CITY OF PORTLAND, MAINE
PLANNING BOARD



Sean Dundon, Chair
Brandon Mazer, Vice Chair
Bob Dunfey
David Eaton
David Silk
Austin Smith
Maggie Stanley

AGENDA
PORTLAND PLANNING BOARD MEETING

The Portland Planning Board will hold a meeting on Tuesday, January 28, 2020, Council Chambers, 2nd Floor, City Hall, 389 Congress Street. **Public comments will be taken for each item on the agenda during the estimated allotted time and written comments should be submitted to planningboard@portlandmaine.gov**.

WORKSHOP - 4:30 PM

i. Level III Site Plan; 175 Fore River Parkway; Northern Light Mercy Hospital, Applicant. (estimated time 4:30 - 5:15 p.m.) The Planning Board will hold a workshop on a proposal for a 20,140 square foot hospital building expansion, a new 34,987 square foot ambulatory surgical center, and additional campus parking, along with modifications to campus driveways and associated site improvements. The property is a 33.5 acre medical campus and is zoned IL, C26 and IH.

ii. Zoning Map Amendment from R-6 to B-2b; 879 Congress Street; 879 Congress, LLC., Applicant. (estimated time 5:15 - 6:00 p.m.) The Planning Board will hold a workshop for a zoning map amendment from R-6 to B-2b to allow a 5-story residential building with a ground floor commercial space. The subject properties include three parcels totaling 11,790 square feet.

iii. Level III Site Plan; 126 and 128 North Street; Upright Properties, LLC., and Josh Wojcik, Co-Applicants. (estimated time 6:00 p.m.) The Planning Board will hold a workshop on a proposal to develop a 3-story, 5-unit apartment building at 126 North Street and a 4-story, 6-unit condominium building with ground floor parking at 128 North Street. One workforce housing unit would be provided within the proposed development. The development site is located within an R-6 zone and the Munjoy Hill Neighborhood Conservation Overlay District.

PUBLIC HEARING - 7:00 PM

1. ROLL CALL AND DECLARATION OF QUORUM

2. COMMUNICATION AND REPORTS

3. REPORT OF ATTENDANCE AT THE MEETING HELD ON JANUARY 21, 2020

Afternoon Workshop
ReCode: Dundon, Dunfey, Eaton, Mazer, Silk, Smith, and Stanley present.

Evening Hearing

1884 Forest Avenue: Dundon, Dunfey, Eaton, Silk, Smith, and Stanley present; Mazer absent.
1190 Brighton Avenue: Dundon, Dunfey, Eaton, Silk, Smith, and Stanley present; Mazer absent.

Evening Workshop

R-6 Design Standards: Dundon, Dunfey, Eaton, Mazer, Silk, Smith, and Stanley present.

4. REPORTS OF DECISIONS AT THE MEETING HELD ON JANUARY 21, 2020

i. Level III Site Plan and Conditional Use; 1884 Forest Avenue; John Chau, Applicant Dundon moved and Eaton seconded a motion to reconsider the site plan application for 1884 Forest Avenue. Vote 5-0, Dunfey recused and Mazer absent.

ii. Level III Subdivision Amendment; 1190 Brighton Avenue; Dirigo Center Developers, LLC., Applicant. Stanley moved and Eaton seconded a motion to waive the requirement for joint review and hearings on further amendments to the Dirigo Plaza/Rock Row subdivision. Vote 6-0, Mazer absent. Stanley moved and Eaton seconded a motion to find the plan in accordance with the subdivision standards of the land use code with one condition of approval. Vote 6-0, Mazer absent.

5. NEW BUSINESS

i. Election of Officers (estimated time 7:00 - 7:15 p.m.)

ii. Level III Site Plan and Subdivision; 58 Fore Street; Portland Foreside Development Company, Applicant. (estimated time 7:15 p.m.) The Planning Board will hold a public hearing to consider a proposal for Phase 1 of 58 Fore Street, which includes 442,500 square feet of mixed-use development, the subdivision of the site into 9 development parcels, and various infrastructure, utility, and access improvements. The subject property is a 10-acre parcel zoned B-6 and EWPZ, a portion of which lies within the Shoreland Zone.

Memorandum
Planning and Urban Development Department
Planning Division

To: Sean Dundon , Chair and Members of the Portland Planning Board
From: Matthew Grooms, Senior Planner
Date: January 24, 2020
Re: Mercy Hospital Expansion, Ph. 2
175 Fore River Parkway
Northern Light Health, Applicant
Project #: PL-000820-2019 CBL: 073-A-001
Meeting Date: January 28, 2020

I. INTRODUCTION

Northern Light Health has submitted a Level III site plan application for the second phase of Mercy Hospital's Fore River Campus development; a multi-phase proposal outlined by a 2001 Conditional Zoning Agreement to redevelop a large industrial and railroad site as a new medical facility. For a more detailed history of the conditional zoning agreement, phase one of this development and the overall process to date, please see the memo submitted for the first Planning Board workshop.



Figure 1: Aerial view of the Mercy Fore River Campus

Phase two involves construction of a new four-story addition to the rear of the existing hospital building, and development of a new two-story Ambulatory Surgical Center (ASC) building, which would be built on the central part of the site on an infilled portion of the existing wetland pond. Aside from the expansion of on-site uses, the development also provides 95 additional surface parking spaces for use by patients, visitors and staff, and a comprehensive reconfiguration of the campus open space scheme.

A preliminary workshop was held by the Planning Board on November 26, 2019. At that workshop, members of the Board focused heavily on the proposal to fill in the majority of the existing wet pond, which was previously identified as valuable natural habitat and a key component of the 2001 conditional zoning agreement and subsequent 2006 site plan approval for Phase I.

This second workshop will provide a follow-up opportunity for both staff and the applicant to address several procedural questions raised by members of the Board at that first workshop related to the preservation of this wetland feature. Additional areas of focus will include review of the building's design and signage program, discussion of on-site pedestrian and vehicle circulation routes, transportation demand management, and landscape programming.

Notices have been sent to 56 property owners and interested citizens in the vicinity of the project and a legal advertisement was published in the January 18th and 20th editions of the *Portland Press Herald*.

Applicant: Northern Light Health (Nick Munro, Facility Project Manager)
Consultants: Gorrill-Palmer (Steve Bushey)

II. REQUIRED REVIEWS

Waiver Requests	Applicable Standards
Request: Waiver of the flooding standard. Staff Comments: Reviewers do not have any concerns regarding this waiver request (*Att. A2*)	Technical Manual, *Section 5 Portland Stormwater Management Standards and MaineDEP Chapter 500 Stormwater Management*
Request: Waiver to provide fewer bicycle parking spaces than required under the ordinance. Staff Comments: Further information regarding the type and distribution of cycle racks is requested to support the request, but a waiver to provide fewer than required is likely to be supported.(*Att 1a*)	Site Plan Standard 14-526 (a) 4b which would require 58 parking spaces for the project.
Request: Waiver to omit curb and sidewalk along the Fore River Parkway between the southerly driveway and the north end of the property Staff Comments: Staff is requesting evidence of compliance with Sec. 14-506 of the City Code.	Site Plan Standard 14-526 (a) 2 c
Review	**Applicable Standards**
Site Plan	Section 14-526
Conditional Zoning Agreement 2001	Section 10 *Development Standards*

III. PROJECT DATA

Existing Zoning	2001 Conditional Zoning Agreement
Existing Use	Hospital and Medical Office Building (MOB) and associated facilities and parking
Proposed Use	Hospital, MOB and Ambulatory Surgical Center (ASC) & associated facilities
Parcel Size	33.5 acres total; approx. 20 acres developable

	Existing	Proposed	Net Change
Building Footprint	64, 629 SF	102,343 SF	Hospital: +20,140 sq ft
Building Floor Area	Hospital: 138,099sq ft MOB: 82,186 sq ft	Hospital: 192,988 sq ft MOB:82,186 sq ft ASC: 34,987 sq ft	Hospital: +54,889 sq ft MOB: 0 New ASC: +34,987sq ft
Impervious Surface Area	50%	66%	16%
Parking Spaces	762	857	+95
Bicycle Parking Spaces	36 spaces proposed, with requirement for 58 spaces. Waiver is being requested.		



Figure 2: Proposed Phase 2 Site Layout

The scope and program of the development remains almost entirely unchanged from the first workshop. Aside from minor revisions to building designs and the signage package, and submission of a more fully developed pedestrian circulation and landscape plan and an updated Master Plan, the information presented at the first workshop remain relevant with no major programmatic changes.

IV. PLANNING BOARD WORKSHOP – NOVEMBER 26, 2019

In its initial workshop, staff and the applicant provided the Board with a first look at phase 2 of this development proposal and received the following feedback:

- Wetland Fill: The existing wetland is a critical component of both the CZA and approved Master Plan for Mercy Hospital and has previously been recognized as valuable wildlife habitat for various bird species and has been integrated into the Portland Trails system. At the November workshop, the Board asked that additional analysis be completed to determine whether or not the pond was protected under the CZA agreement on the basis of its value as wildlife habitat.

- Design Review: In reviewing the building design for both the hospital addition and ASC building, the Board requested that the hospital extension entrance be made more prominent, and that the screening of rooftop mechanical equipment be further assessed, particularly in consideration of potential long views of the building from vantage points on the Western Promenade.

- **Pedestrian Circulation:** At the time of the November workshop, a concept for internal site circulation had not been fully developed, and the Board requested a plan identifying exact sidewalk locations with prioritization given to pedestrian circulation.

- **Landscaping:** The Board stressed the need for a more robust landscape plan with a focus on recreating natural spaces lost as part of this development proposal and as buffer to soften proposed surface parking.

- **Signage:** One member of the Board weighed in on the scale of proposed hospital logo, which was identified as being too large for the building.

- **Portland Trails and Bus Stop:** At the time of the November workshop, it was unclear to what extent the proposed open space reconfiguration would impact the existing easement held by Portland Trails and similarly, whether or not the proposed bus shelter relocation could occur as part of this phase of the development.

In the course of this memorandum, staff will either provide additional information as requested or address questions raised by members of the Board where possible. Likewise, where an issue or question remains unresolved, staff will clearly flag it as unresolved and identify where more information is needed.

V. NEIGHBORHOOD MEETING AND PUBLIC COMMENT

A neighborhood meeting was held on December 11th and attended by two (2) members of the public. A copy of the neighborhood meeting minutes and sign-in sheet are attached to this memo. Additionally, as of the writing of this memo, one (1) written public comment was received by the Planning Office. Comments raised have focused on the proposed loss of existing wetland, maintaining and enhancing connections to local open space sites such as the Fore River Parkway trail, status of the State Street facility and questions regarding the architecture and energy efficiency of the proposed buildings. For detailed responses to these questions, please see the attached minutes (Attachment Q).

VI. UPDATE ON ZONING ANALYSIS – CONDITIONAL ZONING AGREEMENT 2001

A. Master Plan

The City Council approved the Conditional Zoning Agreement (CZA) in 2001 that allowed this large (then 42 acres) site to be rezoned from IH to medical and related uses as listed in the CZA. A "Conceptual" Plan was attached to the CZA and the CZA language refers to it as follows:

> *The **PROPERTY** shall be developed substantially in accordance with the conceptual master plan shown on Attachment 2, provided, however, that each building, whether classified as a major or minor development, shall be subject to site plan review by the Planning Board, and if applicable, subdivision review by the Planning Board. Any site plan review applications shall fully comply with the detailed site plan application requirements contained in article V (site plan) of the Land Use Code. The Planning Board may permit deviations from the conceptual master plan, as long as the deviations are consistent with the purposes of this Agreement.*

Staff Finding: The currently adopted Master Plan identifies a building program that is incompatible with the phase two layout, as future buildings are shown directly within the now proposed wet pond location. In

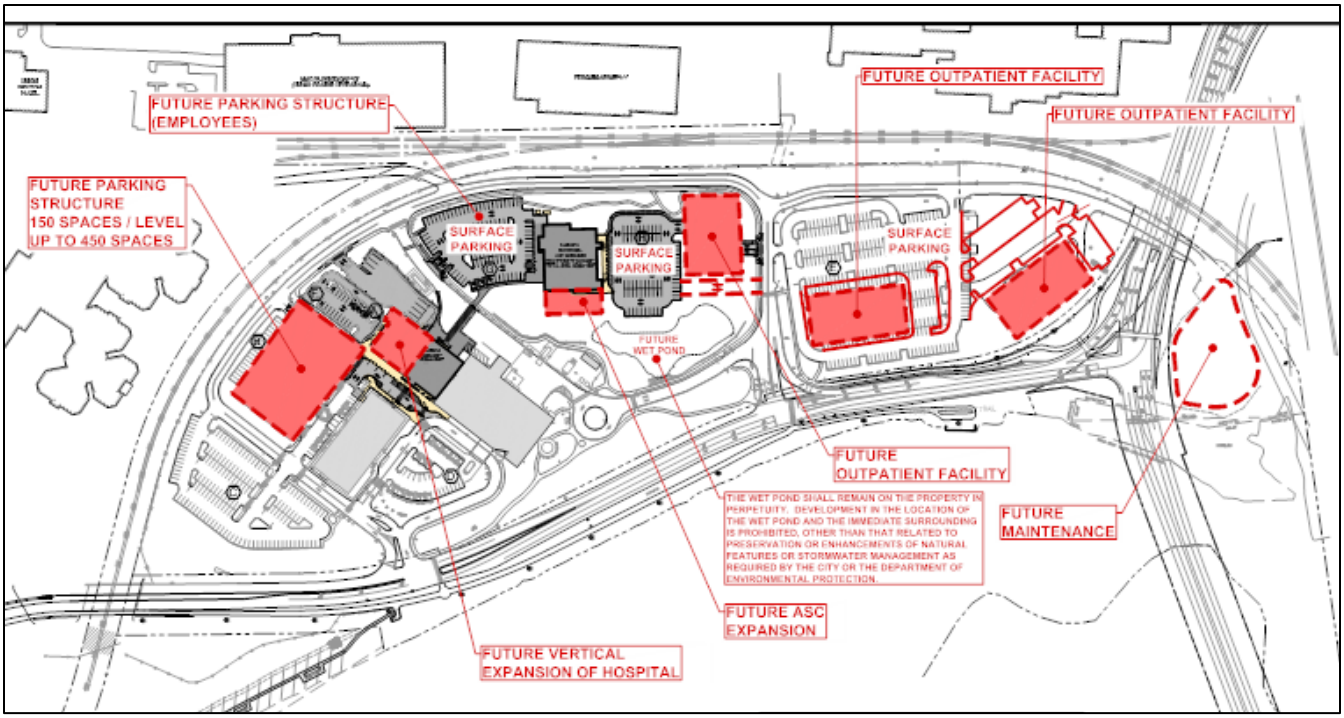


Figure 3: Revised Concept Plan for Future Phases

response to this, the applicant has developed a new concept plan, which provides locations for future building, parking and open space areas that does not conflict with the site plan submitted for phase two. Staff have reviewed the updated Master Plan and find that it complies with this requirement.

In order to ensure future consistency, the applicant's attorney is working with the City to legally formalize the proposed site layout with specific respect to the new wet pond location, which would be maintained for future use as an amenity and stormwater feature of Mercy Hospital's Fore River campus.

B. Development Standards

The CZA includes a set of nine (9) development standards specifically tailored to the unique characteristics of this site and future build-out of a hospital campus. In many instances, these standards relate directly to or feature considerable overlap with general site plan review standards, and provide a regulatory framework on such themes as building and site design principles, landscaping and preservation of natural spaces, vehicular and pedestrian circulation and signage. Given this significant overlap between standards, the development review section, later in this memorandum, regularly refers back to analysis or narrative provided in this section. CZA standards and staff discussion of compliance are described below.

CZA Preamble - Development Standards: All site plans may be approved by the Planning Board only if, in addition to the dimensional requirements of paragraph 11 and the applicable provisions of article IV (subdivisions) and article V (site Plan), the development meets the following development standards.

1. *Design relationship to site*: Development proposals shall demonstrate a reasonably unified design of the site in a campus-like setting, including the architecture, the layout of the buildings, pedestrian and vehicular circulation plan, open space, drainage, and the topography, soil conditions, vegetation, and other natural features of the site. Integration of open spaces and natural features shall be achieved by incorporation of outdoor amenities for the benefit of users of the site, such as jogging and walking trails, gardens, and benches. The proposed layout of buildings and uses shall

demonstrate compatibility between the buildings and other site features within the site. Consideration shall be given to compatibility of proposed perimeter on-site development with the existing and future uses off-site but adjacent to the PROPERTY.

Staff Finding: Staff advised the applicant at the pre-application meeting that the proposed location of the ASC did not appear well-integrated into the campus, particularly as the building and associated surface parking and stormwater management resulted in the loss of the existing wetland. The wetland marsh area was preserved in 2006 to provide a campus amenity with aesthetic, open space and wildlife benefits and includes a public trail as formalized as part of the 2006 site plan approval.

Following the Planning Board workshop, city staff met with the applicant to discuss outstanding concerns, in particular, the elimination of the existing pond. The applicant articulated that the proposed program takes into account changing trends in the healthcare field which necessitated a reconfiguration of the site from the approved Master Plan. Additionally, other site constraints (including required parking and circulation infrastructure) and plans for future expansion precluded the applicant from being able to preserve the existing pond in its entirety. In 2013, in anticipation of this expansion, the applicant secured approval from Maine DEP to fill in this wetland, and currently have valid authorization to complete this work.

Corporation Counsel, in reviewing the development criteria of the CZA, determined that the proposal to shrink and relocate the pond, while maintaining it as a prominent resource and amenity of the development, was still consistent with requirements of the CZA. As mentioned above, the applicant is coordinating with the city to execute a legal agreement that would protect the future wet pond in perpetuity for use by visitors and staff. In addition to serving as a stormwater feature, the pond would be designed to function in a more recreational capacity as well, with trails around the pond that would connect to the local trail network managed by Portland Trails.

At the November workshop, one of the key concerns raised related to the filling of the wet pond was the loss of high-value bird habitat. Following that workshop, staff reviewed state resources provided by Maine DEP, and confirmed that the wet pond location is not identified as high value wildlife habitat. Significant wildlife habitats are defined under Maine's Natural Resources Protection Act (NRPA) and such data is reviewed as part of the NRPA permitting process, which the applicant went through in 2013 for authorization by the state to fill in the wetland. It is staff's understanding that the DEP NRPA permit was in the process of being extended. Prior to the public hearing, the applicant should provide evidence that the NRPA permit remains valid, otherwise staff would suggest a condition of approval conditioning the start of construction on this permit.

Staff continue to recommend that future development be cognizant of pedestrian circulation patterns, new impervious surface creation and the creation, in particular new surface parking, improved integration of the site with surrounding areas of the city and continued maintenance of the campus's open space features.

2. *Landscaping:* Development proposals shall include a landscape program. All land areas not covered by structures, parking areas, or circulation facilities shall be landscaped and maintained. In order to soften the visual impact of large expanses of pavement in parking lots, vegetation shall be planted or retained in islands or planting strips where required by article IV (subdivisions) and article V (site plan) of the Land Use Code.

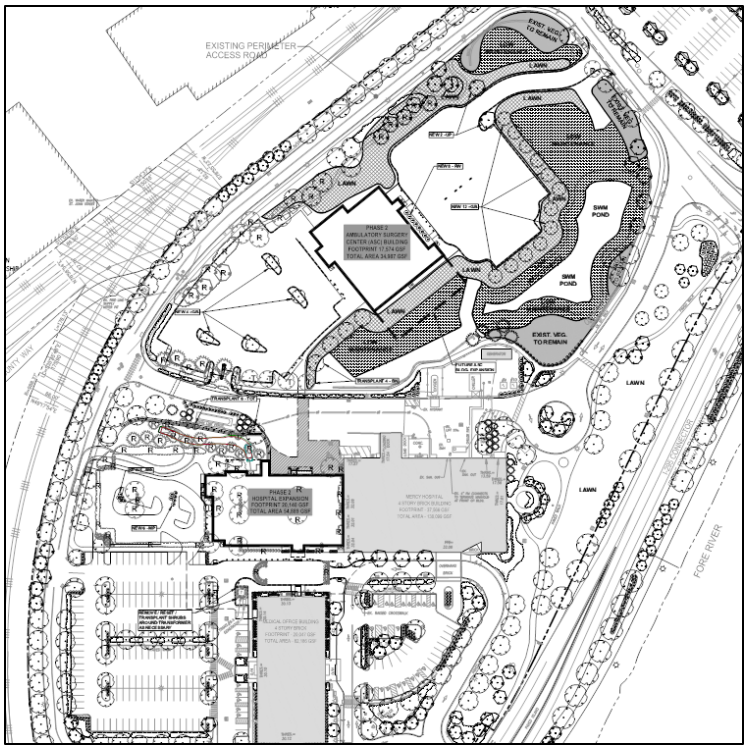


Figure 4: Proposed landscaping plan. Per CZA requirements, landscaping is intended to soften the visual impact of the site, in particular along Fore River Parkway, and enhance existing natural features.

Staff Finding: The applicant has submitted a revised landscape plan specifically focused on the area around the proposed wet pond in response to prior staff comments and Board feedback. In review of this revised plan, Jeff Tarling, the City Arborist, offers the following comments (Attachment 1e):

a. Existing trees & vegetation -
Areas shown as 'Exist. Veg. to Remain' should be checked for the types of vegetation. Invasive plants, noted by the State of Maine should be removed, and native trees and vegetation protected during construction. This can be a condition for the pre-construction phase before site work begins.

b. Low Maintenance areas around should be planted with native vegetation, especially around the pond, to support habitat and meet the overall tree & landscape goals. In addition to seeding this area, native trees and shrub groups should be included to give the site a natural feel. The new trees shown as NEW 12-GB near the Phase 2 site could be grouped together and made to appear as a natural setting. This recommendation is not meant to re-forest the site but to result in the site to feel like it existed in a natural setting.

This feature could be a benefit to future patients, staff and visitors to the Mercy Campus. There are good examples for this type of setting. Recommending adding these plant groupings that would be planted in smaller plant sizes then the typical standard to allow the plants to adapt the site and at a reasonable cost.

http://lweanerassociates.com/?portfolio-category=meadows-natural-areas

c. Street & Parking Lot trees / landscape - Following the success of Mercy Phase 1, the proposed expansion should continue the existing landscape scale. This helps with wayfinding and creating a 'sense of place' that the original project established. Parking lots should meet the guidelines for tree and landscape density. Street-trees: many of the original

Fore River Parkway trees near Phase 1 were lost after grade changes likely added more water to the drainage swale along the Parkway. Options would be to replace the regular spacing of trees perhaps set back from the low point along the road or to plant a few groves of trees along the campus edge of the parkway. This would be similar to examples like at UNUM along Congress Street.

3. *Pedestrian Orientation:* Development proposals shall include an integrated pedestrian circulation system, including internal sidewalks, to take advantage of the topography and natural features of the site and providing for safe pedestrian access to all buildings and parking areas with the ability to conveniently access all developed portions of the site without additional driving. The pedestrian circulation system shall link with the shoreline trail feature of the site.

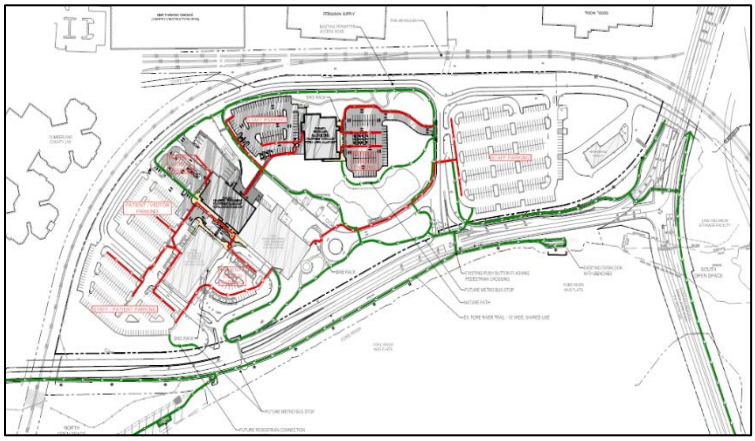


Figure 5: Pedestrian Circulation Plan. Note lines in red identify routes between buildings and parking, while lines in green represent routes to open space.

Staff Finding: The applicant has submitted a revised Pedestrian Circulation Plan that incorporates feedback provided by staff at a meeting held on December 16, 2019. The pedestrian routes identified on the plan are generally consistent with this standard, though staff are recommending minor changes to the plan, including relocation/addition of crosswalks and enhancement of bicycle infrastructure. Please see the attached annotated plan (Attachment 1f).

4. *Vehicular Access and Circulation*: The primary access to serve the entire development will be from two access points or two access points and a slip lane from the CONNECTOR as may be further developed or modified by joint agreement of the City, MDOT and the applicant. Vehicular circulation through internal driveways and roadways will provide safe and orderly access to all developed portions of the site.

Staff Finding: The proposals generally meet this standard (Attachment 1c).

5. *Buffers and Screens*: Development proposals shall include appropriate measures of a dense and continuous nature (for example, a double staggered row of white pine twenty-five (25) feet on center, etc.) in order to buffer parking lot visibility from public roads.

Staff Finding: As noted above under landscape, staff recommend additional landscaping around and within the surface parking areas to achieve the scale of buffering indicated by the CZA.

6. *Preservation of Natural Features*: Development proposals shall identify the extent to which the developer will preserve natural features including, but not limited to, existing vegetation, flood plains, rock outcroppings, surface water bodies, drainage swales and courses, and wetlands; provided any such program shall consider and be sensitive to the need to preserve such natural features.

Staff Finding: The 3.5-acre wetlands were required to be preserved by both the MDEP and the City as part of the 2006 Site Plan review. They were seen as having wildlife, public and patient amenity value and comprising a key element in the campus open space system.



Figure 6: View of the existing pond from the internal circulation driveway

As part of this second phase, the applicant has identified, under a full build-out scenario of the site, that it would be impossible to maintain the existing wetland and open space feature at its current extent. Eight (8) alternative configurations were assessed, which were provided to Maine DEP for consideration as part of their NRPA permit application. Maine DEP, in reviewing this application, made a similar conclusion, and permitted the proposed filling of the existing wet pond feature.



Figure 7: Proposed open space configuration with pond, trail and landscaping amenities

The development standard states that "development proposals shall identify the extent to which the developer will preserve natural features … provided any such program shall consider and be sensitive to the need to preserve such natural features". In reviewing the CZA language, Corporation Counsel determined that the CZA and prior Planning Board approvals, which permits future deviation from the concept plan, does not require that the Hospital retain the current extent of its open space and natural area configuration. The applicant is responsible for proposing a strategy moving forward that achieves the aim of this standard.

To mitigate this impact, the applicant is proposing a smaller 0.5-acre wet pond designed to have a natural appearance, that will double as a recreational resource for use by hospital staff, visitors and patients as well as a component of the site's stormwater management system. Plans provided show a new trail network and open space area separated from vehicular traffic and generous landscaping around the pond. While reduced in size, Planning staff find that the proposed combination of pond, landscaping and pedestrian oriented amenities fulfills the requirement for preservation of natural features standard. In order to preserve this proposed

feature, the applicant is working with the City to develop a legal agreement for preservation of and continued maintenance of this feature.

7. *Architectural Design:* All buildings shall be designed or approved by a registered architect in the State of Maine. The scale, texture, colors, and massing of the buildings shall be coordinated. The full range of high- quality, permanent, and traditional or contemporary building materials and technology may be incorporated in a manner so that the development as a whole embodies distinguishing attributes that achieve the developer's desired degree of excellence and are in conformance with the architectural guidelines provided in any private development restrictions. Particular emphasis



Figure 8: View of the rear of the hospital where future addition would be constructed.



Figure 9: View of the Hospital addition, with emphasized entrance as requested by the Planning Board.



Figure 10: Rendering of ASC Building from Fore River Parkway with screening



Figure 11: Rendering of ASC Building

shall be placed on the appearance of building facades from public streets and highways including the CONNECTOR, from driveway and parking areas, and from other nearby buildings. Building elevation drawings shall be submitted which indicate architectural style, exterior finishes and color, building height and scale, and location and scale of window and door openings. Samples of exterior building materials shall also be submitted.

Staff Finding: The applicant has submitted elevations and floor plans of the hospital building addition and the ASC. These have been reviewed by the city's Urban Designer in the context of the CZA language above, as well as in relation to the Private Development Restrictions (*Attachment 1d*) that were approved as a condition to the 2006 Site Plan approval to help achieve coordination of design details across the campus.

The Design Review is included in *Attachment 1d* and generally supports the design approach for the two new buildings. The key concern is the scale of the rooftop mechanical systems and the need to integrate them better into the overall design. In response, the applicant has prepared a series of renderings showing the building with and without screening, including partially obscured views from the Western Promenade and from Fore River Parkway. Staff is requesting that the Western Promenade vantage point be reassessed, to determine whether or not the building would be visible from locations with unobstructed views. Based on the Fore River Parkway renderings, it is staff's finding that screening of rooftop mechanical equipment on the ASC building is warranted, as first; the low height of the building minimizes concerns of massing or visual impacts derived from the screening, and second; the screening material better relates the ASC building to the hospital's design.

8. ***Signs:*** Signage shall be focused internally to the site or to the CONNECTOR and shall not be oriented or scaled to address Route 1 or Interstate 295, with the exception of the hospital and major office buildings. Development proposals shall identify all proposed signage. Signs shall be designed in proportion and character with the building facades. All signs shall be constructed of permanent materials and shall be coordinated with the building and landscaping design through the use of appropriate materials and finishes.

Staff Finding: The applicant is proposing to revise both the building signs and the ground "information" signs to reflect the new name/logo of the hospital and to incorporate new signage on the buildings. Based upon feedback provided by the Planning Board and staff at the first workshop, the applicant has further revised their proposed signage package, eliminating the

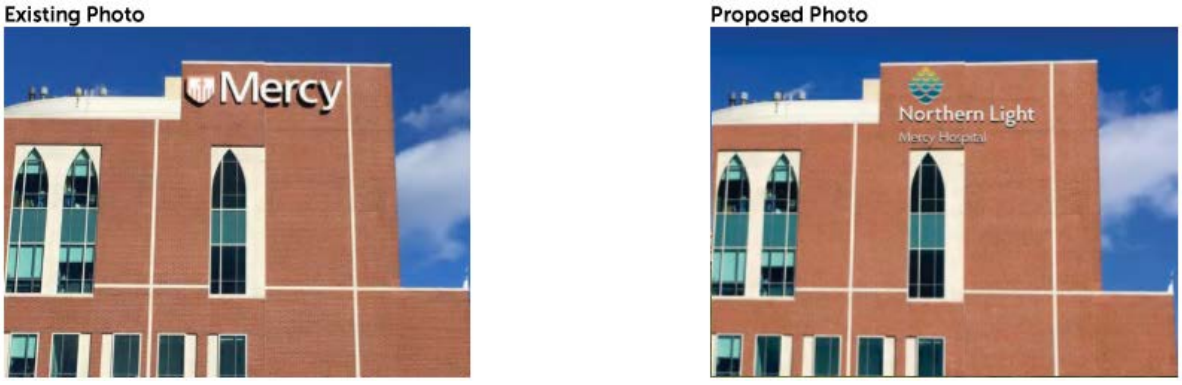


Figure 12: Proposed signage along Fore River Parkway

signage initially shown on the east façade, though retaining the new sign on the south façade, facing Fore River Parkway.

The proposed replacement and new building signage are generally acceptable except for the new sign on the hospital façade facing Fore River Parkway. This sign replaces the word "Mercy" with "Northern Light Mercy Hospital" and Design Review comments (Attachment 1d) note that this is considered to be out of proportion and character with the building façade. Staff have previously advised the applicant that this sign is not supported.

9. *Master Plan:* Prior to development on the PROPERTY, MERCY shall provide a master plan of the campus. The master plan shall include the following: The location of the building(s) on the site; infrastructure of the site; identification of common areas; traffic circulation, architectural character and treatment of the building(s); proposed building envelopes; phasing and timing of the development; private development restrictions; and such other information necessary and sufficient to ensure compliance with the standards in this section. Master plans are dynamic representations that assist in guiding projects through phased development. Master plans are flexible and adaptable to changes that occur within the development process. The master plan shall be subject to periodic revision and update as needed and as phased development occurs over time.

   Staff Finding: The applicant has provided an updated concept plan for future build-out of the Mercy Hospital Campus that is now consistent with the proposed phase two development. While the Master Plan development standard does not specifically require that the Master Plan be updated with each individual phase, staff continue to recommend that the document approved as part of the 2006 site plan review for phase one, be updated to reflect anticipated changes to program and site usage as shown in the revised concept plan.

Summary of Master Plan Data

Site Data	2001	2006	2019
Usable site (taking account loss for roads/bridges and adding in filled pond area in 2014)	25.46 acres	24.91 acres	Approximately 20 acres
Building footprint	183,335 sf	128,000 sf	Data associated with future Phase graphic not submitted
Building floorspace	433,000 sf	544,902 sf	
Parking	1251 surface spaces	1467, some in garage	
Impervious surface (acres)	Approx 22 acres	Approx 13 acres	

10. *Dimensional Requirements:* The following dimensional requirements shall apply to the PROPERTY as a whole, and not additionally to individual lots (if any) within the PROPERTY:
    a. Maximum imperious surface ratio: Eighty (80) percent;
    b. Maximum building height: Ninety (90) feet;
    c. Minimum front yard landscaped buffer: Twenty (20) feet from the edge of the CONNECTOR right-of-way shall be in the form of a landscaped buffer provided, however, that the area within such buffer may include a retaining wall, walkway, trail, or pathway but no buildings, roadways, parking areas, or other expanses of pavement.

d. Minimum side yards: Ten (10) feet;
e. Minimum rear yard: Ten (10) feet;
f. Pavement setback from lot boundaries: Fifteen (15) feet.

Staff Finding: The proposal as shown conforms with the dimensional requirements established by the CZA agreement for this site.

VII. SITE PLAN STANDARDS (SECTION 14-526)

The proposed development has been reviewed by staff for conformance with the relevant review standards of Portland's site plan ordinance and applicable regulations. Staff comments are listed below.

a) Transportation Standards

a. Impact on Surrounding Street Systems and Access and Circulation

The Traffic Engineering Reviewer has requested further information to evaluate the impacts of the proposals on the surrounding street system. In reviewing the data provided, staff have identified that the City will be implementing traffic signal improvements that would be expected to improve interface of the site with the adjacent street system. In looking at trip generation, it appears that the development is generating significantly less traffic than would be expected using either the method developed in 2001 for the CZA agreement or using current ITE trip generation rates. Staff are asking that the applicant provide supporting documentation on site operations and other factors that may be resulting in reduced trip generation rates. Staff comments are included in Attachment 1c.

DPW has stated that on-street bicycle accommodations (shoulders and dedicated bike lanes) are not provided consistently along Fore River Parkway. According to DPW, the most likely means of access for bicyclists is via the trail network. Their recommendation is that pedestrian and bicycle-scale wayfinding signage be added, especially near crossing locations, points of interest and along primary routes to and from the site. The staff comment is included as Attachment 1a.

b. Public Transit Access

The applicant has submitted a Plan showing existing and future metro Routes and Stops which identify the existing bus shelter being eliminated and replaced by two new bus shelters along Fore River Parkway that would take advantage of changes in Metro's routing, where in both an east and west bound bus would serve the campus. The City is asking that the applicant confirm the status of these conversations with Metro and revise the plan if necessary.

c. Parking

The Traffic Engineering Reviewer has requested further information to understand the parking demand related to this phase of the development, particularly in view of the fact the proposed provision is above the zoning requirement (*Attachment 1c*). It should be noted that during the 2006 review the Planning Board recognized that overflow parking should be avoided at this site and that the demand would justify parking provision substantially above the zoning requirement. According to staff review, the proposal includes 42 spaces beyond which would be expected under ITE calculations. The applicant shall provide additional information to support the number of parking spaces being shown.

d. Transportation Demand Management (TDM)
The applicant has submitted the original TDM related to the 2006 approval and a narrative regarding intentions for an updated TDM. The applicant should note that the site plan ordinance and Technical Standards include requirements for TDM Plans and based upon this requirement, are directing the applicant to prepare an updated TDM plan that complies with current city requirements and accounts for the proposed set of uses.

b) Environmental Quality Standards

1. Preservation of Significant Natural Features
In the context of the CZA Development Standards regarding the preservation of natural features staff have suggested that the applicant mitigate impact to the existing wetland by retaining that feature to the extent possible and enhancing the remaining feature with a robust landscaping plan comprised largely of native species to establish a 'natural' feel for the new pond. Staff are also requesting that a narrative response be provided which demonstrates that the current proposal for Phase 2 is fully permitted under relevant NRPA and ACOE permits.

2. Landscaping and Landscape Preservation *See above under compliance with CZA Development Standards*

3. Water Quality, Storm Water Management and Erosion Control
The proposed stormwater management wet pond located in the area of the existing wetlands has been reviewed by the Peer Engineer and is considered acceptable in that it meets the site plan and chapter 500 standards. Related to Chapter 500 standards, the only outstanding point is that the erosion and sedimentation control plan should be updated to identify construction entrances. Review comments are included as Attachment 1b.

c) Public Infrastructure and Community Safety Standards (as relevant to this project)

1. Availability and Adequate Capacity of Public Utilities
The applicant has provided all requisite ability to serve letters with the exception of waste water capacity.

d) Site Design Standards -

Regarding site design, exterior site lighting has not yet been provided for staff review. Given the isolated position of the campus, it is not anticipated that site lighting would adversely impact surrounding properties, and the applicant has indicated that they are planning to submit lighting cut sheets and photometric plans in the near future.

VIII. NEXT STEPS

Staff recommend that the applicant provide additional information or respond to comments or questions as follows:

- Applicant shall update the Master Plan document so that it aligns with current proposals and factors in plans for future phases.
- Applicant shall address staff review comments regarding landscape, pedestrian routes and design, rooftop mechanicals, vehicle and bicycle parking.
- Applicant shall submit a TDM plan that complies with current City standards, and evaluate steps for reducing overall parking demand on-site. This information should inform the parking supply provided on site.

- Applicant shall provide an updated construction management plan with drawn plans included. This plan should include a dewatering plan (Attachment 1a).
- Applicant shall provide lighting cut sheets and photometric plans to determine compliance with the site lighting standards of the technical manual.
- Applicant shall provide additional information for waiver of curbing and sidewalk as required by Sec. 14-506 of the City Code.
- City shall provide additional guidance on ground level wayfinding signage.

IX. ATTACHMENTS:

PLANNING BOARD MEMORANDUM ATTACHMENTS

1. Staff Review Comments
    a. DPW Review comments
    b. Peer Engineer Review comments
    c. Traffic Engineering Review comments
    d. Design Review
    e. City Arborist Review comments
    f. Pedestrian Circulation Plan - Annotated
2. Public Comment
    PC-1: William Wilson (1.16.20)

APPLICANT'S SUBMITTALS

A. Cover Letter
B. Checklist
C. Right, Title & Interest
D. State Permits
E. Project Description
F. Zoning Assessment
G. CZA Compliance
H. Site Plan Standards Compliance
I. Waivers
J. Financial Capacity
K. Technical Capacity
L. Traffic and Parking Information
M. TDM Narratives
N. Stormwater Management Report
O. Response letters with additional information
P. Construction Management Report
Q. Neighborhood Meeting Materials
R. Signage Package
S. Ability to Serve Letters

PLANS

Plan 1. Cover Sheet
Plan 2. General Notes
Plan 3. Existing Conditions Plan
Plan 4. Demolition and Removals
Plan 5. Overall Campus Map
Plan 6. Overall Site Layout Plan
Plan 7. Wayfinding Plan
Plan 8. Expansion Area Plan
Plan 9. Overall Grading and Drainage Plan
Plan 10. Detailed Grading Plan
Plan 11. Overall Utility Plan

Plan 12. Landscape Plan
Plan 13. Landscape Details
Plan 14. Site Details
Plan 15. Storm Drain and Utility Details
Plan 16. Erosion Control Details
Plan 17. Erosion Control Notes
Plan 18. Wet Pond Plan & Sections
Plan 19. Wet Pond Details
Plan 20. Site Sections
Plan 21. Storm Drain Profiles
Plan 22. Utility Profiles
Plan 23. CZA Materials
Plan 24. Master Plan Phases
Plan 25. Master Plan Pedestrian Access Routes
Plan 26. Pond Walking Trail and Planting Plan
Plan 27. Pond Detail Sheet
Plan 28. Overall Site Plan (Architectural)
Plan 29. Pond Trail Concept Plan
Plan 30. Current Conditions Landcover
Plan 31. Post Development Land Cover
Plan 32. Post Development Watershed Map
Plan 33. Water Quality Map
Plan 34. Hospital First Floor Plan (Revised)
Plan 35. Ground and First Floor Facilities Plan
Plan 36. Second and Third Floor Facilities Plan
Plan 37. ASC Level One Facility Plan
Plan 38. ASC Level TWO Facility Plan
Plan 39. Hospital Addition Exterior Elevations
Plan 40. ASC Exterior Elevations

a.

Portland Maine Yes. Google's good here.

Matthew Grooms <mgrooms@portlandmaine.gov>

Mercy Hospital - 175 Fore River Parkway - Final comments ahead of PB workshop

Mike Tremblay <mtremblay@portlandmaine.gov> Fri, Jan 24, 2020 at 9:16 AM
To: Matthew Grooms <mgrooms@portlandmaine.gov>
Cc: Bruce Hyman <bhyman@portlandmaine.gov>

Matt,

Here are my final comments before Tuesday's PB workshop.

- The Applicant should implement the pedestrian circulation and safety improvements suggested by DPW and Tom Errico. I can discuss these at the PB workshop.

- On-street bicycle accommodations (shoulders, dedicated bicycle lanes, etc.) are not provided consistently along Fore River Parkway. The most likely means of access for bicyclists is via the trail network. Ped/bike-scale wayfinding signage may be appropriate, especially near crossing locations, points of interest, and along primary routes to/from the site.

- A construction managment plan with drawn plans will be required before approval. The CM plan should, at a minimum, cover the items discussed in the most recent Construction Management Plan template. A dewatering plan should be included in the CM plan.

-Mike

Mike Tremblay, P.E.
Senior Engineer
Engineering Division
Department of Public Works
City of Portland, ME
mtremblay@portlandmaine.gov
P. 207.874.8881 F. 207.874.8852

Portland Maine Yes. Google's good here.

Matthew Grooms <mgrooms@portlandmaine.gov>

Mercy Hospital - 175 Fore River Parkway - Final comments ahead of PB workshop

Mike Tremblay <mtremblay@portlandmaine.gov> Fri, Jan 24, 2020 at 3:13 PM
To: Matthew Grooms <mgrooms@portlandmaine.gov>
Cc: Bruce Hyman <bhyman@portlandmaine.gov>

Matt,

We are still considering both waivers.

- The curbing and sidewalk waiver has specific criteria that must be met in order to be granted. These are outlined in Section 14-506 of the City Code. The project's applicability for each criterion must be discussed in a memo. We have not seen such a memo as of yet.

- The bike parking waiver needs specifics: How many bike spaces are proposed vs. required? Where will they be located in relation to staff and visitor parking areas and entrances? The applicant should justify their reduced bicycle parking numbers using data from similar facilities or existing data from their current facility. DPW assumes that, while patients and visitors are not likely to arrive by bicycle, many staff members likely live within biking distance and should be accommodated.

Mike Tremblay, P.E.
Senior Engineer
Engineering Division
Department of Public Works
City of Portland, ME
mtremblay@portlandmaine.gov
P. 207.874.8881 F. 207.874.8852

On Fri, Jan 24, 2020 at 2:33 PM Matthew Grooms <mgrooms@portlandmaine.gov> wrote:
[Quoted text hidden]

Portland Maine Yes. Google's good here.

Matthew Grooms <mgrooms@portlandmaine.gov>

FW: 175 Fore River Parkway Peer Review

Lauren Swett <lswett@woodardcurran.com> Thu, Jan 23, 2020 at 5:16 AM
To: Matthew Grooms <mgrooms@portlandmaine.gov>

Hi Matt,

I have reviewed the additional materials submitted since my last set of comments to Jean. I'm not sure if they had been directly provided to the Applicant. They have provided their ability to serve documentation for water, gas, and electricity. I don't see sewer, but Brad may send that to you directly.

I don't see that they have updated their erosion control plan, so my comment to show the construction entrances is still valid. I also don't see any commentary in their latest submissions discussing their work relative to the DEP permits they've received in the past. I am just looking for some clarity on how this work fits into the existing permits.

Any questions, let me know. I'm travelling today, but will be checking emails.

Thanks,

Lauren

From: Lauren Swett
Sent: Thursday, November 21, 2019 9:11 AM
To: Jean Fraser <jf@portlandmaine.gov>
Subject: 175 Fore River Parkway Peer Review

Hi Jean,

I have reviewed the Applicant's submittal for 175 Fore River Parkway, and I have the following comments to support your Planning Board report:

- The proposed project is required to comply with stormwater standards per Maine DEP Chapter 500 and City of Portland Technical Manual Section 5. These standards include the Basic, General and Flooding standards. We have the following comments on their stormwater design.
  - Basic: The Applicant is providing erosion and sedimentation control measures in compliance with the Basic Standards. Locations of proposed construction entrances should be provided on the Erosion Control Plan (sheet C-4.0).
  - Flooding: The Applicant has requested a waiver of the Flooding Standard as the project site discharges directly to the Fore River. This waiver has previously been granted for this site, and is consistent with the standards. We take no issue with this request.
  - General: The Applicant has proposed a wet pond to provide stormwater treatment in accordance with the General Standard. In general, the pond design appears to be correct. It is unclear what the intent for stormwater treatment will be in the future, as plans appear to show the pond being replaced by surface parking

and buildings in the future. It is recommended that the Applicant consider opportunities to construct stormwater treatment measures that could continue to be utilized in the future, i.e. subsurface storage systems installed in parking lots that remain in the future master plan.

- The Applicant has included a copy of the SLOD and NRPA approvals from Maine DEP and Army Corps of Engineers, as well as extensions issued in 2017 for the previous approvals. The Applicant should confirm that there have been no additional changes to the plans since the permit extensions were issued in 2017.
- The Applicant has noted that utility ability to serve letters are pending, and they will provide documentation of the adequacy of the existing utility services to the site when responses are available.

If you have any questions, please let me know.

Thanks,

Lauren

Lauren Swett, P.E.*

Technical Manager

Woodard & Curran

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Email: lswett@woodardcurran.com

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Commitment & Integrity Drive Results

www.woodardcurran.com

M.ASCE

Chair, Leader Training Committee

American Society of Civil Engineers

http://regions.asce.org/leader-training-committee/

C.

Portland Maine Yes. Google's good here.

Matthew Grooms <mgrooms@portlandmaine.gov>

Mercy Hospital - Status Traffic and Parking Comments

Tom Errico <thomas.errico@tylin.com> Tue, Jan 21, 2020 at 2:31 PM
To: Matthew Grooms <mgrooms@portlandmaine.gov>
Cc: Mike Tremblay <mtremblay@portlandmaine.gov>, Bruce Hyman <bhyman@portlandmaine.gov>, Jeremiah Bartlett <JBartlett@portlandmaine.gov>

Hi Matt – This following is a status update of comments provided on October 24, 2019 and November 21, 2019.

- The parking inventory for the site should be expanded to 6pm. The data presented indicates a peak parking demand at 2pm (the end of the survey). We would like to confirm that parking demand does not increase after 2pm. A graphic shall be provided that generally depicts the location of available spaces.

Status: The applicant conducted a supplemental parking survey on Wednesday November 6, 2019 between 1:00pm and 6:00pm. The data indicates the Mercy Hospital Campus has a peak parking demand in the early afternoon time period. No additional data collection is being requested.

Status: I have no further comment.

- For comparison purposes, parking demand estimates using the Parking Generation Manual, ITE, 5th edition shall be provided.

Status: The applicant provided an estimate of parking demand for the Mercy Campus utilizing the noted publication. The 5th Edition of the ITE Parking Generation Manual estimates 82 less parking spaces for the Hospital when using building area (square feet) as the independent variable. The Surgery Center resulted in a need for 11 additional parking spaces and the Medical Office use estimates a need for 25 additional parking spaces. The applicant is proposing an 857 parking spaces following the build-out of the proposed expansion. My review of the ITE parking generation rates and the parking analysis data provided by the applicant estimates a need of approximately 815 parking spaces. The project is providing slightly more parking spaces than estimated. I would note that the TDM Plan and associated strategies may have an impact on reducing parking demand and this is not accounted for in the estimate.

Status: I have no further comment.

- A pedestrian facilities/routing graphic for the entire site shall be provided with anticipated origin-destination patterns to and from each parking area.

Status: The requested plan has been provided and I will provide comments in the future.

Status: I have provided comments to City staff and those will be provided by others.

- The Parking and Driveway Mitigation Evaluation report posted in ePlan does not include the noted Figures. Those should be uploaded. I would also suggest that printouts of the SimTraffic Model results be provided.

Status: The requested documents have been provided and no further action is required.

Status: I have no further comment.

- In conjunction with site plan standards (see below) a traffic safety study shall be conducted at the High Crash Location (HCL) of Fore River Parkway and Congress Street.

Sec. 14-526. Site plan standards.

Requirements for approval. The Planning Board or Planning Authority shall not approve a site plan application unless the development proposal meets the following criteria:

(a) Transportation Standards

1. Impact on Surrounding Street Systems:

The provisions for vehicular loading and unloading and parking and for vehicular and pedestrian circulation on the site and onto adjacent public streets and ways; and the incremental volume of traffic will not create or aggravate any significant hazard to safety at or to and including intersections in any direction where traffic could be expected to be impacted; and will not cause traffic congestion on any street which reduces the level of service below Level "D" as described in the 1985 Highway Capacity Manual published by the Transportation Research Board of the National Research Council, a copy of which manual is on file with the public works authority, or substantially increase congestion on any street which is already at a level of service below Level "D";

Status: The applicant has conducted the requested Safety Analysis and I continue to review and coordinate with City staff. I will provide comments in the future.

Status: The City will be implementing traffic signal improvements that would be expected to mitigate crash patterns. No further action is required.

- Existing trip generation from the site was based upon on a single traffic count sample performed in January 2017. I would suggest that updated counts be performed to confirm existing trip levels inclusive of any changes since 2017 and to increase sample size.

Status: The applicant conducted intersection turning movement counts at the Fore River Parkway/Mercy Hospital Driveways on Wednesday November 6, 2019 from 7:00am to 9:00am and 4:00pm to 6:00pm. The following table summarizes total entering and exiting peak hour volumes both in November 2019 and January 2017, trips expected from the new expansion and allowable trips from the 2002 MaineDOT Traffic Movement Permit. As noted, the proposed project appears to be compliant with the TMP. I would note that I am surprised with the low trip generation for the current site and I will be investigating this in the future. I would note that both driveways are projected to operate at an acceptable level of service and no congestion is expected.

	AM Peak Hour			PM Peak Hour		
	Enter	Exit	Total	Enter	Exit	Total
November 6, 2019	224	46	270	48	184	232
January 7, 2017	185	53	238	64	173	237
New Trips from Expansion	137	38	175	57	123	180
Total Trips Following Expansion	361	84	445	105	307	412
MaineDOT TMP Trip Bank	598	186	784	222	465	687

Status: As noted in my previous comment, the existing site is generating significantly less traffic than what would be estimated using either the method developed in 2001 or current ITE Trip Generation rates. It is unclear why the site is generating less traffic and I would like to determine factors that are contributing to this. Is the current hospital not fully operational? And does this correlate to less employees and patients. I would request that the applicant provide a response with supporting documentation on site operations and factors that may be resulting in lower trip generation rates.

If you have any questions, please contact me.

Best regards,

Thomas A. Errico, PE
Senior Associate
Traffic Engineering Director
T·Y·LIN INTERNATIONAL
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+1.207.781.4721 main
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thomas.errico@tylin.com
Visit us online at www.tylin.com
Twitter | Facebook | LinkedIn | Instagram

Planning and Urban Development Department
Planning Division

Subject: Contract Zone Design Review – 175 Fore River Parkway (Mercy)

Written by: Caitlin Cameron, Urban Designer

Date of Review: Tuesday, January 14 2020

The revised materials for the expansion project at 175 Fore River Parkway for the Mercy Fore River Campus was reviewed according to the *City of Portland Design Manual* standards by Caitlin Cameron, Urban Designer, Matt Grooms, Senior Planner, and Andrew Tufts, Planner against the standards of the *Conditional Zoning Agreement* and *Private Development Restrictions.*

Design Review Comments*:*
Conditional Zoning Agreement

Architectural Design: *. . . The scale, texture, colors, and massing of the buildings shall be coordinated. The full range of high-quality, permanent, and traditional or contemporary building materials and technology may be incorporated in a manner so that the development as a whole embodies distinguishing attributes that achieve the developer's desired degree of excellence and are in conformance with the architectural guidelines provided in any private development restrictions. Particular emphasis shall be placed on the appearance of building facades from public streets and highways including the CONNECTOR, from driveway and parking areas, and from other nearby buildings.*

- Hospital Addition: No additional comments – building addition meets the standards.
- ASC: Staff find the building to be coordinated in the scale, texture, colors, and massing. With regards to the treatment of the roof mechanical systems – **the screening proposed will better relate this building to the architecture of the hospital building (in particular, the architectural cap) and creating a more visually coordinated campus from the Fore River Parkway experience.**

Signs: *Signage shall be focused internally to the site or to the CONNECTOR and shall not be oriented or scaled to address Route 1 or Interstate 295, with the exception of the hospital and major office buildings. . . . Signs shall be designed in proportion and character with the building facades. All signs shall be constructed of permanent materials and shall be coordinated with the building and landscaping design through the use of appropriate materials and finishes.*

- Hospital: **The third building sign was removed from consideration.**
  The proposed sign on the Fore River Parkway façade appears unchanged – there is an issue of hierarchy with multiple signs on the same façade. The signs are large and occupying a disproportionate amount of the façade without a relationship to the architectural features of the building (the façade proportions, the fenestration, the articulation/banding elements). The applicant is requested to make the case to the Planning Board how this proposal meets the standard regarding being "designed in proportion and character with the building facades."

- ASC: These signs are appropriately oriented to Fore River Parkway and the entrance road. However, the signage is too large in proportion to the façade on which it appears. The applicant is requested to make the case to the Planning Board how this proposal meets the standard regarding being "designed in proportion and character with the building facades." Otherwise, the staff recommendation is to decrease the scale of the sign to be in proportion to the building façade on which it appears.

Building Development Restrictions

2. Design Goals and Objectives

The overall objective . . . is to create a medical services oriented campus consisting of an integrated assemblage of buildings of varying sizes and functions coordinated with the associated site improvements. New development shall be designed and constructed to be functionally cohesive and aesthetically consistent with Phase I development and the surrounding community.

Building Development

In general, buildings should be oriented to the pedestrian realm and located to facilitate pedestrian movement and access between them, creating significant exterior spaces and strengthening intra-campus relations. Buildings within the campus should share common architectural elements consistent with Phase I development to reinforce a unified campus appearance. This is to be achieved as follows:

A. Building Orientation and Form
B. Scale
C. Massing/Composition
D. Materials and Color
E. Exterior Components
F. Mechanical Appurtenances

- Hospital Addition: No additional comments – building addition meets the standards.
- ASC: The building design was found to meet the standards. Staff are most concerned about the rooftop mechanical systems which are quite substantial. The elevations show that these appurtenances are tall and large in scale in proportion to the two-story building. In previous comments, staff felt the enclosure and design of these appurtenances are not well integrated into the overall building design and raise concern about the visibility of these systems from long views to the building/campus. **The applicant is providing renderings showing two options – with a screen cap and without. The applicant argues that adding the screening is costly and brings attention to the rooftop whereas leaving the units unscreened is less visible. Staff conclude from the provided materials that the screening unifies the roof components and creates a design that is better coordinated with the hospital building and overall campus aesthetic (at least from the Fore River Parkway view).**
- **To better determine the impact from the public ways, provide a rendering that shows the rooftop of the ASC from the Western Prom at a location where there is a clearing (shown below) showing how visible the building and rooftop is from the prom.**


Blaise's Euro Pro Shop
Maine Central Railroad Building
Sprinkler Systems
Google

e.

Portland Maine Yes. Google's good here.

Matthew Grooms <mgrooms@portlandmaine.gov>

Mercy Expansion

Jeff Tarling <jst@portlandmaine.gov> Tue, Jan 21, 2020 at 6:43 PM
To: Matthew Grooms <mgrooms@portlandmaine.gov>

Hi Matt -

In review of the trees & landscape plans for the proposed Mercy Hospital Expansion project would like to offer the following comments and suggestions:

The existing Mercy Hospital campus landscape has been successful due to good planning and careful maintenance that reflects both the goal of the facility and that as a gateway to Portland. The overall campus plan helps achieve that goal for future expansion phases. In addition to meeting campus plan and City standards, the known health benefits of 'greenery', trees, shrubs etc. should be a major goal for all healthcare facilities along with the important environmental factors.

The tree & landscape recommendations offered fall into the following categories:

a) Existing trees & vegetation - Areas shown as 'Exist. Veg. to Remain' should be checked for the types of vegetation. Invasive plants, noted by the State of Maine should be removed, and native trees and vegetation protected during construction. This can be a condition for the pre-construction phase before site work begins.

b) Low Maintenance areas around should be planted with native vegetation, especially around the pond, to support habitat and meet the overall tree & landscape goals. In addition to seeding this area, native trees and shrub groups should be included to give the site a natural feel. The new trees shown as NEW 12-GB near the Phase 2 site could be grouped together and made to appear as a natural setting. This recommendation is not meant to re-forest the site but to result in the site to feel like it existed in a natural setting.

This feature could be a benefit to future patients, staff and visitors to the Mercy Campus. There are good examples for this type of setting. Recommending adding these plant groupings that would be planted in smaller plant sizes then the typical standard to allow the plants to adapt the site and at a reasonable cost.

http://lweanerassociates.com/?portfolio-category=meadows-natural-areas

c) Street & Parking Lot trees / landscape - Following the success of Mercy Phase 1, the proposed expansion should continue the existing landscape scale. This helps with wayfinding and creating a 'sense of place' that the original project established. Parking lots should meet the guidelines for tree and landscape density. Street-trees: many of the original Fore River Parkway trees near Phase 1 were lost after grade changes likely added more water to the drainage swale along the Parkway. Options would be to replace the regular spacing of trees perhaps set back from the low point along the road or to plant a few groves of trees along the campus edge of the parkway. This would be similar to examples like at UNUM along Congress Street.

Thanks

Jeff

Jeff Tarling
City Arborist - City of Portland Maine
Parks, Recreation & Facilities Department
Forestry & Horticulture
212 Canco Road
Portland, ME. 04103
(207) 808-5446
jst@portlandmaine.gov

f.

UNION STATION PLAZA

MMC PARKING GARAGE (UNDER CONSTRUCTION 2019)

FERGUSON SUPPLY

EXISTING PERIMETER ACCESS ROAD

PAN AM RAILWAY

TYSON FOODS

COUNTY WAY

CUMBERLAND COUNTY JAIL

BIKE RACK

STAFF PARKING

PHASE 2 PROPOSED ASC BUILDING FOOTPRINT 17,574 GSF TOTAL AREA 34,987 GSF

PATIENT / VISITOR PARKING

PHASE 2 HOSPITAL EXPANSION FOOTPRINT 20,140 GSF TOTAL AREA 54,889 GSF

PHASE 1 EXISTING MERCY HOSPITAL 4 STORY BRICK BUILDING FOOTPRINT - 37,566 GSF TOTAL AREA - 138,099 GSF

PHASE 1 EXISTING MEDICAL OFFICE BUILDING 1 STORY BRICK FOOTPRINT - 20,047 GSF TOTAL AREA - 62,186 GSF

STAFF / PATIENT PARKING

add crosswalk??

loss of shoulder and bike enhancements?

RRFB

I would pedestrians to cross here and not take the longer route noted. Add crosswalk?

signalize or other enhancement??

on road bike enhancements?

stamped crosswalk condition?

EXISTING PUSH BUTTON FLASHING PEDESTRIAN CROSSING

FUTURE METRO BUS STOP

NATURE PATH

EX. FORE RIVER TRAIL - 10' WIDE, SHARED USE

EXISTING OVERLOOK WITH BENCHES

FORE RIVER MUD FLATS

MAINTENANCE FACILITY

EXISTING SNOW STORAGE FACILITY

SOUTH OPEN SPACE

VETERANS MEMORIAL BRIDGE (FORE RIVER) U.S. ROUTE ONE

NORTH OPEN SPACE

FUTURE PEDESTRIAN CONNECTION PENDING METRO

EXISTING OVERLOOKS WITH BENCHES

FUTURE PEDESTRIAN CONNECTION

TYPICAL STAFF / PEDESTRIAN ACCESS ROUTE TO / FROM PARKING TO BUILDINGS

TYPICAL ACCESS ROUTES TO OPEN SPACE

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES & CD PRICING AND SHALL NOT BE USED FOR CONSTRUCTION.

NORTH

GRAPHIC SCALE

75 0 37.5 75 150

(IN FEET)
1 inch = 75 ft.

STATE OF MAINE STEPHEN R. BUSHEY 11.22.19 LICENSED PROFESSIONAL ENGINEER

STEPHEN R. BUSHEY, P.E.
LIC. #7429

Rev.	Date	Revision
1	11.04.19	PREPARED FOR L.O.R. #1 & SUBMITTED TO CITY

Issued For	Date	By
CONSTRUCTION DOCUMENTS FOR PRICING ONLY	11.22.19	SRB
PERMIT APPROVAL SUBMISSION	08.30.19	SRB
DESIGN DEVELOPMENT SUBMISSION TO OWNER	07.31.19	SRB

Design: SRB | Draft: CDD | Date: AUG. 2019
Checked: SRB | Scale: NTS | Job No.: 3257.04
File Name: 325704--MASTER PLAN.dwg

This plan shall not be modified without written permission from Gorrill Palmer Consulting Engineers, Inc.(GP). Any alterations, authorized or otherwise, shall be at the user's sole risk and without liability to GP.

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Drawing Name: Master Plan – Pedestrian Access Routes
Project: Fore River Campus Consolidation, Portland, Maine
Client: Northern Light Mercy Hospital, 144 State Street, Portland, Maine 04101

Drawing No. FIG. 5

U:\3257.04_Mercy Hospital_Expansion_DD_Permits\STANTEC\civil\cadd\permit\dwg\325704--MASTER PLAN.dwg 12/19/2019 3:13 PM

GORRILL PALMER

707 Sable Oaks Drive, Suite 30
South Portland, Maine 04106
207.772.2515

August 23, 2019

Ms. Christine Grimando
Planning and Development Department
City of Portland, Maine
389 Congress Street
Portland, Maine 04101-3509

Subject: Application for Level III Site Plan Application
Northern Light℠ Mercy Hospital – Fore River Campus Consolidation

Dear Christine:

On behalf of **Mercy Hospital dba Northern Light℠ Mercy Hospital** (Applicant), our office is pleased to provide the uploaded submission materials for a Level III Site Plan Application. This submission package is intended to meet the City's Level III Site Plan Submission requirements as outlined in the Level III Site Plan Checklist as well as Section 14-526 of the Code of Ordinances.

PROJECT OVERVIEW

Northern Light℠ Mercy Hospital is proposing to develop their Phase 2 Hospital expansion on the Fore River development site with construction to begin in early 2020, pending City Site Plan approval and building permits from now thru the end of the year. The site is currently in the Mercy Hospital Contract Zone District. The site is identified in the City's Assessors Maps as follows:

Tax Map	Block/Lot
73	A-1 B-2 (MUD FLATS) B-7
74	A-1 A-2 B-3 (MUD FLATS) B-11 B-12
74A	A-1 (MUD FLATS) A-2 (MUD FLATS)
75	A-3 B-4 B-30 (MUD FLATS)
75A	A-1 (MUD FLATS) A-17
76	B-33 B-1 (MUD FLATS) B-2

The current development plan includes the following uses:

- The Phase 2 Hospital expansion wherein all State Street hospital functions are relocated to the Fore River campus. This will include an additional 54,889 SF of Hospital program area over a 20,140 SF building expansion footprint. The hospital expansion will include Emergency Room services, thus a new parking area with 19 spaces designated for emergency room patient and visitors will be provided to the north side of the expansion. Additional parking for up to 8 ambulances will also be provided and designated entries for both patient drop off and ambulance drop off/pick up to the emergency room have been depicted on the site plan. This Hospital expansion was contemplated back in 2006 at the time of the original Phase 1 site plan review and its positioning is in keeping with the plans reviewed and approved at that time.

- The front entry drive past the existing main Hospital entrance will be extended between the existing Hospital, proposed expansion and the existing Medical Office thus connecting the front of the Hospital to the parking lot to the north side of the MOB. This one-way drive will provide access to the expansion and the MOB.

- A 34,987 SF Ambulatory Surgical Center (ASC) will be established within the former borrow pit that will be partially filled. The two-story building will be accessed from a new driveway off the signalized southerly site entrance. Building access will also include staff parking and entry at the rear of the building. The ASC positioning will keep its visibility somewhat muted given the location and higher building height of the existing hospital in the foreground and the much larger new MMC 2,500-space parking garage in the background. The ASC positioning is intended to allow for possible future building development within the center of the property whereby additional Hospital expansion and/or medical office space opportunities can be realized based on the direct proximity to the existing hospital building. Additionally, the ASC is positioned for convenient access off the southerly, signalized site entrance off the Fore River Parkway and also for ease of utility connectivity to the existing utilities that are located along the site's rear perimeter, nearest the railroad tracks.

- Accessory uses, including but not limited to, surface parking facilities, ASC utility services, stormwater management systems, and site amenities are also part of the current proposal. A new parking lot containing 103 parking spaces will be provided on the north end of the ASC site and this parking is expected to replace the displaced parking due to the expansion. An additional parking lot of 73 spaces will be provided on the south side of the ASC and this lot will be designated specifically for ASC use. The total onsite parking available will be 857 spaces, which will exceed the required by code parking requirement of 679 spaces. The expected parking demand for the site upon completion of the Hospital expansion and the ASC is met with the 857 spaces as that provides for a "practical capacity" factor of around 25%. A parking demand study at the Fore River campus completed by Gorrill Palmer in January 2017, determined the parking demand to be about 525 vehicles using the 762 existing spaces. Mercy anticipates the proposed parking will adequately meet proposed demand and this will preclude the need for any further parking expansion or structured parking conditions;

- There will be continued use of public open space along the waterfront at the north and south ends of the Campus and access to the Fore River Trail along the Parkway as well as pedestrian walks throughout the campus.

- Continued use of the south end of the campus for snow storage and/or remote parking.

- Metro Route 1 Congress Street Bus service currently serves the site and this will continue until METRO implements currently planned changes to their service routes. There is an existing bus shelter located on the site that will remain in the interim. We have met with Greg Jordan of Metro and we understand they are currently evaluating route changes and updates that might include two directional routes along the Fore River Parkway. We have also discussed the implementation of new bus stops along the Parkway in front of the site, to replace the current Route – Congress Street circuit that goes through the site. Mercy will continue to work with Metro and City officials on the updates to Metro service for this site over the upcoming months.

CLOSURE

As outlined in the Level III Site Plan submission requirements and checklist, we will upload the following materials:

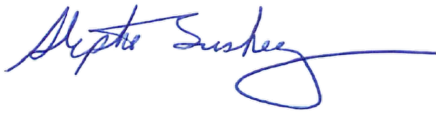
- General Application Documents
    - Project Description
    - Level III Application Checklist
    - Right, Title and Interest
    - Zoning Assessment
    - Existing and/or Proposed Easements
    - Waiver Request and Waiver Table
    - Financial Capacity
    - Technical Capability
- Transportation
    - Transportation Narrative
    - Traffic Assessment
- Environmental and Landscape Features
    - Narrative to Address Standards
- Environmental and Stormwater
    - Narrative to Address Standards
- Public Infrastructure and Safety
    - Narrative to Address Standards
- Site Design
    - Narrative to Address Standards
- Construction Management Plan
- Site Plans and Architectural Plans

On behalf of the Northern Light℠ Mercy Hospital, we look forward to your continued assistance on the project and we look forward to the next available workshop meeting with the Planning Board. As is required, once we complete the Planning Board workshop, the applicant will be conducting a Neighborhood Meeting. We anticipate this meeting will be conducted prior to the Public Hearing. We also note that we will be filing an amendment application with the Maine Department of Environmental Protection and the US Army Corp of Engineers related to the changes in the development design since the last permit issuance in 2013.

If you have any questions regarding the materials being submitted, please contact this office.

Sincerely,

GORRILL-PALMER



Stephen Bushey, PE
Senior Associate
Phone: 207-772-2515 x286
sbushey@gorrillpalmer.com

Attachments

c: Nick Munro, Northern Light℠ Mercy Hospital
Ed Gilman, Northern Light℠ Mercy Hospital
Kristen Damuth, SMRT

U:\3257.04_Mercy Hospital_Expansion_DD_Permits\P Applications\Local\Level III site plan\sub_level3_sp_20190821_final.docx

Attachment B.

CITY OF PORTLAND
Planning & Urban Development Department

LEVEL II and LEVEL III SITE PLAN
GENERAL DOCUMENT AND DRAWINGS CHECKLIST
Please submit each document as a separate PDF file
Please confirm by electronically checking the boxes to the left

** PLEASE FILL OUT AND UPLOAD SEPARATELY THE ZONING TABLE AND WAIVER TABLE AS NOTED BELOW **

GENERAL APPLICATION DOCUMENTS	
Yes ☑ NA ☐	**Project Description** • Cover Letter with detailed project description
Yes ☑ NA ☐	**Completed Checklist – Level I: Site Alteration** (this document)
Yes ☑ NA ☐	**Right, Title and Interest** • Deeds, leases, or purchase and sales agreements
Yes ☑ NA ☐	**Evidence of State or Federal Approvals** • Permits or letters of non-jurisdiction, if applicable
Yes ☑ NA ☐	**Zoning Assessment** • Table listing required and proposed uses and dimensional standards Zoning Assessment Table
Yes ☑ NA ☐	**Existing and/or Proposed Easements or Covenants, applicable.** • Evidence of existing easements and any proposed easements
Yes ☑ NA ☐	**Waiver Requests** • Written request for waiver describing request and reason Waiver Table
Yes ☑ NA ☐	**Financial Capability** • Letter or evidence from a financial institution or third party verifying financial capacity to undertake project
Yes ☑ NA ☐	**Technical Capability** • Evidence of technical capability of applicant and consultants – resumes and/or examples of past projects

LEVEL II AND LEVEL III SITE PLAN
STANDARDS AND SUBMISSION CHECKLIST

Provide assessment of compliance with standards and include supplemental documentation, as applicable
Please Submit each document as a separate PDF file

TRANSPORTATION

Yes	NA	
☑	☐	**Transportation Analysis- Traffic Impact (14-526 (a) 1)** • Provisions for pedestrian, bicycle, vehicle, and loading circulation and incremental volume of traffic impacts • Traffic Impact Study (Technical Manual, Section 1) if applicable
☑	☐	**Access and Circulation (14-526 (a) 2 a)** • Access and internal circulation, addressing ADA access • Access and egress impacts on traffic flows • Description and use of drive-up features, if applicable
☑	☐	**Loading and Servicing (14-526 (a) 2 b)** • Loading and servicing needs, route and travel way geometrics for deliveries • Turning templates for delivery vehicles, if applicable
☑	☐	**Sidewalks (14-526 (a) 2 c)** • Sidewalks and condition along street frontages and internal walkways • Engineered details for ADA ramps and public sidewalk details meeting sidewalk materials policy and ADA ramp construction details as applicable (Technical Manual, Section 1)
☑	☐	**Public Transit (14-526 (a) 3), if applicable** • Existing available transit services • Proposed site plan design details, such as easement, pad base, and shelter
☑	☐	**Off-Street Parking: Vehicle & Motorcycle/Scooter) (14-526 (a) 4 a and c)** • Expected parking demand, proposed parking supply, ADA parking, and applicable Zoning Requirements • Address Technical Manual standards (Section 1) for curb cut separation and parking lot layout and locate on site plan
☑	☐	**Bicycle Parking (14-526 (a) 4 b)** • Address bicycle parking requirements and identify locations on-site • Construction details for bike racks (Technical Manual, Section 1)
☑	☐	**Snow Storage (14-526 (a) 4 d)** • Management plan for snow removal and locate snow storage areas on plan
☑	☐	**Traffic Demand Management (TDM) (14-526 (a) 5), if applicable** • Develop TDM with Trip Reduction Targets and Strategies

ENVIRONMENTAL AND LANDSCAPE FEATURES	
Yes ☐ NA ☑	**Preservation of Significant Natural Features (14-526 (b) 1), if applicable** • Trees, plants, habitats listed on State or Federal list of endangered or threatened • High and moderate value waterfowl and wading habitat • Aquifers on Casco Bay Islands • Waterbodies (including wetlands, watercourses, significant vernal pools and floodplains) • Proposed preservation areas and protection measures • Documentation from environmental consultants, determinations from applicable state agencies
Yes ☑ NA ☐	**Landscaping and Landscape Preservation (14-526 (b) 2 a)** • Preservation of trees and preservation within required zoning setbacks (Technical Manual, Section 4) • Protection measures of existing vegetation during construction • Protection measures within Shoreland Zone, if applicable
Yes ☑ NA ☐	**Site Landscaping (14-526 (b) 2 b)** • Screening and buffering of service areas and between non-residential and residential uses • Planting plans with plant schedule and sizes (Technical Manual, Section 4)
Yes ☑ NA ☐	**Parking Lot Landscaping (14-526 (b) 2 b ii), if applicable** • Landscaped islands within parking areas (Technical Manual, Section 4)
Yes ☑ NA ☐	**Street Trees (14-526 (b) 2 b iii)** • Existing Heritage or Feature Trees on site and measures to preserve • Identify street trees on the plan meeting the site plan and Technical Manual standards (Section 4) or identify alternative measures, if applicable
ENVIRONMENTAL AND STORMWATER	
Yes ☑ NA ☐	**Water Quality, Stormwater Management and Erosion Control (14-526 (b)3 a)** • Stormwater report in compliance with Section 5 of Technical Manual and DEP Chapter 500 stormwater for basic, general and flooding standards, as applicable • Erosion control plan and measures • Evidence of compliance with Urban Impaired Stream Standards pursuant to DEP Chapter 500 stormwater, as applicable • Subsurface sanitary sewage disposal and groundwater protection

PUBLIC INFRASTRUCTURE AND SAFETY	
Yes ☑ NA ☐	**Consistency with City Master Plans (14-526 (c) 1)** • Identify consistency with master plans • Proposed easements, rights and improvements to connect or continue off-premises public infrastructure, as applicable
Yes ☑ NA ☐	**Public Safety and Fire Prevention (14-526 (c))** • Address Crime Prevention through Environmental Design (CPTED) (Technical Manual, Section 3) • Emergency vehicle access • Address consistency with public safety standards (Technical Manual, Section 3) • Submit a code summary referring NFPA 1 and all Fire Department standards (Technical Manual, Section 3) – Fire Checklist
Yes ☑ NA ☐	**Availability and Adequacy of Public Utilities (14-526 (c) 3) (Technical Manual, Sections 2 & 9)** • Electrical services, including providing underground services • Identify existing and proposed connections for public utilities and required public utility upgrades • Sewer line connections are required, if there is a main within 200 feet • Proposed solid waste management facilities on-site and management for the site • Written evidence of the ability to serve from utility companies, as applicable
SITE DESIGN	
Yes ☑ NA ☐	**Massing, Ventilations and Wind Impact (14-526 (d) 1)** • Wind and ventilation impacts on adjoining structures and/or adjacent public spaces. Wind study, if applicable • Bulk, location or height impacts on adjoining structures • Identify and locate HVAC equipment and venting away from public spaces and residential properties • Identify screening and manufacturing specifications for noise, if applicable
Yes ☑ NA ☐	**Shadows (14-526 (d) 2), if applicable** • Shadow analysis of impacts on publicly accessible open space (Technical Manual, Section 11)
Yes ☑ NA ☐	**Snow and Ice Loading (14-526 (d) 3)** • Building design to prevent snow and ice from loading or falling onto adjacent properties or public ways
Yes ☑ NA ☐	**View Corridors (14-526 (d) 4), if applicable** • Protection of designated view corridors (Portland Design Manual, Appen. 1)

Yes ☐ NA ☑	**Historic Resources (14-526 (d) 5), if applicable** • Identify developments within Historic Districts or affecting Designated Landmarks • Certificate of Appropriateness or other evidence • Identify Developments within 100 feet of Historic Districts or affecting Designated Landmarks. Advisory HP review may be required • Address preservation and documentation of Archaeological Resources
Yes ☑ NA ☐	**Exterior Lighting (14-526 (d) 6)** • Cut sheets of on-site light fixtures and any architectural or specialty lights (Technical Manual, Section 12) • Engineered details for any lights proposed in street right-of-way (Technical Manual, Section 10)
Yes ☑ NA ☐	**Noise and Vibration (14-526 (d) 7)** • Evidence of noise levels for equipment, such as equipment specifications, to demonstrate consistency with zoning requirements
Yes ☑ NA ☐	**Signage and Wayfinding (14-526 (d) 8), if applicable** • Signage plan showing the location, dimensions, height and setback of all existing and proposed signs. Signs in Historic Districts are reviewed by Historic Preservation staff • Proposed commercial and directional signage on site
Yes ☑ NA ☐	**Zone Related Design Standards (14-526 (d) 5)** • Address Historic Preservation Design Review, if applicable • Address any applicable design review standards by zone • Address submission requirements from Design Manual, page 1, addressing neighborhood context • Description of exterior materials, color, finish, and samples
Construction Management Plan	
Yes ☑ NA ☐	**Construction Management Plan** • Construction Management Document and Plan

LEVEL II AND LEVEL III SITE PLAN
DRAWINGS CHECKLIST

Please upload the following DRAWINGS with the listed details into e-Plan as separate pdfs

RECENT BOUNDARY SURVEY (stamped by Maine Licensed Surveyor)

- [x] Must be in compliance with Technical Manual, Section 13

SITE PLAN(s) (stamped by Maine Licensed Engineer) including:

Existing Conditions

- [x] Approximate location of structures on abutting property
- [x] Topography
- [x] Locate water courses
- [ ] Delineate wetlands
- [x] Zone lines

Proposed Site Plan

- [x] Ground floor area, and grade elevations for all buildings

Access, Circulation, and Parking

- [x] Streets and intersections adjacent to site, any proposed geometric modifications
- [x] Location, dimensions and materials of all existing and proposed driveways, vehicle, bicycle, & pedestrian access ways with corresponding curb lines
- [x] Engineered specifications/ cross-sections for proposed driveways, sidewalks & paved areas
- [x] Location and dimensions of proposed loading areas
- [x] Existing and proposed transit infrastructure with dimensions/ engineering specifications
- [x] Location of vehicle and bicycle parking with dimensions and engineering specifications

Site Considerations

- ☑ Identify snow storage areas
- ☑ Location of fire hydrants
- ☑ Location of solid waste management facilities

UTILITY PLAN including:

- ☑ Existing utilities on site and within public streets
- ☑ Location, sizing and directional flows of all existing and proposed utilities
- ☑ Location and dimensions of off-premises public or publicly accessible infrastructure adjacent to site
- ☑ Electric utility infrastructure

GRADING AND DRAINAGE PLAN including:

- ☑ Existing grades and drainage
- ☑ Proposed grades
- ☑ Proposed stormwater management meeting Technical Manual (Section 5), standards
- ☑ Location and proposed alteration of a water course
- ☑ Preservation or alteration of wetlands

EROSION CONTROL

- ☑ Must be in compliance with Technical Manual, Section 5

LANDSCAPE PLAN including:

- ☑ Existing vegetation to be preserved and preservation measures
- ☑ Proposed landscaping and buffers
- ☑ Planting schedule

RECORDING PLAT, if applicable
☐ If Subdivision, must be in compliance with requirements of Section 14-496 (b)
ARCHITECTURAL PLANS AND RENDERINGS including:
☑ Exterior building elevations, color renderings, illustrations of all sides
☑ Location and dimensions of all existing and proposed HVAC and mechanical equipment, all proposed screening
☑ Provide context drawings, if applicable (Design Manual, page 1)
☑ Floor plans

GENERAL APPLICATION DOCUMENTS

RIGHT, TITLE & INTEREST

Northern Light Mercy Hospital owns the property as evidenced in the accompanying deeds. Mercy currently is entered into a lease agreement with HCRI Fore River Medical Facilities LLC as they own the medical office building. Mercy has also previously transferred approximately 1.48 acres of land to the Maine Department of Transportation for the construction of the Fore River Parkway and the Veterans Memorial Bridge. The purchase deeds held by Mercy Hospital are included at the end of this section.

EASEMENT DEED

The **STATE OF MAINE**, by its Department of Transportation, with offices in Augusta, Maine ("Grantor"), for consideration paid, grants to **MERCY HOSPITAL**, a Maine non-profit corporation with a mailing address of 144 State Street, Portland, Maine 04101-3795 ("Grantee"), its successors and assigns, for the benefit of and appurtenant to certain lots or parcels of land, situated in the City of Portland, County of Cumberland and State of Maine, as described in a deed from Merrill Industries, Inc. to Mercy Hospital dated October 9, 2002 and recorded in the Cumberland County Registry of Deeds in Book 18203, Page 128 and in a deed from Portland Terminal Company to Mercy Hospital dated June 26, 2002 and recorded in said Registry of Deeds in Book 17783, Page 289 (collectively "Grantee's Property"), an easement, in common with the Grantor herein, located in the City of Portland, County of Cumberland and State of Maine, and more particularly bounded and described as follows:

This Easement shall include the perpetual right to flow water through drainage structures, including, but not limited to, storm sewer outlet pipes, catch basins, and outlet ditches ("Drainage Structures") installed or to be installed by Grantor, under or adjacent to State Highway "10" as shown on a plan entitled "Right-of-Way Map, State Highway "10", City of Portland, Federal Aid Project No. TCSP-7589 (200)X, (PIN 007589.20), dated September 2002" as revised on file in the office of the Department of Transportation, (D.O.T. File No. 3-483) to be recorded in the Cumberland County Registry of Deeds ("Right of Way Map"), together with the perpetual right to flow water under and across State Highway "10" and to connect to and use any and all Drainage Structures installed by Grantor, whether located inside or outside the bounds of State Highway "10", for the purpose of flowing water from Grantee's Property located easterly of said State Highway "10" to Grantee's Property located westerly of said State Highway "10", in the locations shown generally on the Right of Way Map as follows:

Type	**Location**	**Direction of Flow**
Storm Sewer Outlet Pipe	Sta. 1+010.4 to Sta. 1+082 (approximately)	Northwesterly

That portion of the Storm Sewer Outlet Pipe located between Station 1+010.4 (approximately) and Station 1+026.2 (approximately) is located on a portion of Grantee's Property and is to be used in common between the Grantor and Grantee.

Storm Sewer Outlet Pipe	Sta. 1+360.5 to Sta. 1+392 (approximately)	Northwesterly
Storm Sewer Outlet Pipe	Sta. 1+528.0 to Sta. 1.534.7 Rt.	Southwesterly

Those portions of the Storm Sewer Outlet Pipe located between Station 1+528.0 and Station 1+534.7 and lying easterly of and westerly of said State Highway "10" are located on a portion of Grantee's Property and are to be used in common between the Grantor and Grantee.

Being a portion of the premises described in the Notice of Layout and Taking dated November 11, 2002 and recorded in the Cumberland County Registry of Deeds in Book 19154, Page 155.

The STATE OF MAINE has caused this instrument to be signed by David A. Cole, Commissioner of the Department of Transportation, thereunto duly authorized, this 5 day of January 2005.

Signed, sealed and delivered
in the presence of

Cheryl C Martin-Hunt

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

By: David A. Cole
Its Commissioner

STATE OF MAINE
KENNEBEC, SS.

January 5, 2005

Personally appeared the above-named David A. Cole, Commissioner, Department of Transportation, and acknowledged this instrument to be his free act and deed and the free act and deed of the State of Maine.

SEAL

Cheryl C Martin-Hunt
Notary Public
Printed Name:
My commission expires:

CHERYL C. MARTIN-HUNT
Notary Public State of Maine
My commission expires December 5, 2010

Received
Recorded Register of Deeds
Jan 27,2005 09:30:35A
Cumberland County
John B OBrien

[W0208832.14]

DECLARATION OF COVENANTS AND RESTRICTIONS

THIS DECLARATION OF COVENANTS AND RESTRICTIONS is made this 29th day of October, 2007, by Mercy Hospital, a nonprofit corporation having a place of business located in the City of Portland, County of Cumberland, State of Maine (herein referred to as the "Declarant"), pursuant to State of Maine Department of Environmental Protection (hereinafter "DEP") Permit Numbers L-20775-19-A-N and L-20775-TG-B-N, dated June 26, 2002, and recorded in Book 17869, Page 165 at the Cumberland County Registry of Deeds (hereinafter referred to as the "Order"), relating to preservation of land near the Fore River in the City of Portland, State of Maine.

RECITALS

WHEREAS, Declarant holds title to certain real property situated in Portland, Maine pursuant to a deed from Portland Terminal Company dated June 26, 2002, and recorded in Book 17783, Page 289 at the Cumberland County Registry of Deeds, and a deed from Merrill Industries, Inc., dated October 9, 2002 and recorded in Book 18203, Page 128 at said Registry of Deeds (the "Hospital Premises"); and

WHEREAS, Declarant desires to place certain deed covenants, under the terms and conditions herein, over a portion of the Hospital Premises (such portion being hereinafter referred to as the "Covenant Area"), which Covenant Area is described in Exhibit A attached hereto.

WHEREAS, pursuant to the Natural Resources Protection Act, Title 38 M.R.S.A. Section 480-A et seq. and Chapter 310 of regulations promulgated by the DEP (the "Wetland Protection Rules"), Declarant has agreed, in satisfaction of Condition 7 of the Order, to impose certain covenants and restrictions on the Covenant Area as more particularly set forth herein and has agreed that such covenants and agreements may be enforced by the DEP or any successor in interest.

NOW, THEREFORE, Declarant hereby declares that the Covenant Area is and shall forever be held, transferred, sold, conveyed, occupied, and maintained subject to the covenants, conditions, and restrictions set forth in Section 1 below (sometimes referred to as the "Covenants and Restrictions"). The Covenants and Restrictions shall run with the Covenant Area and shall be binding on all parties having any right, title, and interest in and to the Covenant Area, or any portion thereof, and their heirs, personal representatives, successors, and assigns. Any present or future owner or occupant of the Covenant Area or any portion thereof, by the acceptance of a deed of conveyance of all or part of the Covenant Area or an instrument conveying any interest

therein, whether or not the deed or instrument shall so express, shall be deemed to have accepted the Covenant Area subject to the Covenants and Restrictions and shall agree to be bound by, to comply with, and to be subject to each and every one of the Covenants and Restrictions hereinafter set forth.

1. Restrictions on Covenant Area. Unless the Declarant of the Covenant Area, or its successors or assigns, obtains the prior written approval of the DEP (or any successor thereof), and with the exception of normal maintenance activities that can be performed by hand and will disturb minimal amounts of vegetation, the Covenant Area shall remain undeveloped in perpetuity. In furtherance of such restriction, the following specific covenants and restrictions shall apply to the Covenant Area:

a. no snow, soil, loam, peat, sand, gravel, concrete, rock, or other mineral substance, refuse, trash, vehicle bodies or parts, rubbish, debris, junk waste, pollutants, or other fill material will be placed, stored, or dumped on the Covenant Area and the surface waters contained thereon, nor shall the topography of the area be altered or manipulated in any way other than by forces of nature;

b. no trees, grasses, shrubs, vines, or other vegetation shall be cut, destroyed, or sprayed with biocides, except that (i) de minimis flower picking shall be allowed, (ii) pruning will be allowed solely to maintain a clear pathway on any path or trail, and (iii) dead wood that is leaning, fallen, or presents a safety hazard may be removed;

c. no ditches shall be dug in the Covenant Area and, other than by forces of nature, no draining of the Covenant Area shall take place, no pumping or any other removal of water shall occur on the Covenant Area, and no manipulation or alteration of natural water courses or hydrology within the Covenant Area shall be permitted;

d. no building, sign, fence, utility pole, or other temporary or permanent structure will be constructed, placed, or permitted to remain on the Covenant Area;

e. no trucks, cars, dirt bikes, ATVs, bulldozers, backhoes, or other motorized vehicles or mechanical equipment shall be permitted on the Covenant Area; and

Any activity on or use of the Covenant Area inconsistent with the purpose of these Covenants and Restrictions is prohibited. Prior to undertaking any changes in the use of the Covenant Area, the Declarant, its successors and assigns, shall consult with the DEP regarding the proposed changes to determine the effect of such changes on the conservation values of the Covenant Area. The DEP shall have the right to approve such changes in use if such uses do not impair or impede the conservation values of the Covenant Area or the purpose of the Covenants and Restrictions.

2. Enforcement. The DEP may enforce any of the Covenants and Restrictions set forth in Section 1 above. Any future alterations of the Covenant Area must receive the prior approval in writing from the DEP, except as expressly permitted in Section 1 above.

3. Binding Effect. The restrictions set forth herein shall be binding on the Declarant and any future owner of the Covenant Area. If the Covenant Area is at any time owned by more than one owner, each owner shall be bound by the foregoing restrictions but only to the extent that any of the Covenant Area is included within such owner's property.

4. Amendment. Any provision contained in this Declaration may be amended or revoked only by the recording of a written instrument or instruments specifying the amendment or the revocation signed by the owner or owners of the Covenant Area and by the DEP (or any successor thereto).

5. Effective Provisions of Declaration. Each provision of this Declaration, and any agreement, promise, covenant, and undertaking to comply with each provision of this Declaration, shall be deemed a covenant running with the land as a burden and upon the title to the Covenant Area.

6. Severability. Invalidity or unenforceability of any provision of this Declaration in whole or in part shall not affect the validity of enforceability of any other provision or any valid and enforceable part of a provision of this Declaration.

7. Governing Law. This Declaration shall be governed by and interpreted in accordance with the laws of the State of Maine.

MERCY HOSPITAL

Eileen F. Skinner

By: Eileen F. Skinner
Its: President + CEO

STATE OF MAINE
COUNTY OF CUMBERLAND, ss. Oct. 29, 2007.

Personally appeared before me the above-named Eileen F. Skinner, the President + CEO of MERCY HOSPITAL, and acknowledged the foregoing instrument to be ~~his~~/her free act and deed in ~~his~~/her said capacity and the free act and deed of said MERCY HOSPITAL.

Notary Public/Attorney at Law
ROBIN R. POULIN
Notary Public, Maine
My Commission Expires December 3, 2011

SEAL

EXHIBIT A

A certain lot or parcel of land situated northerly of the Blue Star Memorial Highway (Route #1) at the Veteran's Memorial Bridge on the Fore River in the City of Portland, County of Cumberland and State of Maine being bounded and described as follows:

Commencing at a rod marking a point 50.00 feet westerly of and at right angles to the center line of the main track marking a P.C. Station of 23 + 11.35 feet as shown on right of way and track map Portland Terminal Company dated June 30, 1916 revised March 1938 filed in the Portland terminal Company in V1-D over 1-A; said rod being approximately 675' northerly of the northerly right of way line of said Route #1;

Thence N 10° 46' 21" W a distance of 482.85 feet;

Thence S 72° 51' 08" W a distance of 85.07 feet to the Point of Beginning;

Thence "around" the existing pond the following courses and distances:

N 89° 17' 49" W a distance of 116.96 feet;
N 39° 59' 46" W a distance of 95.00 feet;
S 80° 40' 20" W a distance of 21.19 feet;
S 00° 22' 56" W a distance of 95.58 feet;
S 87° 47' 32" W a distance of 102.76 feet;
N 41° 04' 07" W a distance of 120.83 feet;
N 28° 32' 57" W a distance of 70.16 feet;
N 30° 50' 33" E a distance of 133.22 feet;
N 10° 00' 00" W a distance of 106.88 feet;
N 00° 17' 29" W a distance of 84.15 feet;
N 33° 50' 55" E a distance of 123.07 feet;
N 36° 10' 32" E a distance of 122.79 feet;
N 47° 34' 00" E a distance of 79.71 feet;
S 24° 04' 28" E a distance of 53.73 feet;
S 43° 06' 20" W a distance of 30.94 feet;
S 10° 39' 58" W a distance of 27.92 feet;
S 37° 32' 39" W a distance of 89.47 feet;
S 43° 38' 51" E a distance of 131.58 feet;
S 4° 06' 45" W a distance of 40.93 feet;
S 25° 54' 26" E a distance of 85.51 feet;
S 15° 10' 22" E a distance of 207.96 feet;
N 77° 01' 33" E a distance of 42.02 feet;
S 41° 28' 05" E a distance of 27.22 feet;
S 10° 00' 00" E a distance of 27.30 feet;

S 16° 46' 44" W a distance of 64.05 feet to the point of beginning, containing 3.52 acres, more or less.

Reference is made to a plan entitled "Wetland Compensation Area off I-295 Connector, Portland, Maine made for Mercy Hospital," dated September 27, 2007, by Owen Haskell, Inc.

Received
Recorded Register of Deeds
Nov 02,2007 01:40:55P
Cumberland County
Pamela E. Lovley

RECREATIONAL TRAIL EASEMENT

MERCY HOSPITAL, a nonprofit corporation located in the City of Portland, County of Cumberland, and the State of Maine (hereinafter referred to as "Grantor"), GRANTS, as a gift to PORTLAND TRAILS, a Maine nonprofit corporation (hereinafter referred to as "Holder"), in perpetuity, the following described Recreational Trail Easement (hereinafter referred to as "Easement"), over the "Property" as more fully described below.

Recitals

A. Grantor owns a parcel of land located along the Fore River in the City of Portland, State of Maine, as more particularly described in **Exhibit A** attached hereto and made a part hereof (the "Property").

B. In order to comply with the requirements of Paragraph 6 of the Contract Zone Agreement Between City of Portland and Mercy Hospital and Mercy Health System of Maine (hereinafter referred to as the "Contract Zone Agreement"), Grantor has agreed to grant Holder an Easement in perpetuity over the pedestrian paths and bicycle paths on the Property.

C. This Easement is established pursuant to Title 33 Maine Revised Statutes Annotated Section 1581, et. seq.

NOW THEREFORE, Grantor establishes this Easement on, over, and across the Property as follows:

1. Recreational Purpose. This Easement is for the purpose of providing the general public the right to use certain trails on the Property for pedestrian and bicycle uses.

2. Easement. Grantor hereby grants to Holder a perpetual easement in gross, in common with Grantor and others, for pedestrian and bicycle use by the general public of those trails on the Property as particularly depicted on the "Recreational Trail Easement Plan" attached as **Exhibit B** and incorporated herein. Reserving to Grantor the right to make minor modifications to the location of the trails shown on the Recreational Trail Easement Plan, subject to the review and approval of the Holder and provided that Grantor shall be obligated to obtain all necessary permits and approval for such modifications.

3. Signage. Grantor shall install and maintain trail signs directing the general public to the trail location provided for by this Easement. Such signage shall be of a type, number and location approved by Holder.

4. Rules.

(a) With respect to the Easement granted herein, use by the general public shall be limited to daylight hours only and use by the general public shall be limited to recreational activities only.

(b) This Easement does not permit the general public or anyone other than Grantor to use the Easement for commercial, political or any other non-recreational activities on the Property, including, without limitation, soliciting, demonstrating or picketing, even if such activities are conducted simultaneously with, or as part of an otherwise permitted recreational activity and Holder acknowledges and agrees that Grantor may take action to prohibit such activities on the Property without additional consent of Holder.

(c) Grantor reserves the right to establish additional rules from time to time regarding the use of all such trails, which rules are subject to the review and prior written approval of the Holder. Grantor reserves the right to prohibit animals from some or all of the trails subject to this Easement.

(d) Either Grantor or Holder may enforce these rules, but Holder shall have no obligation to enforce these rules. Both Grantor and Holder acknowledge that this Easement is established for public use of the trails, on foot or by bicycle without charge, and Grantor and Holder agree to take no action to prohibit, discourage or charge a fee for public access to and use of the trails during daylight hours, except in compliance with the terms of this Easement.

5. Grantor acknowledges and agrees that it shall be responsible for obtaining all necessary permits or consents from the City of Portland for any amendment to this Easement and for any relocation of the trails shown on the Recreational Trail Easement Plan.

6. Holder, or its duly authorized agents, shall have the right to access the trails shown on the Recreational Trail Easement Plan by foot or by vehicle for the purpose of monitoring or inspecting said trails. The Grantor, its successors and assigns, shall be responsible for any and all costs associated with ownership, control, operation, maintenance, and upkeep of the trails.

7. The parties acknowledge and agree that this Easement is for "recreational activities" as such term is defined in 14 M.R.S.A. § 159-A(1)(B) and that Grantor and Holder shall be entitled to the liability protection set forth in such statute.

8. In the event the Holder shall cease to exist or shall cease to be willing or able to hold this Easement, then Holder shall assign this Easement to either (a) an entity that is a publicly supported, non-profit 501(c) (3) organization with a substantially similar purpose as Holder, which entity must be approved by the City of Portland, Maine or (b) the City of Portland, Maine.

9. Upon a written request from Holder, Grantor shall grant to Holder an additional easement to extend that portion of the trail located in the "North Open Space" on the Recreational Trail

Easement Plan from the "End Of Trail" in a northerly or northwesterly direction (as designated by Holder) to the boundary of the Property. The purpose of such extension will be to connect such trail to another trail located outside of the Property, and such extension of the easement will be subject to all other terms and conditions set forth herein.

10. The failure or delay of the Holder, for any reason whatsoever, to do any action required or contemplated hereunder, or to discover a violation or initiate an action to enforce this Easement shall not constitute a waiver, laches, or estoppel of its rights to do so at a later time.

11. Only Holder and Grantor may bring an action to enforce this grant, and nothing herein should be construed to grant any other individual or entity standing to bring an action hereunder, unless otherwise provided by law.

12. The interpretation and performance of this Easement shall be governed by the laws of the State of Maine. Except with respect to Section 4(b), which shall be liberally construed in favor of Grantor's right to prohibit non-recreational activities on the Property (a) any general rule of construction to the contrary notwithstanding, this Easement shall be liberally construed in favor of the grant to effect the recreational purpose of this Easement; and (b) if any provision in this instrument is found to be ambiguous, an interpretation consistent with the recreational purposes of this Easement shall govern.

IN WITNESS WHEREOF, MERCY HOSPITAL, has caused these presents to be signed and sealed in its corporate name by Eileen F. Skinner, its President, hereunto duly authorized, this 28th day of February 2008.

Signed, sealed, and delivered in
the presence of:

Witness

MERCY HOSPITAL

By: _____

Its: President

Name: Eileen F. Skinner

STATE OF MAINE
COUNTY OF CUMBERLAND, ss. Date: February 28, 2008

Personally appeared the above named Eileen F. Skinner, the President of MERCY HOSPITAL, and acknowledged the foregoing instrument to be her free act and deed in said capacity, and the free act and deed of said corporation.

Before me,

Notary Public/~~Attorney at Law~~
Type or print name of notary
My commission expires:

ROBIN R. POULIN
Notary Public, Maine
My Commission Expires December 3, 2011

SEAL

EXHIBIT A

PARCEL I

A certain lot or parcel of land with buildings thereon situated on the northerly side of the Blue Star Memorial Highway (Route #1) at the Veteran's Memorial Bridge on the Fore River in the City of Portland, County of Cumberland and State of Maine as shown on a plan entitled "Land in Portland, ME. Portland Terminal Company to Mercy Hospital", Sale: 1: = 100', dated June 29, 2001, as amended to date, by Owen Haskell, Inc., which plan is recorded in the Cumberland County Registry of Deeds at Plan Book 202, Page 431 (the "Conveyancing Plan"), which lot or parcel of land is bounded and described as follows:

Commencing at a rod marking a point 50.00' westerly of and at right angles to the center line of the main track marking a P.C. Station of 23 + 11.35 as shown on right of way and track map Portland Terminal Company dated June 30, 1916 revised March 1938 filed in the Portland Terminal Company in V1-D over 1-A; Said rod being approximately 675' northerly of the northerly right of way line of said Route #1;

Thence northerly along land of Portland Terminal Company and being 50.00' westerly of the centerline of said main track, N 10° 46' 19" W a distance of 482.85' to a rod opposite station 18 + 28.50;

Thence continuing along land of Portland Terminal Company and being 50.00' westerly of the centerline of said main track N 10° 57' 07" W a distance of 290.08' to a rod opposite station 15 + 38.42;

Thence continuing along land of Portland Terminal Company N 9° 29' 00" W a distance of 197.09' to a rod marking the westerly right of way line for the existing spur track and being 33.00' westerly and opposite P.C. Station 2 + 00.64' as shown on said railroad plan;

Thence continuing along land of Portland Terminal Company and being along said right of way line of said spur track along a curve to the left whose radius is 922.37', an arc distance of 185.63' to a rod on the westerly edge of a paved drive, said rod being found on a chord of N 22° 33' 26" W a distance of 185.32' and said rod being the Point of Beginning;

Thence continuing along land of Portland Terminal Company and following the westerly edge of said paved drive S 9° 2' 42" W a distance 110.67' to a rod';

Thence continuing along land of Portland Terminal Company on the following courses:

N 78° 59' 25" W a distance of 42.80' to a rod;

S 10° 55' 38" E a distance of 580.68' to a rod, said rod being 160.00' westerly of and at right angles to the centerline of the main track opposite said Station 18 + 28.50';

S 78° 59' 25" W a distance of 446.63 feet to a tie point;

Continuing S 78° 59' 25" W a distance of 133' ± to the easterly bank of the Fore River and continuing to the approximate low water line a total distance of 1165' ±;

Thence northerly, northwesterly, westerly, northeasterly and southwesterly following the approximate low water line a distance of 2550' ± to the easterly right of way line of Route 295;

Thence N 17° 19' 15" E along said right of way line 760' ±;

Thence N 50° 25' 55" E along said right of way line 176.00 feet;

Thence easterly along said right of way line and along a curve to the left whose radius is 375.00', an arc distance of 7.14' to a point and the southwesterly right of way line for the existing spur track and land of Portland Terminal Company, said point being found on a chord of S 84° 55' 24" E a distance of 7.14';

Thence S 54° 28' 52" E along land of Portland Terminal Company 116.36';

Thence southeasterly along said land and a curve to the left whose radius is 988.44' an arc distance of 283.21 to a tie point, said tie point being located the following courses and distance from the aforementioned tie point:

N 36° 35' 47" W 23.62';
N 36° 20' 10" W 1202.64';
N 41° 38' 20" W 452.20 and said tie point being found on a chord of
S 62° 42' 17" E a distance of 282.24';

Thence continuing southeasterly and easterly along said land and a curve to the left whose radius is 988.37' an arc distance of 247.17' to a point said point being found on a chord of S 78° 04' 38" E a distance of 246.53';

Thence S 85° 15' 29" E along said land 439.84';

Thence continuing southeasterly along said land and a curve whose radius is 922.37', an arc distance of 1102.20' to the Point of Beginning, said point being found on a chord of S 51° 01' 30" E, 1037.78'.

Above courses are grid north.

Meaning and intending to describe that certain parcel of land identified as the "Portland

Terminal Parcel" on the Conveyancing Plan.

PARCEL II

A certain lot or parcel of land with buildings thereon situated on the northerly side of the Blue Star Memorial Highway (Route #1) at the Veteran's Memorial Bridge on the Fore River in the City of Portland, County of Cumberland and State of Maine as shown on a plan entitled "Land in Portland, ME. Portland Terminal Company to Mercy Hospital", Sale: 1: = 100', dated June 29, 2001, as amended, by Owen Haskell, Inc., which plan is recorded in the Cumberland County Registry of Deeds at Plan Book 202, Page 431 (the "Conveyancing Plan"), which lot or parcel of land is bounded and described as follows:

Beginning at a rod marking a point 50.00' westerly of and at right angles to the center line of the main track marking a P.C. Station of 23 + 11.35 as shown on right of way and track map Portland Terminal Company dated June 30, 1916 revised March 1938 filed in the Portland Terminal Company in V1-D over 1-A; Said rod being approximately 675' northerly of the northerly right of way line of said Route #1;

Thence northerly along land of Portland Terminal Company and being 50.00' westerly of the centerline of said main track, N 10° 46' 19" W a distance of 482.85' to a rod opposite station 18 + 28.50;

Thence continuing along land of Portland Terminal Company and being 50.00' westerly of the centerline of said main track N 10° 57' 07" W a distance of 290.08' to a rod opposite station 15 + 38.42;

Thence continuing along land of Portland Terminal Company N 9° 29' 00" W a distance of 197.09' to a rod marking the westerly right of way line for the existing spur track and being 33.00' westerly and opposite P.C. Station 2 + 00.64' as shown on said railroad plan;

Thence continuing along land of Portland Terminal Company and being along said right of way line of said spur track along a curve to the left whose radius is 922.37', an arc distance of 185.63' to a rod on the westerly edge of a paved drive, said rod being found on a chord of N 22° 33' 26" W a distance of 185.32';

Thence continuing along land of Mercy Hospital described in that certain deed given by Portland Terminal Company dated June 26, 2002 and recorded in the Cumberland County Registry of Deeds in Book 17783, Page 289, shown on the Conveyancing Plan as the "Portland Terminal Parcel" and following the westerly edge of said paved drive S 9° 2' 42" W a distance 110.67' to a rod;

Thence continuing along said land of Mercy Hospital on the following courses:

N 78° 59' 25" W a distance of 42.80' to a rod;

S 10° 55' 38" E a distance of 580.68' to a rod, said rod being 160.00' westerly of and at right angles to the centerline of the main track opposite said Station 18 + 28.50';

S 78° 59' 25" W a distance of 446.63 feet to a tie point;

Continuing S 78° 59' 25" W a distance of 133' ± to the easterly bank of the Fore River and continuing to the approximate low water line a total distance of 1165' ±;

Thence along a southerly, easterly, southerly, easterly and westerly line following the approximate low water line a distance of 1800' ± to the northerly right of way line of said Route #1;

Thence by the northerly right of way line of said Route #1 N 71° 56' 20" E a distance of 455' ± to the easterly bank of said Fore River;

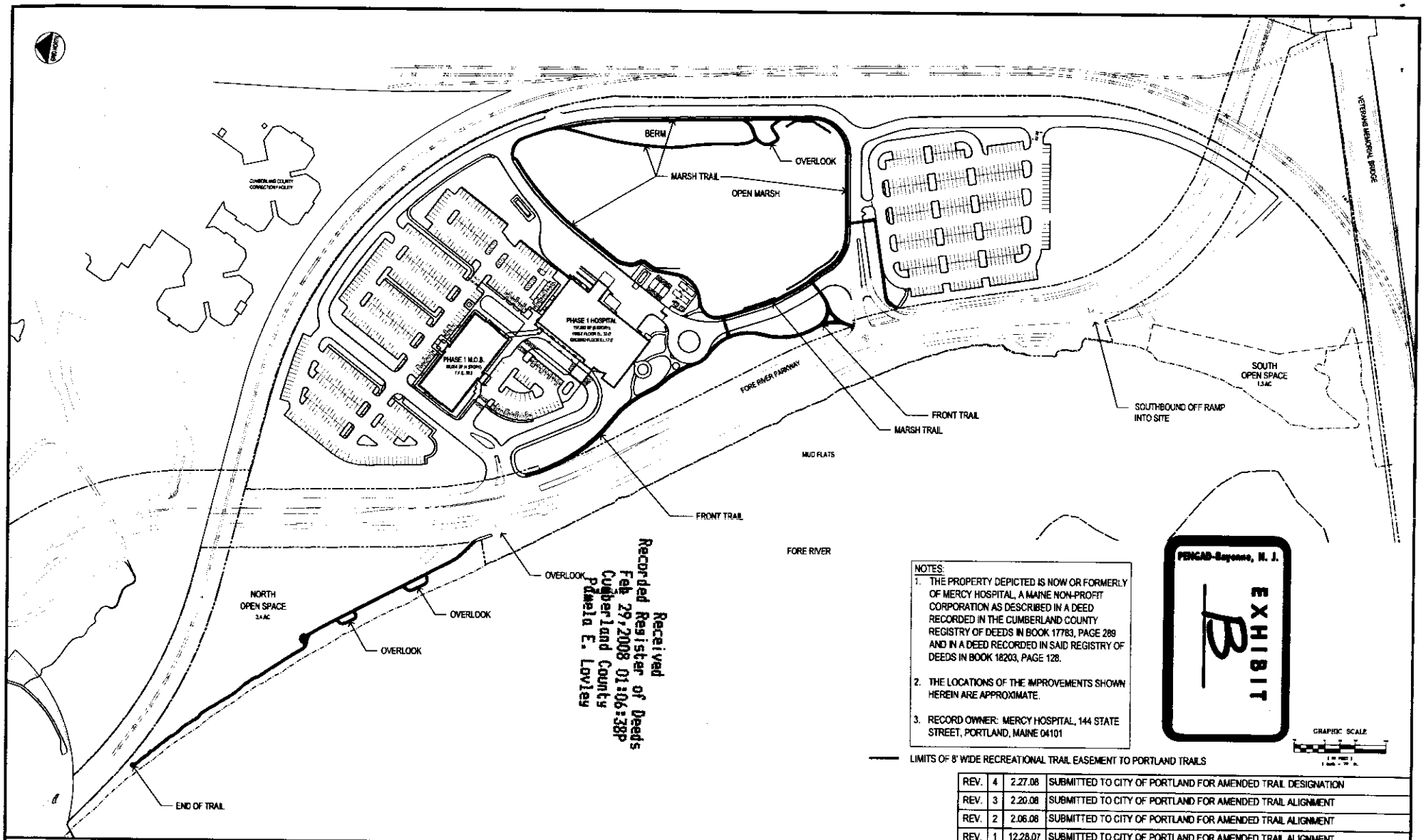
Thence continuing by said northerly right of way line of Route #1 on same course of N 71° 56' 20" E a distance of 125.37' to a tie point, said tie point being located the following courses and distances from the aforementioned tie point: S 9° 02' 28" E 1006.02 and S 16° 59' 00" W 273.21;

Thence continuing by said northerly right of way line of Route #1 on same course of N 71° 56' 20" E a distance of 244.63' to a point being 50.00' northerly of the centerline of said main track and opposite Station 32 + 86.66, at the intersection of a non-tangent curve;

Thence continuing along land of Portland Terminal Company along a curve to the left whose radius is 831.95' an arc of 920.02' whose chord is N 21° 53' 19" E 873.85 to the point of beginning.

Above courses are grid north.

Meaning and intending to describe that certain parcel of land identified as the "Merrill Parcel" on the Conveyancing Plan, and further meaning and intending to describe that certain parcel of land described in the deed of Portland Terminal Company to Merrill Industries, Inc. ("Merrill") dated July 27, 1998 and recorded in the Cumberland County Registry of Deeds at Book 14022, Page 302 (the "Merrill Deed").



Received
Recorded Register of Deeds
Feb 29,2008 01:06:38P
Cumberland County
Pamela E. Lovley

NOTES:
1. THE PROPERTY DEPICTED IS NOW OR FORMERLY OF MERCY HOSPITAL, A MAINE NON-PROFIT CORPORATION AS DESCRIBED IN A DEED RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS IN BOOK 17783, PAGE 289 AND IN A DEED RECORDED IN SAID REGISTRY OF DEEDS IN BOOK 18203, PAGE 128.
2. THE LOCATIONS OF THE IMPROVEMENTS SHOWN HEREIN ARE APPROXIMATE.
3. RECORD OWNER: MERCY HOSPITAL, 144 STATE STREET, PORTLAND, MAINE 04101

PENGAB-Bayonne, N. J.

EXHIBIT B

GRAPHIC SCALE

LIMITS OF 8' WIDE RECREATIONAL TRAIL EASEMENT TO PORTLAND TRAILS

REV.	4	2.27.08	SUBMITTED TO CITY OF PORTLAND FOR AMENDED TRAIL DESIGNATION
REV.	3	2.20.08	SUBMITTED TO CITY OF PORTLAND FOR AMENDED TRAIL ALIGNMENT
REV.	2	2.06.08	SUBMITTED TO CITY OF PORTLAND FOR AMENDED TRAIL ALIGNMENT
REV.	1	12.28.07	SUBMITTED TO CITY OF PORTLAND FOR AMENDED TRAIL ALIGNMENT

DeLuca-Hoffman Associates, Inc.
778 MAIN STREET, SUITE 8
SOUTH PORTLAND, ME 04106
207.775.1121
WWW.DELUCAHOFFMAN.COM

DRAWN:	DED	DATE:	11.20.07
DESIGNED:	-	SCALE:	AS NOTED
CHECKED:	SRB	JOB NO.	2149.01
FILE NAME:	2149.01-MP3		

MERCY HOSPITAL
FORE RIVER PROJECT

RECREATIONAL TRAIL EASEMENT PLAN

FIGURE 1

Doc#: 10512 Bk:25855 Pg: 261

FIRST AMENDMENT TO RECREATIONAL TRAIL EASEMENT

THIS FIRST AMENDMENT TO RECREATIONAL TRAIL EASEMENT (this "Amendment") is made and entered into as of this 17th day of September 2008, by and between **MERCY HOSPITAL,** a Maine nonprofit corporation located in the City of Portland, State of Maine ("Mercy"), and **PORTLAND TRAILS**, a Maine nonprofit corporation located in the City of Portland, State of Maine.

RECITALS:

A. Mercy owns certain parcel of land located along the Fore River in the City of Portland, State of Maine, as more particularly described in Exhibit A to the "Recreational Trail Easement" (defined below) (the "Mercy Property").; and

B. In connection with the development of the Mercy Property, Mercy conveyed to Portland Trails certain recreational easements over the Mercy Property, all as more particularly described in the Recreational Trail Easement, dated February 28, 2008 and recorded in the Cumberland County Registry of Deeds in Book 25855, Page 253 (the "Recreational Trail Easement"); and

C. The parties now wish to amend Exhibit B to the Recreational Trail Easement to reflect minor modifications to the locations of the trails.

NOW, THEREFORE, for valuable consideration and the covenants and agreements hereinafter set forth and in furtherance of the parties' understanding, it is agreed as follows:

1. Attached hereto as **EXHIBIT B** is an Amended and Restated Recreational Trail Easement Plan, prepared by Deluca-Hoffman Associates, Inc., dated November 20, 2007 and revised August 28, 2008 (the "Revised Recreational Trail Plan") that reflects the as-built locations of the trails on the Mercy Property. The parties agree that said Revised Recreational Trail Plan hereby replaces and supersedes the Recreational Trail Easement Plan attached to the Recreational Trail Easement as **EXHIBIT B** (the "Original Recreational Trail Plan").

2. Portland Trails hereby RELEASES to Mercy any and all easement rights it has as to the trails shown on the Original Recreational Trail Plan. Mercy hereby GRANTS to Portland Trails easements over the trails shown on the Revised Recreational Trail Plan in accordance with

the terms and conditions set forth in the Recreational Trail Easement as modified by this Amendment.

3. Except as expressly set forth in this Amendment, all other terms and conditions of the Recreational Trail Easement shall remain in full force and effect and are hereby ratified by the parties.

IN WITNESS WHEREOF, the Parties have hereunto set their hands and seals as of the date first set forth above.

WITNESS:

Diane Sanders

MERCY HOSPITAL, a Maine nonprofit corporation

By: Ellen T. Sh

Its:

Name:

Jane Violette

PORTLAND TRAILS, a Maine nonprofit corporation

By: Brent M. Bridges

Its: President

Name: Brent M. Bridges

STATE OF MAINE
COUNTY OF CUMBERLAND, s.s.

On September 18th, 2008, personally appeared the above-named Eileen F. Skinner, President+CEO of Mercy Hospital, and acknowledged the foregoing instrument to be ~~his~~ her free act and deed in ~~his~~ her said capacity and the free act and deed of Mercy Hospital.

Before me,

Notary Public/~~Attorney at Law~~
Name: _____

ROBIN R. POULIN
Notary Public, Maine
My Commission Expires December 3, 2011

SEAL

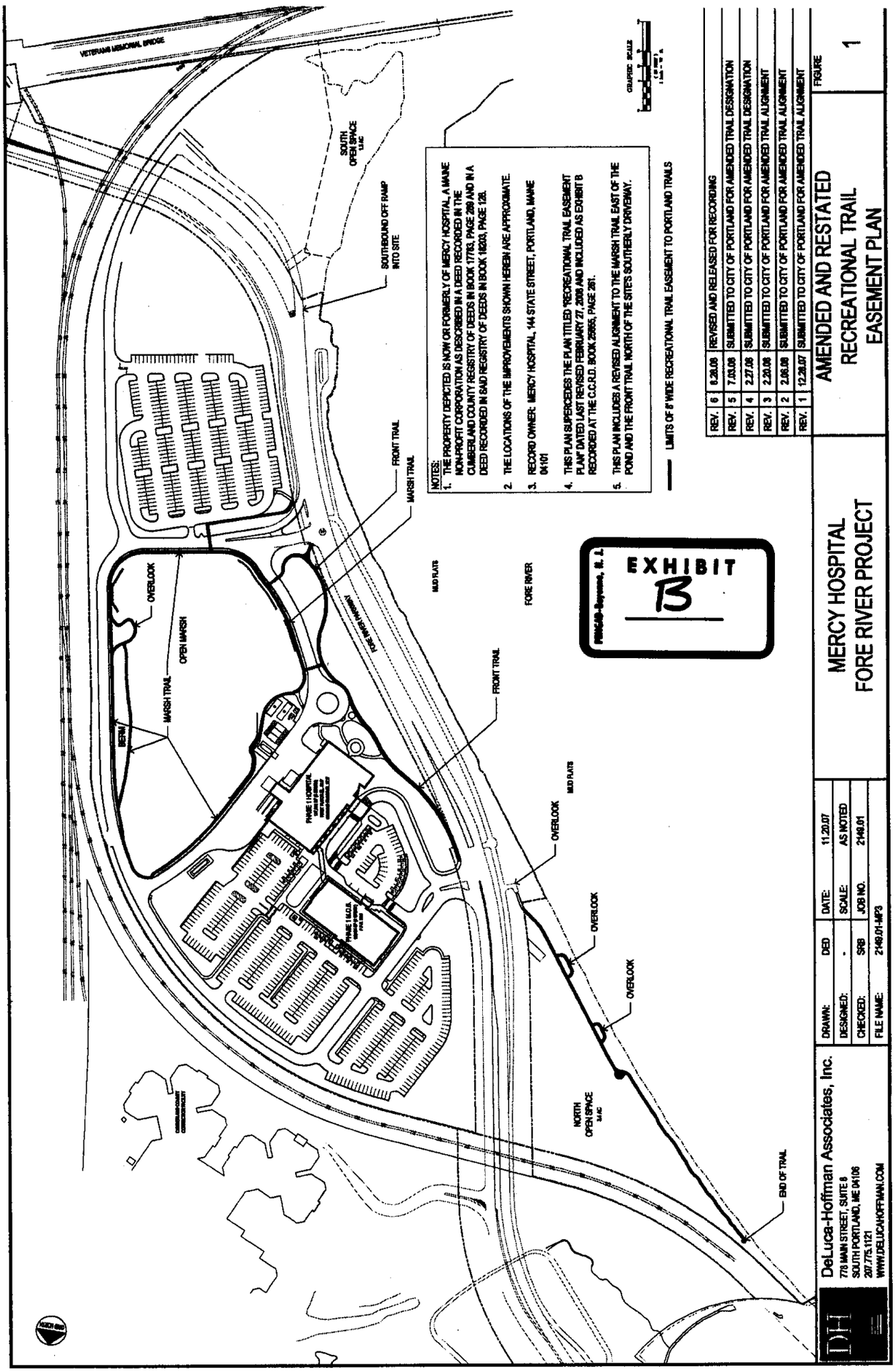
STATE OF MAINE
COUNTY OF CUMBERLAND, s.s.

On September 17, 2008, personally appeared the above-named Brent M Bridges, President of Portland Trails, and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of Portland Trails.

Before me,

Notary Public/Attorney at Law
Name: Debra A. Moriarty

DEBRA A. MORIARTY
Notary Public, Maine
My Commission Expires September 27, 2012



Received
Recorded Register of Deeds
Sep 18,2008 03:52:07P
Cumberland County
Pamela E. Lovies

Attachment D.

DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS
696 VIRGINIA ROAD
CONCORD, MASSACHUSETTS 01742-2751

REPLY TO
ATTENTION OF

RECEIVED NOV 17 2017

Regulatory Division
CENAE-RDC

David B. Van Slyke
Preti, Flaherty, Beliveau & Pachios, LLP
One City Center
Portland, Maine 04101

Dear Mr. Van Slyke:

This refers to Department of the Army permit number NAE-2012-00084, which authorized your client, Mercy Hospital, to fill approximately 3.49 acres of freshwater wetland adjacent to the Fore River at Portland, Maine in order to expand an existing hospital complex.

In accordance with your recent request, the time limit in which to complete the work authorized by the permit is hereby extended to December 31, 2022.

All other conditions of the permit remain in force and effect.

BY AUTHORITY OF THE SECRETARY OF THE ARMY:

Frank J. Del Giudice
Chief, Permits & Enforcement Branch
Regulatory Division

DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT CORPS OF ENGINEERS
696 VIRGINIA ROAD
CONCORD, MA 01742-2718

OFFICIAL BUSINESS

CENAE-R/CODE 450



David B. Van Slyke
Preti, Flaherty, Beliveau & Pachios, LLP
One City Center
Portland, Maine 04101

RECEIVED NOV 17 2017

04101-419399

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
17 STATE HOUSE STATION AUGUSTA, MAINE 04333-0017

DEPARTMENT ORDER

IN THE MATTER OF

MERCY HOSPITAL	) SITE LOCATION OF DEVELOPMENT ACT
Portland, Cumberland County	) NATURAL RESOURCES PROTECTION ACT
HOSPITAL RELOCATION	) WATER QUALITY CERTIFICATION
L-20775-19-W-B (approval)	) MINOR AMENDMENT
L-20775-TG-X-M (approval)	) FINDINGS OF FACT AND ORDER

Pursuant to the provisions of 38 M.R.S. §§ 481–489-E, §§ 480-A–480-JJ, and Section 401 of the Federal Water Pollution Control Act (33 U. S. C. § 1341), and Chapters 310, 371-376, 500, and 501 of Department rules, the Department of Environmental Protection has considered the application of MERCY HOSPITAL with the supportive data and other related materials on file and FINDS THE FOLLOWING FACTS:

1. PROJECT DESCRIPTION:

A. History: In Department Order #L-20775-19-A-N/L-20775-TG-B-N, dated June 26, 2002, the Department approved the development of a new Mercy Hospital Campus on 85.5 acres off Congress Street, adjacent to the Fore River in Portland. In Department Orders #L-20775-19-C-T, #L-20775-19-D-M, and #L-20775-TG-E-M, the Department approved the partial transfer and modification of the original Orders by the Maine Department of Transportation (MDOT) for the construction of a connector road, the Fore River Parkway, across the property. Approximately three acres of land were transferred to MDOT for the construction of the new Veteran's Bridge to South Portland. Subsequent Department Orders approved several minor modifications. In Department Order #L-20775-19-T-A/L-20775-TG-U-N, dated March 22, 2013, the Department approved the construction of Phase II of the Mercy Hospital relocation project that consists of a 116,980 square-foot hospital building expansion, a 15,000 square-foot medical office building, a detached 40,000 square-foot medical office building, a 33,800 square-foot parking garage, a 51,800 square-foot parking garage, an elevated parking deck, associated on-site traffic circulation and utility renovations, and new stormwater management structures. The Department also approved the placement of 3.49 acres of fill in a freshwater wetland under the Natural Resources Protection Act.

B. Summary: The applicant is proposing to extend start of construction for Department Order #L-20775-19-T-A/L-20775-TG-U-N an additional four years and stormwater structure amendments to meet current stormwater standards. Start of construction has been delayed due to extenuating circumstances. The Department's Chapter 2 Rule Concerning the Processing of Applications and Other Administrative Matters requires that renewal applications to extend the expiration date for projects that have not commenced construction be subject to the procedural and substantive requirements in effect at the time of acceptance of the renewal application. Therefore, in order to extend the permits, the applicant is also proposing to amend the stormwater

management plan portion of Department Order #L-20775-19-T-A to meet current standards. No change in the amount of impervious or developed area is proposed as part of these amendments. The project is shown on a set of plans, the first of which is titled "Site Development Plans for Mercy Hospital Relocation Project Amended Master Plan/Phase II Expansion", prepared by DeLuca-Hoffman Associates, and dated May 2012. Proposed changes to the stormwater management plan are shown on sheet numbers C-4.0, C-4.1, C-4.2, C-4.4, C-4.5, and C-7.4 of this plan set, with a most recent revision date on any of the sheets of October 19, 2017.

2. STORMWATER MANAGEMENT:

The applicant submitted an amended stormwater management plan to meet current Chapter 500 Department Rules. Changes to the plan include the replacement of Tree Box Filters which are no longer approved by the Department. The applicant proposes to replace the Tree Box Filters with one four-foot by eight-foot and two six-foot by 10-foot Filterra Bioretention Systems. Additionally, the applicant proposes to redesign and enlarge the sand filter originally approved to meet the current maximum storage depth standard of 18 inches. The applicant further proposes to redesign the two grassed underdrained soil filters originally approved to meet the current maximum surface area standard of 3,000 square feet. No changes to the amount of impervious or developed area are proposed.

A. Basic Standards:

No changes to this section of Department Order #L-20775-19-T-A are proposed.

B. General Standard:

The applicant's stormwater management plan includes general treatment measures that will mitigate for the increased frequency and duration of channel erosive flows due to runoff from smaller storms, provide for effective treatment of pollutants in stormwater, and mitigate potential thermal impacts. The applicant is proposing to amend the stormwater management plan to meet current General Standards requirements in Chapter 500. The amended plan replaces the previously approved Tree Box Filters with Filterra Bioretention treatment units, redesign of the sand filter to meet the maximum storage depth of 18 inches, and redesign of the grassed underdrained soil filters to meet the maximum allowable 3,000 square feet of surface area. The applicant submitted calculations demonstrating that the revised plans will treat stormwater runoff from 95% of the total impervious area and 96% of the total developed area.

The proposed amendments to the stormwater management system were reviewed by the Bureau of Land Resources (BLR). After final review, BLR commented that the amended stormwater management systems are designed in accordance with the Chapter 500 General Standard provided that the applicant's design engineer, or other qualified engineer, oversee the construction of the stormwater management structures to ensure that they are installed according to the details and notes specified on the approved plans

and provided that prior to the start of construction, the applicant submits a five-year binding inspection and maintenance contract for the Filterra Bioretention Systems to the BLR for review and approval. These contracts must be renewed before expiration. Within 30 days of completion of the entire stormwater management system or if the project takes more than one year to complete, at least once per year, the applicant must submit a log of inspection reports detailing the items inspected, photos taken, and the dates of each inspection to the BLR for review.

Based on the stormwater system's design and BLR's review, the Department finds that the applicant has made adequate provision to ensure that the proposed project will meet the General Standards contained in Chapter 500(4)(C) provided that construction of the stormwater structures is overseen and documented as described above and that the applicant submits a five-year binding inspection and maintenance contract for the Filterra Bioretention Systems to the BLR prior to the start of construction.

C. Flooding Standard:

No changes to this section of Department Order #L-20775-19-T-A are proposed.

3. WETLAND IMPACTS:

No changes to Department Order #L-20775-TG-U-N are proposed.

4. ALL OTHER:

All other findings of fact, conclusions, and conditions remain as approved in Department Order #L-20775-19-A-N/L-20775-TG-B-N, and subsequent Orders.

BASED on the above findings of fact, and subject to the conditions listed below, the Department makes the following conclusions pursuant to 38 M.R.S. §§ 480-A–480-JJ and Section 401 of the Federal Water Pollution Control Act:

A. The proposed activity will not unreasonably interfere with existing scenic, aesthetic, recreational, or navigational uses.

B. The proposed activity will not cause unreasonable erosion of soil or sediment.

C. The proposed activity will not unreasonably inhibit the natural transfer of soil from the terrestrial to the marine or freshwater environment.

D. The proposed activity will not unreasonably harm any significant wildlife habitat, freshwater wetland plant habitat, threatened or endangered plant habitat, aquatic habitat, travel corridor, freshwater, estuarine, or marine fisheries or other aquatic life.

E. The proposed activity will not unreasonably interfere with the natural flow of any surface or subsurface waters.

F. The proposed activity will not violate any state water quality law including those governing the classifications of the State's waters.

G. The proposed activity will not unreasonably cause or increase the flooding of the alteration area or adjacent properties.

H. The proposed activity is not on or adjacent to a sand dune.

I. The proposed activity is not on an outstanding river segment as noted in 38 M.R.S. Section 480-P.

BASED on the above findings of fact, and subject to the conditions listed below, the Department makes the following conclusions pursuant to 38 M.R.S. §§ 481–489-E:

A. The applicant has provided adequate evidence of financial capacity and technical ability to develop the project in a manner consistent with state environmental standards.

B. The applicant has made adequate provision for fitting the development harmoniously into the existing natural environment and the development will not adversely affect existing uses, scenic character, air quality, water quality or other natural resources in the municipality or in neighboring municipalities.

C. The proposed development will be built on soil types which are suitable to the nature of the undertaking and will not cause unreasonable erosion of soil or sediment nor inhibit the natural transfer of soil.

D. The proposed development meets the standards for storm water management in Section 420-D and the standard for erosion and sedimentation control in Section 420-C provided that construction of the stormwater structures is overseen and documented as described in Finding 2, provided that prior to the start of construction the applicant submits a five-year binding inspection and maintenance contract for the Filterra Bioretention Systems to the BLR for review and approval, and provided that the contract is renewed prior to expiration.

E. The proposed development will not pose an unreasonable risk that a discharge to a significant groundwater aquifer will occur.

F. The applicant has made adequate provision of utilities, including water supplies, sewerage facilities and solid waste disposal required for the development and the development will not have an unreasonable adverse effect on the existing or proposed utilities in the municipality or area served by those services.

G. The activity will not unreasonably cause or increase the flooding of the alteration area or adjacent properties nor create an unreasonable flood hazard to any structure.

THEREFORE, the Department APPROVES the application of MERCY HOSPITAL for a permit extension and stormwater structure amendments SUBJECT TO THE FOLLOWING CONDITIONS and all applicable standards and regulations:

1. The Standard Conditions of Approval, a copy attached.

2. In addition to any specific erosion control measures described in this or previous orders, the applicant shall take all necessary actions to ensure that its activities or those of its agents do not result in noticeable erosion of soils or fugitive dust emissions on the site during the construction and operation of the project covered by this approval.

3. Severability. The invalidity or unenforceability of any provision, or part thereof, of this License shall not affect the remainder of the provision or any other provisions. This License shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

4. The applicant shall retain the services of a professional engineer to inspect and document the installation of the Filterra Bioretention Systems according to the details and notes specified on the approved plans. Within 30 days of completion of the stormwater management system or if the project takes more than one year to complete at least once per year, the applicant shall submit a log of inspection reports detailing the items inspected, photographs taken, and dates of each inspection to the BLR for review.

5. Prior to the start of construction, the applicant shall submit a five-year binding inspection and maintenance contract for the Filterra Bioretention Systems to the BLR for review and approval, and that contract shall be renewed before expiration.

6. All other Findings of Fact, Conclusions, and Conditions remain as approved in Department Order #L-20775-19-A-N/L-20775-TG-B-N, and subsequent Orders, and are incorporated herein.

THIS APPROVAL DOES NOT CONSTITUTE OR SUBSTITUTE FOR ANY OTHER REQUIRED STATE, FEDERAL OR LOCAL APPROVALS NOR DOES IT VERIFY COMPLIANCE WITH ANY APPLICABLE SHORELAND ZONING ORDINANCES.

DONE AND DATED IN AUGUSTA, MAINE, THIS 27TH DAY OF NOVEMBER, 2017.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
For: Paul Mercer, Commissioner

Filed
NOV 27 2017
State of Maine
Board of Environmental Protection

PLEASE NOTE THE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES.

JM/L20775WBXM/ATS#81564, 82225

DEP SITE LOCATION OF DEVELOPMENT (SITE) STANDARD CONDITIONS

STRICT CONFORMANCE WITH THE STANDARD AND SPECIAL CONDITIONS OF THIS APPROVAL IS NECESSARY FOR THE PROJECT TO MEET THE STATUTORY CRITERIA FOR APPROVAL.

A. Approval of Variations from Plans. The granting of this approval is dependent upon and limited to the proposals and plans contained in the application and supporting documents submitted and affirmed to by the applicant. Any variation from these plans, proposals, and supporting documents is subject to review and approval prior to implementation. Further subdivision of proposed lots by the applicant or future owners is specifically prohibited without prior approval of the Board, and the applicant shall include deed restrictions to that effect.

B. Compliance with All Applicable Laws. The applicant shall secure and comply with all applicable federal, state, and local licenses, permits, authorizations, conditions, agreements, and orders prior to or during construction and operation, as appropriate.

C. Compliance with All Terms and Conditions of Approval. The applicant shall submit all reports and information requested by the Board or the Department demonstrating that the applicant has complied or will comply with all preconstruction terms and conditions of this approval. All preconstruction terms and conditions must be met before construction begins.

D. Advertising. Advertising relating to matters included in this application shall refer to this approval only if it notes that the approval has been granted WITH CONDITIONS, and indicates where copies of those conditions may be obtained.

E. Transfer of Development. Unless otherwise provided in this approval, the applicant shall not sell, lease, assign or otherwise transfer the development or any portion thereof without prior written approval of the Board where the purpose or consequence of the transfer is to transfer any of the obligations of the developer as incorporated in this approval. Such approval shall be granted only if the applicant or transferee demonstrates to the Board that the transferee has the technical capacity and financial ability to comply with conditions of this approval and the proposals and plans contained in the application and supporting documents submitted by the applicant.

F. Time frame for approvals. If the construction or operation of the activity is not begun within four years, this approval shall lapse and the applicant shall reapply to the Board for a new approval. The applicant may not begin construction or operation of the development until a new approval is granted. A reapplication for approval may include information submitted in the initial application by reference. This approval, if construction is begun within the four-year time frame, is valid for seven years. If construction is not completed within the seven-year time frame, the applicant must reapply for, and receive, approval prior to continuing construction.

G. Approval Included in Contract Bids. A copy of this approval must be included in or attached to all contract bid specifications for the development.

H. Approval Shown to Contractors. Work done by a contractor pursuant to this approval shall not begin before the contractor has been shown by the developer a copy of this approval.

Natural Resource Protection Act (NRPA)
Standard Conditions

THE FOLLOWING STANDARD CONDITIONS SHALL APPLY TO ALL PERMITS GRANTED UNDER THE NATURAL RESOURCE PROTECTION ACT, TITLE 38, M.R.S.A. SECTION 480-A ET.SEQ. UNLESS OTHERWISE SPECIFICALLY STATED IN THE PERMIT.

A. Approval of Variations From Plans. The granting of this permit is dependent upon and limited to the proposals and plans contained in the application and supporting documents submitted and affirmed to by the applicant. Any variation from these plans, proposals, and supporting documents is subject to review and approval prior to implementation.

B. Compliance With All Applicable Laws. The applicant shall secure and comply with all applicable federal, state, and local licenses, permits, authorizations, conditions, agreements, and orders prior to or during construction and operation, as appropriate.

C. Erosion Control. The applicant shall take all necessary measures to ensure that his activities or those of his agents do not result in measurable erosion of soils on the site during the construction and operation of the project covered by this Approval.

D. Compliance With Conditions. Should the project be found, at any time, not to be in compliance with any of the Conditions of this Approval, or should the applicant construct or operate this development in any way other the specified in the Application or Supporting Documents, as modified by the Conditions of this Approval, then the terms of this Approval shall be considered to have been violated.

E. Time frame for approvals. If construction or operation of the activity is not begun within four years, this permit shall lapse and the applicant shall reapply to the Board for a new permit. The applicant may not begin construction or operation of the activity until a new permit is granted. Reapplications for permits may include information submitted in the initial application by reference. This approval, if construction is begun within the four-year time frame, is valid for seven years. If construction is not completed within the seven-year time frame, the applicant must reapply for, and receive, approval prior to continuing construction.

F. No Construction Equipment Below High Water. No construction equipment used in the undertaking of an approved activity is allowed below the mean high water line unless otherwise specified by this permit.

G. Permit Included In Contract Bids. A copy of this permit must be included in or attached to all contract bid specifications for the approved activity.

H. Permit Shown To Contractor. Work done by a contractor pursuant to this permit shall not begin before the contractor has been shown by the applicant a copy of this permit.

DEP INFORMATION SHEET

Appealing a Department Licensing Decision

Dated: March 2012 **Contact: (207) 287-2811**

SUMMARY

There are two methods available to an aggrieved person seeking to appeal a licensing decision made by the Department of Environmental Protection's ("DEP") Commissioner: (1) in an administrative process before the Board of Environmental Protection ("Board"); or (2) in a judicial process before Maine's Superior Court. An aggrieved person seeking review of a licensing decision over which the Board had original jurisdiction may seek judicial review in Maine's Superior Court.

A judicial appeal of final action by the Commissioner or the Board regarding an application for an expedited wind energy development (35-A M.R.S.A. § 3451(4)) or a general permit for an offshore wind energy demonstration project (38 M.R.S.A. § 480-HH(1)) or a general permit for a tidal energy demonstration project (38 M.R.S.A. § 636-A) must be taken to the Supreme Judicial Court sitting as the Law Court.

This INFORMATION SHEET, in conjunction with a review of the statutory and regulatory provisions referred to herein, can help a person to understand his or her rights and obligations in filing an administrative or judicial appeal.

I. ADMINISTRATIVE APPEALS TO THE BOARD

LEGAL REFERENCES

The laws concerning the DEP's *Organization and Powers*, 38 M.R.S.A. §§ 341-D(4) & 346, the *Maine Administrative Procedure Act*, 5 M.R.S.A. § 11001, and the DEP's *Rules Concerning the Processing of Applications and Other Administrative Matters* ("Chapter 2"), 06-096 CMR 2 (April 1, 2003).

HOW LONG YOU HAVE TO SUBMIT AN APPEAL TO THE BOARD

The Board must receive a written appeal within 30 days of the date on which the Commissioner's decision was filed with the Board. Appeals filed after 30 calendar days of the date on which the Commissioner's decision was filed with the Board will be rejected.

HOW TO SUBMIT AN APPEAL TO THE BOARD

Signed original appeal documents must be sent to: Chair, Board of Environmental Protection, c/o Department of Environmental Protection, 17 State House Station, Augusta, ME 04333-0017; faxes are acceptable for purposes of meeting the deadline when followed by the Board's receipt of mailed original documents within five (5) working days. Receipt on a particular day must be by 5:00 PM at DEP's offices in Augusta; materials received after 5:00 PM are not considered received until the following day. The person appealing a licensing decision must also send the DEP's Commissioner a copy of the appeal documents and if the person appealing is not the applicant in the license proceeding at issue the applicant must also be sent a copy of the appeal documents. All of the information listed in the next section must be submitted at the time the appeal is filed. Only the extraordinary circumstances described at the end of that section will justify evidence not in the DEP's record at the time of decision being added to the record for consideration by the Board as part of an appeal.

WHAT YOUR APPEAL PAPERWORK MUST CONTAIN

Appeal materials must contain the following information at the time submitted:

1. *Aggrieved Status*. The appeal must explain how the person filing the appeal has standing to maintain an appeal. This requires an explanation of how the person filing the appeal may suffer a particularized injury as a result of the Commissioner's decision.
2. *The findings, conclusions or conditions objected to or believed to be in error.* Specific references and facts regarding the appellant's issues with the decision must be provided in the notice of appeal.
3. *The basis of the objections or challenge.* If possible, specific regulations, statutes or other facts should be referenced. This may include citing omissions of relevant requirements, and errors believed to have been made in interpretations, conclusions, and relevant requirements.
4. *The remedy sought.* This can range from reversal of the Commissioner's decision on the license or permit to changes in specific permit conditions.
5. *All the matters to be contested*. The Board will limit its consideration to those arguments specifically raised in the written notice of appeal.
6. *Request for hearing.* The Board will hear presentations on appeals at its regularly scheduled meetings, unless a public hearing on the appeal is requested and granted. A request for public hearing on an appeal must be filed as part of the notice of appeal.
7. *New or additional evidence to be offered.* The Board may allow new or additional evidence, referred to as supplemental evidence, to be considered by the Board in an appeal only when the evidence is relevant and material and that the person seeking to add information to the record can show due diligence in bringing the evidence to the DEP's attention at the earliest possible time in the licensing process or that the evidence itself is newly discovered and could not have been presented earlier in the process. Specific requirements for additional evidence are found in Chapter 2.

OTHER CONSIDERATIONS IN APPEALING A DECISION TO THE BOARD

1. *Be familiar with all relevant material in the DEP record.* A license application file is public information, subject to any applicable statutory exceptions, made easily accessible by DEP. Upon request, the DEP will make the material available during normal working hours, provide space to review the file, and provide opportunity for photocopying materials. There is a charge for copies or copying services.
2. *Be familiar with the regulations and laws under which the application was processed, and the procedural rules governing your appeal.* DEP staff will provide this information on request and answer questions regarding applicable requirements.
3. *The filing of an appeal does not operate as a stay to any decision.* If a license has been granted and it has been appealed the license normally remains in effect pending the processing of the appeal. A license holder may proceed with a project pending the outcome of an appeal but the license holder runs the risk of the decision being reversed or modified as a result of the appeal.

WHAT TO EXPECT ONCE YOU FILE A TIMELY APPEAL WITH THE BOARD

The Board will formally acknowledge receipt of an appeal, including the name of the DEP project manager assigned to the specific appeal. The notice of appeal, any materials accepted by the Board Chair as supplementary evidence, and any materials submitted in response to the appeal will be sent to Board members with a recommendation from DEP staff. Persons filing appeals and interested persons are notified in advance of the date set for Board consideration of an appeal or request for public hearing. With or without holding a public hearing, the Board may affirm, amend, or reverse a Commissioner decision or remand the matter to the Commissioner for further proceedings. The Board will notify the appellant, a license holder, and interested persons of its decision.

II. JUDICIAL APPEALS

Maine law generally allows aggrieved persons to appeal final Commissioner or Board licensing decisions to Maine's Superior Court, see 38 M.R.S.A. § 346(1); 06-096 CMR 2; 5 M.R.S.A. § 11001; & M.R. Civ. P 80C. A party's appeal must be filed with the Superior Court within 30 days of receipt of notice of the Board's or the Commissioner's decision. For any other person, an appeal must be filed within 40 days of the date the decision was rendered. Failure to file a timely appeal will result in the Board's or the Commissioner's decision becoming final.

An appeal to court of a license decision regarding an expedited wind energy development, a general permit for an offshore wind energy demonstration project, or a general permit for a tidal energy demonstration project may only be taken directly to the Maine Supreme Judicial Court. See 38 M.R.S.A. § 346(4).

Maine's Administrative Procedure Act, DEP statutes governing a particular matter, and the Maine Rules of Civil Procedure must be consulted for the substantive and procedural details applicable to judicial appeals.

ADDITIONAL INFORMATION

If you have questions or need additional information on the appeal process, for administrative appeals contact the Board's Executive Analyst at (207) 287-2452 or for judicial appeals contact the court clerk's office in which your appeal will be filed.

Note: The DEP provides this INFORMATION SHEET for general guidance only; it is not intended for use as a legal reference. Maine law governs an appellant's rights.

DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS
696 VIRGINIA ROAD
CONCORD, MASSACHUSETTS 01742-2751

REPLY TO
ATTENTION OF

Regulatory Division
CENAE-R-51
Permit Number: NAE-2012-00084

Robert F. Nutter
Mercy Hospital
144 State Street
Portland, Maine 04101

Dear Mr. Nutter:

Attached are two copies of a Department of the Army permit authorizing your project. **Please sign both copies of the permit and return one signed copy to this office at the address above.** A fee of $100.00 is required. Please enclose a check made payable to "FAO New England District", and return it with the signed permit copy. Please ensure your address and social security number, or tax identification number for businesses, are on the check. The authorized work cannot start until we receive a complete, signed copy of the permit.

You are required to complete and return the attached forms to this office:

1. Preliminary Jurisdictional Determination Form to be submitted along with your signed copy of the permit.
2. Work Start Notification Form at least two weeks before the anticipated work start date.
3. Compliance Certification Form within one month following the completion of the authorized work.

This permit is a limited authorization containing a specific set of conditions. Please read the permit thoroughly to familiarize yourself with those conditions, **including any conditions contained on the attached state water quality certification.** If a contractor does the work for you, both you and the contractor are responsible for ensuring that the work is done in compliance with the permit's terms and conditions, as any violations could result in civil or criminal penalties.

Our verification of this project's wetland delineation under the Corps of Engineers Wetlands Delineation Manual, and its applicable supplement, is valid for a period of five years from the date of this letter unless new information warrants revision of the determination before the expiration date.

A combined Notification of Administrative Appeal Options and Process (NAP) and Request for Appeal (RFA) form, and flow chart explaining the appeals process and your options, are attached to this letter. If you desire to appeal this proffered permit, you must submit a completed RFA form along with any supporting or clarifying information to Michael G.

Engineers; North Atlantic Fort Hamilton Military Community, Bldg. 301; General Lee Avenue; Brooklyn, NY 11252-6700. Contact info: (347) 370-4663 or michael.g.vissichelli@usace.army.mil.

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 CFR 331.5, and that it has been received by the Division Office within 60 days of the date of the NAP.

You may not appeal conditions contained in the State water quality certification under this program as they are automatically included in the federal permit. Also note that the Department of the Army permit process does not supersede any other agency's jurisdiction.

We continually strive to improve our customer service. In order for us to better serve you, we would appreciate your completing our Customer Service Survey located at http://per2.nwp.usace.army.mil/survey.html

If you have any questions regarding this correspondence, please contact Jay Clement at 207-623-8367 at our Manchester, Maine Project Office.

Sincerely,

Frank J. Del Giudice
Chief, Permits and Enforcement Branch
Regulatory Division

Attachments
Copy Furnished:
Tewey & Associates
P.O. Box 238
Gorham, Maine 04038

DEPARTMENT OF THE ARMY PERMIT

Permittee Mercy Hospital, 144 State Street, Portland, Maine 04101

Permit No. NAE-2012-00084

Issuing Office New England District

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

Project Description:

Fill approximately 3.49 acres of freshwater wetland in order to expand an existing hospital complex. The expansion will include the addition of 250,000 square feet of space to house the Emergency Department, an expanded Acute Care Center, hospital support services, and medical office space. The expansion will allow the applicant to consolidate the two separate facilities into one single campus.

This work is shown on the attached plans entitled, "MERCY AT THE FORE MASTER PLAN", on seven sheets, and dated "March 2001" and "07.10.12".

Project Location:

In freshwater wetlands adjacent to the Fore River at Portland, Maine

Permit Conditions:

General Conditions:

1. The time limit for completing the work authorized ends on December 31, 2017. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.

2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.

3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.

5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.

6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

Special Conditions:

1. The permittee shall ensure that a copy of this permit is at the work site (and the project office) authorized by this permit whenever work is being performed, and that all personnel with operational control of the site ensure that all appropriate personnel performing work are fully aware of its terms and conditions. The entire permit shall be made a part of any and all contracts and sub-contracts for work that affects areas of Corps jurisdiction at the site of the work authorized by this permit. This shall be achieved by including the entire permit in the specifications for work. The term "entire permit" means this permit (including its drawings, plans, appendices and other attachments) and also includes permit modifications.

(Special conditions continued on Page 4)

Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:

( ) Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).

X Section 404 of the Clean Water Act (33 U.S.C. 1344).

( ) Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

2. Limits of this authorization.

a. This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.

b. This permit does not grant any property rights or exclusive privileges.

c. This permit does not authorize any injury to the property or rights of others.

d. This permit does not authorize interference with any existing or proposed Federal project.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

d. Design or construction deficiencies associated with the permitted work.

e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

a. You fail to comply with the terms and conditions of this permit.

b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).

c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions. General condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

_____ _____

(PERMITTEE) *(DATE)*

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

for Jack Del Green 4-10-2013

(DISTRICT ENGINEER) *(DATE)*

Chief, Permits & Enforcement Branch
Regulatory Division
For District Engineer

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

_____ _____

(TRANSFEREE) *(DATE)*

☆U.S. GOVERNMENT PRINTING OFFICE: 1986 — 717-425

(Special conditions continued from Page 2)

If the permit is issued after the construction specifications, but before receipt of bids or quotes, the entire permit shall be included as an addendum to the specifications. If the permit is issued after receipt of bids or quotes, the entire permit shall be included in the contract or sub-contract. Although the permittee may assign various aspects of the work to different contractors or sub-contractors, all contractors and sub-contractors shall be obligated by contract to comply with all environmental protection provisions contained within the entire permit, and no contract or sub-contract shall require or allow unauthorized work in areas of Corps jurisdiction.

2. The permittee shall complete and return the enclosed Compliance Certification Form within one month following the completion of the authorized work.

3. Adequate sedimentation and erosion control devices, such as geo-textile silt fences or other devices capable of filtering the fines involved, shall be installed and properly maintained to minimize impacts during construction. These devices must be removed upon completion of work and stabilization of disturbed areas. The sediment collected by these devices must also be removed and placed upland, in a manner that will prevent its later erosion and transport to a waterway or wetland.

4. Except where stated otherwise, reports, drawings, correspondence and any other submittals required by this permit shall be marked with the words "Permit No. NAE-2012-00084" and shall be addressed to "Inspection Section, CENAE-R, U.S. Army Corps of Engineers, 696 Virginia Road, Concord, MA 01742-2751." Documents which are not marked and addressed in this manner may not reach their intended destination and do not comply with the requirements of this permit.

5. Mitigation shall consist of payment of $834,156.00 to the Natural Resource Mitigation Fund. The completed ILF Project Data Worksheet which must be mailed with a cashier's check or bank draft, made out to "Treasurer, State of Maine", with the permit number noted on the check. The check and worksheet should be mailed to: ME DEP, Attn: ILF Program Administrator, State House Station 17, Augusta, ME 04333. No project construction may begin until the permittee provides the Corps with a copy of the check, with the permit number noted on the check. The ILF amount is only valid for a period of one year from the date on the authorization letter. After that time, the project would need to be reevaluated and a new amount determined.

6. The introduction, spread, or the increased risk of invasion of non-native invasive plant or animal species on the project site, into new or disturbed areas, or areas adjacent to the project site caused by the site work is prohibited. Prior to being on the construction site,

Special Conditions Continued on Page 5

the contractor shall thoroughly inspect and remove seeds, plant material, soil, mud, insects, and other invertebrates on all equipment, including construction mats, to be used on the project site to prohibit introduction of invasive organisms. At a minimum, the following shall be inspected and cleaned on terrestrial vehicles where applicable:

- ***Rubber Tired Vehicles*** **- Crevices in upper surface and panels, tires, rims, and fender wells, spare tire mounting area, bumpers, front and rear quarter panels, around and behind grills, bottom of radiator vent openings, brake mechanisms, transmission, stabilizer bar, shock absorbers, front and rear axles, beds, suspension units, exhaust systems, light casings, and mirrors.**

- ***Tracked Land Vehicles*** **- Crevices in upper surface and panels, top of axles and tensioners, support rollers, between rubber or gridded areas, beneath fenders, hatches, under casings, and grills.**

- ***Interiors of All Vehicles*** **- Beneath seats, beneath floor mats, upholstery, beneath foot pedals, inside folds of gear shift cover.**

IN-LIEU-FEE (ILF) PROJECT DATA WORKSHEET

DEP Invoice # _____

[Note: Will be filled in by ILF Administrator at DEP]

Project name: Mercy Hospital Expansion

Applicant (s): Mercy Hospital

DEP Permit #: L-20775-TG-U-N; L-20775-19-T-A

Corps Permit #: NAE-2012-00084

ILF Contribution Amount $834,156.00

[Note: Please attach a copy of the check]

Project address: 192 Fore River Parkway; Portland, Maine

Biophysical region: Gulf of Maine Coastal Lowland Subsection

Size of total impact subject to compensation: 191,759 s.f. (4.41 acres)

Resources Impacted: Refer to attached table

DEP Project manager: Woodruff

Corps Project manager: Clement

Corps ILF Processing Procedure:

Within 3 days of final permit approval the Corps project manager MUST send via e-mail to the ILF Administrator at DEP with the following attachments:

1. **A Microsoft word version of this completed ILF project worksheet including the resource impact table. Please make sure that you double check the information to make sure that the worksheet is accurate and reflects the actual impacts that are stated in the permit and the correct biophysical region.**

   [Note: The DEP Invoice # section of the worksheet should be left blank and will be filled in by the ILF Program Administrator.]

2. **A copy of a location map for the project site. The map MUST be made in GIS and saved as a pdf and MUST include a call out box to physically locate the project site and enough reference information so that project site can be geo-located on the MNRCP GIS data layer.**

3. **A pdf copy of the Corps permit for the project.**

Corps permitees MUST be instructed to send all required ILF payments to the attention of the ILF Administrator Maine Department of Environmental Protection, State House Station 17, Augusta, Maine 04333. All checks must have the ILF program routing # 014.06A.1776.14 on the memo line.

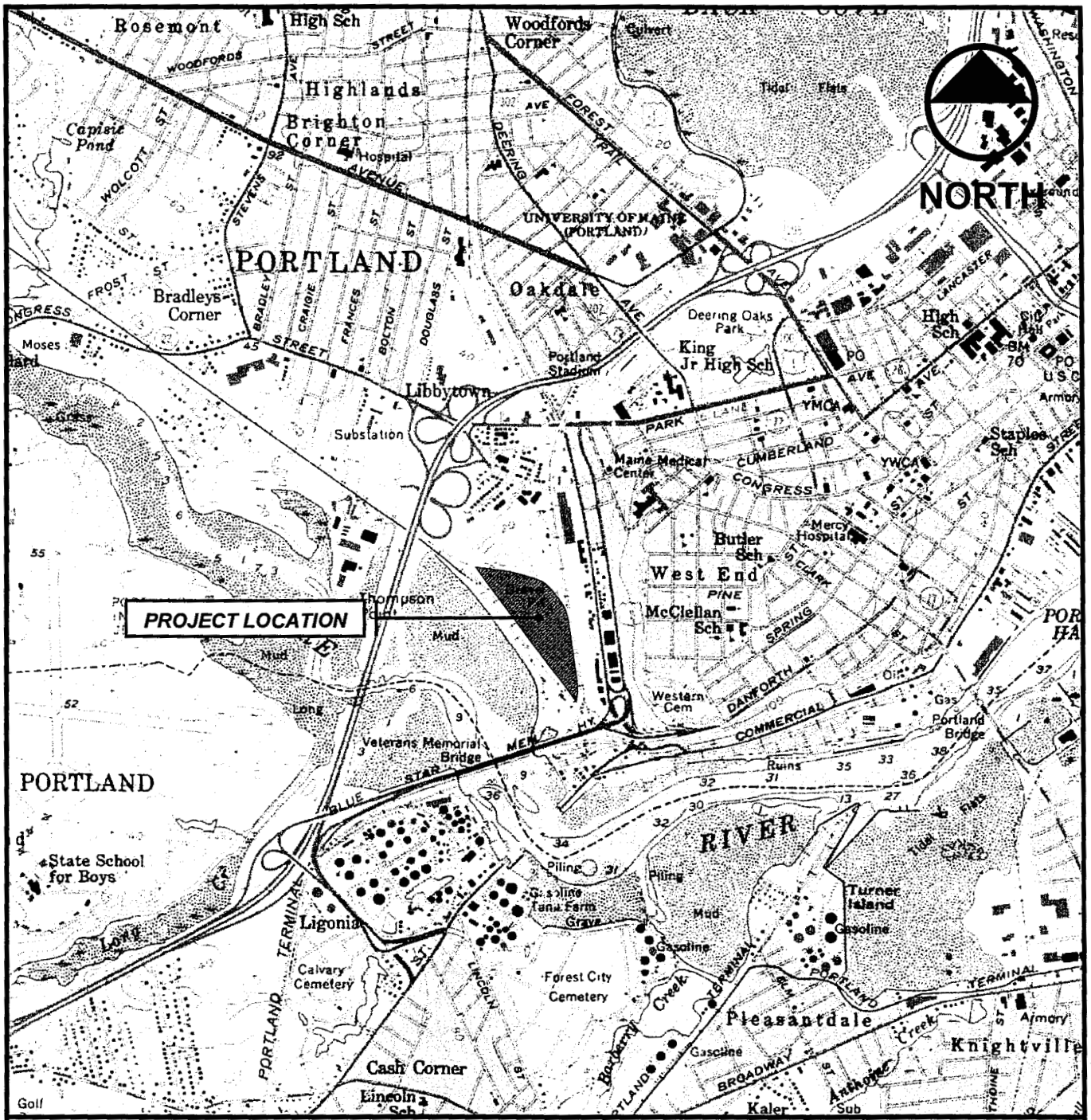
Resource(s) Impacted:

Resource Type: (Wetlands by NWI Type (PFO, PSS, M1, M2, E1, E2, etc), significant vernal pool (SVP), shorebird feeding & staging habitat (Shorebird), inland waterfowl & wading bird habitat (IWWH), tidal waterfowl & wading habitat (TWWH), and river, stream, or brook (RSB).

Wetland Functions & Values: Groundwater recharge/discharge (GWR); floodflow alterations(FF); fish & shellfish habitat (FSH); sediment toxicant retention (STR); nutrient removal (NR); production export (PE); sediment/shoreline stabilization (SS); wildlife habitat (WH); recreation (R); education/scientific value (ESV); uniqueness/heritage (UH); and visual quality/aesthetics (VQ).

Types of impacts: may include filling, dredging, vegetation conversion (e.g. forested to shrub/scrub), others.

Resource type (list all that apply)	**Functions (for wetland impacts)** (list all that apply, by resource type)	**Type of Impact** (by resource type)	**Sq Feet Impacted** (by resource type)
PUB3/4	WH, R, FSH	Filling	63,446
PFO1	GWR, NR, STR, WH, R	Filling	17,298
PSS1	GWR, NR, STR, WH, R	Filling	6,458
PEM1	GWR, NR, STR, WH, R	Filling	2,591
PSS1/PEM1	GWR, NR, STR, WH, R	Filling	10,895
PEM1/PUB3/4	WH, IWWH, SS, NR, STR	Filling	51,236
PEM1/PUB3/4	WH, IWWH, SS, NR, STR	Filling	39,835*
	*Previously authorized/mitigated. Included because its mitigation will be compromised as a result of the current proposal.		
		Total square feet impacted	191,759 s.f.



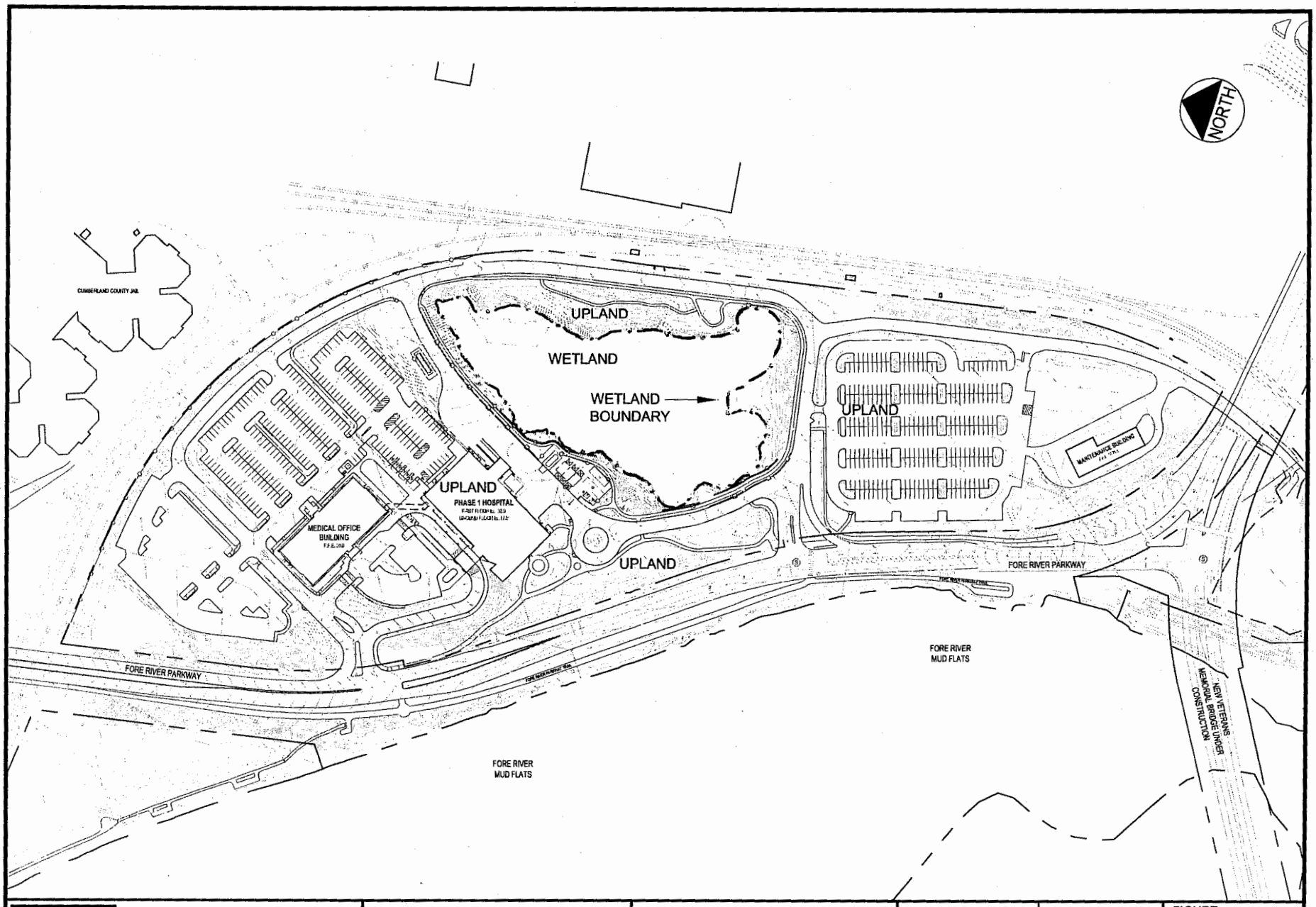
USGS TOPOGRAPHIC MAP

Mercy Health System of Maine – Portland, Maine

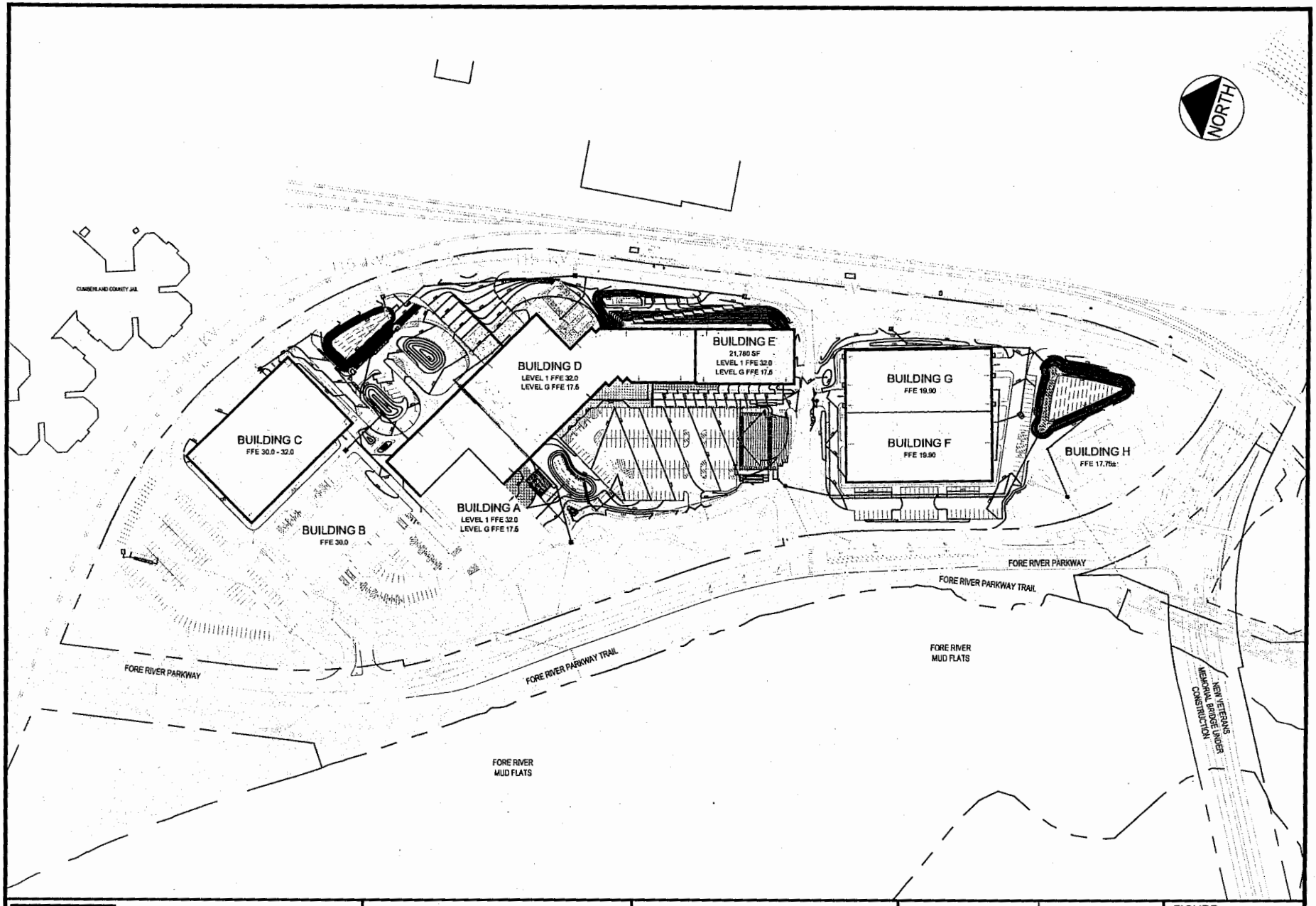
SOURCE: TOPOSCOUT; Coastal Maine CD-ROM, USGS Portland West Quadrangle, 7.5 Minute Series (Topographic)

DeLUCA-HOFFMAN ASSOCIATES, INC.
CONSULTING ENGINEERS
778 MAIN STREET, SUITE 8
SOUTH PORTLAND, MAINE 04106
TEL. 207-775-1121
FAX 207-879-0896

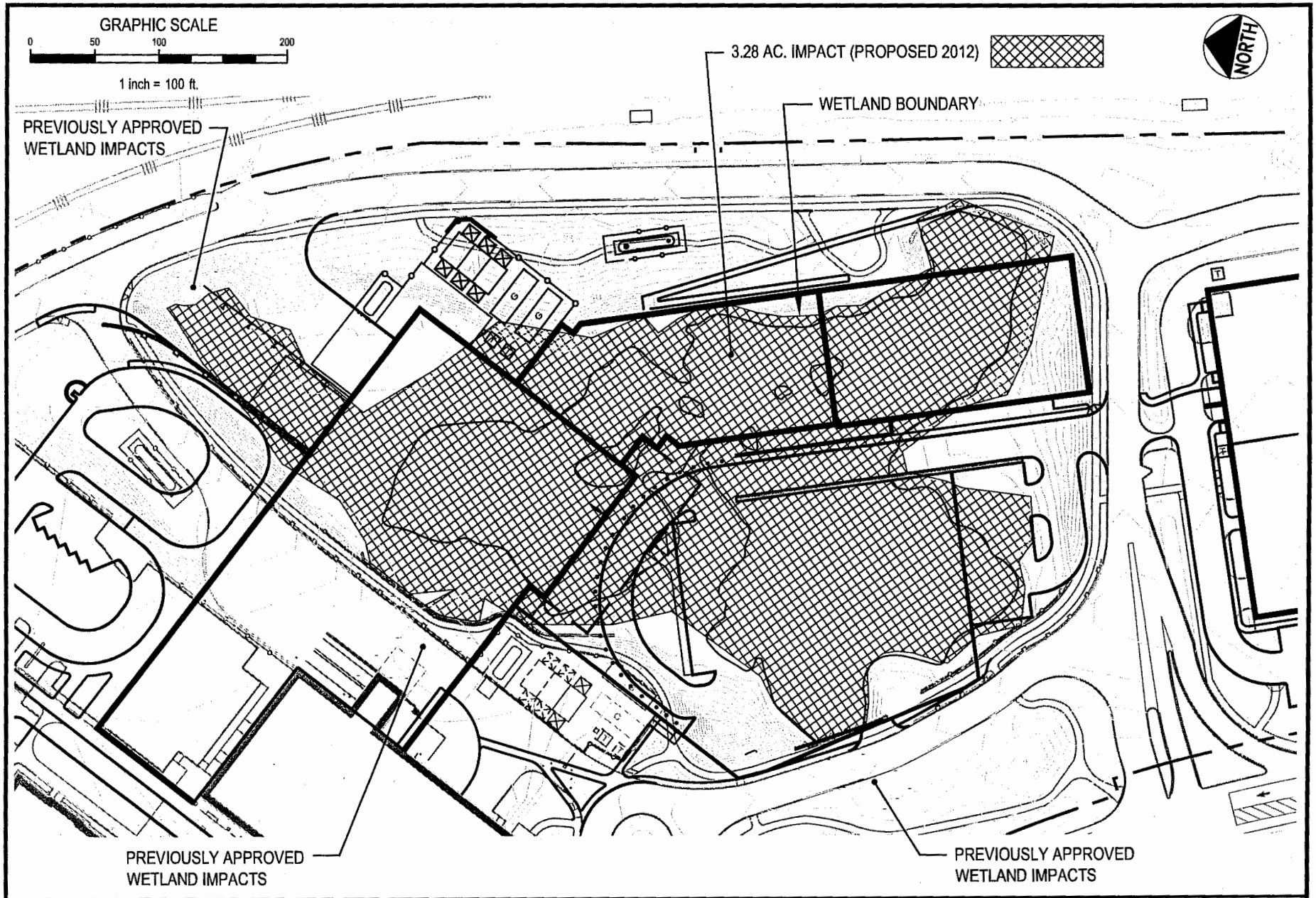
DESIGNED	SRB	DATE	MARCH 2001	FIGURE
DRAWN	JDL	SCALE	1" = 2000'+-	2
CHECKED	SRB	JOB NO.	2149	



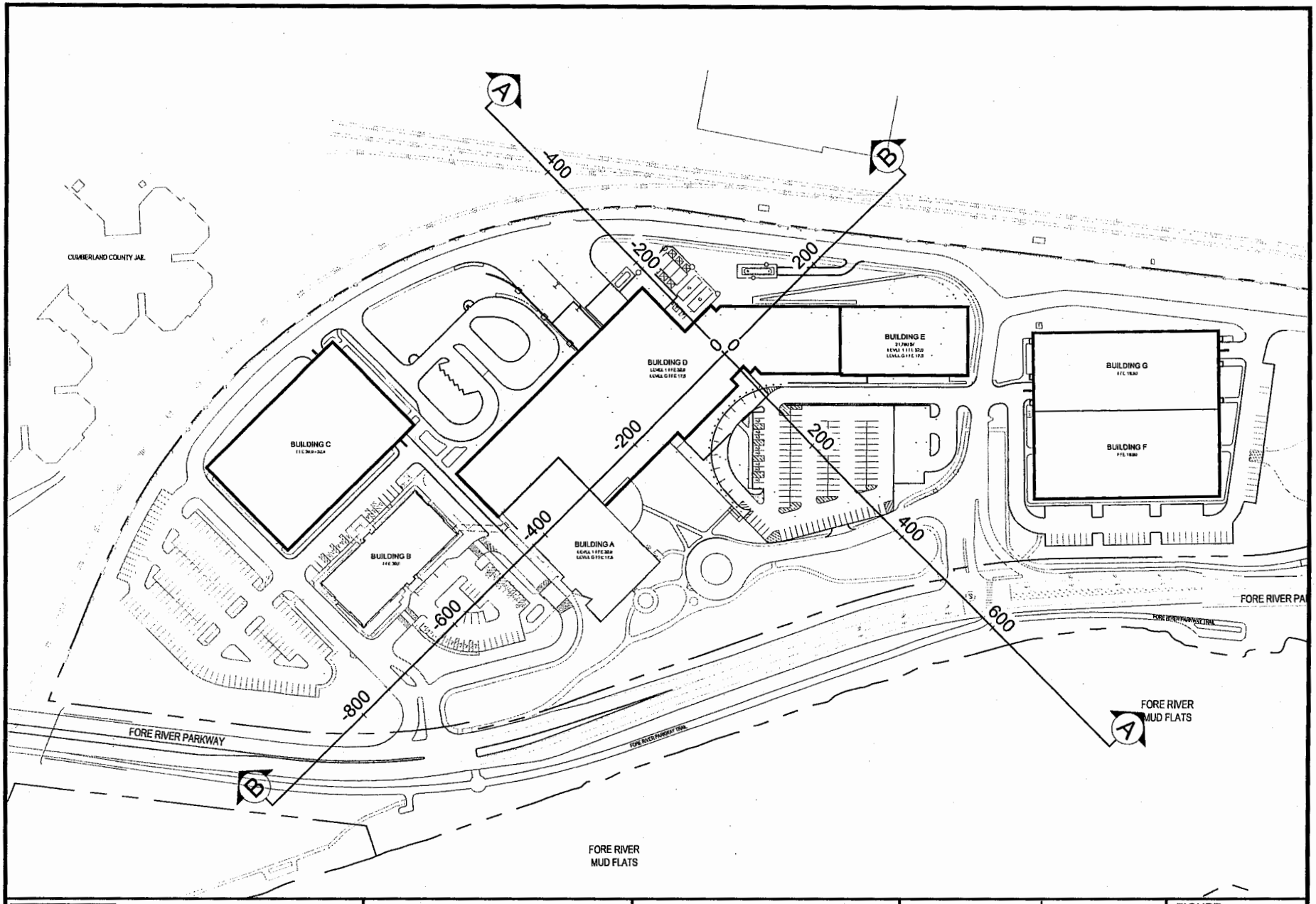
DH	DeLuca-Hoffman Associates, Inc. 778 MAIN STREET, SUITE 8 SOUTH PORTLAND, ME 04106 207.775.1121 WWW.DELUCAHOFFMAN.COM	MERCY AT THE FORE MASTER PLAN	EXISTING CONDITIONS	DRAWN: DED | DATE: 07.10.12 DESIGNED: BEK | SCALE: 1" = 250' CHECKED: SRB | JOB NO. 2149.08 FILE NAME: 2149.08-GRADING	FIGURE 2



DH	DeLuca-Hoffman Associates, Inc. 778 MAIN STREET, SUITE 8 SOUTH PORTLAND, ME 04106 207.775.1121 WWW.DELUCAHOFFMAN.COM	MERCY AT THE FORE MASTER PLAN	PROPOSED CONDITIONS	DRAWN: DED DESIGNED: BEK CHECKED: SRB FILE NAME: 2149.08-GRADING	DATE: 07.10.12 SCALE: 1" = 250' JOB NO. 2149.08	FIGURE 3

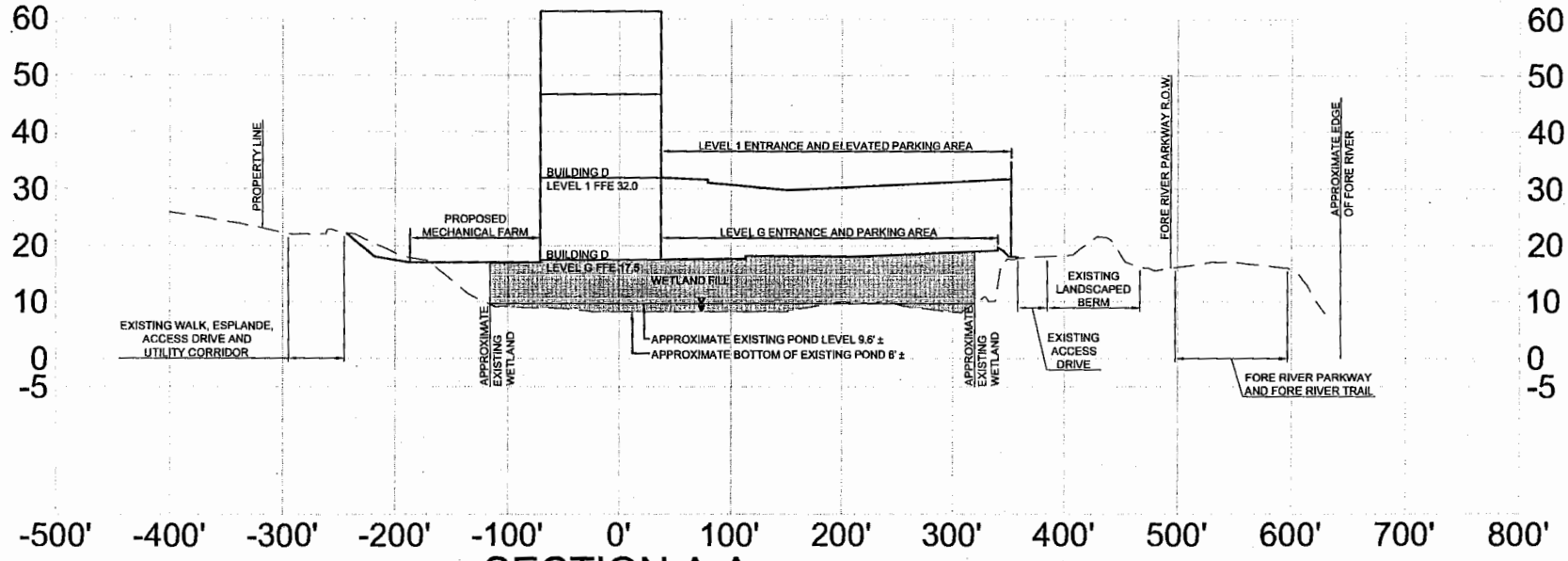


DH DeLuca-Hoffman Associates, Inc. 778 MAIN STREET, SUITE 8 SOUTH PORTLAND, ME 04106 207.775.1121 WWW.DELUCAHOFFMAN.COM	MERCY AT THE FORE MASTER PLAN	100 SCALE FIGURE OF WETLAND FILL AREA	DRAWN: DED DESIGNED: BEK CHECKED: SRB FILE NAME: 2149.08-FIG 9	DATE: 07.10.12 SCALE: 1" = 100' JOB NO. 2149.08	FIGURE 4



DH	DeLuca-Hoffman Associates, Inc. 778 MAIN STREET, SUITE 8 SOUTH PORTLAND, ME 04106 207.775.1121 WWW.DELUCAHOFFMAN.COM	MERCY AT THE FORE MASTER PLAN	SITE SECTION KEY MAP

DRAWN:	DED	DATE:	07.10.12	FIGURE
DESIGNED:	BEK	SCALE:	1" = 200'	5A
CHECKED:	SRB	JOB NO.	2149.08	
FILE NAME:	2149.08-GRADING			



SECTION A-A

SCALE: HORZ 1" = 50'
VERT 1" = 10'

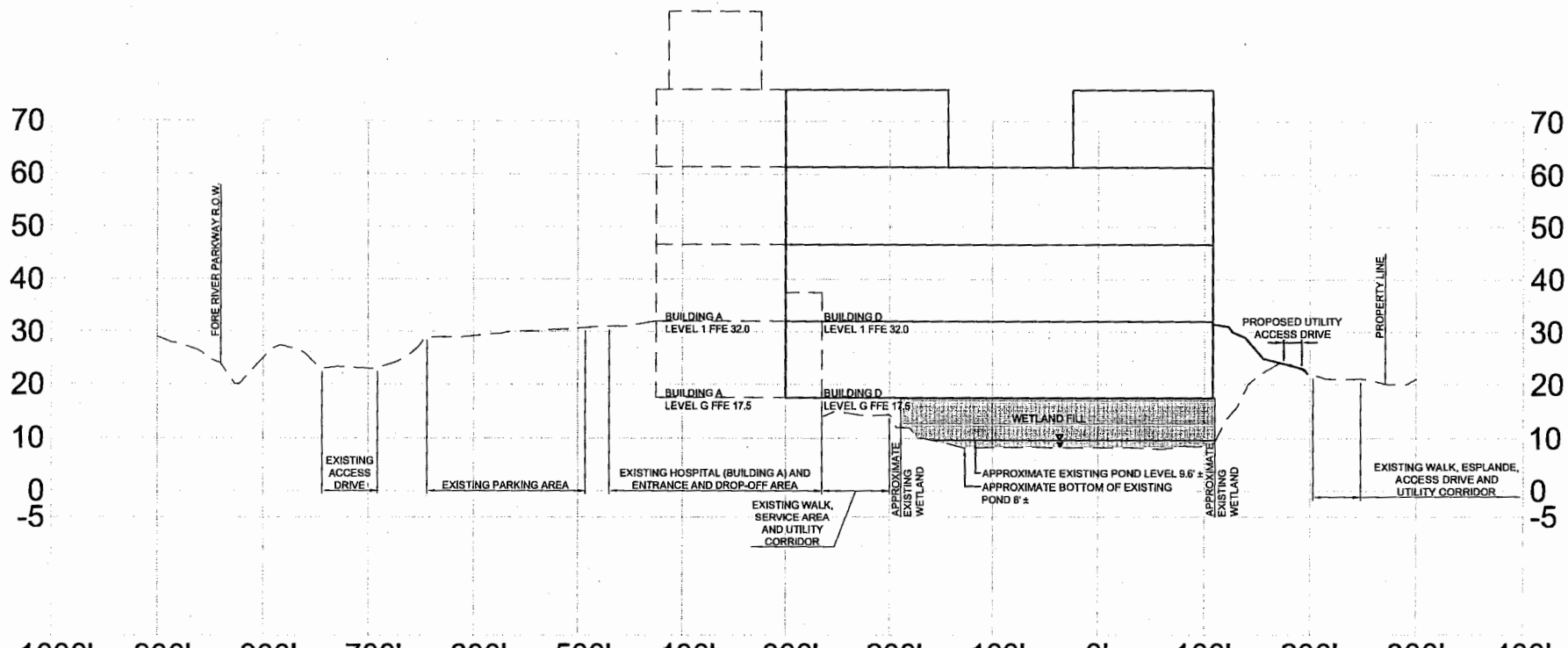
DeLuca-Hoffman Associates, Inc.
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SOUTH PORTLAND, ME 04106
207.775.1121
WWW.DELUCAHOFFMAN.COM

MERCY AT THE FORE
MASTER PLAN

SITE SECTION A-A

DRAWN:	DED	DATE: 07.10.12	
DESIGNED:	BEK	SCALE: AS NOTED	
CHECKED:	SRB	JOB NO. 2149.08	
FILE NAME:	2149.08-GRADING		

FIGURE
5B



SECTION B-B

SCALE: HORZ 1" = 50'
VERT 1" = 10'

DeLuca-Hoffman Associates, Inc.
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MERCY AT THE FORE
MASTER PLAN

SITE SECTION B-B

DRAWN: DED	DATE: 07.10.12	FIGURE
DESIGNED: BEK	SCALE: AS NOTED	5C
CHECKED: SRB	JOB NO. 2149.08	
FILE NAME: 2149.08-GRADING		

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

PAUL R. LEPAGE
GOVERNOR

PATRICIA W. AHO
COMMISSIONER

March 2013

Mercy Hospital
144 State Street
Portland, Maine 04101
ATTN: Bill Connolly

RE: Site Location of Development Act and Natural Resources Protect Act Applications
Portland, DEP #L-20775-19-T-A/L-20775-TG-U-N

Dear Mr. Connolly:

Enclosed is a signed copy of your Department of Environmental Protection land use permit. Please note that the permit includes a description of your project, findings of fact that relate to the approval criteria the Department used in evaluating your project, and conditions that are based on those findings and the particulars of your project. Please take several moments to read your permit carefully, paying particular attention to the conditions of the approval. The Department reviews every application thoroughly and strives to formulate reasonable conditions of approval within the context of the Department's environmental laws. Also attached are some materials that describe the Department's appeal procedures for your information.

If you have any questions about the permit please contact me at (207) 615-6426 or at christine.woodruff@maine.gov.

Sincerely,

Chris Woodruff

Christine Woodruff, Project Manager
Division of Land Resource Regulation
Bureau of Land & Water Quality

pc: File

AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688 FAX: (207) 287-7826
RAY BLDG., HOSPITAL ST

BANGOR
106 HOGAN ROAD
BANGOR, MAINE 04401
(207) 941-4570 FAX: (207) 941-4584

PORTLAND
312 CANCO ROAD
PORTLAND, MAINE 04103
(207) 822-6300 FAX: (207) 822-6303

PRESQUE ISLE
1235 CENTRAL DRIVE, SKYWAY PARK
PRESQUE ISLE, MAINE 04769-2094
(207) 764-0477 FAX: (207) 764-3143

WEB SITE: WWW.MAINE.GOV/DEP

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
17 STATE HOUSE STATION
AUGUSTA, ME 04333

DEPARTMENT ORDER

IN THE MATTER OF

MERCY HOSPITAL	) SITE LOCATION OF DEVELOPMENT ACT
Portland, Cumberland County	) NATURAL RESOURCES PROTECTION ACT
PHASE II RELOCATION PROJECT	) TIER 3 WETLAND ALTERATION
L-20775-19-T-A (approval)	) WATER QUALITY CERTIFICATION
L-20775-TG-U-N (approval)	) FINDINGS OF FACT AND ORDER

Pursuant to the provisions of 38 M.R.S.A. Sections 481 et seq. and 480-A et seq., 38 M.R.S.A. Sections 480-A et seq. and Section 401 of the Federal Water Pollution Control Act, the Department of Environmental Protection has considered the application of MERCY HOSPITAL with the supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

1. PROJECT DESCRIPTION:

A. History of Project: In Department Order #L-20775-19-A-N/L-20775-TG-B-N, dated June 26, 2002, the Department approved the development of a new Mercy Hospital Campus on 85.5 acres off Congress Street, adjacent to the Fore River in Portland. In Department Orders #L-20775-19-C-T, #L-20775-19-D-M, and #L-20775-TG-E-M, the Department approved the partial transfer and modification of the original Orders by the Maine Department of Transportation for the construction of a connector road, the Fore River Parkway, across the property. Approximately three acres of land was transferred to the Maine Department of Transportation for the construction of the new Veteran's Bridge to South Portland. Subsequent Department Orders approved several minor modifications.

B. Summary: The applicant proposes to construct Phase II of the Mercy Hospital relocation project that consists of a 116,980-square foot hospital building expansion, a 15,000-square foot medical office building, a detached 40,000-square foot medical office building, a 51,800-square foot parking garage, a 33,800-square foot parking garage, an elevated parking deck and associated on-site traffic circulation renovations. The project includes utility service relocations and new stormwater management systems. The two existing site entrances will remain the same. The project is shown on a set of plans, the

first of which is titled "Site Development Plans for Mercy Hospital Fore River Hospital Relocation Project Amended Master Plan / Phase II Expansion," prepared by DeLuca-Hoffman Associates, and dated May 2012, with a last revision date of October 23, 2012. The project is located on the remaining approximately 33 acres of the parcel on the east side of the Fore River Parkway in the City of Portland.

The applicant is also seeking approval under the Natural Resources Protection Act to fill a 3.49-acre freshwater wetland.

C. Current Use of Site: The portion of the site that is east of the Fore River Parkway is completely developed except for the central portion of the site that is occupied by a pond and wetlands. The existing development includes a hospital building, a medical office building, a maintenance building, parking, utilities, and access roads.

2. FINANCIAL CAPACITY:

The total cost of the project is estimated to be $5,378,880.00. The applicant submitted a letter from Eastern Maine Healthcare System, dated February 21, 2013, stating that Eastern Maine Healthcare System and Mercy Health System of Maine executed an affiliation agreement on January 14, 2013, pursuant to which Eastern Maine Healthcare System will become the sole corporate member of Mercy Health System of Maine. Pursuant to terms of the affiliation agreement and subject to the regulatory approval and closure of the transaction, as well as other contractual restrictions, Eastern Maine Healthcare System has committed to spending $115 million in support of Mercy Health System of Maine. This financial support includes expanding the Fore River campus of Mercy Hospital to consolidate Mercy Hospital's State Street facility onto the Fore River campus. Prior to the start of construction, the applicant must submit evidence that it has been granted a line of credit or a loan by a financial institution authorized to do business in this State or evidence of any other form of financial assurance determined by Department Rules, Chapter 373(1), to be adequate to the Bureau of Land and Water Quality (BLWQ) for review and approval as a condition of compliance.

The Department finds that the applicant has demonstrated adequate financial capacity to comply with Department standards provided that the applicant submits evidence of financial capacity to the BLWQ for review and approval prior to the start of construction.

3. TECHNICAL ABILITY:

The applicant provided resume information for key consultants involved with the project and a list of projects successfully constructed by the applicant and the consultants. The applicant retained the services of DeLuca-Hoffman Associates, a professional engineering firm, to provide site design and engineering of the project. Haley and Aldrich provided geotechnical engineering, Normandeau Associates was the wetland consultant, Hoffman Engineering provided environmental engineering, Owen Haskell

provided land surveying services, SMRT provided architectural services and Tewhey Associates was the project manager.

The Department finds that the applicant has demonstrated adequate technical ability to comply with Department standards.

4. NOISE:

The proposed project is primarily the expansion of an existing hospital campus. A hospital is classified as a development producing a minor noise impact. The Department finds that no regulated sources of noise have been identified.

5. SCENIC CHARACTER:

The Mercy Hospital Fore River Campus is located between the Fore River Parkway and an active railroad line. The Cumberland County Jail is across the railroad tracks to the north, commercial development on Saint John Street is across the railroad tracks to the east, the Veterans' Memorial Bridge is to the south and a mud flat and Interstate Route 295 is across the Fore River Parkway to the west. The areas of the proposed project that are not to be covered with structures, parking areas or vehicle circulation facilities will be landscaped and maintained consistent with the current landscaping features including providing landscaped strips within parking lots. The project will be in keeping with the existing buildings, grounds and surrounding scenic character.

Based on the project's location and design, the Department finds that the proposed project will not have an unreasonable adverse effect on the scenic character of the surrounding area.

6. WILDLIFE AND FISHERIES:

The Maine Department of Inland Fisheries and Wildlife (MDIFW) reviewed Phase 1 of the Mercy Hospital project at the Fore River site in 2002 and stated that it found no records of any Essential or Significant Wildlife Habitats, or other wildlife habitats of special concern associated with this site. But MDIFW noted that the wetlands on the site, particularly the pond, was used by several species of waterfowl and wading birds and recommended that impacts to the birds be minimized by maximizing the retention of the existing buffer around the pond and maintaining or elevating the water level of the pond. The 2002 project was constructed to eliminate direct impact to the pond by directing stormwater runoff to other locations and placing a buffer around the pond. Subsequent monitoring of the site since 2006 has documented use by waterfowl (mallards, black ducks), wading birds (green heron, great blue heron), a variety of passerine species (red-winged blackbird, mocking birds, common yellow throat, song sparrow), gulls and painted turtles. Fish have been observed in the pond and mammal signs include grey fox, chipmunks and woodchucks.

As part of the review for the currently proposed expansion project that includes filling of the pond and wetland used by the above noted wildlife, MDIFW visited the site to determine if additional buffering could be added on land owned by Mercy Hospital adjacent to the Fore River on the northwest portion of the site to compensate for the loss of habitat in the pond area. Due to several issues on the land adjacent to the Fore River, it was determined that a buffer that would provide roosting habitat along the Fore River was not feasible. The loss of wetlands as a result of the proposed Phase II will be compensated for through a contribution into the In-Lieu Fee (ILF) program of the Maine Natural Resource Conservation Fund (MNRCF), discussed further in Finding 13. It was determined that the loss of wildlife habitat from the wetland impacts could be compensated for by emphasizing on the ILF Project Data Worksheet that the habitat losses include waterfowl habitat so that the funds could be used towards replacement of the habitat. It was also determined that the resident turtle population in the pond should be relocated. The applicant has developed a Turtle Trapping and Removal plan that followed the recommendations made by MDIFW. The applicant must implement the relocation plan prior to the start of construction and release the turtles to Capisic Pond Park in Portland and/or Evergreen Cemetery on Stevens Avenue in Portland, or to another location with prior approval from MDIFW.

The Department finds that the applicant has made adequate provision for the protection of wildlife and fisheries provided the wildlife habitats are noted on the In Lieu Fee (ILF) Project Data Worksheet and that prior to the start of construction, the Turtle Trapping and Removal plan is implemented as recommended by MDIFW.

7. SOILS:

There are several locations on the site that have lead-contaminated ash from the former railroad operations that have been covered with clean soil or bituminous pavement to prevent direct exposure. The proposed project was reviewed by an Oil and Hazardous Materials Specialist in the Bureau of Remediation and Waste Management (BRWM) in regards to the existing Voluntary Response Action Plan for the site. BRWM concluded that they have no issues with the planned expansion provided that the appropriate precautions are followed during the project to insure that the contaminated ash is handled, placed on site and/or disposed as appropriate and that the necessary cover systems are in place once the project is completed. The current deed restrictions on the property that were placed during Phase I work are consistent with and adequate as future restrictions for the property, and will continue to be subject to the operation and maintenance program with annual inspections.

The applicant has previously submitted a geotechnical report based on the soils found at the project site which was previously reviewed by the Division of Environmental Assessment (DEA).

The Department finds that, based on the comments from the BRWM and DEA's previous review, the soils on the project site present no limitations to the proposed project that cannot be overcome through standard engineering practices.

8. STORMWATER MANAGEMENT:

The proposed project includes approximately 4.12 acres of new impervious area for a total of 19.80 acres of impervious area, and 4.89 acres of new developed area for a total of approximately 29.03 acres of developed area. It lies within the watershed of the tidal waters of the Fore River. The applicant submitted a stormwater management plan based on the Basic, General, and Flooding standards contained in Department Rules, Chapter 500. The proposed stormwater management system consists of an underdrained soil filter, an underdrained bioretention cell, an underdrained subsurface sand filter, and proprietary filters (Filterra ® and StormFilter®).

A. Basic Standards:

(1) Erosion and Sedimentation Control: The applicant submitted an Erosion and Sedimentation Control Plan that is based on the performance standards contained in Appendix A of Chapter 500 and the Best Management Practices (BMPs) outlined in the Maine Erosion and Sediment Control BMPs, which were developed by the Department. This plan and plan sheets containing erosion control details were reviewed by, and revised in response to the comments of, the Division of Land Resource Regulation (DLRR) of the BLWQ.

Erosion control details will be included on the final construction plans and the erosion control narrative will be included in the project specifications to be provided to the construction contractor.

(2) Inspection and Maintenance: The applicant submitted a maintenance plan that addresses both short and long-term maintenance requirements. This plan was reviewed by, and revised in response to the comments of, DLRR. The maintenance plan is based on the standards contained in Appendix B of Chapter 500. The applicant will be responsible for the maintenance of all common facilities including the stormwater management system.

Prior to occupancy of the new buildings, the applicant must submit a copy of an executed long-term maintenance contract (minimum of 5 years and renewable) for the on-going maintenance of the Filterra®, the underdrained subsurface sand filter, and the StormFilter® to the BLWQ. Storm sewer grit and sediment materials removed from any parts of the stormwater management system, including conveyance structures, during maintenance activities must be disposed of in compliance with the Maine Solid Waste Management Rules.

(3) Housekeeping: The proposed project will comply with the performance standards outlined in Appendix C of Chapter 500.

Based on DLRR's review of the erosion and sedimentation control plan and the maintenance plan, the Department finds that the proposed project meets the Basic Standards contained in Chapter 500(4)(A).

B. General Standards:

The applicant's stormwater management plan includes general treatment measures that will mitigate for the increased frequency and duration of channel erosive flows due to runoff from smaller storms, provide for effective treatment of pollutants in stormwater, and mitigate potential temperature impacts. This mitigation is being achieved by using Best Management Practices (BMPs) that will control runoff from 95% of the impervious area and 96% of the developed area.

The stormwater management system proposed by the applicant was reviewed by, and revised in response to comments from, DLRR. After a final review, DLRR commented that the proposed stormwater management system is designed in accordance with the General Standards contained in Chapter 500(4)(B) and recommended that the applicant retain the design engineer, or another qualified engineer, to oversee the construction of the stormwater management structures according to the details and notes specified on the approved plans. Within thirty days of completion of each stormwater management structure, the applicant must submit a log of inspection reports detailing the items inspected, photos taken, and the dates of each inspection to the BLWQ for review.

Based on the stormwater system's design and DLRR's review, the Department finds that the applicant has made adequate provision to ensure that the proposed project will meet the General Standards contained in Chapter 500(4)(B).

C. Flooding Standard:

The applicant is not proposing a formal stormwater management system to detain stormwater from 24-hour storms of 2-, 10-, and 25-year frequency. Instead, since the project site is located adjacent to a tidal section of the Fore River, the applicant requested a waiver from the flooding standard pursuant to Department Rules, Chapter 500(4)(E)(2)(a). DLRR reviewed the request for a waiver of the flooding standard and recommended that the waiver be granted.

The Department finds that the proposed project will meet the Chapter 500 standards for management of stormwater discharges and discharges to coastal wetlands.

9. WATER SUPPLY:

When completed, the proposed expanded project is anticipated to use 63,919 gallons of water per day. Water will be supplied by the Portland Water District. The applicant submitted a letter from the Portland Water District, dated January 2, 2013, indicating that it will be capable of servicing this project.

The Department finds that the applicant has made adequate provision for securing and maintaining a sufficient and healthful water supply.

10. WASTEWATER DISPOSAL:

When completed, the proposed project is anticipated to discharge up to 63,919 gallons of wastewater per day to the Portland Water District's East End wastewater treatment facility. This project was reviewed and approved by the Division of Water Quality Management (DWQM) of the BLWQ, which commented that the East End wastewater treatment facility has the capacity to treat these flows but has some non-compliance issues that are being addressed by the Portland Water District and scrutinized by the Department.

Based on DWQM's comments, the Department finds that the applicant has made adequate provision for wastewater disposal at a facility that has the capacity to ensure satisfactory treatment.

11. SOLID WASTE:

All municipal solid wastes from the proposed project will be disposed of at Ecomaine, which is currently in substantial compliance with the Maine Solid Waste Management Rules. All wood waste generated from site clearing, such as stumps and grubbings, will be ground and used on site. Any treated wood and mixed construction and demolition debris will be transported to Juniper Ridge Landfill in Old Town or Waste Management in Norridgewock. Untreated wood waste from construction will be sent to KTE Biofuels in Lewiston or to the City of Portland Riverside Recycling Facility. Any petroleum-contaminated soils will be transported to CPRC Group in Scarborough. Biomedical waste will be disposed of at Stericycle in Massachusetts. Any chemical waste will be sent to Clean Harbors Waste Disposal Services. Scrap metal will be sent to One Steel located in Arundel and Oakland, or to Schnitzer Steel in Portland. Any coal ash encountered will be handled in accordance with the Voluntary Response Action Plan. The BRWM reviewed this section of the application and found these facilities are in substantial compliance with the Maine Solid Waste Management Rules.

Based on the above information, the Department finds that the applicant has made adequate provision for solid waste disposal.

12. FLOODING:

The project is adjacent to tidal mudflats of the Fore River. The one hundred year flood elevation of the Fore River and Atlantic Ocean is elevation 10.0 (NGVD 29). The pond and the surrounding wetlands in the old excavated gravel pit portion of the site are below elevation 10.0 and could possibly flood from backflow from the Fore River through the storm drain system. After the pond and surrounding wetlands are filled for the proposed project, all the elevations of the site east of the Fore River Parkway will be above the one hundred year flood elevation. This loss of flood plain area in the Fore River watershed is unlikely to cause an increase in the flood elevation of the Fore River and the surrounding areas because the amount of flood plain area loss from the proposed project is very small in comparison to the flood plain area of the Fore River and surrounding tidal areas.

The Department finds that the proposed project is unlikely to cause or increase flooding or cause an unreasonable flood hazard to any structure.

13. WETLAND IMPACTS:

The applicant proposes to alter 151,924 square feet (3.49 acres) of wetlands to construct the proposed project. The types of wetland proposed to be impacted are 63,446 square feet of open water, 51,236 square feet of emergent/open water wetland, 17,298 square feet of forested wetland, 10,895 square feet of shrub/emergent wetland, 6,458 square feet of shrub wetland, and 2,591 square feet of emergent wetland. These wetlands are the existing pond and the surrounding wetlands in the central part of the site that were originally created from gravel extraction below the groundwater table. The pond is considered artificial and is not considered a wetland of special significance. The purpose and need of the wetland impact is to consolidate the operations of the hospital from the existing two campuses, one on State Street and one on the Fore River Parkway, to a single hospital campus on the Fore River Parkway site, which will allow Mercy Hospital to increase the capacity of the hospital for outpatient care and to provide a facility that meets current hospital standards.

In Department Order #L-20775-19-A-N/L-20775-TG-B-N, dated June 26, 2002, the Department approved 39,835 square feet (0.91 acre) of mostly scrub shrub wetland impact for the initial development of the site by the applicant. The cumulative wetland impact for the existing project plus the proposed project is 191,301 square feet (4.40 acres).

The Wetland Protection Rules interpret and elaborate on the NRPA criteria for obtaining a permit. The rules guide the Department in its determination of whether a project's impacts would be unreasonable. A proposed project would generally be found to be unreasonable if it would cause a loss in wetland area, functions and values and there is a practicable alternative to the project that would be less damaging to the environment. Each application for a Natural Resources Protection Act permit that involves a freshwater

wetland alteration must provide an analysis of alternatives in order to demonstrate that a practicable alternative does not exist.

A. Avoidance. No activity may be permitted if there is a practicable alternative to the project that would be less damaging to the environment. The applicant submitted an alternative analysis for the proposed project completed by Normandeau Associates and dated July 2012.

The applicant evaluated using single and dual campus alternatives to bring the hospital up to appropriate standards of care, safety, efficiency, convenience, and cost effectiveness. The applicant examined moving all operations back to the State Street campus; however the existing facility on State Street has the deficiencies of an aging facility including: an internal power distribution system that is antiquated, at-load capacity and in need of replacement; piping systems that need replacement; the two primary chillers of the heating, ventilating and air conditioning system need replacement; and the lack of space for parking is a major issue that includes high costs and inconvenience for patients and employees. Therefore, moving back to a single campus on State Street is not a feasible alternative because it will not meet the project purpose based on the expense and the inability to create a state-of-the-art healthcare facility.

The applicant evaluated moving all operation to a third site. A search was conducted for alternative sites in 2001 and 2002 that found no other local site was feasible or appropriate. The relocation of all operations to a third location is considered not practicable because it would not meet the project purpose of having a facility in Portland and the $90 million invested in the Fore River location could not be recouped which would jeopardize the long-term sustainability of the hospital.

The applicant evaluated maintaining a duel campus, but has found that two campuses perpetuates unfavorable conditions that would render the hospital unsustainable in the long term because of safety issues, operational difficulties, inconvenience, the expenses of duplicated services, bussing between facilities and renovating the State Street facility, and does not meet the project purpose of having a cost-effective, safe, and state-of-the-art healthcare facility.

The applicant evaluated consolidating operations onto the Fore River Campus with the proposed expansion. This would result in a state-of-the-art facility that would be best for healthcare delivery logistics, staff and patient access, reduction in operating costs, increases in staff efficiency, eliminating the need for duplicated services, and could lead to higher employee retention rates. This alternative meets the project purpose, is practicable in terms of cost effectiveness, and provides a state-of-the-art facility.

The applicant evaluated five alternative site layouts for the expanded Fore River campus, which included layouts that partially or completely filled the central wetland. Alternative ONS-3 shown in the project application avoided impacts to the wetland but did not

address current and anticipated future changes in the U.S. healthcare delivery system, including large increases in the amount of outpatient and ambulatory services provided by hospital campuses which would create a need for increased hospital size and more adjacent parking. Therefore, alternative ONS-3 was rejected.

Alternatives ONS-4 thru ONS-7 represented site layouts that minimize impacts to the central wetland, however they result in an unacceptable facility design that significantly limits the hospital's clinical operations. These unacceptable facility designs include congested and unsafe traffic circulation conditions where the Ambulatory Care Center and Emergency Department entrances are immediately adjacent to one another and other traffic circulation problems that result in confusion and congestion problems for incoming patients and visitors. These designs do not provide parking structures that are located in the critically essential location immediately adjacent to the ambulatory care center. These alternatives would also encroach on the wetland. One of the primary functions and values of the wetland is wildlife habitat, and it was recognized that direct encroachment on the wetland, shading of the wetland, and human activities associated with the building in closer proximity to the wetland would likely have a detrimental effect on this wetland function and value. Although these alternatives would have less direct wetland impact than the proposed project, these alternatives were deemed impracticable for the delivery of patient care services and would likely have detrimental effect on the wetland's wildlife functions and values.

Alternative ONS-8 is the basis of the proposed project. This alternative fills the entire central wetland and raises the grades of the site up such that the emergency department entrance and the building expansion entrance are at the same elevation as the entrance of the Phase 1 hospital. This feature is an important design element to the hospital because it reduces patient and visitor navigation issues inside the building. This alternative meets the current standards for hospital design with appropriate adjacencies and colocation of key services; allows physician and staff efficiency because it has inpatient and outpatient services at one facility; it provides parking for both patients and staff adjacent to the hospital; and, provides enough floor space to meet current program objectives. It is the connectedness of the existing and proposed facility and the future expansion potential that makes this alternative the preferred alternative and the applicant stated that this is the only practicable alternative of meeting the project purpose of a state-of-the-art facility.

B. Minimal Alteration. The amount of freshwater wetland to be altered must be kept to the minimum amount necessary for meeting the overall purpose of the project. The applicant examined alternative site layouts for the project and the only site layout that met the overall purpose of the project proposes to fill 3.49 acres of wetland. Other alternative site layouts that had less direct impact to the wetland were reviewed, but they did not meet the project purpose and need and the wetland alterations, although smaller, would most likely compromise the higher functions and values of the wetland. Given the chosen alternative described in Finding 13 A, the amount of alteration cannot be further minimized.

C. Compensation. Compensation is required to achieve the goal of no net loss of wetland functions and values because the project alters greater than 15,000 square feet of freshwater wetland, which is the threshold over which compensation is generally required. The applicant conducted a wetland mitigation site search and concluded that on-site mitigation was not possible due to space constraints. Although off-site parcels represented viable options for wetland compensation, none of the parcels meet the objectives of compensating for the lost wetland acreage and functions and values within the watershed. The applicant proposes to mitigate for the lost wetland functions and values by making a payment to the In-Lieu Fee (ILF) program of the Maine Natural Resource Conservation Fund (MNRCF).

The wetland that is proposed to be filled was originally formed as a gravel extraction area that was excavated below the groundwater table. This wetland was used as a wetland preservation area to partially compensate for the 0.91 acre of wetland losses approved in Department Order #L-20775-19-A-N/L-20775-TG-B-N. As part of the wetland compensation package for that permit and to enhance the wildlife habitat at the site, the pond and surrounding wetland was enhanced by the removal of solid wastes (such as trash, white goods, tires, metal, etc.), the water quality of the pond was protected by designing the stormwater management system such that only limited amounts of stormwater were directed to the wetland, and a narrow buffer around the wetland was maintained. The remaining wetland compensation for the 0.91 acre of impact from the initial project was 0.21 acre wetland creation in swales on the west side of the Fore River Parkway. The 0.21 acre of wetlands created as compensation for the initial project will not be affected by the proposed project.

The wetland proposed to be impacted is classified as a palustrine (freshwater) system with the following cover type classes: emergent (PEM1), open water (PUB3/4), forested (PFO1), and shrub wetland (PSS1). The pond is fed by a groundwater discharge that appears to flow year-round; therefore, groundwater recharge/discharge is considered a principle function of the wetland. Small fish have been observed in the pond in the past; this population is likely the remnant from birds or the previous hydrological connections to the Fore River and is supported by the groundwater flows; hence, fish and shellfish habitat is a principle function of the wetland. Sediment/toxicant retention is expected to be one of the principle functions of the wetland because any toxicants and sediments flowing into the wetland from the surrounding uplands would become trapped in the organic rich substrate observed in many areas around the pond. Nutrient removal/retention/transformation is expected to be another principle function of the wetland based on the observation of the density and type of vegetation thriving in the wetland and the presence of organic deposits in the wetland. Floodflow alteration is not a principle function of the wetland. Production export is not considered a principal function either. The wetland does provide food for wildlife. The wetland provides habitat for small fish, invertebrates and amphibian populations, which provides a forage base for secondary and tertiary consumers. Reptiles (turtles) have been observed basking

around the pond. Piscivorous birds, including herons, were observed foraging in and along the pond habitat. Migratory waterfowl, including mallard ducks and black ducks, were observed using the wetland. Although the wetland provides food for the wildlife utilizing the wetland, it does not provide nutrients that are transported out of the wetland. Wildlife habitat is considered to be a principle function of the wetland because of the variety of resident and migratory species present. As noted above, the pond has populations of invertebrates, fish and amphibians that provide a forage base for higher trophic level consumers. The wetlands and adjacent forested upland also support small mammals such as voles, shrews, field mice, and potentially larger mammals such as fox and woodchucks. Uniqueness/heritage value is believed to be present because the central wetland is somewhat unique as the surrounding land is developed and freshwater wetlands are rare on the Portland peninsula.

The wetland compensation required in Department Order #L-20775-19-A-N/L-20775-TG-B-N for 0.70 acre of wetland impacts will be eliminated by the proposed project, plus an additional 3.49 acres of wetland impact requires compensation, therefore the total amount of wetland impact requiring compensation for the project is 4.19 acres. The applicant proposes to make a contribution into the ILF program of the MNRCF in the amount of $834,156.00. Prior to the start of construction, a cashier's check or bank draft, payable to "Treasurer, State of Maine", with the permit number noted on the check, must be mailed to: ME DEP, Attn: ILF Program Administrator, State House Station 17, Augusta, ME 04333.

The Department finds that the applicant has avoided and minimized wetland impacts to the greatest extent practicable, and that the proposed project represents the least environmentally damaging alternative that meets the overall purpose of the project provided that prior to project construction, the applicant submits the ILF payment as described above.

14. AIR QUALITY:

The applicant has obtained an air emissions license from the Bureau of Air Quality, #A-912-71-A-N, for Phase I of the project. The applicant must amend its air emissions license from the Bureau of Air Quality prior to using any new equipment that requires an air emissions license.

15. ALL OTHER:

All other Findings of Fact, Conclusions and Conditions remain as approved in Department Order #L-20775-19-A-N and #L-20775-TG-B-N, and subsequent orders.

BASED on the above findings of fact, and subject to the conditions listed below, the Department makes the following conclusions pursuant to 38 M.R.S.A. Sections 480-A et seq. and Section 401 of the Federal Water Pollution Control Act:

A. The proposed activity will not unreasonably interfere with existing scenic, aesthetic, recreational, or navigational uses.

B. The proposed activity will not cause unreasonable erosion of soil or sediment.

C. The proposed activity will not unreasonably inhibit the natural transfer of soil from the terrestrial to the marine or freshwater environment.

D. The proposed activity will not unreasonably harm any significant wildlife habitat, freshwater wetland plant habitat, threatened or endangered plant habitat, aquatic habitat, travel corridor, freshwater, estuarine, or marine fisheries or other aquatic life provided that the applicant makes a contribution to the In-Lieu Fee (ILF) program, the wildlife habitat losses are noted on the In Lieu Fee (ILF) Project Data Worksheet as described in Findings 6 and 13, and the Turtle Trapping and Removal plan is implemented prior to construction as described in Finding 6.

E. The proposed activity will not unreasonably interfere with the natural flow of any surface or subsurface waters.

F. The proposed activity will not violate any state water quality law including those governing the classifications of the State's waters.

G. The proposed activity will not unreasonably cause or increase the flooding of the alteration area or adjacent properties.

H. The proposed activity is not on or adjacent to a sand dune.

I. The proposed activity is not on an outstanding river segment as noted in 38 M.R.S.A. Section 480-P.

BASED on the above findings of fact, and subject to the conditions listed below, the Department makes the following conclusions pursuant to 38 M.R.S.A. Sections 481 et seq.:

A. The applicant has provided adequate evidence of financial capacity and technical ability to develop the project in a manner consistent with state environmental standards provided that the applicant submits evidence of financial capacity to the BLWQ for review and approval prior to the start of construction as described in Finding 2.

B. The applicant has made adequate provision for fitting the development harmoniously into the existing natural environment and the development will not adversely affect existing uses, scenic character, air quality, water quality or other natural resources in the municipality or in neighboring municipalities.

C. The proposed development will be built on soil types which are suitable to the nature of the undertaking and will not cause unreasonable erosion of soil or sediment nor inhibit the natural transfer of soil.

D. The proposed development meets the standards for storm water management in Section 420-D and the standard for erosion and sedimentation control in Section 420-C provided that the applicant retains the design engineer, or another qualified engineer, to oversee the construction of the stormwater management structures; submits a log of inspection reports to the BLWQ for review; submits a copy of an executed long-term maintenance contract for the on-going maintenance of the Filterra®, the underdrained subsurface sand filter, and the StormFilter®; and, disposes of materials removed from the stormwater management systems in compliance with the Maine Solid Waste Management Rules as described in Finding 8.

E. The proposed development will not pose an unreasonable risk that a discharge to a significant groundwater aquifer will occur.

F. The applicant has made adequate provision of utilities, including water supplies, sewerage facilities and solid waste disposal required for the development and the development will not have an unreasonable adverse effect on the existing or proposed utilities in the municipality or area served by those services.

G. The activity will not unreasonably cause or increase the flooding of the alteration area or adjacent properties nor create an unreasonable flood hazard to any structure.

THEREFORE, the Department APPROVES the application of MERCY HOSPITAL to construct Phase II of the Mercy Hospital Relocation project as described above, SUBJECT TO THE FOLLOWING CONDITIONS and all applicable standards and regulations:

1. The Standard Conditions of Approval, a copy attached.

2. In addition to any specific erosion control measures described in this or previous orders, the applicant shall take all necessary actions to ensure that its activities or those of its agents do not result in noticeable erosion of soils or fugitive dust emissions on the site during the construction and operation of the project covered by this approval.

3. Severability. The invalidity or unenforceability of any provision, or part thereof, of this License shall not affect the remainder of the provision or any other provisions. This

License shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

4. The applicant or other responsible party shall, within three months of the expiration of each five-year interval from the date of this Order, submit a report certifying that the items listed in Department Rules, Chapter 500, Appendix B(4) have been completed in accordance with the approved plans.

5. Prior to the start of construction, the applicant must submit evidence that it has been granted a line of credit or a loan by a financial institution authorized to do business in this State or evidence of any other form of financial assurance determined by Department Rules, Chapter 373(1), to be adequate to the BLWQ for review and approval.

6. Prior to occupancy of the new buildings, the applicant shall submit a copy of an executed long-term maintenance contract (minimum of 5 years and renewable) to the BLWQ for the on-going maintenance of the Filterra®, the underdrained subsurface sand filter, and the StormFilter®.

7. Storm sewer grit and sediment materials removed from any parts of the stormwater management system, including conveyance structures, during maintenance activities shall be disposed of in compliance with the Maine Solid Waste Management Rules.

8. The applicant shall retain the design engineer, or another qualified engineer, to oversee the construction of the stormwater management structures according to the details and notes specified on the approved plans. Within thirty days of completion of each stormwater management structure, the applicant shall submit a log of inspection reports detailing the items inspected, photos taken, and the dates of each inspection to the BLWQ for review.

9. Prior to the start of construction, the applicant shall mail or deliver a cashier's check or bank draft in the amount of $834,156.00, payable to "Treasurer, State of Maine", with the permit number noted on the check; to: ME DEP, Attn: ILF Program Administrator, State House Station 17, Augusta, ME 04333.

10. Prior to the start of construction, the applicant shall implement the Turtle Trapping and Removal plan.

11. All other Findings of Fact, Conclusions and Conditions remain as approved in Department Order #L-20775-19-A-N and #L-20775-TG-B-N, and subsequent orders, and are incorporated herein.

THIS APPROVAL DOES NOT CONSTITUTE OR SUBSTITUTE FOR ANY OTHER REQUIRED STATE, FEDERAL OR LOCAL APPROVALS NOR DOES IT VERIFY COMPLIANCE WITH ANY APPLICABLE SHORELAND ZONING ORDINANCES.

DONE AND DATED IN AUGUSTA, MAINE, THIS 22 DAY OF March, 2013.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Michael Kuhns for
Patricia W. Aho, Commissioner

Filed
MAR 22 2013
State of Maine
Board of Environmental Protection

PLEASE NOTE THE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES...

CGW/L20775TA&UN/ATS#74936&74937

Department of Environmental Protection

SITE LOCATION OF DEVELOPMENT (SITE)
STANDARD CONDITIONS

A. **Approval of Variations from Plans.** The granting of this approval is dependent upon and limited to the proposals and plans contained in the application and supporting documents submitted and affirmed to by the applicant. Any variation from these plans, proposals, and supporting documents is subject to review and approval prior to implementation. Further subdivision of proposed lots by the applicant or future owners is specifically prohibited without prior approval of the Board, and the applicant shall include deed restrictions to that effect.

B. **Compliance with All Applicable Laws.** The applicant shall secure and comply with all applicable federal, state, and local licenses, permits, authorizations, conditions, agreements, and orders prior to or during construction and operation, as appropriate.

C. **Compliance with All Terms and Conditions of Approval.** The applicant shall submit all reports and information requested by the Board or the Department demonstrating that the applicant has complied or will comply with all preconstruction terms and conditions of this approval. All preconstruction terms and conditions must be met before construction begins.

D. **Advertising.** Advertising relating to matters included in this application shall refer to this approval only if it notes that the approval has been granted WITH CONDITIONS, and indicates where copies of those conditions may be obtained.

E. **Transfer of Development.** Unless otherwise provided in this approval, the applicant shall not sell, lease, assign or otherwise transfer the development or any portion thereof without prior written approval of the Board where the purpose or consequence of the transfer is to transfer any of the obligations of the developer as incorporated in this approval. Such approval shall be granted only if the applicant or transferee demonstrates to the Board that the transferee has the technical capacity and financial ability to comply with conditions of this approval and the proposals and plans contained in the application and supporting documents submitted by the applicant.

F. **Time frame for approvals.** If the construction or operation of the activity is not begun within four years, this approval shall lapse and the applicant shall reapply to the Board for a new approval. The applicant may not begin construction or operation of the development until a new approval is granted. A reapplication for approval may include information submitted in the initial application by reference. This approval, if construction is begun within the four-year time frame, is valid for seven years. If construction is not completed within the seven-year time frame, the applicant must reapply for, and receive, approval prior to continuing construction.

G. **Approval Included in Contract Bids.** A copy of this approval must be included in or attached to all contract bid specifications for the development.

H. **Approval Shown to Contractors.** Work done by a contractor pursuant to this approval shall not begin before the contractor has been shown by the developer a copy of this approval.

Natural Resource Protection Act (NRPA)
Standard Conditions

THE FOLLOWING STANDARD CONDITIONS SHALL APPLY TO ALL PERMITS GRANTED UNDER THE NATURAL RESOURCE PROTECTION ACT, TITLE 38, M.R.S.A. SECTION 480-A ET.SEQ. UNLESS OTHERWISE SPECIFICALLY STATED IN THE PERMIT.

A. Approval of Variations From Plans. The granting of this permit is dependent upon and limited to the proposals and plans contained in the application and supporting documents submitted and affirmed to by the applicant. Any variation from these plans, proposals, and supporting documents is subject to review and approval prior to implementation.

B. Compliance With All Applicable Laws. The applicant shall secure and comply with all applicable federal, state, and local licenses, permits, authorizations, conditions, agreements, and orders prior to or during construction and operation, as appropriate.

C. Erosion Control. The applicant shall take all necessary measures to ensure that his activities or those of his agents do not result in measurable erosion of soils on the site during the construction and operation of the project covered by this Approval.

D. Compliance With Conditions. Should the project be found, at any time, not to be in compliance with any of the Conditions of this Approval, or should the applicant construct or operate this development in any way other the specified in the Application or Supporting Documents, as modified by the Conditions of this Approval, then the terms of this Approval shall be considered to have been violated.

E. Time frame for approvals. If construction or operation of the activity is not begun within four years, this permit shall lapse and the applicant shall reapply to the Board for a new permit. The applicant may not begin construction or operation of the activity until a new permit is granted. Reapplications for permits may include information submitted in the initial application by reference. This approval, if construction is begun within the four-year time frame, is valid for seven years. If construction is not completed within the seven-year time frame, the applicant must reapply for, and receive, approval prior to continuing construction.

F. No Construction Equipment Below High Water. No construction equipment used in the undertaking of an approved activity is allowed below the mean high water line unless otherwise specified by this permit.

G. Permit Included In Contract Bids. A copy of this permit must be included in or attached to all contract bid specifications for the approved activity.

H. Permit Shown To Contractor. Work done by a contractor pursuant to this permit shall not begin before the contractor has been shown by the applicant a copy of this permit.

STORMWATER STANDARD CONDITIONS

STRICT CONFORMANCE WITH THE STANDARD AND SPECIAL CONDITIONS OF THIS APPROVAL IS NECESSARY FOR THE PROJECT TO MEET THE STATUTORY CRITERIA FOR APPROVAL

Standard conditions of approval. Unless otherwise specifically stated in the approval, a department approval is subject to the following standard conditions pursuant to Chapter 500 Stormwater Management Law.

(1) Approval of variations from plans. The granting of this approval is dependent upon and limited to the proposals and plans contained in the application and supporting documents submitted and affirmed to by the applicant. Any variation from these plans, proposals, and supporting documents must be reviewed and approved by the department prior to implementation. Any variation undertaken without approval of the department is in violation of 38 M.R.S.A. §420-D(8) and is subject to penalties under 38 M.R.S.A. §349.

(2) Compliance with all terms and conditions of approval. The applicant shall submit all reports and information requested by the department demonstrating that the applicant has complied or will comply with all terms and conditions of this approval. All preconstruction terms and conditions must be met before construction begins.

(3) Advertising. Advertising relating to matters included in this application may not refer to this approval unless it notes that the approval has been granted WITH CONDITIONS, and indicates where copies of those conditions may be obtained.

(4) Transfer of project. Unless otherwise provided in this approval, the applicant may not sell, lease, assign, or otherwise transfer the project or any portion thereof without written approval by the department where the purpose or consequence of the transfer is to transfer any of the obligations of the developer as incorporated in this approval. Such approval may only be granted if the applicant or transferee demonstrates to the department that the transferee agrees to comply with conditions of this approval and the proposals and plans contained in the application and supporting documents submitted by the applicant. Approval of a transfer of the permit must be applied for no later than two weeks after any transfer of property subject to the license.

(5) Time frame for approvals. If the construction or operation of the activity is not begun within four years, this approval shall lapse and the applicant shall reapply to the department for a new approval. The applicant may not begin construction or operation of the project until a new approval is granted. A reapplication for approval may include information submitted in the initial application by reference. This approval, if construction is begun within the four-year time frame, is valid for seven years. If construction is not completed within the seven-year time frame, the applicant must reapply for, and receive, approval prior to continuing construction.

(6) Certification. Contracts must specify that "all work is to comply with the conditions of the Stormwater Permit." Work done by a contractor or subcontractor pursuant to this approval may not begin before the contractor and any subcontractors have been shown a copy of this

approval with the conditions by the developer, and the owner and each contractor and subcontractor has certified, on a form provided by the department, that the approval and conditions have been received and read, and that the work will be carried out in accordance with the approval and conditions. Completed certification forms must be forwarded to the department.

(7) Maintenance. The components of the stormwater management system must be adequately maintained to ensure that the system operates as designed, and as approved by the department.

(8) Recertification requirement. Within three months of the expiration of each five-year interval from the date of issuance of the permit, the permittee shall certify the following to the department.

(a) All areas of the project site have been inspected for areas of erosion, and appropriate steps have been taken to permanently stabilize these areas.

(b) All aspects of the stormwater control system have been inspected for damage, wear, and malfunction, and appropriate steps have been taken to repair or replace the facilities.

(c) The erosion and stormwater maintenance plan for the site is being implemented as written, or modifications to the plan have been submitted to and approved by the department, and the maintenance log is being maintained.

(9) Severability. The invalidity or unenforceability of any provision, or part thereof, of this permit shall not affect the remainder of the provision or any other provisions. This permit shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

November 16, 2005 (revised December 27, 2011)

DEP INFORMATION SHEET
Appealing a Department Licensing Decision

Dated: March 2012 **Contact: (207) 287-2811**

SUMMARY

There are two methods available to an aggrieved person seeking to appeal a licensing decision made by the Department of Environmental Protection's ("DEP") Commissioner: (1) in an administrative process before the Board of Environmental Protection ("Board"); or (2) in a judicial process before Maine's Superior Court. An aggrieved person seeking review of a licensing decision over which the Board had original jurisdiction may seek judicial review in Maine's Superior Court.

A judicial appeal of final action by the Commissioner or the Board regarding an application for an expedited wind energy development (35-A M.R.S.A. § 3451(4)) or a general permit for an offshore wind energy demonstration project (38 M.R.S.A. § 480-HH(1)) or a general permit for a tidal energy demonstration project (38 M.R.S.A. § 636-A) must be taken to the Supreme Judicial Court sitting as the Law Court.

This INFORMATION SHEET, in conjunction with a review of the statutory and regulatory provisions referred to herein, can help a person to understand his or her rights and obligations in filing an administrative or judicial appeal.

I. ADMINISTRATIVE APPEALS TO THE BOARD

LEGAL REFERENCES

The laws concerning the DEP's *Organization and Powers*, 38 M.R.S.A. §§ 341-D(4) & 346, the *Maine Administrative Procedure Act*, 5 M.R.S.A. § 11001, and the DEP's *Rules Concerning the Processing of Applications and Other Administrative Matters* ("Chapter 2"), 06-096 CMR 2 (April 1, 2003).

HOW LONG YOU HAVE TO SUBMIT AN APPEAL TO THE BOARD

The Board must receive a written appeal within 30 days of the date on which the Commissioner's decision was filed with the Board. Appeals filed after 30 calendar days of the date on which the Commissioner's decision was filed with the Board will be rejected.

HOW TO SUBMIT AN APPEAL TO THE BOARD

Signed original appeal documents must be sent to: Chair, Board of Environmental Protection, c/o Department of Environmental Protection, 17 State House Station, Augusta, ME 04333-0017; faxes are acceptable for purposes of meeting the deadline when followed by the Board's receipt of mailed original documents within five (5) working days. Receipt on a particular day must be by 5:00 PM at DEP's offices in Augusta; materials received after 5:00 PM are not considered received until the following day. The person appealing a licensing decision must also send the DEP's Commissioner a copy of the appeal documents and if the person appealing is not the applicant in the license proceeding at issue the applicant must also be sent a copy of the appeal documents. All of the information listed in the next section must be submitted at the time the appeal is filed. Only the extraordinary circumstances described at the end of that section will justify evidence not in the DEP's record at the time of decision being added to the record for consideration by the Board as part of an appeal.

WHAT YOUR APPEAL PAPERWORK MUST CONTAIN

Appeal materials must contain the following information at the time submitted:

1. *Aggrieved Status.* The appeal must explain how the person filing the appeal has standing to maintain an appeal. This requires an explanation of how the person filing the appeal may suffer a particularized injury as a result of the Commissioner's decision.
2. *The findings, conclusions or conditions objected to or believed to be in error.* Specific references and facts regarding the appellant's issues with the decision must be provided in the notice of appeal.
3. *The basis of the objections or challenge.* If possible, specific regulations, statutes or other facts should be referenced. This may include citing omissions of relevant requirements, and errors believed to have been made in interpretations, conclusions, and relevant requirements.
4. *The remedy sought.* This can range from reversal of the Commissioner's decision on the license or permit to changes in specific permit conditions.
5. *All the matters to be contested.* The Board will limit its consideration to those arguments specifically raised in the written notice of appeal.
6. *Request for hearing.* The Board will hear presentations on appeals at its regularly scheduled meetings, unless a public hearing on the appeal is requested and granted. A request for public hearing on an appeal must be filed as part of the notice of appeal.
7. *New or additional evidence to be offered.* The Board may allow new or additional evidence, referred to as supplemental evidence, to be considered by the Board in an appeal only when the evidence is relevant and material and that the person seeking to add information to the record can show due diligence in bringing the evidence to the DEP's attention at the earliest possible time in the licensing process or that the evidence itself is newly discovered and could not have been presented earlier in the process. Specific requirements for additional evidence are found in Chapter 2.

OTHER CONSIDERATIONS IN APPEALING A DECISION TO THE BOARD

1. *Be familiar with all relevant material in the DEP record.* A license application file is public information, subject to any applicable statutory exceptions, made easily accessible by DEP. Upon request, the DEP will make the material available during normal working hours, provide space to review the file, and provide opportunity for photocopying materials. There is a charge for copies or copying services.
2. *Be familiar with the regulations and laws under which the application was processed, and the procedural rules governing your appeal.* DEP staff will provide this information on request and answer questions regarding applicable requirements.
3. *The filing of an appeal does not operate as a stay to any decision.* If a license has been granted and it has been appealed the license normally remains in effect pending the processing of the appeal. A license holder may proceed with a project pending the outcome of an appeal but the license holder runs the risk of the decision being reversed or modified as a result of the appeal.

WHAT TO EXPECT ONCE YOU FILE A TIMELY APPEAL WITH THE BOARD

The Board will formally acknowledge receipt of an appeal, including the name of the DEP project manager assigned to the specific appeal. The notice of appeal, any materials accepted by the Board Chair as supplementary evidence, and any materials submitted in response to the appeal will be sent to Board members with a recommendation from DEP staff. Persons filing appeals and interested persons are notified in advance of the date set for Board consideration of an appeal or request for public hearing. With or without holding a public hearing, the Board may affirm, amend, or reverse a Commissioner decision or remand the matter to the Commissioner for further proceedings. The Board will notify the appellant, a license holder, and interested persons of its decision.

II. JUDICIAL APPEALS

Maine law generally allows aggrieved persons to appeal final Commissioner or Board licensing decisions to Maine's Superior Court, see 38 M.R.S.A. § 346(1); 06-096 CMR 2; 5 M.R.S.A. § 11001; & M.R. Civ. P 80C. A party's appeal must be filed with the Superior Court within 30 days of receipt of notice of the Board's or the Commissioner's decision. For any other person, an appeal must be filed within 40 days of the date the decision was rendered. Failure to file a timely appeal will result in the Board's or the Commissioner's decision becoming final.

An appeal to court of a license decision regarding an expedited wind energy development, a general permit for an offshore wind energy demonstration project, or a general permit for a tidal energy demonstration project may only be taken directly to the Maine Supreme Judicial Court. See 38 M.R.S.A. § 346(4).

Maine's Administrative Procedure Act, DEP statutes governing a particular matter, and the Maine Rules of Civil Procedure must be consulted for the substantive and procedural details applicable to judicial appeals.

ADDITIONAL INFORMATION

If you have questions or need additional information on the appeal process, for administrative appeals contact the Board's Executive Analyst at (207) 287-2452 or for judicial appeals contact the court clerk's office in which your appeal will be filed.

Note: The DEP provides this INFORMATION SHEET for general guidance only; it is not intended for use as a legal reference. Maine law governs an appellant's rights.

GENERAL APPLICATON DOCUMENT

PROJECT DESCRIPTION

PROJECT OVERVIEW

Background and Purpose of the Move to the Fore River Campus

Northern Light℠ Mercy Hospital (Mercy) is an acute care, non-profit hospital located in Portland, ME and is licensed for 200 in-patient beds. Mercy has over 1,604 employees, 743 medical staff, and over 125 volunteers. Mercy has served the greater Portland community for over 100 years opening its current 144 State Street Campus in 1943. In the early 2000s, Mercy Hospital's strategic plan identified important objectives that could not be achieved at the 3.5-acre State Street site, given its age, size, location and Portland's Historic District constraints. Four priority objectives of the strategic plan are listed below and represent the purpose for which the Fore River project was conceived and implemented:

- ***Mercy must assure "state of the art" technological infrastructure*** consistent with industry norms and standards of care;
- ***Mercy must assure short-term and long-term excellence*** in program plans and facilities to support them;
- ***Mercy must assure strong physician relationships*** enhanced by improved facilities; and
- ***Mercy must solidify itself as a health care employer of choice*** by providing safe, comfortable, and technologically advanced facilities.

When it became apparent that the State Street facility could not meet important strategic goals, Mercy engaged a technical team to work with the Hospital's management and Board to find a new location. The team developed six criteria for evaluating prospective sites:

- A 50-acre parcel was the goal for siting a new facility with 25 acres being the minimum;
- Easy accessibility from interstate highways and major roadways;
- Easy accessibility to public transportation;
- Convenient to doctor's offices, many of which are located on the Portland peninsula;
- Proximity to Maine Medical Center to avoid duplication of highly specialized equipment; and
- A site where Mercy would be welcomed by the neighborhood and the community at large.

Selection of the Fore River Site

Finding a location that satisfied all criteria was difficult. Three dozen potential locations were identified and reviewed. Of those, only the Fore River site met all six criteria. The City of Portland Planning and Economic Development Department endorsed the Fore River site, as did the Maine Department of Environmental Protection (MDEP) as evidenced by the granting of Permit Approvals L-20775-A-A-N & L-20775-TG-B-N and subsequent amendments.

The Fore River site was formerly owned by Merrill Industries and the Portland Terminal Co. and contained multiple sets of railroad tracks that were used to store railcars. The combined 85.5-acre parcel consisted of 43.5 acres of tidal mudflats and 42 acres of undeveloped land above the mudflats. Four wetland areas totaling over four acres were present in the upland area. Three small linear wetland areas were located within former drainage ditches along old railroad track paths. The fourth and largest wetland was a 3.6-acre former gravel pit that had been excavated to below the groundwater table to provide gravel for the original Veterans Memorial Bridge and for railroad operations. At the time that Mercy acquired the land in 2001, the former gravel pit contained numerous homeless encampments and a common dumping ground for trash and solid waste.

Mercy originally retained a team of hospital planning architects and consultants to develop an initial Master Plan for the Fore River parcel. Numerous development layouts were refined over time as Mercy's understanding of the site's existing conditions and development programming became known. The selected design layout in 2002 reduced the proposed wetland impacts to 0.92 acres, which involved the filling of three former rail line drainage ditches which were considered of low value, however it avoided filling in the former gravel pit. A MDEP Site Location Permit and Natural Resources Permit were issued for the site in 2002. Similarly, the City of Portland approved a Contract Zone Agreement in 2002, whereby allowing the proposed Hospital use; the site's original zoning was Industrial and Hospital, and medical offices are not an allowed use in the City's Industrial zones. During that same period, the Maine Department of Transportation undertook the construction of the Fore River Parkway connection from Congress Street and the Transportation terminal to West Commercial Street. Mercy's willingness to work with State and Local officials and agreement to transfer a portion of their land to allow the road construction was instrumental in the Parkway and Fore River Trail construction in 2004.

In 2005, Mercy submitted a Certificate of Need Application (CON) Application which proposed relocating part of its services to a new Fore River Campus (Phase 1). This CON Application was granted in 2005 and in 2008 Mercy opened a medical office building and a new hospital providing inpatient and outpatient surgical services, diagnostic imaging, laboratory, and obstetrics on the Fore River campus. Phase 1 design plans were developed from 2004 through 2006 following the CON approval. The Portland Planning Board reviewed and approved the Phase 1 Site plan and an overall Master Plan for the site in 2006 and in September 2006 the Phase 1 construction commenced. The Phase 1 program maintained resource impacts to the originally permitted 0.92 acres, thus avoiding any significant impacts to the former gravel pit wetland located in the middle of the site. The Phase 1 program, consisting of the 138,099 SF Hospital and 82,186 Medical Office Building, was completed and opened in September 2008.

Status of the Two-Phase Move to the Fore River Campus

Mercy chose to relocate from their State Street site and move to the Fore River campus in order to meet important strategic obligations and maintain appropriate standards of care that were in jeopardy long-term if the Hospital were to remain at State Street. A two-phase move was planned due to various circumstances. The first phase of the move to the Fore River campus was completed in 2008 with the construction of the Phase 1 hospital facility and the adjoining medical office building (MOB). At the Fore River site, ancillary facilities including surface parking for 762 vehicles, utilities, snow storage, and a maintenance building were also constructed. The Phase 2 planning effort has also continued since that time. In Mercy's 2005 Certificate of Need (CON), the Master Facility Plan anticipated future consolidation

of inpatient and ambulatory services on the Fore River Campus. Northern Light℠ Mercy Hospital Leadership have determined that the time is right to proceed with the phase two-development proposal.

In the eleven-year period that the Hospital has been maintaining both the State Street campus and the Fore River campus, Mercy has become acutely aware of the operational and financial problems of maintaining two interdependent campuses. In 2013 Mercy, joined EMHS (now Northern Light Health) and embarked upon a strategic repositioning initiative to achieve operational and financial efficiencies. The recently approved CON Application[1] (Phase 2), proposes to relocate all hospital services at State Street to the Fore River Campus.

The location of the Phase 2 hospital expansion has not changed from previous permitting. The current Phase 2 hospital build-out is projected to incorporate 54,889 SF of hospital space along with approximately 34,987 SF for an Ambulatory Surgical Center (ASC) to be separate from the hospital.

The useable portion of the original 42-acre Fore River property has shrunk over time. The Fore River Parkway and the final grading of the Phase 1 property have constricted expansion opportunities toward the river on the west. Construction of the new Veterans Memorial Bridge has further constrained the south end of the site. All major utility entries, hospital gas, and emergency generators are optimally located immediately south of the Phase 1 hospital, to service the intended Phase 2 expansion, but they restrict development in the southwest portion of the site. The Mercy Team has determined that there is approximately less than 20 acres of developable land remaining at the Mercy Fore River site, as shown on Figure 1 following this section.

In 2013, Mercy approached the Maine Department of Environmental Protection and the US Army Corps of Engineers with a long-term plan for the Hospital needs on the Campus. This involved the expansion of building(s) and parking facilities that encompass filling of the former gravel pit entirely. Based on the long-term plans and supporting evidence, both the MDEP and the USACOE approved Mercy's development plans. Both agencies accepted as compensation for the impacts to the basin resource, Mercy's participation in the In-Lieu Fee Compensation program[2]. Mercy has provided a contribution of $834,156 to the State to satisfy the NRPA condition of approval, thus establishing their standing to move ahead with filling the former gravel pit.

PURPOSE AND NEED

The fundamental reasons for the campus consolidation are:

- Improved access to the full range of healthcare delivery services on one campus;
- Improved Clinical and administrative Staff efficiencies;
- Improved patient experience in single patient rooms and ambulatory services;
- Reduction in annual operating costs will be achieved; and
- Continue high quality service delivery in one efficient modern facility.

[1] See https://www.maine.gov/dhhs/dlc/c_o_n/2019/index.shtml
[2] See https://www.maine.gov/dep/land/nrpa/ILF_and_NRCP/index.html

To achieve these objectives Mercy's current project is to construct a Phase 2 Hospital build-out with 54,889 SF of expanded hospital space and approximately 34,987 SF for an Ambulatory Surgical Center (ASC). The hospital expansion will be directly connected to the existing Phase 1 Fore River Hospital, while maximizing site safety and allowing for a future Phase 3 expansion that would be in close proximity to the ASC. The ASC will be positioned within the former gravel pit area so that it provides relatively close proximity to the Hospital while also maintaining its own parking and stand-alone features, given its outpatient services programing.

DEVELOPMENT PROPOSAL

Mercy Hospital is proposing to develop their Phase 2 Hospital expansion on the Fore River development site with construction to begin in early 2020, pending City Site plan approval and building permits. The current development plan includes the following uses:

- The Phase 2 Hospital expansion wherein all State Street hospital functions are relocated to the Fore River Campus. This will include an additional 54,889 SF of Hospital program area over a 20,140 SF building expansion footprint. The expansion area will occur on the north end of the existing hospital over an area currently used for surface parking containing 105 parking spaces for staff only. The hospital expansion will include Emergency Room services, thus a new parking area with 19 spaces designated for emergency room patient and visitors will be provided to the north side of the expansion. Additional parking for up to 8 ambulances will also be provided and designated entries for both patient drop off and ambulance drop off/pick up to the emergency room have been depicted on the site plan. The four level expansion will be partially screened by the existing hospital and Medical office locations for views from the parkway. SMRT Architects is responsible for the building expansion design and ASC design and they have prepared floor plans, building elevations and various renderings depicting the proposed architecture for these buildings.

- The front entry drive past the existing main Hospital entrance will be extended between the existing Hospital, proposed expansion and the existing Medical office thus connecting the front of the Hospital to the parking lot to the north side of the MOB. This one-way drive will provide access to the expansion and the MOB.

- A 34,987 SF Ambulatory Surgical Center (ASC) will be established within the former gravel pit area that will be partially filled. The two-story building will be accessed from a new driveway off the southerly site entrance and the building access will include a staff entry at the rear of the building. The ASC positioning will keep its visibility somewhat muted given the location and higher building height of the existing hospital in the foreground and the much larger new MMC 2,500 space parking garage in the background.

- Accessory uses, including but not limited to, surface parking facilities, ASC utility services, stormwater management systems, and site amenities are also part of the current proposal. A new parking lot containing 103 parking spaces will be provided on the north end of the ASC site and this parking is expected to replace the displaced parking due to the expansion. An additional parking lot of 73 spaces will be provided on the south side of the ASC and this lot will be designated specifically for ASC use. The total onsite parking available will be 857 spaces, which will exceed the required by code parking requirement of 679 spaces. The expected parking demand for the site upon completion of the Hospital expansion and the ASC is met with the 857 spaces as that provides for a "practical capacity"

factor of around 25%. A parking demand study at the Fore River campus completed by Gorrill Palmer in January 2017, determined the parking demand to be about 525 vehicles using the 762 existing spaces. Mercy anticipates the proposed parking will adequately meet proposed demand and this will preclude the need for any further parking expansion or structured parking conditions.

- There will be continued use of public open space along the waterfront at the north and south ends of the campus and access to the Fore River Trail along the Parkway as well as pedestrian walks throughout the campus; and

- Continued use of the south end of the campus for snow storage and/or remote parking.

- Metro Bus service currently serves the site and this will remain a critical access condition into the future.

All of the above facilities will be developed primarily to support the main use of the site as a hospital campus, although it is anticipated that some use of support facilities by others in the neighboring community may occur.

Two separate access drives will continue to provide access to the Hospital campus off the Fore River Parkway. These access locations remain fixed due to geometric and sight line constraints along the Fore River Parkway. These fixed locations also contribute to the planning and layout challenges for the site. Access off County Way is limited to emergency vehicles only, as it requires crossing of Pan Am Railway's tracks.

The Phase 2 project's proposed stormwater management systems will provide water quality treatment measures to treat the new structure area developed as part of the Phase 2 expansion. The intent is to meet the current MDEP Chapter 500 Standards and City of Portland Standards including treatment of at least 95% of new structure area and 80% of the Phase 2 developed area. Stormwater quantity control is not required since the site will be discharging to tidal waters. The primary mechanism for water quality treatment will be a wet pond that will be constructed. This wet pond will benefit from existing infrastructure including an outfall that ultimately discharges to the Fore River.

Additional landscaping including perimeter tree plantings will continue to be provided for buffering and aesthetic benefits. The existing site design includes substantial open space necessary to satisfy local requirements associated with the Contract Zone Agreement negotiated between Mercy Hospital and the City of Portland.

EXISTING CONDITIONS

The Mercy Campus currently contains the 137,832 SF Phase 1 Hospital and an approximately 82,186 SF medical office building both of which are located north of the former gravel pit wetland located in the middle of the site. Site access is from two primary driveways. The northerly, unsignalized driveway allows left and right turn entering off the Fore River Parkway, but only right turn exiting onto the Parkway. The southerly signalized driveway allows entering and exiting movements in each direction. The south end of the site currently contains a surface parking lot for 310 vehicles. A small maintenance building remains at the site's south end also. A snow storage area at the far south end of the site will remain.

The site's parking is spread out over five surface parking lots. The northerly lots contain over 452 spaces used by the medical office building staff and visitors as well as by the Phase 1 Hospital patients, visitors and some staff. The southerly parking lot is used by Phase 1 Hospital staff as well as for remote parking for State Street Hospital staff. Mercy currently runs a shuttle service between the parking lot and the State Street facility. Drainage systems within these parking lots capture and convey stormwater runoff to the Fore River.

Mercy maintains the entire site and those areas not covered by building or parking are well landscaped and managed with manicured lawn and planting beds. A generous number of trees and shrubs compliment the site's appearance.

Gorrill Palmer conducted a parking evaluation in the fall 2018 and concluded that the existing onsite parking exceeds the parking demand encountered on the site. There are an existing 762 spaces on the property and the peak existing demand was determined to be approximately 525 spaces (69% of total). An update to the parking demand analysis is underway and will be provided for review once complete.

Gorrill Palmer also conducted a driveway analysis to verify whether the existing driveways will operate safely and with an acceptable level of service. They concluded that there are no high accident locations in the vicinity of the site and that the site driveways will operate at acceptable levels off service. An updated analysis will be provided for City review upon completion.

UTILITIES

The Hospital Campus will continue to be served by public water, sewer, natural gas, and nearby communication, cable, and electric utilities. Onsite water service consists of a 12" water main. A 42" sanitary sewer interceptor borders the site along its easterly border. The Hospital will continue to manage its wastewater flow stream in a similar fashion to the existing facilities at both Fore River and State Street. Communications, cable, and electric utilities are located on the project site.

CONSTRUCTION SCHEDULE

The Phase 2 project is currently under design with a targeted construction start date for March 2020 and construction completion in early 2022.

The project will be phased beginning with the placement of fill in the borrow pit to create temporary parking and construction staging facilities. The temporary facilities will allow subsequent construction of the main Phase 2 Hospital expansion followed by the ASC. The Hospital expansion effort involves a coordinated effort that maintains ongoing Hospital functions and service throughout the Phase 2 duration. A Construction Management Plan has been prepared by Consigli and is appended to the Construction Management Plan section of this application.

GENERAL APPLICATION DOCUMENT

ZONING ASSESSMENT

See attached Zoning Assessment Table and project site plans for additional information.

ZONING ANALYSIS Relevant Zone(s) C-26 Mercy Hospital Contract Zone

All Projects:

	Required	Proposed
Lot Size	C2	33.51 AC
Area Per Dwelling Unit		
Minimum Street Frontage		
Front Yard ~~Minimum~~ Setback	20 FT	100 FT
Front Yard Maximum		
Rear Yard	10 FT	123 FT
Yard Right		
Yard Left		
Side Street Setback	10 FT	204 FT
Step Back		
Maximum Lot Coverage		
Minimum Lot Coverage		
Maximum Height	90 FT	<90 FT
Open Space		
Maximum Impervious Area	80%	66%
Pavement Setback		16 FT
Floor Area Ratio		
Off Street Parking Spaces	679	857
Loading Bays	2	2
Other 1		
Other 2		
Other 3		

The above information is subject to the existing Contract Zone approved for Mercy Hospital.

NOT APPLICABLE

Planned Residential Unit Developments (PRUD) Requirements

	Required	Proposed
Minimum Lot Size		
Minimum Lot Area per Dwelling		
Maximum # Units per Building		
Maximum Building Length		
Maximum Accessory Building Length		
Minimum Setbacks		
Minimum Building Separation		
Minimum Open Space		

Affordable Housing Density Bonuses (if applicable)

	Bonus Increase or Decrease	Maximum Allowable With Bonus	Proposed
Density			
Height			
Setback Reduction			
Recreation Space			
Maximum Accessory Building Length			
Minimum Setbacks			
Minimum Building Separation			
Minimum Open Space			
Explanatory Text 1 (optional):			
Explanatory Text 2 (optional):			
Explanatory Text 3 (optional):			

Attachment G.

NORTHERN LIGHT MERCY HOSPITAL
FORE RIVER CAMPUS
LEVEL III SITE PLAN APPLICATION
CONTRACT ZONE COMPLIANCE

Prepared for:

Northern Light℠
Mercy Hospital

175 Fore River Parkway
Portland, Maine 04101

Prepared by:

Gorrill Palmer Consulting Engineers
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November 2019

The following is an analysis of the Site Plan Application for Phase II of Mercy Hospital's development of the Fore River campus, as it relates to the additional development standards contained in the December 3, 2001 Contract Zone Agreement with the City of Portland. As demonstrated below, the proposed development meets all of the standards.

I. DEVELOPMENT STANDARDS

A. Design Relationship to Site

Development proposals shall demonstrate a reasonably unified design of the site in a Campus-like setting, including the architecture, the layout of the buildings, pedestrian and vehicular circulation plan, open space, drainage, and the topography, soil conditions, vegetation, and other natural features of the site. Integration of open spaces and natural features shall be achieved by incorporation of outdoor amenities for the benefit of users of the site, such as jogging and walking trails, gardens, and benches. The proposed layout of buildings and uses shall demonstrate compatibility within the site. Consideration shall be given to compatibility of proposed perimeter development with the existing and future uses adjacent to the property. The existing north and south open space areas provide over 4 acres of undeveloped waterfront for the use and enjoyment of site users as well as the general public.

1. Building Orientation

The development layout is governed by the following site conditions:

- Location of the driveway access locations along the Fore River Parkway. These are fixed due to geometric and sight line requirements.
- Naturally high ground within the northern sections of the site.
- Natural building envelopes available within the north and south sections. Neither area is large enough by itself to support the full Campus program, therefore requiring a "bridge" between them. Mercy sought and was granted approvals by the MaineDEP and USACOE for the filling of the pond in the middle of the site which allows for the Phase 2 plan for the Ambulatory Surgery Center ("ASC") and next phase support programming. Future phases will build upon the availability of development area provided by the pond filling.
- The building envelopes allow for the following key elements:
  - Building connectivity for the Phase 1 Medical Office Building and Expanded Hospital.
  - Adequacy of Phase 1 and Phase 2 surface parking within reasonable proximity to each building's entrance.
  - Future accessibility to surface and structured parking proximate to the Hospital, the expansion, and existing and future Hospital Facility outpatient Building(s).
  - The hospital's prominence on the higher elevation of the site provides for clarity of view from the nearby roadways and over the Fore River Parkway to the Fore River.
  - Allows capacity for building expansion.
  - Ample utilities capacity on the Campus.
  - Open spaces for patients, staff, and the general public to take advantage of the site's waterfront conditions and aesthetics.

- Continued connectivity to various pedestrian access routes including the Fore River Parkway Trail and other Portland Trails systems, METRO bus services, Veterans Bridge and Portland Transportation Terminal.
- A designated vehicular access route from the northerly driveway to the southerly driveway and ideal connectivity to the nearby regional highway system including I-295, US Route 1 and Maine Turnpike.

B. ***Landscaping***

Future development proposals shall include a landscape program. All land areas not covered by structures, parking areas, or circulation facilities shall be landscaped and maintained to supplement the existing site landscaping. In order to soften the visual impact of large expanses of pavement in parking lots, vegetation shall be planted or retained in islands or planting strips where required by Article IV (Subdivisions) and Article V (Site plan) of the Land Use Code.

The current surface parking areas contain significant tree plant and vegetative plantings for screening and general aesthetics.

Please see Schematic Figure 4.

1. Design Intent

   Mercy Hospital looks to "heal" the development site through its approved soil management plan and landscaping program. The cleanup and coverage of exposed soils and disturbed areas has been accomplished in a manner that beautifies the site and builds upon its waterfront location.

   The project's landscaping program has been installed to meet the City's Arboricultural Specifications and Standards of Practice and Landscape Guidelines. The site contains trees and landscaping species that are suitable for the property's environmental conditions. All materials are of appropriate hardiness, are suitable to the site's soils conditions and generally complement existing landscaping in the surrounding areas, including the Fore River Parkway and Veterans Bridge. All areas not otherwise used for buildings, paved parking areas, landscaping or otherwise naturally vegetated have been covered with topsoil and grassed.

2. Planting Design

   Plantings utilized throughout the site have been maintained to fulfill the functions listed below. Plant types used vary in type and size, some being native, and are placed to take full advantage of individual plant characteristics, such as form, mature size, and seasonal interest.

   - Highlight and accent building entrances and specialty areas; gardens, terraces, etc.
   - Define major entry, intersection, and focal points.
   - Soften and screen the visual impact of parking and service/utilitarian areas from views within and from outside the site.
   - Help define areas and travel sequences within the site to aid in identification of circulation patterns and wayfinding.
   - Provide an aesthetically pleasing environment for patients, staff, and visitors.

This is accomplished by means of the following:

- Establish a hierarchical planting structure defining major site components.
- Used Green Ash to line and identify the primary site circulation loop from the north entry, around the pond, to the south entry, and along the eastern drive to the south end of the site (access from Connector eastbound).
- Used Ginkgo and Red Maple to line and identify secondary circulation drives adjoining the hospital and through the southern parking area.
- Used single species in individual parking "cells" or blocks, to define and create identity for each, much like a color-coding for each sub lot. Species include European Hornbeam, Chinese Elm, and Ornamental Pear.
- Used flowering accent trees such as Crabapple, Ornamental Pear, and Serviceberry, to highlight primary intersections and points of emphasis.
- Utilize a mix of deciduous and evergreen species around the site perimeter to screen parking areas, and integrate the site into the background of mixed-species vegetation at the base of the Western Promenade. Evergreens are used on the slope between the Fore River Parkway and north parking, which screen views of the north parking areas, augmenting the street trees planted in the Parkway Right-of-way. The eastern side of the site at the property line is planted in a mix of deciduous and evergreen trees. The planting on the berm on the east side of the south parking is augmented with shrubs. Mixed planting is shown at the northwest corner to soften views to the northern parking from those southbound on the Connector, reinforcing the natural screening by existing vegetation and lower position of the parking in the landscape.



- Existing vegetation has been preserved to the greatest extent practicable, and is incorporated into the overall plan as a screening and naturalizing element.

3. Open Space Design

Though constituting what essentially amounts to "leftovers" from the Fore River Parkway and Veterans Bridge road projects, the open spaces at the north and south ends of the project area adjacent to the Fore River represent an excellent opportunity for recreation resources. Character-defining elements of the area include:

- Close proximity to the water's edge, with a few limited opportunities for shoreline access.
- Expansive views to the Fore River north of the Veteran's Bridge.
- Access potential from an established pedestrian system (Portland Trail network).
- Remnants of past uses including wharves, rail lines and access ways that speak to Portland's industrial "working waterfront" heritage.
- New, state-of-the-art stormwater treatment swales that reflect the latest environmental thinking in run-off water quality, the form of which includes long, geometric, swales and berms in the landscape.
- Large open areas of essentially flat land in varying degrees of natural succession vegetation re-establishment.
- Somewhat secluded from view, and the sometimes haunt of Portland's transient population, raising questions of security.

Taken together, these elements offer an opportunity for the creation of passive-oriented recreation areas with interpretive potential. This is achieved by:

- Utilizing and integrating the regular geometry of the stormwater swales and berms into the open space design. The swales are reminiscent of the Cumberland & Oxford Canal system that used to terminate in the nearby turning basin. The linear arrangement is incorporated into the composition as a foil for a bosque of trees, across which pathways with footbridges are located to draw the user into the area. Interpretive signage could be installed at some future date to provide information about the treatment system and water quality issues, as well as nearby canal history.







- At the north end, the remains of a railroad spur to the former wharves organize the alignment of a path between it and the water's edge. Volunteer tree growth, primarily birches, in and amongst the tracks, creates a unique "decomposition" of an industrial area back to the natural. Old internal access drives are geometrically incorporated with allée of trees, with a sitting area with benches focused on the water at their confluence.
- Opportunities are created along stone dust pathways for bench seating and viewing of the water.
- Disturbed areas not otherwise treated are given back to a naturalized field state, or, where active recreation activities (Frisbee, kite flying, etc.) are possible, mown lawn.

4. Phasing

Phase 1 planting and open space improvements included:

- Plantings in the north and south parking areas.
- Plantings at the north and south site entrances.
- Perimeter screen/buffer plantings.
- Plantings around Phase 1 hospital and medical office buildings.
- Screen plantings around service/loading area.
- "Structural" planting in the green space south of the hospital building between the access drive and Connector to include trees and lawns only.
- Full development of north open space including stone dust paths, footbridges, benches, and plantings. The path will be constructed to a point at the northernmost property line where it will be met by pending Portland Trails construction. Trail directional signage will be installed in coordination with Portland Trails.
- Partial development of the south open space to include a portion of planned shade tree planting, general cleanup, and grassing of disturbed and un-revegetated areas.

Phase 2 planting and open space improvements will include:

- Plantings in the expanded parking area.
- Plantings at the Phase 2 hospital building expansion.

5. Wind Buffering

In addition to the front yard buffer areas, the parking areas contain landscaped longitudinal barrier islands at regular intervals. Tree plantings and other landscape measures are positioned to provide winter wind buffering of the building's front entrances and provide protection in the wide-open spaces.

6. General Site Character/Construction Materials

- *Parking Lot Surfaces*

  Parking lot surfaces are hot bituminous asphalt. Standard or pervious concrete may be used in service areas.

- *Walkways*

  Walks within reasonable proximity to the building are reinforced concrete. More remote walks consist of hot bituminous asphalt. Several pedestrian paths to open spaces and around the open marsh in the middle of the site may be bituminous asphalt or stone dust.

- *Curbs/Islands*

  Curbs are vertical or sloped granite. Landscaped islands are sloped or vertical granite.

- *Walls*

  Site retaining walls, where necessary, are segmented block retaining walls. Decorative walls at the main entrances have a masonry or poured concrete core and stone veneer (granite or limestone) constructed on an appropriate foundation. Retaining walls as an extension of the building façade shall be poured concrete with a veneer of material to complement the building materials.

- *Fencing*

  Chain link fencing has been placed along the railroad ROW to provide separation and site security. Vinyl coating shall be used where appropriate.

C. Pedestrian Orientation

Development proposals shall include an integrated pedestrian circulation system, including internal sidewalks, to take advantage of the topography and natural features of the site. They shall provide for safe pedestrian access to all buildings and parking areas and conveniently access all developed portions of the site without additional driving. The pedestrian circulation system shall link with the shoreline trail feature of the site.

Currently there are over 4,000 LF of paved and maintained sidewalks throughout the Campus. Mercy maintains these routes year-round for staff, patient, and visitor use. The Phase 2 plans include maintenance of the majority of these sidewalks and some new sidewalk with the limits of work for the ASC and parking areas within the gravel pit area.

Pedestrian sidewalks link the Portland Trails network along the waterfront to each primary site entrance and to the site's internal sections. A pedestrian crossing signal has been installed on the Fore River Parkway at the southerly driveway. Pedestrian linkages include overlooks of the Fore River and also connectivity to the north open space. A paved sidewalk follows the rear

access drive around the outside site perimeter; a pedestrian can walk over 4,000 LF (0.75 mile) along onsite paved sidewalk systems in a closed loop, without having to leave the Campus. Pedestrian crossings on the Parkway connect pedestrians to many more miles of available trail within the greater neighborhood and beyond, thus making the Fore River Campus one of the more accessible and walkable sites on the Peninsula.



The north open space area, constructed during Phase 1 includes pathways that enable completion of the linkage between the Thompson's Point area to the already paved and in-place Parkway sidewalk/trail system.

Site-related pedestrian circulation also includes designated sidewalk routes from the surface parking areas to the buildings. A hard surface, landscaped pedestrian sidewalk connects the southerly staff parking area to the staff entrance at the south end of the hospital. A shuttle van also transports hospital staff from the employee parking lots to the hospital entrance on a regular basis. Appropriate signage is provided to aid in the understanding of onsite and offsite pedestrian facilities.

Mercy has actively worked with nearby landowners including the Thompsons Point by allowing weekend event parking that benefits from the site's connectivity to the Fore River Parkway Trail, allowing patrons a very short 8-15 minute walk to events at the Point.

D. ***Vehicular Access and Circulation***

The primary access to serve the entire development will be from two access points and a slip lane from the Connector as may be further developed or modified by joint agreement of the City, MDOT and the applicant. Vehicular circulation through internal driveways and roadways will provide safe an orderly access to all developed portions of the site.

The Maine Department of Transportation used a significant portion of the property for the construction of the I-295/Commercial Street Connector aka fore River Parkway. The connector roadway provides the link between Outer Congress Street, I-295, the Veterans Bridge and the Commercial Street Corridor. From west to east, the connector extends from the I-295 Exit 5 interchange and crosses the Pan Am railroad tracks above grade and proceeds across the property generally along the Fore River frontage. The Veterans Bridge Interchange has been reconstructed with expansive pedestrian facilities for walkers, runners, and bicyclist between Portland and South Portland. The connector right of way includes the Fore River Parkway pedestrian walkway/bikeway along the Fore River frontage. Two separate access drives to the hospital Campus have been provided off the Parkway with the southerly driveway being signalized. Additional gated emergency access is provided off an existing access route behind the County Correctional Facility. These access conditions will likely remain unchanged into the future due to design consideration along the Parkway. A traffic analysis of predicted operating conditions at the driveways upon completion of the Phase 2 project indicates a high level of service will be maintained at both side driveways. Overall, the Fore River Parkway is considered

to be an under-utilized transportation corridor in the city, while the city has made efforts to even further improve conditions in the Libbytown area, north of the Mercy Campus[1].

1. Parking

   A parking demand and supply analysis was conducted by Gorrill Palmer Consulting Engineers in support of the Phase II development activity and the findings of that study support the proposed parking supply of 857 spaces. Future development activity will rely on updated parking demand analysis to further inform decision making for surface or structured parking expansion on the property.

   Overall Assessment of Need

   Currently the Phase 1 development contains the following parking:

		Fore River Site Parking Phase 1	
Phase 1 Use	**Building Size**	**Required by Code**	**Currently Available**
Hospital – 1 SP/500 SF	137,832 SF	276	
MOB – 1 SP/400 SF	82,186 SF	205	
Total		**481**	**762**

   Assuming similar ratios are allocated for Phase 2, the expected parking demand at the Fore River site can be summarized as follows:

		Fore River Site Parking Phase 2	
Phase 2	**Building Size**	**Required by Code**	**Provided on Site**
Hospital Expansion – 1 SP/500 SF	54,889 SF	110	
ASC – 1 SP/400 SF	34,987 SF	88	
Subtotal		198	
Plus Existing		481	
Grand Total		**679**	**857**

2. Access and Circulation

   Please see Schematic Figures 2 and 3.

3. Major Entrances and Exits

   - Northerly Driveway – Unsignalized
     - Southbound left and northbound right turn entering
     - Exiting right only to Fore River Parkway northbound
   - Southerly Driveway – Signalized
     - Northbound right turn entering
     - Southbound left turning entering
     - Exiting left turn to Veterans Bridge and West Commercial Street and right turn to I-295 and Congress Street

[1] See *Libbytown Traffic Circulation and Streetscape Study,* by DuBois & King Inc. 2012

4. Secondary Access

   Gate controlled emergency access is provided from the existing at-grade crossing behind the Cumberland County Correctional Facility.

5. Internal Site Circulation

   Designated access drive connections are provided between the north and south driveways. Wayfinding measures including signage is provided to direct travelers to the appropriate driveways for north and south access from the site. Landscaping and lighting selection provide distinction from adjacent parking and interior circulation and pedestrian areas.

6. Bus Routes

   METRO currently serves the site from their Congress Street route that involves bus travel from the Parkway and northbound to Congress Street. There is an existing bus shelter located adjacent the Medical Office building. In the future, METRO has expressed a planning goal to update their service routes along the Parkway to provide service in both directions. METRO is also seeking to discontinue the onsite service path and to replace it with possibly two or three new bus stops along the Parkway, one each at the south driveway intersection and at the north driveway intersection. METRO is also contemplating a new stop on the southbound leg of the Parkway. Mercy will continue to work closely with METRO on this planning as these route updates are likely to improve overall METRO service and also continue to provide key service to all onsite programming including the Hospital, Medical office building and the ASC.

7. Alternative Transportation/Travel Demand Management Plan

   The development operations will be conducted in a manner to promote transportation demand alternatives to the extent practicable, given the use and inherent conditions associated patient services, staff work hours[2] and overall hospital Campus visitation. A fundamental result of the relocation of Mercy programming from the State Street facility to the Fore River Campus will be less traffic resulting from Mercy State Street operations. This action alone will result in shifting long standing Mercy traffic from the Portland Peninsula interior and specifically State and High Streets, to the Fore River Parkway and its direct connectivity to the regional highway system. The State Street neighborhood will dramatically benefit from decreased emergency services traffic and overall parking demand along neighborhood streets. Further, the Phase 2 development will not result in increased traffic pressure on the Peninsula as a whole, since Mercy has always been a valued existing land use. Simply, the move results in an improvement for Mercy generated traffic as it utilizes the direct highway connectivity and ample capacity of these highways and the Fore River Parkway.

   In addition, Mercy continues to promote the shifting of various operational and administrative functions to their outpatient facilities in surrounding Portland Communities and/or work from home telecommuting opportunities, thus resulting in decreased traffic overall to the Portland Peninsula.

[2] Acute care hospital settings and workforce hours are characterized by shift work, per diem staff, and irregular patient load, thus contributing to challenges of a traditional TDM plan.

Ultimately, Mercy's TDM will include strategies that encourage employees to use alternatives to driving to work unaccompanied. For example, employees participating in a ride share program currently benefit from designated spaces at the northwest parking lot, nearest the MOB and thus do not need to park in the south parking lot[3]. This will enable Mercy and other tenants to successfully provide parking to all employees, visitors, patients, and physicians in the designed parking plan. Mercy also maintains bike racks at the front of the hospital and near the staff entrance at the south end of the hospital building. Bicycle riding staff have the availability of staff locker room facilities for changing and showering. Mercy routinely provides Taxi vouchers to patients on an as needed basis and they have promoted bus pass programs in the past. An updated Transportation Demand Management Plan is currently underway and will be shared as it becomes available.

E. Buffers and Screens

Development proposals shall include appropriate measures of a dense and continuous nature to supplement existing buffering to parking lot visibility from public roads.

Buffer plantings to provide wind buffering and reduce off-site noise shall be incorporated where feasible. Since the Phase 1 development in 2008, Mercy has maintained a robust planting plan across the Campus and many of the trees have become well established and are providing excellent screening and aesthetic impact to the site overall. The Phase 2 development program includes expansion of the hospital within an existing parking lot and placement of the new ASC within the gravel pit. Much of the existing buffering to the ASC location will remain unchanged from current conditions, thus reducing the visual impact the new buildings may have on the site.

F. Preservation of Natural Features

Development proposals shall identify the extent to which the developer will preserve natural features including, but not limited to, existing vegetation, flood plains, rock outcroppings, surface water bodies, drainage swales and courses, and wetlands, provided *any such program shall consider and be sensitive to the need to preserve such natural features.*

See landscaping section above. Public open space has been provided at each end of the property's water frontage, as well as around the new wet pond. During the first development phase, the open spaces offered passive recreational opportunity. The northerly open space is connected to the Portland Trails network by a stone dust path extension. The primary purpose of these spaces is to allow waterfront access. Portland Trails also holds a recreational trail easement over the pedestrian and bicycle paths on the property. Except for one section of gravel path near the existing pond, all pedestrian and bicycle paths will remain.

The property contains a 3.49-acre artificial pond and associated wetlands that had formed in an abandoned gravel pit. The abandoned pit area was substantial cleaned up during the initial 2006 Phase 1 construction period, at which time a significant amount of solid waste including tires, old appliances, furniture and the remnants of a multitude of homeless encampments was removed from the site and some vegetative embankment stabilization was performed. The wetlands are not depicted on the Shoreland Zoning Map. The proposed development will include filling in the existing pond and building a half-acre wet pond in same location. Pursuant to the dimensional

[3] There are approximately 12 designated spaces for ride share vehicles to park closer to the MOB/Hospital than the south parking lot.

standards in the CZA, the maximum amount of impervious coverage permitted on the site is 80%. The proposed project will result in lot coverage of 66%. In 2013, Mercy Hospital obtained permits from the Maine Department of Environmental Protection and the US Army Corps of Engineers to fill in the pond.[4] (see attached permits). In its application, Mercy Hospital provided an alternatives analysis that explains how the campus expansion design evolved to having to fill in the pond. The initial alternatives focused on site selection for all hospital facilities. Campus consolidation is a preferred alternative to a dual campus system for a multitude of reasons, including bringing the hospital up to appropriate standards of care, efficiency and safety, as well as being more cost effective. Mercy Hospital analyzed five alternative site layouts for the expansion and ultimately was approved for a design that included filling the pond.

The proposed site layout, which requires filling the pond, is essential for several reasons. Mercy Hospital's goal is to provide patient care in the most appropriate location for optimum experience and accessibility. Our intent is not to overbuild a costly acute hospital, but rather, create settings to which care is most appropriately provided – our Ambulatory Surgery Center and Medical Office Building – affording convenience for patients and providers as well as adjacencies to support services as required. The ASC is not connected to the hospital because a separate building meets the goal of providing outpatient services in an appropriate outpatient setting, discreet from Mercy's acute hospital services. In addition, ambulatory surgical services are expected to continue to be a significant part of Mercy's healthcare offerings, with potential for growth which would be compromised if the ASC programming were located in the hospital or otherwise not well positioned on the site. The proposed location allows for future expansion of the ASC building. The site layout was also carefully designed to utilize the rear access road as the central utility corridor and to serve back-of-house functions. All onsite utilities are located either behind the existing hospital or within the east side access drive. There are no utilities (water, sewer, power, gas, comm.) along the Fore River Parkway frontage or front half of the site. The hospital expansion is displacing 100+ physician parking spaces which need to be relocated to a location that provides easy access to the hospital and to the ASC. The parking lots on the MOB side of the hospital will be designated for patients & visitors to the MOB & Hospital as those lots are situated at the front of the hospital building. The new physician parking relocated to the east of the hospital provides for direct access into the staff entrances at the hospital, and to the ASC. Finally, the ASC back-of-house functions are backed up to the central utility/service corridor that exists today for the hospital. Functions that will be provided to the ASC through this corridor include staff and provider parking & circulation between buildings, utilities, deliveries and ambulance pick-up/drop-off. Other potential functions that could be shared between the hospital and ASC through this corridor include materials management, clinical engineering, housekeeping and security.

The MaineDEP accepted Mercy Hospital's alternatives analysis, finding that Mercy has "avoided and minimized wetland impacts to the greatest extent practicable, and that the proposed project represents the least environmentally damaging alternative that meets the overall purpose of the project." In issuing the permit, the MaineDEP found that the pond was used by waterfowl, but it was not a wetland of special significance. The permit requires Mercy Hospital to pay a total of

[4] The permit obtained from the MaineDEP is for a project that is larger than the current phased development presented to the City for permitting.

$834,156.00 in wetland compensation. The funds have been paid into the In-Lieu-Fee program of the Maine Natural Resource Conservation Fund.

The proposed project preserves natural features to the greatest extent practicable, while allowing Mercy Hospital to provide safe, effective, cost-effective, and state-of-the-art medical services to patients in an appropriate location and manner.

G. ***Architecture***

All buildings shall be designed or approved by a registered architect in the State of Maine. The scale, texture, colors, and massing of the buildings shall be coordinated. The full range of high-quality, permanent, and traditional or contemporary building materials and technology may be incorporated in a manner so that the development as a whole embodies distinguishing attributes that achieve the developer's desired degree of excellence and are in conformance with the architectural guidelines provided in any private development restrictions. Particular emphasis shall be placed on the appearance of building facades from public streets and highways including the Connector, from driveway and parking areas, and from other nearby buildings. Building elevation drawings shall be submitted which indicate architectural style, exterior finishes and color, building height and scale, and location and scale of window and door openings. Samples of exterior building materials shall also be submitted.

1. Design

During the Phase 1 development, Mercy requested a building that embodies the faith-based nature of their institution. The design approach utilized the pointed arch motif of Gothic Revival, a style that has historically had a great depth of meaning for Roman Catholic institutions in our country. This approach is given a modernist overlay with concentrated areas of glass wall and metal panel, with generally clean lines throughout. Mercy also wished to maintain a sense of continuity with their existing State Street facility.

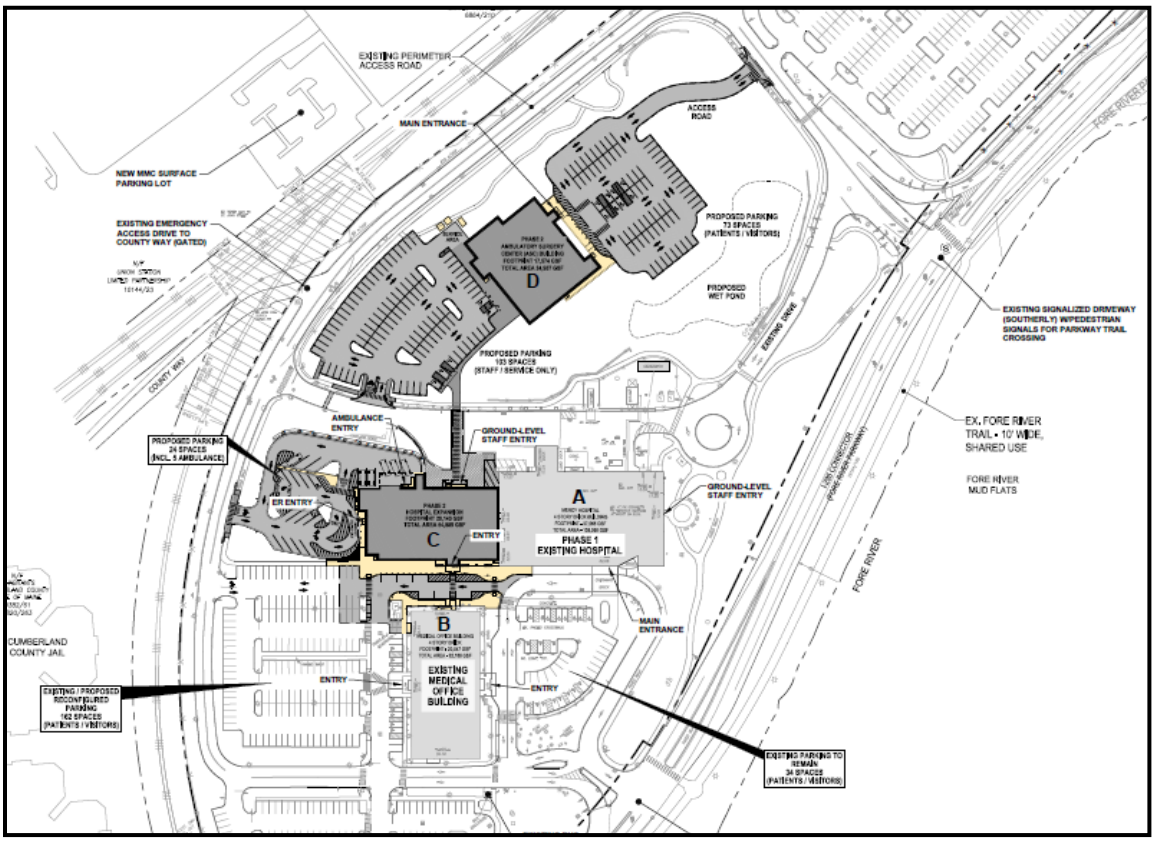


Finally, the prominent waterfront location bears a direct relationship to the historic brick waterfront structures of downtown Portland. The Phase 2 expansion will continue to reflect this design intent. Future buildings will adhere to the Private Development Restrictions previously prepared as a condition of Phase 1 approval.

2. Building Footprint

The Hospital is centrally located on the high point of the site to enhance visibility from all directions. The rectangular footprint of the hospital is oriented north-south to both maximize access to sunlight and to optimize views from patient windows of the Fore River to the west. This footprint will be extended to the north as part of the Phase 2 activity as this simplifies construction of foundations, internal utilities, and internal operational connectivity among other things. The existing building's four floors above a partially exposed ground level maximize the building's height (90 ft.) with the available program while minimizing the impact on the site. The existing Medical Office Building is located perpendicular to the Hospital in an L-shaped alignment so that future connections to the Hospital Expansion and a future multi-level parking garage may be easily facilitated. The MOB currently connects to the hospital with a below grade tunnel between the buildings.

The ASC footprint has been positioned to allow for surface parking on both sides of the building, yet maintaining proximity to the main Hospital, as it is expected that ASC staff will need access the hospital (for example, staff may use the Hospital Cafeteria, etc.). The ASC positioning also allows for Hospital facilities personnel to easily travel between the buildings as they made need for supply management, maintenance, and general facilities operations.



3. Building Massing



The massing of the existing hospital building steps in, on both the east and west elevations as a response to the programmatic requirements within. This pattern will continue with the Phase 2 hospital expansion. During Phase 1, a prominent location was created for the chapel with a full-height diagonal slice at the southwest corner of the Hospital. The Medical Office Building was sited perpendicular to the hospital on the west elevation in an L-shaped configuration, creating an entry court for both buildings that opens directly onto the Fore River Parkway and river. The Medical Office Building is oriented in a manner that allows access from each side.

The Phase 2 Hospital expansion uses the stepped pattern for the third floor to help shape the building form while softening the linear building presentation. Much of the Phase 2 expansion is partially shielded from the Parkway views due to the placement of the MOB, generally in front of the Hospital expansion. The Phase 2 building height at only three levels also minimizes the overall massing effects. Finally, the recent construction of the nine (9) level 2,500 space MMC parking garage, to the east of the site, substantially impacts the background and overall visual effect of the Fore River Campus, as seen from the I-295 Corridor and Veterans Bridge. Future Hospital facilities on the Fore River Campus will not exceed the overall MMC parking garage height and are expected to actually be much smaller in overall scale.



4. Building Façade/Materials

The existing hospital façade is composed of traditional Portland red brick with light cast stone highlights. Gothic cast stone tracery throughout and stained-glass windows at the existing chapel convey the faith-based nature of the institution. A brick arcade and entry

canopy create an inviting approach on the west elevation. The majority of windows throughout are traditional punched openings, counterbalanced by the full height glass and metal panel slice at the southwest corner of the building. The windows on the west and south elevations are combined in a larger scale to read strongly at a distance from across the river. Traditional sloped metal roofing covers the chapel. The MOB follows the Hospital's lead with a complementary building face, glass, and accents to mirror the Hospital building. The Phase 2 buildings will also follow these building and materials patterns and character.

5. Roofline

The main roofline of the Hospital building is a clean modernist horizontal edge accented with a large-scale pediment centered over the main entry that is a direct reference back to Mercy's State Street building. The overall massing of the Hospital building is softened with the cascading sloped rooflines along the east and west elevations. The MOB follows with a horizontal roofline that falls at or below the Hospitals. Future buildings will follow with similar or lower rooflines.

6. Service Areas

The exiting service areas for the hospital are located along the partially exposed ground floor level on the east side (rear) of the building. These service areas are partially screened from view from the Fore River Parkway by the hospital itself, as well as landscaping along the Parkway frontage. The semi-trailer loading area is located to the northeast corner and is shielded from general view by the building. Waste containers and other service-related activities are buffered by appropriate screening. The MOB service area will continue to be minimal. The Phase 2 hospital expansion will generally rely on the existing Hospital service areas, as the loading area was originally sized based on the Hospital's full anticipated build-out. Service areas for future buildings will be placed to consider buffering and shielding from important views to the extent practicable. This applies to the ASC building that will have a modest waste collection and utility area at the east side of the facility, facing the railroad tracks.

7. Building and Site Lighting

Ground-mounted and building-mounted lighting provides general illumination of the building and safety and security over building entrances and walks and within parking fields. Building mounted lighting places specific emphasis on the Phase 1 Hospital arcade and entrance canopy along the westerly elevation. Site Lighting is provided throughout the Campus with the use of "Heritage" style fixtures that blend traditional architecture with modern performance. Fixture heights do not exceed 30 feet along primary drives, 25 feet within parking fields and 12 to 15 feet around pedestrian walks and building perimeters. These lighting measures will remain as part of the Phase 2 activity.

Parking area and pedestrian lighting is of high-quality construction and materials and with a character that complements the architectural features and style of the building. The site lighting meets the City of Portland strict requirements regarding minimum, average, and maximum levels of illumination, maximum wattage, and mounting height.

H. Signs

Signage shall be focused internally to the site or to the Connector and shall not be oriented or scaled to address Route 1 or Interstate 295, with the exception of the hospital and major office buildings. Development proposals shall identify all proposed signage. Signs shall be designed in proportion and character with the building facades. All signs shall be constructed of permanent materials and shall be coordinated with the building and landscaping design through the use of appropriate materials and finishes.

All signage at main entrance and way finding signs throughout the site shall be of a character and quality consistent with that of the building. Signs shall be illuminated at the entrances, with consistent graphics and logo (custom screen-printing) throughout the project.

I. Master plan

Prior to development on the property, Mercy shall provide a master plan of the campus. The master plan shall include the following: The location of the buildings on the site; infrastructure of the site; identification of common areas; traffic circulation; architectural character and treatment of the buildings; proposed building envelopes; phasing and timing of the development; private development restrictions; and such other information necessary and sufficient to ensure compliance with the standards in this section. Master plans are dynamic representations that assist in guiding projects through phased development. Master plans are flexible and adaptable to changes that occur within the development process. The master plan shall be subject to periodic revision and update as needed and as phased development occurs over time.

A revised master plan of the campus is provided as Figure 1. As summary of the phased development that balances business needs and economic capacity is as follows:

- **Initial Phase 1 – Constructed 2008**
  - 137,832 SF Hospital
  - 82,186 SF Medical Office Building
  - Surface parking for 762 vehicles
  - Utilities extended for initial and future phases
  - Campus grounds fully landscaped and open spaces established
  - Exterior systems including med gas, auxiliary power, and above ground heating oil tank storage
- **Phase 2 – Proposed 2019**
  - 54,889 SF Hospital expansion over 3 levels to include emergency department and ancillary programming
  - 34,987 SF Outpatient Ambulatory Surgical Center within free-standing 2-story building
  - Surface parking resulting in a net increase of 95 parking spaces on the Campus
  - Partial filling of the former gravel pit for ASC and parking placement
  - Wet Pond construction for stormwater management

- **Future Phases**

  - ASC Expansion
  - Parking Structure(s) to support 700-900 parking spaces subject to demand analysis and future programming
  - 50,000 to 200,000 SF Hospital facilities may be attached or free-standing structures to meet expanding outpatient and/or acute care health care delivery
  - Relocation of Maintenance facility
  - Total building space equals to 500,000 to 600,000 SF can be supported on the Campus depending on building height etc.

II. DIMENSIONAL REQUIREMENTS

The following dimensional requirements shall apply to the property as a whole and not to individual lots (if any) within the property:

Maximum Impervious Surface Ratio

Eighty (80) percent. The Phase 1 development resulted in 57 percent impervious and the Phase 2 proposal will increase the ratio to 66 percent.

Maximum Building Height

Ninety (90) feet. The maximum building height on the Campus is currently 90 feet and that will remain unchanged.

Minimum Front Yard Landscaped Buffer

Twenty (20) feet from the edge of the connector right-of-way. Retaining walls, walkways, trails and pathways may occur within the landscaped buffer. Buildings and expanses of paved surfaces for vehicular use are prohibited.

Minimum Side Yards

Ten (10) feet.

Minimum Rear Yard

Ten (10) feet.

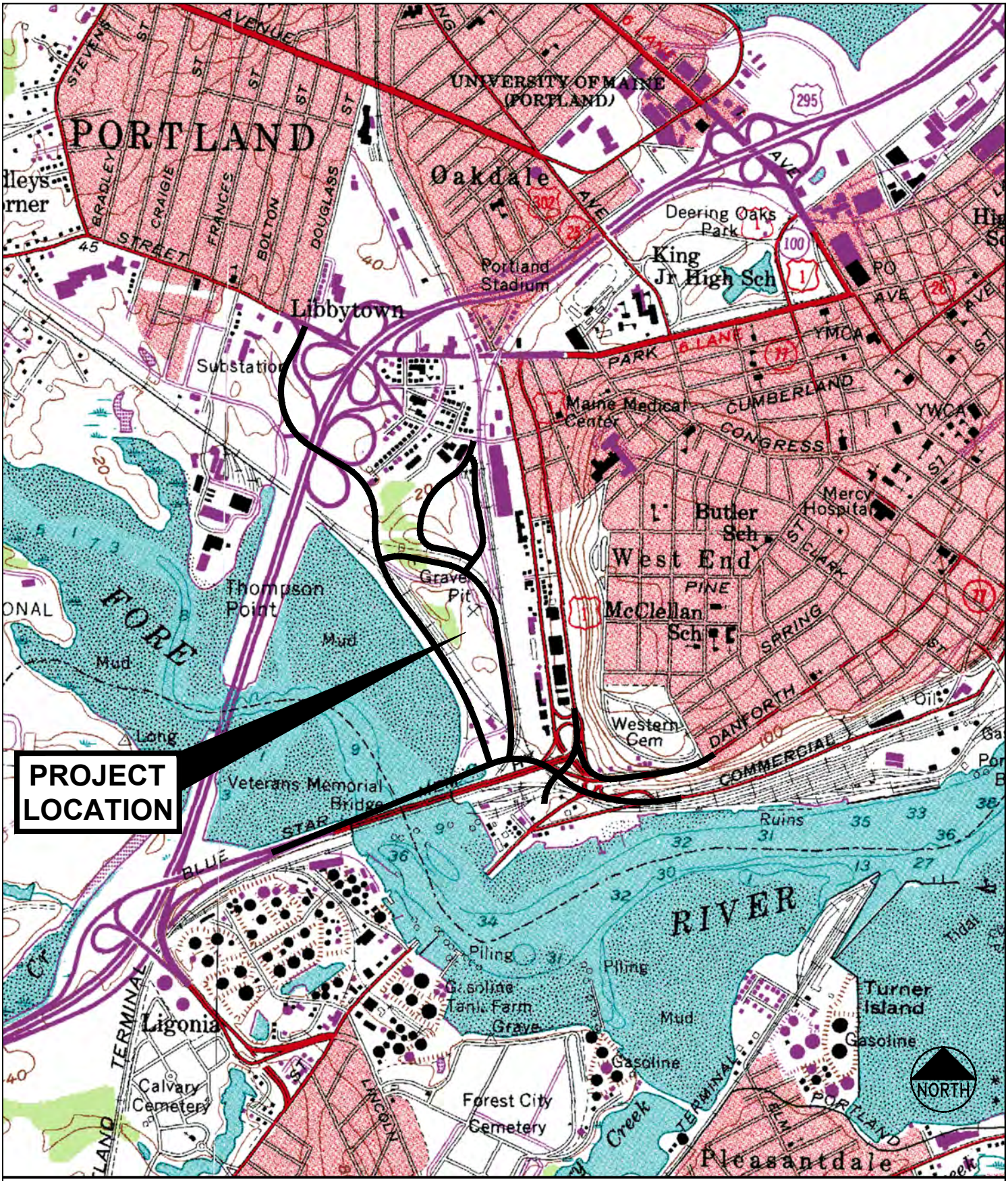
Pavement Setback from property

Fifteen (15) feet; twenty (20) feet from connector right of way.

The proposed development meets the above dimensional requirements.

APPENDIX A

FIGURES



U.S.G.S. Location Map

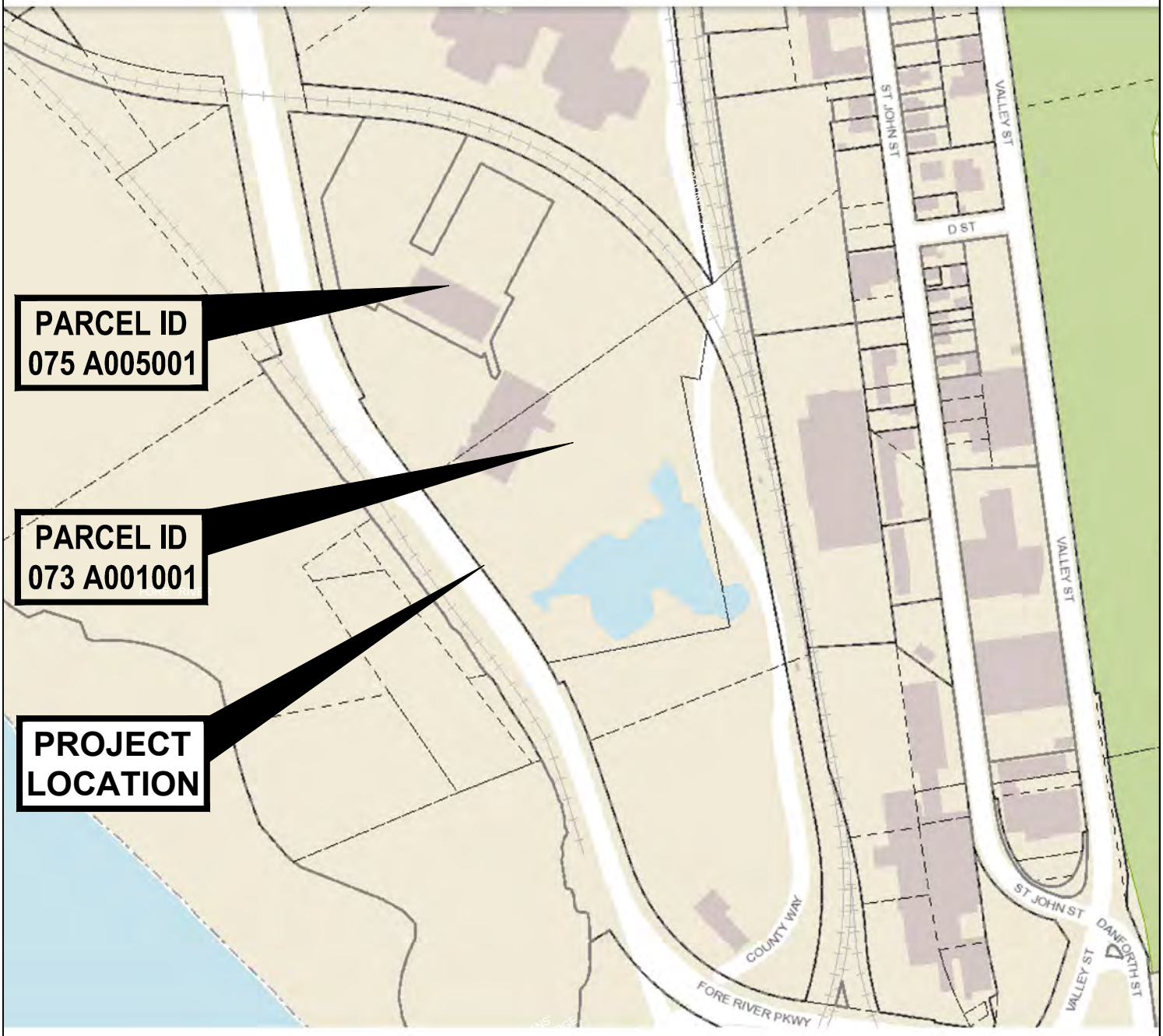
NLH Mercy Hospital, Fore River Campus Consolidation, Portland, Maine
U.S.G.S. Portland West, State-7.5 Minute Series (Topographic)

Design: JTA	Date: AUG. 2019
Draft: CDD	Job No.: 3257.04
Checked: SRB	Scale: N.T.S.
File Name: 325704–DEP FIGURES.dwg	

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Figure
1



Property Tax Map

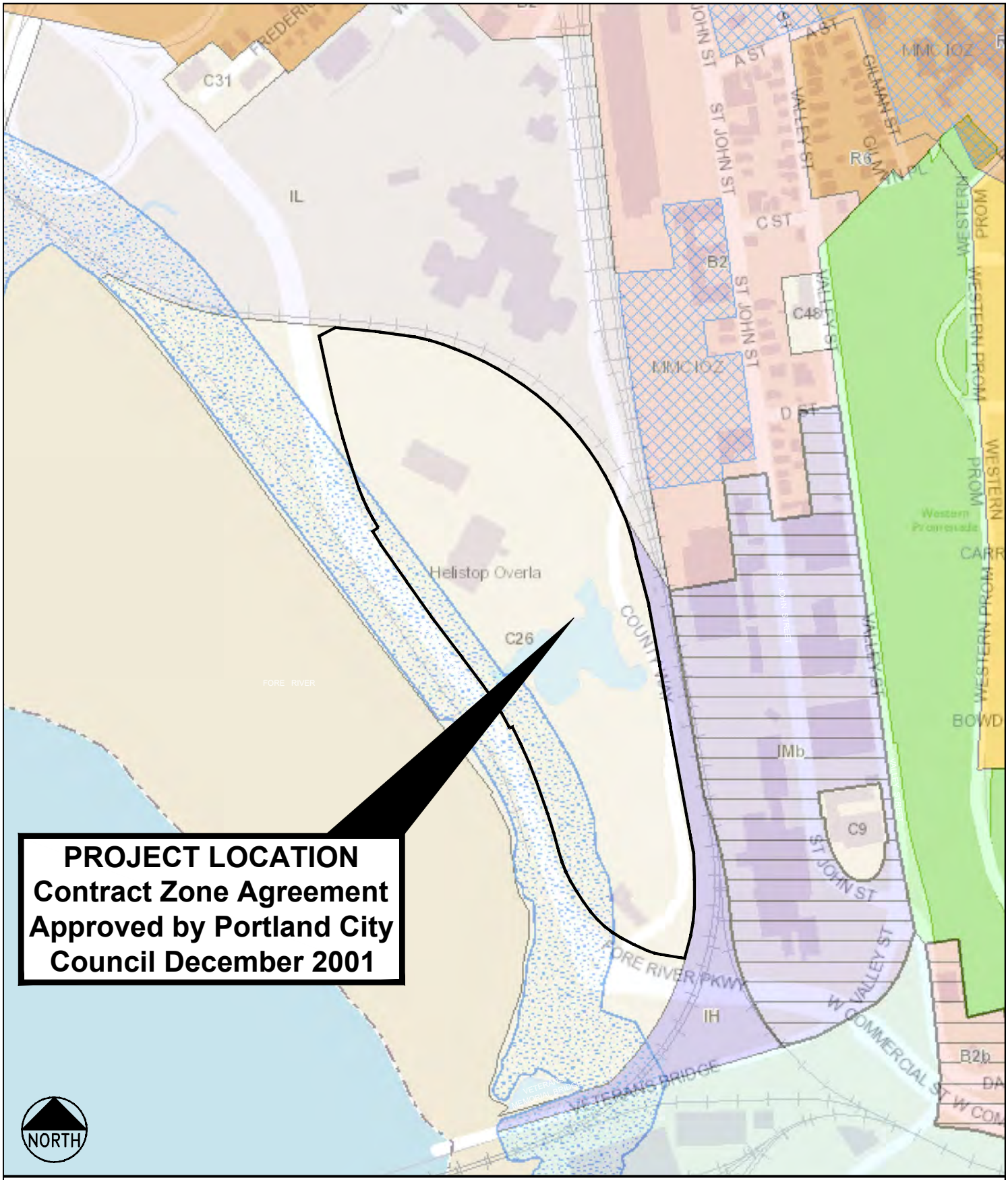
NLH Mercy Hospital, Fore River Campus Consolidation, Portland, Maine
City of Portland Maine Parcel Viewer

Design: JTA	Date: AUG. 2019	
Draft: CDD	Job No.: 3257.04	
Checked: SRB	Scale: N.T.S.	
File Name: 325704–DEP FIGURES.dwg		

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Figure
2



Zoning Map

NLH Mercy Hospital, Fore River Campus Consolidation, Portland, Maine
City of Portland Maine Zoning Map Viewer

Design: JTA	Date: AUG. 2019
Draft: CDD	Job No.: 3257.04
Checked: SRB	Scale: N.T.S.
File Name: 325704–DEP FIGURES.dwg	

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Figure
3



Aerial Photograph

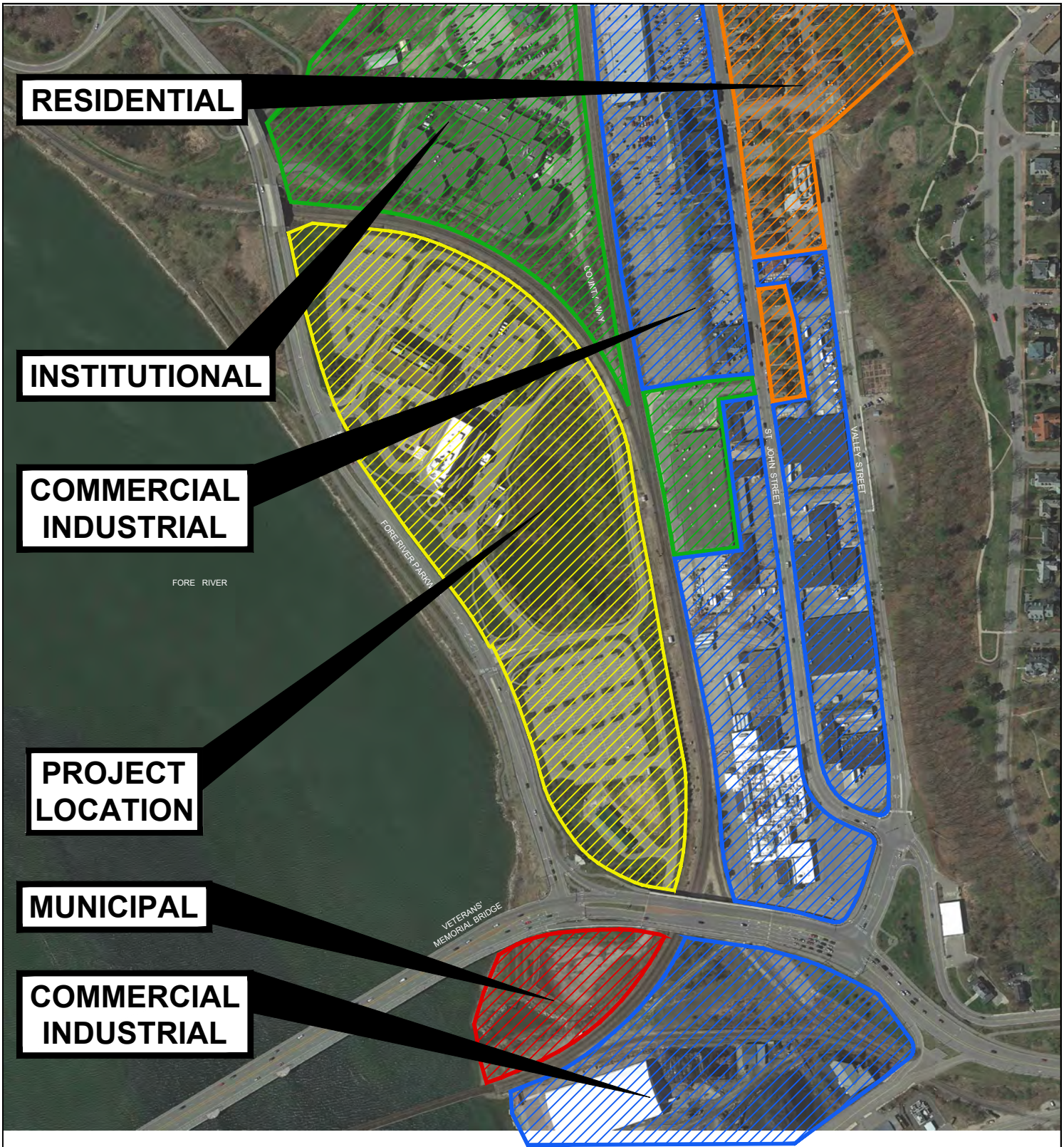
NLH Mercy Hospital, Fore River Campus Consolidation, Portland, Maine
City of Portland Maine Aerial Imagery 2018

Design: JTA	Date: AUG. 2019
Draft: CDD	Job No.: 3257.04
Checked: SRB	Scale: N.T.S.
File Name: 325704–DEP FIGURES.dwg	

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Figure
4



Abutting Land Use Map

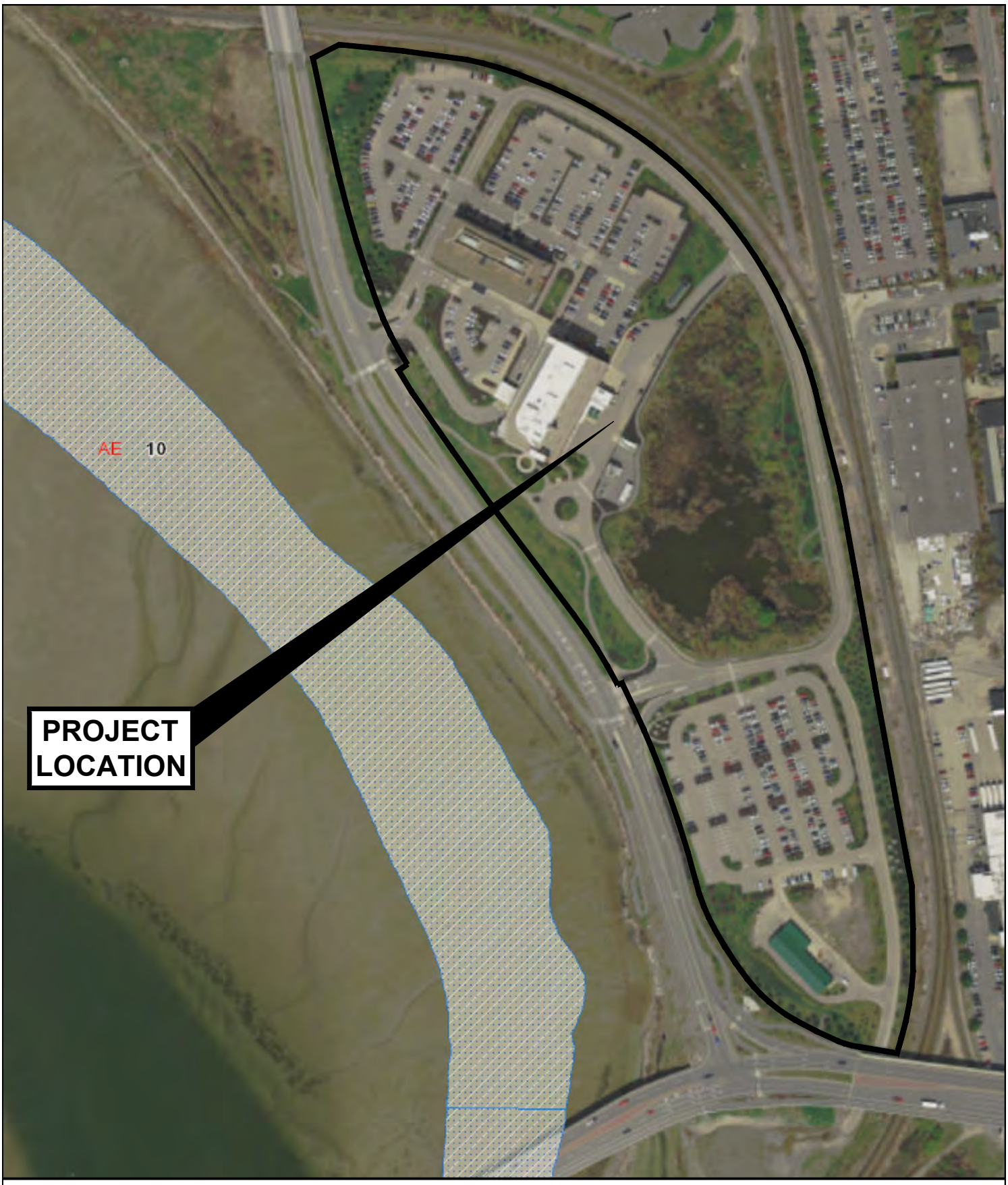
NLH Mercy Hospital, Fore River Campus Consolidation, Portland, Maine
City of Portland Maine Aerial Imagery 2018

Design: JTA	Date: AUG. 2019
Draft: CDD	Job No.: 3257.04
Checked: SRB	Scale: N.T.S.
File Name: 325704–DEP FIGURES.dwg	

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Figure
5



NORTH

Flood Map

NLH Mercy Hospital, Fore River Campus Consolidation, Portland, Maine
City of Portland Maine Flood Map Viewer

Design: JTA	Date: AUG. 2019
Draft: CDD	Job No.: 3257.04
Checked: SRB	Scale: N.T.S.
File Name: 325704–DEP FIGURES.dwg	

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Figure
6



USDA Soils Map

NLH Mercy Hospital, Fore River Campus Consolidation, Portland, Maine
Soil Survey of Cumberland County, Maine

NORTH

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Figure
7



Sand and Gravel Aquifer Map

NLH Mercy Hospital, Fore River Campus Consolidation, Portland, Maine
Source: Maine Geological Survey (Department of Conservation)

Design: JTA	Date: AUG. 2019
Draft: CDD	Job No.: 3257.04
Checked: SRB	Scale: N.T.S.
File Name: 325704–DEP FIGURES.dwg	

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Figure
8



Surficial Geology Map

NLH Mercy Hospital, Fore River Campus Consolidation, Portland, Maine
Source: Maine Geological Survey (Department of Conservation)

NORTH

Design: JTA	Date: AUG. 2019
Draft: CDD	Job No.: 3257.04
Checked: SRB	Scale: N.T.S.
File Name: 325704–DEP FIGURES.dwg	

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Figure
9

APPENDIX B

PHOTOGRAPHS



PHOTO 1



PHOTO 2

GORRILL PALMER
707 Sable Oaks Drive
Suite 30
So. Portland, ME 04106
207.772.2515

Northern Light Mercy Hospital – Fore River Campus
Existing Photographs
Photos on October 21, 2019



PHOTO 3



PHOTO 4

GORRILL PALMER
707 Sable Oaks Drive
Suite 30
So. Portland, ME 04106
207.772.2515

Northern Light Mercy Hospital – Fore River Campus
Existing Photographs
Photos on October 21, 2019



PHOTO 5



PHOTO 6

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Northern Light Mercy Hospital – Fore River Campus
Existing Photographs
Photos on October 21, 2019



PHOTO 7



PHOTO 8

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Suite 30
So. Portland, ME 04106
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Northern Light Mercy Hospital – Fore River Campus
Existing Photographs
Photos on October 21, 2019



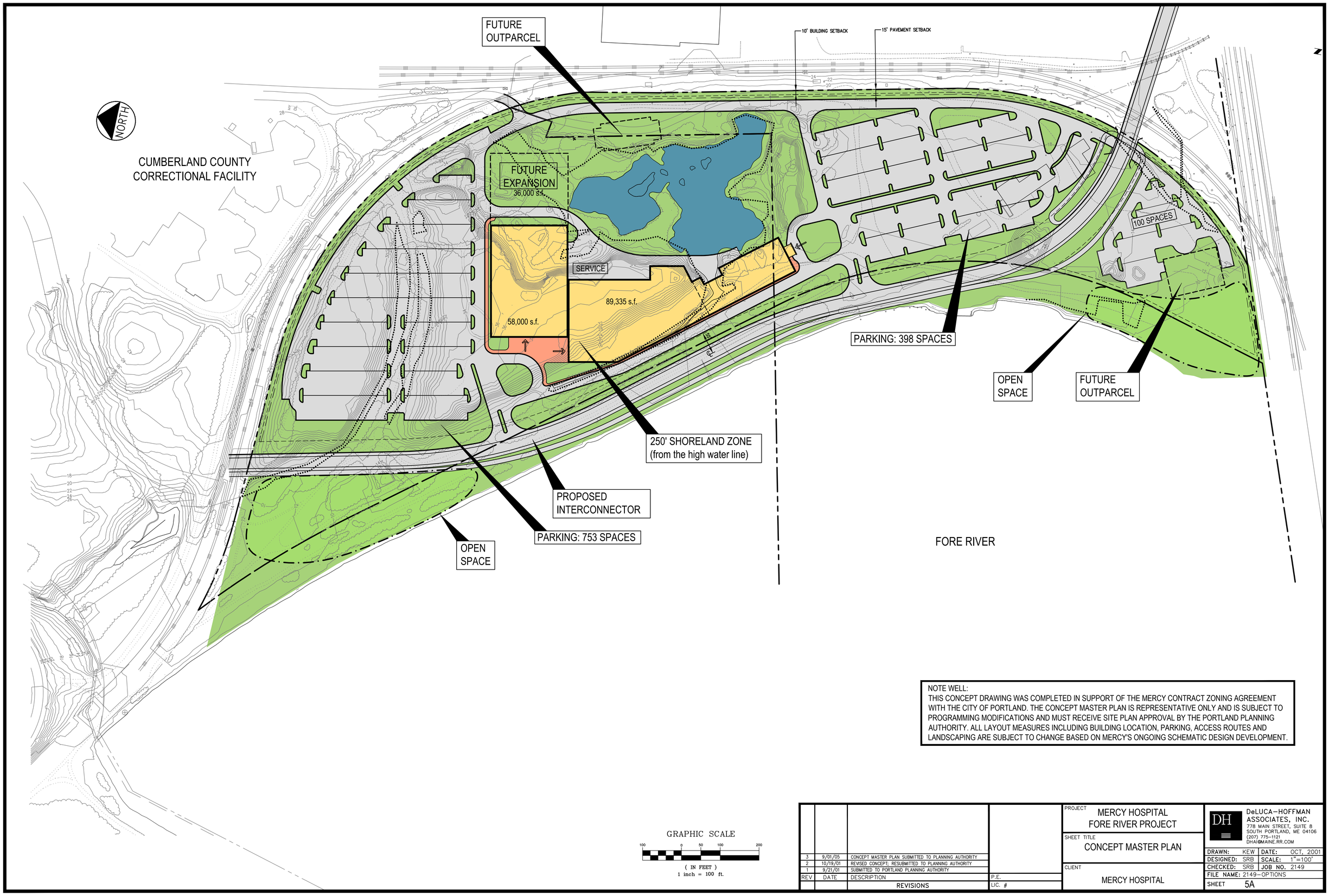
PHOTO 9

GORRILL PALMER
707 Sable Oaks Drive
Suite 30
So. Portland, ME 04106
207.772.2515

Northern Light Mercy Hospital – Fore River Campus
Existing Photographs
Photos on October 21, 2019

APPENDIX C

ORIGINAL MASTER PLAN



NOTE WELL:
THIS CONCEPT DRAWING WAS COMPLETED IN SUPPORT OF THE MERCY CONTRACT ZONING AGREEMENT WITH THE CITY OF PORTLAND. THE CONCEPT MASTER PLAN IS REPRESENTATIVE ONLY AND IS SUBJECT TO PROGRAMMING MODIFICATIONS AND MUST RECEIVE SITE PLAN APPROVAL BY THE PORTLAND PLANNING AUTHORITY. ALL LAYOUT MEASURES INCLUDING BUILDING LOCATION, PARKING, ACCESS ROUTES AND LANDSCAPING ARE SUBJECT TO CHANGE BASED ON MERCY'S ONGOING SCHEMATIC DESIGN DEVELOPMENT.

GRAPHIC SCALE
100 0 50 100 200
(IN FEET)
1 inch = 100 ft.

REV.	DATE	DESCRIPTION
3	9/01/05	CONCEPT MASTER PLAN SUBMITTED TO PLANNING AUTHORITY
2	10/19/01	REVISED CONCEPT; RESUBMITTED TO PLANNING AUTHORITY
1	9/21/01	SUBMITTED TO PORTLAND PLANNING AUTHORITY

REVISIONS

P.E.
LIC. #

PROJECT
MERCY HOSPITAL
FORE RIVER PROJECT

SHEET TITLE
CONCEPT MASTER PLAN

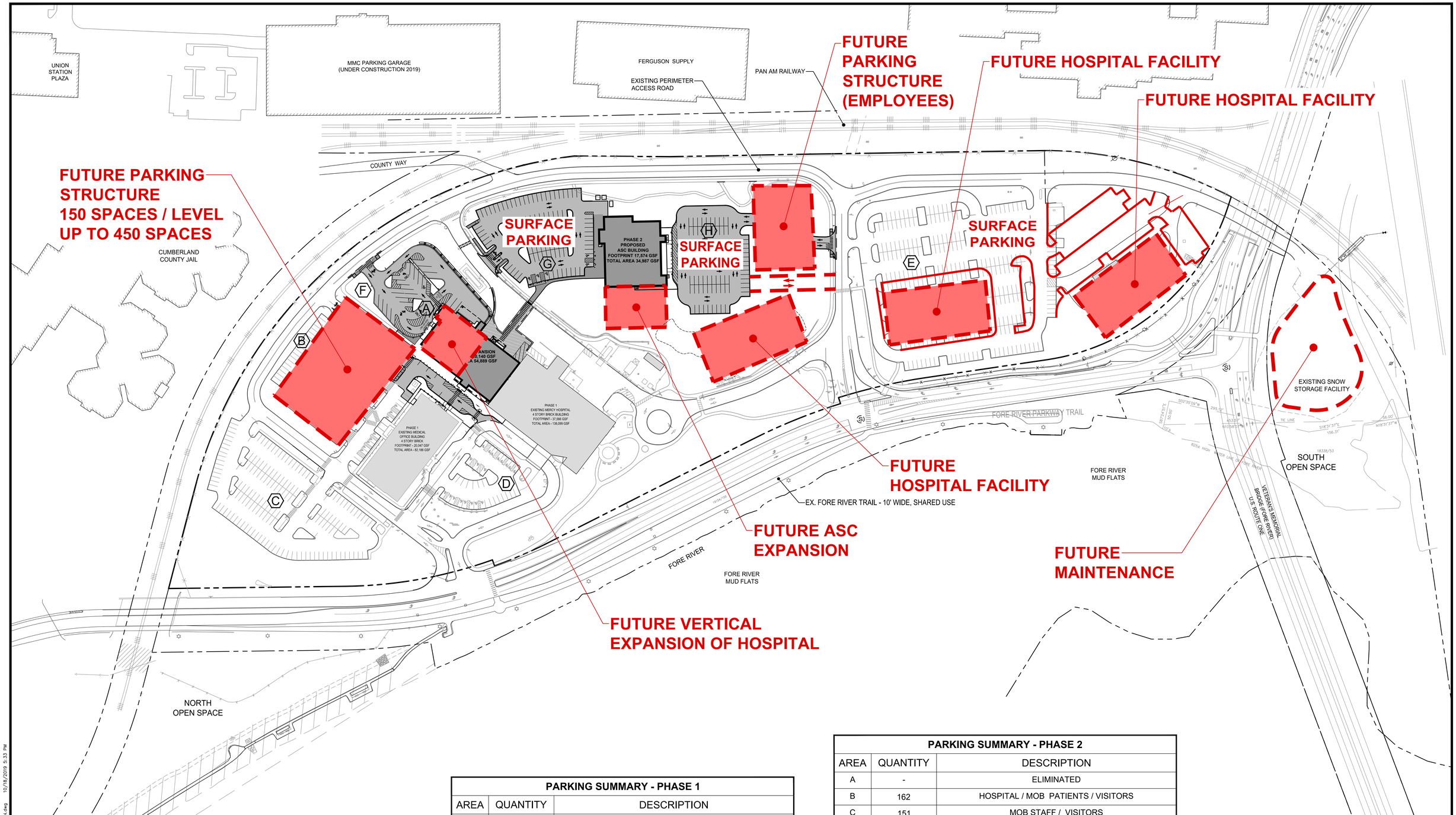
CLIENT
MERCY HOSPITAL

DeLUCA–HOFFMAN ASSOCIATES, INC.
778 MAIN STREET, SUITE 8
SOUTH PORTLAND, ME 04106
(207) 775-1121
DHAI@MAINE.RR.COM

DRAWN: KEW | DATE: OCT, 2001
DESIGNED: SRB | SCALE: 1"=100'
CHECKED: SRB | JOB NO. 2149
FILE NAME: 2149-OPTIONS
SHEET 5A

APPENDIX D

MASTER PLAN SCHEMATICS



PARKING SUMMARY - PHASE 1		
AREA	QUANTITY	DESCRIPTION
A	105	HOSPITAL PATIENT / VISITORS / PHYSICIANS
B	162	MOB PATIENT / VISITORS
C	151	MOB STAFF / VISITORS
D	34	HOSPITAL / MOB PATIENTS
E	310	HOSPITAL STAFF
TOTAL	762	

PARKING SUMMARY - PHASE 2		
AREA	QUANTITY	DESCRIPTION
A	-	ELIMINATED
B	162	HOSPITAL / MOB PATIENTS / VISITORS
C	151	MOB STAFF / VISITORS
D	34	HOSPITAL / MOB PATIENTS
E	310	HOSPITAL / MOB / ASC FACILITY STAFF
F	24	HOSPITAL PATIENTS / VISITORS / AMBULANCE
G	103	HOSPITAL / ASC FACILITY STAFF / SERVICE
H	73	ASC FACILITY PATIENTS / VISITORS
TOTAL	857	

NORTH

GRAPHIC SCALE
75 0 37.5 75 150
(IN FEET)
1 inch = 75 ft.

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.

STATE OF MAINE
STEPHEN R. BUSHEY
08.30.19
LICENSED PROFESSIONAL ENGINEER
STEPHEN R. BUSHEY, P.E.
LIC. #7429

Rev.	Date	Revision
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Issued For	Date	By
PERMIT APPROVAL SUBMISSION	08.30.19	SRB
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Design: SRB	Draft: CDD	Date: AUG. 2019
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File Name: 325704-MASTER PLAN.dwg

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Drawing Name: Master Plan – Phases
Project: Fore River Campus Consolidation, Portland, Maine
Client: Northern Light Mercy Hospital, 144 State Street, Portland, Maine 04101

Drawing No. FIG. 1

U:\3257.04_Mercy Hospital_Expansion_DD_Permits\STANTEC\civil\cadd\permit\dwg\325704-MASTER PLAN.dwg 10/18/2019 5:33 PM

UNION STATION PLAZA

MMC PARKING GARAGE (UNDER CONSTRUCTION 2019)

FERGUSON SUPPLY

EXISTING PERIMETER ACCESS ROAD

PAN AM RAILWAY

TYSON FOODS

COUNTY WAY

PROPOSED EMERGENCY DEPARTMENT ENTRANCE

CUMBERLAND COUNTY JAIL

PHASE 2 PROPOSED ASC BUILDING FOOTPRINT 17,574 GSF TOTAL AREA 34,987 GSF

AMBULANCE ENTRANCE

PROPOSED AMBULATORY SURGICAL CENTER

MAINTENANCE FACILITY

PHASE 2 HOSPITAL EXPANSION FOOTPRINT 20,140 GSF TOTAL AREA 54,889 GSF

PHASE 1 EXISTING MERCY HOSPITAL 4 STORY BRICK BUILDING FOOTPRINT - 37,566 GSF TOTAL AREA - 138,099 GSF

PHASE 1 EXISTING MEDICAL OFFICE BUILDING 1 STORY BRICK FOOTPRINT - 20,047 GSF TOTAL AREA - 62,186 GSF

SIGNALIZED INTERSECTION

EXISTING SNOW STORAGE FACILITY

FORE RIVER PARKWAY TRAIL

SOUTH ENTRANCE (SIGNALIZED)

FORE RIVER MUD FLATS

EX. FORE RIVER TRAIL - 10' WIDE, SHARED USE

PED CONNECTOR (FORE RIVER PARKWAY)

FORE RIVER

FORE RIVER MUD FLATS

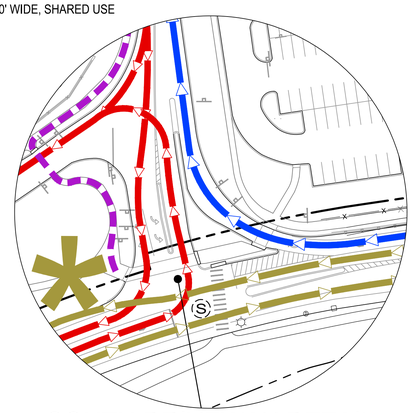
MAIN HOSPITAL ENTRANCE

NORTH ENTRANCE (UNSIGNALIZED - NO LEFT TURNS OUT)

NORTH OPEN SPACE

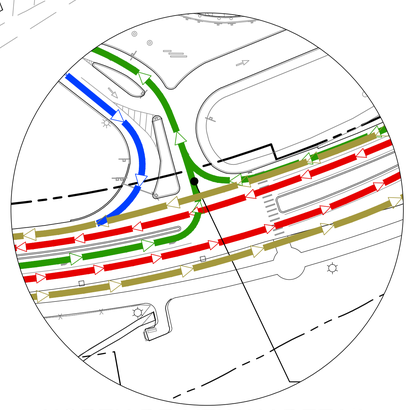
SOUTH OPEN SPACE

VETERANS MEMORIAL BRIDGE (FORE RIVER) U.S. ROUTE ONE



SOUTH DRIVEWAY DETAIL

SCALE: 1" = 50'



NORTH DRIVEWAY DETAIL

SCALE: 1" = 50'

TYPICAL SERVICE VEHICLE ROUTE

EXISTING METRO BUS ROUTE (TO BE DISCONTINUED WHEN METRO UPDATES SERVICE ROUTES)

FUTURE METRO BUS ROUTE

AMBULANCE ROUTE

FUTURE METRO BUS STOP

FUTURE PEDESTRIAN ROUTE TO BUS STOPS

NORTH

GRAPHIC SCALE

75 0 37.5 75 150

(IN FEET)

1 inch = 75 ft.

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.

STATE OF MAINE STEPHEN R BUSHEY 08.30.19 LICENSED PROFESSIONAL ENGINEER

STEPHEN R. BUSHEY, P.E. LIC. #7429

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Drawing Name: Master Plan – Service & Bus Circulation Routes

Project: Fore River Campus Consolidation
Portland, Maine

Client: Northern Light Mercy Hospital
144 State Street, Portland, Maine 04101

Drawing No. FIG. 2

U:\3257.04_Mercy Hospital_Expansion_DD_Permits\STANTEC\civil\cadd\permit\dwg\325704–MASTER PLAN.dwg 10/2/2019 3:10 PM

UNION STATION PLAZA

MMC PARKING GARAGE (UNDER CONSTRUCTION 2019)

FERGUSON SUPPLY

EXISTING PERIMETER ACCESS ROAD

PAN AM RAILWAY

TYSON FOODS

COUNTY WAY

PROPOSED EMERGENCY DEPARTMENT ENTRANCE

CUMBERLAND COUNTY JAIL

PHASE 2 PROPOSED ASC BUILDING FOOTPRINT 17,574 GSF TOTAL AREA 34,987 GSF

AMBULANCE ENTRANCE

PROPOSED AMBULATORY SURGICAL CENTER

PHASE 2 HOSPITAL EXPANSION FOOTPRINT 20,140 GSF TOTAL AREA 54,889 GSF

PHASE 1 EXISTING MERCY HOSPITAL 4 STORY BRICK BUILDING FOOTPRINT - 37,566 GSF TOTAL AREA - 138,099 GSF

PHASE 1 EXISTING MEDICAL OFFICE BUILDING 1 STORY BRICK FOOTPRINT - 20,047 GSF TOTAL AREA - 62,186 GSF

MAINTENANCE FACILITY

SIGNALIZED INTERSECTION

EXISTING SNOW STORAGE FACILITY

FORE RIVER PARKWAY TRAIL

SOUTH ENTRANCE (SIGNALIZED)

FORE RIVER MUD FLATS

EX. FORE RIVER TRAIL - 10' WIDE, SHARED USE

CASE CONNECTOR (FORE RIVER PARKWAY)

FORE RIVER

MAIN HOSPITAL ENTRANCE

NORTH ENTRANCE (UNSIGNALIZED - NO LEFT TURNS OUT)

NORTH OPEN SPACE

SOUTH OPEN SPACE

VETERANS MEMORIAL BRIDGE (FORE RIVER) U.S. ROUTE ONE

SOUTH DRIVEWAY DETAIL

SCALE: 1" = 50'

NORTH DRIVEWAY DETAIL

SCALE: 1" = 50'

ENTERING FROM I-295 NORTH BOUND / SOUTH BOUND

ENTERING FROM COMMERCIAL ST / VETERANS BRIDGE

EXITING TO I-295 NORTH BOUND

EXITING TO I-295 SOUTH BOUND

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.

NORTH

GRAPHIC SCALE

75 0 37.5 75 150

(IN FEET)

1 inch = 75 ft.

STATE OF MAINE STEPHEN R. BUSHEY 08.30.19 LICENSED PROFESSIONAL ENGINEER

STEPHEN R. BUSHEY, P.E.
LIC. #7429

Rev.	Date	Revision
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Drawing Name: Master Plan – Visitor / Staff Circulation Routes
Project: Fore River Campus Consolidation, Portland, Maine
Client: Northern Light Mercy Hospital, 144 State Street, Portland, Maine 04101

Drawing No. FIG. 3

U:\3257.04_Mercy Hospital_Expansion_DD_Permits\STANTEC\civil\cadd\permit\dwg\325704–MASTER PLAN.dwg 10/2/2019 3:17 PM

UNION STATION PLAZA

MMC PARKING GARAGE (UNDER CONSTRUCTION 2019)

FERGUSON SUPPLY

EXISTING PERIMETER ACCESS ROAD

PAN AM RAILWAY

TYSON FOODS

LANDSCAPE BERM

COUNTY WAY

CUMBERLAND COUNTY JAIL

PHASE 2 PROPOSED ASC BUILDING FOOTPRINT 17,574 GSF TOTAL AREA 34,987 GSF

PHASE 2 HOSPITAL EXPANSION FOOTPRINT 20,140 GSF TOTAL AREA 54,889 GSF

PHASE 1 EXISTING MEDICAL OFFICE BUILDING 1 STORY BRICK FOOTPRINT - 20,047 GSF TOTAL AREA - 62,186 GSF

PHASE 1 EXISTING MERCY HOSPITAL 4 STORY BRICK BUILDING FOOTPRINT - 37,566 GSF TOTAL AREA - 138,099 GSF

MAINTENANCE FACILITY

FUTURE OUTPARCEL

EXISTING SNOW STORAGE FACILITY

FORE RIVER PARKWAY TRAIL

WET POND AREA

I-295 CONNECTOR (FORE RIVER PARKWAY)

EX. FORE RIVER TRAIL - 10' WIDE, SHARED USE

FORE RIVER MUD FLATS

SCENIC OVERLOOK

SOUTH OPEN SPACE

EXISTING WATER QUALITY TREATMENT SWALE

VETERANS MEMORIAL BRIDGE (FORE RIVER) U.S. ROUTE ONE

EXISTING CONDITIONS TO REMAIN

FORE RIVER

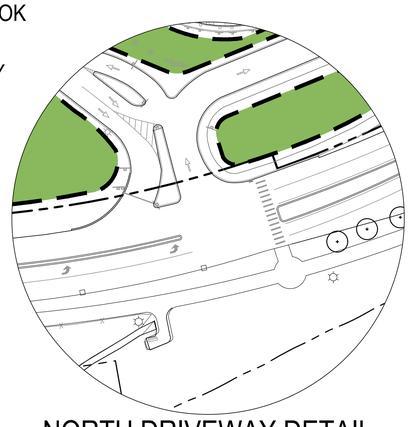
FORE RIVER MUD FLATS

NORTH OPEN SPACE

SCENIC OVERLOOK

EXISTING WATER QUALITY TREATMENT SWALE

FUTURE TRAIL TO PROPERTY LINE FOR LINKAGE TO PORTLAND TRAILS



NORTH DRIVEWAY DETAIL

SCALE: 1" = 50'



SOUTH DRIVEWAY DETAIL

SCALE: 1" = 50'

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.

NORTH

GRAPHIC SCALE

75 0 37.5 75 150

(IN FEET)
1 inch = 75 ft.

STATE OF MAINE
STEPHEN R. BUSHEY
08.30.19
LICENSED PROFESSIONAL ENGINEER

STEPHEN R. BUSHEY, P.E.
LIC. #7429

Rev.	Date	Revision
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Drawing Name: Master Plan – Landscape & Open Space

Project: Fore River Campus Consolidation
Portland, Maine

Client: Northern Light Mercy Hospital
144 State Street, Portland, Maine 04101

Drawing No. *FIG. 4*

U:\3257.04_Mercy Hospital_Expansion_DD_Permits\STANTEC\civil\cadd\permit\dwg\325704–MASTER PLAN.dwg 10/2/2019 4:18 PM

UNION STATION PLAZA

MMC PARKING GARAGE (UNDER CONSTRUCTION 2019)

FERGUSON SUPPLY

EXISTING PERIMETER ACCESS ROAD

PAN AM RAILWAY

TYSON FOODS

COUNTY WAY

CUMBERLAND COUNTY JAIL

STAFF PARKING

PHASE 2 PROPOSED ASC BUILDING FOOTPRINT 17,574 GSF TOTAL AREA 34,987 GSF

PATIENT / VISITOR PARKING

PATIENT / VISITOR PARKING

PHASE 2 HOSPITAL EXPANSION FOOTPRINT 20,140 GSF TOTAL AREA 54,889 GSF

PATIENT / VISITOR PARKING

PHASE 1 EXISTING MERCY HOSPITAL 4 STORY BRICK BUILDING FOOTPRINT - 37,566 GSF TOTAL AREA - 138,099 GSF

PHASE 1 EXISTING MEDICAL OFFICE BUILDING 1 STORY BRICK FOOTPRINT - 20,047 GSF TOTAL AREA - 62,186 GSF

STAFF / PATIENT PARKING

STAFF PARKING

MAINTENANCE FACILITY

EXISTING SNOW STORAGE FACILITY

SOUTH OPEN SPACE

FORE RIVER TRAIL

EX. FORE RIVER TRAIL - 10' WIDE, SHARED USE

FORE RIVER MUD FLATS

FORE RIVER

FORE RIVER MUD FLATS

VETERANS MEMORIAL BRIDGE (FORE RIVER) U.S. ROUTE ONE

NORTH OPEN SPACE

FUTURE PEDESTRIAN CONNECTION

TYPICAL STAFF / PEDESTRIAN ACCESS ROUTE TO / FROM PARKING TO BUILDINGS

TYPICAL ACCESS ROUTES TO OPEN SPACE

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.

NORTH

GRAPHIC SCALE

75 0 37.5 75 150

(IN FEET)
1 inch = 75 ft.

STATE OF MAINE
STEPHEN R. BUSHEY
11.04.19
LICENSED PROFESSIONAL ENGINEER

STEPHEN R. BUSHEY, P.E.
LIC. #7429

Rev.	Date	Revision
1	11.04.19	PREPARED FOR L.O.R. #1 & SUBMITTED TO CITY

Issued For	Date	By
PERMIT APPROVAL SUBMISSION	08.30.19	SRB
DESIGN DEVELOPMENT SUBMISSION TO OWNER	07.31.19	SRB

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207.772.2515

Drawing Name: Master Plan – Pedestrian Access Routes

Project: Fore River Campus Consolidation
Portland, Maine

Client: Northern Light Mercy Hospital
144 State Street, Portland, Maine 04101

Drawing No. FIG. 5

U:\3257.04_Mercy Hospital_Expansion_DD_Permits\STANTEC\civil\cadd\permit\dwg\325704-MASTER PLAN.dwg 11/4/2019 4:12 PM

SITE DESIGN

The following statements are provided in accordance with the submission and Section 14-526 of the ordinance.

(d) Site Design Standards.

Massing, Ventilations and Wind Impact (14-526 (d) 1)

- *Wind and ventilation impacts on adjoining structures and/or adjacent public spaces. Wind study, if applicable.*
- *Bulk, location or height impacts on adjoining structures*
- *Identify and locate HVAC equipment and venting away from public spaces and residential properties*
- *Identify screening and manufacturing specifications for noise, if applicable*

1. *Massing, Ventilation and Wind Impact:*

   a. The project proposes construction of a new multi-story ASC building and hospital expansion. The project will not result in any significant changes to the wind environment proximate to the site. There are no abutting structures or uses that might be impacted by the proposed buildings, as the site is somewhat isolated from nearby neighborhoods.

   b. The project will not result in any significant impacts to abutting properties and is consistent with the contract zone and other zoning/city standard considerations. The proposed expansion and ASC will be considerably less in scale when compared to the MMC Parking Garage under construction on the opposite side of the rail tracks to the east of the site.

   c. HVAC venting, if necessary, will be directed through building roof top mounted units and will not impact any adjacent public spaces or residential properties

Shadows (14-526 (d) 2), if applicable

- Shadow analysis of impacts on publicly accessible open space (Technical Manual, Section 11)

2. *Shadows:*

   a. The buildings at the site will not cast significant shadows onto neighboring properties, or block access to direct sunlight for structures utilizing solar energy. The Site Layout Plan and Grading and Drainage Plan show the proposed site improvements and their relationships to property lines. The grading plan shows the relative elevations of the building with respect to elevations along the property lines.

Snow and Ice Loading (14-526 (d) 3)

- *Building design to prevent snow and ice from loading or falling onto adjacent properties or public ways.*

3. Snow and Ice Loading:

a. The buildings has been designed and located such that accumulated snow and ice will not fall onto adjacent properties or public ways. Snow will be removed from the parking lots and stockpiled in the snow dump at the south end of the site.

View Corridors (14-526 (d) 4), if applicable

- *Protection of designated view corridors (Portland Design Manual, Appendix 1)*

4. View Corridors:

a. The project entails construction of a two-story ASC building and four level hospital expansion at the site in manner that is compliant with the Mercy Hospital Contract Zone. The site is considered exemplary for its public view from I-295 and the Veteran's Bridge. The site does not block views from nearby properties. The site is not located within any corridors identified in the Downtown Vision View Corridor Protection Plan. The MMC parking garage construction will introduce a larger building to the background of the Mercy campus, thus detracting from the Mercy visual character to a certain extent.

Historic Resources (14-526 (d) 5), if applicable

- *Identify developments within Historic Districts or affecting Designated Landmarks*
- *Certificate of Appropriateness or other evidence*
- *Identify Developments within 100 feet of Historic Districts or affecting Designated Landmarks. Advisory HP review may be required*
- *Address preservation and documentation of Archaeological Resources*

5. Historic Resources:

a. The development is not located in a historic district, historic landscape district or City designated landmark.

b. The development is not located adjacent to or within 100 feet of a designated landmark, historic district, or historic landscape district.

c. There are no known remaining archaeological resources on the site. The Fore River Parkway was constructed in the areas previously occupied by the Cumberland and Oxford Canal as well as historical rail tracks.

Exterior Lighting (14-526 (d) 6)

- *Cut sheets of on-site light fixtures and any architectural or specialty lights (Technical Manual, Section 12)*
- *Engineered details for any lights proposed in street right-of-way (Technical Manual, Section 10)*

6. Exterior Lighting:

a. Site Lighting

(i) All new exterior lighting at the site will be full cutoff with no light emitted above the horizontal plane, and in accordance with Section 12 of the Technical Manual. A

photometric Lighting Plan is being prepared to demonstrate illumination levels throughout the site will be consistent with City Standards. The plan will be uploaded for review when complete.

b. Architectural and Specialty Lighting

(i) Not applicable to the project.

c. Street Lighting

(i) There are existing area lights along drives within the Campus area. There are no new street lights proposed for the Fore River Parkway.

Noise and Vibration (14-526 (d) 7)

- *Evidence of noise levels for equipment, such as equipment specifications, to demonstrate consistency with zoning requirements*

7. Noise and Vibration:

All heating, ventilation, air conditioning equipment including air handlers and generators are designed to meet local, state, and federal emissions and noise requirements. Most of the HVAC equipment is mounted in the middle of the roofs to minimize visibility. The addition expands the current hospital toward the middle of the site and the new ASC building is also located in the middle of the site. There are no residences with direct views of either roof. The ground mounted equipment for the new ASC will be screened. Any additional ground mounted equipment for the Hospital will be located in the existing screened service yard. Equipment cut sheets can be provided upon request.

Signage and Wayfinding (14-526 (d) 8), if applicable

- *Signage plan showing the location, dimensions, height and setback of all existing and proposed signs. Signs in Historic Districts are reviewed by Historic Preservation staff*
- *Proposed commercial and directional signage on site*

8. Signage and Wayfinding:

a. All street and wayfinding signage shall meet the requirements of the Manual on Uniform Traffic Devices (MUTCD) and Division 22 of the City Code.

(i) The project is not located in a historic district or subject to Article IX.

(ii) Proposed wayfinding signage is identified in the Wayfinding and circulation plan. In addition, Mercy has recently submitted a sign permit application for separate review by the Code Enforcement office. The sign package includes removal and replacement of many of the onsite signs as part of a rebranding of the campus related to the Northern Light Health/Mercy affiliation.

(iii) All street and wayfinding signage shall meet the requirements of the Manual on Uniform Traffic Devices (MUTCD) and Division 22 of the City Code.

Zone Related Design Standards (14-526 (d) 9)

- Address Historic Preservation Design Review, if applicable
- Address any applicable design review standards by zone
- Address submission requirements from Design Manual, page 1, addressing neighborhood context
- Description of exterior materials, color, finish, and samples

9. Zoning Related Design Standards:

The following excerpt of the Contract Zone Agreement Paragraph 10 (g.) outlines the architectural standards pertaining to the site:

"**g**. **Architectural design***: All buildings shall be designed or approved by a registered architect in the State of Maine. The scale, texture, color, and massing of the buildings shall be coordinated. The full range of high-quality, permanent, and traditional or contemporary building materials and technology may be incorporated in a manner so that the development as a whole embodies distinguishing attributes that achieve the developer's desired degree of excellence and are in conformance with the architectural guidelines provided in any private development restrictions. Particular emphasis shall be placed on the appearance of building facades from public streets and highways including the* **CONNECTOR***, from driveway and parking areas, and from other nearby buildings. Building elevation drawings shall be submitted which indicate architectural style, exterior finishes and color, building height and scale, and location and scale of window and door openings. Samples of exterior building materials shall also be submitted."*

Architectural Comments:

The architectural design intent for the Hospital Addition is to complement the existing Phase 1 portion so that when viewed in its entirety it presents one unified composition.

The existing Phase 1 building is essentially a 5-story tall rectangle that steps back on the east and west sides as the building gets higher. The 4-story addition extends the rectangle toward the north and steps back along the west. The Addition also steps back along the longitudinal axis as well with the third floor being half the length of the second.

The new Addition will be clad with the same brick and cast stone components used in Phase 1. The language of the fenestration and cast stone banding draws from the existing using the punched windows with the vertical band from Level 2 as the inspiration. The arcade extends with the same aesthetic for an additional two bays toward the new entrance on the west side.

In order to best address wayfinding needs and to minimize confusion for patients and visitors, the new entry canopies on the north and west purposefully look different from the main, drive-under Harry Davis entrance. The new entrances are only meant to cover a passenger exiting a car so the glass panels are suspended from the wall above.

The Ambulatory Surgery Center (ASC) is a 2-story free standing building that sits to the east of the hospital addition in board from the Parkway. At this point on the site, the first floor of the ASC is at the same level as the ground floor of the Hospital. The ASC will be positioned approximately

Similar to the other buildings on the campus, the ASC is clad in brick with glass storefront with spandrel panels. Taking cues from the existing Medical Office Building, the glass over the front entrance has an arched pattern – which also reflects back to the windows on the fourth floor of the Hospital. The front canopy is glass similar to the canopies on the north and west of the Addition. The rear canopy is much simpler in part due to its utilitarian function but also because it faces the rear of the Hospital, which has a similar simple canopy.

Architectural renderings are included with this section.

MEMO

SMRT Architects and Engineers

p 877.700.7678
w www.smrtinc.com

To	Steve Bushey	**Date**	7 August 19
From	Kristen Damuth	**Project No.**	19002
Subject	Level III site plan application	**Project Name**	Mercy FR campus consolidation

Public Safety & Fire Prevention: "A narrative regarding building code compliance etc addressing the items in 14-526 (c) below"
All three projects (the new Addition, the MOB renovations and the new ASC) will comply with the appropriate edition of MUBEC, IBC, NFPA and ADA. There is a life safety/code compliance drawing in each document set that identifies each code and year along with specific pertinent requirements.

I assume GP has the sentence about emergency vehicular access

Massing, Ventilation, Wind Impact: "A narrative from SMRT to explain the basis of design for both the Expansion and the ASC would be helpful with info we can incorporate into the narrative to address the sections below."

The architectural design intent for the Hospital Addition is to complement the existing Phase 1 portion so that when viewed in its entirety it presents one unified composition.

The existing Phase 1 building is essentially a 5-story tall rectangle that steps back on the east and west sides as the building gets higher. The 4-story addition extends the rectangle toward the north and steps back along the west. The Addition also steps back along the longitudinal axis as well with the third floor being half the length of the second.

The new Addition will be clad with the same brick and cast stone components used in Phase 1. The language of the fenestration and cast stone banding draws from the existing using the punched windows with the vertical band from level 2 as the inspiration. The arcade extends with the same aesthetic for an additional two bays toward the new entrance on the west side.

In order to best address wayfinding needs and to minimize confusion for patients and visitors, the new entry canopies on the north and west purposefully look different from the main, drive-under Harry Davis entrance. The new entrances are only meant to cover a passenger exiting a car so the glass panels are suspended from the wall above.

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Similar to the other buildings on the campus, the ASC is clad in brick with glass storefront with spandrel panels. Taking cues from the existing Medical Office Building, the glass over the front entrance has an arched pattern –

which also reflects back to the windows on the fourth floor of the Hospital. The front canopy is glass similar to the canopies on the north and west of the Addition. The rear canopy is much simpler in part due to its utilitarian function but also because it faces the rear of the Hospital, which has a similar simple canopy.

Noise & Vibration: "See 14-526 (d) 7 below"

All heating, ventilation, air conditioning equipment including air handlers and generators are designed to meet state and federal emissions requirements. Most of the HVAC equipment is mounted in the middle of the roofs to minimize visibility. The addition expands the current hospital toward the middle of the site and the new ASC building is also located in the middle of the site. There are no residences with direct views of either roof. The ground mounted equipment for the new ASC will be screened. Any additional ground mounted equipment for the Hospital will be located in the existing screened service yard.

Zone related design standards: "Narrative describing how the Contract zone is satisfied"
Re item 10g Architectural Design of the Contract Zone Agreement

The architectural design intent described above supports the guidelines regarding scale, texture, color and massing to achieve an aesthetically pleasing and cohesive campus. The new ASC building also enhances the view of the campus from the Parkway.

Architectural Plans: DD floor plans and elevations dated 7/31/19 provided



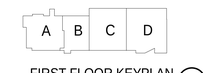
GROUND FLOOR - FACILITY PLAN (K1)
3/32" = 1'-0"



FIRST FLOOR - FLOOR PLAN AREA A (A1)
3/32" = 1'-0"



GROUND FLOOR KEYPLAN (2)
1" = 160'-0"



FIRST FLOOR KEYPLAN (1)
1" = 160'-0"

REV	DESCRIPTION	DATE

DESIGN DEVELOPMENT
7-31-2019
CURRENT ISSUE STATUS:

PROJECT NORTH:

SMRT Architects and Engineers
144 Fore Street/P.O. Box 618
Portland, Maine 04104
ARCHITECTURE | ENGINEERING | PLANNING | INTERIORS | ENERGY

MERCY FORE RIVER CAMPUS CONSOLIDATION
MERCY HOSPITAL - PHASE 2
175 FORE RIVER PARKWAY

GROUND FLOOR AND FIRST FLOOR FACILITY PLANS

SHEET TITLE:

0" 1/4" 1/2" 1" 2" 3"

SCALE: AS NOTED

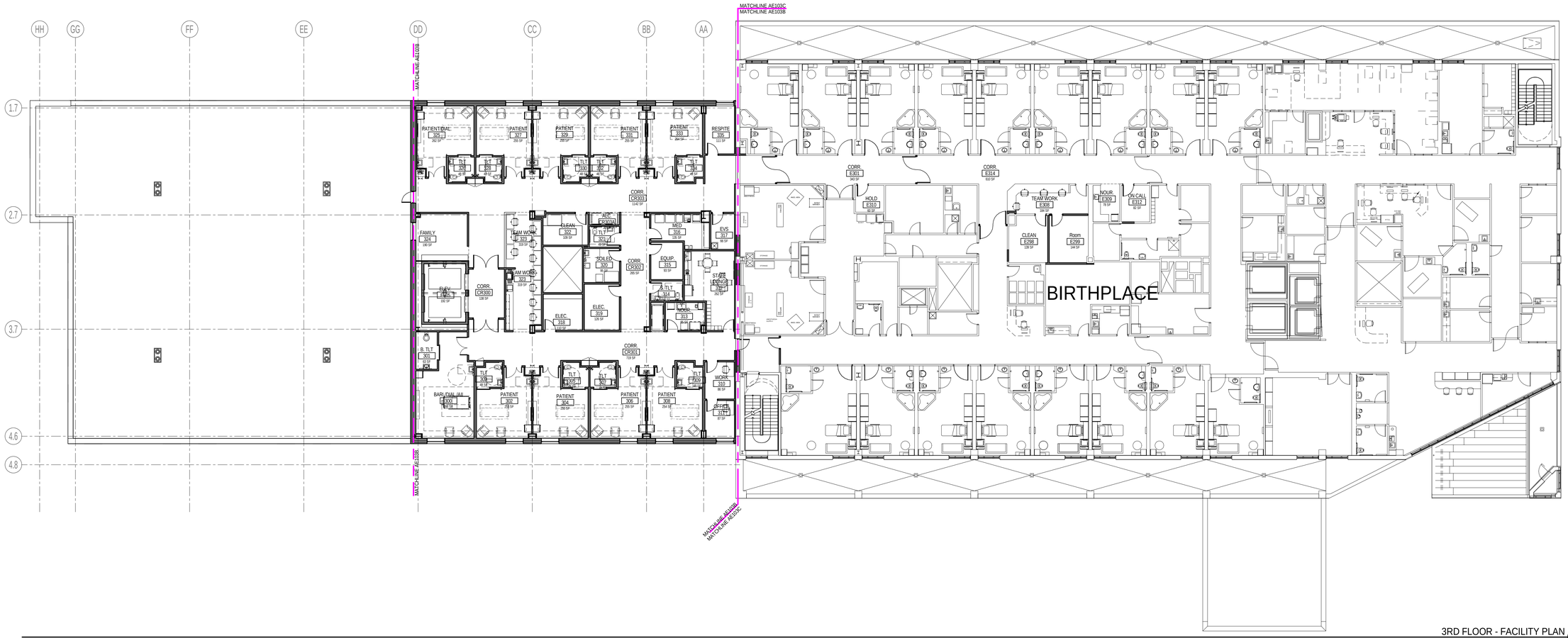
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A/E OF RECORD:	KD		
JOB CAPTAIN:	JCH		A-100
DRAWN BY:	JCH	SHEET No.	
SMRT FILE:	A-100-19002		

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2ND FLOOR - FACILITY PLAN J1
3/32" = 1'-0"



3RD FLOOR - FACILITY PLAN A1
3/32" = 1'-0"

A B C D

SECOND FLOOR KEYPLAN 2
1" = 160'-0"

B C D

THIRD FLOOR KEYPLAN 1
1" = 160'-0"

REV	DESCRIPTION	DATE

DESIGN DEVELOPMENT
7-31-2019
CURRENT ISSUE STATUS:

PROJECT NORTH:

SMRT Architects and Engineers
144 Fore Street/P.O. Box 618
Portland, Maine 04104
ARCHITECTURE | ENGINEERING | PLANNING | INTERIORS | ENERGY

MERCY FORE RIVER CAMPUS CONSOLIDATION
MERCY HOSPITAL - PHASE 2
175 FORE RIVER PARKWAY

SECOND FLOOR AND THIRD FLOOR FACILITY PLANS

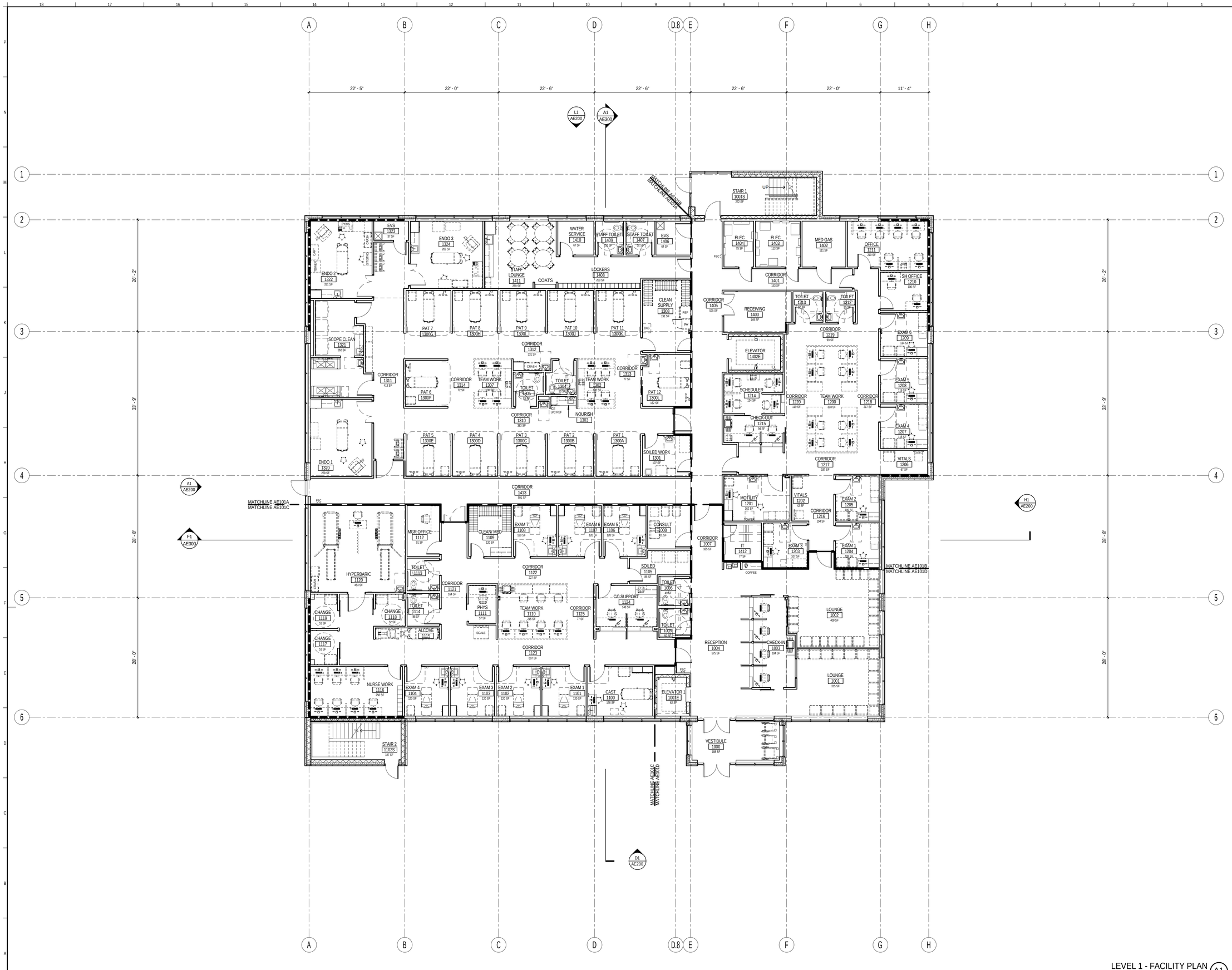
SHEET TITLE:

0" 1/4" 1/2" 1" 2" 3"
SCALE: AS NOTED

PROJECT MANAGER:	KD	PROJECT NO:	19002
A/E OF RECORD:	KD		
JOB CAPTAIN:	JCH		A-101
DRAWN BY:	JCH		
SMRT FILE:	A-101-19002	SHEET No.	

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LEVEL 1 - FACILITY PLAN A1

1/8" = 1'-0"

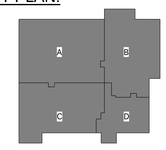
PLAN NOTES:

1. SEE G-001 FOR GENERAL PROJECT NOTES, LEGENDS AND ABBREVIATIONS.
2. SEE G-003 FOR GENERAL TOP OF WALL DETAILS AND PARTITION TYPES.
3. CONTRACTOR IS RESPONSIBLE FOR REVIEWING CODE COMPLIANCE PLANS AND NOTIFYING THE ARCHITECT OF CONFLICTS BETWEEN WHAT IS IN THE FIELD AND ON THE CODE DOCUMENTS.
4. DIMENSIONS ARE FACE OF CONCRETE, FACE OF MASONRY AND CENTERLINE OF STUD, UNLESS NOTED OTHERWISE.
5. DOOR JAMBS (HINGE SIDE) SHALL BE 6" FROM CORNER IN STUD PARTITIONS AND 0" FROM CORNER IN MASONRY PARTITIONS UNLESS NOTED OTHERWISE.
6. REFER TO DETAILS FOR ADDITIONAL DIMENSIONING INFORMATION.
7. REFER TO ENLARGED PLANS FOR PARTITION TYPES AND DIMENSIONS IN AREAS WHICH ARE DETAILED AT A LARGER SCALE.
8. FURNITURE AND OWNER PROVIDED EQUIPMENT ARE INDICATED BY DASHED LINE TYPE.
9. CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF OWNER PROVIDED EQUIPMENT INCLUDING BUT NOT LIMITED TO DIMENSIONAL INFORMATION, AND MECHANICAL, ELECTRICAL AND PLUMBING REQUIREMENTS.

LEGEND:

STRUCTURAL BRACING

KEY PLAN:



REV	DESCRIPTION	DATE

DESIGN DEVELOPMENT
7-31-2019

CURRENT ISSUE STATUS:

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MERCY HOSPITAL
AMBULATORY SURGERY CENTER

Portland, ME

LEVEL 1 FACILITY PLAN

SHEET TITLE:

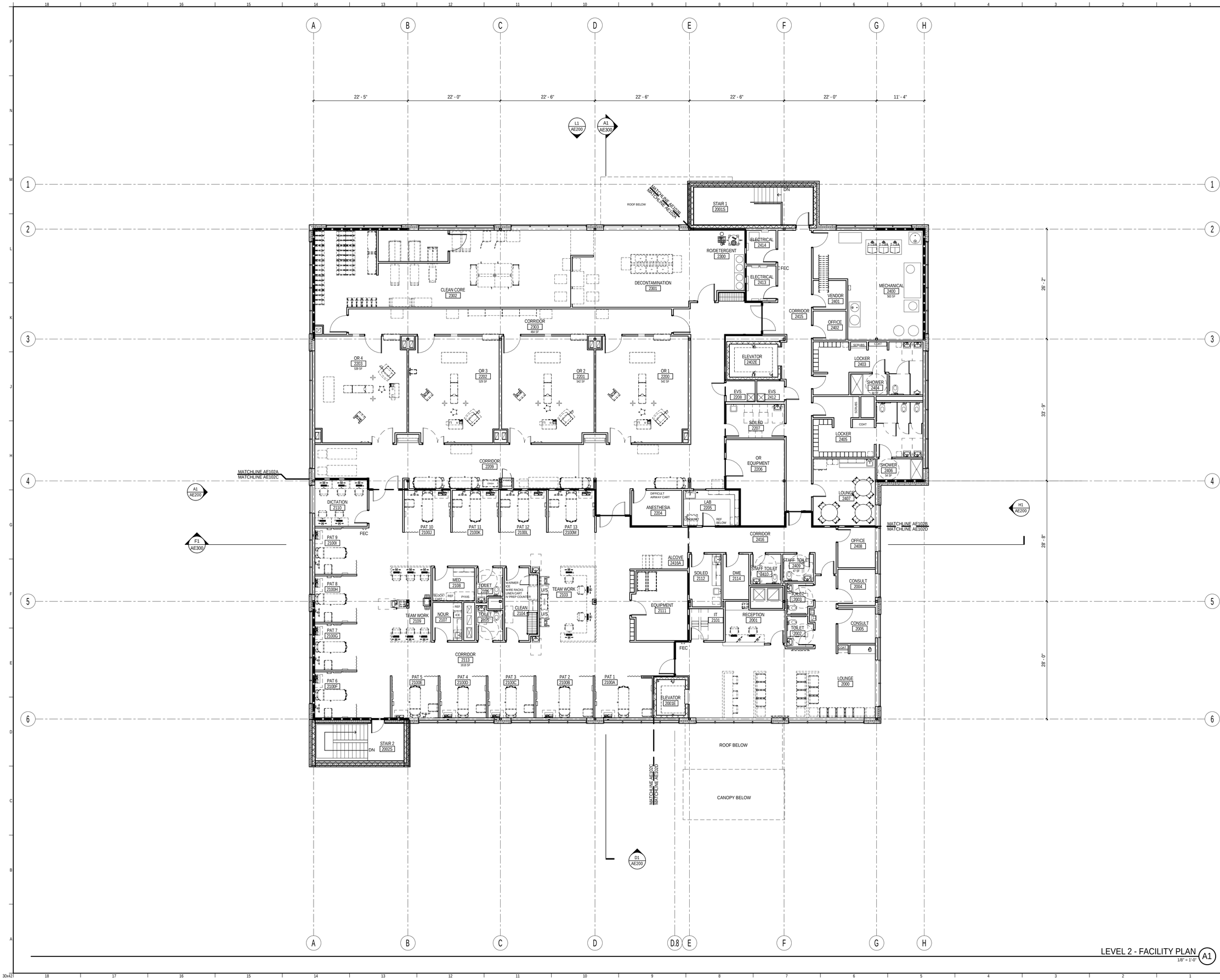
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PROJECT MANAGER:	KD	PROJECT NO:	19004
A/E OF RECORD:	KD		
JOB CAPTAIN:	CAH		A-101
DRAWN BY:	CAH		
SMRT FILE:	A-101-19004	SHEET No.	

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LEVEL 2 - FACILITY PLAN A1
1/8" = 1'-0"

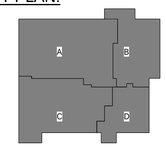
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LEGEND:

STRUCTURAL BRACING

KEY PLAN:



REV	DESCRIPTION	DATE

DESIGN DEVELOPMENT
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AMBULATORY SURGERY CENTER

Portland, ME

LEVEL 2 FACILITY PLAN

SHEET TITLE:

0" 1/4" 1/2" 1" 2" 3"

SCALE: AS NOTED

PROJECT MANAGER:	KD	PROJECT NO:	19004
A/E OF RECORD:	KD		
JOB CAPTAIN:	CAH		A-102
DRAWN BY:	CAH		
SMRT FILE:	A-102-19004	SHEET No.	

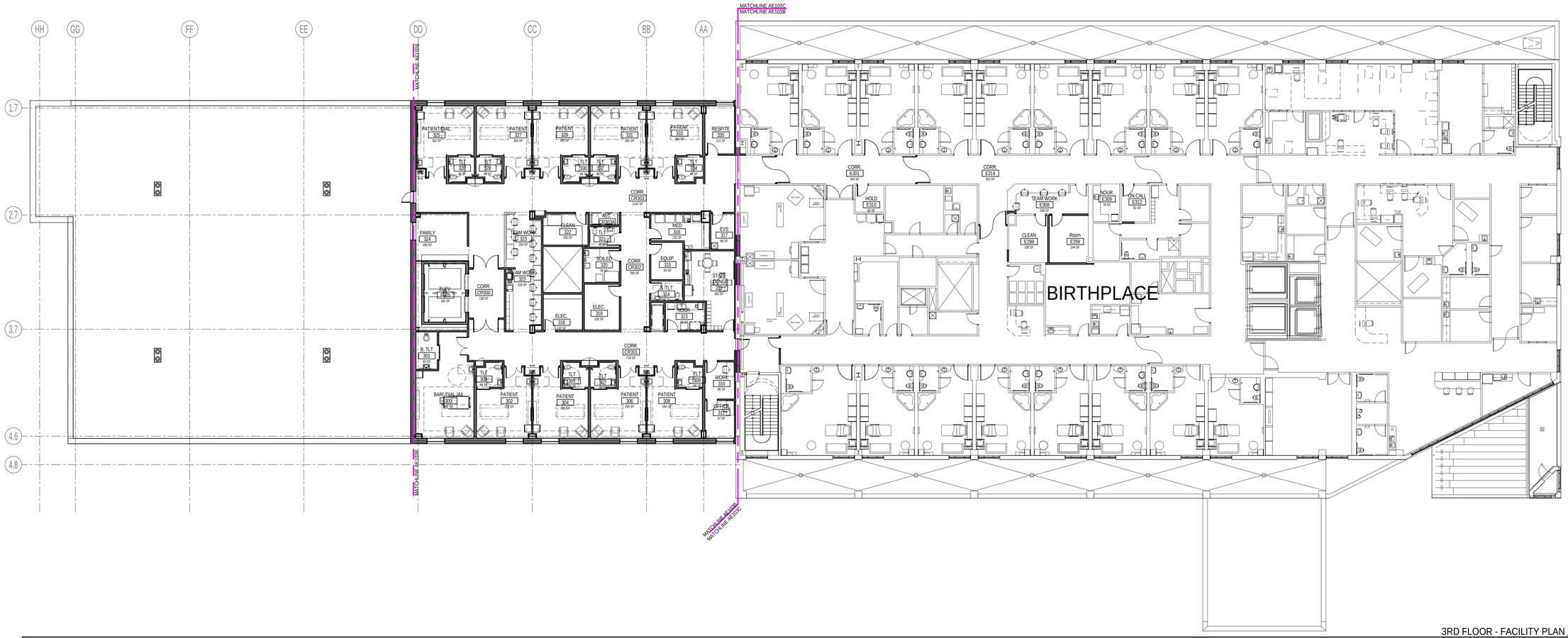
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2ND FLOOR - FACILITY PLAN J1
3/32" = 1'-0"



3RD FLOOR - FACILITY PLAN A1
3/32" = 1'-0"

A B C D

SECOND FLOOR KEYPLAN 2
1" = 160'-0"

B C D

THIRD FLOOR KEYPLAN 1
1" = 160'-0"

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MERCY HOSPITAL - PHASE 2
175 FORE RIVER PARKWAY

SECOND FLOOR AND THIRD FLOOR FACILITY PLANS

SHEET TITLE:

0" 1/4" 1/2" 1" 2" 3"
SCALE: AS NOTED

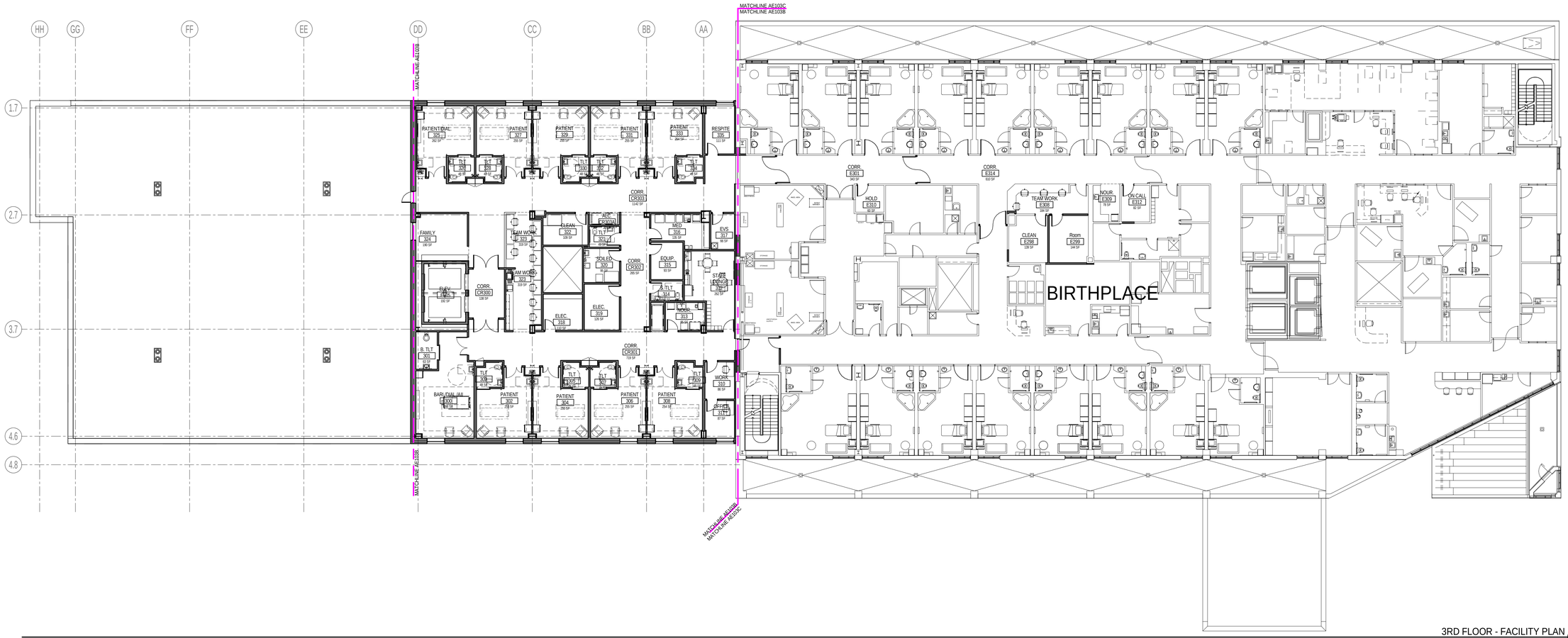
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A/E OF RECORD:	KD		
JOB CAPTAIN:	JCH		A-101
DRAWN BY:	JCH		
SMRT FILE:	A-101-19002	SHEET No.	

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2ND FLOOR - FACILITY PLAN J1
3/32" = 1'-0"



3RD FLOOR - FACILITY PLAN A1
3/32" = 1'-0"

A B C D

SECOND FLOOR KEYPLAN 2
1" = 160'-0"

B C D

THIRD FLOOR KEYPLAN 1
1" = 160'-0"

REV	DESCRIPTION	DATE

DESIGN DEVELOPMENT
7-31-2019
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MERCY HOSPITAL - PHASE 2
175 FORE RIVER PARKWAY

SECOND FLOOR AND THIRD FLOOR FACILITY PLANS

SHEET TITLE:

0" 1/4" 1/2" 1" 2" 3"
SCALE: AS NOTED

PROJECT MANAGER:	KD	PROJECT NO:	19002
A/E OF RECORD:	KD		
JOB CAPTAIN:	JCH		A-101
DRAWN BY:	JCH		
SMRT FILE:	A-101-19002	SHEET No.	

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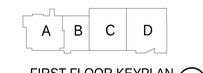
GROUND FLOOR - FACILITY PLAN (K1)
3/32" = 1'-0"



FIRST FLOOR - FLOOR PLAN AREA A (A1)
3/32" = 1'-0"



GROUND FLOOR KEYPLAN (2)
1" = 160'-0"



FIRST FLOOR KEYPLAN (1)
1" = 160'-0"

REV	DESCRIPTION	DATE

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MERCY FORE RIVER CAMPUS CONSOLIDATION
MERCY HOSPITAL - PHASE 2
175 FORE RIVER PARKWAY

GROUND FLOOR AND FIRST FLOOR FACILITY PLANS

SHEET TITLE:

0" 1/4" 1/2" 1" 2" 3"

SCALE: AS NOTED

PROJECT MANAGER:	KD	PROJECT NO:	19002
A/E OF RECORD:	KD		
JOB CAPTAIN:	JCH		A-100
DRAWN BY:	JCH	SHEET No.	
SMRT FILE:	A-100-19002		

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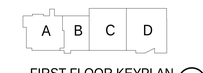
GROUND FLOOR - FACILITY PLAN (K1)
3/32" = 1'-0"



FIRST FLOOR - FLOOR PLAN AREA A (A1)
3/32" = 1'-0"



GROUND FLOOR KEYPLAN (2)
1" = 160'-0"



FIRST FLOOR KEYPLAN (1)
1" = 160'-0"

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MERCY FORE RIVER CAMPUS CONSOLIDATION
MERCY HOSPITAL - PHASE 2
175 FORE RIVER PARKWAY

GROUND FLOOR AND FIRST FLOOR FACILITY PLANS

SHEET TITLE:

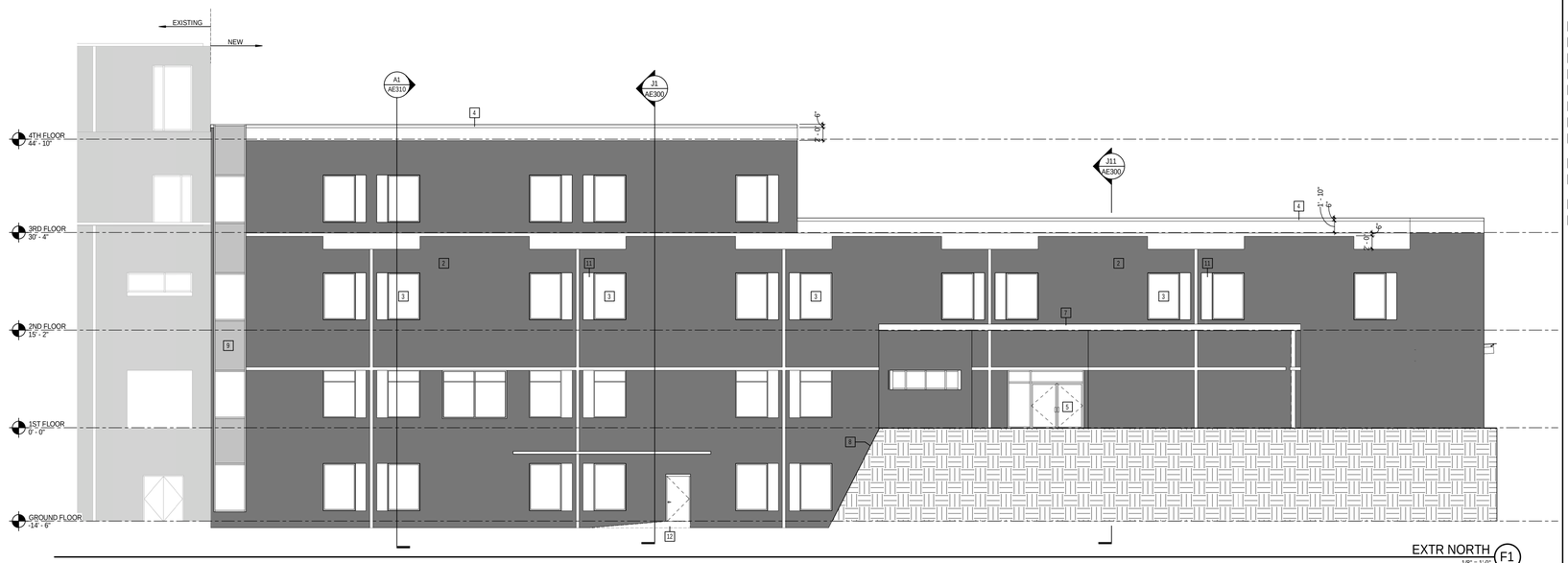
0" 1/4" 1/2" 1" 2" 3"

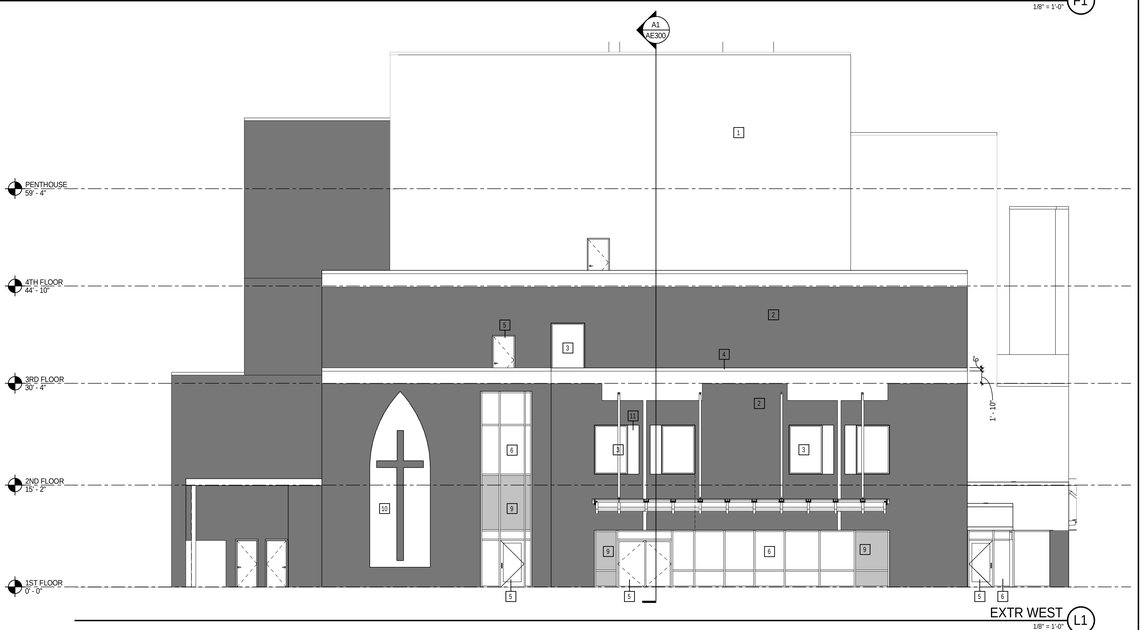
SCALE: AS NOTED

PROJECT MANAGER:	KD	PROJECT NO:	19002
A/E OF RECORD:	KD		
JOB CAPTAIN:	JCH		A-100
DRAWN BY:	JCH	SHEET No.	
SMRT FILE:	A-100-19002		

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EXTERIOR KEYED NOTES:

1. METAL PANEL TO MATCH EXISTING PENTHOUSE
2. BRICK VENEER
3. ALUMINUM WINDOW
4. 6" CAST STONE TRIM BAND
5. ALUMINUM DOOR AND FRAME
6. ALUMINUM STOREFRONT
7. CANOPY, RE:AE501
8. NEW RETAINING WALL, COORDINATE W/ CIVIL DRAWINGS BY OTHERS
9. SPANDREL PANELS
10. RELIGIOUS ICONOGRAPHY/HOSPITAL BRANDING, DESIGN TBD
11. CAST STONE PANEL, RE XX/AEXXX
12. NEW RAMP AND STAIRS, TBD

REV	DESCRIPTION	DATE

DESIGN DEVELOPMENT
7-31-2019

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MERCY FORE RIVER CAMPUS CONSOLIDATION
MERCY HOSPITAL - PHASE 2
175 FORE RIVER PARKWAY

EXTERIOR ELEVATIONS

SHEET TITLE:

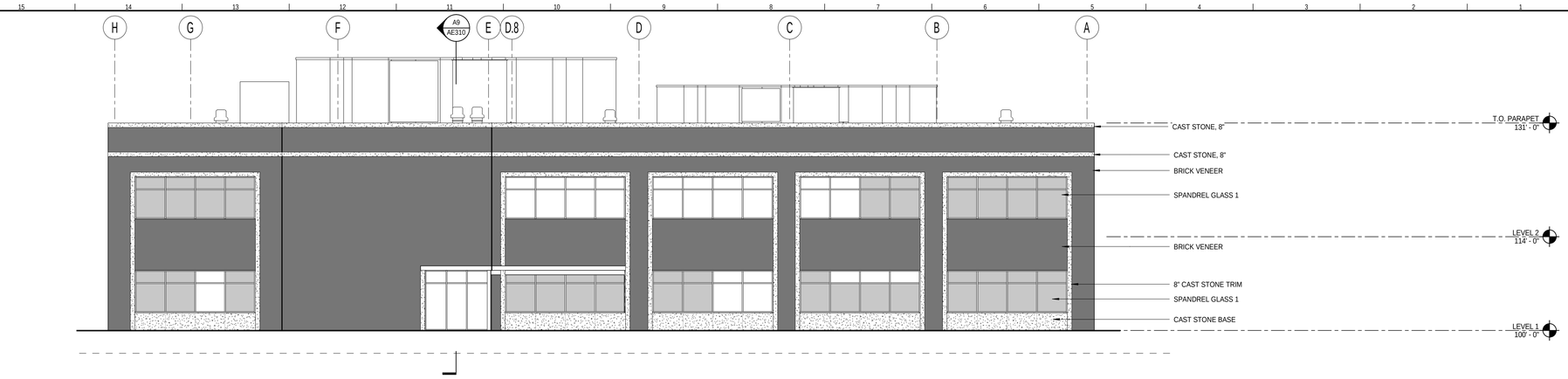
0' 1/4" 1/2" 1' 2' 3'

SCALE: AS NOTED

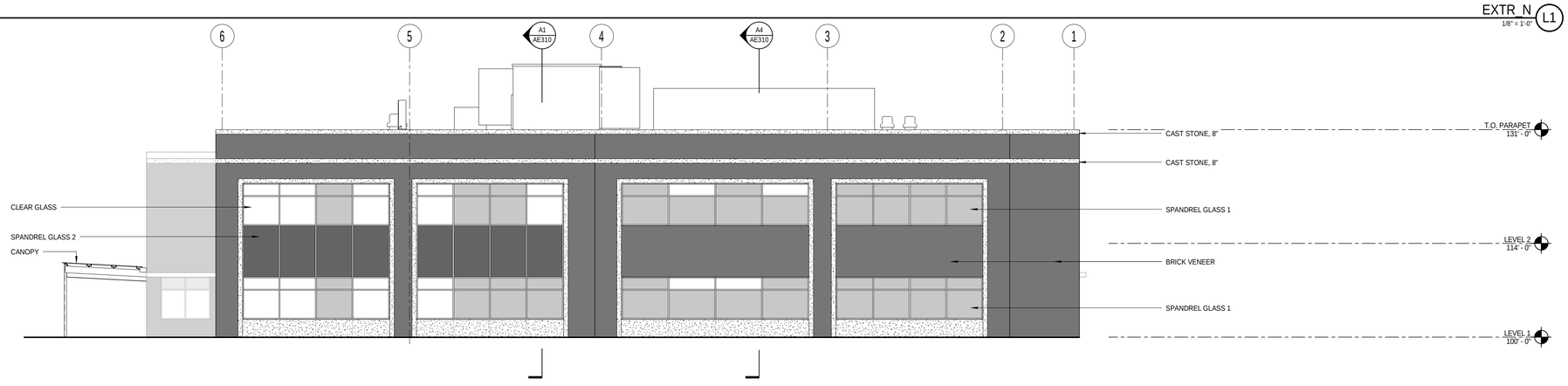
PROJECT MANAGER:	KD	PROJECT NO:	19002
A/E OF RECORD:	KD		
JOB CAPTAIN:	JCH		
DRAWN BY:	JCH		
SMRT FILE:	AE200-19002	SHEET No.	AE200

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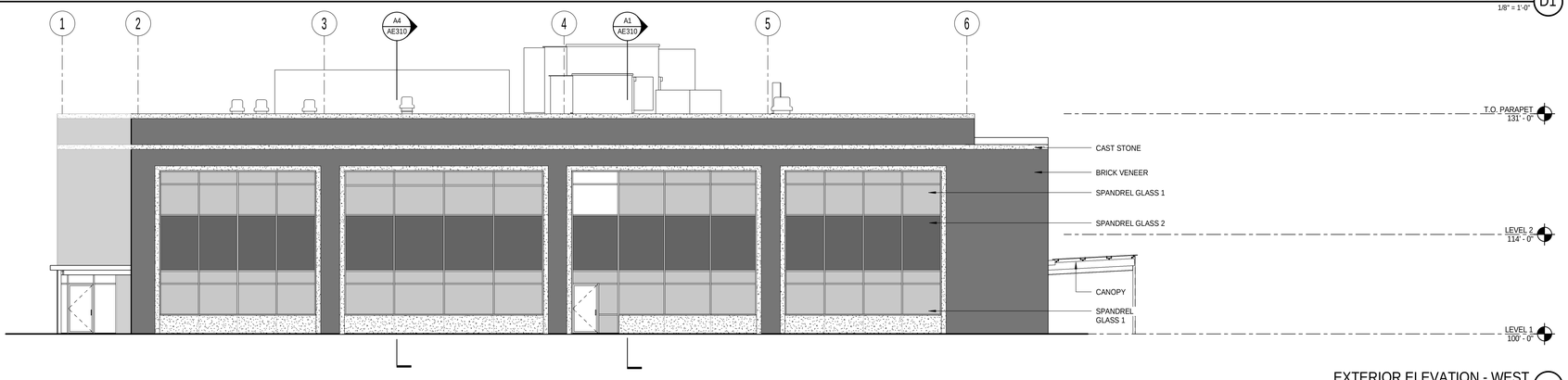
EXTR_N
1/8" = 1'-0" L1



EXTERIOR ELEVATION - EAST
1/8" = 1'-0" H1



EXTERIOR ELEVATION - SOUTH
1/8" = 1'-0" D1



EXTERIOR ELEVATION - WEST
1/8" = 1'-0" A1

REV	DESCRIPTION	DATE

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AMBULATORY SURGERY CENTER

Portland, ME

EXTERIOR ELEVATIONS

SHEET TITLE:

0" 1/4" 1/2" 1" 2" 3"

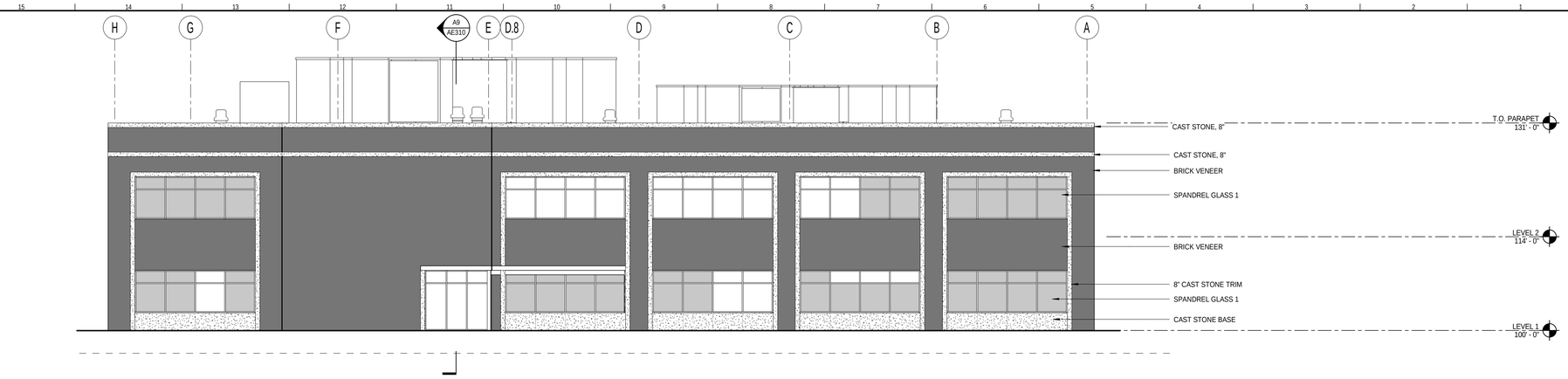
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PROJECT MANAGER:	KD	PROJECT NO:	19004
A/E OF RECORD:	KD		
JOB CAPTAIN:	CAH	AE200	
DRAWN BY:	CAH		
SMRT FILE:	AE200-19004	SHEET No.	

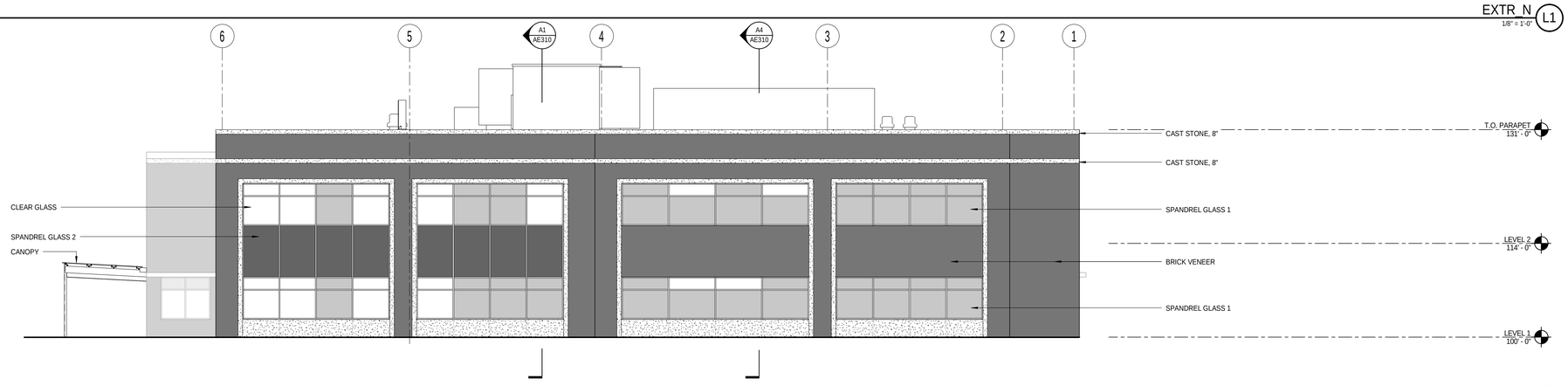
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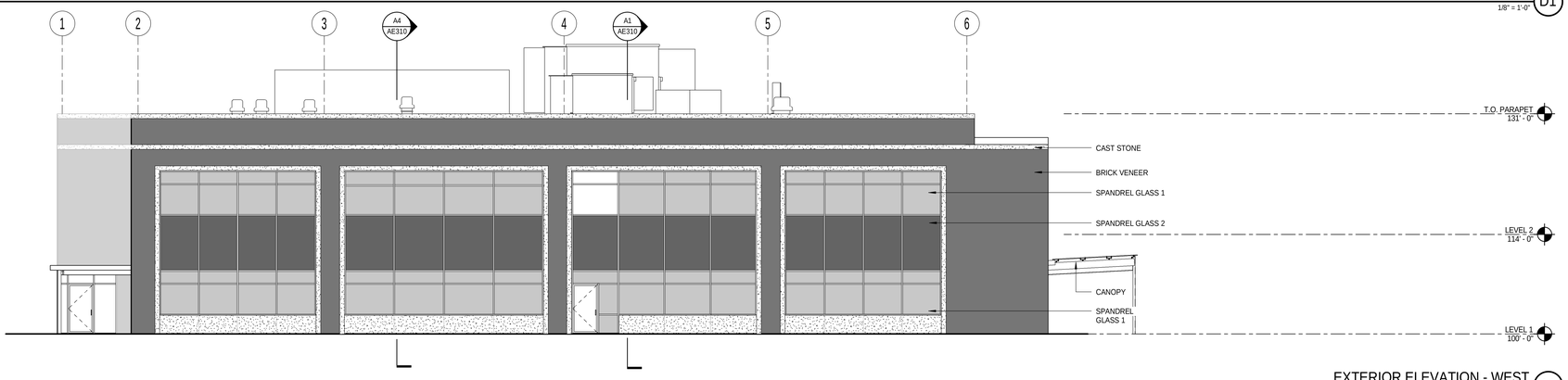
EXTR_N
1/8" = 1'-0" L1



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EXTERIOR ELEVATION - SOUTH
1/8" = 1'-0" D1



EXTERIOR ELEVATION - WEST
1/8" = 1'-0" A1

REV	DESCRIPTION	DATE

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AMBULATORY SURGERY CENTER

Portland, ME

EXTERIOR ELEVATIONS

SHEET TITLE:

0" 1/4" 1/2" 1" 2" 3"

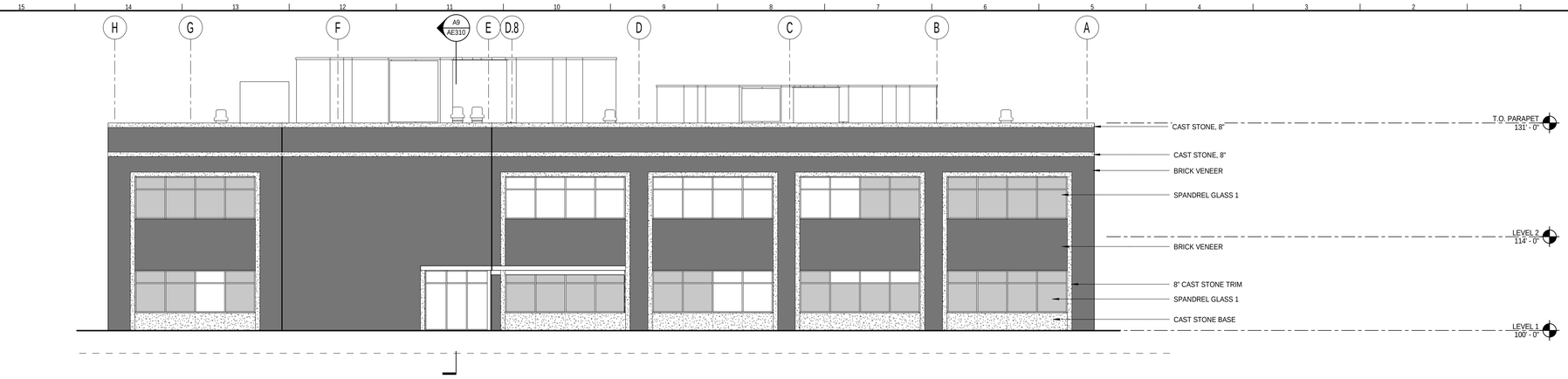
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PROJECT MANAGER:	KD	PROJECT NO:	19004
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JOB CAPTAIN:	CAH	AE200	
DRAWN BY:	CAH		
SMRT FILE:	AE200-19004	SHEET No.	

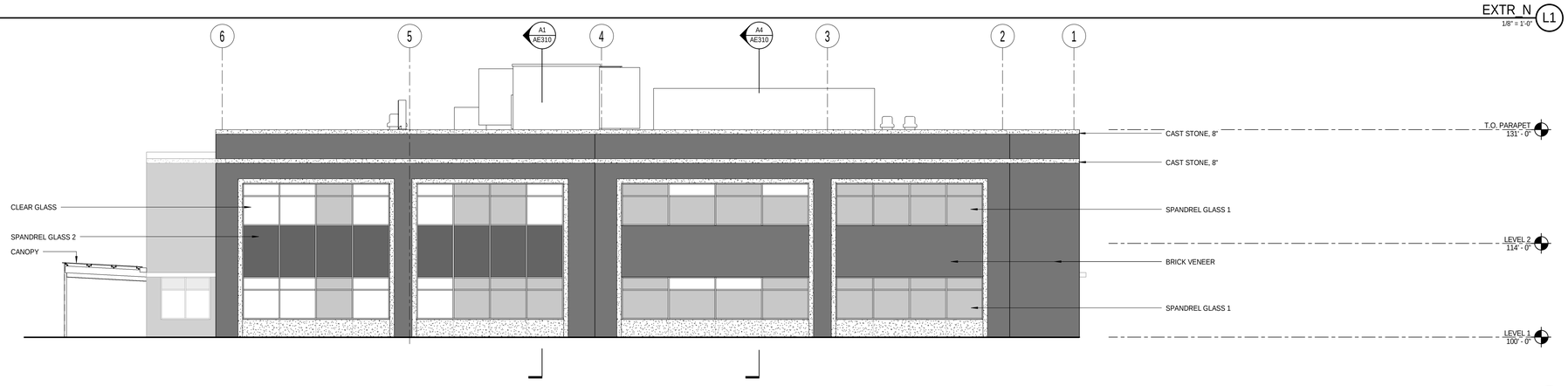
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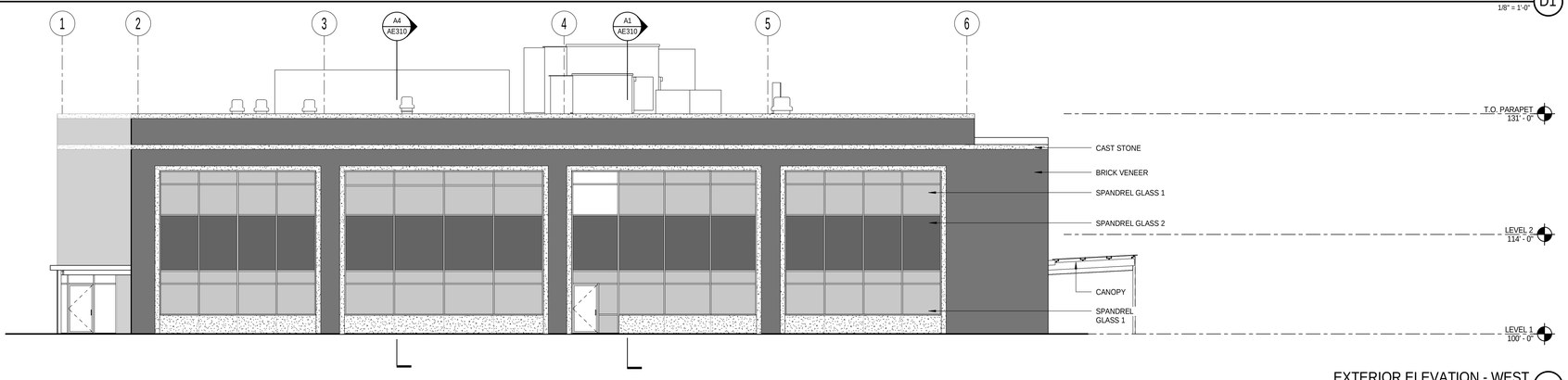
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EXTERIOR ELEVATION - WEST
1/8" = 1'-0" A1

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AMBULATORY SURGERY CENTER

Portland, ME

EXTERIOR ELEVATIONS

SHEET TITLE:

0" 1/4" 1/2" 1" 2" 3"

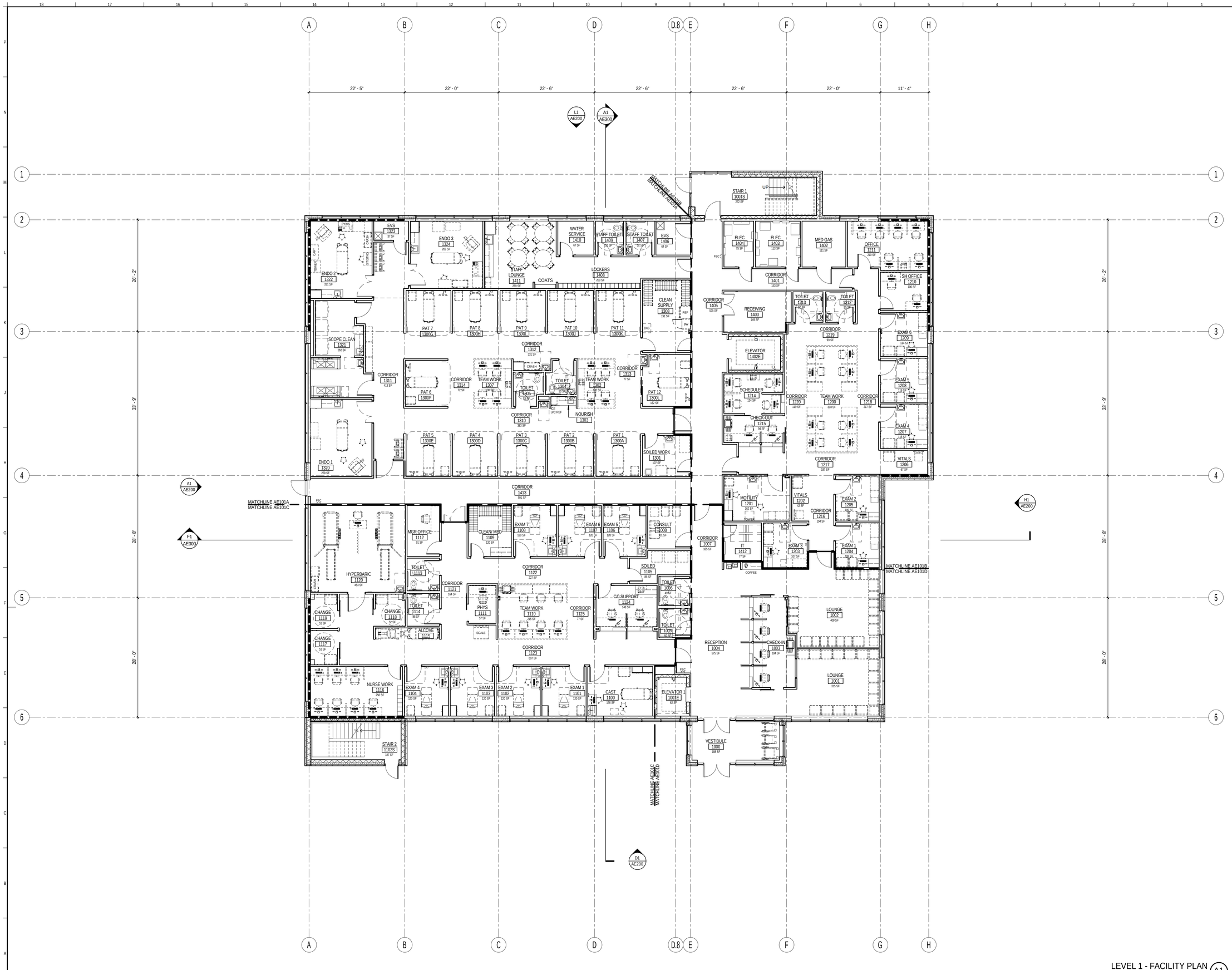
SCALE: AS NOTED

PROJECT MANAGER:	KD	PROJECT NO:	19004
A/E OF RECORD:	KD		
JOB CAPTAIN:	CAH	AE200	
DRAWN BY:	CAH		
SMRT FILE:	AE200-19004	SHEET No.	

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30x42



LEVEL 1 - FACILITY PLAN A1

1/8" = 1'-0"

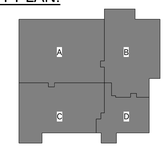
PLAN NOTES:

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LEGEND:

STRUCTURAL BRACING

KEY PLAN:



REV	DESCRIPTION	DATE

DESIGN DEVELOPMENT
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ARCHITECTURE | ENGINEERING | PLANNING | INTERIORS | ENERGY

MERCY HOSPITAL
AMBULATORY SURGERY CENTER

Portland, ME

LEVEL 1 FACILITY PLAN

SHEET TITLE:

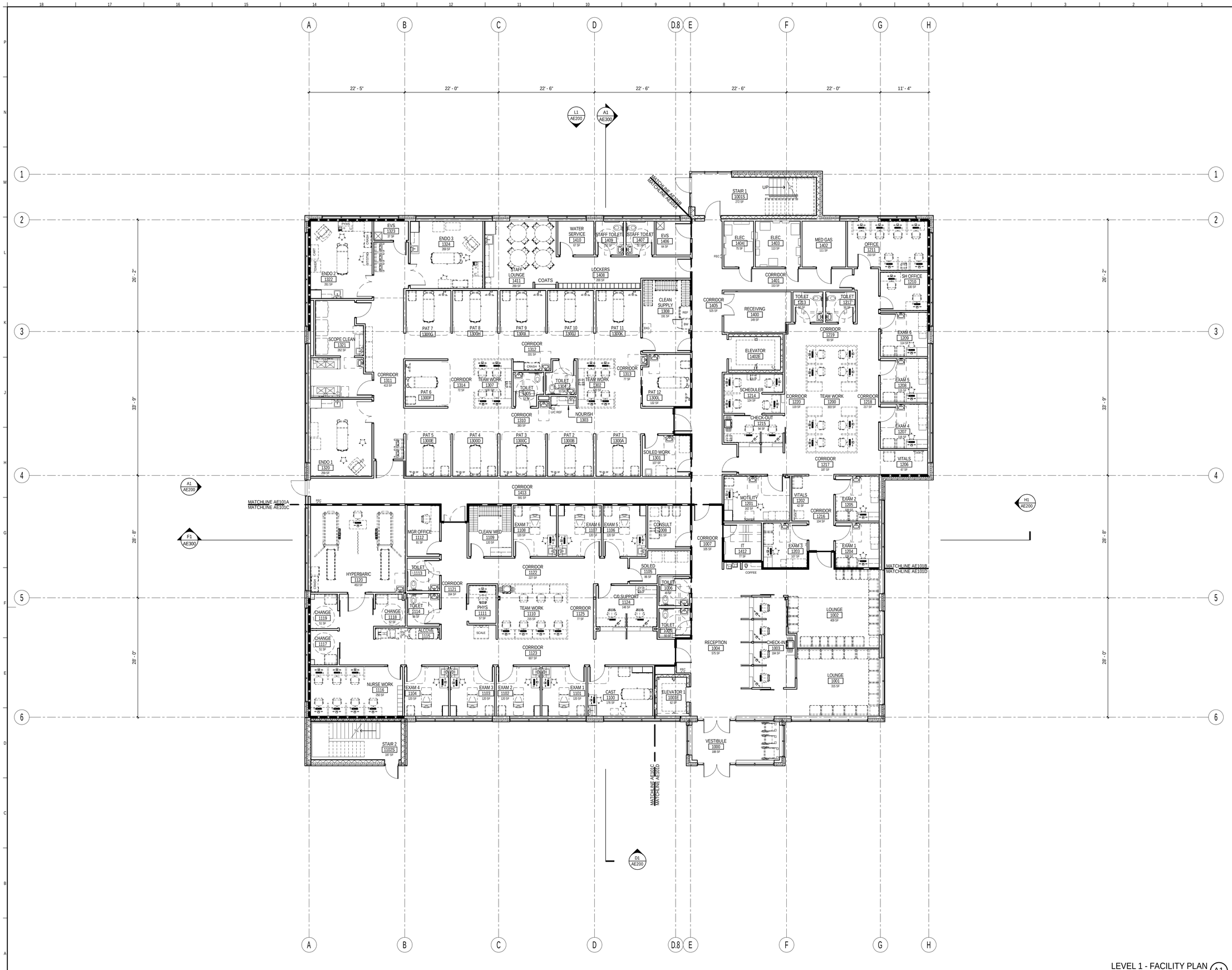
SCALE: AS NOTED

PROJECT MANAGER:	KD	PROJECT NO:	19004
A/E OF RECORD:	KD		
JOB CAPTAIN:	CAH		A-101
DRAWN BY:	CAH		
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LEVEL 1 - FACILITY PLAN A1

1/8" = 1'-0"

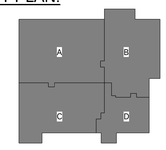
PLAN NOTES:

1. SEE G-001 FOR GENERAL PROJECT NOTES, LEGENDS AND ABBREVIATIONS.
2. SEE G-003 FOR GENERAL TOP OF WALL DETAILS AND PARTITION TYPES.
3. CONTRACTOR IS RESPONSIBLE FOR REVIEWING CODE COMPLIANCE PLANS AND NOTIFYING THE ARCHITECT OF CONFLICTS BETWEEN WHAT IS IN THE FIELD AND ON THE CODE DOCUMENTS.
4. DIMENSIONS ARE FACE OF CONCRETE, FACE OF MASONRY AND CENTERLINE OF STUD, UNLESS NOTED OTHERWISE.
5. DOOR JAMBS (HINGE SIDE) SHALL BE 6" FROM CORNER IN STUD PARTITIONS AND 0" FROM CORNER IN MASONRY PARTITIONS UNLESS NOTED OTHERWISE.
6. REFER TO DETAILS FOR ADDITIONAL DIMENSIONING INFORMATION.
7. REFER TO ENLARGED PLANS FOR PARTITION TYPES AND DIMENSIONS IN AREAS WHICH ARE DETAILED AT A LARGER SCALE.
8. FURNITURE AND OWNER PROVIDED EQUIPMENT ARE INDICATED BY DASHED LINE TYPE.
9. CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF OWNER PROVIDED EQUIPMENT INCLUDING BUT NOT LIMITED TO DIMENSIONAL INFORMATION, AND MECHANICAL, ELECTRICAL AND PLUMBING REQUIREMENTS.

LEGEND:

STRUCTURAL BRACING

KEY PLAN:



REV	DESCRIPTION	DATE

DESIGN DEVELOPMENT
7-31-2019

CURRENT ISSUE STATUS:

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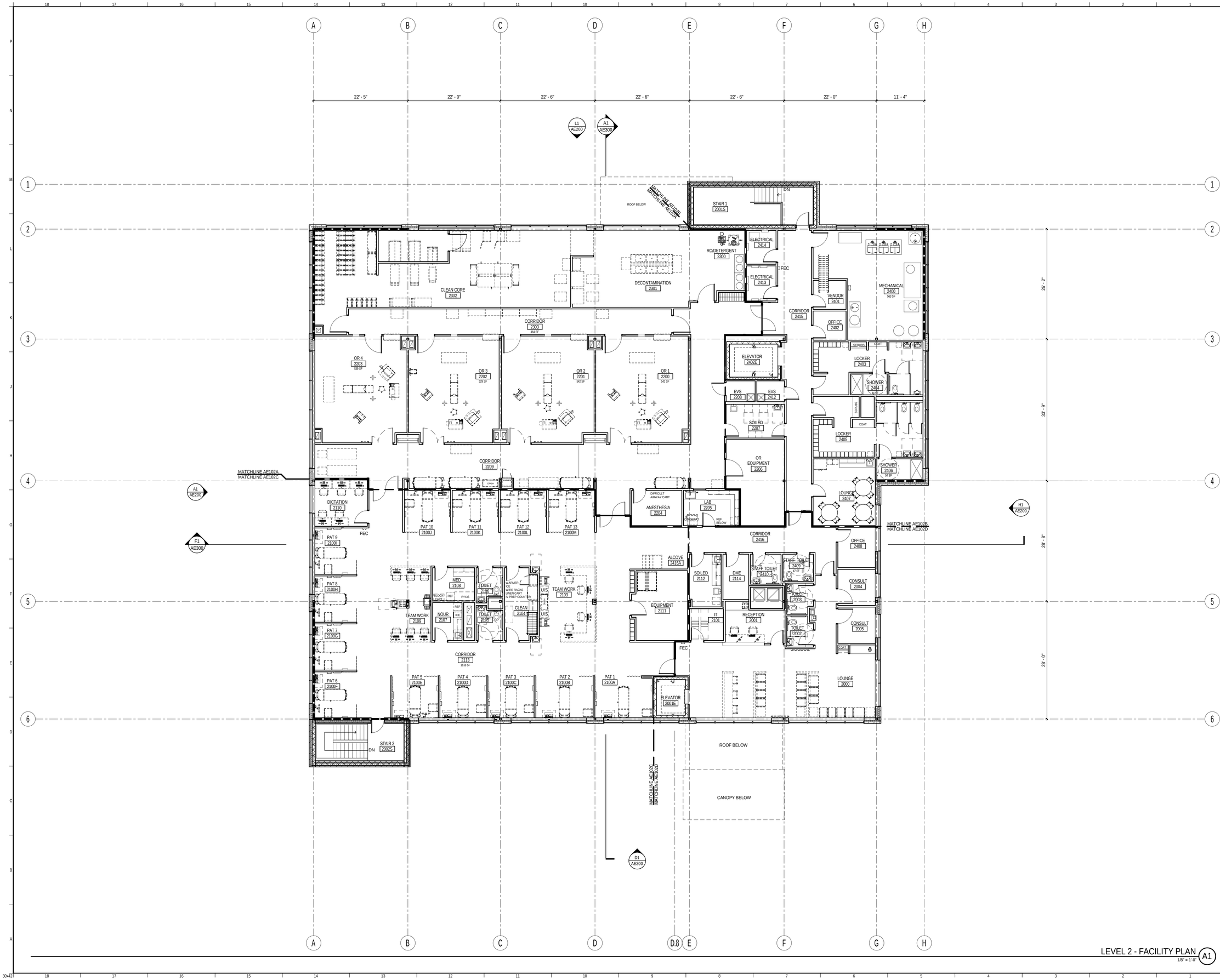
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LEVEL 2 - FACILITY PLAN A1
1/8" = 1'-0"

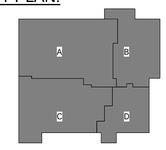
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AMBULATORY SURGERY CENTER

Portland, ME

LEVEL 2 FACILITY PLAN

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0" 1/4" 1/2" 1" 2" 3"

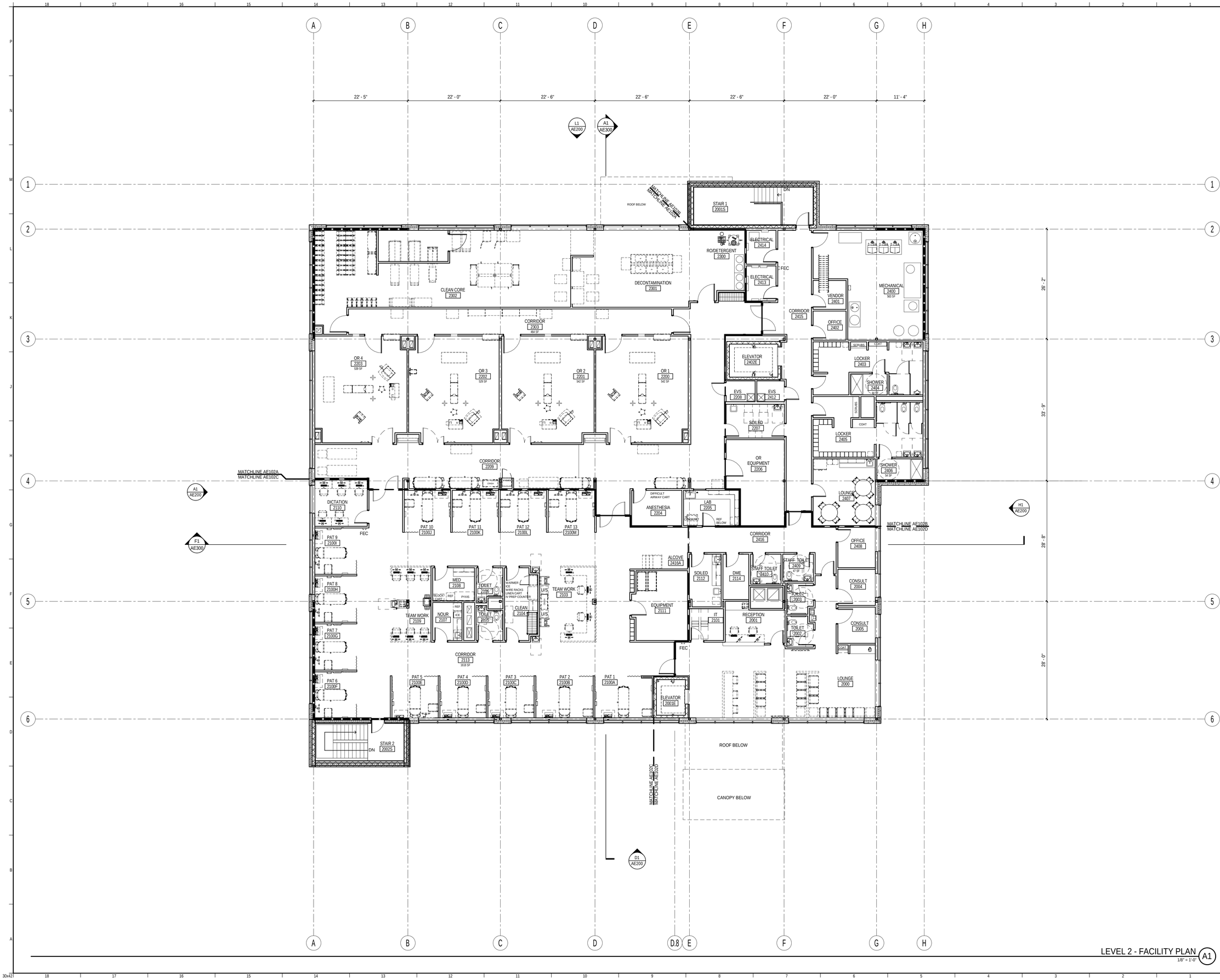
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PROJECT MANAGER:	KD	PROJECT NO:	19004
A/E OF RECORD:	KD		
JOB CAPTAIN:	CAH		A-102
DRAWN BY:	CAH		
SMRT FILE:	A-102-19004	SHEET No.	

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LEVEL 2 - FACILITY PLAN A1
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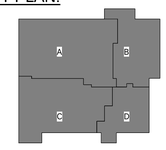
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ENVIRONMENTAL AND LANDSCAPE FEATURES

The following statements are provided in accordance with the Section 14-526 of the ordinance.

(b) Environmental Quality Standards

Preservation of Significant Natural Features (14-526 (b) 1), if applicable

- *Trees, plants, habitats listed on State or Federal list of endangered or threatened*
- *High and moderate value waterfowl and wading habitat*
- *Aquifers on Casco Bay Islands*
- *Waterbodies (including wetlands, watercourses, significant vernal pools and floodplains)*
- *Proposed preservation areas and protection measures*
- *Documentation from environmental consultants, determinations from applicable state agencies*

1. *Preservation of Significant Natural Features:*

   - In 2012, Normandeau Associates completed an onsite investigation to delineate wetlands and to identify resources that may be subject to regulatory review as part of the proposed amended development process. A copy of their wetlands report is included with the original submission material on file with the City. The wetlands were delineated according to the 1987 Corps of Engineers Wetlands Delineation Manual (Technical Report Y-87-1) as clarified in Performance Standard and Supplemental Definitions for use with the 1987 Corps Manual (August 1, 1995). This multi-parameter approach uses the characteristics of vegetation, soils and hydrology in determining wetland boundaries.

     The existing site was historically used as a railyard, a construction staging site, a materials stockyard and a borrow pit among other land uses. Since Mercy's acquisition and development of the Phase 1 Hospital, the site has undergone significant change and aesthetic improvement. The former borrow pit has largely reverted to a naturalized condition with pond features that have supported wildlife habitat and aesthetic appeal over time. However, Mercy has sought and has been granted approval by the MDEP and USACOE to fill in the former borrow pit entirely to achieve their proposed long-term development goals. Thus, this part of the site will be altered as part of the current development proposal. Other important site areas include the waterfront zones associated with the existing northern and southern open spaces that will remain place. The northern open space contains 3.32 acres of open area that contains a shorefront pedestrian path and several seating areas overlooking the Fore River. This open space is access from the Fore River Parkway Trail and is open to the public. The southern open space, located just south of the Veterans Bridge contains 0.99 acres also overlooking the Fore River.

     The current MDEP and USACOE permits authorize Mercy's intentions to fill the previously existing gravel pit area for the proposed development activity. As the current plans do involve changes to the development plan previously approved, Mercy will be filing a project amendment with each agency and these applications are expected to be reviewed concurrently with the Site plan application to the City.

- The does not contain any population of trees or plants that are on the official list of endangered and threatened plans in Maine. Nor does the site contain any habitat for endangered or threatened species, high or moderate value waterfowl and wading bird habitat or significant wetlands or vernal pools.

Landscaping and Landscape Preservation (14-526 (b) 2 a)

- *Preservation of trees and preservation within required zoning setbacks (Technical Manual, Section 4)*
- *Protection measures of existing vegetation during construction*
- *Protection measures within Shoreland Zone, if applicable*

2. Landscaping and Landscape Prevention:

a. Landscape Preservation.

(i) The existing tree coverage within the basin area will be largely removed to allow for filling of the pond. A very limited number of larger trees at the very top of the basin perimeter may be retained when possible, however trees along the embankments and in the pond will be removed. A number of trees and shrubs will be removed around the parking lot within which the hospital expansion will be constructed. The majority of the site will remain unchanged with the now well-established vegetation that was planted in 2008 now coming to maturity and providing a well screened and aesthetically appealing site, particularly for the Portland Peninsula.

(ii) Not applicable.

(iii) There is no specific vegetation protection required on the site.

(iv) The Applicant will request a waiver from this standard.

(v) Not applicable.

Landscaping and Landscape Preservation (14-526 (b) 2 b i)

a. Screening and buffering of service areas and between non-residential and residential uses
b. Planting plans with plant schedule and sizes

2. Landscaping and Landscape Prevention:

b. Site Landscaping:

(i) Landscaped Buffers:

(a) There is an existing loading area at the rear of the existing hospital and this area will remain open. All trash collection will be within a secure area at the rear of the hospital at ground level and is relatively screened from view simply by topography.

(b) The site is fully landscaped and contains significant tree screening along all sides.

(c) Not applicable.

(d) Not applicable.

Landscaping and Landscape Preservation (14-526 (b) 2 b ii)

Parking Lot Landscaping, if applicable

- *Landscaped islands within parking areas (Technical Manual, Section 4)*

2. Landscaping and Landscape Preservation:

a. Site Landscaping.

(ii) Parking Lot Landscaping:

a) thru d) The proposed parking lots will contain landscaping that is consistent with the existing parking lots on the campus. This landscaping is maintained in a well-manicured manner and is considered exemplary for the Portland peninsula.

Street Trees (14-526 (b) 2 b iii)

- *Existing Heritage or Feature Trees on site and measures to preserve*
- *Identify street trees on the plan meeting the site plan and Technical Manual standards (Section 4) or identify alternative measures, if applicable*

2. Landscaping and Landscape Preservation:

b. Site Landscaping.

(iii) Street Trees:

(a) The Fore River Parkway contains a large number of trees along the waterfront side of the road, between the Parkway Trail and the road. Along the Mercy frontage there are a substantial number of existing trees and shrubs between the north parking lot and the Parkway. There is a maintained lawn area along the site frontage between the two site driveways and more trees and shrubs somewhat interior to the site. The south parking lot contains significant tree and shrub plantings that meet or exceed the City standards including street trees that extend up to the Veterans intersection. The landscape architect will coordinate plantings with the City arborist.

PUBLIC INFRASTRUCTURE AND SAFETY

The following statements are provided in accordance with the submission and Section 14-526 of the ordinance.

(c) Public Infrastructure and Community Safety Standards.

Consistency with City Master Plans (14-526 (c) 1)

- *Identify consistency with master plans*
- *Proposed easements, rights and improvements to connect or continue off-premises public infrastructure, as applicable*

1. *Consistency with City Master Plans:*

    a. The project has been designed to be consistent with the Contract Zoning agreement and off-site infrastructure plans. The site is uniquely placed along the Fore River Parkway and in the 11 years since the Phase 1 Hospital opened, the campus has operated efficiently and without issue with respect to the surrounding land uses, access conditions and overall city peninsula planning. The Mercy site continues to represent a welcoming view for the traveling public on the I-295 and Veteran's Bridge roadways and Mercy continues to offer health care delivery services that are much needed within the community.

    b. Various easements will remain in place for public infrastructure including water supply, power, and sanitary sewer among others. These will remain in place and unchanged. Public access to the north and south open spaces also remains unchanged because of the Phase II activity.

Public Safety and Fire Prevention (14-526 (c) 2)

- *Address Crime Prevention through Environmental Design (CPTED) (Technical Manual, Section 3)*
- *Emergency vehicle access*
- *Address consistency with public safety standards (Technical Manual, Section 3)*
- *Submit a code summary referring NFPA 1 and all Fire Department standards (Technical Manual, Section 3) – Fire Checklist*

2. *Public Safety and Fire Prevention:*

    a. The site has been designed to promote a safe and welcoming environment. Mercy does maintain security on the campus including building entry controls, restricted parking areas, and camera surveillance.

    b. The site provides access from Fore River Parkway for emergency vehicles. A secondary emergency access from County Way also is provided, although it is gated and is available for emergency use only.

    c. Fire hydrants are located throughout the property. The buildings are fully sprinklered. A summary letter to Division Chief Thompson is included at the end of this section.

Availability and Adequacy of Public Utilities (14-526 (c) 3) (Technical Manual, Sections 2 & 9)

- *Electrical services, including providing underground services*
- *Identify existing and proposed connections for public utilities and required public utility upgrades*
- *Sewer line connections are required, if there is a main within 200 feet*
- *Proposed solid waste management facilities on-site and management for the site*
- *Written evidence of the ability to serve from utility companies, as applicable*

a. The Applicant is securing letters from the applicable utilities stating their ability to continue to serve the site. The project will require new electrical, gas, sewer, and water services to the ambulatory surgical center, while the hospital expansion will rely on the existing hospital interior utilities.

b. All new electrical services to the ASC site will be underground.

c. All new utility infrastructures from the existing facilities will meet the provisions of the Technical Manual. The ASC will be served by new fire and domestic mains off the PWD 12" water main located on the site. The ASC sewer will connect to the existing Fore River Interceptor sewer located along the rear property line. Power will be from the existing underground primary distribution system that CMP maintains on the property.

d. The project will utilize a new ASC service connection to the public sewer system within the Fore River Interceptor located along the site's rear property line.

e. All new sewer and stormwater infrastructure will meet City standards. Backflow prevention in accordance with PWD standards will be provided in the ASC.

f. A solid waste collection and storage area will be provided with adequate capacity for the needs of the ASC development. Mercy maintains their existing solid waste collection equipment at the rear of the existing hospital where it will remain upon completion of the Phase II expansion.

Ability to serve letters will be forwarded to the planning office upon receipt.

GENERAL APPLICATION DOCUMENT

WAIVER REQUESTS

The Accompanying Waiver Table provides a description of the applicable waiver requests and supporting evidence for these requests.

Standard to be Waived: Cite Ordinance or Technical Manual Standard	**Cite Standard Language:** Cite specific language of applicable Ordinance or Technical Manual Standard	**Waiver Being Sought:** Describe waiver being sought. Ex. – We are requesting a two-way parking lot drive aisle width of 20'.	**Justification for Waiver:** Address specific waiver criteria, if applicable, and document reasons for the waiver request.
Technical Standards – Section 5. Portland Stormwater Management Standards and MaineDEP Chapter 500 Stormwater Management	*Flooding Standards: : Subcatchment plans with flow paths, full hydrology computations/model output of pre- and post-development conditions, summary of pre- and post-development flowrates, and a written request for waiver with rationale for waiver as noted in Section 5.II.F. (as applicable)*	The applicant is requesting a waiver for the flooding standard requirements.	The project will discharge stormwater runoff to existing drainage systems that will discharge directly to the Fore River which is a tidal waterbody. Mercy has previously requested and been granted, a waiver of the flooding standards under both the State and Local stormwater rules.
Technical Standards – Transportation Standards – Sidewalks (14-526 (a) 2 c)	*(i) All proposed developments shall provide sidewalks along all frontages in accordance with Sections 14-498 and 14- 499 of the City Code, installed to City specifications as described in Section 1 of the Technical Manual. An applicant may request a waiver from curb and sidewalk installation requirements if they meet applicable waiver criteria listed in Section 14-506 (b) of the City Code.*	The applicant is requesting a waiver to provide curb and sidewalk from the southerly driveway to the north end of the property, as there is no curb in the area today and no drainage systems.	There is no sidewalk in existence or expected within 1000 feet and the construction of sidewalks does not contribute to the development of a pedestrian oriented infrastructure.
Technical Standards – Transportation Standards –Bicycle Parking (14-526 (a) 4 b)	*(b) Non-residential structures. Two (2) bicycle parking spaces for every ten (10) vehicle parking spaces for the first one hundred (100) required vehicle parking spaces, plus one (1) bicycle parking space for every twenty (20) required motor vehicle parking space over one hundred (100) required vehicle parking spaces.*	The applicant is requesting a waiver of the required number of bicycle parking spaces as that would exceed well over 50 bike spaces which is considered excessive for the Hospital use.	The proposed development is expected to generate a reduced demand for bicycle parking due to the service they provide.

GENERAL APPLICATON DOCUMENT

FINANCIAL CAPACITY

The Applicant has adequate financial resources to undertake this project as evidenced by the approved Certificate of Need notification issued by the Maine Department of Health and Human Services on April 17, 2019, a copy of which is attached. The following excerpt of the CON Unit response from DHHS outlines their findings:

> *"Based on the review of the applicant's financial projections and financial performance indicators, CONU believes the underlying assumptions regarding future performance are reasonable. Since Northern Light Health and the hospital members of the obligated group are jointly and severally obligated on the system's bonded indebtedness, CONU reviewed Eastern main Healthcare Systems (Now Norther Light) 2018 and 2017 consolidated financial statements and believes the sufficient financial resources exist to assist Mercy if financial projections are not realized. Due to Mercy's campaign and the proposed sale of the State Street facility additional debt has been minimized. CONU believes that the project is necessary Operating two campuses is simply not financially sustainable in the long term. Since the ability of the applicant to support the project financially over its useful life is heavily dependent on both inpatient and outpatient volume CONU is including the following condition:*
>
> **Condition:** *The applicant is to report inpatient discharge volume and outpatient encounter volume on an annual basis, within 90 days of its fiscal end, beginning with the time period when the Certificate of need was approved until a full three years have elapsed since the date of project completion."*

The estimated full cost of the project is $74.7 million; the certificate of need applicable capital cost is $63.1 million. Campus consolidation will reduce Mercy's current operating expenses by a net of $1.2 million annually following full implementation.

GENERAL APPLICATION DOCUMENT

TECHNICAL CAPABILITY

The applicant has retained a highly qualified team of professionals to undertake planning, permitting and design tasks on this project. Services will be provided by the following companies and their respective team leaders:

Civil Engineer	Stephen Bushey, P.E. Gorrill-Palmer Consulting Engineers 707 Sable Oaks Drive South Portland, Maine 04106 (207) 772-2515 – Work sbushey@gorrillpalmer.com
Architect	SMRT Architects and Engineers 144 Fore Street Ste A Portland, Maine 04101 (207) 772-3846 Attn: Kristen Damuth, AIA, CSI KDamuth@smrtinc.com
Surveyor	Randy Loubier Owen Haskell, Inc. 390 US Route 1, Unit 10 Falmouth, ME 04105 (207) 774-0424 – Work (207) 774-0511 – Fax rloubier@ownehaskell.com
Traffic Engineer	Randy Dunton, P.E. Gorrill-Palmer Consulting Engineers 707 Sable Oaks Drive South Portland, Maine 04106 (207) 772-2515 – Work rdunton@gorrillpalmer.com
Geotechnical Consultant	Bryan Steinert, P.E. Haley & Aldrich, Inc. 75 Washington Ave, Ste 1A Portland, Maine 04101 (207)482-4600 BSteinert@haleyaldrich.com
Mercy Facilities	Nick Munro – Facility Project Manager Northern Light Healthcare 43 Witing Hill Road Brewer, ME 04412 (207)553-6633 nmunro@northernlight.org

The team of consultants retained has expertise and experience in the design of similar institutional projects. Resumes of key personnel for development team can be provided upon request.

TRANSPORTATION

The following statements are provided in accordance with the Section 14-526 of the ordinance.

TRANSPORTATION

(a) Transportation Standards

Transportation Analysis – Traffic Impact (14-526 (a) 1)

- *Provisions for pedestrian, bicycle, vehicle, and loading circulation and incremental volume of traffic impacts*
- *Traffic Impact Study (Technical Manual, Section 1) if applicable*

1. *Impact on Surrounding Street Systems:*

   The surrounding street system consists of the Fore River Parkway and the I-295 Interchange to the west and the Veterans Bridge Intersection to the East. The proposed use is considered consistent with the zoning and objectives identified in various City reports; therefore, we believe it results in no significant impact to the surrounding street system. There will continue to be two primary driveways into the site from the Fore River Parkway and each will have sight distance in each direction exceeding 200 feet. The easterly signalized driveway provides primary access from points east of the site, including South Portland, Cape Elizabeth, Scarborough, and the Portland Waterfront. The westerly, unsignalized driveway provides for access from points north and west including from I-295, Portland, Falmouth, Westbrook, etc. The westerly driveway restricts exiting movements to right turns out only. These existing driveways will continue to operate at an acceptable level of service upon the completion of the Phase 2 Hospital relocation, based on the relatively low traffic volumes on the Fore River Parkway and considering the design volumes originally contemplated for that roadway. Gorrill Palmer is currently completing a driveway analysis to evaluate the operating conditions at each driveway and will be providing this for City review under a subsequent submission.

2. *Traffic Impact Study*

   A Traffic Assessment is underway by Gorrill Palmer and this assessment will include trip generation and accident information for the site and surrounding area. The Mercy site was originally approved for a Traffic Movement Permit in 2002 (Div. 06-00035-A-N) and it was permitted for 784 am and 687 pm peak hour trips during the adjacent street peak hours and 990 PM peak hour trips of the generator.

   Gorrill Palmer conducted turning movement counts in January 2017. Adjusting the counts for seasonal factors the actual trip generation is approximately 238 trips in the AM and 237 Trips in the PM peak hours. Thus, the site is well below the permitted trip generation leaving a significant credit for additional trip generation to apply to the proposed expansion and the proposed Ambulatory Surgical Center. The traffic assessment to be completed by Gorrill Palmer will discuss this information and findings in greater detail.

   Any further traffic assessment is subject to the City's peer review.

Access and Circulation (14-526 (a) 2 a)

- *Access and internal circulation, addressing ADA access*
- *Access and egress impacts on traffic flows*
- *Description and use of drive-up features, if applicable*

3. Access and Circulation:

a. Site Access and Circulation.

(i) Vehicular access to the site remains unchanged and includes two primary driveways off the Fore River Parkway. A 24' wide paved loop drive around the site perimeter provides clear and safe access to the interior parking lots. Directional and traffic control signage has been in place and helps provide direction to patients/visitors and also controls onsite speed and circulation. The proposed hospital expansion will involve a dedicated drive off the perimeter loop road and parking for ER visitors/patients as well as for ambulance services. Mercy is currently working on an updated wayfinding sign package to replace the existing signs as part of a Mercy rebranding effort, now that they are part of the Northern Light Health family.

(ii) We believe the primary points of access will not conflict with any existing turning movements on the Parkway or within the internal circulation drives as well as avoid conflict with any of the existing traffic flow on nearby streets.

(iii) Not applicable as there are no drive through features proposed.

Loading and Servicing (14-526 (a) 2 b)

- *Loading and servicing needs, route and travel way geometrics for deliveries*
- *Turning templates for delivery vehicles, if applicable*

2. Access and Circulation:

b. Loading and Servicing:

(i) Adequate provisions are made at the site for periodic loading from various size trucks to service the Hospital and ASC. There are existing unloading facilities including multiple dock spaces to accommodate Hospital truck traffic at the rear of the existing hospital building. Larger delivery vehicle access is not required for the new hospital building, although ambulance traffic has been accommodated to the ER entrances. The ASC building will have a small loading area at the rear of that building. Given the site's proximity to I-295 and the Veteran's Bridge, the overall accessibility for loading and servicing to the property is considered excellent.

Sidewalks (14-526 (a) 2 c)

- *Sidewalks and condition along street frontages and internal walkways*
- *Engineered details for ADA ramps and public sidewalk details meeting sidewalk materials policy and ADA ramp construction details as applicable (Technical Manual, Section 1)*

2. Access and Circulation:

c. Sidewalks:

(i) The existing site has sidewalks throughout for complete access around the property. There is a pedestrian crossing signal at the southerly driveway on the Parkway which connect pedestrians to the Fore River Parkway Trail and to points north and south i.e. Veterans Bridge and Congress Street. The Parkway was not constructed with a sidewalk along the site frontage except between the southerly driveway and the Veteran's Bridge Intersection. The applicant is requesting a waiver to provide curb and sidewalk from the southerly driveway to the north end of the property, as there is no curb in the area today and no drainage systems.

Public Transit (14-526 (a) 3), if applicable

- *Existing available transit services*
- *Proposed site plan design details, such as easement, pad base, and shelter*

3. Public Transit Access.

a. The Fore River Campus is currently served by METRO bus service along the METRO #1 Congress Street route. The Bus service routes through the south entrance off the Fore River Parkway and stops for drop off/pick up at an existing bus shelter adjacent the Medical office Building. The bus exits the north driveway and proceeds to Congress Street.

b. There is an existing METRO stop and shelter located on the site adjacent the existing Medical Office building.

c. The existing bus stop is on the existing sidewalk system that connects the buildings as well as to the Fore River Parkway sidewalk system.

Off-Street Parking: Vehicle & Motorcycle/Scooter (14-526 (a) 4 a and c)

- *Expected parking demand, proposed parking supply, ADA parking, and applicable Zoning Requirements*
- *Address Technical Manual standards (Section 1) for curb cut separation and parking lot layout and locate on site plan*

4. Parking.
a. Location and Required Number of Vehicle Parking Spaces.
c. Motorcycles and Scooter Parking.

i. Gorrill Palmer has conducted a parking study on the campus. In January 2017, GP conducted a parking inventory across the campus to determine the parking supply and demand conditions. There are currently 762 spaces on the campus. At the time of the parking counts, GP determined a peak demand to be approximately 525 spaces, thus leaving a substantial volume of available parking.

The ordinance requirements for onsite parking are as follows:

Land Use	Area (SF)	Ordinance Requirement	Spaces Required
Existing Hospital	138,099	1 sp/500 SF	276
Existing MOB	82,186	1 sp/400 SF	205
Proposed Hospital Expansion	54,889	1 sp/500 SF	110
Ambulatory Surgical Center	34,987	1 sp/400 SF	88
		Total	**679**

Upon completion of the proposed expansion and ASC, the total onsite parking supply will be 858 parking spaces which exceeds the ordinance requirements. On the basis of the parking demand study performed by Gorrill Palmer, we believe there will continue to be more than adequate onsite parking available for the proposed Hospital expansion and ASC.

ii. Mercy provided a Transportation Demand Management Plan as part of the original Site plan process in 2006 and they continue to provide oversight of their TDM initiatives. An update to the TDM plan is currently underway and it will be submitted for review upon completion.

iii. Please see above.

iv. Parking aisles and dimensions on the existing parking lots meet the applicable standards. All new parking areas will continue to meet similar standards.

v. All new surface parking shall be paved.

The site plan has been developed to allow safe passage and parking for motorcycles and scooters within the surface parking lots.

Bicycle Parking (14-526 (a) 4 b)

- *Address bicycle parking requirements and identify locations on-site*
- *Construction details for bike racks (Technical Manual, Section 1)*

4. Parking.

b. Location and Required Number of Bicycle Parking Spaces.

The hospital currently provides several bike rack locations on the campus that satisfy the demand for bike parking. There is an existing rack at the north end of the existing hospital that will need to be relocated due to the expansion and the relocation is identified on the site plan. A second rack is located at the employee ground level entrance at the south end of the existing



Existing Bike Rack at North End of Hospital

hospital. This rack will remain in place. New bike racks will be provided at the ASC entrance area as identified on the site plan.

The applicant is requesting a waiver of the required number of bicycle parking spaces as that would exceed well over 50 bike spaces which is considered excessive for the Hospital use.



Existing Bike Rack at North End of Hospital

Snow Storage (14-526 (a) 4 d)

- *Management plan for snow removal and locate snow storage areas on plans*

4. Parking.

d. Snow Storage.

i. The Hospital campus includes a snow dump at the far south end of the site. Snow removal on the site will continue to be managed by contracted services and snow will be plowed and moved to this stockpile area in accordance with previously approved MDEP standards and requirements.

ii. The hospital provides snow removal on the pedestrian walks across the campus and removes snow to avoid displacement of any onsite parking.

Traffic Demand Management (TDM) (14-526 (a) 5), if applicable

- *Develop TDM with Trip Reduction Targets and Strategies*

5. Transportation Demand Management (TDM).

a. A Transportation Demand Management (TDM) Plan will be prepared and submitted for Planning review within the upcoming application review period. Mercy Hospital is currently reviewing and updating the original TDM plan associated with the Phase 1 development.

GORRILL PALMER

707 Sable Oaks Drive, Suite 30
South Portland, Maine 04106
207.772.2515

Response to City (Peer Review) Request for Additional Information
Mercy Hospital Phase II Expansion – Portland, Maine
JN 3257.04

Date: November 14, 2019
Subject: Response to City's Peer Review Request for Additional Information
Mercy Hospital Phase II Expansion
To: Nick Munro, Northern Light Health
From: Randy Dunton, Gorrill Palmer

GP had submitted a Parking and Driveway Mitigation Evaluation for this project dated September 10, 2019. Mr. Errico requested additional information to supplement that submittal in an email dated October 24, 2019. For ease of review, we have repeated Mr. Errico's **requests** followed by our *response shown in italics*:

Request: The parking inventory for the site should be expanded to 6pm. The data presented indicates a peak parking demand at 2pm (the end of the survey). We would like to confirm that parking demand does not increase after 2pm. A graphic shall be provided that generally depicts the location of available spaces.

Response: To confirm the peak parking demand, additional occupancy counts were completed on Wednesday November 6, 2019 from 1:00 PM to 6:00 PM. The Lot numbers are consistent with the previous submittal. The following table summarizes that count data.

November 6, 2019 Parking Occupancy Count

Lot	*Total Number of Spaces Available*	*Number of Parked Vehicles*					
		1:00 PM	*2:00 PM*	*3:00 PM*	*4:00 PM*	*5:00 PM*	*6:00 PM*
1	*34*	*23*	*22*	*16*	*15*	*9*	*8*
2	*50*	*45*	*48*	*47*	*37*	*13*	*6*
3	*101*	*54*	*55*	*49*	*48*	*14*	*4*
4	*162*	*100*	*111*	*108*	*87*	*50*	*32*
5	*105*	*57*	*52*	*58*	*54*	*36*	*31*
6	*310*	*216*	*205*	*176*	*119*	*61*	*37*
Total	***762***	***495***	***493***	***454***	***360***	***183***	***118***

As can be seen from the above table, the peak parking demand of 495 spaces is less than the 514 spaces identified in the September 10, 2019 evaluation as the peak. It should be noted, that to be conservative, GP had increased the 514 spaces in the last submittal up to 525 spaces.

Request: For comparison purposes, parking demand estimates using the Parking Generation Manual, ITE, 5th edition shall be provided.

Response: The below compares the parking demand rate based on actual counts completed on site, the City Ordinance, and the ITE Parking Generation Manual, 5th Edition using Land Use Code 610 – Hospital and Land Use Code 720 – Medical-Dental Office Building.

Parking Rates (per 1,000 spaces)

	Based on Counts	*Ordinance*	*ITE*
Hospital	*2.54*	*2.0*	*2.25*
Medical Office Building	*2.13*	*2.5*	*3.23*

As seen from the above summary, the actual parking demand rate for the hospital is nearer the ITE than to the Ordinance and the MOB rate is much closer to the Ordinance than to the ITE.

Request: A pedestrian facilities/routing graphic for the entire site shall be provided with anticipated origin-destination patterns to and from each parking area.

Response:

See attached diagram.

Request: The Parking and Driveway Mitigation Evaluation report posted in ePlan does not include the noted Figures. Those should be uploaded. I would also suggest that printouts of the SimTraffic Model results be provided.

Response: To address this request, GP completed turning movement counts on Wednesday, November 6, 2019 at the two site driveways on Fore River Parkway from 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM. Wednesdays were identified by the Hospital as being their busiest day. The results of the counts are shown on the attached Figure 2. Similar to the previous submittal, the raw volumes were seasonally and annually adjusted, other development was added, and the proposed development was added to arrive at the postdevelopment traffic volumes shown on the attached Figure 7.

Capacity analysis was completed similar to the previous submittal and the computer printouts are attached. A summary of the results of the capacity analysis is provided in the following summary table.

Level of Service Summary

Approach	Level of Service			
	AM Pre	AM Post	PM Pre	PM Post
Fore River / North Driveway (unsignalized)				
Driveway WB	A	A	A	A
Fore River NB	A	A	A	A
Fore River SB	A	A	A	A
Fore River / South Driveway (signalized)				
Driveway WB	B	B	A	B
Fore River NB	A	A	A	A
Fore River SB	A	A	A	A
Overall	**A**	**A**	**A**	**A**

As shown in the table, the two site driveways are forecast to operate at high levels of service both before and after the campus expansion is completed. This is consistent with the results in the September 10, 2019 evaluations submitted to the City.

Request: In conjunction with site plan standards (see below) a traffic safety study shall be conducted at the High Crash Location (HCL) of Fore River Parkway and Congress Street.

Response: Per request, GP requested and received the latest collision diagram from the MaineDOT (attached) for the high crash location. Based on a review of that collision diagram, there are five patterns:

- *Congress Street Eastbound rear-end (12 crashes)*
- *I-295 southbound off-ramp rear-end (11 crashes)*
- *Congress Street eastbound through traffic angle crash with left turns from Fore River Parkway (3 crashes)*
- *Congress Street eastbound through traffic angle crash with southbound left turns onto Fore River Parkway (4 crashes)*
- *Right turns off Fore River Parkway onto eastbound Congress Street. (4 crashes)*

We offer the following for consideration:

- *The referenced site plan standards indicate the adjacent street. In our opinion, the Fore River Parkway / Congress Street intersection would not fall into that category given the significant I-295 ramps between the hospital and this intersection.*

- *This intersection is included in an existing MaineDOT / City corridor study to coordinate traffic signals from the intersection with Stevens Avenue to this intersection. That study will revise the timing and phasing of this intersection, which would be expected to address and change the existing crash patterns.*

UNION STATION PLAZA

MMC PARKING GARAGE (UNDER CONSTRUCTION 2019)

FERGUSON SUPPLY

EXISTING PERIMETER ACCESS ROAD

PAN AM RAILWAY

TYSON FOODS

COUNTY WAY

CUMBERLAND COUNTY JAIL

STAFF PARKING

PHASE 2 PROPOSED ASC BUILDING FOOTPRINT 17,574 GSF TOTAL AREA 34,987 GSF

PATIENT / VISITOR PARKING

PATIENT / VISITOR PARKING

PHASE 2 HOSPITAL EXPANSION FOOTPRINT 20,140 GSF TOTAL AREA 54,889 GSF

PATIENT / VISITOR PARKING

PHASE 1 EXISTING MERCY HOSPITAL 4 STORY BRICK BUILDING FOOTPRINT - 37,566 GSF TOTAL AREA - 138,099 GSF

PHASE 1 EXISTING MEDICAL OFFICE BUILDING 1 STORY BRICK FOOTPRINT - 20,047 GSF TOTAL AREA - 62,186 GSF

STAFF / PATIENT PARKING

STAFF PARKING

MAINTENANCE FACILITY

EXISTING SNOW STORAGE FACILITY

SOUTH OPEN SPACE

FORE RIVER TRAIL

EX. FORE RIVER TRAIL - 10' WIDE, SHARED USE

FORE RIVER MUD FLATS

FORE RIVER

FORE RIVER MUD FLATS

VETERANS MEMORIAL BRIDGE (FORE RIVER) U.S. ROUTE ONE

NORTH OPEN SPACE

FUTURE PEDESTRIAN CONNECTION

TYPICAL STAFF / PEDESTRIAN ACCESS ROUTE TO / FROM PARKING TO BUILDINGS

TYPICAL ACCESS ROUTES TO OPEN SPACE

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.

NORTH

GRAPHIC SCALE

75 0 37.5 75 150

(IN FEET)
1 inch = 75 ft.

STATE OF MAINE
STEPHEN R. BUSHEY
11.04.19
LICENSED PROFESSIONAL ENGINEER

STEPHEN R. BUSHEY, P.E.
LIC. #7429

Rev.	Date	Revision
1	11.04.19	PREPARED FOR L.O.R. #1 & SUBMITTED TO CITY

Issued For	Date	By
PERMIT APPROVAL SUBMISSION	08.30.19	SRB
DESIGN DEVELOPMENT SUBMISSION TO OWNER	07.31.19	SRB

Design: SRB	Draft: CDD	Date: AUG. 2019
Checked: SRB	Scale: NTS	Job No.: 3257.04
File Name: 325704-MASTER PLAN.dwg		

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Drawing Name: Master Plan – Pedestrian Access Routes

Project: Fore River Campus Consolidation
Portland, Maine

Client: Northern Light Mercy Hospital
144 State Street, Portland, Maine 04101

Drawing No. FIG. 5

U:\3257.04_Mercy Hospital_Expansion_DD_Permits\STANTEC\civil\cadd\permit\dwg\325704-MASTER PLAN.dwg 11/4/2019 4:12 PM

Site Location

Figure No. 1



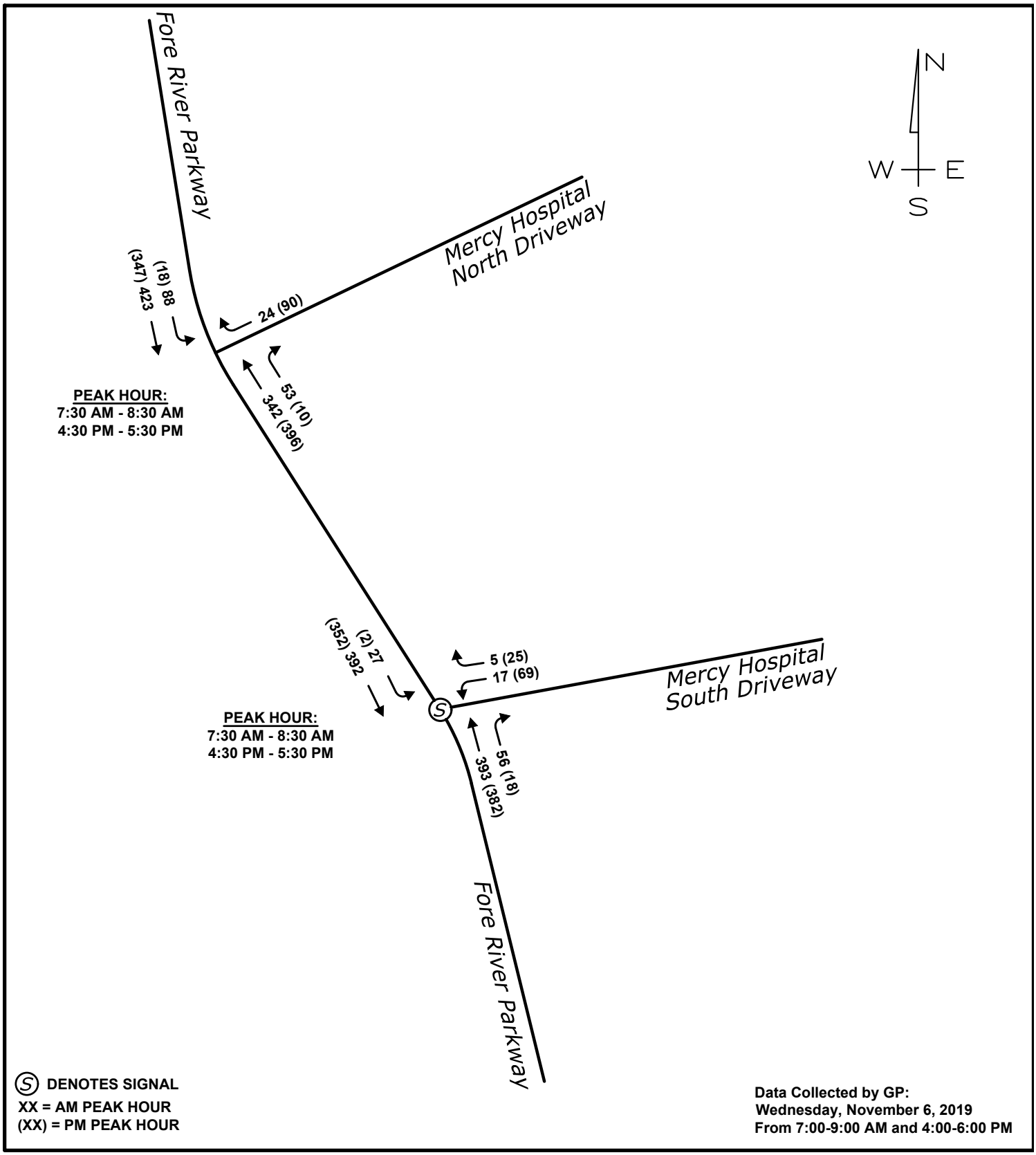
MERCY HOSPITAL
PORTLAND, MAINE

Design:	TPG	Scale:	NONE
Draft:	TPG	Date:	11/6/2019
Checked:	RED	File Name:	Figure Set.dwg

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Raw Volumes

Figure No. 2



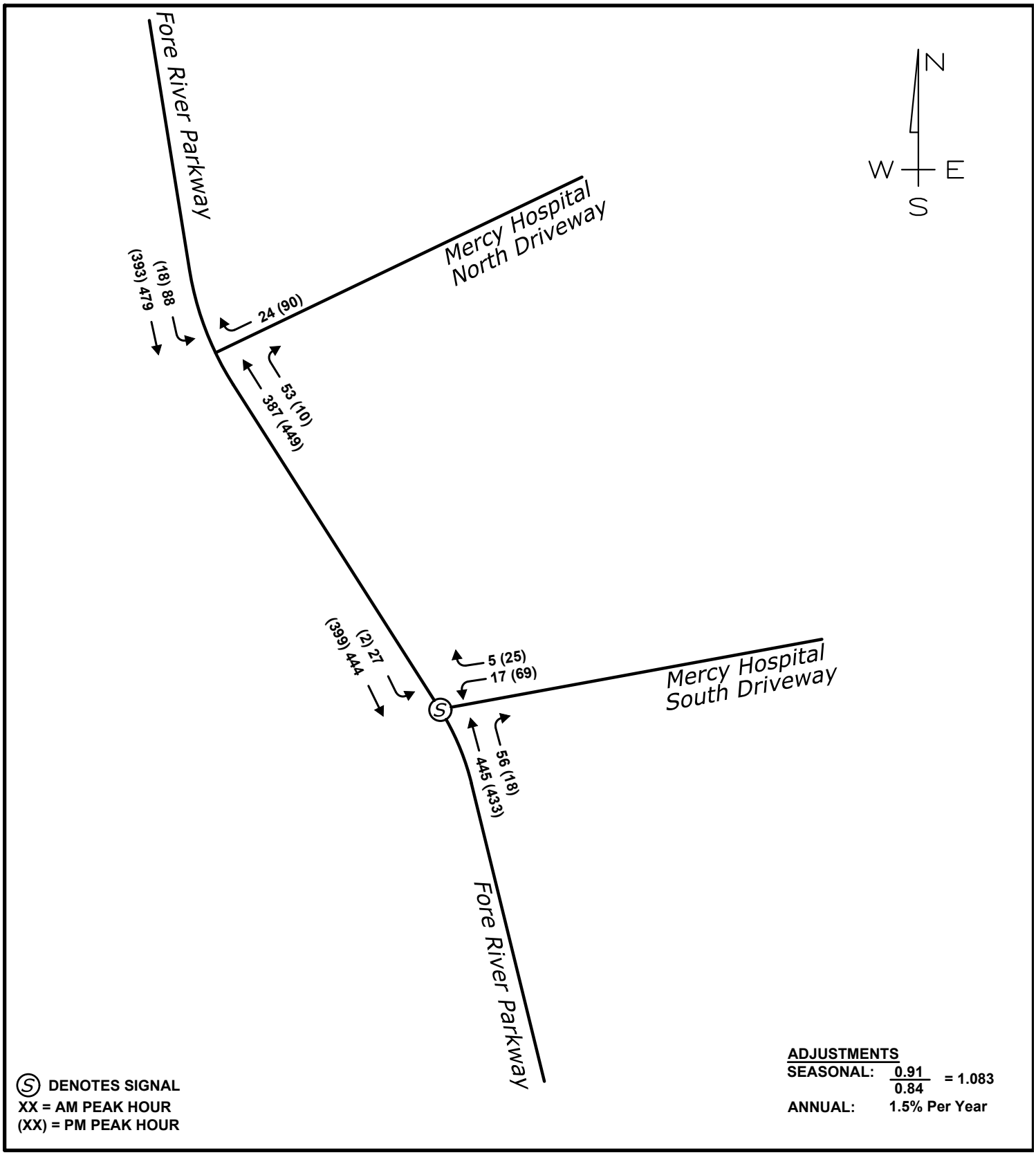
MERCY HOSPITAL
PORTLAND, MAINE

Design: TPG Scale: NONE
Draft: TPG Date: 11/6/2019
Checked: RED File Name: Figure Set.dwg

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2022 Adjusted Volumes

Figure No. 3



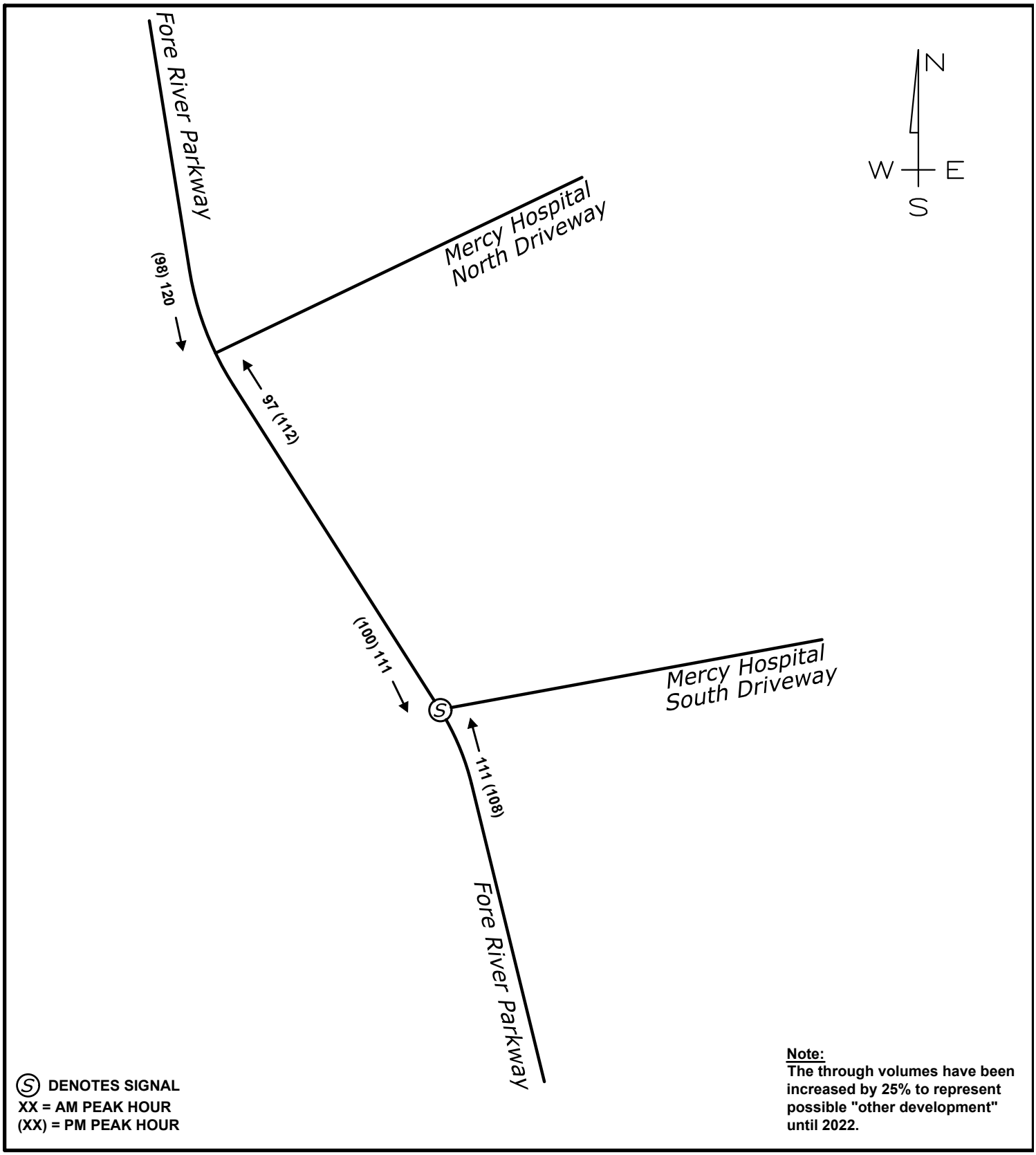
MERCY HOSPITAL
PORTLAND, MAINE

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Checked:	RED	File Name:	Figure Set.dwg

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Other Developments

Figure No. 4



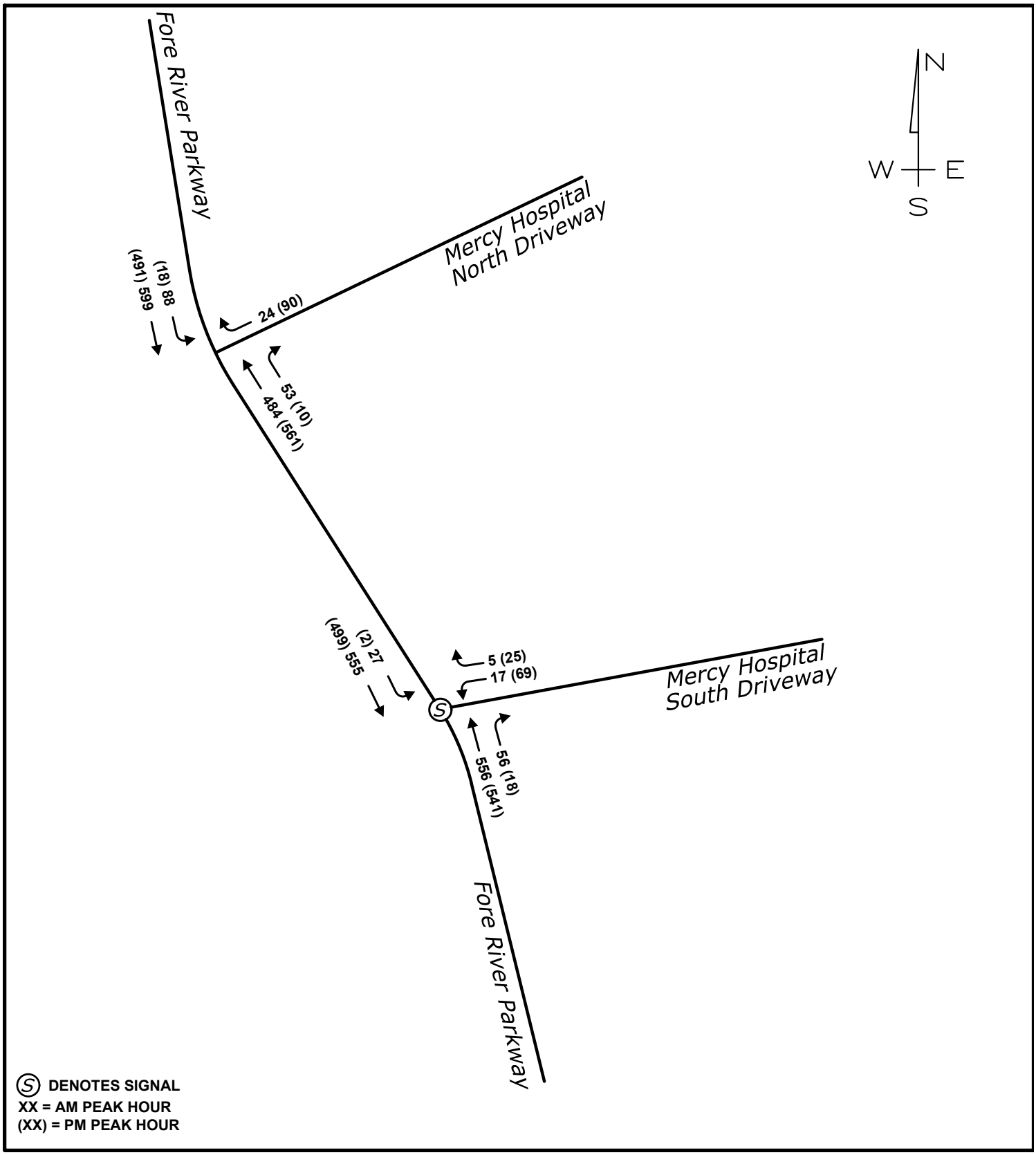
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Checked:	RED	File Name:	Figure Set.dwg

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2022 Predevelopment DHV

Figure No. 5



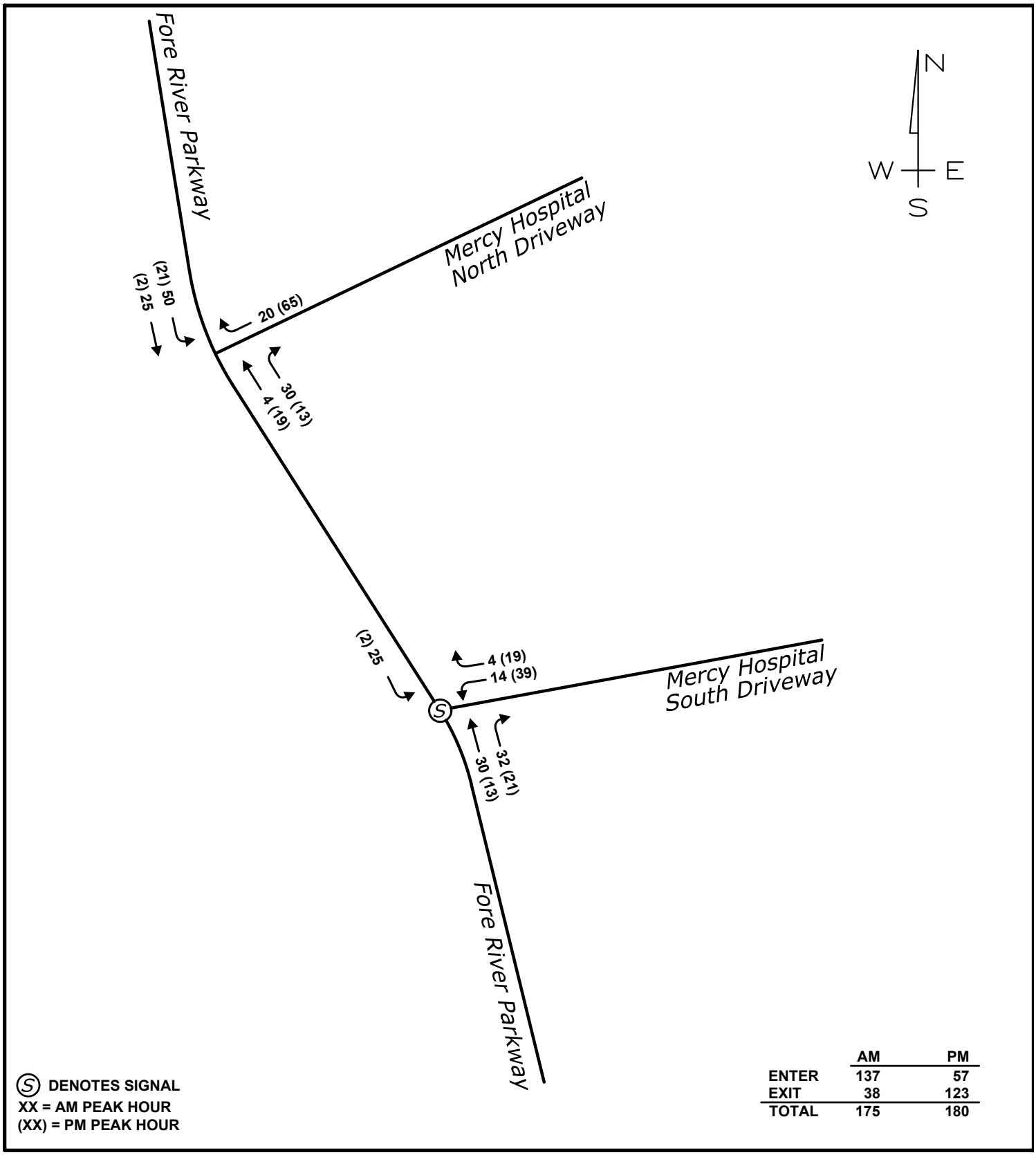
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Checked:	RED	File Name:	Figure Set.dwg

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Trip Assignment

Figure No. 6



	AM	PM
ENTER	137	57
EXIT	38	123
TOTAL	175	180

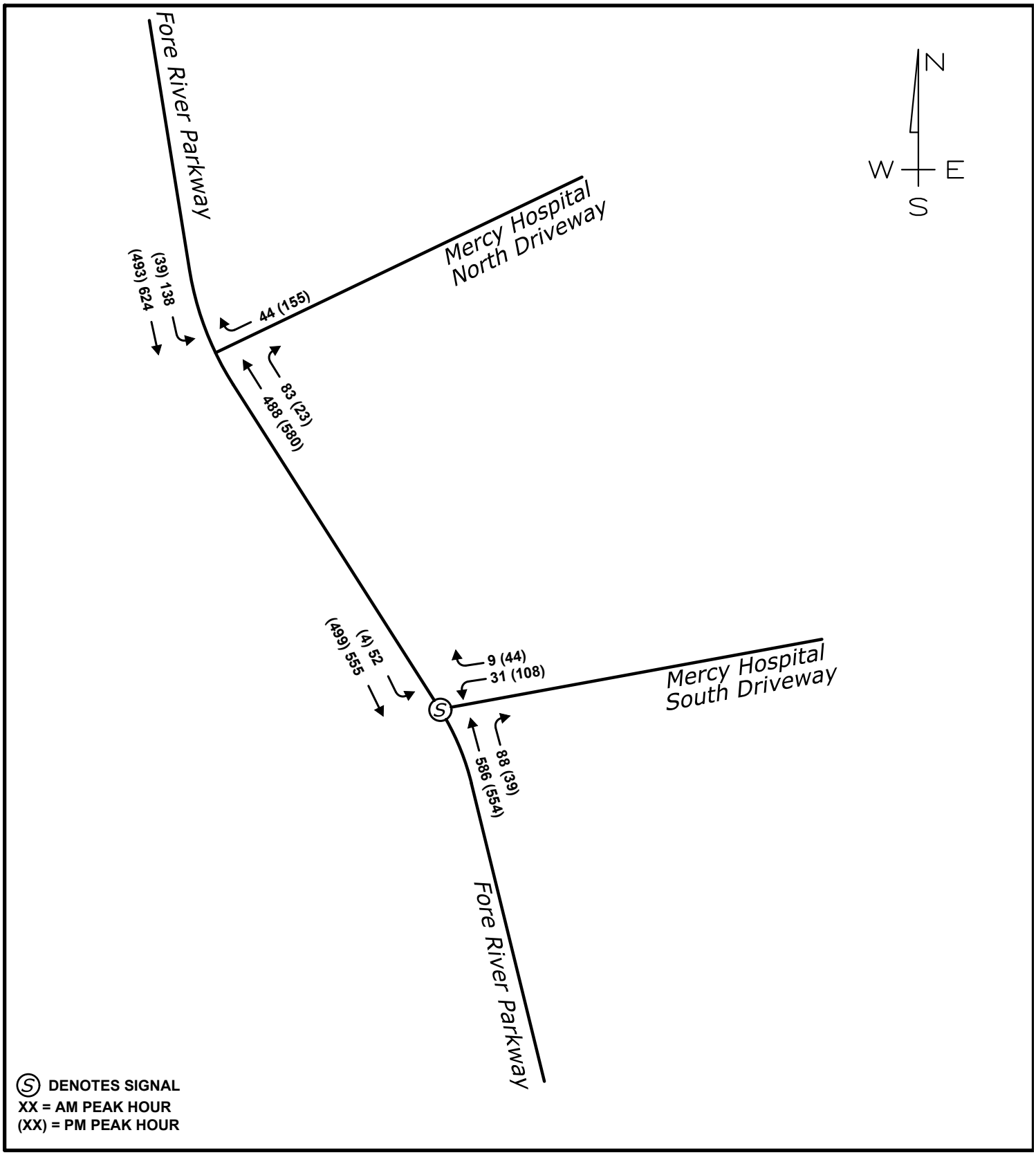
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Design: TPG Scale: NONE
Draft: TPG Date: 11/6/2019
Checked: RED File Name: Figure Set.dwg

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2022 Postdevelopment DHV

Figure No. 7



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Design:	TPG	Scale:	NONE
Draft:	TPG	Date:	11/6/2019
Checked:	RED	File Name:	Figure Set.dwg

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Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:57	6:57	6:57	6:57	6:57	6:57
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	63	63	63	63	63	63
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	1420	1363	1363	1335	1316	1360
Vehs Exited	1417	1351	1367	1333	1311	1356
Starting Vehs	23	14	24	16	19	17
Ending Vehs	26	26	20	18	24	22
Denied Entry Before	1	0	0	0	1	0
Denied Entry After	2	0	0	0	1	0
Travel Distance (mi)	573	557	558	540	537	553
Travel Time (hr)	22.2	21.5	21.5	20.8	20.7	21.3
Total Delay (hr)	2.5	2.4	2.4	2.4	2.3	2.4
Total Stops	239	242	257	271	239	249
Fuel Used (gal)	18.5	17.9	18.1	17.5	17.2	17.8

Interval #0 Information Seeding

Start Time	6:57
End Time	7:00
Total Time (min)	3

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	8:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	1420	1363	1363	1335	1316	1360
Vehs Exited	1417	1351	1367	1333	1311	1356
Starting Vehs	23	14	24	16	19	17
Ending Vehs	26	26	20	18	24	22
Denied Entry Before	1	0	0	0	1	0
Denied Entry After	2	0	0	0	1	0
Travel Distance (mi)	573	557	558	540	537	553
Travel Time (hr)	22.2	21.5	21.5	20.8	20.7	21.3
Total Delay (hr)	2.5	2.4	2.4	2.4	2.3	2.4
Total Stops	239	242	257	271	239	249
Fuel Used (gal)	18.5	17.9	18.1	17.5	17.2	17.8

3: Fore River Parkway & North Driveway Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	1.0	0.5
Total Del/Veh (s)	4.4	1.6	1.2	1.4
Denied Entry Before	0	0	0	0
Denied Entry After	0	0	0	0

5: South Driveway & Fore River Parkway Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.8	0.8	0.0	0.4
Total Del/Veh (s)	11.6	2.8	2.9	3.0
Denied Entry Before	0	0	0	0
Denied Entry After	0	0	0	0

Total Network Performance

Denied Del/Veh (s)	0.9
Total Del/Veh (s)	5.3
Denied Entry Before	0
Denied Entry After	0

Intersection: 3: Fore River Parkway & North Driveway

Movement	WB	NB	SB
Directions Served	R	R	L
Maximum Queue (ft)	40	9	61
Average Queue (ft)	16	0	26
95th Queue (ft)	39	4	54
Link Distance (ft)	273		
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		170	270
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 5: South Driveway & Fore River Parkway

Movement	WB	WB	NB	SB	SB
Directions Served	L	R	T	L	T
Maximum Queue (ft)	45	29	118	62	164
Average Queue (ft)	14	3	48	16	40
95th Queue (ft)	39	16	102	46	105
Link Distance (ft)	423		748		822
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		100		500	
Storage Blk Time (%)					
Queuing Penalty (veh)					

Network Summary

Network wide Queuing Penalty: 0

Intersection: 5: South Driveway & Fore River Parkway

Phase	1	2	6	8
Movement(s) Served	SBL	NBT	SBTL	WBL
Maximum Green (s)	5.0	24.0	34.0	16.0
Minimum Green (s)	5.0	10.0	10.0	5.0
Recall	None	None	None	None
Avg. Green (s)	6.8	15.2	16.5	6.1
g/C Ratio	-0.01	-0.01	-0.01	-0.01
Cycles Skipped (%)	92	3	5	87
Cycles @ Minimum (%)	6	18	16	0
Cycles Maxed Out (%)	8	8	3	0
Cycles with Peds (%)	0	0	0	0

Controller Summary
Average Cycle Length (s): NA

Number of Complete Cycles : 0

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:57	6:57	6:57	6:57	6:57	6:57
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	63	63	63	63	63	63
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	1508	1539	1576	1508	1472	1520
Vehs Exited	1500	1529	1580	1513	1472	1519
Starting Vehs	21	15	26	23	24	21
Ending Vehs	29	25	22	18	24	25
Denied Entry Before	1	0	0	0	1	0
Denied Entry After	0	0	1	3	0	1
Travel Distance (mi)	587	599	621	590	576	595
Travel Time (hr)	23.3	24.0	25.0	23.8	22.9	23.8
Total Delay (hr)	3.0	3.3	3.6	3.4	3.0	3.2
Total Stops	354	369	435	410	344	383
Fuel Used (gal)	19.3	19.9	20.8	19.7	18.9	19.7

Interval #0 Information Seeding

Start Time	6:57
End Time	7:00
Total Time (min)	3

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	8:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	1508	1539	1576	1508	1472	1520
Vehs Exited	1500	1529	1580	1513	1472	1519
Starting Vehs	21	15	26	23	24	21
Ending Vehs	29	25	22	18	24	25
Denied Entry Before	1	0	0	0	1	0
Denied Entry After	0	0	1	3	0	1
Travel Distance (mi)	587	599	621	590	576	595
Travel Time (hr)	23.3	24.0	25.0	23.8	22.9	23.8
Total Delay (hr)	3.0	3.3	3.6	3.4	3.0	3.2
Total Stops	354	369	435	410	344	383
Fuel Used (gal)	19.3	19.9	20.8	19.7	18.9	19.7

3: Fore River Parkway & North Driveway Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	1.3	0.7
Total Del/Veh (s)	4.5	2.1	1.6	1.9
Denied Entry Before	0	0	0	0
Denied Entry After	0	0	0	0

5: South Driveway & Fore River Parkway Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	1.0	1.0	0.0	0.6
Total Del/Veh (s)	12.9	4.3	3.1	4.0
Denied Entry Before	0	0	0	0
Denied Entry After	0	1	0	1

Total Network Performance

Denied Del/Veh (s)	1.1
Total Del/Veh (s)	6.5
Denied Entry Before	0
Denied Entry After	1

Intersection: 3: Fore River Parkway & North Driveway

Movement	WB	NB	SB
Directions Served	R	R	L
Maximum Queue (ft)	46	22	83
Average Queue (ft)	22	3	35
95th Queue (ft)	42	15	66
Link Distance (ft)	273		
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		170	270
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 5: South Driveway & Fore River Parkway

Movement	WB	WB	NB	SB	SB
Directions Served	L	R	T	L	T
Maximum Queue (ft)	59	34	182	78	155
Average Queue (ft)	20	7	71	22	45
95th Queue (ft)	48	27	150	54	111
Link Distance (ft)	423		748		822
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		100		500	
Storage Blk Time (%)	0				
Queuing Penalty (veh)	0				

Network Summary

Network wide Queuing Penalty: 0

Intersection: 5: South Driveway & Fore River Parkway

Phase	1	2	6	8
Movement(s) Served	SBL	NBT	SBTL	WBL
Maximum Green (s)	5.0	24.0	34.0	16.0
Minimum Green (s)	5.0	10.0	10.0	5.0
Recall	None	None	None	None
Avg. Green (s)	6.6	16.1	18.7	6.4
g/C Ratio	-0.01	-0.01	-0.01	-0.01
Cycles Skipped (%)	85	4	8	80
Cycles @ Minimum (%)	12	15	13	0
Cycles Maxed Out (%)	15	11	7	0
Cycles with Peds (%)	0	0	0	0

Controller Summary
Average Cycle Length (s): NA

Number of Complete Cycles : 0

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:57	6:57	6:57	6:57	6:57	6:57
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	63	63	63	63	63	63
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	1275	1338	1246	1177	1149	1237
Vehs Exited	1288	1327	1244	1175	1159	1239
Starting Vehs	28	22	16	19	25	21
Ending Vehs	15	33	18	21	15	20
Denied Entry Before	0	0	0	0	0	0
Denied Entry After	0	1	0	0	0	0
Travel Distance (mi)	531	551	514	484	482	512
Travel Time (hr)	21.0	22.0	20.3	19.0	18.8	20.2
Total Delay (hr)	2.8	3.0	2.6	2.4	2.3	2.6
Total Stops	381	442	352	356	314	370
Fuel Used (gal)	17.3	18.2	16.7	15.7	15.6	16.7

Interval #0 Information Seeding

Start Time	6:57
End Time	7:00
Total Time (min)	3

Volumes adjusted by Growth Factors.
No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	8:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	1275	1338	1246	1177	1149	1237
Vehs Exited	1288	1327	1244	1175	1159	1239
Starting Vehs	28	22	16	19	25	21
Ending Vehs	15	33	18	21	15	20
Denied Entry Before	0	0	0	0	0	0
Denied Entry After	0	1	0	0	0	0
Travel Distance (mi)	531	551	514	484	482	512
Travel Time (hr)	21.0	22.0	20.3	19.0	18.8	20.2
Total Delay (hr)	2.8	3.0	2.6	2.4	2.3	2.6
Total Stops	381	442	352	356	314	370
Fuel Used (gal)	17.3	18.2	16.7	15.7	15.6	16.7

3: Fore River Parkway & North Driveway Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.5	0.2
Total Del/Veh (s)	5.6	1.9	0.6	1.6
Denied Entry Before	0	0	0	0
Denied Entry After	0	0	0	0

5: South Driveway & Fore River Parkway Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	1.3	0.6	0.0	0.4
Total Del/Veh (s)	11.0	4.1	3.9	4.6
Denied Entry Before	0	0	0	0
Denied Entry After	0	0	0	0

Total Network Performance

Denied Del/Veh (s)	0.6
Total Del/Veh (s)	6.9
Denied Entry Before	0
Denied Entry After	0

Intersection: 3: Fore River Parkway & North Driveway

Movement	WB	SB
Directions Served	R	L
Maximum Queue (ft)	64	36
Average Queue (ft)	30	7
95th Queue (ft)	51	29
Link Distance (ft)	273	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		270
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 5: South Driveway & Fore River Parkway

Movement	WB	WB	NB	SB	SB
Directions Served	L	R	T	L	T
Maximum Queue (ft)	62	50	175	12	128
Average Queue (ft)	28	16	62	1	55
95th Queue (ft)	57	43	131	8	104
Link Distance (ft)	423		748		822
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		100		500	
Storage Blk Time (%)					
Queuing Penalty (veh)					

Network Summary

Network wide Queuing Penalty: 0

Intersection: 5: South Driveway & Fore River Parkway

Phase	1	2	6	8
Movement(s) Served	SBL	NBT	SBTL	WBL
Maximum Green (s)	5.0	24.0	34.0	16.0
Minimum Green (s)	5.0	10.0	10.0	5.0
Recall	None	None	None	None
Avg. Green (s)	8.4	15.3	15.5	7.0
g/C Ratio	-0.01	-0.01	-0.01	-0.01
Cycles Skipped (%)	98	2	2	63
Cycles @ Minimum (%)	1	15	14	0
Cycles Maxed Out (%)	2	6	1	0
Cycles with Peds (%)	0	0	0	0

Controller Summary
Average Cycle Length (s): NA

Number of Complete Cycles : 0

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:57	6:57	6:57	6:57	6:57	6:57
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	63	63	63	63	63	63
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	1435	1513	1436	1416	1388	1439
Vehs Exited	1430	1513	1434	1406	1394	1435
Starting Vehs	24	25	15	18	28	21
Ending Vehs	29	25	17	28	22	24
Denied Entry Before	0	0	0	1	0	0
Denied Entry After	1	0	0	2	0	0
Travel Distance (mi)	566	598	559	547	550	564
Travel Time (hr)	23.2	24.9	23.3	22.7	22.6	23.3
Total Delay (hr)	3.6	4.1	3.8	3.7	3.5	3.7
Total Stops	549	605	619	605	553	586
Fuel Used (gal)	19.1	20.3	19.2	18.8	18.5	19.2

Interval #0 Information Seeding

Start Time	6:57
End Time	7:00
Total Time (min)	3

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	8:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	1435	1513	1436	1416	1388	1439
Vehs Exited	1430	1513	1434	1406	1394	1435
Starting Vehs	24	25	15	18	28	21
Ending Vehs	29	25	17	28	22	24
Denied Entry Before	0	0	0	1	0	0
Denied Entry After	1	0	0	2	0	0
Travel Distance (mi)	566	598	559	547	550	564
Travel Time (hr)	23.2	24.9	23.3	22.7	22.6	23.3
Total Delay (hr)	3.6	4.1	3.8	3.7	3.5	3.7
Total Stops	549	605	619	605	553	586
Fuel Used (gal)	19.1	20.3	19.2	18.8	18.5	19.2

3: Fore River Parkway & North Driveway Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.2	0.0	0.6	0.3
Total Del/Veh (s)	7.4	2.3	0.8	2.3
Denied Entry Before	0	0	0	0
Denied Entry After	0	0	0	0

5: South Driveway & Fore River Parkway Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	1.3	0.7	0.0	0.5
Total Del/Veh (s)	11.0	5.3	5.3	5.9
Denied Entry Before	0	0	0	0
Denied Entry After	0	0	0	0

Total Network Performance

Denied Del/Veh (s)	0.7
Total Del/Veh (s)	8.5
Denied Entry Before	0
Denied Entry After	0

Intersection: 3: Fore River Parkway & North Driveway

Movement	WB	SB
Directions Served	R	L
Maximum Queue (ft)	89	44
Average Queue (ft)	42	14
95th Queue (ft)	75	40
Link Distance (ft)	273	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		270
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 5: South Driveway & Fore River Parkway

Movement	WB	WB	NB	SB	SB
Directions Served	L	R	T	L	T
Maximum Queue (ft)	101	68	170	25	175
Average Queue (ft)	42	22	81	2	72
95th Queue (ft)	79	52	146	14	133
Link Distance (ft)	423		748		822
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		100		500	
Storage Blk Time (%)	0	0			
Queuing Penalty (veh)	0	0			

Network Summary

Network wide Queuing Penalty: 0

Intersection: 5: South Driveway & Fore River Parkway

Phase	1	2	6	8
Movement(s) Served	SBL	NBT	SBTL	WBL
Maximum Green (s)	5.0	24.0	34.0	16.0
Minimum Green (s)	5.0	10.0	10.0	5.0
Recall	None	None	None	None
Avg. Green (s)	6.3	16.4	16.7	7.8
g/C Ratio	-0.01	-0.01	-0.01	-0.01
Cycles Skipped (%)	96	2	1	43
Cycles @ Minimum (%)	3	11	11	0
Cycles Maxed Out (%)	4	14	1	0
Cycles with Peds (%)	0	0	0	0

Controller Summary
Average Cycle Length (s): NA

Number of Complete Cycles : 0

Crash Summary Report

Report Selections and Input Parameters

REPORT SELECTIONS

☑ Crash Summary I ☐ Section Detail ☑ Crash Summary II ☐ 1320 Public ☐ 1320 Private ☐ 1320 Summary

REPORT DESCRIPTION

Portland: Fore River Pkwy from Congress St (node 19209) to Commercial St/Veterans Bridge (node 66542)

REPORT PARAMETERS

Year 2016, Start Month 1 through Year 2018 End Month: 12

Route: 3200556	Start Node: 63206	Start Offset: 0	☐ Exclude First Node
	End Node: 19209	End Offset: 0	☐ Exclude Last Node
Route: 3200159	Start Node: 59425	Start Offset: 0	☐ Exclude First Node
	End Node: 59423	End Offset: 0	☑ Exclude Last Node
Route: 3200158	Start Node: 59424	Start Offset: 0	☐ Exclude First Node
	End Node: 59423	End Offset: 0	☑ Exclude Last Node
Route: 320556S	Start Node: 59417	Start Offset: 0	☑ Exclude First Node
	End Node: 59413	End Offset: 0	☑ Exclude Last Node
Route: 320556S	Start Node: 59413	Start Offset: 0	☑ Exclude First Node
	End Node: 63206	End Offset: 0	☑ Exclude Last Node
Route: 320556S	Start Node: 63206	Start Offset: 0	☑ Exclude First Node
	End Node: 63211	End Offset: 0	☑ Exclude Last Node
Route: 0001A	Start Node: 63211	Start Offset: 0	☐ Exclude First Node
	End Node: 66542	End Offset: 0	☐ Exclude Last Node
Route: 3209586	Start Node: 66548	Start Offset: 0	☐ Exclude First Node
	End Node: 66546	End Offset: 0	☑ Exclude Last Node
Route: 001AS	Start Node: 66581	Start Offset: 0	☑ Exclude First Node
	End Node: 63209	End Offset: 0	☑ Exclude Last Node
Route: 001AS	Start Node: 63209	Start Offset: 0	☑ Exclude First Node
	End Node: 63211	End Offset: 0	☑ Exclude Last Node
Route: 001AS	Start Node: 63211	Start Offset: 0	☑ Exclude First Node

Crash Summary Report

Report Selections and Input Parameters

REPORT SELECTIONS

☑ Crash Summary I ☐ Section Detail ☑ Crash Summary II ☐ 1320 Public ☐ 1320 Private ☐ 1320 Summary

REPORT DESCRIPTION

Portland: Fore River Pkwy from Congress St (node 19209) to Commercial St/Veterans Bridge (node 66542)

REPORT PARAMETERS

Year 2016, Start Month 1 through Year 2018 End Month: 12

End Node: 63206 End Offset: 0 ☑ Exclude Last Node

Crash Summary I

Nodes

Node	Route - MP	Node Description	U/R	Total Crashes	Injury Crashes K	A	B	C	PD	Percent Injury	Annual M Ent-Veh	Crash Rate	Critical Rate	CRF
63206	3200556 - 0	Int of FORE RIVER PKY RINV 3200154	2	0	0	0	0	0	0	0.0	6.024	0.00	0.28	0.00
												Statewide Crash Rate:	0.11	
59413	3200556 - 0.05	Int of FORE RIVER PKY RAMP OFF 295 SB THOMPSONS I	9	8	0	0	1	1	6	25.0	6.244	0.43	1.21	0.00
												Statewide Crash Rate:	0.73	
59418	3200556 - 0.09	Int of FORE RIVER PKY RINV 3200156	2	2	0	0	0	0	2	0.0	2.777	0.24	0.35	0.00
												Statewide Crash Rate:	0.11	
59417	3200556 - 0.18	Non Int FORE RIVER PKY	2	0	0	0	0	0	0	0.0	5.420	0.00	0.37	0.00
												Statewide Crash Rate:	0.15	
59423	3200556 - 0.21	Int of FORE RIVER PKY RINV 3200158 RINV 3200159	2	5	0	0	0	1	4	20.0	5.806	0.29	0.34	0.00
												Statewide Crash Rate:	0.14	
P19209	3200556 - 0.24	Int of CONGRESS ST FORE RIVER PKY RAMP D OFF TO (	9	45	0	0	2	14	29	35.6	12.091	1.24	1.08	1.15
												Statewide Crash Rate:	0.73	
A59425	3200159 - 0	Int of CONGRESS ST, RINV 3200159	9	0	0	0	0	0	0	0.0	0.000	0.00	0.00	0.00
												Statewide Crash Rate:	0.73	
A59424	3200158 - 0	Int of CONGRESS ST RINV 3200158	2	0	0	0	0	0	0	0.0	0.000	0.00	0.00	0.00
												Statewide Crash Rate:	0.14	
63207	320556S - 0.29	Int of FORE RIVER PKY RINV 05 E1000	2	0	0	0	0	0	0	0.0	2.104	0.00	0.37	0.00
												Statewide Crash Rate:	0.11	
63211	0001A - 9.08	Int of FORE RIVER PKY RD INV 3201452	2	2	0	0	1	0	1	50.0	3.415	0.20	0.33	0.00
												Statewide Crash Rate:	0.11	
63209	0001A - 9.11	Int of FORE RIVER PKY RAMP ONTO I 295	2	2	0	0	0	0	2	0.0	3.343	0.20	0.33	0.00
												Statewide Crash Rate:	0.11	
66581	0001A - 9.45	Non Int FORE RIVER PKY	2	0	0	0	0	0	0	0.0	3.127	0.00	0.42	0.00
												Statewide Crash Rate:	0.15	
63191	0001A - 9.55	Int of FORE RIVER PKY, RD INV 3201441	9	4	0	0	2	0	2	50.0	3.300	0.40	1.38	0.00
												Statewide Crash Rate:	0.73	
66546	0001A - 9.67	Int of FORE RIVER PKY RD INV 3209586	2	0	0	0	0	0	0	0.0	3.306	0.00	0.42	0.00
												Statewide Crash Rate:	0.15	
66542	0001A - 9.70	Int of FORE RIVER PKY VETERANS BRIDGE	9	12	0	0	0	1	11	8.3	9.466	0.42	1.13	0.00
												Statewide Crash Rate:	0.73	
66548	3209586 - 0	Int of FORE RIVER PKY RD INV 3209586	2	0	0	0	0	0	0	0.0	5.487	0.00	0.37	0.00
												Statewide Crash Rate:	0.15	
63212	001AS - 3.04	Int of FORE RIVER PKY RINV 05 G1000	2	1	0	0	0	0	1	0.0	2.672	0.12	0.35	0.00
												Statewide Crash Rate:	0.11	
Study Years:	3.00	NODE TOTALS:		81	0	0	6	17	58	28.4	74.582	0.36	0.48	0.75

Crash Summary I

Sections

Start Node	End Node	Element	Offset Begin - End	Route - MP	Section Length	U/R	Total Crashes	Injury Crashes K	A	B	C	PD	Percent Injury	Annual HMVM	Crash Rate	Critical Rate	CRF
63206	59413	3123688	0 - 0.05	3200556 - 0	0.05	2	0	0	0	0	0	0	0.0	0.00126	0.00	699.54	0.00
Int of FORE RIVER PKY RINV 3200154				RD INV 3200556											Statewide Crash Rate: 216.18		
59413	59418	3115322	0 - 0.04	3200556 - 0.05	0.04	2	0	0	0	0	0	0	0.0	0.00087	0.00	766.58	0.00
Int of FORE RIVER PKY RAMP OFF 295 SB THOMPSONS POINT CONNECTOR RD				RD INV 3200556											Statewide Crash Rate: 216.18		
59418	59417	3115321	0 - 0.09	3200556 - 0.09	0.09	2	0	0	0	0	0	0	0.0	0.00252	0.00	585.45	0.00
Int of FORE RIVER PKY RINV 3200156				RD INV 3200556											Statewide Crash Rate: 216.18		
59423	59417	2080875	0 - 0.03	3200556 - 0.18	0.03	2	3	0	0	0	0	3	0.0	0.00157	636.94	661.90	0.00
Int of FORE RIVER PKY RINV 3200158 RINV 3200159				RD INV 3200556											Statewide Crash Rate: 216.18		
19209	59423	2080874	0 - 0.03	3200556 - 0.21	0.03	2	0	0	0	0	0	0	0.0	0.00064	0.00	820.66	0.00
Int of CONGRESS ST FORE RIVER PKY RAMP D OFF TO CONGRESS ST				RD INV 3200556											Statewide Crash Rate: 216.18		
59425	59423	3115018	0 - 0.05	3200159 - 0	0.05	2	0	0	0	0	0	0	0.0	0.00049	0.00	863.84	0.00
Int of CONGRESS ST, RINV 3200159				RD INV 3200159											Statewide Crash Rate: 216.18		
59424	59423	3115017	0 - 0.04	3200158 - 0	0.04	2	0	0	0	0	0	0	0.0	0.00085	0.00	708.84	0.00
Int of CONGRESS ST RINV 3200158				RD INV 3200158											Statewide Crash Rate: 194.16		
59413	59417	3116436	0 - 0.13	320556S - 0	0.13	2	1	0	0	0	0	1	0.0	0.00316	105.53	552.49	0.00
Int of FORE RIVER PKY RAMP OFF 295 SB THOMPSONS POINT CONNECTOR RD				RD INV 320566S											Statewide Crash Rate: 216.18		
59413	63206	3116345	0 - 0.05	320556S - 0.13	0.05	2	1	0	0	0	0	1	0.0	0.00165	202.04	653.52	0.00
Int of FORE RIVER PKY RAMP OFF 295 SB THOMPSONS POINT CONNECTOR RD				RD INV 320566S											Statewide Crash Rate: 216.18		
63206	63207	3116343	0 - 0.11	320556S - 0.18	0.11	2	0	0	0	0	0	0	0.0	0.00231	0.00	598.72	0.00
Int of FORE RIVER PKY RINV 3200154				RD INV 320566S											Statewide Crash Rate: 216.18		
63207	63211	3121828	0 - 0.03	320556S - 0.29	0.03	2	0	0	0	0	0	0	0.0	0.00058	0.00	838.22	0.00
Int of FORE RIVER PKY RINV 05 E1000				RD INV 320566S											Statewide Crash Rate: 216.18		
63211	63209	3115957	0 - 0.03	0001A - 9.08	0.03	2	0	0	0	0	0	0	0.0	0.00050	0.00	859.97	0.00
Int of FORE RIVER PKY RD INV 3201452				US 1A											Statewide Crash Rate: 216.18		
63209	66581	3129848	0 - 0.34	0001A - 9.11	0.34	2	2	0	0	0	1	1	50.0	0.00520	128.24	487.41	0.00
Int of FORE RIVER PKY RAMP ONTO I 295				US 1A											Statewide Crash Rate: 216.18		
66581	63191	3097052	0 - 0.10	0001A - 9.45	0.10	2	1	0	0	0	1	0	100.0	0.00320	104.30	550.84	0.00
Non Int FORE RIVER PKY				US 1A											Statewide Crash Rate: 216.18		
63191	66546	3117411	0 - 0.12	0001A - 9.55	0.12	2	0	0	0	0	0	0	0.0	0.00350	0.00	538.20	0.00
Int of FORE RIVER PKY, RD INV 3201441				US 1A											Statewide Crash Rate: 216.18		
66546	66542	3508657	0 - 0.03	0001A - 9.67	0.03	2	0	0	0	0	0	0	0.0	0.00064	0.00	819.81	0.00
Int of FORE RIVER PKY RD INV 3209586				US 1A											Statewide Crash Rate: 216.18		
66548	66546	3120374	0 - 0.06	3209586 - 0	0.06	2	0	0	0	0	0	0	0.0	0.00047	0.00	871.07	0.00
Int of FORE RIVER PKY RD INV 3209586				RD INV 3209586											Statewide Crash Rate: 216.18		
66581	63209	3129849	0 - 0.34	001AS - 2.63	0.34	2	0	0	0	0	0	0	0.0	0.00567	0.00	477.21	0.00
Non Int FORE RIVER PKY				US 1AS											Statewide Crash Rate: 216.18		

Crash Summary I

Sections

Start Node	End Node	Element	Offset Begin - End	Route - MP	Section Length	U/R	Total Crashes	Injury Crashes K	A	B	C	PD	Percent Injury	Annual HMVM	Crash Rate	Critical Rate	CRF
63209	63211	3130274	0 - 0.02	001AS - 2.97	0.02	2	0	0	0	0	0	0	0.0	0.00029	0.00	926.02	0.00
Int of FORE RIVER PKY RAMP ONTO I 295				US 1AS											Statewide Crash Rate: 216.18		
63211	63212	3130132	0 - 0.05	001AS - 2.99	0.05	2	0	0	0	0	0	0	0.0	0.00087	0.00	765.87	0.00
Int of FORE RIVER PKY RD INV 3201452				US 1AS											Statewide Crash Rate: 216.18		
63212	63206	3118571	0 - 0.09	001AS - 3.04	0.09	2	0	0	0	0	0	0	0.0	0.00245	0.00	589.82	0.00
Int of FORE RIVER PKY RINV 05 G1000				US 1AS											Statewide Crash Rate: 216.18		
Study Years: 3.00				Section Totals:	1.83		8	0	0	0	2	6	25.0	0.03868	68.93	322.44	0.21
				Grand Totals:	1.83		89	0	0	6	19	64	28.1	0.03868	766.89	454.44	1.69

Crash Summary

Section Details

Start Node	End Node	Element	Offset Begin - End	Route - MP	Total Crashes	Injury Crashes K	A	B	C	PD	Crash Report	Crash Date	Crash Mile Point	Injury Degree
63206	59413	3123688	0 - 0.05	3200556 - 0	0	0	0	0	0	0				
59413	59418	3115322	0 - 0.04	3200556 - 0.05	0	0	0	0	0	0				
59418	59417	3115321	0 - 0.09	3200556 - 0.09	0	0	0	0	0	0				
59423	59417	2080875	0 - 0.03	3200556 - 0.18	3	0	0	0	0	3	2016-6903	02/29/2016	0.19	PD
											2016-21341	08/01/2016	0.20	PD
											2017-34237	11/12/2017	0.20	PD
19209	59423	2080874	0 - 0.03	3200556 - 0.21	0	0	0	0	0	0				
59425	59423	3115018	0 - 0.05	3200159 - 0	0	0	0	0	0	0				
59424	59423	3115017	0 - 0.04	3200158 - 0	0	0	0	0	0	0				
59413	59417	3116436	0 - 0.13	320556S - 0	1	0	0	0	0	1	2016-6346	02/05/2016	0.10	PD
59413	63206	3116345	0 - 0.05	320556S - 0.13	1	0	0	0	0	1	2016-19807	07/16/2016	0.15	PD
63206	63207	3116343	0 - 0.11	320556S - 0.18	0	0	0	0	0	0				
63207	63211	3121828	0 - 0.03	320556S - 0.29	0	0	0	0	0	0				
63211	63209	3115957	0 - 0.03	0001A - 9.08	0	0	0	0	0	0				
63209	66581	3129848	0 - 0.34	0001A - 9.11	2	0	0	0	1	1	2016-4063	02/05/2016	9.15	PD
											2017-15583	05/25/2017	9.24	C
66581	63191	3097052	0 - 0.10	0001A - 9.45	1	0	0	0	1	0	2018-17191	06/21/2018	9.51	C
63191	66546	3117411	0 - 0.12	0001A - 9.55	0	0	0	0	0	0				
66546	66542	3508657	0 - 0.03	0001A - 9.67	0	0	0	0	0	0				
66548	66546	3120374	0 - 0.06	3209586 - 0	0	0	0	0	0	0				
66581	63209	3129849	0 - 0.34	001AS - 2.63	0	0	0	0	0	0				
63209	63211	3130274	0 - 0.02	001AS - 2.97	0	0	0	0	0	0				
63211	63212	3130132	0 - 0.05	001AS - 2.99	0	0	0	0	0	0				
63212	63206	3118571	0 - 0.09	001AS - 3.04	0	0	0	0	0	0				
				Totals:	8	0	0	0	2	6				

Crash Summary II - Characteristics

Crashes by Day and Hour

	AM												PM												
	Hour of Day																								
Day Of Week	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	Un	Tot
SUNDAY	0	0	0	0	0	0	0	0	0	1	3	0	0	0	1	0	1	0	1	0	0	1	0	0	0	8
MONDAY	0	0	0	0	0	0	0	1	2	2	1	0	0	5	2	1	2	1	0	0	0	1	0	0	0	18
TUESDAY	0	0	0	0	0	0	2	1	2	0	0	1	3	0	2	1	0	2	0	0	1	0	0	0	0	15
WEDNESDAY	0	0	0	0	0	0	1	0	4	2	1	1	1	0	0	0	0	1	1	0	0	0	0	0	0	12
THURSDAY	0	0	0	0	0	0	3	0	1	1	2	1	2	1	0	0	1	2	1	0	0	2	0	0	0	17
FRIDAY	0	0	0	0	0	0	1	2	0	2	2	0	0	0	3	0	0	1	0	0	1	0	0	0	0	12
SATURDAY	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	0	0	2	0	1	1	0	0	7
Totals	0	0	0	0	0	0	7	4	9	8	10	3	6	7	9	2	4	7	3	2	2	5	1	0	0	89

Vehicle Counts by Type

Unit Type	Total
1-Passenger Car	104
2-(Sport) Utility Vehicle	42
3-Passenger Van	6
4-Cargo Van (10K lbs or Less)	5
5-Pickup	9
6-Motor Home	0
7-School Bus	0
8-Transit Bus	2
9-Motor Coach	0
10-Other Bus	0
11-Motorcycle	1
12-Moped	1
13-Low Speed Vehicle	0
14-Autocycle	0
15-Experimental	0
16-Other Light Trucks (10,000 lbs or Less)	0
17-Medium/Heavy Trucks (More than 10,000 lbs)	1
18-ATV - (4 wheel)	0
20-ATV - (2 wheel)	0
21-Snowmobile	0
22-Pedestrian	1

Unit Type	Total
23-Bicyclist	0
24-Witness	8
25-Other	4
26-Construction	0
27-Farm Vehicle	0
Total	184

Crash Summary II - Characteristics

Crashes by Driver Action at Time of Crash

Driver Action at Time of Crash	Dr 1	Dr 2	Dr 3	Dr 4	Dr 5	Other	Total
No Contributing Action	22	65	1	0	0	0	88
Ran Off Roadway	1	0	0	0	0	0	1
Failed to Yield Right-of-Way	8	6	0	0	0	0	14
Ran Red Light	3	0	0	0	0	0	3
Ran Stop Sign	0	0	0	0	0	0	0
Disregarded Other Traffic Sign	0	0	0	0	0	0	0
Disregarded Other Road Markings	0	0	0	0	0	0	0
Exceeded Posted Speed Limit	0	0	0	0	0	0	0
Drove Too Fast For Conditions	6	3	0	0	0	0	9
Improper Turn	0	0	0	0	0	0	0
Improper Backing	1	0	0	0	0	0	1
Improper Passing	0	0	0	0	0	0	0
Wrong Way	0	0	0	0	0	0	0
Followed Too Closely	38	4	0	0	0	0	42
Failed to Keep in Proper Lane	4	0	0	0	0	0	4
Operated Motor Vehicle in Erratic, Reckless, Careless, Negligent or Aggressive Manner	0	0	0	0	0	0	0
Swerved or Avoided Due to Wind, Slippery Surface, Motor Vehicle, Object, Non-Motorist in Roadway	1	0	0	0	0	0	1
Over-Correcting/Over-Steering	0	0	0	0	0	0	0
Other Contributing Action	2	3	0	0	0	0	5
Unknown	2	2	0	0	0	0	4
Total	88	83	1	0	0	0	172

Crashes by Apparent Physical Condition And Driver

Apparent Physical Condition	Dr 1	Dr 2	Dr 3	Dr 4	Dr 5	Other	Total
Apparently Normal	87	80	1	0	0	1	169
Physically Impaired or Handicapped	0	1	0	0	0	0	1
Emotional(Depressed, Angry, Disturbed, etc.)	1	1	0	0	0	0	2
Ill (Sick)	0	0	0	0	0	0	0
Asleep or Fatigued	0	0	0	0	0	0	0
Under the Influence of Medications/Drugs/Alcohol	0	0	0	0	0	0	0
Other	0	1	0	0	0	0	1
Total	88	83	1	0	0	1	173

Driver Age by Unit Type

Age	Driver	Bicycle	SnowMobile	Pedestrian	ATV	Total
09-Under	0	0	0	0	0	0
10-14	0	0	0	0	0	0
15-19	9	0	0	0	0	9
20-24	22	0	0	0	0	22
25-29	14	0	0	0	0	14
30-39	27	0	0	0	0	27
40-49	36	0	0	0	0	36
50-59	32	0	0	0	0	32
60-69	21	0	0	0	0	21
70-79	11	0	0	0	0	11
80-Over	0	0	0	0	0	0
Unknown	3	0	0	1	0	4
Total	175	0	0	1	0	176

Crash Summary II - Characteristics

Most Harmful Event

Most Harmful Event	Total	Most Harmful Event	Total
1-Overturn / Rollover	0	38-Other Fixed Object (wall, building, tunnel, etc.)	0
2-Fire / Explosion	0	39-Unknown	32
3-Immersion	0	40-Gate or Cable	0
4-Jackknife	0	41-Pressure Ridge	0
5-Cargo / Equipment Loss Or Shift	0	Total	173
6-Fell / Jumped from Motor Vehicle	0		
7-Thrown or Falling Object	0		
8-Other Non-Collision	0		
9-Pedestrian	0		
10-Pedalcycle	0		
11-Railway Vehicle - Train, Engine	0		
12-Animal	0		
13-Motor Vehicle in Transport	140		
14-Parked Motor Vehicle	1		
15-Struck by Falling, Shifting Cargo or Anything Set in Motion by Motor Vehicle	0		
16-Work Zone / Maintenance Equipment	0		
17-Other Non-Fixed Object	0		
18-Impact Attenuator / Crash Cushion	0		
19-Bridge Overhead Structure	0		
20-Bridge Pier or Support	0		
21-Bridge Rail	0		
22-Cable Barrier	0		
23-Culvert	0		
24-Curb	0		
25-Ditch	0		
26-Embankment	0		
27-Guardrail Face	0		
28-Guardrail End	0		
29-Concrete Traffic Barrier	0		
30-Other Traffic Barrier	0		
31-Tree (Standing)	0		
32-Utility Pole / Light Support	0		
33-Traffic Sign Support	0		
34-Traffic Signal Support	0		
35-Fence	0		
36-Mailbox	0		
37-Other Post Pole or Support	0		

Injury Data

Severity Code	Injury Crashes	Number Of Injuries
K	0	0
A	0	0
B	6	7
C	19	25
PD	64	0
Total	89	32

Road Character

Road Grade	Total
1-Level	74
2-On Grade	10
3-Top of Hill	1
4-Bottom of Hill	4
5-Other	0
Total	89

Traffic Control Devices

Traffic Control Device	Total
1-Traffic Signals (Stop & Go)	62
2-Traffic Signals (Flashing)	1
3-Advisory/Warning Sign	1
4-Stop Signs - All Approaches	0
5-Stop Signs - Other	2
6-Yield Sign	14
7-Curve Warning Sign	1
8-Officer, Flagman, School Patrol	0
9-School Bus Stop Arm	0
10-School Zone Sign	0
11-R.R. Crossing Device	0
12-No Passing Zone	0
13-None	8
14-Other	0
Total	89

Light

Light Condition	Total
1-Daylight	69
2-Dawn	1
3-Dusk	1
4-Dark - Lighted	17
5-Dark - Not Lighted	1
6-Dark - Unknown Lighting	0
7-Unknown	0
Total	89

Crash Summary II - Characteristics

Crashes by Year and Month

Month	2016	2017	2018	Total
JANUARY	5	2	2	9
FEBRUARY	6	0	3	9
MARCH	3	1	2	6
APRIL	2	2	0	4
MAY	4	5	2	11
JUNE	1	4	3	8
JULY	3	2	1	6
AUGUST	4	2	1	7
SEPTEMBER	2	1	2	5
OCTOBER	3	2	4	9
NOVEMBER	1	3	3	7
DECEMBER	2	4	2	8
Total	36	28	25	89

Report is limited to the last 10 years of data.

Crash Summary II - Characteristics

Crashes by Crash Type and Type of Location

Crash Type	Straight Road	Curved Road	Three Leg Intersection	Four Leg Intersection	Five or More Leg Intersection	Driveways	Bridges	Interchanges	Other	Parking Lot	Private Way	Cross Over	Railroad Crossing	Traffic Circle-Roundabout	Total
Object in Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rear End - Sideswipe	3	3	22	40	0	0	0	1	0	0	0	0	0	0	69
Head-on - Sideswipe	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Intersection Movement	0	0	5	10	0	0	0	0	0	0	0	0	0	0	15
Pedestrians	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Train	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Went Off Road	1	1	1	0	0	0	0	0	0	0	0	0	0	0	3
All Other Animal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycle	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jackknife	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rollover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fire	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Submersion	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thrown or Falling Object	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bear	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Deer	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Moose	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Turkey	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	4	4	29	51	0	0	0	1	0	0	0	0	0	0	89

Crash Summary II - Characteristics

Crashes by Weather, Light Condition and Road Surface

Weather Light	Dry	Ice/Frost	Mud, Dirt, Gravel	Oil	Other	Sand	Slush	Snow	Unknown	Water (Standing, Moving)	Wet	Total
Blowing Sand, Soil, Dirt												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Blowing Snow												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Clear												
Dark - Lighted	10	1	0	0	0	0	0	0	0	0	1	12
Dark - Not Lighted	1	0	0	0	0	0	0	0	0	0	0	1
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	47	2	0	0	0	0	0	1	0	0	5	55
Dusk	1	0	0	0	0	0	0	0	0	0	0	1
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Cloudy												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	2	0	0	0	0	0	0	0	0	0	2	4
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0

Crash Summary II - Characteristics

Crashes by Weather, Light Condition and Road Surface

Weather Light	Dry	Ice/Frost	Mud, Dirt, Gravel	Oil	Other	Sand	Slush	Snow	Unknown	Water (Standing, Moving)	Wet	Total
Fog, Smog, Smoke												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Other												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Rain												
Dark - Lighted	0	0	0	0	0	0	1	0	0	0	2	3
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	1	1
Daylight	0	0	0	0	0	0	0	0	0	0	4	4
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Severe Crosswinds												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0

Crash Summary II - Characteristics

Crashes by Weather, Light Condition and Road Surface

Weather / Light	Dry	Ice/Frost	Mud, Dirt, Gravel	Oil	Other	Sand	Slush	Snow	Unknown	Water (Standing, Moving)	Wet	Total
Sleet, Hail (Freezing Rain or Drizzle)												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Snow												
Dark - Lighted	0	0	0	0	0	0	0	2	0	0	0	2
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	2	0	0	0	0	0	4	0	0	0	6
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	61	5	0	0	0	0	1	7	0	0	15	89

H. C. L.
CRASH COLLISION DIAGRAM
DATA PACKAGE

COUNTY: **CUMBERLAND** TOWN: **PORTLAND**

LOW NODE: **19209** HIGH NODE: **0000** REGION: **1** U/R: **URBAN**

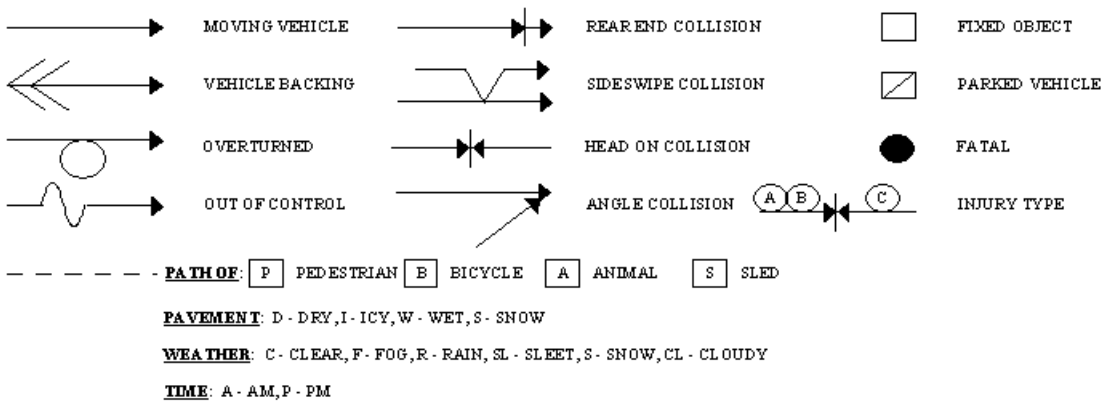
DESCRIPTION: **Jct Congress St & Fore River Pkwy/I-295 SB Off**

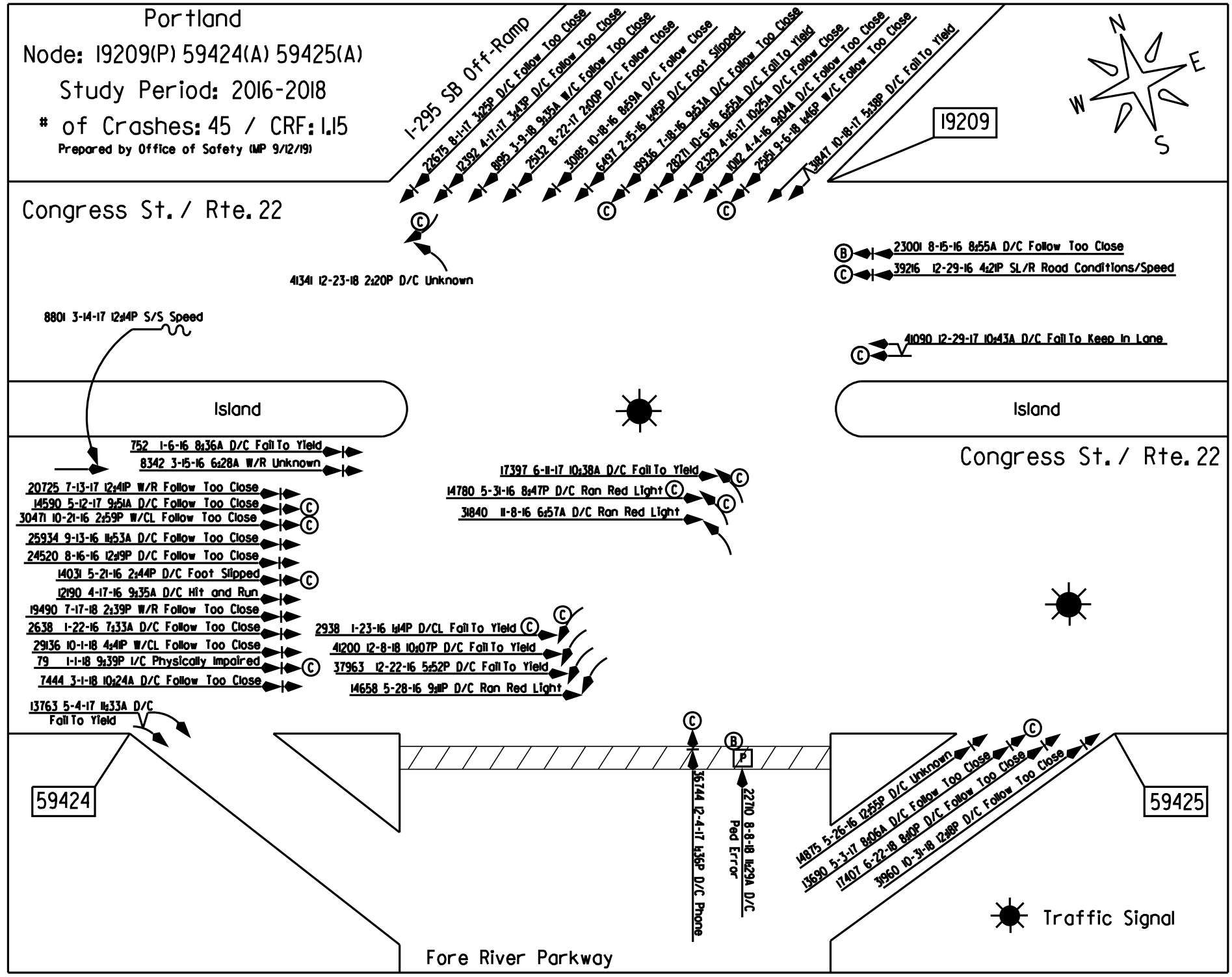
RTE # / RD #: **0022S** DATE DRAWN: **9/12/2019** DRAWN BY: **Michelle**

STUDY FROM: **1/1/2016** STUDY TO: **12/31/2018**

CRASH RATE: **1.24** CRF: **1.15** % INJURY: **35.6** TOTAL CRASHES: **45**

LEGEND




Portland
Node: 19209(P) 59424(A) 59425(A)
Study Period: 2016-2018
# of Crashes: 45 / CRF: 1.15
Prepared by Office of Safety (MP 9/12/19)
I-295 SB Off-Ramp
22675 8-1-17 3:25P D/C Follow Too Close
12392 4-17-17 3:43P D/C Follow Too Close
8895 3-9-18 9:35A W/C Follow Too Close
25132 8-22-17 2:00P D/C Follow Too Close
30885 10-18-16 8:59A D/C Follow Too Close
6497 2-15-16 1:45P D/C Foot Slipped
19336 7-18-16 9:53A D/C Follow Too Close
28271 10-6-16 6:55A D/C Fail To Yield
12329 4-16-17 10:25A D/C Follow Too Close
1012 4-4-16 9:04A D/C Follow Too Close
25151 9-6-18 1:46P W/C Follow Too Close
38847 10-18-17 5:38P D/C Fail To Yield
19209
N
E
S
W
Congress St. / Rte. 22
41341 12-23-18 2:20P D/C Unknown
23001 8-15-16 8:55A D/C Follow Too Close
39216 12-29-16 4:21P SL/R Road Conditions/Speed
8801 3-14-17 12:14P S/S Speed
41090 12-29-17 10:43A D/C Fail To Keep In Lane
Island
Island
Congress St. / Rte. 22
752 1-6-16 8:36A D/C Fail To Yield
8342 3-15-16 6:28A W/R Unknown
17397 6-11-17 10:38A D/C Fail To Yield
14780 5-31-16 8:47P D/C Ran Red Light
31840 11-8-16 6:57A D/C Ran Red Light
20725 7-13-17 12:41P W/R Follow Too Close
14590 5-12-17 9:51A D/C Follow Too Close
30471 10-21-16 2:59P W/CL Follow Too Close
25934 9-13-16 11:53A D/C Follow Too Close
24520 8-16-16 12:19P D/C Follow Too Close
14031 5-21-16 2:44P D/C Foot Slipped
12190 4-17-16 9:35A D/C Hit and Run
19490 7-17-18 2:39P W/R Follow Too Close
2638 1-22-16 7:33A D/C Follow Too Close
29136 10-1-18 4:41P W/CL Follow Too Close
79 1-1-18 9:39P I/C Physically Impaired
7444 3-1-18 10:24A D/C Follow Too Close
2938 1-23-16 1:14P D/CL Fail To Yield
41200 12-8-18 10:07P D/C Fail To Yield
37963 12-22-16 5:52P D/C Fail To Yield
14658 5-28-16 9:11P D/C Ran Red Light
13763 5-4-17 11:33A D/C Fail To Yield
59424
36744 12-4-17 1:36P D/C Phone
22710 8-8-18 11:29A D/C Ped Error
14875 5-26-16 12:55P D/C Unknown
13690 5-3-17 8:06A D/C Follow Too Close
17407 6-22-18 8:40P D/C Follow Too Close
31960 10-31-18 12:18P D/C Follow Too Close
59425
Traffic Signal
Fore River Parkway

GORRILL PALMER

707 Sable Oaks Drive, Suite 30
South Portland, Maine 04106
207.772.2515

Parking and Driveway Mitigation Evaluations
Mercy Hospital Phase II Expansion – Portland, Maine
JN 3257.04

Date: September 10, 2019
Subject: Parking and Driveway Mitigation Evaluations
Mercy Hospital Phase II Expansion
To: Nick Munro, Northern Light Health
From: Randy Dunton, Gorrill Palmer

Gorrill Palmer (GP) has been retained by Northern Light Health to provide a preliminary evaluation of potential parking deficit and driveway intersection mitigation as a result of the Phase II expansion of Mercy Hospital on Fore River Parkway in Portland, Maine. The proposed expansion includes the following:

- 32 new beds (Total of 71 beds for Phase I + II)
- 54,889 sf of new hospital (Total of 192,988 sf for Phase I + II)
- 34,987 sf ambulatory surgery center (ASC) (Total of 117,173 sf MOB for Phase I + II)

It is assumed that the ASC is medical office building space with outpatient service only.

PARKING EVALUATION

On-Site Parking Inventory

GP previously completed weekday on-site parking occupancy counts on Wednesday, January 10, 2017 from 10:30 AM to 11:30 AM and again on January 25, 2017 from 10:00 AM to 2:00 PM. Wednesday was chosen after discussions with the hospital and this was identified as their busiest day. Based on information provided in *ITE Parking Generation, 4th Edition*, 11 AM and 12 PM were identified as peak parking demand times for a hospital. The following table summarizes the parking demands that occurred on Wednesday, January 10, 2017. The attached site plan identified the individual lots counted.

January 10, 2017 Parking Inventory and Demand

Lot	Total Number of Spaces Available	Number of Parked Vehicles		
		10:30 AM	11:00 AM	11:30 AM
1	34	24	27	24
2	50	47	44	44
3	101	50	53	54
4	162	112	102	107
5	105	62	65	59
6	310	174	174	178
Total	**762**	**469**	**465**	**466**

The following table summarizes the parking demands that occurred on Wednesday, January 25, 2017. Please note that the parking times were expanded from the previous parking inventory to capture a broader time period.

January 25, 2017 Parking Inventory and Demand

Lot	Total Number of Spaces Available	Number of Parked Vehicles				
		10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM
1	34	20	23	17	14	20
2	50	44	46	42	40	41
3	101	56	57	56	55	55
4	162	115	116	107	117	146
5	105	62	64	64	65	65
6	310	181	184	205	208	187
Total	**762**	**478**	**490**	**491**	**499**	**514**

As can be seen from the above two tables, the highest parking demand in the times recorded (514 at 2:00 PM on January 25, 2017) was approximately 67 percent of the total. Please note that the parking demand trend is increasing from 10 AM to 2 PM, which indicates that later in the day after the 2 PM time period, the demand could be slightly higher. However, comparing this with other studies and the previous count, we suspect the parking demand was close to its peak. To be conservative, we added 11 parked cars to the 514 for a total of 525 vehicle peak parking demand.

It should be noted that this count is conservative, since parking for the State Street location was being provided on this campus at the time of the counts, and therefore the parking demand rate will be higher than it normally would.

Parking Demand

- Based on City Ordinance Requirements:

Using the City ordinance requirement of 1 space per 500 sf of floor area for the hospital, the existing hospital (approximately 138,099 sf) would require 276 parking spaces.

Using the City ordinance requirement of 1 space per 400 sf of floor area, the existing medical office building (MOB, approximately 82,186 sf) would require 205 parking spaces.

The total number of existing parking spaces required based on the City ordinance is 481 (276 hospital + 205 MOB = 481). Since the site currently has 762 parking spaces, it exceeds the City ordinance by approximately 281 parking spaces.

- Based on Current Parking Demand Rate:

Since the hospital and MOB share parking fields, it would be difficult to identify the destination of the driver of each of the parked cars. For the purposes of this evaluation, we assumed a conservative approach that of the parked cars, 85% of the 205 spaces identified by the City ordinance requirement (or approximately 174 spaces) are associated with the MOB. This would leave approximately 351 of the 525 peak parking demand associated with the demand for the hospital.

The existing hospital is 138,099 sf (not including MOB). Based on this size and the peak parking demand of 351 parked vehicles, the current parking demand for the Hospital is approximately 1.27 spaces per 500 sf of hospital, which is close to the City ordinance (1 per 500 sf). As noted previously, the rate was expected to be slightly higher due to State Street vehicles parking on this campus.

The existing MOB is 82,186 sf. Based on this size and the peak parking demand of 174 parked vehicles, the current parking demand for MOB is approximately 0.85 spaces per 400 sf of MOB, which is close to the City ordinance (1 per 400 sf).

- Parking Demand for the Hospital Expansion:

Based on the City ordinance (1 per 500 sf), the additional parking required for the 54,889 sf hospital expansion is 110 parking spaces. Using the estimated existing rate identified by the counts (1.27 per 500 sf), the increased parking demand would be 140 parking spaces.

- Parking Demand for the MOB Expansion:

Based on the City ordinance (1 per 400 sf), the additional parking required for the 34,987 sf MOB expansion is 88 parking spaces. Using the estimated existing rate identified by the counts (0.85 per 400 sf), the increased parking demand would be 75 parking spaces.

- Recommended Site Parking Supply After Hospital Expansion:

The forecast parking demand of 198 spaces using the ordinance or 215 parking spaces using the calculated rate, plus the existing parking demand of 525 parking spaces is approximately 723 to 740 parking spaces. When determining parking demands, the standard is to provide "practical capacity", which is approximately 15% additional parking than the forecast demand. This "practical capacity" provides enough additional parking spaces so the last few drivers do not have to drive around the entire parking area in order to find a parking space. Applying this "practical capacity" adjustment increases the recommended parking demand to approximately 831 to 851 parking spaces. Upon completion of Phase 11, the total on-site parking supply will be 857 parking spaces, a surplus of approximately 6 to 26 parking spaces more than what is needed.

Parking Layout

As part of the hospital expansion, some parking will be displaced. The proposed hospital expansion will displace approximately 105 parking spaces (staff only). In addition, 19 parking spaces will be needed for the emergency department (ED). The site plan submitted under separate cover shows the 105 relocated parking spaces and the 19 ED spaces.

As previously identified, ample parking will be provided on-site.

DRIVEWAY MITIGATION EVALUATION

In addition to evaluating the parking demand, GP also evaluated the potential for additional mitigation at the site driveways to accommodate the additional traffic generated by the proposed hospital expansion. The following is a summary of the findings:

Collision Data

GP obtained the crash data for the area surrounding the site from the MaineDOT for the period of 2016-2018, the most recent three-year period available. In order to evaluate whether a location has a crash problem, MaineDOT uses two criteria to define a High Crash Location (HCL). Both criteria must be met in order to be classified as an HCL.

1. A critical rate factor (CRF) of 1.00 or more for a three year period. A CRF compares the actual crash rate to the rate for similar intersections in the state. A CRF of less than 1.00 indicates a rate of less than average, **and**:

2. A minimum of eight crashes over the same three-year period.

Based on the crash data report generated by MaineDOT, there are no HCLs in the vicinity of the site. Although there are no HCLs in the vicinity of the site, the intersection of Fore River Parkway with Veterans Bridge meets one of the two criteria with 12 crashes and a CRF of 0.37 during the most recent three year period.

It is also important to note that there were no crashes involving pedestrians or bicyclists in the most recent three year period.

Existing Traffic Volumes

GP completed turning movement counts on Wednesday, January 25, 2017 at the two site driveways on Fore River Parkway from 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM. As identified in a previous section, Wednesdays were identified by the Hospital as being their busiest day. The results of the counts are shown on the attached Figure 2.

2022 Predevelopment Design Hour Volumes

The traffic volumes in Figure 2 were counted in late January. The Fore River Parkway traffic volumes are adjusted to the 30th highest hour of the year using MaineDOT weekly group mean factors. This adjustment increases the Fore River volumes to those that may be experienced during peak summer months. This seasonal adjustment resulted in an increase of 18%. The traffic volumes into and out of the site are not adjusted by a seasonal adjustment.

In addition to seasonally adjusting the Fore River Parkway traffic volumes, they are also increased by an annual growth to estimate traffic volumes for the build out year of the project. MaineDOT traffic counts in the area show an average increase in traffic volumes of approximately 1.5% per year, which was utilized to increase the Fore River Parkway counted volumes. The build out year for the hospital is anticipated to be 2022. The 2022 Adjusted Volumes on the attached Figure 3 reflect the seasonal and annual adjustments for the Fore River traffic volumes.

Approved projects that are not yet opened, as well as projects for which applications have been filed are required to be included in the predevelopment volumes on Fore River Parkway. This initial evaluation was started in 2017, and at that time GP included traffic from the full build-out of the Thompson's Point development. It should be noted that this project has standing since 2002. To be conservative GP increased the through traffic by 25% to accommodate for other development traffic and is shown on the attached Figure 4.

The 2022 Adjusted Volumes on the attached Figure 3 have been combined with the Other Development traffic volumes on Figure 4 to yield the 2022 Predevelopment shown on Figure 5.

Increase in Traffic due to Hospital Expansion

To calculate the trip generation for the proposed hospital expansion (54,889 SF & 32 new beds), GP utilized two separate sources. The first source was to use the same trip generation rates that were used in the previously approved 2001 Traffic Impact Study completed by DeLuca-Hoffman Associates, Inc. The second source was to use the ITE *Trip Generation*, 10th Edition, Land Use Code (LUC) 610 – Hospital to forecast trip generation for the proposed expansion. The trip generation has been based on the average of the trip generation for gross floor area (GFA) and number of beds. The number of employees was not used in the original 2001 study and to ensure we were comparing "apples to apples" the same methodology was used using the ITE source.

GP also used LUC 720 – Medical / Dental Office Building for the proposed ASC facility (34,987 SF).

Based on the MaineDOT Traffic Movement Permit (TMP) (Div. 06-00035-A-N) issued on 5-13-2002, the site is permitted for 784 AM and 687 PM peak hour trips during the adjacent street peak hours and 990 PM peak hour trips of the generator.

Trip Generation Summary

	AM Adjacent St			PM Adjacent St		
	In	Out	Total	In	Out	Total
Permitted for Site	598	186	784	222	465	687
Counted for Site	185	53	238	64	173	237
Proposed Hospital Expansion using 2001 Rates	59	19	78	21	38	59
Proposed Hospital Expansion using ITE 10th Edition	38	16	54	17	40	57
Proposed ASC Facility using ITE 10th Edition	78	19	97	36	85	121
Remaining Trip Credit using: 2001 Rates & (ITE 10 Edition)	276 (297)	95 (98)	371 (395)	101 (105)	169 (167)	270 (272)

(xx) = Remaining Trip Credit using ITE 10th Edition for all uses

As shown in the table, the site is well below the permitted trip generation with 371 AM and 270 PM peak hour trip end **credits** using the original trip rates from the 2001 Traffic Impact Study and 395 AM and 272 PM peak hour trip end **credits** using the most current edition of ITE. As identified previously, this also includes employees from the State Street location already parking on this site.

Since the existing plus proposed trip generation is forecast to be well below both the AM and PM permitted peak hour trips, it is our opinion that no modification is required to the previously issued TMP.

For the purposes of the remainder of the study, to be conservative the trip generation using the previous 2001 TIS was used since it is slightly higher than the trip generation using the ITE rates.

Trip Distribution and Assignment

GP has assumed that all trips are primary in nature, with the sole purpose of going to and from the site. The trip distribution and assignment has been based on the existing traffic patterns and is shown on the attached Figure 6.

2022 Postdevelopment Design Hour Volumes

The 2022 Predevelopment Design Hour Volumes (DHV) shown on Figure 5 have been combined with the traffic forecast for the development shown on Figure 6 to yield the 2022 Postdevelopment DHV shown on the attached Figure 7.

Capacity Analysis

GP completed capacity analyses for the site driveways using Synchro/SimTraffic computer analysis software with and without the hospital expansion. Level of service rankings are similar to the academic ranking system where an 'A' is very good with little control delay and an 'F' represents very congested traffic conditions. If the level of service falls below a 'D,' an evaluation should be made to determine if mitigation is warranted. The following tables summarize the relationship between control delay and level of service for signalized and unsignalized intersections.

Level of Service Criteria for Signalized Intersections

Level of Service	Control Delay per Vehicle (sec)
A	Less than 10.0
B	10.1 to 20.0
C	20.1 to 35.0
D	35.1 to 55.0
E	55.1 to 80.0
F	Greater than 80.0

Level of Service Criteria for Unsignalized Intersections

Level of Service	Control Delay per Vehicle (sec)
A	Less than 10.0
B	10.1 to 15.0
C	15.1 to 25.0
D	25.1 to 35.0
E	35.1 to 50.0
F	Greater than 50.0

The results of the capacity analysis are summarized as follows. The detailed analyses are attached.

Level of Service Summary

Approach	Level of Service			
	AM Pre	AM Post	PM Pre	PM Post
Fore River / North Driveway (unsignalized)				
Driveway WB	A	A	A	A
Fore River NB	A	A	A	A
Fore River SB	A	A	A	A
Fore River / South Driveway (signalized)				
Driveway WB	B	B	B	B
Fore River NB	A	A	A	A
Fore River SB	A	A	A	A
Overall	**A**	**A**	**A**	**A**

As shown in the table, the two site driveways are forecast to operate at high levels of service both before and after the campus expansion is completed. The expansion is not forecast to change the levels of service at either site driveway.

Queuing Analysis

GP completed queuing analyses for the site driveways using the same Synchro/SimTraffic used to complete the capacity analysis with and without the hospital expansion. The queue analysis involves comparing the 95th percentile queue length to the available storage length. The following table summarizes the storage lengths and the 95th percentile queue lengths for the two site driveways:

Queue Analysis Summary

Approach	Storage Length (ft)	95th Percentile Queue Length (ft)			
		AM Pre	AM Post	PM Pre	PM Post
Fore River / North Driveway (unsignalized)					
Driveway WB	NA	45	60	60	80
Fore River NB R	170	5	15	5	5
Fore River SB L	270	55	65	40	55
Fore River / South Driveway (signalized)					
Driveway WB L	NA	55	65	55	75
Driveway WB R	100	15	25	40	50
Fore River NB R	400	--	--	--	--
Fore River SB L	500	35	40	15	25

For the purposes of queue length evaluation, the length of one car and the associated space between cars is considered to be 25 feet. The 95th percentile queue lengths are forecast to increase by one vehicle or less from the predevelopment to the postdevelopment conditions. Additionally, the available storage lengths can accommodate the 95th percentile queue lengths after the expansion is completed. This analysis reflects timing changes from pre to post development conditions.

Lane Warrant Analysis

GP would typically complete a lane warrant analysis for Fore River Parkway at the site driveways to determine if left or right turn auxiliary lanes are warranted. However, Fore River Parkway at both site driveways has both left and right turn storage lanes at both site driveways, so no lane warrant analysis was required.

CONCLUSIONS / RECOMMENDATIONS

The following is a summary of the conclusions and recommendations based on the parking and driveway mitigation analyses:

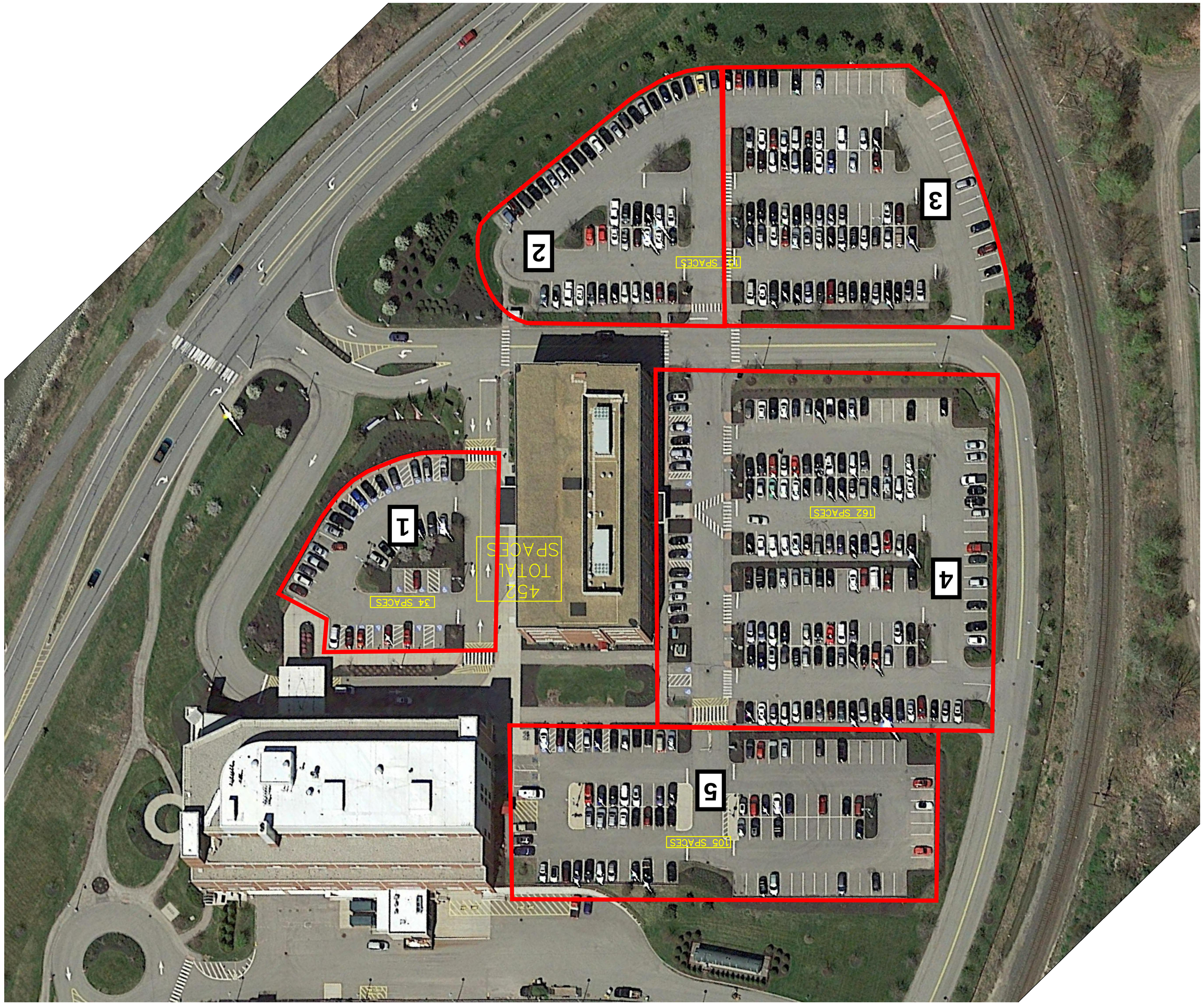
1. The recommended on-site parking supply after the construction of the proposed campus expansion and including adjustment for "practical capacity" is 831 to 851 parking spaces. The expansion will supply 857 parking spaces, a surplus of 6 to 26 spaces more than what is needed.

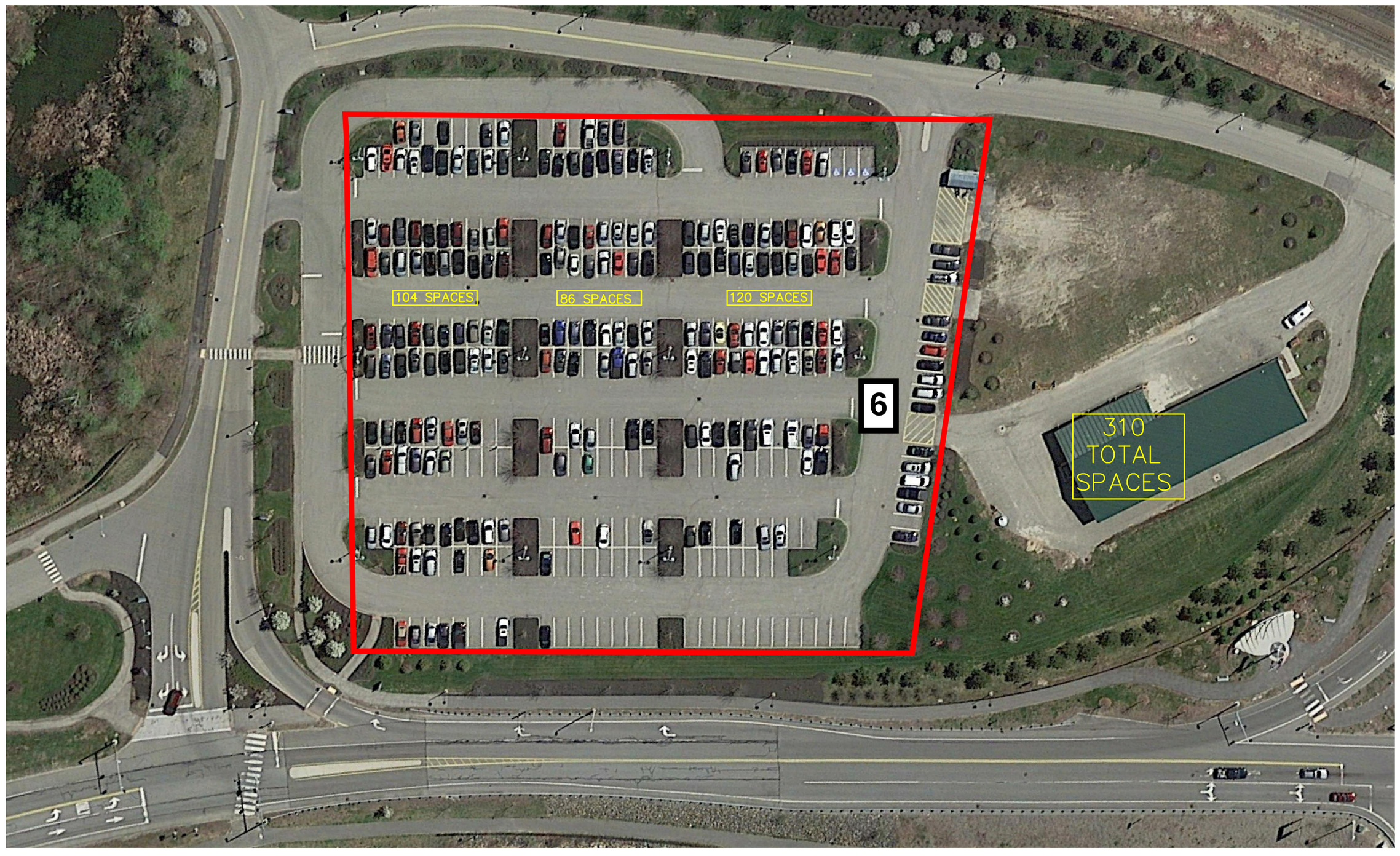
2. The campus expansion and ASC facility is forecast to generate 175 trip ends during the AM peak hour of the adjacent street and 180 trip ends during the PM peak hour of the adjacent street. In reviewing the previously issued MaineDOT Traffic Movement Permit for this

project, the site is forecast to still be well below the permitted trip generations and therefore will not require any modifications to the permit.

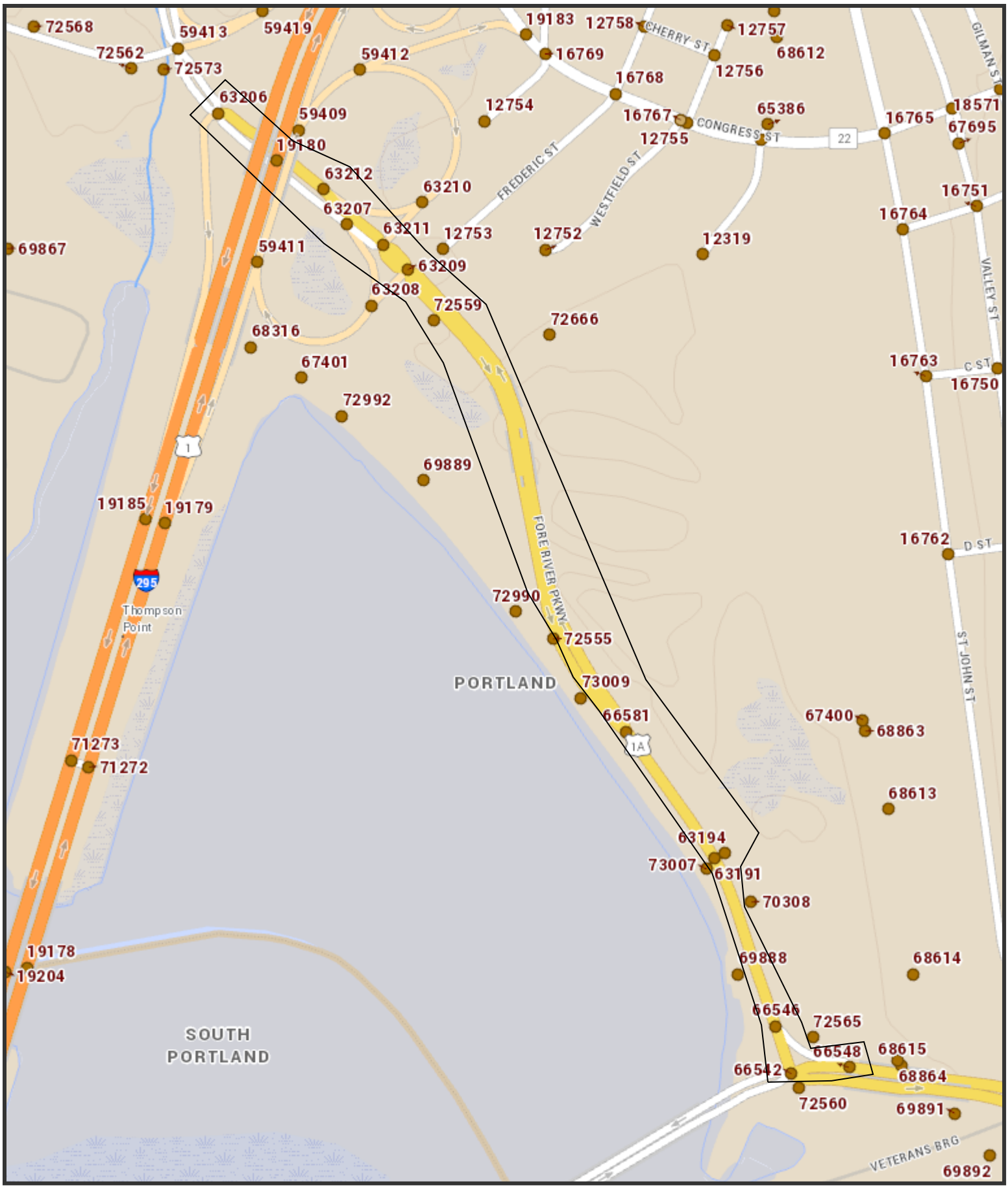
3. The MaineDOT crash data indicates that there are no high crash locations in the vicinity of the site.

4. The intersections of Fore River Parkway with the site driveways are forecast to operate at acceptable levels of service with no additional mitigation required.


1
34 SPACES
452
TOTAL
SPACES
2
2 SPACES
3
4
162 SPACES
5
105 SPACES


104 SPACES
86 SPACES
120 SPACES
6
310
TOTAL
SPACES

PORTLAND NODE MAP



The Maine Department of Transportation provides this publication for information only. Reliance upon this information is at user risk. It is subject to revision and may be incomplete depending upon changing conditions. The Department assumes no liability if injuries or damages result from this information. This map is not intended to support emergency dispatch.

0.1 Miles

1 inch = 0.11 miles

Date: 8/7/2018
Time: 9:56:48 AM

Crash Summary Report

Report Selections and Input Parameters

REPORT SELECTIONS

☑ Crash Summary I ☐ Section Detail ☑ Crash Summary II ☐ 1320 Public ☐ 1320 Private ☐ 1320 Summary

REPORT DESCRIPTION

Portland: Rte 1A/Fore River Pkwy from the I-95 SB on-ramp (node 63206) to Veterans Memorial Bridge (nodes 66542 NB, 66548 SB)

REPORT PARAMETERS

Year 2016, Start Month 1 through Year 2018 End Month: 12

Route: 0001A	Start Node: 63211	Start Offset: 0	☐ Exclude First Node
	End Node: 66542	End Offset: 0	☐ Exclude Last Node
Route: 320556S	Start Node: 63206	Start Offset: 0	☐ Exclude First Node
	End Node: 63211	End Offset: 0	☑ Exclude Last Node
Route: 3209586	Start Node: 66548	Start Offset: 0	☑ Exclude First Node
	End Node: 66546	End Offset: 0	☑ Exclude Last Node
Route: 001AS	Start Node: 66548	Start Offset: 0	☐ Exclude First Node
	End Node: 66542	End Offset: 0	☑ Exclude Last Node
Route: 001AS	Start Node: 66581	Start Offset: 0	☑ Exclude First Node
	End Node: 63209	End Offset: 0	☑ Exclude Last Node
Route: 001AS	Start Node: 63209	Start Offset: 0	☑ Exclude First Node
	End Node: 63211	End Offset: 0	☑ Exclude Last Node
Route: 001AS	Start Node: 63211	Start Offset: 0	☑ Exclude First Node
	End Node: 63206	End Offset: 0	☑ Exclude Last Node

Crash Summary I

Nodes

Node	Route - MP	Node Description	U/R	Total Crashes	Injury Crashes K	A	B	C	PD	Percent Injury	Annual M Ent-Veh	Crash Rate	Critical Rate	CRF
63209	0001A - 9.11	Int of FORE RIVER PKY RAMP ONTO I 295	2	2	0	0	0	0	2	0.0	3.343	0.20	0.33	0.00
												Statewide Crash Rate:	0.11	
66581	0001A - 9.45	Non Int FORE RIVER PKY	2	0	0	0	0	0	0	0.0	3.127	0.00	0.42	0.00
												Statewide Crash Rate:	0.15	
63191	0001A - 9.55	Int of FORE RIVER PKY, RD INV 3201441	9	4	0	0	2	0	2	50.0	3.300	0.40	1.38	0.00
												Statewide Crash Rate:	0.73	
66542	0001A - 9.70	Int of FORE RIVER PKY VETERANS BRIDGE	9	12	0	0	0	1	11	8.3	9.466	0.42	1.13	0.00
												Statewide Crash Rate:	0.73	
66546	0001A - 9.67	Int of FORE RIVER PKY RD INV 3209586	2	0	0	0	0	0	0	0.0	3.306	0.00	0.42	0.00
												Statewide Crash Rate:	0.15	
63211	0001A - 9.08	Int of FORE RIVER PKY RD INV 3201452	2	2	0	0	1	0	1	50.0	3.415	0.20	0.33	0.00
												Statewide Crash Rate:	0.11	
63206	320556S - 0.18	Int of FORE RIVER PKY RINV 3200154	2	0	0	0	0	0	0	0.0	6.024	0.00	0.28	0.00
												Statewide Crash Rate:	0.11	
63207	320556S - 0.29	Int of FORE RIVER PKY RINV 05 E1000	2	0	0	0	0	0	0	0.0	2.104	0.00	0.37	0.00
												Statewide Crash Rate:	0.11	
66548	001AS - 2.59	Int of FORE RIVER PKY RD INV 3209586	2	0	0	0	0	0	0	0.0	5.487	0.00	0.37	0.00
												Statewide Crash Rate:	0.15	
63212	001AS - 3.04	Int of FORE RIVER PKY RINV 05 G1000	2	1	0	0	0	0	1	0.0	2.672	0.12	0.35	0.00
												Statewide Crash Rate:	0.11	
Study Years:	3.00	NODE TOTALS:		21	0	0	3	1	17	19.0	42.244	0.17	0.43	0.38

Crash Summary I

Sections

Start Node	End Node	Element	Offset Begin - End	Route - MP	Section Length	U/R	Total Crashes	Injury Crashes K	A	B	C	PD	Percent Injury	Annual HMVM	Crash Rate	Critical Rate	CRF
63211	63209	3115957	0 - 0.03	0001A - 9.08	0.03	2	0	0	0	0	0	0	0.0	0.00050	0.00	860.52	0.00
Int of FORE RIVER PKY RD INV 3201452				US 1A											Statewide Crash Rate: 216.35		
63209	66581	3129848	0 - 0.34	0001A - 9.11	0.34	2	2	0	0	0	1	1	50.0	0.00520	128.24	487.69	0.00
Int of FORE RIVER PKY RAMP ONTO I 295				US 1A											Statewide Crash Rate: 216.35		
66581	63191	3097052	0 - 0.10	0001A - 9.45	0.10	2	1	0	0	0	1	0	100.0	0.00320	104.30	551.16	0.00
Non Int FORE RIVER PKY				US 1A											Statewide Crash Rate: 216.35		
63191	66546	3117411	0 - 0.12	0001A - 9.55	0.12	2	0	0	0	0	0	0	0.0	0.00350	0.00	538.51	0.00
Int of FORE RIVER PKY, RD INV 3201441				US 1A											Statewide Crash Rate: 216.35		
66546	66542	3508657	0 - 0.03	0001A - 9.67	0.03	2	0	0	0	0	0	0	0.0	0.00064	0.00	820.32	0.00
Int of FORE RIVER PKY RD INV 3209586				US 1A											Statewide Crash Rate: 216.35		
63206	63207	3116343	0 - 0.11	320556S - 0.18	0.11	2	0	0	0	0	0	0	0.0	0.00231	0.00	599.07	0.00
Int of FORE RIVER PKY RINV 3200154				RD INV 320566S											Statewide Crash Rate: 216.35		
63207	63211	3121828	0 - 0.03	320556S - 0.29	0.03	2	0	0	0	0	0	0	0.0	0.00058	0.00	838.75	0.00
Int of FORE RIVER PKY RINV 05 E1000				RD INV 320566S											Statewide Crash Rate: 216.35		
66548	66546	3120374	0 - 0.06	3209586 - 0	0.06	2	0	0	0	0	0	0	0.0	0.00047	0.00	871.64	0.00
Int of FORE RIVER PKY RD INV 3209586				RD INV 3209586											Statewide Crash Rate: 216.35		
66548	66542	3121654	0 - 0.04	001AS - 2.59	0.04	2	0	0	0	0	0	0	0.0	0.00188	0.00	631.93	0.00
Int of FORE RIVER PKY RD INV 3209586				US 1AS											Statewide Crash Rate: 216.35		
66581	63209	3129849	0 - 0.34	001AS - 2.63	0.34	2	0	0	0	0	0	0	0.0	0.00567	0.00	477.50	0.00
Non Int FORE RIVER PKY				US 1AS											Statewide Crash Rate: 216.35		
63209	63211	3130274	0 - 0.02	001AS - 2.97	0.02	2	0	0	0	0	0	0	0.0	0.00029	0.00	926.69	0.00
Int of FORE RIVER PKY RAMP ONTO I 295				US 1AS											Statewide Crash Rate: 216.35		
63211	63212	3130132	0 - 0.05	001AS - 2.99	0.05	2	0	0	0	0	0	0	0.0	0.00087	0.00	766.33	0.00
Int of FORE RIVER PKY RD INV 3201452				US 1AS											Statewide Crash Rate: 216.35		
63212	63206	3118571	0 - 0.09	001AS - 3.04	0.09	2	0	0	0	0	0	0	0.0	0.00245	0.00	590.16	0.00
Int of FORE RIVER PKY RINV 05 G1000				US 1AS											Statewide Crash Rate: 216.35		
Study Years: 3.00				Section Totals:	1.36		3	0	0	0	2	1	66.7	0.02756	36.29	342.08	0.11
				Grand Totals:	1.36		24	0	0	3	3	18	25.0	0.02756	290.30	478.87	0.61

Crash Summary

Section Details

Start Node	End Node	Element	Offset Begin - End	Route - MP	Total Crashes	Injury Crashes K	A	B	C	PD	Crash Report	Crash Date	Crash Mile Point	Injury Degree
63211	63209	3115957	0 - 0.03	0001A - 9.08	0	0	0	0	0	0				
63209	66581	3129848	0 - 0.34	0001A - 9.11	2	0	0	0	1	1	2016-4063	02/05/2016	9.15	PD
											2017-15583	05/25/2017	9.24	C
66581	63191	3097052	0 - 0.10	0001A - 9.45	1	0	0	0	1	0	2018-17191	06/21/2018	9.51	C
63191	66546	3117411	0 - 0.12	0001A - 9.55	0	0	0	0	0	0				
66546	66542	3508657	0 - 0.03	0001A - 9.67	0	0	0	0	0	0				
63206	63207	3116343	0 - 0.11	320556S - 0.18	0	0	0	0	0	0				
63207	63211	3121828	0 - 0.03	320556S - 0.29	0	0	0	0	0	0				
66548	66546	3120374	0 - 0.06	3209586 - 0	0	0	0	0	0	0				
66548	66542	3121654	0 - 0.04	001AS - 2.59	0	0	0	0	0	0				
66581	63209	3129849	0 - 0.34	001AS - 2.63	0	0	0	0	0	0				
63209	63211	3130274	0 - 0.02	001AS - 2.97	0	0	0	0	0	0				
63211	63212	3130132	0 - 0.05	001AS - 2.99	0	0	0	0	0	0				
63212	63206	3118571	0 - 0.09	001AS - 3.04	0	0	0	0	0	0				
				Totals:	3	0	0	0	2	1				

Crash Summary II - Characteristics

Crashes by Day and Hour

	AM												Hour of Day	PM											
Day Of Week	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	Un	Tot
SUNDAY	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	1	0	0	0	3
MONDAY	0	0	0	0	0	0	0	0	0	0	1	0	0	2	1	0	0	0	0	0	0	0	0	0	0	4
TUESDAY	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	4
WEDNESDAY	0	0	0	0	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
THURSDAY	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	0	0	2	0	0	0	5
FRIDAY	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	4
SATURDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Totals	0	0	0	0	0	0	1	2	4	0	4	0	0	2	2	0	1	4	0	1	0	3	0	0	0	24

Vehicle Counts by Type

Unit Type	Total	Unit Type	Total
1-Passenger Car	24	23-Bicyclist	0
2-(Sport) Utility Vehicle	12	24-Witness	5
3-Passenger Van	1	25-Other	2
4-Cargo Van (10K lbs or Less)	1	26-Construction	0
5-Pickup	3	27-Farm Vehicle	0
6-Motor Home	0	Total	51
7-School Bus	0		
8-Transit Bus	2		
9-Motor Coach	0		
10-Other Bus	0		
11-Motorcycle	1		
12-Moped	0		
13-Low Speed Vehicle	0		
14-Autocycle	0		
15-Experimental	0		
16-Other Light Trucks (10,000 lbs or Less)	0		
17-Medium/Heavy Trucks (More than 10,000 lbs)	0		
18-ATV - (4 wheel)	0		
20-ATV - (2 wheel)	0		
21-Snowmobile	0		
22-Pedestrian	0		

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JOB 3257.04 – Mercy Hospital
SHEET NO. 1 OF 3
CALCULATED BY MC DATE 9/5/19
CHECKED BY DATE
SCALE

Task: Determine trip generation for proposed Mercy Hospital

Assumptions: Hospital:
→ Gross Floor Area: 54,889 SF
→ Number of Beds: 32

Source: 2001 Traffic Impact Study Prepared by Deluca-Hoffman

Calculations:

Based on GFA (Per thousand #)

AM Peak Hour of Adjacent Street

Trip Rate = 1.46 Trips = 1.46 (54.889) → 80 TE 75%/25%

PM Peak Hour of Adjacent Street

Trip Rate = 1.10 Trips = 1.10 (54.889) → 60 TE 35%/65%

Based on number of beds

AM Peak Hour of Adjacent Street

Trip Rate = 2.36 Trips = 2.36 (32) → 76 TE 75%/25%

PM Peak Hour of Adjacent Street

Trip Rate = 1.78 Trips = 1.78 (32) → 57 TE 35%/65%

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JOB 3257.04 - Mercy Hospital
SHEET NO. 2 OF 3
CALCULATED BY MC DATE 9/5/19
CHECKED BY DATE
SCALE

Task: Determine trip generation for proposed Mercy Hospital

Assumptions: Hospital:
→ Gross Floor Area: 54,889 SF
→ Number of Beds: 32

Source: ITE Trip Generation, 10th Edition
LUC 610 - Hospital

Calculations:

Based on GFA (per thousand #)

AM Peak Hour of Adjacent Street
Trip Rate = 0.89 Trips = 0.89(54.889) → 49 TE 70%/30%

PM Peak Hour of Adjacent Street
Trip Rate = 0.97 Trips = 0.97(54.889) → 53 TE 30%/70%

Based on number of beds

AM Peak Hour of Adjacent Street
Trip Rate = 1.84 Trips = 1.84(32) → 59 TE 70%/30%

PM Peak Hour of Adjacent Street
Trip Rate = 1.89 Trips = 1.89(32) → 60 TE 30%/70%

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JOB 3257.04 – Mercy Hospital
SHEET NO. 3 OF 3
CALCULATED BY MC DATE 9/5/19
CHECKED BY _____ DATE _____
SCALE _____

Task: Determine trip generation for proposed Ambulatory Surgery Center (ASC)

Assumptions: ASC:
→ Gross Floor Area: 34,987 SF
→ Number of beds: 0

Source: ITE Trip Generation, 10th Edition
LUC 720 – Medical / Dental Office Building

Calculations:

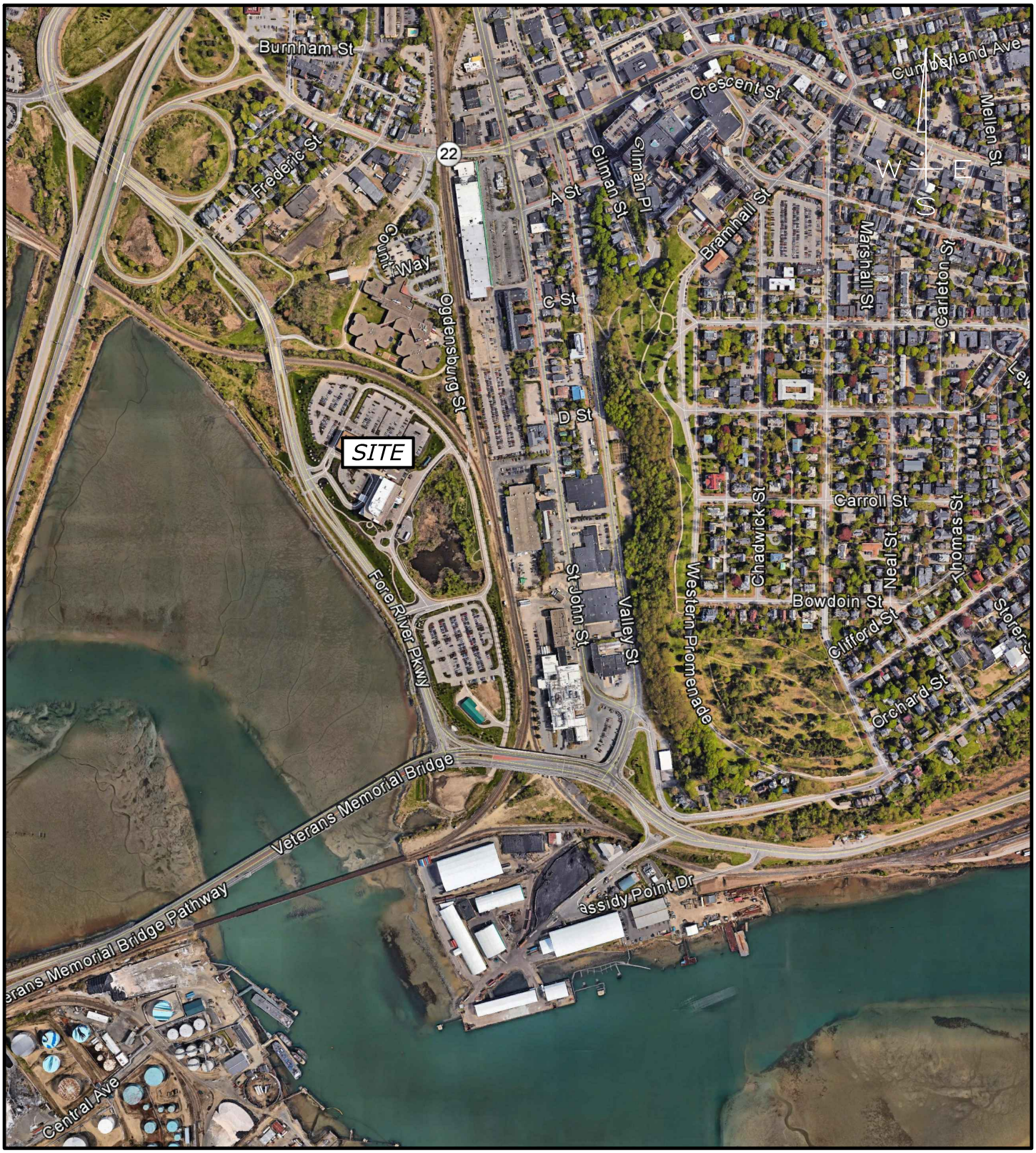
Based on GFA (Per thousand #)

AM Peak Hour of Adjacent Street
Trip Rate = 2.78 Trips = 2.78 (34.987) → 97 TE 80% / 20%

PM Peak Hour of Adjacent Street
Trip Rate = 3.46 Trips = 3.46 (34.987) → 121 TE 30% / 70%

Location Map

Figure No. 1



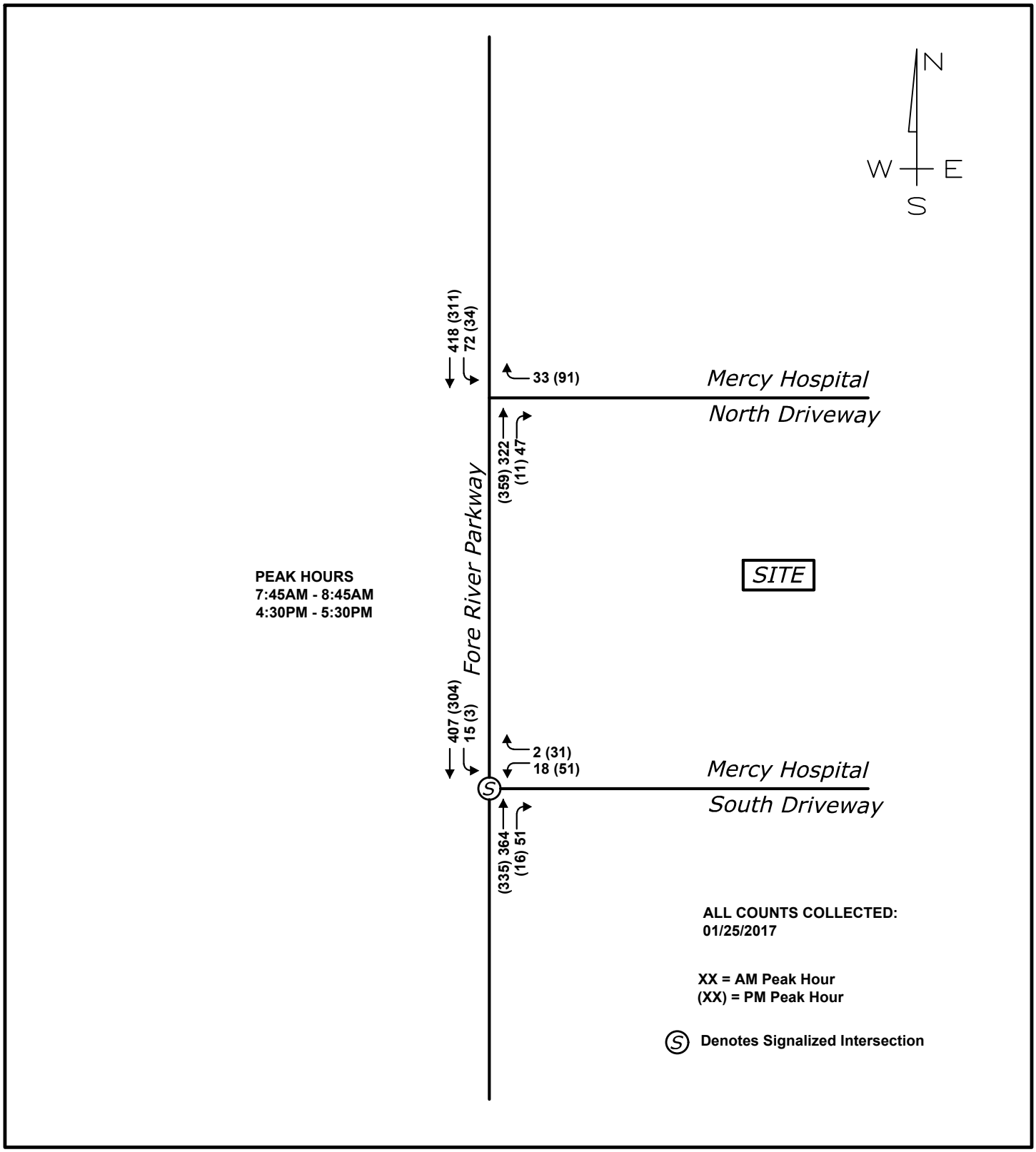
MERCY EXPANSION
PORTLAND, MAINE

Design:	ET	Scale:	NONE
Draft:	LAN	Date:	FEB 2017
Checked:	RED	File Name:	3257.04-TRAFF.dwg

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Raw Volumes

Figure No. 2



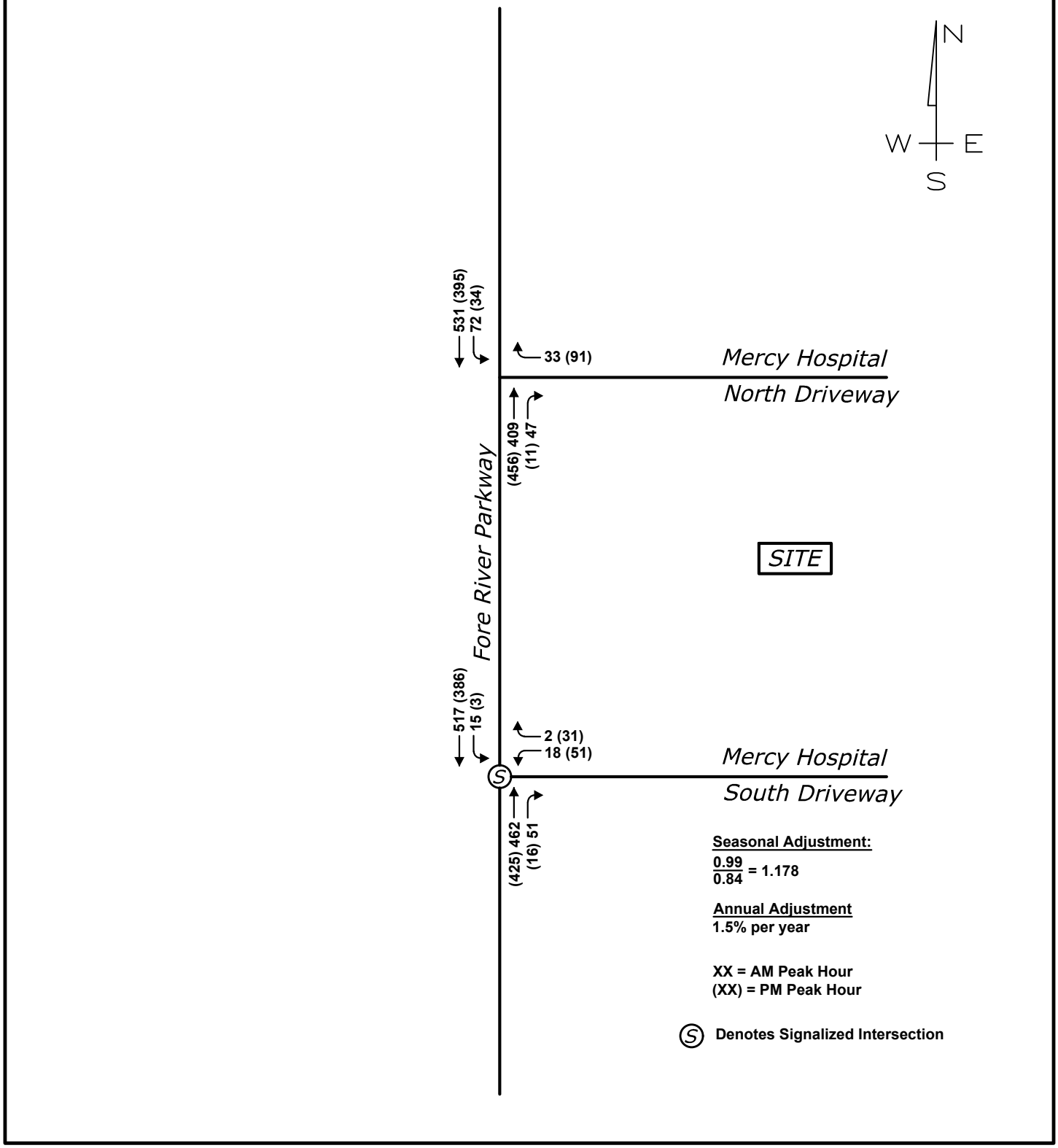
MERCY EXPANSION
PORTLAND, MAINE

Design:	ET	Scale:	NONE
Draft:	LAN	Date:	FEB 2017
Checked:	RED	File Name:	3257.04-TRAFF.dwg

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2022 Adjusted Volumes

Figure No. 3



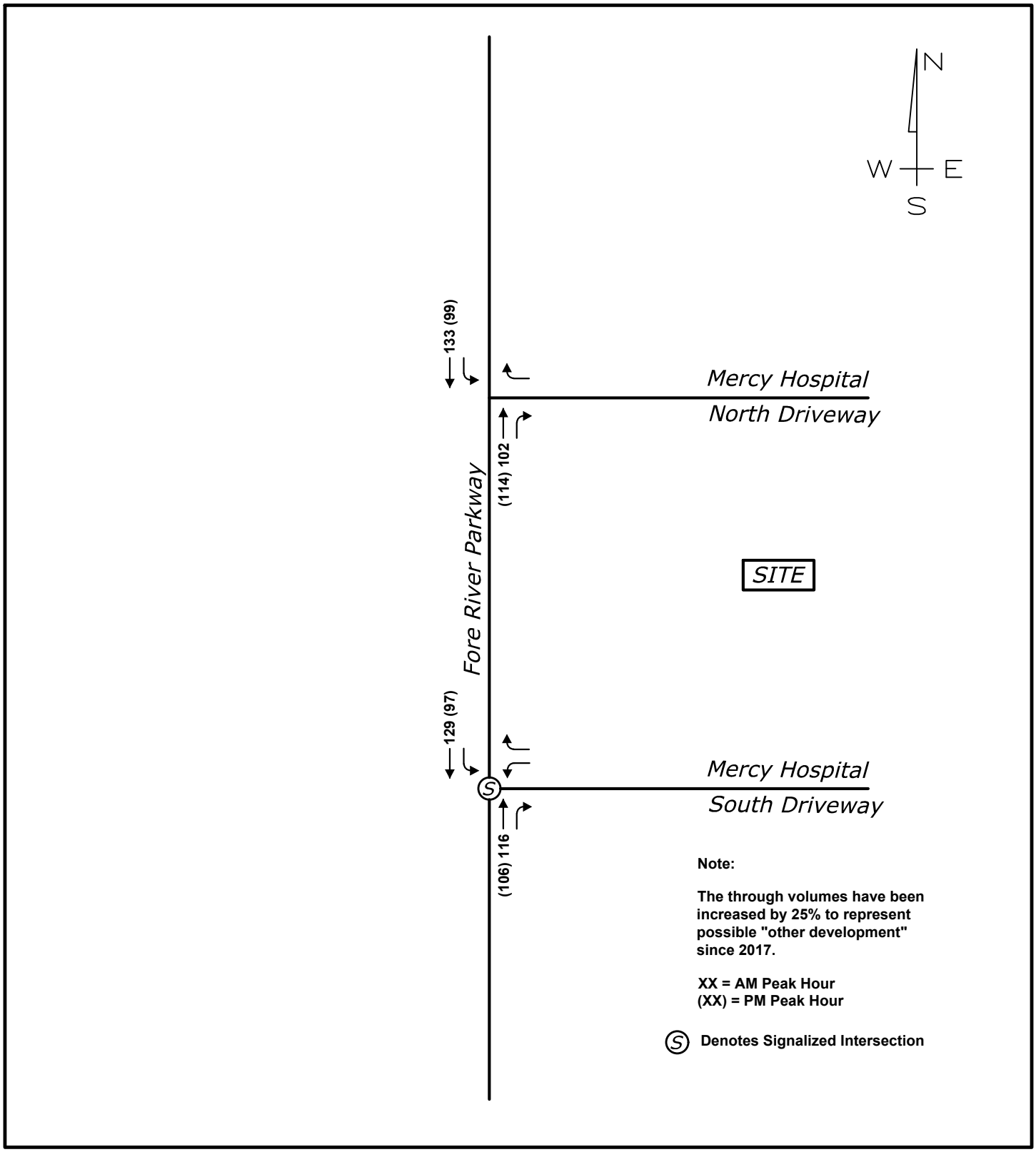
MERCY EXPANSION
PORTLAND, MAINE

Design: MC
Draft: LAN
Checked: RED
Scale: NONE
Date: SEPTEMBER 6, 2019
File Name: 3257.04-TRAFF.dwg

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Other Development

Figure No. 4



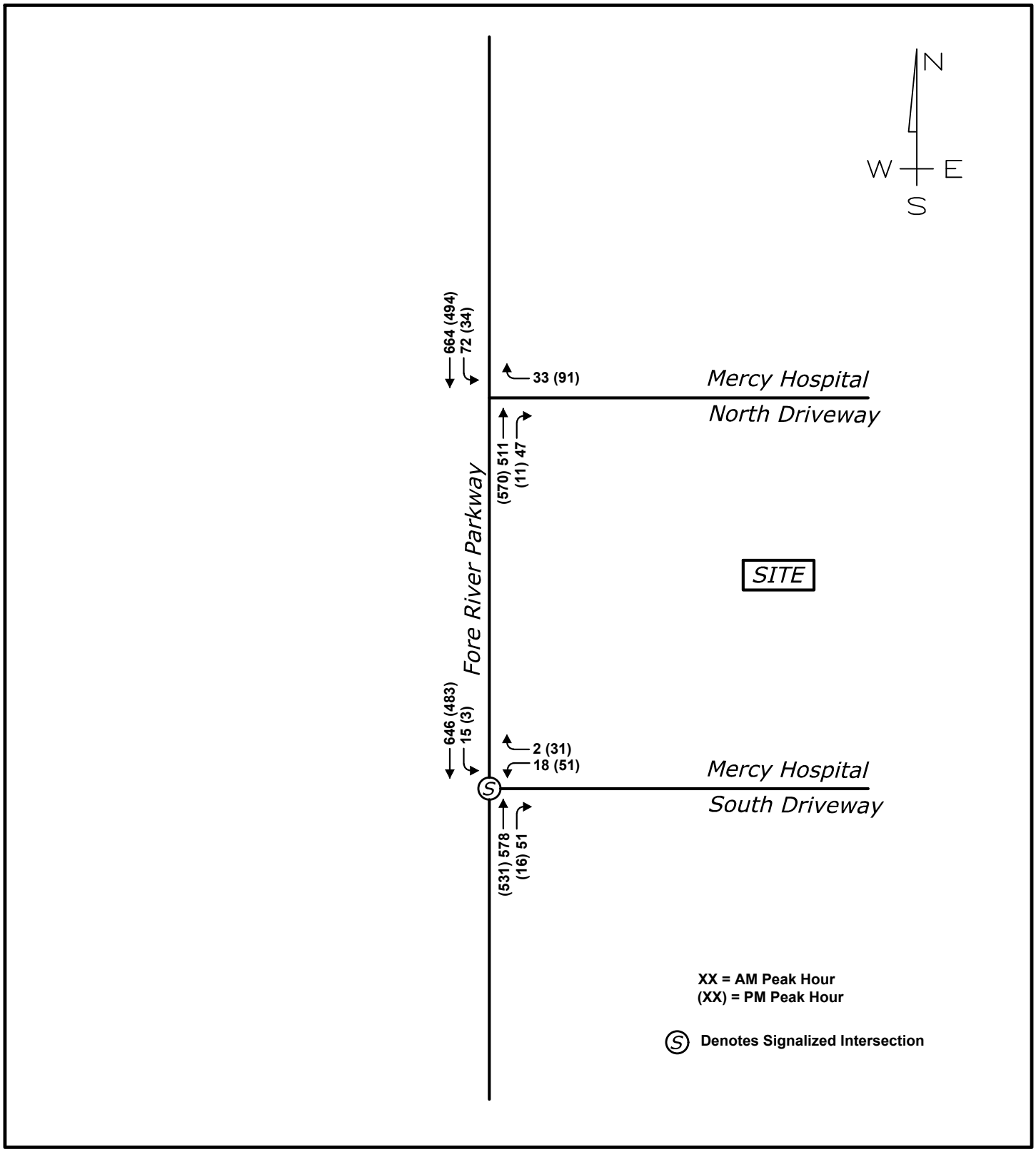
MERCY EXPANSION
PORTLAND, MAINE

Design: MC Scale: NONE
Draft: LAN Date: SEPTEMBER 6, 2019
Checked: RED File Name: 3257.04-TRAFF.dwg

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2022 Predevelopment DHV

Figure No. 5



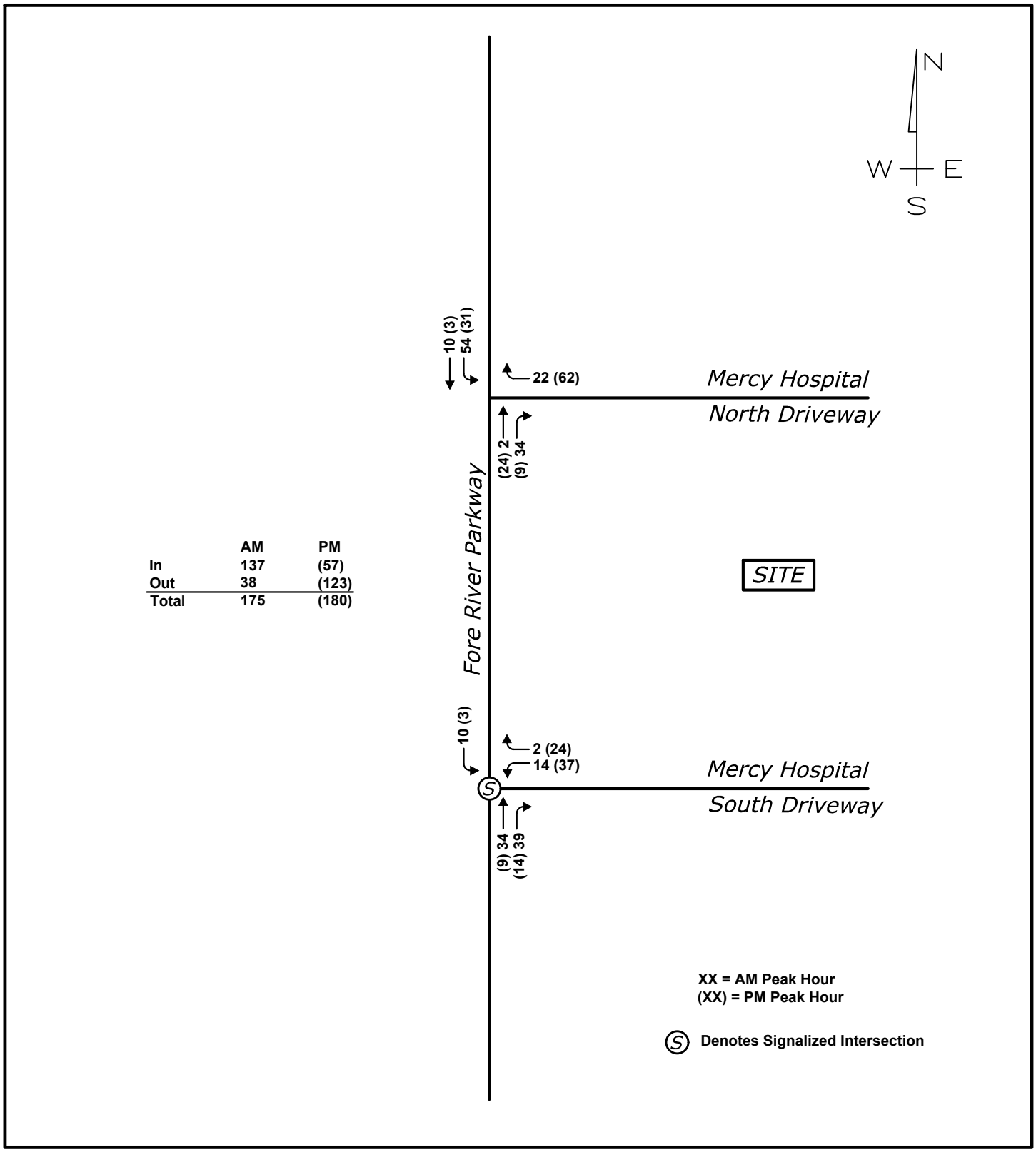
MERCY EXPANSION
PORTLAND, MAINE

Design:	MC	Scale:	NONE
Draft:	LAN	Date:	SEPTEMBER 6, 2019
Checked:	RED	File Name:	3257.04-TRAFF.dwg

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Trip Assignment

Figure No. 6



	AM	PM
In	137	(57)
Out	38	(123)
Total	175	(180)

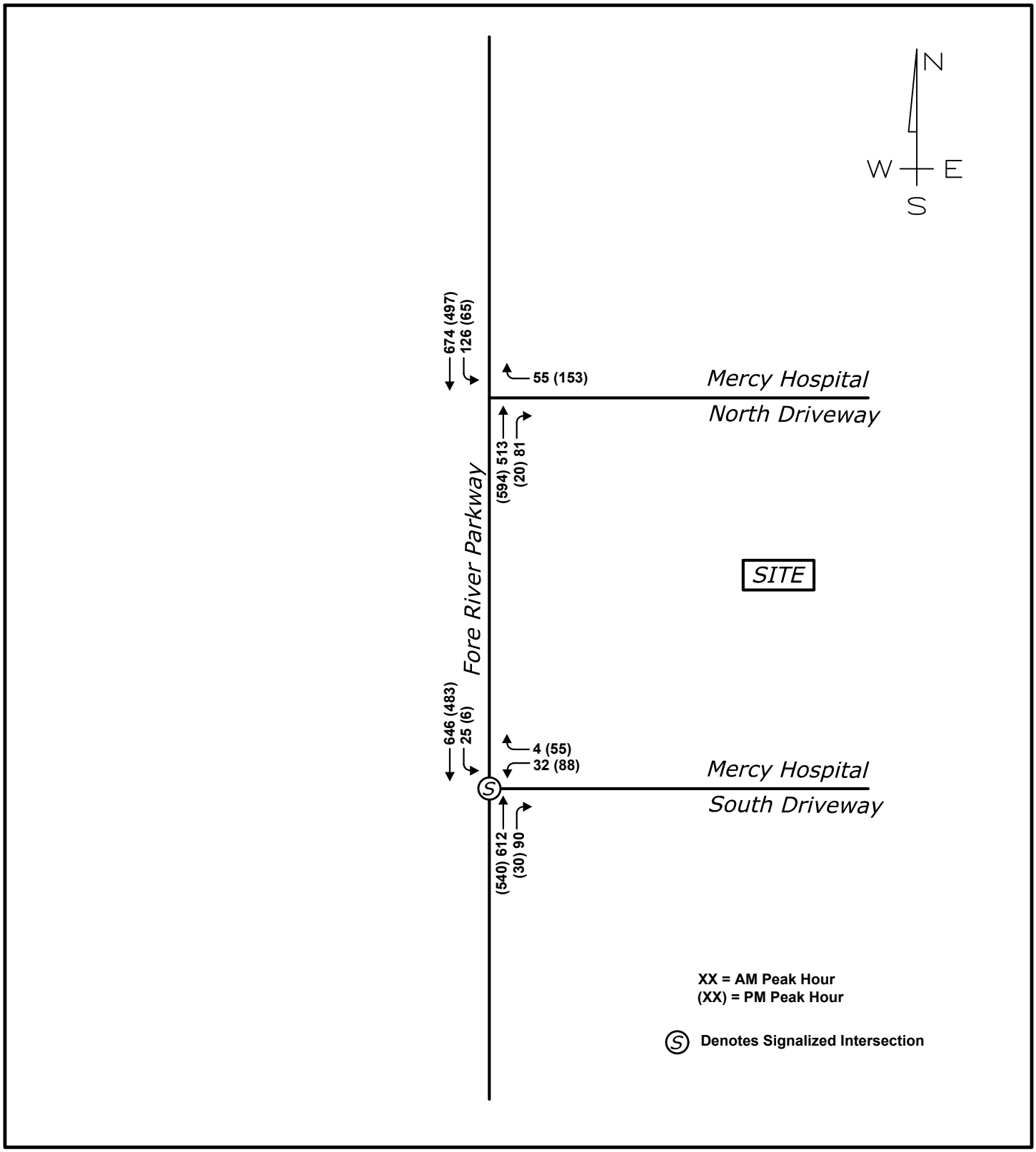
MERCY EXPANSION
PORTLAND, MAINE

Design: MC Scale: NONE
Draft: Date: SEPTEMBER 6, 2019
Checked: RED File Name: 3257.04-TRAFF.dwg

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2022 Postdevelopment DHV

Figure No. 7



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PORTLAND, MAINE

Design: MC Scale: NONE
Draft: LAN Date: SEPTEMBER 6, 2019
Checked: RED File Name: 3257.04-TRAFF.dwg

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TRAFFIC IMPACT STUDY
MERCY MEDICAL FACILITIES
PORTLAND, MAINE

Prepared for:

Mercy Health System of Maine
144 State Street
Portland, Maine 04101

Prepared by:

DeLuca-Hoffman Associates, Inc.
778 Main Street, Suite 8
South Portland, Maine 04106
(207) 775-1121
dhai@maine.rr.com

December 2001

APPENDIX B

Trip Generation Calculations, Gravity Model, and Parking Study

DeLUCA-HOFFMAN ASSOCIATES, INC.
Consulting Engineers
778 Main Street Suite 8
SOUTH PORTLAND, MAINE 04106
(207) 775-1121
FAX (207) 879-0896

JOB 1N2149 - Mercy Hospital
SHEET NO. 1 OF 5
CALCULATED BY PDO DATE 9-7-01
CHECKED BY _____ DATE _____
SCALE _____

Task: Determine Trip Generation for the Proposed Mercy Hospital & Ambulatory Care Unit to be located near the Fore River

Assumptions:

Hospital
Gross Floor Area: 300,000 ☐
Number of Beds: 250

Ambulatory Care Unit
Gross Floor Area: 60,000 ☐

Source: Calculated Trip Rates from counts at existing Hospital on State and Spring Street

DeLUCA-HOFFMAN ASSOCIATES, INC.
Consulting Engineers
778 Main Street Suite 8
SOUTH PORTLAND, MAINE 04106
(207) 775-1121
FAX (207) 879-0896

JOB _____
SHEET NO. 2 OF 5
CALCULATED BY _____ DATE _____
CHECKED BY _____ DATE _____
SCALE _____

Hospital

Based on Gross Floor Area (Per thousand ft)

AM Peak Hour of Adjacent Street

Trip Rate = 1.46 Trips = 1.46 * 300 → 438 TE 75%/25%

PM Peak Hour of Adjacent Street

Trip Rate = 1.10 Trips = 1.10 * 300 → 330 TE 35%/65%

PM Peak Hour of Shift Change

Trip Rate = 1.60 Trips = 1.60 * 300 → 480 TE 50%/50%

Based on number of Beds

AM Peak Hour of Adjacent Street

Trip Rate = 2.36 Trips = 2.36 * 250 → 590 TE 75%/25%

PM Peak Hour of Adjacent Street

Trip Rate = 1.78 Trips = 1.78 * 250 → 445 TE 35%/65%

PM Peak Hour of Shift Change

Trip Rate = 2.59 Trips = 2.59 * 250 → 648 Trips 50%/50%

2149/97

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
16 STATE HOUSE STATION
AUGUSTA, MAINE
04333-0016

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MAY 23 2002

ANGUS S. KING, JR.
GOVERNOR

JOHN G. MELROSE
COMMISSIONER

Developer: Mercy Health Systems of Maine

Location: Between the Fore River and St. Johns Street on the proposed I-295 connector in Portland

Project: Ambulatory Care Unit, Hospital and Medical Offices

Identification Number: Div. 06-00035-A-N

Pursuant to the provision of 23 M.R.S.A. § 704-A and Chapter 305 of the Department's Regulations, the Department of Transportation has considered the application of Mercy Health Systems of Maine with supportive data, agency review and other related materials on file.

Project Description

The applicant proposes to construct a 60,000 square foot Ambulatory Care Unit, 75,000 square foot Medical Office Building, and a 300,000 square foot hospital with 250 beds. The development is expected to generate 784 passenger car equivalent trips in the a.m. peak hour of adjacent street, 687 passenger car equivalent trips in the p.m. peak hour of adjacent street and 990 passenger care equivalent trips in the p.m. peak hour of generator.

Findings

Based on the findings of fact, the Department approves the Traffic Movement Permit application Mercy Health Systems of Maine, subject to the following conditions:

MITIGATION

On Site Mitigation

A. The project will provide two driveways onto the proposed Commercial Street Extension (CSE). The northerly most driveway will provide two entrance lanes and a single right turn only exit lane with divisional island to channelize the right turning traffic from the site. The southerly driveway will provide a single right turn in only entrance lane with channelizing divisional island and separate left and right turn exit lanes. A third driveway will be provided toward the rear of the site for emergency and service vehicles only. An existing access drive to the correctional facility toward the back of the site will be relocated to align with the third proposed driveway.

B. Mercy shall provide and erect the necessary signs at each of the two driveways to convey the prohibited turning movements.

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C. A right turn lane 100 feet in length plus appropriate taper shall be provided on the CSE for right turning vehicles into the southerly site driveway.

D. A left turn lane 200 feet in length plus appropriate taper and deceleration length shall be provided on the CSE to provide for queued left turning vehicles into the site at the northerly driveway.

E. Underground conduit shall be installed at the intersection of the CSE / southerly site driveway for potential future signalization.

F. Provide a dual use pole with mast arm over the CSE at the southerly site driveway to support intersection lighting, a pedestrian actuated flasher, and a NO LEFT TURN symbol sign for southbound vehicles. Mercy shall be responsible for providing and installing the entire assembly with associated pedestrian actuated push button.

G. Mercy shall provide overhead lighting at the CSE / northerly site driveway intersection and at the emergency entrance at the rear of the site.

Off Site Mitigation

H. An off ramp to the site will be provided on the westerly side of the CSE to provide access to the site for southbound vehicles which would typically be accommodated via a left turn movement on
the CSE at the southerly driveway. Left turns into the site off the Connector Road at the southerly driveway will be prohibited.

I. Provide overhead lighting at the intersection of the CSE and the southbound Mercy off ramp.

J. Underground conduit shall be installed at the intersection of the CSE / I-295 Northbound Off Ramp for potential future signalization.

K. Mercy Medical Facilities shall place $150,000 in an escrow account for traffic signals and potential signal system interconnection for the intersections of the CSE with the southerly driveway and the I-295 northbound off ramp. These escrow accounts shall be provided prior to construction of each development phase and held until a signal warrant analysis is completed by Mercy 6 months after the opening of each phase. If the escrow money is not used within 12 months of the last development phase or ten years of the escrow agreement date(whichever comes first), the money and all accrued interest shall be returned to Mercy Health Systems.

L. Stevens Avenue (at the intersection with Congress Street) shall be restriped to reflect a left and a left/through/right turn lane. Congress Street shall be restriped to provide for receiving the Stevens Avenue dual left turn lanes. The City recognizes and accepts the responsibility for improvements necessary at this intersection to allow the intersection to operate at acceptable levels of service. This work shall be done within three years of the hospital opening.

M. The applicant shall provide the support necessary, such as signal equipment and/or monetary support, to ensure the timing and phasing indicated in the Traffic Impact Study, dated December 2001 and with associated supplements, can be realized in the field at the study area intersections.

N. The applicant shall place $ 83,000 dollars in escrow to be applied toward unspecified future improvements for the highway overlap section of Route 22 and Route 114 in the towns of Scarborough and Gorham. If the escrow money is not used within ten years of the escrow agreement date, the money and all accrued interest shall be returned to Mercy Health Systems.

O. Mercy Health Systems of Maine shall provide a $ 5,000 contribution to the City for construction of a traffic signal at the intersection of Commercial Street and Park Street. The City has recognized forecast queues may exceed existing roadway lengths and has accepted responsibility for future improvements if required. All details associated with this payment are between the City of Portland and Mercy Health Systems and shall be built within within three years of development opening if warranted.

Signage (ground and overhead) and striping shall be in accordance with the Manual on Uniform Traffic Control Devices (MUTCD) and the Maine Department of Transportation Highway Design Guide.

Because the proposed project effects the state highway and drainage systems and requires improvement to that system, the applicant must obtain approval of the design plans and coordinate work through MeDOT's State Traffic Engineer, who can be reached at (207)-287-3775 in Augusta.
624-3620 (SB)

By:

Bruce A. Ibarguen, P.E.
State Traffic Engineer

Date: 5-13-02

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:57	6:57	6:57	6:57	6:57	6:57
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	63	63	63	63	63	63
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	1403	1439	1460	1372	1341	1404
Vehs Exited	1406	1436	1454	1376	1348	1404
Starting Vehs	20	26	18	26	30	22
Ending Vehs	17	29	24	22	23	22
Denied Entry Before	1	0	0	0	0	0
Denied Entry After	1	1	0	1	0	0
Travel Distance (mi)	587	598	611	576	560	586
Travel Time (hr)	22.5	23.2	23.6	22.2	21.4	22.6
Total Delay (hr)	2.5	2.7	2.9	2.5	2.2	2.6
Total Stops	218	261	257	246	213	239
Fuel Used (gal)	19.0	19.3	19.7	18.5	18.0	18.9

Interval #0 Information Seeding

Start Time	6:57
End Time	7:00
Total Time (min)	3

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	8:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	1403	1439	1460	1372	1341	1404
Vehs Exited	1406	1436	1454	1376	1348	1404
Starting Vehs	20	26	18	26	30	22
Ending Vehs	17	29	24	22	23	22
Denied Entry Before	1	0	0	0	0	0
Denied Entry After	1	1	0	1	0	0
Travel Distance (mi)	587	598	611	576	560	586
Travel Time (hr)	22.5	23.2	23.6	22.2	21.4	22.6
Total Delay (hr)	2.5	2.7	2.9	2.5	2.2	2.6
Total Stops	218	261	257	246	213	239
Fuel Used (gal)	19.0	19.3	19.7	18.5	18.0	18.9

3: Fore River Parkway & North Driveway Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.9	0.5
Total Del/Veh (s)	4.7	1.7	1.1	1.5
Denied Entry Before	0	0	0	0
Denied Entry After	0	0	0	0

5: South Driveway & Fore River Parkway Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.7	0.8	0.0	0.4
Total Del/Veh (s)	12.2	3.1	3.1	3.2
Denied Entry Before	0	0	0	0
Denied Entry After	0	0	0	0

Total Network Performance

Denied Del/Veh (s)	0.9
Total Del/Veh (s)	5.6
Denied Entry Before	0
Denied Entry After	0

Intersection: 3: Fore River Parkway & North Driveway

Movement	WB	NB	SB
Directions Served	R	R	L
Maximum Queue (ft)	54	9	67
Average Queue (ft)	19	0	23
95th Queue (ft)	45	5	53
Link Distance (ft)	273		
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		170	270
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 5: South Driveway & Fore River Parkway

Movement	WB	WB	NB	SB	SB
Directions Served	L	R	T	L	T
Maximum Queue (ft)	84	24	154	36	155
Average Queue (ft)	16	2	50	10	45
95th Queue (ft)	54	14	120	34	112
Link Distance (ft)	423		748		822
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		100		500	
Storage Blk Time (%)	0				
Queuing Penalty (veh)	0				

Network Summary

Network wide Queuing Penalty: 0

Intersection: 5: South Driveway & Fore River Parkway

Phase	1	2	6	8
Movement(s) Served	SBL	NBT	SBTL	WBL
Maximum Green (s)	5.0	24.0	34.0	16.0
Minimum Green (s)	4.0	4.0	4.0	4.0
Recall	None	None	None	None
Avg. Green (s)	6.1	12.4	13.0	6.8
g/C Ratio	-0.01	-0.01	-0.01	-0.01
Cycles Skipped (%)	95	3	3	91
Cycles @ Minimum (%)	1	7	7	0
Cycles Maxed Out (%)	4	8	2	0
Cycles with Peds (%)	0	0	0	0

Controller Summary
Average Cycle Length (s): NA

Number of Complete Cycles : 0

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:57	6:57	6:57	6:57	6:57	6:57
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	63	63	63	63	63	63
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	1256	1272	1217	1243	1290	1254
Vehs Exited	1257	1268	1216	1253	1286	1255
Starting Vehs	19	18	17	26	20	19
Ending Vehs	18	22	18	16	24	20
Denied Entry Before	0	0	0	0	0	0
Denied Entry After	0	0	1	2	0	0
Travel Distance (mi)	520	521	502	512	532	518
Travel Time (hr)	20.5	20.5	19.9	20.5	21.3	20.5
Total Delay (hr)	2.7	2.6	2.7	2.8	2.9	2.7
Total Stops	348	374	373	416	425	386
Fuel Used (gal)	17.0	17.0	16.4	16.9	17.5	17.0

Interval #0 Information Seeding

Start Time	6:57
End Time	7:00
Total Time (min)	3

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	8:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	1256	1272	1217	1243	1290	1254
Vehs Exited	1257	1268	1216	1253	1286	1255
Starting Vehs	19	18	17	26	20	19
Ending Vehs	18	22	18	16	24	20
Denied Entry Before	0	0	0	0	0	0
Denied Entry After	0	0	1	2	0	0
Travel Distance (mi)	520	521	502	512	532	518
Travel Time (hr)	20.5	20.5	19.9	20.5	21.3	20.5
Total Delay (hr)	2.7	2.6	2.7	2.8	2.9	2.7
Total Stops	348	374	373	416	425	386
Fuel Used (gal)	17.0	17.0	16.4	16.9	17.5	17.0

3: Fore River Parkway & North Driveway Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.2	0.0	0.6	0.3
Total Del/Veh (s)	6.5	2.0	0.8	1.8
Denied Entry Before	0	0	0	0
Denied Entry After	0	0	0	0

5: South Driveway & Fore River Parkway Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	1.6	0.6	0.0	0.4
Total Del/Veh (s)	10.5	4.0	4.2	4.6
Denied Entry Before	0	0	0	0
Denied Entry After	0	0	0	0

Total Network Performance

Denied Del/Veh (s)	0.7
Total Del/Veh (s)	7.1
Denied Entry Before	0
Denied Entry After	0

Intersection: 3: Fore River Parkway & North Driveway

Movement	WB	NB	SB
Directions Served	R	R	L
Maximum Queue (ft)	81	4	40
Average Queue (ft)	34	0	12
95th Queue (ft)	60	3	38
Link Distance (ft)	273		
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		170	270
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 5: South Driveway & Fore River Parkway

Movement	WB	WB	NB	SB	SB
Directions Served	L	R	T	L	T
Maximum Queue (ft)	55	42	156	24	145
Average Queue (ft)	27	15	62	2	59
95th Queue (ft)	55	40	119	13	121
Link Distance (ft)	423		748		822
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		100		500	
Storage Blk Time (%)					
Queuing Penalty (veh)					

Network Summary

Network wide Queuing Penalty: 0

Intersection: 5: South Driveway & Fore River Parkway

Phase	1	2	6	8
Movement(s) Served	SBL	NBT	SBTL	WBL
Maximum Green (s)	5.0	24.0	34.0	16.0
Minimum Green (s)	4.0	4.0	4.0	4.0
Recall	None	None	None	None
Avg. Green (s)	6.8	12.1	12.2	6.7
g/C Ratio	-0.01	-0.01	-0.01	-0.01
Cycles Skipped (%)	98	2	1	69
Cycles @ Minimum (%)	0	5	5	0
Cycles Maxed Out (%)	2	5	1	0
Cycles with Peds (%)	0	0	0	0

Controller Summary
Average Cycle Length (s): NA

Number of Complete Cycles : 0

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:57	6:57	6:57	6:57	6:57	6:57
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	63	63	63	63	63	63
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	1614	1642	1591	1562	1528	1587
Vehs Exited	1615	1652	1586	1569	1535	1591
Starting Vehs	20	29	18	29	32	25
Ending Vehs	19	19	23	22	25	22
Denied Entry Before	1	0	0	1	0	0
Denied Entry After	0	1	1	0	2	0
Travel Distance (mi)	648	656	636	628	609	635
Travel Time (hr)	26.2	26.5	25.1	25.4	24.2	25.5
Total Delay (hr)	3.8	3.9	3.3	3.6	3.2	3.6
Total Stops	414	438	338	432	358	396
Fuel Used (gal)	21.6	21.9	21.0	20.9	20.2	21.1

Interval #0 Information Seeding

Start Time	6:57
End Time	7:00
Total Time (min)	3

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	8:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	1614	1642	1591	1562	1528	1587
Vehs Exited	1615	1652	1586	1569	1535	1591
Starting Vehs	20	29	18	29	32	25
Ending Vehs	19	19	23	22	25	22
Denied Entry Before	1	0	0	1	0	0
Denied Entry After	0	1	1	0	2	0
Travel Distance (mi)	648	656	636	628	609	635
Travel Time (hr)	26.2	26.5	25.1	25.4	24.2	25.5
Total Delay (hr)	3.8	3.9	3.3	3.6	3.2	3.6
Total Stops	414	438	338	432	358	396
Fuel Used (gal)	21.6	21.9	21.0	20.9	20.2	21.1

3: Fore River Parkway & North Driveway Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	1.2	0.7
Total Del/Veh (s)	5.4	2.0	1.5	1.9
Denied Entry Before	0	0	0	0
Denied Entry After	0	0	0	0

5: South Driveway & Fore River Parkway Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.7	1.0	0.0	0.5
Total Del/Veh (s)	13.3	4.0	4.0	4.3
Denied Entry Before	0	0	0	0
Denied Entry After	0	0	0	0

Total Network Performance

Denied Del/Veh (s)	1.1
Total Del/Veh (s)	6.9
Denied Entry Before	0
Denied Entry After	0

Intersection: 3: Fore River Parkway & North Driveway

Movement	WB	NB	SB
Directions Served	R	R	L
Maximum Queue (ft)	72	30	71
Average Queue (ft)	29	2	34
95th Queue (ft)	57	15	62
Link Distance (ft)	273		
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		170	270
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 5: South Driveway & Fore River Parkway

Movement	WB	WB	NB	SB	SB
Directions Served	L	R	T	L	T
Maximum Queue (ft)	80	30	200	40	166
Average Queue (ft)	29	4	72	12	64
95th Queue (ft)	65	21	152	37	130
Link Distance (ft)	413		748		822
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		100		500	
Storage Blk Time (%)	0				
Queuing Penalty (veh)	0				

Network Summary

Network wide Queuing Penalty: 0

Intersection: 5: South Driveway & Fore River Parkway

Phase	1	2	6	8
Movement(s) Served	SBL	NBT	SBTL	WBL
Maximum Green (s)	5.0	24.0	34.0	16.0
Minimum Green (s)	4.0	4.0	4.0	4.0
Recall	None	None	None	None
Avg. Green (s)	6.1	14.2	15.0	6.8
g/C Ratio	-0.01	-0.01	-0.01	-0.01
Cycles Skipped (%)	92	3	3	79
Cycles @ Minimum (%)	1	3	3	0
Cycles Maxed Out (%)	7	10	3	0
Cycles with Peds (%)	0	0	0	0

Controller Summary
Average Cycle Length (s): NA

Number of Complete Cycles : 0

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:57	6:57	6:57	6:57	6:57	6:57
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	63	63	63	63	63	63
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	1476	1415	1382	1424	1349	1410
Vehs Exited	1482	1412	1386	1429	1353	1412
Starting Vehs	30	20	21	34	24	24
Ending Vehs	24	23	17	29	20	22
Denied Entry Before	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0
Travel Distance (mi)	580	548	542	556	537	553
Travel Time (hr)	24.2	22.6	22.3	23.4	22.3	23.0
Total Delay (hr)	4.0	3.5	3.6	4.0	3.6	3.7
Total Stops	609	605	564	618	554	588
Fuel Used (gal)	19.9	18.8	18.4	19.1	18.2	18.9

Interval #0 Information Seeding

Start Time	6:57
End Time	7:00
Total Time (min)	3

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	8:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	1476	1415	1382	1424	1349	1410
Vehs Exited	1482	1412	1386	1429	1353	1412
Starting Vehs	30	20	21	34	24	24
Ending Vehs	24	23	17	29	20	22
Denied Entry Before	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0
Travel Distance (mi)	580	548	542	556	537	553
Travel Time (hr)	24.2	22.6	22.3	23.4	22.3	23.0
Total Delay (hr)	4.0	3.5	3.6	4.0	3.6	3.7
Total Stops	609	605	564	618	554	588
Fuel Used (gal)	19.9	18.8	18.4	19.1	18.2	18.9

3: Fore River Parkway & North Driveway Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.2	0.0	0.9	0.4
Total Del/Veh (s)	7.7	2.3	1.2	2.5
Denied Entry Before	0	0	0	0
Denied Entry After	0	0	0	0

5: South Driveway & Fore River Parkway Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	1.7	0.7	0.0	0.5
Total Del/Veh (s)	10.4	6.0	4.9	6.0
Denied Entry Before	0	0	0	0
Denied Entry After	0	0	0	0

Total Network Performance

Denied Del/Veh (s)	0.8
Total Del/Veh (s)	8.6
Denied Entry Before	0
Denied Entry After	0

Intersection: 3: Fore River Parkway & North Driveway

Movement	WB	NB	NB	SB
Directions Served	R	T	R	L
Maximum Queue (ft)	97	6	8	69
Average Queue (ft)	44	0	0	21
95th Queue (ft)	77	4	4	54
Link Distance (ft)	273	822		
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			170	270
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: South Driveway & Fore River Parkway

Movement	WB	WB	NB	SB	SB
Directions Served	L	R	T	L	T
Maximum Queue (ft)	84	52	228	31	146
Average Queue (ft)	37	23	86	4	68
95th Queue (ft)	71	50	160	22	125
Link Distance (ft)	423		748		822
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		100		500	
Storage Blk Time (%)	0				
Queuing Penalty (veh)	0				

Network Summary

Network wide Queuing Penalty: 0

Intersection: 5: South Driveway & Fore River Parkway

Phase	1	2	6	8
Movement(s) Served	SBL	NBT	SBTL	WBL
Maximum Green (s)	5.0	24.0	34.0	16.0
Minimum Green (s)	4.0	4.0	4.0	4.0
Recall	None	None	None	None
Avg. Green (s)	6.0	13.4	14.0	7.6
g/C Ratio	-0.01	-0.01	-0.01	-0.01
Cycles Skipped (%)	92	4	2	54
Cycles @ Minimum (%)	0	4	4	0
Cycles Maxed Out (%)	8	8	2	1
Cycles with Peds (%)	0	0	0	0

Controller Summary
Average Cycle Length (s): NA

Number of Complete Cycles : 0

TRANSPORTATION DEMAND MANAGEMENT

The following statements are provided in accordance with the Section 1.13 of the Technical Manual pertaining to Transportation Demand Management (TDM);

TRANSPORTATION

1.13.1 Transportation Narrative –

Every TDM plan shall describe how the project fits within the multimodal transportation system serving the district in which the development is located. The narrative should address the specifics of the use, occupants, visitors, and location of the development and how it is anticipated to relate to its transportation context.

Mercy expects to operate the Fore River Campus in a manner that promotes transportation demand alternatives to the extent practicable, given the use and inherent conditions associated Acute care and Outpatient health services, staff work hours[1] and overall hospital campus visitation. A fundamental result of the relocation of Mercy programming from the State Street facility to the Fore River Campus will be decreased traffic resulting from Mercy State Street operations. This action alone will result in significant shifting of long standing Mercy traffic from the Portland Peninsula interior and specifically State and High Streets, to the Fore River Parkway and its direct connectivity to the regional highway system. The State Street neighborhood will dramatically benefit from decreased emergency services traffic and overall parking demand along neighborhood streets. Further, the Phase 2 development will not result in increased traffic pressure on the Peninsula as a whole, since Mercy has always been a valued existing land use that has generated traffic on the Peninsula. Simply, the move results in an improvement for Mercy generated traffic as it utilizes the direct highway connectivity and ample capacity of these highways and the Fore River Parkway. These circumstances likely provide greater overall benefit than what will be achieved through TDM, although TDM remains a valuable secondary source of transportation and trip generation management.

The Fore River campus also benefits from proximity to the METRO service and this will continue into the future, particularly with updated METRO routing and positioning of multiple stops along the Parkway expected in the future. The ability for both staff and patients to use METRO and public transportation associated with the nearby Transportation Terminal is unique to the Fore River Campus and Mercy will seek to take advantage of these transportation resources ever more greatly into the future.

In addition, Mercy continues to promote the shifting of various operational and administrative functions to their outpatient facilities in surrounding Portland

[1] Acute care hospital settings and workforce hours are characterized by shift work, per diem staff and irregular patient load, thus contributing to challenges of a traditional TDM plan.

Communities and/or work from home telecommuting opportunities, thus resulting in decreased traffic overall to the Portland Peninsula.

Ultimately Mercy's TDM will include strategies that encourage employees to use alternatives to driving to work unaccompanied. For example, employees participating in a ride share program currently benefit from designated spaces at the northwest parking lot, nearest the MOB and thus do not need to park in the south parking lot[2]. This will enable Mercy and other tenants to successfully provide parking to all employees, visitors, patients, and physicians in the designed parking plan. Mercy also maintains bike racks at the front of the hospital and near the staff entrance at the south end of the hospital building. Bicycle riding staff have the availability of staff locker room facilities for changing and showering. Mercy routinely provides Taxi vouchers to patients on an as needed basis and they have promoted bus pass programs in the past. An updated Transportation Demand Management Plan is currently underway and will be shared as it becomes available. In the interim the accompanying copy of the original TDM approved in 2006 is provided for initial review.

[2] There are approximately 12 designated spaces for rideshare vehicles to park closer to the MOB/Hospital than the south parking lot.

Alternative Transportation/Travel Demand Management Plan

TDM Objective: To establish a set of strategies that encourages Mercy employees to use alternatives to driving to work unaccompanied. This would enable Mercy to successfully provide parking to all employees, visitors, patients, and physicians in the designed parking plan, which has been established at 5% below Mercy's anticipated parking capacity need.

The literature on travel demand management (TDM) identifies three basic goals for TDM programs:

1. decreasing driving alone
2. reducing the number of trips per week
3. reducing the number of peak hour trips

Goals:
Mercy's Alternative Transportation/Travel Demand Management Plan includes objectives and strategies for each goal:

Strategy	Objective	Tactics
Decrease driving alone	• Establish and market a Mercy Rideshare Program	• Use Mercy Intranet as a portal for an in-house rideshare electronic "matching program"; market through employee orientation program. • Provide incentives for carpooling, such as preferential parking for carpools of 2 or more persons at Fore River site, or monthly prize raffles. • Evaluate financial incentives for car pooling.
	• Promote use of public transportation to Mercy campus	• Promote public transportation alternatives through employee newsletters, intranet, and employee orientation. • Offer employees a 50% subsidy for use of monthly bus passes; investigate using a Section 132F Plan • Encourage managers to review work schedules and provide employee flexibility in work start times to meet bus schedules. • Meet with public transportation providers to review existing service levels and opportunities to improve service levels.
	• Promote walking and bicycle use.	• Ensure availability of bike racks and shower facilities. • Construct pedestrian connector and encourage its use.

Stagger the arrivals at Mercy Fore River	• Increase use of compressed work schedules. • Increase use of flexible hours	• Expand use of 4/10 and 3/36 work schedules to departments beyond nursing (currently over 80% of nurses are on compressed schedules) • Encourage managers to evaluate opportunities for increased use of flexible hours.
Reduce peak hour trips	Continue to refine three-shift schedule.	• Encourage managers to evaluate opportunities to shift employee schedules away from traditional patterns.

Implementation:
Mercy Fore River will target formal implementation of the Plan on with the opening of the new facility.

Measures:
Given that the current parking plan is sized at 5% below predicted need, Mercy will strive to have a parking use rate of 95% or lower at all times (or establish a confidence level of 95% that a space is available for the "next arriving vehicle"). Mercy will also strive to have zero parking complaints related to availability of spots (vs. proximity of spots).

Monitoring:
Annually, covering all shift times, Mercy will monitor parking space usage and traffic turnover to determine traffic flow and lot usage against hospital staff and visitor traffic. The responsibility for this function will be held by the Director of Plant and Engineering who will work with the Manager of Security to implement monitoring plans. These will include examining parking space vacancy rates/shifts in comparison to the numbers of employees and patients. Mercy's monitoring will be implemented in a way that reviews parking lot usage during peak times as well as different seasons. Mercy will use direct feedback as well as patient and employee satisfaction surveys, to monitor parking complaints.

Fall Back Alternatives:
In the event that TDM efforts are not successful or successful enough, Mercy would use some combinations of fallback alternatives, such as remote parking with shuttles or seeking additional parking on-site. Ultimately, the parking management plan, and thus the TDM plan, calls for a parking garage with implementation of Phase II.

ENVIRONMENTAL AND STORMWATER

The following statements are provided in accordance with the submission checklist and Section 14-526 of the ordinance.

(b) Environmental Quality Standards

Water Quality, Stormwater Management and Erosion Control (14-526 (b) 3 a)

- *Stormwater report in compliance with Section 5 of Technical Manual and DEP Chapter 500 stormwater for basic, general and flooding standards, as applicable*
- *Erosion control plan and measures*
- *Evidence of compliance with Urban Impaired Stream Standards pursuant to DEP Chapter 500 stormwater, as applicable*
- *Subsurface sanitary sewage disposal and groundwater protection*

3. Water Quality, Stormwater Management and Erosion Control:

a. Stormwater:

(i) The Mercy Fore River Campus contains an expansive drainage system for the collection, treatment and conveyance of stormwater runoff to the Fore River. The campus setting is located adjacent the Fore River, which is under tidal influence, thus, Mercy has previously requested and been granted, a waiver of the flooding standards under both the State and Local stormwater rules. The existing site was developed in 2006, and at the time the water quality standards involved the Total Suspended Solids (TSS) requirements. To achieve compliance, the development included multiple hydrodynamic separators and vegetated treatment swales that function to remove suspended sediments from the runoff flow leaving the site. For the proposed Phase II hospital expansion and Ambulatory Surgical Center, a wet pond will be constructed within the southwest corner of the existing basin. The wet pond has been designed to comply with the MDEP BMP manual design guidelines. The existing systems and TSS devices will remain in place and the new wet pond will function to treat the new impervious areas created as part of the Phase II development. A full Stormwater management report is contained within the application materials and the report provides evidence for compliance with the City's Stormwater management regulations.

(ii) The site's stormwater runoff is collected and conveyed by multiple closed systems that ultimately discharge to the Fore River. The north end of the site basically drains thru a closed drainage system and two hydrodynamic separators to a 36" storm drain across the Parkway and into parallel vegetated treatment swales before discharging into the River. The central area of the site drains to a closed drainage system and an 18" storm drain that discharges to the River. The existing pond discharges into a closed pipe system that also crosses the Parkway and discharges to the River. Finally, the south parking lot drainage includes a closed drainage system, hydrodynamic separator and discharge into parallel vegetated treatment swales within the south open space, before discharging to the river. These systems are adequately sized to handle the development's stormwater runoff

conditions. The proposed wet pond will serve as a quantity control/flood storage measure to reduce the peak flow to the existing drainage system.

(iii) The existing drainage systems within the Fore River Parkway are adequately sized to handle the increase in runoff volume and peak discharge. The stormwater management report contains HydroCAD calculations that evaluate the 25 and 100-year storm events and system capacities. The results indicate there is adequate capacity in these systems.

(iv) The existing drainage systems within the Fore River Parkway are adequately sized to handle the increase in runoff volume and peak discharge.

b. Flooding Standards:

The project will ultimately meet the General Standards under Chapter 500, Stormwater Law (City of Portland Technical Manual, Section 5 – Portland Stormwater Management and MaineDEP Ch. 500, 3 (e)). The Basic Standards will apply to this project and a detailed Soil Erosion and Sediment Control Plan has been developed to address this.

c. Not applicable, not located within an Urban Impaired Stream.

d. Not applicable – not a residential development.

e. Construction at the site will be required to follow Local, State and Federal regulations and will be undertaken under the supervision of a suitably qualified environmental professional. Post-construction activities at the site do not pose a risk of groundwater contamination.

f. The project will be connected to the public sanitary sewer system which is adequately sized for the anticipated project flows.

SECTION 12

STORMWATER MANAGEMENT REPORT

NORTHERN LIGHT℠ MERCY HOSPITAL
FORE RIVER CAMPUS
PORTLAND MAINE

Prepared for

Northern Light℠
Mercy Hospital

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AUGUST 2019

STORMWATER MANAGEMENT REPORT

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Figure

1 USGS Project Location Map

Attachments

A Watershed Maps:
W-1 Current Conditions Land Cover
W-2 Proposed Land Cover
W-3 Post Development Watershed Map
W-Q Water Quality Map

B Post Development HydroCAD Model

C Storm Drain Calculation

D Operation & Maintenance Manual

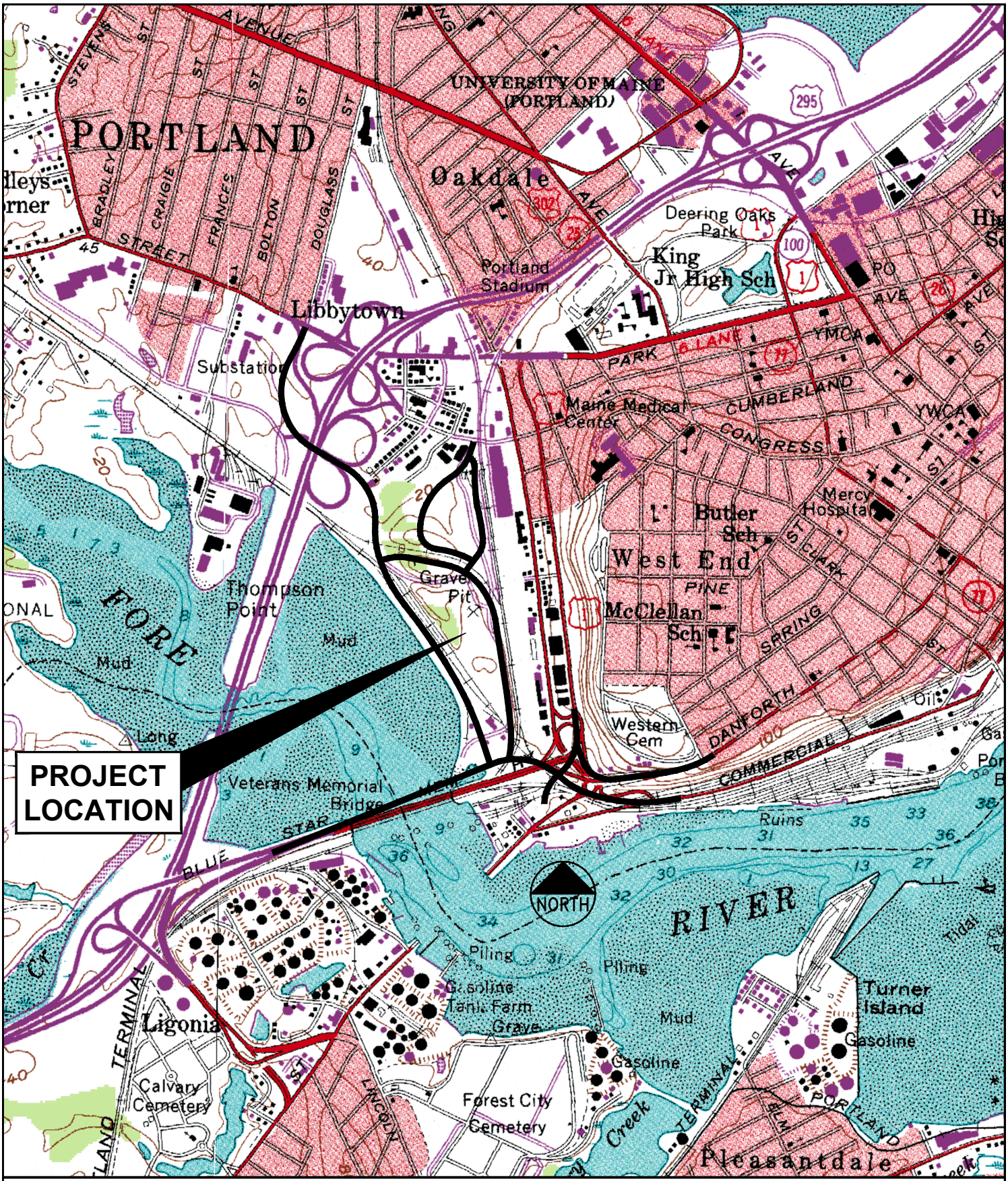
12.0 INTRODUCTION

Northern Light℠ Mercy Hospital (Mercy) is an acute care, non-profit hospital located in Portland, ME and is licensed for 200 in-patient beds. Mercy has over 1,604 employees, 743 medical staff, and over 125 volunteers. Mercy has served the greater Portland community for over 100 years opening its current 144 State Street Campus in 1943. In the early 2000s, Mercy Hospital's strategic plan identified important objectives that could not be achieved at the 3.5-acre State Street site, given its age, size, location and Portland's Historic District constraints. Mercy chose to relocate from their State Street site and move to the Fore River Campus in order to meet important strategic obligations and maintain appropriate standards of care that were in jeopardy long-term if the Hospital were to remain at State Street. A two-phase move was planned due to various circumstances. In 2001, Mercy first was granted a Site Location of Development Approval from the Maine Department of Environmental Protection[1]. Mercy also executed a Contract Zone Agreement with the City of Portland to allow the Hospital Campus on what at the time, was Industrial zoned land, within which a Hospital land use was not a permitted use. With these approvals in hand, Mercy acquired the land from the original owners, Portland Terminal Company and P.D. Merrill. Mercy obtained a Certificate of Need approval from the State of Maine in 2006. The first phase of the move to the Fore River campus was completed in 2008 with the construction of the Phase 1 hospital facility and the adjoining medical office building (MOB), ancillary facilities including surface parking for 762 vehicles, utilities, snow storage, and a maintenance building were also constructed. In 2013, Mercy approached the Maine Department of Environmental Protection and the US Army Corps of Engineers with a long-term plan for the Hospital needs on the Campus. This involved the expansion of building(s) and parking facilities that encompass filling of the former gravel pit entirely. Based on the long-term plans and supporting evidence, both the MDEP and the USACOE approved development plans that result in the complete filling of the existing basin. Both agencies accepted as compensation for the impacts to the basin resource, Mercy's participation in the In-Lieu Fee Compensation program. Mercy has provided a contribution of $834,156 to the State to satisfy the NRPA condition of approval, thus establishing their standing to move ahead with filling of the onsite basin.

The proposed project represents Phase 2 which includes the construction of a 19,260 SF footprint building addition to the existing hospital and a 17,610 SF footprint Ambulatory Surgical Center (ASC). The hospital expansion will be directly connected to the existing Phase 1 Fore River Hospital, while maximizing site safety and allowing for a future Phase 3 expansion that will be in close proximity to the ASC. The ASC will be positioned within the existing basin area so that it provides relatively close proximity to the Hospital while also maintaining its own parking and stand-alone features, given its outpatient services programing. Figure 1 is a map showing the project location.

Mercy is currently seeking a Site Plan Permit from the City of Portland and an Amendment to the Site Location of Development Permit from the MDEP. The project combines redevelopment and new construction on a site that has previously received a Site Location of Development Permit. The proposed project is subject to the standards of MaineDEP's Chapter 500 Rules for Stormwater Management and City of Portland Stormwater Management regulations. The plans prepared by Gorrill Palmer include the infrastructure necessary to serve the project and to comply with current local and state stormwater standards. Erosion and Sedimentation Controls (Basic Standards) will be

[1] See Permit orders #L-20775-19-A-N and #L-20775-TG-B-N



U.S.G.S. Location Map

NLH Mercy Hospital, Fore River Campus Consolidation, Portland, Maine

U.S.G.S. Portland West, State-7.5 Minute Series (Topographic)

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Figure 1

employed during the construction of this project and are summarized in the Erosion and Sedimentation Control Plans provided on Sheets C-4.0, C-7.5, and C-7.6.

12.1 EXISTING SITE CONDITIONS

The project boundary is located within the parcel bounded by the Fore River parkway to the west, the railroad to the north and east and the new Veteran's Bridge to the south. This portion of the lands owned by Mercy Hospital is comprised of 33.51 acres.

Topography varies across the site and can be broken down into two areas. The north end of the site is generally 14 feet higher than the south end. The north end is slightly rolling and designed to provide access to the first floor of the existing hospital (FFE 32) and Medical Office Building (FFE 30). The southerly end of the site is relatively flat and designed to access the ground floor/service area of the hospital at finished floor elevation 17.5. The northerly developed portion of the site ranges from elevation 20 to 36. The southerly portion of the site ranges from elevation 10 to elevation 19 with isolated mounds up to elevation 26.

The soils on the site are shown on the USDA medium intensity soils map to be Hinckley gravelly sandy loam, Cut and Fill land and Gravel Pit. The historical gravel pit operations and Phase I construction of the property has modified all of the original surface soils from their original classification to a "Cut and Fill" classification. A mix of native and imported soils was used to construct the parking lots and structural fill for the buildings.

The existing drainage is divided into four areas; all four areas are tributary to a storm drainage network comprised of precast catch basin inlets and HDPE storm drainage piping. There are four points of discharge from the site into the Fore River. Referring to the Existing Conditions plan, the points of discharge are listed below, from North to South:

- 36" culvert – runoff from medical office building and associated parking lot discharging into a vegetated treatment swale.
- 15" culvert - runoff from the hospital building and service area and discharges directly to Fore River
- 18" culvert – runoff from perimeter access road and wetland area discharges directly to Fore River
- 36" culvert – runoff from parking lot and maintenance yard discharges directly to Fore River

12.2 DEVELOPMENT DESCRIPTION

The Phase 2 development site comprises approximately 4.62 acres of the 33.5-acre site. Approximately 26.9 acres of the site have been previously developed for the original Phase 1 project. Approximately 1.9 acres of the current project area is currently developed with pavement and grassed area. The southerly portion of the project site contains a former gravel pit that has become a pond. The applicant has previously received a permit to fill the pond and has completed the In-Lieu fee payment to the MDEP.

Abutting land uses include:

- North – Railroad/Cumberland County Jail
- East – Railroad/Commercial/MMC Parking Garage
- South – Medical/Railroad/Cassidy Point
- West – Fore River Parkway/Fore River

Runoff from the site is tributary to the Fore River. The Fore River is not currently listed as an "Urban Impaired Stream", therefore, the development will not be required to meet the Chapter 500 Urban Impaired Stream Standard.

Changes in land cover will include removal of paved surfaces, wooded areas, and grassed areas through portions of the project site and the addition of roof, paved surfaces, and lawn areas. The existing impervious area within the limit of work is approximately 1.25 acres. The existing developed area is approximately 1.9 acres. The overall proposed impervious area for Phase 2 is 3.88 acres, and the overall proposed developed area is 4.77 acres.

12.3 REFERENCES

The following reference sources were reviewed during preparation of the stormwater analysis:

1. Hydraulic Engineering Circular No. 22, Second Edition – Urban Drainage Design Manual, U.S. Department of Transportation, August 2001.
2. AASHTO Model Drainage Manual, American Association of State Highway and Transportation, 1991.
3. Hydraulic Engineering Circular No. 14 - Hydraulic Design of Energy Dissipators for Culverts and Channel, U.S. Department of Transportation, September 1983.
4. Maine Erosion and Sedimentation Control Handbook for Construction: Best Management Practices, MaineDEP, current edition.
5. Best Management Practices for Erosion and Sediment Control, U.S. Department of Transportation, June 1995.
6. Municipal Stormwater Management – Second Edition, Thomas N. Debo, Andrew J. Reese, 2003.
7. Handbook of Applied Hydrology, Chow, 1964.
8. Technical Release Number 55 – Urban Hydrology for Small Watersheds, USDA Soil Conservation Service, June 1986.
9. Stormwater Management for Maine, Volume III BMPS Technical Design Manual, MeDEP, January 2006.
10. Technical Release Number 20 – Computer Program for Project Formulation – Hydrology, USDA Soil Conservation Service, May 1983.
11. Section 4 – Hydrology, USDA Soil Conservation Service, March 1985.

12. Technical Release Number 55 – Urban Hydrology for Small Watersheds, USDA Soil Conservation Service, June 1986.

The following sources were used for preparation of the North Village stormwater quality analysis:

1. Stormwater Management for Maine, Volume III BMPS Technical Design Manual, MaineDEP, May 2016
2. A Current Assessment of Urban Best Management Practices, Techniques for Reducing Non-point Source Pollution in the Coastal Zone, U.S.E.P.A. Office of Watersheds, March 1992.
3. MeDEP Chapter 500, Stormwater Management Rules.

Computer programs used to assist in the various components of this analysis include:

1. HydroCAD 10.00, HydroCAD Software Solutions LLC – used for modeling watersheds for pre and post development conditions.
2. Microsoft Excel, Microsoft Corporation – used for spreadsheet computations.
3. AutoCAD Civil 3D 2010, 2011, and 2019, Autodesk - used to determine areas and graphical representation of design.
4. AutoDesk Storm and Sanitary Analysis 2019 – used to analyze storm drain network performance during specified storm events.

Data resources used to obtain the hydrologic input data for the stormwater models are identified later in this report.

12.4 OVERVIEW OF STORMWATER RUNOFF MODELING

The stormwater analysis evaluates the following elements:

- Predevelopment and post development stormwater runoff and peak discharge rates; We have updated the Mercy Hospital model with an examination at the original points of analysis now considering the Phase 2 development;
- The impacts of the proposed development and subsequent modification to site discharge rates and locations;
- The effect of land cover modifications within the site, especially those that are expected to increase site runoff rates;
- The requirements for stormwater management including compliance with Chapter 500 flooding standards (**A waiver is being requested from the flooding standard due to the site's proximity to the Fore River: A waiver was previously granted by the MDEP and the City during the Phase 1 permitting period)**;
- Storm drainage requirements for parking areas, roof areas and other improvements; and
- Requirements for water quality measures.

12.5 METHODS OF ANALYSIS – STORMWATER QUANTITY

The hydrologic analyses for predevelopment and post development conditions have been conducted based upon the methodology contained in the USDA Soil Conservation Service's Technical Releases No. 20 and 55 (SCS TR-20 and TR-55) as modified for special site conditions. For this section of Cumberland County, Maine, a 24-hour SCS Type III Storm distribution was used for the analysis using the following storm frequencies and rainfall amounts:

Storm Event	24-Hour Rainfall (Post 2014)
2-Year Storm	3.10
10-Year Storm	4.60
25-Year Storm	5.80
100-Year Storm	8.10

The HydroCAD computer program was used in the analysis. This program determines the critical points of the project watershed and uses SCS TR-20 methodology for evaluation of the anticipated conditions at these points.

Land use, cover, delineation of watershed subcatchments, hydraulic flow paths, and hydrologic soil types were obtained using the following data:

1. Portland West, Maine USGS 7.5-minute Quadrangle Maps.
2. Cumberland County, USDA Medium Intensity Soils Survey.
3. Onsite Topographic Survey with 1-foot contour intervals prepared by Owen Haskell, field reconnaissance by former Deluca-Hoffman Associates Inc, staff now with Gorrill Palmer.
4. The Class C Medium Intensity Soil Survey for the watershed areas.

12.6 DESCRIPTION OF SITE WATERSHED MODEL

The watershed model was developed to predict peak discharge rates emanating from one point of analysis for the post development condition. The post development condition includes the developed area of the building expansion, ASC building, and associated parking.

12.7 PRE-DEVELOPMENT CONDITIONS

The existing impervious area within the limit of Phase 2 work is approximately 1.25 acres. The existing developed area is approximately 1.9 acres.

There are no lakes located on, adjacent to or downstream of the project site and the project site is adjacent to the tidal Fore River. An existing manmade pond occurs onsite. The existing basin resulted when the Railroad excavated the pit for the extraction of gravels and borrow, beginning in the 1950's. Mercy Hospital received approval from the MDEP and US ACOE to fill the pond and adjacent wetlands upon payment of an in-lieu fee which was paid in 2013. Excavation activity

extended to below the groundwater table, thus the basin has had a permanent pool for greater than 30 years. Prior to the development of the Fore River Parkway, the basin had a ditch outlet that connected to a culvert that passed under multiple rail tracks[2], within the area now occupied by the Parkway Road. The culvert discharged into the river, thus the basin has always had an outlet to the river.

The existing pond receives runoff from existing vegetated developed area and existing impervious area consisting of roof, access drives, loading areas, and mechanical pads. The Existing Conditions Plan shows the edge of the pond between elevation 8 and 9. The existing pond outlet consists of a 15" diameter storm drain pipe with an invert elevation of 7.78. The storm drain system increases to an 18" diameter outlet pipe that conveys runoff to the tidal Fore River. The invert of the outlet pipe is at the approximate high tide line (estimated at around elevation 5.0±'). The outlet area consists of a stable area of rip-rap/boulders. There is no wetland area between the existing outlet storm drain and the storm drain system outlet at the Fore River.

Based upon the FEMA maps, a Zone A 100- year floodplain is associated with the Fore River. No part of the proposed development is located within the Zone A 100-year floodplain. To the best of our understanding, there is no salt water intrusion into the basin, either from backwater effects from the River or thru the groundwater/saltwater interface[3].

12.8 POST DEVELOPMENT CONDITION

The overall proposed impervious area for Phase 2 is 3.88 acres, and the overall proposed developed area is 4.77 acres.

The development will be required to meet the MDEP's water quality standards. In order to meet the water quality standard, the project will utilize a wet pond. The wet pond, with additional detention above the water quality volume elevation, will be utilized to control the post development runoff for larger storm events. Although the Flooding Standard is asked to be waived for this project, the pond's performance during larger storms was analyzed to assess the effects on the existing infrastructure including the closed drainage system that conveys flow across the Parkway and discharges into the River.

The proposed storm drain system consists of multiple catch basins, manholes, and storm drain piping which conveys the site runoff to stable outlet locations. Most of the stormwater runoff within the project's limit of work is conveyed to the proposed wet pond for water quality treatment. Stormwater runoff from the developed area adjacent to the existing Medical Office Building will be conveyed to the existing storm drain system. By inspection, it can be seen that the runoff to the existing system will be reduced since the existing parking lot of the Hospital Building will be redeveloped, and the runoff will be redirected to the wet pond.

The flow to the proposed storm drain system was calculated using the Rational Method for the 25-year storm event based on the Portland rainfall intensity curves. The storm drain performance while

[2] The site was used as a railyard with numerous sidetracks up until the 1960's. Remnants of the tracks remain along the site's waterfront zone.
[3]MDEP records indicate a Highest Annual Tide of elevation 7.4'.

conveying runoff from the 25-year storm was calculated using Autodesk Storm and Sanitary Analysis 2019. The proposed piping has capacity to convey the runoff to the wet pond. The calculations are included in Attachment C.

A proposed swale that will also convey runoff to the wet pond was analyzed for capacity using the FHWA Hydraulic Toolbox, which calculates the swale capacity, based upon the Manning Equation. The results for the two sections of the swale analyzed are included in Attachment C.

12.9 APPROACH AND ANALYSIS FOR QUALITY AND QUANTITY

The proposed development will be required to meet the Basic Standard and the BMP Standard under the General Standards for a Site Law project. Based upon our review of the four recommended and approved methods for mitigating the increased frequency and duration of channel erosive flows, as required by the BMP Standards, Mercy Hospital is proposing to use a wet pond. The existing pond area will be modified to provide the required stormwater quality treatment. As part of the previous SLDA permit, the existing pond area was approved for filling. We believe that the current Phase 2 proposal is well suited to using a portion of the existing basin area as a wet pond, since the outlet is already in place and the amount of retrofit work is limited.

Since the project is an amendment to an existing SLODA Permit, the Basic Standard, General Standard, and Flooding Standard apply. The stormwater runoff from the project site is directly tributary to the Fore River that is tidal at this location. Since the site is tributary to the tidal river and as previously approved in the existing SLODA Permit, **the Applicant is requesting a waiver from the Flooding Standard.** Although the Applicant is requesting this waiver, a HydroCAD model has been prepared and attached that analyses the storm drain network and wet pond for peak discharge conditions.

The project site contains developed area as well as undeveloped area. The portion of the project within the previously developed area will be analyzed as a redevelopment project. The portion of the project within the undeveloped area of the site will be analyzed as new construction. The new construction will require treatment of no less than 95% of the impervious area and 80% of the developed area. The portion of the project categorized as redevelopment is summarized below.

In order to determine the treatment required for the project, the addition to the existing building and adjacent parking lot has been analyzed as redevelopment. Chapter 500 uses a pollutant ranking to determine the required treatment for a redevelopment project. The required treatment has been calculated based upon the pollutant ranking system presented in Section 4.C.d.1 of Chapter 500. A redevelopment boundary encompassing 1.9 acres was used to determine the pre and post development pollutant ranking as shown on the Watershed Maps included in Attachment A.

The following tables present the pollutant ranking calculation as outlined in Section 4.C.2.d of Chapter 500.

TABLE 1 PRE-DEVELOPMENT POLLUTANT				
Type	**SF**	**Acres**	**Pollutant Ranking**	**Total (acres x pollutant)**
Roads/High Use Parking	0	0	5	0.00
Other Roads/Medium Use Parking	45,395	1.04	4	4.17
Other Parking/Driveways	2,575	0.06	3	0.18
Other Roof/Walkways/Grassed Areas mowed more than twice per year	26,600	0.61	2	1.22
Non-Grassed Landscape	6,875	0.16	1	0.16
Forest/Meadow mowed no more than twice per year	0	0	0	0.00
			Total	5.72
			Redevelopment Area (ac)	1.90
			Total/Redevelopment	3.06

TABLE 2 POST-DEVELOPMENT POLLUTANT				
Type	**SF**	**Acres**	**Pollutant Ranking**	**Total (acres x pollutant)**
Roads/High Use Parking	26,823	0.62	5	3.08
Other Roads/Medium Use Parking	0	0	4	0.00
Other Parking/Driveways	13953	0.32	3	0.96
Other Roof/Walkways/Grassed Areas mowed more than twice per year	37,402	0.86	2	1.72
Non-Grassed Landscape	3,267	0.08	1	0.08
Forest/Meadow mowed no more than twice per year	0	0	0	0.00
			Total	5.83
			Redevelopment Area (ac)	1.90
			Total/Redevelopment	3.12

The impact change = 3.12 - 3.06 = 0.06 from Table 3 of Chapter 500 Section 4.C.2.d the Percentage of Developed Area that must be treated is **60%**.

Watershed Maps W1 and W2 depict the cover type used for the pollutant ranking calculation and are included in Attachment A of this report.

12.10 STORMWATER MANAGEMENT SUMMARY

Under the General Standard, the project is required to meet the BMP Standards, as the development site is not tributary to a lake watershed. The project contains new construction as well as redevelopment and will be required to meet the treatment standards based upon the pollutant impact ratings for redeveloped areas and the standard treatment requirements as presented in

Chapter 500. The following section summarizes the Wet Pond that serves as the central Stormwater BMP being utilized for the proposed development.

12.10.1 Wet Pond

Water Quality Measures

The wet pond requires a permanent pool volume with a minimum storage volume of 2.0 inches times the pond's tributary impervious area plus 0.8 inches times the pond's tributary non-impervious developed area. The permanent pool should have a minimum mean depth of 3 feet. The mean depth is defined as the pond volume measured at one foot below the permanent pool elevation, divided by the surface area at that elevation.

The wet pond must provide a channel protection volume of 1-inch times the pond's tributary impervious area plus 0.4-inch times the pond's tributary non-impervious developed area. The channel protection volume is released over a 24 to 48-hour time period. When the outflow of the pond is to a tidal water, an underdrained gravel trench is not required. The wet pond BMP appears to require Channel Protection storage when the outflow is tributary to a tidal waterbody while Chapter 500 does not appear to require the Channel Protection storage. In order to be conservative, Channel Protection storage has been provided.

Wet ponds are not typically located within a wetland. The MDEP previously approved the filling of the existing pond/wetland; therefore, the pond site is no longer a regulated wetland. The existing water elevation of 8 to 9 feet is the approximate groundwater elevation as this was established when the existing outlet culvert was installed. This level also coincides with the generally groundwater table as it is noted that the basin was formed as result of historic excavation activity for the extraction of gravel and borrow material by the railroad many years ago. The BMP Chapter 4 states that a wet pond with its pool surface at the elevation of the groundwater table can be acceptable if the discharge outlet is an acceptable receiving channel and is stable under a constant discharge. The current and proposed pond outlet is a storm drain which conveys the runoff to the tidal river. The existing storm drain outlet is stabilized with riprap. The proposed wet pond pool elevation is 9.5 which is slightly higher than it is today.

The majority of the pond's tributary runoff will enter the pond at the north end through a sediment forebay consisting of a stone bermed level lip spreader. The outlet structure is located at the south end of the pond resulting in a length to width ratio greater than 3:1. Runoff from the southerly access drive is tributary to the southerly end of the wet pond. The tributary impervious area of the access drive is approximately 1.6% of the total tributary impervious area. The runoff is directed away from the pond outlet. Since the access drive area is a small percentage of the total tributary impervious area, it is the opinion of Gorrill Palmer that having less than a 2:1 length to width ratio for this contributing runoff quantity is insignificant.

The channel protection volume will be provided above the permanent pool elevation. The channel protection outlet will consist of an orifice set at the permanent pool elevation and designed to release the channel protection volume in 24 to 48-hours. The existing 15-inch

diameter culvert will be connected to the outlet control structure and will control runoff from the larger storms. A weir will be set at the channel protection elevation to ensure that the channel protection volume passes solely through the outlet orifice.

Subcatchment 1 is tributary to the wet pond and consists of existing roof, pavement, and vegetated area, as well as pavement, roof, and vegetated area from the proposed development. Approximately 73% of the runoff enters the pond at the northerly end through a sediment forebay. A sediment forebay is not proposed at the southerly inlet since the catch basin within the access drive will have a sump and outlet hood, and the runoff will flow through a 140' vegetated channel, which will allow for sediment deposition prior to entering the pond.

Since the wet pond will be located within the site of the existing pond, which is a low point within the landscape, there is not a defined berm, or emergency spillway. The proposed emergency outlet will consist of a trash rack over the open top of the outlet control structure, which will allow for flow through the outlet pipe assuming the inlet weir to the outlet control structure is clogged.

The following table presents the wet pond performance:

TABLE 3
WET POND

Description	Required	Provided
Impervious Area		234,288 SF
Vegetated Developed Area		159,660 SF
Channel Protection Volume	24,846 CF	25,121 CF
Elevation at Channel Protection Volume		10.36 FT
Pond Base Elevation		4.5 FT
Permanent Pool Elevation		9.5 FT
Permanent Pool Volume	49,692 CF	82,236 CF
Pond Volume at Elev. 8.5		61,396 CF.
Surface Area at Elev. 8.5		19,723 SF.
Mean Depth	3 FT	3.11 FT
UD trench Length	N/A Tidal Outlet	
Channel Protection Outflow		0.25 CFS
Release Time	24-48 hours	28 hours

The wet pond storage table is included in Appendix B.

The Water Quality Map depicting the treated area is included in Appendix A.

The building addition and parking area at the northerly end of the site is a redevelopment project. Based upon Section 4.C.2.d of Chapter 500, the redeveloped portion of the project is required to treat 60% of the Developed Area. The total developed area is approximately 81,445 SF (1.9 acres). The approximate impervious area within the developed area is 70,213 SF (1.6 acres). Treatment is required for 48,867 SF (1.12 acres) of the developed area.

Existing developed area that is not within the limit of work is tributary to the proposed wet pond. Since the existing pond does not conform to MDEP BMP's, it is assumed that there is no water quality treatment for the existing runoff. The proposed wet pond will provide treatment for these existing impervious and vegetated areas.

The following table summarizes the proposed treatment.

TABLE 4
STORMWATER TREATMENT

	Impervious	Developed (Impervious + Landscaped)
Redeveloped Area Treated by the Wet Pond (SF)	47,961	58,788
Total Redeveloped Area (SF)	70,213	81,445
Untreated Redeveloped Area (SF)	22,252	22,657
Percent of Redeveloped area treated	68.3%	72.2%
New Construction treated by the Wet Pond (SF)	100,656	128,334
Total New Construction Area (SF)	101,160	128,838
Untreated New Construction Area (SF)	504	504
Percent of New Construction Treated (SF)	99.5%	99.6%
Total Area Treated by Wet Pond Including Existing Area (SF)	234,288	393,948
Total Area of Redevelopment and New Construction (SF)	168,798	207,708
Percent Treated Relative to Proposed Construction (SF)	139%	190%

The wet pond treats 72.2% of the developed redevelopment area, which exceeds the required 60% treatment.

The wet pond treats 99.5% of the new construction impervious area and 99.6% of the new construction developed area, which exceeds the required treatment of 95% of the impervious area and 80% of the developed area.

The wet pond also treats existing developed area, which results in an excess treatment of 44% of the impervious area and 110% of the developed area.

Water Quantity Measures

The proposed project will generate stormwater runoff that is directly tributary to the Fore River. Since the Applicant is requesting a waiver from the flooding standard, the analysis of post-development flow from the current project has been limited to determining the capacity of the existing storm drain outlet from the pond and storm drain system performance during peak tide and storm events.

The storm drain system consists of a 15-inch diameter pond outlet pipe that conveys runoff to 18-inch diameter pipes linking manholes and catch basins, before discharging the runoff at the high-water line of the Fore River.

The soil types are shown on the watershed map included in Attachment A were obtained from the NRCS Cumberland County Medium Intensity Soil Survey. The proposed development occurs over previously developed area labeled as Hinckley soil or over gravel pit, cut, and fill soil types. Post-development vegetated area is assumed to be hydrologic Group C soil for this analysis.

The permanent pool surface area has been assumed to have a CN of 98 with a time of concentration of zero, which results in instantaneous runoff from the pond surface.

The developed portion of the site tributary to the wet pond was modelled as one subcatchment with an assumed time of concentration of 6 minutes due to the large percentage of impervious surface. The post-development watershed map is included in Attachment A.

The wet pond outlet structure was modelled with an orifice outlet for the channel protection volume, and a weir to convey the larger storms. The orifice and weir convey the runoff to the existing 15-inch diameter culvert.

The low point in the drainage system connected to the wet pond is an existing catch basin to the west of the wet pond located in the loading/utility pad area adjacent to the existing building. The catch basin rim elevation is 13.07. The lowest point in the outlet storm drain system is a catch basin adjacent to the Fore River Parkway. The catch basin rim elevation is 15.02.

The wet pond performance for the various storm return periods is presented in the following table.

TABLE 5
WET POND

	Storm Event			
	2 Year	**10 Year**	**25 Year**	**100 Year**
Peak Inflow (CFS)	21.07	35.60	47.24	69.37
Peak Outflow (CFS)	1.23	3.78	6.20	11.85
Stage (Max. Elevation)	10.83	11.41	11.82	12.46
Storage (cf)	41,980	65,264	85,665	122,092
Depth Above Permanent Pool (ft)	1.33	1.91	2.32	2.96

As can be seen from the table above, the maximum stage within the wet pond is 12.46 for the 100-year storm, which is below the existing catch basin rim of 13.07.

The wet pond outlet storm drain is modelled as a series of ponds with insignificant storage with culvert outlets. In order to take into account the effect of the tidal Fore River at the outflow, the highest astronomical tide from the Maine Geologic Survey was set as a fixed tail water within the system. The highest astronomical tide is listed as elevation 6.7 (NAVD 88) at the Fore River. Converting elevation 6.7 to the project datum of NGVD 29 results in an

elevation of 7.4 for the highest astronomical tide. As can be seen in the HydroCAD printouts contained in Attachment B, the peak elevation of the stormwater outflow for the 100-year storm within the outlet storm drain system is below the existing catch basin rims.

The location of the proposed wet pond is within a depression on the project site, so there is not a berm that would be vulnerable to an overflow of the stormwater runoff. There is no overland emergency spillway proposed, since the area surrounding the pond is currently developed. The proposed outlet control structure will consist of a 6-foot diameter manhole with an open top. The top will be protected by a trash rack as shown on the Wet Pond detail sheet included with this report. The maximum opening size of the trash rack is 4 ¾ inches. The trash rack will prevent the outlet pipe from becoming clogged with debris; therefore, it is unlikely that the pond outlet will become plugged and require an emergency spillway to convey the runoff from the pond. In addition to the unlikely clogging of the outlet structure, Attachment B contains a routing of the wet pond with no outflow. The routing shows that the pond is capable of storing the entire volume of runoff from the 25-year storm without exceeding the existing catch basin rim of 13.07. The calculated peak stage of the 25-year storm routed to the wet pond with no outlet is 13.00.

The stormwater runoff is tributary to the Fore River; therefore, **a waiver from the Flooding Standard is requested**. The wet pond is capable of conveying runoff from the 100-year storm without exceeding the elevation of the low point in the existing storm drain system. The existing storm drain outlet will discharge at a stable riprapped location. A trash rack over the outlet control structure will ensure that the outlet pipe will not be clogged. The proposed wet pond has the capacity to store the entire runoff from a 25-year storm without exceeding the low point elevation. Based upon the factors stated, Gorrill Palmer is of the opinion that the project construction will not result in adverse effects to downstream conditions.

12.11 MAINTENANCE OF FACILITIES

The stormwater management facilities will be maintained by the Applicant or their assigns after construction is completed. The general contractor will be responsible for maintenance during construction. The contract documents will require that the contractor designate a person for maintenance of the facilities during construction as required by this application. Long-term operation/maintenance schedules for the facilities are provided in the updated O&M Manual included in Attachment D of this report.

12.12 CONCLUSION

The Stormwater Management Plan for this project is anticipated to mitigate any impacts of development on stormwater runoff rates and to provide treatment of pollutants in the runoff. The majority of the proposed development will be tributary to a closed wet pond with one point of discharge.

Based on the proposed design, the runoff from the proposed development will be captured and conveyed in a manner that will not have an adverse impact to the surrounding stormwater systems or the environment.

ATTACHMENT A

WATERSHED MAPS

PAN AM RAILWAY

N/F
ST. JOHN STREET ASSOCIATES
LIMITED PARTNERSHIP
6864/210

EXISTING PERIMETER
ACCESS ROAD

S16°57'07"E
290.08'

NEW MMC SURFACE
PARKING LOT

PARCEL A TRACT TWO
UTILITY AREA
23723/214 & 5738/60
22764/208 & 17783/298

S09°29'00"E
197.09'

S17°04'57"E
180.50'

EX. WATER MAIN TO
ST. JOHN STREET

N/F
UNION STATION
LIMITED PARTNERSHIP
10144/23

PARCEL A TRACT THREE
LICENSE AGREEMENT
17783/322
LICENSE AGREEMENT
14203/252

COUNTY WAY

L=384.91'

R=988.37'

N49°17'54"E
66.00'

L=1102.20'

R=922.37'

L=522.60'

N/F
INHABITANTS
CUMBERLAND COUNTY
STATE OF MAINE
9382/61
9820/263

CUMBERLAND
COUNTY JAIL

REDEVELOPMENT BOUNDARY

MERCY HOSPITAL
4 STORY BRICK BUILDING
FOOTPRINT - 37,566 GSF
TOTAL AREA - 138,099 GSF

MEDICAL OFFICE BUILDING
4 STORY BRICK
FOOTPRINT - 20,047 GSF
TOTAL AREA - 82,186 GSF

GAS FACILITIES
EASEMENT
25696/212

UNDERGROUND UTILITY
LINE EASEMENT MAIN LINE

PORTLAND WATER DISTRICT
WATER LINE EASEMENT
25624/210

RECREATIONAL TRAIL EASEMENT
25855/253
26346/137

(SEE NOTE 7)
EDGE OF POND

EDGE OF POND
POND EASEMENT AREA
25591/149

THIS AREA INCLUDED IS
VOLUME CALCULATION
(SEE NOTE 7)

UNDERGROUND UTILITY
LINE EASEMENT SOUR
25971/306

GENERATOR

OXYGEN

CHILLER

EX. FRONT

EX. LIFT STA.

EX. SMH

EX. GREASE TANK

LOAD DOCK

CONC. RAMP

THRES.= 17.54
LOADING DOCK

EX. SAN. OUT

EX. 4" I.W. (CONNECTS TO TERMINUS MANHOLE AT FRONT OF BLDG.

OVERHANG BRICK

CONCRETE

EX. RAISED CROSSWALK

EX. CONC.

EX. LIGHT, TYP.

TRANS. PAD W/ GENERATOR

PAVED WALK

OVERHEAD UTILITY LINE EASEMENT
25971/306

PIPELINE PER
19154/555

I-295 CONNECTOR
(FORE RIVER PARKWAY)
19154/555

S72°45'03"W
472.62'

L=197.60'
R=1184.38'

L=185.42'
R=197.50'

N13°18'41"W
252.78'

N62°48'26"E
13.12'
(S)

EX. FORE RIVER
TRAIL - 10' WIDE,
SHARED USE

AREA BETWEEN
HIGH & LOW WATER
OWNED BY MERCY HOSPITAL

HIGH WATER LINE OF FORE RIVER

FORE RIVER

FORE RIVER
MUD FLATS

LEGEND

- OTHER ROADS, MEDIUM USE PARKING
- OTHER ROOFS, BIKEWAYS, GRASS MOWED MORE THAN 2x / YR, WALKWAYS / FOOT TRAFFIC ONLY PAVEMENT
- NON-GRASS LANDSCAPE, STORMWATER TREATMENT / STORAGE

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.

NORTH

GRAPHIC SCALE
40 0 20 40 80
(IN FEET)
1 inch = 40 ft.

STATE OF MAINE
STEPHEN R. BUSHEY
08.30.19
LICENSED PROFESSIONAL ENGINEER
STEPHEN R. BUSHEY, P.E.
LIC. #7429

Rev.	Date	Revision
–	–	–

Issued For	Date	By
PERMIT APPROVAL SUBMISSION	08.30.19	SRB
DESIGN DEVELOPMENT SUBMISSION TO OWNER	07.31.19	SRB

Design: SRB	Draft: CDD	Date: AUG. 2019	
Checked: SRB	Scale:	Job No.: 3257.04	
File Name: 325704–existing.dwg			

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Drawing Name: Current Conditions Landcover Map
Project: Fore River Campus Consolidation
Portland, Maine
Client: Northern Light Mercy Hospital
144 State Street, Portland, Maine 04101

Drawing No. W–1

U:\3257.04_Mercy Hospital_Expansion_DD_Permits\STANTEC\civil\cadd\permit\dwg\325704–existing.dwg 8/30/2019 12:12 PM

ST. JOHN STREET ASSOCIATES
LIMITED PARTNERSHIP
6864/210

EXISTING PERIMETER
ACCESS ROAD

EX. WATER MAIN TO
ST. JOHN STREET

N/F
UNION STATION
LIMITED PARTNERSHIP
10144/23

COUNTY WAY

N/F
INHABITANTS
ERLAND COUNTY
TE OF MAINE
9382/61
9820/263

CUMBERLAND
COUNTY JAIL

MERCY HOSPITAL
4 STORY BRICK BUILDING
FOOTPRINT - 37,566 GSF
TOTAL AREA - 138,099 GSF

MEDICAL OFFICE BUILDING
4 STORY BRICK
FOOTPRINT - 20,047 GSF
TOTAL AREA - 82,186 GSF

GENERATOR

OXYGEN

CHILLER

EX. HYDRANT

EX. LIFT STA.

EX. GREASE TANK

LOADING DOCK

CONC. PAD

EX. SMH

EX. SAN. OUT

EX. 4" I.N. CONNECTS TO TERMINUS MANHOLE AT FRONT OF BLDG.

OVERHANG BRICK

CONCRETE BUTTRESS

EX. RAISED CROSSWALK

EX. LIGHT, TYP.

PAVED WALK

PAVED ISLAND

TRANS. PAD

EX. CONC. WALL

I-295 CONNECTOR
(FORE RIVER PARKWAY)
1915/1735

FORE RIVER

FORE RIVER
MUD FLATS

REDEVELOPMENT BOUNDARY

LEGEND

- ROADS WITH IDLING, HIGH USE PARKING
- OTHER PARKING AND DRIVEWAYS, FLAT ASPHALT ROOFS, IND. ROOFS
- OTHER ROOFS, BIKEWAYS, GRASS MOWED MORE THAN 2x / YR, WALKWAYS / FOOT TRAFFIC ONLY PAVEMENT
- NON-GRASS LANDSCAPE, STORMWATER TREATMENT / STORAGE

NORTH

GRAPHIC SCALE
40 0 20 40 80
(IN FEET)
1 inch = 40 ft.

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STATE OF MAINE
STEPHEN R. BUSHEY
LICENSED
PROFESSIONAL ENGINEER
08.30.19
STEPHEN R. BUSHEY, P.E.
LIC. #7429

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Rev.	Date	Revision
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Issued For	Date	By
PERMIT APPROVAL SUBMISSION	08.30.19	SRB
DESIGN DEVELOPMENT SUBMISSION TO OWNER	07.31.19	SRB

Design: SRB	Draft: CDD	Date: AUG. 2019
Checked: SRB	Scale:	Job No.: 3257.04

File Name: 325704-WSHED-POST.dwg

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Drawing Name: Post–Development Landcover Map
Project: Fore River Campus Consolidation
Portland, Maine
Client: Northern Light Mercy Hospital
144 State Street, Portland, Maine 04101

Drawing No. W–2

WATERSHED LEGEND

- WATERSHED BOUNDARY
- A — B: WATERSHED FLOW PATH
- 999: SUBCATCHMENT
- 999: REACH
- SF: SHEET FLOW
- SCF: SHALLOW CONCENTRATED FLOW
- CF: CHANNEL FLOW
- CC: CIRCULAR CHANNEL
- POI: POINT OF INTEREST
- 999: POND

PAN AM RAILWAY

N/F
ST. JOHN STREET ASSOCIATES
LIMITED PARTNERSHIP
6864/210

EXISTING PERIMETER ACCESS ROAD

OUTLET CONTROL STRUCTURE

EXISTING DOWNSTREAM DEFENDER

FORE RIVER MUD FLATS

STORM DRAIN OUTLET LOCATION

WET POND

FORE RIVER MUD FLATS

WATERSHED BOUNDARY

EXISTING DOWNSTREAM DEFENDER

N/F
UNION STATION
LIMITED PARTNERSHIP
10144/23

COUNTY WAY

N/F
INHABITANTS
CUMBERLAND COUNTY
STATE OF MAINE
9382/61
9820/263

CUMBERLAND COUNTY JAIL

MAINTENANCE FACILITY

MERCY HOSPITAL
4 STORY BRICK & CONCRETE
FOOTPRINT - 37,566 GSF
TOTAL AREA - 138,099 GSF

MEDICAL OFFICE BUILDING
4 STORY BRICK
FOOTPRINT - 20,047 GSF
TOTAL AREA - 82,186 GSF

I-295 CONNECTOR (FORE RIVER PARKWAY)

FORE RIVER

1S 2S 3S 4S 5S 6S 7S 8S 9P 10P 7P

NOTE:
TIME OF CONCENTRATION AT SUBCATCHMENT 7S IS ASSUMED TO BE 0 MINUTES. TIME OF CONCENTRATION AT ALL OTHER SUBCATCHMENTS IS ASSUMED TO BE 5 MINUTES.

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.

NORTH

GRAPHIC SCALE
40 0 20 40 80
(IN FEET)
1 inch = 40 ft.

STATE OF MAINE
STEPHEN R. BUSHEY
08.30.19
LICENSED PROFESSIONAL ENGINEER
STEPHEN R. BUSHEY, P.E.
LIC. #7429

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PERMIT APPROVAL SUBMISSION	08.30.19	SRB
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Design: SRB | Drafted: CDD | Date: AUG. 2019
Checked: SRB | Scale: | Job No.: 3257.04
File Name: 325704–WSHED–POST.dwg

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Drawing Name: Post–Development Watershed Map
Project: Fore River Campus Consolidation, Portland, Maine
Client: Northern Light Mercy Hospital, 144 State Street, Portland, Maine 04101

Drawing No. W–3

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STORMWATER QUALITY TREATMENT											
	IMPERVIOUS						DEVELOPED				TREATMENT
SUBCATCHMENT	COVER TYPE	AREA (SF)	AMOUNT TREATED	% AREA	% TREATED		AREA (SF)	AMOUNT TREATED	% AREA	% TREATED	
1	PROPOSED/REDEVELOPED PAVE/ROOF	148,617	100%	*	*		187,122	100%	*	*	WET POND
2	EXISTING PAVE/ROOF	85,671	100%	*	*		206,826	100%	*	*	WET POND
3	PAVE	22,756	0%	*	*		23,161	0%	*	*	UNTREATED
TOTAL % TREATMENT					*	TOTAL % TREATMENT				*	

*SEE TREATMENT TABLE BELOW

LEGEND

- AREA UNTREATED
- EXISTING AREA TREATED BY WET POND
- AREA TREATED BY WET POND
- (1) SUBCATCHMENT

Table 4 – Stormwater Treatment		
	IMPERVIOUS	DEVELOPED (Impervious + Landscaped)
Redeveloped area treated by the Wet Pond (sf)	47,961	58,788
Total Redeveloped Area (sf)	70,213	81,445
Untreated Redeveloped Area (sf)	22,252	22,657
Percent of Redeveloped area treated	68.3%	72.2%
New Construction treated by the Wet Pond (sf)	100,656	128,334
Total New Construction Area (sf)	101,160	128,838
Untreated New Construction Area (sf)	504	504
Percent of New Construction treated (sf)	99.5%	99.6%
Total Area Treated by Wet Pond Including existing area (sf)	234,288	393,948
Total Area of Redevelopment and New Construction (sf)	168,798	207,708
Percent Treated relative to proposed construction (sf)	139%	190%

REQUIRED TREATMENT:
REDEVELOPED: 60% OF DEVELOPED AREA
NEW CONSTRUCTION: 95% OF IMPERVIOUS AREA
80% OF DEVELOPED AREA

PAN AM RAILWAY

N/F
ST. JOHN STREET ASSOCIATES
LIMITED PARTNERSHIP
6864/210

EXISTING PERIMETER ACCESS ROAD

N/F
UNION STATION
LIMITED PARTNERSHIP
10144/23

COUNTY WAY

N/F
INHABITANTS
CUMBERLAND COUNTY
STATE OF MAINE
9382/61
9820/263

CUMBERLAND COUNTY JAIL

MERCY HOSPITAL
4 STORY W/BASEMENT
FOOTPRINT - 37,566 GSF
TOTAL AREA - 138,099 GSF

MEDICAL OFFICE BUILDING
4 STORY BRICK
FOOTPRINT - 20,047 GSF
TOTAL AREA - 82,186 GSF

EX. FORE RIVER TRAIL - 10' WIDE, SHARED USE

WET POND

FORE RIVER MUD FLATS

I-295 CONNECTOR (FORE RIVER PARKWAY)

FORE RIVER

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.

NORTH

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40 0 20 40 80
(IN FEET)
1 inch = 40 ft.

STATE OF MAINE
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08.30.19
LICENSED PROFESSIONAL ENGINEER
STEPHEN R. BUSHEY, P.E.
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File Name: 325704–WSHED–POST.dwg			

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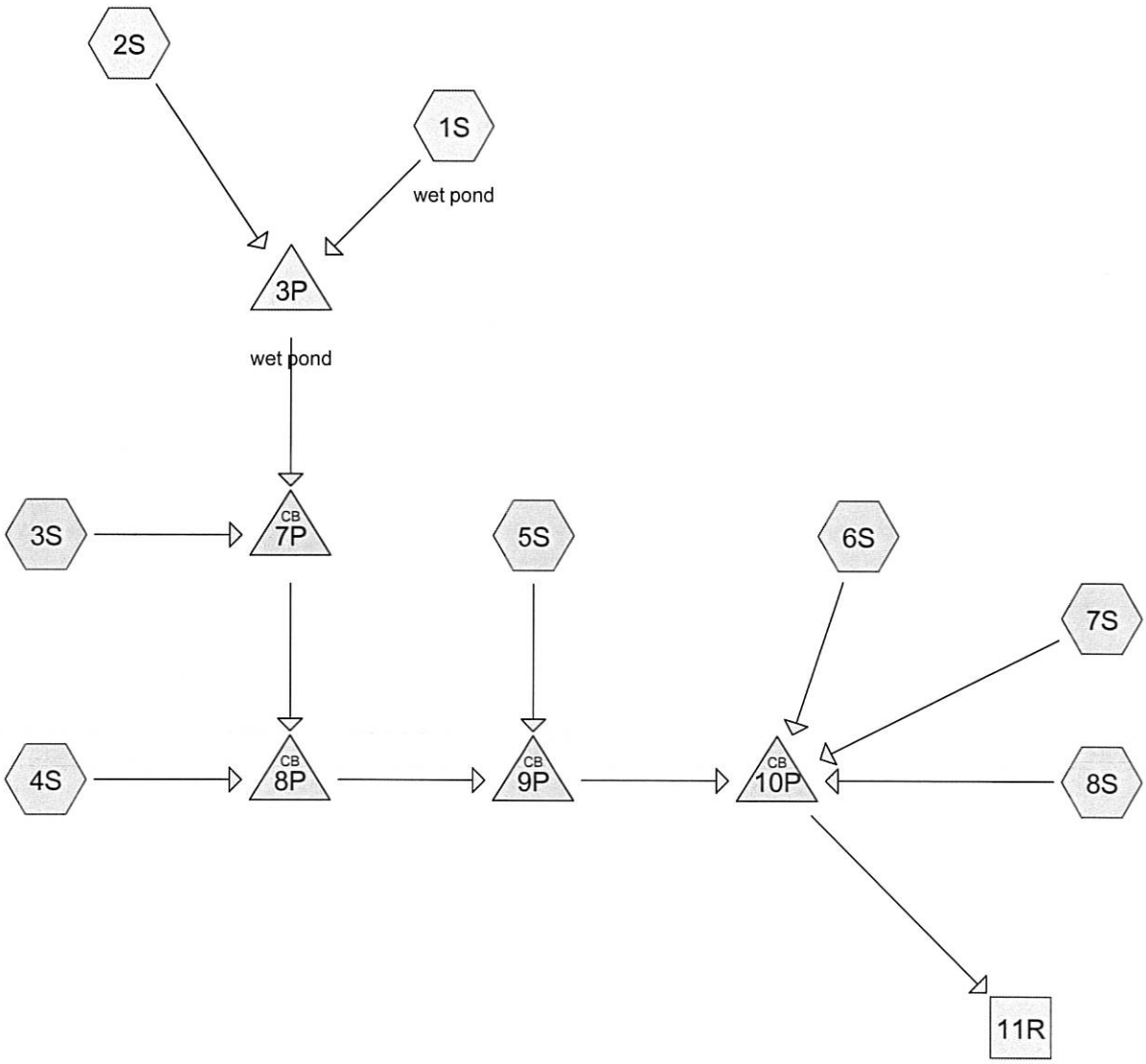
Drawing Name:	Water Quality Map
Project:	Fore River Campus Consolidation Portland, Maine
Client:	Northern Light Mercy Hospital 144 State Street, Portland, Maine 04101

Drawing No.
WQ

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ATTACHMENT B

POST DEVELOPMENT HYDROCAD MODEL



Subcat Reach Pond Link

Routing Diagram for wet pond
Prepared by Gorrill Palmer, Printed 8/2/2019
HydroCAD® 10.00-22 s/n 01265 © 2018 HydroCAD Software Solutions LLC

Time span=0.00-40.00 hrs, dt=0.01 hrs, 4001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: wet pond Runoff Area=21,798 sf 100.00% Impervious Runoff Depth=5.56"
Tc=0.0 min CN=98 Runoff=3.47 cfs 0.232 af

Subcatchment 2S: Runoff Area=393,948 sf 59.47% Impervious Runoff Depth=4.43"
Tc=6.0 min CN=88 Runoff=45.51 cfs 3.341 af

Subcatchment 3S: Runoff Area=22,488 sf 60.03% Impervious Runoff Depth=4.43"
Tc=6.0 min CN=88 Runoff=2.60 cfs 0.191 af

Subcatchment 4S: Runoff Area=14,264 sf 92.54% Impervious Runoff Depth=5.33"
Tc=6.0 min CN=96 Runoff=1.84 cfs 0.145 af

Subcatchment 5S: Runoff Area=6,504 sf 100.00% Impervious Runoff Depth=5.56"
Tc=6.0 min CN=98 Runoff=0.85 cfs 0.069 af

Subcatchment 6S: Runoff Area=11,944 sf 0.00% Impervious Runoff Depth=3.02"
Tc=6.0 min CN=74 Runoff=0.97 cfs 0.069 af

Subcatchment 7S: Runoff Area=16,308 sf 100.00% Impervious Runoff Depth=5.56"
Tc=6.0 min CN=98 Runoff=2.13 cfs 0.174 af

Subcatchment 8S: Runoff Area=11,220 sf 100.00% Impervious Runoff Depth=5.56"
Tc=6.0 min CN=98 Runoff=1.46 cfs 0.119 af

Reach 11R: Inflow=12.89 cfs 3.906 af
Outflow=12.89 cfs 3.906 af

Pond 3P: wet pond Peak Elev=11.82' Storage=167,902 cf Inflow=47.24 cfs 3.573 af
Outflow=6.20 cfs 3.139 af

Pond 7P: Peak Elev=8.43' Inflow=6.68 cfs 3.329 af
18.0" Round Culvert n=0.013 L=110.0' S=0.0065 '/' Outflow=6.68 cfs 3.329 af

Pond 8P: Peak Elev=8.20' Inflow=7.63 cfs 3.475 af
18.0" Round Culvert n=0.013 L=40.0' S=0.0113 '/' Outflow=7.63 cfs 3.475 af

Pond 9P: Peak Elev=8.38' Inflow=8.43 cfs 3.544 af
18.0" Round Culvert n=0.013 L=35.0' S=0.0020 '/' Outflow=8.43 cfs 3.544 af

Pond 10P: Peak Elev=10.60' Inflow=12.89 cfs 3.906 af
18.0" Round Culvert n=0.013 L=130.0' S=0.0050 '/' Outflow=12.89 cfs 3.906 af

Total Runoff Area = 11.443 ac Runoff Volume = 4.340 af Average Runoff Depth = 4.55"
36.44% Pervious = 4.170 ac 63.56% Impervious = 7.273 ac

Summary for Subcatchment 1S: wet pond

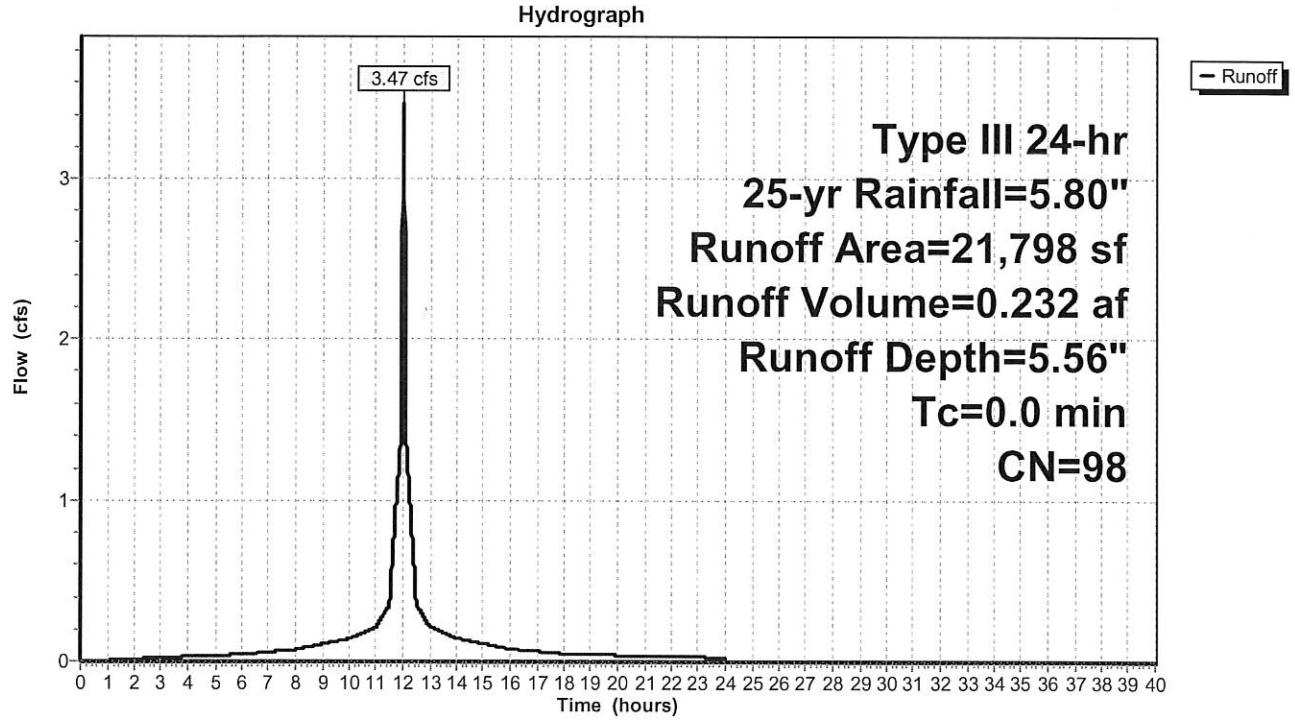
Runoff = 3.47 cfs @ 12.00 hrs, Volume= 0.232 af, Depth= 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-yr Rainfall=5.80"

Area (sf)	CN	Description
21,798	98	Water Surface, HSG A
21,798		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.0					**Direct Entry,**

Subcatchment 1S: wet pond



Summary for Subcatchment 2S:

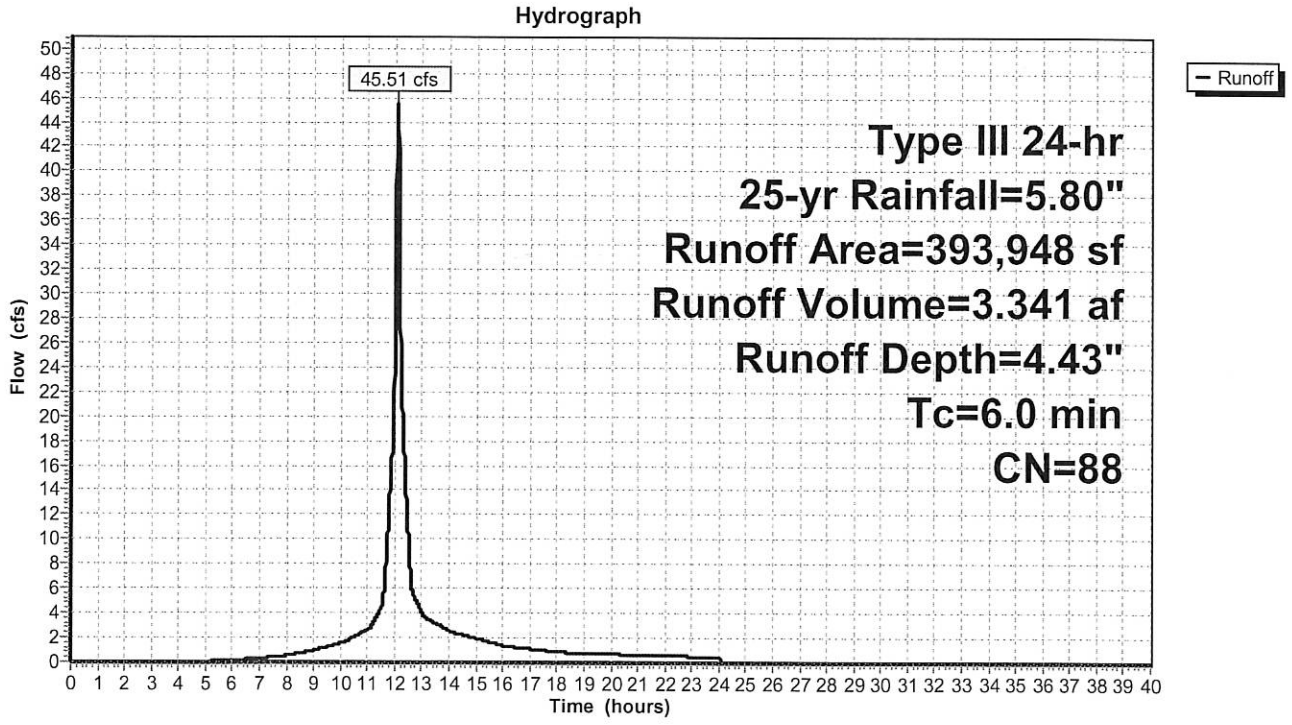
Runoff = 45.51 cfs @ 12.09 hrs, Volume= 3.341 af, Depth= 4.43"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-yr Rainfall=5.80"

Area (sf)	CN	Description
234,288	98	Paved parking, HSG A
159,660	74	>75% Grass cover, Good, HSG C
393,948	88	Weighted Average
159,660		40.53% Pervious Area
234,288		59.47% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 2S:



Summary for Subcatchment 3S:

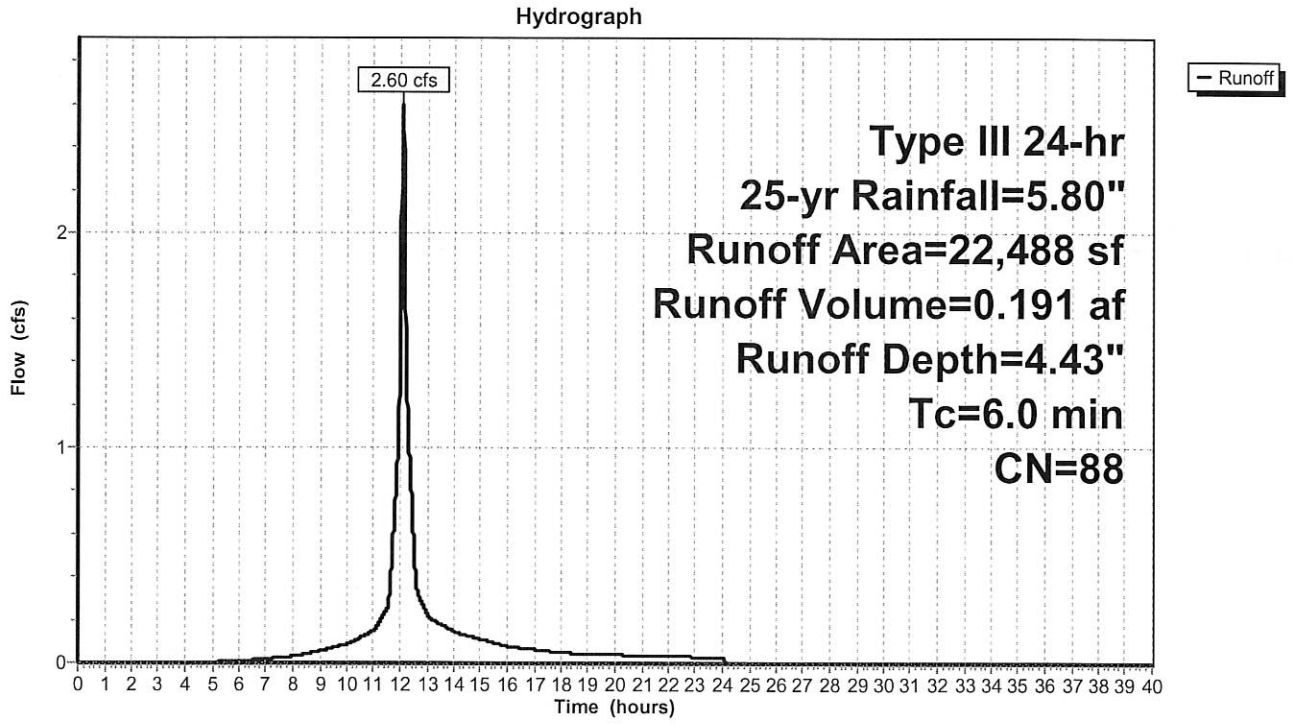
Runoff = 2.60 cfs @ 12.09 hrs, Volume= 0.191 af, Depth= 4.43"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-yr Rainfall=5.80"

Area (sf)	CN	Description
13,500	98	Paved parking, HSG A
8,988	74	>75% Grass cover, Good, HSG C
22,488	88	Weighted Average
8,988		39.97% Pervious Area
13,500		60.03% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 3S:



Summary for Subcatchment 4S:

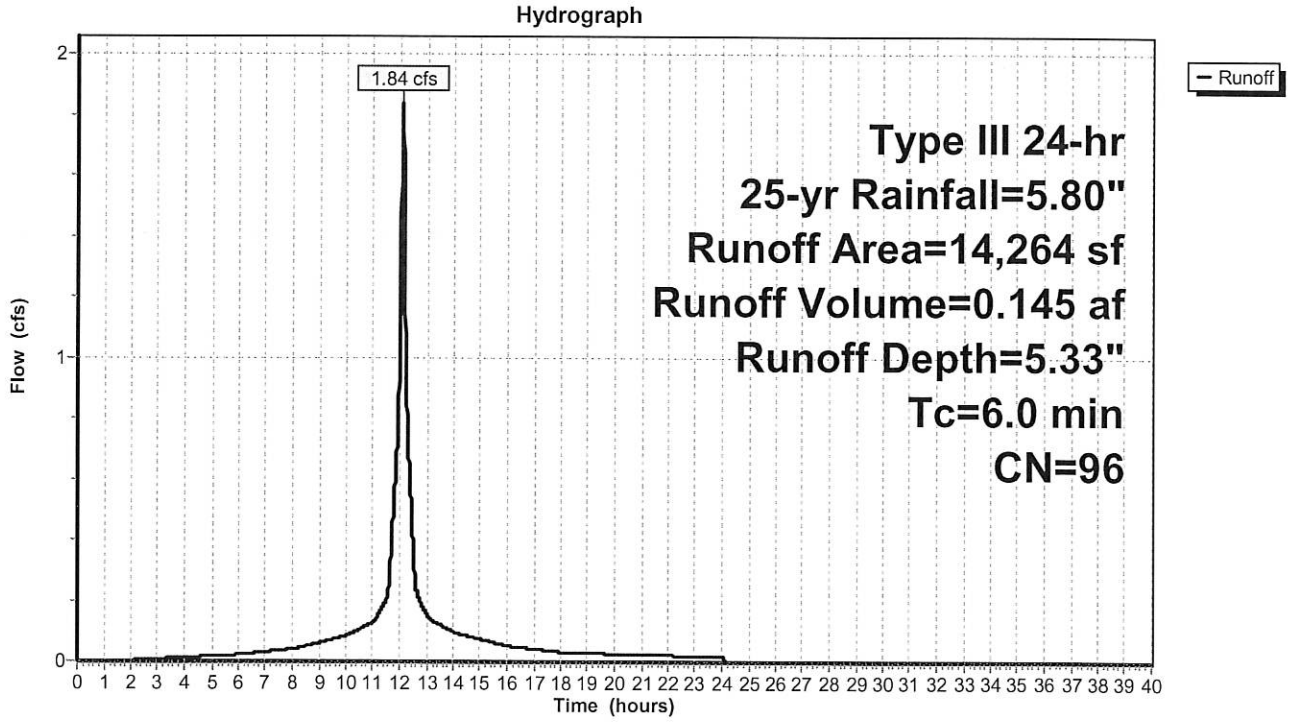
Runoff = 1.84 cfs @ 12.08 hrs, Volume= 0.145 af, Depth= 5.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-yr Rainfall=5.80"

Area (sf)	CN	Description
13,200	98	Paved parking, HSG A
1,064	74	>75% Grass cover, Good, HSG C
14,264	96	Weighted Average
1,064		7.46% Pervious Area
13,200		92.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 4S:



Summary for Subcatchment 5S:

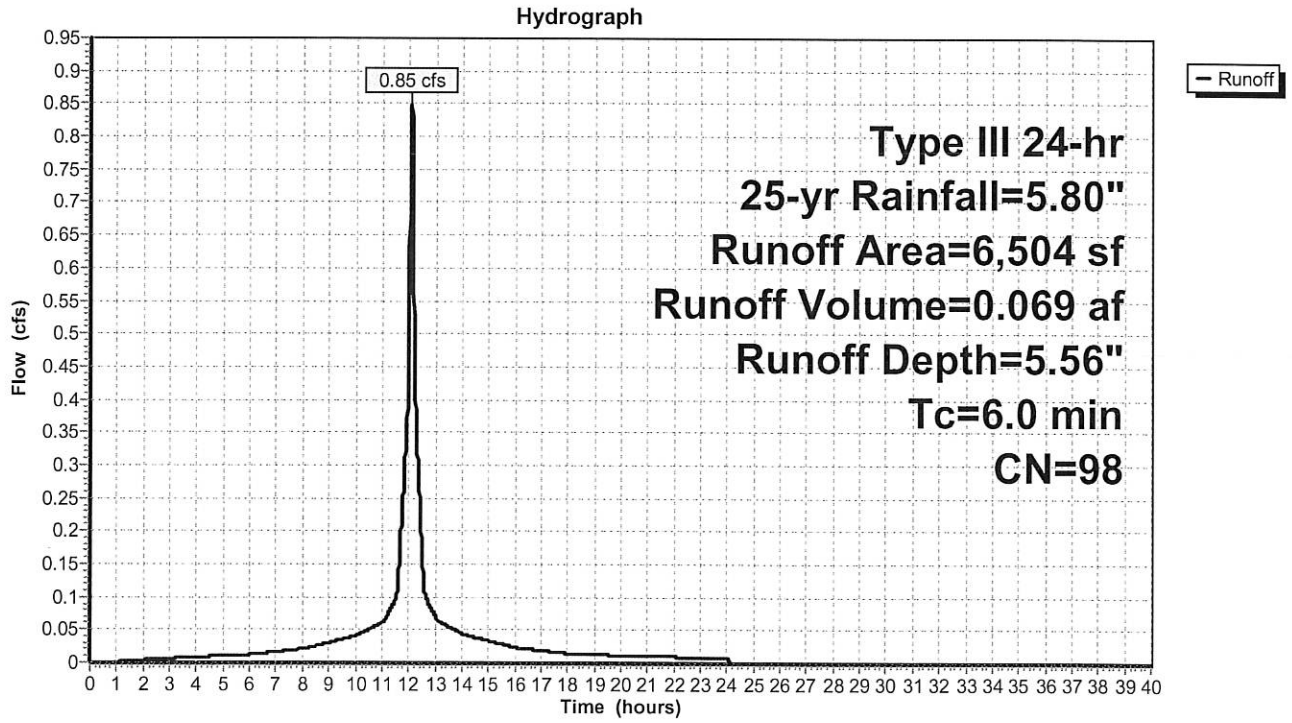
Runoff = 0.85 cfs @ 12.08 hrs, Volume= 0.069 af, Depth= 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-yr Rainfall=5.80"

Area (sf)	CN	Description
6,504	98	Paved parking, HSG A
6,504		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 5S:



Summary for Subcatchment 6S:

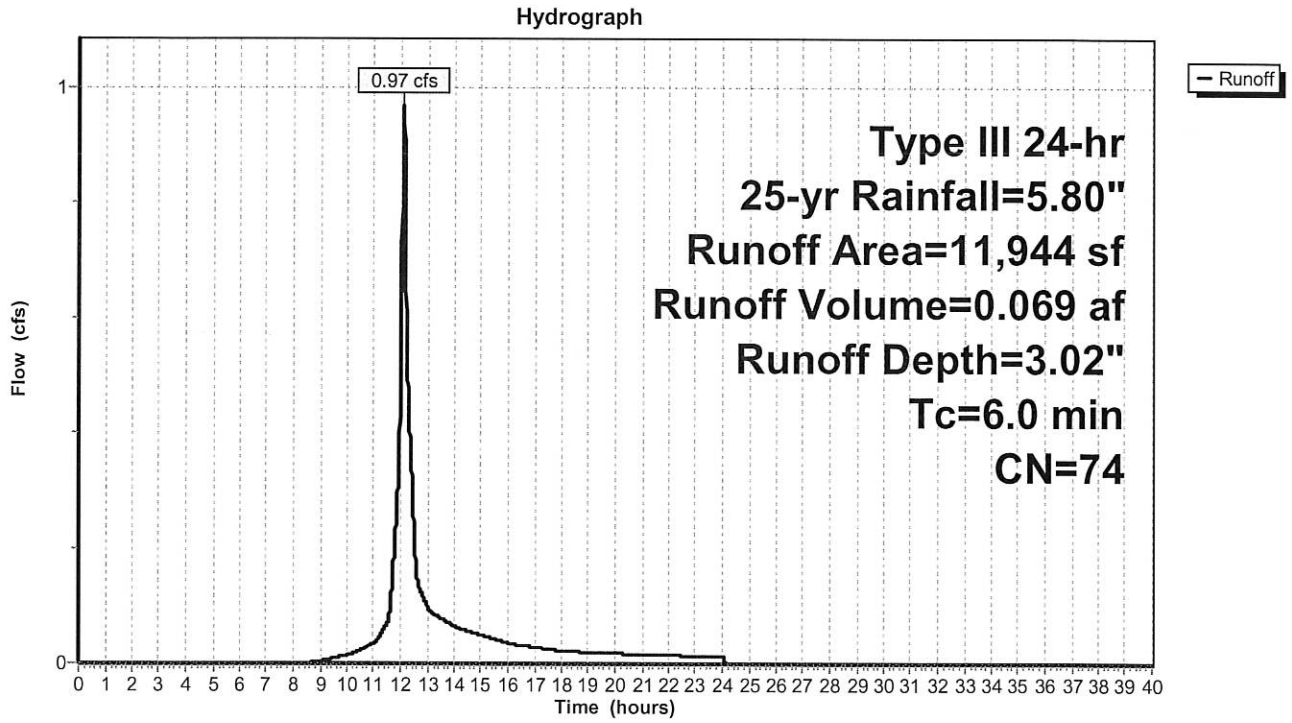
Runoff = 0.97 cfs @ 12.09 hrs, Volume= 0.069 af, Depth= 3.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-yr Rainfall=5.80"

Area (sf)	CN	Description
11,944	74	>75% Grass cover, Good, HSG C
11,944		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 6S:



Summary for Subcatchment 7S:

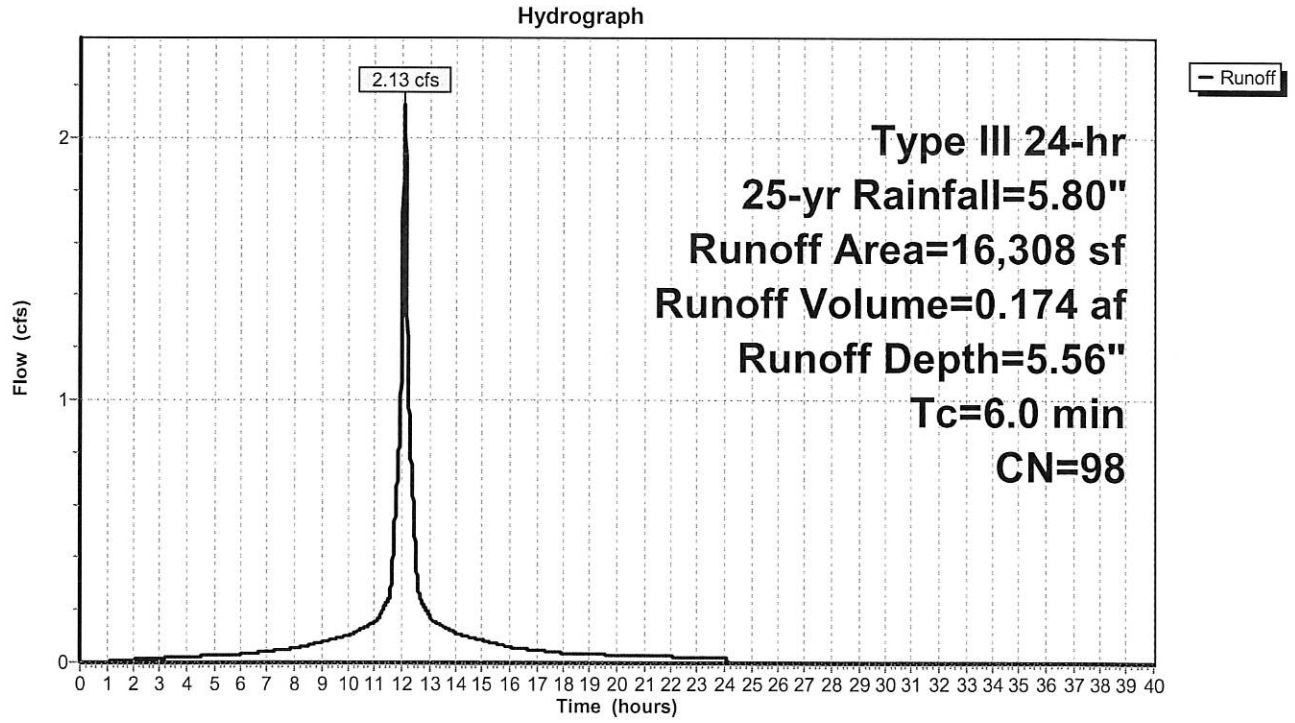
Runoff = 2.13 cfs @ 12.08 hrs, Volume= 0.174 af, Depth= 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-yr Rainfall=5.80"

Area (sf)	CN	Description
16,308	98	Paved parking, HSG A
16,308		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 7S:



Summary for Subcatchment 8S:

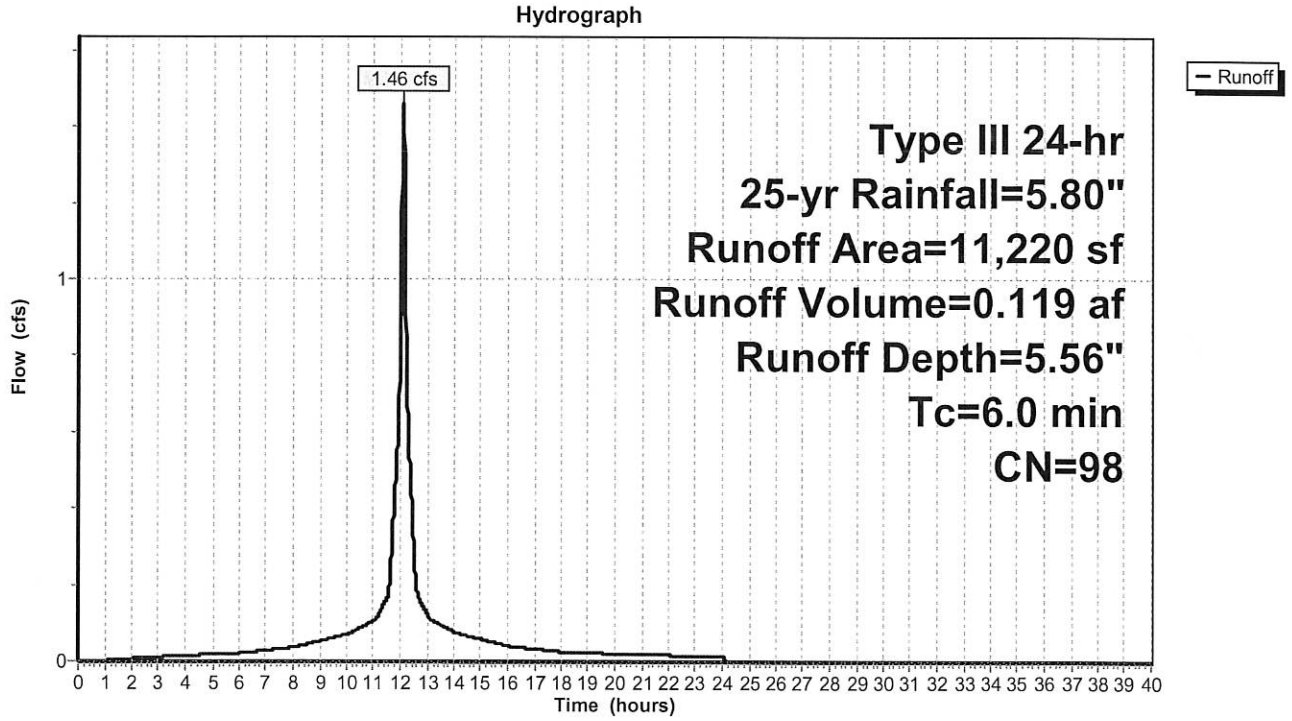
Runoff = 1.46 cfs @ 12.08 hrs, Volume= 0.119 af, Depth= 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-yr Rainfall=5.80"

Area (sf)	CN	Description
11,220	98	Paved parking, HSG A
11,220		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 8S:

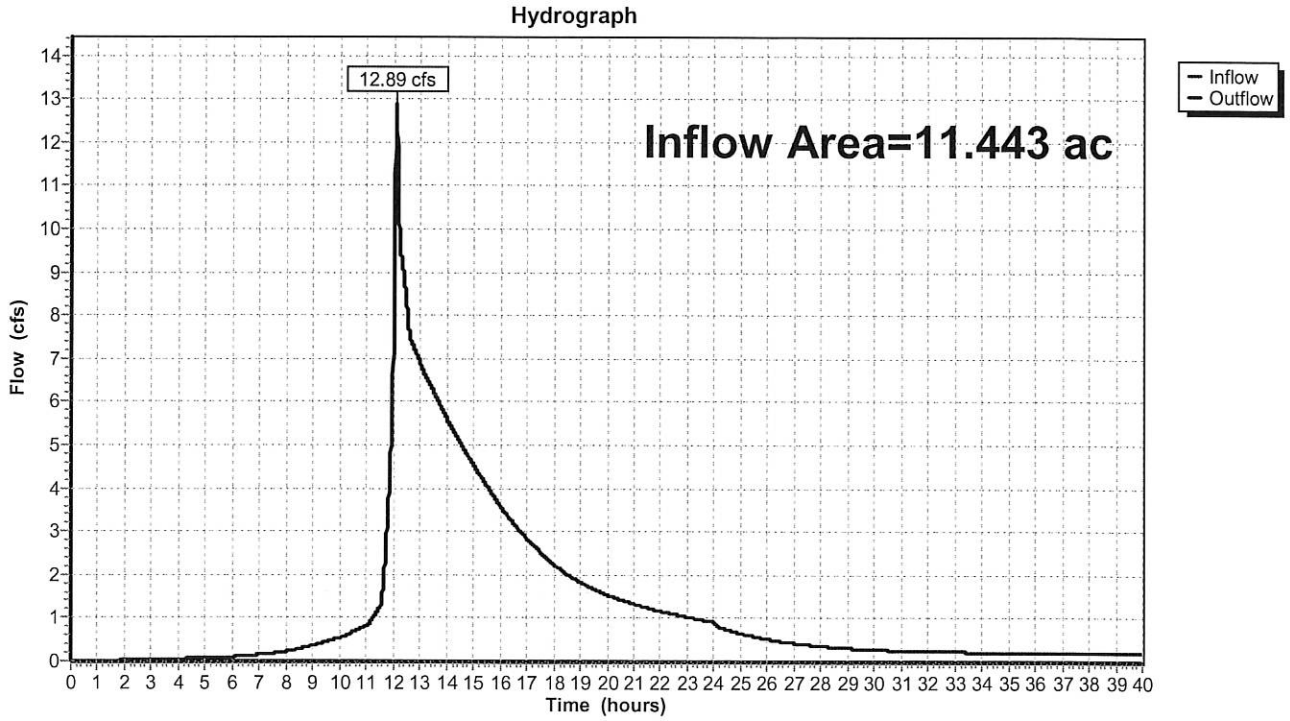


Summary for Reach 11R:

Inflow Area = 11.443 ac, 63.56% Impervious, Inflow Depth > 4.10" for 25-yr event
Inflow = 12.89 cfs @ 12.10 hrs, Volume= 3.906 af
Outflow = 12.89 cfs @ 12.10 hrs, Volume= 3.906 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs

Reach 11R:



Summary for Pond 3P: wet pond

Inflow Area = 9.544 ac, 61.60% Impervious, Inflow Depth = 4.49" for 25-yr event
Inflow = 47.24 cfs @ 12.08 hrs, Volume= 3.573 af
Outflow = 6.20 cfs @ 12.64 hrs, Volume= 3.139 af, Atten= 87%, Lag= 33.2 min
Primary = 6.20 cfs @ 12.64 hrs, Volume= 3.139 af

Routing by Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Starting Elev= 9.50' Surf.Area= 21,798 sf Storage= 82,236 cf
Peak Elev= 11.82' @ 12.64 hrs Surf.Area= 53,220 sf Storage= 167,902 cf (85,665 cf above start)

Plug-Flow detention time= 740.8 min calculated for 1.251 af (35% of inflow)
Center-of-Mass det. time= 273.4 min (1,062.7 - 789.2)

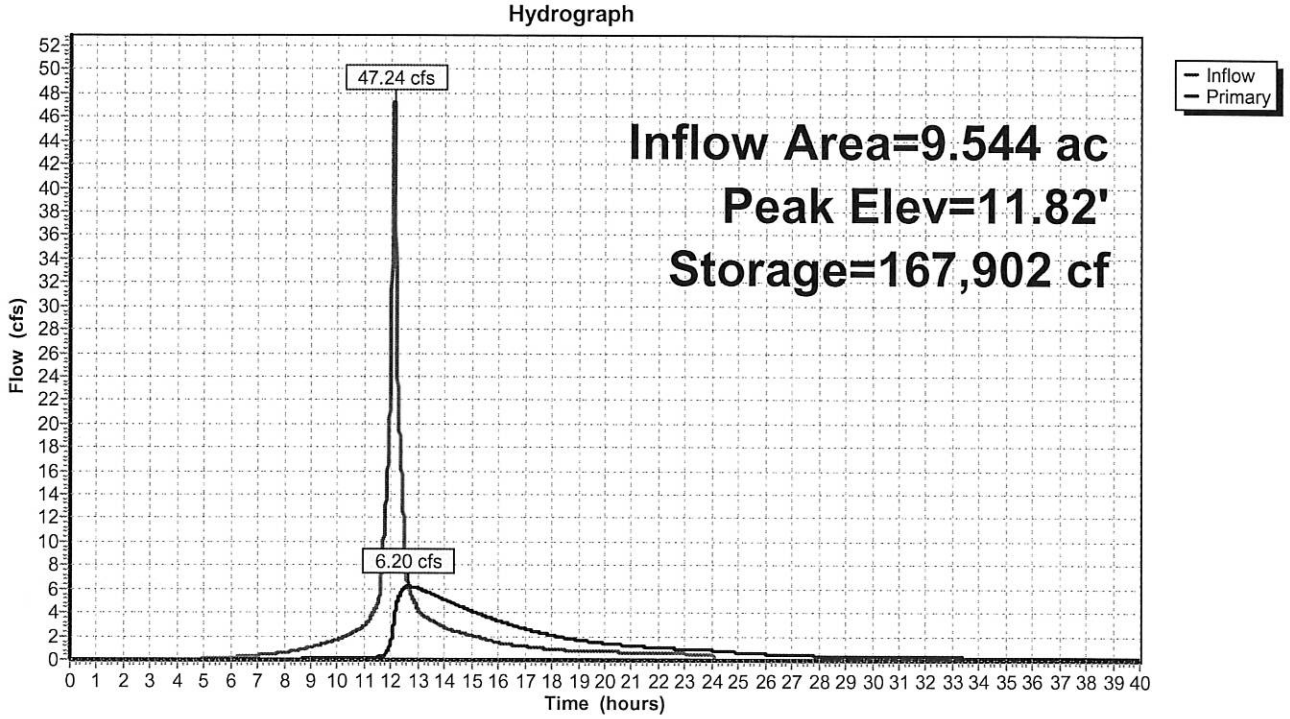
Volume	Invert	Avail.Storage	Storage Description
#1	4.50'	238,036 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
4.50	11,142	540.0	0	0	11,142
5.00	12,303	580.0	5,859	5,859	14,718
9.00	20,925	665.0	65,697	71,556	23,500
9.50	21,798	720.0	10,680	82,236	29,571
10.00	31,707	920.0	13,299	95,535	55,676
11.00	38,223	1,495.0	34,914	130,450	166,186
12.00	56,772	1,700.0	47,193	177,642	218,332
13.00	64,089	1,470.0	60,394	238,036	276,373

Device	Routing	Invert	Outlet Devices
#1	Primary	7.78'	**15.0" Round Culvert** L= 60.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 7.78' / 7.01' S= 0.0128 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf
#2	Device 1	12.00'	**14.0' long x 0.7' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 Coef. (English) 2.76 2.82 2.93 3.09 3.18 3.22 3.27 3.30 3.32 3.31 3.32
#3	Device 1	10.36'	**1.0' long x 0.7' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 Coef. (English) 2.76 2.82 2.93 3.09 3.18 3.22 3.27 3.30 3.32 3.31 3.32
#4	Device 1	9.50'	**3.2" Vert. Orifice/Grate** C= 0.600
#5	Device 4	9.50'	**1.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=6.20 cfs @ 12.64 hrs HW=11.82' TW=7.40' (Fixed TW Elev= 7.40')
- **1=Culvert** (Passes 6.20 cfs of 10.92 cfs potential flow)
  - **2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)
  - **3=Broad-Crested Rectangular Weir** (Weir Controls 5.80 cfs @ 3.97 fps)
  - **4=Orifice/Grate** (Orifice Controls 0.40 cfs @ 7.12 fps)
    - **5=Broad-Crested Rectangular Weir** (Passes 0.40 cfs of 11.75 cfs potential flow)

Pond 3P: wet pond



Summary for Pond 7P:

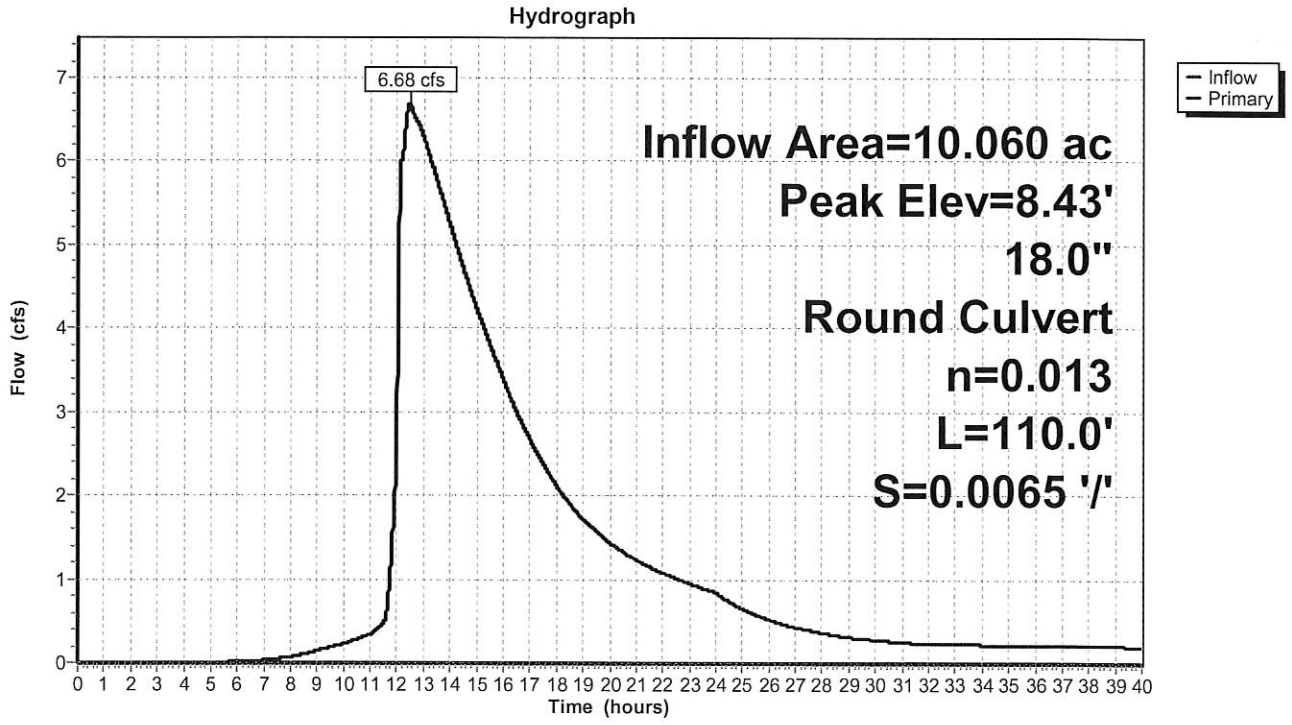
Inflow Area = 10.060 ac, 61.52% Impervious, Inflow Depth > 3.97" for 25-yr event
Inflow = 6.68 cfs @ 12.47 hrs, Volume= 3.329 af
Outflow = 6.68 cfs @ 12.47 hrs, Volume= 3.329 af, Atten= 0%, Lag= 0.0 min
Primary = 6.68 cfs @ 12.47 hrs, Volume= 3.329 af

Routing by Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Peak Elev= 8.43' @ 12.47 hrs
Flood Elev= 18.71'

Device	Routing	Invert	Outlet Devices
#1	Primary	6.91'	**18.0" Round Culvert** L= 110.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 6.91' / 6.19' S= 0.0065 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf

Primary OutFlow Max=6.68 cfs @ 12.47 hrs HW=8.43' TW=7.40' (Fixed TW Elev= 7.40')
↑**1=Culvert** (Outlet Controls 6.68 cfs @ 4.65 fps)

Pond 7P:



Summary for Pond 8P:

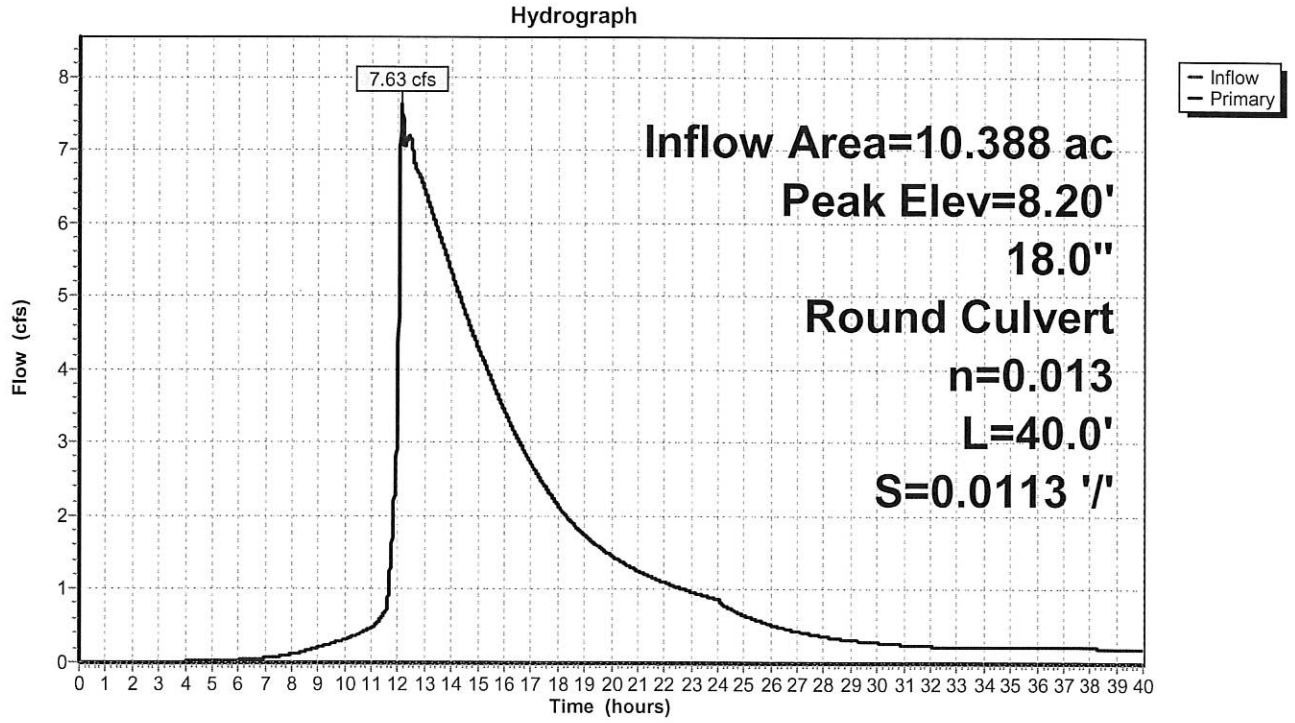
Inflow Area = 10.388 ac, 62.49% Impervious, Inflow Depth > 4.01" for 25-yr event
Inflow = 7.63 cfs @ 12.11 hrs, Volume= 3.475 af
Outflow = 7.63 cfs @ 12.11 hrs, Volume= 3.475 af, Atten= 0%, Lag= 0.0 min
Primary = 7.63 cfs @ 12.11 hrs, Volume= 3.475 af

Routing by Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Peak Elev= 8.20' @ 12.11 hrs
Flood Elev= 16.29'

Device	Routing	Invert	Outlet Devices
#1	Primary	5.99'	**18.0" Round Culvert** L= 40.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 5.99' / 5.54' S= 0.0113 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf

Primary OutFlow Max=7.63 cfs @ 12.11 hrs HW=8.20' TW=7.40' (Fixed TW Elev= 7.40')
↑—**1=Culvert** (Inlet Controls 7.63 cfs @ 4.32 fps)

Pond 8P:



Summary for Pond 9P:

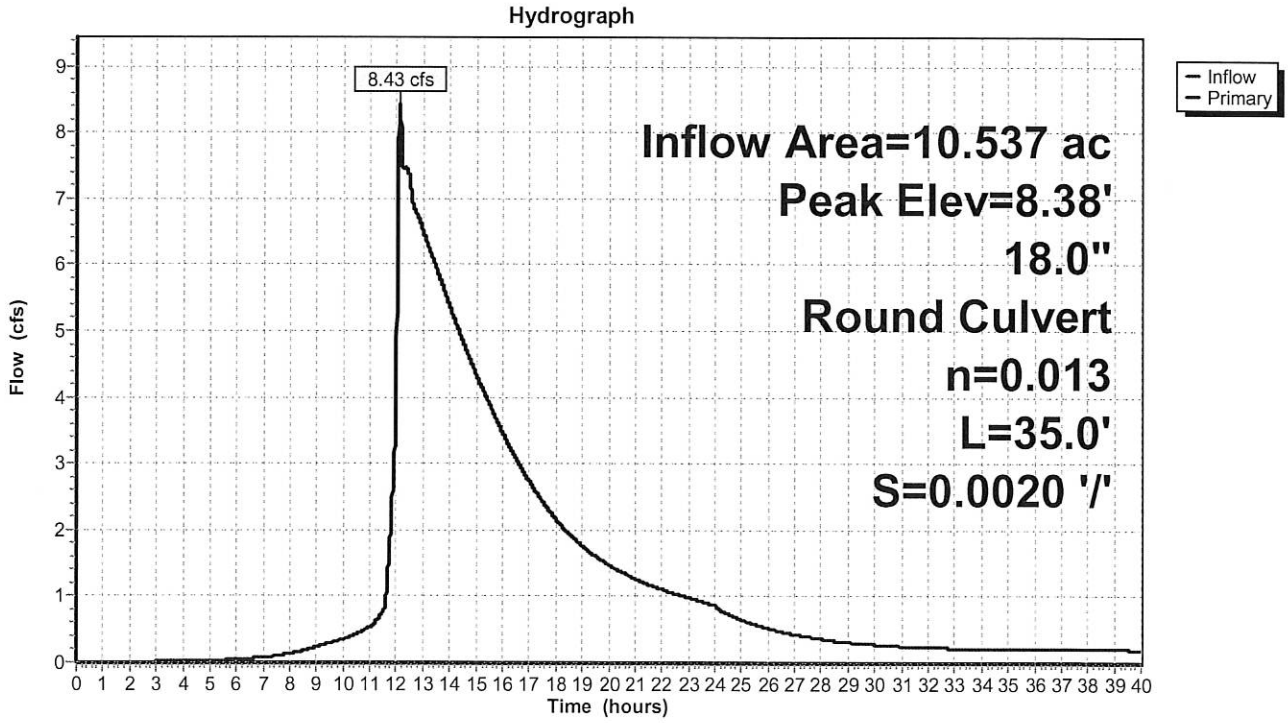
Inflow Area = 10.537 ac, 63.03% Impervious, Inflow Depth > 4.04" for 25-yr event
Inflow = 8.43 cfs @ 12.11 hrs, Volume= 3.544 af
Outflow = 8.43 cfs @ 12.11 hrs, Volume= 3.544 af, Atten= 0%, Lag= 0.0 min
Primary = 8.43 cfs @ 12.11 hrs, Volume= 3.544 af

Routing by Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Peak Elev= 8.38' @ 12.11 hrs
Flood Elev= 15.84'

Device	Routing	Invert	Outlet Devices
#1	Primary	5.34'	**18.0" Round Culvert** L= 35.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 5.34' / 5.27' S= 0.0020 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf

Primary OutFlow Max=8.43 cfs @ 12.11 hrs HW=8.38' TW=7.40' (Fixed TW Elev= 7.40')
↑**1=Culvert** (Inlet Controls 8.43 cfs @ 4.77 fps)

Pond 9P:



Summary for Pond 10P:

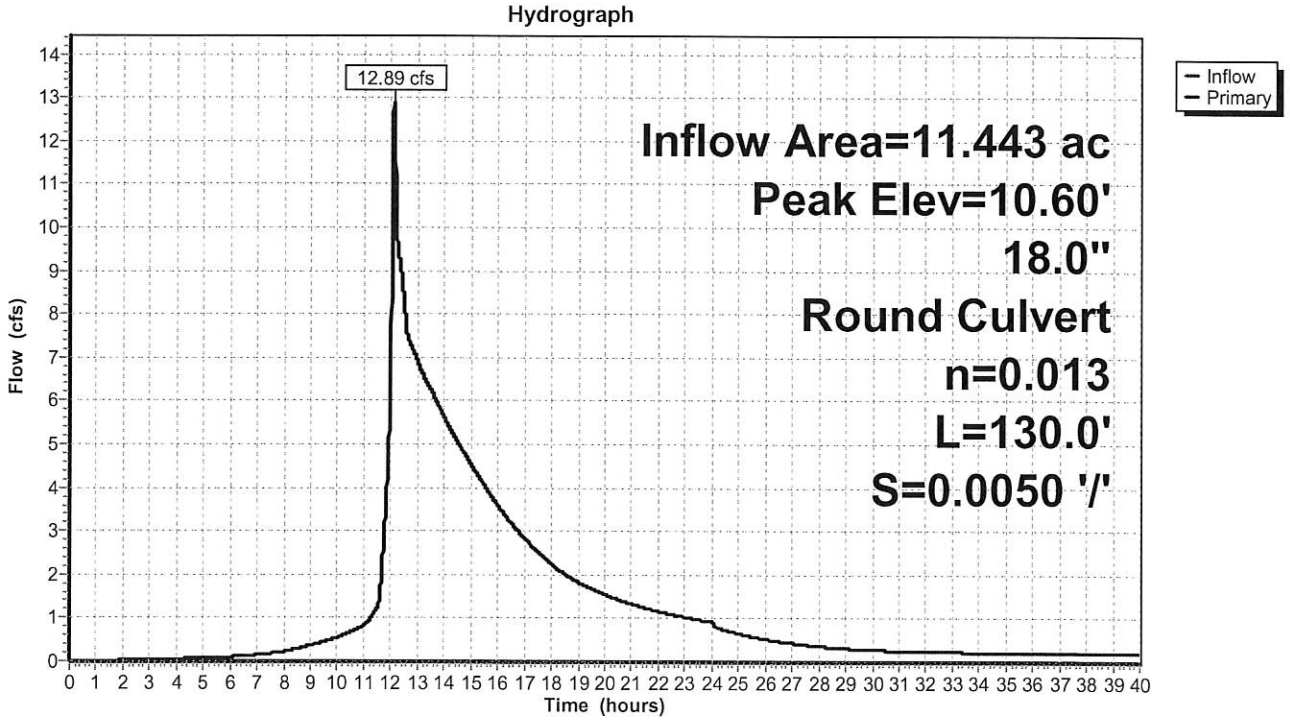
Inflow Area = 11.443 ac, 63.56% Impervious, Inflow Depth > 4.10" for 25-yr event
Inflow = 12.89 cfs @ 12.10 hrs, Volume= 3.906 af
Outflow = 12.89 cfs @ 12.10 hrs, Volume= 3.906 af, Atten= 0%, Lag= 0.0 min
Primary = 12.89 cfs @ 12.10 hrs, Volume= 3.906 af

Routing by Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Peak Elev= 10.60' @ 12.10 hrs
Flood Elev= 16.57'

Device	Routing	Invert	Outlet Devices
#1	Primary	4.77'	**18.0" Round Culvert** L= 130.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 4.77' / 4.12' S= 0.0050 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf

Primary OutFlow Max=12.88 cfs @ 12.10 hrs HW=10.60' TW=7.40' (Fixed TW Elev= 7.40')
↑—**1=Culvert** (Outlet Controls 12.88 cfs @ 7.29 fps)

Pond 10P:



Time span=0.00-40.00 hrs, dt=0.01 hrs, 4001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: wet pond Runoff Area=21,798 sf 100.00% Impervious Runoff Depth=2.87"
Tc=0.0 min CN=98 Runoff=1.84 cfs 0.120 af

Subcatchment 2S: Runoff Area=393,948 sf 59.47% Impervious Runoff Depth=1.91"
Tc=6.0 min CN=88 Runoff=20.18 cfs 1.437 af

Subcatchment 3S: Runoff Area=22,488 sf 60.03% Impervious Runoff Depth=1.91"
Tc=6.0 min CN=88 Runoff=1.15 cfs 0.082 af

Subcatchment 4S: Runoff Area=14,264 sf 92.54% Impervious Runoff Depth=2.65"
Tc=6.0 min CN=96 Runoff=0.95 cfs 0.072 af

Subcatchment 5S: Runoff Area=6,504 sf 100.00% Impervious Runoff Depth=2.87"
Tc=6.0 min CN=98 Runoff=0.45 cfs 0.036 af

Subcatchment 6S: Runoff Area=11,944 sf 0.00% Impervious Runoff Depth=0.97"
Tc=6.0 min CN=74 Runoff=0.29 cfs 0.022 af

Subcatchment 7S: Runoff Area=16,308 sf 100.00% Impervious Runoff Depth=2.87"
Tc=6.0 min CN=98 Runoff=1.13 cfs 0.089 af

Subcatchment 8S: Runoff Area=11,220 sf 100.00% Impervious Runoff Depth=2.87"
Tc=6.0 min CN=98 Runoff=0.77 cfs 0.062 af

Reach 11R: Inflow=4.96 cfs 1.528 af
Outflow=4.96 cfs 1.528 af

Pond 3P: wet pond Peak Elev=10.83' Storage=124,216 cf Inflow=21.07 cfs 1.557 af
Outflow=1.23 cfs 1.165 af

Pond 7P: Peak Elev=7.69' Inflow=1.37 cfs 1.247 af
18.0" Round Culvert n=0.013 L=110.0' S=0.0065 '/' Outflow=1.37 cfs 1.247 af

Pond 8P: Peak Elev=7.49' Inflow=2.32 cfs 1.319 af
18.0" Round Culvert n=0.013 L=40.0' S=0.0113 '/' Outflow=2.32 cfs 1.319 af

Pond 9P: Peak Elev=7.51' Inflow=2.76 cfs 1.355 af
18.0" Round Culvert n=0.013 L=35.0' S=0.0020 '/' Outflow=2.76 cfs 1.355 af

Pond 10P: Peak Elev=7.87' Inflow=4.96 cfs 1.528 af
18.0" Round Culvert n=0.013 L=130.0' S=0.0050 '/' Outflow=4.96 cfs 1.528 af

Total Runoff Area = 11.443 ac Runoff Volume = 1.920 af Average Runoff Depth = 2.01"
36.44% Pervious = 4.170 ac 63.56% Impervious = 7.273 ac

Time span=0.00-40.00 hrs, dt=0.01 hrs, 4001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: wet pond Runoff Area=21,798 sf 100.00% Impervious Runoff Depth=4.36"
Tc=0.0 min CN=98 Runoff=2.74 cfs 0.182 af

Subcatchment 2S: Runoff Area=393,948 sf 59.47% Impervious Runoff Depth=3.29"
Tc=6.0 min CN=88 Runoff=34.24 cfs 2.480 af

Subcatchment 3S: Runoff Area=22,488 sf 60.03% Impervious Runoff Depth=3.29"
Tc=6.0 min CN=88 Runoff=1.95 cfs 0.142 af

Subcatchment 4S: Runoff Area=14,264 sf 92.54% Impervious Runoff Depth=4.14"
Tc=6.0 min CN=96 Runoff=1.44 cfs 0.113 af

Subcatchment 5S: Runoff Area=6,504 sf 100.00% Impervious Runoff Depth=4.36"
Tc=6.0 min CN=98 Runoff=0.67 cfs 0.054 af

Subcatchment 6S: Runoff Area=11,944 sf 0.00% Impervious Runoff Depth=2.05"
Tc=6.0 min CN=74 Runoff=0.65 cfs 0.047 af

Subcatchment 7S: Runoff Area=16,308 sf 100.00% Impervious Runoff Depth=4.36"
Tc=6.0 min CN=98 Runoff=1.68 cfs 0.136 af

Subcatchment 8S: Runoff Area=11,220 sf 100.00% Impervious Runoff Depth=4.36"
Tc=6.0 min CN=98 Runoff=1.16 cfs 0.094 af

Reach 11R: Inflow=8.82 cfs 2.826 af
Outflow=8.82 cfs 2.826 af

Pond 3P: wet pond Peak Elev=11.41' Storage=147,501 cf Inflow=35.60 cfs 2.662 af
Outflow=3.78 cfs 2.241 af

Pond 7P: Peak Elev=8.10' Inflow=4.05 cfs 2.382 af
18.0" Round Culvert n=0.013 L=110.0' S=0.0065 '/' Outflow=4.05 cfs 2.382 af

Pond 8P: Peak Elev=7.71' Inflow=4.73 cfs 2.495 af
18.0" Round Culvert n=0.013 L=40.0' S=0.0113 '/' Outflow=4.73 cfs 2.495 af

Pond 9P: Peak Elev=7.80' Inflow=5.38 cfs 2.549 af
18.0" Round Culvert n=0.013 L=35.0' S=0.0020 '/' Outflow=5.38 cfs 2.549 af

Pond 10P: Peak Elev=8.90' Inflow=8.82 cfs 2.826 af
18.0" Round Culvert n=0.013 L=130.0' S=0.0050 '/' Outflow=8.82 cfs 2.826 af

Total Runoff Area = 11.443 ac Runoff Volume = 3.247 af Average Runoff Depth = 3.41"
36.44% Pervious = 4.170 ac 63.56% Impervious = 7.273 ac

Time span=0.00-40.00 hrs, dt=0.01 hrs, 4001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: wet pond Runoff Area=21,798 sf 100.00% Impervious Runoff Depth=7.86"
Tc=0.0 min CN=98 Runoff=4.85 cfs 0.328 af

Subcatchment 2S: Runoff Area=393,948 sf 59.47% Impervious Runoff Depth=6.67"
Tc=6.0 min CN=88 Runoff=66.94 cfs 5.024 af

Subcatchment 3S: Runoff Area=22,488 sf 60.03% Impervious Runoff Depth=6.67"
Tc=6.0 min CN=88 Runoff=3.82 cfs 0.287 af

Subcatchment 4S: Runoff Area=14,264 sf 92.54% Impervious Runoff Depth=7.62"
Tc=6.0 min CN=96 Runoff=2.59 cfs 0.208 af

Subcatchment 5S: Runoff Area=6,504 sf 100.00% Impervious Runoff Depth=7.86"
Tc=6.0 min CN=98 Runoff=1.19 cfs 0.098 af

Subcatchment 6S: Runoff Area=11,944 sf 0.00% Impervious Runoff Depth=5.02"
Tc=6.0 min CN=74 Runoff=1.61 cfs 0.115 af

Subcatchment 7S: Runoff Area=16,308 sf 100.00% Impervious Runoff Depth=7.86"
Tc=6.0 min CN=98 Runoff=2.98 cfs 0.245 af

Subcatchment 8S: Runoff Area=11,220 sf 100.00% Impervious Runoff Depth=7.86"
Tc=6.0 min CN=98 Runoff=2.05 cfs 0.169 af

Reach 11R: Inflow=20.86 cfs 6.021 af
Outflow=20.86 cfs 6.021 af

Pond 3P: wet pond Peak Elev=12.46' Storage=204,328 cf Inflow=69.37 cfs 5.352 af
Outflow=11.85 cfs 4.900 af

Pond 7P: Peak Elev=10.88' Inflow=13.51 cfs 5.187 af
18.0" Round Culvert n=0.013 L=110.0' S=0.0065 '/' Outflow=13.51 cfs 5.187 af

Pond 8P: Peak Elev=10.47' Inflow=14.91 cfs 5.395 af
18.0" Round Culvert n=0.013 L=40.0' S=0.0113 '/' Outflow=14.91 cfs 5.395 af

Pond 9P: Peak Elev=10.80' Inflow=15.68 cfs 5.493 af
18.0" Round Culvert n=0.013 L=35.0' S=0.0020 '/' Outflow=15.68 cfs 5.493 af

Pond 10P: Peak Elev=15.79' Inflow=20.86 cfs 6.021 af
18.0" Round Culvert n=0.013 L=130.0' S=0.0050 '/' Outflow=20.86 cfs 6.021 af

Total Runoff Area = 11.443 ac Runoff Volume = 6.473 af Average Runoff Depth = 6.79"
36.44% Pervious = 4.170 ac 63.56% Impervious = 7.273 ac

WET POND VOLUMES

Stage-Area-Storage for Pond 3P: wet pond

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
4.50	11,142	0
4.52	11,187	223
4.54	11,233	447
4.56	11,278	673
4.58	11,324	899
4.60	11,370	1,126
4.62	11,415	1,353
4.64	11,461	1,582
4.66	11,507	1,812
4.68	11,553	2,042
4.70	11,599	2,274
4.72	11,646	2,506
4.74	11,692	2,740
4.76	11,739	2,974
4.78	11,785	3,209
4.80	11,832	3,446
4.82	11,878	3,683
4.84	11,925	3,921
4.86	11,972	4,160
4.88	12,019	4,400
4.90	12,066	4,640
4.92	12,113	4,882
4.94	12,161	5,125
4.96	12,208	5,369
4.98	12,255	5,613
5.00	12,303	5,859
5.02	12,340	6,105
5.04	12,378	6,352
5.06	12,416	6,600
5.08	12,453	6,849
5.10	12,491	7,099
5.12	12,529	7,349
5.14	12,566	7,600
5.16	12,604	7,851
5.18	12,642	8,104
5.20	12,680	8,357
5.22	12,718	8,611
5.24	12,756	8,866
5.26	12,794	9,121
5.28	12,832	9,378
5.30	12,871	9,635
5.32	12,909	9,892
5.34	12,947	10,151
5.36	12,986	10,410
5.38	13,024	10,670
5.40	13,063	10,931
5.42	13,101	11,193
5.44	13,140	11,455
5.46	13,179	11,718
5.48	13,217	11,982
5.50	13,256	12,247
5.52	13,295	12,513
5.54	13,334	12,779
5.56	13,373	13,046
5.58	13,412	13,314
5.60	13,451	13,583
5.62	13,490	13,852
5.64	13,530	14,122
5.66	13,569	14,393
5.68	13,608	14,665
5.70	13,648	14,937
5.72	13,687	15,211
5.74	13,726	15,485
5.76	13,766	15,760
5.78	13,806	16,036
5.80	13,845	16,312
5.82	13,885	16,589
5.84	13,925	16,868
5.86	13,965	17,146
5.88	14,005	17,426
5.90	14,044	17,707
5.92	14,085	17,988
5.94	14,125	18,270
5.96	14,165	18,553
5.98	14,205	18,837
6.00	14,245	19,121
6.02	14,285	19,406
6.04	14,326	19,692
6.06	14,366	19,979
6.08	14,407	20,267
6.10	14,447	20,556
6.12	14,488	20,845
6.14	14,528	21,135
6.16	14,569	21,426
6.18	14,610	21,718
6.20	14,651	22,011
6.22	14,691	22,304
6.24	14,732	22,598
6.26	14,773	22,893
6.28	14,814	23,189
6.30	14,855	23,486
6.32	14,897	23,783
6.34	14,938	24,082
6.36	14,979	24,381
6.38	15,020	24,681
6.40	15,062	24,982
6.42	15,103	25,283
6.44	15,145	25,586
6.46	15,186	25,889
6.48	15,228	26,193
6.50	15,270	26,498
6.52	15,311	26,804
6.54	15,353	27,111
6.56	15,395	27,418

Stage-Area-Storage for Pond 3P: wet pond (continued)

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
6.58	15,437	27,726
6.60	15,479	28,036
6.62	15,521	28,346
6.64	15,563	28,656
6.66	15,605	28,968
6.68	15,647	29,281
6.70	15,689	29,594
6.72	15,732	29,908
6.74	15,774	30,223
6.76	15,816	30,539
6.78	15,859	30,856
6.80	15,901	31,174
6.82	15,944	31,492
6.84	15,986	31,811
6.86	16,029	32,131
6.88	16,072	32,452
6.90	16,115	32,774
6.92	16,157	33,097
6.94	16,200	33,421
6.96	16,243	33,745
6.98	16,286	34,070
7.00	16,329	34,396
7.02	16,373	34,724
7.04	16,416	35,051
7.06	16,459	35,380
7.08	16,502	35,710
7.10	16,546	36,040
7.12	16,589	36,372
7.14	16,633	36,704
7.16	16,676	37,037
7.18	16,720	37,371
7.20	16,763	37,706
7.22	16,807	38,041
7.24	16,851	38,378
7.26	16,895	38,715
7.28	16,939	39,054
7.30	16,983	39,393
7.32	17,027	39,733
7.34	17,071	40,074
7.36	17,115	40,416
7.38	17,159	40,759
7.40	17,203	41,102
7.42	17,247	41,447
7.44	17,292	41,792
7.46	17,336	42,138
7.48	17,381	42,486
7.50	17,425	42,834
7.52	17,470	43,183
7.54	17,514	43,532
7.56	17,559	43,883
7.58	17,604	44,235
7.60	17,648	44,587
7.62	17,693	44,941
7.64	17,738	45,295
7.66	17,783	45,650
7.68	17,828	46,006
7.70	17,873	46,363
7.72	17,918	46,721
7.74	17,963	47,080
7.76	18,009	47,440
7.78	18,054	47,800
7.80	18,099	48,162
7.82	18,145	48,524
7.84	18,190	48,888
7.86	18,236	49,252
7.88	18,281	49,617
7.90	18,327	49,983
7.92	18,373	50,350
7.94	18,418	50,718
7.96	18,464	51,087
7.98	18,510	51,457
8.00	18,556	51,827
8.02	18,602	52,199
8.04	18,648	52,572
8.06	18,694	52,945
8.08	18,740	53,319
8.10	18,787	53,695
8.12	18,833	54,071
8.14	18,879	54,448
8.16	18,926	54,826
8.18	18,972	55,205
8.20	19,019	55,585
8.22	19,065	55,966
8.24	19,112	56,347
8.26	19,158	56,730
8.28	19,205	57,114
8.30	19,252	57,498
8.32	19,299	57,884
8.34	19,346	58,270
8.36	19,393	58,658
8.38	19,440	59,046
8.40	19,487	59,435
8.42	19,534	59,825
8.44	19,581	60,217
8.46	19,628	60,609
8.48	19,675	61,002
8.50	19,723	61,396 ← MEAN DEPTH
8.52	19,770	61,791
8.54	19,818	62,186
8.56	19,865	62,583
8.58	19,913	62,981
8.60	19,960	63,380
8.62	20,008	63,779
8.64	20,056	64,180

Stage-Area-Storage for Pond 3P: wet pond (continued)

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
8.66	20,104	64,582
8.68	20,151	64,984
8.70	20,199	65,388
8.72	20,247	65,792
8.74	20,295	66,198
8.76	20,343	66,604
8.78	20,392	67,011
8.80	20,440	67,420
8.82	20,488	67,829
8.84	20,536	68,239
8.86	20,585	68,650
8.88	20,633	69,063
8.90	20,682	69,476
8.92	20,730	69,890
8.94	20,779	70,305
8.96	20,828	70,721
8.98	20,876	71,138
9.00	20,925	71,556
9.02	20,960	71,975
9.04	20,994	72,394
9.06	21,029	72,815
9.08	21,063	73,236
9.10	21,098	73,657
9.12	21,133	74,080
9.14	21,168	74,503
9.16	21,202	74,926
9.18	21,237	75,351
9.20	21,272	75,776
9.22	21,307	76,202
9.24	21,342	76,628
9.26	21,377	77,055
9.28	21,412	77,483
9.30	21,447	77,912
9.32	21,482	78,341
9.34	21,517	78,771
9.36	21,552	79,202
9.38	21,587	79,633
9.40	21,622	80,065
9.42	21,657	80,498
9.44	21,692	80,931
9.46	21,728	81,366
9.48	21,763	81,801
9.50	21,798	82,236
9.52	22,159	82,676
9.54	22,523	83,122
9.56	22,889	83,577
9.58	23,259	84,038
9.60	23,632	84,507
9.62	24,007	84,983
9.64	24,386	85,467
9.66	24,767	85,959
9.68	25,152	86,458
9.70	25,539	86,965
9.72	25,930	87,480
9.74	26,323	88,002
9.76	26,720	88,533
9.78	27,119	89,071
9.80	27,521	89,617
9.82	27,927	90,172
9.84	28,335	90,734
9.86	28,746	91,305
9.88	29,160	91,884
9.90	29,577	92,472
9.92	29,997	93,067
9.94	30,420	93,672
9.96	30,846	94,284
9.98	31,275	94,905
10.00	31,707	95,535
10.02	31,831	96,171
10.04	31,956	96,808
10.06	32,081	97,449
10.08	32,206	98,092
10.10	32,331	98,737
10.12	32,457	99,385
10.14	32,583	100,035
10.16	32,709	100,688
10.18	32,835	101,344
10.20	32,962	102,002
10.22	33,088	102,662
10.24	33,215	103,325
10.26	33,343	103,991
10.28	33,470	104,659
10.30	33,598	105,330
10.32	33,726	106,003
10.34	33,854	106,679
10.36	33,983	107,357
10.38	34,111	108,038
10.40	34,240	108,721
10.42	34,370	109,408
10.44	34,499	110,096
10.46	34,629	110,788
10.48	34,759	111,481
10.50	34,889	112,178
10.52	35,019	112,877
10.54	35,150	113,579
10.56	35,281	114,283
10.58	35,412	114,990
10.60	35,544	115,699
10.62	35,675	116,412
10.64	35,807	117,126
10.66	35,939	117,844
10.68	36,072	118,564
10.70	36,204	119,287
10.72	36,337	120,012

PERM POOL →

← CHANNEL PROTECTION

107,357 − 82,236 = 25,121

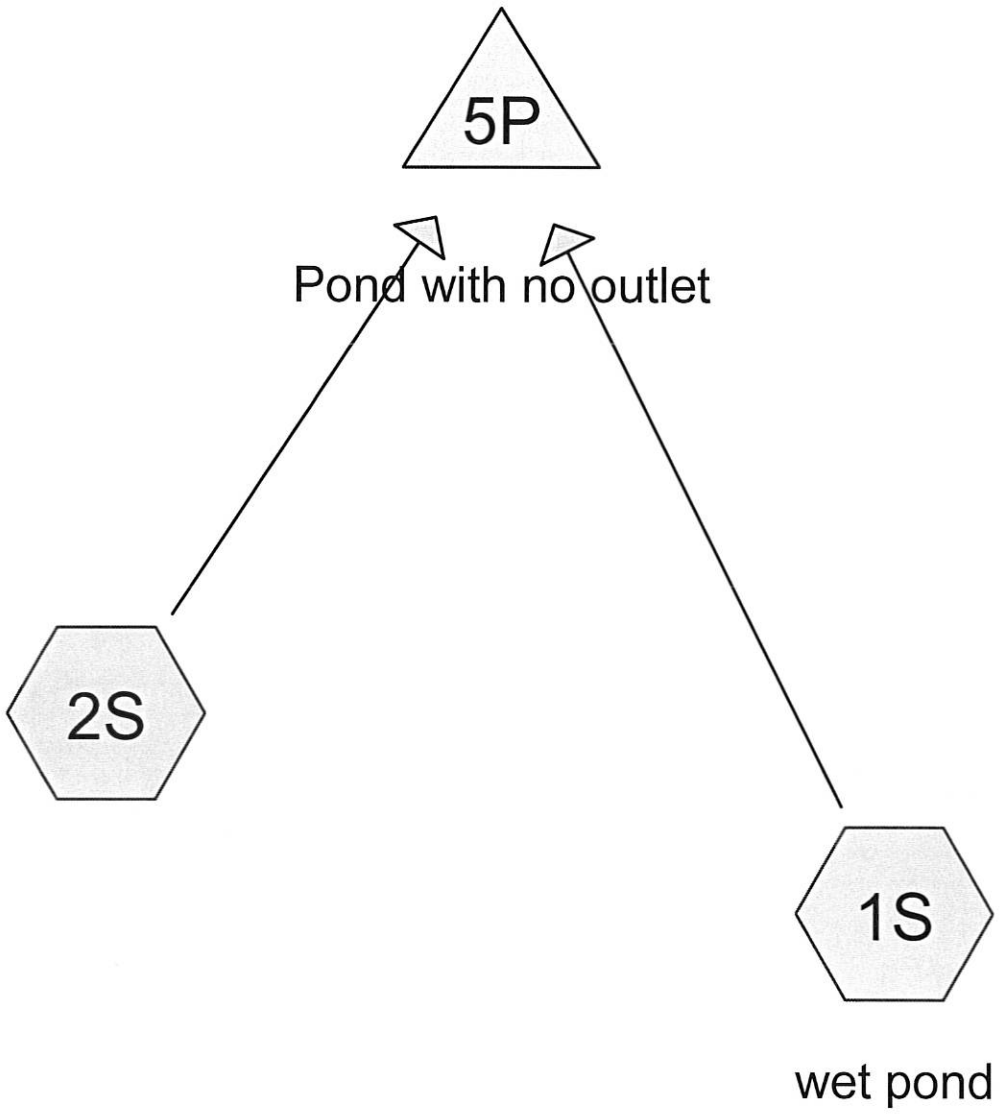
Stage-Area-Storage for Pond 3P: wet pond (continued)

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
10.74	36,470	120,740
10.76	36,604	121,471
10.78	36,737	122,204
10.80	36,871	122,941
10.82	37,005	123,679
10.84	37,140	124,421
10.86	37,274	125,165
10.88	37,409	125,912
10.90	37,544	126,661
10.92	37,679	127,413
10.94	37,815	128,168
10.96	37,951	128,926
10.98	38,087	129,686
11.00	38,223	130,450
11.02	38,558	131,217
11.04	38,895	131,992
11.06	39,233	132,773
11.08	39,572	133,561
11.10	39,913	134,356
11.12	40,256	135,158
11.14	40,600	135,966
11.16	40,945	136,782
11.18	41,292	137,604
11.20	41,640	138,433
11.22	41,990	139,270
11.24	42,341	140,113
11.26	42,694	140,963
11.28	43,048	141,821
11.30	43,404	142,685
11.32	43,761	143,557
11.34	44,119	144,436
11.36	44,479	145,322
11.38	44,841	146,215
11.40	45,204	147,115
11.42	45,568	148,023
11.44	45,934	148,938
11.46	46,301	149,860
11.48	46,670	150,790
11.50	47,040	151,727
11.52	47,412	152,672
11.54	47,785	153,624
11.56	48,160	154,583
11.58	48,536	155,550
11.60	48,914	156,525
11.62	49,293	157,507
11.64	49,673	158,496
11.66	50,055	159,494
11.68	50,438	160,499
11.70	50,823	161,511
11.72	51,210	162,532
11.74	51,597	163,560
11.76	51,987	164,595
11.78	52,377	165,639
11.80	52,770	166,691
11.82	53,163	167,750
11.84	53,558	168,817
11.86	53,955	169,892
11.88	54,353	170,975
11.90	54,753	172,066
11.92	55,153	173,165
11.94	55,556	174,273
11.96	55,960	175,388
11.98	56,365	176,511
12.00	56,772	177,642
12.02	56,914	178,779
12.04	57,056	179,919
12.06	57,199	181,061
12.08	57,341	182,207
12.10	57,484	183,355
12.12	57,627	184,506
12.14	57,770	185,660
12.16	57,913	186,817
12.18	58,056	187,977
12.20	58,200	189,139
12.22	58,344	190,305
12.24	58,488	191,473
12.26	58,632	192,644
12.28	58,776	193,818
12.30	58,921	194,995
12.32	59,065	196,175
12.34	59,210	197,358
12.36	59,355	198,543
12.38	59,500	199,732
12.40	59,646	200,923
12.42	59,791	202,118
12.44	59,937	203,315
12.46	60,083	204,515
12.48	60,229	205,718
12.50	60,375	206,924
12.52	60,522	208,133
12.54	60,668	209,345
12.56	60,815	210,560
12.58	60,962	211,778
12.60	61,109	212,999
12.62	61,256	214,222
12.64	61,404	215,449
12.66	61,551	216,678
12.68	61,699	217,911
12.70	61,847	219,146
12.72	61,996	220,385
12.74	62,144	221,626
12.76	62,292	222,871
12.78	62,441	224,118
12.80	62,590	225,368

Stage-Area-Storage for Pond 3P: wet pond (continued)

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
12.82	62,739	226,621
12.84	62,888	227,878
12.86	63,038	229,137
12.88	63,188	230,399
12.90	63,337	231,665
12.92	63,487	232,933
12.94	63,637	234,204
12.96	63,788	235,478
12.98	63,938	236,756
13.00	**64,089**	**238,036**

WET POND WITHOUT OUTLET



Subcat Reach Pond Link

Routing Diagram for wet pond
Prepared by Gorrill Palmer, Printed 8/2/2019
HydroCAD® 10.00-22 s/n 01265 © 2018 HydroCAD Software Solutions LLC

Time span=0.00-40.00 hrs, dt=0.01 hrs, 4001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: wet pond Runoff Area=21,798 sf 100.00% Impervious Runoff Depth=5.56"
Tc=0.0 min CN=98 Runoff=3.47 cfs 0.232 af

Subcatchment 2S: Runoff Area=393,948 sf 59.47% Impervious Runoff Depth=4.43"
Tc=6.0 min CN=88 Runoff=45.51 cfs 3.341 af

Pond 5P: Pond with no outlet Peak Elev=13.00' Storage=237,886 cf Inflow=47.24 cfs 3.573 af
Outflow=0.00 cfs 0.000 af

Total Runoff Area = 9.544 ac Runoff Volume = 3.573 af Average Runoff Depth = 4.49"
38.40% Pervious = 3.665 ac 61.60% Impervious = 5.879 ac

Summary for Subcatchment 1S: wet pond

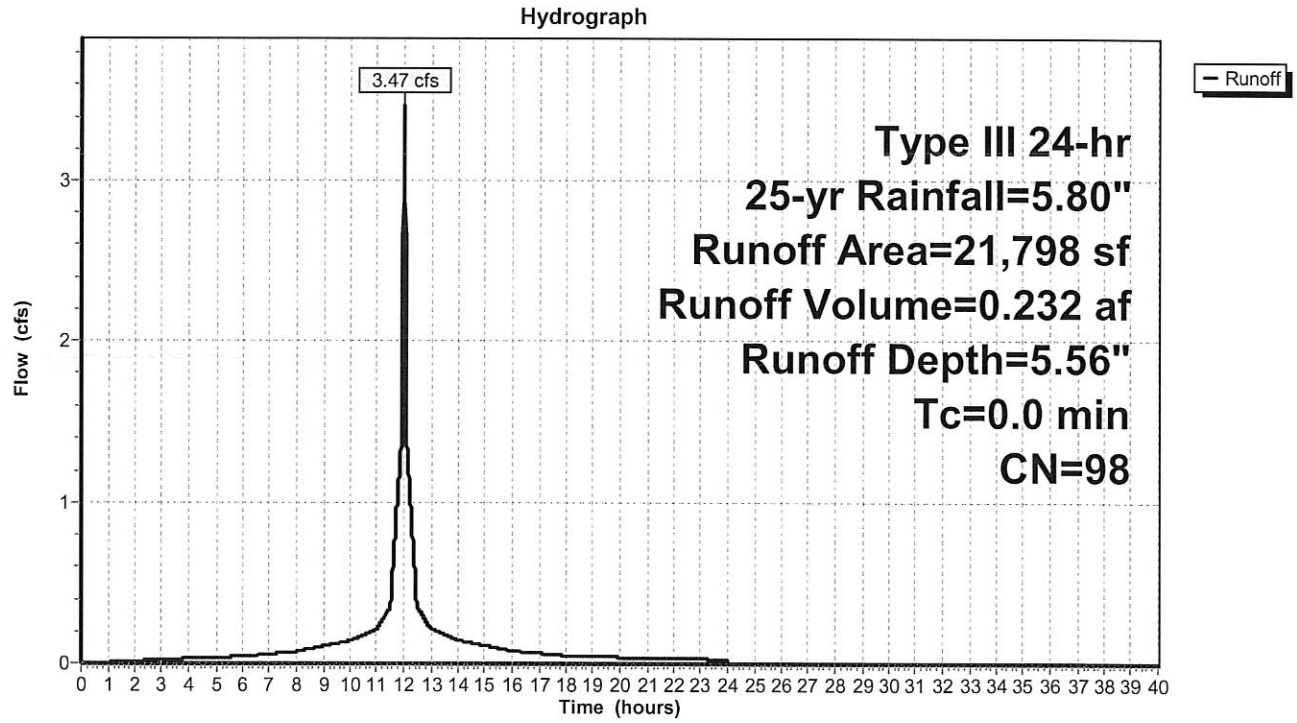
Runoff = 3.47 cfs @ 12.00 hrs, Volume= 0.232 af, Depth= 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-yr Rainfall=5.80"

Area (sf)	CN	Description
21,798	98	Water Surface, HSG A
21,798		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.0					**Direct Entry,**

Subcatchment 1S: wet pond



Summary for Subcatchment 2S:

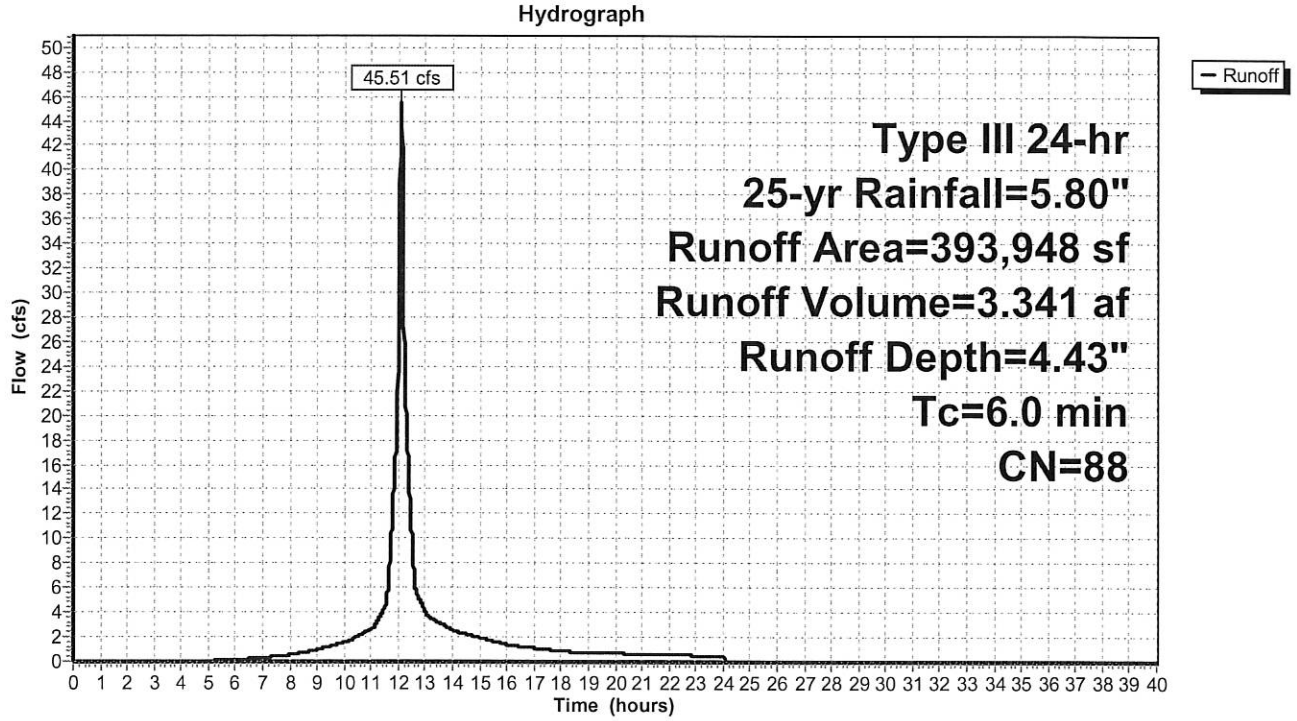
Runoff = 45.51 cfs @ 12.09 hrs, Volume= 3.341 af, Depth= 4.43"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-yr Rainfall=5.80"

Area (sf)	CN	Description
234,288	98	Paved parking, HSG A
159,660	74	>75% Grass cover, Good, HSG C
393,948	88	Weighted Average
159,660		40.53% Pervious Area
234,288		59.47% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**
5.0	0	Total, Increased to minimum Tc = 6.0 min			

Subcatchment 2S:



Summary for Pond 5P: Pond with no outlet

Inflow Area = 9.544 ac, 61.60% Impervious, Inflow Depth = 4.49" for 25-yr event
Inflow = 47.24 cfs @ 12.08 hrs, Volume= 3.573 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min

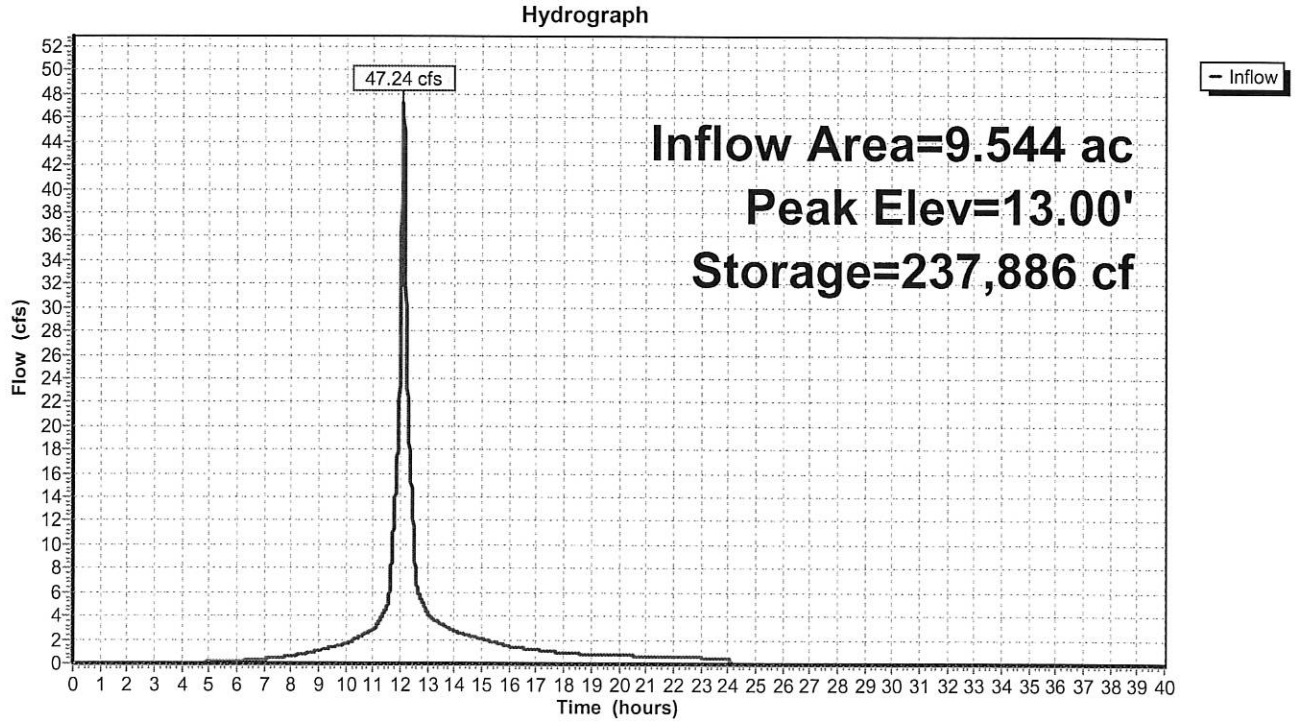
Routing by Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Starting Elev= 9.50' Surf.Area= 21,798 sf Storage= 82,236 cf
Peak Elev= 13.00' @ 24.34 hrs Surf.Area= 64,071 sf Storage= 237,886 cf (155,650 cf above start)

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description
#1	4.50'	238,036 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
4.50	11,142	540.0	0	0	11,142
5.00	12,303	580.0	5,859	5,859	14,718
9.00	20,925	665.0	65,697	71,556	23,500
9.50	21,798	720.0	10,680	82,236	29,571
10.00	31,707	920.0	13,299	95,535	55,676
11.00	38,223	1,495.0	34,914	130,450	166,186
12.00	56,772	1,700.0	47,193	177,642	218,332
13.00	64,089	1,470.0	60,394	238,036	276,373

Pond 5P: Pond with no outlet



ATTACHMENT C

STORM DRAIN CALCULATIONS

SN	Element ID	Description	Length	Inlet Invert Elevation	Outlet Invert Elevation	Total Drop	Average Slope	Pipe Shape	Pipe Diameter or Height	Manning's Roughness	Entrance Losses	Exit/Bend Losses	Peak Flow	Time of Peak Flow Occurrence	Max Flow Velocity	Travel Time	Design Flow Capacity	Max Flow / Design Flow Ratio	Max Flow Depth / Total Depth Ratio	Total Time Surcharged	Max Flow Depth	Reported Condition
			(ft)	(ft)	(ft)	(ft)	(%)		(inches)				(cfs)	(days hh:mm)	(ft/sec)	(min)	(cfs)			(min)	(ft)	
1	Link-01	inlet - cb 11	44.00	13.00	12.50	0.50	1.1400	CIRCULAR	12.000	0.0130	0.9000	0.6000	1.18	0 00:05	5.29	0.14	3.80	0.31	0.38	0.00	0.38	Calculated
2	Link-02	cb 11 - outlet	37.00	12.40	12.00	0.40	1.0800	CIRCULAR	12.000	0.0130	0.5000	0.5000	1.64	0 00:05	4.59	0.13	3.70	0.44	0.47	0.00	0.47	Calculated

SN	Element ID	X Coordinate	Y Coordinate	Description	Invert Elevation	Boundary Type	Flap Gate	Fixed Water Elevation	Peak Inflow	Peak Lateral Inflow	Maximum HGL Depth Attained	Maximum HGL Elevation Attained
					(ft)			(ft)	(cfs)	(cfs)	(ft)	(ft)
1	Out-01	2140.65	4945.90		12.00	NORMAL	NO		1.64	0.00	0.47	12.47

SN	Element ID	Description	Catchbasin Invert Elevation (ft)	Max (Rim) Elevation (ft)	Initial Water Elevation (ft)	Peak Flow (cfs)	Peak Lateral Inflow (cfs)
1	Inlet-01	CB11	12.40	17.80	12.40	0.47	0.47

SN	Element ID	Description	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Minimum Pipe Cover (inches)	Peak Inflow (cfs)	Peak Lateral Inflow (cfs)	Maximum HGL Elevation Attained (ft)	Maximum HGL Depth Attained (ft)	Maximum Surcharge Depth Attained (ft)	Average HGL Elevation Attained (ft)	Time of Maximum HGL Occurrence (days hh:mm)
1	Inlet-02	culvert inlet	13.00	18.98	13.00	59.76	1.19	1.19	13.38	0.38	0.00	13.00	0 00:05

SN	Element ID	Description	Area (acres)	Drainage Node ID	Weighted Runoff Coefficient	Accumulated Precipitation (inches)	Total Runoff (inches)	Peak Runoff (cfs)	Rainfall Intensity (inches/hr)	Time of Concentration (days hh:mm:ss)
1	Sub-01	to culvert inlet	0.64	Inlet-02	0.3000	0.52	0.16	1.19	6.200	0 00:05:00
2	Sub-02	to cb 11	0.08	Inlet-01	0.9500	0.52	0.49	0.47	6.200	0 00:05:00

SN	Element ID	Description	Length	Inlet Invert Elevation	Outlet Invert Elevation	Total Drop	Average Slope	Pipe Shape	Pipe Diameter or Height	Manning's Roughness	Entrance Losses	Exit/Bend Losses	Peak Flow	Time of Peak Flow Occurrence	Max Flow Velocity	Travel Time	Design Flow Capacity	Max Flow / Design Flow Ratio	Max Flow Depth / Total Depth Ratio	Total Time Surcharged	Max Flow Depth	Reported Condition
			(ft)	(ft)	(ft)	(ft)	(%)		(inches)				(cfs)	(days hh:mm)	(ft/sec)	(min)	(cfs)			(min)	(ft)	
1	Link-01	cb 10-cb 9	59.00	13.30	12.72	0.58	0.9800	CIRCULAR	12.000	0.0130	0.5000	0.5000	2.27	0 00:05	5.13	0.19	3.53	0.64	0.58	0.00	0.58	Calculated
2	Link-02	cb 9 - cb 8	54.00	12.62	12.08	0.54	1.0000	CIRCULAR	12.000	0.0130	0.5000	0.6000	3.85	0 00:05	5.33	0.17	3.56	1.08	0.92	0.00	0.92	> CAPACITY
3	Link-03	cb 8 - outlet	81.00	11.83	9.00	2.83	3.4900	CIRCULAR	12.000	0.0130	0.5000	0.5000	4.62	0 00:05	9.35	0.14	6.66	0.69	0.61	0.00	0.61	Calculated

SN	Element ID	X Coordinate	Y Coordinate	Description	Invert Elevation	Boundary Type	Flap Gate	Fixed Water Elevation	Peak Inflow	Peak Lateral Inflow	Maximum HGL Depth Attained	Maximum HGL Elevation Attained
					(ft)			(ft)	(cfs)	(cfs)	(ft)	(ft)
1	Out-01	1097.37	6306.03		9.00	NORMAL	NO		4.62	0.00	0.61	9.61

SN	Element ID	Description	Catchbasin Invert Elevation	Max (Rim) Elevation	Initial Water Elevation	Peak Flow
			(ft)	(ft)	(ft)	(cfs)
1	Inlet-01	CB10	13.30	17.30	13.30	2.30
2	Inlet-02	CB9	12.62	17.30	12.62	1.47
3	Inlet-03	CB8	11.83	17.29	11.83	0.94

SN	Element ID	Description	Area	Drainage Node ID	Weighted Runoff Coefficient	Accumulated Precipitation	Total Runoff	Peak Runoff	Rainfall Intensity	Time of Concentration
			(acres)			(inches)	(inches)	(cfs)	(inches/hr)	(days hh:mm:ss)
1	Sub-01	to cb 10	0.39	Inlet-01	0.9500	0.52	0.49	2.30	6.200	0 00:05:00
2	Sub-02	to cb 9	0.25	Inlet-02	0.9500	0.52	0.49	1.47	6.200	0 00:05:00
3	Sub-03	to cb 8	0.16	Inlet-03	0.9500	0.52	0.49	0.94	6.200	0 00:05:00

SN	Element ID	Description	Length	Inlet Invert Elevation	Outlet Invert Elevation	Total Drop	Average Slope	Pipe Shape	Pipe Diameter or Height	Manning's Roughness	Entrance Losses	Exit/Bend Losses	Peak Flow	Time of Peak Flow Occurrence	Max Flow Velocity	Travel Time	Design Flow Capacity	Max Flow / Design Flow Ratio	Max Flow Depth / Total Depth Ratio	Total Time Surcharged	Max Flow Depth	Reported Condition
			(ft)	(ft)	(ft)	(ft)	(%)		(inches)				(cfs)	(days hh:mm)	(ft/sec)	(min)	(cfs)			(min)	(ft)	
1	Link-01	cb 6 - cb 5	38.00	24.00	23.62	0.38	1.0000	CIRCULAR	12.000	0.0130	0.5000	0.5000	0.70	0 00:05	3.97	0.16	3.56	0.20	0.30	0.00	0.30	Calculated
2	Link-02	cb 5 - cb 4	44.00	23.52	23.08	0.44	1.0000	CIRCULAR	15.000	0.0130	0.5000	0.6000	4.61	0 00:05	5.74	0.13	6.46	0.71	0.62	0.00	0.78	Calculated
3	Link-03	cb 4 - dmh 3	59.00	22.98	22.39	0.59	1.0000	CIRCULAR	15.000	0.0130	0.5000	0.6000	6.01	0 00:05	6.03	0.16	6.46	0.93	0.76	0.00	0.95	Calculated
4	Link-04	dmh 3 - dmh 1	149.00	16.24	14.75	1.49	1.0000	CIRCULAR	15.000	0.0130	0.5000	0.8000	5.95	0 00:05	6.12	0.41	6.46	0.92	0.75	0.00	0.94	Calculated
5	Link-05	dmh 4 - dmh 1	60.00	14.78	14.18	0.60	1.0000	CIRCULAR	15.000	0.0130	0.5000	0.8000	2.61	0 00:05	6.43	0.16	6.46	0.40	0.44	0.00	0.55	Calculated
6	Link-06	dmh 1 - cb 2	121.00	13.93	12.60	1.33	1.1000	CIRCULAR	18.000	0.0130	0.5000	0.8000	8.34	0 00:05	6.92	0.29	11.01	0.76	0.65	0.00	0.97	Calculated
7	Link-07	dmh 2 - cb 2	104.00	14.13	13.08	1.05	1.0100	CIRCULAR	12.000	0.0130	0.5000	0.8000	2.95	0 00:05	7.58	0.23	3.58	0.82	0.69	0.00	0.69	Calculated
8	Link-08	cb 2 - cb 1	32.00	12.50	11.85	0.65	2.0300	CIRCULAR	18.000	0.0130	0.5000	0.5000	12.66	0 00:05	9.50	0.06	14.97	0.85	0.71	0.00	1.06	Calculated
9	Link-09	cb 1 - outlet	28.00	11.75	11.00	0.75	2.6800	CIRCULAR	18.000	0.0130	0.5000	0.5000	16.39	0 00:05	11.07	0.04	17.19	0.95	0.78	0.00	1.17	Calculated
10	Link-10	bldg - cb 5	133.00	28.00	23.62	4.38	3.2900	CIRCULAR	12.000	0.0130	0.5000	0.8000	2.67	0 00:05	10.91	0.20	6.47	0.41	0.45	0.00	0.45	Calculated

SN	Element ID	X Coordinate	Y Coordinate	Description	Invert Elevation	Boundary Type	Flap Gate	Fixed Water Elevation	Peak Inflow	Peak Lateral Inflow	Maximum HGL Depth Attained	Maximum HGL Elevation Attained
					(ft)			(ft)	(cfs)	(cfs)	(ft)	(ft)
1	Out-01	2241.11	5680.06		11.00	NORMAL	NO		16.39	0.00	1.17	12.17

SN	Element ID	Description	Catchbasin Invert Elevation	Max (Rim) Elevation	Initial Water Elevation	Peak Flow
			(ft)	(ft)	(ft)	(cfs)
1	Inlet-01	cb 6	24.00	28.00	24.00	0.71
2	Inlet-02	cb 5	23.52	27.78	23.52	1.30
3	Inlet-03	cb 4	22.98	28.34	22.98	1.47
4	Inlet-04	cb 2	12.50	17.10	12.50	1.77
5	Inlet-05	cb 1	11.75	16.35	11.75	4.12

SN	Element ID	Description	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Minimum Pipe Cover (inches)	Peak Inflow (cfs)	Maximum HGL Elevation Attained (ft)	Maximum HGL Depth Attained (ft)	Maximum Surcharge Depth Attained (ft)	Time of Maximum HGL Occurrence (days hh:mm)
1	64	dmh 3	16.24	29.47	16.24	69.96	6.01	23.34	7.10	0.00	0 00:05
2	64	dmh 1	13.93	20.10	13.93	49.20	8.37	15.70	1.77	0.00	0 00:05
3	64	dmh 4	14.78	21.40	14.78	64.44	2.65	15.34	0.56	0.00	0 00:05
4	64	dmh 2	14.13	19.30	14.13	50.04	3.00	14.83	0.70	0.00	0 00:05
5	64	roof	28.00	32.00	28.00	36.00	2.71	28.45	0.45	0.00	0 00:05

SN	Element ID	Description	Area	Drainage Node ID	Weighted Runoff Coefficient	Accumulated Precipitation	Total Runoff	Peak Runoff	Rainfall Intensity	Time of Concentration
			(acres)			(inches)	(inches)	(cfs)	(inches/hr)	(days hh:mm:ss)
1	Sub-01	roof	0.46	64	0.9500	0.52	0.49	2.71	6.200	0 00:05:00
2	Sub-02	to cb 6	0.12	Inlet-01	0.9500	0.52	0.49	0.71	6.200	0 00:05:00
3	Sub-03	to cb 5	0.22	Inlet-02	0.9500	0.52	0.49	1.30	6.200	0 00:05:00
4	Sub-04	to cb 4	0.25	Inlet-03	0.9500	0.52	0.49	1.47	6.200	0 00:05:00
5	Sub-05	to dmh 4	0.45	64	0.9500	0.52	0.49	2.65	6.200	0 00:05:00
6	Sub-06	to dmh 2	0.51	64	0.9500	0.52	0.49	3.00	6.200	0 00:05:00
7	Sub-07	to cb 2	0.30	Inlet-04	0.9500	0.52	0.49	1.77	6.200	0 00:05:00
8	Sub-08	to cb 1	0.70	Inlet-05	0.9500	0.52	0.49	4.12	6.200	0 00:05:00

Hydraulic Analysis Report

Project Data

Project Title:
Designer:
Project Date: Thursday, August 1, 2019
Project Units: U.S. Customary Units
Notes:

Channel Analysis: Channel Analysis

Notes:

Input Parameters

Channel Type: Trapezoidal
Side Slope 1 (Z1): 3.0000 ft/ft
Side Slope 2 (Z2): 3.0000 ft/ft
Channel Width: 2.0000 ft
Longitudinal Slope: 0.0200 ft/ft
Manning's n: 0.0350
Lining Type: Rock Riprap - 150 mm (6-inch)
Flow: 16.4000 cfs

Result Parameters

Depth: 0.8836 ft
Area of Flow: 4.1092 ft^2
Wetted Perimeter: 7.5881 ft
Hydraulic Radius: 0.5415 ft
Average Velocity: 3.9911 ft/s
Top Width: 7.3014 ft
Froude Number: 0.9375
Critical Depth: 0.8554 ft
Critical Velocity: 4.1986 ft/s
Critical Slope: 0.0230 ft/ft
Critical Top Width: 7.13 ft
Calculated Max Shear Stress: 1.1027 lb/ft^2
Calculated Avg Shear Stress: 0.6758 lb/ft^2

Channel Analysis: Channel Analysis 2

Notes:

Input Parameters

Channel Type: Trapezoidal
Side Slope 1 (Z1): 3.0000 ft/ft
Side Slope 2 (Z2): 3.0000 ft/ft
Channel Width: 2.0000 ft
Longitudinal Slope: 0.0050 ft/ft
Manning's n: 0.0350
Lining Type: Rock Riprap - 150 mm (6-inch)
Flow: 16.4000 cfs

Result Parameters

Depth: 1.2165 ft
Area of Flow: 6.8728 ft^2
Wetted Perimeter: 9.6940 ft
Hydraulic Radius: 0.7090 ft
Average Velocity: 2.3862 ft/s
Top Width: 9.2991 ft
Froude Number: 0.4891
Critical Depth: 0.8554 ft
Critical Velocity: 4.1985 ft/s
Critical Slope: 0.0230 ft/ft
Critical Top Width: 7.13 ft
Calculated Max Shear Stress: 0.3796 lb/ft^2
Calculated Avg Shear Stress: 0.2212 lb/ft^2

ATTACHMENT D

OPERATION & MAINTENANCE MANUAL

NORTHERN LIGHT℠ MERCY HOSPITAL
FORE RIVER CAMPUS
PORTLAND, MAINE

STORMWATER MANAGEMENT SYSTEM OPERATION AND MAINTENANCE MANUAL FOR STORMWATER FACILITIES

Prepared for

Northern Light℠
Mercy Hospital

43 Whiting Hill Road
Brewer, ME 04412

Prepared by

Gorrill Palmer
707 Sable Oaks Drive – Suite 30
South Portland, Maine 04106
207.772.2515

AUGUST 2019

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APPENDICES

Appendix A – Summary Checklist for Inspection and Maintenance

Appendix B – Inspection Logs

Appendix C – Permits for Project

I. INTRODUCTION

Runoff from developed areas, may contain a number of contaminants especially when emanating from rooftops, paved or lawn areas. This runoff can contain a significant amount of non-point contaminants, which can have an adverse impact on the receiving waters. The installation of wet ponds, many times combined with soil media filters, vegetated buffer strips and other measures can significantly reduce the non-point pollution discharge from the developed area.

The effectiveness of ponds and other components of the system are dependent on their upkeep and maintenance to assure they meet their design function over an extended period of years. It is critical that the stormwater management facilities are inspected on a regularly scheduled basis, and that maintenance is performed on an as needed basis. It must also be recognized that the effectiveness of these facilities, and their maintenance requirements, are related to the stormwater drainage facilities that transport the flow to the ponds or treatment measures. Thus, maintenance should be directed to the total system, not just the ponds.

The purpose of this document is to define in detail the inspection and maintenance requirements deemed necessary to assure that the stormwater management facilities function as intended on a long-term basis for Phase 2 at Mercy Hospital. This Operations and Maintenance Manual is specific to the existing and proposed stormwater measures utilized to execute a successful stormwater management plan. Subsequent sections identify individual maintenance items, give a brief commentary of the function and need of the item, a description of the work required, and a suggested frequency of accomplishment. While the suggested programs and schedules must be adapted to specific projects, the material presented should provide guidance for a successful long-term program.

A. Guidelines Overview

A summary of the individual components of stormwater management facilities for this project has been prepared. The format used in the summary is as follows:

Preface: A general description of what function/benefit the element is intended to provide. This is a short summary and not intended to provide the design basis, which can be found in other sources.

Inspection: This section provides the inspection requirements for the individual component.

Maintenance: The section provides general information on the routine maintenance requirements of this element.

Frequency: This section outlines the best judgment of the designer on the system to the frequency of maintenance.

Comments: This section provides any particular comment on the site-specific features of this element. This is a summary only. The owner/operator should review the design drawings and documents carefully to understand the particular elements of the project. The end of this section should allow the owner/operator to make notes on the specific

program. This may include the selected maintenance procedure, cross-references to applicable design drawings, etc.

A list of the individual inspection/maintenance elements is provided in the table of contents. The guidelines are proposed for initial use with adjustments made as appropriate based upon specific project experience.

This report includes the Operation and Maintenance requirements for any potential BMP identified in the Stormwater Management Report for this project.

B. Responsible Party

The responsible party for operation and maintenance of the stormwater and other site infrastructure will be the applicant or their agents or assigns.

II. PROJECT OVERVIEW

Key permits issued (or applied for) on the project include:

- City of Portland Level III Site Plan Approval
- MaineDEP Amended Site Location of Development Permit
- MaineDEP Tier III Natural Resource Protection Act Permit
- ACOE Section 404 Wetland Permit
- Maine Construction General Permit Stormwater General Permit

A copy of the permits and Stormwater Management Report should be appended to this manual as Appendix C. The Owner/Operator of the stormwater management system should review these permits for a general description and background of the project, as well as any specific permit conditions or requirements of the project.

The applicant has retained Gorrill Palmer for civil engineering for the development project. Gorrill Palmer has prepared the design for the stormwater management facilities and may be contacted at:

Gorrill Palmer
707 Sable Oaks Drive – Suite 30
South Portland, Maine 04106
207.772.2515

The applicable plans and design documents which apply to the project are:

1. Civil Site Plans Prepared by Gorrill Palmer
2. The Erosion Control/Sedimentation Control Plan for the project
3. The Stormwater Management Plan for the project

A copy of these documents should be retained with this manual.

The proposed design includes inlets, stormwater conveyance lines, and a wet pond with an outlet control structure.

The key receiving waters for this project is the Fore River that is located south of the project site.

The manual is intended for general guidance; however, any substituted deviations from the manual should be reviewed with respect to provisions of Appendix C.

III. STANDARD INSPECTION/MAINTENANCE DESCRIPTIONS

The following narratives describe the inspection/maintenance provisions for the Stormwater Management system. These O&M procedures will complement scheduled vacuuming of the parking lots which is anticipated to occur at least twice per year. Proper O&M is necessary to make sure the system will provide its intended purpose of conveying runoff, removing a substantial amount of the suspended solids, and other contaminants in the stormwater runoff. Routine vacuuming of the porous areas is critical to their successful functioning.

A. Stormwater Inlets

Preface: The success of any stormwater facility relies on the ability to intercept stormwater runoff at the design locations. Stormwater inlets include catch basins, open culverts, and field inlets. Inlets exist throughout the Mercy Hospital – Fore River Campus system.

Inspection: The inspection of inlet points will need to be coordinated with other maintenance items, these include:

- Building maintenance areas
- Grounds maintenance

The key elements of the inspection are to assure the inlet entry point is clear of debris and will allow the intended water entry.

Maintenance: The key maintenance is the removal of any blockage which restricts the entry of stormwater to the inlet. The removed material should be taken out of the area of the inlet and placed where it will not reenter the runoff collection system. Snow should be removed from inlets on parking lots. Grass clippings and leaves should be bagged and removed particularly near the yard inlets near the buildings.

Frequency: All inlets should be inspected on a quarterly basis, and after/during significant storm events i.e. >1" rainfall).

Maintenance Personnel: The maintenance personnel will perform the normal maintenance/ inspections of the inlets and tributary drainage system.

Comments: Maintenance of inlets is critical on this project.

B. Tributary Drainage System

Preface: Stormwater from most of the project will be directed through a conveyance (tributary) system which transports the flow to the wet pond and ultimately to the Fore

River. This conveyance system will be principally overland flow discharging to piped drain systems. Most of the sediment carried by the drainage system is intended to be trapped in structures. Maintenance of this system can play a major role in the long-term maintenance costs and the effectiveness of the onsite systems. The primary pretreatment measure for the Mercy Hospital site will be through deep sumped catch basins with hooded outlets.

Inspection: The tributary drainage system should be periodically inspected to assure that it is operating as intended, and that the carrying capacity has not been diminished by accumulations of debris and sediment or other hydraulic impediments. On piped systems, the inlets must be inspected to ensure the rims are set at the proper elevation to optimize flow entry and are not clogged with debris.

The level of sediment in the sumps should be checked to assure their effectiveness. Pipelines connecting the inlets should be checked to determine if siltation is occurring. This will be most critical on drain lines laid at minimal slopes. This can usually be accomplished by a light and mirror procedure.

Maintenance: Maintenance of the storm drainage system must assure that it continues to serve its design function on a long-term basis, and that its operation does not transport excessive sediments to any downstream treatment device or the receiving waters. Elevations on the rim of catch basins should be adjusted as needed to assure optimal water entry. Depending on the frost susceptibility of the soil, the rims may become elevated over time causing flow to circumvent the inlet. If a temporary filter bag has been designated for the inlet during construction, silt or other deleterious materials, can significantly reduce capacity and the bags should be removed with the sediment and replaced during construction. Catch basin cleaning would normally be accomplished with vacuum trucks contracted as a maintenance service for the Development. The removed material must be disposed of at an approved site for such materials.

If sediment in the pipeline is observed, it should be removed. This may be accomplished by hydraulic flushing, or by mechanical means. If hydraulic flushing is used the downstream conditions should be analyzed.

Frequency: The tributary drainage system should be inspected on an annual basis. Adjustment of inlet rim elevations should be on an as needed basis. Cleaning catch basin sumps and pipelines will depend on the rate of accumulation.

F. Vegetation in Pond

Preface: Typically, ponds constructed for stormwater management will have an earthen bottom as is the case for the Mercy Hospital wet pond. Aquatic vegetation will often become established in such ponds. It will be more prevalent in ponds with silty soils and ponds with relatively impermeable liners and less prevalent in granular soils. This vegetation is beneficial as it assists in nutrient removal, provides wildlife habitat, and assists in side slope stability through its root structure.

Proper maintenance is important because, if the vegetation proliferates beyond acceptable levels, it can become a detriment to the pond function. Dying vegetation may

also accumulate on the pond bottom where it will release nutrients back in the water, and may lower oxygen levels. If allowed to accumulate it will lessen pond volumes over time.

Inspection/Monitoring: The extent of aquatic vegetation associated with the wet pond should be monitored. A photographic record of growth may be useful.

Maintenance: Judgment must be used to determine a proper balance between desirable growth levels and excessive growth. This will be gained by experience. If excessive growth is observed it should be cut back and removed on an annual basis.

Removal of excessive growth should be accomplished in the late fall or early winter. When ice forms sufficiently to walk on, the vegetation extending above the ice level should be cut and removed from the pond. The material should be disposed of in accordance with applicable ordinances.

Frequency: Inspect and document aquatic vegetation growth and wildlife use annually in late summer or early fall at the end of the growing season. Cutting and removal of growth will depend on its density. Removal on a 1-to-3 year frequency will be typical. Activity associated with burrowing wildlife, including muskrat and groundhogs must be monitored to avoid holes within the berms that may give way to erosion or water loss.

Removal of Cutting: Cuttings of undesirable excessive vegetation should be removed from the pond areas and composted or otherwise disposed.

Comments: Care should be taken when performing work around and on ice.

H. Sediment Monitoring/Wet Ponds

Preface: It is important to monitor sediment build-up in wet ponds to assure that capacity remains to accomplish its intended water quality function. This is true for both the wet pond at Mercy Hospital.

Inspection: Measuring sediment build-up in a pond with a permanent pool, which cannot be readily dewatered, must rely on recorded differential elevation. In such an installation, it is important to have accurate "As Built" elevations on the pond bottom prior to its being placed in operation. This should be a requirement of the construction contract.

The build-up of sediment requires establishing the elevation of the top of the sediment layer for comparison with original bottom elevations. To accomplish this, a permanent benchmark should be established at the site that is not subject to frost action. The elevation of the water surface at the time of survey can thus be established. Measurement should then be taken from the water surface to the top of the sediment layer. This should be done at sufficient locations to cover the total pond area. It is noted that sediment build-up will be more rapid near the inlet of the pond.

The depth measurements can be taken in the summer utilizing a small boat, or in the winter through the ice. The depth measuring staff should have a flat plate attached to the bottom so it will not sink substantially into the sediment layer.

By comparing the measured elevations with the as-built elevations of the pond bottom it will be possible to compute sediment build-up levels.

Maintenance: If sediment build-up in the pond becomes sufficient to diminish its treatment function it will have to be removed. This may be accomplished by dewatering and removal. If the pond cannot be dewatered, hydraulic dredging should be utilized. When pond sediment removal is planned, record drawings should be reviewed for special linings or other special features, which may influence removal techniques, or may have to concurrently be maintained.

Frequency: The sediment buildup measurements should be accomplished at 5- year intervals. Removal of sediment should be accomplished when it occupies 15% of the effective pond volume.

Options to sediment removal will vary on each project, but could include enlargement of the pond, or qualitative sampling to examine pond performance. If such options are considered, existing permit conditions, as well as current regulations, should be examined where necessary, and permit amendments should be obtained.

Comments: None.

I. Sediment in Forebay

Preface: The wet pond has been constructed with a small forebay sump at the entrance. The purpose of this sump is to collect and detain larger particles in the sediment, which may enter the pond through the inlet pipe. A secondary benefit of the forebay sump is to achieve better hydraulic flow distribution in the main segment of the pond.

Inspection: During periods of lowest water surface in the pond it should be possible to inspect the forebay sump and to measure the sediment accumulation.

Maintenance: If a significant accumulation of sediment is recorded in the sump, it should be removed. Depending on the size of the sump, the amount of sediment collected, and its location, the sediment may be removed manually, by a vacuum truck or other methods. The material removed from the sump should be disposed of in accordance with local practice for disposing of catch basin cleanings.

Frequency: The forebay sump should be inspected semi-annually if possible, preferably in the early summer after spring runoff, and in the fall. The frequency of sump cleaning will depend on the rate of sediment buildup. Cleaning on a 1 to 2 year basis is likely. It is noted that cleaning of the forebay sump will lengthen the time between pond cleanings.

The rate of sediment buildup will depend on the tributary drainage facilities, i.e., faster buildup with open ditch transport systems and buildup from pipe systems with sumped

catch basins. Maintenance practiced for the tributary drainage system will also impact sediment buildups.

Comments: None.

I. Litter

Litter should be removed as a matter of course by workers and as part of the ground's maintenance contract.

IV. PROGRAM ADMINISTRATION

A. General

A reliable administrative structure must be established to assure implementation of the maintenance programs described in the foregoing section. Key factors that must be considered in establishing a responsive administrative structure include:

1. Administrative body must be responsible for long-term operation and maintenance of the facilities. (Maintenance continues for the lifespan of the development in accordance with this document)

2. Administrative body must have the financial resources to accomplish the inspection and maintenance program over the life of the facility.

3. The administrative body must have a responsible administrator to manage the inspection and maintenance programs.

4. The administrative body must have the staff to accomplish the inspection and maintenance programs or must have authority to contract for the required services.

5. The administrative body must have a management information system sufficient to file, retain, and retrieve all inspection and maintenance records associated with the inspection and maintenance programs.

6. A qualified post construction inspector shall be retained by the Owner. His/her duties shall include preparing schedules for the Owner's maintenance, summarizing the results of this maintenance and preparing an annual report on the operation, maintenance, and repair of the stormwater system which must be copied to the City. (The Owner shall be responsible for retaining a separate entity to perform maintenance which cannot be performed by the management of building and property grounds.) This person shall also participate in troubleshooting of the stormwater management system if a problem develops.

If any of the above criteria cannot be met by the entity assigned inspection and maintenance responsibilities, it is likely that the system will fail to meet its water quality objectives at some point during its life. While each of the above criteria may be met by a variety of formats, it is critical to clearly establish the assigned administrative body in a responsible and sustainable manner.

B. Record Keeping

Records of all inspections and maintenance work accomplished must be kept and maintained to document facility operations. These records should be filed and retained for a minimum 5-year time span. The filing system should be capable of ready retrieval of data for periodic reviews by appropriate regulatory bodies. Where possible, copies of such records should also be filed with the designated primary regulatory agency for their review for compliance with permit conditions. Typical inspection and maintenance record forms are attached hereto as Appendix B.

Beyond the initial 5-year time span of the original approval and maintenance plan, the stormwater management system will need to be recertified through the Department every 5 years to confirm that there is conformance with the original permit documents. This process will ensure all systems function properly over time. This document will remain valid throughout any subsequent recertification processes.

C. Contract Services

In some instances, or at specific times, the Maintenance Personnel may not have the staff to conduct the required inspection and/or maintenance programs as outlined in this document. In such cases, the work should be accomplished on a contractual basis with a firm or organization that has the staff and equipment to accomplish the required work.

The service contract for inspection and maintenance should be formal, well written legal document which clearly defines the services to be provided, the contractual conditions that will apply, and detailed payment schedules. Liability insurance should be required in all contracts.

APPENDIX A

Summary Checklist
Inspection and Maintenance

Stormwater Management System Maintenance Program Summary Checklist						
Item	**Commentary**	**Frequency**				
		Monthly	**Quarterly**	**Semi-Annual**	**Annual**	**Long Term**
Stormwater Inlets	Stormwater inlets allow flow entry from a surface swale to a piped system. Entry may or may not be equipped with a bar rack. Inspect entry for debris accumulation. Remove debris to allow unimpeded entry. Lawn clippings and leaves should be removed from yard areas.		X		X Clearing	
Tributary Drainage System	Inspect to assure that the carrying capacity has not been diminished by debris, sediment or other hydraulic impediments.				X	
Vegetation in Pond	Observe extent of vegetation in fall. Cut above ice level in winter – remove.				X	
Sediment Monitoring in Wet Pond	In larger ponds with permanent water body the sediment can be measured by measuring bottom surface elevations and comparing with record elevations of initial construction. Should occur roughly every 5 years. Remove sediment when it occupies 15% of volume (10-15 years)					X
Sediment in Forebay	Observe sediment accumulation in forebay sumps. Remove sediment from sump.				X	
Litter	Litter should be removed daily.					

APPENDIX B

Sample Inspection Logs

MERCY HOSPITAL – FORE RIVER CAMPUS
PORTLAND, MAINE

STORMWATER MANAGEMENT
SAMPLE STORMWATER INSPECTION & MAINTENANCE LOG

This log is intended to accompany the Operation and Maintenance Manual for Stormwater Management and Related Facilities. All stormwater BMPs shall be maintained in effective operating condition. A person with knowledge of erosion and stormwater control, including the standards and conditions of the DEP Stormwater Permit, shall conduct inspections of the facilities as described in the O&M Manual and on this form, and identified deficiencies must be corrected. This log shall be kept on file for a minimum of five (5) years.

A. General Information			
Project Name:		**Inspection Date:**	
Parcel/Lot:		**Current Weather:**	
BMP Owner:		**Date/Amount Last Precip.:**	
Owner Mailing Address:		**Inspection Company:**	
Owner Phone #:		**Inspection Co. Mailing Address:**	
Owner Email:		**Inspector Name:**	
		Inspector Phone #:	
		Inspector Email:	

B. Stormwater Inlets (Catchbasins)	**Observations**
Frequency: Annually in the spring	
Accumulated sediments from inflow channels and pipes between basins have been removed and legally disposed of	☐ Yes ☐ No ☐ NA
Floating debris and large sediment particles have been removed from inlets.	☐ Yes ☐ No ☐ NA
Stormwater Inlet Notes:	

C. Tributary Drainage System	**Observations**
Frequency: Annually spring or late fall and after heavy rains	
Remove and legally dispose of sediments	☐ Yes ☐ No ☐ NA
Remove floatables and other objects	☐ Yes ☐ No ☐ NA
Check for overgrown vegetation impeding flow	☐ Yes ☐ No ☐ NA
Check pipelines for siltation and clogging	☐ Yes ☐ No ☐ NA
Repair any slumping side slopes or erosion	☐ Yes ☐ No ☐ NA
Replace any riprap on areas where any underlying fabric or underlying gravel is exposed.	☐ Yes ☐ No ☐ NA
Tributary Drainage System Notes:	

G. Vegetation in Pond	Observations
Frequency: Biannually spring and late fall and following heavy rains	
Check for excessive growth of vegetation that could decrease pond volume over time. Do this in late summer early/fall after growing season	☐ Yes ☐ No ☐ NA
Check for signs of wildlife burrowing into berms that could cause failure of pond structure	☐ Yes ☐ No ☐ NA
Vegetation in Pond Notes:	

H. Sediment Watering in Wet Pond	Observations
Frequency: Longterm (5-10 years)	
Clean basin of debris, sediment and hydrocarbons from pretreatment structure	☐ Yes ☐ No ☐ NA
If mowing is desired, use handheld trimmers or push mowers.	☐ Yes ☐ No ☐ NA
Inspect inlets and outlets of obstructions and remove	☐ Yes ☐ No ☐ NA
Inspect slopes for erosions or destabilization; repair as required	☐ Yes ☐ No ☐ NA
Till, Seed and mulch basin if vegetation is sparse	☐ Yes ☐ No ☐ NA
Replace top several inches of soul filter material if water is ponding more than 72 hours	☐ Yes ☐ No ☐ NA
Sediment Watering in Wetpond Notes:	

I. Sediment in Forebay	Observations
Frequency: Annually	
Check for sediment buildup in sump	☐ Yes ☐ No ☐ NA
Check for other debris and large sediment particles in sump	☐ Yes ☐ No ☐ NA
Remove sediment and dispose of properly	☐ Yes ☐ No ☐ NA
Sediment in Forebay Notes:	

APPENDIX C

Permits for Project

(To be Added at a Subsequent Time)

GORRILL PALMER

707 Sable Oaks Drive, Suite 30
South Portland, Maine 04106
207.772.2515

December 23, 2019

Mr. Matthew Grooms
Planning and Development Department
City of Portland, Maine
389 Congress Street
Portland, Maine 04101-3509

Subject: Application for Level III Site Plan Application
Northern Light Mercy Hospital – Fore River Campus Consolidation
Project #: PL-000570-2019
Supplemental Information

Dear Matt:

We are pleased to provide the following supplemental information associated with the staff and Planning Board comments we have received thus far on the Mercy Hospital Phase 2 Expansion project and as discussed at our December 16, 2019 meeting with staff. Our team has prepared materials related to the following topics:

1. **Pedestrian Circulation Plan** –The accompanying Figure 5 in Attachment 1, outlines various pedestrian routes on the campus and connections to the Fore River Parkway that are available to Hospital Staff, patients and visitors as well as to the general public. The site's pedestrian access features are highlighted by the following:

   - Paved sidewalks throughout the campus that connect the parking lots to each of the buildings. There are nearly 1.5 miles of interconnected maintained sidewalks on the property with many more miles of pedestrian pathways available offsite as part of the Portland Trails network;
   - A paved sidewalk that circumnavigates the former pond area and will remain for connectivity and onsite recreational usage;
   - Two connections, one at each driveway, to the Fore River Parkway Trail;
   - A push button activated pedestrian signal at the southerly driveway for ease of pedestrian crossing;
   - Footpath access to the northerly open space along the waterfront where several bench overlooks provide for passive use; and
   - The Fore River Parkway Trail provides connectivity to a myriad of opportunity including connectivity to the Portland Transportation Terminal, the Veteran's Bridge and various in-town locations.
   - To address Staff comments related to METRO Service, the plan has been updated to reflect anticipated updates to METRO's area service including two-way service along the Fore River Parkway and new bus stops that might be positioned at Mercy's site driveways, thus achieving METRO's stated goals of discontinuing the existing onsite Congress Street Route. Mercy will continue to coordinate with METRO as their plans solidify over upcoming months. Mercy's objectives will be to provide sidewalk connectivity to any new METRO stops along the Parkway and if possible, allow METRO to relocate the existing bus shelter located next the Medical Office Building.

- The access from the staff parking area behind the ASC to the ground level Hospital Entrance consists of a 10' wide textured asphalt or painted surface to better provide visual separation from the surrounding surfaces. This 105' long crossing is within the "back of the house" zone that includes the loading/receiving area, however, we believe that its form and function are fully compatible with the location. Mercy's frequency of deliveries is very low and is typically offset from the arrival/departure times of staff using the parking lot. These pedestrian travel conditions are no different from many other similar urban "downtown" conditions where the movements of pedestrians and vehicles interface all the time, thus, we are very comfortable with the location and function of this staff/pedestrian travel path to the building.

- Mercy will update any new bicycle racks not compliant with the current Technical Standard. Considering that the existing bike racks were found acceptable during the initial Phase 1 construction and these are private racks, Mercy respectfully requests they be retained on the property. Based on an onsite parking supply of 857 spaces, under Section 14-526 a.4.b.i.b, bicycle parking capacity is to be 58 spaces. Currently there are racks at the employee entrance at the rear of the hospital and between the MOB and Hospital each with capacity for 9 bikes for a total of 18 as shown below. The site plan has been updated to include new rack (DERO™ Downtown rack) locations near the MOB and near the ASC and these will have an additional capacity of 9 bicycles each. The new total capacity will be 36 bike spaces. We are requesting a waiver of the total bicycle parking amount of 58.





2. **Signage** – Mercy has prepared the accompanying updated signage materials contained in Attachment 2 to this letter. Signage on the South Elevation is very important to Mercy, as it is a prominent view where the "Mercy" sign has previously been located. The feedback from the Planning Board was that two signs on the South and East Elevations are not needed or desired. Therefore, Mercy has amended its signage application by removing the new sign on the East Elevation. Additional graphics are provided for the South Elevation signage. The signage design on the South Elevation was created in consultation with City staff and based upon feedback received.

3. **Architecture** – See the enclosed memo and graphics from SMRT in Attachment 3 to this letter regarding roof top appurtenances on the ASC building and the hierarchy of entrances on the hospital building.

4. **Landscaping** – SMRT has prepared color graphics contained in Attachment 3 showing the proposed wet pond and a pond trail concept. A more detailed landscape plan will be provided prior to the January 14 workshop.

5. **Contract Zone Agreement Compliance** – See the letter from Mercy's attorney Mary Costigan in Attachment 4 to this letter that provides an update to the previously submitted CZA compliance document.

6. **Revised Plan for Ambulance Access** – Plans reflecting an updated layout to the proposed Emergency Department access conditions at the north end of the Hospital Expansion have been uploaded to EPlan. As a result of coordination with the Ambulance providers, we have now modified the design to provide separation between the ambulance entry zone and the patient/ visitor ED entrance on the north end. Ambulances will have a defined entry off the rear loop access drive into their covered loading/unloading space at the rear of the expansion wing. Patients will access their ED entrance from off the new drive aisle passing between the expansion space and the existing MOB. We believe this modified design better achieves Mercy's objectives. These changes have relatively modest impact to other technical design measures including grading, drainage, stormwater management and utilities.

We will continue to await any further staff comments, including any more from the Traffic peer review engineer, Tom Errico. We will respond as quickly as we can to any comments as we look forward to appearing before the Planning Board at their January 14, 2020 workshop meeting. It is Mercy's team goal to then appear before the Board at the next available meeting in February for possible Public hearing and Planning Board Action on our application. We previously uploaded the Neighborhood meeting certification materials as evidence of satisfying that checklist requirement. We will continue to provide additional material such as any outstanding Utility provider "Capacity availability" documents as they become available. Finally, we can advise you that the Maine DEP is processing an amendment application and we anticipate their issuance of an updated MaineDEP SLODA Permit order early in 2020.

If you have any questions regarding the materials being submitted, please contact this office.

Sincerely,

GORRILL-PALMER

Stephen Bushey, PE
Senior Associate
Phone: 207-772-2515 x286
sbushey@gorrillpalmer.com

Attachments

c: Nick Munro, Northern Light℠ Mercy Hospital
Ed Gilman, Northern Light℠ Mercy Hospital
Mary Costigan, Bernstein Shur
Ellen Belknap, SMRT

Attachment 1

Figures

Attachment 2

Signage Materials

SignCHART

Northern Light

EMHS

Proposed Existing Building Signage Replacement and New Signage

Site Number: 000048

Site Name: Fore River Hospital

Address: 175 Fore River Parkway

,

Recommendation Completed: 2018-06-13

Approved: 2018-07-10

Date Print: 11/14/2019

Leased/Owned: Owned





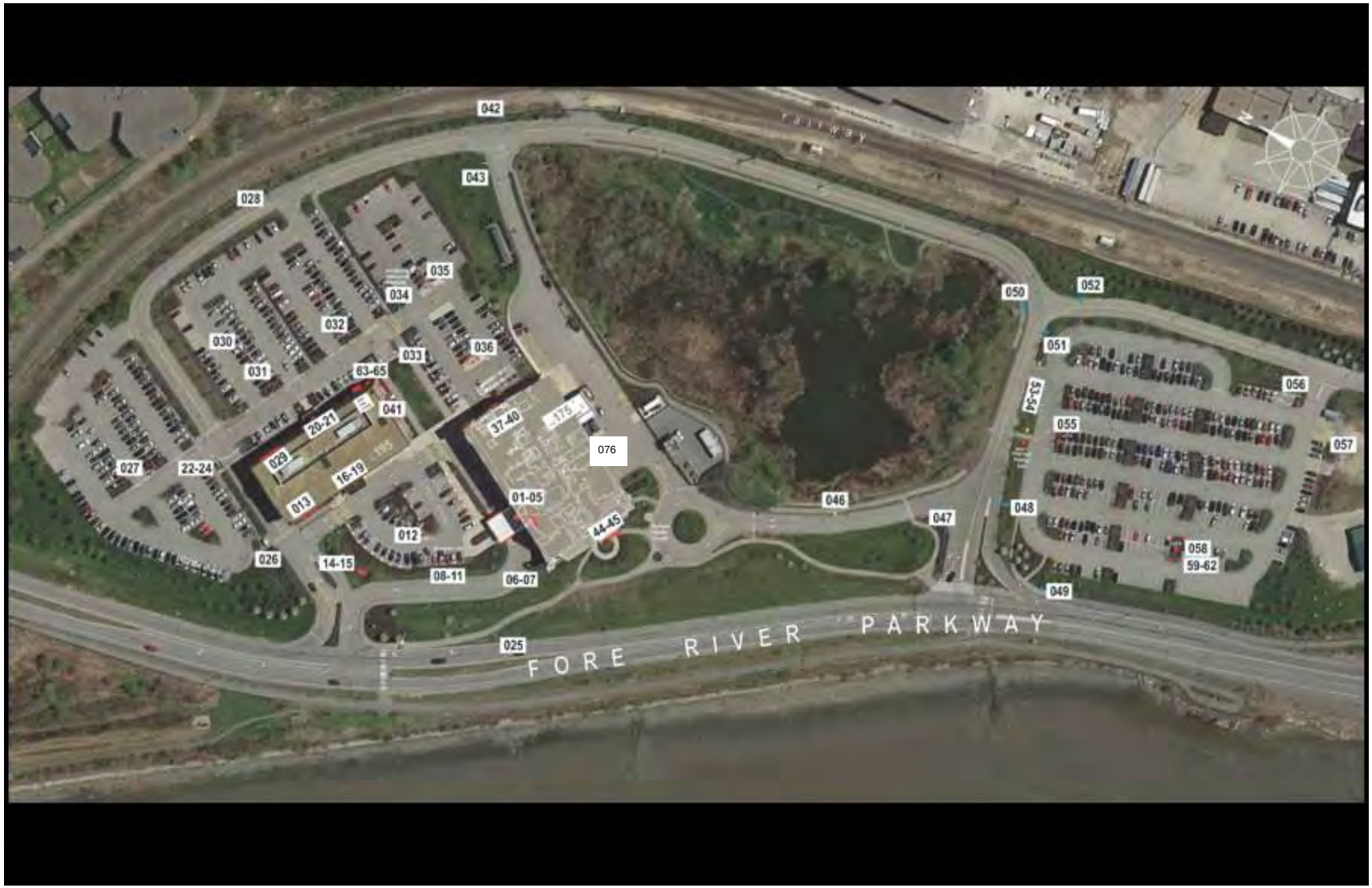
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Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019



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EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Recommendations Report

Sign Number	Sign Type	Description	Action Code
001a	CL-36-EXHOR-D	36' Extreme Horizontal Signature Channel letters - Dark Faces	Remove and Replace
001c	Leave	Leave Existing Donor Name Sign	Leave
002	DL-S-20-W	20'' Secondary Name (Typeset Font) Dimensional letters - White Faces	Remove and Replace
003	Remove	Remove Existing Plate Letters	Remove
004	Custom	Custom Door Vinyl	Remove and Replace
013	Leave	Leave Dimensional Letters	Leave

(continued on next page)

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Recommendations Report *(continued)*

Sign Number	Sign Type	Description	Action Code
029	Leave	Leave Dimensional Wall Letters	Leave

(continued on next page)

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Recommendations Report *(continued)*

Sign Number	Sign Type	Description	Action Code
037	Custom	Custom Door Vinyl	Remove and Replace
038a	DL-18-VERT-W	18'' Vertical Signature Non-Illuminated Dimensional Letters - White Faces	New
039	REG-W2-NS	Small Wall Mounted Regulatory Sign - No Smoking	Remove and Replace
040a	Remove	Remove Existing Mercy Hospital Sign	Remove
040b	Leave	Leave Ambulance Entrance Plate Letters	Leave
041b	Leave	Leave Existing Non-branded Regulatory Wall Sign	Leave
045a	CL-30-VERT-W	30'' Vertical Signature Channel letters - White Faces	Remove and Replace

(continued on next page)

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Recommendations Report *(continued)*

Sign Number	Sign Type	Description	Action Code
045c	Leave	Leave	Leave
045d	REG-W2-NS	Small Wall Mounted Regulatory Sign - No Smoking	Remove and Replace
045e	V3	Door Vinyl - Double Doors	Remove and Replace

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Recommendations Report *(continued)*

Sign Number	Sign Type	Description	Action Code
063	Custom	Custom Reface of Existing Canopy	Leave
064	Custom	Custom Window Vinyl	Remove and Replace
065	Custom	Custom Window Vinyl	Remove and Replace

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EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Existing

Sign Number:	001a
Existing Sign Type:	Channel Letters
Face Material:	Flat Plastic
Graphics Material:	Vinyl
Overall Height:	
Face Height:	60"
Face Width:	26' /-
Square Feet:	
Illuminated:	Internally Illuminated
Electrical:	
Wall Material:	Driveit
Sign Comment:	60" M /- cap heigjt white rooftop letters column to column 32' /-

Proposed

Sign Number:	001a
Sign Type:	CL-36-EXHOR-D
Description:	36" Extreme Horizontal Signature Channel letters - Dark Faces
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	Vendor must confirm that stated size will fit as shown

Overall Height:	5'-5 5/8"
Overall Width:	45'-7 1/4"
Logo Height:	4'-6"
Letter Height:	3'-0"
Illuminated:	Illuminated

Restoration Notes: Patch and repair existing wall surface to like new condition. Repaint to match existing color finish. For brick or stone walls fill holes with matching silicone. Power wash wall if required. Install new signage using existing primary electrical. Verify if additional circuits are required for new sign. Field verify dimensions of space shown in photo morph prior to fabrication to verify if specified letterset will fit in area and meet clear zone tolerances – refer to Control Documents. ***Change letterset height if required. See control documents for product specification and master agreement for removal

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EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Existing

Sign Number:	001c
Existing Sign Type:	
Face Material:	
Graphics Material:	
Overall Height:	
Face Height:	
Face Width:	
Square Feet:	
Illuminated:	
Electrical:	
Wall Material:	
Sign Comment:	

Proposed

Sign Number:	001c
Sign Type:	Leave
Description:	Leave Existing Donor Name Sign
Action:	Leave
Message A:	
Message B:	
Comments:	
Restoration Notes:	

Overall Height:	
Overall Width:	
Logo Height:	
Letter Height:	
Illuminated:	

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EMHS

Site Number: 000048

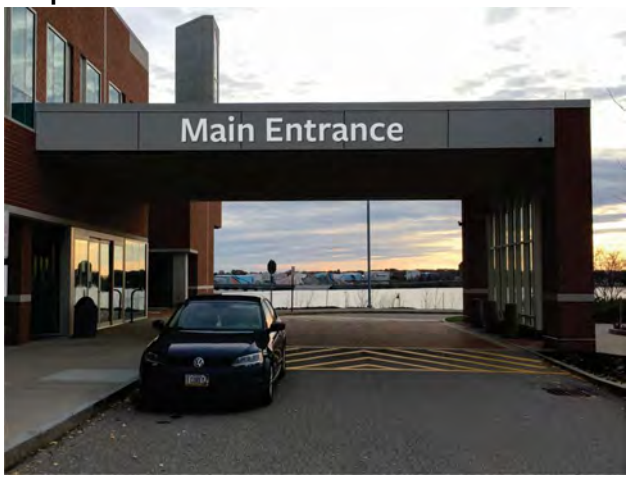
Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Existing

Sign Number:	002
Existing Sign Type:	Plate Letters
Face Material:	Flat Plastic
Graphics Material:	Acrylic
Overall Height:	
Face Height:	24"
Face Width:	18' /-
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	34"h fascia below flashing. 24" 'M' height cap height letters. .5" /-

Proposed

Sign Number:	002
Sign Type:	DL-S-20-W
Description:	20"" Secondary Name (Typeset Font) Dimensional letters - White Faces
Action:	Remove and Replace
Message A:	
Message B:	

Overall Height:	NULL
Overall Width:	NULL
Logo Height:	NULL
Letter Height:	1'-8""
Illuminated:	Non Illuminated

Comments: Hospital name is redundant in this location. Replace with "Main Entrance" copy to assist in directing patients to this entry instead of the Urgent Care entrance around the corner.

Restoration Notes: Patch and repair existing wall surface to like new condition. Repaint to match existing color finish. For brick or stone walls fill holes with matching silicone. Power wash wall if required. See master agreement for removal requirements.

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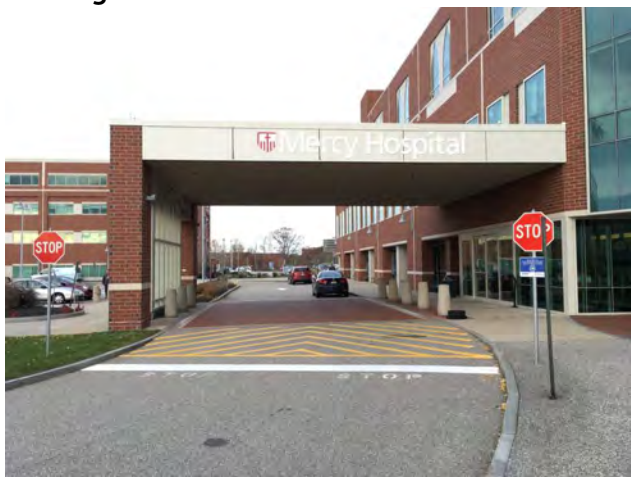
EMHS

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City/State: ,

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Existing Photo



Proposed Photo



Existing

Sign Number:	003
Existing Sign Type:	Plate Letters
Face Material:	Flat Plastic
Graphics Material:	Acrylic
Overall Height:	
Face Height:	24"
Face Width:	18' /-
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	34"h fascia below flashing. 24" 'M' height cap height letters. .5" /-

Proposed

Sign Number:	003
Sign Type:	Remove
Description:	Remove Existing Plate Letters
Action:	Remove
Message A:	
Message B:	
Comments:	These letters are unnecessary
Restoration Notes:	Patch and repair existing wall surface to like new condition. Repaint to match existing color finish. For brick or stone walls fill holes with matching silicone. Power wash wall if required. See master agreement for removal requirements.

Overall Height:	
Overall Width:	
Logo Height:	
Letter Height:	
Illuminated:	

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EMHS

Site Number: 000048

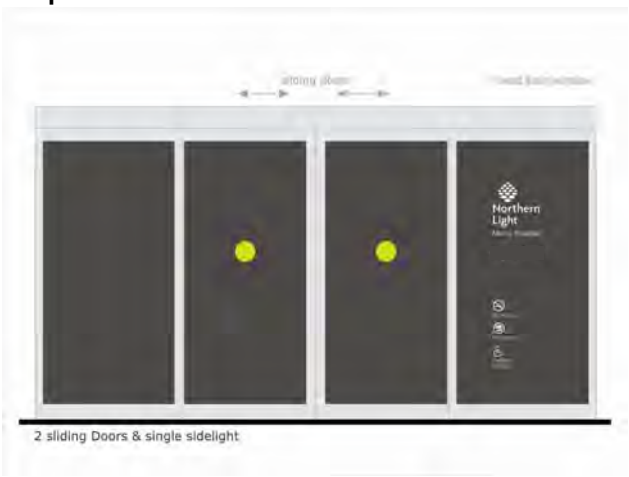
Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Existing

Sign Number: 004
Existing Sign Type:
Face Material:
Graphics Material:
Overall Height:
Face Height:
Face Width:
Square Feet:
Illuminated:
Electrical:
Wall Material:
Sign Comment:

Proposed

Sign Number: 004
Sign Type: Custom
Description: Custom Door Vinyl
Action: Remove and Replace
Message A:
Message B:
Comments: Client to verify copy and hours prior to approval.
Restoration Notes: Field verify dimensions of space shown in photo morph prior to fabrication to verify if specified vinyl graphics will fit in area and meet clear zone tolerances – refer to Control Documents. ***Change vinyl graphics sizes if required. See control documents for product specification and master agreement for installation requirements. Verify copy w/ hospital prior to fabrication. Clean surface of all residue.

Overall Height:
Overall Width:
Logo Height:
Letter Height:
Illuminated: Non Illuminated

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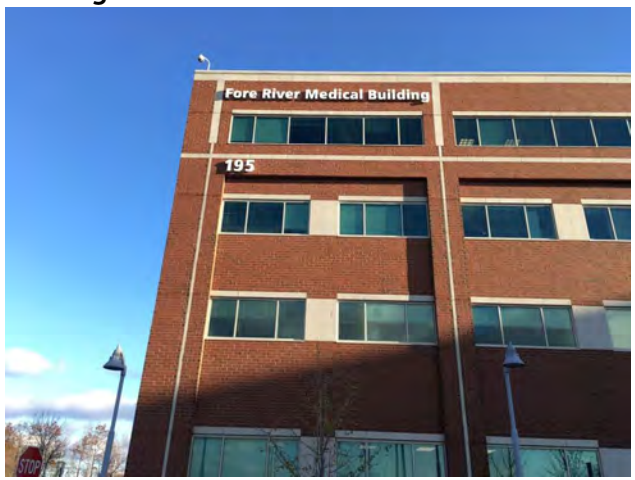
EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Existing

Sign Number:	013
Existing Sign Type:	Dimensional Letters
Face Material:	Metal
Graphics Material:	Painted Letters
Overall Height:	
Face Height:	18"
Face Width:	24' /-
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	18" 'FRMB' height cap height letters. 4.5 brik /- M height

Proposed

Sign Number:	013
Sign Type:	Leave
Description:	Leave Dimensional Letters
Action:	Leave
Message A:	
Message B:	
Comments:	Leave "Fore River Medical Building" letters
Restoration Notes:	

Overall Height:	
Overall Width:	
Logo Height:	
Letter Height:	
Illuminated:	

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Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Existing

Sign Number:	029
Existing Sign Type:	Dimensional Letters
Face Material:	Metal
Graphics Material:	Painted Letters
Overall Height:	
Face Height:	18"
Face Width:	24' /-
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	18" 'FRMB' height cap height letters. 4.5 brik /- M height

Proposed

Sign Number:	029
Sign Type:	Leave
Description:	Leave Dimensional Wall Letters
Action:	Leave
Message A:	
Message B:	
Comments:	
Restoration Notes:	

Overall Height:	
Overall Width:	
Logo Height:	
Letter Height:	
Illuminated:	

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Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Existing

Sign Number:	037
Existing Sign Type:	Regulatory Sign
Face Material:	Flat Plastic
Graphics Material:	Painted
Overall Height:	
Face Height:	
Face Width:	
Square Feet:	
Illuminated:	
Electrical:	
Wall Material:	
Sign Comment:	

Proposed

Sign Number:	037
Sign Type:	Custom
Description:	Custom Door Vinyl
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	Client to verify copy and hours prior to approval.

Overall Height:	
Overall Width:	
Logo Height:	
Letter Height:	
Illuminated:	Non Illuminated

Restoration Notes: Field verify dimensions of space shown in photo morph prior to fabrication to verify if specified vinyl graphics will fit in area and meet clear zone tolerances – refer to Control Documents. ***Change vinyl graphics sizes if required. See control documents for product specification and master agreement for installation requirements. Verify copy w/ hospital prior to fabrication. Clean surface of all residue.

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EMHS

Site Number: 000048

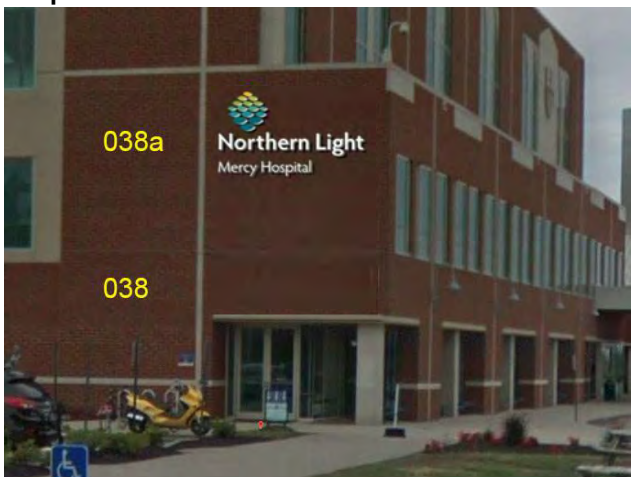
Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Existing

Sign Number:	038a
Existing Sign Type:	
Face Material:	
Graphics Material:	
Overall Height:	
Face Height:	
Face Width:	
Square Feet:	
Illuminated:	
Electrical:	
Wall Material:	
Sign Comment:	

Proposed

Sign Number:	038a
Sign Type:	DL-18-VERT-W
Description:	18"" Vertical Signature Non-Illuminated Dimensional Letters - White Faces
Action:	New
Message A:	
Message B:	
Comments:	Install new NLH letterset centered on upper brick area as shown.
Restoration Notes:	Field verify dimensions of space shown in photo morph prior to fabrication to verify if specified letterset will fit in area and meet clear zone tolerances – refer to Control Documents. ***Change letterset height if required. See control documents for product specification and master agreement for installation requirements.

Overall Height:	7'-6""
Overall Width:	13'-5 1/8""
Logo Height:	3'-7 1/4""
Letter Height:	1'-6""
Illuminated:	Non Illuminated

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EMHS

Site Number: 000048

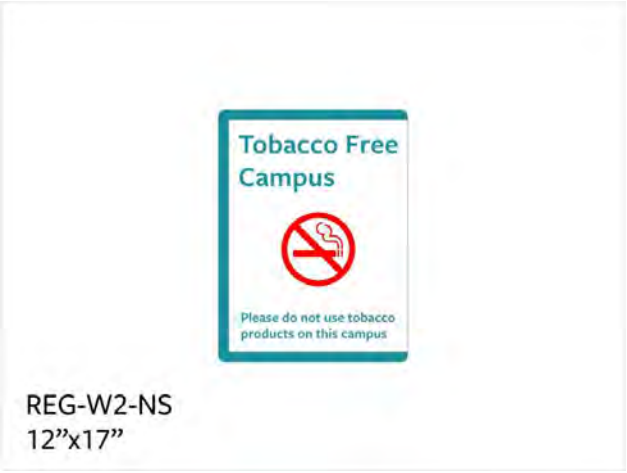
Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Existing

Sign Number:	039
Existing Sign Type:	Smoke Free
Face Material:	Metal
Graphics Material:	Painted Letters
Overall Height:	
Face Height:	12"
Face Width:	18"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	silkscreened graphics on pole sign

Proposed

Sign Number:	039
Sign Type:	REG-W2-NS
Description:	Small Wall Mounted Regulatory Sign - No Smoking
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	

Overall Height:	1'-5"
Overall Width:	1'-0"
Logo Height:	
Letter Height:	
Illuminated:	Non Illuminated

Restoration Notes: Patch and repair existing wall surface to like new condition. Repaint to match existing color finish. For brick or stone walls fill holes with matching silicone. Power wash wall if required. Field verify dimensions of space shown in photo morph prior to fabrication to verify if specified sign will fit in area. See control documents for product specification and master agreement for removal & installation requirements.

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EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Existing

Sign Number:	040a
Existing Sign Type:	Plate Letters
Face Material:	Brick
Graphics Material:	Acrylic
Overall Height:	
Face Height:	12"-14"
Face Width:	143"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	

Proposed

Sign Number:	040a
Sign Type:	Remove
Description:	Remove Existing Mercy Hospital Sign
Action:	Remove
Message A:	
Message B:	
Comments:	Remove Mercy Hospital Sign. See #40b
Restoration Notes:	Patch and repair existing wall surface to like new condition. Repaint to match existing color finish. For brick or stone walls fill holes with matching silicone. Power wash wall if required. See master agreement for removal requirements.

Overall Height:	
Overall Width:	
Logo Height:	
Letter Height:	
Illuminated:	

(continued on next page)

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(continued)

Existing *(continued)*

Sign Comment: 14" E cap height in Ambulance Entr. 12" Mercy Hospit... OAw - 143" 1/2" thk acrylic Adjacent canopy (10'x15'x3') is pending reskin due to storm damage.

Proposed

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EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Existing

Sign Number:	040b
Existing Sign Type:	Plate Letters
Face Material:	Brick
Graphics Material:	Acrylic
Overall Height:	
Face Height:	12"-14"
Face Width:	143"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	14" E cap height in Ambulance Entr. 12" Mercy Hospit... OAw -143" 1/2" thk acrylic Adjacent canopy (10'x15'x3') is pending reskin due to storm damage.

Proposed

Sign Number:	040b
Sign Type:	Leave
Description:	Leave Ambulance Entrance Plate Letters
Action:	Leave
Message A:	
Message B:	
Comments:	
Restoration Notes:	

Overall Height:	
Overall Width:	
Logo Height:	
Letter Height:	
Illuminated:	

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Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo

Leave Existing Sign

Existing

Sign Number:	041b
Existing Sign Type:	Regulatory Sign
Face Material:	Flat Plastic
Graphics Material:	Vinyl
Overall Height:	
Face Height:	8"
Face Width:	8"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	Employee entrance

Proposed

Sign Number:	041b
Sign Type:	Leave
Description:	Leave Existing Non-branded Regulatory Wall Sign
Action:	Leave
Message A:	
Message B:	
Comments:	
Restoration Notes:	

Overall Height:	
Overall Width:	
Logo Height:	
Letter Height:	
Illuminated:	

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EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Additional details on next page.

Existing

Sign Number:	045a
Existing Sign Type:	Channel Letters
Face Material:	Flat Plastic
Graphics Material:	Vinyl
Overall Height:	
Face Height:	60"
Face Width:	26' /-
Square Feet:	
Illuminated:	Internally Illuminated
Electrical:	
Wall Material:	Brick
Sign Comment:	60" M /- cap heigjt white rooftop letters

Proposed

Sign Number:	045a
Sign Type:	CL-30-VERT-W
Description:	30"" Vertical Signature Channel letters - White Faces
Action:	Remove and Replace
Message A:	
Message B:	

Overall Height:	12'-6""
Overall Width:	22'-4 5/8""
Logo Height:	6'-0""
Letter Height:	2'-6""
Illuminated:	Illuminated

Comments: Vendor must confirm that size will fit as shown. ***Donor letters were built at 30". Mercy letters to be 36" to match copy height of Donor name. Unfortunately due to limited architectural space cap height of Northern Light Health will be slightly smaller than Mercy and Donor name.

Restoration Notes: Patch and repair existing wall surface to like new condition. Repaint to match existing color finish. For brick or stone walls fill holes with matching silicone. Power wash wall if required. Install new signage using existing primary electrical. Verify if additional circuits are required for new sign. Field verify dimensions of space shown in photo morph prior to fabrication to verify if specified letterset will fit in area and meet clear zone tolerances – refer to Control Documents. ***Change letterset height if required. See control documents for product specification and master agreement for removal

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This is the Northern Light Mercy Hospital logo in vertical orientation. This is a service mark to identify Northern Light Mercy Hospital and can not be modified relative to size, spacing, and proportions. The proposal includes this logo as dimensioned below positioned above the 4th floor window in the same space as the existing, previous Mercy logo. The positioning is proportional to the overall architecture of the south facade.



EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Existing

Sign Number:	045c
Existing Sign Type:	Channel Letters
Face Material:	Flat Plastic
Graphics Material:	Vinyl
Overall Height:	
Face Height:	30" (cap height)
Face Width:	
Square Feet:	
Illuminated:	
Electrical:	
Wall Material:	
Sign Comment:	30" ALL CAP Donor letters

Proposed

Sign Number:	045c
Sign Type:	Leave
Description:	Leave
Action:	Leave
Message A:	
Message B:	
Comments:	***Donor letters were built at 30". Mercy letters to be 36" to match copy height of Donor name. Unfortunately due to limited architectural space cap height of Northern Light Health will be slightly smaller than Mercy and Donor name.
Restoration Notes:	

Overall Height:	
Overall Width:	
Logo Height:	
Letter Height:	
Illuminated:	

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EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Existing

Sign Number:	045d
Existing Sign Type:	Smoke Free
Face Material:	Metal
Graphics Material:	Vinyl
Overall Height:	
Face Height:	12"
Face Width:	18"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	silkscreened graphics

Proposed

Sign Number:	045d
Sign Type:	REG-W2-NS
Description:	Small Wall Mounted Regulatory Sign - No Smoking
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	

Overall Height:	1'-5"
Overall Width:	1'-0"
Logo Height:	
Letter Height:	
Illuminated:	Non Illuminated

Restoration Notes: Field verify dimensions of space shown in photo morph prior to fabrication to verify if specified sign will fit in area. See control documents for product specification and master agreement for removal

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EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Existing

Sign Number:	045e
Existing Sign Type:	Vinyls
Face Material:	Glass
Graphics Material:	Vinyl
Overall Height:	
Face Height:	
Face Width:	
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	

Proposed

Sign Number:	045e
Sign Type:	V3
Description:	Door Vinyl - Double Doors
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	

Overall Height:	2'-4"
Overall Width:	1'-8"
Logo Height:	
Letter Height:	
Illuminated:	Non Illuminated

Restoration Notes: Field verify dimensions of space shown in photo morph prior to fabrication to verify if specified vinyl graphics will fit in area and meet clear zone tolerances – refer to Control Documents. ***Change vinyl graphics sizes if required. See control documents for product specification and master agreement for installation requirements. Verify copy w/ hospital prior to fabrication. Clean surface of all residue.

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EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



As Built Photo



Existing

Sign Number:	063
Existing Sign Type:	Canopy
Face Material:	Panaflex
Graphics Material:	Vinyl
Overall Height:	
Face Height:	
Face Width:	
Square Feet:	
Illuminated:	
Electrical:	
Wall Material:	
Sign Comment:	Incase of a reskin only: 13' /- x 9' /- deep x 28" /. miller brand on 3 sides

Proposed

Sign Number:	063
Sign Type:	Custom
Description:	Custom Reface of Existing Canopy
Action:	Leave
Message A:	
Message B:	
Comments:	Reface the existing canopy with new white material and full-color logo on all 3 sides as shown. Typeset "Pharmacy"
Restoration Notes:	Reuse existing frame but repair and paint it as needed

Overall Height:	
Overall Width:	
Logo Height:	
Letter Height:	
Illuminated:	

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EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



As Built Photo



Existing

Sign Number:	064
Existing Sign Type:	Vinyls
Face Material:	Glass
Graphics Material:	Vinyl
Overall Height:	
Face Height:	5'
Face Width:	4'
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	Glass
Sign Comment:	Miller pestle vinyl

Proposed

Sign Number:	064
Sign Type:	Custom
Description:	Custom Window Vinyl
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	Replace with white first surface vinyl as shown. Use locked up artwork
Restoration Notes:	clean surface of all residue.

Overall Height:	
Overall Width:	
Logo Height:	
Letter Height:	
Illuminated:	

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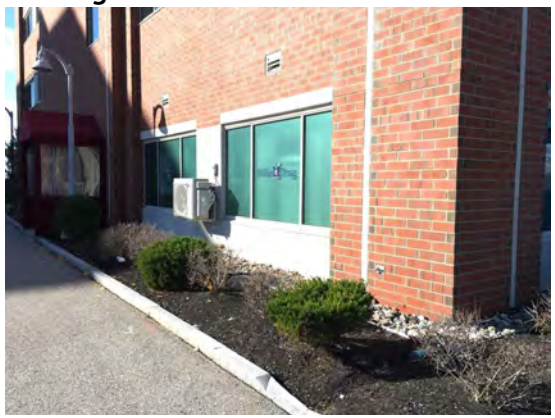
EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



As Built Photo



Existing

Sign Number:	065
Existing Sign Type:	Vinyls
Face Material:	Glass
Graphics Material:	Vinyl
Overall Height:	
Face Height:	5'
Face Width:	4'
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	Glass
Sign Comment:	Miller pestle vinyl

Proposed

Sign Number:	065
Sign Type:	Custom
Description:	Custom Window Vinyl
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	Replace with white first surface vinyl as shown. Use locked up artwork
Restoration Notes:	clean surface of all residue.

Overall Height:	
Overall Width:	
Logo Height:	
Letter Height:	
Illuminated:	

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Attachment 3

SMRT Memorandum and Color Graphics

Memo

SMRT Architects and Engineers
877.700.7678
smrtinc.com

To	Portland Planning Board	**Date**	12-23-19
From	Ellen Belknap, AIA	**Project No.**	19002
Subject	ASC Rooftop Appurtenances and Hospital Entrances	**Project Name**	Northern Light Mercy Hospital

Regarding the concerns raised by the City of Portland planning staff about the roof top appurtenances on the proposed Mercy Ambulatory Surgery Center we offer the following discussion:

- The proposed Mercy Ambulatory Surgery Center (ASC) is a 2 story 34,000 SF building (17,574 SF Footprint) located on the 27 acre+/- Mercy Fore River main campus. Building height to the parapet is 31'-0" and the ASC finish floor elevation is placed at elevation 19.0'. For comparison, the Hospital's existing main entry level is at elevation 32.0'.
- The rooftop appurtenances include two air handlers and a chiller. This equipment rises approximately 8-10 feet above the roof. The programmatic requirements of surgery centers require significant air changes which drives the size of the air handlers.
- One concern raised by the planning staff is the visibility of the rooftop equipment on the ASC. Although the "elevation drawings" detail the height of this equipment the perspective views from ground level or the Fore River Parkway accurately show the extent to which this equipment is actually visible.
- SMRT is providing perspective views from the Western Prom (approx. distance 1,200 LF), Fore River Parkway (400 LF), and the access drive to the campus from the Fore River Parkway with and without screening of the mechanical appurtenances.
- The Mercy planning team is recommending that the appurtenances remain "unscreened" as the perspective views are not significantly improved with the addition of the screens. The roof level view from the Fore River Parkway is dominated by a recently constructed 8 story parking deck and the intervening vegetation on the Western Prom obscures view of the roof of the ASC.
- While it is feasible to add screens for the mechanical appurtenances, the estimated cost to do so is $100,000. With limited healthcare dollars available, Mercy would like to avoid the added cost of roof screens if possible.

An additional issue SMRT would like to address is the hierarchy of the building entrances at the Mercy Fore River Hospital building. An illustrative plan diagram and exterior perspective view is attached for reference.

- The existing Mercy Fore River hospital building is accessed from a "main entrance" with a convenient covered vehicle drop off. This main entrance brings the public, patients and visitors into the front lobby where reception, information and security are located.
- A public corridor is provided along the entire length of the front façade of the hospital connecting a "convenience" entrance at the north end of the hospital today.
- The proposed Phase 2 addition is located at the north end of the existing hospital. As part of this planned expansion, a new "secondary entrance" at the north end is provided. This "secondary entrance" is located for patient and visitor convenience to adjacent parking but it is important

that this entrance not be viewed as another “main entrance”. It will not be staffed 24/7 and it does not afford a covered vehicle drop off, reception, information or security. For the first time visitor to the Mercy Fore River campus, it will be important that the existing “main entrance” appear as the primary entrance. It is for this reason that the architectural definition of the new secondary entrance is downplayed. A modest canopy is provided at this new entrance, but it is not detailed as a significant architectural feature.

- The emergency department is accessed by a new entrance on the north façade for “walk-in” emergency patients and visitors which enters directly into the emergency department registration/waiting and triage area. This entrance includes a canopy and vehicle drop off.
- Ambulances will access the building from a dedicated drive and parking area. Patient vehicles and ambulances will be completely separated.
- The configuration of these entries provides convenience, safety and separation of critical hospital functions. Entrances will be clearly marked with appropriate signage providing for clear wayfinding and ease of access.
- The perspective view of the hospital expansion provided, illustrates the relative scale of these entrances.



Proposed View From Westend Promanade

12/11/2019

MERCY FORE RIVER CAMPUS CONSOLIDATION

Portland, Maine

ASC with Mechanical Screen



Proposed View From Westend Promanade

12/11/2019

MERCY FORE RIVER CAMPUS CONSOLIDATION

Portland, Maine

ASC without Mechanical Screen



Proposed View From Fore River Parkway

12/11/2019

MERCY FORE RIVER CAMPUS CONSOLIDATION

Portland, Maine

ASC with Mechanical Screen



Proposed View From Fore River Parkway

12/11/2019

MERCY FORE RIVER CAMPUS CONSOLIDATION

Portland, Maine

ASC without Mechanical Screen



Proposed View From Fore River Parkway

12/11/2019

MERCY FORE RIVER CAMPUS CONSOLIDATION

Portland, Maine

ASC with Mechanical Screen



Proposed View From Fore River Parkway

12/11/2019

MERCY FORE RIVER CAMPUS CONSOLIDATION

Portland, Maine

ASC without Mechanical Screen



Proposed View From Existing Parking

12/11/2019

MERCY FORE RIVER CAMPUS CONSOLIDATION

Portland, Maine

Hospital Expansion

Attachment 4

Bernstein Shur CZA Compliance letter

BERN
STEIN
SHUR

Bernstein, Shur,
Sawyer & Nelson, P.A.
100 Middle Street
PO Box 9729
Portland, ME 04104-5029

T (207) 774 - 1200
F (207) 774 - 1127

Mary E. Costigan
(207) 228-7147 direct
mcostigan@bernsteinshur.com

December 23, 2019

Portland Planning Board
389 Congress Street
Portland, ME 04101

Subject: Northern Light Mercy Hospital Level III Site Plan Application

Dear Board Members:

I am writing on behalf of Northern Light Mercy Hospital regarding its application for Level III Site Plan Approval at the Fore River Campus. This letter is intended as a follow-up to address issues raised at the first Planning Board workshop regarding the Contract Zone Agreement ("CZA"), specifically the master plan and compliance with the development standards.

Master Plan

We wanted to provide some clarity regarding the master plan requirements in the CZA – which differs from Master Development Plans that the Board is used to. The master plan is referenced twice in the CZA. Both provisions recognize that the master plan can be amended over time as the phased development changes over time. The first reference requires the property to be developed substantially in compliance with the conceptual master plan attached to the CZA, but notes that the Board may permit deviations from the master plan, as long as the deviations are consistent with the purposes of the CZA. The second reference requires the master plan to include certain elements and states that the master plan is flexible and adaptable to changes that occur within the development process and is subject to periodic revision and update as needed.

We have submitted a revised master plan with our application and are requesting the Planning Board to permit the deviations from and amendments to the plan in accordance with the CZA. The changes to the master plan are consistent with the purpose of the CZA, which was to amend the zoning of the Fore River Parcel in order to allow a mixed-use hospital development in a campus-like setting on land that was then zoned industrial and did not permit hospitals. The original master plan was amended in 2006 and approved by the Planning Board. As explained at the first workshop, further amendments to the plan are driven by changes in the way healthcare is provided – in

particular, the need to separate the acute-care hospital facility from ambulatory surgery and other non-acute care services. The amended master plan is consistent with the purposes of the CZA in that it continues to provide for a mixed-use hospital development in a campus-like setting.

In addition, the amended master plan contains the elements required by the CZA, including building locations, traffic circulation and parking. As explained in more detail below we have made one significant change to the master plan since the workshop, in response to Board comments. For the reasons stated above, the revised master plan complies with the requirements in the CZA and we therefore request that the Planning Board approve the revised plan.

Development Standards

We provided a separate document in our application materials detailing compliance with each development standard in the CZA. The one standard that received the most attention at the workshop is the standard regarding preservation of natural features, specifically as it relates to the filling of the gravel pit/pond on the site. We thought we would therefore provide information regarding our compliance with that standard, including changes made since the workshop in response to Board comments.

The standard in the CZA regarding natural features does not require preservation of the pond or other natural features. Rather, it requires the developer to identify the extent to which the developer will preserve natural features and consider and be sensitive to the need to preserve natural features. As stated at the workshop, the decision to fill the pond was not an easy one and required a thorough analysis of all options in order to determine whether the needs of the development could be accomplished without filling the pond. In the end, it was determined by Mercy Hospital, the DEP and the Army Corps of Engineers that the proposed project avoided and minimized wetland impacts to the greatest extent practicable, and that the proposed project represents the least environmentally damaging alternative that meets the overall purpose of the project.

Included with our application materials is the Site Location of Development Act and Natural Resources Protection Act Permit issued by the DEP. In the permit, DEP summarizes the alternatives analysis presented by Mercy Hospital in its application. That alternatives analysis is one method of identifying the extent to which Mercy will preserve natural features and consider and be sensitive to the need to preserve natural features, in accordance with the CZA. The eight alternatives proposed ranged from moving everything back to State Street to five different layouts of the Fore River Campus, all including varying encroachment on the wetlands.

In addition to the extensive alternatives analysis, Mercy Hospital has demonstrated its consideration and sensitivity to the need to preserve natural features by

the construction of a half-acre wetpond and enhancement of the natural features surrounding the new pond, as well as enhancements to the trails and open space located elsewhere on the property. As mentioned above, Mercy Hospital has made a significant amendment to the master plan submitted with the application, in response to comments from the Board regarding the loss of the pond. The master plan submitted with the site plan application shows a future building in the location of the wetpond. The newly amended master plan retains the half-acre wetpond and moves the proposed building to another location on the plan. In order to demonstrate its commitment to preserving natural features on the property, Mercy has committed to retaining the wetpond in that location in perpetuity. We therefore recommend that a condition of approval be added to the approval of the master plan and site plan that prohibits any future development in the location of the wetpond, other than that related to preservation or enhancements of natural features or stormwater management. A note regarding said prohibition has been added to the revised master plan.

Finally, there was some discussion at the workshop regarding a trail easement on the property, so we wanted to provide additional information regarding easements and update the Board on our communications with Portland Trails regarding the project. The CZA required Mercy to enter into two easement agreements: 1) a public access easement over those areas identified as "open space" on the conceptual master plan attached to the CZA. Those spaces are the north and south open spaces on the Fore River side of the property; and 2) a trail easement for a pedestrian and bike use along the perimeter of the property.

A Conservation Easement recorded in 2002 grants to the City of Portland in perpetuity, an easement over the two identified open space parcels for public access for recreational activities during daylight hours. A recreational Trail Easement recorded in 2008, grants to Portland Trails an easement over certain trails identified on a plan for pedestrian and bicycle use by the general public. The trails generally follow the sidewalks in the property, as well as a trail on the Fore River side of the property. Access to the trails are not impacted by the proposed project.

Although access to and use of the actual trails are not impacted by the proposed project, Mercy Hospital did meet with Portland Trails to get their feedback and ideas as to how the trails can be enhanced as part of this project. On December 20th Mercy received more detailed written feedback from Portland Trails. The Mercy team will discuss the feedback from Portland Trails and anticipates making some further modifications to the plan prior to the January 14th workshop. Mercy is committed to a continued dialogue and partnership with Portland Trails to work on the longer-term items such as connectivity.

Mercy Hospital's demonstrated efforts in its alternatives analysis to try to design a project with minimum impact to the pond, while meeting the needs of the hospital and its users and visitors, along with its commitment to retaining the new wetpond in

its users and visitors, along with its commitment to retaining the new wetpond in perpetuity and enhancing the trail system and other natural areas, demonstrates its consideration and sensitivity to the need to preserve natural features. The proposed project is therefore in compliance with Development Standard (f) in the CZA: preservation of natural features.

Thank you for your time and attention to this matter. Please contact me should you have any questions.

Sincerely,

Mary E. Costigan

CONSTRUCTION MANAGEMENT PLAN

A Construction Management Plan has been prepared by Consigli and is appended to this section.

August 5, 2019

Mercy Hospital Fore River Expansion Construction Management Plan

Prepared For: Portland Department of Planning & Urban Development Department

Project Proponent: Northern Light Health - Mercy Hospital Fore River

Construction Manager: Consigli Construction

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Construction Principles

The purpose of this Construction Management plan is to identify, mitigate and plan for all potential impacts throughout the duration of building the Mercy Hospital Fore River campus expansion. Northern Light Health (Mercy Hospital) and Consigli Construction will strive for a seamless, incident free project by means of typical practices used to ensure that public safety and community are at the forefront of priorities.

Throughout this CM plan, we will refer to specific examples of potentially invasive construction practices, traffic control concerns, neighboring building considerations and public safety hazards; as well as measures in which these items will be managed, mitigated and avoided at all cost throughout the project. Along with our subcontractor team members, it is imperative that we have complete participation from all parties affiliated with the project to maintain our strict safety requirements and ensure a quality building for Northern Light Health (Mercy Hospital).

Northern Light is in the process of consolidating their services and facilities to the Fore River campus. Consigli Construction has been commissioned to aid in the development of a 50,000 square foot 4-story addition to the existing hospital that will allow for new emergency department, nuclear imaging, observations suite and inpatient units. In addition, Northern Light Health will construct a new 35,000 square foot 2-story standing ambulatory surgery center to accommodate wound care, endoscopy/GI and outpatient surgery. A 12,000 square foot renovation of the adjacent Medical Office Building for imaging, pain, cardiology and administrative spaces is also planned.

Consigli has planned the project's schedule, site logistics and safety protocols that will be covered in this report with graphics and narratives. This CM plan will be updated to meet the needs of the project, community and the city as the project progresses. We aim to deliver a safe and quality project to Northern Light Health, their employees and the City of Portland by means of communication, teamwork and stewardship.

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Construction Administration and Communication

Consigli Construction will be the Construction Manager on site throughout the duration of the project. As such, there will be a dedicated team of individuals tasked with managing quality, schedule, site logistics and safety. These personnel will be stationed on site to manage and enforce the proposed CMP with all associated subcontractors and material vendors.

Dave Thomas – Project Executive
207-650-8665, dthomas@consigli.com

Chad Whalen – Senior Project Manager
207-446-3341, cwhalen@consigli.com

Brian Campbell – Project Superintendent
207-754-0820, bcampbell@consigli.com

Larry Chouinard – General Superintendent
207-650-5204, lchouinard@consigli.com

Site Communication

Communication will be imperative throughout construction to keep the public informed of the expected changes to site logistics as the project progresses. Site signage will be prominently displayed to show vehicular and pedestrian access around the site.

Continuous reporting and updating of the CMP will be provided for the following activities:

1) Material deliveries, including notice of any oversized loads that may impact public traffic
2) Requests for upcoming off-hours work including weekends and holidays
3) Notice of any upcoming activities that may produce strong noise, vibration or dust that could adversely affect the neighboring communities.

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Construction Schedule

Project Work Hours

Construction work hours will be in accordance with section 17-18 of the City of Portland Code of Ordinances.

The project site is located within zoning group C26 – Due to Mercy Hospital's location on Fore River Pkwy, this project will have minimal impact to buildings used for residential purposes. Work hours are planned for Monday – Friday 7:00am – 6:00pm. Should work extend into weekends or holidays, the use of heavy equipment will be kept within the time constraints of the ordinance.

Project Schedule/Logistics

The project is anticipated to be approximately 20 months in duration. Beginning in March 2020, the project will be turned over to Northern Light in November 2021.

Regarding scheduled work to take place within public streets and sidewalks, this work will comply with Section 25-129 – Noise, dust and debris of the City of Portland Code of Ordinances. not Work outside of Mercy Hospital property is not anticipated at this time.

Material Deliveries

The construction projects will require coordination of material deliveries throughout the duration of the project. The following logistical plans show the planned lay-down areas, truck routes and safety protocols that will be in place prior to the start of construction.

1. All construction traffic will enter and exit the site through Fore River Pkwy by the south lot (see attached PDF for reference). This will allow for all construction vehicles to pull straight onto the site without impacting the public right away.

Material Storage and Laydown Areas

All construction staging, laydown and temporary storage will be within the project limits on Mercy property and secured by temporary fencing. Designated areas for storage will allow the site to remain accessible by incoming trucks without causing a queuing affect outside of the fence.

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Contractor Parking

At the peak of construction activity, it is anticipated that up to 150 tradespeople will be on site working various trades associated with the building. Tradespeople will be required to park in designated areas within Mercy Hospital property. No offsite contractor parking is anticipated. (See attached site logistics plan)

Fire Protection for Construction Activities

Consigli and its subcontractors will comply with Mercy Hospital safety protocols and will execute the following measures to provide a safe and secure work place:

1) On Site Fuel Storage: The requirement for different flammable liquids will be required throughout construction. A free standing, 30-minute fire-rated enclosure will be built to safely and securely store all flammable liquids and gases. Fueling trucks will be used as needed but under no circumstances be allowed to be parked or stored on site for any extended period.

2) Means of Egress: The construction projects will be permanently equipped with (2) 2-way stair assemblies for means of egress. Our team will also be connecting into the existing emergency egress stairwells in the main hospital. These stairs will be identified with temporary signage throughout construction indicating the floor level and exit path direction

3) Good Housekeeping: Consigli Construction will provide necessary dumpsters for the removal of debris from the site. All subcontractors are responsible for the daily clean-up of their work areas to ensure that no materials or tools are left out over night that could pose a hazard to the building. Daily safety walks by Consigli will be utilized to ensure that all working floors are equipped with an inspected fire extinguisher and clear means of egress in the event of an emergency.

4) On-site Security: The project site will be secured at the end of everyday by means of a temporary, post driven construction fence and scrim. Lockable gates will be located at various locations for site access.

5) Rapid Communication: Evacuation notification will be provided by means of 2-way radios/cellular devises as well as strategically positioned air horns. Upon evacuation of the building all project personnel will report to the muster point location where the

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Consigli and all subcontractor foremen will perform accountability checks. Consigli field staff will then be dispatched to all project entry points. Upon arrival of the first responders to the site Consigli will provide and incident briefing.

Public Safety

The construction process will minimally interact with public traffic throughout the duration of the project. Material deliveries have the potential to have minor impact to typical public activity.

Noise

Construction activities throughout the project will create noise that leaves the project site. It is the intent of the project team to limit the exposure to the noise by following section 17-18 of the City of Portland Code of Ordinances. This project site is not located within 500 feet of buildings classified as residential.

Work related to earthwork, foundations and structural steel will likely be the loudest activity experienced during construction. Most of this work will take place in 2020. Recently, many local projects have utilized similar means of construction to much success around Portland.

Dust Control/Air Quality

Maintaining an environmentally conscious project site will be a priority for the project team to ensure safety not only for the neighboring communities but also for the construction workers on site day after day. All soils and debris will be kept within the project limits following Maine DEP erosion control BMPs:

1) Erosion controlled construction entrances
2) Tarped dump trucks leaving the site with soil/debris
3) On-going sidewalk and street cleaning activities
4) The installation of temporary, compacted roads within the job site
5) Using wetting agents to control dust
6) Covering stock piles when material stored is to be piled for long periods of time
7) Smoking will not be allowed on the job site

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Vibration Monitoring

Many construction practices required for this project may result in ground vibration waves that transmit to nearby buildings. Prior to any potential vibration causing activities taking place a pre-construction survey will be conducted to review and document existing conditions for structures on Mercy Hospital property.

Construction activities such as vibratory compaction and support of excavation will be monitored diligently by a third-party monitoring company within Mercy Hospital property boundaries.

Traffic Control

The main access point to the construction project will be through the private roads located on the Mercy Hospital campus. All efforts will be made to minimize the impact to traffic flow and patterns to the patients and staff of Mercy Hospital.

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Location Map

Figure No. 1



MERCY EXPANSION
PORTLAND, MAINE

Design:	ET	Scale:	NONE
Draft:	LAN	Date:	FEB 2017
Checked:	RED	File Name:	3257-TRAFF.dwg

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Attachment Q.

Neighborhood Meeting Certification

I, Stephen R. Bushey, P.E., hereby certify that a neighborhood meeting was held on Wednesday, December 11, 2019 at the Fore River Hospital Cafeteria, 175 Fore River Parkway, Portland, Maine at 5:30 P.M.

I also certify that on November 22, 2019, invitations were mailed to the following:

1. All addresses on the mailing list provided by the Planning Division, including property owners within 500 feet of the proposed development or within 1000 feet of a proposed industrial subdivision or industrial zone change.

2. Residents on the "interested parties" list.

3. A digital copy of the notice was also provided to the Planning Division (jmy@portlandmaine.gov and ldobson@portlandmaine.gov) and the assigned planner to be forwarded to those on the interested citizen list who receive e-mail notices.

Signed,



12/17/19
(date)

December 17, 2019

Attached to this certification are:

1. Copy of invitation sent
2. Sign-in sheet
3. Meeting minutes

GORRILL PALMER

707 Sable Oaks Drive, Suite 30
South Portland, Maine 04106
207.772.2515

November 21, 2019

Dear Neighbor:

Please join us for a Neighborhood Meeting to discuss our plans for the proposed development at Mercy Hospital Fore River Campus in Portland, ME (Tax Map/Block/Lot - 73 A-1, B-2, B-7; Map 74 A-1, A-2, B-3, B-11, B-12; 74A A-1, U-2; 75 A-3, B-4, B-30; 75AA-1, A-17; 76 B-33, B-1, B-2).

The proposed project includes a 19,260 SF footprint building addition to the existing Mercy Hospital at Fore River Parkway and a 17,610 SF footprint Ambulatory Surgical Center and parking at 175 Fore River Parkway in Portland, ME. Mercy Hospital dba Northern Light Mercy Hospital has filed a Level III Site Plan Application with the Planning Authority.

Meeting Location:	**Mercy Hospital – 175 Fore River Parkway, Portland, ME**
	Cafeteria on Level 1
Meeting Date:	**December 11, 2019**
Meeting Time:	**5:30 PM**

The City Code requires that property owners within 500 feet (except notices must be sent to property owners within 1,000 feet for industrial zoning map amendments and industrial subdivisions) of the proposed development and residents on an "interested parties list", be invited to participate in a neighborhood meeting. A sign-in sheet will be circulated and minutes of the meeting will be taken. Both the sign-in sheet and minutes will be submitted to the Planning Board. The meeting will last no more than 30-45 minutes.

If you have any questions, please feel free to contact Steve Bushey, P.E. at 207.772.2515 x286.

Sincerely,

GORRILL PALMER

Stephen R. Bushey, P.E.
Associate/Sr. Project Manager
sbushey@gorrillpalmer.com

Note: Under Section 14-32(C) and 14-525 of the City Code of Ordinances, an applicant for a Level III development, subdivision of over five lots/units, or zone change is required to hold a neighborhood meeting within three weeks of submitting a preliminary application or two weeks of submitting a final site plan application, if a preliminary plan was not submitted. The neighborhood meeting must be held at least seven days prior to the Planning Board public hearing on the proposal. Should you wish to offer additional comments on this proposed development, you may contact the Planning Division at 874-8721 or send written correspondence to the Planning and Urban Development Department, Planning Division 4th Floor, 389 Congress Street, Portland, ME 04101 or by email to: cdg@portlandmaine.gov

u:\3257.04_mercy hospital_expansion_dd_permits\p applications\local\level iii site plan\neighborhood meeting\neighborhood meeting_final_11.22.19.docx

Neighborhood Meeting Sign-In Sheet
Project: Mercy Hospital – Fore River Parkway

Date: December 11, 2019
Time: 5:30 PM
Location: Mercy Hospital – 175 Fore River Parkway – Cafeteria on Level 1

Name	Company	Telephone No.	Email Address
Steve Bushey	Gorrill Palmer	207.772.2515	Sbushey@gorrillpalmer.com
Ed Gilman	Mercy	202/657/9363	gilmane@northernlight.org
Nick Munro	Northern Light Health	207.232.8285	nmunro@northernlight.org
Wendy Napolitano	Mercy	207.232.6255	napolitanow@northerlight.org
Melissa Skahan	Mercy	207-232-1229	Skahanm@emhs.org
Liz Parsons	neighbor	207-899-2206	ecparsons33@hotmail.com
Lin Parsons	neighbor	"	linparson@maine.rr.com
Mary Costigan	Bernstein Shur	207-228-7147	mcostigan@bernsteinshur.com
KAREN BELKNAP	SMRT	207-232-2931	ebelknap@smrtinc.com

GORRILL PALMER

707 Sable Oaks Drive, Suite 30
South Portland, Maine 04106
207.772.2515

MEETING MINUTES

Project: **Mercy Hospital Phase 2 Expansion, Portland, Maine**

Job #: **3257.04**

Date: **December 11, 2019 – 5:30 PM**

Location: **Project Site – 175 Fore River Parkway – Hospital Cafeteria**

Subject: **Neighborhood Meeting**

Attendees: **See Attached Sign-in Sheet**

In accordance with the City of Portland Planning Board Requirements, a Neighborhood Meeting was scheduled to discuss the proposed Phase 2 Hospital Expansion and Ambulatory Surgical Center (ASC) buildings which includes new surface parking facilities and related utility improvements.

The meeting was held on Wednesday, December 11, 2019 at 5:30 P.M. and various Mercy representatives were present on site from 5:15 PM–6:45 PM. Two (2) members of the public attended the meeting. The following is a synopsis of the meeting:

Mercy Overview

- Meeting held at the Fore River Hospital Cafeteria
- Meeting started promptly at 5:30 pm
- Charlie T. provided brief overview of project proposal using overhead slide graphics.
    - Mercy focus on both Acute care delivery with Hospital expansion, that will allow full departure from State Street facility
    - Patient care shifting to outpatient services and proposed Ambulatory Surgical Center is a result of that shift in care delivery.
    - Outpatient services are purposely separated from the acute care infrastructure. Buildings are not connected but can share certain site features including access, service, utilities.
- Charlie T. explained purpose behind filling of the pit.
    - Cost effective- saves money
    - Mercy has received permits from the Maine DEP and US Army corps of Engineers
- Renderings of the Hospital Expansion onto the existing building were shown and reviewed with key points made about continuity of architecture etc. The proposed expansion will include new ED with dedicated entrances for Ambulances and patients.
- Rendering of the proposed ASC and its positioning within the former gravel pit.

- Melissa S provided a brief overview of Mercy's community outreach and specific discussions with Portland Trails. Current themes under discussion include:
    - Trail System enhancement, both on campus and off campus.
    - Community gardens
    - Waterfront enhancement for activating use
    - Neighborhood association meetings
- SRB provided brief comments about other site features include where utilities are located, VRAP aspects and ash, and the stormwater management pond.

Public Comment

Mr. and Mrs. Parsons offered numerous questions including:

- What was Portland Trails reaction to the filling of the pond? Mercy responded that PT is not supportive of filling the pond but have acknowledged they will work with Mercy on mitigation strategies.
- The pond provides holistic value to the campus, so what can Mercy develop to maintain those attributes?
- There were comments regarding the services that will be transferred to the Fore River. Does Mercy intend to eliminate any services currently offered at State Street? Charlie T. replied that all services offered at State Street will move to the Fore River, although delivery is changing all the time. Fewer beds are required at the new campus, simply because so many services now no longer need overnight stay at the Hospital.
- There were questions and comments regarding architecture, energy efficiency, solar applicability, air quality. Ellen B. of SMRT offered incite to these topics. The Mercy buildings will be specifically designed for these criteria; solar is not currently contemplated for the site.
- It might be worthy of obtaining some old photos of the site to better understand the genesis off the gravel pit.
- Brief mention of the Fore River Parkway trail and the underpass beneath the Parkway as the trail extends to Frederick Street. Not a pleasant little length of the trail, due to poor visibility, etc. this might be an area to focus some enhancement to make it more comfortable for users.

The meeting adjourned around 6:30 pm.

SignCHART Northern Light EMHS

Proposed Existing Building Signage Replacement and New Signage

Site Number: 000048

Site Name: Fore River Hospital

Address: 175 Fore River Parkway

,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019
Leased/Owned: Owned





EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019



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Recommendations Report

Sign Number	Sign Type	Description	Action Code
001a	CL-36-EXHOR-D	36' Extreme Horizontal Signature Channel letters - Dark Faces	Remove and Replace
001c	Leave	Leave Existing Donor Name Sign	Leave
002	DL-S-20-W	20'' Secondary Name (Typeset Font) Dimensional letters - White Faces	Remove and Replace
003	Remove	Remove Existing Plate Letters	Remove
004	Custom	Custom Door Vinyl	Remove and Replace
013	Leave	Leave Dimensional Letters	Leave

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Recommendations Report *(continued)*

Sign Number	Sign Type	Description	Action Code
029	Leave	Leave Dimensional Wall Letters	Leave

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Recommendations Report *(continued)*

Sign Number	Sign Type	Description	Action Code
037	Custom	Custom Door Vinyl	Remove and Replace
038a	DL-18-VERT-W	18" Vertical Signature Non-Illuminated Dimensional Letters - White Faces	New
039	REG-W2-NS	Small Wall Mounted Regulatory Sign - No Smoking	Remove and Replace
040a	Remove	Remove Existing Mercy Hospital Sign	Remove
040b	Leave	Leave Ambulance Entrance Plate Letters	Leave
041b	Leave	Leave Existing Non-branded Regulatory Wall Sign	Leave
045a	CL-30-VERT-W	30" Vertical Signature Channel letters - White Faces	Remove and Replace

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Recommendations Report *(continued)*

Sign Number	Sign Type	Description	Action Code
045c	Leave	Leave	Leave
045d	REG-W2-NS	Small Wall Mounted Regulatory Sign - No Smoking	Remove and Replace
045e	V3	Door Vinyl - Double Doors	Remove and Replace

(continued on next page)

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Recommendations Report *(continued)*

Sign Number	Sign Type	Description	Action Code
063	Custom	Custom Reface of Existing Canopy	Leave
064	Custom	Custom Window Vinyl	Remove and Replace
065	Custom	Custom Window Vinyl	Remove and Replace

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EMHS

Site Number: 000048

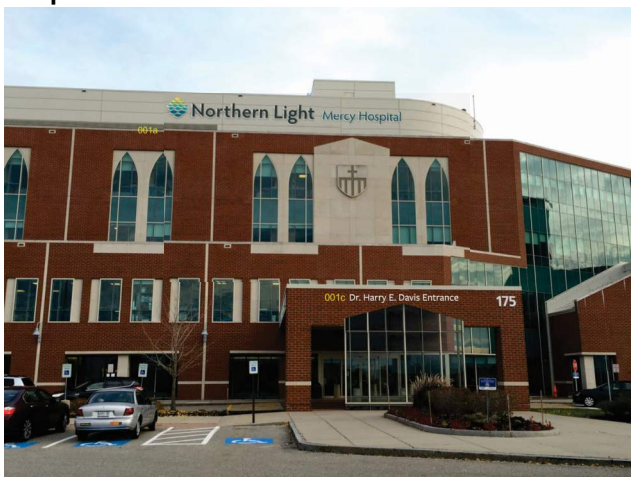
Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Existing

Sign Number:	001a
Existing Sign Type:	Channel Letters
Face Material:	Flat Plastic
Graphics Material:	Vinyl
Overall Height:	
Face Height:	60"
Face Width:	26' /-
Square Feet:	
Illuminated:	Internally Illuminated
Electrical:	
Wall Material:	Driveit
Sign Comment:	60" M /- cap heigjt white rooftop letters column to column 32' /-

Proposed

Sign Number:	001a
Sign Type:	CL-36-EXHOR-D
Description:	36" Extreme Horizontal Signature Channel letters - Dark Faces
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	Vendor must confirm that stated size will fit as shown

Overall Height:	5'-5 5/8"
Overall Width:	45'-7 1/4"
Logo Height:	4'-6"
Letter Height:	3'-0"
Illuminated:	Illuminated

Restoration Notes: Patch and repair existing wall surface to like new condition. Repaint to match existing color finish. For brick or stone walls fill holes with matching silicone. Power wash wall if required. Install new signage using existing primary electrical. Verify if additional circuits are required for new sign. Field verify dimensions of space shown in photo morph prior to fabrication to verify if specified letterset will fit in area and meet clear zone tolerances – refer to Control Documents. ***Change letterset height if required. See control documents for product specification and master agreement for removal

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Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Existing

Sign Number:	001c
Existing Sign Type:	
Face Material:	
Graphics Material:	
Overall Height:	
Face Height:	
Face Width:	
Square Feet:	
Illuminated:	
Electrical:	
Wall Material:	
Sign Comment:	

Proposed

Sign Number:	001c
Sign Type:	Leave
Description:	Leave Existing Donor Name Sign
Action:	Leave
Message A:	
Message B:	
Comments:	
Restoration Notes:	

Overall Height:	
Overall Width:	
Logo Height:	
Letter Height:	
Illuminated:	

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EMHS

Site Number: 000048

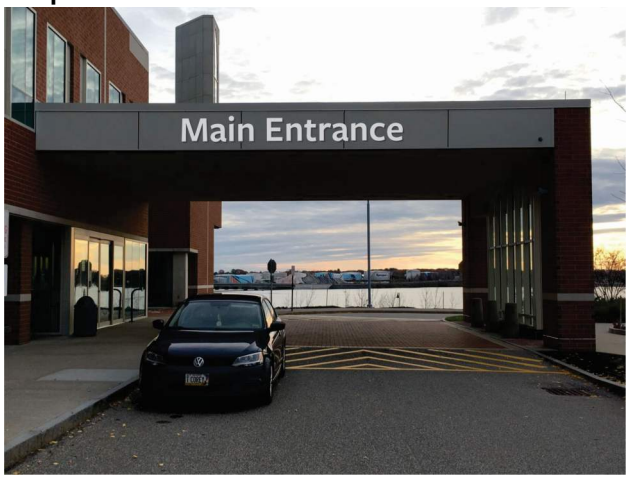
Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Existing

Sign Number:	002
Existing Sign Type:	Plate Letters
Face Material:	Flat Plastic
Graphics Material:	Acrylic
Overall Height:	
Face Height:	24"
Face Width:	18' /-
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	34"h fascia below flashing. 24" 'M' height cap height letters. .5" /-

Proposed

Sign Number:	002
Sign Type:	DL-S-20-W
Description:	20"" Secondary Name (Typeset Font) Dimensional letters - White Faces
Action:	Remove and Replace
Message A:	
Message B:	

Overall Height:	NULL
Overall Width:	NULL
Logo Height:	NULL
Letter Height:	1'-8""
Illuminated:	Non Illuminated

Comments: Hospital name is redundant in this location. Replace with "Main Entrance" copy to assist in directing patients to this entry instead of the Urgent Care entrance around the corner.

Restoration Notes: Patch and repair existing wall surface to like new condition. Repaint to match existing color finish. For brick or stone walls fill holes with matching silicone. Power wash wall if required. See master agreement for removal requirements.

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EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo

Remove Existing Sign

Existing

Sign Number:	003
Existing Sign Type:	Plate Letters
Face Material:	Flat Plastic
Graphics Material:	Acrylic
Overall Height:	
Face Height:	24"
Face Width:	18' /-
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	34"h fascia below flashing. 24" 'M' height cap height letters. .5" /-

Proposed

Sign Number:	003
Sign Type:	Remove
Description:	Remove Existing Plate Letters
Action:	Remove
Message A:	
Message B:	
Comments:	These letters are unnecessary
Restoration Notes:	Patch and repair existing wall surface to like new condition. Repaint to match existing color finish. For brick or stone walls fill holes with matching silicone. Power wash wall if required. See master agreement for removal requirements.

Overall Height:	
Overall Width:	
Logo Height:	
Letter Height:	
Illuminated:	

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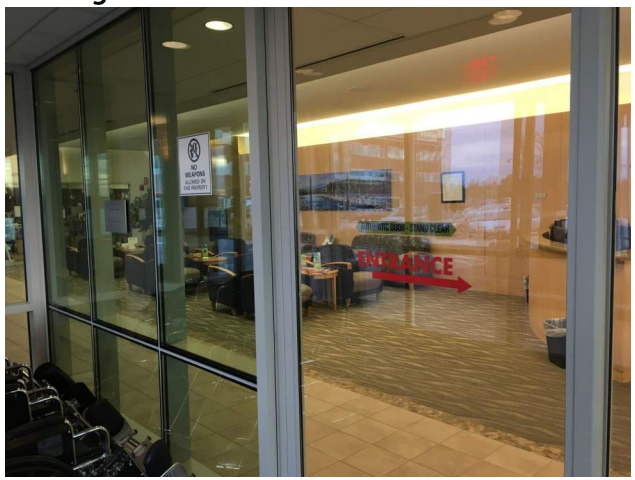
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Site Number: 000048

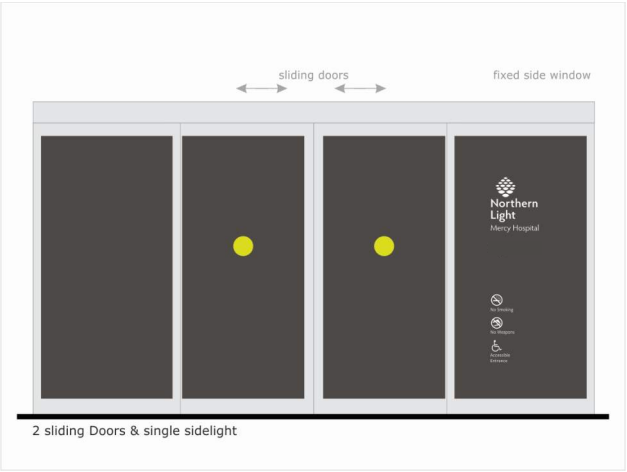
Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Existing

Sign Number:	004
Existing Sign Type:	
Face Material:	
Graphics Material:	
Overall Height:	
Face Height:	
Face Width:	
Square Feet:	
Illuminated:	
Electrical:	
Wall Material:	
Sign Comment:	

Proposed

Sign Number:	004
Sign Type:	Custom
Description:	Custom Door Vinyl
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	Client to verify copy and hours prior to approval.
Restoration Notes:	Field verify dimensions of space shown in photo morph prior to fabrication to verify if specified vinyl graphics will fit in area and meet clear zone tolerances – refer to Control Documents. ***Change vinyl graphics sizes if required. See control documents for product specification and master agreement for installation requirements. Verify copy w/ hospital prior to fabrication. Clean surface of all residue.

Overall Height:	
Overall Width:	
Logo Height:	
Letter Height:	
Illuminated:	Non Illuminated

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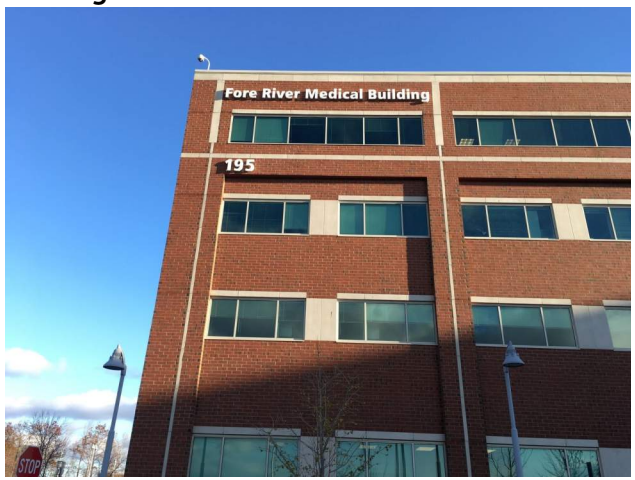
EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo

Leave Existing Sign

Existing

Sign Number:	013
Existing Sign Type:	Dimensional Letters
Face Material:	Metal
Graphics Material:	Painted Letters
Overall Height:	
Face Height:	18"
Face Width:	24' /-
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	18" 'FRMB' height cap height letters. 4.5 brik /- M height

Proposed

Sign Number:	013
Sign Type:	Leave
Description:	Leave Dimensional Letters
Action:	Leave
Message A:	
Message B:	
Comments:	Leave "Fore River Medical Building" letters
Restoration Notes:	

Overall Height:	
Overall Width:	
Logo Height:	
Letter Height:	
Illuminated:	

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EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo

Leave Existing Sign

Existing

Sign Number:	029
Existing Sign Type:	Dimensional Letters
Face Material:	Metal
Graphics Material:	Painted Letters
Overall Height:	
Face Height:	18"
Face Width:	24' /-
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	18" 'FRMB' height cap height letters. 4.5 brik /- M height

Proposed

Sign Number:	029
Sign Type:	Leave
Description:	Leave Dimensional Wall Letters
Action:	Leave
Message A:	
Message B:	
Comments:	
Restoration Notes:	

Overall Height:	
Overall Width:	
Logo Height:	
Letter Height:	
Illuminated:	

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EMHS

Site Number: 000048

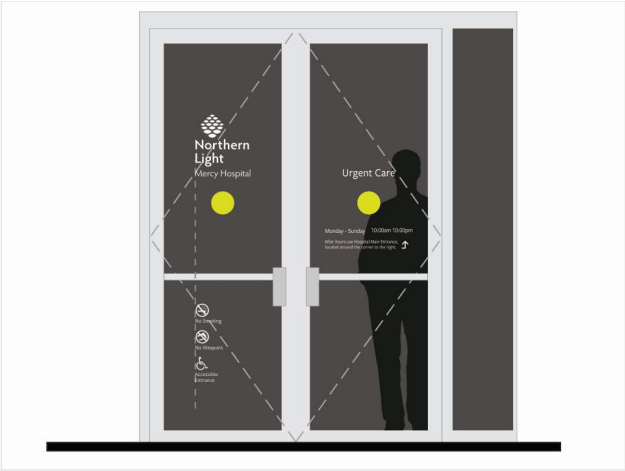
Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Existing

Sign Number:	037
Existing Sign Type:	Regulatory Sign
Face Material:	Flat Plastic
Graphics Material:	Painted
Overall Height:	
Face Height:	
Face Width:	
Square Feet:	
Illuminated:	
Electrical:	
Wall Material:	
Sign Comment:	

Proposed

Sign Number:	037
Sign Type:	Custom
Description:	Custom Door Vinyl
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	Client to verify copy and hours prior to approval.

Overall Height:	
Overall Width:	
Logo Height:	
Letter Height:	
Illuminated:	Non Illuminated

Restoration Notes: Field verify dimensions of space shown in photo morph prior to fabrication to verify if specified vinyl graphics will fit in area and meet clear zone tolerances – refer to Control Documents. ***Change vinyl graphics sizes if required. See control documents for product specification and master agreement for installation requirements. Verify copy w/ hospital prior to fabrication. Clean surface of all residue.

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EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Existing

Sign Number:	038a
Existing Sign Type:	
Face Material:	
Graphics Material:	
Overall Height:	
Face Height:	
Face Width:	
Square Feet:	
Illuminated:	
Electrical:	
Wall Material:	
Sign Comment:	

Proposed

Sign Number:	038a
Sign Type:	DL-18-VERT-W
Description:	18"" Vertical Signature Non-Illuminated Dimensional Letters - White Faces
Action:	New
Message A:	
Message B:	
Comments:	Install new NLH letterset centered on upper brick area as shown.
Restoration Notes:	Field verify dimensions of space shown in photo morph prior to fabrication to verify if specified letterset will fit in area and meet clear zone tolerances – refer to Control Documents. ***Change letterset height if required. See control documents for product specification and master agreement for installation requirements.

Overall Height:	7'-6""
Overall Width:	13'-5 1/8""
Logo Height:	3'-7 1/4""
Letter Height:	1'-6""
Illuminated:	Non Illuminated

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EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



REG-W2-NS
12”x17”

Existing

Sign Number:	039
Existing Sign Type:	Smoke Free
Face Material:	Metal
Graphics Material:	Painted Letters
Overall Height:	
Face Height:	12"
Face Width:	18"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	silkscreened graphics on pole sign

Proposed

Sign Number:	039
Sign Type:	REG-W2-NS
Description:	Small Wall Mounted Regulatory Sign - No Smoking
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	

Overall Height:	1'-5"
Overall Width:	1'-0"
Logo Height:	
Letter Height:	
Illuminated:	Non Illuminated

Restoration Notes: Patch and repair existing wall surface to like new condition. Repaint to match existing color finish. For brick or stone walls fill holes with matching silicone. Power wash wall if required. Field verify dimensions of space shown in photo morph prior to fabrication to verify if specified sign will fit in area. See control documents for product specification and master agreement for removal & installation requirements.

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EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo

Remove Existing Sign

Existing

Sign Number:	040a
Existing Sign Type:	Plate Letters
Face Material:	Brick
Graphics Material:	Acrylic
Overall Height:	
Face Height:	12"-14"
Face Width:	143"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	

Proposed

Sign Number:	040a
Sign Type:	Remove
Description:	Remove Existing Mercy Hospital Sign
Action:	Remove
Message A:	
Message B:	
Comments:	Remove Mercy Hospital Sign. See #40b
Restoration Notes:	Patch and repair existing wall surface to like new condition. Repaint to match existing color finish. For brick or stone walls fill holes with matching silicone. Power wash wall if required. See master agreement for removal requirements.

Overall Height:	
Overall Width:	
Logo Height:	
Letter Height:	
Illuminated:	

(continued on next page)

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(continued)

Existing *(continued)*

Sign Comment: 14" E cap height in Ambulance Entr. 12" Mercy Hospit... OAw - 143" 1/2" thk acrylic Adjacent canopy (10'x15'x3') is pending reskin due to storm damage.

Proposed

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EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Existing

Sign Number:	040b
Existing Sign Type:	Plate Letters
Face Material:	Brick
Graphics Material:	Acrylic
Overall Height:	
Face Height:	12"-14"
Face Width:	143"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	14" E cap height in Ambulance Entr. 12" Mercy Hospit... OAw -143" 1/2" thk acrylic Adjacent canopy (10'x15'x3') is pending reskin due to storm damage.

Proposed

Sign Number:	040b
Sign Type:	Leave
Description:	Leave Ambulance Entrance Plate Letters
Action:	Leave
Message A:	
Message B:	
Comments:	
Restoration Notes:	

Overall Height:	
Overall Width:	
Logo Height:	
Letter Height:	
Illuminated:	

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EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo

Leave Existing Sign

Existing

Sign Number:	041b
Existing Sign Type:	Regulatory Sign
Face Material:	Flat Plastic
Graphics Material:	Vinyl
Overall Height:	
Face Height:	8"
Face Width:	8"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	Employee entrance

Proposed

Sign Number:	041b
Sign Type:	Leave
Description:	Leave Existing Non-branded Regulatory Wall Sign
Action:	Leave
Message A:	
Message B:	
Comments:	
Restoration Notes:	

Overall Height:	
Overall Width:	
Logo Height:	
Letter Height:	
Illuminated:	

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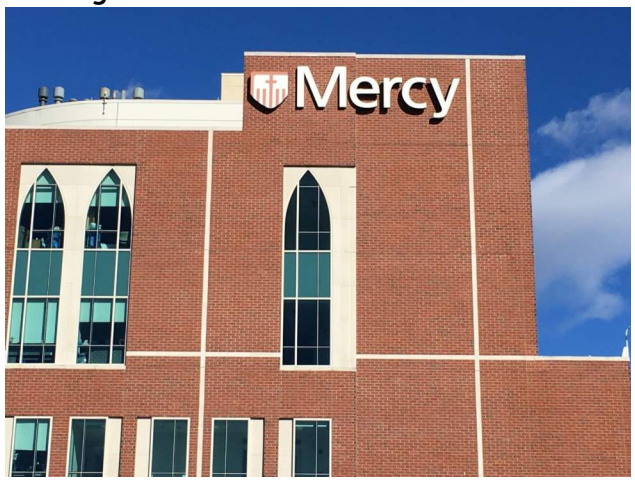
EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Existing

Sign Number:	045a
Existing Sign Type:	Channel Letters
Face Material:	Flat Plastic
Graphics Material:	Vinyl
Overall Height:	
Face Height:	60"
Face Width:	26' /-
Square Feet:	
Illuminated:	Internally Illuminated
Electrical:	
Wall Material:	Brick
Sign Comment:	60" M /- cap heigjt white rooftop letters

Proposed

Sign Number:	045a
Sign Type:	CL-30-VERT-W
Description:	30"" Vertical Signature Channel letters - White Faces
Action:	Remove and Replace
Message A:	
Message B:	

Overall Height:	12'-6""
Overall Width:	22'-4 5/8""
Logo Height:	6'-0""
Letter Height:	2'-6""
Illuminated:	Illuminated

Comments: Vendor must confirm that size will fit as shown. ***Donor letters were built at 30". Mercy letters to be 36" to match copy height of Donor name. Unfortunately due to limited architectural space cap height of Northern Light Health will be slightly smaller than Mercy and Donor name.

Restoration Notes: Patch and repair existing wall surface to like new condition. Repaint to match existing color finish. For brick or stone walls fill holes with matching silicone. Power wash wall if required. Install new signage using existing primary electrical. Verify if additional circuits are required for new sign. Field verify dimensions of space shown in photo morph prior to fabrication to verify if specified letterset will fit in area and meet clear zone tolerances – refer to Control Documents. ***Change letterset height if required. See control documents for product specification and master agreement for removal

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EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Existing

Sign Number:	045c
Existing Sign Type:	Channel Letters
Face Material:	Flat Plastic
Graphics Material:	Vinyl
Overall Height:	
Face Height:	30" (cap height)
Face Width:	
Square Feet:	
Illuminated:	
Electrical:	
Wall Material:	
Sign Comment:	30" ALL CAP Donor letters

Proposed

Sign Number:	045c
Sign Type:	Leave
Description:	Leave
Action:	Leave
Message A:	
Message B:	
Comments:	***Donor letters were built at 30". Mercy letters to be 36" to match copy height of Donor name. Unfortunately due to limited architectural space cap height of Northern Light Health will be slightly smaller than Mercy and Donor name.
Restoration Notes:	

Overall Height:	
Overall Width:	
Logo Height:	
Letter Height:	
Illuminated:	

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EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



REG-W2-NS
12”x17”

Existing

Sign Number:	045d
Existing Sign Type:	Smoke Free
Face Material:	Metal
Graphics Material:	Vinyl
Overall Height:	
Face Height:	12"
Face Width:	18"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	silkscreened graphics

Proposed

Sign Number:	045d
Sign Type:	REG-W2-NS
Description:	Small Wall Mounted Regulatory Sign - No Smoking
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	

Overall Height:	1'-5"
Overall Width:	1'-0"
Logo Height:	
Letter Height:	
Illuminated:	Non Illuminated

Restoration Notes: Field verify dimensions of space shown in photo morph prior to fabrication to verify if specified sign will fit in area. See control documents for product specification and master agreement for removal

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EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Existing

Sign Number:	045e
Existing Sign Type:	Vinyls
Face Material:	Glass
Graphics Material:	Vinyl
Overall Height:	
Face Height:	
Face Width:	
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	

Proposed

Sign Number:	045e
Sign Type:	V3
Description:	Door Vinyl - Double Doors
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	

Overall Height:	2'-4"
Overall Width:	1'-8"
Logo Height:	
Letter Height:	
Illuminated:	Non Illuminated

Restoration Notes: Field verify dimensions of space shown in photo morph prior to fabrication to verify if specified vinyl graphics will fit in area and meet clear zone tolerances – refer to Control Documents. ***Change vinyl graphics sizes if required. See control documents for product specification and master agreement for installation requirements. Verify copy w/ hospital prior to fabrication. Clean surface of all residue.

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EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



As Built Photo



Existing

Sign Number:	063
Existing Sign Type:	Canopy
Face Material:	Panaflex
Graphics Material:	Vinyl
Overall Height:	
Face Height:	
Face Width:	
Square Feet:	
Illuminated:	
Electrical:	
Wall Material:	
Sign Comment:	Incase of a reskin only: 13' /- x 9' /- deep x 28" /. miller brand on 3 sides

Proposed

Sign Number:	063
Sign Type:	Custom
Description:	Custom Reface of Existing Canopy
Action:	Leave
Message A:	
Message B:	
Comments:	Reface the existing canopy with new white material and full-color logo on all 3 sides as shown. Typeset "Pharmacy"
Restoration Notes:	Reuse existing frame but repair and paint it as needed

Overall Height:	
Overall Width:	
Logo Height:	
Letter Height:	
Illuminated:	

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EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



As Built Photo



Existing

Sign Number:	064
Existing Sign Type:	Vinyls
Face Material:	Glass
Graphics Material:	Vinyl
Overall Height:	
Face Height:	5'
Face Width:	4'
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	Glass
Sign Comment:	Miller pestle vinyl

Proposed

Sign Number:	064
Sign Type:	Custom
Description:	Custom Window Vinyl
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	Replace with white first surface vinyl as shown. Use locked up artwork
Restoration Notes:	clean surface of all residue.

Overall Height:	
Overall Width:	
Logo Height:	
Letter Height:	
Illuminated:	

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EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



As Built Photo



Existing

Sign Number:	065
Existing Sign Type:	Vinyls
Face Material:	Glass
Graphics Material:	Vinyl
Overall Height:	
Face Height:	5'
Face Width:	4'
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	Glass
Sign Comment:	Miller pestle vinyl

Proposed

Sign Number:	065
Sign Type:	Custom
Description:	Custom Window Vinyl
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	Replace with white first surface vinyl as shown. Use locked up artwork
Restoration Notes:	clean surface of all residue.

Overall Height:	
Overall Width:	
Logo Height:	
Letter Height:	
Illuminated:	

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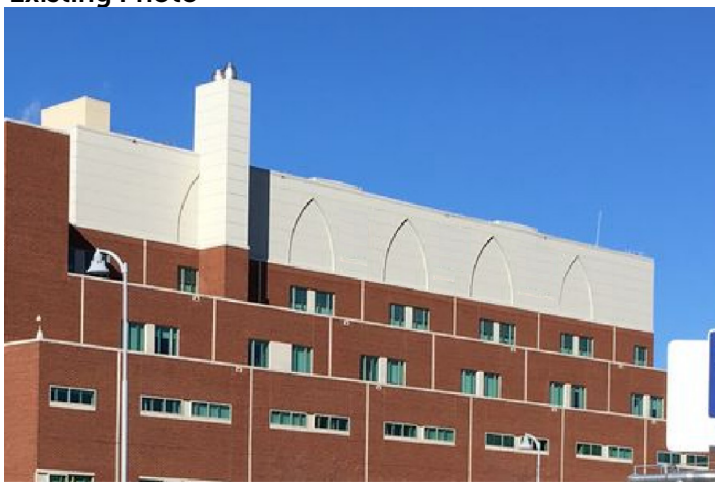
EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Existing

Sign Number:	076
Existing Sign Type:	Channel Letters
Face Material:	Flat Plastic
Graphics Material:	Vinyl
Overall Height:	
Face Height:	60"
Face Width:	26' /-
Square Feet:	
Illuminated:	Internally Illuminated
Electrical:	
Wall Material:	Driveit
Sign Comment:	60" M /- cap heigjt white rooftop letters column to column 32' /-

Proposed

Sign Number:	076
Sign Type:	CL-36-EXHOR-D
Description:	36" Extreme Horizontal Signature Channel letters - Dark Faces
Action:	New
Message A:	
Message B:	
Comments:	Vendor must confirm that stated size will fit as shown

Overall Height:	5'-5 5/8"
Overall Width:	45'-7 1/4"
Logo Height:	4'-6"
Letter Height:	3'-0"
Illuminated:	Illuminated

Restoration Notes: Patch and repair existing wall surface to like new condition. Repaint to match existing color finish. For brick or stone walls fill holes with matching silicone. Power wash wall if required. Install new signage using existing primary electrical. Verify if additional circuits are required for new sign. Field verify dimensions of space shown in photo morph prior to fabrication to verify if specified letterset will fit in area and meet clear zone tolerances – refer to Control Documents. ***Change letterset height if required. See control documents for product specification and master agreement for removal

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SignCHART Northern Light EMHS

Proposed Replacement Ground Signs

Site Number: 000048

Site Name: Fore River Hospital

Address: 175 Fore River Parkway

,

Recommendation Completed: 2018-06-13

Approved: 2018-07-10

Date Print: 11/14/2019

Leased/Owned: Owned





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EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019



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EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Recommendations Report

Sign Number	Sign Type	Description	Action Code
006	D-NB-6.4-NIL	6'-4' Non-Branded Non-Illuminated Directional	Remove and Replace
007	REG-W2-NS	Small Wall Mounted Regulatory Sign - No Smoking	Remove and Replace
008	REG-W2	Small Wall Mounted Regulatory Sign	Remove and Replace
009	REG-W2	Small Wall Mounted Regulatory Sign	Remove and Replace
010	REG-W2	Small Wall Mounted Regulatory Sign	Remove and Replace
011	REG-W2	Small Wall Mounted Regulatory Sign	Remove and Replace
012	PL-1	Parking Lot Sign	Remove and Replace
012a	PL-1	Parking Lot Sign	Remove and Replace
014	D-NB-6.4-NIL	6'-4' Non-Branded Non-Illuminated Directional	
015	DM-8	8' Internally Illuminated Monument w/ Directional Copy	Remove and Replace

(continued on next page)

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Recommendations Report *(continued)*

Sign Number	Sign Type	Description	Action Code
016	REG-W2-NS	Small Wall Mounted Regulatory Sign - No Smoking	Remove and Replace
017	REG-W2-NS	Small Wall Mounted Regulatory Sign - No Smoking	Remove and Replace
018	REG-W2-NS	Small Wall Mounted Regulatory Sign - No Smoking	Remove and Replace
021	REG-W2-NS	Small Wall Mounted Regulatory Sign - No Smoking	Remove and Replace
022	D-NB-6.4-NIL	6'-4' Non-Branded Non-Illuminated Directional	Remove and Replace
023	D-NB-6.4-NIL	6'-4' Non-Branded Non-Illuminated Directional	Remove and Replace
024	REG-W2-NS	Small Wall Mounted Regulatory Sign - No Smoking	Remove and Replace
025	Custom	Custom Non-illuminated 10' Pylon	Remove and Replace
026	REG-W2-NS	Small Wall Mounted Regulatory Sign - No Smoking	Remove and Replace
027	PL-1	Parking Lot Sign	Remove and Replace
027a	PL-1	Parking Lot Sign	Remove and Replace
028	D-NB-6.4-NIL	6'-4' Non-Branded Non-Illuminated Directional	Remove and Replace
030	PL-1	Parking Lot Sign	Remove and Replace
030a	PL-1	Parking Lot Sign	Remove and Replace
031	Custom	Custom Pole Mounted Directional Plaque	Remove and Replace
032	Custom	Custom Pole Mounted Directional Plaque	Remove and Replace

(continued on next page)

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Recommendations Report *(continued)*

Sign Number	Sign Type	Description	Action Code
033	D-NB-6.4-NIL	6'-4' Non-Branded Non-Illuminated Directional	Remove and Replace
034	D-NB-6.4-NIL	6'-4' Non-Branded Non-Illuminated Directional	Remove and Replace
035	PL-1	Parking Lot Sign	Remove and Replace
035b	PL-1	Parking Lot Sign	Remove and Replace
036	PL-1	Parking Lot Sign	Remove and Replace
036b	PL-1	Parking Lot Sign	
042	D-NB-6.4-NIL	6'-4' Non-Branded Non-Illuminated Directional	Remove and Replace
043a	REG-W2-NS	Small Wall Mounted Regulatory Sign - No Smoking	Remove and Replace
043b	Leave	Leave Regulatory Sign	Leave
044	D-NB-6.4-NIL	6'-4' Non-Branded Non-Illuminated Directional	Remove and Replace

(continued on next page)

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Recommendations Report *(continued)*

Sign Number	Sign Type	Description	Action Code
046	REG-P2-NS-DF	Small Pole Mounted Regulatory Sign - No Smoking - D/F	Remove and Replace
047	D-NB-6.4-NIL	6'-4' Non-Branded Non-Illuminated Directional	Remove and Replace
048	D-NB-6.4-NIL	6'-4' Non-Branded Non-Illuminated Directional	Remove and Replace
049	P-10	10' Internally Illuminated Pylon	Remove and Replace
050	D-NB-6.4-NIL	6'-4' Non-Branded Non-Illuminated Directional	Remove and Replace
051	D-NB-6.4-NIL	6'-4' Non-Branded Non-Illuminated Directional	Remove and Replace
052	D-NB-6.4-NIL	6'-4' Non-Branded Non-Illuminated Directional	Remove and Replace
053	REG-W1-NS	Large Wall Mounted Regulatory Sign - No Smoking	Remove and Replace
053b	REG-W1-NS	Large Wall Mounted Regulatory Sign - No Smoking	Remove and Replace
053c	Remove	Remove Faded Sign	
053d	Leave	Leave Security Sign	Leave
054	REG-P2-NS-DF	Small Pole Mounted Regulatory Sign - No Smoking - D/F	Remove and Replace
055	PL-1	Parking Lot Sign	Remove and Replace
055b	PL-1	Parking Lot Sign	Remove and Replace
056	PL-1	Parking Lot Sign	Remove and Replace

(continued on next page)

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Recommendations Report *(continued)*

Sign Number	Sign Type	Description	Action Code
056b	PL-1	Parking Lot Sign	Remove and Replace
057	REG-W2-NS	Small Wall Mounted Regulatory Sign - No Smoking	
058	PL-1	Parking Lot Sign	Remove and Replace
058b	PL-1	Parking Lot Sign	Remove and Replace
059	REG-W2	Small Wall Mounted Regulatory Sign	Remove and Replace
060	REG-W2	Small Wall Mounted Regulatory Sign	Remove and Replace
061	REG-W2	Small Wall Mounted Regulatory Sign	Remove and Replace
062	REG-W2	Small Wall Mounted Regulatory Sign	Remove and Replace

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EMHS

Site Number: 000048

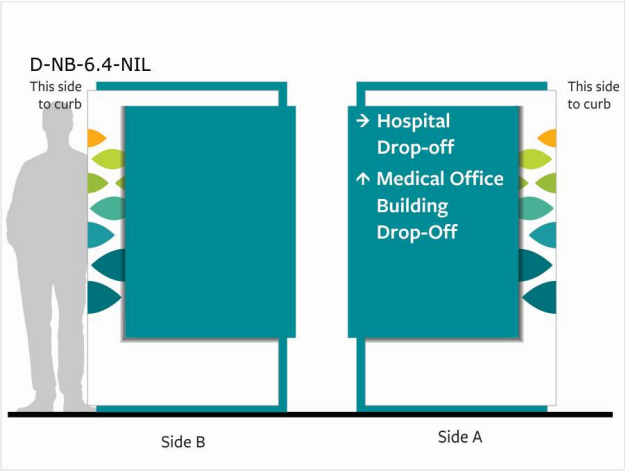
Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Existing

Sign Number:	006
Existing Sign Type:	Directional Sign
Face Material:	Metal
Graphics Material:	Vinyl
Overall Height:	80"
Face Height:	39.5"
Face Width:	32.5"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	

Sign Comment: 32.5"x39.5"faded signface w reflected vinyl on 80"h x 9"w 2.25"deep support pole. Shield symbol is 6"w x 7.5" h vinyl only. Single face.

Proposed

Sign Number:	006
Sign Type:	D-NB-6.4-NIL
Description:	6'-4" Non-Branded Non-Illuminated Directional
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	

Restoration Notes: Perform utility locates and verify setbacks prior to fabrication / installation. Restore ground material to base of new sign. See control documents for product specification and master agreement for removal & installation requirements.

Overall Height:	6'-4"
Overall Width:	4'-0"
Logo Height:	n/a
Letter Height:	3"
Illuminated:	Non Illuminated

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EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



REG-W2-NS
12”x17”

Existing

Sign Number:	007
Existing Sign Type:	Smoke Free
Face Material:	Metal
Graphics Material:	Painted Letters
Overall Height:	
Face Height:	12"
Face Width:	18"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	silkscreened graphics on pole sign

Proposed

Sign Number:	007
Sign Type:	REG-W2-NS
Description:	Small Wall Mounted Regulatory Sign - No Smoking
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	Attach to existing pole
Restoration Notes:	Field verify dimensions of space shown in photo morph prior to fabrication to verify if specified sign will fit in area. See control documents for product specification and master agreement for removal & installation requirements.

Overall Height:	1'-5"
Overall Width:	1'-0"
Logo Height:	
Letter Height:	
Illuminated:	Non Illuminated

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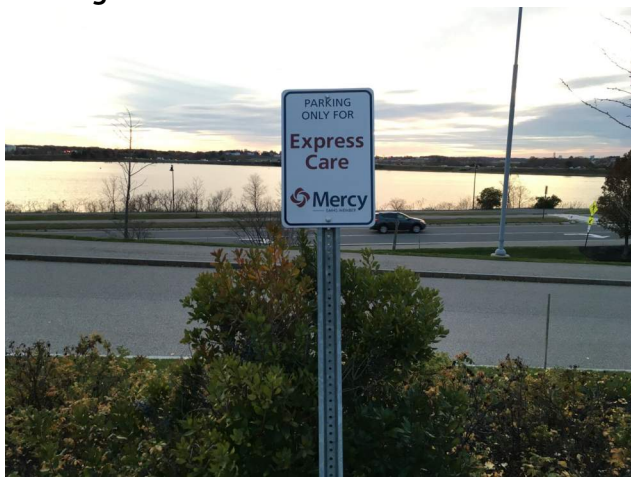
EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo

Reg-W2
12”x17”



Existing

Sign Number:	008
Existing Sign Type:	Regulatory - Pole Mo
Face Material:	Metal
Graphics Material:	Vinyl
Overall Height:	
Face Height:	18"
Face Width:	12"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	Express care vinyl graphics

Proposed

Sign Number:	008
Sign Type:	REG-W2
Description:	Small Wall Mounted Regulatory Sign
Action:	Remove and Replace
Message A:	
Message B:	

Overall Height:	1'-5"
Overall Width:	1'-0"
Logo Height:	
Letter Height:	
Illuminated:	Non Illuminated

Comments: Existing pole appears to be newer and in good condition. Recommend to reuse pole and attach new sign panel to the existing pole.

Restoration Notes: Field verify dimensions of space shown in photo morph prior to fabrication to verify if specified sign will fit in area. See control documents for product specification and master agreement for removal & installation requirements.

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EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo

Reg-W2
12”x17”



Existing

Sign Number:	009
Existing Sign Type:	Regulatory - Pole Mo
Face Material:	Metal
Graphics Material:	Vinyl
Overall Height:	
Face Height:	18"
Face Width:	12"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	Express care vinyl graphics

Proposed

Sign Number:	009
Sign Type:	REG-W2
Description:	Small Wall Mounted Regulatory Sign
Action:	Remove and Replace
Message A:	
Message B:	

Overall Height:	1'-5"
Overall Width:	1'-0"
Logo Height:	
Letter Height:	
Illuminated:	Non Illuminated

Comments: Existing pole appears to be newer and in good condition. Recommend to reuse pole and attach new sign panel to the existing pole.

Restoration Notes: Field verify dimensions of space shown in photo morph prior to fabrication to verify if specified sign will fit in area. See control documents for product specification and master agreement for removal

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EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo

Reg-W2
12”x17”



Existing

Sign Number:	010
Existing Sign Type:	Regulatory - Pole Mo
Face Material:	Metal
Graphics Material:	Vinyl
Overall Height:	
Face Height:	18"
Face Width:	12"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	Express care vinyl graphics

Proposed

Sign Number:	010
Sign Type:	REG-W2
Description:	Small Wall Mounted Regulatory Sign
Action:	Remove and Replace
Message A:	
Message B:	

Overall Height:	1'-5"
Overall Width:	1'-0"
Logo Height:	
Letter Height:	
Illuminated:	Non Illuminated

Comments: Existing pole appears to be newer and in good condition. Recommend to reuse pole and attach new sign panel to the existing pole.

Restoration Notes: Field verify dimensions of space shown in photo morph prior to fabrication to verify if specified sign will fit in area. See control documents for product specification and master agreement for removal

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EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo

Reg-W2
12”x17”



Existing

Sign Number:	011
Existing Sign Type:	Regulatory - Pole Mo
Face Material:	Metal
Graphics Material:	Vinyl
Overall Height:	
Face Height:	18"
Face Width:	12"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	Express care vinyl graphics

Proposed

Sign Number:	011
Sign Type:	REG-W2
Description:	Small Wall Mounted Regulatory Sign
Action:	Remove and Replace
Message A:	
Message B:	

Overall Height:	1'-5"
Overall Width:	1'-0"
Logo Height:	
Letter Height:	
Illuminated:	Non Illuminated

Comments: Existing pole appears to be newer and in good condition. Recommend to reuse pole and attach new sign panel to the existing pole.

Restoration Notes: Field verify dimensions of space shown in photo morph prior to fabrication to verify if specified sign will fit in area. See control documents for product specification and master agreement for removal

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EMHS

Site Number: 000048

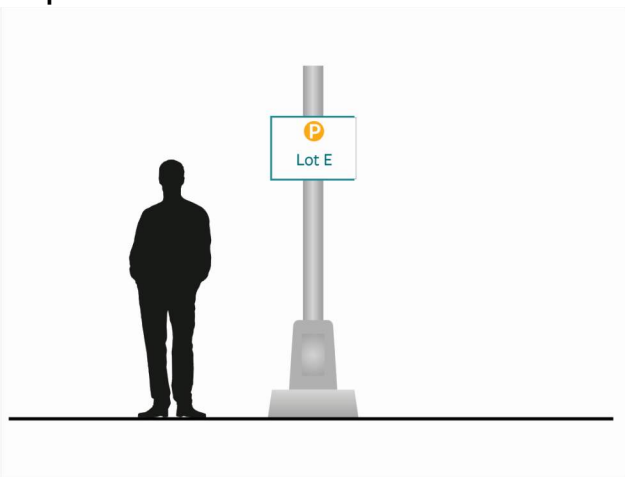
Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Existing

Sign Number:	012
Existing Sign Type:	
Face Material:	Metal
Graphics Material:	Vinyl
Overall Height:	
Face Height:	36"
Face Width:	32"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	Break formed at ends. Attached to pole with worm drive straps -10ft to bottom of sign

Proposed

Sign Number:	012
Sign Type:	PL-1
Description:	Parking Lot Sign
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	
Restoration Notes:	Field verify dimensions of space shown in photo morph prior to fabrication to verify if specified sign will fit in area. See control documents for product specification and master agreement for removal & installation requirements.

Overall Height:	1'-6"
Overall Width:	2'-0"
Logo Height:	
Letter Height:	
Illuminated:	Non Illuminated

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EMHS

Site Number: 000048

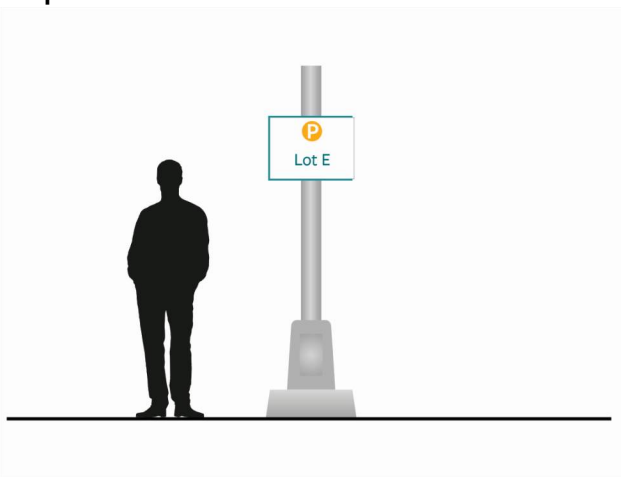
Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Existing

Sign Number:	012a
Existing Sign Type:	
Face Material:	Metal
Graphics Material:	Vinyl
Overall Height:	
Face Height:	36"
Face Width:	32"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	Break formed at ends. Attached to pole with worm drive straps -10ft to bottom of sign

Proposed

Sign Number:	012a
Sign Type:	PL-1
Description:	Parking Lot Sign
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	
Restoration Notes:	Field verify dimensions of space shown in photo morph prior to fabrication to verify if specified sign will fit in area. See control documents for product specification and master agreement for removal & installation requirements.

Overall Height:	1'-6"
Overall Width:	2'-0"
Logo Height:	
Letter Height:	
Illuminated:	Non Illuminated

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EMHS

Site Number: 000048

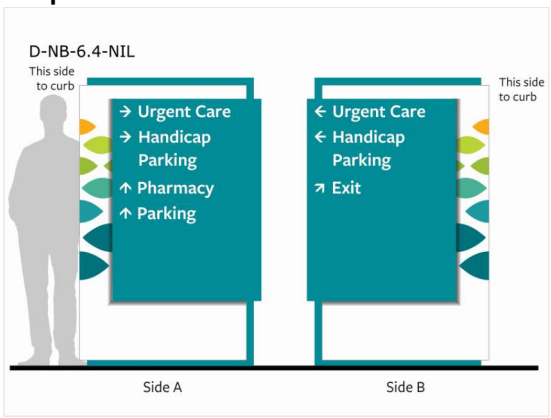
Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

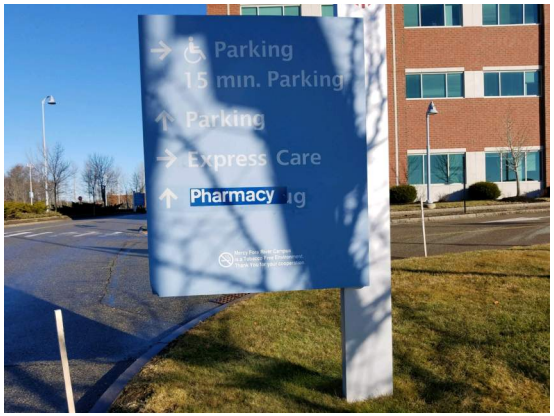
Existing Photo



Proposed Photo



As Built Photo



Existing

Sign Number:	014
Existing Sign Type:	Directional Sign
Face Material:	Metal
Graphics Material:	Vinyl
Overall Height:	80"
Face Height:	39.5"
Face Width:	32.5"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	

Proposed

Sign Number:	014
Sign Type:	D-NB-6.4-NIL
Description:	6'-4" Non-Branded Non-Illuminated Directional
Action:	
Message A:	
Message B:	
Comments:	Verify copy and arrows directions w/ hospital prior to fabrication.
Restoration Notes:	Perform utility locates and verify setbacks prior to fabrication / installation. Restore ground material to base of new sign. See control documents for product specification and master agreement for removal & installation requirements.

Overall Height:	6'-4"
Overall Width:	4'-0"
Logo Height:	n/a
Letter Height:	3"
Illuminated:	Non Illuminated

Comment on this sign from Tom Errico email to Jean Fraser on 2 Nov 2018: Confirm sign does not impact vehicle sight distance.

(continued on next page)

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(continued)

Existing *(continued)*

Sign Comment: 32.5"x39.5"faded signface w reflected vinyl on 80"h x 9"w 2.25"deep support pole. Shield symbol is 6"w x 7.5" h vinyl only. Single face.

Proposed

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EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



As Built Photo



Existing

Sign Number:	015
Existing Sign Type:	Monument
Face Material:	Metal
Graphics Material:	
Overall Height:	
Face Height:	various
Face Width:	various
Square Feet:	
Illuminated:	Internally Illuminated
Electrical:	
Wall Material:	

Proposed

Sign Number:	015
Sign Type:	DM-8
Description:	8' Internally Illuminated Monument w/ Directional Copy
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	Verify copy and arrows directions w/ hospital prior to fabrication.

Overall Height:	8'-0"
Overall Width:	8'-8"
Logo Height:	
Letter Height:	
Illuminated:	Illuminated

Restoration Notes: Perform utility locates and verify setbacks prior to fabrication / installation. Install new signage using existing primary electrical. Verify if additional circuits are required for new sign. Restore ground material to base of new sign. See control documents for product specification and master agreement for removal & installation requirements.

(continued on next page)

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(continued)

Existing *(continued)*

Sign Comment: 26"x30" routed backup shield on 6'x 9.25 deep internal illum silver box. Mercy 19.25" h plates on 77.75" x138"x3" deep white backer. Vinyl decorated descriptor blue panel:=3.25"deep x 13'x 42" h

Proposed

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EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



REG-W2-NS
12”x17”

Existing

Sign Number:	016
Existing Sign Type:	Smoke Free
Face Material:	Metal
Graphics Material:	Painted Letters
Overall Height:	
Face Height:	12"
Face Width:	18"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	silkscreened graphics on pole sign

Proposed

Sign Number:	016
Sign Type:	REG-W2-NS
Description:	Small Wall Mounted Regulatory Sign - No Smoking
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	Reuse pole. Pole appears to be in good condition.

Restoration Notes: Verify copy w/ hospital prior to fabrication. Fabricator to verify if secondary copy is required on sign face (i.e. legal, towing, city ordinances or code information). See control documents for product specification and master agreement for removal & installation requirements.

Overall Height:	1'-5"
Overall Width:	1'-0"
Logo Height:	
Letter Height:	
Illuminated:	Non Illuminated

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EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



REG-W2-NS
12”x17”

Existing

Sign Number:	017
Existing Sign Type:	Smoke Free
Face Material:	Metal
Graphics Material:	Vinyl
Overall Height:	
Face Height:	12"
Face Width:	18"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	silkscreened graphics on pole sign

Proposed

Sign Number:	017
Sign Type:	REG-W2-NS
Description:	Small Wall Mounted Regulatory Sign - No Smoking
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	Reuse pole. Pole appears to be in good condition

Overall Height:	1'-5"
Overall Width:	1'-0"
Logo Height:	
Letter Height:	
Illuminated:	Non Illuminated

Restoration Notes: Patch and repair existing wall surface to like new condition. Repaint to match existing color finish. For brick or stone walls fill holes with matching silicone. Power wash wall if required. Field verify dimensions of space shown in photo morph prior to fabrication to verify if specified sign will fit in area. See control documents for product specification and master agreement for removal & installation requirements.

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EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



REG-W2-NS
12”x17”

Existing

Sign Number:	018
Existing Sign Type:	Smoke Free
Face Material:	Metal
Graphics Material:	Painted Letters
Overall Height:	
Face Height:	12"
Face Width:	18"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	silkscreened graphics on pole sign

Proposed

Sign Number:	018
Sign Type:	REG-W2-NS
Description:	Small Wall Mounted Regulatory Sign - No Smoking
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	Reuse pole. Pole appears to be in good condition

Overall Height:	1'-5"
Overall Width:	1'-0"
Logo Height:	
Letter Height:	
Illuminated:	Non Illuminated

Restoration Notes: Patch and repair existing wall surface to like new condition. Repaint to match existing color finish. For brick or stone walls fill holes with matching silicone. Power wash wall if required. Field verify dimensions of space shown in photo morph prior to fabrication to verify if specified sign will fit in area. See control documents for product specification and master agreement for removal & installation requirements.

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EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



REG-W2-NS
12”x17”

Existing

Sign Number:	021
Existing Sign Type:	Smoke Free
Face Material:	Metal
Graphics Material:	Painted Letters
Overall Height:	
Face Height:	12"
Face Width:	18"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	silkscreened graphics on pole sign

Proposed

Sign Number:	021
Sign Type:	REG-W2-NS
Description:	Small Wall Mounted Regulatory Sign - No Smoking
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	Client to verify copy and hours prior to approval.

Overall Height:	1'-5"
Overall Width:	1'-0"
Logo Height:	
Letter Height:	
Illuminated:	Non Illuminated

Restoration Notes: Patch and repair existing wall surface to like new condition. Repaint to match existing color finish. For brick or stone walls fill holes with matching silicone. Power wash wall if required. Field verify dimensions of space shown in photo morph prior to fabrication to verify if specified sign will fit in area. See control documents for product specification and master agreement for removal

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EMHS

Site Number: 000048

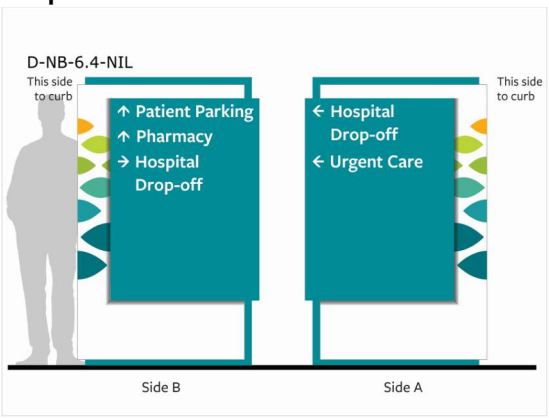
Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



As Built Photo



Existing

Sign Number:	022
Existing Sign Type:	Directional Sign
Face Material:	Metal
Graphics Material:	Vinyl
Overall Height:	80"
Face Height:	39.5"
Face Width:	32.5"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	

Proposed

Sign Number:	022
Sign Type:	D-NB-6.4-NIL
Description:	6'-4" Non-Branded Non-Illuminated Directional
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	Verify copy and arrows directions w/ hospital prior to fabrication.
Restoration Notes:	Perform utility locates and verify setbacks prior to fabrication / installation. Restore ground material to base of new sign. See control documents for product specification and master agreement for removal & installation requirements.

Overall Height:	6'-4"
Overall Width:	4'-0"
Logo Height:	n/a
Letter Height:	3"
Illuminated:	Non Illuminated

(continued on next page)

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(continued)

Existing *(continued)*

Sign Comment: 32.5"x39.5"faded signface w reflected vinyl on 80"h x 9"w 2.25"deep support pole. Shield symbol is 6"w x 7.5" h vinyl only. Double face.

Proposed

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EMHS

Site Number: 000048

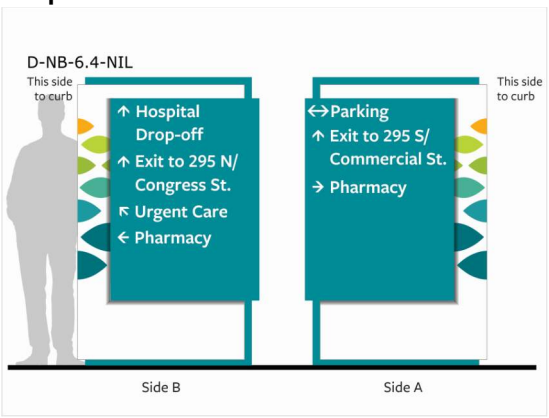
Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



As Built Photo



Existing

Sign Number:	023
Existing Sign Type:	Directional Sign
Face Material:	Metal
Graphics Material:	Vinyl
Overall Height:	108"
Face Height:	63.5"
Face Width:	51.5"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	

Proposed

Sign Number:	023
Sign Type:	D-NB-6.4-NIL
Description:	6'-4" Non-Branded Non-Illuminated Directional
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	Verify copy and arrows directions w/ hospital prior to fabrication.
Restoration Notes:	Perform utility locates and verify setbacks prior to fabrication / installation. Restore ground material to base of new sign. See control documents for product specification and master agreement for removal & installation requirements.

Overall Height:	6'-4"
Overall Width:	4'-0"
Logo Height:	n/a
Letter Height:	3"
Illuminated:	Non Illuminated

Comment on this sign from Tom Errico email to Jean Fraser on 2 Nov 2018:
Confirm sign does not obstruct sight to/from pedestrians.

(continued on next page)

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(continued)

Existing *(continued)*

Sign Comment: 63.5"x51.5"faded signface w reflected vinyl on 80"h x 9"w 2.25"deep support pole. Shield symbol is 6"w x 7.5" h vinyl only. Double face.

Proposed

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EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



REG-W2-NS
12”x17”

Existing

Sign Number:	024
Existing Sign Type:	Smoke Free
Face Material:	Metal
Graphics Material:	Painted Letters
Overall Height:	
Face Height:	12"
Face Width:	18"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	silkscreened graphics on pole sign

Proposed

Sign Number:	024
Sign Type:	REG-W2-NS
Description:	Small Wall Mounted Regulatory Sign - No Smoking
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	Reuse pole. Pole appears to be in good condition

Overall Height:	1'-5"
Overall Width:	1'-0"
Logo Height:	
Letter Height:	
Illuminated:	Non Illuminated

Restoration Notes: Verify copy w/ hospital prior to fabrication. Fabricator to verify if secondary copy is required on sign face (i.e. legal, towing, city ordinances or code information). See control documents for product specification and master agreement for removal & installation requirements.

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EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Existing

Sign Number:	025
Existing Sign Type:	Directional Sign
Face Material:	Metal
Graphics Material:	Vinyl
Overall Height:	108"
Face Height:	63.5"
Face Width:	51.5"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	

Sign Comment: 63.5"x51.5"faded signface w reflected vinyl on 80"h x 9"w 2.25"deep support pole. Shield symbol is 6"w x 7.5" h vinyl only. Double face.

Proposed

Sign Number:	025
Sign Type:	Custom
Description:	Custom Non-illuminated 10' Pylon
Action:	Remove and Replace
Message A:	
Message B:	

Overall Height:	10'
Overall Width:	5'
Logo Height:	
Letter Height:	3.125"
Illuminated:	Non Illuminated

Comments: Verify copy and arrows directions w/ hospital prior to fabrication.

Restoration Notes: Perform utility locates and verify setbacks prior to fabrication / installation. New electrical work required. Field verify available circuits and access prior to fabrication. Restore ground material to base of new sign. See control documents for product specification and master agreement for removal & installation requirements.

Comment on this sign from Tom Errico email to Jean Fraser on 2 Nov 2018:
Confirm roadway horizontal clear zone requirements are met.

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EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



REG-W2-NS
12”x17”

Existing

Sign Number:	026
Existing Sign Type:	Smoke Free
Face Material:	Metal
Graphics Material:	Painted Letters
Overall Height:	
Face Height:	12"
Face Width:	18"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	silkscreened graphics on pole sign

Proposed

Sign Number:	026
Sign Type:	REG-W2-NS
Description:	Small Wall Mounted Regulatory Sign - No Smoking
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	Reuse pole. Pole appears to be in good condition.

Overall Height:	1'-5"
Overall Width:	1'-0"
Logo Height:	
Letter Height:	
Illuminated:	Non Illuminated

Restoration Notes: . Verify copy w/ hospital prior to fabrication. Fabricator to verify if secondary copy is required on sign face (i.e. legal, towing, city ordinances or code information). See control documents for product specification and master agreement for removal & installation requirements.

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EMHS

Site Number: 000048

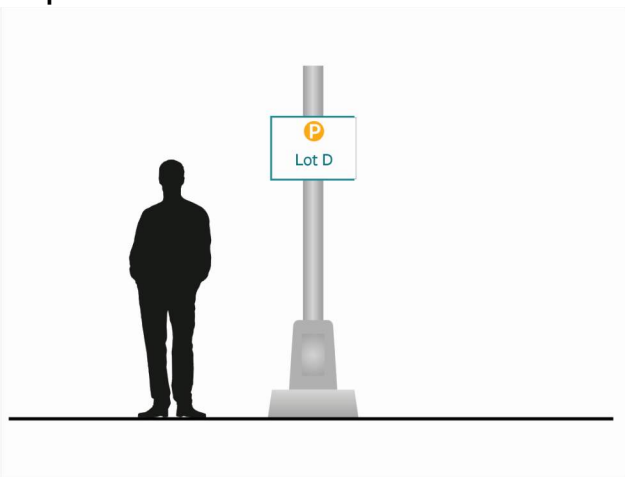
Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Existing

Sign Number:	027
Existing Sign Type:	
Face Material:	Metal
Graphics Material:	Vinyl
Overall Height:	
Face Height:	36"
Face Width:	32"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	Break formed at ends. Attached to pole with worm drive straps -8 ft to bottom of sign

Proposed

Sign Number:	027
Sign Type:	PL-1
Description:	Parking Lot Sign
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	Verify copy w/ hospital prior to fabrication.
Restoration Notes:	. Verify copy w/ hospital prior to fabrication. Fabricator to verify if secondary copy is required on sign face (i.e. legal, towing, city ordinances or code information). See control documents for product specification and master agreement for removal & installation requirements.

Overall Height:	1'-6"
Overall Width:	2'-0"
Logo Height:	
Letter Height:	
Illuminated:	Non Illuminated

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EMHS

Site Number: 000048

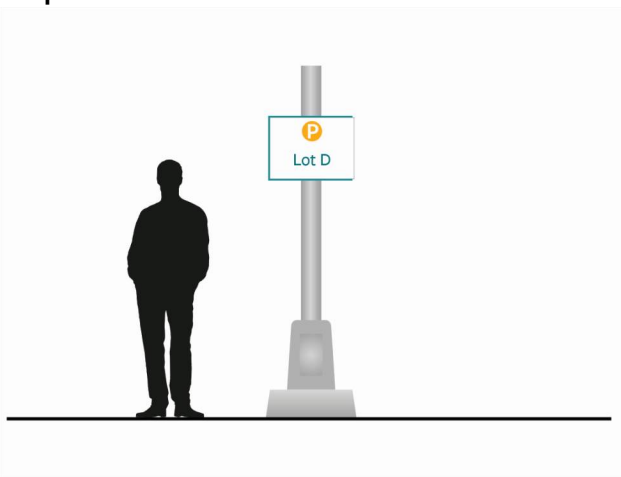
Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Existing

Sign Number:	027a
Existing Sign Type:	
Face Material:	Metal
Graphics Material:	Vinyl
Overall Height:	
Face Height:	36"
Face Width:	32"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	Break formed at ends. Attached to pole with worm drive straps -8 ft to bottom of sign

Proposed

Sign Number:	027a
Sign Type:	PL-1
Description:	Parking Lot Sign
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	Verify copy w/ hospital prior to fabrication.

Overall Height:	1'-6"
Overall Width:	2'-0"
Logo Height:	
Letter Height:	
Illuminated:	Non Illuminated

Restoration Notes: . Verify copy w/ hospital prior to fabrication. Fabricator to verify if secondary copy is required on sign face (i.e. legal, towing, city ordinances or code information). See control documents for product specification and master agreement for removal & installation requirements.

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EMHS

Site Number: 000048

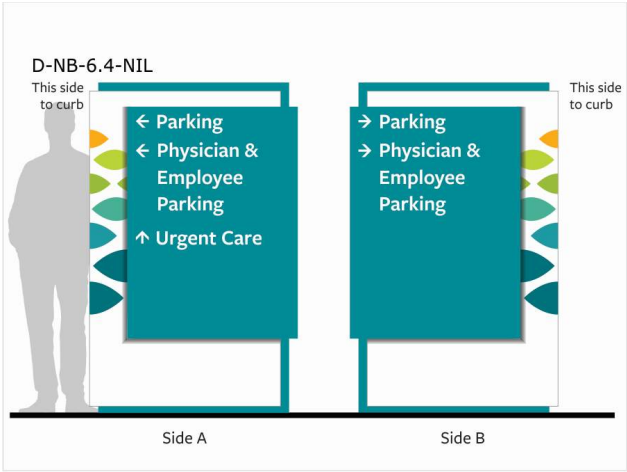
Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Existing

Sign Number:	028
Existing Sign Type:	Directional Sign
Face Material:	Metal
Graphics Material:	Vinyl
Overall Height:	108"
Face Height:	63.5"
Face Width:	51.5"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	63.5"x51.5"faded signface w reflected vinyl on 80"h x 9"w 2.25"deep support pole. Shield symbol is 6"w x 7.5" h vinyl only. Double face.

Proposed

Sign Number:	028
Sign Type:	D-NB-6.4-NIL
Description:	6'-4" Non-Branded Non-Illuminated Directional
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	Verify copy and arrows directions w/ hospital prior to fabrication.
Restoration Notes:	Perform utility locates and verify setbacks prior to fabrication / installation. Restore ground material to base of new sign. See control documents for product specification and master agreement for removal & installation requirements.

Overall Height:	6'-4"
Overall Width:	4'-0"
Logo Height:	n/a
Letter Height:	3"
Illuminated:	Non Illuminated

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Site Number: 000048

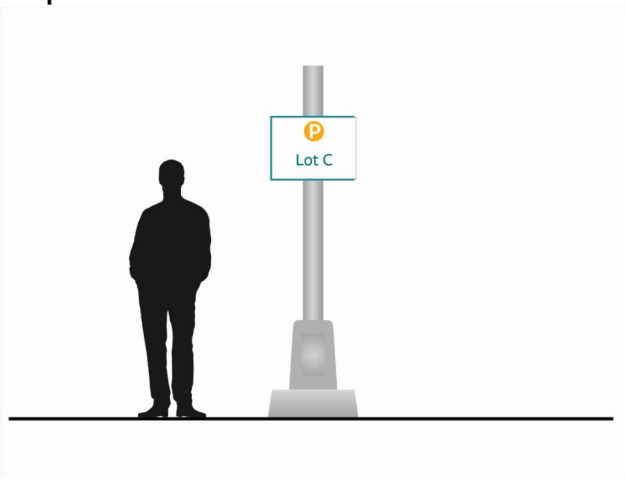
Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Existing

Sign Number:	030
Existing Sign Type:	
Face Material:	Metal
Graphics Material:	Vinyl
Overall Height:	
Face Height:	36"
Face Width:	32"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	Break formed at ends. Attached to pole with worm drive straps -10 ft to bottom of sign

Proposed

Sign Number:	030
Sign Type:	PL-1
Description:	Parking Lot Sign
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	Verify copy w/ hospital prior to fabrication.
Restoration Notes:	Verify copy w/ hospital prior to fabrication. Fabricator to verify if secondary copy is required on sign face (i.e. legal, towing, city ordinances or code information). See control documents for product specification and master agreement for removal & installation requirements.

Overall Height:	1'-6"
Overall Width:	2'-0"
Logo Height:	
Letter Height:	
Illuminated:	Non Illuminated

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Site Number: 000048

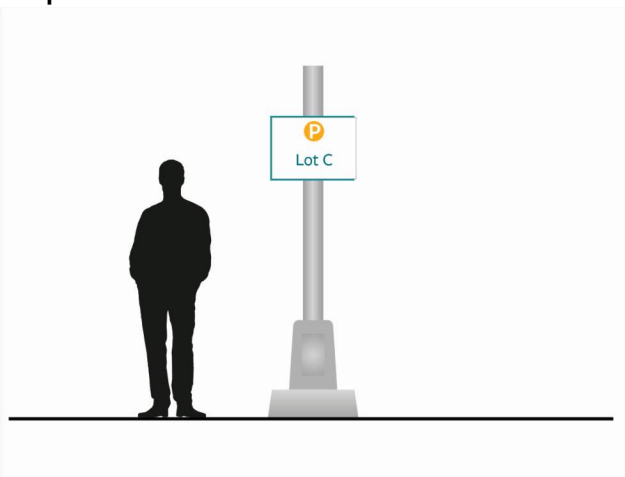
Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Existing

Sign Number:	030a
Existing Sign Type:	
Face Material:	Metal
Graphics Material:	Vinyl
Overall Height:	
Face Height:	36"
Face Width:	32"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	Break formed at ends. Attached to pole with worm drive straps -8 ft to bottom of sign

Proposed

Sign Number:	030a
Sign Type:	PL-1
Description:	Parking Lot Sign
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	Verify copy w/ hospital prior to fabrication.

Overall Height:	1'-6"
Overall Width:	2'-0"
Logo Height:	
Letter Height:	
Illuminated:	Non Illuminated

Restoration Notes: . Verify copy w/ hospital prior to fabrication. Fabricator to verify if secondary copy is required on sign face (i.e. legal, towing, city ordinances or code information). See control documents for product specification and master agreement for removal & installation requirements.

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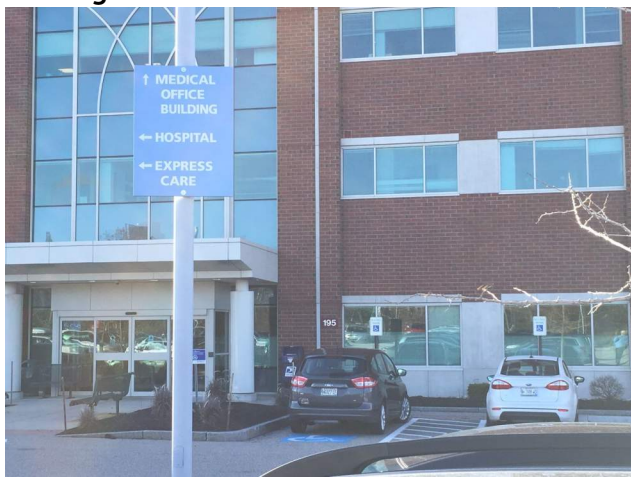
EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Existing

Sign Number:	031
Existing Sign Type:	
Face Material:	Metal
Graphics Material:	Vinyl
Overall Height:	
Face Height:	40"
Face Width:	30"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	Break formed at ends. Attached to pole with worm drive straps -10 ft to bottom of sign

Proposed

Sign Number:	031
Sign Type:	Custom
Description:	Custom Pole Mounted Directional Plaque
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	Verify copy and arrows directions w/ hospital prior to fabrication.
Restoration Notes:	Field verify dimensions of space shown in photo morph prior to fabrication to verify if specified sign will fit in area. See control documents for product specification and master agreement for removal

Overall Height:	40"
Overall Width:	30"
Logo Height:	
Letter Height:	
Illuminated:	Non Illuminated

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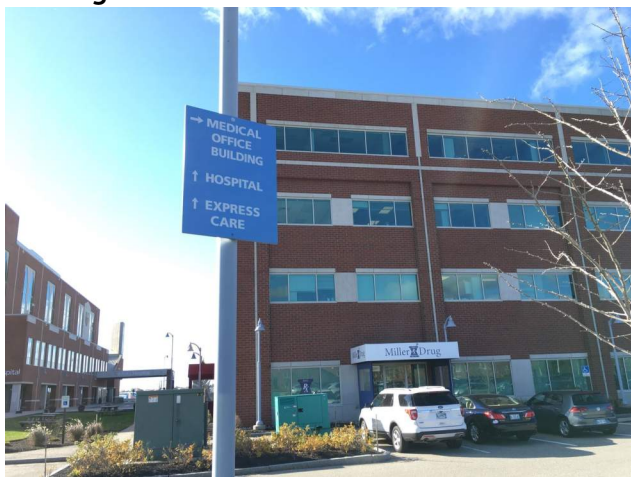
EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Existing

Sign Number:	032
Existing Sign Type:	
Face Material:	Metal
Graphics Material:	Vinyl
Overall Height:	
Face Height:	40"
Face Width:	30"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	Break formed at ends. Attached to pole with worm drive straps -10 ft to bottom of sign

Proposed

Sign Number:	032
Sign Type:	Custom
Description:	Custom Pole Mounted Directional Plaque
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	Verify copy and arrows directions w/ hospital prior to fabrication.
Restoration Notes:	Field verify dimensions of space shown in photo morph prior to fabrication to verify if specified sign will fit in area. See control documents for product specification and master agreement for removal

Overall Height:	40"
Overall Width:	30"
Logo Height:	
Letter Height:	
Illuminated:	Non Illuminated

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Site Number: 000048

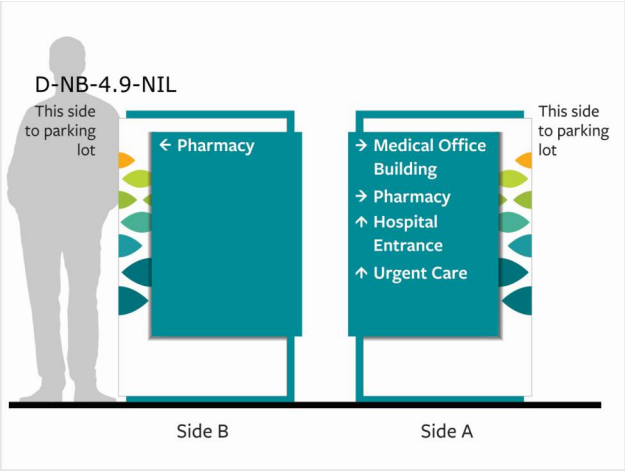
Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Existing

Sign Number:	033
Existing Sign Type:	Directional Sign
Face Material:	Metal
Graphics Material:	Vinyl
Overall Height:	80"
Face Height:	39.5"
Face Width:	32.5"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	

Sign Comment: 32.5"x39.5"faded signface w reflected vinyl on 80"h x 9"w 2.25"deep support pole. Shield symbol is 6"w x 7.5" h vinyl only. Double face.

Proposed

Sign Number:	033
Sign Type:	D-NB-6.4-NIL
Description:	6'-4" Non-Branded Non-Illuminated Directional
Action:	Remove and Replace
Message A:	
Message B:	

Overall Height:	6'-4"
Overall Width:	4'-0"
Logo Height:	n/a
Letter Height:	3"
Illuminated:	Non Illuminated

Comments: Verify copy and arrows directions w/ hospital prior to fabrication.

Restoration Notes: Perform utility locates and verify setbacks prior to fabrication / installation. Restore ground material to base of new sign. See control documents for product specification and master agreement for removal & installation requirements.

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Site Number: 000048

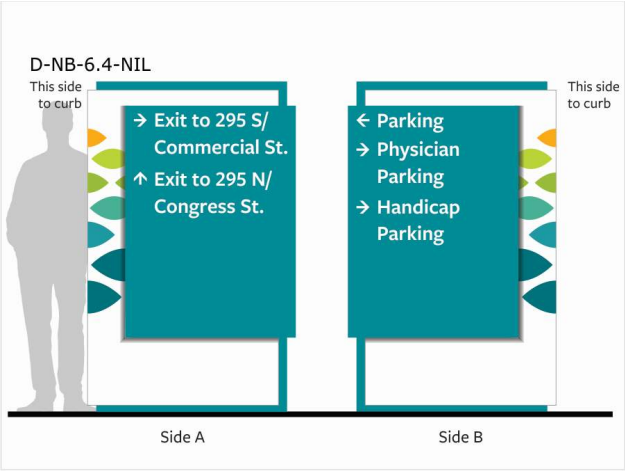
Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Existing

Sign Number:	034
Existing Sign Type:	Directional Sign
Face Material:	Metal
Graphics Material:	Vinyl
Overall Height:	108"
Face Height:	63.5"
Face Width:	51.5"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	63.5"x51.5"faded signface w reflected vinyl on 80"h x 9"w 2.25"deep support pole. Shield symbol is 6"w x 7.5" h vinyl only. Double face.

Proposed

Sign Number:	034
Sign Type:	D-NB-6.4-NIL
Description:	6'-4" Non-Branded Non-Illuminated Directional
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	Verify copy and arrows directions w/ hospital prior to fabrication.
Restoration Notes:	Perform utility locates and verify setbacks prior to fabrication / installation. Restore ground material to base of new sign. See control documents for product specification and master agreement for removal & installation requirements.

Overall Height:	6'-4"
Overall Width:	4'-0"
Logo Height:	n/a
Letter Height:	3"
Illuminated:	Non Illuminated

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Site Number: 000048

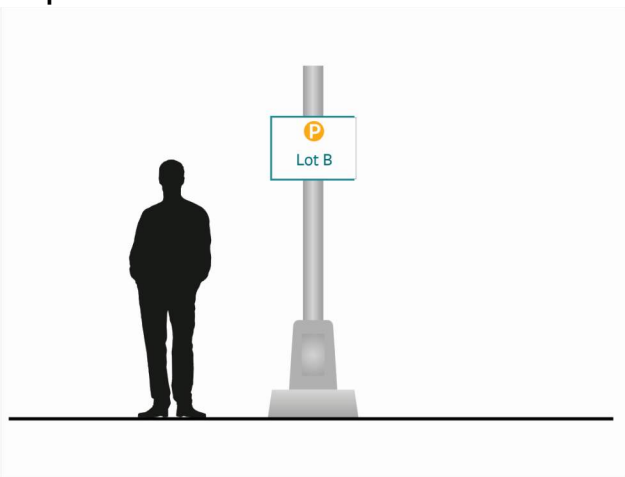
Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Existing

Sign Number:	035
Existing Sign Type:	Wall Plaque
Face Material:	Metal
Graphics Material:	Vinyl
Overall Height:	
Face Height:	36"
Face Width:	32"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	Break formed at ends. Attached to pole with worm drive straps -10 ft to bottom of sign

Proposed

Sign Number:	035
Sign Type:	PL-1
Description:	Parking Lot Sign
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	
Restoration Notes:	Field verify dimensions of space shown in photo morph prior to fabrication to verify if specified sign will fit in area. See control documents for product specification and master agreement for removal

Overall Height:	1'-6"
Overall Width:	2'-0"
Logo Height:	
Letter Height:	
Illuminated:	Non Illuminated

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Site Number: 000048

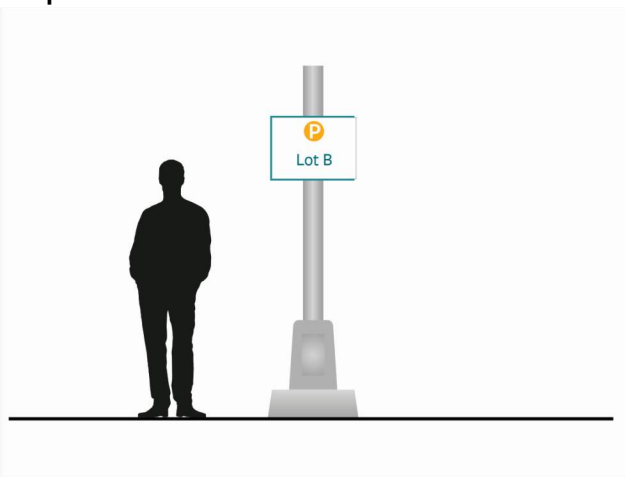
Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Existing

Sign Number:	035b
Existing Sign Type:	Wall Plaque
Face Material:	Metal
Graphics Material:	Vinyl
Overall Height:	
Face Height:	36"
Face Width:	32"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	Break formed at ends. Attached to pole with worm drive straps -10 ft to bottom of sign

Proposed

Sign Number:	035b
Sign Type:	PL-1
Description:	Parking Lot Sign
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	
Restoration Notes:	Field verify dimensions of space shown in photo morph prior to fabrication to verify if specified sign will fit in area. See control documents for product specification and master agreement for removal

Overall Height:	1'-6"
Overall Width:	2'-0"
Logo Height:	
Letter Height:	
Illuminated:	Non Illuminated

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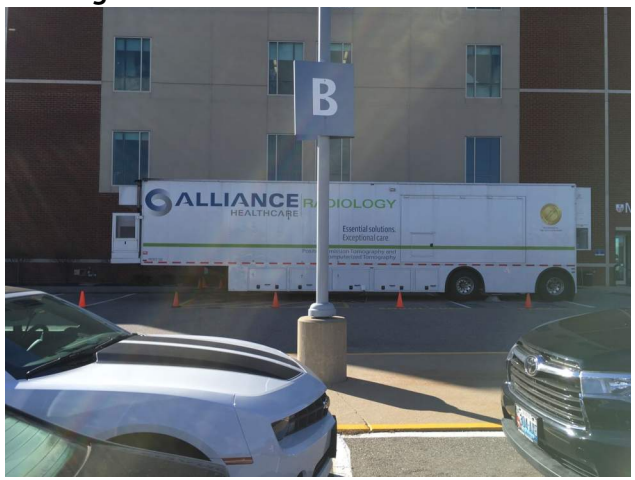
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Site Number: 000048

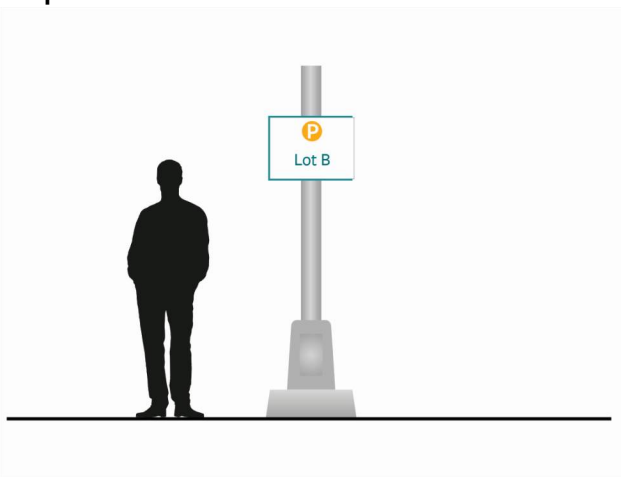
Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Existing

Sign Number:	036
Existing Sign Type:	
Face Material:	Metal
Graphics Material:	Vinyl
Overall Height:	
Face Height:	36"
Face Width:	32"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	

Sign Comment: Break formed at ends. Attached to pole with worm drive straps -10 ft to bottom of sign

Proposed

Sign Number:	036
Sign Type:	PL-1
Description:	Parking Lot Sign
Action:	Remove and Replace
Message A:	
Message B:	

Overall Height:	1'-6"
Overall Width:	2'-0"
Logo Height:	
Letter Height:	
Illuminated:	Non Illuminated

Comments: Verify copy and arrows directions w/ hospital prior to fabrication.

Restoration Notes: Patch and repair existing wall surface to like new condition. Repaint to match existing color finish. For brick or stone walls fill holes with matching silicone. Power wash wall if required. Field verify dimensions of space shown in photo morph prior to fabrication to verify if specified letterset will fit in area and meet clear zone tolerances – refer to Control Documents. ***Change letterset height if required. See control documents for product specification and master agreement for installation requirements.

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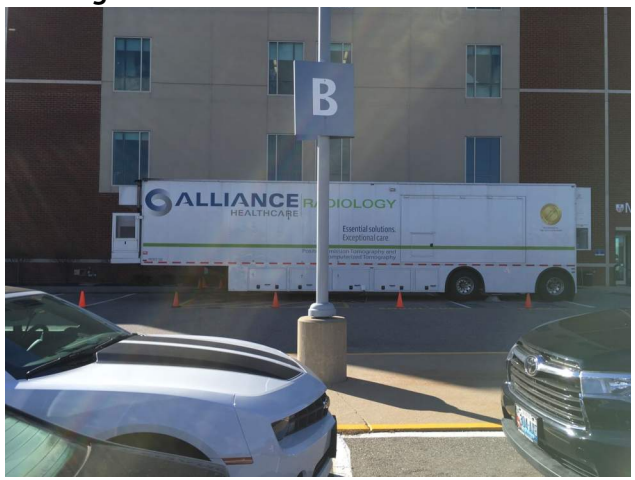
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Site Number: 000048

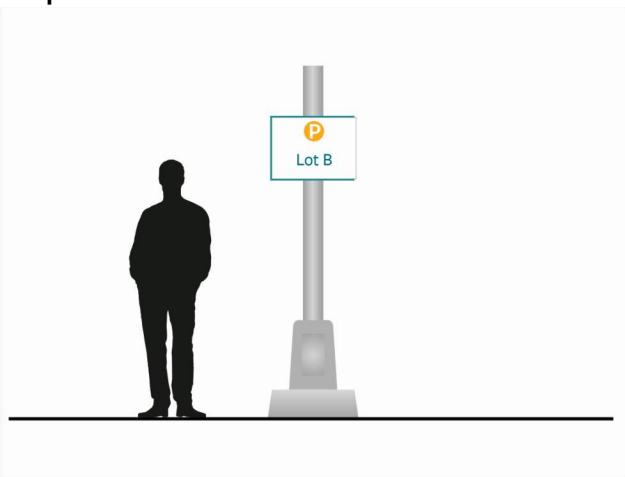
Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Existing

Sign Number:	036b
Existing Sign Type:	Wall Plaque
Face Material:	Metal
Graphics Material:	Vinyl
Overall Height:	
Face Height:	36"
Face Width:	32"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	Break formed at ends. Attached to pole with worm drive straps -10 ft to bottom of sign

Proposed

Sign Number:	036b
Sign Type:	PL-1
Description:	Parking Lot Sign
Action:	
Message A:	
Message B:	

Overall Height:	1'-6"
Overall Width:	2'-0"
Logo Height:	
Letter Height:	
Illuminated:	Non Illuminated

Comments: Verify copy and arrows directions w/ hospital prior to fabrication.

Restoration Notes: Field verify dimensions of space shown in photo morph prior to fabrication to verify if specified letterset will fit in area and meet clear zone tolerances – refer to Control Documents. ***Change letterset height if required. See control documents for product specification and master agreement for installation requirements.

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Site Number: 000048

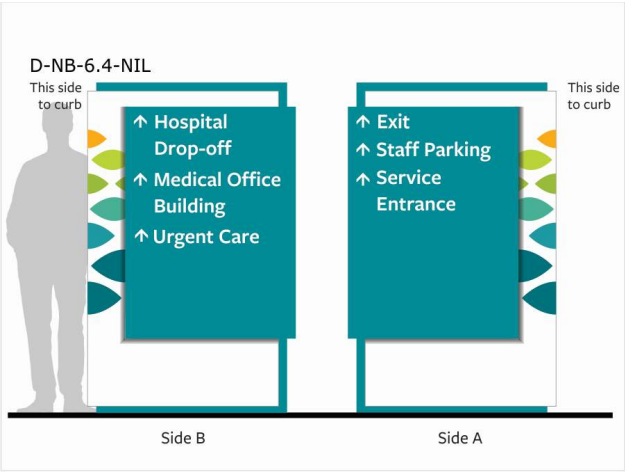
Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Existing

Sign Number:	042
Existing Sign Type:	Directional Sign
Face Material:	Metal
Graphics Material:	Vinyl
Overall Height:	108"
Face Height:	63.5"
Face Width:	51.5"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	63.5"x51.5"faded signface w reflected vinyl on 80"h x 9"w 2.25"deep support pole. Shield symbol is 6"w x 7.5" h vinyl only. Double face.

Proposed

Sign Number:	042
Sign Type:	D-NB-6.4-NIL
Description:	6'-4" Non-Branded Non-Illuminated Directional
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	Verify copy and arrows directions w/ hospital prior to fabrication.
Restoration Notes:	Perform utility locates and verify setbacks prior to fabrication / installation. Restore ground material to base of new sign. See control documents for product specification and master agreement for removal & installation requirements.

Overall Height:	6'-4"
Overall Width:	4'-0"
Logo Height:	n/a
Letter Height:	3"
Illuminated:	Non Illuminated

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Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



REG-W2-NS
12”x17”

Existing

Sign Number:	043a
Existing Sign Type:	Smoke Free
Face Material:	Metal
Graphics Material:	Painted Letters
Overall Height:	
Face Height:	12"
Face Width:	18"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	silkscreened graphics on pole sign

Proposed

Sign Number:	043a
Sign Type:	REG-W2-NS
Description:	Small Wall Mounted Regulatory Sign - No Smoking
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	Reuse existing pole
Restoration Notes:	Field verify dimensions of space shown in photo morph prior to fabrication to verify if specified sign will fit in area. See control documents for product specification and master agreement for removal & installation requirements.

Overall Height:	1'-5"
Overall Width:	1'-0"
Logo Height:	
Letter Height:	
Illuminated:	Non Illuminated

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EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo

Leave Existing Sign

Existing

Sign Number:	043b
Existing Sign Type:	
Face Material:	Metal
Graphics Material:	Vinyl
Overall Height:	
Face Height:	24"
Face Width:	18"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	silkscreened graphics on pole sign

Proposed

Sign Number:	043b
Sign Type:	Leave
Description:	Leave Regulatory Sign
Action:	Leave
Message A:	
Message B:	
Comments:	
Restoration Notes:	

Overall Height:	
Overall Width:	
Logo Height:	
Letter Height:	
Illuminated:	

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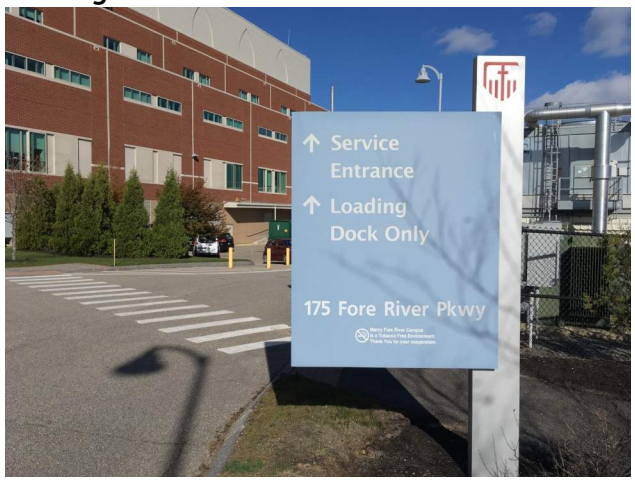
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Site Number: 000048

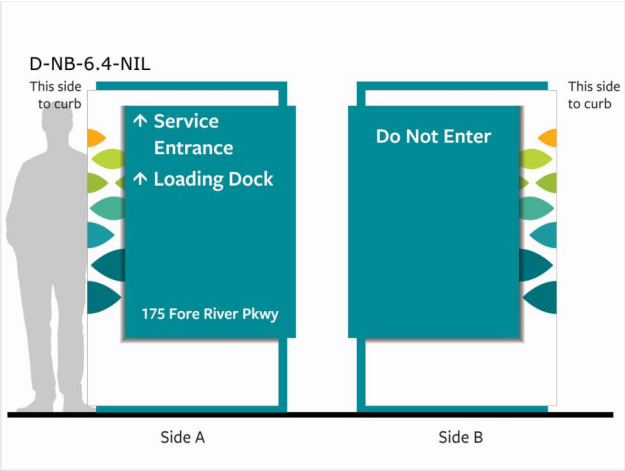
Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Existing

Sign Number:	044
Existing Sign Type:	Directional Sign
Face Material:	Metal
Graphics Material:	Vinyl
Overall Height:	108"
Face Height:	63.5"
Face Width:	51.5"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	

Sign Comment: 63.5"x51.5"faded signface w reflected vinyl on 80"h x 9"w 2.25"deep support pole. Shield symbol is 6"w x 7.5" h vinyl only. Double face.

Proposed

Sign Number:	044
Sign Type:	D-NB-6.4-NIL
Description:	6'-4" Non-Branded Non-Illuminated Directional
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	

Overall Height:	6'-4"
Overall Width:	4'-0"
Logo Height:	n/a
Letter Height:	3"
Illuminated:	Non Illuminated

Restoration Notes: Perform utility locates and verify setbacks prior to fabrication / installation. Restore ground material to base of new sign. See control documents for product specification and master agreement for removal & installation requirements.

Comment on this sign from Tom Errico email to Jean Fraser on 2 Nov 2018:
Confirm sign does not obstruct sight to/from pedestrians.

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EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Existing

Sign Number:	046
Existing Sign Type:	Smoke Free
Face Material:	Metal
Graphics Material:	Painted Letters
Overall Height:	
Face Height:	12"
Face Width:	18"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	silkscreened graphics on pole D/F sign

Proposed

Sign Number:	046
Sign Type:	REG-P2-NS-DF
Description:	Small Pole Mounted Regulatory Sign - No Smoking - D/F
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	double sided

Overall Height:	1'-5"
Overall Width:	1'-0"
Logo Height:	
Letter Height:	
Illuminated:	Non Illuminated

Restoration Notes: Patch and repair existing wall surface to like new condition. Repaint to match existing color finish. For brick or stone walls fill holes with matching silicone. Power wash wall if required. Field verify dimensions of space shown in photo morph prior to fabrication to verify if specified sign will fit in area. See control documents for product specification and master agreement for removal

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EMHS

Site Number: 000048

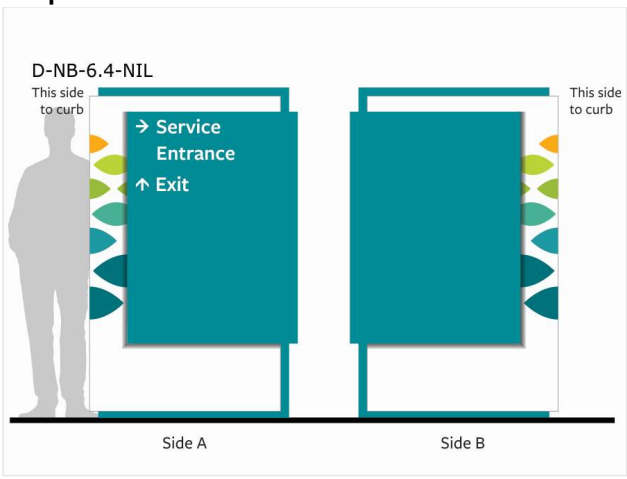
Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Existing

Sign Number:	047
Existing Sign Type:	Directional Sign
Face Material:	Metal
Graphics Material:	Vinyl
Overall Height:	108"
Face Height:	63.5"
Face Width:	51.5"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	63.5"x51.5"faded signface w reflected vinyl on 80"h x 9"w 2.25"deep support pole. Shield symbol is 6"w x 7.5" h vinyl only. Double face.

Proposed

Sign Number:	047
Sign Type:	D-NB-6.4-NIL
Description:	6'-4" Non-Branded Non-Illuminated Directional
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	Verify copy and arrows directions w/ hospital prior to fabrication.
Restoration Notes:	Perform utility locates and verify setbacks prior to fabrication / installation. Restore ground material to base of new sign. See control documents for product specification and master agreement for removal & installation requirements.

Overall Height:	6'-4"
Overall Width:	4'-0"
Logo Height:	n/a
Letter Height:	3"
Illuminated:	Non Illuminated

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EMHS

Site Number: 000048

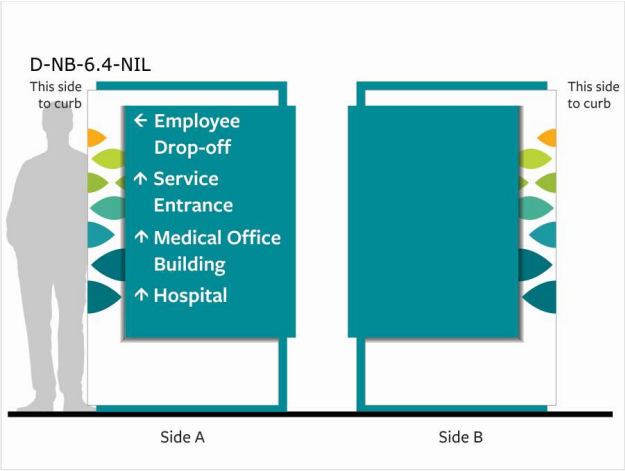
Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Existing

Sign Number:	048
Existing Sign Type:	Directional Sign
Face Material:	Metal
Graphics Material:	Vinyl
Overall Height:	108"
Face Height:	63.5"
Face Width:	51.5"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	63.5"x51.5"faded signface w reflected vinyl on 80"h x 9"w 2.25"deep support pole. Shield symbol is 6"w x 7.5" h vinyl only. Single face.

Proposed

Sign Number:	048
Sign Type:	D-NB-6.4-NIL
Description:	6'-4" Non-Branded Non-Illuminated Directional
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	Verify copy and arrows directions w/ hospital prior to fabrication.
Restoration Notes:	Perform utility locates and verify setbacks prior to fabrication / installation. Restore ground material to base of new sign. See control documents for product specification and master agreement for removal & installation requirements.

Overall Height:	6'-4"
Overall Width:	4'-0"
Logo Height:	n/a
Letter Height:	3"
Illuminated:	Non Illuminated

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EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Existing

Sign Number:	049
Existing Sign Type:	Directional Sign
Face Material:	Metal
Graphics Material:	Vinyl
Overall Height:	108"
Face Height:	63.5"
Face Width:	51.5"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	

Sign Comment: 63.5"x51.5"faded signface w reflected vinyl on 80"h x 9"w 2.25"deep support pole. Shield symbol is 6"w x 7.5" h vinyl only. Double face.

Proposed

Sign Number:	049
Sign Type:	P-10
Description:	10' Internally Illuminated Pylon
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	

Overall Height:	10'-0"
Overall Width:	5'-0"
Logo Height:	17.8"
Letter Height:	3.125"
Illuminated:	Illuminated

Restoration Notes: Perform utility locates and verify setbacks prior to fabrication / installation. Install new signage using existing primary electrical. Verify if additional circuits are required for new sign. Restore ground material to base of new sign. See control documents for product specification and master agreement for removal

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EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Existing

Sign Number:	050
Existing Sign Type:	Directional Sign
Face Material:	Metal
Graphics Material:	Vinyl
Overall Height:	108"
Face Height:	63.5"
Face Width:	51.5"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	63.5"x51.5"faded signface w reflected vinyl on 80"h x 9"w 2.25"deep support pole. Shield symbol is 6"w x 7.5" h vinyl only. Double face.

Proposed

Sign Number:	050
Sign Type:	D-NB-6.4-NIL
Description:	6'-4" Non-Branded Non-Illuminated Directional
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	
Restoration Notes:	Perform utility locates and verify setbacks prior to fabrication / installation. Restore ground material to base of new sign. See control documents for product specification and master agreement for removal

Overall Height:	6'-4"
Overall Width:	4'-0"
Logo Height:	n/a
Letter Height:	3"
Illuminated:	Non Illuminated

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EMHS

Site Number: 000048

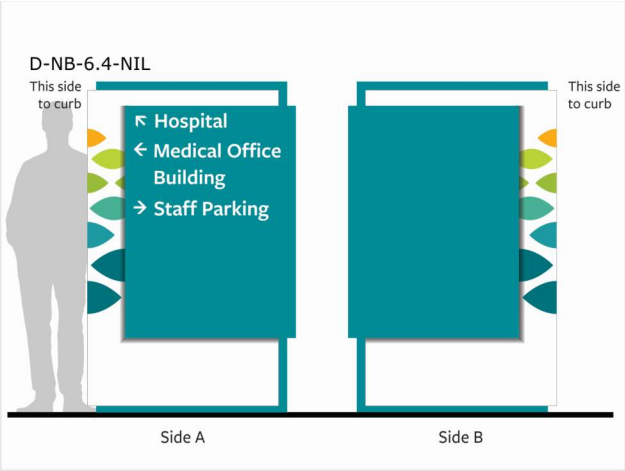
Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Existing

Sign Number:	051
Existing Sign Type:	Directional Sign
Face Material:	Metal
Graphics Material:	Vinyl
Overall Height:	108"
Face Height:	63.5"
Face Width:	51.5"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	63.5"x51.5"faded signface w reflected vinyl on 80"h x 9"w 2.25"deep support pole. Shield symbol is 6"w x 7.5" h vinyl only. Double face.

Proposed

Sign Number:	051
Sign Type:	D-NB-6.4-NIL
Description:	6'-4" Non-Branded Non-Illuminated Directional
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	
Restoration Notes:	Perform utility locates and verify setbacks prior to fabrication / installation. Restore ground material to base of new sign. See control documents for product specification and master agreement for removal

Overall Height:	6'-4"
Overall Width:	4'-0"
Logo Height:	n/a
Letter Height:	3"
Illuminated:	Non Illuminated

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Site Number: 000048

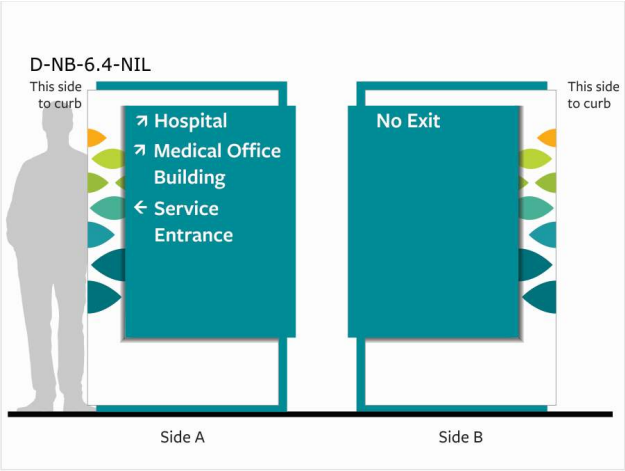
Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Existing

Sign Number:	052
Existing Sign Type:	Directional Sign
Face Material:	Metal
Graphics Material:	Vinyl
Overall Height:	108"
Face Height:	63.5"
Face Width:	51.5"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	63.5"x51.5"faded signface w reflected vinyl on 80"h x 9"w 2.25"deep support pole. Shield symbol is 6"w x 7.5" h vinyl only. Double face.

Proposed

Sign Number:	052
Sign Type:	D-NB-6.4-NIL
Description:	6'-4" Non-Branded Non-Illuminated Directional
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	
Restoration Notes:	Perform utility locates and verify setbacks prior to fabrication / installation. Restore ground material to base of new sign. See control documents for product specification and master agreement for removal

Overall Height:	6'-4"
Overall Width:	4'-0"
Logo Height:	n/a
Letter Height:	3"
Illuminated:	Non Illuminated

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EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



REG-W1-NS
18”x24”

Existing

Sign Number:	053
Existing Sign Type:	Smoke Free
Face Material:	Metal
Graphics Material:	Painted Letters
Overall Height:	
Face Height:	12"
Face Width:	18"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	silkscreened graphics on pole sign

Proposed

Sign Number:	053
Sign Type:	REG-W1-NS
Description:	Large Wall Mounted Regulatory Sign - No Smoking
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	

Overall Height:	2'-0"
Overall Width:	1'-6"
Logo Height:	
Letter Height:	
Illuminated:	Non Illuminated

Restoration Notes: Patch and repair existing wall surface to like new condition. Repaint to match existing color finish. For brick or stone walls fill holes with matching silicone. Power wash wall if required. Field verify dimensions of space shown in photo morph prior to fabrication to verify if specified sign will fit in area. See control documents for product specification and master agreement for removal

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EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



REG-W1-NS
18”x24”

Existing

Sign Number:	053b
Existing Sign Type:	Smoke Free
Face Material:	Metal
Graphics Material:	Painted Letters
Overall Height:	
Face Height:	12"
Face Width:	18"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	silkscreened graphics on pole sign

Proposed

Sign Number:	053b
Sign Type:	REG-W1-NS
Description:	Large Wall Mounted Regulatory Sign - No Smoking
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	

Overall Height:	2'-0"
Overall Width:	1'-6"
Logo Height:	
Letter Height:	
Illuminated:	Non Illuminated

Restoration Notes: Patch and repair existing wall surface to like new condition. Repaint to match existing color finish. For brick or stone walls fill holes with matching silicone. Power wash wall if required. Field verify dimensions of space shown in photo morph prior to fabrication to verify if specified sign will fit in area. See control documents for product specification and master agreement for removal

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EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo

Remove Existing Sign

Existing

Sign Number:	053c
Existing Sign Type:	Regulatory Sign
Face Material:	Metal
Graphics Material:	Painted Letters
Overall Height:	
Face Height:	12"
Face Width:	18"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	Faded Mercy permit parking

Proposed

Sign Number:	053c
Sign Type:	Remove
Description:	Remove Faded Sign
Action:	
Message A:	
Message B:	
Comments:	Remove the upper sign.
Restoration Notes:	

Overall Height:	
Overall Width:	
Logo Height:	
Letter Height:	
Illuminated:	

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EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo

Leave Existing Sign

Existing

Sign Number:	053d
Existing Sign Type:	Regulatory Sign
Face Material:	Metal
Graphics Material:	Vinyl
Overall Height:	
Face Height:	12"
Face Width:	18"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	Faded Mercy permit parking

Proposed

Sign Number:	053d
Sign Type:	Leave
Description:	Leave Security Sign
Action:	Leave
Message A:	
Message B:	
Comments:	Leave Security Sign
Restoration Notes:	

Overall Height:	
Overall Width:	
Logo Height:	
Letter Height:	
Illuminated:	

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EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Existing

Sign Number:	054
Existing Sign Type:	Smoke Free
Face Material:	Metal
Graphics Material:	Painted Letters
Overall Height:	
Face Height:	12"
Face Width:	18"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	silkscreened graphics on pole sign

Proposed

Sign Number:	054
Sign Type:	REG-P2-NS-DF
Description:	Small Pole Mounted Regulatory Sign - No Smoking - D/F
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	double-sided

Overall Height:	1'-5"
Overall Width:	1'-0"
Logo Height:	
Letter Height:	
Illuminated:	Non Illuminated

Restoration Notes: Patch and repair existing wall surface to like new condition. Repaint to match existing color finish. For brick or stone walls fill holes with matching silicone. Power wash wall if required. Field verify dimensions of space shown in photo morph prior to fabrication to verify if specified sign will fit in area. See control documents for product specification and master agreement for removal

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EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Existing

Sign Number:	055
Existing Sign Type:	
Face Material:	Metal
Graphics Material:	Vinyl
Overall Height:	
Face Height:	36"
Face Width:	32"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	Break formed at ends. Attached to pole with worm drive straps -10ft to bottom of sign

Proposed

Sign Number:	055
Sign Type:	PL-1
Description:	Parking Lot Sign
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	
Restoration Notes:	Field verify dimensions of space shown in photo morph prior to fabrication to verify if specified sign will fit in area. See control documents for product specification and master agreement for removal

Overall Height:	1'-6"
Overall Width:	2'-0"
Logo Height:	
Letter Height:	
Illuminated:	Non Illuminated

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EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Existing

Sign Number:	055b
Existing Sign Type:	Regulatory - Pole Mo
Face Material:	Metal
Graphics Material:	Vinyl
Overall Height:	
Face Height:	36"
Face Width:	32"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	Break formed at ends. Attached to pole with worm drive straps -10ft to bottom of sign

Proposed

Sign Number:	055b
Sign Type:	PL-1
Description:	Parking Lot Sign
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	
Restoration Notes:	Field verify dimensions of space shown in photo morph prior to fabrication to verify if specified sign will fit in area. See control documents for product specification and master agreement for removal

Overall Height:	1'-6"
Overall Width:	2'-0"
Logo Height:	
Letter Height:	
Illuminated:	Non Illuminated

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EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Existing

Sign Number:	056
Existing Sign Type:	Regulatory - Pole Mo
Face Material:	Metal
Graphics Material:	Vinyl
Overall Height:	
Face Height:	36"
Face Width:	32"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	Break formed at ends. Attached to pole with worm drive straps -10ft to bottom of sign

Proposed

Sign Number:	056
Sign Type:	PL-1
Description:	Parking Lot Sign
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	
Restoration Notes:	Field verify dimensions of space shown in photo morph prior to fabrication to verify if specified sign will fit in area. See control documents for product specification and master agreement for removal

Overall Height:	1'-6"
Overall Width:	2'-0"
Logo Height:	
Letter Height:	
Illuminated:	Non Illuminated

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EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Existing

Sign Number:	056b
Existing Sign Type:	Regulatory - Pole Mo
Face Material:	Metal
Graphics Material:	Vinyl
Overall Height:	
Face Height:	36"
Face Width:	32"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	Break formed at ends. Attached to pole with worm drive straps -10ft to bottom of sign

Proposed

Sign Number:	056b
Sign Type:	PL-1
Description:	Parking Lot Sign
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	
Restoration Notes:	Field verify dimensions of space shown in photo morph prior to fabrication to verify if specified sign will fit in area. See control documents for product specification and master agreement for removal

Overall Height:	1'-6"
Overall Width:	2'-0"
Logo Height:	
Letter Height:	
Illuminated:	Non Illuminated

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EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



REG-W2-NS
12”x17”

Existing

Sign Number:	057
Existing Sign Type:	Smoke Free
Face Material:	Metal
Graphics Material:	Painted Letters
Overall Height:	
Face Height:	12"
Face Width:	18"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	silkscreened graphics on pole sign

Proposed

Sign Number:	057
Sign Type:	REG-W2-NS
Description:	Small Wall Mounted Regulatory Sign - No Smoking
Action:	
Message A:	
Message B:	
Comments:	Reuse pole. Pole appears to be in good condition
Restoration Notes:	

Overall Height:	1'-5"
Overall Width:	1'-0"
Logo Height:	
Letter Height:	
Illuminated:	Non Illuminated

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EMHS

Site Number: 000048

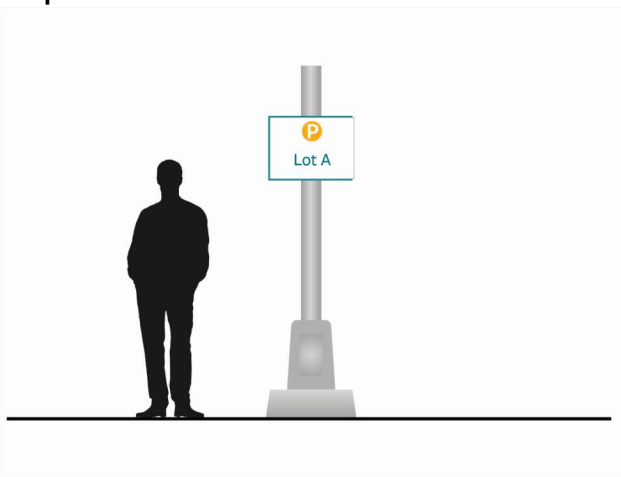
Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Existing

Sign Number:	058
Existing Sign Type:	Regulatory - Pole Mo
Face Material:	Metal
Graphics Material:	Vinyl
Overall Height:	
Face Height:	36"
Face Width:	32"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	Break formed at ends. Attached to pole with worm drive straps -10ft to bottom of sign

Proposed

Sign Number:	058
Sign Type:	PL-1
Description:	Parking Lot Sign
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	
Restoration Notes:	Field verify dimensions of space shown in photo morph prior to fabrication to verify if specified sign will fit in area. See control documents for product specification and master agreement for removal

Overall Height:	1'-6"
Overall Width:	2'-0"
Logo Height:	
Letter Height:	
Illuminated:	Non Illuminated

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EMHS

Site Number: 000048

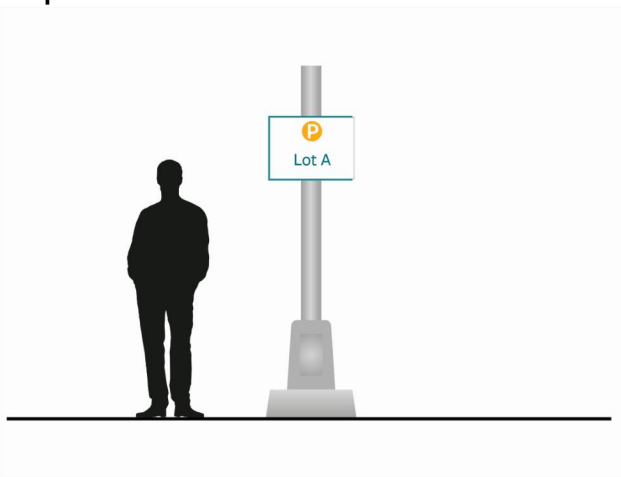
Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo



Existing

Sign Number:	058b
Existing Sign Type:	Regulatory - Pole Mo
Face Material:	Metal
Graphics Material:	Vinyl
Overall Height:	
Face Height:	36"
Face Width:	32"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	Break formed at ends. Attached to pole with worm drive straps -10ft to bottom of sign

Proposed

Sign Number:	058b
Sign Type:	PL-1
Description:	Parking Lot Sign
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	
Restoration Notes:	Field verify dimensions of space shown in photo morph prior to fabrication to verify if specified sign will fit in area. See control documents for product specification and master agreement for removal

Overall Height:	1'-6"
Overall Width:	2'-0"
Logo Height:	
Letter Height:	
Illuminated:	Non Illuminated

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EMHS

Site Number: 000048

Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo

Reg-W2
12”x17”



Existing

Sign Number:	059
Existing Sign Type:	
Face Material:	Metal
Graphics Material:	Vinyl
Overall Height:	
Face Height:	18"
Face Width:	12"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	Branded EV parking

Proposed

Sign Number:	059
Sign Type:	REG-W2
Description:	Small Wall Mounted Regulatory Sign
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	Reuse pole. Pole appears to be in good condition
Restoration Notes:	Field verify dimensions of space shown in photo morph prior to fabrication to verify if specified sign will fit in area. See control documents for product specification and master agreement for removal

Overall Height:	1'-5"
Overall Width:	1'-0"
Logo Height:	
Letter Height:	
Illuminated:	Non Illuminated

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Existing Photo



Proposed Photo

Reg-W2
12”x17”



Existing

Sign Number:	060
Existing Sign Type:	
Face Material:	Metal
Graphics Material:	Vinyl
Overall Height:	
Face Height:	18"
Face Width:	12"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	Branded EV parking

Proposed

Sign Number:	060
Sign Type:	REG-W2
Description:	Small Wall Mounted Regulatory Sign
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	Reuse pole. Pole appears to be in good condition
Restoration Notes:	Field verify dimensions of space shown in photo morph prior to fabrication to verify if specified sign will fit in area. See control documents for product specification and master agreement for removal

Overall Height:	1'-5"
Overall Width:	1'-0"
Logo Height:	
Letter Height:	
Illuminated:	Non Illuminated

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EMHS

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Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo

Reg-W2
12”x17”



Existing

Sign Number:	061
Existing Sign Type:	
Face Material:	Metal
Graphics Material:	Vinyl
Overall Height:	
Face Height:	18"
Face Width:	12"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	Branded EV parking

Proposed

Sign Number:	061
Sign Type:	REG-W2
Description:	Small Wall Mounted Regulatory Sign
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	Reuse pole. Pole appears to be in good condition
Restoration Notes:	Field verify dimensions of space shown in photo morph prior to fabrication to verify if specified sign will fit in area. See control documents for product specification and master agreement for removal

Overall Height:	1'-5"
Overall Width:	1'-0"
Logo Height:	
Letter Height:	
Illuminated:	Non Illuminated

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EMHS

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Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

Existing Photo



Proposed Photo

Reg-W2
12”x17”



Existing

Sign Number:	062
Existing Sign Type:	
Face Material:	Metal
Graphics Material:	Vinyl
Overall Height:	
Face Height:	18"
Face Width:	12"
Square Feet:	
Illuminated:	Non Illuminated
Electrical:	
Wall Material:	
Sign Comment:	Branded EV parking

Proposed

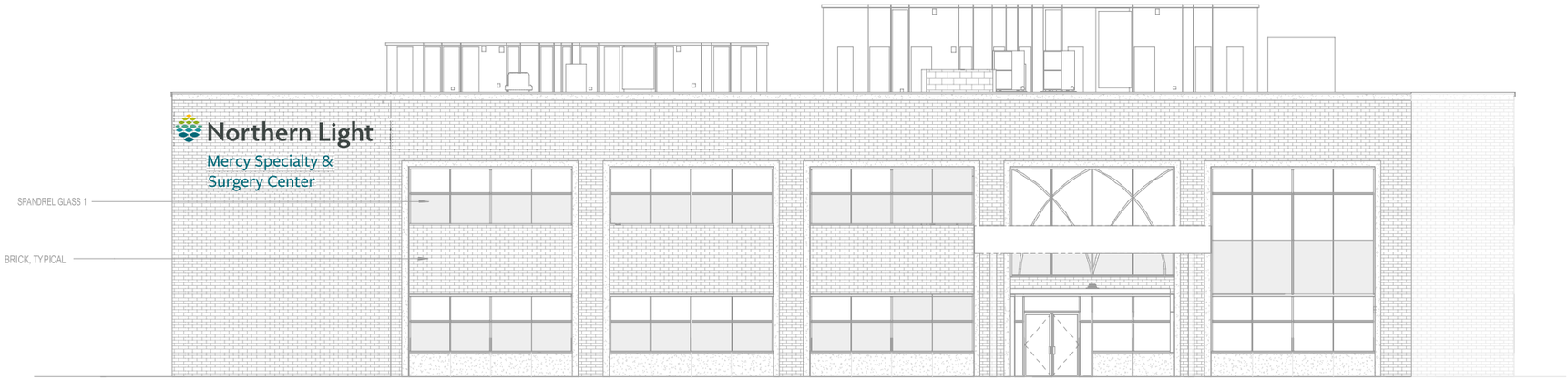
Sign Number:	062
Sign Type:	REG-W2
Description:	Small Wall Mounted Regulatory Sign
Action:	Remove and Replace
Message A:	
Message B:	
Comments:	Reuse pole. Pole appears to be in good condition
Restoration Notes:	Field verify dimensions of space shown in photo morph prior to fabrication to verify if specified sign will fit in area. See control documents for product specification and master agreement for removal

Overall Height:	1'-5"
Overall Width:	1'-0"
Logo Height:	
Letter Height:	
Illuminated:	Non Illuminated

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Concept Signage Proposals - New Surgery Center

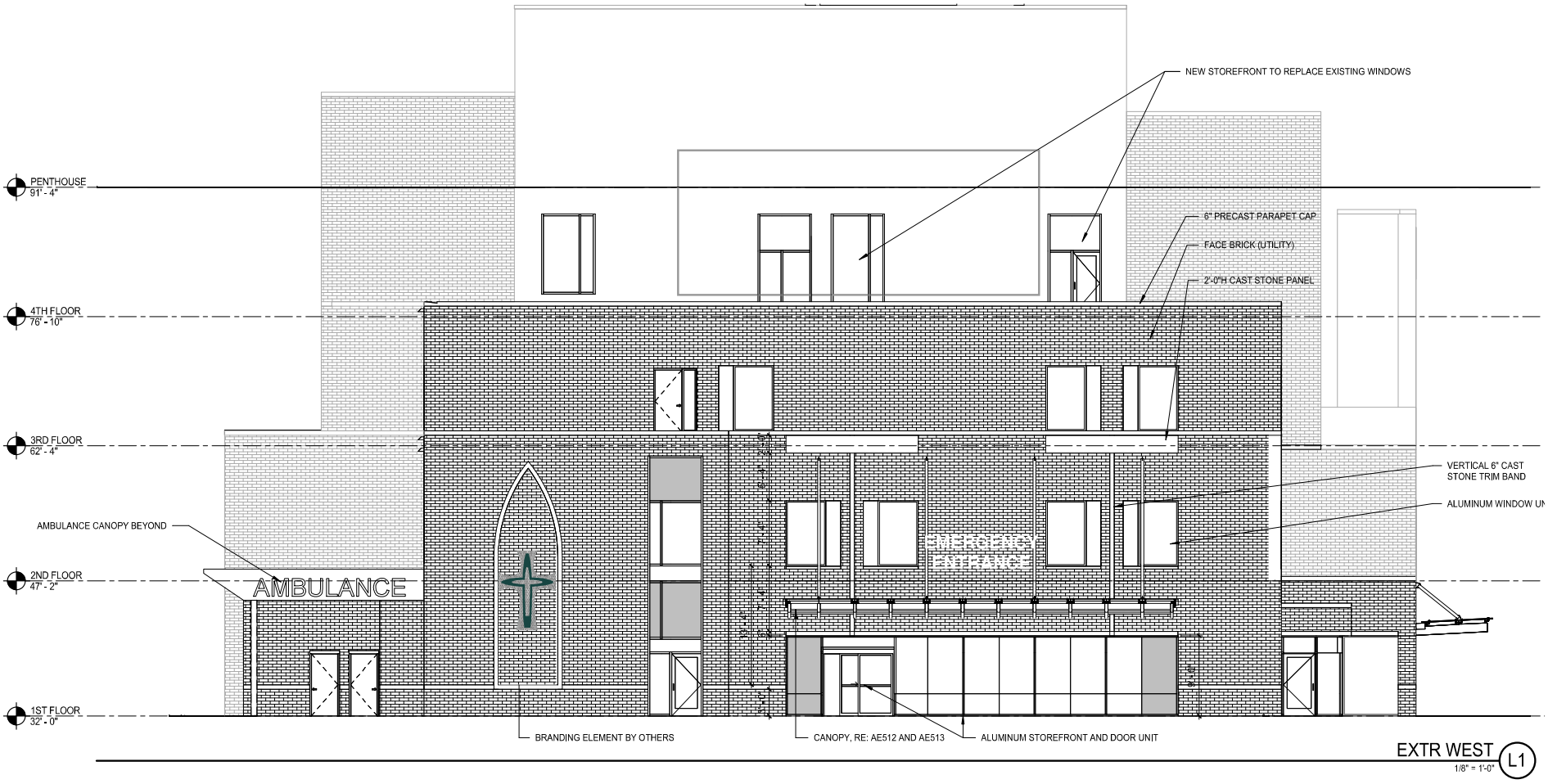


EXTERIOR ELEVATION - SOUTH D1

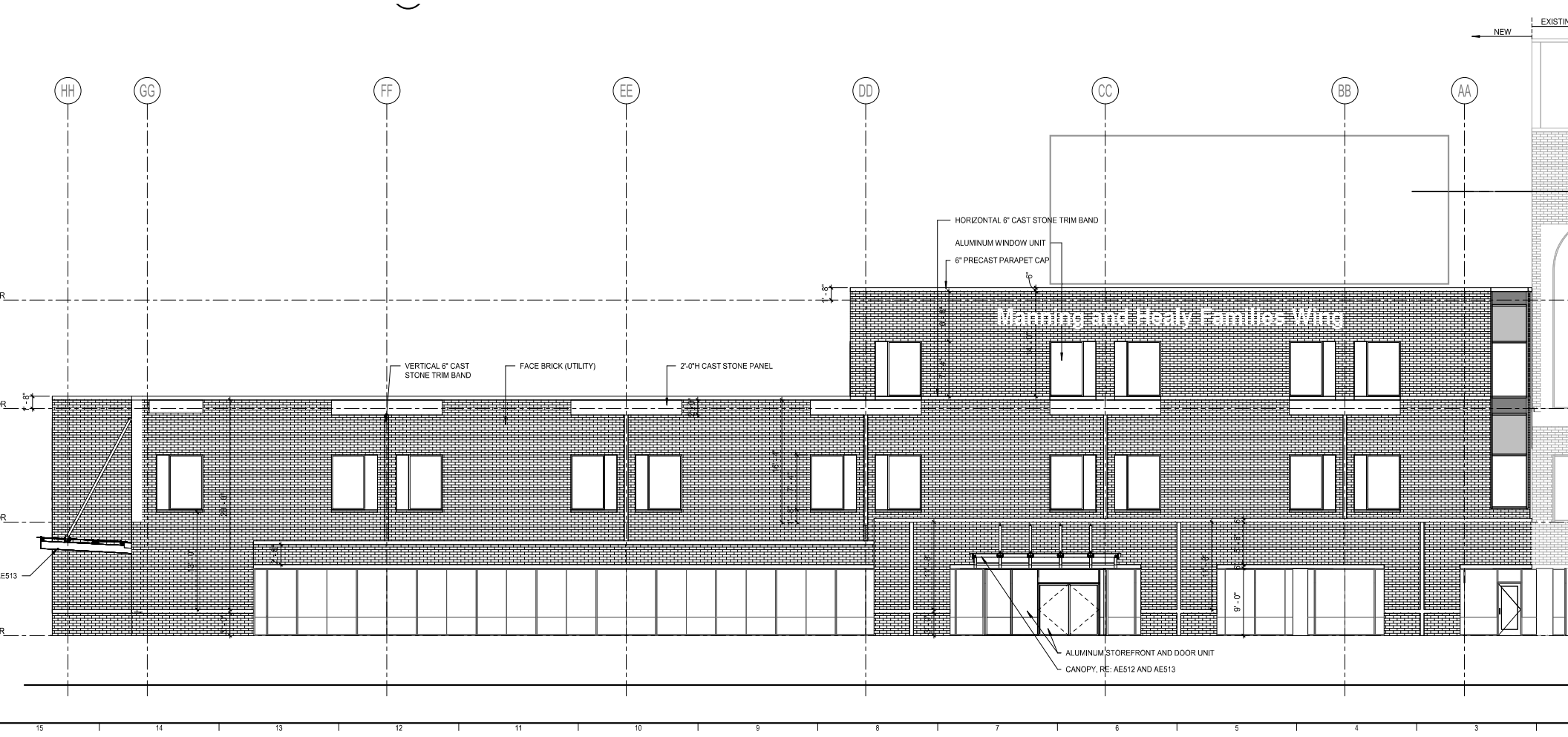


EXTERIOR ELEVATION - WEST A1

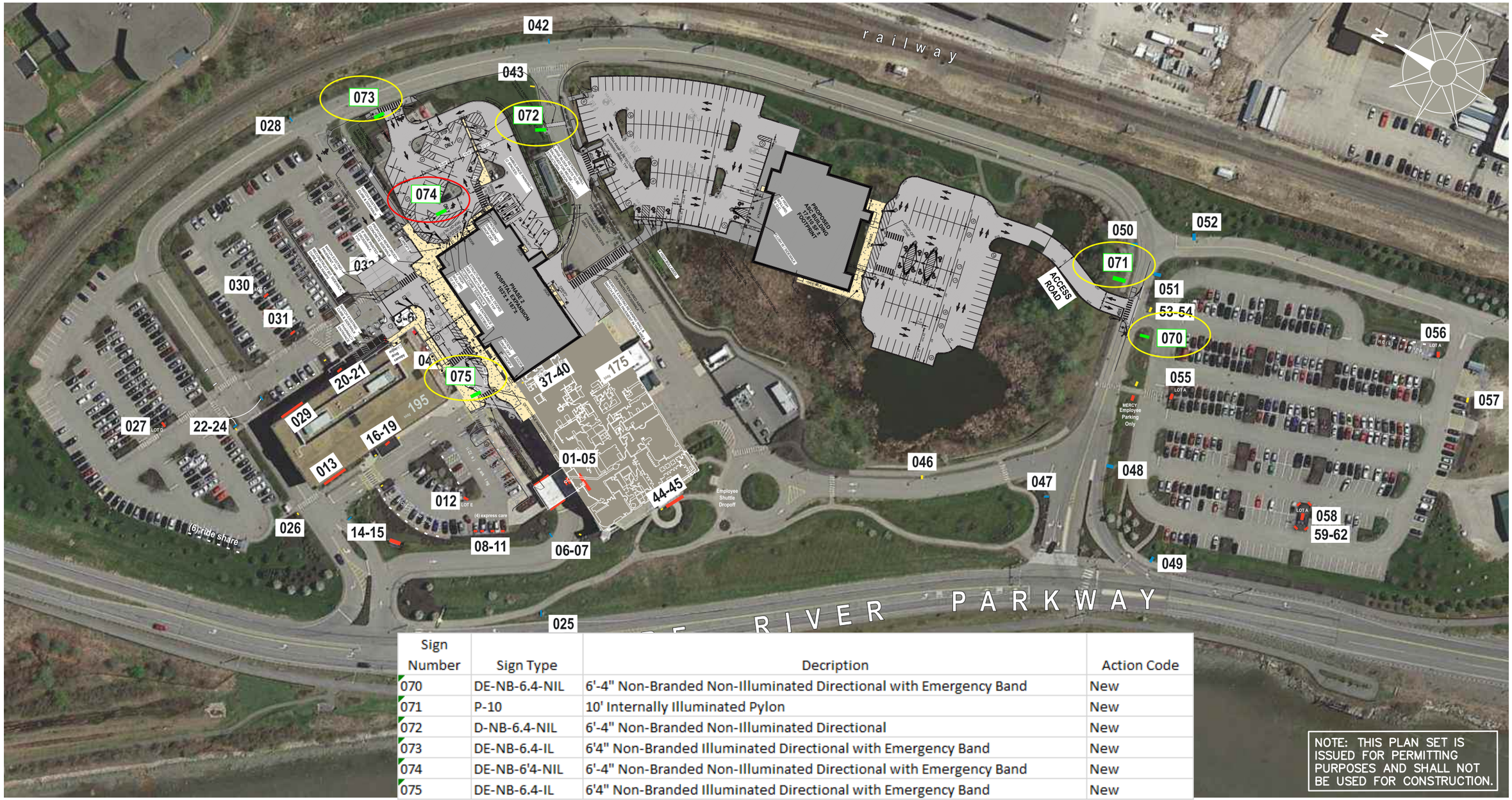
Concept Signage Proposals - Hospital Expansion West Facade



Concept Signage Proposals - Hospital Expansion South Facade



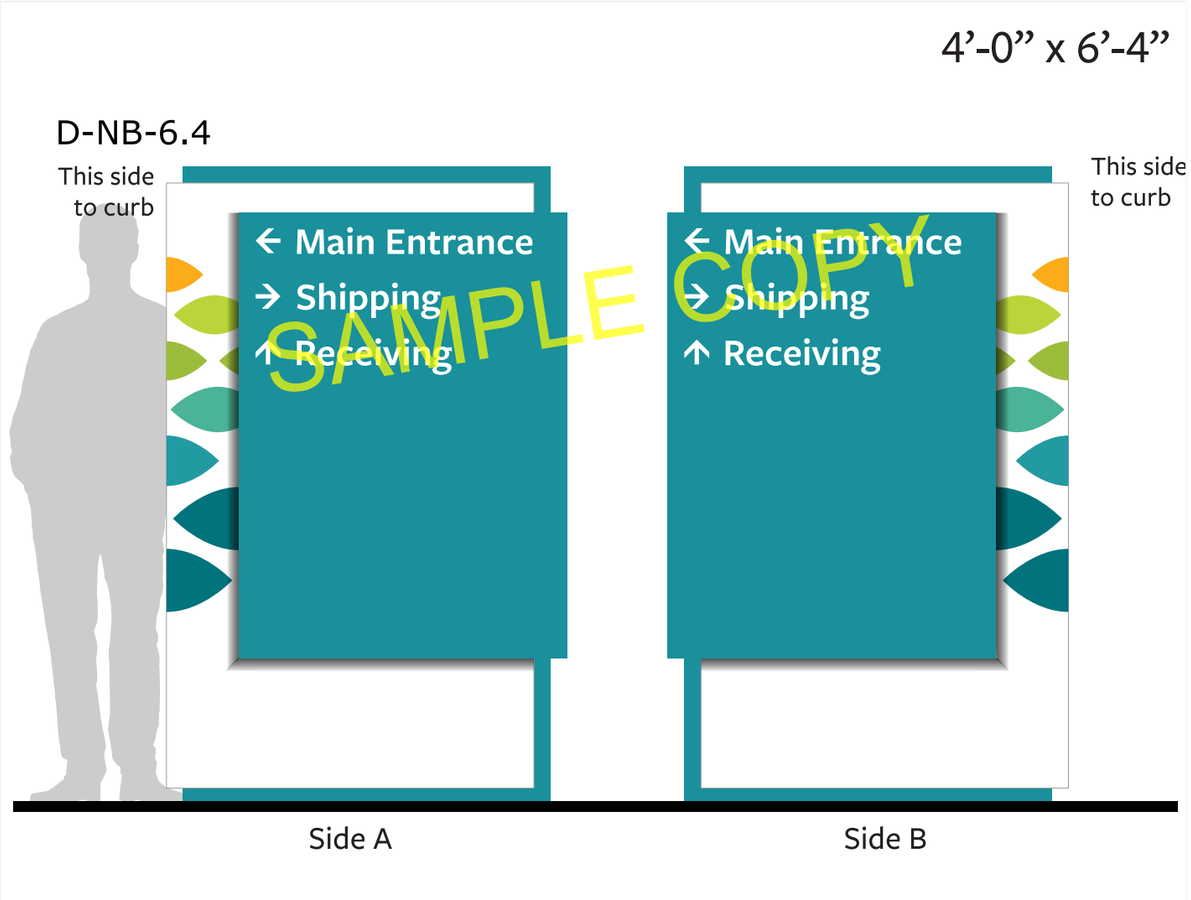
Current and Future State Proposed Sign Locations



Sign Number	Sign Type	Decription	Action Code
070	DE-NB-6.4-NIL	6'-4" Non-Branded Non-Illuminated Directional with Emergency Band	New
071	P-10	10' Internally Illuminated Pylon	New
072	D-NB-6.4-NIL	6'-4" Non-Branded Non-Illuminated Directional	New
073	DE-NB-6.4-IL	6'4" Non-Branded Illuminated Directional with Emergency Band	New
074	DE-NB-6'4-NIL	6'-4" Non-Branded Non-Illuminated Directional with Emergency Band	New
075	DE-NB-6.4-IL	6'4" Non-Branded Illuminated Directional with Emergency Band	New

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.

Future State Proposed Sign Design



Signs 070-073



Signs 074-075

monigle

Attachment S.

From:	Cough, Jamie
To:	Kaleb Bourassa
Subject:	CMP Ability to Serve Request and Three Phase Service Process-Mercy Hospital Fore River Phase II
Date:	Monday, November 25, 2019 6:54:51 AM
Attachments:	image001.jpg Easement_Information_Worksheet.doc Standard Easement Sample.pdf Draft April 2019 EDET.XLSX

11/25/2019

Kaleb Bourassa, EI
Design Engineer
Gorrill Palmer
707 Sable Oaks Drive, Suite 30
South Portland, ME 04106

Subject: Mercy Hospital - Phase II Development
Fore River Parkway – Portland, Maine
Letter of Ability to Serve Request

SAP Notification Temp is TBD
SAP Notification Permanent is TBD

(please set these up asap)

Project Description:

The proposed development includes construction of Phase II at the Northern Light℠ Mercy Hospital – Fore River Campus. The project includes an approximately 20,140 SF footprint expansion of the existing hospital facility, construction of an approximately 17,574 SF footprint stand-alone Ambulatory Surgical Center (ASC), and associated pedestrian and vehicular infrastructure.

CMP has the ability to serve the proposed project in accordance with our CMP Handbook (web link below). We can provide you the desired pad or pole mounted transformers per your request and city approval, in accordance with our CMP Handbook of Standard Requirements. If you have any questions on the process, or need help in completion of the documents, **please contact me at 207-629-1489.**

Here is our typical process for getting your three phase or CT rated single phase service installed. If you have any questions, please let me know. The underlined links will redirect you to the appropriate site for additional information. If this is a single phase service with all self-contained metering, the process is simplified, but still begins with a call to CMP.

Service Milestones for Three Phase Services and CT Rated Single Phase Services. Please refer to

CMP Installation Checklists for other installations.

- Call 1-800-565-3181 to establish a new account (if needed) and an SAP work order. Please provide both of these to me.
- Submit Load information. Please complete the attached EDET (excel file) using load information. . Please complete this and email back to me.
- Submit the easement information worksheet. Please complete this form and either email or fax back to me.
- Submit any electronic drawings (PDF (preferred) or DWG files) of the site layout and proposed electrical connections if you have them.
- Preliminary meetings with CMP Advisor and Engineer to determine details of job (I will need to schedule with your electrician/contractor-please let me know who this is)
- Field planner design appointment to cost out job and develop CMP Invoice. The invoice is typically generated 5-6 weeks after the design appointment. This expires after 90 days from the invoice date.
- CMP submits invoice to the customer for payment (typically via email). Payment received from customer.
- Easements (based on easement information worksheet) sent out, signed and originals returned to CMP.
- Job scheduled for completion after the electrical inspection has been received.

This process can take several months, depending upon several factors including transformer or materials delivery, return of completed paperwork, and other jobs in the system that may be ahead of yours. In addition, contact with the other utilities, including telephone and cable, should be commenced as soon as practical. They may have additional work or charges in addition to the CMP work required to bring your project on line.

Please complete the attached forms (the specific instructions are on each form) and email them back to me at your earliest convenience.

For your convenience, here is a link to the CMP Website which contains our Handbook with details on most service requirements: CMP Handbook of Standard Requirements

You will be responsible for installing the customer connections, conduits, and metering in accordance with the CMP Handbook of Standard Requirements. The transformer will be sized based on your submitted load sheets.

Your deposit amount will be typically based on an estimated two month bill, calculated from your completed load sheet unless otherwise determined by CMP.

Metering:

All metering (including locations) must be preapproved by CMP.

Chapter 324 Interconnections:

Please be advised that if you plan to install solar/wind/hydro generation, you must complete an application under the MPUC mandated Chapter 324 Interconnection Standards. If you go to Chapter 324 Interconnection Standards and follow the instructions for the Small Generator Interconnection Procedures, CMP can do this work in parallel to your service request that will be handled by me. If you project is under 660 KW You will be able to have a Customer Net Energy Billing contract. Information concerning Customer Net Energy Billing can be accessed thru the Chapter 324 website or by clicking here: Net Energy Billing

Reallocation/Line Extensions:

Recently, changes were made to the three-phase construction policy, which require CMP to reallocate construction costs paid by customers. If applicable, those projects identified as "developments" do not qualify for reallocation of funds. Please see this document at our website for details about the reallocation conditions. Any reallocation charges will be specifically denoted on your invoice. The website address for this is: PolyphaseLineExtension .

This line extension will be part of Central Maine Power's distribution system. In the event the property served under this Agreement is sold or otherwise conveyed, all rights and obligations of the Agreement shall stay with the property. Please note that if you rent or lease this property to another and you want to receive the reimbursement payments, you must make special arrangements with the Central Maine Power Company. Otherwise, any reimbursement payments will be sent to the "Customer" taking service at the service location.

Electricity Supplier Information:

Central Maine Power Company (CMP) will provide your facility with electric delivery service. If you don't already have a provider, you will need to make arrangements with a competitive electricity provider in order to receive electricity supply for your facility. In the event you fail to choose a competitive electricity provider, you will receive Standard Offer service arranged by the Maine Public Utilities Commission. If you wish to be served by a competitive electricity provider immediately upon establishment of delivery service, you must arrange for this service directly through your chosen competitive electricity provider, who must enroll your account no later than 5 PM on the business day prior initiation of delivery service by CMP. An up-to-date list of competitive suppliers can be found at the:

1) Maine Public Utilities Commission (MPUC) web site- **Maine PUC**
2) By calling the MPUC at (207) 287-3831

Attachments:

Excel Load Sheet (EDET)
Easement Worksheet and Sample Standard Easement

Regards,

Jamie

Jamie Cough
Energy Services Advisor
Central Maine Power Company
162 Canco Road
Portland, ME 04103
207-629-1489 office



==========

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Portland Water District

FROM SEBAGO LAKE TO CASCO BAY

November 15, 2019

Stephen Bushey P.E.
707 Sable Oaks Drive, Suite 30
South Portland, ME 04106

Re: 175/195 Fore River Parkway, PO
Ability to Serve with PWD Water

Dear Mr. Bushey:

The Portland Water District has received your request for an Ability to Serve Determination for the noted site submitted on August 13, 2019. Based on the information provided per plans dated November 14, 2019, we can confirm that the District will be able to serve the proposed project as further described in this letter. **Please note that this letter constitutes approval of the water system as currently designed. Any changes affecting the approved water system will require further review and approval by PWD.**

Conditions of Service

The following conditions of service apply:

- A new 6-inch fire service and 4-inch domestic service with a 1.5-inch meter may be installed to the ASC Facility from the 12-inch PVC water main in the Mercy Hospital ROW. The service(s) should enter through the properties frontage at least 10-feet from any side property lines.
- An approved backflow prevention device must be installed on the service lines directly after the meter and before the fire sprinkler riser prior to service activation. Please refer to the PWD website for more information on cross-connection control policies.
- The existing 12-inch PVC service to Mercy Hospital may be used for the proposed building expansion as long as the project team determines that it will provide adequate flow and pressure for the proposed use. The existing 8-inch meter has sufficient capacity to handle the additional demand of the site.

Prior to construction, the owner or contractor will need to make an appointment to complete a service application form and pay all necessary fees. The appointment shall be requested through MEANS@pwd.org or by calling 207-774-5961 ext. 3199. Please allow (3) business days to process the service application paperwork. PWD will guide the applicant through the new development process during the appointment.

Existing Site Service

According to District records, the project site does currently have existing water service. A 12-inch diameter PVC combined fire and domestic service line provides water service to the site. Please refer to the "Conditions of Service" section of this letter for requirements related to the use of this service.

Water System Characteristics

According to District records, there is an 12-inch diameter PVC water main in Mercy Hospital ROW and a public fire hydrant located adjacent to the site. Recent flow data is not available in this area. The most recent static pressure reading was 99 psi.

Public Fire Protection

The installation of new public hydrants to be accepted into the District water system will most likely not be required. It is your responsibility to contact the City of Portland Fire Department to ensure that this project is adequately served by existing and/or proposed hydrants.

Domestic Water Needs

The data noted above indicates there should be adequate pressure and volume of water to serve the domestic water needs of your proposed project. Based on the high water pressure in this area, we recommend that you consider the installation of pressure reducing devices that comply with state plumbing codes.

Private Fire Protection Water Needs

You have indicated that this project will require water service to provide private fire protection to the site. Please note that the District does not guarantee any quantity of water or pressure through a fire protection service. Please share these results with your sprinkler system designer so that they can design the fire protection system to best fit the noted conditions. If the data is out of date or insufficient for their needs, please contact MEANS to request a hydrant flow test and we will work with you to get more complete data.

Should you disagree with this determination, you may request a review by the District's Internal Review Team. Your request for review must be in writing and state the reason for your disagreement with the determination. The request must be sent to MEANS@PWD.org or mailed to 225 Douglass Street, Portland Maine, 04104 c/o MEANS. The Internal Review Team will undertake review as requested within 2 weeks of receipt of a request for review.

If the District can be of further assistance in this matter, please let us know.

Sincerely,
Portland Water District



Robert A. Bartels, P.E.
Senior Project Engineer

Unitil
Northern Utilities, Inc.

November 27, 2019

Kaleb Bourassa
Gorrill Palmer
707 Sable Oaks Drive
Suite 30
South Portland, ME 04106

RE: Mercy Hospital – Ability to Serve Request

Dear Kaleb:

This letter is in response to your November 22, 2019 letter to Unitil requesting confirmation of Unitil's ability to serve the Mercy Hospital Phase II Development. Until currently has natural gas infrastructure serving the existing Mercy Hospital Fore River Campus. Based on the preliminary design provided, our gas facilities have the capacity to serve the proposed Development.

If you have any questions, please contact me at 207-541-2534.

Sincerely,

Michael T. Smith
Manager, Business Services

Google Groups

Re: a bug in your ear-- Mercy Fore River opportunity

Kimberly M. Cook <kcook@portlandmaine.gov> Jan 16, 2020 7:49 PM
Posted in group: **Planning Board**

William - Thank you for contacting me and the Council about your concerns and ideas regarding Mercy Phase 2. I am not familiar with the plans but I suspect this is a plan that is going before the Planning Board. I have copied the Planning Board on this email so that they have the benefit of your input.

Anytime we have the opportunity to preserve public access to the water is an opportunity that should be fully explored.

Thanks
Kim

Kim Cook
Portland City Council, District 5
Deering Ctr., Riverton, No. Deering
www.kimcook.org
207.874.8986

On Thu, Jan 16, 2020 at 4:15 PM wwilson2829@yahoo.com <wwilson2829@yahoo.com> wrote:

> To all: the new Mercy Phase II, down by the river, is teeny, compared to its original plan 25 years ago. There will be considerable land left over now, which might be wasted (some paved). And if you took a drone trip around Portland, you would realize that the tiny lot which has just gotten a grant, down by Phineas Sprague's old Portland Co, is miniscule, as compared to the public access which now very readily could, and should, be gotten, and funded down there by the Fore River. There are huge public access opportunities down there now, related to a pretty amazing stretch of beautiful waterfront. Mercy should be working with Maine Islands and others, to preserve access. The old Cumberland Canal came down through there, to the old Vaughn St. bridge, it's an amazing space.
>
> More to the point, the original 1990s-era plan for that end of the peninsula is out of date --- tarmac's much too predominant, among other things. Somebody ought sit down with Mercy/Northern CEO and say, hey what can we do here? (Pan Am also needs contact, they own the RR line, and their interests have conflicted with prudent use of Thompson's Point -- city should've by now required that Pan Am fence-in its tracks --easily done, every day, to insure safe pedestrian and auto access to the Thompson's Point property adjacent to Mercy property -- and to insure that Portland Trail runs through there efficiently.) If Mercy Phase II plan goes through as styled, the city loses last opportunity for (incredible) citizen access to shoreline. I view it as an emergency -- but then, nobody ever goes down there, because it is, based upon the old plan, a neglected backwater, literally, so no one knows about it.
>
> No city official should take any action on Mercy Phase II without doing a tour -- I've been running down there for 30 years, and it is a neglected jewel.
>
> Wm Wilson Portland Maine USA 04102 wwilson2829@yahoo.com

SITE DEVELOPMENT PLANS

FOR

Northern Light℠ Mercy Hospital

FORE RIVER CAMPUS CONSOLIDATION

PORTLAND, MAINE

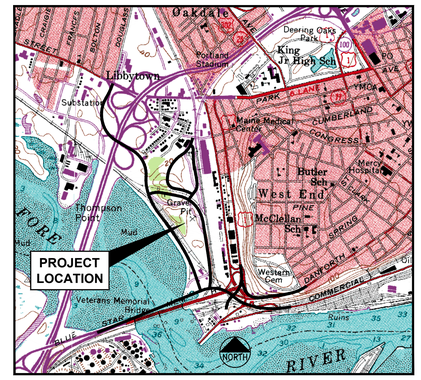
AUGUST 2019

DESIGN DEVELOPMENT / PERMIT APPROVAL

OWNER	TAX MAP-BLOCK-LOT NUMBER
MERCY HOSPITAL	73-A-1
MERCY HOSPITAL	73-B-2 (MUD FLATS)
MERCY HOSPITAL	73-B-7
MERCY HOSPITAL	74-A-1
MERCY HOSPITAL	74-A-2
MERCY HOSPITAL	74-B-3 (MUD FLATS)
MERCY HOSPITAL	74-B-11
MERCY HOSPITAL	74-B-12
MERCY HOSPITAL	75-B-30 (MUD FLATS)
MERCY HOSPITAL	74A-A-1 (MUD FLATS)
MERCY HOSPITAL	74A-A-2 (MUD FLATS)
MERCY HOSPITAL	75-A-3
MERCY HOSPITAL	75-B-4
MERCY HOSPITAL	75A-A-1 (MUD FLATS)
MERCY HOSPITAL	75A-A-17
MERCY HOSPITAL	76-B-33
MERCY HOSPITAL	76A-B-1 (MUD FLATS)
MERCY HOSPITAL	76A-B-2

CURRENT OWNER / APPLICANT

MERCY HOSPITAL d/b/a Northern Light Mercy Hospital
144 STATE STREET
PORTLAND, MAINE 04101
CONTACT: NICK MUNRO - FACILITY PROJECT MANAGER
NORTHERN LIGHT HEALTH
PORTLAND OFFICE - 207.553.6633
cell - 207.232.3285
nmunro@northernlight.org



LOCATION MAP
N.T.S.

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*PLAN NOT INCLUDED IN THIS SUBMISSION

I HEREBY ACKNOWLEDGE THAT THESE PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECT SUPERVISION, AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MAINE AND THAT I AM COMPETENT TO PREPARE THIS DOCUMENT.

UTILITIES

WATER:
PORTLAND WATER DISTRICT
22 DOUGLASS STREET
P.O. BOX 3553
PORTLAND, MAINE 04104
207.761.8310
CONTACT: ROBERT BARTELS
rbartels@pwd.org

SEWER:
CITY OF PORTLAND
PUBLIC SERVICES DIVISION
212 CANCO ROAD
PORTLAND, MAINE 04103
207.874.8840
CONTACT: KEITH GRAY / BRAD ROLAND

ELECTRIC:
CENTRAL MAINE POWER
162 CANCO ROAD
PORTLAND, MAINE 04103
207.842.2367
CONTACT: JAMIE COUGH

TELEPHONE:
CONSOLIDATED COMMUNICATIONS
5 DAVIS HILL FARM ROAD
PORTLAND, MAINE 04103
207.797.1866
CONTACT: PATRICK MORRISON

NATURAL GAS:
NORTHERN UTILITIES / UNITIL
1075 FOREST AVENUE
PORTLAND, MAINE 04103
207.797.8002, EXT. 6220
CONTACT: CRAIG CAMPBELL / SCOTT CARPENTER
207.650.6716

CABLE TV:
TIME WARNER CABLE / SPECTRUM
115 JOHNSON ROAD
PORTLAND, MAINE 04102
207.253.2324
CONTACT: MARK PELLETIER

DIG SAFE:
CALL BEFORE YOU DIG
DIAL 811 (AT LEAST 72 HRS IN ADVANCE)

PERMITS / APPROVALS

TYPE:	GOVERNING BODY:	STATUS/DATE ISSUED:
LOCAL		
SITE PLAN PERMIT:	CITY OF PORTLAND PLANNING AUTHORITY CITY HALL, CONGRESS STREET PORTLAND, MAINE 04103 207.874.8608 CONTACT: CHRISTINE GRIMANDO	LEVEL III SITE PLAN APPLICATION - TENTATIVE SUBMITTAL AUGUST 2019
BUILDING PERMIT:	CITY OF PORTLAND CODE ENFORCEMENT OFFICE CITY HALL, CONGRESS STREET PORTLAND, MAINE 04103 207.874.8900	TO BE DETERMINED
STATE		
MAINE DEP SITE LOCATION OF DEVELOPMENT ACT PERMIT:	MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION 312 CANCO ROAD PORTLAND, MAINE 04103 207.822.6300 CONTACT: CHRISTINE WOODRUFF	PERMIT ORDER L-20775-19-W-B (APPROVAL) 11/27/2017 L-20775-TG-X-M (APPROVAL) 11/27/2017 PROJECT TO COMMENCE NO LATER THAN 11/27/2021 AND BE COMPLETED BY 11/27/2024
MAINE DEP NATURAL RESOURCE PROTECTION ACT (NRPA) PERMIT:	MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION 312 CANCO ROAD PORTLAND, MAINE 04103 207.822.6300 CONTACT: CHRISTINE WOODRUFF	L-20775-TG-X-M (APPROVAL) IN LIEU FEE PAID PREVIOUSLY BY OWNER
UTILITY OPENING PERMITS:	CITY OF PORTLAND PUBLIC SERVICES DIVISION 212 CANCO ROAD PORTLAND, ME 04103	TO BE DETERMINED
MAINE DOT TRAFFIC PERMIT:	MAINE DEPARTMENT OF TRANSPORTATION SOUTHERN REGION (REGION 1) 51 PLEASANT HILL ROAD SCARBOROUGH, MAINE 04074 207.885.7000	ORIGINAL TRAFFIC MOVEMENT PERMIT APPROVED 05/13/2002 DIV. 06-00035-A-N
MAINE VOLUNTARY RESPONSE ACTION PLAN (VRAP):	MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF REMEDIATION AND WASTE MANAGEMENT 17 STATE HOUSE STATION AUGUSTA, MAINE 04333-0017 ATTN: NICHOLAS HODGKINS 207.623.8367	CERTIFICATE OF COMPLETION ISSUED 04/12/2011
FEDERAL		
NPDES PERMIT:	U.S. ENVIRONMENTAL PROTECTION AGENCY REGION 1 JFK FEDERAL BUILDING, ROOM 2209 BOSTON, MASSACHUSETTS 02203-2211	-
ARMY CORPS OF ENGINEERS SECTION 404 PERMIT	U.S.ARMY CORPS OF ENGINEERS 442 CIVIC CENTER DRIVE, SUITE 350 AUGUSTA, MAINE 04330 207.623.8367 ATTENTION: JAY CLEMENT	NAE-2012-00084 AND EXTENSION APPROVED TIME LIMIT TO COMPLETE WORK IS DECEMBER 31, 2022

CONSULTANT LIST

CIVIL ENGINEER / TRAFFIC ENGINEER:
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707 SABLE OAKS DRIVE, SUITE 30
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CONTACT: RANDY DUNTON
rdunton@gorrillpalmer.com

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CONTACT: WAYNE CHADBOURNE / BRYAN STEINERT
bsteinert@haleyaldrich.com

ENVIRONMENTAL ENGINEER:
Hoffman Engineering, Inc.
640 TEN ROD ROAD
NORTH KINGSTOWN, RHODE ISLAND 02852
401.294.9032
CONTACT: BOB HOFFMAN
hoffmanengineering@verizon.net

CONSTRUCTION MANAGER:
Consigli
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PORTLAND, MAINE 04101
207.791.2502
CONTACT: DAVE THOMAS
dthomas@consigli.com

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.

STATE OF MAINE
STEPHEN R. BUSHEY
08.30.19
LICENSED PROFESSIONAL ENGINEER
STEPHEN R. BUSHEY, P.E.
LIC. #7429

Rev.	Date	Revision
-	-	-

Issued For	Date	By
PERMIT APPROVAL SUBMISSION	08.30.19	SRB
DESIGN DEVELOPMENT SUBMISSION TO OWNER	07.31.19	SRB

Design: SRB	Draft: CDD	Date: AUG. 2019
Checked: SRB	Scale: NTS	Job No.: 3257.04
File Name: 325704-COVER.dwg		

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Drawing Name: Cover Sheet
Project: Fore River Campus Consolidation, Portland, Maine
Client: Northern Light Mercy Hospital, 144 State Street, Portland, Maine 04101

Drawing No. C-1.0

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GENERAL NOTES:

1. THE CONTRACTOR SHALL REFER TO THE PROJECT MANUAL FOR CONSTRUCTION SPECIFICATIONS AND BIDDING PROCEDURES.
2. THIS PROJECT WILL BE SUBJECT TO THE TERMS AND CONDITIONS OF ALL PERMITS ISSUED BY THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, THE U.S. DEPARTMENT OF THE ARMY CORPS OF ENGINEERS, LOCAL UTILITY COMPANIES AND THE CITY OF PORTLAND.
3. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF THE ENTRANCE, PAVING, PRECISE BUILDING DIMENSIONS, AND EXACT BUILDING UTILITY ENTRANCE POINTS. ENTRANCES IN MOST LOCATIONS REQUIRE STRUCTURAL SLABS. REFER TO THE ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR INFORMATION ON THE STRUCTURAL SLAB ENTRANCES.
4. ALL REQUIRED AND NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICE COMPANIES SHALL BE PERFORMED PRIOR TO ANNOUNCED BUILDING POSSESSIONS AND THE FINAL SERVICE CONNECTIONS.
5. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR THE ELEVATION OF THE EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AND DIG SAFE AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
6. MAINTENANCE OF EROSION CONTROL MEASURES IS OF PARAMOUNT IMPORTANCE TO THE APPLICANT AND THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL EROSION CONTROL MEASURES SHOWN ON THE PLANS. ADDITIONAL EROSION CONTROL MEASURES SHALL BE INSTALLED IF DEEMED NECESSARY BY ONSITE INSPECTIONS OF THE OWNER, THEIR REPRESENTATIVES, OR THE CITY, AT NO ADDITIONAL COST TO THE OWNER.
7. ALL MATERIAL SCHEDULES SHOWN ON THE PLANS ARE FOR GENERAL INFORMATION ONLY. THE CONTRACTOR SHALL PREPARE HIS OWN MATERIAL SCHEDULES BASED UPON HIS PLAN REVIEW. ALL SCHEDULES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO ORDERING MATERIALS OR PERFORMING WORK.
8. ALL MATERIALS AND CONSTRUCTION METHODS SHALL CONFORM TO THE PROJECT SPECIFICATIONS, THE CITY OF PORTLAND AND SERVICING UTILITY REQUIREMENTS, IN CASES WHERE THESE CONFLICT THE MOST STRINGENT SHALL APPLY AT NO EXTRA COST TO THE OWNER.
9. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING RECORD DRAWINGS THROUGHOUT THE PROJECT AND PROVIDING THE OWNER WITH A SET OF THE FINAL RECORD DRAWINGS WHEN THE PROJECT IS COMPLETE.
10. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ACCESS AT ALL TIMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY MARKINGS, SIGNAGE AND INCIDENTALS TO MAINTAIN SAFE VEHICLE AND PEDESTRIAN ACCESS THROUGH OUT THE LIFE OF THE PROJECT.

SITE LAYOUT NOTES:

1. ALL HANDICAP PARKING SPACES ARE TO RECEIVE HANDICAP SIGNS AND PAVEMENT MARKINGS AS ILLUSTRATED ON THE DETAIL SHEETS.
2. BITUMINOUS CONCRETE CURB AND GRANITE CURB SHALL MEET THE REQUIREMENTS OF MDOT 702.01, 703.07, AND 609.04.
3. ALL DIMENSIONING, UNLESS NOTED OTHERWISE, IS TO THE FACE OF CURB OR THE FACE OF THE BUILDING.
4. EXCEPT WHERE INDICATED OTHERWISE, THE PAVEMENT IS TO BE STANDARD DUTY PAVEMENT.
5. ALL TRAFFIC CONTROL SIGNS INDICATED ON THE SITE LAYOUT PLAN ARE TO MEET ALL REQUIREMENTS AND STANDARDS OF THE MAINE DEPARTMENT OF TRANSPORTATION, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITIONS AND THE AMERICANS WITH DISABILITIES ACT REQUIREMENTS.
6. STRIPE PARKING AREAS, DRIVES AND ROADWAY AS SHOWN, INCLUDING PARKING SPACES, STOP BARS, CROSSWALKS, HANDICAP SYMBOLS, PAINTED ISLANDS AND FIRE LANES. (ALL MARKINGS EXCEPT MEDIAN ISLANDS AND CENTERLINES TO BE CONSTRUCTED USING WHITE TRAFFIC PAINT.) ALL TRAFFIC PAINT SHALL MEET THE REQUIREMENTS OF AASHTO M248 TYPE `F'. MEDIAN ISLANDS AND CENTERLINES TO BE CONSTRUCTED USING YELLOW TRAFFIC PAINT.
7. SEE DETAILS FOR PARKING STALL DIMENSIONS, HANDICAP SYMBOLS, SIGNS AND SIGN POSTS.
8. STOP BARS SHALL BE 12" WIDE.
9. PAINTED ISLANDS SHALL BE 4" WIDE DIAGONAL LINES @ 3'-0" O.C. BORDERED BY 4" WIDE LINES.

GRADING & DRAINAGE NOTES:

1. ALL STORM DRAIN PIPE SHALL BE SMOOTH BORE INTERIOR PROVIDING A MANNINGS ROUGHNESS COEFFICIENT OF n = 0.013 OR LESS.
2. PROVIDE TURF REINFORCEMENT IN AREAS INDICATED ON THE PLANS.
3. AN "AS-BUILT" CERTIFICATION OF THE STORMWATER DRAINAGE SYSTEM BY A REGISTERED ENGINEER IS REQUIRED PRIOR TO THE OWNER ACCEPTING THE BUILDING AND PROPERTY. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT ANY DEVIATION FROM THE PLANS MAY DELAY THE ACCEPTANCE OF THE PROJECT.
4. A DETAILED O&M MANUAL FOR STORMWATER MANAGEMENT SYSTEMS IS (WILL BE) FILED WITH THE CITY OF PORTLAND AND MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION DURING THE PERMIT REVIEW PROCESS. A SPECIFIC MANUAL HAS BEEN PREPARED FOR O&M OF THE DRAINAGE SYSTEM. REFER TO SECTION 12 OF THE MEDEP SITE LOCATION OF DEVELOPMENT PERMIT APPLICATION.
5. SEE EXISTING CONDITIONS FOR BENCHMARK INFORMATION.
6. SEE GRADING, DRAINAGE AND EROSION/SEDIMENT CONTROL FOR PROPOSED GRADING AND EROSION CONTROL MEASURES.
7. ALL DISTURBED AREAS NOT TO BE PAVED, SODDED OR OTHERWISE TREATED SHALL RECEIVE 4" LOAM, SEED, FERTILIZER AND MULCH.
8. COMPACTION REQUIREMENTS:

LOCATION	MINIMUM COMPACTION
SUBBASE AND BASE GRAVEL BELOW PAVED OR CONCRETE AREAS	95%
SUBGRADE FILL BELOW PAVED AREAS	90%
TRENCH BEDDING MATERIAL AND SAND BLANKET BACKFILL	95%
BELOW LOAM AND SEED AREAS	90%
STRUCTURAL FILL WITHIN PROPOSED BUILDING AREA	95%
SELECT FILL ADJACENT BUILDING FOUNDATIONS, EXTERIOR FOUNDATIONS, AND WITHIN 8 INCHES OF THE SLAB-ON-GRADE	95%

*ALL PERCENTAGES OF COMPACTION SHALL BE OF THE MAXIMUM DRY DENSITY AT THE OPTIMUM MOISTURE CONTENT AS DETERMINED AND CONTROLLED IN ACCORDANCE WITH ASTM D-1557.

8. ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE.
9. CONTRACTOR SHALL PROVIDE A FINISH PAVEMENT SURFACE FREE OF LOW SPOTS AND PONDING AREAS. CRITICAL AREAS INCLUDE BUILDING ENTRANCE AND EXIT RAMPS ADJACENT TO THE BUILDING AND ALONG NEW CURBED AREAS. ALL ADA COMPLIANT PARKING SPACES SHALL BE PAVED WITH A MAXIMUM SLOPE OF 2% IN ANY DIRECTION.
10. PROVIDE STABILIZATION OR SEPARATION GEOTEXTILE FABRIC OVER WETLAND AREAS TO BE FILLED OR OVER UNSTABLE SOILS AS DIRECTED BY THE OWNER'S REPRESENTATIVE AND IN ACCORDANCE WITH THE FINAL GEOTECHNICAL RECOMMENDATIONS.
11. NATIVE SOILS RANGE FROM GRANULAR TO CLAYEY AND SILTY. CARE MUST BE EXERCISED TO LIMIT DISTURBANCE OF THE BEARING SOILS. THE NATIVE CLAYEY OR SILTY SOILS SHOULD NOT BE PROOF-ROLLED. SHOULD THE SUBGRADE BECOME YIELDING OR DIFFICULT TO WORK, DISTURBED AREAS SHOULD BE EXCAVATED AND BACKFILLED WITH COMPACTED SELECT FILL OR CRUSHED STONE AT NO EXTRA EXPENSE TO THE OWNER.
12. FIVE (5.0) FEET OF CLEAN GRANULAR SOIL MEETING THE SELECT FILL GRADATION SPECIFICATIONS SHALL BE PROVIDED BELOW THE ENTRANCE SLABS AND ADJACENT SIDEWALKS. GRADUAL TRANSITION (3 HORIZONTAL TO 1 VERTICAL) OF SELECT FILL THICKNESS SHALL BE PROVIDED FROM THE 5.0 FOOT DEPTH TO THE GRAVEL BASE THICKNESS AT THE SIDEWALKS AND PAVED AREAS AWAY FROM THE BUILDINGS.

LOCAL APPROVALS, WAIVERS, AND VARIANCES:
(ADDITIONAL INFORMATION TO BE PROVIDED UPON RECEIPT OF APPROVALS)

THE CONSTRUCTION PLANS ARE TO BE SUBMITTED TO THE CITY OF PORTLAND FOR THEIR REVIEW AND APPROVAL.

UTILITY NOTES:

1. ALL REQUIRED UTILITIES SERVING THE PROJECT SHALL BE COORDINATED AND CONSTRUCTED BY THE DIVISION 2 CONTRACTOR TO WITHIN 5 FEET OF THE BUILDINGS, AT A LOCATION COORDINATED WITH THE DIVISION 15 OR 16 CONTRACTOR AND THE BUILDING PLANS. DIVISION 2 WORK WITHIN 5 FEET OF UNDERSLAB UTILITIES SHALL CONSIST OF TRENCHING AND BACKFILLING. ACTUAL UTILITY INSTALLATION SHALL BE BY THE DIVISION 15/16 CONTRACTOR. ALL REQUIRED CONNECTION FEES SHALL BE PAID BY THE GENERAL CONTRACTOR.
2. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF AND/OR RELOCATION OF OVERHEAD AND UNDERGROUND TELEPHONE WITH VERIZON. CONTRACTOR SHALL BE RESPONSIBLE FOR CONDUITS, PULL WIRES, TRENCHING AND BACKFILLING NECESSARY TO COMPLETE THE WORK.
3. ALL SANITARY SEWER WORK SHALL MEET THE STANDARDS OF THE MAINE STATE PLUMBING CODE AND CITY OF PORTLAND PUBLIC WORKS DEPARTMENT.
4. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF ELECTRIC SERVICE WITH CENTRAL MAINE POWER.
5. COORDINATE ALL UTILITY WORK WITH THE APPROPRIATE UTILITY COMPANY. ALL UTILITY WORK SHALL CONFORM TO THE STANDARDS OF THE UTILITY COMPANY AND PROJECT SPECIFICATIONS.
6. THE LOCATIONS OF THE NEW UTILITY SERVICES AND CONNECTIONS SHALL BE COORDINATED WITH THE SERVING UTILITY COMPANY.
7. UNDERGROUND ELECTRICAL, CONDUIT MATERIAL AND INSTALLATION SHALL CONFORM TO UTILITY COMPANY STANDARDS AND PROJECT SPECIFICATIONS, WHICH EVER IS MORE STRINGENT.
8. ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE.
9. ALL UNDERGROUND CONDUITS SHALL HAVE NYLON PULL ROPES TO FACILITATE PULLING CABLES.
10. THE CONTRACTOR SHALL OBTAIN, PAY FOR, AND COMPLY WITH ALL REQUIRED PERMITS, ARRANGE FOR ALL INSPECTIONS, AND SUBMIT COPIES OF ACCEPTANCE CERTIFICATES TO THE OWNER PRIOR TO COMPLETION OF THE PROJECT.
11. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL BOXES, FITTINGS, CONNECTORS, COVER PLATES AND OTHER MISCELLANEOUS ITEMS NOT NECESSARILY DETAILED ON THE DRAWINGS TO RENDER INSTALLATION OF UTILITIES COMPLETE AND OPERATIONAL, AT NO EXTRA EXPENSE TO THE OWNER.
12. A 10 FOOT MINIMUM EDGE TO EDGE HORIZONTAL SEPARATION SHALL BE PROVIDED BETWEEN ALL WATER AND SANITARY SEWER LINES. AN 18 INCH OUTSIDE TO OUTSIDE VERTICAL SEPARATION SHALL BE PROVIDED AT ALL WATER AND SANITARY SEWER CROSSINGS.
13. THE CONTRACTOR SHALL PHASE UTILITY CONSTRUCTION AND PROVIDE TEMPORARY SERVICES AS REQUIRED TO PROVIDE CONTINUOUS SERVICE TO THE JOBSITE. TEMPORARY SERVICES SHALL COMPLY WITH ALL FEDERAL, STATE, LOCAL AND UTILITY COMPANY STANDARDS. COORDINATE ALL TEMPORARY SERVICES WITH UTILITY COMPANY, OWNER AND AFFECTED BUSINESSES.

LANDSCAPE NOTES:

(SUBJECT TO COORDINATION WITH LANDSCAPE DRAWINGS. IN CASE OF CONFLICT, THE LANDSCAPING DRAWINGS SHALL GOVERN.)

1. ALL PLANTS SHALL BE NURSERY GROWN AND WORKMANSHIP SHALL CONFORM TO THE AMERICAN ASSOCIATION OF NURSERYMEN, STANDARDS AND SHALL BE SUBJECT TO THE APPROVAL OF THE OWNERS REPRESENTATIVE BEFORE AND AFTER PLANTING.
2. PLANTS SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR AFTER INSPECTION AND ACCEPTANCE, AND SHALL HAVE AT LEAST 80% HEALTHY GROWTH AT THE END OF THE GUARANTEED PERIOD.
3. ALL DISTURBED AREAS NOT TO BE PAVED OR OTHERWISE TREATED SHALL RECEIVE 4" LOAM AND SEED.
4. THREE (3) INCH BARK MULCH IS TO BE USED AROUND THE TREE AND SHRUB PLANTING AS SPECIFIED IN THE DETAILS. WHERE BARK MULCH IS USED IN A CURBED ISLAND, THE BARK SHALL MEET THE TOP INSIDE EDGE OF THE CURB. ALL OTHER AREAS SHALL RECEIVE 4" LOAM AND SEED.
5. THE CONTRACTOR SHALL SUPPLY ALL PLANT MATERIALS IN QUANTITIES SUFFICIENT TO COMPLETE THE PLANTING AS SHOWN.
6. PARKING AREA PLANTED ISLANDS TO HAVE A MINIMUM OF 4" TOPSOIL. REMOVE ALL CONSTRUCTION DEBRIS BEFORE TOPSOILING. TOPSOIL SHALL BE PLACED TO TOP OF CURB.
7. ALL PLANT MATERIAL SHALL BE APPROVED BY THE OWNER OR THE OWNERS REPRESENTATIVE PRIOR TO ARRIVAL ON THE SITE.
8. PLANT MATERIAL SHALL BEAR THE SAME RELATIONSHIP TO FINISHED GRADE AS TO THE ORIGINAL PLANTING GRADE PRIOR TO DIGGING.
9. THE CONTRACTOR SHALL LOCATE, VERIFY, AND MARK ALL EXISTING AND NEWLY INSTALLED UNDERGROUND UTILITIES PRIOR TO ANY LAWN WORK OR PLANTING. ANY CONFLICTS WHICH MIGHT OCCUR BETWEEN PLANTINGS AND UTILITIES SHALL BE IMMEDIATELY REPORTED TO THE OWNER SO THAT ALTERNATE PLANTING LOCATIONS CAN BE DETERMINED.
10. NO SUBSTITUTION OF PLANT MATERIALS SHALL BE ALLOWED WITHOUT THE PRIOR WRITTEN APPROVAL OF THE OWNER.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL PLANTING AND LAWNS AGAINST DAMAGE FROM ONGOING CONSTRUCTION. THIS PROTECTION SHALL BEGIN AT THE TIME THE PLANT IS INSTALLED AND CONTINUE UNTIL THE FORMAL ACCEPTANCE OF ALL THE PLANTINGS.
12. SEE PLANTING DETAILS FOR WEED BARRIER INFORMATION.
13. ALL PLANTING LOCATED AT THE ENTRANCE TO THE PROJECT OR AT INTERSECTIONS WITHIN THE SITE WILL BE MAINTAINED AND WILL NOT EXCEED 3 FEET IN HEIGHT WITHIN A TRIANGLE FORMED 25' INTO THE DRIVEWAY AND 25' ALONG THE TRAVEL WAY.

EROSION CONTROL NOTES:

1. PRIOR TO BEGINNING ANY LAND DISTURBING ACTIVITIES. CLEARING AND GRADING LIMITS SHALL BE STAKED BY THE CONTRACTOR BASED ON THE LIMITS OF GRADING SHOWN ON THE DRAWINGS AND ACCEPTED BY THE OWNER'S REPRESENTATIVE IN THE FIELD. AFTER THE CLEARING AND GRADING LIMITS HAVE BEEN ACCEPTED, THE CONTRACTOR SHALL INSTALL THE PERIMETER SILT FENCES AND THE CONSTRUCTION ENTRANCES ASSOCIATED WITH THE PROJECT.
2. ALL GROUND AREAS GRADED FOR CONSTRUCTION SHALL BE GRADED, LOAMED, SEEDED AND MULCHED AS SOON AS POSSIBLE. TEMPORARY/PERMANENT SEED MIXTURES SHALL CONFORM TO THE SEEDING PLAN CONTAINED IN THE EROSION CONTROL PROJECT PREPARED FOR THIS PROJECT.
3. PRIOR TO PAVING, THE CONTRACTOR SHALL FLUSH SILT FROM ALL STORM LINES.
4. ALL STORM DRAIN INLETS AND OUTLETS NOT IN PAVED AREAS ARE TO RECEIVE RIPRAP PROTECTION APRONS DURING CONSTRUCTION.
5. SILT FENCES SHALL BE INSPECTED, REPAIRED AND CLEANED AS NOTED IN THE EROSION CONTROL NOTES SHOWN ON THE EROSION CONTROL DETAIL SHEET.
6. THE CONTRACTOR SHALL REPAIR AND ADD STONE TO THE CONSTRUCTION ENTRANCE AS IT BECOMES SATURATED WITH MUD TO ENSURE THAT IT FUNCTIONS TO CAPTURE MUD FROM THE TIRES OF CONSTRUCTION VEHICLES DURING CONSTRUCTION. THE PURPOSE OF THE CONSTRUCTION ENTRANCE IS TO KEEP ADJACENT STREETS CLEAR OF DIRT AND MUD, SWEEPING OF THE ROADWAYS SHALL BE PERFORMED BY THE CONTRACTOR.
7. SILT REMOVED FROM AROUND INLETS AND BEHIND THE SILT FENCES SHALL BE PLACED ON A TOPSOIL STOCKPILE AND MIXED INTO TOPSOIL FOR USE IN LANDSCAPING OPERATIONS.
8. LAND DISTURBING ACTIVITIES SHALL BE ACCOMPLISHED IN A MANNER AND SEQUENCE WHICH CAUSE THE LEAST PRACTICAL UNPROTECTED DENUDED AREAS ON THE SITE DURING CONSTRUCTION.
9. THE CONTRACTOR IS CAUTIONED THAT FAILURE TO COMPLY WITH THE SEQUENCE OF CONSTRUCTION, EROSION / SEDIMENT CONTROL PLAN, AND OTHER PERMIT REQUIREMENTS MAY RESULT IN MONETARY PENALTIES AS ENFORCED BY THE MEDEP OR LOCAL AGENCIES. THE CONTRACTOR SHALL BE ASSESSED ALL SUCH PENALTIES AT NO COST TO THE OWNER OR PERMITTEE.
10. A FULL EROSION/SEDIMENTATION CONTROL PLAN ACCOMPANIES THIS DRAWING SET AND IS ALSO CONTAINED IN THE DIV 2 SPECIFICATIONS.
11. PROVIDE INLET PROTECTION BARRIERS AROUND ALL EXISTING AND PROPOSED STORM DRAINAGE INLETS AS SHOWN AND MAINTAIN FOR THE DURATION OF THE PROJECT UNTIL PAVEMENT HAS BEEN INSTALLED.
12. INSPECT EROSION AND SEDIMENT CONTROL DEVICES AFTER EACH RAIN STORM OF 0.25 INCH OR GREATER. REPAIR/MODIFY PROTECTION AS NECESSARY TO MAXIMIZE EFFICIENCY FILTER. REPLACE ALL FILTERS WHEN SEDIMENT IS $\frac{1}{3}$ THE STRUCTURE HEIGHT.
13. INSTALL CURLEX EROSION CONTROL MAT OR EQUAL ON ALL SLOPES STEEPER THAN 3:1.
14. THE CONTRACTOR SHALL INSTALL ALL EROSION CONTROL MEASURES IN ACCORDANCE WITH THE "MAINE EROSION & SEDIMENT CONTROL HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES, CUMBERLAND COUNTY SOIL AND WATER CONVERSATION DISTRICT AND MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, MARCH 1991"

CITY OF PORTLAND
SPACE AND BULK REQUIREMENTS

1. EXISTING ZONE: CONTRACT ZONE AGREEMENT
2. PARCEL SIZE (TO MEAN HIGH WATER): 33.51 ACRES±
3. SPACE AND BULK:

	REQUIRED	PROVIDED (UPON COMPLETION OF PHASE II)
MAXIMUM IMPERVIOUS SURFACE RATIO	80%	66%±
MAXIMUM BUILDING HEIGHT	90 FT.	90 FT.
MINIMUM FRONT YARD LANDSCAPED BUFFER	20 FT.	20 FT.
MINIMUM SIDE YARD	10 FT.	121 FT.
MINIMUM REAR YARD	10 FT.	121 FT.
PAVEMENT SETBACK FROM LOT BOUNDARIES	15 FT.	> 15 FT.

4. PARKING REQUIREMENT:

HOSPITAL - 1 SPACE/500SF		
EXISTING HOSPITAL 138,099 SF	277 SPACES	306 SPACES
HOSPITAL EXPANSION 54,889 SF	110 SPACES	200 SPACES
MEDICAL OFFICE - 1 SPACE/400SF		
EXISTING MED. OFFICE 82,186 SF	206 SPACES	255 SPACES
PROPOSED ASC BLDG. 34,987 SF	88 SPACES	100 SPACES
TOTAL ONSITE PARKING	681 SPACES	861 SPACES

LEGEND

EXISTING		PROPOSED	
	EXISTING STRUCTURE	BUILDING	
	EDGE OF TRAVEL WAY, PAVEMENT, ROADS, DRIVES		
	CURBING	RETAINING WALL	
	PROPERTY LINE	CURBING	
OHE	OVERHEAD ELECTRIC LINES	VERTICAL GRANITE	
UGE	UNDERGROUND ELECTRIC LINE	SLOPED GRANITE	
UGT	UNDERGROUND TELEPHONE LINE	EDGE OF PAVEMENT	
W	WATER LINE	GRADING CONTOUR LINE	100
12"SD	STORM DRAIN LINE	SPOT ELEVATION	100.31
S	SANITARY SEWER LINE	GUARD POST/BOLLARD	
OX	OXYGEN	POLE WITH LIGHT FIXTURE(S)	
G	GAS	FREESTANDING SIGN	
X	FENCE	PYLON SIGN	
50	EXISTING CONTOUR LINE	BARRIER FREE PARKING SYMBOL	
	EXISTING WETLANDS	PEDESTRIAN CROSSWALK	
	RAILROAD TRACKS	PAINTED DIRECTIONAL TRAFFIC ARROW	
	UTILITY POLE	UNDERGROUND TELEPHONE / CABLE	UGT/C
	SIGN	UNDERGROUND ELECTRIC/TELEPHONE	UGE/T
	LIGHT POLE	WATER LINE	W
	CATCH BASIN	SEWER LINE	SAN1
	SEWER MANHOLE	GAS LINE	G
	ELECTRICAL/COMMUNICATIONS VAULT	STORM DRAIN LINE	SD1
PB	ELECTRICAL/COMMUNICATIONS PULL BOX	HYDRANT	
	HYDRANT	WATER GATE VALVE	
	TREE	WATER SHUT OFF VALVE	
	TELEPHONE MANHOLE	MANHOLE	
W	WELL	CATCH BASIN	
		EXISTING CATCH BASIN TO BE ALTERED	
		RIPRAP	
		SILT FENCE	SF1
		CHAIN LINK OR SAFETY FENCE	
		WOOD FENCE	
		GUIDE RAIL	
		LIMIT OF WORK	
		EXISTING UTILITY LINE TO BE REMOVED	X X X X
		STONE SEDIMENT BARRIER	
		TRANSFORMER PAD	T

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.

STATE OF MAINE — STEPHEN R. BUSHEY — 08.30.19 — LICENSED PROFESSIONAL ENGINEER

STEPHEN R. BUSHEY, P.E.
LIC. #7429

Rev.	Date	Revision
–	–	–

Issued For	Date	By
PERMIT APPROVAL SUBMISSION	08.30.19	SRB
DESIGN DEVELOPMENT SUBMISSION TO OWNER	07.31.19	SRB

Design: SRB	Draft: CDD	Date: AUG. 2019
Checked: SRB	Scale: NTS	Job No.: 3257.04
File Name: 325704-GEN.dwg		

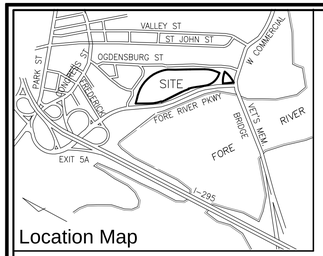
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Drawing Name: General Notes & Legend
Project: Fore River Campus Consolidation, Portland, Maine
Client: Northern Light Mercy Hospital, 144 State Street, Portland, Maine 04101

Drawing No. C–1.1

U:\3257.04_Mercy Hospital_Expansion_DD_Permits\STANTEC\civil\cadd\permit\dwg\325704-GEN.dwg 8/30/2019 11:52 AM



Location Map

Legend:

- IRON PIPE OR ROD FOUND
- UTILITY POLE
- MANHOLE
- EM ELECTRIC BOX/METER
- SIGN
- CATCH BASIN
- HYDRANT
- WATER VALVE OR SHUTOFF
- GAS VALVE
- LIGHT POLE
- ICV IRRIGATION CONTROL VALVE
- T TRANSFORMER PAD
- FENCE
- CURB
- OVERHEAD WIRES
- UGE UNDERGROUND POWER
- UGC UNDERGROUND COMMUNICATION
- W WATER LINE
- G GAS LINE
- SD STORM DRAIN
- SS SANITARY SEWER
- 30 1' CONTOUR
- IPF/IRF IRON PIPE OR ROD FOUND
- INV. INVERT
- FFE FINISHED FLOOR ELEVATION
- N/F NOW OR FORMERLY
- 000/000 DEED BOOK AND PAGE

GRID NORTH WEST ZONE

N/F UNION STATION LIMITED PARTNERSHIP 10144/23

N/F INHABITANTS CUMBERLAND COUNTY STATE OF MAINE 9382/61 9820/263

N/F ST. JOHN STREET ASSOCIATES LIMITED PARTNERSHIP 6864/210

PARCEL A TRACT TWO UTILITY AREA 1 23723/214 26738/60 22764/198 17783/298

PARCEL A TRACT THREE LICENSE AGREEMENT 17783/322 LICENSE AGREEMENT 14203/252

GAS FACILITIES EASEMENT 25696/212

UNDERGROUND UTILITY LINE EASEMENT MAIN LINE 25971/306

PORTLAND WATER DISTRICT WATER LINE EASEMENT 25624/210

RECREATIONAL TRAIL EASEMENT 25855/253 26346/137

POND EASEMENT AREA 25591/149

UNDERGROUND UTILITY LINE EASEMENT SPUR 25971/306

PARCEL A TRACT 1

PARCEL A "LEASE PARCEL"

PARCEL A

PARCEL B

MERCY HOSPITAL 4 STORY BRICK BUILDING

MEDICAL OFFICE BUILDING 4 STORY BRICK

CONNECTOR

I-295 CONNECTOR 19154/155

SIDELINE PER 19154/555

27" FORCE MAIN SEWER LINE 3975/262

PARCEL A TRACT FOUR 50' WIDE ABOVE GRADE CROSSING EASEMENT

18338/53 OPEN SPACE-NORTH

BRIDGE OVER RAILROAD

(FORE RIVER PARKWAY)

FORE RIVER

HIGH WATER LINE OF FORE RIVER

138'± TO HIGHWATER

AREA BETWEEN HIGH & LOW WATER OWNED BY MERCY HOSPITAL

PORTLAND WATER LINE E

STORM SEWER OUTLET 22266/52

SCALE : 1" = 50'

0' 25' 50' 100'

Owner of Record:

MERCY HOSPITAL
144 STATE STREET
PORTLAND, MAINE 04101
C.C.R.D. BOOK 17783 PAGE 289 (PORTLAND TERMINAL COMPANY PARCEL)
C.C.R.D. BOOK 18203 PAGE 128 (MERRILL PARCEL)

Utility Note:

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. CALL 1-888-DIGSAFE AT LEAST THREE BUSINESS DAYS BEFORE PERFORMING ANY CONSTRUCTION. DUE TO OSHA CONFINED SPACE REQUIREMENTS, ALL INVERTS AND PIPE SIZES MUST BE VERIFIED PRIOR TO ANY CONSTRUCTION.

Notes:

1. THERE IS ACCESS TO THE SUBJECT PROPERTY PER AN INGRESS AND EGRESS EASEMENT SET FORTH IN VOLUME 24969, PAGE 25 FROM FORE RIVER PARKWAY, A.K.A. I-295 CONNECTOR, A PUBLIC RIGHT-OF-WAY.
2. BEARINGS ARE GRID NORTH (MAINE STATE COORDINATE SYSTEM WEST ZONE) BASED ON MARKERS FOUND ON PLAN REFERENCE 4.
3. ELEVATIONS ARE BASED ON NGVD 1929.
4. MEDICAL OFFICE BUILDING TOTAL LEASE PARCEL AREA = 3.88 ACRES.
5. TOTAL AREA OF PROPERTY TO MEAN HIGH WATER IS 33.51 ACRES ±.
6. UNDERGROUND UTILITIES WERE MARKED BY CENTERLINE UTILITY LOCATING. GAS LINE LOCATION WAS NOT MARKED, ITS LOCATION HAS BEEN TAKEN FROM PLAN REFERENCE 22.

EXISTING CONDITIONS PLAN

AT

175 FORE RIVER PARKWAY, PORTLAND, MAINE

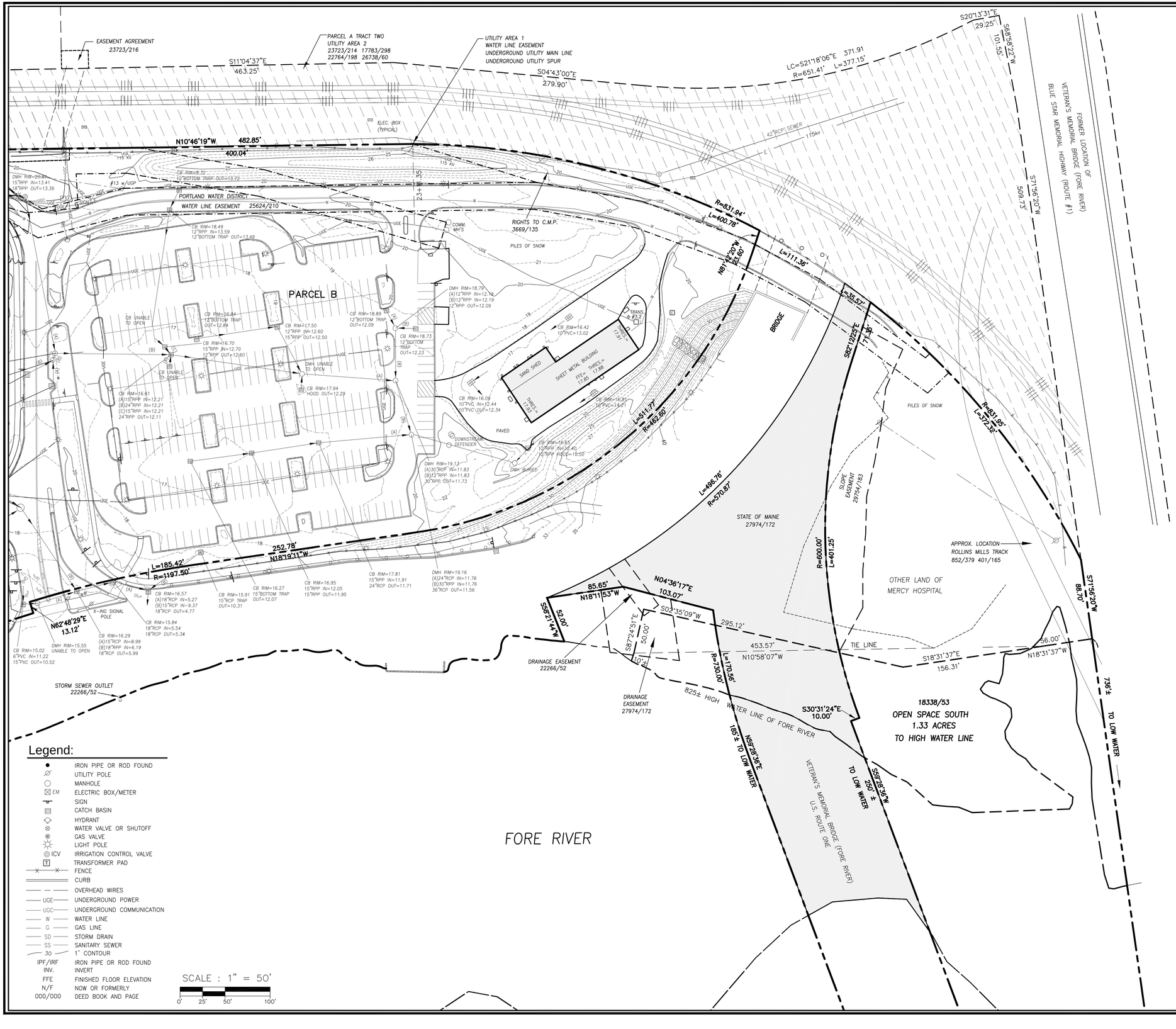
MADE FOR

MERCY HOSPITAL

175 FORE RIVER PARKWAY, PORTLAND, MAINE

OWEN HASKELL, INC.
PROFESSIONAL LAND SURVEYORS
390 U.S. ROUTE ONE, FALMOUTH, ME 04105 (207)774-0424

Drawn By SDG	Date MARCH 20, 2017	Job No. 2013-024P
Trace By JLW		
Check By SDG	Scale 1" = 50'	Drwg. No. 1 OF 2
Book No. FILE		



Plan References:

1. STANDARD BOUNDARY SURVEY ROUTE 1 BLUE STAR MEMORIAL HIGHWAY PORTLAND, MAINE PORTLAND TERMINAL COMPANY TO MERRILL INDUSTRIES, INC." DATED MAY 19, 1998 BY OWEN HASKELL, INC.
2. TOPOGRAPHIC AND SITE CONDITIONS PLAN PORTLAND; RAIL UNDERPASS; VETERANS MEMORIAL BRIDGE" DATED FEB. 28, 1996 BY OWEN HASKELL, INC.
3. RECORDING PLAT FOR CUMBERLAND COUNTY COMMISSIONERS . . . CUMBERLAND COUNTY JAIL" DATED 11-08-90 BY SMRT RECORDED IN PLAN BOOK 191 PAGE 200.
4. PLAN OF PROPERTY IN PORTLAND MAINE MADE FOR PORTLAND CARGO ASSOCIATES" DATED 4-26-88 BY HI & EC JORDAN.
5. PLAN OF PROPERTY IN PORTLAND MAINE MADE FOR MERRILL INDUSTRIES, INC. DATED FEB. 11, 1987 BY HI & EC JORDAN.
6. MAINE STATE HIGHWAY COMMISSION RIGHT OF WAY MAP STATE HIGH 295" SHC FILE NO. 3-185 DATED MAY 1967.
7. RIGHT OF WAY AND TRACK MAP PORTLAND TERMINAL COMPANY OPERATED BY THE PORTLAND TERMINAL COMPANY" DATED JUNE 30, 1916 DWG V-1-D/1.
8. PLAN OF PROPERTY IN PORTLAND AND DEERING MAINE AT LIBBYS CORNER SURVEYED FOR JAMES H. SMITH" DATED SEPT 1886 BY HI & EC JORDAN.
9. PLAN OF AREA CLAIMED BY J.F. PROCTOR ON FILE AT OWEN HASKELL, INC. (ECJ FILE # 331).
10. THE PORTLAND AND OGDENSBURG RAILWAY PLAN OF LOCATION OF BRANCH RAILROAD TRACK TO PORTLAND UNION RAILWAY STATION PORTLAND MAINE DATED JULY 16, 1906.
11. PLAN OF PART OF CITY FARM AND ADJACENT STREETS DATED AUGUST 1878 BY WILLIAM A. GOODWIN C.C.E. RECORDED IN PLAN BOOK 4 PAGE 16.
12. PLAN OF PROPERTY BOUGHT OF J.B. BROWN BY THE BOSTON & MAINE RAILROAD PORTLAND DATED MARCH 15, 1873 RECORDED IN PLAN BOOK 3 PAGES 38 & 39.
13. PLAN OF PROPERTY IN PORTLAND MAINE MADE FOR PORTLAND WATER DISTRICT – EASEMENT PLAN FORE RIVER FORCE MAIN" DATED 5-4-1976 BY HI & EC JORDAN.
14. RIGHT OF WAY MAP STATE HIGHWAY 10, CITY OF PORTLAND DATED SEPTEMBER 2002 DOT FILE NO. 3-483
15. LAND TITLE SURVEY OFF CONGRESS STREET, PORTLAND, MAINE MADE FOR MERCY HOSPITAL DATED JUNE 29, 2002 BY OWEN HASKELL, INC.
16. RIGHT OF WAY AND TRACK MAP THE PORTLAND AND OGDENSBURG RY OWNED AND OPERATED BY THE PORTLAND TERMINAL COMPANY DATED JUNE 30, 1916 DWG V-2/2.
17. RIGHT OF WAY AND TRACK MAP THE PORTLAND AND OGDENSBURG RY OWNED AND OPERATED BY THE PORTLAND TERMINAL COMPANY DATED JUNE 30, 1916 DWG V-2/1.
18. RIGHT OF WAY AND TRACK MAP THE PORTLAND AND OGDENSBURG RY OWNED AND OPERATED BY THE PORTLAND TERMINAL COMPANY DATED JUNE 30, 1916 DWG V-1-D/1-A.
19. AS-BUILT ACSM LAND TITLE SURVEY ON I-295 CONNECTOR, PORTLAND, MAINE MADE FOR LANDMARK HEALTHCARE FACILITIES, LLC DATED SEPTEMBER 8, 2009 BY OWEN HASKELL, INC.
20. ALTA/ACSM LAND TITLE SURVEY PREPARED FOR: HEALTH CARE REIT, INC., FORE RIVER MEDICAL COMPLEX, LLC, 175 FORE RIVER PARKWAY, CITY OF PORTLAND, COUNTY OF CUMBERLAND, STATE OF MAINE DATED 08/18/11 REVISED THRU 10/06/11 FOR MILLMAN LAND BY OWEN HASKELL, INC.
21. ALTA/ACSM LAND TITLE SURVEY, 175 FORE RIVER PARKWAY, PORTLAND, CUMBERLAND COUNTY, MAINE MADE FOR STEWARD HEALTH CARE SYSTEMS, LLC DATED NOVEMBER 12, 2012 BY OWEN HASKELL, INC.
22. ALTA/ACSM LAND TITLE SURVEY, 175 FORE RIVER PARKWAY, PORTLAND, CUMBERLAND COUNTY, MAINE MADE FOR MERCY HOSPITAL AND EASTERN MAINE HEALTHCARE SYSTEMS DATED MARCH 1, 2013 LAST REVISED SEPT. 20, 2013 BY OWEN HASKELL, INC.

Utility Note:

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. CALL 1-888-DIGSAFE AT LEAST THREE BUSINESS DAYS BEFORE PERFORMING ANY CONSTRUCTION. DUE TO OSHA CONFINED SPACE REQUIREMENTS, ALL INVERTS AND PIPE SIZES MUST BE VERIFIED PRIOR TO ANY CONSTRUCTION.

Legend:

●	IRON PIPE OR ROD FOUND
⌀	UTILITY POLE
○	MANHOLE
☒ EM	ELECTRIC BOX/METER
⊢	SIGN
▤	CATCH BASIN
⌭	HYDRANT
⊗	WATER VALVE OR SHUTOFF
⊛	GAS VALVE
☼	LIGHT POLE
◎ ICV	IRRIGATION CONTROL VALVE
T	TRANSFORMER PAD
X X	FENCE
	CURB
	OVERHEAD WIRES
UGE	UNDERGROUND POWER
UGC	UNDERGROUND COMMUNICATION
W	WATER LINE
G	GAS LINE
SD	STORM DRAIN
SS	SANITARY SEWER
30	1' CONTOUR
IPF/IRF	IRON PIPE OR ROD FOUND
INV.	INVERT
FFE	FINISHED FLOOR ELEVATION
N/F	NOW OR FORMERLY
000/000	DEED BOOK AND PAGE

SCALE : 1" = 50'

0' 25' 50' 100'

EXISTING CONDITIONS PLAN

AT

175 FORE RIVER PARKWAY, PORTLAND, MAINE

MADE FOR

MERCY HOSPITAL

175 FORE RIVER PARKWAY, PORTLAND, MAINE

OWEN HASKELL, INC.
PROFESSIONAL LAND SURVEYORS
390 U.S. ROUTE ONE, FALMOUTH, ME 04105 (207)774-0424

Drawn By SDG	Date	Job No.
Trace By JLW	MARCH 10, 2017	2013-024P
Check By SDG	Scale	Drwg. No.
Book No. FILE	1" = 50'	2 OF 2

VRAP SURFACE TREATMENT LEGEND

- ASH CONSOLIDATION AREA MINIMUM 3' BELOW GRADE
- MINIMUM 6" OF TERRASEED OVERLYING BLACK GEOTEXTILE FABRIC EXCEPT IN DENSE TREES (3" OF TERRASEED ONLY)
- MINIMUM 3" OF TERRASEED (AS NEEDED)
- MINIMUM 3" OF TERRASEED OVER 6" OF GRANULAR BORROW OVERLYING BLACK GEOGRID
- MINIMUM 12" OF CLEAN SOIL OVERLYING ORANGE SNOW FENCE DEMARCATION AND ASH
- MINIMUM 24" OF CLEAN SOIL OVERLYING RESIDUAL ASH
- MINIMUM 36" OF CLEAN SOIL OVERLYING RESIDUAL ASH
- MINIMUM 36" OF CLEAN SOIL OVERLYING RESIDUAL ASH
- MINIMUM 5' OF CLEAN SOIL OVERLYING RESIDUAL ASH
- MINIMUM 8' OF CLEAN SOIL OVERLYING RESIDUAL ASH
- 4" STONE DUST OVER 8" SUBBASE GRAVEL OVER GEOGRID SEPARATION FABRIC
- MINIMUM 14" OF HEAVY RIPRAP OVER GEOTEXTILE SEPARATION FABRIC

PAN AM RAILWAY

N/F
ST. JOHN STREET ASSOCIATES
LIMITED PARTNERSHIP
6864/210

EXISTING PERIMETER ACCESS ROAD

S16°57'07"E
290.08'

NEW MMC SURFACE PARKING LOT

PARCEL A TRACT TWO
UTILITY AREA
23723/214 & 5738/60
22764/198 & 17783/298

S09°29'00"E
197.09'

S11°04'37"E
150.16'

EX. WATER MAIN TO ST. JOHN STREET

S11°04'37"E
180.50' 42" SEWER 23723/262

N/F
UNION STATION
LIMITED PARTNERSHIP
10144/23

PARCEL A TRACT THREE
LICENSE AGREEMENT
17783/322
LICENSE AGREEMENT
14203/252

COUNTY WAY

L=384.91'

L=1102.20'

R=922.37'
L=522.60'

N/F
INHABITANTS
CUMBERLAND COUNTY
STATE OF MAINE
9382/61
9820/263

CUMBERLAND
COUNTY JAIL

GAS FACILITIES EASEMENT 25696/212

UNDERGROUND UTILITY LINE EASEMENT MAIN LINE

PORTLAND WATER DISTRICT WATER LINE EASEMENT 25624/210

RECREATIONAL TRAIL EASEMENT 25855/253 26346/137

POND EASEMENT AREA 25591/149

UNDERGROUND UTILITY LINE EASEMENT SPUR 25971/306

EDGE OF POND

POND

(SEE NOTE 7) EDGE OF POND

THIS AREA INCLUDED IS VOLUME CALCULATION (SEE NOTE 7)

APPROXIMATE LIMIT OF DISTURBANCE

SEE GEOTECHNICAL RECOMMENDATIONS BY HALEY & ALDRICH FOR ALL GRUBBING AND SOIL BACKFILL REQUIREMENTS

REMOVE / RESET CURB AS NECESSARY

PROTECT EXISTING PRECAST WALL UNITS

SAWCUT PAVEMENT

SAWCUT & REMOVE PAVEMENT

REMOVE / RESET LIGHT POLE AS NECESSARY

REMOVE PORTION OF EX. GUARDRAIL & CURB

SAWCUT & REMOVE PAVEMENT

REMOVE / RESET LIGHT POLE & SIGN AS NECESSARY

REMOVE & RELOCATE RETAINING WALL (SEE NOTE 1)

PROTECT CHAIN LINK FENCE, OIL TANK & OIL LINES

PROTECT UNDERGROUND UTILITIES, TYP.

SAWCUT & REMOVE PAVEMENT

SOLID WASTE CONTAINERS (TO REMAIN)

APPROXIMATE LIMIT OF DISTURBANCE

REMOVE FENCE

ALTER CATCH BASIN

REMOVE GUARDRAIL

REMOVE CURB

REMOVE CATCH BASIN & DRAIN PIPE

REMOVE UGE & LIGHT POLE

REMOVE ASPHALT

REMOVE GUARDRAIL

REMOVE SIGN

REMOVE UGE & LIGHT POLE

REMOVE CATCH BASIN & DRAIN PIPE

REMOVE / SALVAGE CURB

REMOVE ASPHALT

REMOVE SIGNS

REMOVE SIGNS

REMOVE CURBED ISLAND & GATE SYSTEM

PLUG EX. CB INLET & ADJUST RIM TO GRADE

RESET SMH RIM TO GRADE

PROTECT EXISTING UTILITIES

PROTECT EXISTING ASPHALT

PROTECT EXISTING HYDRANT, SIGN, LIGHT POLE & UGE, TYP.

REMOVE CURB

PROTECT CURB

PROTECT EXISTING BUILDING

PROTECT SMH, TYP.

REMOVE CONCRETE SIDEWALK TO NEAREST JOINT, TYP.

REMOVE SIGNS

REMOVE SIGNS

PROTECT EXISTING BUILDING

REMOVE & RESET SIGN

PROTECT EX. LIGHT / GAS SERVICE METER

MERCY HOSPITAL
4 STORY BRICK BUILDING
FOOTPRINT - 37,566 GSF
TOTAL AREA - 138,099 GSF

MEDICAL OFFICE BUILDING
4 STORY BRICK
FOOTPRINT - 20,047 GSF
TOTAL AREA - 82,186 GSF

GENERATOR

OVERHANG BRICK

CONCRETE

PAVED WALK

N61°18'41"W
252.78'

L=185.42'
R=197.50'

N62°48'26"E
12.12'

L=197.60'
R=1184.38'

N36°45'03"W
472.82'

I-295 CONNECTOR
(FORE RIVER PARKWAY)

EX. FORE RIVER TRAIL - 10' WIDE, SHARED USE

AREA BETWEEN HIGH & LOW WATER OWNED BY MERCY HOSPITAL

FORE RIVER MUD FLATS

HIGH WATER LINE OF FORE RIVER

FORE RIVER

NOTES:

1. THE EXISTING LARGE BLOCK MODULAR RETAINING WALL SHALL BE DISMANTLED AND SALVAGED FOR RE-USE IN ACCORDANCE WITH THE PROPOSED SITE PLAN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE EXISTING PRECAST UNITS DURING DEMOLITION. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE SHOP DRAWINGS FOR THE NEW WALL ALIGNMENT DESIGN, PREPARED BY A LICENSED STRUCTURAL ENGINEER (MAINE). THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY NEW OR REPLACEMENT PRECAST WALL UNITS AND ALL INCIDENTALS FOR COMPLETE WALL INSTALLATION, AT NO EXTRA COSTS TO THE OWNER.

PLAN REFERENCES:

1. EXISTING CONDITIONS PLAN MADE FOR MERCY HOSPITAL BY OWEN HASKELL, INC., MARCH 20, 2017 JOB NO. 2013-024P.
2. MERCY AT THE FORE VRAP COMPLETION PLAN SHEETS 1-4, STAMPED BY ROBERT HOFFMAN, P.E., DATED FEB.17, 2011, C.C.R.D. BOOK 211, PAGES 39, 40, 41 & 42.

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.

NORTH

GRAPHIC SCALE
40 0 20 40 80
(IN FEET)
1 inch = 40 ft.

STATE OF MAINE
STEPHEN R. BUSHEY
08.30.19
LICENSED PROFESSIONAL ENGINEER
STEPHEN R. BUSHEY, P.E.
LIC. #7429

Rev.	Date	Revision
–	–	–

Issued For	Date	By
PERMIT APPROVAL SUBMISSION	08.30.19	SRB
DESIGN DEVELOPMENT SUBMISSION TO OWNER	07.31.19	SRB

Design: SRB	Draft: CDD	Date: AUG. 2019
Checked: SRB	Scale:	Job No.: 3257.04

File Name: 325704–existing.dwg

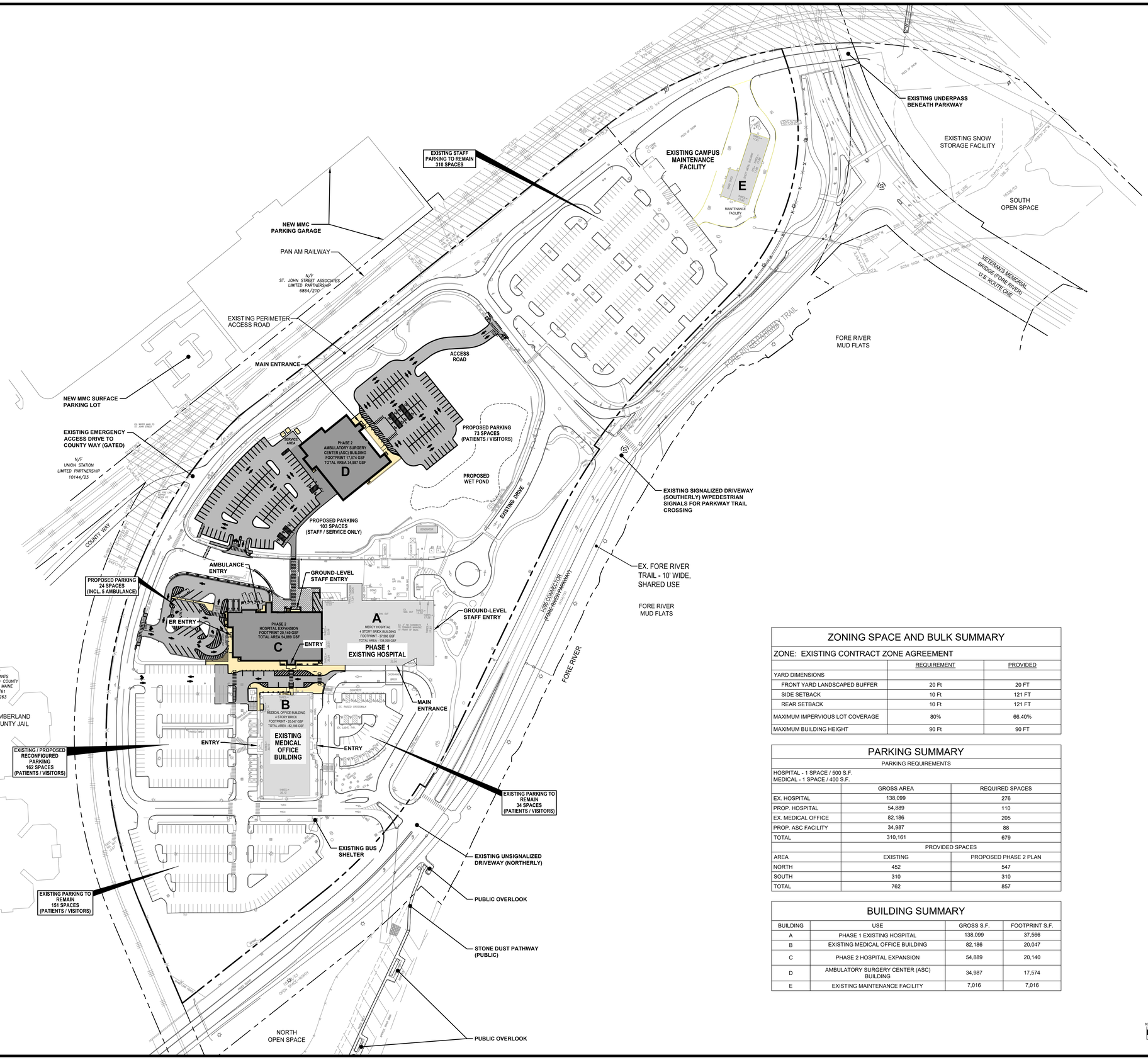
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Drawing Name: Overall Existing Conditions & Removals Plan
Project: Fore River Campus Consolidation
Portland, Maine
Client: Northern Light Mercy Hospital
144 State Street, Portland, Maine 04101

Drawing No. C–2.1

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ZONING SPACE AND BULK SUMMARY

ZONE: EXISTING CONTRACT ZONE AGREEMENT

	REQUIREMENT	PROVIDED
YARD DIMENSIONS		
FRONT YARD LANDSCAPED BUFFER	20 Ft	20 FT
SIDE SETBACK	10 Ft	121 FT
REAR SETBACK	10 Ft	121 FT
MAXIMUM IMPERVIOUS LOT COVERAGE	80%	66.40%
MAXIMUM BUILDING HEIGHT	90 Ft	90 FT

PARKING SUMMARY

PARKING REQUIREMENTS

HOSPITAL - 1 SPACE / 500 S.F.
MEDICAL - 1 SPACE / 400 S.F.

	GROSS AREA	REQUIRED SPACES
EX. HOSPITAL	138,099	276
PROP. HOSPITAL	54,889	110
EX. MEDICAL OFFICE	82,186	205
PROP. ASC FACILITY	34,987	88
TOTAL	310,161	679

	PROVIDED SPACES	
AREA	EXISTING	PROPOSED PHASE 2 PLAN
NORTH	452	547
SOUTH	310	310
TOTAL	762	857

BUILDING SUMMARY

BUILDING	USE	GROSS S.F.	FOOTPRINT S.F.
A	PHASE 1 EXISTING HOSPITAL	138,099	37,566
B	EXISTING MEDICAL OFFICE BUILDING	82,186	20,047
C	PHASE 2 HOSPITAL EXPANSION	54,889	20,140
D	AMBULATORY SURGERY CENTER (ASC) BUILDING	34,987	17,574
E	EXISTING MAINTENANCE FACILITY	7,016	7,016

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.

NORTH

GRAPHIC SCALE

80 0 40 80 160

(IN FEET)

1 inch = 80 ft.

STATE OF MAINE
STEPHEN R. BUSHEY
08.30.19
LICENSED PROFESSIONAL ENGINEER

STEPHEN R. BUSHEY, P.E.
LIC. #7429

Rev.	Date	Revision
–	–	–

Issued For	Date	By
PERMIT APPROVAL SUBMISSION	08.30.19	SRB
DESIGN DEVELOPMENT SUBMISSION TO OWNER	07.31.19	SRB

Design: SRB	Draft: CDD	Date: AUG. 2019
Checked: SRB	Scale: NTS	Job No.: 3257.04
File Name: 325704–SITE.dwg		

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Drawing Name: Overall Campus Map

Project: Fore River Campus Consolidation
Portland, Maine

Client: Northern Light Mercy Hospital
144 State Street, Portland, Maine 04101

Drawing No. C–3.0

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SIGN LEGEND

R1-1 24"x24" A	R7-8A 18"x12" R7-8 12"x6" B	R4-7 24"x30" C	18"x12" D	R8-4EVO 30"x24" E	18"x12" F	R3-5L 30"x36" G	R3-5A 30"x36" H	R5-1 30"x30" I
STOP	RESERVED PARKING VAN ACCESSIBLE		EMERGENCY VEHICLE PARKING ONLY	EMERGENCY VEHICLES ONLY	DROP-OFF ONLY NO PARKING	ONLY	ONLY	DO NOT ENTER

SURFACE LEGEND

- STANDARD-DUTY BITUMINOUS ASPHALT PAVEMENT
- HEAVY-DUTY BITUMINOUS ASPHALT PAVEMENT
- BITUMINOUS SIDEWALK
- CONCRETE SIDEWALK

ABBREVIATIONS

L/S	LANDSCAPED AREA
4'TD	4' LONG CURB TIPDOWN (WHERE CURB IS ADJACENT TO LAWN AREA)
7'TD	7' LONG CURB TIPDOWN (WHERE CURB IS ADJACENT TO SIDEWALK)

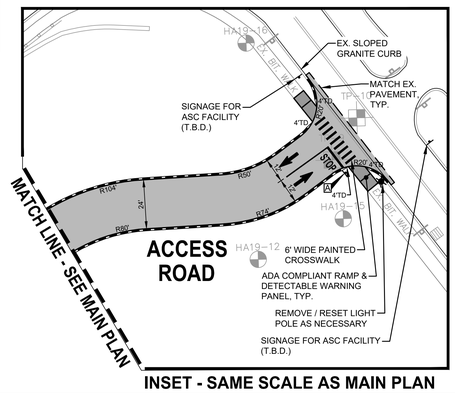
NOTES:

1. ALL DIMENSIONING, UNLESS OTHERWISE NOTED, IS TO THE FACE OF BUILDING, FACE OF CURB OR TO THE EDGE OF PAVEMENT.
2. SNOW WILL BE REMOVED FROM PARKING AREAS AND HAULED TO THE SNOW DUMP AT THE SOUTH END OF THE SITE, TYP.

ACCESS ROAD
6' WIDE PAINTED CROSSWALK
ADA COMPLIANT RAMP & DETECTABLE WARNING PANEL, TYP.
REMOVE / RESET LIGHT POLE AS NECESSARY
SIGNAGE FOR ASC FACILITY (T.B.D.)
MATCH LINE - SEE INSET BELOW
PROPOSED GRANITE OR SLIPFORM CURB, TYP.
PROPOSED PARKING 73 SPACES (PATIENTS / VISITORS)
EXISTING RETAINING WALL TO REMAIN
PROPOSED WET POND
EXISTING DRIVE
121.86' SETBACK
MAIN ENTRY DOOR
DROP-OFF ZONE
SIDEWALK
6" DIA. x 4' HIGH BOLLARD, 8' O.C.
PHASE 2 AMBULATORY SURGERY CENTER (ASC) BUILDING FOOTPRINT 17,574 GSF TOTAL AREA 34,987 GSF
SERVICE AREA
FLUSH W / SIDEWALK
PROPOSED REINFORCED CONCRETE SIDEWALK
STRUCTURAL SLAB AT ALL DOORS (SEE STRUCTURAL PLANS) TYP.
PROPOSED BITUMINOUS SIDEWALK
PROPOSED GRANITE OR SLIPFORM CURB, TYP.
PROPOSED PARKING 103 SPACES (STAFF / SERVICE ONLY)
ADA COMPLIANT RAMP & DETECTABLE WARNING PANEL, TYP.
6" DIA. x 4' HIGH BOLLARDS, 8' O.C.
HOSPITAL RESERVES THE RIGHT TO INSTALL GATE CONTROLS
MATCH EXISTING PAVEMENT, TYP.
REMOVE & RESET CURB AS NECESSARY, TYP.
PROPOSED RETAINING WALL LARGE BLOCK UNITS TO BE SALVAGED FOR REUSE - STRUCTURAL DESIGN REQUIRED SEE NOTE ON SHEET C-2.1
REMOVE / RESET LIGHT POLE AS NECESSARY
METAL GUIDERAIL AT TOP OF WALL, BEHIND CURB, WHERE SHOWN (APPROX. 235 LF)
AMBULANCE STANDING / ACCESS AREA
10' WIDE TEXTURED ASPHALT OR PAINTED CROSSWALK
REMOVE EXISTING RETAINING WALL & MATCH EXISTING HEAVY-DUTY PAVEMENT IN THIS AREA
PROPOSED SLOPED GRANITE OR SLIPFORM CONCRETE CURB, TYP.
PROPOSED PARKING 24 SPACES (INCL. 5 AMBULANCE)
AMBULANCE PARKING (TOTAL 5 SPACES)
EXISTING LOADING DOCK
HEAVY-DUTY PVMT.
CANOPY
REINFORCED CONCRETE LANDING, STEPS & RAMP - SEE STRUCTURAL PLANS
PHASE 2 HOSPITAL EXPANSION FOOTPRINT 20,140 GSF TOTAL AREA 54,889 GSF
PATIENT EMERGENCY DROP OFF
STRUCTURAL SLAB AT ALL DOORS (SEE STRUCTURAL PLANS) TYP.
MAIN ENTRANCE / VESTIBULE
4' HIGH BOLLARD, 10' O.C.
FLUSH CURB / SIDEWALK
PATIENT DROP OFF
ADA COMPLIANT RAMP & DETECTABLE WARNING PANEL, TYP.
PAINTED CHEVRON PAVEMENT MARKINGS, TYP.
EXISTING PERIMETER ACCESS ROAD
MERCY HOSPITAL 4 STORY BRICK BUILDING FOOTPRINT - 37,566 GSF TOTAL AREA - 138,099 GSF
PHASE 1 EXISTING HOSPITAL
RELOCATED BIKE RACK DISPLACED BY HOSPITAL EXPANSION
REMOVE CONCRETE SIDEWALKS TO NEAREST JOINT, TYP.
MATCH EXISTING CURB & SIDEWALK
PROPOSED REINFORCED CONCRETE SIDEWALK
EXISTING BITUMINOUS WALK - WIDTH VARIES
8' WIDE PAINTED CROSSWALK, TYP.
END RAILING
8' WIDE PAINTED CROSSWALK
MATCH EXISTING PAVEMENT, TYP.
5' x 6' LANDING
5' x 16' LONG RAMP
WALL WITH RAILING
5' x 5' LANDING
MATCH EXISTING PAVEMENT, TYP.
RECONSTRUCT BIT. SIDEWALK, CURB & ADA RAMPS
MATCH EXISTING CURB & SIDEWALK
PHARMACY ENTRANCE
MEDICAL OFFICE BUILDING 4 STORY BRICK FOOTPRINT - 20,047 GSF TOTAL AREA - 82,186 GSF
EXISTING BIKE RACK
LOWER LEVEL STAFF ENTRANCE ONLY
EXISTING HOSPITAL MAIN ENTRANCE DRIVE
100.12' SETBACK
EX. FORE RIVER TRAIL - 10' WIDE, SHARED USE
I-295 CONNECTOR (FORE RIVER PARKWAY)
COUNTY WAY
EX. WATER MAIN TO ST. JOHN STREET
EX. FIRE LINE SUPPLY METER PIT
GENERATOR
OXYGEN
CHILLER
EX. HYDRANT
EX. LIFT STA.
EX. GREASE TANK
EX. SMH
EX. SAN. OUT
EX. 4" FM (CONNECTS TO TERMINUS MANHOLE AT FRONT OF BLDG.
EX. RAISED CROSSWALK
EX. LIGHT, TYP.
CHAIN LINK FENCE
PAVED WALK
CONC. RAMP
LOAD DOCK
OVERHANG
BRICK
CONCRETE
SIGNAL POLE
EX. BIT. WALK
PAVED TRAIL
N/F N STATION PARTNERSHIP 0144/23
N76°56'54"E 67.28'
S71°06'06"E 86.50'
L=176.13'
L=315.45'
175.90'
R=988.37'
N49°17'54"E 66.00'
S71°56'23"W 82.42'
S71°06'06"E 150.16'
#10 w/UCP
#9 w/UCP
#11
TP-34
TP-17
TP-19
TP-20
HA19-1 through HA19-17
HA05-2 through HA05-129
B 217 19.52
B 210 22.00
B 208 21.38
B 209 14.09
B 106 A
B 106 B

GRAPHIC SCALE
30 0 15 30 60
(IN FEET)
1 inch = 30 ft.

NORTH



INSET - SAME SCALE AS MAIN PLAN

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.

STATE OF MAINE
STEPHEN R. BUSHEY
08.30.19
LICENSED PROFESSIONAL ENGINEER
STEPHEN R. BUSHEY, P.E.
LIC. #7429

Rev.	Date	Revision
–	–	–

Issued For	Date	By
PERMIT APPROVAL SUBMISSION	08.30.19	SRB
DESIGN DEVELOPMENT SUBMISSION TO OWNER	07.31.19	SRB

Design: SRB	Draft: CDD	Date: AUG. 2019
Checked: SRB	Scale: NTS	Job No.: 3257.04

File Name: 325704-SITE.dwg

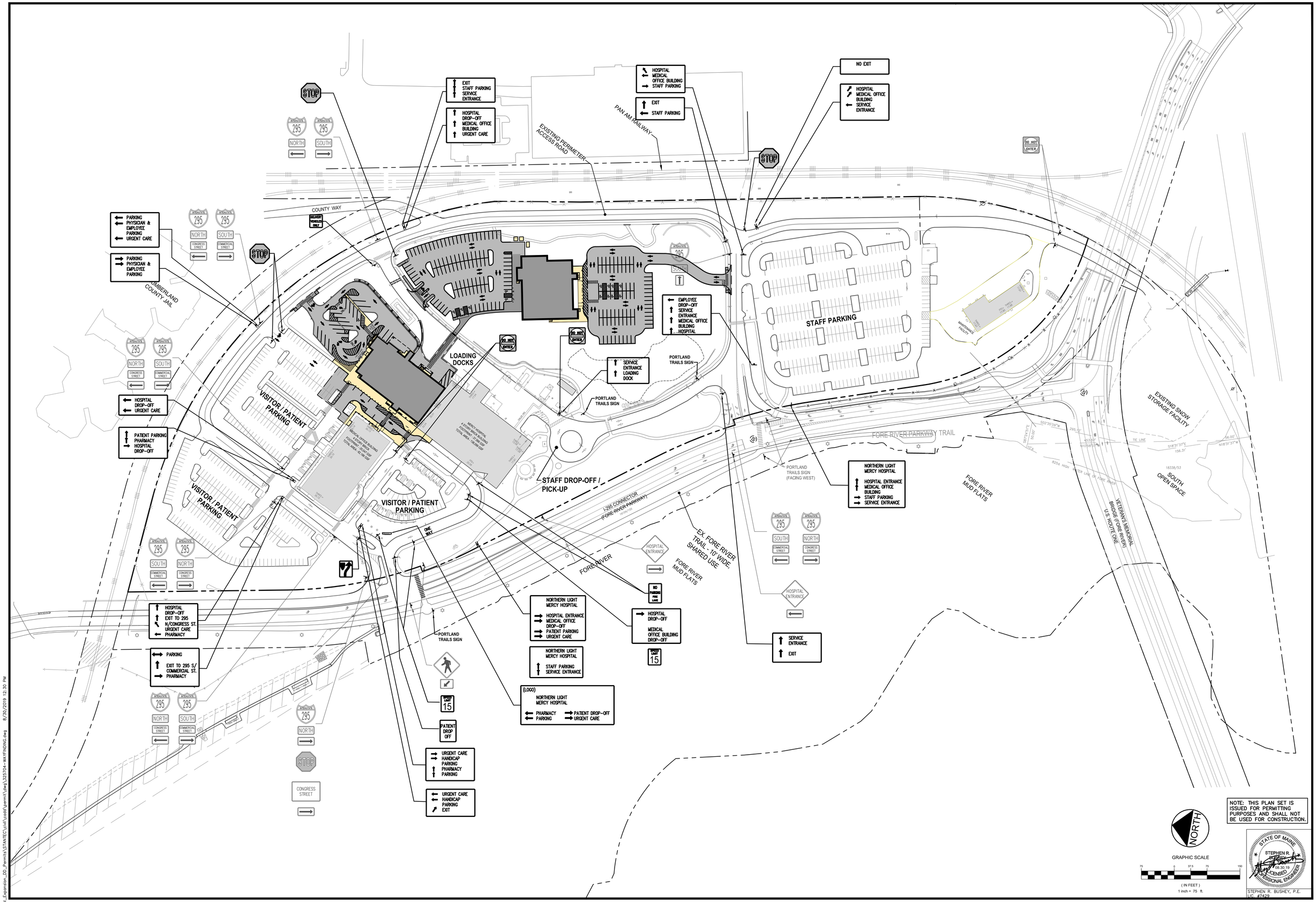
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Drawing Name: Overall Site Layout Plan
Project: Fore River Campus Consolidation, Portland, Maine
Client: Northern Light Mercy Hospital, 144 State Street, Portland, Maine 04101

Drawing No. C–3.1

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NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.

NORTH

GRAPHIC SCALE

75 0 37.5 75 150

(IN FEET)

1 inch = 75 ft.

STATE OF MAINE
STEPHEN R. BUSHEY
08.30.19
LICENSED
PROFESSIONAL ENGINEER

STEPHEN R. BUSHEY, P.E.
LIC. #7429

Rev.	Date	Revision
–	–	–

Issued For	Date	By
PERMIT APPROVAL SUBMISSION	08.30.19	SRB
DESIGN DEVELOPMENT SUBMISSION TO OWNER	07.31.19	SRB

Design: SRB	Draft: CDD	Date: AUG. 2019	
Checked: SRB	Scale: NTS	Job No.: 3257.04	
File Name: 325704–WAYFINDING.dwg			

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Drawing Name: Wayfinding Plan

Project: Fore River Campus Consolidation
Portland, Maine

Client: Northern Light Mercy Hospital
144 State Street, Portland, Maine 04101

Drawing No. C–3.2

U:\3257.04_Mercy Hospital_Expansion_DD_Permits\STANTEC\civil\cadd\permit\dwg\325704–WAYFINDING.dwg 8/30/2019 12:30 PM

SMRT
Architecture • Engineering • Planning

EXISTING PARKING

PROPOSED ACCESS ROAD

PROPOSED PARKING 73 SPACES
(PATIENTS / VISITORS)

ENTRANCE
(PATIENTS / VISITORS)

3/4 MILE WALKING LOOP

SERVICE AREA

STAFF ENTRANCE

PROPOSED PARKING 103 SPACES
(STAFF/ SERVICE ONLY)

PHASE 2
AMBULATORY
SURGURY

POND TRAIL LOOP

3/4 MILE WALKING LOOP

AMBULANCE ONLY

EMERGENCY WALK-IN

PROPOSED PARKING
(20 SPACES)

SECONDARY ENTRANCE

EXISTING PARKING

PHASE 2
HOSPITAL
EXPANSION

MAIN ENTRANCE

FORE RIVER

FORE RIVER PARKWAY

FORE RIVER PARKWAY TRAIL

LINE OF FORE RIVER

HIGH WATER

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES & CD PRICING AND SHALL NOT BE USED FOR CONSTRUCTION.

NORTH

GRAPHIC SCALE
30 0 15 30 60
(IN FEET)
1 inch = 30 ft.

Rev.	Date	Revision
1	11.04.19	PREPARED FOR L.O.R. #1 & SUBMITTED TO CITY

Issued For	Date	By
CONSTRUCTION DOCUMENTS FOR PRICING ONLY	11.22.19	SRB
PERMIT APPROVAL SUBMISSION	08.30.19	SRB
DESIGN DEVELOPMENT SUBMISSION TO OWNER	07.31.19	SRB

Design: --- Draft: --- Date: AUG. 2019
Checked: --- Scale: AS NOTED Job No.: 3257.04
File Name: 325704-GRADING WITH TRAIL.dwg

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207.772.2515

Drawing Name: EXPANSION AREA PLAN
Project: Fore River Campus Consolidation
Portland, Maine
Client: Northern Light Mercy Hospital
144 State Street, Portland, Maine 04101

Drawing No. C-4.0

J:\2019 Projects\19004_Mercy Fore River ASC\400 Design and Documentation\440 Contract Docs\441 Autocad\Xrefs\191209_LandscapeRendering\121819-DWGS\325704-GRADING WITH TRAIL.dwg 12/18/2019 9:03 AM

STORM DRAIN APPURTENANCE SCHEDULE						
ID	RIM	SIZE	INV. IN / SIZE / FROM	INV. OUT / SIZE / TO	NORTHING	EASTING
CB 1	16.35	*6 ft Ø	11.85 / 18" / CB 2	11.75 / 18" / OUTFALL 1	297091.30	2922462.35
CB 2	17.10	4 ft Ø	12.60 / 18" / DMH 1 13.08 / 12" / DMH 2	12.50 / 18" / CB 1	297109.21	2922496.16
CB 4	28.34	4 ft Ø	23.08 / 15" / CB 5	22.98 / 15" / DMH 3	297412.30	2922454.56
CB 5	27.78	4 ft Ø	23.62 / 12" / CB 6 23.62 / 12" / RD 1	23.52 / 15" / CB 4	297443.26	2922415.81
CB 6	28.00	4 ft Ø		24.00 / 12" / CB 5	297473.96	2922391.54
CB 8	17.29	4 ft Ø	12.08 / 12" / CB 9	11.98 / 12" / OUTFALL 2	296780.03	2922472.55
CB 9	17.30	4 ft Ø	12.72 / 12" / CB 10	12.62 / 12" / CB 8	296791.03	2922529.24
CB 10	17.30	4 ft Ø		13.30 / 12" / CB 9	296803.07	2922591.29
CB 11	17.80	4 ft Ø	12.50 / 12" / INLET 1	12.40 / 12" / OUTFALL 4	296592.33	2922614.25
CB 12	30.80	10 in Ø		25.90 / 8" / CB 12A	297264.56	2922150.00
CB 12A	30.08	10 in Ø	25.58 / 8" / CB 12	25.48 / 8" / CB 13	297293.96	2922165.61
CB 13	29.80	10 in Ø	25.16 / 8" / CB 12A	25.06 / 8" / CB 14	297323.71	2922180.52
CB 14	30.66	4 ft Ø	24.26 / 8" / CB 13 24.26 / 12" / CB 14A	23.00 / 12" / EX CB 3	297316.76	2922195.95
CB 14A	30.88	4 ft Ø		26.10 / 12" / CB 14	297235.73	2922153.18
DMH 1	20.10	4 ft Ø	14.18 / 15" / DMH 4 14.75 / 15" / DMH 3	13.93 / 18" / CB 2	297224.67	2922545.35
DMH 2	19.30	4 ft Ø	14.23 / 12" / EX CB1	14.13 / 12" / CB 2	297101.28	2922604.48
DMH 3	29.47	4 ft Ø	22.39 / 15" / CB 4	16.24 / 15" / DMH 1	297349.57	2922454.48
DMH 4	21.40	4 ft Ø	14.88 / 15" / EX CB2	14.78 / 15" / DMH 1	297283.94	2922571.03
EX CB 3	30.00	4 ft Ø	22.00 / 12" / CB 14	19.21 / 18" / EXIST	297355.70	2922219.38

*INSTALL WITH DOUBLE GRATE

NOTES:

1. DUE TO CONSTRUCTION ON FILL, A FOUNDATION DRAIN FOR THE ASC BUILDING IS NOT PROPOSED.
2. CATCH BASIN OUTLET HOOD SHALL BE INSTALLED ON ALL CATCH BASIN OUTLET PIPES.
3. THE CONTRACTOR SHALL SUBMIT A DEWATERING PLAN TO THE OWNER FOR APPROVAL PRIOR TO THE START OF CONSTRUCTION. THE DEWATERING PLAN SHALL DESIGNATE A SITE FOR A SEDIMENT CONTAINMENT DEVICE SUCH AS A DIRTBAG™. SEDIMENT-LADEN WATER SHALL NOT BE DISCHARGED TO THE EXISTING STORM DRAIN SYSTEM.

EXISTING PERIMETER ACCESS ROAD

ACS FACILITY F.F.E.: 19.00

GROUND FLOOR F.F.E. 17.55

FIRST FLOOR F.F.E. 32.00

HOSPITAL EXPANSION

MERCY HOSPITAL
4 STORY BRICK BUILDING
FOOTPRINT - 37,566 GSF
TOTAL AREA - 138,099 GSF

PROPOSED WET POND PERMANENT POOL EL. 9.5

SEE SHEET C-4.1 FOR DETAILED GRADING IN THIS AREA

GENERATOR

TENAX MULTIMAT FABRIC ON SLOPES EQUAL TO OR STEEPER THAN 8% FOR OCTOBER 1st TO APRIL 15th AND EQUAL TO OR STEEPER THAN 15% FOR APRIL 15th THROUGH OCTOBER 1st, TYP.

SILTATION FENCE, TYP.

TEMP. SEDIMENTATION BARRIER, TYP.

GRADE TO DIRECT RUNOFF TO SWALE

GRADE TO DIRECT RUNOFF TO CULVERT

EXCESS FILL MAY BE PLACED IN THIS AREA (TYP.)

REMOVE TRAIL, RESTORE TO LAWN

PROVIDE MAX. GRADE OF 2% IN ANY DIRECTION FOR ALL ADA SPACES, TYP.

6" FOUNDATION DRAIN TO DAYLIGHT, TYP.

ROOF DRAIN OUTLET INV. 15.00 COORDINATE WITH ARCHITECTURAL PLANS

CONNECT EXISTING STORM DRAIN TO DMH 2

CONNECT EXISTING STORM DRAIN TO DMH 4

EX. FIRE LINE, SUPPLY METER PIT

TEST PIT TO DETERMINE EXACT LOCATION & ELEV. OF EXISTING WATER AND ELECTRIC LINES

2" RIGID FOAM INSULATION BETWEEN SD & WATER

2' WIDE PAVEMENT GRIND BEYOND SAWCUT LIMIT, TYP. (MATCH EX. PAVEMENT EL.)

SAWCUT AND REMOVE PAVEMENT, SHIM BASE GRAVEL TO PROVIDE 1.5% CROSS SLOPE OVER WIDTH OF CROSSWALK. TRANSITION BASE GRAVEL TO EXISTING GRADE 5 FEET MINIMUM BEYOND CROSSWALK. REPAVE.

5' WIDE ACCESSIBLE ROUTE - SEE DETAILED GRADING SHEET C-4.1

MATCH EX. CB RIM EL.13.97

DIRECT RUNOFF TO CATCH BASIN

ALTER CATCH BASIN INLET & ADJUST RIM TO GRADE

OUTFALL 1

RIPRAP OUTLET APRON, TYP.

SEDIMENT FOREBAY BOTTOM EL. 9.0

3:1 SLOPE, TYP.

STONE BERM LEVEL LIP SPREADER - TOP EL. 11.0

RECONSTRUCT RIPRAP APRON TO DIRECT RUNOFF TO LEVEL LIP SPREADER

RIPRAP SWALE, D_{50} = 4", THICKNESS = 12" 2' BOTTOM WIDTH

EXISTING RETAINING WALL TO REMAIN

EXTENT OF WET POND STORAGE AREA = EL. 13.0 (TYP.)

10' WIDE MAINTENANCE ACCESS

DEWATERING PUMP DISCHARGE

FILTERED RUNOFF, TYP.

POTENTIAL DIRTBAG™ LOCATION - SEE NOTE 3

MAINTAIN VEGETATION BELOW DIRTBAG™ DISCHARGE LOCATION

POTENTIAL TEMPORARY BERM LOCATION TO DIRECT CLEAN WATER TO EXISTING STORM DRAIN INLET

3:1 SLOPE, TYP. VEGETATED SWALE, 2' BOTTOM WIDTH, PLACE E & S MATTING LENGTH OF SWALE, CURLEX II OR EQUAL

2:1 SLOPE

2' WIDE BERM

EX DMH 1

OCS 1

EXISTING 15" POND OUTLET PIPE

6' DIA. OUTLET CONTROL STRUCTURE & EMERGENCY OVERFLOW - PROVIDE SEDIMENT BARRIER INLET PROTECTION DURING CONSTRUCTION

PROVIDE TEMPORARY SOIL PROTECTION SUCH AS CRUSHED STONE OR RIPRAP TO PREVENT EROSION BETWEEN PUMP DISCHARGE LOCATION & EXISTING STORM DRAIN

SEE SHEETS C-8.0 & C-8.1 FOR WET POND PLAN & DETAILS

CONSTRUCT POND STARTING AT EL. 10.0

8' WIDE SAFETY BENCH

EXISTING RETAINING WALL TO REMAIN

EXISTING SD OUTFALLS VIA 18" PIPE TO MUD FLATS

(OUTFALLS TO MUD FLATS)

HIGH WATER LINE OF FORE RIVER

FORE RIVER

I-295 CONNECTOR (FORE RIVER PARKWAY)

S10°57'07"E 290.08'

S09°29'00"E 197.09'

S17°01'05"E 86.50'

N78°36'54"E 67.78'

L=384.91'

L=176.12'

L=1102.20'

L=522.60'

R=922.37'

L=197.60'

R=1184.38'

N62°48'29"E 13.12'

472.62' N36°45'03"W

STORM DRAIN PIPE SCHEDULE			
ID	SIZE	LENGTH	SLOPE
SD 1	18"	27'	0.0274
SD 2	18"	33'	0.0195
SD 3	18"	122'	0.0109
SD 4	15"	150'	0.0099
SD 5	15"	59'	0.0100
SD 6	15"	46'	0.0097
SD 7	12"	35'	0.0108
SD 8	15"	61'	0.0099
SD 10	12"	105'	0.0100
SD 12	12"	81'	0.0369
SD 13	12"	54'	0.0100
SD 14	12"	59'	0.0098
SD 15	10"	26'	0.0765
SD 16	12"	37'	0.0107
SD 17	8"	32'	0.0100
SD 17A	8"	32'	0.0100
SD 18	8"	14'	0.0554
SD 19	12"	41'	0.0241
SD 20	12"	44'	0.0114
SD 21	12"	136'	0.0322
SD 22	12"	88'	0.0210

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.

NORTH

GRAPHIC SCALE
30 0 15 30 60
(IN FEET)
1 inch = 30 ft.

STATE OF MAINE
STEPHEN R. BUSHEY
08.30.19
LICENSED PROFESSIONAL ENGINEER

STEPHEN R. BUSHEY, P.E.
LIC. #7429

Rev.	Date	Revision
–	–	–

Issued For	Date	By
PERMIT APPROVAL SUBMISSION	08.30.19	SRB
DESIGN DEVELOPMENT SUBMISSION TO OWNER	07.31.19	SRB

Design: SRB | Draft: CDD | Date: AUG. 2019
Checked: SRB | Scale: | Job No.: 3257.04
File Name: 3257-04–GRADING.dwg

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Drawing Name: Overall Grading, Drainage & Erosion Control Plan
Project: Fore River Campus Consolidation
Portland, Maine
Client: Northern Light Mercy Hospital
144 State Street, Portland, Maine 04101

Drawing No. C–4.0

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CANOPY OVERHANG, TYP. SEE ARCHITECTURAL PLANS FOR DETAILS

SEE STRUCTURAL PLANS FOR INTERFACE BETWEEN BLOCK WALL AND BUILDING FOUNDATION

CORE EXISTING CATCH BASIN TO ACCEPT NEW 4" FOUNDATION DRAIN. INV. 9.87

MATCH EX. CB RIM EL.13.97

4" PERFORATED FOUNDATION DRAIN COORDINATE WITH ARCHITECTURAL / STRUCTURAL PLANS

4" FOUNDATION DRAIN OUTLET

DIRECT RUNOFF TO CATCH BASIN

12" ROOF DRAIN EXIT POINT INV. 28.00 COORDINATE WITH ARCHITECTURAL PLANS

GROUND FLOOR F.F.E. 17.55

5' x 9' REINFORCED CONCRETE STRUCTURAL PAD, ACCESSIBLE RAMP WITH HAND RAIL AND STAIRS. SEE ARCHITECTURAL / STRUCTURAL PLANS FOR DETAILS.

ROOF / FOUNDATION DRAIN EXIT PT. (SEE PLUMBING PLANS)

SEE ARCHITECTURAL / STRUCTURAL PLANS FOR ALL TRANSITIONS FROM EXISTING HOSPITAL TO EXPANSION SPACE, TYP.

HOSPITAL EXPANSION

FIRST FLOOR F.F.E. 32.00

SLIDING DOORS

PROVIDE FLUSH TRANSITION FROM CONCRETE SIDEWALK TO BIT. PAVEMENT SURFACE, TYP.

STEEPER SLOPE TO TRANSITION BETWEEN SIDEWALK & PARKING IN THIS AREA

SEE STRUCTURAL PLANS FOR FOUNDATION DRAIN REQUIREMENTS, TYP.

PROVIDE FLUSH TRANSITION FROM CONCRETE SIDEWALK TO BIT. PAVEMENT SURFACE, TYP.

SEE ARCHITECTURAL PLANS FOR BUILDING COLUMNS AND INTERFACE WITH EXTERIOR CONCRETE AREAS.

MAX. CROSS SLOPE 2% WIDTH TO MATCH EX. BIT. SIDEWALK WIDTH

GRADE TO DRAIN, TYP.

CORE EXISTING CATCH BASIN TO ACCEPT NEW 12" STORM DRAIN. ADJUST RIM TO GRADE

ADJUST SMH TO GRADE, TYP.

SLIDING DOORS

MATCH EXISTING ELEVATION

MATCH EXISTING PAVEMENT ELEVATION

ADJUST ELEC. MANHOLE RIM TO GRADE, TYP.

EX CB 3

CB 14

CB 14A

CB 13
10" NYLOPLAST WITH DOME GRATE

CB 12
10" NYLOPLAST WITH DOME GRATE

CB 12A
10" NYLOPLAST WITH DROP IN GRATE

SD 17A

SD 17

TEST PIT TO DETERMINE EXACT LOCATION & ELEVATION OF UNDERGROUND UTILITIES, TYP.

ALTER CATCH BASIN INLET & ADJUST RIM TO GRADE

GRADE TO DIRECT RUNOFF TO CB, TYP.

EXISTING LANDSCAPED BED

UGE MAY REQUIRE REMOVAL / RESETTING TO MAKE WAY FOR SD, TYP.

RAISE TEL. BOX TO GRADE

GRADE TO DIRECT RUNOFF AWAY FROM BLDG.

MATCH EXISTING ELEVATION OF ENTRANCE SLAB

GRADE TO DIRECT RUNOFF TO DRIVEWAY

MATCH EXISTING ELEVATION

MATCH EXISTING PAVEMENT ELEVATION

MATCH EXISTING CONCRETE ELEVATION

EMERGENCY VEHICLES ONLY

EMERGENCY DROP-OFF ONLY

ONLY

ONLY

SMH RIM=31.72
(A)6"PVC IN=25.82
(B)8"SS IN=25.82
8"SS OUT=25.72

SMH RIM=30.14
(A)8"SS IN=22.04
(B)8"SS IN=22.04
8"SS OUT=21.94

CB RIM=28.31

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.

NORTH

GRAPHIC SCALE
10 0 5 10 20
(IN FEET)
1 inch = 10 ft.

STATE OF MAINE
STEPHEN R. BUSHEY
08.30.19
LICENSED PROFESSIONAL ENGINEER
STEPHEN R. BUSHEY, P.E.
LIC. #7429

MEDICAL OFFICE BUILDING

Rev.	Date	Revision
–	–	–

Issued For	Date	By
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DESIGN DEVELOPMENT SUBMISSION TO OWNER	07.31.19	SRB

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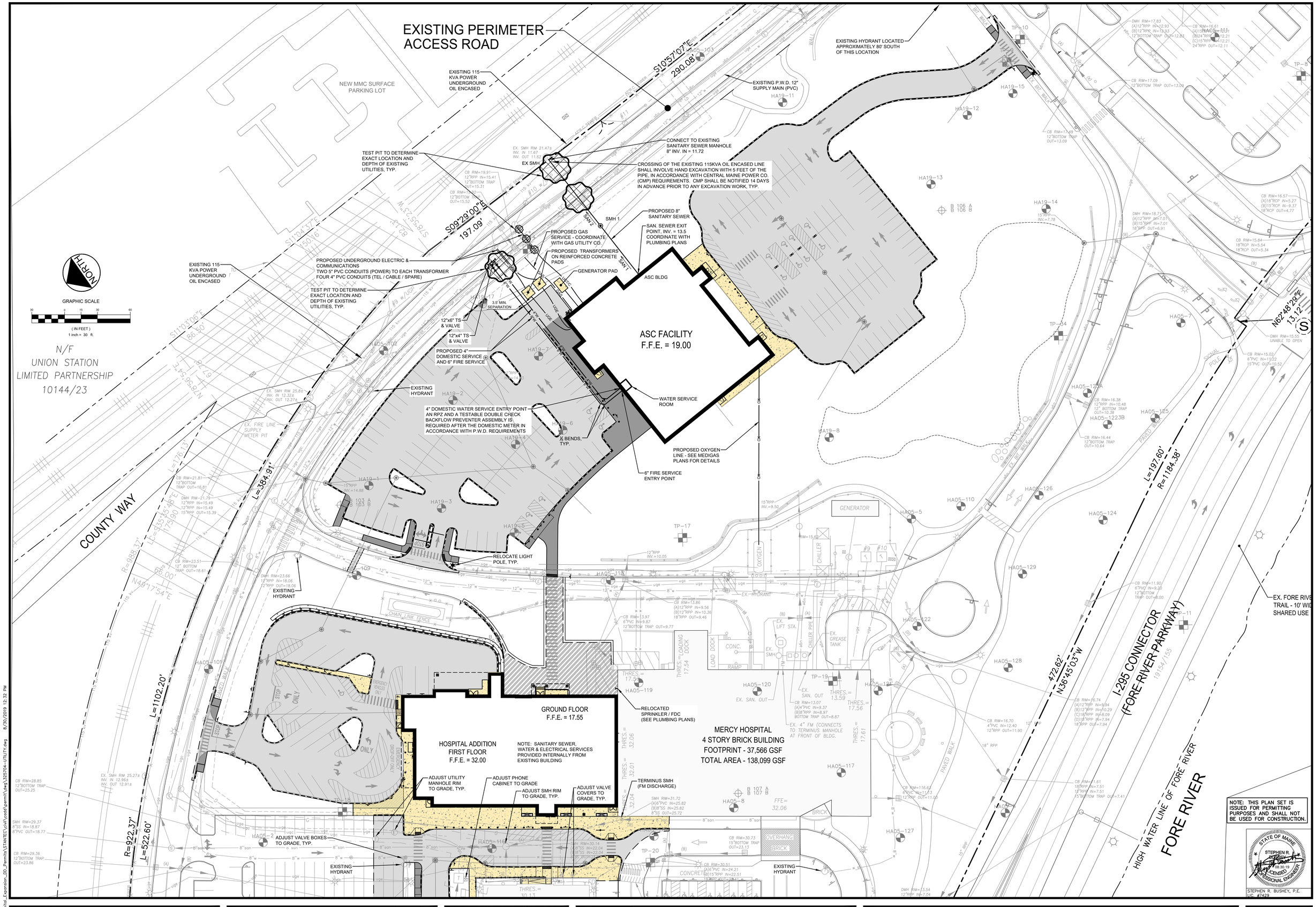
Drawing Name: Detailed Grading Plan

Project: Fore River Campus Consolidation
Portland, Maine

Client: Northern Light Mercy Hospital
144 State Street, Portland, Maine 04101

Drawing No. C–4.1

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Rev.	Date	Revision
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DESIGN DEVELOPMENT SUBMISSION TO OWNER	07.31.19	SRB

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Checked: SRB	Scale: 1" = 30'	Job No.: 3257.04	
File Name: 325704-UTILITY.dwg			

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Drawing Name: Overall Utility Plan – North

Project: Fore River Campus Consolidation
Portland, Maine

Client: Northern Light Mercy Hospital
144 State Street, Portland, Maine 04101

Drawing No. C–5.0

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N/F
ST. JOHN STREET ASSOCIATES
LIMITED PARTNERSHIP
6864/210

EXISTING PERIMETER
ACCESS ROAD

N/F
UNION STATION
LIMITED PARTNERSHIP
10144/23

N/F
INHABITANTS
CUMBERLAND COUNTY
STATE OF MAINE
9382/61
9820/263

CUMBERLAND
COUNTY JAIL

COUNTY WAY

EX. WATER MAIN
ST. JOHN STREET

EX. FIRE LINE
SUPPLY
METER PIT

EXIST. VEG. TO REMAIN

LOW MAINTENANCE

LAWN

NEW 2 - UP

NEW 8 - RW

NEW 12 - GB

NEW 4 - GB

NEW 6 - MP

PHASE 2
AMBULATORY SURGERY
CENTER (ASC) BUILDING
FOOTPRINT 17,574 GSF
TOTAL AREA 34,987 GSF

PHASE 2
HOSPITAL EXPANSION
FOOTPRINT 20,140 GSF
TOTAL AREA 54,889 GSF

MERCY HOSPITAL
4 STORY BRICK BUILDING
FOOTPRINT - 37,566 GSF
TOTAL AREA - 138,099 GSF

MEDICAL OFFICE BUILDING
4 STORY BRICK
FOOTPRINT - 20,047 GSF
TOTAL AREA - 82,186 GSF

SWM POND

FUTURE ASC
BLDG. EXPANSION

TRANSPLANT 4 - BN

TRANSPLANT 6 - TOT

REMOVE / RESET /
TRANSPLANT SHRUBS
AROUND TRANSFORMER
AS NECESSARY

GENERATOR

OXYGEN

CHILLER

EX. HYDRANT

EX. LIFT STA.

EX. SMH

EX. SAN. OUT

EX. 4" FM (CONNECTS TO TERMINUS MANHOLE AT FRONT OF BLDG.

LOAD DOCK

CONC. RAMP

OVERHANG BRICK

EX. RAISED CROSSWALK

PAVED WALK

PAVED ISLAND

EX. FORE RIVER TRAIL - 10' WIDE, SHARED USE

I-295 CONNECTOR
(FORE RIVER PARKWAY)

FORE RIVER

FORE RIVER
MUD FLATS

LANDSCAPE LEGEND

- EXISTING LANDSCAPING TO REMAIN
- T — EXISTING LANDSCAPING TO BE TRANSPLANTED
- R R — EXISTING LANDSCAPING TO BE REMOVED
- PROPOSED NEW LANDSCAPING
- LOW MAINTENANCE — LOW MAINTENANCE MIX = NEW ENGLAND EROSION CONTROL / RESTORATION MIX BY NEW ENGLAND WETLAND PLANTS, INC., OR EQUAL

NORTH

GRAPHIC SCALE
40 0 20 40 80
(IN FEET)
1 inch = 40 ft.

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.

STATE OF MAINE
STEPHEN R. BUSHEY
11.04.19
LICENSED PROFESSIONAL ENGINEER
STEPHEN R. BUSHEY, P.E.
LIC. #7429

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1	11.04.19	PREPARED FOR L.O.R. #1 & SUBMITTED TO CITY

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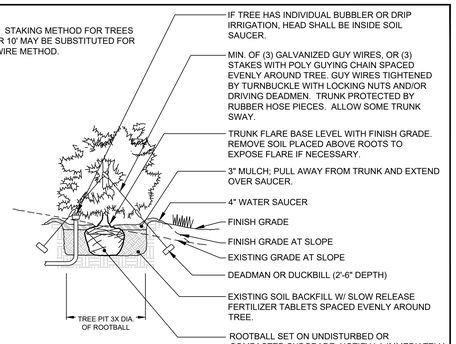
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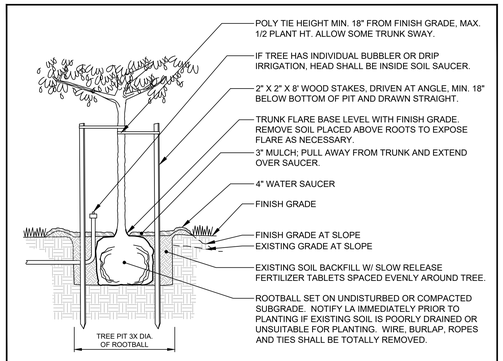
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Project: Fore River Campus Consolidation
Portland, Maine
Client: Northern Light Mercy Hospital
144 State Street, Portland, Maine 04101

Drawing No. C-6.0

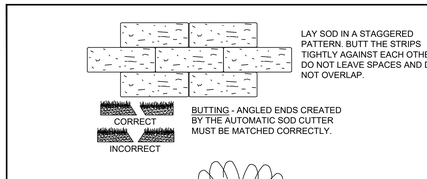
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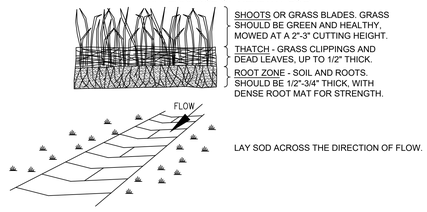


A CONIFER INSTALLATION DETAIL
N.T.S.



E TREE INSTALLATION DETAIL: <10' HT.
N.T.S.





I SOD PLACEMENT DETAILS (IF SOD IS USED IN LIEU OF LOAM & SEED)
N.T.S.

SPECIFICATIONS

SITE PREPARATION
(a) INSTALL NEEDED WATER CONTROL MEASURES.
(b) GRADE SLOPES 2:1 OR FLATTER.
(c) BEFORE LAYING SOD, PROVIDE ADEQUATE DRAINAGE WHERE INTERNAL WATER MOVEMENT, ESPECIALLY AT THE TOE OF SLOPES, MAY CAUSE SEEPS OR SOIL SLIPPAGE.

SOIL PREPARATION
(a) PROVIDE THE BEST POSSIBLE SOIL CONDITIONS FOR SODDING. THE DESIRABLE SOIL TEXTURES INCLUDE SANDY LOAM, LOAM, AND SILT LOAM. WHERE DROUGHTY OR CLAYEY SOILS ARE ENCOUNTERED, CONSIDER AMENDING THEM WITH IMPORTED MATERIALS (TOPSOIL, COMPOST, SAND, ETC.) TO IMPROVE MOISTURE AND NUTRIENT RETENTION AND DRAINAGE. RESPREAD SCREENED NATIVE TOPSOIL (WHEN AVAILABLE) AFTER GRADING.

(b) IF TIME PERMITS, HAVE SOILS TESTED AND FOLLOW LIME AND FERTILIZER RECOMMENDATIONS.

(c) FILL AREAS MUST BE COMPACTED ENOUGH TO PREVENT UNEVEN SETTLING. THE ENTIRE SURFACE TO BE SODDED SHALL BE FREE FROM LARGE CLODS, STONES, OR OTHER DEBRIS. AT THIS STAGE, INCORPORATE LIME AND FERTILIZER UNIFORMLY INTO THE SURFACE SOIL AS NEEDED. IMMEDIATELY BEFORE SODDING, THE SOIL SHALL BE LOOSENED TO A DEPTH OF 1 INCH AND THOROUGHLY DAMPENED, IF NOT ALREADY MOIST. SOD SHALL NOT BE LAID ON DRY SOIL. THE LAST TILLAGE OPERATION SHOULD BE PERFORMED ACROSS THE SLOPE WHENEVER PRACTICAL.

SELECTION OF SOD
(a) SELECT SOD GROWN FROM SEED OF ADAPTED VARIETIES OR TYPES AND UNDER CULTURAL PRACTICES CONDUCIVE TO HIGH QUALITY SOD FREE OF THATCH, WEED, INSECT, DISEASE, AND OTHER PEST PROBLEMS.

(b) SELECT SPECIES AND VARIETIES BEST SUITED FOR THE SITES TO BE STABILIZED.

(c) SELECT SOD AT LEAST 15 MONTHS OLD AND NO OLDER THAN 3 YEARS. CULTIVATED TURF GRASS IS USUALLY CONSIDERED READY FOR HARVEST WHEN A CUT PORTION OF SOD 3 FEET LONG BY 1 TO 1 1/2 FEET WIDE WILL SUPPORT ITS OWN WEIGHT WHEN SUSPENDED VERTICALLY FROM THE UPPER 10 PERCENT OF THE SECTION. THE MOST COMMON AGE OF SOD WHEN CUT IS 15 TO 24 MONTHS.

(d) SELECT SOD CUTS OF WIDTH AND LENGTH SUITED TO THE PROJECT AND AVAILABLE EQUIPMENT. GENERALLY, SOD PIECES ARE 12 TO 24 INCHES WIDE, AVERAGING 18 INCHES IN WIDTH. LENGTHS OF PIECES VARY FROM 4 TO 8 FEET. SOD MAY BE CUT AND ROLLED OR FOLDED IN THE MIDDLE AND STACKED ON PALLETS. FOLDED SOD IS CUT SHORTER THAN ROLLED SOD - ABOUT 3 TO 4 FEET IN LENGTH. SOD SHOULD BE CUT WITH A 1/4 TO 1/2 INCH LAYER OF SOIL. ABOUT 80 PERCENT OF ALL RHIZOMES ARE IN THE TOP 3/4 INCH OF SOIL. THE THINNER THE SOD IS CUT THE MORE QUICKLY IT WILL KNIT TO THE SITE SOIL, BUT THE SOIL LAYER MUST BE THICK ENOUGH TO HOLD CUT PIECES TOGETHER WITHOUT FALLING APART.

(e) HAVE SOD DELIVERED TO THE SITE AS SOON AS PRACTICAL AFTER LIFTING. DURING HOT WEATHER, DELIVERY SHOULD BE MADE WITHIN 6 HOURS AND MAY BE EXTENDED TO 48 HOURS DURING COOL SEASONS. IT IS GENERALLY UNWISE TO MOVE SOD DURING JULY AND AUGUST. IF MOVED DURING THIS PERIOD, SOD MAY NEED TO BE CUT THICKER AND IT WILL REQUIRE FREQUENT IRRIGATION.

ESTABLISHMENT
(a) DATES: SOD CAN BE ESTABLISHED FROM APRIL 1st TO NOVEMBER 15th (MAY VARY WITH REGION OF STATE).

(b) LAY STRIPS OF SOD AT RIGHT ANGLES TO DIRECTION OF SLOPE OR FLOW OF WATER STARTING AT THE LOWEST ELEVATION. WEDGE THE EDGES AND ENDS OF THE SOD STRIPS TOGETHER AND TAMP OR ROLL. STAGGER JOINTS. LAY SO THE TOP OF THE SOIL LAYER IS FLUSH WITH THE TOP OF THE UNDISTURBED GROUND OR PAVEMENT SURFACE.

(c) USE WIRE STAPLES, FINE MESH WIRE OR WOOD PINS AND BINDER TWINE ON VERY STEEP SLOPES TO HOLD SOD IN PLACE UNTIL SECURED BY PLANT GROWTH.

(d) IRRIGATE SODDED AREA IMMEDIATELY AFTER INSTALLATION. IF UNFAVORABLE DRY WEATHER OR OTHER CONDITIONS PREVAIL, ADDITIONAL WATERING WILL SUBSEQUENTLY BE REQUIRED. IT MAY ALSO BE DESIRABLE TO IRRIGATE AREA FROM WHICH SOD IS TO BE REMOVED PRIOR TO LIFTING.

SODDED WATERWAYS
(a) CARE SHALL BE TAKEN TO PREPARE THE SOIL ADEQUATELY IN ACCORDANCE WITH THE SPECIFICATIONS. THE SOD TYPE SHALL CONSIST OF PLANT MATERIALS ABLE TO WITHSTAND THE DESIGNED VELOCITY.

(b) SOD STRIPS IN WATERWAYS SHALL BE LAID PERPENDICULAR TO THE DIRECTION OF FLOW (FIGURE 4.2). CARE SHOULD BE TAKEN TO BUTT ENDS OF STRIPS TIGHTLY.

(c) AFTER ROLLING OR TAMPING, SOD SHALL BE PEGGED OR STAPLED TO RESIST WASHOUT DURING THE ESTABLISHMENT PERIOD. CHICKEN WIRE, JUTE OR OTHER NETTING MAY BE PEGGED OVER THE SOD FOR EXTRA PROTECTION IN CRITICAL AREAS.

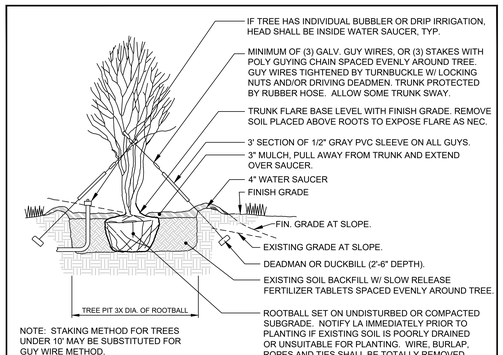
(d) ALL OTHER SPECIFICATIONS FOR THIS PRACTICE SHALL BE ADHERED TO WHEN SODDING A WATERWAY.

TIMING
WHEN SOD IS INSTALLED TO STABILIZE AREAS OF CONCENTRATED FLOW (INLETS, DIVERSIONS, DITCHES, ETC.), INSTALLATION MUST BE COMPLETED BEFORE RUNOFF IS DIRECTED TO THAT AREA.

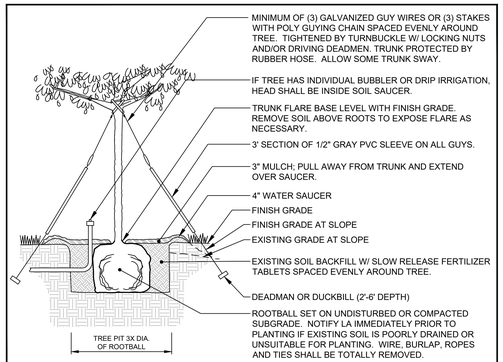
MAINTENANCE
(a) AFTER THE FIRST WEEK, SOD SHALL BE WATERED AS NECESSARY TO MAINTAIN ADEQUATE MOISTURE IN THE ROOT ZONE AND PREVENT DORMANCY OF SOD.

(b) NO MORE THAN 1/3 OF THE SHOOT (GRASS LEAF) SHOULD BE REMOVED IN ANY MOWING. GRASS HEIGHT SHOULD BE MAINTAINED BETWEEN 2 AND 3 INCHES UNLESS OTHERWISE SPECIFIED.

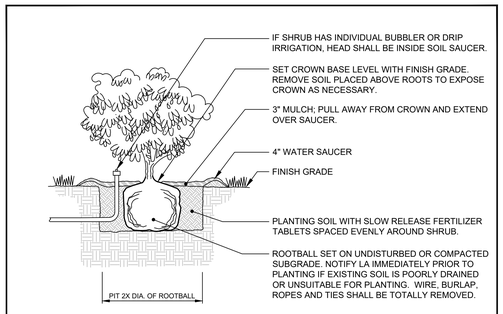
(c) AFTER THE FIRST GROWING SEASON, ESTABLISHED SOD WILL REQUIRE FERTILIZATION AND MAY REQUIRE LIME. FOLLOW SOIL TEST RECOMMENDATIONS.



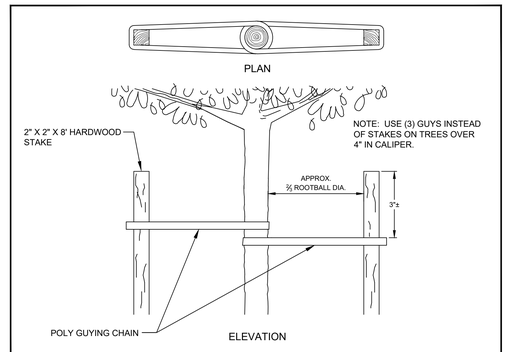
B MULTI-TRUNKED TREE INSTALLATION DETAIL
N.T.S.



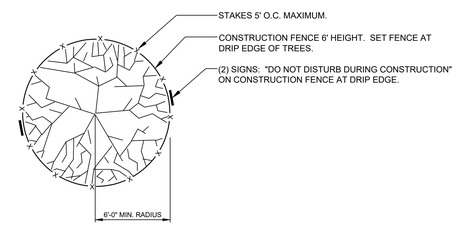
F TREE INSTALLATION DETAIL: >10' HT.
N.T.S.



C SHRUB INSTALLATION DETAIL
N.T.S.



G POLY GUYING DETAIL
N.T.S.



D TREE PROTECTION DETAIL
N.T.S.

H VACANT
N.T.S.

1. PLANTING OF TREES AND SHRUBS SHALL NOT OCCUR UNTIL ALL GRADING AND PAVING IS COMPLETED IN THE AREA.
2. ALL PLANTS SHALL HAVE A NORMAL HABIT OF GROWTH FOR THE SPECIES AND SHALL BE SOUND, HEALTHY AND FREE OF DISEASE AND INSECTS. THEY SHALL CONFORM TO THE SIZE SPECIFICATION INDICATED ON THE PLANT LIST AND SHALL CONFORM TO ANSI Z60.1 - NURSERY STOCK, LATEST REVISION.
3. ALL PLANTS SHALL HAVE ALL ROOTBALL WRAPPING MATERIALS (BURLAP, WIRE, STRING, ROPE, POTS, ETC.) REMOVED AT THE TIME OF PLANTING. REMOVE SOIL PLACED ABOVE ROOTS TO EXPOSE TRUNK FLARE AS NECESSARY TO DETERMINE SETTING LEVEL AND PIT DEPTH. CIRCLING ROOTS OR ROOTS THAT WOULD LATER GIRDLE THE PLANT SHALL BE STRAIGHTENED OR CUT OR THE ROOT BALL SHALL BE CUT UTILIZING THE "BUTTERFLY METHOD".
4. BACKFILL MIX FOR ALL PLANT MATERIAL, EXCEPT TREES, SHALL BE COMPOSED OF TWO PARTS EXISTING SOIL AMENDED WITH ONE PART COMPOST OR TOPSOIL, OR WITH ONE PART SANDY FILL IF HEAVY SOILS. TREE PITS SHALL BE BACKFILLED WITH EXISTING SOIL. PLANTING PITS SHALL BE EXCAVATED TO TWICE THE DIAMETER AND TO THE SAME DEPTH OF THE PLANT ROOT BALL. BACKFILL 1/2 OF DEPTH OF PIT AT A TIME AND COMPACT. REFER TO FERTILIZER RATES AND INSTALL SLOW RELEASE FERTILIZER AFTER FIRST BACKFILL LIFT.
5. ALL PLANTINGS SHALL HAVE SLOW RELEASE FERTILIZER TABLETS INSTALLED. TABLETS SHALL BE AGRIFORM 21-GRAM 20-10-5 PLANTING TABLETS OR AN APPROVED EQUAL. APPLICATION RATE: PERENNIALS - 1 TABLET/PLANT, WOODY SHRUBS TO 3'-0" - 2 TABLETS/PLANT, SHRUBS AND TREES 3'-0" TO 6'-0"-3 TABLETS/PLANT AND TREES 6'-0" AND ABOVE - 4 TABLETS/PLANT. AFTER PLANTS ARE INSTALLED, LIQUID FEED ALL PLANTS WITH ROOTS OR AN APPROVED EQUAL. MIX ACCORDING TO MANUFACTURERS INSTRUCTIONS. APPLICATION RATE: PERENNIALS - 2 QT/PLANT, WOODY SHRUBS TO 4'-0" - 1.5 GAL/PLANT, TREES AND SHRUBS 4'-0" TO 10'-0" 3.0 GAL/PLANT AND TREES 10' AND ABOVE - 4.0 GAL/PLANT.
6. ALL TREES REQUIRE A MINIMUM OF 2 STAKES EACH AND ALL SHALL BE GUYED OR STAKED. TREE STAKING MATERIAL SHALL BE REMOVED BY THE LANDSCAPE CONTRACTOR AFTER ONE GROWING SEASON.
7. ALL SHRUB PLANTINGS ARE IN MULCHED BEDS. ALL PLANTING BEDS SHALL BE FREE OF WEEDS OR GRASS PRIOR TO INSTALLATION OF MULCH. IF VEGETATION EXISTS, TREAT WITH HERBICIDE. MULCH SHALL BE MEDIUM SHREDDED BARK, 3" DEPTH. ALL PLANTINGS NOT IN BEDS OR ISLANDS SHALL HAVE MULCHED WATER RINGS ACCORDING TO THE DETAIL.
8. ALL PLANTS SHALL HAVE THEIR LOCATIONS STAKED AND APPROVED BY THE LANDSCAPE ARCHITECT OR OWNER PRIOR TO PLANT INSTALLATION. ALL PLANTS SHALL BE ORIENTED FOR BEST APPEARANCE.
9. PLANT SPECIES SUBSTITUTIONS WILL NOT BE ALLOWED UNLESS FIRST APPROVED BY THE LANDSCAPE ARCHITECT, OWNER, AND MUNICIPAL AUTHORITY (IF APPLICABLE). ANY CHANGE TO PLANT SPECIES, DUE TO LACK OF AVAILABILITY DURING CONSTRUCTION, SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT.
10. ALL PLANTS SHALL BE GUARANTEED FOR ONE YEAR FROM DATE OF FINAL ACCEPTANCE BY THE OWNER, OR ONE YEAR FROM STORE GRAND OPENING DATE, WHICHEVER IS LONGER. ANY PLANTS THAT DIE DURING THE GUARANTEE PERIOD SHALL BE REPLACED BY THE CONTRACTOR AT NO COST TO THE OWNER. A WRITTEN WARRANTY, WITH CONTRACTOR'S CONTACT INFORMATION, DATE OF ACCEPTANCE AND LENGTH OF GUARANTEE PERIOD SHALL BE SUBMITTED AS PART OF JOB CLOSEOUT. ANY MATURE TREE WHICH WAS USED TO SATISFY THE REQUIRED NUMBER OF PLANT UNITS WHICH DIES WITHIN FIVE YEARS OF THE ISSUANCE OF THE BUILDING PERMIT SHALL BE REPLACED WITH TWO CANOPY OR EVERGREEN TREES WITHIN ONE GROWING SEASON OF ITS DEATH.
11. ALL AREAS NOT IDENTIFIED WITH OTHER SURFACE TREATMENTS SHALL BE LAWN. THE LAWN AREA SHALL BE LOAMED, SEEDED AND STRAW MULCHED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LAWN MAINTENANCE. MAINTENANCE SHALL COMMENCE AT THE TIME OF PLANTING AND CONTINUE UNTIL GRASS IS FULL AND ESTABLISHED AND ACCEPTED BY THE OWNER.
12. ALLOW SHRUBS AND ORNAMENTAL GRASSES TO GROW TOGETHER TO FORM A NATURAL LOOKING PLANT MASS AND ALLOW EVERGREEN SHRUBS TO GROW TOGETHER TO FORM A SOLID GROUND COVER.
13. IF QUANTITIES OF PLANTS LISTED IN THE PLANT LIST DO NOT CORRELATE WITH THOSE INDICATED ON THE PLAN, THE QUANTITIES ON THE PLAN SHALL GOVERN.
14. ALL LANDSCAPE ISLANDS SHALL HAVE 12" OF LOAM AND BE SLIGHTLY MOUNDED PER THE DETAIL.
15. REMOVE EXISTING GRASS AND WEEDS FROM ALL AREAS TO BE PLANTED PRIOR TO PLANT INSTALLATION. LOAM, SEED AND STRAW MULCH (OR OTHER SURFACE TREATMENT AS INDICATED) ALL AREAS DISTURBED BY CONSTRUCTION.
16. ALL AREAS NOT IDENTIFIED WITH OTHER SURFACE TREATMENTS SHALL BE SEEDED AND STRAW MULCHED WITH SEED MIXES AS NOTED AND AS DESCRIBED IN THE SPECIFICATIONS:
    a. PRIOR TO SEEDING, APPLY FERTILIZER AND LIME IN ACCORDANCE WITH SOIL TEST RECOMMENDATIONS.
    b. LAWNS: 35% KENTUCKY BLUEGRASS, 35% CREEPING RED FESCUE, 20% CHEWING FESCUE, 10% PERENNIAL RYEGRASS. RATE: 5 LBS/1000 SF.
    c. LOW MAINTENANCE AREAS: 35% TALL FESCUE, 30% CREEPING RED FESCUE, 20% PERENNIAL RYEGRASS, 15% ANNUAL RYEGRASS RATE: 5 LBS/1000 SF.
    d. WETLAND SEED MIX: WETLAND SEED MIX AS DISTRIBUTED BY NE WETLAND PLANTS IN AMHERST, MA. RATE: 0.5 LB/1000 SF.
    e. EROSION CONTROL SEED MIX: EROSION CONTROL SEED MIX AS DISTRIBUTED BY NE WETLAND PLANTS IN AMHERST, MA. RATE: 1 LB/1000 SF.

J LANDSCAPE NOTES
N.T.S.

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.

STATE OF MAINE
STEPHEN R. BUSHEY
08.30.19
LICENSED PROFESSIONAL ENGINEER
STEPHEN R. BUSHEY, P.E.
LIC. #7429

Rev.	Date	Revision
–	–	–

Issued For	Date	By
PERMIT APPROVAL SUBMISSION	08.30.19	SRB
DESIGN DEVELOPMENT SUBMISSION TO OWNER	07.31.19	SRB

Design: SRB	Draft: CDD	Date: AUG. 2019
Checked: SRB	Scale: 1" = 40'	Job No.: 3257.04
File Name: 325704-LANDSCAPE.dwg		

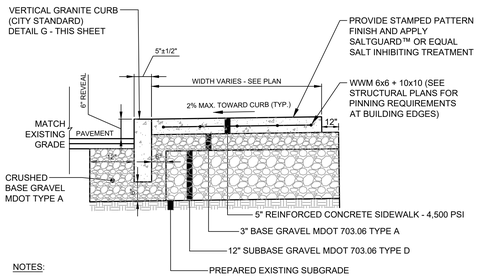
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Drawing Name: LANDSCAPE DETAILS
Project: Fore River Campus Consolidation, Portland, Maine
Client: Northern Light Mercy Hospital, 144 State Street, Portland, Maine 04101

Drawing No. C–6.1

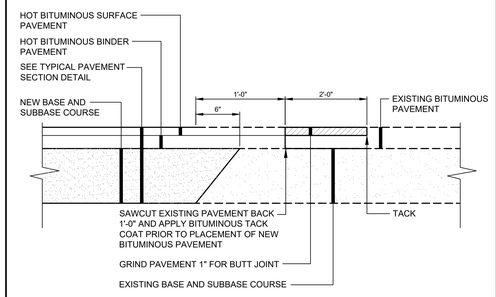
U:\3257.04_Mercy Hospital_Expansion_DD_Permits\STANTEC\civil\cadd\permit\dwg\325704-LANDSCAPE.dwg 10/4/2019 3:46 PM



NOTES:

1. INSTALL CONSTRUCTION JOINTS AT 12' SPACING.
2. PROVIDE ½" WIDE EXPANSION JOINT BETWEEN SIDEWALK AND ALL FIXED OBJECTS.
3. STAMPING PATTERN SHALL BE REVIEWED AND APPROVED BY OWNER PRIOR TO PLACEMENT.

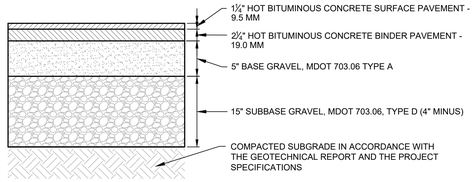
Ⓐ CONCRETE SIDEWALK DETAIL
N.T.S.



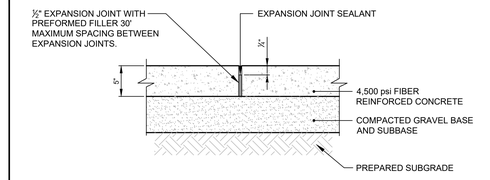
Ⓔ PAVEMENT SAWCUT DETAIL
N.T.S.

NOTES:

1. SEE OVERALL SITE LAYOUT PLAN (SHEET C-3.1) FOR LOCATION(S) OF DIFFERENT PAVEMENT TYPES.
2. APPLY TACK COAT BETWEEN BINDER AND SURFACE COURSES.
3. ALL MATERIALS SHALL CONFORM TO MDOT SPECIFICATIONS, LATEST REVISION. COMPACTION OF ALL MATERIALS TO BE IN ACCORDANCE WITH THE SPECIFICATIONS AND GEOTECHNICAL REPORTS PREPARED BY THE GEOTECHNICAL ENGINEER, WHICHEVER IS MORE STRINGENT.
4. CONTRACTOR SHALL BE REQUIRED TO PROTECT ALL BEARING SOILS FROM EXCESSIVE DISTURBANCE. SHOULD SUBGRADE BECOME YIELDING OR DIFFICULT TO WORK, DISTURBED AREAS SHOULD BE EXCAVATED AND COMPACTED WITH SELECT GRANULAR FILL OR CRUSHED STONE AT NO EXTRA EXPENSE TO THE OWNER. WOVEN GEOTEXTILE TENSILE FABRIC (MIRAFI 600X OR EQUAL) SHALL BE PLACED OVER UNSUITABLE SUBGRADE AS DIRECTED BY THE OWNER'S REPRESENTATIVE, AT NO EXTRA EXPENSE TO THE OWNER.
5. ALL GRAVELS SHALL EXTEND A MINIMUM OF 12" BEYOND THE EDGE OF PAVEMENT.



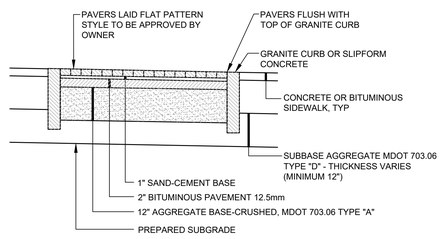
Ⓘ STANDARD DUTY BITUMINOUS CONCRETE PAVEMENT SECTION
N.T.S.



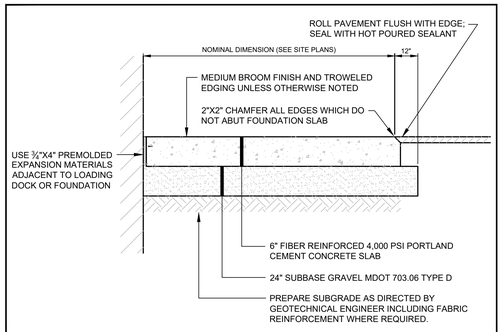
NOTE:
CONCRETE SIDEWALK TO HAVE FINE TO MEDIUM BROOM FINISH PERPENDICULAR TO CURB LINE.

PROVIDE 1/2" WIDE EXPANSION JOINT BETWEEN SIDEWALK AND ALL FIXED OBJECTS.

Ⓜ SIDEWALK EXPANSION JOINT
N.T.S.



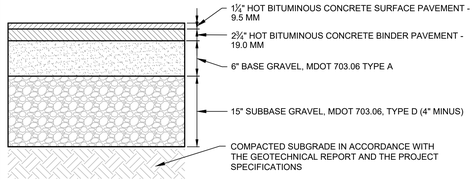
Ⓑ PAVER SIDEWALK OR ENTRY PLAZA DETAIL
N.T.S.



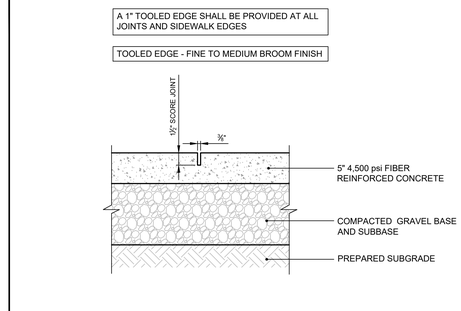
Ⓕ CONCRETE SLAB DETAIL
N.T.S.

NOTES:

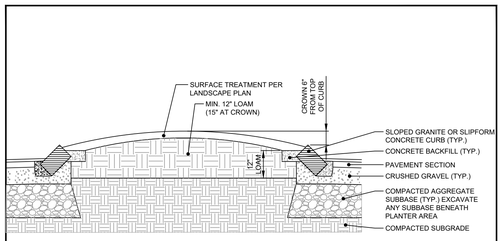
1. SEE OVERALL SITE LAYOUT PLAN (SHEET C-3.1) FOR LOCATION(S) OF DIFFERENT PAVEMENT TYPES.
2. APPLY TACK COAT BETWEEN BINDER AND SURFACE COURSES.
3. ALL MATERIALS SHALL CONFORM TO MDOT SPECIFICATIONS, LATEST REVISION. COMPACTION OF ALL MATERIALS TO BE IN ACCORDANCE WITH THE SPECIFICATIONS AND GEOTECHNICAL REPORTS PREPARED BY THE GEOTECHNICAL ENGINEER, WHICHEVER IS MORE STRINGENT.
4. CONTRACTOR SHALL BE REQUIRED TO PROTECT ALL BEARING SOILS FROM EXCESSIVE DISTURBANCE. SHOULD SUBGRADE BECOME YIELDING OR DIFFICULT TO WORK, DISTURBED AREAS SHOULD BE EXCAVATED AND COMPACTED WITH SELECT GRANULAR FILL OR CRUSHED STONE AT NO EXTRA EXPENSE TO THE OWNER. WOVEN GEOTEXTILE TENSILE FABRIC (MIRAFI 600X OR EQUAL) SHALL BE PLACED OVER UNSUITABLE SUBGRADE AS DIRECTED BY THE OWNER'S REPRESENTATIVE, AT NO EXTRA EXPENSE TO THE OWNER.
5. ALL GRAVELS SHALL EXTEND A MINIMUM OF 12" BEYOND THE EDGE OF PAVEMENT.



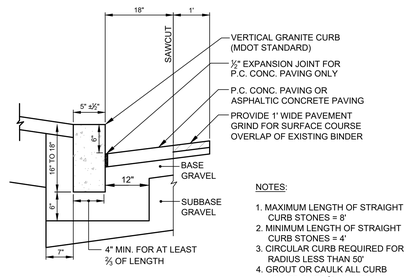
Ⓙ HEAVY DUTY BITUMINOUS CONCRETE PAVEMENT SECTION
N.T.S.



Ⓝ SIDEWALK SCORE JOINT
N.T.S.



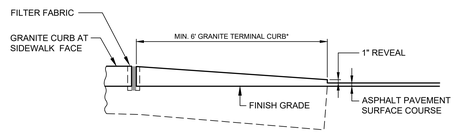
Ⓒ TYPICAL ISLAND PLANTING BEDS WITHOUT SIDEWALK
N.T.S.



NOTES:

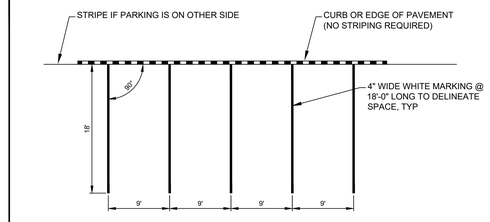
1. MAXIMUM LENGTH OF STRAIGHT CURB STONES = 8'
2. MINIMUM LENGTH OF STRAIGHT CURB STONES = 4'
3. CIRCULAR CURB REQUIRED FOR RADIUS LESS THAN 50'
4. GROUT OR CAULK ALL CURB JOINTS OVER ¼" IN WIDTH. INSTALL STRIP OF FILTER FABRIC BEHIND EACH CURB JOINT.

Ⓖ VERTICAL GRANITE CURB DETAIL
N.T.S.



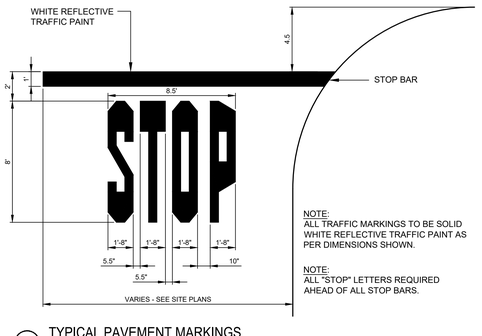
* 6'-0" IS MINIMUM - LENGTH MAY NEED TO BE EXTENDED TO MEET ADA REQUIREMENTS

Ⓚ TERMINAL CURB DETAIL
N.T.S.



NOTE:
WHEN PARKING IS ON A CURVE, THE NARROWEST PORTION OF THE PARKING STALL SHALL MEET THE WIDTH SHOWN.

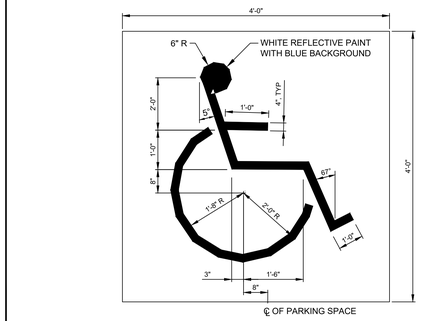
Ⓞ STANDARD PARKING STALL STRIPING
N.T.S.



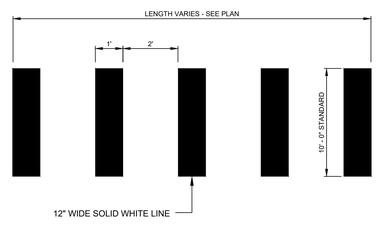
NOTE:
ALL TRAFFIC MARKINGS TO BE SOLID WHITE REFLECTIVE TRAFFIC PAINT AS PER DIMENSIONS SHOWN.

NOTE:
ALL "STOP" LETTERS REQUIRED AHEAD OF ALL STOP BARS.

Ⓓ TYPICAL PAVEMENT MARKINGS
N.T.S.



Ⓗ INTERNATIONAL BARRIER FREE SYMBOL
N.T.S.



Ⓛ CROSSWALK STRIPING DETAIL
N.T.S.

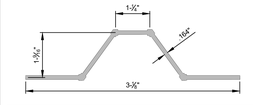
LENGTH: AS REQUIRED

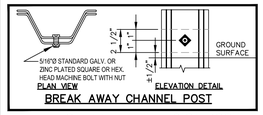
WEIGHT PER LINEAR FOOT: 2.50 LBS. MIN.

HOLES: ⅜" DIAMETER, 1" C-C FULL LENGTH

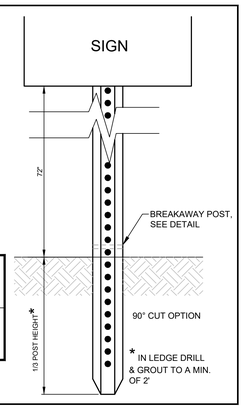
STEEL: SHALL CONFORM TO ASTM A-499 (GRADE 60) OR ASSTM A-576 (GRADE 1070 - 1080)

FINISH: SHALL BE PAINTED WITH TWO COATS OF AN APPROVED MEDIUM GREEN BAKED ON OR AIR DRIED, PAINT OF WEATHER RESISTANT QUALITY. ALL FABRICATION SHALL BE COMPLETE BEFORE PAINTING.





BREAK AWAY CHANNEL POST



Ⓟ U-CHANNEL METAL SIGN POST
N.T.S.

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.

STATE OF MAINE
STEPHEN R. BUSHEY
08.30.19
LICENSED PROFESSIONAL ENGINEER
STEPHEN R. BUSHEY, P.E.
LIC. #7429

Rev.	Date	Revision
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Issued For	Date	By
PERMIT APPROVAL SUBMISSION	08.30.19	SRB
DESIGN DEVELOPMENT SUBMISSION TO OWNER	07.31.19	SRB

Design: SRB	Draft: CDD	Date: AUG. 2019
Checked: SRB	Scale: NTS	Job No.: 3257.04

File Name: 3257.04-DET.dwg

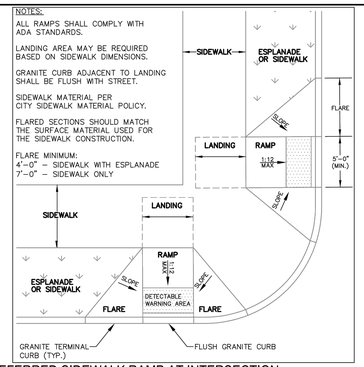
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Drawing Name: Site Details
Project: Fore River Campus Consolidation, Portland, Maine
Client: Northern Light Mercy Hospital, 144 State Street, Portland, Maine 04101

Drawing No. C-7.0

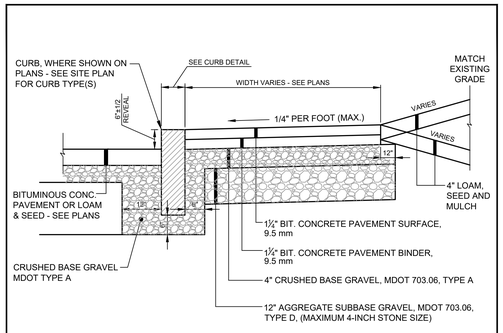
U:\3257.04_Mercy Hospital_Expansion_DD_Permits\STANTEC\civil\cadd\permit\dwg\325704-DET.dwg 8/30/2019 12:16 PM



A PREFERRED SIDEWALK RAMP AT INTERSECTION

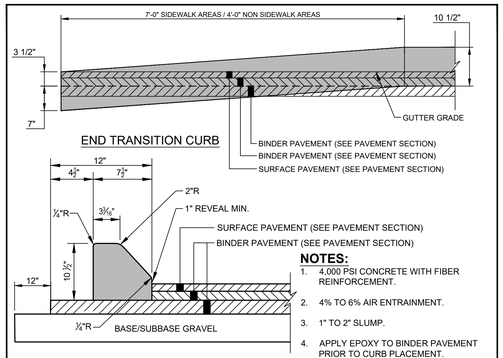
N.T.S.

AS OBTAINED FROM THE CITY OF PORTLAND "TECHNICAL MANUAL"



D BITUMINOUS SIDEWALK WITH CURB DETAIL

N.T.S.



NOTES:

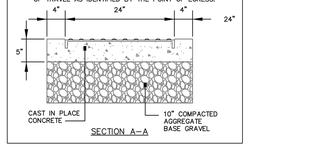
1. 4,000 PSI CONCRETE WITH FIBER REINFORCEMENT.
2. 4% TO 6% AIR ENTRAINMENT.
3. 1" TO 2" SLUMP.
4. APPLY EPOXY TO BINDER PAVEMENT PRIOR TO CURB PLACEMENT.

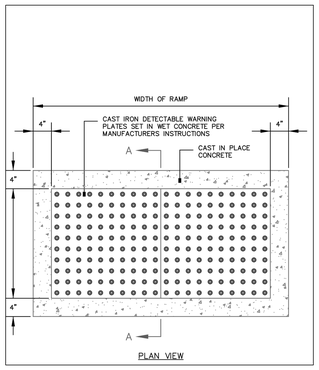
F EXTRUDED SLIPFORM SLOPED CONCRETE CURB DETAIL

N.T.S.

NOTES:

1. ALL DETECTABLE WARNING PLATES SHALL BE UNCOATED CAST IRON. FOLLOW MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION.
2. CAST IN PLACE CONCRETE SHALL MEET SPECIFICATIONS FOR MDOT CLASS A STRUCTURAL CONCRETE, MINIMUM COMPRESSIVE STRENGTH 4,000 PSI. THE EXPOSED CONCRETE BORDER SHALL RECEIVE A UNIFORM BROOM FINISH PERPENDICULAR TO THE FLOW OF PEDESTRIAN TRAFFIC.
3. TRUNCATED DOMES SHALL BE ALIGNED IN ROWS, PARALLEL AND PERPENDICULAR TO THE PREDOMINANT DIRECTION OF TRAVEL. TRUNCATED DOME BRICKS AND GRANITE PAVERS ARE NOT ALLOWED.
4. SIZE: THE DETECTABLE WARNING PLATES SHALL EXTEND 24 INCHES MINIMUM IN THE DIRECTION OF TRAVEL AND THE FULL WIDTH OF THE CURB RAMP, LANDING, OR BLENDED TRANSITION TO THE STREET.
5. ORIENTATION: THE DETECTABLE WARNING PANEL SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE IS 6 INCHES MINIMUM AND 8 INCHES MAXIMUM FROM THE CURB LINE. THE PANEL SHALL BE ORIENTED TO THE DIRECTION OF TRAVEL AS IDENTIFIED BY THE POINT OF EGRESS.

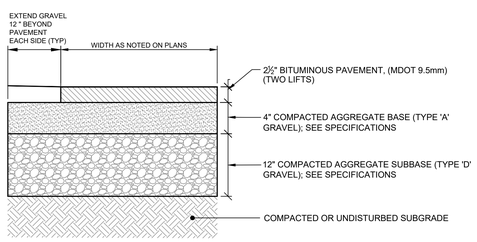




B SIDEWALK RAMP DETECTABLE WARNING PANEL

N.T.S.

AS OBTAINED FROM THE CITY OF PORTLAND "TECHNICAL MANUAL"

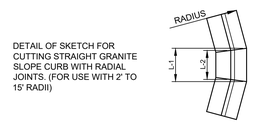


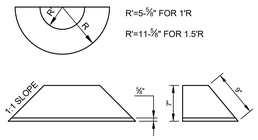
NOTES:

1. APPLY TACK COAT BETWEEN PAVEMENT COURSES.
2. ALL MATERIALS SHALL CONFORM TO MDOT SPECIFICATIONS, LATEST REVISION.
3. COMPACTION OF ALL MATERIALS TO BE IN ACCORDANCE WITH THE SPECIFICATIONS AND THE GEOTECHNICAL REPORT.

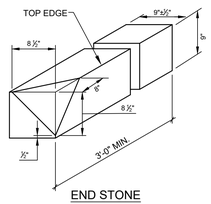
C BITUMINOUS ASPHALT SIDEWALK

N.T.S.



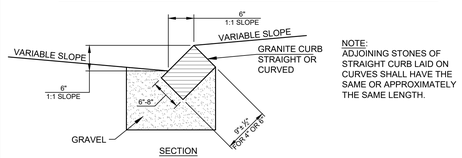


DETAIL FOR CUTTING CURVED CURB



END STONE

L-1	RADIUS 2'	2.5'	3'	3.5'	4'	5'	6'	8'	10'	12'	14'	15'
	L-2											
0'-9"	0'-6-1/2"											
1'-0"	0'-8-3/4"	0'-9-1/2"										
1'-1"	0'-9-1/2"	0'-10-1/4"										
1'-2"	0'-10-1/4"	0'-11"	0'-11-1/2"									
1'-3"	0'-11"	0'-11-3/4"	1'-0-1/4"									
1'-4"	0'-11-3/4"	1'-0-1/2"	1'-1-1/4"	1'-1-1/2"								
1'-5"	1'-0-1/2"	1'-1-1/2"	1'-2"	1'-2-1/2"	1'-2-3/4"	1'-3-1/4"	1'-3-1/2"	1'-4"	1'-4"	1'-4-1/4"	1'-4-1/4"	1'-4-1/4"
1'-6"	1'-1-1/4"	1'-2-1/4"	1'-2-3/4"	1'-3"	1'-3-1/4"	1'-3-1/2"	1'-4"	1'-4-1/2"	1'-4-3/4"	1'-5"	1'-5-1/4"	1'-5-1/4"
1'-7"	1'-2"	1'-3"	1'-3-3/4"	1'-4"	1'-4-1/4"	1'-4-1/2"	1'-4-3/4"	1'-5"	1'-5-1/4"	1'-5-1/4"	1'-5-1/4"	1'-5-1/4"
1'-8"	1'-2-3/4"	1'-3-3/8"	1'-4-1/2"	1'-5"	1'-5-1/4"	1'-5-1/4"	1'-5-1/4"	1'-5-3/4"	1'-6"	1'-6"	1'-6-1/4"	1'-6-1/4"
1'-9"							1'-7-1/4"	1'-7-1/2"	1'-8"	1'-8"	1'-8-1/4"	1'-8-1/4"
1'-10"							1'-8"	1'-8-1/2"	1'-8-3/4"	1'-9"	1'-9-1/4"	1'-9-1/4"
1'-11"							1'-9"	1'-9-1/2"	1'-9-3/4"	1'-10"	1'-10-1/4"	1'-10-1/4"
2'-0"							1'-10"	1'-10-1/2"	1'-10-3/4"	1'-11"	1'-11"	1'-11"
2'-1"											2'-0"	2'-0"
2'-2"											2'-1"	2'-1"
2'-3"											2'-2"	2'-2"
2'-4"											2'-3"	2'-3"
2'-5"											2'-3"	2'-3"
2'-6"											2'-4-3/4"	2'-5"
2'-7"											2'-5-3/4"	2'-5-3/4"
2'-8"											2'-6-3/4"	2'-6-3/4"



SECTION

RADIUS FOR STONES WITH SQUARE JOINTS	RADIUS FOR STONES WITH SQUARE JOINTS	MAXIMUM LENGTH
16'-28'	SEE DETAIL CHART	1'-6"
29'-41'		2'
42'-55'		3'
56'-68'		4'
69'-82'		5'
83'-96'		6'
97'-110'		7'
OVER 110'		8'

MINIMUM LENGTH OF STRAIGHT CURB STONES-18"

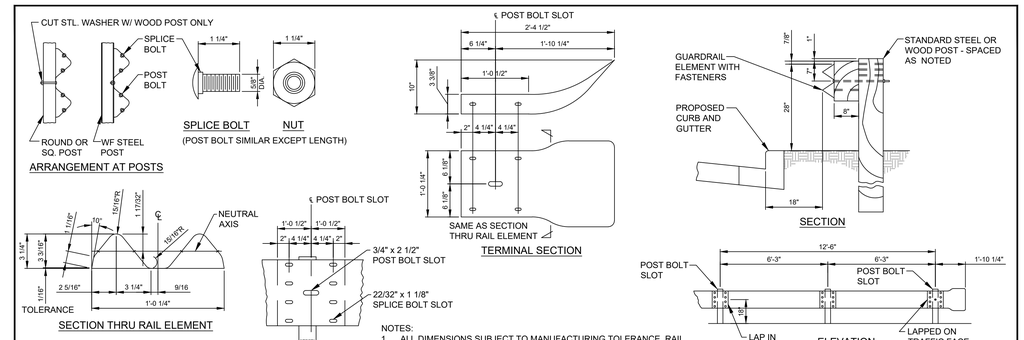
MAXIMUM LENGTH OF STRAIGHT CURB STONES-8'

MAXIMUM LENGTH OF STRAIGHT CURB STONES LAID ON CURVES-SEE CHART

NOTE: ADJOINING STONES OF STRAIGHT CURB LAID ON CURVES SHALL HAVE THE SAME OR APPROXIMATELY THE SAME LENGTH.

E SLOPED GRANITE CURB DETAIL

N.T.S.



NOTES:

1. ALL DIMENSIONS SUBJECT TO MANUFACTURING TOLERANCE. RAIL ELEMENT MAY BE 12'-6" OR 25'-0" IN LENGTH.
2. CONTRACTOR SHALL FURNISH AND INSTALL GUIDERAIL, POSTS, FASTENERS, AND ALL NECESSARY PARTS REQUIRED TO COMPLETE THE INSTALLATION.

G STANDARD METAL GUIDERAIL DETAIL

N.T.S.

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.

STATE OF MAINE
STEPHEN R. BUSHEY
08.30.19
LICENSED PROFESSIONAL ENGINEER
STEPHEN R. BUSHEY, P.E.
LIC. #7429

Rev.	Date	Revision
–	–	–

Issued For	Date	By
PERMIT APPROVAL SUBMISSION	08.30.19	SRB
DESIGN DEVELOPMENT SUBMISSION TO OWNER	07.31.19	SRB

Design: SRB | Draft: CDD | Date: AUG. 2019
Checked: SRB | Scale: NTS | Job No.: 3257.04
File Name: 325704–DET.dwg

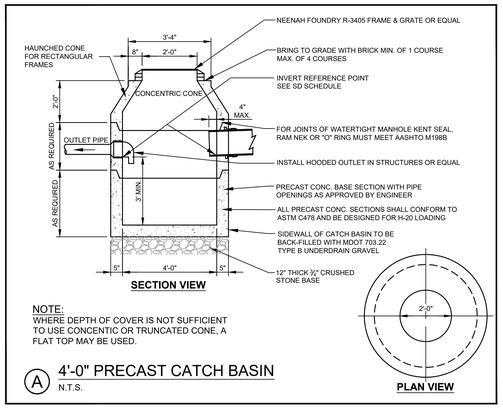
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Drawing Name: Site Details
Project: Fore River Campus Consolidation, Portland, Maine
Client: Northern Light Mercy Hospital, 144 State Street, Portland, Maine 04101

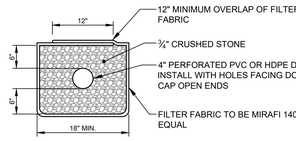
Drawing No. C–7.1

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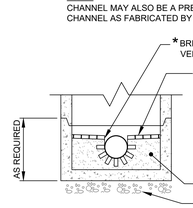
NOTE:
WHERE DEPTH OF COVER IS NOT SUFFICIENT TO USE CONCENTIC OR TRUNCATED CONE, A FLAT TOP MAY BE USED.

(A) 4'-0" PRECAST CATCH BASIN
N.T.S.



NOTE:
LOCATIONS AS NOTED ON PLANS - COORDINATE WITH ARCHITECTURAL AND / OR STRUCTURAL PLANS.

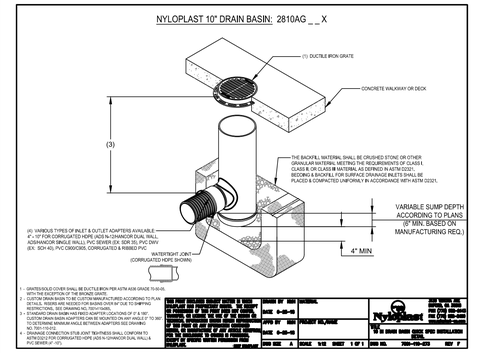
(D) TYPICAL FOUNDATION DRAIN DETAIL
N.T.S.



* NOTE:
CHANNEL MAY ALSO BE A PREFABRICATED FIBERLINER 2000 CHANNEL AS FABRICATED BY GDT, INC. OF ESSEX, CT OR EQUAL

NOTES:
1. BRICK CHANNEL TO BE AASHTO M-91-42 GRADE SA SEWER BRICK. *
2. MANHOLE TEST TO BE ACCOMPLISHED AFTER CHANNEL INSTALLATION IS COMPLETE.
3. WHERE THE ALIGNMENT CHANGES OR SIDE FLOW ENTERS THE MANHOLE, CONSTRUCT CHANNEL WITH A SMOOTH RADIAL CHANNEL TO ACCOMPLISH ALL JUNCTIONAL CHANGE OF ALIGNMENT WITHIN MANHOLE.

(H) MANHOLE BRICK CHANNEL INSTALLATION DETAIL
N.T.S.



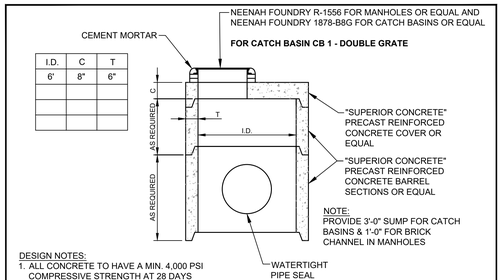
(4) VARIOUS TYPES OF INLET & OUTLET ADAPTERS AVAILABLE - 4"- 10" FOR CORRUGATED HDPE (ADS N-12/ADVANCOR DUAL WALL, ADS/ADVANCOR SINGLE WALL), PVC SEWER (EX. SDR 35), PVC DWV (EX. SCH 40), PVC C900/C905, CORRUGATED & RIBBED PVC

1. GRATES/SOLID COVER SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-45-05 WITH THE EXCEPTION OF THE BRONZE GRATE.
2. OUTLET PIPE CUTOUTS ARE FACTORY MANUFACTURED ACCORDING TO PLAN DETAILS. RISERS ARE NECESSARY FOR MAKING CNSTA AT DUE TO SHIPPING RESTRICTIONS. SEE DRAWING NO. TS01-113455.
3. STANDARD DRAIN BASIN HAS TWO ADAPTER LOCATIONS OF 0° & 180°. CUSTOM DRAIN BASIN ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. TS01-113472.
4. DRAINAGE CONNECTION STUB (CNST TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/ADVANCOR DUAL WALL) & PVC SEWER (F° 477).

Nyloplast	DRAWN BY: MAT	MATERIAL:
	DATE: 6-06-19	
	CHK'D BY: MAT	PROJECT: PLANS
	DATE: 6-06-19	
	SCALE: A	SHEET: 1 OF 1

USA: 2100 Nyloplast Drive, Piqua, OH 45356 (800) 421-6144 FAX (800) 468-4000
CANADA: 6 Kenview Blvd, Brampton, ON L6T 5E6 (800) 387-7387 FAX (800) 461-9122
DWG NO. 7000-10-0203 REV F

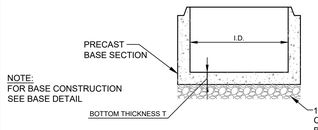
(L) 10" NYLOPLAST DRAIN BASIN DETAIL
N.T.S.



I.D.	C	T
6'	8"	6"

NOTE:
PROVIDE 3'-0" SUMP FOR CATCH BASINS & 1'-0" FOR BRICK CHANNEL IN MANHOLES

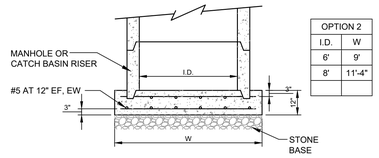
DESIGN NOTES:
1. ALL CONCRETE TO HAVE A MIN. 4,000 PSI COMPRESSIVE STRENGTH AT 28 DAYS
2. DESIGN FOR H-20 WHEEL LOADING
3. CATCH BASIN TO CONFORM TO ASTM-C478 SPECIFICATIONS
4. REINFORCE TO .12 IN. SQ./L.F.



NOTE:
FOR BASE CONSTRUCTION SEE BASE DETAIL

OPTION 1	
I.D.	T
6'	6"
8'	6"

BASE DETAIL OPTION 1



OPTION 2	
I.D.	W
6'	9'
8'	11'-4"

BASE DETAIL OPTION 2

NOTE:
THE CONTRACTOR SHALL USE BASE OPTION 2 UNLESS ANTIFLOATATION COMPUTATIONS ARE PROVIDED BY THE CONTRACTOR DEMONSTRATING OPTION 1 CAN BE USED AT THIS SITE. APPROVAL IS SUBJECT TO REVIEW OF THE ENGINEER.

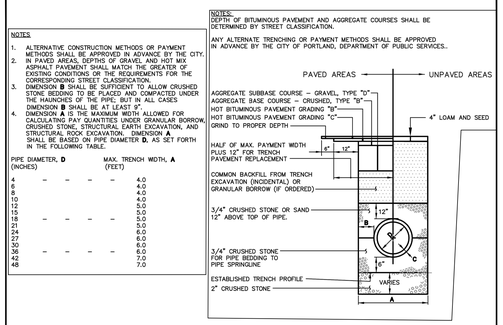
(B) LARGE DIAMETER STORM DRAIN MANHOLE AND CATCH BASIN WITH FLAT TOP
N.T.S.

NOTES
1. ALTERNATIVE CONSTRUCTION METHODS OR PAYMENT METHODS SHALL BE APPROVED IN ADVANCE BY THE CITY.
2. IN PAVED AREAS, DEPTHS OF GRAVEL AND HOT MIX ASPHALT SHALL BE THE DEPTHS OR THE GREATER OF EXISTING CONDITIONS OR THE REQUIREMENTS FOR THE CORRESPONDING STREET CLASSIFICATION.
3. DIMENSION **B** SHALL BE SUFFICIENT TO ALLOW CRUSHED STONE BEDDING TO BE PLACED AND COMPACTED UNDER THE HAUNCHES OF THE PIPE, BUT IN ALL CASES DIMENSION **B** SHALL BE AT LEAST 8".
4. DIMENSION **A** IS THE MAXIMUM WIDTH ALLOWED FOR CALCULATING PAY QUANTITIES UNDER GRANULAR BORROW, CRUSHED STONE, STRUCTURAL EARTH EXCAVATION, AND STRUCTURAL ROCK EXCAVATION. DIMENSION **A** SHALL BE BASED ON PIPE DIAMETER **D**, AS SET FORTH IN THE FOLLOWING TABLE:

PIPE DIAMETER, **D** (INCHES)	MAX. TRENCH WIDTH, **A** (FEET)
4	4.0
6	4.0
8	4.0
10	4.0
12	5.0
15	5.0
18	5.0
21	5.0
24	6.0
27	6.0
30	6.0
36	6.0
42	7.0
48	7.0

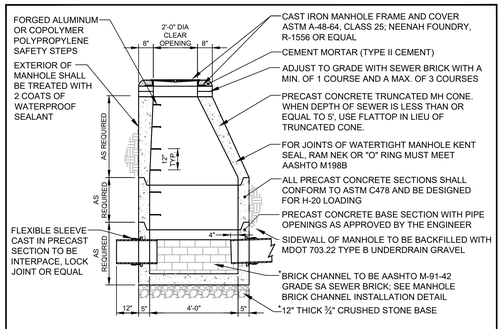
NOTES:
DEPTH OF BITUMINOUS PAVEMENT AND AGGREGATE COURSES SHALL BE DETERMINED BY STREET CLASSIFICATION.

ANY ALTERNATE TRENCHING OR PAYMENT METHODS SHALL BE APPROVED IN ADVANCE BY THE CITY OF PORTLAND, DEPARTMENT OF PUBLIC SERVICES..



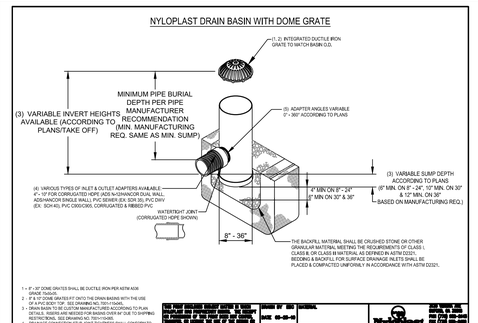
(E) TYPICAL PIPE TRENCH INSTALLATION AND NOTES
N.T.S.

AS OBTAINED FROM THE CITY OF PORTLAND "TECHNICAL MANUAL"



(I) 4'-0" DIA. PRECAST SEWER & STORM DRAIN MANHOLE DETAIL
N.T.S.

* NOTE:
CHANNEL MAY ALSO BE A PREFABRICATED FIBERLINER 2000 CHANNEL AS FABRICATED BY GDT, INC. OF ESSEX, CT OR EQUAL

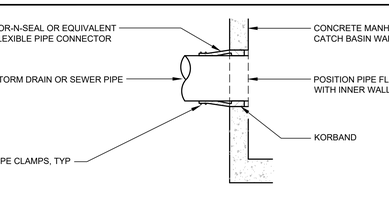


1 = 8" (-30° DOME GRATES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-45-05)
2 = INTEGRATED DUCTILE GRATES FIT ONTO THE DRAIN BASIN WITH THE USE OF A PVC BODY TOP. SEE DRAWING NO. TS01-174346.
3 = DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RISERS ARE NEEDED FOR BASING CNSTA AT DUE TO SHIPPING RESTRICTIONS. SEE DRAWING NO. TS01-113455.
4 = DRAINAGE CONNECTION STUB (CNST TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/ADVANCOR DUAL WALL) w/24" & PVC SEWER (F° 477).
5 = STANDARD DRAIN BASIN HAS TWO ADAPTER LOCATIONS OF 0° & 180°. CUSTOM DRAIN BASIN ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. TS01-113472.
6 = 0° - 30° DOME GRATES HAVE NO LOAD RATING.

Nyloplast	DRAWN BY: MAT	MATERIAL:
	DATE: 6-06-19	
	CHK'D BY: MAT	PROJECT: PLANS
	DATE: 6-06-19	
	SCALE: A	SHEET: 1 OF 1

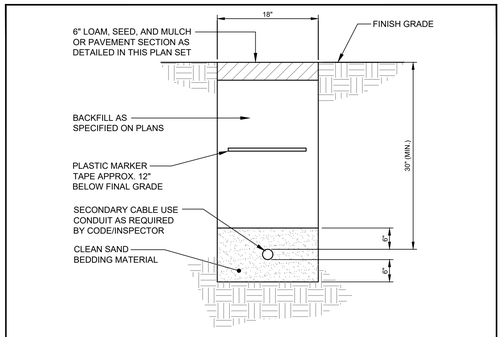
USA: 2100 Nyloplast Drive, Piqua, OH 45356 (800) 421-6144 FAX (800) 468-4000
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DWG NO. 7000-10-0207 REV E

(M) NYLOPLAST DRAIN BASIN WITH DOME GRATE DETAIL
N.T.S.



NOTES:
1. A FLEXIBLE PIPE TO MANHOLE CONNECTOR SHALL BE EMPLOYED IN THE CONNECTION OF ALL PIPE TO MANHOLE JUNCTIONS.
2. THE CONNECTOR SHALL BE KOR-N-SEAL AS MANUFACTURED BY NPC SYSTEMS, INC., OF MILFORD, NH OR EQUAL.
3. THE CONNECTOR SHALL BE THE SOLE ELEMENT RELIED ON TO ASSURE A FLEXIBLE WATERTIGHT SEAL OF THE PIPE TO MANHOLE NO ADHESIVES OR LUBRICANTS SHALL BE EMPLOYED IN THE INSTALLATION OF THE CONNECTOR TO THE MANHOLE. THE RUBBER FOR THE CONNECTOR SHALL COMPLY TO ASTM C443 AND ASTM C923 AND CONSIST OF EPDM AND ELASTOMERS KNOWN TO BE RESISTANT TO OZONE, WEATHER ELEMENTS, CHEMICALS, INCLUDING ACIDS, ALKALIS, ANIMAL AND VEGETABLE FATS, OILS AND PETROLEUM PRODUCTS FROM SPILLS.
4. ALL STAINLESS STEEL ELEMENTS OF THE CONNECTOR SHALL BE TOTALLY NON-MAGNETIC SERIES 304 STAINLESS, EXCLUDING THE WORM SCREW USED FOR TIGHTENING THE STEEL BAND AROUND THE PIPE WHICH SHALL BE SERIES 305 STAINLESS. THE WORM SCREW USED FOR TIGHTENING THE STEEL BAND SHALL BE TORQUED BY A BREAK-AWAY TORQUE WRENCH AVAILABLE FROM THE PRECAST MANHOLE SUPPLIER, AND SET AT 60/70 in/lbs.
5. THE CONNECTOR SHALL BE INSTALLED IN THE MANHOLE WALL BY ACTIVATING THE EXPANDING MECHANISM IN STRICT ACCORDANCE WITH THE RECOMMENDATION OF THE CONNECTOR MANUFACTURER.
6. THE CONNECTOR SHALL BE OF A SIZE SPECIFICALLY DESIGNED FOR THE PIPE MATERIAL AND SIZE BEING UTILIZED ON THE PROJECT.
7. ALL CONNECTORS WHICH ARE CAPPED AWAITING PIPE INSTALLATION AT A LATER DATE MUST BE RESTRAINED.

(C) PIPE CONNECTION TO PRECAST CONCRETE SANITARY SEWER AND STORM DRAINAGE STRUCTURE
N.T.S.



(G) SECONDARY ELECTRICAL TRENCH DETAIL
N.T.S.

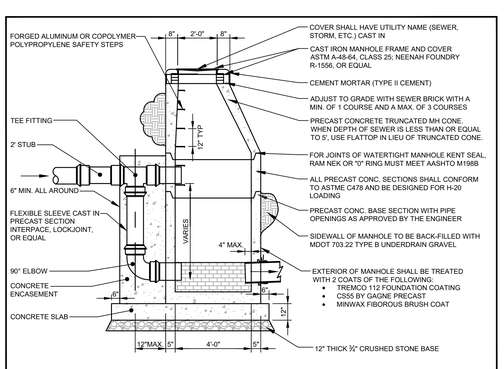
CONDUIT TYPE

SERVICE	CONDUIT SIZE	GRASS AREAS	PAVED AREAS	UTILITY	REMARKS
A	2-6"	SCHEDULE 40 PVC ELECTRICAL GRADE	RIGID GALVANIZED STEEL, ASTM A120*	POWER	SEE NOTE
B	2-4"	SCHEDULE 40 PVC	RIGID GALVANIZED STEEL, ASTM A120*	TELEPHONE	SEE NOTE
C	2-4"	SCHEDULE 40 PVC	RIGID GALVANIZED STEEL, ASTM A120*	COMMUNICATION	SEE NOTE
D	2-4"	SCHEDULE 40 PVC	RIGID GALVANIZED STEEL, ASTM A120*	SPARES	SEE NOTE

*AS REQUIRED BY CITY /UTILITY

NOTES:
1. ONE CONDUIT CAPPED FOR SPARE. PROVIDE GALVANIZED STEEL LONG SWEEP AT RISER POLE AND EXTEND GALVANIZED CONDUIT TO 10' ABOVE GRADE AT POLE WITH STAND-OFF BRACKETS. COORDINATE WITH ELECTRICAL PLANS.
2. IN CITY RIGHT OF WAY, CONDUITS TO HAVE 36" MIN. COVER AND SHALL BE ENCASED WITH MIN. 3" CONCRETE ON ALL SIDES.

(F) UTILITY TRENCH - PRIMARY ELEC., TEL. & COMM.
N.T.S.

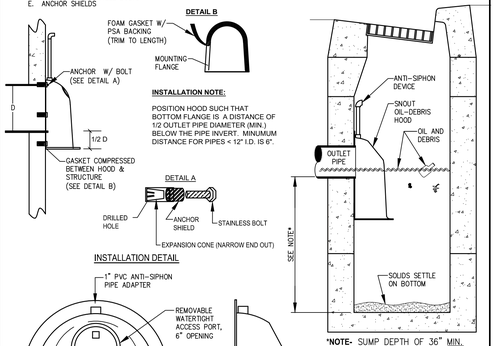


(J) 4'-0" DIA. DROP MANHOLE
N.T.S.

NOTES:
1. ALL HOODS AND TRAPS FOR CATCH BASINS AND WATER QUALITY STRUCTURES SHALL BE AS MANUFACTURED BY BEST MANAGEMENT PRODUCTS, INC. TOLL FREE: (800) 504- 8008 OR (888) 354- 7585 WEB SITE: www.bmpinc.com OR PRE-APPROVED EQUAL.
2. ALL HOODS SHALL BE CONSTRUCTED OF A GLASS REINFORCED RESIN COMPOSITE WITH ISO GEL COAT EXTERIOR FINISH WITH A MINIMUM 0.125" LAMINATE THICKNESS.
3. ALL HOODS SHALL BE EQUIPPED WITH A WATERTIGHT ACCESS PORT, A MOUNTING FLANGE, & AN ANTI-SIPHON VENT AS DRAWN. (SEE CONFIGURATION DETAIL)
4. THE SIZE AND POSITION OF THE HOOD SHALL BE DETERMINED BY OUTLET PIPE SIZE IN ACCORDANCE WITH THE FOLLOWING TABLE:

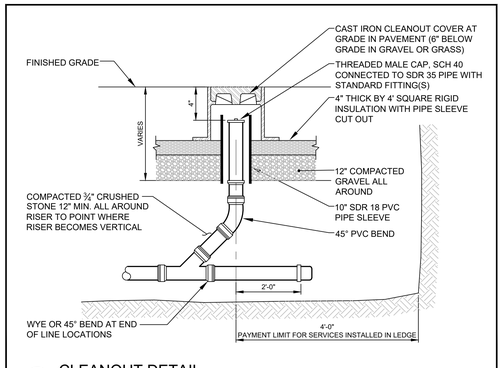
STRUCTURE OUTLET HOLE SIZE	SNOUT SIZE
11.9" O.D. OR LESS	12 F or R
12.0"–17.9" O.D.	18 F or R
18.0"–23.9" O.D.	24 F or R
24.0"–29.9" O.D.	30 F or R
30.0"–47.9" O.D.	48 F
48.0"–95.9" O.D.	96 F

5. THE BOTTOM OF THE HOOD SHALL EXTEND DOWNWARD A DISTANCE EQUAL TO 1/2 THE OUTLET PIPE DIAMETER WITH A MINIMUM DISTANCE OF 6" FOR PIPES <12" I.D.
6. THE ANTI-SIPHON VENT SHALL EXTEND ABOVE HOOD BY MINIMUM OF 3" AND A MAXIMUM OF 24" ACCORDING TO STRUCTURE CONFIGURATION.
7. THE SURFACE OF THE STRUCTURE WHERE THE HOOD IS MOUNTED SHALL BE FINISHED SMOOTH AND FREE OF LOOSE MATERIAL.
8. THE HOOD SHALL BE SECURELY ATTACHED TO STRUCTURE WALL WITH 3/8" STAINLESS STEEL BOLTS AND OIL-RESISTANT GASKET AS SUPPLIED BY MANUFACTURER. (SEE INSTALLATION DETAIL)
9. INSTALLATION INSTRUCTIONS SHALL BE FURNISHED WITH MANUFACTURER SUPPLIED INSTALLATION KIT, WHICH INCLUDES:
   A. INSTALLATION INSTRUCTIONS
   B. PVC ANTI-SIPHON VENT PIPE AND ADAPTER
   C. OIL-RESISTANT CRUSHED CELL FOAM GASKET WITH PSA BACKING
   D. 3/8" STAINLESS STEEL BOLTS
   E. ANCHOR SHIELDS



SNOUTS INSTALLED ON STORM DRAIN PIPES GREATER THAN 18" DIAMETER ARE REQUIRED TO BE INSTALLED PRIOR TO INSTALLATION OF CATCH BASIN FLAT TOP.

(N) SNOUT OIL–WATER–DEBRIS SEPARATOR DETAIL
N.T.S.



(K) CLEANOUT DETAIL
N.T.S.

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.

STATE OF MAINE — STEPHEN R. BUSHEY — 08.30.19 — LICENSED PROFESSIONAL ENGINEER
STEPHEN R. BUSHEY, P.E.
LIC. #7429

Rev.	Date	Revision
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Issued For	Date	By
PERMIT APPROVAL SUBMISSION	08.30.19	SRB
DESIGN DEVELOPMENT SUBMISSION TO OWNER	07.31.19	SRB

Design: SRB | Draft: CDD | Date: AUG. 2019
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File Name: 3257-04-DET.dwg

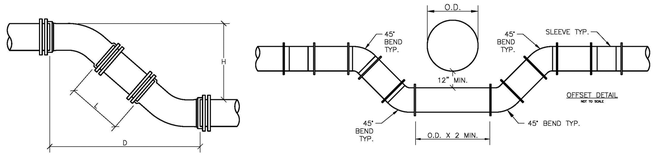
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Drawing Name: Storm Drain & Utility Details
Project: Fore River Campus Consolidation — Portland, Maine
Client: Northern Light Mercy Hospital — 144 State Street, Portland, Maine 04101

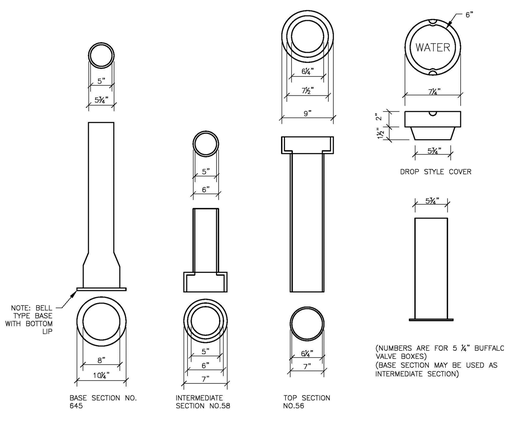
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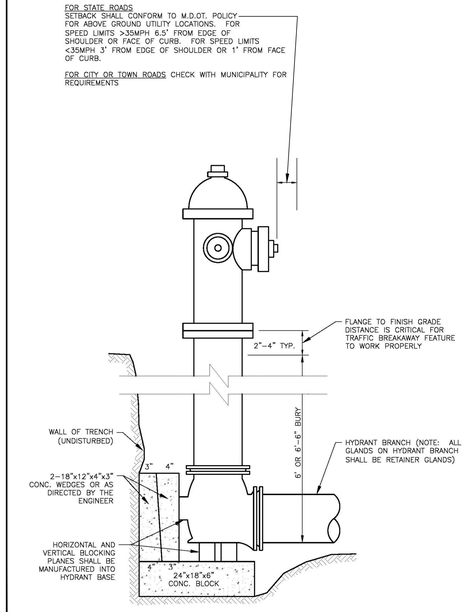
TYPICAL MAIN OFFSET

	6" PIPE		8" PIPE		12" PIPE	
H	D	L	D	L	D	L
12"	1' 6-1/2"	0' 10-1/2"	1' 7-1/2"	0' 8-1/2"	1' 11-1/2"	0' 5-1/2"
13"	1' 7-1/2"	0' 11-7/8"	1' 8-1/2"	0' 10-7/8"	2' 0-1/2"	0' 8-7/8"
14"	1' 8-1/2"	1' 1-5/16"	1' 9-1/2"	1' 0-5/16"	2' 1-1/2"	0' 8-5/16"
15"	1' 9-1/2"	1' 2-11/16"	1' 10-1/2"	1' 1-11/16"	2' 2-1/2"	0' 9-11/16"
16"	1' 10-1/2"	1' 4-1/8"	1' 11-1/2"	1' 3-1/8"	2' 3-1/2"	0' 11-1/8"
17"	1' 11-1/2"	1' 5-9/16"	2' 0-1/2"	1' 4-9/16"	2' 4-1/2"	1' 0-9/16"
18"	2' 0-1/2"	1' 6-15/16"	2' 1-1/2"	1' 5-15/16"	2' 5-1/2"	1' 1-15/16"
19"	2' 1-1/2"	1' 8-3/8"	2' 2-1/2"	1' 7-3/8"	2' 6-1/2"	1' 3-3/8"
20"	2' 2-1/2"	1' 9-13/16"	2' 3-1/2"	1' 8-13/16"	2' 7-1/2"	1' 4-13/16"
21"	2' 3-1/2"	1' 11-3/16"	2' 4-1/2"	1' 10-3/16"	2' 8-1/2"	1' 6-3/16"
22"	2' 4-1/2"	2' 0-5/8"	2' 5-1/2"	1' 11-5/8"	2' 9-1/2"	1' 7-5/8"
23"	2' 5-1/2"	2' 2"	2' 6-1/2"	2' 1"	2' 10-1/2"	1' 9"
24"	2' 6-1/2"	2' 3-7/16"	2' 7-1/2"	2' 2-7/16"	2' 11-1/2"	1' 10-7/16"
25"	2' 7-1/2"	2' 4-7/8"	2' 8-1/2"	2' 3-7/8"	3' 0-1/2"	1' 11-7/8"
26"	2' 8-1/2"	2' 6-1/4"	2' 9-1/2"	2' 5-1/4"	3' 1-1/2"	2' 1-1/4"
27"	2' 9-1/2"	2' 7-11/16"	2' 10-1/2"	2' 6-11/16"	3' 2-1/2"	2' 2-11/16"
28"	2' 10-1/2"	2' 9-1/8"	2' 11-1/2"	2' 8-1/8"	3' 3-1/2"	2' 4-1/8"
29"	2' 11-1/2"	2' 10-1/2"	3' 0-1/2"	2' 9-1/2"	3' 4-1/2"	2' 5-1/2"
30"	3' 0-1/2"	2' 11-15/16"	3' 1-1/2"	2' 10-15/16"	3' 5-1/2"	2' 6-15/16"
31"	3' 1-1/2"	3' 1-5/16"	3' 2-1/2"	3' 0-5/16"	3' 6-1/2"	2' 8-5/16"
32"	3' 2-1/2"	3' 2-3/4"	3' 3-1/2"	3' 1-3/4"	3' 7-1/2"	2' 9-3/4"
33"	3' 3-1/2"	3' 4-3/16"	3' 4-1/2"	3' 3-3/16"	3' 8-1/2"	2' 11-3/16"
34"	3' 4-1/2"	3' 5-9/16"	3' 5-1/2"	3' 4-9/16"	3' 9-1/2"	3' 0-9/16"
35"	3' 5-1/2"	3' 7"	3' 6-1/2"	3' 6"	3' 10-1/2"	3' 2"
36"	3' 6-1/2"	3' 8-7/16"	3' 7-1/2"	3' 7-7/16"	3' 11-1/2"	3' 3-7/16"
37"	3' 7-1/2"	3' 9-13/16"	3' 8-1/2"	3' 8-13/16"	4' 0-1/2"	3' 4-13/16"
38"	3' 8-1/2"	3' 11-1/4"	3' 9-1/2"	3' 10-1/4"	4' 1-1/2"	3' 6-1/4"
39"	3' 9-1/2"	4' 0-11/16"	3' 10-1/2"	3' 11-11/16"	4' 2-1/2"	3' 7-11/16"
40"	3' 10-1/2"	4' 2-1/8"	3' 11-1/2"	4' 1-1/16"	4' 3-1/2"	3' 9-1/16"
41"	3' 11-1/2"	4' 3-1/2"	4' 0-1/2"	4' 2-1/2"	4' 4-1/2"	3' 10-1/2"
42"	4' 0-1/2"	4' 4-7/8"	4' 1-1/2"	4' 3-7/8"	4' 5-1/2"	3' 11-7/8"
43"	4' 1-1/2"	4' 6-5/16"	4' 2-1/2"	4' 5-5/16"	4' 6-1/2"	4' 1-5/16"
44"	4' 2-1/2"	4' 7-3/4"	4' 3-1/2"	4' 6-3/4"	4' 7-1/2"	4' 2-3/4"
45"	4' 3-1/2"	4' 9-1/8"	4' 4-1/2"	4' 8-1/8"	4' 8-1/2"	4' 4-1/8"
46"	4' 4-1/2"	4' 10-9/16"	4' 5-1/2"	4' 9-9/16"	4' 9-1/2"	4' 5-9/16"
47"	4' 5-1/2"	4' 11-15/16"	4' 6-1/2"	4' 10-15/16"	4' 10-1/2"	4' 6-15/16"
48"	4' 6-1/2"	5' 1-3/8"	4' 7-1/2"	5' 0-3/8"	4' 11-1/2"	4' 8-3/8"
49"	4' 7-1/2"	5' 2-13/16"	4' 8-1/2"	5' 1-13/16"	5' 0-1/2"	4' 9-13/16"
50"	4' 8-1/2"	5' 4-3/16"	4' 9-1/2"	5' 3-3/16"	5' 1-1/2"	4' 11-3/16"
51"	4' 9-1/2"	5' 5-9/16"	4' 10-1/2"	5' 4-9/16"	5' 2-1/2"	5' 0-9/16"
52"	4' 10-1/2"	5' 7-1/16"	4' 11-1/2"	5' 6-1/16"	5' 3-1/2"	5' 2-1/16"
53"	4' 11-1/2"	5' 8-7/16"	5' 0-1/2"	5' 7-7/16"	5' 4-1/2"	5' 3-7/16"
54"	5' 0-1/2"	5' 9-7/8"	5' 1-1/2"	5' 8-7/8"	5' 5-1/2"	5' 4-7/8"
55"	5' 1-1/2"	5' 11-5/16"	5' 2-1/2"	5' 10-5/16"	5' 6-1/2"	5' 6-5/16"



VALVE BOX & COVER

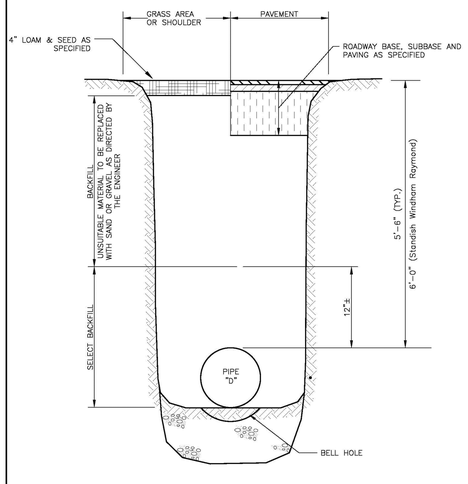
Ⓐ STANDARD WATER DETAILS
N.T.S.



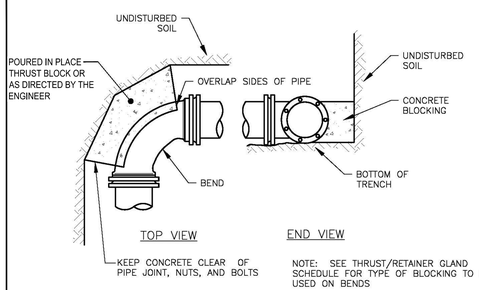
Ⓔ HYDRANT INSTALLATION DETAIL
N.T.S.

TRENCH NOTES

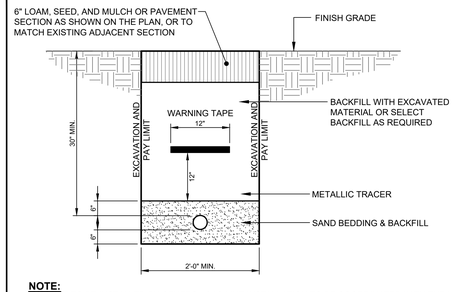
1. MAX PAY LIMITS SHALL BE 1.5 TIMES THE PIPE DIAMETER ON EACH SIDE OF PIPE
2. CLAY DAMS WILL BE INSTALLED IN LEDGE TRENCHES EVERY 100'± IN AREAS OF MORE THAN 3% SLOPE.



Ⓑ TYPICAL WATER TRENCH DETAIL
N.T.S.

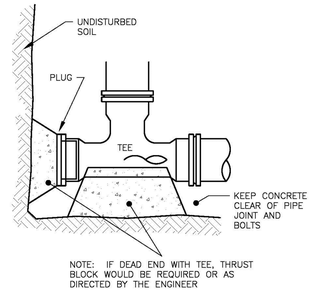


Ⓒ STANDARD BEND BLOCKING
N.T.S.



NOTE:
GAS LINE TO BE INSTALLED BY OTHERS. GAS LINE INSTALLATION TO BE COORDINATED WITH THE LOCAL GAS UTILITY COMPANY, AND SHALL COMPLY WITH ITS STANDARDS. SITE CONTRACTOR IS RESPONSIBLE FOR EXCAVATION AND BACKFILL OF THE GAS LINE AND PLACEMENT OF THE WARNING TAPES AND TRACER.

Ⓕ GAS SERVICE TRENCH SECTION
N.T.S.



Ⓓ STANDARD TEE THRUST BLOCK DETAIL
N.T.S.

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.

STATE OF MAINE
STEPHEN R. BUSHEY
08.30.19
LICENSED PROFESSIONAL ENGINEER
STEPHEN R. BUSHEY, P.E.
LIC. #7429

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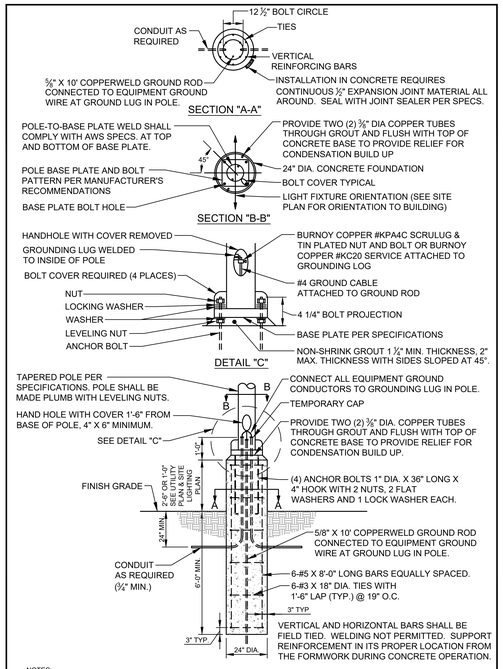
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Drawing Name:	Storm Drain & Utility Details
Project:	Fore River Campus Consolidation Portland, Maine
Client:	Northern Light Mercy Hospital 144 State Street, Portland, Maine 04101

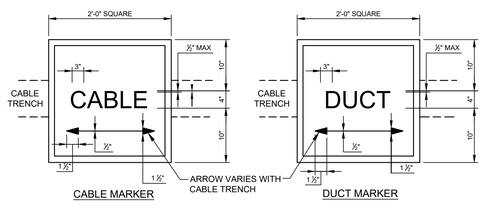
Drawing No. C–7.3

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NOTES:
1. 3500 P.S.I. MIN. 28 DAY COMPRESSIVE STRENGTH CONC. WITH GRADE 60 REINF. STEEL.
2. IF WATER IS PRESENT IN HOLE, REMOVE BEFORE POURING CONCRETE.
3. FOUNDATION EXCAVATION SHALL BE BY 24" AUGER IN UNDISTURBED OR PROPERLY COMPACTED FILL PER SPECIFICATIONS.
4. FOUNDATION SHALL HAVE A MINIMUM ALLOWABLE END BEARING OF 2000 PSF.
5. FOUNDATION HAS BEEN DESIGNED FOR A COHESIVE SOIL BASED ON A MINIMUM COHESIVE VALUE OF 1000 PSF.
6. FOUNDATION HAS BEEN DESIGNED FOR A GRANULAR SOIL BASED ON A MINIMUM LATERAL SOIL PRESSURE OF 1000 PSF,
7. UTILIZING AASHTO FIGURE 1.8.2C(4) OF "EMBEDMENT OF POSTS WITH OVERTURNING LOADS".
8. DETAIL FOR MAX. 39' POLE WITH MAX. FIXTURE EPA 4.6 S.F.
9. CONFIRM ANCHOR BOLT PLACEMENT AND PATTERN WITH LIGHT POLE MANUFACTURER BEFORE PREPARING FOUNDATION.
10. EXCAVATION WILL LIKELY BE BELOW WATER TABLE - DO NOT LEAVE EXCAVATION OPEN FOR EXTENDED PERIODS.

(A) TYPICAL PARKING LOT LIGHTING POLE FOUNDATION
N.T.S.

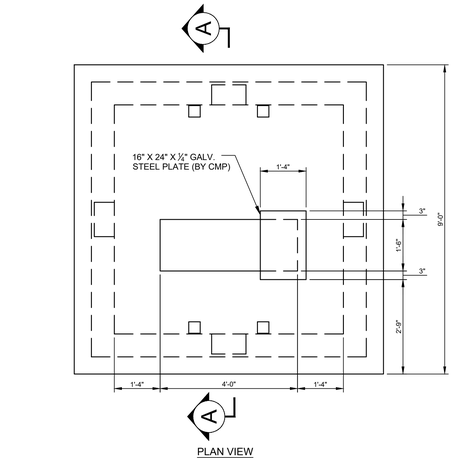


CABLE MARKER

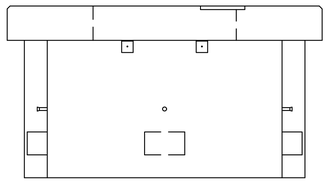
DUCT MARKER

MARKER NOTES:
1. HAND LETTERING NOT ALLOWED ON MARKERS. LETTERING IS TO BE IMPRESSED.
2. ARROW ON CABLE MARKER INDICATE DIRECTION OF CABLES.
3. NO SEPARATE PAYMENT WILL BE MADE FOR CABLE OR SPLICE MARKERS.
4. ALL CONCRETE MARKERS ARE TO BE AT LEAST 4" IN THICKNESS.

(B) ELECTRICAL MARKERS
N.T.S.



SECTION VIEW



END VIEW

NOTES:
1. CONCRETE MINIMUM COMPRESSIVE STRENGTH 4,000 PSI @ 28 DAYS WITH STEEL REINFORCEMENT.
2. AS PER CENTRAL MAINE POWER COMPANY SPECIFICATIONS, AS MANUFACTURED BY SUPERIOR CONCRETE OR EQUAL.
3. FINAL SIZING TO BE BY ELECTRICAL DESIGNER.
4. ONE 8" x 24" KNOCKOUT PROVIDED EACH WALL.
5. FOR 750 - 5000 KVA THREE PHASE TRANSFORMER.
6. FINISH GRADE SHALL BE GRADED TO ALLOW SURFACE WATER TO FLOW AWAY FROM THE PAD.

(D) 9'-0" TRANSFORMER PAD
N.T.S.

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.

STATE OF MAINE
STEPHEN R. BUSHEY
08.30.19
LICENSED PROFESSIONAL ENGINEER
STEPHEN R. BUSHEY, P.E.
LIC. #7429

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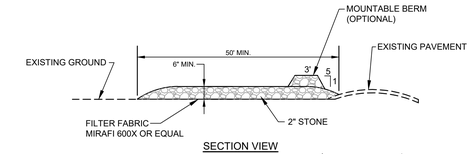
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Drawing Name: Storm Drain & Utility Details
Project: Fore River Campus Consolidation
Portland, Maine
Client: Northern Light Mercy Hospital
144 State Street, Portland, Maine 04101

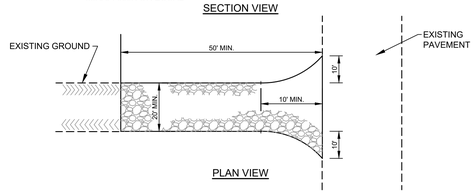
Drawing No. C–7.4

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NOTE:
CONTRACTOR SHALL ADD STONE TO OR REMOVE AND RECONSTRUCT THE STABILIZED CONSTRUCTION ENTRANCE AS MUD/SILT MATERIAL ACCUMULATES

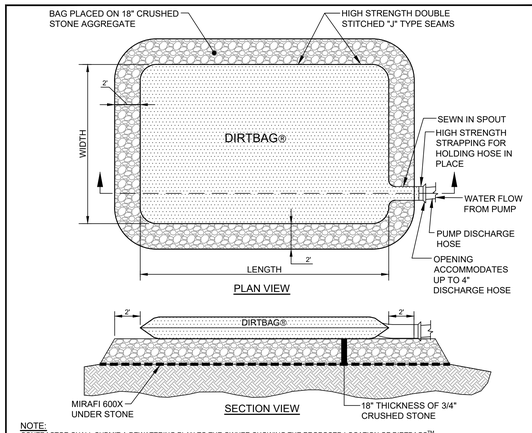


SECTION VIEW



PLAN VIEW

A STABILIZED CONSTRUCTION ENTRANCE DETAIL
N.T.S.



PLAN VIEW

SECTION VIEW

NOTE:
CONTRACTOR SHALL SUBMIT A DEWATERING PLAN TO THE OWNER SHOWING THE PROPOSED LOCATION OF DIRTBAGS™.

SPECIFICATIONS AND REQUIREMENTS FOR DEWATERING

THIS PROJECT WILL REQUIRE THE DISCHARGE OF CONSTRUCTION DEWATERING AND TURBID LADEN RUNOFF FROM THE SITE TO BE DIRECTED AND DISCHARGED THROUGH A DIRTBAG™. THIS DESCRIPTION ALSO CONTAINS APPENDED MATERIALS DESCRIBING THE **DIRTBAGS** REFERRED TO IN THIS NARRATIVE.

OVERVIEW:

DISCHARGE OF SEDIMENT-LADEN WATER FROM THE CONSTRUCTION SITE SHALL NOT BE ACCEPTABLE. TRADITIONALLY, MEDEP PERMITS HAVE HAD A STANDARD CONDITION WHICH STATES:

"THE APPLICANT SHALL TAKE ALL NECESSARY ACTIONS TO ENSURE THAT ITS ACTIVITIES OR THOSE OF ITS AGENTS DO NOT RESULT IN NOTICEABLE EROSION OF SOILS OR FUGITIVE DUST EMISSIONS ON THE SITE DURING THE CONSTRUCTION AND OPERATION OF THE PROJECT COVERED BY THIS APPROVAL."

SUITABLE METHODS OF FILTERING WATER FROM DEWATERING OPERATIONS, OR CONSTRUCTION SITE RUNOFF, SHALL BE EMPLOYED PRIOR TO DISCHARGE TO THE STORM DRAIN SYSTEM. ACCEPTABLE METHODS OF FILTERING INCLUDE DIRTBAGS™, SAND BERM FILTERS, SEDIMENTATION PONDS OR OTHER APPROVED METHODS AS DETAILED IN THE CURRENT EDITION OF THE MDEP "MAINE EROSION AND SEDIMENT CONTROL PRACTICES FIELD GUIDE FOR CONTRACTORS".

REQUIREMENTS FOR DIRTBAGS:

THE SITE CONTRACTOR SHALL INCLUDE THE PRICE OF DEWATERING AND FILTERING OF THE CONSTRUCTION DEWATERING PRIOR TO DISCHARGE. REMOVAL OF **DIRTBAGS™** AND DISPOSAL OF SEDIMENT SHALL BE INCLUDED IN THE PRICE.

AT ALL TIMES THERE MUST BE AN UNUSED DIRTBAG AVAILABLE FOR EMERGENCY USE.

AT ALL TIMES (AFTER INITIAL SITE PREPARATION), THE CONTRACTOR SHALL HAVE ONE **DIRTBAG** ACTIVE OR READY FOR USE. THE **DIRTBAG** SHALL BE INSTALLED ON A PREPARED SUBGRADE. THIS SUBGRADE SHALL CONSIST OF THE INSTALLATION OF A LAYER OF MIRAFI 600X, AND 18 INCHES OF ¾ INCH CRUSHED STONE. THE PLAN DIMENSION OF THE CRUSHED STONE PAD SHALL EXCEED THE PLAN AREA OF THE **DIRTBAG** BY AT LEAST TWO FEET IN ALL DIRECTIONS. THE **DIRTBAG** SHALL NOT BE INSTALLED ON AN UNDERLYING SLOPE OF GREATER THAN 15 PERCENT.

CONSTRUCTION DEWATERING OPERATIONS:

ALL CONSTRUCTION-DEWATERING OPERATIONS ARE THE RESPONSIBILITY OF THE SITE CONTRACTOR. IT SHALL BE THE SITE CONTRACTOR WHO IS RESPONSIBLE FOR SELECTING THE SITE FOR THE **DIRTBAG.**

WINTER OPERATIONS:

IN THE EVENT THAT WINTER OPERATIONS ARE REQUIRED, THE CONTRACTOR SHALL "POLY", ENCLOSE, AND PROVIDE TEMPORARY HEAT TO PREVENT THE **DIRTBAG** FROM SUBSTANTIAL FREEZING.

RECORD KEEPING

THE WEEKLY EROSION-SEDIMENT CONTROL REPORTS PREPARED IN ACCORDANCE WITH THE NPDES PERMIT SHALL MAINTAIN A LOG OF THE LOCATION, USE, AND REMOVAL OF **DIRTBAGS.** IN THE EVENT THAT THE STONE UNDER THE **DIRTBAG** BECOMES HIGHLY CONTAMINATED WITH FINES, THE NEXT **DIRTBAG** SHALL BE INSTALLED IN A DIFFERENT LOCATION.

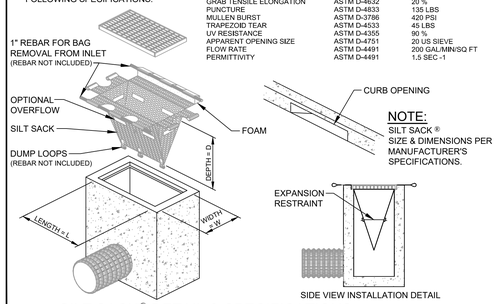
D DIRTBAG® DETAIL AND SPECIFICATIONS
N.T.S.

NOTE: THE SILT SACK ® WILL BE MANUFACTURED FROM A WOVEN POLYPROPYLENE FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS:

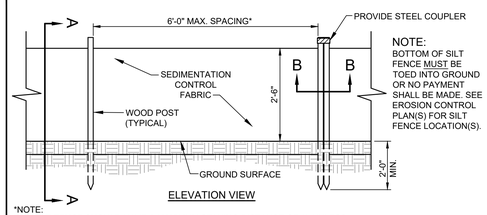
HIGH-FLOW SILT SACK ® (FOR USE IN LOW POINTS/SAGS)

(FOR AREAS OF MODERATE TO HEAVY PRECIPITATION AND RUN-OFF)

PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	265 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20 %
PUNCTURE	ASTM D-4833	135 LBS
MULLEN BURST	ASTM D-3786	420 PSI
TRAPEZOID TEAR	ASTM D-4533	45 LBS
UV RESISTANCE	ASTM D-4355	90 %
APPARENT OPENING SIZE	ASTM D-4751	20 US SIEVE
FLOW RATE	ASTM D-4491	200 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	1.5 SEC -1



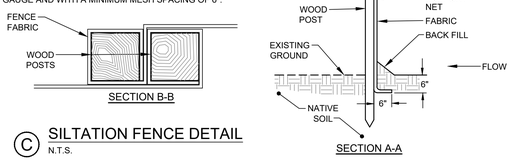
B SILT SACK® DETAIL & SPECIFICATIONS
N.T.S.



ELEVATION VIEW

NOTE:
BOTTOM OF SILT FENCE MUST BE TOED INTO GROUND OR NO PAYMENT SHALL BE MADE. SEE EROSION CONTROL PLAN(S) FOR SILT FENCE LOCATION(S).

*NOTE:
THE SILT FENCE SHOULD HAVE A MAXIMUM STAKING DISTANCE OF 6', UNLESS THE FENCE IS SUPPORTED BY WIRE FENCE REINFORCEMENT, A MAXIMUM 14 GAUGE AND WITH A MINIMUM MESH SPACING OF 6".

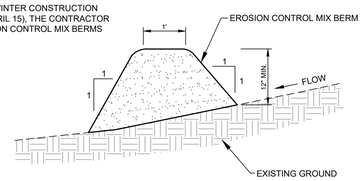


SECTION B-B

SECTION A-A

C SILTATION FENCE DETAIL
N.T.S.

NOTE:
DURING PERIODS OF WINTER CONSTRUCTION (NOV. 15 THROUGH APRIL 15), THE CONTRACTOR SHALL INSTALL EROSION CONTROL MIX BERMS IN LIEU OF SILT FENCE.

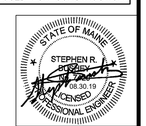


EROSION CONTROL MIX:
EROSION CONTROL MIX SHALL CONTAIN A WELL-GRADED MIXTURE OF PARTICLE SIZES & MAY CONTAIN ROCKS LESS THAN 4" IN DIAMETER. EROSION CONTROL MIX MUST BE FREE OF REFUSE, PHYSICAL CONTAMINANTS, AND MATERIAL TOXIC TO PLANT GROWTH. THE MIX COMPOSITION SHALL MEET THE FOLLOWING STANDARDS:

- THE ORGANIC MATTER CONTENT SHALL BE BETWEEN 80 AND 100%, DRY WEIGHT BASIS.
- PARTICLE SIZE BY WEIGHT SHALL BE 100% PASSING A 6" SCREEN AND A MINIMUM OF 70%, MAXIMUM OF 85%, PASSING A 0.75" SCREEN.
- THE ORGANIC PORTION NEEDS TO BE FIBROUS AND ELONGATED.
- LARGE PORTIONS OF SILTS, CLAYS OR FINE SANDS ARE NOT ACCEPTABLE IN THE MIX.
- SOLUBLE SALTS CONTENT SHALL BE < 4.0 mmhos/cm.
- PH SHALL FALL BETWEEN 5.0 AND 8.0.

E EROSION CONTROL MIX BERM DETAIL
N.T.S.

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.



STEPHEN R. BUSHEY, P.E.
LIC. #7429

Rev.	Date	Revision
–	–	–

Issued For	Date	By
PERMIT APPROVAL SUBMISSION	08.30.19	SRB
DESIGN DEVELOPMENT SUBMISSION TO OWNER	07.31.19	SRB

Design: SRB	Draft: CDD	Date: AUG. 2019
Checked: SRB	Scale: NTS	Job No.: 3257.04
File Name: 325704–DET.dwg		

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207.772.2515

Drawing Name:	Erosion Control Details
Project:	Fore River Campus Consolidation Portland, Maine
Client:	Northern Light Mercy Hospital 144 State Street, Portland, Maine 04101

Drawing No.
C–7.5

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1.3.5 Erosion Control Measures and Site Stabilization

The primary emphasis of the erosion/sedimentation control plan, which will be implemented for this project, is as follows:

- Development of a careful construction sequence.
- Rapid revegetation of denuded areas to minimize the period of soil exposure.
- Rapid stabilization of drainage paths to avoid rill and gully erosion.
- The use of on-site measures to capture sediment (hay bales/ stone check dams/silt fence, etc.)

The following temporary and permanent erosion and sediment control devices will be implemented as part of the site development. These devices shall be installed as indicated on the plans or as described within this report. For further reference, see the latest edition of the Maine Erosion and Sediment Control Practices Field Guide for Contractors.

A. Dewatering

Water from construction trench dewatering shall pass first through a filter bag or secondary containment structure (e.g. hay bale lined pool) prior to discharge. The discharge site shall be selected to avoid flooding, icing, and sediment discharges to a protected resource. In no case shall the filter bag or containment structure be located within 50 feet of a protected natural resource. Dewatering discharge shall not be directed across adjacent properties in a concentrated manner.
The Contractor shall submit to the project engineer, a dewatering plan for the pond dewatering that designates the dewatering process, a stable outlet location, and includes measures to prevent sediment discharges to the outlet location.

B. Inspection and Monitoring

Maintenance measures shall be applied as needed during the entire construction season. After each rainfall, snow storm or period of thawing and runoff, the site contractor shall perform a visual inspection of all installed erosion control measures and perform repairs as needed to insure their continuous function. Following the temporary and/or final seeding and mulching, the contractor shall in the spring inspect and repair any damages and/or unestablished spots. Established vegetative cover means a minimum of 90% of areas vegetated with vigorous growth.

The following standards must be met during construction.

(a) **Inspection and corrective action**. Inspect disturbed and impervious areas, erosion control measures, materials storage areas that are exposed to precipitation, and locations where vehicles enter or exit the site. Inspect these areas at least once a week as well as before and within 24 hours after a storm event (rainfall), and prior to completing permanent stabilization measures. A person with knowledge of erosion and stormwater control, including the standards and conditions in the permit, shall conduct the inspections.

(b) **Maintenance**. If best management practices (BMPs) need to be repaired, the repair work should be initiated upon discovery of the problem but no later than the end of the next workday. If additional BMPs or significant repair of BMPs are necessary, implementation must be completed within 7 calendar days and prior to any storm event (rainfall). All measures must be maintained in effective operating condition until areas are permanently stabilized.

(c) **Documentation**. Keep a log (report) summarizing the inspections and any corrective action taken. The log must include the name(s) and qualifications of the person making the inspections, the date(s) of the inspections, and major observations about the operation and maintenance of erosion and sedimentation controls, materials storage areas, and vehicles access points to the parcel. Major observations must include BMPs that need maintenance, BMPs that failed to operate as designed or proved inadequate for a particular location, and location(s) where additional BMPs are needed. For each BMP requiring maintenance, BMP needing replacement, and location needing additional BMPs, note in the log the corrective action taken and when it was taken.

The log must be made accessible to Department staff and a copy must be provided upon request. The permittee shall retain a copy of the log for a period of at least three years from the completion of permanent stabilization.

C. Temporary Erosion Control Measures

Temporary erosion control measures shall be installed by the Contractor as required by this report and as shown on the plan set for the project. Additional erosion control measures shall be installed if deemed necessary by on-site inspections of the Owner, the City of Portland, MDEP, or their representatives at no additional cost to the Owner.

The following measures are planned as temporary erosion/sedimentation control measures during construction:

1. Crushed stone-stabilized construction entrance shall be placed at any truck entrance to the project site from the existing paved access drives.

2. Siltation fence or wood waste compost berms shall be installed downstream of any disturbed areas to trap runoff- borne sediments until grass areas are revegetated. The silt fence and/or wood waste compost berms shall be installed per the details provided in this package and inspected at least once a week and before and immediately after a storm event of 0.5 inches or greater, and at least daily during prolonged rainfall. Repairs shall be made if there are any signs of erosion or sedimentation below the fence or berm line. If there are signs of undercutting at the center or the edges, or impounding of large volumes of water behind the fence or berm, the barrier shall be replaced with a stone check dam. Wood waste compost berms are not to be used adjacent to wetland areas that are not to be disturbed.

3. Straw or hay mulch including hydroseeding is intended to provide cover for denuded or seeded areas until revegetation is established. Mulch placed between April 15th and October 15th on slopes of less then 15 percent shall be anchored by applying water; mulch placed on slopes of equal to or steeper than 15 percent shall be covered by a fabric netting and anchored with staples in accordance with manufacturer's recommendation. Fabric netting and staples shall be used on disturbed areas within 50' of lakes, streams, and wetlands regardless of the upstream slope. Mulch placed between October 15th and April 15th on slopes equal to or steeper than 8 percent shall be covered with a fabric netting and anchored with staples in accordance with the manufacturer's recommendations. Slopes steeper than 3:1 and equal to or flatter than 2:1, which are to be revegetated, shall receive curlex blankets by American Excelsior or equal. Slopes steeper than 2:1 shall receive riprap as noted on the plans. The mulch application rate for both temporary and permanent seeding is 75 lbs per 1000 sf as identified in the seeding plan. Mulch shall not be placed over snow.

4. Temporary stockpiles of stumps, grubbings, or common excavation will be protected as follows:

a) Temporary stockpiles shall not be located within 100 feet of any wetlands which will not be disturbed and shall be located away from drainage swales.

b) Stockpiles shall be stabilized within 7 days by either temporarily seeding the stockpile by a hydroseed method containing an emulsified mulch tackifier or by covering the stockpile with mulch, such as hay, straw, or erosion control mix.

c) Stockpiles shall be surrounded by sedimentation barrier at the time of formation.

5. All denuded areas that are within 100 feet of an undisturbed wetland, which have been rough graded and are not located within a building pad, parking area, or access drive subbase area, shall receive mulch or erosion control mesh fabric within 48 hours of initial disturbance of soil. All areas within 100 feet of an undisturbed wetland shall be mulched prior to any predicted rain event regardless of the 48 hour window. In other areas, the time period may be extended to 7 days.

6. For work, which is conducted between October 15th and April 15th of any calendar year, all denuded areas, shall be covered with hay mulch or erosion control mix, applied at twice the normal application rate and anchored with a fabric netting. The time period for applying mulch shall be limited to 2 days for all areas.

7. The paved access drives shall be swept to control mud and dust as necessary. Additional stone shall be added to the stabilized construction entrance to minimize the tracking of material off the site and onto the surrounding roadways.

8. During grubbing operations stone check dams shall be installed at any evident concentrated flow discharge points and as directed on the Erosion Control Plans.

9. Silt fencing with a minimum stake spacing of 6 feet shall be used, unless the fence is supported by wire fence reinforcement of minimum 14 gauge and with a maximum mesh spacing of 6 inches, in which case stakes may be spaced a maximum of 10 feet apart. The bottom of the fence shall be anchored. A double row of silt fence shall be used adjacent to wetlands.

10. Wood waste compost/bark berms may be used in lieu of siltation fencing. Berms shall be removed and spread in a layer not to exceed 3" thick once upstream areas are completed and a 90% catch of vegetation is attained.

11. Storm drain catch basin inlet protection shall be provided through the use of stone sediment barriers or approved sediment bags (such as Silt Sack). Installation details are provided in the plan set. The barriers shall be inspected after each rainfall and repairs made as necessary. Sediment shall be removed and the barrier restored to its original dimensions when the sediment has accumulated to ½ the design depth of the barrier. The barrier shall be removed when the tributary drainage area has been stabilized.

12. Water and/or calcium chloride shall be furnished and applied in accordance with MDOT specifications - Section 637 - Dust Control.

13. Loam and seed is intended to serve, as the primary permanent revegetative measure for all denuded areas not provided with other erosion control measures, such as riprap. Application rates are provided in the seeding plan. Seeding shall not occur over snow.

D. Permanent Erosion Control Measures

The following permanent erosion control measures have been designed as part of the Erosion/Sedimentation Control Plan:

1. All areas disturbed during construction, but not subject to other restoration (paving, riprap, etc.) will be loamed, limed, fertilized, mulched, and seeded. Fabric netting, anchored with staples, shall be placed over the mulch in areas as noted in Temporary Erosion Control Measures paragraph 3 of this report. All areas within 100 feet of an undisturbed wetland shall be mulched prior to any predicted rain event regardless of the 48 hour window. Native topsoil shall be stockpiled and reused for final restoration when it is of sufficient quality.

2. All storm drain pipe outlets shall have riprap aprons at their outlet to protect the outlet and receiving channel from scour and deterioration. Installation details are provided in the plan set. The aprons shall be installed and stabilized to the extent practicable prior to directing runoff to the tributary pipe or culvert.

3. Catch basins shall be provided with sediment sumps and inlet hoods (the Snout) for all outlet pipes that are 18" in diameter or less.

1.4 Implementation Schedule

The following construction sequence shall be required to ensure the effectiveness of the erosion and sedimentation control measures are optimized:

It is anticipated that construction of the Hospital Expansion and related infrastructure will commence in Spring of 2020 and be completed by Winter of 2021.

Note: For all grading activities, the contractor shall exercise extreme caution not to overexpose the site, this shall be accomplished by limiting the disturbed area.

1. Install stabilized construction entrance at any truck entrance to the project site from a paved access drive.
2. Install perimeter silt fence and/or wood waste berms prior to grubbing respective areas.
3. Commence dewatering of the pond.
4. Excavate for wet pond permanent pool.
5. Clear and grub site. Install stone check dams at any evident concentrated flow discharge points.
6. Foundation area shall be excavated for installation of the building footings. Building work will be on going through the remainder of the project.
7. Commence installation of drainage appurtenances.
8. Commence earthwork and grading to subgrade.
9. Commence installation of water and sewer lines.
10. Continue earthwork and grading to subgrade as necessary for construction.
11. Complete installation of underground utilities to within 5' of the buildings.
12. Install light pole foundations and light poles.
13. Complete remaining earthwork operations.
14. Complete installation of catch basins and appurtenances.
15. Complete construction of wet pond.
16. Install sub-base and base gravel within parking fields, walkways, and all driveways.
17. Install curbing in parking fields, driveways, and along the streets as needed.
18. Install base course paving for access drive and parking area as well as concrete surfaces.
19. Loam, lime, fertilize, seed and mulch disturbed areas and complete all landscaping.
20. Install surface course paving for access drive and parking areas. Stripe per plan.
21. Once the site is stabilized and a 90% catch of vegetation has been obtained, remove all temporary erosion control measures.
22. Touch up loam and seed.

Note: All denuded areas not subject to final paving, riprap, or gravel shall be revegetated.

Prior to construction of the project, the contractor shall submit to the owner a schedule for the completion of the work, which will satisfy the following criteria:

1. The above construction sequence should generally be completed in the specified order; however, several separate items may be constructed simultaneously. Work must also be scheduled or phased to reduce the extent of the exposed areas as specified below. The intent of this sequence is to provide for erosion control and to have structural measures such as silt fence and construction entrances in place before large areas of land are denuded.

2. The work shall be conducted in sections which shall:

a) Limit the amount of exposed area to those areas in which work is expected to be undertaken during the proceeding 30 days.

b) Revegetate disturbed areas as rapidly as possible. All areas shall be permanently stabilized within 7 days of final grading or before a storm event; or temporarily stabilized within 48 hours of initial disturbance of soil for areas within 100 feet of an undisturbed wetland and 7 days for all other areas. Areas within 100 feet of an undisturbed wetland shall be mulched prior to any predicted rain event regardless of the 48 hour window.

c) Incorporate planned inlets and drainage system as early as possible into the construction phase. The ditches shall be immediately lined or revegetated as soon as their installation is complete.

1.5 Erosion, Sedimentation and Stabilization Control Plan

The Erosion Control Plan is included in the plan set.

1.6 Details and Specifications

The Erosion Control details and specifications are included in the plan set.

1.7 Winter Stabilization Plan

The winter construction period is from November 1 through April 15. If the construction site is not stabilized with pavement, a road gravel base, 75% mature vegetation cover or riprap by November 15 then the site needs to be protected with over-winter stabilization. An area considered open is any area not stabilized with pavement; vegetation, mulching, erosion control mats, riprap or gravel base on a road.

Winter excavation and earthwork shall be completed such that any area left exposed can be controlled by the contractor. Limit the exposed area to those areas in which work is expected to be under taken during the proceeding 15 days and that can be mulched in one day prior to any snow event.

All areas shall be considered to be denuded until the subbase gravel is installed in roadway/parking areas or the areas of future loam and seed have been loamed, seeded and mulched. Hay and straw mulch rate shall be a minimum of 150 lbs/1,000 s.f. (3 tons/acre) and shall be properly anchored.

The contractor shall install any added measures which may be necessary to control erosion/sedimentation from the site dependent upon the actual site and weather conditions. Continuation of earthwork operations on additional areas shall not begin until the exposed soil surface on the area being worked has been stabilized, in order to minimize areas without erosion control protection.

1. Soil Stockpiles

Stockpiles of soil or subsoil shall be mulched for over winter protection with hay or straw at twice the normal rate or at 150 lbs/1,000 s.f. (3 tons per acre) or with a four-inch layer of woodwaste erosion control mix. This shall be done within 24 hours of stocking and re-established prior to any rainfall or snowfall. Any soil stockpile shall not be placed (even covered with hay or straw) within 100 feet from any natural resources.

2. Natural Resource Protection

Any areas within 100 feet from any natural resources, if not stabilized with a minimum of 75% mature vegetation catch, shall be mulched by December 1 and anchored with plastic netting or protected with erosion control mats. During winter construction, a double line of sediment barriers (i.e. silt fence backed with hay bales or erosion control mix) shall be placed between any natural resource and the disturbed area. Projects crossing the natural resource shall be protected a minimum distance of 100 feet on either side from the resource. Existing projects not stabilized by December 1 shall be protected with the second line of sediment barrier to ensure functionality during the spring thaw and rains.

3. Sediment Barriers

During frozen conditions, sediment barriers shall consist of woodwaste filter berms as frozen soil prevents the proper installation of hay bales and sediment silt fences.

4. Mulching

An area shall be considered denuded until areas of future loam and seed have been loamed, seeded and mulched. Hay and straw mulch shall be applied at a rate of 150 lb. per 1,000 square feet or 3 tons/acre (twice the normal accepted rate of 75-lbs/1,000 s.f. or 1.5 tons/acre) and shall be properly anchored. Mulch shall not be spread on top of snow. The snow shall be removed down to a one-inch depth or less prior to application. After each day of final grading, the area shall be properly stabilized with anchored hay or straw or erosion control matting. An area shall be considered to have been stabilized when exposed surfaces have been either mulched with straw or hay at a rate of 150 lb. per 1,000 square feet (3 tons/acre) and adequately anchored that ground surface is not visible though the mulch.

Between the dates of November 1 and April 15, all mulch shall be anchored by peg line, mulch netting, asphalt emulsion chemical, or wood cellulose fiber. When ground surface is not visible through the mulch then cover is sufficient. After November 1st, mulch and anchoring of all bare soil shall occur at the end of each final grading workday.

5. Mulching on Slopes and Ditches

Slopes shall not be left exposed for any extended time of work suspension unless fully mulched and anchored with peg and netting or with erosion control blankets. Mulching shall be applied at a rate of 230 lbs/1,000 s.f. on all slopes greater than 8%.

Mulch netting shall be used to anchor mulch in all drainage ways with a slope greater than 3% for slopes exposed to direct winds and for all other slopes greater that 8%. Erosion control blankets shall be used in lieu of mulch in all drainage ways with slopes greater than 8%. Erosion control mix can be used to substitute erosion control blankets on all slopes except ditches.

6. Seeding

Between the dates of October 15 and April 1st, loam or seed will not be required. During periods of above freezing temperatures finished areas shall be fine graded and either protected with mulch or temporarily seeded and mulched until such time as the final treatment can be applied. If the date is after November 1st and if the exposed area has been loamed, fine graded with a uniform surface, then the area may be dormant seeded at a rate of 3 times higher than specified for permanent seed and then mulched. Dormant seeding may be selected to be placed prior to the placement of mulch and fabric netting anchored with staples. If dormant seeding is used for the site, all disturbed areas shall receive 4" of loam and seed at an application rate of 5 lbs/1,000 s.f. All areas seeded during the winter shall be inspected in the spring for adequate catch. All areas insufficiently vegetated (less than 75% catch) shall be revegetated by replacing loam, seed and mulch. If dormant seeding is not used for the site, all disturbed areas shall be revegetated in the spring.

Standards for Timely Stabilization of Construction Sites During Winter

1. Standard for the timely stabilization of ditches and channels -- The applicant shall construct and stabilize all stone-lined ditches and channels on the site by November 15. The applicant shall construct and stabilize all grass-lined ditches and channels on the site by September 1. If the applicant fails to stabilize a ditch or channel to be grass-lined by September 1, then the applicant will take one of the following actions to stabilize the ditch for late fall and winter.

Install a sod lining in the ditch -- The applicant shall line the ditch with properly installed sod by October 1. Proper installation includes the applicant pinning the sod onto the soil with wire pins, rolling the sod to guarantee contact between the sod and underlying soil, watering the sod to promote root growth into the disturbed soil, and anchoring the sod with jute or plastic mesh to prevent the sod strips from sloughing during flow conditions.

Install a stone lining in the ditch --The applicant shall line the ditch with stone riprap by November 15. The applicant shall hire a registered professional engineer to determine the stone size and lining thickness needed to withstand the anticipated flow velocities and flow depths within the ditch. If necessary, the applicant shall regrade the ditch prior to placing the stone lining so to prevent the stone lining from reducing the ditch's cross-sectional area.

2. Standard for the timely stabilization of disturbed slopes -- The applicant shall construct and stabilize stone-covered slopes by November 15. The applicant shall seed and mulch all slopes to be vegetated by September 1. The departments shall consider any area having a grade greater than 15% to be a slope. If the applicant fails to stabilize any slope to be vegetated by September 1, then the applicant shall take one of the following actions to stabilize the slope for late fall and winter.

Stabilize the soil with temporary vegetation and erosion control mats -- By September 1 the applicant shall seed the disturbed slope with winter rye at a seeding rate of 3 pounds per 1,000 square feet and apply erosion control mats over the mulched slope. The applicant shall monitor growth of the rye over the next 30 days. If the rye fails to grow at least three inches or cover at least 75% of the disturbed slope by November 1, then the applicant shall cover the slope with a layer of woodwaste compost as described in item iii of this standard or with stone riprap as described in item iv of this standard.

Stabilize the slope with sod -- The applicant shall stabilize the disturbed slope with properly installed sod by September 1. Proper installation includes the applicant pinning the sod onto the slope with wire pins, rolling the sod to guarantee contact between the sod and underlying soil, and watering the sod to promote root growth into the disturbed soil. The applicant shall not use late-season sod installation to stabilize slopes having a grade greater than 33% (3H:1V).

Stabilize the slope with woodwaste compost -- The applicant shall place a six-inch layer of woodwaste compost on the slope by November 15. Prior to placing the woodwaste compost, the applicant shall remove any snow accumulation on the disturbed slope. The applicant shall not use woodwaste compost to stabilize slopes having grades greater than 50% (2H:1V) or having groundwater seeps on the slope face.

Stabilize the slope with stone riprap -- The applicant shall place a layer of stone riprap on the slope by November 15. The applicant shall hire a registered professional engineer to determine the stone size needed for stability and to design a filter layer for underneath the riprap.

3. Standard for the timely stabilization of disturbed soils -- By September 15 the applicant shall seed and mulch all disturbed soils on areas having a slope less than 15%. If the applicant fails to stabilize these soils by this date, then the applicant shall take one of the following actions to stabilize the soil for late fall and winter.

Stabilize the soil with temporary vegetation -- By September 1 the applicant shall seed the disturbed soil with winter rye at a seeding rate of 3 pounds per 1000 square feet, lightly mulch the seeded soil with hay or straw at 75 pounds per 1000 square feet, and anchor the mulch with plastic netting. The applicant shall monitor growth of the rye over the next 30 days. If the rye fails to grow at least three inches or cover at least 75% of the disturbed soil before November 1, then the applicant shall mulch the area for over-winter protection as described below.

Stabilize the soil with sod -- The applicant shall stabilize the disturbed soil with properly installed sod by September 15. Proper installation includes the applicant pinning the sod onto the soil with wire pins, rolling the sod to guarantee contact between the sod and underlying soil, and watering the sod to promote root growth into the disturbed soil.

Stabilize the soil with mulch -- By November 15 the applicant shall mulch the disturbed soil by spreading hay or straw at a rate of at least 150 pounds per 1000 square feet on the area so that no soil is visible through the mulch. Prior to applying the mulch, the applicant shall remove any snow accumulation on the disturbed area. Immediately after applying the mulch, the applicant will anchor the mulch with plastic netting to prevent wind from moving the mulch off the disturbed soil.

1.8 Maintenance of facilities

The stormwater facilities will be maintained by the Applicant, Mercy Hospital or their assigned heirs. The contract documents will require the contractor to designate a person responsible for maintenance of the sedimentation control features during construction as required by the Erosion Control Report. Long-term operation/maintenance recommended for the stormwater facilities is presented below.

The responsible party may contract with such professionals, as may be necessary in order to comply with this provision and may rely on the advice of such professionals in carrying out its duty hereunder, provided, that the following operation and maintenance procedures are hereby established as a minimum for compliance with this section. A maintenance log of the inspections shall be kept by the responsible party.

Inspection and Maintenance Frequency and Corrrective Measures:
The following areas, facilities, and measures will be inspected and the identified deficiencies will be corrected. Clean-out must include the removal and legal disposal of any accumulated sediments and debris.

Catch Basins:
Inspect catch basins 2 times per year (preferably in Spring and Fall) to ensure that the catch basins are working in their intended fashion and that they are free of debris. Clean structures when sediment depths reach 12" from invert of outlet. If the basin outlet is designed with a hood to trap floatable materials (i.e. Snout), check to ensure watertight seal is working. At a minimum, remove floating debris and hydrocarbons at the time of the inspection.

Culverts:
Inspect culverts 2 times per year (preferably in Spring and Fall) to ensure that the culverts are working in their intended fashion and that they are free of debris. Remove any obstructions to flow; remove accumulated sediments and debris at the inlet, at the outlet, and within the conduit and repair any erosion damage at the culvert's inlet and outlet.

Inlet/Outlet Control Structures:
Inspect structures and piping 2 times per year (preferably in Spring and Fall) to ensure that the structures are working in their intended fashion and that they are free of debris. Remove any obstructions to flow; remove accumulated sediments and debris within the structure.

Stormdrain Outlets:
Inspect outlets 2 times per year (preferably in Spring and Fall) to ensure that the outlets are working in their intended fashion and that they are free of debris. Remove any obstructions to flow; remove accumulated sediments and debris at the outlet and within the conduit Repair any erosion damage at the stormdrain outlet.

Wet Pond:
Inspect pond 2 times per year (preferably in Spring and Fall) to ensure that it is working in its intended fashion and that it is free of trash and debris. Remove and properly dispose of any accumulated sediment or debris as needed. Inspect the embankments and spillways for settlement, slope erosion, and downstream swamping. Mow the embankment and/or vegetated spillway as needed to control woody vegetation. The facilities shall be inspected after major storms and any identified deficiencies shall be corrected.

Stone Bermed Level Lip Spreaders:
Inspect 2 times per year (preferably in Spring and Fall) to ensure that they are free of debris and no undesirable growth is impeding water flow through the berm. In addition, the stone bermed level lip spreaders shall be inspected to ensure that runoff is not bypassing the bermed spreader.

Vegetated Areas:
Inspect slopes and embankments early in the growing season to identify active or potential erosion problems. Replant bare areas or areas with sparse growth. Where rill erosion is evident, armor the area with an appropriate lining or divert the erosive flows to on-site areas able to withstand the concentrated flows. The facilities will be inspected after major storms and any identified deficiencies will be corrected.

Ditches, Swales and other Open Stormwater Channels:
Inspect 2 times per year (preferably in Spring and Fall) to ensure they are working in their intended fashion and that they are free of sediment and debris. Remove any obstructions to flow, including accumulated sediments and debris and vegetated growth. Repair any erosion of the ditch lining. Vegetated ditches will be mowed at least annually or otherwise maintained to control the growth of woody vegetation and maintain flow capacity. Any woody vegetation growing through riprap linings must also be removed. Repair any slumping side slopes as soon as practicable. If the ditch has a riprap lining, replace riprap on areas where any underlying filter fabric or underdrain gravel is showing through the stone or where stones have dislodged. Correct any erosion of the channel's bottom or sideslopes. The facilities shall be inspected after major storms and any identified deficiencies shall be corrected.

Roadways and Parking Surfaces: Clear accumulations of winter sand in parking lots and along roadways at least once a year, preferably in the spring. Accumulations on pavement may be removed by pavement sweeping. Accumulations of sand along road shoulders may be removed by grading excess sand to the pavement edge and removing it manually or by a front-end loader. Repair potholes and other roadway obstructions and hazards. Plowing and sanding of paved areas shall be performed as necessary to maintain vehicular traffic safety.

Recertification

As part of the Stormwater Permit, the applicant is required to meet the standards in Appendix B of the Chapter 500 Rules. Appendix B states that a project must submit a certification of the following to the department within three months of the expiration of each five-year interval from the date of issuance of the permit.
(a)Identification and repair of erosion problems. All areas of the project site have been inspected for areas of erosion, and appropriate steps have been taken to permanently stabilize these areas.
(b)Inspection and repair of stormwater control system. All aspects of the stormwater control system have been inspected for damage, wear, and malfunction, and appropriate steps have been taken to repair or replace the system, or portions of the system.
(c)Maintenance. The erosion and stormwater maintenance plan for the site is being implemented as written, or modifications to the plan have been submitted to and approved by the department, and the maintenance log is being maintained.
(d)Proprietary Systems. All proprietary systems have been maintained according to the manufacturer's recommendations. Where required by the Department, the permittee shall execute a 5-year maintenance contract with a qualified professional for the coming 5-year interval. The maintenance contract must include provisions for routine inspections, cleaning, and general maintenance.

Housekeeping

As part of the Stormwater Permit, the applicant is required to meet the standards in Appendix C of the Chapter 500 Rules. The following procedures are hereby established as a minimum for compliance with this section. For further information on the procedures listed below, refer to Chapter 500 rules - Appendix C.

Spill Prevention:
Appropriate spill prevention, containment, and response planning/implementation shall be used to prevent pollutants from being discharged from materials on site.

Groundwater Protection:
During construction, hazardous materials with the potential to contaminate groundwater shall not be stored or handled in areas of the site which drain to an infiltration area.

Fugitive Sediment and Dust:
Appropriate measures shall be taken to ensure that activities do not result in noticeable erosion of the soils and water and/or calcium chloride shall be used to ensure that activities do not result in fugitive dust emissions during or after construction.

Debris and Other Materials:
Litter, construction debris, and chemicals exposed to stormwater must be prevented from becoming a pollutant source.

Trench or Foundation De-watering:
Water collected through the process of trenching and/or de-watering must be removed from the ponded area, and must be spread through natural wooded buffers or other areas that are specifically designed to collect the maximum amount of sediment possible.

Non-stormwater Discharges:
Identify and prevent contamination by non-stormwater discharges.

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SEEDING PLAN

Project: Mercy Hospital Expansion

Site Location: Portland, ME

☐ Permanent Seeding ☒ Temporary Seeding

1. Instruction on preparation of soil: Prepare a good seed bed for planting method used.
2. Apply lime as follows: _____# / acres, OR 138 # /M Sq. Ft.
3. Fertilize with _____ pounds of _____ N-P-K/ac. OR 13.8 pounds of 10-10-10 N-P-K/M Sq. Ft.
4. Method of applying lime and fertilizer: Spread and work into the soil before seeding.
5. Seed with the following mixture:
   50% Winter Rye
   50% Annual Rye
6. Mulching instructions: Apply at the rate of _____per acre, OR 75 pounds per M. Sq. Ft.

	Amount	Unit # Tons, Etc.
7. TOTAL LIME	138	#/1000 sq. ft.
8. TOTAL FERTILIZER	13.8	#/1000 sq. ft.
9. TOTAL SEED	1.03	#/1000 sq. ft.
10. TOTAL MULCH	75	#/1000 sq. ft.
11. TOTAL other materials, seeds, etc.		
12. REMARKS		

Spring seeding is recommended; however, late summer (prior to September 1) seeding can be made. Permanent seeding should be made prior to August 5 or as a dormant seeding after the first killing frost and before the first snowfall. If seeding cannot be done within these seeding dates, temporary seeding and mulching shall be used to protect the site. Permanent seeding shall be delayed until the next recommended seeding period.

Project: Mercy Hospital Expansion

Site Location: Portland, ME

☒ Permanent Seeding ☐ Temporary Seeding

1. Instruction on preparation of soil: Prepare a good seed bed for planting method used.
2. Apply lime as follows: _____# / acres, OR 138 # /M Sq. Ft.
3. Fertilize with _____ pounds of _____ N-P-K/ac. OR 18.4 pounds of 10-20-20 N-P-K/M Sq. Ft.
4. Method of applying lime and fertilizer: Spread and work into the soil before seeding.
5. Seed with the following mixture:
   40% Creeping Red Fescue
   30% Charger II Perennial Ryegrass
   20% KenBlue Kentucky Bluegrass
   10% Tiffany Chewings Fescue
6. Mulching instructions: Apply at the rate of _____per acre, OR 75 pounds per M. Sq. Ft.

	Amount	Unit # Tons, Etc.
7. TOTAL LIME	138	#/1000 sq. ft.
8. TOTAL FERTILIZER	18.4	#/1000 sq. ft.
9. TOTAL SEED	1.03	#/1000 sq. ft.
10. TOTAL MULCH	75	#/1000 sq. ft.
11. TOTAL other materials, seeds, etc.		
12. REMARKS		

Spring seeding is recommended, however, late summer (prior to September 1) seeding can be made. Permanent seeding should be made prior to August 5 or as a dormant seeding after the first killing frost and before the first snowfall. If seeding cannot be done within these seeding dates, temporary seeding and mulching shall be used to protect the site. Permanent seeding shall be delayed until the next recommended seeding period.

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.

STATE OF MAINE
STEPHEN R. BUSHEY
08.30.19
LICENSED PROFESSIONAL ENGINEER

STEPHEN R. BUSHEY, P.E.
LIC. #7429

Rev.	Date	Revision
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Issued For	Date	By
PERMIT APPROVAL SUBMISSION	08.30.19	SRB
DESIGN DEVELOPMENT SUBMISSION TO OWNER	07.31.19	SRB

Design: SRB	Draft: CDD	Date: AUG. 2019
Checked: SRB	Scale: NTS	Job No.: 3257.04
File Name: 325704–DET.dwg		

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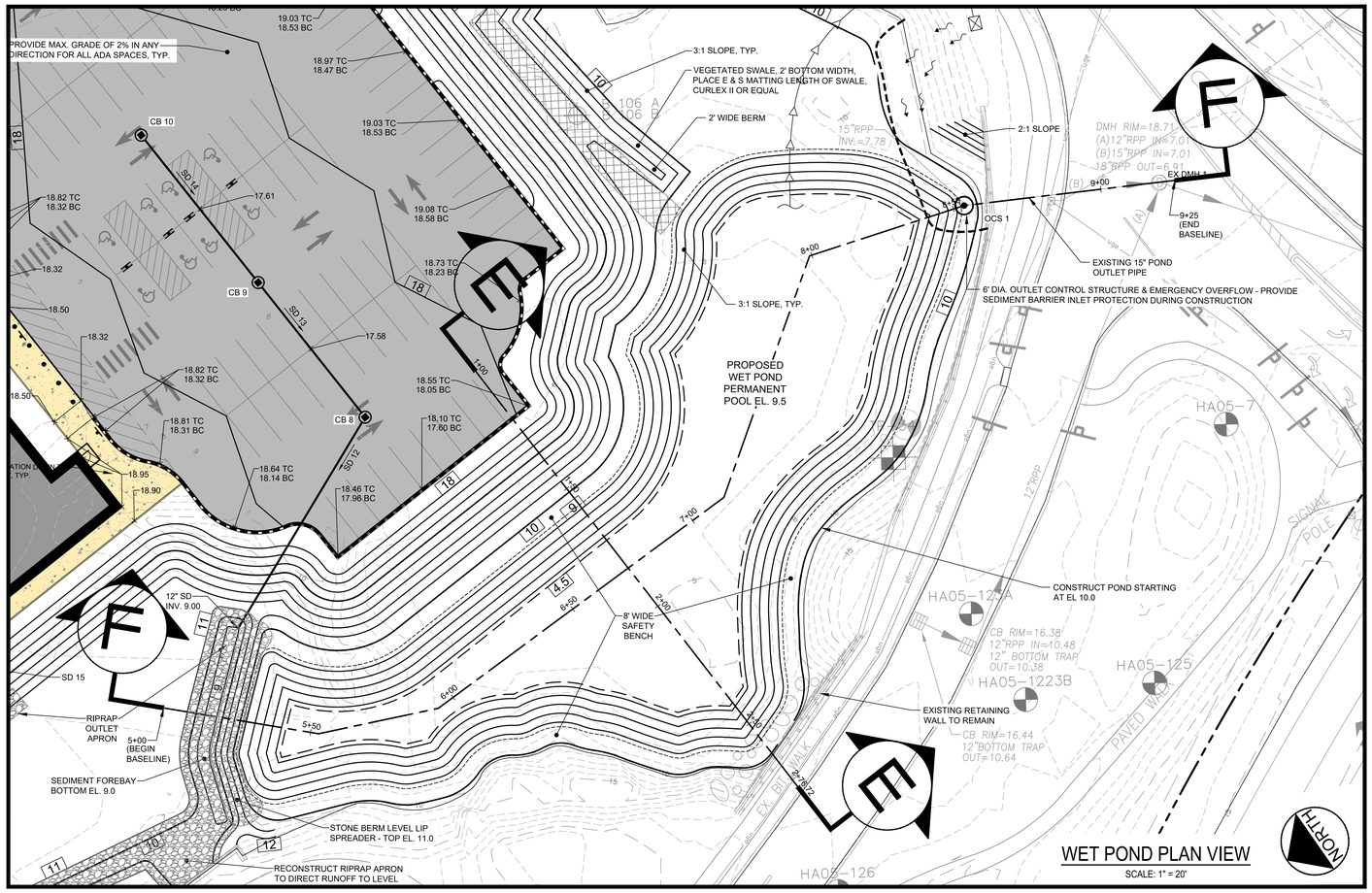
Drawing Name: Erosion Control Notes & Seeding Plan

Project: Fore River Campus Consolidation
Portland, Maine

Client: Northern Light Mercy Hospital
144 State Street, Portland, Maine 04101

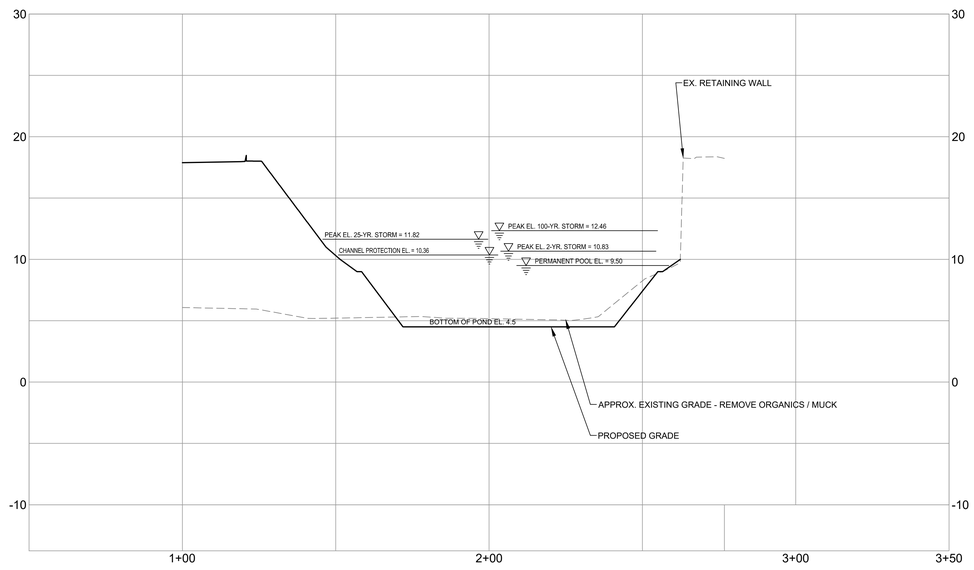
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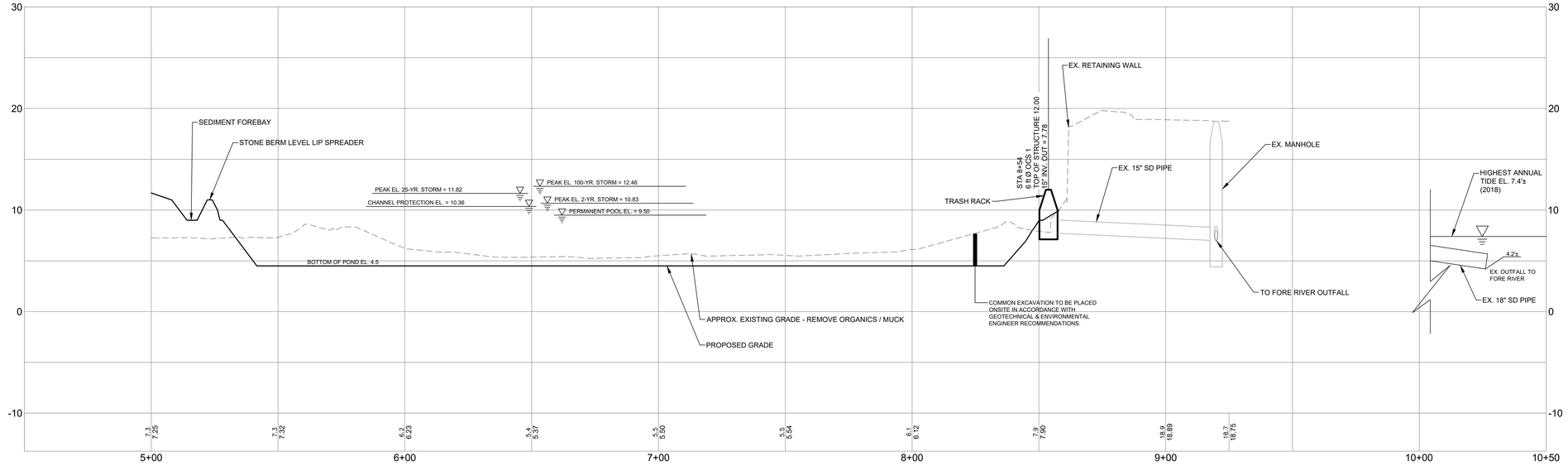
WET POND PLAN VIEW

SCALE: 1" = 20'



WET POND CROSS SECTION E-E

SCALE: 1" = 20' HORZ.
1" = 5' VERT.



WET POND CROSS SECTION F-F

SCALE: 1" = 20' HORZ.
1" = 5' VERT.

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STATE OF MAINE — STEPHEN R. BUSHEY — 08.30.19 — LICENSED PROFESSIONAL ENGINEER

STEPHEN R. BUSHEY, P.E.
LIC. #7429

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Design: SRB	Draft: CDD	Date: AUG. 2019	
Checked: SRB	Scale: NTS	Job No.: 3257.04	
File Name: 325704-DET-POND.dwg			

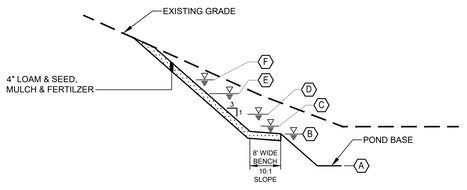
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Drawing Name: Wet Pond Plan & Cross Sections
Project: Fore River Campus Consolidation, Portland, Maine
Client: Northern Light Mercy Hospital, 144 State Street, Portland, Maine 04101

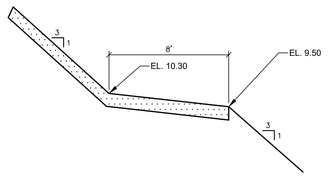
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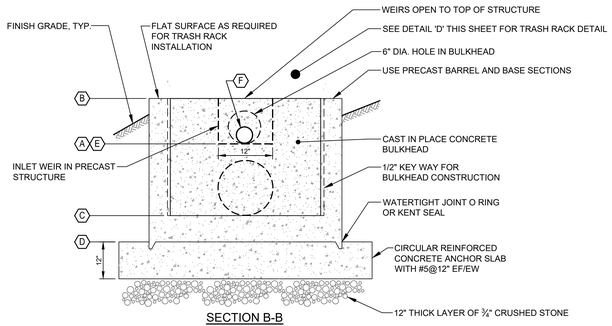


SCHEDULE A EMBANKMENT SCHEDULE	
ITEM DESCRIPTION	DIMENSION/ELEVATION
(A) POND BASE ELEVATION	4.5
(B) PERMANENT POOL ELEVATION	9.5
(C) PEAK ELEVATION – CHANNEL PROTECTION VOLUME	10.36
(D) PEAK ELEVATION – 2 YEAR STORM	10.83
(E) PEAK ELEVATION – 25 YEAR STORM	11.82
(F) PEAK ELEVATION – 100 YEAR STORM	12.46

(A) TYPICAL WET POND CROSS SECTION
N.T.S.

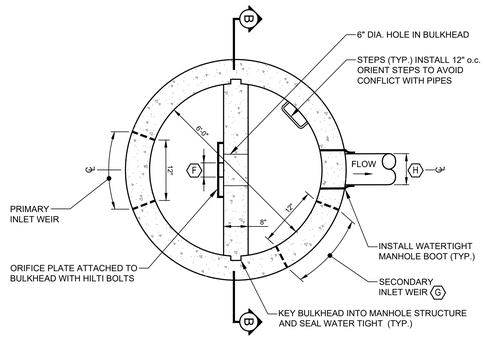


(B) 8' WIDE BENCH DETAIL
N.T.S.



SECTION B-B

SEE SCHEDULE 'B'

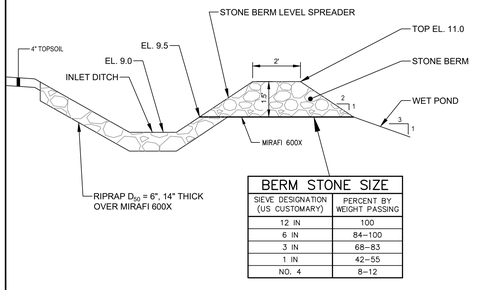


PLAN VIEW

SEE SCHEDULE 'B'

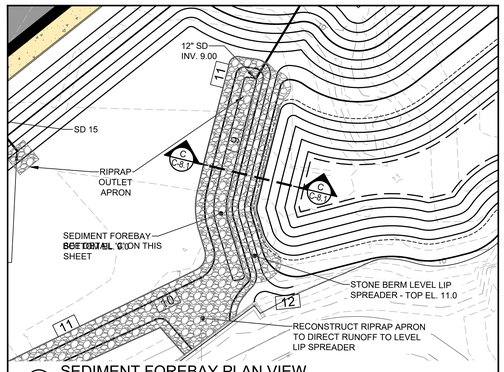
SCHEDULE 'B' OUTLET CONTROL STRUCTURE		
	DESCRIPTION	DIM./ELEV.
A	PRIMARY WEIR INVERT	9.50
B	TOP OF STRUCTURE / TOP OF BULKHEAD	12.00
C	MANHOLE INVERT	7.78
D	BOTTOM OF STRUCTURE	6.78
E	ORIFICE INVERT	9.50
F	ORIFICE DIAMETER	3.25"
G	SECONDARY WEIR INVERT	10.36
H	PIPE DIAMETER	15" - EXIST. PIPE
	INVERT OUT	7.78 - EXIST. INVERT

(E) 6' DIA. OUTLET CONTROL STRUCTURE (OCS 1) DETAILS
N.T.S.

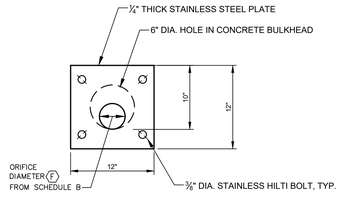


BERM STONE SIZE	
SIEVE DESIGNATION (US CUSTOMARY)	PERCENT BY WEIGHT PASSING
12 IN	100
6 IN	84–100
3 IN	68–83
1 IN	42–55
NO. 4	8–12

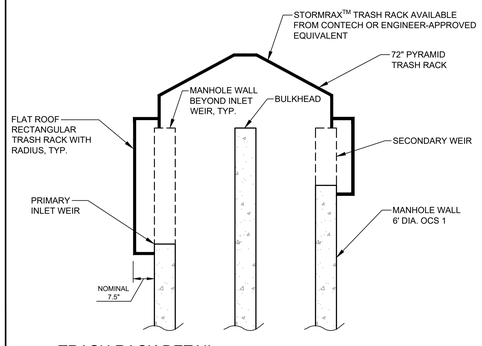
(C) SEDIMENT FOREBAY - SECTION C-C (SEE DETAIL F FOR PLAN)
N.T.S.



(F) SEDIMENT FOREBAY PLAN VIEW
SCALE: 1" = 20'



(H) ORIFICE DETAIL
N.T.S.



(D) TRASH RACK DETAIL
N.T.S.

CONSTRUCTION OVERSIGHT:

1. THE APPLICANT WILL RETAIN THE SERVICES OF A PROFESSIONAL ENGINEER TO INSPECT THE CONSTRUCTION AND STABILIZATION OF ALL STORMWATER MANAGEMENT STRUCTURES. IF NECESSARY, THE INSPECTING ENGINEER WILL INTERPRET THE POND'S CONSTRUCTION PLAN FOR THE CONTRACTOR. ONCE ALL STORMWATER MANAGEMENT STRUCTURES ARE CONSTRUCTED AND STABILIZED, THE INSPECTING ENGINEER WILL NOTIFY THE MeDEP IN WRITING WITHIN 30 DAYS TO STATE THAT THE POND HAS BEEN COMPLETED. ACCOMPANYING THE ENGINEER'S NOTIFICATION MUST BE A LOG OF THE ENGINEER'S INSPECTIONS GIVING THE DATE OF EACH INSPECTION, THE TIME OF EACH INSPECTION, AND THE ITEMS INSPECTED ON EACH VISIT, AND INCLUDE ANY TESTING DATA OR SIEVE ANALYSIS DATA OF EVERY MINERAL SOIL AND SOIL MEDIA SPECIFIED IN THE PLANS AND USED ON SITE.
2. INSPECTION BY A PROFESSIONAL ENGINEER WILL CONSIST OF WEEKLY VISITS TO THE SITE TO INSPECT THE INSTALLATION OF EACH POND'S EMBANKMENT CONSTRUCTION, STORMWATER INLET AND OUTLET CONTROL STRUCTURE, FROM INITIAL GROUND DISTURBANCE TO FINAL STABILIZATION OF THE POND.
3. AN UNDERDRAINED GRAVEL TRENCH OUTLET IS NOT PROPOSED FOR THE OUTFLOW TRIBUTARY TO THE TIDAL FORE RIVER.

(G) CONSTRUCTION OVERSIGHT NOTE
N.T.S.

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.

STATE OF MAINE
STEPHEN R. BUSHEY
08.30.19
LICENSED PROFESSIONAL ENGINEER
STEPHEN R. BUSHEY, P.E.
LIC. #7429

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DESIGN DEVELOPMENT SUBMISSION TO OWNER	07.31.19	SRB

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File Name: 325704-DET-POND.dwg		

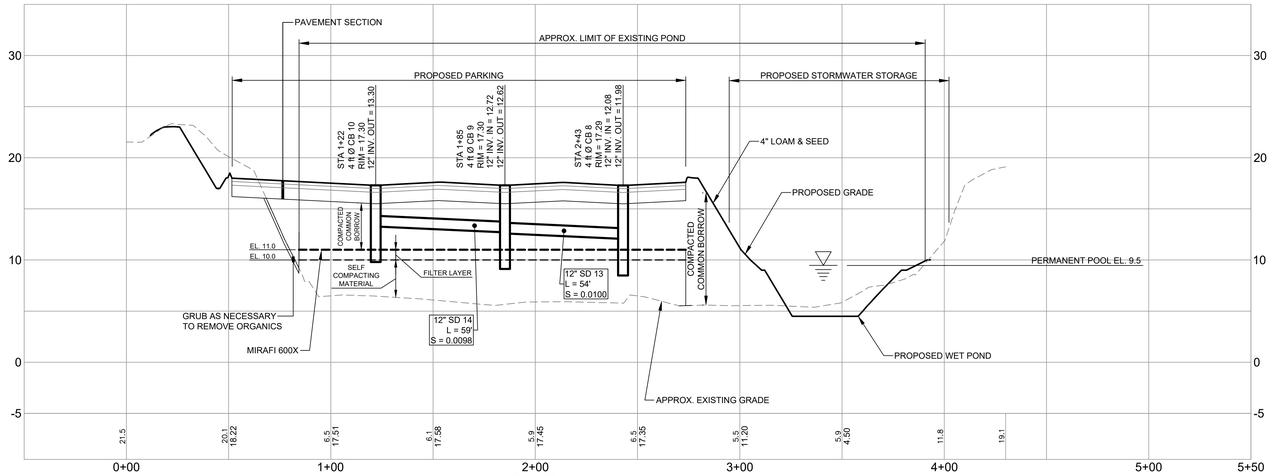
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Drawing Name:	Wet Pond Details
Project:	Fore River Campus Consolidation Portland, Maine
Client:	Northern Light Mercy Hospital 144 State Street, Portland, Maine 04101

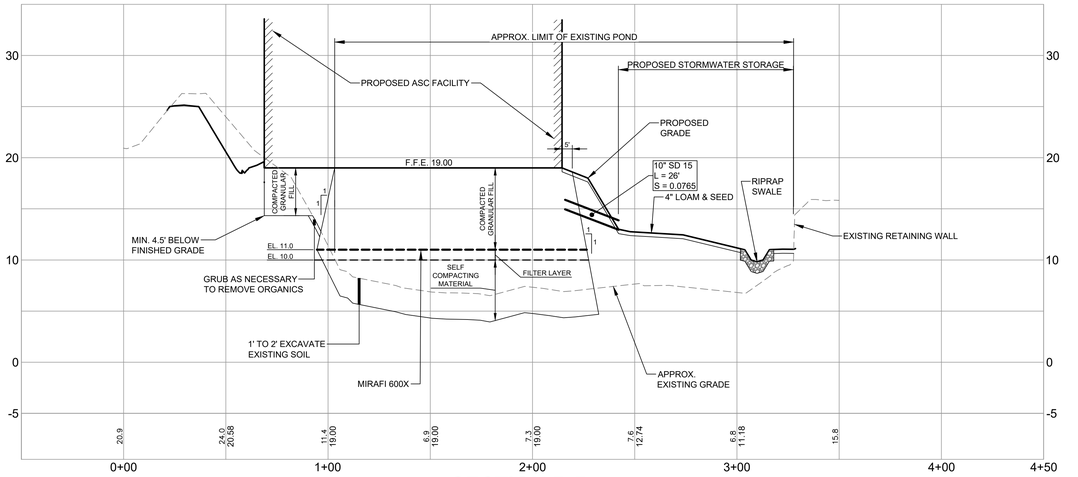
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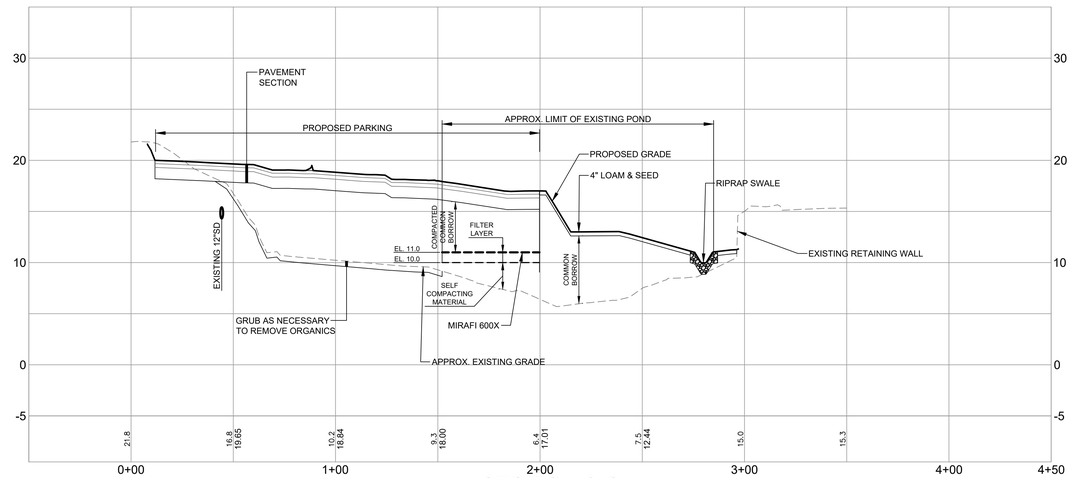
SECTION A-A

SCALE: 1" = 30' HORZ.
1" = 6' VERT.



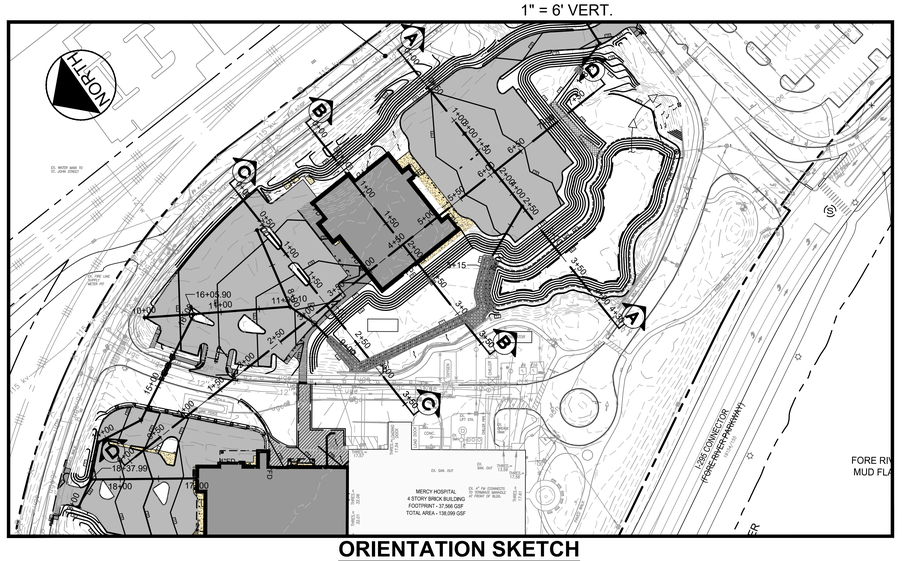
SECTION B-B

SCALE: 1" = 30' HORZ.
1" = 6' VERT.



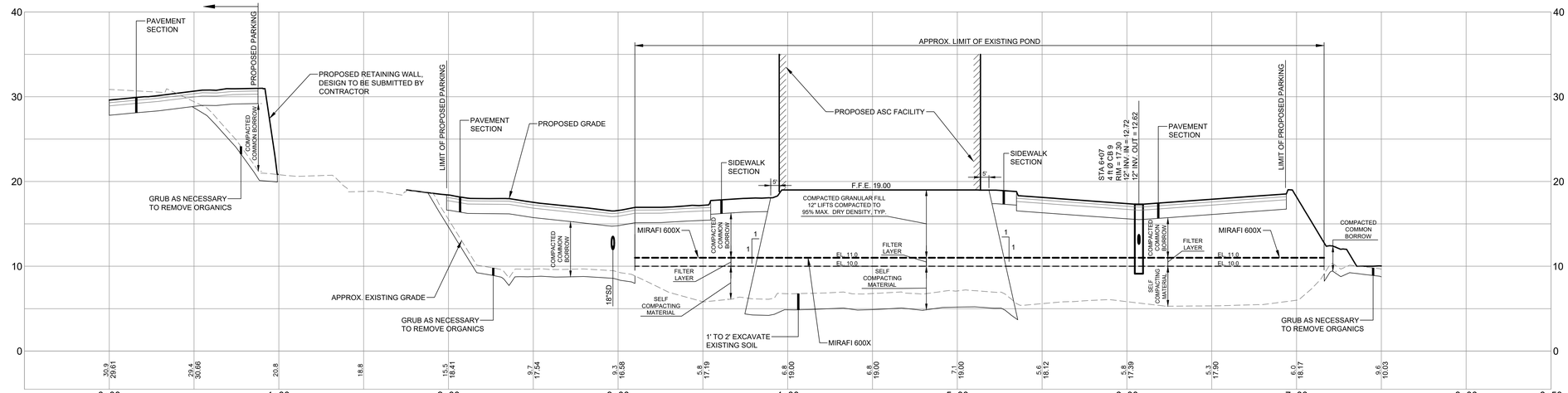
SECTION C-C

SCALE: 1" = 30' HORZ.
1" = 6' VERT.



ORIENTATION SKETCH

SCALE: 1" = 80'



SECTION D-D

SCALE: 1" = 30' HORZ.
1" = 6' VERT.

FILL MATERIAL	
MATERIAL TYPE	DESCRIPTION
COMPACTED GRANULAR FILL	MDOT 703.06 TYPE D
FILTER LAYER (TWO OPTIONS)	2" CRUSHED STONE MDOT 703.31 IF PLAIN RIPRAP IS USED FOR SELF COMPACTING MATERIAL
	¾" CRUSHED STONE MDOT 703.13 IF 2" CRUSHED STONE IS USED FOR SELF COMPACTING MATERIAL
SELF COMPACTING MATERIAL (TWO OPTIONS)	PLAIN RIPRAP MDOT 703.26
	2" CRUSHED STONE MDOT 703.31

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.

STATE OF MAINE
STEPHEN R. BUSHEY
08.30.19
LICENSED PROFESSIONAL ENGINEER
STEPHEN R. BUSHEY, P.E.
LIC. #7429

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Checked: SRB | Scale: | Job No.: 3257.04
File Name: 3257.04--GRADING.dwg

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Drawing Name: Site Sections
Project: Fore River Campus Consolidation
Portland, Maine
Client: Northern Light Mercy Hospital
144 State Street, Portland, Maine 04101

Drawing No. C–9.0

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MMC ST. JOHN STREET PARKING GARAGE
TOP EL. 116.00

LEVEL 8
LEVEL 7
LEVEL 6
LEVEL 5
LEVEL 4
LEVEL 3
LEVEL 2
LEVEL 1

GROUND LEVEL F.F.E. 26.00

EXISTING PAN AM RAILWAY AREA

MERCY PROPERTY LINE

EXISTING ACCESS ROAD

PROPOSED STAFF PARKING AREA

ROOF (PARAPET) EL. 50.00

PROPOSED ASC FACILITY

LEVEL 2 F.F.E. 33.00

GROUND LEVEL F.F.E. 19.00 (LEVEL 1)

PROPOSED PATIENT / VISITOR PARKING AREA

PROPOSED WET POND (STORMWATER MANAGEMENT AREA)

EXISTING WALKWAY

EXISTING ACCESS ROAD

EXISTING LANDSCAPE / PATHWAY AREA

EXISTING ACCESS ROAD INTERSECTION

EXISTING FORE RIVER PARKWAY

EXISTING FORE RIVER TRAIL

EXISTING FORE RIVER MUD FLATS

PERMANENT POOL EL. 9.5'

APPROX. HIGH TIDE FORE RIVER

EXISTING RETAINING WALL

PROPOSED GRADE

APPROX. EXISTING GRADE

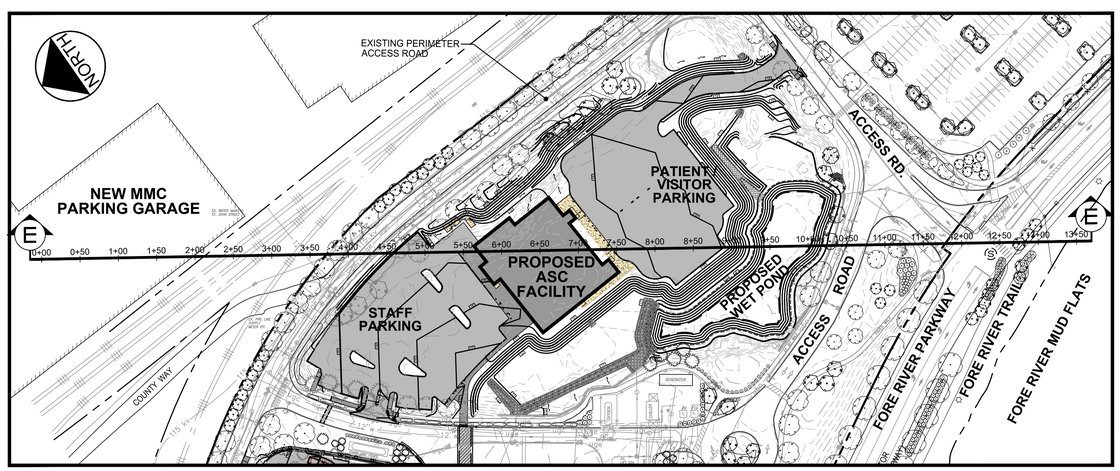
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0+00 1+00 2+00 3+00 4+00 5+00 6+00 7+00 8+00 9+00 10+00 11+00 12+00 13+00 14+00 14+50

22.7 22.6 22.3 19 19.87 16.0 19.12 11.7 19.00 7.5 19.00 6.6 19.00 5.6 18.27 7.6 17.84 5.5 17.47 5.9 17.13 5.6 4.50 7.2 4.50 18.5 18.1 16.7 15.8 16.1

SECTION E-E

SCALE: 1" = 40' HORZ.
1" = 8' VERT.



ORIENTATION SKETCH

SCALE: 1" = 80'

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.

STATE OF MAINE
STEPHEN R. BUSHEY
11.04.19
LICENSED PROFESSIONAL ENGINEER
STEPHEN R. BUSHEY, P.E.
LIC. #7429

Rev.	Date	Revision
1	11.04.19	PREPARED FOR L.O.R. #1 & SUBMITTED TO CITY

Issued For	Date	By
PERMIT APPROVAL SUBMISSION	08.30.19	SRB
DESIGN DEVELOPMENT SUBMISSION TO OWNER	07.31.19	SRB

Design: SRB	Draft: CDD	Date: AUG. 2019
Checked: SRB	Scale:	Job No.: 3257.04

File Name: 325704-GRADING.dwg

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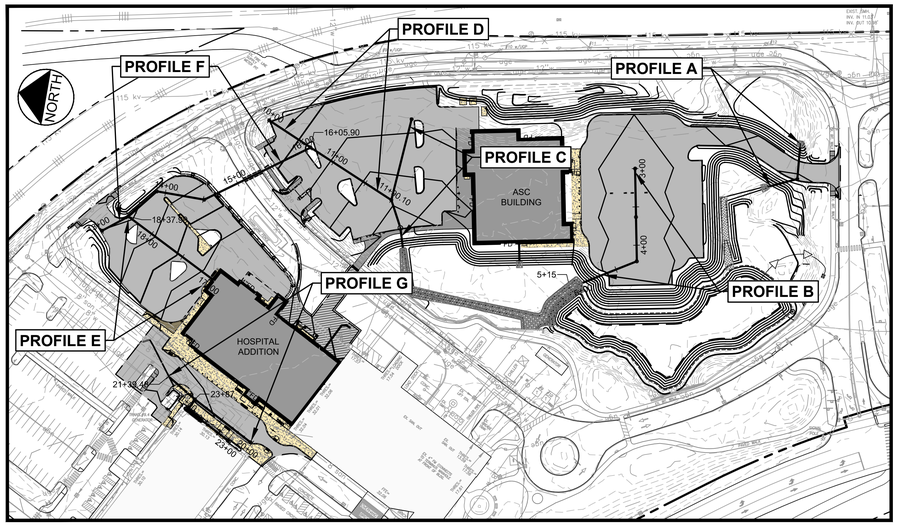
Drawing Name: Site Section From MMC Parking Garage to Fore River

Project: Fore River Campus Consolidation
Portland, Maine

Client: Northern Light Mercy Hospital
144 State Street, Portland, Maine 04101

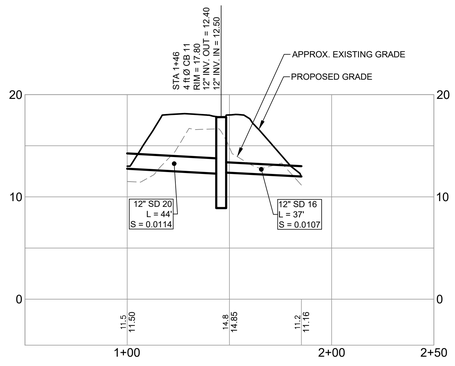
Drawing No. C-9.1

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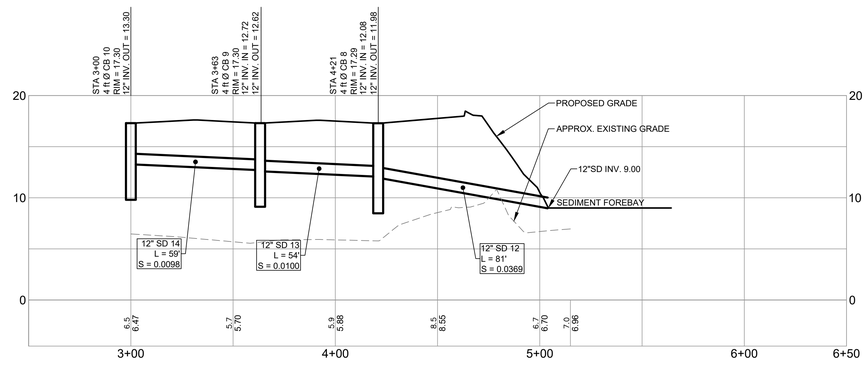
ORIENTATION SKETCH

SCALE: 1" = 80'



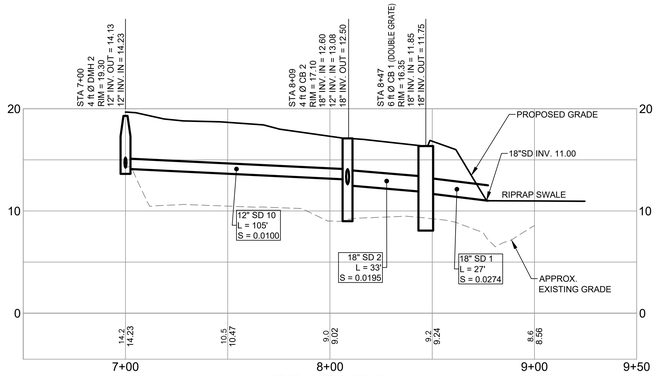
PROFILE A

SCALE: 1" = 30' HORZ.
1" = 6' VERT.



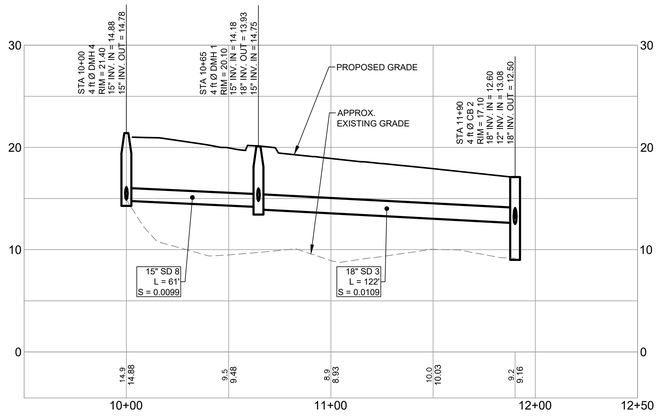
PROFILE B

SCALE: 1" = 30' HORZ.
1" = 6' VERT.



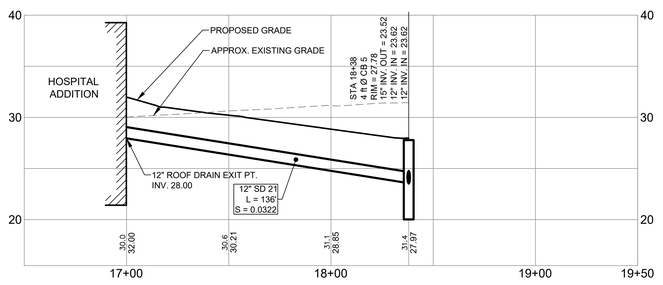
PROFILE C

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1" = 6' VERT.



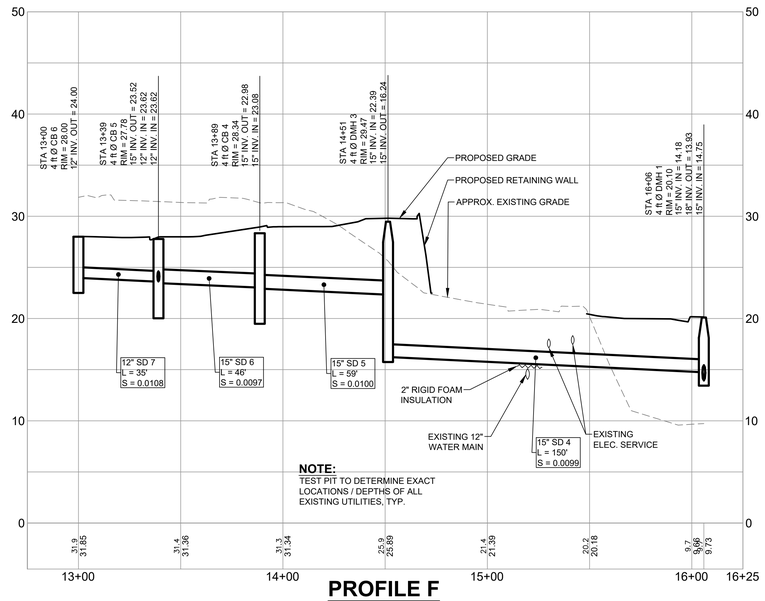
PROFILE D

SCALE: 1" = 30' HORZ.
1" = 6' VERT.



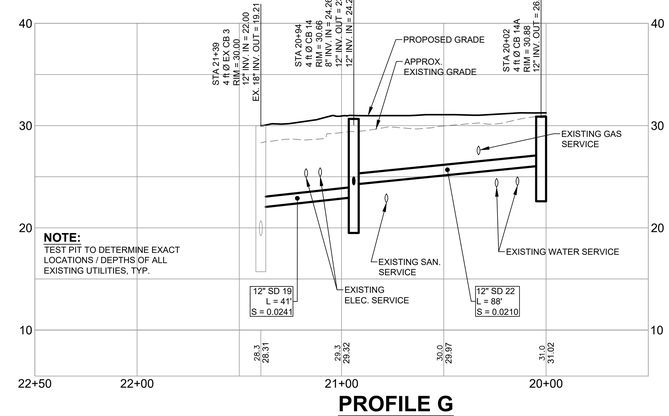
PROFILE E

SCALE: 1" = 30' HORZ.
1" = 6' VERT.



PROFILE F

SCALE: 1" = 30' HORZ.
1" = 6' VERT.



PROFILE G

SCALE: 1" = 30' HORZ.
1" = 6' VERT.

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STATE OF MAINE
STEPHEN R. BUSHEY
08.30.19
LICENSED PROFESSIONAL ENGINEER

STEPHEN R. BUSHEY, P.E.
LIC. #7429

Rev.	Date	Revision
-	-	-

Issued For	Date	By
PERMIT APPROVAL SUBMISSION	08.30.19	SRB
DESIGN DEVELOPMENT SUBMISSION TO OWNER	07.31.19	SRB

Design: SRB	Draft: CDD	Date: AUG. 2019
Checked: SRB	Scale:	Job No.: 3257.04

File Name: 325704-GRADING.dwg

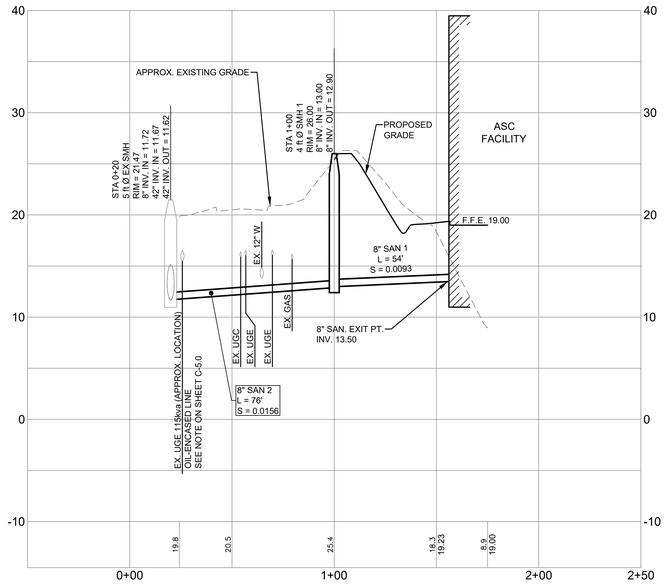
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Drawing Name: Storm Drain Profiles
Project: Fore River Campus Consolidation, Portland, Maine
Client: Northern Light Mercy Hospital, 144 State Street, Portland, Maine 04101

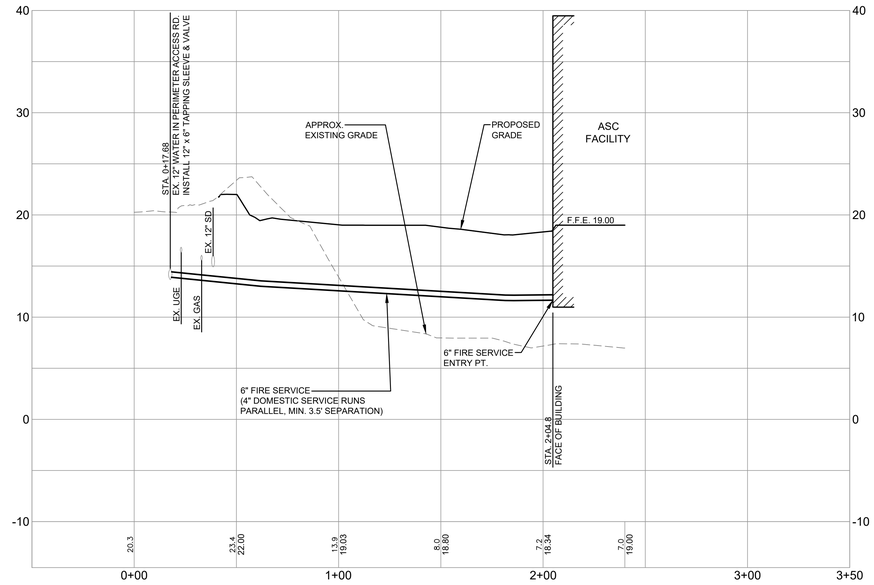
Drawing No. C-10.0

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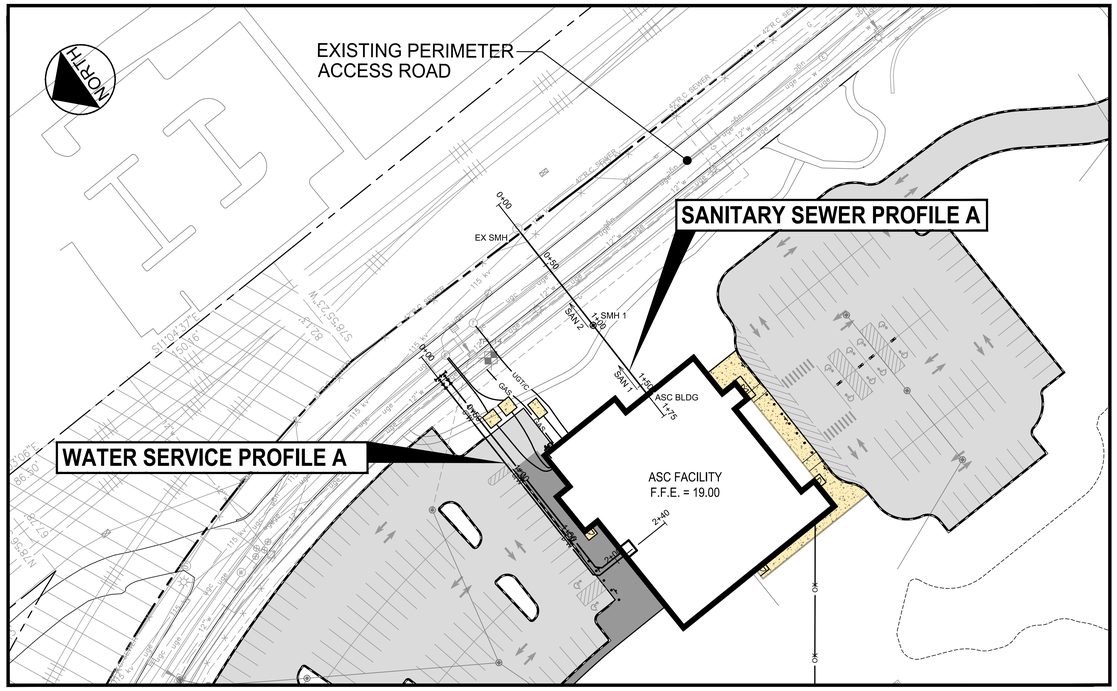
SANITARY SEWER PROFILE A

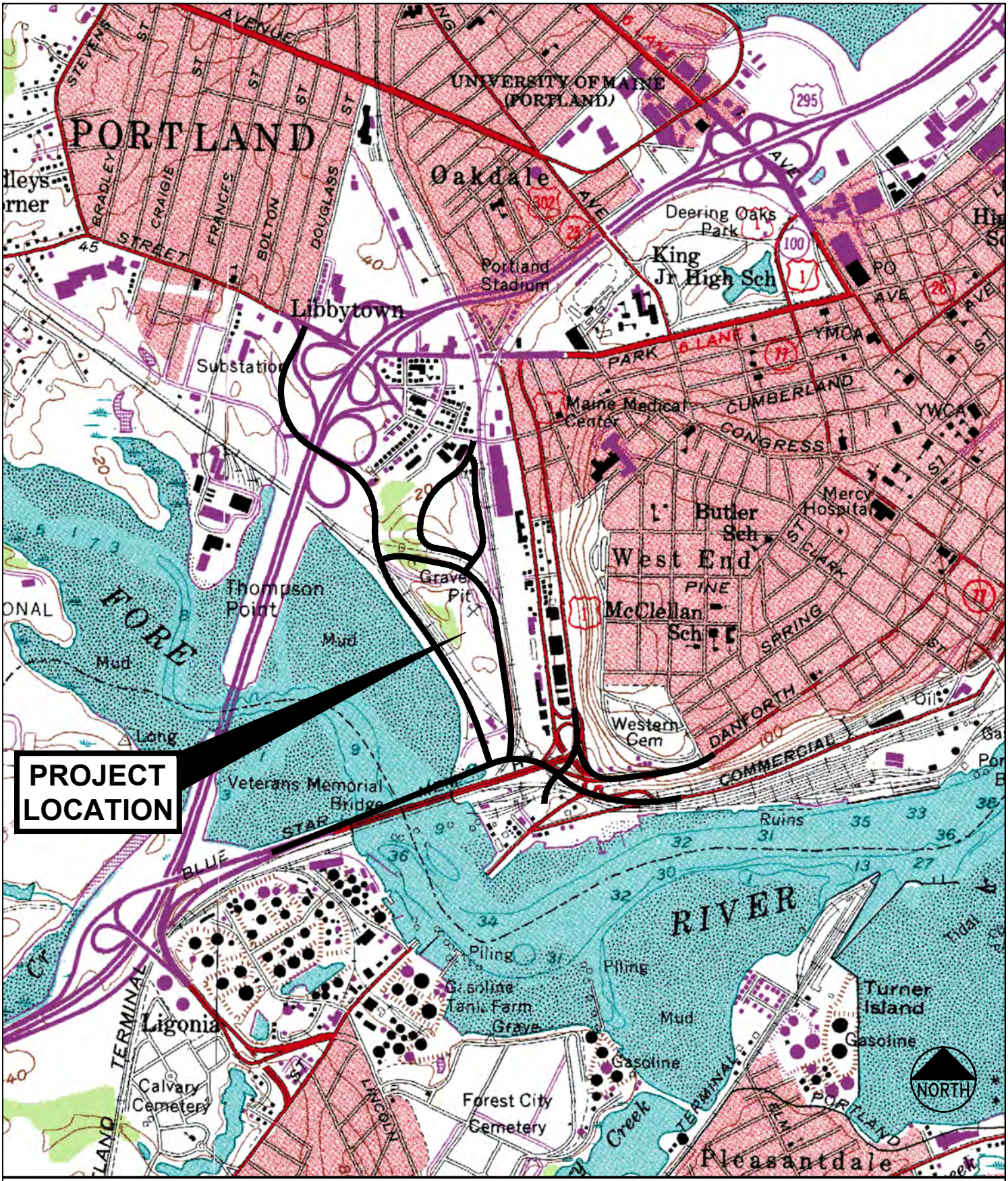
SCALE: 1" = 30' HORZ.
1" = 6' VERT.



WATER SERVICE PROFILE A

SCALE: 1" = 30' HORZ.
1" = 6' VERT.


NORTH
EXISTING PERIMETER
ACCESS ROAD
SANITARY SEWER PROFILE A
WATER SERVICE PROFILE A
EX SMH
SMH 1
SAN 2
SAN 1
ASC BLDG
ASC FACILITY
F.F.E. = 19.00
0+00
0+50
1+00
1+75
2+40
GAS
UGTC
EX. 12" W.
EX. 12" SD
EX. 8" SAN
EX. 6" W.
EX. 4" SAN FORCE MAIN
EX. 12" SD
EX. 8" SAN
EX. 12" W.



U.S.G.S. Location Map

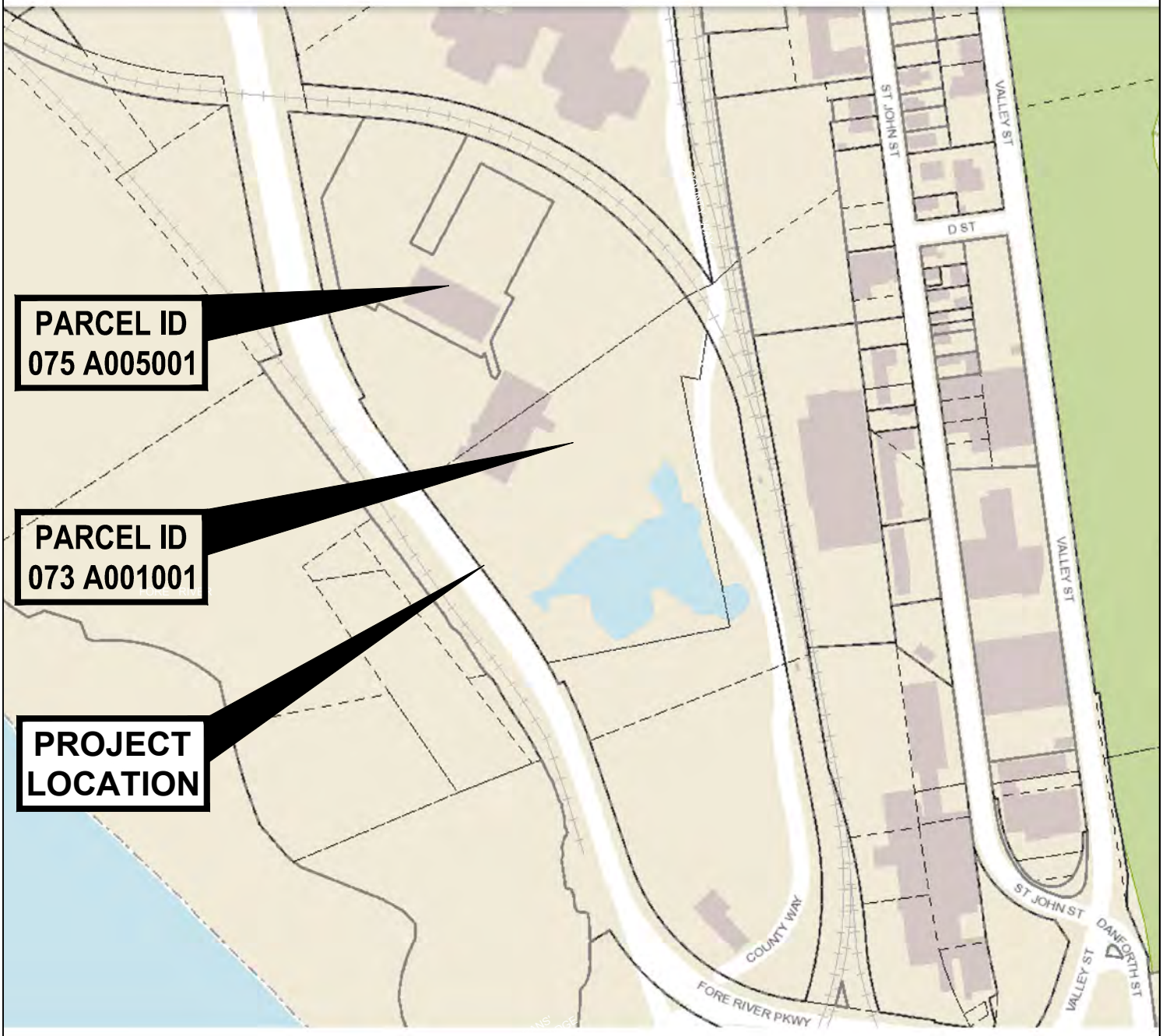
NLH Mercy Hospital, Fore River Campus Consolidation, Portland, Maine
U.S.G.S. Portland West, State-7.5 Minute Series (Topographic)

Design: JTA	Date: AUG. 2019
Draft: CDD	Job No.: 3257.04
Checked: SRB	Scale: N.T.S.
File Name: 325704–DEP FIGURES.dwg	

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Figure
1



Property Tax Map

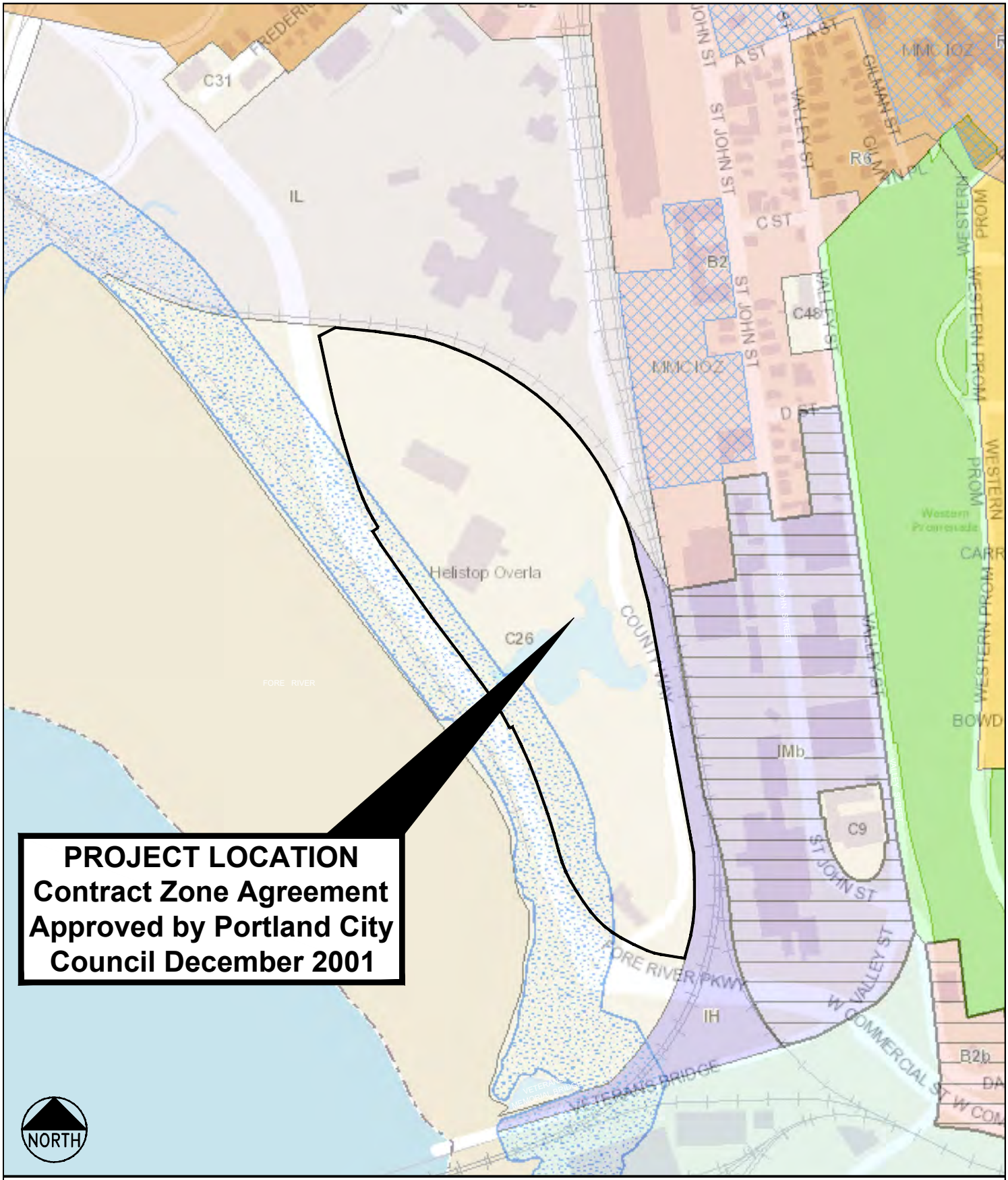
NLH Mercy Hospital, Fore River Campus Consolidation, Portland, Maine
City of Portland Maine Parcel Viewer

Design: JTA	Date: AUG. 2019	
Draft: CDD	Job No.: 3257.04	
Checked: SRB	Scale: N.T.S.	
File Name: 325704–DEP FIGURES.dwg		

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Figure
2



Zoning Map

NLH Mercy Hospital, Fore River Campus Consolidation, Portland, Maine
City of Portland Maine Zoning Map Viewer

Design: JTA	Date: AUG. 2019
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Checked: SRB	Scale: N.T.S.
File Name: 325704–DEP FIGURES.dwg	

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Figure
3



Aerial Photograph

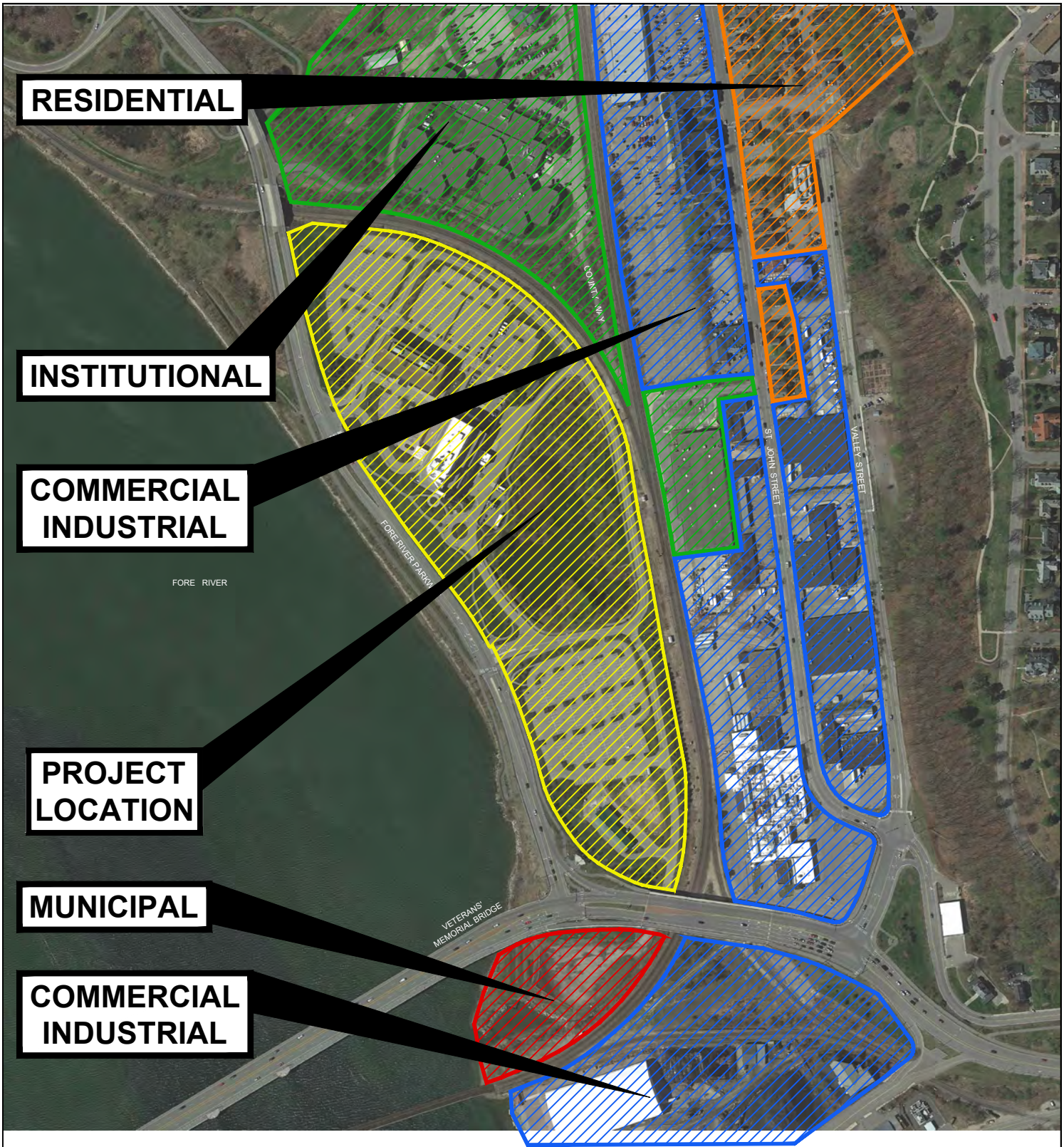
NLH Mercy Hospital, Fore River Campus Consolidation, Portland, Maine
City of Portland Maine Aerial Imagery 2018

Design: JTA	Date: AUG. 2019
Draft: CDD	Job No.: 3257.04
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Figure
4



Abutting Land Use Map

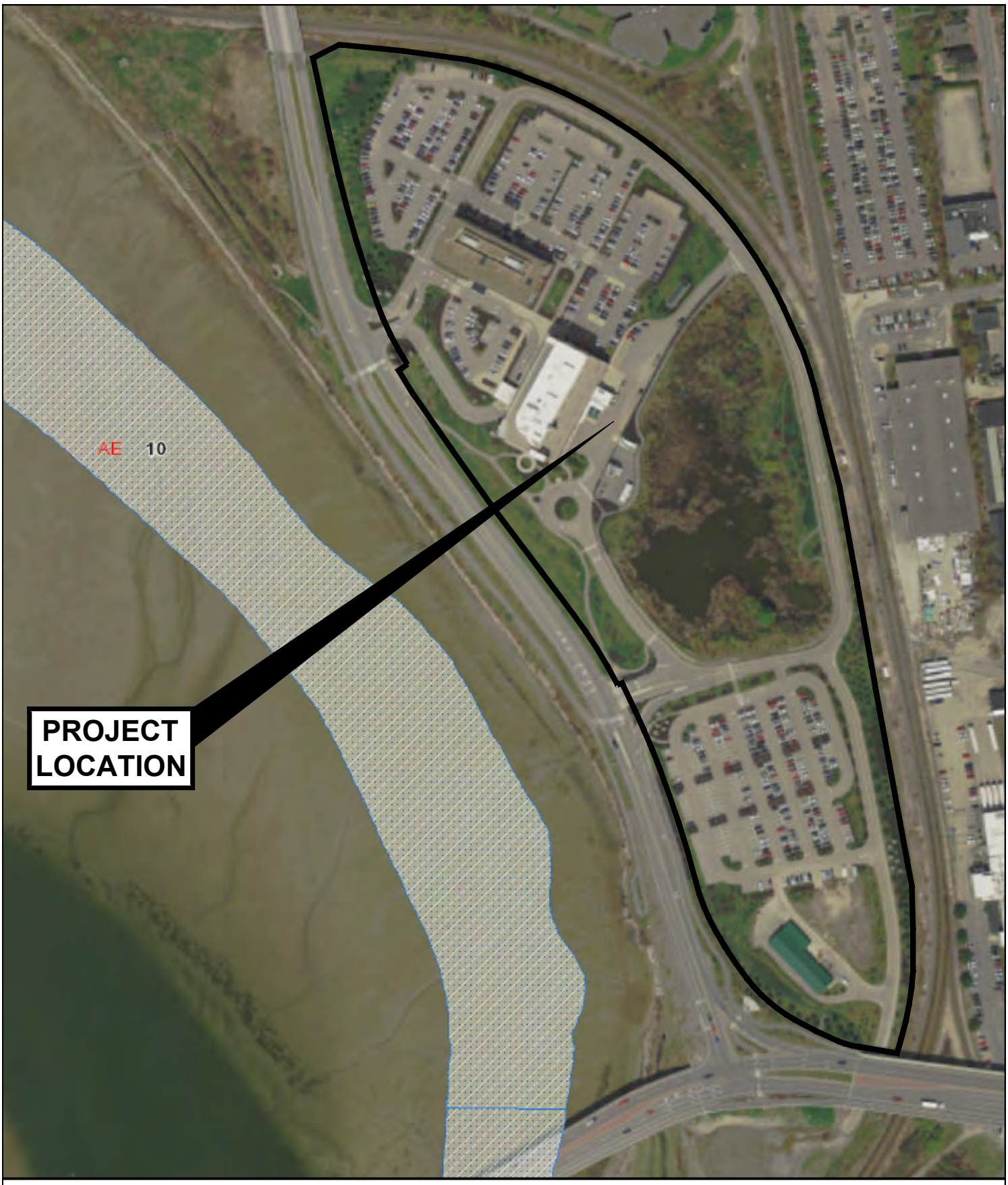
NLH Mercy Hospital, Fore River Campus Consolidation, Portland, Maine
City of Portland Maine Aerial Imagery 2018

Design: JTA	Date: AUG. 2019
Draft: CDD	Job No.: 3257.04
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File Name: 325704–DEP FIGURES.dwg	

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Figure
5



NORTH

Flood Map

NLH Mercy Hospital, Fore River Campus Consolidation, Portland, Maine
City of Portland Maine Flood Map Viewer

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Draft: CDD	Job No.: 3257.04
Checked: SRB	Scale: N.T.S.
File Name: 325704–DEP FIGURES.dwg	

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Figure
6



USDA Soils Map

NLH Mercy Hospital, Fore River Campus Consolidation, Portland, Maine
Soil Survey of Cumberland County, Maine

NORTH

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Checked: SRB	Scale: N.T.S.
File Name: 325704–DEP FIGURES.dwg	

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Figure
7



Sand and Gravel Aquifer Map

NLH Mercy Hospital, Fore River Campus Consolidation, Portland, Maine
Source: Maine Geological Survey (Department of Conservation)

NORTH

Design: JTA	Date: AUG. 2019
Draft: CDD	Job No.: 3257.04
Checked: SRB	Scale: N.T.S.
File Name: 325704–DEP FIGURES.dwg	

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Figure
8



Surficial Geology Map

NLH Mercy Hospital, Fore River Campus Consolidation, Portland, Maine
Source: Maine Geological Survey (Department of Conservation)

NORTH

Design: JTA	Date: AUG. 2019
Draft: CDD	Job No.: 3257.04
Checked: SRB	Scale: N.T.S.
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Figure
9



PHOTO 1



PHOTO 2

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So. Portland, ME 04106
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Northern Light Mercy Hospital – Fore River Campus
Existing Photographs
Photos on October 21, 2019



PHOTO 3



PHOTO 4

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Northern Light Mercy Hospital – Fore River Campus
Existing Photographs
Photos on October 21, 2019



PHOTO 5



PHOTO 6

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Northern Light Mercy Hospital – Fore River Campus
Existing Photographs
Photos on October 21, 2019



PHOTO 7



PHOTO 8

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So. Portland, ME 04106
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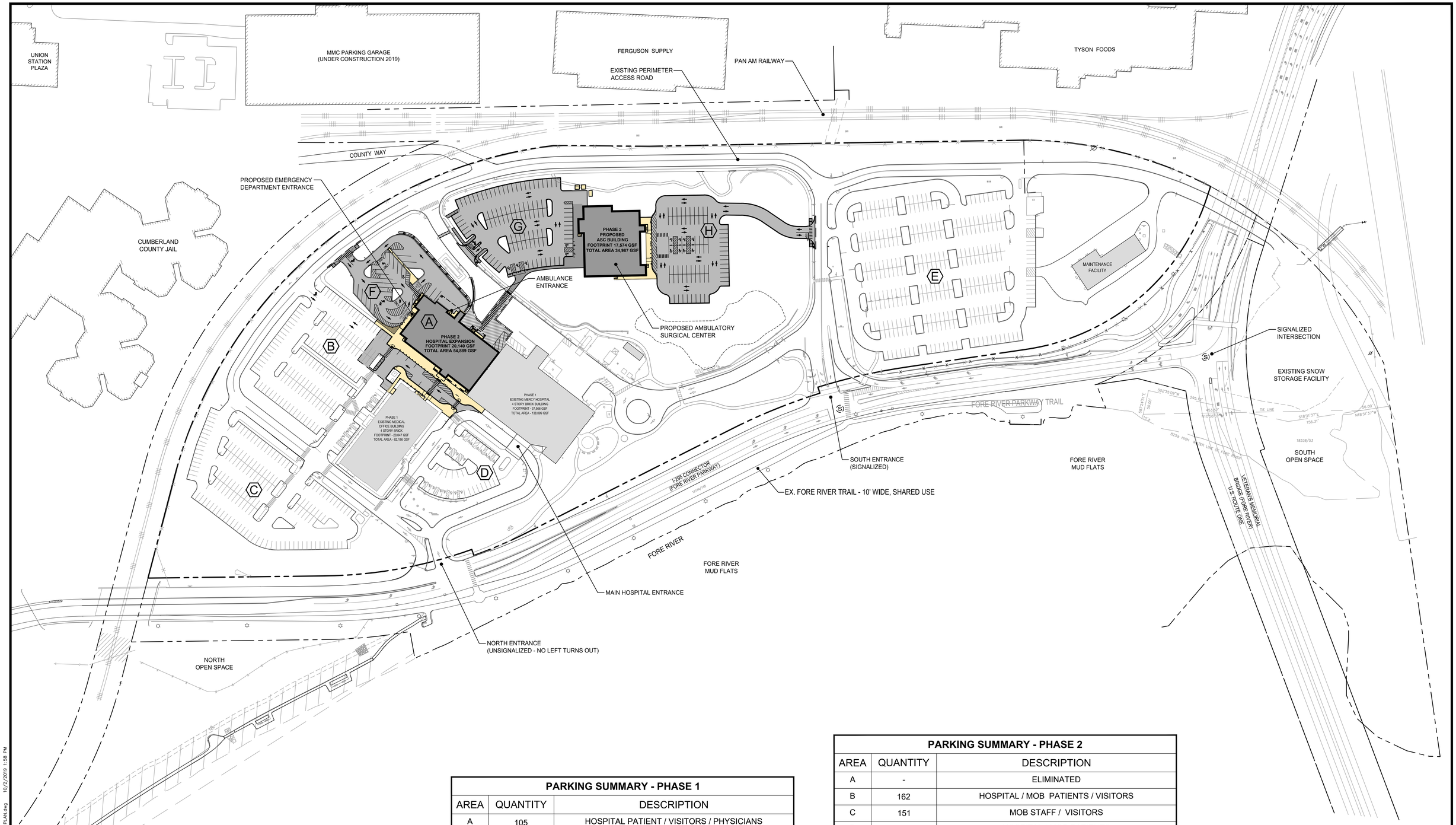
Northern Light Mercy Hospital – Fore River Campus
Existing Photographs
Photos on October 21, 2019



PHOTO 9

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Suite 30
So. Portland, ME 04106
207.772.2515

Northern Light Mercy Hospital – Fore River Campus
Existing Photographs
Photos on October 21, 2019



PARKING SUMMARY - PHASE 1

AREA	QUANTITY	DESCRIPTION
A	105	HOSPITAL PATIENT / VISITORS / PHYSICIANS
B	162	MOB PATIENT / VISITORS
C	151	MOB STAFF / VISITORS
D	34	HOSPITAL / MOB PATIENTS
E	310	HOSPITAL STAFF
TOTAL	762	

PARKING SUMMARY - PHASE 2

AREA	QUANTITY	DESCRIPTION
A	-	ELIMINATED
B	162	HOSPITAL / MOB PATIENTS / VISITORS
C	151	MOB STAFF / VISITORS
D	34	HOSPITAL / MOB PATIENTS
E	310	HOSPITAL / MOB / ASC FACILITY STAFF
F	24	HOSPITAL PATIENTS / VISITORS / AMBULANCE
G	103	HOSPITAL / ASC FACILITY STAFF / SERVICE
H	73	ASC FACILITY PATIENTS / VISITORS
TOTAL	857	

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.

NORTH

GRAPHIC SCALE

75 0 37.5 75 150

(IN FEET)

1 inch = 75 ft.

STATE OF MAINE STEPHEN R. BUSHEY 08.30.19 LICENSED PROFESSIONAL ENGINEER

STEPHEN R. BUSHEY, P.E. LIC. #7429

Rev.	Date	Revision
–	–	–

Issued For	Date	By
PERMIT APPROVAL SUBMISSION	08.30.19	SRB
DESIGN DEVELOPMENT SUBMISSION TO OWNER	07.31.19	SRB

Design: SRB | Draft: CDD | Date: AUG. 2019
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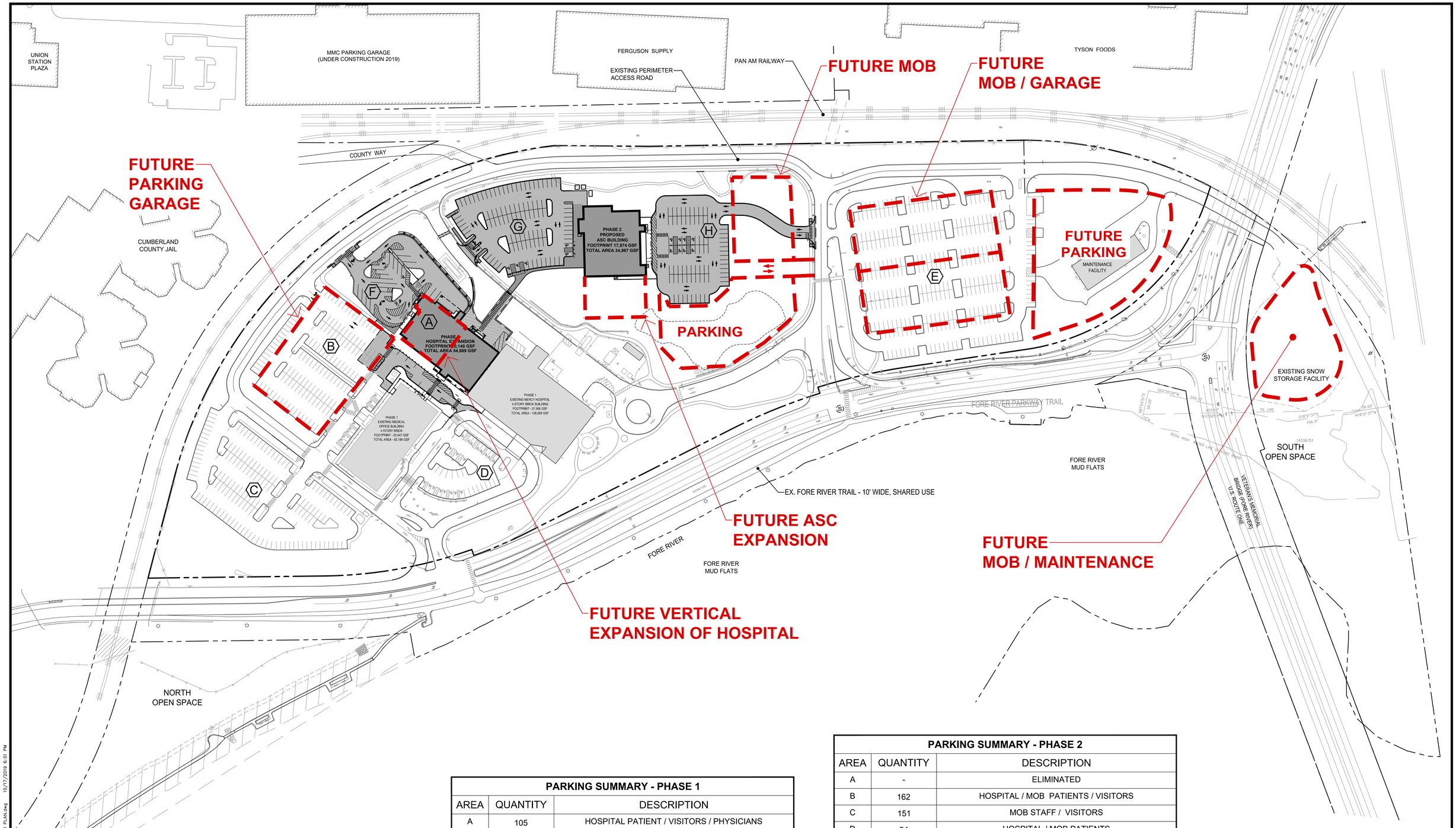
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Drawing Name: Master Plan – Phases
Project: Fore River Campus Consolidation, Portland, Maine
Client: Northern Light Mercy Hospital, 144 State Street, Portland, Maine 04101

Drawing No. FIG. 1

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PARKING SUMMARY - PHASE 1		
AREA	QUANTITY	DESCRIPTION
A	105	HOSPITAL PATIENT / VISITORS / PHYSICIANS
B	162	MOB PATIENT / VISITORS
C	151	MOB STAFF / VISITORS
D	34	HOSPITAL / MOB PATIENTS
E	310	HOSPITAL STAFF
TOTAL	762	

PARKING SUMMARY - PHASE 2		
AREA	QUANTITY	DESCRIPTION
A	-	ELIMINATED
B	162	HOSPITAL / MOB PATIENTS / VISITORS
C	151	MOB STAFF / VISITORS
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NORTH

GRAPHIC SCALE

75 0 37.5 75 150

(IN FEET)

1 inch = 75 ft.

STATE OF MAINE STEPHEN R. BUSHEY 08.30.19 LICENSED PROFESSIONAL ENGINEER

STEPHEN R. BUSHEY, P.E. LIC. #7429

Rev.	Date	Revision
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DESIGN DEVELOPMENT SUBMISSION TO OWNER	07.31.19	SRB

Design: SRB | Draft: CDD | Date: AUG. 2019
Checked: SRB | Scale: NTS | Job No.: 3257.04
File Name: 325704–MASTER PLAN.dwg

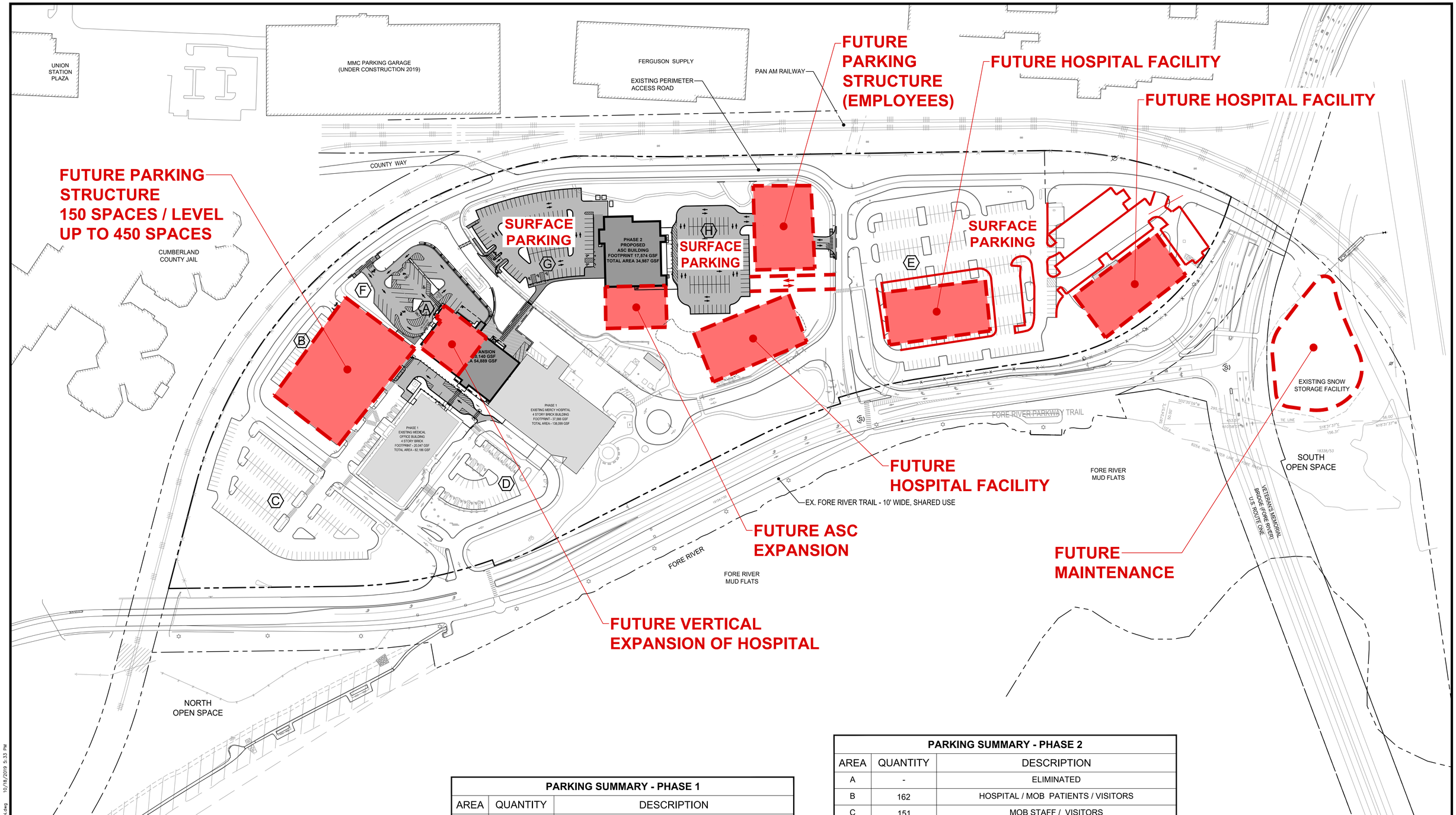
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Drawing Name: Master Plan – Phases
Project: Fore River Campus Consolidation, Portland, Maine
Client: Northern Light Mercy Hospital, 144 State Street, Portland, Maine 04101

Drawing No. FIG. 1

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PARKING SUMMARY - PHASE 1		
AREA	QUANTITY	DESCRIPTION
A	105	HOSPITAL PATIENT / VISITORS / PHYSICIANS
B	162	MOB PATIENT / VISITORS
C	151	MOB STAFF / VISITORS
D	34	HOSPITAL / MOB PATIENTS
E	310	HOSPITAL STAFF
TOTAL	762	

PARKING SUMMARY - PHASE 2		
AREA	QUANTITY	DESCRIPTION
A	-	ELIMINATED
B	162	HOSPITAL / MOB PATIENTS / VISITORS
C	151	MOB STAFF / VISITORS
D	34	HOSPITAL / MOB PATIENTS
E	310	HOSPITAL / MOB / ASC FACILITY STAFF
F	24	HOSPITAL PATIENTS / VISITORS / AMBULANCE
G	103	HOSPITAL / ASC FACILITY STAFF / SERVICE
H	73	ASC FACILITY PATIENTS / VISITORS
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NORTH

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75 0 37.5 75 150
(IN FEET)
1 inch = 75 ft.

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LIC. #7429

Rev.	Date	Revision
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DESIGN DEVELOPMENT SUBMISSION TO OWNER	07.31.19	SRB

Design: SRB	Draft: CDD	Date: AUG. 2019
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207.772.2515

Drawing Name: Master Plan – Phases
Project: Fore River Campus Consolidation, Portland, Maine
Client: Northern Light Mercy Hospital, 144 State Street, Portland, Maine 04101

Drawing No. FIG. 1

U:\3257.04_Mercy Hospital_Expansion_DD_Permits\STANTEC\civil\cadd\permit\dwg\325704-MASTER PLAN.dwg 10/18/2019 5:33 PM

UNION STATION PLAZA

MMC PARKING GARAGE (UNDER CONSTRUCTION 2019)

FERGUSON SUPPLY

EXISTING PERIMETER ACCESS ROAD

PAN AM RAILWAY

TYSON FOODS

COUNTY WAY

PROPOSED EMERGENCY DEPARTMENT ENTRANCE

CUMBERLAND COUNTY JAIL

PHASE 2 PROPOSED ASC BUILDING FOOTPRINT 17,574 GSF TOTAL AREA 34,987 GSF

AMBULANCE ENTRANCE

PROPOSED AMBULATORY SURGICAL CENTER

MAINTENANCE FACILITY

PHASE 2 HOSPITAL EXPANSION FOOTPRINT 20,140 GSF TOTAL AREA 54,889 GSF

PHASE 1 EXISTING MERCY HOSPITAL 4 STORY BRICK BUILDING FOOTPRINT - 37,566 GSF TOTAL AREA - 138,099 GSF

PHASE 1 EXISTING MEDICAL OFFICE BUILDING 1 STORY BRICK FOOTPRINT - 20,047 GSF TOTAL AREA - 62,186 GSF

SIGNALIZED INTERSECTION

EXISTING SNOW STORAGE FACILITY

FORE RIVER PARKWAY TRAIL

SOUTH ENTRANCE (SIGNALIZED)

FORE RIVER MUD FLATS

EX. FORE RIVER TRAIL - 10' WIDE, SHARED USE

PED CONNECTOR (FORE RIVER PARKWAY)

FORE RIVER

FORE RIVER MUD FLATS

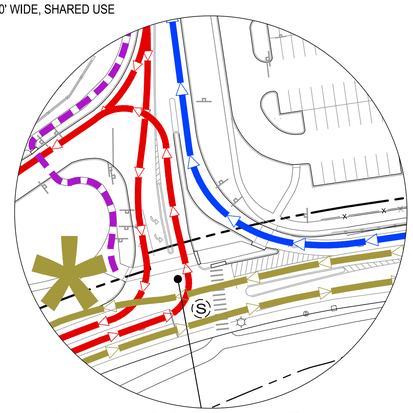
MAIN HOSPITAL ENTRANCE

NORTH ENTRANCE (UNSIGNALIZED - NO LEFT TURNS OUT)

NORTH OPEN SPACE

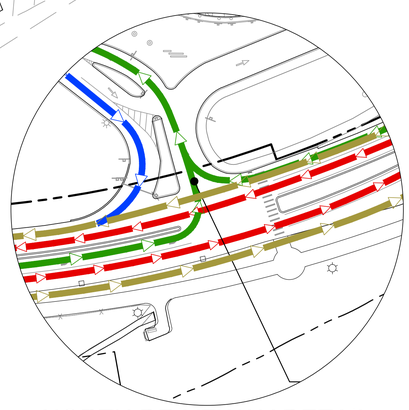
SOUTH OPEN SPACE

VETERANS MEMORIAL BRIDGE (FORE RIVER) U.S. ROUTE ONE



SOUTH DRIVEWAY DETAIL

SCALE: 1" = 50'



NORTH DRIVEWAY DETAIL

SCALE: 1" = 50'

TYPICAL SERVICE VEHICLE ROUTE

EXISTING METRO BUS ROUTE (TO BE DISCONTINUED WHEN METRO UPDATES SERVICE ROUTES)

FUTURE METRO BUS ROUTE

AMBULANCE ROUTE

FUTURE METRO BUS STOP

FUTURE PEDESTRIAN ROUTE TO BUS STOPS

NORTH

GRAPHIC SCALE

75 0 37.5 75 150

(IN FEET)

1 inch = 75 ft.

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.

STATE OF MAINE STEPHEN R BUSHEY 08.30.19 LICENSED PROFESSIONAL ENGINEER

STEPHEN R. BUSHEY, P.E. LIC. #7429

Rev.	Date	Revision
–	–	–

Issued For	Date	By
PERMIT APPROVAL SUBMISSION	08.30.19	SRB
DESIGN DEVELOPMENT SUBMISSION TO OWNER	07.31.19	SRB

Design: SRB	Draft: CDD	Date: AUG. 2019
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Drawing Name: Master Plan – Service & Bus Circulation Routes

Project: Fore River Campus Consolidation
Portland, Maine

Client: Northern Light Mercy Hospital
144 State Street, Portland, Maine 04101

Drawing No. FIG. 2

U:\3257.04_Mercy Hospital_Expansion_DD_Permits\STANTEC\civil\cadd\permit\dwg\325704–MASTER PLAN.dwg 10/2/2019 3:10 PM

UNION STATION PLAZA

MMC PARKING GARAGE (UNDER CONSTRUCTION 2019)

FERGUSON SUPPLY

EXISTING PERIMETER ACCESS ROAD

PAN AM RAILWAY

TYSON FOODS

COUNTY WAY

PROPOSED EMERGENCY DEPARTMENT ENTRANCE

CUMBERLAND COUNTY JAIL

PHASE 2 PROPOSED ASC BUILDING FOOTPRINT 17,574 GSF TOTAL AREA 34,987 GSF

AMBULANCE ENTRANCE

PROPOSED AMBULATORY SURGICAL CENTER

PHASE 2 HOSPITAL EXPANSION FOOTPRINT 20,140 GSF TOTAL AREA 54,889 GSF

PHASE 1 EXISTING MERCY HOSPITAL 4 STORY BRICK BUILDING FOOTPRINT - 37,566 GSF TOTAL AREA - 138,099 GSF

PHASE 1 EXISTING MEDICAL OFFICE BUILDING 1 STORY BRICK FOOTPRINT - 20,047 GSF TOTAL AREA - 62,186 GSF

MAINTENANCE FACILITY

SIGNALIZED INTERSECTION

EXISTING SNOW STORAGE FACILITY

FORE RIVER PARKWAY TRAIL

SOUTH ENTRANCE (SIGNALIZED)

FORE RIVER MUD FLATS

EX. FORE RIVER TRAIL - 10' WIDE, SHARED USE

CASE CONNECTOR (FORE RIVER PARKWAY)

FORE RIVER

MAIN HOSPITAL ENTRANCE

NORTH ENTRANCE (UNSIGNALIZED - NO LEFT TURNS OUT)

NORTH OPEN SPACE

SOUTH OPEN SPACE

VETERANS MEMORIAL BRIDGE (FORE RIVER) U.S. ROUTE ONE

SOUTH DRIVEWAY DETAIL

SCALE: 1" = 50'

NORTH DRIVEWAY DETAIL

SCALE: 1" = 50'

ENTERING FROM I-295 NORTH BOUND / SOUTH BOUND

ENTERING FROM COMMERCIAL ST / VETERANS BRIDGE

EXITING TO I-295 NORTH BOUND

EXITING TO I-295 SOUTH BOUND

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.

NORTH

GRAPHIC SCALE

75 0 37.5 75 150

(IN FEET)

1 inch = 75 ft.

STATE OF MAINE STEPHEN R. BUSHEY 08.30.19 LICENSED PROFESSIONAL ENGINEER

STEPHEN R. BUSHEY, P.E.
LIC. #7429

Rev.	Date	Revision
–	–	–

Issued For	Date	By
PERMIT APPROVAL SUBMISSION	08.30.19	SRB
DESIGN DEVELOPMENT SUBMISSION TO OWNER	07.31.19	SRB

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Checked: SRB | Scale: NTS | Job No.: 3257.04
File Name: 325704–MASTER PLAN.dwg

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207.772.2515

Drawing Name: Master Plan – Visitor / Staff Circulation Routes
Project: Fore River Campus Consolidation, Portland, Maine
Client: Northern Light Mercy Hospital, 144 State Street, Portland, Maine 04101

Drawing No. FIG. 3

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UNION STATION PLAZA

MMC PARKING GARAGE (UNDER CONSTRUCTION 2019)

FERGUSON SUPPLY

EXISTING PERIMETER ACCESS ROAD

PAN AM RAILWAY

TYSON FOODS

LANDSCAPE BERM

COUNTY WAY

CUMBERLAND COUNTY JAIL

PHASE 2 PROPOSED ASC BUILDING FOOTPRINT 17,574 GSF TOTAL AREA 34,987 GSF

PHASE 2 HOSPITAL EXPANSION FOOTPRINT 20,140 GSF TOTAL AREA 54,889 GSF

PHASE 1 EXISTING MEDICAL OFFICE BUILDING 1 STORY BRICK FOOTPRINT - 20,047 GSF TOTAL AREA - 62,186 GSF

PHASE 1 EXISTING MERCY HOSPITAL 4 STORY BRICK BUILDING FOOTPRINT - 37,566 GSF TOTAL AREA - 138,099 GSF

MAINTENANCE FACILITY

FUTURE OUTPARCEL

EXISTING SNOW STORAGE FACILITY

FORE RIVER PARKWAY TRAIL

WET POND AREA

I-295 CONNECTOR (FORE RIVER PARKWAY)

EX. FORE RIVER TRAIL - 10' WIDE, SHARED USE

FORE RIVER MUD FLATS

SCENIC OVERLOOK

SOUTH OPEN SPACE

EXISTING WATER QUALITY TREATMENT SWALE

VETERANS MEMORIAL BRIDGE (FORE RIVER) U.S. ROUTE ONE

EXISTING CONDITIONS TO REMAIN

FORE RIVER

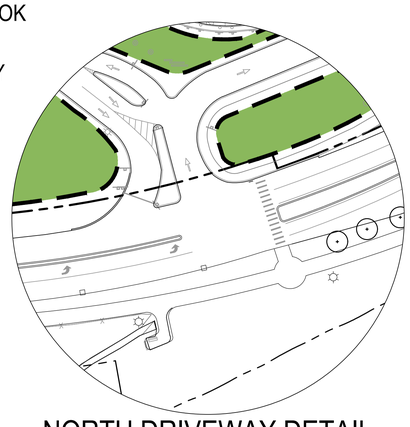
FORE RIVER MUD FLATS

NORTH OPEN SPACE

SCENIC OVERLOOK

EXISTING WATER QUALITY TREATMENT SWALE

FUTURE TRAIL TO PROPERTY LINE FOR LINKAGE TO PORTLAND TRAILS



NORTH DRIVEWAY DETAIL

SCALE: 1" = 50'



SOUTH DRIVEWAY DETAIL

SCALE: 1" = 50'

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.

NORTH

GRAPHIC SCALE

75 0 37.5 75 150

(IN FEET)
1 inch = 75 ft.

STATE OF MAINE
STEPHEN R. BUSHEY
08.30.19
LICENSED PROFESSIONAL ENGINEER

STEPHEN R. BUSHEY, P.E.
LIC. #7429

Rev.	Date	Revision
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Issued For	Date	By
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DESIGN DEVELOPMENT SUBMISSION TO OWNER	07.31.19	SRB

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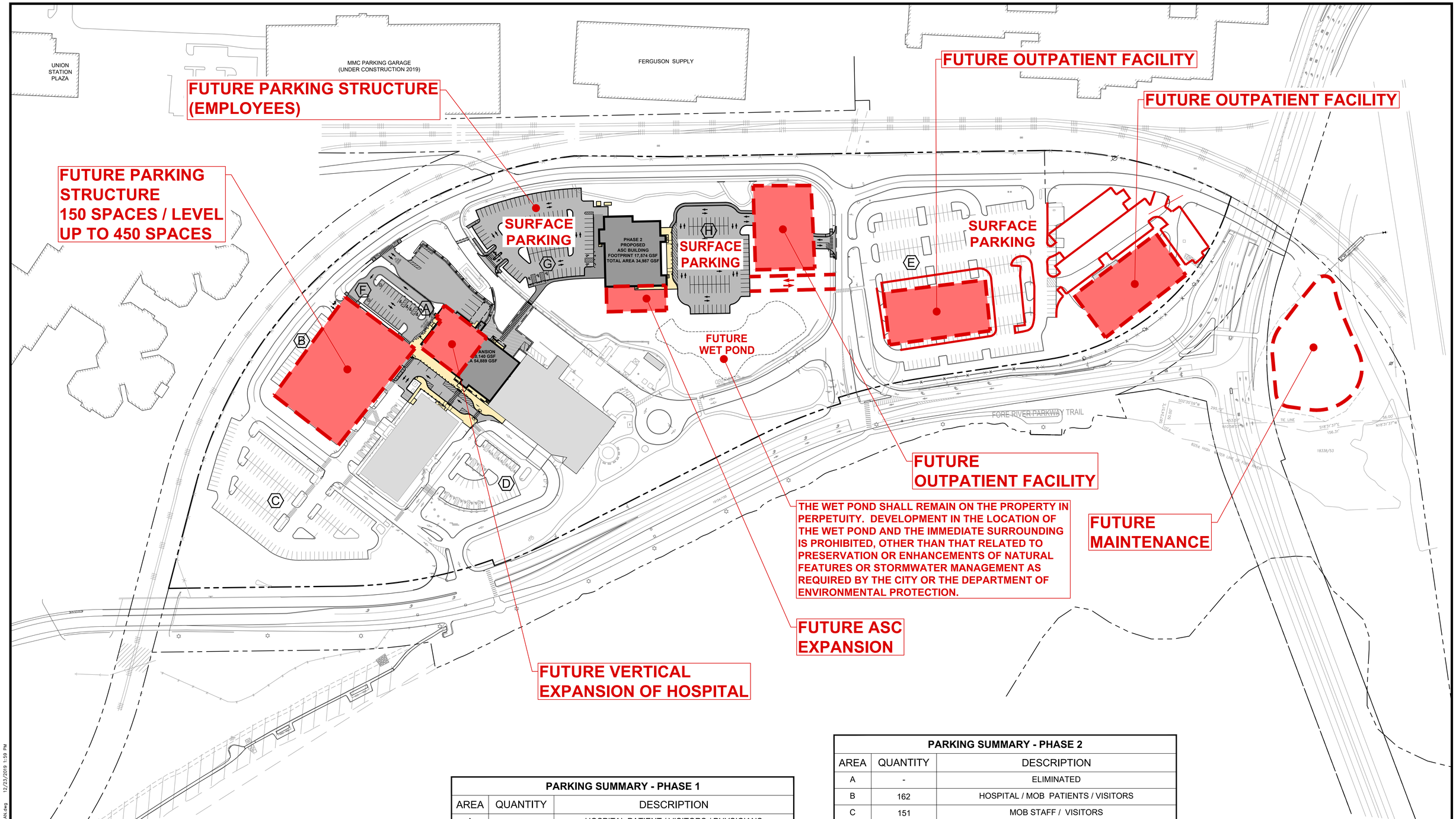
Drawing Name: Master Plan – Landscape & Open Space

Project: Fore River Campus Consolidation
Portland, Maine

Client: Northern Light Mercy Hospital
144 State Street, Portland, Maine 04101

Drawing No. *FIG. 4*

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PARKING SUMMARY - PHASE 1

AREA	QUANTITY	DESCRIPTION
A	105	HOSPITAL PATIENT / VISITORS / PHYSICIANS
B	162	MOB PATIENT / VISITORS
C	151	MOB STAFF / VISITORS
D	34	HOSPITAL / MOB PATIENTS
E	310	HOSPITAL STAFF
TOTAL	762	

PARKING SUMMARY - PHASE 2

AREA	QUANTITY	DESCRIPTION
A	-	ELIMINATED
B	162	HOSPITAL / MOB PATIENTS / VISITORS
C	151	MOB STAFF / VISITORS
D	34	HOSPITAL / MOB PATIENTS
E	310	HOSPITAL / MOB / ASC FACILITY STAFF
F	24	HOSPITAL PATIENTS / VISITORS / AMBULANCE
G	103	HOSPITAL / ASC FACILITY STAFF / SERVICE
H	73	ASC FACILITY PATIENTS / VISITORS
TOTAL	857	

NORTH

GRAPHIC SCALE

75 0 37.5 75 150

(IN FEET)

1 inch = 75 ft.

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STATE OF MAINE
STEPHEN R. BUSHEY
11.22.19
LICENSED PROFESSIONAL ENGINEER

STEPHEN R. BUSHEY, P.E.
LIC. #7429

Rev.	Date	Revision
1	11.04.19	PREPARED FOR L.O.R. #1 & SUBMITTED TO CITY

Issued For	Date	By
CONSTRUCTION DOCUMENTS FOR PRICING ONLY	11.22.19	SRB
PERMIT APPROVAL SUBMISSION	08.30.19	SRB
DESIGN DEVELOPMENT SUBMISSION TO OWNER	07.31.19	SRB

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Drawing Name: Master Plan – Phases
Project: Fore River Campus Consolidation, Portland, Maine
Client: Northern Light Mercy Hospital, 144 State Street, Portland, Maine 04101

Drawing No. FIG. 1

U:\3257.04_Mercy Hospital_Expansion_DD_Permits\STANTEC\civil\cadd\permit\dwg\325704–MASTER PLAN.dwg 12/23/2019 1:59 PM

UNION STATION PLAZA

MMC PARKING GARAGE (UNDER CONSTRUCTION 2019)

FERGUSON SUPPLY

EXISTING PERIMETER ACCESS ROAD

PAN AM RAILWAY

TYSON FOODS

COUNTY WAY

CUMBERLAND COUNTY JAIL

BIKE RACK

STAFF PARKING

PHASE 2 PROPOSED ASC BUILDING FOOTPRINT 17,574 GSF TOTAL AREA 34,987 GSF

PATIENT / VISITOR PARKING

PATIENT / VISITOR PARKING

PHASE 2 HOSPITAL EXPANSION FOOTPRINT 20,140 GSF TOTAL AREA 54,889 GSF

PATIENT / VISITOR PARKING

PHASE 1 EXISTING MERCY HOSPITAL 4 STORY BRICK BUILDING FOOTPRINT - 37,566 GSF TOTAL AREA - 138,099 GSF

PHASE 1 EXISTING MEDICAL OFFICE BUILDING 1 STORY BRICK FOOTPRINT - 20,047 GSF TOTAL AREA - 62,186 GSF

STAFF / PATIENT PARKING

BIKE RACK

BIKE RACK

STAFF PARKING

MAINTENANCE FACILITY

EXISTING SNOW STORAGE FACILITY

FORE RIVER PARKWAY TRAIL

EXISTING PUSH BUTTON FLASHING PEDESTRIAN CROSSING

EXISTING OVERLOOK WITH BENCHES

FUTURE METRO BUS STOP

FORE RIVER MUD FLATS

NATURE PATH

EX. FORE RIVER TRAIL - 10' WIDE, SHARED USE

SOUTH OPEN SPACE

VETERANS MEMORIAL BRIDGE (FORE RIVER) U.S. ROUTE ONE

FORE RIVER

FORE RIVER MUD FLATS

FUTURE METRO BUS STOP

NORTH OPEN SPACE

FUTURE PEDESTRIAN CONNECTION PENDING METRO

EXISTING OVERLOOKS WITH BENCHES

FUTURE PEDESTRIAN CONNECTION

TYPICAL STAFF / PEDESTRIAN ACCESS ROUTE TO / FROM PARKING TO BUILDINGS

TYPICAL ACCESS ROUTES TO OPEN SPACE

NORTH

GRAPHIC SCALE

75 0 37.5 75 150

(IN FEET)
1 inch = 75 ft.

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES & CD PRICING AND SHALL NOT BE USED FOR CONSTRUCTION.

STATE OF MAINE STEPHEN R. BUSHEY 11.22.19 LICENSED PROFESSIONAL ENGINEER

STEPHEN R. BUSHEY, P.E.
LIC. #7429

Rev.	Date	Revision
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Issued For	Date	By
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DESIGN DEVELOPMENT SUBMISSION TO OWNER	07.31.19	SRB

Design: SRB | Draft: CDD | Date: AUG. 2019
Checked: SRB | Scale: NTS | Job No.: 3257.04
File Name: 325704-MASTER PLAN.dwg

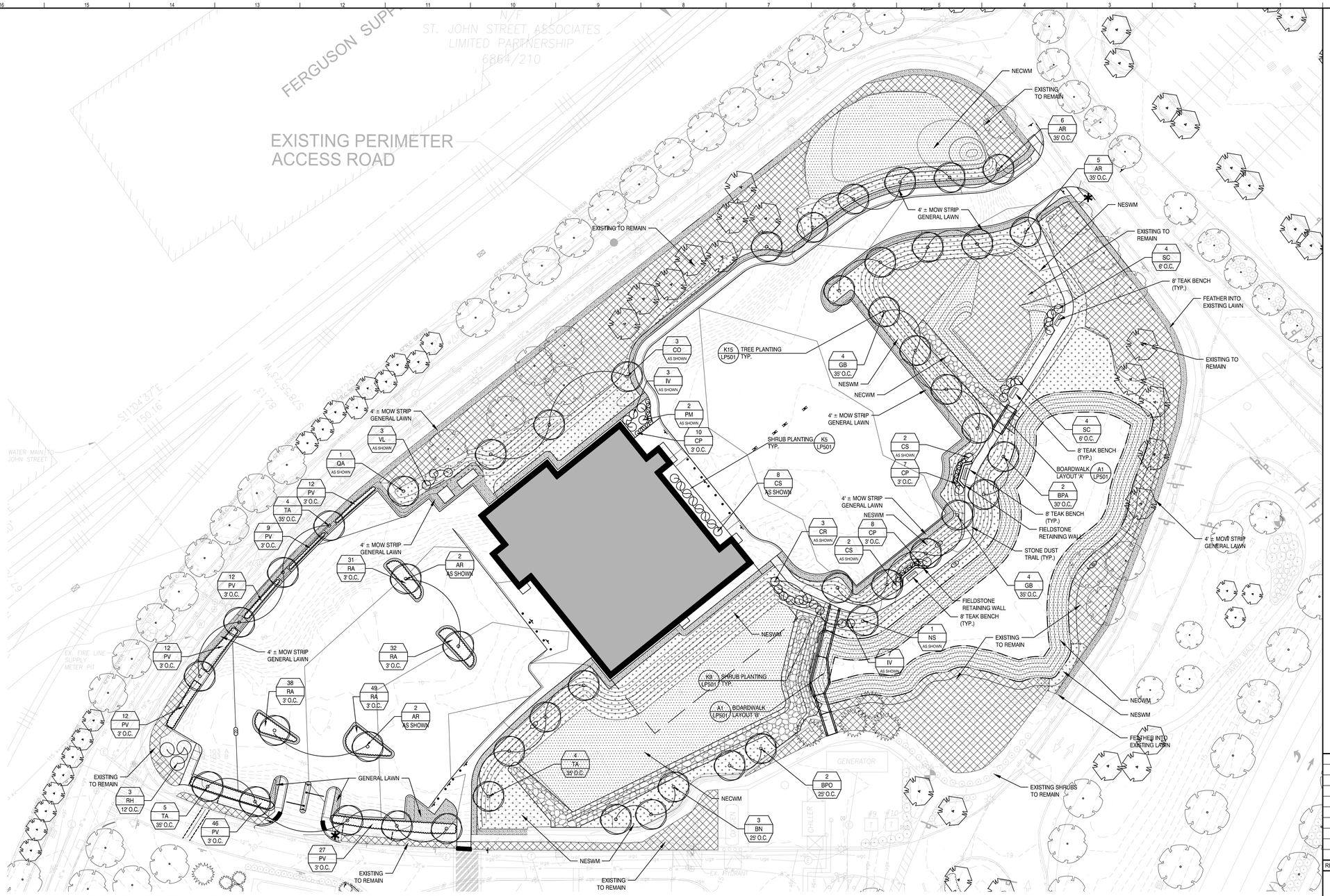
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207.772.2515

Drawing Name: Master Plan – Pedestrian Access Routes
Project: Fore River Campus Consolidation, Portland, Maine
Client: Northern Light Mercy Hospital, 144 State Street, Portland, Maine 04101

Drawing No. FIG. 5

U:\3257.04_Mercy Hospital_Expansion_DD_Permits\STANTEC\civil\cadd\permit\dwg\325704-MASTER PLAN.dwg 12/19/2019 3:13 PM



LEGEND

- GENERAL LAWN
- NEW ENGLAND CONSERVATION / WILDLIFE MIX (NECWM)
- NEW ENGLAND SHOWY WILDFLOWER MIX (NESWM)
- EXISTING VEGETATION TO REMAIN

NEW ENGLAND CONSERVATION / WILDLIFE MIX (NECWM) *

SCIENTIFIC NAME / COMMON NAME
Andropogon gerardii / Big Bluestem
Asclepias tuberosa / Butterfly Milkweed
Aster pilosus / Heath Aster
Bidens frondosa / Beggar Ticks
Chamaecrista fasciculata / Partridge Pea
Desmodium canadense / Showy Tick Trefoil
Elymus virginicus / Virginia Wild Rye
Eupatorium purpureum / Purple Joe Pye Weed
Festuca rubra / Red Fescue
Panicum virgatum / Switch Grass
Rudbeckia hirtum / Black Eyed Susan
Schizachyrium scoparium / Little Bluestem
Solodago juncea / Early Goldenrod
Sorghastrum nutans / Indian Grass
APPLICATION RATE: 25 LBS/ACRE

NEW ENGLAND SHOWY WILDFLOWER MIX (NESWM) *

SCIENTIFIC NAME / COMMON NAME
Asclepias syriaca / Common Milkweed
Asclepias tuberosa / Butterfly Milkweed
Aster novae-angliae / New England Aster
Coreopsis lanceolata / Lance Leaved Coreopsis
Chamaecrista fasciculata / Partridge Pea
Elymus canadensis / Canada Wild Rye
Elymus riparius / Riverbank Wild Rye
Eupatorium perfoliatum / Boneset
Eupatorium purpureum / Purple Joe Pye Weed
Festuca rubra / Red Fescue
Heliopsis helianthoides / Ox Eye Sunflower
Liatris spicata / Marsh Blazing Star
Rudbeckia hirtum / Black Eyed Susan
Schizachyrium scoparium / Little Bluestem
Solodago juncea / Early Goldenrod
Sorghastrum nutans / Indian Grass
Veronia noveboracensis / New York Ironweed
APPLICATION RATE: 23 LBS/ACRE

*** NEW ENGLAND WETLAND PLANTS**
www.newp.com
OR APPROVED EQUAL

PLANT LIST

MARK	SCIENTIFIC NAME / COMMON NAME	SIZE CAL	SIZE HT	ROOT	REMARKS
TREES					
AR	Acer rubrum / Red Maple	2" - 3"	10' - 12'	B & B	Full
AS	Acer spicatum / Mountain Maple	2" - 3"	10' - 12'	B & B	Full
BN	Betula nigra / River Birch	2" - 3"	10' - 12'	B & B	Clump form; 3-stem minimum
BPA	Betula papyrifera / Paper Birch	2" - 3"	10' - 12'	B & B	Full
BPO	Betula populifolia / Gray Birch	2" - 3"	10' - 12'	B & B	Full
CO	Celtis occidentalis / Hackberry Tree	2" - 3"	10' - 12'	B & B	Full
NS	Nyssa sylvatica / Black Gum	2" - 3"	10' - 12'	B & B	Full
QR	Quercus alba / White Oak	2" - 3"	10' - 12'	B & B	Full
TA	Tilia americana / Basswood	2" - 3"	10' - 12'	B & B	Full
SHRUBS					
CP	Comptonia peregrina / Sweet Fern	#3	24"-36"	Cont.	
CR	Cornus racemosa / Gray Dogwood	#3	24"-36"	Cont.	
CS	Cornus sericea / Redosier Dogwood	#3	24"-36"	Cont.	
IV	Ilex verticulata / Winter Berry	#3	24"-36"	Cont.	
PM	Photinia melanocarpa / Black Choke Cherry	#3	24"-36"	Cont.	
PV	Panicum virgatum / Switch Grass	#3	24"-36"	Cont.	
RH	Rhus hirta / Staghorn Sumac	#3	24"-36"	Cont.	
RT	Rhus aromatica 'Grow - Low' / Fragrant Sumac	#3	24"-36"	Cont.	
SD	Salix disorder / Pussy Willow	#3	24"-36"	Cont.	
SC	Sambucus canadensus / American Elder	#3	24"-36"	Cont.	
VL	Viburnum lentago / Nannyberry	#3	24"-36"	Cont.	

REV	DESCRIPTION	DATE

ISSUED FOR PERMITTING
1-3-20

CURRENT ISSUE STATUS:

TRUE NORTH:

LICENSED LANDSCAPE ARCHITECT
MARK G. JOHNSON
NO. 1867
STATE OF MAINE
1/3/20

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144 Fore Street/P.O. Box 6181
Portland, Maine 04104
1.877.700.7678
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NORTHERN LIGHT MERCY HOSPITAL
AMBULATORY SURGERY CENTER

PORTLAND, MAINE

POND WALK TRAIL
PLANTING PLAN

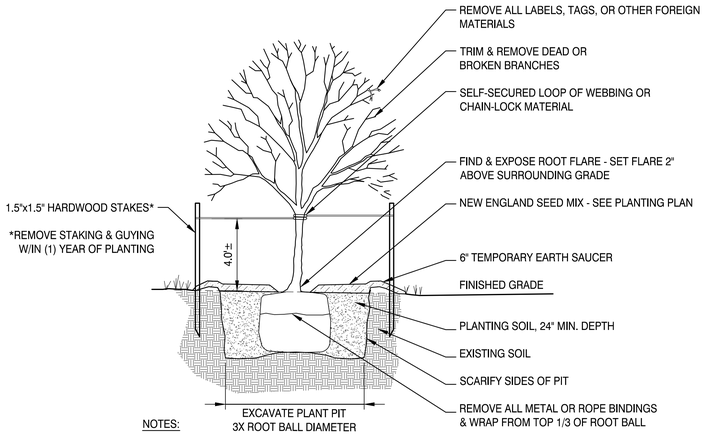
SHEET TITLE:

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SCALE: 1" = 30'

PROJECT MANAGER:	KD	PROJECT NO:	19004
A/E OF RECORD:	MGJ		
JOB CAPTAIN:	JCH		
DRAWN BY:	TNL		
SMRT FILE:	LP101-19004	SHEET No.	LP101

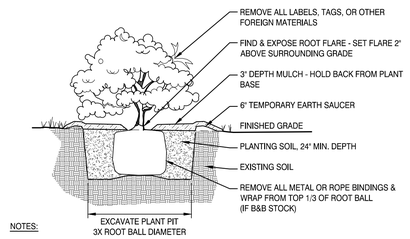
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NOTES:

1. TREE TO BE SET PLUMB.
2. SECURE TREE AS MAY BE REQUIRED ACCORDING TO TREE SIZE, LOCATION, & WIND/WEATHER CONDITIONS.
3. IF USING ROOTBALL STABILIZATION, FOLLOW MANUFACTURER'S RECOMMENDATIONS.

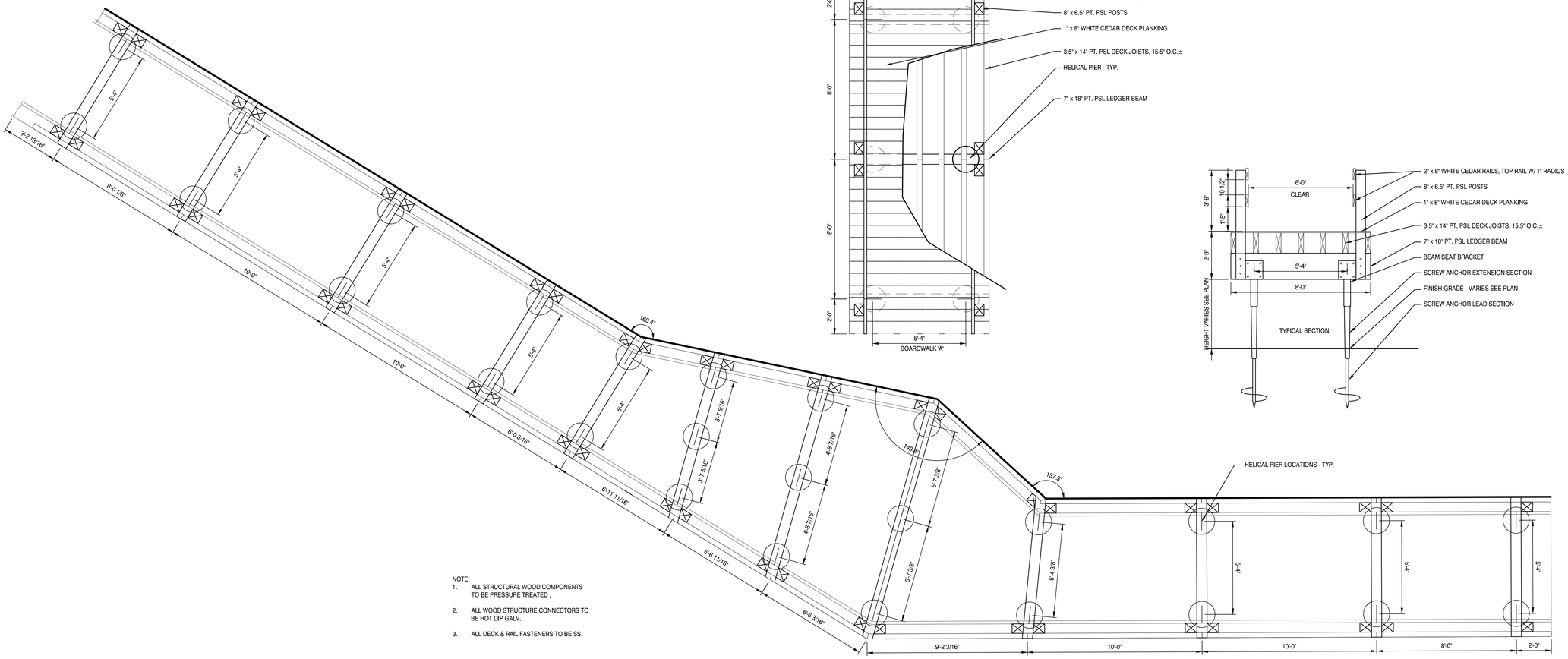
TREE PLANTING K15
N.T.S.



NOTES:

1. SHRUB TO BE SET PLUMB.

SHRUB PLANTING K5
N.T.S.



NOTE:

1. ALL STRUCTURAL WOOD COMPONENTS TO BE PRESSURE TREATED .
2. ALL WOOD STRUCTURE CONNECTORS TO BE HOT DIP GALV.
3. ALL DECK & RAIL FASTENERS TO BE SS.

BOARDWALK LAYOUT A1
3/8" = 1'

REV	DESCRIPTION	DATE

ISSUED FOR PERMITING
1-3-20
CURRENT ISSUE STATUS:

TRUE NORTH:

LICENSED LANDSCAPE ARCHITECT
MARK G. JOHNSON
NO. 1857
STATE OF MAINE
1/3/20

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NORTHERN LIGHT MERCY HOSPITAL
AMBULATORY SURGERY CENTER

PORTLAND, MAINE

POND WALK TRAIL
PLANTING DETAILS

SHEET TITLE:

SCALE: AS SHOWN

PROJECT MANAGER:	KD	PROJECT NO:	19004
A/E OF RECORD:	MGJ		
JOB CAPTAIN:	JCH		
DRAWN BY:	TNL		
SMRT FILE:	LP501-19004	SHEET No.	LP501

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30x42

SMRT
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WESTERN PROMENADE

VALLEY STREET

ST JOHN STREET

D STREET

EXISTING PARKING

3/4 MILE WALKING LOOP

PHASE 2 AMBULATORY SURGERY

PHASE 2 HOSPITAL EXPANSION

EXISTING PARKING

EXISTING PARKING

CONNECTION TO ST JOHN STREET

VETERANS MEMORIAL BRIDGE

POND TRAIL LOOP

FORE RIVER PARKWAY

FORE RIVER PARKWAY

FORE RIVER

3/4 MILE WALKING LOOP

CONNECTION TO FREDRIC ST. / LIBBYTOWN AREA

N/F
ST. JOHN STREET ASSOCIATES
LIMITED PARTNERSHIP
6684/210

N/F
CUMBERLAND COUNTY
STATE OF MAINE
9352/61
9620/253

N/F
TENANTS

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES & CD PRICING AND SHALL NOT BE USED FOR CONSTRUCTION.

NORTH

GRAPHIC SCALE

(IN FEET)
1 inch = 80 ft.

N:\2019 Projects\19004_Mercy Fore River ASC\400 Design and Documentation\440 Contract Docs\441 Autocad\Xrefs\191209_LandscapeRendering\325704-LANDSCAPE.dwg 12/17/2019 3:58 PM

Rev.	Date	Revision
1	11.04.19	PREPARED FOR L.O.R. #1 & SUBMITTED TO CITY

Issued For	Date	By
CONSTRUCTION DOCUMENTS FOR PRICING ONLY	11.22.19	SRB
PERMIT APPROVAL SUBMISSION	08.30.19	SRB
DESIGN DEVELOPMENT SUBMISSION TO OWNER	07.31.19	SRB

Design: ---- Draft: ---- Date: AUG. 2019
Checked: ---- Scale: AS NOTED Job No.: 3257.04
File Name: 325704-LANDSCAPE.dwg

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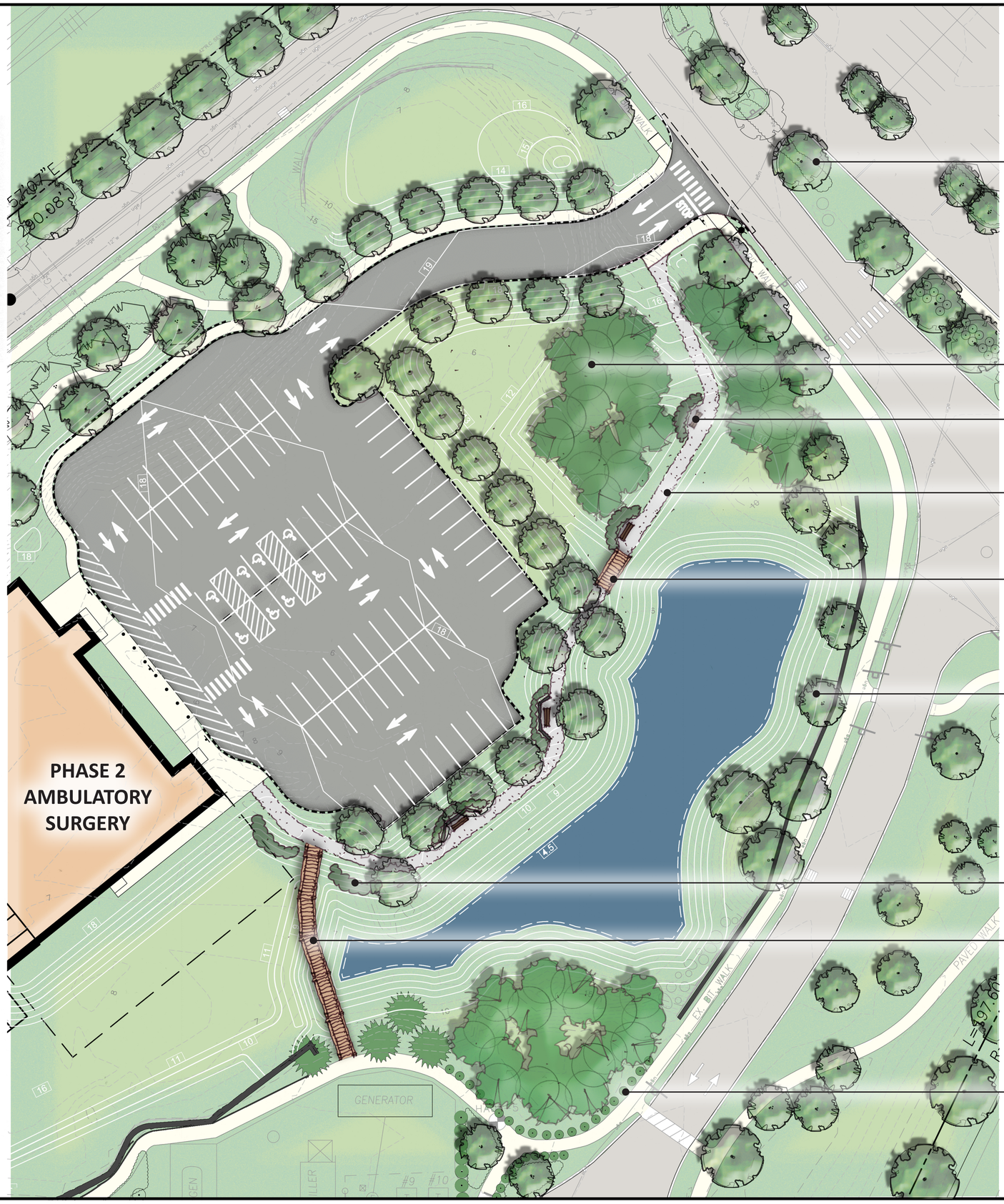
GORRILL PALMER
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www.gorrillpalmer.com
207.772.2515

Drawing Name: **OVERALL SITE PLAN**
Project: Fore River Campus Consolidation
Portland, Maine
Client: Northern Light Mercy Hospital
144 State Street, Portland, Maine 04101

Drawing No.

SMRT

Architecture • Engineering • Planning



NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES & CD PRICING ONLY

Rev.	Date	Revision
1	11.04.19	PREPARED FOR L.O.R. #1 & SUBMITTED TO CITY

Issued For	Date	By
CONSTRUCTION DOCUMENTS FOR PRICING ONLY	11.22.19	SRB
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DESIGN DEVELOPMENT SUBMISSION TO OWNER	07.31.19	SRB

Design: ---	Draft: ---	Date: AUG. 2019
Checked: ---	Scale: AS NOTED	Job No.: 3257.04
File Name: 325704-GRADING WITH TRAIL.dwg		

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GORRILL PALMER

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www.gorrillpalmer.com
207.772.2515

Drawing Name: **POND TRAIL CONCEPT PLAN**

Project: **Fore River Campus Consolidation**
Portland, Maine

Client: **Northern Light Mercy Hospital**
144 State Street, Portland, Maine 04101

Drawing No.

N:\2019 Projects\19004_Mercy Fore River ASC\400 Design and Documentation\440 Contract Docs\441 Autocad\Xrefs\191209_LandscapeRendering\121819-DWGS\325704-GRADING WITH TRAIL.dwg 12/19/2019 12:48 PM

PAN AM RAILWAY

N/F
ST. JOHN STREET ASSOCIATES
LIMITED PARTNERSHIP
6864/210

EXISTING PERIMETER
ACCESS ROAD

S16°57'07"E
290.08'

NEW MMC SURFACE
PARKING LOT

PARCEL A TRACT TWO
UTILITY AREA
23723/214 & 5738/60
22764/208 & 17783/298

S09°29'00"E
197.09'

S17°04'57"E
180.50'

EX. WATER MAIN TO
ST. JOHN STREET

N/F
UNION STATION
LIMITED PARTNERSHIP
10144/23

PARCEL A TRACT THREE
LICENSE AGREEMENT
17783/322
LICENSE AGREEMENT
14203/252

COUNTY WAY

L=384.91'

R=988.37'

N49°17'54"E
66.00'

L=1102.20'

R=922.37'

L=522.60'

N/F
INHABITANTS
CUMBERLAND COUNTY
STATE OF MAINE
9382/61
9820/263

CUMBERLAND
COUNTY JAIL

REDEVELOPMENT BOUNDARY

MERCY HOSPITAL
4 STORY BRICK BUILDING
FOOTPRINT - 37,566 GSF
TOTAL AREA - 138,099 GSF

MEDICAL OFFICE BUILDING
4 STORY BRICK
FOOTPRINT - 20,047 GSF
TOTAL AREA - 82,186 GSF

GAS FACILITIES
EASEMENT
25696/212

UNDERGROUND UTILITY
LINE EASEMENT MAIN LINE

PORTLAND WATER DISTRICT
WATER LINE EASEMENT
25624/210

RECREATIONAL TRAIL EASEMENT
25855/253
26346/137

(SEE NOTE 7)
EDGE OF POND

EDGE OF POND
POND EASEMENT AREA
25591/149

THIS AREA INCLUDED IS
VOLUME CALCULATION
(SEE NOTE 7)

UNDERGROUND UTILITY
LINE EASEMENT SOUR
25971/306

GENERATOR

OXYGEN

CHILLER

EX. FRONT

EX. LIFT STA.

EX. SMH

EX. GREASE TANK

LOAD DOCK

CONC. RAMP

THRES.= 17.54
LOADING DOCK

EX. SAN. OUT

EX. 4" I.W. (CONNECTS TO TERMINUS MANHOLE AT FRONT OF BLDG.

OVERHANG BRICK

CONCRETE

EX. RAISED CROSSWALK

EX. CONC.

EX. LIGHT, TYP.

TRANS. PAD W/ GENERATOR

PAVED WALK

OVERHEAD UTILITY LINE EASEMENT
25971/306

PIPELINE PER
19154/555

I-295 CONNECTOR
(FORE RIVER PARKWAY)
19154/555

S72°45'03"W
472.62'

L=197.60'
R=1184.38'

L=185.42'
R=197.50'

N13°18'41"W
252.78'

N62°48'26"E
13.12'
(S)

EX. FORE RIVER
TRAIL - 10' WIDE,
SHARED USE

AREA BETWEEN
HIGH & LOW WATER
OWNED BY MERCY HOSPITAL

HIGH WATER LINE OF FORE RIVER

FORE RIVER

FORE RIVER
MUD FLATS

LEGEND

- OTHER ROADS, MEDIUM USE PARKING
- OTHER ROOFS, BIKEWAYS, GRASS MOWED MORE THAN 2x / YR, WALKWAYS / FOOT TRAFFIC ONLY PAVEMENT
- NON-GRASS LANDSCAPE, STORMWATER TREATMENT / STORAGE

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.

NORTH

GRAPHIC SCALE
40 0 20 40 80
(IN FEET)
1 inch = 40 ft.

STATE OF MAINE
STEPHEN R. BUSHEY
08.30.19
LICENSED PROFESSIONAL ENGINEER
STEPHEN R. BUSHEY, P.E.
LIC. #7429

Rev.	Date	Revision
–	–	–

Issued For	Date	By
PERMIT APPROVAL SUBMISSION	08.30.19	SRB
DESIGN DEVELOPMENT SUBMISSION TO OWNER	07.31.19	SRB

Design: SRB	Draft: CDD	Date: AUG. 2019	
Checked: SRB	Scale:	Job No.: 3257.04	
File Name: 325704–existing.dwg			

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207.772.2515

Drawing Name: Current Conditions Landcover Map
Project: Fore River Campus Consolidation
Portland, Maine
Client: Northern Light Mercy Hospital
144 State Street, Portland, Maine 04101

Drawing No. W–1

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ST. JOHN STREET ASSOCIATES
LIMITED PARTNERSHIP
6864/210

EXISTING PERIMETER
ACCESS ROAD

EX. WATER MAIN TO
ST. JOHN STREET

N/F
UNION STATION
LIMITED PARTNERSHIP
10144/23

COUNTY WAY

N/F
INHABITANTS
ERLAND COUNTY
TE OF MAINE
9382/61
9820/263

CUMBERLAND
COUNTY JAIL

MERCY HOSPITAL
4 STORY BRICK BUILDING
FOOTPRINT - 37,566 GSF
TOTAL AREA - 138,099 GSF

MEDICAL OFFICE BUILDING
4 STORY BRICK
FOOTPRINT - 20,047 GSF
TOTAL AREA - 82,186 GSF

GENERATOR

OXYGEN

CHILLER

EX. HYDRANT

EX. LIFT STA.

EX. GREASE TANK

LOADING DOCK

CONC. PAD

EX. SMH

EX. SAN. OUT

EX. 4" I.N. CONNECTS TO TERMINUS MANHOLE AT FRONT OF BLDG.

OVERHANG BRICK

CONCRETE BUTTRESS

EX. RAISED CROSSWALK

EX. LIGHT, TYP.

PAVED WALK

PAVED ISLAND

TRANS. PAD

EX. CONC. WALL

I-295 CONNECTOR
(FORE RIVER PARKWAY)
1915/1735

FORE RIVER

FORE RIVER
MUD FLATS

REDEVELOPMENT BOUNDARY

LEGEND

- ROADS WITH IDLING, HIGH USE PARKING
- OTHER PARKING AND DRIVEWAYS, FLAT ASPHALT ROOFS, IND. ROOFS
- OTHER ROOFS, BIKEWAYS, GRASS MOWED MORE THAN 2x / YR, WALKWAYS / FOOT TRAFFIC ONLY PAVEMENT
- NON-GRASS LANDSCAPE, STORMWATER TREATMENT / STORAGE

NORTH

GRAPHIC SCALE
40 0 20 40 80
(IN FEET)
1 inch = 40 ft.

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.

STATE OF MAINE
STEPHEN R. BUSHEY
LICENSED
PROFESSIONAL ENGINEER
08.30.19
STEPHEN R. BUSHEY, P.E.
LIC. #7429

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Rev.	Date	Revision
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Issued For	Date	By
PERMIT APPROVAL SUBMISSION	08.30.19	SRB
DESIGN DEVELOPMENT SUBMISSION TO OWNER	07.31.19	SRB

Design: SRB	Draft: CDD	Date: AUG. 2019
Checked: SRB	Scale:	Job No.: 3257.04

File Name: 325704-WSHED-POST.dwg

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207.772.2515

Drawing Name: Post–Development Landcover Map
Project: Fore River Campus Consolidation
Portland, Maine
Client: Northern Light Mercy Hospital
144 State Street, Portland, Maine 04101

Drawing No. W–2

WATERSHED LEGEND

- WATERSHED BOUNDARY
- A — B: WATERSHED FLOW PATH
- 999: SUBCATCHMENT
- 999: REACH
- SF: SHEET FLOW
- SCF: SHALLOW CONCENTRATED FLOW
- CF: CHANNEL FLOW
- CC: CIRCULAR CHANNEL
- POI: POINT OF INTEREST
- 999: POND

PAN AM RAILWAY

N/F
ST. JOHN STREET ASSOCIATES
LIMITED PARTNERSHIP
6864/210

EXISTING PERIMETER ACCESS ROAD

OUTLET CONTROL STRUCTURE

EXISTING DOWNSTREAM DEFENDER

FORE RIVER MUD FLATS

STORM DRAIN OUTLET LOCATION

WET POND

FORE RIVER MUD FLATS

WATERSHED BOUNDARY

EXISTING DOWNSTREAM DEFENDER

N/F
UNION STATION
LIMITED PARTNERSHIP
10144/23

COUNTY WAY

N/F
INHABITANTS
CUMBERLAND COUNTY
STATE OF MAINE
9382/61
9820/263

CUMBERLAND COUNTY JAIL

MAINTENANCE FACILITY

MERCY HOSPITAL
4 STORY BRICK & CONCRETE
FOOTPRINT - 37,566 GSF
TOTAL AREA - 138,099 GSF

MEDICAL OFFICE BUILDING
4 STORY BRICK
FOOTPRINT - 20,047 GSF
TOTAL AREA - 82,186 GSF

I-295 CONNECTOR (FORE RIVER PARKWAY)

FORE RIVER

1S 2S 3S 4S 5S 6S 7S 8S 9P 10P 7P

NOTE:
TIME OF CONCENTRATION AT SUBCATCHMENT 7S IS ASSUMED TO BE 0 MINUTES. TIME OF CONCENTRATION AT ALL OTHER SUBCATCHMENTS IS ASSUMED TO BE 5 MINUTES.

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.

NORTH

GRAPHIC SCALE
40 0 20 40 80
(IN FEET)
1 inch = 40 ft.

STATE OF MAINE
STEPHEN R. BUSHEY
08.30.19
LICENSED PROFESSIONAL ENGINEER
STEPHEN R. BUSHEY, P.E.
LIC. #7429

Rev.	Date	Revision
–	–	–

Issued For	Date	By
PERMIT APPROVAL SUBMISSION	08.30.19	SRB
DESIGN DEVELOPMENT SUBMISSION TO OWNER	07.31.19	SRB

Design: SRB | Drafted: CDD | Date: AUG. 2019
Checked: SRB | Scale: | Job No.: 3257.04
File Name: 325704–WSHED–POST.dwg

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Relationships. Responsiveness. Results.
www.gorrillpalmer.com
207.772.2515

Drawing Name: Post–Development Watershed Map
Project: Fore River Campus Consolidation, Portland, Maine
Client: Northern Light Mercy Hospital, 144 State Street, Portland, Maine 04101

Drawing No. W–3

U:\3257.04_Mercy Hospital_Expansion_DD_Permits\STANTEC\civil\cadd\permit\dwg\325704–WSHED–POST.dwg 8/30/2019 1:03 PM

STORMWATER QUALITY TREATMENT											
	IMPERVIOUS						DEVELOPED				TREATMENT
SUBCATCHMENT	COVER TYPE	AREA (SF)	AMOUNT TREATED	% AREA	% TREATED		AREA (SF)	AMOUNT TREATED	% AREA	% TREATED	
1	PROPOSED/REDEVELOPED PAVE/ROOF	148,617	100%	*	*		187,122	100%	*	*	WET POND
2	EXISTING PAVE/ROOF	85,671	100%	*	*		206,826	100%	*	*	WET POND
3	PAVE	22,756	0%	*	*		23,161	0%	*	*	UNTREATED
TOTAL % TREATMENT					*	TOTAL % TREATMENT				*	

*SEE TREATMENT TABLE BELOW

LEGEND

- AREA UNTREATED
- EXISTING AREA TREATED BY WET POND
- AREA TREATED BY WET POND
- (1) SUBCATCHMENT

Table 4 – Stormwater Treatment		
	IMPERVIOUS	DEVELOPED (Impervious + Landscaped)
Redeveloped area treated by the Wet Pond (sf)	47,961	58,788
Total Redeveloped Area (sf)	70,213	81,445
Untreated Redeveloped Area (sf)	22,252	22,657
Percent of Redeveloped area treated	68.3%	72.2%
New Construction treated by the Wet Pond (sf)	100,656	128,334
Total New Construction Area (sf)	101,160	128,838
Untreated New Construction Area (sf)	504	504
Percent of New Construction treated (sf)	99.5%	99.6%
Total Area Treated by Wet Pond Including existing area (sf)	234,288	393,948
Total Area of Redevelopment and New Construction (sf)	168,798	207,708
Percent Treated relative to proposed construction (sf)	139%	190%

REQUIRED TREATMENT:
REDEVELOPED: 60% OF DEVELOPED AREA
NEW CONSTRUCTION: 95% OF IMPERVIOUS AREA
80% OF DEVELOPED AREA

PAN AM RAILWAY

N/F
ST. JOHN STREET ASSOCIATES
LIMITED PARTNERSHIP
6864/210

EXISTING PERIMETER ACCESS ROAD

N/F
UNION STATION
LIMITED PARTNERSHIP
10144/23

COUNTY WAY

N/F
INHABITANTS
CUMBERLAND COUNTY
STATE OF MAINE
9382/61
9820/263

CUMBERLAND COUNTY JAIL

MERCY HOSPITAL
4 STORY W/BASEMENT
FOOTPRINT - 37,566 GSF
TOTAL AREA - 138,099 GSF

MEDICAL OFFICE BUILDING
4 STORY BRICK
FOOTPRINT - 20,047 GSF
TOTAL AREA - 82,186 GSF

EX. FORE RIVER TRAIL - 10' WIDE, SHARED USE

WET POND

FORE RIVER MUD FLATS

I-295 CONNECTOR (FORE RIVER PARKWAY)

FORE RIVER

NOTE: THIS PLAN SET IS ISSUED FOR PERMITTING PURPOSES AND SHALL NOT BE USED FOR CONSTRUCTION.

NORTH

GRAPHIC SCALE
40 0 20 40 80
(IN FEET)
1 inch = 40 ft.

STATE OF MAINE
STEPHEN R. BUSHEY
08.30.19
LICENSED PROFESSIONAL ENGINEER
STEPHEN R. BUSHEY, P.E.
LIC. #7429

Rev.	Date	Revision
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DESIGN DEVELOPMENT SUBMISSION TO OWNER	07.31.19	SRB

Design: SRB	Drafft: CDD	Date: AUG. 2019	
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File Name: 325704–WSHED–POST.dwg			

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207.772.2515

Drawing Name:	Water Quality Map
Project:	Fore River Campus Consolidation Portland, Maine
Client:	Northern Light Mercy Hospital 144 State Street, Portland, Maine 04101

Drawing No.
WQ

U:\3257-04_Mercy Hospital_Expansion_DD_Permits\STANTEC\civil\cadd\permit\dwg\325704–WSHED–POST.dwg 8/30/2019 1:16 PM



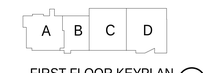
GROUND FLOOR - FACILITY PLAN (K1)
3/32" = 1'-0"



FIRST FLOOR - FLOOR PLAN AREA A (A1)
3/32" = 1'-0"



GROUND FLOOR KEYPLAN (2)
1" = 160'-0"



FIRST FLOOR KEYPLAN (1)
1" = 160'-0"

REV	DESCRIPTION	DATE

DESIGN DEVELOPMENT
7-31-2019
CURRENT ISSUE STATUS:

PROJECT NORTH:

SMRT Architects and Engineers
144 Fore Street/P.O. Box 618
Portland, Maine 04104
ARCHITECTURE | ENGINEERING | PLANNING | INTERIORS | ENERGY

MERCY FORE RIVER CAMPUS CONSOLIDATION
MERCY HOSPITAL - PHASE 2
175 FORE RIVER PARKWAY

GROUND FLOOR AND FIRST FLOOR FACILITY PLANS

SHEET TITLE:

0" 1/4" 1/2" 1" 2" 3"

SCALE: AS NOTED

PROJECT MANAGER:	KD	PROJECT NO:	19002
A/E OF RECORD:	KD		
JOB CAPTAIN:	JCH		A-100
DRAWN BY:	JCH	SHEET No.	
SMRT FILE:	A-100-19002		

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EMERGENCY DEPARTEMENT
CAFETERIA
CHAPEL/PASTORAL CARE
IMAGING
OBSERVATION DEPARTMENT
SUPPORT
VERTICAL CIRCULATION
PUBLIC CIRCULATION



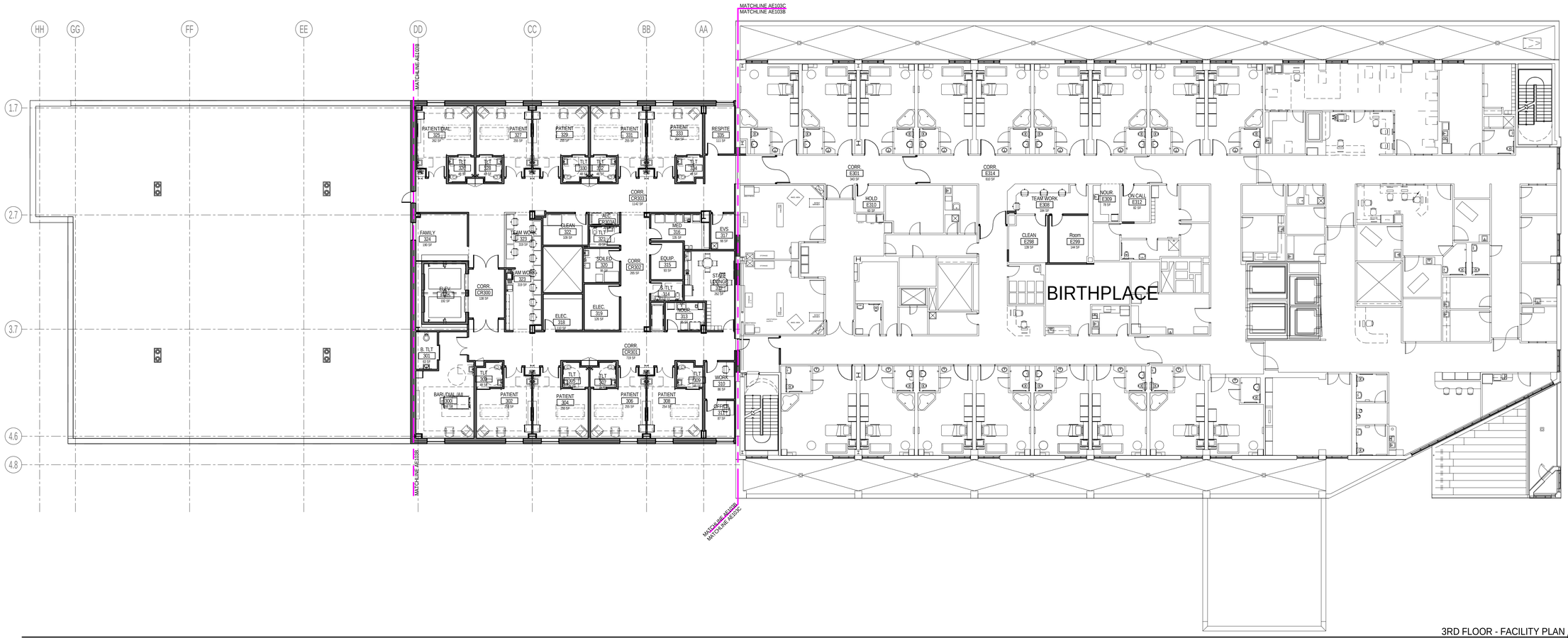
HOSPITAL ADDITION
NORTHERN LIGHT MERCY HOSPITAL

First Floor Plan

12/11/19
1/16" = 1'-0"



2ND FLOOR - FACILITY PLAN J1
3/32" = 1'-0"



3RD FLOOR - FACILITY PLAN A1
3/32" = 1'-0"

A B C D

SECOND FLOOR KEYPLAN 2
1" = 160'-0"

B C D

THIRD FLOOR KEYPLAN 1
1" = 160'-0"

REV	DESCRIPTION	DATE

DESIGN DEVELOPMENT
7-31-2019
CURRENT ISSUE STATUS:

PROJECT NORTH:

SMRT Architects and Engineers
144 Fore Street/P.O. Box 618
Portland, Maine 04104
ARCHITECTURE | ENGINEERING | PLANNING | INTERIORS | ENERGY

MERCY FORE RIVER CAMPUS CONSOLIDATION
MERCY HOSPITAL - PHASE 2
175 FORE RIVER PARKWAY

SECOND FLOOR AND THIRD FLOOR FACILITY PLANS

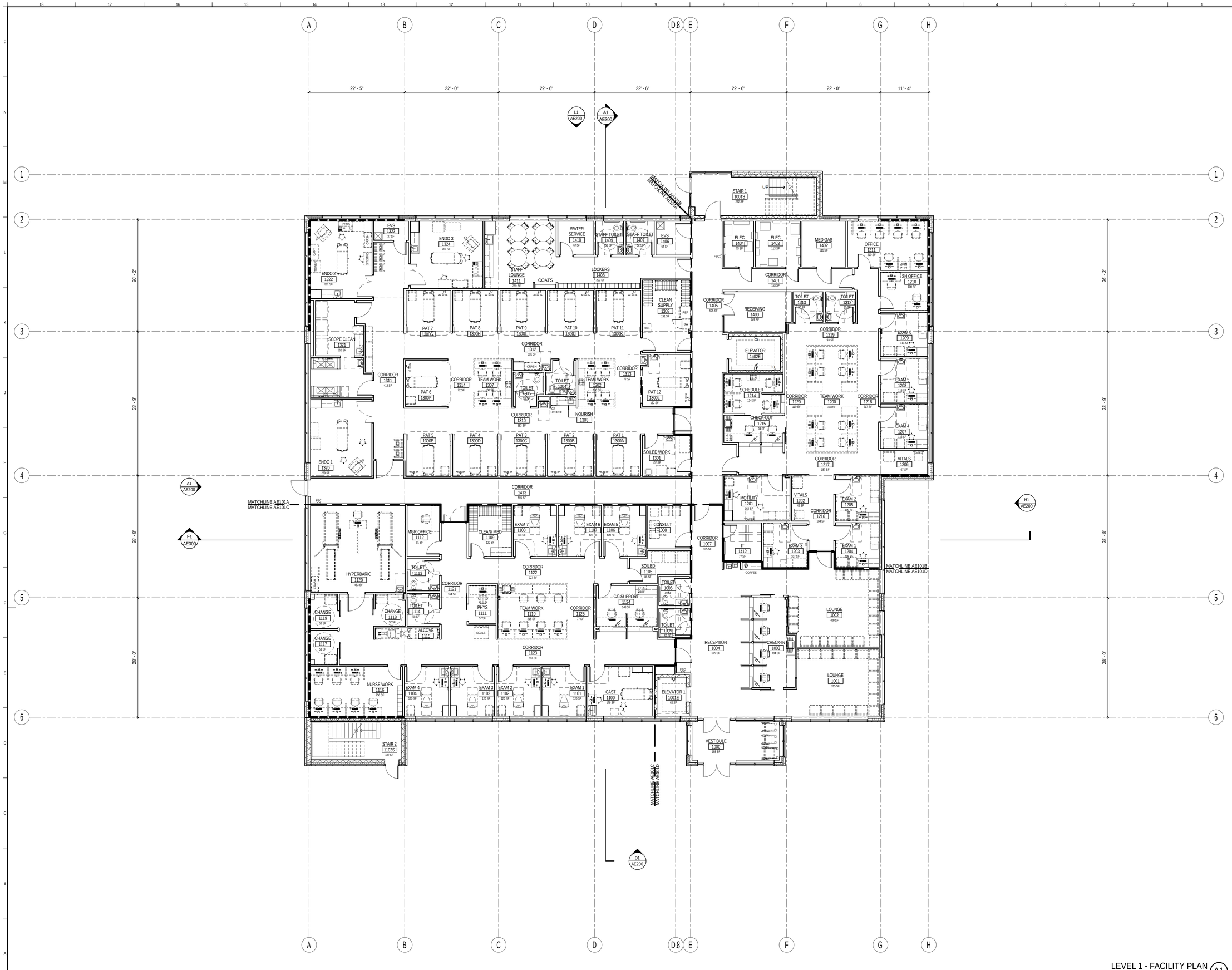
SHEET TITLE:

0" 1/4" 1/2" 1" 2" 3"
SCALE: AS NOTED

PROJECT MANAGER:	KD	PROJECT NO:	19002
A/E OF RECORD:	KD		
JOB CAPTAIN:	JCH		A-101
DRAWN BY:	JCH		
SMRT FILE:	A-101-19002	SHEET No.	

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NOT FOR CONSTRUCTION



LEVEL 1 - FACILITY PLAN A1

1/8" = 1'-0"

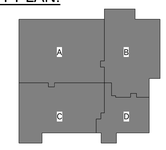
PLAN NOTES:

1. SEE G-001 FOR GENERAL PROJECT NOTES, LEGENDS AND ABBREVIATIONS.
2. SEE G-003 FOR GENERAL TOP OF WALL DETAILS AND PARTITION TYPES.
3. CONTRACTOR IS RESPONSIBLE FOR REVIEWING CODE COMPLIANCE PLANS AND NOTIFYING THE ARCHITECT OF CONFLICTS BETWEEN WHAT IS IN THE FIELD AND ON THE CODE DOCUMENTS.
4. DIMENSIONS ARE FACE OF CONCRETE, FACE OF MASONRY AND CENTERLINE OF STUD, UNLESS NOTED OTHERWISE.
5. DOOR JAMBS (HINGE SIDE) SHALL BE 6" FROM CORNER IN STUD PARTITIONS AND 0" FROM CORNER IN MASONRY PARTITIONS UNLESS NOTED OTHERWISE.
6. REFER TO DETAILS FOR ADDITIONAL DIMENSIONING INFORMATION.
7. REFER TO ENLARGED PLANS FOR PARTITION TYPES AND DIMENSIONS IN AREAS WHICH ARE DETAILED AT A LARGER SCALE.
8. FURNITURE AND OWNER PROVIDED EQUIPMENT ARE INDICATED BY DASHED LINE TYPE.
9. CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF OWNER PROVIDED EQUIPMENT INCLUDING BUT NOT LIMITED TO DIMENSIONAL INFORMATION, AND MECHANICAL, ELECTRICAL AND PLUMBING REQUIREMENTS.

LEGEND:

STRUCTURAL BRACING

KEY PLAN:



REV	DESCRIPTION	DATE

DESIGN DEVELOPMENT
7-31-2019

CURRENT ISSUE STATUS:

PROJECT NORTH:

SMRT Architects and Engineers
144 Fore Street/P.O. Box 618
Portland, Maine 04104
ARCHITECTURE | ENGINEERING | PLANNING | INTERIORS | ENERGY

MERCY HOSPITAL
AMBULATORY SURGERY CENTER

Portland, ME

LEVEL 1 FACILITY PLAN

SHEET TITLE:

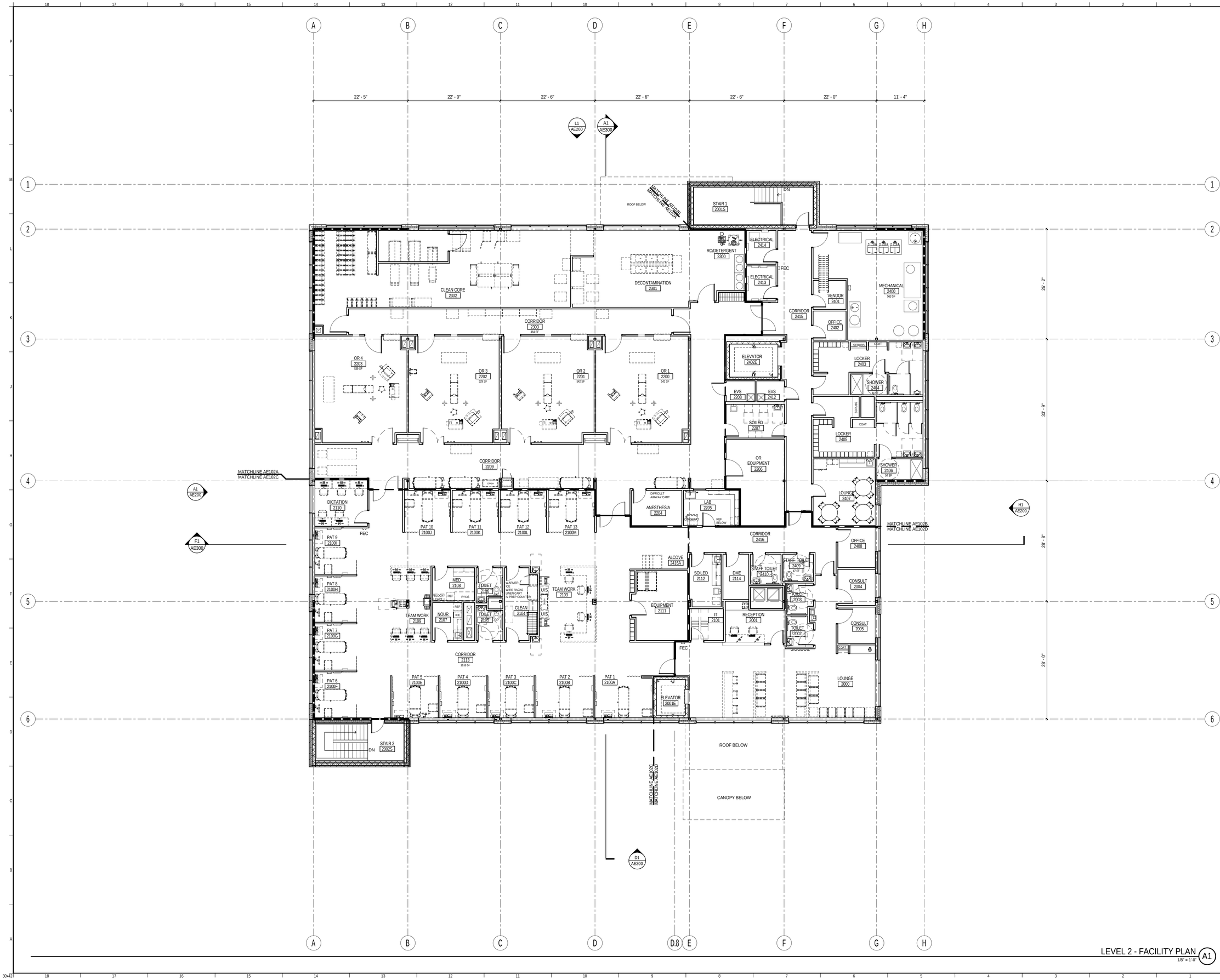
SCALE: AS NOTED

PROJECT MANAGER:	KD	PROJECT NO:	19004
A/E OF RECORD:	KD		
JOB CAPTAIN:	CAH		A-101
DRAWN BY:	CAH		
SMRT FILE:	A-101-19004	SHEET No.	

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30x42



LEVEL 2 - FACILITY PLAN A1
1/8" = 1'-0"

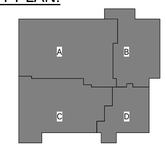
PLAN NOTES:

1. SEE G-001 FOR GENERAL PROJECT NOTES, LEGENDS AND ABBREVIATIONS.
2. SEE G-003 FOR GENERAL TOP OF WALL DETAILS AND PARTITION TYPES.
3. CONTRACTOR IS RESPONSIBLE FOR REVIEWING CODE COMPLIANCE PLANS AND NOTIFYING THE ARCHITECT OF CONFLICTS BETWEEN WHAT IS IN THE FIELD AND ON THE CODE DOCUMENTS.
4. DIMENSIONS ARE FACE OF CONCRETE, FACE OF MASONRY AND CENTERLINE OF STUD, UNLESS NOTED OTHERWISE.
5. DOOR JAMBS (HINGE SIDE) SHALL BE 6" FROM CORNER IN STUD PARTITIONS AND 0" FROM CORNER IN MASONRY PARTITIONS UNLESS NOTED OTHERWISE.
6. REFER TO DETAILS FOR ADDITIONAL DIMENSIONING INFORMATION.
7. REFER TO ENLARGED PLANS FOR PARTITION TYPES AND DIMENSIONS IN AREAS WHICH ARE DETAILED AT A LARGER SCALE.
8. FURNITURE AND OWNER PROVIDED EQUIPMENT ARE INDICATED BY DASHED LINE TYPE.
9. CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF OWNER PROVIDED EQUIPMENT INCLUDING BUT NOT LIMITED TO DIMENSIONAL INFORMATION, AND MECHANICAL, ELECTRICAL AND PLUMBING REQUIREMENTS.

LEGEND:

STRUCTURAL BRACING

KEY PLAN:



REV	DESCRIPTION	DATE

DESIGN DEVELOPMENT
7-31-2019

CURRENT ISSUE STATUS:

PROJECT NORTH:

SMRT Architects and Engineers
144 Fore Street/P.O. Box 618
Portland, Maine 04104
ARCHITECTURE | ENGINEERING | PLANNING | INTERIORS | ENERGY

MERCY HOSPITAL
AMBULATORY SURGERY CENTER

Portland, ME

LEVEL 2 FACILITY PLAN

SHEET TITLE:

0" 1/4" 1/2" 1" 2" 3"

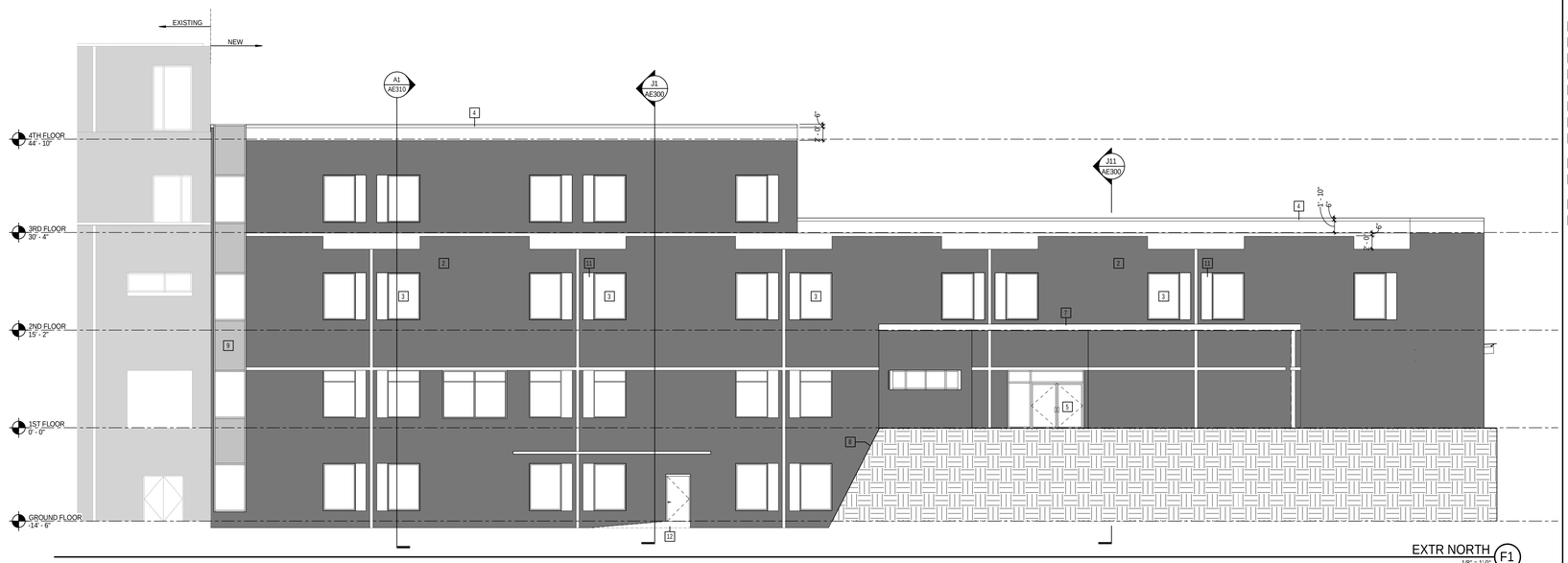
SCALE: AS NOTED

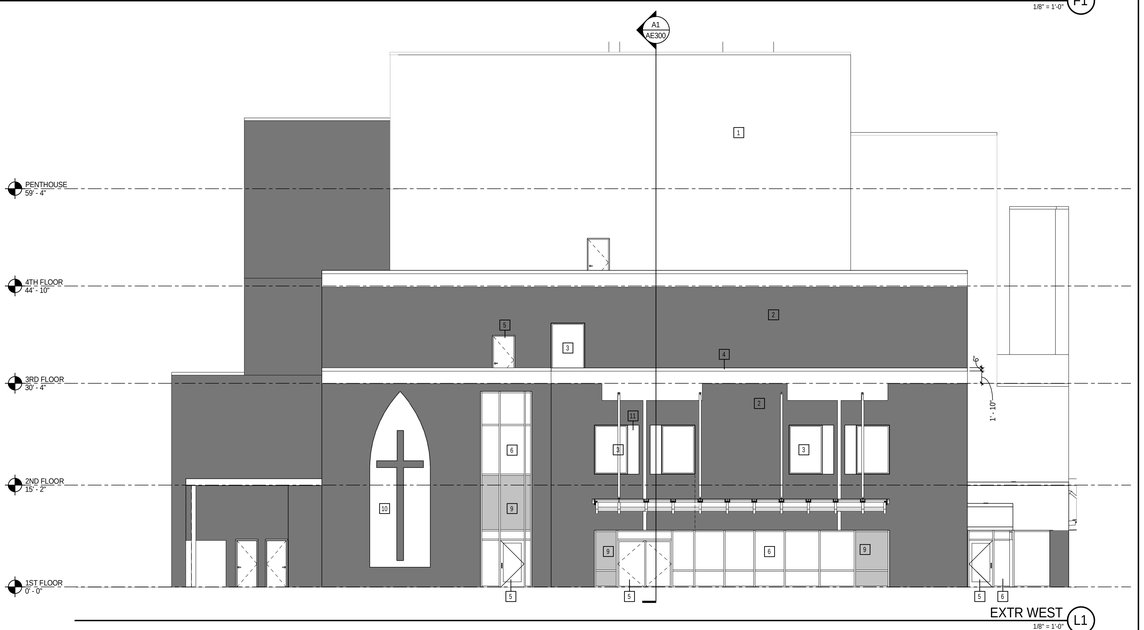
PROJECT MANAGER:	KD	PROJECT NO:	19004
A/E OF RECORD:	KD		
JOB CAPTAIN:	CAH		A-102
DRAWN BY:	CAH		
SMRT FILE:	A-102-19004	SHEET No.	

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30x42







EXTERIOR KEYED NOTES:

1. METAL PANEL TO MATCH EXISTING PENTHOUSE
2. BRICK VENEER
3. ALUMINUM WINDOW
4. 6" CAST STONE TRIM BAND
5. ALUMINUM DOOR AND FRAME
6. ALUMINUM STOREFRONT
7. CANOPY, RE:AE501
8. NEW RETAINING WALL, COORDINATE W/ CIVIL DRAWINGS BY OTHERS
9. SPANDREL PANELS
10. RELIGIOUS ICONOGRAPHY/HOSPITAL BRANDING, DESIGN TBD
11. CAST STONE PANEL, RE XX/AEXXX
12. NEW RAMP AND STAIRS, TBD

REV	DESCRIPTION	DATE

DESIGN DEVELOPMENT
7-31-2019

CURRENT ISSUE STATUS:

SMRT Architects and Engineers
144 Fore Street/P.O. Box 618
Portland, Maine 04104
ARCHITECTURE | ENGINEERING | PLANNING | INTERIORS | ENERGY

MERCY FORE RIVER CAMPUS CONSOLIDATION
MERCY HOSPITAL - PHASE 2
175 FORE RIVER PARKWAY

EXTERIOR ELEVATIONS

SHEET TITLE:

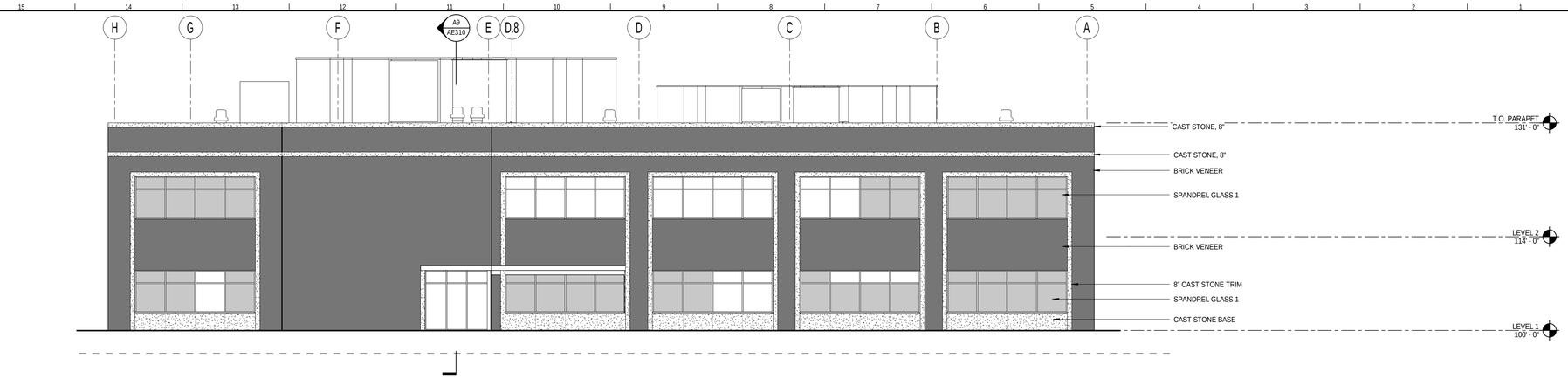
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SCALE: AS NOTED

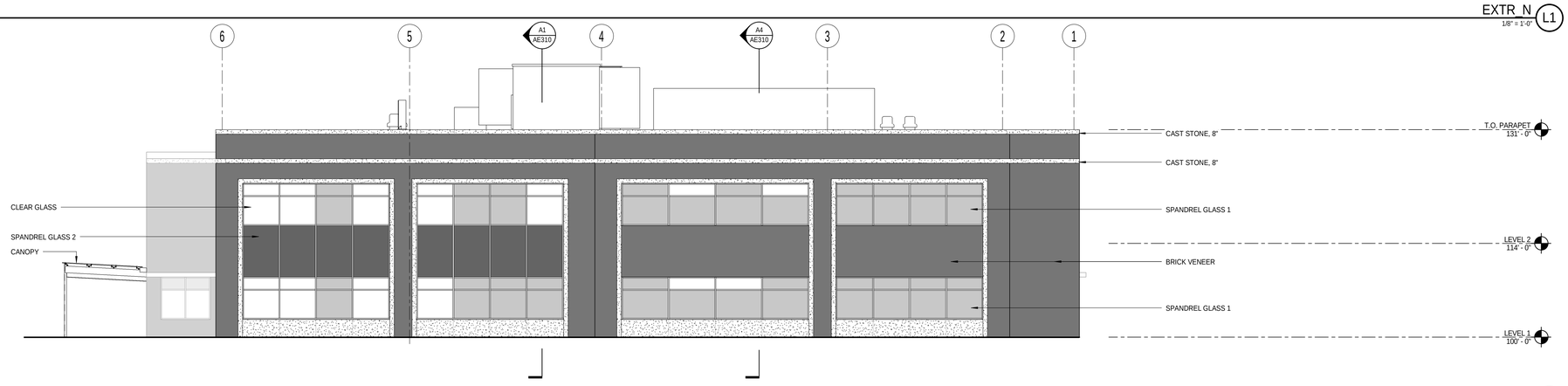
PROJECT MANAGER:	KD	PROJECT NO:	19002
A/E OF RECORD:	KD		
JOB CAPTAIN:	JCH		
DRAWN BY:	JCH		
SMRT FILE:	AE200-19002	SHEET No.	AE200

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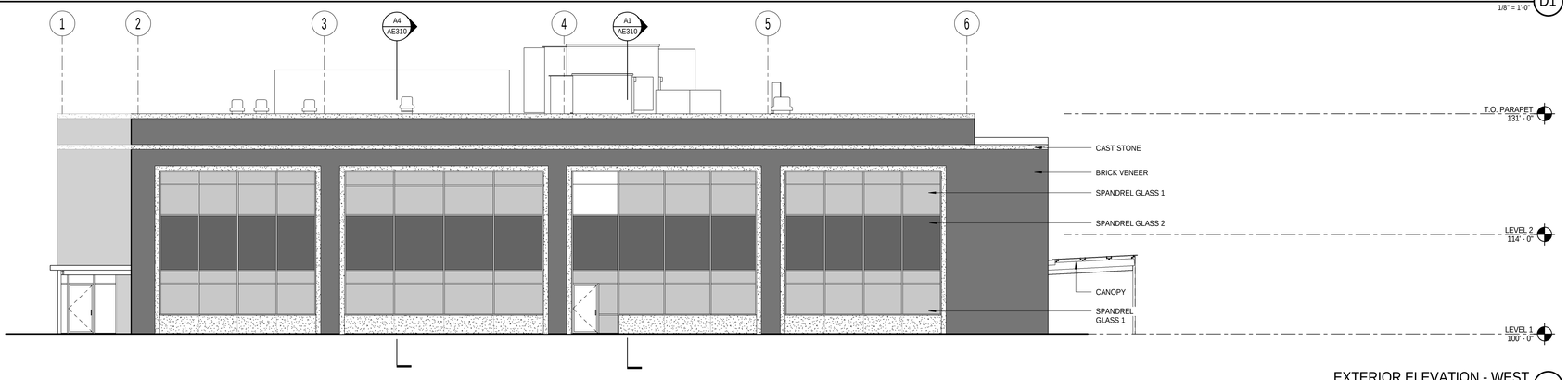
EXTR_N
1/8" = 1'-0" L1



EXTERIOR ELEVATION - EAST
1/8" = 1'-0" H1



EXTERIOR ELEVATION - SOUTH
1/8" = 1'-0" D1



EXTERIOR ELEVATION - WEST
1/8" = 1'-0" A1

REV	DESCRIPTION	DATE

DESIGN DEVELOPMENT
7-31-2019

CURRENT ISSUE STATUS:

SMRT Architects and Engineers
144 Fore Street/P.O. Box 618
Portland, Maine 04104

ARCHITECTURE | ENGINEERING | PLANNING | INTERIORS | ENERGY

MERCY HOSPITAL
AMBULATORY SURGERY CENTER

Portland, ME

EXTERIOR ELEVATIONS

SHEET TITLE:

0" 1/4" 1/2" 1" 2" 3"

SCALE: AS NOTED

PROJECT MANAGER:	KD	PROJECT NO:	19004
A/E OF RECORD:	KD		
JOB CAPTAIN:	CAH	AE200	
DRAWN BY:	CAH		
SMRT FILE:	AE200-19004	SHEET No.	

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Memorandum
Planning and Urban Development Department
Planning Division

To: Sean Dundon, Chair and Members of the Portland Planning Board
From: Shukria Wiar, Planner
Date: January 24, 2020
Re: 879 Congress Street Rezone
Project ID ZN-000823-2019 **CBL** 053 I016
Meeting Date: January 28, 2020

I. INTRODUCTION

879 Congress LLC proposes a zoning map amendment for the property at 879 Congress Street in the West End. The property is currently zoned R-6 Residential; the applicant proposes to rezone it to B-2b Community Business. The applicant has stated that rezoning the site to B-2b will best allow them to develop a mixed-use building with commercial uses on the ground floor and residential units above.

Figure – Aerial of the Development Site



A legal ad for the Board workshop was posted on the city's web page and appeared in the *Portland Press Herald* on January 18 and January 20, 2020. Notices were also sent to 106 property owners within 500 feet of the site and to the interested citizen list.

Applicant and Property Owner: Paul Peck, 879 Congress Street LLC

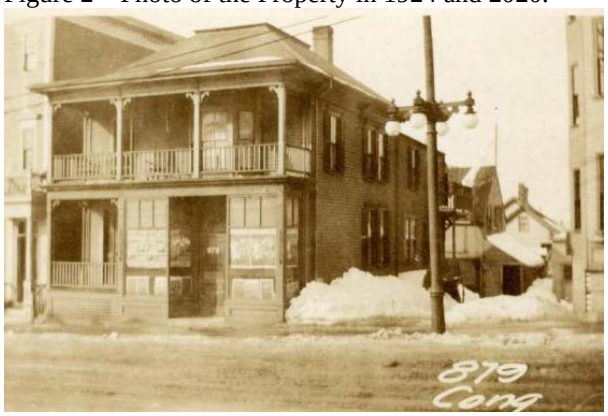
II. PROPOSED MAP AMENDMENT

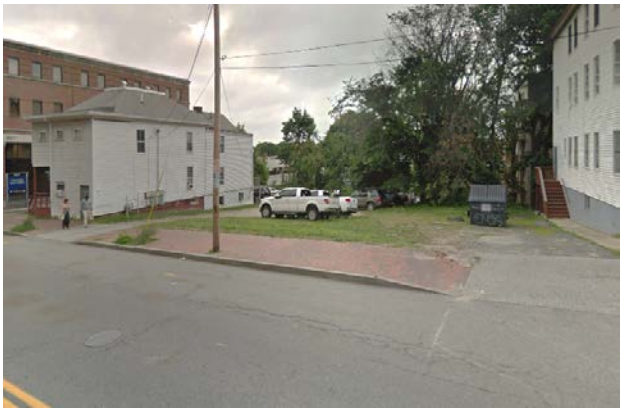
Current Zoning: R-6 (Residential)
Proposed Zoning: B-2b (Community Business)
Current Uses: Residential
Proposed Uses: Mixed-use with first floor commercial (restaurant) and upper floor residential
Parcel Area: 11,889 SF
Area to be Rezoned: 11,889 SF

III. BACKGROUND

879 Congress Street site, which consists of three parcels, is currently occupied by a two-story, five-unit apartment building on the eastern half of the site. The remainder of the site is dedicated to surface parking. The total area of the combined parcels is 11,889 SF. The lot is approximately 114 feet wide and 106 feet deep.

Figure 2 – Photo of the Property in 1924 and 2020.





The site lies at the intersection of several zones. The property itself is zoned R-6; as such, it is surrounded on two sides by mostly residential uses, including some large multi-family housing to the east. Most of the adjacent housing is of a scale characteristic of the city's West End. A Maine Medical Center IOZ zone lies to the west and across Congress Street. To the west, about a block away, is the B-2 zone. The B-2 and B- 2b zones are the nearest commercial zones; B2-b is to the east of the site along on Congress Street. This B-2b zone includes restaurant, retail, office, and residential uses.

IV. PROPOSED CONCEPTUAL DEVELOPMENT

Figure 3- Proposed Conceptual Building

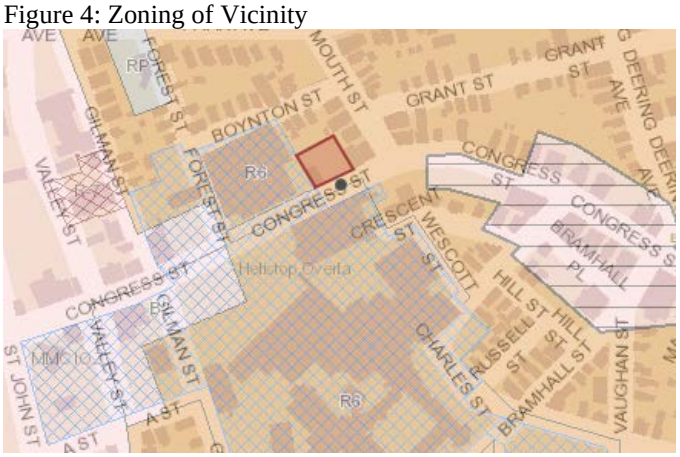


The applicant is proposing the zone amendment so they can construct a four to five story apartment building with twenty-seven (27) housing units, as well as ground floor restaurant and/or retail use. The applicant envisions the exterior of the building be energy efficient with architecturally appropriate mix of masonry, steel and cement board.

V. ZONING ANALYSIS

The applicant proposes to develop approximately 27 residential units of high-density housing on the site as well as first floor commercial space and, in particular, a retail and/or restaurant. The underlying zone precludes this plan, however, on at least two counts. The existing R-6 zoning allows a density of one unit/1,000 SF of lot area for the first three units and one unit/1,200 SF thereafter, a density that the applicant has stated is too low to support the project. Secondly, restaurant uses are not permitted in the R-6 zone; nor are other commercial establishments, such as retail or office. For this reason, the applicant has requested a rezoning to B-2b, which allows housing at a density of one unit/435 SF and restaurant and office uses by right.

Figure 4: Zoning of Vicinity



In the process of review, City staff assessed other alternatives to the B-2b that includes the B-2 Community Business zone, which is represented in the nearest business zone and has been used in similar locations around the city. Although this zone would allow the housing density desired by the applicant, logistically the B-2b works since that portion is that zone. Likewise, staff considered the R-7 Residential zone, which allows a higher residential density and has been used for other large residential projects on the peninsula. As in the R-6, however, restaurants are not allowed in the R-7.

The following chart compares the current R-6 zone and the proposed B-2b zone; the charts show the purpose statements, permitted uses, and dimensional requirements of each zone.

Purpose
The existing R-6 zoning is designed to promote dense, neighborhood-scale housing. The purpose of the R-6 zone, which can currently be found mainly in the East and West Ends of the city, is to "set aside areas…for housing characterized primarily by multi-family dwellings at a high density" and to "conserve the existing housing stock and residential character of neighborhoods by controlling the scale and external impacts of professional offices and other nonresidential uses" *(Section 14-135).*

The B-2b zone, in contrast, is written to encourage commercial development, particularly neighborhood and community retail, in a compact, urban form. The B-2 and B-2b is expressly written for "arterials and intersections with an existing urban or neighborhood oriented building pattern" *(Section 14-181).* The B-2b can be found on Congress Street east and west of downtown, Washington Avenue, St John Street, and Forest Avenue.

Table 1: Purposes

	R-6 Residential	B-2b
Purpose	To set aside areas on the peninsula for housing characterized primarily by multifamily dwellings at a high density providing a wide range of housing for differing types of households; and to conserve the existing housing stock and residential character of neighborhoods by controlling the scale and external impacts of professional offices and other nonresidential uses. In cases of qualifying small, vacant, underutilized lots located in the urban residential and business zone, to encourage new housing development consistent with the compact lot development pattern typically found on the peninsula.	The B-2b zone is intended to provide neighborhood and community retail, business and service establishments that are oriented to and built close to the street. The B-2b zone is appropriate in areas where a more compact urban development pattern exists such as on-peninsula or in areas off-peninsula where a neighborhood compatible commercial district is established which exhibits a pedestrian scale and character. Such locations may include the peninsula and other arterials and intersections with an existing urban or neighborhood oriented building pattern.

Permitted Uses
The R-6 zone clearly encourages high-density housing, and permits most housing types by right. However, the R-6 zone does not permit most non-residential uses, and commercial uses are excluded entirely. Some institutional uses are conditionally permitted. The Business B-2b zone clearly permits both the residential uses permitted in the R-6 zone as well as a host of commercial, institutional, and other establishments. The B-2b is slightly more permissive, permitting office uses, personal services, business services, and retail establishments, as well as funeral homes, health clubs, theaters, hotels, dairies, bakeries, and veterinary hospitals, among others. Restaurants are permitted by right in the B-2b.

Table 2: Permitted and Conditional Uses – Shown with X if listed in Zone

			R-6	B-2b
Permitted	Residential	Single-family and two-family dwellings	x	x
		Multi-family dwellings	x	x [1]
		Handicapped family units	x	x
		Single-family manufactured housing	x	
		Combined living/working spaces		x
		Lodging houses	x	x
	Institutional	Schools		x
		Clinics		x
		Places of assembly		x
		Long term, extended and intermediate care facilities		x
		Governmental buildings and uses/municipal uses	x	x
		College, university or trade schools		x

Table 2: Permitted and Conditional Uses – Shown with X if listed in Zone

			R-6	B-2b
		Nursery schools, kindergartens		
		Day care facilities		x
	Business	General, business & professional offices		x
		Personal services		x
		Offices of building tradesmen		x
		Retail establishments		x
		Restaurants		x
		Drinking establishments		x
		Billiard parlors		x
		Mortuaries or funeral homes		x
		Miscellaneous repair services, excluding motor vehicle repair		x
		Communication studios or broadcast and receiving facilities		x
		Health clubs and gymnasiums		x
		Veterinary hospitals		x
		Theaters		x
		Hotels		x
		Dairies and bakeries		x
		Drive-throughs when accessory to a principal use		x
		Registered medical marijuana dispensaries		x
	Other	Accessory uses	x	x
		Cemeteries	x	
		Parks	x	
		Home occupation	x	
		Special needs independent living units	x	
		Conversion into bed and breakfast	x	
		Hostels	x	x
		Wind energy systems	x	x
		Utility substations		x
		Bed and breakfasts		x
		Studios for artists and craftspeople		x
Conditional	Residential	Sheltered care group homes	x	
		Conversion into bed and breakfast (over 5 rooms)	x	
	Institutional	Schools	x	
		Long-term and extended care facilities	x	
		Intermediate care facility	x	
		Places of assembly	x	
		Hospital	x	
		College, university, trade schools	x	
	Business	Major and minor auto service stations existing as of 1999		x
		Car washes		x

Table 2: Permitted and Conditional Uses – Shown with X if listed in Zone

			R-6	B-2b
		Drive-throughs associated with a permitted use adjacent to residential zones		x
		Automobile dealerships		x
	Other	Utility substations	x	
		Professional offices	x	
		Chancellery	x	
		Nursery school and kindergartens	x	
		Off-street parking for passenger cars for permitted uses	x	
		Day care facilities	x	
		Temporary wind anemometer towers	x	x
		Hostels	x	
		Wind energy systems	x	x
		Printing and publishing establishments		x
		Wholesale distribution establishments		x
		Research and developments and related production establishments		x

[1] If nearest residential zone is R-4, R-5, R-6, or R-7 or if first floor is used for commercial purposes.

Dimensional Requirements and Form

Though the R-6 explicitly encourages high density housing, the existing R-6 zoning provides certain density controls – minimum area per dwelling unit, maximum lot coverages, and minimum open space ratios – that limit the buildout of any given parcel. The R-6's requirement for density, 725 SF of lot area required per dwelling unit, would limit the residential buildout of the parcel to approximately 16 units. The R-6 also poses structure stepback requirements state that the '*Portions of a structure above 35 ft shall be no closer than 10 ft from the side property line and no closer than 15 feet from the rear property line when such property line abuts a residential zone*', which guarantees that buildings will be separated both from each other and the street.

The city's business zones generally encourage a more dense, urban form. The B-2b zone has no lot coverage limits or required open space ratio, and the setbacks are considerably smaller. Further, the B-2b allows one dwelling unit for each 435 SF of lot area, or more than the number of units allowed in the R-6 (twenty-seven (27) is allowed in the B-2b zone). The B-2b also allows a slightly taller building than the R-6, 50 feet, so long as the first floor is occupied by a commercial use.

Table 3: Dimensional Requirements

	R-6[1]	B-2b
Min. Lot Size	2,000 SF (depending on use)	None
Min. Lot Area per D.U.	725 SF (depending on use)	435 SF if active street frontage
Min. Street Frontage	20 ft.	20 ft.
Min. Lot Width	20 ft.	
Min. Front Yard	10 ft.	None
Max. Front yard	5 ft. or the average depths of adjacent front yards	10 ft., except for irregularly shaped lots or lots with < 40 ft. of frontage
Min. Rear Yard	10 ft.	10 ft.; 5 ft. for accessory structures
Min. Side Yard	5 ft. except that a side yard in the R-6 zone may be reduced to zero, provided that the cumulative side yard setbacks are not less than 10 ft.	None; 5 ft. for accessory structures
Max. Structure Height	45 ft.	45 ft., except 50 ft. if first floor is occupied by a commercial use
Max. Lot Coverage	60%	
Open Space Ratio	20%	

[1] Additional dimensional requirements apply for small residential lot development, bed and breakfasts, places of assembly

VI. LAND USE POLICY

The applicant has submitted their analysis of the project's conformance with the Comprehensive Plan (refer to Attachment E). The staff has identified the following goals and policies which are relevant to the proposed housing development and finds the proposal in conformance with the Comprehensive Plan. As stated, the purpose of the B-2b Zone is:

> *The B-2b zone is intended to provide neighborhood and community retail, business and service establishments that are oriented to and built close to the street. The B-2b zone is appropriate in areas where a more compact urban development pattern exists such as on-peninsula or in areas off-peninsula where a neighborhood compatible commercial district is established which exhibits a pedestrian scale and character. Such locations may include the peninsula and other arterials and intersections with an existing urban or neighborhood oriented building pattern.*

The central vision of Portland's Plan 2030 is represented by the venn diagram demonstrating the integral interrelation of the community's core belief that Portland is equitable, sustainable, connected, dynamic, authentic and secure. The vision conveys the message of the City's need to balance many competing needs to assure the advance of the vision as a unified concept. In this instance, that the City's goals for job growth and transforming Portland through orderly growth and development be balanced with needs for connectivity of the street grid, sustainability of infrastructure and the ability to maintain that infrastructure, and security in the sense of public safety.



Housing: A Livable City

State Goals: To encourage and promote affordable decent, housing opportunities for all Maine citizens

Local Goals:

- Increase, preserve, and modify the overall supply of housing City-wide to meet the needs, preferences and financial capabilities of all Portland households.
- Encourage additional contextually-appropriate housing density in and proximate to neighborhood centers, concentrations of services, and transit nodes and corridors as a means of supporting complete neighborhoods.
- Pursue policies to enable people who work in Portland to have the option to live in Portland.
- Encourage quality, sustainable design in new housing development.

Goals from Future Strategies:

3. Remove Housing Barriers

- Evaluate whether current zoning allows for new development consistent with historic patterns of form, density and/or use, as well as whether it allows for priority growth areas.
- Identify priority growth areas.
- Allow for a range of housing models in City codes, whether small units, co-housing, or others that may suit changing needs and demographics.

A Vibrant City

5. TARGET AREAS FOR JOB GROWTH

- Ensure that new employment can be accommodated in priority growth areas across the City.
- Evaluate zoning and the condition of existing infrastructure in priority areas - downtown, in identified neighborhood nodes, and along transit corridors – to ensure that employment and housing growth can be supported.
- Expand possibilities for live/work spaces – residential living space with integrated creative work space.
- Modify ordinances and make strategic investments to better promote business development and job creation in priority areas.

Future Land Use

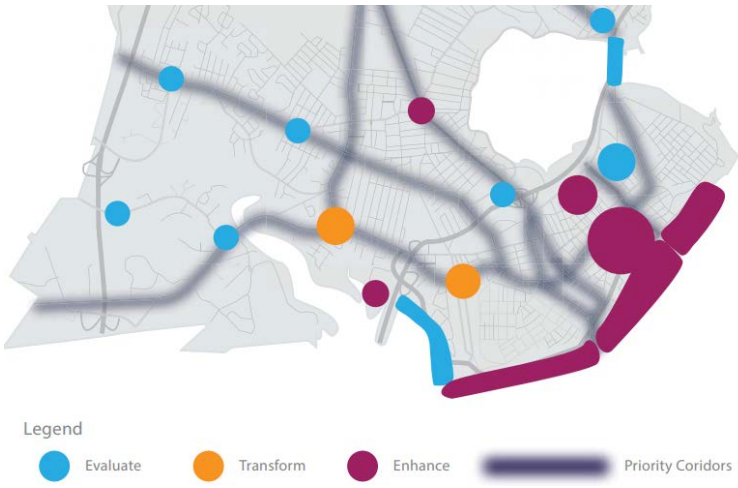
Portland's plan for Future Land Use places emphasis on areas most important to its growth over the next ten years. It includes three maps: a map depicting current dominant land use patterns, a map showing a connected network of trails and open spaces, and a map of corridors and nodes that are poised to accommodate additional growth. These maps are best understood in the context of the plan's principles for future growth. The Libbytown area is one of the priority growth nodes identified in the plan as an area for potential future transformation.

Priority growth areas include the following elements:

1. *Priority nodes:* Nodes are areas with concentrated mixed-use activity, which can occur at varying scales and serve varying catchment areas - Portland's downtown supports a large successful node, for example, but nodes can also be found at smaller convergences and intersections throughout the City. As mapped, nodes are not meant to sharply delineate boundaries, but to indicate general areas in need of further planning or investment. The nodes identified by the map may have seen disinvestment, grown in sprawling patterns, or simply have the potential to serve as focal points for change in density or, height, streetscape, or uses to better serve neighborhood needs. These nodes are placed into three broad categories that correspond with their respective stage of planning or investigation at the present time.

- Evaluate: Areas as diverse as East Bayside and Allen's Corner, where the City recognizes the need to review existing conditions and develop a strategy for future change. These nodes should be assessed for their ability to address neighborhood needs and serve as centers for complete neighborhoods;
- Transform: Areas such as Morrill's Corner, which have been previously recognized as areas of significant potential transformation, but which need comprehensive revisioning; and
- Enhance: Areas such as Woodford's Corner, or the Eastern, Central and Western Waterfronts, which have been studied and are awaiting or in the midst of plan implementation.

2. *Priority corridors* The Priority Nodes & Corridors Map identifies key corridors - those that connect major nodes and neighborhoods and therefore serve as major commuter routes - as areas for additional planning and investment. Priority corridors are major arterials that often see heavy vehicular traffic, but also have the capacity to improve mobility by capitalizing on their potential for increased walking, bicycling, and transit use. Priority corridors can also serve as areas of additional mixed-use, higher density growth to take advantage of the transit benefits and services that well-designed, diverse corridors can offer. The Congress Street Corridor in Libbytown is one of Portland's priority corridor.



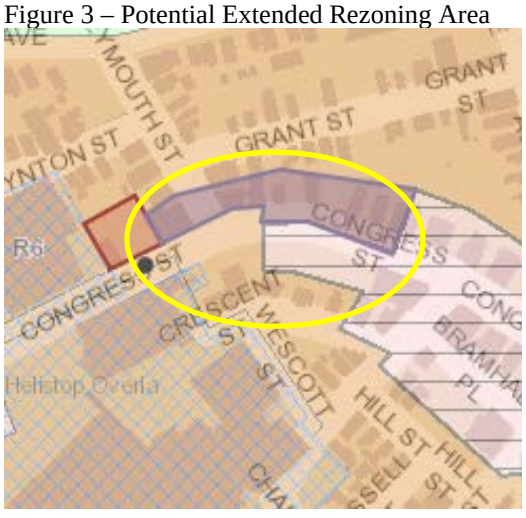
VII. PUBLIC COMMENT/NEIGBHORHOOD MEETING

Notices were sent to one hundred and six (106) residents and the interested citizen list. The notice also appeared in the Portland Press Herald on January 18 and January 20, 2020, as well as being posted on the City's web page. The Planning Division has received one public comment from Aaron Duffy, in which he supports this zone amendment and requests his property at 847-851 Congress Street be also included in the rezone. A neighborhood meeting has not been held. The applicant is aware that a neighborhood meeting will need to take place prior to the public hearing.

VIII. CONSIDERATION OF EXTENDED REZONING AREA

Generally, when a Zoning Map Amendment is reviewed, the Planning Board examines the proposed boundaries comprehensively and considers other adjacent areas that may be appropriate candidates for a similar rezoning. This may result in the Board contemplating and noticing for a larger geographic area for the purposes of holding a public hearing, which can be reduced in scope when the Board formulates its recommendation to the City Council. 879 Congress LLC requested a map amendment for their site only. However, upon further consideration, the Board may wish to extend the rezoning area to include the additional lots abutting the parcel on Congress Street in order to rationalize the zoning boundaries; please see map.

Figure 3 – Potential Extended Rezoning Area



IX. NEXT STEPS

- Provide initial feedback on map amendment request
- Obtain Planning Board feedback on the extended rezoning area
- Address any additional information requested by the Planning Board
- Schedule a public hearing or a second workshop

X. ATTACHMENTS

A. PUBLIC COMMENTS

PC1 Aaron Duffey 11-6-19

B. APPLICANT'S ATTACHMENTS

A. 879 Congress LLC Cover letter
B. 879 Congress LLC Application Comprehensive Plan
C. 879 Congress LLC Application Project Description
D. 879 Congress LLC Proposed Map Amendment
E. 879 Congress Checklist
F. 879 Congress Vicinity Map updated
G. 879 Vicinity Map
H. Context Google Map 873-879 Congress (1)
I. Context Zoning 873-879 Congress final
J. Congress Deed
K. Congress Lease with Option
L. Architectural Drawings

Attachment A.

879 Congress LLC
PO Box 7589
Portland, Maine 04112
207-712-5891
paul@lwsdevelopment.com

RE: Map Amendment Application R6 zone to B-2b Community Business Zone
879-873 Congress Street
Lots: 053-1016, 1017, 1018

Dear Planning Board

On behalf of 879 Congress LLC, I am uploading into ePlan an application for Map Amendment for our land located at 879-873 Congress Street. The land is currently zoned R6 and we are requesting the zone be changed to B-2b, the Community Business Zone.

Along with this letter I have uploaded to ePlan the following:

a. Completed Submission Checklist.

b. Project Description.

c. Elevation Plans depicting the project we would like to build.

d. Our deed and option to purchase evidencing our right, title and interest.

e. Consistency with Comprehensive Plan.

f. Proposed Map Amendment.

g. Vicinity Map.

Please advise when the application is complete so we can timely hold the required neighborhood meeting.

Thank you very much.

Paul Peck
Member 879 Congress LLC

Attachment B.

879 Congress LLC PO Box 7589 Portland Maine 04112 207-712-5891

RE: **Map Amendment / Consistency with Comprehensive Plan**

LN-000823-2019 / 879-873 Congress Street

9/30/19

On behalf of 879 Congress LLC we respectfully request the City approve our Map Amendment Application to change our parcels zone from R6 to the B-2b Community Business Zone.

The current use of the 3 parcels is a 2 story older multi-unit apartment building with two vacant lots. A change in the zone to B-2b will allow the parcels to be used for more compact urban infill development. Our intended use of the lots is to construct a multi-unit apartment building with street level restaurant or retail.

Consistency with Comprehensive Plan: The requested map amendment will help further the goals, policies and land use plan of Portland's Comprehensive Plan for the following reasons:

a. The B-2b zone will help to leverage our underutilized site. Activating and better utilizing underutilized sites is a goal of the Comprehensive Plan.

b. Our goal is to build a multi-unit apartment building with street level restaurant or retail. The B-2b zone will afford us the opportunity to increase housing units next to Portland's largest employer. Our properties current R6 zoning is inconsistent with the on peninsula zoning along Congress St. and acts as a barrier to infill development and housing density. Increasing housing density in Portland's walkable on peninsula urban environment is a dominate theme of the Comprehensive Plan.

c. If given the opportunity our multi-unit apartment building will allow for the creation of affordable housing units through the inclusionary zoning ordinance and through the developers desire to help meet the workforce housing needs of the city.

d. The B-2b zone will allow the construction of a state of the art building that will be age friendly, safe and accessible to all which are stated goals of the Comprehensive Plan.

e. The B-2b zone will expand the possible uses of the site which will provide the neighborhood with access to goods and services not necessarily currently offered.

f. The B-2b zone will allow for greater density in an area well served by public transportation therefore furthering the Comprehensive Plan's goal of encouraging Transit-Oriented Development.

g. Congress Street is classified by the Comprehensive Plan as a Priority Corridor and the St. John Street area Node is the an area targeted to be transformed. The requested zone change will enhance the corridor and help transform the St. John Street Node.

h. The Comprehensive Plan calls for additional mixed use development along the identified priority corridors of which Congress Street is one. The plan also envisions higher density growth in existing high density areas. There is high density and mixed use development up and down Congress Street. Our immediate abutter to the west is the MMC garage which towers over our site and is in the MMC IOZ which allows for 100 foot plus buildings. Across the Street is also the MMC IOZ and the Crescent Heights MMC resident housing complex. Our immediate abutter to the east is an 11 unit older apartment building, then a church and then on the corner of Congress and Weymouth a mixed use building with commercial use on the street level. The Map Amendment will further the goals of the Comprehensive Plan by allowing more density in an area targeted by the plan for smart mixed use growth.

i. The Comprehensive Plan also encourages neighborhood input and engagement. We have already shared our plans with the area neighborhood association which expressed support and encouragement for our proposed map amendment and project.

In sum we believe the Map Amendment we are seeking will enhance the neighborhood and is 100% consistent with and furthers the objectives of Portland's Comprehensive Plan.

879 Congress LLC
Paul E. Peck
Its: Manager

Attachment C.

879 Congress LLC PO Box 7589 Portland Maine 04112 207-712-5891

RE: Map Amendment Project Description

LN-000823-2019 / 879-873 Congress Street

10/14/19

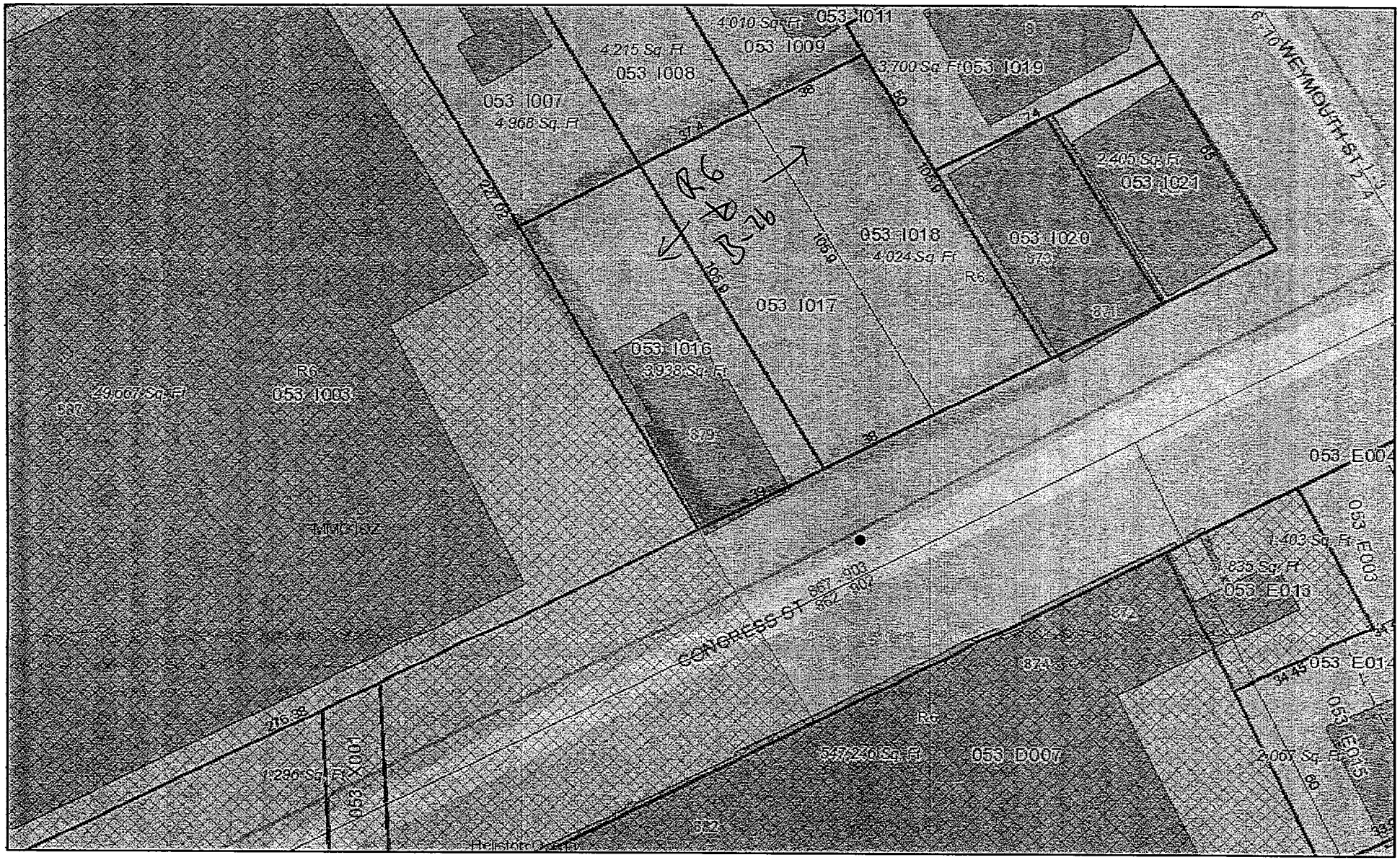
Project Description:

The B-2b Community Business Zone will afford us the opportunity to build a 4 to 5 story apartment building with 27 housing units +- and ground floor restaurant or retail use. We envision and as depicted on the submitted preliminary elevation plans, the exterior of our energy efficient building will be an architectural pleasing mix of masonry, steel and cement board. The building will comply with all city and state building codes and will be accessible to all.

The property being proposed for the Map Amendment consists of Lots 053-1016, 1017 and 1018. The total area of the combined parcels is 11,889 sqft. The lot is approximately 114 feet wide and 106 feet deep. The parcel is currently improved with an older style story 5 unit apartment building.

879 Congress LLC
Paul E. Peck
Its: Member

ArcGIS Web Map



9/26/2019 3:11:44 PM

1:487

0 0 0.01 0.02 mi

0 0.01 0.01 0.02 km

City of Portland, DPS

Zoning

- IR-1 Island Residential
- IR-2 Island Residential
- IR-3 Island Residential
- I-B Island Business
- I-TS Island Transfer Station
- R1 Residential
- R2 Residential
- R3 Residential
- R4 Residential
- R5 Residential
- R-5A Residential
- R6 Residential
- R-6A Residential

Web AppBuilder for ArcGIS
City of Portland, DPS |

Attachment D.

Attachment E.

CITY OF PORTLAND
Planning & Urban Development Department

LN-000823-2019

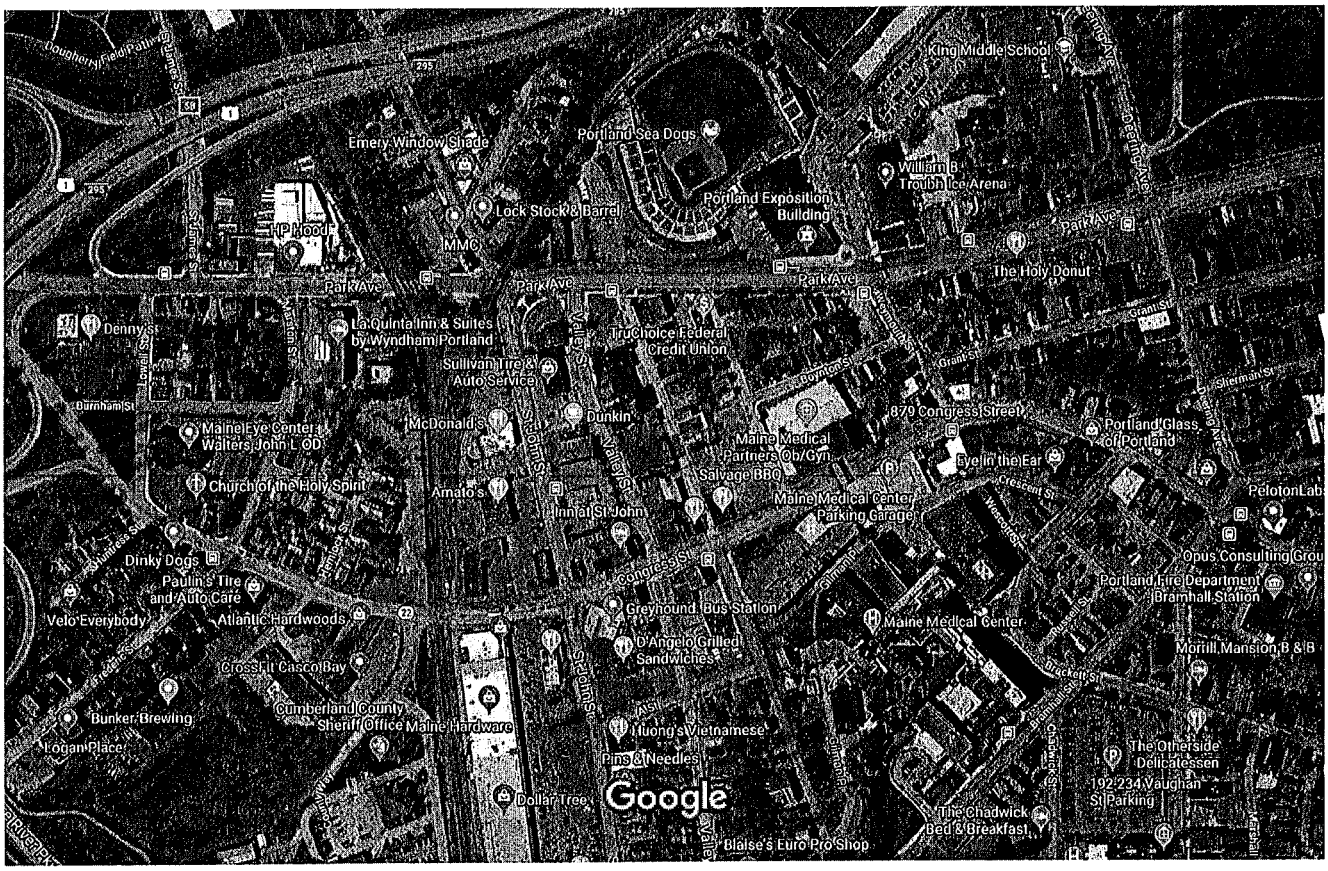
MAP AMENDMENT SUBMISSION CHECKLIST Please submit each document as a separate PDF file Please confirm by electronically checking the boxes to the left	
GENERAL APPLICATION DOCUMENTS	
☑	**Project Description** • Cover Letter with detailed project description
☑	**Consistency with Comprehensive Plan** • Analysis of the consistency of the zone change request with the goals, policies and land use plan of Portland's Comprehensive Plan.
☑	**Completed Checklist – Map Amendment Application** (this document)
☑	**Right, Title and Interest** • Deeds, leases, or purchase and sales agreements
PLANS	
☑	**Vicinity Map**
☑	**Proposed Map Amendment** (please use the Portland zoning map as a reference)
☐	**Site Plan (if applicable)** Provide a site plan of the property showing existing and proposed improvements, including such features as buildings, parking, driveways, walkways, landscape and property boundaries.

Attachment E.

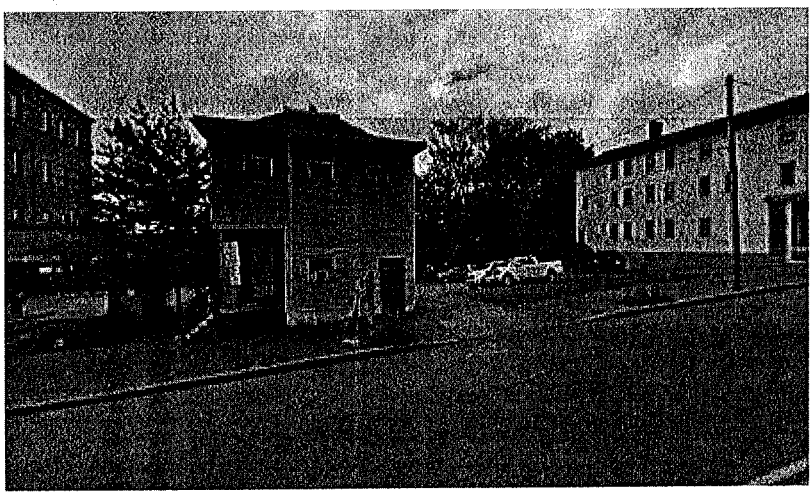


Attachment G.

Google Maps 879 Congress St



Imagery ©2019 Maine GeoLibrary, Maxar Technologies, U.S. Geological Survey, USDA Farm Service Agency, Map data ©2019 200 ft



879 Congress St

Portland, ME 04102

Directions Save Nearby Share

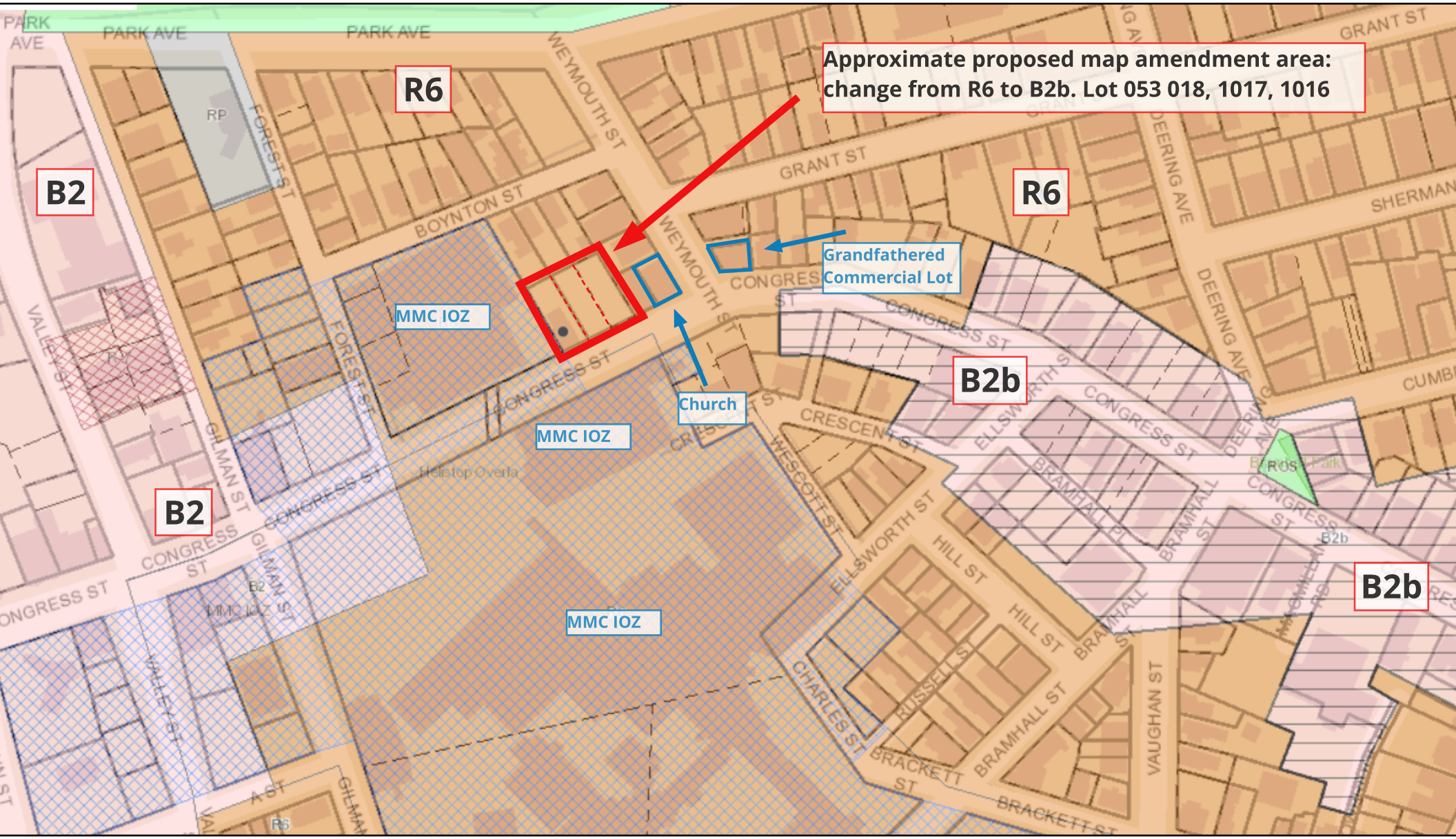
Context Google Map

Attachment H.



Context Zoning Map

Attachment I.



This lot is directly across from the Maine Med. parking garage and commercial spaces. The lot on the upper corner is grandfathered commercial.

Context Google Map



MAINE REAL ESTATE TAX-Paid

WARRANTY DEED

DLN: 1001740016141

GREGORY C. KONTOS and **CAROL A. KONTOS**, both of Windham, County of Cumberland, and State of Maine, for consideration paid, grant to **879 CONGRESS, LLC**, a Maine limited liability company with an office address of P. O. Box 7589, Portland, Maine, 04111, with Warranty Covenants, a certain lot or parcel of land, with any buildings thereon, situated in Portland, on the northerly side of Congress Street, and bounded and described as follows:

> Beginning on the line of said Congress Street at the corner of land formerly of William D. Marriner; thence running northwesterly by line of said Marriner land one hundred five (105) feet; thence southwesterly on a line parallel with the line of said Congress Street thirty-six and twenty-five hundredths (36.25) feet to a point: thence southerly one hundred five (105) feet, more or less, to a point on said Congress Street a distance of thirty-nine (39) feet from the place of beginning; thence northeasterly along the line of said Congress Street thirty-nine (39) feet to the point of beginning.
>
> Also hereby conveying the benefits of the easement described in a deed from Gertrude Bell et al to Thomas P. Blake, dated December 6, 1961 and recorded in said Registry of Deeds in Book 2649, Page 315, this conveyance is made subject to the easement described in a deed from Thomas P. Blake to Gertrude Bell, et al. Recorded in said Registry of Deeds on December 14, 1961 in Book 2649, Page 317.

DOC :43030 BK:34268 PG:106
RECEIVED - RECORDED, CUMBERLAND COUNTY REGISTER OF DEEDS
08/28/2017, 11:26:36A
Register of Deeds Nancy A. Lane E-RECORDED

Together with the following described premises:

Beginning at a point on the northerly line of Congress Street, said point being eleven feet easterly of the southeasterly corner of land described in a deed from Thomas P. Blake to George B. Frederick, Jr. recorded in the Cumberland County Registry of Deeds in Book 4555, Page 75. Thence southwesterly along the northerly line of Congress Street eleven feet to said southeasterly corner; thence northwesterly along the northerly line of said land conveyed from Blake to Frederick to the northeasterly corner of said parcel; thence southeasterly to the northerly line of Congress Street and the point of beginning.

Being the same premises described in a Warranty Deed from Kontos Associates to Gregory C. Kontos and Carol A. Kontos dated June 20, 1988, and recorded in the Cumberland County Registry of Deeds in Book 8340, Page 330.

IN WITNESS WHEREOF, the Grantors have executed this instrument on this 25th day of August, 2017.

Witness

Gregory C. Kontos

Witness

Carol A. Kontos

STATE OF MAINE
ANDROSCOGGIN, SS.

August 25, 2017

Then personally appeared the above-named Gregory C. Kontos and Carol A. Kontos and acknowledged the foregoing instrument to be their free act and deed.

Before me,

Notary Public / Attorney at Law
Print Name: James H. Willman
My Commission Expires: _____

LEASE WITH OPTION TO PURCHASE

THIS LEASE made and entered into as of August 15, 2017, whereby **GREGORY C. KONTOS and CAROL A. KONTOS**, individuals with a mailing address of P.O. Box 1785, Windham, Maine 04062(the "**Landlord**"), do hereby lease to **879 CONGRESS, LLC**, a Maine limited liability company with a mailing address of 306 Congress Street, Suite 3, Portland, Maine 04101 (the "**Tenant**"), the premises situated at 873-877 Congress Street, Portland, Maine (the "**Land**"), which consists of approximately 8048 Square Feet of land, depicted and described on the attached Exhibit A annexed hereto (the "**Premises**").

Section 1. TERM and RENT.

(a) The Lease term shall be for **three (3) years** (the "**Term**") commencing on the **Commencement Date** of August 25, 2017 and terminating on August 24, 2020 (the "**Termination Date**"), unless otherwise extended, renewed or sooner terminated pursuant to the terms herein. The "Commencement Date" shall be August 25, 2017.

(b) Beginnin shall **se Rent**") as follows during the Tern vance **ch term**:

LEASE YEARS	NT	T
1 - 3		

If the first payment of Base Rent shall fall on a day o... than the first day of the month the Base Rent shall be apportioned pro rata on a per diem basis and all future payments of Base Rent and any other payments due Landlord under this Lease should be payable on the first (1st) of the month. Payment shall be made at the address of the landlord set forth above, or at such other place as Landlord may from time to time designate in writing.

(c) Late Payments. In the event any installment of Base Rent, or any other sums due from Tenant to Landlord under this Lease, is not paid as and when due, Tenant shall pay to Landlord, to defray the additional expenses incurred by Landlord in processing such late payment and to compensate Landlord for the economic consequences of such late payment, an administrative fee equal to five percent (5%) of such past due amount, together with interest on the amount past due at ten percent (10%) per year.

Section 2. CHARGES & UTILITIES. Tenant is responsible for the costs of the Premises, taxes, stormwater fees, insurance, and upkeep. Tenant shall pay all the expenses associated with the Premises directly to the taxing authorities, insurance companies and vendors. Landlord, upon receipt, shall mail to Tenant any tax and stormwater invoices and all correspondence received concerning the Premises.

Section 3. USE OF PREMISES. Tenant shall use and occupy the Premises for any legally permissible purpose.

Section 4. CONDEMNATION.

(a) If all or part of the Premises is taken or condemned for a public or quasi-public use, or if a material portion of the Premises is taken or condemned for a public or quasi-public use and the remaining portion thereof is not usable by Tenant in the reasonable opinion of Tenant, this Lease, at the option of Tenant, shall terminate as of the earlier of the date title to the condemned real estate vests in the condemnor or the date on which Tenant is deprived of possession of the Premises. In such event, the

Rent herein reserved and all charges, utilities, and other sums payable hereunder shall be apportioned and paid in full by Tenant to Landlord to that date.

(b) Landlord shall be entitled to receive the entire award in any proceeding with respect to any taking provided for in this Section 5.1, without deduction, unless Tenant exercises its option to purchase, in which case Tenant shall receive the award. Nothing herein contained shall be deemed to prohibit Tenant from making a separate claim, against the condemnor, to the extent permitted by law, for the value of Tenant's moveable trade fixtures, machinery and moving expenses, provided that the making of such claim shall not and does not adversely affect or diminish Landlord's award.

Section 5. INDEMNIFICATION AND INSURANCE.

(a) Tenant agrees to indemnify and hold harmless Landlord from any and all loss, damage, claim, suits, judgments, or liabilities which Landlord may incur, arising by reason of any injury, damage or death to persons or property or any claim on account thereof resulting from use of the Premises by the Tenant, its agents, guests, or invitees, including, without limitation, all costs of defending against such claims and in enforcing this indemnity provision, including reasonable attorneys' fees and costs for such purpose.

(b) Tenant agrees throughout the term of this Lease and any extension or renewal thereof, at its sole cost and expense, to maintain (i) comprehensive general public liability insurance naming Landlord as an additional insured.

(c) In the event that Tenant shall fail to carry and maintain the insurance coverages set forth in this Section, Landlord may upon thirty (30) days notice to Tenant (unless such coverages will lapse in which event no such notice shall be necessary) procure such policies of insurance and Tenant shall be liable to Landlord for Landlord's costs in obtaining said policies.

(d) Landlord and Tenant hereby waive any rights each may have against the other on account of any loss or damage occasioned to Landlord or Tenant, as the case may be, their respective property, the Premises, its contents or to the other portions of the Building, arising from any risk covered by all risks fire and extended coverage insurance of the type and amount required to be carried hereunder, provided that such waiver does not invalidate such policies or prohibit recovery thereunder.

Section 6. ALTERATIONS AND IMPROVEMENTS. Tenant covenants and agrees, that it will not, without the consent in writing of Landlord, which consent shall not be unreasonably withheld, conditioned or delayed, make any alterations, improvements or additions to the Premises. All alterations, improvements, additions or fixtures, whether installed before or after the execution of this Lease, shall remain upon the Premises at the expiration or sooner termination of this Lease and become the property of Landlord, unless Landlord gives written notice to Tenant prior to the termination of the Lease to remove the same, in which event Tenant will remove such alterations, improvements and additions, and restore the Premises to the same good order and condition in which it was at the Commencement Date. Should Tenant fail so to do, Landlord may do so, and the cost and expense thereof shall be treated as past due and late additional rent due Landlord. Tenant shall not suffer or permit any lien of any nature or description to be placed against the building, the leased Premises or any portion thereof, and in the case of any such lien attaching by reason of the conduct of Tenant to immediately pay and remove the same; this provision shall not be interpreted as meaning that the Tenant has any authority or power to permit any lien of any nature or description to attach or to be placed upon the Landlord's title or interest in the leased Premises, or any portion thereof.

Section 7. REPAIRS & MAINTENANCE. Tenant agrees with the Landlord that while the Tenant holds the Premises or any part thereof, and except as otherwise expressly provided herein, the Tenant will perform all maintenance, repairs and replacement for the Premises.

Section 8. SUBLETTING. Tenant shall be permitted to assign or sublet any part or the whole of the Premises or permit any other person or persons to occupy the same without obtaining permission of the Landlord.

Section 9. SIGNS. All signs placed upon the Premises by Tenant must be compliant with the City of Portland sign ordinance.

Section 10. NOTICES. Written notice from the Landlord to the Tenant and from Tenant to Landlord shall be deemed to have been properly given two (2) days after deposit in the U.S. Mail if mailed by registered or certified mail to the other party at the address set forth above, or the date delivered if hand-delivered.

Section 11. DEFAULT. (a) Tenant Default. If (i) the Premises shall be abandoned by Tenant, or the estate hereby created shall be taken by process of law, (ii) Tenant fails to make any timely payment of any installment of Rent or any other sum due under this Lease after 10 (ten) days notice from Landlord, (iii) Tenant shall default in the faithful observance or performance of any other covenant to be performed or observed by Tenant under this Lease for thirty (30) or more days after Landlord gave Tenant notice in writing of such default and a demand to cure the same provided that such cure period shall be extended while Tenant diligently and in good faith attempts to cure any such default, (iv) there shall be filed by or against Tenant a petition under any Chapter or Chapters of the Bankruptcy Code of the United States or any other insolvency proceeding relating to the debts of Tenant shall be brought by or against Tenant (in which event Tenant shall have a period of thirty (30) days to secure its dismissal), or (v) Tenant shall make an assignment for the benefit of creditors, or shall be insolvent or unable to pay its debts as they mature, or a receiver shall be appointed for Tenant or any substantial part of its property, then and in any one or more of such events, Landlord may, at Landlord's sole election, enter the Premises and expel Tenant and those claiming under it, and remove its and their effects, and/or notify Tenant that the term of this Lease has terminated, and in either case the term hereof shall terminate upon such entry or the giving of such notice, whichever shall first occur, and Tenant shall thereupon quit and surrender the Premises to Landlord. In case of termination of the term of this Lease for any such cause, and in either manner above provided, Landlord shall be deemed to have waived no rights or other remedies hereunder, at law or in equity, and shall be entitled to recover arrearages of rent, damages as for breach of contract, which shall include, without limitation, the amount of the total rent reserved under this Lease for the full term as if the same had not been terminated, less any proper credits, and Landlord's reasonable attorneys' fees and any other expenses of Landlord incurred in connection with the retaking of possession of the Premises and the removal and storage of Tenant's effects and the recovery of damages or the exercise of other rights or remedies.

(b) Landlord Default. Landlord shall in no event be in default in the performance of any of its obligations hereunder unless and until Landlord shall have failed to perform such obligations within thirty (30) days or such additional time as is reasonably required to correct any such default after written notice by Tenant to Landlord properly specifying wherein Landlord has failed to perform any such obligation. Further, if the holder of the mortgage on the building of which the leased premises are a part notifies Tenant that such holder has taken over Landlord's rights under this lease, Tenant shall not assert any right to deduct the cost of repairs or any monetary claim against Landlord from rent thereafter due and accruing, but shall look solely to the Landlord for satisfaction of such claim.

Section 12. INSPECTION. Landlord or its agents may enter to examine the Premises at reasonable times to view the Premises.

Section 13. COMPLIANCE. Tenant shall comply with any and all laws, ordinances, and regulations (federal, state, county or municipal), now or hereafter in force applicable to the Premises, relating

to the use or occupancy thereof or to the making of repairs, changes, alterations or improvements, ordinary or extraordinary, seen or unforeseen.

Section 14. **NO MORTGAGE OR LIEN OF LANDLORD'S FEE INTEREST.** The Landlord shall have no right to mortgage, pledge, encumber or have liened its fee interest in the Premises. In the event Landlord allows any mortgage, lien or other encumbrance on the Premises or one is placed on the Property without Landlord's consent, (a "Lien"), then Landlord shall notify Tenant of such Lien within three (3) business days and shall cause such Lien to be paid and released within thirty (30) days thereafter. If Landlord fails to do so, Tenant shall have the right to satisfy such Lien and receive from Landlord, within thirty (30) days after notice from Tenant, the full amount paid by Tenant. In the event Landlord does not repay Tenant within said thirty (30) days, Tenant shall be entitled to interest at the highest Prime Rate reported in the Wall Street Journal plus ten (10%) percent, together with all costs of collection, including but not limited to attorney's fees. Any amounts not paid by Landlord under this provision, together with interest thereon, shall reduce the purchase price in the Option to Purchase in Section 16 herein below. Tenant may, at is sole discretion pursue the recovery of amounts due hereunder by collection action or any other remedy available at law or equity.

Section 15. **SECURITY DEPOSIT.** There shall be no security deposit.

Section 16. **OPTION TO PURCHASE.** Tenant shall have a one (1) time option to purchase the
rcised at any
ɔ (2) months
ve Thousand
ɔf August 24,

Section 17. **REPRESENTATIONS.** Landlord represents and warrants to Tenant that to the best of its knowledge **(a)** Landlord is the owner in fee simple of the Premises and has the legal right, power and authority to enter into this Agreement and to perform all of its obligations hereunder, and the execution and delivery of this Agreement and the performance by Landlord of its obligations hereunder will not conflict with any agreement to which Landlord is a party or by which Landlord is bound; **(b)** Landlord has good and marketable title to the Premises, and there are no claims, lawsuits, or other proceedings threatened or currently pending by or against the Landlord or the Premises; **(c)** Landlord has received no notice of any eminent domain proceedings or any other adverse event affecting the Premises, nor of any special or betterment assessments contemplated against the Premises nor of any actions that would hinder or delay the development of the Premises, and Landlord has no knowledge of any of the foregoing; and **(d)** Landlord has not received notice and is not otherwise aware of any incident which would have required the filing of notice or notification pursuant to any Applicable Environmental Laws applicable to the Premises.

Section 18. **HAZARDOUS MATERIALS.** Tenant covenants and agrees that it shall not use or store in the Premises any hazardous, toxic or special wastes, materials or substances including but not limited to waste or cooking oil and petroleum products (the "Hazardous Materials") which Tenant, its agent or employees, may use, handle, store or generate in the conduct of its business at the leased Premises. Tenant covenants and agrees: (i) that Tenant will comply with all applicable laws, ordinances and regulations which relate to the treatment, storage, transportation and handling of Hazardous Materials; (ii) that Tenant will in no event permit or cause any disposal of Hazardous Materials in, on or about the leased Premises and in particular will not deposit any Hazardous Materials in, on or about the floor or in any drainage system or in the trash containers which are customarily used for the disposal of solid waste; (iii) that Tenant will with advance notice and at all reasonable times permit Landlord or its agents or employees to enter the leased Premises to inspect the same for compliance with the terms of this

paragraph and will further provide upon five (5) days notice from Landlord copies of all records which Tenant may be obligated by federal, state and/or local law to obtain and keep; (iv) that upon termination of this Lease, Tenant will, at its expense, remove all Hazardous Materials, which came to exist on, in or under the leased Premises during the term of this Lease or any extensions thereof and comply with applicable local, state and federal laws as the same may be amended from time to time; and (v) Tenant will deliver the leased Premises to Landlord at the termination of this Lease free of all Hazardous Materials which came to exist on, in or under the leased Premises during the term of this Lease or any extension thereof. Landlord covenants and agrees that they have no knowledge of any Hazardous Materials on or underneath the Premises.

Section 19. JURY TRIAL WAIVER. NOTWITHSTANDING ANYTHING IN THIS LEASE TO THE CONTRARY, TENANT AND LANDLORD, FOR THEMSELVES AND THEIR SUCCESSORS AND ASSIGNS, HEREBY KNOWINGLY, WILLINGLY, AND VOLUNTARILY WAIVE ANY AND ALL RIGHTS TENANT AND/OR LANDLORD MAY HAVE TO A TRIAL BY JURY IN ANY ACTION OR PROCEEDING BROUGHT BY LANDLORD OR TENANT BASED UPON OR RELATED TO THE PROVISIONS OF THIS LEASE.

Section 20. SEVERABILITY OF PROVISIONS. In the event that any one or more provisions contained in this Agreement should be found to be invalid, illegal, or unenforceable in any respect by any court having valid jurisdiction, the validity, legality, and enforceability of the remaining provisions contained herein shall not in any way be affected or impaired thereby and to this end, the provisions hereof shall be deemed severable. If such provision shall be deemed invalid due to its scope or breadth, such provision shall be deemed valid to the extent of the scope or breadth permitted by law.

Section 21. CHOICE OF LAW. This Agreement shall be governed by and constructed in accordance with the laws of the State of Maine.

Section 22. AMENDMENT AND WAIVER. No provision of this Agreement may be amended, modified, supplemented, changed, waived, discharged, or terminated unless each party hereto consents in writing.

Section 23. COUNTERPARTS. This Agreement may be signed on any number of identical counterparts, such as a faxed or scanned copy, with the same binding effect as if the signatures were on one instrument.

Section 24. BINDING CONTRACT. This Agreement is a binding contract when signed by all parties hereto.

Section 25. CONSTRUCTION. This Agreement and all agreements relating to the subject matter hereof is the product of drafting, negotiation and preparation by and among each party and its respective attorneys, and shall be construed accordingly. Each party expressly waives the rules of contract interpretation that interpret language based on the party who drafted the agreement.

Section 26. HEADINGS. The headings contained in this Agreement are for reference purposes only and shall not affect the meaning or interpretation of any particular paragraph of this Agreement.

Section 27. ENTIRE AGREEMENT. This Agreement constitutes the entire agreement between the parties with respect to the subject matter herein, and this Agreement supersedes all previous negotiations, discussions, and agreements between the parties as to the subject matter hereof, and no parole evidence of any prior or other agreement or alleged agreements shall be permitted to contradict of vary the terms hereof.

Section 28. **MEMORANDUM OF LEASE.** Tenant and Landlord shall sign the attached Memorandum of Lease which Tenant may record in the Cumberland County Registry of Deeds.

IN WITNESS WHEREOF, the parties to this Lease set their signatures as of the Effective Date first written above.

WITNESS:

LANDLORD:

By: Gregory C. Kontos

By: Carol A. Kontos

WITNESS:

TENANT:
879 CONGRESS, LLC

By:
Name:
Its:

SCHEDULE A

Warranty Deed
George Burton Frederick, Jr.
to
Gregory C. Kontos, d/b/a
G. C. K. Group
July , 1985

FIRST

A certain lot or parcel of land situated on the northerly side of Congress Street in the City of Portland, County of Cumberland and State of Maine, and being premises No. 877 Congress Street, bounded and described as follows:

Beginning on the northerly side of Congress Street at the southerly corner of a lot of land formerly of Martha J. Tuttle; thence westerly by said Congress Street, thirty-eight (38) feet to land formerly of William J. Whitney; thence northerly by said Whitney land one hundred five and nine tenths (105.9) feet; thence easterly parallel with Congress Street thirty-eight (38) feet to the most westerly corner of said Tuttle land; thence southerly by said Tuttle land one hundred five and nine tenths (105.9) feet to said Congress Street and the point of beginning.

Excepting and reserving therefrom the following described premises:

Beginning at a point on the northerly line of Congress Street, said point being eleven feet easterly of the southeasterly corner of land described in a deed from Thomas P. Blake to George B. Frederick, Jr., recorded in the Cumberland County Registry of Deeds in Book 4555, Page 75. Thence southwesterly along the northerly line of Congress Street eleven feet to said southeasterly corner; thence northwesterly along the northerly line of said land conveyed from Blake to Frederick to the northeasterly corner of said parcel; thence southeasterly to the northerly line of Congress Street and the point of beginning.

Being a portion of the premises described in a deed from Downeast Realty, Inc., to George Buxton Frederick, Jr., dated December 5, 1980 and recorded in the Cumberland County Registry of Deeds in Book 4751, Page 173.

This conveyance is made subject to and together with the rights in a common driveway as represented by an exchange of deeds between Gertrude Bell and Sam P. Reef, and Thomas P. Blake, which deeds are recorded in Cumberland County Registry of Deeds, Book 2649, Page 317 and Book 2649, Page 315.

Meaning and intending to convey and hereby conveying a portion of premises conveyed to Grantor herein by Warranty deed of Downeast Realty, Inc. dated December 5, 1980, and recorded in the Cumberland County Registry of Deeds in Book 4751, Page 173.

B6826P46

SECOND

Also, a certain lot or parcel of land situated on the northerly side of Congress Street, west of Weymouth Street (formerly called Alms House Street), in said Portland, and bounded and described as follows, viz:

Commencing on the northerly side of Congress Street at the southeast corner of the lot of land hereby conveyed; thence northerly in a line nearly parallel with Weymouth Street one hundred and five (105.9) and nine tenths feet; thence westerly along the northerly end of the lot hereby conveyed thirty-eight (38) feet; thence southerly to a line parallel with the first mentioned sideline, one hundred and five and nine tenths (105.9) feet to Congress Street; thence easterly along Congress Street, thirty-eight (38) feet to the point of beginning.

Meaning and intending to convey and hereby conveying the same premises conveyed to Grantor herein by Warranty deed of Downeast Realty, Inc., and recorded in the Cumberland County Registry of Deeds in Book 4751, Page 171.

RECEIVED
1985 JUL 15 PM 3:56
RECORDED REGISTRY OF DEEDS
CUMBERLAND COUNTY
James J. Walsh

Attachment L.

MIXED USE BUILDING

879 CONGRESS STREET, PORTLAND, MAINE

JULY 19, 2019



1 FRONT CONCEPT IMAGE
NTS

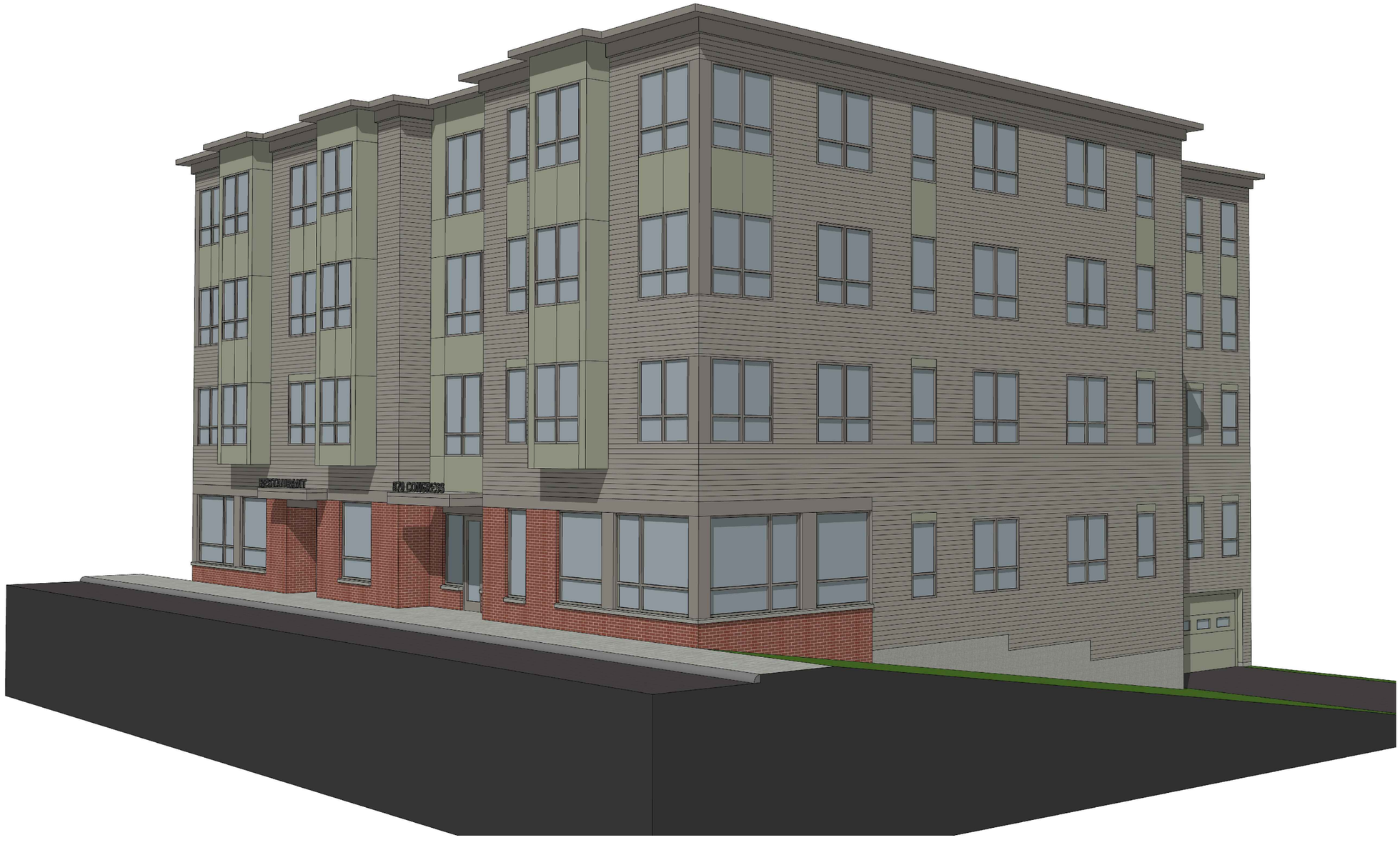
PROGRESS PRINT ONLY
Not for Construction

RYAN SENATORE **ARCHITECTURE**

MIXED USE BUILDING

879 CONGRESS STREET, PORTLAND, MAINE

JULY 19, 2019



1 CORNER VIEW CONCEPT IMAGE
NTS

PROGRESS PRINT ONLY
Not for Construction

RYAN SENATORE **ARCHITECTURE**

MIXED USE BUILDING

879 CONGRESS STREET, PORTLAND, MAINE

JULY 19, 2019



1 VIEW LOOKING WEST ON CONGRESS STREET
NTS

PROGRESS PRINT ONLY
Not for Construction

RYAN SENATORE **ARCHITECTURE**

PC1

Google Groups

Fwd: 879 Congress St

Shukria Wiar <shukriaw@portlandmaine.gov> Nov 6, 2019 11:29 AM
Posted in group: **Planning and Urban Development**

---------- Forwarded message ---------
From: **Aaron Duffey** <aduffey@gmail.com>
Date: Wed, Nov 6, 2019 at 11:15 AM
Subject: 879 Congress St
To: <shukriaw@portlandmaine.gov>

Hello Ms. Wiar,

I hope you are well.

I own an apartment building at 847-851 congress st. I just received notice that a neighbor, 879 Congress St, is applying for a zone change near our building from R6 to B2b. While I support the idea of a change there I have been hopeful that that small section of congress st that is currently R6 would change to B2B, including my lots. The B2B zone abruptly stops just a few doors down from us and then picks up again down the street near Salvage restaurant. We have been hoping to develop more market rate housing and commercial space but the R6 zone has been prohibitive. I was told a few years ago that a request for change would not be considered as a wider rezoning was being considered. If the 879 change goes through that would leave just a handful of property on that stretch of congress st left out of the B2B zone, effectively stooping any further development of housing and commercial space.

Is it possible as part of this process for 879 Congress to consider connecting the existing B2B zones to include the small left out stretch of congress st in that area? I would be grateful if this could be considered and would appreciate any guidance about how to voice this request.

Thank You!

Aaron

Aaron Duffey
207-712-6719

--
Shukria Wiar, Planner
Planning & Urban Development Department
389 Congress Street 4th Floor
Portland, ME 04101
Phone 207.756.8083
Fax 207.756.8258
http://www.portlandmaine.gov/planning

Memorandum
Planning and Urban Development Department
Planning Division

To: Sean Dundon, Chair and Members of the Portland Planning Board
From: Shukria Wiar, Planner
Date: January 24, 2020
Re: 126 and 128R North Street, Upright Properties, LLC and Josh Wojcik
Project #: PL-000791-2019 CBL: 012 H009 and 012 H014
Meeting Date: January 28, 2020

I. INTRODUCTION

Upright Properties, LLC has submitted an application for a three-story, five-unit residential building at 126 North Street and a four-story, six-unit condominium building at 128R North Street, for a total of eleven residential units. The project site is located in the Residential R-6 zoning district and the Munjoy Hill Conservation Overlay District. This redevelopment project includes the demolition of the existing structures on the sites and construction of two structures with a six-unit condominium and a five-unit rental, both with open-air/covered parking. The project will house six parking spaces at 128R and two spaces at 126 North Street. The project is proposed to be a phased development; Phase One is the structure at 128R North Street and Phase Two is the building at 126 North Street.

Figure 1 – Aerial of the Existing Proposed Site



The 128R building will contain condominiums and will be owner-occupied. It includes a first-floor workforce housing unit, in order to get a height bonus, and all of the units will be FHA compliant. The 126 residential building will house five apartments for rent. No roof top decks are proposed and none of the roof-mounted condensers will be visible from the street.

The Planning Board will review the application for compliance with the site plan and subdivision standards. As the project is over ten units, it will be required to meet the standards of the Inclusionary Zoning ordinance. The applicant is not proposing an affordable unit and the developer intends to meet the inclusionary requirements by paying the required workforce contribution to the City.

Applicant: Upright Properties, LLC
Consultants: Will Savage, PE, Acorn Engineering, Inc.
Tracie Reed, Architect, Dextrous Creative

II. REQUIRED REVIEWS

Waiver Requests	Applicable Standards
Request: Applicant is requesting a drive aisle of 13.91′	Technical Manual, *Section 1.14,* requiring that aisle width for right-angle parking be 24 feet per Figure I-27
Request: To reduce the 18′ dimension to 16.5′	Technical Manual, *Section 1.14, requiring* that standard parking space to be 9 feet wide by 18 feet long
Review	**Applicable Standards**
Site Plan	Section 14-526
Subdivision	Section 14-497
Inclusionary Zoning (IZ)	Section 14-474, Section 14-487
Other Potential Reviews	
Munjoy Hill Neighborhood Conservation Overlay District	Sec. 14-140.5
R-6 Small Infill Development Design Principles & Standards	Appendix 7 of the Design Manual

III. PROJECT DATA

Existing Zoning	Residential R-6	
Existing Use	Residential	
Proposed Use	Residential	
- Bedroom Mix	126 – Five 2-BR	128R – Three 1-BR; Two 2-BR; One 4-BR
Parcel Size	126 - 3,645 SF	128R - 6,142 SF

	Existing		Proposed		Net Change	
	126	**128R**	**126**	**128R**	**126**	**128R**
Building Footprint	1,885 SF	1,404 SF	1,677 SF	2,715 SF	-209 SF	+1,311 SF
Building Floor Area	4,360 SF	0 SF	5,981 SF	11,732 SF	+1,621 SF	11,732 SF
Impervious Surface Area	82.4%	27.5%	80%	60%	-2.4%	+52.5%
Parking Spaces	3	0	2	6	-1	+6
Bicycle Parking Spaces	0	0	2	2	2	+2
Estimated Cost of Project	$3,000,000					

IV. EXISTING CONDITIONS and BACKGROUND

The project application was originally submitted in August of 2019 for a multifamily structure at the rear of 128 North Street. During the review process, it was determined that the development did not meet the dimensional requirement for the fire access lane. Fire standards require that the access to a development be 20' but can be waived to 16' if there are site constraints. City staff met with the applicant on September 27th, 2019 to discuss options for the project to move forward. Based upon the discussions at this meeting, the Applicant updated the application to include the future plans for 126 North St, as a phased project where Phase One would include the redevelopment of 128R into a four-story building with six condominiums and covered parking on the ground level and Phase Two would include the redevelopment of 126 into a three-story building with five rental units. The overall phased project will have a net increase of six dwelling units. Additionally, 126 would grant 128R an access easement to provide a 16′-wide access way, providing greater emergency access for three properties.

Figure 2 - Existing 126 and 128R (at rear) North Street



Figure 3 – Aerial of the Proposed Development Site



The proposed project site is located at 126 and 128R North Street. 126 North Street has frontage on North Street, whereas 128R North Street is a rear lot immediately adjacent to Bayview Heights senior apartments and across the street from the Island View Apartment complex. The 126 North Street parcel currently is a four-unit residential building and the rear lot, 128R, previously housed a single-family home. Both properties are currently accessed by bituminous driveways off North Street. The 128R site currently shares a driveway with the abutting 128F North Street property. To the West the parcel is abuts Munjoy Heights Condominiums, where the site slopes down significantly and runs towards a concrete block retaining wall constructed as part of the condominium project in 2015. There is a 10′ maintenance easement along the rear property line which would provide future access for the Munjoy Heights to repair or replace the wall when necessary.

V. PROPOSED DEVELOPMENT

Upright Properties, LLC has submitted an application for a three-story, five-unit residential building at 126 North Street and a four-story, six-unit condominium building at 128R North Street. The three-story building will have five two-bedroom apartments and two off-street parking spaces. The first-floor unit will be FHA compliant. The condominium building will have six units; one is a workforce housing unit on the ground floor and five-FHA compliant units serviced via an elevator on upper floors and six parking spaces. A workforce housing unit is proposed in order to obtain the height bonus for the 128R North Street building.

The applicant is proposing to the have the development phased, with the construction of the rear building at 128R as the first phase. According to the applicant, the second phase will be demolishment of the existing four-unit building at 126 to allow for widening of the walk and driveway to meet the standard of 16' for fire access for 128R site. The new building at 126 will share a pedestrian entrance with 128R with vehicles entering via the existing curb cut at 126. The applicant states that this new driveway to 128R will "*improve access for vehicles and increases visibility for pedestrians and cyclists visiting 128R and 126 via a brick walkway leading from North Street*".

Figure 4 – Proposed Site Plan

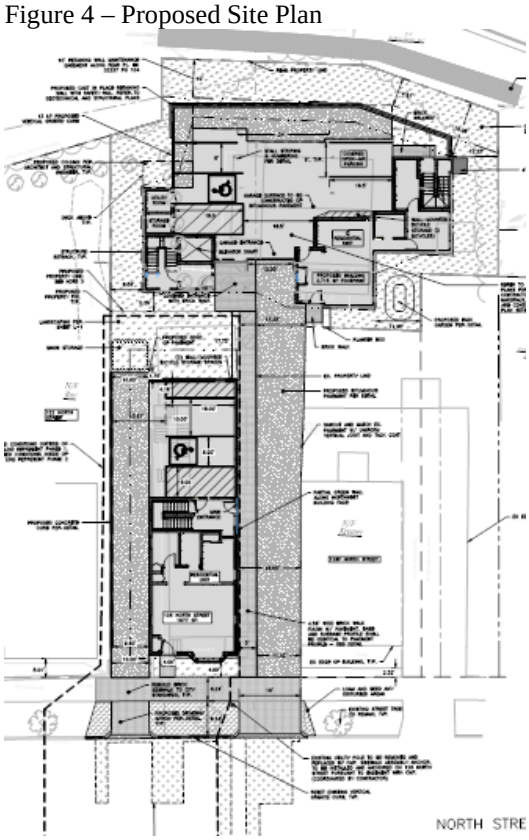


Figure 5 - Rendering of 128R North Street



VI. PUBLIC COMMENT AND NEIGHBORHOOD MEETING

A legal ad for the Board workshop was posted on the City's web page and appeared in the *Portland Press Herald* on January 18 and January 20, 2020. Notices were also sent to 215 property owners within 500 feet of the site and to the interested citizen list.

The project team held two neighborhood meetings to introduce the proposed buildings to the neighbors on September 18, 2019 and January 16, 2020. Nineteen attendees signed in at the meeting. Questions generally focused on the design of the building and vehicular parking, emergency vehicles access; see Attachment U - DD for the Neighborhood Meeting minutes. In addition, staff received correspondence from seventeen neighbors via email (Attachment PC1 - PC25). These neighbors reiterated concerns about the building design.

Figure 6 – Rendering of 126 North Street in the front and 128R at the Rear



VII. RIGHT, TITLE, & INTEREST AND FINANCIAL & TECHNICAL CAPACITY

The owners of the property for 126 North Street is Joshua Wojcik and for 128R North Street is Upright Properties, LLC. The applicant has provided a copy of a quitclaim deed, recorded at the Cumberland County Registry of Deeds (Book 34890 Page 304), which demonstrates their right, title and interest in the property. The estimated cost of the development is $3,000,000. The applicant has submitted a letter from Bangor Savings Bank, dated June 25, 2019, as a demonstration of their financial capacity to complete the proposed development.

VIII. ZONING ANALYSIS

A. DIMENSIONAL AND USE REQUIREMENTS

The proposed eleven (11) residential units are a permitted use in the Residential R-6 zone, which allows multi-family dwellings. Under the R-6 zone all of the dimensional requirements are being met. In the table below is the relevant dimensional standards in the table and how the propose development is meeting the zoning.

	Required	Proposed	
		126	128R
Lot Size	2,000 SF	3,645 SF	6,142 SF
Area Per Dwelling Unit	725 SF	5	6 Units
Minimum Street Frontage	20'	38'	n/a
Front Yard Minimum	5'	4' (average)	5.25'
Rear Yard	10'; Buildings more than 35': 15'	17.75'	15.08'
Side Yard	5'; Buildings more than 35': 10'		
Maximum Lot Coverage	60%	47%	57%
Maximum Height	35' *	33.32'	44.61 *
Open Space	20%	20%	40%
Off-Street Parking	1 space/unit after first 3 units = 3	2	6
* Height bonus for 128R North Street - 45' for developments of 3 units or more on lots over 2000 sf. that include at least one "workforce housing unit for rent" or "workforce housing unit for sale", defined elsewhere in this ordinance. Applicant is providing a workforce housing unit to get the bonus height			

A 10' maintenance easement runs along the rear property line a concrete block retaining wall constructed as part of the Munjoy Heights project in 2015, which provide future access for the Munjoy Heights Homeowner's Association to repair or replace the retaining wall when necessary.

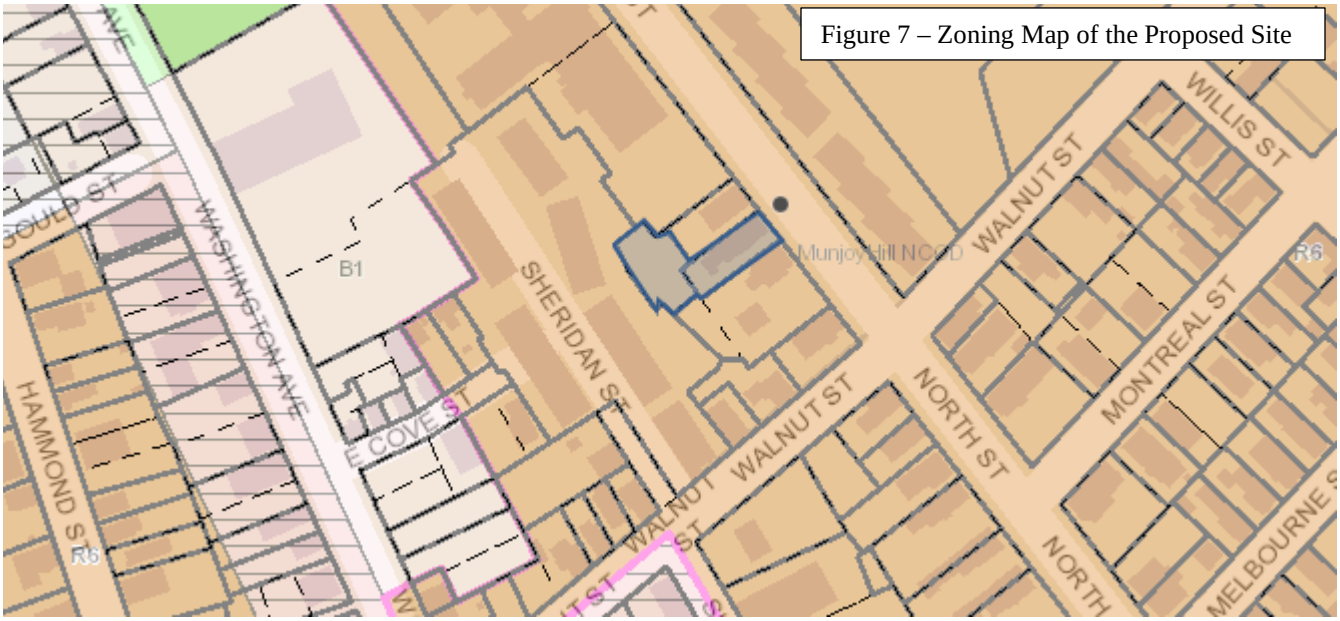


Figure 7 – Zoning Map of the Proposed Site

B. CONDITIONAL USE – INCLUSIONARY ZONING

As required by the City's Inclusionary Zoning Ordinance, residential developments with ten (10) or more units are required to provide a minimum of ten percent (10%) of the dwelling units as Workforce Housing units, and the units themselves must contain in total, ten percent (10%) of the total bedroom count for the entire development. The City's Housing Program Manager, Victoria Volent, has reviewed the application and offers the following comments (Attachment 5):

The development located at 126 and 128R North Street proposes to demolish the existing rental unit at 126 North Street and has already demolished the single-family dwelling unit at 128R North Street and will replace 126 North Street with a five (5) unit rental building and will replace 128R North Street with a six (6) condominium unit building. Please note, the development at 128R North Street would not qualify for a building permit (due to the lack of emergency access) unless 126 North Street is demolished. As the construction of 128R North Street is conditioned upon the demolition of 126 North Street, this project is determined to be one development project. According to Section 14-487 e 1, "projects shall not be segmented or phased to avoid compliance with these provisions."

The five (5) dwelling units of rental housing at 126 North Street would consist of five (5) two-bedroom units. The six (6) condominium units at 128R North Street would consist of three (3) one-bedroom units, two (2) two-bedroom units, and one (1) four-bedroom unit. The applicant may determine the location of the workforce unit (126 or 128R North Street). The unit must be a minimum of two-bedrooms. Per my conversation with the applicant, the workforce unit would be located 126 North Street. As a dwelling unit for rent, the designated Workforce Unit will be restricted to a household earning up to 100% of Area Median Income (AMI). Based on the requirements outlined in Section 14-487, the applicant is required to either; provide a minimum of one (1) workforce unit consisting of a total of two (2) bedrooms and pay a fractional fee-in-lieu of $10,609 or, pay a fee-in-lieu for 1.1 units (or $116,699). The Applicant has elected to provide one (1) two-bedroom workforce unit on-site, and pay a fractional fee-in-lieu of $10,609 (.1 X $106,090) to satisfy the ordinance's minimum requirements. As such, the project has met the minimum requirements set forth in Section 14-487.

Section 14-140.5 c,
Section 14-140.5 c, Munjoy Hill Neighborhood Conservation Overlay District- height bonus, requires developments of three or more units on lots over 2000 sf, with a building height of greater than 35' to a maximum of 45' in height, include at least one workforce housing unit for rent or for sale. The Workforce unit shall be no smaller than 50% of the average size of the other units in the development and only be sold or rented to a household at or below the applicable income levels. The workforce unit shall be deed restricted for affordability for the longest term possible under the state and federal law.

The development at 128R North Street proposes the creation of a building that triggers the maximum height requirement within the Munjoy Hill Neighborhood Conservation Overlay District. Based on the requirements

outlined in Section 14-140.5 c, the Applicant is required to create a housing unit that is no smaller than 50% of the average size of the other units (or 672 sf). The Applicant has elected to provide the first-floor unit, a one (1) one-bedroom unit that is 672 sf. As such, the project has met the minimum requirements set forth in Section 14-140.5.

IX. DEVELOPMENT REVIEW

A. SITE PLAN SUBMISSION REQUIREMENTS (Section 14-527) and SUBDIVISION PLAT AND RECORDING PLAT REQUIREMENTS (Section 14-496)

The applicant has submitted recording plats for the two phases of the development. The review of the plats is pending and comments will be submitted to the applicant.

B. SUBDIVISION (Section 14-496)

The proposed development has been reviewed by staff for conformance with the relevant review standards of Portland's Subdivision Ordinance and applicable regulations. Staff comments are listed below.

1. Will Not Result in Undue Water and Air Pollution (Section 14-497 (a) 1), and Will Not Result in Undue Soil Erosion (Section 14-497 (a) 4)
   Lauren Swett, P.E. with Woodard and Curran Engineering, has reviewed the erosion and sediment control plan and states the applicant has provided plans, notes, and details have been that erosion and sediment control requirements and inspection and maintenance requirements, in accordance with the Basic Standard.

2. Sufficient Water Available (Section 14-497 (a) 2 and 3)
   The project will be served by new water service located in North Street. Confirmation of ability to serve sewer from Portland Water District should be forwarded to the Planning Authority upon receipt.

3. Will Not Cause Unreasonable Traffic Congestion (Section 14-497 (a) 5)
   The site will be accessed by an existing curb cut on North Street. The proposed project is not anticipated to cause unreasonable traffic congestion. Mike Tremblay, Senior Engineer at Department of Public Works, reviewed the proposal's details including the access, parking, and vehicle circulation, below are his comments (Attachment 1):

   - The Applicant did not implement the suggested shared driveway treatment between the two properties. One of the stated reasons is that no easement currently exists for 126 North Street to access and use the driveway. It should be noted that such an easement could be created if desired, as the two properties are currently under common ownership.

   - The Applicant does not have a standard width driveway accessing the parking spaces at 126 North Street. They have alleviated this by providing a wider-than-required parking space so that vehicles can more easily maneuver into the parking space. However, AutoTURN runs provided show that it is still very difficult for a vehicle to exit this space, coming very close to the wall of the building, the wall along the edge of the driveway, and the adjacent handicap parking space. This configuration likely requires that vehicles back into the driveway; it does not look possible for a vehicle to pull into the driveway and eventually exit head-out. While this configuration may be suitable assuming the occupants of 126 North Street do not have overly large vehicles, always back into the driveway, and have the skill and acuity to maneuver a vehicle into and out of the parking spaces. This may not always be the case however. This configuration requires a waiver for parking area drive aisle.

   - The handicap space in 126 North Street does not need to be marked as such, as it is located in a parking area with 4 spaces or less. The space must be accessible (as designed), but anyone can park there. The applicant may choose to keep it marked as a handicap space if they choose.

   - Space 4 in 128 North Street does not appear to meet the dimensional requirements for a compact space (8x15), and therefore should not be counted as a parking space for the purposes of meeting zoning requirements. Since only 3 spaces are required per zoning, this is acceptable; however, this space should not be shown as a parking space in the site plan.

- Space 2, Space 5, and Space 6 in 128 North Street are compact spaces. The Applicant requires a waiver for the proportion of parking spaces (67%, assuming Space 4 is retained as an allowable compact space, vs 20% allowed).

4. Will Provide for Adequate Sanitary Sewer and Stormwater Disposal (Section 14-497 (a) 6), and Will Not Cause an Unreasonable Burden on Municipal Solid Waste and Sewage (Section 14-497 (a) 7)
There is an existing sewer lateral in North Street that will be serve the new project. Ms. Swett has reviewed the plans and finds the plans acceptable.

5. Will not have an undue adverse effect on the scenic or natural beauty of the area, aesthetics, historic sites, significant wildlife habitat (Section 14-497 (a) 8)
The proposal site is not within an historic district. It is in an urban neighborhood surrounded by a variety of residential building types. The proposed building does not impact the natural beauty of the area or adversely affect any significant wildlife habitat, rare or irreplaceable natural areas, or any public access to the shoreline. The staff finds the proposal in conformance with this standard.

6. Comprehensive Plan (Section 14-497 (a) 9)
The applicant has submitted their analysis of the project's conformance with the Comprehensive Plan (refer to Attachment XX). The staff has identified the following goals and policies which are relevant to the proposed housing development and finds the proposal in conformance with the Comprehensive Plan.



The central vision of Portland's Plan 2030 is represented by the venn diagram demonstrating the integral interrelation of the community's core belief that Portland is equitable, sustainable, connected, dynamic, authentic and secure. The vision conveys the message of the City's need to balance many competing needs to assure the advance of the vision as a unified concept. In this instance, that the City's goals for job growth and transforming Portland through orderly growth and development be balanced with needs for connectivity of the street grid, sustainability of infrastructure and the ability to maintain that infrastructure, and security in the sense of public safety.

Housing: A Livable City
State Goals: To encourage and promote affordable decent, housing opportunities for all Maine citizens
Local Goals:
- Increase, preserve, and modify the overall supply of housing City-wide to meet the needs, preferences and financial capabilities of all Portland households.
- Encourage additional contextually-appropriate housing density in and proximate to neighborhood centers, concentrations of services, and transit nodes and corridors as a means of supporting complete neighborhoods.
- Pursue policies to enable people who work in Portland to have the option to live in Portland.
- Encourage quality, sustainable design in new housing development.

Goals from Future Strategies:
9. Adopt Affordable Housing
- Pursue new opportunities for increased energy efficiency, increased densities, mixed incomes, and greater connectivity to surrounding neighborhoods.

7. Adequate financial and technical capacity (Section 14-497 (a) 10)
The estimated cost of the development is $3,000,000. The applicant has submitted a letter from Bangor Savings Bank, dated June 25, 2019, as a demonstration of their financial capacity to complete the proposed development.

B. SITE PLAN STANDARDS (Section 14-526)

The proposed development has been reviewed by staff for conformance with the relevant review standards of Portland's site plan ordinance and applicable regulations. Staff comments are listed below.

a) Transportation Standards

1. Impact on Surrounding Street Systems and Access and Circulation
See Subdivision, Paragraph IX (B) (3), above.

a. Sidewalks
The applicant is proposing to install new brick sidewalk along their frontage on North Street, as well as internal walkway for pedestrian access to 128R North Street.

b. Parking
The number of proposed parking spaces exceeds the minimum requirement by more than 10% on 128R North Street, or exceeds by 3 spaces. The parking requirement is one space per residential unit on the peninsula, therefore the building at 126 North Street's parking requirement is two spaces, whereas 128R is required to have 3 spaces. The development is proposing 8 parking spaces. In their application, they state that "*Given the recent development boom and an overall higher demand for on-street parking, decreasing the demand for on-street parking will benefit the end users as well as the entire neighborhood*".

c. Bicycle Parking
The development proposes interior bicycle storage room in each building. This will allow a minimum of two bicycles on each site to be parked in a secure location, with the potential for additional storage within each owner's individual unit.

b) Environmental Quality Standards

1. Preservation of Significant Natural Features
There are no known significant natural features on the site.

2. Landscaping and Landscape Preservation
The site will have a green wall along the sides of the building at 126 North Street as well landscaping at the front and rear of the building. Trellises and screens are proposed to enhance visual interest along the pedestrian walkway.
The 128R North Street will have a rain garden, trees and shrubs, and a fence at the westerly side of the property that will have English ivy planted on it.

The street tree requirement would be one tree per unit, or eleven street trees, in or near the ROW. There are two existing street trees on North Street that is proposed to remain. Due to the limited frontage for both parcels, the Applicant will pay a contribution to the Portland Tree Fund will be made per City requirement.

Jeff Tarling, City Arborist, has reviewed the landscaping plan and offers the following recommendation:

> *The North Street project should include some type of landscape treatment, after looking at the site they may want to consider smaller scale trees / shrubs like Amelanchier, which can be a small tree or shrub depending on the cultivar selected. Lilacs or viburnums could also work. Plantings can be in groves or along the property line. We can suggest types, sizes and spacing.*

3. Water Quality, Storm Water Management and Erosion Control
Under Section 5 of the City of Portland Technical Manual, a Level III development project is required to submit a stormwater management plan pursuant to the regulations of MaineDEP Chapter 500 Stormwater Management Rules, including conformance with the Basic, General, and Flooding Standards. A rain garden at the northerly corner of the site will catch stormwater from the roof drains, gutters, and a downspout, the entirety of the roof and deck runoff (which is essentially the extent of the 128R parking). The runoff generated by the building and driveway at 126 will be routed to a catch basin and storm drain lateral directed to the sewer main.

Lauren Swett, P.E. with Woodard and Curran Engineering, has reviewed the drainage plan and stormwater report, and that the following comments should be addressed:

- *The Applicant has provided erosion and sedimentation control locations, details, and a written plan in accordance with the Basic Standards. The erosion and sedimentation control measures have been shown on the Construction Management Plan. It is suggested that*

perimeter erosion controls also be shown on the grading and drainage plan, for clarity during construction on this very tight site.

- *The Applicant is proposing a Focal Point rain garden system to provide treatment in accordance with the General Standards. Focal Point details have been provided. The actual Focal Point system components should be drawn on the grading plan, including the R-tanks. It is not clear on the plan as shown what the extent of the subsurface system will be. The system is in close proximity to the property line as well as the proposed building, so clear extents should be provided to ensure that the system can be constructed properly.*

- *The Applicant has noted that flows will not be increasing, in accordance with the Flooding Standard. It is noted, however, that the project will be redirecting flows, and stormwater flow to the rear of the site will be reduced, but stormwater flow to the combined sewer in North Street will be increasing in the 10-year and 25-year storm events. The acceptability of this increase to the combined sewer will need to be verified by the Department of Public Works.*

c) Public Infrastructure and Community Safety Standards

1. Consistency with City Master Plans
   See Subdivision, Paragraph IX (B) (6), above.

2. Public Safety and Fire Prevention (CPTED and Fire)
   The Crime Prevention through Environmental Design (CPTED) standards in the site plan ordinance address the principles of natural surveillance, access control and territorial reinforcement so that the design of developments enhance the security of public and private spaces and reduce the potential for crime.

3. Availability and Adequate Capacity of Public Utilities
   The project will be served by the Portland Water District, City Department of Public Works, and underground power/cable/communications. The applicant shall submit ability to serve letter from the Department of Public Services and Portland Water District to the Planning Authority upon receipt. Ms. Swett reviewed the utility plans and states that "*Consideration should be made for landscaping conflicts with utilities. In particular, consider the oak and blue point juniper proposed to the southeast of the southern building. These trees are located over a bank of proposed subsurface utility lines*".

d) Site Design Standards

1. Snow and Ice Loading
   Proposed snow storage areas will be on the green spaces around the buildings. The applicant states "*Given the parking areas will be covered in their entirety, snow removal is not required*". Ms. Swett reviewed the snow storage locations and states, "*Additional information should be provided on snow storage. The snow storage area currently shown overlaps with a landscaped area. Snow storage should be considered for both driveways*".

2. View Corridors
   This site is not within a Protected View Corridor as per the "View Corridor Protection Plan" approved by the Portland City Council in 2001.

3. Historic Resources
   The site is not in a historic district or within 100 feet of a historic district; therefore, the project does not have to be reviewed by Historic Preservation.

4. Exterior Lighting
   The applicant has not submitted a lighting and photometric plan that shows all the proposed lighting fixtures on site. Catalog cuts of the proposed lighting fixtures were submitted and reviewed by staff. The Cypher- CY1 and the 6" LED Downlight LC6SL does not meet the 3000K color temperature and will have to be amended to meet standards.

5. Noise and Vibration
All heating, ventilation and air conditioning equipment (HVAC), air handling units (AHU), emergency generators, and similar equipment will have to be shown on the plans and meet state and federal emissions requirements. This mechanical equipment should be located to the interior of the site, away from abutting residential properties and be screened from view from any public street and from adjacent sites by structure walls, evergreen landscaping, fencing, masonry wall or a combination thereof.

6. Signage and Wayfinding
No signage or wayfinding is proposed at this time.

7. Zoning Related Design Standards
A design review according to the *City of Portland Design Manual* Standards was performed for the new construction of multi-family dwellings at 126 and 128R North Street. The review was performed by Caitlin Cameron, Urban Designer, Shukria Wiar, Planner, and Deb Andrews, Historic Preservation Program Manager. The project was reviewed against the *R-6 Small Infill Development Design Principles & Standards* (Appendix 7 of the Design Manual). The proposed design passes all of the criteria of the R-6 Design Standards at 128R North Street; however, 126 North Street's proposed design does not pass. Staff believe that with some revision; the project will be able to meet all the design standards. Below are some concerns, please refer Attachment 6 and 6a for a complete design analysis:

- *A-3 Relationship to the Street:* The project is slightly set back from the street, more so than the neighboring buildings – staff suggest that the applicant use the average of the two setbacks to establish the setback line and bring the building more in alignment with the neighboring facades.
- *B-4 Roof Pitch:* Please note the roof pitch on the elevations to verify it meets zoning requirements.
- *C-1 Entrances:* The main entry is oriented towards the street and is emphasized with a canopy. It is not clear what is the main entrance – if the side entry is the main entrance, a porch extending to the sidewalk is required. If the front-facing door is intended to read like the main entrance, more is needed to integrate and bring emphasis.
- *C-2 Visual Privacy:* Visual privacy is not adequately addressed; the ground floor living spaces are at grade and the windows are not raised at least 48" above grade. Revise in some way to meet this standard.
- *C-3 Transition Spaces:* There is a transition from the sidewalk to the building entrance through the front-yard setback/landscape buffer. However, the project lacks adequate transition at the entrance area given the ground floor is at grade.
- *F-5 Porches, etc.:* The entrance is not adequately integrated into the overall design – too minimal.
- *F-6 Main Entries:* The entrance is not adequately integrated into the overall design. Whereas in the context, the entry is raised above the grade and includes a stoop or porch that visually relates to the elements of the façade, this entrance is minimal and the canopy has little relationship in its detail or width to the other architectural elements.
- *F-7 Articulation Elements:* The rake of the roof meets the 6" requirement; trim must be at least 4"; offsets in the principal façade are at least 12", cornice line is pronounced.

X. NEXT STEPS

- Board feedback on the proposed development
- Address any additional information requested by the Planning Board
- Schedule a public hearing

XIII. ATTACHMENTS

PLANNING BOARD REPORT ATTACHMENTS

1. DPW Engineer Review 01.22.2020
2. Civic Engineer Review 01.24.2020
3. City Arborist Review 01.21.2020
4. Fire Department Comments
5. 126 and 128 North Street IZ memo for PB

6. Urban Designer Comments - 128 North R6 Design Review Final
    a. 126 North R6 Design Review Preliminary

PUBLIC COMMENT

PC1 Betty Lorber 9-16-19
PC2 Eldon Mayer 9-22-19
PC3 Ann Casady and Peter Pitegoff 9-22-19
PC4 Richard Marino 9-23-19
PC5 Leslie Hart 9-26-19
PC6 Kevin Schochat 9-26-19
PC7 Liz Hays 9-27-18
PC8 Sue Robins 9-30-19
PC9 Deborah Cole 10-4-19
PC10 Nancy Machesney 10-9-19
PC11 Annette and Steven Frye 10-16-19
PC12 Pete Roehrig 10-31-19
PC13 Elizabeth Helming 10-30-19
PC14 Frances Savage
PC15 Katharine Wojcik 10-31-19
PC16 Meagan Sway & Sage Friedman
PC17 Lindsay Mann 9-10-19
PC18 Deborah Cole 1-22-20
PC19 Ann Casady & Peter Pitegoff 1-23-20
PC20 Vana Carmona 1-24-20
PC21 Lindsay Mann 1-24-20
PC22 Leslie Hart 1-24-20
PC23 Kevin Schochat 1-24-20
PC24 Tracy Davis & Michael Kennedy 1-24-20
PC25 David Machesney 1-24-20

APPLICANT'S SUBMITTALS

A. Cover Letter
B. Application Form
C. Right, Title & Interest
D. Zoning Assessment
E. Easements
F. Waivers
G. Financial Capacity
H. Technical Capacity
I. Conformity with Land Use Ordinance
J. Stormwater Management Report
K. Erosion and Sedimentation Control Report
L. Fire Department Letter
M. Wastewater Capacity
N. Lighting
O. Architectural Design Narrative
P. Utility Cover
Q. Construction Management Report
R. Solid Waste Disposal
S. Parking Analysis
T. Neighborhood Study & Project Renderings
U. Neighborhood Meeting Invitation
V. Certification Letter
W. Neighborhood Meeting Minutes
X. Sign-in Sheet
Y. Neighborhood Presentation
Z. Comment Response Letter
AA. Neighborhood Invitation 2

BB. Certification Letter 2
CC. Meeting Minutes 2
DD. Sign-In Sheet 2

PLANS

Plan 1. Cover Sheet
Plan 2. General Notes
Plan 3. Survey
Plan 4. Demolition, Construction Management
Plan 5. Site Plan
Plan 6. Landscape Plan
Plan 7. Utility Plan
Plan 8. Grading & Drainage Plan
Plan 9. Site Details I
Plan 10. Site Details II
Plan 11. Landscape Details
Plan 12. Utility Details I
Plan 13. Utility Details II
Plan 14. Drainage Details
Plan 15. Focal Point Rain Garden Details
Plan 16. Erosion & Sedimentation Control Notes
Plan 17. Basement Plan
Plan 18. First Floor Plan
Plan 19. Second and Third Floor Plan
Plan 20. Fourth Floor Plan
Plan 21. Roof Plan
Plan 22. Basement Plan
Plan 23. Front and Back Elevations – A
Plan 24. Front and Back Elevations – B
Plan 25. Side Elevations – A
Plan 26. Side Elevations – B
Plan 27. Perspectives – A
Plan 28. Perspectives – B
Plan 29. Subdivision Plat
Plan 30. Subdivision Plat - Phase 2
Plan 31. Phase 2 Plans
Plan 32. Phase 2 Perspectives – A
Plan 33. Phase 2 Perspectives – B
Plan 34. Front and Back Elevations - Phase 2
Plan 35. Side Elevations - Phase 2

 ATTACHMENT 1.

Portland Maine Yes. Google's good here.

Shukria Wiar <shukriaw@portlandmaine.gov>

126-128 North Street comments

Mike Tremblay <mtremblay@portlandmaine.gov> Wed, Jan 22, 2020 at 3:26 PM
To: Shukria Wiar <shukriaw@portlandmaine.gov>

Shukria,

Most of my comments have been addressed in Acorn's latest comment response letter. Some outstanding issues and necessary waivers:

- The Applicant did not implement the suggested shared driveway treatment between the two properties. One of the stated reasons is that no easement currently exists for 126 North Street to access and use the driveway. It should be noted that such an easement could be created if desired, as the two properties are currently under common ownership.

- The Applicant does not have a standard width driveway accessing the parking spaces at 126 North Street. They have alleviated this by providing a wider-than-required parking space so that vehicles can more easily maneuver into the parking space. However, AutoTURN runs provided show that it is still very difficult for a vehicle to exit this space, coming very close to the wall of the building, the wall along the edge of the driveway, and the adjacent handicap parking space. This configuration likely requires that vehicles back into the driveway; it does not look possible for a vehicle to pull into the driveway and eventually exit head-out. While this configuration may be suitable assuming the occupants of 126 North Street do not have overly large vehicles, always back into the driveway, and have the skill and acuity to maneuver a vehicle into and out of the parking spaces. This may not always be the case however. This configuration requires a waiver for parking area drive aisle.

- The handicap space in 126 North Street does not need to be marked as such, as it is located in a parking area with 4 spaces or less. The space must be accessible (as designed), but anyone can park there. The applicant may choose to keep it marked as a handicap space if they choose.

- Space 4 in 128 North Street does not appear to meet the dimensional requirements for a compact space (8x15), and therefore should not be counted as a parking space for the purposes of meeting zoning requirements. Since only 3 spaces are required per zoning, this is acceptable; however, this space should not be shown as a parking space in the site plan.

- Space 2, Space 5, and Space 6 in 128 North Street are compact spaces. The Applicant requires a waiver for the proportion of parking spaces (67%, assuming Space 4 is retained as an allowable compact space, vs 20% allowed).

Let me know if you need anything else.

-Mike

Mike Tremblay, P.E.
Senior Engineer
Engineering Division
Department of Public Works
City of Portland, ME
mtremblay@portlandmaine.gov
P. 207.874.8881 F. 207.874.8852

 ATTACHMENT 2.

Portland Maine Yes. Google's good here.

Shukria Wiar <shukriaw@portlandmaine.gov>

North Street Comments

Lauren Swett <lswett@woodardcurran.com> Fri, Jan 24, 2020 at 7:19 AM
To: Shukria Wiar <shukriaw@portlandmaine.gov>

Hi Shukria,

I have a handful of comments for the North Street project:

- The project required to comply with the City of Portland's Section 5 Stormwater Standards as well as Chapter 500 Regulations. The project must consider the Basic, General, and Flooding. The following comments should be addressed:
  - The Applicant has provided erosion and sedimentation control locations, details, and a written plan in accordance with the Basic Standards. The erosion and sedimentation control measures have been shown on the Construction Management Plan. It is suggested that perimeter erosion controls also be shown on the grading and drainage plan, for clarity during construction on this very tight site.
  - The Applicant is proposing a Focal Point rain garden system to provide treatment in accordance with the General Standards. Focal Point details have been provided. The actual Focal Point system components should be drawn on the grading plan, including the R-tanks. It is not clear on the plan as shown what the extent of the subsurface system will be. The system is in close proximity to the property line as well as the proposed building, so clear extents should be provided to ensure that the system can be constructed properly.
  - The Applicant has noted that flows will not be increasing, in accordance with the Flooding Standard. It is noted, however, that the project will be redirecting flows, and stormwater flow to the rear of the site will be reduced, but stormwater flow to the combined sewer in North Street will be increasing in the 10-year and 25-year storm events. The acceptability of this increase to the combined sewer will need to be verified by the Department of Public Works.
- Additional information should be provided on snow storage. The snow storage area currently shown overlaps with a landscaped area. Snow storage should be considered for both driveways.
- Consideration should be made for landscaping conflicts with utilities. In particular, consider the oak and blue point juniper proposed to the southeast of the southern building. These trees are located over a bank of proposed subsurface utility lines.

I apologize for the delay, I ended up without wifi access most of yesterday. If there are any questions, let me know.

Thanks!

Lauren

Lauren Swett, P.E.*

Technical Manager

Woodard & Curran

41 Hutchins Drive

Portland, Maine 04102

Phone: (207)558-3763 (direct)

(207)219-3591 (cell)

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Email: lswett@woodardcurran.com

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M.ASCE

Chair, Leader Training Committee

American Society of Civil Engineers

http://regions.asce.org/leader-training-committee/

ATTACHMENT 3.

Portland Maine Yes. Google's good here.

Shukria Wiar <shukriaw@portlandmaine.gov>

North Street

Jeff Tarling <jst@portlandmaine.gov> Tue, Jan 21, 2020 at 7:10 PM
To: Shukria Wiar <shukriaw@portlandmaine.gov>

Hi Shukria -

The North Street project should include some type of landscape treatment, after looking at the site they may want to consider smaller scale trees / shrubs like Amelanchier, which can be a small tree or shrub depending on the cultivar selected. Lilacs or viburnums could also work. Plantings can be in groves or along the property line.

We can suggest types, sizes and spacing.

Thanks

Jeff
Jeff Tarling
City Arborist - City of Portland Maine
Parks, Recreation & Facilities Department
Forestry & Horticulture
212 Canco Road
Portland, ME. 04103
(207) 808-5446
jst@portlandmaine.gov

ATTACHMENT 4.

PLAN CORRECTIONS REPORT PL-000791-2019
FOR CITY OF PORTLAND

PLAN ADDRESS: 128 North St
Portland, Maine 04101

PARCEL: 012 H009001

APPLICATION DATE: 08/05/2019

SQUARE FEET: 0.00

EXPIRATION DATE:

VALUATION: $0.00

DESCRIPTION: Proposed redevelopment of 2 parcels. The first parcel will consist of 5 apartment units at 126 North Street. The second parcel will consist of a 4-story, 6-unit condominium with off street parking, and one workforce unit.

CONTACTS	Name	Company	Address
Agent/Representative	Will Savage	Acorn Engineering	158 Danforth Portland, ME 04104

Comments & Corrections Required

Comment(s)/ Recommendation(s): Robert Thompson

A sixteen foot (16') access road, capable of supporting fire apparatus, shall be required to provided emergency vehicle access to this building. (See additional comment added 11/27/2019.)

The Fire Department approves the site plan as shown in: Site Plan.pdf V3

The Fire Department approves the site plan as shown in Site Plan V.4

Conditions Required

ATTACHMENT 5.

Portland, Maine | Yes. Life's good here.

Planning & Urban Development Department

To: Shukria Wiar, Planner, Planning & Urban Development Department

From: Victoria Volent, Housing Program Manager, Housing & Community Development Division

Date: January 22, 2020

Subject: 126 and 128R North Street– Inclusionary Zoning Conditional Use and Munjoy Hill Neighborhood Conservation Overlay District

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All developments of ten (10) units or more are conditional uses subject to Planning Board review on the condition that they comply with the requirements set forth in Division 30, Section 14-487 of the Zoning Ordinance.

Division 30, Section 14-487

Division 30, Section 14-487, Ensuring Workforce Housing, requires at least ten percent (10%) of the dwelling units in the development shall meet the definition of Workforce Housing units for sale or for rent. A fractional fee-in-lieu would result when the calculation of a project's inclusionary obligation results in a fractional unit. The fractional unit obligation will be provided in the form of a proportional fee-in-lieu. The in-lieu fee shall be calculated and paid into the Housing Trust Fund as defined in Sec. 14-489, on or before the date upon which a certificate of occupancy is issued. The ordinance under Section 14-487 e 3 also requires the number of bedrooms in the Workforce units shall be at least 10% of the total number of bedrooms made available as part of the development.

The development located at 126 and 128R North Street proposes to demolish the existing rental unit at 126 North and has already demolished the single family dwelling unit at 128R North Street and will replace 126 North with a five (5) unit rental building and will replace 128R North with a six (6) condominium unit building. Please note, the development at 128R North Street would not qualify for a building permit (due to the lack of emergency access) unless 126 North Street is demolished. As the construction of 128R North is conditioned upon the demolition of 126 North Street, this project is determined to be one development project. According to Section 14-487 e 1, "projects shall not be segmented or phased to avoid compliance with these provisions."

The five (5) dwelling units of rental housing at 126 North Street would consist of five (5) two-bedroom units. The six (6) condominium units at 128R North Street would consist of three (3) one-bedroom units, two (2) two-bedroom units, and one (1) four-bedroom unit. The applicant may determine the location of the workforce unit (126 or 128R North Street). The unit must be

a minimum of two-bedrooms. Per my conversation with the applicant, the workforce unit would be located 126 North Street. As a dwelling unit for rent, the designated Workforce Unit will be restricted to a household earning up to 100% of Area Median Income (AMI). Based on the requirements outlined in Section 14-487, the applicant is required to either; provide a minimum of one (1) workforce unit consisting of a total of two (2) bedrooms and pay a fractional fee-in-lieu of $10,609 or, pay a fee-in-lieu for 1.1 units (or $116,699). The Applicant has elected to provide one (1) two-bedroom workforce unit on-site, and pay a fractional fee-in-lieu of $10,609 (.1 X $106,090) to satisfy the ordinance's minimum requirements. As such, the project has met the minimum requirements set forth in Section 14-487.

Section 14-140.5 c,

Section 14-140.5 c, Munjoy Hill Neighborhood Conservation Overlay District- height bonus, requires developments of three or more units on lots over 2000 sf, with a building height of greater than 35' to a maximum of 45' in height, include at least one workforce housing unit for rent or for sale. The Workforce unit shall be no smaller than 50% of the average size of the other units in the development and only be sold or rented to a household at or below the applicable income levels. The workforce unit shall be deed restricted for affordability for the longest term possible under the state and federal law.

The development at 128R North Street proposes the creation of a building that triggers the maximum height requirement within the Munjoy Hill Neighborhood Conservation Overlay District. Based on the requirements outlined in Section 14-140.5 c, the Applicant is required to create a housing unit that is no smaller than 50% of the average size of the other units (or 672 sf). The Applicant has elected to provide the first floor unit, a one (1) one-bedroom unit that is 672 sf. As such, the project has met the minimum requirements set forth in Section 14-140.5.

Staff Recommendation

Staff recommends the Board Approve the Inclusionary Zoning Conditional Use provided the Applicant and the City enter into an Affordable Housing Agreement (AHA) for a workforce unit before a Building Permit may be issued.

Staff recommends, should the Board Approve the Munjoy Hill Neighborhood Conservation Overlay District height density bonus, the Board require the Applicant and the City to enter into an Affordable Housing Agreement (AHA) for the first floor unit before a Building Permit may be issued.

The Affordable Housing Agreement(s) will outline the details of the affordability restrictions placed on the workforce units and will be filed as covenant to the 126 and 128R North Street property deed with the Cumberland County Registry of Deeds before a certificate of occupancy may be issued.

Staff recommends the agreed upon fee-in-lieu of $10,609 be paid into the City's Housing Trust Fund prior to issuance of the certificate of occupancy for 126 North Street.

Sincerely,

Victoria Volent
Housing Program Manager

ATTACHMENT 6.

Planning and Urban Development Department
Planning Division

Subject: R-6 Small Infill/Multi-family Design Review – 128R North Street

Written by: Caitlin Cameron, Urban Designer

Date of Review: Wednesday, December 4, 2019

A design review according to the *City of Portland Design Manual* Standards was performed for the revised proposal for new construction of a multi-family dwelling at 128 North Street. The review was performed by Caitlin Cameron, Urban Designer, Shukria Wiar, Planner, and Deb Andrews, Historic Preservation Program Manager. The project was reviewed against the *R-6 Small Infill Development Design Principles & Standards* (Appendix 7 of the Design Manual).

Findings of the Design Review:
The proposed design **passes** all of the criteria of the R6 Design Standards.

- The predominant characteristics of the neighborhood include simple forms, material selection and placement, and limited window types and articulation methods used consistently throughout the building with regular rhythm of patterns. Multi-family buildings typically have a vertically proportioned façade with a flat roof line, massing variation with bay windows or stacked porches integrated into the form.
- This project has massing that is more complex and larger in footprint and scale that the neighborhood context and especially as it relates the adjacent residential buildings. Therefore, in order to be contextual, massing variation, scale, and other design elements must break the building into proportions and scales that relate to the multi-family context nearby.
- The building should be treated like one building with attention to being consistent, cohesive, but also recessive.
- Because the building is a rear lot, the relationship to the street and neighboring buildings is evaluated differently given the anomalous and less visible context.

Design Review Comments *(red text denotes principles or standards that are not met):*
Appendix 7: R-6 Infill Development
Principle A Overall Context –Met – see below.

- *A-1 Scale and Form:* The context is predominantly single and two-family buildings with simple forms, one and a half to two and half stories in height, vertical proportions, and masonry bases with clapboard siding. Larger multi-family buildings typically are 3 stories, use balconies or bay windows, flat roofs, and vertical proportions. In those rare instances where a larger scale, wider building has been built, the scale is mitigated by keeping setbacks as a buffer and through massing variation with elements such as bay windows and porches, and scaling elements such as canopies, material variation, and balconies. The overall building scale and form is larger and more complex than those found in the context. Some scale mitigation has been achieved by varying the massing at the front, maintaining a flat roof, and varying materials. The design creates façade

compositions reminiscent of triple-deckers at the corners of the building to create a relatable scale and form. In this situation, a building is found to meet the standard because the massing is manipulated to relate to the context buildings and create perceived massing and scale that relate. Staff find that the current iteration of massing relationships and proportions are now related enough to the context buildings to mitigate the scale and complexity. This is especially the case given the rear lot relationship to the street and the mitigation of scale and width being set back from the street and behind other residential buildings.

- *A-2 Composition of Principal Facades:* The façade composition in some ways relates to those in context – staff find it appropriate as a large, rear lot building, to be quiet, recessive and simple in the façade composition. The facade is treated with a consistent language but with color and massing variation to create positive scale and proportional relationships. The fenestration patterns, roof lines, materials are consistent throughout with a cohesive façade with a single roof line, consistent window type and placement, integration of balconies, and simple material placement. Predominantly, traditional façade compositions include vertical proportions and narrower buildings – the massing variation and façade composition were revised to better reflect these patterns. The façade composition is also impacted by placement of circulation at the front façade and the overall width of the building, which is much wider than the buildings with which it shares the streetscape.
- *A-3 Relationship to the Street:* The project has an anomalous relationship with the street as a rear lot and is not expected to directly relate to the street in the same way as a project with frontage. The building orients to the street and has visible entrances.

Principle B Massing – Met – The building is larger in scale than what is found in the context in both height and width of the building. In that situation, projects must use massing variation to elicit references to the proportions, forms, and massing found in traditional multi-family buildings and to mitigate the scale impact of this larger building adjacent to small, single family buildings. In this case, the building massing results in perceived masses that relate to the context in the scale, proportion, and relationships found in the triple-decker buildings.

- *B-1 Massing:* The proposed massing is complex in a context where buildings have simple form and massing. The scale and massing of this new project is taller, wider and more complex than the residential context – in order to be considered to meet the standard to be harmonious with the massing of existing buildings, the proposed massing variation breaks down the perceived scale and relates in proportion. In this case, the balconies, three-story flat roof, massing variations define portions of the building into smaller, vertical proportions that are harmonious with the massing of the existing buildings.
- *B-2 Roof Forms:* The proposed flat roof form is in keeping with the traditional multi-family building types found in the context. This form is emphasized with a strong, overhanging cornice line.
- *B-3 Main Roofs and Subsidiary Roofs:* The roof was revised to have one main roof form.
- *B-4 Roof Pitch:* The roof is flat.
- *B-5 Façade Articulation:* The project employs a covered entry, balconies.
- *B-6 Garages:* The garage is attached with living space above, door is recessed from facade.

Principle C Orientation to the Street – Met – This project has an anomalous relationship to the street as a rear lot. The building is oriented towards the street with street-oriented entrances

though the building is set back from the street and the lot does not have a direct relationship with the sidewalk.

- *C-1 Entrances:* The main entries are oriented towards the street and are emphasized by special materials, canopy. The hierarchy of the entrances was addressed by bringing more emphasis to the "main" entrance and down-playing the single unit entrance.
- *C-2 Visual Privacy:* Visual privacy is adequately addressed; all living spaces are elevated or set back from the street.
- *C-3 Transition Spaces:* The transition from the sidewalk to the building entrance is significant given the rear lot placement of the building.

Principle D Proportion and Scale – Met – The proportion and massing of the front façade was revised to feel more cohesive and consistent with proportions that reference the traditional multi-family buildings in the context. The individual building elements are human-scaled.

- *D-1 Windows:* The majority of windows are rectangular and have a vertical proportion. The proportional relationship of the fenestration to the façade is appropriate to the context.
- *D-2 Fenestration:* The project appears to meet the 12% fenestration requirement and appropriately scaled to the massing of the building. Appropriately scaled openings are provided on all sides of the building.
- *D-3 Porches:* The balconies meet the size requirement.

Principle E Balance – Met – The façade uses local symmetry and alignment as described in the standards below, the overall project with an overall sense of balance with the massing, façade proportions, and fenestration patterns. As a rear lot, the front façade is not viewed from the front and is best treated to be recessive.

- *E-1 Window and Door Height:* The majority of window and door head heights align along a common horizontal datum.
- *E-2 Window and Door Alignment:* The majority of windows shall stack so that centerlines of windows are in vertical alignment.
- *E-3 Symmetricality:* Primary window compositions are arranged symmetrically around discernable vertical axes.

Principle F Articulation –

- *F-1 Articulation:* The design uses balconies, a strong roof line, and the texture of the material to provide surface articulation and visual interest.
- *F-2 Window Types:* Two window types are used with consistency with the window types, rhythm, and placement.
- *F-3 Visual Cohesion:* The visual cohesion of the façade was improved with simple materials, limited window types, consistent roofline. The massing variation and proportions were revised to be referential to the triple-decker proportions, massing relationships, and stacked balcony treatment. The project, though a different footprint and scale than the traditional triple-deckers, creates visual cohesion – material selection, placement, consistent details and window patterns throughout.
- *F-4 Delineation between Floors:* The balconies provide the most apparent floor delineation. The entry canopy also makes this distinction.
- *F-5 Porches, etc.:* The entrances were revised to integrate into the overall design. The articulation methods used – change in material, canopy, landscape wall – signify the entrances while keeping within the language of the overall building. The balconies now

have a more appropriate railing and the stacked porches are better integrated into the overall façade design and use the railings as an opportunity to introduce articulation detail.

- *F-6 Main Entries:* There are many entries – legibility of the entrances was improved. The main entry is visible from the street approach, emphasized with a canopy, material change, landscape wall, glazing. The single unit entry is now down-played as secondary but still includes planters and a canopy to signify the entrance.
- *F-7 Articulation Elements:* The rake of the roof meets the 6" requirement; no trim; offsets in the principal façade are at least 12", cornice line is pronounced.

Principle G Materials – Met – The material choice of clapboard is contextual and fine-grained. Material variation is appropriate at the entrances to assist with legibility and emphasis. Otherwise, material placement should be simple and consistent throughout the building.

- *G-1 Materials:* The residential context is predominantly clapboards with occasional shingle or brick. The clapboard is a fine-grain materials in keeping with the context. The residential entry is differentiated appropriately with an accent material.
- *G-2 Material and Façade Design:* The materials are appropriately placed according to their nature.
- *G-3 Chimneys:* Not applicable.
- *G-4 Window Types:* Two window types are used on the front façade. Where the building is predominantly circulation space, the windows could be a recessive but consistent pattern similar to the side elevations of neighborhood multi-family buildings. Detailing is consistent throughout.
- *G-5 Patios and Plazas:* n/a

ATTACHMENT 6a.

Planning and Urban Development Department
Planning Division

Subject: R-6 Small Infill/Multi-family Design Review – 126 North Street
Written by: Caitlin Cameron, Urban Designer

Date of Review: Monday, December 16, 2019

A design review according to the *City of Portland Design Manual* Standards was performed for the new construction of a multi-family dwelling at 126 North Street. The review was performed by Caitlin Cameron, Urban Designer, Shukria Wiar, Planner, and Deb Andrews, Historic Preservation Program Manager. The project was reviewed against the *R-6 Small Infill Development Design Principles & Standards* (Appendix 7 of the Design Manual).

Findings of the Design Review:
The proposed design **does not pass** all of the criteria of the R6 Design Standards – please refer to comments below and the attached illustrative comments. Staff believe with some revision, the project will be able to meet all the design standards.

- The predominant characteristics of the neighborhood include simple forms, material selection and placement, and limited window types and articulation methods used consistently throughout the building with regular rhythm of patterns. Multi-family buildings typically have a vertically proportioned façade with a flat roof line.
- This project sits at grade with living space and entries directly accessible from grade.

Design Review Comments *(red text denotes principles or standards that are not met):*
Appendix 7: R-6 Infill Development
Principle A Overall Context –Met – see below.

- *A-1 Scale and Form:* The context is predominantly single and two-family buildings with simple forms, one and a half to two and half stories in height, vertical proportions, and masonry bases with clapboard siding. Larger multi-family buildings typically are 3 stories, use balconies or bay windows, flat roofs, and vertical proportions The design uses a form and proportions that relate to the neighborhood context. The scale is a story taller than typical multi-family buildings but staff find one story to be within an acceptable tolerance to meet the standard. The building uses a front-end gable rather than a flat roof which reduces the perceived scale. The building sits at grade which also minimizes the overall scale of the building.
- *A-2 Composition of Principal Facades:* The façade composition closely relates to those in context with a two-bay composition with a multi-story bay window. There is overall and local symmetry and vertical proportioned elements.
- *A-3 Relationship to the Street:* The project is slightly set back from the street, more so than the neighboring buildings – staff suggest that the applicant use the average of the two setbacks to establish the setback line and bring the building more in alignment with the neighboring facades.

Principle B Massing – Met – The building is one story taller than the typical multi-family triple-decker building – staff find this scale difference to be compatible and harmonious with the surrounding scale especially given the contextual proportions and roof form with the massing variation provided by the bay window. The front-end gable roof, vertical proportions, and bay window reinforce the traditional building character of the neighborhood.

- *B-1 Massing:* The proposed massing is simple and reflects the forms, building width, footprint, and proportions found in the context to which this building relates.
- *B-2 Roof Forms:* The proposed front-end gable roof form meets the zoning standard and if referential to traditional, simple roof forms.
- *B-3 Main Roofs and Subsidiary Roofs:* There is a clear primary roof form.
- *B-4 Roof Pitch:* Please note the roof pitch on the elevations to verify it meets zoning requirements.
- *B-5 Façade Articulation:* The project employs a covered entry, bay window.
- *B-6 Garages:* The garage is attached but to the side and not visible from the street.

Principle C Orientation to the Street – Not Met – The building is oriented towards the street with one street-oriented entrance. However, the building is at grade which is anomalous with the traditional residential building relationship to the street – this might be considered to meet the principle if more is done to create a transition and relationship to the street similar to context (transition at the entry, visual privacy).

- *C-1 Entrances:* The main entry is oriented towards the street and is emphasized with a canopy. It is not clear what is the main entrance – if the side entry is the main entrance, a porch extending to the sidewalk is required. If the front-facing door is intended to read like the main entrance, more is needed to integrate and bring emphasis.
- *C-2 Visual Privacy:* Visual privacy is not adequately addressed; the ground floor living spaces are at grade and the windows are not raised at least 48" above grade. Revise in some way to meet this standard.
- *C-3 Transition Spaces:* There is a transition from the sidewalk to the building entrance through the front-yard setback/landscape buffer. However, the project lacks adequate transition at the entrance area given the ground floor is at grade.

Principle D Proportion and Scale – Met – The proportion and massing of the front façade is harmonious. The individual building elements are human-scaled.

- *D-1 Windows:* The majority of windows are rectangular and have a vertical proportion. The proportional relationship of the fenestration to the façade is appropriate to the context.
- *D-2 Fenestration:* The project appears to meet the 12% fenestration requirement and appropriately scaled to the massing of the building. Appropriately scaled openings are provided on all sides of the building.
- *D-3 Porches:* Currently no porches – however, a porch may resolve some of the concerns raised in other standards about the prominence and integration of the main entrance.

Principle E Balance – Met – The façade uses local symmetry and alignment as described in the standards below. The overall project creates a sense of balance with the massing, façade proportions, and fenestration patterns – the result is cohesion and balance to the overall project composition similar to the traditional buildings nearby.

- *E-1 Window and Door Height:* The majority of window and door head heights align along a common horizontal datum.
- *E-2 Window and Door Alignment:* The majority of windows shall stack so that centerlines of windows are in vertical alignment.
- *E-3 Symmetricality:* Primary window compositions are arranged symmetrically around discernable vertical axes.

Principle F Articulation – Met

- *F-1 Articulation:* The design uses a bay window, a strong roof line, and the texture of the material to provide surface articulation and visual interest.
- *F-2 Window Types:* Two window types are used with consistent placement, rhythm.
- *F-3 Visual Cohesion:* The visual cohesion of the façade is good with simple design.
- *F-4 Delineation between Floors:* The window alignment provide the most apparent floor delineation. The entry canopy also makes this distinction.
- *F-5 Porches, etc.:* The entrance is not adequately integrated into the overall design – too minimal.
- *F-6 Main Entries:* The entrance is not adequately integrated into the overall design. Whereas in the context, the entry is raised above the grade and includes a stoop or porch that visually relates to the elements of the façade, this entrance is minimal and the canopy has little relationship in its detail or width to the other architectural elements.
- *F-7 Articulation Elements:* The rake of the roof meets the 6" requirement; trim must be at least 4"; offsets in the principal façade are at least 12", cornice line is pronounced.

Principle G Materials – Met – The material choice of clapboard is contextual and fine-grained. Material variation is appropriate at the entrances to assist with legibility and emphasis. Otherwise, material placement should be simple and consistent throughout the building.

- *G-1 Materials:* The residential context is predominantly clapboards with occasional shingle or brick. The clapboard is a fine-grain materials in keeping with the context.
- *G-2 Material and Façade Design:* The materials are appropriately placed according to their nature.
- *G-3 Chimneys:* Not applicable.
- *G-4 Window Types:* Two window types are used on the front façade. Detailing is consistent throughout.
- *G-5 Patios and Plazas:* n/a

A.

ACORN ENGINEERING, INC.

Planning Division
Attn: Shukria Wiar
City of Portland, Maine
389 Congress Street, 4th Floor
Portland, ME 04101

August 2, 2019
Rev. October 29, 2019

Subject: Level III Final Site Plan/Subdivision Application – 126/128 North Street

Dear Shukria Wiar:

On behalf of Upright Properties, LLC, we are pleased to submit the accompanying package of submission materials related to the proposed redevelopment at 126 and 128R North Street. Based upon the discussions at the September 27th, 2019 meeting with you, Chief Thompson, the Applicant and design team the project was updated to include the future plans for 126 North St. As such the proposal has been updated as a phased project where Phase 1 would include the redevelopment of 128R into a four-story building with six condominiums and covered parking on the ground level. Phase 2 would include the redevelopment of 126 into a three-story building with five rental units. Overall, the phased project will result in a net increase of six dwelling units. The project site is located within the City's R-6 Zoning District as well as the Munjoy Hill Conservation Overlay District. This application package is intended to meet the City's Submission Requirements as outlined in the Level III Site Plan/Subdivision Application procedures.

The 128R site currently shares a driveway with the abutting 128F North Street property, achieving a public policy goal of the City's. Additionally, 126 would grant 128R an access easement to provide a 16'-wide access way, providing greater emergency access for three properties. We are pleased to submit this application which will increase the available housing stock by six units including one workforce unit on site and will also improve the area's stormwater management by implementing a high-flow rain garden and storm infrastructure resulting in a reduction in runoff.

The 128R infill lot is largely hidden from the public right-of-way; however, the building design has incorporated strategies to help the structure blend in with the surrounding character of the neighborhood. Prior to this formal application, the project architect has held extensive conversations with the City's Urban Planner to strategize on ways the building can fit into the neighborhood and provide an active front façade. Furthermore, the proposed 126 building features a three-story gable roof structure which compliments the neighboring 128F multi-family building.

If you have any questions regarding these materials or the completeness of the application materials, please contact us within the next five (5) days.

Sincerely,

William H. Savage, P.E.
Project Manager
Acorn Engineering, Inc.

The following documents and drawings will be uploaded onto the City's electronic submission site per the procedure outlined in the application:

Documents:

- Section A: Cover Letter
- Section B: Level III Final Site Plan Application & Checklist
- Section C: Right, Title, Interest
- Section D: Zoning Assessment
- Section E: Easements
- Section F: Waivers
- Section G: Financial Capacity
- Section H: Technical Capacity
- Section I: Conformity with Land Use Ordinance
- Section J: Stormwater Management Report
- Section K: Erosion & Sedimentation Control Report
- Section L: Fire Department Letter
- Section M: Wastewater Capacity Letter
- Section N: Lighting
- Section O: Architectural Design Narrative
- Section P: Utility Cover
- Section Q: Construction Management Plan
- Section R: Solid Waste
- Section S: Parking Analysis
- Section T: Neighborhood Study & Project Renderings

Drawings:

- Civil Site Plan Set, Dated 10/29/19
- Architectural Plan Set, Dated 10/29/19

Portland, Maine Yes. Life's good here.

Planning & Urban Development Department

LEVEL II and LEVEL III APPLICATION SUBMISSION CHECKLIST

Please submit each document as a separate PDF file.

Please confirm by electronically checking the boxes to the left

General Application Documents

Checklist	Items to be Provided
Yes NA Plan ✔	PROJECT DESCRIPTION • Cover Letter with detailed project description
Yes NA Plan ✔	COMPLETED CHECKLIST – LEVEL III APPLICATION
Yes NA Plan ✔	RIGHT, TITLE AND INTEREST • Deeds, leases, or purchase and sales agreements
Yes NA Plan ✔	EVIDENCE OF STATE OR FEDERAL APPROVALS, if applicable • Permits or letters of non-jurisdiction, if applicable
Yes NA Plan ✔	ZONING ASSESSMENT • Table listing required and proposed uses and dimensional standards Zoning Assessment Table
Yes NA Plan ✔	EXISTING &/OR PROPOSED EASEMENTS OR COVENANTS, if applicable • Evidence of existing easements and any proposed easements
Yes NA Plan ✔	WAIVER REQUESTS • Written request for waiver describing request and reason. Waiver Table
Yes NA Plan ✔	FINANCIAL CAPABILITY • Letter or evidence from a financial institution or third party verifying financial capacity to undertake project
Yes NA Plan ✔	TECHNICAL CAPABILITY • Evidence of technical capability of applicant and consultants – resumes and/or examples of past projects

LEVEL II AND LEVEL III SITE PLAN STANDARDS AND SUBMISSION CHECKLIST

Provide assessment of compliance with standards and include supplemental documentation, as applicable.

Please submit each document as a separate PDF file.

TRANSPORTATION

Check list	Assess/Provide/Document:
Yes NA Plan ☐ ✔ ☐	Transportation Analysis- Traffic Impact (14-526 (a) 1) • Provisions for pedestrian, bicycle, vehicle, and loading circulation and incremental volume of traffic impacts • Traffic Impact Study (Technical Manual, Section 1) if applicable
Yes NA Plan ✔ ☐ ☐	Access and Circulation (14-526 (a) 2 a) • Access and internal circulation, addressing ADA access • Access and egress impacts on traffic flows • Description and use of drive-up features, if applicable
Yes NA Plan ☐ ✔ ☐	Loading and Servicing (14-526 (a) 2 b) • Loading and servicing needs, route and travel way geometrics for deliveries • Turning templates for delivery vehicles, if applicable
Yes NA Plan ✔ ☐ ☐	Sidewalks (14-526 (a) 2 c) • Sidewalks and condition along street frontages and internal walkways • Engineered details for ADA ramps and public sidewalk details meeting sidewalk materials policy and ADA ramp construction details as applicable (Technical Manual, Section 1)
Yes NA Plan ☐ ✔ ☐	Public Transit (14-526 (a) 3), if applicable • Existing available transit services • Proposed site plan design details, such as easement, pad base, and shelter
Yes NA Plan ✔ ☐ ☐	Off-Street Parking: Vehicle & Motorcycle/Scooter) (14-526 (a) 4 a and c) • Expected parking demand, proposed parking supply, ADA parking, and applicable Zoning Requirements • Address Technical Manual standards (Section 1) for curb cut separation and parking lot layout and locate on site plan
Yes NA Plan ✔ ☐ ☐	Bicycle Parking (14-526 (a) 4 b) • Address bicycle parking requirements and identify locations on-site • Construction details for bike racks (Technical Manual, Section 1)
Yes NA Plan ✔ ☐ ☐	Snow Storage (14-526 (a) 4 d) • Management plan for snow removal and locate snow storage areas on plan
Yes NA Plan ☐ ✔ ☐	Traffic Demand Management (TDM) (14-526 (a) 5), if applicable • Develop TDM with Trip Reduction Targets and Strategies

ENVIRONMENTAL AND LANDSCAPE FEATURES	
Check list	Assess/Provide/Document:
Yes NA Plan ☐ ✔ ☐	Preservation of Significant Natural Features (14-526 (b) 1), if applicable • Trees, plants, habitats listed on State or Federal list of endangered or threatened • High and moderate value waterfowl and wading habitat • Aquifers on Casco Bay Islands • Waterbodies (including wetlands, watercourses, significant vernal pools and floodplains) • Proposed preservation areas and protection measures • Documentation from environmental consultants, determinations from applicable state agencies
Yes NA Plan ✔ ☐ ☐	Landscaping and Landscape Preservation (14-526 (b) 2 a) • Preservation of trees and preservation within required zoning setbacks (Technical Manual, Section 4) • Protection measures of existing vegetation during construction • Protection measures within Shoreland Zone, if applicable
Yes NA Plan ✔ ☐ ☐	Site Landscaping (14-526 (b) 2 b) • Screening and buffering of service areas and between non-residential and residential uses • Planting plans with plant schedule and sizes (Technical Manual, Section 4)
Yes NA Plan ☐ ✔ ☐	Parking Lot Landscaping (14-526 (b) 2 b ii), if applicable • Landscaped islands within parking areas (Technical Manual, Section 4)
Yes NA Plan ✔ ☐ ☐	Street Trees (14-526 (b) 2 b iii) • Existing Heritage or Feature Trees on site and measures to preserve • Identify street trees on the plan meeting the site plan and Technical Manual standards (Section 4) or identify alternative measures, if applicable

ENVIRONMENTAL AND STORMWATER	
Check list	Assess/Provide/Document:
Yes NA Plan ✔ ☐ ☐	Water Quality, Stormwater Management and Erosion Control (14-526 (b) 3 a) • Stormwater report in compliance with Section 5 of Technical Manual and DEP Chapter 500 stormwater for basic, general and flooding standards, as applicable • Erosion control plan and measures • Evidence of compliance with Urban Impaired Stream Standards pursuant to DEP Chapter 500 stormwater, as applicable • Subsurface sanitary sewage disposal and groundwater protection

PUBLIC INFRASTRUCTURE AND SAFETY	
Check list	Assess/Provide/Document:
Yes NA Plan ✔	Consistency with City Master Plans (14-526 (c) 1) • Identify consistency with master plans • Proposed easements, rights and improvements to connect or continue off-premises public infrastructure, as applicable
Yes NA Plan ✔	Public Safety and Fire Prevention (14-526 (c)) • Address Crime Prevention through Environmental Design (CPTED) (Technical Manual, Section 3) • Emergency vehicle access • Address consistency with public safety standards (Technical Manual, Section 3) • Submit a code summary referring NFPA 1 and all Fire Department standards (Technical Manual, Section 3) – Fire Checklist
Yes NA Plan ✔	Availability and Adequacy of Public Utilities (14-526 (c) 3) (Technical Manual, Sections 2 & 9) • Electrical services, including providing underground services • Identify existing and proposed connections for public utilities and required public utility upgrades • Sewer line connections are required, if there is a main within 200 feet • Proposed solid waste management facilities on-site and management for the site • Written evidence of the ability to serve from utility companies, as applicable

SITE DESIGN	
Check list	Assess/Provide/Document:
Yes NA Plan ✔	Massing, Ventilations and Wind Impact (14-526 (d) 1) • Wind and ventilation impacts on adjoining structures and/or adjacent public spaces. Wind study, if applicable • Bulk, location or height impacts on adjoining structures • Identify and locate HVAC equipment and venting away from public spaces and residential properties • Identify screening and manufacturing specifications for noise, if applicable
Yes NA Plan ✔	Shadows (14-526 (d) 2), if applicable • Shadow analysis of impacts on publicly accessible open space (Technical Manual, Section 11)
Yes NA Plan ✔	Snow and Ice Loading (14-526 (d) 3) • Building design to prevent snow and ice from loading or falling onto adjacent properties or public ways
Yes NA Plan ✔	View Corridors (14-526 (d) 4), if applicable • Protection of designated view corridors (Portland Design Manual, Appendix 1)

Yes NA Plan ☐ ✔ ☐	Historic Resources (14-526 (d) 5), if applicable • Identify developments within Historic Districts or affecting Designated Landmarks • Certificate of Appropriateness or other evidence • Identify Developments within 100 feet of Historic Districts or affecting Designated Landmarks. Advisory HP review may be required • Address preservation and documentation of Archaeological Resources
Yes NA Plan ✔ ☐ ☐	Exterior Lighting (14-526 (d) 6) • Cut sheets of on-site light fixtures and any architectural or specialty lights (Technical Manual, Section 12) • Engineered details for any lights proposed in street right-of-way (Technical Manual, Section 10)
Yes NA Plan ☐ ✔ ☐	Noise and Vibration (14-526 (d) 7) • Evidence of noise levels for equipment, such as equipment specifications, to demonstrate consistency with zoning requirements
Yes NA Plan ☐ ✔ ☐	Signage and Wayfinding (14-526 (d) 8), if applicable • Signage plan showing the location, dimensions, height and setback of all existing and proposed signs. Signs in Historic Districts are reviewed by Historic Preservation staff • Proposed commercial and directional signage on site
Yes NA Plan ✔ ☐ ☐	Zone Related Design Standards (14-526 (d) 5) • Address Historic Preservation Design Review, if applicable • Address any applicable design review standards by zone • Address submission requirements from Design Manual, page 1, addressing neighborhood context • Description of exterior materials, color, finish, and samples
Construction Management Plan	
Check list	
Yes NA Plan ✔ ☐ ☐	Construction Management Plan • Construction Management Document and Plan

Level II and Level III Site Plan Checklist

Please upload the following drawings with the listed details into e-Plan as separate pdfs.

☒ RECENT BOUNDARY SURVEY (stamped by Maine Licensed Surveyor)

Must be in compliance with Technical Manual, Section 13

SITE PLAN(s) (stamped by Maine Licensed Engineer) including:

☒ Existing Conditions
- Approximate location of structures on abutting property
- Topography
- Locate water courses
- Delineate wetlands
- Zone lines

☒ Proposed Site Plan
- Ground floor area, and grade elevations for all buildings

☒ Access, Circulation, and Parking
- Streets and intersections adjacent to site , any proposed geometric modifications
- Location, dimensions and materials of all existing and proposed driveways, vehicle, bicycle, & pedestrian access ways with corresponding curb lines
- Engineered specifications/ cross-sections for proposed driveways, sidewalks & paved areas
- Location and dimensions of proposed loading areas
- Existing and proposed transit infrastructure with dimensions/ engineering specifications
- Location of vehicle and bicycle parking with dimensions and engineering specifications

☒ Site Considerations
- Identify snow storage areas
- Location of fire hydrants
- Location of solid waste management facilities

☒ UTILITY PLAN including:

- Existing utilities on site and within public streets
- Location, sizing, and directional flows of all existing and proposed utilities
- Location and dimensions of off-premises public or publicly accessible infrastructure adjacent to site
- Electric utility infrastructure

☒ GRADING and DRAINAGE PLAN including:
• Existing grades and drainage • Proposed grades • Proposed stormwater management meeting Technical Manual (Section 5) standards • Location and proposed alteration of a water course • Preservation or alteration of wetlands
☒ EROSION CONTROL
• Must be in compliance with Technical Manual, Section 5
☒ LANDSCAPE PLAN including:
• Existing vegetation to be preserved and preservation measures • Proposed landscaping and buffers • Planting schedule
Δ RECORDING PLAT, if applicable
• IF SUBDIVISION: Must be in compliance with requirements of Section 14-496 (b)
☒ ARCHITECTURAL PLANS & RENDERINGS including:
• Exterior building elevations, color renderings, illustrations of all sides • Location and dimensions of all existing & proposed HVAC & mechanical equipment, all proposed screening • Provide context drawings, if applicable (Design Manual, page 1) • Floor plans

Section C

Right, Title, Interest

MAINE REAL ESTATE TAX PAID

QUITCLAIM DEED WITH COVENANT

MARY ROY, of Portland, County of Cumberland and State of Maine, for consideration paid, grants to UPRIGHT PROPERTIES, LLC, a Maine limited liability company with its principal place of business in Portland, County of Cumberland and State of Maine and having a mailing address of P.O. Box 833, Wilton, Maine 04294, WITH QUITCLAIM COVENANT, a certain lot or parcel of land situated southwesterly of, but not adjacent to, the southwesterly sideline of North Street, in the City of Portland, County of Cumberland, and State of Maine, being more particularly bounded and described as follows:

Beginning at the northerly corner of the herein described parcel on the southwesterly line of land described in a deed from Gregory D. Kesich and Gail D. Kesich to Raymond T. Wojcik, Zetta A. Wojcik, and Joshua T. Wojcik, dated August 24, 2007 and recorded at the Cumberland County Registry of Deeds (CCRD) in Book 25418, Page 226, being S35°14'21"E along said land of Wojcik, a distance of twenty-four and fifty-six hundredths (24.56') feet from the westerly corner of said land of Wojcik;

Thence S52°38'46"W along land described in a deed from Redfern Munjoy, LLC to Upright Properties, LLC, dated January 31, 2014, recorded in CCRD Book 31318, Page 270, a distance of thirty-seven and eighty hundredths (37.80') feet to the westerly corner of the herein described parcel at land described in a deed from Raymond C. Maxwell to Redfern Munjoy, LLC, dated January 31, 2014, recorded in CCRD Book 31317, Page 116;

Thence S53°48'37"E along said land of Redfern Munjoy, LLC, a distance of fourteen (14') feet, more or less, to the southwesterly extension of the southeasterly sideline of said land of Wojcik;

Thence N52°38'46"E along remaining land of the herein grantor on the southwesterly extension of the southeasterly sideline of said land of Wojcik, a distance of thirty-three (33') feet, more or less, to the southerly corner of said land of Wojcik, and the westerly corner of land described in a deed from Hazel Brenerman to Peter J. DeTroy, III and Mary Roy (the herein grantor), dated November 21, 2003 and recorded in CCRD Book 20592, Page 111;

Thence N35°14'21"W along said land of Wojcik, a distance of thirteen and a half (13 1/2') feet, more or less, to the point of beginning.

Total area of the herein described parcel equals 480 square feet, more or less. The bearings in this description are based on Grid North, MSPC NAD83, 1802 (West Zone).

The herein described property is depicted on "*Exhibit Sketch For Proposed Conveyance*", prepared by Nadeau Land Surveys, Job #2181902, dated May 29, 2018, attached to and made part of this deed. Meaning and intending to convey a portion of land described in a deed from Redfern Munjoy, LLC to Peter J. DeTroy, III and Mary Roy, dated January 31, 2014, recorded at the Cumberland County Registry of Deeds in Book 31318, Page 267.

Mary Roy derived her sole title to this property by being the surviving joint tenant of her late spouse, Peter J. DeTroy, III. Peter J. DeTroy, III died on May 28, 2016, a resident of Portland, Cumberland County, Maine. Reference is made to a Certificate and Abstract N-121, dated June 16, 2016 and recorded at the Cumberland County Registry of Deeds in Book 33213, Page 100.

Witness my hand and seal this 5 day of June, 2018.

Witness

Darya I. Zappia

Mary Roy

STATE OF MAINE
Cumberland, ss.

June 5, 2018

Personally appeared the above-named MARY ROY and acknowledged the foregoing instrument to be her free act and deed. Before me,

~~Notary Public~~/Attorney-at-law
Printed Name: DARYA I ZAPPIA
~~My Commission Exp.:~~ Bar No 4717

Doc#: 25448 Bk:34890 Pg: 306

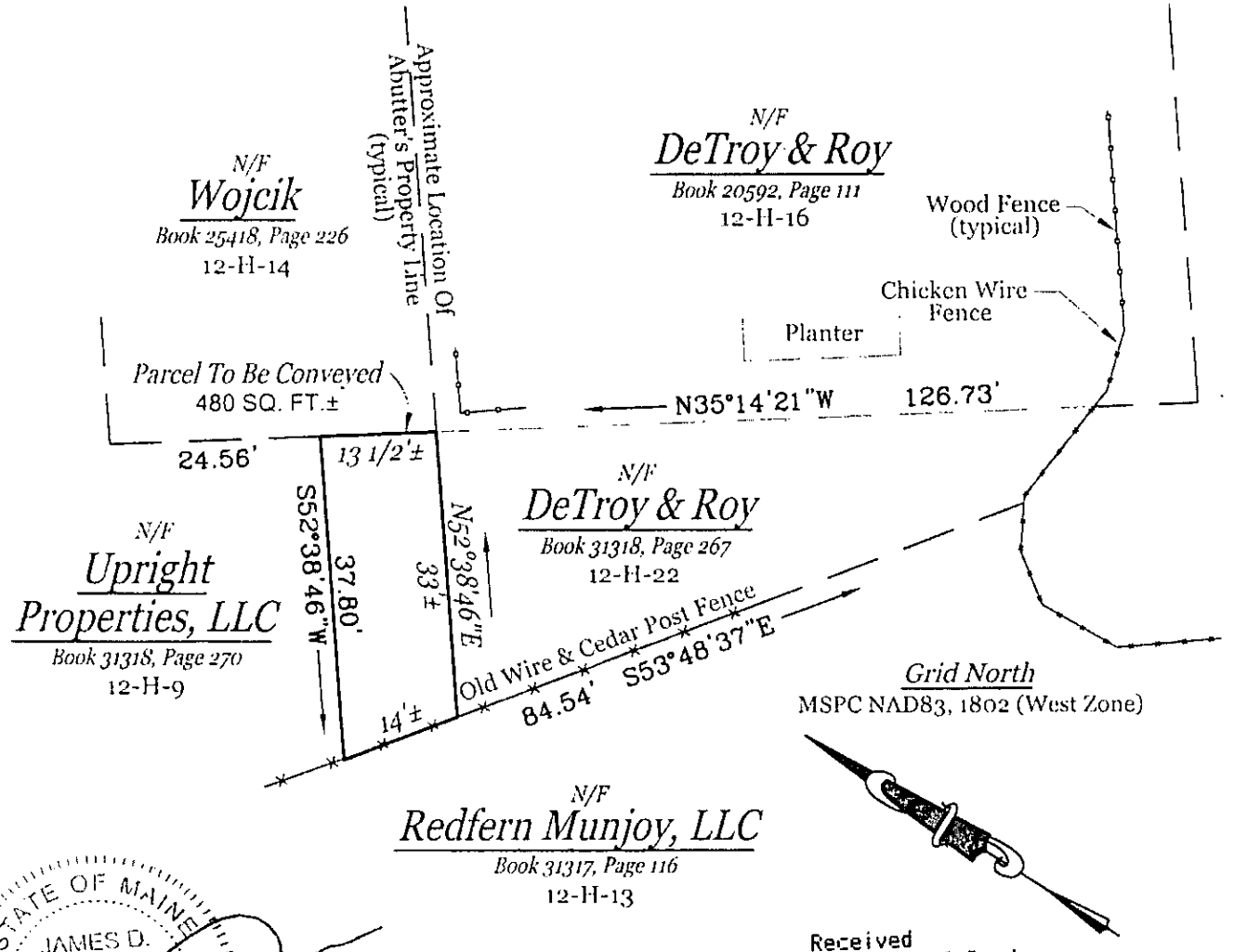
Nadeau Land Surveys

Professional Land Surveyors
Certified Floodplain Managers

Exhibit Sketch For Proposed Conveyance

Mary Roy to Upright Properties, LLC
Between Sheridan Street & North Street, Portland, Maine
1" = 20' May 29, 2018 Job #2181902

Boundary lines based on "Exhibit Sketch For Proposed Conveyance", dated November 27, 2013, recorded in CCRD Book 31318, Page 267, and "Condominium Plat, Munjoy Heights, A Condominium, Sheridan Street, East Cove Street, And Walnut Street, Portland, Maine", dated April 21, 2015 by Nadeau Land Surveys, Portland, Maine, recorded in CCRD Plan Book 215, Page 143.



STATE OF MAINE
JAMES D. NADEAU
2124
PROFESSIONAL LAND SURVEYOR

5-29-18

Received
Recorded Register of Deeds
Jun 05,2018 03:05:59P
Cumberland County
Nancy A. Lane

918 Brighton Avenue
Portland, Maine 04102

www.nadeaulandsurveys.com

Phone (207) 878-7870
Fax (207) 878-7871

307

Know all Men by these Presents, That

I, Elmore W. Ramsdell of Portland in the County of Cumberland and State of Maine,

in consideration of one dollar and other valuable considerations, paid by
Claire Bowden of said Portland,

the receipt whereof I do hereby acknowledge, do hereby give, grant, bargain, sell and convey unto the said Claire Bowden, her heirs and assigns forever, a certain lot or parcel of land on the easterly side of Sheridan Street, beginning at a point on said easterly side of Sheridan Street which point marks the southwesterly corner of land conveyed by A. J. Bernstein to Elmore W. Ramsdell by deed dated May 28, 1923, and recorded in Cuberland County Registry of Deeds in Book 1133, Page 466; thence running northerly by said easterly side line of Sheridan Street sixty-three and five tenths (63.5) feet, more or less, to the northwesterly corner of said land conveyed to Ramsdell as aforesaid; thence running easterly along the northerly line of said land one hundred and four and sixty-two one hundredths (104.62) feet to the northwest corner of land conveyed by said A. J. Bernstein to Joseph R. Murphy by deed dated May 28, 1923, recorded in Cumberland County Registry of Deeds, Book 1133, Page 465; thence running southerly by the westerly line of said Murphy land twenty and thirty-one one hundredths (20.31) feet to the southwesterly corner of said Murphy land; thence running easterly along the southerly line of said Murphy land fifteen (15) feet to a point; thence southerly in a line parallel with and fifteen (15) feet distant easterly from said westerly side line of said Murphy land extended southerly, about forty-three (43) feet to the southerly line of land first above mentioned as conveyed by Bernstein to Ramsdell, at a point ninety-one and ninety-three one hundredths (91.93) feet westerly from the westerly side line of North Street; thence running westerly by said southerly side line of said Ramsdell land about one hundred twenty-one and ninety-five one hundredths (121.95) feet to Sheridan Street and the point of beginning.

Being a part of land conveyed by Abraham J. Bernstein to me by deed dated May 28, 1923, recorded in Cumberland County Registry of Deeds, Book 1133, Page 466.

Together with a right of way across my land from the lot hereby conveyed to North Street.

Twelve words blotted out before signing. D.W.P.

U.S.I.R.
$2.00
E.W.R.
7/25/23

To Have and to Hold the aforegranted and bargained premises, with all the privileges and appurtenances thereof to the said Claire Bowden, her heirs and assigns, to her and their use and behoof forever. And I do covenant with the said Grantee, her heirs and assigns, that I am lawfully seized in fee of the premises; that they are free of all incumbrances; except as aforesaid;

that I have good right to sell and convey the same to the said Grantee to hold as aforesaid; and that I and my heirs, shall and will warrant and defend the same to the said Grantee, her heirs and assigns forever, against the lawful claims and demands of all persons. except as aforesaid.

In Witness Whereof, I, the said Elmore W. Ramsdell, and I, Amy S. Ramsdell, wife of the said Elmore W. Ramsdell, joining in this deed as Grantor, and relinquishing and conveying my right by descent and all other rights in the above described premises

have hereunto set my hand- and seal -this 25th, day of July in the year of our Lord one thousand nine hundred and twenty-three.

Signed, Sealed and Delivered in presence of

D. W. Philbrick — Elmore W. Ramsdell — Seal

Everett W. Fowler — Amy S. Ramsdell — Seal

State of Maine, CUMBERLAND, ss. July 25, 192 3. Personally appeared the above named Elmore W. Ramsdell and acknowledged the above instrument to be his free act and deed.

Before me, Donald W. Philbrick *Justice of the Peace.*

Received July 27, 192 3, at 9 o'clock 40 m. A. M., and recorded according to the original.

EXHIBIT A

RELEASE AND EASEMENT AGREEMENT

This Release and Easement Agreement (the "Agreement") is by and between **REDFERN MUNJOY, LLC**, a Maine limited liability company ("Redfern"), with a place of business in Portland, Maine and a mailing address of PO Box 8816, Portland, Maine 04104, owner of premises (the "Redfern Land") described in deeds recorded in the Cumberland County Registry of Deeds set forth on Exhibit A attached hereto and made a part hereof, and **UPRIGHT PROPERTIES, LLC** ("Upright"), a Maine limited liability company with a mailing address of PO Box 833, Wilton, Maine 04294, owner of premises (the "Upright Parcel") conveyed by corrective deed from Redfern dated January 31, 2014 and recorded in said Registry in Book 31318, Page 270 (the "Upright Deed").

Whereas, in the Upright Deed, Redfern reserved Easement Rights in the Easement Area, all as defined and more fully described therein, which Easement Rights are for the benefit of portions of the Redfern Land that Redfern is developing as residential condominium/subdivision ("Munjoy Heights").

Whereas, the conditions of the Easement Area requires modifications that were not anticipated at the time the Upright Deed was delivered.

Whereas, Upright and Redfern desire to amend the Easement Rights and reduce the square footage of the Easement Area and to clarify their respective ownership rights and easement rights.

Now Therefore, Redfern and Upright, for one dollar and other sufficient consideration paid and received including the grants and covenants hereinafter set forth, do hereby make the following grants of real property interests and agreements, which agreements are intended to run with the land that is Munjoy Heights and the Upright Parcel:

1. Redfern releases to Upright all interest in the easterly portion of the Easement Area, being a strip of land ten (10) feet wide more particularly bounded and described as follows:

   Commencing at a #5 steel rebar with survey cap #2124 to be set at the southerly corner of the Upright Parcel;

   Thence N 52° 38' 46" E along the Redfern Land, a distance of ten and one one-hundredth (10.01) feet to the southerly corner of the land to be released from the Easement Area and the Point of Beginning;

   Thence from said Point of Beginning N 52° 38' 46" E along the Redfern Land and land conveyed to Peter J. DeTroy, III and Mary Roy by corrective deed dated January 31, 2014 and recorded in the Cumberland County Registry of Deeds in Book 31318, Page 267, a distance of ten and one hundredth (10.01) feet;

   Thence N 35° 18' 27" W through the Upright Parcel, a distance of forty-nine and sixty-nine hundredths (49.69) feet;

   Thence N 17° 29' 52" W continuing through the Upright Parcel, a distance of forty and sixty-one hundredths (40.61) feet to the northwesterly line of the Upright Parcel at the Redfern Land;

   Thence S 52° 38' 46" W along the Redfern Land a distance of ten and sixty-three hundredths (10.63) feet;

   Thence S 17° 29' 52" E a distance of thirty-eight and fifty-seven hundredths (38.57) feet;

   Thence S 35° 18' 27" E a distance of fifty-one and sixty-two hundredths (51.62) feet to the Point of Beginning.

   Total area of the herein described parcel equals 902 square feet (0.02 acre). The bearings in this description are based on Grid North, MSPC NAD83, 1802 (West Zone).

2. The Revised Easement Area is a strip of land ten (10) feet wide, being more particularly bounded and described over the following portion of the property:

   Beginning at a #5 steel rebar with survey cap #2124 to be set at the southerly corner of the Upright Parcel;

   Thence N 52° 38' 46" E along the Redfern Land a distance of ten and one hundredth (10.01) feet to the southerly corner of the land to be released from the Easement Area;

   Thence N 35° 18' 27" W along a line ten (10) feet easterly of the Redfern Land, a distance of fifty-one and sixty-two hundredths (51.62) feet;

Thence N 17° 29' 52" W along a line ten (10) feet easterly of the Redfern Land, a distance of thirty-eight and fifty-seven hundredths (38.57) feet to the northwesterly line of the Upright Parcel at the Redfern Land;

Thence S 52° 38' 46" W along the Redfern Land, a distance of ten and sixty-three hundredths (10.63) feet to a #5 steel rebar with survey cap #2124 to be set at the westerly corner of the Upright Parcel;

Thence S 17° 29' 52" E continuing along the Redfern Land, a distance of thirty-six and fifty-three hundredths (36.53) feet to a #5 steel rebar with survey cap #2124 to be set;

Thence S 35° 18' 27" E continuing along the Redfern Land, a distance of fifty-three and fifty-four hundredths (53.54') feet to the point of beginning.

Total area of the herein described parcel equals 901 square feet (0.02 acre). The bearings in this description are based on Grid North, MSPC NAD83, 1802 (West Zone).

3. The Easement Rights are hereby amended as follows and the description of the rights and obligations herein supersede and replace the Easement Rights reserved in the Upright Deed:

   Upright grants to Redfern, its successors and assigns, the right and easement to enter upon the Revised Easement Area with at least 120 days of advance notice (except in the case of emergency) to the Grantee, its successors and assigns, with men and equipment, including heavy equipment, to maintain, repair, shore-up and replace a retaining wall between the adjacent properties of the Grantor and the Grantee (the "Revised Easement Rights"), provided that in the exercise of the Revised Easement Rights Grantor, its successor and assigns, shall (a) ensure all work is done properly and promptly; (b) ensure that no vehicles or construction equipment whatsoever are left overnight or otherwise stored within the Easement Area except when easement work is underway; (c) exercise best efforts to limit any inconvenience to the Grantee, its successors and assigns, or to any other lawful occupier of the Upright Parcel; (d) promptly and reasonably restore the Revised Easement Area to its former condition before the exercise of the Revised Easement Rights; and (e) defend and indemnify the Grantee, its successors and assign, of and from all losses, damages and expenses arising from the exercise of the Revised Easement Rights, including all losses, damages and expenses (including death) arising from the exercise of the Revised Easement Rights for which any third parties seek to hold the Grantee, its successors and assigns, liable.

4. The terms of this Agreement, including all obligations and rights of the parties hereto, are intended to run with ownership of the Upright Parcel and the Redfern Land (the "Affected Lands"). The acceptance of a deed or mortgage to any portion of the Affected Lands, or the entering into a lease or other occupancy of any such portion shall constitute an agreement that the covenants and restrictions set forth in this Agreement are accepted and ratified by such grantee, mortgagee, tenant, or occupant. All of such provisions shall be covenants running with the land and shall bind any persons having at any time any

interest or estate in the Affected Lands or any portion thereof as though such provisions were recited and stipulated at length in each and every deed, conveyance, mortgage or lease thereof.

5. Each owner of all or any portion of the Affected Lands and its heirs, successors and assigns shall be liable for the performance of all covenants, obligations and undertakings set forth in this Agreement, but only to the extent such covenants, obligations or undertakings accrue during the period in which such party owns the affected lands or any portion thereof.

6. Invalidation of any of the provisions contained in this Agreement, or of the application thereof to any person by judgment or court order shall in no way affect any of the other provisions hereof or the application thereof to any other person and the same shall remain in full force and effect.

(Signature Pages follow this page)

IN WITNESS WHEREOF, the said Redfern Munjoy, LLC has caused this instrument to be executed by Jonathan Culley, its Manager, hereunto duly authorized, as of the 30th day of April, 2015.

Redfern Munjoy, LLC, a Maine limited liability company

Witness: Mary Lea Clifford

By: _____

Jonathan Culley
Its Manager

STATE OF MAINE
COUNTY OF CUMBERLAND

4/30, 2015

Then personally appeared Jonathan Culley, Manager of Redfern Munjoy, LLC, and acknowledged the foregoing instrument to be his free act in his said capacity and the free act and deed of the limited liability company.

Before me,

Mary Lea Clifford
Notary Public/~~Attorney at Law~~

SEAL

MARY LEA CLIFFORD
Notary Public, Maine
My Commission Expires February 5, 2016

IN WITNESS WHEREOF, the said Upright Properties, LLC has caused this instrument to be executed by Joshua Wojcik, its Manager, hereunto duly authorized, as of the 30 day of April, 2015.

Upright Properties, LLC, a Maine limited liability company

Witness : _____
Cliff Ruprecht

By: _____
Joshua Wojcik
Its Manager

STATE OF MAINE
COUNTY OF CUMBERLAND April 30, 2015

Then personally appeared Joshua Wojcik, Manager of Upright Properties, LLC, and acknowledged the foregoing instrument to be his free act in his said capacity and the free act and deed of the limited liability company.

Before me,

_____
Notary Public/~~Attorney at Law~~

SEAL

BRITTANY HANDCOCK
NOTARY PUBLIC
CUMBERLAND COUNTY
MAINE
MY COMMISSION EXPIRES FEBRUARY 21, 2021

Exhibit A
Source Deeds for Redfern Munjoy LLC
The Redfern Land

1. Deed from Four Sills LLC to Redfern Munjoy, LLC dated December 4, 2013 and recorded in the Cumberland County Registry of Deeds in Book 31207, Page 48.

2. Deed from Francis O'Connor and Nelson Nadeau to Redfern Munjoy, LLC dated December 4, 2013 and recorded in the Cumberland County Registry of Deeds in Book 31207, Page 50.

3. Deed from Craig G. Coffin, Trustee of the North Street Realty Trust to Redfern Munjoy, LLC dated December 11, 2013 and recorded in the Cumberland County Registry of Deeds in Book 31222, Page 224.

4. Deed from Katherine P. Richman and Nikki Lee Green to Redfern Munjoy, LLC dated December 30, 2013 and recorded in the Cumberland County Registry of Deeds in Book 31262, Page 266.

5. Deed from Dennis E. Lovejoy and Gladys A. Lovejoy to Redfern Munjoy, LLC dated January 10, 2014 and recorded in the Cumberland County Registry of Deeds in Book 31281, Page 281.

6. Deed from Raymond C. Maxwell to Redfern Munjoy, LLC dated January 31, 2014 and recorded in the Cumberland County Registry of Deeds in Book 31317, Page 116.

7. Deed from Raymond H. Waterhouse and Alina Waterhouse to Redfern Munjoy, LLC dated January 23, 2014 and recorded in the Cumberland County Registry of Deeds in Book 31302, Page 177.

Received
Recorded Register of Deeds
Apr 30,2015 01:41:03P
Cumberland County
Nancy A. Lane

{W4856287.4}

MEMORANDUM

OF

UNDERSTANDING

Redevelopment of 126 & 128R North Street

This Memorandum of Understanding ("MOU") is entered into as of October 21, 2019 by Joshua T. Wojcik, an individual residing in Portland, Maine ("Wojcik"), and Upright Properties, LLC, a Maine limited liability Company ("Upright").

WHEREAS, Wojcik is the owner of record of 126 North Street, Portland, Maine ("126 North"); and

WHEREAS, Upright is the owner of record of 128R North Street, Portland, Maine ("128R North"); and

WHEREAS, Upright and Wojcik are submitting a joint application to the Planning and Urban Development Department of the City of Portland proposing the redevelopment of 126 North and 128R North.

IT IS THEREFORE UNDERSTOOD AND AGREED that:

A. Wojcik shall, upon the request of Upright, and provided all appropriate permits have been issued by all relevant State and City authorities, reconstruct the existing building located at 126 North prior to the substantial completion of the building to be built at 128R North.

B. Wojcik shall situate any structure at 126 North such that a sixteen foot (16') access corridor is available to accommodate pedestrian and vehicular traffic between 128R North and the nearest public way (North Street).

C. Wojcik shall execute and deliver to Upright, prior to the commencement of any reconstruction at 126 North or earlier upon the request of Upright, a deed implementing the terms of this MOU as an easement appurtenant and delineating the pedestrian and vehicular access rights to be provided in perpetuity to 128R North as the dominant estate.

IN WITNESS WHEREOF, Joshua T. Wojcik and Upright Properties, LLC, have executed this MOU and thereby bind themselves to the conditions set forth within this MOU on the day and year first above written.

UPRIGHT PROPERTIES, LLC

Joshua T. Wojcik
126 North Street
Portland, Maine

By: _____
Joshua T. Wojcik
Its Manager
128R North Street
Portland, Maine

Section D

Zoning Assessment

ZONING ANALYSIS Relevant Zone: R-6

All Projects:

	Required	Proposed – 128R
Lot Size	2,000 sf	6,142 sf
Area Per Dwelling Unit	725 sf	1,024 sf
Minimum Street Frontage	20'	N/A
Front Yard Minimum	5'	5.25'
Front Yard Maximum	N/A	N/A
Rear Yard	15'	15.11'
Yard Right	5'	11.90'
Yard Left	5'	8.56'
Side Street Setback	N/A	N/A
Step Back	10' @ 35'	> 10'
Maximum Lot Coverage	60%	57%
Minimum Lot Coverage	N/A	N/A
Maximum Height	45'	44.6'
Open Space	20%	40%
Maximum Impervious Area	80%	60%
Pavement Setback	N/A	N/A
Floor Area Ratio	N/A	N/A
Off Street Parking Spaces	3	6
Loading Bays		
Other 1		
Other 2		
Other 3		

	Required	Proposed – 126
Lot Size	2,000 sf	3,645 sf
Area Per Dwelling Unit	725 sf	729 sf
Minimum Street Frontage	20'	38’
Front Yard Minimum	5’	5.25'
Front Yard Maximum	N/A	N/A
Rear Yard	15'	16.49’
Yard Right	5'	5 '
Yard Left	5'	10’
Side Street Setback	N/A	N/A
Step Back	10' @ 35'	> 10'
Maximum Lot Coverage	60%	47%
Minimum Lot Coverage	N/A	N/A
Maximum Height	45'	33.3’
Open Space	20%	20%
Maximum Impervious Area	80%	80%
Pavement Setback	N/A	N/A
Floor Area Ratio	N/A	N/A
Off Street Parking Spaces	2	2
Loading Bays		
Other 1		
Other 2		
Other 3		

E. Summary of Written Easements

Existing

There are two easements as identified by the Surveyor:

- Permanent right-of-way with 128F North Street (includes the rights to use the corridor for utilities). Reference CCRD Bk 1143, Pg 307.
- Permanent retaining wall maintenance easement with Munjoy Heights. Reference CCRD Bk 32237, Page 104.

Proposed

There is currently one proposed easement.

- Access/Utility easement from 126 to 128R (includes rights to use the 4.58' brick walkway for access/utilities)

Section F

Request For Waivers

Standard to be Waived: Cite Ordinance or Technical Manual Standard	**Cite Standard Language:** Cite specific language of applicable Ordinance or Technical Manual Standard	**Waiver Being Sought:** Describe waiver being sought. Ex. – We are requesting a two-way parking lot drive aisle width of 20' feet.	**Justification for Waiver:** Address specific waiver criteria, if applicable, and document reasons for the waiver request.
Technical Manual I-27	24' drive aisle	We are requesting a drive aisle of 13.91'	Due to the constrained width of the lot, the parking spaces have been designed larger than the standard to provide vehicle circulation with the 13.91' drive
Technical Manual I-27	Standard parking = 18' in length	To reduce the 18' dimension to 16.5'	Given the site constraints, the waiver is necessary to facilitate parking.
Technical Manual 1.7.1	Minimum driveway width = 10'	To reduce the drive way aisle to 9.60'	Given the site constraints, the waiver is necessary to facilitate parking.

G. Financial Capacity

A letter from the Applicant's bank confirming financial capacity is attached to this section.

Bangor Savings Bank

06/25/2019

The proposed terms and conditions are provided for discussion purposes only and do not constitute an offer, agreement, or commitment to lend. The actual terms and conditions upon which the Bank might extend credit to the Borrower are subject to the satisfactory completion of due diligence, formal credit approval, satisfactory review of documentation and such other terms and conditions as are determined by the Bank.

This Term Sheet (including summary and terms) and the contents hereof and thereof are confidential and, except for disclosure hereof or thereof on a confidential basis to your accountants, attorneys, City of Portland Planning Board or any individual directly involved in the review process, and other professional advisors retained by you in connection with this loan or as otherwise required by law, may not be disclosed in whole or in part to any person or entity without our prior written consent.

Borrower:	Upright Properties, LLC
Guarantors:	[redacted]
Loan Facility:	Commercial Construction Loan
Amount:	[redacted]
	[redacted]
Purpose:	To provide a construction line of credit for the development of a new, 6-unit residential building located at 128R North Street, Portland, ME.
Term:	Twenty-four (24) months
Rate:	Wall Street Journal Prime Rate [redacted] plus 0.50%, adjusting monthly.
Repayment:	The Loan shall be repayable in monthly payments of accrued interest with principal payments due upon the sale of each unit. Principal payments shall be equal to the net proceeds received from the sale of each unit. Any remaining principal and interest at loan maturity shall be due and payable at the loan maturity date.
Late Charge:	[redacted]
Default Rate:	[redacted]

Advances: Advances under the construction loan will be made monthly in accordance with standard construction documentation requirements including requisition forms, lien waivers and engineer's certificates (as applicable) from an engineer acceptable to the Bank.

Collateral: Collateral will consist of the following:

1. First mortgage on property located at 128R North Street, Portland, ME.
2. Assignment of leases and rents at 128R North Street, Portland, ME.
3. First priority security interest in all construction materials, supplies and equipment owned by Borrower and used in connection with the construction of the subject property.
4. Assignment of all contracts including, but not limited to, property management agreements.
5. Assignment of architectural, construction, and engineering contracts, as well as any permits, approvals, surveys, plans and specs.

Loan Fee: [redacted]

Discharge Fee: Bank shall be paid a release fee of [redacted] as units are sold until such time as the Bank loan is paid in full.

Financial Reporting: The Bank will require the following financial reporting:

[redacted]

Appraisal: [redacted]

Other Conditions: [redacted]

Notice: The Federal Equal Credit Opportunity Act prohibits creditors from discriminating against credit applicants on the basis of race, color, religion, national origin, sex, marital status, age (provided the applicant has the capacity to enter into a binding contract); because all or part of the applicant's income derives from any public assistance program; or because the applicant has in good faith exercised any right under the Consumer Credit Protection Act. The Federal agency that administers compliance with this law concerning this creditor is FDIC Consumer Response Center, 1100 Walnut Street, Box#11, Kansas City, MO 64106.

Borrower shall comply with all normal construction guidelines as required by the Bank and outlined in a Construction Loan Agreement to be executed by Borrower and Bank

Project shall be subject to satisfactory review of project plans, specifications, and construction contract by an independent construction professional selected and engaged by the Bank along with monthly inspection and disbursement review during construction.
The Borrower shall provide Bank with the following prior to any loan disbursements:

[redacted]

Environmental: [redacted]

Insurance Requirements: Borrower will maintain hazard, liability and flood insurances (if applicable) with financially sound and reputable insurers in such amounts and for such coverages satisfactory in all respects to Bank.

[redacted]

Upon Bangor Savings Bank providing the Borrower with a formal written commitment letter which is accepted by the Borrower, the Borrower shall be responsible for all fees, including but not limited to legal, appraisal, and environmental fees associated with this transaction.

Notice: The Federal Equal Credit Opportunity Act prohibits creditors from discriminating against credit applicants on the basis of race, color, religion, national origin, sex, marital status, age (provided the applicant has the capacity to enter into a binding contract); because all or part of the applicant's income derives from any public assistance program; or because the applicant has in good faith exercised any right under the Consumer Credit Protection Act. The Federal agency that administers compliance with this law concerning this creditor is FDIC Consumer Response Center, 1100 Walnut Street, Box#11, Kansas City, MO 64106.

I look forward to discussing this proposal with you further, and again appreciate the opportunity to review your financing request.

Sincerely,



[redacted]

ACKNOWLEDGED AND AGREED TO BY:

By signing below, I am duly authorized to execute and enter into this application for the Borrower and authorize the Bank to initiate formal underwriting of this loan request. I agree to repay the Bank for any expenses incurred during the underwriting process including but not limited to appraisal and legal fees, whether or not the transaction is approved or closed.

BORROWER:

Upright Properties, LLC

[redacted]

Notice: The Federal Equal Credit Opportunity Act prohibits creditors from discriminating against credit applicants on the basis of race, color, religion, national origin, sex, marital status, age (provided the applicant has the capacity to enter into a binding contract); because all or part of the applicant's income derives from any public assistance program; or because the applicant has in good faith exercised any right under the Consumer Credit Protection Act. The Federal agency that administers compliance with this law concerning this creditor is FDIC Consumer Response Center, 1100 Walnut Street, Box#11, Kansas City, MO 64106.

Bangor
Savings Bank

You matter more.

October 22, 2019

City of Portland, Planning Division
389 Congress Street, 4th Floor
Portland, ME 04101

RE: 126 North St.

To Whom It May Concern:

Josh Wojcik, Upright Properties and its affiliates are well known to Bangor Savings Bank. We have worked with Josh for over 10 years and have been directly involved in the financing of numerous successful projects. All accounts have been handled as agreed.

Bangor Savings Bank is providing financing for 128 R North St. The Bank is interested in entertaining financing for 126 North St. Josh has the financial capacity to successfully complete the proposed project. We are looking forward to more substantive conversations as this project materializes.

Please feel free to contact me should you need any additional information. I can be reached at (207) 974-4154; rick.fournier@bangor.com.

Sincerely,

Richard L. Fournier, II
Vice President

Section H

Technical Capacity

H. Technical Capacity

Acorn Engineering, Inc. has successfully permitted and engineered over 15 level II/III projects in Portland in the past 5 years, many of which have been constructed. Some examples include:

- Eldredge Lumber Expansion
- 127 York Street – Harborview Townhomes
- Munjoy Heights
- 89 Anderson St. – East Bayside Lofts
- 667 Congress St – The Hiawatha
- 121 Washington Ave Redevelopment
- 31 Fore Street Condominiums

Additionally, the rest of the design team is outlined below.

- Dextrous Creative (Architect – Tracie Reed) – Tracie Reed is a Maine Licensed, LEED AP and NCARB certified architect based in Portland. Her work encompasses a wide variety of commercial, residential and construction builds. In addition, she performs field work for High Performance Building Model Assessments in accordance with ASHRAE Level 2 Energy Audits guidelines, with the aim of reducing energy and water consumption. Tracie has received awards from the American Institute of Architects and has appeared in publications for the Journal of Green Building and Young Architect Forum Connection.

I. Conformity with Land Use Ordinance

The following outline is made in accordance with the City of Portland Code of Ordinances, Chapter 14 Land Use, Article V Section 14-526.

OVERVIEW

The proposed project includes a two-phase approach where Phase 1 would include the redevelopment of 128R into a four-story building with six condominiums and covered parking on the ground level. Phase 2 would include the redevelopment of 126 into a three-story building with five rental units. The demolition of 126 would occur prior to occupancy of 128R to allow for 16' wide of vehicular access to 128R as requested by the Fire Department.

(a) Transportation Standards

1. Impact on Surrounding Street Systems:

   The site is located at 126 and 128R North Street. North Street is classified as a local street and currently supports a low traffic volume. A negligible traffic increase along North Street is expected for this project due to the low turnover of the proposed land use.

2. Access and Circulation:

   a. Site Access and Circulation:

      (i) The development will provide safe access and internal circulation for both pedestrians and vehicles as seen on the Site Plan.

      (ii) The proposed driveways will be in the same location as the existing driveways. Turning movements and traffic flows will not be conflicted.

      (iii) The site does not feature drive up services as mentioned in this requirement.

   b. Loading and Servicing:

      (i) There are no anticipated loading and servicing needs.

   c. Sidewalks:

      (i) An existing bituminous sidewalk exists on the westerly side of North Street.

      (ii) The small portion of sidewalk along the driveway will be rebuilt per the City's latest detail and specifications on driveway aprons and sidewalks.

      (iii) An internal sidewalk from the public ROW to the proposed site of 128R North Street will be constructed as seen on the Site Plan.

3. Public Transit Access:

   a. Not applicable.

b. Not applicable.

c. Not applicable.

4. Parking:

a. Location and Required Number of Vehicle Parking Spaces:

(i) The proposed project on 126 & 128R North Street will provide 2 & 6 parking spaces respectively, which meets the requirement.

(ii) A parking study is not required.

(iii) The amount of parking exceeds the minimum requirement by more than 10% on 128R North Street. The proposed 6 spaces exceed the requirement by 3 spaces. This is to provide one space per unit which is the industry standard for condominiums. Given the recent development boom and an overall higher demand for on-street parking, decreasing the demand for on-street parking will benefit the end users as well as the entire neighborhood. For more information, please refer to section S. Parking Analysis.

(iv) A waiver has been requested to reduce the required stall length of 18' to 16.5' on 128R North Street.

(v) The driveways and parking areas will be constructed with bituminous pavement which will drain water without eroding.

b. Location and Required Number of Bicycle Parking Spaces:

(i) The site plan includes interior bicycle storage room. This will allow for the minimum storage of 2 bicycles on each site to be parked in a secure location, with the potential for additional storage within each owner's individual unit.

c. Motorcycles and Scooter Parking:

(i) There are no areas designated for motorcycles or scooters at this time; however, adequate room exists for the storage of these motor vehicles should an owner decided to use his/her deeded space for motorcycles or scooters.

d. Snow Storage:

(i) Given the parking areas will be covered in their entirety, snow removal is not required. In general, snow will be stored in green space. Snow storage for 126 North Street will be located on the southeast edge of the lot. See site plan C-10.

(ii) The snow storage has not been located where it will adversely impact the functionality of any part of the site.

5. Transportation Demand Management (TDM):

a. A TDM plan is not required for this project.
b. A TDM plan is not required for this project.
c. A TDM plan is not required for this project.

(b) Environmental Quality Standards

1. Preservation of Significant Natural Features:

   a. Not applicable.

   b. Not applicable.

2. Landscaping and Landscaping Preservation:

   a. Landscape Preservation.

      (i) The disturbance of trees and vegetation that are not proposed to be removed as part of the project will be limited as much as possible – namely along the side and rear property lines.

      (ii) There are no trees 10 inches DBH or greater identified by the Surveyor within the setbacks.

      (iii) It is not anticipated that the project will necessitate any tree protection.

      (iv) A waiver is not requested.

      (v) Not applicable.

   b. Site Landscaping.

      (i) Landscaped Buffers:

         a. Solid waste will be handled internally and out of site from the public ROW.

         b. The project has 0 linear feet of frontage along North Street; however, a multitude of plantings will be provided on site as outlined on the Landscape Plan.

         c. Not applicable.

         d. Screening has been provided as outlined in the Landscape Plan.

      (ii) Parking Lot Landscaping:

         a. Not applicable – all parking is covered.

         b. There is no proposed area with greater than 40 parking spaces without interrupted pavement.

         c. Not applicable.

         d. Not applicable.

         e. Not applicable.

         f. Not applicable.

      (iii) Street Trees:

a. The two existing street trees are proposed to remain. Given the minimal street frontage and existing trees, the Applicant will pay into the tree fund for the net deficit of nine street trees.

b. Not applicable.

3. Water Quality, Stormwater Management and Erosion Control:

a. Stormwater:

(i) The site drainage will not be directed to flow or pond onto adjacent lots. The drainage patterns will be altered to intercept the roof runoff as well as the driveway runoff, with the addition of stormwater best management practices to attenuate the flows.

(ii) Any stormwater that flows onto adjacent lots will not exceed the pre-development flows.

(iii) The runoff from the site into the City property will not increase from the pre-development condition.

(iv) Not applicable.

b. A site-specific Stormwater Management Plan has been developed for the project to show compliance with Section 5 of the Technical Manual, including the basic standards of MEDEP Chapter 500. Please refer to sections J and K, the Stormwater Management and Erosion & Sedimentation Control Plans, respectively, for more information.

c. The project is not located in a watershed of an urban impaired stream as listed by the MEDEP.

d. Not applicable.

e. The development is not anticipated to pose a contamination risk to groundwater during or after construction. The project will be serviced by a public wastewater system.

f. The development will provide for adequate and sanitary disposal of sewage in accordance with Section 2 of the Technical Manual.

(c) Public Infrastructure and Community Safety Standards

1. Consistency with City Master Plans:

a. The project has been designed to be consistent with the City's Zoning Ordinance and off-site infrastructure.

b. Not applicable.

2. Public Safety and Fire Prevention:

a. The site has been designed to promote safe and inviting public access.

b. Access is available to both buildings via the proposed 16' entrance to 128R North Street which

will be constructed in Phase 1. The building will be sprinkled with a full NFPA 13 system.

c. A fire hydrant is located about 215' away located on 146 North street in front of the Island View Apartments. Another fire hydrant is located approximately 175' away on the corner of Walnut Street and North Street.

3. Availability and Adequate Capacity of Public Utilities:

a. Public utilities in the vicinity of the site have capacity to serve the project. Ability to Serve letters have been sent to the respective companies. Responses have been included in the submission and any remaining responses will be submitted upon receipt.

b. The electrical service will be wired underground.

c. The new sewer and stormwater infrastructure will meet the provisions of the Technical Manual.

d. The projects will be served by connection to the public sewer system within North Street.

e. The sanitary sewer collection system meets all applicable sections of the Technical Manual. The stormwater management system is designed to meet the standards of Chapter 500.

f. Although not required, the project anticipates providing internal solid waste storage with private hauling of the waste.

(d) Site Design Standards

1. Massing, Ventilation and Wind Impact:

a. Not applicable.

b. Not applicable.

c. Not applicable.

2. Shadows:

a. The shadows created by the building will not influence public open spaces.

3. Snow and Ice Loading:

a. The structures will not distribute snow and ice onto adjacent properties.

4. View Corridors:

a. The project site is located outside the Downtown Vision View Corridor Protection Plan.

5. Historic Resources:

a. The development is not located in a historic district, historic landscape district or City designated landmark.

b. The development is not located adjacent to designated landmarks, historic district, or historic landscape district. The pending Munjoy Hill historic district may abut the project in the future.

c. There are no known archaeological resources on the site.

6. Exterior Lighting:

   a. Site Lighting.

      (i) Exterior lighting will be designed to meet the requirements of Section 12 of the Technical Manual. A photometric plan has been included with this submission.

      (ii) Any lighting that may adversely impact the abutting residential properties will feature house-side shielding.

   b. Architectural and Specialty Lighting.

      (i) No architectural or specialty lighting is proposed.

      (ii) No up-lighting is proposed.

   c. Street Lighting.

      (i) No new street lights are proposed.

7. Noise and Vibration:

   a. The HVAC system will meet the applicable state and federal emissions requirements and will also be screened and directed away from abutters.

8. Signage and Wayfinding:

   a. All street and wayfinding signage shall meet the requirements of the Manual on Uniform Traffic Devices (MUTCD) and Division 22 of the City Code.

      (i) The project is not located in a historic district or subject to Article IX.

      (ii) Not applicable.

      (iii) All street and wayfinding signage shall meet the requirements of the Manual on Uniform Traffic Devices (MUTCD) and Division 22 of the City Code.

9. Zoning Related Design Standards:

   a. The project has been designed to meet the standards set forth in the R-6 zone. Please refer to the Site Plan for more information on the Space & Bulk Standards.

ACORN ENGINEERING, INC.

STORMWATER MANAGEMENT REPORT

Prepared For:

Upright Properties, LLC

Prepared By:

Acorn Engineering, Inc.
P.O. Box 3372
65 Hanover Street Portland, Maine 04104



December 2019
Rev. January 2020

INTRODUCTION

Acorn Engineering, Inc., has been retained by Upright Properties, LLC to provide civil engineering services for the proposed development at 126 and 128R North Street. The existing structures would be demolished and replaced with a six-unit condominium and a five-unit rental. The project will increase the site's impervious area by greater than 1,000 square feet and as such is subject to water quality standards.

A stormwater analysis has been prepared to demonstrate that the project will meet the following requirements of the City of Portland (the City):

- City of Portland Land Use Ordinance Chapter 14, Article V. Site Plan Section 14-523. Required Approvals and Applicability (F) Level III Site Plan Review.
- City of Portland Technical Manual – Section 5 – Portland Stormwater Management Standards and Maine DEP Chapter 500 Stormwater Management.

EXISTING CONDITIONS

The proposed project site is located at 126/128R North Street. A boundary plan has been prepared by Nadeau Land Surveys from Portland, Maine dated August 22, 2018. All abutting uses are residential.

Both properties are currently accessed by bituminous driveways off North Street. The majority of the subject parcel's impervious area is attributed to the main structure and the driveway. Smaller areas are made up of walkways and a shed. The site slopes down significantly towards the southwest. The steep slope runs towards a concrete block retaining wall constructed as part of the Munjoy Heights project in 2015. A 10' maintenance easement runs along the rear property line which would provide future access for the Munjoy Heights Homeowner's Association to repair or replace the wall when necessary. Approximately half of the single-family's roof runoff is directed toward this wall and site.

The project team is not aware of the presence of any existing significant natural features located on the site. Given the urban setting, existing free-draining soils and steep slopes a field inventory of significant natural feature was not undertaken. The project is not located within a watershed classified as an Urban Impaired Stream.

PROPOSED DEVELOPMENT

The proposed redevelopment includes the demolition of the existing structures and construction of two structures, both with open-air/covered parking. A series of impermeable decks supported by columns will protrude from the rear of the structure. The columns on 128R will be placed on piers set below the angle of influence to the downgradient retaining wall. Furthermore, a proposed cast-in-place retaining wall up to 5' is proposed on the subject parcel to facilitate the parking. The wall will be designed and constructed in conjunction with the main structure's foundation as well as the supporting columns.

Through a series of roof drains, gutters, and a downspout, the entirety of the roof and deck runoff (which is essentially the extent of the 128R parking) are proposed to be routed to a

proprietary high-flow media rain garden at the northerly corner of the site. The design is based off a Focal Point system manufactured by ACF Environmental. The footprint of the filter media is 21 square feet and has an infiltration rate of 100 inches per hour. Below the media, 48 maintenance modules will sit above crushed stone to provide storage of the filtered water before being collected by the underdrain and piped to the street. Above the media, the garden will allow for 6 inches of ponding before overflowing into an overflow beehive grate which bypasses the filter media. The runoff generated by the building and driveway at 126 will be routed to a catch basin and storm drain lateral directed to the sewer main.

The development will be served by the Portland Water District, underground power/cable/communications, natural gas and the municipal sewer system. The project anticipates incorporating Maine DEP approved stormwater Best Management Practices (BMP) to meet the General and Flooding Standards.

GENERAL STANDARDS - WATER QUALITY

The development shall provide water quality treatment for no less than 95% of the new impervious area and 80% of the developed area. The project includes the redevelopment of existing impervious area including rooftops, asphalt driveways, and walkways. Water quality treatment shall be provided through the use of a proprietary high-flow filter media rain garden. The proposed system is a Focal Point rain garden with maintenance modules. This system is manufactured by ACF Environmental.

The system was sized to meet or exceed the requirements set forth within the MDEP Volume III: BMPs Technical Design Manual Section 7. Filtration BMPs have been shown to be very effective at removing a wide range of pollutants from stormwater runoff. Stormwater runoff from the roofs and decks will be collected by roof drains and gutters before being piped to the rain garden. A downspout will outlet onto a splash stone before entering the BMP.

The treatment of the impervious surface is as follows:

Table 1 – Impervious Treatment Area Table

Existing Impervious Area (SF)	Total Proposed Impervious Area (SF)	New Impervious Area (SF)	Proposed Impervious Area with Treatment (SF)	Overall New Imp. Area Treated
5,705*	7,713*	2,008	3,558	177%

*Areas include shared driveway

As shown above, the project anticipates meeting and exceeding the required treatment for new impervious surfaces and developed area.

Furthermore, the minimum 80% treatment of new developed area is exceeded as ample stormwater treatment is being provided while the proposed development footprint is negligibly larger than the existing development footprint.

Regarding the water quality volume, this requirement is met by sizing the system to store 1 inch of runoff from the impervious tributary area and 0.4 inches of runoff from the landscaped tributary area.

Table 2 – Water Quality Volume			
Tributary Impervious Area (SF)	Tributary Pervious Area (SF)	Water Quality Volume Required (CF)	System Storage Volume Provided (CF)
3,558	223	304	319

Furthermore, the system is able to pass a 0.95" rainfall without overflowing into the beehive bypass drain as required by Chapter 7 Appendix B.

FLOODING STANDARD – WATER QUANTITY

The proposed project was modeled using HydroCAD to verify that the post-development conditions do not exceed the pre-development conditions. A 24-hour SCS Type III storm distribution for the 2, 10, and 25-year storm events were used. The corresponding rainfall amounts for these storms are 3.10", 4.60", and 5.80" respectively.

Due to the numerous variables, and inherent inaccuracies with the modeling program used to calculate stormwater runoff it is custom at Acorn Engineering, Inc. to round to the nearest whole number. However due to the small size of the project and the minimal existing flows, the stormwater runoff shall be rounded to the nearest tenth of a cubic feet per second (cfs).

Time of Concentration (T_c)

Within the pre-development, calculating a Tc using site specific flow paths yielded less than 5 minutes. A consistent time of concentration (T_c) of 5 minutes was applied to each subcatchment for both the pre and post-development conditions.

Pre-development Calculations

The pre-development model was broken into two separate subcatchments.

- Subcatchment 1 – This tributary includes the front half of the 128R pitched roof, a portion of the concrete walk, the driveway between the existing house and North St., and green space., 126 North structure and driveway.
- Subcatchment 2 – This tributary includes the rear half of the pitched roof, the shed, a portion of the concrete walk, and the embankment upgradient of the Munjoy Heights retaining wall.

A pre-development watershed map developed for this project can be viewed in Attachment A and a copy of the HydroCAD calculations is included within Attachment C, of this report.

Peak flow rates for the storm events are as follows:

Table 3 – Pre-Development Peak Stormwater Flows			
Drainage Area	**2 – Year Storm Event (cfs)**	**10 – Year Storm Event (cfs)**	**25 – Year Storm Event (cfs)**
Total Runoff	0.5	0.9	1.2

Post-development Calculations:

The post-development model was broken into three separate subcatchments.

- Subcatchment 1.1 – This tributary includes the entirety of the 128 R roof, the decks, and a small amount of green space all flowing to the high-flow rain garden.
- Subcatchment 1 – This tributary includes green space on both properties flowing to field inlets and a catch basin, the brick walkways, the proposed 126 structure, and the two driveways.
- Subcatchment 2 – This tributary includes a portion of the proposed retaining wall as well as green space and the embankment upgradient of the existing retaining wall on the Munjoy Heights site.

A post-development Watershed Map developed for this project can be viewed in Attachment B and a copy of the HydroCAD calculations is included within Attachment C, of this report.

It should be noted that the existing driveway was modeled in both the pre and post conditions. Despite the property lines, it is functionally part of the site and tributary to North Street along with a portion of the subject parcel. Therefore, its hydrology and contribution to stormwater runoff was included within both models.

The post-development calculations include changes to the land use, and the compensation provided by the stormwater BMP. The following table represents comparison of pre-development and post-development condition peak runoff rates for the proposed development and tributary area.

Table 4 – Comparison of Peak Flows						
Drainage Area	**2 – Year Storm Event (cfs)**		**10 – Year Storm Event (cfs)**		**25 – Year Storm Event (cfs)**	
Total Runoff	**Pre**	**Post**	**Pre**	**Post**	**Pre**	**Post**
	0.5	0.4	0.9	0.7	1.2	0.9

As shown in Table 4 the net impact of the post development peak flows will remain at or below the predevelopment levels. A post-development watershed map developed for this project can be viewed in Attachment B, anda copy of the HydroCAD calculations is included within Attachment C of this report.

SOILS

Onsite soil information includes the following:

- Soil Conservation Service Medium Intensity Soil Survey for Cumberland County

Given the soils information, listed above, no onsite wastewater is proposed, deep fills/cuts the applicant does not intend to perform a more intense hydric soil boundary delineation because of the waiver requirements set forth in the City of Portland Technical Manual – Section 7 – Soil Survey, Rev. 6/17/12 are met.

The area within and surrounding the project includes soils types listed in the table below. The susceptibility of soils to erosion is indicated on a relative "K" scale of values over a range of 0.02 to 0.69. Higher "K" values indicate more erodible soils.

Table 5 - "K" Value		
Soils Type	**Subsurface**	**Substratum**
Hinckley	.17	.17

The soil "K" values for the soils, listed above, show a low susceptibility to erosion. The site's susceptibility to erosion is from the Soil Conservation Service Medium Intensity Soil Survey for Cumberland County. Although soil "K" values for the soils show a low susceptibility to erosion, implementation of the proposed Erosion & Sedimentation Measures by the contractor will be of the utmost importance, given the embankment and downhill retaining wall.

Conclusion

The proposed development was designed to meet the requirements implemented by the MDEP under the Stormwater Management Statute (38 M.R.S.A. § 420-D) as well as the City of Portland Technical Manual – Section 5 – Portland Stormwater Management Standards. As a result, the design of the proposed development and stormwater system, the project does not anticipate to create erosion, drainage or runoff problems either in the development or with respect to adjoining properties. The existing flows will be maintained, but redirected to the stormwater system through LID techniques rather than the abutting property.

Attachments

Attachment A: Pre Development Watershed Map
Attachment B: Post Development Watershed Map
Attachment C: HydroCAD Calculations

POI #2

2

1

PROPERTY LINE

SUBCAT BOUNDARY

POI #1

NORTH STREET

N/F Roy

N/F Kremer

N/F Portland VOA Elderly Housing Inc.

N/F Redfern Manlius, LLC

Tiered Concrete Retaining Wall

Found #5 Steel Rebar w/Survey Cap #2124 Or MagNail w/Washer Set 5/7/2018 (typical)

Found #5 Steel Rebar w/Survey Cap (3" up/disturbed)

Sill=141.2'

Sill=143.2'

Sill=143.9'

Paved Sidewalk

Granite Curb

Paved Drive

Concrete

Porches

Porch

Shed

Cedars

Landscaped Area

Parcel Parking

Paved Drive (See Note 19)

10' x 28' Right Of Way Per Bk. 1128, Pgs. 405-6

Concrete Pad (flush) Above Pavement Edge (not shown)

CMP 18.1

RIM=134.7'
12"PVC INV.IN=127.2'(SE)
6"PVC INV.IN=127.4'(NE)

NOTE:

1. REFER TO STORMWATER REPORT FOR MORE INFORMATION

1 — SUBCATCHMENT NUMBER

SUBCATCHMENT EXTENTS

POI #1 — POINT OF INTEREST (POI)

FLOW LINE

ISSUED FOR	BY DATE
FINAL APP.	WHS 6/7/19
PHASE II UPDATE	WHS 10/29/19
REVISION	REV. DATE

DRAWING NAME: PRE-DEVELOPMENT WATERSHED MAP

PROJECT NAME: 128R NORTH STREET

CLIENT: UPRIGHT FRAMEWORKS, LLC
PORTLAND, ME

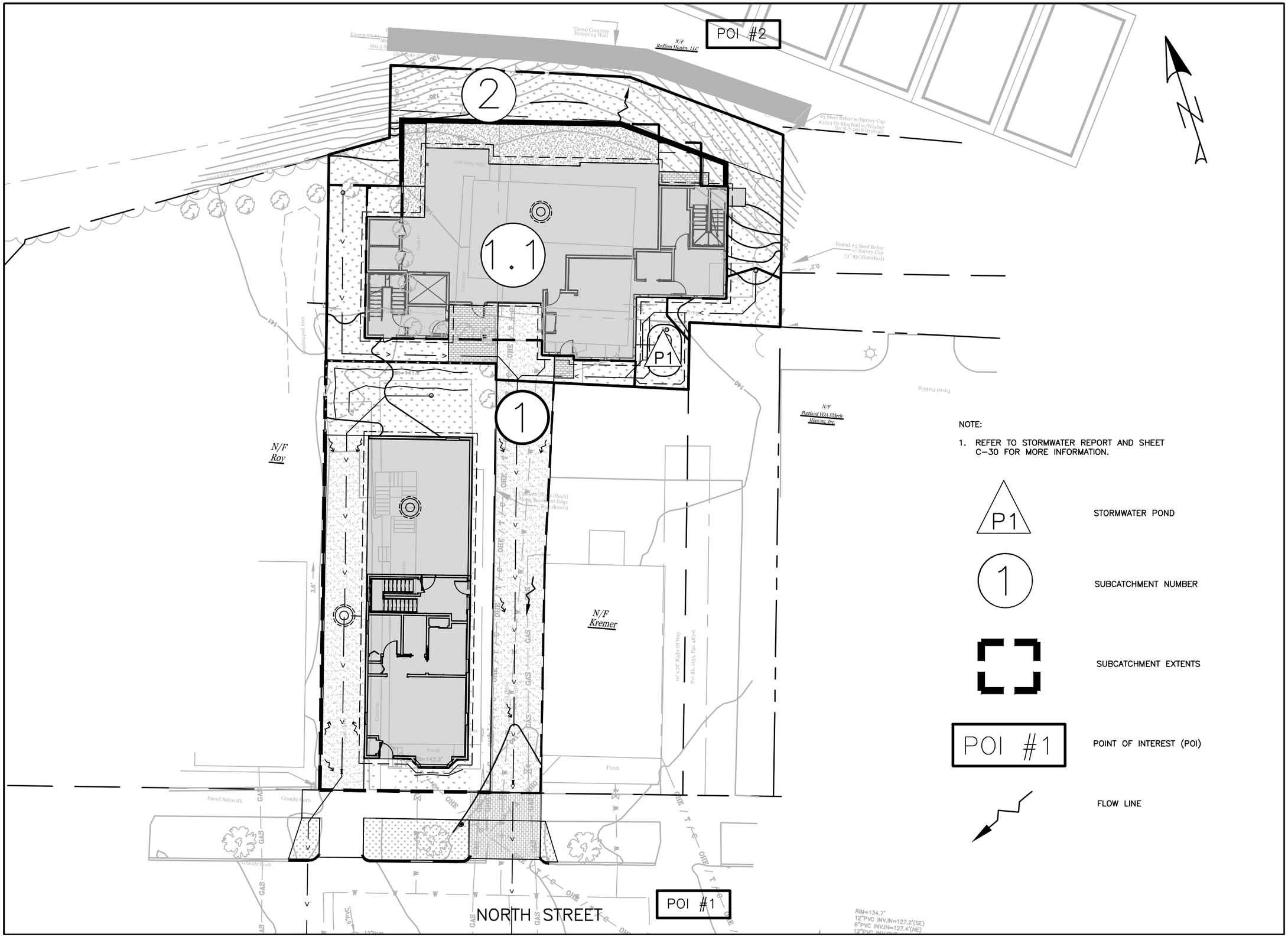
ACORN ENGINEERING, INC
65 HANOVER ST PORTLAND, MAINE 04101
(207) 775-2655

FILE:	1116_CIVIL
JN:	1116
SCALE:	1"=20'
DESIGN BY:	SJL
DRAWN BY:	SJL
CHECKED BY:	WHS

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DRAWING NO.

PRE



NOTE:

1. REFER TO STORMWATER REPORT AND SHEET C-30 FOR MORE INFORMATION.

P1 — STORMWATER POND

1 — SUBCATCHMENT NUMBER

SUBCATCHMENT EXTENTS

POI #1 — POINT OF INTEREST (POI)

FLOW LINE

ISSUED FOR	BY DATE
FINAL APP.	WHS 6/7/19
PHASE II UPDATE	WHS 10/29/19
REVISION	REV. DATE

DRAWING NAME: POST-DEVELOPMENT WATERSHED MAP

PROJECT NAME: 128R NORTH STREET

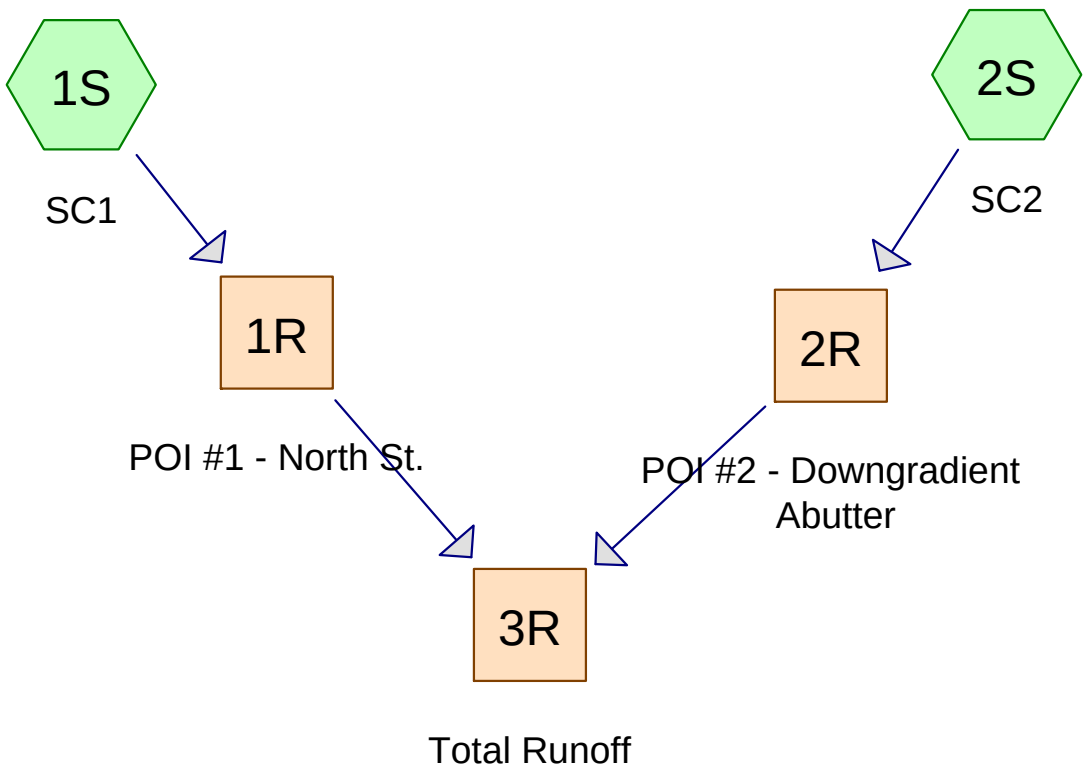
CLIENT: UPRIGHT FRAMEWORKS, LLC
PORTLAND, ME

ACORN ENGINEERING, INC
65 HANOVER ST PORTLAND, MAINE 04101
(207) 775-2655

FILE:	1116_CIVIL
JN:	1116
SCALE:	1"=20'
DESIGN BY:	SJL
DRAWN BY:	SJL
CHECKED BY:	WHS

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DRAWING NO.
POST



Subcat Reach Pond Link

Routing Diagram for Pre Development 10-29
Prepared by Acorn Eng, Printed 10/29/2019
HydroCAD® 10.00-24 s/n 00620 © 2018 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.016	98	(2S)
0.118	74	>75% Grass cover, Good, HSG C (1S, 2S)
0.090	98	Pavement, roof, concrete (1S)
0.025	98	shared driveway (1S)
0.249	**87**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.118	HSG C	1S, 2S
0.000	HSG D	
0.131	Other	1S, 2S
0.249		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	0.000	0.016	0.016		2S
0.000	0.000	0.118	0.000	0.000	0.118	>75% Grass cover, Good	1S, 2S
0.000	0.000	0.000	0.000	0.090	0.090	Pavement, roof, concrete	1S
0.000	0.000	0.000	0.000	0.025	0.025	shared driveway	1S
0.000	**0.000**	**0.118**	**0.000**	**0.131**	**0.249**	**TOTAL AREA**	

Time span=1.00-36.00 hrs, dt=0.01 hrs, 3501 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: SC1 Runoff Area=6,051 sf 82.73% Impervious Runoff Depth=2.45"
Tc=5.0 min CN=94 Runoff=0.40 cfs 0.028 af

Subcatchment 2S: SC2 Runoff Area=4,811 sf 14.53% Impervious Runoff Depth=1.14"
Tc=5.0 min CN=77 Runoff=0.15 cfs 0.011 af

Reach 1R: POI #1 - North St. Inflow=0.40 cfs 0.028 af
Outflow=0.40 cfs 0.028 af

Reach 2R: POI #2 - Downgradient Abutter Inflow=0.15 cfs 0.011 af
Outflow=0.15 cfs 0.011 af

Reach 3R: Total Runoff Inflow=0.54 cfs 0.039 af
Outflow=0.54 cfs 0.039 af

Total Runoff Area = 0.249 ac Runoff Volume = 0.039 af Average Runoff Depth = 1.87"
47.48% Pervious = 0.118 ac 52.52% Impervious = 0.131 ac

Summary for Subcatchment 1S: SC1

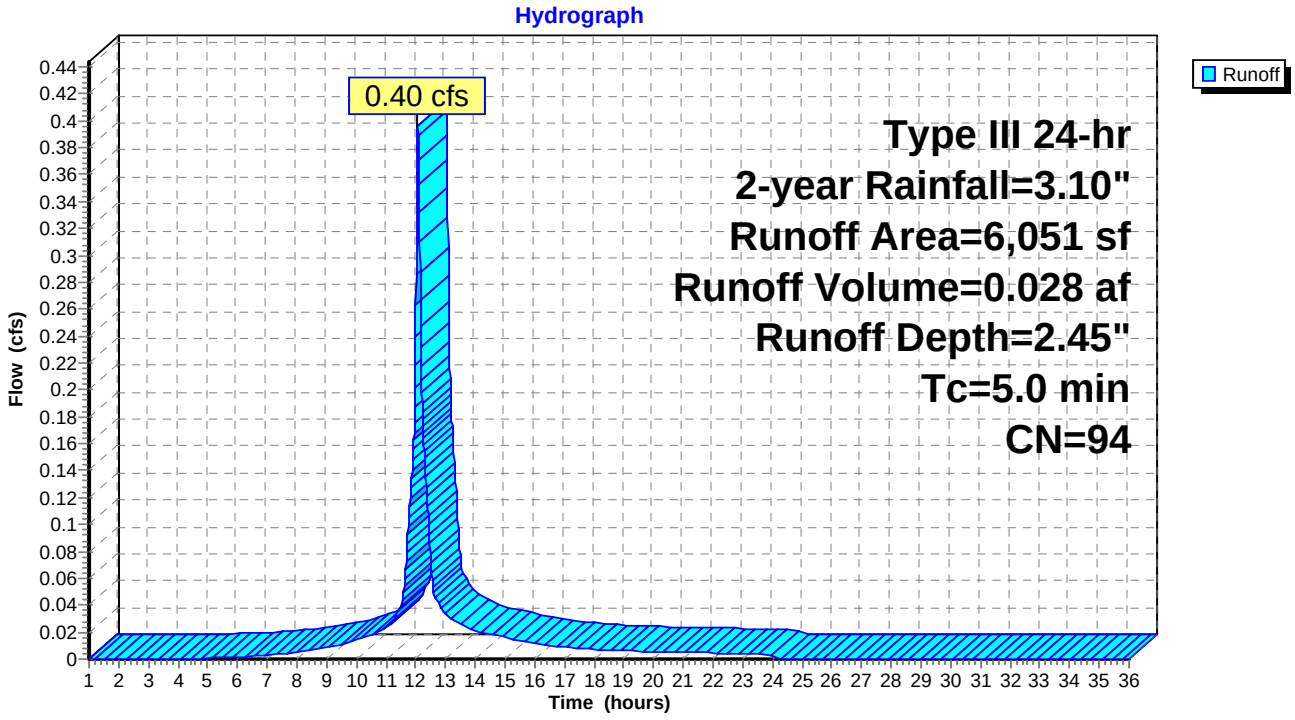
Runoff = 0.40 cfs @ 12.07 hrs, Volume= 0.028 af, Depth= 2.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
	1,045	74	>75% Grass cover, Good, HSG C
*	3,929	98	Pavement, roof, concrete
*	1,077	98	shared driveway
	6,051	94	Weighted Average
	1,045		17.27% Pervious Area
	5,006		82.73% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, Direct Urban Environment**

Subcatchment 1S: SC1



Summary for Subcatchment 2S: SC2

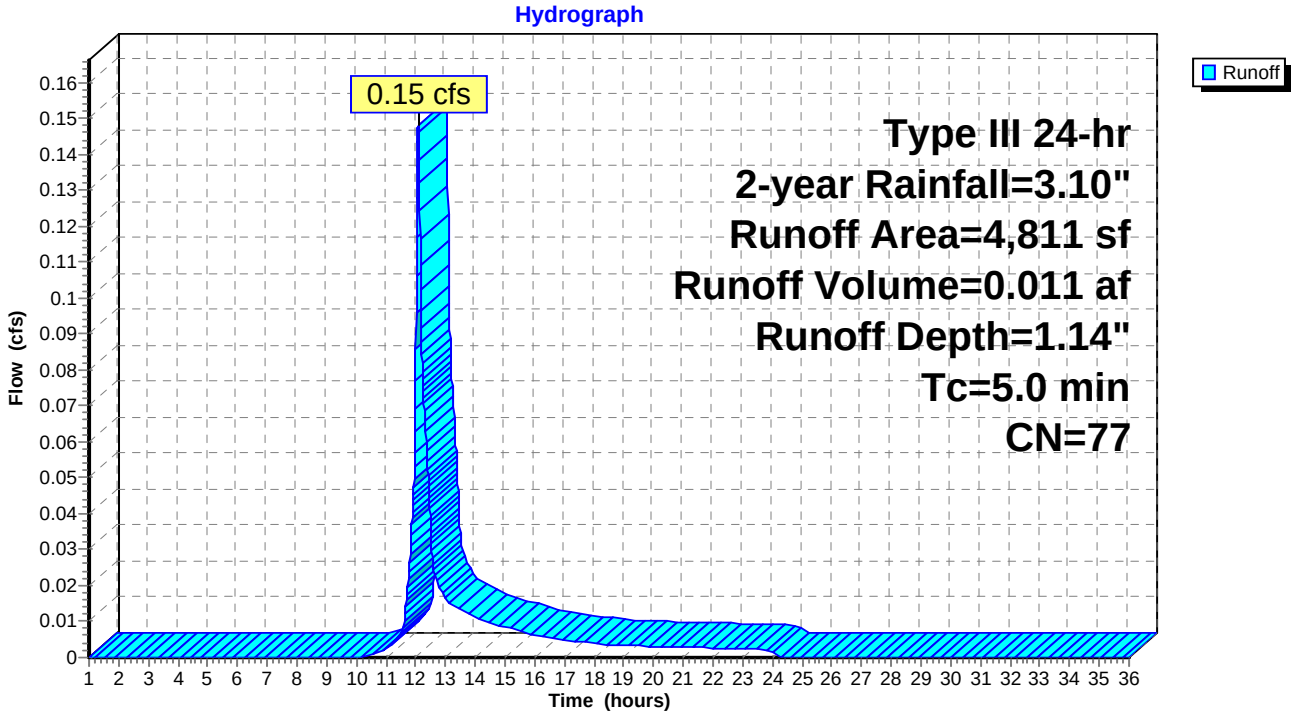
Runoff = 0.15 cfs @ 12.08 hrs, Volume= 0.011 af, Depth= 1.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
*	699	98	
	4,112	74	>75% Grass cover, Good, HSG C
	4,811	77	Weighted Average
	4,112		85.47% Pervious Area
	699		14.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, Direct Urban Environment**

Subcatchment 2S: SC2

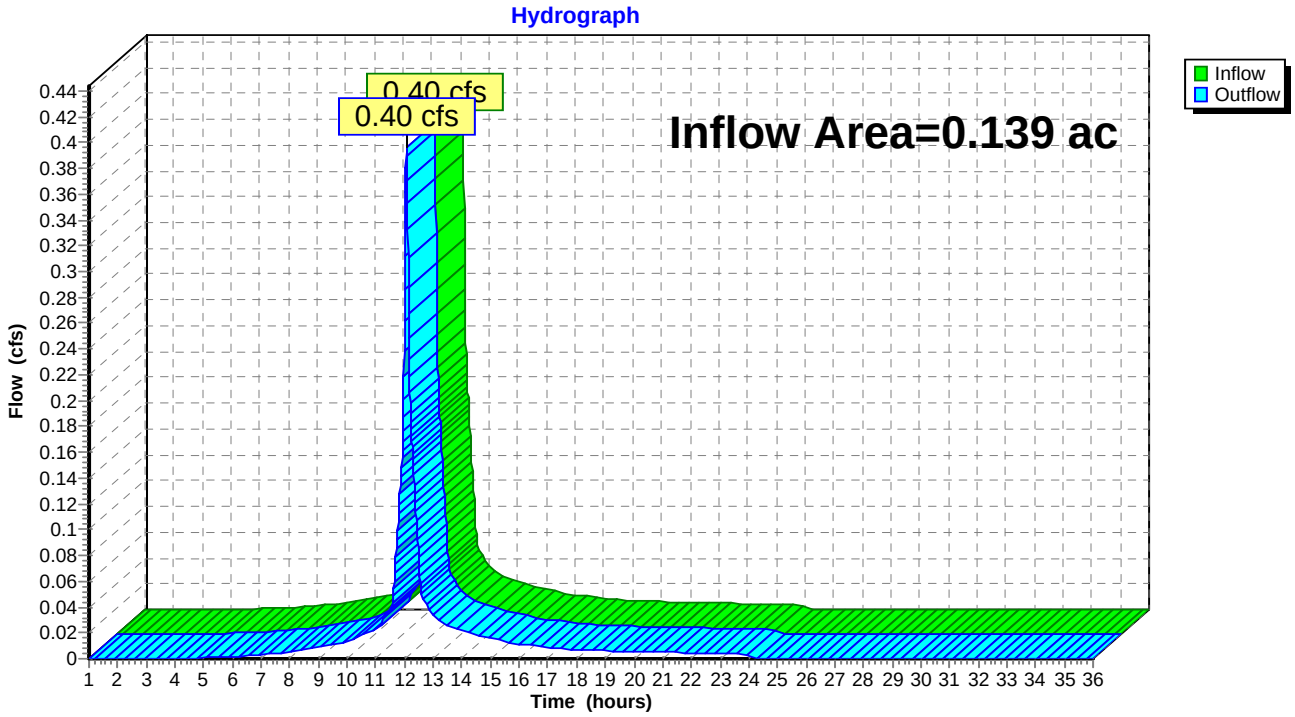


Summary for Reach 1R: POI #1 - North St.

Inflow Area = 0.139 ac, 82.73% Impervious, Inflow Depth = 2.45" for 2-year event
Inflow = 0.40 cfs @ 12.07 hrs, Volume= 0.028 af
Outflow = 0.40 cfs @ 12.07 hrs, Volume= 0.028 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-36.00 hrs, dt= 0.01 hrs

Reach 1R: POI #1 - North St.

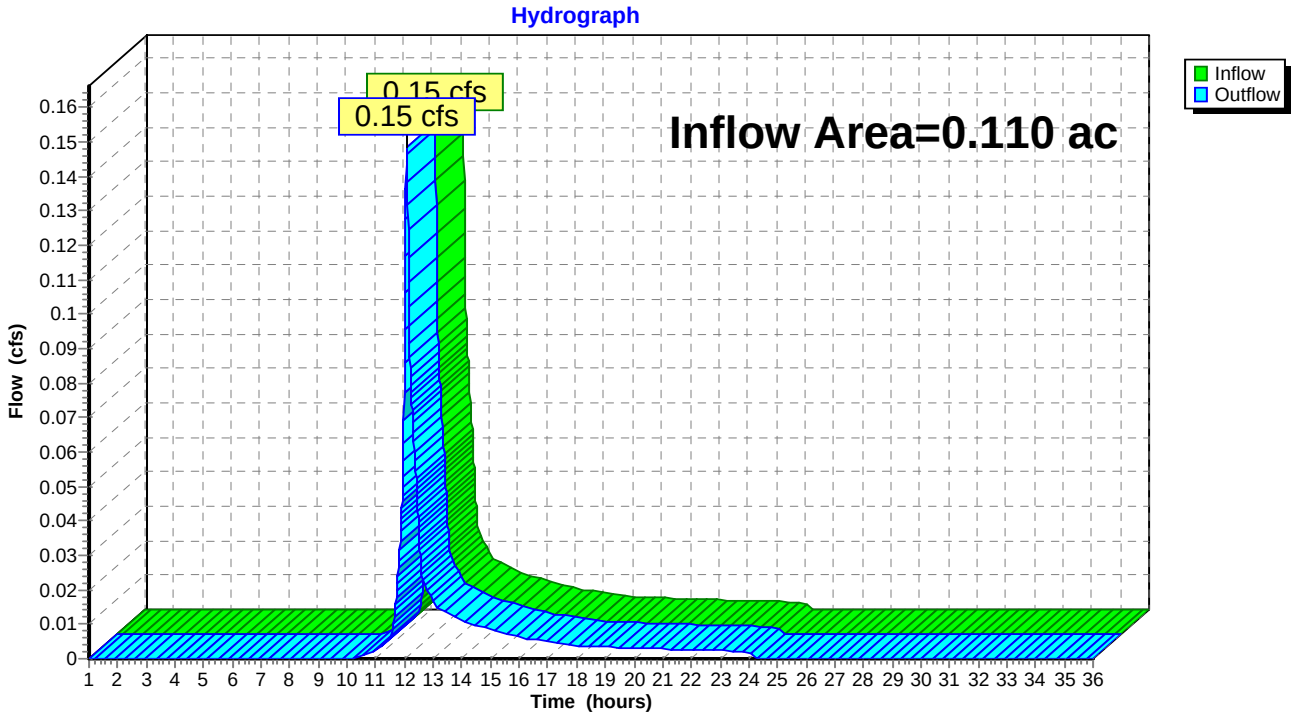


Summary for Reach 2R: POI #2 - Downgradient Abutter

Inflow Area = 0.110 ac, 14.53% Impervious, Inflow Depth = 1.14" for 2-year event
Inflow = 0.15 cfs @ 12.08 hrs, Volume= 0.011 af
Outflow = 0.15 cfs @ 12.08 hrs, Volume= 0.011 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-36.00 hrs, dt= 0.01 hrs

Reach 2R: POI #2 - Downgradient Abutter

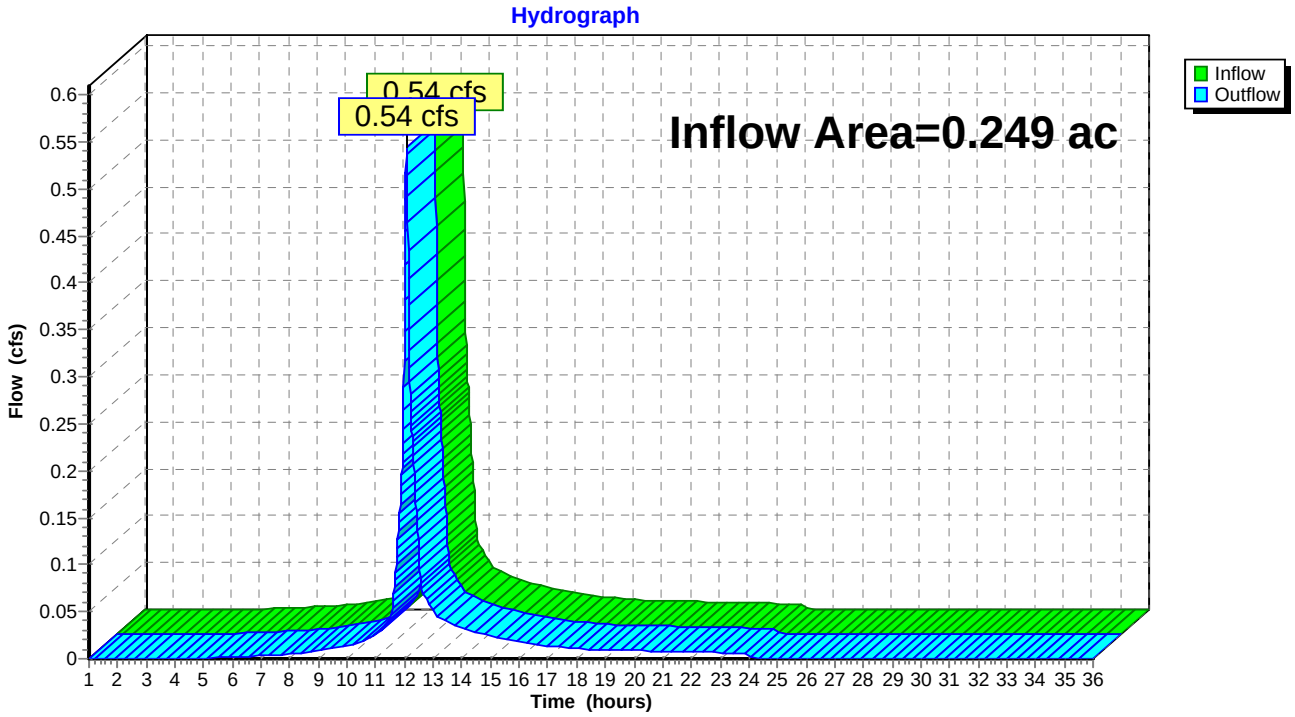


Summary for Reach 3R: Total Runoff

Inflow Area = 0.249 ac, 52.52% Impervious, Inflow Depth = 1.87" for 2-year event
Inflow = 0.54 cfs @ 12.07 hrs, Volume= 0.039 af
Outflow = 0.54 cfs @ 12.07 hrs, Volume= 0.039 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-36.00 hrs, dt= 0.01 hrs

Reach 3R: Total Runoff



Time span=1.00-36.00 hrs, dt=0.01 hrs, 3501 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: SC1 Runoff Area=6,051 sf 82.73% Impervious Runoff Depth=3.91"
Tc=5.0 min CN=94 Runoff=0.62 cfs 0.045 af

Subcatchment 2S: SC2 Runoff Area=4,811 sf 14.53% Impervious Runoff Depth=2.29"
Tc=5.0 min CN=77 Runoff=0.31 cfs 0.021 af

Reach 1R: POI #1 - North St. Inflow=0.62 cfs 0.045 af
Outflow=0.62 cfs 0.045 af

Reach 2R: POI #2 - Downgradient Abutter Inflow=0.31 cfs 0.021 af
Outflow=0.31 cfs 0.021 af

Reach 3R: Total Runoff Inflow=0.92 cfs 0.066 af
Outflow=0.92 cfs 0.066 af

Total Runoff Area = 0.249 ac Runoff Volume = 0.066 af Average Runoff Depth = 3.20"
47.48% Pervious = 0.118 ac 52.52% Impervious = 0.131 ac

Summary for Subcatchment 1S: SC1

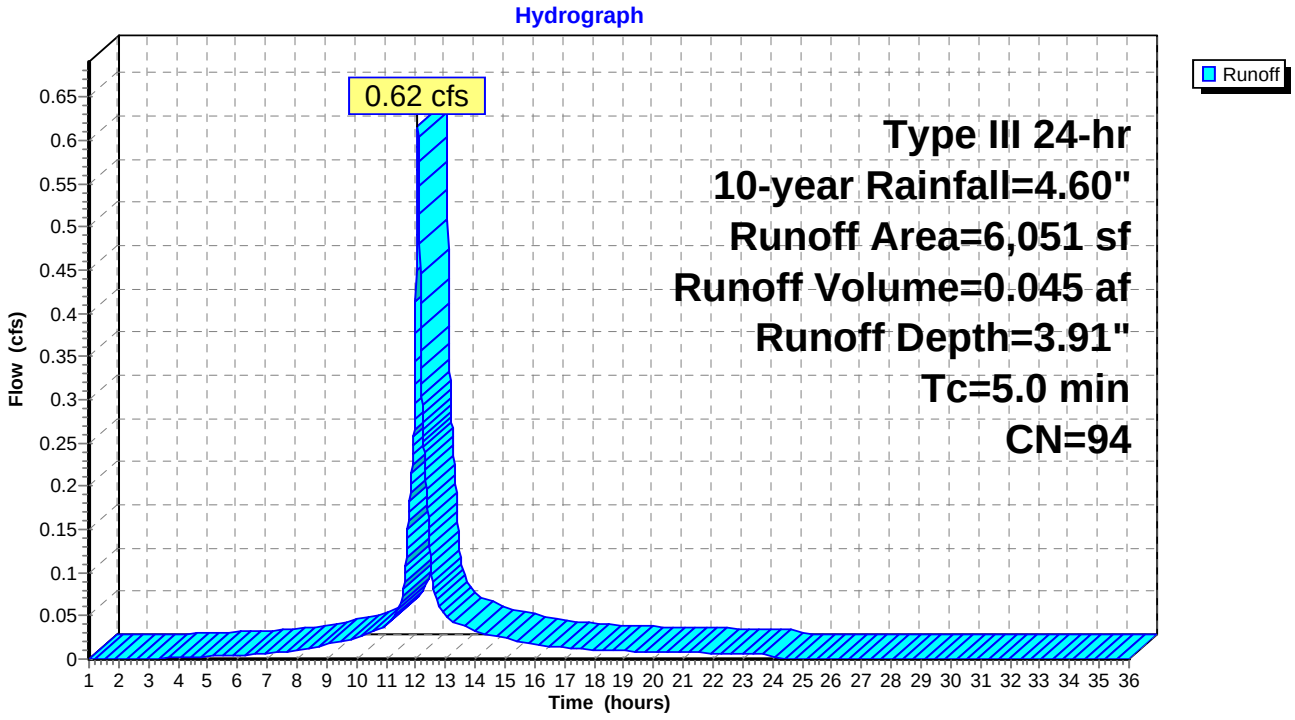
Runoff = 0.62 cfs @ 12.07 hrs, Volume= 0.045 af, Depth= 3.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
	1,045	74	>75% Grass cover, Good, HSG C
*	3,929	98	Pavement, roof, concrete
*	1,077	98	shared driveway
	6,051	94	Weighted Average
	1,045		17.27% Pervious Area
	5,006		82.73% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, Direct Urban Environment**

Subcatchment 1S: SC1



Summary for Subcatchment 2S: SC2

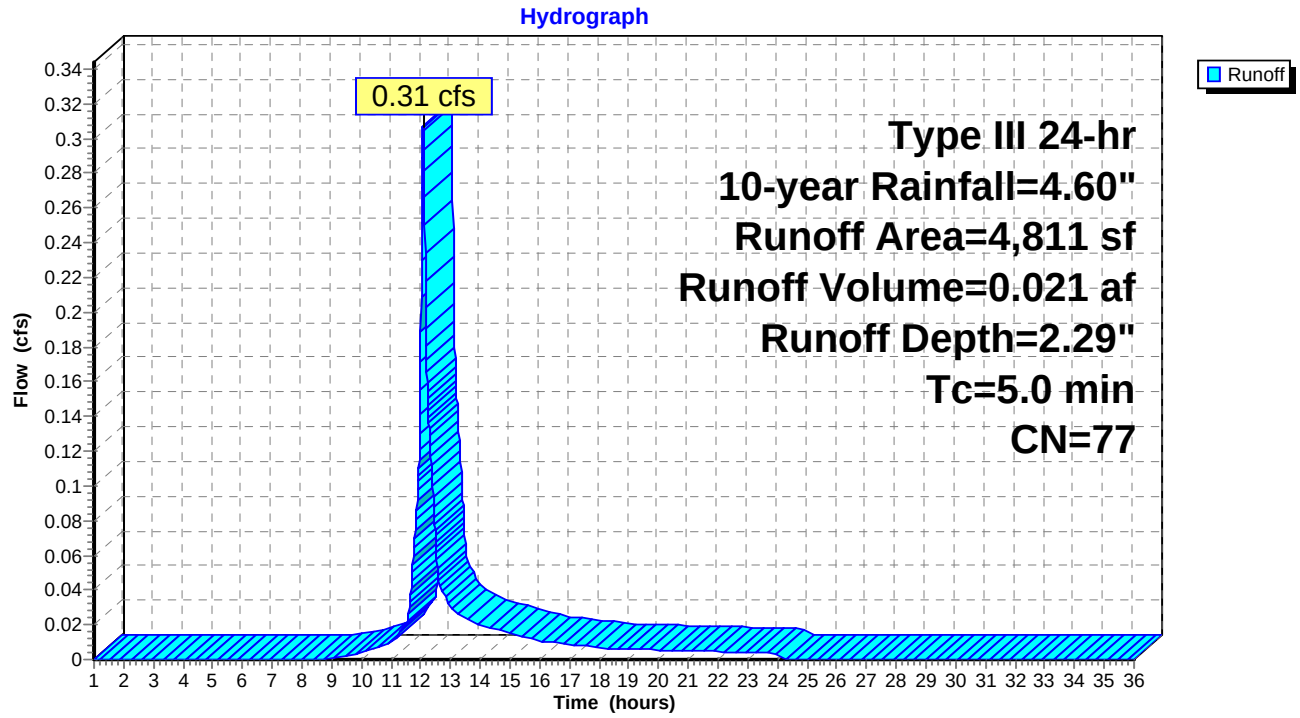
Runoff = 0.31 cfs @ 12.08 hrs, Volume= 0.021 af, Depth= 2.29"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
*	699	98	
	4,112	74	>75% Grass cover, Good, HSG C
	4,811	77	Weighted Average
	4,112		85.47% Pervious Area
	699		14.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, Direct Urban Environment**

Subcatchment 2S: SC2

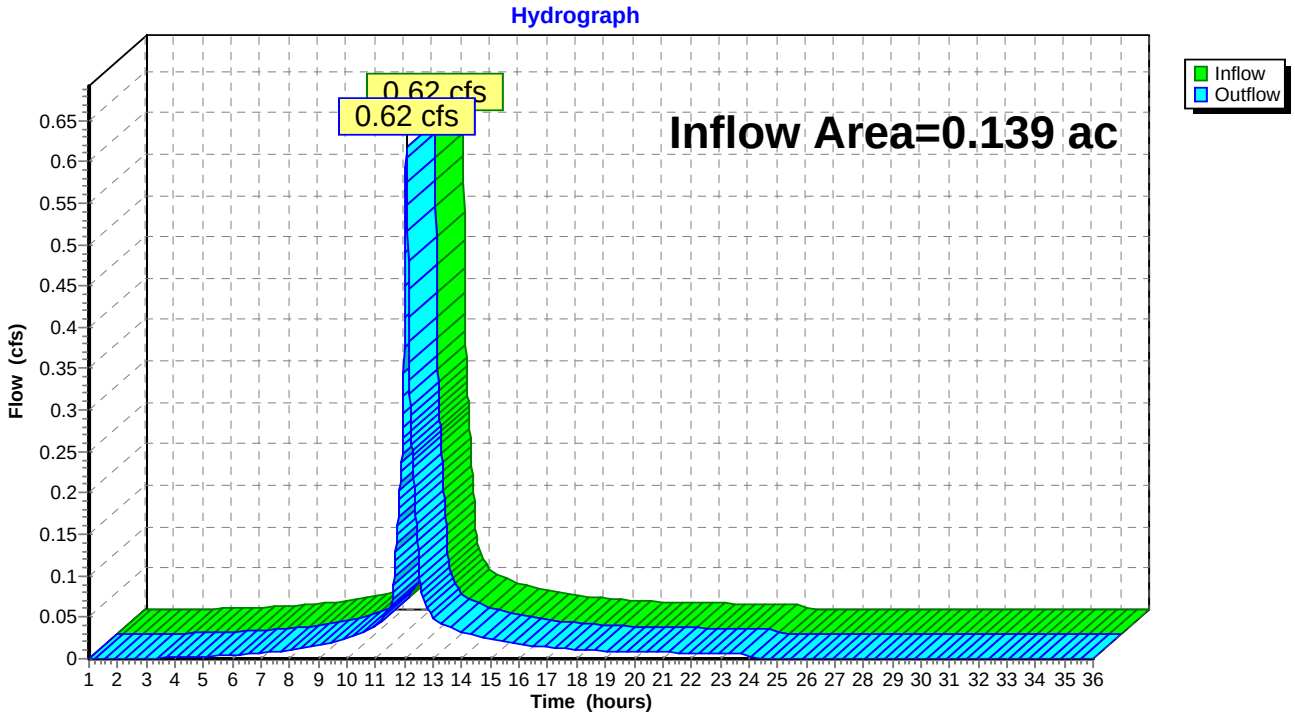


Summary for Reach 1R: POI #1 - North St.

Inflow Area = 0.139 ac, 82.73% Impervious, Inflow Depth = 3.91" for 10-year event
Inflow = 0.62 cfs @ 12.07 hrs, Volume= 0.045 af
Outflow = 0.62 cfs @ 12.07 hrs, Volume= 0.045 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-36.00 hrs, dt= 0.01 hrs

Reach 1R: POI #1 - North St.

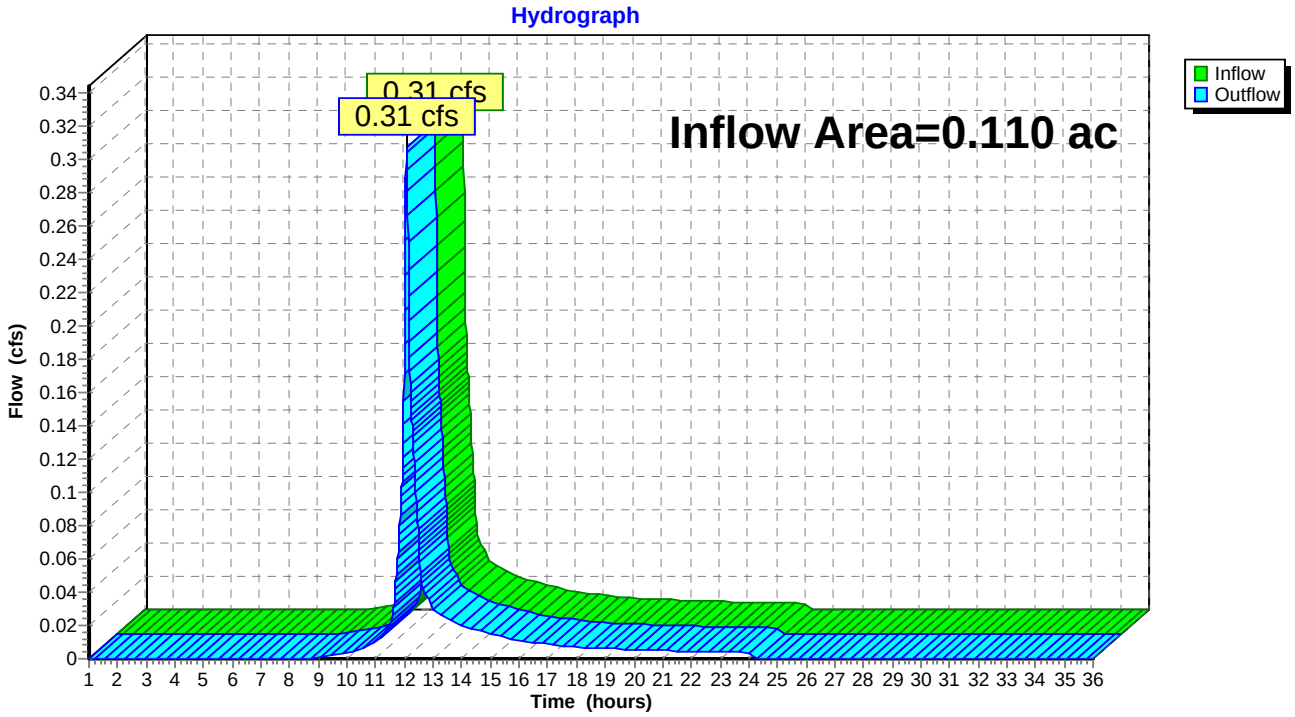


Summary for Reach 2R: POI #2 - Downgradient Abutter

Inflow Area = 0.110 ac, 14.53% Impervious, Inflow Depth = 2.29" for 10-year event
Inflow = 0.31 cfs @ 12.08 hrs, Volume= 0.021 af
Outflow = 0.31 cfs @ 12.08 hrs, Volume= 0.021 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-36.00 hrs, dt= 0.01 hrs

Reach 2R: POI #2 - Downgradient Abutter

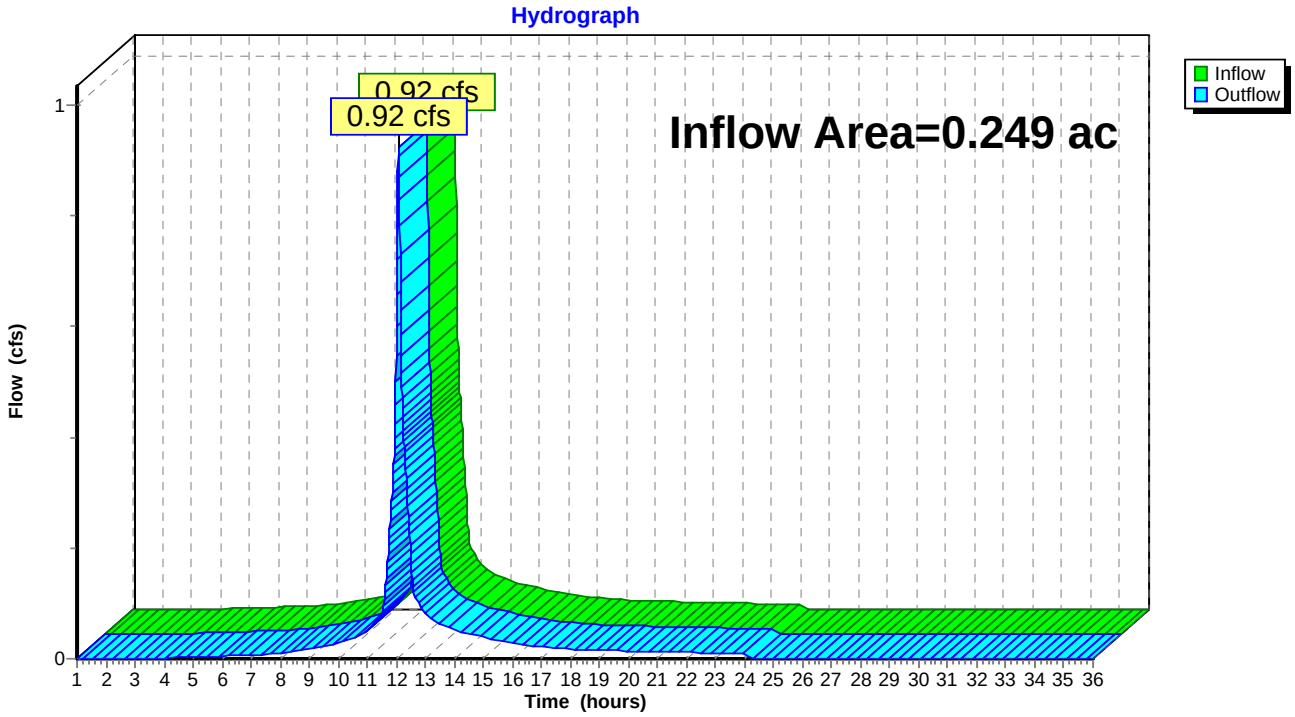


Summary for Reach 3R: Total Runoff

Inflow Area = 0.249 ac, 52.52% Impervious, Inflow Depth = 3.20" for 10-year event
Inflow = 0.92 cfs @ 12.07 hrs, Volume= 0.066 af
Outflow = 0.92 cfs @ 12.07 hrs, Volume= 0.066 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-36.00 hrs, dt= 0.01 hrs

Reach 3R: Total Runoff



Time span=1.00-36.00 hrs, dt=0.01 hrs, 3501 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: SC1 Runoff Area=6,051 sf 82.73% Impervious Runoff Depth=5.10"
Tc=5.0 min CN=94 Runoff=0.79 cfs 0.059 af

Subcatchment 2S: SC2 Runoff Area=4,811 sf 14.53% Impervious Runoff Depth=3.31"
Tc=5.0 min CN=77 Runoff=0.44 cfs 0.030 af

Reach 1R: POI #1 - North St. Inflow=0.79 cfs 0.059 af
Outflow=0.79 cfs 0.059 af

Reach 2R: POI #2 - Downgradient Abutter Inflow=0.44 cfs 0.030 af
Outflow=0.44 cfs 0.030 af

Reach 3R: Total Runoff Inflow=1.24 cfs 0.089 af
Outflow=1.24 cfs 0.089 af

Total Runoff Area = 0.249 ac Runoff Volume = 0.089 af Average Runoff Depth = 4.30"
47.48% Pervious = 0.118 ac 52.52% Impervious = 0.131 ac

Summary for Subcatchment 1S: SC1

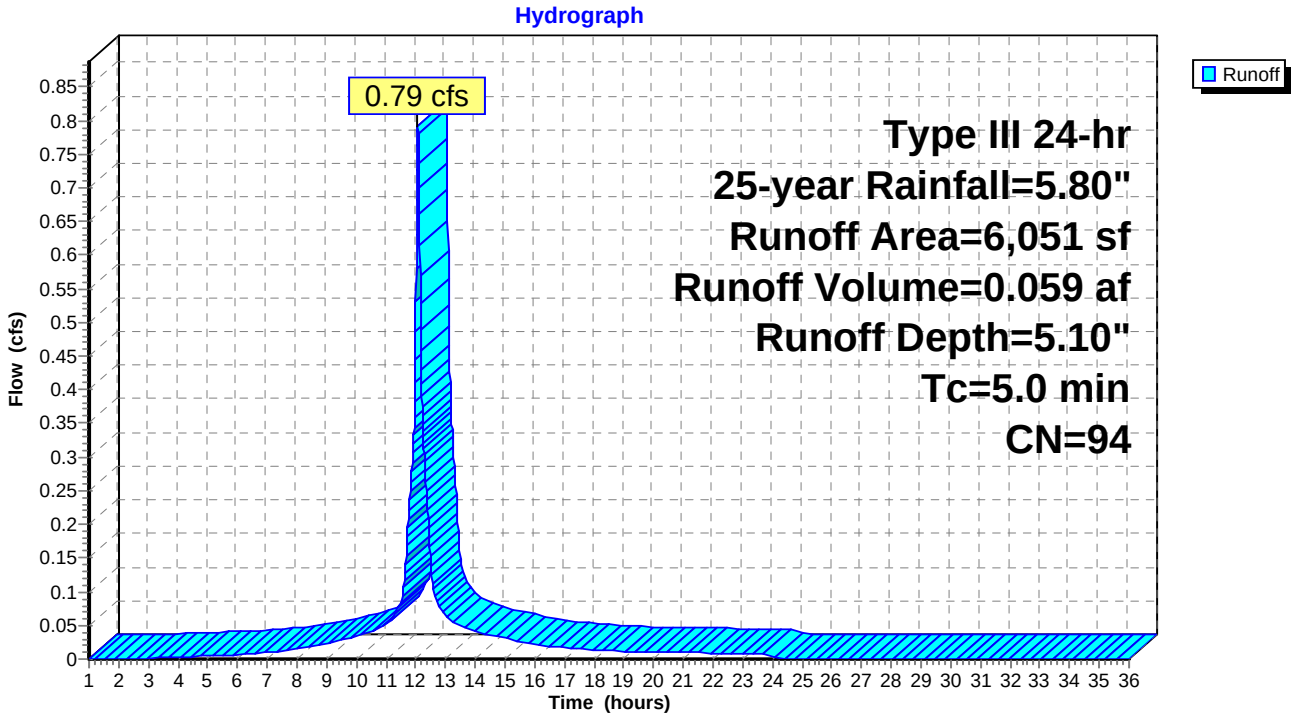
Runoff = 0.79 cfs @ 12.07 hrs, Volume= 0.059 af, Depth= 5.10"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
	1,045	74	>75% Grass cover, Good, HSG C
*	3,929	98	Pavement, roof, concrete
*	1,077	98	shared driveway
	6,051	94	Weighted Average
	1,045		17.27% Pervious Area
	5,006		82.73% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, Direct Urban Environment**

Subcatchment 1S: SC1



Summary for Subcatchment 2S: SC2

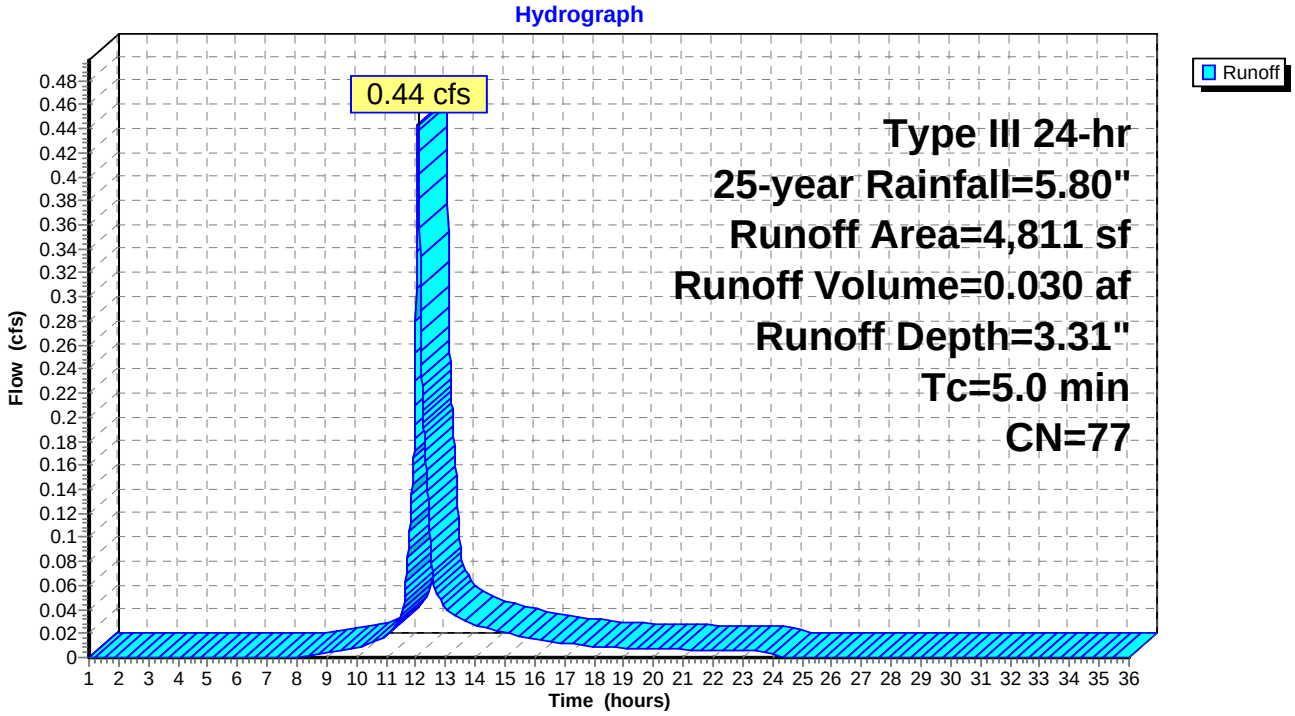
Runoff = 0.44 cfs @ 12.07 hrs, Volume= 0.030 af, Depth= 3.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
*	699	98	
	4,112	74	>75% Grass cover, Good, HSG C
	4,811	77	Weighted Average
	4,112		85.47% Pervious Area
	699		14.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, Direct Urban Environment**

Subcatchment 2S: SC2

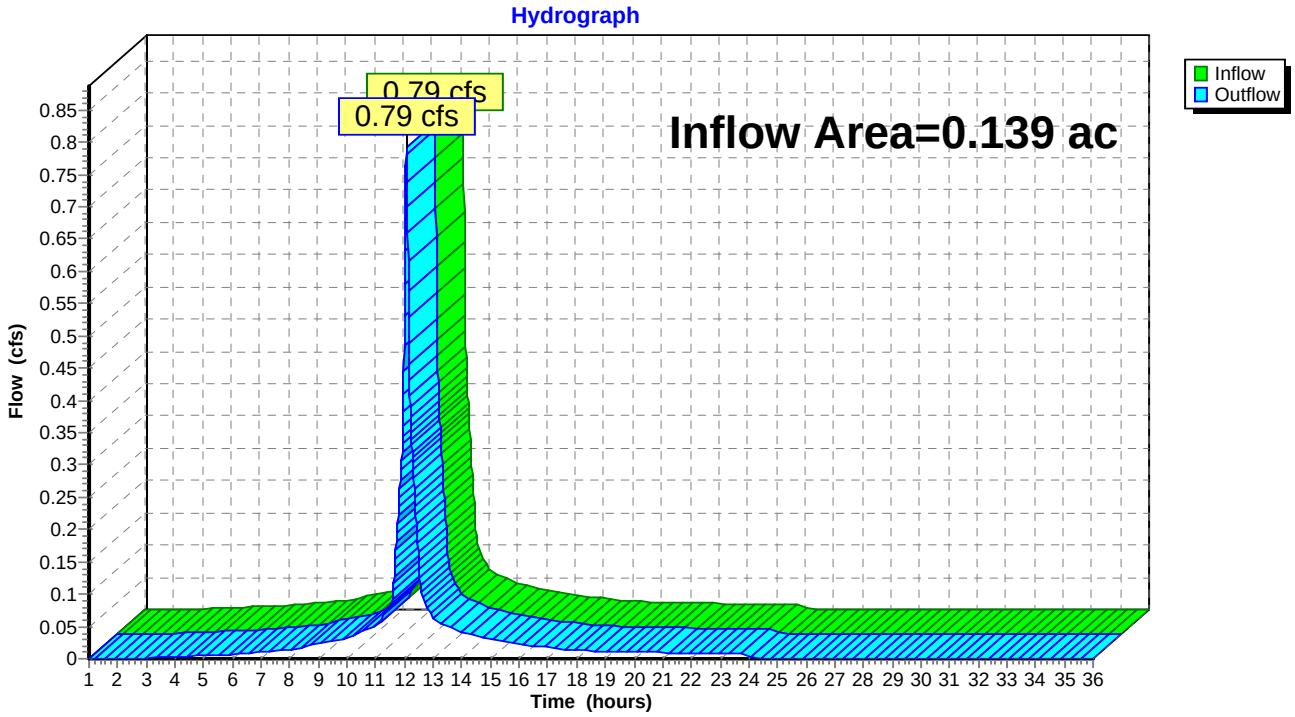


Summary for Reach 1R: POI #1 - North St.

Inflow Area = 0.139 ac, 82.73% Impervious, Inflow Depth = 5.10" for 25-year event
Inflow = 0.79 cfs @ 12.07 hrs, Volume= 0.059 af
Outflow = 0.79 cfs @ 12.07 hrs, Volume= 0.059 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-36.00 hrs, dt= 0.01 hrs

Reach 1R: POI #1 - North St.

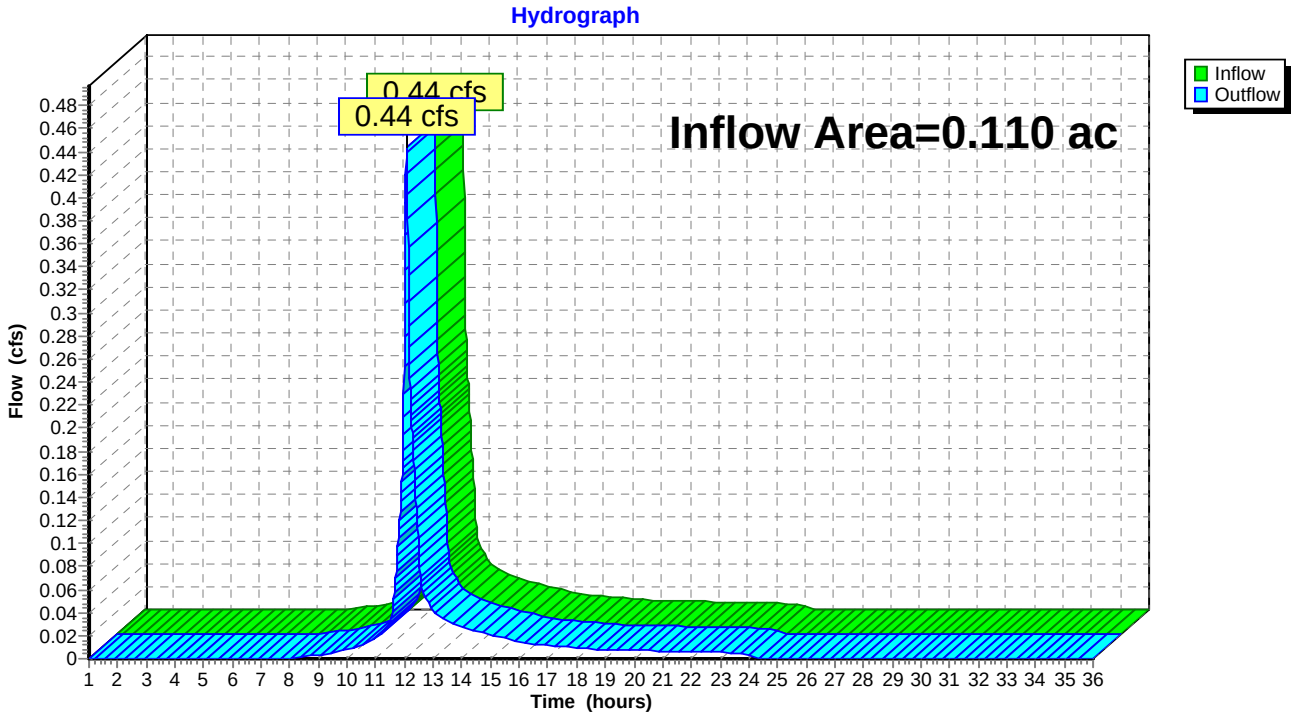


Summary for Reach 2R: POI #2 - Downgradient Abutter

Inflow Area = 0.110 ac, 14.53% Impervious, Inflow Depth = 3.31" for 25-year event
Inflow = 0.44 cfs @ 12.07 hrs, Volume= 0.030 af
Outflow = 0.44 cfs @ 12.07 hrs, Volume= 0.030 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-36.00 hrs, dt= 0.01 hrs

Reach 2R: POI #2 - Downgradient Abutter

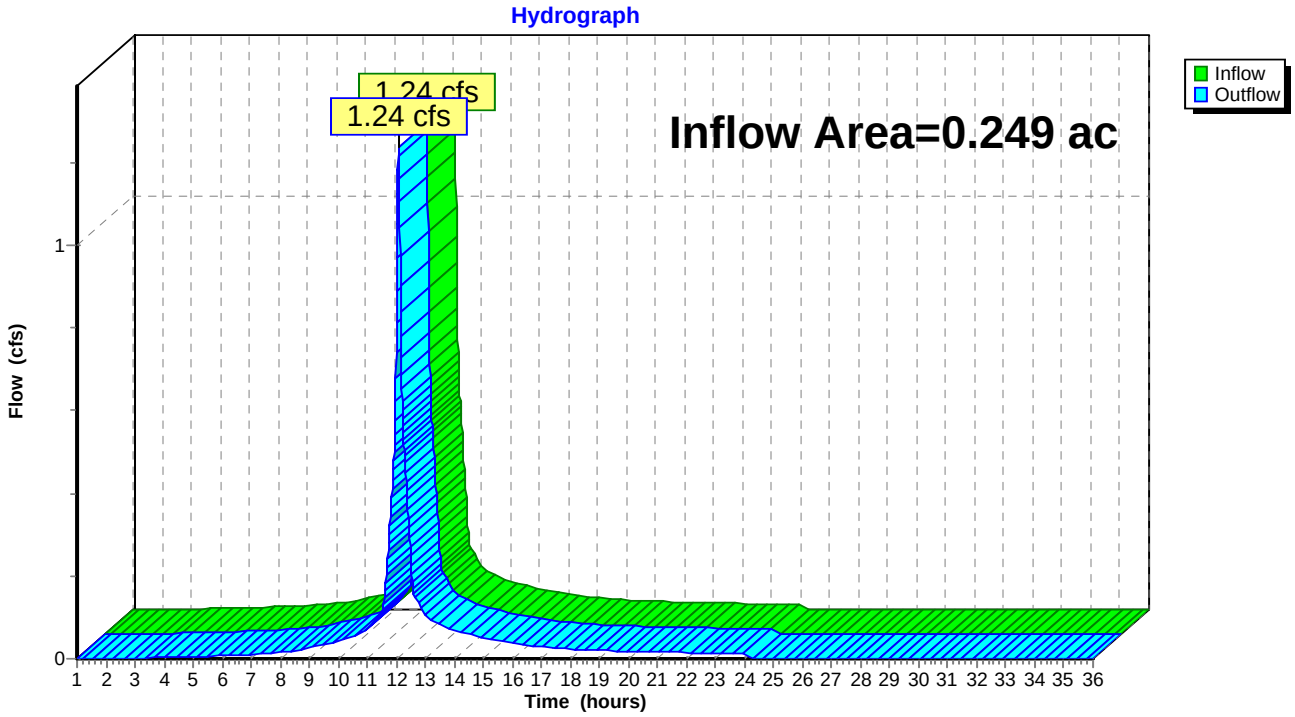


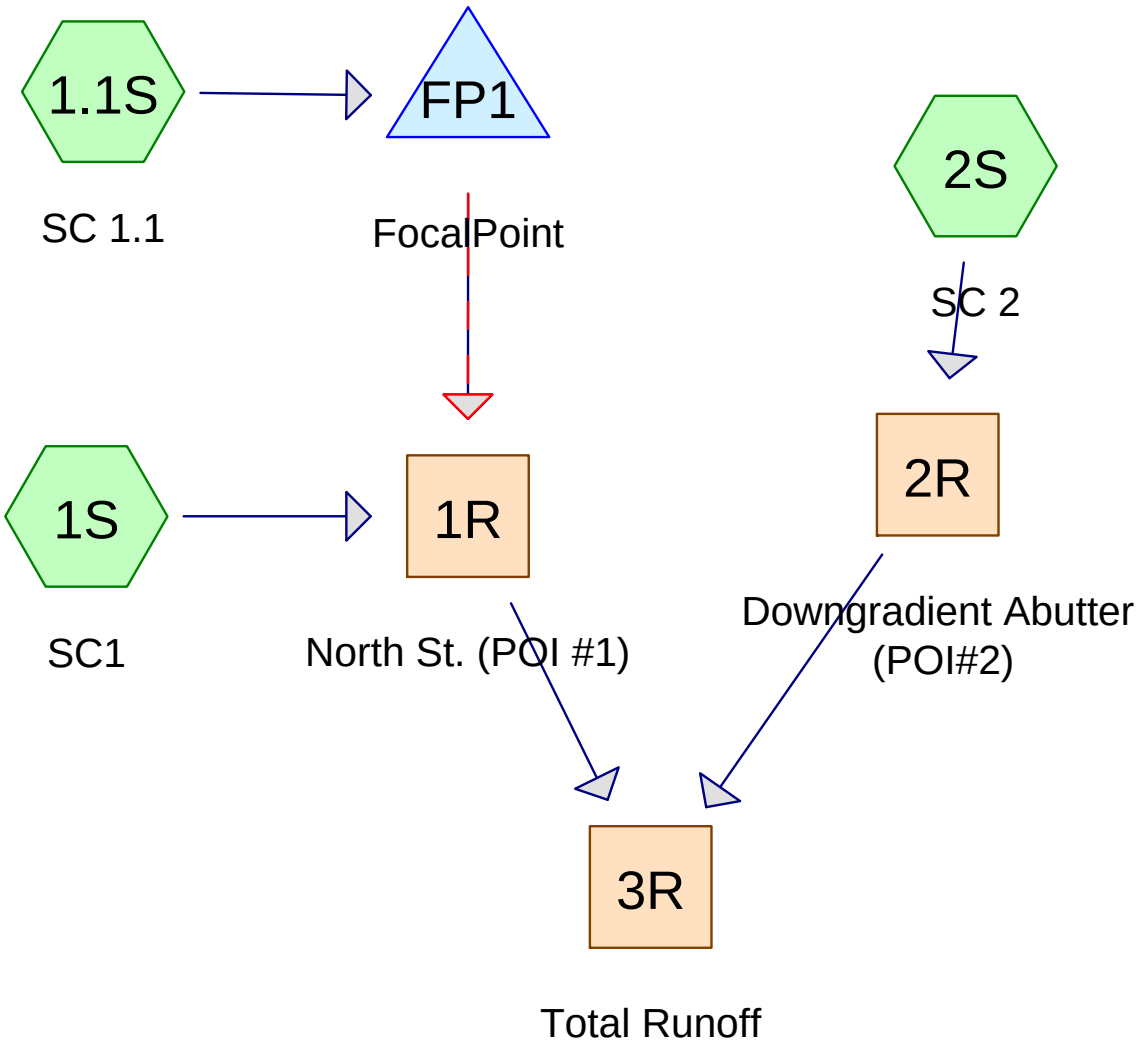
Summary for Reach 3R: Total Runoff

Inflow Area = 0.249 ac, 52.52% Impervious, Inflow Depth = 4.30" for 25-year event
Inflow = 1.24 cfs @ 12.07 hrs, Volume= 0.089 af
Outflow = 1.24 cfs @ 12.07 hrs, Volume= 0.089 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-36.00 hrs, dt= 0.01 hrs

Reach 3R: Total Runoff





Subcat Reach Pond Link

Routing Diagram for Post Development1-2-20
Prepared by Acorn Eng, Printed 1/8/2020
HydroCAD® 10.00-24 s/n 00620 © 2018 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.067	98	126 roof,walk,drive (1S)
0.003	98	128R walk/drive (1S)
0.037	39	>75% Grass cover, Good, HSG A (1.1S, 2S)
0.035	39	Field inlets trib/landscaping (1S)
0.001	98	Misc impervious (2S)
0.082	98	Roof, decks (1.1S)
0.025	98	shared drive (1S)
0.249	**81**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.037	HSG A	1.1S, 2S
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
0.212	Other	1.1S, 1S, 2S
0.249		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	0.000	0.067	0.067	126 roof,walk,drive	1S
0.000	0.000	0.000	0.000	0.003	0.003	128R walk/drive	1S
0.037	0.000	0.000	0.000	0.000	0.037	>75% Grass cover, Good	1.1S, 2S
0.000	0.000	0.000	0.000	0.035	0.035	Field inlets trib/landscaping	1S
0.000	0.000	0.000	0.000	0.001	0.001	Misc impervious	2S
0.000	0.000	0.000	0.000	0.082	0.082	Roof, decks	1.1S
0.000	0.000	0.000	0.000	0.025	0.025	shared drive	1S
0.037	**0.000**	**0.000**	**0.000**	**0.212**	**0.249**	**TOTAL AREA**	

Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	FP1	133.70	132.70	150.0	0.0067	0.010	4.0	0.0	0.0

Time span=1.00-50.00 hrs, dt=0.01 hrs, 4901 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1.1S: SC 1.1 Runoff Area=3,781 sf 94.10% Impervious Runoff Depth=2.55"
Tc=5.0 min CN=95 Runoff=0.25 cfs 0.018 af

Subcatchment1S: SC1 Runoff Area=5,648 sf 72.98% Impervious Runoff Depth=1.46"
Tc=5.0 min CN=82 Runoff=0.23 cfs 0.016 af

Subcatchment2S: SC 2 Runoff Area=1,433 sf 2.30% Impervious Runoff Depth=0.00"
Tc=5.0 min CN=40 Runoff=0.00 cfs 0.000 af

Reach 1R: North St. (POI #1) Inflow=0.40 cfs 0.034 af
Outflow=0.40 cfs 0.034 af

Reach 2R: Downgradient Abutter (POI#2) Inflow=0.00 cfs 0.000 af
Outflow=0.00 cfs 0.000 af

Reach 3R: Total Runoff Inflow=0.40 cfs 0.034 af
Outflow=0.40 cfs 0.034 af

Pond FP1: FocalPoint Peak Elev=134.55' Storage=54 cf Inflow=0.25 cfs 0.018 af
Outflow=0.18 cfs 0.018 af

Total Runoff Area = 0.249 ac Runoff Volume = 0.034 af Average Runoff Depth = 1.64"
28.99% Pervious = 0.072 ac 71.01% Impervious = 0.177 ac

Summary for Subcatchment 1.1S: SC 1.1

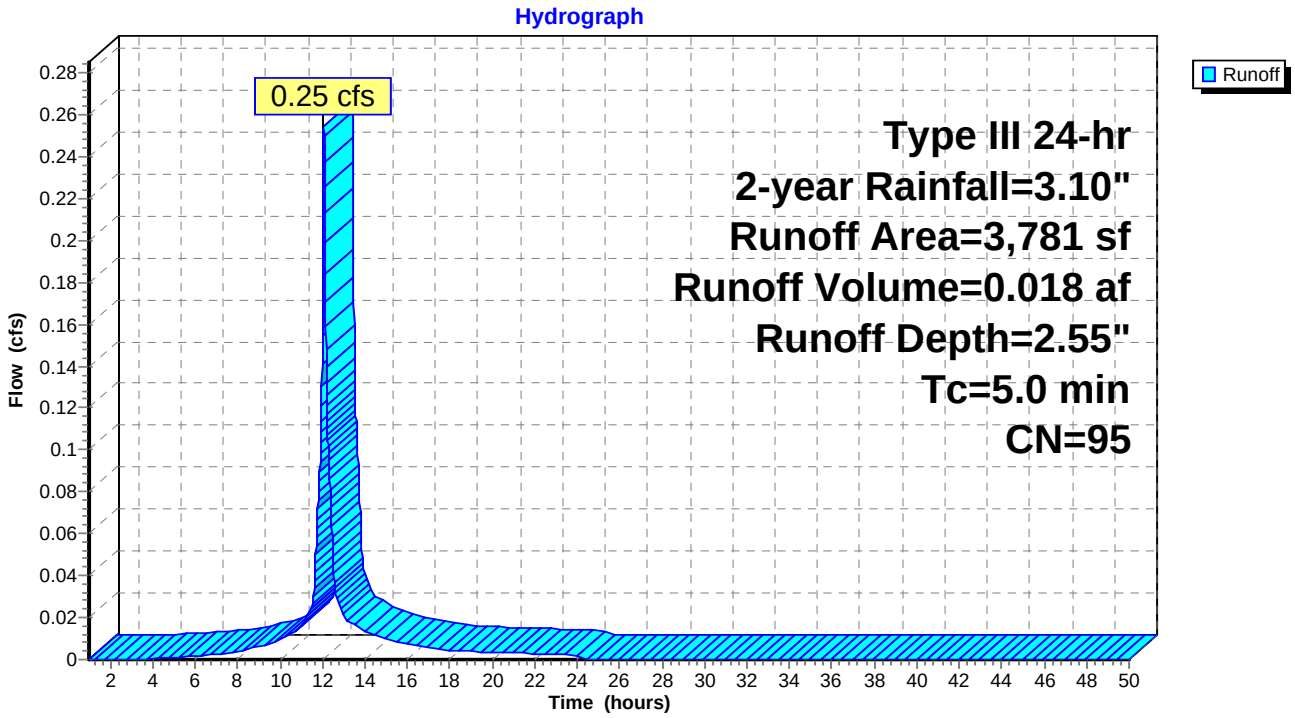
Runoff = 0.25 cfs @ 12.07 hrs, Volume= 0.018 af, Depth= 2.55"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-50.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
*	3,558	98	Roof, decks
	223	39	>75% Grass cover, Good, HSG A
	3,781	95	Weighted Average
	223		5.90% Pervious Area
	3,558		94.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 1.1S: SC 1.1



Summary for Subcatchment 1S: SC1

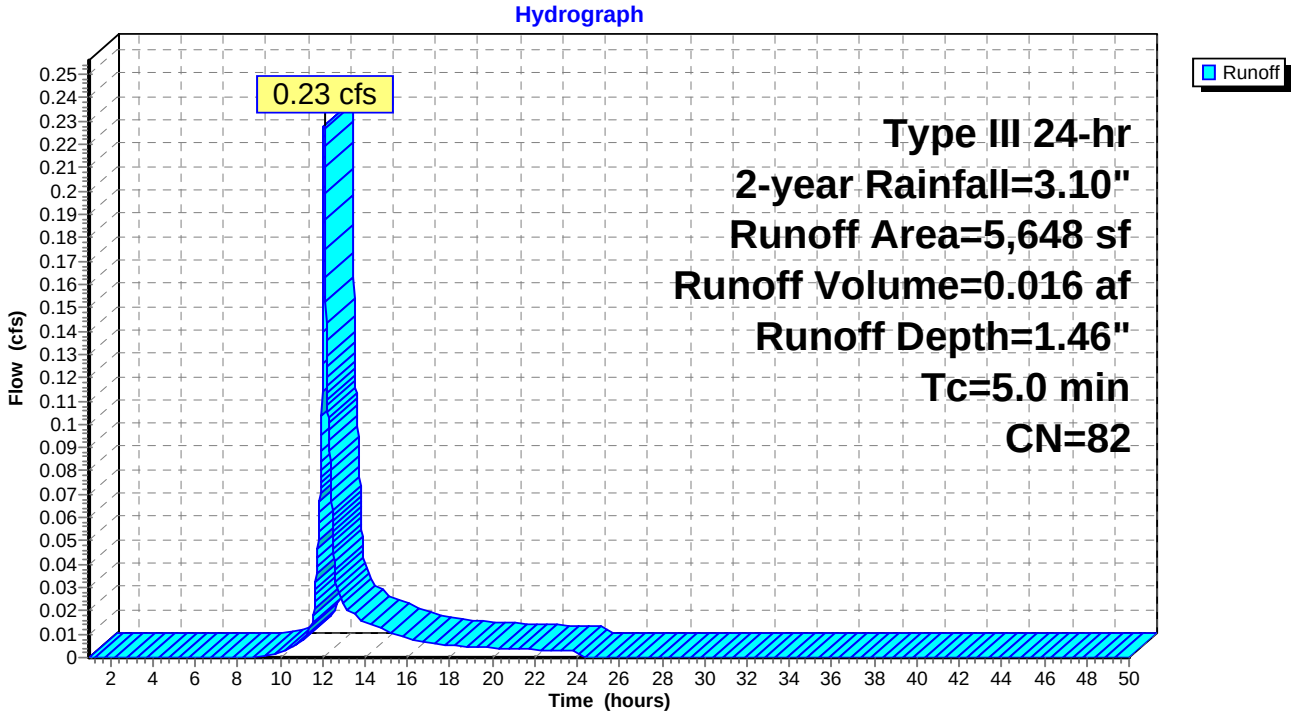
Runoff = 0.23 cfs @ 12.08 hrs, Volume= 0.016 af, Depth= 1.46"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-50.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
*	1,526	39	Field inlets trib/landscaping
*	122	98	128R walk/drive
*	1,077	98	shared drive
*	2,923	98	126 roof,walk,drive
	5,648	82	Weighted Average
	1,526		27.02% Pervious Area
	4,122		72.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 1S: SC1



Summary for Subcatchment 2S: SC 2

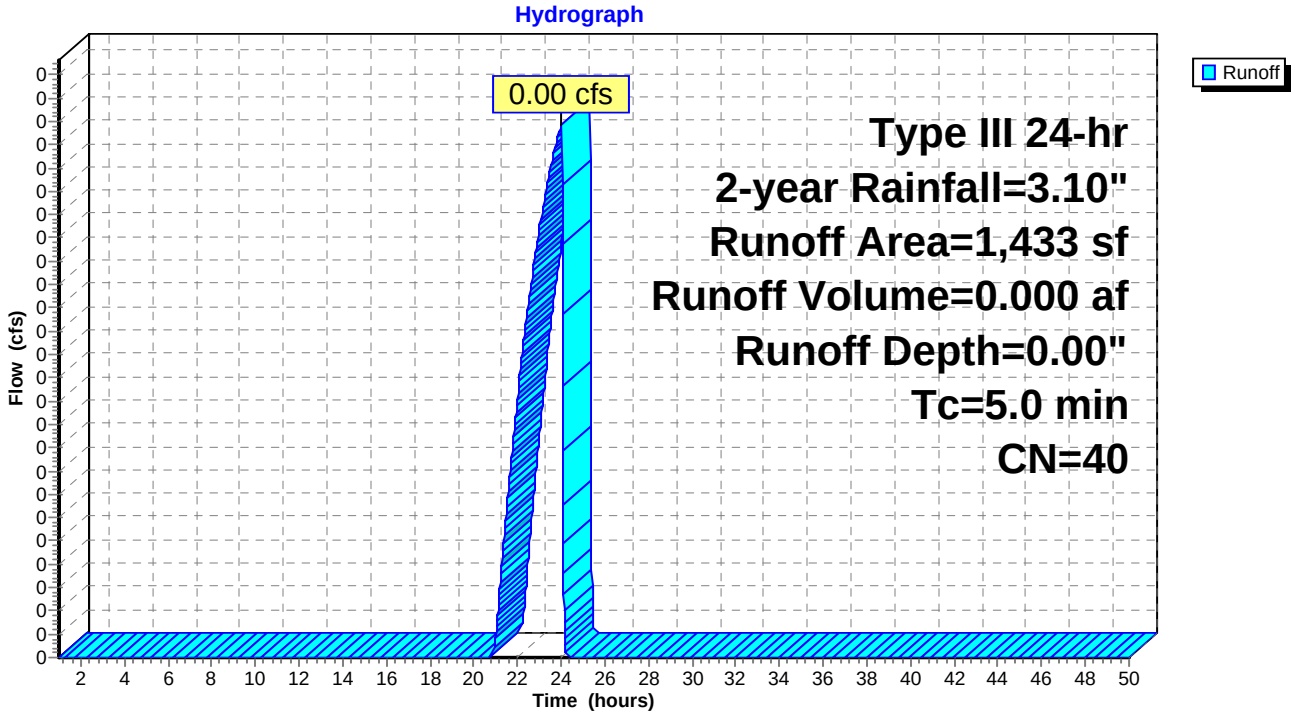
Runoff = 0.00 cfs @ 24.01 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-50.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
	1,400	39	>75% Grass cover, Good, HSG A
*	33	98	Misc impervious
	1,433	40	Weighted Average
	1,400		97.70% Pervious Area
	33		2.30% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 2S: SC 2

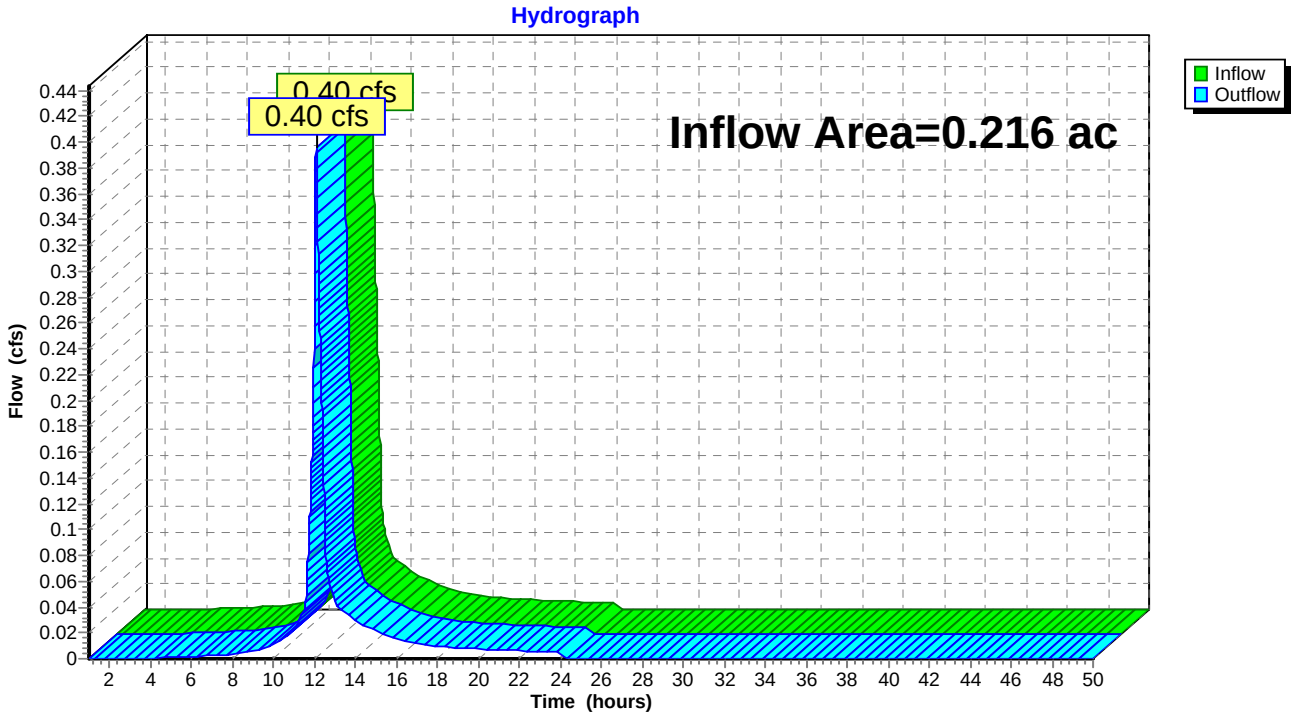


Summary for Reach 1R: North St. (POI #1)

Inflow Area = 0.216 ac, 81.45% Impervious, Inflow Depth = 1.89" for 2-year event
Inflow = 0.40 cfs @ 12.09 hrs, Volume= 0.034 af
Outflow = 0.40 cfs @ 12.09 hrs, Volume= 0.034 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-50.00 hrs, dt= 0.01 hrs

Reach 1R: North St. (POI #1)

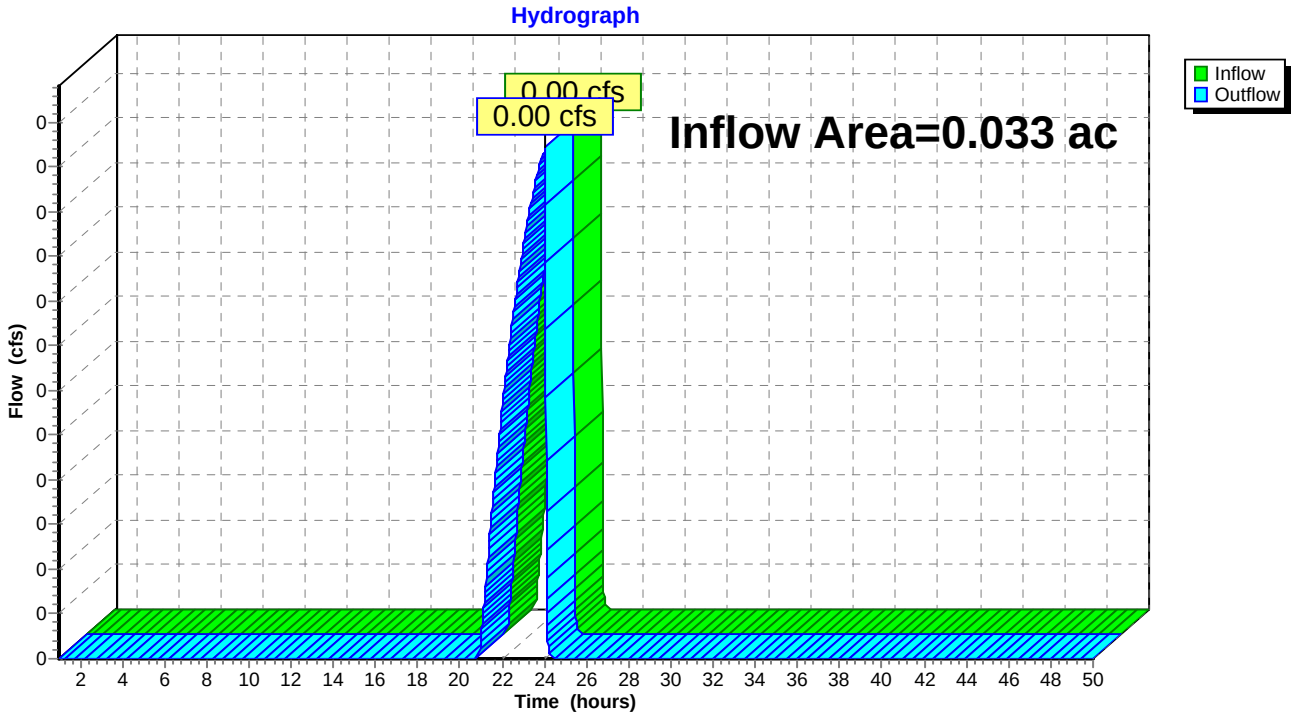


Summary for Reach 2R: Downgradient Abutter (POI#2)

Inflow Area = 0.033 ac, 2.30% Impervious, Inflow Depth = 0.00" for 2-year event
Inflow = 0.00 cfs @ 24.01 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 24.01 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-50.00 hrs, dt= 0.01 hrs

Reach 2R: Downgradient Abutter (POI#2)

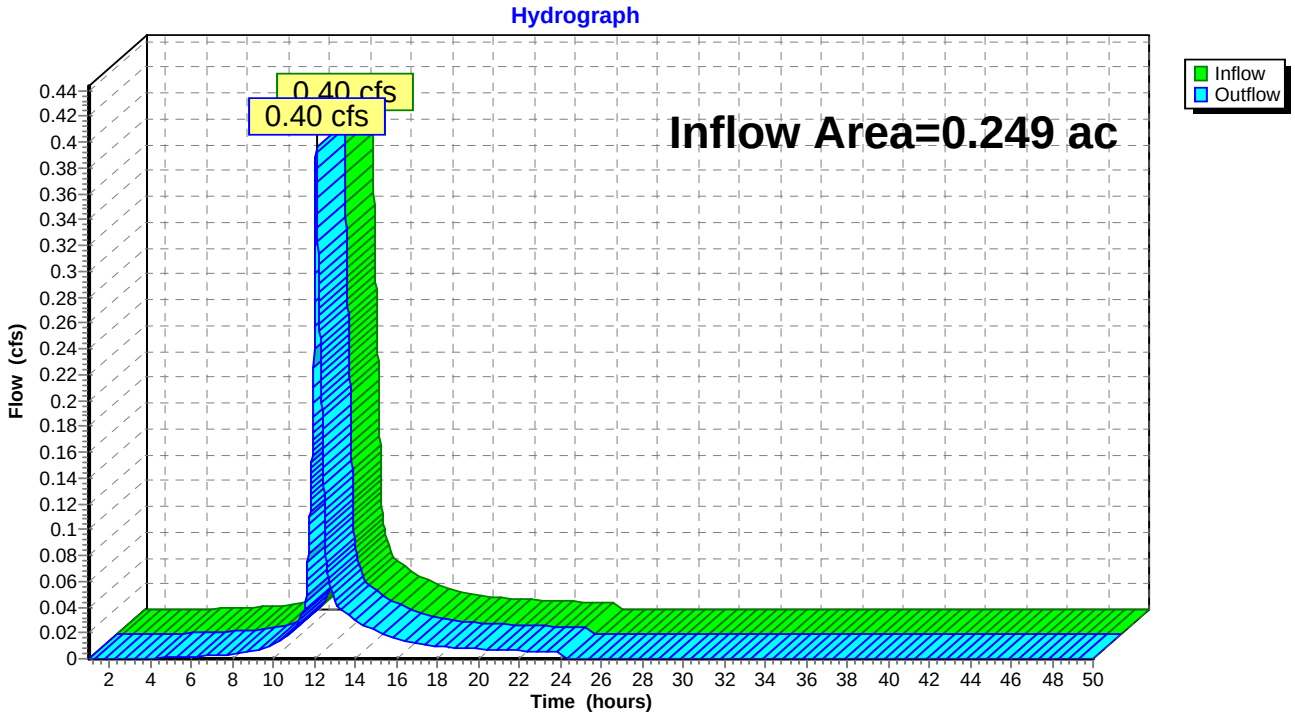


Summary for Reach 3R: Total Runoff

Inflow Area = 0.249 ac, 71.01% Impervious, Inflow Depth = 1.64" for 2-year event
Inflow = 0.40 cfs @ 12.09 hrs, Volume= 0.034 af
Outflow = 0.40 cfs @ 12.09 hrs, Volume= 0.034 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-50.00 hrs, dt= 0.01 hrs

Reach 3R: Total Runoff



Summary for Pond FP1: FocalPoint

Inflow Area = 0.087 ac, 94.10% Impervious, Inflow Depth = 2.55" for 2-year event
Inflow = 0.25 cfs @ 12.07 hrs, Volume= 0.018 af
Outflow = 0.18 cfs @ 12.14 hrs, Volume= 0.018 af, Atten= 28%, Lag= 4.2 min
Primary = 0.18 cfs @ 12.14 hrs, Volume= 0.018 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-50.00 hrs, dt= 0.01 hrs
Peak Elev= 134.55' @ 12.14 hrs Surf.Area= 116 sf Storage= 54 cf

Plug-Flow detention time= 2.8 min calculated for 0.018 af (100% of inflow)
Center-of-Mass det. time= 2.8 min (783.9 - 781.0)

Volume	Invert	Avail.Storage	Storage Description
#1	133.75'	89 cf	**3/4 Stone (Prismatic)** Listed below (Recalc) 435 cf Overall - 213 cf Embedded = 222 cf x 40.0% Voids
#2	134.12'	202 cf	**1.31'W x 2.35'L x 2.88'H Tanks** x 24 Inside #1 213 cf Overall x 95.0% Voids
#3	137.00'	9 cf	**3.00'W x 7.00'L x 2.25'H FocalPoint** 47 cf Overall x 20.0% Voids
#4	139.25'	61 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) -Impervious
		362 cf	Total Available Storage

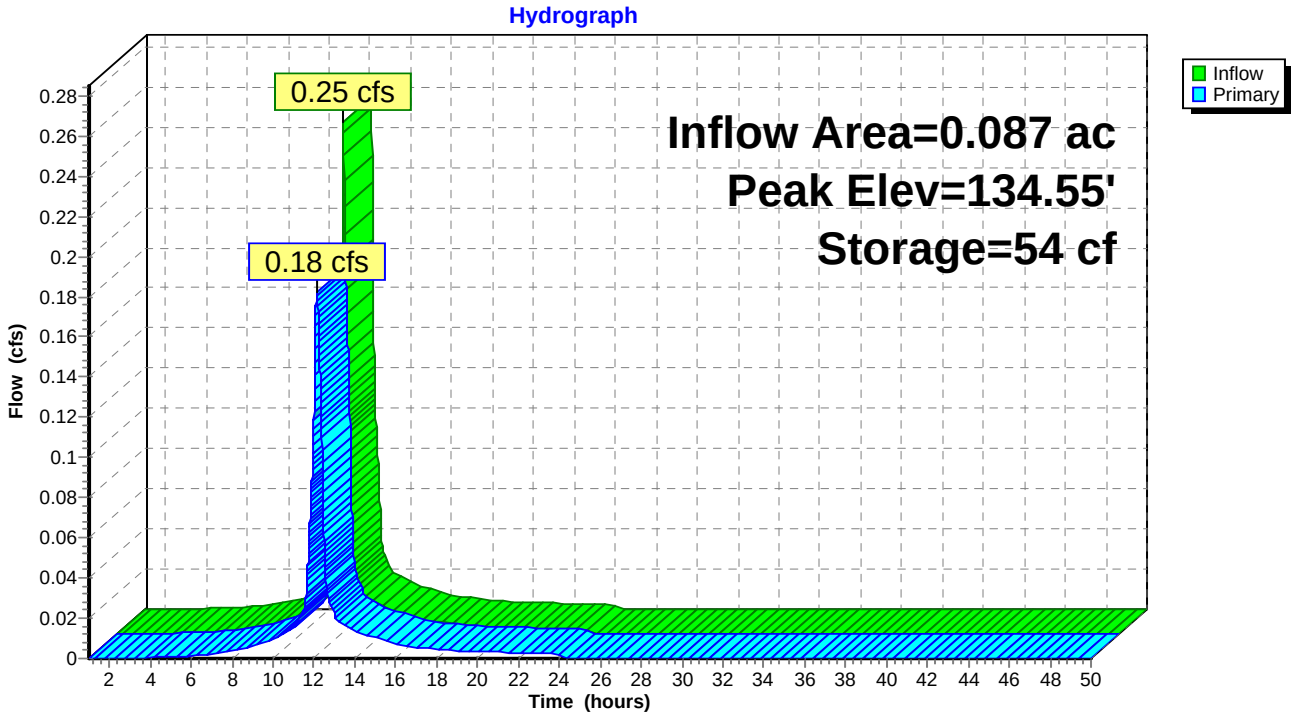
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
133.75	116	0	0
137.50	116	435	435

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
139.25	21	0	0
139.50	37	7	7
139.75	55	12	19
140.00	85	18	36
140.25	115	25	61

Device	Routing	Invert	Outlet Devices
#1	Primary	133.70'	**4.0" Round Culvert** L= 150.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 133.70' / 132.70' S= 0.0067 '/' Cc= 0.600 n= 0.010 PVC, smooth interior, Flow Area= 0.09 sf
#2	Device 1	133.75'	**100.000 in/hr Exfiltration over Surface area** Phase-In= 0.10'
#3	Device 1	139.75'	**8.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.18 cfs @ 12.14 hrs HW=134.54' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert** (Inlet Controls 0.18 cfs @ 2.09 fps)
└─**2=Exfiltration** (Passes 0.18 cfs of 0.27 cfs potential flow)
└─**3=Orifice/Grate** (Controls 0.00 cfs)

Pond FP1: FocalPoint



Time span=1.00-50.00 hrs, dt=0.01 hrs, 4901 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1.1S: SC 1.1 Runoff Area=3,781 sf 94.10% Impervious Runoff Depth=4.02"
Tc=5.0 min CN=95 Runoff=0.39 cfs 0.029 af

Subcatchment1S: SC1 Runoff Area=5,648 sf 72.98% Impervious Runoff Depth=2.72"
Tc=5.0 min CN=82 Runoff=0.43 cfs 0.029 af

Subcatchment2S: SC 2 Runoff Area=1,433 sf 2.30% Impervious Runoff Depth=0.15"
Tc=5.0 min CN=40 Runoff=0.00 cfs 0.000 af

Reach 1R: North St. (POI #1) Inflow=0.65 cfs 0.059 af
Outflow=0.65 cfs 0.059 af

Reach 2R: Downgradient Abutter (POI#2) Inflow=0.00 cfs 0.000 af
Outflow=0.00 cfs 0.000 af

Reach 3R: Total Runoff Inflow=0.65 cfs 0.059 af
Outflow=0.65 cfs 0.059 af

Pond FP1: FocalPoint Peak Elev=135.16' Storage=108 cf Inflow=0.39 cfs 0.029 af
Outflow=0.25 cfs 0.029 af

Total Runoff Area = 0.249 ac Runoff Volume = 0.059 af Average Runoff Depth = 2.84"
28.99% Pervious = 0.072 ac 71.01% Impervious = 0.177 ac

Summary for Subcatchment 1.1S: SC 1.1

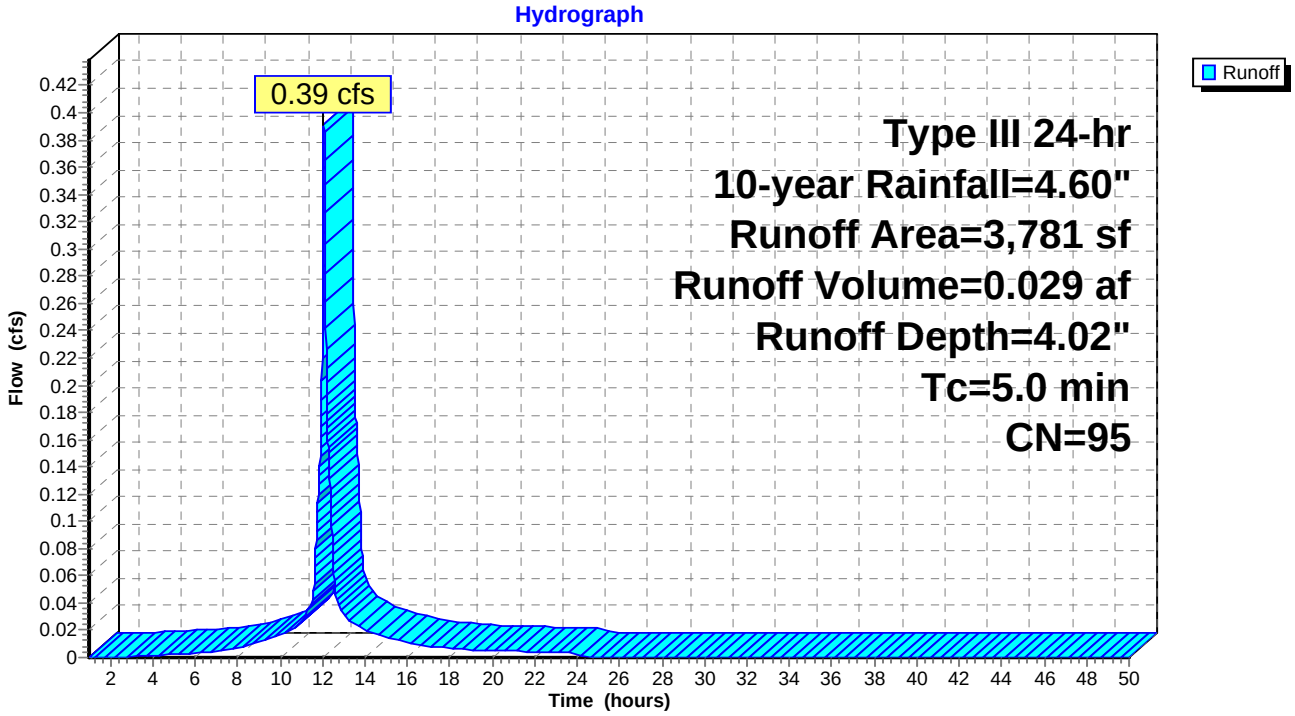
Runoff = 0.39 cfs @ 12.07 hrs, Volume= 0.029 af, Depth= 4.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-50.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
*	3,558	98	Roof, decks
	223	39	>75% Grass cover, Good, HSG A
	3,781	95	Weighted Average
	223		5.90% Pervious Area
	3,558		94.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 1.1S: SC 1.1



Summary for Subcatchment 1S: SC1

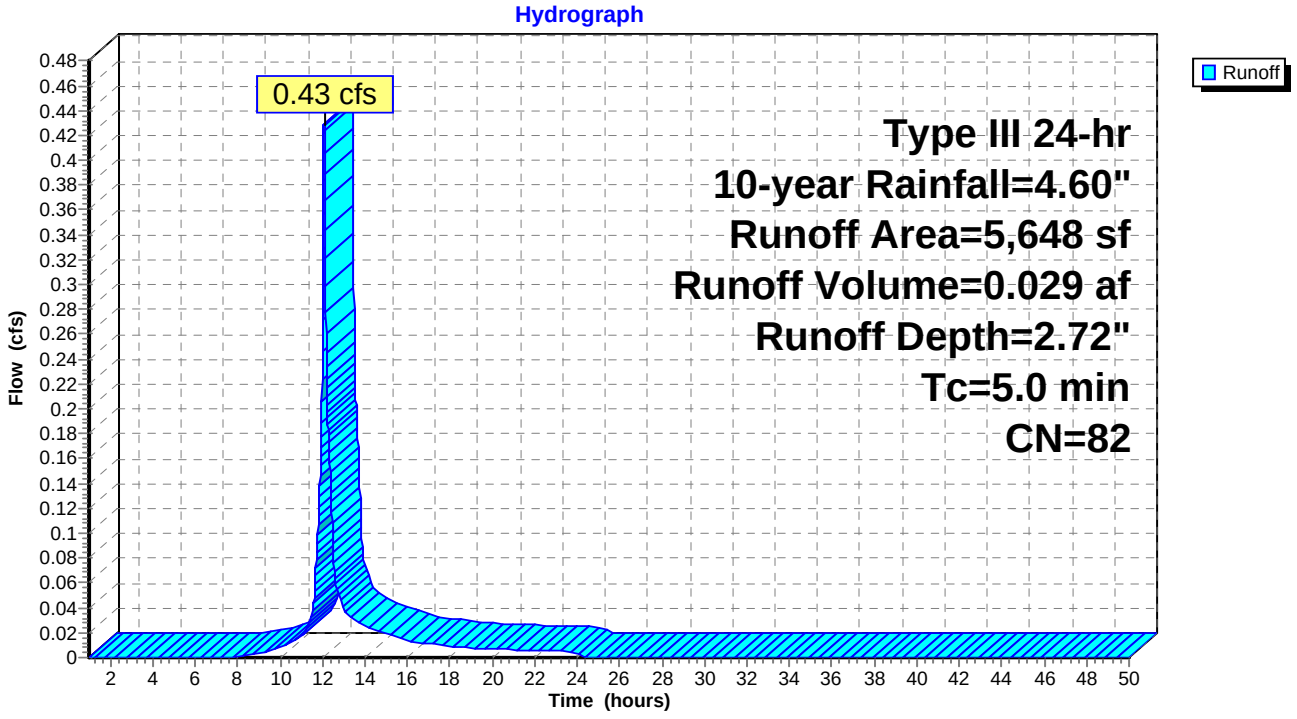
Runoff = 0.43 cfs @ 12.07 hrs, Volume= 0.029 af, Depth= 2.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-50.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
*	1,526	39	Field inlets trib/landscaping
*	122	98	128R walk/drive
*	1,077	98	shared drive
*	2,923	98	126 roof,walk,drive
	5,648	82	Weighted Average
	1,526		27.02% Pervious Area
	4,122		72.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 1S: SC1



Summary for Subcatchment 2S: SC 2

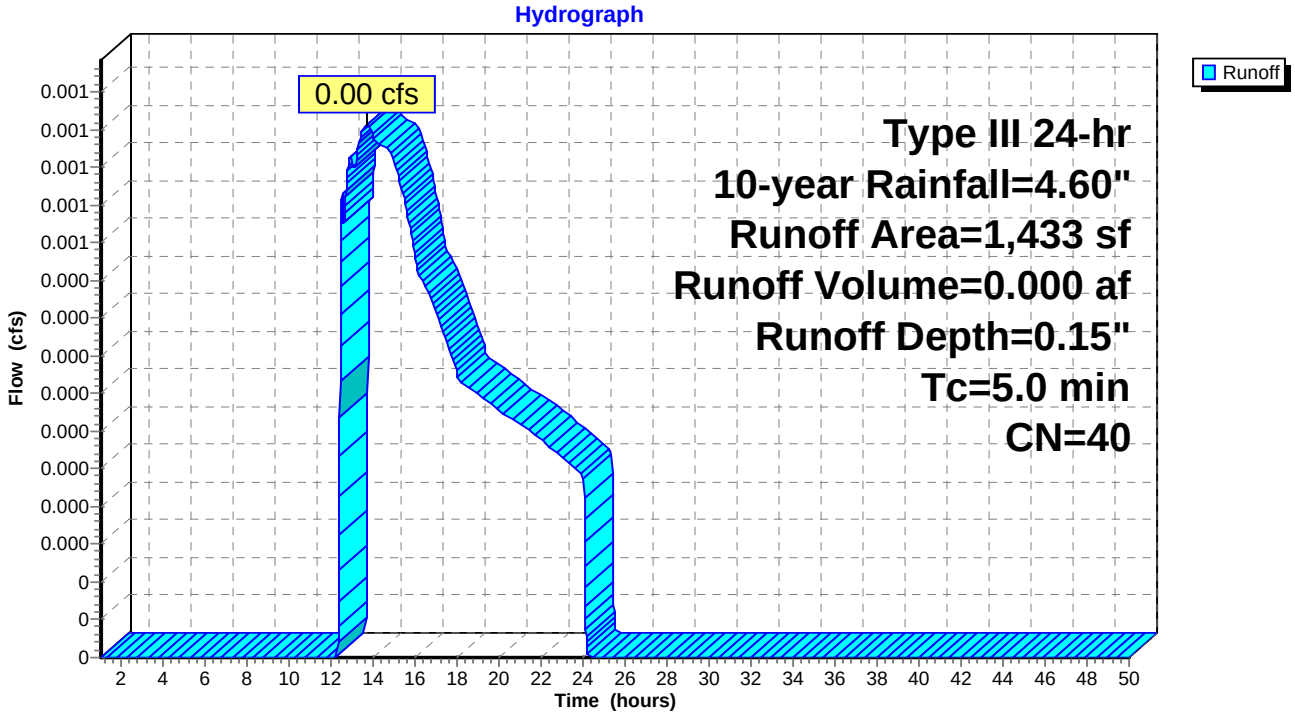
Runoff = 0.00 cfs @ 13.66 hrs, Volume= 0.000 af, Depth= 0.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-50.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
	1,400	39	>75% Grass cover, Good, HSG A
*	33	98	Misc impervious
	1,433	40	Weighted Average
	1,400		97.70% Pervious Area
	33		2.30% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 2S: SC 2

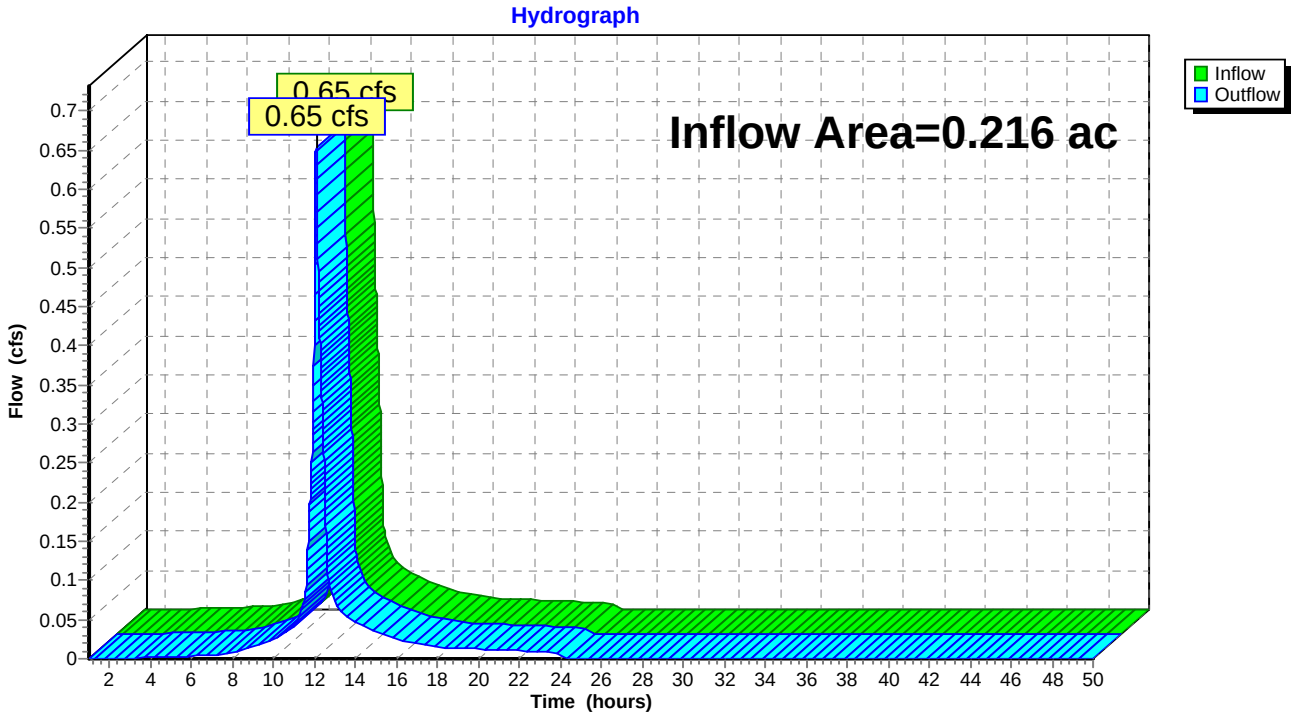


Summary for Reach 1R: North St. (POI #1)

Inflow Area = 0.216 ac, 81.45% Impervious, Inflow Depth = 3.25" for 10-year event
Inflow = 0.65 cfs @ 12.08 hrs, Volume= 0.059 af
Outflow = 0.65 cfs @ 12.08 hrs, Volume= 0.059 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-50.00 hrs, dt= 0.01 hrs

Reach 1R: North St. (POI #1)

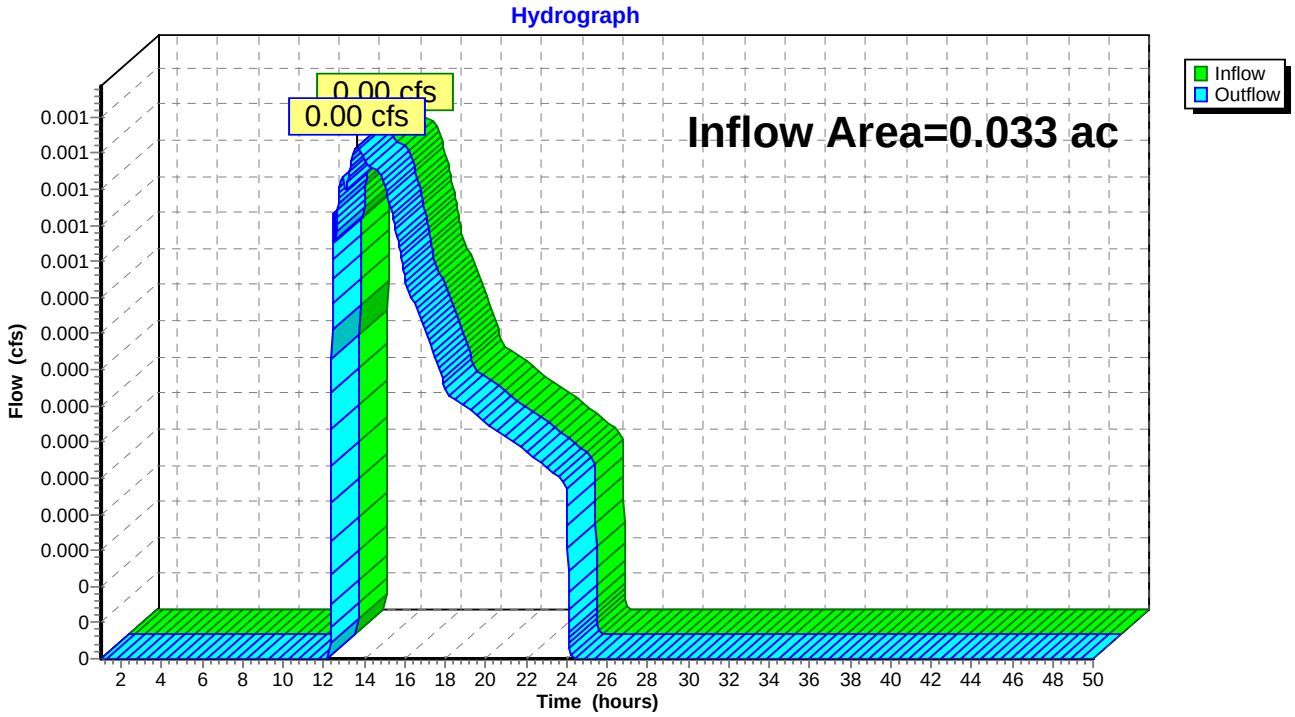


Summary for Reach 2R: Downgradient Abutter (POI#2)

Inflow Area = 0.033 ac, 2.30% Impervious, Inflow Depth = 0.15" for 10-year event
Inflow = 0.00 cfs @ 13.66 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 13.66 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-50.00 hrs, dt= 0.01 hrs

Reach 2R: Downgradient Abutter (POI#2)

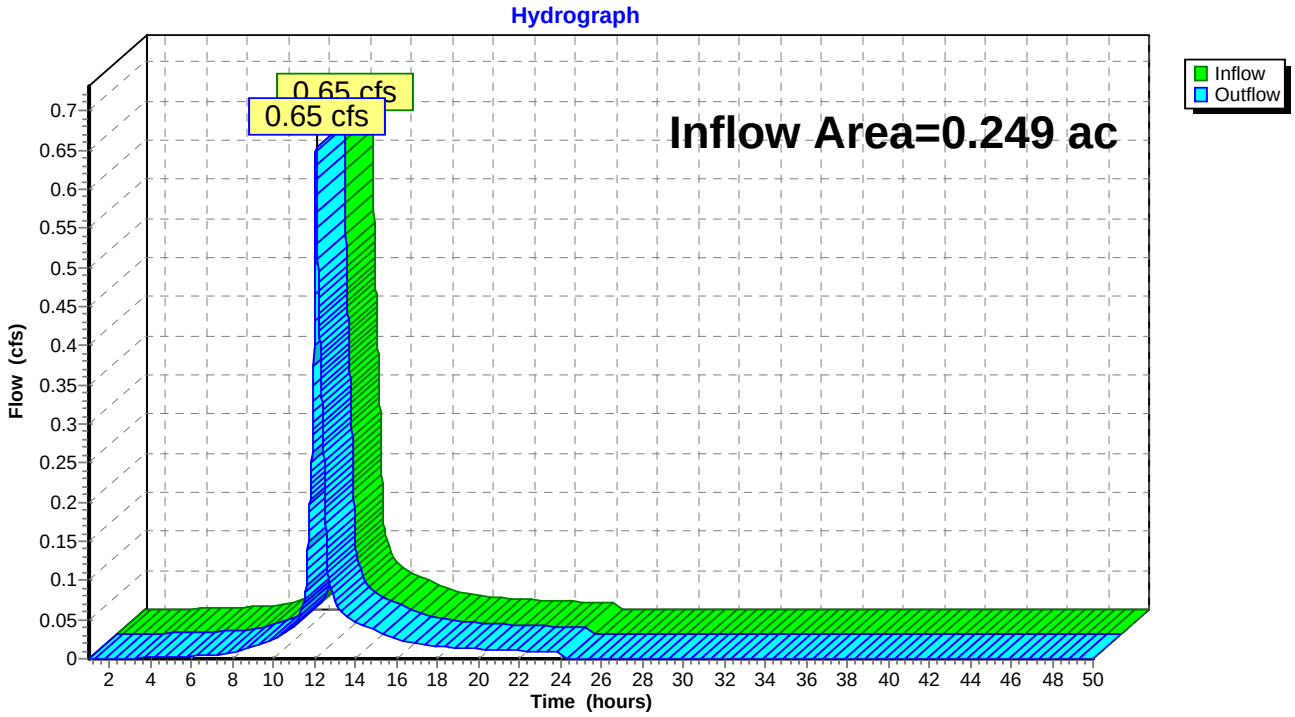


Summary for Reach 3R: Total Runoff

Inflow Area = 0.249 ac, 71.01% Impervious, Inflow Depth = 2.84" for 10-year event
Inflow = 0.65 cfs @ 12.08 hrs, Volume= 0.059 af
Outflow = 0.65 cfs @ 12.08 hrs, Volume= 0.059 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-50.00 hrs, dt= 0.01 hrs

Reach 3R: Total Runoff



Summary for Pond FP1: FocalPoint

Inflow Area = 0.087 ac, 94.10% Impervious, Inflow Depth = 4.02" for 10-year event
Inflow = 0.39 cfs @ 12.07 hrs, Volume= 0.029 af
Outflow = 0.25 cfs @ 12.15 hrs, Volume= 0.029 af, Atten= 36%, Lag= 5.1 min
Primary = 0.25 cfs @ 12.15 hrs, Volume= 0.029 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-50.00 hrs, dt= 0.01 hrs
Peak Elev= 135.16' @ 12.15 hrs Surf.Area= 116 sf Storage= 108 cf

Plug-Flow detention time= 3.6 min calculated for 0.029 af (100% of inflow)
Center-of-Mass det. time= 3.6 min (773.2 - 769.5)

Volume	Invert	Avail.Storage	Storage Description
#1	133.75'	89 cf	**3/4 Stone (Prismatic)** Listed below (Recalc) 435 cf Overall - 213 cf Embedded = 222 cf x 40.0% Voids
#2	134.12'	202 cf	**1.31'W x 2.35'L x 2.88'H Tanks** x 24 Inside #1 213 cf Overall x 95.0% Voids
#3	137.00'	9 cf	**3.00'W x 7.00'L x 2.25'H FocalPoint** 47 cf Overall x 20.0% Voids
#4	139.25'	61 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) -Impervious
		362 cf	Total Available Storage

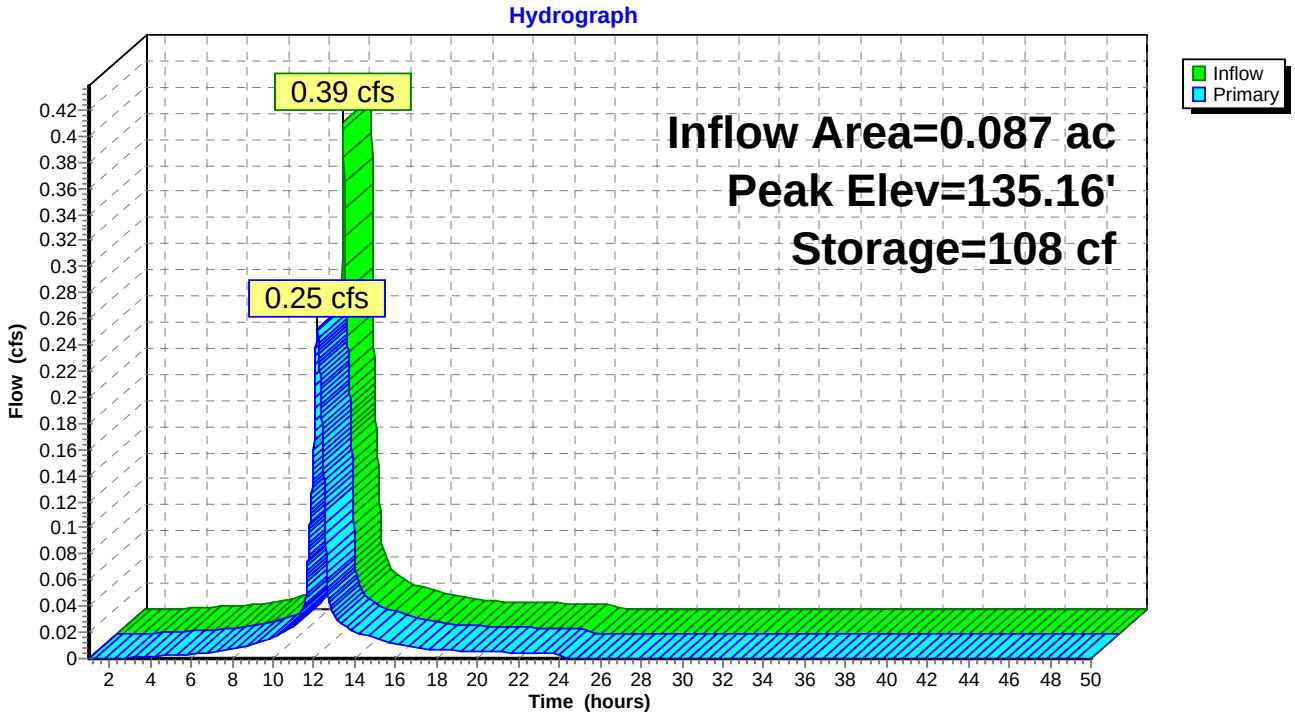
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
133.75	116	0	0
137.50	116	435	435

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
139.25	21	0	0
139.50	37	7	7
139.75	55	12	19
140.00	85	18	36
140.25	115	25	61

Device	Routing	Invert	Outlet Devices
#1	Primary	133.70'	**4.0" Round Culvert** L= 150.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 133.70' / 132.70' S= 0.0067 '/' Cc= 0.600 n= 0.010 PVC, smooth interior, Flow Area= 0.09 sf
#2	Device 1	133.75'	**100.000 in/hr Exfiltration over Surface area** Phase-In= 0.10'
#3	Device 1	139.75'	**8.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.25 cfs @ 12.15 hrs HW=135.16' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert** (Inlet Controls 0.25 cfs @ 2.89 fps)
└─**2=Exfiltration** (Passes 0.25 cfs of 0.27 cfs potential flow)
└─**3=Orifice/Grate** (Controls 0.00 cfs)

Pond FP1: FocalPoint



Time span=1.00-50.00 hrs, dt=0.01 hrs, 4901 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1.1S: SC 1.1 Runoff Area=3,781 sf 94.10% Impervious Runoff Depth=5.21"
Tc=5.0 min CN=95 Runoff=0.50 cfs 0.038 af

Subcatchment1S: SC1 Runoff Area=5,648 sf 72.98% Impervious Runoff Depth=3.80"
Tc=5.0 min CN=82 Runoff=0.59 cfs 0.041 af

Subcatchment2S: SC 2 Runoff Area=1,433 sf 2.30% Impervious Runoff Depth=0.44"
Tc=5.0 min CN=40 Runoff=0.01 cfs 0.001 af

Reach 1R: North St. (POI #1) Inflow=0.86 cfs 0.079 af
Outflow=0.86 cfs 0.079 af

Reach 2R: Downgradient Abutter (POI#2) Inflow=0.01 cfs 0.001 af
Outflow=0.01 cfs 0.001 af

Reach 3R: Total Runoff Inflow=0.86 cfs 0.080 af
Outflow=0.86 cfs 0.080 af

Pond FP1: FocalPoint Peak Elev=135.83' Storage=166 cf Inflow=0.50 cfs 0.038 af
Outflow=0.27 cfs 0.038 af

Total Runoff Area = 0.249 ac Runoff Volume = 0.080 af Average Runoff Depth = 3.85"
28.99% Pervious = 0.072 ac 71.01% Impervious = 0.177 ac

Summary for Subcatchment 1.1S: SC 1.1

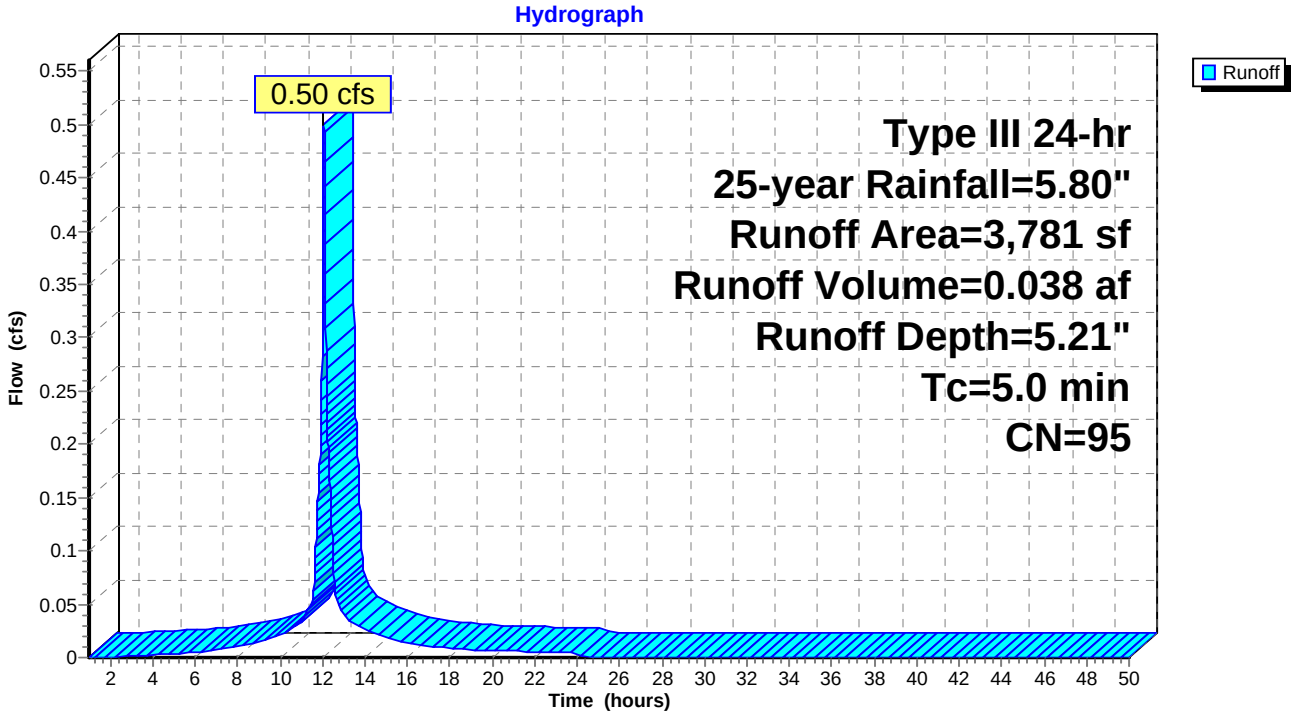
Runoff = 0.50 cfs @ 12.07 hrs, Volume= 0.038 af, Depth= 5.21"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-50.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
*	3,558	98	Roof, decks
	223	39	>75% Grass cover, Good, HSG A
	3,781	95	Weighted Average
	223		5.90% Pervious Area
	3,558		94.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 1.1S: SC 1.1



Summary for Subcatchment 1S: SC1

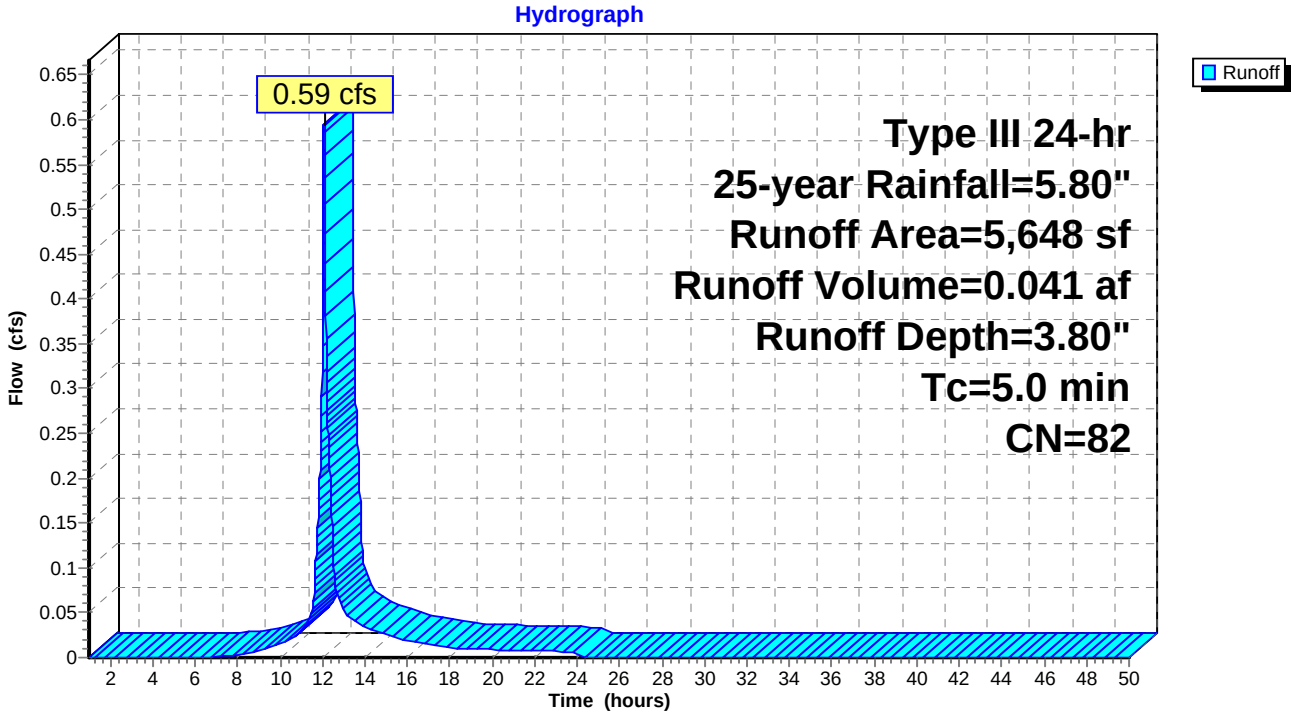
Runoff = 0.59 cfs @ 12.07 hrs, Volume= 0.041 af, Depth= 3.80"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-50.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
*	1,526	39	Field inlets trib/landscaping
*	122	98	128R walk/drive
*	1,077	98	shared drive
*	2,923	98	126 roof,walk,drive
	5,648	82	Weighted Average
	1,526		27.02% Pervious Area
	4,122		72.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 1S: SC1



Summary for Subcatchment 2S: SC 2

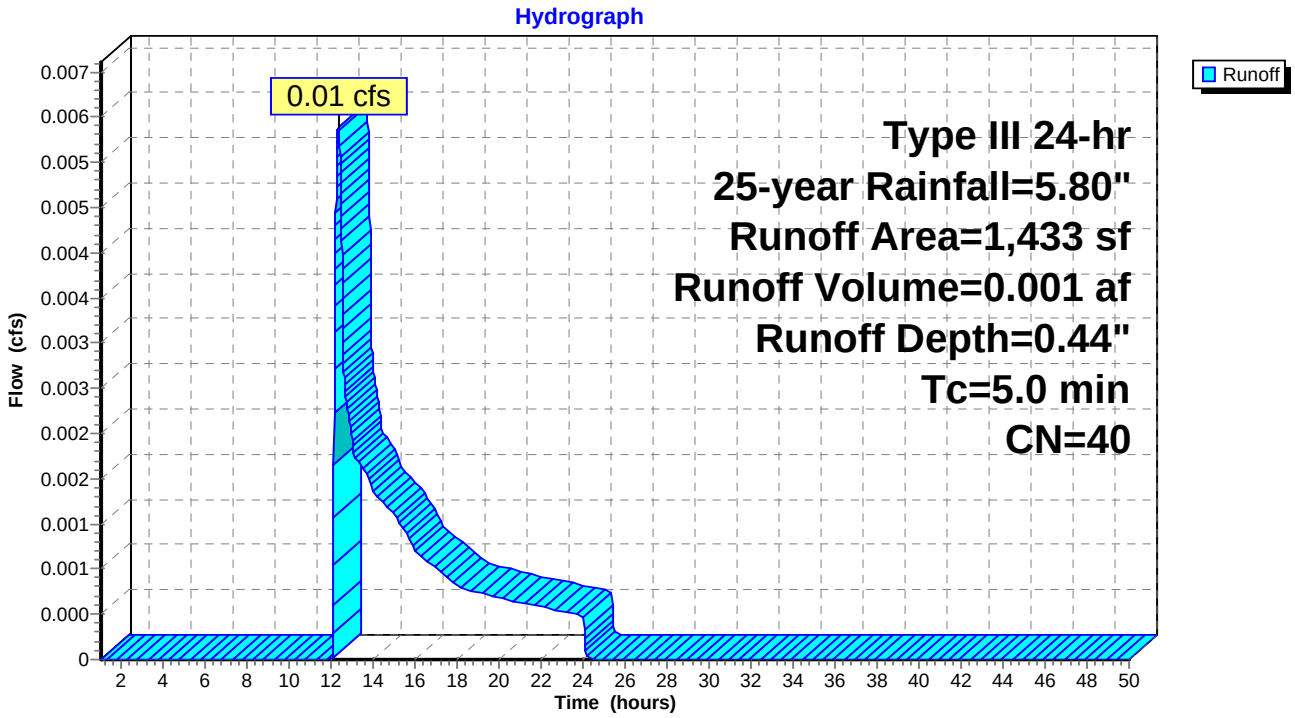
Runoff = 0.01 cfs @ 12.32 hrs, Volume= 0.001 af, Depth= 0.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-50.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
	1,400	39	>75% Grass cover, Good, HSG A
*	33	98	Misc impervious
	1,433	40	Weighted Average
	1,400		97.70% Pervious Area
	33		2.30% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 2S: SC 2

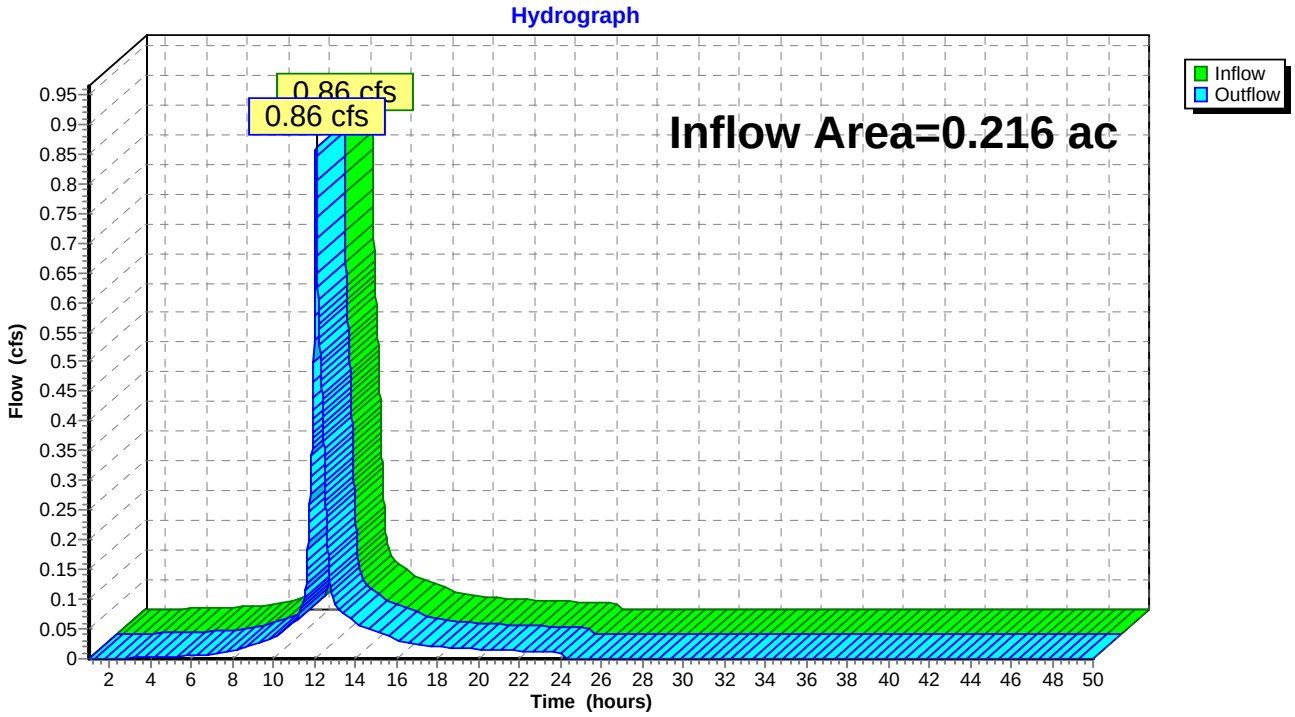


Summary for Reach 1R: North St. (POI #1)

Inflow Area = 0.216 ac, 81.45% Impervious, Inflow Depth = 4.37" for 25-year event
Inflow = 0.86 cfs @ 12.08 hrs, Volume= 0.079 af
Outflow = 0.86 cfs @ 12.08 hrs, Volume= 0.079 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-50.00 hrs, dt= 0.01 hrs

Reach 1R: North St. (POI #1)

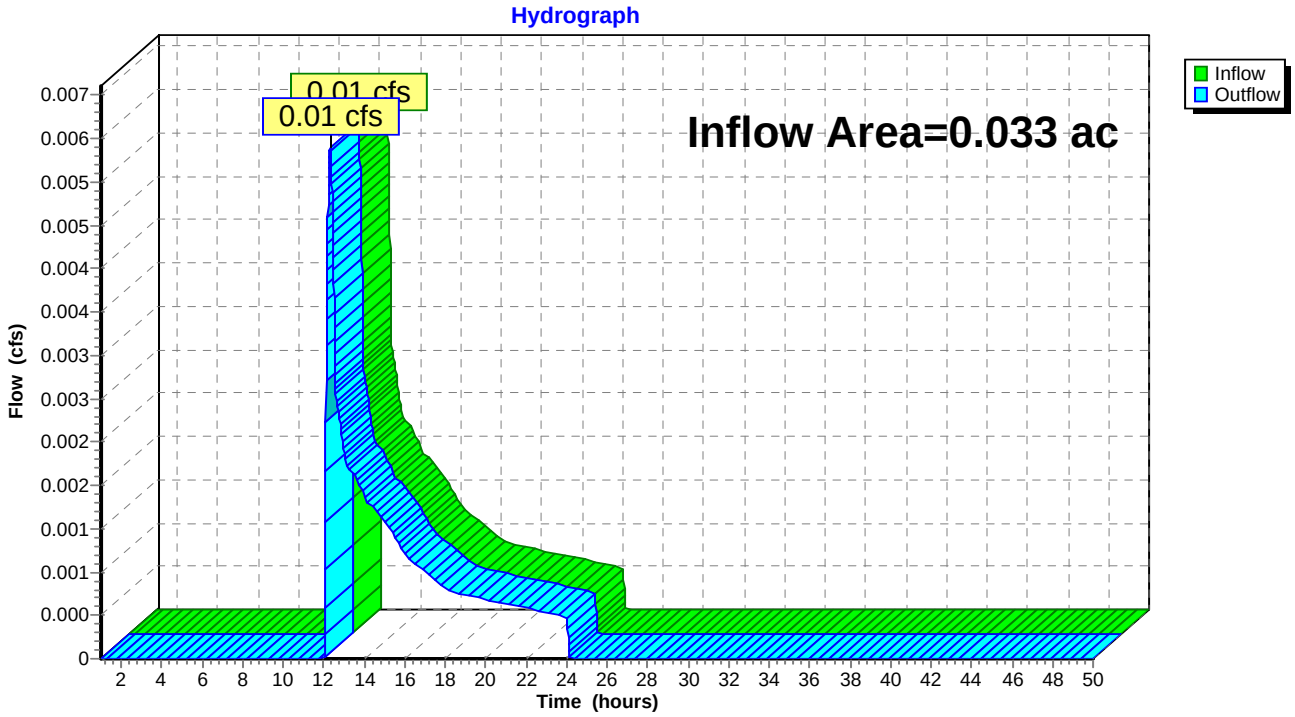


Summary for Reach 2R: Downgradient Abutter (POI#2)

Inflow Area = 0.033 ac, 2.30% Impervious, Inflow Depth = 0.44" for 25-year event
Inflow = 0.01 cfs @ 12.32 hrs, Volume= 0.001 af
Outflow = 0.01 cfs @ 12.32 hrs, Volume= 0.001 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-50.00 hrs, dt= 0.01 hrs

Reach 2R: Downgradient Abutter (POI#2)

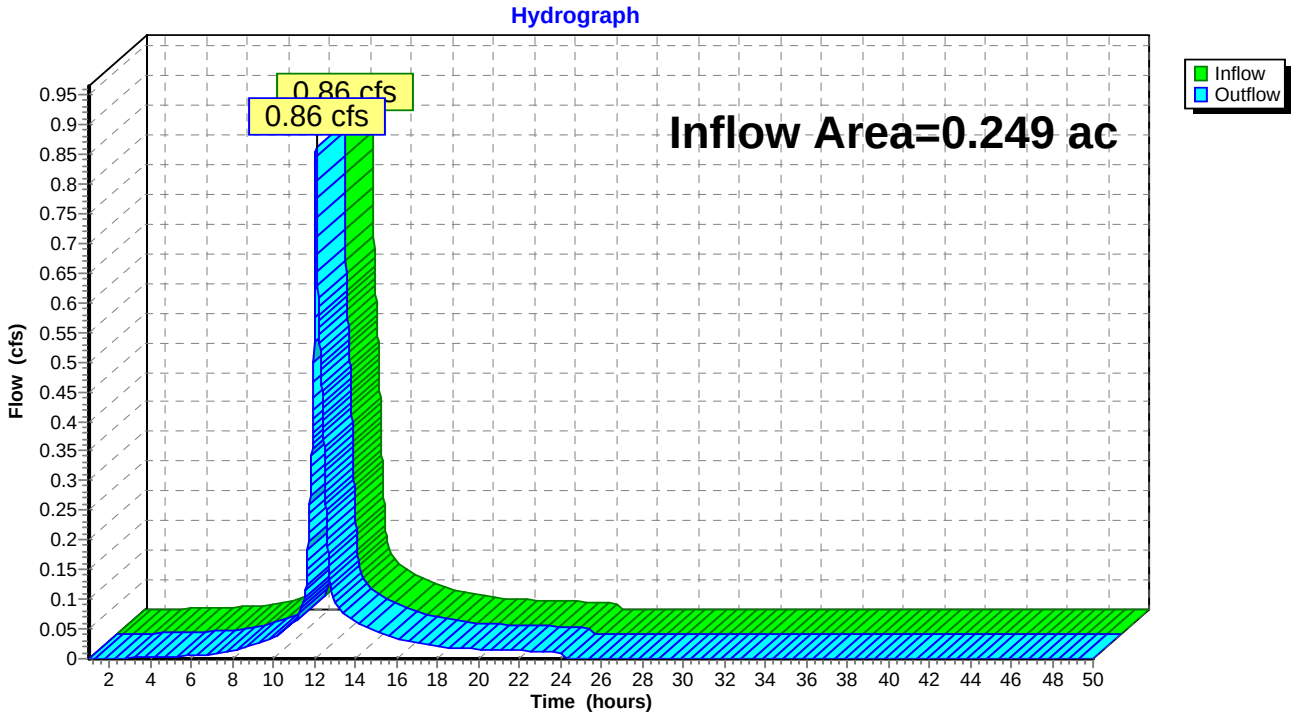


Summary for Reach 3R: Total Runoff

Inflow Area = 0.249 ac, 71.01% Impervious, Inflow Depth = 3.85" for 25-year event
Inflow = 0.86 cfs @ 12.08 hrs, Volume= 0.080 af
Outflow = 0.86 cfs @ 12.08 hrs, Volume= 0.080 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-50.00 hrs, dt= 0.01 hrs

Reach 3R: Total Runoff



Summary for Pond FP1: FocalPoint

Inflow Area = 0.087 ac, 94.10% Impervious, Inflow Depth = 5.21" for 25-year event
Inflow = 0.50 cfs @ 12.07 hrs, Volume= 0.038 af
Outflow = 0.27 cfs @ 12.09 hrs, Volume= 0.038 af, Atten= 46%, Lag= 1.2 min
Primary = 0.27 cfs @ 12.09 hrs, Volume= 0.038 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-50.00 hrs, dt= 0.01 hrs
Peak Elev= 135.83' @ 12.18 hrs Surf.Area= 116 sf Storage= 166 cf

Plug-Flow detention time= 4.4 min calculated for 0.038 af (100% of inflow)
Center-of-Mass det. time= 4.4 min (767.9 - 763.5)

Volume	Invert	Avail.Storage	Storage Description
#1	133.75'	89 cf	**3/4 Stone (Prismatic)**Listed below (Recalc) 435 cf Overall - 213 cf Embedded = 222 cf x 40.0% Voids
#2	134.12'	202 cf	**1.31'W x 2.35'L x 2.88'H Tanks** x 24 Inside #1 213 cf Overall x 95.0% Voids
#3	137.00'	9 cf	**3.00'W x 7.00'L x 2.25'H FocalPoint** 47 cf Overall x 20.0% Voids
#4	139.25'	61 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc) -Impervious
		362 cf	Total Available Storage

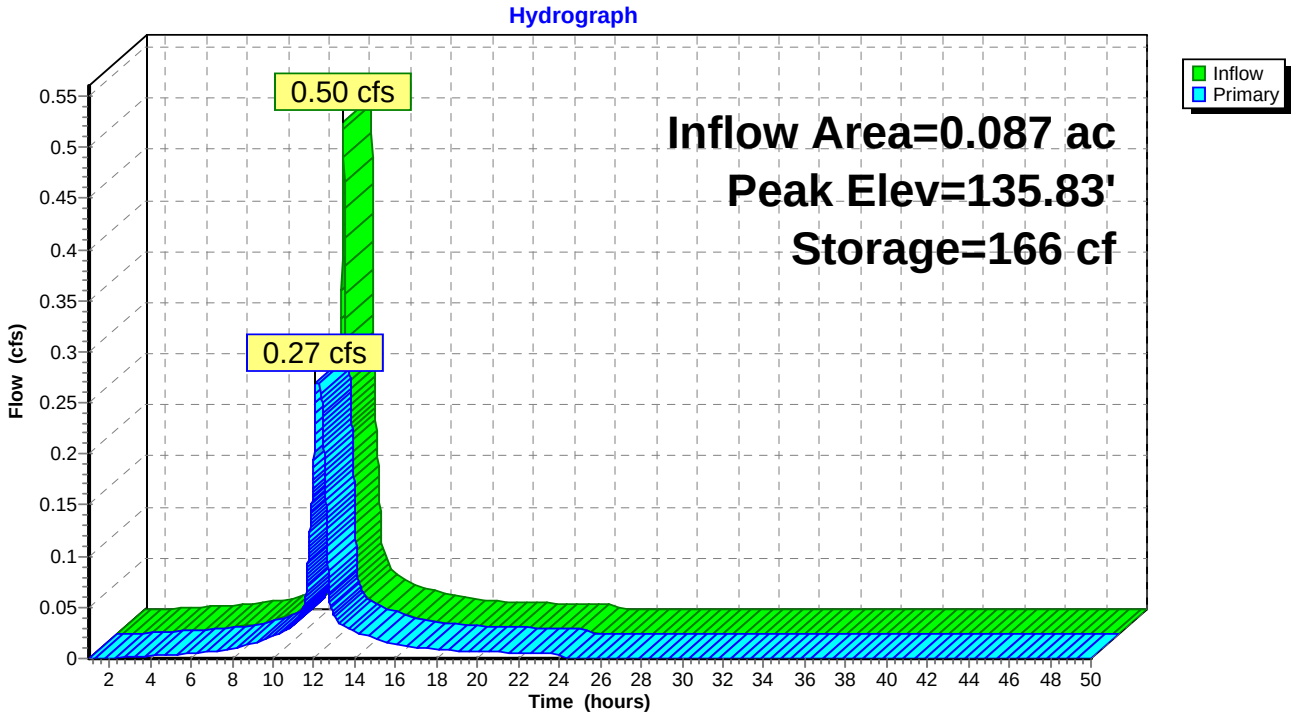
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
133.75	116	0	0
137.50	116	435	435

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
139.25	21	0	0
139.50	37	7	7
139.75	55	12	19
140.00	85	18	36
140.25	115	25	61

Device	Routing	Invert	Outlet Devices
#1	Primary	133.70'	**4.0" Round Culvert** L= 150.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 133.70' / 132.70' S= 0.0067 '/' Cc= 0.600 n= 0.010 PVC, smooth interior, Flow Area= 0.09 sf
#2	Device 1	133.75'	**100.000 in/hr Exfiltration over Surface area** Phase-In= 0.10'
#3	Device 1	139.75'	**8.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.27 cfs @ 12.09 hrs HW=135.43' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert** (Passes 0.27 cfs of 0.28 cfs potential flow)
  ├─**2=Exfiltration** (Exfiltration Controls 0.27 cfs)
  └─**3=Orifice/Grate** (Controls 0.00 cfs)

Pond FP1: FocalPoint



Time span=1.00-50.00 hrs, dt=0.01 hrs, 4901 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1.1S: SC 1.1 Runoff Area=3,781 sf 94.10% Impervious Runoff Depth=0.52"
Tc=5.0 min CN=95 Runoff=0.05 cfs 0.004 af

Subcatchment1S: SC1 Runoff Area=5,648 sf 72.98% Impervious Runoff Depth=0.10"
Tc=5.0 min CN=82 Runoff=0.01 cfs 0.001 af

Subcatchment2S: SC 2 Runoff Area=1,433 sf 2.30% Impervious Runoff Depth=0.00"
Tc=5.0 min CN=40 Runoff=0.00 cfs 0.000 af

Reach 1R: North St. (POI #1) Inflow=0.06 cfs 0.005 af
Outflow=0.06 cfs 0.005 af

Reach 2R: Downgradient Abutter (POI#2) Inflow=0.00 cfs 0.000 af
Outflow=0.00 cfs 0.000 af

Reach 3R: Total Runoff Inflow=0.06 cfs 0.005 af
Outflow=0.06 cfs 0.005 af

Pond FP1: FocalPoint Peak Elev=133.92' Storage=8 cf Inflow=0.05 cfs 0.004 af
Outflow=0.05 cfs 0.004 af

Total Runoff Area = 0.249 ac Runoff Volume = 0.005 af Average Runoff Depth = 0.23"
28.99% Pervious = 0.072 ac 71.01% Impervious = 0.177 ac

Summary for Subcatchment 1.1S: SC 1.1

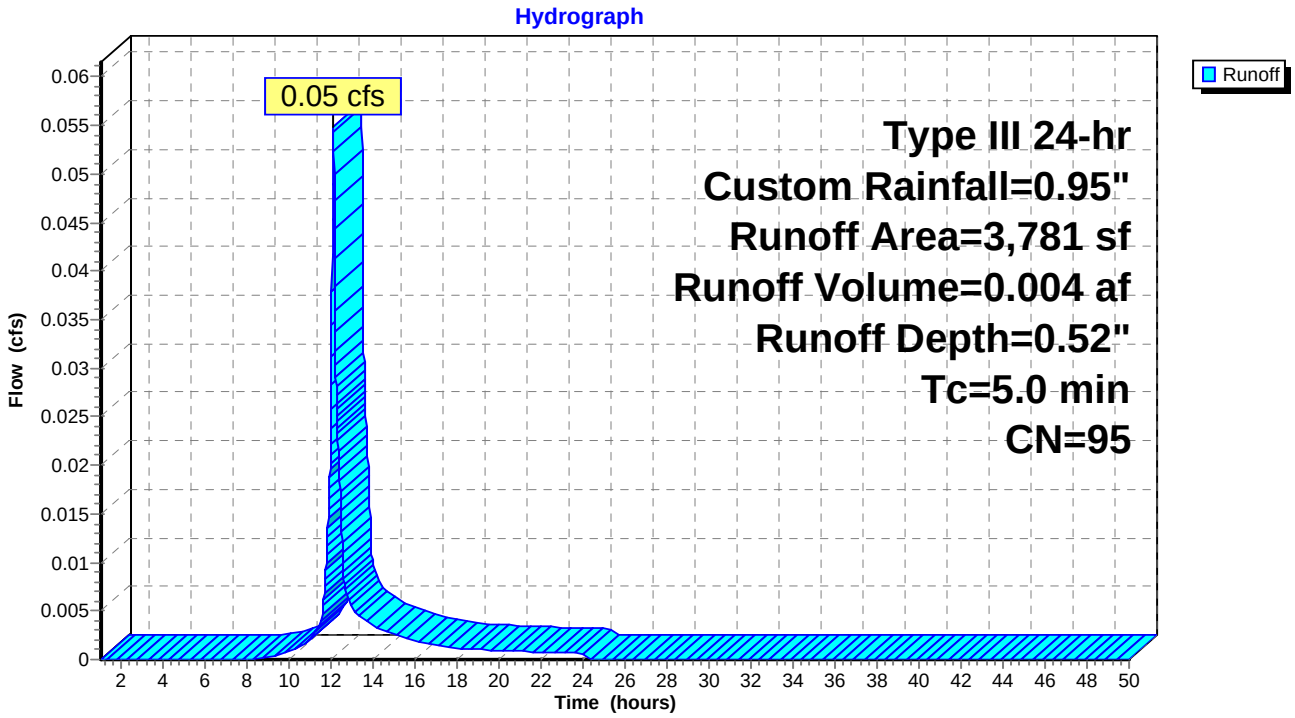
Runoff = 0.05 cfs @ 12.08 hrs, Volume= 0.004 af, Depth= 0.52"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-50.00 hrs, dt= 0.01 hrs
Type III 24-hr Custom Rainfall=0.95"

	Area (sf)	CN	Description
*	3,558	98	Roof, decks
	223	39	>75% Grass cover, Good, HSG A
	3,781	95	Weighted Average
	223		5.90% Pervious Area
	3,558		94.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 1.1S: SC 1.1



Summary for Subcatchment 1S: SC1

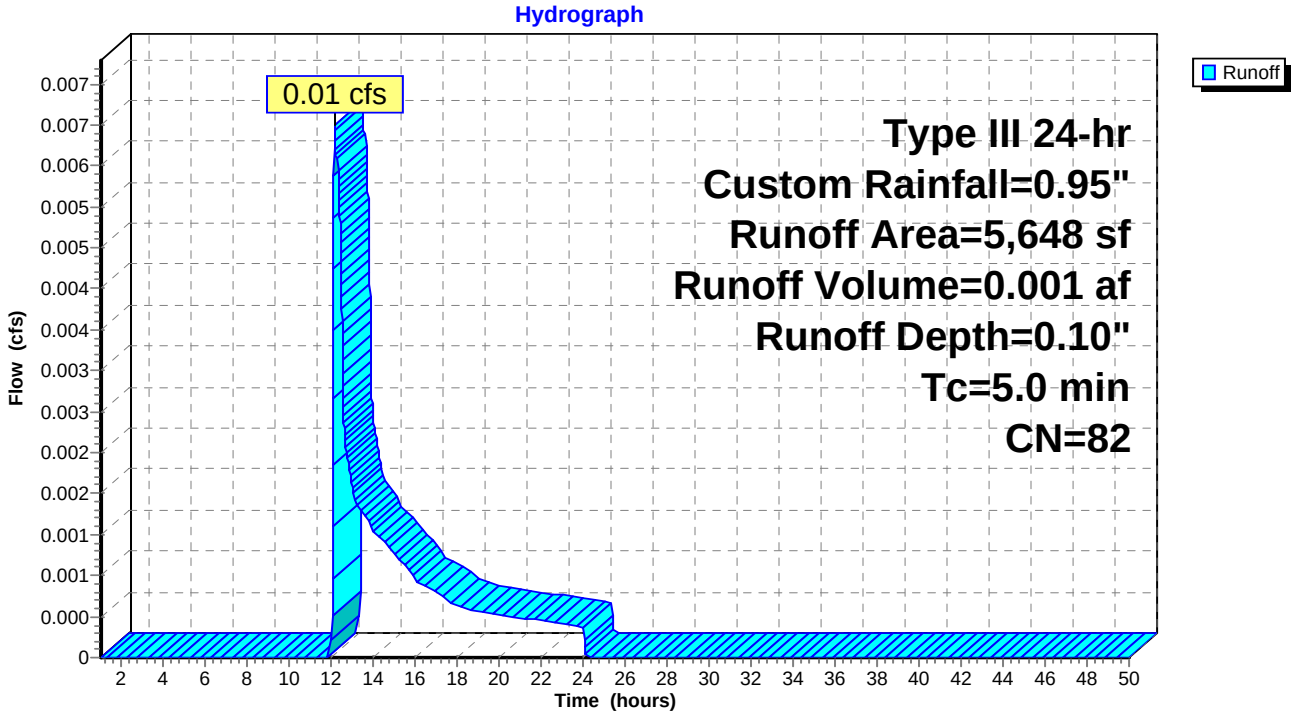
Runoff = 0.01 cfs @ 12.13 hrs, Volume= 0.001 af, Depth= 0.10"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-50.00 hrs, dt= 0.01 hrs
Type III 24-hr Custom Rainfall=0.95"

	Area (sf)	CN	Description
*	1,526	39	Field inlets trib/landscaping
*	122	98	128R walk/drive
*	1,077	98	shared drive
*	2,923	98	126 roof,walk,drive
	5,648	82	Weighted Average
	1,526		27.02% Pervious Area
	4,122		72.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 1S: SC1



Summary for Subcatchment 2S: SC 2

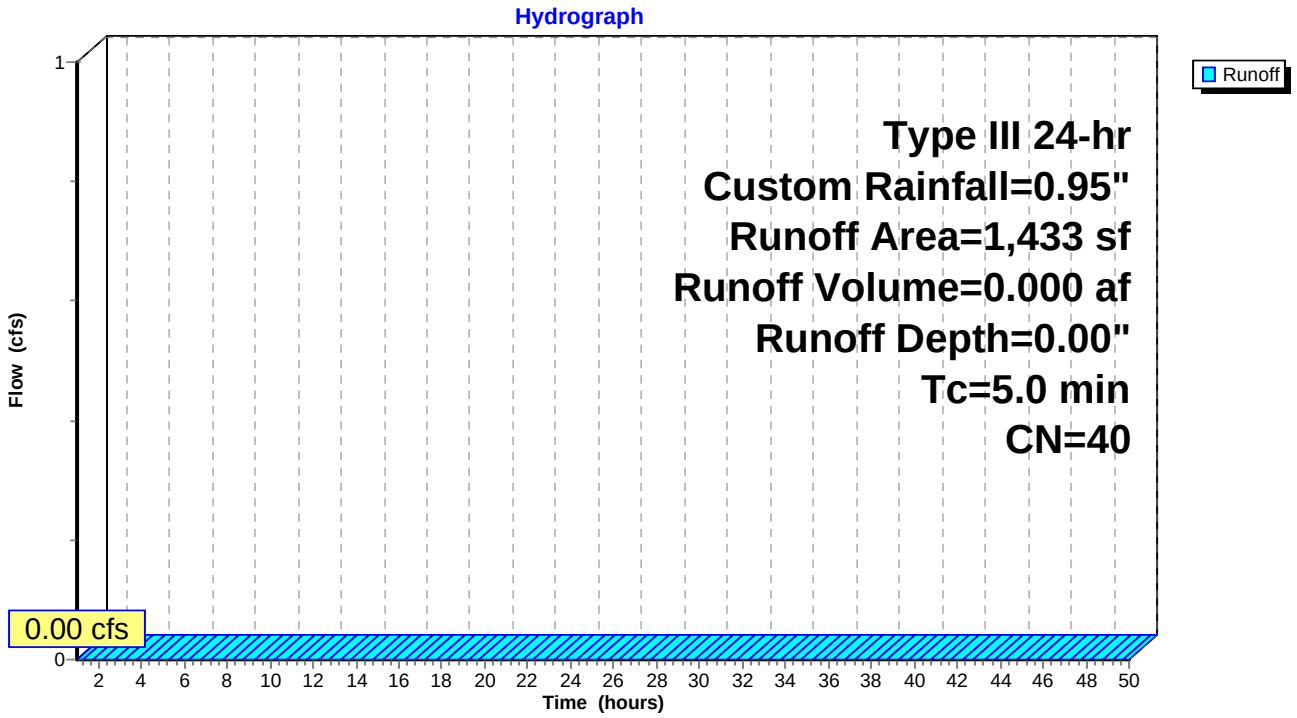
Runoff = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-50.00 hrs, dt= 0.01 hrs
Type III 24-hr Custom Rainfall=0.95"

	Area (sf)	CN	Description
	1,400	39	>75% Grass cover, Good, HSG A
*	33	98	Misc impervious
	1,433	40	Weighted Average
	1,400		97.70% Pervious Area
	33		2.30% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 2S: SC 2

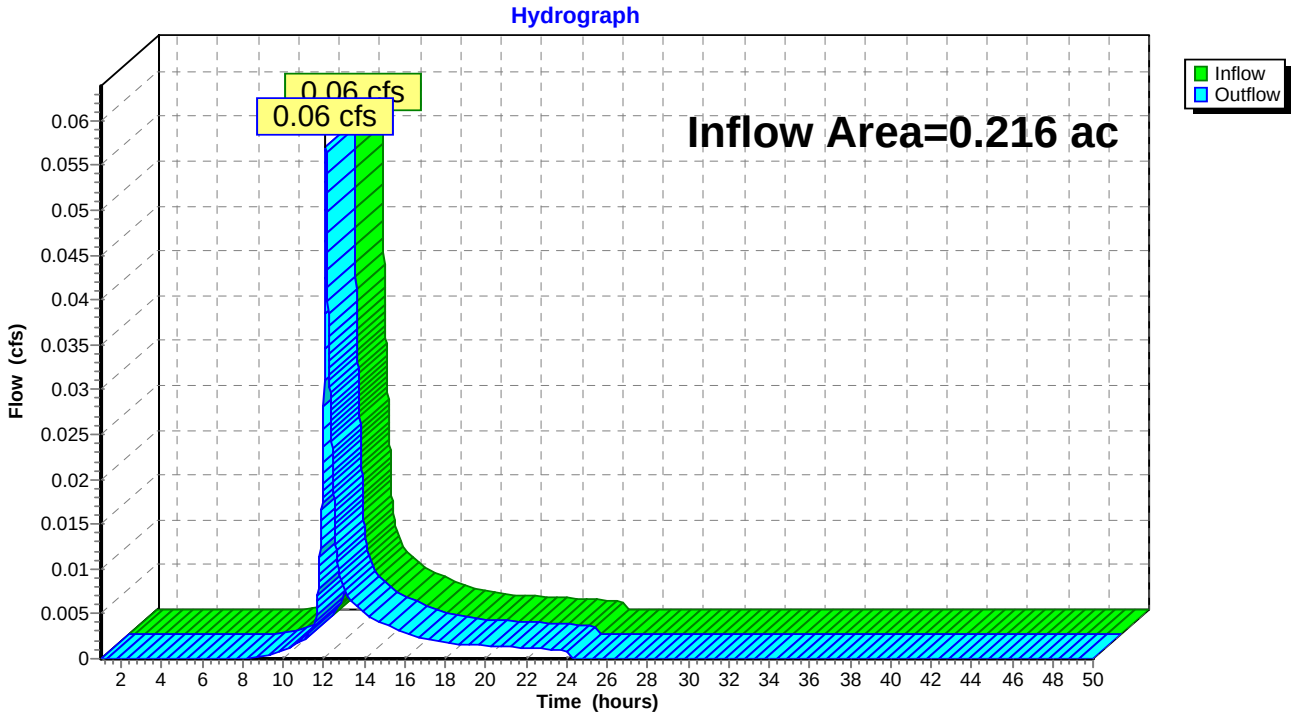


Summary for Reach 1R: North St. (POI #1)

Inflow Area = 0.216 ac, 81.45% Impervious, Inflow Depth = 0.27" for Custom event
Inflow = 0.06 cfs @ 12.11 hrs, Volume= 0.005 af
Outflow = 0.06 cfs @ 12.11 hrs, Volume= 0.005 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-50.00 hrs, dt= 0.01 hrs

Reach 1R: North St. (POI #1)

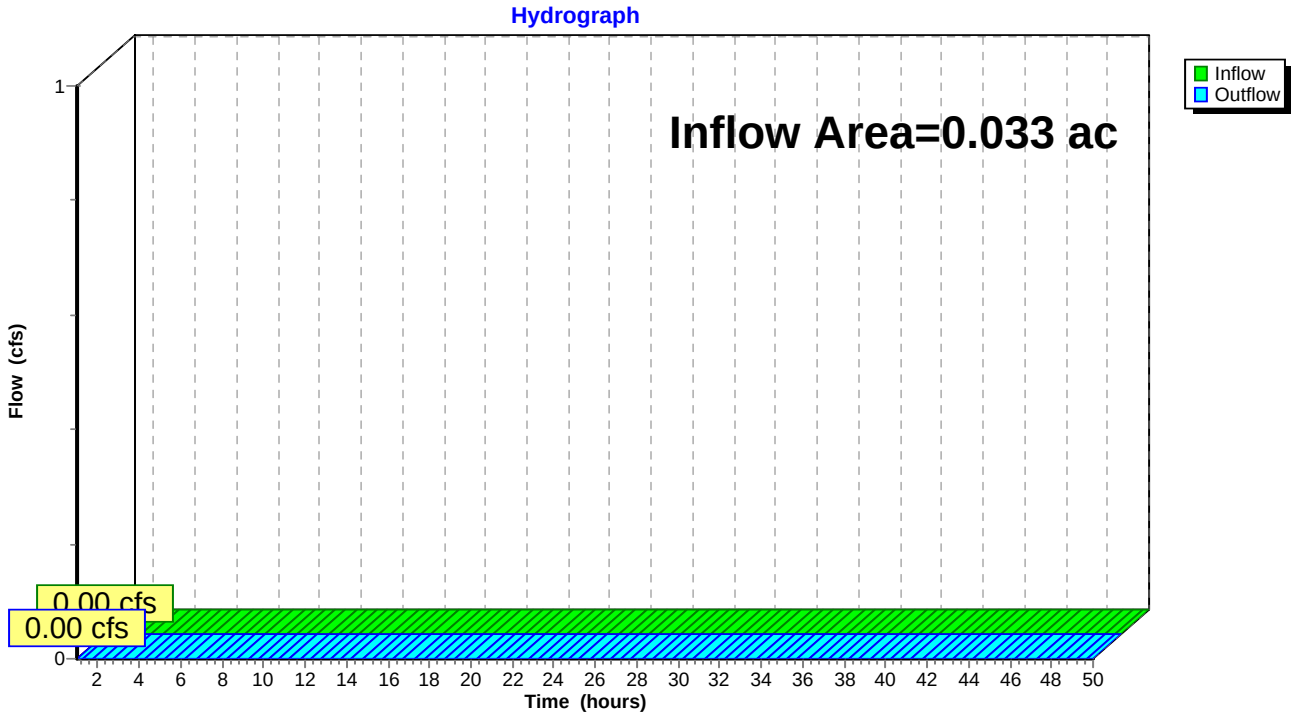


Summary for Reach 2R: Downgradient Abutter (POI#2)

Inflow Area = 0.033 ac, 2.30% Impervious, Inflow Depth = 0.00" for Custom event
Inflow = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-50.00 hrs, dt= 0.01 hrs

Reach 2R: Downgradient Abutter (POI#2)

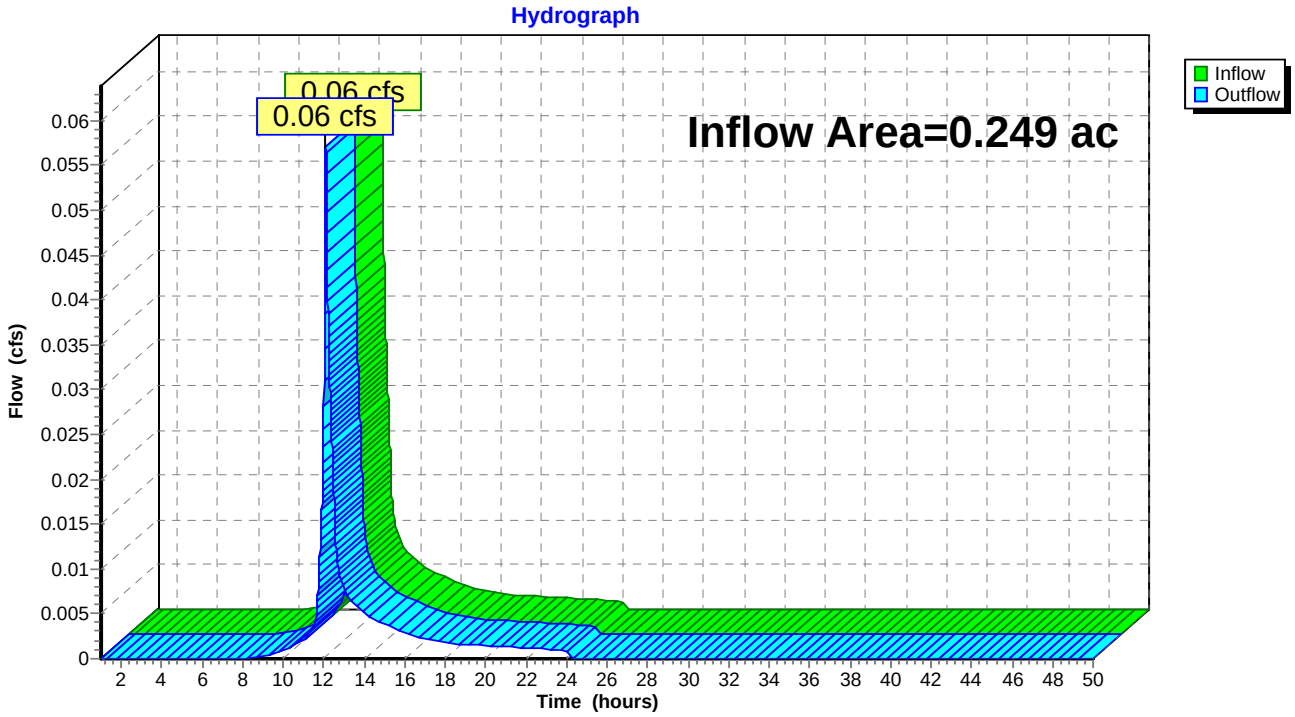


Summary for Reach 3R: Total Runoff

Inflow Area = 0.249 ac, 71.01% Impervious, Inflow Depth = 0.23" for Custom event
Inflow = 0.06 cfs @ 12.11 hrs, Volume= 0.005 af
Outflow = 0.06 cfs @ 12.11 hrs, Volume= 0.005 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-50.00 hrs, dt= 0.01 hrs

Reach 3R: Total Runoff



Summary for Pond FP1: FocalPoint

Inflow Area = 0.087 ac, 94.10% Impervious, Inflow Depth = 0.52" for Custom event
Inflow = 0.05 cfs @ 12.08 hrs, Volume= 0.004 af
Outflow = 0.05 cfs @ 12.11 hrs, Volume= 0.004 af, Atten= 7%, Lag= 1.9 min
Primary = 0.05 cfs @ 12.11 hrs, Volume= 0.004 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-50.00 hrs, dt= 0.01 hrs
Peak Elev= 133.92' @ 12.11 hrs Surf.Area= 116 sf Storage= 8 cf

Plug-Flow detention time= 1.7 min calculated for 0.004 af (100% of inflow)
Center-of-Mass det. time= 1.7 min (827.1 - 825.4)

Volume	Invert	Avail.Storage	Storage Description
#1	133.75'	89 cf	**3/4 Stone (Prismatic)** Listed below (Recalc) 435 cf Overall - 213 cf Embedded = 222 cf x 40.0% Voids
#2	134.12'	202 cf	**1.31'W x 2.35'L x 2.88'H Tanks** x 24 Inside #1 213 cf Overall x 95.0% Voids
#3	137.00'	9 cf	**3.00'W x 7.00'L x 2.25'H FocalPoint** 47 cf Overall x 20.0% Voids
#4	139.25'	61 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) -Impervious
		362 cf	Total Available Storage

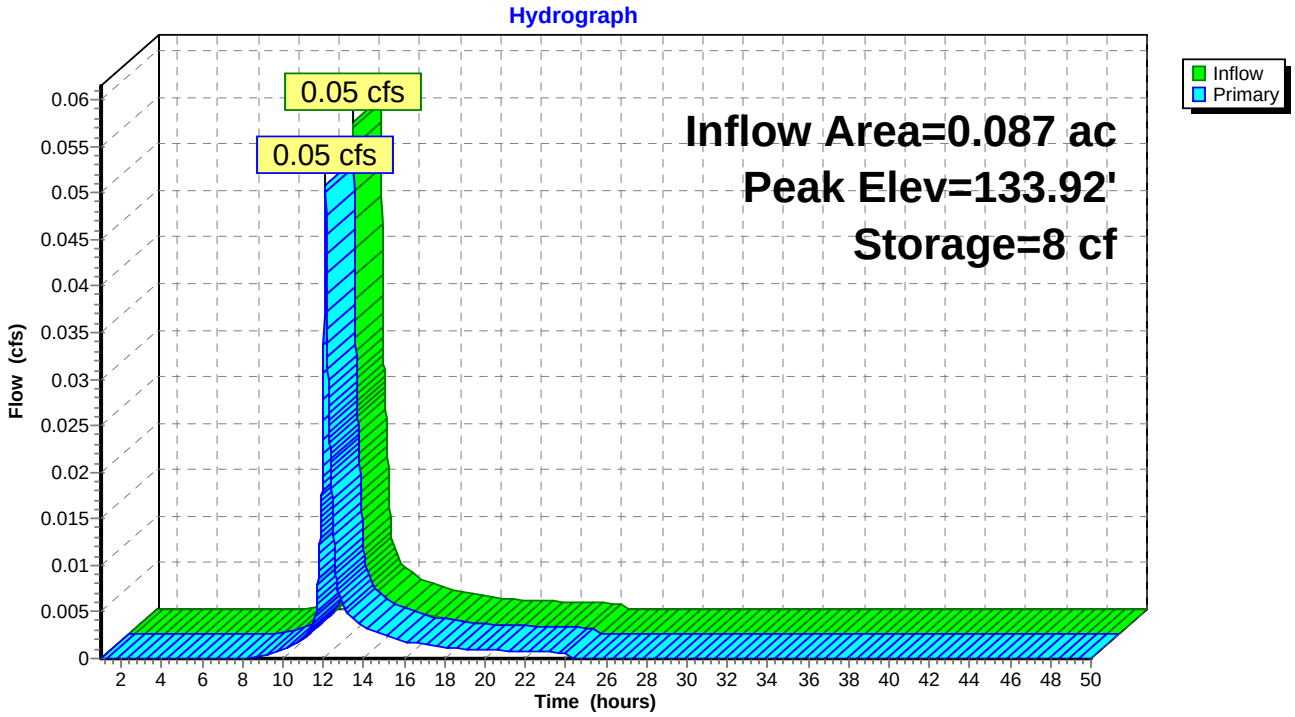
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
133.75	116	0	0
137.50	116	435	435

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
139.25	21	0	0
139.50	37	7	7
139.75	55	12	19
140.00	85	18	36
140.25	115	25	61

Device	Routing	Invert	Outlet Devices
#1	Primary	133.70'	**4.0" Round Culvert** L= 150.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 133.70' / 132.70' S= 0.0067 '/' Cc= 0.600 n= 0.010 PVC, smooth interior, Flow Area= 0.09 sf
#2	Device 1	133.75'	**100.000 in/hr Exfiltration over Surface area** Phase-In= 0.10'
#3	Device 1	139.75'	**8.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.05 cfs @ 12.11 hrs HW=133.92' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert** (Inlet Controls 0.05 cfs @ 0.84 fps)
└─**2=Exfiltration** (Passes 0.05 cfs of 0.27 cfs potential flow)
└─**3=Orifice/Grate** (Controls 0.00 cfs)

Pond FP1: FocalPoint



Time span=1.00-50.00 hrs, dt=0.01 hrs, 4901 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1.1S: SC 1.1 Runoff Area=3,781 sf 94.10% Impervious Runoff Depth=0.56"
Tc=5.0 min CN=95 Runoff=0.06 cfs 0.004 af

Subcatchment1S: SC1 Runoff Area=5,648 sf 72.98% Impervious Runoff Depth=0.11"
Tc=5.0 min CN=82 Runoff=0.01 cfs 0.001 af

Subcatchment2S: SC 2 Runoff Area=1,433 sf 2.30% Impervious Runoff Depth=0.00"
Tc=5.0 min CN=40 Runoff=0.00 cfs 0.000 af

Reach 1R: North St. (POI #1) Inflow=0.06 cfs 0.005 af
Outflow=0.06 cfs 0.005 af

Reach 2R: Downgradient Abutter (POI#2) Inflow=0.00 cfs 0.000 af
Outflow=0.00 cfs 0.000 af

Reach 3R: Total Runoff Inflow=0.06 cfs 0.005 af
Outflow=0.06 cfs 0.005 af

Pond FP1: FocalPoint Peak Elev=133.93' Storage=8 cf Inflow=0.06 cfs 0.004 af
Outflow=0.06 cfs 0.004 af

Total Runoff Area = 0.249 ac Runoff Volume = 0.005 af Average Runoff Depth = 0.26"
28.99% Pervious = 0.072 ac 71.01% Impervious = 0.177 ac

Summary for Subcatchment 1.1S: SC 1.1

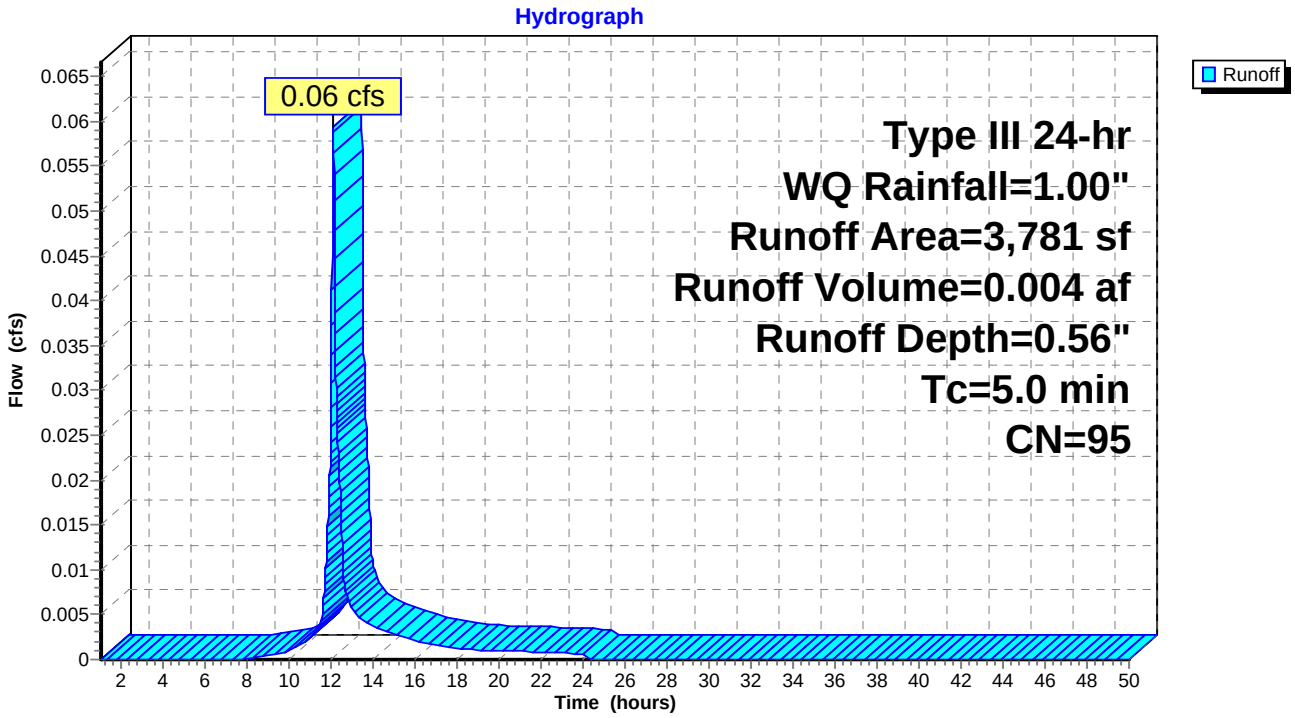
Runoff = 0.06 cfs @ 12.07 hrs, Volume= 0.004 af, Depth= 0.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-50.00 hrs, dt= 0.01 hrs
Type III 24-hr WQ Rainfall=1.00"

	Area (sf)	CN	Description
*	3,558	98	Roof, decks
	223	39	>75% Grass cover, Good, HSG A
	3,781	95	Weighted Average
	223		5.90% Pervious Area
	3,558		94.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 1.1S: SC 1.1



Summary for Subcatchment 1S: SC1

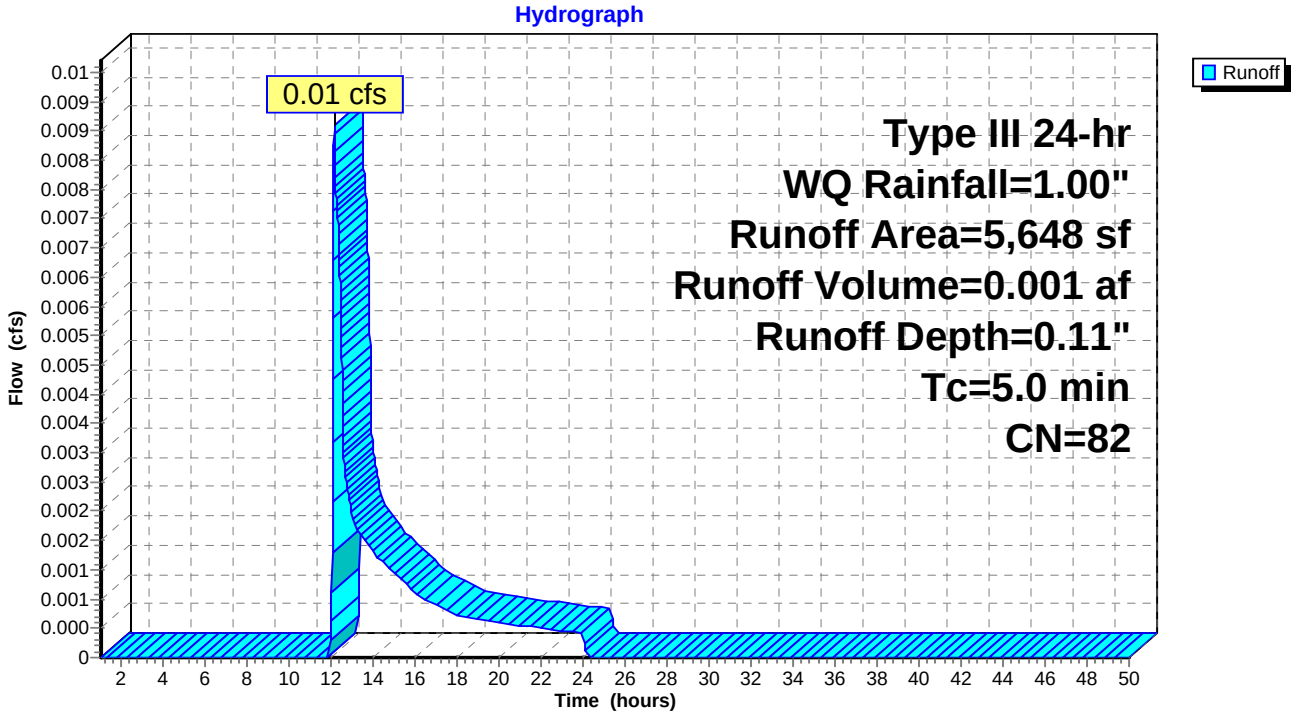
Runoff = 0.01 cfs @ 12.12 hrs, Volume= 0.001 af, Depth= 0.11"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-50.00 hrs, dt= 0.01 hrs
Type III 24-hr WQ Rainfall=1.00"

	Area (sf)	CN	Description
*	1,526	39	Field inlets trib/landscaping
*	122	98	128R walk/drive
*	1,077	98	shared drive
*	2,923	98	126 roof,walk,drive
	5,648	82	Weighted Average
	1,526		27.02% Pervious Area
	4,122		72.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 1S: SC1



Summary for Subcatchment 2S: SC 2

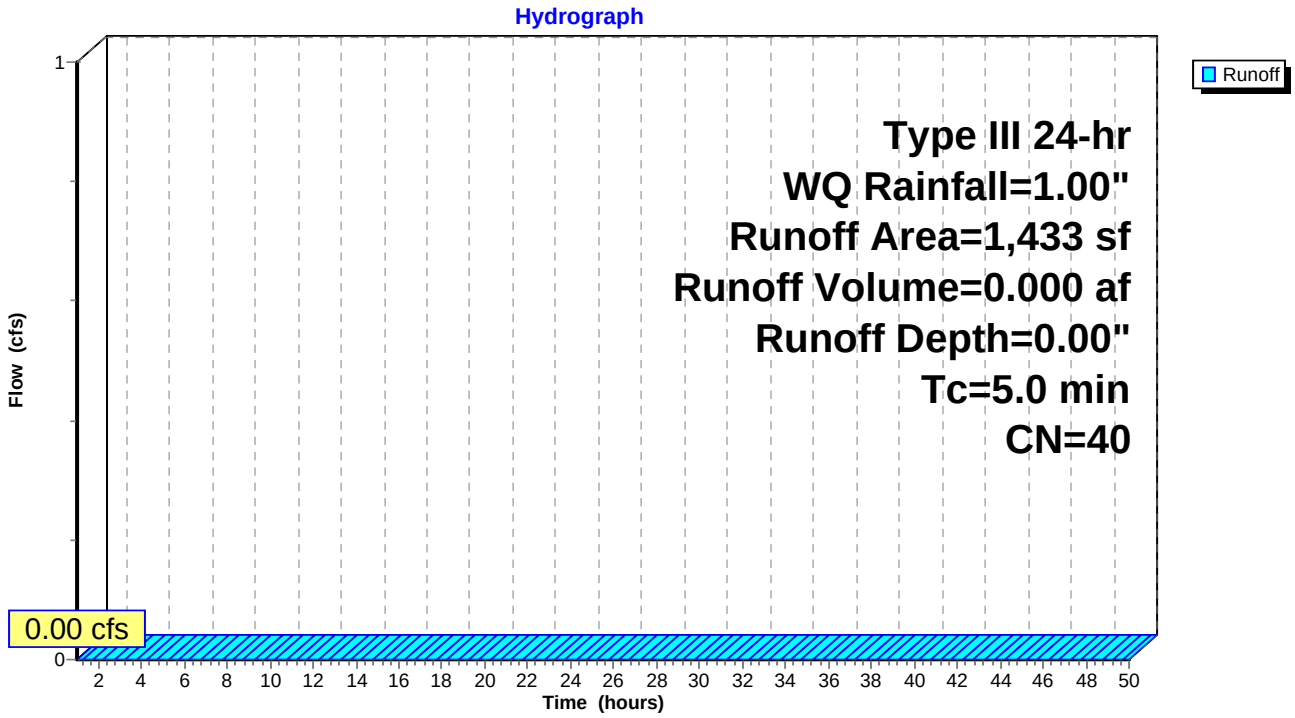
Runoff = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-50.00 hrs, dt= 0.01 hrs
Type III 24-hr WQ Rainfall=1.00"

	Area (sf)	CN	Description
	1,400	39	>75% Grass cover, Good, HSG A
*	33	98	Misc impervious
	1,433	40	Weighted Average
	1,400		97.70% Pervious Area
	33		2.30% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 2S: SC 2

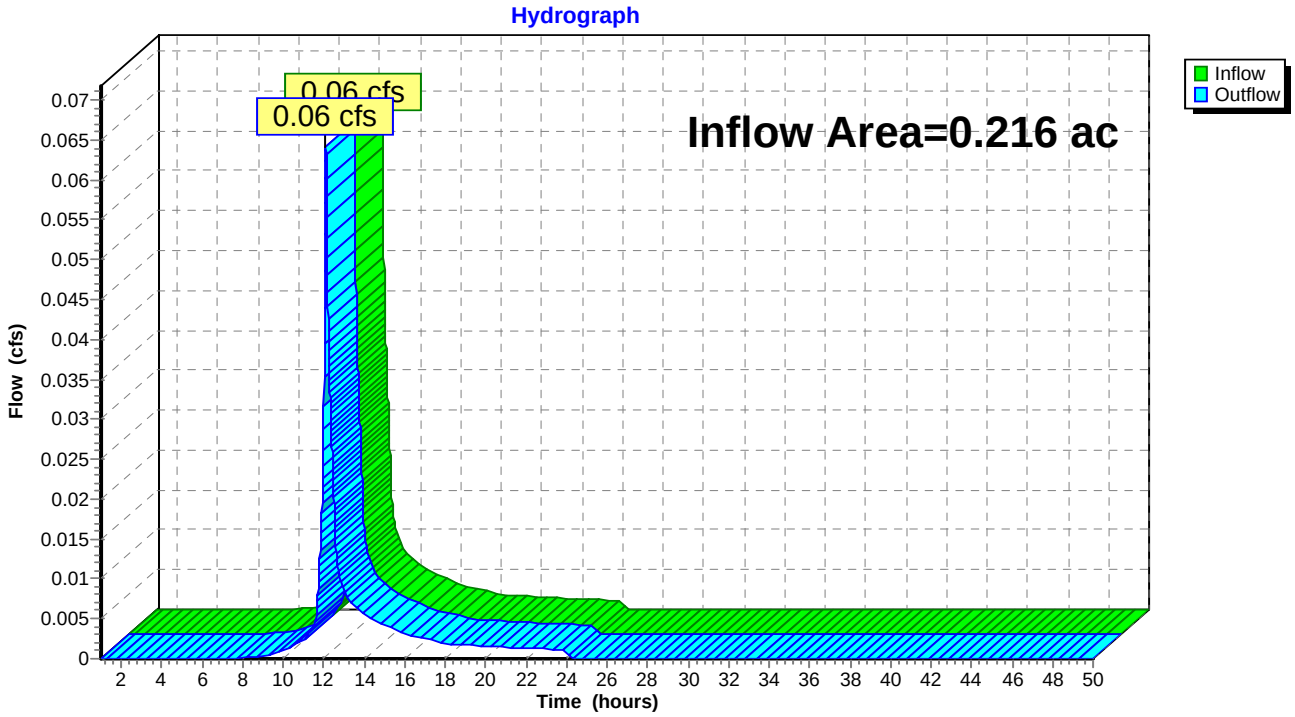


Summary for Reach 1R: North St. (POI #1)

Inflow Area = 0.216 ac, 81.45% Impervious, Inflow Depth = 0.29" for WQ event
Inflow = 0.06 cfs @ 12.11 hrs, Volume= 0.005 af
Outflow = 0.06 cfs @ 12.11 hrs, Volume= 0.005 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-50.00 hrs, dt= 0.01 hrs

Reach 1R: North St. (POI #1)

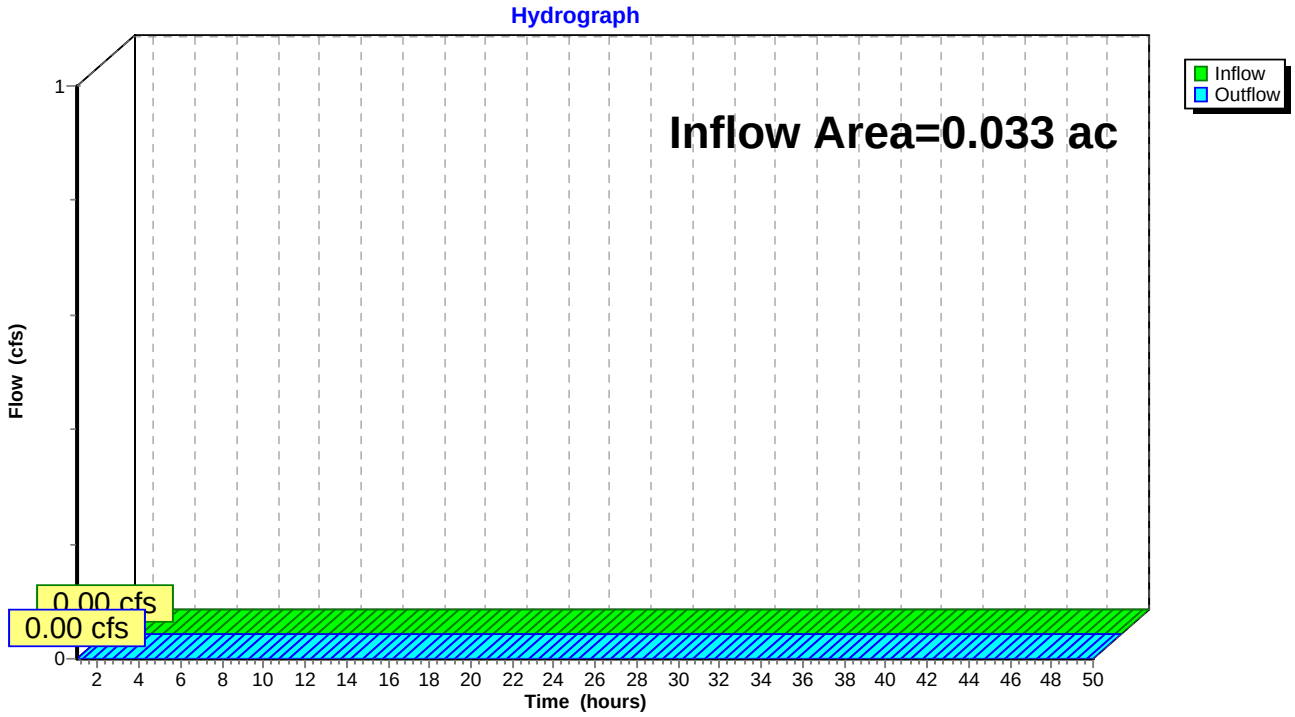


Summary for Reach 2R: Downgradient Abutter (POI#2)

Inflow Area = 0.033 ac, 2.30% Impervious, Inflow Depth = 0.00" for WQ event
Inflow = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-50.00 hrs, dt= 0.01 hrs

Reach 2R: Downgradient Abutter (POI#2)

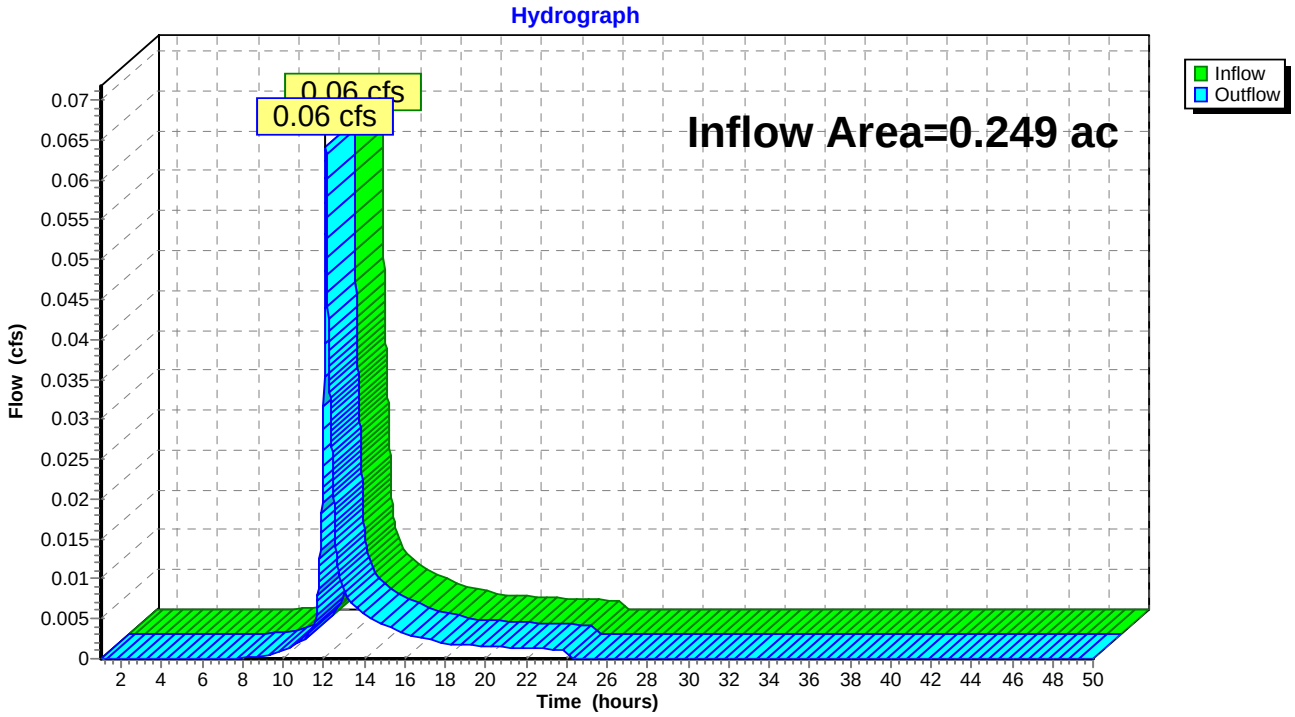


Summary for Reach 3R: Total Runoff

Inflow Area = 0.249 ac, 71.01% Impervious, Inflow Depth = 0.26" for WQ event
Inflow = 0.06 cfs @ 12.11 hrs, Volume= 0.005 af
Outflow = 0.06 cfs @ 12.11 hrs, Volume= 0.005 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-50.00 hrs, dt= 0.01 hrs

Reach 3R: Total Runoff



Summary for Pond FP1: FocalPoint

Inflow Area = 0.087 ac, 94.10% Impervious, Inflow Depth = 0.56" for WQ event
Inflow = 0.06 cfs @ 12.07 hrs, Volume= 0.004 af
Outflow = 0.06 cfs @ 12.11 hrs, Volume= 0.004 af, Atten= 7%, Lag= 1.9 min
Primary = 0.06 cfs @ 12.11 hrs, Volume= 0.004 af

Routing by Dyn-Stor-Ind method, Time Span= 1.00-50.00 hrs, dt= 0.01 hrs
Peak Elev= 133.93' @ 12.11 hrs Surf.Area= 116 sf Storage= 8 cf

Plug-Flow detention time= 1.8 min calculated for 0.004 af (100% of inflow)
Center-of-Mass det. time= 1.8 min (824.8 - 823.1)

Volume	Invert	Avail.Storage	Storage Description
#1	133.75'	89 cf	**3/4 Stone (Prismatic)** Listed below (Recalc) 435 cf Overall - 213 cf Embedded = 222 cf x 40.0% Voids
#2	134.12'	202 cf	**1.31'W x 2.35'L x 2.88'H Tanks** x 24 Inside #1 213 cf Overall x 95.0% Voids
#3	137.00'	9 cf	**3.00'W x 7.00'L x 2.25'H FocalPoint** 47 cf Overall x 20.0% Voids
#4	139.25'	61 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) -Impervious
		362 cf	Total Available Storage

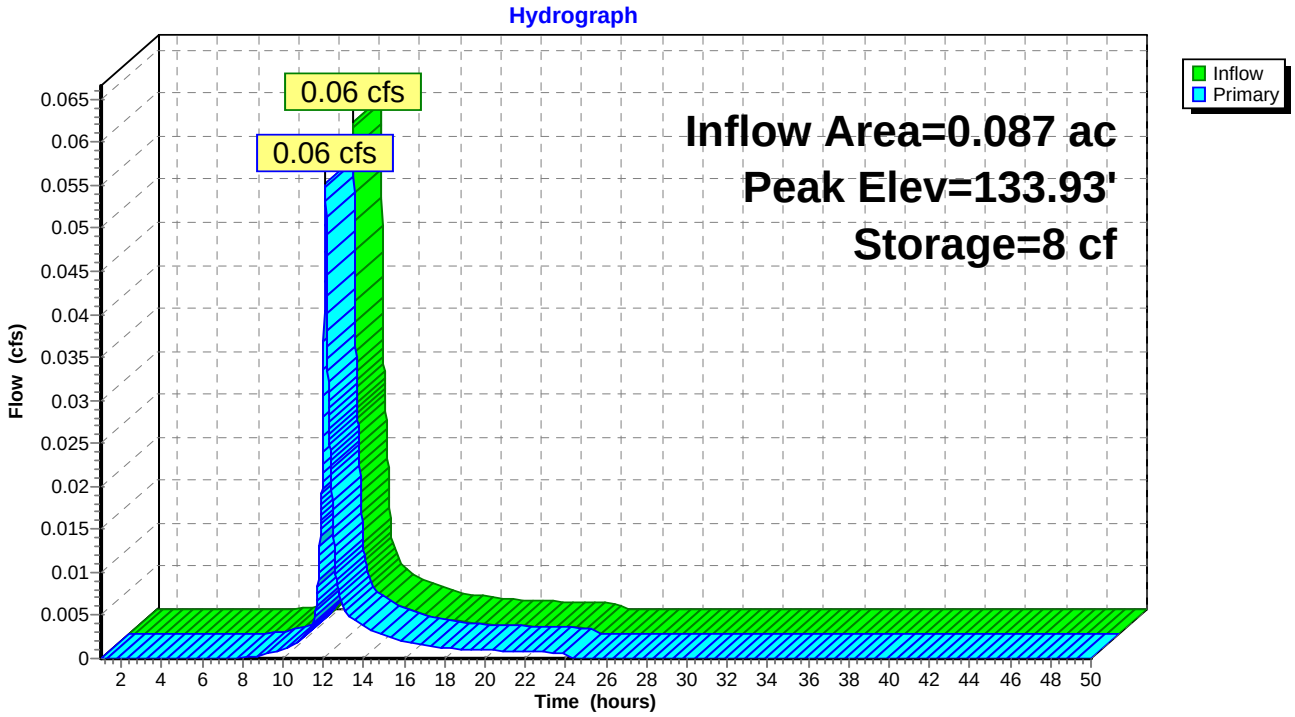
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
133.75	116	0	0
137.50	116	435	435

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
139.25	21	0	0
139.50	37	7	7
139.75	55	12	19
140.00	85	18	36
140.25	115	25	61

Device	Routing	Invert	Outlet Devices
#1	Primary	133.70'	**4.0" Round Culvert** L= 150.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 133.70' / 132.70' S= 0.0067 '/' Cc= 0.600 n= 0.010 PVC, smooth interior, Flow Area= 0.09 sf
#2	Device 1	133.75'	**100.000 in/hr Exfiltration over Surface area** Phase-In= 0.10'
#3	Device 1	139.75'	**8.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.06 cfs @ 12.11 hrs HW=133.93' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert** (Inlet Controls 0.06 cfs @ 0.86 fps)
└─**2=Exfiltration** (Passes 0.06 cfs of 0.27 cfs potential flow)
└─**3=Orifice/Grate** (Controls 0.00 cfs)

Pond FP1: FocalPoint



ACORN ENGINEERING, INC.

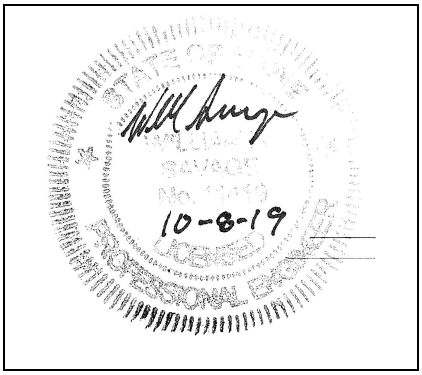
K. EROSION & SEDIMENTATION CONTROL REPORT

Prepared For:

Upright Properties, LLC
Portland, ME 04101
PO Box 833 Wilton, ME 04294

Prepared By:

Acorn Engineering, Inc.
65 Hanover Street
Portland, Maine 04101



March 2019
Rev. October 2019

INTRODUCTION

Acorn Engineering, Inc. has been retained by Upright Properties, LLC to provide civil engineering services for the proposed redevelopment of 126 & 128R North Street. The proposed project includes a two-phase approach where Phase 1 would include the redevelopment of 128R into a four-story building with six condominiums and covered parking on the ground level. Phase 2 would include the redevelopment of 126 into a three-story building with five rental units.

The following Erosion and Sedimentation Control Report was developed in accordance with the City of Portland Technical Manual – Section 5 – Portland Stormwater Management Standards and the Maine DEP Chapter 500 Stormwater Management Appendix A and B (1), Amended August 12, 2015. This narrative also meets the standards required in the Maine DEP's Erosion & Sediment Control BMP's Manual, revised in 2016.

1.0 EXISTING CONDITIONS

The proposed project site is located on North Street. A boundary plan has been prepared by Nadeau Land Surveys; Maine dated August 22, 2018.

Abutting Uses:

- North R-6 Zone — Two-Unit Residential
- East R-6 Zone — Multi Family Residential
- South R-6 Zone — Multi Family Residential
- West R-6 Zone — Multi Family Residential

The site is currently occupied by a two-story single-family house. The South side of the lot has slopes that range from 15 to 25 percent toward the abutting condominium associations of Munjoy Heights.

1.1 Existing Soils

Onsite soil information includes the following:

- Soil Conservation Service Medium Intensity Soil Survey for Cumberland County
- United States Department of Agriculture Web Soil Survey

Given the soils information, listed above, no onsite wastewater is proposed; the applicant does not intend to perform a more intense hydric soil boundary delineation because the waiver requirements set forth in the City of Portland Technical Manual – Section 7 – Soil Survey, Rev. 6/17/11 are met.

The area within and surrounding the project includes soil types listed in the table below. The susceptibility of soils to erosion is indicated on a relative "K" scale of values over a range of 0.02 to 0.69. Higher "K" values indicate more erodible soils.

Table 1 - "K" Value		
Soils Type	**Subsurface**	**Substratum**
Hinckley Loamy Sand	0.17	0.17

The soil "K" values for the soils, listed above, show a low susceptibility to erosion. The site's susceptibility to erosion is from the Soil Conservation Service Medium Intensity Soil Survey for Cumberland County. Although soil "K" values for the soils show a low susceptibility to erosion, implementation of the proposed Erosion & Sedimentation Measures by the contractor will be of the utmost importance given the sustained slope throughout the site.

1.2 Existing Erosion Problems

There are no signs of erosion.

1.3 Critical Areas

The south side of the 128R lot has slopes that can range from 15 to 25 percent.

1.4 Protected Natural Resource

The client is not aware of the presence of any existing significant natural features located on the site as listed in Section 14-526 (b) 1. of the Land Use Code. The project is not located within a watershed classified as an Urban Impaired Stream by the Maine DEP.

1.5 Previous Construction Activity (5 years)

Acorn Engineering, Inc. is not aware of any construction related activities within the project limits within the past 5 years.

1.6 Timber Harvesting

Acorn Engineering, Inc. is not aware of any timber harvesting within the past five years.

2.0 EROSION CONTROL MEASURES AND SITE STABILIZATION

As part of the site development, the following temporary and permanent erosion and sedimentation control devices shall be implemented. Devices shall be installed as described in this report or within the plan set. See the Maine Erosion and Sediment Control Handbook for Construction: Best Management Practices for further reference.

2.1 Temporary Erosion Control Measures

The following temporary erosion and sedimentation control measures are planned for the project's construction period:

2.1.1 Crushed stone stabilized construction entrances shall be placed at all access points to the project site where there are disturbed areas. The following specifications shall be followed at a minimum:

- Stone size shall be 2-3 inches, or reclaimed or recycled concrete equivalent.
- The thickness of the entrance stone layer shall be no less than 6 inches.
- The entrance shall not be less than 20 feet wide unless not feasibile, however not less than the full width of points where ingress or egress occurs. The length shall not be less than 50 feet in length.
- Geotextile fabric (woven or non-woven) shall be placed over the entire entrance area.
- The entrance/exit shall be maintained to the extent that it will prevent the tracking of sediment onto public roadways.

2.1.2 Siltation fence or erosion control berm shall be installed down gradient of any disturbed areas to trap runoff borne sediments until permanent stabilization is achieved. The silt fence or erosion control berm shall be installed per the details provided in the plan set and inspected before and immediately after each rainfall and at least daily during prolonged rainfall. Repairs shall be made if there are any signs of erosion or sedimentation below the fence line or berm. If there are signs of undercutting at the center or the edges, or impounding of large volumes of water behind the fence or berm, the barrier shall be replaced with a stone check dam.

2.1.3 Hay mulch including hydro seeding is intended to provide cover for denuded or seeded areas until revegetation is established. Mulch placed between April 15th and November 1st on slopes of less than 15 percent shall be covered by fabric netting and anchored with staples in accordance with the manufacturer's recommendation. Mulch placed between November 1st and April 15th on slopes equal to or steeper than 8 percent and equal to or flatter than 2:1 shall use mats or fabric netting and anchored with staples in accordance with the manufacturer's recommendation.

2.1.4 At any time of the year, all slopes greater than 3:1 shall be stabilized with Double Net Erosion Control Blanket Bionet SC150BN by North American Green or Approved Equal, or Erosion Control Mix Slope Protection as detailed within the plans.

2.1.5 North Street shall be swept to control mud and dust from the construction site as necessary. Add additional stone to the stabilized construction entrance to minimize the tracking of material off the site and onto the surrounding roadways.

2.1.6 During demolition, clearing and grubbing operations, stone check dams shall be installed at any areas of concentrated flow. The maximum height of the check dam shall not exceed 2 feet. The center of the check dam shall be 6 inches below the outer edges of the dam. The contractor shall mulch the side slopes and install stone check dams for all newly excavated ditch lines within 24 hours of their creation.

2.1.7 Silt fence stake spacing shall not exceed 6 feet unless the fence is supported with 14-gauge wire in which case the maximum spacing shall not exceed 10 feet. The silt fence shall be "toed" into the ground.

2.1.8 Storm drain inlet protection shall be provided to storm drains using any of the following: hay bale drop inlet structures, silt fence drop inlet sediment filter, gravel and wire mesh drop inlet sediment filter, or curb inlet sediment filter. Barriers shall be inspected after every rainfall event and repaired as necessary. Sediments shall be removed when accumulation has reached ½ the design height.

2.1.9 Dust control shall be accomplished using any of the following: water, calcium chloride, stone, or an approved MDEP product. Dust control shall be applied as needed to accomplish dust control.

2.1.10 Temporary loam, seed, and mulching shall be used in areas where no other erosion control measure is used. Application rates for seeding are provided at the end of this report.

2.1.11 Stockpiles shall be stabilized within 7 days of formation unless a scheduled rain event occurs prior to the 7-day window, in which case the stockpile shall be stabilized prior to the rain event. Methods of stabilization shall be mulch, erosion control mix, or erosion control blankets/mats. Silt fence or a wood waste compost filter berm shall be placed downhill of any soil stockpile location.

2.1.12 For disturbance between November 1 and April 15, please refer to winter stabilization plan in this report and the Maine Erosion and Sediment Control BMP manual for further information.

2.1.13 It is of the utmost importance that stormwater runoff and potential sediment from the construction site be diverted around the proposed underdrains until the trench is backfilled.

2.2 Permanent Erosion Control Measures

The following permanent erosion control measures are intended for post disturbance areas of the project.

2.2.1 All disturbed areas during construction, not subject to other proposed conditions, shall receive a minimum 4" of loam, limed, and mulched. Erosion

control blankets or mats shall be placed over the mulch in areas noted in paragraph 4.1 of this report.

2.2.2 All stormwater devices shall be installed and tributary areas stabilized prior receiving stormwater.

2.2.3 Refer to the Maine Erosion and Sediment Control BMP manual for additional information.

3.0 EROSION AND SEDIMENTATION CONTROL PLAN

3.1 The Erosion and Sedimentation Control Plan is included within the plan set.

4.0 DETAILS AND SPECIFICATIONS

4.1 Erosion Control Details and Specifications are included in the plan set.

5.0 STABILIZATION PLAN FOR WINTER CONSTRUCTION

Winter Construction consists of earthwork disturbance between the dates of November 1 and April 15. If a construction site is not stabilized with pavement, a road gravel base, 75% mature vegetation cover or riprap by November 15, then the site shall be protected with over-winter stabilization. Any area not stabilized with pavement, vegetation, mulching, erosion control mix, erosion control mats, riprap, or gravel base on a road shall be considered open.

The contractor shall limit the work area to areas that work will occur in during the subsequent 15 days and so that it can be mulched one day prior to a snow event. The contractor shall stabilize work areas prior to opening additional work areas to minimize areas without erosion control measures.

The following measures shall be implemented during winter construction periods:

5.1 Sediment Barriers

During frozen conditions, sediment barriers may consist of erosion control mix berms or any other recognized sediment barriers as frozen soil prevents the proper installation of hay bales or silt fences.

5.2 Mulching

All areas shall be considered to be denuded until seeded and mulched. Hay and straw mulch shall be applied at a rate of 150 lb. per 1,000 square feet or 3 tons/acre (twice the normal accepted rate of 75-lbs./1,000 s.f. or 1.5 tons/acre) and shall be properly anchored. Erosion control mix must be applied with a minimum 4-inch thickness. Mulch shall not be spread on top of snow. The snow shall be removed down to a one-inch depth or less prior to application. After each day of final grading, the area shall be properly stabilized with anchored hay or straw or erosion control

matting. An area shall be considered to have been stabilized when exposed surfaces have been either mulched or adequately anchored so that ground surface is not visible through the mulch. Between the dates of November 1 and April 15, all mulch shall be anchored by either mulch netting, tracking or wood cellulose fiber. The cover will be considered sufficient when the ground surface is not visible through the mulch. After November 1st, mulch and anchoring of all exposed soil shall occur at the end of each final grading workday.

5.3 Soil Stockpiling

Stockpiles of soil or subsoil shall be mulched for over winter protection with hay or straw at twice the normal rate or with a four-inch layer of erosion control mix. This shall be done within 24 hours of stocking and re-established prior to any rainfall or snowfall.

5.4 Seeding

Between the dates of October 15th and April 1st, loam or seed shall not be required. During periods of above freezing temperatures finished areas shall be fine graded and either protected with mulch or temporarily seeded and mulched until the final treatment can be applied. If the date is after November 1st and if the exposed area has not been loamed, final grading with a uniform surface, then the area may be dormant seeded at a rate of 3 times higher than specified for permanent seed and then mulched.

Dormant seeding may be placed prior to the placement of mulch or erosion control blankets. If dormant seeding is used for the site, all disturbed areas shall receive 4" of loam and seed at an application rate of 5 lbs./1,000 s.f. All areas seeded during the winter shall be inspected in the spring for adequate catch. All areas insufficiently vegetated (less than 75% catch) shall be revegetated by replacing loam, seed and mulch. If dormant seeding is not used for the site, all disturbed areas shall be revegetated in the spring.

5.5 Over winter stabilization of disturbed soils

By September 15th, all disturbed soils on areas having a slope less than 15% shall be seeded and mulched. If the disturbed areas are not stabilized by this date, then one of the following actions shall be taken to stabilize the soil for late fall and winter:

- Stabilize the soil with temporary vegetation – By October 1st, seed the disturbed soil with winter rye at a seeding rate of 3lbs per 1,000 s.f., lightly mulch the seeded soil with hay or straw at 75 lbs per 1,000 s.f., and anchor the mulch with plastic netting. Monitor growth of the rye over the next 30 days. If the rye fails to grow at least three inches or fails to cover at least 75% of the disturbed soil before November 1st, then mulch the area for over-winter protection.

- Stabilize the soil with sod – Stabilize the disturbed soil with properly installed sod by October 1st. Proper installation includes pinning the sod onto the soil with

wire pins, rolling the sod to guarantee contact between the sod and underlying soil, and watering the sod to promote root growth into the disturbed soil.

- Stabilize the soil with mulch – By November 15th, mulch the disturbed soil by spreading hay or straw at a rate of at least 150 lbs per 1,000 s.f. on the area so that no soil is visible through the mulch. Immediately after applying the mulch, anchor the mulch with plastic netting to prevent wind from moving the mulch off the disturbed soil.

5.6 Over winter stabilization of disturbed slopes

All stone-covered slopes shall be constructed and stabilized by November 15th. All slopes to be vegetated shall be seeded and mulched by September 1st. A slope is considered a grade greater than 15%. If a slope to be vegetated is not stabilized by September 1st, then one of the following action shall be taken to stabilize the slope for late fall and winter:

- Stabilize the soil with temporary vegetation and erosion control mats – By October 1st the disturbed slope shall be seeded with winter rye at a seeding rate of 3 lbs per 1,000 s.f. and then install erosion control mats or anchored mulch over the seeding. If the rye fails to grow at least three inches or fails to cover at least 75% of the slope by November 1st, then the contractor shall cover the slope with a layer of erosion control mix or with stone riprap.

- Stabilize the soil with sod – The disturbed slope shall be stabilized with properly installed sod by October 1st. Proper installation includes the contractor pinning the sod onto the slope with wire pins, rolling the sod to guarantee contact between the sod and underlying soil, and watering the sod to promote root growth into the disturbed soil. The contractor shall not use late-season sod installation to stabilize slopes having a grade greater than 3H:1V or having groundwater seeps on the slope face.

- Stabilize the soil with erosion control mix – Erosion control mix shall be properly installed by November 15th. The contractor shall not use erosion control mix to stabilize slopes having grades greater than 2H:1V or having groundwater seeps on the slope face.

- Stabilize the soil with stone riprap – Place a layer of stone riprap on the slope by November 15th. A registered professional engineer shall be hired to determine the stone size needed for stability on the slope and to design a filter layer for underneath the riprap.

6.0 INSPECTION AND MAINTENANCE

A person with knowledge of erosion and stormwater control, including the standards and conditions in the permit, shall conduct periodic visual inspections of installed erosion control measures. The frequency of inspection shall occur at least once every two weeks, as well as after a "storm event". A "storm event" shall consist 0.5 inches of rain within a 24-

hour period. The following Erosion and Sediment Control - Best Management Practices (BMP's) shall inspected in the manner as described.

6.1 Sediment Barriers

Hay bale barriers, silt fences and filter berms shall be inspected and repaired for the following if there are any signs of erosion or sedimentation below them. If there are signs of undercutting at the center or the edges of the barrier, or impounding of large volumes of water behind them, sediment barriers shall be replaced with a temporary check dam. Should the fabric on a silt fence or filter barrier decompose or become ineffective prior to the end of the expected usable life and the barrier is still necessary, the fabric shall be replaced promptly. Sediment deposits should be removed when deposits reach approximately one-half the height of the barrier. Filter berms should be reshaped as needed. Any sediment deposits remaining in place after the silt fence or filter barrier is no longer required should be dressed to conform to the existing grade, prepared and seeded.

6.2 Stabilized Stone Construction Entrances

The exit shall be maintained in a condition that will prevent tracking of sediment onto public rights-of-way. When the control pad becomes ineffective, the stone shall be removed along with the collected soil material and redistributed on site in a stable manner. The entrance should then be reconstructed. The contractor shall sweep or wash pavement at exits, which have experienced mud-tracking on to the pavement or traveled way. When washing is required, it shall be done on an area stabilized with aggregate, which drains into an approved sediment trapping device. All sediment shall be prevented from entering storm drains, ditches, or waterways.

6.3 Mulched Areas

All mulches must be inspected periodically, in particular after rainstorms, to check for rill erosion. If less than 90% of the soil surface is covered by mulch, additional mulch shall be immediately applied. Nets must be inspected after rain events for dislocation or failure. If washouts or breakage occur, re-install the nets as necessary after repairing damage to the slope. Where mulch is used in conjunction with ornamental plantings, inspect periodically throughout the year to determine if mulch is maintaining coverage of the soil surface. Repair as needed.

6.4 Dust Control

When temporary dust control measures are used, repetitive treatment shall be applied as needed to accomplish control.

6.5 Stormwater Appurtenances

All underdrains, storm drains, and catch basins need to be operating effectively and free of debris.

6.6 Erosion and Sedimentation Control Inspections:

Acorn Engineering has personnel qualified to conduct Erosion and Sedimentation Control Inspections. For further information, contact:

Contact: Will Savage, PE
Telephone: (207) 775-2655

Qualifications:

- Maine Professional Engineering License #11419
- Maine DEP - Certified in Maintenance & Inspection of Stormwater BMP's Cert #14
- Certified Erosion, Sediment and Storm Water Inspector (CESSWI) Cert #0293
- Certified Professional in Erosion and Sediment Control (CPESC) Cert. #4620

The Contractor has sole responsibility for complying with the Erosion and Sedimentation Report/Plan, including control of fugitive dust. The Contractor shall be responsible for any monetary penalties resulting from failure to comply with these standards.

7.0 IMPLEMENTATION SCHEDULE

The following implementation sequence is intended to maximize the effectiveness of the above described erosion control measures. Contractors should avoid overexposing disturbed areas and limit the amount of stabilization area.

1. Install a stabilized construction entrance in all locations where construction traffic will enter and exit the site.
2. Install perimeter erosion control berm.
3. Commence installation of drainage infrastructure.
4. Install all other erosion control devices as necessary throughout the remainder of this schedule.
5. Commence earthwork operations, associated with the roadway construction.
6. Commence installation of utilities.
7. Continue earthwork and grading to subgrade as necessary for construction.
8. Complete installation of drainage infrastructure, as well as other utility work.
9. Complete remaining earthwork operations.
10. Install sub-base and base gravels in paved areas.
11. Install paving, curbing and brickwork.
12. Loam, lime, fertilize, seed and mulch disturbed areas and complete all landscaping.
13. Once the site is stabilized, 90% catch of grass has been obtained, or mulching of landscape areas is complete, remove all temporary erosion control measures.
14. Touch up areas without a vigorous catch of grass with loam and seed.
15. Complete site signage and striping.
16. Execute proper maintenance of all temporary and permanent erosion control measures throughout the project.

The above implementation sequence should be generally followed by the site contractor. However, the contractor may construct several items simultaneously. The contractor shall submit to the owner a schedule of the completion of the work. If the contractor is to commence the construction of more than one item above, they shall limit the amount of exposed areas to those areas in which work is expected to be undertaken during the following 30 days.

The contractor shall re-vegetate disturbed areas as rapidly as possible. All areas shall be permanently stabilized within 7 days of final grading or before a storm event. The contractor shall incorporate planned inlets and drainage systems as early as possible into the construction phase.

8.0 CONCLUSION

The above erosion control narrative is intended to minimize the development impact by implementing temporary and permanent erosion control measures. The contractor shall also refer to the Maine Erosion and Sediment Control BMP manual for additional information.

9.0 ATTACHMENTS

- Temporary Seeding Plan
- Permanent Seeding Plan

TEMPORARY SEEDING PLAN

Site Preparation

The seeded areas shall be feasibly graded out to provide the use of equipment for seedbed preparation, seeding, mulch application, and mulch anchoring. If necessary, the site may require additional temporary erosion control measures outlined in the Erosion Control report.

Seedbed Preparation

Fertilizer shall be applied to the site at a rate of 13.8 pounds per 1,000 square feet. The composition of the fertilizer shall be 10-10-10 (N-P2O5-K2O) or equivalent.

Limestone shall be applied to the site at a rate of 138 pounds per 1,000 square feet.

Seeding

The composition and amount of temporary seed applied to a site shall be determined by the following table:

Seed	Pounds / 1,000 S.F.	Recommended Seeding Dates
Winter Rye	2.57	Aug-15 to Oct-1
Oats	1.84	Apr-1 to Jul-1 Aug-15 to Sep-15
Annual Ryegrass	0.92	Apr-1 to Jul-1
Sudangrass	0.92	May-15 to Aug-15
Perennial	0.92	Aug-15 to Sep-15

Mulching

Mulch shall be applied at a rate of 70 lbs – 90 lbs per 1,000 square feet. The mulch shall be installed at a minimum depth of 4 inches. The seeded area shall be mulched immediately after seed is applied. Mulching during the winter season shall be double the normal amount.

Conclusion

Please refer to the Maine Erosion and Sediment Control BMP manual for additional information pertaining to temporary seeding and mulching.

PERMANENT SEEDING PLAN

Site Preparation

The seeded areas shall be feasibly graded out to provide the use of equipment for seedbed preparation, seeding, mulch application, and mulch anchoring. If necessary, the site may require additional temporary erosion control measures outlined in the Erosion Control report.

Seedbed Preparation

Fertilizer shall be applied to the site at a rate of 13.8 pounds per 1,000 square feet. The composition of the fertilizer shall be 10-10-10 (N-P2O5-K2O) or equivalent.

Limestone shall be applied to the site at a rate of 138 pounds per 1,000 square feet.

Seeding

The composition and amount of permanent seed applied to a site shall be determined by the following table:

Seed	Pounds / 1,000 S.F.
Kentucky Bluegrass	0.46
Creeping Red Fescue	0.46
Perennial Ryegrass	0.11
Total	1.03

Mulching

Mulch shall be applied at a rate of 70 lbs – 90 lbs per 1,000 square feet. The mulch shall be installed at a minimum depth of 4 inches. The seeded area shall be mulched immediately after seed is applied. Mulching during the winter season shall be double the normal amount.

Recommendations

Permanent seeding is recommended to be completed in the spring. Later summer seeding is allowed if completed prior to September 1st. If seeding cannot be accomplished during the periods recommended for permanent seeding, then the contractor shall perform temporary seeding per the temporary seeding plan.

Conclusion

Please refer to the Maine Erosion and Sediment Control BMP manual for additional information pertaining to permanent seeding and mulching.

L.

ACORN ENGINEERING, INC.

Chief Mike Thompson
City of Portland Fire Department
380 Congress St.
Portland, ME 04101

August 7, 2019
Rev. October 29, 2019

Subject: 126 & 128R North Street – Fire Department Checklist
Section L of Application

On behalf of Upright Properties, LLC, the design team is pleased to respond to the Portland Fire Department Site Review Checklist.

1. Name, address, telephone number of applicant

   Upright Properties, LLC
   PO Box 833
   Wilton, ME 04294
   207-749-9656

2. Name address, telephone number of architect

   Tracie Reed, Dextrous Creative Architecture
   traciereed@dextrouscreative.com
   Portland, Maine 04101
   207-409-0459

3. Proposed uses of any structures [NFPA and IBC classification]

   NFPA: Apartments / IBC: R-6

4. Square footage of all structures, including decks [total and per story]

Existing Building – 128 R		
Total	1,448	**sf**

Proposed Building		
Basement	700	sf
1st Floor	1,003	sf
2nd Floor	2,370	sf
3rd Floor	2,370	sf
4th Floor	2,593	sf
Total	9,036	**sf**

Existing Building – 126		
Total	2,510	**sf**

Proposed Building		
1st Floor	680	sf
2nd Floor	1,403	sf
3rd Floor	1,403	sf
Total	3,486	**sf**

5. Elevation of all structures

   Based upon the average grade plane defined by the IBC, the proposed building height for 126 & 128R are 33.3' and 44.6' respectively. The height of each building is below the allowable limit in the R-6 zone. Please refer to the building elevations provided by the Architect for additional information.

6. Proposed fire protection of all structures

   The buildings will each have a sprinkler system with additional protection per code. Fire flows and requirements for system storage or booster pumping are subject to the fire designer which will be performed prior the request for a building permit.

7. Hydrant locations

   An existing hydrant is located approximately 175 ft southeast of the property at the corner of North Street and Walnut Street. Hydrant flow data from the Portland Water District once received may be made available to the Fire Department upon request.

8. Water main size and location

   The 128R redevelopment will be serviced by a new 6" sprinkler line and 1.5" domestic water line. The sprinkler line will be taped from an existing 12" ductile iron main within North Street. A 6" fire service line will extend from the water main to the building fire suppression system. The building is expected to have internal sprinkler risers and a Fire Department pump connection on the street side of the building.

   The 126 redevelopment will be serviced by a 4" sprinkler line off the 12" ductile iron main water main within North Street. A 1.5" domestic line is proposed to branch off the proposed sprinkler line.

9. Access to all structures [min. 2 sides]

   Access to the structure is provided directly on North Street. Additionally, Phase I of the project will implement a 16' drive aisle to 128R North Street which will provide access for fire/emergency vehicles.

10. The Architect has provided a code summary (attached).

NFPA 1 – Chapter 18 Fire Department Access and Water Supply

18.2 Fire Department Access:

The project site is located in a developed area and is fronted by a public street. The following pavement street width is currently available:

- North Street: 34 feet

Per NFPA 1 – Chapter 18.2.3.3.1, there will be public street access within 50 feet of at least one exterior door. Per NFPA 1 – Chapter 18.2.3.2.2.1, all first story floors shall be located not more than 450 feet from a Fire Department access road.

City of Portland Technical Manual – Section 3 Public Safety

3.4.1 Every dead-end roadway more than one hundred fifty (150') feet in length shall provide a turnaround at the closed end. Turnarounds shall be designed to facilitate future street connectivity and shall always be designed to the right (refer to Figure I-5).

Response: Not applicable

3.4.2 Where possible, developments shall provide access for Fire Department vehicles to at least two sides of all structures. Access may be from streets, access roads, emergency access lanes, or parking areas.

Response: As depicted on the site plan, the proposed building layout provides a minimum of two paved access points to the structure: from North Street directly and one from the driveway.

3.4.3 Building setbacks, where required by zoning, shall be adequate to allow for emergency vehicle access and related emergency response activities and shall be evaluated based on the following factors:

- *Building Height.*
- *Building Occupancy.*
- *Construction Type.*
- *Impediments to the Structures.*
- *Safety Features Provided.*

Response: The proposed development layout has contemplated and altered the plans for emergency access conditions and provides for safe and efficient access along the public street for emergency vehicles.

3.4.4. Fire Dept. access roads shall extend to within 50' of an exterior door providing access to the interior of the structure.

Response: The buildings will be provided with exterior doors that will be within 50' of a Fire Department access route, namely North Street.

3.4.5. Site access shall provide a minimum of nine (9) feet clearance height to accommodate ambulance access.

Response: Site access and driveway is clear of vertical obstructions.

3.4.6. Elevators shall be sized to accommodate an 80 x 24-inch stretcher.

Response: The elevators will be sized to accommodate an 80 x 24 stretcher, per the Architect's designs.

3.4.7. All structures are required to display the assigned street number. Numbers shall be clearly visible from the public right of way.

Response: The applicant will work with the City's Public Works Division to assign street addresses and numbering to meet City Standards.

Thank you for your review. Please let me know if you have any additional questions or comments.

Sincerely,

William H. Savage, P.E.
Principal
Acorn Engineering, Inc.

CODE REVIEW 128R NORTH STREET

DESCRIPTION: 8,700+ SF, FOUR-STORY MULTI-FAMILY BLDG
SPRINKLERED: NFPA 13R
CBL: 012 H009001
MIXED USE: R-2 APARTMENT (IBC 310.4) W/FIRST FLOOR S-2 COVERED PARKING (IBC 311.3)

CONSTRUCTION TYPE | VA
SPRINKLER | TYPE 13, W/CLASS 1 STANDPIPE (IBC 905.3.1)
KNOCK BOX: CONTRACTOR TO PROVIDE KNOCK BOX

APPLICABLE BUILDING CODES

IBC 2015
IEBC 2015
NFPA 101 2009
NFPA 1 2006

IECC

INSULATION VALUES REQ. PER ICC 2009 TABLE 402.1.1
CLIMATE ZONE | 6A
CEILINGS | R-49
WALLS | R-20
SKYLIGHTS | 0.6 U-FACTOR
FENESTRATIONS | .35 U-FACTOR
BASEMENT WALL 15/19
FLOOR | R-30

IBC

-CONSTRUCTION TYPE: 5A
-HEIGHT | 4 STORIES (504.4)
-AREA | 36,000 SF (506.2)
-FIRE-RESISTANCE REQ.: ROOF, FLOOR, STRUCTURE, INTERIOR/EXTERIOR BEARING WALLS 1-HOUR RATING (601)
-FIRE SEP. DISTANCE 5'-0"-10'-0" FROM LOT LINE: 1-HR EXT. WALL REQ. (602)
-OPENING FACTOR: FOR SPRINKLED BUILDING BTW 5'-0"-10'-0" SETBACK 25% OF FAÇADE, 10’-0” – 15’-0 “45% OF FAÇADE (705.8)
-STRUCT. BEAMS/ELEMENTS ARE PERMITTED TO ENTER SHAFT ENCLOSURES (713.8)
-PENETRATION FIRESTOPS TESTED IN ACCORDANCE W/ASTM E814 OR UL 1479 TO HAVE RATING EQUAL OR GREATER THAN ASSEMBLY BEING PENETRATED (714.3.1.2)
-PROVIDE FIRE STOPS TESTED IN ACCORDANCE W/ASTME814 OR UL 1479 TO HAVE RATING EQUAL OR GREATER HAN ASSEMBLY BEING PENETRATED AT ALL HORIZONTAL & VERT MEMBRANE PENETRATIONS PER (714.3.-714.4) INCLUDING RECESSED FIXTURES, PLUMBING, VENT, ELECT., ETC.

-PLUMBING TUB, FLOOR AND SHOWER DRAINS NOT REQ. TO HAVE THRU-STOP PENETRATION RATING (714.4.1.2.2)
-RATED DOORS TO HAVE CLOSERS & LATCHES (716.5.9)
-DRAFT-STOPPING NOT REQ. IN FLOOR/CEILING SPACES W/SPRINKLER SYSTEM (718.3.2)
-DRAFT-STOPPING NOT REQ. IN ATTICS/OVERHANGS OR CONCEALED ROOF SPACES W/SPRINKLER SYSTEM (718.4.2)
-PENETRATIONS INTO OR THROUGH INTERIOR EXIT STAIRWAYS PROHIBITED EXCEPT AS NECESSARY FOR INDEPENDENT VENT, PRESSURIZATION, SPRINKLER PIPING, STANDPIPE, ELECT. RACEWAY OR FIRE DEPT. COMMUNICATION (1023.5)
-OCCUPANT LOAD | 200 GROSS SF (1004.1.2)
-SINGLE MEANS OF EGRESS: 125'-0" W/RESCUE OPENING IN BEDROOMS (1006.3.2(1)
-SINGLE MEANS OF EGRESS PERMITTED FOR BASEMENT – 3 STORIES W/< 4 UNITS ON EACH FLOOR (1006.3.2(1))
-DOORS IN SERIES SHALL BE 48”MIN. APART + WIDTH OF DOOR SWINGING INTO SPACE, DOORS SHALL SWING IN THE SAME DIRECTION OR AWAY FROM EACH OTHER (1010.1.8)
-DOOR HARDWARE TO BE MOUNTED BTW 34”-48” AFF (1010.1.9.2)
-CORRIDOR WIDTH | 36" FOR OCCUPANT LOAD UNDER 50 PERSONS (1011.2)
-HANDRAILS: 34-38" AFF MEAURED FROM TREAD NOSING (1014.2)
-GUARDS: 42" AFF (1015.3)
-SHAFT ENCLOSURES | RATING OF NOT LESS THAN 2-HOURS WHEN CONNECTING FOUR STORIES OR MORE, NOT LESS THAN 1-HR WHEN CONNECTING UNDER 4-STORIES. (713.4)
-NO AREA OF REFUGE REQUIRED AT STAIRWAYS IN R-2 (1009.3.8)
-ELEVATORS SHALL NOT OPEN ONTO AN EXIT ACCESS PASSAGEWAY (1024.5)
-AT LEAST ONE ACCESSIBLE ENTRANCE SHALL BE PROVIDED TO ALL DWELLING UNITS REQ. TO BE TYPE A OR B (1105.1.7)
-ALL UNITS IN R-2 BUILDINGS W/4+ UNITS TO BE TYPE B (1107.6.2.2.2)
-R-2 BUILDING UNDER 20 UNITS NOT REQUIRED TO HAVE TYPE A UNITS (1107.6.2.2.1)
-PUBLIC SPACES SHALL BE ACCESSIBLE FOR BUIDINGS W/TYPE B UNITS (1107.3)
-WHERE PARKING IS PROVIDED 1 ACCESSIBLE SPACE IS REQUIRED FOR SITES W/1-25 SPOTS (1106.1)
-WHERE PARKING IS PROVIDED UNDER THE BUILDING THE ACCESSIBLE SPACE MUST BE UNDER THE BUILDING (1106.2)
-ACCESSIBLE PARKING SHALL BE PROVIDED W/SHORTEST DISTANCE TO ACCESSIBLE ENTRANCE (1106.6)
-AT LEAST ONE ACCESSIBLE ROUTE SHALL BE PROVIDED FOR ALL BUILDINGS & PRIMARY ENTRANCES OF ACCESSIBLE UNITS (1107.4)
-BUILDINGS W/OUT AN ELEVATOR SHALL PROVIDE AT LEAST ONE STORY W/TYPE B UNITS (1107.7.1)
-FOR BUILDINGS 4+ STORIES W/AN ELEVATOR THE ELEVATOR SHALL FIT A 24x84 AMBULENCE STRETCHER (3002.4)
-ELEVATOR CANNOT SHARE SHAFT W/STAIR (3002.7)
-WALLS AND CEILINGS DWELLING/SLEEPING UNITS FROM PUBLIC/SERVICE AREAS SHALL HAVE A STC RATING OF 50+ TESTED IN ACCORDANCE WITH ASTM E90 (1207.2 1207.3)
-RAINFALL RATE FOR PORTLAND 100 YEAR STORM: 2.4" PER HR (2018 IPC APPENDIX B)

-PROVIDE 2-WAY COMMUNICATION @ ELEVATOR LANDINGS ON FLOORS 2-4 PER (1009.8)
-DRAFT STOPPING NOT REQ. W/NFPA 13 SPRINKLER SYSTEM INSTALLED IN CONCEALED SPACES (FLOORS, ROOF), PER (718.3.2)
-SPRAYED FIRE RESISTANCE MATERIALS PERMITTED IN PROTECTION OF STEEL COLUMNS/BEAMS PER 722.5.2.2, INTUMESCENT COATINGS PER 703.2 TESTED IN ACCORDANCE WITH ASTM E119 OR UL 263.

NFPA
-1 EXIT WHEN | THE TRAVEL DISTANCE FROM THE ENTRANCE DOOR OF ANY DWELLING UNIT TO AN EXIT DOES NOT EXCEED 35'-0" (NFPA 101 - 31.2.4.3), 60 MIN. SELF-CLOSING DOORS, 60 MIN. WALL ENCLOSURE RATING. HORIZONTAL AND VERT. SEPERATION OF 30. MIN BTW UNITS. NO MORE THAN 3-STORIES (NFPA 31.2.4.4)
-TRAVEL DISTANCE W/IN UNIT: 200'-0" WITH SPRINKLERS (NFPA 31.2.6.2)
-EMERGENCY LIGHTING: ONLY NEEDED FOR BUILDINGS OVER 4 STORIES HIGH OR 12+ UNITS (NFPA 31.2.9)
-BOILER ROOM: 1-HOUR PROTECTION OR SPRINKLERS (NFPA 31.3.2.1.1)
-WALL/CEILING FINISH: EXIT ENCLOSURES CLASS A OR B (NFPA 31.3.3.2)
-FIRE ALARM SYSTEM: APARTMENT BLDG. 4+ STORIES IN HEIGHT OR MORE THAN 11-UNITS SHALL BE PROVIDED W/A FIRE ALARM SYSTEM PER SECTION 9.6, EXCEPT AS MODIFIED PER 30.3.4.2 - 30.3.4.6.
-MANUAL INITIATION OF ALARM NOT REQ. FOR BUILDING 4-OR LESS STORIES IN HEIGHT, UNDER 16 UNITS W/AN AUTOMATIC, SUPERVISED SPRINKLER SYSTEM (30.3.4.2.2).
-PROVIDE CARBON MONOXIDE DETECTORS PER NFPA 720 STANDARD FOR CO DETECTION & WARNING EQUIPMENT 2009
-NOTE THAT CONCEALED SPACES INCLUDING FLOOR CAVITIES TO BE SPRINKLERED

CODE REVIEW 126 NORTH STREET

DESCRIPTION: 4,318 SF, THREE-STORY MULTI-FAMILY BLDG + 700 SF OF COVERED PARKING (TWO SPACES, INCLUDING ONE ADA SPACE)
SPRINKLERED: NFPA 13
CBL: 012 H014001
MIXED USE: R-2 APARTMENT (IBC 310.4) W/FIRST FLOOR S-2 COVERED PARKING (IBC 311.3)
CONSTRUCTION TYPE | VB
SPRINKLER | TYPE 13, W/CLASS 1 STANDPIPE (IBC 905.3.1)
KNOCK BOX: CONTRACTOR TO PROVIDE KNOCK BOX

APPLICABLE BUILDING CODES

IBC 2015
IEBC 2015
NFPA 101 2009
NFPA 1 2006

IECC

INSULATION VALUES REQ. PER ICC 2009 TABLE 402.1.1
CLIMATE ZONE | 6A
CEILINGS | R-49
WALLS | R-20
SKYLIGHTS | 0.6 U-FACTOR
FENESTRATIONS | .35 U-FACTOR
BASEMENT WALL 15/19
FLOOR | R-30

IBC

-CONSTRUCTION TYPE: 5B
-HEIGHT | 3 STORIES (504.4)
-AREA | 7,000 SF (506.2)
-FIRE-RESISTANCE REQ.: ROOF, FLOOR, STRUCTURE, INTERIOR/EXTERIOR BEARING WALLS 0-HOUR RATING 10’-0” FROM LOT LINE (601)
-FIRE SEP. DISTANCE 5'-0"-10'-0" FROM LOT LINE: 1-HR EXT. WALL REQ. (602)
-OPENING FACTOR: FOR SPRINKLED BUILDING BTW 10'-0"-15'-0" SETBACK 45% OF FAÇADE, 5’-0” to 10’-0” 25% (705.8)
-STRUCT. BEAMS/ELEMENTS ARE PERMITTED TO ENTER SHAFT ENCLOSURES (713.8)
-PENETRATION FIRESTOPS TESTED IN ACCORDANCE W/ASTM E814 OR UL 1479 TO HAVE RATING EQUAL OR GREATER THAN ASSEMBLY BEING PENETRATED (714.3.1.2)
-PROVIDE FIRE STOPS TESTED IN ACCORDANCE W/ASTME814 OR UL 1479 TO HAVE RATING EQUAL OR GREATER HAN ASSEMBLY BEING PENETRATED AT ALL HORIZONTAL & VERT MEMBRANE PENETRATIONS PER (714.3.-714.4) INCLUDING RECESSED FIXTURES, PLUMBING, VENT, ELECT., ETC.

-PLUMBING TUB, FLOOR AND SHOWER DRAINS NOT REQ. TO HAVE THRU-STOP PENETRATION RATING (714.4.1.2.2)
-RATED DOORS TO HAVE CLOSERS & LATCHES (716.5.9)
-DRAFT-STOPPING NOT REQ. IN FLOOR/CEILING SPACES W/SPRINKLER SYSTEM (718.3.2)
-DRAFT-STOPPING NOT REQ. IN ATTICS/OVERHANGS OR CONCEALED ROOF SPACES W/SPRINKLER SYSTEM (718.4.2)
-PENETRATIONS INTO OR THROUGH INTERIOR EXIT STAIRWAYS PROHIBITED EXCEPT AS NECESSARY FOR INDEPENDENT VENT, PRESSURIZATION, SPRINKLER PIPING, STANDPIPE, ELECT. RACEWAY OR FIRE DEPT. COMMUNICATION (1023.5)
-OCCUPANT LOAD | 200 GROSS SF (1004.1.2)
-SINGLE MEANS OF EGRESS: 125'-0" W/RESCUE OPENING IN BEDROOMS (1006.3.2(1)
-SINGLE MEANS OF EGRESS PERMITTED FOR BASEMENT – 3 STORIES W/< 4 UNITS ON EACH FLOOR (1006.3.2(1))
-DOORS IN SERIES SHALL BE 48”MIN. APART + WIDTH OF DOOR SWINGING INTO SPACE, DOORS SHALL SWING IN THE SAME DIRECTION OR AWAY FROM EACH OTHER (1010.1.8)
-DOOR HARDWARE TO BE MOUNTED BTW 34”-48” AFF (1010.1.9.2)
-CORRIDOR WIDTH | 36" FOR OCCUPANT LOAD UNDER 50 PERSONS (1011.2)
-HANDRAILS: 34-38" AFF MEAURED FROM TREAD NOSING (1014.2)
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-ALL UNITS IN R-2 BUILDINGS W/4+ UNITS TO BE TYPE B (1107.6.2.2.2)
-R-2 BUILDING UNDER 20 UNITS NOT REQUIRED TO HAVE TYPE A UNITS (1107.6.2.2.1)
-PUBLIC SPACES SHALL BE ACCESSIBLE FOR BUIDINGS W/TYPE B UNITS (1107.3)
-WHERE PARKING IS PROVIDED 1 ACCESSIBLE SPACE IS REQUIRED FOR SITES W/1-25 SPOTS (1106.1)
-WHERE PARKING IS PROVIDED UNDER THE BUILDING THE ACCESSIBLE SPACE MUST BE UNDER THE BUILDING (1106.2)
-ACCESSIBLE PARKING SHALL BE PROVIDED W/SHORTEST DISTANCE TO ACCESSIBLE ENTRANCE (1106.6)
-AT LEAST ONE ACCESSIBLE ROUTE SHALL BE PROVIDED FOR ALL BUILDINGS & PRIMARY ENTRANCES OF ACCESSIBLE UNITS (1107.4)
-BUILDINGS W/OUT AN ELEVATOR SHALL PROVIDE AT LEAST ONE STORY W/TYPE B UNITS (1107.7.1)
-WALLS AND CEILINGS DWELLING/SLEEPING UNITS FROM PUBLIC/SERVICE AREAS SHALL HAVE A STC RATING OF 50+ TESTED IN ACCORDANCE WITH ASTM E90 (1207.2 1207.3)
-RAINFALL RATE FOR PORTLAND 100 YEAR STORM: 2.4" PER HR (2018 IPC APPENDIX B)
-DRAFT STOPPING NOT REQ. W/NFPA 13 SPRINKLER SYSTEM INSTALLED IN CONCEALED SPACES (FLOORS, ROOF), PER (718.3.2)

-SPRAYED FIRE RESISTANCE MATERIALS PERMITTED IN PROTECTION OF STEEL COLUMNS/BEAMS PER 722.5.2.2, INTUMESCENT COATINGS PER 703.2 TESTED IN ACCORDANCE WITH ASTM E119 OR UL 263.

NFPA

-1 EXIT WHEN | THE TRAVEL DISTANCE FROM THE ENTRANCE DOOR OF ANY DWELLING UNIT TO AN EXIT DOES NOT EXCEED 35'-0" (NFPA 101 - 31.2.4.3), 60 MIN. SELF-CLOSING DOORS, 60 MIN. WALL ENCLOSURE RATING. HORIZONTAL AND VERT. SEPERATION OF 30. MIN BTW UNITS. NO MORE THAN 3-STORIES (NFPA 31.2.4.4)
-TRAVEL DISTANCE W/IN UNIT: 200'-0" WITH SPRINKLERS (NFPA 31.2.6.2)
-EMERGENCY LIGHTING: ONLY NEEDED FOR BUILDINGS OVER 4 STORIES HIGH OR 12+ UNITS (NFPA 31.2.9)
-BOILER ROOM: 1-HOUR PROTECTION OR SPRINKLERS (NFPA 31.3.2.1.1)
-WALL/CEILING FINISH: EXIT ENCLOSURES CLASS A OR B (NFPA 31.3.3.2)
-FIRE ALARM SYSTEM: APARTMENT BLDG. 4+ STORIES IN HEIGHT OR MORE THAN 11-UNITS SHALL BE PROVIDED W/A FIRE ALARM SYSTEM PER SECTION 9.6, EXCEPT AS MODIFIED PER 30.3.4.2 - 30.3.4.6.
-MANUAL INITIATION OF ALARM NOT REQ. FOR BUILDING 4-OR LESS STORIES IN HEIGHT, UNDER 16 UNITS W/AN AUTOMATIC, SUPERVISED SPRINKLER SYSTEM (30.3.4.2.2).
-PROVIDE CARBON MONOXIDE DETECTORS PER NFPA 720 STANDARD FOR CO DETECTION & WARNING EQUIPMENT 2009
-NOTE THAT CONCEALED SPACES INCLUDING FLOOR CAVITIES TO BE SPRINKLERED

M.

CITY OF PORTLAND WASTEWATER CAPACITY APPLICATION

Portland Dept. of Public Works -
Water Resources
55 Portland Street,
Portland, Maine 04101-2991

Date: 8/7/2019

Bradley Roland, P.E.
Water Resources Division
Department of Public Works
55 Portland Street
Portland, ME 04103

1. Please, Submit Utility, Site, and Locus Plans.

Site Address: 128R North Street, Portland, ME 04101

Chart Block Lot Number: 12 - H - 9

Proposed Use: Multi-Family Residential
Previous Use: Single-Family Residential
Existing Sanitary Flows: 990 GPD
Existing Process Flows: 0 GPD
Description and location of City sewer that is to receive the proposed building sewer lateral.

Combined 12" sewer main in North Street

Site Category		
	Commercial *(see part 4 below)*	
	Industrial *(complete part 5 below)*	
	Governmental	
	Residential	X
	Other *(specify)*	

Clearly, indicate the proposed connections, on the submitted plans.

2. Please, Submit Contact Information.

City Planner's Name: TBD Phone: 207-874-8719
Owner/Developer Name: Upright Frameworks, LLC
Owner/Developer Address: PO Box 833 Wilton, ME 04294
Phone: 207-749-9656 Fax: E-mail: jwojcik@uprightframeworks.com
Engineering Consultant Name: Acorn Engineering
Engineering Consultant Address: 65 Hanover Portland, ME 04101
Phone: 207-317-1884 Fax: E-mail: wsavage@acorn-engineering.com

Note: Consultants and Developers should allow +/- 15 days, for capacity status, prior to Planning Board Review.

3. Please, Submit Domestic Wastewater Design Flow Calculations.

Estimated Domestic Wastewater Flow Generated: 1890 GPD
Peaking Factor/ Peak Times: Diurnal
Specify the source of design guidelines: *(i.e. "Handbook of Subsurface Wastewater Disposal in Maine," "Plumbers and Pipe Fitters Calculation Manual," Portland Water District Records, Other (specify)*
Handbook of Subsurface Wastewater Disposal in Maine

Note: Please submit calculations showing the derivation of your design flows, either on the following page, in the space provided, or attached, as a separate sheet.

4. Please, Submit External Grease Interceptor Calculations.

Total Drainage Fixture Unit (DFU) Values: N/A

Size of External Grease Interceptor: _____

Retention Time: _____

Peaking Factor/ Peak Times: _____

Note: In determining your restaurant process water flows, and the size of your external grease interceptor, please use The Uniform Plumbing Code. Note: In determining the retention time, sixty (60) minutes is the minimum retention time. Note: Please submit detailed calculations showing the derivation of your restaurant process water design flows, and please submit detailed calculations showing the derivation of the size of your external grease interceptor, either in the space provided below, or attached, as a separate sheet.

5. Please, Submit Industrial Process Wastewater Flow Calculations

Estimated Industrial Process Wastewater Flows Generated: 0 GPD

Do you currently hold Federal or State discharge permits? Yes ____ No ____

Is the process wastewater termed categorical under CFR 40? Yes ____ No ____

OSHA Standard Industrial Code (SIC): *(http://www.osha.gov/oshstats/sicser.html)*

Peaking Factor/Peak Process Times: _____

Note: On the submitted plans, please show where the building's domestic sanitary sewer laterals, as well as the building's industrial-commercial process wastewater sewer laterals exits the facility. Also, show where these building sewer laterals enter the city's sewer. Finally, show the location of the wet wells, control manholes, or other access points; and, the locations of filters, strainers, or grease traps.

Note: Please submit detailed calculations showing the derivation of your design flows, either in the space provided, or attached, as a separate sheet.

M. Calculation of Wastewater Flowrate for 126 & 128R North Street Redevelopment

The proposed project includes a two-phase approach where Phase 1 would include the redevelopment of 128R into a four-story building with six condominiums and covered parking on the ground level. Phase 2 would include the redevelopment of 126 into a three-story building with five rental units. Based upon the Section 4 of the Maine Subsurface Wastewater Disposal Rules, the project anticipates the following daily flows:

Estimate of Anticipated Daily Flows – 128R North Street				
Development	Unit Size	Number of Units	Gallons per Day per Unit	Total Gallons per Day
Existing Flow				
Single-Family Unit	3-Bedroom	1	270	270
Total Gallons per Day (Existing)				270
Proposed Flow				
Residential Units	1-Bedroom	3	120	360
Residential Units	2-Bedroom	2	180	360
Residential Units	3-Bedroom	1	270	270
Total Gallons per Day (Proposed)				990
Net Change				**+720 GPD**
*Values based on STATE OF MAINE: SUBSURFACE WASTEWTAER DISPOSAL RULES, most recent edition				

Based upon the table above, the 128R site is anticipated to increase its wastewater flows by nearly 720 gallons per day.

Estimate of Anticipated Daily Flows – 126 North Street				
Development	Unit Size	Number of Units	Gallons per Day per Unit	Total Gallons per Day
Existing Flow				
Multifamily	2-Bedroom	4	180	720
Total Gallons per Day (Existing)				720
Proposed Flow				
Multifamily	2-Bedroom	5	180	900
Total Gallons per Day (Proposed)				900
Net Change				**+180 GPD**
*Values based on STATE OF MAINE: SUBSURFACE WASTEWTAER DISPOSAL RULES, most recent edition				

Based upon the table above, the 126 site is anticipated to increase its wastewater flows by nearly 180 gallons per day.

The total increase for the project's wastewater flows is 900 gallons per day. This will largely be offset during wet weather events, because the stormwater management on site will improve considerably.

ACORN ENGINEERING, INC.

N. Lighting

Please find attached the photometric plans and cut sheets.

Swaney Lighting
PO Box 1597
Scarborough ME 04070
Phone: (207) 883-7100
Fax: (207) 885-9606

Date: Aug 19, 2019

Job Name
128R NORTH STREET
SLA19-42917
WILTON ME

Bid Date
Aug 19, 2019

Submittal Date
Aug 19, 2019

Distributor:
SWANEY LIGHTING
15 PLEASANT HILL ROAD
SCARBOROUGH ME 04074

Transmittal

Swaney Lighting
PO Box 1597
Scarborough ME 04070
Phone: (207) 883-7100
From: Therese "TC" Freeman X-103

Project **128R NORTH STREET**
Quote# SLA19-42917
Location WILTON ME
Contact:

ATTACHED WE ARE SENDING YOU 1 COPY OF THE FOLLOWING ITEM:

☐ Drawings	☐ Specifications	Other:
☐ Prints	☐ Information	
☐ Plans	☒ Submittals	

THESE ARE TRANSMITTED FOR:

☒ Prior Approval	☐ Resubmittal for Approval	☐ Record
☐ Approval	☐ Corrections	Bids due on:
☐ Approval as Submitted	☐ Your Use	Other:
☐ Approval as Noted	☐ Review and Comment	

Type	MFG	Part
WP	BEACON PRODUCTS	TRV-D/24L-27/3K7/4/UNV/**
CY	Architectural Area Lighting	CY1-15-4K7-1-WG-UNV-**-R-FPP
CL	PRESCOLITE	LC6SL / 6LCSL18L35K8

TRAVERSE SERIES

SURFACE/CEILING/GARAGE

Cat.#

Job

Type

BEACON design . performance . technology

Approvals

SPECIFICATIONS

Intended Use:
The Traverse luminaire is a wall surface mounted luminaire with a field replaceable LED light engine & optical bezel system. Internal components are totally enclosed in rain-tight and corrosion-resistant die cast aluminum housing. The TRV Luminaire is suitable for wet locations when ordered as a downlight.

Construction:
- Traverse luminaire consists of a die cast aluminum two-piece housing.
- Die cast main (thermal) housing provides direct heat exchange between the LED light engine and the cool outdoor
- LED drivers are thermally isolated from the main housing, mechanically attached and heat sinked to the rear housing.
- Shape of the main housing is designed to prevent debris accumulation and as a bird nesting deterrent. The back and main housings are designed to hinge open for easy mounting and easy access.

LED/Optics:
- Optical one piece cartridge system consisting of an LED engine, LED lamps, optics, gasket and stainless steel bezel.
- Cartridge is held together with internal brass standoffs soldered to the board so that it can be field replaced as a one piece optical system.
- A die cut silicone foam gasket ensures a weather-proof seal around each individual LED
- Optics are held in place without the use of adhesives
- Cartridge assembly is available in various lighting distributions using TIR designed acrylic optical lenses over each LED.

Electrical:
- 100V through 277V, 50 Hz to 60 Hz (UNV, 347/480V).
- Dimming drivers are standard, but must contact factory to request wiring leads for purpose of external dimming controls
- Component-to-component wiring within the luminaire may carry no more than 80% of rated load and is certified by UL for use at 600 VAC at 50°C or higher.
- Plug disconnects are certified by UL for use at 600 VAC, 13A or higher. 13A rating applies to primary (AC) side only.
- Surge protection - 20kA

Controls/Options:
- Traverse is available with an optional passive infrared (PIR) motion sensor capable of detecting motion 360° around the luminaire. When no motion is detected for the specified time, the Motion Response system reduces the wattage down to a factory preset level, reducing light level accordingly. When motion is detected, the luminaire returns to full wattage and full light output. Please contact Beacon Products if project requirements vary from the standard configurations
- Available with Energeni for optional set dimming, timed dimming with simple delay, or timed dimming based on time of night (see Energeni product page for more details www.beaconproducts.com/products/energeni).
- In addition, Traverse can be specified with SiteSync™ wireless control system for reduction in energy and maintenance cost while optimizing light quality 24/7. See ordering information or visit for more details: www.hubbell-automation.com/products/sitesync/

Installation:
- Rear housing (back plate) is designed with various bolt patterns for direct wall mounting or mounting to a recessed junction box.
- Rear housing has three integral 3/4" NPT power feed locations (bottom and each side) for surface mounted conduit applications.
- After mounting the rear housing to the wall or junction box, the main housing is designed to attach and hinge closed after connecting the male and female quick connectors.
- Mounting design permits a simple retrofit to existing wall luminaires that utilize or recessed junction boxes.

Finish:
- IFS polyester powder-coat electrostatically applied and thermocured.
- IFS finish consists of a five stage iron phosphate chemical pretreatment regimen with a polymer primer sealer, oven dry off, and top coated with a thermoset super TGIC polyester powder coat finish.
- The finish meets the AAMA 2604 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance and resists cracking or loss of adhesion per ASTM D522 and resists surface impacts of up to 160 inch-pounds.

Listings:
- The luminaire shall bear a CSA label and be marked suitable for wet locations (standard).
- This product is approved by the Florida Fish and Wildlife Conservation Commission. Separate spec available at: http://www.beaconproducts.com/products/traverse

Warranty:
Five year limited warranty for more information visit: www.hubbelllighting.com/resources/warranty

CERTIFICATIONS/LISTINGS

C SP US

ida

*3000K and warmer CCTs only

PRODUCT IMAGE(S)

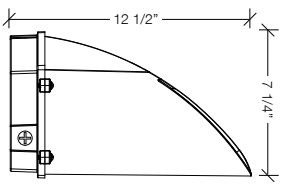




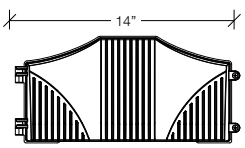


Shown with SiteSync™

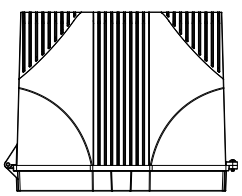
DIMENSIONS



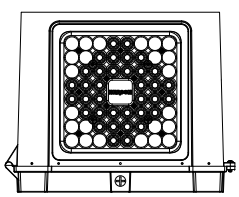
Side View



Front View



Top View



Bottom View

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HUBBELL Lighting

ORDERING INFORMATION

ORDERING EXAMPLE: TRV-D/60L-136/5K7/5R/UNV/GENIXX/PEC-208/BL

SERIES	ENGINE-WATTS	CCT/CRI[11]	OPTICS	VOLTAGE	CONTROL OPTIONS	SENSOR OPTIONS	ELECTRICAL OPTIONS	FINISH
TRV-D Traverse Down Light	**24L-27** 27 Watts - LED array	**3K7** 3000K,70 CRI	**2** Type II	**UNV** 120-277V	**GENI-XX**[6] Energeni	**MOB**[3,5,7,9] Occupancy Sensor (33% or 50% dimming)	**PEC-120** photocell, button 120V	**BL** Black textured
TRV-U[1] Traverse Up Light (lens req.)	**24L-55** 55 Watts - LED array	**4K7** 4000K, 70 CRI	**3** Type III	**347** 347V	**SWP**[7,8] SiteSync Wireless Pre-Commission		**PEC-208** photocell, button 208V	**DB** Dark bronze
	36L-80 80 Watts - LED array	**5K7** 5000K, 70 CRI	**4** Type IV	**480** 480V	**SWPM**[7,8,9] SiteSync Wireless Pre-Commission w/ Occupancy Sensor		**PEC-240** photocell, button 240V	**GYS** Light gray smooth
	48L-110 110 Watts - LED array		**5R** Type V, rectangular				**PEC-277** photocell, button 277V	**PS** Platinum silver
	60L-136 136 Watts - LED array		**2X2** Narrow spot flood				**2PF**[2,3,10] Dual power feed	**WH** White textured
			5X5 Medium flood				**BPC**[4] Cold weather battery pack	Specify standard finish

[1] Indoor use only
[2] Not available on 24L-27
[3] Not available @ 347V or 480V input
[4] 36L-80 only, not available with SWP or SWPM control options
[5] Not available on 48L-110 or 60L-136
[6] When ordering Energeni, specify the routine setting code (example GENI-04). See Energeni brochure and instructions for setting table and options. Not available with sensor options.
[7] Not available with other control or sensor options. PEC is available with MOB.
[8] Specify group and zone. See **SiteSync** product page www.hubbell-automation.com/products/sitesync/ for more details.
[9] Specify time delay; dimming level and mounting height.
[10] Not available with SWP or SWPM control options.
[11] This product is approved by the Florida Fish and Wildlife Conservation Commission. Separate spec available at: http://cdn.beaconproducts.com/content/products/specs/specs_files/Traverse_LED_turtle_spec_sheet.pdf

Accessories and Services (Ordered Separately)

Catalog Number	Description
SWUSB*	SiteSync loaded on USB flash drive (Windows based only)
SWTAB*	SiteSync Windows Tablet
SWBRG+	SiteSync Wireless Bridge Node

*When ordering with SiteSync, one of the following interface options must be chosen and ordered separately. Each option contains the SiteSync License, GUI and Bridge Node.
+ If needed, an additional Bridge Node can be ordered.

PRECOMMISSIONED SITESYNC ORDERING INFORMATION: When ordering a fixture with the SiteSync lighting control option, additional information will be required to complete the order. The SiteSync Commissioning Form or alternate schedule information must be completed. This form includes Project location, Group information, and Operating schedules. For more detailed information please visit www.hubbelllighting.com/products/sitesync/ or contact Hubbell Lighting tech support at (800) 345-4928.

SiteSync fixtures with occupancy sensor (SWPM) require the mounting height of the fixture for selection of the lens.

Examples: TRV/24L-55/5K7/3/UNV/SWP/BL — SiteSync only
TRV/24L-55/5K7/3/UNV/SWPM-20F/BL — SiteSync with Occupancy Sensor

MOB ORDERING INFORMATION: When ordering a fixture with a dimming occupancy sensor option (MOB), please specify the appropriate information. These settings are specified in the ordering as shown in the example below.

TRV/24L-55/5K7/3/UNV/MOB - 1 to 30 min. - 33% or 50% - ?? / BL

High to Dim Delay | Low Level | Mounting Height (ft.)

SiteSync



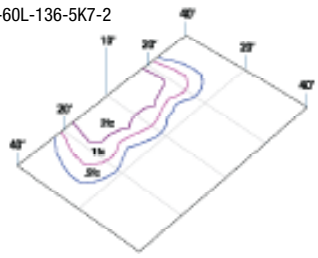
SiteSync Lighting Control is available from our most popular brands in a broad range of award-winning product families.

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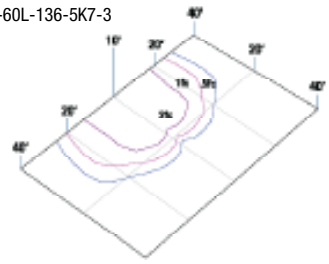
HUBBELL Lighting

PHOTOMETRICS

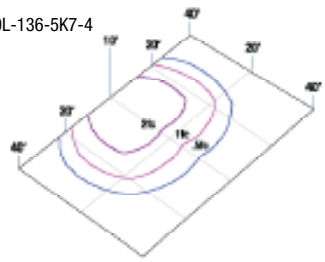
Type II
TRV-60L-136-5K7-2



Type III
TRV-60L-136-5K7-3



Type IV
TRV-60L-136-5K7-4



PERFORMANCE DATA

				5K (5000K nominal, 67 CRI)					4K (4000K nominal, 70 CRI)					3K (3000K nominal, 80 CRI)				
# LED'S	DRIVE CURRENT	SYSTEM WATTS 120-277V	DISTRIBUTION TYPE	LUMENS	LPW[1]	B	U	G	LUMENS	LPW[1]	B	U	G	LUMENS	LPW[1]	B	U	G
24	700mA	27W	2	3746	139	1	0	1	3783	142	1	0	1	3413	126	1	0	1
			3	3723	138	1	0	1	3760	141	1	0	1	3392	126	1	0	1
			4	3753	139	0	0	1	3791	142	0	0	1	2850	106	0	0	1
			4W	3689	137	1	0	1	3726	140	1	0	1	3360	124	1	0	1
			5R	3809	141	2	0	1	3847	144	2	0	2	3470	129	2	0	1
			5X5	3815	141	N/A	N/A	N/A	3854	144	N/A	N/A	N/A	3476	129	N/A	N/A	N/A
			2X2	4086	151	N/A	N/A	N/A	4127	155	N/A	N/A	N/A	3723	138	N/A	N/A	N/A
24	700mA	55W	2	6243	108	1	0	1	6306	109	1	0	2	5688	98	1	0	1
			3	6204	107	1	0	2	6267	108	1	0	2	5653	98	1	0	2
			4	6273	108	3	0	1	6336	109	3	0	1	5715	99	3	0	1
			4W	6148	106	1	0	2	6210	107	1	0	2	6501	97	1	0	2
			5R	6348	110	3	0	1	6412	111	3	0	1	5784	100	3	0	1
			5X5	6359	110	N/A	N/A	N/A	6423	111	N/A	N/A	N/A	5793	100	N/A	N/A	N/A
			2X2	6810	118	N/A	N/A	N/A	6879	119	N/A	N/A	N/A	6205	107	N/A	N/A	N/A
36	700mA	80W	2	9364	110	1	0	2	9458	111	1	0	2	8531	100	1	0	2
			3	9307	109	1	0	2	9401	110	1	0	3	8480	99	1	0	2
			4	9409	110	3	0	2	9504	111	3	0	2	8573	100	3	0	2
			4W	9221	108	1	0	2	9315	109	1	0	2	8402	98	1	0	2
			5R	9522	111	3	0	2	9618	113	3	0	2	8676	102	3	0	1
			5X5	9538	112	N/A	N/A	N/A	9635	113	N/A	N/A	N/A	8690	102	N/A	N/A	N/A
			2X2	10215	120	N/A	N/A	N/A	10319	121	N/A	N/A	N/A	9308	109	N/A	N/A	N/A
48	700mA	110W	2	12485	114	2	0	2	12611	115	2	0	2	11375	104	2	0	2
			3	12409	113	1	0	3	12534	114	1	0	3	11306	103	1	0	3
			4	12546	114	4	0	2	12672	116	4	0	2	11430	104	4	0	2
			4W	12295	112	2	0	3	12419	113	2	0	3	11202	102	1	0	3
			5R	12696	116	4	0	2	12824	117	4	0	2	11568	105	3	0	2
			5X5	12717	116	N/A	N/A	N/A	12846	117	N/A	N/A	N/A	11587	106	N/A	N/A	N/A
			2X2	13620	124	N/A	N/A	N/A	13758	125	N/A	N/A	N/A	12410	113	N/A	N/A	N/A
60	700mA	136W	2	15606	114	2	0	2	15764	116	2	0	2	14219	104	2	0	2
			3	15511	114	2	0	3	15668	115	2	0	3	14133	104	2	0	3
			4	15682	115	4	0	2	15840	116	4	0	2	14288	105	4	0	2
			4W	15369	113	2	0	3	15524	114	2	0	3	14003	103	2	0	3
			5R	15870	116	4	0	2	16030	117	4	0	2	14459	106	4	0	2
			5X5	15897	116	N/A	N/A	N/A	16058	118	N/A	N/A	N/A	14484	106	N/A	N/A	N/A
			2X2	17026	125	N/A	N/A	N/A	17198	126	N/A	N/A	N/A	15512	114	N/A	N/A	N/A

[1]Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown. Actual performance may differ as a result of end-user environment and application.

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PROJECTED LUMEN MAINTENANCE

AMBIENT TEMP.	0	25,000	50,000	[1]TM-21-11 60,000	100,000	Calculated L70 (HOURS)
25°C / 77°F	1.00	0.97	0.96	0.95	0.93	>560,000

[1] Projected per IESNA TM-21-11
Data references the extrapolated performance projections for the base model in a 40°C ambient, based on 10,000 hours of LED testing per IESNA LM-80-08.

ELECTRICAL DATA

# OF LEDS	NUMBER OF DRIVERS	DRIVE CURRENT (mA)	INPUT VOLTAGE (V)	OPER. CURRENT (Amps)	SYSTEM POWER (Watts)
24	1	(350mA)	120	0.27	27.0
			277	0.12	
24	2	(700mA)	120	0.55	55.0
			277	0.24	
36	1	(700mA)	120	0.80	80.0
			277	0.35	
48	1	(700mA)	120	1.10	110.0
			277	0.48	
60	1	(700mA)	120	1.36	136.0
			277	0.59	

AMBIENT TEMPERATURE		LUMEN MULTIPLIER
0°C	32°F	1.02
10°C	50°F	1.01
20°C	68°F	1.00
25°C	77°F	1.00
30°C	86°F	1.00
40°C	104°F	0.99
50°C	122°F	0.98

Use these factors to determine relative lumen output for average ambient temperatures from 0-50°C (32-122°F).

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Cypher™ – CY1 Accent Scale

TYPE

FEATURES

- Integral Battery Backup Option
- 360° Light Distribution
- RGBW or Static White Luminous Front Option
- IES Type I, II, III & IV Distributions
- Wall Graze, Spot and Pencil Distributions
- Multiple Fascia Options and Finishes
- 0-10V dimming
- IP-66 Housing & Optical System
- 120-277V
- 3000K, 4000K & 5000K CCT
- 10kA Surface Protection
- Fascia Forms F, E and T are ADA compliant for use in low mounting height applications (80 inches or less)
- IDA approved, downlight only, 3000K and warmer CCTs

Downlight only, 3000K and warmer CCTs



ORDERING CODE

1	2	3	4	5	6	7	8	9	10	11	12
Series-Output	CCT/CRI	Model	Main Distribution	Secondary Distribution	Voltage	Housing Finish	Fascia Form	Luminous Front	Fascia Panel	Control Options	Options

SERIES-OUTPUT (Base)

CY1-15	15w, 1500 nominal lumens
CY1-25	25w, 2500 nominal lumens

CCT-CRI

27K8	2700K, 80CRI
3K7	3000K, 70CRI
3K8	3000K, 80CRI
4K7	4000K, 70CRI
4K8	4000K, 80CRI
5K7	5000K, 70CRI

MODEL (Light Engine)

1	DownLight Only
2	50/50 Down/Up, **Down/Up distributions must match**
3	90/10 Down/Up
4	25/25/25/25 Split, **Down/Up/ Side distributions must match**
5	70/10/10/10 Split, **Top/Side distributions must match**

Contact factory for custom distributions,
See Distribution Matrix on page 2 for restrictions.

MAIN DISTRIBUTION (Down)

1	IES Type I
2	IES Type II
3	IES Type III
4	IES Type IV
SP	15° Spot/Column
WG	60° Wall Graze
1D	Type 1 Diffused
2D	Type 2 Diffused
3D	Type 3 Diffused
4D	Type 4 Diffused

SECONDARY DISTRIBUTION (Up, Sides)

1	IES Type I
2	IES Type II
3	IES Type III
4	IES Type IV
SP	15° Spot/Column
WG	60° Wall Graze
PB*	Pencil Beam
1D	Type 1 Diffused
2D	Type 2 Diffused
3D	Type 3 Diffused
4D	Type 4 Diffused

** PB distribution is available for 90/10 and 70/10/10/10 models only. Not all combinations are recommended. See Distribution Matrix on page 2 for restrictions.*

VOLTAGE

UNV	120-277V

BASE HOUSING FINISH

Standard Colors

AGN	Antique Green
BL	Black
BLT	Matte Black
CRT	Corten
DB	Dark Bronze
DGN	Dark Green
GT	Graphite
LG	Light Grey
MAL	Matte Aluminum
MDB	Metallic Bronze
MG	Medium Grey
TT	Titanium
VBU	Verde Blue
WDB	Weathered Bronze
WH	Arctic White

Specify standard finish

Premium Colors

SFM	Seafoam
SHK	Shamrock
SPP	Salt and Pepper
WCP	Weathered Copper
RAL	Provide a RAL 4 digit color number
CUSTOM COLOR	Please provide color chip for matching

FASCIA FORM

F	Flat
R	Radius/Curved
T	Triangle/Wedge
E	Rounded Edge
C	Circle/Curved
CB	Cylinder Balanced
CT	Cylinder Tall
CBM	Custom Building Material Mount Ghost Fascia

LUMINOUS FRONT

BLANK	Standard None
RGBW	RGBW Luminous Front
LFSW	Static White Luminous Front

RGBW and LFSW luminous fronts are only available with open, four square and perforated fascia panels

FASCIA PANEL

FPP	Full Panel Painted
FPS	Full Panel Stainless Steel
FPC	Full Panel Copper
OPP	Open Panel Painted
OPS	Open Panel Stainless Steel
OPC	Open Panel Copper
4PP	4-Square Panel Painted
4PS	4-Square Panel Stainless Steel
4PC	4-Square Panel Copper
PPP	Perforated Panel Painted
PPS	Perforated Panel Stainless Steel
PPC	Perforated Panel Copper

Flat and Radius Fascia forms only. Painted panels by default match base housing finish/color. Consult factory for custom panel finishes.

CONTROL OPTIONS

PCU	Universal Button Photocell (120-277V)

OPTIONS

EM	Battery Backup Unit -20°C
SF	Single Fuse (120, 277)
DF	Double Fuse (208, 240)

Battery Backup not available with Triangle and Rounded Edge Fascia Forms.

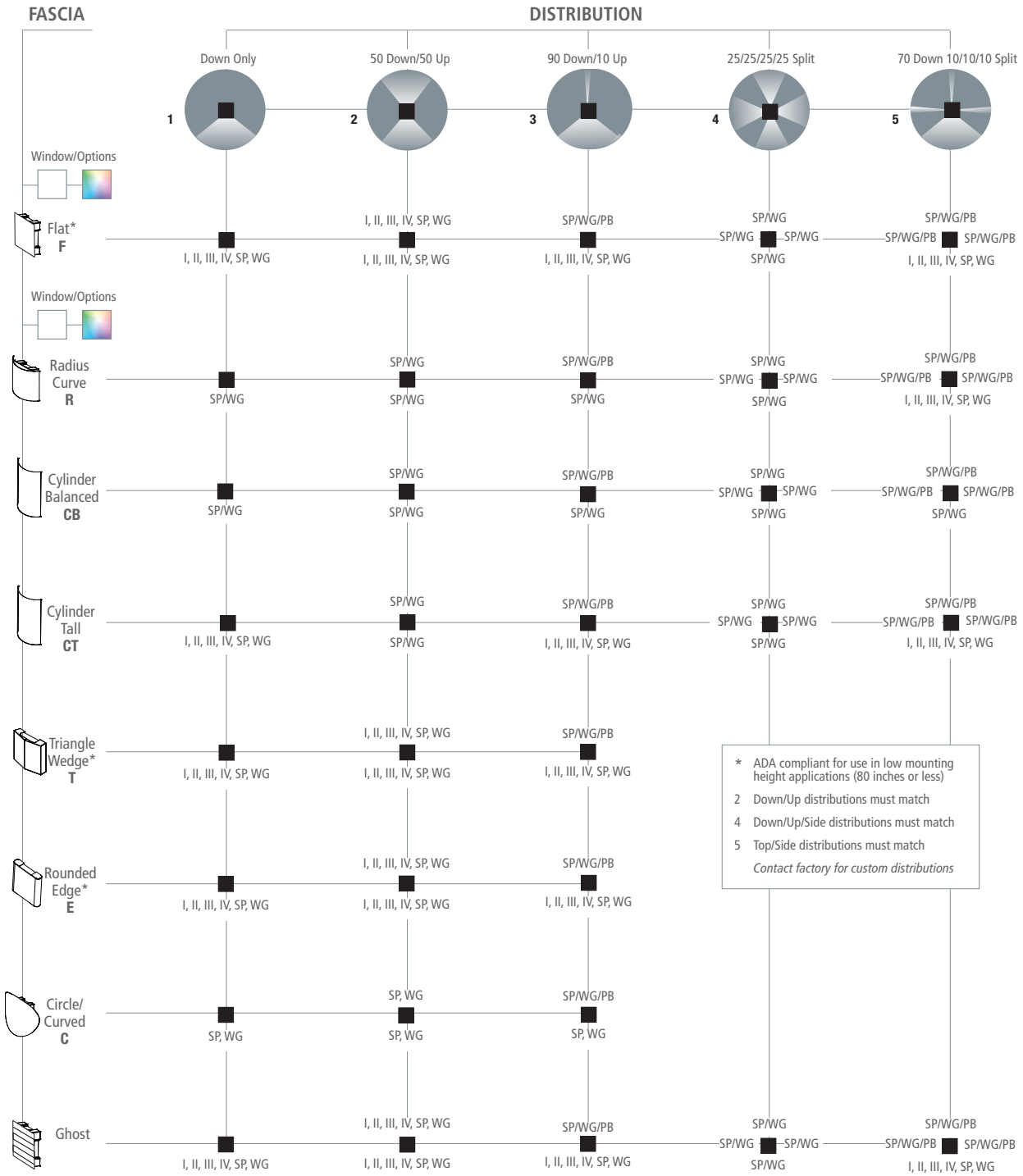
architectural area lighting
ARCHITECTURAL AREA LIGHTING
17760 Rowland Street | City of Industry | CA 91748
P 626.968.5666 | F 626.369.2695 | www.aal.net
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JOB
TYPE
NOTES

Cypher™ – CY1 Accent Scale

TYPE

Distribution Matrix



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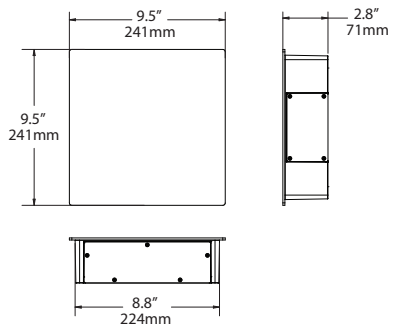
JOB
TYPE
NOTES

Cypher™ – CY1 Accent Scale

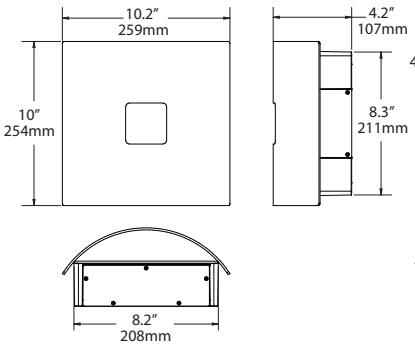
TYPE

Drawings

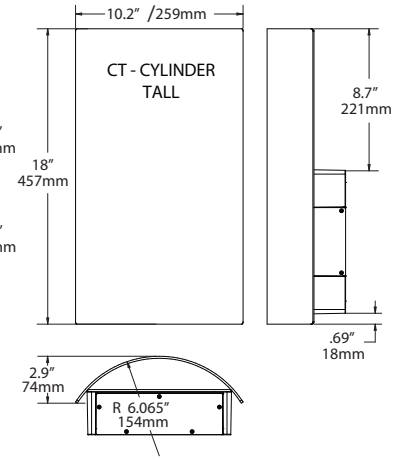
F - FLAT
ADA approved.



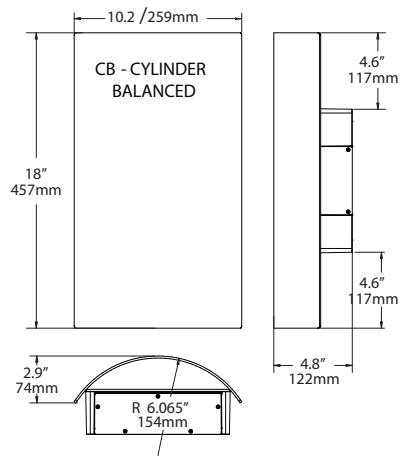
R - RADIUS/CURVED



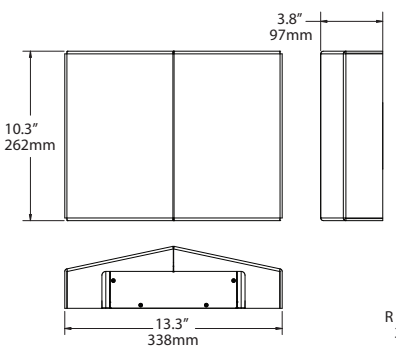
CT - CYLINDER
TALL



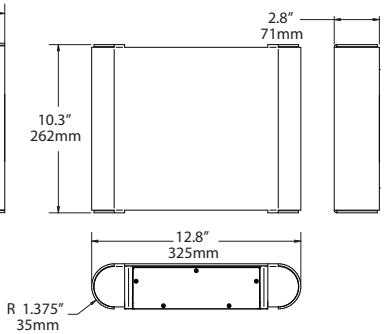
CB - CYLINDER
BALANCED



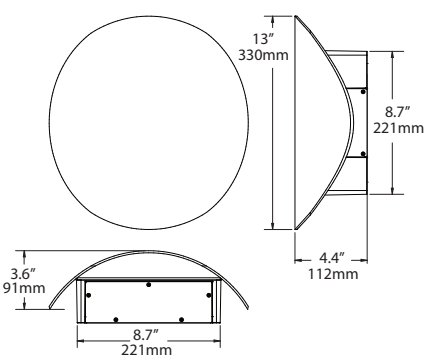
T - TRIANGLE/WEDGE
ADA approved.



E - ROUNDED EDGE
ADA approved.



C - CIRCLE/CURVED



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JOB
TYPE
NOTES

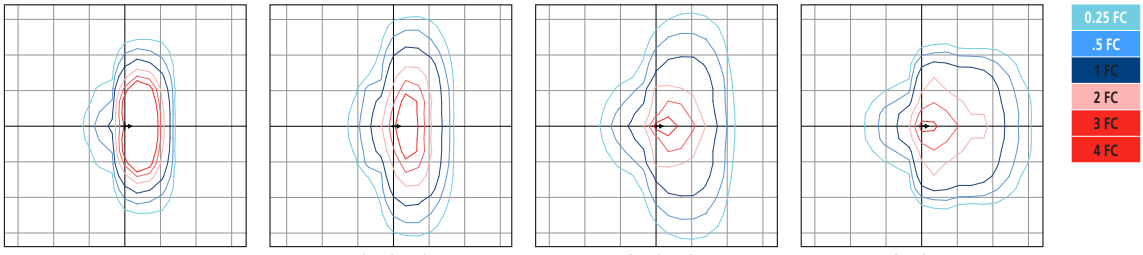
Cypher™ – CY1 Accent Scale

TYPE

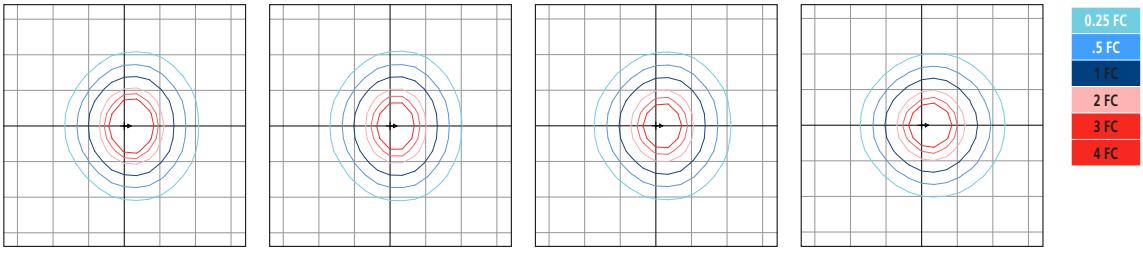
LUMINAIRE PERFORMANCE

Downlight only			Configuration														
			Bright White (5000K)					Neutral White (4000K)					Warm White (3000K)				
Nominal Output (Lm)	Average System Wattage	Distribution	Delivered Lumens	Efficacy (Lm/W)	BUG Rating B	U	G	Delivered Lumens	Efficacy (Lm/W)	BUG Rating B	U	G	Delivered Lumens	Efficacy (Lm/W)	BUG Rating B	U	G
			5000K 70 CRI					4000K 70 CRI					3000K 70 CRI				
1,500	17	Type 1	1923	113	0	0	0	1928	113	0	0	0	1825	107	0	0	0
		Type 2	1726	102	0	0	0	1730	102	0	0	0	1638	96	0	0	0
		Type 3	1750	100	0	0	1	1755	103	0	0	1	1661	98	0	0	1
		Type 4	1757	103	0	0	0	1762	104	0	0	0	1668	98	0	0	0
		Wall Graze	1971	114	1	0	0	1976	116	1	0	0	1871	110	1	0	0
		Spot/Column	1792	103	2	0	0	1797	106	2	0	0	1701	100	2	0	0
		Type 1 Diffused	1629	96	1	0	0	1634	96	1	0	0	1547	91	1	0	0
		Type 2 Diffused	1573	93	1	0	1	1577	93	1	0	0	1493	88	1	0	0
		Type 3 Diffused	1425	84	1	0	0	1429	84	1	0	0	1353	80	1	0	0
		Type 4 Diffused	1602	94	1	0	1	1607	95	1	0	0	1521	89	1	0	0
			5000K 70 CRI					4000K 70 CRI					3000K 70 CRI				
2,500	26	Type 1	2517	96	0	0	0	2524	97	0	0	0	2390	92	0	0	0
		Type 2	2233	85	1	0	1	2239	86	1	0	1	2120	82	1	0	1
		Type 3	2229	85	1	0	1	2236	85	1	0	1	2117	80	1	0	1
		Type 4	2319	88	1	0	1	2325	89	1	0	1	2201	85	1	0	1
		Wall Graze	2744	104	2	0	0	2752	106	2	0	0	2605	100	2	0	0
		Spot/Column	2471	94	2	0	0	2478	95	2	0	0	2346	90	2	0	0
		Type 1 Diffused	2344	89	1	0	1	2350	90	1	0	1	2225	86	1	0	1
		Type 2 Diffused	2062	79	1	0	1	2068	80	1	0	1	1958	75	1	0	1
		Type 3 Diffused	2050	78	1	0	1	2056	79	1	0	1	1946	75	1	0	1
		Type 4 Diffused	2123	80	1	0	1	2129	82	1	0	1	2016	78	1	0	1

ISOLINE TEMPLATES 10' Mounting Height, 10' Grid Spacing



CY1-25-1-1 CY1-25-1-2 CY1-25-1-3 CY1-25-1-4



CY1-25-1-1D CY1-25-1-2D CY1-25-1-3D CY1-25-1-4D

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JOB
TYPE
NOTES

Cypher™ – CY1 Accent Scale

TYPE

ELECTRICAL CHARACTERISTICS

Lumen Package	System Wattage (W)	Line Voltage		Input				Min. Power Factor	Max THD (%)	Dimming Range	Source/Sink Current (mA)		Abosolute voltage range on 0-10v (+) Purple	
		VAC	Hz	120	277	347	480				Min.	Max.	Min.	Max.
1,500	17	120	50/60	0.1	0.1	0.0	0.0	>0.9	20	10% to 100%	0 mA	1 mA	0V	10V
2,500	26			0.2	0.1	0.1	0.1							

TM-21 LIFETIME CALCULATION (500mA)

Lumen Package	Ambient Environment °C	Projected Lumen Maintenance (Khrs)					Reported L70
		15	25	50	60 (TM-21)	100	
2,500	**25**	98%	97%	94%	92%	87%	>60Khrs.
	40	95%	93%	89%	87%	80%	

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JOB
TYPE
NOTES

Cypher™ – CY1 Accent Scale

TYPE

SPECIFICATIONS

HOUSING

- Main housing shroud shall be of fabricated 5052-H32 aluminum alloy
- Housing mounting interface shall have a stamped silicone gasket.
- Luminaire housing shall be free of any visible heat fins, hardware or fasteners.
- Bracketry and hardware shall be stainless steel.

OPTICAL ARRAY

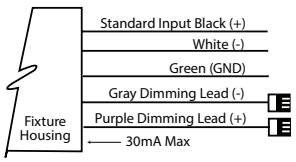
- LEDs shall be mounted to a metal printed circuit board assembly (MCPCB) with a uniform conformal coating over the panel surface and electrical features.
- Optical lenses shall be clear injection molded PMMA acrylic.
- Optical array shall be recessed in order to shield each LED optic across the length of the aperture.
- Optical array shall be sealed for IP66 rating.
- Secondary lens is impact resistant 5/32" tempered glass.

ELECTRICAL

- Drivers shall be in direct contact with the die-cast aluminum housing across the entire surface area of the widest face for maximum thermal transfer.
- "Thermal Shield", primary side, thermister provides protection for the sustainable life of LED module and electronic components.
- Drivers shall have greater than a 0.9 power factor, less than 20% harmonic distortion, and be suitable for operation in -40°C to 40°C ambient environments
- Luminaires shall have integral surge protection that shall be U.L. recognized and have a surge current rating of 10,000 Amps using the industry standard 8/20uSec wave and surge rating of 372J. Surge protection device shall be wired in series.
- Drivers shall be U.L recognized.
- Drivers shall not be compatible with current sourcing dimmers, consult factory for current list of known compatible dimming systems approved dimmers include Lutron Diva AVTV, Lutron Nova NFTV and NTFTV.
- Integral battery backup provides emergency path of egress lighting for the required 90 minutes for -20°C ambient environments.

SPECIFICATIONS

- Luminaire shall be capable of operating at 100% brightness in a 40°C environment. Both driver and optical array shall have integral thermal protection that will dim the luminaire upon detection of temperatures in excess of 85°C.
- Luminaires not configured with a control system shall be provided with 0-10 purple and gray dimming leads.



CONTROLS

- Button photocontrol for dusk to dawn energy savings
- PC12 for 120V, PC20 for 208V, PC24 for 240V, PC27 for 277V
- Photocell is factory installed inside the housing with a fully gasketed sensor on the side wall. For multiple fixture mountings, one fixture is supplied with a photocell to operate the others.

BLUETOOTH®

- RGBW option includes integral Bluetooth module, built into driver, that permits the adjustment of luminous front color when paired with Hubbell Remote App via cellular/ tablet device.
- Bluetooth Low Energy (BLE) or Bluetooth Smart compatible for both iOS (iOS8 and forward) and Android (Gingerbread and forward) handheld software applications. Compatible with phones and tablets.
- Free Bluetooth Apps are available for Apple iOS and Google Android mobile devices and are downloadable via the internet at Apple App Store or Google Play.

MOUNTING AND INSTALLATION

- JUNCTION BOX: Standard with zinc-plated, quick-mount junction box plate that mounts directly to 4" J-Box
- Mounting plate features a one-piece EPDM gasket on back side of plate to firmly seal fixture to wall surface, forbidding entry of moisture and particulates.
- Fixture attaches by two Allen-head hidden fasteners for tamper resistance.
- Optional mounting arrangements utilize a die-cast mounting adaptor to allow for surface conduit and through branch wiring.

SERVICING

- Housing shall be able to hang freely in an open service position for inspection of internal wire connections. Once in service position, the housing shall be able to be removed for service by lifting the assembly up off the rear mounting plate and disconnecting the wiring plugs.
- Driver assembly shall be mounted to a prewired internal tray with quick disconnects for removal.

FINISH

- Luminaire finish shall consist of a five stage pretreatment regimen with a polymer primer sealer, oven dry off, and top coated with a thermoset super TGIC polyester powder coat finish.
- Luminaire finish shall meet the AAMA 605.2 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance.

CERTIFICATION

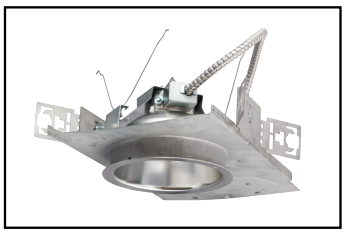
- Luminaire shall be listed with UL for outdoor, wet location use, UL1598, UL 8750 and Canadian CSA Std. C22.2 no.250.
- IP66 rated assembly
- IDA approved, 3000K and warmer CCTs only.
- DesignLights Consortium® (DLC) qualified. Please refer to the DLC website for specific product qualifications at www.designlights.org.
- ANSI C136.31-2010 4G Vibration tested and compliant.
- Complies with "Americans with Disabilities Act" or "ADA" on select versions for low mounting height applications (fixtures extend maximum of 4 inches from wall for mounting heights of 80 inches or less).

WARRANTY / TERMS AND CONDITIONS OF SALE

Download:
Five year limited warranty (for more information visit: http:// www.hubbelllighting.com/resources/warranty/

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Submitted by Swaney Lighting			
	Job Name: 128R NORTH STREET Distributor: SWANEY LIGHTING (SCARBOROUGH)	**Catalog Number:** LC6SL / 6LCSL18L35K8 Notes:	**Type:** **CL** SLA19-42917



6" LED Downlight

LC6SL

1000/1400/1800 Lumens
120V-277V, 347V
0-10V Dimming

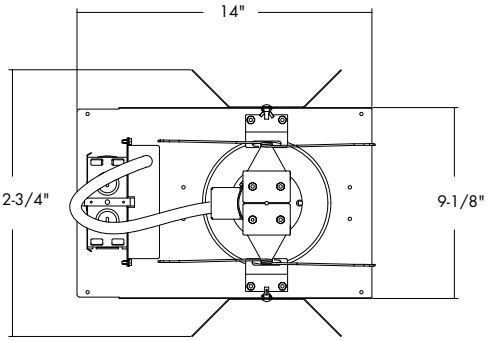
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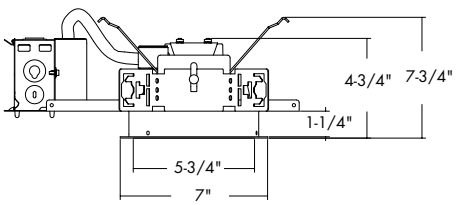
FIRM NAME:

PROJECT:

LiteFrame

Ceiling Cutout: 6¼"
Maximum Ceiling Thickness 1¼"
For conversion to millimeters, multiply inches by 25.4
Not to Scale





LC6SL 10L & 14L

***See page 4 for LC6SL 18L line art**
***See page 4 for LC6SL EM line art**
***See page 4 for LC6SL CP line art**
***See page 4 for LC6SL WWCP line art**

APPLICATIONS:
LiteFrame Commercial LC6SL is a 6" commercial grade LED downlight with available outputs between 1000-1800 lumens. This is suitable to replace most CFL downlighting applications, while realizing substantial energy and maintenance savings. Rated for a minimum of 50,000 hours life (70% lumen maintenance) with ambient plenum temperatures up to 35°C. Free Air Flow around the fixture is required for optimal life performance. This product is not recommended for use with 3rd party "FIREHAT" or insulation barriers.

HOUSING:
One-piece 22 gauge non-corrosive steel platform. Pre-wired J-box with snap-on cover for easy access. Snap-in connection from driver compartment allows easy installation of light engine/trim assembly and can be upgraded to accommodate technology improvements. Approved for 8 (4 in/4 out) No. 12 AWG conductors rated for 90°C through wiring.

REFLECTOR:
High purity aluminum, Alzak, iridescence suppressed, semi-diffuse reflector. Self-trim standard. Painted white self-trim (WT) available as option.

LED LIGHT ENGINE:
The LC6SL uses mid power Nichia LEDs, specifically mixed to provide a minimum of 80 CRI with 3 SDCM color consistency. The use of multiple mid power LEDs allows for optimal thermal management by effectively spreading the heat over a larger area and eliminating hot spots on the LEDs. A diffuse, yet highly transmissive lens obscures the view of the LEDs and creates a smooth, even look from below. The light engine is available in multiple Kelvin temperatures and the system is designed to provide optimal life and lumen maintenance (50,000 hours at 70% lumen maintenance). The reflector/light engine assembly is mechanically retained to the housing.

LED DRIVER:
The LC6SL utilizes a constant current LED driver. This same driver is capable of running all three different lumen outputs, resulting in a reduction of housing skus and simplified specification. The driver is UL8750, Class II compliant and universal 120V-277V.

DIMMING:
Comes standard with flicker-free 0-10V dimming to 10%. 0-10V to 1% dimming option is also available. See list of compatible dimmers on page (4). For the sizing of the control circuit, the dimming circuit may require up to 2mA of sink current.

INSTALLATION:
Light commercial bar hangers included (not with WWCP option). Universal adjustable mounting brackets also accept ½" EMT conduit or 1½" or ¾" lathing channel (by others) or Prescolite 24" bar hangers (B24 or B6). Wall wash orientation may be field adjusted in 90° increments to housing.

CERTIFICATIONS:
CSA certified to US and Canadian safety standards. Suitable for wet locations (EM, EMR and WW damp location). ENERGY STAR qualified.

WARRANTY:
5 year warranty. See www.prescolite.com for details.

Order housing, reflector, and accessories separately

CATALOG NUMBER:

EXAMPLE: LC6SL-6LCSL14L35K9WT

HOUSING	DRIVER OPTIONS	VOLTAGE	HOUSING OPTIONS
❑ **LC6SL** Standard Lumen 0-10V Dimming to 10% 120V-277V	*Standard 0-10V 10% Dimming* ❑ **DM1** 0-10V 1% Dimming	*Standard 120V-277V* ❑ **347**[3,7,10] 347V	❑ **EM**[2,4,8] Integral Battery Pack ❑ **EMR**[4] Remote Battery Pack ❑ **CP**[3,6,8] Chicago Plenum ❑ **WWCP**[3,9] Wall Wash Chicago Plenum Housing

[1] See Central Inverter compatibility note and web links on page 4.
[2] EM must be selected on both the housing and the trim.
[3] Not compatible with EM or EMR
[4] Damp location only
[5] Compatible with EMR only
[6] CP must be selected on both the housing and the trim
[7] Not compatible with CP
[8] Not available with WW option
[9] WW must be selected on trim
[10] Not compatible with WWCP

TRIM APERTURE	OUTPUT	KELVIN	CRI	REF. FINISH/ COLOR OPTION	REFLECTOR OPTIONS
❑ **6LCSL** Standard Lumen Clear Alzak Reflector	❑ **10L** 1000 Lumen ❑ **14L** 1400 Lumen ❑ **18L** 1800 Lumen	❑ **27K** 2700 Kelvin ❑ **30K** 3000 Kelvin ❑ **35K** 3500 Kelvin ❑ **40K** 4000 Kelvin ❑ **50K** 5000 Kelvin	❑ **8** 80+ CRI ❑ **9** 90+ CRI	*Standard Semi-Diffuse Clear Alzak* ❑ **WH** Painted Matte White Reflector and Flange	❑ **WT** Painted White Flange Only ❑ **WF** Wide Flange ❑ **WW**[4,5,7] Wall Wash ❑ **EM**[2,4,8] Integral Battery Pack ❑ **CP**[3,6] Chicago Plenum

ACCESSORIES
❑ **B24** Set of two(2) 24" bar hangers for T-bar ceilings
❑ **B6** Set of two (2) bar hangers for ceiling joist up to 24" centers
❑ **SCA6D_** Sloped ceiling adapter (see note on page 4)
❑ **LiteGear**[1] Inverter, single phase central lighting, 125VA-250VA
❑ **LPS Series**[1] LitePower micro-inverter, 20VA-55VA

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In a continuing effort to offer the best product possible we reserve the right to change, without notice, specifications or materials that in our opinion will not alter the function of the product.
Web: **www.prescolite.com** • Tech Support: **(888) 777-4832**

LFR-LED-041

PHOTOMETRIC DATA

LiteFrame - 6" LC6SL Downlight

DRIVER DATA	6LCSL10Lxxx	6LCSL14Lxxx	6LCSL18Lxxx
Input Voltage	120-277V	120-277V	120-277V
Input Frequency	50/60 Hz	50/60 Hz	50/60 Hz
Input Current	0.111 (120v)	0.148 (120v)	0.185 (120v)
	0.048 (277v)	0.064 (277v)	0.080 (277v)
Input Power	13.4W	17.8W	22.2W
Constant Current Output	700mA	700mA	700mA
Power Factor	≥0.90	≥0.90	≥0.90
THD	<25%	<20%	<20%
EMI Filtering	FCC 47CFR	FCC 47CFR	FCC 47CFR
	Part 15, Class A	Part 15, Class A	Part 15, Class A
Operating Temperature	-30°C to +35°C	-30°C to +28°C	-30°C to +25°C
Dimming	0-10V	0-10V	0-10V

Over-voltage, over-current, short-circuit protected

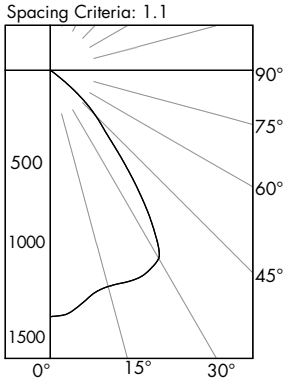
When operating in EM mode, the fixture will deliver approximately 30% of the published full lumen output.

Lumen Multiplier Table

Photometrics for the LC6SL are published below at a nominal 3500 Kelvin temperature. This table may be used to approximate the lumen values at different Kelvin temperatures. Power consumption would stay the same.

5000 Kelvin	1.09
4000 Kelvin	1.00
3500 Kelvin	1.00
3000 Kelvin	0.99
2700 Kelvin	0.96

LC6SL 6LCSL18L35K8
LED Light Engine: 3500K, 80+ CRI
System Wattage: 22.3W
Fixture Delivered Lumens: 1941
Fixture Efficacy: 87.0
Spacing Criteria: 1.1



Test No. 16.03178
Tested at 25°C Ambient in accordance to IESNA LM-79-2008

CANDELA DISTRIBUTION

DEG	CANDELA
0	1368
5	1345
15	1243
25	1247
35	923
45	357
55	27
65	5
75	1
85	0
90	0

ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LUMINAIRE
0-60	1935	99.7
0-90	1941	100.0
90-180	0	0.0
0-180	1941	100.0

LUMINANCE DATA IN CANDELA/ SQ. METER

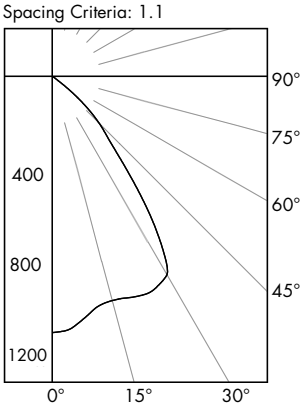
Angle in Vertical	Average
45°	27667
55°	2580
65°	648
75°	212
85°	0

COEFFICIENTS OF UTILIZATION Zonal Cavity Method

Room Cavity Ratio	% Effective Ceiling Cavity Reflectance: 80%				70%				50%			30%		10%		
	20% Effective Floor Cavity Reflectance															
	% Wall Reflectance															
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
1	113	110	107	105	110	108	105	103	104	102	100	100	98	97	96	95	94
2	106	101	97	93	104	99	95	92	96	93	90	93	90	88	90	88	86
3	100	93	87	83	98	92	86	82	89	85	81	86	83	80	84	81	78
4	94	86	79	75	92	84	79	74	82	77	73	80	76	72	78	75	72
5	89	79	73	68	87	78	72	67	76	71	67	74	70	66	73	69	66
6	83	73	66	62	82	72	66	61	71	65	61	69	64	60	68	63	60
7	78	68	61	56	77	67	61	56	66	60	56	64	59	55	63	59	55
8	74	63	56	52	72	62	56	52	61	55	51	60	55	51	59	54	51
9	70	59	52	48	68	58	52	48	57	51	47	56	51	47	55	51	47
10	66	55	48	44	65	54	48	44	54	48	44	53	47	44	52	47	44

LC6SL 6LCSL18L35K8 Test No. 16.03178

LC6SL 6LCSL14L35K8
LED Light Engine: 3500K, 80+ CRI
System Wattage: 17.9W
Fixture Delivered Lumens: 1520
Fixture Efficacy: 84.9
Spacing Criteria: 1.1



Test No. 16.03177
Tested at 25°C Ambient in accordance to IESNA LM-79-2008

CANDELA DISTRIBUTION

DEG	CANDELA
0	1072
5	1050
15	971
25	990
35	721
45	277
55	20
65	4
75	1
85	0
90	0

ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LUMINAIRE
0-60	1515	99.7
0-90	1520	100.0
90-180	0	0.0
0-180	1520	100.0

LUMINANCE DATA IN CANDELA/ SQ. METER

Angle in Vertical	Average
45°	21467
55°	1911
65°	519
75°	212
85°	0

COEFFICIENTS OF UTILIZATION Zonal Cavity Method

Room Cavity Ratio	% Effective Ceiling Cavity Reflectance: 80%				70%				50%			30%		10%		
	20% Effective Floor Cavity Reflectance															
	% Wall Reflectance															
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
1	113	110	107	105	110	108	105	103	104	102	100	100	98	97	96	95	94
2	106	101	97	93	104	99	95	92	96	93	90	93	90	88	90	88	86
3	100	93	87	83	98	92	86	82	89	85	81	86	83	80	84	81	78
4	94	86	80	75	92	85	79	74	82	77	73	80	76	73	78	75	72
5	89	79	73	68	87	78	72	67	76	71	67	74	70	66	73	69	66
6	83	73	66	62	82	72	66	61	71	65	61	69	64	61	68	64	60
7	78	68	61	56	77	67	61	56	66	60	56	65	59	56	63	59	55
8	74	63	56	52	72	62	56	52	61	56	51	60	55	51	59	54	51
9	70	59	52	48	68	58	52	48	57	51	47	56	51	47	55	51	47
10	66	55	48	44	65	54	48	44	54	48	44	53	47	44	52	47	44

LC6SL 6LCSL14L35K8 Test No. 16.03177

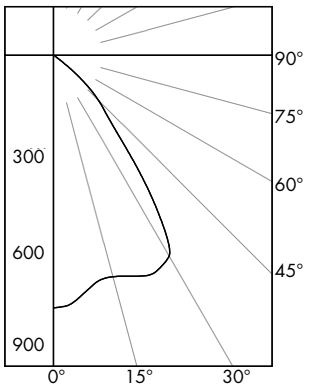
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PHOTOMETRIC DATA

LiteFrame - 6" LC6SL Downlight

LC6SL 6LCSL10L35K8
LED Light Engine: 3500K, 80+ CRI
System Wattage: 13.5W
Fixture Delivered Lumens: 1106
Fixture Efficacy: 81.9
Spacing Criteria: 1.1



CANDELA DISTRIBUTION

DEG	CANDELA
0	780
5	762
15	708
25	740
35	518
45	196
55	15
65	3
75	1
85	0
90	0

ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LUMINAIRE
0-60	1103	99.7
0-90	1106	100.0
90-180	0	0.0
0-180	1106	100.0

LUMINANCE DATA IN CANDELA/ SQ. METER

Angle in Vertical	Average
45°	15190
55°	1433
65°	389
75°	212
85°	0

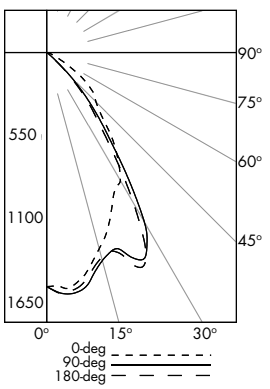
COEFFICIENTS OF UTILIZATION Zonal Cavity Method

Room Cavity Ratio	% Effective Ceiling Cavity Reflectance: 80%				70%				50%				30%				10%			
	20% Effective Floor Cavity Reflectance																			
	% Wall Reflectance																			
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
1	113	110	107	105	110	108	105	103	104	102	100	100	98	97	96	95	94			
2	107	101	97	93	104	99	95	92	96	93	90	93	90	88	90	88	86			
3	100	93	88	83	98	92	87	82	89	85	81	86	83	80	84	81	79			
4	94	86	80	75	92	85	79	74	82	77	74	80	76	73	78	75	72			
5	89	79	73	68	87	78	72	68	76	71	67	75	70	66	73	69	66			
6	83	73	67	62	82	73	66	62	71	65	61	69	65	61	68	64	60			
7	78	68	61	57	77	67	61	56	66	60	56	65	60	56	64	59	55			
8	74	63	57	52	73	63	56	52	61	56	52	60	55	61	59	55	51			
9	70	59	52	48	69	58	52	48	57	52	48	57	51	47	56	51	47			
10	66	55	49	44	65	55	48	44	54	48	44	53	48	44	52	47	44			

LC6SL 6LCSL10L35K8 Test No. 16.03179

Test No. 16.03179
Tested at 25°C Ambient in accordance to IESNA LM-79-2008

LC6SL 6LCSL18L35K8 WW
LED Light Engine: 3500K, 80+ CRI
System Wattage: 22.2W
Fixture Delivered Lumens: 1938
Fixture Efficacy: 87.3



CANDELA DISTRIBUTION

DEG	0	90	180
0	1527	1527	1527
5	1545	1581	1565
15	1324	1404	1383
25	1030	1489	1517
35	792	780	670
45	454	219	189
55	273	8	8
65	64	2	2
75	9	1	1
85	0	0	0
90	0	0	0

LUMINANCE DATA IN CANDELA/SQ. METER

Angle in Vertical	0 DEG	90 DEG	180 DEG
45°	38311	18480	15949
55°	28400	832	832
65°	9036	282	282
75°	2075	231	231
85°	0	0	0

	MULTIPLE UNITS		
1′ 2′ 3′ 4′	UNITS ON 3′ CENTER	UNITS ON 4′ CENTER	

2′ DISTANCE FIXTURE MOUNTED OUT FROM WALLS
FOOTCANDLE DISTRIBUTION ON WALL SURFACE (DIRECT ONLY)

DISTANCE FROM CEILING IN FEET															
1	15	11	6	2	1	15	5	15	15	1	15				
2	40	36	26	13	5	41	27	41	40	10	40				
3	36	35	28	18	11	41	36	41	36	22	36				
4	22	22	22	19	13	33	39	33	25	27	25				
5	14	14	14	14	13	27	30	27	20	25	20				
6	10	10	9	9	9	24	22	24	16	19	16				
7	7	7	6	6	6	19	18	19	14	14	14				
8	5	5	5	4	4	15	15	15	12	11	12				
9	4	4	3	3	3	12	13	12	10	9	10				

LC6SL 6LCSL18L35K8 WW Test No. 16.03309

Test No. 16.03309
Tested at 25°C Ambient in accordance to IESNA LM-79-2008

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PHOTOMETRIC DATA

LiteFrame - 6" LC6SL Downlight

Dimming Compatibility Table

Dimming Ballast	Manufacturer	Web Link
DM/DM1	Lutron DVTV	http://bit.ly/11jSvZg
DM/DM1	Leviton AWRMG-7xx, AWSMG-7xx, AWSMT-7xx	http://bit.ly/1BJn2R9

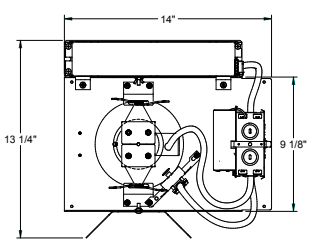
Central Inverters

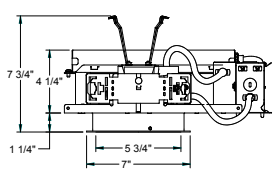
For full fixture output in back-up mode, we recommend you visit www.dual-lite.com for your Central Lighting Inverter options. Please contact your local Hubbell representative for any assistance with proper sizing and loading of your inverter selection. Central lighting inverters must be ordered separately.

LiteGear: www.dual-lite.com/products/litegear_lg_series
LPS Series: www.dual-lite.com/products/lps

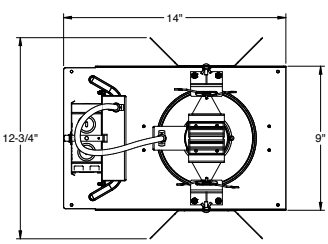
SCA6D

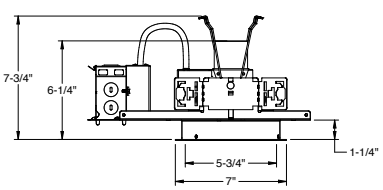
When ordering a sloped ceiling adapter, specify the degree of slope in 1° increments, maximum of 35°. For a more precise degree or wet ceiling applications, please contact factory. Sloped ceiling adapter and housing must be installed at the same time.



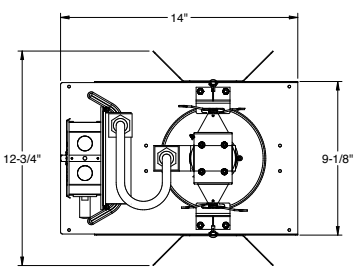


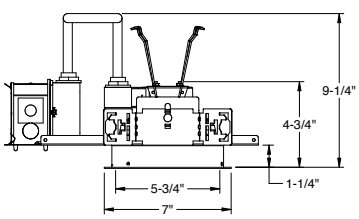
LC6SL EM



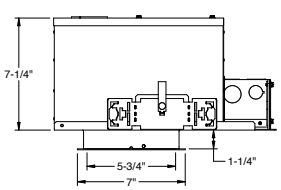


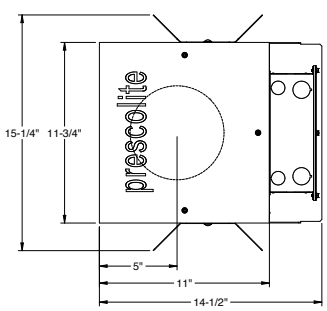
LC6SL 18L





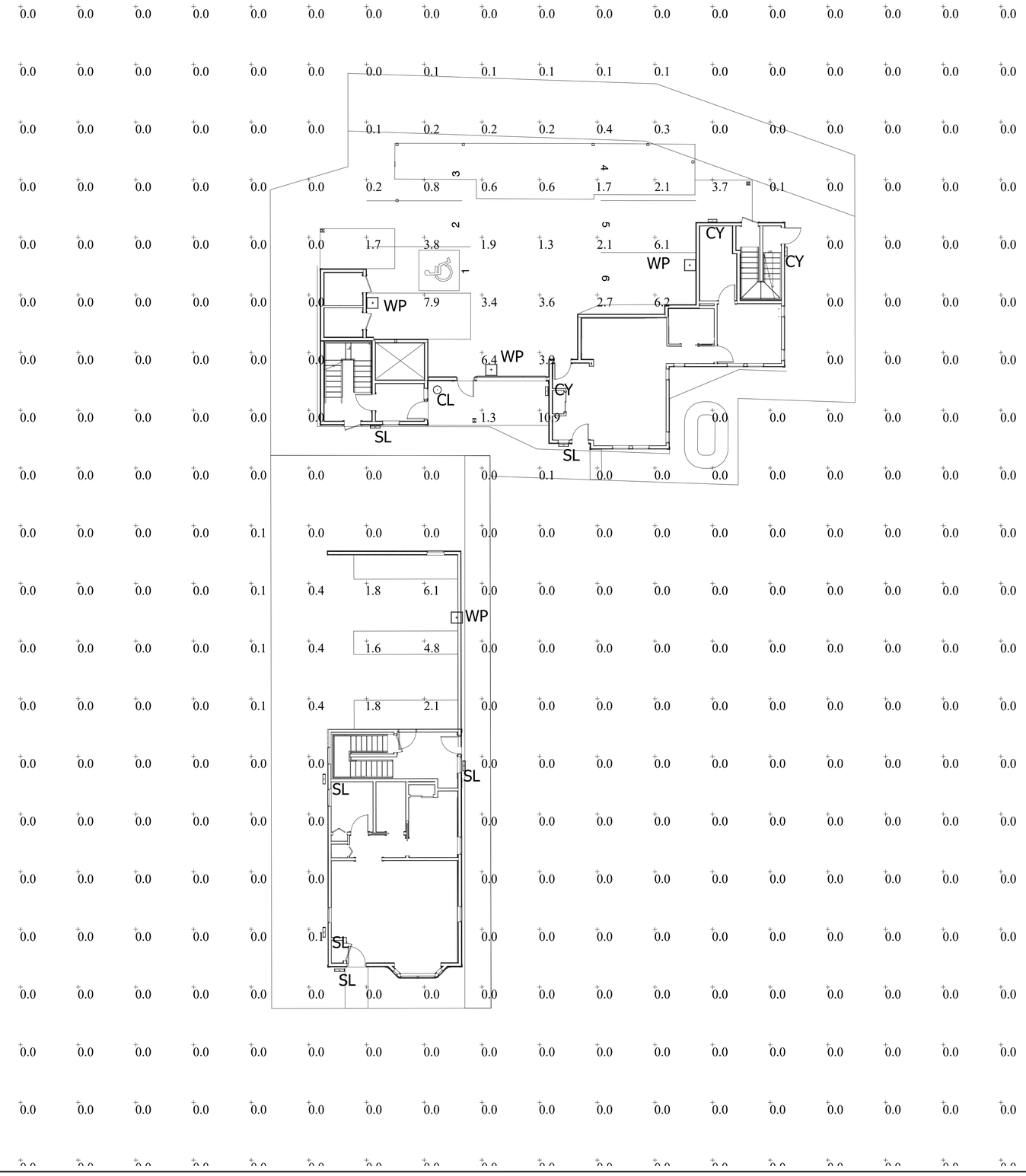
LC6SL CP





LC6SL WWCP

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0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.1 0.1 0.1 0.1 0.1 0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0 0.1 0.2 0.2 0.2 0.4 0.3 0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0 0.2 0.8 0.6 0.6 1.7 2.1 3.7 0.1 0.0 0.0 0.0 0.0
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0.0 0.0 0.0 0.0 0.0 0.0 7.9 3.4 3.6 2.7 6.2 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0 6.4 3.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0 1.3 10.9 0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.1 0.4 1.8 6.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.1 0.4 1.6 4.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.1 0.4 1.8 2.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
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0.0 0.0 0.0 0.0 0.0 0.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
0.0 0.0 0.0 0.0 0.0 0.0

O. Architectural Design Narrative

Please find attached the design narrative completed by Dexterous Creative.

October 29, 2019

Shukria Wiar
Planner
City of Portland Maine
389 Congress Street
Portland, Maine 04101

Re: 128R and 126 North Street

In Summer 2018 our team submitted an application for a four-story, six-unit condominium building at 128R North Street. The project features a workforce housing unit on the ground floor, five-FHA compliant units serviced via an elevator on upper floors and six parking spaces. This rear lot, previously housed a single-family home. The site is immediately adjacent to Bayview Heights senior apartments and is across the street from the Island View Apartment complex. In September our team held a neighborhood meeting to introduce this building to neighbors.

As a result of neighborhood feedback and staff comments, our team elected to add a plan to develop the front lot, 126 North Street, in addition to 128R North. This three-story building features five, two-bedroom apartments and two off-street parking spaces. The first-floor unit will be FHA compliant.

Development will begin with construction of the rear building at 128R. Prior to substantial completion the existing four-unit building at 126 will be demolished to allow for widening of the walk and driveway to this lot. The new building at 126 will share a pedestrian entrance with 128R with vehicles entering via the existing curb cut at 126. This widened driveway to 128R improves access for vehicles and increases visibility for pedestrians and cyclists visiting 128R and 126 via a brick walkway leading from North Street (walkway to be flush with drive).

In addition to improving access to 128R North, the three-story form of 126 is used to mitigate massing of the four-story building at 128R North when viewed from the streetscape. The three-story building creates a gradual stepping of roof-lines between the two-story building at 122 North, the 1 1/2 story building at 128 North (front lot) and the proposed four-story building at 128R North.

The building at 128R is minimally visible from the public way due to the its position as a rear lot, 100’-0” from the street-front, and unique topography of the surrounding area, which includes a steep elevation change. This means that the four-story, six-unit building will only be visible from across the Bayview Heights parking lot, as viewed through a mature row of Pine Trees and at the driveway entrance to the site, viewed at a distance of 100’-0”. The impact of this elevation change on building visibility is best illustrated on Washington Avenue looking up at the Munjoy Heights complex. Due to the elevation change the rear buildings of that four-story complex are not visible, except at a gap between the buildings (see photo on page 26).

Neighboring Munjoy Heights represents a recent example of a dense, four-story inner/rear lot re-development that increases density within the city, via a new access driveway off Sheridin Street. The footprint of 128R North is smaller than one of the six, four-story buildings of the Munjoy Heights complex providing precedent such density

within the neighborhood. A prominent feature between the 128R and Munjoy Heights site is a retaining wall designed by our team. Sensitivity to that wall is a major reason the civil, geotechnical and structural engineering team from Munjoy Heights was retained for our project. Additionally, the Island View Apartment complex across North Street and Bayview Heights complexes represent much larger and more complex masses than the proposed building at 128R North.

To break up the width of the 128R facade, the siding color is changed at the central extrusion. Both 126 and 128R feature two window types along front facades in a consistent pattern and rhythm. A difference in color/cladding at the main entrances of both buildings is utilized to improve way-finding.

The architectural styles of buildings immediately adjacent to and in immediate blocks surrounding the project are diverse, in scale, materiality and massing. There is little continuity amongst the structures which range from single-story flat-roofed masonry buildings, gable-roof structures with horizontal siding (clapboard, vinyl, composite and aluminum) to four-story masonry buildings with mansard roofs.

Neither proposed building features rooftop deck. Roof-mounted condensers are not visible from the street at 128R North. Mechanicals in 126 will be housed in the basement or mounted to the rear facade of the building. The elevator overrun on 128R is minimally visible form the public way. To reduce complexity of the massing at 128R the roof eave is consistent except for this element. Deck rails at the front of the building at 128R have been modified from previously submitted editions to minimize their presence/bulk.

These two projects will result in a net increase of six much-needed housing units for the city, including a work-force unit, and seven FHA compliant units increasing housing options for prospective residents of all mobility levels, housing that is sorely needed in our city and aging state.

Regards,



Tracie J. Reed, Maine Licensed Architect
Dextrous Creative, LLC

Dextrous Creative, LLC
Portland, Maine
traciereed@dextrouscreative.com
(207) 409-0459

P. Utilities

The proposed project will include installation of multiple utility services to the new buildings.

Water:

The existing 128R water service will be retired as part of this project. It is proposed to tap a 6" service line off the water main within North Street. The 6" line will serve as the sprinkler line with a 1.5" child connection for a domestic service.

For the project located at 126 North Street the existing water service will be retired as part of this project. It is proposed to tap a 4" service line off the water main within North Street. The 4" line will serve as the sprinkler line with a 1.5" child connection for a domestic service.

Sewer:

The existing sewer laterals are to be retired and plugged. A new 6" lateral for each site is proposed to accept the wastewater from each unit, and the garage sewer (after draining from the oil-water separator). The garage and elevator sump at 128R may be pumped internally to meet with the wastewater lines from the living levels before being fed via gravity to the sewer main within North Street.

Stormwater:

There is currently no drainage infrastructure on either site. The proposed measures to handle runoff include foundation drains and field inlets for both sites and a high-flow rain garden on 128R North Street. These systems will connect to a separated 6" storm drain line that ties in to the existing 12" combined sewer main within North Street. Please see the Stormwater Management Report for more information.

UGE/T/C:

The sites are currently served by aerial services. These services are proposed to be routed underground from a proposed utility pole on North Street which will convey 3-phase power from an existing utility pole across North Street east.

Gas:

It is proposed to retire the existing services install new taps off the existing main in North Street for each site as seen on the Utility Plan, Sheet C-20. The 128R service will be coordinated with 128F North Street such that a branch can be spliced off the proposed service and routed to the neighboring property.

Ability to serve letters were sent out to the respective utility companies on July 1, 2019 in accordance with the City of Portland Code of Ordinances Chapter 14 Land Use, Section 14-527(g)(7). Responses from the utility companies can be found attached to this section.

ACORN ENGINEERING, INC.

Charter Communications
Attn: Mr. Mark Pelletier
118 Johnson Road
Portland, Maine 04102

July 1, 2019

Subject: 128R North Street Redevelopment
Re: Ability to Serve

Dear Mr. Pelletier:

On behalf of Upright Properties, LLC, we are pleased to submit the following request for Charter's ability to serve the proposed development. The proposed project is located along 128R North Street, tax map 12-H-9 within the R-6 Residential Zoning District in Portland, Maine. The lot will be redeveloped into a four-story, six-unit residential building with an open-air ground level for parking. The site currently serves as two story single-family home.

It is proposed that a new underground conduit be dropped from the existing utility pole adjacent to the access drive off North Street.

On behalf of the client, we are requesting the following information:

1. Any additional information, such as utility mapping within North Street.
2. Any easements for overhead services currently crossing the proposed development.
3. Alternative connection locations from the property to the existing communication system.
4. Charter's proposed infrastructure improvements within the project vicinity.
5. Charter's ability to serve the project.

I have attached an existing conditions plan created by Nadeau Land Surveys from June 2018 as well as the proposed preliminary utility plan from our office to facilitate your review. Please do not hesitate to contact me or the office for any questions or clarifications.

Sincerely,

Sam Lebel

Sam Lebel, E.I.
Project Engineer
Acorn Engineering, Inc.

ACORN ENGINEERING, INC.

Portland Water District
Attn: MEANS Department
225 Douglass Street
Portland, Maine 04104

July 1, 2019

Subject: 128R North Street Redevelopment
Re: Ability to Serve

To Whom It May Concern:

On behalf of Upright Properties, LLC, we are pleased to submit the following request for Portland Water District's (PWD) ability to serve the proposed development. The proposed project is located along 128R North Street, tax map 12-H-9 within the R-6 Residential Zoning District in Portland, Maine. The existing single-family structure will be demolished and the lot will be redeveloped into a four-story, six-unit residential building with the ground level serving as an open-air parking space.

The existing water service will be removed as part of the redevelopment. It is proposed to tap a 6" sprinkler line off the water main within North Street. A 2" domestic line is proposed to branch off the sprinkler line. Based upon Section 4 of the Maine Subsurface Wastewater Disposal Rules, the project anticipates the following design flows:

Estimate of Anticipated Daily Flows				
Development	Unit Size	Number of Units	Gallons per Day per Unit	Total Gallons per Day
Existing Flow				
Single Family Dwelling	3-Bedroom	1	270	270
Total Gallons per Day (Existing)				270 GPD
Proposed Flow				
Residential Units	1-Bedroom	3	120	360
Residential Units	2-Bedroom	2	180	360
Residential Units	3-Bedroom	1	270	270
Total Gallons per Day (Proposed)				990 GPD

Net Change	+720 GPD
*Values based on STATE OF MAINE: SUBSURFACE WASTEWTAER DISPOSAL RULES, most recent edition	

The proposed project is anticipated to increase the net flow by approximately 720 gallons per day (GPD). It should be noted that these values were developed using conservative estimates from the State of Maine Subsurface Wastewater Disposal Rules.

On behalf of the client, we are requesting the following information:

1. Any additional information, such as utility mapping within North Street and confirmation of the location and size of the services to the existing property and the size and material of the water main.
2. Alternative connection locations from the property to the existing system.
3. PWD's proposed infrastructure improvements within the project vicinity.
4. Flow data for adjacent hydrant.
5. PWD's ability to serve the project.

I have attached a fixture count, an existing conditions plan created by Nadeau Land Surveys from June 2018, and the proposed preliminary utility plan from our office to facilitate your review. Please do not hesitate to contact me or the office for any questions or clarifications.

Sincerely,

Sam Lebel

Sam Lebel, E.I.
Project Engineer
Acorn Engineering, Inc.

Portland Water District

FROM SEBAGO LAKE TO CASCO BAY

November 27, 2019

Sam Lebel, E.I
Acorn Engineering, Inc.
PO Box 3372
Portland, ME 04104

Re: 128R North Street, PO
REVISED - Ability to Serve with PWD Water

Dear Mr. Lebel:

The Portland Water District has received your request for an Ability to Serve Determination for the noted site submitted on October 30, 2019. Based on the information provided, we can confirm that the District will be able to serve the proposed project as further described in this letter. **Please note that this letter constitutes approval of the water system as currently designed. Any changes affecting the approved water system will require further review and approval by PWD.**

Conditions of Service

The following conditions of service apply:

- A new 6-inch fire service (parent) and 1.5-inch domestic service (child) with a 1-inch meter may be installed from the water main in North Street to serve **128R North Street**. The services should enter through the properties frontage on North Street at least 10-feet from any side property lines. An approved backflow prevention device must be installed on each service line directly after the meter/entrance to the building prior to service activation. Please note that only one meter and one bill will be associated to each domestic service line. This one master meter would be located in a common space that all tenants could gain access to if necessary.

- A new 4-inch fire service (parent) and 1.5-inch domestic service (child) with a 1-inch meter may be installed from the water main in North Street to serve **126 North Street**. The services should enter through the properties frontage on North Street at least 10-feet from any side property lines. An approved backflow prevention device must be installed on each service line directly after the meter/entrance to the building prior to service activation. Please note that only one meter and one bill will be associated to each domestic service line. This one master meter would be located in a common space that all tenants could gain access to if necessary.

- The Portland Water District does not have record of any other existing infrastructure in public roads and recommends a survey and test pitting be performed by the development team prior to construction. **Any conflicts that arise during construction are at the risk of the developer and may result in job shutdown until new plans are submitted by the developer and reviewed and approved by PWD.**

Prior to construction, the owner or contractor will need to make an appointment to complete a service application form and pay all necessary fees. The appointment shall be requested through MEANS@pwd.org or by calling 207-774-5961 ext. 3199. Please allow (3) business days to process the service application paperwork. PWD will guide the applicant through the new development process during the appointment.

Existing Site Service

According to District records, the project site does currently have existing water service. A 1-inch diameter copper domestic service line provides water service to the site. Please refer to the "Conditions of Service" section of this letter for requirements related to the use of this service.

Water System Characteristics

According to District records, there is a 12-inch diameter ductile iron water main in North Street and a public fire hydrant located approximately 200 feet from the site. The most recent static pressure reading was 48 psi on August 5, 2019.

Public Fire Protection

The installation of new public hydrants to be accepted into the District water system will most likely not be required. It is your responsibility to contact the Portland Fire Department to ensure that this project is adequately served by existing and/or proposed hydrants.

Domestic Water Needs

The data noted above indicates there should be adequate pressure and volume of water to serve the domestic water needs of your proposed project.

Private Fire Protection Water Needs

You have indicated that this project will require water service to provide private fire protection to the site. Please note that the District does not guarantee any quantity of water or pressure through a fire protection service. Please share these results with your sprinkler system designer so that they can design the fire protection system to best fit the noted conditions. If the data is out of date or insufficient for their needs, please contact MEANS to request a hydrant flow test and we will work with you to get more complete data.

Should you disagree with this determination, you may request a review by the District's Internal Review Team. Your request for review must be in writing and state the reason for your disagreement with the determination. The request must be sent to MEANS@PWD.org or mailed to 225 Douglass Street, Portland Maine, 04104 c/o MEANS. The Internal Review Team will undertake review as requested within 2 weeks of receipt of a request for review.

If the District can be of further assistance in this matter, please let us know.

Sincerely,
Portland Water District



Robert A. Bartels, P.E.
Senior Project Engineer

ACORN ENGINEERING, INC.

Unitil Service Corp.
Attn: Bridget Harmon
376 Riverside Industrial Parkway
Portland, Maine 04103

July 1, 2019

Subject: 128R North Street Redevelopment
Re: Ability to Serve

Dear Ms. Harmon:

On behalf of Upright Properties, LLC, we are pleased to submit the following request for Unitil's ability to serve the proposed development. The proposed project is located along 128R North Street, tax map 12-H-9 within the R-6 Residential Zoning District in Portland, Maine. The lot will be redeveloped into a four-story, six-unit residential building with the first level including a parking area. The site currently serves as two story single-family home.

We are not aware of any existing gas services to the property. The new gas line is proposed to tap off the main and run parallel to an abutting gas line. Modifications are proposed to the neighbor's gas line to facilitate the redevelopment. The Owner will be responsible for coordinating with the landowner of 128F North Street as well as Unitil and Neuco.

On behalf of the client, we are requesting the following information:

1. Any additional utility mapping such as gas lines within North Street.
2. Unitil's proposed infrastructure improvements within the project vicinity.
3. Unitil's ability to serve the project.

I have attached an existing conditions plan created by Nadeau Land Surveys from June 2018, and the proposed preliminary utility plan from our office to facilitate your review. Please do not hesitate to contact me or the office for any questions or clarifications.

Sincerely,

Sam Lebel

Sam Lebel, E.I.
Project Engineer
Acorn Engineering, Inc.

ACORN ENGINEERING, INC.

Central Maine Power Company
Attn: Mr. Paul DuPerre
162 Canco Road
Portland, Maine 04103

July 1, 2019

Subject: 128R North Street Redevelopment
Re: Ability to Serve

Mr. DuPerre:

On behalf of Upright Properties, LLC, we are pleased to submit the following request for Central Maine Power's (CMP) ability to serve the proposed development. The proposed project is located along 128R North Street, tax map 12-H-9 within the R-6 Residential Zoning District in Portland, Maine. The lot will be redeveloped into a four-story, six-unit residential building with the first level including a parking area. The site currently serves as two story single-family home.

It is proposed that a new underground conduit be dropped from the existing utility pole along North Street with the potential for a pole-mounted transformer to be installed on this pole. 3-phase power appears to be available from the pole across the street. I look forward to our July 10th on-site meeting to discuss options for serving this redevelopment.

On behalf of the client, we are also requesting the following information:

1. Any easements for overhead services currently crossing the proposed development.
2. Alternative connection locations from the development to the existing system.
3. CMP's proposed infrastructure improvements within the project vicinity.
4. CMP's ability to serve the project.
5. Access requirements to the CMP meters.

I have attached an existing conditions plan created by Nadeau Land Surveys from June 2018 as well as the proposed preliminary utility plan from our office to facilitate your review. Please do not hesitate to contact me or the office for any questions or clarifications.

Sincerely,

Sam Lebel

Sam Lebel, E.I.
Project Engineer
Acorn Engineering, Inc.

CENTRAL MAINE POWER

July 5, 2019

Acorn Engineering, Inc.
C/O Mr. Sam Lebel, E.I.
PO Box 3372
Portland, Maine 04104

RE: 128R North Street, Portland, Maine

Dear Mr. Lebel,

This letter is to advise you Central Maine Power has sufficient three phase electrical capacity in the area to serve the subject project.

Once the project is accepted by the City of Portland, the owner will need to call our Customer Service Center at 1-800-565-3181 to sign up for a New Account and a SAP Work Request Order so we may provide an actual cost.

If you have any questions please feel free to call me at 629-1487.

Sincerely,

Paul DuPerre

Paul DuPerre
Energy Service Specialist

162 Canco Road, Portland, ME 04103
Telephone 800.750.4000, Fax 207.791.1026
cmpco.com

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ACORN ENGINEERING, INC.

Charter Communications
Attn: Mr. Mark Pelletier
118 Johnson Road
Portland, Maine 04102

October 29, 2019

Subject: 126 North Street Redevelopment
Re: Ability to Serve

Dear Mr. Pelletier:

On behalf of Joshua Wojcik, we are pleased to submit the following request for Charter's ability to serve the proposed development. The proposed project is located along 126 North Street, tax map 12-H-14 within the R-6 Residential Zoning District in Portland, Maine. The existing four-unit structure will be demolished, and the lot will be redeveloped into a three-story, five-unit residential building with the ground level serving as an open-air parking space.

It is proposed that a new underground conduit be dropped from the utility pole adjacent to the access drive off North Street. The utility pole is proposed to be replaced as part of this project.

On behalf of the client, we are requesting the following information:

1. Any additional information, such as utility mapping within North Street.
2. Any easements for overhead services currently crossing the proposed development.
3. Alternative connection locations from the property to the existing communication system.
4. Charter's proposed infrastructure improvements within the project vicinity.
5. Charter's ability to serve the project.

I have attached an existing conditions plan created by Nadeau Land Surveys from June 2018 as well as the proposed preliminary utility plan from our office to facilitate your review. Please do not hesitate to contact me or the office for any questions or clarifications.

Sincerely,

Sam Lebel

Sam Lebel, E.I.
Project Engineer
Acorn Engineering, Inc.

A C O R N
ENGINEERING, INC.

Portland Water District
Attn: MEANS Department
225 Douglass Street
Portland, Maine 04104

October 21, 2019

Subject: 126 North Street Redevelopment
Re: Ability to Serve

To Whom It May Concern:

On behalf of Joshua Wojcik, we are pleased to submit the following request for Portland Water District's (PWD) ability to serve the proposed development. The proposed project is located along 126 North Street, tax map 12-H-14 within the R-6 Residential Zoning District in Portland, Maine. The existing four-family structure at 126 will be demolished to facilitate construction of the related project at 128R North Street. The 126 lot will thenbe redeveloped into a three-story, five-unit residential building.

The existing water service will be removed as part of the redevelopment. It is proposed to tap a 4" sprinkler line off the water main within North Street. A 1.5" domestic line is proposed to branch off the sprinkler line. Based upon Section 4 of the Maine Subsurface Wastewater Disposal Rules, the project anticipates the following design flows:

Estimate of Anticipated Daily Flows				
Development	Unit Size	Number of Units	Gallons per Day per Unit	Total Gallons per Day
Existing Flow				
Multifamily	2-Bedroom	4	180	720
Total Gallons per Day (Existing)				720 GPD
Proposed Flow				
Multifamily	2-Bedroom	5	180	900
Total Gallons per Day (Proposed)				900 GPD
Net Change				**+180 GPD**
*Values based on STATE OF MAINE: SUBSURFACE WASTEWTAER DISPOSAL RULES, most recent edition				

The proposed project is anticipated to increase the net flow by approximately 180 gallons per day (GPD). It should be noted that these values were developed using conservative estimates from the State of Maine Subsurface Wastewater Disposal Rules.

On behalf of the client, we are requesting the following information:

1. Any additional information, such as utility mapping within North Street and confirmation of the location and size of the services to the existing property and the size and material of the water main.
2. Alternative connection locations from the property to the existing system.
3. PWD's proposed infrastructure improvements within the project vicinity.
4. Flow data for adjacent hydrant.
5. PWD's ability to serve the project.

I have attached a fixture count, an existing conditions plan created by Nadeau Land Surveys from June 2018, and the proposed preliminary utility plan from our office to facilitate your review. Please do not hesitate to contact me or the office for any questions or clarifications.

Sincerely,

Sam Lebel

Sam Lebel, E.I.
Project Engineer
Acorn Engineering, Inc.

ACORN ENGINEERING, INC.

Unitil Service Corp.
Attn: Bridget Harmon
376 Riverside Industrial Parkway
Portland, Maine 04103

October 29, 2019

Subject: 126 North Street Redevelopment
Re: Ability to Serve

Dear Ms. Harmon:

On behalf of Joshua Wojcik, we are pleased to submit the following request for Unitil's ability to serve the proposed development. The proposed project is located along 126 North Street, tax map 12-H-14 within the R-6 Residential Zoning District in Portland, Maine. The existing four-unit structure will be demolished, and the lot will be redeveloped into a three-story, five-unit residential building with the ground level serving as an open-air parking space.

We are not aware of any existing gas services to the property. The new gas line is proposed to tap off the main and run underneath the proposed driveway of 126 North Street.

On behalf of the client, we are requesting the following information:

1. Any additional utility mapping such as gas lines within North Street.
2. Unitil's proposed infrastructure improvements within the project vicinity.
3. Unitil's ability to serve the project.

I have attached an existing conditions plan created by Nadeau Land Surveys from June 2018, and the proposed preliminary utility plan from our office to facilitate your review. Please do not hesitate to contact me or the office for any questions or clarifications.

Sincerely,

Sam Lebel

Sam Lebel, E.I.
Project Engineer
Acorn Engineering, Inc.

ACORN ENGINEERING, INC.

Central Maine Power Company
Attn: Mr. Paul DuPerre
162 Canco Road
Portland, Maine 04103

October 29, 2019

Subject: 126 North Street Redevelopment
Re: Ability to Serve

Mr. DuPerre:

On behalf of Joshua Wojcik, we are pleased to submit the following request for Central Maine Power's (CMP) ability to serve the proposed development. The proposed project is located along 126 North Street, tax map 12-H-14 within the R-6 Residential Zoning District in Portland, Maine. The existing four-unit structure will be demolished, and the lot will be redeveloped into a three-story, five-unit residential building with the ground level serving as an open-air parking space.

It is proposed that a new underground conduit be dropped from the utility pole that is proposed to be replaced in front of the existing 126 North Street structure. This pole would provide underground connections to both 126 and 128R.

On behalf of the client, we are also requesting the following information:

1. Any easements for overhead services currently crossing the proposed development.
2. Alternative connection locations from the development to the existing system.
3. CMP's proposed infrastructure improvements within the project vicinity.
4. CMP's ability to serve the project.
5. Access requirements to the CMP meters.

I have attached an existing conditions plan created by Nadeau Land Surveys from June 2018 as well as the proposed preliminary utility plan from our office to facilitate your review. Please do not hesitate to contact me or the office for any questions or clarifications.

Sincerely,

Sam Lebel

Sam Lebel, E.I.
Project Engineer
Acorn Engineering, Inc.

Q. Construction Management Plan

Project Address: 126 & 128R North Street

Project Description:

The proposed project includes a two-phase approach where Phase 1 would include the redevelopment of 128R into a four-story building with six condominiums and covered parking on the ground level. Phase 2 would include the redevelopment of 126 into a three-story building with five rental units.

Project Team Summary:

Owner:	Upright Properties, LLC
General Contractor:	TBD
Civil Engineer:	Acorn Engineering, Inc.
Architect:	Dextrous Creative
Structural Engineer:	Structural Integrity Consulting Engineers, Inc.

The Owner/GC and all subcontractors will work with the City of Portland and adjacent landowners to minimize any project impacts.

The GC will remain responsible for enforcement of all compliance with 1) all contract plans and specifications in their scope of work and 2) all site working conditions and safety requirements, day and night, for both persons and property, in each case for the duration of their work. These include OSHA, NIOSH, U.S. EPA, local ordinance and any other applicable governmental regulations. Both the Owner/GC and any subcontractors will remain responsible for safeguarding the general public.

The GC shall review all permits and conditions associated with the project. Refer to the Civil/Site Plan Set, Sheet C-03 Construction Management Plan for visual representation of the measures to be taken during construction.

The following outline has been developed in accordance with the City of Portland Construction Management Plan General Template and shall be referenced by the GC during construction.

A. Construction Management Principles

The control of noise, vibrations, ground movement, truck traffic, and other construction related factors will be of utmost importance. Care shall be taken to minimize these effects in the best interest of neighbors and the general public. GC to ensure that work hours conform to the City of Portland's Ordinance.

B. Development Review of Construction Management Plan

Logistics and safety program shall be submitted at or prior to the preconstruction meeting by the GC with all pertinent information required by the Maine Department of Transportation's Traffic Control Plan Standard Specification 652.3.3.

C. Performance Guarantees, Inspection Fees, Preconstruction Meeting, and Permits

Guarantees and fees will be paid at the time of the respective application. Sections 14-530 and 13-532 will be complied with all necessary permits will be obtained prior to work.

1. Street Opening and Street Occupancy Permits:

   Required permits regarding street opening and occupancy will be obtained from the Department of Public Works. The requests shall conform to the approved Construction Management Plan.

2. Blasting:

   Although not anticipated, if blasting occurs, it shall conform to Article VIII. In Chapter 14 of the City Code and Section 3.7 in the City's Technical Manual.

3. Building Code:

   Employ the best practices, as applicable, of Chapter 33 Safeguards During Construction, from the 2009 International Building Code.

D. Construction Administration and Communication

The Contractor will work closely with adjacent abutters, businesses, and all parties informed, as far in advance as possible, of scheduled work, particularly work anticipated to cause significant noise, vibrations, or dust. Communication in order to comply with all agreements, ordinances, and special permits will be of the utmost importance. Contractor contact information shall be posted on a sign on the construction fence along the North Street frontage. Additional signage necessary for communication shall be provided, but will be temporary and removed upon completion of the project. The contract information for the project personnel is:

Josh Wojcik
Upright Properties, LLC
(207)-749-9656

GC and Subcontractor information will be posted along the North Street frontage once contracted.

E. Construction Schedule

The GC shall submit a construction timeline at or prior to the preconstruction meeting. Construction may occur during the daytime hours as defined in Section 17-18 of the Construction Activities for Building permit and City Code Section 25-129, Noise, dust and debris. Between September 1 and May 31, the following year, no person shall engage in construction activities generating noise exceeding 50 decibels, between the hours of 7 pm and 7 am of the following day within 500 feet of any buildings. From June 1 to August 31, construction activity may continue until 8 pm. No construction activity shall begin before 8

am on a Saturday, Sunday, or legal holiday. Extended hours or night work may be requested for special circumstances and street utility work if needed. These requests will be subject to approval by the Public Works Authority.

Due to the limited space within the project parcel, deliveries will need to be stored in an alternate location or deliveries must be small enough to fit within the property. Deliveries will be scheduled between 7 am and 5 pm.

The estimated timeframe of the proposed project is outlined below:

Project Start Date:	Winter 2019
Project End Date:	Summer 2021

A more detailed work schedule shall be provided by the GC at or before the pre-construction meeting with the City.

F. Security

1. The Construction Management Plan, Sheet C-03, depicts all proposed fencing and other barriers, with the intent of separating pedestrian and vehicle circulation from the construction site. Construction entrances per detail shall be installed.

2. Structures undergoing construction, alteration, or demolition operations, including those in underground locations, shall comply with NFPA 1 Chapter 16. *Safeguarding Construction, Alteration, and Demolition Operations.*

3. Fire Safety Program: Prior to construction, an overall construction and demolition fire safety program shall be developed. Essential items to be emphasized include the following:
    - Good Housekeeping
    - On-site security
    - Installation of new fire protection systems as construction progresses
    - Preservation of existing systems during demolition
    - Organization and training of an on-site fire brigade
    - Development of a pre-fire plan with the local fire department
    - Rapid communication
    - Consideration of special hazards resulting from previous occupancies
    - Protection of existing structures and equipment from exposure fires resulting from construction, alteration, and demolition operations.

4. Blasting, if required, shall conform with all measures of Article VIII. Regulation of Explosives in the Land Use Code and Section 3.7 Standards for Blasting and Regulation of Explosives in Portland's Technical Manual.

5. Temporary security lighting shall be shown on the Construction Management Plan, and all fixtures shall be full cutoffs.

G. Construction Permitting and Traffic Control Plans

1. Construction Activity in Public Streets

Construction activity in the public right-of-way shall be compliant with Chapter 25 Article VII of the City Code. At no time will it be permissible for construction activity including delivery vehicle to close or block streets or affect public safety access without prior notice and approval of the Department of Public Works.

2. Sewer and Stormwater

Sewer and stormwater system connections are controlled by Chapters 24 and 32 of the City code of Ordinance. Required permits for new connections and/or abandonment of existing connections are available through the Street Opening Clerk at the Department of Public Works. Rules and Regulations for these utility systems are available through the City Engineer's office of the Department of Public Works and in Section II of the Technical Manual. This will apply to the new connections within North Street.

3. Traffic Control Plans

Construction activity that impacts the existing public street system must be controlled to protect the safety of the construction workers and all modes of the traveling public. The contractor shall submit a satisfactory "Maintenance of Traffic" (MOT) plan prior to any street opening permit approval. This document shall contain all pertinent information from the Maine Department of Transportation's Traffic Control Plan Standard Specification 652.3.3.

The MOT will address the work required for utility connections in North Street. Traffic will be channelized utilizing drums and cones. Proper signage will be installed prior to the through work zone. Alternating traffic will be controlled with flaggers. Trenches will be patched with pavement daily.

The MOT plan shall provide for the safe passage of the public through or along the construction work zone. It may be permissible to close a portion of North Street during utility connections and/or detour a mode of traffic when absolutely necessary for safety. All requests shall be subject to City approval. MOT plans shall employ the appropriate techniques and devices as called for in the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD). In addition:

- Construction speed signing may be used as needed to slow traffic.
- Traffic Control signs shall not be placed where they would create any obstructions to bicycles or pedestrians.
- Flaggers will be utilized when necessary.

All existing modes of travel in the work zone area shall be accommodated if impacted by the activity. The safe passage of pedestrians, bicyclists, transit providers, and motorists are of equal importance when planning and laying out the work zone; no pre-existing travel mode may be eliminated without the express approval of the Department of Public Works. The MOT should also address on-street parking impacts, including deliveries and parking for adjoining businesses and property owners, analysis of roadway capacity or diversion capacity if street closure or change to roadway capacity is required, and coordination with other on-going or future construction or utility projects in the vicinity.

- Traffic control bicycle and pedestrian facilities or routes through work zones shall be maintained until the bicycle and pedestrian facilities or routes are ready for safe operation. Traffic control will not be removed to allow auto travel at the expense of bicycle and pedestrians.
- Barrier systems utilized to separate the construction activity from the public street and /or sidewalk shall not inhibit sight distances, particularly for visibility of pedestrians and bicyclists.
- ADA compliance in all capacities shall be maintained.

The blockage of any portion of sidewalk for the purpose of construction activity shall require an occupancy permit and appropriate fee as assessed by the Department of Public Works.

H. Site Management and Controls

1. Regular trash and debris shall be managed appropriately and its removal shall comply with all local, state, and federal regulations.

2. Street cleaning and sweeping shall be followed as outlined in the erosion and sedimentation control notes and report. Damage to the street shall be avoided and shall be the responsibility of the contractor.

3. Dust shall be controlled and shall comply with Section 25-129 and the erosion and sedimentation control notes, plan, and details.

4. Noise shall be controlled and shall comply with Section 17-18 and Section 25-129.

5. Rodent Control shall be provided, if applicable, by a professional exterminator and shall be consistent with Chapter 22 of the City Code.

6. Snow and Ice Removal shall be provided. Pursuant to Section 25-173, the Contractor shall ensure a safe means of travel within the work zone by the following steps:

    a. Snow/ice removal or commence automatically from 1" or greater of snow or ice
    b. Remove snow as needed within the work zone, including parking spaces. Driveways and site lines shall not be blocked by piles of snow.
    c. Clear all walks and ramps within the work zone
    d. Sand or salt as needed
    e. Clear all basin or drainage to help snow melt
    f. The above steps shall be carried out Sunday-Saturday including holidays.

I. Erosion & Sedimentation Control

1. The Contractor shall install all erosion and sedimentation controls as depicted on the approved Construction Management Plan, C-03, and the approved erosion and sedimentation control report, prior to the pre-construction meeting for inspection by the City. The Contractor shall regularly inspect the control measures, no less than weekly and after storm events (0.5" or more in 24 hours). Additionally, temporary or permanent stormwater management systems shall be inspected and maintained to ensure working order. The Contractor shall document all inspection activities and

corrective actions and be prepared to provide these documents for inspection by the City, Maine Department of Environmental Protection (MDEP) or the U.S. Environmental Protection Agency (EPA) upon request.

2. Due to the existing sparse landscaping on site, no protection during construction will be necessary.

3. Stored materials shall be identified and avoid being located under/near trees.

J. Construction Staging Area

1. The Contractor shall submit a plan with locations depicted for the location of material staging areas, the location of on-site temporary construction trailers, the location of on-site truck delivery holding areas, the location of on-site truck washing stations, masonry mixing stations, the general location of the construction security fence and the general location of temporary construction dumpsters. This plan shall be submitted at or prior to the pre-construction meeting. Any open storage areas shall be shown on the plan.

2. Delivery Truck Holding Areas On-Site: The majority of materials delivered to the site will be scheduled such that they are able to be off-loaded immediately. On days when the construction activities require multiple truck deliveries, these deliveries will be carefully scheduled so that there is always adequate on-site area for the holding of trucks until they can be unloaded. Once at the site all vehicles will be brought within the fence line and will make every attempt to avoid queuing on public streets. If, for any reason, on-site holding of trucks is not feasible, an off-site location must be designated and shown on the submitted plan referenced above in J.1.

3. All deliveries for materials shall comply with the City's noise requirements.

K. Parking During Construction

1. Adequate parking for construction workers shall be provided along North Street or arrangements for off-street parking at an off-site location shall be provided.

2. Truck Routes and Volumes: The following quantities are estimated as part of the reconstruction:

    - Gravel & Stone – 350 CY. Earthwork subcontractor(s) pit to project site.
    - Hot Mix Asphalt – 115 tons. Paving subcontractor(s) pit to project site.

L. Special Measures as Necessary

No special measures are necessary for the proposed reconstruction.

R. Solid Waste Disposal

The property management company or Owner shall be responsible for locating the solid waste and recyclable material to the space allocated for solid waste storage determined by the Property Manager.

The solid waste containers will be fully enclosed and screened from the public view on both properties.

ACORN ENGINEERING, INC.

S. Parking Analysis

The proposed project at 128R North Street proposes to utilize the existing shared driveway, build 6 condominium units, and provide one open air parking space per unit on the ground level of the structure. This proposal accomplishes a public policy goal of the City in that the proposed driveway will allow off-street parking for the new development as well as existing neighboring properties.

The 6 parking spaces exceed the required 3 by more than 10%. We see off street parking as an advantage for the neighborhood which is seeing an increase in development activity. The industry standard for condominium units is to provide a 1:1 ratio for parking, which is a common occurrence in the R-6. This project proposes a 1:1 ratio of spaces to units which will free up space on North Street and the surrounding street network for others to park on-street.

The proposed project at 126 North Street proposes to reutilize the existing driveway, build 5 rental units, and provide two open air parking spaces on the ground level which meets the City of Portland Land Use requirements.

T.

December 23, 2019

Re: Side setback 128R North Street

Buildings in the vicinity of 126 and 128R North Street feature side setbacks that predominantly are shifted towards one side. The proposed building at 128R North features a setback that is 8.56’ on one side and 12.13’ on the opposite side providing the required 20’-0” cumulative setback required.

The pattern supports vehicular traffic and off-street parking, which our projects do as well. The wider setback was also positioned in our project to provide a larger buffer to the single-family houses on the South side or our project.

Neighborhood examples of this development pattern include:
1) 116 North Street: approximate 5’-0” setback on one side and 15’-0”* on the opposite (facing Walnut Street).
2) 104 North Street: approximately 4’-6” setback on one side and 12’-0” on the opposite
3) 91 Walnut Street: approximately 3’-0” setback on one side and 9’-0” on the opposite
4) 94 Walnut Street: approximately 13’-0” setback on one side and 17’-0” on the opposite



City of Portland GIS Map of Neighborhood (128R North is outlined in blue)

*Setbacks are estimated using the ‘measuring tape’ tool in the Portland GIS database with satellite image and parcel boundaries as underlays. For visual clarity the satellite image was not used on the map above.



1: Bayview Heights (60 units)
2: Island View Apartments (70 units)
3: Munjoy Heights (29 units)
4: Northern Burner Supply
5: Forage Market

North Street represents the high point on Munjoy Hill. Sheridin Street, below is approximately 30'-0" lower than North Street. Washington Avenue is approximately 50'-0" lower than North Street. As a result even the upper section of Munjoy Heights is not visible from Washington Avenue.

The only vantages the site is visible from are from the Bayview Heights parking lot to the North of the site and the end of the driveway leading to the rear lot. A row of mature pine trees acts as a buffer between the site and Bayview Heights parking lot.

128R North Street

is a rear lot immediately adjacent to Bayview Heights senior apartments and across the street from the Island View Apartment complex. To the West the parcel is bounded by Munjoy Heights Condominium project.

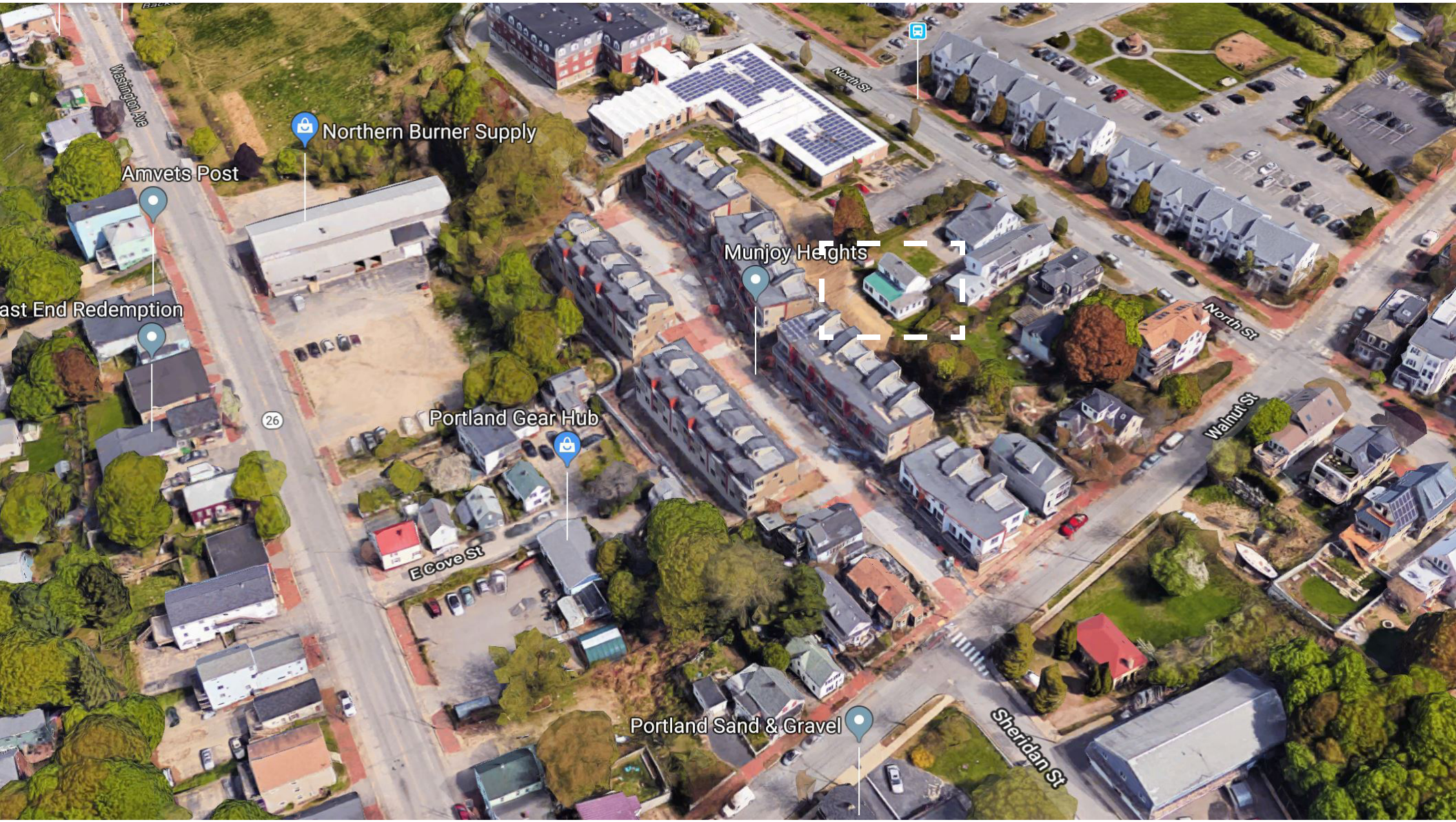
The unique topography of the surrounding area, with steep elevation change means the proposed four-story, six-unit building will only be visible from across the Bayview Heights parking lot, as viewed through a mature row of Pine Trees and at the driveway entrance to the site, viewed at a distance of 100'-0".

The project will house six condominiums and six parking spaces. The building includes a first floor workforce housing unit. All units will be FHA compliant. The owner-occupied building has several pre-buyers (long-time friends) and Munjoy Hill residents who are looking forward to calling this building home.

No rooftop decks are proposed and none of the roof-mounted condensers are visible from the street.



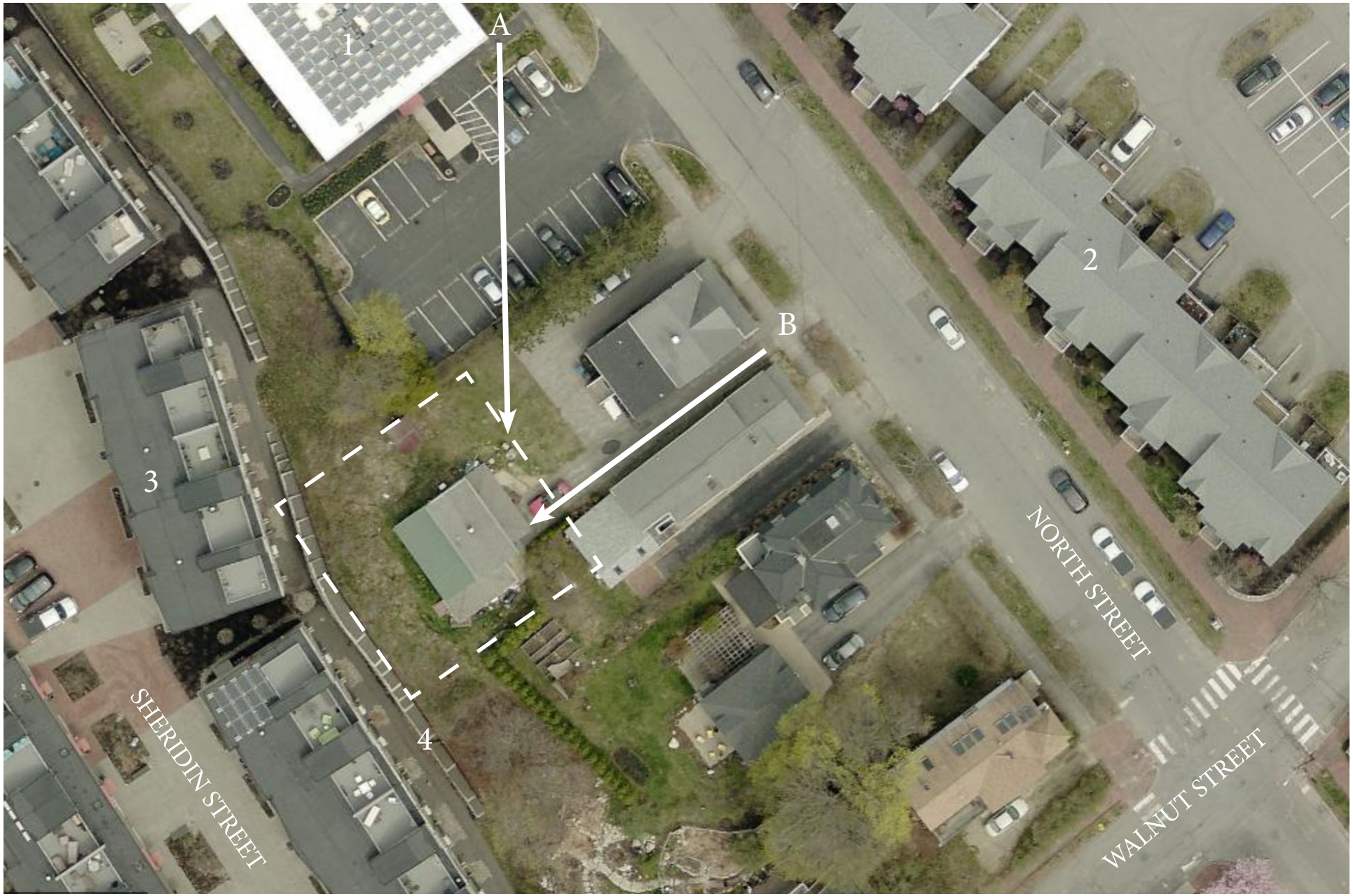
Bird's eye view of site looking towards Back Cove. Bayview Heights at right, Island View Apartments at bottom and Munjoy Heights at center.



Bird's eye view of site looking towards Falmouth. Munjoy Heights at Center, Bayview Heights at top and Island Avenue at top right.



Bird's eye view of site with Washington Avenue at bottom, Bayview Heights at top left, Island View Apartments at top center and Munjoy Heights at center.



A: Rendering location at sidewalk
B: Rendering location at driveway

1: Bayview Heights (60 units)
2: Island View Apartments (70 units)
3: Munjoy Heights (29 units)
4: Retaining Wall



126 North Street (left) also owned by applicant driveway at center to be utilized for accessing rear lot. Existing two-story building on rear parcel (128R North). 128 North at right.



Rendering Location B: 128R North parcel as viewed from existing/proposed driveway



Rendering Location A: sidewalk adjacent to Bayview Heights senior housing parking lot. Note existing Pine Tree buffer is not on applicants parcel.



128R North Street as viewed from within parking lot at Bayview Terrace. Note Munjoy Heights extending above the retaining wall past the smoking area at right.



Munjoy Heights as viewed from parcel



A section of Island View Apartments across the street. The complex has a mixture of single and mulled windows and is clad in clapboard-style lap siding. Parts of the complex are three stories high and some sections are four stories.





Bayview Heights Apartments, immediately adjacent to the site, features buildings that are four-stories high with a mansard roof and a one-story section adjacent to the parcel with a flat roof.





Two houses on the corner of North Street and Walnut showing the character of the neighborhood. The fascia and frieze board of the house, at right, inspired the design of our project.





The window trim, corner board, frieze and eave detail of the house on North Street (at left) were utilized as sources that inspired the trim details on our project. At right, the triple-decker on Walnut Street has a broad eave, flat roof and corner boards similar to that utilized in our project.





A three-story building with small punched openings on North Street and triple-decker with lap siding and flat roof, also along North Street.





Two adjacent buildings on Walnut Street, a triple decker with flat roof and clapboard lap siding and a two-story building with gable roof.





Elevated flat-roofed building at left and Munjoy Heights complex as seen from Walnut Street on right.



Munjoy Heights at Right at Sheridan Street entrance illustrating steep grade change



Munjoy Heights which borders the site to the West





New flat-roofed four-story building along Washington Avenue (at right) and new three story buidling along Walnut Street.

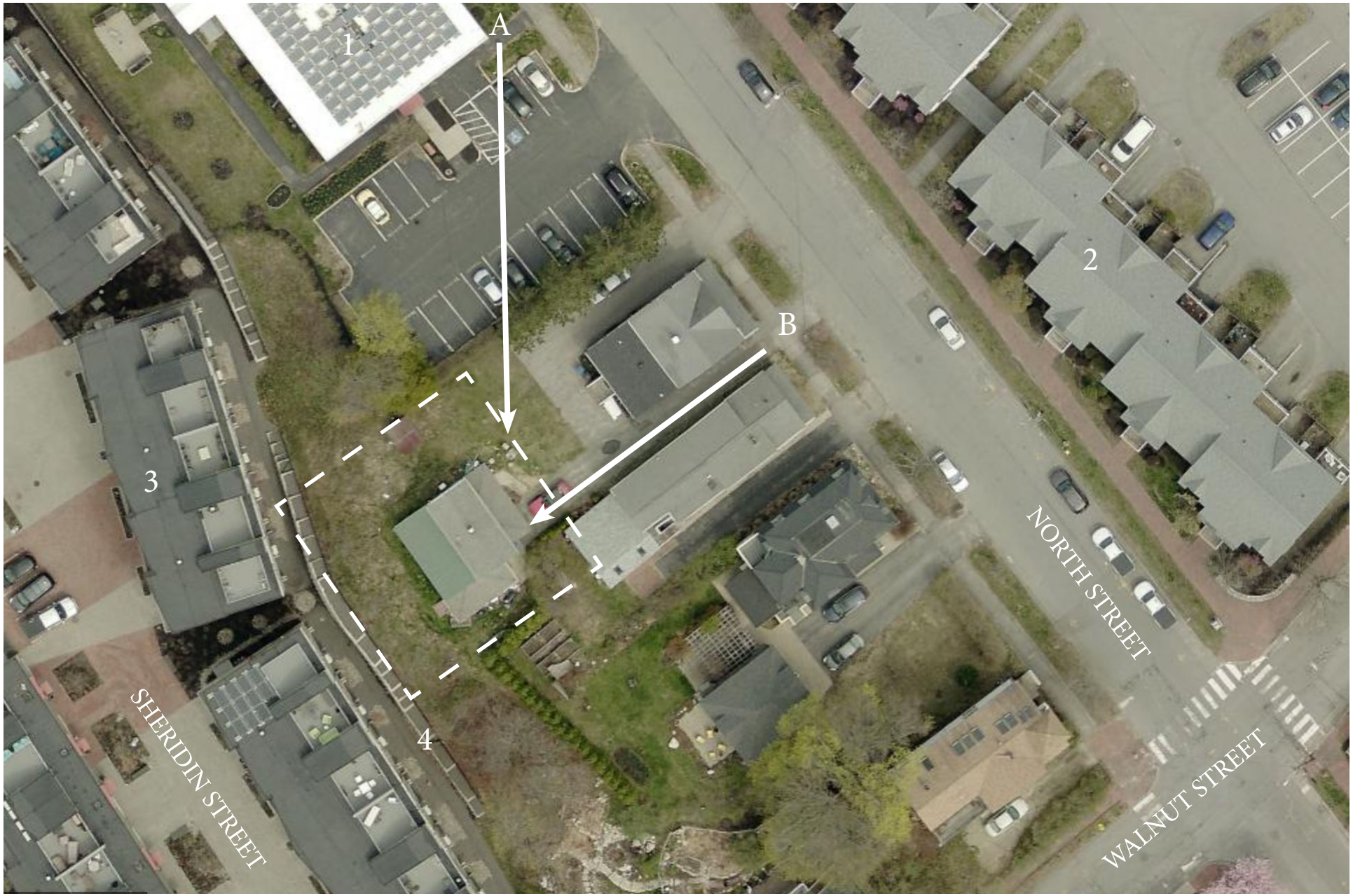


Looking towards site from corner of Walnut and North Street.



Looking up towards Munjoy Heights from Washington Avenue near the Northern Burner Supply parking lot. Houses along North Street are not visible due to the elevation change.

[Intentionally blank]



A: Rendering location at sidewalk
B: Rendering location at driveway

1: Bayview Heights (60 units)
2: Island View Apartments (70 units)
3: Munjoy Heights (29 units)
4: Retaining Wall

Rendering Location A - Existing












128R

U.

Dear Neighbor: September 7, 2019

On behalf of Upright Properties LLC and the families who will live in the residences, I am pleased to invite you to a neighborhood meeting to discuss our plans for the proposed project at 128R North Street within the R-6 zoning (Munjoy Hill Overlay) district. The project includes the redevelopment of this rear lot into a 4-story residential building. As this is primarily a project to provide housing for 5 known households, the Developer has elected to only build 6 units, instead of the allowable 8. Moreover, 90% of the building will be substantially shorter than the allowable maximum height and over 40% of the site will be dedicated to greenspace and gardens. A ground-level parking garage will allow for one parking space per unit with additional storage space for bicycle parking. Because the site sits about 100 feet from the street, the building will have a minimal impact on the streetscape but the entrance will be re-built, improving the sidewalk to City standards.

Meeting Location:	The Root Cellar – 94 Washington Ave., Portland, ME 04101
Meeting Date:	Wednesday, September 18, 2019
Meeting Time:	5:30 p.m.

The City code requires that property owners within 500 feet of the proposed development and residents on an "interested parties list" be invited to participate in a neighborhood meeting. A sign-in sheet will be circulated and minutes of the meeting will be taken. Both the sign-in sheet and minutes will be submitted to the Planning Board. If you have any questions regarding the neighborhood meeting, please don't hesitate to call me at 207-749-9656.

Sincerely,
Joshua Wojcik
Project Builder and (Future Resident of 128R North St)

V.

Planning Division
City of Portland, Maine
389 Congress Street, 4th Floor
Portland, ME 04101

September 20, 2019

Subject: 128R North Street Neighborhood Meeting

I, Tracie Reed, hereby certify that a neighborhood meeting was held on September 18, 2019 at the Root Cellar at 5:30 p.m.

I also certify that on Friday, September 6th invitations were mailed to the following:

1. All addresses on the mailing list provided by the Planning Division which includes property owners within 500 feet of the proposed development.

2. Residents on the "interested parties" list.

3. A digital copy of the notice was also provided to the Planning Division (jmy@portlandmaine.gov and ldobson@portlandmaine.gov) and the assigned planner to be forwarded to those on the interested citizen list who receive e-mail notices.

Sincerely,

Tracie J Reed

Tracie J. Reed, Maine Licensed Architect, NCARB
Project Architect
Dextrous Creative, LLC

Attached to this certification are:

1. Copy of the invitation sent
2. Sign-in sheet
3. Meeting minutes
4. Presentation materials

128R North Street
Neighborhood Meeting Minutes

Date: September 18, 2019
Time: 5:30-8:15 p.m.
Location: Root Cellar
Attachments: Presentation materials and attendance sign-in sheet

The Meeting started at approximately 5:35 p.m.

Applicant Josh Wojcik of Upright Properties welcomed neighbors and introduced his family and project architect, Tracie Reed. Josh provided an overview of the project for neighbors, introducing them to pre-sale buyers, a history of the site and project goals of pooling the family's resources together to develop an energy-efficient building in the neighborhood the applicants currently reside.

The presentation was frequently interrupted by neighbors who posed a variety of questions, expressed concerns about the specific project and general land use policies in the neighborhood.

-A neighbor on North Street expressed uncertainty with the boundary of the proposed historic preservation district and its implication on the project review.

-Neighbors asked for details regarding membership of the LLC which owns and will develop the property. Josh clarified that the LLC only owns 128R North Street. He declined to provide specific details as to the owners out of respect for their privacy. The LLC will build the properties, the five friends are pre-sale buyers who are prequalified to purchase the units. Architect Tracie Reed explained to neighbors that the planning board applicants are required to demonstrate financial capacity as part of their application.

-Neighbors expressed concerns the group may not be able to complete the project financially if unexpected expenses occur such as damage to the retaining wall during construction. Architect Tracie Reed explained that the project's design team included the geotechnical, civil and structural engineers who designed the wall. If the wall is damaged during excavation or construction the wall will be repaired. Reed explained that the city has a list of pre-qualified excavators who are able to do work in the city. The team has conducted geotechnical borings and analyzed bearing on the wall as part of the project's feasibility. Josh explained that the project budget includes contingency funds. Without them the bank would not have offered terms.

-Numerous participants expressed concerns over the height of the building. Several Munjoy Hill residents are concerned about views from their roof decks and kitchen windows. They expressed concerns that units may sell and the pre-sale buyers introduced may eventually move, leaving neighbors they may not like. Josh and Tracie explained that due to the recently passed Munjoy Hill Overlay the side setback is increased by 10'-0" overall which allows the fourth floor, and that the building includes a work force unit as required by the new regulations. The 13'-0" elevator overrun is the only section of the building that reaches the 45'-0" maximum in the zone.

-A North Street neighbor expressed disapproval that the existing building was being demolished. She recommended that the applicant instead renovate the front of 126 North St, a building owned by Wojcik, without altering the exterior and build a two-unit on the rear site. The neighbor also noted that she felt the building is too big for the site, that it is out of proportion with neighboring buildings and should be smaller with outside parking similar to that of other Munjoy Hill residents. She questioned whether the building received special variances due to being a rear lot to which the applicant clarified it still met and was required to meet all the requirements of front lots in the overlay including the 50% active

living space requirement added last year by the overlay language. Tracie clarified that if the building had surface parking it would be required to be at the back of the building facing Munjoy Heights and would be difficult to screen due to easement restrictions. Neighbors from Munjoy Heights expressed that they do not want to look out the rear of their building at parked cars.

-Several participants suggested the applicant consider underground parking so the building would appear to be three stories from the street.

-Josh clarified that a decorative screen to support climbing vegetation at the rear of the building is intended to screen vehicles parked under the building from Munjoy Heights. Josh showed a possible concept for screening the garage level and several of the participants from Munjoy Heights noted the screening improved the concept. Tracie clarified that the 10'-0" maintenance easement existing between Munjoy Heights and the property prohibits any structures or plantings like shrubs or trees with roots that may damage the retaining wall's integrity.

-Several neighbors were concerned that shrubs on the property will be removed as part of construction and are highly valued by Munjoy Heights residents who overlook that section of the property. Other neighbors pointed out that pointed out that most of the larger trees behind Munjoy Heights would not be impacted by the project, since the rear of the property is currently mostly clear of trees. Tracie explained that the project would be planting new trees as required by the city, and that our vegetation plan would be reviewed by the city's horticulturist as part of our application. She reminded residents that restrictions by the neighbors own easement prohibits many plant types in the rearmost 10'-0" of the property to protect the structural integrity of their retaining wall. Neighbors asked for a current satellite image of the site that would clearly delineate which shrubs would be removed. The satellite image underlay shows the Munjoy Heights complex nearing the end of construction and seeding has not occurred at this time. Josh reminded neighbors that any plants installed after construction would be quite young and should not be within the easement.

-Neighbors inquired about lot coverage. Josh explained that coverage is 57% leaving 43% open space, more than the 20% requirement in the zone.

-Some neighbors expressed disappointment that the application was not for a two-story home. Many had made the assumption when they first heard about the project that it was going to be a single-family residence and only realized the property was a six-family after receiving the postcard. Josh stated that he met with or repeatedly tried to schedule meetings with all adjacent individual homeowners and the Munjoy Heights Condo Association. Some neighbors declined the opportunity and some in Munjoy Heights neighbors were unable to attend the organized site walk with their Association. A neighbor clarified that, after receiving the demolition notification letter, he had called Josh and that Josh had been clear that the project was going to be possibly be a 5 or 6-unit building.

-Neighbors asked where trash would be stored. Josh clarified that it would be under the building and screened from view.

-Adjacent neighbors on North Street are concerned about windows overlooking their yard and asked how many in the stair/elevator tower would face their property. Josh explained that no windows in the stair tower face their yard and asked if they wanted any to face their yard. Their response was "no." Munjoy Heights residents expressed concerns over residents of the condo being able to look at their roof decks. Munjoy Heights neighbors expressed concern over not wanting to view a solar array if one was added in the future from their roof decks or property. Tracie explained that

they would not be able to see them from their buildings due to their proximity and OSHA requirements that that the panels be located 10'-0" from the roof edge (to avoid fall protection screening) if added at a future date.

-Munjoy Heights residents were interested in a comparison to the height of their roof decks relative to the building. Josh clarified that the roof decks of the Munjoy Heights complex will be approximately at the second-floor level of the proposed project. It was also explained that their buildings ground floor is 30 feet lower, due to the sloping topography.

-Residents challenged the architect's assertion that the building is minimally visible, if at all, from the corner of Walnut and North Street and not visible from Washington Avenue due to the long distances and elevation changes. She did note that it is likely visible from some points in Bayside or driving along I-295. She clarified that photos taken from Washington Avenue illustrated that the second tier of Munjoy Heights is not even visible and the photo was included in the planning packet. A photo of the Walnut Street intersection was also included.

-A new resident of Portland and Munjoy Heights was upset that a rear infill project of the scale is being proposed and asked the applicant to provide examples of this in the city. The architect said she had done a three-story, single-family home on a rear lot in the zone. Josh suggested that although he wasn't certain, Munjoy Heights was possibly the most recent infill project that was mostly sited in the rear of other properties. The Munjoy Heights neighbors did not agree that this was comparable.

-Several Munjoy Heights residents expressed concern that the building would completely shade their units and block sunlight. Other neighbor participants noted that minimal shading should occur based on the sun's path.

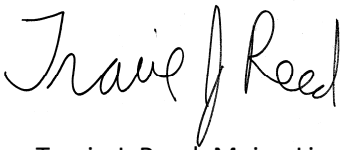
-Neighbors recognized that the meeting was emotional for all with Josh and his family excited about their project and neighbors concerned about changes to their neighborhood.

-Josh thanked everyone for taking the time to attend the meeting and for their feedback. He apologized for any confusion about the number of units.

Meeting concluded at approximately 8:15 pm.

The above-mentioned material was as interpreted and recorded from handwritten notes. Please note and relay any discrepancies or disputed information in the recorded minutes to the below address so that they can be reviewed, revised, and resubmitted as necessary.

Recorded by:



Tracie J. Reed, Maine Licensed Architect, NCARB
Project Architect
Dextrous Creative
traciereed@dextrouscreative.com

X.

128R North Street

Neighborhood Meeting
September 18, 2019

Name	Organization	Address	Phone	Email
Terry Robbins	Munjoy Heights	206 Sheridan	424-333-5443	trobbins90230@gmail.com
KevinSchochat	"	215 "	917.597.4454	kevin@kevinschochat.com
Leslie Hart	"	215 Sheridan	917 364 3682	blesliehart@gmail.com
PETER BAGG	"	199 SHERIDAN	207-318-0992	PETERBAGG1@GMAIL.COM
Martha Emerson		340 E.P.	207-871-8900	
Munira Naqui	"	203 Sheridan	207-838-1267	mn — —
PATRICIA BAGG	"	199 Sheridan	207.253.5156	PATBAGG@GMAIL.COM
A-NAQUI	"	203 Sheridan St.	207-838-8740	ALI.NAQUI@yahoo
Vana Carmona		105 North	207 420-6962	vanacarmona@gmail.com
Betty Lorber	Munjoy Heights	225 Sheridan		Betty.lorber@gmail
Bud Pollak	munjoy heights	225 Sheridan	203-984-1833	BPOLLAK64@yahoo
Richard MARINO	munjoy H.	226		MPARINO04102@YAHO.
TRACY A. DAVIS	MUNJOY HTS	201		TDAVIS@URBAN-ADEL.COM
Michael Kennedy	"	201	917-940-2509	Michael.Kennedy11@
MANN		122 North		lindsaymann@outlook.com
Sage Friedman MPM		47 Lafayette #2	207-233-5888	SFriedman@mpmcare.com

Travis Reed Dett. Carroll 77 Newbury

Y.

128R

128R North Street

Once upon a time

there was a group of friends who wanted to figure out a way to **live an affordable life on Munjoy Hill.**



Some had known each other for **decades.**







Others were **more recent** additions.



Munjoy Hill had gotten so expensive

that this group quickly realized the only way to make their dream work was to pool their resources. By doing so, they could create a home together that would be enjoyable and that would have minimal, **predictable** operating costs.

This second part is especially important to those in the group who are on a **fixed income.**

To Buy or Build?

Buy

Accomplishing **Net Zero** with a large existing structure would be **prohibitively expensive.**

Build

Super Insulated Building
+ Energy Efficient Heating and Cooling
+ Space on Roof for PVs
= **Net Zero Capable Building**

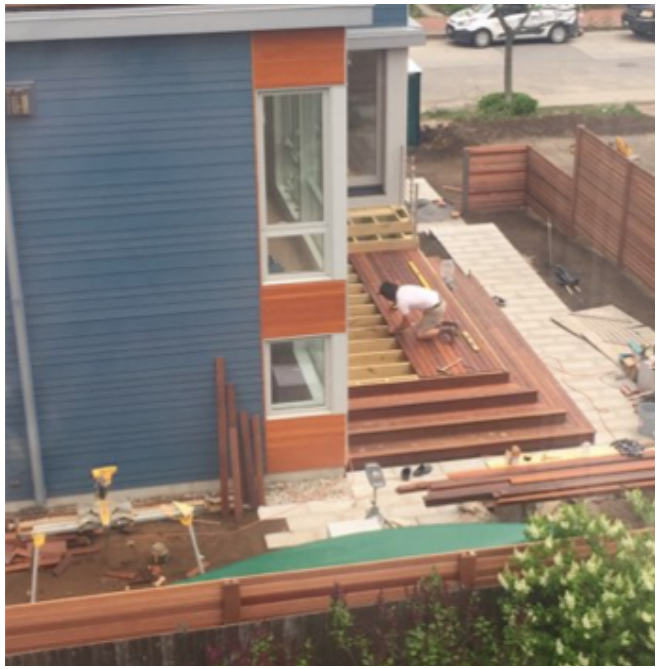
Some place a high value on the aesthetic flourishes of the Victorian style;
This group highly values **energy efficiency** and a **small carbon footprint.**

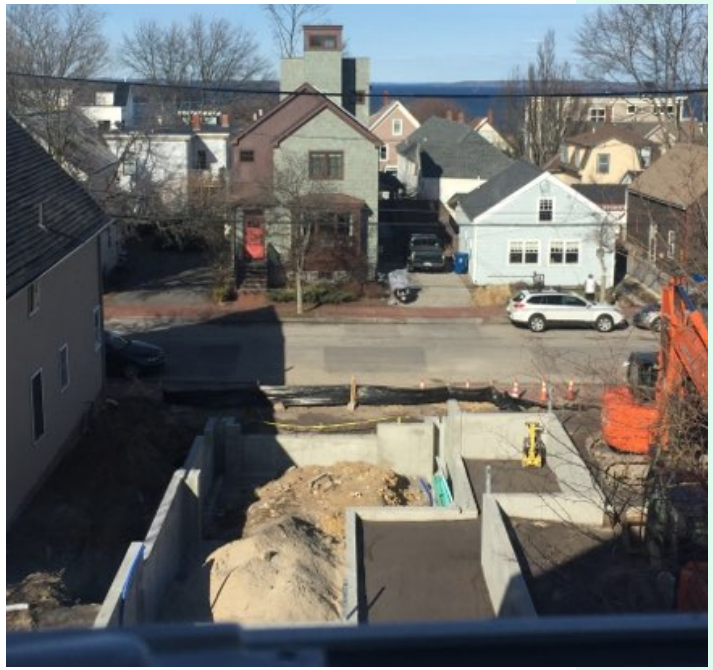


So they found

a property that was on the edge of the neighborhood, **away from the proposed historic district,** and which was set back far enough from the street that their building would be quite **hard to see** from most vantage points.







They were aware

that many in the neighborhood were tired of deep-pocketed developers changing the neighborhood and causing a racket.

And, having lived through the construction of such projects in their own back yards, **they understood these concerns only too well...**

And they came up with **a design that fits them all,** which is actually shorter than many of the existing homes on the street.

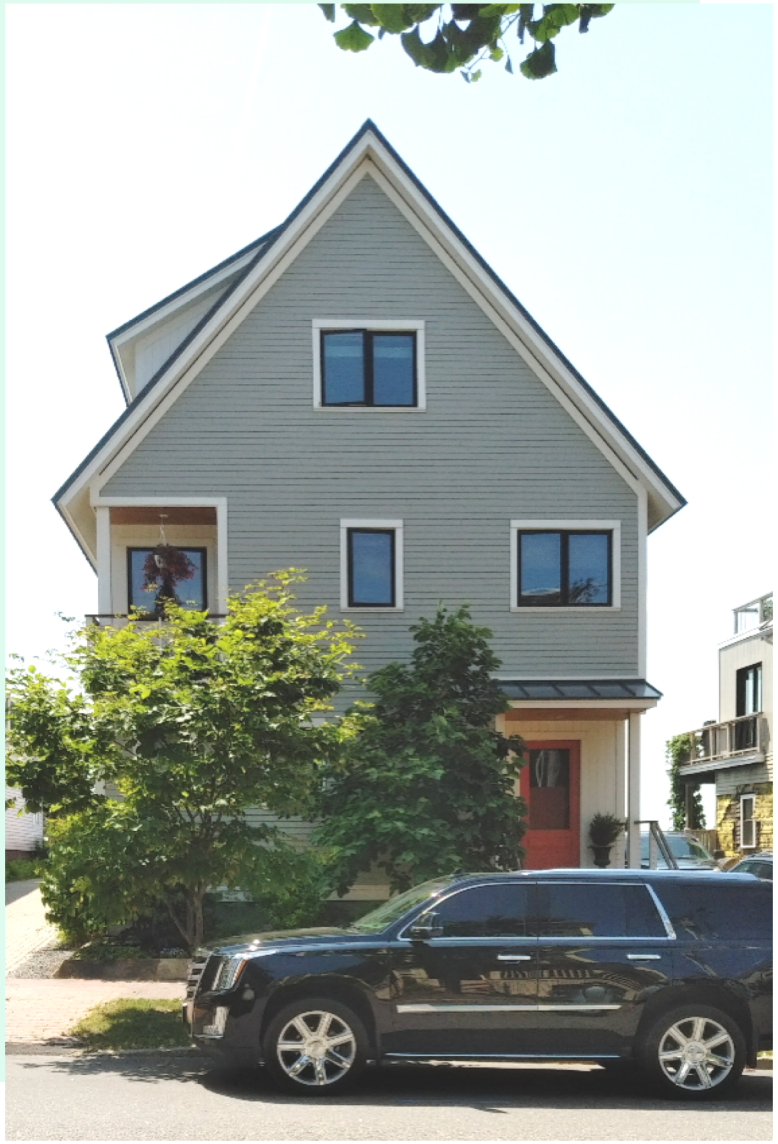


And given how far from the street it will sit, their new space **will appear smaller than most of the buildings on North Street.**

We hope you like it!







The Design

pulls **inspiration from the surrounding buildings** in the neighborhood.



The Design

features street-facing decks, which will help keep eyes on the street.

The Design

features on-site parking for each unit to help minimize congestion on the streets.



We are working with the City

to determine the most appropriate color scheme.

1



2





White clapboards are prevalent in the neighborhood.

But dark colors tend to make buildings look smaller.







We think both look attractive,

but we appreciate your input, too.

This is the only perspective

from which you can see most of the building from the street.





Z.

ACORN ENGINEERING, INC.

Shukria Wiar – City Planner
Planning Division, City of Portland
389 Congress Street
Portland, ME 04101

December 18, 2019

Subject: Comment Response Letter
126/128R North Street Redevelopment – Portland, Maine

On behalf of Upright Properties, LLC we are pleased to respond to the comments that we've received thus far.

Shukria Wiar, Planning Comments

Comment – *The applicant will need to submit a copy of the actual easements for the ones below to establish what restrictions (if any) as it impacts scope for site plan standards to be addressed:*

- *Permanent right-of-way with 128F North Street (includes the rights to use the corridor for utilities). Reference CCRD Bk 1143, Pg 307.*
- *Permanent retaining wall maintenance easement with Munjoy Heights. Reference CCRD Bk 32237, Page 104.*

Response – Please refer to Document C for this information.

Comment – *Evidence of utilities' capacity to serve the development.*

Response – Please refer to Document P for this information which includes the updated ability to serve letter from Portland Water District.

Comment – *Manufacturer's verification that HVAC and manufacturing equipment meets applicable state and federal emissions requirements - Show locations of HVAC and mechanical equipment.*

Response – The architect will provide this information once a model is selected. The selected model will comply with the applicable state and federal emissions requirements.

Comment – *Is the project utilizing heat pumps, and if so, where will you be locating the compressors?*

Response – Yes, the project will utilize heat pumps for the 128R building at a minimum. The compressors will be located on the roof (set back from the street towards the middle of the building) and under the rear decks.

Comment – *Provide cut sheets and photometric plan for all proposed exterior lights.*

Response – Please refer to Document N for this information that was included with the updated Site Plan submission.

Comment – *Minimum Side Yard Setback (8.59 on the easterly side of the property). Please document how it is being met: Buildings more than 35': 10' for all side yards, except that a side yard no less than 5' is permitted when used to continue a documented built pattern of the surrounding streetscape, in which case a proportional increase in another side yard must be provided.*

Response – The cumulative side setbacks are a minimum of 20' as required. One side setback is less than 10' due to the documented built pattern of the neighborhood. Please refer to the revised Document T. for further analysis.

Comment – *Condo Docs need to be submitted.*

Response – Because the condo docs are partially contingent on how the project progresses through the first workshop, the draft condo docs are anticipated to be submitted prior to the Final Hearing.

Chief Mike Thompson, Fire Department Comments/Recommendations

Comment – *A sixteen-foot (16') access road, capable of supporting fire apparatus, shall be required to provide emergency vehicle access to this building (See additional comment added 11/27/2019)*

Response – A sixteen-foot (16') access road, capable of supporting fire apparatus has been provided within the revised plan set.

Comment – *The Fire Department approves the site plan as shown in: Site Plan.pdf V3*

Response – Thank you for your review and approval.

Victoria Violent, Housing Program Manager

Comment – *It appears that both buildings will be greater than the maximum allowable height of 35', subsequently both buildings trigger Section 14-140.5 (c) Munjoy Hill Neighborhood Conservation District maximum height dimensional standards.*

Response – The proposed 126 North St. property is below the 35' height threshold. Please refer to sheet C-30 for these calculations which show the building height at 33.3'.

Comment – *Based on the floor plans provided for 128 R North, the workforce unit meets the requirements of Section 14-140.5 (c).*

Response – Thank you for your review.

Comment – *Has the applicant submitted floor plans for Phase II (126 North Street)? As a separate building, 126 North also needs to meet the requirements of Section 14-140.5 (c).*

Response – The 126 North Street building is not anticipated to provide a workforce unit given its height is below the 35' threshold and the unit count is less than 10'.

Mike Tremblay, DPW

Comment – *The driveway serving 126 North Street is unacceptably narrow in the vicinity of the parking spaces. There is only 14 feet of maneuvering room behind the parking spaces, which would likely require multiple maneuvers to enter and exit. The Applicant should explore providing access to these parking spaces via the driveway serving 128 North Street; turning this driveway into a shared driveway and allowing 16+ feet of maneuvering space for vehicles. This would allow the driveway serving 126 North Street to be closed, which is desirable. It may also allow additional options for the design of 126 North Street, including (but not necessarily limited to) shifting the building eastward, allowing for a wider shared driveway.*

Response – Please refer to the attached AutoTurn analyses. Because of the extra width provided for the parking spaces, the drive aisle is sufficient for the typical architectural design vehicle to cleanly pull in and out without the need for multi-point turns.

Comment – *While closure of the 126 North Street driveway is not required, as it exists today, the spacing between the 126 North Street and 128 North Street driveways are not optimal. As there is not enough separation to achieve a legal parking space, since parking is restricted within 5 feet of any driveway. Closure of the 126 North Street driveway could, therefore, add two additional legal on-street parking spaces.*

Response – The project as designed maintains the typical built pattern and rhythm along North Street of driveway, structure, driveway, structure while providing the requested 16'+ feet of emergency access width to the 128R building, therefore no change to the historical built pattern is proposed.

Furthermore, 126 North Street does not have an existing access easement across 128F North Street.

Comment – *The accessible parking space in the 126 North Street parking area should be designed as 11 feet wide with a 5-foot clear area, or 8 feet wide with an 8-foot clear area, in order to accommodate a van as required by ADA. As such, the accessible space should be shifted toward the back of the building at least 3 feet, in order to provide 8 feet of clear width adjacent to the main entrance.*

Response – We have revised the Site Plan to provide 16' of width for an accessible van space.

Comment – *There are a significant number of service connections. Trench repair for these services should be conducted as one. Storm drain, sewer, and water connections should be repaired as one, uniformly extending all the way to the centerline of the roadway. Gas service trenches should be repaired as one, extending for the full curb-to-curb width of the roadway. I have attached a rough sketch of this.*

Response – We have revised the proposed pavement cut to provide more continuity in the

patching; however, the separation of pavement cuts between phases has been maintained due to various utility companies' requirements, phasing requirements and existing utility easements.

Comment – *The Applicant proposes an overhead electric/telecom service across North Street from a proposed utility pole #17H, before converting to underground at an existing-to-be-replaced pole #18.1. While an underground service to the development sites is desirable, the Applicant should explore moving these utilities underground before crossing North Street, rather than proposing a new overhead crossing of North Street. Applicant should confirm whether the existing overhead connection will be removed.*

Response – We will explore this option with CMP; however certain horizontal separations may not be feasible. The existing overhead lines will be removed prior to demolition of each respective building.

Comment – *Confirm that the reconstructed sidewalk along the frontage is designed to a 1.5% cross slope (2% maximum). One set of spot grades appears to confirm that this is the case, but additional spot grades at the bottom and top of driveway and back of sidewalk may be helpful.*

Response – We have added additional spot grades to further illustrate the proposed cross slope of 1.5%.

Comment – *The electric meter for 126 North is proposed for the front of the house. This should be relocated to the side if at all possible.*

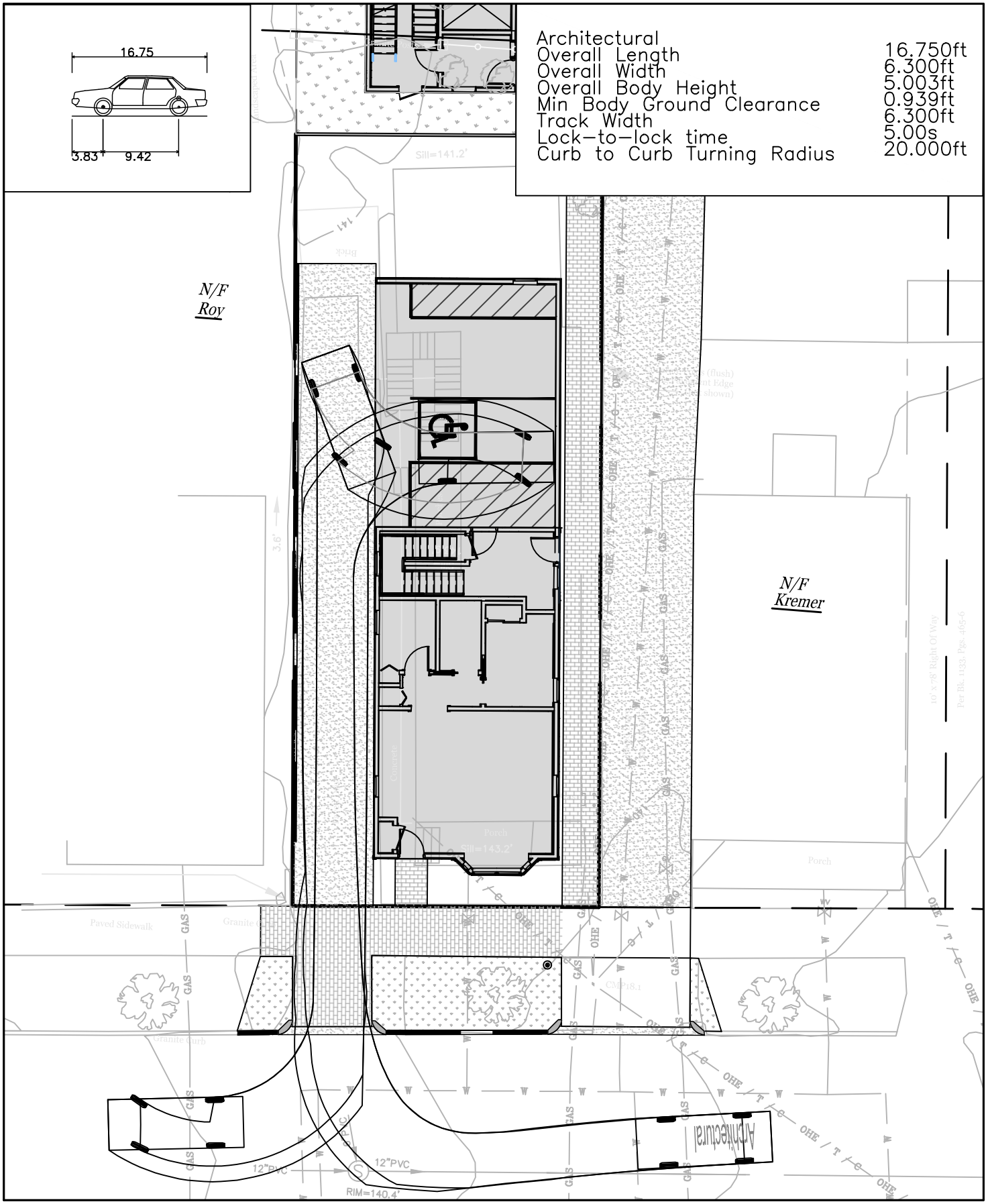
Response – The meters have been relocated to the side of the building.

Please let us know if you have any additional questions or comments.

Sincerely,

Samuel J. Lebel, E.I.
Project Engineer
Acorn Engineering, Inc.

William H. Savage, P.E.
Principal
Acorn Engineering, Inc.



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DRAWING NO.
EX

FILE:	1116_CIVIL
DATE:	12/17/19
JN:	1116
SCALE:	AS NOTED
DESIGN BY:	SJL
DRAWN BY:	ZMS
CHECKED BY:	WHS

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ACORN ENGINEERING, INC. P.O. BOX 3372
PORTLAND, MAINE 04104 (207) 775-2655

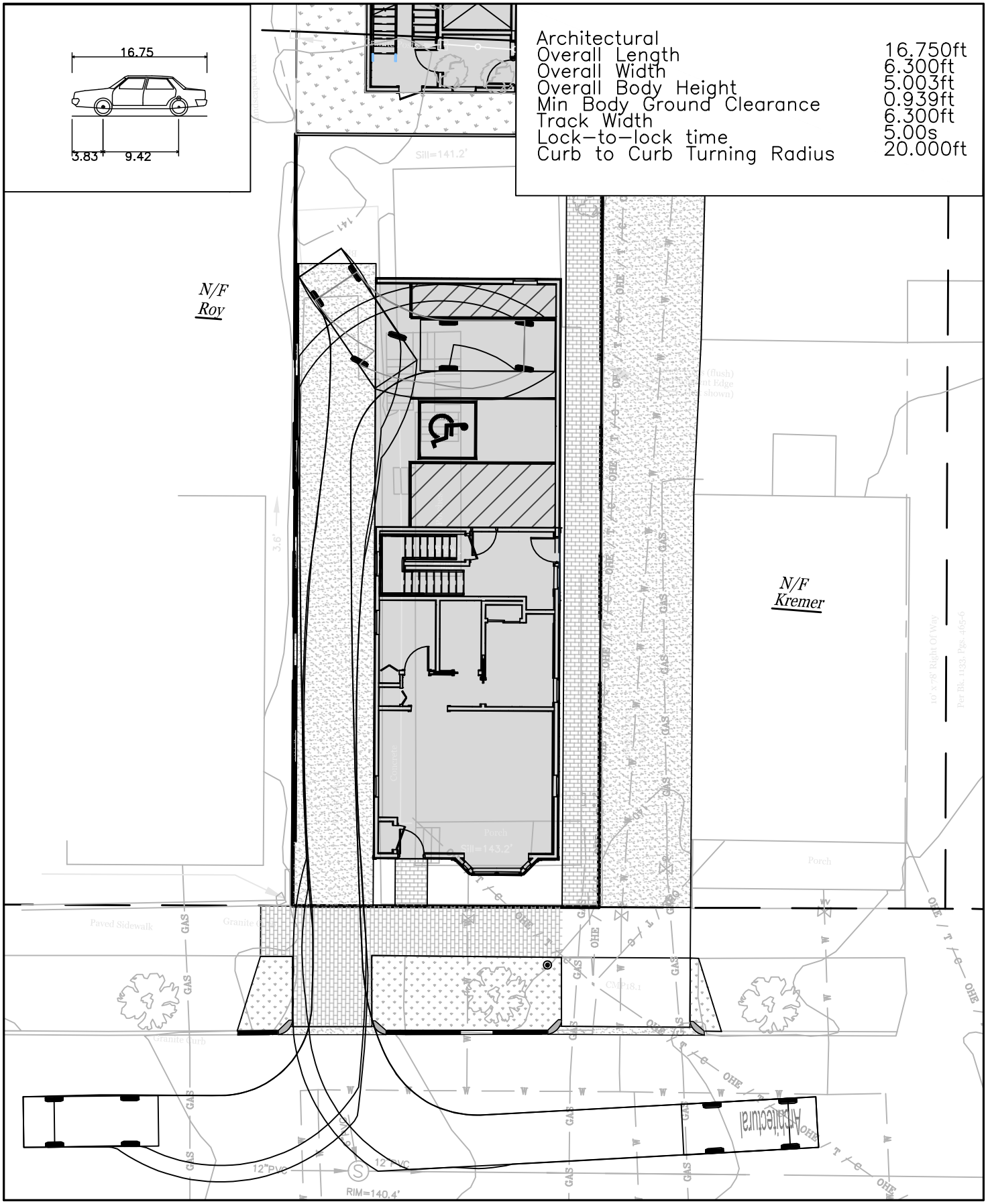
DRAWING NAME:
INTERNAL PARKING EXHIBIT

PROJECT NAME:
126 NORTH STREET REDEVELOPMENT

CLIENT:
UPRIGHT FRAMEWORKS, LLC
PORTLAND, MAINE 04101

ISSUED FOR	BY	DATE
COMMENT RESPONSE	WHS	11/26/19

REV. DATE



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CLIENT:
UPRIGHT FRAMEWORKS, LLC
PORTLAND, MAINE 04101

ISSUED FOR	BY	DATE
COMMENT RESPONSE	WHS	11/26/19

REV. DATE

December 17, 2019

Caitlin Cameron, AICP, Associate AIA, LEED AP
Urban Designer
Planning & Urban Development Department
389 Congress Street
Portland, ME 04101

Re: 128R and 126 North Street

Caitlin,

Below please find comments in response to the design reviews dated December 4, 2019 for 128R North and December 16, 2019 for 126 North.

Many of the comments below relate to 126 North's entrance reflect a larger policy issue outlined in the city's Design Manual that suggest design principals in conflict with best practices for inclusive design. We understand these guidelines are beyond the purview of this review but wish to bring the issue to staff and the board's attention.

Guidelines in the city's manual for the R-6 zone, on page 109 under C-2, state suggested guidelines for creating visual privacy on first floors. A suggested means for creating this privacy includes elevating a building's first floor to at least 24" above grade, and articulating it with porches. This characteristic is also emphasized in the IS-FBC zone on page 120 of the manual.

Page 120 includes an illustrative illustration of an 'exemplary streetscape' designers should emulate. However, the illustration includes no visible curb-cuts and the multi-family residences depicted clearly do not meet both IBC 2015 Chapter 11 (accessibility) and Federal Fair Housing Standards which require accessible building entrances at the streetscape. Both buildings depicted show multiple steps, an impossible moat for someone using a rollator, wheelchair and even difficult for a young parent pushing a stroller. To further emphasize the barrier as acceptable; bullet three of this page states 'entry is emphasized with stair and canopy.'

Our team feels these images are contrary to the City's objectives in creating housing for all Portlanders, regardless of mobility impairments, and urge the City to address this issue. Violation of Fair Housing Standards and IBC puts clients, the city and designers at risk for discrimination suits and fails our most vulnerable residents.

Dextrous Creative
dextrouscreative.com
traciereed@dextrouscreative.com
Portland, ME 04101

128R Design Review Comments

Memo notes that the design passes all design standards. Thanks for your review.

126 Design Review Comments

A-3 Relationship to the Street: My client is happy to pull the building closer to the street using the average of the two adjacent side setbacks which, according to Acorn Engineering, will result in a 3.7' front setback. Acorn has suggested a revised site plan showing a 4'-0" setback to reflect this change.

B-4 Roof Pitch: The roof pitch meets the Portland Land Use Ordinance for the Munjoy Hill Overlay which articulates that a front-end gable pitch should be between 10:12 and 12:12 per 14-140.5(d). The proposed front-end gable roof is 11:12. The height of a building per the ordinance is measured from the mid-point of the gable roof which puts the height of the building at 33'-6" as measured on drawing A/A-2.3.

C-1 Entrances: Our building seeks to meet the active streetscape requirements of the Munjoy Hill Overlay as articulated in 14.140.5(h). The main entrance for our first-floor unit is located along North Street, satisfying this requirement. Our unique site has a sidewalk shared with 128R North Street along the length of the building. The entrance to upper units will be situated along this walkway providing an increased to the streetscape with the rear parcel,128R North.

C-2 Visual Privacy: The ground floor living spaces are at grade to satisfy IBC 2015 1104.1 'Site arrival points' which require the entrance of our Type B accessible unit to be accessible from the public sidewalk. This project is required to meet both IBC 2015 and Fair Housing requirements since it contains four-or-more units. Elevating the building would expose my client, the city and our design team to a housing discrimination suit. Relegating mobility-impaired residents or visitors to a secondary 'back door' entrance is considered discriminatory according to HUD[i]. Our team feels strongly that the city should take strides to create expanded housing opportunities for all Portlanders, including the elderly and those with mobility impairments who many-times have difficulty finding accessible housing. We believe the city should re-examine and revise the design standard C-2 to avoid such liability. It currently reads:

'Ensure the visual privacy of occupants of dwellings through such means as placing the window sill at least 48" above the adjoining sidewalk grade; providing the finished floor elevation of a residence at a minimum of 24" above the sidewalk elevation; incorporating porches along the front side of the building façade design; or other measures.'

On a narrow lot such as are predominant in-town fitting an approximately 34'-0" long ramp (including bottom and top landing) would be impracticable. Instead, our team will provide double-hung windows with first floor translucent glazing on the bottom pane, below 48". This will allow our team to meet the intensions of visual privacy without creating 34'-0" of icy ramps to traverse or exposing us all to a discrimination suit.

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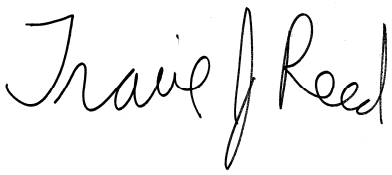
C-3 Transitional Spaces: See above response to C-2. Our project is required to meet both IBC chapter 11 and Fair Housing which requires our entrances form the sidewalk to be at grade. We have provided a covered entry at both entrances.

F-6 Porches, etc.: See response to C-2.

F-6 Main Entries: See response to C-2. Raising the porch above grade would put my client and the city at risk for a housing discrimination suit.

F-7 Articulation: The rake of the roof will be over 6" and the rake trim detail is over 9" in depth overall.

Sincerely,



Tracie J. Reed, Maine Licensed Architect, LEED AP, NCARB
Principal

CC: William Savage, P.E, Acorn Engineering
Sam Lebel, Acorn Engineering
Josh Wojcik, Upright Properties
Jill S. Johanning, AIA
Jeanie Bourke, Plan Review Team Leader, City of Portland Maine Building Inspections

[i] HUD provided design commentary on its site arrival points standard, noting: "HUD requires that an accessible route not be hidden, remote, circuitous or require people with disabilities to travel long distances. It also requires that use of an accessible route not place requirements, like a special key, an attendant, or additional waiting periods, on people with disabilities. Providing an accessible route that has different and less favorable conditions for people with disabilities than for people without disabilities may violate the Fair Housing Act because it amounts to a difference in terms and conditions of housing based on disability." https://www.fairhousingfirst.org/faq/accessibleroutes.html

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AA.

Dear Neighbor: January 3, 2020

On behalf Upright Properties LLC and the families who will live in the residences, we are pleased to invite you to a second neighborhood meeting to discuss our revised plans for the proposed project at 128R and 126 North Street, which are located within the R-6 zoning (Munjoy Hill Overlay) district. The project includes a phased approach with first phase the redevelopment of the 128R lot into a 6 unit, 4-story residential building and the second phase the reconstruction of the 126 lot into a 3-story, 5 unit rental property. Ground-level parking at both locations will allow us to reduce the amount of parking spaces used on the street and storage space for bicycle parking will be provided as well. Both buildings will include modern fire/life safety systems and will exceed the state's energy efficiency requirements. Both buildings are designed to fair housing accessibility standards, providing 7 fully adaptable housing units. In addition to providing improved housing, the sidewalk will be rebuilt to City technical standards.

Meeting Location:	The Root Cellar – 94 Washington Ave., Portland, ME 04101
Meeting Date:	Thursday, January 16, 2020
Meeting Time:	5:30 p.m.

This notification supersedes the postcard dated December 27, 2019. There is no longer a meeting on January 9, 2020.This notification is being sent to all residents within 500 feet of the proposed development as well as those residents on the "interested parties list." A sign-in sheet will be circulated and minutes of the meeting will be taken. Both the sign-in sheet and minutes will be submitted to the Planning Board. If you have any questions regarding the neighborhood meeting, please don't hesitate to call me at 207-749-9656.

Sincerely,

Joshua Wojcik
Project Builder and Future Resident of 128R North St.

BB.

ACORN ENGINEERING, INC.

Planning Division
City of Portland, Maine
389 Congress Street, 4th Floor
Portland, ME 04101

January 16, 2020

Subject: 126/128R North Street Neighborhood Meeting #2

I, Will Savage, hereby certify that a neighborhood meeting was held on January 16, 2020 at the Root Cellar at 5:30 pm.

I also certify that on January 6, 2020, invitations were mailed to the following:

1. All addresses on the mailing list provided by the Planning Division which includes property owners within 500 feet of the proposed development.

2. Residents on the "interested parties" list.

Sincerely,

Date: 1/16/20

William H. Savage, P.E.
Principal - Project Manager
Acorn Engineering, Inc.

Included with this certification are:

1. Copy of the invitation sent
2. Sign-in sheet
3. Meeting minutes

CC.

128R & 126 North St Neighborhood Meeting Notes (Second Meeting) 1/16/2020 5:30pm at the Root Cellar on Washington Ave, Portland, ME.

Applicant Joshua Wojcik thanked everyone for attending, introduced the two development projects and the design team including civil engineer Will Savage from Acorn Engineering and architect Tracie Reed from Dextrous Creative.

Will Savage's Presentation covered the following:

- Notification that the planning board workshop for the two projects had been tentatively set for January 28th, 2020. All attendees were encouraged to go to the workshop;
- The purpose of the second meeting was to cover the various changes to the plan;
- The reason two development projects were being submitted under one application was to provide transparency to all parties and to avoid confusion;
- The zoning context of the project is R-6, Munjoy Hill Overlay;
- Site plan for both properties was presented;
- Site is fairly flat, with 126 sloping slightly towards the street and 128R sloping towards Munjoy Heights;
- Parking plan: 6 covered spaces at 128R; 2 covered parking spaces at 126. Each includes an ADA space and access lane;
- The plan for plantings;
- The plan for underground utilities;
- The storm water plan, including collection and storage systems and highlighted the point that less storm water will runoff towards Munjoy Heights as a result of this project;
- Clarified that the same engineering team (civil, geotechnical and structural) was being used for these projects as was used for the Munjoy Heights development project in order to ensure continuity of analysis and approach to make sure the retaining wall was fully understood and protected during all phases of the project.

Tracie Reed's Presentation covered the following:

- A description of the neighborhood;
- A discussion of the changes that were made to the rear building;
- A discussion of the changes that are being proposed for the 126 property;
- Presentation of revised renderings showing 128R as well as new renderings showing 126;
- Discussion of locations of compressors for heating/cooling systems;
- Described size and width and heights of both buildings;

Questions and Comments from the Public Attendees:

Questions about the timelines for both projects were raised. It was explained that each project will take approximately 12+ months to substantial completion and that 128R will be first. It was noted that 126 will be demolished after 128R is substantially completed, but before the CO for 128R is issued. It was explained that the order of the project was for several reasons, including that two of the prospective owners at 128R are currently residents of 126 North but also from a construction management perspective that it makes the most sense to "build your way out of a job site."

Questions were raised several times about how it was possible the storm water runoff towards Munjoy Heights would be reduced. The storm water plan was explained in greater detail, including how both the proposed development and Munjoy Heights stormwater system had been designed for a 100 year storm event. The snow removal and storage plan for both properties was also described.

Questions were raised about whether the garage could be enclosed to protect the residents of Munjoy Heights from having to look at parked cars and to shield them from the fumes that may result from the parking garage. It was explained that the zoning ordinance requires parking to be located in the rear of all properties to provide for an activated frontage. Difference in the zoning setbacks for buildings vs parking areas vs. decks meant that fully enclosing the garage was not possible. Examples of extruded metal screen that will be used at the rear of the garage to support vine growth was requested and the design team agreed to bring images to the planning board workshop. It was also questioned whether additional plantings could be installed between the garage and Munjoy Heights. The team noted that the root structure of plantings in the 10' strip between the garage and the property line could jeopardize the integrity of the retaining wall. It was questioned whether anything else could be done to reduce the potential for idling of vehicles within the garage that residents of Munjoy Heights believe would impact them. The design team agreed to explore ideas.

The idea of an underground parking garage was proposed by an attendee. It was explained that this would conflict with fair housing accessibility requirements and that it would present numerous engineering problems both to the retaining wall and to surrounding buildings.

A rendering from Sheridan Street taken at a small opening of the Munjoy Heights buildings looking up towards the retaining wall was requested. The team noted that renderings take significant time and resources to complete and a view from this area would not be possible before the workshop.

A question was raised about what would happen if the owner of 126 decided to not re-develop his property once the building was demo'd. It was explained that he would have to pay a significant fine to cover the elimination of housing units. It was emphasized that the owners of

both properties are very much interested in helping the City address its housing crisis by adding units. It was questioned what the rental prices will be for the units at 126 North St. It was explained that these units would be relatively affordable (rental prices from $1850 - $2,000) compared to other two bedroom units in the market, since the units were modest in size. Attendees didn't feel like those were affordable prices. It was explained that the current price of a two bedroom Work Force unit was about $1,860. An attendee commented that she thought that number was unaffordable.

Concerns was raised that emergency vehicles wouldn't be able to reach the rear property. The team noted that the building would have a 16' wide fire lane for emergency vehicles in addition to the sprinkler and fire alarm system.

Questions were raised about the front, side and rear setbacks. Several attendees commented that they felt like the zoning setbacks were too small. The neighbors who live next to the proposed projects feel like the side setback is too small. The neighbors who live in Munjoy Heights feel like the rear setbacks are too small.

It was asked whether a shadow / shading analysis was done by a Munjoy Heights resident. The team confirmed this is not required for the application but noted that Munjoy Heights is to the south and west of the property, which means the building will have a minimal impact on the amount of sun shining on Munjoy Heights.

It was asked whether this would be the tallest building visible from I-295. It was explained that Promenade East Condominiums will remain visibly taller.

It was clarified that 126 North St does not have a 4th floor. The window above the third floor is an attic window. It was further explained that the stairwell inside will not reach the attic.

A few attendees commented that the building is too large.

One attendee commented that he believed the project would reduce property values.

With no further questions raised or comments offered, the team thanked attendees for their time and thoughtful comments and the meeting was closed at 7pm.

Meeting minutes by Joshua Wojcik & Reviewed by Will Savage and Tracie Reed.

DD.

126 & 128R North Street

Neighborhood Meeting
January 16, 2020

Name	Organization	Address	Phone	Email
Bud Pollak		225 Sheraton St	203-984-1833	BPOLLAK64@Yahoo.com
Susan & Lindsay Mann		122 North St	610-613-8322	lindsaymann@gmail.com
Betts + Eldon Mayer		211 Sheridan ST	207-253-1838	bettsgmayer@gmail.com
A. NAQVI		203 Sheridan St	207-838-8740	Ali.Naqvi@Yahoo.com
James Trainor		204 Sheridan St	646 346-4838	Jamesmtrainor
YAEL REINITA	R2	204 Sheridan ST	6463274158	yael.reinhart@gmail.com
Tom Federle		254 Commercial Street	899-0155	tom@federlelawmaine.com

126 & 128R North Street

Neighborhood Meeting

January 16, 2020

Name	Organization	Address	Phone	Email
Liz Hays		107 North St.		lizchays@gmail.com
ANN CASADY		205 Sheridan		anncasadya yahoo.com
Peter Pitegoff		205 Sheridan		ppitegoff@gmail.com
Betty Lorber		225 Sheridan St		betty.lorber@gmail
Pam Kaufman		137 North St.		
Andrew Kaufman		137 NORTH ST		Kaufmanandrew1@ gmail.com
Leslie Hart		215 Sheridan		blesliehart@gmail
Kevin Schochat		215 Sheridan		kevin@kevinschochat.com
Sue Robins		206 Sheridan		suerobins@twc.com
Richard MARINO		226 SHERIDAN		RMARINO4132@Yahoo
Tracey J Reed	Dept. Comm.	77 Nursery		
Joshua Wojcik	Upright Properties	PO Box 833 Wilton, ME		JWojcik@UprightFrameworks.com
Will Savage	Acorn Engineering	65 Hanover St. Portland, ME		WSAVAGE@Acorn-engineering.com

Google Groups

Proposal for building at 128R north St

Betty Lorber <betty.lorber@gmail.com> Sep 15, 2019 12:03 PM
Posted in group: **Planning Board**

To the Planning Board of Portland Maine:

We are Portland residents. Our address is 225 Sheridan St. We live in the condo development known as Munjoy Heights, directly in front of the proposed building at 128R North Street. We have the following concerns about this plan:

1. Construction of the proposed building will eliminate precious green space behind Munjoy Heights. We have seen no plans for new landscaping and other measures that will screen the rear and sides of the building, nor have we received any assurance that trash cans, boats, bicycles, and other material will not be situated or stored behind the proposed building. Moreover, given the apparently tight budget and limited financing for the project, we fear that sufficient green space preservation and improvement might be "lost in the shuffle" and never be completed.

1. The proposed building will be only 15 feet from the fence behind Munjoy Heights. On the first story, it will include outdoor covered parking extending to the rear end of the building, potentially resulting in intrusive car noise, exhaust, and sight pollution affecting our units. We need further information and assurances regarding the installation and adequacy of fire suppression and warning systems.

   [Note: We understand that the Munjoy Heights property line extends five feet from the fence adjacent to the retaining wall, and an easement extends a further ten feet to allow for maintenance of our retaining wall. The rear of the proposed building thus extends as close to Munjoy Heights as permissible.]

1. The new building is about 4 times the size of the existing single family home, resulting potentially in additional stress on the retaining wall that is only 15 feet away. We need to see an engineering assessment of the proposed project and its impact on the integrity of the Munjoy Heights retaining wall, as well is its impact on drainage and stormwater flow.

1. The height of the proposed building and its proximity to Munjoy Heights, particularly with extensive outdoor balcony and deck space, will severely compromise the privacy of the roof decks and rear windows in multiple units at Munjoy Heights. It appears that the height of the building on the street side elevation is just below the 45-foot restriction (to be clarified by examination of the site plan).

1. The proposed building is a very large structure that is out of scale with nearby houses and that sits on a footprint substantially larger than the existing structure. It is likely that the proposed building will reduce sunlight exposure to surrounding neighbors. A daylighting study might "shed more light" on this issue. As a related matter, we are concerned about the negative impact of light pollution emitted by both the interior and exterior of such a large structure with six units.

1. From our perspective, the architectural design of the proposed building falls short of acceptable standards.

1. We are concerned about the ability of the developer to fully finance the project and have no assurance of his adequate access to capital for construction, inevitable delays and adjustments, zoning variances, landscaping, and ongoing maintenance of the property. We also should explore a mechanism to assure payment for any repairs or restoration of Munjoy Heights property as a result of the construction process. Josh repeatedly reminded us that he is a builder, and not an experienced developer.

We ask that you consider all of these concerns before issuing permits for this project.
We believe that our quality of life and the value of our property is at stake.

Thank you for your attention to this matter.

Betty Lorber
Bernard E Pollak
225 Sheridan St
Portland Maine

Google Groups

development at 128R North St.

Eldon Mayer <vixenskipper@gmail.com> Sep 22, 2019 8:41 AM
Posted in group: **Planning Board**

Our rear windows are so close to the proposed 6 condo building that we surely will be able to hear conversations and other noise taking place in that building (noise pollution) and fumes from the vehicles parked in the open air parking garage on the first floor of that building will contaminate the environment in our condo and those of our neighbors.. Also, utilizing the first floor of 128R as a parking garage causes the building to be four stories high, which would be unnecessary if an underrground garage were used for parking. A four story building is much higher than any other buildings on North Street, and in our condo and those of our neighbors, blocks our sunlight.

Another concern is that excavation of the project site will loosen the soil thereon, increasing the flow of gravity-fed stormwater down the sharp slope to our condo and those of our neighbors.

We thank you for paying attention to our concerns.

Eldon Mayer, 211 Sheridan Street

Google Groups

Plan Number PL-000791-2019 at 128R North Street

Peter Pitegoff <ppitegoff@gmail.com> Sep 22, 2019 3:02 PM
Posted in group: **Planning Board**

Dear Members of the Planning Board:

We have serious concerns about a proposal to demolish and remove the two-story house at 128R North Street on Munjoy Hill in Portland and to construct a four-story, six-unit condominium development in its place – Plan Number PL-000791-2019. We are homeowners living at 205 Sheridan Street (Munjoy Heights) immediately adjacent to the 128R North Street property. This email outlines some of the negative neighborhood impacts of this project, which is located within an R6 Zone and the Munjoy Hill Neighborhood Conservation Overlay District.

1. The proposed building is a large and boxy structure that is out of scale and character with nearby houses and that sits on a footprint substantially larger than the existing structure. The architectural design of the proposed building falls short of acceptable standards of quality and accountability for its North Street neighborhood on Munjoy Hill.

2. The proposed building is about four times the size of the existing single family home that it would replace. This will cause additional stress on the deep retaining wall that is only 15 feet away and will affect drainage and storm-water flow. With climate change and increasingly severe weather events, we fear erosion, mud slides, and compromise to the retaining wall.

3. The proposed driveway is 11.25 feet wide, substantially narrower than the standard requirement of a 20-foot width, and is squeezed between two houses in front of the proposed building. This has dangerous implications for limiting access by fire engines, ambulances, and other emergency vehicles and arguably is inadequate for daily use by cars entering and exiting the proposed building.

4. The proposed building, only 15 feet from the retaining wall behind Munjoy Heights, will extend over the steep slope between the two buildings. On the first story, it will include an open covered parking area for six cars, extending to the rear end of the building. As a result, we will suffer intrusive car noise and exhaust fumes immediately outside our kitchen window, with similarly negative impact on other neighbors as well.

5. There are no firm plans for new landscaping and other measures that will screen the rear and sides of the building. The new building dimensions bump up against and even exceed setback requirements, leaving little room for green space, and the project appears to avoid minimum required road frontage.

We strongly urge the Planning Board to consider these issues. We believe that any a new structure should be built ***within*** the footprint of the existing building. We also insist that any new building reflect a high degree of architectural integrity and compatibility with the surrounding neighborhood. Thank you for your consideration.

Ann Casady & Peter Pitegoff
205 Sheridan Street
Portland, Maine

ann@casadydesign.com
ppitegoff@gmail.com

Google Groups

128 North Street R

Richard Marino <marino04102@gmail.com> Sep 23, 2019 11:01 AM
Posted in group: **Planning Board**

I am writing to state my concerns about the planned six unit building at 128 North Street R. It seems like an overwhelming building to site in a rear lot with no street frontage. I am not sure what variances may be necessary. I would object to any that may be required.
Respectfully
Richard Marino
226 Sheridan St.
Portland 04101

Sent from my iPad

Google Groups

Plan Number PL-000791-2019 at 128R North St.

Leslie Hart <blesliehart@gmail.com> Sep 26, 2019 8:58 AM
Posted in group: **Planning Board**

Dear Planning Board members

I am an abutter who lives directly below the proposed project Plan Number PL-000791-2019 at 128R North St. and writing to urge the Board not to approve this project as proposed. It is too large and will negatively affect the neighborhood. Among my chief concerns are:

Safety hazard. City ordinance requires a minimum 20 ft. wide driveway, yet the developer is requesting for a waiver to maintain the existing width of only 11.25 feet. A narrow driveway would be a safety hazard, impeding access for fire trucks and ambulances. The board should not approve this waiver. The developer maintains that "Due to the existing conditions and low turnover of residential uses, the driveway is anticipated to be functional serving the proposed 6 spaces and existing 2-unit 128F property**."** However, the evidence is that there will not be a "low turnover of residential uses." The new condo could add as many as 12 cars, two per unit. Plus additional traffic from guests and deliveries.

Negative daylight impact. The proposed project would double the height of the structure now on the property from a small 2-story single family home to a massive 4-story, six-unit condo, and almost double the footprint of the building now on the lot. The large proposed structure will certainly block the daylight into my home for at least half the day. And it will do the same for at least 10 of my neighbors. The developer should be required to do a daylight impact study.

The proposed structure is too large, with an insufficient and dangerously narrow driveway, and should not be approved.

Thank you in advance for your consideration.

Leslie Hart
215 Sheridan St.
Portland ME 04101
917.364.3682

PC6

Google Groups

Plan Number PL-000791-2019 at 128R North St.

Kevin Schochat <kevin@kevinschochat.com> Sep 26, 2019 9:44 AM
Posted in group: **Planning Board**

Members of the Planning Board:

As a homeowner who lives directly below the proposed project Plan Number PL-000791-2019 at 128R North St. I strongly believe this project should not be approved.

I am very concerned about the damage to our Munjoy Heights retaining wall and property during construction and afterwards.

The developer is planning to remove 10 cedar trees on the site (per his Construction Management Plan). What's more, the proposed new structure slightly exceeds side yard setbacks, deck setbacks and rear yard setbacks. So the entire site will be torn up during construction with no vegetation to stop erosion, subjecting my own property and neighbors, plus the Munjoy Heights retaining wall, to damage from run off and mudslides. Especially in a era of increasingly severe weather events.

We have not seen a landscape plan for the proposed project. Or a timetable. Given how little vegetation will remain after construction, our property and the Munjoy Heights retaining wall will still be exposed to damage.

I am also very concerned about the visual impact and exposure to car exhaust from the open parking that will be visible from our house. The developer is asking for a waiver from the required 18' parking space to a smaller 16.5'. I believe he should have to meet the town's requirements and not compromise.

Thank you.

Kevin Schochat
215 Sheridan Street
Portland, Maine 04101

T: 917.597.4154

Google Groups

Oppose the Redevelopment Proposal at 128 North Street

Liz Hays <lizchays@gmail.com> Sep 27, 2019 8:43 PM
Posted in group: **Planning Board**

Dear Planning Board of the City of Portland

My name is Liz Hays and I own a home at 107 North Street.
I am writing you to oppose the existing redevelopment proposal at 128-R North Street, PL-000791-2019. My home is across the street and at a diagonal corner to the redevelopment project.

I feel the mass and height of the proposed building is significantly out of proportion to the abutting historic homes on the North Street side of the building. This mass and height will have a detrimental impact on the values to all the abutting properties to the project because there is no street frontage to the building.

I also concerned about the erosion impact this property will have during construction and after completion to the Munjoy Heights condominium properties due its very close, up hill proximity.

I am concerned about the safety and increase noise implications of 6 or more vehicles, of different sizes, passing between residences to access the building on a narrow driveway.

I feel this project is trying to over maximize its wealth potential to have six condominiums within a small, boxed in piece of property with no regards to the negative impact on its neighbors. There are surrounding properties in the neighborhood of both modern and historic design, but the intent of the R6 Zone Conservation Overlay District is to maintain the historic character of Munjoy Hill, which this building does not.

Thank you for considering my concerns.

Liz Hays
107 North Street
Portland
207-441-4653

Google Groups

128R North Street

Sue Robins <suerobins@twc.com>
Sep 30, 2019 9:13 PM
Posted in group: **Planning Board**

Monday, September 30, 2019

Regarding Plan Number PL-000791-2019, 128R North St, Portland

Dear Portland Planning Board,

We write to you today to share my concern regarding plans to build an enormous condominium building at the top of Munjoy Hill. Our concerns are primarily in the areas of ground instability due to the proposed new construction and the significant negative visual impact to the hill community.

First, I understand that there has been a cursory geotechnical assessment, but our understanding is that this assessment does not consider the dramatic increases in rainfall that we know from climate scientists will occur in the near future. A structure of the magnitude proposed atop a hill being significantly impacted by dramatic increases in rain runoff is of great concern to those of us in homes below it.

Second, this is an enormous structure and, as I understand it, will equal the visual height of the Shailer School/Avesta building. They skyline we all see from the Old Port and Casco bay is already marred by the two tall apartment buildings on Eastern Promenade and Walnut Streets. Another enormous building at the top of the hill is a commitment to a significant change in the visual scape of the hill. With community concern for preservation of the culture of the neighborhood and our attraction as a vacation destination, I urge the planning board to be thoughtful about the impact that such an enormous structure at the top of Munjoy Hill would have on the skyline of the eastern part of the Peninsula.

Finally, we are also very concerned about the number of variances required to achieve approval of this project. Any project with this many code variances, pushing the limits of building codes in so many areas must be questioned further. Is it really a good idea to allow a project with a driveway well below code requirements, no plan for landscaping or erosion protection, significant impact on the sun exposure, and air quality of neighboring homes, and insufficient frontage and setbacks? Finally, while the project is just barely outside of the historic overlay, its enormity and proximity to homes that ARE within the overlay district, should give the committee pause.

I strongly urge the Planning Board NOT to approve this plan in its current state.

Sincerely,

Susanne and Terry Robins

206 Sheridan St.

Portland, ME 04101

Sent from Mail for Windows 10

To Portland City Planning Board: planningboard@portlandmaine.gov

Re: Plan number PL-000791-2019

From: Deborah Cole, Portland resident at 71 Walnut St

Date: October 2, 2019

To Portland City Planning Board members,

I have lived at 71 Walnut St for over 40 years. I purchased my home in 1980. I am in favor of infill housing on the peninsula and I did not oppose the major influx of 29 condominiums (Munjoy Heights) at Sheridan and Walnut which are two doors down from my home.

The view I see from my back windows and back yard, looking north towards the proposed development by Joshua Wojcik at 128R North Street, is of a single family two story white clapboard house, which was built long ago in the back lot of a four unit building at 124 North St, also owned by Joshua Wojcik. There is a house sized driveway which provides access to the back lot where the single family house is situated.

Because this is an odd placement of single family house on a back lot, I would recommend retaining a single family house footprint on that site to maintain integrity of scale and neighborhood character. The proposed condominium complex would be four times the size of the existing house, dwarfing the scale of the houses on the block.

Munjoy Hill has a well-earned reputation as a multi income; multi-use, multi-scale neighborhood which we are pleased to learn is being considered for historical districting on the peninsula.

This project is out of scale and character with the Hill. My additional concerns include the following:

- It is poorly designed and fails to meet the standards of quality and accountability in this vibrant and sought after neighborhood.
- Its planned location adjacent to a hill with poor drainage and poor retaining walls raises drainage, storm water and erosion concerns.
- The narrow single family driveway leading back to the site appear insufficient for regular cars, snow removal and emergency vehicle access.

Given the outlined concerns above, as well as those concerns expressed by other worried neighbors I recommend that the house lot in the back of 124 North Street retain its odd configuration and continue to provide a single family option on North St.

Thank you,

Deborah Cole

Home owner

71 Walnut St, Portland, Me 04101

207 754 3859

Google Groups

Fwd: Plan Number PL-000791-2019 At 128R North Street

Nancy Machesney <dmaches101@aol.com> Oct 8, 2019 4:36 PM
Posted in group: **Planning Board**

October 8, 2019

Nancy Machesney
213 Sheridan St.
Portland, ME 04101

Portland Planning Board
389 Congress Street
4th Floor
Portland, ME 04101

To Whom It May Concern:

I am writing to express my concerns regarding the proposed development at 128R North Street (PL 000791-2019). I believe the building as designed, is too massive in size and scope for its plot of land and will have negative consequences for neighboring properties, Munjoy Hill, and the city at large.

I live in Munjoy Heights directly below where this project is planned. There is currently a single-family residence on the site. The proposed construction potentially could be ten times the size of the existing structure and would effectively block all sunlight from any building downslope of it. It would loom three stories above the current home and vastly change the landscape of Munjoy Hill.

The planned structure would utilize almost every square inch of the property as presented, leading the developers to cut corners on the size of planned parking spaces, pave over existing green spaces, and impinge on the privacy of neighboring residents. They have requested to keep a 11.5 foot wide driveway when the City requires a minimum width of 20 feet for two way ingress and egress. I fear that this driveway will not be wide enough for fire trucks to reach the building in an emergency situation, posing danger to all buildings and people in the vicinity.

This building would be built atop a steep hill. A retaining wall currently exists at the base of the property. However, this retaining wall was not designed to accommodate a development of this size. The potential environmental impacts from this proposal during the building phase and then after development are alarming. Abutters, particularly those below, need assurances of how construction, water runoff, snow removal and soil erosion will be addressed. We need guarantees against long term impact and potential damage to our properties

I question given the plot of land if it is safe or prudent to build much more than currently exists. The topography is risky and what currently is proposed will significantly reduce all neighbors' privacy and sunlight and compromise safety. The developer is putting forth too large a proposal and requesting unsafe easements.

I urge you to not support this plan.

Sincerely,

Nancy Machesney

PC11

Google Groups

Project # PL-000791-2019 concerns

Annie Frye <fryenh@comcast.net> Oct 16, 2019 11:27 AM
Posted in group: **Planning and Urban Development**

shukriaw@portlandmaine.gov

amachado@portlandmaine.gov

Planning Board of Portland Maine

Re: Project # PL-000791-2019

128R North Street

Dear Ms. Wiar and Ms. Machado and members of the Planning Board-

We are abutters to the project PL-000791-2019 and would like to express our concerns about the proposed development. Our home is 217 Sheridan Street.

In reviewing the R-6 zoning requirements and the Munjoy Hill Conservation Overlay District we had concerns about the development and zoning violations.

- Lot 128 R is a small completely “land locked” parcel. It has no frontage of its own, it shares a driveway easement. R-6 requires 20 ‘of frontage. This lot has 0’ frontage. After speaking with Ms. Wiar, I understand that the zoning administrator decided that the frontage issue could be overlooked by deeming it a non conforming lot. We are concerned that this is not an appropriate measure. Among other issues, the emergency access to the proposed housing could be compromised.
- The Munjoy Hill Conservation Overlay requires the 1st floor of a multi-floor development must be living area. The drawing indicates parking at this level.
- As a rear abutter we are concerned about the retaining wall. The capacity for it to retain this 6 unit development is a question. Was it designed to accommodate such a load? We already experience substantial water running through our garage from the base of the wall. Engineering is a concern.
- I understand by providing the work force housing unit the development can maximize the height of the building to 45’, the R-6 zone is normally 35’ max height.

It seems this small, back lot on the edge of a huge slope has maximized its coverage and density using every loophole and exception. This doesn’t make sense. Zoning is established to protect the neighborhood and safety of community.

Please take these concerns into consideration when deciding on this development.

Thank you.

Annette and Steven Frye

217 Sheridan Street

Portland Maine

fryenh@comcast.net

PC12

Planning Board of the City of Portland Maine
C/O Shukria Wiar, Planner
Department of Planning and Urban Development
City Hall - 389 Congress St
Portland, ME 04101

10/31/2019

To the Honorable Members of the Portland Planning Board,

My name is Peter Roehrig and I am writing in support of the proposed development at 128R North Street.

I decided to move to Maine in September 2019 to live and work in large part thanks to the quality of life and affordability benefits of Portland. My career is in building energy efficient schools and public buildings, so it is an important priority for me as I look for a new home. However, finding an energy efficient and affordable place in Portland has been rather challenging, especially given the housing stock on peninsula.

I jumped at the opportunity to join a group of friends to buy a unit in the proposed 128R North Street property. The camaraderie we share will help to enhance the community-based contributions of this project. Upright Frameworks has an established track record of quality craftsmanship and customer satisfaction, utilizing modern technology, smart design and energy efficiency. Josh and his team build quality structures with high standards that will help to ensure long-term value and in harmony with the neighborhood.

Thank you for your consideration.

With warm regards,



Pete

Future Resident of 128R North St.

Planning Board of the City of Portland Maine
C/O Shukria Wiar, Planner
Department of Planning and Urban Development
City Hall - 389 Congress St
Portland, ME 04101

10/30/2019

To the Honorable Members of the Portland Planning Board,

My name is Elizabeth Helming and I am writing in support of the proposed development at 128R North St.

The project furthers the goals outlined in the "Portland's Plan 2030" document, but more importantly, the proposed building will be a home for me. I have lived on Munjoy Hill for the last five and a half years. As a retired teacher, living on a fixed income, one of the most difficult challenges for me is figuring out how to keep my costs from increasing every year. To manage my rising rents, I have tried everything from subletting a room to taking on a part-time job. The super energy efficient, work force unit I will be purchasing is going to help me keep these costs under control.

I love this neighborhood and I'm the kind of person who does her part to keep it sparkling. No matter where I've rented, I've always made a point of helping to keep the trash and recycling organized and I will confess that I'm also one of those people who will pick up a piece of trash on the sidewalk and find a trash can for it, if I'm out on a walk.

I intend to live in my unit full time. In addition to the predictable (and low) energy costs, I am excited about my new home for other reasons too. First – as I get older, it is increasingly difficult to shovel out my car after a snow storm and having a garage will be a game changer in that regard. The idea of being able to age in place is also super appealing and with a ground-level ADA accessible space, there are few scenarios in which I would not be comfortable in my new home. More than that, I genuinely like the other people who will live in the building. I do have family in the area, but knowing that I have neighbors in my actual building who I care about (and who care about me) is incredibly reassuring.

Finally – I know that when I move out of my current home, my apartment will be made available to others seeking an affordable, long term lease. And such space are extremely rare on the Hill.

Thank you for your consideration.

Regards,

Elizabeth (Bets) Helming
Resident of 126 North St. & Future Resident of 128R North St

Planning Board of the City of Portland Maine
C/O Shukria Wiar, Planner
Department of Planning and Urban Development
City Hall
389 Congress St
Portland, ME 04101

To The Honorable Members of the Portland Planning Board,

I am pleased to offer my support for the Redevelopment Plan at 128R North Street. My husband and I will both soon retire and want to purchase our "final" forever home in Portland. We have been renting an apartment on Munjoy Hill for the past two years in order to get a "feel" for what life would be like as home owners in this dynamic, multi-cultural Portland neighborhood. From the very first days of living here, I felt that I had found my "place". For the past two years, thanks to my daily walks to the area's museums, shops, restaurants, music and art venues, parks, and trails, I've developed friendships and relationships with the great people who live, work, and visit this neighborhood. These connections play a big part in why I now KNOW I need to live in this part of Portland. Being witness to how the City Council's and Planning Board's recent housing development decisions are guided by the Portland 2030 plan (A great plan that syncs with my beliefs about the necessity to address issues of climate change, sustainability, community connectedness, and fiscal responsibility!) gives me hope that this project will soon be approved, and we can purchase a home on Munjoy Hill. That "home" waits for us, our children, grandchildren, and friends, and happily, it's just a few blocks away at 128R North Street! Please help us get there by approving the development plan you have before you.

My story of finding magic on Munjoy Hill continues because of Upright Properties. The building they are proposing to build is PERFECT for us. As a retired teacher, I pay close attention to my budget and idea of a super energy-efficient home with low operating costs is very appealing. My husband and I intend to live in our unit full time. We are excited about the energy efficiency of the space, but also excited to have a home that that will allow us to grow older in a comfortable space. The building's garage and elevator will allow us to get around, no matter what the conditions outdoors. The unit itself is laid out in a way that allows for a wheelchair if that ever becomes necessary. I do have family in the area, but even a short drive can be daunting in the winter, so knowing that we will be living in a building which also houses friends eases worries about becoming isolated. An added bonus is the fact that a Greater Portland Metro (I use it often!) stop is just steps away from the building, as is East End Community School, where I hope to volunteer. My retirement from teaching became official on July 1, 2019 and I am happy to say that the volunteering opportunities I've taken part in have added much joy to my life. Also, as a gardener, I am super excited to take advantage of all of the green space that our property at 128R North Street will include. I can't wait to welcome bees, birds, and my little family of visiting grandSavages to a home I know will be built to the highest of standards and will provide a safe haven for our family for the next 20+ years.

Finally, I know that my landlord only rents to long term tenants, so my current apartment will be available to someone else who wants to live (rather than vacation) in the neighborhood. (Hopefully that "somebody" will be my daughter who wants to return to Maine from Brooklyn to raise her family here, near her sister, nephews, and parents. A mother can dream.....) I foresee only positive outcomes for my family and the residents of Munjoy Hill due to the construction of this amazingly beautiful building. I hope you agree. Please contact me if you have further questions.

Thank you for your consideration.

Best Regards,

Mrs. Frances McCann Savage **(Current resident on Lafayette Street, Portland and hopeful future resident of 128R North Street, Portland)**

Planning Board of the City of Portland Maine
C/O Shukria Wiar, Planner
Department of Planning and Urban Development
City Hall - 389 Congress St
Portland, ME 04101

10/31/2019

To the Honorable Members of the Portland Planning Board,

Family. Community. Environmental Impact. These are my priorities as a new mother and a years-long resident of Portland, and they are the reasons I am writing to voice my support of the proposed development at 128R North St.

My name is Katharine Wojcik and I moved to Portland seven years ago to start a business and new life path more consistent with my personal values. In short time, I happily formed a network in the community and created a family of my own, and I continue to live in Portland as a working mother. With my design company, Adept Creative, I am able to offer work at lower costs to local nonprofits, and often provide pro bono work for a number of organizations in Portland. This work continues to be an important arm of my company; one that I am proud to offer to neighbors and friends in the city.

Portland was a gracious landing pad for me and I found this community to be open, collaborative and welcoming. As a business owner and community member I hope to extend this spirit through my work. I am disheartened to see this spirit diminished, by a vocal minority of my neighbors on the Hill who have chosen to spend their time attempting to block progressive building projects. I believe that everyone should have an opportunity to voice their opinion, but I do not agree with an ideology that seeks to halt forward progress. There is too much at stake.

As a mother, there is nothing more important to me than the safety and wellbeing of my child, future children - and every child for that matter. We need well-built homes that provide families with safe spaces free of lead, asbestos and fire hazards. We need buildings that offer affordable options for families of all income levels and that promote a communal atmosphere living side by side (this is a city, after all). We need, now more than ever, to prioritize cutting the energy waste, budgetary uncertainty and poor environmental impacts from older buildings.

This proposed building will be a year-round home for my family and a number of close friends who have become my "Maine family." Munjoy Hill is where I want to raise my children. My husband, Joshua Wojcik, and his project team have taken much time and measure to design a building that adheres to the City's building code and rules and is consistent with the City's 2030 Vision. We are not seeking to max out the number of allowable units of the amount of buildable space, but instead to build a home for our family and friends, together. We are maximizing the amount of green space on the property, doubling the 20% requirement to 40% green space. Our design is based on styles from surrounding neighborhood buildings and reflects our values of saving energy and conserving green space while maximizing the livable space on the property so as not to waste a large city lot.

I am looking forward to living in a building with a small carbon footprint, and my husband and I intend to teach our children what that will mean for the planet's future.

Thank you for your consideration.

Regards,



-Katharine Wojcik

Designer (and Future Resident) of 128R North St

PC16

Meagan Sway & Sage Friedman
47 Lafayette Street # 2
Portland, Maine 04101

Dear Portland Planning Board:

Our names are Sage Friedman and Meagan Sway, and we write in support of the proposed development at 128R North Street.

We are current residents of Munjoy Hill and have been renting there for most of the past decade. Sage is a new lawyer at a downtown law firm, and Meagan is a civil rights lawyer. Because of our life paths, owning a home on Munjoy Hill is nearly cost-prohibitive. The proposed development at 128R North Street, because it is an investment of pooled resources by a group of friends, is likely the only way we can afford to own a home in our neighborhood.

Living at 128R North would mean a great deal to us. We want to stay on Munjoy Hill. The building will be net-zero capable, which is increasingly important as we each try to do our part to keep climate change from getting worse. The property's location and under-building parking will enable us to reduce or even remove our impact on congested Hill parking.

Most importantly, it will enable us to stay close to our dear friends (Peter, Fran & Jim, and Bets) and our chosen family. Sage and Josh have known each other for 41 years. We babysit Josh and Katharine's daughter and have Sunday family dinners together most weeks. To us, this will not just be an attractive new building where we happen to have awesome neighbors, it will mean the solidification of deeply-rooted community.

We very much look forward to the next phase of our lives at 128R North Street and thank you for your time and consideration.

Sincerely,

Meagan Sway & Sage Friedman

Portland Maine Yes. Google's good here.

Caitlin Cameron <ccameron@portlandmaine.gov>

The Problem with 128 North Street

1 message

Lindsay Steven Mann <lindsaymann@gmail.com> Tue, Sep 10, 2019 at 12:19 PM
To: Lindsay Mann <lindsaymann@gmail.com>
Bcc: ccameron@portlandmaine.gov

Dear Council members,

My name is Lindsay Mann. My wife, Susan, and I bought 122 North Street on Munjoy Hill one year ago. We instantly fell in love with the old charm, the architectural details, and the back yard. We have two young children who will grow up here, attend the East End Community School, and be part of the fabric of this city.

We were notified in July that our house has been included in the Historical Preservation Board's recommended historic district. **However, we were also recently notified that a 4-story, 6-unit condo building will be built at 128 North Street, right in our back yard.**

We are surrounded on all four sides by construction that would not be included in the historic zone. We would literally be the only house on the block that is designated historical - an island of one house. I am opposed to the zone for myriad reasons, but it seems particularly unfair to cherry pick our house.

I am, however, **more** opposed to the scale and scope of the proposed condo building at 128 North Street. It's height and design is in stark contrast to the neighborhood aesthetic (especially my house, which the city deems historic). The developer claims the building "blends in with the surrounding character of the neighborhood" and is "hidden from the public right-of-way." This is completely false. The building will dwarf our house and others.

We are, quite literally, stuck in the middle. The city wants to control what I build on my property, what materials I use, and limit my options if I ever sell. Meanwhile, if they allow 128 North Street to go through as proposed, they are allowing a developer to demolish a late 1800's house (and part of the building next to it), block the sun with cheap modern materials, and add traffic to an overly busy school zone, all with complete disregard for the rich architectural design that makes Munjoy Hill unique.

You may have recently received an email from our neighbor, Josh Wojcik, the developer of 128 North Street (if not, I can forward it). In it, he claims: *"The district is unnecessary. Many who are pushing this are hoping that it will stop developers from buying and tearing down buildings to build giant condos for out of town buyers. This issue was already addressed by the Munjoy Hill overlay vote. The rules already put in place are more than adequate."* The fact is, **he is a developer. He is tearing down a building to build a giant condo.**

Wojcik misrepresents our overall feelings in that email. If it comes to this, we will have to choose the lesser of two evils and support a historic district. While I feel the historic district adversely effects those much less fortunate than my family, if the district (and it's 100 foot proximity rule) will prevent a monster 4-story building from blacking out what's left of the evening sky on North Street, then that's the position we will have to take.

Wojcik is right about one thing: we are not crazy. We are lovers of fine architecture. We are taxpaying citizens. We are young and energetic members of this diverse and vibrant community. We bought our house on North Street because it is the first place we ever felt at home. We plan to raise our kids here, cherish and preserve the beautiful architecture of the building, and never sell to a developer who would knock it down in order to build something new and awful. We are not opposed to progress. We are not opposed to new construction. We are opposed to being treated unfairly, and we are opposed to the scale and design of the proposed building at 128 North Street.

Please reach out to me if you are interested in hearing more.

Thank you for your time and consideration,

Lindsay & Susan Mann
122 North Street
(207) 613-4066

To Portland Planning Board
From Deborah Cole
Re: PL-000791-2019- Condo development proposal for 128R North St

I have been a resident of Walnut Street on Munjoy Hill for over 40 years and have seen major growth and change in our neighborhood. I purchased my home at 71 Walnut St in 1980 and am probably the longest living neighbor in the vicinity of this condo proposal. Our Munjoy Hill neighborhood has thrived and grown in popularity over the years with its unique character and vibrancy. Munjoy Hill is now the number one neighborhood in popularity city wide.

Our small triangle of Munjoy Hill, bordered by Walnut Street, North Street, the East End School, the community gardens and Mount Joy Orchard has already absorbed more than its fair share of infill housing including Island View Apartments developed by Roger Gendron and Munjoy Heights developed by Jonathan Culley.

This proposed project would be overkill. It is out of scale with the neighborhood and does not harmonize with the surrounding streetscape. It would monopolize an already non conforming backyard that originally housed a small cape cod style one family home.
We run the risk of destroying the very cache which Munjoy Hill now enjoys if the city allows infill development to run amuck. This project would be an unfortunate tipping point for our neighborhood and should not be built.

For me personally, when looking west from my home, from my garden, or from my orchard, I would only see “Wojcik Heights” squeezed in and towering above my single family home.
Please do not approve this project.

Thank you,
Deborah Cole
71 Walnut St
dcole1030@gmail.com
207 754 3859

Google Groups

PL-000791-2019

Peter Pitegoff <ppitegoff@gmail.com> Jan 23, 2020 5:13 PM
Posted in group: **Planning Board**

Dear Members of the Planning Board:

As Munjoy Hill residents, we express our continuing alarm regarding recent demolition of a single family home in a rear lot (128R North Street) adjacent to our home, with the developer's intention to replace it with a large 4-story, 6-unit condominium building. We are further troubled by the developer's plan to demolish a second building, an existing 4-unit building at 126 North Street (in front of 128R), and to construct a new 5-unit building in its place. The developer submitted the 126 North Street plan as a revision of a previous site plan at 128R North Street -- Plan Number PL-000791-2019. This letter presents several specific concerns that supplement questions we have raised previously.

The proposed building at 128R is very close to the 15 foot high retaining wall behind Munjoy Heights, with a steep slope between the new building, the retaining wall, and the Munjoy Heights buildings immediately to the rear of 128R. The Munjoy Heights Condominium Association holds a 10 foot wide sloped easement on the 128R property to enable access, with "...equipment, including heavy equipment, to maintain, repair, shore-up and replace a retaining wall between the adjacent properties....” It appears that the expanded and expansive footprint of the new structure would limit and possibly preclude such necessary access to the easement area for maintenance of the retaining wall.

We also learned at a recent neighborhood meeting with the developer that the proximity of the new building to the retaining wall precludes the planting of trees or plants with a deep root system behind the building, as they would compromise the integrity of the retaining wall. The first story of the new structure immediately behind Munjoy Heights will be an open covered parking area for six cars, extending to the rear end of the building. This will result in intrusive car exhaust fumes immediately outside our and our neighbors' kitchen, bathroom, and bedroom windows and is likely to invade our air circulation systems. The plan is to build a 2 1/2 foot high knee wall at the rear of the first-floor parking area, with some sort of mesh screen above the partial wall. We have urged the developer to enclose the parking area, or at least to build a higher rear wall, and to provide for landscaping behind the building. Aside from the possibility of vines above the partial wall, the developer suggested that landscaping in the back will consist only of grasses planted behind the building.

The developer's rationale for demolishing the 126 North Street building is in part to widen the narrow driveway to 128R North, now squeezed between two buildings, in order to meet fire code standards for a 16 foot wide driveway and enable access by emergency vehicles. We are troubled by the developer’s intention to begin construction of the rear building *before* widening the driveway, heightening risk to neighboring homes behind and adjacent to the proposed rear building during the construction period. The developer estimated that the construction period for the 128R structure will be roughly twelve months. Throughout that period, the current narrow 11 1/2 foot wide driveway will remain in place, as the 126 North Street building remains standing, which would impede access for fire engines if required on the construction site.

These properties are within the Munjoy Hill Neighborhood Conservation Overlay District and immediately adjacent to the prospective Munjoy Hill Historic District. As we and other neighbors have noted previously, these proposed developments are out of scale and character with nearby North Street homes and are ill-advised. The proposed building at 128R North Street expands way beyond the footprint of the demolished home on the site, it strains the setback requirements on all sides, and it towers four stories above the top of the 15-foot high retaining wall that sits behind it. We urge the Planning Board to

insist upon a new site plan that is smaller in scale and that reflects a high degree of architectural integrity and compatibility with the surrounding Munjoy Hill neighborhood.

Thank you for your consideration.

Ann Casady & Peter Pitegoff
205 Sheridan Street
Portland, Maine

Google Groups

128R and 126 North St

Vana Carmona <vanacarmona@gmail.com> Jan 24, 2020 9:46 AM

Posted in group: **Planning Board**

In addition to all the other demos taking place on Munjoy Hill, we are again concerned about yet another. This will be the third one within a block from our home in the last few months.

The house at 128R North was torn down in November. At about the same time, the neighbors received notices that 126 North was also going to be scheduled for demolition.

This was deemed necessary so that the 128R project could be completed.

As neighbors —who do not want any of these enormous mass-and-scale projects on the Hill—, we have to ask: why were the developers given permission to tear down a house for a project that was not even approved?

If the 128R depended on the destruction of 126, why was that plan not included and the demo halted?

I did attend a workshop at Root Cellar last fall about the 128R project and no mention was made at all about 126. Yet, the developers certainly knew at the time that they would have to address the issue of access and the building at 126.

That meeting, by the way, was attended by many abutters who were angry that the developers had not been clear with them about their intentions.

I suspected at the time that 126 was doomed and shared that thought with several people in the days following the workshop.

When we received the notification, we were surprised only that we were getting it sooner rather than later.

As you know from the recent workshops, the residents of the Hill are alarmed at these types of projects. You need to listen to us before it is too late.

The 128R project is designed as a multi-family 5 story condo, towering 8 feet from a (hopefully) future historic district. It is already too big for the neighborhood in general, and certainly too large for its location abutting much smaller residences.

I also want to point out that, after the workshop in the Fall and prior the demolition of 128R, I took the images of the proposed project showing how it would ultimately look form North St. I went to the locations and tried to compare these renderings to the buildings currently there. The mock-up were entirely misleading! The perspective that was used was incorrect and in reality, the new building will tower over the buildings along the street.

These projects are suffering from the same problems that are being created with many other projects on the Hill. They are just too big!!!

Please reconsider what you are planning to approve on these. Please encourage these developers of 128R and 126 to come up with a new plan that betters serves our neighborhood.

Thank you.
Vana Carmona

Google Groups

126/128R North Street

Lindsay Steven Mann <lindsaymann@gmail.com> Jan 24, 2020 11:22 AM
Posted in group: **Planning Board**

To the Planning Board Members concerning project PL-000791-2019.

My name is Lindsay Mann. My wife, Susan, and I bought 122 North Street on Munjoy Hill in July of 2018. We have two young children who will grow up here. Our daughter will attend the East End School in the fall.

We fell in love with the spirit of this house - the architecture, the character, the beautiful back yard. The yard looks onto the lot at 128R North, which is set back from the street and sandwiched in between many different buildings. It was previously home to a single family residence. It is simply too small to absorb a building of the size proposed. There is an easement between 126 and 128 North Street that allows access to the building at 128R. The driveway is not wide enough for a 6-unit building. There is an easement for the Munjoy Heights retaining wall on this property that allows maintenance for that wall. These are all signs that the proposed building is too large for the lot. The solution, however, is not to demolish another 4-unit apartment building (126) and replace it with a structure nearly equal in height to 128R. This does not hide the scale and massing of the rear building, it only adds to the enormity of the project.

Our 1890's house is one the city deems historic: "a remarkable example of the Second Empire style on Munjoy Hill, retaining a significant amount of defining ornamentation and stylistic features." If the city wants to protect the charm of Munjoy Hill that makes it a popular destination, then it should not allow new construction to dwarf and diminish that very charm. For the most historically significant building on the block, it is very noticeable how little our house has been included in the developer's drawings and documents. At the neighborhood meeting, we asked for renderings from our point of view - those were not provided. We asked if the building could be shifted towards Bayview Heights so the setback to a single family back yard was greater than it is to a parking lot - we were told that isn't possible due to the building's footprint. The developer has used renderings from very specific locations to claim the building will be hidden from the public way. This simply is not true. Overhead site plans and drawings are one thing, but the real impact on our neighborhood, our lives, and our back yard is impossible to overstate. In the attached PDF, you will find images that much more accurately reflect the sheer size of the building, they are temporary, but will give you a much more accurate sense of the scale of this building.

Density should not mean suffocation. We support smart growth, we support affordable housing, we support protection of open spaces, and preservation of this city's history and architecture. But we do not support this project. It is incompatible with the neighborhood and threatens to divide this community. The people surrounding this project have spoken clearly: this building does not belong.

Lindsay Mann
122 North Street

--

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LINDSAY STEVEN MANN
Director / Cinematographer
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mobile: (207) 613-4066
www.beechwoodfilm.com




drone @ 38 ft.
Roof
38' - 10"




drone @ 45 ft
drone @ 38 ft.

Google Groups

128R and 126 North Street development proposal

Leslie Hart <blesliehart@gmail.com> Jan 24, 2020 10:22 AM

Posted in group: **Planning Board**

I am writing to express my concerns regarding these proposed developments. They are unacceptable under the R-6 Design Standards which require new construction to maintain the existing character of a neighborhood including scale.
The proposed developments are much too large and will overwhelm the neighborhood. They should be reduced in size, mass and scale.
Thank you

Leslie Hart
215 Sheridan Street

Sent from my iPhone

Google Groups

128R and 126 North Street Development Proposal

Kevin Schochat <kevin@kevinschochat.com> Jan 24, 2020 11:49 AM
Posted in group: **Planning Board**

To Whom It May Concern,
I am writing to let you know my concerns in regards to the above referenced proposed developments. They are totally unacceptable under the R-6 Design Standards which require new construction to maintain the existing character of a neighborhood including scale.
These proposed developments are much too large and will overwhelm the neighborhood. They should be reduced in size, mass and scale.
I hope you will do the right thing and what is best for all the citizens of Portland.
All the best,
Kevin Schochat

P.S. Please note that this email was submitted before 12:00 noon today - 1/24/2020

Kevin Schochat
215 Sheridan Street
Portland, Maine 04101

T: 917.597.4154

Google Groups

128R and 126 North Street-Opposite Letter

Tracy Davis <tdavis@urban-dwell.com> Jan 24, 2020 11:54 AM
Posted in group: **Planning Board**

To whom it may concern:

We, Tracy Davis and Michael Kennedy in residence at 201 Sheridan Street, are in staunch opposition to the proposed housing development suggested for 128R and 126 North Street.

Mr. Josh Wojcik, wholly and intentionally mislead neighbors when proposing that he was “building a home for his family”. What was presented was not a single family home but rather a monolithic four story multiplex box, inclusive of open, above ground open air parking. The proposed design of this property would tower over neighboring buildings, punctuate North Street from lower elevations and highway views, and will negatively impact the neighboring Historic Residence.

As residents of Munjoy Heights, our concerns are how this proposal negatively and physically impacts our property and neighborhood, our right to privacy, and the evolving Historic R7 District.

This development has already permitted the demolition and removal of a small single family home, a short of neighborhood inventory. Mr. Wojcik purposefully let the residence at 128R fall into ruin over a period of 12 months after evicting his tenants, turning off the heat, and opening the buildings windows inviting the mix of seasonal elements, only later to claim that the building was irreparable and condemned as a result. A strategic piece of his manipulation to deceive abutters as he ramped up to execute a plan that has now gone from “building a home for his family” to a multiplex, now doubled in size that occupies TWO existing lots, since he conducted the first neighborhood meeting.

Throughout the process, Mr. Wojcik has claimed that he does not have money to complete the project as illustrated in his first neighborhood meeting (a single multiplex). He has publicly stated, once the building was complete, landscape would happen as he could afford. Mr. Wojcik repeatedly commented that he did not have the funds for redesign.

Suddenly, Mr. Wojcik has fiscally committed not only to the redesign the original building but has added ANOTHER building to his proposal. This amended proposal will demolish a SECOND existing building, to affect and effect his goal of an income stream (to provide a college fund for his children-yes he actually said this). Adding this building also provided him the ability to add width between two buildings (126 which Mr. Wojcik currently owns and the neighboring residence that he does not own) for Emergency Equipment, but still falls short of what is required by current code.

Concerns/Impact:

1. Fiscally responsible to complete in whole
2. Air quality and impact

3. Snow removal
4. Proximity
5. Rainwater run off
6. Erosion of the retaining wall
7. Fire
8. Meeting requirements for emergency equipment
9. Greenspace
10. Light Pollution
11. Impact on R7
12. Parking requirements for additional units at 128

As the City of Portland evolves, Planners need to consider cause and effect. The need to preserve the character of our neighborhoods must be in collaboration with progress. The impact of change is a constant. We ask the board to consider our concerns as they process Mr. Wojcik's request to built an income producing multiplex in this small multicultural, mixed income neighborhood.

Respectfully submitted,

Tracy Davis and Michael Kennedy

TRACY DAVIS

urban dwellings™

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Studio Hours: Tuesday-Friday 8:30-4:30 / Saturday 10:00-3:00 *by appointment only*
Retail Store Hours: Tuesday-Friday 10:00-6:00 / Saturday 10:00-3:00

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PC25

Google Groups

128R and 126 North Street Planning Board workshop

David Machesney <dmachesney@prattabbott.com> Jan 24, 2020 12:05 PM

Posted in group: **Planning Board**

To the Planning Board:

As an abutter to the proposed project I am concerned with the size and scope of this project. I feel the size and scope is not in line with the R-6 design standards and I am concerned with the scale and massing and architectural compatibility that is not compatible with the neighborhood.

Sincerely

David Machesney

213 Sheridan Street

Portland, Maine 04101

126/128R NORTH STREET REDEVELOPMENT

UPRIGHT PROPERTIES, LLC
PORTLAND, MAINE

LEGEND

EXISTING		PROPOSED
REFER TO THE EXISTING CONDITIONS PLAN FOR ADD'L INFO		
	UNDERDRAIN	
	UTILITY PAVEMENT CUTS	
	RETAINING WALL	
	SEDIMENTATION BARRIER	
	EDGE OF PAVEMENT	
	CURB	
	SIGN	
	LAMP OR LIGHT POLE	
	UTILITY POLE	
	GUY WIRE	
	WATER VALVE	
	FIRE HYDRANT	
	SEWER MANHOLE	
	CATCH BASIN/FIELD INLET	
UE UE	UNDERGROUND ELECTRIC LINE	UGE
W W	UNDERGROUND WATER LINE	UW UW
	MINOR CONTOURS (1 FT)	64
	MAJOR CONTOURS (5 FT)	65
GAS	GAS LINE	GAS
	UNDERDRAIN	
	STORM DRAIN LINE	
S S	SEWER LINE	S S
	EXISTING/PROPOSED BUILDING	
OHE/T/C	OVERHEAD ELECTRICAL/TELEPHONE/CABLE	OHE/T/C
	PROPERTY LINE	
	SETBACKS	

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UTILITIES

SEWER:

DEPARTMENT OF PUBLIC WORKS (DPW)
250 CANCO ROAD
PORTLAND, MAINE 04103
CONTACT: KEITH GRAY, P.E.
(207) 874-8834

WATER:

PORTLAND WATER DISTRICT
225 DOUGLASS STREET
PO BOX 3553
PORTLAND, MAINE 04104
ATTN: MEANS DIVISION
(207) 774-5961

ELECTRIC:

CENTRAL MAINE POWER COMPANY (CMP)
162 CANCO ROAD
PORTLAND, MAINE 04103
CONTACT: PAUL DUPERRE
(207) 828-2882

TELEPHONE:

CONSOLIDATED COMMUNICATIONS
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PORTLAND, MAINE 04103
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(207) 745-9363

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PROJECT TEAM

DEVELOPER:

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(207) 749-9656

ARCHITECT:

DEXTROUS CREATIVE
PORTLAND, MAINE
CONTACT: TRACIE REED, R.A.
(207) 409-0459

SURVEYOR:

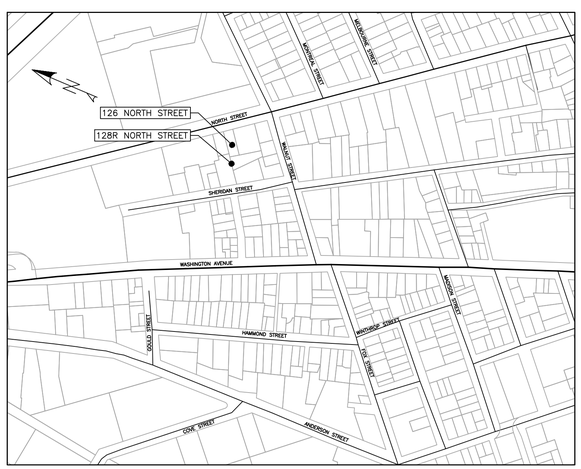
NADEAU LAND SURVEYS
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(207) 878-7870

STRUCTURAL ENGINEER:

STRUCTURAL INTEGRITY CONSULTING ENGINEERS, INC.
PORTLAND, MAINE
CONTACT: AARON JONES, P.E.
(207) 774-4614

GEOTECHNICAL ENGINEER:

SUMMIT GEOENGINEERING SERVICES
LEWISTON, MAINE
CONTACT: BILL PETERLEIN, P.E.
(207) 318-7761



VICINITY MAP
NOT TO SCALE

ABBREVIATIONS

PARTIAL LIST OF ABBREVIATIONS AND THEIR CORRESPONDING MEANING. PLEASE CONTACT THE ENGINEER FOR ANY CLARIFICATION

APPROX.	APPROXIMATE
BC	BOTTOM OF CURB
BMP	BEST MANAGEMENT PRACTICE
BOT.	BOTTOM
CAD	COMPUTER AIDED DESIGN
CB	CATCH BASIN
CF	CUBIC FOOT
CIP	CAST IN PLACE
CM	CONSTRUCTION MANAGER
CMP	CENTRAL MAINE POWER
CONC.	CONCRETE
CY	CUBIC YARD
DIP	DUCTILE IRON PIPE
DIA.	DIAMETER
DIM.	DIMENSION
EA.	EACH
ELEC.	ELECTRICAL
ELEV.	ELEVATION
EQUIV.	EQUIVALENT
EST.	ESTIMATE
EX.	EXISTING
FFE	FINISH FLOOR ELEVATION
FT.	FEET
GAL.	GALVANIZED
I.B.C.	INTERNATIONAL BUILDING CODE
ID	INNER DIAMETER
IN.	INCH
INV.	INVERT
IZ	INCLUSIONARY ZONING
L	LENGTH
MAX.	MAXIMUM
M.E.P.	MECHANICAL, ELECTRICAL, PLUMBING DESIGNER
MDOT	MAINE DEPARTMENT OF TRANSPORTATION
MFG.	MANUFACTURED
MH	MANHOLE
MIN.	MINIMUM
O.C.	ON CENTER
OD	OUTSIDE DIAMETER
OHE/T/C	OVERHEAD ELECTRIC/TELEPHONE/CABLE
PC	PRECAST
PE	PROFESSIONAL ENGINEER
PL	PROPERTY LINE
PLS	PROFESSIONAL LAND SURVEYOR
PROP.	PROPOSED
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
PWD	PORTLAND WATER DISTRICT
R	RADIUS
RD	ROOF DRAIN
RET.	RETAINING
ROW	RIGHT OF WAY
S	SLOPE
SD	STORM DRAIN
SDR	STANDARD DIMENSION RATIO
SF	SQUARE FEET
SMH	SEWER MANHOLE
SPEC.	SPECIFICATION
TC	TOP OF CURB
TW	TOP OF WALL
TYP.	TYPICAL
UD	UNDERDRAIN
UGE	UNDERGROUND ELECTRIC
DCVA	DOUBLE-CHECK VALVE ASSEMBLY

ISSUED FOR	BY DATE
LEVEL III SITE PLAN	WHS 8/7/19
PHASE II UPDATE	WHS 10/29/19
COMMENT RESPONSE	WHS 12/18/19

DRAWING NAME: COVER SHEET & LEGEND
PROJECT NAME: 128R NORTH STREET REDEVELOPMENT
CLIENT: UPRIGHT PROPERTIES, LLC
PO BOX 833 WILTON, ME 04294

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SCALE: NTS
DESIGNED BY: SJL
DRAWN BY: ZMS
CHECKED BY: WHS

STATE OF MAINE
WILLIAM H. SAVAGE
No. 11417
12/12/2019
REGISTERED PROFESSIONAL ENGINEER

DRAWING NO.
C-01

GENERAL NOTES:

1. THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANIES AND DIG SAFE AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION FOR UTILITIES. OTHERWISE IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF UNDERGROUND UTILITIES AND LOCATE ANY POTENTIAL CONFLICTS WITH THE APPROVED PLANS PRIOR TO CONSTRUCTION.
2. THE CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF ALL EROSION CONTROL MEASURES SHOWN ON THE PLAN. IF DEEMED NECESSARY BY THE OWNER OR OWNER'S REPRESENTATIVE, ADDITIONAL EROSION CONTROL MEASURES SHALL BE INSTALLED AT NO ADDITIONAL COST TO THE OWNER.
3. THE CONTRACTOR SHALL PREPARE THEIR OWN MATERIAL SCHEDULE BASED ON THE PLANS AND FIELD VERIFICATION BY THE CONTRACTOR. ALL MATERIAL SCHEDULES SHOWN WITHIN THE PLAN SET ARE FOR GENERAL INFORMATION ONLY.
4. ALL CONSTRUCTION METHODS, TESTING AND MATERIALS SHALL CONFORM TO THE MAINE DEPARTMENT OF TRANSPORTATION SPECIFICATIONS, THE CITY OF PORTLAND AND SERVICING UTILITY REQUIREMENTS, IF ANY. IN CASES WHERE THESE CONFLICT THE MOST STRINGENT SPECIFICATION SHALL APPLY AT NO ADDITIONAL COST TO THE OWNER.
5. THE SITE CONTRACTOR SHALL MAINTAIN A SET OF PAPER AND CAD DRAWINGS WHICH SHALL RECORD THE ACTUAL LOCATION, DIMENSIONS, ELEVATIONS, MATERIALS OF THEIR WORK, INDICATING THEREON ALL VARIATIONS FROM THE CONTRACT DRAWINGS. THE CONTRACTOR SHALL PROVIDE THE OWNER WITH ONE COMPLETE SET OF REPRODUCIBLE RECORD DRAWINGS, IN .DWG FORMAT AND PAPER, STAMPED ''AS-BUILT''. IF AUTOCAD NOT AVAILABLE EXCLUDE FROM BID IN WRITING.
6. THE CONTRACTOR WILL REMAIN SOLELY AND COMPLETELY RESPONSIBLE FOR ENFORCEMENT OF AND COMPLIANCE WITH 1) ALL CONTRACT PLANS AND SPECIFICATIONS, 2) APPLICABLE INTERNATIONAL BUILDING CODE REQUIREMENTS, AND 3) ALL SITE WORKING CONDITIONS AND SAFETY REQUIREMENTS, DAY AND NIGHT, FOR BOTH PERSONS AND PROPERTY, IN EACH CASE BOTH BY THE CONTRACTOR AND ITS SUBCONTRACTORS. THESE INCLUDE ALL OSHA, NIOSH, U.S. EPA AND ANY OTHER APPLICABLE GOVERNMENTAL REGULATIONS.
7. EXISTING CONDITIONS, BOUNDARY SURVEY, AND TOPOGRAPHY FROM THE PLAN TITLED ''PLAN DEPICTING THE RESULTS OF A BOUNDARY SURVEY & EXISTING CONDITIONS SURVEY'' (JOB NO. 2181902BTR1) BY NADEAU LAND SURVEYS DATED 8/22/2018 AND REVISED 5/1/2019.
8. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ACCESS TO THE SITE AT ALL TIMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY MARKINGS, SIGNAGE AND INCIDENTALS TO MAINTAIN A SAFE VEHICLE AND PEDESTRIAN ACCESS THOUGH THE LIFE OF THE PROJECT. THE CONTRACTOR SHALL NOTIFY THE PORTLAND PUBLIC SAFETY DIVISION ROUTINELY REGARDING TEMPORARY IMPACTS OR CHANGES TO SITE ACCESS CONDITIONS.
9. CONSTRUCTION MANAGEMENT PLAN BY ACORN ENGINEERING SHALL BE REFERRED TO FOR ANTICIPATED PROJECT SCHEDULE AND CLOSURES. TRAFFIC CONTROL SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
10. CONTRACTOR TO DETERMINE SOIL CLASSIFICATION INDEPENDENTLY FOR TRENCH, SHORING, AND OTHER SIMILAR CONSTRUCTION MEANS AND METHODS APPLICATIONS.
11. NO HOLES, TRENCHES, OR STRUCTURES SHALL BE LEFT OPEN OR UNATTENDED OVERNIGHT IN ANY AREA ACCESSIBLE TO THE PUBLIC OR WITHIN THE PUBLIC RIGHT-OF-WAY.
12. THE CONTRACTOR SHALL CONDUCT A PRE-CONSTRUCTION SURVEY OF INTERIOR SUBGRADE AND ABOVE GRADE ACCESSIBLE WALLS, CEILINGS, FLOORS, ROOF AND VISIBLE EXTERIOR AS VIEWED FROM THE GRADE LEVEL. THIS SHALL BE COMPLETED AT A MINIMUM FOR ADJACENT STRUCTURES. A COPY OF THE SURVEY SHOULD BE PROVIDED TO THE OWNER. DOCUMENT WITH PICTURES AT A MINIMUM.
13. THE CONTRACTOR SHALL SURVEY ROCK SURFACE PRIOR TO EXCAVATION AND DEVELOP VOLUME CALCULATIONS TO SHARE WITH ACORN ENGINEERING, IF ANY.

CIVIL SITE NOTES:

1. THE CONTRACTOR SHALL SUBMIT IN WRITING ANY REQUESTS TO MODIFY THE CONTRACT DOCUMENTS.
2. ALL SHOP AND ERECTION DRAWINGS SHALL BE CHECKED AND STAMPED BY THE CONTRACTOR PRIOR TO SUBMISSION FOR ENGINEER'S REVIEW. ANY UNCHECKED OR NON-STAMPED SUBMITTALS WILL BE RETURNED WITHOUT REVIEW.
3. CONTRACTOR SHALL THOROUGHLY INSPECT AND SURVEY EXISTING STRUCTURES AND SITE TO VERIFY CONDITIONS THAT AFFECT THE WORK SHOWN ON THE DRAWINGS. CONTRACTOR TO NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO PROCEEDING.
4. DETAILS SHOWN APPLY TO ALL SIMILAR CONDITIONS UNLESS OTHERWISE INDICATED.
5. ALTHOUGH ALL DUE DILIGENCE HAS BEEN APPLIED TO MAKE THE DRAWINGS AS COMPLETE AS POSSIBLE, NOT ALL DETAILS ARE ILLUSTRATED, NOR IS EVERY EXCEPTIONAL CONDITION ADDRESSED WITHIN THE CONTRACT DOCUMENTS.
6. ALL PROPRIETARY CONNECTIONS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
7. THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF ALL WORK, INCLUDING DIMENSION AND LAYOUT VERIFICATION, MATERIALS COORDINATION, SHOP DRAWING REVIEW, AND THE WORK OF ANY SUBCONTRACTORS.
8. UNLESS OTHERWISE SPECIFICALLY INDICATED, THE DRAWINGS DO NOT DESCRIBE OR DIRECT MEANS OR METHODS OF CONSTRUCTION.
9. THE CONTRACTOR, IN THE PROPER SEQUENCE, SHALL PERFORM OR SUPERVISE ALL WORK NECESSARY TO ACHIEVE THE FINAL COMPLETED STRUCTURE, AND TO PROTECT THE STRUCTURE, WORKMEN, AND OTHERS DURING THE CONSTRUCTION. SUCH WORK SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING FOR CONSTRUCTION EQUIPMENT, SHORING FOR EXCAVATION, FORMWORK, SCAFFOLDING, SAFETY DEVICES AND PROGRAMS OF ALL KINDS, SUPPORT AND BRACING FOR CRANES AND OTHER ERECTION EQUIPMENT.
10. DO NOT BACKFILL AGAINST RETAINING WALLS UNTIL SUPPORTING SLABS AND FLOOR FRAMING ARE IN PLACE AND SECURELY ANCHORED, UNLESS ADEQUATE BRACING IS PROVIDED. CONCRETE SHALL ALSO BE CURED FOR 28 DAYS PRIOR TO BACKFILLING.
11. TEMPORARY BRACING SHALL REMAIN IN PLACE UNTIL ALL FLOORS, WALLS, ROOFS AND OTHER SUPPORTING ELEMENTS ARE IN PLACE.
12. ALL PAVEMENT JOINTS SHALL BE SAWCUT AND APPLIED WITH TACK COAT PRIOR TO PAVING TO PROVIDE A DURABLE AND UNIFORM JOINT.
13. THE ENGINEER BEARS NO RESPONSIBILITY FOR THE ABOVE ITEMS, AND OBSERVATION VISITS TO THE SITE DO NOT IN ANY WAY INCLUDE INSPECTION OF THEM.

SPECIAL INSPECTION NOTES:

1. ALL SITE SOILS-RELATED WORK AND FOOTING EXCAVATIONS PRIOR TO PLACING FORMS SHALL BE REVIEWED BY THE GEOTECHNICAL ENGINEER.
2. SITE DRAINAGE SHALL BE REVIEWED BY THE PROJECT ENGINEER.
3. NORMAL REVIEWS WILL BE CONDUCTED BY LOCAL BUILDING DEPARTMENT.
4. NOTIFY 48 HOURS PRIOR TO REQUIRED REVIEW.
5. REQUIRED SPECIAL INSPECTIONS PER I.B.C. SECTION 1705.6 BY AN APPROVED SPECIAL INSPECTOR RETAINED BY OWNER. CONTRACTOR TO COORDINATE SPECIAL INSPECTIONS.
6. SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION.
7. DUTIES AND RESPONSIBILITIES OF THE SPECIAL INSPECTOR SHALL BE TO OBSERVE AND/OR TEST THE WORK ASSIGNED AND OUTLINED ABOVE FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS, ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION.
8. THE SPECIAL INSPECTOR SHALL FURNISH REGULAR REPORTS TO THE BUILDING OFFICIAL, THE ARCHITECT AND ENGINEER OF RECORD, AND OTHER DESIGNATED PERSONS. PROGRESS REPORTS FOR CONTINUOUS INSPECTION SHALL BE FURNISHED WEEKLY. INDIVIDUAL REPORTS OF PERIODIC INSPECTIONS SHALL BE FURNISHED WITHIN ONE WEEK OF INSPECTION DATES. THE REPORTS SHALL NOTE UNCORRECTED DEFICIENCIES, AND CHANGES TO THE APPROVED CONSTRUCTION DOCUMENTS AUTHORIZED BY THE ENGINEER OF RECORD.
9. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT WITHIN TEN DAYS OF THE FINAL INSPECTION STATING WHETHER THE WORK REQUIRING A SPECIAL INSPECTION WAS, TO THE BEST OF THE INSPECTOR'S KNOWLEDGE AND BELIEF, IN CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE I.B.C. WORK NOT IN COMPLIANCE SHALL BE NOTED IN THE REPORT.
10. SPECIAL INSPECTION FIRM SHALL BE EMPLOYED BY OWNER AND COORDINATED BY THE CONTRACTOR.

LAYOUT NOTES:

1. MONUMENTS DELINEATING PROPERTY LINES OR RIGHT OF WAYS SHALL NOT BE DISTURBED DURING CONSTRUCTION OPERATIONS. IN THE CASE A MONUMENT IS DISTURBED, AT THE CONTRACTOR'S EXPENSE, THE MONUMENT SHALL BE RESET TO ITS ORIGINAL LOCATION AND ELEVATION BY A REGISTERED LAND SURVEYOR.
2. ALL DIMENSIONS ON THE FOLLOWING SHEETS TAKE PRECEDENT OVER SCALED DIMENSIONS. EACH DRAWING WITH A BAR SCALE MEANS THAT THE DRAWING/DETAIL HAS BEEN SCALED AS ACCURATELY AS POSSIBLE, AND THE BAR SCALE IS FOR GENERAL REFERENCE ONLY. IF NO BAR SCALE IS PRESENT, THEN THERE IS NO SCALE TO THAT DRAWING/DETAIL. AT NO TIME SHOULD DRAWINGS BE SCALED FROM. ANY DISCREPANCIES BETWEEN DRAWINGS, DETAILS, SPECIFICATIONS AND THE FIELD CONDITION SHALL BE IMMEDIATELY REPORTED TO THE CIVIL ENGINEER FOR FURTHER DIRECTIONS BEFORE ANY ADDITIONAL WORK PROCEEDS.
3. SIGNAGE, STRIPING, AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
4. ALL TRAFFIC CONTROL SIGNS INDICATED ON THE SITE LAYOUT PLAN ARE TO MEET ALL REQUIREMENTS & CONDITIONS OF THE CITY OF PORTLAND, MAINE DEPARTMENT OF TRANSPORTATION AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
5. THE CONTRACTOR SHALL OBTAIN THE SERVICES OF A LICENSED PROFESSIONAL LAND SURVEYOR TO PROVIDE A MINIMUM OF TWO TEMPORARY BENCHMARKS WITHIN THE SITE AND TO LOCATE PROPOSED STRUCTURE CORNERS.
6. CONTRACTOR SHALL ENSURE THAT ACCESS, INCLUDING BUT NOT LIMITED TO WALKWAYS, DRIVEWAYS, AND MAILBOXES ADJACENT TO THE PROJECT REMAIN FUNCTIONAL AND AVAILABLE FOR USE AT ALL TIMES.

PERMITTING NOTES

1. THIS PROJECT IS SUBJECT TO THE TERMS AND CONDITIONS OF SITE PLAN – LEVEL III AND SUBDIVISION PERMIT FROM THE CITY OF PORTLAND.
2. THE CONTRACTOR SHALL REVIEW THE ABOVE REFERENCED PERMITS PRIOR TO SUBMITTING A BID FOR THIS PROJECT, AND INCLUDE COSTS AS NECESSARY TO COMPLY WITH THE CONDITIONS OF THESE PERMITS.
3. ALL WORK WITHIN THE PUBLIC RIGHT-OF-WAY REQUIRES A STREET OPENING PERMIT FROM THE CITY OF PORTLAND. ADDITIONALLY, COORDINATE WITH THE DEPARTMENT OF PUBLIC WORKS.

GRADING AND DRAINAGE NOTES:

1. TOPSOIL STRIPPED FROM THE SITE THAT IS SUITABLE FOR REUSE AS LOAM (MEETS THE REQUIREMENTS WITHIN SECTION 615 OF THE MDOT STANDARD SPECIFICATIONS, MOST RECENT VERSION AND IS FREE OF TRACEABLE AMOUNTS OF CONTAMINANTS) SHALL BE STOCKPILED WITHIN THE PROPOSED LIMIT OF WORK AREA. THE CONTRACTOR SHALL NOT ASSUME THAT ANY STRIPPED TOPSOIL WILL BE ACCEPTABLE FOR REUSE WITH THEIR ESTIMATE.
2. THE CONTRACTOR SHALL ANTICIPATE THAT GROUNDWATER WILL BE ENCOUNTERED DURING CONSTRUCTION AND SHALL INCLUDE SUFFICIENT COSTS WITHIN THEIR BID TO PROVIDE DEWATERING AS NECESSARY; NO SEPARATE PAYMENT SHALL BE MADE TO THE CONTRACTOR FOR DEWATERING. DEWATERING SHALL INCLUDE TREATMENT OF SILT THROUGH THE USE OF A DIRTBAG BY ACF ENVIRONMENTAL OR APPROVED EQUIVALENT.
3. THE OWNER SHALL BE RESPONSIBLE FOR OBTAINING ANY EASEMENT OR TEMPORARY CONSTRUCTION RIGHTS AS NECESSARY BY PRIVATE ADJACENT LAND OWNERS. THE CONTRACTOR SHALL NOT DISTURB ANY SOIL BEYOND THE PROPERTY LINE WITHOUT NOTIFYING AND OBTAINING SUCH EASEMENT OR TEMPORARY CONSTRUCTION RIGHT FROM THE OWNER. PRIOR TO THE CONTRACTOR PRICING THE WORK THE CONTRACTOR SHALL REQUEST PROOF OF SUCH EASEMENT OR TEMPORARY RIGHTS. SHOULD EASEMENTS OR TEMPORARY RIGHTS NOT BE AVAILABLE THE CONTRACTOR SHALL INCLUDE COST FOR BRACING AND SHORING AS NECESSARY.
4. THE CONTRACTOR SHALL PROVIDE A FINISH PAVEMENT SURFACE FREE OF LOW SPOTS AND PONDING AREAS. THE MINIMUM SLOPE SHALL MEET OR EXCEED 0.5% IN ALL CASES. ALL SLOPES SHALL BE AWAY FROM BUILDINGS AND TOP OF PAVEMENT SHALL BE AT OR BELOW EXISTING FINISH FLOOR ELEVATIONS.
5. NO ADDITIONAL PAYMENT FOR UNSUITABLE MATERIALS SHALL BE MADE.
6. ALL STORM DRAIN PIPE SHALL BE SMOOTH BORE INTERIOR PROVIDING A MANNINGS ROUGHNESS COEFFICIENT OF N=0.012 OR LESS.
7. ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE.
8. NATIVE SOILS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LIMIT THE DISTURBANCE TO SUBGRADE SOILS. SHOULD THE SUBGRADE BECOME YIELDING OR DIFFICULT TO WORK, DISTURBED AREAS SHALL BE EXCAVATED AND BACKFILLED WITH COMPACTED SELECT FILL OR CRUSHED STONE AT NO ADDITIONAL EXPENSE TO THE OWNER.
9. ALL SUBGRADE PREPARATION IS SUBJECT TO THE RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL ENGINEER.

EROSION CONTROL NOTES:

1. ALL ROUTINE MAINTENANCE ACTIVITIES SHALL BE CONDUCTED IN SUCH A WAY TO LIMIT THE AMOUNT OF DISTURBED AREA AT ONE TIME TO THE EXTENT PRACTICABLE.
2. PRIOR TO THE START OF ANY CLEARING/LAND DISTURBING ACTIVITIES, THE CONTRACTOR SHALL INSTALL APPLICABLE EROSION CONTROL DEVICES SUCH AS PERIMETER SILT FENCE, AND OTHER APPLICABLE MEASURES. IN THE EVENT THE CONTRACTOR IS NOT SURE A EROSION CONTROL MEASURE SHOULD BE IMPLEMENTED, THE CONTRACTOR SHALL CONTACT THE ENGINEER OF RECORD TO CONFIRM IMPLEMENTATION OF ANY EROSION CONTROL DEVICES.
3. ALL GROUND AREAS GRADED FOR CONSTRUCTION SHALL BE GRADED, LOAMED, SEEDED AND MULCH SHALL BE APPLIED AS SOON AS POSSIBLE WITHIN 7 DAYS FOLLOWING THE COMPLETION OF ANY SOIL DISTURBANCE, AND PRIOR TO ANY STORM EVENT.
4. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL SHALL BE INSTALLED TO THE SATISFACTION OF THE CITY. THE CONTRACTOR SHALL REFERENCE THE APPROVED EROSION AND SEDIMENTATION CONTROL REPORT FOR TEMPORARY AND PERMANENT EROSION AND SEDIMENTATION CONTROL DEVICES IN ADDITION TO THE PLAN SET. THE CONTRACTOR SHALL ALSO REFER TO THE MAINE D.E.P.'S PERMIT CONDITIONS, FINDINGS OF FACT AND ORDER (IF ANY), AND THE CURRENT MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR ADDITIONAL INFORMATION.
5. PRIOR TO PAVING, THE CONTRACTOR SHALL REMOVE ALL SEDIMENT FROM STORM DRAINS, CATCH BASINS, AND APPURTENANCES.
6. REFER TO THE EROSION CONTROL DETAILS & NOTES FOR ADDITIONAL INFORMATION.

UTILITY NOTES:

1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND ELEVATION OF THE EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED UPON RECORDS OF VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO TEST PIT TO DETERMINE THE EXACT LOCATION AND ELEVATION OF UTILITIES TO COORDINATE WITH THE PROPOSED CONNECTIONS OR CROSSING. ANY DISCREPANCIES SHALL BE IMMEDIATELY REPORTED TO THE CIVIL ENGINEER FOR FURTHER DIRECTIONS BEFORE ANY ADDITIONAL WORK PROCEEDS.
2. CONTRACTOR SHALL, AT NO ADDITIONAL COST TO THE OWNER, CONDUCT EXPLORATORY EXCAVATIONS AT LOCATIONS WHERE PROPOSED EXCAVATION WILL INTERSECT WITH EXISTING UTILITIES, PRIOR TO THE ORDERING OF STRUCTURES.
3. ALL NEW SANITARY MANHOLES SHALL BE VACUUM TESTED BEFORE BACKFILLING. TESTING SHALL BE COMPLETED IN ACCORDANCE WITH TECHNICAL REPORT #16 (TR-16): GUIDES FOR THE DESIGN OF WASTEWATER TREATMENT WORKS, PREPARED BY THE NEW ENGLAND INTERSTATE WATER POLLUTION CONTROL COMMISSION.
4. SEWER MANHOLES SHALL BE 4' ID UNLESS OTHERWISE STATED ON THE PLANS.
5. CONTRACTOR TO PROVIDE 5' OF COVER FROM TOP OF PIPE TO FINISH GRADE FOR WATER MAINS.
6. THRUST BLOCKS SHALL BE USED FOR THRUST RESTRAIN ON WATER MAINS. DETAIL AND LIMITS FOR THRUST BLOCKS ARE SHOWN ON SHEET C-44.
7. WATER INFRASTRUCTURE SHALL BE TESTED IN ACCORDANCE WITH THE PORTLAND WATER DISTRICT DOCUMENT ''WATER AND SEWER CONSTRUCTION SPECIFICATIONS AND PROCEDURE'', MOST RECENT REVISION.
8. ALL REQUIRED FITTINGS FOR THE WATER MAIN ARE NOT SHOWN ON DRAWINGS. CONTRACTOR SHALL FURNISH AND INSTALL ALL NECESSARY FITTINGS REQUIRED TO CONSTRUCT THE WATER MAIN IN ACCORDANCE WITH CITY OF PORTLAND, STATE OF MAINE, AND AMERICAN WATER WORKS ASSOCIATION STANDARDS AND REGULATIONS.
9. CONTRACTOR SHALL COORDINATE WORK REGARDING ANY WATER MAIN CONNECTION AND WATER MAIN SHUTDOWN WITH THE PORTLAND WATER DISTRICT AT LEAST SEVEN (7) DAYS PRIOR TO CONSTRUCTION.
10. ALL WATER PIPE INSTALLATION SHALL CONFORM WITH THE PORTLAND WATER DISTRICT SPECIFICATIONS AND PROCEDURES, MOST RECENT EDITION.
11. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
12. SEWER, GAS, TELEPHONE, ELECTRICITY, CABLE, WATER AND ANY OTHER UTILITY CONNECTIONS SHALL BE REVIEWED BY PLUMBING, ELECTRICAL, AND MECHANICAL DESIGNER FOR CONSISTENCY WITH THEIR PLANS PRIOR TO CONSTRUCTION.
13. COORDINATE EXIT POINT FOR SECONDARY SERVICE WITH THE ARCHITECT/ELECTRICAL ENGINEER. SECONDARY LINE LOCATIONS NOT PROVIDED BY ACORN ENGINEERING WITHIN THE UTILITY PLAN.
14. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL THE NECESSARY PERMITS FOR THE INSTALLATION OF THE UTILITIES AND STORMDRAINS WITHIN THE PUBLIC RIGHT OF WAY. THE CONTRACTOR SHALL SUBMIT A MAINTENANCE OF TRAFFIC PLAN TO THE CITY IN ACCORDANCE WITH THE CITY OF PORTLAND TECHNICAL MANUAL PRIOR TO ANY WORK.
15. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL BOXES, FITTINGS, CONNECTORS, COVER PLATES AND OTHER MISCELLANEOUS ITEMS NOT NECESSARILY DETAILED ON THE DRAWINGS TO RENDER INSTALLATION OF UTILITIES COMPLETE AND OPERATIONAL AT NO EXTRA EXPENSE TO THE OWNER.

DEMOLITION NOTES:

1. THE FOLLOWING ITEMS ARE TYPICAL OF MATERIAL WHICH MAY EXIST ON SITE. THE CONTRACTOR IS ADVISED TO VISIT THE SITE TO CONFIRM DEMOLITION ITEMS SINCE THE LIST IS NOT INCLUSIVE OF THE SITE CONDITIONS WHICH MAY BE ENCOUNTERED:

   ROCK AND CONCRETE FOUNDATIONS

   CONCRETE SLABS

   BITUMINOUS ASPHALT PAVEMENT

   CONCRETE PADS AND BLOCKS

   FENCE POST AND FENCING

   UNDERGROUND UTILITY LINES

   ABOVE AND OR BELOW FUEL OIL AND PROPANE GAS TANKS

   STORM DRAIN PIPES AND APPURTENANCE STRUCTURES

   OTHER TRASH & MISCELLANEOUS SOLID WASTES

2. ALL DISPOSAL OF DEMOLITION DEBRIS OR WASTE SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE, & FEDERAL REGULATIONS. CONTRACTORS SHALL PROVIDE OWNER WITH APPROPRIATE "BILLS OF LADING" DEMONSTRATING PROPER DISPOSAL OF ALL MATERIALS.
3. THE CLIENT HAS NOT REQUESTED NOR HAS ACORN ENGINEERING COMPLETED A PHASE I – ENVIRONMENTAL SITE ASSESSMENT FOR THE PROPERTY.

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
LEVEL III SITE PLAN	WHS	8/7/19
PHASE II UPDATE	WHS	10/29/19
COMMENT RESPONSE	WHS	12/18/19

DRAWING NAME: GENERAL NOTES
PROJECT NAME: 128R NORTH STREET REDEVELOPMENT
CLIENT: UPRIGHT PROPERTIES, LLC
PO BOX 833 WILTON, ME 04294

ACORN ENGINEERING, INC.
CIVIL ENGINEERING AND LAND PLANNING
65 HANOVER STREET PORTLAND, MAINE 04101
(207) 775-2655

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THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. AND SHALL NOT BE USED FOR OTHER PROJECTS OR, OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

FILE: 1116_CIVIL
JN: 1116
SCALE: NTS
DESIGNED BY: SJL
DRAWN BY: ZMS
CHECKED BY: WHS

STATE OF MAINE — WILLIAM H. SAVAGE — No. 11511 — REGISTERED PROFESSIONAL ENGINEER
12/12/2019

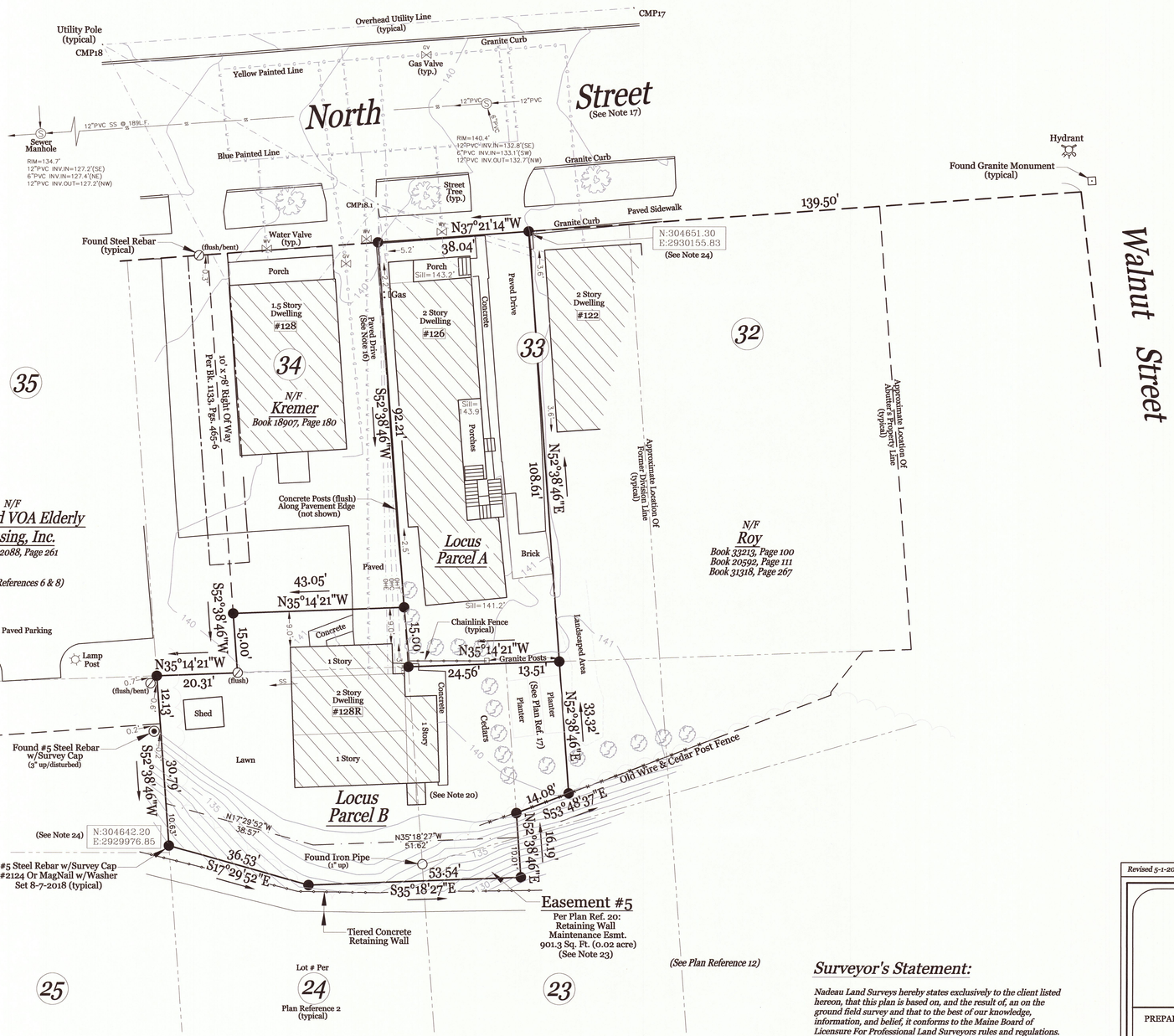
DRAWING NO.
C-02

Plan References:

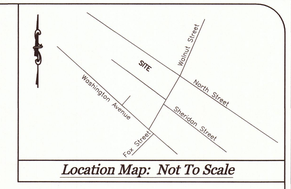
1. *Subdivision Of Lot #1 On Mountjoy's Neck For Little, Weeks, And Moody, dated February 17, 1802 and recorded March 24, 1802 in CCRD Book 36, Page 247.*
2. *Re-Survey Of Plan Reference 1, dated June 1876 by E.C. Jordan, C.E., City Plan 370/6 and 386/28.*
3. *Subdivision Of Elijah Kellogg Lot, dated April 10, 1802 and recorded February 18, 1807 in CCRD Book 51, Page 297, and traced June 1925 for City Plan 406/78.*
4. *City Of Portland Revaluation Plans, Sheets 10 & 12, dated 1882 by William A. Goodwin, City Engineer, recorded October 24, 1884 in CCRD Plan Book 5, Pages 10 & 12.*
5. *Plan Of Lot At Terminus Of Sheridan Street, dated 1928 on file at Owen Haskell, Inc.*
6. *"Property In Portland Me. Surveyed For The Jewish Home For Aged", dated August 1928 by E.C. Jordan & Co. on file at Owen Haskell, Inc.*
7. *"General Plan And Profile, Department Of Parks And Public Works, City Of Portland, Maine, Reconstruction Of Walnut St., North St. To Washington Ave.", dated May 17, 1984 by Herbert P. Gray, Consulting Engineer, Portland, Maine, City Plan 502/7.*
8. *"Standard Boundary Survey, Plan Of Property In County Of Cumberland, City Of Portland, Maine For Jewish Home For Aged", dated December 20, 1985 (Working Plan) by Morton & Rose Associates, Limerick, Maine on file at Maine Boundary Consultants.*
9. *"City Of Portland, Maine Parks And Public Works Department Engineering Division, North Street Plan And Profile Sta. 11+00 To 16+50", Sheet 8 of 14, dated August 1985 by Woodard & Curran Inc. Consulting Engineers, Gorham, Maine, City Plan 925/1.*
10. *"City Of Portland, Maine Parks And Public Works Department Engineering Division, Sheridan Street Plan And Profile Sta. 9+00N To 13+50N", Sheet 5 of 25, dated June 1987 by Woodard & Curran Inc. Consulting Engineers, Portland, Maine, City Plan 913/10.*
11. *"Plan Of Property In Portland, Maine Made For Nicole D'Entremont (Standard Boundary Survey)", dated July 15, 1991 by Robert J. Cyr, RLS 955, South Portland, Maine, recorded July 16, 1991 in CCRD Plan Book 191, Page 43.*
12. *"Division Of Land For Nicki Lee Green & Katherine P. Richmond, 79 Walnut Street, Portland, Maine", dated April 2006 by Andrew E. Bradford Land Surveying, Inc., Kennebunk, Maine.*
13. *"Plan Of Property Of W.H. Baxter, Esq.", dated July 1866 by Anderson Bonnell & Co., recorded July 1, 1866 in CCRD Plan Book 2, Page 54.*
14. *Richards Standard Atlas Of The City Of Portland, Plate 2, dated 1914.*
15. *Insurance Maps Of Portland, Maine, Volume One, Published By The Sanborn Map Company, Plate 1, dated 1909, last corrected April 1952.*
16. *City Of Portland Atlas, Plate 48A, dated 1873.*
17. *"Exhibit Sketch For Proposed Conveyance, Mary Roy To Upright Properties, LLC Between Sheridan Street & North Street, Portland, Maine", dated May 29, 2018 by Nadeau Land Surveys, Portland, Maine, recorded June 5, 2018 at the Cumberland County Registry of Deeds in Book 34890, Page 304.*
18. *"Plan Depicting The Results Of A Boundary Survey & Existing Conditions Survey Made For Redfern Properties LLC, Sheridan Street And East Cove Street, Portland, Maine", dated November 11, 2013, revised November 25, 2013 by Nadeau Land Surveys, Portland, Maine.*
19. *"Plan Depicting A Proposed Subdivision Made For Redfern Munjoy LLC, P.O. Box 8816, Portland, ME 04104, Munjoy Heights, Sheridan Street, East Cove Street, And Walnut Street, Portland, Maine", dated December 6, 2013, last revised February 10, 2014 by Nadeau Land Surveys, Portland, Maine, recorded February 21, 2014 at the Cumberland County Registry of Deeds in Plan Book 214, Page 48.*
20. *"Condominium Plat, Munjoy Heights, A Condominium, Sheridan Street, East Cove Street, And Walnut Street, Portland, Maine", dated April 21, 2015 by Nadeau Land Surveys, Portland, Maine, recorded April 30, 2015 at the Cumberland County Registry of Deeds in Plan Book 215, Page 143.*
21. *"City Of Portland, Maine Parks And Public Works Department Engineering Division, North Street, Plan And Profile Sta. 11+00 To 16+50", Sheet 8 of 14, dated August 15, 1985, City Plan 925/1.*
22. *"Portland Water District, Portland Sewer System Infiltration-Inflow Analysis, System Base Mapping, Study Area IV", Sheet IV-11, dated 1981, last revised March 22, 1999 by Hunter-Ballew Associates, Falmouth, Maine, City Plan 905/1.*

Graphic Scale:

0' 5' 10' 15' 30' 45' 60' 75'



Grid North
MSPC NAD83, 1802 (West Zone)



Location Map: Not To Scale

General Notes:

1. *This plan is not intended to depict limits or extent of fee title ownership. An opinion of title should be rendered by a title attorney.*
2. *This office reserves the right to be held harmless by all 3rd party claims.*
3. *This survey does not purport to reflect any of the following:*
   a. *easements other than those that are visible or specifically stated in the referenced documents.*
   b. *building setback compliance or restrictive covenants.*
   c. *zoning or other land use regulations.*
   d. *the location of any underground utilities or structures.*
4. *This office reserves the right to be held harmless for unknown or unobtainable private records which could affect the results of this survey.*
5. *Reference is made to "Letter Of Agreement" dated May 23, 2018 between Nadeau Land Surveys and the below listed client(s), which shall be considered an integral part of this survey.*
6. *N/F is an abbreviation for Now or Formerly.*
7. *All deeds referenced on this plan are recorded at the Cumberland County Registry of Deeds (CCRD).*
8. *Locus Parcels are located in the R-6 Residential Zone:*
   Minimum Lot Size = 2,000 S.F.
   Minimum Lot Area / Dwelling Unit = 725 S.F.
   Minimum Street Frontage = 20 feet
   Minimum Lot Width = 20 feet
   Maximum Lot Coverage = 60%
   Minimum Front Yard Setback = 5 feet, or average depth of adjacent front yards
   Minimum Side Yard Setback = 5 feet
   Minimum Rear Yard Setback = 10 feet
   A City of Portland Code Enforcement Officer should be consulted for confirmation of all applicable space & bulk requirements for Locus Parcels.
9. *Locus Parcel A is shown on the City of Portland Assessor's Map 12, Block H, as Lot 14, and is listed as 126 North Street. Locus Parcel B is shown on the City of Portland Assessor's Map 12, Block H, as parts of Lots 9 & 22, and is listed as 128R North Street.*
10. *Area of Locus Parcel A is 4,105.0 square feet (0.09 acre). Area of Locus Parcel B is 5,682.0 square feet (0.13 acre).*
11. *The apparent right of way lines depicted on this plan are based on the Plan References listed hereon and monumentation found in the field, and City of Portland Engineering Street Notes.*
12. *The Locus Parcels do not scale in a Special Flood Hazard Area per FEMA Flood Insurance Rate Map Community-Panel Number 230051 0014B, index dated December 8, 1998. The parcels scale in Zone C.*
13. *All building corner offsets to boundary lines are from cornerboards and not building foundation, unless noted.*
14. *Call 1-888-DIGSAFE at least three business days before performing ANY excavation.*
15. *Vertical Datum is NGVD29. Benchmark is City Monument T112-18-107, elevation = 145.08'.*
16. *See CCRD Book 1143, Page 307, dated July 25, 1923, from Elmore W. Ramsdell to Claire Bowden, for right of way to North Street.*
17. *Per City of Portland Records Vol. 1, Page 184, North Street was accepted March 20, 1795 as 4 rods (66 feet) wide.*
18. *See CCRD Book 14149, Page 281, dated September 10, 1998, for City of Portland's License to erect a fence across Poplar Street partially intruding on land N/F Maxwell.*
19. *See CCRD Book 31326, Page 331, dated February 3, 2014, from the City of Portland to Raymond C. Maxwell, for Termination of License recorded in Book 14149, Page 281.*
20. *Existing bulkhead is allowed to encroach setback window per City of Portland Zoning Ordinance Section 14-425.*
21. *See Notice for vacated portions of Sheridan Street and East Cove Street, dated March 5, 2015 and recorded in CCRD Book 32118, Page 145.*
22. *The underground utilities shown have been located from field survey information and existing drawings. This office make no guarantees that the underground utilities shown comprise all such utilities in the area, either in-service or abandoned. The underground utilities shown are approximate location and are located as accurately as possible from information available. This office has not physically located the underground utilities.*
23. *See CCRD Book 32237, Page 104, dated April 30, 2015, for Release And Easement Agreement between Redfern Munjoy, LLC and Upright Properties, LLC.*
24. *The coordinates depicted on our plan are for municipal requirements only and should not be used for construction layout. This office assumes no liability and/or responsibility if used for construction purposes.*
25. *Spot grades, sill and rim elevations are for engineering purposes only, and shall not be used as project benchmarks. This office assumes no liability and/or responsibility if used for construction purposes.*
26. *No records research or site evaluation has been performed since the original date of this survey. The survey plan was revised solely to depict additional utility information.*

Locus Deed References:

Locus Parcel A
Gregory D. Kesich and Gail D. Kesich
To
Raymond T. Wojcik, Zetta A. Wojcik and Joshua T. Wojcik
dated August 24, 2007 and recorded August 27, 2007 at the Cumberland County Registry of Deeds in Book 25418, Page 226.

Locus Parcel B
Redfern Munjoy, LLC
To
Upright Properties, LLC
dated January 31, 2014 and recorded February 3, 2014 at the Cumberland County Registry of Deeds in Book 31317, Page 118, corrected on same date in Book 31318, Page 270.

Mary Roy
To
Upright Properties, LLC
dated and recorded June 5, 2018 at the Cumberland County Registry of Deeds in Book 34890, Page 304.

Surveyor's Statement:

Nadeau Land Surveys hereby states exclusively to the client listed hereon, that this plan is based on, and the result of, an on the ground field survey and that to the best of our knowledge, information, and belief, it conforms to the Maine Board of Licensure For Professional Land Surveyors rules and regulations.

This plan is not valid without the signature and stamp of the below listed Professional Land Surveyor who prepared this plan as it may contain unauthorized alterations unknown to this office.

Nadeau Land Surveys

James D. Nadeau, P.L.S. #2124 (agent) Date: 5-1-2019

STATE OF MAINE — JAMES D. NADEAU — 2124 — PROFESSIONAL LAND SURVEYOR

Revised 5-1-2019: Added Sewer and Water information, Plan References 21 & 22, Note 26, and FB 409.

Plan Depicting The Results Of A Boundary Survey & Existing Conditions Survey Made For

Joshua T. Wojcik

Southwesterly Sideline Of North Street

Portland, Maine

PREPARED BY:

Nadeau Land Surveys

918 BRIGHTON AVENUE
PORTLAND, ME 04102

Professional Land Surveyors
Certified Floodplain Managers

PH. (207) 878-7870
FAX (207) 878-7871

RECORD OWNER: Joshua T. Wojcik, et al. Upright Properties, LLC 47 Lafayette St. #1 Portland, ME 04101	DRAWN BY: TPB	PLAN DATE:	8/22/2018
	CHECKED BY: JDN/MLC	SURVEY DATE:	June 2018
	INSTR. Topcon DS-205AC	SCALE:	1" = 15'
FIELD BOOK: FB 407 & 409 & Topcon Tesla	JOB No: 2181902BTR1	SHEET No:	1 of 1

GENERAL NOTES: PHASE II DEMOLITION TO OCCUR PRIOR TO PHASE 1 CERTIFICATE OF OCCUPANCY

1. EXISTING ASPHALT PAVEMENT TO BE REMOVED SHALL BE STRIPPED AND PROPERLY DISPOSED OF OFFSITE.
2. ALL DISPOSAL OF DEMOLITION DEBRIS OR WASTE SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE, & FEDERAL REGULATIONS. CONTRACTOR SHALL PROVIDE OWNER WITH APPROPRIATE "BILLS OF LADING" TO DEMONSTRATE PROPER DISPOSAL OF ALL MATERIALS.
3. SITE DEMOLITION SHALL NOT OCCUR UNTIL PROPER ABATEMENT PROCEDURES HAVE OCCURRED. ABATEMENT, IF NECESSARY, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
4. THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANIES AND DIG SAFE AT LEAST 72 HOURS PRIOR TO EXCAVATION TO REQUEST EXACT FIELD LOCATION FOR UTILITIES. OTHERWISE IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF UNDERGROUND UTILITIES AND LOCATE POTENTIAL CONFLICT WITH THE APPROVED PLANS PRIOR TO CONSTRUCTION.
5. ALL CONSTRUCTION SIGNAGE IS TEMPORARY AND SHALL BE REMOVED AT PROJECT COMPLETION.
6. SEDIMENT BARRIERS TO BE PLACED DIRECTLY ON THE FRONT AND SIDE PROPERTY LINES, DOWN GRADIENT OF THE PROPOSED PROJECT WORK PER DETAIL; FENCES ARE OFFSET OF THE PROPERTY LINES AS SHOWN ON THE PLAN FOR CLARITY PURPOSES AND DO NOT NECESSARILY DEPICT THE PHYSICAL LOCATION.
7. CONTRACTOR SHALL PLACE CATCH BASIN INLET PROTECTION ON CATCH BASINS AND FIELD INLETS DOWN-GRADIENT OF ALL NON-STABILIZED SURFACES, PER DETAIL.
8. DEMOLITION PLAN IS NOT INCLUSIVE OF ALL EXISTING ITEMS TO BE REMOVED AS PART OF SITE CONSTRUCTION INCLUDING BUT NOT LIMITED TO LANDSCAPING, UTILITIES, WORK WITHIN THE ROW, ETC. ALL DEMOLITION WORK SHALL BE IN ACCORDANCE WITH THE CITY OF PORTLAND REGULATIONS.
9. CONTRACTOR TO BE RESPONSIBLE FOR PROVIDING OFF-SITE PARKING TO EMPLOYEES; ON-SITE PARKING WILL NOT BE PROVIDED OR GUARANTEED. CONTRACTOR TO BE RESPONSIBLE FOR OBTAINING THE APPROPRIATE PERMITS FROM THE CITY FOR CLOSING ANY ON-STREET PARKING SPACES DURING THE CONSTRUCTION PERIOD.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR SNOW REMOVAL ALONG CONSTRUCTION FENCE AND GATE.
11. NO WORK ON PHASE II SHALL OCCUR DURING PHASE I WORK UNLESS AUTHORIZED BY THE OWNER.

N/F Redfern Munjoy, LLC

EX. MUNJOY HEIGHTS CONDOMINIUMS

EX. RETAINING WALL

EX. 10' RET. WALL EASEMENT

EROSION CONTROL MIX BERM

EX. STRUCTURE DEMOLISHED ON 11/19/19. DEBRIS, UTILITIES, ECT. MAY REMAIN. CONTRACTOR TO COORDINATE EXTENT OF DEMO W/ CLIENT

RELOCATE 10 CEDAR TREES ON SITE. SEE SHEET L-1

EXISTING PROPERTY LINE

128R NORTH STREET

PROPOSED PROPERTY LINE PER SUBDIVISION PLAT AND LAND CONVEYANCE

RETIRE EXISTING SEWER LATERAL. REMOVE PIPE MIN. 5' BEYOND PROPOSED BUILDING FOOTING AND PLUG PER DETAIL.

REMOVE CONC. SLABS, TYP.

TEMP. CONSTRUCTION FENCE

N/F Portland VOA Elderly Housing Inc

EROSION CONTROL MIX BERM

REMOVE OVERHEAD UTILITIES.

N/F Roy

TEMP. CONSTRUCTION FENCE

DEMOLISH EXISTING BUILDING PRIOR TO OCCUPANCY OF 128R NORTH

UTILITY + DRIVEWAY CONSTRUCTION TO BE COORDINATED WITH OWNER OF 128F NORTH STREET. LIMIT DURATION TO THE GREATEST EXTENT PRACTICABLE. SUBBASE AND BASE GRAVELS AS WELL AS BASE PAVEMENT SHALL BE CONSTRUCTED IMMEDIATELY AFTER COMPLETION OF UTILITIES.

N/F Kremer

REMOVE EXISTING PAVEMENT

128F NORTH STREET

126 NORTH STREET

PHASE 1 INCLUDES CONDITIONS OUTSIDE OF DASHED LINE. PHASE 2 INCLUDES CONDITIONS INSIDE OF LINE

REROUTE EXISTING GAS LINE IN COORDINATION WITH UNITIL TO FACILITATE 128R CONSTRUCTION. RETIRE LINE PRIOR TO DEMOLITION OF 126

REMOVE OVERHEAD UTILITIES

LOCATE EXISTING DOMESTIC WATER SERVICE LINE, SHUT CORPORATION, REMOVE SERVICE BOX AND ROAD, AND CUT DOMESTIC SERVICE AT MAIN

REMOVE EXISTING PAVEMENT FOR UTILITY CONSTRUCTION

CONTRACTOR AND OWNER TO COORDINATE TEMP. DISCONNECTION OF GAS SERVICE TO 128F NORTH STREET. SEE SHEET C-20

MODIFY DRIVEWAY AND CURB CUT PER SHEET C-10

REMOVE EXISTING UTILITY POLE. SEE SHEET C-20 FOR NEW POLE AND CONNECTIONS TO EXISTING BUILDINGS

LOCATE EXISTING DOMESTIC WATER SERVICE LINE, SHUT CORPORATION, REMOVE SERVICE BOX AND ROAD, AND CUT DOMESTIC SERVICE AT MAIN

EXISTING WATER MAIN

RIM=140.4'
12"PVC INV.IN=132.9'(SE)
6"PVC INV.IN=133.1'(SW)
12"PVC INV.OUT=132.7'(NW)

UTILITY TRENCH WITHIN R.O.W., TYP.

RETIRE EXISTING GAS LINE IN COORDINATION WITH UNITIL

EXISTING GAS MAIN

12"PVC SS @ 189L.F.

RIM=134.7'
12"PVC INV.IN=127.2'(SE)
6"PVC INV.IN=127.4'(NE)
12"PVC INV.OUT=127.2'(NW)

EXISTING SEWER MAIN

10 0 10 20

SCALE: 1"=10'

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
LEVEL III SITE PLAN	WHS 8/7/19
PHASE II UPDATE	WHS 10/29/19
COMMENT RESPONSE	WHS 12/18/19

DRAWING NAME: DEMOLITION & CONSTRUCTION MANAGEMENT PLAN

PROJECT NAME: 126/128R NORTH STREET REDEVELOPMENT

CLIENT: UPRIGHT PROPERTIES, LLC
PO BOX 833 WILTON, ME 04294

ACORN ENGINEERING, INC.

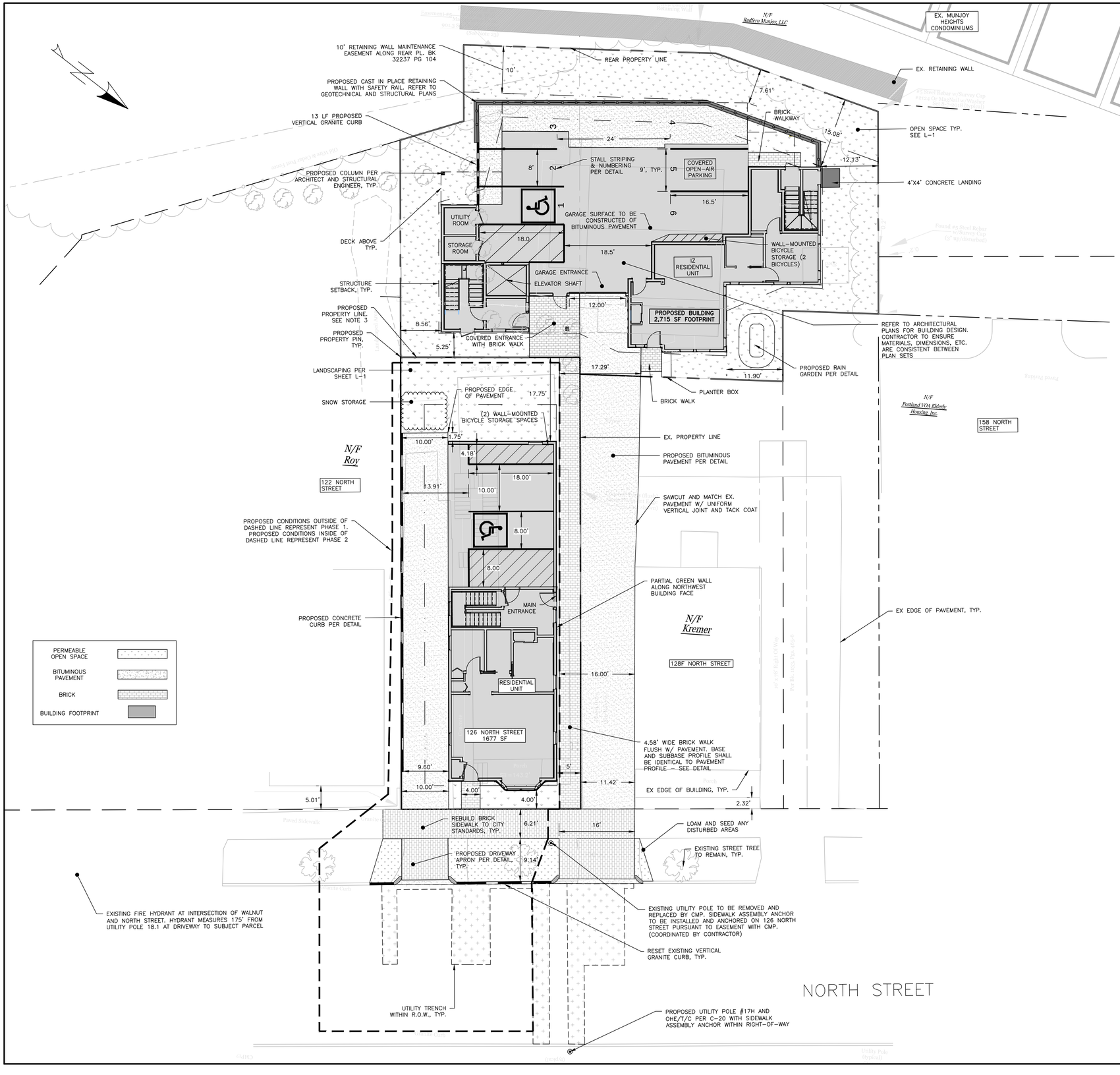
THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY MODIFICATIONS MADE TO THIS PLAN WITHOUT THE WRITTEN PERMISSION OF ACORN ENGINEERING, INC. SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
65 HANOVER ST. PORTLAND, MAINE 04101
(207) 775-2655

FILE:	1116_CIVIL
JN:	1116
SCALE:	1"=10'
DESIGNED BY:	SJL
DRAWN BY:	ZMS
CHECKED BY:	WHS

STATE OF MAINE — WILLIAM SAVAGE — No. 10111 — REGISTERED PROFESSIONAL ENGINEER — 12/12/2019

DRAWING NO.
C-03



GENERAL NOTES:

1. STRIPING AS INDICATED ON SITE PLAN SHALL BE WHITE AND 4" WIDE.
2. EXISTING CONDITIONS PROVIDED BY NADEAU LAND SURVEYS ON A PLAN ENTITLED BOUNDARY & EXISTING CONDITIONS SURVEY AT NORTH STREET MADE FOR JOSH T. WOJCIK (JOB NO. 2181902BTR1). PLAN IS DATED AUG. 22, 2018 WITH A MOST RECENT REVISION DATE OF MAY 1, 2019.
3. REFER TO LEGAL DESCRIPTION AND ACCOMPANYING EXHIBIT IN BK _____ PG _____ FOR CONVEYANCE OF LAND FROM 126 NORTH STREET TO 128R NORTH STREET.
4. SOLID GREY HATCH DEPICTS ENCLOSED LIVING SPACE AT THE GROUND LEVEL OR ABOVE.
5. NO WORK ON PHASE II SHALL OCCUR DURING PHASE I WORK UNLESS AUTHORIZED BY THE OWNER.

PHASE I SPACE AND BULK STANDARDS – 128R NORTH		
ZONE: R6 – MHNCDO	REQUIRED	PROPOSED
MINIMUM LOT SIZE	2,000 SF	6,142 SF
MINIMUM STREET FRONTAGE	20'	N/A
MINIMUM FRONT YARD SETBACK	5'	5.25'
MINIMUM SIDE YARD SETBACK (LEFT)	8.15' *	8.56'
MINIMUM SIDE YARD SETBACK (RIGHT)	11.85' *	11.90'
MINIMUM DECK SETBACK	7.5'	7.61'
MINIMUM REAR YARD SETBACK	15'	15.08'
MAXIMUM LOT COVERAGE	60%	57%
MINIMUM LOT WIDTH	20'	101'
MAXIMUM BUILDING HEIGHT	45'	44.61'
MINIMUM LANDSCAPED OPEN AREA	20%	40%
MAXIMUM NUMBER OF DWELLING UNITS	725 SF/UNIT = 8	6
RESIDENTIAL PARKING	1 SPACE PER UNIT AFTER 3 UNITS = 3 SPACES	6
MINIMUM INTERNAL RESIDENT BICYCLE STORAGE SPACES	2 SPACES/5 D.U. = 2	2

* 10' FOR ALL SIDE YARDS, EXCEPT THAT A SIDE YARD NO LESS THAN 5' IS PERMITTED WHEN USED TO CONTINUE A DOCUMENTED BUILT PATTERN OF THE SURROUNDING STREETSCAPE, IN WHICH CASE A PROPORTIONAL INCREASE IN ANOTHER SIDE YARD MUST BE PROVIDED

PERMISSIBLE VEHICLE SUMMARY – 128R			
SPACES	MAX WHEEL BASE	MAX LENGTH	MAX WIDTH
1,5,6	9.3'	16.5'	6.5'
2,3	8.6'	15.8'	6'
4	8.5'	14.5'	5.8'

PARKING SUMMARY – 128R	
DIMENSIONS	# PARKING SPACES
9'x16.5'	4
8'X16.5'	1
8'X18'	1
TOTAL PROPOSED SPACES	6

PHASE II SPACE AND BULK STANDARDS – 126 NORTH		
ZONE: R6 – MHNCDO	REQUIRED	PROPOSED
MINIMUM LOT SIZE	2,000 SF	3,645 SF
MINIMUM STREET FRONTAGE	20'	38'
MINIMUM FRONT YARD SETBACK	3.7' AVG	4'
MINIMUM SIDE YARD SETBACK (LEFT)	5'	10'
MINIMUM SIDE YARD SETBACK (RIGHT)	5'	5'
MINIMUM DECK SETBACK	7.5'	N/A
MINIMUM REAR YARD SETBACK	10'	17.75'
MAXIMUM LOT COVERAGE	60%	47%
MINIMUM LOT WIDTH	20'	38'
MAXIMUM BUILDING HEIGHT	35'	33.32'
MINIMUM LANDSCAPED OPEN AREA	20%	20%
MAXIMUM NUMBER OF DWELLING UNITS	725 SF/UNIT = 5	5
RESIDENTIAL PARKING	1 SPACE PER UNIT AFTER 3 UNITS = 2 SPACES	2
MINIMUM INTERNAL RESIDENT BICYCLE STORAGE SPACES	2 SPACES/5 D.U. = 2	2

PARKING SUMMARY – 126	
DIMENSIONS	# PARKING SPACES
10'x18'	1
8'X18' (ADA)	1
TOTAL PROPOSED SPACES	2

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
LEVEL III SITE PLAN	WHS 8/7/19
PHASE II UPDATE	WHS 10/29/19
COMMENT RESPONSE	WHS 12/18/19

DRAWING NAME: MASTER SITE PLAN
PROJECT NAME: 126/128R NORTH STREET REDEVELOPMENT
CLIENT: UPRIGHT PROPERTIES, LLC
PO BOX 833 WILTON, ME 04294

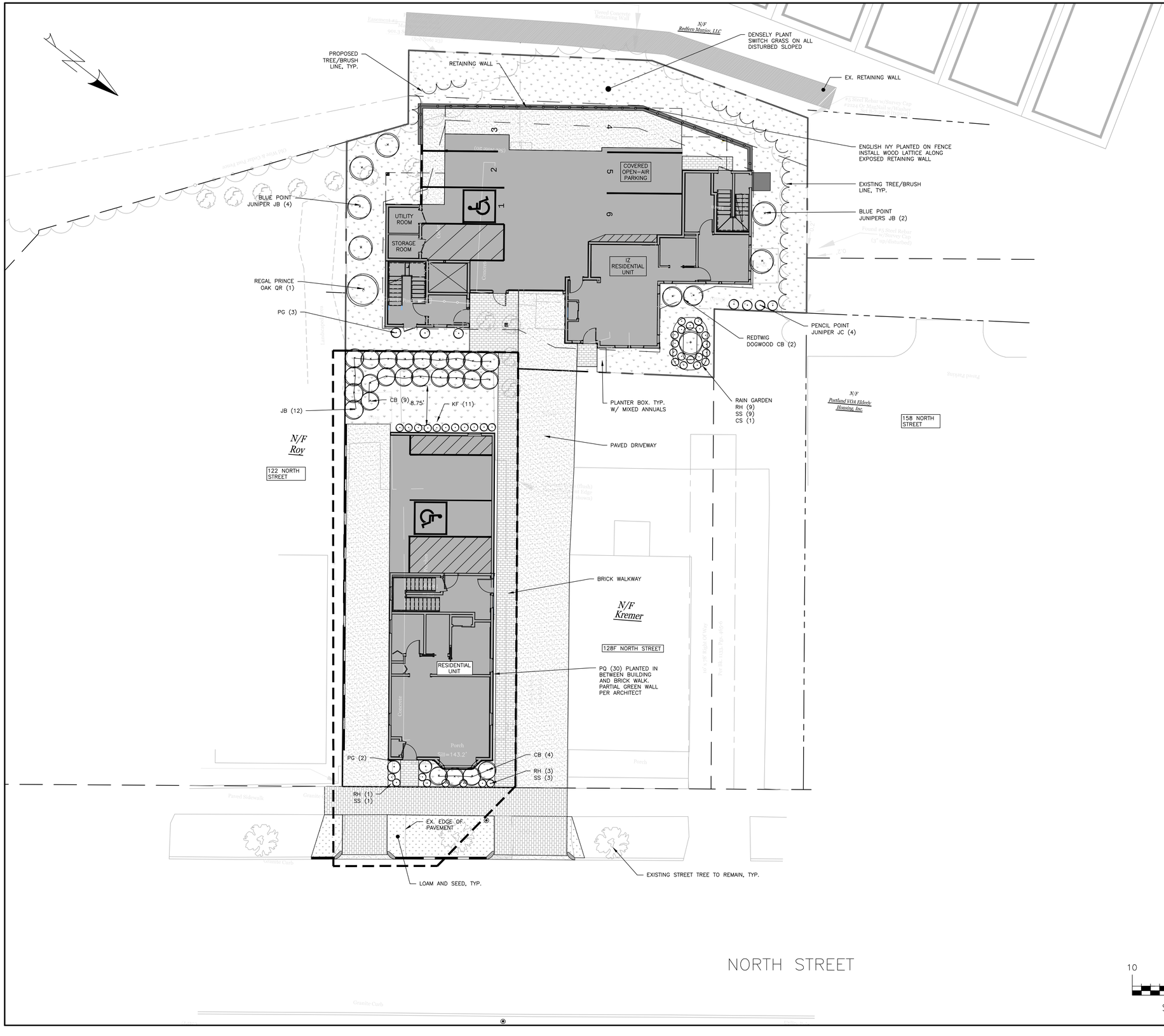
THESE PLANS SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. AND SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
65 HANDYBOY LANE, NEW GLOUCESTER, MAINE 04101
(207) 775-2655

FILE: 1116_CIVIL
JN: 1116
SCALE: 1"=10'
DESIGNED BY: SJL
DRAWN BY: ZMS
CHECKED BY: WHS

STATE OF MAINE
WILLIAM H. SAVAGE
NO. 10111
REGISTERED PROFESSIONAL ENGINEER
12/12/2019

DRAWING NO.
C-10



GENERAL NOTES:

1. CONTRACTOR TO BE HELD RESPONSIBLE FOR THE WATERING AND MAINTENANCE OF ALL PLANT MATERIAL AND LANDSCAPING IMPROVEMENTS AS NECESSARY.
2. CONTRACTOR TO MAINTAIN A ONE YEAR WARRANTY ON ALL PLANTINGS FOLLOWING INSTALLATION.
3. NO PLANTING WILL BE INSTALLED UNTIL ALL GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA.
4. CONTRACTOR TO VERIFY ALL UTILITIES ON PROPERTY AND TO PROTECT ALL UTILITIES DURING EXCAVATION FOR PLANTS.
5. ALL CONTAINER MATERIAL TO BE GROWN IN CONTAINER MINIMUM OF 6 MONTHS.
6. ALL MATERIAL SHALL COMPLY WITH THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK, AMERICAN ASSOCIATION OF NURSERYMAN.
7. CONTRACTOR SHALL REPAIR ALL DAMAGE TO PROPERTY FROM PLANTING OPERATIONS AT NO COST TO OWNER.
8. THE ENGINEER MAY TAG ALL PLANTS AT THE NURSERY AND INSPECT THEM AFTER DELIVERY TO THE SITE; ALL PLANT MATERIALS SHALL BE INSPECTED BY THE ENGINEER ON SITE PRIOR TO INSTALLATION.
9. SEE PERMANENT SEEDING TABLE ON SHEET C-47 FOR LAWN AREAS.
10. BLUE POINT JUNIPERS MAY BE SUBSTITUTED W/ EXISTING RELOCATED CEDARS IF IN GOOD HEALTH

PLANT SCHEDULE

ID	BOTANICAL NAME	COMMON NAME	QTY	SIZE
	TREES			
JB	JUNIPERUS CHINENSIS 'BLUE POINT'	BLUE POINT JUNIPER	18	5'
JC	JUNIPERUS COMMONS 'PENCIL POINT'	PENCIL POINT JUNIPER	4	5'
QR	QUERCUS ROBUR X BICOLOR LONG	REGAL PRICE OAK	1	2" CA.
	SHRUBS			
CB	CORNUS BAILEY SERICEA 'YARROW'	ARCTIC FIRE REDTWG DOGWOOD	15	3 GAL.
PG	PICEA GLAUCA 'CONICA'	DWARF ALBERTA SPRUCE	5	3'-4'
CS	CORNUS SERICEA	RED TWG DODWOOD	1	3 GAL.
	PERENNIALS			
RH	RUDBECKIA HIRTA	BLACK EYED SUSAN	13	1 GAL.
SS	SALVIA SYLVESTRIS	SAGE 'MAY NIGHT'	13	1 GAL.
HH	HEDERA HELIX	COMMON IVY	44	1 GAL.
PQ	PARTHENOCISSUS QUINQUEFOLIA	VIRGINIA CREEPER	30	1 GAL.
KF	CALAMSGROSTIS ACUTIFLORA	KARL FORESTOR	11	1 GAL.

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
LEVEL III SITE PLAN	WHS 8/7/19
PHASE II UPDATE	WHS 10/29/19
COMMENT RESPONSE	WHS 12/18/19

DRAWING NAME: LANDSCAPE PLAN

PROJECT NAME: 126/128R NORTH STREET REDEVELOPMENT

CLIENT: UPRIGHT PROPERTIES, LLC
PO BOX 833 WILTON, ME 04294

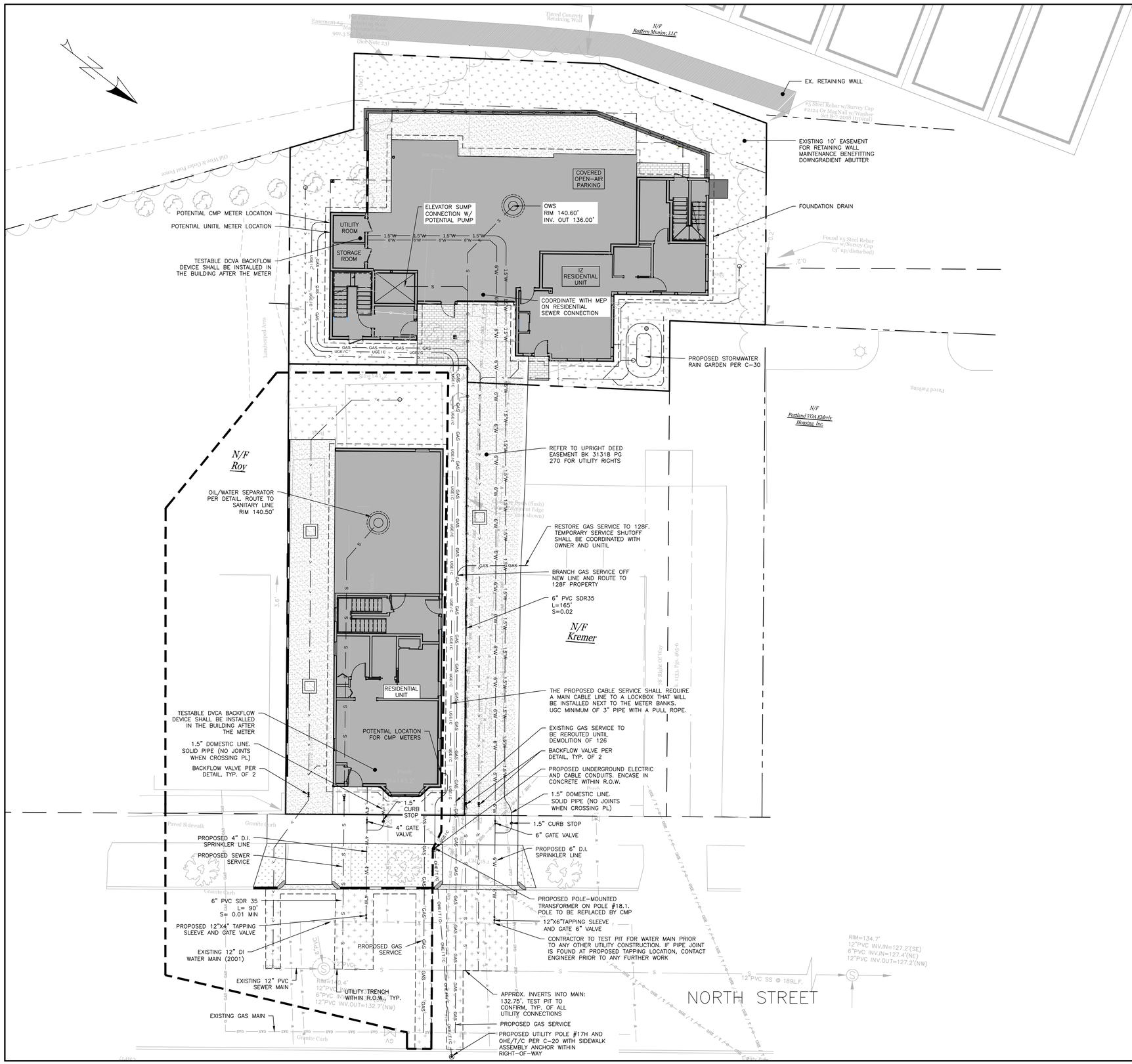
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ACORN ENGINEERING, INC.
65 HANOVER STREET PORTLAND, MAINE 04101
(207) 775-2655

FILE:	1116_CIVIL
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SCALE:	1"=10'
DESIGNED BY:	SJL
DRAWN BY:	ZMS
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM H. SAVAGE
NO. 11...
12/12/2019
REGISTERED PROFESSIONAL ENGINEER

DRAWING NO.
L-1



GENERAL NOTES:

1. LOCATION OF PROPOSED CONNECTIONS ARE APPROXIMATE. CONTRACTOR TO CONTACT ENGINEER IF FIELD INFORMATION VARIES FROM INFORMATION ON PLANS.
2. CONTRACTOR IS TO BE CAUTIONED THAT CERTAIN LOCATIONS AND/OR ELEVATIONS OF EXISTING UTILITIES HAVE BEEN PROVIDED THROUGH UTILITY COORDINATION OR OTHER OBSERVATIONS. INFORMATION IS NOT TO BE RELIED UPON AS EXACT OR COMPLETE. CONTRACTOR TO FIELD VERIFY AND COORDINATE WITH UTILITY COMPANY AND DIG SAFE NO LESS THAN 72 HOURS PRIOR TO ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF ALL UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS INDICATED IN THE CONTRACT DOCUMENTS. CONTRACTOR TO NOTIFY ENGINEER OF ANY DIFFERENTIATIONS FROM EXISTING CONDITIONS, INCLUDING UTILITY SURVEY, PRIOR TO ANY CHANGES.
3. FOR ALL UTILITIES, ACORN ENGINEERING DESIGN LIMITS EXTEND TO OUTSIDE WALL OF BUILDING. METERING OF UTILITIES TO BE COMPLETED BY MECHANICAL, ELECTRICAL, PLUMBING DESIGNER (M.E.P.) UNLESS SPECIFIED OTHERWISE.
4. CONTRACTOR TO COORDINATE WITH ARCHITECT ON FINAL UTILITY CONNECTIONS WITHIN THE BUILDING.
5. SEWER UTILITIES: CONTRACTOR TO COORDINATE WITH ARCHITECT FOR FINAL SERVICE CONNECTION. PUMP AND FORCE MAIN SIZING PER M.E.P. SEWER UTILITIES TO BE CONSTRUCTED IN ACCORDANCE WITH CITY OF PORTLAND TECHNICAL STANDARDS. VALVE FOR BACKFLOW PREVENTION SHALL BE INSTALLED WITHIN THE THE PROPERTY LINES FOR EACH CITY SEWER CONNECTION. CONTACT ENGINEER IF FIELD CONDITIONS FROM INVERT VARY FROM DESIGN.
6. WATER UTILITIES: FINAL PIPE SIZING PROVIDED BY M.E.P. AND FIRE PROTECTION DESIGNER. INTERNAL METERING, BACKFLOW PREVENTION, AND PRESSURE REDUCERS TO BE COMPLETED BY M.E.P. ENGINEER. DOMESTIC WATER PIPE SIZES WILL DETERMINE THE FINAL WATER METERING OPTIONS. METER MAY BE SMALLER THAN PROPOSED WATER MAIN. WATER METERING, PRESSURE REDUCER AND BACKFLOW PREVENTION TO BE IN ACCORDANCE WITH THE PORTLAND WATER DISTRICT STANDARDS. CONTRACTOR TO FOLLOW METERING GUIDELINES OF THE PORTLAND WATER DISTRICT AND CITY OF PORTLAND.
7. GAS UTILITIES: PROJECT GAS LOAD, GAS UTILITY DESIGN, AND FINAL GAS SERVICE LOCATION AND METERS TO BE DEFINED BY M.E.P. AND IN ACCORDANCE WITH UNITIL.
8. ELECTRIC UTILITIES: ELECTRIC DESIGN TO BE FINALIZED BY M.E.P, ELECTRICAL LOAD TO BE DETERMINED BY M.E.P. ENGINEER. METER LOCATION AND TRANSFORMER SIZE, IF NECESSARY DEFINED BY M.E.P. M.E.P. TO FINALIZE SERVICE CONNECTION TO BUILDING. ALL ELECTRIC CONSTRUCTION SHALL CONFORM TO CMP GUIDEBOOK OF STANDARD REQUIREMENTS, MOST RECENT EDITION. DESIGN SUBJECT TO FINAL APPROVAL FROM CMP.
9. CABLE AND TELEPHONE PULLBOXES AND PEDESTAL LOCATIONS TO BE DETERMINED BY CHARTER COMMUNICATIONS AND FAIRPOINT PRIOR TO CONSTRUCTION. CONTRACTOR TO COORDINATE INSTALLATION OF UNDERGROUND UTILITIES WITH ALL UTILITY COMPANIES INVOLVED.

10 0 10 20

SCALE: 1"=10'

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
ATS	WHS 8/26/19
LEVEL III SITE PLAN	WHS 9/7/19
PHASE II UPDATE	WHS 10/29/19
COMMENT RESPONSE	WHS 12/18/19

DRAWING NAME: UTILITY PLAN

PROJECT NAME: 126/128R NORTH STREET REDEVELOPMENT

CLIENT: UPRIGHT PROPERTIES, LLC
PO BOX 833 WILTON, ME 04294

THESE PLANS SHALL NOT BE MODIFIED IN ANY WAY WITHOUT THE PRIOR WRITTEN PERMISSION OF ACORN ENGINEERING, INC. ANY UNAUTHORIZED MODIFICATIONS TO THESE PLANS WILL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
65 HANOVER ROAD, FLOOR 2 YORK, MAINE 04101
(207) 775-2655

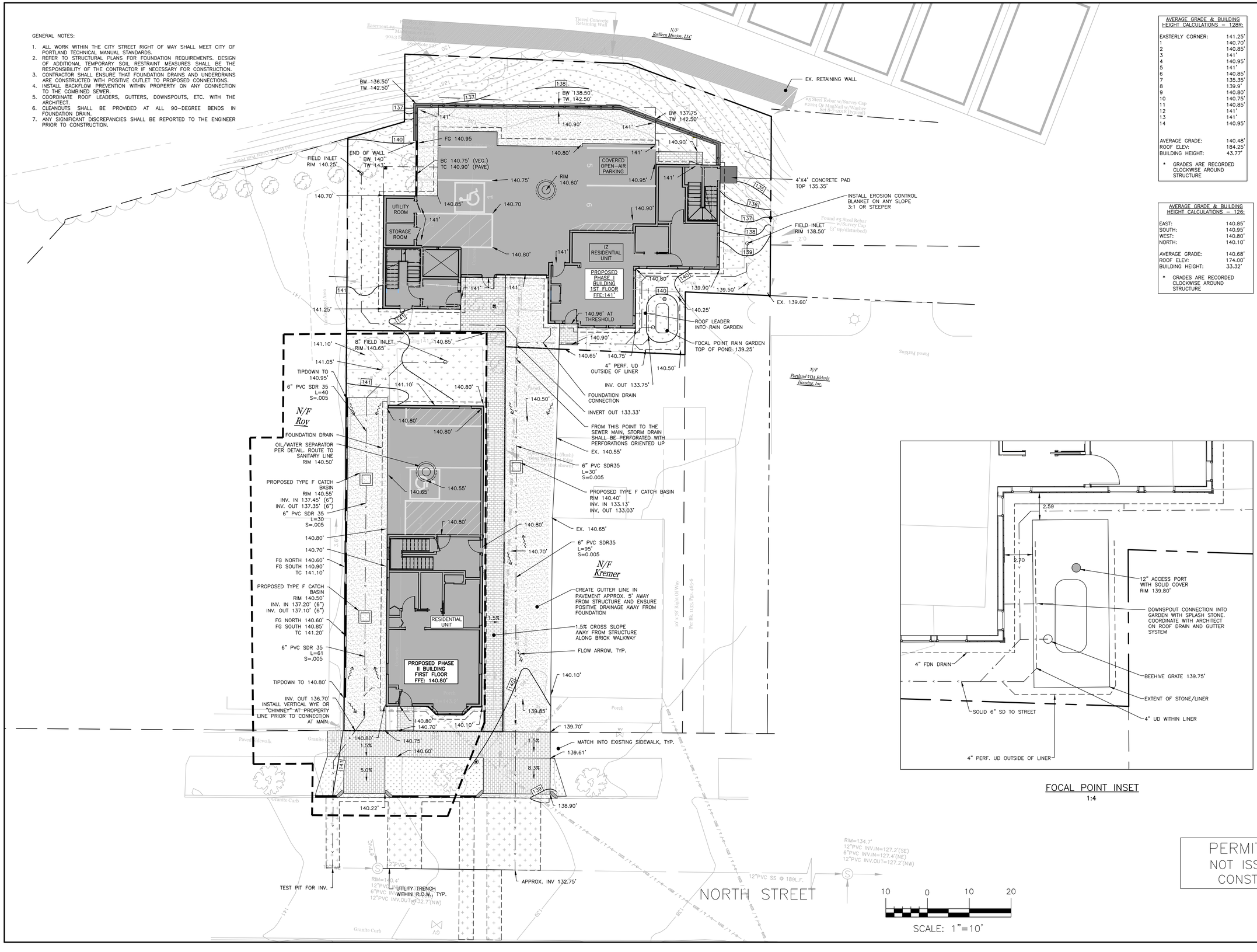
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SCALE:	1"=10'
DESIGNED BY:	SJL
DRAWN BY:	SJL & ZMS
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM SAVAGE
No. 13151
12/12/2019
REGISTERED PROFESSIONAL ENGINEER

DRAWING NO.
C-20

GENERAL NOTES:

1. ALL WORK WITHIN THE CITY STREET RIGHT OF WAY SHALL MEET CITY OF PORTLAND TECHNICAL MANUAL STANDARDS.
2. REFER TO STRUCTURAL PLANS FOR FOUNDATION REQUIREMENTS. DESIGN OF ADDITIONAL TEMPORARY SOIL RESTRAINT MEASURES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR IF NECESSARY FOR CONSTRUCTION.
3. CONTRACTOR SHALL ENSURE THAT FOUNDATION DRAINS AND UNDERDRAINS ARE CONSTRUCTED WITH POSITIVE OUTLET TO PROPOSED CONNECTIONS.
4. INSTALL BACKFLOW PREVENTION WITHIN PROPERTY ON ANY CONNECTION TO THE COMBINED SEWER.
5. COORDINATE ROOF LEADERS, GUTTERS, DOWNSPOUTS, ETC. WITH THE ARCHITECT.
6. CLEANOUTS SHALL BE PROVIDED AT ALL 90-DEGREE BENDS IN FOUNDATION DRAIN.
7. ANY SIGNIFICANT DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER PRIOR TO CONSTRUCTION.



AVERAGE GRADE & BUILDING HEIGHT CALCULATIONS – 128R:

EASTERLY CORNER:	141.25'
1	140.70'
2	140.85'
3	141'
4	140.95'
5	141'
6	140.85'
7	135.35'
8	139.9'
9	140.80'
10	140.75'
11	140.85'
12	141'
13	141'
14	140.95'
AVERAGE GRADE:	140.48'
ROOF ELEV:	184.25'
BUILDING HEIGHT:	43.77'

* GRADES ARE RECORDED CLOCKWISE AROUND STRUCTURE

AVERAGE GRADE & BUILDING HEIGHT CALCULATIONS – 126:

EAST:	140.85'
SOUTH:	140.95'
WEST:	140.80'
NORTH:	140.10'
AVERAGE GRADE:	140.68'
ROOF ELEV:	174.00'
BUILDING HEIGHT:	33.32'

* GRADES ARE RECORDED CLOCKWISE AROUND STRUCTURE

FOCAL POINT INSET
1:4

PERMIT LEVEL
NOT ISSUED FOR
CONSTRUCTION

ISSUED FOR	BY DATE
ATS	WHS 8/26/19
LEVEL III SITE PLAN	WHS 9/7/19
PHASE II UPDATE	WHS 10/29/19
COMMENT RESPONSE	WHS 12/18/19

DRAWING NAME: GRADING & DRAINAGE PLAN

PROJECT NAME: 126/128R NORTH STREET REDEVELOPMENT

CLIENT: UPRIGHT PROPERTIES, LLC
PO BOX 833 WILTON, ME 04294

ACORN ENGINEERING, INC.
65 HANOVER STREET PORTLAND, MAINE 04101
(207) 775-2655

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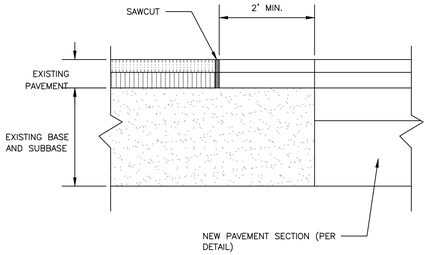
STATE OF MAINE
WILLIAM H. SAVAGE
NO. 11913
12/12/2019
REGISTERED PROFESSIONAL ENGINEER

DRAWING NO.
C-30

NOTES:

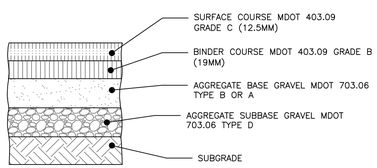
1. SAWCUT EXISTING PAVEMENT AND REMOVE 2' STRIP OF EXISTING PAVEMENT. APPLY BITUMINOUS TACK COAT PRIOR TO PLACEMENT OF NEW BITUMINOUS PAVEMENT.

2. THE NEW PAVEMENT SECTION SHALL MEET THE CITY OF PORTLAND ARTERIAL BITUMINOUS PAVEMENT SECTION DETAIL AT A MINIMUM OR THE THE EXISTING PAVEMENT AND AGGREGATE BASE AND SUBBASE DEPTH WHICHEVER IS GREATER.



PAVEMENT SAWCUT DETAIL

NOT TO SCALE

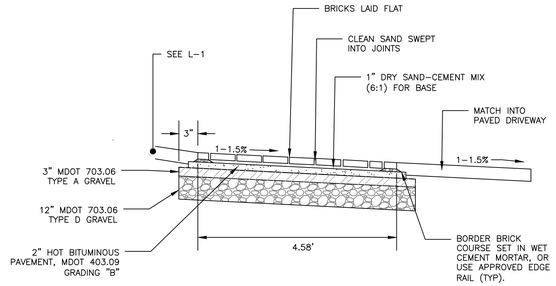


NOTE:
COMPACT SUBGRADE TO 95% MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D-1557

THICKNESS OF LAYERS	
STANDARD	LAYERS
1-1/2"	SURFACE COURSE MDOT 403.09 GRADE C (12.5mm)
2"	BINDER COURSE MDOT 403.09 GRADE B (19mm)
3"	AGGREGATE BASE GRAVEL MDOT 703.06 TYPE B OR A
15"	AGGREGATE SUBBASE GRAVEL MDOT 703.06 TYPE D

BITUMINOUS PAVEMENT PROFILE

NOT TO SCALE



INTERNAL BRICK PEDESTRIAN SIDEWALK ON VEHICULAR WAY

NOT TO SCALE

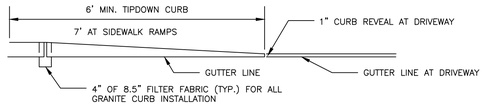
NOTES:

1. BRICKS TO BE USED:

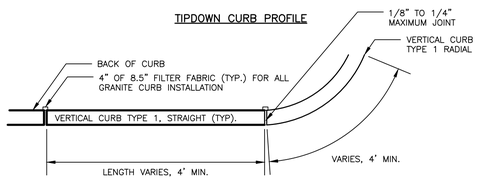
   NEW CONSTRUCTION:
   4"X8" PINE HALL PATHWAY PAVER BRICK; MFG. BY PINE HALL BRICK CO., MADISON, NORTH CAROLINA. LACHANCE ITEM #193623;. PINE HALL PATHWAY PAVER BRICK.

   REPAIR/MAINTENANCE TO EXISTING BRICK SIDEWALKS:
   VERMONT BACKER SUPPLIED BY GAGNE AND SONS SPECIFICATION NUMBER: "VERMONT PAVER BRICK". ITEM NUMBER #VBBB

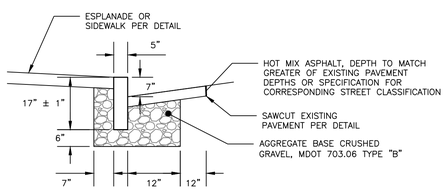
2. INSTALL BRICK FLUSH UP TO BUILDING, PAVEMENT, STAIRS, CONCRETE SURFACES, CURB OR LANDSCAPED AREAS.



TIPDOWN CURB PROFILE



VERTICAL GRANITE CURB PLAN VIEW



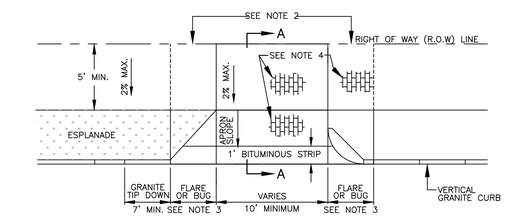
VERTICAL GRANITE CURB CROSS SECTION

NOTES:

1. CURB SHALL BE RESET IN ACCORDANCE WITH MDOT 609.08 WITH THE EXCEPTION OF CURB SPACING TO BE INSTALLED PER DETAIL.

VERTICAL GRANITE CURB AND TIPDOWN INSTALLATION IN EXISTING STREETS DETAIL

NOT TO SCALE



APRON SLOPE TABLE

LAND USE	MAXIMUM RECOMMENDED GRADE CHANGE AT STREET(G)
RESIDENTIAL WITH <9 PARKING SPACES	14%
ALL OTHER DRIVEWAYS	10%

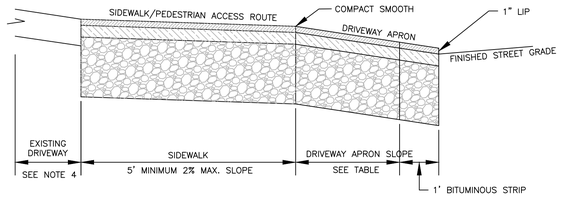
NOTES:

1. MATCH EXISTING GRADE AT R.O.W LINE, WHERE REQUIRED TO MEET A.D.A. AND DRIVEWAY APRON SLOPE REQUIREMENTS, A CONSTRUCTION EASEMENT MAY BE REQUIRED.

2. IF MATCHING THE EXISTING GRADE AT ROW CAUSES APRON SLOPE TO EXCEED RECOMMENDED %, SIDEWALK TRANSITION AREAS MAY BE ADDED, BUT SHALL NOT EXCEED 8.33%.

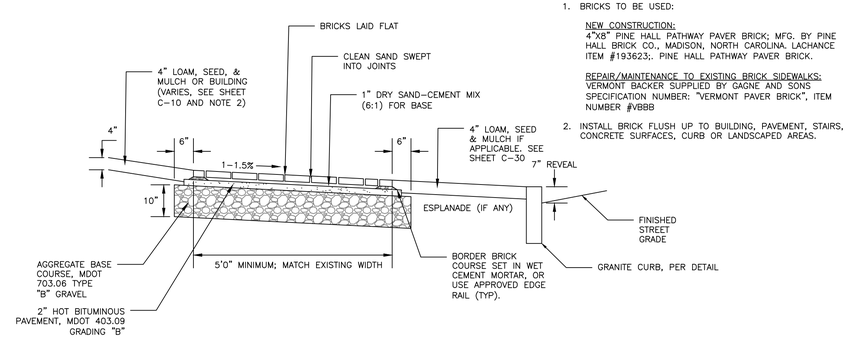
3. TWO-FOOT RADIUS CORNER GRANITE PIECES ("BUGS") ARE REQUIRED AT LOW-VOLUME DRIVEWAYS UNLESS OTHERWISE DIRECTED BY DPW. AT OTHER DRIVEWAYS, STANDARD FLARE/TIPDOWN TREATMENTS SHALL BE USED.

4. ALL MATERIALS TO COMPLY WITH CITY'S SIDEWALK & DRIVEWAY MATERIAL POLICY. BRICK IN DRIVEWAY APRONS, WHERE APPLICABLE, SHALL BE ORIENTED IN THE SAME WAY AS THE ADJACENT BRICK SIDEWALK.



DRIVEWAY APRON

NOT TO SCALE



NOTES:

1. BRICKS TO BE USED:

   NEW CONSTRUCTION:
   4"X8" PINE HALL PATHWAY PAVER BRICK; MFG. BY PINE HALL BRICK CO., MADISON, NORTH CAROLINA. LACHANCE ITEM #193623;. PINE HALL PATHWAY PAVER BRICK.

   REPAIR/MAINTENANCE TO EXISTING BRICK SIDEWALKS:
   VERMONT BACKER SUPPLIED BY GAGNE AND SONS SPECIFICATION NUMBER: "VERMONT PAVER BRICK", ITEM NUMBER #VBBB

2. INSTALL BRICK FLUSH UP TO BUILDING, PAVEMENT, STAIRS, CONCRETE SURFACES, CURB OR LANDSCAPED AREAS.

BRICK SIDEWALK WITH BITUMINOUS BASE DETAIL – RIGHT OF WAY AND INTERNAL NON-VEHICULAR WALKS

NOT TO SCALE

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
LEVEL III SITE PLAN	WHS 8/7/19
PHASE II UPDATE	WHS 10/29/19

DRAWING NAME: SITE DETAILS – 1

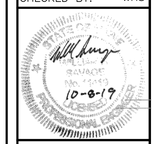
PROJECT NAME: 126/128R NORTH STREET REDEVELOPMENT

CLIENT: UPRIGHT PROPERTIES, LLC
PO BOX 833 WILTON, ME 04294

ACORN ENGINEERING, INC.
ENGINEERING
65 HANCOCK STREET PORTLAND, MAINE 04101
(207) 775-2655

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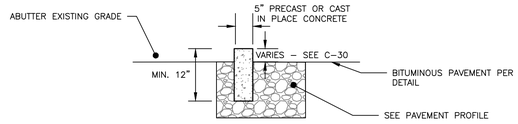
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DESIGNED BY:	SJL
DRAWN BY:	ZMS
CHECKED BY:	WHS



DRAWING NO.
C-40

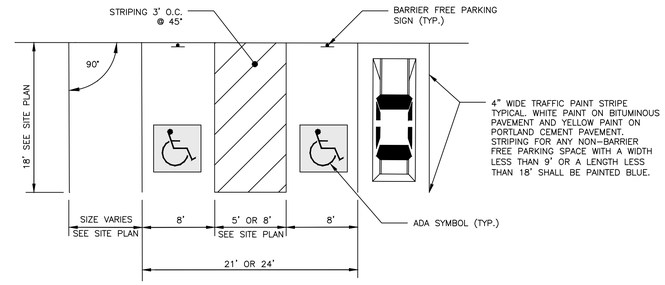
NOTES:

1. CONCRETE 5,000 PSI AT 28 DAYS
2. REINFORCE WITH (2) #4 REBARS
3. ALL CURBING SHOULD BE COATED WITH A CLEAR SEALER EACH FALL TO PROTECT FROM ROAD SALT DAMAGE. CHECK WITH MANUFACTURER FOR APPROPRIATE TYPE.
4. JOINTS SHALL BE BACKED WITH GEOTEXTILE FABRIC WHEN ADJACENT TO TOPSOIL



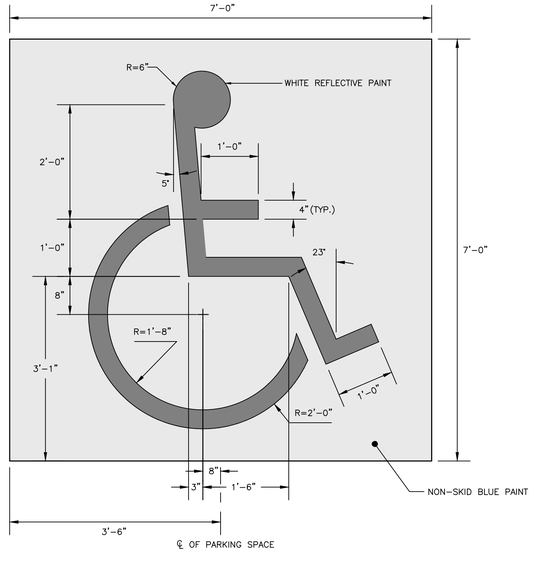
VERTICAL CONCRETE CURB DETAIL

NOT TO SCALE



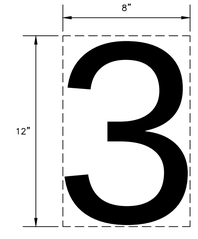
PARKING SPACE DIMENSIONS

NOT TO SCALE



INTERNATIONAL BARRIER FREE SYMBOL

NOT TO SCALE



NOTES:

1. NUMBERS TO BE PAINTED AS THE SAME COLOR AS THE CORRESPONDING PARKING SPACE.
2. BOTTOM OF NUMBER TO BE FLUSH WITH THE FRONT OF THE PARKING SPACE.

PARKING STALL NUMBER DETAIL

NOT TO SCALE

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
LEVEL III SITE PLAN	WHS 8/7/19
PHASE II UPDATE	WHS 10/29/19

DRAWING NAME: SITE DETAILS – 2

PROJECT NAME: 126/128R NORTH STREET REDEVELOPMENT

CLIENT: UPRIGHT PROPERTIES, LLC
PO BOX 833 WILTON, ME 04294

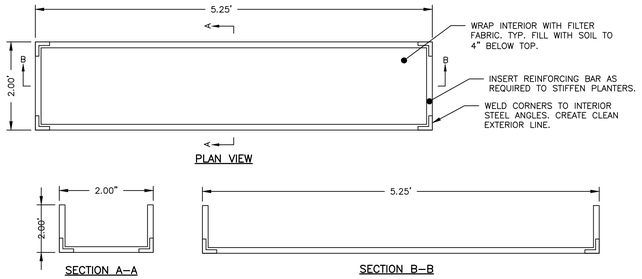
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ACORN ENGINEERING, INC.
65 HANOVER ST PORTLAND, MAINE 04101
(207) 775-2655

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SCALE:	NTS
DESIGNED BY:	SJL
DRAWN BY:	ZMS
CHECKED BY:	WHS

STATE OF MAINE
SCOTT J. LEVESQUE
SAVAGE
No. 10113
10-8-19
REGISTERED PROFESSIONAL ENGINEER

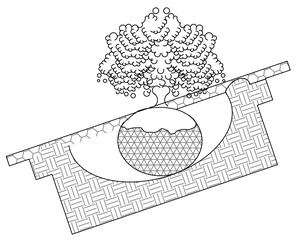
DRAWING NO.
C-41



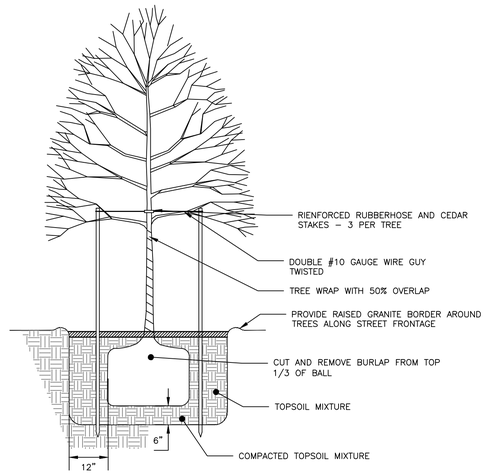
WEATHERING STEEL PLANTER BOX
NOT TO SCALE

NOTES:

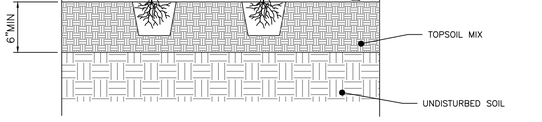
1. DIG HOLE AT LEAST 2 TIMES THE DIAMETER OF THE ROOT BALL AND AS DEEP AS THE ROOT BALL (NO DEEPER). SET ROOT BALL CENTERED, WITH THE TOP AT DOWNHILL EDGE OF THE HOLE.
2. TOPSOIL BACKFILL SHALL BE NATURAL FRIABLE, FERTILE, FINE LOAMY SOIL POSSESSING THE CHARACTERISTICS OF TOPSOIL IN THE VICINITY WHICH PRODUCE A HEAVY GROWTH. TOPSOIL SHALL CONTAIN NOT LESS THAN 6% NOR MORE THAN 20% ORGANIC MATTER. TOP SOIL SHALL HAVE A pH VALUE OF NOT LESS THAN 5.5 NOR MORE THAN 7.0.
3. CONTAINER GROWN STOCK – REMOVE CONTAINER PROTECTING THE ROOT BALL. GENTLY COMB OUT THE ROOTS. PRUNE DAMAGED ROOTS.
4. BACKFILL THE HOLE WITH TOPSOIL TO A DEPTH NOT TO EXCEED 8" THEN WATER SUFFICIENTLY TO SETTLE TOPSOIL. REPEAT SOIL BACKFILL, WATER, DRAIN. TOPSOIL SHALL BE TAMPED UNDER EDGES OF THE BALLED PLANTS. BACKFILL TO FINISH GRADE AND CREATE AN EARTHEN SAUCER. SOAK PLANTS TWICE WITHIN THE FIRST TWENTY–FOUR HOURS OF PLANTING.



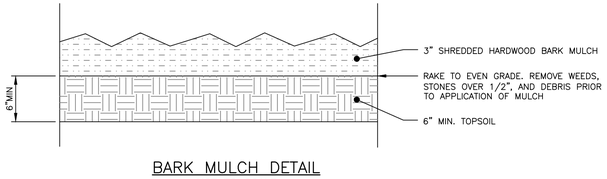
TYPICAL PLANTING
NOT TO SCALE



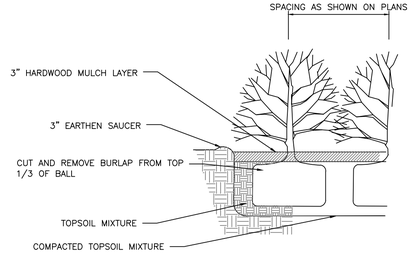
TREE PLANTING DETAIL
NOT TO SCALE



PERENNIAL PLANTING DETAIL
NOT TO SCALE



BARK MULCH DETAIL
NOT TO SCALE



SHRUB PLANTING DETAIL
NOT TO SCALE

PLANTING NOTES:

1. ALL PLANT SELECTION AND INSTALLATION WILL BE IN COMPLIANCE WILL THE CITY OF PORTLAND TECHNICAL MANUAL (SECTION 4).
2. CONTRACTOR TO VERIFY ALL UTILITIES ON PROPERTY AND TO PROTECT ALL UTILITIES DURING EXCAVATION FOR PLANTS.
3. IF THERE IS A DISCREPANCY BETWEEN THE NUMBER OF PLANTS SHOWN ON THE PLAN AND THE NUMBER OF PLANTS SHOWN IN PLANT LIST (IF ANY), THE NUMBER OF PLANTS SHOWN ON PLAN WILL TAKE PRECEDENCE.
4. ALL MATERIAL SHALL COMPLY WITH THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK, AMERICAN ASSOCIATION OF NURSERYMAN.
5. ALL DISTURBED AREAS NOT TO BE PAVED OR PLANTED SHALL BE LOAMED AND SEEDED AS SHOWN. THE SEED MIX SPECIFICATIONS ARE AS FOLLOWS: LESCO FINE FESCUE LINKS BLEND OF 35% HARD FESCUE, 35% CREEPING RED FESCUE, 20% CHEWINGS FESCUE AND 10% SHEEP FESCUE. ADD 5% LITTLE BLUESTEM AND 5% NORTHEAST WILDFLOWER SEED MIXTURE BY WEIGHT TO THE LINKS BLEND.
6. FOR PRICING PURPOSES, PROVIDE A PER TREE UNIT COST FOR STAKING AND GUYING. IF STAKING AND GUYING IS REQUIRED, REMOVE TREE WRAP, STAKES, AND GUY WIRES AT END OF FIRST GROWING SEASON.
7. FOR TREE PLANTING IN LAWN AREAS, ANY DISTURBED LAWN SHALL BE LOAMED AND SEEDED AS NECESSARY.
8. NEW TREES TO BE INSTALLED WITH A SLOW RELEASE WATERING BAG.
9. CONTRACTOR TO BE HELD RESPONSIBLE FOR THE WATERING AND MAINTENANCE OF ALL PLANT MATERIAL AND LANDSCAPING IMPROVEMENTS FOR AT LEAST 30 DAYS FOLLOWING INSTALLATION. FOLLOWING THIS PERIOD, THE LANDOWNER OR PROPERTY MANAGEMENT SHALL BE RESPONSIBLE FOR CONTINUED WATERING AND MAINTENANCE. CONTRACTOR TO MAINTAIN A ONE YEAR WARRANTY ON ALL PLANTINGS FOLLOWING FINAL INSTALLATION.
10. ALL PROPOSED PLANTS SHALL BE LOCATED AS SHOWN ON THE PLANS. CONTRACTOR TO NOTIFY ENGINEER WHEN PLANTINGS HAVE BEEN MOBILIZED ON SITE. ENGINEER TO INSPECT AND ACCEPT OR REJECT ANY SPECIMENS ON THE BASIS OF APPARENT HEALTH, HARDINESS, AND CONFORMANCE WITH THE PLANTING SCHEDULE. REJECTED SPECIMENS ARE TO BE REPLACED BY THE CONTRACTOR AT NO ADDED COST TO THE OWNER. ACCEPTANCE DOES NOT WAIVE THE REQUIRED ONE YEAR PLANTING WARRANTY.

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
LEVEL III SITE PLAN	WHS 8/7/19
PHASE II UPDATE	WHS 10/29/19

DRAWING NAME: LANDSCAPING DETAILS

PROJECT NAME: 126/128R NORTH STREET REDEVELOPMENT

CLIENT: UPRIGHT PROPERTIES, LLC
PO BOX 833 WILTON, ME 04294

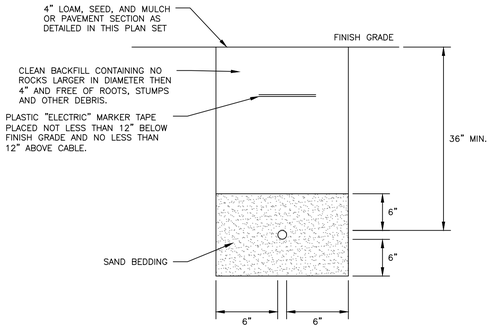
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ACORN ENGINEERING, INC.
65 HANCOCK ST. SCARBOROUGH, MAINE 04101
(207) 775-2655

FILE:	1116_CIVIL
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SCALE:	NTS
DESIGNED BY:	SJL
DRAWN BY:	ZMS
CHECKED BY:	WHS

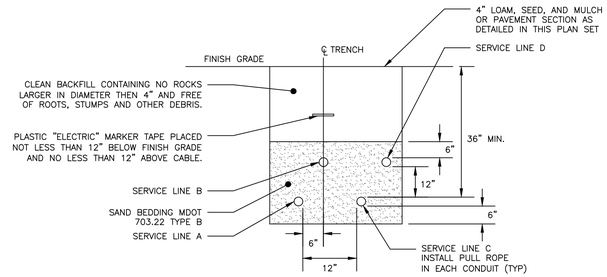
STATE OF MAINE
SCOTT J. LAPOINTE
No. 12602
REGISTERED PROFESSIONAL ENGINEER
10-8-19

DRAWING NO.
C-42



SECONDARY ELECTRICAL TRENCH

NOT TO SCALE



CONDUIT TYPE				
SERVICE	CONDUIT SIZE	GRASS AND PAVED AREAS	UTILITY	REMARKS
A	2–5"	SCHEDULE 40 PVC ELECTRICAL GRADE	PRIMARY POWER	SEE NOTE 1
B	2–4"	SCHEDULE 40 PVC	COMMUNICATION	–
C	2–4"	SCHEDULE 40 PVC ELECTRICAL GRADE	SPARE	IF REQUIRED
D	2–4"	SCHEDULE 40 PVC	CABLE	–

NOTES:

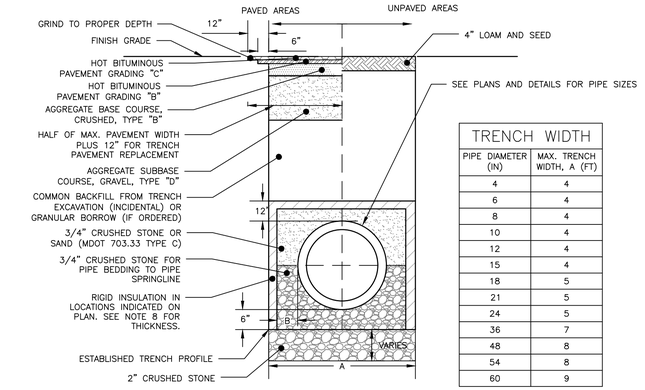
1. ONE CONDUIT CAPPED FOR SPARE, PROVIDE GALVANIZED STEEL LONG SWEEP AT RISER POLE AND EXTEND GALVANIZED CONDUIT TO 10" ABOVE GRADE AT POLE WITH STAND–OFF BRACKETS.
2. MINIMUM SEPARATION OF 24 INCHES BETWEEN PRIMARY CABLE/CONDUIT AND GAS LINES SHALL BE MAINTAINED.
3. CONDUITS WITHIN THE CITY RIGHT–OF–WAY SHALL BE ENCASED IN CONCRETE.

UTILITY TRENCH – PRIMARY AND SECONDARY POWER, TELEPHONE, AND CABLE

NOT TO SCALE

DESIGN NOTES:

1. ANY ALTERNATE TRENCHING METHODS SHALL BE APPROVED IN ADVANCE BY THE CITY.
2. ALL CONSTRUCTION METHODS SHALL CONFORM TO THE CITY OF PORTLAND TECHNICAL STANDARDS FIGURE II–2.
3. BRACING & SHEETING OR OTHER TRENCH PROTECTION TO BE PROVIDED TO MEET APPLICABLE STATE AND O.S.H.A SAFETY STANDARDS. ALL SUCH TRENCH PROTECTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
4. WHERE APPLICABLE, PERFORATIONS IN STORM DRAIN (PERF. SD) SHALL BE ORIENTED UP.
5. ALL STORM DRAINS SHALL BE PVC SDR 35 MIN PS–46 RATING OR OR IN ACCORDANCE WITH CITY OF PORTLAND TECHNICAL MANUAL , SECTION 2 – SANITARY SEWER AND STORM DRAIN – PART 2.5.2
6. IN PAVED AREAS, DEPTHS OF GRAVEL AND HOT MIX ASPHALT PAVEMENT SHALL MATCH THE GREATER OF EXISTING CONDITIONS OR THE REQUIREMENTS FOR THE CORRESPONDING STREET CLASSIFICATION.
7. THIS DETAIL SHALL BE APPLIED ONLY TO PIPE TRENCHES WITHIN OF THE CITY OF PORTLAND R.O.W.
8. STORM DRAIN COVER BETWEEN 2' AND 3' SHALL INCLUDE 4" OF RIGID INSULATION. COVER BETWEEN 3' AND 4' SHALL INCLUDE 2" RIGID INSULATION. OTHER UTILITIES: ADD 2" OF RIGID INSULATION FOR EACH FOOT ABOVE MINIMUM DEPTH.
9. DEPTH OF BITUMINOUS PAVEMENT AND AGGREGATE COURSES SHALL BE DETERMINED BY STREET CLASSIFICATION.
10. DIMENSION B SHALL BE SUFFICIENT TO ALLOW CRUSHED STONE BEDDING TO BE PLACED AND COMPACTED UNDER THE HAUNCHES OF THE PIPE; BUT IN ALL CASES DIMENSION B SHALL BE AT LEAST 9".
11. DIMENSION A IS THE MAXIMUM WIDTH ALLOWED FOR CALCULATING PAY QUANTITIES UNDER GRANULAR BORROW, CRUSHED STONE, STRUCTURAL EARTH EXCAVATION, AND STRUCTURAL ROCK EXCAVATION. DIMENSION A SHALL BE BASED ON PIPE DIAMETER D, AS SET FORTH IN THE TABLE BELOW.



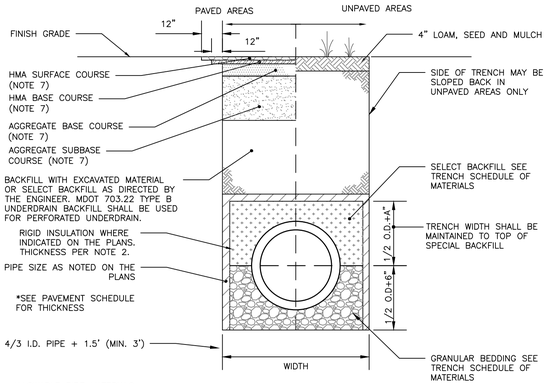
TRENCH WIDTH	
PIPE DIAMETER (IN)	MAX. TRENCH WIDTH, A (FT)
4	4
6	4
8	4
10	4
12	4
15	4
18	5
21	5
24	5
36	7
48	8
54	8
60	9

ALLOWABLE PIPE MATERIALS:

- REINFORCED CONCRETE PIPE (RCP) MIN. STRENGTH OF CLASS III
- PVC RING TYPE SEWER (SDR 35) OR EQUIVALENT, MIN PS–46 RATING
- PVC RING TYPE SEWER PIPE MEETING ASTM F 789
- DUCTILE IRON PIPE (DIP)
- ADS N–12 HP TRIPLE–WALL MIN PS–46 RATING
- ADS SANITITE HP MIN. PS–46

CITY OF PORTLAND TYPICAL PIPE TRENCH DETAIL

NOT TO SCALE



SCHEDULE OF MATERIALS		
TYPE OF PIPE	GRANULAR BEDDING	SELECT BACKFILL
CMP DUCTILE IRON RCP	MDOT 703.22 TYPE B UD BACKFILL	MDOT 703.22 TYPE B UD BACKFILL
PVC/HDPE	MDOT 703.22 TYPE C 3/4" CRUSHED STONE	MDOT 703.22 TYPE B UD BACKFILL
CMP	MDOT 703.22 TYPE C 3/4" CRUSHED STONE	MDOT 703.22 TYPE C 3/4" CRUSHED STONE

NOTES:

1. BRACING AND SHEETING OR OTHER TRENCH PROTECTION TO BE PROVIDED TO MEET APPLICABLE STATE AND O.S.H.A. SAFETY STANDARDS. ALL SUCH TRENCH PROTECTION TO BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. STORM DRAIN COVER BETWEEN 2' AND 3' SHALL INCLUDE 4" OF RIGID INSULATION. COVER BETWEEN 3' AND 4' SHALL INCLUDE 2' RIGID INSULATION. OTHER UTILITIES: ADD 2" OF RIGID INSULATION FOR EACH FOOT ABOVE MINIMUM DEPTH.
3. INSTALL WARNING TAPE DIRECTLY ABOVE UTILITIES AT THE TOP OF SUBGRADE.
4. MINIMUM COVER
   4.1. 2'–0" – STORM DRAIN
   4.2. 5'–0" – SEWER
5. NO TREES SHALL BE PLANTED WITHIN 5' OF A SEWER PIPE OR SERVICE
6. THIS DETAIL SHALL BE APPLIED ONLY TO DRAINAGE PIPE TRENCHES OUTSIDE OF THE CITY OF PORTLAND ROW.
7. THICKNESS AS NOTED BY SURFACE DETAILS

ALLOWABLE PIPE MATERIALS:

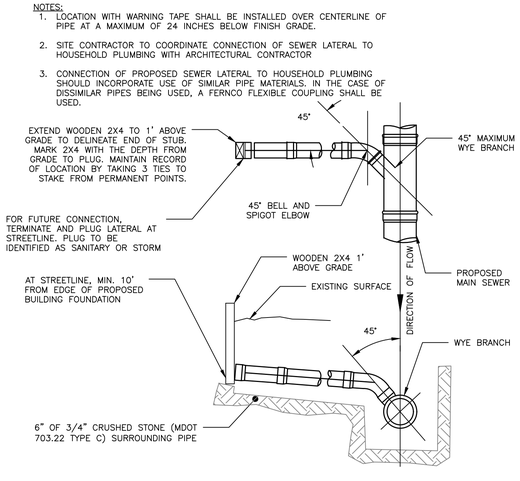
- REINFORCED CONCRETE PIPE (RCP) MIN. STRENGTH OF CLASS III
- PVC RING TYPE SEWER (SDR 35) OR EQUIVALENT, MIN PS–46 RATING
- PVC RING TYPE SEWER PIPE MEETING ASTM F 789
- DUCTILE IRON PIPE (DIP)
- ADS N–12 HP TRIPLE–WALL MIN PS–46 RATING
- ADS SANITITE HP MIN. PS–46

INTERNAL STORM DRAIN AND SEWER TYPICAL TRENCH SECTION

NOT TO SCALE

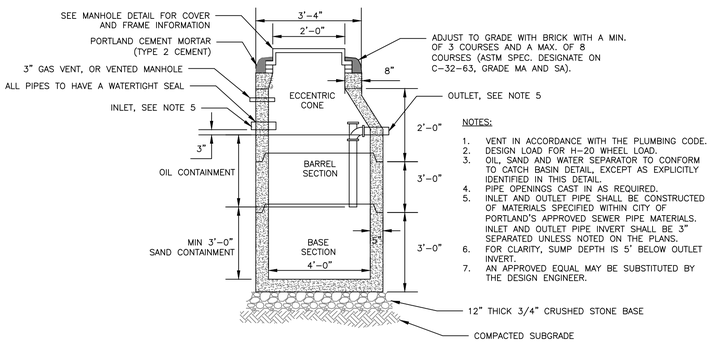
NOTES:

1. LOCATION WITH WARNING TAPE SHALL BE INSTALLED OVER CENTERLINE OF PIPE AT A MAXIMUM OF 24 INCHES BELOW FINISH GRADE.
2. SITE CONTRACTOR TO COORDINATE CONNECTION OF SEWER LATERAL TO HOUSEHOLD PLUMBING WITH ARCHITECTURAL CONTRACTOR
3. CONNECTION OF PROPOSED SEWER LATERAL TO HOUSEHOLD PLUMBING SHOULD INCORPORATE USE OF SIMILAR PIPE MATERIALS. IN THE CASE OF DISSIMILAR PIPES BEING USED, A FERNCO FLEXIBLE COUPLING SHALL BE USED.



SEWER TEE/WYE CONNECTION DETAIL

NOT TO SCALE



NOTES:

1. VENT IN ACCORDANCE WITH THE PLUMBING CODE.
2. DESIGN LOAD FOR H–20 WHEEL LOAD.
3. OIL, SAND AND WATER SEPARATOR TO CONFORM TO CATCH BASIN DETAIL, EXCEPT AS EXPLICITLY IDENTIFIED IN THIS DETAIL.
4. PIPE OPENINGS CAST IN AS REQUIRED.
5. INLET AND OUTLET PIPE SHALL BE CONSTRUCTED OF MATERIALS SPECIFIED WITHIN CITY OF PORTLAND'S APPROVED SEWER PIPE MATERIALS. INLET AND OUTLET PIPE INVERT SHALL BE 3" SEPARATED UNLESS NOTED ON THE PLANS.
6. FOR CLARITY, SUMP DEPTH IS 5' BELOW OUTLET INVERT.
7. AN APPROVED EQUAL MAY BE SUBSTITUTED BY THE DESIGN ENGINEER.

4'–0" DIAMETER PRECAST OIL AND WATER SEPARATOR

NOT TO SCALE

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
LEVEL III SITE PLAN	WHS 8/7/19
PHASE II UPDATE	WHS 10/29/19

DRAWING NAME: UTILITY DETAILS – 1

PROJECT NAME: 126/128R NORTH STREET REDEVELOPMENT

CLIENT: UPRIGHT PROPERTIES, LLC
PO BOX 833 WILTON, ME 04294

ACORN ENGINEERING, INC.

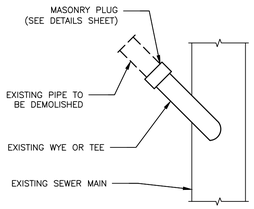
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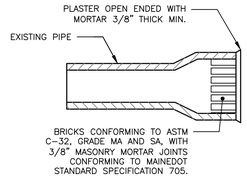
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65 HANOVER STREET, PORTLAND, MAINE 04101
(207) 775–2655

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SCALE:	NTS
DESIGNED BY:	SJL
DRAWN BY:	ZMS
CHECKED BY:	WHS

STATE OF MAINE — SCOTT J. LAVOIE — 20406 — REGISTERED PROFESSIONAL ENGINEER
10-8-19

DRAWING NO.
C-43

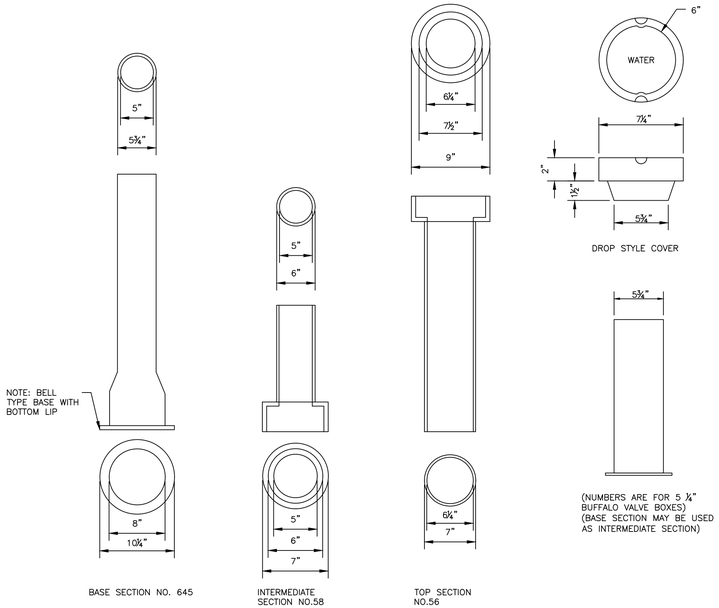




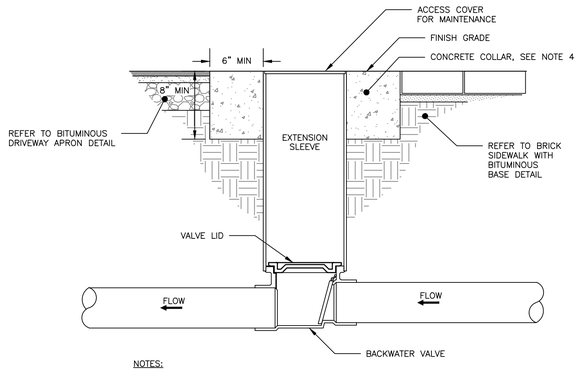
DESIGN NOTES:

1. IT IS ASSUMED THAT THE EXISTING PIPE IS OF VITRIFIED CLAY CONSTRUCTION. USE CAP OR PLUG FOR PVC PIPE

MASONRY PLUG DETAIL
NOT TO SCALE



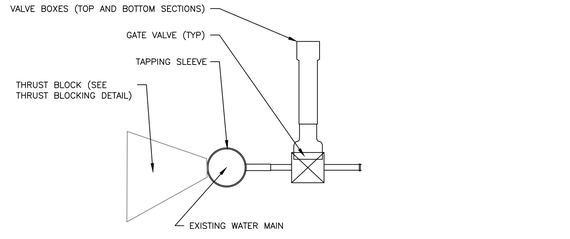
VALVE BOX & COVER
NOT TO SCALE



NOTES:

1. BACKFLOW VALVE TO BE PROVIDED BY AGRI DRAIN CORPORATION OR AN APPROVED EQUAL.
2. VALVE TO BE INSTALLED TO MANUFACTURER'S SPECIFICATIONS AND COMPLY WITH RULES AND REGULATIONS AS OUTLINED IN SECTION 2 OF THE CITY OF PORTLAND TECHNICAL MANUAL.
3. VALVE SHALL BE INSTALLED WITH A VALVE BOX AND COVER TO PROVIDE EASY ACCESS AND MAINTENANCE; VALVE COVER SHALL STATE 'SEWER' ON LID FLUSH TO SURFACE. REFER TO VALVE & BOX COVER DETAIL FOR ADDITIONAL INFORMATION.
4. CONCRETE COLLAR AT A MINIMUM 24-HOUR COMPRESSIVE STRENGTH OF 3,000 PSI.

BACKFLOW VALVE ASSEMBLY
NOT TO SCALE

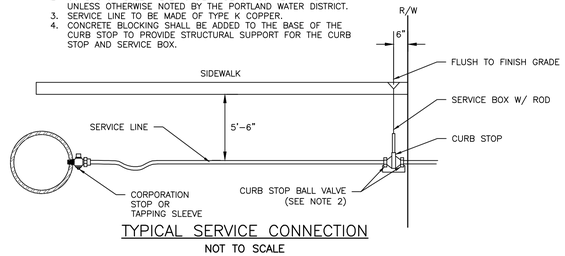


SIDE VIEW

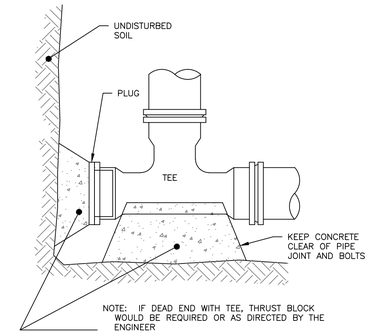
TAPPING SLEEVE AND VALVE
NOT TO SCALE

NOTES:

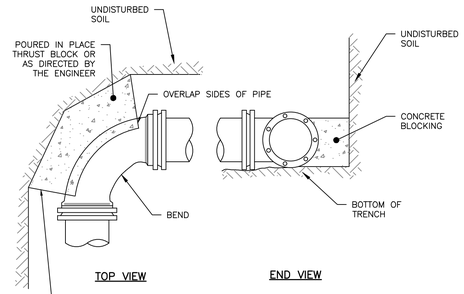
1. ALL MATERIALS AND INSTALLATION PROCEDURES MUST COMPLY WITH THE CITY OF PORTLAND WATER DISTRICT (PWD) SPECIFICATIONS.
2. CURB STOP BALL VALVE TO BE MADE OF COPPER OR BRASS UNLESS OTHERWISE NOTED BY THE PORTLAND WATER DISTRICT.
3. SERVICE LINE TO BE MADE OF TYPE K COPPER.
4. CONCRETE BLOCKING SHALL BE ADDED TO THE BASE OF THE CURB STOP TO PROVIDE STRUCTURAL SUPPORT FOR THE CURB STOP AND SERVICE BOX.



TYPICAL SERVICE CONNECTION
NOT TO SCALE



END SECTION



TOP VIEW

END VIEW

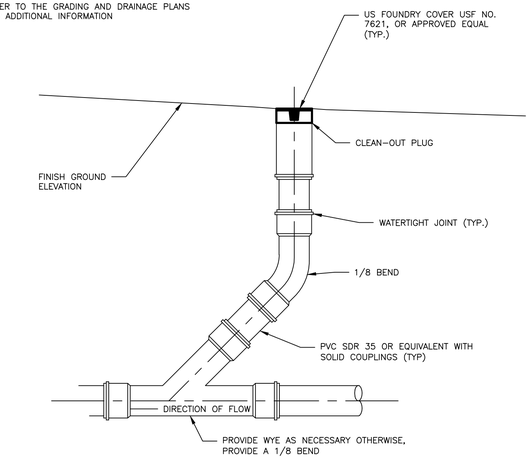
NOTE: SEE THRUST/RETAINER GLAND SCHEDULE FOR TYPE OF BLOCKING TO BE USED ON BENDS

REGULAR BEND

THRUST BLOCKING
NOT TO SCALE

NOTES:

1. REFER TO THE GRADING AND DRAINAGE PLANS FOR ADDITIONAL INFORMATION



CLEANOUT DETAIL
NOT TO SCALE

PERMIT LEVEL
NOT ISSUED FOR
CONSTRUCTION

ISSUED FOR	BY DATE
LEVEL III SITE PLAN	WHS 8/7/19
PHASE II UPDATE	WHS 10/29/19

DRAWING NAME: UTILITY DETAILS - 2

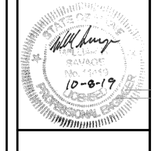
PROJECT NAME: 126/128R NORTH STREET REDEVELOPMENT

CLIENT: UPRIGHT PROPERTIES, LLC
PO BOX 833 WILTON, ME 04294

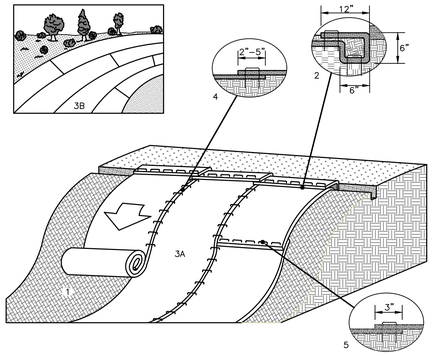
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65 HANOVER STREET PORTLAND, MAINE 04101
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DRAWING NO.
C-44



SLOPE
INSTALLATION DETAIL

1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL BLANKET (ECB), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE ECB IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF ECB EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE ECB WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO THE COMPACTED SOIL AND FOLD THE REMAINING 12" PORTION OF ECB BACK OVER THE SEED AND COMPACTED SOIL. SECURE ECB OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE ECB.
3. ROLL THE ECB (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. ECB WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL ECB MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE.
4. THE EDGES OF PARALLEL ECB MUST BE STAPLED WITH APPROXIMATELY 2" – 5" OVERLAP DEPENDING ON THE ECB TYPE.
5. CONSECUTIVE ECB SPLICED DOWN THE SLOPE MUST BE END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE ECB WIDTH.

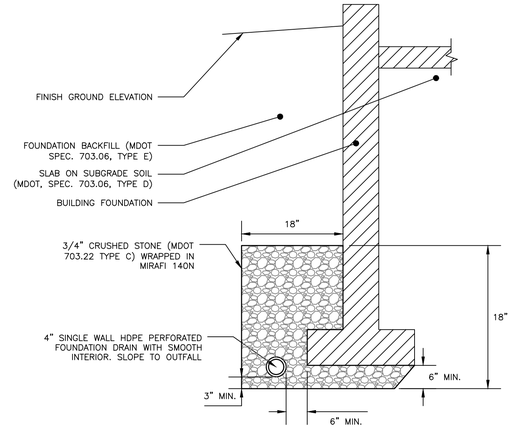
*NOTE:
IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE ECB.

EROSION CONTROL BLANKET SLOPE INSTALLATION

NOT TO SCALE

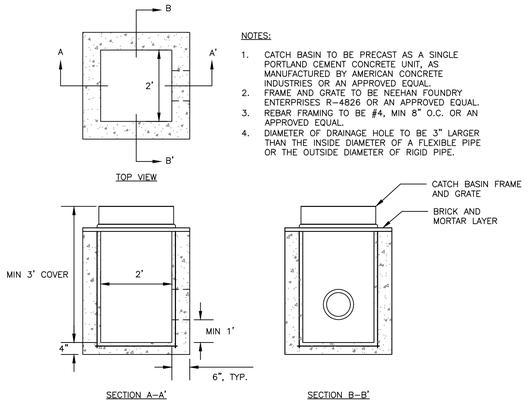
NOTES:

1. REFER TO THE BUILDING ARCHITECTS PLANS FOR THE BUILDING FOUNDATION, BACKFILL, ROOF DRAIN, SIDEWALK AND OTHER DETAILS.
2. PERFORATIONS IN UNDERDRAIN PIPE SHALL BE ORIENTED DOWN.
3. FOUNDATION WALL FOOTINGS SHALL BE CONSTRUCTED TO A MIN. DEPTH OF 4 FT BELOW ADJACENT FINISH GRADE. REFER TO STRUCTURAL ENGINEERS PLANS FOR ADDITIONAL INFORMATION AND MIN. REQUIREMENTS.



FOUNDATION DRAIN DETAIL

NOT TO SCALE

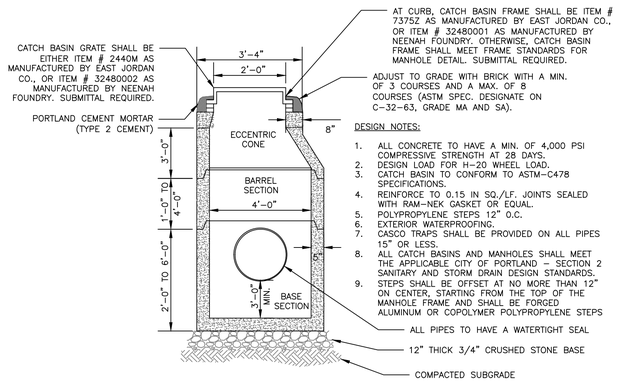


NOTES:

1. CATCH BASIN TO BE PRECAST AS A SINGLE PORTLAND CEMENT CONCRETE UNIT, AS MANUFACTURED BY AMERICAN CONCRETE INDUSTRIES OR AN APPROVED EQUAL.
2. FRAME AND GRATE TO BE NEEHAN FOUNDRY ENTERPRISES R-4826 OR AN APPROVED EQUAL.
3. REBAR FRAMING TO BE #4, MIN 8" O.C. OR AN APPROVED EQUAL.
4. DIAMETER OF DRAINAGE HOLE TO BE 3" LARGER THAN THE INSIDE DIAMETER OF A FLEXIBLE PIPE OR THE OUTSIDE DIAMETER OF RIGID PIPE.

'TYPE F' PRECAST CATCH BASIN

NOT TO SCALE



DESIGN NOTES:

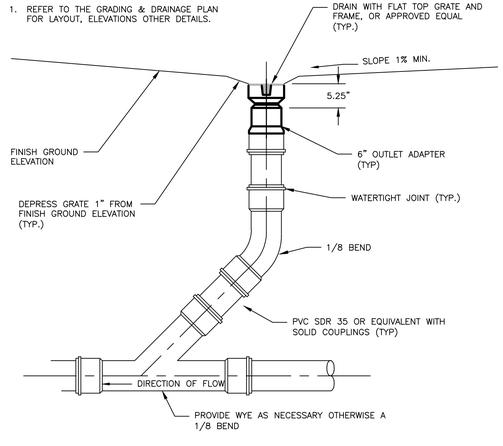
1. ALL CONCRETE TO HAVE A MIN. OF 4,000 PSI COMPRESSIVE STRENGTH AT 28 DAYS.
2. DESIGN LOAD FOR H-20 WHEEL LOAD.
3. CATCH BASIN TO CONFORM TO ASTM-C478 SPECIFICATIONS.
4. REINFORCE TO 0.15 IN SQ./LF. JOINTS SEALED WITH RAM-NEK GASKET OR EQUAL.
5. POLYPROPYLENE STEPS 12" O.C.
6. EXTERIOR WATERPROOFING.
7. CASCO TRAPS SHALL BE PROVIDED ON ALL PIPES 15" OR LESS.
8. ALL CATCH BASINS AND MANHOLES SHALL MEET THE APPLICABLE CITY OF PORTLAND – SECTION 2 SANITARY AND STORM DRAIN DESIGN STANDARDS.
9. STEPS SHALL BE OFFSET AT NO MORE THAN 12" ON CENTER, STARTING FROM THE TOP OF THE MANHOLE FRAME AND SHALL BE FORGED ALUMINUM OR COPOLYMER POLYPROPYLENE STEPS

4'–0" DIAMETER PRECAST CATCH BASIN/MANHOLE

NOT TO SCALE

NOTES:

1. REFER TO THE GRADING & DRAINAGE PLAN FOR LAYOUT, ELEVATIONS OTHER DETAILS.



INLINE DRAIN DETAIL WITH FLAT GRATE

NOT TO SCALE

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
LEVEL III SITE PLAN	WHS 8/7/19
PHASE II UPDATE	WHS 10/29/19
COMMENT RESPONSE	WHS 12/18/19

DRAWING NAME: DRAINAGE DETAILS

PROJECT NAME: 128R NORTH STREET REDEVELOPMENT

CLIENT: UPRIGHT PROPERTIES, LLC
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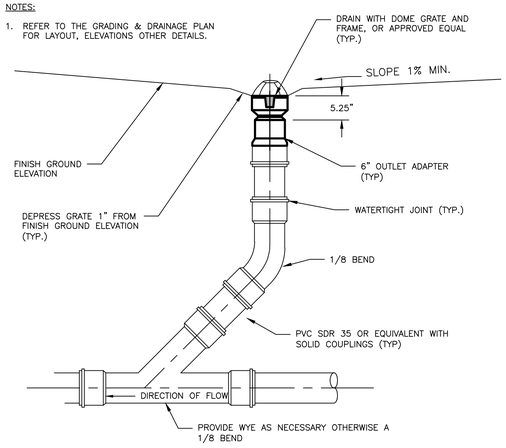
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STATE OF MAINE
WILLIAM J. SAVAGE
No. 12019
12/12/2019
REGISTERED PROFESSIONAL ENGINEER

DRAWING NO.
C-45

NOTES:

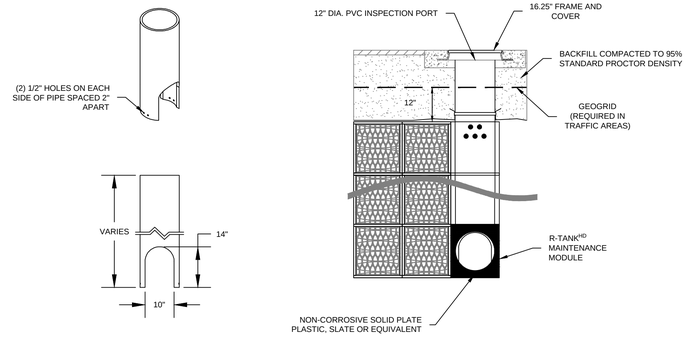
1. REFER TO THE GRADING & DRAINAGE PLAN FOR LAYOUT, ELEVATIONS OTHER DETAILS.



OVERFLOW BEEHIVE DRAIN

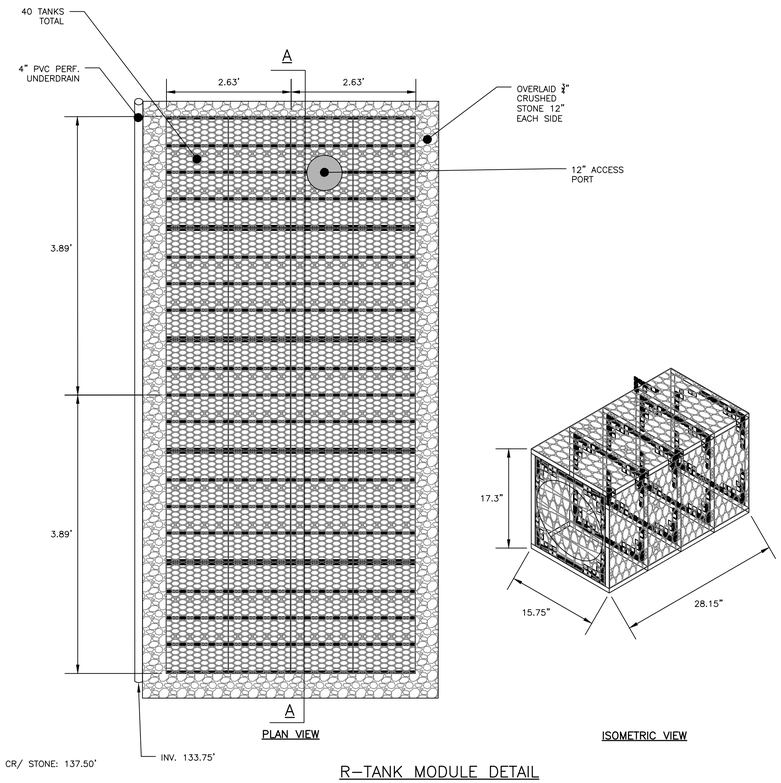
NOTES

1. THE INSPECTION PORT IS USED IN THE MAINTENANCE MODULE TO INSPECT THE LEVEL OF SEDIMENT ACCUMULATION.
2. MINIMUM REQUIRED MAINTENANCE INCLUDES A QUARTERLY INSPECTION DURING THE FIRST YEAR OF OPERATION AND A YEARLY INSPECTION THEREAFTER. FLUSH MAINTENANCE ROW VIA THE ACCESS STRUCTURE FROM EITHER END AS NEEDED.
3. SEE TRAFFIC LOADING DETAIL FOR MINIMUM & MAXIMUM COVER REQUIREMENTS.



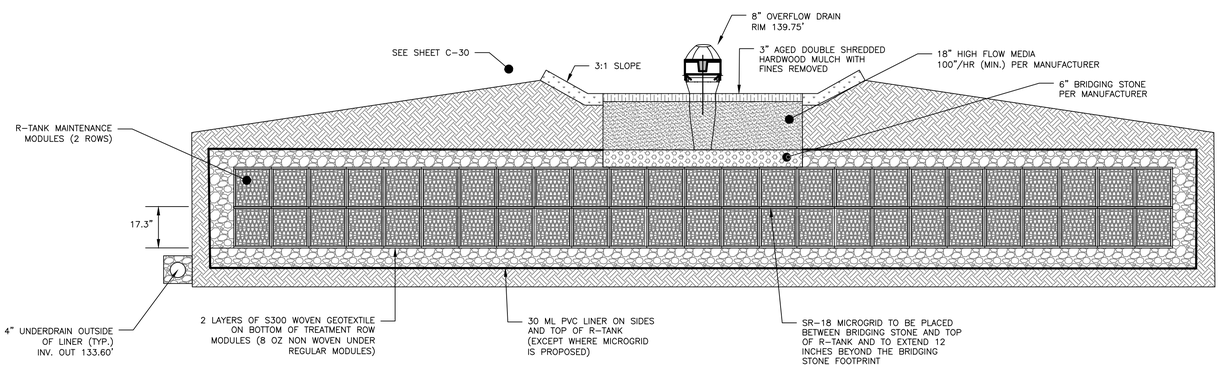
ACCESS PORT WITH SOLID COVER

NOT TO SCALE



PLAN VIEW

ISOMETRIC VIEW



SECTION A–A

FOCAL POINT RAIN GARDEN WITH R–TANK TREATMENT ROW

NOT TO SCALE

TOP OF MULCH: 139.25'

TOP OF BRIDGING STONE + ¾" CR/ STONE: 137.50'

TOP OF R–TANK: 137.00'

BOTTOM OF R–TANK: 134.12'

BOTTOM OF ¾" CR. STONE: 133.5'

R–TANK MODULE DETAIL

NOT TO SCALE

ISSUED FOR	BY DATE
LEVEL III SITE PLAN	WHS 8/7/19
PHASE II UPDATE	WHS 10/29/19
COMMENT RESPONSE	WHS 12/18/19

DRAWING NAME: FOCAL POINT RAIN GARDEN DETAILS

PROJECT NAME: 128R NORTH STREET REDEVELOPMENT

CLIENT: UPRIGHT PROPERTIES, LLC
PO BOX 833 WILTON, ME 04294

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PERMIT LEVEL
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DRAWING NO.
C-46

1.0 EROSION CONTROL MEASURES AND SITE STABILIZATION

AS PART OF THE SITE DEVELOPMENT, THE FOLLOWING TEMPORARY AND PERMANENT EROSION AND SEDIMENTATION CONTROL DEVICES SHALL BE IMPLEMENTED. DEVICES SHALL BE INSTALLED AS DESCRIBED IN THIS REPORT OR WITHIN THE PLAN SET. SEE THE MAINE EROSION AND SEDIMENT CONTROL HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES FOR FURTHER REFERENCE.

1.1 TEMPORARY EROSION CONTROL MEASURES

THE FOLLOWING TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES ARE PLANNED FOR THE PROJECT'S CONSTRUCTION PERIOD:

1.1.1 CRUSHED STONE STABILIZED CONSTRUCTION ENTRANCES SHALL BE PLACED AT ALL ACCESS POINTS TO THE PROJECT SITE WHERE THERE ARE DISTURBED AREAS. THE FOLLOWING SPECIFICATIONS SHALL BE FOLLOWED AT A MINIMUM:
- STONE SIZE SHALL BE 2–3 INCHES, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
- THE THICKNESS OF THE ENTRANCE STONE LAYER SHALL BE NO LESS THAN 6 INCHES.
- THE ENTRANCE SHALL NOT BE LESS THAN 20 FEET WIDE, HOWEVER NOT LESS THAN THE FULL WIDTH OF POINTS WHERE INGRESS OR EGRESS OCCURS. THE LENGTH SHALL NOT BE LESS THAN 50 FEET IN LENGTH.
- GEOTEXTILE FABRIC (WOVEN OR NON–WOVEN) SHALL BE PLACED OVER THE ENTIRE ENTRANCE AREA.
- THE ENTRANCE/EXIT SHALL BE MAINTAINED TO THE EXTENT THAT IT WILL PREVENT THE TRACKING OF SEDIMENT ONTO PUBLIC ROAD WAYS.

1.1.2 SILTATION FENCE OR EROSION CONTROL BERM SHALL BE INSTALLED DOWN GRADIENT OF ANY DISTURBED AREAS TO TRAP RUNOFF BORNE SEDIMENTS UNTIL PERMANENT STABILIZATION IS ACHIEVED. THE SILT FENCE OR EROSION CONTROL BERM SHALL BE INSTALLED PER THE DETAILS PROVIDED IN THE PLAN SET AND INSPECTED BEFORE AND IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. REPAIRS SHALL BE MADE IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THE FENCE LINE OR BERM. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR THE EDGES, OR IMPOUNDING OF LARGE VOLUMES OF WATER BEHIND THE FENCE OR BERM, THE BARRIER SHALL BE REPLACED WITH A STONE CHECK DAM.

1.1.3 HAY MULCH INCLUDING HYDRO SEEDING IS INTENDED TO PROVIDE COVER FOR DENUDED OR SEEDED AREAS UNTIL REVEGETATION IS ESTABLISHED. MULCH PLACED BETWEEN APRIL 15TH AND NOVEMBER 1ST ON SLOPES OF LESS THAN 15 PERCENT SHALL BE COVERED BY FABRIC NETTING AND ANCHORED WITH STAPLES IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION. MULCH PLACED BETWEEN NOVEMBER 1ST AND APRIL 15TH ON SLOPES EQUAL TO OR STEEPER THAN 8 PERCENT AND EQUAL TO OR FLATTER THAN 2:1 SHALL USE MATS OR FABRIC NETTING AND ANCHORED WITH STAPLES IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION.

1.1.4 AT ANY TIME OF THE YEAR, ALL SLOPES STEEPER THAN 3:1 SHALL BE STABILIZED WITH DOUBLE NET EROSION CONTROL BLANKET BIONET SC150BN BY NORTH AMERICAN GREEN OR APPROVED EQUAL, OR EROSION CONTROL MIX SLOPE PROTECTION AS DETAILED WITHIN THE PLANS.

1.1.5 NORTH STREET SHALL BE SWEPT TO CONTROL MUD AND DUST FROM THE CONSTRUCTION SITE AS NECESSARY. ADD ADDITIONAL STONE TO THE STABILIZED CONSTRUCTION ENTRANCE TO MINIMIZE THE TRACKING OF MATERIAL OFF THE SITE AND ONTO THE SURROUNDING ROADWAYS.

1.1.6 DURING DEMOLITION, CLEARING AND GRUBBING OPERATIONS, STONE CHECK DAMS SHALL BE INSTALLED AT ANY AREAS OF CONCENTRATED FLOW. THE MAXIMUM HEIGHT OF THE CHECK DAM SHALL NOT EXCEED 2 FEET. THE CENTER OF THE CHECK DAM SHALL BE 6 INCHES BELOW THE OUTER EDGES OF THE DAM. THE CONTRACTOR SHALL MULCH THE SIDE SLOPES AND INSTALL STONE CHECK DAMS FOR ALL NEWLY EXCAVATED DITCH LINES WITHIN 24 HOURS OF THEIR CREATION.

1.1.7 SILT FENCE STAKE SPACING SHALL NOT EXCEED 6 FEET UNLESS THE FENCE IS SUPPORTED WITH 14 GAUGE WIRE IN WHICH CASE THE MAXIMUM SPACING SHALL NOT EXCEED 10 FEET. THE SILT FENCE SHALL BE "TOED" INTO THE GROUND.

1.1.8 STORMDRAIN INLET PROTECTION SHALL BE PROVIDED TO STORMDRAINS THROUGH THE USE OF ANY OF THE FOLLOWING: HAY BALE DROP INLET STRUCTURES, SILT FENCE DROP INLET SEDIMENT FILTER, GRAVEL AND WIRE MESH DROP INLET SEDIMENT FILTER, OR CURB INLET SEDIMENT FILTER. BARRIERS SHALL BE INSPECTED AFTER EVERY RAINFALL EVENT AND REPAIRED AS NECESSARY. SEDIMENTS SHALL BE REMOVED WHEN ACCUMULATION HAS REACHED ½ THE DESIGN HEIGHT.

1.1.9 DUST CONTROL SHALL BE ACCOMPLISHED BY THE USE OF ANY OF THE FOLLOWING: WATER, CALCIUM CHLORIDE, STONE, OR AN APPROVED MDEP PRODUCT. DUST CONTROL SHALL BE APPLIED AS NEEDED TO ACCOMPLISH DUST CONTROL.

1.1.10 TEMPORARY LOAM, SEED, AND MULCHING SHALL BE USED IN AREAS WHERE NO OTHER EROSION CONTROL MEASURE IS USED. APPLICATION RATES FOR SEEDING ARE PROVIDED AT THE END OF THIS REPORT.

1.1.11 STOCKPILES SHALL BE STABILIZED WITHIN 7 DAYS OF FORMATION UNLESS A SCHEDULED RAIN EVENT OCCURS PRIOR TO THE 7 DAY WINDOW, IN WHICH CASE THE STOCKPILE SHALL BE STABILIZED PRIOR TO THE RAIN EVENT. METHODS OF STABILIZATION SHALL BE MULCH, EROSION CONTROL MIX, OR EROSION CONTROL BLANKETS/MATS. SILT FENCE OR A WOOD WASTE COMPOST FILTER BERM SHALL BE PLACED DOWNHILL OF ANY SOIL STOCKPILE LOCATION.

1.1.12 FOR DISTURBANCE BETWEEN NOVEMBER 1 AND APRIL 15, PLEASE REFER TO WINTER STABILIZATION PLAN IN THIS REPORT AND THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR FURTHER INFORMATION.

1.1.13 IT IS OF THE UTMOST IMPORTANCE THAT STORMWATER RUNOFF AND POTENTIAL SEDIMENT FROM THE CONSTRUCTION SITE BE DIVERTED AROUND THE PROPOSED UNDERDRAINS UNTIL THE TRENCH IS BACKFILLED.

1.2 PERMANENT EROSION CONTROL MEASURES

THE FOLLOWING PERMANENT EROSION CONTROL MEASURES ARE INTENDED FOR POST DISTURBANCE AREAS OF THE PROJECT.

1.2.1 ALL DISTURBED AREAS DURING CONSTRUCTION, NOT SUBJECT TO OTHER PROPOSED CONDITIONS, SHALL RECEIVE A MINIMUM 4" OF LOAM, LIMED, AND MULCHED. EROSION CONTROL BLANKETS OR MATS SHALL BE PLACED OVER THE MULCH IN AREAS NOTED IN PARAGRAPH 4.2 OF THIS REPORT.

1.2.2 ALL STORMWATER DEVICES SHALL BE INSTALLED AND TRIBUTARY AREAS STABILIZED PRIOR RECEIVING STORMWATER.

1.2.3 REFER TO THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR ADDITIONAL INFORMATION.

2.0 EROSION AND SEDIMENTATION CONTROL PLAN

2.1 THE EROSION AND SEDIMENTATION CONTROL PLAN IS INCLUDED WITHIN THE PLAN SET.

3.0 DETAILS AND SPECIFICATIONS

3.1 EROSION CONTROL DETAILS AND SPECIFICATIONS ARE INCLUDED IN THE PLAN SET.

4.0 STABILIZATION PLAN FOR WINTER CONSTRUCTION

WINTER CONSTRUCTION CONSISTS OF EARTHWORK DISTURBANCE BETWEEN THE DATES OF NOVEMBER 1 AND APRIL 15. IF A CONSTRUCTION SITE IS NOT STABILIZED WITH PAVEMENT, A ROAD GRAVEL BASE, 75% MATURE VEGETATION COVER OR RIPRAP BY NOVEMBER 15, THEN THE SITE SHALL BE PROTECTED WITH OVER–WINTER STABILIZATION. ANY AREA NOT STABILIZED WITH PAVEMENT, VEGETATION, MULCHING, EROSION CONTROL MIX, EROSION CONTROL MATS, RIPRAP, OR GRAVEL BASE ON A ROAD SHALL BE CONSIDERED OPEN.

THE CONTRACTOR SHALL LIMIT THE WORK AREA TO AREAS THAT WORK WILL OCCUR IN DURING THE SUBSEQUENT 15 DAYS AND SO THAT IT CAN BE MULCHED ONE DAY PRIOR TO A SNOW EVENT. THE CONTRACTOR SHALL STABILIZE WORK AREAS PRIOR TO OPENING ADDITIONAL WORK AREAS TO MINIMIZE AREAS WITHOUT EROSION CONTROL MEASURES.

THE FOLLOWING MEASURES SHALL BE IMPLEMENTED DURING WINTER CONSTRUCTION PERIODS:

4.1 SEDIMENT BARRIERS

DURING FROZEN CONDITIONS, SEDIMENT BARRIERS MAY CONSIST OF EROSION CONTROL MIX BERMS OR ANY OTHER RECOGNIZED SEDIMENT BARRIERS AS FROZEN SOIL PREVENTS THE PROPER INSTALLATION OF HAY BALES OR SILT FENCES.

4.2 MULCHING

ALL AREAS SHALL BE CONSIDERED TO BE DENUDED UNTIL SEEDED AND MULCHED. HAY AND STRAW MULCH SHALL BE APPLIED AT A RATE OF 150 LB. PER 1,000 SQUARE FEET OR 3 TONS/ACRE (TWICE THE NORMAL ACCEPTED RATE OF 75–LBS./1,000 S.F. OR 1.5 TONS/ACRE) AND SHALL BE PROPERLY ANCHORED. EROSION CONTROL MIX MUST BE APPLIED WITH A MINIMUM 4 INCH THICKNESS. MULCH SHALL NOT BE SPREAD ON TOP OF SNOW. THE SNOW SHALL BE REMOVED DOWN TO A ONE–INCH DEPTH OR LESS PRIOR TO APPLICATION. AFTER EACH DAY OF FINAL GRADING, THE AREA SHALL BE PROPERLY STABILIZED WITH ANCHORED HAY OR STRAW OR EROSION CONTROL MATTING. AN AREA SHALL BE CONSIDERED TO HAVE BEEN STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED OR ADEQUATELY ANCHORED SO THAT GROUND SURFACE IS NOT VISIBLE THROUGH THE MULCH. BETWEEN THE DATES OF NOVEMBER 1 AND APRIL 15, ALL MULCH SHALL BE ANCHORED BY EITHER MULCH NETTING, TRACKING OR WOOD CELLULOSE FIBER. THE COVER WILL BE CONSIDERED SUFFICIENT WHEN THE GROUND SURFACE IS NOT VISIBLE THROUGH THE MULCH. AFTER NOVEMBER 1ST, MULCH AND ANCHORING OF ALL EXPOSED SOIL SHALL OCCUR AT THE END OF EACH FINAL GRADING WORKDAY.

4.3 SOIL STOCKPILING

STOCKPILES OF SOIL OR SUBSOIL SHALL BE MULCHED FOR OVER WINTER PROTECTION WITH HAY OR STRAW AT TWICE THE NORMAL RATE OR WITH A FOUR–INCH LAYER OF EROSION CONTROL MIX. THIS SHALL BE DONE WITHIN 24 HOURS OF STOCKING AND RE–ESTABLISHED PRIOR TO ANY RAINFALL OR SNOWFALL.

4.4 SEEDING

BETWEEN THE DATES OF OCTOBER 15TH AND APRIL 1ST, LOAM OR SEED SHALL NOT BE REQUIRED. DURING PERIODS OF ABOVE FREEZING TEMPERATURES FINISHED AREAS SHALL BE FINE GRADED AND EITHER PROTECTED WITH MULCH OR TEMPORARILY SEEDED AND MULCHED UNTIL SUCH TIME AS THE FINAL TREATMENT CAN BE APPLIED. IF THE DATE IS AFTER NOVEMBER 1ST AND IF THE EXPOSED AREA HAS NOT BEEN LOAMED, FINAL GRADING WITH A UNIFORM SURFACE, THEN THE AREA MAY BE DORMANT SEEDED AT A RATE OF 3 TIMES HIGHER THAN SPECIFIED FOR PERMANENT SEED AND THEN MULCHED.

DORMANT SEEDING MAY BE PLACED PRIOR TO THE PLACEMENT OF MULCH OR EROSION CONTROL BLANKETS. IF DORMANT SEEDING IS USED FOR THE SITE, ALL DISTURBED AREAS SHALL RECEIVE 4" OF LOAM AND SEED AT AN APPLICATION RATE OF 5 LBS/1,000 S.F. ALL AREAS SEEDED DURING THE WINTER SHALL BE INSPECTED IN THE SPRING FOR ADEQUATE CATCH. ALL AREAS INSUFFICIENTLY VEGETATED (LESS THAN 75% CATCH) SHALL BE REVEGETATED BY REPLACING LOAM, SEED AND MULCH. IF DORMANT SEEDING IS NOT USED FOR THE SITE, ALL DISTURBED AREAS SHALL BE REVEGETATED IN THE SPRING.

4.5 OVER WINTER STABILIZATION OF DISTURBED SOILS

BY SEPTEMBER 15TH, ALL DISTURBED SOILS ON AREAS HAVING A SLOPE LESS THAN 15% SHALL BE SEEDED AND MULCHED. IF THE DISTURBED AREAS ARE NOT STABILIZED BY THIS DATE, THEN ONE OF THE FOLLOWING ACTIONS SHALL BE TAKEN TO STABILIZE THE SOIL FOR LATE FALL AND WINTER:

- STABILIZE THE SOIL WITH TEMPORARY VEGETATION – BY OCTOBER 1ST, SEED THE DISTURBED SOIL WITH WINTER RYE AT A SEEDING RATE OF 3LBS PER 1,000 S.F., LIGHTLY MULCH THE SEEDED SOIL WITH HAY OR STRAW AT 75 LBS PER 1,000 S.F., AND ANCHOR THE MULCH WITH PLASTIC NETTING. MONITOR GROWTH OF THE RYE OVER THE NEXT 30 DAYS. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR FAILS TO COVER AT LEAST 75% OF THE DISTURBED SOIL BEFORE NOVEMBER 1ST, THEN MULCH THE AREA FOR OVER–WINTER PROTECTION.
- STABILIZE THE SOIL WITH SOD – STABILIZE THE DISTURBED SOIL WITH PROPERLY INSTALLED SOD BY OCTOBER 1ST. PROPER INSTALLATION INCLUDES PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL.
- STABILIZE THE SOIL WITH MULCH – BY NOVEMBER 15TH, MULCH THE DISTURBED SOIL BY SPREADING HAY OR STRAW AT A RATE OF AT LEAST 150 LBS PER 1,000 S.F. ON THE AREA SO THAT NO SOIL IS VISIBLE THROUGH THE MULCH. IMMEDIATELY AFTER APPLYING THE MULCH, ANCHOR THE MULCH WITH PLASTIC NETTING TO PREVENT WIND FROM MOVING THE MULCH OFF THE DISTURBED SOIL.

4.6 OVER WINTER STABILIZATION OF DISTURBED SLOPES

ALL STONE–COVERED SLOPES SHALL BE CONSTRUCTED AND STABILIZED BY NOVEMBER 15TH. ALL SLOPES TO BE VEGETATED SHALL BE SEEDED AND MULCHED BY SEPTEMBER 1ST. A SLOPE IS CONSIDERED A GRADE GREATER THAN 15%. IF A SLOPE TO BE VEGETATED IS NOT STABILIZED BY SEPTEMBER 1ST, THEN ONE OF THE FOLLOWING ACTION SHALL BE TAKEN TO STABILIZE THE SLOPE FOR LATE FALL AND WINTER:

- STABILIZE THE SOIL WITH TEMPORARY VEGETATION AND EROSION CONTROL MATS – BY OCTOBER 1ST THE DISTURBED SLOPE SHALL BE SEEDED WITH WINTER RYE AT A SEEDING RATE OF 3 LBS PER 1,000 S.F. AND THEN INSTALL EROSION CONTROL MATS OR ANCHORED MULCH OVER THE SEEDING. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR FAILS TO COVER AT LEAST 75% F THE SLOPE BY NOVEMBER 1ST, THEN THE CONTRACTOR SHALL COVER THE SLOPE WITH A LAYER OF EROSION CONTROL MIX OR WITH STONE RIPRAP.
- STABILIZE THE SOIL WITH SOD – THE DISTURBED SLOPE SHALL BE STABILIZED WITH PROPERLY INSTALLED SOD BY OCTOBER 1ST. PROPER INSTALLATION INCLUDES THE CONTRACTOR PINNING THE SOD ONTO THE SLOPE WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL. THE CONTRACTOR SHALL NOT USE LATE–SEASON SOD INSTALLATION TO STABILIZE SLOPES HAVING A GRADE GREATER THAN 3H:1V OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE.
- STABILIZE THE SOIL WITH EROSION CONTROL MIX – EROSION CONTROL MIX SHALL BE PROPERLY INSTALLED BY NOVEMBER 15TH. THE CONTRACTOR SHALL NOT USE EROSION CONTROL MIX TO STABILIZE SLOPES HAVING GRADES GREATER THAN 2H:1V OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE.
- STABILIZE THE SOIL WITH STONE RIPRAP – PLACE A LAYER OF STONE RIPRAP ON THE SLOPE BY NOVEMBER 15TH. A REGISTERED PROFESSIONAL ENGINEER SHALL BE HIRED TO DETERMINE THE STONE SIZE NEEDED FOR STABILITY ON THE SLOPE AND TO DESIGN A FILTER LAYER FOR UNDERNEATH THE RIPRAP.

5.0 INSPECTION AND MAINTENANCE

A PERSON WITH KNOWLEDGE OF EROSION AND STORMWATER CONTROL, INCLUDING THE STANDARDS AND CONDITIONS IN THE PERMIT, SHALL CONDUCT PERIODIC VISUAL INSPECTIONS OF INSTALLED EROSION CONTROL MEASURES. THE FREQUENCY OF INSPECTION SHALL OCCUR AT LEAST ONCE EVERY TWO WEEKS, AS WELL AS AFTER A "STORM EVENT". A "STORM EVENT" SHALL CONSIST 0.5 INCHES OF RAIN WITHIN A 24 HOUR PERIOD. THE FOLLOWING EROSION AND SEDIMENT CONTROL – BEST MANAGEMENT PRACTICES (BMP'S) SHALL INSPECTED IN THE MANNER AS DESCRIBED.

5.1 SEDIMENT BARRIERS

HAY BALE BARRIERS, SILT FENCES AND FILTER BERMS SHALL BE INSPECTED AND REPAIRED FOR THE FOLLOWING IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THEM. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR THE EDGES OF THE BARRIER, OR IMPOUNDING OF LARGE VOLUMES OF WATER BEHIND THEM, SEDIMENT BARRIERS SHALL BE REPLACED WITH A TEMPORARY CHECK DAM. SHOULD THE FABRIC ON A SILT FENCE OR FILTER BARRIER DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER IS STILL NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY. SEDIMENT DEPOSITS SHOULD BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE–HALF THE HEIGHT OF THE BARRIER. FILTER BERMS SHOULD BE RESHAPED AS NEEDED. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHOULD BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.

5.2 STABILIZED STONE CONSTRUCTION ENTRANCES

THE EXIT SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OF SEDIMENT ONTO PUBLIC RIGHTS–OF–WAY. WHEN THE CONTROL PAD BECOMES INEFFECTIVE, THE STONE SHALL BE REMOVED ALONG WITH THE COLLECTED SOIL MATERIAL AND REDISTRIBUTED ON SITE IN A STABLE MANNER. THE ENTRANCE SHOULD THEN BE RECONSTRUCTED. THE CONTRACTOR SHALL SWEEP OR WASH PAVEMENT AT EXITS, WHICH HAVE EXPERIENCED MUD–TRACKING ON TO THE PAVEMENT OR TRAVELED WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH AGGREGATE, WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING STORM DRAINS, DITCHES, OR WATERWAYS.

5.3 MULCHED AREAS

ALL MULCHES MUST BE INSPECTED PERIODICALLY, IN PARTICULAR AFTER RAINSTORMS, TO CHECK FOR RILL EROSION. IF LESS THAN 90% OF THE SOIL SURFACE IS COVERED BY MULCH, ADDITIONAL MULCH SHALL BE IMMEDIATELY APPLIED. NETS MUST BE INSPECTED AFTER RAIN EVENTS FOR DISLOCATION OR FAILURE. IF WASHOUTS OR BREAKAGE OCCUR, RE–INSTALL THE NETS AS NECESSARY AFTER REPAIRING DAMAGE TO THE SLOPE. WHERE MULCH IS USED IN CONJUNCTION WITH ORNAMENTAL PLANTINGS, INSPECT PERIODICALLY THROUGHOUT THE YEAR TO DETERMINE IF MULCH IS MAINTAINING COVERAGE OF THE SOIL SURFACE. REPAIR AS NEEDED.

5.4 DUST CONTROL

WHEN TEMPORARY DUST CONTROL MEASURES ARE USED, REPETITIVE TREATMENT SHALL BE APPLIED AS NEEDED TO ACCOMPLISH CONTROL.

5.5 STORMWATER APPURTENANCES

ALL UNDERDRAINS, STORM DRAINS, AND CATCH BASINS NEED TO BE OPERATING EFFECTIVELY AND FREE OF DEBRIS.

5.6 EROSION AND SEDIMENTATION CONTROL INSPECTIONS:

ACORN ENGINEERING HAS PERSONNEL QUALIFIED TO CONDUCT EROSION AND SEDIMENTATION CONTROL INSPECTIONS. FOR FURTHER INFORMATION CONTACT:

CONTACT: WILL SAVAGE, PE
TELEPHONE: (207) 775–2655

QUALIFICATIONS:

Ø MAINE PROFESSIONAL ENGINEERING LICENSE #11419
Ø MAINE DEP – CERTIFIED IN MAINTENANCE & INSPECTION OF STORMWATER BMP'S CERT #14
Ø CERTIFIED EROSION, SEDIMENT AND STORM WATER INSPECTOR (CESSWI) CERT #0293
Ø CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC) CERT. #4620

THE CONTRACTOR HAS SOLE RESPONSIBILITY FOR COMPLYING WITH THE EROSION AND SEDIMENTATION REPORT/PLAN, INCLUDING CONTROL OF FUGITIVE DUST. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY MONETARY PENALTIES RESULTING FROM FAILURE TO COMPLY WITH THESE STANDARDS.

6.0 IMPLEMENTATION SCHEDULE

THE FOLLOWING IMPLEMENTATION SEQUENCE IS INTENDED TO MAXIMIZE THE EFFECTIVENESS OF THE ABOVE DESCRIBED EROSION CONTROL MEASURES. CONTRACTORS SHOULD AVOID OVEREXPOSING DISTURBED AREAS AND LIMIT THE AMOUNT OF STABILIZATION AREA.

1. INSTALL A STABILIZED CONSTRUCTION ENTRANCE IN ALL LOCATIONS WHERE CONSTRUCTION TRAFFIC WILL ENTER AND EXIT THE SITE.
2. INSTALL PERIMETER SILT FENCE OR EROSION CONTROL BERM.
3. INSTALL ALL OTHER EROSION CONTROL DEVICES AS NECESSARY THROUGHOUT THE REMAINDER OF THIS SCHEDULE.
4. COMMENCE INSTALLATION OF DRAINAGE INFRASTRUCTURE.
5. PRIORITIZE THE DOWNHILL RETAINING AND FOUNDATION WALLS TO CONTAIN RUNOFF WITHIN THE SITE WHILE PROVIDING AN ENGINEERED OUTLET WITH SILTATION BARRIER TO THE MUNICIPAL STORMWATER SYSTEM WITHIN NORTH STREET.
6. COMMENCE EARTHWORK OPERATIONS, WALL AND FOUNDATION INSTALLATION.
7. COMMENCE INSTALLATION OF UTILITIES.
8. CONTINUE EARTHWORK AND GRADING TO SUBGRADE AS NECESSARY FOR CONSTRUCTION.
9. COMPLETE INSTALLATION OF DRAINAGE INFRASTRUCTURE, AS WELL AS OTHER UTILITY WORK.
10. COMPLETE REMAINING EARTHWORK OPERATIONS.
11. INSTALL SUB–BASE AND BASE GRAVELS IN PAVED AREAS.
12. INSTALL PAVING, CURBING AND BRICKWORK.
13. LOAM, LIME, FERTILIZE, SEED AND MULCH DISTURBED AREAS AND COMPLETE ALL LANDSCAPING.
14. ONCE THE SITE IS STABILIZED, 90% CATCH OF GRASS HAS BEEN OBTAINED, OR MULCHING OF LANDSCAPE AREAS IS COMPLETE REMOVE ALL TEMPORARY EROSION CONTROL MEASURES.
15. TOUCH UP AREAS WITHOUT A VIGOROUS CATCH OF GRASS WITH LOAM AND SEED.
16. COMPLETE SITE SIGNAGE AND STRIPING.
17. EXECUTE PROPER MAINTENANCE OF ALL TEMPORARY AND PERMANENT EROSION CONTROL MEASURES THROUGHOUT THE PROJECT.

THE ABOVE IMPLEMENTATION SEQUENCE SHOULD BE GENERALLY FOLLOWED BY THE SITE CONTRACTOR. HOWEVER, THE CONTRACTOR MAY CONSTRUCT SEVERAL ITEMS SIMULTANEOUSLY. THE CONTRACTOR SHALL SUBMIT TO THE OWNER A SCHEDULE OF THE COMPLETION OF THE WORK. IF THE CONTRACTOR IS TO COMMENCE THE CONSTRUCTION OF MORE THAN ONE ITEM ABOVE, THEY SHALL LIMIT THE AMOUNT OF EXPOSED AREAS TO THOSE AREAS IN WHICH WORK IS EXPECTED TO BE UNDERTAKEN DURING THE FOLLOWING 30 DAYS.

THE CONTRACTOR SHALL RE–VEGETATE DISTURBED AREAS AS RAPIDLY AS POSSIBLE. ALL AREAS SHALL BE PERMANENTLY STABILIZED WITHIN 7 DAYS OF FINAL GRADING OR BEFORE A STORM EVENT. THE CONTRACTOR SHALL INCORPORATE PLANNED INLETS AND DRAINAGE SYSTEMS AS EARLY AS POSSIBLE INTO THE CONSTRUCTION PHASE.

7.0 CONCLUSION

THE ABOVE EROSION CONTROL NARRATIVE IS INTENDED TO MINIMIZE THE DEVELOPMENT IMPACT BY IMPLEMENTING TEMPORARY AND PERMANENT EROSION CONTROL MEASURES. THE CONTRACTOR SHALL ALSO REFER TO THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR ADDITIONAL INFORMATION.

8.0 SEEDING PLAN

8.1 SITE PREPARATION

THE SEEDED AREAS SHALL BE FEASIBLY GRADED OUT TO PROVIDE THE USE OF EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING. IF NECESSARY, THE SITE MAY REQUIRE ADDITIONAL TEMPORARY EROSION CONTROL MEASURES OUTLINED IN THE EROSION CONTROL REPORT.

8.2 SEEDBED PREPARATION

FERTILIZER SHALL BE APPLIED TO THE SITE AT A RATE OF 13.8 POUNDS PER 1,000 SQUARE FEET. THE COMPOSITION OF THE FERTILIZER SHALL BE 10–10–10 (N–P205–K20) OR EQUIVALENT.

LIMESTONE SHALL BE APPLIED TO THE SITE AT A RATE OF 138 POUNDS PER 1,000 SQUARE FEET.

8.3 SEEDING

THE COMPOSITION AND AMOUNT OF TEMPORARY SEED APPLIED TO A SITE SHALL BE DETERMINED BY THE FOLLOWING TABLE:

TEMPORARY SEED APPLICATION RATES

SEED	LBS / ACRE	RECOMMENDED SEEDING DATES
WINTER RYE	2.57	8/15 TO 10/1
OATS	1.84	4/1 TO 7/1 8/15 TO 9/15
ANNUAL RYGRASS	0.92	4/1 TO 7/1
SUDANGRASS	0.92	5/15 TO 8/15
PERENNIAL	0.92	8/15 TO 9/15
TOTAL	7.17 LBS/ACRE	

PERMANENT SEED APPLICATION RATES

SEED	LBS / ACRE
KENTUCKY BLUEGRASS	20.00
CREEPING RED FESCUE	20.00
PERENNIAL RYEGRASS	4.80
TOTAL	44.8 LBS/ACRE

8.4 MULCHING

MULCH SHALL BE HARDWOOD AND APPLIED AT A RATE OF 70 LBS – 90 LBS PER 1,000 SQUARE FEET. THE MULCH SHALL BE INSTALLED AT A MINIMUM DEPTH OF 4 INCHES. THE SEEDED AREA SHALL BE MULCHED IMMEDIATELY AFTER SEED IS APPLIED. MULCHING DURING THE WINTER SEASON SHALL BE DOUBLE THE NORMAL AMOUNT. REFER TO DETAIL FOR MORE INFORMATION.

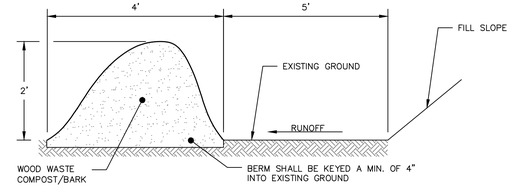
8.5 CONCLUSION

PLEASE REFER TO THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR ADDITIONAL INFORMATION PERTAINING TO TEMPORARY SEEDING AND MULCHING.

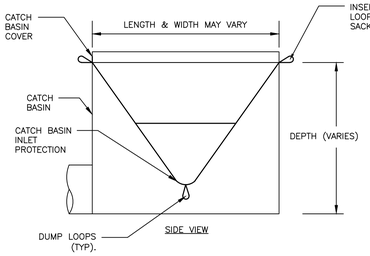
PERMIT LEVEL
NOT ISSUED FOR
CONSTRUCTION

NOTES:

1. THE EROSION CONTROL MIX SHALL CONFORM TO THE FOLLOWING STANDARDS AND IN ACCORDANCE WITH THE MAINE DOT CHAPTER 700, SECTION 717.04(D):
   1.1. pH BETWEEN 5.0 – 8.0
   1.2. PARTICLE SIZE (BY WEIGHT):
   1.2.1. 100% PASSING A 150 MM (6 IN) SCREEN
   1.2.2. 75 TO 85% PASSING A 19 MM (0.75 IN) SCREEN
   1.3. SOLUBLE SALTS CONTENT < 4.0 MMHOS/CM
   1.4. ORGANIC MATTER 20 TO 100% , DRY WEIGHT BASIS
2. THE BERM SHOULD BE PLACED, UNCOMPACTED, ALONG A RELATIVELY LEVEL CONTOUR, WHEN NECESSARY THE BERM MAY BE PLACED PERPENDICULAR TO THE SLOPE ALONG THE PROPERTY LINE TO CONTAIN THE SEDIMENT PROVIDED A BERM IS LOCATED AT THE BASE OF THE SLOPE.
3. THE BERM MAY BE USED IN LIEU OF SILTATION FENCE, AT THE TOE OF SHALLOW SLOPES, ON FROZEN GROUND, LEDGE OUT CROPS, VERY ROOTED FORESTED AREA OR AT THE EDGE OF GRAVEL PARKING AREAS.
4. BERMS SHALL REMAIN IN PLACE UNTIL UPSTREAM AREA IS STABILIZED OR 90% CATCH OF VEGETATION IS ATTAINED. BERMS SHALL BE REMOVED OFFSITE OR BY SPREADING SUCH THAT NATIVE EARTH CAN BE SEEN BELOW.



EROSION CONTROL MIX BERM DETAIL
NOT TO SCALE



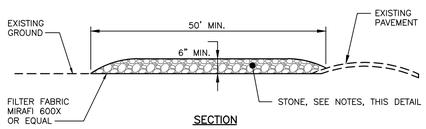
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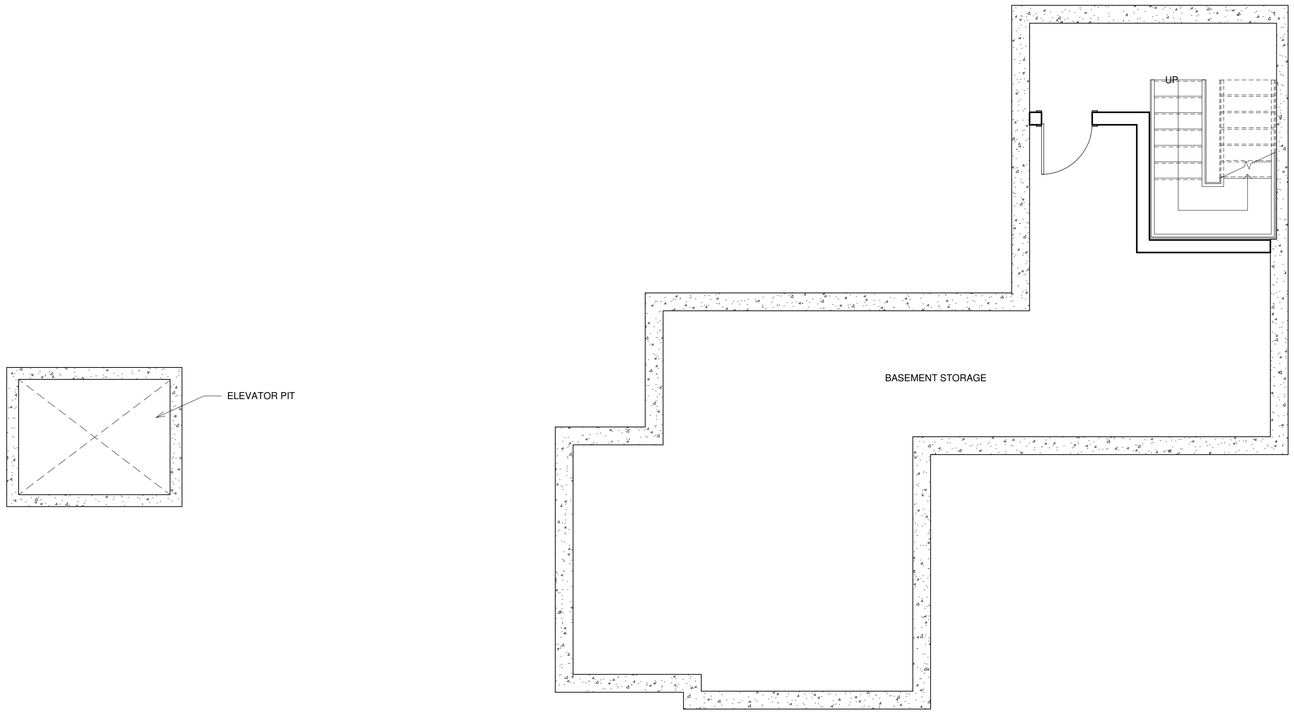
1. CATCH BASIN INLET PROTECTION SHALL BE INSTALLED DOWNGRADIENT OF PROPOSED PROJECT AND ROUTINELY MAINTAINED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS
2. CATCH BASIN SIZE VARIES. CONTRACTOR TO ENSURE CATCH BASIN INLET PROTECTION MATCHES CATCH BASIN DIMENSIONS.
3. SILT SACK SHALL BE ACF ENVIRONMENTAL SILT SACK, TYPE A, OR APPROVED EQUAL.

CATCH BASIN INLET PROTECTION
NOT TO SCALE

NOTES:

1. CONTRACTOR SHALL ADD STONE TO ENTRANCE AS MUD/SILT MATERIAL ACCUMULATES
2. STONE SHALL BE 2"–3" COARSE AGGREGATE
3. CONSTRUCTION ENTRANCE SHALL BE GRADED TO NOT ALLOW ANY STORMWATER TO BE CONVEYED OFF SITE. IN SITUATIONS WHERE THIS IS NOT POSSIBLE, ANY STORMWATER CONVEYED OFFSITE SHALL BE TREATED OR RETAINED IN A MANNER APPROVED BY ENGINEER.
4. WHEN NECESSARY, ON–SITE VEHICLES SHALL HAVE THEIR WHEELS CLEANED PRIOR TO LEAVING SITE.
5. CONSTRUCTION ENTRANCE SHALL BE GRADED IN A MANNER THAT PREVENTS TRACKING OF SEDIMENTS ONTO PUBLIC RIGHT–OF–WAY


EXISTING GROUND
50' MIN.
6" MIN.
EXISTING PAVEMENT
FILTER FABRIC MIRAFI 600



A Basement Plan
1/4" = 1'-0"

128R North Street

NEW CONSTRUCTION

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No.	Description	Date

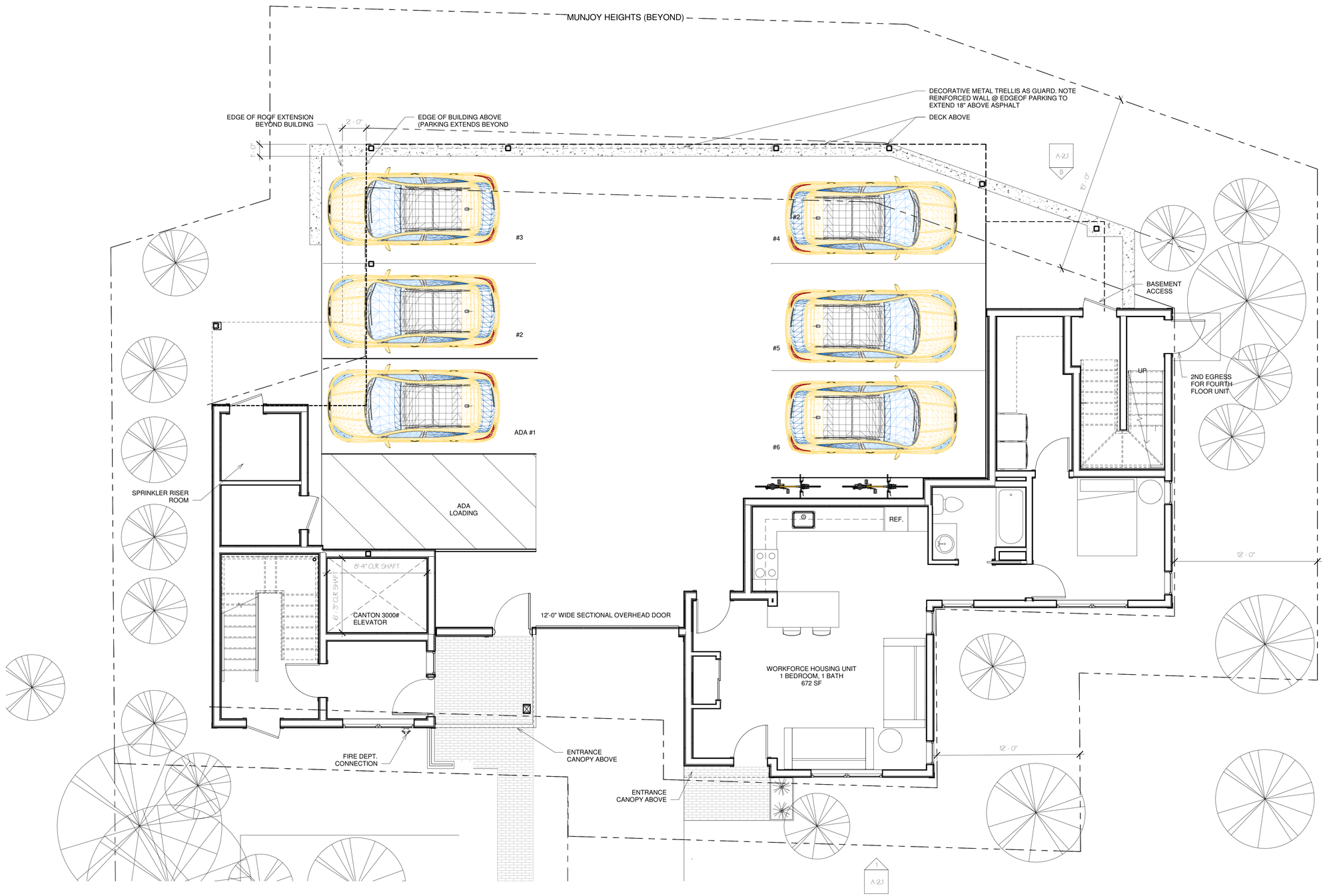
BASEMENT PLAN

Project number	18-16_128R North
Date	11.19.18
Drawn by	Author
Checked by	Checker

A-1.6

Scale 1/4" = 1'-0"

8/2/2019 12:06:57 PM



A First Floor
1/4" = 1'-0"

[DESIGN DEVELOPMENT NOT FOR CONSTRUCTION]

0' 2' 4' 8' 16'

126 & 128R North Street

NEW CONSTRUCTION

OWNER
JOSHUA WOJCIK
UPRIGHT FRAMEWORKS LLC
PO BOX 833
WILTON ME 04294
jwojcik@uprightframeworks.com

DEXTROUS CREATIVE
PORTLAND, ME 04102
TRACIE REED, ARCHITECT
NCARB, AIA, LEED AP BD+C
traciereed@dextrouscreative.com
2074090459 (cell)

PROJECT TEAM

SURVEYOR
James P. Nadeau, PLS
Nadeau Land Surveyors
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(207) 878-7870

GEOTECHNICAL ENGINEER
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Senior Geotechnical Engineer
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STRUCTURAL ENGINEER
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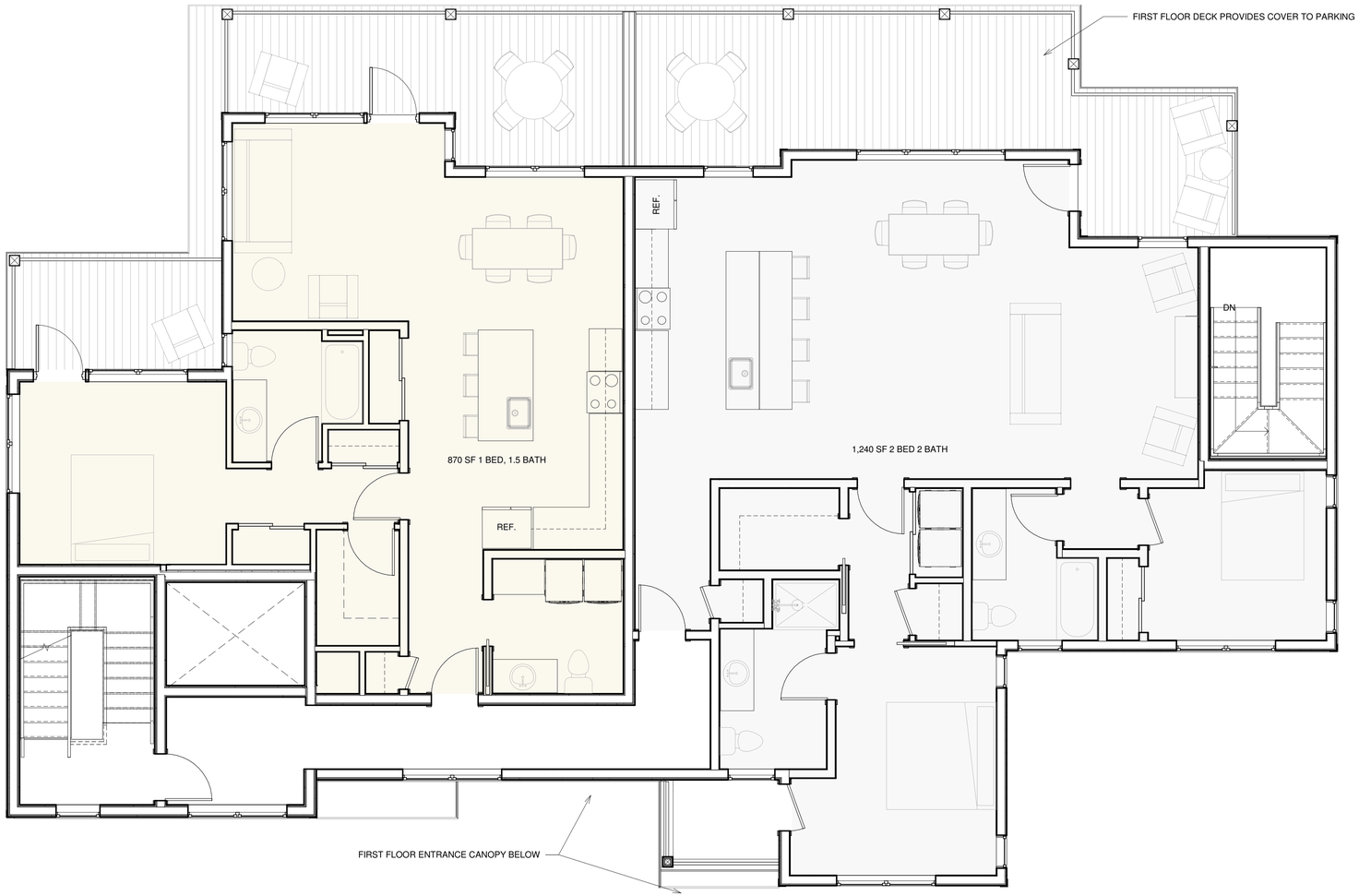
No.	Description	Date

FIRST FLOOR PLAN

Project number	18-16_128R North
Date	11.19.18
Drawn by	TJR
Checked by	TJR
Scale	1/4" = 1'-0"

A-1.1

10/29/2019 9:54:36 AM



A Second Floor
1/4" = 1'-0"

[DESIGN DEVELOPMENT NOT FOR CONSTRUCTION]

0' 2' 4' 8' 16'

126 & 128R North Street

NEW CONSTRUCTION

OWNER
JOSHUA WOJCIK
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No.	Description	Date

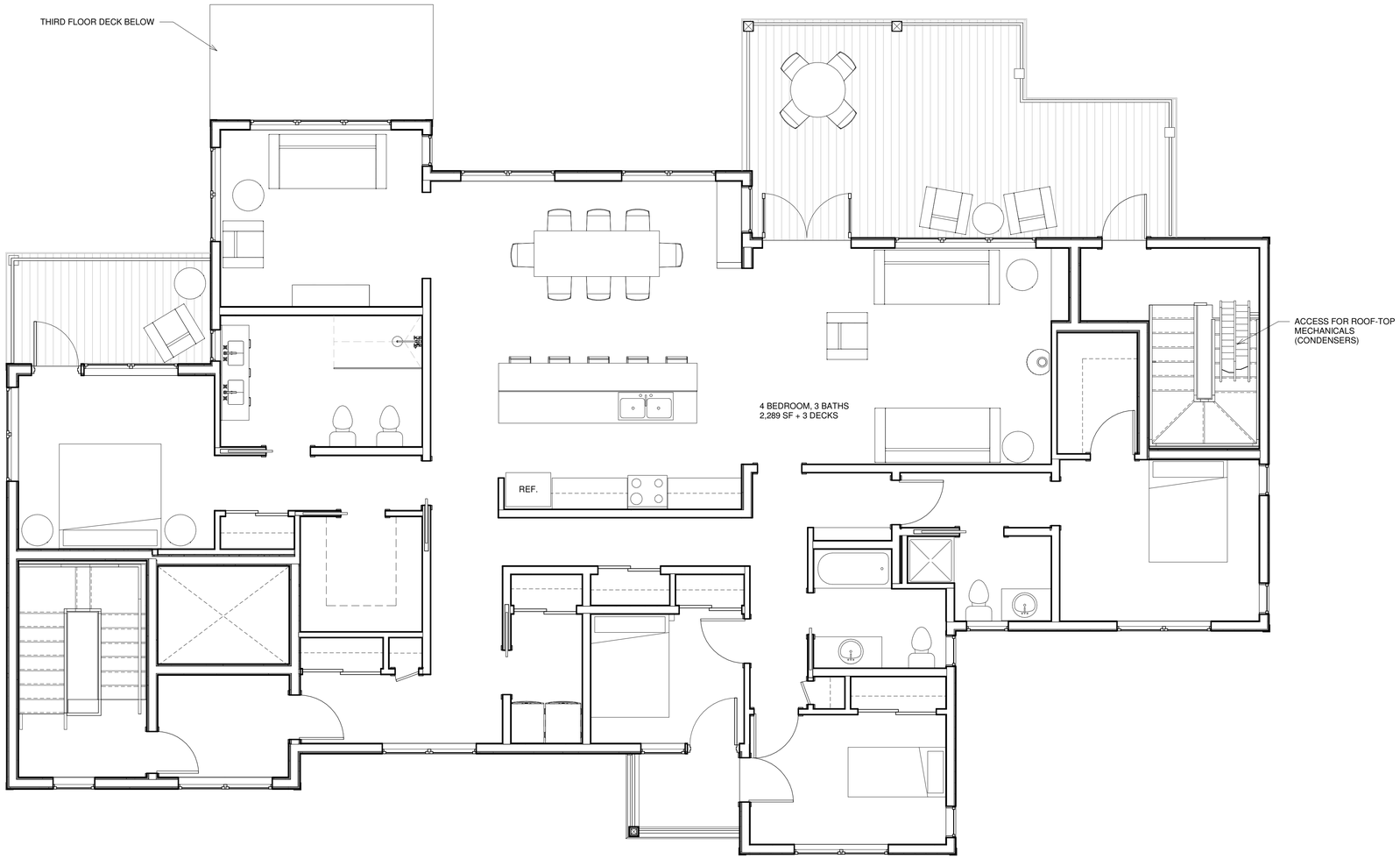
SECOND & THIRD FLOOR PLAN

Project number	18-16_128R North
Date	11.19.18
Drawn by	TJR
Checked by	TJR

A-1.2

Scale 1/4" = 1'-0"

10/29/2019 9:54:42 AM



A Fourth Floor
1/4" = 1'-0"

[DESIGN DEVELOPMENT NOT FOR CONSTRUCTION]

0' 2' 4' 8' 16'

126 & 128R North Street

NEW CONSTRUCTION

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No.	Description	Date

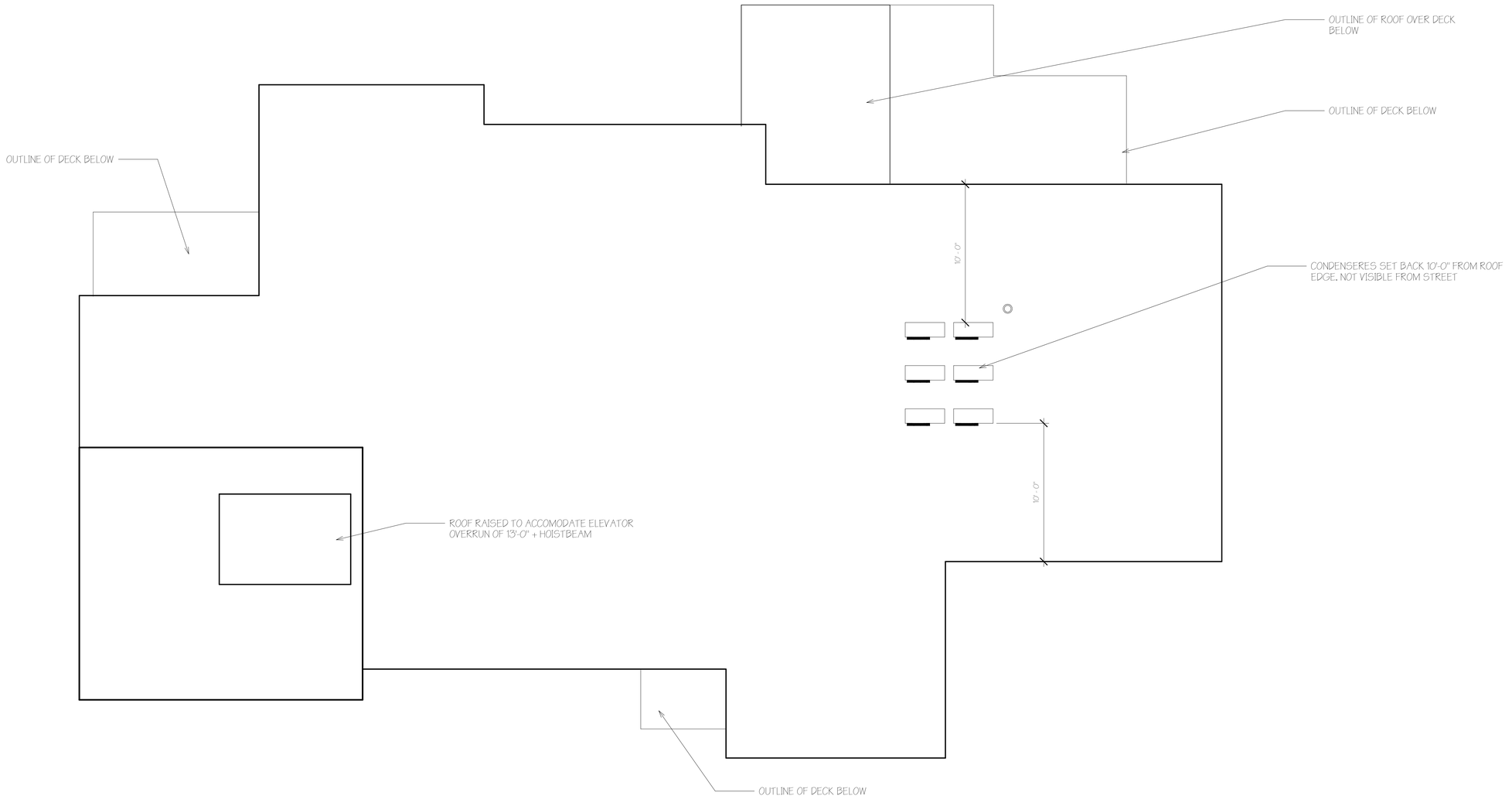
FOURTH FLOOR

Project number	18-16_128R North
Date	11.19.18
Drawn by	TJR
Checked by	TJR

A-1.4

Scale 1/4" = 1'-0"

10/23/2019 9:54:45 AM



A Roof
1/4" = 1'-0"

[DESIGN DEVELOPMENT NOT FOR CONSTRUCTION]

0' 2' 4' 8' 16'

126 & 128R North Street

NEW CONSTRUCTION

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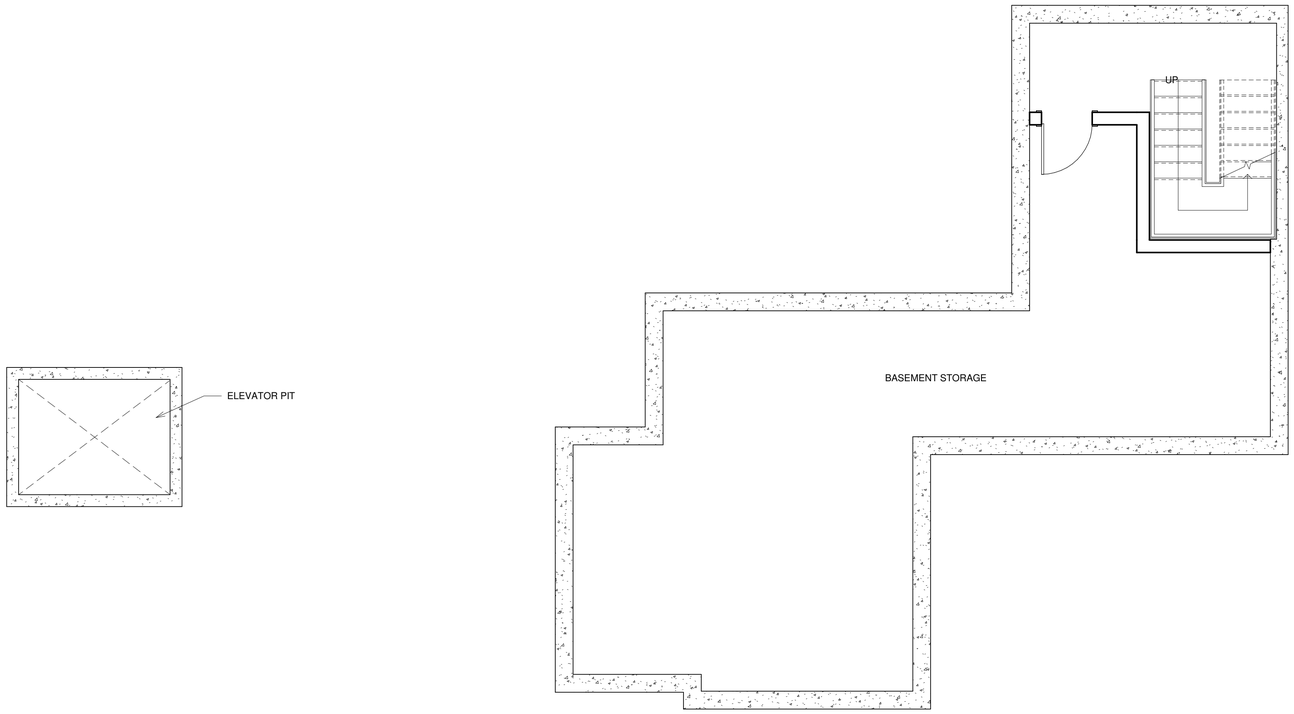
STRUCTURAL ENGINEER
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No.	Description	Date

ROOF PLAN

Project number	18-16_128R North
Date	11.19.18
Drawn by	Author
Checked by	Checker
	A-1.5
Scale	1/4" = 1'-0"

10/23/2019 9:54:44 AM



A Basement Plan
1/4" = 1'-0"

128R North Street

NEW CONSTRUCTION

OWNER
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No.	Description	Date

BASEMENT PLAN

Project number	18-16_128R North
Date	11.19.18
Drawn by	Author
Checked by	Checker

A-1.6

Scale 1/4" = 1'-0"

8/2/2019 12:06:57 PM



1 South Elevation
3/16" = 1'-0"



B North Elevation
3/16" = 1'-0"

0' 2' 4' 8' 16'

126 & 128R North Street

NEW CONSTRUCTION

OWNER
JOSHUA WOJCIK
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jwojcik@uprightframeworks.com

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(207) 774-4614

No.	Description	Date

SOUTH & NORTH ELEVATIONS

Project number	18-16_128R North
Date	11.19.18
Drawn by	Author
Checked by	Checker

A-2.1

Scale 3/16" = 1'-0"

10/29/2019 9:56:59 AM



A South Elevation
3/16" = 1'-0"



B North Elevation
1/4" = 1'-0"

0' 2' 4' 8' 16'

128R North Street

NEW CONSTRUCTION

OWNER
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(207) 774-4614

No.	Description	Date

SOUTH & NORTH ELEVATIONS

Project number	18-16_128R North
Date	11.19.18
Drawn by	Author
Checked by	Checker
	A-2.1
Scale	As indicated

8/22/2019 12:23:35 AM



A East Elevation
3/16" = 1'-0"



B West Elevation
3/16" = 1'-0"

126 & 128R North Street

NEW CONSTRUCTION

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JOSHUA WOJCIK
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No.	Description	Date

EAST & WEST ELEVATIONS

Project number	18-16_128R North
Date	11.19.18
Drawn by	Author
Checked by	Checker

A-2.2

Scale 3/16" = 1'-0"

10/29/2019 9:58:51 AM



A East Elevation
3/16" = 1'-0"



B West Elevation
3/16" = 1'-0"

128R North Street

NEW CONSTRUCTION

OWNER
JOSHUA WOJCIK
UPRIGHT FRAMEWORKS LLC
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jwojcik@uprightframeworks.com

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Portland, ME 04101
(207) 774-4614

No.	Description	Date

EAST & WEST ELEVATIONS

Project number	18-16_128R North
Date	11.19.18
Drawn by	Author
Checked by	Checker

A-2.2

Scale 3/16" = 1'-0"

5/2/2019 11:39:56 AM



F Northeast Perspective



B Bird's Eye View of North Street Facade



1 Main Entrance 128R



D View from Driveway



E Entrance View

126 & 128R North Street

NEW CONSTRUCTION

OWNER
JOSHUA WOJCIK
UPRIGHT FRAMEWORKS LLC
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jwojcik@uprightframeworks.com

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(207) 774-4614

No.	Description	Date

PERSPECTIVES 128R

Project number	18-16_128R North
Date	11.19.18
Drawn by	Author
Checked by	Checker
	A-5.1
Scale	

10/29/2019 10:02:47 AM



A Northwest Perspective

126 & 128R North Street

DEXTROUS CREATIVE

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tracie.reed@dextrouscreative.com
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PROJECT TEAM

No.	Description	Date

PERSPECTIVES 128R

Project number 18-16_128R North
Date 11.19.18
Drawn by Author
Checked by Checker

A-5.2

Scale

10/29/2019 10:03:35 AM



VICINITY MAP
NOT TO SCALE

PHASE II		
SPACE AND BULK STANDARDS – 126 NORTH		
ZONE: R6 – MHNCDO	REQUIRED	PROPOSED
MINIMUM LOT SIZE	2,000 SF	3,645 SF
MINIMUM STREET FRONTAGE	20'	38'
MINIMUM FRONT YARD SETBACK	5'	5.25'
MINIMUM SIDE YARD SETBACK (LEFT)	5'	10'
MINIMUM SIDE YARD SETBACK (RIGHT)	5'	5'
MINIMUM DECK SETBACK	7.5'	N/A
MINIMUM REAR YARD SETBACK	10'	16.49'
MAXIMUM LOT COVERAGE	60%	47%
MINIMUM LOT WIDTH	20'	38'
MAXIMUM BUILDING HEIGHT	35'	33.32'
MINIMUM LANDSCAPED OPEN AREA	20%	20%
MAXIMUM NUMBER OF DWELLING UNITS	725 SF/UNIT = 5	5
RESIDENTIAL PARKING	1 SPACE PER UNIT AFTER 3 UNITS = 2 SPACES	2
MINIMUM INTERNAL RESIDENT BICYCLE STORAGE SPACES	2 SPACES/5 D.U. = 2	2

OWNER:

JOSH WOJCIK
PORTLAND, MAINE
PO BOX 833 WILTON, ME 04294

CIVIL/SITE ENGINEER:

ACORN ENGINEERING, INC.
PORTLAND, MAINE
CONTACT: WILL SAVAGE, P.E.
65 HANOVER STREET, PORTLAND, ME 04101

SURVEYOR

NADEAU LAND SURVEYS
PORTLAND, MAINE
CONTACT: JAMES D. NADEAU, P.L.S.
918 BRIGHTON AVE, PORTLAND, ME 04102

LANDSCAPED AREAS
PAVED
CURB
PROPOSED BUILDING
PROPERTY LINE
STRIPING
RETAINING WALL
PROPERTY MARKER
SETBACK LINE

RECORDING INFORMATION
STATE OF MAINE, CUMBERLAND
COUNTY REGISTRY OF DEEDS

RECEIVED: _____

RECORDED IN _____

ATTEST: _____
REGISTRAR

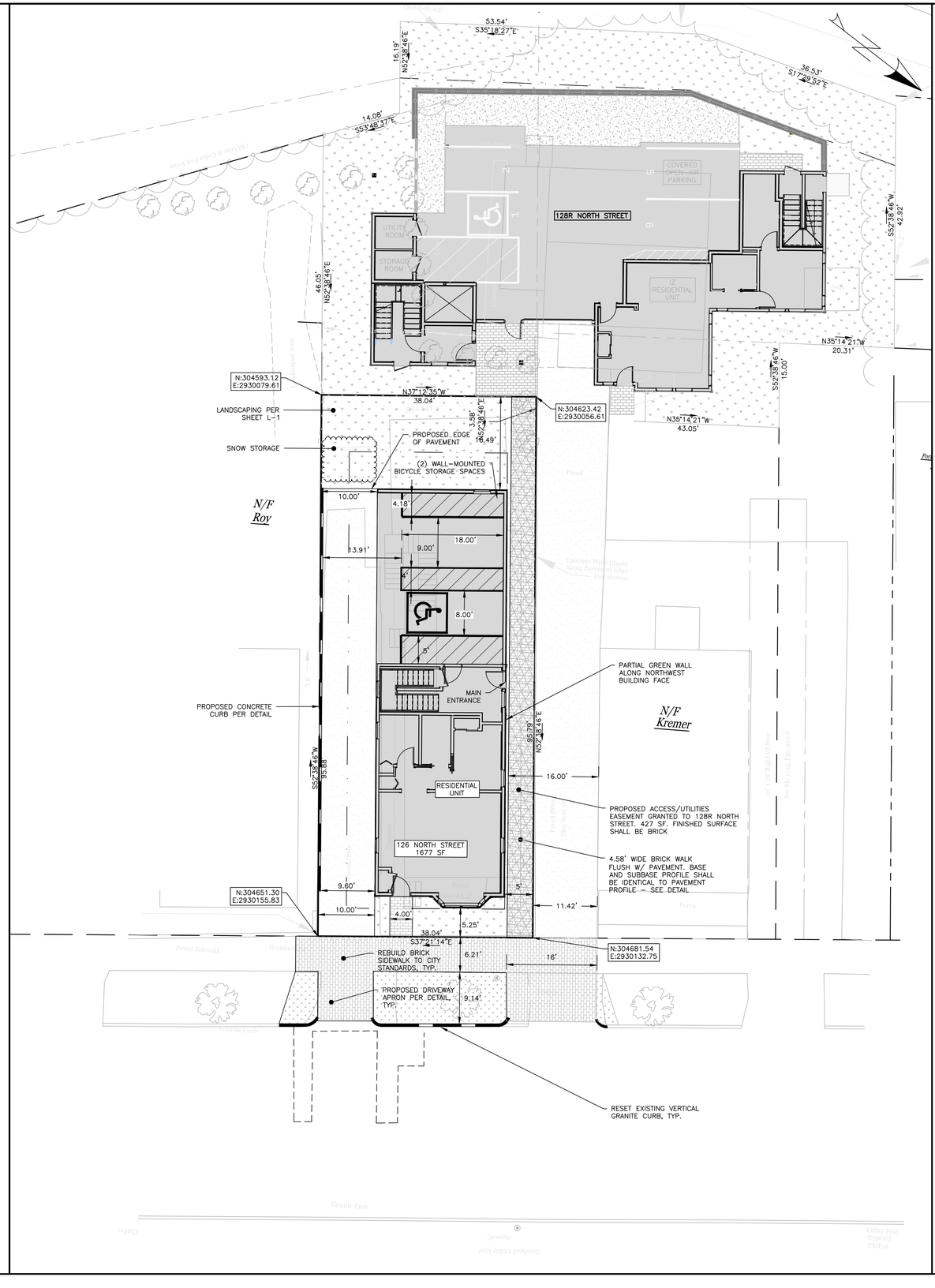
PARKING SUMMARY – 126	
DIMENSIONS	# PARKING SPACES
9'x18'	1
8'X18' (ADA)	1
TOTAL PROPOSED SPACES	2

APPROVED: PORTLAND PLANNING BOARD

CHAIRPERSON: DATE:

UNIT TABULATION – 126	
UNIT NUMBER	SIZE (SF)*
1A	680
2A	687
2B	716
3A	687
3B	716

*UNIT AREA MEASURED FROM OUTSIDE OF EXTERIOR WALLS TO THE CENTER OF SHARED WALLS



GENERAL NOTES:

1. FOR INFORMATION REGARDING THE PROPOSED SITE, REFER TO THE SITE PLAN, C–10, MOST RECENT VERSION.
2. FOR INFORMATION REGARDING PROPOSED UTILITIES, REFER TO THE UTILITY PLAN, SHEET C–20, MOST RECENT VERSION.
3. FOR INFORMATION REGARDING PROPOSED GRADING AND STORMWATER, REFER TO THE GRADING & DRAINAGE PLAN, SHEET C–30, MOST RECENT VERSION.
4. UNIT TABULATION PROVIDED BY DEXTROUS CREATIVE; REFER TO ARCHITECTURAL PLANS FOR FLOOR PLANS AND BUILDING HEIGHTS.
5. TOTAL SITE AREA INCLUDES 0.084 ACRES (3,645 S.F.). R.O.W. WIDTH FOR NORTH STREET IS 50 FEET PER BOUNDARY SURVEY & TOPOGRAPHICAL MAP WITH EXISTING CONDITIONS COMPLETED BY NADEAU LAND SURVEYS DATED 8/22/2018 (JOB #2181902BTR1).
6. SITE BOUNDARIES PER BOUNDARY SURVEY & TOPOGRAPHICAL MAP WITH EXISTING CONDITIONS COMPLETED BY NADEAU LAND SURVEYS ASSOCIATED DATED 8/22/2018 (JOB #2181902BTR1)
7. PROPERTY PINS TO BE SET BY PROFESSIONAL LAND SURVEYOR
8. AS OF 5/7/2019, THE SITE IS BOUNDED BY THE R–6 ZONE ON EAST, WEST, SOUTH, AND NORTH SIDES OF THE CITY OF PORTLAND GIS WEBSITE.
9. LOCUS PARCEL IS SHOWN ON THE CITY OF PORTLAND ASSESSOR'S MAP 12, BLOCK H, LOT 14
10. LOCUS PARCEL DOES NOT FALL IN A SPECIAL FLOOD HAZARD AREA PER FEMA FLOOD INSURANCE RATE MAP COMMUNITY–PANEL NUMBER 2300510014B, INDEX DATED 7/17/1986.
11. ALL BUILDING CORNER OFFSETS TO BOUNDARY LINES ARE FROM THE BUILDING FOUNDATION, UNLESS OTHERWISE NOTED.
12. THIS SHEET IS THE SUBDIVISION PLAT FOR THE CREATION OF UP TO FIVE (5) DWELLING UNITS ON THE EXISTING SUBJECT PROPERTY. APPROVAL OF THIS PLAT DOES NOT CREATE ANY SUBDIVISION OF THE LAND ON THE SUBJECT PROPERTY.
13. THE OWNER SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND MANAGEMENT OF DRIVEWAYS, SIDEWALKS, STORMWATER DEVICES, SITE LIGHTING, TRASH REMOVAL, RETAINING WALLS, AND SNOW REMOVAL.
14. THE OWNER SHALL BE RESPONSIBLE FOR COMPLYING WITH THE CONDITIONS OF CHAPTER 32 STORMWATER INCLUDING ARTICLE III, POST–CONSTRUCTION STORMWATER MANAGEMENT AGREEMENT, WHICH SPECIFIES ANNUAL INSPECTIONS AND REPORTING REQUIREMENTS AT A MINIMUM. IN ADDITION, THE OWNER SHALL BE RESPONSIBLE FOR COMPLYING WITH THE CONDITIONS OF THE SUBMITTED STORMWATER MANAGEMENT PLAN AND THE APPROVED PLANS, AND MEET CITY STANDARDS AND STATE GUIDELINES.

SURVEY NOTES:

1. THIS PLAN IS NOT INTENDED TO DEPICT LIMITS OR EXTENT OF FEE TITLE OWNERSHIP. AN OPINION OF TITLE SHOULD BE RENDERED BY A TITLE ATTORNEY.
2. THE OFFICE RESERVES THE RIGHT TO BE HELD HARMLESS BY ALL 3RD PARTY CLAIMS.
3. THIS SURVEY DOES NOT PURPORT TO REFLECT ANY OF THE FOLLOWING:
   3.1. EASEMENTS OTHER THAN THOSE THAT ARE VISIBLE OR SPECIFICALLY STATED IN THE REFERENCED DOCUMENTS.
   3.2. BUILDING SETBACK COMPLIANCE OR RESTRICTIVE COVENANTS.
   3.3. ZONING OR OTHER LAND USE REGULATIONS
   3.4. THE LOCATION OF ANY UNDERGROUND UTILITIES OR STRUCTURES.
4. THIS OFFICE RESERVES THE RIGHT TO BE HELD HARMLESS FOR UNKNOWN OR UNOBTAINABLE PRIVATE RECORDS WHICH COULD AFFECT THE RESULTS OF THIS SURVEY
5. REFERENCE IS MADE TO "LETTER OF AGREEMENT" DATED MAY 23, 2018 BETWEEN NADEAU LAND SURVEYS AND THE BELOW LISTED CLIENT(S), WHICH SHALL BE CONSIDERED AN INTEGRAL PART OF THIS SURVEY.
6. N/F IS AN ABBREVIATION FOR NOW OR FORMERLY.
7. ALL DEEDS REFERENCED ON THIS PLAN ARE RECORDED AT THE CUMBERLAND COUNTRY REGISTRY OF DEEDS (CCRD).
8. LOCUS PARCELS ARE LOCATED IN THE R–6 RESIDENTIAL ZONE: (AS OF 8/22/18)
   8.1. MIMIMUM LOT SIZE = 200 S.F.
   8.2. MINIMUM LOT AREA / DWELLING UNIT = 725 S.F.
   8.3. MINIMUM STREET FRONTAGE = 20 FEET
   8.4. MINIMUM LOT WIDTH = 20 FEET
   8.5. MAXIMUM LOT COVERAGE = 60%
   8.6. MINIMUM FRONT YARD SETBACK = 5 FEET, OR AVERAGE DEPTH OF ADJACENT FRONT YARDS
   8.7. MINIMUM SIDE YARD SETBACK = 5 FEET
   8.8. MINIMUM REAR YARD SETBACK = 10 FEET
9. LOCUS PARCEL A IS SHOWN ON THE CITY OF PORTLAND ASSESSOR'S MAP 12, BLOCK H, AS LOT 14, AND IS LISTED AS 126 NORTH STREET. LOCUS PARCEL B IS SHOWN ON THE CITY OF PORTLAND ASSESSOR'S MAP 12, BLOCK H, AS PARTS OF LOTS 9 & 22, AND LISTED AS 128R NORTH STREET.
10. AREA OF LOCUS PARCEL A IS 4,105.0 SQUARE FEET (0.09 ACRE). AREA OF LOCUS PARCEL B IS 5,682.0 SQUARE FEET (0.13 ACRES)
11. THE APPARENT RIGHT OF WAY LINES DEPICTED ON THIS PLAN ARE BASED ON THE PLAN REFERENCES LISTEN HEREON MONUMENTATION FOUND IN THE FIELD, AND CITY OF PORTLAND ENGINEERING STREET NOTES.
12. THE LOCUS PARCELS DO NOT SCALE IN A SPECIAL FLOOD HAZARD AREA PER FEMA FLOOD INSURANCE RATE MAP COMMUNITY–PANEL NUMBER 230051 0014B, INDEX DATED DECEMBER 8, 1998. THE PARCELS SCALE IN ZONE C.
13. ALL BUILDING CORNER OFFSETS TO BOUNDARY LINES ARE FROM CORNER BOARDS AND NOT BUILDING FOUNDATION, UNLESS NOTED.
14. CALL 1–888–DIGSAFE AT LEAST THREE BUSINESS DAYS BEFORE PERFORMING ANY EXCAVATION.
15. VERTICAL DATUM IS NGVD29, BENCHMARK IS CITY MONUMENT T112–18–107, ELEVATION = 145.08'
16. SEE CCRD BOOK 1143, PAGE 307, DATED JULY 25, 1923, FROM ELMORE W. RAMSDELL TO CLAIRE BOWDEN, FOR RIGHT OF WAY TO NORTH STREET.
17. PER CITY OF PORTLAND RECORDS. VOL. 1, PAGE 184, NORTH STREET WAS ACCEPTED MARCH 20, 1795 AS 4 RODS (66 FEET) WIDE.
18. SEE CCRD BOOK 14149, PAGE 281, DATED SEPTEMBER 10, 1998, FOR CITY OF PORTLAND'S LICENSE TO ERECT A FENCE ACROSS POPLAR STREET PARTIALLY INTRUDING ON LAND N/F MAXWELL.
19. SEE CCRD BOOK 31326, PAGE 331, DATED FEBRUARY 3, 2014, FROM THE CITY OF PORTLAND TO RAYMOND C. MAXWELL, FOR TERMINATION OF LICENSE RECORDED IN BOOK 14149, PAGE 281.
20. EXISTING BULKHEAD IS ALLOWED TO ENCROACH SETBACK WINDOW PER CITY OF PORTLAND ZONING ORDINANCE SECTION 14–425.
21. SEE NOTICE FOR VACATED PORTIONS OF SHERIDAN STREET AND EAST COVE STREET, DATED MARCH 5, 2015 AND RECORDED IN CCRD BOOK 32118, PAGE 145.
22. THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THIS OFFICE MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN–SERVICE OR ABANDONED. THE UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE LOCATION AND ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THIS OFFICE HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.
23. SEE CCRD BOOK 32237, PAGE 104, DATED APRIL 30, 2015, FOR RELEASE AND EASEMENT AGREEMENT BETWEEN REDFERN MUNJOY, LLC AND UPRIGHT PROPERTIES, LLC.
24. THE COORDINATES DEPICTED ON OUR PLAN ARE FOR MUNICIPAL REQUIREMENTS ONLY AND SHOULD NOT BE USED FOR CONSTRUCTION LAYOUT. THIS OFFICE ASSUMES NO LIABILITY AND/OR RESPONSIBILITY IF USED FOR CONSTRUCTION PURPOSED.
25. SPOT GRADES, SILL AND RIM ELEVATIONS ARE FOR ENGINEERING PURPOSED ONLY. AND SHALL NOT BE USED AS PROJECT BENCHMARKS. THIS OFFICE ASSUMES NO LIABILITY AND/OR RESPONSIBILITY IS USED FOR CONSTRUCTION PURPOSES.
26. NO RECORDS RESEARCH OR SITE EVALUATION HAS BEEN PERFORMED SINCE THE ORIGINAL DATE OF THIS SURVEY. THIS SURVEY PLAN WAS REVISED SOLEY TO DEPICT ADDITIONAL UTILITY INFORMANTION

EASEMENTS:

THERE ARE NO EXISTING EASEMENTS IDENTIFIED BY THE SURVEYOR PERTAINING TO 126 NORTH STREET.

PROPOSED:
1. JOSHUA WOJCIK (126 NORTH STREET) GRANTS UPRIGHT PROPERTIES LLC (128R NORTH STREET) AN ACCESS AND UTILITY EASEMENT OVER A 4.58' STRIP OF LAND ABUTTING THE NORTHERLY SIDE PROPERTY LINE. REFERENCE CCRD BK_____ PG_____.

WAIVERS & CONDITIONS OF APPROVAL:

N/A

JAMES D. NADEAU, MAINE P.L.S. #2124

NADEAU LAND SURVEYS DATE:

10 0 10 20
SCALE: 1"=10'

PERMIT LEVEL
NOT ISSUED FOR
CONSTRUCTION

ISSUED FOR	BY	DATE
PHASE II UPDATE	WHS	10/29/19

DRAWING NAME: SUBDIVISION PLAT – PHASE II (126 NORTH STREET)
PROJECT NAME: 126/128R NORTH STREET REDEVELOPMENT
CLIENT: JOSHUA WOJCIK
PO BOX 833 WILTON, ME 04294

ACORN ENGINEERING, INC.
65 HANOVER STREET, PORTLAND, MAINE 04101
(207) 775–2655

THIS PLAN IS NOT TO BE REUSED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. AND IS NOT TO BE USED FOR ANY OTHER PROJECT OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

FILE: 1116_CIVIL
JN: 1116
SCALE: 1"=10'
DESIGNED BY: SJL
DRAWN BY: ZMS
CHECKED BY: WHS

STATE OF MAINE
SCOTT
JOSEPH
LICENSED
PROFESSIONAL
ENGINEER
10-8-19

DRAWING NO.
PLAT



VICINITY MAP
NOT TO SCALE

PHASE II		
SPACE AND BULK STANDARDS – 126 NORTH		
ZONE: R6 – MHNCDO	REQUIRED	PROPOSED
MINIMUM LOT SIZE	2,000 SF	3,645 SF
MINIMUM STREET FRONTAGE	20'	38'
MINIMUM FRONT YARD SETBACK	5'	5.25'
MINIMUM SIDE YARD SETBACK (LEFT)	5'	9.76'
MINIMUM SIDE YARD SETBACK (RIGHT)	5'	5'
MINIMUM DECK SETBACK	7.5'	N/A
MINIMUM REAR YARD SETBACK	10'	16.49'
MAXIMUM LOT COVERAGE	60%	47%
MINIMUM LOT WIDTH	20'	38'
MAXIMUM BUILDING HEIGHT	35'	33.32'
MINIMUM LANDSCAPED OPEN AREA	20%	20%
MAXIMUM NUMBER OF DWELLING UNITS	725 SF/UNIT = 5	5
RESIDENTIAL PARKING	1 SPACE PER UNIT AFTER 3 UNITS = 2 SPACES	2
MINIMUM INTERNAL RESIDENT BICYCLE STORAGE SPACES	2 SPACES/5 D.U. = 2	2

OWNER:

JOSH WOJCIK
PORTLAND, MAINE
PO BOX 833 WILTON, ME 04294

CIVIL/SITE ENGINEER:

ACORN ENGINEERING, INC.
PORTLAND, MAINE
CONTACT: WILL SAVAGE, P.E.
65 HANOVER STREET, PORTLAND, ME 04101

SURVEYOR

NADEAU LAND SURVEYS
PORTLAND, MAINE
CONTACT: JAMES D. NADEAU, P.L.S.
918 BRIGHTON AVE, PORTLAND, ME 04102

LANDSCAPED AREAS
PAVED
CURB
PROPOSED BUILDING
PROPERTY LINE
STRIPING
RETAINING WALL
PROPERTY MARKER
SETBACK LINE

RECORDING INFORMATION
STATE OF MAINE, CUMBERLAND
COUNTY REGISTRY OF DEEDS

RECEIVED: _____

RECORDED IN _____

ATTEST: _____
REGISTRAR

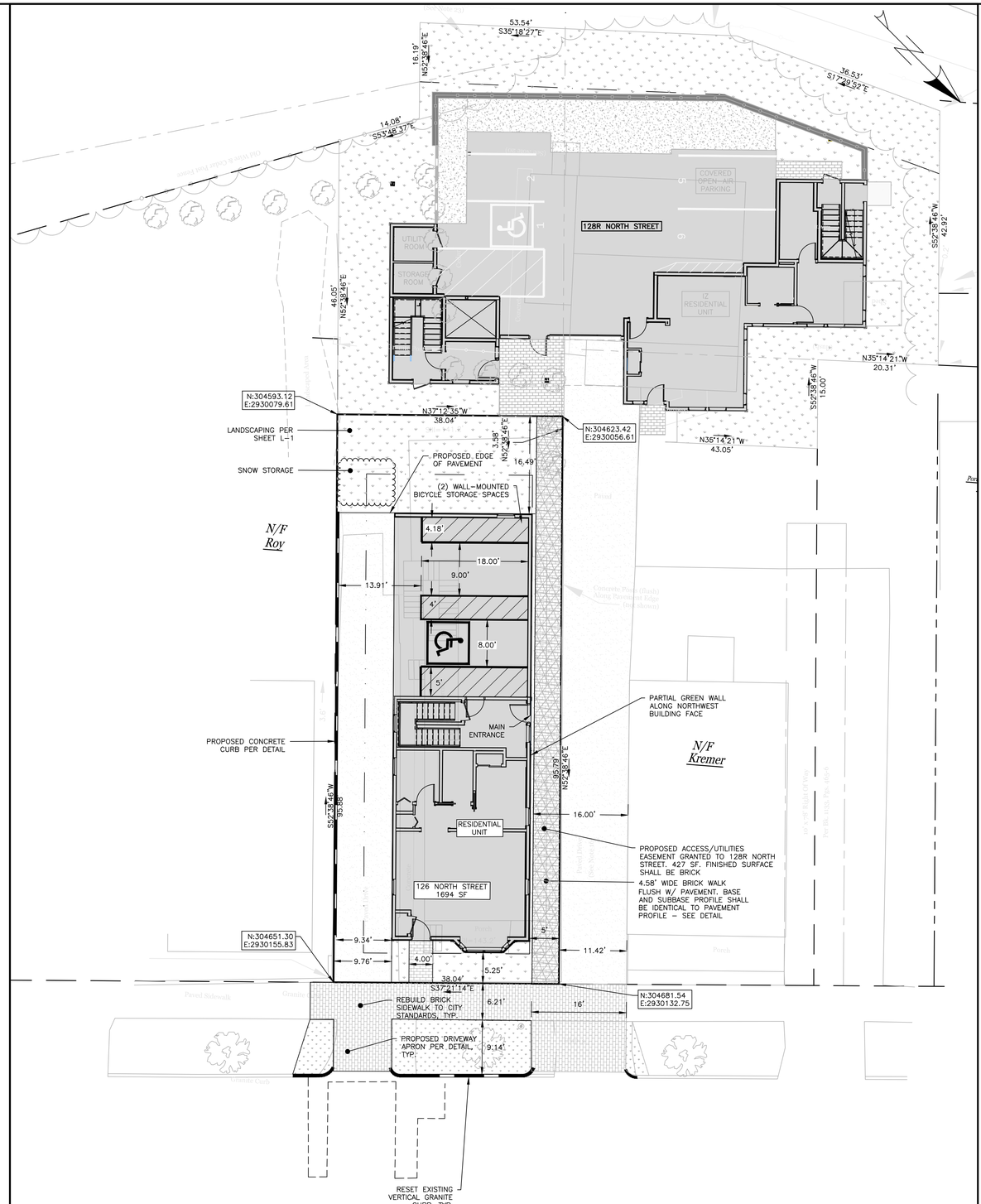
PARKING SUMMARY – 126	
DIMENSIONS	# PARKING SPACES
9'x18'	1
8'X18' (ADA)	1
TOTAL PROPOSED SPACES	2

APPROVED: PORTLAND PLANNING BOARD

CHAIRPERSON: DATE:

UNIT TABULATION – 126	
UNIT NUMBER	SIZE (SF)*
1A	680
2A	687
2B	716
3A	687
3B	716

*UNIT AREA MEASURED FROM OUTSIDE OF EXTERIOR WALLS TO THE CENTER OF SHARED WALLS



GENERAL NOTES:

1. FOR INFORMATION REGARDING THE PROPOSED SITE, REFER TO THE SITE PLAN, C–10, MOST RECENT VERSION.
2. FOR INFORMATION REGARDING PROPOSED UTILITIES, REFER TO THE UTILITY PLAN, SHEET C–20, MOST RECENT VERSION.
3. FOR INFORMATION REGARDING PROPOSED GRADING AND STORMWATER, REFER TO THE GRADING & DRAINAGE PLAN, SHEET C–30, MOST RECENT VERSION.
4. UNIT TABULATION PROVIDED BY DEXTROUS CREATIVE; REFER TO ARCHITECTURAL PLANS FOR FLOOR PLANS AND BUILDING HEIGHTS.
5. TOTAL SITE AREA INCLUDES 0.084 ACRES (3,645 S.F.). R.O.W. WIDTH FOR NORTH STREET IS 50 FEET PER BOUNDARY SURVEY & TOPOGRAPHICAL MAP WITH EXISTING CONDITIONS COMPLETED BY NADEAU LAND SURVEYS DATED 8/22/2018 (JOB #2181902BTR1).
6. SITE BOUNDARIES PER BOUNDARY SURVEY & TOPOGRAPHICAL MAP WITH EXISTING CONDITIONS COMPLETED BY NADEAU LAND SURVEYS ASSOCIATED DATED 8/22/2018 (JOB #2181902BTR1)
7. PROPERTY PINS TO BE SET BY PROFESSIONAL LAND SURVEYOR
8. AS OF 5/7/2019, THE SITE IS BOUNDED BY THE R–6 ZONE ON EAST, WEST, SOUTH, AND NORTH SIDES OF THE CITY OF PORTLAND GIS WEBSITE.
9. LOCUS PARCEL IS SHOWN ON THE CITY OF PORTLAND ASSESSOR'S MAP 12, BLOCK H, LOT 14
10. LOCUS PARCEL DOES NOT FALL IN A SPECIAL FLOOD HAZARD AREA PER FEMA FLOOD INSURANCE RATE MAP COMMUNITY–PANEL NUMBER 2300510014B, INDEX DATED 7/17/1986.
11. ALL BUILDING CORNER OFFSETS TO BOUNDARY LINES ARE FROM THE BUILDING FOUNDATION, UNLESS OTHERWISE NOTED.
12. THIS SHEET IS THE SUBDIVISION PLAT FOR THE CREATION OF UP TO FIVE (5) DWELLING UNITS ON THE EXISTING SUBJECT PROPERTY. APPROVAL OF THIS PLAT DOES NOT CREATE ANY SUBDIVISION OF THE LAND ON THE SUBJECT PROPERTY.
13. THE OWNER SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND MANAGEMENT OF DRIVEWAYS, SIDEWALKS, STORMWATER DEVICES, SITE LIGHTING, TRASH REMOVAL, RETAINING WALLS, AND SNOW REMOVAL.
14. THE OWNER SHALL BE RESPONSIBLE FOR COMPLYING WITH THE CONDITIONS OF CHAPTER 32 STORMWATER INCLUDING ARTICLE III, POST–CONSTRUCTION STORMWATER MANAGEMENT AGREEMENT, WHICH SPECIFIES ANNUAL INSPECTIONS AND REPORTING REQUIREMENTS AT A MINIMUM. IN ADDITION, THE OWNER SHALL BE RESPONSIBLE FOR COMPLYING WITH THE CONDITIONS OF THE SUBMITTED STORMWATER MANAGEMENT PLAN AND THE APPROVED PLANS, AND MEET CITY STANDARDS AND STATE GUIDELINES.

SURVEY NOTES:

1. THIS PLAN IS NOT INTENDED TO DEPICT LIMITS OR EXTENT OF FEE TITLE OWNERSHIP. AN OPINION OF TITLE SHOULD BE RENDERED BY A TITLE ATTORNEY.
2. THE OFFICE RESERVES THE RIGHT TO BE HELD HARMLESS BY ALL 3RD PARTY CLAIMS.
3. THIS SURVEY DOES NOT PURPORT TO REFLECT ANY OF THE FOLLOWING:
   3.1. EASEMENTS OTHER THAN THOSE THAT ARE VISIBLE OR SPECIFICALLY STATED IN THE REFERENCED DOCUMENTS.
   3.2. BUILDING SETBACK COMPLIANCE OR RESTRICTIVE COVENANTS.
   3.3. ZONING OR OTHER LAND USE REGULATIONS
   3.4. THE LOCATION OF ANY UNDERGROUND UTILITIES OR STRUCTURES.
4. THIS OFFICE RESERVES THE RIGHT TO BE HELD HARMLESS FOR UNKNOWN OR UNOBTAINABLE PRIVATE RECORDS WHICH COULD AFFECT THE RESULTS OF THIS SURVEY
5. REFERENCE IS MADE TO "LETTER OF AGREEMENT" DATED MAY 23, 2018 BETWEEN NADEAU LAND SURVEYS AND THE BELOW LISTED CLIENT(S), WHICH SHALL BE CONSIDERED AN INTEGRAL PART OF THIS SURVEY.
6. N/F IS AN ABBREVIATION FOR NOW OR FORMERLY.
7. ALL DEEDS REFERENCED ON THIS PLAN ARE RECORDED AT THE CUMBERLAND COUNTRY REGISTRY OF DEEDS (CCRD).
8. LOCUS PARCELS ARE LOCATED IN THE R–6 RESIDENTIAL ZONE: (AS OF 8/22/18)
   8.1. MIMIMUM LOT SIZE = 200 S.F.
   8.2. MINIMUM LOT AREA / DWELLING UNIT = 725 S.F.
   8.3. MINIMUM STREET FRONTAGE = 20 FEET
   8.4. MINIMUM LOT WIDTH = 20 FEET
   8.5. MAXIMUM LOT COVERAGE = 60%
   8.6. MINIMUM FRONT YARD SETBACK = 5 FEET, OR AVERAGE DEPTH OF ADJACENT FRONT YARDS
   8.7. MINIMUM SIDE YARD SETBACK = 5 FEET
   8.8. MINIMUM REAR YARD SETBACK = 10 FEET
9. LOCUS PARCEL A IS SHOWN ON THE CITY OF PORTLAND ASSESSOR'S MAP 12, BLOCK H, AS LOT 14, AND IS LISTED AS 126 NORTH STREET. LOCUS PARCEL B IS SHOWN ON THE CITY OF PORTLAND ASSESSOR'S MAP 12, BLOCK H, AS PARTS OF LOTS 9 & 22, AND LISTED AS 128R NORTH STREET.
10. AREA OF LOCUS PARCEL A IS 4,105.0 SQUARE FEET (0.09 ACRE). AREA OF LOCUS PARCEL B IS 5,682.0 SQUARE FEET (0.13 ACRES)
11. THE APPARENT RIGHT OF WAY LINES DEPICTED ON THIS PLAN ARE BASED ON THE PLAN REFERENCES LISTEN HEREON MONUMENTATION FOUND IN THE FIELD, AND CITY OF PORTLAND ENGINEERING STREET NOTES.
12. THE LOCUS PARCELS DO NOT SCALE IN A SPECIAL FLOOD HAZARD AREA PER FEMA FLOOD INSURANCE RATE MAP COMMUNITY–PANEL NUMBER 230051 0014B, INDEX DATED DECEMBER 8, 1998. THE PARCELS SCALE IN ZONE C.
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15. VERTICAL DATUM IS NGVD29, BENCHMARK IS CITY MONUMENT T112–18–107, ELEVATION = 145.08'
16. SEE CCRD BOOK 1143, PAGE 307, DATED JULY 25, 1923, FROM ELMORE W. RAMSDELL TO CLAIRE BOWDEN, FOR RIGHT OF WAY TO NORTH STREET.
17. PER CITY OF PORTLAND RECORDS. VOL. 1, PAGE 184, NORTH STREET WAS ACCEPTED MARCH 20, 1795 AS 4 RODS (66 FEET) WIDE.
18. SEE CCRD BOOK 14149, PAGE 281, DATED SEPTEMBER 10, 1998, FOR CITY OF PORTLAND'S LICENSE TO ERECT A FENCE ACROSS POPLAR STREET PARTIALLY INTRUDING ON LAND N/F MAXWELL.
19. SEE CCRD BOOK 31326, PAGE 331, DATED FEBRUARY 3, 2014, FROM THE CITY OF PORTLAND TO RAYMOND C. MAXWELL, FOR TERMINATION OF LICENSE RECORDED IN BOOK 14149, PAGE 281.
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26. NO RECORDS RESEARCH OR SITE EVALUATION HAS BEEN PERFORMED SINCE THE ORIGINAL DATE OF THIS SURVEY. THIS SURVEY PLAN WAS REVISED SOLEY TO DEPICT ADDITIONAL UTILITY INFORMANTION

EASEMENTS:

THERE ARE NO EXISTING EASEMENTS IDENTIFIED BY THE SURVEYOR PERTAINING TO 126 NORTH STREET.

PROPOSED:
1. JOSHUA WOJCIK (126 NORTH STREET) GRANTS UPRIGHT PROPERTIES LLC (128R NORTH STREET) AN ACCESS AND UTILITY EASEMENT OVER A 4.58' STRIP OF LAND ABUTTING THE NORTHERLY SIDE PROPERTY LINE. REFERENCE CCRD BK_____ PG_____.

WAIVERS & CONDITIONS OF APPROVAL:

N/A

JAMES D. NADEAU, MAINE P.L.S. #2124

NADEAU LAND SURVEYS DATE:

10 0 10 20
SCALE: 1"=10'

PERMIT LEVEL
NOT ISSUED FOR
CONSTRUCTION

ISSUED FOR	BY	DATE
PHASE II UPDATE	WHS	10/29/19

DRAWING NAME: SUBDIVISION PLAT – PHASE II (126 NORTH STREET)
PROJECT NAME: 126/128R NORTH STREET REDEVELOPMENT
CLIENT: JOSHUA WOJCIK
PO BOX 833 WILTON, ME 04294

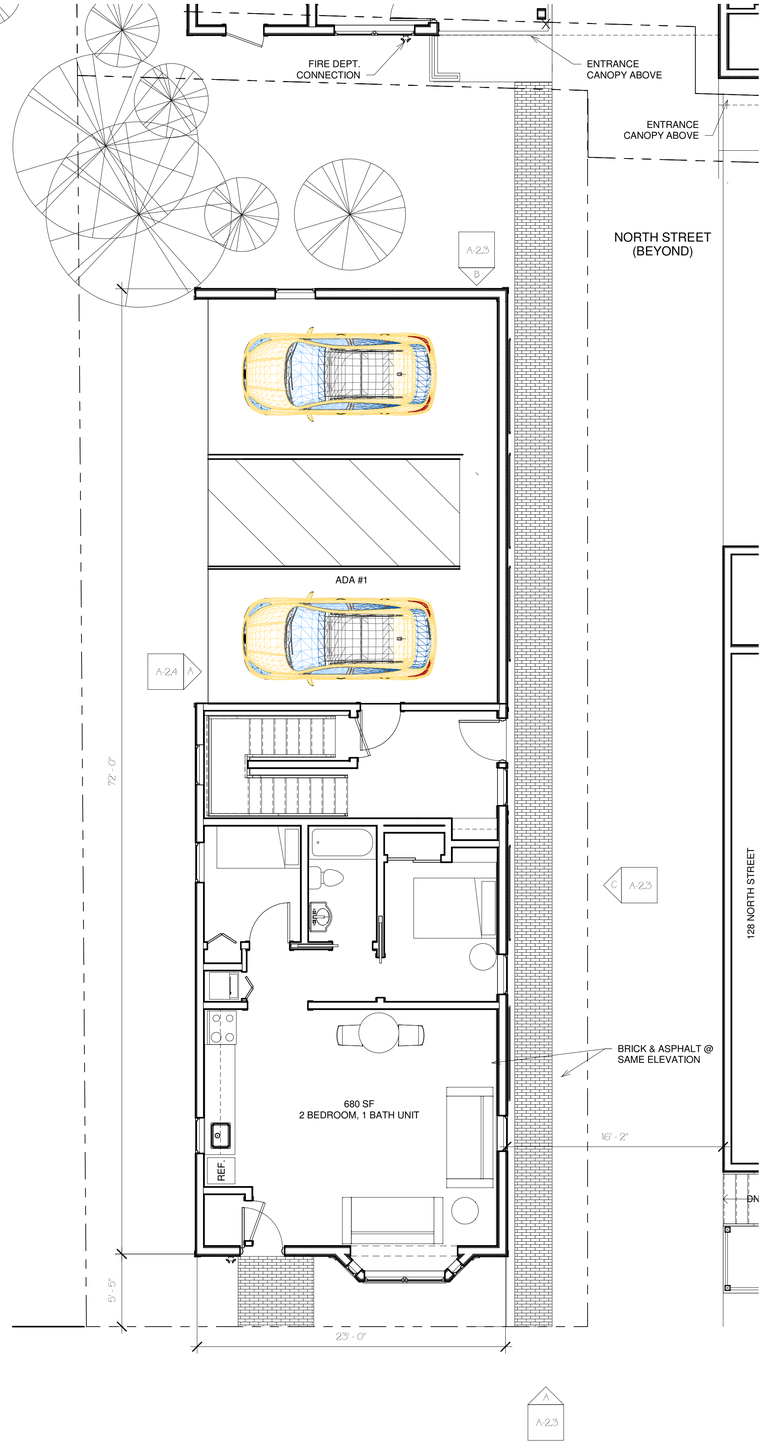
ACORN ENGINEERING, INC.
65 HANOVER ST, PORTLAND, MAINE 04101
(207) 775-2855

THIS PLAN IS NOT TO BE REUSED WITHOUT EXPRESSED WRITTEN PERMISSION OF ACORN ENGINEERING, INC. AND IS NOT TO BE USED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH IT WAS PREPARED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

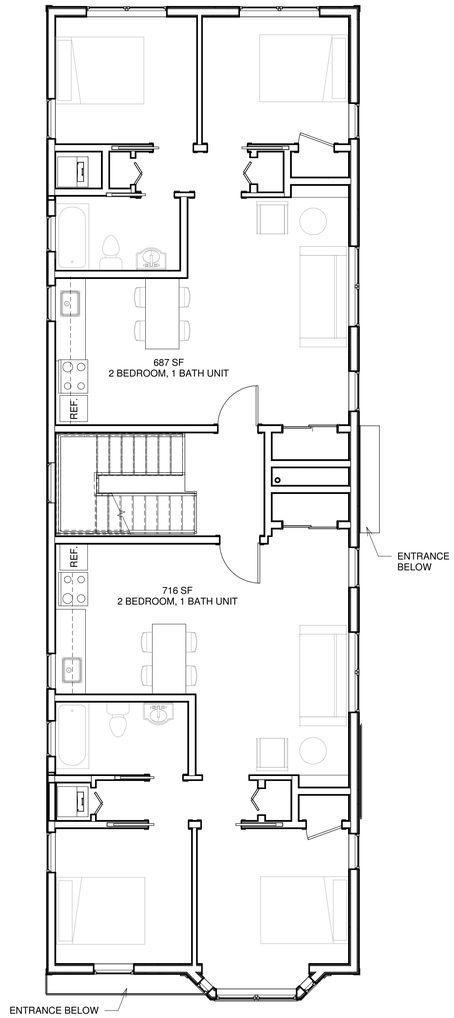
FILE:	1116_CIVIL
JN:	1116
SCALE:	1"=10'
DESIGNED BY:	SJL
DRAWN BY:	ZMS
CHECKED BY:	WHS

STATE OF MAINE
JAMES D. NADEAU
No. 2124
REGISTERED PROFESSIONAL LAND SURVEYOR
10-8-19

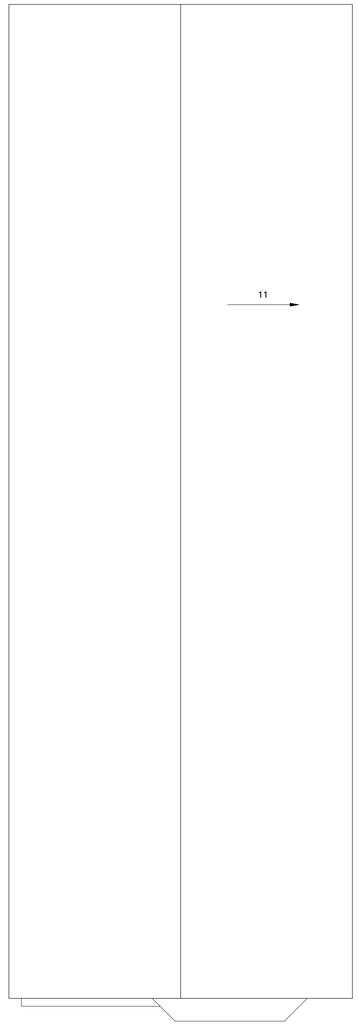
DRAWING NO.
PLAT



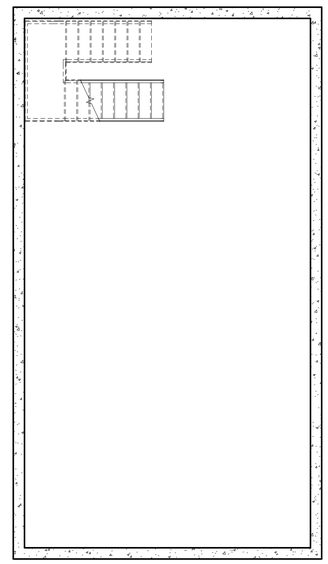
A First Floor 126
3/16" = 1'-0"



B Second & Third Floors 126
3/16" = 1'-0"



C Roof 126
3/16" = 1'-0"



D Basement
3/16" = 1'-0"

126 & 128R North Street

NEW CONSTRUCTION

OWNER
JOSHUA WOJCIK
UPRIGHT FRAMEWORKS LLC
PO BOX 833
WILTON ME 04294
jwojcik@uprightframeworks.com

DEXTROUS CREATIVE
PORTLAND, ME 04102
TRACIE REED, ARCHITECT
NCARB, AIA, LEED AP BD+C
tracienreed@dextrouscreative.com
207.409.0459 (cell)

PROJECT TEAM

SURVEYOR
James P. Nadeau, PLS
Nadeau Land Surveyors
918 Brighton Ave
Portland, ME 04102
(207) 878-7870

GEOTECHNICAL ENGINEER
Mat Hardison, P.E.
Senior Geotechnical Engineer
Summit Geoengineering Services, Inc.
P.O. Box 7216
Lewiston, Maine 04243
(207) 576-6762

CIVIL ENGINEER
Will Savage, PE
Acorn Engineering, Inc
PO Box 3372
Portland, Maine 04104
(207) 775-2655

STRUCTURAL ENGINEER
Aaron C. Jones, P.E.
Structural Integrity Consulting Engineers, Inc.
46 Forest Ave
Portland, ME 04101
(207) 774-4614

No.	Description	Date

PHASE 2 PLANS

Project number	18-16_128R North
Date	11.19.18
Drawn by	Author
Checked by	Checker

A-1.6 126

Scale 3/16" = 1'-0"

10/23/2019 9:54:46 AM



A View for Walnut Street Rendering



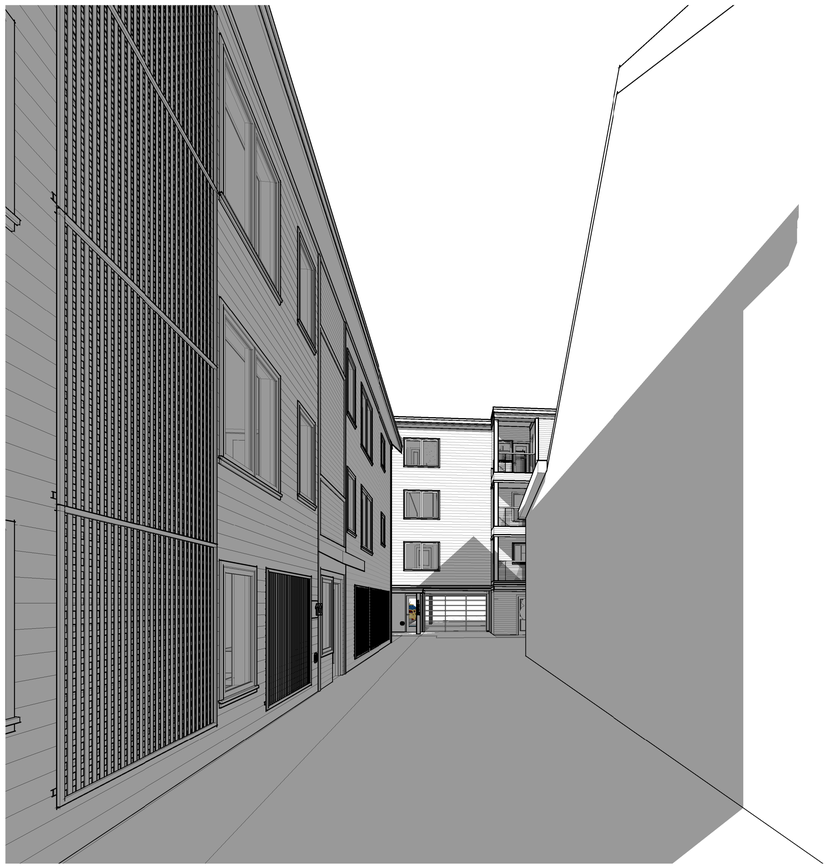
D View from Senior Housing for Rendering Copy 1



B View 126 + 128R North (elevation 176"



C Street View 126 + 128R North (Eye at 5'-0")



E View from North Street Sidewalk 126 & 128R

126 & 128R North Street

NEW CONSTRUCTION

OWNER
JOSHUA WOJCIK
UPRIGHT FRAMEWORKS LLC
PO BOX 833
WILTON ME 04294
jwojcik@uprightframeworks.com

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STRUCTURAL ENGINEER
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Structural Integrity Consulting Engineers, Inc.
46 Forest Ave
Portland, ME 04101
(207) 774-4614

No.	Description	Date

PERSPECTIVES 126

Project number 18-16_128R North
Date 11.19.18
Drawn by Author
Checked by Checker

A-5.3

Scale

10/29/2019 10:54:41 AM



A North Street View Showing Entrances



B Main Entrance 126

126 & 128R North Street

NEW CONSTRUCTION

OWNER
JOSHUA WOJCIK
UPRIGHT FRAMEWORKS LLC
PO BOX 833
WILTON ME 04294
jwojcik@uprightframeworks.com

DEXTROUS CREATIVE
PORTLAND, ME 04102
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46 Forest Ave
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No.	Description	Date

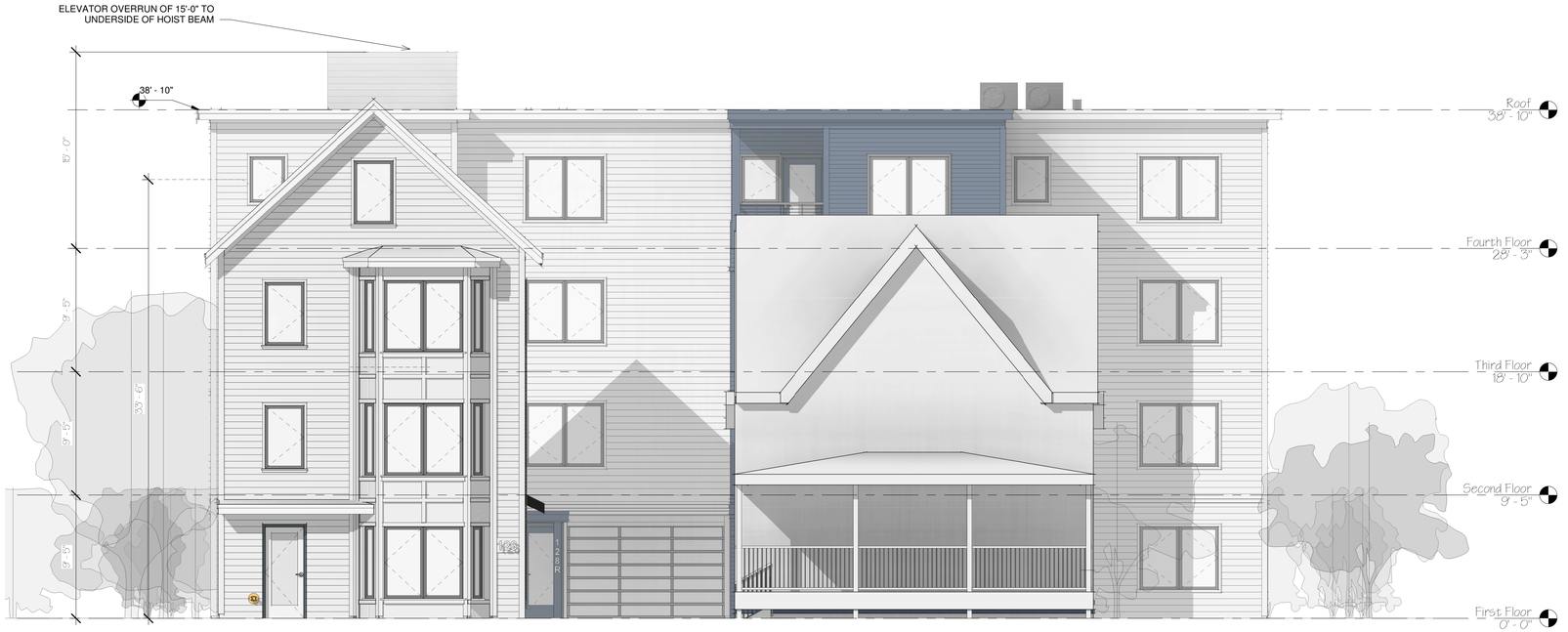
PERSPECTIVES
126

Project number 18-16_128R North
Date 11.19.18
Drawn by Author
Checked by Checker

A-5.4

Scale

10/29/2019 10:54:49 AM



A South Elevation 126 & 128
3/16" = 1'-0"



B North Elevation 126 North
3/16" = 1'-0"



C East Elevation 126 North
3/16" = 1'-0"

126 & 128R North Street

NEW CONSTRUCTION

OWNER
JOSHUA WOJCIK
UPRIGHT FRAMEWORKS LLC
PO BOX 833
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jwojcik@uprightframeworks.com

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Structural Integrity Consulting Engineers, Inc.
46 Forest Ave
Portland, ME 04101
(207) 774-4614

No.	Description	Date

SOUTH, NORTH & EAST 126

Project number	18-16_128R North
Date	11.19.18
Drawn by	Author
Checked by	Checker

A-2.3

Scale 3/16" = 1'-0"

10/29/2019 10:00:20 AM



A West Elevation 126 North
3/16" = 1'-0"

126 & 128R North Street

NEW CONSTRUCTION

OWNER
JOSHUA WOJCIK
UPRIGHT FRAMEWORKS LLC
PO BOX 833
WILTON ME 04294
jwojcik@uprightframeworks.com

DEXTROUS CREATIVE
PORTLAND, ME 04102
TRACIE REED, ARCHITECT
NCARB, AIA, LEED AP BD+C
tracienreed@dextrouscreative.com
207.409.0459 (cell)

PROJECT TEAM

SURVEYOR
James P. Nadeau, PLS
Nadeau Land Surveyors
918 Brighton Ave
Portland, ME 04102
(207) 878-7870

GEOTECHNICAL ENGINEER
Mat Hardison, P.E.
Senior Geotechnical Engineer
Summit Geoengineering Services, Inc.
P.O. Box 7216
Lewiston, Maine 04243
(207) 576-6762

CIVIL ENGINEER
Will Savage, PE
Acorn Engineering, Inc
PO Box 3372
Portland, Maine 04104
(207) 775-2655

STRUCTURAL ENGINEER
Aaron C. Jones, P.E.
Structural Integrity Consulting Engineers, Inc.
46 Forest Ave
Portland, ME 04101
(207) 774-4614

No.	Description	Date

WEST ELEVATION 126

Project number	18-16_128R North
Date	11.19.18
Drawn by	Author
Checked by	Checker

A-2.4

Scale 3/16" = 1'-0"

10/29/2019 10:50:24 AM

PLANNING BOARD REPORT
PORTLAND, MAINE

Mixed-Use Development
58 Fore Street
Level III Site Plan and Subdivision Review
PL-000924-2020
Portland Foreside Development Co., Applicant

Submitted to: Portland Planning Board **Public Hearing Date**: 1/28/2020	**Prepared by**: Christian Roadman, Planner **Date Prepared**: 1/24/2020



Proposed development at 58 Fore Street. "Block 3," "Block 5," and "Block 6" are intended for future development (image: applicant)

I. INTRODUCTION / PROPOSED DEVELOPMENT

Portland Foreside Development Co. seeks to create a mixed-use development on an approximately 10 acre site of the former Portland Company Complex. The project received master development plan approval from the Planning Board in 2016 (and a traffic movement permit in 2017). The applicant is currently seeking Level III site plan approval for the project's first phase. Phase 1 is intended to include renovation of several existing buildings, reconstruction of a previously deconstructed building, and new construction. The total floor area of proposed development is 442,500 sf. This total includes:

- Residential (14 units): 16,100 sf.
- Office: 110,700 sf.
- Retail / service / restaurant: 49,500 sf.
- Event space: 17,900 sf.

- Parking (722 spaces): 248,300 sf.

Much of the proposed development also includes open plaza-style space. The proposed disturbed area of phase 1 site work is 343,100 sf. A marina, which was proposed as part of the master development plan, is already constructed and operating to the south of the phase 1 development site.

The January 28 public hearing follows three Planning Board workshops.



Site context of proposed development at 58 Fore Street. The project site is outlined in teal.

Applicant: Portland Foreside Development Co.
Consultants: Woodard & Curran (engineering); Bruner / Cott Architects, Perkins + Will (architecture)

II. REQUIRED REVIEWS

Waiver Requests	Applicable Standards
Maximum illumination levels at property line (exceeded)	Technical Manual, Section 12.3.4 (light trespass) requiring a maximum 0.1 foot candles beyond property line
Existing utility poles along Fore Street to remain above ground. The applicant intends to bring electrical lines underground to the site.	Subdivision Ordinance, Section 14-499(h) - All utility lines shall be placed underground unless otherwise approved by the Planning Board.
Percentage of compact spaces	Technical Manual, Section 1.14, allowing parking lots comprised of 20% compact parking spaces
Review	**Applicable Standards**
Site Plan	Section 14-526
Subdivision	Section 14-497
Conditional Use (meeting & exhibition facilities)	Section 14-68
Inclusionary Zoning	Section 14-474, Section 14-487
Site Location of Development	Technical Manual Section 14



Rendering of the Eastern area of proposed development at 58 Fore Street (image: applicant)

III. PROJECT DATA

Existing Zoning	B6; EWPZ
Existing Use:	Industrial / manufacturing / warehouse
Proposed Use	Mixed-use development (office, residential, retail, event, parking)
Bedroom Mix	Studio: three 1 Bedroom : four 2 Bedroom: seven
Parcel Size	492,100 sf.

	Existing	Proposed	Net Change
Building Footprint (sf.)	101,700	137,300	+35,600
Building Floor Area (sf.)	101,700	457,400	+355,700
Impervious Surface Area (sf.)	266,000	292,000	+26,000
Parking Spaces	110	722	+612
Bicycle Parking Spaces	0	48	+48

IV. PUBLIC COMMENT AND NEIGHBORHOOD MEETING

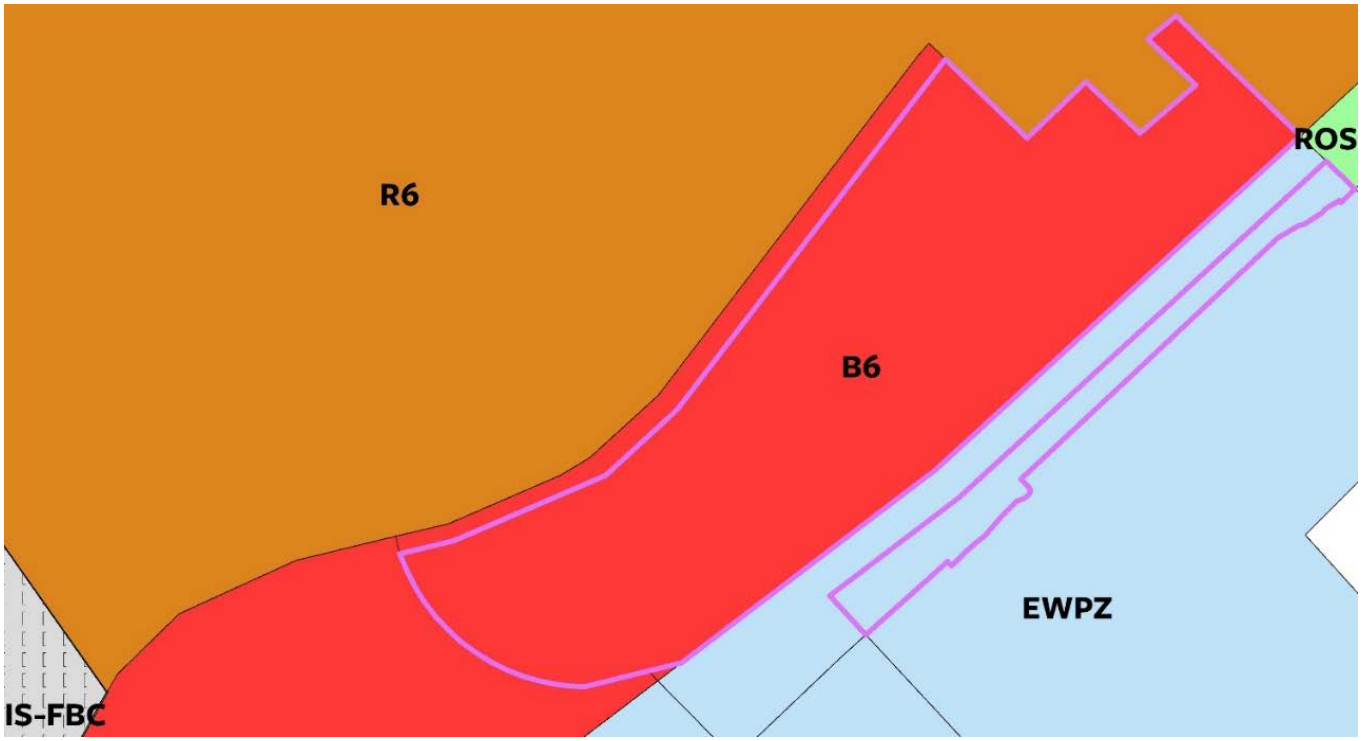
At the time of this writing, the Planning Department received 19 public comments **(attachment PC)** regarding this project (including those submitted for workshops). The applicant team held a neighborhood meeting on November 25 2019 (**attachment T**).

V. RIGHT, TITLE, & INTEREST

The applicant provided several deeds (**attachment D**) as evidence of right, title, and interest.

VI. ZONING ANALYSIS

The phase 1, level III project under review is within the B-6 eastern waterfront mixed zone. Office, restaurant, retail, and residential uses are all permitted in the zone. "Meeting and exhibition facilities" are a conditional use in the zone.



Zoning context of proposed development at 58 Fore Street. The project site is outlined in lavender.

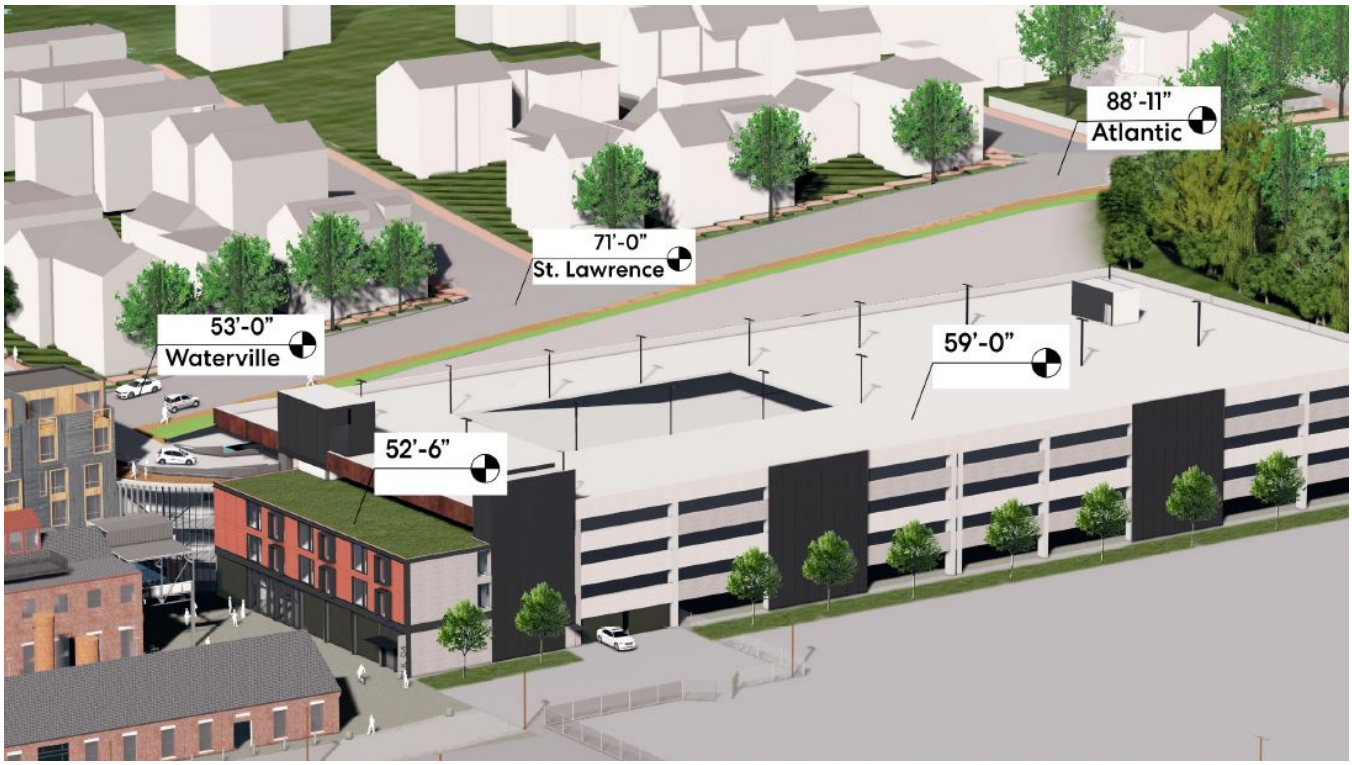
The B-6 Eastern Waterfront mixed use zone is subject to a building height overlay and view corridor restrictions. The applicant provided documentation of their compliance with these restrictions (**attachment P13**), which the City's Zoning Administrator reviewed and deemed acceptable.

A portion of the overall development site, particularly the existing marina, falls within the Eastern Waterfront Port Zone (EWPZ).

While the applicant intends for future development phases, a large parking structure is included in the first phase. This results in a parking provision significantly higher than is currently required (722 spaces, primarily via the 652 space parking garage). The applicant calculates the parking demand of the first phase as 385 parking spaces, and the recommended number of parking spaces as 453 spaces (**attachments R and S**).

The applicant calculates their required bicycle parking as 44 spaces but propose to provide 48 bicycle parking spaces (**attachment S**),.

The project proposes 14 residential units, and therefore triggers inclusionary zoning requirements of 1.4 affordable residential units. The City's housing program manager determined that the applicant can pay a fee-in-lieu of $148,526 to account for those 1.4 units. The applicant opted to provide two affordable units to meet the requirement. The Housing Program Manager determined **(attachment 6)** this approach is acceptable, and recommended approval of the inclusionary zoning application with two conditions: entering into an affordable housing agreement with the City and filing the details of the affordability restrictions on those units as covenant to the 58 Fore Street property deed.



A view of the proposed parking garage, from the south west, as it interacts with Fore Street and Munjoy Hill (image: applicant)

VII. DEVELOPMENT REVIEW

A. SITE PLAN SUBMISSION REQUIREMENTS (Section 14-527) and SUBDIVISION PLAT AND RECORDING PLAT REQUIREMENTS (Section 14-496)

The applicant submitted a draft recording plat (**attachment P8**), which was reviewed by City staff and revised by the applicant.

A final plat will need to be revised to reflect any waivers and conditions of approval that relate to the subdivision plan. Any waivers granted must be recorded at the Registry of Deeds within two years of a Planning Board decision.

B. SUBDIVISION (Section 14-496)

Staff are reviewing the proposed development for conformance with the relevant review standards of Portland's Subdivision Ordinance and applicable regulations. Pertinent comments are listed below.

1. Will Not Result in Undue Water and Air Pollution (Section 14-497 (a) 1), and Will Not Result in Undue Soil Erosion (Section 14-497 (a) 4)
   The proposed project was reviewed by a third party civil engineer, who found it to be in compliance with relevant standards (**attachment 3**).

2. Sufficient Water Available (Section 14-497 (a) 2 and 3)
   The applicant provided an ability to serve letter from the Portland Water District (**attachment L**)

3. Will Not Cause Unreasonable Traffic Congestion (Section 14-497 (a) 5)
   The original Master Development Plan received a traffic movement permit for the entire project in 2017. Each phase, when applied for, must show that the proposed development complies with that permit. This is

the first phase of the project to apply for site plan review, and the projected trips to be generated by this phase fall well below the total permitted trips as approved in the traffic movement permit.

The City's third-party traffic engineering reviewer requested additional information from the applicant in order to complete their review (regarding special event impacts, parking garage gate / queuing analysis, and traffic distribution). Responses from the applicant are expected prior to the Planning Board public hearing. Staff will provide an update at the public hearing. Otherwise, a condition of approval will be required.

4. Will Provide for Adequate Sanitary Sewer and Stormwater Disposal (Section 14-497 (a) 6), and Will Not Cause an Unreasonable Burden on Municipal Solid Waste and Sewage (Section 14-497 (a) 7)
The Department of Public Works provided confirmation of wastewater capacity for this proposed phase 1 development project (**attachment L**). The confirmation only applies to the proposed phase 1. The applicant must seek wastewater capacity confirmation for each additional development phase proposed in the future.

5. Will not have an undue adverse effect on the scenic or natural beauty of the area, aesthetics, historic sites, significant wildlife habitat (Section 14-497 (a) 8)
Adherence to zoning-related height restrictions and view corridors is documented by the applicant's height calculations submittal (**attachment P13**), which was reviewed by the City's Zoning Administrator. The applicant submitted feedback from state agencies (**attachment F**) indicating that no adverse impacts to significant wildlife habitat or botanical species are expected. The Maine Historic Preservation Commission previously requested additional information of the applicant. While the applicant provided a response, no response has been received as of yet. **Confirmation from MHPC that the project will not have adverse impact on historic sites is suggested as a condition of approval.**

6. Comprehensive Plan (Section 14-497 (a) 9)
The applicant indicates (**attachment J**) that a number of policy goals in the City's comprehensive plan are advanced by the proposed project, including the following:

    - "Promote historic preservation as a key economic, sustainability, and community development strategy"
    - "Stabilize and enhance historic areas of the city by ensuring quality investment in existing structures and compatible infill development
    - "Create economic prosperity by growing Portland's tax and employment base"
    - "Reinforce the waterfront as a key component of Portland's economic health, balancing traditional and emerging industries with tourism and recreation"

7. Adequate financial and technical capacity (Section 14-497 (a) 10)
The applicant cited their team's experience (**attachment G**) as evidence of technical capacity to complete the project. A letter from Ackman-Ziff Real Estate Capital Advisors (**attachment G**) notes the applicant's "relationships with capital partners, banks, and financial institutions" as evidence of financial capacity, and states that that firm will "work with [the applicant] to arrange the appropriate capitalization for each phase of the development."

8. Will not adversely affect the quality or quantity of groundwater (Section 14-497 (a) 12)
The proposed project was reviewed by a third party civil engineer, who found it to be in compliance with relevant standards (**attachment 3**).

9. Is or is not in a flood-prone area (Section 14-497 (a) 13)
   The applicant submitted a flood hazard development permit for this project (**attachment Z**), **w**hich will be reviewed by the Zoning Administrator.

10. All potential wetlands are identified (Section 14-497 (a) 14)
    Not applicable.

11. Any river, stream or brook within or abutting the proposed subdivision are identified (Section 14-497 (a) 15)
    Not applicable.



A view of the proposed staircase from Fore Street down to the project site (image: applicant)

C. SITE PLAN STANDARDS (Section 14-526)

The proposed development is under review by staff for conformance with the relevant review standards of Portland's site plan ordinance and applicable regulations. Staff and reviewer comments are discussed below.

a) Transportation Standards

Impact on Surrounding Street Systems; Access and Circulation; Public Transit Access; Parking; Transportation Demand Management

As noted above, the City's third-party traffic engineering reviewer continues to review the project and requested additional information of the applicant. This additional information is expected prior to the Planning Board public hearing, at which staff will provide an update.

The City's transportation programs manager and Public Works' senior engineer are also reviewing the project (**attachments 4 and 1**), including the construction management plan (**attachment P12**) and transportation demand management plan (**attachment Q**). The transportation programs manager provided comments to the applicant regarding their transportation demand management plan; responses to those comments are expected prior to the Planning Board public hearing. Otherwise, an updated transportation management plan will be suggested as a condition of approval. Responses and adequate revisions to the Public Works' senior engineer's comments (regarding accessible garage parking spaces, confirmation of parking space dimensions, and a waiver for compact parking spaces) are also expected in advance of Tuesday's Public Hearing, at which staff will provide an update. If these revisions are not made, additional conditions of approval are expected.

b) Environmental Quality Standards

Preservation of Significant Natural Features; Landscaping and Landscape Preservation; Water Quality, Storm Water Management and Erosion Control

The proposed project was reviewed by a third party civil engineer, who found it to be in compliance with relevant standards (**attachment 3**).

Because the applicant intends to develop the project in phases, several areas of the proposed site plan represent intended interim conditions. These include a wedge-shaped parcel along Fore Street, a paved flex-space along the Eastern Promenade Trail, and site area to the south of the proposed parking garage.

The applicant provided a landscape contingency plan (**attachment P16**) intended as a **required condition of approval** if a building is not constructed on the wedge-shaped parcel, 1B. The applicant also proposes to bring a site plan amendment of visual improvements to the parking garage if buildings are not constructed on top of and wrapping the southern face of it, per their approved master development plan. **These are suggested as conditions of approval.**

Because the proposed project includes fourteen residential units, it must provide fourteen street trees. The project also must account for an appropriate number of street trees for commercial development, per the City's Technical Manual. Staff calculate the total number of required street trees as approximately 40, while approximately fourteen are accounted for on the current landscaping plan. **The applicant may pay into the City's street tree fund at a rate of $400 per tree not provided per the City's Technical Manual standard ($10,400). This is suggested as a condition of approval.**



Proposed parking and flex-space on the site, intended as an interim condition until future development (image: applicant)

c) Public Infrastructure and Community Safety Standards

The applicant received confirmation of ability to serve from the Portland Water District and confirmation of adequate wastewater capacity from the Department of Public Works **(attachment L).**

The Fire Department determined (**attachment 7**) that additional fire hydrants are required on site. **The applicant is expected to meet the Fire Department's requirements in placing new fire hydrants. This is suggested as a condition of approval.**

d) Site Design Standards

Lighting

The applicant provided photometric plans and cut sheets for proposed lighting (**attachments J and U**). The applicant also requests a waiver from the maximum light spillage standard of the City's Technical Manual near the staircase entrance from Fore Street. Staff are generally comfortable with the applicant's approach to site lighting and reduction of light spillage in these areas of the site.

Zoning Related Design Standards

Much of the project was subject to historic preservation review. The City's Historic Preservation Board issued a certificate of appropriateness for the project, with conditions (**attachment X**). The Planning Board's purview includes general site design, the proposed large office building, and the proposed parking structure.

Submission of final approved design elevations meeting the Historic Preservation's Board's conditions of approval is suggested as a Planning Board condition of approval.

The City's urban designer provided a memo regarding this project (**attachment 5**). It raises several points for Planning Board discussion, including:

- Future improvements to Block 3 if left unbuilt
- Block 4 parking garage compliance with design guidelines and standards as relates to public ways
- Fore Street sidewalk / streetscape design (landscape edge, street trees, fence, decorative fixtures)
- Additional office building articulation elements.

These items prompt several suggested conditions of approval, including the following:

- The applicant shall provide details for fences to be installed on Fore Street to be reviewed and approved by staff for conformance with the design standards.
- The final Block 4 garage design shall be reviewed and approved by Planning staff taking into consideration an advisory design review from the Historic Preservation Board.
- The applicant shall submit for review and approval by staff revised site elevations for building 1A including appropriate articulation elements.
- The applicant shall submit for review and approval by staff revised site plan drawings showing edge treatments for the landscape areas adjacent to sidewalks and trails, and the decorative street light fixture designated in the Technical Manual with appropriate spacing.
- Within three years of issuance of a Certificate of Occupancy, if no additional site improvements or building development beyond Phase 1 has begun, the property owner of Block 3 shall submit a plan showing improvements to this area that provide an enhanced interface between the trail and the Block 3 lot in the form of screen wall, street trees, or similar proposal.
-



Rendering of proposed phase 1 development at 58 Fore Street, from Fore Street (image: applicant)

VIII. SITE LOCATION OF DEVELOPMENT REVIEW

The City of Portland has delegated review authority from the Maine Department of Protection for large projects that trigger Site Location of Development Act review (which this project does). The standards for this review generally dovetail with Portland's existing site plan and subdivision standards:

Financial & Technical Capacity: see subdivision, 7, above.
Traffic Movement: see subdivision 3, and site plan standards, a, above.
No Adverse Effect on the Natural Environment: see site plan standards, b, above.
Soil Types: see site plan standards, b, above.
Ground Water: see subdivision, 8, above.
Infrastructure: see subdivision 2, 3, and 4, above.
Flooding: see subdivision, 9, above.
Storm Water Management & Erosion and Sedimentation Control: see subdivision 1 and 8, above.

The Maine Historic Preservation Commission previously requested additional information of the applicant. **A findings letter from the Maine Historic Preservation Commission confirming that the proposed project is not expected**

to cause adverse impacts to historic resources is suggested as a condition of approval.

IX. PROPOSED MOTIONS

A. WAIVERS

On the basis of the application, plans, reports and other information submitted by the applicant, findings and recommendations contained in the Planning Board report for the public hearing on January 28, 2020 for application PL-000924-2019 relevant to Portland's technical and design standards and other regulations; and the testimony presented at the Planning Board hearing:

1. The Planning Board **[finds / does not find]** based upon the submitted materials, that extraordinary conditions exist or undue hardship may result from strict compliance with the Technical Manual standard (Section 12.3, 4) which requires that light trespass at the property line shall not exceed .1 foot candles, or 1.0 foot candles when a commercial use abuts a public right-of-way. The Planning Board **[waives / does not waive]** the Technical Manual standard (Section 12.3, 4) to allow trespass in accordance with the project's submitted photometric plans.

2. The Planning Board **[finds / does not find]**, based upon the Department of Public Works Senior Engineer's review (**Attachment 1**), that extraordinary conditions exist or undue hardship may result from strict compliance with the Technical Manual standard (Section 1.14) which allows parking lots with greater than 10 spaces to be comprised of 20% compact parking spaces. The Planning Board **[waives / does not waive]** the Technical Manual standard (Section 1.14) to allow 60.8% of the proposed spaces to be compact.

3. The Planning Board [**finds/does not find**], based upon the submitted materials, that extraordinary conditions exist or undue hardship may result from strict compliance with the Subdivision standard (Subdivision Ordinance 14-499(h) which requires that all utility lines shall be placed underground unless otherwise approved by the Planning Board. The Planning Board [**waives / does not waive**] the subdivision standard (Subdivision Ordinance 14-499(h)) to allow maintenance of existing above-ground utility distribution on Fore Street.

B. SUBDIVISION

On the basis of the application, plans, reports, and other information submitted by the applicant; findings and recommendations contained in the Planning Board report for the public hearing on January 28, 2020 for application PL-000924-2019 relevant to the subdivision regulations; and the testimony presented at the Planning Board hearing, the Planning Board finds that the plan **[is / is not]** in conformance with the subdivision standards of the land use code.

C. DEVELOPMENT REVIEW & SITE LOCATION OF DEVELOPMENT

On the basis of the application, plans, reports, and other information submitted by the applicant; findings and recommendations contained in the Planning Board report for the public hearing on January 28, 2019 for application PL-000924-2019 relevant to the site plan and Site Location of Development Act regulations; and the testimony presented at the Planning Board hearing, the Planning Board finds that the plan **[is / is not]** in conformance with the site plan standards of the land use code and the Site Location of Development Act standards, subject to the following conditions of approval:

1. Prior to application for a building permit, the applicant shall submit an updated utilities plan with an adequate number and spacing of fire hydrants, for review and approval by the Planning Authority and Fire Department.

2. Prior to fence installation, the applicant shall provide details for fencing to be installed on Fore Street, for review and approval by the Planning Authority.

3. Prior to application for a building permit, final Block 4 garage elevations shall be reviewed and approved by the Planning Authority, taking into consideration both conformity with the City of Portland's design standards and an advisory Historic Preservation review.

4. Prior to application for a building permit, the applicant shall submit final building 1A elevations showing articulation elements for review and approval by the Planning Authority.

5. Prior to issuance of building permits for buildings included in the Historic Preservation Board's review authority, the applicant shall submit final elevations as approved by the City of Portland's Historic Preservation Board.

6. The applicant shall submit final plans that include revised edge treatments for the landscape areas adjacent to sidewalks and trails, for review and approval by the Planning Authority.

7. The applicant shall submit final plans that include decorative street light fixtures, with appropriate spacing, as designated in the City of Portland's Technical Manual, along sidewalks and trails, for review and approval by the Planning Authority.

8. Prior to issuance of building permits, the applicant shall submit a findings letter from the Maine Historic Preservation Commission confirming that the proposed project is not expected to cause adverse impacts to historic resources.

9. Prior to issuance of a certificate of occupancy, the applicant shall pay $10,400 total ($400 per tree) for each of the 26 street trees not provided in accordance with the City's Technical Manual.

10. Within two years of issuance of a Certificate of Occupancy for Building 1A, if no additional site improvements or building development for block 1B has begun, the property owner shall plant and install additional trees, shrubs, and benches as illustrated in ATTACHMENT P16.

11. Within three years of issuance of a Certificate of Occupancy for the phase 1 block 4 development, if no additional site improvements or building development beyond phase 1 has begun, the property owner shall improve this structure and surrounding area by providing visual enhancements in the form of screen walls, street trees, and/or other improvements, to be submitted for review and approval by the Planning Authority.

D. CONDITIONAL USE: INCLUSIONARY ZONING

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the Planning Board Report for the public hearing on January 28, 2020 for application PL-000924-2019 relevant to the Conditional Use as authorized by Division 30, Section 14-487 Ensuring Workforce Housing; and the testimony presented at the Planning Board hearing, the Planning Board finds that the Conditional Use [is / is not] in conformance with the standards of the land use code and [approves / does not approve] the application, subject to the following conditions of approval:

1. Prior to issuance of a building permit, the applicant and the City shall enter into an agreed upon Affordable Housing Agreement for two one-bedroom workforce units.

2. Prior to issuance of a certificate of occupancy, the Affordable Housing Agreement will be filed as a covenant to the property's deed with the Cumberland County Registry of Deeds.

E. CONDITIONAL USE: MEETING & EVENT FACILITIES

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the Planning Board Report for the public hearing on January 28, 2020 for application PL-000924-2020 relevant to the Conditional Use standards as listed under Division 28, Section 14-474, Conditional Uses; and the testimony presented at the Planning Board hearing, the Planning Board finds the proposed conditional use for Meeting and Event Facilities [**does / does not**] meet the standards of Section 14-474.

XIII. ATTACHMENTS

PLANNING BOARD REPORT ATTACHMENTS

1. DPW Senior Engineer Review Comments 1-9-2020
2. Third-Party Traffic Engineer Review 1-10-2020
3. Third-Party Civil Engineer Memos Consolidated
4. Transportation Programs Manager Review 1-24-2020
5. Urban Designer Review Memo 1-24-2020
6. Housing Programs Manager Memo 1-24-2020
7. Energov Report 1-10-2020

PUBLIC COMMENT

PC. Compiled Public Comment 1-19

APPLICANT'S SUBMITTALS

A. Early Application Documentation
B. Project Summary
C. Waiver Requests
D. Evidence of Right, Title, & Interest
E. Easements & Other Burdens
F. Evidence of State & or Federal Approvals
G. Evidence of Financial & Technical Capacity
H. Consistency with Portland Design Standards
I. Zoning Assessment
J. Consistency with City Comprehensive Plan
K. Boundary Survey
L. Availability & Adequacy of Public Utilities
M. Portland Fire Department Site Design Checklist
N. Site Location of Development Report
O. Citizen Self Service Summary Letter
P. Stormwater Management Report
Q. Phase 1 Transportation Demand Management Plan
R. Traffic Analysis Memos and Supplementary Traffic, Parking Responses
S. Assorted Comment Responses

T. Neighborhood Meeting Certification Packet
U. Garage Roof Lighting
V. H&A Paver Design Recommendations Letter
W. Inclusionary Zoning Letter
X. Historic Preservation Board Decision Letter
Y. Legal Analysis Letter to Planning Board 1-24-20

PLANS

P1. Boundary Survey
P2. Existing Conditions Plans
P3. Demolition Plans
P4. Site Plans
P5. Grading and Drainage Plans
P6. Utility Plans
P7. Pipe & Structure Tables
P8. Subdivision Plat
P9. Landscape Plans
P10. Civil Details, Cover Sheet, Notes and Legend
P11. Building Elevations and Floor Plans
P12. Construction Management Plan
P13. Building Height and Zoning Figure
P14. Phase 1 Drawing
P15. Phase 1 Conditional Drawing
P16. 1B Landscape Contingency Plan
P17. Assorted Renderings

Attachment 1.

Portland Maine Yes. Google's good here.

Christian Roadman <croadman@portlandmaine.gov>

58 Fore Street - Waiver and other comments

2 messages

Mike Tremblay <mtremblay@portlandmaine.gov> Thu, Jan 23, 2020 at 1:20 PM
To: Christian Roadman <croadman@portlandmaine.gov>
Cc: James Rather <jrather@portlandmaine.gov>, Tom Errico <thomas.errico@tylin.com>

Christian,

I think you have all the comments you need from me. I had a couple of small things to note ahead of Planning Board on Tuesday. Bold and underlined items should be resolved by Tuesday's Planning Board Hearing, or included as a condition of approval to be met before issuance of a building permit.

- **The Applicant should show additional detail regarding the southern sidewalk on Fore Street.** It is our understanding that the Applicant will a) widen the sidewalk as much as possible between the existing sidewalk and the site; and b) coordinate with the City's CSO project on Fore Street, scheduled to begin in September 2020, to move the curb line along Fore Street northward by two feet, and coordinating with CMP to move utility poles to the back of the new curb line to create as wide a pedestrian walkway as possible.

- It is our understanding that all sidewalks on Fore Street will be reconstructed for the full length of the Project's Fore Street frontage as part of this phase. The portions of sidewalk fronting Building 12 and the grand staircase will be reconstructed in brick, and the remaining portions (along future Building 1B and along future Building 4/parking garage) will be temporarily reconstructed in bituminous. The Applicant should be required to reconstruct all temporary bituminous sidewalks in brick if the next phase of development does not begin within two years' time (same timeline as the enhancements in the green space in Lot 1B). **Limits of sidewalk work, including material proposed for Phase 1, as well as sidewalk cross-slope and width, should be clearly noted on plans**.

- **The Applicant should confirm that the parking space dimensions in the final design of the parking garage are consistent with the plans shown in the document "Parking Space Layout", dated 1-20-2020**, rather than the architectural plans uploaded to ePlan (which are likely not intended to show the minutiae of parking dimensions), but rather structural features).

- The Building 4 garage design does not appear to have the number of required accessible parking spaces, and in one instance does not have proper design of accessible parking spaces. According to ADA, for a parking area of 625 parking spaces, 2% of the total parking spaces, or 13 spaces, must be accessible, with three (1 out of every 6 accessible spaces, rounded up) spaces being van-accessible. According to the plans in the same "Parking Space Layout" document, four accessible spaces are provided on Level 1. One of the four spaces on level 1 does not have a proper landing area and is not a valid accessible space; therefore, only 3 of the required 13 spaces are provided in the garage. All spaces should be provided on Level 1, as close to the pedestrian entrance(s) as possible. Van-accessible spaces, and the routes serving them, must have a vertical clearance of at least 98 inches. **The Applicant should reissue the parking layout of Building 4 to comply with ADA, providing at least the minimum number of accessible spaces required by ADA, and designed to ADA standards.**

- The Building 1A garage has 70 total spaces. One accessible space is required per 25 parking spaces, rounded up, in garages less than 100 spaces; therefore, three accessible spaces are required. One of these spaces must be van-accessible. See ADA and the above comment for other considerations. **The Applicant should reissue the parking layout of Building 1A to comply with ADA, providing at least the minimum number of accessible spaces required by ADA, and designed to ADA standards.**

One waiver is required, below.

- **The Applicant will require a waiver for percentage of compact parking spaces in the Block 4 garage.** DPW supports this waiver. Most of the substandard spaces are larger than 8.5' x 18' and will not be noticeably smaller than a standard space for most users. Additionally, the applicant proposes some 220 spaces that are slightly or somewhat larger than the standard space, so larger vehicles will be able to utilize these wider spaces if they are not able to comfortably use one of the slightly substandard spaces. None of the spaces in the Block 4 garage are designed to be truly compact spaces (only 8 feet wide and/or 15 feet deep).

Thanks,
Mike

Mike Tremblay, P.E.
Senior Engineer
Engineering Division
Department of Public Works
City of Portland, ME
mtremblay@portlandmaine.gov
P. 207.874.8881 F. 207.874.8852

Christian Roadman <croadman@portlandmaine.gov> Thu, Jan 23, 2020 at 1:47 PM
To: Michael Tremblay <mtremblay@portlandmaine.gov>

--
Christian Roadman
Planner
207.874.8984

Planning & Urban Development Department
389 Congress Street
Portland, Maine 04101
[Quoted text hidden]

Attachment 2.

Portland Maine Yes. Google's good here.

Christian Roadman <croadman@portlandmaine.gov>

Portland Foreside - Status Traffic Comments

Tom Errico <thomas.errico@tylin.com> Fri, Jan 10, 2020 at 9:38 AM
To: Christian Roadman <croadman@portlandmaine.gov>
Cc: Bruce Hyman <bhyman@portlandmaine.gov>, Michael Tremblay <mtremblay@portlandmaine.gov>, Jeremiah Bartlett <JBartlett@portlandmaine.gov>

Hi Christian – the following is a status update of prior traffic review comments.

- In conjunction with the Master Development Plan approval the applicant was issued a MaineDOT Traffic Movement Permit (TMP) for the full buildout of the project. The applicant has conducted a traffic assessment for the current phase and my initial conclusion is that trip generation levels are under the TMP permitted trip bank for the site. I would note that I continue to review methods for the trip generation estimate.

Status: The trip generation estimate is consistent with previously approved methods and I find the estimate to be reasonable.

- I have not reviewed the Transportation Demand Management Plan (TDM) provided for the project but would note that the trip generation analysis for the project assumes a "multi-modal" (walk, bike, transit, carpool) reduction of 18% and thus the TDM plan should reflect strategies and targets accordingly.

Status: Refer to Bruce Hyman's comments regarding trip reduction assumptions used in the Traffic Impact Study and TDM trip reduction targets.

- The application indicates the project will include a new Events Space and that traffic levels are not expected to change from prior occupancy given that historically events have been held at the site. I would like to fully understand both historic and future event programs before supporting the conclusion that no additional new traffic is expected.

Status: The applicant has noted that the Event space will be reduced significantly. The applicant did account for the Event traffic volumes in the assessment of traffic operations in the November 2019 traffic study (see below for more comments). I continue to review the impact of Events on the transportation system in the vicinity of the project and whether traffic management strategies are required.

- The application notes a parking demand estimate for the site of 159 parking spaces. The applicant should provide analysis in support of this estimate. I would note that the parking demand analysis shall be based on the most current best practice methods available and proposed TDM Plan Strategies.

Status: The applicant has revised the parking demand analysis and is estimating between 288 spaces (based on the ITE Parking Generation Manual) and 385 spaces using City zoning requirements. Parking demand would not be expected to exceed supply, but I do have the following questions:

  - **The estimate does not include Event vehicles. An explanation should be provided.**
  - **The parking demand estimate assumes 227 to 238 parking spaces for the Sun Life office space. According to ITE, 468 employees would require 393 parking spaces (0.84 spaces per employee). It seems like the estimate is low.**

Other Review Comments

- Compare the number of employees in the Sunlife office to the ITE Trip Generation for their office.

Status: The applicant has provided a trip generation estimate based on expected employee levels and the magnitude is similar to the estimate assuming building floor area.

New Review Comments

- **All dimensions within the parking garages shall be provided and the applicant shall request waivers from the City's Technical standards if required. Based upon available information, a number of the parking spaces do not comply with dimensional standards.**

- **Given the potential for peak entry movements at the Fore Street garage entrance, a vehicle queuing analysis shall be performed assuming the parking garage is fully occupied. The analysis shall document that vehicles will not spill back and block Fore Street. The applicant has noted this request and is conducting the analysis.**

- **Previous analysis assumed traffic associated with Events would impact the PM peak hour. Those volumes now do not seem to be included in the material transmitted on January 10, 2020. An explanation should be provided. It is also unclear how Events would impact area traffic operations given no recent Events and traffic would be new or added to traffic volumes.**

- **The applicant provided information comparing traffic volumes in the project vicinity between the Master Development Plan TMP and this application with assumptions on assignment of trips to the Fore Street garage (25% and 60%). Given general roadway network conditions, I would expect conditions to reflect the 60% assignment. I compared the change in traffic volumes at area intersections between the MDP and this phase under the 60% assignment and most have less impact with the exception of the Fore Street intersections with India Street and Mountfort Street. The applicant should note how this change may impact those intersections.**

- **The applicant has noted that the traffic analysis/impact study conclusions would not change without the Fore Street Connector. I continue to review this and request that the applicant provide a graphic summarizing the peak hour volume changes at area intersections with and without the Connector.**

If you have any questions, please contact me.

Best regards,

Thomas A. Errico, PE
Senior Associate
Traffic Engineering Director
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WRIGHT-PIERCE
Engineering a Better Environment

MEMORANDUM

TO:	Christian Roadman, Planner	**DATE:**	1/21/2020
FROM:	Michael Guethle, PE	**PROJECT NO.:**	20208B
SUBJECT:	58 Fore Street – Level III Site Plan, 000924-2019		

Wright-Pierce has reviewed the initial Level III Site Plan Application information provided for the redevelopment at 58 Fore Street, as defined in the above subject line. The proposed project is located on a 10 +/- acre site bound by Fore Street, Fore Connector Road, a MaineDOT/Railroad ROW, and private abutters. The proposed project includes redevelopment of a former industrial site with several uses, including commercial spaces and business uses, residential uses, developed outdoor spaces, new pedestrian connectivity, and appurtenant needs such as parking and utility connections.

Documents Reviewed by Wright-Pierce:

- Level III Site Plan application, dated (most recent) December 20, 2019
- Engineering Permitting Plans, uploaded (most recent) December 20, 2019
- Comment-Response Letter and Attachments, dated (most recent) January 20, 2020

Comments:

1) General Standard:
    a. The applicant has provided additional discussion confirming locations of each pollutant ranking, and has updated the stormwater management plans to incorporate additional landscaping and pedestrian stairway modifications.
        i. Plans indicating which areas of the site correlate with which pollutant ranking, for the existing and the proposed condition, have been provided. We generally concur with the pollutant ranking areas stated in the application materials. No further action necessary.

ii. Applicant has confirmed the existing buildings to remain are included in the redevelopment calculations, and have the same pollutant ranking in the existing and proposed condition. No further action necessary.

iii. An area of the site at the northern and eastern perimeter is wooded and does not necessarily appear developed, and is included in the redevelopment portion of the site.

1. Per Chapter 500 definitions, a minor amount of undeveloped land may be included within the perimeter of the existing developed area. The applicant has shown that 11% of the redevelopment area is previously undeveloped area. It is our experience that this clause typically has an upper limit of less than 10% of the redevelopment area. However, we find the proposed calculations to be acceptable for the following reasons:

    a. 0.82 acres of the 0.87 acres undeveloped land, including all of the impervious roof area, is receiving surface runoff treatment. Similar treatment would be required under the general standard for undeveloped area.

    b. 11% is within the range of the 10% typical upper limit.

2. The applicant has indicated the existing vegetated embankment is more typical of a Pollutant Ranking 1 and not 0 due to steep slopes limiting pollutant treatment through the soil and forest ground layer. We agree; no further action necessary.

b. The applicant has demonstrated that a majority of surfaces with Pollutant Ranking 5, 4, and 3 are receiving treatment, and that priority has been placed for treating high-pollutant areas. No further action necessary.

WRIGHT-PIERCE
Engineering a Better Environment

MEMORANDUM

TO:	Christian Roadman, Planner	**DATE:**	1/2/2020
FROM:	Michael Guethle, PE	**PROJECT NO.:**	20208B
SUBJECT:	58 Fore Street – Level III Site Plan, 000924-2019		

Wright-Pierce has reviewed the initial Level III Site Plan Application information provided for the redevelopment at 58 Fore Street, as defined in the above subject line. The proposed project is located on a 10 +/- acre site bound by Fore Street, Fore Connector Road, a MaineDOT/Railroad ROW, and private abutters. The proposed project includes redevelopment of a former industrial site with several uses, including commercial spaces and business uses, residential uses, developed outdoor spaces, new pedestrian connectivity, and appurtenant needs such as parking and utility connections.

Documents Reviewed by Wright-Pierce:

- Level III Site Plan application, dated (most recent) December 20, 2019
- Engineering Permitting Plans, uploaded (most recent) December 20, 2019
- Comment-Response Letter, dated December 20, 2019

Comments:

1) Basic Standard: The applicant has updated the erosion control notes and details Sheet C-201 and removed omissions. No further action necessary.
2) General Standard:
    a. The applicant has provided additional discussion on which locations were considered which pollutant ranking.
        i. This information provides a better understanding of the existing and proposed pollutant rankings. However, is still not clear where some of the boundaries for pollutant rankings are. Given that the project is on the cusp between requiring 50% and 60% of treatment for disturbed areas, a full understanding on the boundary between differing pollutant rankings is critical for the reviewer to make a determination on the proposed treatment.

1. Plans indicating which areas of the site correlate with which pollutant ranking, for both existing and proposed condition, are requested to assist in this determination.
2. On these plans, please confirm if existing buildings to remain are excluded from the redevelopment land use tables.
3. An area of the site at the northern and eastern perimeter is wooded and does not appear developed, and is included in the redevelopment portion of the site.
    a. This area appears to have been identified as non-grass landscaping in the land use tables, but may be more typical of a forested condition than a landscaped condition.
    b. Per Chapter 500 definitions, A minor amount of undeveloped land may be included within the perimeter of the existing developed area. The percentage of undeveloped land included in the redevelopment calculation should be included in the stormwater management report.

b. The applicant has provided information identifying the treated area subcatchments, and a discussion on the ability limitations on treating areas near the waterfront.
    i. Calculations identifying which percentage of redeveloped surface areas Pollutant Ranking 5, 4, and 3 are receiving treatment are requested to confirm that the intent of the standard is being met to the extent practicable.
c. The applicant has confirmed that an SLDP application has been submitted to the City. No further action is necessary.
d. The applicant has provided confirmation from MaineDEP indicating that channel protection volume storage is not required for this project due the size of the receiving body. No further action is necessary.
e. The applicant has shown calculations indicating minimal differences in critical runoff rates between Hydrologic Group A and D soils. No further information on existing soils is necessary to evaluate surface runoff rates.

3) Flooding Standard:
    a. Applicant has indicated that a waiver for the Flooding Standard has been previously granted for the site, and that all discharges from the site are direct to the ocean. No further action necessary.
4) General Engineering:
    a. The applicant has indicated that work within the Fore Street corridor, including curb elevation and roadway drainage, will be evaluated as part of a sewer separation project with the City, and is not part of this project. No further action necessary.
    b. Additional electrical utility information was provided on the updated Sheet C-204. No further action necessary.
    c. The applicant has provided information that the existing storm drain (Fore Connector) has been installed to anticipate flows from the development's anticipated site flows, and that there are ongoing discussions regarding the Fore Connector design point. No further action on this topic by the applicant is required; final acceptance of the connection would come from the Department of Public Works.
5) Utility conflicts;
    a. General: The applicant has indicated that final construction documents will indicate additional detailing on pipe separation requirements. No further action required for the site review.
6) HydroCAD calculations:
    a. R-Tank System:
        i. Numbering of systems has been completed in the updated plan set. Grid alignment for R-Tank cells, as well as detailing for storage elevation and pipe elevations, has been provided by the applicant. This information is in agreement with input information for the HyrdoCAD model. No further action necessary.
7) Drainage Structures Table and Pipe Schedule:
    a. The applicant has indicated that all storm drains on the site will remain private connections and as such are not subject to the City's requirements for drainage. Applicant has further

noted that the pipes have been sized to meet industry TR-16 flow rate standards. No further action necessary.

b. Applicant has indicated that construction documents will have notes coordinating invert elevations between the building drawings and the grading plan. No further action necessary.

c. The structures table has been updated without duplicate basin names. No further action necessary.

8) Grading limitations:

a. The applicant has indicated that others will be developing the Riprap Drainage Swale and associated level spreader. When designed, this feature should be sized to meet the Distribution of Concentrated Flows requirements under MaineDEP Chapter 500.

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MEMORANDUM

TO:	Christian Roadman, Planner	**DATE:**	12/16/2019
FROM:	Michael Guethle, PE	**PROJECT NO.:**	20208B
SUBJECT:	58 Fore Street – Level III Site Plan, 000924-2019		

Wright-Pierce has reviewed the initial Level III Site Plan Application information provided for the redevelopment at 58 Fore Street, as defined in the above subject line. The proposed project is located on a 10 +/- acre site bound by Fore Street, Fore Connector Road, a MaineDOT/Railroad ROW, and private abutters. The proposed project includes redevelopment of a former industrial site with several uses, including commercial spaces and business uses, residential uses, developed outdoor spaces, new pedestrian connectivity, and appurtenant needs such as parking and utility connections.

Documents Reviewed by Wright-Pierce:

- Level III Site Plan application, dated (most recent) December 4, 2019
- Engineering Permitting Plans, uploaded (most recent) December 4, 2019

Comments:

1) It is understood that several items were commented on in a prior comment letter dated 11/20/2019. In general, major aspects of the project that were previously commented on (and are not commented on in this additional memorandum) include:
    a. Stormwater treatment systems and adherence to City and State stormwater requirements;
    b. Utility connections;
    c. Site grading;
    d. General submission completeness.
2) Utility conflicts;
    a. General: There are several areas where proposed utility lines horizontally cross other utilities. Details for non-drainage utilities typically include minimum installation depths or other general installation guidance where final pipe elevations

may vary. Additional detailing or notes should be provided to identify minimum clearances between pipes where crossings occur.

b. Additional information as noted in Comment 4)a. and 4)b. is needed to determine if conflicts between drainage pipes are present.

3) HydroCAD calculations:
   a. Jellyfish filter design is consistent between plans and modeling output.
   b. Additional detailing on the plans is needed to confirm that the R-Tank systems are designed consistently with the project plans and the project HydroCAD calculations. Applicant should submit the following:
      i. Numbering on site plans (such as R-Tank System 1; R-Tank System 2);
      ii. Grid alignment for R-Tank cells to confirm total capacity of system on project plans or details to confirm total storage capacity;
      iii. Storage elevation and pipe elevations in detail, table, or plan locations.
4) Drainage Structures Table and Pipe Schedule:
   a. Minimum velocities for drain pipes should be greater than 3 feet/second per the City Technical Manual. Due to the flat nature of the site and proximity to tidal areas, this may not be feasible to obtain while meeting other site needs. If the applicant is not able to meet this standard, a waiver request with a brief statement discussing the need for waiver, and calculations showing the ability of the drain system to adequately convey flows, would likely be supported. The following pipes were identified to have limited peak velocity:
      i. Pipe SD 19
      ii. Pipe SD 20
      iii. Pipe SD 38
      iv. Pipe SD 40
      v. Pipe SD 44
      vi. Pipe SD 56
      vii. Pipe SD 57
      viii. Pipe SD 58
      ix. Pipes SD 60-62
      x. Pipes SD 64-67
      xi. Pipe SD 73

b. 28 pipe slopes were not able to be evaluated due to the unknown elevation of their connection with the existing and proposed buildings. Reference to detail, other sheet set, or invert elevation at building should be made on the plans for these pipes.
c. Two structures are labeled as CB-7 on the structure table.

5) Grading limitations:
   a. Riprap Drainage Swale and associated level spreader should be evaluated and sized to meet the Distribution of Concentrated Flows requirements under MaineDEP Chapter 500.
6) Utilities in Shoreland Zone:
   a. In Zoning Section 26:
      i. Erosion and Sedimentation Control: All activities which involve filling, grading, excavation or other similar activities which result in unstabilized soil conditions and which require a permit shall require a written soil erosion and sedimentation control plan in accordance with Maine Erosion and Sediment Control Handbook for Construction. The applicant has provided this information, with a level of further review comments dated 11/20/2019.
      ii. Installation of Public Utility Service: No public utility shall install services to new structures until applicable City Permits are obtained. Applicant shall not begin any utility construction until permits are obtained.
   b. In Section 26.5, Flood Zone:
      i. Water Supply and Sanitary Sewage Systems: All new and replacement water supply systems and sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters and discharges, as applicable. The applicant has provided that information in project details.

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Engineering a Better Environment

MEMORANDUM

TO:	Christian Roadman, Planner	**DATE:**	11/20/2019
FROM:	Michael Guethle, PE;	**PROJECT NO.:**	20208A
SUBJECT:	58 Fore Street – Level III Site Plan, 000924-2019		

Wright-Pierce has reviewed the initial Level III Site Plan Application information provided for the redevelopment at 58 Fore Street, as defined in the above subject line. The proposed project is located on a 10 +/- acre site bound by Fore Street, Fore Connector Road, a MaineDOT/Railroad ROW, and private abutters. The proposed project includes redevelopment of a former industrial site with several uses, including commercial spaces and business uses, residential uses, developed outdoor spaces, new pedestrian connectivity, and appurtenant needs such as parking and utility connections.

Documents Reviewed by Wright-Pierce:

- Level III Site Plan application, dated (most recent) November 13, 2019
- Engineering Permitting Plans, uploaded (most recent) November 12, 2019

Comments:

1) It is understood that due to the project schedule, not all documents were able to be fully evaluated and commented on. In general, major aspects of the project that are not commented on in this response but will be reviewed at a later date include:
    a. Utility conflicts;
    b. HydroCAD calculations;
    c. Drainage Structures Table and Pipe Schedule;
    d. Grading limitations;
    e. Soils Storage/VRAP program;
    f. Lighting.
2) Level III Site Plan applications with the City of Portland must submit a stormwater plan pursuant to the regulations of MaineDEP Chapter 500 Stormwater Management Rules.

This includes conformance with the Basic, General, and Flooding Standards (Ref: Technical Manual, Section 5. II. Applicability in Portland. C. a.; and Ref: City of Portland Code of Ordinances Sec. 14-526. Site Plan Standards, (b). 3. b.)

a. Basic Standard: Per the City's Technical Manual *Portland Stormwater Management Standards And Maine Dep Chapter 500 Stormwater Management*, an Erosion & Sediment Control management plan, notes, and details per the Chapter 500 Rules must be provided to meet the Basic Standard.
    i. Erosion and Sedimentation Control best practices were observed on the Erosion and Sedimentation Control Plan, Civil Details – 2 (C-201). An Inspection, Maintenance, and Housekeeping Plan has been provided with the application. Additional clarification is needed on blank spaces on the soils, erosion control notes regarding the timeframe of application, Sheet C-201. Further clarification of the placement and location of erosion control, including stockpiling of construction materials and devices will need to be implemented into the design, and discussed in the Construction Management Plan.
b. General Standard: The applicant has provided information regarding the size and scope of the project, and has indicated the project is subject to the General Standard under the requirements of the Site Location of Development Act (SLODA). The project is being reviewed under the redevelopment guidelines and requirements.
    i. The applicant has provided an impact analysis to compare pre-development and post-development land use pollutant rankings under MaineDEP redevelopment guidelines.
        1. The written analysis indicated that the proposed development had a lower pollutant ranking than the existing site and is therefore required to treat 50% of the proposed site's disturbed surface area, with priority placed on the highest-ranked pollutant for the site. However, the calculations show a very small increase in the proposed pollutant ranking when carried out to several digits. The

way the MaineDEP table is structured, a pollutant ranking value of 0.0 can be interpreted to require 60% of a site's redeveloped area treatment, or 50% treatment. To better understand and evaluate the minor changes in pollutant ranking, the following items should be identified on the Redevelopment Figures and further discussed in the stormwater management plan:

a. Parking lot pollutant rankings are generally based on turnover rate. Additional information is needed on which parking lot spaces are low-use, medium-use, and high-use.
b. High-pollutant surface areas should be prioritized for stormwater treatment under the redevelopment standard. Following the above comment, please add additional information on the plans to provide a better understanding of which surfaces are receiving stormwater treatment, and calculations identifying which percentage of the highest pollutant rankings are receiving treatment.
c. Per the City of Portland Technical Manual, Section 5, redevelopment standards, 50% of impervious surfaces require treatment for projects without an existing SLODA permit. An existing SLODA permit was not identified in the application, although application for such permit was referenced. Application shall provide additional information as to existing permits, or discussion on adherence or exception from the 50% impervious treatment requirement.

ii. The proposed proprietary BMP systems, R-Tank and Jellyfish Filters, are accepted best management practices for the proposed project under the MaineDEP. A HydroCAD model has been developed for the site to assist in evaluating the performance of the BMPs.

1. The R-Tank system is proposed to be sized below the standard requirement of providing channel protection volume for 1.0" of impervious area and 0.4" of landscaped area for the proposed SF subcatchment areas. Whereas the City's requirement references the MaineDEP's regulations on this item, approval will need to be granted by MaineDEP for any variance.
2. Hydrologic Soil Group (HSG) "A" has been modeled for portions of the site that are urban fill. Whereas urban fill can substantially vary in porosity, and HSG A soils typically have very low runoff, incorporating the existing urban fill soils as a low-runoff option without advanced soil information may not provide an accurate representation of the runoff from urban fill soils. Additional soil information may be necessary to complete the model, and additional discussion on which modeling assumptions provide conservative final results may also be appropriate.

iii. An executed maintenance contract for the BMP systems is required and may be included as a Condition of Approval.

c. Flooding Standard: The applicant has submitted information regarding a waiver to the flooding standard due to discharges to tidal waters. The applicant will need to provide appropriate discussion and calculations as to how the flooding standard is met for runoff at other down-slope property lines.

3) Grading and Drainage:
   a. The applicant has indicated that a Maine Construction General Permit will be issued for the project prior to construction.
   b. Grading and Drainage at the Fore Street sidewalk location may need additional evaluation in locations where the curb line will be reset in a different location from its current placement.
4) Utility Connections

a. Ability to serve letters have not been provided for utilities impacted by the proposed project, but have been requested by the applicant for applicable utilities. The applicant has indicated that ability to serve letters will be submitted to Planning upon receipt.
b. It is understood that grease trap sizing is being reviewed by Department of Public Works. Applicant shall defer to comments from Department of Public Works on this item.
c. Details for the water system have been provided on Sheet C-202. Adherence to PWD standards is typically provided by the water utility for water connections, and would be addressed in an accepted ability to serve letter.
d. Details for the electrical conduit and natural gas pipe have been provided on Sheet C-200. Details and siting for the electrical transformer vaults was not provided.
e. Connection to Existing Stormwater Systems: E-mail, or otherwise written, confirmation from the Department of Public Works accepting this connection is requested to confirm that this connection is appropriate under Land Use section 14-526 (b) 3 a. (iv); and 14-526 (c) 3 a.

Attachment 4.

Portland Maine Yes. Google's good here.

Christian Roadman <croadman@portlandmaine.gov>

Preliminary Comments: Portland Foreside Revised TDM Plan

Bruce Hyman <bhyman@portlandmaine.gov> Fri, Jan 24, 2020 at 8:52 AM
To: Christian Roadman <croadman@portlandmaine.gov>
Cc: Michael Tremblay <mtremblay@portlandmaine.gov>, Tom Errico <thomas.errico@tylin.com>, Helen Donaldson <hcd@portlandmaine.gov>, James Rather <jrather@portlandmaine.gov>

Good morning, Christian,

The applicant submitted a revised TDM Plan on 1/22/20 in response to a conference call with their consultants on 1/17/20. Some of the comments from my 1/9/20 preliminary comments (below) which addressed bigger picture topics have been resolved. Others remain a work in progress. I provide a status update below based upon my prior comments.

On Thu, Jan 9, 2020 at 12:48 PM Bruce Hyman <bhyman@portlandmaine.gov> wrote:

> Good afternoon, Christian,
>
> The revised Plan (uploaded December 31, 2019) is a solid update to the first draft (November 2019) reviewed in terms of its breadth and level of commitments contained. Detailed comments will be provided to the applicant directly and I and other staff will work with the applicant to further strengthen it.
>
> The following are an overview of my preliminary high-level comments upon first review of the revised Transportation Demand Management Plan (TDM) for Portland Foreside, Phase I:
>
> - The TDM Plan does not show a direct relationship to the development of the Traffic Movement Permit (issued May 2017) nor to the traffic study being completed for the Phase I development. The TMP included credits for "other modes trip reductions" that will rely on robust TDM measures to be accomplished and are to be assessed as part of the TDM monitoring regime to be done. They should not be assumed to "just happen." These reductions are to be documented in the TDM plan itself and reflected in the monitoring.

Status: This remains a key outstanding issue in terms of cross-referencing the data and assumptions within the development's approved Traffic Movement Permit that affect how the monitoring and reporting will be conducted to determine the effectiveness of TDM measures once they are implemented.

> - The Plan sets additional targets of 5% for vehicle trip reduction and parking demand reduction beyond those included in the TMP. These percentage targets should be translated into absolute numbers for easier tracking of progress by a specified year, assuming a base year for occupancy.

Status: This comment has been satisfactorily addressed.

> - The development of 'Tenant Profiles' (similar to those done in a sample plan provided to the applicant) is encouraged to be implemented as part of the Portland Foreside TDM Plan as a tool to tailor specific TDM strategies and monitoring to individual tenants. It helps to standardize data related to tenants and TDM efforts and outcomes.

Status: This comment has been satisfactorily addressed. The applicant has agreed to use a Tenant Profile framework as part of its reporting and monitoring.

> - The monitoring plan is to be more specific in terms of what it will report. The monitoring component of the Plan does not make reference to the parking demand reduction targets; parking utilization data from the parking garages is to be used to inform both trip-making and parking usage overall levels and time of day usage.

Status: This comment has been satisfactorily addressed.

> As noted above, detailed comments will be provided to the applicant to make needed edits and to further strengthen the proposed strategies such as those in the Transit Infrastructure and Transit Incentives sections.

Status: These finer grained comments were provided to the applicant on 1/23/20. I anticipate they will be satisfactorily addressed in the next submission.

[Quoted text hidden]

Planning and Urban Development Department
Planning Division

Subject: B6 Design Review for Phase I – 58 Fore Street

Written by: Caitlin Cameron, Urban Designer

Date: Friday, January 24, 2020

Design Review Criteria:
For the public hearing, staff will highlight those areas of design review that warrant Board and public discussion.

The Site Plan application is subject to the policies and standards listed below.

1. City of Portland Design Manual – *(g) EWPZ Eastern Waterfront Port Zone and B6 Eastern Waterfront Mixed Use Zone*
2. Proposed Design Parameters – *Master Development Plan for 58 Fore Street*
3. Eastern Waterfront Master Plan - *Design Guidelines for the Eastern Waterfront*

1. **City of Portland Design Manual –** *All major and minor development reviewed under the provisions of the eastern waterfront zones shall be designed to support the development of this urban neighborhood as a dense, mixed-use, pedestrian friendly neighborhood.*
   - In regards to density: The project size is substantial and will be adding density to this area in office workers and residents. The first phase has more emphasis on commercial, retail, and event uses. Future phases will bring more residential density.
   - In regards to mixed-uses: The project includes a mix of uses, including more active retail uses on the ground floor with office, event spaces, and residential on upper floors. The goal would be for a mix of uses that allows for and encourages activity throughout the day and seasons.
   - In regards to pedestrian-friendliness: Staff find the overall layout and circulation to promote pedestrian circulation and wayfinding. The building placement, entrances, and architecture contribute to legibility and wayfinding throughout the site. The applicant team has thought about the priority viewsheds and corridors where activity is most critical. This phase of the proposal is inward-facing with little activity towards the public ways; staff review has focused on the quality of the streetscape and interaction of the development edges with the public realm. The project includes pedestrian amenities with the public easement area, viewing opportunities, and visual and physical connection from the trail into the site.

2. MDP Design Parameters

The following design parameters were developed from the *Design Guidelines for the Eastern Waterfront*, to guide future Site Plan applications:

Appropriate Street Design: *The new internal street shall use design treatments that encourage flexible and shared-use space with the potential for frequent pedestrian crossing and occupation. Design development should treat the street as a shared space with slow vehicle speeds and pedestrian comfort, especially at those points where pedestrians will want to cross to the water's edge. Surface parking spaces should be adequately screened from public view.*

- Staff are generally supportive of the treatment of the internal street as a shared space delineated with bollards and differentiated paving. The transition from public to private way is relatively seamless and continues to make legible the vehicular and pedestrian paths.
- The project provides several moments of visual and physical connection from the public ways into the private development.
- The surface parking areas are screened by understory planting buffers next to the trail. No fence or similar devise is proposed at this time – this is determined to be appropriate to provide a sense of permeability between the public and private spaces.

Sidewalks: *Public sidewalk design shall be coordinated with City staff to ensure a cohesive and attractive public realm.*

- Staff typically recommend new development provide a streetscape design consistent with existing patterns. The developing pattern on this side of the street is to place landscape between the sidewalk and the private property.
- The sidewalks on Fore Street are narrow and do not easily accommodate street trees in the furnishing zone. Staff support the interim condition for Block 1B which provides street trees and lawn on the private property side. In addition, staff support the placement of a landscape buffer between the sidewalk and the building/fence edge. However, an edge of some kind (curb, planter wall, metal edge, etc.) should be provided between the sidewalk and landscape areas – this differentiates public from private and protects the viability of the landscape. An edge of some kind should also be provided around the landscape area between the Thames Street extension and the trail (west of Building 12). The landscape areas between the trail and Blocks 3 and 4 would logically remain soft edges consistent with existing conditions and considering the narrow gauge tracks are between this landscape and the trail.
- The *City of Portland Technical Manual* designates Fore Street for decorative street lights given the width of Fore Street as a major road on the East End. The existing cobrahead lighting is not sufficient and the City intends to underground utilities on Fore Street according to the Eastern Waterfront Utility Master Plan. Therefore, staff determine that Fore Street should receive the Peninsula decorative fixture as has been implemented in adjacent blocks on Fore Street to the west.
- The Connector Road will have sidewalk only until the end of the 58 Fore property – staff requests clarification on how that sidewalk being terminated/transitioned?

Contextual Design – *The MDP proposal presents a cohesive design approach to building forms, scale, massing, and façade treatment. The approval of this MDP does not indicate an approval of specific design treatments or detail. The design approach is clearly contemporary, which is encouraged. The review of materials, articulation, aesthetic or style will be a part of the Site Plan approval process with an emphasis on appropriateness in response to their context and compatibility with surrounding neighborhoods.*

- Staff continue to find the design approach of the new architecture to be appropriate. The new buildings are clearly of their time but also subtle in material palette and form to complement the historic buildings. Building 1A appropriately keeps a simple form and massing with regular pattern of windows and simple material palette – these characteristics are consistent with the architectural character of the East End and particularly the larger warehouse and industrial buildings found along Commercial Street and the waterfront. The use of masonry and articulation details such as deep recesses provide human scale and visual interest.

Clear conveyance of the function and significance of buildings – *Staff identified three opportunities to improve the legibility of the site in regards to building function and significance. First, the hotel use should be distinguished in character or form from the residential uses. Second, on Fore Street the transition from residential uses to the historic Portland Company buildings and public easement access should reflect in the streetscape experience the change of use, the historic fabric, and public open space components. Third, on the new street extension, the building edges should be designed to differentiate the residential from the office uses which will also provide some variation and visual interest to the less active streetscape.*

- The buildings are designed to give clear conveyance of the function and distinguish between uses.
- The differentiation of public versus private uses is being well conveyed in the architecture, especially related to the public stair and the more active, retail locations.

Building Interface with Pedestrian Environment: *Buildings shall engage the street and be designed with consideration for the impact on the pedestrian environment, especially in the case of Fore Street, the new public street, and the trail. Massing, scale, and articulation should create comfortable and active spaces. Specifically, articulation can be used to provide a human scale, break up the length of the building at grade, and mitigate the impact of the building height making the space more comfortable. Articulation on the new street extension facades should also be employed to provide a visually interesting street wall. Comfort in the pedestrian environment should also consider wind and shadow impacts. The design development of garages should meet the guideline in terms of achieving a visually attractive pedestrian environment, with the expectation that the articulation and materials will be compatible with the new and existing buildings.*

- Connector Road: Staff find, given the revised status of the Connector Road, that the limited activity and access on this B-street is appropriate.
- Block 1A: The proposed street trees and landscape are appropriate as interim conditions and follow the pedestrian path and sight lines towards the public easement area and the active portions of building 1B.
- Building 1A: The high level of active frontage is desirable, especially on the internal-facing facades where the pedestrian environment should be activated. Is this level of retail frontage realistic? How will these spaces be treated while vacant? More articulation and scaling elements would be appropriate to create a sense of enclosure and pedestrian-level comfort.
- Block 4: Staff would like more information about the proposed fence between the Fore Street sidewalk and parking structure. How is the garage wall interacting with the landscape and fence? Given the site conditions and visual access to the water from Fore Street, staff agree with the approach of making the garage as submerged below the Fore Street grade as possible. The application of weathered steel and metal rainscreen to the garage components visible from the street do elevate the materiality of the garage and relate it to the material palette of the other contemporary buildings within the site. The lighting and parked cars will be visible from the pedestrian environment – the fence and landscaping are the elements maintaining a street wall here, but the trade off is the visual access and permeability of that edge to the water. From

the trail environment, this building is set back and does not have a direct relationship to the pedestrian environment. The building does not provide an active edge but again, is set back from the trail and is separated from the trail physically by the rail bed.

- Staff supports public, accessible viewing opportunities and a realistic approach to the pedestrian environment that provides scale and comfort, opportunities for sun and shade.
- Trail: Building 12 interface with the trail was reviewed and approved by the Historic Preservation Board. Staff suggest that the Block 3 and 4 treatment is appropriate given the narrow gauge railroad lies between these lots and the trail. Trail users will be able to visually and physically connect to any programming/activity occurring in Block 3.

Entrances – *Pedestrian building entrances shall be oriented towards streets whenever possible. Service entrances should be internal to the site with shared infrastructure whenever possible.*

- Building 1A main entrance is well emphasized.
- Building 1A: Staff recommend that the articulation elements also can bring emphasis the entries.
- Fore Street has very few direct entries to buildings except for the residential developments. Staff recommends that the final design of the pedestrian entrance to the Block 4 parking structurebe emphasized in to be more legible at the Fore Street sidewalk (signage, canopy, lighting, material change, etc.)
- Staff support the treatment of the Connector Road as a B-street with less activity and engagement to the street.

Public Access Easement Design: *The public easement through the site provides visual and physical connections to and through the site and to the public trail and waterfront. Design of the public easement entrance on Fore Street shall be revised to provide accessibility and increased viewing opportunities in that location, as well as enhanced streetscape treatment for the public to appreciate and experience the historic building complex and the waterfront.*

- Staff find revisions to provide visual and physical accessibility to meet the intent of the guideline
- The approaches to the easement are approachable and convey public access
- The benches/seating opportunities were added to the area to increase the comfort, usability and overall public amenity.
- The Historic Preservation Board reviewed and improved this component of the design with a condition that the design development of ADA accessible component be brought back for review.

Water's Edge: *The MDP successfully meets the B6 design criteria regarding the water's edge. Future coordination will be required to integrate the design of the public and private waterfront properties in a way that is seamless and creates an enhanced public experience of the trail and waterfront access. Consideration shall be given to the pedestrian level facades, buffers, and other design techniques that shall be utilized to transition between the waterfront and the upland development.*

- The interaction with the trail is a critical public-facing component of the site plan. The functional/back-of-house components of buildings facing towards this well-used trail were vetted by the Historic Preservation Board – this current design reflects their review and approval.
- Staff find the treatments at Block 3 and 4 to be acceptable interim conditions with some landscape buffer between the surface parking areas and the trail. There is concern, however, about the long-term impact of this space should future phases not be developed and/or the programmed activities proposed are not implemented. Staff support a condition that would

require a screen and/or street tress installation at a future time to enhance the public realm experience of this lot.

3. <u>Eastern Waterfront Master Plan Design Guidelines</u>

As applied to the Block 4 Parking Structure – provide updated elevations with materials labeled. The west face of the building is within the historic district and received review and conditional approval for that façade only (which includes residential uses). The remainder of the building is within 100' of the historic district and is therefore subject to Advisory Review by Historic Preservation. Staff propose a condition of approval that the building be reviewed and approved by Planning staff based on an advisory review from Historic Preservation.

B. *Buildings/Architecture: Design guidelines for buildings in the Eastern Waterfront Redevelopment Area encourage architecture that* ***enhances the development of the mixed-use*** *and marine intermodal transportation center, and is* ***compatible with the surrounding neighborhoods****. New construction should* ***respect the historic character of Portland's waterfront****, while representing* ***the best elements of contemporary design.***

4. Parking Structures*: Parking structures should be compatible with adjacent uses and architecture in form, bulk, massing, articulation, and materials. The design of parking structures should create a visually attractive and active pedestrian environment by incorporating retail, commercial, and residential uses along all public streets.*

a. Mixed-use Architecture: Parking uses and the appearance of parking structures should not dominate public streetscapes. All above-grade parking structures should include useable retail, commercial, and/or residential uses along street frontages to create high quality urban environment. Parking structures on Primary Streets should have at least two stories of mixed uses integrated along the street frontage.

- Fore Street: The parking structure does not dominate the public streetscape. Future phases will incorporate the requisite residential use along the public street. Staff has evaluated this as a below-grade parking structure from the perspective of Fore Street and consider that the edge treatment – fence, walls, and landscape – are what should be evaluated. While the fence/landscape treatment provide for greater visible access to the harbor., this also allows for increased visibility of parked cars, lighting, and circulation structures. As presented in the most recent application materials, staff finds that the parking structure does not dominate the public streetscape given its below-grade nature and visual permeability while relying on landscape and fence to maintain a street wall.
- Trail: The design question for this facade is how this building relates to the overall complex within view of the public way. The design incorporates some elements – material selection, simple form, regularity/pattern that correspond to the overall complex architectural language. This elevation of the project is not considered to have street frontage and is exempt from the retail liner requirement.

b. Vertical and Horizontal Articulation: Visible diagonal ramps and non-horizontal parking plates should be screened from all visible angles whenever possible and not allowed on primary facades.

- Not applicable – no ramps are visible from the public ROWs

c. Lighting: Light fixtures installed in the interiors of parking garages should be fully screened from the exterior or utilize full cut-off shielding as defined in the City's Technical Standards.

- Staff find the proposed lighting fixtures meet the standard with regards to full cut-off and light trespass. The standard is difficult to interpret in the case of the lights on the top deck of the structure – these are not technically interior lights. Staff believe the intent is met with the full cut-off fixtures proposed.

For Board discussion:

- Future improvements to Block 3 if left unbuilt
- Block 4 Parking Garage compliance with design guidelines and standards as relates to the public ways.
- Fore Street sidewalk/streetscape design (landscape edge, street trees, fence, decorative fixtures)
- Building 1A articulation elements as suggested by staff

Proposed Conditions of Approval related to design review

Prior to the application for building permit:

- The applicant shall provide details for fences to be installed on Fore Street to be reviewed and approved by staff for conformance with the design standards.
- Final Block 4 garage design shall be reviewed and approved after taking into consideration the Historic Preservation Advisory Design Review.
- The applicant shall submit for review and approval by staff revised building 1a elevations showing revised articulation elements.
- The applicant shall submit for review and approval by staff revised Site Plan drawings showing edge treatments for the landscape areas adjacent to sidewalks and trails, and the decorative street light fixture designated in the Technical Manual with appropriate spacing.

Within three years of Certificate of Occupancy:

- If no additional site improvements or building development has begun, the property owner of Block 3 shall amend the proposal for this area by providing an enhanced interface between the trail and Block 3 lot in the form of screen wall, street trees, or similar proposal, to be submitted to the Planning Authority for review and approval.

Attachment 6.

Portland, Maine Yes. Life's good here.

Planning & Urban Development Department

To: Christian Roadman, Planner, Planning & Urban Development Department

From: Victoria Volent, Housing Program Manager, Housing & Community Development Division

Date: January 24, 2020

Subject: 58 Fore Street Inclusionary Zoning Conditional Use

All developments of ten (10) units or more are conditional uses subject to Planning Board review on the condition that they comply with the requirements set forth in Division 30, Section 14-487 of the Zoning Ordinance.

Division 30, Section 14-487

Division 30, Section 14-487, Ensuring Workforce Housing, requires at least ten percent (10%) of the dwelling units in the development shall meet the definition of Workforce Housing units for sale or for rent. A fractional fee-in-lieu would result when the calculation of a project's inclusionary obligation results in a fractional unit. The fractional unit obligation will be provided in the form of a proportional fee-in-lieu. The in-lieu fee shall be calculated and paid into the Housing Trust Fund as defined in Sec. 14-489, on or before the date upon which a certificate of occupancy is issued. The ordinance under Section 14-487 e 3 also requires the number of bedrooms in the Workforce unit shall be at least 10% of the total number of bedrooms made available as part of the development.

The development located at 58 Fore Street proposes the creation of 14 residential units. The fourteen (14) dwelling units of housing would consist of three (3) studio units, four (4) one-bedroom units, and seven (7) two-bedroom units. As dwelling units for rent, the designated Workforce Units will be restricted to households earning up to 100% of Area Median Income (AMI). Based on the requirements outlined in Section 14-487, the applicant is required to; provide a minimum of two (2) one-bedroom workforce units or; provide one (1) workforce unit consisting of one-bedroom and pay a proportional fee-in-lieu of $42,436 (.4 X $106,090); or pay a fee-in-lieu for 1.4 units (or 1.4 X $106,090 = $148,526). The Applicant has elected to provide two (2) one-bedroom workforce units on-site, to satisfy the ordinance's minimum requirements. As such, the project has met the minimum requirements set forth in Section 14-487.

Staff Recommendation

Staff recommends the Board Approve the Inclusionary Zoning Conditional Use provided the Applicant and the City enter into an Affordable Housing Agreement (AHA) for two (2) one-bedroom workforce units before a Building Permit may be issued.

The Affordable Housing Agreement(s) will outline the details of the affordability restrictions placed on the workforce units and will be filed as covenant to the 58 Fore Street property deed with the Cumberland County Registry of Deeds before a certificate of occupancy may be issued.

Sincerely,

Victoria Volent
Housing Program Manager

Attachment 7.

PLAN CORRECTIONS REPORT PL-000924-2019
FOR CITY OF PORTLAND

PLAN ADDRESS: 58 Fore St
Portland, Maine 04101

PARCEL: 018 A001001

APPLICATION DATE: 11/08/2019

SQUARE FEET: 0.00

EXPIRATION DATE:

VALUATION: $0.00

DESCRIPTION: The proposed project is the construction of a mixed-use redevelopment. The project includes construction of a new office and retail building, the reconstruction of a relocated building, renovation of the historic core of buildings on the site, and the construction of a new parking garage, as well as site utilities and finishes to support the buildings.

CONTACTS	Name	Company	Address
Agent/Representative	Lauren Swett	Woodard & Curran	41 Hutchins Drive Portland, ME 04102

Comments & Corrections Required

City Arborist — Jeff Tarling

DPW Engineering — Mike Tremblay

Fire — Robert Thompson

Comment(s)/ Recommendation(s):

All areas using pavers shall be constructed to support a 50 ton emergency vehicle

Bollards must be retractable or spring loaded to allow emergency access to the site.

Additional fire hydrants will be required within the property. Developer should coordinate with the Fire Department Fire Prevention Bureau for the number and location of these hydrants.

New overhead obstructions shall maintain a vertical clearance of no less than 13'6" high

Planning — Christian Roadman

Traffic - Third Party Reviewer — Tom Errico

Historic Preservation — Pool Historic Preservation

Conditions Required

General

Historic Preservation Board condition of approval

a) The documentation, disassembly and reconstruction of Building 12 will be performed according to the means and methods outlined in a letter dated 12/24/18 from Consigli Construction. Such documentation, disassembly and reconstruction will be performed in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties.

b) Reconstruction of Building 12 shall be completed prior to the release of a Certificate of Occupancy for any other building on the property.

c) Any proposed alterations or additions to Building 12 must be reviewed and approved by the Historic Preservation Board prior to commencing with the reconstruction.

d) A remaining original window shall be salvaged for use as a template for reconstruction

e) Approval for relocation and reconstruction is contingent on the existing historic orientation of Building 12 being maintained as described in final proposal.

Attachment A.

PORTLAND FORESIDE DEVELOPMENT – PHASE 1

LEVEL III SITE PLAN

58 Fore Street
Portland, ME

41 Hutchins Drive
Portland, ME 04102
800-426-4262

woodardcurran.com
COMMITMENT & INTEGRITY DRIVE RESULTS

0227007.16
Portland Foreside Development Company
November 2019

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1. APPLICATION CHECKLIST

CITY OF PORTLAND
Planning & Urban Development Department

LEVEL II and LEVEL III SITE PLAN
GENERAL DOCUMENT AND DRAWINGS CHECKLIST
Please submit each document as a separate PDF file
Please confirm by electronically checking the boxes to the left

** PLEASE FILL OUT AND UPLOAD SEPARATELY THE ZONING TABLE AND WAIVER TABLE AS NOTED BELOW **

GENERAL APPLICATION DOCUMENTS	
Yes ☑ NA ☐	**Project Description** • Cover Letter with detailed project description
Yes ☑ NA ☐	**Completed Checklist – Level I: Site Alteration** (this document)
Yes ☑ NA ☐	**Right, Title and Interest** • Deeds, leases, or purchase and sales agreements
Yes ☑ NA ☐	**Evidence of State or Federal Approvals** • Permits or letters of non-jurisdiction, if applicable
Yes ☑ NA ☐	**Zoning Assessment** • Table listing required and proposed uses and dimensional standards Zoning Assessment Table
Yes ☑ NA ☐	**Existing and/or Proposed Easements or Covenants, applicable.** • Evidence of existing easements and any proposed easements
Yes ☑ NA ☐	**Waiver Requests** • Written request for waiver describing request and reason Waiver Table
Yes ☑ NA ☐	**Financial Capability** • Letter or evidence from a financial institution or third party verifying financial capacity to undertake project
Yes ☑ NA ☐	**Technical Capability** • Evidence of technical capability of applicant and consultants – resumes and/or examples of past projects

LEVEL II AND LEVEL III SITE PLAN
STANDARDS AND SUBMISSION CHECKLIST

Provide assessment of compliance with standards and include supplemental documentation, as applicable
Please Submit each document as a separate PDF file

TRANSPORTATION

Yes	NA	
☑	☐	**Transportation Analysis- Traffic Impact (14-526 (a) 1)** • Provisions for pedestrian, bicycle, vehicle, and loading circulation and incremental volume of traffic impacts • Traffic Impact Study (Technical Manual, Section 1) if applicable
☑	☐	**Access and Circulation (14-526 (a) 2 a)** • Access and internal circulation, addressing ADA access • Access and egress impacts on traffic flows • Description and use of drive-up features, if applicable
☑	☐	**Loading and Servicing (14-526 (a) 2 b)** • Loading and servicing needs, route and travel way geometrics for deliveries • Turning templates for delivery vehicles, if applicable
☑	☐	**Sidewalks (14-526 (a) 2 c)** • Sidewalks and condition along street frontages and internal walkways • Engineered details for ADA ramps and public sidewalk details meeting sidewalk materials policy and ADA ramp construction details as applicable (Technical Manual, Section 1)
☑	☐	**Public Transit (14-526 (a) 3), if applicable** • Existing available transit services • Proposed site plan design details, such as easement, pad base, and shelter
☑	☐	**Off-Street Parking: Vehicle & Motorcycle/Scooter) (14-526 (a) 4 a and c)** • Expected parking demand, proposed parking supply, ADA parking, and applicable Zoning Requirements • Address Technical Manual standards (Section 1) for curb cut separation and parking lot layout and locate on site plan
☑	☐	**Bicycle Parking (14-526 (a) 4 b)** • Address bicycle parking requirements and identify locations on-site • Construction details for bike racks (Technical Manual, Section 1)
☑	☐	**Snow Storage (14-526 (a) 4 d)** • Management plan for snow removal and locate snow storage areas on plan
☑	☐	**Traffic Demand Management (TDM) (14-526 (a) 5), if applicable** • Develop TDM with Trip Reduction Targets and Strategies

ENVIRONMENTAL AND LANDSCAPE FEATURES	
Yes NA ☑ ☐	**Preservation of Significant Natural Features (14-526 (b) 1), if applicable** • Trees, plants, habitats listed on State or Federal list of endangered or threatened • High and moderate value waterfowl and wading habitat • Aquifers on Casco Bay Islands • Waterbodies (including wetlands, watercourses, significant vernal pools and floodplains) • Proposed preservation areas and protection measures • Documentation from environmental consultants, determinations from applicable state agencies
Yes NA ☑ ☐	**Landscaping and Landscape Preservation (14-526 (b) 2 a)** • Preservation of trees and preservation within required zoning setbacks (Technical Manual, Section 4) • Protection measures of existing vegetation during construction • Protection measures within Shoreland Zone, if applicable
Yes NA ☑ ☐	**Site Landscaping (14-526 (b) 2 b)** • Screening and buffering of service areas and between non-residential and residential uses • Planting plans with plant schedule and sizes (Technical Manual, Section 4)
Yes NA ☐ ☑	**Parking Lot Landscaping (14-526 (b) 2 b ii), if applicable** • Landscaped islands within parking areas (Technical Manual, Section 4)
Yes NA ☑ ☐	**Street Trees (14-526 (b) 2 b iii)** • Existing Heritage or Feature Trees on site and measures to preserve • Identify street trees on the plan meeting the site plan and Technical Manual standards (Section 4) or identify alternative measures, if applicable
ENVIRONMENTAL AND STORMWATER	
Yes NA ☑ ☐	**Water Quality, Stormwater Management and Erosion Control (14-526 (b)3 a)** • Stormwater report in compliance with Section 5 of Technical Manual and DEP Chapter 500 stormwater for basic, general and flooding standards, as applicable • Erosion control plan and measures • Evidence of compliance with Urban Impaired Stream Standards pursuant to DEP Chapter 500 stormwater, as applicable • Subsurface sanitary sewage disposal and groundwater protection

PUBLIC INFRASTRUCTURE AND SAFETY	
Yes ☑ NA ☐	**Consistency with City Master Plans (14-526 (c) 1)** • Identify consistency with master plans • Proposed easements, rights and improvements to connect or continue off-premises public infrastructure, as applicable
Yes ☑ NA ☐	**Public Safety and Fire Prevention (14-526 (c))** • Address Crime Prevention through Environmental Design (CPTED) (Technical Manual, Section 3) • Emergency vehicle access • Address consistency with public safety standards (Technical Manual, Section 3) • Submit a code summary referring NFPA 1 and all Fire Department standards (Technical Manual, Section 3) – Fire Checklist
Yes ☑ NA ☐	**Availability and Adequacy of Public Utilities (14-526 (c) 3) (Technical Manual, Sections 2 & 9)** • Electrical services, including providing underground services • Identify existing and proposed connections for public utilities and required public utility upgrades • Sewer line connections are required, if there is a main within 200 feet • Proposed solid waste management facilities on-site and management for the site • Written evidence of the ability to serve from utility companies, as applicable
SITE DESIGN	
Yes ☑ NA ☐	**Massing, Ventilations and Wind Impact (14-526 (d) 1)** • Wind and ventilation impacts on adjoining structures and/or adjacent public spaces. Wind study, if applicable • Bulk, location or height impacts on adjoining structures • Identify and locate HVAC equipment and venting away from public spaces and residential properties • Identify screening and manufacturing specifications for noise, if applicable
Yes ☑ NA ☐	**Shadows (14-526 (d) 2), if applicable** • Shadow analysis of impacts on publicly accessible open space (Technical Manual, Section 11)
Yes ☑ NA ☐	**Snow and Ice Loading (14-526 (d) 3)** • Building design to prevent snow and ice from loading or falling onto adjacent properties or public ways
Yes ☑ NA ☐	**View Corridors (14-526 (d) 4), if applicable** • Protection of designated view corridors (Portland Design Manual, Appen. 1)

Yes ☑ NA ☐	**Historic Resources (14-526 (d) 5), if applicable** • Identify developments within Historic Districts or affecting Designated Landmarks • Certificate of Appropriateness or other evidence • Identify Developments within 100 feet of Historic Districts or affecting Designated Landmarks. Advisory HP review may be required • Address preservation and documentation of Archaeological Resources
Yes ☑ NA ☐	**Exterior Lighting (14-526 (d) 6)** • Cut sheets of on-site light fixtures and any architectural or specialty lights (Technical Manual, Section 12) • Engineered details for any lights proposed in street right-of-way (Technical Manual, Section 10)
Yes ☑ NA ☐	**Noise and Vibration (14-526 (d) 7)** • Evidence of noise levels for equipment, such as equipment specifications, to demonstrate consistency with zoning requirements
Yes ☑ NA ☐	**Signage and Wayfinding (14-526 (d) 8), if applicable** • Signage plan showing the location, dimensions, height and setback of all existing and proposed signs. Signs in Historic Districts are reviewed by Historic Preservation staff • Proposed commercial and directional signage on site
Yes ☑ NA ☐	**Zone Related Design Standards (14-526 (d) 5)** • Address Historic Preservation Design Review, if applicable • Address any applicable design review standards by zone • Address submission requirements from Design Manual, page 1, addressing neighborhood context • Description of exterior materials, color, finish, and samples
Construction Management Plan	
Yes ☑ NA ☐	**Construction Management Plan** • Construction Management Document and Plan

LEVEL II AND LEVEL III SITE PLAN
DRAWINGS CHECKLIST

Please upload the following DRAWINGS with the listed details into e-Plan as separate pdfs

RECENT BOUNDARY SURVEY (stamped by Maine Licensed Surveyor)

- ☑ Must be in compliance with Technical Manual, Section 13

SITE PLAN(s) (stamped by Maine Licensed Engineer) including:

Existing Conditions

- ☑ Approximate location of structures on abutting property
- ☑ Topography
- ☑ Locate water courses (Fore River)
- ☑ Delineate wetlands (Fore River)
- ☑ Zone lines

Proposed Site Plan

- ☑ Ground floor area, and grade elevations for all buildings

Access, Circulation, and Parking

- ☑ Streets and intersections adjacent to site, any proposed geometric modifications
- ☑ Location, dimensions and materials of all existing and proposed driveways, vehicle, bicycle, & pedestrian access ways with corresponding curb lines
- ☑ Engineered specifications/ cross-sections for proposed driveways, sidewalks & paved areas
- ☑ Location and dimensions of proposed loading areas
- ☑ Existing and proposed transit infrastructure with dimensions/ engineering specifications
- ☑ Location of vehicle and bicycle parking with dimensions and engineering specifications

Site Considerations

- [x] Identify snow storage areas
- [x] Location of fire hydrants
- [x] Location of solid waste management facilities

UTILITY PLAN including:

- [x] Existing utilities on site and within public streets
- [x] Location, sizing and directional flows of all existing and proposed utilities
- [x] Location and dimensions of off-premises public or publicly accessible infrastructure adjacent to site
- [x] Electric utility infrastructure

GRADING AND DRAINAGE PLAN including:

- [x] Existing grades and drainage
- [x] Proposed grades
- [x] Proposed stormwater management meeting Technical Manual (Section 5), standards
- [ ] Location and proposed alteration of a water course
- [ ] Preservation or alteration of wetlands

EROSION CONTROL

- [x] Must be in compliance with Technical Manual, Section 5

LANDSCAPE PLAN including:

- [x] Existing vegetation to be preserved and preservation measures
- [x] Proposed landscaping and buffers
- [x] Planting schedule

RECORDING PLAT, if applicable

- [x] If Subdivision, must be in compliance with requirements of Section 14-496 (b)

ARCHITECTURAL PLANS AND RENDERINGS including:

- [x] Exterior building elevations, color renderings, illustrations of all sides
- [x] Location and dimensions of all existing and proposed HVAC and mechanical equipment, all proposed screening
- [x] Provide context drawings, if applicable (Design Manual, page 1)
- [x] Floor plans

2. APPLICATION FEES

A check for the required application fee(s) will be provided to the Planning Department. It is our understanding that the application fee includes:

- Level III Site Plan Over 300,000 SF $7,000
- Site Location of Development Permit $3,500
- Site Location of Development x 9 lots $1,800
- Subdivision $500
- Subdivision x 10 Lots $225

TOTAL: $13,025

(Note: We understand that the $1,600 parking lot fee is not currently being charged, but we will be notified separately if it is determined that a parking garage qualifies for this fee.)

3. PROJECT SUMMARY

On behalf of Portland Foreside Development Company (Applicant), Woodard & Curran is submitting a Level III Site Plan Application to construct Phase 1 of the 58 Fore Street Master Development Plan. A letter authorizing Woodard & Curran to act at the agent on behalf of the Applicant is attached to this Section. The project Site is located at 58 Fore Street in Portland, Maine, on three parcels of land identified by the City Tax Assessor as Tax Map 18, Lots A001, A002, and A013 and is partially located within a FEMA Flood Zone, as shown by the attached maps. Additional work associated with the project will be completed on the abutting lots owned by the City of Portland and a Right-of-Way owned by the Maine DOT and utilized by the Maine Narrow Gauge Railroad. The proposed work is shown on the drawings and renderings included with this application.

3.1 Permit Summary

As noted above, this project is being submitted for Site Plan Approval from the City of Portland. The project's size and scale qualify it for a Level III Site Plan that will be reviewed and approved by the Planning Board. The project's location partially within a Flood Zone requires a Flood Hazard Development Permit.

This application includes the subdivision of the 58 Fore Street property into 9 development parcels with utility and access space held in common with reciprocal easements granted to the proposed parcels. A subdivision plan prepared by Owen Haskell, Inc. is included with the project drawings.

The project is subject to the Maine Department of Environmental Protection (DEP) regulations for a Site Location of Development Act (SLOD) or Site Law Permit. It is our understanding that the project will be reviewed by the City of Portland under their Delegated Review Authority. A separate SLOD permit application has been provided with this Site Plan Application, and 3 paper copies have also been provided for the City to give to the Maine DEP.

3.2 58 Fore Street Master Development Plan

The proposed development is the first phase of the 58 Fore Street Master Development Plan, unanimously approved by the Planning Board (Project ID: 2016-224) on December 22, 2016, to redevelop and revitalize the 10-acre former Portland Company complex into a mixed-use development. The Master Development Plan consists of six "blocks" of development with open space plazas, public access easements, view corridors to the water and a private roadway that provides shared access for both vehicular and pedestrian traffic through the Site.



Figure 3-1 Master Development Plan Blocks

A seventh block was included in the Master Development Plan for an adjacent marina (Fore Points Marina). The marina has been previously permitted and construction was completed in 2019. While the marina is located on a separate parcel directly to the south, it will be integrated into the operation of the Portland Foreside Development.

The overall Master Development Plan focused on the redevelopment and revitalization of the former Portland Company complex into a mixed-use neighborhood to encourage year-round use by the greater community. The overarching vision is to redevelop the 10-acre site so it can reach its potential as a revitalized waterfront neighborhood with a vibrant and diverse mix of uses.

The Project Site previously served as a pre-Civil War locomotive manufacturing site and components of that past still stand today. Historically significant facades include the Portland Company Vault, the Machine Shop, the Boiler House/Brass Foundry and the Blacksmith Shop. The development team has included these historic buildings, along with the character and linear orientation of the alleyways between, in the redevelopment planning for the site.

The Phase 1 development of 58 Fore Street is a critical piece to Portland's future for a number of reasons including:

- The overall Project Site is large (+/- 10 acres) and strategically located between Portland's vibrant downtown, its working waterfront, and the beginning of its Eastern Promenade residential neighborhoods. Phase I will begin the connection of an underutilized part of the City to adjacent neighborhoods, the waterfront and the Old Port.

- The Project Site represents a keystone piece in the City's continuing efforts to link its vibrant downtown to the vast potential of its commercial waterfront. Phase 1 will help the City further realize the benefits of its investments in the Ocean Gateway marine terminal facility and related infrastructure;

- The development will help stimulate other investments in the eastern waterfront with the anticipation that investment in the Project Site will result in investment in underdeveloped public and private lands situated between the India Street neighborhood and the Project Site;

- As a whole, this proposed development presents an unparalleled opportunity to grow the City's tax base, add housing, and create jobs; and

- The development can act as a catalyst for change in this area, improve the quality of life for all Portland residents by facilitating access to the waterfront, adding capacity for events that draw residents and visitors and enable the City's cruise ship terminal to live up to its name as a truly memorable gateway.

The entire Master Development Plan was informed by the development considerations noted in the Eastern Waterfront Master Plan which include: the historic nature of the 19th century industrial complex; promoting the continuation of boat yard and yacht support services; adaptive reuse and sensitive rehabilitation of historic structures; increasing connections to Commercial Street; promoting shared parking with abutting onsite uses; and expanding recreational boating and active public use of the water. Phase 1 of the 58 Fore Street Master Development Plan includes these development considerations as well as components of Portland's Plan 2030.

The design intent of the entire Master Development Plan for 58 Fore Street is to provide vehicular and pedestrian access to the uses on the site while creating contemporary social spaces that are respectful of the site's industrial history, but also support the programmatic intent of the buildings.

3.2.1 Minor Amendments to the Master Development Plan

As part of the Level III Site Plan for Phase 1 of the 58 Fore Street development project, several minor amendments to the Master Development Plan have been made. The proposed location for Building 12 is in a different location than

what was shown on the approved Master Development Plan. The change in location allows for Building 12, an important historic resource, to be more visible and prominent on the site. We are requesting the following modifications to the 58 Fore Street Master Development Plan approved on December 20, 2016 be made:

- Relocation of Building 12 from its former position on the 58 Fore Street Master Development Plan (as shown by Figure 3-2, Building 12 was formerly intended to connect to Building 1A and, as shown on the design drawings, Building 12 is proposed to be located across the roadway); and
- Modification of the Portland Company Historic District boundary line within the Master Development Plan to be consistent with the new location of Building 12.

Portland Foreside Development Company received approval on February 6, 2019 (decision letter for Certificate of Appropriateness dated May 17, 2019) from the City of Portland Historic Preservation Board to amend the boundary of the Portland Company Historic District to reflect the revised relocation site for Building 12 and disassemble, reconstruct and relocate Building 12 to its new location. The decision letter from the Historic Preservation Board has been included as an attachment to this section for your reference.

Section 14-532(b)(1) of the City of Portland Land Use Code indicates that revisions to a Master Development Plan can be approved by the Planning Authority upon written application. The 58 Fore Street Master Development Plan approval letter dated December 22, 2016, also references this minor amendment process. Based on discussions with City Staff (Ms. Christine Grimando), we are documenting revisions to the Master Development Plan within this Level III Site Plan Application.

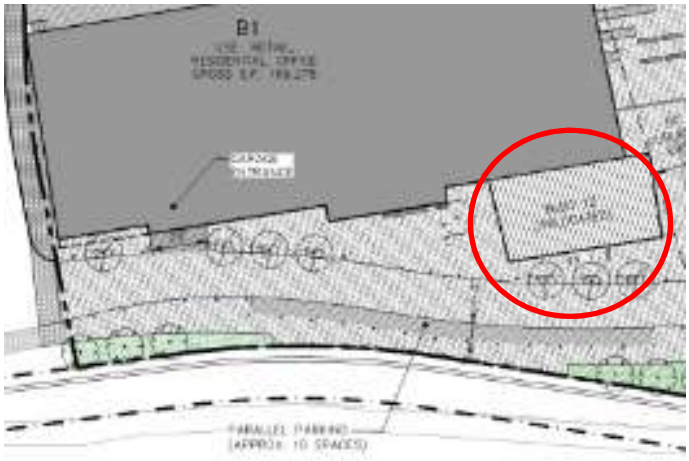


Figure 3-2: Former Building 12 Location Per Master Development Plan

3.3 Phase 1 Project Description

The redevelopment of 58 Fore Street into a mixed-use neighborhood highlights the historical significance of the area, access to the waterfront and provides a direct connection from the adjacent neighborhoods to the waterfront. The result is a vibrant revitalization of the City's eastern waterfront. The Phase 1 development program for the project was considered and designed around the overall vision of creating this mixed-use neighborhood and proposes commercial, residential, office, retail, restaurant, marina and public open space uses which are consistent with the Master Development Plan for the site. Open space proposed for Phase 1 includes plazas for pedestrian use between the individual building components as well as a public access easement, view corridors and access to the waterfront via a walkway along the water's edge.

Phase 1 of the 58 Fore Street Master Development Plan is focused on Block 1, Block 2, Block 4 and associated infrastructure which is advanced by the development program described below. For the purposes of our use and area evaluation, we have broken all building areas down into five area categories – residential, office, retail/service/restaurant, event, and parking. Within each block description below we give total areas for each of these uses, and these uses also relate to the uses evaluated within the traffic studies described further in this application.

Block 1

Block 1 marks a prominent entry point to the 58 Fore Street property from Thames Street for vehicles and pedestrians. Visitors are introduced to the revitalized area by the strong visual prominence of reconstructed historical Building 12 as they walk alongside ground-level retail associated with a new office building. Other points of entry are along the realigned Eastern Promenade Trail, which will have a closer connection to the waterfront, and through the public access easement which resides over an entry stair with adjacent public view vantage points that provides pedestrian access on the east side of Block 1 to the core of the abutting historic district.

Parcel 1A is the construction of a Class A office building with round floor retail on the south side and a single deck of parking. Parcel 1C highlights the reconstruction of Building 12 which was meticulously catalogued and disassembled with approval from Historic Preservation Board and will be rebuilt in the more prominent location detailed in the site plan with uses that include a fine dining restaurant, office space, and two residential units. The table below summarizes the uses and square footage amounts for each parcel associated with Block 1:

Use	Building 1A (Parcel 1A)	Building 12 (Parcel 1C)	Total Phase 1 Block 1
	Area (SF)		
Residential	N/A	3,200 (2 units)	3,200
Office	95,100	3,200	98,300
Retail/Service/Restaurant	9,300	3,200	12,500
Event	N/A	N/A	N/A
Parking	26,500 (70 spaces)	N/A	26,500
Total	**130,900**	**9,600**	**140,500**

Block 2

Block 2 is the Historic Core of the redevelopment project which highlights the adaptive reuse of 7 historic buildings from the former Portland Company complex. Along with the historic buildings, this block brings to life two alleys and two plazas that will serve pedestrians as they move throughout the site. The reuse of these 7 historic buildings for a market hall and ground floor retail will invigorate the neighborhood and provide a strong sense of place rooted in the masonry style and form of Portland's industrial past. Upper floors will be utilized primarily for event space, preserving the historic industrial character of the space, a visual element that patrons have enjoyed during many events that were hosted at this location in the recent past. A portion of the upper floors will also be utilized as office space. New residential townhomes along Fore Street will complement the retail, commercial and office uses. The redeveloped historic core reveals itself to pedestrians and vehicles by emphasizing openness and flexibility. Considerations for public access include a new staircase providing access from Fore Street to plaza spaces within the site that continue all the way down to the waterfront.

Parcels 2A, 2B and 2C are all associated with the renovation of the site's historic core buildings (Building 2, Building 3, Building 4, Building 6A, Building 6B, Building 24, Building 14, Building 15 and Building 16) into restaurant, office, residential and event space, along with a market hall that will showcase local food/beverage vendors, chefs, and

culinary focused entrepreneurs. The table below summarizes the uses and square footage amounts associated with Block 2:

Use	Block 2 (Parcels 2A, 2B, & 2C)
	Area (SF)
Residential	N/A
Office	12,400
Retail/Service/Restaurant	35,900
Event	17,900
Parking	N/A
Total	**66,200**

Block 4

Block 4 provides the initial levels of common, structured parking that will serve all uses associated with each development block at 58 Fore Street. Residential units and retail space along the western side of the garage are proposed during Phase 1 for Block 4. The structured parking built during Phase 1 will form the foundation for the future buildout of residential (above) and ground floor retail (south elevation) during Phase 2, along with an expansion of the parking in that future phase. Block 4 will provide the entire development with centralized parking to support the full buildout.

Parcel 4 is the construction of 5 levels of the parking garage with residential units, storage and retail on the west elevation. The table below summarizes the uses and square footage amounts associated with Block 4:

Use	Block 4 (Parcel 4)
	Area (SF)
Residential	12,900 (12 units)
Office	N/A
Retail/Service/Restaurant	1,100
Event	N/A
Parking	221,800 (652 spaces)
Total	**235,800**

Infrastructure, Utilities & Access Improvements

In addition to the Block development, shared street infrastructure and utilities will be installed throughout the site in the common spaces between the development parcels with reciprocal easements granted throughout." The Phase 1 infrastructure will support the proposed development in Blocks 1, 2, and 4. The Phase 1 work will also include the adjustment of the Maine Narrow Gauge Railroad and the Eastern Promenade Trail to be located closer to the water, as well as access improvements on property owned by the Maine DOT and City of Portland.

The Phase 1 development focuses on encouraging public access to the site in a number of locations, and specifically focuses on the 50' public access easement. Pedestrians will be encouraged to access the site via a public staircase from Fore Street directly down to the plaza space between Block 1 and Block 2. In addition, the design compliments the staircase by providing for an expansive public upper viewing area and public lower plaza area to provide for the enjoyment of views of both the rehabilitated buildings of the Portland Company Historic District and Casco Bay.

In order to create a complete, functional site at the completion of Phase 1, interim conditions are proposed in areas of the site that will not see their finished conditions as part of this project including:

- Block 1 – Grading and loam and seed on Parcel 1B.
- Block 3 – Grading and repaving in Parcel 3 to provide temporary access to the adjacent Fore Points Marina.
- Blocks 5 and 6 – Minor surface improvements, grading, and utility work within Parcel 5 to enable the surrounding work. No development is proposed in association with these blocks as part of Phase 1.

3.4 Attachments

- Agent Letter
- Location Map
- Tax Map
- FEMA Map
- City of Portland Historic Preservation Board February 6, 2019 Certificate of Appropriateness
- Civil, Landscape, & Architecture Design Plans (uploaded to Drawings folder in Eplan)
- Subdivision Plan (uploaded to Drawings folder in Eplan)
- Architectural Renderings (uploaded to Drawings folder in Eplan)

FORESIDE
PORTLAND, MAINE
254 Commercial Street, Suite 118, Portland, Maine 04101

July 25, 2019

RE: Portland Foreside Development Company LLC – Agent Authorization

To Whom It May Concern:

Woodard & Curran will be acting as our agent for all local, state, and federal permitting associated with the Portland Foreside Development Company LLC project located at 58 Fore Street in Portland, Maine.

Please contact our project manager, David Senus, if you have any questions, 207.517.1102.

Sincerely,

Casey Prentice
Manager
Portland Foreside Development Company



FIGURE 1

SITE LOCATION

PORTLAND FORESIDE PHASE 1
58 FORE STREET
PORTLAND, MAINE

Legend

Site Location

0 500 1,000 2,000 Feet

N

WOODARD &CURRAN

Project #: 227007.09
Map Created: February 2019

Figure Exported: 2/11/2019 By: nkatsiaficas Using: C:\Users\nkatsiaficas\OneDrive - Woodard & Curran_PCFolders\Desktop\58 Fore St\Figure 1 -58 Fore St Site Location.mxd

Third Party GIS Disclaimer: This map is for reference and graphical purposes only and should not be relied upon by third parties for any legal decisions. Any reliance upon the map or data contained herein shall be at the users' sole risk. **Data Sources:** USGS

GILBERTS LN
MUNJOY ST
ATLANTIC ST
EASTERN PROM
ST LAWRENCE ST
FORE ST
WATERVILLE ST
ADAMS ST
MUNJOY SOUTH
THAMES ST
016 E022
016 F012
016 F001
016 F002
016 F025
016 F003
016 C018
016 C019
016 C017
016 C020
016 C012
016 C021
016 C013
016 C022
016 C023
ISABELLE CONDO
8839
003 O014
016 F013
016 F014
016 F015
016 F004
016 F005
016 F006
016 F007
016 F008
016 F009
016 F010
016 F011
016 F022
016 F023
016 F024
CASCO BAY CONDO
5890
016 J001
016 J002
016 J003
016 J016
016 J017
WATERVILLE STREE CONDO
3204
016 J005
016 J006
016 J007
016 J020
016 J021
016 J022
016 J023
016 J024
016 J008
GOOD YELLOW HOUSE CONDO
016 J009
016 J010
016 J011
016 J012
016 J025
016 J026
016 F016
016 F017
016 F018
016 F019
016 F020
016 J015
017 E041
017 E034
017 E040
017 E035
017 E036
017 G007
002 A004
002 A002
16300
002 A003
25500
002 A010
4508
002 A007
002 A014
002 A017
002 A016
002 A018
20608
002 A020
9370
002 A022
002 A019
11440
001 C003
001 C005
001 C004
002 X001
018 A001
018 A002
018 A013
52376
381942
446 A003
18600
446 A004
304290
446 A001
446 A002
374692
019 A010
019 A014

1 inch = 50 feet


G10NW
G10NE
G11NW
G10SW
G10SE
F10NW
F10NE
F11NW
CUMBERLAND AVE
CONGRESS ST
PONCE ST
MONUMENT ST
KELLOGG ST
SHERIDAN ST
SHERBROOKE ST
GILBERTS LN
HOYTS LN
ST LAWRENCE ST
WATERVILLE ST
ADAMS ST
MUNJOY SOUTH
WASHINGTON AVE
MOUNTFORT ST
FEDERAL ST
NEWBURY ST
FORE ST
HANCOCK ST
105 CONGRESS ST CONDO
HACIENDA CONDO
JOHN FORD HOUSE CONDO
11 SHERIDAN ST CONDO
WATERVILLE STREE CONDO
CONG FHARRAIGE CONDO
44 FEDERAL STREET CONDO
CITY
379,092
230,107
1 inch = 50 feet

G10SE | G11SW | G11SE

F10NE | G/NE

018 A001

58 10

018 A013

019 A010

87.18 | 137.3 | 137.25 | 225 | 169.54

018 A002

446 A003

374692

446 A001

40432

019 A014

019 A015

Street ID 14-21

80 - 136
79 - 135
THAMES ST

445 A001

233010

1084465

446 A004

597

446 A002

445 A002

N

F10NE

38

64

1 inch = 50 feet

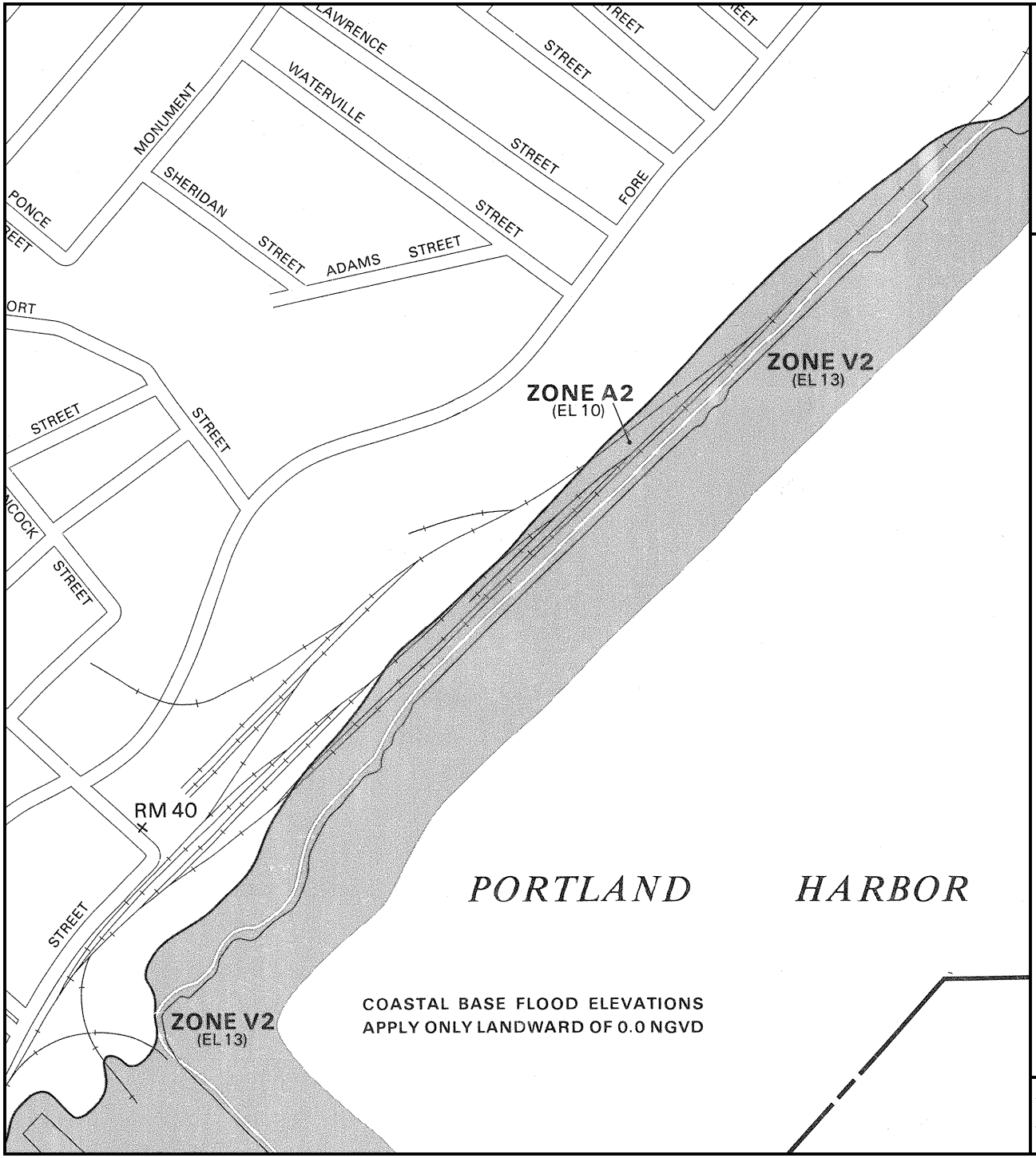
F10SE

April 1 2012 fy 2013

Tax Map Index; http://www.portlandassessors.com/taxmaps.htm

F11SW

Index Number - F11NW



NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

CITY OF
PORTLAND, MAINE
CUMBERLAND COUNTY

PANEL 14 OF 17
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
230051 0014 B

EFFECTIVE DATE:
JULY 17, 1986

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

CITY OF PORTLAND, MAINE
HISTORIC PRESERVATION BOARD

Julia Sheridan, Chair
Bruce Wood, Vice Chair
Ian Jacob
Robert O'Brien
Penny Pollard
Julia Tate
John Turk

May 17, 2019

Portland Foreside Development Company
Attn. Casey Prentice and Kevin Costello

Dear Casey and Kevin,

On February 6, 2019, the City of Portland's Historic Preservation Board voted 4-0 (Sheridan recused; O'Brien, Pollard absent) to:

1) amend the boundary of the Portland Company Historic District to reflect the revised relocation site for Building 12; and
2) approve your application for a Certificate of Appropriateness for the disassembly, reconstruction and relocation of Building 12 to the revised site

Approval was made on the basis of plans and specifications submitted on your behalf by your consultants for the 2/6/19public hearing. Approval was made subject to the following conditions of approval:

a) The documentation, disassembly and reconstruction of Building 12 will be performed according to the means and methods outlined in a letter dated 12/24/18 from Consigli Construction. Such documentation, disassembly and reconstruction will be performed in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties.

b) Reconstruction of Building 12 shall be completed prior to the release of a Certificate of Occupancy for any other building on the property.

c) Any proposed alterations or additions to Building 12 must be reviewed and approved by the Historic Preservation Board prior to commencing with the reconstruction.

d) A remaining original window shall be salvaged for use as a template for reconstruction

e) Approval for relocation and reconstruction is contingent on the existing historic orientation of Building 12 being maintained as described in final proposal.

All work to be carried out as shown and described in the materials submitted for the 2/6/19

public hearing and/or as described above. Changes to the approved plans and specifications and any additional work that may be undertaken must be reviewed and approved by this office prior

to construction, alteration, or demolition. If, during the course of completing the approved work, conditions are encountered which prevent completing the approved work, or which require additional or alternative work, you must apply for and receive a Certificate of Appropriateness or Non-Applicability PRIOR to undertaking additional or alternative work.

This Certificate is granted upon condition that the work authorized herein is commenced within twelve (12) months after the date is issuance. If the work authorized by this Certificate is not commenced within twelve (12) months after the date of issuance or if such work is suspended in significant part for a period of one year after the time the work is commenced, such Certificate shall expire and be of no further effect; provided that, for cause, one or more extensions of time for periods not exceeding ninety (90) days each may be allowed in writing by the Department.

Sincerely,



Deborah Andrews
Historic Preservation Program Manager

Cc: Mary McCrann, Woodard & Curran

Standard to be Waived: Cite Ordinance or Technical Manual Standard	**Cite Standard Language:** Cite specific language of applicable Ordinance or Technical Manual Standard	**Waiver Being Sought:** Describe waiver being sought. Ex. – We are requesting a two-way parking lot drive aisle width of 20' feet.	**Justification for Waiver:** Address specific waiver criteria, if applicable, and document reasons for the waiver request.
City of Portland Technical Manual - Section 12 Site Lighting, 12.3, 4. Light Trespass	Paraphrased: - Max illumination at property line shall not exceed 0.1 foot candles. - When a commercial use abuts a public ROW, lighting at the property boundary must not exceed 1.0 foot candles.	Requesting a waiver of the maximum illumination at the property line at entrances to the site as shown on the photometrics plan included with the site plan application.	Maximum illumination levels are exceeded at the primary entrances to the site; these are areas where pedestrians and/or vehicular traffic will be entering the property and additional lighting will be warranted.
City of Portland Technical Manual - Section 1 Transportation Systems and Street Design, 1.14 Parking Lot and Parking Space Design	Parking lots with greater than 10 spaces may be comprised of up to 20% compact parking spaces.	Requesting a waiver of the maximum percentage of parking stalls allowed to be compact spaces in the Block 4 Garage (380 spaces with reduced dimensions, or 60.8% of the total Block 4 Garage total)	Slight variation from the parking sizes are necessary to align with the structural support of the garage. Most of the substandard spaces are larger than 8.5' x 18' and will not be noticeably smaller than a standard space for most users. Additionally, 220 spaces are
Subdivision Ordinance - Section 14-499(h)	All utility lines shall be placed underground unless otherwise approved by the Planning Board.	Requesting a waiver to maintain existing above-ground electrical distribution utilities on Fore Street.	Existing public electric distribution within the right-of-way adjacent to the site is above ground and moving the lines underground presents many logistical issues in addition to exorbitant costs. Burying the Fore Street power

5. EVIDENCE OF RIGHT, TITLE & INTEREST

The proposed development is located on properties owned by the Applicant and identified as Tax Map 18, Lots A001 and A002. Attached are copies of the deeds associated with these properties. Additionally, the Applicant has obtained easements for work that will occur on the adjacent Narrow Gauge Railroad property owned by the Maine Department of Transportation (Tax Map 18, Lot A013). Easements associated with this work are provided in Section 6.

5.1 Attachments

- Deeds

TRUSTEES' DEED

Maine Statutory Short Form

KNOW ALL BY THESE PRESENTS THAT **ELIZABETH M. SPRAGUE, ERIC THOMAS SPRAGUE and PHINEAS M. SPRAGUE, as Trustees of THE BUENA VISTA TRUST**, under indenture dated December 20, 2011, with a principal place of business in Cape Elizabeth, Maine, by the power conferred by law, and every other power, for consideration paid, grant to **CPB2 LLC**, a Delaware limited liability company, with a place of business c/o Blue Water Construction, 41 Glendale Place, Gilford, New Hampshire 03249, the land, together with any improvements thereon, situated in the City of Portland, County of Cumberland, State of Maine, described on Exhibit A attached hereto.

MAINE REAL ESTATE TAX PAID

Pursuant to Title 18-B M.R.S. § 1013, we, in our capacities, do hereby certify that (1) we are all of the Trustees of said Trust; (2) the Trust exists as the date of this Agreement; (3) we have power under said Trust to convey any trust asset in our sole discretion and need no consent from any beneficial interests; (4) we are the trustees authorized to execute or otherwise authenticate any and all documents in the exercise of our power; (5) in making this conveyance, we have in all respects acted in pursuance of the authority granted in and by said Trust; and (6) the Trust has not been revoked, modified, amended or terminated in any way that would cause the representations contained in this certificate to be incorrect.

[signatures on next page]

Witness our hands and seals this 19 day of the month of July, 2013.

WITNESS:

THE BUENA VISTA TRUST

_____

By_____
Eric Thomas Sprague, Trustee

_____

By_____
Elizabeth M. Sprague, Trustee

_____

By_____
Phineas M. Sprague, Trustee

STATE OF MAINE
COUNTY OF CUMBERLAND

July __, 2013

Then personally appeared the above named Eric Thomas Sprague, in his said capacity and acknowledged the foregoing instrument to be his free act and deed.

Before me,

_____
Notary Public/Attorney at Law

Witness our hands and seals this 26 day of the month of July, 2013.

WITNESS:

THE BUENA VISTA TRUST

By _____
Eric Thomas Sprague, Trustee

By _____
Elizabeth M. Sprague, Trustee

By _____
Phineas M. Sprague, Trustee

STATE OF MAINE
COUNTY OF CUMBERLAND

July 26, 2013

Then personally appeared the above named Eric Thomas Sprague, in his said capacity and acknowledged the foregoing instrument to be his free act and deed.

Before me,

~~Notary Public~~/Attorney at Law
Drew A. Ardelean

EXHIBIT A

A certain lot or parcel of land together with the buildings thereon situated on the southerly side of Fore Street in the City of Portland, County of Cumberland and State of Maine bounded and described as follows:

Beginning at a point on the southerly sideline of Fore Street at the northeasterly corner of Tract I as shown on "ALTA/ACSM Land Title Survey 58 Fore Street, Portland, Cumberland County, Maine made for CPB2 LLC" dated May 22, 2013 by Owen Haskell, Inc., thence N53°19'30"E along the southerly sideline of said Fore Street 140.00 feet;

Thence, N 61° 01' 30" E along the southerly sideline of said Fore Street 43.36 feet to land now or formerly of Macgowan as described in the Deed recorded in Cumberland County Registry of Deeds in Book 15773, Page 153;

Thence, S 31° 18' 30" E along land of said Macgowan 150.00 feet;

Thence, N 61° 01' 30" E along land of said Macgowan 112.00 feet to land now or formerly of Timothy Haley, Trustee, as described in the Deed recorded in the said Registry of Deeds in Book 24759, Pages 67 & 69;

Thence, S 31° 18' 30" E along land of said Haley 110.28 feet;

Thence, N 63° 18' 30" E along land of said Haley 100.00 feet;

Thence, N 31° 18' 30" W along land of said Haley 95.88 feet;

Thence, N 69° 31' 20" E along land of said Haley 49.73 feet to land now or formerly of Eastern Promenade Condominium;

Thence, S 31° 18' 26" E along land of said Eastern Promenade Condominium 240.48 feet to an iron rod found and to land now or formerly of the State of Maine as described in the Deed recorded in said Registry of Deeds in Book 10924, Page 91;

Thence, S 63° 18' 30" W along land of said State of Maine 430.00 feet to the easterly line of said Tract I;

Thence, N 33° 29 '33" W along said Tract I 381.17 feet to the point of beginning containing 2.87 acres.

The premises are conveyed together with the right of access and egress running from the existing paved driveway over land now or formerly of The Portland Company to the

premises conveyed herein as described in a deed to Elizabeth M. Sprague, Eric Thomas Sprague and Phineas M. Sprague, Trustees of The Buena Vista Trust by Warranty deed of The Portland Company dated December 30, 1012 and recorded in the Cumberland County Registry of Deeds in Book 30265, Page 32.

Meaning and intending to convey and hereby conveying the same premises conveyed to Elizabeth M. Sprague, Eric Thomas Sprague and Phineas M. Sprague, Trustees of The Buena Vista Trust by Warranty Deed of The Portland Company, dated December 30, 2012 and recorded in the Cumberland County Registry of Deeds in Book 30265, Page 32.

S:\P\POCO14\Prentice Purchase\Sale Documents\Deed of Trustees.doc

Received
Recorded Register of Deeds
Jul 29,2013 03:54:21P
Cumberland County
Pamela E. Lovley

Doc#: 13675 Bk:31425 Pg: 267

QUITCLAIM DEED WITH COVENANT

Maine Statutory Short Form

KNOW ALL BY THESE PRESENTS, that **THE PORTLAND COMPANY**, a Maine corporation and having a place of business at 58 Fore Street, County of Cumberland, and State of Maine, for consideration paid, grants to **CPB2 LLC**, a Delaware limited liability company, with an address of P.O. Box 7987, Portland, Maine 04112, with **QUITCLAIM COVENANTS,** the land located in Portland, County of Cumberland and State of Maine, and more particularly described in Exhibit "A" attached hereto and made a part hereof.

MAINE REAL ESTATE TAX PAID

IN WITNESS WHEREOF, said THE PORTLAND COMPANY has caused this instrument to be signed and sealed this 1st day of April, 2014.

WITNESS:

THE PORTLAND COMPANY

Phineas Sprague Jr

By: Phineas Sprague, Jr.
Its: President

STATE OF MAINE
COUNTY OF CUMBERLAND

April 1, 2014

Personally appeared the above-named Phineas Sprague, Jr. in his said capacity, and acknowledged the foregoing to be his free act and deed and that of said corporation, The Portland Company, before me.

~~Notary Public~~/Attorney at Law

Drew A. Anderson

Printed Name

EXHIBIT A

TRACT I

A certain lot or parcel of land together with the buildings thereon situated on the southerly side of Fore Street, City of Portland, County of Cumberland and State of Maine bounded and described as follows:

Beginning at a point on the southerly sideline of Fore Street at a railroad spike at the northeasterly corner of land now or formerly of Hope 1 LLC as described in deed Book 22261, Page 50, thence S 87° 34' 45" E along the southerly sideline of said Fore Street 287.74 feet;

Thence, N 53° 19' 30" E along the southerly sideline of said Fore Street 594.45 feet to the northwesterly corner of Tract III, as shown on "ALTA/ACSM Land Title Survey, 58 Fore Street, Portland, Cumberland County, Maine made for CPB2 LLC" by Owen Haskell, Inc. dated May 22, 2013.

Thence, S 33° 29' 33" E along the westerly side of said Tract III 381.17 feet to land now or formerly of the State of Maine as described in deed Book 10924, Page 91;

Thence, S 63° 18' 30" W along land of said State of Maine 255.00 feet;

Thence, S 68° 31' 30" W along land of said State of Maine 442.91 feet to an iron rod found (bent) and land now or formerly of City of Portland as described in deed Book 21951, Page 341;

Thence, N 88° 12' 30" W along land of said City of Portland 137.25 feet to a non-tangent curve to the right;

Thence, following the curve to the right, along land of said City of Portland and land of said Hope 1 LLC, having a radius of 274.33 feet, an arc length of 337.36 feet, a chord bearing of N 38° 35' 30" W, and a chord length of 316.50 feet, to the southerly sideline of Fore Street and the point of beginning containing 6.04 acres.

Basis of bearings: Magnetic 1967.

TRACT II

A certain lot or parcel of land together with the buildings thereon situated southerly of but not adjacent to Fore Street, in the City of Portland, County of Cumberland and State of Maine bounded and described as follows:

Commencing at a point on the southerly line of Tract I, at an iron rod found (bent) at the southeasterly corner of land now or formerly of the City of Portland as described in deed Book 21951, Page 341, on the northerly line of land now or formerly of the State of Maine as described in deed Book 10924, Page 91, as shown on "ALTA/ACSM Land Title Survey, 58 Fore Street, Portland, Cumberland County, Maine made for CPB2 LLC" by Owen Haskell, Inc. dated May 22, 2013.

Thence, N 68° 31' 30" E along the northerly line of land of said State of Maine 215.11 feet;

Thence, S 27° 09' 40" E across land of said State of Maine and along the easterly line of land now or formerly of the City of Portland 50.25 feet to the true point of beginning;

Thence, N 68° 31' 30" E along the southerly sideline of land of said State of Maine 225.10 feet;

Thence, N 63° 18' 30" E along the southerly sideline of land of said State of Maine 690.74 feet;

Thence, S 30° 39' 00" E along land of said State of Maine 56.34 feet;

Thence, S 61° 35' 30" W 27.46 feet;

Thence, S 77° 24' 52" W 94.07 feet;

Thence, S 62° 35' 30" W 475.00 feet;

Thence, S 38° 50' 30" W 60.00 feet;

Thence, S 63° 50' 30" W 120.00 feet;

Thence, N 26° 10' 00" W 8.00 feet;

Thence, S 63° 49' 37" W 150.00 feet to land of said City of Portland;

Thence, N 27° 09' 40" W along land of said City of Portland 74.89 feet to the point of beginning containing 44,274 sq. ft.

Basis of bearings: Magnetic 1967.

ALSO CONVEYING two crossings for vehicular, pedestrian and utility access to and from other land now or formerly of Phineas Sprague to the most immediately above described parcel across the area shown on Exhibit B of Indenture Deed by and between the Maine Department of Transportation and Phineas Sprague, dated August 30, 1993 and recorded in Book 10924, Page 97, as the "Rail-Trail Corridor." Each crossing shall be 50 feet in width over the 50 foot wide "Rail-Trail Corridor" plus turning radii, as necessary, at the entrances to the crossings from the above described parcel of land. Such crossings may be moved from time to time by the Grantee at its expense upon proper notice to and approval by the Maine Department of Transportation, provided that the distance between the centerlines of the two crossings shall never be less than 200 feet; and further provided that in the event of any relocation, any former crossing shall be restored to the condition it would have been in had the crossing not been placed in that location.

TOGETHER WITH any upland including the seawall which immediately adjoin the above described premises.

Received
Recorded Register of Deeds
Apr 03,2014 12:25:29P
Cumberland County
Pamela E. Lovley

QUITCLAIM DEED WITHOUT COVENANT

CITY OF PORTLAND, a body corporate and politic and Maine municipal corporation ("Grantor"), FOR CONSIDERATION PAID, releases to **CPB2 I LLC**, a Delaware limited liability company with a mailing address of Merrill's Wharf, 254 Commercial Street, Suite 118, Portland, Maine 04101 ("Grantee"), certain real property, together with any improvements thereon, located southerly of Fore Street, in the City of Portland, County of Cumberland and State of Maine (the "Premises"), more particularly described on Exhibit A attached hereto and made a part hereof.

MAINE REAL ESTATE TAX PAID

Grantee covenants and agrees by acceptance of this Deed that the Premises herein conveyed is subject to the Declaration of Covenants and Option to Repurchase the Premises set forth in Exhibit B attached hereto and hereby made a part hereof.

IN WITNESS WHEREOF, Grantor has caused this instrument to be executed on its behalf by Jon P. Jennings, its City Manager, duly authorized, on this 2 day of November, 2018.

WITNESS:

CITY OF PORTLAND

Jon P. Jennings
Its City Manager

STATE OF MAINE
COUNTY OF CUMBERLAND

November 2, 2018

Personally appeared the above-named Jon P. Jennings, City Manager of the City of Portland, as aforesaid, and acknowledged the foregoing to be his free act and deed in his said capacity, and the free act and deed of said City of Portland.

Before me,

Attorney-at-Law/~~Notary Public~~
Commission Expires:
Print Name: Michael Goldman Bar No. 9842

EXHIBIT A

A certain lot or parcel of land situated southerly of but not adjacent to Fore Street in the City of Portland, County of Cumberland and State of Maine bounded and described as follows:

Beginning at a point on the southerly line of land of CPB2 at the southeasterly corner of land now or formerly of 100 Fore Street LLC as described in deed book 33748, page 1;

Thence, southeasterly along the southerly line of land of said CPB2 along a curve to the left having a radius of 274.33 feet, an arc length of 86.71, chord bearing of S 80°30'39" E and chord length of 86.35;

Thence, N 76°02'49" E along the southerly line of said CPB2 a distance of 137.25 feet to land of the State of Maine;

Thence, S 57°47'32" W across land of said City of Portland 11.22 feet to a point of curvature;

Thence, southwesterly across land of said City of Portland along a curve to the left, having a radius of 466.50 feet an arc length of 133.12 feet chord bearing of S 49°37'02" W and chord length of 132.67 feet;

Thence, S 41°26'32" W across land of the City of Portland 17.92 feet;

Thence, S 46°01'18" W along land of the State of Maine 31.95 feet;

Thence, N 52°05'24" W across land of the City of Portland 97.53 feet to a point of curvature;

Thence, northwesterly across land of the City of Portland along a curve to the right having a radius of 370.00 feet, an arc length of 47.73 feet, chord bearing of N 48°23'40" W and chord length of 47.70 feet to the southerly line of land of said 100 Fore Street LLC;

Thence, N 66°39'40" E along the southerly line of land of said 100 Fore Street LLC 43.19 feet to land of said CPB2 and the point of beginning containing 12,087 square feet more or less and being a portion of the property described in deed book 10924, page 84.

The above described parcel of land is shown on "Exhibit Plan Proposed Parcel City to CPB2 Fore Street Portland, Maine" dated July 2018 by Owen Haskell, Inc.

Bearings are based on Maine State Plane Coordinate System.

EXHIBIT B

Declaration of Covenants, Restrictions, And Option to Repurchase

1. This Declaration of Covenants, Restrictions, and Option to Repurchase (the "Declaration") was contemplated by the terms and conditions of a certain Purchase and Sale Agreement dated December 5, 2016 between Grantor and Grantee, as amended to date, a copy of which is on file with the City of Portland's Department of Finance and incorporated by reference herein (the "Agreement").

2. Access Road.

a. Grantee covenants and agrees to commence construction of a certain Access Road to CPB2's Property, as those terms are defined in the Agreement, within 36 months after the date of the deed to which these Covenants are attached (the "Closing Date"). After the construction of the Access Road has commenced, Grantor shall execute and record an affidavit indicating that the Option (as defined in Section 5 below), including Grantor's right and option to repurchase the Premises, has terminated and is on no further force or effect.

b. In the event that Grantor does not construct the Thames Street Extension (as defined in the Agreement) prior to Grantee's commencement of construction on CPB2's Property, and provided that Grantee, and/or its successors and assigns, is unable to access CPB2's Property from Fore Street, Grantor shall enter into a revocable license agreement with Grantee, and/or its successors or assigns, in a form satisfactory to Grantor, in order to provide the owner of the Premises and the owner of CPB2's Property, and their respective contractors, tenants, and invitees, with access to the Premises and/or to CPB2's Property across other property owned by Grantor that is contiguous to the western boundary of the Premises. Such license agreement shall only be available to Grantee and/or its successors and assigns from the time Grantee loses access to its property from Fore Street until the City completes the construction of the Thames Street Extension.

3. Payment In Lieu Of Property Taxes. Grantee covenants and agrees in the event that the Premises or any portion thereof shall be exempt from real and personal property taxes, by transfer, conversion, or otherwise, then the then-owner of the exempt portion shall make annual payments to the Grantor in lieu of taxes in the amount equal to the amount of property taxes that would have been assessed on the exempt portion of the real and personal property situated on the Premises had such property remained taxable. Grantor hereby confirms that Grantee and its successors and assigns shall possess and be vested with all rights and privileges as to abatement and appeal of valuations, rates, and the like as are accorded owners of real and personal property in Maine.

4. Grantee covenants and agrees to indemnify, defend, and hold Grantor harmless from and against any and all claims, damages, losses, liabilities, obligations, settlement payments, penalties, assessments, citations, directives, claims, litigation, demands, defenses, judgments, costs, or expenses of any kind, including, without limitation, reasonable attorneys', consultants', and experts' fees incurred in investigating, defending, settling, or prosecuting any claim, litigation or proceeding, that may at any time be imposed upon, incurred by or asserted or awarded against Grantee or Grantor and relating directly or indirectly to the violation of or compliance with any federal, state, or local environmental laws, rules, or regulations governing the release, handling or storage of hazardous wastes or hazardous materials and affecting all or any portion of the Premises, except to the extent that such a claim results directly from the Grantor's release, handling or storage of hazardous wastes or hazardous materials on the Premises.

5. Grantor's Option to Repurchase. Subject at all times to the remaining terms and conditions in this Section 5, if Grantee fails to commence construction of the Access Road as described in Section 2 above within 36 months after the Closing Date, Grantor shall have the right, during the one (1) year period from the third (3rd) anniversary of the Closing Date to, and including, the day immediately preceding the fourth (4th) anniversary of the Closing Date (the "Option Period"), but not the obligation, to repurchase the Premises at the Purchase Price set forth in the Agreement (such right set forth above and described below is hereinafter referred to as the "Option").

a. In order to exercise this Option to repurchase, Grantor must notify Grantee in writing (the "Notice") of its intent to do so during the Option Period. If Grantor gives Grantee the Notice during the Option Period, then Grantee shall have the right, but not the obligation, to commence construction of the Access Road within sixty (60) days after Grantee's receipt of the Notice. If Grantee commences construction of the Access Road within sixty (60) days after its receipt of the Notice, then, upon return to Grantor of the Earnest Money described below, the Notice shall be deemed automatically rescinded, and the provisions of this Section 5 shall be deemed of no further force or effect, as of the date of such commencement of construction. If Grantee fails to commence construction of the Access Road within sixty (60) days after its receipt of the Notice, then Grantee agrees that it will reconvey to Grantor the Premises within ten (10) business days after the expiration of said sixty (60) day period for the Purchase Price paid by Grantee to Grantor. The time, place and exact date of the closing shall be agreed to by the parties.

b. In the event Grantor provides the Notice of its intent to exercise the option, the Notice is to be accompanied by a payment to Grantee or its successors or assigns of earnest money in the amount of One Thousand Dollars ($1,000.00) (the "Earnest Money").

c. If Grantor exercises this Option to purchase the Premises, then in consideration of the terms, covenants and conditions contained herein, the parties mutually agree as follows:

i. Upon the giving of the Notice together with the Earnest Money, Grantee shall thereby be bound to sell and City shall thereby be bound to purchase the Premises upon the terms and conditions set forth herein, except as otherwise provided in clause 5.a above. Grantee or its successors, transferees or assigns shall execute, acknowledge and deliver to Grantor a quitclaim deed conveying to Grantor good and marketable title to the Premises, free and clear of all encumbrances and defects in title, except for utility and public easements of record servicing the Premises, and except for those approved by Grantor in its sole discretion. The closing shall be held at the date, time and place agreed to by the parties, or at such reasonable date thereafter as may be required to clear any encumbrance and defects in title, and Grantee or its successors, transferees or assigns shall then and there deliver the deed to Grantor upon tender of the balance of the Purchase Price by wire transfer, certified check, cashier's check, or cash. The balance to be tendered to Grantee or its successors or assigns shall be the Purchase Price, less the Earnest Money and any other option consideration actually received by Grantee.

ii. If counsel for Grantor, or its successors or assigns, shall be of the opinion, given in good faith, that the title to said Premises is defective or is otherwise not free and clear of all material encumbrances or that the title is not marketable, then Grantor, its successors or assigns, shall have the right, provided it or they shall have exercised this Option, to extend the time for conveyance of the Premises, during which time Grantee or its successors, transferees or assigns shall make a reasonable effort to remove such defects at its own expense, to the satisfaction of counsel of Grantor, its successors or assigns. If record title proves defective and Grantee or its successors or assigns shall fail to remove such defect within a reasonable time after notice from Grantor of the nature of the defect, Grantor may, at its election, (a) cure any such defect and deduct the cost thereof from the Purchase Price at closing, or (b) elect to close notwithstanding any such defect, or (c) terminate this Option by written notice to Grantee or its successors or assigns, whereupon all Earnest Money paid by Grantor to Grantee or its successors or assigns shall immediately be returned to Grantor and thereafter the parties shall be relieved of all obligations and this Option shall terminate.

iii. If all obligations of this agreement have been performed, excepting that Grantor does not complete the purchase, Grantee or its successors or assigns shall retain the Earnest Money as full liquidated damages, and without recourse to any other remedies, and whereupon this Option shall terminate and shall be of no further force or effect.

iv. Full possession of the Premises, free of all encumbrances except as aforesaid, is to be delivered to Grantor at closing, with the Premises to be in the reasonably functional condition, reasonable wear and tear excepted.

v. Real estate taxes and utilities shall be prorated as of the time of the passing of title. Real estate transfer taxes, if any, arising in connection with the conveyance of the Premises shall be paid by Grantor and/or Grantee or its successors or assigns in accordance with the custom of the locality where the Premises are situated.

d. Notwithstanding anything else to the contrary herein, in the event that (a) Grantor fails to give the Notice on or before the expiration of the Option Period, (b) Grantee commences construction of the Access Road on or before the third (3rd) anniversary of the Closing Date, or (3) Grantee commences construction of the Access Road within sixty (60) days after Grantee's receipt of the Notice and returns the Earnest Money to Grantor in accordance with Section 5(a) above, the Option, including Grantor's right and option to repurchase the Premises, shall terminate and shall be of no further force or effect, and upon such termination, Grantor shall execute and record an affidavit indicating that the Option, including Grantor's right and option to repurchase the Premises, has terminated and is of no further force or effect.

e. The parties hereto hereby agree that this right and option to purchase, and the Grantor's rights in the Premises thereby created, are immediately fully vested and are hereby deemed to be fully vested in any event, not contingent, and shall, by agreement, not be subject to the Rule Against Perpetuities, or any statutory enactment thereof, or similar law.

f. This Option is personal to Grantor (City of Portland) and cannot be assigned to or exercised by any other person or entity.

6. This Declaration may be amended or modified in whole or in part only by written agreement of Grantee and Grantor.

7. The covenants and option to repurchase set forth herein are intended to, and shall, run with the Premises and shall bind all subsequent owners of the Premises.

8. Except as specifically set forth herein, this Declaration shall survive a sale, transfer, foreclosure or transfer of title in lieu of foreclosure, or other disposition of the Premises.

9. This Declaration is enforceable by Grantor as a contract and shall inure to the benefit of and be enforceable by Grantor, its successors, and assigns.

10. The validity of any clause, part or provision of this Declaration shall not affect the validity of the remaining portions of thereof.

Received
Recorded Register of Deeds
Nov 05,2018 09:28:05A
Cumberland County
Nancy A. Lane

Doc#: 14813 Bk:35576 Pg: 153

MAINE REAL ESTATE TAX PAID

SHORT FORM QUITCLAIM DEED WITH COVENANT

DLN No. 1001940054598

100 FORE STREET, LLC, a Maine limited liability company with a mailing address of P.O. Box 910, Westbrook, Maine 04098-0910 ("Grantor") FOR CONSIDERATION PAID, grants to **CPB2 I LLC** ("Buyer"), a Delaware limited liability company, having an address at Merrill's Wharf, 254 Commercial Street, Suite 118, Portland, Maine 04101 ("Grantee") with QUITCLAIM COVENANT, certain real property, with any improvements thereon, located at or near 100 Fore Street, Portland, Cumberland County, Maine, and more particularly described on **Exhibit A** attached hereto and made a part hereof.

Being a portion of the premises described in Quitclaim Deed with Covenant granted by Hope 1, LLC to the Grantor dated January 6, 2017 and recorded in the Cumberland County Registry of Deeds in Book 33748, Page 1.

IN WITNESS WHEREOF, 100 Fore Street, LLC has caused this instrument to be executed and delivered by Jonathan S. Cohen, its duly-authorized Manager as of this 10th day of April, 2019.

WITNESS:

100 FORE STREET, LLC

By: MANAGER
Jonathan S. Cohen Manager

State of Maine
County of Cumberland

April 10, 2019

PERSONALLY APPEARED before me the above-named Jonathan S. Cohen, Manager of 100 Fore Street, LLC, and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of said limited liability company.

Before me,

Name: Hawley Strait
~~Notary Public~~/Attorney at Law
~~Commission Expires~~

EXHIBIT A

A certain lot or parcel of land situated southerly of but not adjacent to Fore Street in the City of Portland, County of Cumberland and State of Maine bounded and described as follows:

Beginning at a point on the southerly line of land of CPB2 LLC at the southeasterly corner of land now or formerly of 100 Fore Street, LLC as described in deed book 33748, page 1;

Thence, S 66°39'40" W along the southerly line of land of said 100 Fore Street LLC 43.19 feet;

Thence, the following courses and distances through the land of the grantor:

Northwesterly along a curve to the right having a radius of 370.00 feet, an arc length of 13.77 feet, chord bearing of N 43°37'59" W and chord length of 13.77 feet;

N 42°34'01" W 68.76 feet;

Northwesterly along a curve to the right having a radius of 370.24 feet, an arc length of 134.07 feet, chord bearing of N 32°11'34" W and chord length of 133.34 feet the easterly line of land of said CPB2, LLC;

Thence, southeasterly along a curve to the left having a radius of 274.33, an arc length of 235.73 feet, chord bearing of S 46°50'20" E and chord length of 228.54 feet to the point of beginning, containing 2,247 square feet, more or less and being a portion of the property described in deed book 33748, page 1.

The above described parcel of land is shown on "Exhibit Plan Proposed Parcel to be Conveyed Fore Street Portland, Maine" dated February 2018 by Owen Haskell, Inc.

Bearings are based on Maine State Plane Coordinate System.

Received
Recorded Register of Deeds
Apr 12,2019 01:15:52P
Cumberland County
Nancy A. Lane

6. EASEMENTS AND OTHER BURDENS

There are a number of easements and other burdens on the project Site associated with Maine DOT (Narrow Gauge Railroad), various utilities, and the City of Portland; attached are copies of the easements.

6.1 Attachments

- Easements

EXCHANGE AGREEMENT

THIS EXCHANGE AGREEMENT (this "Agreement") made this 21st day of June, 2017 by and between the CITY OF PORTLAND, a body politic and corporate located in Cumberland County, Maine (hereinafter referred to as "CITY"), CPB2 LLC, a Delaware limited liability company, having a mailing address of c/o CPB2 Management LLC, P.O. Box 7987, Portland, Maine 04112 (hereinafter referred to as "CPB2"), and STATE OF MAINE DEPARTMENT OF TRANSPORTATION, an agency of the State of Maine, having a mailing address of 16 State House Station, Augusta, Maine 04333-0016 (hereinafter referred to as "DOT"). For the purposes of this Agreement, the CITY, CPB2 and DOT are sometimes hereinafter collectively referred to as the "Parties" and individually as a "Party."

RECITALS

WHEREAS, CITY is the owner of that certain real property located along the eastern waterfront that is designated on the official tax map for the City of Portland as Block 448, Lot A-1 (the "CITY Property"); and

WHEREAS, CPB2 is the owner of that certain real property known as 58 Fore Street in the City of Portland, County of Cumberland and State of Maine, which is more particularly described in deeds dated July 19, 2013 and April 1, 2014 and recorded in the Cumberland County Registry of Deeds in Book 30879, Page 75 and Book 31425, Page 267 respectively (the "CPB2 Property"); and

WHEREAS, DOT is the owner of that certain right of way along the eastern waterfront that is designated on the official tax map for the City of Portland as Block 18, Lot A-13 (the "DOT Right of Way"); and

WHEREAS, in connection with the construction of the Thames Street extension and the development of the CPB2 Property, CITY and CPB2 have proposed the relocation of a portion of the DOT Right of Way in the manner shown on the Land Transfer Plan prepared by Woodard & Curran dated December 1, 2016 and revised January 10, 2017, a copy of which is attached hereto as Exhibit A (the "Plan"); and

WHEREAS, DOT has approved the relocation of the DOT Right of Way, as shown on the Plan; and

WHEREAS, in order to accomplish such relocation, the parties have agreed to certain property transfers, as identified herein; and

WHEREAS, the parties hereto desire to memorialize their agreements;

NOW THEREFORE, in consideration of the foregoing and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties, intending to be legally bound, hereby agree as follows:

1. **EXCHANGE.** In accordance with the terms and conditions set forth in this Agreement, (i) CITY agrees to transfer to DOT the property designated on the Plan as "City to MDOT" (the "CITY/DOT Exchange Property") by municipal quitclaim deed, (ii) DOT agrees to transfer to CITY the property designated on the Plan as "DOT to City" (the "DOT/CITY Exchange Property") by deed of vacation, (iii) DOT agrees to transfer to CPB2 the property designated on the Plan as "DOT to CPB2" (the "DOT/CPB2 Exchange Property") by deed, of vacation (iv) CPB2 agrees to transfer to DOT the property designated on the Plan as "CPB2 to DOT" (the "CBP2/DOT Exchange Property") by quitclaim deed, and (v) CPB2 agrees to transfer to CITY the property designated on the Plan as "CPB2 to City" (the "CPB2/CITY Exchange Property") by quitclaim deed, together with an easement in a form satisfactory to the CITY and CPB2 allowing public access over the entire five foot strip of land separating the CPB2/CITY Exchange Property from the water(said properties being hereinafter collectively referred to as the "Exchange Properties" and individually referred to as an "Exchange Property").

2. **CONSIDERATION**. The parties agree that the properties being conveyed are of a comparable size and value and that there is no additional consideration being paid or received by any party in connection with the exchanges.

3. **SURVEY.** CPB2 shall, at is sole expense, cause an ALTA survey to be prepared that will more specifically describe, by metes and bounds, the Exchange Properties. CPB2 shall provide such survey and associated property descriptions to the CITY and to DOT on or before the expiration of the Due Diligence Period (as defined in Paragraph 4.a) for their review and approval.

4. **TITLE.**

   a. Due Diligence Period. Each Party will have from the date of this Agreement until 4:00 PM Eastern Daylight Savings Time on the day that is one hundred eighty (180) days after the date of this Agreement (the "Due Diligence Period") to complete its title and survey examinations.

   b. Title and Survey Objections. Each Party will have thirty (30) days from the expiration of the Due Diligence Period (the "Due Diligence Response Period") to deliver to the other Parties any written objections to title or survey matters (other than the permitted exceptions identified herein), including, but not limited to, those affecting marketability or use. Objections not made prior to the end of the Due Diligence Response Period will be deemed waived; provided, however, that objections pertaining to matters of record first appearing after the date of this Agreement may be made at any time prior to the closing.

   c. Option to Cure. In the event of (i) an objection to the title or the survey pursuant to Paragraph 4.b or (ii) an objection to the results of the Inspection (as defined in Paragraph 5.a) pursuant to Paragraph 5.f, the Party who owns the property to which such objection relates (the "Notice Recipient") will have the option, but not the obligation, to cure the objection and will notify the

Party who gave the objection notice (the "Notice Sender") of its election within ten (10) business days after receipt of the objection. In the event that the Notice Recipient elects to cure the objection, it will have sixty (60) days from the date of the notice of election, or such other reasonable time as the Parties may agree, to cure the objection to the satisfaction of the Notice Sender. In the event that the Notice Recipient does not elect to cure the objection, or, having elected to cure the objection fails to timely do so to the satisfaction of the Notice Sender, then the Notice Sender will have the option to (1) terminate this Agreement (after which the Parties will not have any further obligation or liability to the other Parties under this Agreement), (2) waive the objection and close, or (3) undertake the cure of such objection at its own expense (in which case it shall have 60 days to do so). In the event the Notice Sender elects to cure such objection, but the Notice Sender is unable to cure such objection to its reasonable satisfaction within said 60-day period, then the Notice Sender will have the option to (1) terminate this Agreement (after which the Parties will not have any further obligation or liability to the other under this Agreement), or (2) waive the objection and close.

d. CPB2 shall convey its property at the closing in fee simple by a quitclaim deed. The City shall convey its property at the closing in fee simple by municipal quitclaim deed. Title shall be free and clear of all encumbrances, except (i) easements for utilities servicing the property, (ii) zoning ordinances, and (iii) real estate taxes not yet due and payable.

e. DOT shall convey its property at the closing as a full release of whatever property interest(s) DOT holds by a deed of vacation. Title shall be free and clear of all encumbrances, except (i) easements for utilities servicing the property, and (ii) zoning ordinances.

5. <u>INSPECTIONS</u>.

a. During the Due Diligence Period and the Due Diligence Response Period, each Party and their respective employees, consultants, contractors and agents shall have the right, at such Party's expense (except as otherwise set forth herein), to enter on the Exchange Property being conveyed to them, at reasonable times, in order to (i) inspect the same, (ii) conduct engineering studies, percolation tests, geotechnical exams, environmental assessments, and other such studies, tests, exams, and assessments, and (iii) do such other things as such Party determines, in its sole discretion, to be required to determine the suitability of such Exchange Property for such Party's intended use (collectively, the "Inspections"). The Parties acknowledge that such Inspections may include the digging of test pits, which each Party hereby approves.

b. To the extent permitted by law, the Party performing the Inspections agrees to defend, indemnify and hold harmless the Party on whose property the Inspections are being performed against any mechanics' liens that may

arise from the activities of said Party and its employees, consultants, contractors and agents on the property.

c. Each Party shall exercise the access and inspection rights granted hereunder at its sole risk and expense, and the Party performing the Inspections hereby releases the Party on whose property the Inspections are being performed from, and agrees to indemnify, defend, and hold said Party harmless, to the extent permitted by law, against, any and all losses, costs, claims, expenses and liabilities (including without limitation reasonable attorney fees and costs) (collectively, "Damages") suffered by said Party on account of any injury to person or damage to property arising out of the exercise by the other Party of its rights hereunder, except to the extent that such Damages result from the act or omission of the Party on whose property the Inspections are being performed. Nothing in this Agreement shall waive any defense, immunity or limitation of liability that may be available to CITY and/or DOT under the Maine Tort Claims Act (14 M.R.S. § 8101 et seq.) or any other privileges or immunities provided by law. Any other provision of this Agreement to the contrary notwithstanding, this provision shall survive any termination or expiration of this Agreement.

d. The Party (other than DOT and the CITY) performing the Inspections shall cause any contractors, consultants or any other party conducting the Inspections to procure automobile insurance and general commercial or public liability insurance coverage in amounts of not less than Four Hundred Thousand Dollars ($400,000.00) per occurrence for bodily injury, death and property damage and also Workers' Compensation Insurance coverage to the extent required by law. DOT and the City are self-insured.

e. In the event that the Party performing the Inspections does not acquire the property in question for any reason or for no reason, said Party agrees to either return the property in question as nearly as possible to its original condition after conducting the Inspections, or, at the option of the Party who owns the property in question, reimburse the Party owning the property for any physical damage caused to the property in question in connection with the Inspections; provided, however, the Parties hereby acknowledge and agree that the term "physical damage" does not include any disturbance of any pre-existing environmental contamination on the property caused by such inspections, studies, tests, exams, and assessments, and that the Party performing such Inspections shall have no obligation to clean-up, remove or take any other action with respect to any pre-existing environmental contamination disturbed thereby.

f. The parties hereto acknowledge and agree that it is a condition to each Party's obligations under this Agreement that the results of the Inspections be acceptable to the Party performing such Inspections in its sole discretion. If the results of such due diligence are not acceptable to the Party performing such Inspections in its sole discretion, then such Party

shall notify the Party who owns the property to which such results relate, and the provisions of Paragraph 4.c shall apply. If such Party ultimately exercises its right to terminate this Agreement, then the Parties shall not have any further obligations or liabilities under this Agreement to each other except as expressly set forth in this Agreement.

6. **TAXES, PRORATIONS AND RECORDING FEES.**

   a. CPB2 shall be liable for all real estate taxes attributable to the CPB2/DOT Exchange Property and the CPB2/CITY Exchange Property through the end of the fiscal year in which the closing occurs. CPB2 shall be liable for all real estate taxes attributable to the DOT/CPB2 Exchange Property beginning as of the start of the fiscal year following the closing and continuing thereafter. Because the DOT/CPB2 Exchange Property, the DOT/CITY Exchange Property, and the CITY/DOT Exchange Property are currently owned by entities that are exempt from real estate taxes, no taxes have been assessed or will be due for any portion of the current fiscal year, and no taxes will be prorated for those properties at the closing.

   b. The DOT/CPB2 Exchange Property and the CPB2/CITY Exchange Property are the only Exchange Properties subject to Maine real estate transfer tax at closing, and any transfer tax due shall be paid for by CPB2 in accordance with 36 M.R.S. § 4641-A. CITY and DOT are exempt from paying the transfer tax pursuant to 36 M.R.S. § 4641-C, and the transfer of the CPB2/DOT Exchange Property is exempt because it is a conveyance to DOT for transportation purposes..

   c. The recording fees for the various deeds shall be paid for by CPB2.

7. **DEFAULT AND REMEDIES**. In the event that any Party defaults under this Agreement, any of the non-defaulting Parties shall have the right (i) to the extent permitted by law, to pursue specific performance or (ii) in lieu of specific performance, as its sole remedy to terminate this Agreement (after which the Parties will not have any further obligation or liability to the other under this Agreement).

8. **RISK OF LOSS.** The risk of loss or damage to any of the Exchange Properties by fire, eminent domain, condemnation, or otherwise, until transfer of title hereunder, is assumed by the owner of the Exchange Property in question. The Exchange Properties are to be delivered in substantially the same condition as of the date of this Agreement unless otherwise stated. In the event any Party is not able to deliver their Exchange Property as stated, any of the other Parties may terminate this Agreement, and the Parties shall not have any further obligations or liabilities under this Agreement except as expressly set forth in this Agreement.

9. **PROPERTY SOLD "AS IS, WHERE IS**." Except as otherwise set forth in this Agreement, each Party acknowledges (i) that, by the end of the Due Diligence Response Period, it will have had an opportunity to inspect the Exchange Property it is receiving, or to hire professionals to do so; (ii) that such Exchange Property will be

sold "as is, where is" and "with all faults;" and (iii) that the current owner of such Exchange Property, and its agents, shall not be deemed to have made any representations or warranties with respect to such Exchange Property, including, without limitation, the accuracy of any statement relating to boundaries or acreage, or relating to any other matters contained in any description of such Exchange Property, or relating to the fitness of such Exchange Property for a particular purpose, or relating to development rights, merchantability, habitability, or as to any other matter, including without limitation, land use, zoning and subdivision issues or the environmental, mechanical, or structural condition of such Exchange Property. Acceptance by a Party of the deed at closing to the Exchange Property it is receiving shall be deemed to be full performance and discharge by the Party conveying such Exchange Property of every agreement and obligation contained herein.

10. **CLOSING**. Time is of the essence in the performance of this Agreement. The closing shall be held at the offices of CPB2's counsel at a time agreeable to the Parties on or before the earlier of that date that is 30 days after the date that the CITY receives the last of the Thames Street Extension Approvals, as that term is defined below, or January 31, 2018, so long as the Due Diligence Response Period has expired. Provided, however, that if the CITY has not received the last of the Thames Street Extension Approvals by January 1, 2018, the closing date, may, upon the mutual agreement of the Parties, be extended to a later date agreed to by the Parties. At the closing:

    a. each Party shall execute, acknowledge and deliver the deed required under this Agreement to convey title to the Exchange Property in question, free and clear of all encumbrances other than those approved by the recipient of such Exchange Property in its sole discretion;

    b. each Party shall execute, acknowledge and deliver such affidavits and indemnifications, to the extent permitted by law, in form and substance reasonably satisfactory to the applicable Parties, regarding mechanics' liens, materialmen's' liens and parties in possession sufficient to eliminate any title insurance exceptions for these matters;

    c. each Party shall deliver to the others such other documents, certificates and the like as may be required herein or as may be necessary to carry out the obligations under this Agreement; and

    d. DOT will grant to CPB2 an easement in accordance with the provisions of Paragraph 1(b) of an associated MOU, as such MOU is defined in Paragraph 11 below.

    For the purposes of this Agreement, the term "Thames Street Extension Approvals" shall mean CITY'S receipt of all necessary permits and regulatory approvals to construct the Thames Street extension and related utilities and the appropriation by the Portland City Council of the funds necessary to do so.

11. CONTINGENCIES. DOT and CPB2 entered into a certain Memorandum of Understanding dated March 31, 2015 relating to the portion DOT Right of Way that bisects the CPB2 Property, which memorandum contemplated the exchange of property between the parties thereto (the "MOU"). DOT and CPB2 acknowledge and agree that DOT's obligations under this Agreement are contingent upon (i) the submission to DOT of the geological tests of the soils required by Paragraph 3 of the MOU and, if applicable, the performance of the work described in Paragraph 3.b of the MOU, (ii) the consent of the CITY to the relocation of the Trail Corridor (as defined in the MOU), as contemplated by Paragraph 7 of the MOU, and (iii) if applicable, CPB2 obtaining the consent of the Trust for the Preservation of Maine Industrial History and Technology (the "Narrow Gauge") to the relocation of the narrow gauge railroad track or to the terms of a lease agreement between the Narrow Gauge and CPB2 to replace the terms of the Narrow Gauge's existing lease with DOT, as contemplated by Paragraphs 4 and 7 of the MOU.

12. ENVIRONMENTAL ASSESSMENT.

As outlined in the MOU, if it is determined by CPB2 that a Phase I Environmental Site Assessment of the existing Rail Corridor, as such is defined in the MOU, is required in connection with the exchange contemplated herein, CPB2 agrees to obtain, at its sole cost and expense, such Phase I Assessment and to submit the resulting report to DOT for review.

a. If, as a result of the findings of the Phase I Assessment, it is determined that a Phase II Environmental Site Assessment is required, CPB2 agrees to obtain, at its sole cost and expense, such Phase II Assessment and to submit the resulting report and all data and associated documentation to DOT for review.

b. If it is determined that environmental remediation is required in connection with the existing Rail Corridor, the Parties acknowledge that DOT shall not be required to perform such remediation unless CPB2 agrees to pay for all associated costs or DOT is otherwise reimbursed for such costs.

13. RELATED WORK.

a. If CPB2 elects to relocate the narrow gauge railroad track, as contemplated by Paragraph 4.a of the MOU, and if the Narrow Gauge has consented to such relocation, then CPB2 agrees to relocate the same at no expense to DOT or to the Narrow Gauge. DOT acknowledges that such work will be done in connection with the redevelopment of the portion of the DOT/CPB2 Exchange Property on which the narrow gauge railroad tracks currently exist and will likely occur after the closing.

b. CPB2 agrees further to relocate the Trail Corridor (as defined in the MOU) at no expense to DOT or to CITY. DOT and CITY acknowledge that such work will be done in connection with the redevelopment of the marina or the redevelopment of the portion of the CPB2 Property that runs along the shoreline, and will likely occur after the closing. If the new location of the Trail Corridor, as shown on an

approved site plan, is partly on the CPB2 Property, then CPB2 agrees to grant to CITY an easement over such portion on substantially the same terms and conditions as set forth in the easement granted by DOT to CITY.

c. In connection with the relocation of the narrow gauge railroad tracks and/or the relocation of the Trail Corridor, DOT agrees to grant to CPB2 a temporary, construction right over the relocated DOT Right of Way to the extent reasonably required to relocate the narrow gauge railroad tracks and/or the Trail Corridor. If requested by CPB2, CITY also agrees to grant to CPB2 a temporary, construction right in form and substance reasonably satisfactory to the CITY, over the relocated Trail Corridor to the extent reasonably required to relocate the narrow gauge railroad tracks and/or the Trail Corridor.

d. DOT acknowledges that the relocation of the narrow gauge railroad tracks and/or the Trail Corridor may require site plan approval or other governmental approval, and DOT agrees to reasonably cooperate with CPB2 in connection with such approvals and to execute and deliver any documents reasonably requested by CPB2 or any governmental entity, department or agency in connection therewith, provided such documents are in form and substance reasonably satisfactory to DOT and do not require DOT to undertake any construction work in connection with such relocation or relocations.

e. The provisions of this Paragraph 13 shall survive the closing.

14. ENTIRE AGREEMENT. This Agreement represents the entire and complete Agreement and understanding between the Parties and supersedes any prior agreement or understanding, written or oral, between the Parties with respect to the acquisition or exchange of the Exchange Properties hereunder. This Agreement cannot be amended except by written instrument executed by the CITY, CPB2 and DOT.

15. NON-WAIVER. No waiver of any breach of any one or more of the conditions of this Agreement by a Party shall be deemed to imply or constitute a waiver of any succeeding or other breach hereunder.

16. HEADINGS AND CAPTIONS. The headings and captions appearing herein are for the convenience of reference only and shall not in any way affect the substantive provisions hereof.

17. BINDING EFFECT. This Agreement shall be binding upon and inure to the benefit of the Parties and their respective heirs, administrators, successors and assigns.

18. TIME IS OF THE ESSENCE. The CITY, CPB2 and DOT each confirm and agree that each of the time periods set forth herein are essential provisions of the terms of this Agreement.

19. GOVERNING LAW. This Agreement shall be construed in all respects in accordance with, and governed by, the laws of the State of Maine. The Parties hereto hereby consent to the exclusive jurisdiction of the Superior Court for the County of

Cumberland in the State of Maine, for all actions, proceedings and litigation arising from or relating directly or indirectly to this Agreement or any of the obligations hereunder, and any dispute not otherwise resolved as provided herein shall be litigated solely in said Court. If any provision of this Agreement is determined to be invalid or unenforceable, it shall not affect the validity or enforcement of the remaining provisions hereof.

20. NOTICE. All notices, demands and other communications hereunder shall be in writing and shall be deemed to have been duly given on the date of service if served personally on the party to whom notice is to be given, or on the first business day after mailing if mailed to the party to whom notice is to be given by first class mail, postage prepaid, certified, return receipt requested, addressed to the recipient at the addresses set forth below. Either party may change addresses for purposes of this paragraph by giving the other party notice of the new address in the manner described herein.

FOR THE CITY:	City of Portland ATTN: CITY MANAGER 389 Congress Street Portland, ME 04101
With a copy to:	The Office of the Corporation Counsel at the same address.
FOR CPB2:	CPB2 LLC c/o CPB2 Management LLC P.O. Box 7987 Portland, Maine 04112
With a copy to:	Bernstein, Shur, Sawyer & Nelson, P.A. Attention: Mary E. Costigan, Esq. 100 Middle Street, West Tower Portland, Maine 04101
FOR DOT:	STATE OF MAINE DEPARTMENT OF TRANSPORTATION Attention: Toni Kemmerle, Esq. 16 State House Station Augusta, Maine 04333-0016

21. SIGNATURES; MULTIPLE COUNTERPARTS. This Agreement may be executed in any number of counterparts and by different parties in separate counterparts. Each counterpart when so executed shall be deemed to be an original and all of which together shall constitute one and the same agreement.

22. BROKERS. The CITY, CPB2 and DOT each represent and warrant that they have not dealt with a real estate broker in connection with this transaction. CPB2 agrees to indemnify and hold harmless the CITY and DOT from any claims made by any broker

should CPB2's representation in this paragraph be false. To the extent permitted by law, the CITY and DOT agree to indemnify and hold harmless CPB2 from any claims made by any broker should the representation by the CITY or DOT in this paragraph be false. The foregoing indemnities shall include all legal fees and costs incurred in defense against any such claim, and shall survive the closing.

IN WITNESS WHEREOF, the Parties have hereunto set their hands and seals on the day and year first written above.

CITY OF PORTLAND

Judith Rosen
WITNESS

By: Jon P. Jennings
Jon P. Jennings
Its: City Manager

CPB2 LLC
By: CPB2 Management LLC, Manager

Richard A. Crontici
WITNESS

By: _____
Name: Casey Prentice
Its: Manager

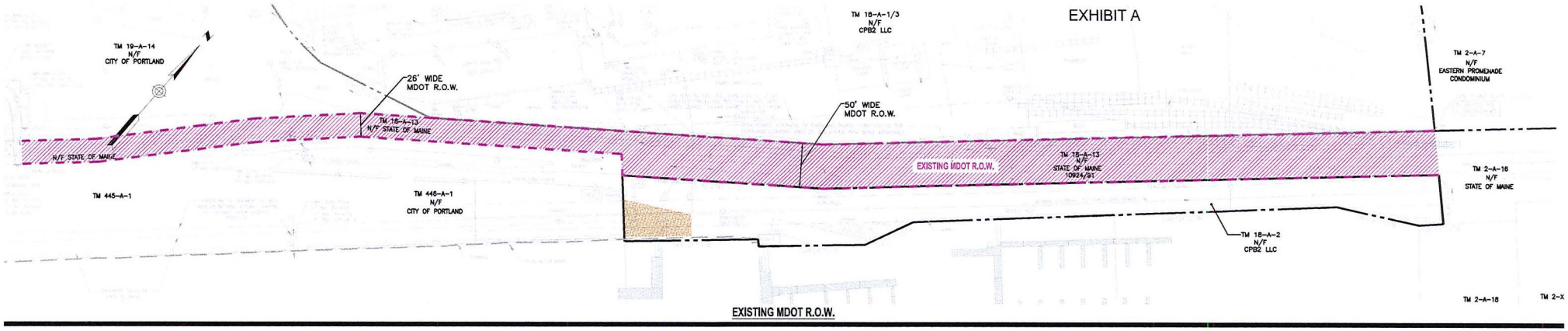
MAINE DEPARTMENT OF TRANSPORTATION

Melissa Pushard
WITNESS

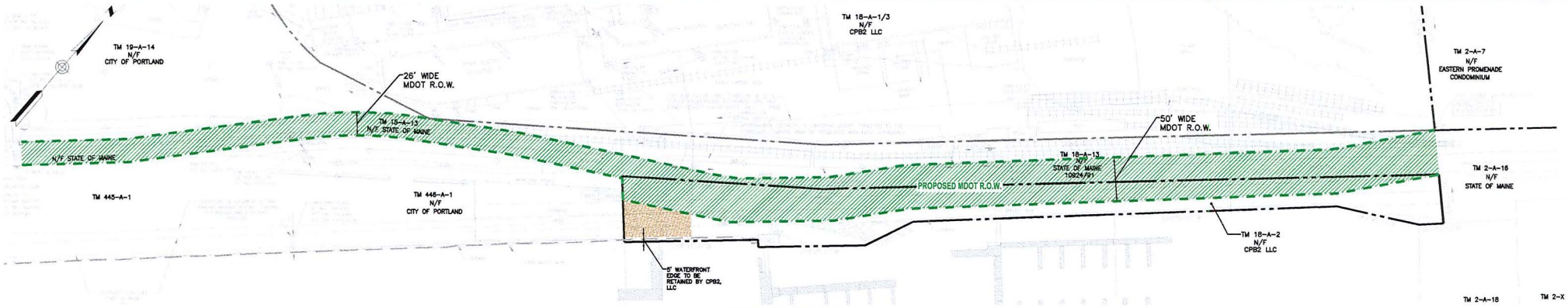
By: _____
David Bernhardt
Its Commissioner

Approved as to Form:
MB
Corporation Counsel's Office

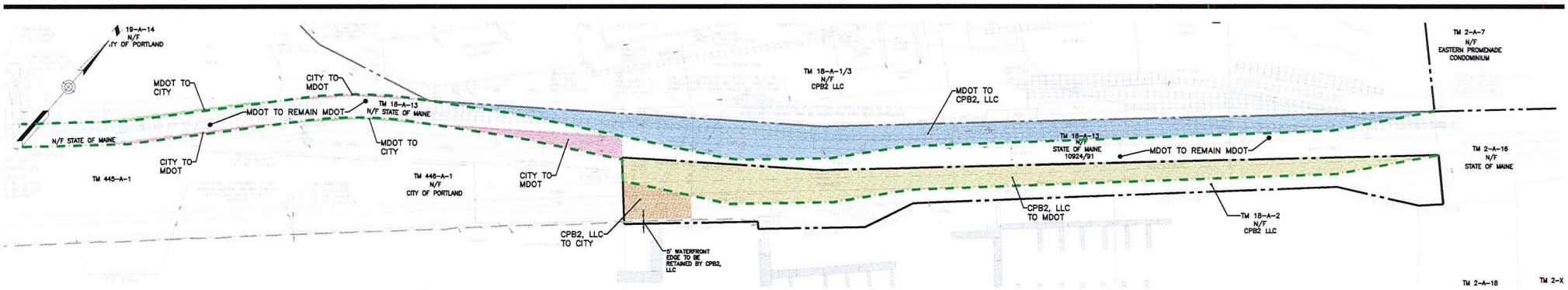
EXHIBIT A



EXISTING MDOT R.O.W.



PROPOSED MDOT R.O.W.



Scale: 1" = 50'
12/1/2016

CPB2 LLC
EASTERN WATERFRONT DEVELOPMENT PORTLAND, MAINE

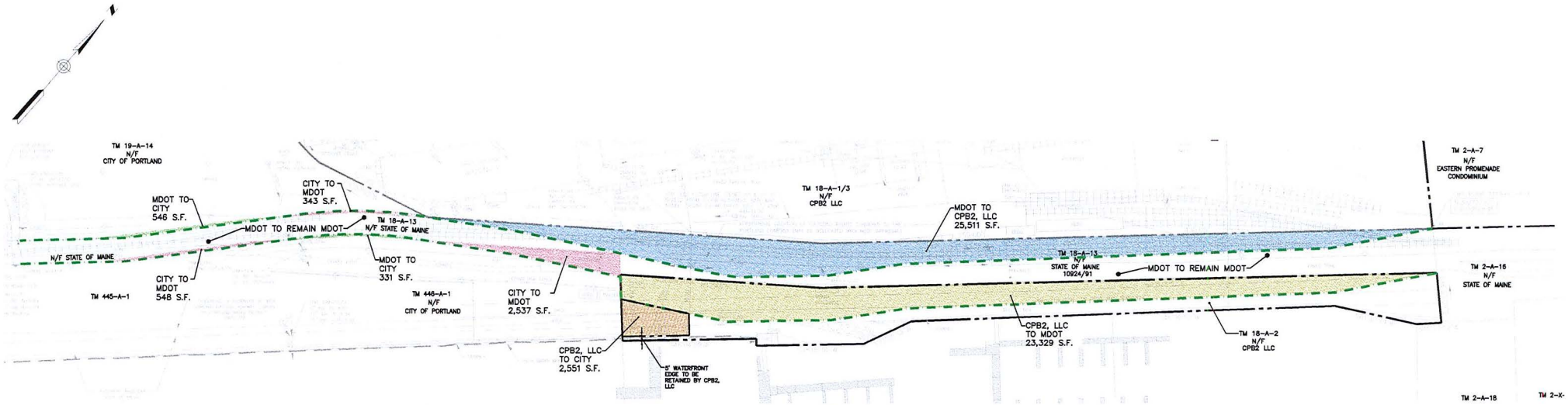
50' 0 50' 100'
BAR SCALE
1" = 50'
CHECK GRAPHIC SCALE BEFORE USING

PLAN REFERENCE
SOURCE OF EXISTING CONDITIONS: PLAN ENTITLED "BOUNDARY & TOPOGRAPHIC SURVEY AT 58 FORE STREET, PORTLAND, ME" PREPARED BY OWEN HASKELL, INC., FALMOUTH, ME 04105, DATED AUGUST 19, 2016 (REV. DATE 10/3/2016).
HORIZONTAL DATUM: NAD83, MAINE STATE PLAIN, WEST ZONE, US FOOT
VERTICAL DATUM: CITY OF PORTLAND DATUM

PROPOSED LAND TRANSFERS

58 FORE STREET
MDOT R.O.W. FIGURE - 1

WOODARD & CURRAN



PROPOSED LAND TRANSFERS

CITY

EXISTING CITY LAND TRANSFERRED TO:		NEW CITY LAND TRANSFERRED FROM:	
MDOT	548 S.F.	MDOT	546 S.F.
	343 S.F.		331 S.F.
	2,537 S.F.		
CPB2	0 S.F.	CPB2	2,551 S.F.
	TOTAL: 3,428 S.F.		TOTAL: 3,428 S.F.

MDOT

EXISTING MDOT LAND TRANSFERRED TO:		NEW MDOT LAND TRANSFERRED FROM:	
CITY	546 S.F.	CITY	548 S.F.
	331 S.F.		343 S.F.
			2,537 S.F.
CPB2	25,511 S.F.	CPB2	23,329 S.F.
	TOTAL: 26,388 S.F.		TOTAL: 26,757 S.F.

CPB2

EXISTING CPB2 LAND TRANSFERRED TO:		NEW CPB2 LAND TRANSFERRED FROM:	
CITY	2,551 S.F.	CITY	0 S.F.
MDOT	23,329 S.F.	MDOT	25,511 S.F.
	TOTAL: 25,880 S.F.		TOTAL: 25,511 S.F.

Scale: 1" = 50'
1/10/2017

CPB2 LLC
EASTERN WATERFRONT DEVELOPMENT PORTLAND, MAINE

50' 0 50' 100'
BAR SCALE
1" = 50'
CHECK GRAPHIC SCALE BEFORE USING

PLAN REFERENCE
SOURCE OF EXISTING CONDITIONS: PLAN ENTITLED "BOUNDARY & TOPOGRAPHIC SURVEY AT 58 FORE STREET, PORTLAND, ME" PREPARED BY OWEN HASKELL, INC., FALMOUTH, ME 04105, DATED AUGUST 19, 2016 (REV. DATE 10/3/2016).
HORIZONTAL DATUM: NAD83, MAINE STATE PLAIN, WEST ZONE, US FOOT
VERTICAL DATUM: CITY OF PORTLAND DATUM

58 FORE STREET
MDOT R.O.W. FIGURE - 2

WOODARD & CURRAN

FIRST AMENDMENT TO
EXCHANGE AGREEMENT

THIS FIRST AMENDMENT TO EXCHANGE AGREEMENT (this "Amendment") dated as of the _____ day of January , 2018 (the "Effective Date"), is made by and between the City of Portland, a body politic and corporate, having an address of 389 Congress Street, Portland, Maine ("City"), CPB2 LLC , a Delaware Limited Liability Company , having a mailing address of P.O. Box 7987, Portland, Maine (the "CPB2") and the State of Maine Department of Transportation, an agency of the State of Maine, having a mailing address of 16 State House Station, Augusta, Maine 04333-0016 ("DOT"). All capitalized terms not otherwise defined herein shall have the meaning given them in the Agreement (as such term is defined below).

WHEREAS, the City, CPB2 and DOT entered into a certain Exchange Agreement dated as of June 21, 2017 (the "Agreement");

WHEREAS, Section 10 of the Agreement currently provides for closing to occur on or before the earlier of the date that is 30 days after the date that the City receives the last of the Thames Street Extension Approvals or January 31, 2018; and

WHEREAS, the City, CPB2, and DOT desire to extend the closing date to April 1, 2018;

NOW THEREFORE, in consideration of the mutual covenants and agreements set forth herein below, and for other good and valuable consideration, the parties hereto agree as follows:

1. **Amendment to Agreement.** The first paragraph of Section 10 of the Agreement is hereby amended to replace "January 31, 2018" with "April 1, 2018."

2. **Ratification.** The parties hereto hereby reaffirm and ratify the continued effectiveness of the Agreement as modified by this Amendment. The parties agree, affirm, and reaffirm that each and every term, condition, and covenant of the Agreement, shall continue in effect except as specifically modified by this Amendment.

3. **Amendments, Etc.** No amendment, modification, or waiver of any provision of this Amendment, or consent to any departure from the terms of this Amendment by any party hereto shall be effective unless the same shall be in writing and signed by all the parties hereto, and then such waiver or consent shall be effective only in the specific instance and for the specific purpose for which given.

4. **No Waiver; Remedies.** No failure on the part of any party hereto to exercise, and no delay in exercising, any right hereunder shall operate as a waiver thereof, nor shall any single or partial exercise of any right hereunder preclude any other or further exercise thereof or the exercise of any other right. The remedies herein provided, and provided in the Agreement, are cumulative and not exclusive of any remedies provided by law.

5. **Successors and Assigns.** This Amendment shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns.

6. **Severability.** Each provision of this Amendment is intended to be severable and, if any term or provision of this Amendment is determined to be illegal or invalid for any reason whatsoever, such illegality or invalidity shall not affect the validity or legality of the remainder of this Amendment.

7. **Counterparts.** This Amendment may be signed in any number of counterparts, each of which shall be an original and, when taken together, shall constitute one agreement.

IN WITNESS WHEREOF, the parties hereto have caused this Amendment to be executed by a duly authorized officer of each of them as of the date first written above.

CITY OF PORTLAND:

By: _____
Name: Jon P. Jennings
Title: City Manager

CPB2:

By: _____
Name: Casey Prentice
Title: Manager

MAINE DEPARTMENT OF TRANSPORTATION:

By: _____
Name: David Bernhardt
Title: Commissioner

SECOND AMENDMENT TO
EXCHANGE AGREEMENT

THIS SECOND AMENDMENT TO EXCHANGE AGREEMENT (this "Amendment"), dated as of the 3rd day of August, 2018, is made by and between the City of Portland, a body politic and corporate, having an address of 389 Congress Street, Portland, Maine 04101 ("City"), CPB2 I LLC , doing business as CPB2 LLC, a Delaware Limited Liability Company, having a mailing address of Merrill's Wharf, 254 Commercial Street, Suite 118, Portland, Maine 04101 ("CPB2"), and the State of Maine Department of Transportation, an agency of the State of Maine, having a mailing address of 16 State House Station, Augusta, Maine 04333-0016 ("DOT"). All capitalized terms not otherwise defined herein shall have the meaning given them in the Agreement (as such term is defined below).

WHEREAS, the City, CPB2 and DOT entered into a certain Exchange Agreement dated as of June 21, 2017, as amended by a certain First Amendment To Exchange Agreement dated January 2018 (collectively, the "Agreement");

WHEREAS, Section 10 of the Agreement currently provides for closing to occur on or before the earlier of the date that is 30 days after the date that the City receives the last of the Thames Street Extension Approvals or April 1, 2018; and

WHEREAS, the City, CPB2, and DOT desire to affirm the continued effectiveness of the Agreement and to extend further the closing date to December 1, 2018;

NOW THEREFORE, in consideration of the mutual covenants and agreements set forth herein below, and for other good and valuable consideration, the parties hereto agree as follows:

1. **Name and Address Update; Effective Date.** The reference to "CPB2" is hereby amended to replace CPB2 LLC with CPB2 I LLC, doing business as CPB2 LLC, and to update the associated address to Merrill's Wharf, 254 Commercial Street, Suite 118, Portland, Maine 04101. In addition, notwithstanding the date of the Amendment set forth above, the parties hereto agree that the Amendment shall be deemed effective as of March 30, 2018 (the "Effective Date").

2. **Amendment to Agreement.** The first paragraph of Section 10 of the Agreement is hereby amended further to replace "April 1, 2018" with "December 1, 2018."

3. **Ratification.** The parties hereto hereby reaffirm and ratify the continued effectiveness of the Agreement as modified by this Amendment. The parties agree, affirm, and reaffirm that each and every term, condition, and covenant of the Agreement, shall continue in effect except as specifically modified by this Amendment.

4. **Amendments, Etc.** No amendment, modification, or waiver of any provision of this Amendment, or consent to any departure from the terms of this Amendment by any party hereto shall be effective unless the same shall be in writing and signed by all the parties hereto, and then such waiver or consent shall be effective only in the specific instance and for the specific purpose for which given.

5. **No Waiver; Remedies.** No failure on the part of any party hereto to exercise, and no delay in exercising, any right hereunder shall operate as a waiver thereof, nor shall any single or partial exercise of any right hereunder preclude any other or further exercise thereof or the exercise of any other right. The remedies herein provided, and provided in the Agreement, are cumulative and not exclusive of any remedies provided by law.

6. **Successors and Assigns.** This Amendment shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns.

7. **Severability.** Each provision of this Amendment is intended to be severable and, if any term or provision of this Amendment is determined to be illegal or invalid for any reason whatsoever, such illegality or invalidity shall not affect the validity or legality of the remainder of this Amendment.

8. **Counterparts.** This Amendment may be signed in any number of counterparts, each of which shall be an original and, when taken together, shall constitute one agreement.

[END OF DOCUMENTS; SIGNATURES ON NEXT PAGE]

IN WITNESS WHEREOF, the parties hereto have caused this Amendment to be executed by a duly authorized officer of each of them as of the date first written above.

CITY OF PORTLAND

By: _____
Name: Jon P. Jennings
Title: City Manager

APPROVED AS TO FORM:
_____
CORPORATION COUNSEL'S OFFICE

CPB2 I LLC
By: CPB2 Management LLC, Manager

By: _____
Name: Casey W. Prentice
Title: Manager

MAINE DEPARTMENT OF TRANSPORTATION

By: _____
Name: David Bernhardt
Title: Commissioner

THIRD AMENDMENT TO
EXCHANGE AGREEMENT

THIS THIRD AMENDMENT TO EXCHANGE AGREEMENT (this "Amendment"), dated as of the 4th day of ~~February~~ March, 2019, is made by and between the City of Portland, a body politic and corporate, having an address of 389 Congress Street, Portland, Maine 04101 ("City"), CPB2 I LLC, doing business as CPB2 LLC, a Delaware Limited Liability Company, having a mailing address of Merrill's Wharf, 254 Commercial Street, Suite 118, Portland, Maine 04101 ("CPB2"), and the State of Maine Department of Transportation, an agency of the State of Maine, having a mailing address of 16 State House Station, Augusta, Maine 04333-0016 ("DOT"). All capitalized terms not otherwise defined herein shall have the meaning given them in the Agreement (as such term is defined below).

WHEREAS, the City, CPB2 and DOT entered into a certain Exchange Agreement dated as of June 21, 2017, as amended by a certain First Amendment To Exchange Agreement dated January 2018 and by a certain Second Amendment To Exchange Agreement dated as of August 3, 2018 (collectively, the "Agreement");

WHEREAS, Section 10 of the Agreement currently provides for closing to occur on or before the earlier of the date that is 30 days after the date that the City receives the last of the Thames Street Extension Approvals or December 1, 2018; and

WHEREAS, the City, CPB2, and DOT desire to affirm the continued effectiveness of the Agreement and to extend further the closing date to June 4, 2019;

NOW THEREFORE, in consideration of the mutual covenants and agreements set forth herein below, and for other good and valuable consideration, the parties hereto agree as follows:

1. **Effective Date**. Notwithstanding the date of this Amendment set forth above, the parties hereto agree that this Amendment shall be deemed effective as of December 1, 2018.

2. **Amendment to Agreement.** The first paragraph of Section 10 of the Agreement, as previously amended, is hereby deleted in its entirety and replaced by the following: "Time is of the essence in the performance of this Agreement. The closing shall be held at the offices of CPB2's counsel at a time agreeable to the Parties on June 4, 2019, or such later date approved by the Parties. If the City has not received the last of the Thames Street Extension Approvals, as that term is defined below, as of the closing date, then the Parties may, upon the mutual agreement of the Parties, extend further the closing date to a later date agreed to by the Parties. At the closing:"

3. **Ratification.** The parties hereto hereby reaffirm and ratify the continued effectiveness of the Agreement as modified by this Amendment. The parties agree, affirm, and reaffirm that each and every term, condition, and covenant of the Agreement, shall continue in effect except as specifically modified by this Amendment.

4. **Amendments, Etc.** No amendment, modification, or waiver of any provision of this Amendment, or consent to any departure from the terms of this Amendment by any party hereto shall be effective unless the same shall be in writing and signed by all the parties hereto,

and then such waiver or consent shall be effective only in the specific instance and for the specific purpose for which given.

5. **No Waiver; Remedies.** No failure on the part of any party hereto to exercise, and no delay in exercising, any right hereunder shall operate as a waiver thereof, nor shall any single or partial exercise of any right hereunder preclude any other or further exercise thereof or the exercise of any other right. The remedies herein provided, and provided in the Agreement, are cumulative and not exclusive of any remedies provided by law.

6. **Successors and Assigns.** This Amendment shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns.

7. **Severability.** Each provision of this Amendment is intended to be severable and, if any term or provision of this Amendment is determined to be illegal or invalid for any reason whatsoever, such illegality or invalidity shall not affect the validity or legality of the remainder of this Amendment.

8. **Counterparts.** This Amendment may be signed in any number of counterparts, each of which shall be an original and, when taken together, shall constitute one agreement.

[END OF DOCUMENTS; SIGNATURES ON NEXT PAGE]

IN WITNESS WHEREOF, the parties hereto have caused this Amendment to be executed by a duly authorized officer of each of them as of the date first written above.

CITY OF PORTLAND

APPROVED AS TO FORM:
CORPORATION COUNSEL

By:_____
Name: Jon P. Jennings
Title: City Manager

CPB2 I LLC
By: CPB2 Management LLC, Manager

By:_____
Name: Casey W. Prentice
Title: Manager

MAINE DEPARTMENT OF TRANSPORTATION

By:_____
Name: Bruce A. Van Note
Title: Commissioner

IN WITNESS WHEREOF, the parties hereto have caused this Amendment to be executed by a duly authorized officer of each of them as of the date first written above.

CITY OF PORTLAND

By:_____
Name: Jon P. Jennings
Title: City Manager

CPB2 I LLC
By: CPB2 Management LLC, Manager

By:_____
Name: Casey W. Prentice
Title: Manager

MAINE DEPARTMENT OF TRANSPORTATION

By: _____
Name: Bruce A. Van Note
Title: Commissioner

FOURTH AMENDMENT TO EXCHANGE AGREEMENT

THIS FOURTH AMENDMENT TO EXCHANGE AGREEMENT (this "Amendment"), dated as of the 13th day of June, 2019, is made by and between the City of Portland, a body politic and corporate, having an address of 389 Congress Street, Portland, Maine 04101 ("City"), CPB2 I LLC, doing business as CPB2 LLC, a Delaware Limited Liability Company, having a mailing address of Merrill's Wharf, 254 Commercial Street, Suite 118, Portland, Maine 04101 ("CPB2"), and the State of Maine Department of Transportation, an agency of the State of Maine, having a mailing address of 16 State House Station, Augusta, Maine 04333-0016 ("DOT"). All capitalized terms not otherwise defined herein shall have the meaning given them in the Agreement (as such term is defined below).

WHEREAS, the City, CPB2 and DOT entered into a certain Exchange Agreement dated as of June 21, 2017, as amended by a certain First Amendment To Exchange Agreement dated January 2018, by a certain Second Amendment To Exchange Agreement dated as of August 3, 2018 and by a certain Third Amendment To Exchange Agreement dated as of March 4, 2019 (collectively, the "Agreement");

WHEREAS, Section 10 of the Agreement currently provides for closing to occur on June 4, 2019, or such later date approved by the Parties; and

WHEREAS, the City, CPB2, and DOT desire to affirm the continued effectiveness of the Agreement and to extend further the closing date to June 30, 2020;

NOW THEREFORE, in consideration of the mutual covenants and agreements set forth herein below, and for other good and valuable consideration, the parties hereto agree as follows:

1. **Effective Date**. Notwithstanding the date of this Amendment set forth above, the parties hereto agree that this Amendment shall be deemed effective as of June 4, 2019.

2. **Amendment to Agreement**. The first paragraph of Section 10 of the Agreement, as previously amended, is amended further to replace "June 4, 2019" with "June 30, 2020."

3. **Ratification**. The parties hereto hereby reaffirm and ratify the continued effectiveness of the Agreement as modified by this Amendment. The parties agree, affirm, and reaffirm that each and every term, condition, and covenant of the Agreement, shall continue in effect except as specifically modified by this Amendment.

4. **Amendments, Etc**. No amendment, modification, or waiver of any provision of this Amendment, or consent to any departure from the terms of this Amendment by any party hereto shall be effective unless the same shall be in writing and signed by all the parties hereto, and then such waiver or consent shall be effective only in the specific instance and for the specific purpose for which given.

5. **No Waiver; Remedies**. No failure on the part of any party hereto to exercise, and no delay in exercising, any right hereunder shall operate as a waiver thereof, nor shall any

single or partial exercise of any right hereunder preclude any other or further exercise thereof or the exercise of any other right. The remedies herein provided, and provided in the Agreement, are cumulative and not exclusive of any remedies provided by law.

6. **Successors and Assigns.** This Amendment shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns.

7. **Severability.** Each provision of this Amendment is intended to be severable and, if any term or provision of this Amendment is determined to be illegal or invalid for any reason whatsoever, such illegality or invalidity shall not affect the validity or legality of the remainder of this Amendment.

8. **Counterparts.** This Amendment may be signed in any number of counterparts, each of which shall be an original and, when taken together, shall constitute one agreement.

[END OF DOCUMENTS; SIGNATURES ON NEXT PAGE]

IN WITNESS WHEREOF, the parties hereto have caused this Amendment to be executed by a duly authorized officer of each of them as of the date first written above.

CITY OF PORTLAND

By: _____
Name: Jon P. Jennings
Title: City Manager

APPROVED AS TO FORM:
_____
CORPORATION COUNSEL'S OFFICE

CPB2 I LLC
By: CPB2 Management LLC, Manager

By: _____
Name: Casey W. Prentice
Title: Manager

MAINE DEPARTMENT OF TRANSPORTATION

By: _____
Name: Bruce A. Van Note
Title: Commissioner

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

MASTER UTILITY LICENSE

This License, made in duplicate this 2nd day of April, 2019, by and between the **STATE OF MAINE DEPARTMENT OF TRANSPORTATION** (hereinafter called "DEPARTMENT") and **CPB2 1 LLC**, a Delaware Limited Liability Company, with a mailing address of Merrill's Wharf, 254 Commercial Street, Suite 118, Portland, ME 04101 (hereinafter called "LICENSEE").

WITNESSETH:

WHEREAS, LICENSEE herein acknowledges that the term DEPARTMENT, wherever used in this License shall include not only the Maine Department of Transportation, but also any operator licensed by the Department of Transportation to provide rail service over the Berlin Subdivision rail line; and,

WHEREAS, LICENSEE and DEPARTMENT are desirous of entering into a Master Utility License (hereinafter called "License") regarding the construction, installation, maintenance, repair and use of the following underground utilities:

> Transmission and distribution of electrical energy, telecommunications, water, sewer, storm water drain, and diesel and gas fuel lines (hereinafter collectively called "Facilities") under the railroad property and tracks of DEPARTMENT in the City of Portland, Cumberland County, State of Maine;

NOW THEREFORE, for the mutual benefits between the parties, it is hereby understood and agreed as follows:

1. Permit for Facilities

DEPARTMENT agrees that it will permit LICENSEE to construct, install, maintain, repair and use the Facilities at or near railroad milepost 0.35 located under the property and tracks of DEPARTMENT located in the City of Portland, as shown on Attachment A attached hereto and by reference made a part hereof, subject to the terms and conditions hereinafter set out.

2. Specifications

(a) LICENSEE shall, at its sole expense, prior to the installation of any Facilities, submit plans and specifications which shall meet DEPARTMENT'S Standard Specifications (latest edition), as well as the provisions of applicable statutes, orders, rules or regulations of any competent public authority having jurisdiction in the matter.

(b) If, any of DEPARTMENT'S Standard Specifications conflict with any statutes or with any orders, rules, or regulations of any competent public authority having jurisdiction in the matter, then such statutes, orders, rules, or regulations shall prevail, but in all other particulars DEPARTMENT'S Standard Specifications shall govern.

(c) In the event that there is any issue which concerns DEPARTMENT and which is not addressed by the DEPARTMENT'S Standard Specifications or by any statutes, orders, rules, or regulations of any competent public authority having jurisdiction in the matter hereinabove described, the Director of Rail Transportation of Department shall in all such cases have the final decision-making authority as to the acceptability of the installation proposed.

(d) LICENSEE shall, at its sole expense, construct and install, and at all times during the term of this License, maintain Facilities in accordance with the design indicated on the aforesaid plans and specifications.

3. Construction and Maintenance

(a) Should emergency work be necessary, LICENSEE shall make every reasonable effort to notify DEPARTMENT that such work is to be done. In the event of an emergency, contact should be made to the following:

DEPARTMENT:	Director, Rail Transportation (207) 624-3042
LICENSEE:	CPB2 1 LLC (207) 517-1100, ext. 1

(b) LICENSEE, in constructing, installing, maintaining, repairing and using Facilities, shall exercise every reasonable precaution and use all reasonable diligence to avoid interference with the operation of trains, locomotives and maintenance-of-way equipment, or with the use and enjoyment of the property by DEPARTMENT or its independent operators.

(c) LICENSEE shall, except in emergency situations, give not less than ten (10) days written notice to DEPARTMENT of the day and hour it proposes to construct, install, repair, remove or maintain the Facilities. In the event DEPARTMENT considers the time specified in such notice to be unsatisfactory or inconvenient, DEPARTMENT shall, within five (5) days after receipt of such notice, notify LICENSEE to that effect in writing and shall specify a time satisfactory or convenient to DEPARTMENT.

(d) If LICENSEE shall fail to properly maintain Facilities or if Facilities interfere with drainage or other uses of DEPARTMENT**'s** property, then DEPARTMENT may order repairs to the construction at LICENSEE's expense or may (but shall have no obligation to do so) make such repairs to the Facilities of LICENSEE as may be immediately necessary for the safety of trains and property of DEPARTMENT. DEPARTMENT shall promptly notify LICENSEE of the making of such repairs. DEPARTMENT shall not incur any liability as a result of performing such repairs and the provisions of Paragraph 6 shall apply.

(e) LICENSEE agrees to pay to DEPARTMENT the cost of such repairs on or before the fifteenth (15th) day of the month next succeeding that in which a bill therefore is rendered.

4. Use

LICENSEE shall use Facilities solely for purposes of delivery of utilities and services to the adjoining marina currently owned by PF Marina LLC and LICENSEE shall make no change in the Facilities without first obtaining, in writing, the approval of DEPARTMENT. LICENSEE shall be solely responsible for acquiring and complying with federal, state or local permits required for its intended use.

5. Protection of Other Utilities

LICENSEE shall protect power, communication, signal and other utility lines and facilities on, over, or under the property of DEPARTMENT from damage of any kind by or because of the construction, installation, maintenance, repair, relocation, removal or use of said Facilities, and shall construct, install, maintain and use said Facilities in such a manner as will not damage or injuriously affect the use of power, communication, signal or other utility uses of DEPARTMENT or other companies which may have under contract the right to maintain such facilities on the property of DEPARTMENT.

6. Liability and Risk

(a) LICENSEE and DEPARTMENT agree that all cost or expense resulting from any and all loss of life or property, or injury or damage to the person or property of any person, firm or corporation (including the parties hereto and their respective officers, agents and employees), and any and all claims, demands or actions for such loss, injury or damage, caused by or arising out of the presence or use, or the construction, installation, maintenance, repair, relocation or removal of Facilities, shall be borne by LICENSEE. LICENSEE shall also bear the cost of inspections performed by DEPARTMENT to determine whether LICENSEE is in compliance with this License.

(b) LICENSEE assumes all risk of loss or damage to LICENSEE**'s** property, inclusive of free or unused materials, supplies and equipment, however caused, resulting directly or indirectly, by reason of the construction, installation, maintenance, repair, relocation, use, existence or removal of Facilities, and hereby releases DEPARTMENT from any and all liability on account of such loss or damage, whether or not the negligence of DEPARTMENT caused thereto in whole or in part.

7. Insurance

LICENSEE shall at all times carry personal property and equipment insurance sufficient to cover the value of all of LICENSEE'S personal property and equipment on the DEPARTMENT'S property. LICENSEE shall carry commercial general liability insurance coverage in an amount not less than $2,000,000.00 for both personal injury and property damage occurring as a result of

LICENSEE'S activities and presence on, and its use, alteration and occupation of any of the DEPARTMENT"S property. This coverage shall apply to any and all claims or causes of action resulting in death, bodily injury or property damage and shall be applicable to all such claims brought by any person or arising out of any single occurrence or in the aggregate. LICENSEE shall provide proof of the above-described insurances upon request by the DEPARTMENT. Failure to maintain this required insurance coverage shall result in the automatic termination of this License.

8. Changes or Relocation

LICENSEE shall, at its sole expense, within ninety (90) days after receipt of written notice from DEPARTMENT, make such changes in the Facilities, including relocation, as may be required by DEPARTMENT, if such changes or relocation shall, in the judgment of DEPARTMENT, be needed for the better development, or use of the property of DEPARTMENT, or if such changes or relocation shall, in the judgment of DEPARTMENT, be needed to protect its requirements, or contractual obligations, or if such change or relocation is required, directly or indirectly by statute or by any order of any competent public authority having jurisdiction in the matter. Provided, however, that the term "contractual obligation" used in this paragraph shall not be construed as including obligations similar hereto, entered into subsequent to the date of this License.

9. Discontinuance

LICENSEE shall, at its sole expense, upon termination of this License, or upon the abandonment or discontinuance of use of the Facilities, promptly remove its property from the premises of DEPARTMENT and restore such premises disturbed by the construction to a condition satisfactory to DEPARTMENT.

10. Cost of Changes

If LICENSEE fails to change or relocate the Facilities within ninety (90) days after the expiration of notice given as provided in Paragraph 8 hereof, or to remove its property as provided in Paragraph 9 hereof, DEPARTMENT may, without further notice, in case of necessary alteration, and in the case of apparent abandonment, after written notice sent to LICENSEE and the expiration of five (5) days after such notice is sent, remove, change or relocate the Facilities and render bills for the cost of such removal, change or relocation to LICENSEE which bills LICENSEE agrees to pay on or before the fifteenth (15^{th}) of the month next succeeding that in which such bill is rendered.

11. Taxes

LICENSEE shall pay all taxes assessed upon the Facilities, if assessed or on account of the existence or use of the Facilities, and shall indemnify DEPARTMENT against the payment of such taxes.

12. Waiver

It is expressly understood and agreed that any waiver on the part of DEPARTMENT of any term, provision or covenant of this License shall not constitute a precedent, nor bind DEPARTMENT to a waiver of any similar or succeeding breach of same or any other terms, provisions or covenants of this License.

13. Execution Official Act Only

The individuals executing this License on behalf of DEPARTMENT do so only in their official capacity and none of the covenants herein contained are to be held or construed as their individual acts, or acts for which they may be individually liable in any way. In exercising the rights granted hereunder, LICENSEE shall not be deemed to be acting as an officer, agent, or employee of the State of Maine.

14. No Warranty of Title

No warranty of title to any property is given hereunder, and the permission herein given to LICENSEE is subject to all encumbrances, conditions and reservations upon or under which DEPARTMENT holds its property. The rights of LICENSEE are limited solely to the License herein granted and LICENSEE shall not acquire by virtue of this License or otherwise any easement or other greater interest in the property of DEPARTMENT.

15. Fees and Rental

(a) LICENSEE shall pay to DEPARTMENT an administrative fee of One Hundred Dollars ($100.00) for expenses in connection with the preparation and execution of this License. LICENSEE shall further pay to DEPARTMENT a fee of One Hundred Dollars ($100.00) for expenses incurred in connection with the examination of each set of plans and specifications submitted for any *new* Facilities constructed after the date of this License.

(b) LICENSEE shall pay to DEPARTMENT for the privileges herein granted and for inspection expenses the sum of; $25 per annum for water line, $25 per annum for Drainage pipe 12 inches or less in diameter, $50 per annum for Drainage pipe greater than 12 inches in diameter, $50 per annum for manhole or catch basin, $100 per annum for each fiber optic crossing, $50.00 per annum for each electric wire crossing up to 7.2 KV, $75.00 per annum for each electric wire crossing from 7.2 KV up to 34.5 KV, $100.00 per annum for each electric wire crossing from 34.5 KV up to 115 KV, $150.00 per annum for each electric wire crossing from 115 KV up to 345 KV, $50/inch for pipelines carrying flammable substances 12 inches or less in diameter per annum, $75/inch for pipelines carrying flammable substances greater than 12 inches in diameter per annum and $1.00 per foot for longitudinal lines (aerial or underground) per annum. The annual charges are to be payable in advance each year to "Treasurer, State of Maine." on the date of this License and on each anniversary date. The current sites and charges for each underground utility are delineated in Attachment B, attached hereto and by reference made a part hereof.

(c) Department reserves the right to review the rental rate at each five-year (5) anniversary date of this License. Written notice will be provided to Licensee of any rate adjustment at least thirty (30) days before the effective date of the rent increase.

(d) Attachment B shall be updated by the deletion or addition of any Facilities whenever applicable, but shall at all times reflect the locations of all such Facilities in existence, and no Facility shall be deemed valid unless it appears on an amended Attachment B.

16. Notification

All communications and notices required or permitted under this License shall be in writing and shall be deemed sufficiently served if served in hand or by certified mail addressed as follows or such other address as each party may designate in writing from time to time:

TO DEPARTMENT:

State of Maine
Department of Transportation
#16 State House Station
Augusta, Maine 04333-0016

Attention: Director, Rail Program

TO LICENSEE:

CPB2 1 LLC
Merrill's Wharf
254 Commercial Street, Ste 118
Portland, Maine 04101

Primary Contact: Casey W. Prentice @
cwp@portlandforeside.com

17. Subordinate to Railroad Operations

The Utility Crossing rights are expressly subordinate to all rights of the DEPARTMENT, and of the Trust for the Preservation of Maine Industrial History and Technology (the "Narrow Gauge Railroad") pursuant to its lease with the DEPARTMENT, and subject to termination at the DEPARTMENT'S discretion if the DEPARTMENT determines that the Utility Crossing Rights interfere in any way with the safe and efficient operation of any rail service performed thereon. In such instance, the DEPARTMENT will provide the LICENSEE with at least ninety (90) days' prior written notice of termination unless such termination is required because of safety concerns, in which case, the DEPARTMENT reserves the right to terminate the License immediately, or with a notice period shorter than ninety (90) days at the DEPARTMENT'S sole discretion.

18. Termination

Except as provided in Paragraph 17 above and/or in the event of public safety concerns, the LICENSEE agrees that any and all rights conveyed by this License may be terminated and revoked by the DEPARTMENT if the DEPARTMENT in its sole discretion determines: a) that the rail line is needed for transportation purposes; b) that the use of the rail line as permitted by this License impairs or compromises the public safety; or c) that the LICENSEE has breached the terms and conditions of this License. In the event of such termination, unless the termination is associated with a public safety issue, the DEPARTMENT shall give the LICENSEE written notice, which shall provide that the LICENSEE has ninety (90) days to discontinue its use of the rail line and remove any improvement therefrom if so directed by the DEPARTMENT at the LICENSEE'S sole expense. The LICENSEE shall not be entitled to compensation in the event the DEPARTMENT terminates this License for any reason.

19. Successors

This License shall inure to the benefit of and be binding upon the parties hereto, their successors or assigns, provided that LICENSEE shall not transfer, assign or permit the use of the Facilities hereby granted by any person or corporation (other than PF Marina LLC, or its successors or assigns) without the prior consent and agreement, in writing, of the DEPARTMENT.

20. Survival

Any covenants and representations contained herein, and any obligations which by their nature can be or are to be performed after the termination of this License, shall survive such termination.

IN WITNESS WHEREOF, the parties have executed this License on the date first written above.

LICENSOR:

STATE OF MAINE DEPARTMENT
OF TRANSPORTATION

Witness

By: _____
Nathan Moulton, Director
Office of Freight and Business Services

LICENSEE:

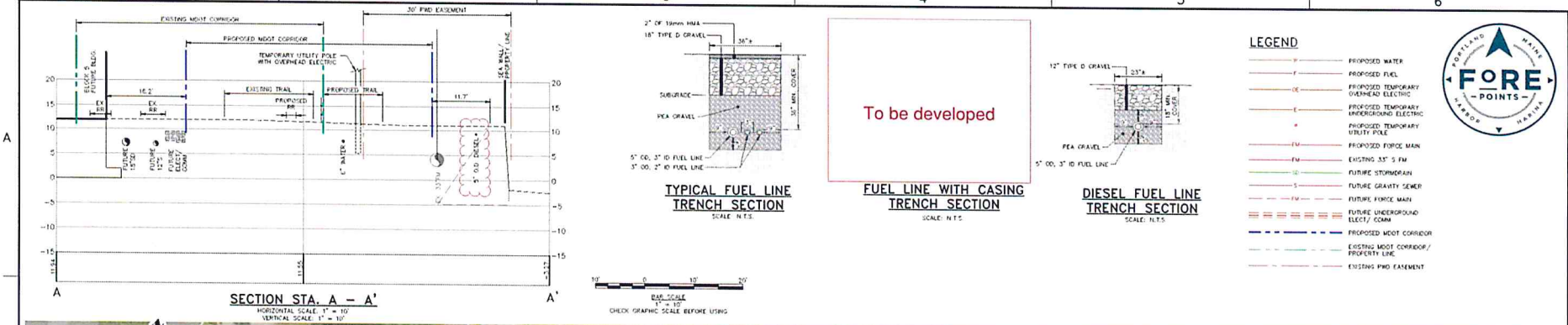
CPB2 1 LLC

Witness

By: _____
Casey W. Prentice
CPB2 Management LLC, Manager

ATTACHMENT A

Facilities Map



SECTION STA. A – A'

HORIZONTAL SCALE: 1" = 10'
VERTICAL SCALE: 1" = 10'

TYPICAL FUEL LINE TRENCH SECTION

SCALE: N.T.S.

To be developed

FUEL LINE WITH CASING TRENCH SECTION

SCALE: N.T.S.

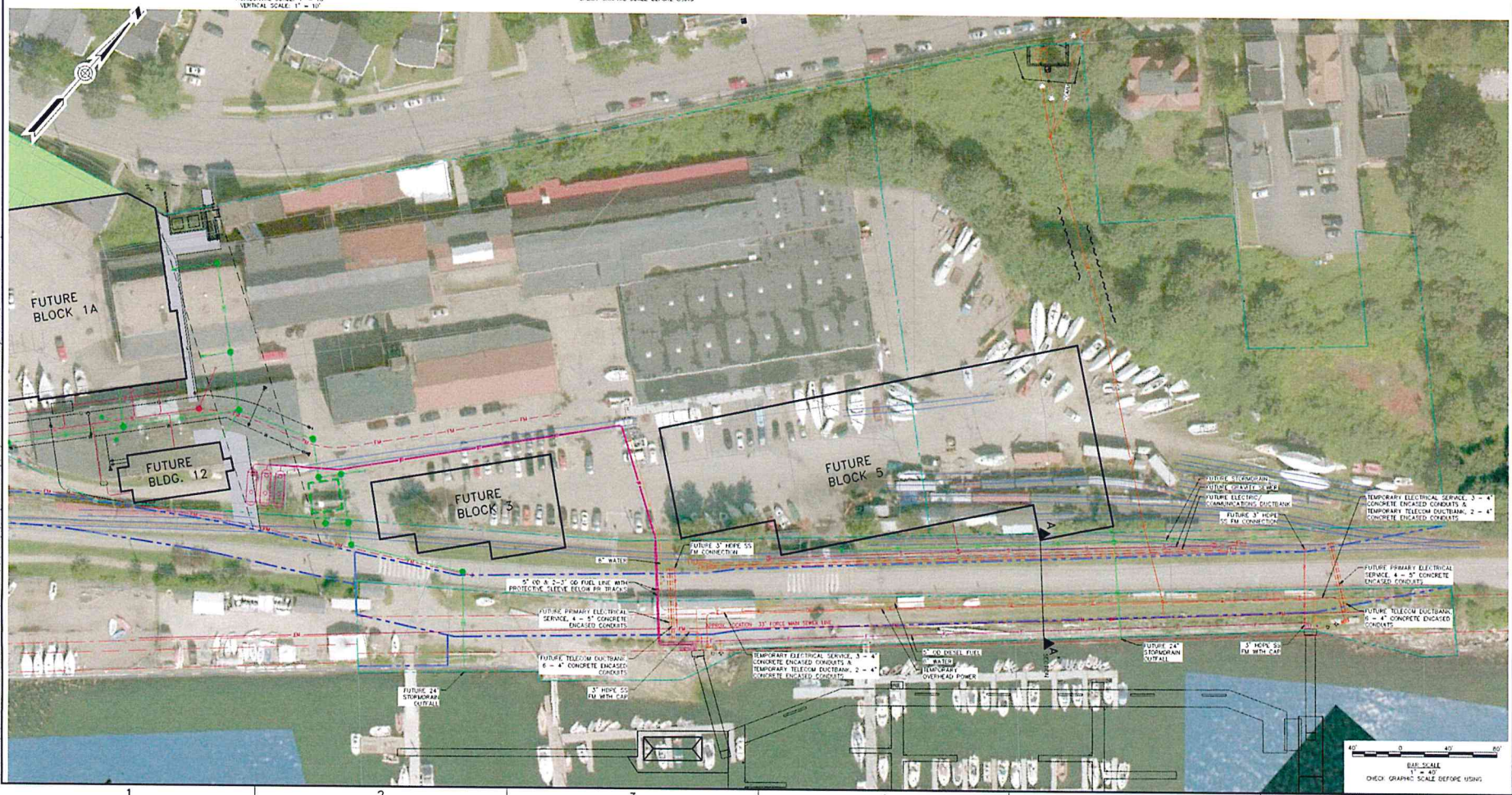
DIESEL FUEL LINE TRENCH SECTION

SCALE: N.T.S.

BAR SCALE
1" = 10'
CHECK GRAPHIC SCALE BEFORE USING

LEGEND

- PROPOSED WATER
- PROPOSED FUEL
- PROPOSED TEMPORARY OVERHEAD ELECTRIC
- PROPOSED TEMPORARY UNDERGROUND ELECTRIC
- PROPOSED TEMPORARY UTILITY POLE
- PROPOSED FORCE MAIN
- EXISTING 33" S FM
- FUTURE STORMDRAIN
- FUTURE GRAVITY SEWER
- FUTURE FORCE MAIN
- FUTURE UNDERGROUND ELECT/ COMM
- PROPOSED MDOT CORRIDOR
- EXISTING MDOT CORRIDOR/ PROPERTY LINE
- EXISTING PRO EASEMENT



BAR SCALE
1" = 40'
CHECK GRAPHIC SCALE BEFORE USING

FORE POINTS

41 Hutchins Drive
Portland, Maine 04102
800.426.4262 | www.woodardcurran.com

COMMITMENT & INTEGRITY DRIVE RESULTS

THIS DOCUMENT IS THE PROPERTY OF WOODARD & CURRAN, INC. AND ITS CLIENT AND IS NOT TO BE USED FOR ANY PURPOSE OR MODIFICATION WITHOUT WRITTEN PERMISSION OF WOODARD & CURRAN, INC.

REV	DESCRIPTION	DATE
1	REVISIONS PER CITY COMMENTS	11/26/18

DESIGNED BY: KJT
DRAWN BY: BCM
CHECKED BY: ECC
CERTIFICATION BLOCK

MARINA UTILITY FIGURE

PF MARINA, LLC
PORTLAND, MAINE

FORE POINTS
MARINA SITE PLAN APPLICATION

JOB NO.: 227007.50
DATE: JANUARY 15, 2019
SCALE: AS NOTED
SHEET: 1 OF 1

FIG. 1

24x36 SHEET

ATTACHMENT B

Underground Utilities

Milepost	Stationing	Railroad Val Plan	Remarks	Annual Fee
.35		V-26, Sheet 24	Underground 24" storm drain pipe (eastern gangway)	$50
.35		V-26, Sheet 24	Underground 24" storm drain pipe (western gangway)	$50
.35		V-26, Sheet 24	Underground 6" water line to run longitudinally within the ROW for 545'.	$545
.35		V-26, Sheet 24	Underground 5" diesel fuel line, double wall pipe (monitored and alarmed); contained within a single protective sleeve under RR tracks	$250
.35		V-26, Sheet 24	Underground 3" Diesel fuel line (monitored and alarmed) contained within 2 single protective sleeves under RR tracks	$150
.35		V-26, Sheet 24	Underground 3" gasoline double wall fuel lines (monitored and alarmed) contained within a single protective sleeve under RR tracks	$150
.35		V-26, Sheet 24	Underground 12.47 KV Primary Electrical Service; four 5" concrete encased conduits located within an electrical duct bank (eastern gangway)	$75
.35		V-26, Sheet 24	Underground 12.47 KV Primary Electrical Service; four 5" concrete encased conduits located within an electrical duct bank (western gangway)	$75
.35		V-26, Sheet 24	Underground Telecom service six 4"concrete encased conduits located within a Telecom duct bank	$100
.35		V-26, Sheet 24	Underground Telecom service six 4" concrete encased conduits located within a Telecom duct bank	$100
.35		V-26, Sheet 24	3" HDPC 55 FM with cap (eastern gangway)	$25
.35		V-26, Sheet 24	3" HDPC 55 FM with cap (western gangway)	$25

TOTAL ANNUAL FEE: $1595

PUBLIC ACCESS EASEMENT

KNOW ALL PERSONS BY THESE PRESENTS, that CPB2 I LLC, a Delaware limited liability company, with a place of business in Portland, Maine and mailing address of Merrill's Wharf, 254 Commercial Street, Suite, 118, Portland, Maine 04101 (the "Grantor"), FOR CONSIDERATION PAID, hereby GRANTS to the CITY OF PORTLAND, a Maine body corporate and politic, with a mailing address of City Hall, 389 Congress Street, Portland, Maine 04101 (the "Grantee" or the "City"), a fifty-foot wide public access easement (the "Access Easement") for the purpose described below, across a portion of Grantor's property in Portland, Maine, running from Fore Street to the southerly boundary of Grantor's property, in the general location depicted on the drawing attached hereto as Exhibit A and made a part hereof (the "Easement Area"), subject to the terms set forth below. The precise location of the Easement Area shall be flexible prior to final design and construction of permanent improvements to the Easement Area. When the final design of the Easement Area has been completed and prior to construction of said improvements, the Easement Area shall be more particularly described by metes and bounds in an Addendum to this Access Easement, signed by both Parties and recorded in the Cumberland County Registry of Deeds.

The purpose of the Access Easement granted herein is to provide physical and visual public access to the waterfront for pedestrians within the Easement Area, which access shall include an ADA compliant access way for pedestrians, including but not limited to wheelchair access on the southern end of the Easement Area. Additional accommodations may be provided if and as required by applicable state or federal law, including the ADA.

The Easement Area shall be subject to such rules or ordinances that Grantee may adopt from time to time in the interests of public safety. Wheelchairs and emergency vehicles as well as snow removal equipment shall be permitted in accordance with applicable federal and/or state laws regulating accessibility for such devices, vehicles or equipment. Maintenance, repair and snow removal responsibilities within the Easement Area shall belong solely to Grantor, its successors and assigns; however, Grantee shall have the right, but not the obligation, to maintain or repair the Easement Area, or to remove snow therefrom, when Grantee, in its sole discretion, deems such maintenance, repair or snow removal necessary to ensure public safety and Grantor has failed to perform the same within a reasonable time after notice from Grantee.

Grantor agrees not to use or permit any use, condition or state of disrepair that would be contrary to or otherwise unreasonably interfere with the use of the Easement Area by pedestrians in the manner contemplated herein. Provided, however, Grantor may temporarily close all or a portion of the Easement Area during construction, maintenance or repair activities if required to safeguard public safety. Grantor shall promptly correct any condition and complete any maintenance or construction activities necessitating such closure in order to minimize the duration of the closure or restriction of public access to the Easement Area. Any closures that prevent public access from Fore Street through to the waterfront shall be pursuant to and in accordance with an Access Easement Closure plan filed with and approved in advance by the City of Portland's Planning Authority.

Nothing herein contained shall be deemed to be a gift or dedication of the fee interest in the Easement Area or any portion thereof to Grantee or to the general public.

The Easement Area is and shall remain private property, and Grantor hereby expressly reserves and retains for itself and for any subsequent owner of the Easement Area, all rights of ownership to the extent the exercise thereof does not unreasonably limit or unreasonably interfere with the use of the Easement Area by pedestrians; such rights include, without limitation, (i) the right to adopt reasonable rules and regulations governing the use of the Easement Area, (ii) the right to use, or to grant to others the right to use, the surface and subsurface of and air space above the Easement Area for any use or purpose (including, without limitation, the right to install, inspect, operate, maintain, repair, replace and remove electric lines, gas lines, underground fuel tanks, telecommunication lines (such as telephone, cable and internet lines), water lines, storm sewers, sanitary sewers, catch basins, manholes, clean-outs, curbing, driveways, surface parking areas, sidewalks, landscaping, benches, information kiosks, light pole bases, lighting fixtures, retaining walls, monument signs, fountains, statues, art pieces and the like, and (iii) the right to make changes, alterations and/or improvements to the Easement Area from time to time.

This easement is given for recreational use and the Grantor and Grantee claim the rights and protections against liability in accordance with Title 14 MRS §159-A to the maximum extent permitted by law.

TO HAVE AND TO HOLD the aforegranted and bargained public access easement, with all privileges and appurtenances thereof, to the Grantee, its successors and assigns, to its and their use and behoof, forever.

IN WITNESS WHEREOF, the Grantor has caused this instrument to be executed by Casey Prentice, its Manager thereunto duly authorized, this 27 day of March, 2019.

CPB2 I LLC
By: CPB2 Management LLC, Manager

By: _____
Name: Casey Prentice
Title: Manager

STATE OF MAINE
CUMBERLAND, ss

March 27, 2019

Personally appeared the above-named Casey Prentice, for CPB2 I LLC as aforesaid, and acknowledged the foregoing instrument to be his/her free act and deed in his/her said capacity and the free act and deed of said limited liability company.

Before me,
Janet L. Davis
Notary Public/Attorney at Law

Print name: Janet L. Davis SEAL
My commission expires: 01-18-2021

JANET L. DAVIS
NOTARY PUBLIC
State of Maine
My Commission Expires
January 18, 2021

GRANTEE ACCEPTANCE:

The City of Portland does hereby accept the foregoing Public Access Easement, by and through City Manager Jon Jennings.

CITY OF PORTLAND

By: Jon Jennings
Its: City Manager

STATE OF MAINE
CUMBERLAND, ss

March 28th, 2019

Personally appeared the above-named Jon Jennings, for the City of Portland as aforesaid, and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of said City of Portland.

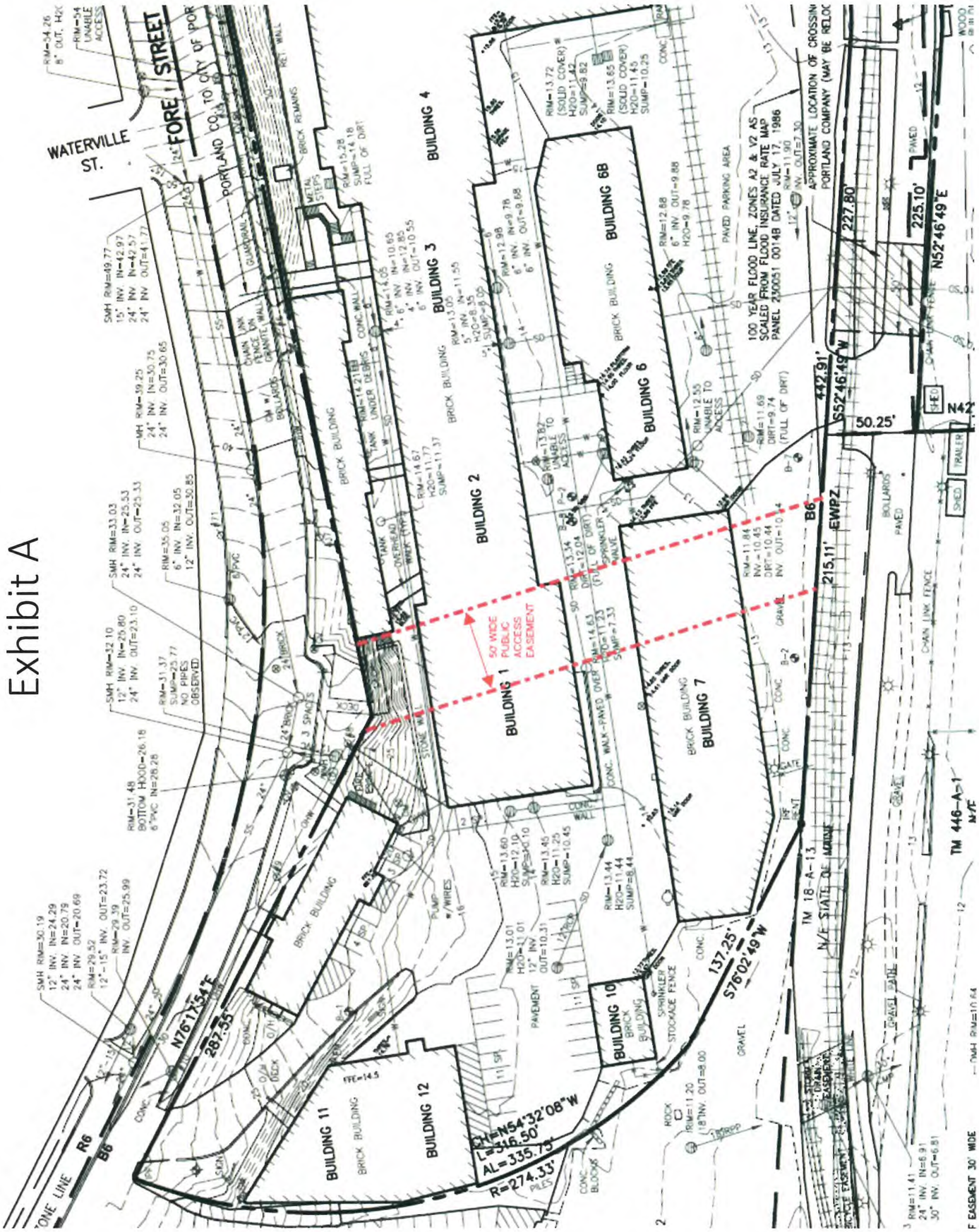
Before me,

Notary Public/Attorney at Law

Print name: Deivy Periana
My commission expires: April 9, 2021

DEIVY PERIANA
NOTARY PUBLIC
CUMBERLAND COUNTY
MAINE
MY COMMISSION EXPIRES APRIL 9, 2021

Exhibit A



Received
Recorded Register of Deeds
Apr 05,2019 03:47:04P
Cumberland County
Nancy A. Lane

7. EVIDENCE OF STATE AND/OR FEDERAL APPROVALS

The following state and federal permits will be required for the proposed work:

- MaineDEP Site Location of Development Act Permit (reviewed by City of Portland under Delegated Review Authority);
- Maine Construction General Permit Notice of Intent; and
- FAA Notice of Proposed Construction.

Copies of these permit approvals can be provided to the City of Portland.

It should be noted that additional permits will also be required for the stormwater outfalls associated with the proposed development. The outfalls will be permitted separately, as described in the Level II Site Plan Amendment submitted to the City of Portland under separate cover for this work.

JANET T. MILLS
GOVERNOR

STATE OF MAINE
DEPARTMENT OF
INLAND FISHERIES & WILDLIFE
284 STATE STREET
41 STATE HOUSE STATION
AUGUSTA ME 04333-0041

JUDITH CAMUSO
COMMISSIONER

December 2, 2019

Lauren Swett
Woodard & Curran
41 Hutchins Drive
Portland, ME 04102

RE: Information Request - 58 Fore Street, Portland

Dear Lauren:

Per your request received November 19, 2019, we have reviewed current Maine Department of Inland Fisheries and Wildlife (MDIFW) information for known locations of Endangered, Threatened, and Special Concern species; designated Essential and Significant Wildlife Habitats; and fisheries habitat concerns within the vicinity of the *58 Fore Street Project* in Portland.

Our information indicates no locations of Endangered, Threatened, or Special Concern species within the project area that would be affected by your project. Additionally, our Department has not mapped any Essential or Significant Wildlife Habitats or fisheries habitats that would be directly affected by your project.

This consultation review has been conducted specifically for known MDIFW jurisdictional features and should not be interpreted as a comprehensive review for the presence of other regulated features that may occur in this area. Prior to the start of any future site disturbance we recommend additional consultation with the municipality, and other state resource agencies including the Maine Natural Areas Program and Maine Department of Environmental Protection in order to avoid unintended protected resource disturbance.

Please feel free to contact my office if you have any questions regarding this information, or if I can be of any further assistance.

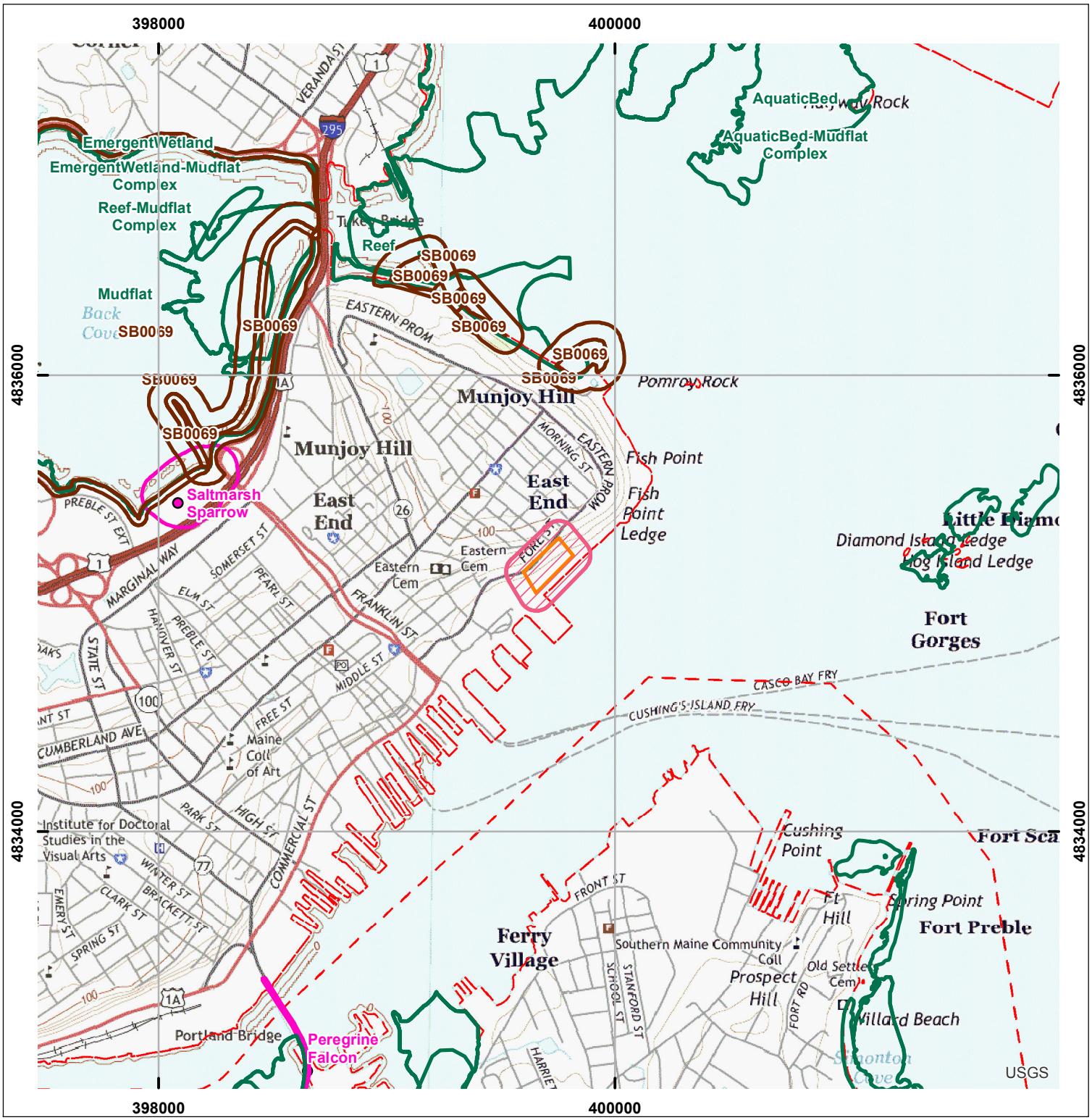
Best regards,

Becca Settele
Wildlife Biologist

PHONE: (207) 287-5254

FISH AND WILDLIFE ON THE WEB:
www.maine.gov/ifw

EMAIL ADDRESS:
John.Perry@maine.gov



Environmental Review of Fish and Wildlife Observations and Priority Habitats

Project Name: Portland, 58 Fore Street (Version 1)

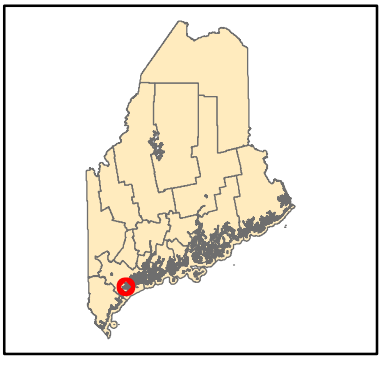
Maine Department of Inland Fisheries and Wildlife

0 0.125 0.25 0.5 0.75 1 Miles

Projection: UTM, NAD83, Zone 19N

Date: 11/20/2019

- ProjectPoints
- ProjectLines
- ProjectPolys
- ProjectSearchAreas
- Deer Winter Area
- LUPC p-fw
- Cooperative DWAs
- Seabird Nesting Islands
- Shorebird Areas
- Inland Waterfowl and Wading Bird
- 2008 Iwwh - Shoreland Zoning
- Tidal Waterfowl and Wading Bird
- Significant Vernal Pools
- Environmental Review Polygons
- Roseate Tern
- Piping Plover and Least Tern
- Aquatic ETSc - 2.5 mi review
- Rare Mussels - 5 mi review
- Maine Heritage Fish Waters
- Arctic Charr Habitat
- Redfin Pickerel and Swamp Darter Habitats - buffer100ft
- Special Concern occupied habitats - 100ft buffer
- Wild Lake Trout Habitats



STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY
177 STATE HOUSE STATION
AUGUSTA, MAINE 04333

JANET T. MILLS
GOVERNOR

AMANDA E. BEAL
COMMISSIONER

November 18, 2019

Lauren Swett
Woodard & Curran
41 Hutchins Drive
Portland, ME 04102

Via email: lswett@woodardcurran.com

Re: Rare and exemplary botanical features in proximity to: #227007.09, 58 Fore Street, Portland Foreside, Portland, Maine

Dear Ms. Swett:

I have searched the Maine Natural Areas Program's Biological and Conservation Data System files in response to your request received November 13, 2019 for information on the presence of rare or unique botanical features documented from the vicinity of the project in Portland, Maine. Rare and unique botanical features include the habitat of rare, threatened, or endangered plant species and unique or exemplary natural communities. Our review involves examining maps, manual and computerized records, other sources of information such as scientific articles or published references, and the personal knowledge of staff or cooperating experts.

Our official response covers only botanical features. For authoritative information and official response for zoological features you must make a similar request to the Maine Department of Inland Fisheries and Wildlife, 284 State Street, Augusta, Maine 04333.

According to the information currently in our Biological and Conservation Data System files, there are no rare botanical features documented specifically within the project area. Based on the information in our files and the landscape context of this project, there is a low probability that rare or significant botanical features occur at this project location.

This finding is available and appropriate for preparation and review of environmental assessments, but it is not a substitute for on-site surveys. Comprehensive field surveys do not exist for all natural areas in Maine, and in the absence of a specific field investigation, the Maine Natural Areas Program cannot provide a definitive statement on the presence or absence of unusual natural features at this site.

The Maine Natural Areas Program (MNAP) is continuously working to achieve a more comprehensive database of exemplary natural features in Maine. We would appreciate the contribution of any information obtained should you decide to do field work. MNAP welcomes coordination with individuals or organizations proposing environmental alteration, or conducting environmental assessments. If, however, data provided by MNAP are to be published in any form, the Program should be informed at the outset and credited as the source.

MOLLY DOCHERTY, DIRECTOR
MAINE NATURAL AREAS PROGRAM
90 BLOSSOM LANE, DEERING BUILDING

PHONE: (207) 287-8044
WWW.MAINE.GOV/DACF/MNAP

The Maine Natural Areas Program has instituted a fee structure of $75.00 an hour to recover the actual cost of processing your request for information. You will receive an invoice for $150.00 for two hours of our services.

Thank you for using MNAP in the environmental review process. Please do not hesitate to contact me if you have further questions about the Natural Areas Program or about rare or unique botanical features on this site.

Sincerely,



Kristen Puryear | Ecologist | Maine Natural Areas Program
207-287-8043 | kristen.puryear@maine.gov

MAINE HISTORIC PRESERVATION COMMISSION
55 CAPITOL STREET
65 STATE HOUSE STATION
AUGUSTA, MAINE
04333

JANET T. MILLS
GOVERNOR

KIRK F. MOHNEY
DIRECTOR

December 6, 2019

Ms. Lauren Swett
Woodard & Curran
41 Hutchins Drive
Portland, ME 04102

Project: MHPC #1689-19 Portland Foreside Development Company; 58 Fore Street
New Buildings; Parking Garage; Roadway; Pedestrian Plazas

Town: Portland, ME

Dear Ms. Swett:

In response to your recent request, I have reviewed the information received November 15, 2019 to continue consultation on the above referenced project in accordance with the requirements of Maine Department of Environmental Protection.

In order to continue our review, please provide additional photographs of the existing buildings, preliminary elevation drawings of the proposed new buildings including the proposed materials. Please key photographs to an existing site plan.

We look forward to continuing consultation with you. If you have any questions regarding above-ground properties, please contact Megan M. Rideout of this office at megan.m.rideout@maine.gov.

Sincerely,

Kirk F. Mohney

Kirk F. Mohney
State Historic Preservation Officer

COMMITMENT & INTEGRITY
DRIVE RESULTS

41 Hutchins Drive
Portland, ME 04102
www.woodardcurran.com

T 800.426.4262
T 207.774.2112
F 207.774.6635

January 14, 2020

Kirk F. Mohney, Director
Maine Historic Preservation Commission
55 Capitol Street, 65 State House Station
Augusta, Maine 04333-0065

Re: MHPC #1689-19 Portland Foreside Development Phase 1 – Additional Information

Dear Mr. Mohney:

Thank you for coordinating the review of the proposed development of Phase 1 of the Portland Foreside Project located at 58 Fore Street in Portland, Maine. As requested in your letter dated December 6, 2019, enclosed are additional photographs of the existing buildings and preliminary elevation drawings of the proposed buildings. Also enclosed is a USGS map showing the locations of the existing and proposed buildings; the photographs and drawings have been keyed to the map.

We appreciate your review of this project. If you have any questions regarding this information or the proposed project, please do not hesitate to contact me at 207-558-3763 or lswett@woodardcurran.com. Thank you for your assistance.

Sincerely,

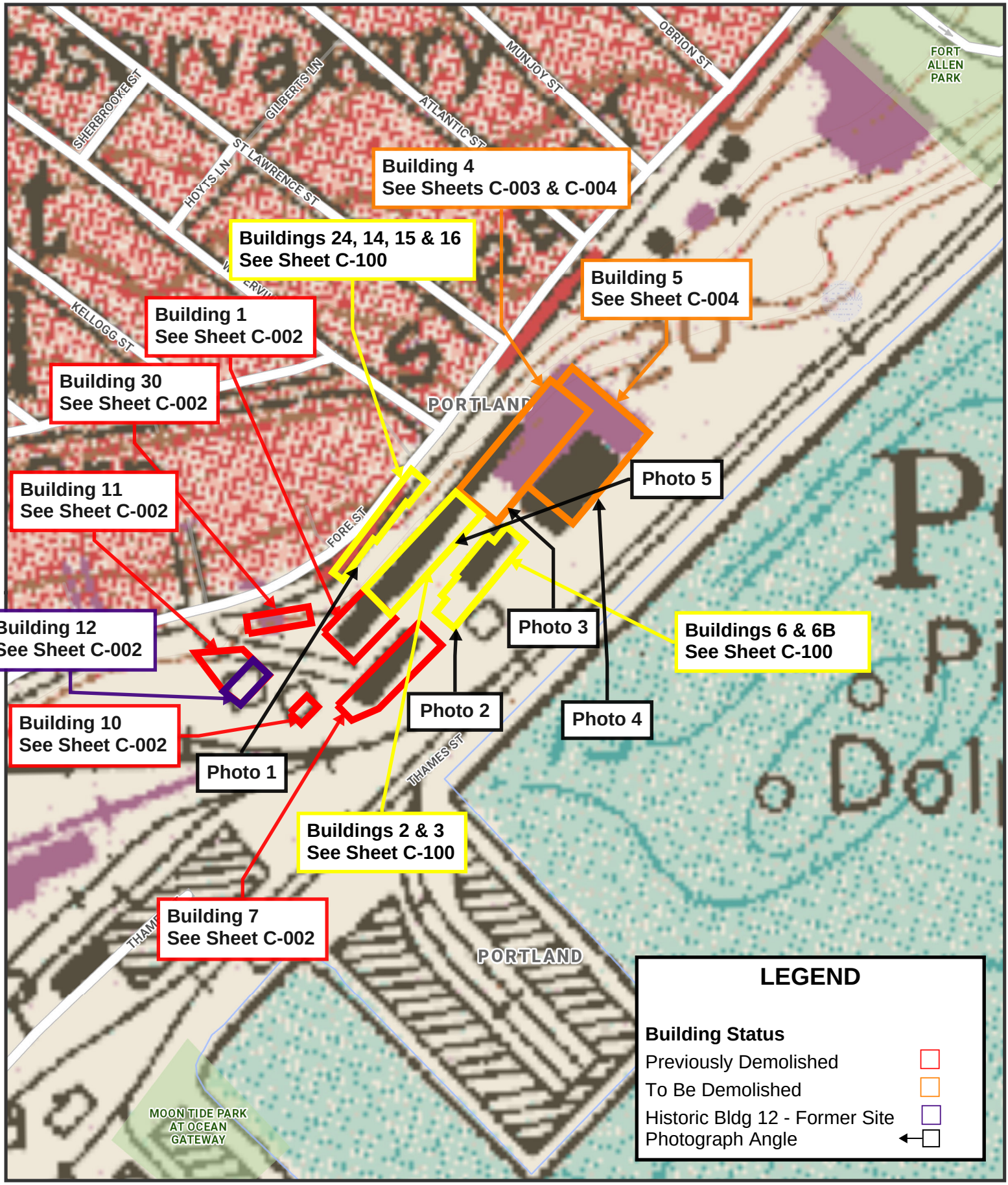
WOODARD & CURRAN

Lauren Swett

Lauren Swett, P.E.
Technical Manager

Enclosures:
- USGS Key Map
- Site Photographs
- Design Drawings
- Building Elevations

MHPC #1689-19 BUILDING KEY MAP #1



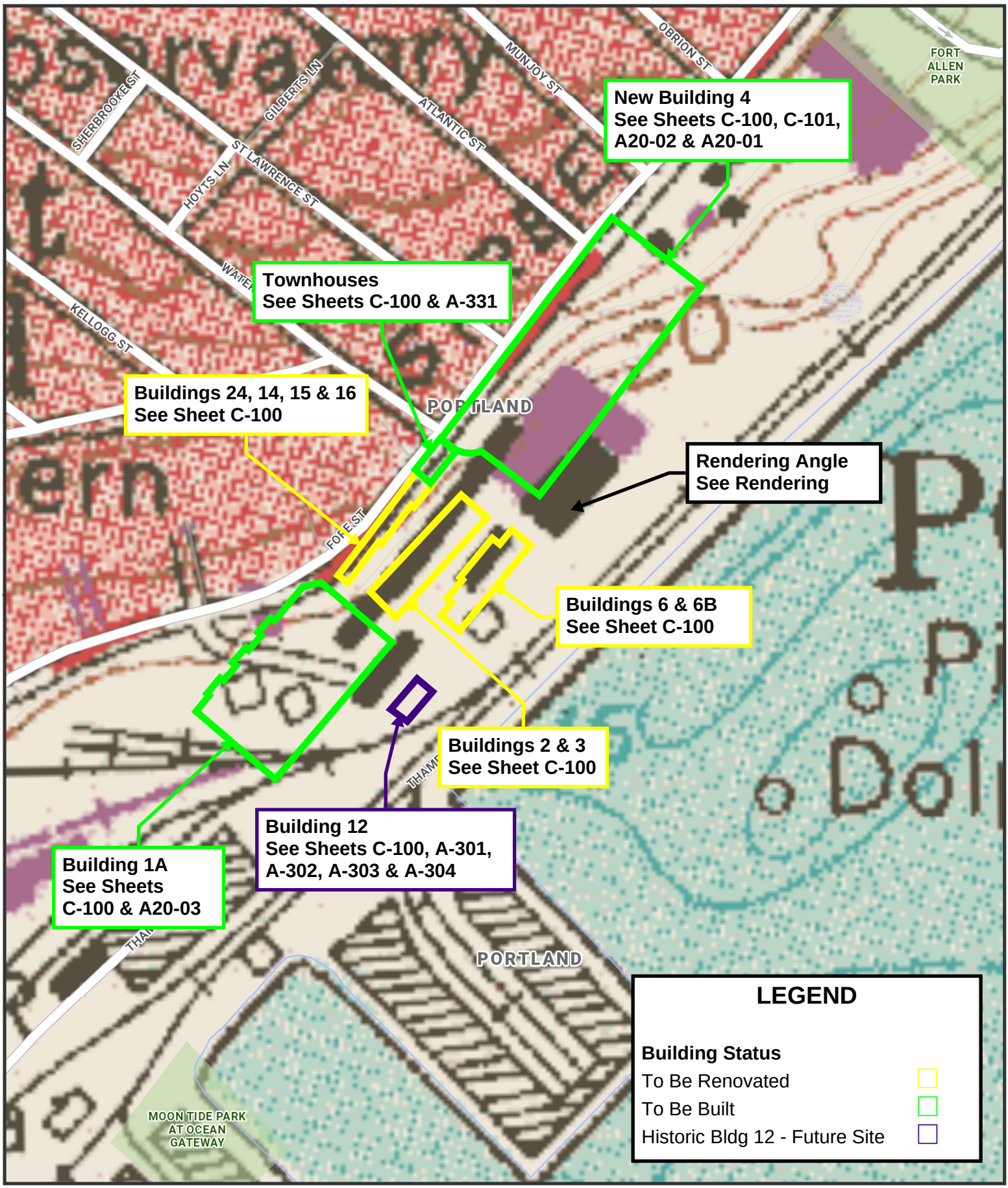
The Maine Department of Transportation provides this publication for information only. Reliance upon this information is at user risk. It is subject to revision and may be incomplete depending upon changing conditions. The Department assumes no liability if injuries or damages result from this information. This map is not intended to support emergency dispatch.

0.05 Miles

1 inch = 0.06 miles

Date: 12/16/2019
Time: 8:41:41 AM

MHPC #1689-19 BUILDING KEY MAP #2



The Maine Department of Transportation provides this publication for information only. Reliance upon this information is at user risk. It is subject to revision and may be incomplete depending upon changing conditions. The Department assumes no liability if injuries or damages result from this information. This map is not intended to support emergency dispatch.

0.05 Miles

1 inch = 0.06 miles

Date: 12/16/2019
Time: 8:41:41 AM



Photo 1 Buildings 24, 14, 15 and 16 (on the left); facing Northeast. Photo captured 12/18/2019.



Photo 2 Buildings 6 and 6B; facing Northeast. Photo captured 12/18/2019.



Photo 3 Building 4; facing Northwest. Photo captured 12/18/2019.



Photo 4 Building 5; facing Northeast. Photo captured 12/18/2019.



Photo 5 Buildings 2 and 3; facing Southwest. Photo captured 12/18/2019.

DEMOLITION NOTES:

1. SEQUENCE OF WORK WILL FOLLOW THE CONSTRUCTION MANAGEMENT PLAN. DEMOLITION ACTIVITIES SHALL BE SEQUENCED TO ENSURE AREAS OF THE SITE SHALL REMAIN OPERATIONAL DURING CONSTRUCTION.
2. PRIOR TO THE START OF DEMOLITION, THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND/OR APPROVALS FROM THE CITY OF PORTLAND, AND ALL OTHER AUTHORITIES HAVING JURISDICTION.
3. THE WORD "DEMOLISH" SHALL IMPLY THE FULL REMOVAL AND PROPER DISPOSAL OF THE ITEM AND ANY APPURTENANT ITEMS, AS NOTED, OR AS DIRECTED BY THE OWNER OR THEIR REPRESENTATIVE. THE OWNER RETAINS THE RIGHT TO KEEP ANY ITEM NOTED FOR REMOVAL OR DEMOLITION AT THE REQUEST OF THE OWNER OR THEIR REPRESENTATIVE.
4. CONSTRUCTION/DEMOLITION DEBRIS NOT APPROVED FOR REUSE ON-SITE, SHALL BE REMOVED AND DISPOSED OFF SITE IN ACCORDANCE WITH THE REQUIREMENTS OF ALL AUTHORITIES HAVING JURISDICTION. WASTE MANIFEST FORMS DOCUMENTING PROPER OFF-SITE DISPOSAL SHALL BE MADE AVAILABLE TO THE SITE/CIVIL ENGINEER AND THE CITY OF PORTLAND UPON REQUEST.
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6. THE CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES TO REMAIN. ANY TEMPORARY SHUT DOWNS REQUIRED TO FACILITATE THE PROPOSED CONSTRUCTION, WHICH MAY AFFECT USES ON ADJACENT PROPERTIES SHALL BE COORDINATED BY THE CONTRACTOR, THE CITY OF PORTLAND AND APPLICABLE UTILITY.
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10. ALL SITE FEATURES OUTSIDE LIMIT OF WORK AND NOT DESIGNATED FOR DEMOLITION SHALL BE PROTECTED.
11. ALL SITE FEATURES WITHIN LIMIT OF WORK TO BE DEMOLISHED UNLESS OTHERWISE NOTED.

SHEET LEGEND

- BUILDING DEMOLITION (WORK DONE PREVIOUSLY UNDER SEPARATE CONTRACT)
- XXXXXXXXXXXXXXXX · UTILITY LINE DEMOLITION
- CATCH BASIN INLET PROTECTION
- SEDIMENT BARRIER

BAR SCALE
1" = 20'
CHECK GRAPHIC SCALE BEFORE USING

Bruner/Cott
ARCHITECTS
225 Friend St., Suite 701
Boston, MA 02114
617.492.8400
www.brunercott.com

Rev.	Date	Remarks
1	8/13/19	Design Development

Portland Foreside Building 12
& Shared Street
58 Fore St. Portland, ME

Date	AUGUST 13, 2019
Scale	
WC Project Number	227007.07
Designed By	AEF
Drawn By	BCM
Checked By	LJS

WOODARD & CURRAN
41 Hutchins Drive
Portland, Maine 04102
800.426.4262 | www.woodardcurran.com

COMMITMENT & INTEGRITY DRIVE RESULTS

STATE OF MAINE
LAUREN JANE SWETT
No. 12284
LICENSED PROFESSIONAL ENGINEER
8/13/2019

Demolition & Erosion & Sedimentation Control Plan

C-002

DESIGN DEVELOPMENT - NOT FOR CONSTRUCTION

41 Hutchins Drive
Portland, Maine 04102
800.426.4262 | www.woodardcurran.com
COMMITMENT & INTEGRITY DRIVE RESULTS

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STATE OF MAINE
LAUREN JANET SMETT
No. 12284
REGISTERED PROFESSIONAL ENGINEER

Lauren Smett

REV	DESCRIPTION	DATE
	07007 PHASE 1 SITE PLAN SUBMISSION	

CHECKED BY: DJC

REV	DESCRIPTION	DATE

DESIGNED BY: LJS DRAWN BY: BDM

DEMOLITION PLAN - 1

PORTLAND FORESIDE DEVELOPMENT CO
PORTLAND, ME 04102

PHASE 1 SITE PLAN SUBMISSION

JOB NO.: 0227007
DATE: NOVEMBER 2019
SCALE: 1"=20'
SHEET: 4 OF 17

C-003

MATCHLINE – SEE SHEET C-004

MATCHLINE – SEE SHEET C-004

FORE CONNECTOR

FORE STREET

WATERVILLE STREET

THAMES STREET EXT.

DEMOLISH SIGN
DEMOLISH FM
DEMOLISH OHW TO UTILITY POLE
DEMOLISH WOODEN DECKING
CATCH BASIN INLET PROTECTION, TYP.
PROTECT & MAINTAIN USE OF MARINA WATER & ASSOCIATED STRUCTURES DURING CONSTRUCTION
DEMOLISH EXISTING OVERHEAD ELECTRIC & UP
PROTECT EXISTING RETAINING WALL, REFER TO STRUCTURAL PLANS
PROTECT EXISTING GAS
DEMOLISH BRICK REMAINS
RELOCATED UP #8 SEE SHT. C-102
DEMOLISH METAL STEPS
DEMOLISH CATCH BASIN
DEMOLISH DRAIN
DEMOLISH STONE RETAINING WALL
DEMOLISH WATER
DEMOLISH SEWER PUMP STATION
DEMOLISH BUILDING 4
DEMOLISH CATCH BASINS
DEMOLISH STRUCTURE
DEMOLISH SPRINKLER & WATER
DEMOLISH ELECTRIC
DEMOLISH WATER LINE & HYDRANT
DEMOLISH SPRINKLER
DEMOLISH 18" SD & CATCH BASIN
CB RIM=11.20
18"INV. OUT=8.00
DEMOLISH FENCE
RELOCATE CONCRETE BLOCKS ON SITE
REMOVE EXISTING RIPRAP
REMOVE EXISTING GUARDRAIL (IF INSTALLED AT TIME OF CONSTRUCTION)
STABILIZED CONSTRUCTION ENTRANCE
CAP SD AT PL
RELOCATION OF MNGRR SIDING
PROTECT & MAINTAIN USE OF EXISTING MARINA WATER DURING CONSTRUCTION
PROTECT & MAINTAIN USE OF MARINA WATER DURING CONSTRUCTION
DEMOLISH EXISTING RAILROAD TRACKS
DEMOLISH EXISTING PUMP STATION
PROTECT EXISTING FUEL LINES
PROTECT EXISTING MARINA WATER
PROTECT EXISTING UG FUEL TANKS FUEL LINES
SEDIMENT BARRIER, TYP.
PROVIDE CB INLET PROTECTION, TYP.
PROVIDE MASONRY PLUGS ON REMAINING DOWNSTREAM PIPES PRIOR TO DEMOLISHING UPSTREAM SD PIPING
BUILDING 2
BUILDING 3
BUILDING 6
BUILDING 6B
BLDG 16
BLDG 24
PAVEMENT
GRAVEL
ROCK
CONC. BLOCKS
B6 EWPZ
ZONE LINE
75' SHORELAND ZONE
100 YEAR FLOOD LINE, ZONE V2 (EL 13) AS SCALED FROM FLOOD INSURANCE RATE MAP PANEL 230051 0014B DATED JULY 17, 1986

DEMOLITION NOTES:

1. SEQUENCE OF WORK WILL FOLLOW THE CONSTRUCTION MANAGEMENT PLAN. DEMOLITION ACTIVITIES SHALL BE SEQUENCED TO ENSURE AREAS OF THE SITE SHALL REMAIN OPERATIONAL DURING CONSTRUCTION.
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SHEET LEGEND

- REMOVE & DISPOSE OF PAVEMENT (REMOVE PAVEMENT, CURB AND/OR STRUCTURE WITHIN ZONE)
- BUILDING DEMOLITION
- UTILITY LINE DEMOLITION
- CATCH BASIN INLET PROTECTION
- SEDIMENT BARRIER

BAR SCALE
1" = 20'
CHECK GRAPHIC SCALE BEFORE USING

NOT FOR CONSTRUCTION

\\woodardcurran.net\shared\Projects\0227007.07 PFDC - 58 Fore Block 1\wip\Drawings\Phase 1 - Site Plan Submission\0227007 Phase 1 SPS Mon, Nov 04, 2019 - 1:38pm

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- BUILDING DEMOLITION
- UTILITY LINE DEMOLITION
- CATCH BASIN INLET PROTECTION
- SEDIMENT BARRIER

MATCHLINE – SEE SHEET C-003

FORE STREET

DEMOLISH BUILDING 4

DEMOLISH BUILDING 5

DEMOLISH EXISTING WOOD RETAINING WALL

MNGRR TO REMOVE BUILDINGS & TRACKS

PROTECT & MAINTAIN USE OF MARINA WATER DURING CONSTRUCTION

PROTECT & MAINTAIN USE OF MARINA ELECTRICAL DURING CONSTRUCTION

APPROX. LOCATION 33" FORCE MAIN SEWER LINE

100 YEAR FLOOD LINE, ZONE V2 (EL 13) AS SCALED FROM FLOOD INSURANCE RATE MAP PANEL 230051 0014B DATED JULY 17, 1986

TM 2-A-3
N/F
TIMOTHY HALEY, TRUSTEE
24759/67, 69

TM 2-A-10

ZONE LINE
250' SHORELAND ZONE
75' SHORELAND ZONE
EWPZ
B6
R6

BAR SCALE
1" = 20'
CHECK GRAPHIC SCALE BEFORE USING

NOT FOR CONSTRUCTION

WOODARD & CURRAN
41 Hutchins Drive
Portland, Maine 04102
800.426.4262 | www.woodardcurran.com

COMMITMENT & INTEGRITY DRIVE RESULTS
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STATE OF MAINE
LAUREN JANET SMETT
No. 12284
REGISTERED PROFESSIONAL ENGINEER

REV	DESCRIPTION	DATE
1	227007 PMB 1.08.19 Ltr.	

REV	DESCRIPTION	DRAWN BY:	DESIGNED BY:	CHECKED BY:
		BDM	LJS	DLC

PORTLAND FORESIDE DEVELOPMENT CO
PORTLAND, ME 04102

DEMOLITION PLAN - 2

PHASE 1 SITE PLAN SUBMISSION

JOB NO.: 0227007
DATE: NOVEMBER 2019
SCALE: 1"=20'
SHEET: 5 OF 17

C-004

\\woodardcurran.net\shared\Projects\0227007.07 PFDC - 58 Fore Block \wpb\Drawings\Phase 1 - Site Plan Submission\0227007 Phase 1 Site Plan.dwg, Nov 08, 2019 - 1:38pm

42x30 SHEET
1:1

FORE CONNECTOR

PROVIDE GRANITE CURB & TEMPORARY BITUMINOUS SIDEWALK TO CLOSE EXISTING DRIVEWAY & CONNECT TO SIDEWALK & RAMP INSTALLED BY ADJACENT DEVELOPMENT

MAINTAIN EXISTING CONCRETE SIDEWALK & CURB

MATCH EXISTING CONCRETE SIDEWALK

ZONING DISTRICT BOUNDARY

FORE STREET

WATERVILLE STREET

MATCHLINE – SEE SHEET C–101

BIKE RACK, SEE LANDSCAPING PLANS

STAIR & RETAINING WALLS

STREET TREES, SEE LANDSCAPING PLANS

EXISTING BELOW GRADE BUILDING 15 LIMIT

PROVIDE SIDEWALK IMPROVEMENTS ALONG FORE STREET

REMOVE EXISTING CURB, PROVIDE FLUSH GRANITE CURB

PROVIDE 7" LONG TIPDOWN CURB

FENCE, SEE LANDSCAPING PLANS

PROVIDE 7" LONG TIPDOWN CURB

25.5'

RAMP

RAMP

5.0'

LOAM & SEED

EXISTING BITUMINOUS SIDEWALK TO REMAIN

PROVIDE RETAINING WALL

LEVEL 1 ROOF

BLDG. 24

BLDG. 14

(24, 14, 15, 16 EXISTING BUILDING RENOVATION)

BLDG. 15

BLDG. 16

TOWNHOUSES
(NEW BUILDING CONSTRUCTION)

OVERHEAD BRIDGE

OVERHEAD BRIDGE

RAMP TO LEVEL 4

56.2'

PAVER PLAZA AREA

BUILDING 4
(NEW BUILDING CONSTRUCTION)

BUILDING 3
(EXISTING BUILDING RENOVATION)

BUILDING 2
(EXISTING BUILDING RENOVATION)

BIKE RACK, TYP. OF 11, SEE LANDSCAPING PLANS

PAVER PLAZA AREA

OVERHEAD BRIDGE

44.0'

MATCH EXISTING BITUMINOUS SIDEWALK

PROTECT EXISTING STREET LIGHT

PROTECT EXISTING GRANITE CURB

8.0'

BRICK SIDEWALK

R10.0'

PROVIDE 14" LONG TIPDOWN CURB

RAMP

REMOVE EXISTING CURB, PROVIDE FLUSH GRANITE CURB

PROVIDE BOLLARDS

TRASH COMPACTOR ENTRANCE

12.0'

BUILDING 1A
(NEW BUILDING CONSTRUCTION)

PORTLAND COMPANY HISTORIC DISTRICT BOUNDARY

250' SHORELAND ZONE

50' PUBLIC ACCESS EASEMENT

STONEDUST, SEE LANDSCAPING PLANS

BUILDING 6B
(EXISTING BUILDING RENOVATION)

BENCH (TYP.), SEE LANDSCAPING PLANES

BUILDING 6
(EXISTING BUILDING RENOVATION)

PROVIDE 7' LONG TIPDOWN CURB

28.0'

PROTECT EXISTING GRANITE CURB

PROTECT EXISTING ADA RAMP

RAMPED SITE ENTRANCE

12.0'

PARKING – SPACES

PAVER SHARED STREET

24.0'

22.0'

8.0'

8.0'

PARKING – SPACES

THAMES STREET EXTENSION

B6
EWPZ

BOLLARD (TYP.), SEE LANDSCAPE PLANS

SITE LANDSCAPING, SEE LANDSCAPING PLANS

REFUSE ENCLOSURE

DEMOLISH BRICK SIDEWALK & CURB

BUILDING 12
(EXISTING BUILDING RECONSTRUCTION)

MECH. ENCLOSURE

EXISTING UNDERGROUND FUEL TANKS

SPACE RESERVED FUTURE UNDERGROUND FUEL TANK

12.0'

PAVER SHARED STREET

FENCE, SEE LANDSCAPING PLANS

FENCE, SEE LANDSCAPING PLANS

PROVIDE TEMPORARY REGLAIM PAVEMENT , SPACE FOR MARINA VEHICLES, EMERGENCY VEHICLE ACCESS & DROP–OFF

B6
EWPZ

442.90'
S52°46'32"W

TRAIL RELOCATION TO BE COORDINATED WITH CITY OF PORTLAND

TRACK RELOCATION TO BE COORDINATED WITH MAINE NARROW GAUGE RAILROAD & MDOT

MDOT PROPERTY

NARROW GAUGE RAILROAD TO BE RELOCATED TO MDOT PROPERTY

B6
EWPZ

250' SHORELAND ZONE

S52°46'32"W

MDOT PROPERTY

12' WIDE BITUMINOUS TRAIL

CITY OF PORTLAND PROPERTY

68.8'

S48°04'59"W

MDOT PROPERTY

PF
MARINA PROPERTY

N41°54'38"E
8.00'

MATCHLINE – SEE SHEET C–101

20' 0 20' 40'
BAR SCALE
1" = 20'
CHECK GRAPHIC SCALE BEFORE USING

NOTES:
1. SEE LANDSCAPE PLANS FOR SITE SURFACE MATERIAL ASSOCIATED WITH LANDSCAPED AREAS, PATIOS, AND NON–BITUMINOUS WALKWAYS & ROADWAYS.

2. ALL AREAS WITHIN LIMIT OF WORK NOT IDENTIFIED FOR FINISH SURFACE MATERIALS (PAVERS, BRICK, PAVEMENT, LANDSCAPING) SHALL BE FINISHED WITH RECLAIM ASPHALT.

3. UTILITY & DRAINAGE STRUCTURES NOT SHOWN FOR CLARITY, SEE GRADING & DRAINAGE & UTILITY PLAN FOR MORE INFORMATION.

NOT FOR CONSTRUCTION

41 Hutchins Drive
Portland, Maine 04102
800.426.4262 | www.woodardcurran.com

COMMITMENT & INTEGRITY DRIVE RESULTS

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WOODARD & CURRAN

STATE OF MAINE
LAUREN MARIE SMETT
No. 12284
REGISTERED PROFESSIONAL ENGINEER

REV	DESCRIPTION	DATE
1	07/07 PMB 1:36.51.4pm	

REV	DESCRIPTION	DRAWN BY:	DESIGNED BY:
		PDM	LJS

PORTLAND FORESIDE DEVELOPMENT CO.
PORTLAND, ME 04102

PHASE 1 SITE PLAN SUBMISSION

SITE PLAN - 1

JOB NO.:	0227007
DATE:	NOVEMBER 2019
SCALE:	1"=20'
SHEET:	6 OF 17

C-100

\\woodardcurran.net\shared\Projects\0227007.07 PFDC - 58 Fore Block 1\wip\Drawings\Phase 1 - Site Plan Submission\0227007 Phase 1 - Site Plan.dwg, Nov 08, 2019 - 1:39pm

NOTES:
1. SEE LANDSCAPE PLANS FOR SITE SURFACE MATERIAL ASSOCIATED WITH LANDSCAPED AREAS, PATIOS, AND NON-BITUMINOUS WALKWAYS & ROADWAYS.
2. ALL AREAS WITHIN LIMIT OF WORK NOT IDENTIFIED FOR FINISH SURFACE MATERIALS (PAVERS, BRICK, PAVEMENT, LANDSCAPING) SHALL BE FINISHED WITH RECLAIM ASPHALT.
3. UTILITY & DRAINAGE STRUCTURES NOT SHOWN FOR CLARITY, SEE GRADING & DRAINAGE & UTILITY PLAN FOR MORE INFORMATION.

FORE STREET

MATCHLINE - SEE SHEET C-100

ZONE LINE

R6
B6

FENCE, SEE LANDSCAPING PLANS

LIMIT OF LEVEL 1

BUILDING 4
(NEW BUILDING CONSTRUCTION)

TM 2-A-2
N/F
MACGOWAN
15773/153

TM 2-A-3
N/F
TIMOTHY HALEY, TRUSTEE
24759/67, 69

TM 2-A-10

N45°16'52"E 43.36'

150.00'

N45°16'52"E 100.00'

N53°46'42"E

N47°33'52"E 100.00'

36.5'

22.0'

BITUMINOUS PAVEMENT

20' DOUBLE SWING GATE

250' SHORELAND ZONE

MAINTAIN EXISTING SURFACE CONDITIONS

MNGRR TO REMOVE BUILDINGS & TRACKS

255.00'
S47°33'52"W

685.00'

75' SHORELAND ZONE

EWPZ

430.00'

MATCH EXISTING BITUMINOUS TRAIL

12' WIDE BITUMINOUS TRAIL

MOODY PROPERTY

MARINA PROPERTY

APPROX. LOCATION 33" FORCE MAIN SEWER LINE

S48°05'52"W 44.00'

EXISTING MARINA

BAR SCALE
1" = 20'
CHECK GRAPHIC SCALE BEFORE USING

NOT FOR CONSTRUCTION

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STATE OF MAINE
LAUREN JANET SWETT
No. 12284
REGISTERED PROFESSIONAL ENGINEER

REV	DESCRIPTION	DATE
	227007 PHASE 1 SITE PLAN	

REV	DESCRIPTION	DATE
	DESIGNED BY: LJS DRAWN BY: BDM CHECKED BY: DLC	

SITE PLAN - 2

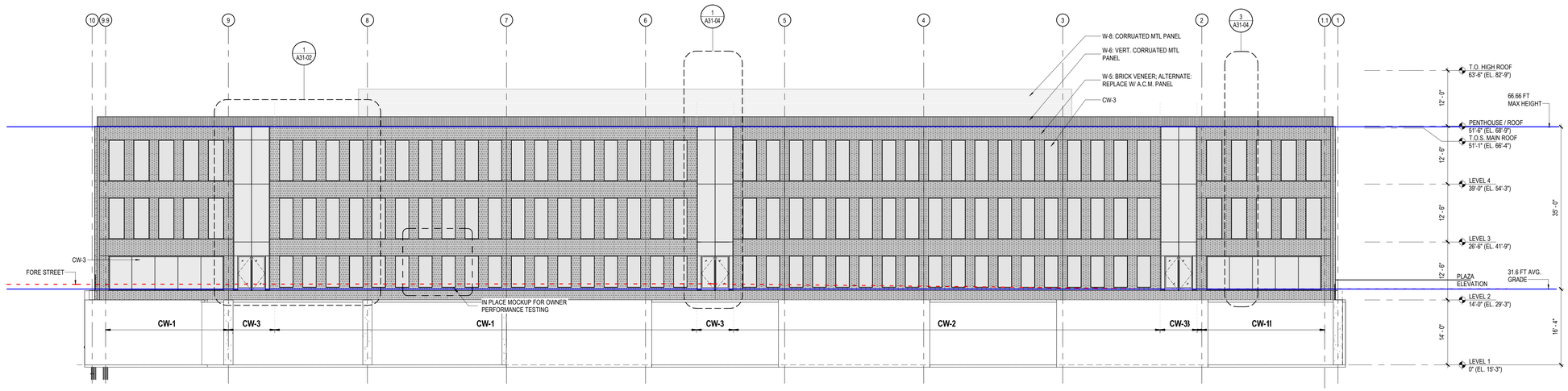
PHASE 1 SITE PLAN SUBMISSION

PORTLAND FORESIDE DEVELOPMENT CO.
PORTLAND, ME 04102

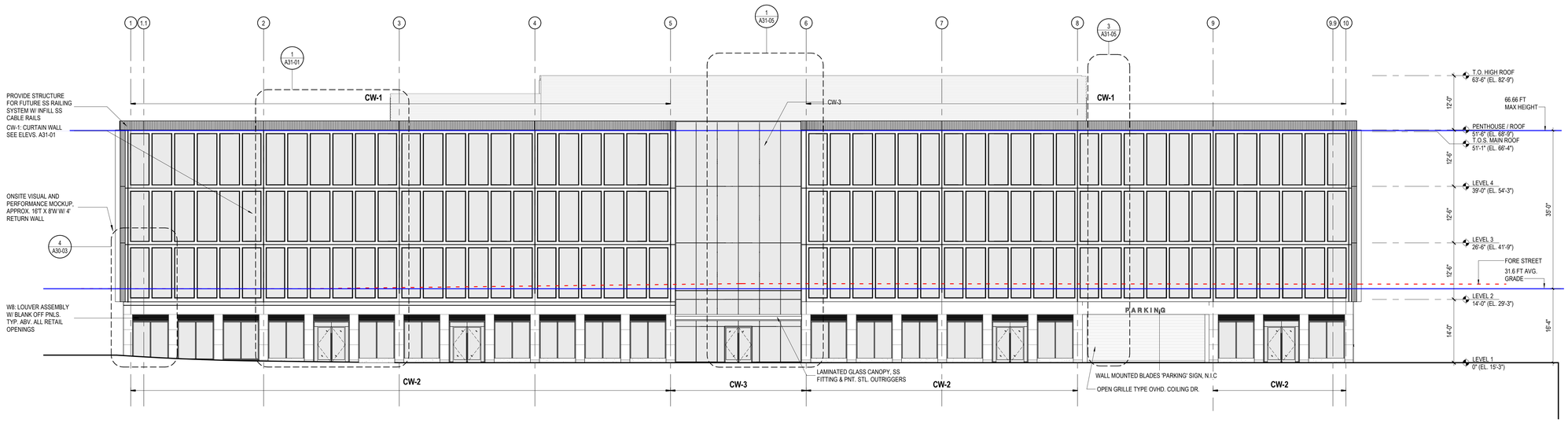
JOB NO.: 0227007
DATE: NOVEMBER 2019
SCALE: 1"=20'
SHEET: 7 OF 17

C-101

\\woodardcurran.net\shared\Projects\0227007.07 PPDS - 58 Fore Block \wet\Drawings\Phase 1 - Site Plan Submission\0227007 Phase 1 Site Plan.dwg, Nov 08, 2019 - 2:06pm



2 NORTH ELEVATION
3/32" = 1'-0"



1 SOUTH ELEVATION
3/32" = 1'-0"

EXTERIOR CURTAINWALL BoD LEGEND:

CW-1 : KAWNEER 1600 UT W/ PROJECTED, PRESSURE CAP. BLACK ANNODIZED FINISH, SOLARBAN 60 GLAZING, 1" IGU

CW-2 : KANEER 1600 UT W/ PROJECTED, PRESSURE CAP & EXTERIOR APPLIED MUNTIN GRID. BLACK ANNODIZED FINISH. SOLAR BAN 60 GLAZING, 1" IGU

CW-3: 4 SIDED SSG TOGGLE SYSTEM. SOLARBAN 60 GLAZING, 1" IGU

Perkins&Will

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OWNER'S CONSULTANT

LANDSCAPE ARCHITECT
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Freeport, Maine
t 207.865.1080

PROJECT

BUILDING 1A
58 FORE ST
PORTLAND, ME 04101

FORESIDE
PORTLAND, MAINE
254 COMMERCIAL ST
SUITE 118
PORTLAND, ME 04101

KEYPLAN

NOT FOR CONSTRUCTION

ISSUE CHART

MARK	ISSUE	DATE

DESIGN DEVELOPMENT
JULY 26, 2019

Job Number	157087.000
Drawn	Author
Checked	Checker
Approved	Approver

TITLE

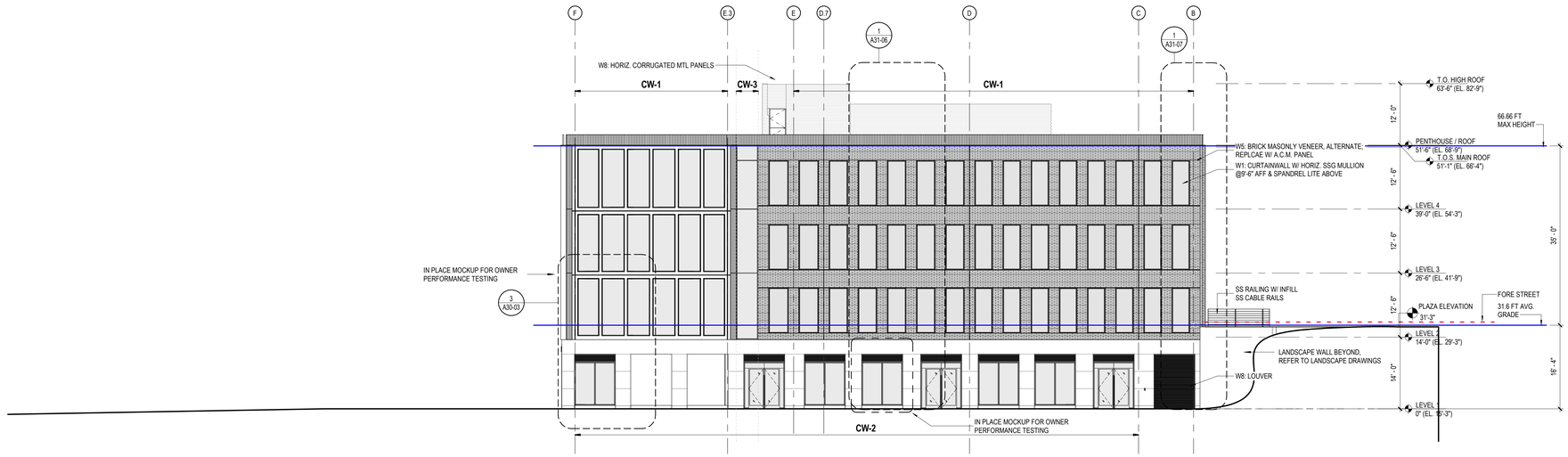
BUILDING ELEVATIONS

SHEET NUMBER

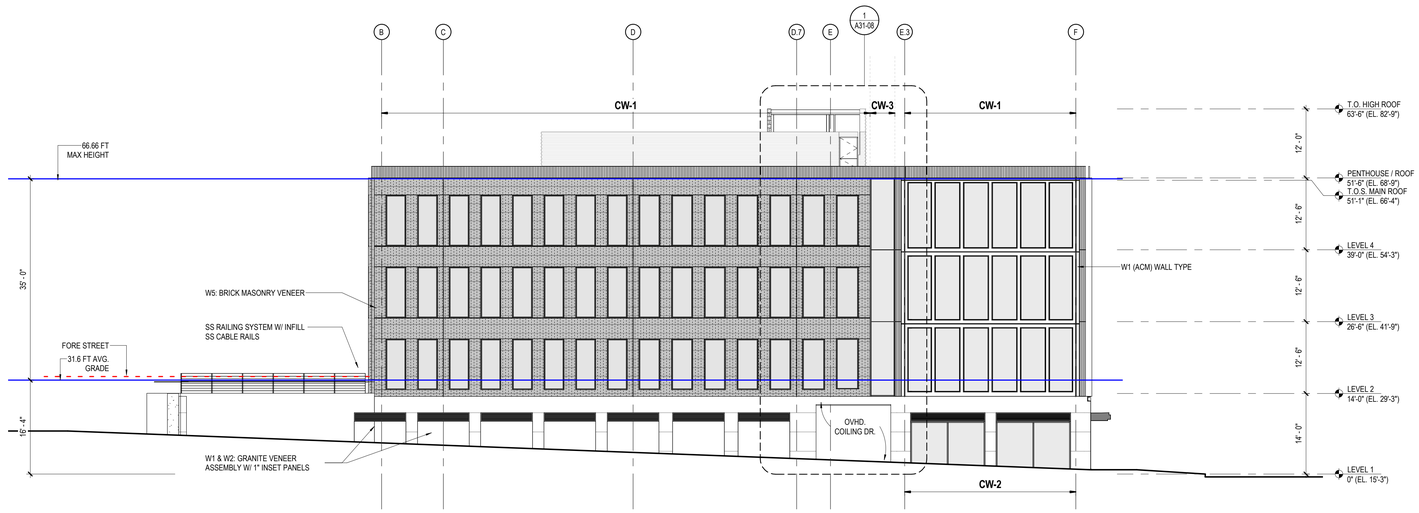
A20-01

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1/2/2020 5:23:32 PM C:\Temp\58 Fore St_Building 1A_v2019_Mirela.Monteiro.rvt



2 EAST ELEVATION
3/32" = 1'-0"



1 WEST ELEVATION
3/32" = 1'-0"

EXTERIOR CURTAINWALL BoD LEGEND:

CW-1 : KAWNEER 1600 UT W/ PROJECTED, PRESSURE CAP.
BLACK ANNODIZED FINISH, SOLARBAN 60 GLAZING, 1" IGU

CW-2 : KANEER 1600 UT W/ PROJECTED, PRESSURE CAP &
EXTERIOR APPLIED MUNTIN GRID. BLACK ANNODIZED
FINISH. SOLAR BAN 60 GLAZING, 1" IGU

CW-3: KANEER 'CLEAR WALL', 4 SIDED TOGGLE SYSTEM.
SOLARBAN 60 GLAZING, 1" IGU

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OWNER'S CONSULTANT

LANDSCAPE ARCHITECT
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PROJECT

BUILDING 1A
58 FORE ST
PORTLAND, ME 04101

FORESIDE
PORTLAND, MAINE
254 COMMERCIAL ST
SUITE 118
PORTLAND, ME 04101

KEYPLAN

NOT FOR CONSTRUCTION

ISSUE CHART

MARK	ISSUE	DATE

DESIGN DEVELOPMENT
JULY 26, 2019

Job Number	157087.000
Drawn	Author
Checked	Checker
Approved	Approver

TITLE

BUILDING ELEVATIONS

SHEET NUMBER

A20-02

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1/2/2020 5:23:39 PM C:\Temp\58 Fore St_Building 1A_v2019_Mirela.Monteiro.rvt

MATERIALS AND ASSEMBLIES

EWA-01 - STAIR LOBBY:

EXTRUDED ALUMINUM CURTAINWALL FRAMING
WITH VERTICAL MULLION EXTENSION
CLASS 1 ANODIZED FINISH
HORIZONTAL JOINTS SSG
BOD SOLARBAN 72
1" INSULATED GLAZING UNIT: ARGON FILLED, LOW IRON W/ SOLAR COATING SURFACE 2
BLACK ALUMINUM SPACERS
EXTERIOR LITE TEMPERED WHERE REQUIRED

EWA 02 - RETAIL STOREFRONT + VESTIBULE GLAZING:
TRIFAB VERSAGLAZE 450 FRAMING SYSTEM OR SIM.
WITH VERTICAL MULLION EXTENSION
1 3/4" MULLION
4" DEPTH GLAZING SYSTEM
FRONT GLAZED
LOW IRON GLAZING
WARM EDGE: BLACK ALUMINUM SPACERS
EXTERIOR LITE TEMPERED WHERE REQUIRED

EWA 03 - RESIDENTIAL WINDOWS:
BAY WINDOW - ALUMINUM WINDOW WITH PAINTED STEEL PLATE SURROUND
COMBINATION WINDOW - VISION + OPERABLE - PAINTED ALUMINUM WINDOW

EWA 04 - METAL RAIN SCREEN #1 (HOUSING UNITS)

VENTILATED RAINSCREEN
WEATHERING STEEL CLADDING
VERTICAL AND HORIZONTAL Z-GIRTS
4" MINERAL WOOL
CONTINUOUS SELF ADHEARING AVB MEMBRANE
1/2" EXTERIOR SHEATHING
6" METAL STUD FRAMING
R22 HIGH DENSITY UNFACED FIBERGLASS BATT INSULATION
INTERIOR GWB FACING

EWA 05 - METAL RAIN SCREEN #2 (LOWER LEVEL):
VENTILATED RAINSCREEN
CORRUGATED METAL CLADDING
VERTICAL AND HORIZONTAL Z-GIRTS
4" MINERAL WOOL
CONTINUOUS SELF ADHEARING AVB MEMBRANE
1/2" EXTERIOR SHEATHING
6" METAL STUD FRAMING
R22 HIGH DENSITY UNFACED FIBERGLASS BATT INSULATION
INTERIOR GWB FACING

EWA 06 - METAL RAIN SCREEN #3 (UPPER LEVEL):
VENTILATED RAINSCREEN
ALUMINUM COMPOSITE PANEL CLADDING
VERTICAL AND HORIZONTAL Z-GIRTS
4" MINERAL WOOL
CONTINUOUS SELF ADHEARING AVB MEMBRANE
1/2" EXTERIOR SHEATHING
6" METAL STUD FRAMING
R22 HIGH DENSITY UNFACED FIBERGLASS BATT INSULATION
INTERIOR GWB FACING

MATERIALS + ASSEMBLIES

DECORATIVE METAL CHANNELS:
ALUMINUM COMPOSITE PANEL - CHANNEL WEB
EXTRUDED ALUMINUM TRIM - CHANNEL FLANGE
PAINTED TO MATCH

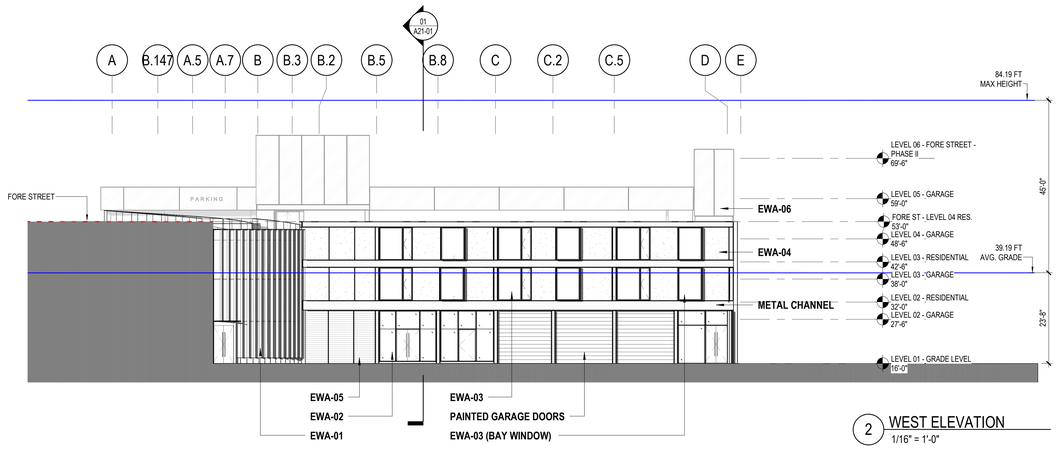
GRANITE VENEER STONE WALL BASE:
18" GRANITE CURB UNDER STAIR CURTAIN WALL

PRECAST CONCRETE:
TEXTURED PRECAST CONCRETE PANELS

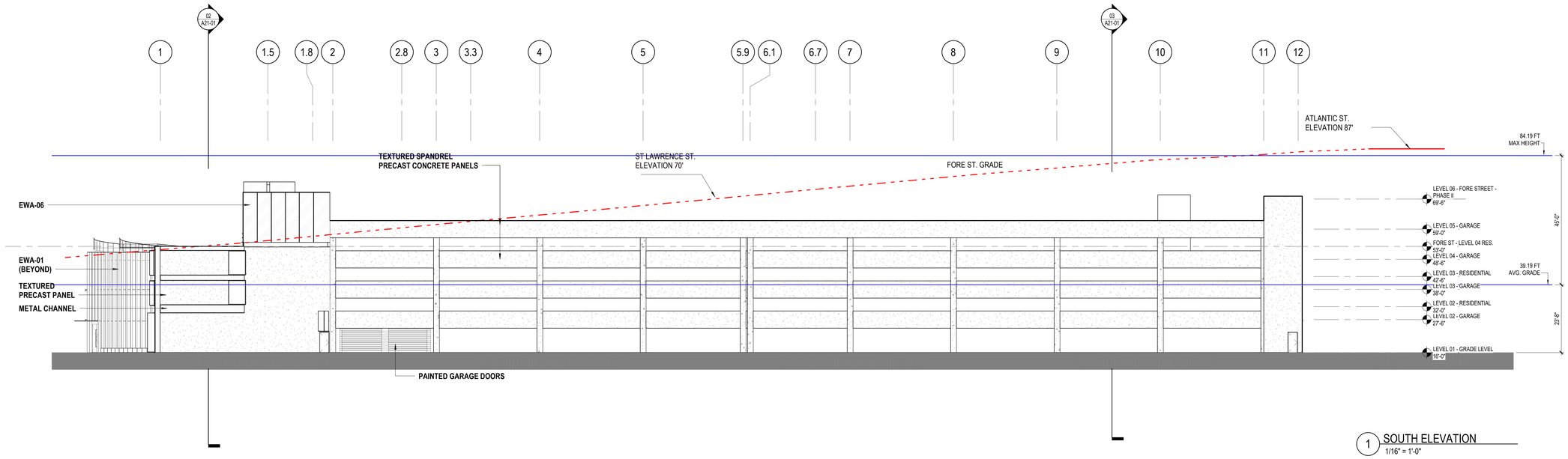
EXTERIOR ELEVATION LEGEND

1. MATERIAL SYMBOLS ON ELEVATIONS ARE TO DISPLAY THE EXTENT OF THE MATERIAL ONLY. THEY ARE NOT TO SCALE.

- GLAZING
- PRECAST CONCRETE
- EW-04 RAINSCREEN SYSTEM
- EWA-05 CORRUGATED METAL
- EW-06 ALUMINUM COMPOSITE PANEL
- PAINTED METAL CHANNELS



2 WEST ELEVATION
1/16" = 1'-0"



1 SOUTH ELEVATION
1/16" = 1'-0"

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f 207.879.1822

MEP ENGINEER
Rist-Frost-Shumway Engineering
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LANDSCAPE ARCHITECT
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f 207.865.1455

GENERAL CONTRACTOR
Consigli
15 Franklin St
Portlan, ME 04101
t 207.773.3000

PROJECT

BLOCK FOUR

FORESIDE
PORTLAND, MAINE

PORTLAND FORESIDE DEVELOPMENT COMPANY
254 COMMERCIAL ST SUITE 118
PORTLAND, ME 04101

KEYPLAN

ISSUE CHART

MARK	ISSUE	DATE

100% SCHEMATIC DESIGN 12/20/2019

Job Number	157087.002
Drawn	Author
Checked	Checker
Approved	Approver

TITLE

EXTERIOR ELEVATIONS - PHASE I

SHEET NUMBER

A20-03

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1/2/2020 5:36:52 PM C:\Temp\58 FORE ST MASTERPLAN_Block Four_v2019_MHeta.Monteiro.rvt



2 BUILDING 12 - NORTHWEST ELEVATION
SCALE: 1/4" = 1'-0"

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Boston, MA 02114
617.492.8400
www.brunercott.com

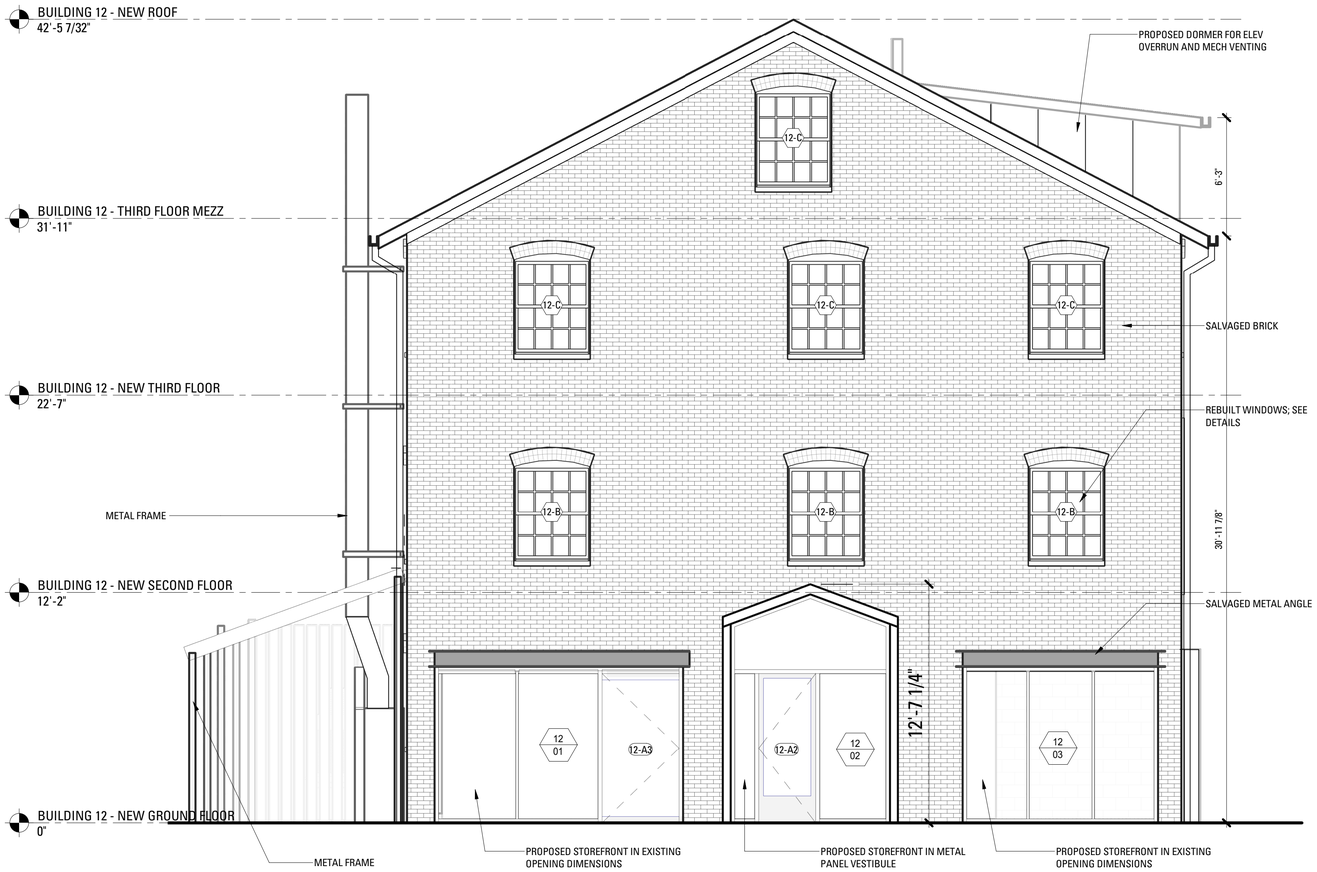
Rev.	Date	Remarks

PORTLAND FORESIDE - BUILDING 12

Date	OCTOBER 25, 2019
Scale	1/4" = 1'-0"
Project Number	19.007
Drawn By	Author

BUILDING 12 - EXTERIOR ELEVATIONS

A-301



1 BUILDING 12 - NORTHEAST ELEVATION
SCALE: 1/4" = 1'-0"

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Rev.	Date	Remarks

PORTLAND FORESIDE - BUILDING 12

Date	OCTOBER 25, 2019
Scale	1/4" = 1'-0"
Project Number	19.007
Drawn By	Author

EXTERIOR ELEVATIONS

A-302



1 BUILDING 12 - SOUTHEAST ELEVATION
SCALE: 1/4" = 1'-0"

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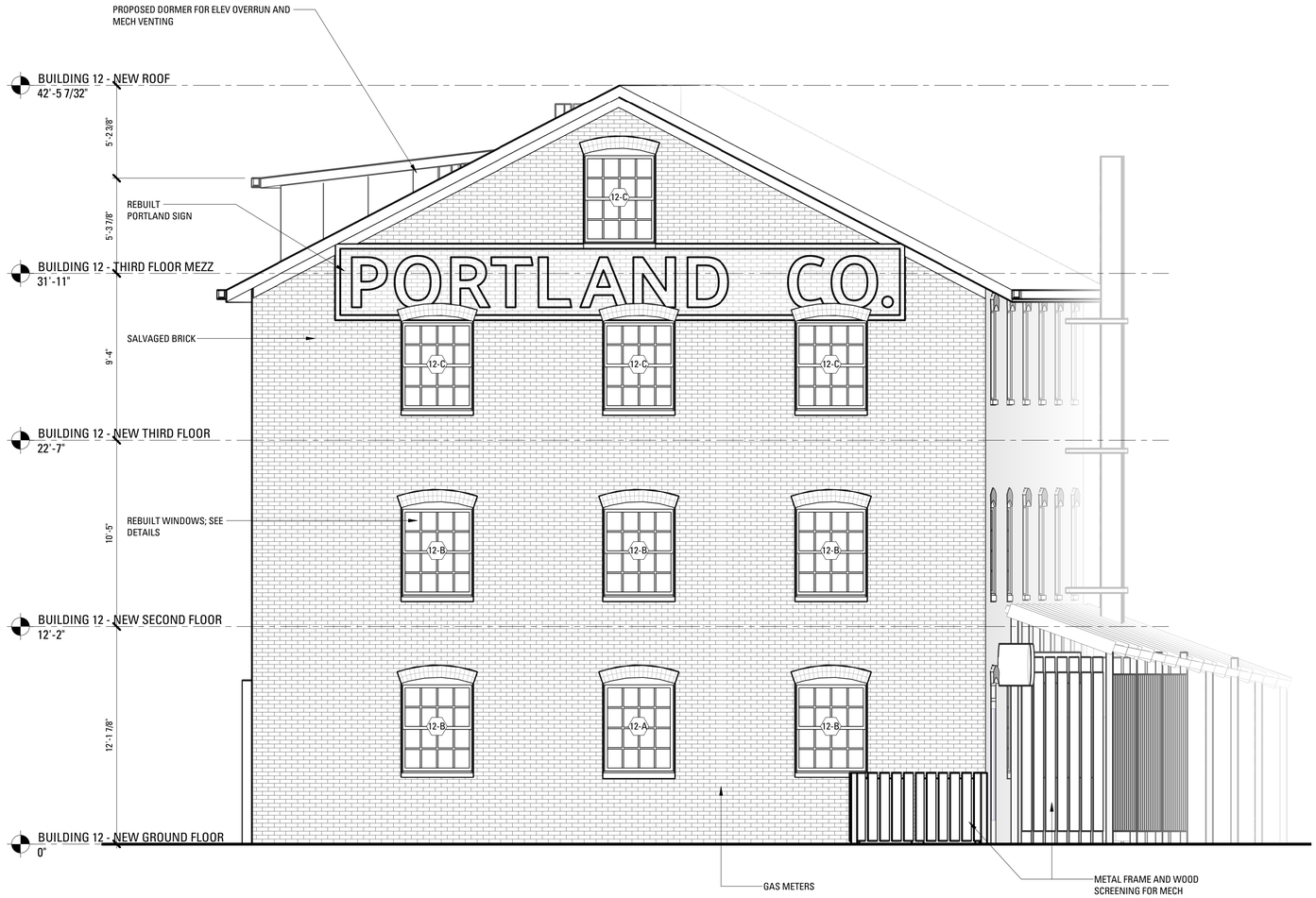
Rev.	Date	Remarks

PORTLAND FORESIDE - BUILDING 12

EXTERIOR ELEVATIONS

Date	OCTOBER 25, 2019
Scale	1/4" = 1'-0"
Project Number	19.007
Drawn By	Author

A-303



1 BUILDING 12 - SOUTHWEST ELEVATION
SCALE: 1/4" = 1'-0"

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Rev.	Date	Remarks

PORTLAND FORESIDE - BUILDING 12

Date	OCTOBER 25, 2019
Scale	1/4" = 1'-0"
Project Number	19.007
Drawn By	Author

EXTERIOR ELEVATION

A-304


BIK 04

BUILDING 1A & BUILDING 1B SITE VIEW (FROM FORE STREET)



VIEW FROM FORE STREET



Portland Foreside Development
Portland, Maine

VIEW FROM TOP OF STAIR



Portland Foreside Development
Portland, Maine

VIEW FROM FORE STREET - BLOCK FOUR PEDESTRIAN RAMP





CAMPUS ENTRANCE LOOKING EAST



BUILDING 12, FACING SOUTH



BUILDING ONE SOUTHEAST CORNER



EXISTING CONTEXT: LOOKING TOWARD BUILDING ONE



BUILDING 6 AND WIDE ALLEY



BUILDING 2 AND NARROW ALLEY



NORTH VIEW TOWARD BLOCK TWO AND BLOCK FOUR

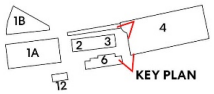
BLOCK FOUR

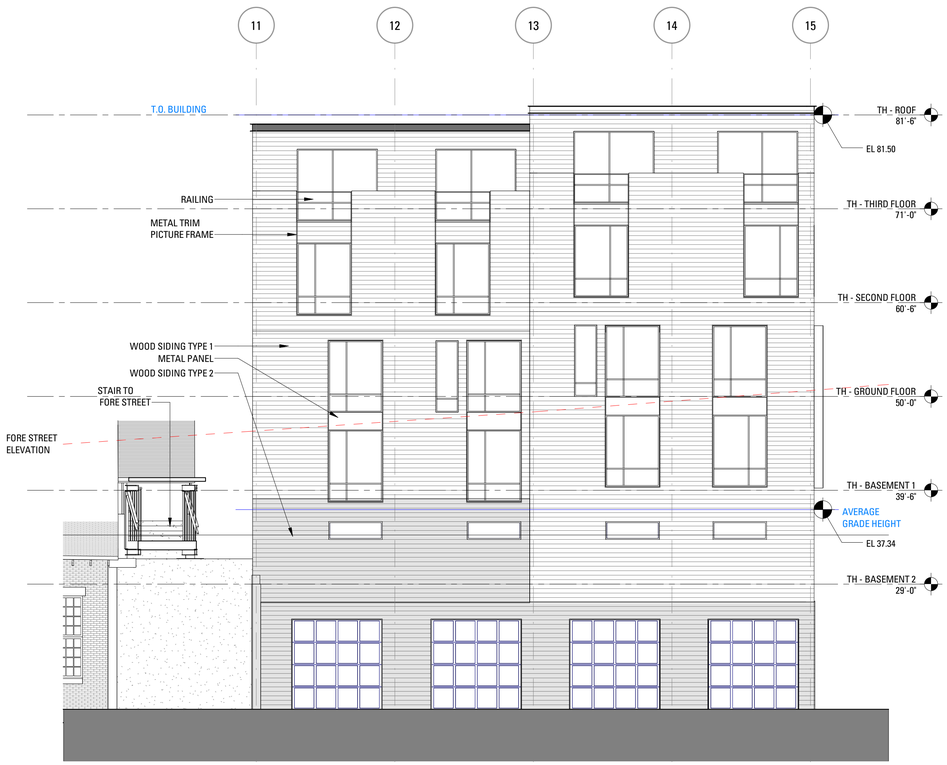


North View Toward Block Two and Block Four

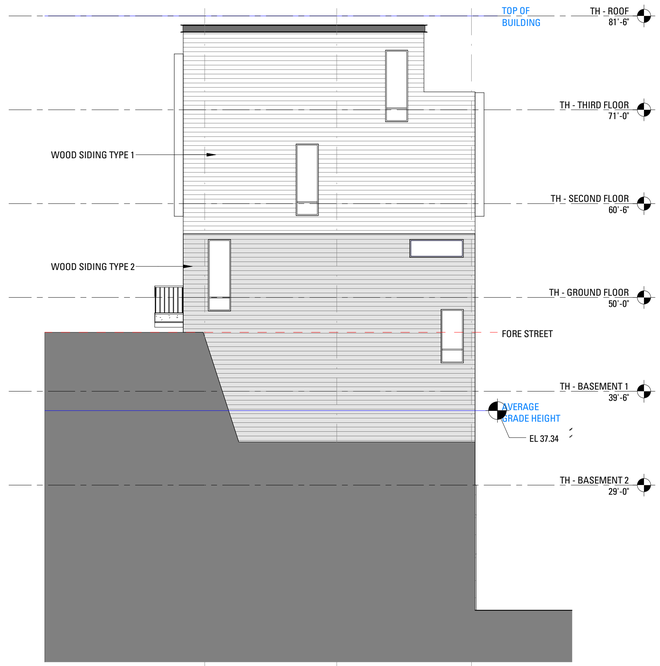


View from Block 4 Lobby

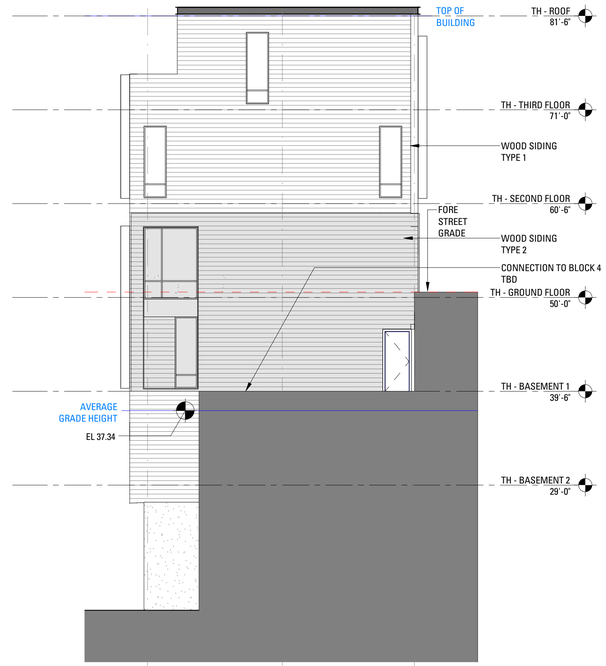




2 Elevation 3 - a
SCALE: 1/8" = 1'-0"



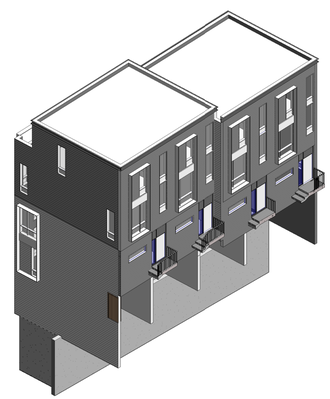
3 Elevation 4 - a
SCALE: 1/8" = 1'-0"



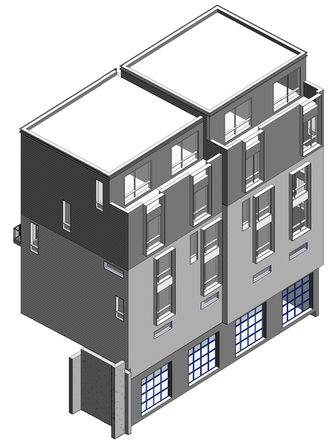
4 Elevation 5 - a
SCALE: 1/8" = 1'-0"



1 Elevation 2 - a
SCALE: 1/8" = 1'-0"



6 TOWNHOUSE AXON B
SCALE:



5 TOWNHOUSE AXON A
SCALE:

Bruner/Cott
ARCHITECTS
225 Friend St., Suite 701
Boston, MA 02114
617.492.8400
www.brunercott.com

Rev.	Date	Remarks

PORTLAND FORESIDE BLOCK 2

Date	DECEMBER 20, 2019
Scale	1/8" = 1'-0"
Project Number	
Drawn By	Author

D - TOWNHOUSE EXTERIOR ELEVATIONS

A-331

8. EVIDENCE OF FINANCIAL & TECHNICAL CAPABILITY

8.1 Financial Capability

Attached is a copy of a letter verifying the Applicant's financial capacity to undertake the project.

8.2 Technical Capability

On behalf of the Applicant, Woodard & Curran is preparing this application for the proposed development. Woodard & Curran has extensive experience with design for site development projects and specifically on the peninsula within the City of Portland. Woodard & Curran, a 1,000-person Portland-based firm, has provided engineering services to the public and private sector for over 40 years, including permitting, civil/site engineering, stormwater and construction management services. The project is also supported by a design team including Perkins+Will and Bruner/Cott for architecture and Michael Boucher Landscape Architecture (MBLA) for landscape architecture.

Perkins+Will architects is a firm consisting of twenty-four domestic and international offices with a depth of technical and management skill employed to execute projects of great complexity. Perkins+Will maintains a full-time QA/QC leader in each office to provide ongoing quality assurance for projects. These experts are guided by a national project delivery system that has resulted from the best practices from around the firm.

Bruner/Cott is a 35-person historic preservation architecture firm located in Boston, Massachusetts. Their leadership team brings a broad, integrated perspective to design, giving depth to each of their practice areas. Bruner/Cott's work has been recognized for award-winning design from preservation to adaptive reuse and new construction, with a focus on educational and cultural institutions. Bruner/Cott partners with private developers for residential and commercial buildings. Bruner/Cott is known for creativity in inventing new solutions to complex programs and as design leaders for historic renewal and contemporary design in the context of urban revitalization and institutional re-invention.

MBLA is a professional design firm located in Freeport, Maine. MBLA practices nationally and internationally, and over the past twenty-five years, the office has collaborated on diverse and notable projects, located in a wide range of settings and climates and across the state of Maine. MBLA projects range in scale and complexity including plazas, courtyards, university building projects, private school facilities, master plans, museums, churches, resorts, parks, and residential landscape projects. Many of MBLA's design projects have focused on creating places for people to gather while addressing issues of circulation, security, and programming.

Copies of resumes can be provided upon request.

8.3 Attachments

- Financial Capacity Letter

ACKMAN | ZIFF

REAL ESTATE CAPITAL ADVISORS

October 2, 2019

Ms. Christine Grimando,
AICP Planning Director
Planning & Urban Development
Department 389 Congress Street 4th
Floor
Portland, ME 04101

Re: 58 Fore Street Phase I Development - Financial Capacity to Serve

Dear Ms. Grimando,

It's my pleasure to provide this memorandum confirming Ackman-Ziff's ("AZ") relationship with Portland Foreside Development Company (PFDC) and its managing partners Casey Prentice and Kevin Costello. We believe that the management team possess the relevant knowledge and experience to design, coordinate and construct a multi-phased development plan – Phase 1 being Block 1A, building 12, Block 2 and Block 4 as described by the approved Master Development Plan. The managing partners have proven their development expertise with numerous successful Portland projects.

The management team possesses relationships with capital partners, banks, and financial institutions demonstrating the financial capacity necessary to obtain project financing for Phase 1. In our role as financial intermediary for the project, AZ will work with PFDC to arrange the appropriate capitalization for each phase of the development.

Ackman-Ziff Real Estate Group is the industry's preeminent boutique real estate capital advisory firm. In business for over 90 years, the privately held company offers a wide variety of cutting-edge commercial real estate capital markets solutions, including debt and mezzanine financing, preferred and joint venture equity, sponsor equity, and investment sales.

AZ looks forward to working with PFDC on the financing aspects of the project as it moves forward from the Master Development Plan submission to phased vertical developments.

AZ's unique knowledge, broad capital markets relationships and national platform enable the firm to be in the position to arrange financing for a wide range of commercial real estate projects and we're proud of our history of performance spanning more than 90 years.

Thank you and best regards,

Jason Krane
Principal



WAYNE A. CHADBOURNE, P.E.

Lead Geotechnical Engineer/Senior Associate

EDUCATION

M.S., Geotechnical Engineering, Tufts University, 1994
B.S., Civil Engineering, University of Vermont, 1992

PROFESSIONAL REGISTRATIONS

Professional Engineer
1998/MA (Reg. No. 40695)
2004/ME (Reg. No. 10620)
2012/NH (Reg. No. 13710)
2012/GA (Reg. No. 037456)

PROFESSIONAL SOCIETIES

Deep Foundation Institute
Maine Real Estate & Development Association
American Society of Civil Engineers
Boston Society of Civil Engineers
American Underground Construction Association

During his 25 years with Haley & Aldrich, Mr. Chadbourne has been involved in a wide variety of projects dealing with geotechnical and environmental aspects of design and construction, for both private and public clients. His responsibilities have included performing site investigations, foundation analyses and design, report and contract document preparation, contractor submittal review, and owner's representative services during construction. Mr. Chadbourne's geotechnical project experience includes aspects of foundation design for bridges, tanks, utility lines and other infrastructure using drilled shaft, mat, spread footing, and various types of pile foundations; lateral support systems for deep excavations including slurry walls, soil-mix walls, steel and polyvinyl chloride sheeting, soil nails, secant piles, soil tiebacks/rock anchors, and soldier piles/lagging. Mr. Chadbourne's project experience also includes deep excavations, horizontal directional drilling, underpinning of structures, ground improvement, preload/surcharge/ prefabricated vertical drain design, and use of various types of light weight fills for building and embankment support.

RELEVANT PROJECT EXPERIENCE

Manufacturers Life Insurance Company U.S. Operations Headquarters Building, South Boston, MA. Project manager during the design and construction phases of the below grade portion of the fifteen-story building. The three level below-grade parking garage extended about 40 ft below grade and 30 ft below the groundwater level. Due to site constraints, the southern portion of the building was supported on deep end-bearing shafts drilled into bedrock. The remaining portion of the building was founded on a structural mat foundation bearing in the marine clay deposit designed to support hydrostatic uplift pressures. A slurry wall and internal cross lot/corner bracing system was used to construct the below grade space. Responsible for providing geotechnical engineering services related to the mat and drilled shaft foundation elements, contract document preparation, consultation with the contractor regarding selection of the slurry wall/internal bracing system, and Owner's Representative services during installation of the slurry walls, excavation of the in-situ soils, and construction of the foundation/mat elements.

Back Cove South CSO Storage Conduit, City of Portland, Portland, ME. Officer-in-charge responsible for determining geotechnical design requirements and constructability issues associated with installation of a 1,500-ft long, 12 ft x 10 ft linear conduit and a new 3,000-ft long 60-in. diameter conduit in an urban section of Portland, ME. The new conduit will provide approximately 3.5 MG of storage and reduce annual overflow volume from 150 MG to 18 MG. Responsible for overseeing design and implementation of the geotechnical and environmental field exploration and laboratory investigation programs. Responsible for determining geotechnical and foundation support requirements, including support of excavation, for the conduit and conducted feasibility evaluations for a trenchless crossing beneath the existing interstate on- and off-ramp bridges. It was determined that mircotunneling was the best alternative to install these portions of the conduit.

Mercy at the Fore Development, Mercy Hospital/KLMK, Portland, ME. Officer-in-charge/project manager responsible for providing geotechnical design and construction phase services for a $90-million institutional development of the new main hospital building and Fore River Campus in Portland. Provided geotechnical engineering services related to the design of the spread footing foundation elements and foundation drain, contract document preparation, consultation with the construction manager regarding pricing of geotechnical aspects of the project, and owner's representative services during installation of foundation elements, foundation drainage system, site retaining walls and earthwork.

Baker Library/Academic Center, Harvard Business School, Boston, MA. Project manager responsible for providing design and construction phase services for the five-story addition to a historic library building. Designed and executed the subsurface exploration program, provided foundation design recommendations and underslab drain system design, collaborated with subcontractors to determine feasibility of excavation support system types, prepared contract documents, evaluated construction related impacts to the adjacent library structure, and provided owner's representative services during construction. The two levels of below-grade space extended about 25 ft below grade and 15 ft below the groundwater level. A soil-mix wall and external (tiebacks) bracing system was used to construct the below grade space. The soil-mix wall was also used as a permanent groundwater cutoff system and permanent membrane waterproofing was placed around the below grade envelope.

University of Southern Maine University Commons, USM Facilities Group, Portland, ME. Officer-in-charge responsible for providing geotechnical design and construction phase services for a $20-million institutional development in the Back Cove section of Portland. Provided geotechnical engineering services related to design of the foundation elements and use of geofoam lightweight fill and foundation piles, contract document preparation, review of estimator pricing of geotechnical aspects of construction, and owner's representative services during installation of foundation elements, foundation drain system and EPS geofoam lightweight fill.

Simmons Hall, Massachusetts Institute of Technology, Cambridge, MA. Project manager for the design and construction phases of the ten-story undergraduate residence building. Responsible for designing and executing several phases of subsurface explorations, assisting in development of the pre-characterization program for excavated soil management, performing consolidation settlement analyses, providing foundation design recommendations, preparing contract documents, evaluating construction related impacts to adjacent structures, reviewing contractor submittals, and providing owner's representative services during construction. The 60 ft x 400 ft building was supported on a structural mat foundation designed to withstand hydrostatic uplift pressures. The lower level basement required excavation to approximately 25 ft below existing ground surface grade and 15 ft below groundwater level. The excavation support system consisted of steel sheet piling and internal cross lot bracing.

Ocean Gateway Parking Garage, Riverwalk, LLC, Portland ME. Officer-in-charge/project manager responsible for providing geotechnical design and construction phase services for a $40-million garage/retail development in the Old Port section of Portland. Provided geotechnical engineering services related to the design of pile and spread footing foundation elements, excavation/blasting and foundation drain systems, contract document preparation, consultation with the construction manager regarding pricing of geotechnical aspects of construction, and owner's representative services during installation of foundation elements, foundation drain and excavation of the in-situ soil and rock.

PUBLICATIONS AND PRESENTATIONS

"Temporary Support of Excavation and Construction Dewatering Systems – A Geotechnical Perspective," presented to various client organizations in Portland, ME, 2016 and 2017.

"Replacement of Mile Brook Bridge," with Erin F. Wood and Peter A. Krakoff, published in PileDriver Magazine by the Pile Driving Contractors Association, December 2013.

"High Capacity Rock Anchors Provide Uplift Resistance for Concrete-Filled Steel Pipe Piles," presented and published with James Weaver and Bryan Steinert, 36th Annual Conference on Deep Foundations, Deep Foundations Institute, Boston, Massachusetts, October 2011.

"Overview of Campus Geothermal Systems," presented to the Bowdoin College Board of Trustees, May 2010.

"Lightweight Fill Accelerates Critical Bridge Replacement Schedule," with Bryan Steinert and James Weaver, Proceedings from the 2008 International Bridge Conference, Pittsburgh, Pennsylvania, June 2008.

"Steel H-Section Piles Support New Penobscot Narrows Bridge, Verona Island and Prospect, Maine," presented at the 11th Annual Pile Driving Contractors Association Conference, Nashville, Tennessee, March 2007.

"Concrete Diaphragm Walls… One Size Does Not Fit All," with D.W. Finocchio, Structure Magazine, December 2006.

"Below Grade Parking Concepts for Planning Developments in Portland, Maine," presented to the Maine Real Estate & Development Association (MEREDA), Portland, Maine, December 2005.

"Factors Effecting the Performance of Deep Excavations," Proceedings from the 12th Pan-American Conference on Soil Mechanics and Geotechnical Engineering, Cambridge, Massachusetts, 2003.



DAMIAN R. SIEBERT, P.E.

Principal – Underground Civil Engineering Service Leader

EDUCATION

M.S. Civil and Environmental Engineering, Northwestern University, 2000
B.S. Civil Engineering, Tufts University, 1998

PROFESSIONAL REGISTRATION

Professional Engineer:
2005/ MA: Reg. No. 46290
2012/ NE: Reg. No. E-14409

EDUCATION/ADVISORY POSITIONS

Tufts University Department of Civil & Environmental Engineering, External Advisory Board Member 2012 - present
Professor of the Practice, Tufts University 2014 – 2017
Haley & Aldrich Board of Directors 2017 – present
Geotechnical Advisory Committee (Massachusetts) 2017 - present

PROFESSIONAL SOCIETIES

Boston Society of Civil Engineers, GeoInstitute member, 2004 to present
GeoInstitute Chair, 2011
American Society of Civil Engineers, Regional Conference Committee Chair, 2016 -present
American Society of Civil Engineers, Local Involvement Committee Secretary, 2011 -2014
American Society of Civil Engineers, Local Involvement Committee Chair, 2014 - present
American Council of Engineering Companies – Massachusetts, Board of Governors Director 2010 - 2013

SPECIAL STUDIES AND COURSES

40-Hour OSHA Health and Safety Training (OSHA 28 CFR 1910.120 (e); (2))

Mr. Siebert has participated as an engineer, project manager, technical leader, and principal on a range of geotechnical and structural engineering projects, including permanent and temporary soil nail walls, mechanically stabilized earth (MSE) walls, bridges, tunnels, pipelines, ground improvement, as well as buildings with both shallow and deep foundations. He has developed specific expertise in the design of reinforced concrete diaphragm walls (slurry walls), MSE walls, slopes, and other support of excavation systems focusing on soldier pile and lagging and steel sheeting.

Mr. Siebert's structural experience includes working for both project owners and contractors in the preparation of contract drawings and specifications. His responsibilities include analysis and design of retaining walls, buildings, culverts, subway stations, and lateral support systems. Temporary support system designs include steel sheet pile cofferdams, concrete slurry walls, soldier pile and lagging, and continuous steel sheeting.

PROJECT RELATED EXPERIENCE

Support of Excavation and Urban Environment Design

Liberty Mutual Insurance Corporate Headquarters and Conference Center, Boston, MA. Project manager for the geotechnical and environmental design and construction of an approximately 600,000 sq-ft 22–story commercial office building with 4-levels of below grade parking. The below grade space was constructed using the up-down technique requiring the installation of load bearing elements (LBEs). Performed slurry wall design for temporary and permanent condition. In addition, the project included a pedestrian bridge connecting the new building to the existing over Stuart Street, a new 2-story with 1-level below grade space conference center and open space with a green and water walls. Sensitive abutter properties required extensive protection and detailed instrumentation program to monitor movements during construction. The design process involved developing an approach to excavation and excavation support that was protective of the surrounding structures while balancing with a cost-effective design. Significant interaction with public agencies was required to support the team during the permitting process.

Millennium Place III (Hayward Place), Boston, MA. Project manager for the geotechnical and environmental design and construction of a 15 story above grade tower in downtown Boston. The site also contained a one-story central atrium and one level of below grade space across most of the site. Foundation design included a mixed system of drilled shafts adjacent to the MBTA Orange Line tunnel and foundation mat. Underpinning of an emergency egress for the MBTA tunnel was required as well as significant settlement and impact evaluations on the MBTA structure.

Manufacturers Life Insurance Company US Headquarters, South Boston, MA. Project engineer providing geotechnical services related to the design and construction of a three level, below grade 14-story building. Design phase services included development of a subsurface exploration program, preparation of a report detailing foundation design recommendations and construction considerations, preparation of specifications and contract drawings and layout of an instrumentation program to monitor performance of the lateral earth support system and the adjacent Ted Williams Tunnel. Analysis of bottom stability, slope stability, differing foundation elements and impacts on the Ted Williams Tunnel were conducted. Construction phase services included daily coordination with field staff, review of contractor's submittals and RFIs, and presentation of geotechnical instrumentation results.

One Franklin Development, Boston, MA. Project manager for the geotechnical and environmental design and construction of a 62–story tower (third tallest building in Boston) with 3-levels of below grade parking. The project also included the renovation and upgrades to an existing historic building on the site. Through extensive design, settlement analysis and coordination with the project team members the tower was able to be supported on a structural concrete mat for a significant cost savings over a deep foundation system. Significant interaction and protection of the MBTA Orange and Red lines adjacent to the site where required.

Cambridge Crossing, Cambridge, MA. Managed the support of excavation design consisting of steel sheet piling with internal bracing for 5 separate parcels for the second phase of the Cambridge Crossing project. Worked closely with the general contractors to optimize the design, including the bracing installation and removal, to meet project schedule.

New Everett High School, Everett, MA. Project manager for the design and construction of a 380-ft-long, up to 45-ft-high, permanent soil nail wall for the New Everett High School in Everett, Massachusetts. The soil nail wall was designed to relieve lateral earth pressure against the structure foundation wall. Design phase services included review and assessment of geotechnical explorations performed by others, evaluation of the global stability of the proposed wall system under construction and post construction conditions, development of design criteria for the wall, design of the soil nail wall using SNAIL and GOLDNAIL software programs, preparation of construction drawings and specifications, and recommendations for wall instrumentation. Construction phase services included meetings with the design team, owners and contractors, review of contractor provided submittals, observation of the excavation of cuts, installation of soil nails, reinforcement and drainage material, application of shotcrete, and verification testing of the soil nails.

One River Street, Atlantic Richfield, Hastings on Hudson, NY. Project manager for the design of a waterfront bulkhead at the former Anaconda Wire & Cable site. The project includes extensive excavation adjacent to the Hudson River and challenging site conditions related to the both environmental and geotechnical issues. Responsible design aspects included overall slope stability during construction, final site conditions, and potential seismic events as well as structural design of the steel bulkhead acting as the support of excavation system. Performed structural and geotechnical analysis related to the evaluation of existing bulkhead.

Massachusetts General Hospital, Ambulance Building and Garage, Boston, MA. Provided geotechnical and structural services related to the design of a three-foot-thick slurry wall for the support of a 6-level below-grade parking garage. Performed staged analysis based on top-down construction sequencing and evaluated loads on the slurry wall from adjacent buildings and construction surcharging.

Confidential University Slurry Wall Design, MA. Provided geotechnical and structural services related to the design of three slurry walls for various building on this university campus. Designs included reinforced concrete and soldier pile and tremie concrete wall construction. Temporary bracing included design of tiebacks, internal corner and cross-lot

struts, and top-down construction utilizing the proposed basement floor slabs. Staged analyses were performed to determine the maximum wall and bracing loads during the excavation.

Seaport Parcels B/C Slurry Wall Design, South Boston, MA. Provided geotechnical and structural services related to the design of slurry walls for Parcels B/C in the Seaport District of South Boston. Design included reinforced concrete wall construction. Temporary bracing included design of internal corner and cross-lot struts and external tiebacks. Staged analyses were performed to determine the maximum wall and bracing loads during the excavation as well as movements.

Pier 4 Slurry Wall Design, South Boston, MA. Provided geotechnical and structural services related to the design of slurry walls for Pier 4 in South Boston. Design included reinforced concrete wall construction. Temporary bracing included design of internal corner and cross-lot struts with pin piles. Staged analyses were performed to determine the maximum wall and bracing loads during the excavation as well as movements.

W-Hotel Slurry Wall Design, Boston, MA. Provided geotechnical and structural services related to the design of slurry walls for the W-Hotel in Boston. Design included reinforced concrete wall construction. Temporary bracing included design of internal corner and cross-lot struts. Staged analyses were performed to determine the maximum wall and bracing loads during the excavation as well as movements.

Longwood Center Slurry Wall Design, Boston, MA. Provided geotechnical and structural services related to the design of slurry walls for the Longwood Center in the medical district of Boston. Design included reinforced concrete wall construction. Temporary bracing included design of internal corner and cross-lot struts. Staged analyses were performed to determine the maximum wall and bracing loads during the excavation as well as movements.

50 Binney Street Slurry Wall Design, Cambridge, MA. Provided geotechnical and structural services related to the design of slurry walls for the 50 Binney Street development in Cambridge. Design included reinforced concrete wall construction. Temporary bracing included design of internal corner and cross-lot struts. Staged analyses were performed to determine the maximum wall and bracing loads during the excavation as well as movements.

Atlantic Wharf Permanent and Temporary Slurry Wall Design, Boston, MA. Provided geotechnical and structural services related to the design of the slurry walls for the Atlantic Wharf development in Boston. The construction sequence employed the up/down construction methodology and included the design analysis of the reinforced concrete wall. Worked closely with the building structural engineer to develop floor slab loads and provided shear and moment forces for use in the permanent wall design.

Duke Energy, Cincinnati, OH. Provided geotechnical and structural services related to the design of support of excavation system to allow excavation of contaminated material to a depth of 40-ft below ground surface. The design consisted of a soldier pile and lagging system with a combination of internal (corner) and external (tieback) bracing. Staged analyses were performed to determine the maximum wall and bracing loads during the excavation. Slope stability analysis performed to determine acceptable slope limits during excavation.

Yerxa Road Support of Excavation Design, Cambridge, MA. Project manager for the design of a steel sheet pile support of excavation system to enable the construction of pedestrian underpass under existing MBTA and MBCR train lines. The design required internal bracing and cantilevered sections. Coordination with the various railroad track owners was required during the design, review and construction as trains were actively using the tracks. Monitoring of adjacent condominium structures for impacts during the sheet pile installation and excavation was required.

Intermediate Pump Station and Headworks, Braintree-Weymouth, MA. Provided geotechnical and structural services for design of jacking pits for the installation of a 5-ft-dia relief interceptor. Work included the design of steel sheeting and internal bracing for the support of the pits, design of reaction blocks used during jacking, and recommendations for dewatering.

Pearl River Combined Sewer Overflow, Lafayette, IN. Evaluated the design of circular cofferdam to serve as a groundwater cutoff wall and support of excavation system to enable the construction of a 72-in. CMP pipe. During construction reviewed required design modification due to unforeseen subsurface conditions and modified construction sequencing. Checked the stability and design of a secant pile wall installed behind a portion of the cofferdam below the water table to allow to cutting and removal of a section of the cofferdam and installation of the pipe.

Fletcher's Paint Works and Storage Facility Superfund Site, Milford, NH. Oversaw the geotechnical, dewatering and structural aspects of the design of a slurry wall cofferdam to allow the removal of contaminated material to the top of bedrock. Specific design tasks included extensive dewatering system, design of temporary excavation support systems (soldier pile and lagging, steel sheeting and slurry wall) analysis of train and construction loading on the slurry wall cofferdam, and review of subsurface information. In addition, oversaw the design of shoreline sheet piling for the same site to prevent the flooding of remedial excavations along an adjacent river.

PUBLICATIONS

Kelvin Wong, P.E., Sandra Iberg, P.E., Damian Siebert, P.E. "Complexities of Mixed Foundation Systems for a Boston Highrise". Published in the proceeding of Geo-Congress 2019, 8th International Conference on Case Histories in Geotechnical Engineering, Philadelphia, Pennsylvania March 24 – 27.

Wystan Carswell, Ph. D., Damian Siebert, P.E. "Design and Performance of a Temporary Concrete Diaphragm Wall Excavation Support System in South Boston". Published in the proceeding of Geo-Congress 2019, 8th International Conference on Case Histories in Geotechnical Engineering, Philadelphia, Pennsylvania March 24 – 27.

Kelvin Wong, P.E., Taylor LaBrecque, Damian Siebert, P.E. "Design of a Deep Basement in Atypically Complex Boston Ground Conditions". Published in the proceeding of Geo-Congress 2019, 8th International Conference on Case Histories in Geotechnical Engineering, Philadelphia, Pennsylvania March 24 – 27.

Damian R. Siebert, P.E. and Steven R. Kraemer, P.E. "Ground Improvement for Building Support: What is it and Who's Responsible?", Structure Magazine July 2015.

Damian R. Siebert, P.E. and Bryan P. Sweeney, P.E., PhD. "Performance of Deep Excavations in Clay in the Boston Urban Environment". Published in the proceedings of the IFCEE Conference, San Antonio, Texas March 17 – 21, 2015.

Damian R. Siebert, P.E. and Bryan P. Sweeney, P.E., PhD. "Digging Deep Excavation in the City of Boston. The Good, the bad, and the ugly". Published in the proceedings of the IFCEE Conference, San Antonio, Texas March 17 – 21, 2015.

Damian R. Siebert, P.E., Joel S. Mooney, P.E., LSP, Richard Marks, Daniel Ocasio, AIA, and Kevin McKenna. "Old Sewer, Big Risks: Managing Risks during the Design and Construction of a 21-Story Building Adjacent to a Critical 100-year Old Sewer Structure." Published in the proceedings of the ASCE's GeoRisks Conference, Atlanta, Georgia June 26 – 28, 2011.

Damian R. Siebert, P.E., Bryan Sweeney, P.E., PhD., Wayne Hardison. "Sediment and Shoreline Remediation Requires Unique Geotechnical Solutions". Battelle's Sixth International Conference on Remediation, February 2011.

Siebert, D., and Dowding. "Control of Construction Vibrations with an Autonomous Crack Comparometer." Published in the proceedings of the First World Conference on Explosives and Blasting Technique, Munich, Germany, September 6-8, 2000.

PROJECT SUMMARY

BOSTON PROPERTIES

H&A provided redevelopment solutions to address issues from previous site usage and filling.

BOSTON, MASSACHUSETTS

CLIENT CHALLENGE

The redevelopment of Atlantic Wharf (formerly known as Russia Wharf) involved the construction of a 6 level deep underground parking garage (650 spaces) and a 32-story mixed-use high-rise tower along the historic Boston Harbor waterfront. The new tower features 550,000 sf of Class A office space, 30,000 sf of retail and public space, and 70 to 80 residential units. The site consists of filled land created by extending the shoreline to support expansion of commerce and trade as the urban population and land needs grew. The wharf was used for early colonial trade with St. Petersburg, Russia and subsequent to filling was occupied by three timber pile-supported buildings built in the early 1900s. Other historically significant structures surround the property with a transit line tunnel running beneath a portion of the property, within 3 ft of the below-grade wall.

As a trusted advisor to Boston Properties, Haley & Aldrich's geotechnical and environmental engineers were challenged to provide redevelopment solutions to address relics of waterfront structures (granite block seawalls, piles, and piers), weak subsurface soil conditions, tidal ground water levels, and contaminated soils resulting from previous site usage and filling.

OUR APPROACH

Haley & Aldrich's engineers recommended up-down construction methodology with drilled shaft foundation elements and an exterior slurry wall to address these factors.

As a prerequisite for development, the historic facades were to be preserved and incorporated into the final building configuration. The historic facades were temporarily braced and supported prior to the commencement of building demolition.

VALUE DELIVERED

- Utilized up-down construction method for foundation which provided cost and time savings.
- This construction methodology saved time and costs to the project.
- This construction methodology addressed the lateral bracing requirements for the slurry wall and restrictive ground movement tolerances to protect adjacent historic structures.



SERVICE HIGHLIGHTS

- Implemented a stiff excavation support system and use of "Up -Down" construction methodology to mitigate impacts to an adjacent transit tunnel, surrounding historic buildings and infrastructure
- Developed engineering solutions to preserve and protect the previous building's historic façade aided in permitting approvals
- Developed a memorandum of understanding with the MBTA that defined construction requirements adjacent to the Silver Line tunnel
- Utilized up-down construction method for foundation which provided cost and time savings

PROJECT SUMMARY

BETH ISRAEL HOSPITAL

H&A provided **integrated geotechnical and environmental services** for the Clinical Center.

BOSTON, MASSACHUSETTS

CLIENT CHALLENGE

Haley & Aldrich lead the below-grade portion of the Beth Israel Deaconess Medical Center (BIDMC) project, providing geotechnical and environmental design and construction phase services for the BIDMC Carl J. Shapiro Clinical Center at the former Massachusetts College of Art (MCA) site.

Site constraints included maintaining several major below-grade utilities in service, and monitoring/protecting existing adjacent hospital campus buildings from construction impacts. Also, a clear corridor for a future Massachusetts Bay Transportation Authority line along Longwood Avenue, needed to be maintained, and a parking deck structure adjacent to the site had to be supported. In addition, underpinning support of the historic west facade of the existing MCA structure for incorporation into the new development.



OUR APPROACH

After several iterations of master planning the complex underground aspects of the project, the redevelopment of the approximately 99,000-sq-ft site involved “up-down” construction of five levels of underground parking to accommodate approximately 750 cars; regulated off-site disposal of soils; design and installation of deep slurry wall and foundation units to support a new medical facility building with a four-story, low-rise portion over the entire site and a 12-story tower above; and construction of a structurally independent link from the new facility to the main hospital campus.

VALUE DELIVERED

- Preservation of historic facade of an adjacent structure.
- Underground master planning minimized construction disruption and allowed uninterrupted hospital operations.
- Up-down construction shortened the delivery schedule for site redevelopment.

SERVICE HIGHLIGHTS

- 12-story tower with 5 levels of below-grade parking
- Integrated geotechnical and environmental services
- Tight urban site with space constraints

PROJECT SUMMARY

CHILDREN'S HOSPITAL

H&A provided **integrated geotechnical and environmental services** for the Research Building.

BOSTON, MASSACHUSETTS

CLIENT CHALLENGE

Haley & Aldrich provided the need for on-site stockpiling integrated geotechnical and environmental engineering services for the design and construction of the Children's Hospital Research Building located on Blackfan Circle in the Longwood Medical Area of Boston. The new research facility is a 13-story building with 5 levels of below-grade space primarily for parking. The site is adjacent to existing buildings on three sides and across Blackfan Circle.

OUR APPROACH

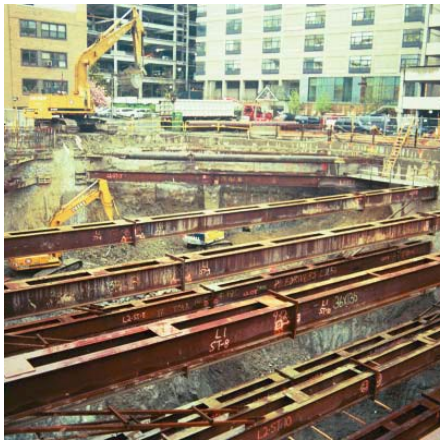
A cast-in-place reinforced concrete diaphragm wall (slurry wall) was selected to control ground movements and maintain groundwater levels outside the excavation. The concrete diaphragm wall also served as the permanent foundation wall.

The excavation was internally braced and the building columns were supported on spread footings bearing on glacio-marine deposits approximately 60 ft below existing grade. Bearing surfaces were protected by a concrete mud mat placed directly following excavation to final grade.

Approximately 90,000 cu yd of soil was characterized and classified for off-site removal prior to construction to allow for direct loading of trucks and eliminate the need for on-site stockpiling. Department of Environmental Protection regulatory submittals and documentation were prepared for management of approximately 6,500 cu yd of contaminated soil.

VALUE DELIVERED

- Successful installation of deep foundations in congested urban area.
- 90,000 cu yd of soil characterized and classified for off-site removal prior to construction eliminating the need for on-site stockpiling.



SERVICE HIGHLIGHTS

- 13-story building with 5 levels of below-ground parking
- Concrete diaphragm wall construction (slurry wall)
- Regulatory submittals and documentation for management of contaminated soil
- Integrated geotechnical and environmental services

PROJECT SUMMARY

MERCK & CO.

H&A provided **integrated geotechnical and environmental services** for the Research Center.

BOSTON, MASSACHUSETTS

CLIENT CHALLENGE

Haley & Aldrich provided integrated geotechnical and environmental engineering services for the design and construction phase of Merck's new Boston Research Center building located on the campus of Emmanuel College in Boston. The new laboratory, the first project in New England for the global pharmaceutical research company, has a 12-story tower, a 4-story wing, and 6 levels of below-grade space for mechanical equipment, storage, and parking.

OUR APPROACH

A particularly significant geotechnical issue included protection of adjacent buildings and utilities. A cast-in-place reinforced concrete diaphragm wall (slurry wall) was selected to control ground movements and maintain groundwater levels outside the excavation. The concrete diaphragm wall also served as the permanent foundation wall. Foundation challenges included the need to accommodate mechanical equipment in a 27-ft high bay area that does not have internal supports, and construction of a 2-story auditorium that is partially above and partially below grade. To meet project schedule, the above-ground spaces and the six levels of below-ground space were constructed simultaneously. Use of the "Up-Down" method resulted in an early start for the building superstructure. Building columns were installed from ground level in rock-socketed caisson foundations excavated under slurry to maintain stability of the foundation unit during excavation and tremi concreting.

VALUE DELIVERED

- Approximately 80,000 cy of soil was characterized and classified for off-site removal prior to construction to allow for direct loading of trucks and eliminate the need for on-site stockpiling.
- The removal of contaminated soil was sequenced with the Up-Down construction technique to allow for removal of contaminated soil prior to placement of the ground floor and start of the subsequent mining operation.
- DEP regulatory submittals were also prepared for management of contaminated soil.



SERVICE HIGHLIGHTS

- 12-story tower and four-story wing with six levels of below-grade space for parking and storage
- Reinforced concrete diaphragm wall construction (slurry wall)
- Up-down construction

PROJECT SUMMARY

MILLENNIUM PARTNERS

H&A provided **integrated geotechnical and environmental services** for mixed-use development.

BOSTON, MASSACHUSETTS

CLIENT CHALLENGE

Haley & Aldrich provided integrated geotechnical and environmental services for a major mixed-use urban development encompassing two city blocks in the midtown area of Boston. The project consists of two residential towers, a health club, a Ritz Carlton hotel, a large entertainment complex, and five levels of underground parking.

OUR APPROACH

Haley & Aldrich provided design criteria and monitored installation of the perimeter concrete diaphragm wall and the foundation elements on the large development block. The concrete diaphragm wall was used to reduce the risks associated with potential ground movement and the lowering of groundwater levels. Interior columns were placed integral with the Load Bearing Elements (LBEs) and caissons socketed into rock from ground surface prior to the start of excavation.

The project site is adjacent to underground subway tunnels as well as other above-grade structures. Haley & Aldrich recommended using the innovative "Up-Down" construction technique to overcome these site constraints and to accelerate the schedule for steel erection of the tower. The up-down construction method permitted the erection of the aboveground structure to proceed while simultaneously excavating the five below-grade levels within the perimeter slurry wall.

The presence of oil and hazardous materials in the soil and groundwater required management during construction under Massachusetts regulations. This was conducted as a Release Abatement Measure during site development in accordance with the regulations of the Massachusetts Contingency Plan.

VALUE DELIVERED

- Haley & Aldrich supported the project team in successfully and cost-effectively completing the planning, design and construction of Millennium Place.



SERVICE HIGHLIGHTS

- Innovative "Up-Down" construction technique
- Two 35-story towers with five levels of below-grade parking
- Adjacent to subway tunnels and historic above-grade structures

9. CONSISTENCY WITH PORTLAND DESIGN STANDARDS

Section 14-526 of the City of Portland's Land Use Code outlines the site plan standards that must be met by Level III Site Plan projects. The proposed development will follow the City's design standards as described in the following section.

9.1 Transportation

A Traffic Movement Permit (TMP #2016-224) was issued by the City of Portland on May 26, 2017, as part of the 58 Fore Street Master Development Plan review process. The TMP conditions of approval require that updated traffic analyses and a Transportation Demand Management (TDM) Plan be approved for each phase of development. A Traffic Assessment and TDM Plan have been prepared by Gorrill Palmer for the proposed development. These reports are provided as an attachment to this Section.

1. *Impact on Surrounding Street Systems*
   The attached Traffic Assessment was prepared by Gorrill Palmer for the proposed development. A trip generation summary is provided in the traffic assessment, as well as a comparison to trip generation previously approved as part of the 58 Fore Street Master Development Plan process.

2. *Access and Circulation*
   The primary vehicular and pedestrian entrances to the site are via the Thames Street Extension and Fore Street. Pedestrians will also be able to access the site from the Eastern Promenade trail.

   Vehicles entering on Thames Street may park in on-street parking within the site or may drive through the site to park in garage spaces located in Buildings 1A or 4. Additional vehicular access to the Building 4 garage is provided via a garage entrance on Fore Street, directly opposite Waterville Street.

   On Fore Street, two existing vehicular drop-off spaces will be relocated to the west of their current location to allow space for the construction of a plaza adjacent to the sidewalk with access to a stair providing a direct connection into the site. This pedestrian access way is located within a 50-foot Public Access Easement.

   The design of the proposed roadway internal to the Site is curb-less and will safely accommodate a mix of pedestrian and vehicle traffic. Continuous paving unifies the driving lane and sidewalk zones, while the paving design defines various zones for vehicles, pedestrians and parking through a mix of materials and paving patterns. Though the material will be continuous, a textured band of paving will differentiate the zones providing visual and tactile clues to the change in use. Bollards are used primarily between street parking and pedestrian walkways. Driving lanes are defined by a continuous, centerline trench drains and the edges are marked by a combination of parking spaces, plants, street trees, bollards, and light poles.

3. *Loading & Servicing*
   Loading and trash removal will be addressed in each of the buildings throughout the site with designated spaces to accommodate deliveries and storage.

4. *Sidewalks*
   Brick sidewalks and granite curb will be provided per the City of Portland Sidewalks and Driveway Apron Materials Policy on the public section of the Fore Connector and on Fore Street where proposed buildings will impact the street. There are three locations where sidewalk replacement is not currently proposed:

- Along the portion of the Fore Connector that is located on abutting private property.
- Along Fore Street at Parcel 1B. Future development on this parcel will replace this sidewalk
- Along Fore Street at Parcel 4 where current work will not impact existing sidewalk. Future development over the garage will replace this sidewalk.

5. *Public Transit Access*
   No changes to public transit access are proposed as part of this project.

6. *Parking*
   The attached Traffic Assessment provides a detailed parking analysis for the proposed development. The parking demand will be satisfied by parking spaces proposed on the garage level of Building 1A, as well as the Block 4 parking garage and additional surface parking areas that will be located throughout the site, as shown on the design drawings attached to Section 3. It has also been determined that 33 bicycle parking spaces will be required for the proposed development; this need will be met by bike racks provided in the Building 1A garage and throughout the Site.

7. *Snow Storage*
   The Site's snow removal will be managed by a contracted third party to ensure safe vehicular and pedestrian circulation, and to maintain access to the building entrances.

8. *Transportation Demand Management (TDM)*
   The attached TDM Plan was prepared by Gorrill Palmer for the proposed development.

9.2 Environmental & Landscape Features

1. *Preservation of Significant Natural Features*
   The Site has been previously developed and there are no known areas of significant natural features, including unusual natural areas, rare or endangered botanical features, areas of significant wildlife habitats, or wetland areas. The attached Official Species List identifies the northern long-eared bat, which has been listed as a Federally Threatened Species, in association with the project area (a common designation across the state); however, there are no critical habitat areas located within the project area. Based on US Fish & Wildlife information, the northern long-eared bat typically lives in caves during the winter months, and in trees larger than three inches in diameter during the summer, with migration between these two habitats in the spring in the fall. Tree-clearing for this project will be minimal; it is not anticipated that this project will have an impact on the northern long-eared bat species.

2. *Landscaping & Landscape Preservation*
   Much of the site will be raised in elevation to meet the grades established at the Thames Street/Fore Connector intersection and to align with the City of Portland Comprehensive Plan for a resilient waterfront. Meeting this goal requires the removal of the handful of birch trees that have established on the site; however, the planting design more than doubles the number of trees currently found on the developed areas of the site. The waterfront edge of the property will be re-vegetated with native seaside plantings including bearberry, sweet pepperbush, northern bayberry and staghorn sumac. These plantings are similar to those found along the Eastern Promenade Trail.

   The planting along the length of the west side of Building 1A includes tulip poplar trees, gro-low sumac groundcover, and lawn. Two planting areas flank the Fore Street Stairs and will contain a mix of woodland plants including a small tree, native shrubs, and groundcover plants. On the north side of the site entrance, the block is bracketed with trees planted in eight-foot wide groundcover beds. Street parking

on the waterfront side is bookended with similar plantings. Along with the four single street trees, two groups of three red maples set the character of the street. This pattern will continue in future phases.

In the historic zone of the Site, plantings will be limited to fully expose building facades and maintain the original industrial character of the site. The plantings in this area will be strategically arranged to provide visual interest and shade, where necessary. The primary group of trees will be a stand of red oaks at the nexus of the historic buildings and the first three development blocks. This grouping adds definition to the various plaza spaces around it, while directing pedestrian movement between the buildings and across the vehicular lanes. It also provides canopy for shade and space for outdoor seating.

3. *Site Landscaping & Street Trees*
   Landscaping Plans are included in the drawings referenced in Section 3 of this Report.

9.3 Environmental & Stormwater

1. *Water Quality, Stormwater Management & Erosion Control*
   The project must comply with the water quality, stormwater management, and erosion control standards identified by the City of Portland in the Land Use Chapter of the Code of Ordinances, as well as the MaineDEP Chapter 500 Stormwater Standards associated with Site Location of Development Act Permit requirements. The Stormwater Management Plan included with this application demonstrates that the proposed development meets the applicable standards.

   The project has been designed to minimize the impact of stormwater leaving the site. The project will not result in the flooding of adjacent lots or City property. Additionally, the project is not located within the watershed of an Urban Impaired Stream and is not anticipated to pose a risk of groundwater contamination during or after construction. Erosion and sediment control measures are described in the attached Stormwater Management Plan and detailed on the drawings. The development has also been designed to provide for the adequate and sanitary disposal of sewage, as further described in Section 14 of this Report.

9.4 Public Infrastructure & Safety

1. *Consistency with City Master Plan*
   The development's consistency with City Master Plan is described in Section 11 of this Report.

2. *Public Safety and Fire Prevention*
   Provisions for public safety have been incorporated into the design of site visibility, access, and territorial reinforcement. Adequate emergency vehicle access is provided via the proposed roadway. Compliance with the Portland Fire Department Site Review Checklist is described in Section 15 of this Report.

3. *Availability and Adequate Capacity of Public Utilities*
   The availability and adequate capacity of public utilities is described in Section 14 of this Report.

9.5 Site Design

1. *Massing, ventilation, and wind impact*
   Buildings have been designed within a context of similarly scaled new and existing buildings. All primary mechanical equipment is housed either within buildings, or within a fully screened extent of roof located to minimize disruption to abutting properties. HVAC venting is directed away from adjacent public areas. The renovation of existing buildings will include small additions to house mechanical rooms and egress

stairs; this work will not impact the surrounding structures and open spaces in regards to scale and environmental comforts.

2. *Shadows*
   Buildings have been designed to minimize impacts of shadows on open space and public areas that would affect the viability of the public use and existing vegetation. Over the course of the day, direct sunlight will be provided to adjacent areas to promote the use and growth of vegetation.

3. *Snow and ice loading*
   Buildings have been designed to prevent snow and ice from accumulating and falling onto abutting properties and public ways.

4. *View corridors*
   Buildings have been designed accommodate views corridors identified in the City's regulatory requirements.

5. *Historic Resources*
   A portion of the proposed development is located within the Portland Company Historic District. The design of this work takes into consideration the review that was undertaken during the Master Development Plan process. Historic artifacts and site furnishings will be employed in purposeful ways, located strategically in the context of the historic buildings.

   To date, Building 12 has received its Certificate of Appropriateness, and additional information required as a condition of approval will be provided to the Historic Preservation Board. The buildings located in the site's historic core are currently in the review process with the Historic Preservation Board, with workshops scheduled in November. We will continue to work with Staff and the Board to schedule review of the Building 1A and Building 4 façades that are located within the Historic District.

6. *Exterior Lighting*
   Proposed exterior lighting is shown on the drawings. A lighting schedule, cut sheets, and photometric plan are attached. We are requesting a waiver from the light trespass standard at the site entrances, as described in Section 4. Maximum illumination levels will be exceeded at the property line at the site entrances to adjacent roadways and sidewalks, where pedestrians and/or vehicular traffic will be entering the property and additional lighting will be warranted; this is not anticipated to impact abutting properties.

7. *Noise and Vibration*
   The noise impact from the proposed development will be minor. The primary source of noise from the proposed project will be the result of construction. Construction activities will be limited to the hours permitting by the City. HVAC and primary mechanical equipment will be located and screened to mitigate noise impacts. Noise associated with the proposed development will not exceed regulated levels and is not anticipated to negatively impact surrounding development in its urban setting. Noise and vibration associated with the proposed development will not exceed regulated levels.

8. *Signage and Wayfinding*
   Sign permit applications will be submitted under separate cover. The size, scale, proportions, design, materials, placement, quantity and source and intensity of illumination shall be designed to complement and enhance the architectural attributes of the proposed building.

Consideration has been put into wayfinding to minimize vehicular traffic. The primary site entrance associated with the 58 Fore Street address will be located off Fore Street, which will lead directly into the Block 4 parking garage. The attached Traffic Assessment provides a trip summary for each site entrance.

9. *Zoning Related Design Standards*
   An assessment of the City Zoning requirements is provided in Section 10 of this Report.

9.6 Attachments

- Official Species List
- Lighting Schedule, Cut Sheets & Photometric Plan
- Traffic Assessment & TDM Plan prepared by Gorrill Palmer (uploaded separately in Eplan)
- Stormwater Management Plan (uploaded separately in Eplan)

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Maine Ecological Services Field Office
P. O. Box A
East Orland, ME 04431
Phone: (207) 469-7300 Fax: (207) 902-1588
http://www.fws.gov/mainefieldoffice/index.html

In Reply Refer To:
Consultation Code: 05E1ME00-2019-SLI-0754
Event Code: 05E1ME00-2019-E-01798
Project Name: Portland Foreside Development - Block 1

May 20, 2019

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies the threatened, endangered, candidate, and proposed species and designated or proposed critical habitat that may occur within the boundary of your proposed project or may be affected by your proposed project. This species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC Web site at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the Endangered Species Consultation Handbook at: http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

This species list also identifies candidate species under review for listing and those species that the Service considers species of concern. Candidate species have no protection under the Act but are included for consideration because they could be listed prior to completion of your project. Species of concern are those taxa whose conservation status is of concern to the Service (i.e., species previously known as Category 2 candidates), but for which further information is needed.

If a proposed project may affect only candidate species or species of concern, you are not required to prepare a Biological Assessment or biological evaluation or to consult with the Service. However, the Service recommends minimizing effects to these species to prevent future conflicts. Therefore, if early evaluation indicates that a project will affect a candidate species or species of concern, you may wish to request technical assistance from this office to identify appropriate minimization measures.

Please be aware that bald and golden eagles are not protected under the Endangered Species Act but are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.). Projects affecting these species may require development of an eagle conservation plan: http://www.fws.gov/windenergy/eagle_guidance.html Information on the location of bald eagle nests in Maine can be found on the Maine Field Office Web site: http://www.fws.gov/mainefieldoffice/Project%20review4.html

Additionally, wind energy projects should follow the wind energy guidelines: http://www.fws.gov/windenergy/ for minimizing impacts to migratory birds and bats. Projects may require development of an avian and bat protection plan.

Migratory birds are also a Service trust resource. Under the Migratory Bird Treaty Act, construction activities in grassland, wetland, stream, woodland, and other habitats that would result in the take of migratory birds, eggs, young, or active nests should be avoided. Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g.,

cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm and at: http://www.towerkill.com; and at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Maine Ecological Services Field Office
P. O. Box A
East Orland, ME 04431
(207) 469-7300

Project Summary

Consultation Code: 05E1ME00-2019-SLI-0754

Event Code: 05E1ME00-2019-E-01798

Project Name: Portland Foreside Development - Block 1

Project Type: DEVELOPMENT

Project Description: Portland, ME

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/43.661965382144984N70.24489577901488W



Counties: Cumberland, ME

Endangered Species Act Species

There is a total of 1 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

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LIGHTING FIXTURE SCHEDULE

Level 3 Site Application

Portland Foreside Project

Not for bidding or construction unless fully incorporated into contract documents by Architect and/or Engineer.

Date Issued: 11/4/2019

Posting Date: 11/4/2019

Lam Project # 18145

Written by: MC/LW

Checked by: LW

Fixture Type		Description	Fixture (Manufacturers and Models)	Light Source	Fixt. Load (W) (Typical)	Controls	Location / Use	Notes
G	---	Ground surface or recessed mounting	Suffixes, like -4', -6', -8', etc. are typically used to denote a variant of a fixture type. Please note that the nomenclature is not absolute. Refer to the individual specifications for each fixture type.					Mounting heights, special notes, references to other documents, instructions to the Contractor, etc. are typically listed in the Notes column.
L	---	Linear fixture of any type						
M	---	Media or Mesh						
DP	---	Decorative Pendant						
P	---	Pendant (usually a discreet unit)						
R	---	Recessed						
S	---	Surface mounted (typically to ceiling)						
T	---	Track or track mounted						
W	---	Wall mounted						
Y		Exterior + Mount, (i.e. YG would be exterior ground mount)						
R1	Created 10/8/2019	Ceiling recessed LED downlight with 50 degree beam, frosted lens, trim flange, and integral driver	USAI Lighting BeveLED2.2 Basic Downlight	Integral LED 3000K 1000 lm delivered 50,000 hrs 80+ CRI	20 W	0-10V to 10% Integral Dimmable Driver	Canopy of Building 6 entry	Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs. EE to confirm dimming compatibility with specified lighting control system.
S1	Created 11/1/2019	Ceiling surface mounted linear LED downlight within Architectural wallslot detail	Lumenwerx Via 2 Symmetric	Integral LED 3000K 500 lm/LF delivered 50,000 hrs 80+ CRI	8 W/LF	0-10V to 5% Integral Dimmable Driver	Block 4 Interior Wall Slots	Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs. EE to confirm dimming compatibility with specified lighting control system.
S2	Created 11/1/2019	Surface mounted curvlinear LED grazer with extruded aluminum housing, frosted lens, and remote driver mounted along underside of stair	LEDLinear	Integral LED 3000K 500 lm/LF delivered 50,000 hrs 80+ CRI	3 W/LF	0-10V to 5% Integral Dimmable Driver	Block 4 Interior Stair	Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs. EE to confirm dimming compatibility with specified lighting control system.
YG1	Updated 7/9/2019	Exterior rated pole mounted Type II beam distribution downlight	Bega Head: 77930-3000K-(Finish)	Integral LED 3000K 3385 lm delivered 50,000 hrs 80+ CRI	24 W	0-10V to 10% Integral Dimmable Driver	Vehicular Pathways	To be used with Type YG7 pole. Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs. EE to confirm dimming compatibility with specified lighting control system.

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Fixture Type		Description	Fixture (Manufacturers and Models)	Light Source	Fixt. Load (W) (Typical)	Controls	Location / Use	Notes
YG2	Updated 7/9/2019	Exterior rated 41" height illuminated bollard with 360 degree light distribution and integral driver	Forms+Surfaces Helio Bollard 41" height Helio Bollard-3000K-MOD Painted "Galvanized Steel" finish Erco Castor Alternate 33943.023-3000K-(Finish)	Integral LED 3000K 700 lm delivered 50,000 hrs 80+ CRI	30 W	0-10V to 10% Integral Dimmable Driver	South Entrance	Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs. EE to confirm dimming compatibility with specified lighting control system.
YG3	Updated 11/1/2019	Wet listed in-grade adjustable uplight with integral driver and flush trim flange	Erco Tesis wide beam distribution 35069.023-(3000K)-(Finish)	Integral LED 3000K 824 lm delivered 50,000 hrs 80+ CRI	14 W	0-10V to 10% Integral Dimmable Driver	Block 2 Tree Grove	Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs. EE to confirm dimming compatibility with specified lighting control system.
YG3A	Created 11/1/2019	Wet listed in-grade adjustable uplight with integral driver and flush trim flange	Erco Tesis spot distribution 35077.023-(3000K)-(Finish)	Integral LED 3000K 600 lm delivered 50,000 hrs 80+ CRI	8 W	0-10V to 10% Integral Dimmable Driver	Block 2 Boiler&Water Tanks	Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs. EE to confirm dimming compatibility with specified lighting control system.
YG4	Updated 6/18/2019	*Not Used (Inground Uplight)*						
YG5	Updated 6/18/2019	*Not Used (Inground Wallwasher)*						
YG6	Updated 7/9/2019	Exterior and security rated non-illuminated bollard	Forms+Surfaces Helio Bollard 41" height Helio Bollard-MOD Security-MOD Painted "Galvanized Steel" finish TBD	N/A	N/A	N/A	Pedestrian Pathways	Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs. EE to confirm dimming compatibility with specified lighting control system.
YG7	Updated 11/1/2019	Ground mounted 20' height wood pole	Structura BOL round straight solid wood pole BOL-STRAIGHT POLE-20FT-5.5"-5.5"-(Wood Finish	N/A	N/A	N/A	Vehicular and Waterfront Poles	To be used with Type YG1 pole mounted head. Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs.
YG8	Created 7/25/2019	Exterior rated ground mounted 20' height pole with mounting plate	Valmont Round Non-Tapered Aluminum Pole-20' Height-(Finish)	N/A	N/A	N/A	West of Buliding 12	To be used with Type YG9 & YG10 pole mounted heads Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs.

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Date Issued: 11/4/2019

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Lam Project # 18145

Written by: MC/LW

Checked by: LW

Fixture Type		Description	Fixture (Manufacturers and Models)	Light Source	Fixt. Load (W) (Typical)	Controls	Location / Use	Notes
YG9	Created 7/25/2019	Pole mounted adjustable accent with oval flood distribution, integral driver, adjustable & lockable yoke, corrosion resistant coating, tenon mounting, and snoot & cross baffle assembly to minimize glare and direct view into fixture	Lumenpulse Lumenbeam Medium LBM-277-30K-NS-LSLH-(Finish)-DIM-CRC-UL-(Cable Length) Tenon Mounting: PM4-1 Wide Snoot: LBMSNW-(Finish)-BK-MOD CROSS BAFFLE	Integral LED 3000K 1,552 lm 120,000 hrs 80+ CRI	28 W	1-10V to 10% Integral Dimmable driver	Buliding 12 Signage Lighting	Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs. EE to confirm dimming compatibility with specified lighting control system.
YG10	Created 7/25/2019	Pole mounted adjustable downlight with wide flood distribution, integral driver, adjustable & lockable yoke, corrosion resistant coating, tenon mounting, and snoot & cross baffle assembly to minimize glare and direct view into fixture	Lumenpulse Lumenbeam Medium LBM-277-30K-WFL-(Finish)-CRC-DIM-UL-(Cable Length) Tenon Mounting: PM4-1 Wide Snoot: LBMSNW-(Finish)-BK-MOD CROSS BAFFLE	Integral LED 3000K 1,370 lm 120,000 hrs 80+ CRI	28 W	1-10V to 10% Integral Dimmable driver	Small courtyard and pedestrian crossing over rail tracks	Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs. EE to confirm dimming compatibility with specified lighting control system.
YG11		14' height pole with 31-1/2" diameter white reflective disk with indirect light, integral driver	Bega 77 208-3000K-(Finish)	Integral LED 3000K 1,742 lm 120,000 hrs 80+ CRI	38 W	1-10V to 10% Integral Dimmable driver	Circulation between Buildings 3 & 6	Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs. EE to confirm dimming compatibility with specified lighting control system.
YG12	Created 10/8/2019	Surface mounted 4' linear LED uplight with snap-on radial louvers, integral driver, and Corrosion-resistant coating for hostile environments	Lumenpulse Lumen facade - exterior Fixture: LOG ASHRAE-277 (Voltage TBC)-48-3000K-10x10-SAM-(Finish)-DIM-ETE-CRC Radial Louver: LOGRD-48-BK (Finish TBC)-CRC	Integral LED 3000K TBD lm 120,000 hrs 80+ CRI	TBD	1-10V to 10% Integral Dimmable driver	Fore Street Stair stone uplight	Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs. EE to confirm dimming compatibility with specified lighting control system.
YP1	Created 10/8/2019	Pendant mounted disc shaped downlight (18" diameter)	Santa and Cole Arne S Domus catenary cable: Tivoli TBD	Integral LED 3000K TBD lm 120,000 hrs 80+ CRI	TBD	1-10V to 10% Integral Dimmable driver	Back Alley in front of Beer Hall	Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs. EE to confirm dimming compatibility with specified lighting control system.
YR1	Updated 7/9/2019	Exterior rated soffit recessed 8' linear LED downlight with integral drivers and microcell louvers to minimize glare	Lumenpulse Squero SQUR-MRO55-B-LED-80-500-30-UNV-4FT-D1-1-(Mounting)-(Finish)	Integral LED 3000K 500lm/LF delivered 50,000 hrs 80+ CRI	6 W/LF	0-10V to 10% Integral Dimmable driver	Block 1A Building and Parking Entries	Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs. EE to confirm dimming compatibility with specified lighting control system.

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LIGHTING FIXTURE SCHEDULE

Level 3 Site Application

Portland Foreside Project

Not for bidding or construction unless fully incorporated into contract documents by Architect and/or Engineer.

Date Issued: 11/4/2019

Posting Date: 11/4/2019

Lam Project # 18145

Written by: MC/LW

Checked by: LW

Fixture Type		Description	Fixture (Manufacturers and Models)	Light Source	Fixt. Load (W) (Typical)	Controls	Location / Use	Notes
YS1-4'	Updated 7/9/2019	Exterior rated surface mounted 4' length linear LED uplight with integral driver and corosion-resistant coating for hostile environments	Lumenpulse Lumen facade - exterior Fixture: LOG ASHRAE-277 (Voltage TBC)-48-3000K-30x30-SAM-(Finish)-DIM-ETE-CRC Radial Louver: LOGRD-48-BK (Finish TBC)-CRC	Integral LED 3000K 3000 lm 50,000 hrs 80+ CRI	5 W/LF	0-10V to 10% Integral Dimmable driver	Canopy uplight	Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs. EE to confirm dimming compatibility with specified lighting control system.
YS1-1'	Updated 7/9/2019	Exterior rated surface mounted 1' length linear LED uplight with integral driver and corosion-resistant coating for hostile environments	Lumenpulse Lumen facade - exterior Fixture: LOG ASHRAE-277 (Voltage TBC)-12-3000K-30x30-SAM-(Finish)-DIM-ETE-CRC Radial Louver: LOGRD-48-BK (Finish TBC)-CRC	Integral LED 3000K 3000 lm 50,000 hrs 80+ CRI	5 W/LF	0-10V to 10% Integral Dimmable driver	Canopy uplight	Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs. EE to confirm dimming compatibility with specified lighting control system.
YS2		*Not Used* *(Roof Screen wallwasher)*						
YS3	Updated 7/9/2019	Pole mounted adjustable downlight, integral driver, adjustable & lockable yoke, corrosion resistant coating, tenon mounting, and snoot & cross baffle assembly to minimize glare and direct view into fixture	Lumenpulse Lumenbeam Large LBL-277-30K-NF-LSLV-(Finish)-DIM-CRC-(Cable Length)-YK TN4 Tenon Adapter Wide Snoot: LBLSNW-(Finish)-BK-MOD CROSS BAFFLE AND 9" DEEP SNOOT	Integral LED 3000K 1500 lm 50,000 hrs 80+ CRI	100 W	0-10V to 10% Integral Dimmable driver	Moonlighting at plaza East of Building 1A	To be coordinate with Type YS4 pole Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs. EE to confirm dimming compatibility with specified lighting control system.
YS4	Created 7/9/2019	Exterior rated roof mounted 10' height pole with mounting plate	Valmont Round Non-Tapered Aluminum Pole-10' Height-(Finish)	N/A	N/A	N/A	Moonlighting for plaza East of Building 1A	To be coordinate with Type YS3 adjustable downlight Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs.

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Fixture Type		Description	Fixture (Manufacturers and Models)	Light Source	Fixt. Load (W) (Typical)	Controls	Location / Use	Notes
YS5	Created 7/9/2019	Exterior rated linear LED striplight with extruded aluminum channel, frosted lens, and remote driver	Acolyte Ribbonlyte Fixture: RB-90-SWS265-2.230-(Finish) Extrusion: AS1 Surface with horizontal mounting clips Frosted Lens Remote Dimmable Driver: 0-10V Dimmable 96W Driver	Integral LED 3000K 100 lm/LF 50,000 hrs 80+ CRI	2.2 W/LF	0-10V to 10% Integral Dimmable driver	Block 1 Vertical Indirect Coves along North Entries	Mounting detail to be coordinated with Architects Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs. Contractor to locate remote dimmable drivers at dry, accessible, and well ventilated locations. Contractor to provide all mounting clips and accessories for a complete operational system.
YS6	Created 7/25/2019	Illuminated Handrail with regressed LED modules, matte frosted lens, symmetric beam distribution, and remote driver	Wagner Lumenlinear or Lumenpod Lumenlinear TBD-LULS-30K-20-120-MS-(Length)-(Finish)	Integral LED 3000K 150 lm/LF 50,000 hrs 80+ CRI	1.85 W/LF	0-10V to 10% Remote Dimmable driver	Stair	Mounting detail to be coordinated with Architects Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs. Contractor to locate remote dimmable drivers at dry, accessible, and well ventilated locations. Contractor to provide all mounting accessories for a complete operational system.
YS7	Created 10/11/2019	Small scale catenary string lights with frosted globe diffusers and remote driver	Tegan Exton System Configuration TBC with Landscape Architects	Integral LED 3000K TBD lm/LF 50,000 hrs 80+ CRI	TBD	0-10V to 10% Remote Dimmable driver	Back Alley	Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs. EE to confirm dimming compatibility with specified lighting control system.
YS8		*Not Used*						

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YS9	Created 10/11/2019	Surface mounted linear LED striplight with remote dimmable driver	Linea Lighting	Integral LED 3000K TBD lm/LF 50,000 hrs 80+ CRI	TBD	0-10V to 10% Remote Dimmable driver	Open Bridges	Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs. EE to confirm dimming compatibility with specified lighting control system.
YS10	Created 10/8/2019	surface mounted linear uplight	Ledlinear Xoolum	Integral LED 3000K TBD lm/LF 50,000 hrs 80+ CRI	TBD	0-10V to 10% Remote Dimmable driver	Building 6 canopy sign lighting/building 4 uplight from trusses	Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs. EE to confirm dimming compatibility with specified lighting control system.
YS11	Created 10/11/2019	building mounted exterior rated adjustable downlights with linear spread lens	Lumenpulse lumenbeam small	Integral LED 3000K TBD lm 50,000 hrs 80+ CRI	TBD	0-10V to 10% Remote Dimmable driver	Building 4 exterior canopy-on arm lighting across space to light beam	Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs. EE to confirm dimming compatibility with specified lighting control system.
YS12	Created 10/11/2019	Structure mounted cylinder downlight with frosted lens	V2 Core 200 SX Surface	Integral LED 3000K TBD lm 50,000 hrs 80+ CRI	TBD	0-10V to 10% Remote Dimmable driver	building 12 south facade restaurant area	Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs. EE to confirm dimming compatibility with specified lighting control system.
YS13	Created 10/11/2019	Exterior rated surface mounted LED downlight with 50 degree beam	Lucifer Cylinder CY3	Integral LED 3000K TBD lm 50,000 hrs 80+ CRI	TBD	0-10V to 10% Remote Dimmable driver	Canopy of Building 4 entry	Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs. EE to confirm dimming compatibility with specified lighting control system.
YW1		*Not Used* *(Column Downlight)*						
YW2		*Not Used* *(Wall mounted direct/indirect)*						

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YW3	Updated 7/9/2019	Exterior rated mullion mounted 4' linear LED downlight with forward throw optic and dual circuit switching	Visa Passage OW2480-L30K-L-3000K-MVOLT0-FT-(Finish)-DS	Integral LED 3000K 650 lm delivered 50,000 hrs 80+ CRI	14 W	0-10V to 10% Integral Dimmable driver	Block 1A entries	Final mounting elevations to be confirmed with Architects. Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs. EE to confirm dimming compatibility with specified lighting control system.
YW4		*Not Used* *(Building 12 Wall Mounted Signage Light)*						
YW5	Updated 7/9/2019	Exterior rated uplight with narrow spot distribution	Erco Kona XS 34832.023-3000K-(Finish)	Integral LED 3000K 520 lm delivered 50,000 hrs 80+ CRI	8 W	0-10V to 10% Integral Dimmable driver	East/South/West Facades	Final mounting elevations to be confirmed with Architects. Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs. EE to confirm dimming compatibility with specified lighting control system.
YW6	Created 7/25/2019	Facade mounted adjustable downlight, narrow flood distribution with linear spread lens, integral driver, adjustable & lockable yoke, corrosion resistant coating, and snoot & cross baffle assembly to minimize glare and direct view into fixture	Lumenpulse Lumenbeam Medium LBL-277-30K-NF-LSLH-(Finish)-DIM-CRC-UL-(Cable Length) Wide Snoot: LBLSNW-(Finish)-BK-MOD CROSS BAFFLE	Integral LED 3000K 1500 lm 50,000 hrs 80+ CRI	28 W	0-10V to 10% Integral Dimmable driver	Moonlighting at plaza East of Building 1A	Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs. EE to confirm dimming compatibility with specified lighting control system.
YW7		*Not Used*						
YW8	Created 10/8/2019	Facade mounted adjustable downlight, medium flood distribution with linear spread lens, integral driver, adjustable & lockable yoke, corrosion resistant coating, and snoot & cross baffle assembly to minimize glare and direct view into fixture	Lumenpulse Lumenbeam Medium LBL-277-30K-F-LSLH-(Finish)-DIM-CRC-UL-(Cable Length) Wide Snoot: LBLSNW-(Finish)-BK-MOD CROSS BAFFLE	Integral LED 3000K TBD lm 50,000 hrs 80+ CRI	28 W	0-10V to 10% Remote Dimmable driver	Back Alley	Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs. EE to confirm dimming compatibility with specified lighting control system.

General Notes:

1. Fixture input power is the actual fixture input wattage, not the light source wattage. The Engineer and Contractor are responsible for confirming these values as they are provided as a convenience only. Any "Alternates", "Equals" or "Equivalents" may have different loads. A minimum of 10% spare electrical lighting capacity is recommended to account for these variances.
2. The primary manufacturer and model number listed for each fixture type shall serve as the basis of design. Any "Alternates", "Equals" or "Equivalents" subsequently listed under each primary listing may be able to provide a suitable product that closely matches the primary listing. Unless provided with a specific catalog number, those "Alternates", "Equals" or "Equivalents" may be required to modify their standard products to match the primary listing as best possible. Suitability of "Alternates", "Equals" or "Equivalents" shall be determined solely by the Lighting Designer for any fixture types listed on this Lighting Fixture Schedule, unless otherwise noted.

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LIGHTING FIXTURE SCHEDULE

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Fixture Type	Description	Fixture (Manufacturers and Models)	Light Source	Fixt. Load (W) (Typical)	Controls	Location / Use	Notes

This information is provided for the use of the Architect and their consultants in the production of their detailed drawings and specifications. Assurances of code compliance, conformity with environmental conditions and other building systems, voltage selection, design of wiring, supports, switching, emergency and exit lighting, engineering calculations or details, and preparation of cost and power consumption estimates are the responsibility of others. Information provided by Lam Partners Inc may require coordination and development by others to a level of detail suitable for incorporation into contract documents. Lam Partners Inc's documents are not intended or represented to be suitable for reuse on extensions of the Project or on any other project, nor are they to be relied upon by anyone other than the Architect and the Architect's consultants for the Project. Lam Partners Inc is not responsible for construction means, methods, sequences, techniques, safety programs, or procedures, or the failure of any contractor to comply with the requirements of the contract documents. There are no warranties of merchantability or fitness for a particular purpose or any other warranties or guarantees whatsoever, express or implied, with respect to any materials, documents, or designs provided by Lam Partners Inc.

18145 Portland Foreside Project

Level 3 Site Plan Application
11/08/2019

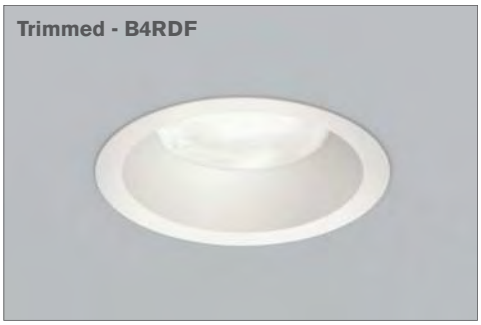


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BeveLED® 2.2 Basic
4.5″ Round Downlight - B4RD-G1

R1
Lam Partners ARCHITECTURAL LIGHTING DESIGN
Lighting

Universal and Field Convertible - Trim | Trimless | Millwork







usailighting.com/beveledbasic

Meet the new and improved BeveLED Basic, upgraded with even more effiicient, perfectly consistent classic white LED light engines and our field convertible trims that allow for easy on-site changes from trimmed to trimless to millwork – all in a budget-conscious product with the same below ceiling appearance as our extremely versatile BeveLED 2.2 product line.

FEATURES

- Field Flexibility between trimmed, trimless and millwork
- Dry/damp/wet location rated for bathrooms and showers, including trimless and millwork
- 1% dimming standard + more dimming options
- Clear overspray protector for installation convenience

COMPANION FAMILY PRODUCTS



Adjustable - B4RA-G1
usailighting.com/B4RA-G1



Wall Wash - B4RW-G1
usailighting.com/B4RW-G1

DOWNLIGHT PERFORMANCE DATA

Classic White

DELIVERED* PERFORMANCE:	9W		12W		16W		24W	
Color Rendering Index:	80+	90+	80+	90+	80+	90+	80+	90+
Source Lumens:	900	725	1250	1050	1775	1450	2650	2175
Lumens Per Watt:	79	65	85	69	85	69	89	73
Delivered Lumens:	700	575	1025	825	1425	1175	2125	1750
EM Mode Output:	550 Delivered Lumens (nominal)							

*Based on 3000K. Performance varies for each specific beamspread and color temperature. See IES files for exact values at usailighting.com.

Classic White

CORRELATED COLOR TEMPERATURE MULTIPLIER	2700K		3000K		3500K		4000K	
Color Rendering Index:	80+	90+	80+	90+	80+	90+	80+	90+
Multiplier for Lumen Output:	0.94	0.82	1.00	0.82	1.00	.88	1.00	0.94

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845-234-4090
showroom@usailighting.com

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Revised 10/02/2019

R1

Lam Partners ARCHITECTURAL LIGHTING DESIGN

Lighting

BeveLED® 2.2 Basic
4.5" Round Downlight - B4RD-G1

Specify fixture part number. (All boxes must be filled in to correctly order)

B4RD__

BeveLED Trim Style

F
Trimmed with Flange (use with all materials)

L
Trimless Spackle-in (use with sheetrock and plaster only)

M
Millwork Knife-Edge (use with wood and stone)

Wattage Options

Classic White Light

09G1
9W LED

12G1
12W LED

16G1
16W LED

24G1
24W LED

LED Color Options

27KS
2700K, 80+ CRI

27KH
2700K, 90+ CRI

30KS
3000K, 80+ CRI

30KH
3000K, 90+ CRI

35KS
3500K, 80+ CRI

35KH
3500K, 90+ CRI

40KS
4000K, 80+ CRI

40KH
4000K, 90+ CRI

Beam Options

25
25° beam

50
50° beam

90
90° beam

Lens Options

S
Solite (provided standard)

BF
Borosilicate Frosted

Trim Finish Options

WH
White

SC
Conduit Silver

GR
Grey

BL
Black

BZ
Bronze

PR
Primer Finish

RAL
Custom Color Specify RAL #

Housing Options

NCSM
New Construction Narrow Width

NC
New Construction

NCCP
Chicago Plenum

NCIC
Insulation Contact Rated / Airtight (1)

Voltage Options
Select one

UNV
120V-277V

120V

Dimming Driver Options

For use with Universal Voltage 120V - 277V

No Additional Charge

D6E
EldoLED 0-10V, 1% (provided standard)

D6F
EldoLED 0-10V, 1%

D4E
Lutron 5 ECO, 5% (1)

D4H
Lutron H ECO, 1% Fade (1)

D6A
EldoLED 0-10V, 0.1%

D6B
EldoLED 0-10V, 0.1%

D7
EldoLED DALI, 0.1%

D18
Moons DMX, 0.1%

For use with 120V only

No Additional Charge

D19
Phase 2-wire, 1% (1)

D3
Lutron 2-wire, 1%

Acessories (Optional)*

CB27
27" C-Channel Bars

CB52
52" C-Channel Bars

EM
Emergency Battery (2)

EMW
Emergency Battery Wet Location (2)

*Residential grade nailer bars provided standard

Notes: 1 Not available with 9W.
2 For NC and NCSM housings only. NCSM housing requires above ceiling access.

TRIM FINISH OPTIONS


White


Grey


Black


Bronze


Custom RAL (example)


Custom RAL (example)

Custom colors and primer finish also available

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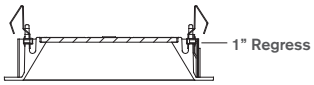
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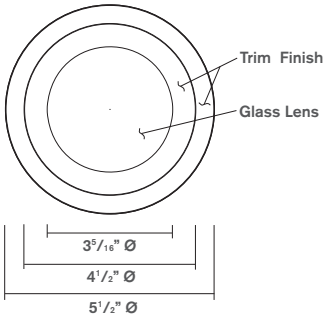
BeveLED® 2.2 Basic
4.5" Round Downlight - B4RD-G1

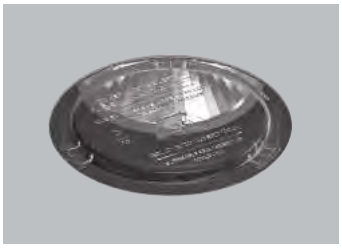
Trimmed - B4RDF-G1

TRIM DETAILS

Trimmed - B4RDF



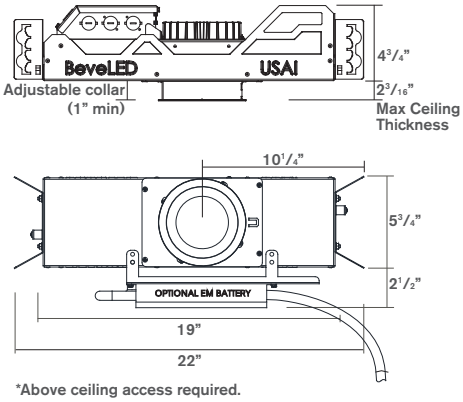




Clear acrylic overspray protector provided standard with every housing to keep out dust and contaminants during construction. Allows for use as work light.

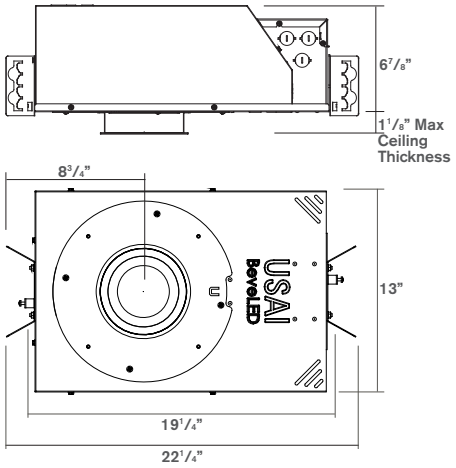
HOUSING OPTIONS

New Construction Narrow Width - NCSM
NCSM with Emergency Battery*



*Above ceiling access required.

New Construction - NC
Insulation-Contact Rated - NCIC
Chicago Plenum Rated - NCCP
NC with Emergency Battery



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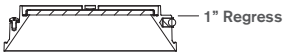
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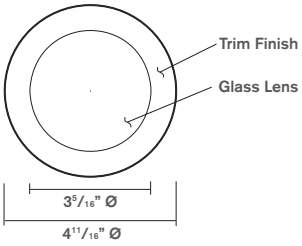
BeveLED® 2.2 Basic
4.5" Round Downlight - B4RD-G1

Trimless - B4RDL-G1

TRIM DETAILS

Trimless - B4RDL



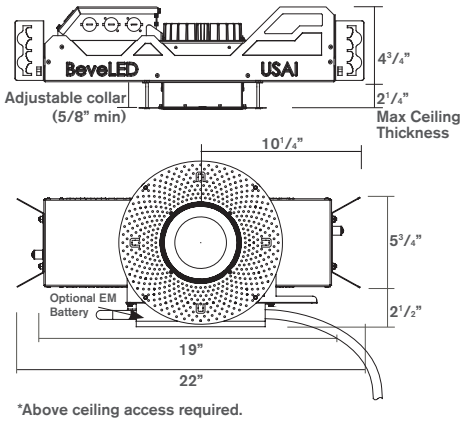




Clear acrylic overspray protector provided standard with every housing to keep out dust and contaminants during construction. Allows for use as work light.

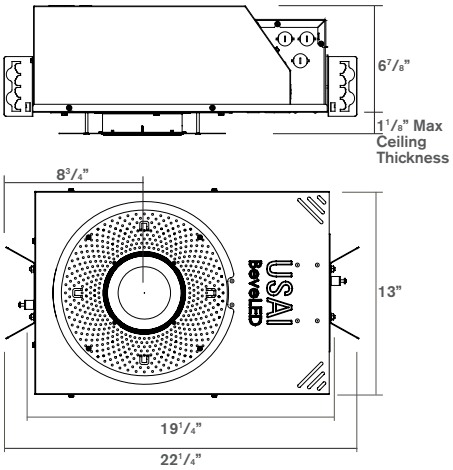
HOUSING OPTIONS

New Construction Narrow Width - NCSM
NCSM with Emergency Battery*



*Above ceiling access required.

New Construction - NC
Insulation-Contact Rated - NCIC
Chicago Plenum Rated - NCCP
NC with Emergency Battery



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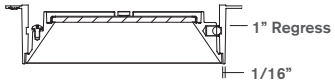
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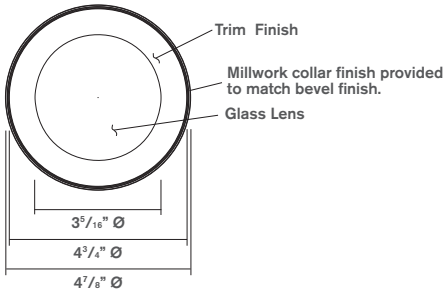
BeveLED® 2.2 Basic
4.5" Round Downlight - B4RD-G1

Millwork - B4RDM-G1

TRIM DETAILS

Millwork - B4RDM



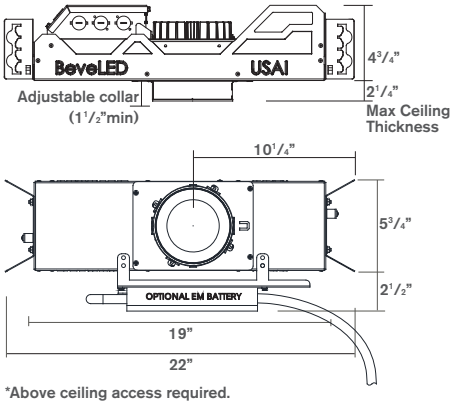




Clear acrylic overspray protector provided standard with every housing to keep out dust and contaminants during construction. Allows for use as work light.

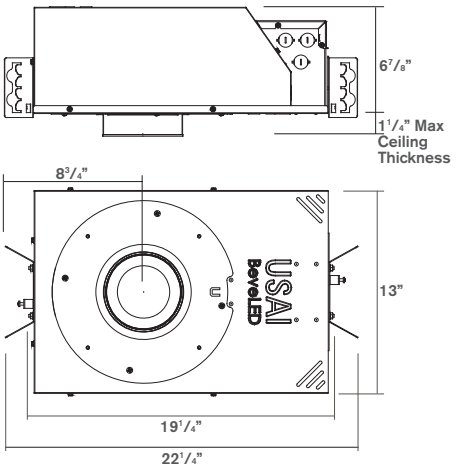
HOUSING OPTIONS

New Construction Narrow Width - NCSM
NCSM with Emergency Battery*



*Above ceiling access required.

New Construction - NC
Insulation-Contact Rated - NCIC
Chicago Plenum Rated - NCCP
NC with Emergency Battery



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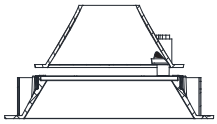
BeveLED® 2.2 Basic
4.5" Round Downlight - B4RD-G1

BEVELED BASIC SPECIFICATIONS

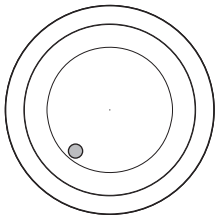
FIELD REPLACEABLE LED LIGHT ENGINE
is serviceable through the aperture without tools or with a Philips screwdriver. All USAI Lighting light engines feature industry-leading color consistency.

FIELD REPLACEABLE DRIVER
Unless otherwise specified, a 0-10V, 100%-1% solid state electronic constant current integral D6E dimming driver with a high power factor is provided standard and sources 2mA. All integral dimming drivers are located within the fixture housing and are serviceable from below the ceiling through the aperture. Some on-time delay may be experienced depending on control system used. All dimming drivers comply with IEEE C62.41 surge protection.

EMERGENCY BATTERY
IOTA emergency battery provides backup power for 90 minutes. NC EM fixtures are provided with an integral emergency battery with integral test switch and can be serviced through the aperture from below the ceiling plane. NCSM EM fixtures are provided with an integral emergency battery with a remote test switch, which comes with a 24" lead length for location of the test switch. Remote EM test switch is dry/damp only; select EMW emergency option for a wet location-rated EM test switch. NCSM EM fixtures require above ceiling access for service of the EM pack. Fixtures that have no USAI EM option may be connected to an inverter (by others) for emergency lighting.



Integral Emergency Test Switch included with NC housing





Remote Emergency Test Switch included with NCSM housing (above ceiling access required).

HOUSING
All BeveLED Basic fixtures are field-flexible which allows for field changes from trimless or millwork to trimmed with a simple components change with parts from USAI. Housings are fabricated of 20 ga. steel construction with thru wire J-box, 4 in 4 out at min. 90°C, #12 AWG thru branch circuit wiring, except for NCSM which is fabricated of 18 ga. steel. NCIC housing for use with 9W, 12W, and 16W light engines only is rated for direct contact with spray foam insulation of R-42 or less.

MOUNTING
B4RDF overlap flange fixtures are designed for use in sheetrock, acoustical ceiling tile, and many other ceiling materials. B4RDL trimless fixtures are provided with a spackle collar and are designed for use in sheetrock/mud-in ceiling applications. B4RDM millwork fixtures are provided with a millwork collar in finish to match trim finish specified and are designed for use in wood/millwork, stone and tile construction applications. Butterfly brackets and residential grade adjustable nailer bars extendible from 14" to 24" centers with integral nails are provided standard for attachment to building structure. C-channel bars are optionally available for acoustical ceiling applications.



Residential-grade nailer bars provided standard.

FIXTURE WEIGHT
NC, NCIC, and NCCP housings weigh 16 lbs. NCSM housing weighs 10 lbs., NCSM with EM weighs 16.5 lbs, and NC housing with EM weighs 24.5 lbs.

WARRANTY
Based on IESNA LM80-2008, BeveLED has a 50,000 hour rated life at 70% lumen maintenance (L70). USAI Lighting Warranty covers replacement parts for 5 years from date of shipment. Ambient temperatures at fixture location should not exceed 40°C during normal operation.

CEILING CUT OUT
B4RDF Trimmed with Overlap Flange: 5-1/16" ∅
B4RDL Trimless Spackle-in: 5-1/2" ∅
B4RDM Millwork Knife-edge: 4-15/16" ∅

LISTINGS
Dry/Damp/Wet location. Remote EM test switch is dry/damp only. Select EMW option for wet location remote test switch. UL2043 rated for use in air handling plenums. NRTL/CSA-US tested to UL standards. IBEW union made.

NOTES
• Use of pressure washer voids warranty

PHOTOMETRICS
Consult factory or website for IES files. Tested in accordance with IESNA LM79.

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Revised 10/02/2019

R1

Lam Partners

DIMMING DRIVER COMPAT
SELECTION GUIDE
D3 / DIML3

DIMMING DRIVER WIRING SCHEMES:

NOTES:
Wiring diagrams are examples of typical installations intended to illustrate the number of wires that must be run to fixture. These diagrams are not intended to specify all equipment necessary for a given dimming circuit. Refer to specific dimmer manufacturer's documentation for details.

IMPORTANT SAFETY INSTRUCTIONS - SAVE THESE INSTRUCTIONS

1. Keep these instructions in a safe place for future reference.
2. Only qualified electricians in accordance to local codes should install these fixtures.
3. De-energize the electrical circuit at the circuit breaker prior to installation process or servicing.
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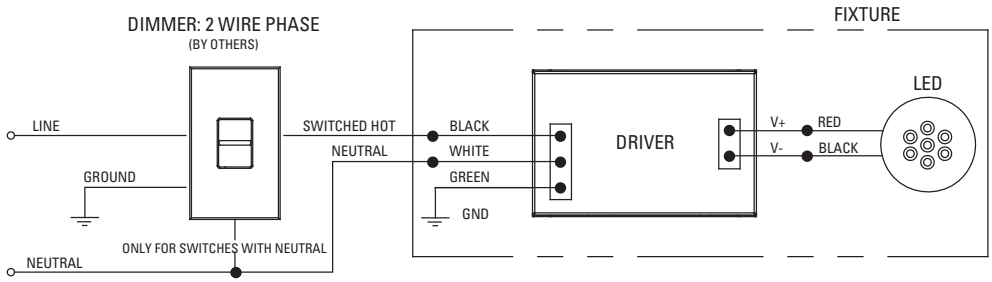
D3 / DIML3 LED: Lutron Hi-Lume A-Series 2 Wire Fwd Phase (with neutral) / LED Dimming Driver Wiring (Dims down to 1%) 120V

D3 / DIML3 Dimmer Compatibility Chart

Manufacturer	Product	Part Number	Dimmed Light Output Range	Qty Fixtures Per Dimmer* Fixture Wattage	
120V Only				39W and Less	40W - 80W
ETC	Sensor+ Cabinet	ELV10	100% - 1%	1 – 26	1 – 13
ETC	Unison DRd Cabinet	ELV10	100% - 1%	1 – 26	1 – 13
Lutron	Maestro Wireless® 600W dimmer	MRF2-6ND-120-	100% - 1%	1 – 8	1 – 4
Lutron	Maestro Wireless® 1000W dimmer	MRF2-10ND-120-	100% - 1%	1 – 13	1 – 6
Lutron	HomeWorks® QS adaptive dimmer	HQRD-6NA-	100% - 1%	1 – 8	1 – 4
Lutron	HomeWorks® QS 600W dimmer	HQRD-6ND-	100% - 1%	1 – 8	1 – 4
Lutron	HomeWorks® QS 1000 W dimmer	HQRD-10ND-	100% - 1%	1 – 13	1 – 6
Lutron	Caseta Wireless® Pro 1000W dimmer	PD-10NXD-	100% - 1%	1 – 13	1 – 6
Lutron	Stanza® dimmer	SZ-6ND-	100% - 1%	1 – 8	1 – 4
Lutron	RadioRA® 2 adaptive dimmer	RRD-6NA-	100% - 1%	1 – 8	1 – 4
Lutron	RadioRA® 2 1000 W dimmer	RRD-10ND-	100% - 1%	1 – 6	1 – 3
Lutron	myRoom DIN power module	MQSE-4A1-D	100% - 1%	1 – 6	1 – 3
Lutron	HomeWorks® QS wallbox power module	HQRJ-WPM-6D-120-	100% - 1%	1 – 26	1 – 13
Lutron	Homeworks® DIN power module	LQSE-4A1-D	100% - 1%	1 – 6	1 – 3
Lutron	HomeWorks® wallbox power module	HWI-WPM-6D-120	100% - 1%	1 – 26	1 – 13
Lutron	GRAFIK Eye® QS control unit	QSGR-, QSGRJ-	100% - 1%	1 – 26	1 – 13
Lutron	GRAFIK Eye® 3000 control unit	GRX-3100-, GRX-3500-	100% - 1%	1 – 26	1 – 13
Lutron	RPM-4U module	HW-RPM-4U-120, LP-RPM-4U-120	100% - 1%	1 – 26	1 – 13
Lutron	RPM-4A module	HW-RPM-4A-120, LP-RPM-4A-120	100% - 1%	1 – 26	1 – 13
Lutron	GP dimming panels	Various	100% - 1%	1 – 26	1 – 13
Lutron	Ariadni CL 250W dimmer	AYCL-253P-	100%-1%	1 – 8	1 – 4
Lutron	Diva CL 250W dimmer	DVCL-253P-, DVSCCL-253P-	100%-1%	1 – 8	1 – 4
Lutron	Grafik T CL or RF CL dimmer	GT-250M-, GTJ-250M-	100%-1%	1 – 8	1 – 4
Lutron	Nova T CL 250W dimmer	NTCL-250-	100%-1%	1 – 10	1 – 5

* NOTE: Refer to dimmer manufacturer's documentation for installation instructions and circuit details.

D3 / DIML3
2 WIRE PHASE DIMMING



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I2-264-3 Revised 03/22/2017

R1

Lam Partners ARCHITECTURAL LIGHTING DESIGN

USAI Lighting

DIMMING DRIVER COMPATI SELECTION GUIDE
D4E / DIML4E and D4H /DIML4H

DIMMING DRIVER WIRING SCHEMES:

NOTES:
Wiring diagrams are examples of typical installations intended to illustrate the number of wires that must be run to fixture. These diagrams are not intended to specify all equipment necessary for a given dimming circuit. Refer to specific dimmer manufacturer's documentation for details.

IMPORTANT SAFETY INSTRUCTIONS - SAVE THESE INSTRUCTIONS

1. Keep these instructions in a safe place for future reference.
2. Only qualified electricians in accordance to local codes should install these fixtures.
3. De-energize the electrical circuit at the circuit breaker prior to installation process or servicing.
4. Make sure all connections are in accordance with the National Electrical Code and any local regulations.
5. Cap any wires not used separately (not together).

D4E / DIML4E LED: Lutron 5 Series EcoSystem LED Driver / LED Dimming Driver Wiring (Dims down to 5%)

D4E / DIML4E EcoSystem Dimmer Compatibility Chart

Manufacturer	Product	Part Number	Dimmed Light Output Range	Qty Fixtures Per Control* Fixture Wattage	
120V / 277V				39W and Less	40W - 80W
Lutron	PowPak dimming module	RMJ-ECO32-DV-B	100%–5%	1–32	1 – 16
Lutron	Energi Savr Node	QSN-1ECO-S, QSN-2ECO-S	100%–5%	1–64	1 – 32
Lutron	GRAFIK Eye QS (120V ONLY)	QSGRJ- E, QSGR- E	100%–5%	1–64	1 – 32
Lutron	Quantum	Various	100%–5%	1–64	1 – 32

* NOTE: Number of fixtures may be higher if wattage is less than maximum values shown. Refer to dimmer manufacturer's documentation for installation instructions and circuit details.

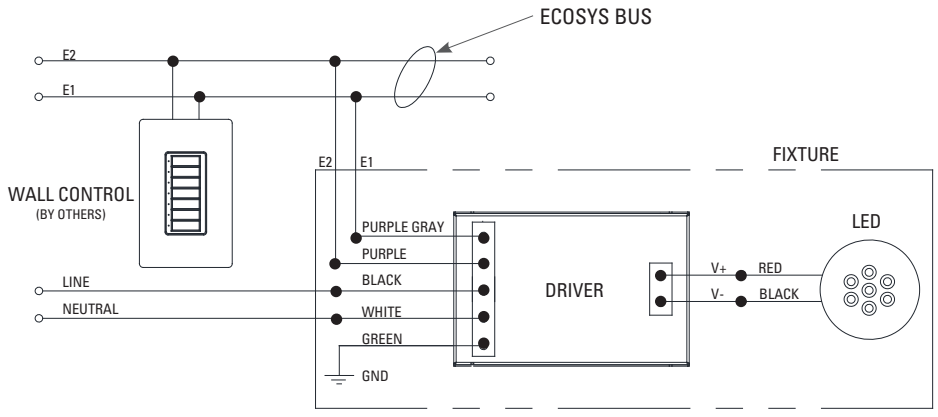
D4H / DIML4H LED: Lutron H Series EcoSystem LED Driver with Fade to Black (dims down to 1%)

D4H / DIML4H EcoSystem Dimmer Compatibility Chart

Manufacturer	Product	Part Number	Dimmed Light Output Range	Qty Fixtures Per Control* Fixture Wattage	
120V / 277V				39W and Less	40W - 80W
Lutron	PowPak dimming module	RMJ-ECO32-DV-B	100%–1%	1–32	1 – 16
Lutron	Energi Savr Node	QSN-1ECO-S, QSN-2ECO-S	100%–1%	1–64	1 – 32
Lutron	GRAFIK Eye QS (120V ONLY)	QSGRJ- E, QSGR- E	100%–1%	1–64	1 – 32
Lutron	Quantum	Various	100%–1%	1–64	1 – 32

* NOTE: Number of fixtures may be higher if wattage is less than maximum values shown. Refer to dimmer manufacturer's documentation for installation instructions and circuit details.

D4E / DIML4E and D4H / DIML 4H EcoSystem CONTROLS



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I2-264-4EH Revised 03/22/2017

R1

Lam Partners
ARCHITECTURAL LIGHTING DESIGN

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DIMMING DRIVER COMPATIBILITY SELECTION GUIDE
D6A / DIML6A and D6E / DIML6E
D6B / DIML6B and D6F / DIML6F

IMPORTANT SAFETY INSTRUCTIONS - SAVE THESE INSTRUCTIONS

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4. Make sure all connections are in accordance with the National Electrical Code and any local regulations.
5. Cap any wires not used separately (not together).

D6A / DIML6A and D6E / DIML6E LED Dimming Compatibility Table

D6A / DIML6A and D6E / DIML6E are linearly programmed dimming drivers for use with the dimming controls listed in the table below.
D6A / DIML6A = EldoLED SOLOdrive 0-10V control dims from 100% to 0.1%
D6E / DIML6E = EldoLED ECOdrive 0-10V control dims from 100% to 1%

D6A / DIML6A and D6E / DIML6E Dimmer Compatibility Chart

Manufacturer	Product	Part Number	Dimmed Light Output Range			Qty Fixtures Per Dimmer*
120V & 277V			DIML6A		6E	Refer to manufacturer's dimmer load rating for maximum and minimum fixture quantities per dimmer. Enlighted compatible.
Lutron	Diva	DVTV/NFTV with PP-20	99% -	0.1%	1%	
Lutron	Nova T	NTFTV with PP-20	99% -	0.1%	1%	
Lutron	Energi Savr Node	QSN-4T16-S	100% -	0.1%	1%	
Lutron	GP Dimming Panels	TVM2 Module	99% -	0.1%	1%	
Lutron	Interfaces	GRX-TVI w/ GRX3503	100% -	0.1%	1%	
Sensor Switch	nIO	nIO EZ	100% -	0.1%	1%	
enlighted	Control Unit	CU-3E-1R	100% -	0.1%	1%	

D6B / DIML6B and D6F / DIML6F LED Dimming Compatibility Table

D6B / DIML6B and D6F / DIML6F are logarithmic-programmed dimming drivers for use with the dimming controls listed in the table below.
D6B / DIML6B = EldoLED SOLOdrive 0-10V control dims from 100% to 0.1% D6F / DIML6F = EldoLED ECOdrive 0-10V control dims from 100% to 1%

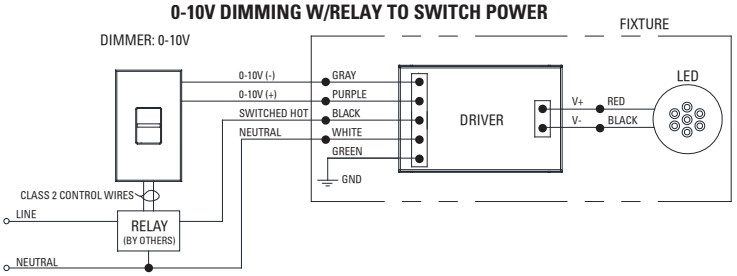
D6B / DIML6B and D6F / DIML6F Dimmer Compatibility Chart

Manufacturer	Product	Part Number	Dimmed Light Output Range			Qty Fixtures Per Dimmer*
120V & 277V			DIML6B		6F	Refer to manufacturer's dimmer load rating for maximum and minimum fixture quantities per dimmer. Enlighted compatible.
Bush-Jaeger	Electronic potentiometer	2112U-101	100% -	0.1%	1%	
Jung	Electronic potentiometer	240-10	100% -	0.1%	1%	
Leviton	Iluma Tech dimmer	IP710-DLX	100% -	0.1%	1%	
Lightolier (Philips)	Momentum (120V ONLY)	ZP600FAM120	100% -	0.1%	1%	
Merten	Electronic potentiometer	5729	100% -	0.1%	1%	
Pass & Seymour	Titan	CD4FB-W	100% -	0.1%	1%	
Watt Stopper	Miro	DCLV1	100% -	0.1%	1%	
Synergy	Wallbox Dimmers	ISD BC	100% -	0.1%	1%	
ABB	i-bus	SD/S 2.16.1	100% -	0.1%	1%	
Crestron	Modules	GLX-DIMFLV8, GLXP-DIMFLV8	100% -	0.1%	1%	
Crestron	Green Light	GLPAC-DIMFLV4-, GLPAC-DIMFLV8-	100% -	0.1%	1%	
Crestron	Green Light Power Pack	GLPP-DIMFLVEX-PM, GLPP-1DIMFLV2EX-PM, GLPP-1DIMFLV3EX-PM	100% -	0.1%	1%	
Crestron	DIN Rail Analog Output Module	DIN-A08	100% -	0.1%	1%	
Crestron	DIN Rail 0-10V Fluorescent Dimmer	DIN-4DIMFLV4	100% -	0.1%	1%	
Crestron	iLux 0-10V Dimmer Expansion Module	CLS-EXP-DIMFLV	100% -	0.1%	1%	
enlighted	Control Unit	CU-3E-1R	100% -	0.1%	1%	

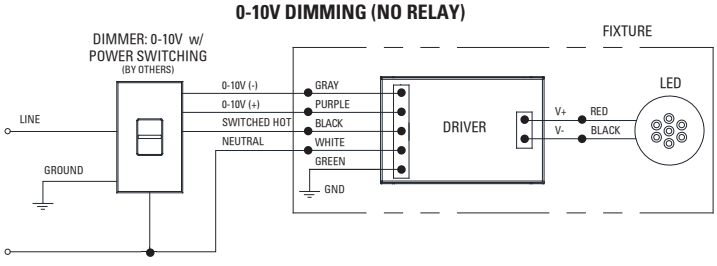
DIMMING DRIVER WIRING SCHEMES:

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D6 / DIML6
0-10V DIMMING W/RELAY TO SWITCH POWER



D6 / DIML6
0-10V DIMMING (NO RELAY)



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I2-264-6 Revised 08/16/2019

USAI Lighting

DIMMING DRIVER COMPAT
SELECTION GUIDE
D7 / DIML7 and D7E

DIMMING DRIVER WIRING SCHEMES:

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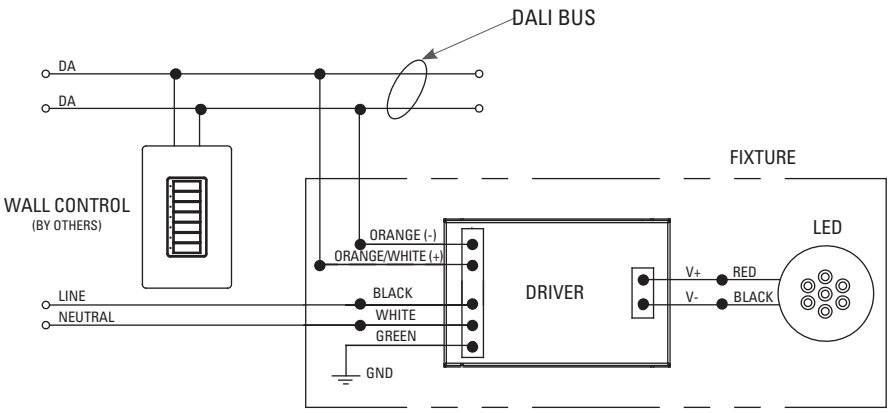
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D7 / DIML7 and D7E Dimming Driver Wiring

D7 / DIML7 and D7E are linearly programmed dimming drivers.
D7 / DIML7 = EldoLED SOLOdrive DALI control dims from 100% to 0.1%
D7E = EldoLED ECOdrive DALI control dims from 100% to 1%

D7 / DIML7 / D7E
DALI CONTROLS



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USAI Lighting

DIMMING DRIVER COMPAT
SELECTION GUIDE
D18

DIMMING DRIVER WIRING SCHEMES:

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D18 Dimming Driver Wiring

D18 are programmed dimming drivers.
D18 Moons DMX control dims from 100% to 1%

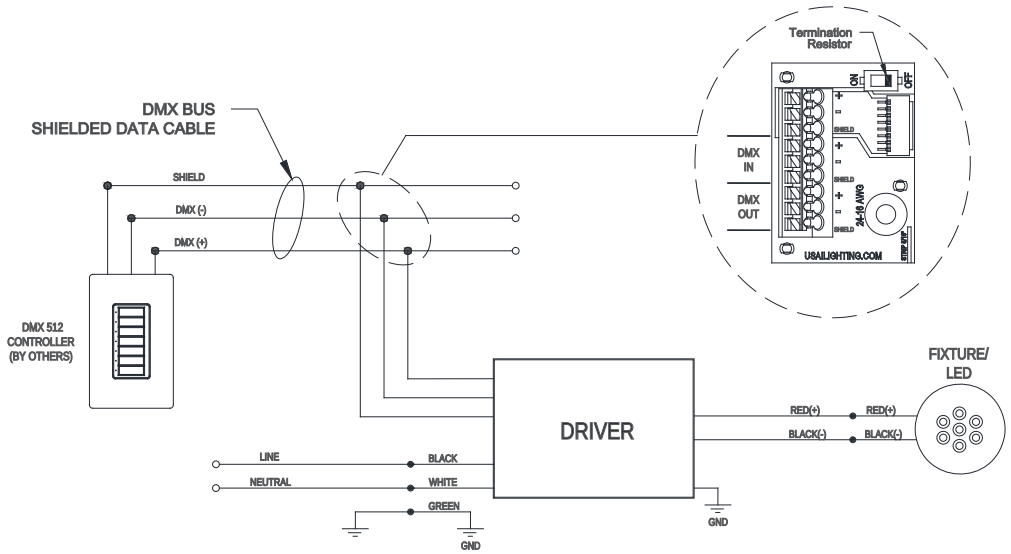
DMX BUS -
SHIELDED DATA CABLE

The data cable used must meet the following requirements:

- type: shielded, 2-conductor twisted pair
- maximum capacitance between conductors: 30 pF/ft
- maximum capacitance between conductor and shield: 55 pF/ft
- maximum resistance: 0.02 ohms/ft
- normal impedance: 100-140 ohms
- conductive core: 24 AWG is recommended

If 3-wire data cables are preferred, we suggest a Belden 9841 or equivalent cable which meets the specifications for EIA RS-485 applications. Do not use standard microphone cables: they cannot transmit DMX512 data reliably over long distances. NOTE: DMX link termination device, provided through Dip Switch on connection board, should be used on last fixture in line on a circuit to avoid signal loss.

D18
DMX CONTROLS



www.usailighting.com
info@usailighting.com
1126 River Road
New Windsor, NY 12553
T 845–565–8500
F 845–561–1130

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I2-264-18 Revised 07/03/2018

USAI Lighting

DIMMING DRIVER COMPATI
SELECTION GUIDE
D19 / DIML19

DIMMING DRIVER WIRING SCHEMES:

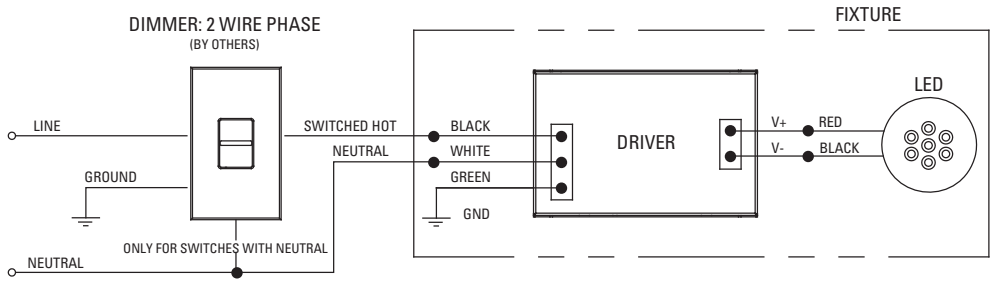
NOTES:
Wiring diagrams are examples of typical installations intended to illustrate the number of wires that must be run to fixture. These diagrams are not intended to specify all equipment necessary for a given dimming circuit. Refer to specific dimmer manufacturer's documentation for details.

IMPORTANT SAFETY INSTRUCTIONS - SAVE THESE INSTRUCTIONS

1. Keep these instructions in a safe place for future reference.
2. Only qualified electricians in accordance to local codes should install these fixtures.
3. De-energize the electrical circuit at the circuit breaker prior to installation process or servicing.
4. Make sure all connections are in accordance with the National Electrical Code and any local regulations.
5. Cap any wires not used separately (not together).

D19 / DIML19 LED: Hatch XTC series or equivalent - Forward and Reverse Phase Dimming Driver. Dims down to 1% contingent upon dimmer specification and load. 120V only.

D19 / DIML19
2 WIRE PHASE DIMMING



D19 / DIML19 Dimmer Compatibility Chart

120V ONLY		
Forward Phase / TRIAC Dimming		
Manufacturer	Product	Qty Fixtures Per Dimmer
Leviton	IPL06-10Z	Use fixture wattage per fixture specification sheet to determine number of fixtures per dimmer. Max number of fixtures is limited by dimmer load rating.
	6613-xxx	
Lutron	S-600P	
	S-603P	
	DV-600P	
	DV-603P	
	DVSC-603P	
	CT-600P	
	CT-603P	

120V ONLY		
Reverse Phase / ELV Dimming		
Manufacturer	Product	Qty Fixtures Per Dimmer
Leviton	6615	Use fixture wattage per fixture specification sheet to determine number of fixtures per dimmer. Max number of fixtures is limited by dimmer load rating.
	IPE04-xxx	
Lutron	NTELV-300	
	NTELV-600	
	SELV-300P	
	SELV-303P	
	DVELV-300P	
	DVELV-303P	

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I2-264-19 Revised 03/22/2017

v2 Lighting Group™

CORE 400 surface mount

S1

Lam Partners ARCHITECTURAL LIGHTING DESIGN

PROJECT

Job _____

Type _____

Part # _____

Notes

SPECIFICATIONS

Source	Xicato XTM LED module - up to 4000 lumens
C.C.T.	2700K, 3000K, 3500K or 4000K
Color Consistency	1x2 SDCM (MacAdam) along BBL, CCT +/- 40K to 70K, Duv +/- .001
CRI (Ra)	83 or 98
Driver / Location	Included / Remote mount or deep canopy options
Dimming	0-10V or phase dimming to 10% standard; DALI, DMX and 1% dimming available
Input Voltage	100 to 277VAC, phase dimmable versions are 120VAC only
Power	Up to 48 watts max, depending on LED module / driver
Reflector	11°, 25°, 41°, 51°, or 83° - field replaceable without tools
Material	CNC machined aluminum with stainless steel hardware
Finish	Powder coat - TGIC polyester for exterior and interior use
Weight	7 lb. [3.2 kg]
Location	Listed for Wet & Damp locations
Approvals	ETL Listed to UL 1598, 2108, 8750 and CSA C22.2# 9 & #250.0
L80 Life	> 50,000 hours at 80% lumen maintenance based on IESNA LM-80-08
Warranty	Lifetime Limited Warranty - see warranty for details
IES Files	LM-79-08 IES files available at www.v2LightingGroup.com/downloads
Modifications	Any modification or customization is possible - consult factory



LED · INDOOR OUTDOOR · WET LOCATION · DIMMABLE · LIGHTSOURCE BY XICATO · MADE IN U.S.A. · TITLE 24 COMPLIANT · c ETL us LISTED Intertek 4001580

ORDERING LOGIC

Model	Driver Location	Dimming	Mounting Location	Output	CRI *	C.C.T.	Reflector	Shell	Options
C4SM -				-				-	-
	R=Remote **D**=Deep Canopy	**N**=None **P**=Phase **V**=0-10V **Z**=Other	**D**=Damp **W**=Wet	**07**=700 lm **10**=950 lm **13**=1300 lm **20**=2000 lm **30**=3000 lm **40**=4000 lm	**83**=83 **98**=98*	**27**=2700K **30**=3000K **35**=3500K **40**=4000K	**11**=11° ** **25**=25° **41**=41° **51**=51° **83**=83° **	**XX** (see chart on page 4) **ZZ**=Custom	

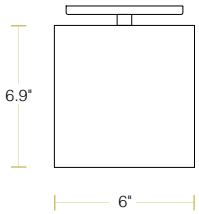
* 98 CRI not available in 4000 lm

** Not available with wet location

Example Part Number: **C4SM-RND-20832741-S3**

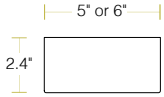
CORE **4**00 **S**X Surface **M**ount **- R**emote Driver, **N**o Dimming, **D**amp Location **- 20**00 lm, **83** CRI, **27**00K, **41**° Reflector **- S3** Red Shell

DIMENSIONS





Standard shallow canopy for remote mounted LED drivers



Optional deep canopy for canopy mounted LED drivers
Order Code = **D**
Diameter depends on LED driver size

All canopies fit standard 3.5" and 4" round and octagonal junction boxes

Not to scale, dimensions are nominal
Consult factory for CAD drawings

LED OPTIONS

Reflector Option	LED Specifications				
	LES[1]	CRI	Lumens[2, 3]	Wattage[4] (W)	Efficacy[5] (lm/W)
11°, 25°, 41°, 51° & 83°	19mm	Ra = 83 ± 3	700	5.6	129
			950	8.2	118
			1300	11.7	111
			2000	19.5	102
			3000	29.3	102
			4000	39.1	102
		Ra = 98 R9 ≥ 90 R15 ≥ 95	700	7.4	97
			950	10.9	89
			1300	15.6	83
			2000	26.4	76
			3000	34.1	88

1 LES: Light Emitting Surface diameter
2 ±10%
3 Source lumens - see photometrics on page 3 for LOR to calculate delivered lumens
4 Maximum luminaire wattage including LED driver = LED wattage x 1.2
5 Higher efficacies are available via lower drive currents - consult factory

CONTROL OPTIONS

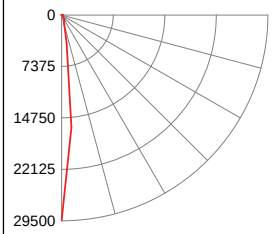
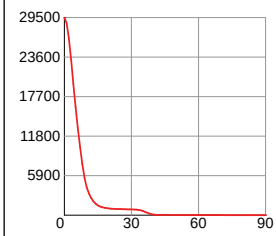
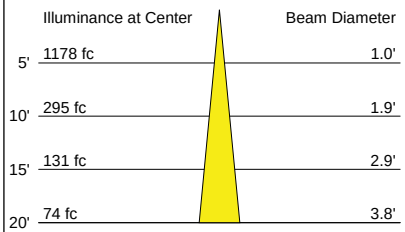
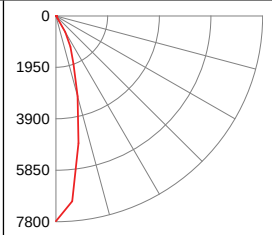
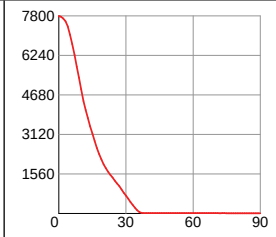
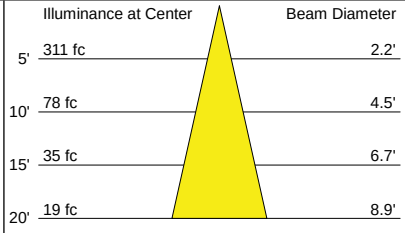
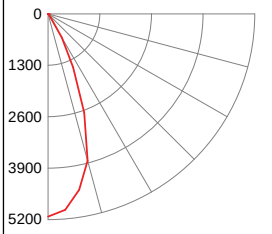
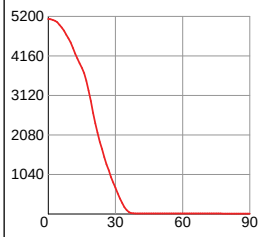
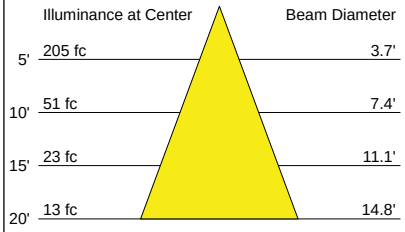
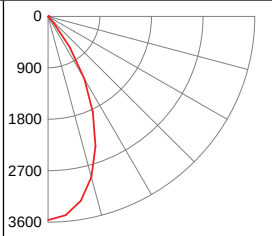
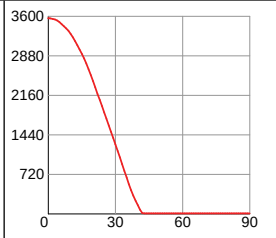
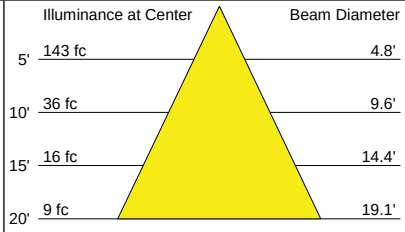
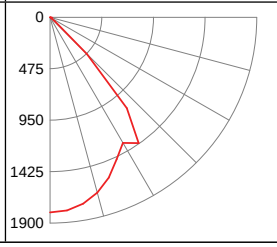
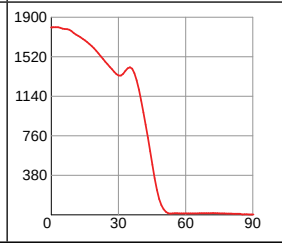
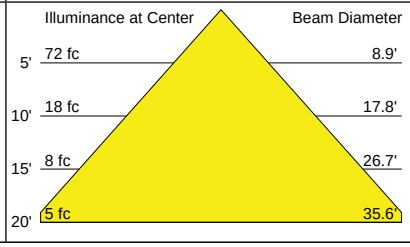
Standard LED Drivers* (included in base price)	Order Code **V** = 0-10V dimming to 10%
	Order Code **P** = Phase dimming to 10% Compatible with both forward and reverse phase dimmers
Optional LED Drivers*	eldoLED 0-10V, DALI, or DMX dimming to 0%
	Lutron Hi-lume™ A-series, EcoSystem or forward phase dimming to 1%
	Lutron Hi-lume™ 5-series, EcoSystem dimming to 5%

* All LED drivers must be mounted in a deep canopy or remote
* Standard LED drivers are suitable for Wet Location
* Optional LED drivers are suitable for Damp Location
* For EM applications:
  All LED drivers may be used with 3rd party inverter style systems

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PHOTOMETRICS

LM-79-08 IES files available at www.v2LightingGroup.com/downloads

Beam Angle	Order Code	Intensity Plot (cd) (3000lm)	Polar Plot (cd) (3000lm)	Cone Diagram (3000lm)	Description
11°	**11**				CBCP = 29,547 cd Beam Angle = 11° Field Angle = 23° LOR = 89.1 % Beam = full width @ 50% Field = full width @ 90%
25°	**25**				CBCP = 7,785 cd Beam Angle = 25° Field Angle = 59° LOR = 87.5 % Beam = full width @ 50% Field = full width @ 90%
41°	**41**				CBCP = 5,127 cd Beam Angle = 41° Field Angle = 62° LOR = 82.4 % Beam = full width @ 50% Field = full width @ 90%
51°	**51**				CBCP = 3,564 cd Beam Angle = 51° Field Angle = 76° LOR = 83.0 % Beam = full width @ 50% Field = full width @ 90%
83°	**83**				CBCP = 1,802 cd Beam Angle = 83° Field Angle = 96° LOR = 84.8 % Beam = full width @ 50% Field = full width @ 90%

Beam Shaping Options

Add the order code shown below to the options box at the end of the part number:

Order Code	Description
-HL	Honeycomb Louver
-DF	Diffusion Lens
-SF	Satin finish on any standard reflector
-LS	Linear Spread Lens (60° x 1°)
-WW	Wall Wash Lens (shifts beam 20° from vertical)

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COLOR OPTIONS

Anodized Effect


A1 Clear Silver


A2 Champagne


A3 Light Bronze


A4 Medium Bronze


A5 Dark Bronze


A6 Black

Metallic


M1 Pearl


M2 Sea Foam


M3 Forest Gray


M4 Charcoal Gray


M5 Gunmetal Gray


M6 Dove Gray


M7 Old Copper


M8 Old Brass

Basic

L1 Gloss White


L2 Gloss Light Gray


L3 Gloss Dark Gray


L4 Gloss Black

T1 Textured Matte White


T2 Textured Matte Light Gray


T3 Textured Metallic Dark Gray


T4 Textured Matte Black

Sparkle


S1 Light Orange


S2 Deep Orange


S3 Red


S4 Burgundy


S5 Violet


S6 Deep Blue


S7 Sky Blue


S8 Bright Green

The complete range of powder coat colors from Tiger Drylac is available - consult factory
Custom match powder coat colors are available - consult factory
Printed or on-screen colors are only approximations - consult v2 Color Chip Set Rev.4 before specifying

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VIA 2 LED

SURFACE

5 YEARS WARRANTY

LUMENWERX
WWW.LUMENWERX.COM

S1

Lam Partners
ARCHITECTURAL LIGHTING DESIGN



Shown with HLO flush



Shown with HLO 0.5" drop



Shown with HLO 1.0" drop

DESCRIPTION

Efficient and flexible, the Via 2 surface features numerous optical configurations including flush and drop diffusers. Via 2 can be installed as discrete luminaires, continuous runs, and patterns, with a wide range of lumen packages, color choices, and electrical and controls options. Via 2 is part of the larger Via family, which includes visually coordinated recessed and mounted luminaires, as well as other light distributions, including wall washing and asymmetric optics, and ChromaWerx (see separate specification sheets).

PROJECT: _____

TYPE: _____

NOTES: _____

up to 103 lm/w performance

ORDER GUIDE

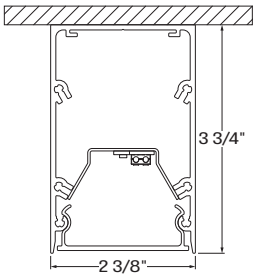
VIA2S	HLO		LED		
LUMINAIRE ID	**OPTICS**	**LENS POSITION**	**LIGHT SOURCE**	**CRI**	**LUMEN PACKAGES**
VIA2S - via 2" surface	**HLO** - High-Efficiency Lambertian Optic	**FH** - Flush **0.5D** - 0.5" drop **1.0D** - 1.0" drop	**LED** - high performance LED	**80** - 80CRI **90** - 90CRI	**350** - min. low output 350lm/ft **500** - medium output 500lm/ft **750** - max. high output 750lm/ft **####** - other required lm/ft

COLOR TEMP.	LUMINAIRE LENGTH	VOLTAGE	DRIVER	ELECTRICAL
27 - 2700K **30** - 3000K **35** - 3500K **40** - 4000K	Standard sections - 2', 3', 4', 5', 8' & 12' For all other specify length **#FT** - nominal length in feet **#IN** - length in inches Continuous Run - for luminaires over 12' Minimum Individual section 2'	**120** - 120V **277** - 277V **UNV** - 120V-277V **347** - 347V (not available with Lutron)	**D1** - 1% dimming 0-10V **DA** - Dali **LTEA2W** - Lutron 1% - 2 wire FF 120V **LDE1** - Lutron Hi-lume 1% Eco **LDE5** - Lutron 5% EcoSystem	**1** - 1 circuit **+#EB** - emergency battery (min 6' fixture, except Lutron) **+#EM** - emergency light circuit **+#NL** - night light circuit **+GTD###** - generator transfer device, 120V or 277V

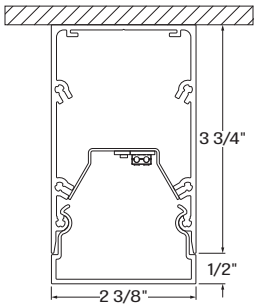
MOUNTING	FINISH	CONTROLS	OPTIONS
GRD - grid ceiling **DRC**- drywall ceiling	**W** - matte white **AL** - aluminum **B** - matte black **CF#** - custom finish specify RAL#	<u>STANDALONE CONTROLS</u> **OMS** - Onboard Occupancy **ODS** - Onboard Daylight **OCS** - Onboard Occupancy & Daylight <u>CONNECTED CONTROLS</u> **CCS()** - **LU**-Lutron, **EN**-Enlighted, **OS**-Osram, **CR**-Crestron. To specify see information on page 3	**FU** - fuse **ITR** - integrated track (consult factory) **CU** - custom

See page 2 for ordering code detailed information

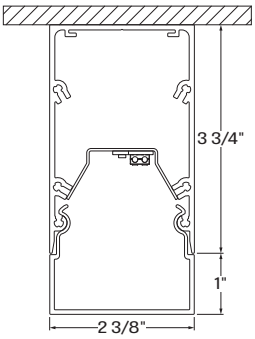
CROSS SECTION



VIA2S - HLO-FH



VIA2S - HLO-0.5D



VIA2S - HLO-1.0D

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C ETL US LISTED Intertek

VIA 2 LED

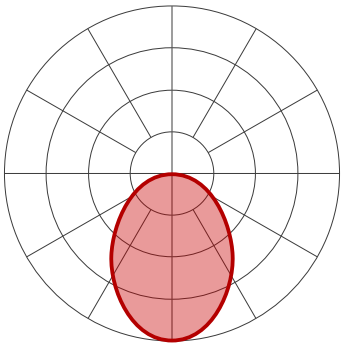
SURFACE

LUMENWERX
WWW.LUMENWERX.COM

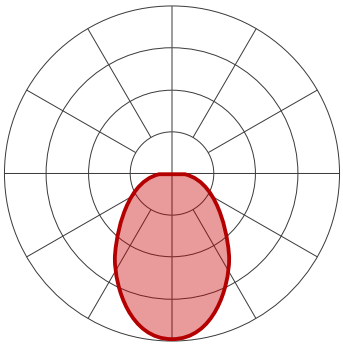
Lam Partners ARCHITECTURAL LIGHTING DESIGN

PHOTOMETRICS

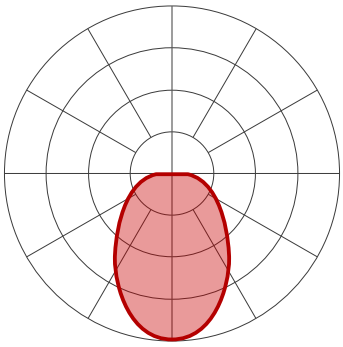
Please follow the multiplier tables to ensure correct lumen value. Lensing, CCT and CRI, will change the lumen output.



HLO-FH



HLO-0.5D



HLO-1.0D

HLO-FH Delivered Lumens for Flush at 35K 80CRI

Lumens per Foot	Total Lumens Per 4FT	Input Watts	LPW
350	1400	13.5	103
500	2000	20	101
750	3000	29.5	102

Multiplier - Drop Lens

Direct lens	Watts Multiplier	LPW Multiplier
Flush lens	1.00	1.00
Drop lens 0.5"	0.99	1.00
Drop lens 1.0"	0.95	1.05

Multiplier - CCT/CRI

CCT (K)	Watts Multiplier		LPW Multiplier	
	CRI80	CRI90	CRI80	CRI90
2700	1.05	1.26	0.95	0.79
3000	1.01	1.23	0.99	0.81
3500	1.00	1.20	1.00	0.84
4000	1.00	1.17	1.00	0.85
5000	0.90	1.09	1.11	0.92
6500	0.94	1.11	1.06	0.90

OPTICS

High Efficiency Lambertian Optic (HLO) shielding of diffusing 0.075" thick acrylic provides up to 88% transmission and good source obscuration. Matte white reflectors distribute LED output across the shielding. Luminaire brightness is controlled by the ratio of luminous flux to shielding area. HLO is available as a flush diffuser or as a drop diffuser, extending 0.5" or 1.0" below the luminaire housing. Drop diffusers are extruded with glued end caps. HLO optics have a Spacing Criteria of 1.06.

LIGHT SOURCE - LED

Custom linear array of mid-flux LED's are cartridge-mounted with quick-connect wiring to facilitate service and thermal management. Available in 3000K, 3500K and 4000K with a minimum 80 CRI and an option for 90 CRI with elevated R9 value. Color consistency maintained to within 3 SDCM. LEDs operate at reduced drive current to optimize efficacy and lumen maintenance.
All LEDs have been tested in accordance with IESNA LM-80-08 and the results have shown L80 lumen maintenance greater than 60,000 hours. Absolute product photometry is measured and presented in accordance with IESNA LM-79, unless otherwise indicated.

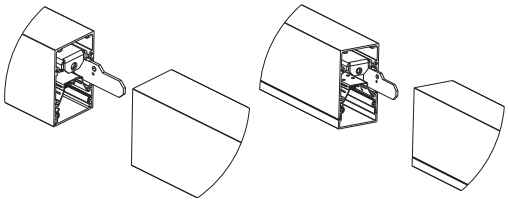
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LUMINAIRE LENGTH

Via 2 is made up of standard 2, 3, 4, 5, 8 and 12 foot sections that may be joined together to create longer continuous run lengths. Exact run length must be noted in the product code. The minimum individual section available is 2 foot.
All individual sections are joined together onsite using the joiner kits provided. LumenWerx offers joiner kits that are extremely simple to work with in the field and result in a fixture that appears virtually seamless with no light leak at any connection.

Joining system



Via 2 direct

Via 2 direct with drop lens

ELECTRICAL

Factory-set, adjustable output current LED driver with universal (120-277VAC) input. Dimmable from 100% to 1% with 0-10V dimming control. Rated life (90% survivorship) of 50,000 hours at 50°C max. ambient (and 70°C max. case) temperature. At maximum driver load: Efficiency>84%, PF>0.9, THD<20%. Other specifiable options include Lutron Hi-Lume 1% (specify 2-wire, or Ecosystem Dim-to-Off), Lutron 5-Series (5% Ecosystem), DMX (RDM compatible) and DALI protocol drivers. All of our standard 0-10V drivers are NEMA 410 compliant.

EMERGENCY

Factory installed long life high temperature recyclable Ni-Cad battery pack with test switch and charge indicator, minimum of 90 minutes operation, up to 1000 lumens per 4ft (25°C) emergency lighting output. Recharge time of 24 hours.

MOUNTING OPTIONS

Fixtures can be mounted directly to T-Bar, drywall and hard surface ceilings, hardware supplied by others. Long runs require a minimum of 6" distance from the vertical wall.

FINISH

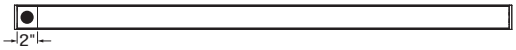
Interior - 95%, reflective matte powder coated white paint
Exterior - matte white, matte black or aluminum powder coating.
Custom finishes are also available.

CONTROLS

LumenWerx offers several options for integrating occupancy and daylight harvesting controls in our luminaires.

STANDALONE CONTROLS

An integrated standalone sensor controls the luminaire in which it is installed. Depending on the length, more than one sensor may be necessary and may control the entire luminaire, or just a section of it. These controls operate independently. Unless otherwise agreed, location and functionality of the sensor within the luminaire are selected by LumenWerx.
Three types are available:
OMS: An integral Passive InfraRed (PIR) sensor turns luminaires on and off automatically with field-adjustable time out period. No wall control is used. Coverage pattern for large motion has a 12' diameter with the sensor mounted 8' above the floor; for small motion, the pattern has an 8' diameter. Typically, one sensor is required for every 10' of a continuous luminaire run.
ODS: An integral, daylight harvesting sensor with closed-loop operation dims the luminaire in which it is installed in order to compensate for available daylight. The sensor measures the combination of daylight and luminaire light reflected from horizontal surfaces below the luminaire. Initial onsite calibration is required via the use of provided remote control.
OCS: Both an occupancy and a daylight sensor are installed in the luminaire.



Location of an Onboard control

CONNECTED CONTROLS

With Connected Controls, sensors or nodes installed in the luminaire form part of a larger control system infrastructure from manufacturers such as: Lutron*, Enlighted, Osram ENCELIUM, Acuity nLight, Crestron and others. These connected controls allow for a scalable system providing features like occupancy and daylight control, manual control, scheduling and configuration of various zones and scenes. Energy reporting and system monitoring are also possible. Specific capabilities depend on the control system being used.

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VIA 2 LED

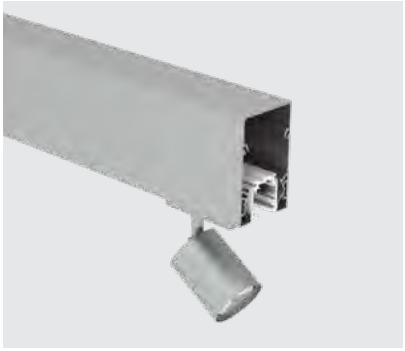
SURFACE

LUMENWERX
WWW.LUMENWERX.COM

LumenWerx installs the components (sensors, nodes, power packs, etc) which may be supplied to us by a third party, or procured directly by LumenWerx, depending on the control system manufacturer.
LumenWerx is solely responsible for the installation of specified components; the controls manufacturer is responsible for performance of the control system.
To indicate a LumenWerx luminaire with Connected Controls, identify the specific onsite control system to be integrated into the luminaires using the ordering code.
Due to the diversity of components, you must contact controls@lumenwerx.com to assure complete compatibility with intended control system and to fully specify the luminaire.
Complete control specifications, sensor/node/power pack layout, and narrative for the control system are required for LumenWerx to create shop drawings and submittals.
* Lumenwerx offers a Lutron Vive-Enabled fixture option using either the DFCSJ-OEM-OCC (OCS Option) or DFCSJ-OEM-RF (wireless only, no sensor) Integral Fixture Modules and a DALI or EcoSystem LED driver based on customer dimming requirements.

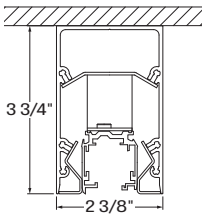
Please contact our controls department at controls@lumenwerx.com for further assistance.

OPTIONS



ITR - integrated track

Multiple track systems manufactured by others, are offered in Via 2, in individual, or runs, with or without LED integrated sections. Detailed specifications of the track system must be supplied. For other mounting options (please consult factory).



VIA2-ITR

CONSTRUCTION

Housing - Extruded Aluminum (0.095" nominal) up to 90% Recycled Content
Interior brackets - Die formed cold rolled sheet steel 18 gauge thick
Joining system - Die cast Zinc (0.95" nominal)
Reflectors - Extruded Aluminum (0.075" nominal) up to 95% reflective matte
Diffuser - 0.075" thick acrylic, 88% transmission
Drop diffuser - extruded with glued end caps.
End caps - Die cast Aluminum (0.95" nominal)

WEIGHT

Via 2 4ft - 9.03lbs - 4.1kg
Via 2 8ft - 18.28lbs - 8.3kg
Via 2 12ft - 27.97lbs - 12.7kg

CERTIFICATIONS

ETL - Rated for Indoor Dry/Damp locations. Conforms to UL Standard 1598 and certified to CAN/CSA Standard C22.2 No. 250.0.

WARRANTY

LumenWerx provides a five-year limited warranty of electrical and mechanical performance of the luminaires, including the LED boards, drivers, and auxiliary electronics. LumenWerx will repair or replace defective luminaires or components at our discretion, provided they have been installed and operated in accordance with our specifications. Other limitations apply, please refer to the full warranty on our website.

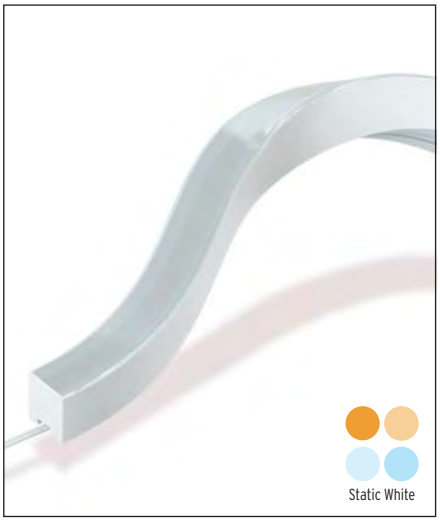
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VENUS TC 3D IP67 Static White

LED LINEAR™ lighting solution

S2

Lam Partners ARCHITECTURAL LIGHTING DESIGN



3D - Universal Bend

3D bendable IP67 flexible dot free and perfectly homogeneous linear LED light line with a 0.71" x 0.67" (W x H) cross section. Opal polyurethane encapsulation offering a premium water proof sealing, UV resistance and chemical stability. True Color technology for an optimal rendition of the LED spectrum with no color shift. Vertical and horizontal bending as well as twisting, with radius of 5.9" offering the ideal solution for organic facade geometry. Usable for accent lighting or decorative applications requiring IP67 ingress. Freely configurable in length. Backside cable feed for an optimal fixture to fixture overlap. Light source assembled using Reel to Reel (R2R) production process supporting LED Linear™ Tj Away® thin flexible circuit board technology. Outstanding lifetime of > 60,000 hrs L80/B10. Embeds high quality CSP LEDs with 3 step MacAdams (SDCM3) binning centered on target CCT (One Bin Only) with an extended photometric code of Wxxx/339 ensuring an exceptional color consistency over the rated lifetime. Premium color rendition with a CRI of 95. Consistent light intensity all along the strip length. Fully PWM dimmable. Engineered and produced in Germany.

Project name

Fixture type

Phase

Specifier

Date

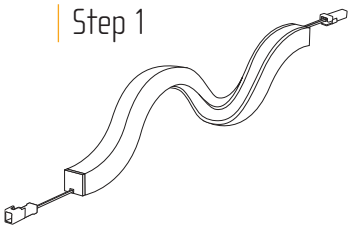
Select Models Only

Intertek ETL Listed

True Color No Color Shift	**Integrated Circuit Driver** Up to 330 lm/ft 73 lm/W constant light output	**Reel-to-Reel R2R Production** High Quality Solder Free Reels	**TjAway® Thermal Management** Exceptional Thermal Dissipation
One Bin Only 3 MacAdam up to 95 CRI	**L/B Lifetime** L80/B10 >60,000 hrs	**6 Digit Photometric Code** Wxxx/339	**IES LM79/LM80** LM79/LM80 Compliant

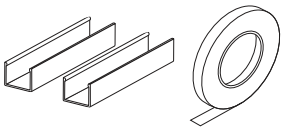
Ordering Process

Step 1



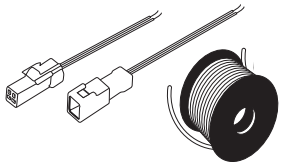
Fixture (Page 1)

Step 2



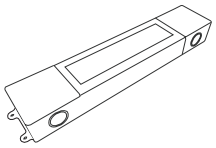
Mounting Accessories (Page 4)

Step 3



Cables and Connectors (Page 4)

Step 4



Drivers and Controllers (Page 5)

Fixture Order Code

Family	Model/Lumen package*	Variant	Color Rendering/Color Temperature	Custom length**	Ingress
VarioLED Flex	_ _ _ _ _	_ _	_ _ _ _	_ _ _ _	IP67
	VENUS TC - Low Output	3D - Universal Bend	W822 - 80CRI, 2200K	L_{min}: 494 mm (1' 7-1/2")	
	120 lm/ft		W927 - 90CRI, 2700K	L_{max}: 1964 mm (6' 5-3/8")	
	PHOBOS TC - Mid Output		W930 - 90CRI, 3000K		
	220 lm/ft		W935 - 90CRI, 3500K	Increment: 70 mm (2-3/4")	
	SKYLLA TC - High Output		W940 - 90CRI, 4000K		
	330 lm/ft		W850 - 80CRI, 5000K		

* Lumen Values represent 5000K (W850)

** Custom Length should be specified in milimeters (mm). See page 3 for all available lengths.

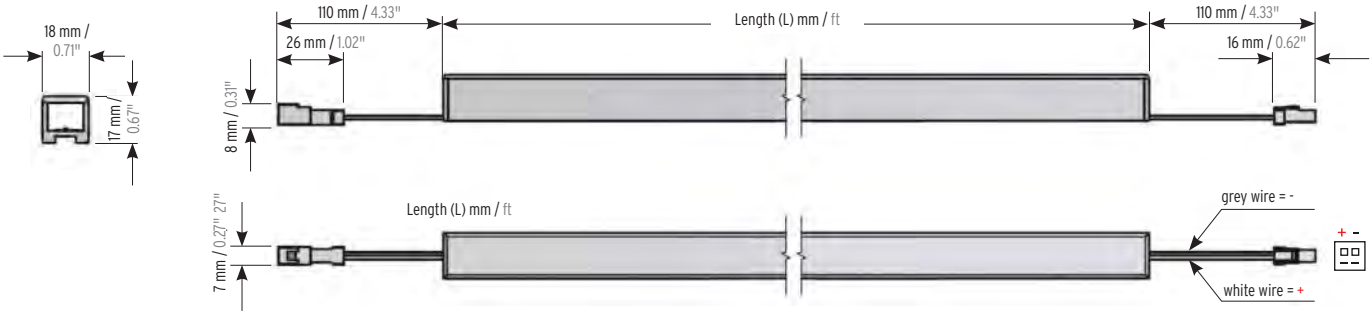
				Low Output		Mid Output		High Output	
			Color temperature[A]	Lumen/ft	W/ft[B]	Lumen/ft	W/ft[B]	Lumen/ft	W/ft[B]
Static White		W822	2,200 K	90	1.8	160	3	240	4.6
		W927	2,700 K	100	1.8	170	3	250	4.6
		W930	3,000 K	100	1.8	170	3	250	4.6
		W935	3,500 K	100	1.8	180	3	260	4.6
		W940	4,000 K	100	1.8	180	3	260	4.6
		W850	5,000 K	120	1.8	220	3	330	4.6

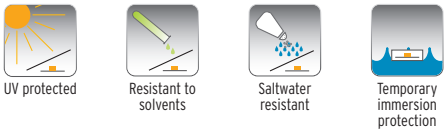
[A] CCT tolerances occur in IP67 products due to the encapsulation of the fixture.

[B] The given data are typical values. Due to tolerances of the production process and the electrical components, values for light output and electrical power can vary up to 10%.

VENUS TC 3D IP67 Static White

Mechanical Details







3D Version Bending Direction
R_{min} = 15 cm / 5.91"
Maximal Twist = 180° / 3.2 ft
Fixture Weight: 0.22 lbs / ft

IP67 plug in connector (male / female) on both ends. Fixtures at maximum length ships with one male connector only.

Technical Details

Voltage	24 Volt (23 V_{min}, 25 V_{max})
Case temperature[A]	Tc_{min} = -4°F / -20°C, Tc_{max} = 149°F / 65°C
Storage temperature	Ts_{min} = -22°F / -30°C, Ts_{max} = 185°F / 85°C
Ambient temperature	Ta_{min} = -4°F / -20°C, Ta_{max} = specific, see Table below

[A] The position of the Tc-point is marked on each step of the LED strip. The Tc-point should be measured in thermal equilibrium according to IEC EN 60598-1.

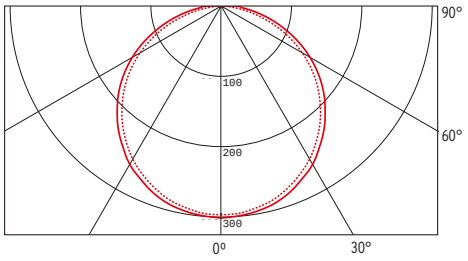
	Low Output	Mid Output	High Output
Power (W/ft)[B]	1.8	3	4.6
Efficacy (lm / W)[B] @ W850	68	71	73
CRI / R9 @ 3000 K	95 / 65	95 / 65	95 / 65
R_f / R_g @ 3000 K	95 / 100	95 / 100	95 / 100
Max fixture length (ft / m)	6.3 / 2	6.3 / 2	6.3 / 2
Max serial run length (ft / m)[B]	16.4 / 5	13.1 / 4	9.2 / 3
Temperature Tc-point (Tc_{max})[C]	149°F / 65°C	149°F / 65°C	149°F / 65°C
Max ambient temperature (Ta_{max})	122°F / 50°C	122°F / 50°C	104°F / 40°C

[B] With supply voltage > 23.5 V

[C] The given data are typical values. Due to tolerances of the production process and the electrical components, values for light output and electrical power can vary up to 10%.

Light Distribution

VENUS TC 3D IP67 - Static White



VENUS TC 3D IP67 Static White

Colorimetric Details – Venus TC 3D IP67

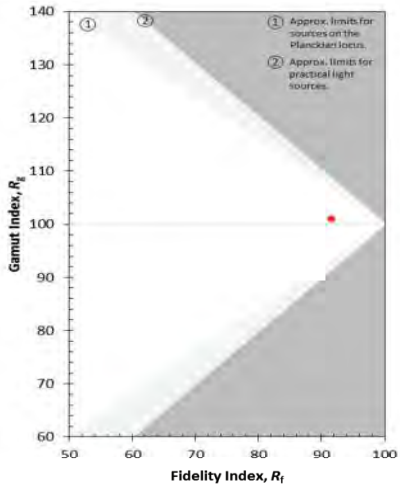
Photometric Code	CCT	R_a / CRI	R9	TM-30-15 / R_f	TM-30-15 / R_g
W940	4000 K	91	77	91	101

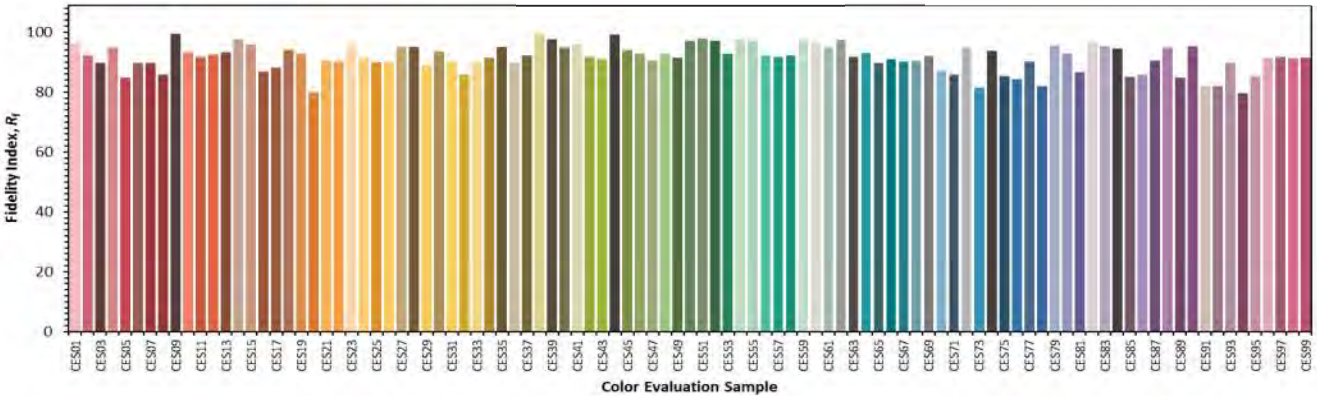
Color Vector Graphic



Color Distortion Graphic



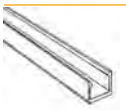
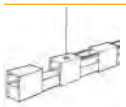




LENGTH CHART - Venus TC 3D IP67

Fixture length (Ships UPS freight allowed on orders >5k)		Static White					
		Low Output 1.8 Watts/Ft		Medium Output 3.1 Watts/Ft		High Output 4.6 Watts/Ft	
inches	mm	Watts/fixture	Lumens/fixture @W930K	Watts/fixture	Lumens/fixture @W930K	Watts /fixture	Lumens / fixture @W830K
19.45	494	3	162	5	275	7	421
22.20	564	3	185	6	314	9	481
24.96	634	4	208	6	354	10	541
27.72	704	4	231	7	393	11	600
30.47	774	5	254	8	432	12	660
33.23	844	5	277	8	471	13	720
35.98	914	5	300	9	510	14	779
38.74	984	6	323	10	549	15	839
41.50	1054	6	346	10	588	16	899
44.25	1124	7	369	11	627	17	959
47.01	1194	7	392	12	666	18	1018
49.76	1264	7	415	12	705	19	1078
52.52	1334	8	438	13	744	20	1138
55.28	1404	8	461	14	783	21	1197
58.03	1474	9	483	15	822	22	1257
60.79	1544	9	506	15	861	23	1317
63.54	1614	10	529	16	900	24	1376
66.30	1684	10	552	17	939	25	1436
69.05	1754	10	575	17	978	26	1496
71.81	1824	11	598	18	1017	28	1556
74.57	1894	11	621	19	1056	29	1615
77.32	1964	12	644	19	1095	30	1675

Mounting Accessories

	Item	Description	Dimensions (L x W x H)	Order Code
	Low Surface Mounting Clip & Channel	Aluminum, surface mounting accessories. Available as 1" short clips, 6.5' and 13' long continuous mounting channel. Clips are recommended to use at most 12 inches apart. White finish.	1-1/4" x 7/8" x 6/8" 6' 6" x 7/8" x 6/8" 13' x'7/8" x 6/8"	13000277 10000552 10000552-4M
	High Surface Mounting Clip & Channel	Aluminum, surface mounting accessories with cable raceway underneath. Available as 1" short clips, 6.5' and 13' continuous mounting channel. Clips are recommended to use at most 12 inches apart. White finish.	1-1/4" x 7/8" x 1" 6' 6" x 7/8" x 1" 13' x 7/8" x 1"	13000278 10000553 10000553-4M
	Clear Surface Holding Clamp	Surface mounting clamp, fix to the surface with screws. UV stable transparent plastic material. Recommended to use at most every 18 inches. White finish.	5/8" x 2" x 3/4"	13000279
	Flexible Pendant Mounting System	Aluminum segmented system for curvatures, pendant set needed every three feet. White finish.	6' 6" x 7/8" x 1"	10000554
	Pendant Set	Steel aircraft cable, available in two lengths. At least 2 pendant sets per 3' are required for flexible pendant channel (1000554).	6' 1/2" cable length 16' 3/8" cable length	13000273 13000274
	Recessed Mounting Channel	Aluminum recessed mounting channel with pre-mounted mounting springs and decorative cover strips. Available as 6.5' and 13' lengths. White finish.	6' 6" x 1-1/2" x 1-3/4" 13' x 1-1/2" x 1-3/4"	10000559 10000559-4M
	Flexible Recessed Mounting System	Flexible recessed mounting system with pre-mounted mounting springs and decorative cover strips. Use to create curved installations. White finish.	6' 6" x 1-1/2" x 1-3/4"	10000560
	End Caps	End cap set (2 pieces) for recessed mounting channel. White finish.	7/8" x 1-3/8" x 1-7/8"	11000214
	Adhesive Tape for Surface Mounting	High quality adhesive tape, use to install the product on glossy or rough surfaces.	164' x 3/4"	18200135

Cables and Connectors

	Item	Description	Model	Dimensions	Order Code
	Cable IP68 for Static White	Outdoor rated UL approved cable. Use to extend installation distance with outdoor rated splicing box (by others).	Static White	2 x 22 AWG, 160 ft	14000030
	Mini Female Connector IP67 for Static White	Use to run cable from the driver to the first fixture of the run or to the next fixture. Female mini connector on one side and open end cable on the other side.	Static White Static White	2 x 22 Awg, 8 in 2 x 22 Awg, 6.5 ft	15000141 15000142
	Mini Male Connector IP67 for Static White	Use to run cable from the fixture to the driver or to the previous fixture. Male mini connector on one side and open end cable on the other side.	Static White	2 x 22 Awg, 8 in	15000140
	Mini Extension IP67 for Static White	Use to extend the distance between connection points. Female connector on one side and male connector on the other side.	Static White Static White	2 x 22 Awg, 4 in 2 x 22 Awg, 6.5 ft	15000143 15000144
	Mini Female Protection Cap IP67 for Static White	Use to seal unused connectors and maintain IP67 ingress protection.	Static White	—	15000218

Drivers

Item		Specifications	Downloads
LED LINEAR™ Non-Dimmable Drivers		• UL 8750 Listed Enclosure - With Built-In Junction Boxes • Universal Input Voltage 120V - 277V • IP65 - For Both Indoor and Outdoor Use • No Minimum Load Requirement • 24V Constant Voltage Output, Class 2 • Available in three wattages 30W, 60W and 96W • Max. Dimensions: 12-1/8" x 2-3/8" x 1-3/8"	30 W SPEC SHEET 60 W SPEC SHEET 96 W SPEC SHEET INSTALLATION INSTRUCTIONS
LED LINEAR™ 0-10V Dimmable Drivers		• UL 8750 Listed Enclosure - With Built-In Junction Boxes • 0-10V Dimmable - Flicker Free Down to 1% • Universal Input Voltage 120V - 277V • IP65 - For Both Indoor and Outdoor Use • 24V Constant Voltage Output, Class 2, Class P • Available in three wattages 30W, 60W and 96W • Max. Dimensions: 12-1/8" x 2-3/8" x 1-3/8"	30 W SPEC SHEET 60 W SPEC SHEET 96 W SPEC SHEET INSTALLATION INSTRUCTIONS
LED LINEAR™ ELV/Triac Dimmable Drivers		• UL 8750 Listed Class 2 Enclosure • 24V constant voltage output • Compact size yet high efficiency and performance in dry and damp environments (IP67) • Multiple Inputs: 120V or 277V • Fully dimmable: ELV Dimmers - Reverse or Adaptive Phase Control, Trailing Edge • Available in two wattages 48W and 96W • Multiple Circuits are available up to 4 units (up to 384W)	48 W SPEC SHEET 96 W SPEC SHEET INSTALLATION INSTRUCTIONS
MEAN WELL PWM Dimmable Drivers		• Universal AC input / Full range (up to 305VAC) • Constant voltage PWM style output • Built-in 3 in 1 dimming function (0~10Vdc or PWM signal or resistance) • Dimming range : 0~100% • Class 2 power unit • Suitable for dry / damp / wet locations • UL Recognized component, 5 years warranty	40 W SPEC SHEET 60 W SPEC SHEET 90 W SPEC SHEET INSTALLATION INSTRUCTIONS
LUTRON Dimmable Drivers		• UL Listed Enclosure • Dimming Range: 100% to 1% and 0.1% (Premiere) • LED lighting turns on to any dimmed level without flashing to full brightness • Operating Voltage: 120V~ to 277V~ at 50/60 Hz • Rated lifetime of 50,000 hours at 40°C (104°F) ambient temperature and maximum loading • For rated warranty, ambient temperature not to exceed 40°C (104°F) • Open-circuit protected output	HI-LUME SPEC SHEET HI-LUME PREMIERE SPEC SHEET INSTALLATION INSTRUCTIONS
eldoLED DALI/DMX Dimmable Drivers		• Available in linear or rectangular format • 100W, DMX/DALI interface • 4 control channels • 24V constant voltage, 4 x 24V outputs • Metal or plastic case options	100 W SPEC SHEET INSTALLATION INSTRUCTIONS

Controllers

Item		Specifications	Downloads
eldoLED Controllers	 	**180/D** DMX Controller for RGB and Tunable White Applications **210/D** Dali Contoller for Static White, RGB and Tunable White Aplications **211/D-LG** 0-10V Logarithmic Dimming Controller **211/D-LN** 0-10V Linear Dimming Controller **212/D** DMX Controller for Static White and Static Color Applications **DimWheel** DMX Wall Controller for RGB and Tunable White Applications	180/D SPEC SHEET 210/D SPEC SHEET 211/D-LG SPEC SHEET 211/D-LN SPEC SHEET 212/D SPEC SHEET DIM WHEEL SPEC SHEET

Click for more information

PRODUCT BROCHURE | INSTALLATION | IES FILES | DRIVERS & CONTROLS

LED LINEAR TECHNOLOGY | VOLTAGE DROP CALCULATOR

YG1

Lam Partners
ARCHITECTURAL LIGHTING DESIGN

Pole top luminaires
with asymmetrical wide spread light distribution

Type:
BEGA Product:
Project:
Voltage:
Color:
Options:
Modified:

Housing/fitter: Heavy one piece die-cast aluminum (minimum .125" thick) with specular anodized aluminum reflector. Slip fitter and arm extensions are die-cast aluminum secured by six (6) socket head stainless steel set screws threaded into stainless steel inserts. Pole extension is extruded aluminum with a die-cast aluminum cap. Slip fits 3" O.D. pole top or tenon. Die castings are marine grade, copper free (≤ 0.3% copper content) A360.0 aluminum alloy.

Enclosure: One piece die-cast aluminum, hinged, trim frame with ¼" thick tempered glass, silicone sealed to trim. Tool-less entry for maintenance. Fully gasketed for weather tight operation for downlighting only.

Electrical: 23.6 W LED luminaire, 28 total system watts -30° C start temperature. Integral 120 V through 277 V electronic LED driver, 0-10V dimming. Standard LED color temperature is 4000K with a >80 CRI. Available in 3000K (>80 CRI); add suffix K3 to order.
Note: Due to the dynamic nature of LED technology, LED luminaire data on this sheet is subject to change at the discretion of BEGA-US. For the most current technical data, please refer to www.bega-us.com.

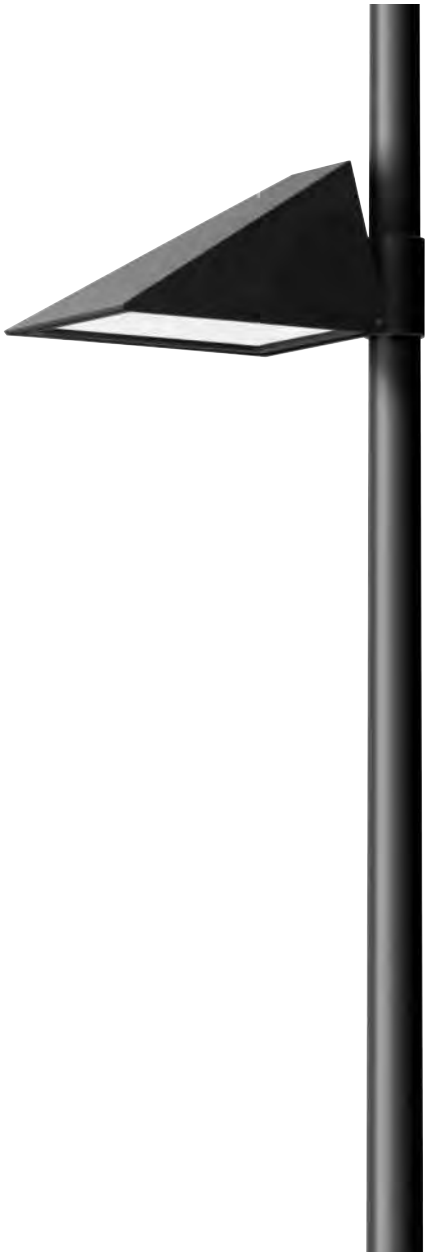
Finish: All BEGA standard finishes are polyester powder coat with minimum 3 mil thickness. These luminaires are available in four standard BEGA colors: Black (BLK); White (WHT); Bronze (BRZ); Silver (SLV). To specify, add appropriate suffix to catalog number. Custom colors supplied on special order.

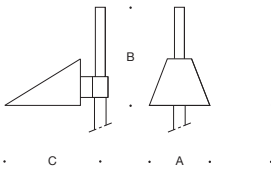
UL listed for US and Canadian Standards, suitable for wet locations. Protection class: IP66.

Weight: 29.0 lbs.

EPA (Effective projection area): 1.4 sq. ft.

Luminaire Lumens: 3385





Single pole-top luminaires

	Lamp	LEED	A	B	C
77 930	23.6 W LED	LZ-1	13 ¾	23	23 ⅝

Recommended for use with 14' to 18' poles.

BEGA 1000 BEGA Way, Carpinteria, CA 93013 (805) 684-0533 FAX (805) 566-9474 www.bega-us.com
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YG2_YG6

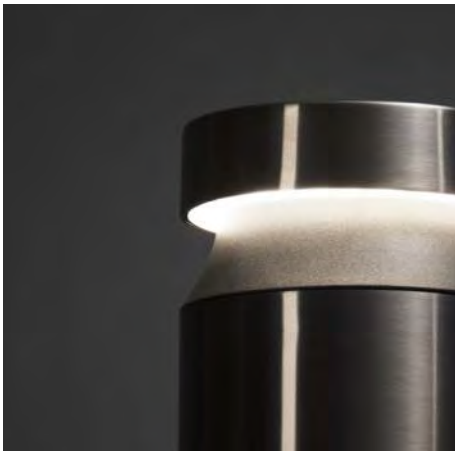
Lam Partners ARCHITECTURAL LIGHTING DESIGN

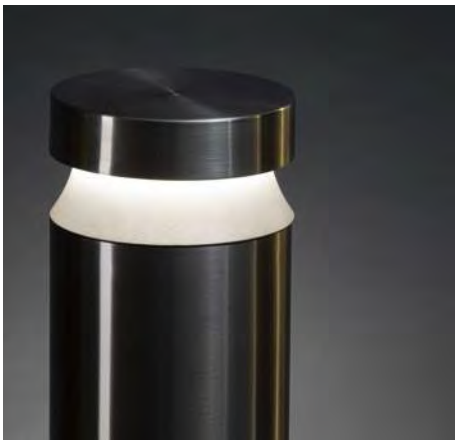
HELIO™ BOLLARD

PRODUCT OVERVIEW

Helio Bollards bring an elegant simplicity to public spaces of all kinds. Constructed of stainless steel, fixtures are available in illuminated and non-illumanted variations. Illuminated bollards feature a frosted acrylic lens, 180˚ or 360˚ light distribution variations, and Cree® LEDs in 3000K warm white and 4000K natural.







PRODUCT DETAILS

MATERIALS, FINISHES, & DIMENSIONS

- Illuminated bollards have a tubular stainless steel column, frosted acrylic lens, and a stainless steel cap.
- Non-Illuminated bollards are tubular stainless steel with welded stainless steel cap.
- Standard stainless steel finish is Satin.
- For optional powdercoat colors see the Forms+Surfaces Powdercoat Chart. Custom RAL colors are available for an upcharge.
- Bollard dimensions are 41" high x 6" diameter.

LED LIGHT ENGINE & DRIVER

- Custom LED light engine with Cree® LEDs.
- 3000K warm white and 4000K natural white color temperatures.
- 700 lumen output.
- Less than 5% upward lumen output.
- LED driver input voltage is 120-227VAC nominal.
- Maximum LED driver input current is 0.40A.
- Driver has 0-10V dimming capabilities.
- 180˚ and 360˚ light distribution options are available.

INSTALLATION & MAINTENANCE

INSTALLATION

- Standard mounting is surface mount.
- Security options are available.

MAINTENANCE

- Metal surfaces can be cleaned as needed using a soft cloth or brush with warm water and a mild detergent. Avoid abrasive cleaners.

T 800.451.0410 | www.forms-surfaces.com

FORMS+SURFACES®

© 2019 Forms+Surfaces® | All dimensions are nominal. Specifications and pricing subject to change without notice. For the most current version of this document, please refer to our website at www.forms-surfaces.com.

ERCO

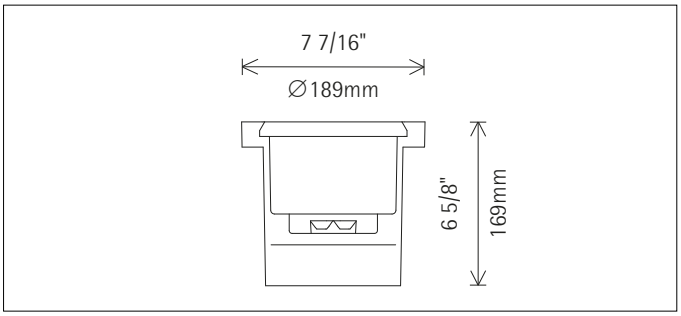
Tesis In-ground luminaire

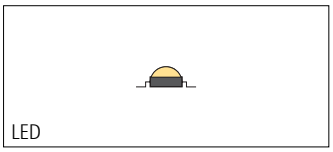
Uplight

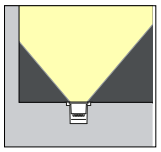
YG3

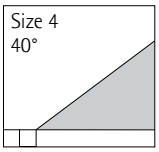
Lam Partners ARCHITECTURAL LIGHTING DESIGN





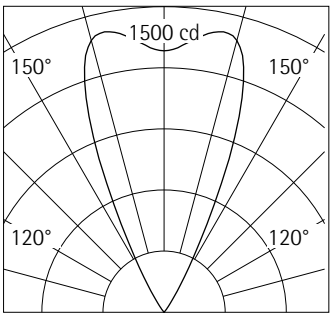






35069.023
LED 12W 1260lm 3000K warm white
0-10V dimmable
Version 9
Flush mounting detail
Spherolit lens, wide flood

Product description
Housing: polymer, black.
Control gear 120V/277V, 60Hz, dimmable. Longitudinally watertight cable 5xAWG14, L 31 1/2" / 800mm.
LED module: high-power LEDs on metal-core PCB. Collimating lens made of optical polymer.
Reflector: aluminum, black lacquered.
Optical cut-off 40° from horizontal.
Screw-fastened cover ring with flush safety glass: stainless steel. Safety glass: 9/16" / 15mm, clear.
Installation with separate connection sleeve.
Mounting in recessed housing: can be driven over in vehicles with pneumatic tyres. Load 4500lb.wt / 20kN.
Dimming with external dimmers possible (0-10V).
Suitable for wet location (IP68): dust-proof.
Weight 5.07lbs / 2.30kg
Version with 3000K CRI 95 or 2700K, 3500K, 4000K CRI 92 available on request.



h(ft)	E(fc)	D
		49°
15	6	13'8"
12	9	10'11"
9	16	8'2"
6	36	5'6"
3	143	2'9"

Technical data

Luminous flux of the luminaire	824lm
Connected load	16.0W
Luminaire efficacy	51lm/W
Color deviation	1.5 SDCM
Color rendition index	CRI 92
Lumen maintenance (LED manufacturer specifications)	L90/B10 ≤50000h L90 ≤100000h
LED failure rate	0.1% ≤50000h
LMF	E
Temperature on the cover glass	113°F / 45°C

For your regional contact in the ERCO Sales network click here
www.erco.com/contact

Technical region: 120V/60Hz, 277V/60Hz
We reserve the right to make technical and design changes.
Edition: 20.02.2019
Current version under
www.erco.com/35069.023

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Tesis In-ground luminaire

Planning data

Cleaning (a)	1				2				3			
Ambient conditions	P	C	N	D	P	C	N	D	P	C	N	D
LMF	0.96	0.94	0.90	0.86	0.93	0.91	0.86	0.81	0.92	0.90	0.84	0.79
RSMF	0.91	0.83	0.68	0.51	0.90	0.81	0.67	0.50	0.90	0.81	0.67	0.50

Hours of operation (h)	1000	5000	10000	20000	30000	40000	50000
LLMF	1.00	0.99	0.98	0.96	0.94	0.92	0.90
LSF	1	1	1	1	1	1	1

MF	LMFxRSMFxLLMFxLSF
MF	Maintenance Factor
LMF	Luminaire Maintenance Factor
RSMF	Room Surface Maintenance Factor
LLMF	Lamp Lumens Maintenance Factor
LSF	Lamp Survival Factor
P	Room pure
C	Room clean
N	Room normal
D	Room dirty

Technical data based on international standards and directives

IEC 60598	Luminaires – Parts 1 + 2: General requirements, particular requirements and tests
IEC 62031	LED modules for general lighting – Safety specifications
IEC 62471	Photobiological safety of lamps and lamp systems
UL 1598	Luminaires
UL 1574	Standard for Track Lighting Systems
UL 8750	Standard for Light Emitting Diode (LED) Equipment for Use in Lighting Products
IES LM-79-08	Electrical and Photometric Measurements of Solid-State Lighting Products
IES LM-80-08	Measuring Lumen Maintenance of LED Light Sources
CIE 13	Method of measuring and specifying color rendering properties of light sources

All technical data are subject to industry standard tolerances.
See also www.erco.com/erco-led

Tesis In-ground luminaire

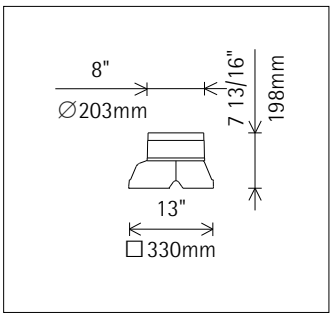
Accessories



33958.023
Connection sleeve
for cable diameters of 0.25" - 0.80".
Polymer conduit, two-part PUR cast resin.
Length 5 15/16" / 150mm.
Width 1 1/4" / 32mm.
Height 2 3/8" / 59mm.
Weight 0.99lbs / 0.45kg



33299.000
Recessed housing
Polymer, black.
4 cable entries.
Load 4500lb.wt / 20kN.
Weight 2.65lbs / 1.20kg



ERCO

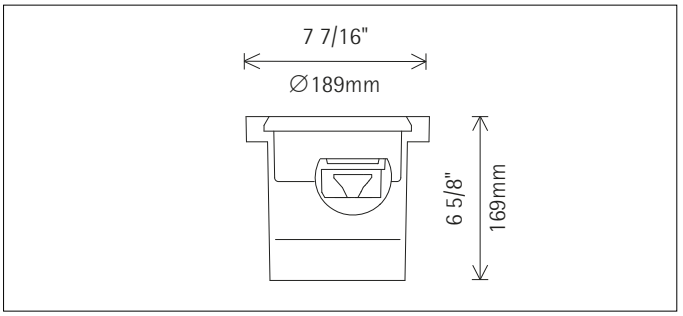
Tesis In-ground luminaire

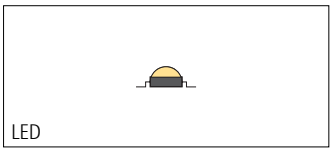
Directional luminaire

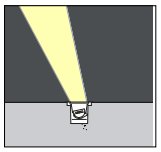
YG3A

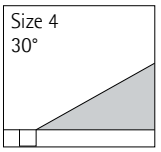
Lam Partners ARCHITECTURAL LIGHTING DESIGN





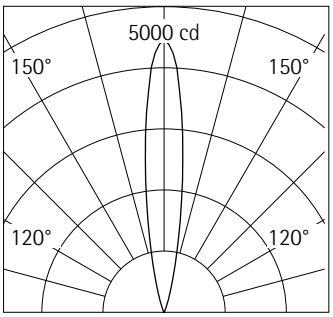






35077.023
LED 6W 630lm 3000K warm white
0-10V dimmable
Version 9
Flush mounting detail
Spherolit lens, spot

Product description
Housing: polymer, black.
Control gear 120V/277V, 60Hz, dimmable. Longitudinally watertight cable 5xAWG14, L 31 1/2" / 800mm.
LED module: high-power LEDs on metal-core PCB. Collimating lens made of optical polymer. 0-30° tiltable, rotatable through 360°.
Reflector: aluminum, black lacquered. Optical cut-off 30° from horizontal.
Screw-fastened cover ring with flush safety glass: stainless steel. Safety glass: 9/16" / 15mm, clear.
Installation with separate connection sleeve.
Mounting in recessed housing: can be driven over in vehicles with pneumatic tyres. Load 4500lb.wt / 20kN.
Dimming with external dimmers possible (0-10V).
Suitable for wet location (IP68): dustproof.
Weight 5.07lbs / 2.30kg
Version with 3000K CRI 95 or 2700K, 3500K, 4000K CRI 92 available on request.



h(ft)	E(fc)	D 16°
15	20	4'3"
12	31	3'4"
9	55	2'6"
6	124	1'8"
3	494	0'10"

Technical data

Luminous flux of the luminaire	465lm
Connected load	8.2W
Luminaire efficacy	57lm/W
Color deviation	1.5 SDCM
Color rendition index	CRI 92
Lumen maintenance (LED manufacturer specifications)	L90/B10 ≤50000h L90 ≤100000h
LED failure rate	0.1% ≤50000h
LMF	E
Temperature on the cover glass	93°F / 34°C

For your regional contact in the ERCO Sales network click here
www.erco.com/contact

Technical region: 120V/60Hz, 277V/60Hz
We reserve the right to make technical and design changes.
Edition: 20.02.2019
Current version under
www.erco.com/35077.023

© ERCO GmbH 2019

Tesis In-ground luminaire

Planning data

Cleaning (a)	1				2				3			
Ambient conditions	P	C	N	D	P	C	N	D	P	C	N	D
LMF	0.96	0.94	0.90	0.86	0.93	0.91	0.86	0.81	0.92	0.90	0.84	0.79
RSMF	0.91	0.83	0.68	0.51	0.90	0.81	0.67	0.50	0.90	0.81	0.67	0.50

Hours of operation (h)	1000	5000	10000	20000	30000	40000	50000
LLMF	1.00	0.99	0.98	0.96	0.94	0.92	0.90
LSF	1	1	1	1	1	1	1

MF	LMFxRSMFxLLMFxLSF
MF	Maintenance Factor
LMF	Luminaire Maintenance Factor
RSMF	Room Surface Maintenance Factor
LLMF	Lamp Lumens Maintenance Factor
LSF	Lamp Survival Factor
P	Room pure
C	Room clean
N	Room normal
D	Room dirty

Technical data based on international standards and directives

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IES LM-80-08	Measuring Lumen Maintenance of LED Light Sources
CIE 13	Method of measuring and specifying color rendering properties of light sources

All technical data are subject to industry standard tolerances.
See also www.erco.com/erco-led

Tesis In-ground luminaire

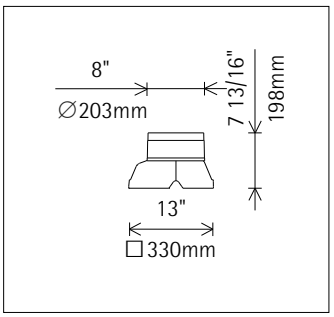
Accessories



33958.023
Connection sleeve
for cable diameters of 0.25" - 0.80".
Polymer conduit, two-part PUR cast resin.
Length 5 15/16" / 150mm.
Width 1 1/4" / 32mm.
Height 2 3/8" / 59mm.
Weight 0.99lbs / 0.45kg



33299.000
Recessed housing
Polymer, black.
4 cable entries.
Load 4500lb.wt / 20kN.
Weight 2.65lbs / 1.20kg



YG7

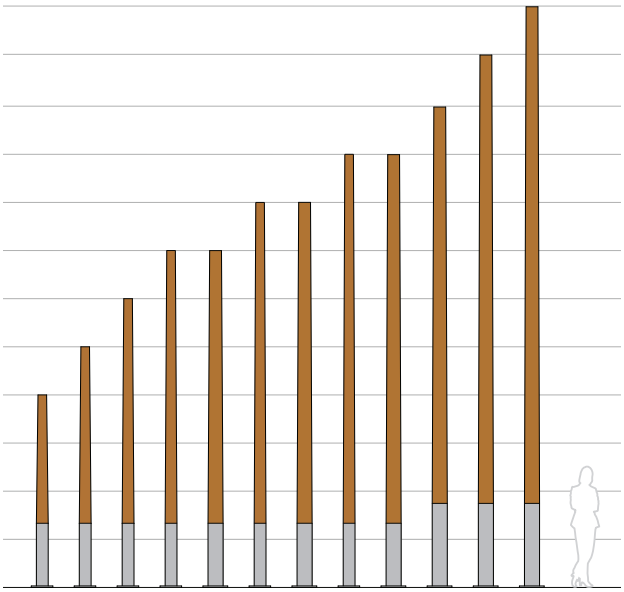
Lam Partners ARCHITECTURAL LIGHTING DESIGN

Bol 8' – 24' Round Tapered and Straight Wood Poles

FIXTURE TYPE: _____

PROJECT NAME: _____





Round Taper



Glulam solid wood and aluminum pole available in 8' – 24' lengths. Tenon adapters, slip fitters and side bracket mounts are available for luminaire mounting.

FEATURES:

- Round extruded aluminum pole base with flush handhole cover held with countersunk stainless steel fasteners.
- Tapered, round, solid glulam wood pole



SPECIFICATIONS:

HOUSING: Solid wood pole is assembled through glulam construction and precision machined using CNC technology. An electrical raceway is provided in the pole's center for wiring. Laminations measure no more than 2" in thickness. Adhesive complies with ASTM D-2559 glulam construction specifications for extreme exposed weather conditions, is waterproof and rated for wet or dry use exposure.

Glulam wood shaft is fastened to aluminum pole base welded to a 3/4" thick aluminum anchor bolt base. Anchor bolt kit includes (4) 3/4" hot dip galvanized anchor bolts and fasteners and ridged concrete pour template.

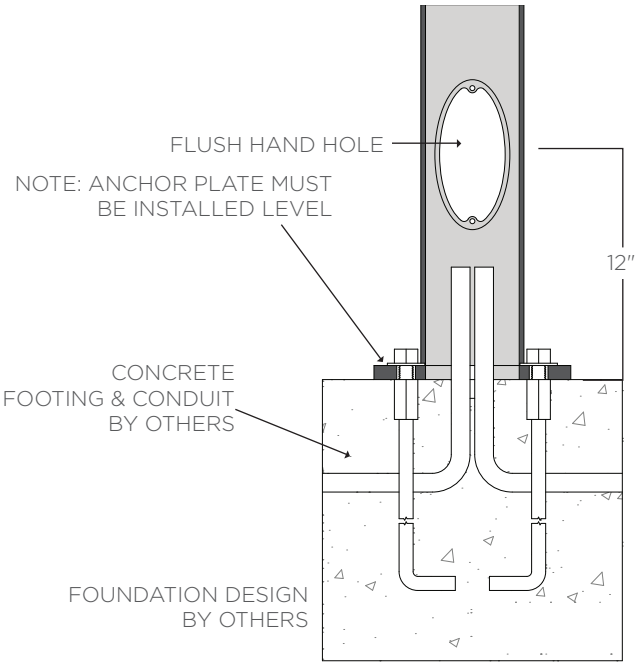
FIXTURE MOUNTING: Fixtures mount either by 2 3/8", 2 7/8", 3 1/2", or 4" diameter by 4" tall tenon or drill mount for arm brackets. Consult factory for other tenon sizes. Luminaires shall be provided by others.

ELECTRICAL: A 5/16" – 18 grounding point is provided on the aluminum pole base. Wireway access is provided through a NEC compliant handhole with a flush, gasketed cover plate.

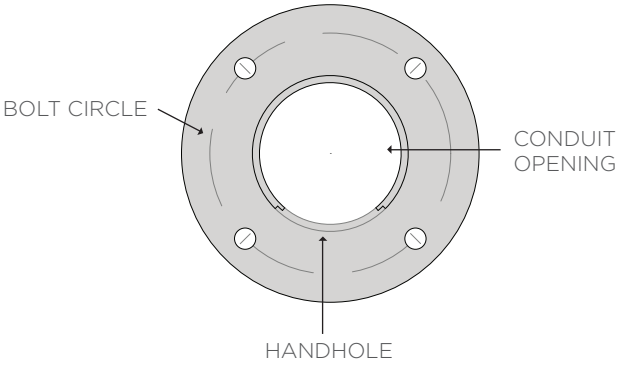
FINISHES AND MATERIALS: Woods are finished with a low VOC waterborne matte exterior finish containing UV and mildew inhibitors. All aluminum parts are polyester powder coat painted.

HARDWARE: Fasteners are stainless steel. Anchor bolt kits are hot dip galvanized.

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	Bolt Circle	Conduit Opening
5.5" Base	8.5" dia	5" dia.
7.0" Base	11" dia.	6.5" dia.



ORDERING GUIDE: EXAMPLE: BOL-S-12-55-55-S3-C6-T3124-STD

The mark of responsible forestry
FSC® C102326

BOL								
1	2	3	4	5	6	7	8	9

1 Series

BOL	Bol

2 Shaft Shape

T	Round Tapered
S	Round Straight

3 Height

8	8′
10	10′
12	12′
14	14′
16	16′
18	18′
20	20′
22	22′
24	24′

4 Base Diameter

55	5.5" – 20′ Maximum Height
70	7.0" – 24′ Maximum Height

5 Top Diameter

40	4.0"
55	5.5"
70	7.0"

6 Wood Finish

S*	See color options on finishes technical sheet

7 Metal Finish

C*	See color options on finishes technical sheet
CSM	Custom Color

8 Fixture Mounting

Tenon

T2384	2 3/8" x 4" Tenon
T2784	2 7/8" x 4" Tenon
T3124	3 1/2" x 4" Tenon
T4004	4" x 4" Tenon
TXXX	Specify diameter and height

Drill

D1	1 @ 90deg
D2	2 @ 180deg
D3	2 @ 90deg
D4	3 @ 90deg
D5	4 @ 90deg

9 Special

STD	Standard
MOD	Modified

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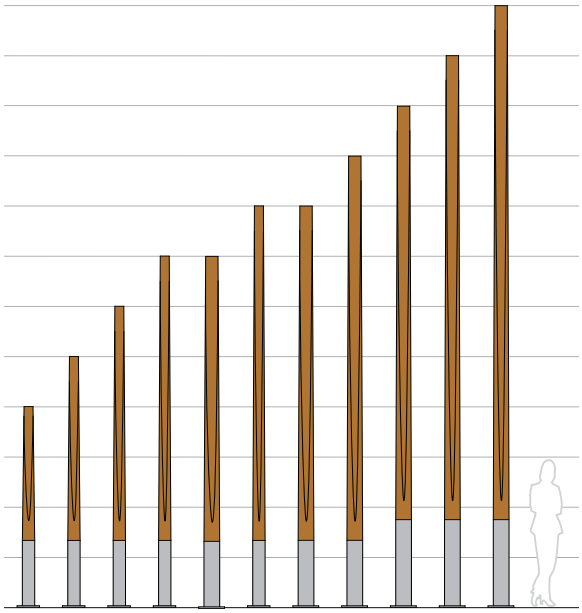
YG7

Lam Partners
ARCHITECTURAL LIGHTING DESIGN

Bol – RSQ 8' – 24' Round Tapered to Square Pole

FIXTURE TYPE: _____

PROJECT NAME: _____



Round Tapered to Square

Glulam solid wood and aluminum pole available in 8' – 24' lengths. Tenon adapters, slip fitters and side bracket mounts are available for luminaire mounting.

FEATURES:

- Unique CNC machined, round cross section at the base tapering to square cross section at the pole's top.
- Solid glulam wood construction.
- Round extruded aluminum pole base with flush handhole cover held with countersunk stainless steel fasteners.





SPECIFICATIONS:

HOUSING: Solid wood pole is assembled through glulam construction and precision machined using CNC technology. The pole's cross section begins round at the base and tapers to a square cross section at the top. An electrical raceway is provided in the pole's center for wiring. Laminations measure no more than 2" in thickness. Adhesive complies with ASTM D-2559 glulam construction specifications for extreme exposed weather conditions, is waterproof and rated for wet or dry use exposure.

Glulam wood shaft is fastened to aluminum pole base welded to a 3/4" thick aluminum anchor bolt base. Anchor bolt kit includes (4) 3/4" hot dip galvanized anchor bolts and fasteners and ridged concrete pour template.

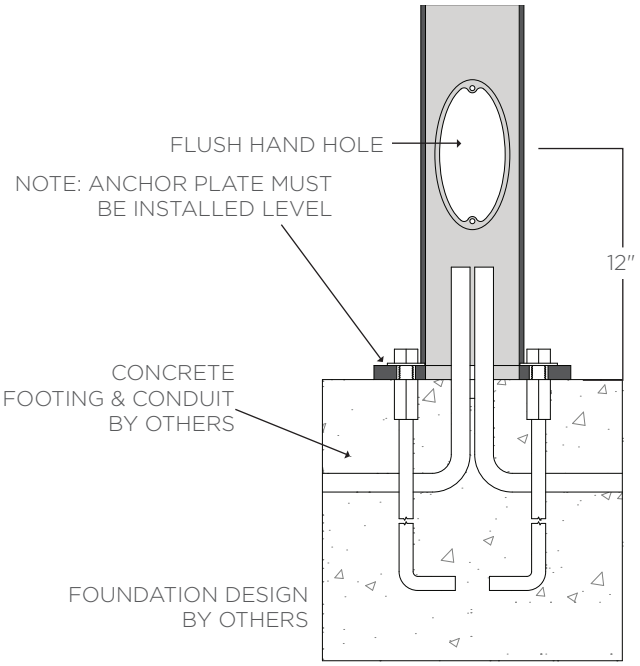
FIXTURE MOUNTING: Fixtures mount either by 2 3/8", 2 7/8", 3 1/2", or 4" diameter by 4" tall tenon or drill mount for arm brackets. Consult factory for other tenon sizes. Luminaires shall be provided by others.

ELECTRICAL: A 5/16" – 18 grounding point is provided on the aluminum pole base. Wireway access is provided through a NEC compliant handhole with a flush, gasketed cover plate.

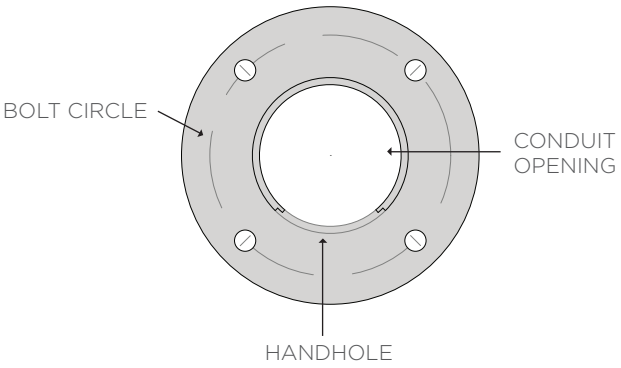
FINISHES AND MATERIALS: Woods are finished with a low VOC waterborne matte exterior finish containing UV and mildew inhibitors. All aluminum parts are polyester powder coat painted.

HARDWARE: Fasteners are stainless steel. Anchor bolt kits are hot dip galvanized.

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	Bolt Circle	Conduit Opening
5.5" Base	8.5" dia	5" dia.
7.0" Base	11" dia.	6.5" dia.



ORDERING GUIDE: EXAMPLE: BOL-RSQ-16-55-40-S4-C7-D2-STD

The mark of responsible forestry
FSC® C102326

BOL	RSQ			40				
1	2	3	4	5	6	7	8	9

1 Series
BOL — Bol

2 Shaft Shape
RSQ — Round Tapered to Square

3 Height
8 8′
10 10′
12 12′
14 14′
16 16′
18 18′
20 20′
22 22′
24 24′

4 Base Diameter
55 5.5" – 16′ Maximum Height
70 7.0" – 24′ Maximum Height

5 Top Width
40 4.0"

6 Wood Finish
S* See color options on finishes technical sheet

7 Metal Finish
C* See color options on finishes technical sheet
CSM Custom Color

8 Fixture Mounting
Tenon
T2384 2 3/8" x 4" Tenon
T2784 2 7/8" x 4" Tenon
T3124 3 1/2" x 4" Tenon
T4004 4" x 4" Tenon
TXXX Specify diameter and height

Drill
D1 1 @ 90deg
D2 2 @ 180deg
D3 2 @ 90deg
D4 3 @ 90deg
D5 4 @ 90deg

9 Special
STD Standard
MOD Modified

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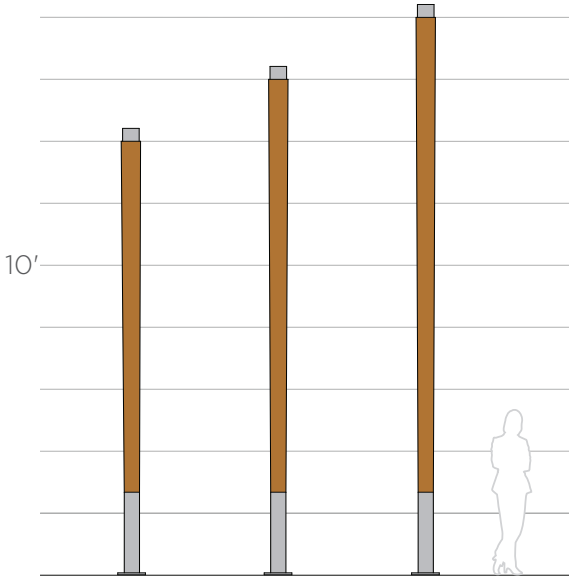
YG7

Lam Partners
ARCHITECTURAL LIGHTING DESIGN

Bol – REV Custom Reverse Taper Pole

FIXTURE TYPE: _____

PROJECT NAME: _____



Custom Reverse Round Taper





Glulam solid wood and aluminum pole available in custom lengths. Tenon adapters are available for luminaire mounting.

FEATURES:

- Custom CNC machined reverse tapered round pole per project requirements.
- Standard and custom tenons available per luminaire and project requirements.
- Solid glulam wood construction.
- Round extruded aluminum pole base with flush handhole cover held with countersunk stainless steel fasteners.

SPECIFICATIONS:

HOUSING: Solid wood pole is assembled through glulam construction and precision machined using CNC technology. Reverse taper is provided per project requirements. Consult factory for options. An electrical raceway is provided in the pole's center for wiring. Laminations measure no more than 2" in thickness. Adhesive complies with ASTM D-2559 glulam construction specifications for extreme exposed weather conditions, is waterproof and rated for wet or dry use exposure.

Glulam wood shaft is fastened to aluminum pole base welded to a 3/4" thick aluminum anchor bolt base. Anchor bolt kit includes (4) 3/4" hot dip galvanized anchor bolts and fasteners and ridged concrete pour template.

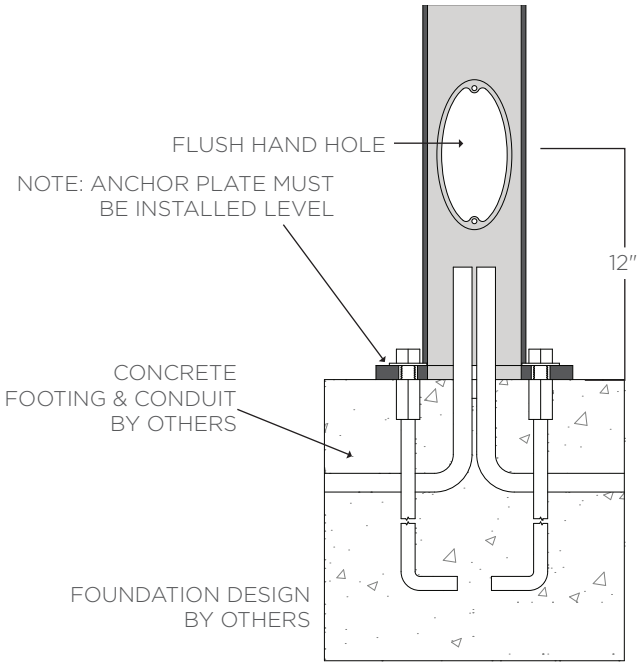
FIXTURE MOUNTING: Fixtures mount by tenon adapters. Consult factory for tenon sizes per project luminaire requirements. Luminaires shall be provided by others.

ELECTRICAL: A 5/16" – 18 grounding point is provided on the aluminum pole base. Wireway access is provided through a NEC compliant handhole with a flush, gasketed cover plate.

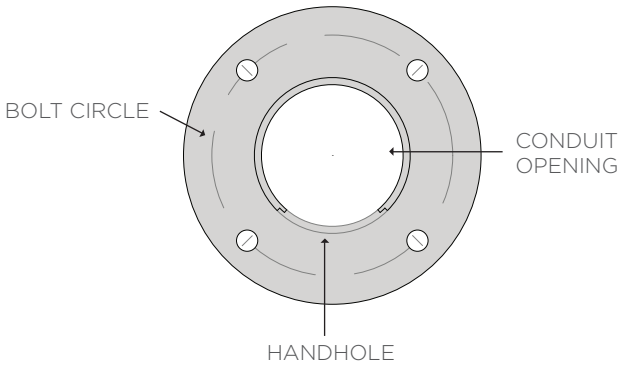
FINISHES AND MATERIALS: Woods are finished with a low VOC waterborne matte exterior finish containing UV and mildew inhibitors. All aluminum parts are polyester powder coat painted.

HARDWARE: Fasteners are stainless steel. Anchor bolt kits are hot dip galvanized.

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	Bolt Circle	Conduit Opening
5.5" Base	8.5" dia	5" dia.
7.0" Base	11" dia.	6.5" dia.



ORDERING GUIDE: EXAMPLE: BOL-REV-12-55-60-S5-C5-T4004-STD

The mark of responsible forestry
FSC® C102326

BOL	REV		55					MOD
1	2	3	4	5	6	7	8	9

1 Series
BOL Bol

2 Shaft Shape
REV Custom Reverse Round Taper

3 Height
XX Specific Height in Feet (consult factory)

4 Base Diameter
55 5.5"

5 Top Diameter
XX Specify in inches

6 Wood Finish
S* See color options on finishes technical sheet

7 Metal Finish
C* See color options on finishes technical sheet
CSM Custom Color

8 Fixture Mounting
TXXX Specify tenon, diameter and height in inches

9 Special
STD Standard
MOD Modified

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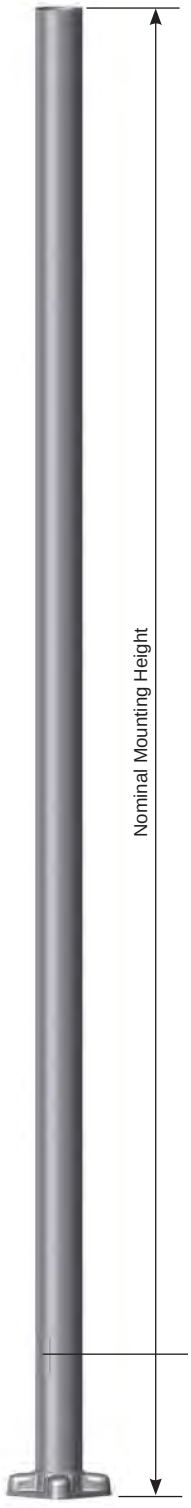
valmont STRUCTURES

8' Round Non-Tapered Alu
4-Bolt Anchor Base Pole

YG8

Lam Partners ARCHITECTURAL LIGHTING DESIGN

Job Name:	Client Name:
Job Location - City: State:	Created By: Date:
Product: Quote:	Customer Approval: Date:



Tenon Top



Pole Cap



Cross Section



Handhole



Nut Covers (Standard)



Dart Square - 2T (Optional)



SPECIFICATIONS

Pole - The pole shaft is extruded from seamless 6000 series alloy aluminum.

Pole Top - A pole top tenon is provided for top mount luminaire and/or bracket. A removable pole cap is available for poles receiving drilling patterns for side-mount luminaire arm assemblies.

Handhole - A covered handhole with hardware and grounding provision are provided.

Base Cover - Optional Dart Square-2T cast and decorative base covers available as special order.

Anchor Base - The anchor base is cast from 356 alloy aluminum. The completed assembly is heat-treated to a T6 temper. Aluminum nut covers are included with anchor base unless otherwise specified.

Anchor Bolts - Anchor bolts conform to ASTM F1554 Grade 55 and are provided with two hex nuts and two flat washers. Bolts have an “L” bend on one end and are galvanized a minimum of 12" on the threaded end.

Finish - The standard finish for the pole assembly and components is satin brushed, natural anodize, duranodic or polyester powder applied coating in accordance with Valmont’s Specifications. Additional finish options available upon request.

8' to 14'
Round Non-Tapered Aluminum
4-Bolt Anchor Base Pole

valmont STRUCTURES

YG8

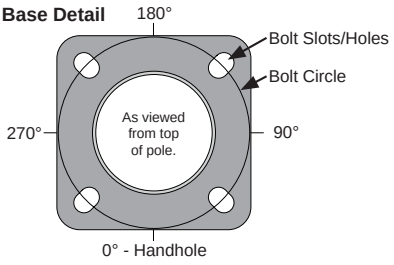
Lam Partners ARCHITECTURAL LIGHTING DESIGN

Job Name:	Client Name:
Job Location - City: State:	Created By: Date:
Product: Quote:	Customer Approval: Date:

ANCHORAGE DATA

POLE		BASE PLATE				ANCHOR BOLTS		
BASE OD (IN)	WALL THK (IN)	BOLT CIRCLE DIA (IN)	BOLT CIRCLE ± (IN)	SQUARE (IN)	THK (IN)	DIA x LENGTH x HOOK (IN)	PROJECTION (IN)	± (IN)
4.00	0.125	7.50	0.75	8.91	0.630	0.75 x 17.00 x 3.00	3.25	N/A
4.50	0.125	7.84	0.78	9.26	0.630	0.75 x 17.00 x 3.00	3.25	N/A
4.50	0.188	7.84	0.78	9.26	0.630	0.75 x 17.00 x 3.00	3.25	N/A
5.00	0.125	8.63	0.88	9.61	0.630	0.75 x 17.00 x 3.00	3.25	N/A
5.00	0.156	8.63	0.88	9.61	0.630	0.75 x 17.00 x 3.00	3.25	N/A
5.00	0.188	8.63	0.88	9.61	0.630	0.75 x 17.00 x 3.00	3.25	N/A

Anchor Base Detail



LOAD AND DIMENSIONAL DATA

DESIGN INFORMATION											POLE DIMENSIONS					
	70 MPH w/1.3 GUST		80 MPH w/1.3 GUST		90 MPH w/1.3 GUST		100 MPH w/1.3 GUST		110 MPH w/1.3 GUST[1]							
NOMINAL MOUNTING HEIGHT	MAX EPA[2] (SQ FT)	MAX WEIGHT (LBS)	MAX EPA[2] (SQ FT)	MAX WEIGHT (LBS)	MAX EPA[2] (SQ FT)	MAX WEIGHT (LBS)	MAX EPA[2] (SQ FT)	MAX WEIGHT (LBS)	MAX EPA[2] (SQ FT)	MAX WEIGHT (LBS)	POLE HEIGHT	BASE OD (IN)	TOP OD (IN)	WALL THK (IN)	STRUTURE WEIGHT[3] (LBS)	MODEL NUMBER
8'-0"	10.7	75	7.9	75	6.0	75	4.7	75	3.9	75	8'-0"	4.00	4.00	0.125	19	080040404S4
	14.9	75	11.2	75	8.6	75	6.9	75	5.7	75	8'-0"	4.50	4.50	0.125	21	080045454S4
	22.0	75	16.6	75	12.9	75	10.4	75	8.5	75	8'-0"	4.50	4.50	0.188	29	080045456S4
10'-0"	8.1	75	5.9	75	4.3	75	3.3	75	2.7	75	10'-0"	4.00	4.00	0.125	22	100040404S4
	11.5	100	8.4	100	6.4	100	5.1	100	4.1	100	10'-0"	4.50	4.50	0.125	25	100045454S4
	17.3	100	12.8	100	9.9	100	7.9	100	6.5	100	10'-0"	4.50	4.50	0.188	35	100045456S4
	15.4	100	11.5	100	8.9	100	7.1	100	5.8	100	10'-0"	5.00	5.00	0.125	27	100050504S4
12'-0"	6.2	75	4.3	75	3.0	75	2.2	75	1.7	75	12'-0"	4.00	4.00	0.125	26	120040404S4
	9.0	75	6.5	75	4.8	75	3.8	75	3.0	75	12'-0"	4.50	4.50	0.125	29	120045454S4
	13.9	75	10.2	75	7.7	75	6.2	75	5.0	75	12'-0"	4.50	4.50	0.188	41	120045456S4
	12.2	100	9.0	100	6.9	100	5.5	100	4.4	100	12'-0"	5.00	5.00	0.125	32	120050504S4
	15.5	100	11.5	100	8.9	100	7.1	100	5.8	100	12'-0"	5.00	5.00	0.156	38	120050505S4
	18.8	100	14.0	100	10.9	100	8.7	100	7.1	100	12'-0"	5.00	5.00	0.188	45	120050506S4
14'-0"	4.6	100	3.0	100	1.9	100	1.2	100	0.9	100	14'-0"	4.00	4.00	0.125	30	140040404S4
	6.9	100	4.7	100	3.4	100	2.6	100	2.0	100	14'-0"	4.50	4.50	0.125	33	140045454S4
	11.1	100	7.9	100	5.9	100	4.6	100	3.7	100	14'-0"	4.50	4.50	0.188	47	140045456S4
	9.7	100	6.9	100	5.3	100	4.1	100	3.3	100	14'-0"	5.00	5.00	0.125	36	140050504S4
	12.5	100	9.1	100	7.0	100	5.5	100	4.4	100	14'-0"	5.00	5.00	0.156	44	140050505S4
	15.3	100	11.2	100	8.7	100	6.9	100	5.6	100	14'-0"	5.00	5.00	0.188	52	140050506S4

1. EPA values are calculated using fastest mile winds.
2. EPA represents the Effective Projected Area of each luminaire. Designs are limited to top mount or side-mount luminaires. Variations from sizes above are available upon inquiry at the factory. Satisfactory performance of poles is dependent upon the pole being properly attached to a supporting foundation of adequate design.
3. Structure weight is a nominal value which includes the pole shaft and base plate.

PRODUCT ORDERING CODES

CROSS SECTION	MODEL NUMBER	FIXTURE MOUNTING	COLOR		OPTIONS
R		--		_	
R = Round	080040404S4 080045454S4 080045456S4 100040404S4 100045454S4 100045456S4 100050504S4 120040404S4 120045454S4 120045456S4 120050504S4 120050505S4 120050506S4 140040404S4 140045454S4 140045456S4 140050504S4 140050505S4 140050506S4	**Drill Mounting** D1 = 1 Luminaire D2 = 2 @ 180° D3 = 3 @ 120° D4 = 4 @ 90° D5 = 2 @ 90° D6 = 3 @ 90° **Tenon Mounting** P2 = 2.38" OD x 4.00" P3 = 3.50" OD x 6.00" P4 = 4.00" OD x 6.00" P5 = 2.88" OD x 4.00" P7 = 2.38" OD x 5.00" PQ = 2.38" OD x 12.00" PD = 3.00" OD x 3.00" -- = Plain Top P9 = Other Tenon (Contact Factory)	**Polyester Powder** DWH = White DSS = Sandstone HTG = Hunter Green DNA = Natural Aluminum DCG = Charcoal Gray DMB = Medium Bronze DNB = New Dark Bronze DDB = Dark Bronze DBL = Black DSB = Steel Blue DTG = Dark Green DBR = Red SC = Special Color (Contact Factory)	**Anodized** 204 = Clear Natural 311 = Light Bronze* 312 = Medium Bronze* 313 = Dark Bronze* 335 = Black* *Duranodic Anodize **Brushed** SBF = Satin Brushed	See Accessories at valmontstructures.com (Please Specify with Code)

SPC7074 09/17 valmontstructures.com carries the most current spec information and supersedes these guidelines.

Specification Sheet

lumenbeam

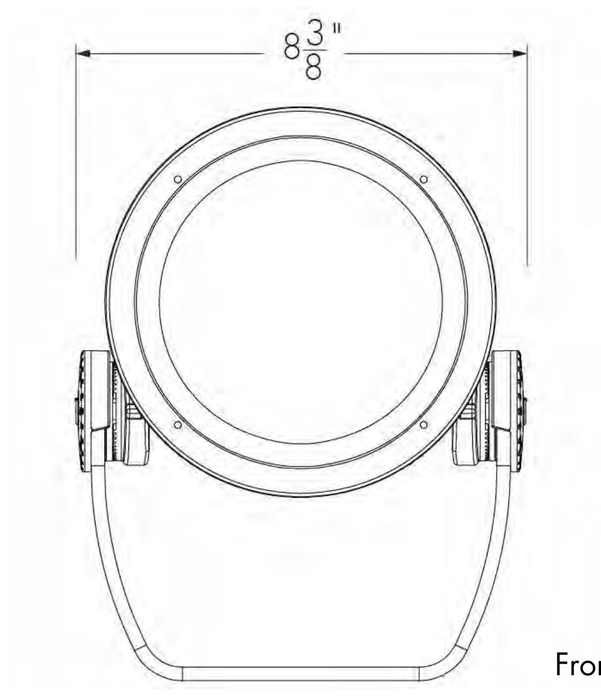
Medium

WHITE AND STATIC COLOURS

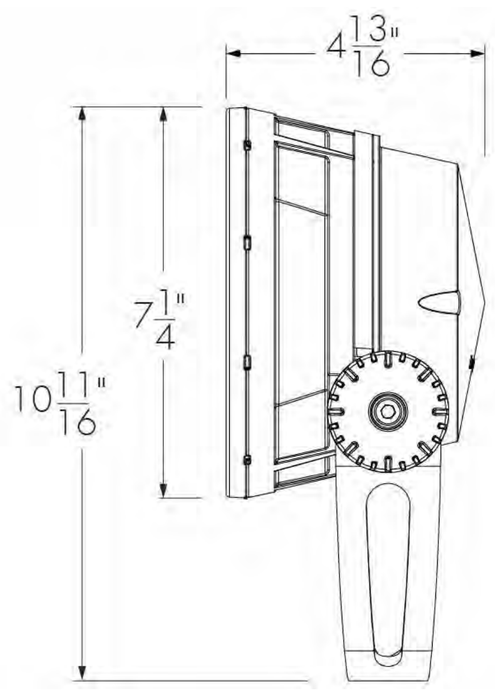
Project Name _____ **Qty** _____

Type _____ **Catalog / Part Number** _____





Front view



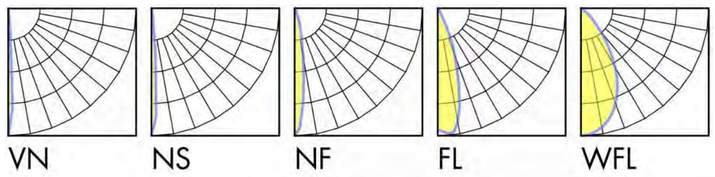
Side view

Photometric Summary

4000K	Delivered output (lm)	Intensity (peak cd)
VN	1,754	75,278
NS	1,552	56,914
NF	1,484	10,878
FL	1,428	4,003
WFL	1,370	1,312

Photometric performance is measured in compliance with IESNA LM-79-08.

Optics



Control

ON/OFF 1-10V DALI DMXrdm

Rating

c UL us CE RoHS

Description

The Lumenbeam Medium is a high-performance, 28W luminaire for solving numerous interior and exterior challenges such as facades, columns, trees or other architectural and landscape features. It offers a flexible package of options: a choice of optics for flood or accent lighting; a number of colour temperatures and colours; various mounting options, accessories, spread lenses and controls.

Features

Colour and Colour Temperature	2200K, 2700K, 3000K, 3500K, 4000K, 5700K, Red, Green, Blue
Optics (nominal distribution)	6°, 10°, 20°, 40°, 60°
Optical Option	Linear spread lens horizontal distribution, Linear spread lens vertical distribution
Options	Short Yoke, 3G ANSI C136.31 Vibration Rating for bridge applications, Corrosion-resistant coating for hostile environments
Power Consumption	28 W
Warranty	5-year limited warranty

Performance

Delivered Output	1,754 lm (4000K, VN optic)
Delivered Intensity	75,278 cd at nadir (4000K, VN optic)
Illuminance at Distance	Minimum 1 fc at 274 ft distance (4000K, VN optic)
Colour Consistency	2 SDCM
Colour Rendering	CRI 80+
Lumen Maintenance	L70 120,000 hrs (Ta 25 °C)

lumenpulse™ 11/13 Weston Street, Unit no 13.3.2 London, SE1 3ER GB **T** +44 (0) 2031 765370 info@lumenpulse.com **www.lumenpulsegroup.com**

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MG - R30

Specification Sheet

lumenbeam

Medium

WHITE AND STATIC COLOURS

Physical

Housing Material	Low copper content high pressure die-cast aluminium
Yoke Material	Heavy aluminium (standard yoke included)
Lens Material	Clear tempered glass
Hardware Material	Stainless steel
Gasket Material	Silicone
Surface Finish	Electrostatically applied polyester powder coat
Weight	6.7 lbs
EPA	Front = 0.46 sq ft, Side = 0.37 sq ft

Electrical and control

Voltage	100 to 277 volts
Fixture Cable	Power and data in 1 cable, 3 ft cord standard (5 x 1.5 sq mm), other lengths available
Inrush Current (peak)	21A @230VAC
Resolution (DMX/RDM)	Per fixture, 8-bit or 16-bit
Control	On/Off control, Dim to Warm via 1-10V (DWW only), DALI dimming, DMX/RDM enabled, Lumentalk system is enabled with LDB accessory - see typical wiring diagrams for details

Environmental

Operating Temperature	-13 °F to 122 °F
IP Rating	IP66
IK Rating	IK09

Accessories (order separately)

Control Boxes	Power and control box - daisy chain configuration, Power and control box - star configuration, Lumentalk Data Bridge
Control Systems	Lumentouch 2.0™, Lumencue
Diagnostic and Addressing Tools	LumenID, LumentalkID

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Specification Sheet

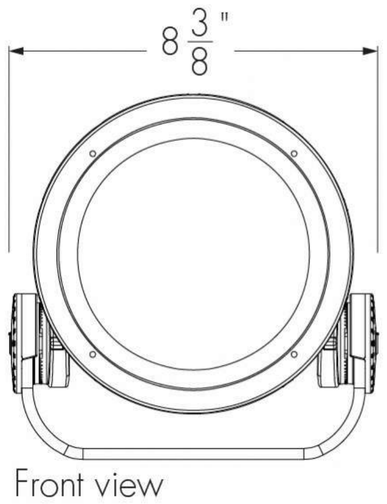
lumenbeam

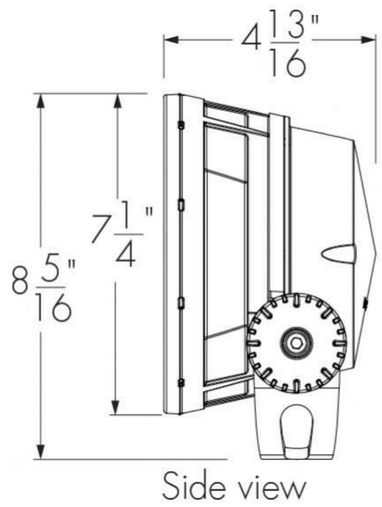
Medium

WHITE AND STATIC COLOURS

Mounting options

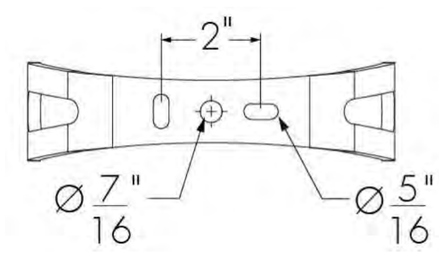
SY - Short yoke



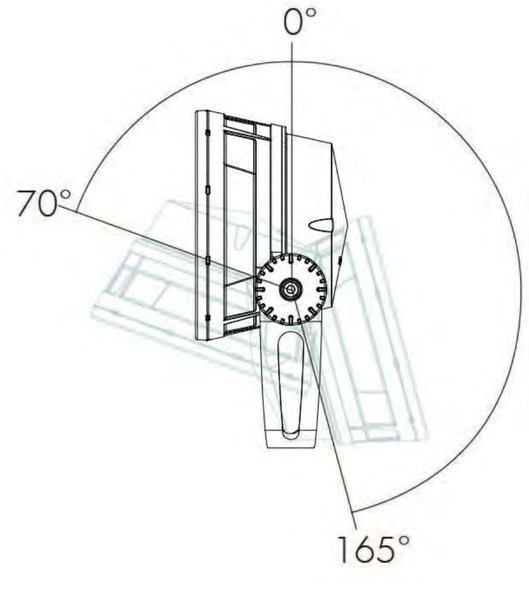


Mounting details

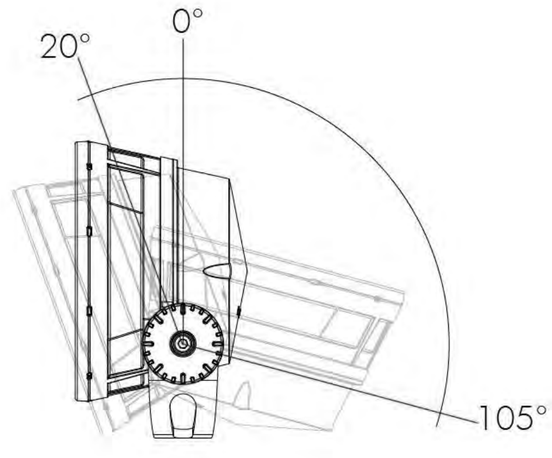
Mounting hole pattern - standard and short yoke



Adjustable pivot limits



Standard yoke



Short yoke

Optical options

LSLH - Linear spread lens horizontal distribution
LSLV - Linear spread lens vertical distribution



LSLH



LSLV

	Beam angle with LSLH/LSLV
VN	8° x 60°
NS	9° x 60°
NF	18° x 65°
FL	32° x 72°

Factory installed, not adjustable on site. Not available for WFL optic.
See 'Optical Accessories' section for field adjustable spread lens (LSLA).

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MG - R30

Specification Sheet

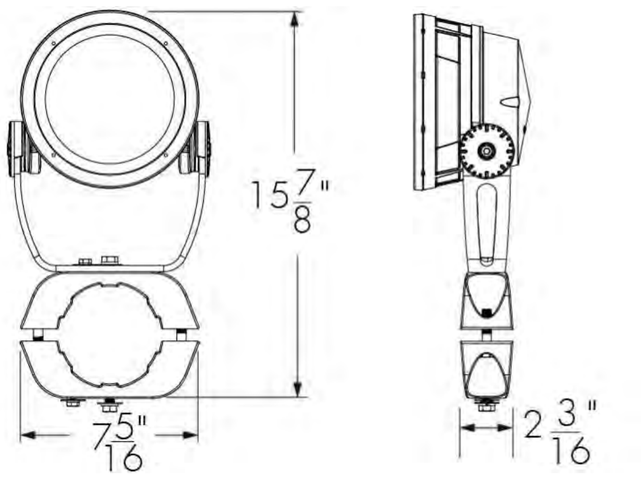
lumenbeam

Medium

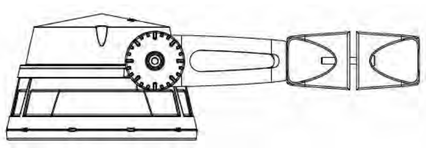
WHITE AND STATIC COLOURS

Mounting accessories (order separately)

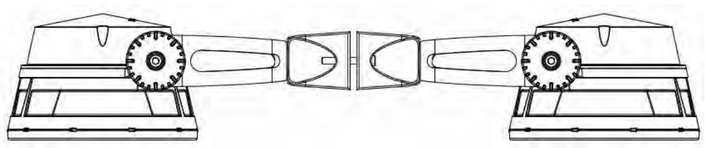
Round pole mounting accessory



PM4 model shown.
Consult factory for square pole section.



PM4-1, PM4.5-1, PM5-1 - Round pole mounting accessory - single fixture

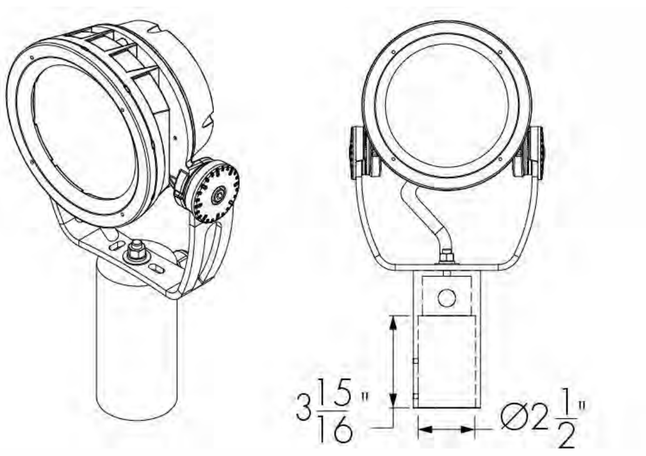


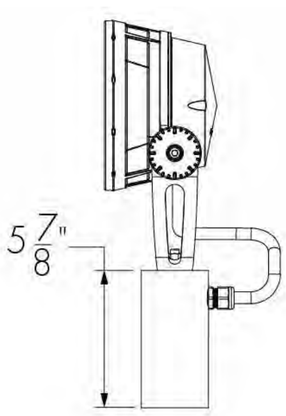
PM4-2, PM4.5-2, PM5-2 - Round pole mounting accessory - twin fixures
*One bracket assembly is supplied per 2 fixtures unless otherwise specified.

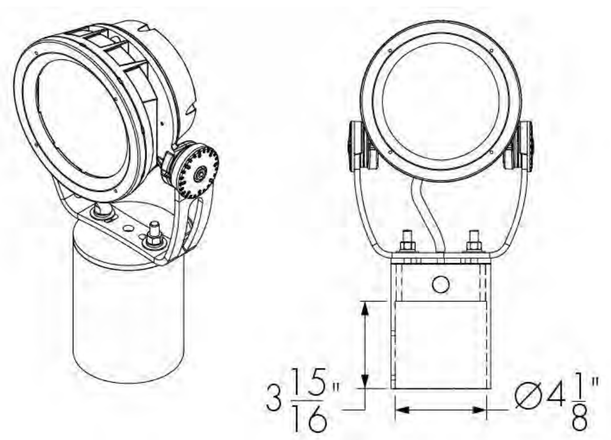
	PM4	PM4.5	PM5
For pole Ø	4" ± 1/16"	4.5" ± 1/16"	5" ± 1/16"

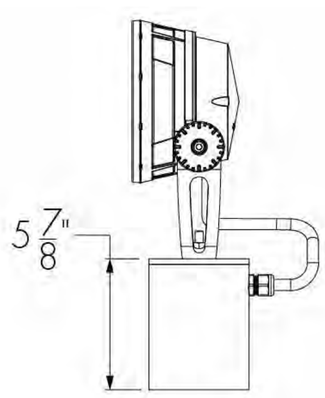
Consult factory for other pole diameters.

Tenon adapter





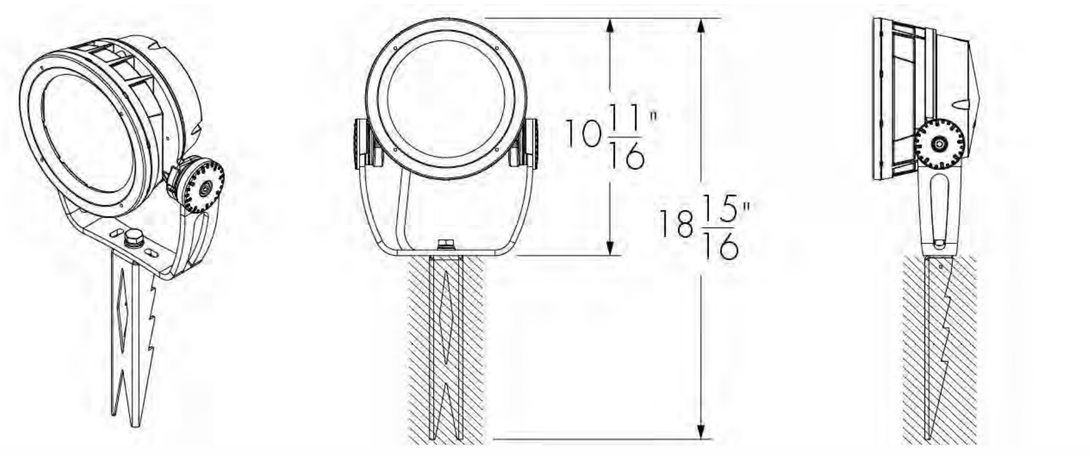




TN2 - Tenon adapter to fit on 2 3/8 in O.D. tenon

TN4 - Tenon adpater to fit on 4 in O.D. tenon

SK - Stake mounting



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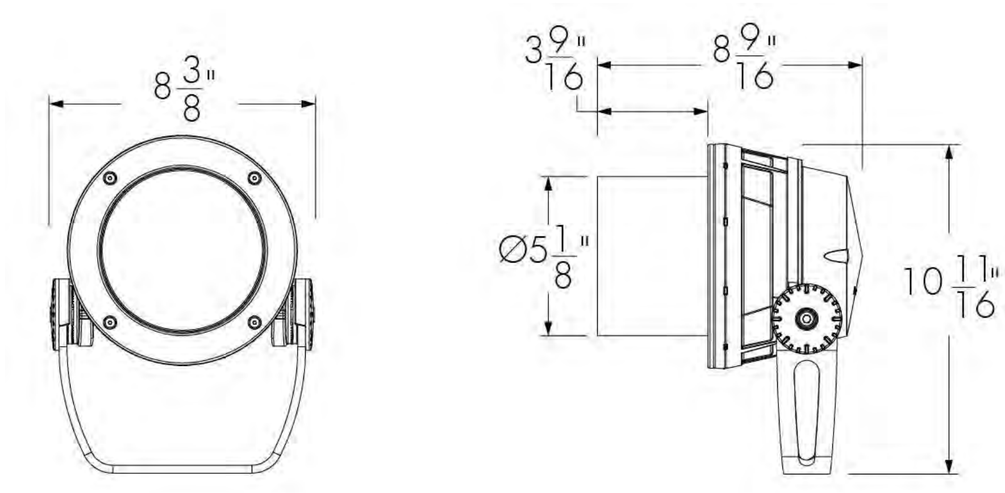
Medium

WHITE AND STATIC COLOURS

Optical accessories (order separately)

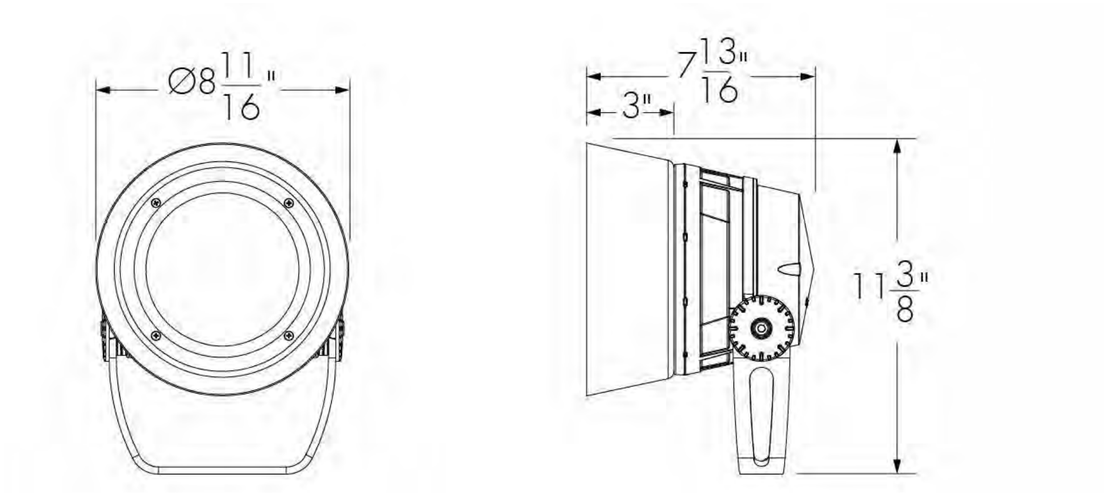
Installed optical accessories will affect the maximum pivot limits for each mounting option, consult factory for details.

SN - Snoot



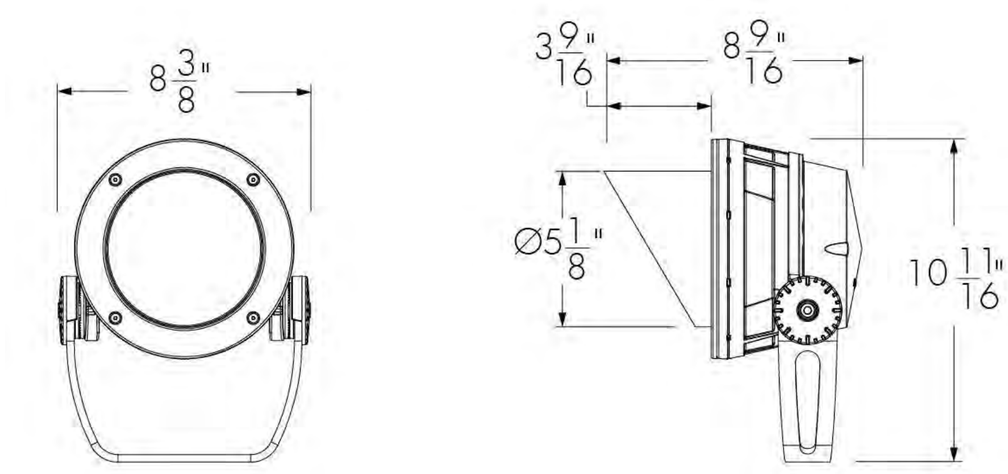
LBMSN-FINISH-BK
Interior surface painted black. Please specify desired exterior FINISH from list of available finishes.

SNW - Snoot wide



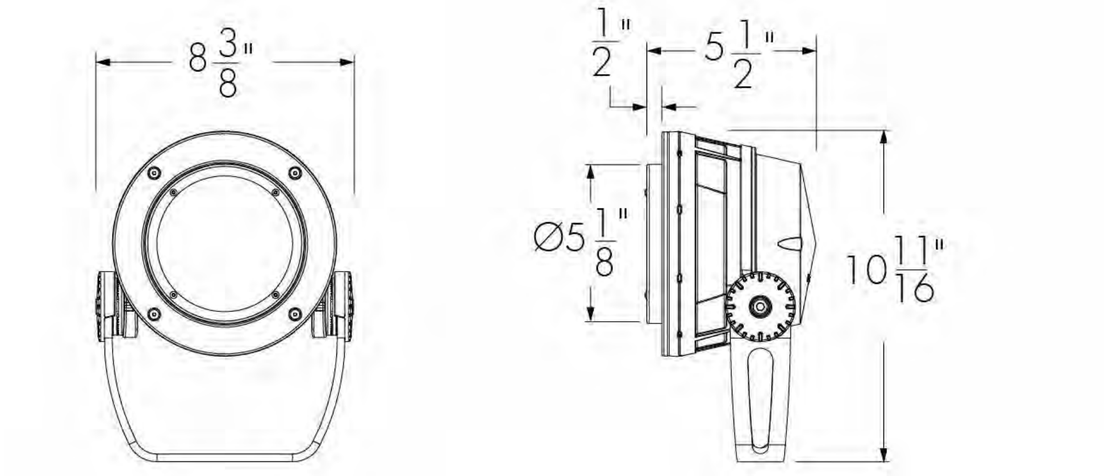
LBMSNW-FINISH-BK
Interior surface painted black. Please specify desired exterior FINISH from list of available finishes.

VS - Visor



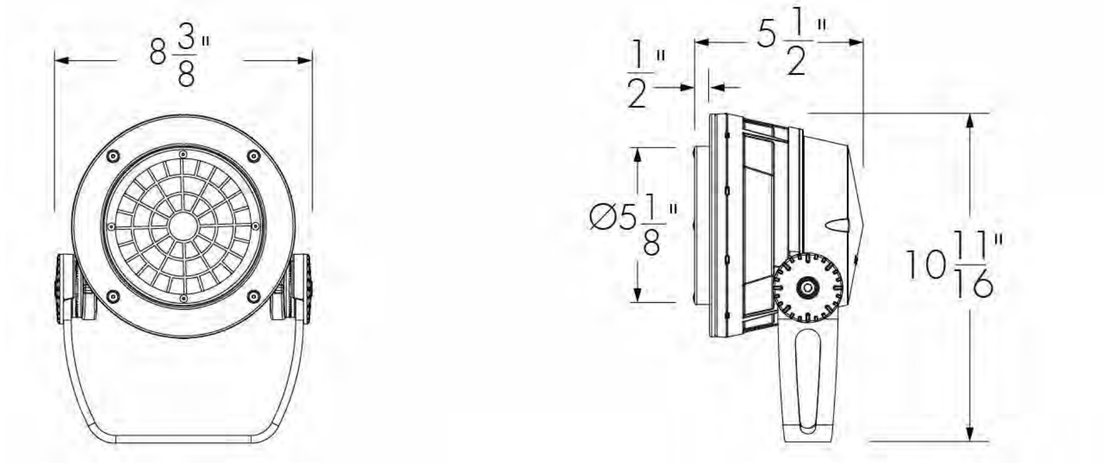
LBMVS-FINISH-BK
Interior surface painted black. Please specify desired exterior FINISH from list of available finishes.

LSLA - Linear spread lens adjustable



LBMLSLA-FINISH
Please specify desired exterior FINISH from list of available finishes.

WG - Wire guard



LBMWG-FINISH
Please specify desired exterior FINISH from list of available finishes.

Accessory combinations

+	Snoot	Snoot wide	Visor
Linear spread lens adjustable	YES	NO*	YES
Wire guard	YES	NO	YES

Accessory combinations must be ordered together on a single line.
Ex: A snoot + wire guard combination order code is LBMSNWG-BK-BK.
*Consult factory for a linear spread lens adjustable + snoot wide combination.

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WHITE AND STATIC COLOURS

Available exterior finishes for optical accessories

BK - Black Sandtex®
BRZ - Bronze Sandtex®
SI - Silver Sandtex®
WH - Smooth white
BKTX - Textured black
BRZTX - Textured bronze, non-metallic
GRATX - Textured medium grey
GRNTX - Textured green
WHTX - Textured white
CC - Custom colour and finish (please specify RAL colour)*

*Lumenpulse offers a wide selection of RAL CLASSIC (K7) colours with a smooth texture and high-gloss finish. Please consult factory for a list of available K7 colours, other RAL textures and glosses, or to match alternate colour charts. Final colour matching results may vary.

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Specification Sheet

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WHITE AND STATIC COLOURS

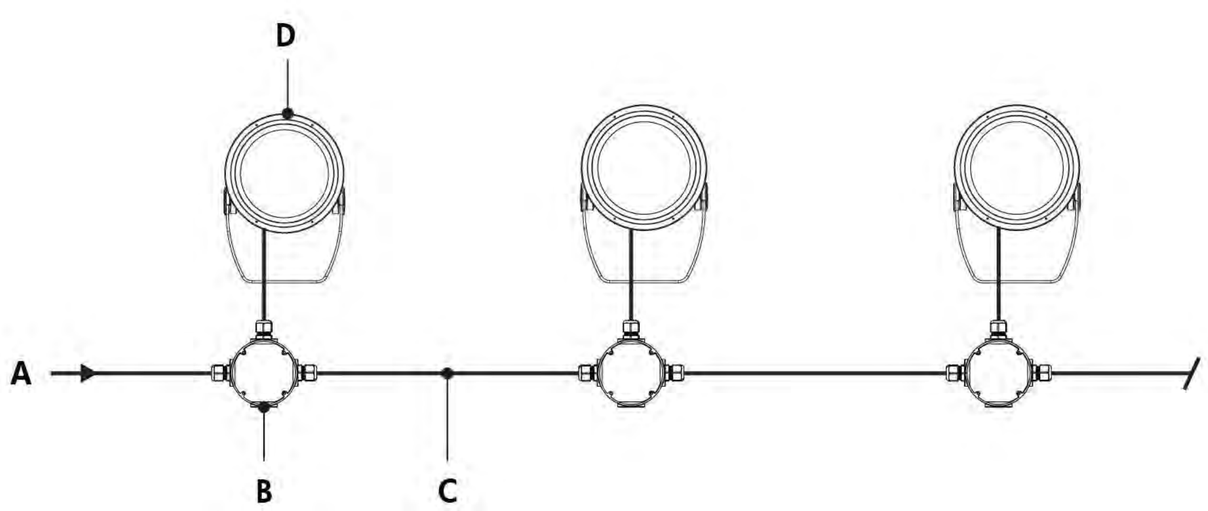
Typical wiring diagrams

Wiring colour code

CE Colour Code	USE
Yellow/Green Brown Blue Black Grey	Ground Live 100-277V Neutral 1-10V / Data + 1-10V / Data -

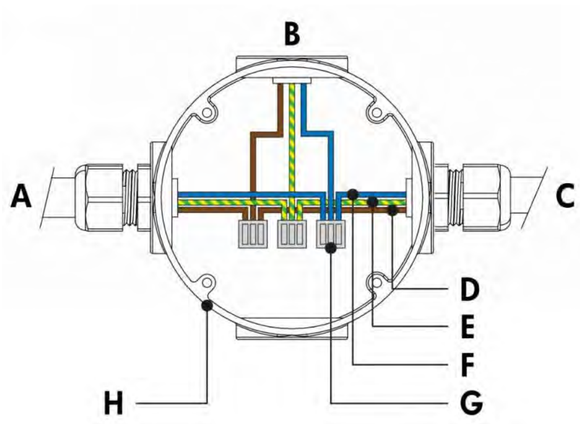
CE Class II Colour Code	USE
Brown Blue Black 1 Black 2 Grey	Live 100-277V Neutral Signal common (DMX/RDM only) 1-10V / Data + 1-10V / Data -

On/Off control (NO)



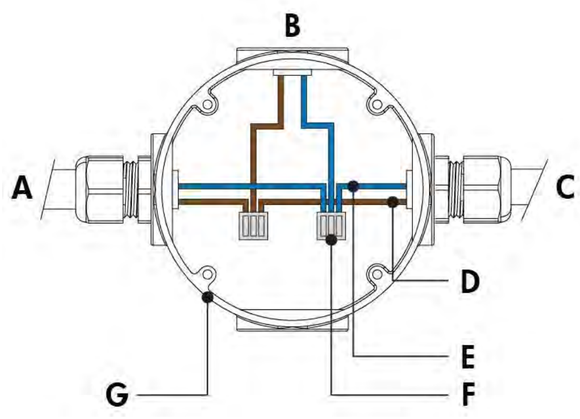
A - Power input (100-277V)
B - Junction box (by others)
C - Power wiring (by others)
D - Lumenbeam Medium

On/Off control (NO) - wiring detail - CE



A - Power input or from previous fixture
B - To fixture
C - To next fixture
D - Live
E - Ground
F - Neutral
G - Terminal connector (by others)
H - Junction box (by others)

On/Off control (NO) - wiring detail - CE Class II option



A - Power input or from previous fixture
B - To fixture
C - To next fixture
D - Live
E - Neutral
F - Terminal connector (by others)
G - Junction box (by others)

- Consult factory for specific applications and maximum fixture count/cable length recommendations.
- 28 watts per fixture.

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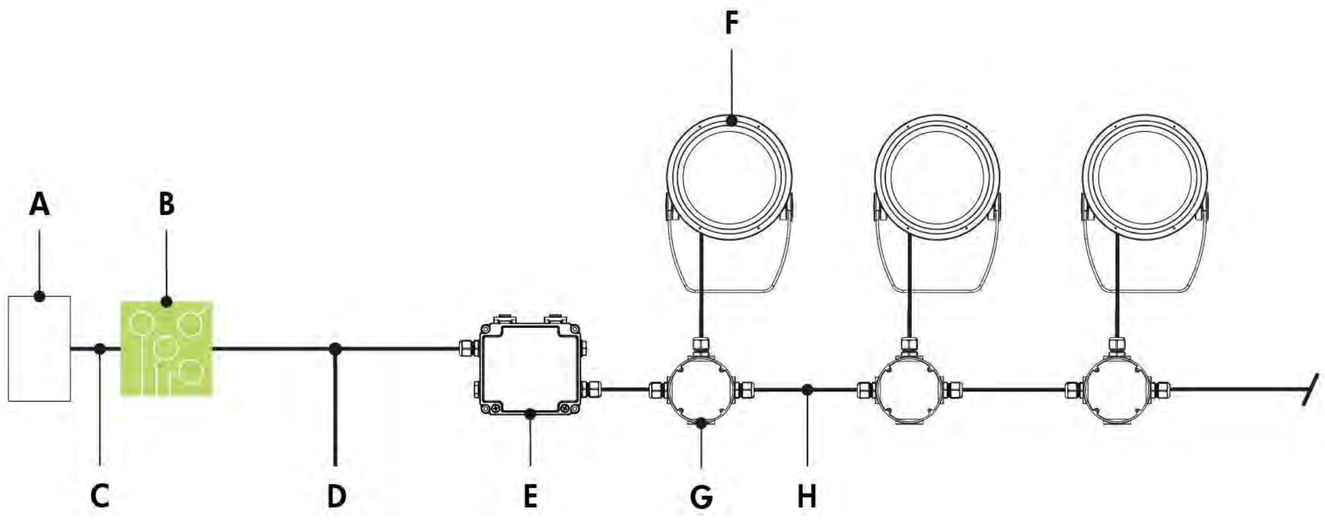
Specification Sheet

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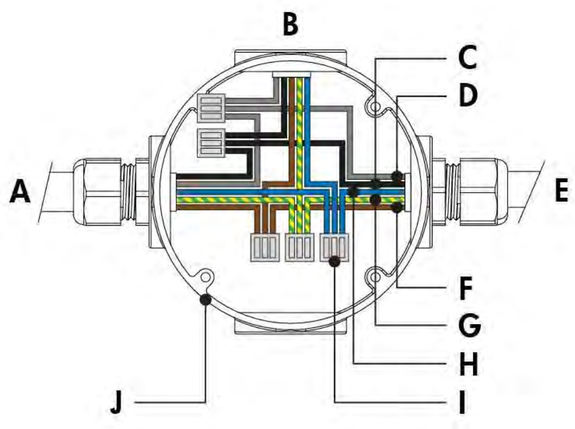
WHITE AND STATIC COLOURS

Lumentalk (LT)



A - Third party dimmer/controller
B - Lumentranslator (LTL-010, -DMX, -TRIAC, -DALI)
C - Data wiring (by others)
D - Power line (120-277V AC)
E - Lumentalk Data Bridge (LDB-DIM or LDB-DMX)
F - Lumenbeam Medium
G - Junction box (by others)
H - Power wiring (by others)

Lumentalk (LT) - wiring detail using LDB



A - From Lumentalk Data Bridge (control over power line via Lumentalk system) or from previous fixture
B - To fixture
C - 0-10 V + / Data +
D - 0-10 V - / Data -
E - To next fixture
F - Live
G - Ground
H - Neutral
I - Terminal connector (by others)
J - Junction box (by others)

- Consult factory for specific applications and maximum fixture count/cable length recommendations.
- Lumentalk Data Bridge required for Lumentalk system, see LDB installation instructions for details.

- For applications with all fixtures controlled as 1 zone: fixtures and Lumentalk Data Bridge must be specified as DIM. Maximum of 10 fixtures per LDB-DIM, consult factory for applications that require additional capabilities.
- For applications with fixtures controlled individually: fixtures and Lumentalk Data Bridge must be specified as DMX, 2-step commissioning process: 1 - DMX/RDM system using LumenID software and a LID, 2 - Lumentalk system using LumentalkID software and a LID-LT. Maximum of 32 fixtures per LDB-DMX. Consult factory for details.

- For DMX applications: 1 DMX controller per Lumentalk network, maximum of 48 DMX channels per Lumentalk network (minimum step transition update rate is 1 second, minimum fade time between two colours is 1 minute). Consult factory for applications that require additional capabilities.
- Maximum of 1 transmitter (Lumentranslator or Lumenlink) per system.
- No third party fixtures allowed on the same circuit.
- Consult factory for DALI Lumentalk applications.
- 1% minimum dimming value.
- 28 watts per fixture.

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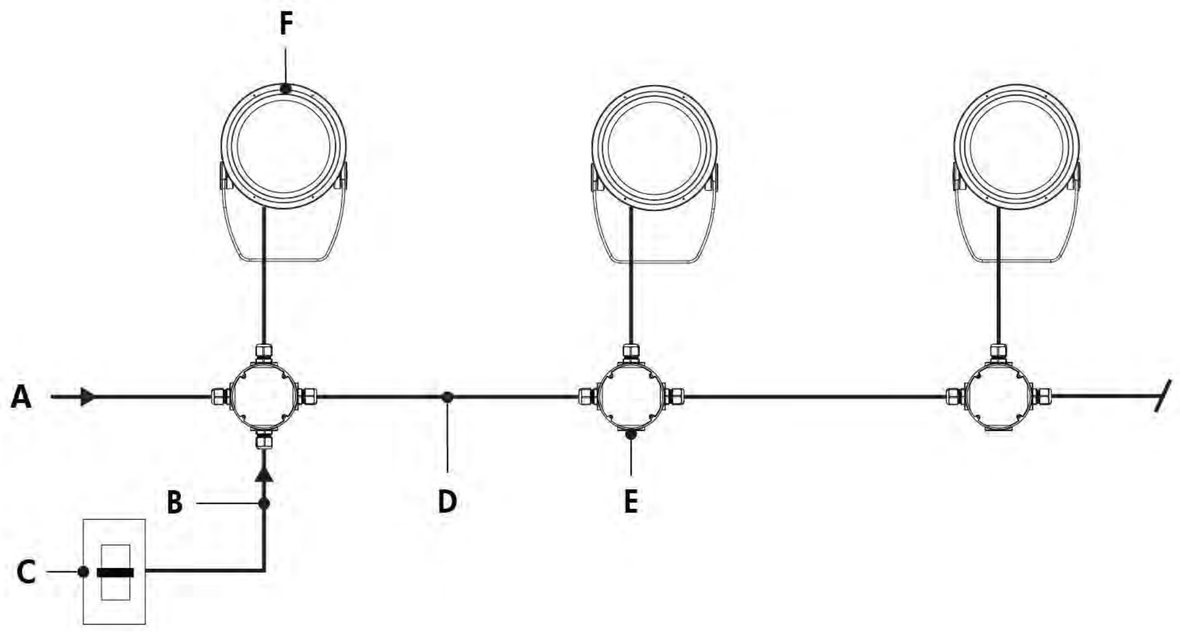
Specification Sheet

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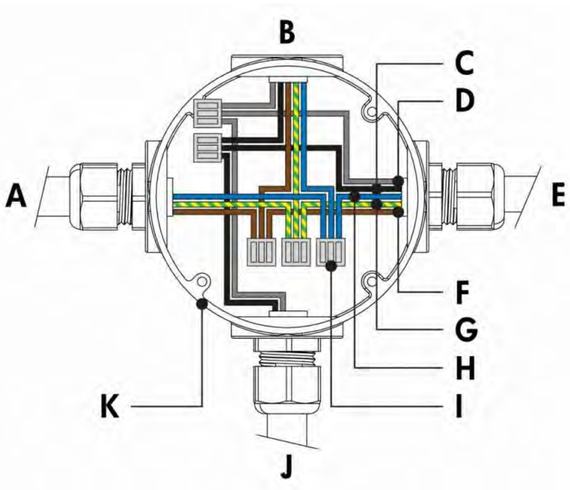
WHITE AND STATIC COLOURS

1-10V dimming (DIM)



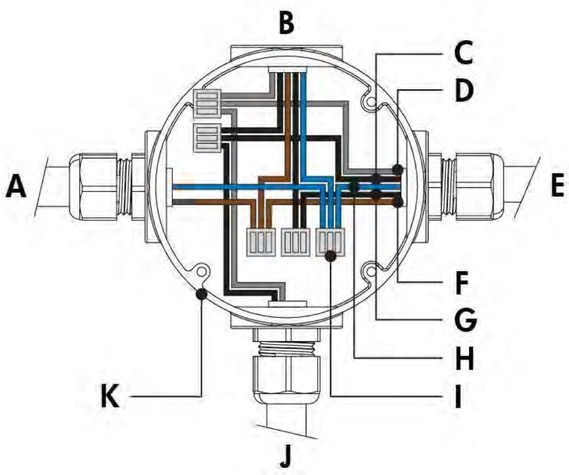
A - Power input (100-277V)
B - Data wiring (by others)
C - Third party dimmer
D - Power and data wiring (by others)
E - Junction box (by others)
F - Lumenbeam Medium

1-10V dimming (DIM) - wiring detail - CE



A - Power input or from previous fixture
B - To fixture
C - 1-10 V +
D - 1-10 V -
E - To next fixture
F - Live
G - Ground
H - Neutral
I - Terminal connector (by others)
J - From third party dimmer
K - Junction box (by others)

1-10V dimming (DIM) - wiring detail – CE Class II



A - Power input or from previous fixture
B - To fixture
C - 1-10 V +
D - 1-10 V -
E - To next fixture
F - Live
G - Signal common
H - Neutral
I - Terminal connector (by others)
J - From third party dimmer
K - Junction box (by others)

- Consult factory for specific applications and maximum fixture count/cable length recommendations.
- 1-10V mA ratings: passive dimmer (Current Sink): 3mA per fixture, active dimmer (Current Source): 0.5mA per fixture.
- 10% minimum dimming value.
- 28 watts per fixture.

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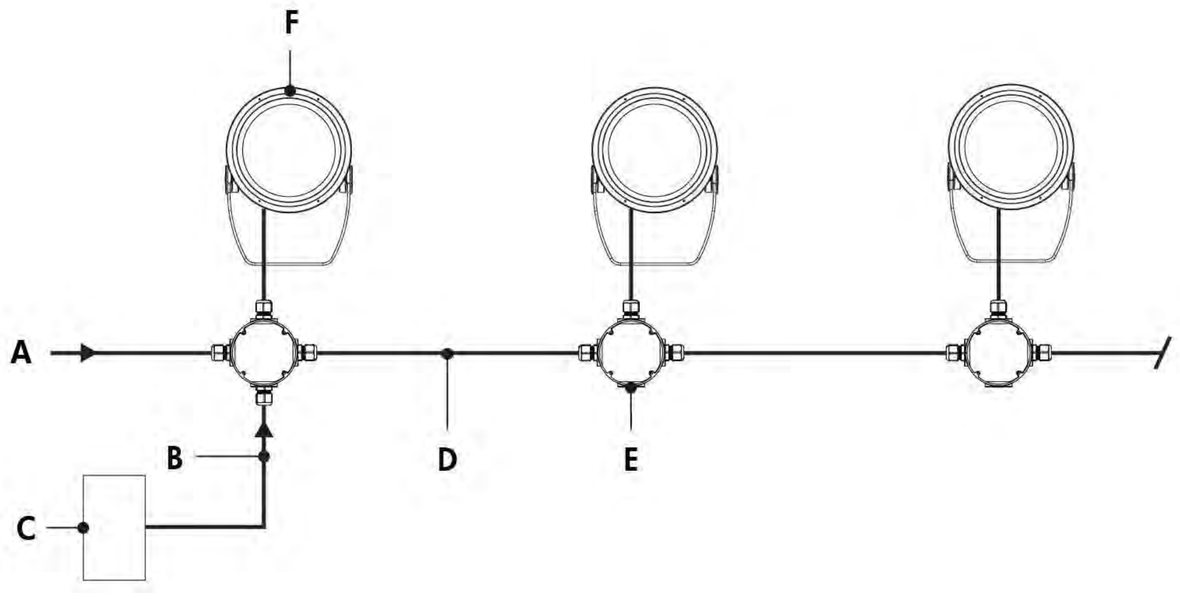
Specification Sheet

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Medium

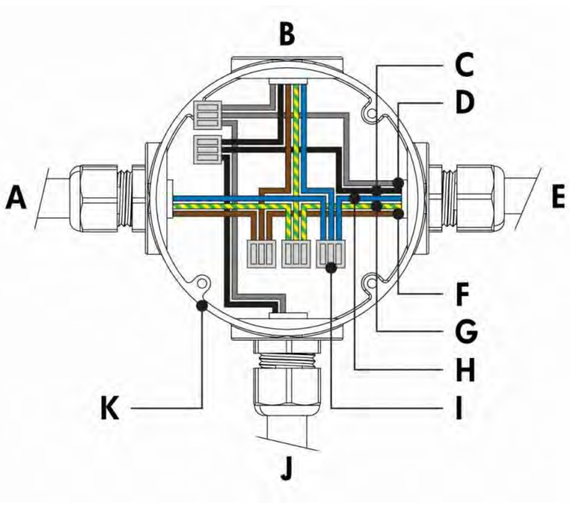
WHITE AND STATIC COLOURS

DALI dimming (DALI)



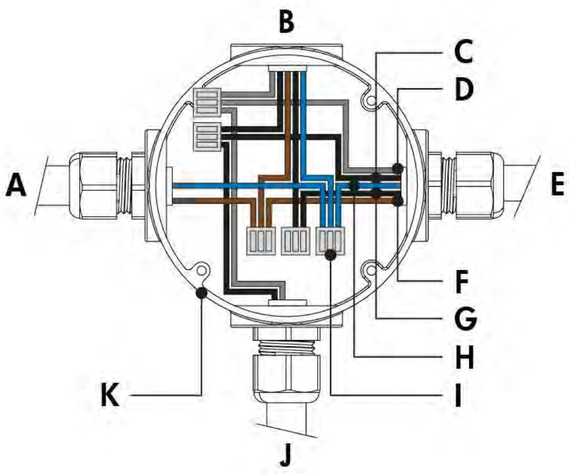
A - Power input (100-277V)
B - Data wiring (by others)
C - Third party DALI controller
D - Power and data wiring (by others)
E - Junction box (by others)
F - Lumenbeam Medium

DALI dimming (DALI) - wiring detail - CE



A - Power input or from previous fixture
B - To fixture
C - Data +
D - Data -
E - To next fixture
F - Live
G - Ground
H - Neutral
I - Terminal connector (by others)
J - From third party DALI controller
K - Junction box (by others)

DALI dimming (DALI) - wiring detail - CE Class II option



A - Power input or from previous fixture
B - To fixture
C - Data +
D - Data -
E - To next fixture
F - Live
G - Signal common
H - Neutral
I - Terminal connector (by others)
J - From third party DALI controller
K - Junction box (by others)

- Consult factory for specific applications and maximum fixture count/cable length recommendations.
- Maximum of 64 DALI fixtures per DALI loop.
- 1% minimum dimming value.
- 28 watts per fixture.

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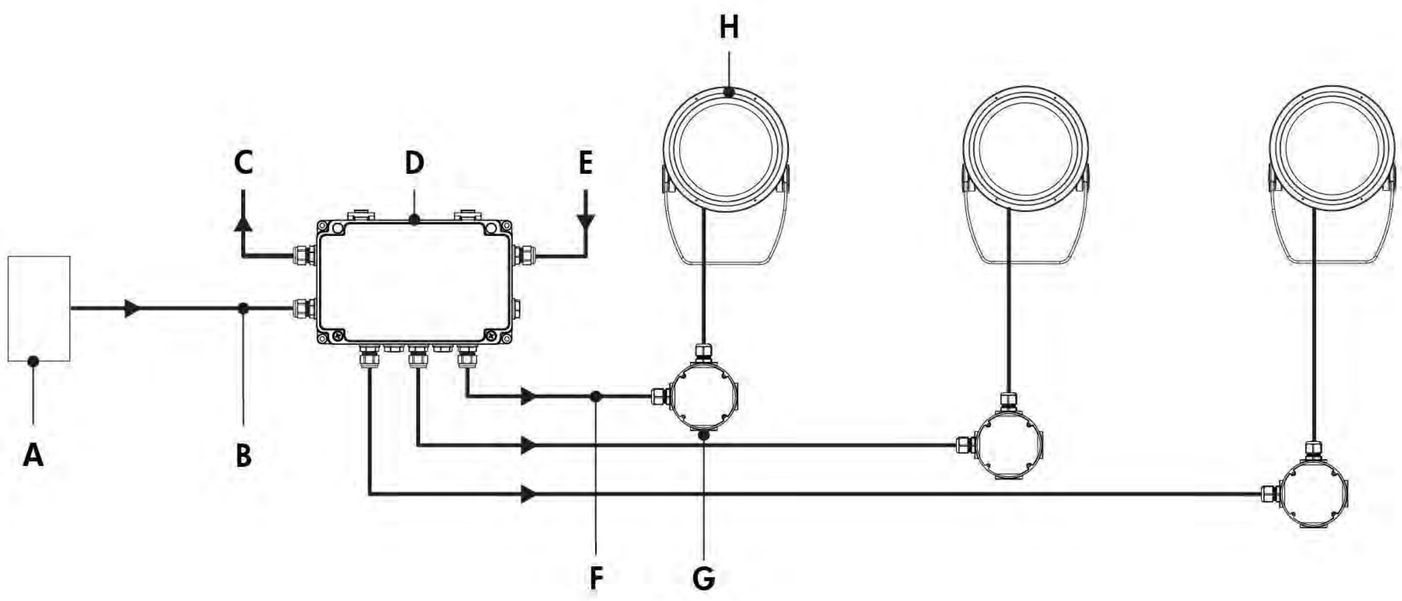
Specification Sheet

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Medium

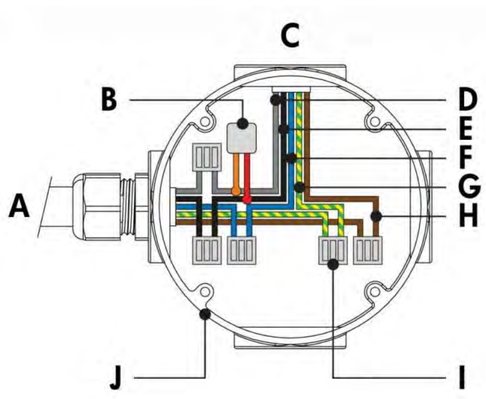
WHITE AND STATIC COLOURS

Star Layout (DMX/RDM)



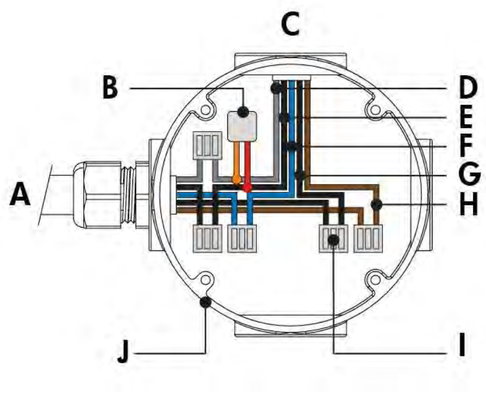
A - Third party DMX/RDM controller
B - Data input (Belden 9841 or equivalent, by others)
C - Data output to next CBX (optional, not isolated/not boosted)
D - CBX-ST
E - Power input (100-277V)
F - Power and data output to fixture (wiring by others)
G - Junction box (by others)
H - Lumenbeam Medium

Star Layout (DMX/RDM) - wiring detail - CE



A - From CBX or previous fixture
B - Lumenterminator*
C - To fixture
D - Data -
E - Data +
F - Neutral
G - Ground
H - Live
I - Terminal connector (by others)
J - Junction box (by others)

Star Layout (DMX/RDM) - wiring detail - CE Class II option



A - From CBX or previous fixture
B - Lumenterminator*
C - To fixture
D - Data -
E - Data +
F - Neutral
G - Signal common
H - Live
I - Terminal connector (by others)
J - Junction box (by others)

Maximum number of fixtures per run (Based on16A maximum, 1,5mm² cable, fixtures spaced 10ft on center, first fixture 50ft from CBX)				
Configuration/Voltage	**120V**	**208V**	**240V**	**277V**
LBM	29	32	32	32

- Consult factory for specific applications and maximum fixture count/cable length recommendations.
- Run length calculations are based on a voltage drop of no more than 25V.
- The DMX/RDM protocol states a maximum of 32 DMX/RDM enabled fixtures on any single run.
- Maximum of 4 DMX/RDM repeaters/CBX cascading in line.
- Maximum of 6 outputs per CBX-ST.
- Each fixture requires 1 DMX address.
- 1% minimum dimming value.
- 28 watts per fixture.

*DMX terminator is required at the end of each run to maintain data integrity. (6x) DMX lumenterminators included per CBX-ST. See installation instructions for details.

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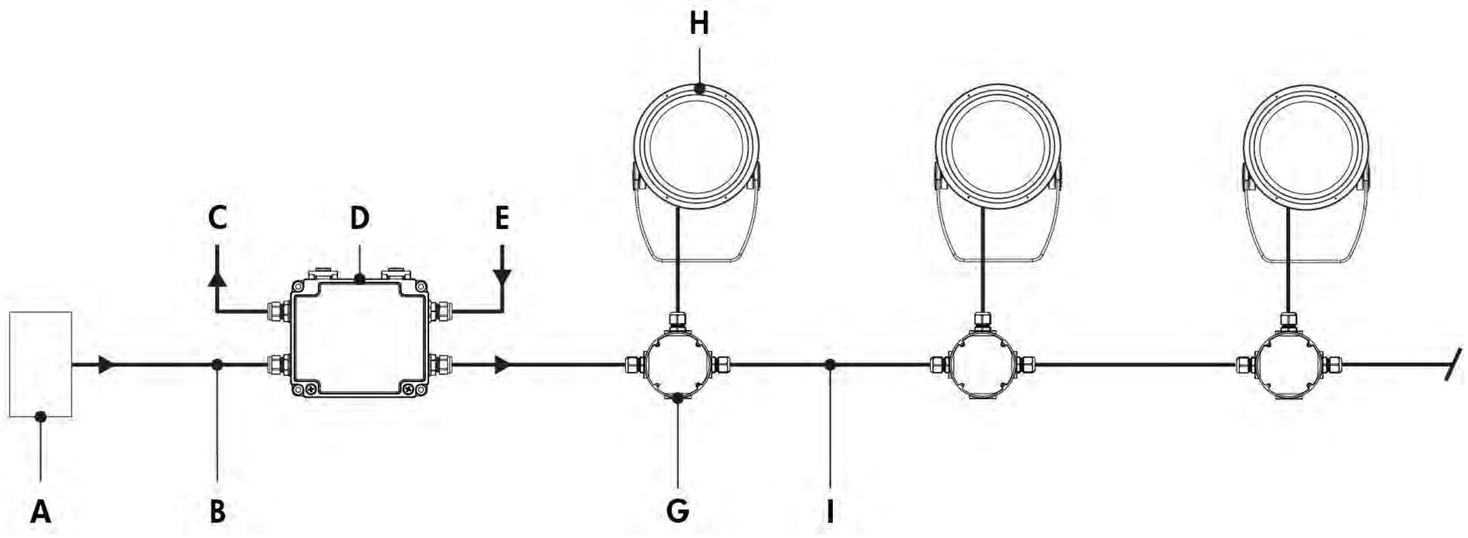
Specification Sheet

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Medium

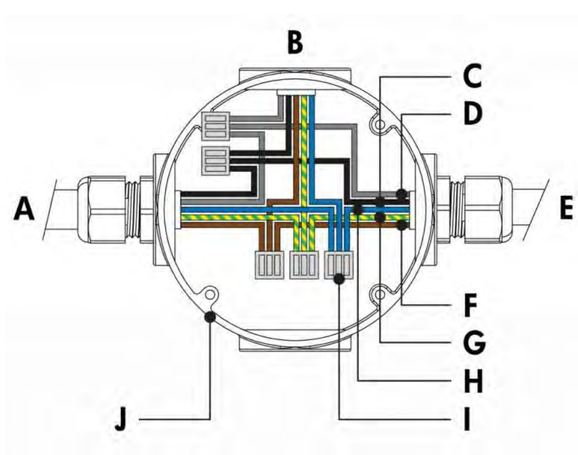
WHITE AND STATIC COLOURS

Daisy Chain Layout (DMX/RDM)



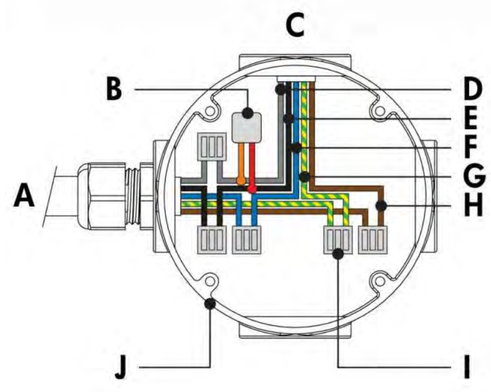
A - Third party DMX/RDM controller
B - Data input (Belden 9841 or equivalent, by others)
C - Data output to next CBX (optional, not isolated/not boosted)
D - CBX-DS
E - Power input (100-277V)
F - Power and data output to fixture (wiring by others)
G - Junction box (by others)
H - Lumenbeam Medium
I - Power and data wiring (by others)

Daisy Chain Layout (DMX/RDM) - wiring detail (first or middle of run) - CE



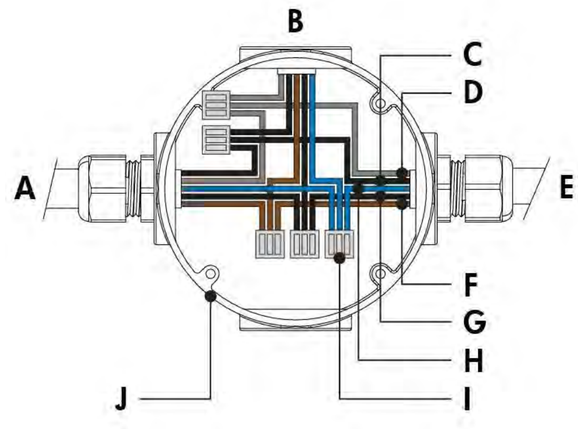
A - From CBX or previous fixture
B - To fixture
C - Data +
D - Data -
E - To next/from previous fixture
F - Live
G - Ground
H - Neutral
I - Terminal connector (by others)
J - Junction box (by others)

Daisy Chain Layout (DMX/RDM) - wiring detail (end of run) - CE



A - From CBX or previous fixture
B - Lumenterminator*
C - To fixture
D - Data -
E - Data +
F - Neutral
G - Ground
H - Live
I - Terminal connector (by others)
J - Junction box (by others)

Daisy Chain Layout (DMX/RDM) - wiring detail (first or middle of run) - CE Class II option



A - From CBX or previous fixture
B - To fixture
C - Data +
D - Data -
E - To next/from previous fixture
F - Live
G - Signal common
H - Neutral
I - Terminal connector (by others)
J - Junction box (by others)

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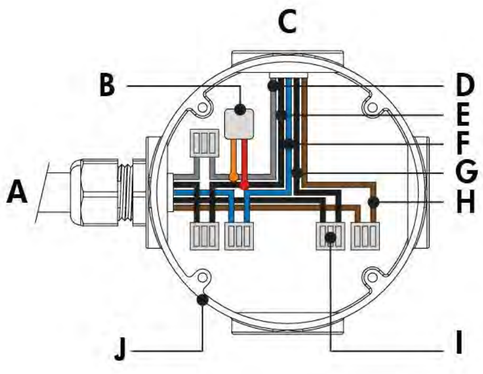
Specification Sheet

lumenbeam

Medium

WHITE AND STATIC COLOURS

Daisy Chain Layout (DMX/RDM) - wiring detail (end of run) - CE Class II option



A - From CBX or previous fixture
B - Lumenterminator*
C - To fixture
D - Data -
E - Data +
F - Neutral
G - Signal common
H - Live
I - Terminal connector (by others)
J - Junction box (by others)

Maximum number of fixtures per run (Based on16A maximum, 1,5mm² cable, fixtures spaced 10ft on center, first fixture 50ft from CBX)				
Configuration/Voltage	**120V**	**208V**	**240V**	**277V**
LBM	29	32	32	32

- Consult factory for specific applications and maximum fixture count/cable length recommendations.
- Run length calculations are based on a voltage drop of no more than 25V.
- The DMX/RDM protocol states a maximum of 32 DMX/RDM enabled fixtures on any single run.
- Maximum of 4 DMX/RDM repeaters/CBX cascading in line.
- Maximum of 1 output per CBX-DS.
- Maximum of 3 ft cable length between fixture and next junction box for daisy chain layout.
- Each fixture requires 1 DMX address.
- 1% minimum dimming value.
- 28 watts per fixture.

* DMX terminator is required at the end of each run to maintain data integrity. (2x) DMX lumenterminators included per CBX-DS. See installation instructions for details.

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Specification Sheet

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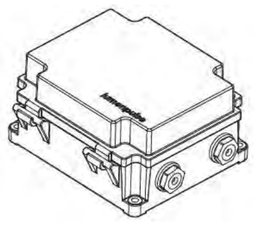
Medium

WHITE AND STATIC COLOURS

Accessories (order separately)

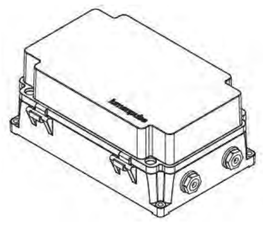
Control Boxes

CBX-DS-Power and control box - daisy chain configuration



DMX/RDM control box. One power and data output to fixture or fixture run. Ethernet enabled option. Refer to CBX specification sheet for details.

CBX-ST-Power and control box - star configuration



DMX/RDM control box. Up to six power and data outputs to fixtures or fixture runs. Ethernet enabled option. Refer to CBX specification sheet for details.

LDB-Lumentalk Data Bridge



Lumentalk Data Bridge, 0-10V or DMX output. Refer to LDB specification sheet for details.

Control Systems

LTO2-Lumentouch 2.0™



Lumentouch is a wall mount DMX 512 controller keypad.

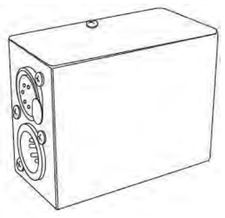
LCU-Lumencue



Lumencue is a USB / mini SD DMX 512 controller.

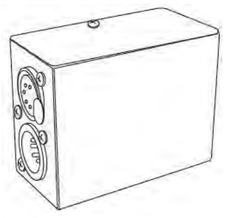
Diagnostic and Addressing Tools

LID-LumenID



LumenID is a diagnostic and addressing DMX/RDM tool. It must be specified on all DMX applications. Refer to LID specification sheet for details.

LID-LT-LumentalkID



LumentalkID is a diagnostic and addressing tool. It must be specified for all Lumentalk (LT) applications. Refer to LID-LT specification sheet for details.

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Specification Sheet

lumenbeam

Medium

WHITE AND STATIC COLOURS

How to order

1	2	3	4	5	6	7	8
LBM							

9	10

1 . Housing

LBM	Lumenbeam™ Medium

2 . Voltage

100	100 volts
120	120 volts
208	208 volts
220	220 volts
240	240 volts
277	277 volts

3 . Colour and Colour Temperature (1)

22K	2200K
27K	2700K
30K	3000K
35K	3500K
40K	4000K
57K	5700K
RD	Red
GR	Green
BL	Blue

4 . Optics

VN	Very Narrow 6°
NS	Narrow Spot 10°
NF	Narrow Flood 20°
FL	Flood 40°
WFL	Wide Flood 60°

5 . Optical Option

LSLH	Linear spread lens horizontal distribution (2)
LSLV	Linear spread lens vertical distribution (2)

6 . Finish

BK	Black Sandtex®
BRZ	Bronze Sandtex®
SI	Silver Sandtex®
WH	Smooth white
BKTX	Textured black
BRZTX	Textured bronze non-metallic
GRATX	Textured medium grey
GRNTX	Textured green
WHTX	Textured white
CC	Custom colour and finish (please specify RAL colour) (3)

7 . Control (4) (5)

NO	On/Off control
DIM	1-10V dimming
DALI	DALI dimming
DMX/RDM	DMX/RDM enabled

8 . Options

SY	Short Yoke
3GV	3G ANSI C136.31 Vibration Rating for bridge applications
CRC	Corrosion-resistant coating for hostile environments (6)

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Specification Sheet

lumenbeam

Medium

WHITE AND STATIC COLOURS

9 . Certification

UL	UL compliant
CE	CE compliant
CEII	CE compliant Class II double insulated

10 . Cable Length [7]

1M	3.3 ft [7] [8]
5M	16.4 ft
10M	32.8 ft
15M	49.2 ft
20M	65.6 ft
30M	98.4 ft

Notes:

[1] Consult factory for availability of static Royal Blue, 6500K and 90+ CRI.

[2] Factory installed, not available for 60° optic. Field adjustable spread lens optical accessory available, order separately.

[3] Lumenpulse offers a wide selection of RAL CLASSIC (K7) colours with a smooth texture and high-gloss finish. Please consult factory for a list of available K7 colours, other RAL textures and glosses, or to match alternate colour charts. Final colour matching results may vary.

[4] Lumentalk system is enabled with LDB accessory, DIM or DMX/RDM must be specified in the order code. See the typical wiring diagrams in the specification sheet for details.

[5] A Lumentranslator and LumentalkID (LIDLT) must be specified for Lumentalk applications. Consult Lumentranslator and Lumentalk pages and specification sheets for details.

[6] Use only when exposed to salt spray and harsh chemicals. This option is not required for normal outdoor exposure.

[7] 1 m cable length is standard unless otherwise specified.

[8] Maximum of 3.3 ft cable length for daisy chain DMX applications with CBX-DS.

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YG11

Lam Partners
ARCHITECTURAL LIGHTING DESIGN

Pole top luminaires with indirect adjustable light distribution

Type:
BEGA Product:
Project:
Voltage:
Color:
Options:
Modified:

Housing/fitter: Heavy one piece die-cast aluminum optical housing with integrally cast transition "fitter" which slip fits a 3" O.D. pole top or tenon and is secured by six (6) flush, stainless steel set screws. The housing gracefully supports two (2) ¾" diameter stainless steel struts located at 180° as well as a die-cast aluminum diffuser retaining ring. All components function and appear as a unified design. Die castings are marine grade, copper free (≤ 0.3% copper content) A360.0 aluminum alloy.

Enclosure: ¾" thick, machined tempered crystal clear optical glass with a high temperature-rated one piece molded silicone rubber gasket encloses the precise, stippled pure aluminum, wide flood distribution reflector. The glass retaining ring is secured by two (2) hidden stainless steel hex head access screws.

Reflective disk: 31½" diameter x ¼" thick aluminum plate secured by two (2) die-cast aluminum fixed clamping "saddles" which receive the stainless steel struts. Adjustable up to 30° in 5° increments in one direction. A ¼" wide by ⅛" deep "drip" channel is provided around the edge of the underside disk.

Electrical: 36.4W LED luminaire, 43 total system watts, -30°C start temperature. Integral 120V through 277V electronic LED driver, 0-10V dimming. LED module(s) are available from factory for easy replacement. Standard LED color temperature is 3000K with an 85 CRI. Available in 4000K (85 CRI); add suffix K4 to order.

Note: LEDs supplied with luminaire. Due to the dynamic nature of LED technology, LED luminaire data on this sheet is subject to change at the discretion of BEGA-US. For the most current technical data, please refer to www.bega-us.com.

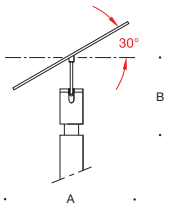
Finish: All BEGA standard finishes are polyester powder coat with minimum 3 mil thickness. Available in four standard BEGA colors: Black (BLK); White (WHT); Bronze (BRZ); Silver (SLV). To specify, add appropriate suffix to catalog number. Custom colors supplied on special order.

CSA certified to U.S. and Canadian standards, suitable for wet locations. Protection class IP65

Weight: 33 lbs.

Effective Projection Area (EPA): 3.2 ft²

Luminaire Lumens: 1742
Tested in accordance with LM-79-08



	Lamp	LEED	A	B
77 208	36.4 W LED	LZ-3	31½	19⅞



BEGA-US 1000 BEGA Way, Carpinteria, CA 93013 (805) 684-0533 FAX (805) 566-9474 www.bega-us.com
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Specification Sheet

lumenfacade

YG12 Lam Partners

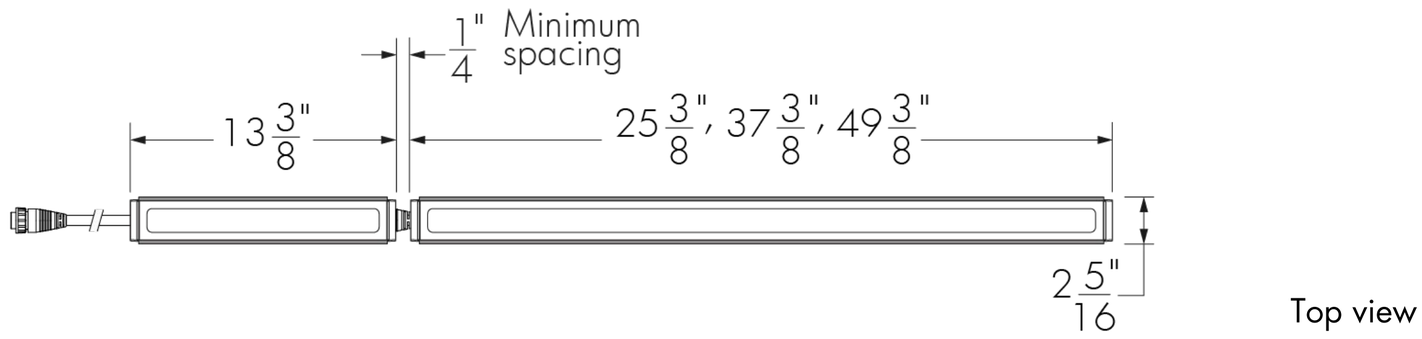
LOG

WHITE AND STATIC COLORS

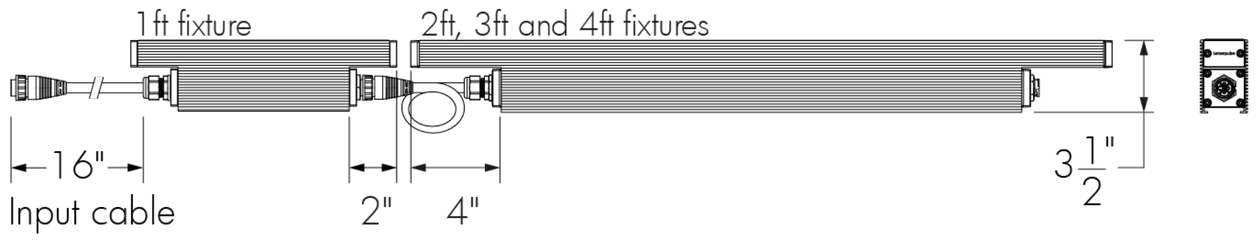
Project Name _____ **Qty** _____

Type _____ **Catalog / Part Number** _____





Top view



End-to-end (ETE) option shown

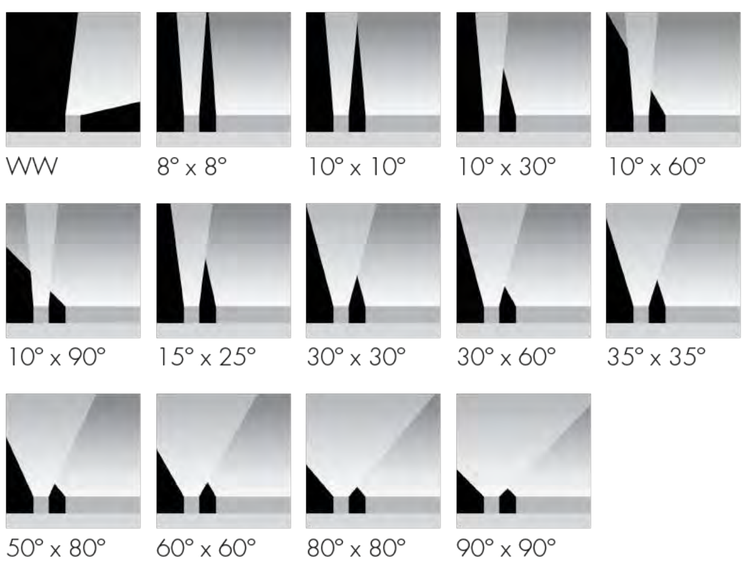
Front and side views

Photometric Summary

	Delivered output (lm)	Intensity (peak cd)
WW	3,592	5,159
8°x8°	4,045	77,896
10°x10°	3,768*	38,346*
10°x30°	3,830	30,056
10°x60°	3,692	19,654
10°x90°	3,576	7,897
30°x30°	3,765	14,726
30°x60°	3,862*	5,119*
60°x60°	3,447*	3,015*
90°x90°	3,592	1,886

Based on HO 4000K, 4ft [1219mm] configuration.
Photometric performance is measured in compliance with IESNA LM-79-08.
*Estimated. Consult website for the latest photometric files.

Optics



Description

The Lumenfacade is a high-performance linear LED luminaire for grazing or floodlighting exterior walls and facades. Featuring second generation LED technology, the luminaire is available in 12 in, 24 in, 36 in or 48 in sections, and can be configured with a wide number of options, including: optics for grazing or flood lighting; a choice of outputs (ASHRAE 5 W/ft, RO 8.5 W/ft or HO 15.25 W/ft); various color temperatures or static colors; various mounting options, finishes, accessories and controls. The Lumenfacade is also available with a unique asymmetric wallwash distribution, providing exceptional uniformity and brightness for walls and signage.

Features

Color and Color Temperature	2200K, 2700K, 3000K, 3500K, 4000K, Red, Green, Blue
Length (nominal)	12 in, 24 in, 36 in, 48 in
Optics	Asymmetric Wallwash, 8° x 8°, 10° x 10°, 10° x 30°, 10° x 60°, 10° x 90°, 15° x 25°, 30° x 30°, 30° x 60°, 35° x 35°, 50° x 80°, 60° x 60°, 80° x 80°, 90° x 90°
Options	End-to-end configuration (factory installed 16 in black input cable included), Corrosion-resistant coating for hostile environments, 3G ANSI C136.31 Vibration Rating for bridge applications, CE (certification covers European Economic Area)
Power Consumption	5 W/ft (meets ASHRAE standards for linear lighting on building facades - not available for 12 in fixture lengths), 8.5 W/ft (RO version), 15.25 W/ft (HO version), Typically 20% higher for 12 in fixture lengths
Warranty	5-year limited warranty

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info@lumenpulse.com **www.lumenpulse.com** **www.lumenpulse.com/products/1046/lumenfacade**

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Colors and Color Temperatures

2200K 2700K 3000K 3500K 4000K

Red Green Blue

Controls

ON/OFF 0-10V DALI

lumentalk DMXrdm EcoSystem Enabled

Ratings

IP66 IK07*

*asymmetric wallwash lens is IK06 rated

Certifications

cULus CE RoHS 5 YEARS lumenpulse

Performance

Illuminance at Distance	Minimum 1 fc at 140 ft (HO 4000K, 48 in fixture, 10° x 60°, DMX/RDM)
Color Consistency	2 SDCM, 3 SDCM (2200K)
Color Rendering	Minimum CRI 80
Lumen Maintenance	L70 280,000 hrs, L95 35,000 hrs

Physical

Housing Material	Low copper content extruded aluminum
Lens Material	Clear tempered glass
Hardware Material	Stainless steel
End Cap Material	Machined aluminum
Gasket Material	Silicone
Surface Finish	Electrostatically applied polyester powder coat
Weight	12 in: 4.5 lbs, 24 in: 7 lbs, 36 in: 10.5 lbs, 48 in: 14 lbs

Electrical and control

Voltage	100 to 277 volts
Fixture Cable	Power and data in one cable, End-to-end option (ETE): 16 in black input cable (no jumper cable needed for minimum spacing between two fixtures)
Leader Cable Conductors	5C #16-5
Maximum Cable and Fixture Run Length	252 ft (On/Off, 277V, RO version), 164 ft (On/Off, 277V, HO version)
Control	On/Off control, Lumentalk, 0-10V dimming, DALI dimming, Lutron® EcoSystem® Enabled dimming, DMX/RDM enabled
Resolution (DMX/RDM)	Per foot or per fixture (configured with LumenID V3 software), 8-bit or 16-bit

Environmental

Storage Temperature	-40 °F to 185 °F (device must reach start-up temperature value before operating)
Start-up Temperature	-13 °F to 122 °F
Operating Temperature	-40 °F to 122 °F
Ingress Protection Rating	IP66
Impact Resistance Rating	IK07 (asymmetric wallwash lens is IK06 rated)

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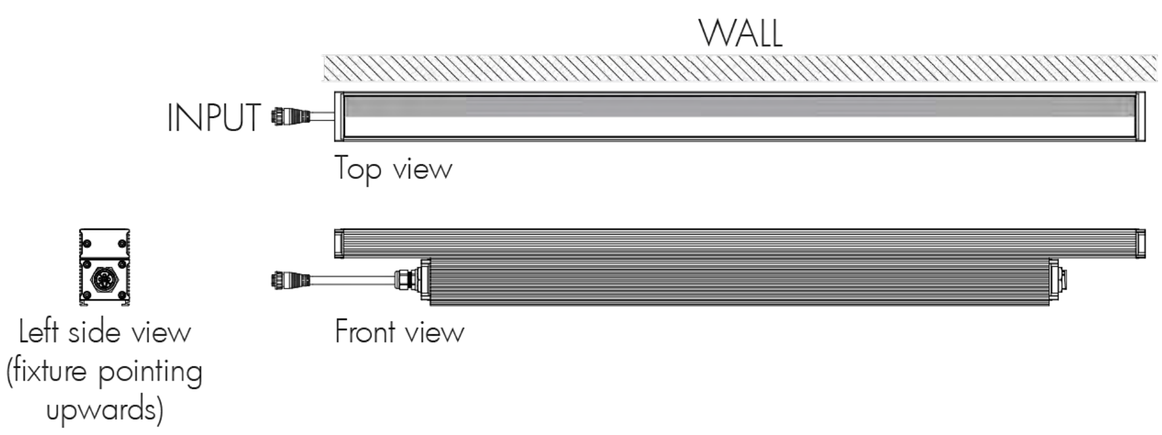
Accessories (order separately)

Optical Accessories	Lumenfacade Radial Louver
Cables	Leader cable (standard), Jumper cable (standard), Leader cable (ETE), Jumper cable (ETE)
Control Boxes	DMX/RDM enabled (daisy chain or star configuration), Ethernet enabled (daisy chain or star configuration), Lumentalk Data Bridge
Control Systems	Lumentone™ 2, Pharos® kit
Diagnostic and Addressing Tools	LumenID, LumentalkID

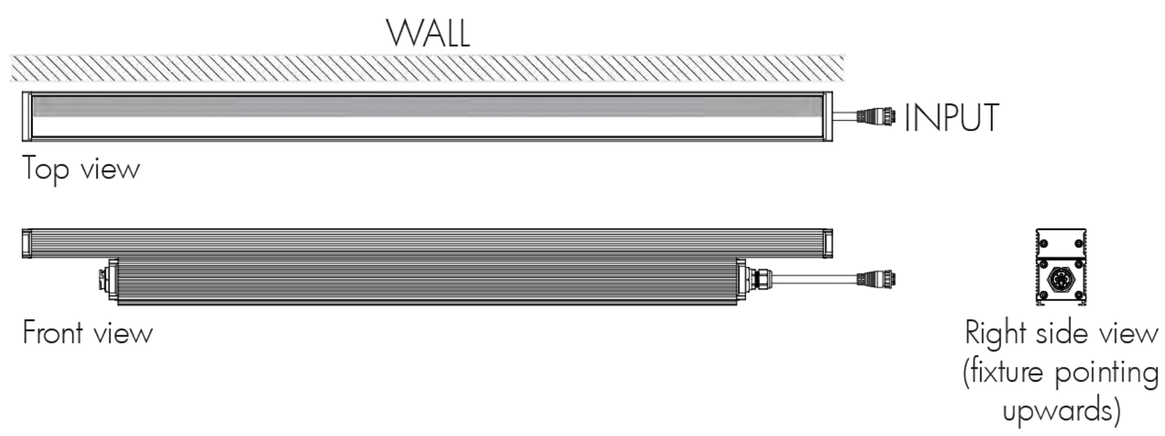
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Asymmetric wallwash optic details

WWLF - Asymmetric wallwash optic, left feed



WWRF - Asymmetric wallwash optic, right feed

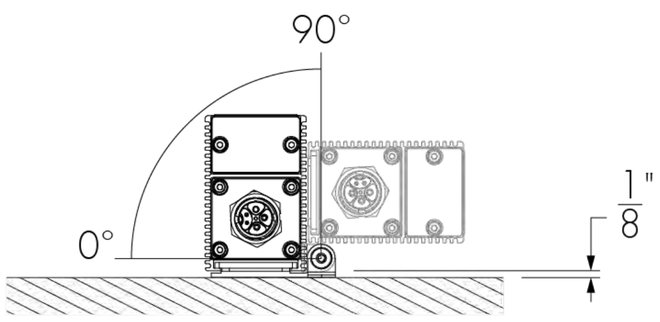


- Always position frosted side toward the wall.
- Fixture's feeding side is based on uplight installations. Feeding sides are reversed when fixture is used in a downlight application.
- Recommended setback from wall is 1/10 of the wall height. Example: 2 ft setback for a 20 ft wall.

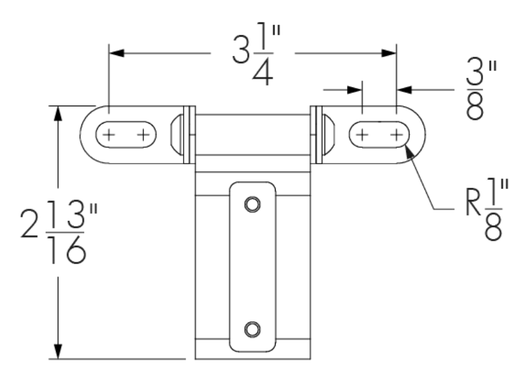
Mounting options

Surface Mount

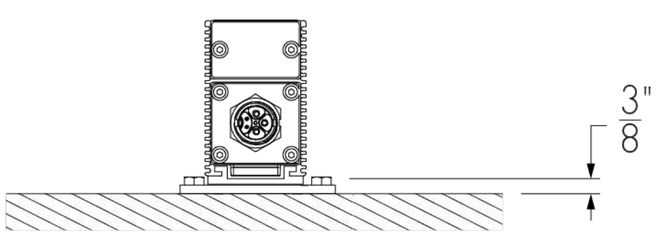
SAM - Slim Adjustable Mounting



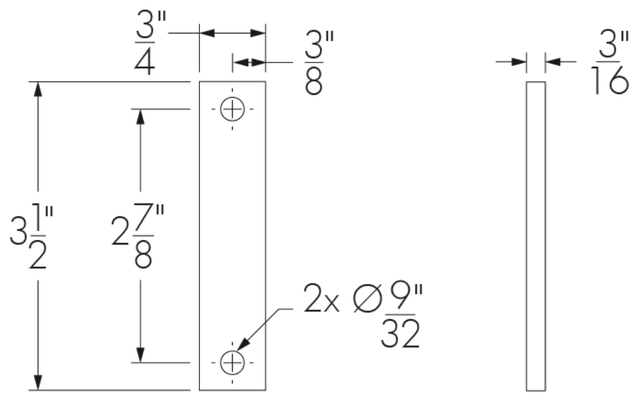
SAM - Mounting hole pattern



UMP - Fixed Mounting



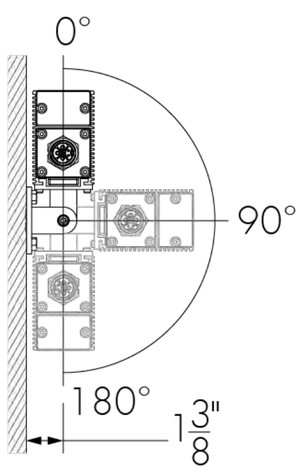
UMP - Mounting hole pattern



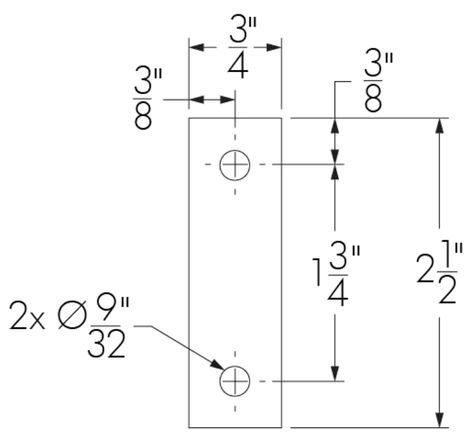
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Wall Mount

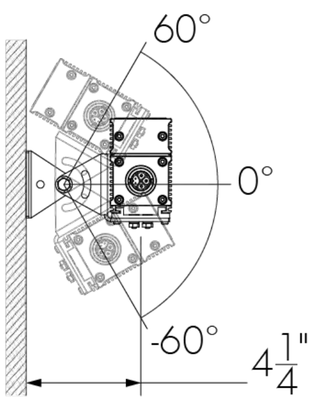
UMAS - Universal Adjustable Mounting



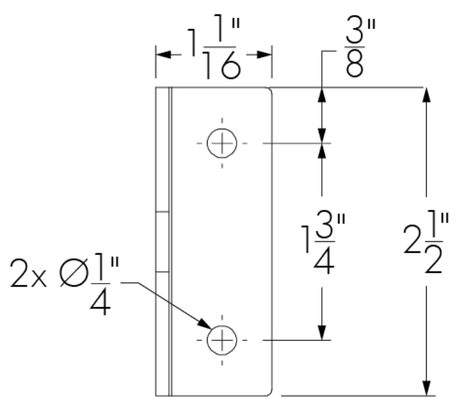
UMAS - Mounting hole pattern



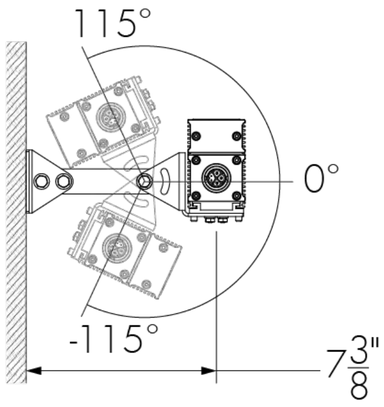
WAM2 - Adjustable Wall Mounting 2 in



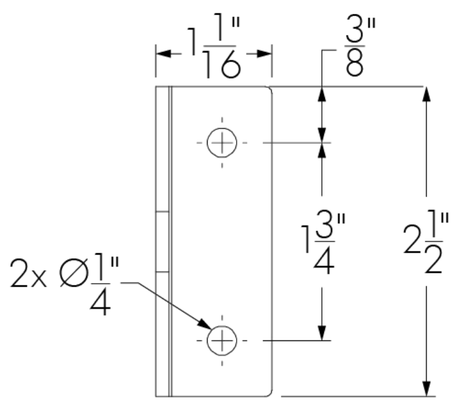
WAM2 - Mounting hole pattern



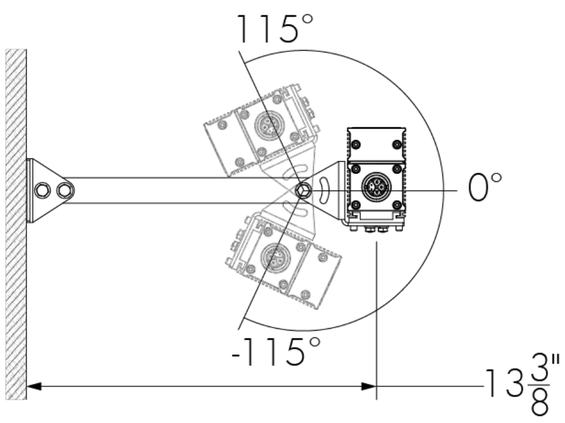
WAM6 - Adjustable Extended Arm Mounting 6 in



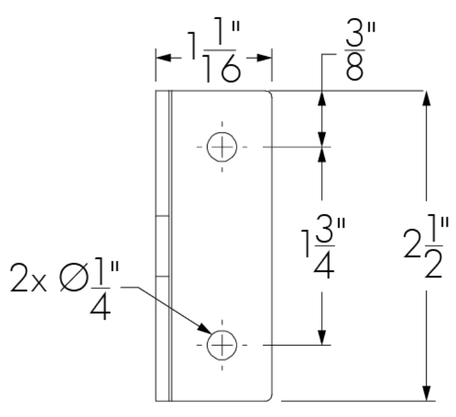
WAM6 - Mounting hole pattern



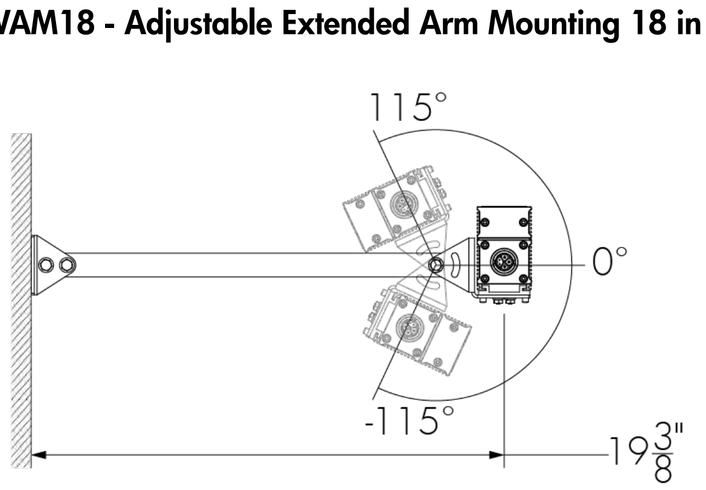
WAM12 - Adjustable Extended Arm Mounting 12 in



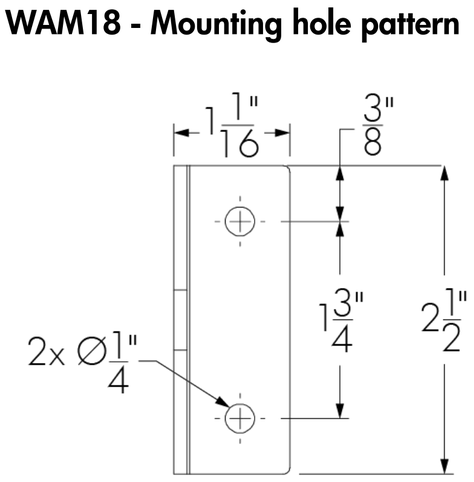
WAM12 - Mounting hole pattern



WAM18 - Adjustable Extended Arm Mounting 18 in

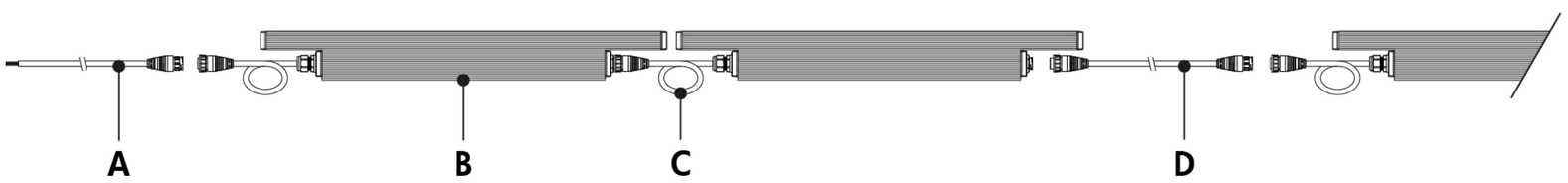


WAM18 - Mounting hole pattern



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End-to-end configuration option (ETE)

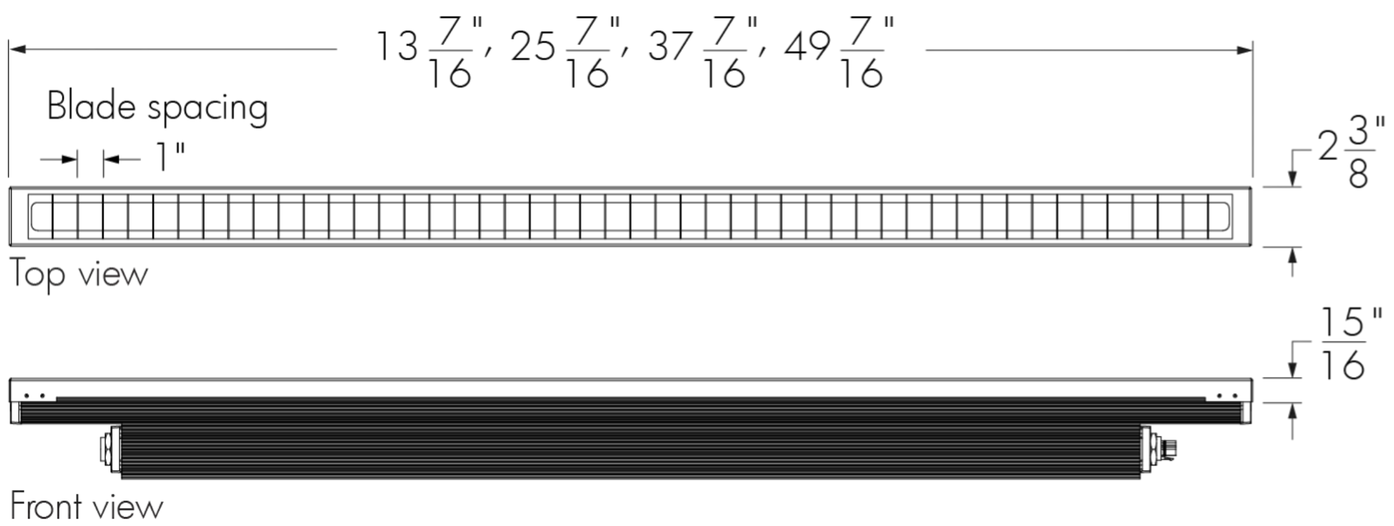


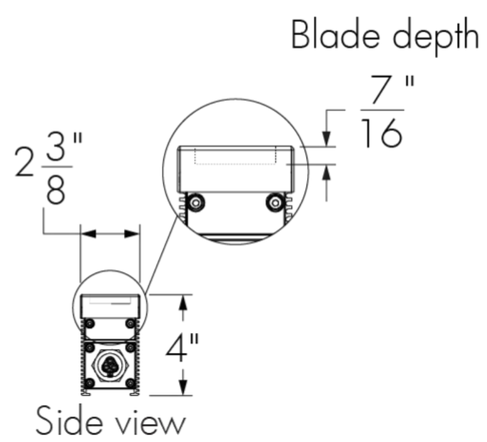
A - ETE leader cable (order separately)
B - Lumenfacade with ETE option
C - ETE 16 in black input cable
D - ETE jumper cable (order separately)

Includes a factory installed 16 in black input cable. A jumper cable is not required for minimum spacing between two end-to-end (ETE) fixtures. An ETE jumper cable is required only if a longer distance between two adjacent ETE fixtures is needed, or to connect two continuous runs of ETE fixtures together.

Optical accessories (order separately)

LOGRD - Radial louver for Lumenfacade





LOGRD-**LENGTH-FINISH-OPTIONS**

Please specify:
LENGTH: 12 in, 24 in, 36 in or 48 in; **FINISH**: BK - Black Sandtex®, BRZ - Bronze Sandtex®, SI - Silver Sandtex®, WH - Smooth white or CC - custom color and finish (please specify RAL color); **OPTIONS**: CRC - Corrosion-resistant coating for hostile environments

- The addition of a louver will affect beam distribution. Consult factory for application support.
- Not suitable for asymmetric wallwash optic.

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Cables (order separately)

LOGLC - Leader cable for Lumenfacade



Standard construction
LOGLC-**CERTIFICATION**-STD-**LENGTH-CABLE COLOR**

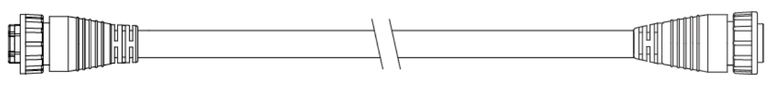


End-to-end (ETE) option
LOGLC-**CERTIFICATION**-ETE-**LENGTH-CABLE COLOR**

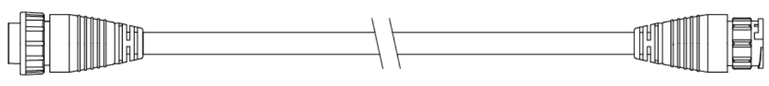
Please specify:
CERTIFICATION: UL or CE; **LENGTH**: 10 ft, 25 ft, 50 ft, 100 ft, 150 ft or 200 ft; **CABLE COLOR**: black or white (connectors are black as standard; ETE fixture input cables are black as standard)

- Suitable for dimming/data and non-dimming applications.
- Sealing end cap is mandatory for any unused connector. One (1) included with every leader cable.
- Consult Lumenfacade leader cable specification sheet for details.

LOGJC - Jumper cable for Lumenfacade



Standard construction
LOGJC-**CERTIFICATION**-STD-**LENGTH-CABLE COLOR**



End-to-end (ETE) option
LOGJC-**CERTIFICATION**-ETE-**LENGTH-CABLE COLOR**

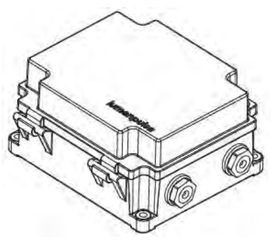
Please specify:
CERTIFICATION: UL or CE; **LENGTH**: 1 ft (available for ETE option only), 2 ft to 30 ft (available in 1 ft increments) or 50 ft; **CABLE COLOR**: black or white (connectors are black as standard; ETE fixture input cables are black as standard)

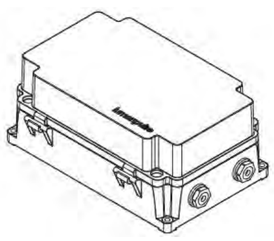
- Suitable for dimming/data and non-dimming applications.
- Consult Lumenfacade jumper cable specification sheet for details.

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Control boxes (order separately)

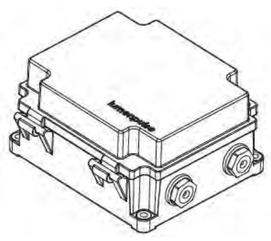
CBX-DMX/RDM - DMX/RDM enabled (daisy chain or star configuration)

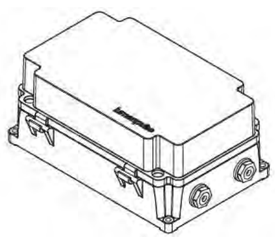




DMX/RDM control box. Up to six power and data outputs to fixtures or fixture runs. Consult CBX specification sheet and installation instructions for details. Lumenterminators provided with CBX (2x for daisy chain configuration, 6x for star configuration), consult factory to order spares.

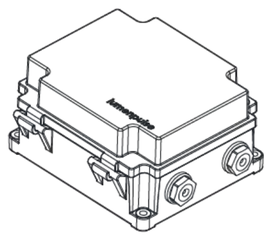
CBX-ENET - Ethernet enabled (daisy chain or star configuration)





Ethernet control box. Up to four power and data outputs to fixture or fixture runs. Consult Ethernet CBX specification sheet and installation instructions for details.

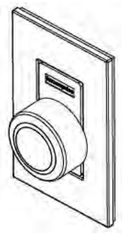
LDB - Lumentalk Data Bridge



Lumentalk Data Bridge, 0-10V or DMX output. Consult LDB specification sheet for details.

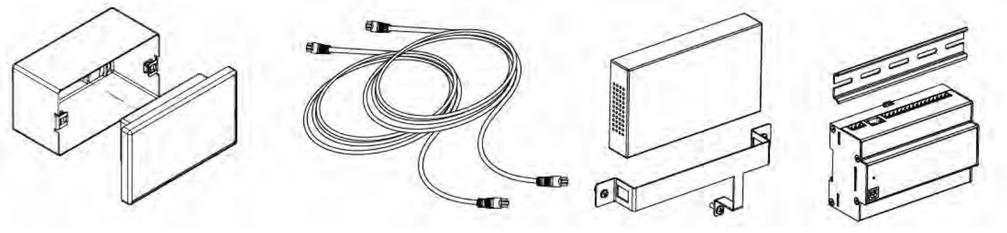
Control systems (order separately)

LTN2 - Lumentone™ 2



Lumentone 2 is a simple pre-programmed DMX 512 controller with a push button rotary dial and live feedback.

PHAROS - Pharos® kit



The Pharos kit, available for 1 or 2 DMX universes, allows for complete control of large lighting installations. 2 DMX universes kit shown.

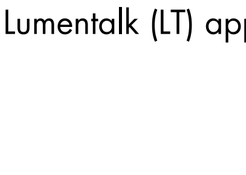
Diagnostic and addressing tools (order separately)

LID - LumenID



LumenID is a diagnostic and addressing DMX/RDM tool. It must be specified on all DMX applications. Consult LID specification sheet for details.

LID-LT - LumentalkID

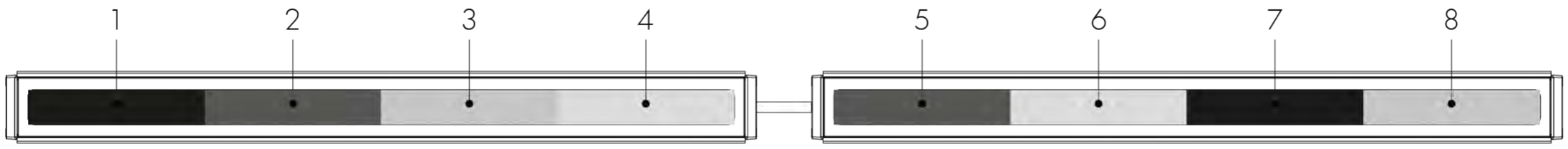


LumentalkID is a diagnostic and addressing tool. It must be specified for all Lumentalk (LT) applications. Consult LID-LT specification sheet for details.

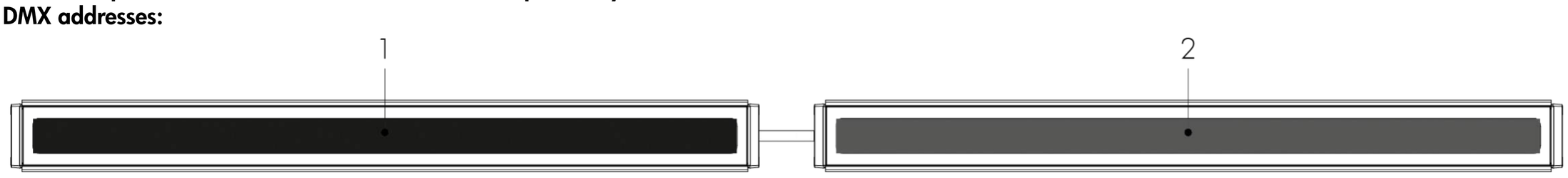
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Resolution details

Resolution per foot: each 12 in section is addressed independently
DMX addresses:



Resolution per fixture: each fixture is addressed independently
DMX addresses:



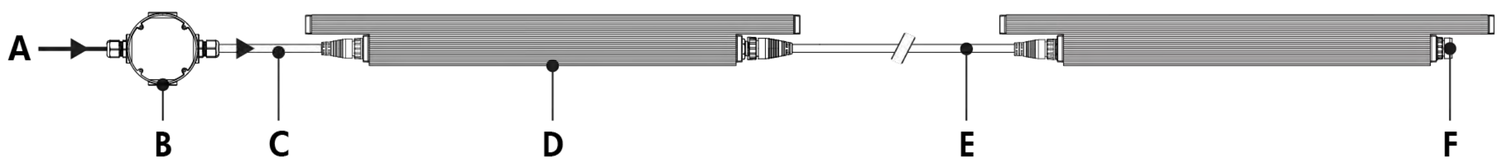
- 48 in fixtures shown.
- Applicable for DMX/RDM control option only. Fixture resolution can be configured on-site within the LumenID V3 software. A DMX/RDM enabled CBX is required.

Typical wiring diagrams

Wiring color code

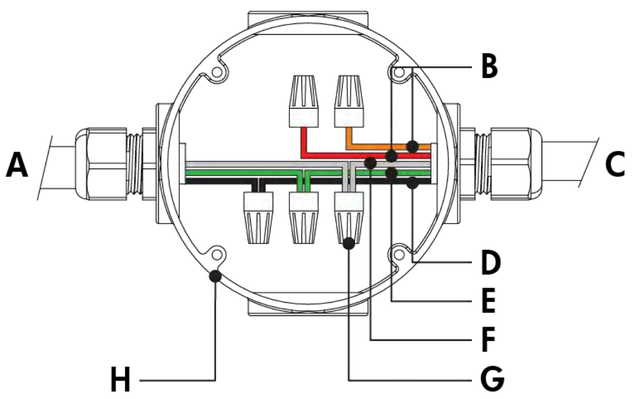
UL Color Code	USE
Green	Ground
Black	Line
White	Line/Neutral
Red or Purple	0-10V / Data +
Orange	0-10V / Data -

On/Off control (NO)



A - Power input (100-277V, wiring by others)
B - Junction box (by others)
C - Leader cable (LOGLC)
D - Lumenfacade
E - Jumper cable (LOGJC)
F - Sealing end cap

On/Off control (NO) - wiring detail

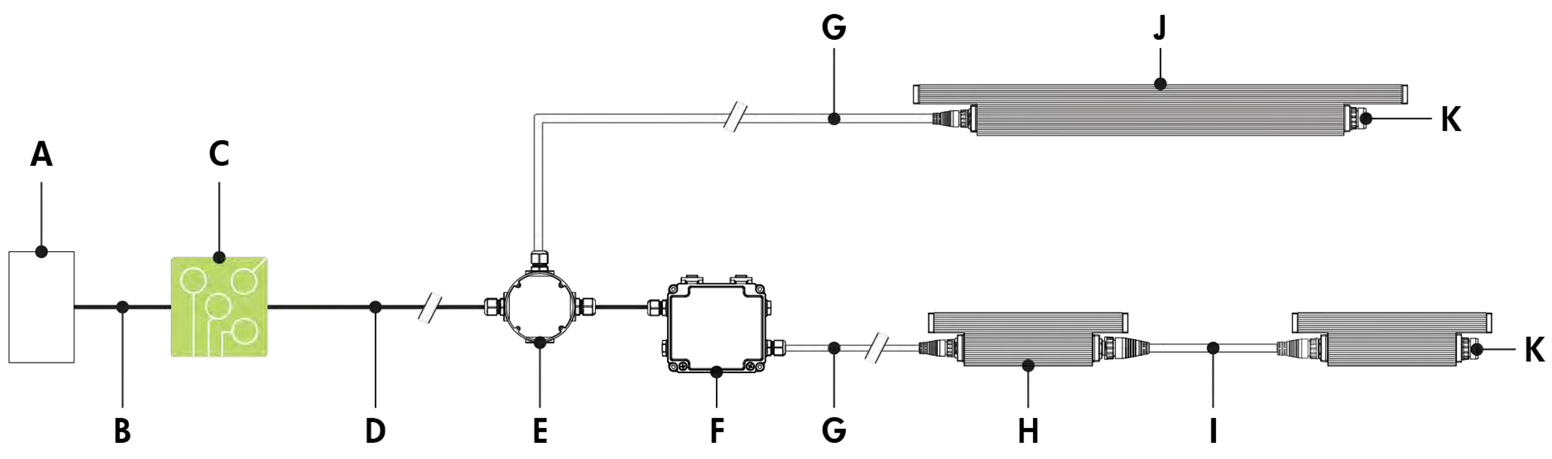


A - Power input
B - Not required
C - To fixture
D - Line
E - Ground
F - Line/Neutral
G - Wire-nuts (by others)
H - Junction box (by others)

- Consult factory for specific applications and maximum fixture count/cable length recommendations.
- ASHRAE version (not available for 12 in fixture lengths): 5 W/ft; Regular Output version: 8.5 W/ft; High Output version: 15.25 W/ft.

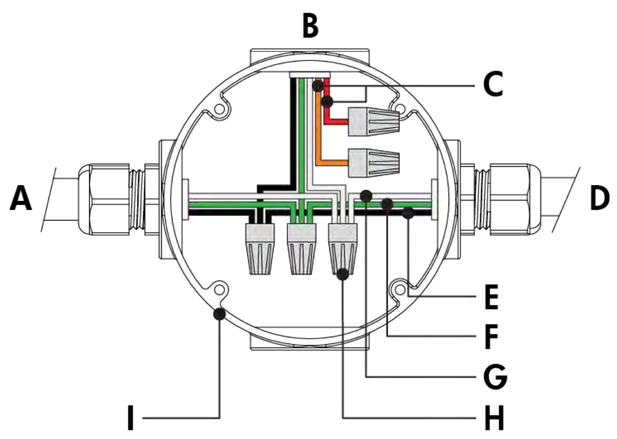
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Lumentalk (LT)



A - Dimmer/controller (order separately from Lumenpulse, or by others)
B - Data wiring (by others)
C - Lumentranslator (LTL-010, -DMX, -TRIAC, -DALI)
D - Power line (120-277V AC, wiring by others)
E - Junction box (by others)
F - Lumentalk Data Bridge (LDB-DIM or LDB-DMX)
G - Leader cable (LOGLC)
H - Lumenfacade 12 in
I - Jumper cable (LOGJC)
J - Lumenfacade (24 in, 36 in or 48 in fixture lengths)
K - Sealing end cap

Lumentalk (LT) - wiring detail



A - Power input (control over power line via Lumentalk system)
B - To fixture
C - Not required
D - To Lumentalk Data Bridge (for run lengths with 12 in fixtures)
E - Line
F - Ground
G - Line/Neutral
H - Wire-nuts (by others)
I - Junction box (by others)

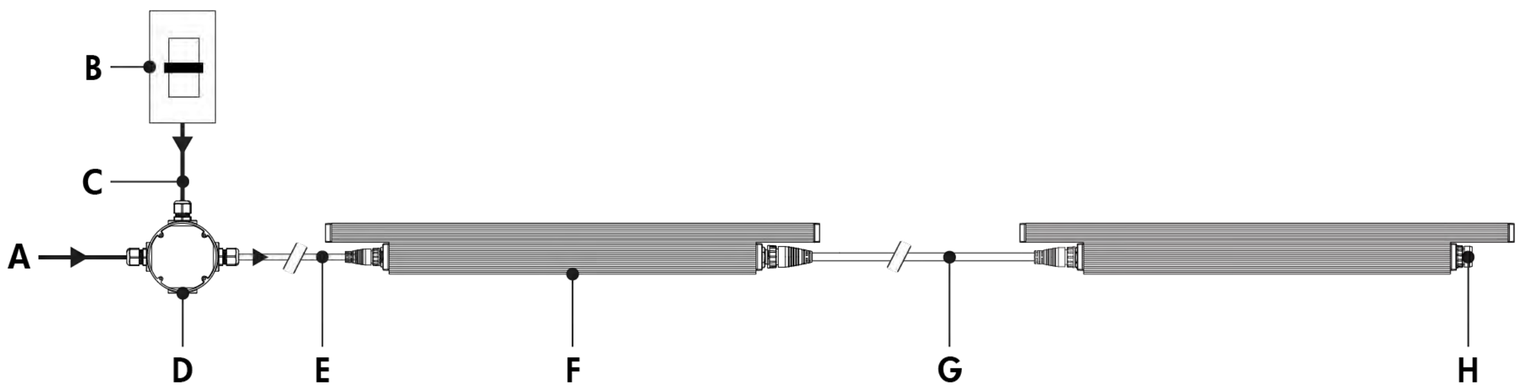
- Consult factory for specific applications and maximum fixture count/cable length recommendations.
- Lumentalk Data Bridge required for 12 in fixture lengths, see LDB installation instructions for details.

- For applications with all fixtures controlled as 1 zone: fixtures and Lumentalk Data Bridge must be specified as DIM. Maximum of 10 fixtures per LDB-DIM, consult factory for applications that require additional capabilities.
- For applications with fixtures controlled individually: fixtures and Lumentalk Data Bridge must be specified as DMX, 2-step commissioning process: 1 - DMX/RDM system using LumenID software and a LID, 2 - Lumentalk system using LumentalkID software and a LID-LT. Maximum of 32 fixtures per LDB-DMX. Consult factory for details.

- For DMX applications: 1 DMX controller per Lumentalk network, maximum of 48 DMX channels per Lumentalk network (minimum step transition update rate is 1 second, minimum fade time between two colors is 1 minute). Consult factory for applications that require additional capabilities.
- Maximum of 1 transmitter (Lumentranslator or Lumenlink) per system.
- No third party fixtures allowed on the same circuit.
- Consult factory for DALI Lumentalk applications.
- 1% minimum dimming value.
- ASHRAE version (not available for 12 in fixture lengths): 5 W/ft; Regular Output version: 8.5 W/ft; High Output version: 15.25 W/ft.

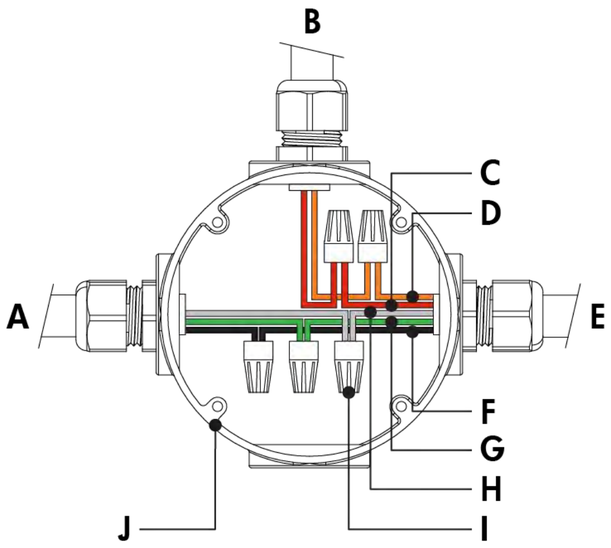
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0-10V dimming (DIM)



A - Power input (100-277V, wiring by others)
B - Dimmer (by others)
C - Data wiring (by others)
D - Junction box (by others)
E - Leader cable (LOGLC)
F - Lumenfacade
G - Jumper cable (LOGJC)
H - Sealing end cap

0-10V dimming (DIM) - wiring detail



A - Power input
B - From dimmer (by others)
C - 0-10 V +
D - 0-10 V -
E - To fixture
F - Line
G - Ground
H - Neutral
I - Wire-nuts (by others)
J - Junction box (by others)

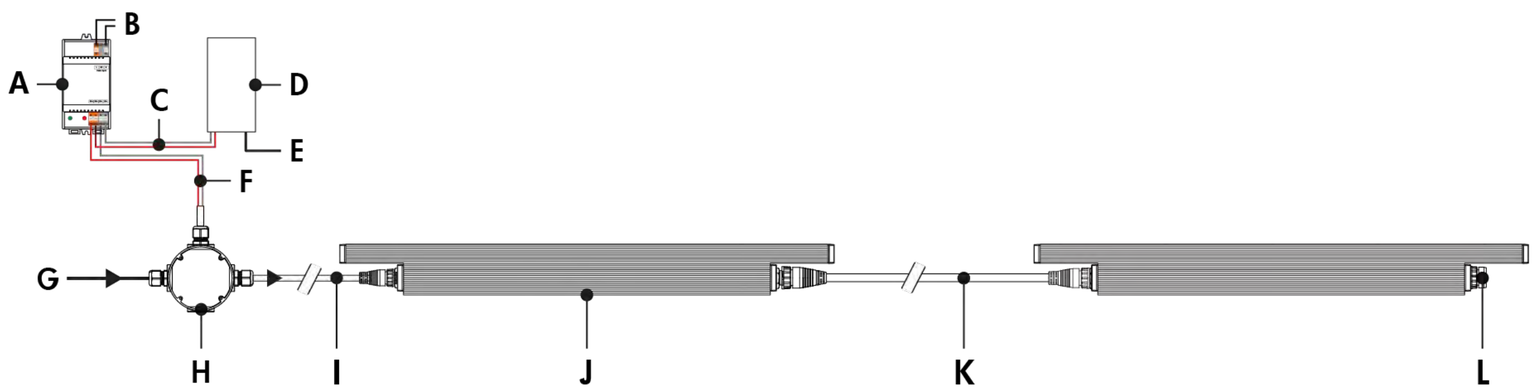
- Consult factory for specific applications and maximum fixture count/cable length recommendations.
- 0-10V mA ratings: passive dimmer (Current Sink): 3 mA per fixture, active dimmer (Current Source): 0.5 mA per fixture.
- 10% minimum dimming value.
- ASHRAE version (not available for 12 in fixture lengths): 5 W/ft; Regular Output version: 8.5 W/ft; High Output version: 15.25 W/ft.

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info@lumenpulse.com **www.lumenpulse.com** **www.lumenpulse.com/products/1046/lumenfacade**

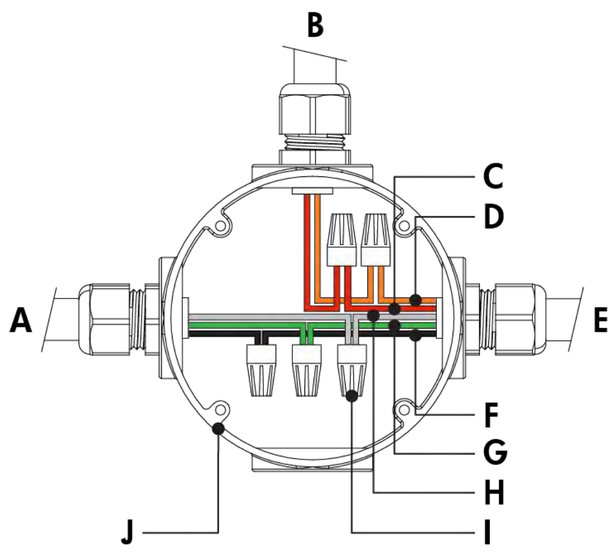
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DALI dimming (DALI)



A - DALI bus power supply (by others)
B - Power input for DALI bus power supply (wiring by others)
C - Data output to DALI controller (wiring by others)
D - DALI controller (by others)
E - Power input for DALI controller (wiring by others)
F - Data output to fixture (wiring by others)
G - Power input (100-277V, wiring by others)
H - Junction box (by others)
I - Leader cable (LOGLC)
J - Lumenfacade
K - Jumper cable (LOGJC)
L - Sealing end cap

DALI dimming (DALI) - wiring detail

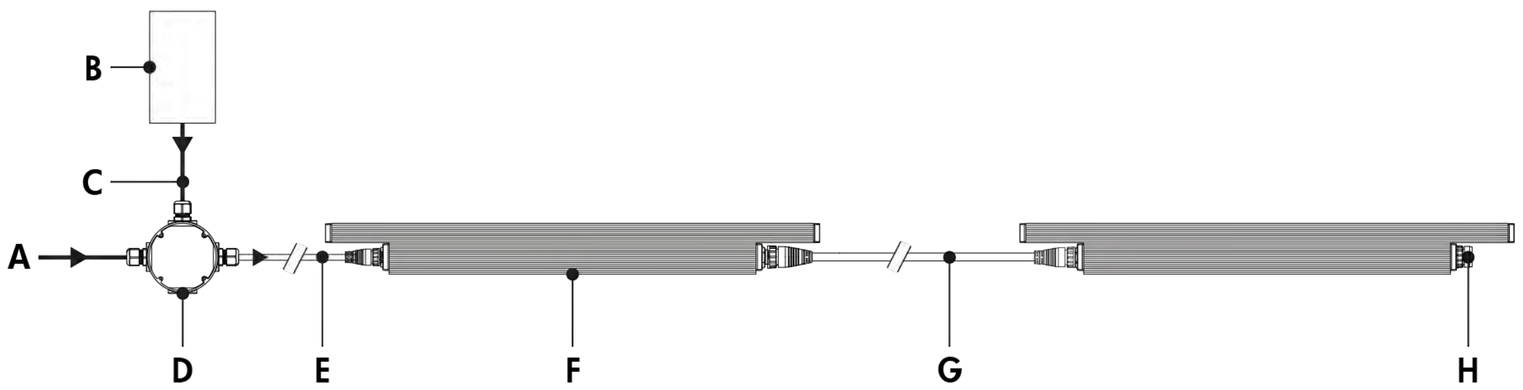


A - Power input
B - From DALI controller (by others)
C - Data +
D - Data -
E - To fixture
F - Line
G - Ground
H - Neutral
I - Wire-nuts (by others)
J - Junction box (by others)

- Consult factory for specific applications and maximum fixture count/cable length recommendations.
- Maximum of 64 DALI fixtures per DALI loop.
- 1% minimum dimming value.
- ASHRAE version (not available for 12 in fixture lengths): 5 W/ft; Regular Output version: 8.5 W/ft; High Output version: 15.25 W/ft.

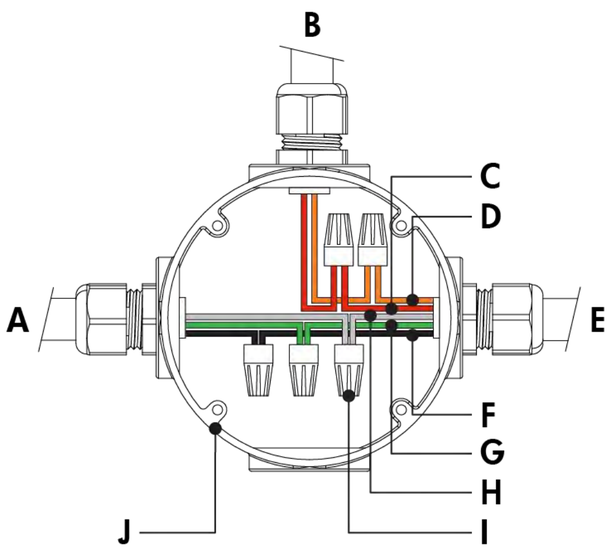
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Lutron® EcoSystem® Enabled dimming (ES)



A - Power input (100-277V, wiring by others)
B - Lutron® EcoSystem® controller (by others)
C - Data wiring (by others)
D - Junction box (by others)
E - Leader cable (LOGLC)
F - Lumenfacade (24 in, 36 in or 48 in fixture lengths)
G - Jumper cable (LOGJC)
H - Sealing end cap

Lutron® EcoSystem® Enabled dimming (ES) - wiring detail

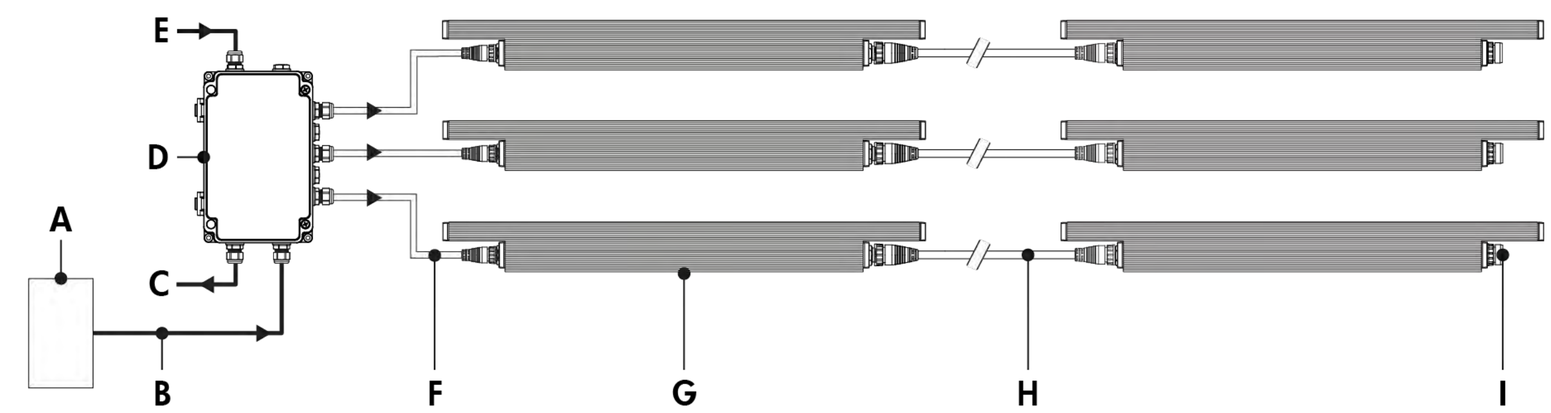


A - Power input
B - From Lutron® EcoSystem® controller (by others)
C - Data +
D - Data -
E - To fixture
F - Line
G - Ground
H - Neutral
I - Wire-nuts (by others)
J - Junction box (by others)

- Consult factory for specific applications and maximum fixture count/cable length recommendations.
- Each Lutron® EcoSystem® enabled fixture has its own address; for the example shown, there are a total of 2 EcoSystem® addresses.
- 1% minimum dimming value.
- ASHRAE version (not available for 12 in fixture lengths): 5 W/ft; Regular Output version: 8.5 W/ft; High Output version: 15.25 W/ft.

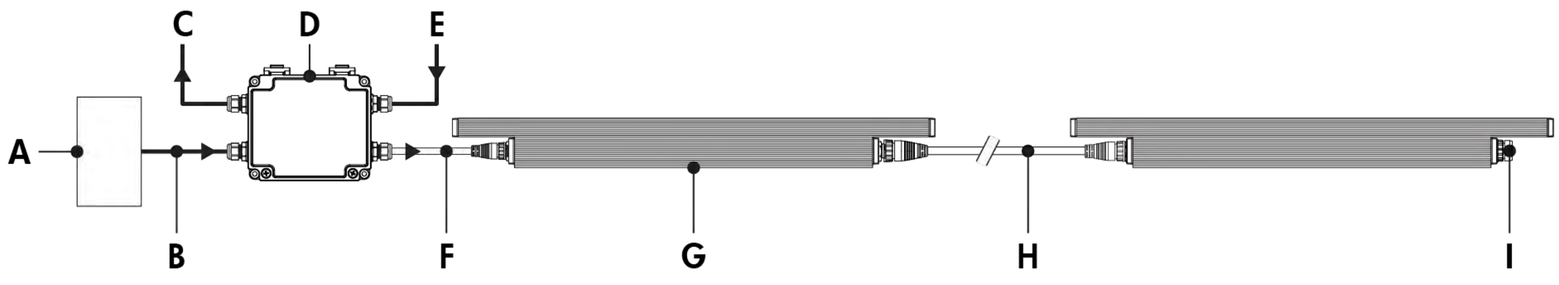
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Star Layout (DMX/RDM)



A - DMX/RDM controller (order separately from Lumenpulse, or by others)
B - Data input (Belden 9841 or equivalent, by others)
C - Data output to next CBX (optional, not isolated/not boosted)
D - CBX-ST
E - Power input (100-277V, wiring by others)
F - Leader cable (LOGLC)
G - Lumenfacade
H - Jumper cable (LOGJC)
I - Sealing end cap

Daisy Chain Layout (DMX/RDM)



A - DMX/RDM controller (order separately from Lumenpulse, or by others)
B - Data input (Belden 9841 or equivalent, by others)
C - Data output to next CBX (optional, not isolated/not boosted)
D - CBX-DS
E - Power input (100-277V, wiring by others)
F - Leader cable (LOGLC)
G - Lumenfacade
H - Jumper cable (LOGJC)
I - Sealing end cap

Maximum run length

Configuration/Voltage	**120V**	**240V**	**277V**
LOG HO	68ft	76ft	84ft
LOG RO	120ft	128ft	128ft
LOG ASHRAE	128ft	128ft	128ft

Based on 15A maximum, 50 ft leader cable.

- Consult CBX installation instructions for additional wiring details.
- Consult factory for specific applications and maximum fixture count/cable length recommendations. Maximum run length calculations are typically based on 48 in fixtures.
- The DMX/RDM protocol states a maximum of 32 DMX/RDM enabled fixtures on any single run.
- Maximum of 4 DMX/RDM repeaters/CBX cascading in line.
- Maximum of 6 outputs per CBX-ST; maximum of 1 output per CBX-DS.
- Each fixture requires 1 DMX address.
- 1% minimum dimming value.
- ASHRAE version (not available for 12 in fixture lengths): 5 W/ft; Regular Output version: 8.5 W/ft; High Output version: 15.25 W/ft.

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1220 Marie-Victorin Blvd., Longueuil, QC J4G 2H9 CA **T** United States 617.307.5700 | Canada 1.877.937.3003 | 514.937.3003 **F** 514.937.6289
info@lumenpulse.com **www.lumenpulse.com** **www.lumenpulse.com/products/1046/lumenfacade**

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MG - R66

How to order

1	2	3	4	5	6	7	8

9

1 . Housing [1]

LOG ASHRAE	Lumenfacade™, 5 W/ft ASHRAE compliant [2]
LOG RO	Lumenfacade™ Regular Output, 8.5 W/ft
LOG HO	Lumenfacade™ High Output, 15.25 W/ft

[1] Power consumption is typically 20% higher for 12 in fixture lengths.

[2] ASHRAE version not available for 12 in fixture lengths.

2 . Voltage

100	100 volts
120	120 volts
208	208 volts
220	220 volts
240	240 volts
277	277 volts

3 . Length

12	13 3/8 in (4.5 lbs) [1] [2]
24	25 3/8 in (7 lbs)
36	37 3/8 in (10.5 lbs)
48	49 3/8 in (14 lbs)

[1] Power consumption is typically 20% higher for 12 in fixture lengths.

[2] To connect 12 in fixture lengths to the Lumentalk system, DIM or DMX/RDM must be specified as the control option, and a Lumentalk Data Bridge (LDB) is required. See the typical wiring diagrams in the specification sheet for details.

4 . Color and Color Temperature [1]

22K	2200K
27K	2700K
30K	3000K
35K	3500K
40K	4000K
RD	Red [2]
GR	Green [2]
BL	Blue [2]

[1] Consult factory for availability of static Royal Blue, 6500K and 90+ CRI.

[2] Static colors made to order 8-10 weeks.

5 . Optics

WWLF	Asymmetric Wallwash, left feed
WWRF	Asymmetric Wallwash, right feed
8x8	8° x 8° [1]
10x10	10° x 10° [1]
10x30	10° x 30°
10x60	10° x 60°
10x90	10° x 90°
15x25	15° x 25°
30x30	30° x 30°
30x60	30° x 60°
35x35	35° x 35°
50x80	50° x 80°
60x60	60° x 60°
80x80	80° x 80°
90x90	90° x 90

[1] For best results use with HO fixtures at a 6 in setback from surface. Contact factory for application support.

6 . Mounting Options

SAM	Slim Adjustable Mounting
UMP	Fixed Mounting [1]
UMAS	Universal Adjustable Mounting [1]
WAM2	Adjustable Wall Mounting 2 in
WAM6	Adjustable Extended Arm Mounting 6 in
WAM12	Adjustable Extended Arm Mounting 12 in
WAM18	Adjustable Extended Arm Mounting 18 in

[1] Suitable to use when 3GV option is specified.

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7 . Finish

BK	Black Sandtex®
BRZ	Bronze Sandtex®
SI	Silver Sandtex®
WH	Smooth white
CC	Custom color and finish (please specify RAL color) (1)

(1) Lumenpulse offers a wide selection of RAL CLASSIC (K7) colors with a smooth texture and high-gloss finish. Please consult factory for a list of available K7 colors, other RAL textures and glosses, or to match alternate color charts. Final color matching results may vary.

8 . Control

NO	On/Off control
LT	Lumentalk (1) (2)
DIM	0-10V dimming
DALI	DALI dimming
ES	Lutron® EcoSystem® Enabled dimming (3)
DMX/RDM	DMX/RDM enabled (4)

(1) To connect 12 in fixture lengths to the Lumentalk system, DIM or DMX/RDM must be specified as the control option, and a Lumentalk Data Bridge (LDB) is required. See the typical wiring diagrams in the specification sheet for details.

(2) A Lumentranslator and LumentalkID (LIDLT) must be specified for Lumentalk applications. Consult Lumentranslator and Lumentalk pages and specification sheets for details.

(3) Available for 24 in (ASHRAE and RO only), 36 in and 48 in fixture lengths only.

(4) A control box (CBX) and LumenID (LID) must be specified.

9 . Options

ETE	End-to-end configuration (factory installed 16 in black input cable included)
CRC	Corrosion-resistant coating for hostile environments (1)
3GV	3G ANSI C136.31 Vibration Rating for bridge applications (2)
CE	CE (certification covers European Economic Area) (3)

(1) Use only when exposed to salt spray and harsh chemicals. This option is not required for normal outdoor exposure.

(2) Available with UMP and UMAS mounting options only.

(3) Consult European specification sheet and installation instructions for CE wiring information.

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YP1

Lam Partners
ARCHITECTURAL LIGHTING DESIGN

SANTA & COLE

Arne S Domus

Santa & Cole Team. 2018
Pendant lamps







CE IP 65

A formal synthesis of the traditional spotlight that is so common in the industry, Arne S Domus is a solid and highly efficient indoor lamp that has no complexes in showing its adaptation to function.
Its forms outline a design that is boiled down to a strict geometric language, in which each detail of the aluminium injection body equates its quality with the internal technology of its light source.

General description:
Matte aluminium injection structure with integrated driver in 4 colour options: S&C white, aluminium grey, dark green and mustard.
Primary optics with tempered glass cover.
Circular metal canopy.
Suitable for indoor and outdoor use (CE market).
Electric cable length: 4 m / 157.5”
Suitable for Junction Box (UL market).

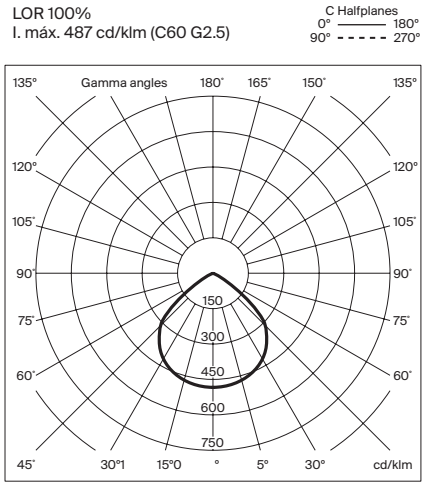
Approximate weight (unpacked):
3,3 Kg / 7.2 lb

Technical information:
Light source included (dimmable).
COB LEDs module
Rated input wattage: 28 W
Operating current: 700 mA
Colour Temp.: 2.700 K
CRI: 90
Lifetime: 50.000 h
Luminous flux: 2.470 lm

Built-in dimmable LED.
Suitable for dimming 1-10V. (Not included external dimmer switch 1-10V).
Energy efficiency class (E.E.C): A^{++}... A.
Suitable for indoor and outdoor use (CE market)

Input voltaje:
CE: 220 ~ 240 Vac.
UL: 120 ~ 277 Vac.
Japan: 100 Vac.
(50 Hz / 60 Hz). According to destination

LOR 100%
I. máx. 487 cd/klm (C60 G2.5)



Arne S Domus

Santa & Cole Team. 2018
Pendant lamps

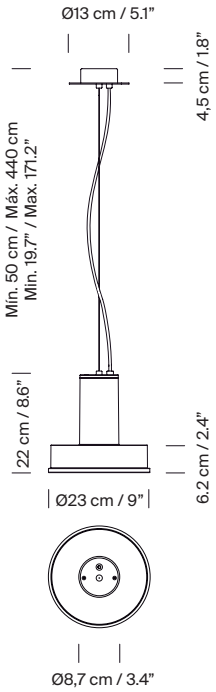
Regulations:
CE
UNE-EN 60598
UNE-EN 55015
UNE-EN 60529
UNE-EN 62031
UNE-EN 61000-3-2
UNE-EN 61347-2-13

UL
Dry and damp location
UL-1598
UL-8750
E-336377

Maintenance:
Clean with a smooth cloth. Do not use ammonia, solvents or abrasive cleaning products.

Others:
The lamp is delivered in one package.
The assembly instructions are delivered with the product.

Model:



Collection:
Pendant lamps


Arne Domus


Arne S Domus

SQUERO LED

RECESSED

5 YEARS WARRANTY

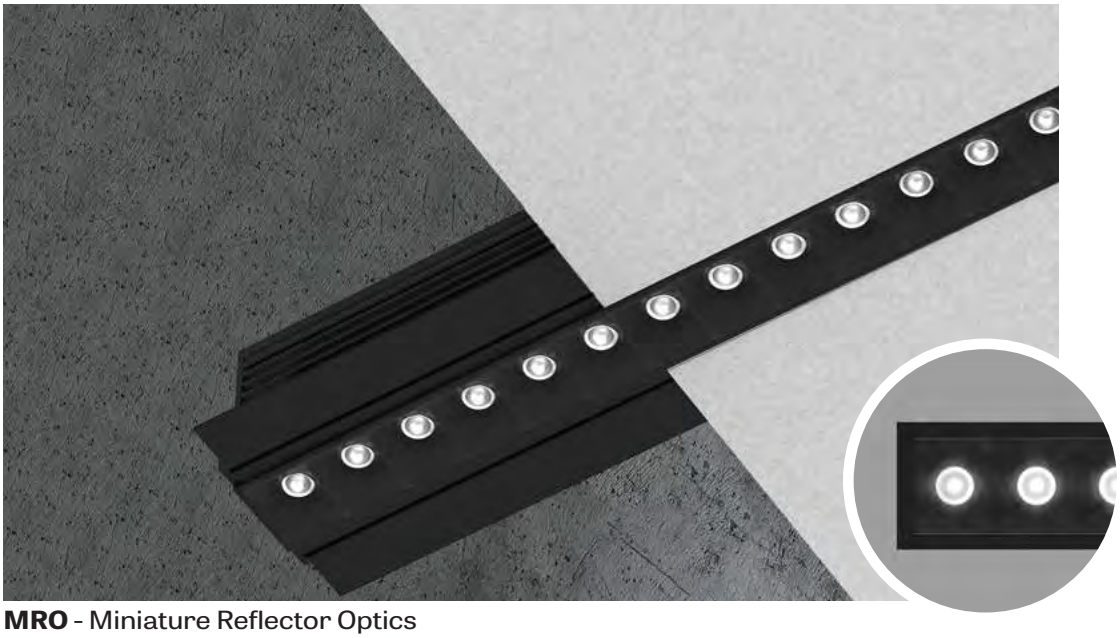
LUMENWERX
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YR1
Lam Partners
ARCHITECTURAL LIGHTING DESIGN

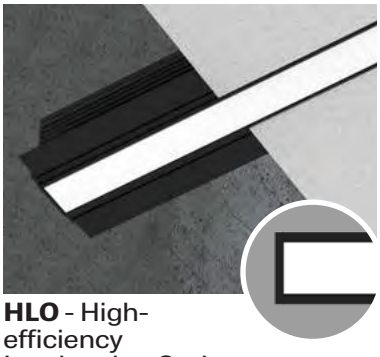
DESCRIPTION

Squero brings new style and flexibility to linear lighting systems. Less than 2" wide, Squero offers four distinctive optics: miniature reflector, parabolic louver, and diffuser as well as a widespread indirect optic. Each optic provides a different visual texture, as well as photometric performance. Further, the optics can be combined in a single luminaire, together with an adjustable accent module. Onboard driver electronics maintain serviceability. Squero recessed can be installed as individual luminaires or in continuous runs and patterns.

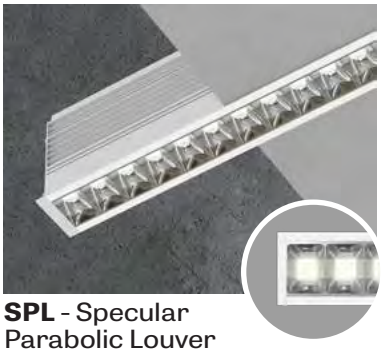
See separate spec sheets for Combinations and Patterns.



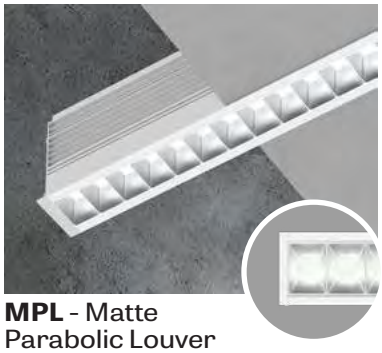
MRO - Miniature Reflector Optics



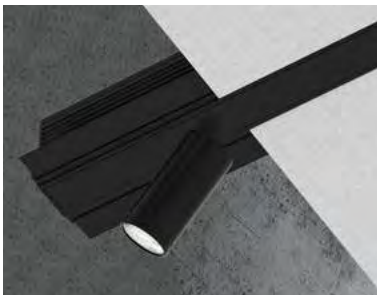
HLO - High-efficiency Lambertian Optic



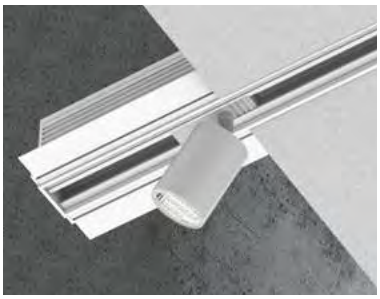
SPL - Specular Parabolic Louver



MPL - Matte Parabolic Louver



AAM - Adjustable Accent Module



ITR - Integrated Track*

All options show above are standard in both black and white, with the exception of the white baffles.
The images are for demonstration only
*** Track and downlight by others**

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Intertek

SQUERO LED

RECESSED

LUMENWERX
WWW.LUMENWERX.COM

YR1
Lam Partners ARCHITECTURAL LIGHTING DESIGN

PROJECT: _____
TYPE: _____
NOTES: _____

ORDER GUIDE

SQUR			LED		
LUMINAIRE ID	**OPTICS**	**MRO COLOR**	**LIGHT SOURCE**	**CRI**	**LUMEN PACKAGES**
SQUR - Squero recessed	**MRO18** - 18 degrees Miniature Reflector Optics **MRO35** - 35 degree Miniature Reflector Optics **MRO55** - 55 degree Miniature Reflector Optics **SPL** - Specular Parabolic Louver **MPL** - Matte Parabolic Louver **HLO** - High-efficiency Lambertian Optic **+BLA** - Blank	**W** - White **B** - Black **NA** - Not applicable	**LED** - High performance LED	**80** - 80CRI **90** - 90CRI	**350** - min. eco low output 350lm/ft **500** - low output 500lm/ft **750** - medium output 750lm/ft **1000** - max. high output 1000lm/ft **####** - other required lm/ft

COLOR TEMP.	VOLTAGE	LUMINAIRE LENGTH	DRIVER	ELECTRICAL	MOUNTING
30 - 3000k **35** - 3500k **40** - 4000k	**120** - 120V **277** - 277V **UNV** - 120V-277V	Standard sections - 2', 3', 4', 5' 6', 7', 8' & 12' For all other specify length **#FT** - nominal length in feet Continuous Run - for luminaires over 12' Minimum Individual section 2'	**D1** - 1% dimming 0-10V **DA** - Dali **LTEA2W** - Lutron 1% - 2 wires 120V **L3DA3W** - Lutron 1% - 3 wires **L3DAE** - Lutron 1% EcoSystem **LDE1** - Lutron 1% Eco Dim to Off **LDE5** - Lutron 5% EcoSystem	**1** - 1 circuit **+#EB** - Emergency battery (min 4' fixture, except Lutron) **+#EM** - Emergency light circuit **+#NL** - Night light circuit **+GTD###** - Generator transfer device, 120V or 277V	**DMF** - Drywall mud flange **DTR** - Drywall trim **TG9** - Tegular 9/16" **TG15** - Tegular 15/16" **TB9** - T-bar 9/16" **TB15** - T-bar 15/16" **ST** - Screw slot T-bar

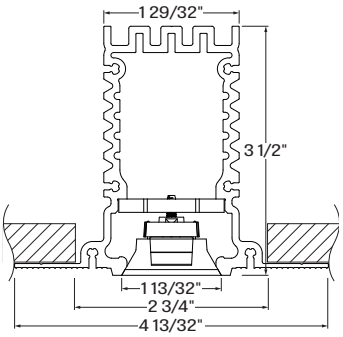
FINISH
W - Matte white **B** - Matte black **CF#** - Custom finish specify RAL#

ADJUSTABLE ACCENT MODULE	AAM CRI	AAM LUMEN PACK.	AAM COLOR TEMP.	AAM FINISH
#AAM21 - AAM 21° **#AAM30** - AAM 30° **#AAM36** - AAM 36° **+ HCL** - Honey comb louver Minimum individual section 4' 5% dimminig 0-10V	**80** - 80CRI **90** - 90CRI	**350** - 350lm **600** - 600lm	**30** - 3000k **35** - 3500k **40** - 4000k	**W** - Matte white **B** - Matte black

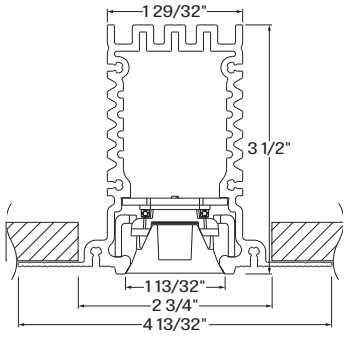
OPTIONS
FU - Fuse **ITR** - Integrated Track **FWC** - Flexible whip cable (6' std) **CU** - custom

See page 3 for ordering code detailed information

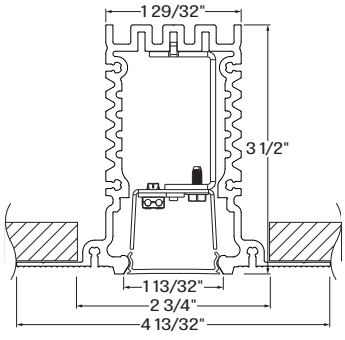
CROSS SECTION



SQUR - recessed-DMF - **MRO**
Miniature Reflector Optics



SQUR - recessed-DMF - **SPL & MPL**
Specular & Matte Parabolic Louver



SQUR - recessed-DMF - **HLO**
High-efficiency Lambertian Optic

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C ETL US LISTED Intertek

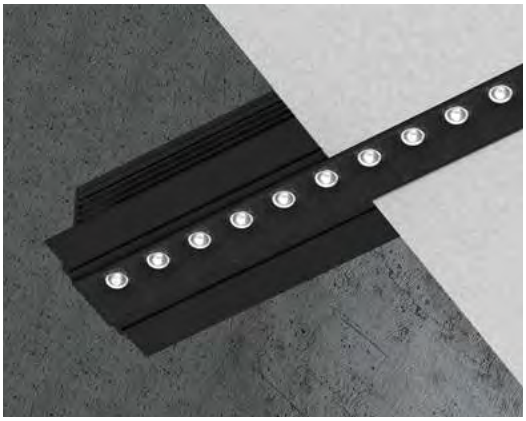
OPTICS

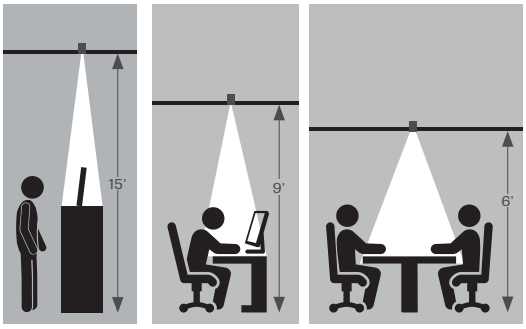
MINIATURE REFLECTOR OPTICS (MRO) locates individual, precisely molded TIR elements over each LED emitter, and further shield the source with precise parabolic reflectors. The controlled beam is remarkably comfortable – especially in a small LED luminaire.

MRO is available in a specular black or gloss white finish and creates a distinctive visual texture.

Different TIR elements offer a choice of beam spreads: narrow (18° with SC of 0.3), medium (35° with SC of 0.6), and wide (55° with SC of 0.9). These concentrated distributions can provide effective task illumination in a variety of applications.

Each MRO module is 6" long with five optical chambers.





Narrow 18 degree 350lm/f | Medium 35 degree 350lm/f | Wide 55 degree 350lm/f

HIGH EFFICIENCY LAMBERTIAN OPTIC (HLO) - The High-efficiency Lambertian Optic (HLO) shielding of diffusing 0.075" thick acrylic with up to 88% transmission and good source obscuration is combined with matte white side reflectors to create an efficient optical chamber with uniform luminosity.

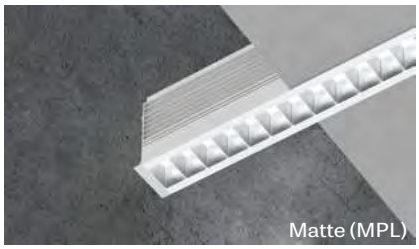


Luminaire brightness is controlled by the flux-to-shielding area ratio. For visual comfort, avoid high lumen output unless Squero is installed in a high ceiling application. Spacing criteria: 1.2 (longitudinal) x 1.1 (lateral).

PARABOLIC LOUVERS (SPL & MPL) - Parabolic Louver Optics provide excellent shielding and a pleasing crisp visual texture. The precisely molded louvers consist of 1" deep blades and side reflectors with shielding of 50° lengthwise and 45°cross wise.

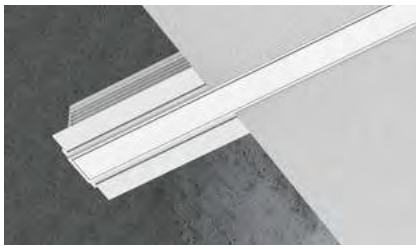


The parabolic contour of the blades and side reflectors direct light into a comfortable downlight distribution with a spacing criterion of 1.1, while minimizing shadows from the LED array above each cell.



Two finishes are available. Specular (SPL) provides higher efficacy, sharper cut-off, and an ultra quiet appearance at shallow viewing angles. Matte (MPL) offers a softer appearance, a wider beam spread, and gentle brightness transition at cut-off.

ALUMINUM BLANK (BLA) Blank covers provide spacing – functional or rhythmic – in the direct component of a Squero Combination luminaire. Covers are sized according to the Combination design, finished to match the luminaire housing, and snap into the aperture.



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Intertek

LIGHT SOURCE - LED

Custom linear array of high-flux LED's mounted onto aluminum-backed circuitry with quick-connect wiring to facilitate service and optimize thermal management. Available in 3000K, 3500K and 4000K with a minimum 80 CRI and an option for 90 CRI with elevated R9 value. Color consistency maintained to within 3 SDCM. All LEDs have been tested in accordance with IESNA LM-80-08 and the results have shown L80 lumen maintenance greater than 60,000 hours. Absolute product photometry is measured and presented in accordance with IESNA LM-79, unless otherwise indicated.

PERFORMANCE PER 4' AT 4000K

MRO - 35 DEGREES

LED output	Color Temp	Watts	Nominal Delivered Lumens	Efficacy LPW
eco low output	4000K	13.5	1400	102
low output	4000K	20	2000	100
medium output	4000K	31	3000	96
high output	4000K	43.5	4000	92

SPL

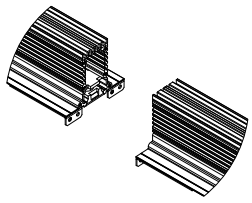
LED output	Color Temp	Watts	Nominal Delivered Lumens	Efficacy LPW
eco low output	4000K	12	1400	116
low output	4000K	17.5	2000	113
medium output	4000K	27.5	3000	109
high output	4000K	38	4000	105

MPL

LED output	Color Temp	Watts	Nominal Delivered Lumens	Efficacy LPW
eco low output	4000K	13.5	1400	103
low output	4000K	20	2000	100
medium output	4000K	31.5	3000	96
high output	4000K	43.5	4000	92

LUMINAIRE LENGTH

Squero is made up of standard 2, 3, 4, 5, 6, 7, 8 and 12 foot sections that may be joined together to create longer continuous run lengths. Exact run lengths must be noted in the product code. The minimum individual section available is 2 feet.
All individual sections are joined together onsite using the joiner kits provided. LumenWerx offers joiner kits that are extremely simple to work with in the field and result in a fixture that appears virtually seamless with no light leak at any connection.



joining system for Squero Recessed

ELECTRICAL

Factory-set adjustable output current electronic driver with 120-277V AC line input. Dimmable from 100% to 1% with 0-10V control. Rated life (90% survivorship) of 50,000 hours at 50°C max. ambient (and 70°C max. case) temperature. At maximum driver load: Efficiency>84%, PF>0.9, THD<20%. Other specifiable options include Lutron Hi-Lume A (specify 2, 3 or 4 wires), EcoSystem H (100%-1%, fade-to-black) and EcoSystem 5 (100%-5%) dimmable drivers and DALI protocol drivers.

EMERGENCY

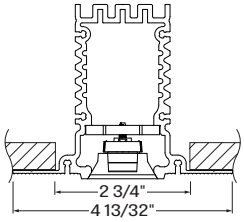
Factory installed long life high temperature recyclable Ni-Cad battery pack with test switch and charge indicator, minimum of 90 minutes operation, up to 1000 lumens per 4ft (25°C) emergency lighting output. Recharge time of 24 hours.

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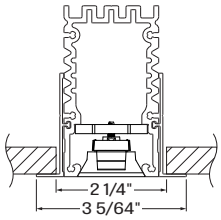
MOUNTING OPTIONS

Recess mount into exposed or concealed T-Bar or Tegular grid ceiling

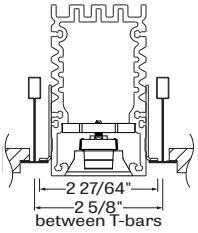
Mounting for drywall ceilings are available with visible trim, mud flange, trim or trimless



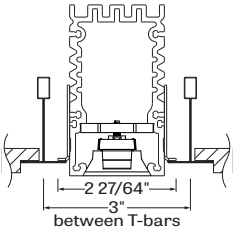
DMF - drywall mud flange



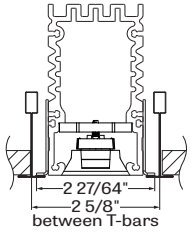
DTR - drywall trim



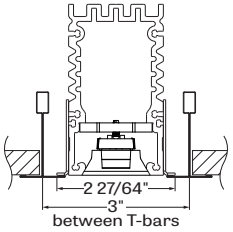
TG9 - tegular 9/16"



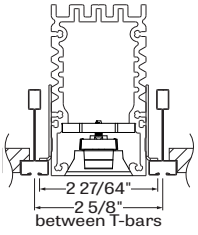
TG15 - tegular 15/16"



TB9 - t-bar 9/16"



TB15 - t-bar 15/16"



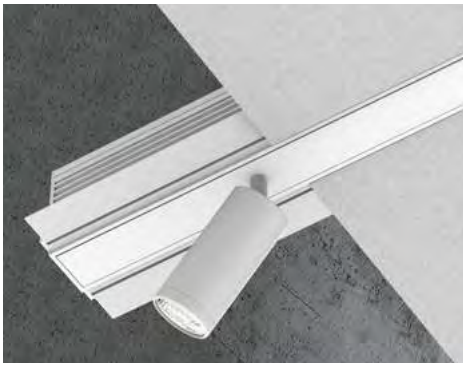
ST - screw slot t-bar

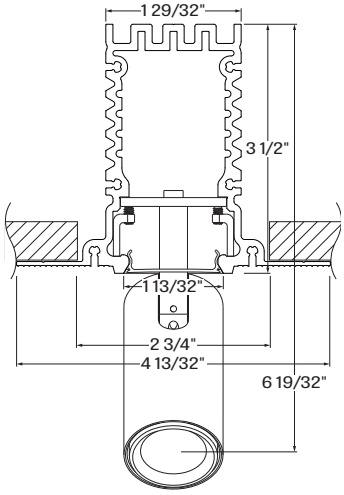
FINISH

Interior - 95%, reflective matte powder coated white paint

Exterior - powder coating.

AJUSTABLE LED ACCENT MODULE (AAM)

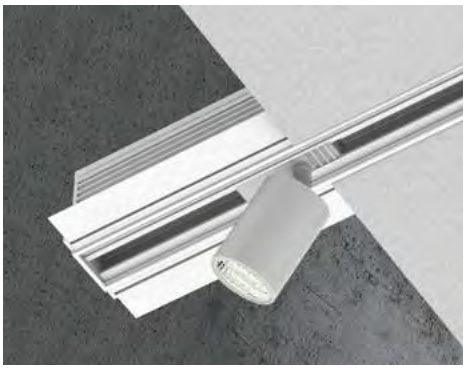


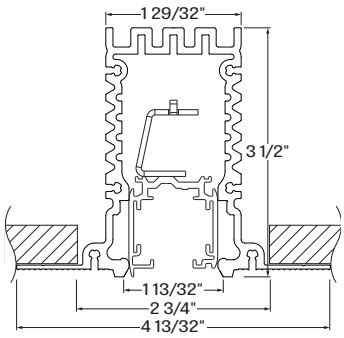


The Adjustable Accent Module (AAM) features a Ø 1.6" x 3.2" cylinder that rotates 360° and tilts 90°. The LED light source is coupled with TIR optics to provide beam angles of 21°, 30°, and 36° while producing up to 600 lumens. LED light source CCT options are 3000K, 3500K, or 4000K, available in either 80 CRI or 90 CRI.

The AAM module can be selected in either a white or black finish and a honeycomb louver accessory is also available. The AAM driver is mounted above the cylinder, inside the SQUERO housing and accepts universal input voltage (120-277VAC) while providing 0-10V dimming control.

OPTIONS





ITR - integrated track (track and downlight by others)

Multiple track systems manufactured by others, are offered in Squero direct, in individual, or runs, with or without LED integrated sections. Detailed specifications of the track system must be supplied. For other mounting options (please consult factory).

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CONSTRUCTION

Housing - Extruded Aluminum (0.100" nominal) up to 90% Recycled Content
Interior brackets - Die formed cold rolled sheet steel 10 gauge thick
Joining system - Die cast Aluminum
MRO - Injection Molded Optical Grade Polycarbonate (0.100" nominal) up to 95% reflective
Parabolic louvers - Injection Molded Optical Grade Polycarbonate Vacuum Metalized, up to 95% reflective
Recessed flanges - Extruded Aluminum (0.075" nominal) up to 90% Recycled Content
End plate - Die formed cold rolled sheet steel 18 gauge thick

WEIGHT

Squero 2ft - 6.63lbs - 3kg
Squero 4ft - 12.35lbs - 5.60kg
Squero 6ft - 18.62lbs - 8.45kg
Squero 8ft - 24.34lbs - 11.04kg

CERTIFICATIONS

ETL - Rated for Indoor Dry/Damp locations. Conforms to UL Standard 1598 and certified to CAN/CSA Standard C22.2 No. 250.0.

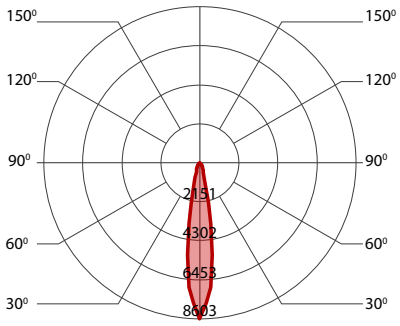
WARRANTY

LumenWerx provides a five-year limited warranty of electrical and mechanical performance of the luminaires, including the LED boards, drivers, and auxiliary electronics. LumenWerx will repair or replace defective luminaires or components at our discretion, provided they have been installed and operated in accordance with our specifications. Other limitations apply, please refer to the full warranty on our website.

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PERFORMANCE WITH MINIATURE REFLECTOR OPTICS (MRO) 18 DEGREES

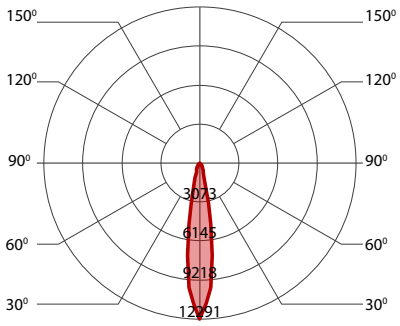
350 LUMEN AT 80CRI - ECO LOW OUTPUT



PERFORMANCE PER 4'

LED output	Color Temp	Watts	Nominal Delivered Lumens	Efficacy LPW
eco low output	3000K	16.5	1400	86
eco low output	3500K	15.5	1400	91
eco low output	4000K	14.5	1400	98

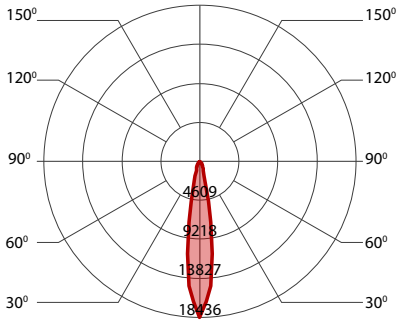
500 LUMEN AT 80CRI - LOW OUTPUT



PERFORMANCE PER 4'

LED output	Color Temp	Watts	Nominal Delivered Lumens	Efficacy LPW
low output	3000K	24	2000	84
low output	3500K	22.5	2000	88
low output	4000K	21	2000	96

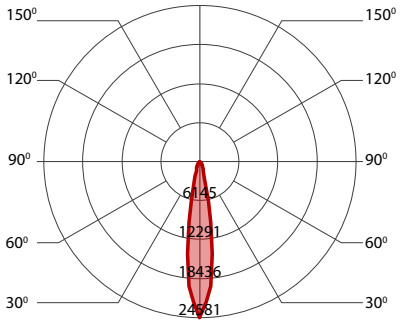
750 LUMEN AT 80CRI - MEDIUM OUTPUT



PERFORMANCE PER 4'

LED output	Color Temp	Watts	Nominal Delivered Lumens	Efficacy LPW
medium output	3000K	37.5	3000	80
medium output	3500K	35.5	3000	84
medium output	4000K	33	3000	91

1000 LUMEN AT 80CRI - HIGH OUTPUT



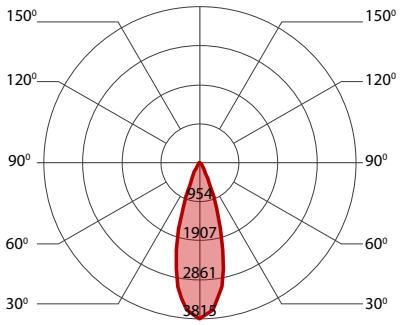
PERFORMANCE PER 4'

LED output	Color Temp	Watts	Nominal Delivered Lumens	Efficacy LPW
high output	3000K	52.5	4000	76
high output	3500K	50	4000	80
high output	4000K	46	4000	87

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PERFORMANCE WITH MINIATURE REFLECTOR OPTICS (MRO) 35 DEGREES

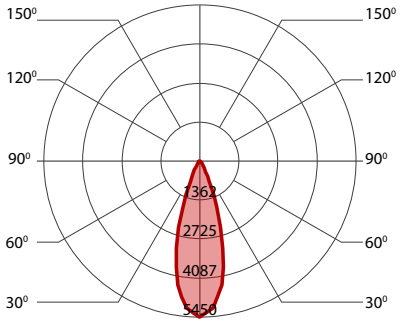
350 LUMEN AT 80CRI - ECO LOW OUTPUT



PERFORMANCE PER 4'

LED output	Color Temp	Watts	Nominal Delivered Lumens	Efficacy LPW
eco low output	3000K	15.5	1400	90
eco low output	3500K	14.5	1400	95
eco low output	4000K	13.5	1400	102

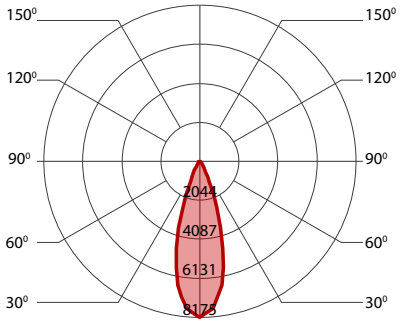
500 LUMEN AT 80CRI - LOW OUTPUT



PERFORMANCE PER 4'

LED output	Color Temp	Watts	Nominal Delivered Lumens	Efficacy LPW
low output	3000K	22.5	2000	88
low output	3500K	21.5	2000	92
low output	4000K	20	2000	100

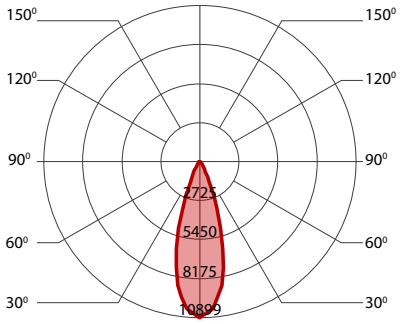
750 LUMEN AT 80CRI - MEDIUM OUTPUT



PERFORMANCE PER 4'

LED output	Color Temp	Watts	Nominal Delivered Lumens	Efficacy LPW
medium output	3000K	35.5	3000	84
medium output	3500K	33.5	3000	89
medium output	4000K	31	3000	96

1000 LUMEN AT 80CRI - HIGH OUTPUT



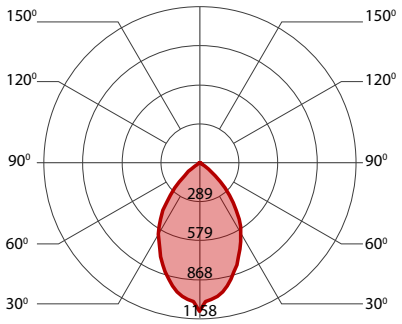
PERFORMANCE PER 4'

LED output	Color Temp	Watts	Nominal Delivered Lumens	Efficacy LPW
high output	3000K	50	4000	80
high output	3500K	47	4000	85
high output	4000K	43.5	4000	92

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PERFORMANCE WITH MINIATURE REFLECTOR OPTICS (MRO) 55 DEGREES

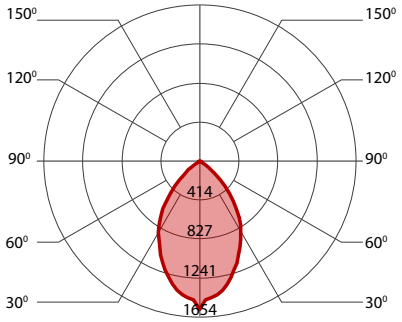
350 LUMEN AT 80CRI - ECO LOW OUTPUT



PERFORMANCE PER 4'

LED output	Color Temp	Watts	Nominal Delivered Lumens	Efficacy LPW
eco low output	3000K	15.5	1400	89
eco low output	3500K	15	1400	94
eco low output	4000K	14	1400	101

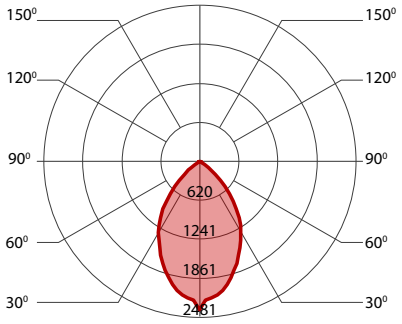
500 LUMEN AT 80CRI - LOW OUTPUT



PERFORMANCE PER 4'

LED output	Color Temp	Watts	Nominal Delivered Lumens	Efficacy LPW
low output	3000K	23	2000	87
low output	3500K	22	2000	91
low output	4000K	20	2000	99

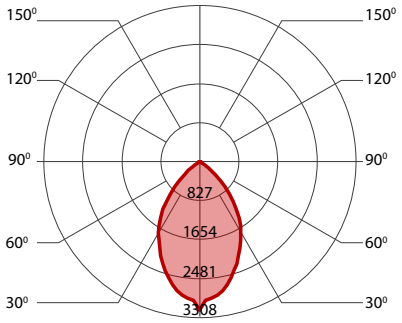
750 LUMEN AT 80CRI - MEDIUM OUTPUT



PERFORMANCE PER 4'

LED output	Color Temp	Watts	Nominal Delivered Lumens	Efficacy LPW
medium output	3000K	36	3000	83
medium output	3500K	34	3000	88
medium output	4000K	31.5	3000	95

1000 LUMEN AT 80CRI - HIGH OUTPUT



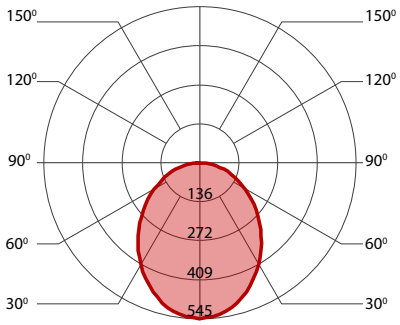
PERFORMANCE PER 4'

LED output	Color Temp	Watts	Nominal Delivered Lumens	Efficacy LPW
high output	3000K	50.5	4000	79
high output	3500K	47.5	4000	84
high output	4000K	44	4000	91

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PERFORMANCE WITH HIGH-EFFICIENCY LAMBERTIAN OPTIC (HLO)

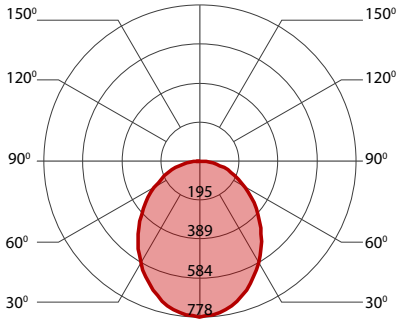
350 LUMEN AT 80CRI - ECO LOW OUTPUT



PERFORMANCE PER 4'

LED output	Color Temp	Watts	Nominal Delivered Lumens	Efficacy LPW
eco low output	3000K	12.5	1400	113
eco low output	3500K	12	1400	115
eco low output	4000K	12	1400	119

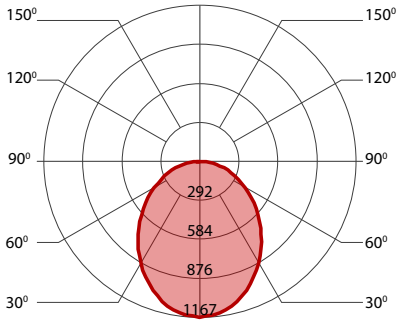
500 LUMEN AT 80CRI - LOW OUTPUT



PERFORMANCE PER 4'

LED output	Color Temp	Watts	Nominal Delivered Lumens	Efficacy LPW
low output	3000K	18	2000	111
low output	3500K	17.5	2000	113
low output	4000K	17	2000	116

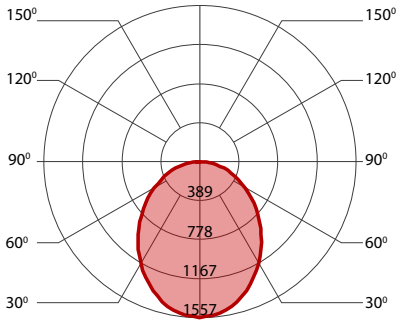
750 LUMEN AT 80CRI - MEDIUM OUTPUT



PERFORMANCE PER 4'

LED output	Color Temp	Watts	Nominal Delivered Lumens	Efficacy LPW
medium output	3000K	28.5	3000	106
medium output	3500K	28	3000	108
medium output	4000K	27	3000	112

1000 LUMEN AT 80CRI - HIGH OUTPUT



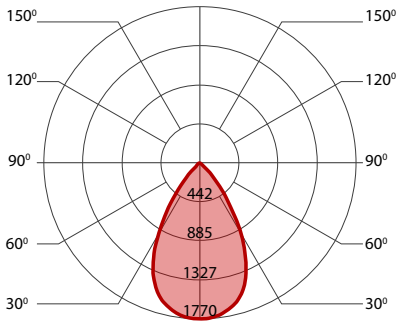
PERFORMANCE PER 4'

LED output	Color Temp	Watts	Nominal Delivered Lumens	Efficacy LPW
high output	3000K	39	4000	102
high output	3500K	38.5	4000	104
high output	4000K	37	4000	108

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PERFORMANCE WITH SPECULAR PARABOLIC LOUVER (SPL)

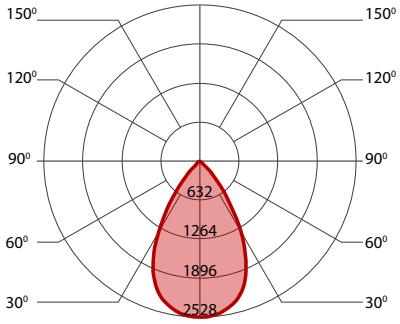
350 LUMEN AT 80CRI - ECO LOW OUTPUT



PERFORMANCE PER 4'

LED output	Color Temp	Watts	Nominal Delivered Lumens	Efficacy LPW
eco low output	3000K	12	1400	115
eco low output	3500K	12	1400	115
eco low output	4000K	12	1400	116

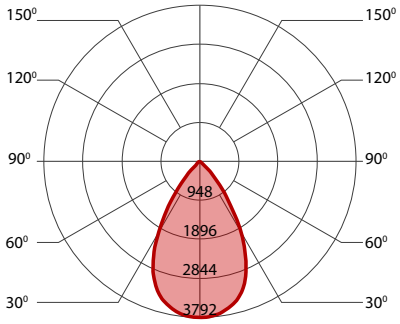
500 LUMEN AT 80CRI - LOW OUTPUT



PERFORMANCE PER 4'

LED output	Color Temp	Watts	Nominal Delivered Lumens	Efficacy LPW
low output	3000K	18	2000	111
low output	3500K	18	2000	111
low output	4000K	17.5	2000	113

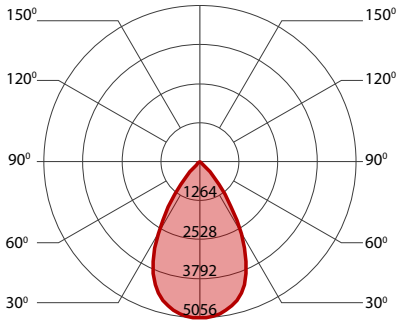
750 LUMEN AT 80CRI - MEDIUM OUTPUT



PERFORMANCE PER 4'

LED output	Color Temp	Watts	Nominal Delivered Lumens	Efficacy LPW
medium output	3000K	28	3000	107
medium output	3500K	28	3000	107
medium output	4000K	27.5	3000	109

1000 LUMEN AT 80CRI - HIGH OUTPUT



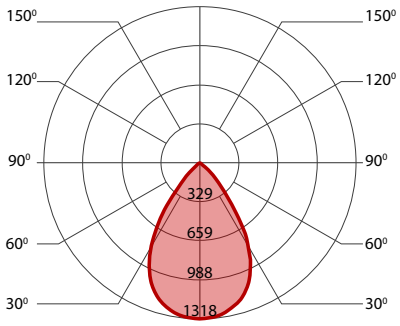
PERFORMANCE PER 4'

LED output	Color Temp	Watts	Nominal Delivered Lumens	Efficacy LPW
high output	3000K	38.5	4000	104
high output	3500K	38.5	4000	104
high output	4000K	38	4000	105

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PERFORMANCE WITH MATTE PARABOLIC LOUVER (MPL)

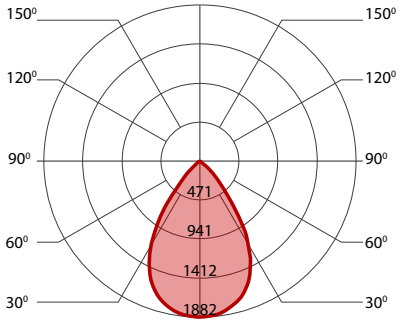
350 LUMEN AT 80CRI - ECO LOW OUTPUT



PERFORMANCE PER 4'

LED output	Color Temp	Watts	Nominal Delivered Lumens	Efficacy LPW
eco low output	3000K	14	1400	101
eco low output	3500K	14	1400	101
eco low output	4000K	13.5	1400	103

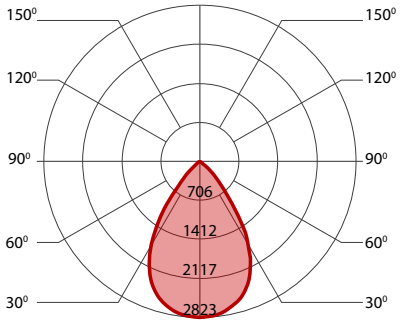
500 LUMEN AT 80CRI - LOW OUTPUT



PERFORMANCE PER 4'

LED output	Color Temp	Watts	Nominal Delivered Lumens	Efficacy LPW
low output	3000K	20.5	2000	98
low output	3500K	20.5	2000	98
low output	4000K	20	2000	100

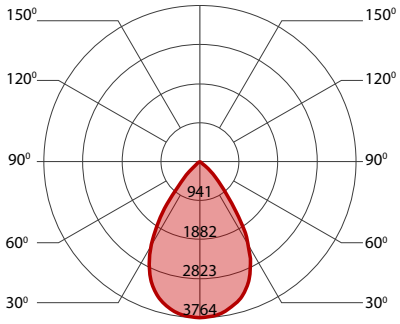
750 LUMEN AT 80CRI - MEDIUM OUTPUT



PERFORMANCE PER 4'

LED output	Color Temp	Watts	Nominal Delivered Lumens	Efficacy LPW
medium output	3000K	32	3000	94
medium output	3500K	32	3000	94
medium output	4000K	31.5	3000	96

1000 LUMEN AT 80CRI - HIGH OUTPUT



PERFORMANCE PER 4'

LED output	Color Temp	Watts	Nominal Delivered Lumens	Efficacy LPW
high output	3000K	44	4000	91
high output	3500K	44	4000	91
high output	4000K	43.5	4000	92

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Specification Sheet

lumenfacade

YS1 Lam Partners

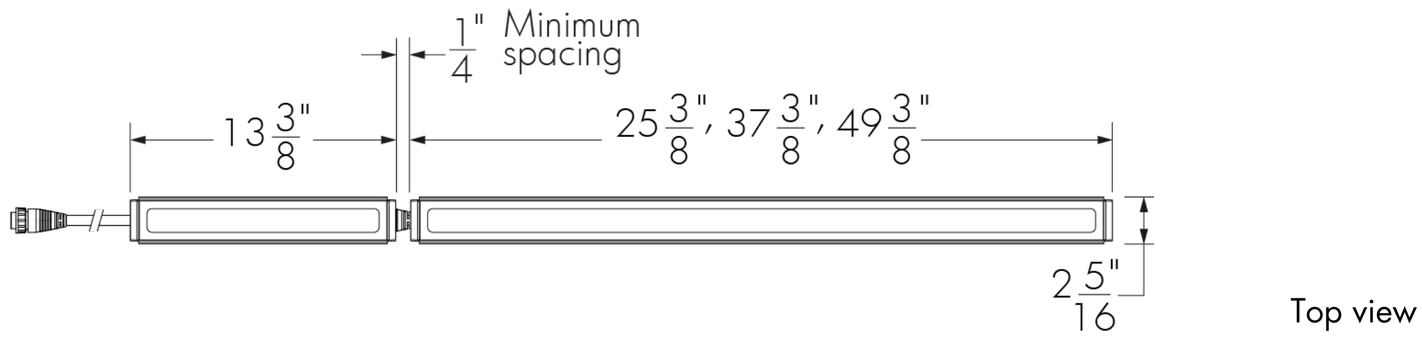
LOG

WHITE AND STATIC COLORS

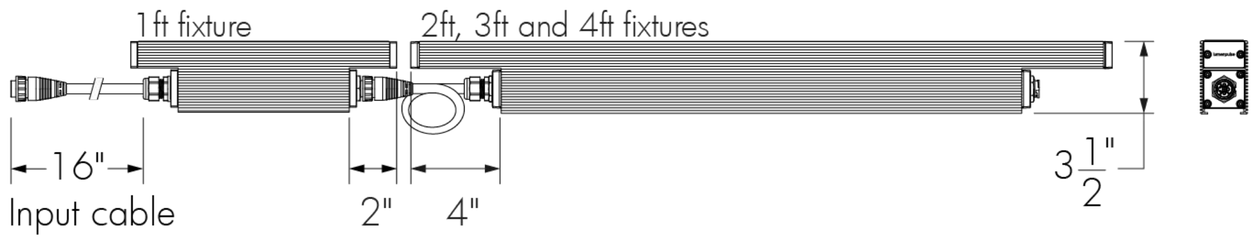
Project Name _____ **Qty** _____

Type _____ **Catalog / Part Number** _____





Top view



End-to-end (ETE) option shown

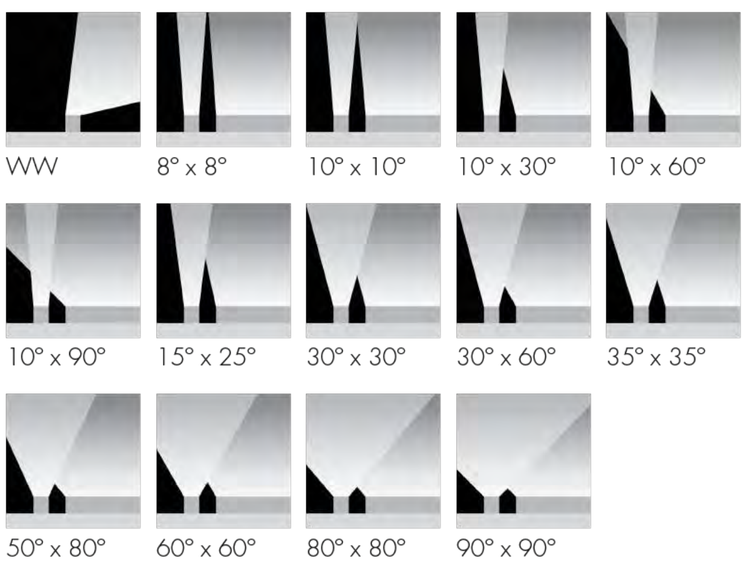
Front and side views

Photometric Summary

	Delivered output (lm)	Intensity (peak cd)
WW	3,592	5,159
8°x8°	4,045	77,896
10°x10°	3,768*	38,346*
10°x30°	3,830	30,056
10°x60°	3,692	19,654
10°x90°	3,576	7,897
30°x30°	3,765	14,726
30°x60°	3,862*	5,119*
60°x60°	3,447*	3,015*
90°x90°	3,592	1,886

Based on HO 4000K, 4ft [1219mm] configuration.
Photometric performance is measured in compliance with IESNA LM-79-08.
*Estimated. Consult website for the latest photometric files.

Optics



Description

The Lumenfacade is a high-performance linear LED luminaire for grazing or floodlighting exterior walls and facades. Featuring second generation LED technology, the luminaire is available in 12 in, 24 in, 36 in or 48 in sections, and can be configured with a wide number of options, including: optics for grazing or flood lighting; a choice of outputs (ASHRAE 5 W/ft, RO 8.5 W/ft or HO 15.25 W/ft); various color temperatures or static colors; various mounting options, finishes, accessories and controls. The Lumenfacade is also available with a unique asymmetric wallwash distribution, providing exceptional uniformity and brightness for walls and signage.

Features

Color and Color Temperature	2200K, 2700K, 3000K, 3500K, 4000K, Red, Green, Blue
Length (nominal)	12 in, 24 in, 36 in, 48 in
Optics	Asymmetric Wallwash, 8° x 8°, 10° x 10°, 10° x 30°, 10° x 60°, 10° x 90°, 15° x 25°, 30° x 30°, 30° x 60°, 35° x 35°, 50° x 80°, 60° x 60°, 80° x 80°, 90° x 90°
Options	End-to-end configuration (factory installed 16 in black input cable included), Corrosion-resistant coating for hostile environments, 3G ANSI C136.31 Vibration Rating for bridge applications, CE (certification covers European Economic Area)
Power Consumption	5 W/ft (meets ASHRAE standards for linear lighting on building facades - not available for 12 in fixture lengths), 8.5 W/ft (RO version), 15.25 W/ft (HO version), Typically 20% higher for 12 in fixture lengths
Warranty	5-year limited warranty

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1220 Marie-Victorin Blvd., Longueuil, QC J4G 2H9 CA **T** United States 617.307.5700 | Canada 1.877.937.3003 | 514.937.3003 **F** 514.937.6289
info@lumenpulse.com **www.lumenpulse.com** **www.lumenpulse.com/products/1046/lumenfacade**

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Specification Sheet

lumenfaca

LOG

WHITE AND STATIC COLORS

Colors and Color Temperatures





Controls

ON/OFF 0-10V DALI

lumentalk DMXrdm EcoSystem Enabled

Ratings

IP66 IK07*

*asymmetric wallwash lens is IK06 rated

Certifications

cULus CE RoHS 5 YEARS lumenpulse

Performance

Illuminance at Distance	Minimum 1 fc at 140 ft (HO 4000K, 48 in fixture, 10° x 60°, DMX/RDM)
Color Consistency	2 SDCM, 3 SDCM (2200K)
Color Rendering	Minimum CRI 80
Lumen Maintenance	L70 280,000 hrs, L95 35,000 hrs

Physical

Housing Material	Low copper content extruded aluminum
Lens Material	Clear tempered glass
Hardware Material	Stainless steel
End Cap Material	Machined aluminum
Gasket Material	Silicone
Surface Finish	Electrostatically applied polyester powder coat
Weight	12 in: 4.5 lbs, 24 in: 7 lbs, 36 in: 10.5 lbs, 48 in: 14 lbs

Electrical and control

Voltage	100 to 277 volts
Fixture Cable	Power and data in one cable, End-to-end option (ETE): 16 in black input cable (no jumper cable needed for minimum spacing between two fixtures)
Leader Cable Conductors	5C #16-5
Maximum Cable and Fixture Run Length	252 ft (On/Off, 277V, RO version), 164 ft (On/Off, 277V, HO version)
Control	On/Off control, Lumentalk, 0-10V dimming, DALI dimming, Lutron® EcoSystem® Enabled dimming, DMX/RDM enabled
Resolution (DMX/RDM)	Per foot or per fixture (configured with LumenID V3 software), 8-bit or 16-bit

Environmental

Storage Temperature	-40 °F to 185 °F (device must reach start-up temperature value before operating)
Start-up Temperature	-13 °F to 122 °F
Operating Temperature	-40 °F to 122 °F
Ingress Protection Rating	IP66
Impact Resistance Rating	IK07 (asymmetric wallwash lens is IK06 rated)

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info@lumenpulse.com **www.lumenpulse.com** **www.lumenpulse.com/products/1046/lumenfacade**

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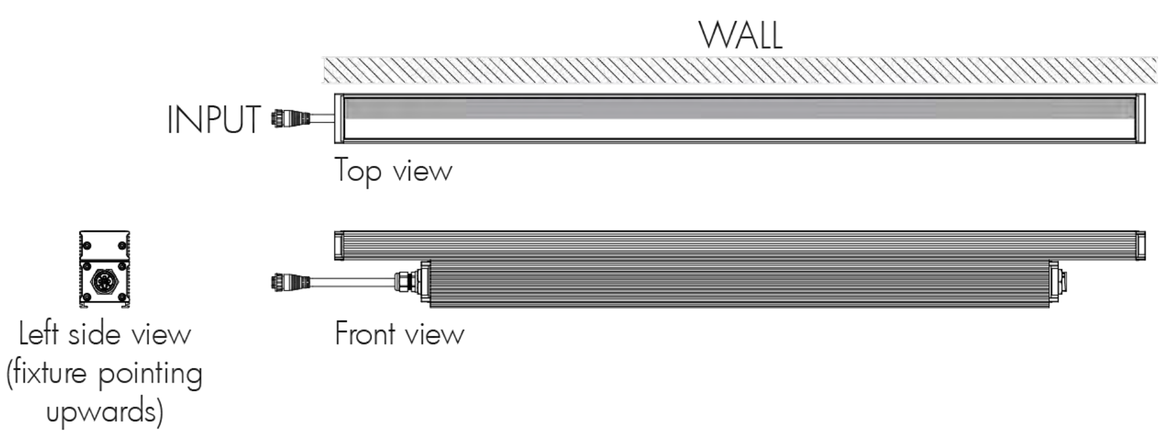
Accessories (order separately)

Optical Accessories	Lumenfacade Radial Louver
Cables	Leader cable (standard), Jumper cable (standard), Leader cable (ETE), Jumper cable (ETE)
Control Boxes	DMX/RDM enabled (daisy chain or star configuration), Ethernet enabled (daisy chain or star configuration), Lumentalk Data Bridge
Control Systems	Lumentone™ 2, Pharos® kit
Diagnostic and Addressing Tools	LumenID, LumentalkID

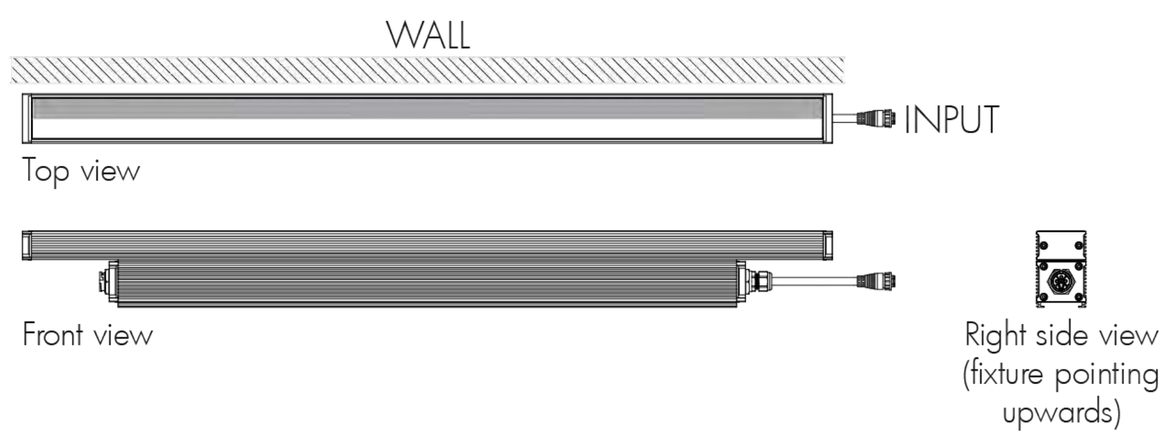
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Asymmetric wallwash optic details

WWLF - Asymmetric wallwash optic, left feed



WWRF - Asymmetric wallwash optic, right feed

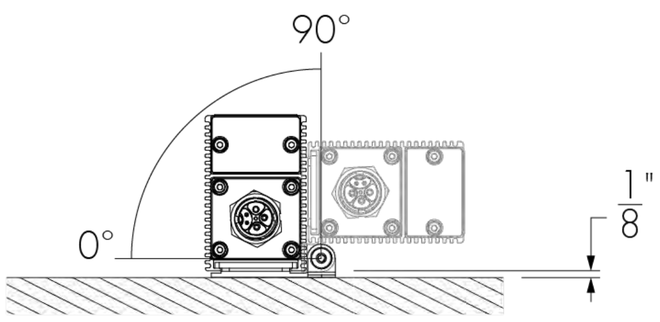


- Always position frosted side toward the wall.
- Fixture's feeding side is based on uplight installations. Feeding sides are reversed when fixture is used in a downlight application.
- Recommended setback from wall is 1/10 of the wall height. Example: 2 ft setback for a 20 ft wall.

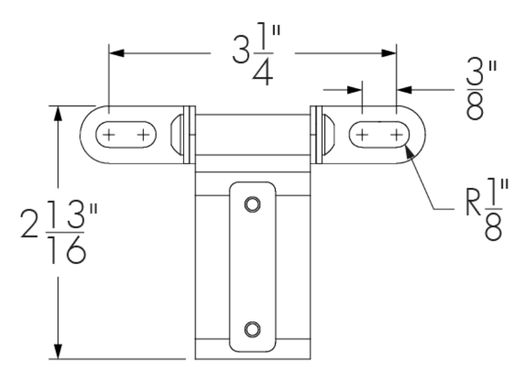
Mounting options

Surface Mount

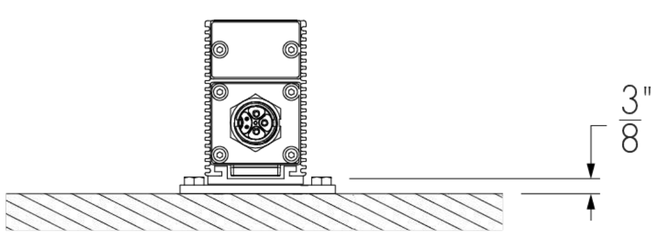
SAM - Slim Adjustable Mounting



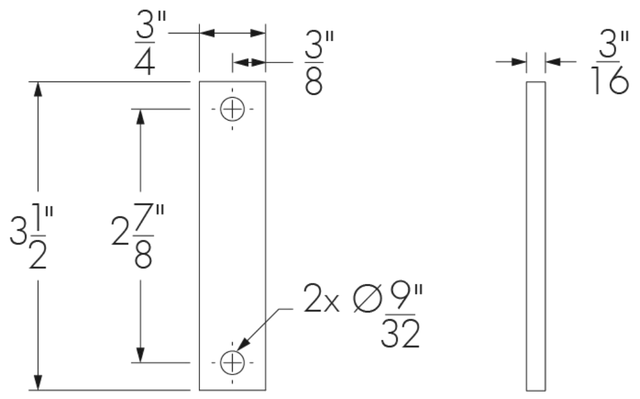
SAM - Mounting hole pattern



UMP - Fixed Mounting



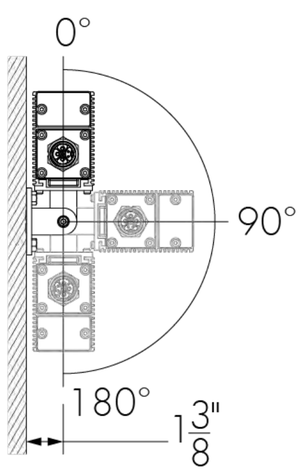
UMP - Mounting hole pattern



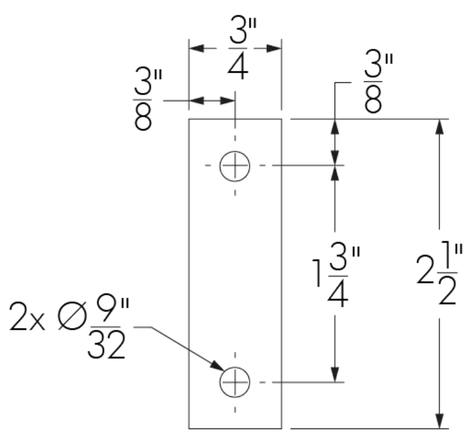
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Wall Mount

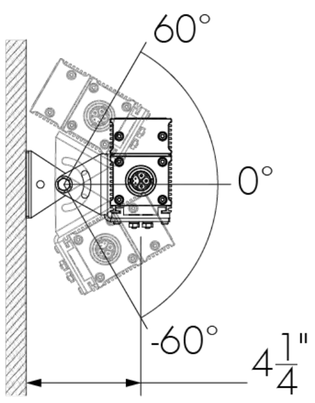
UMAS - Universal Adjustable Mounting



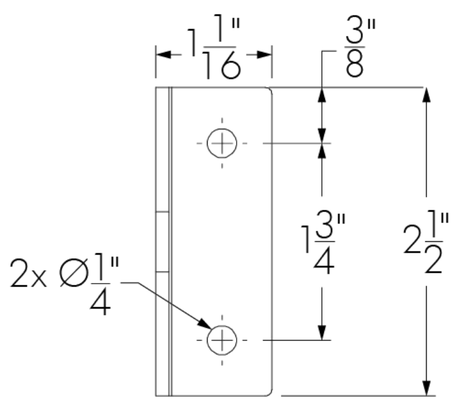
UMAS - Mounting hole pattern



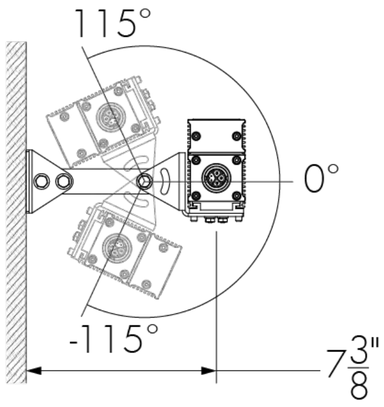
WAM2 - Adjustable Wall Mounting 2 in



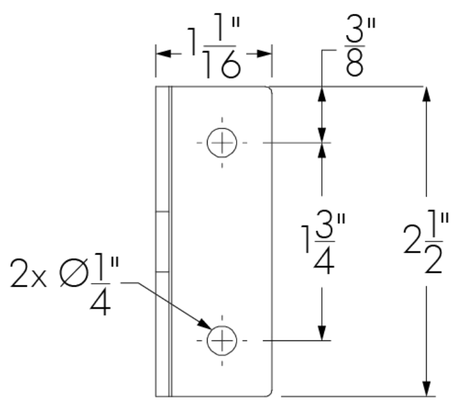
WAM2 - Mounting hole pattern



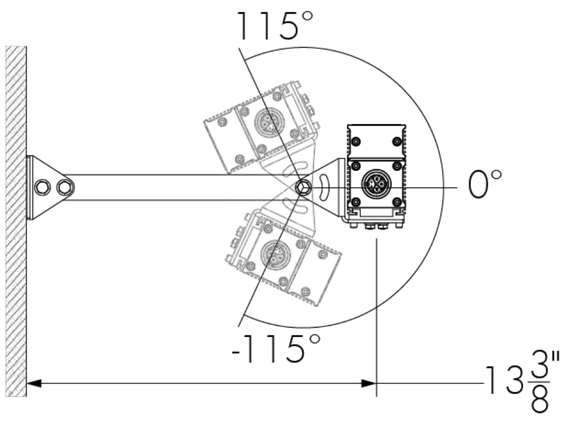
WAM6 - Adjustable Extended Arm Mounting 6 in



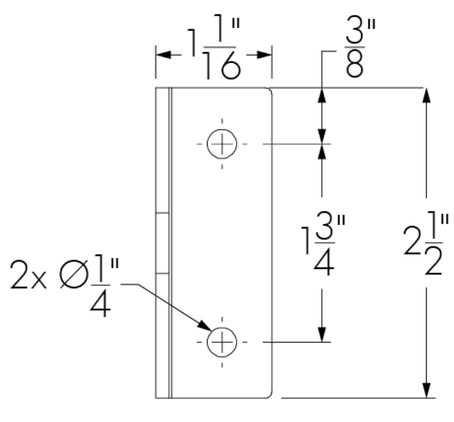
WAM6 - Mounting hole pattern



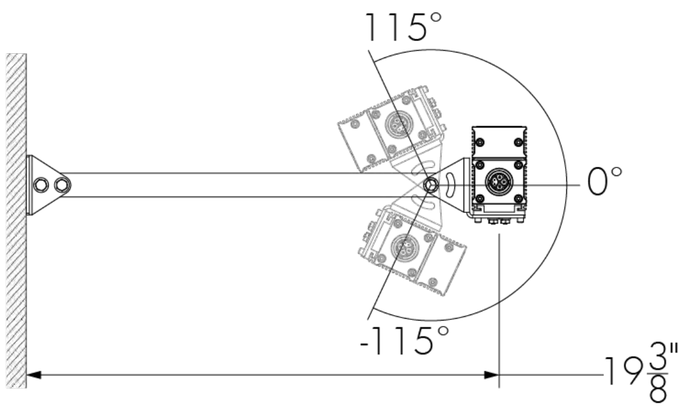
WAM12 - Adjustable Extended Arm Mounting 12 in



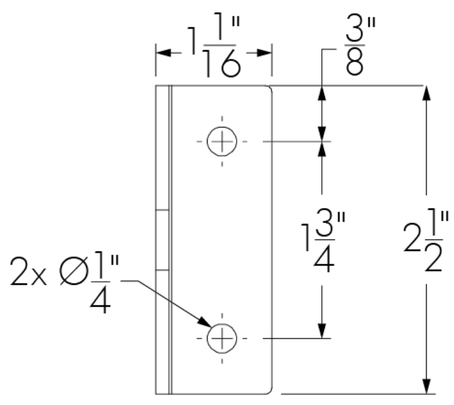
WAM12 - Mounting hole pattern



WAM18 - Adjustable Extended Arm Mounting 18 in

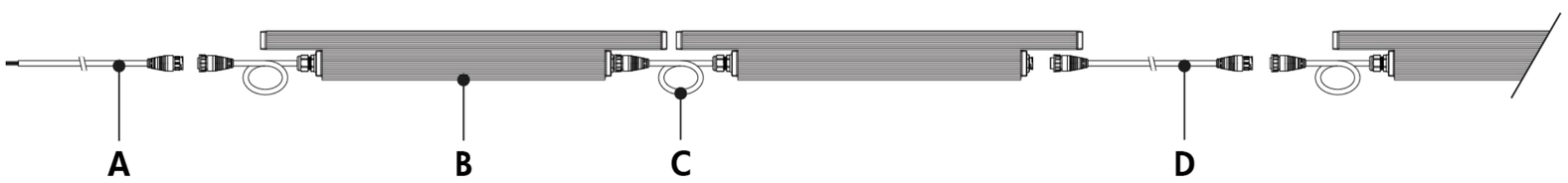


WAM18 - Mounting hole pattern



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End-to-end configuration option (ETE)

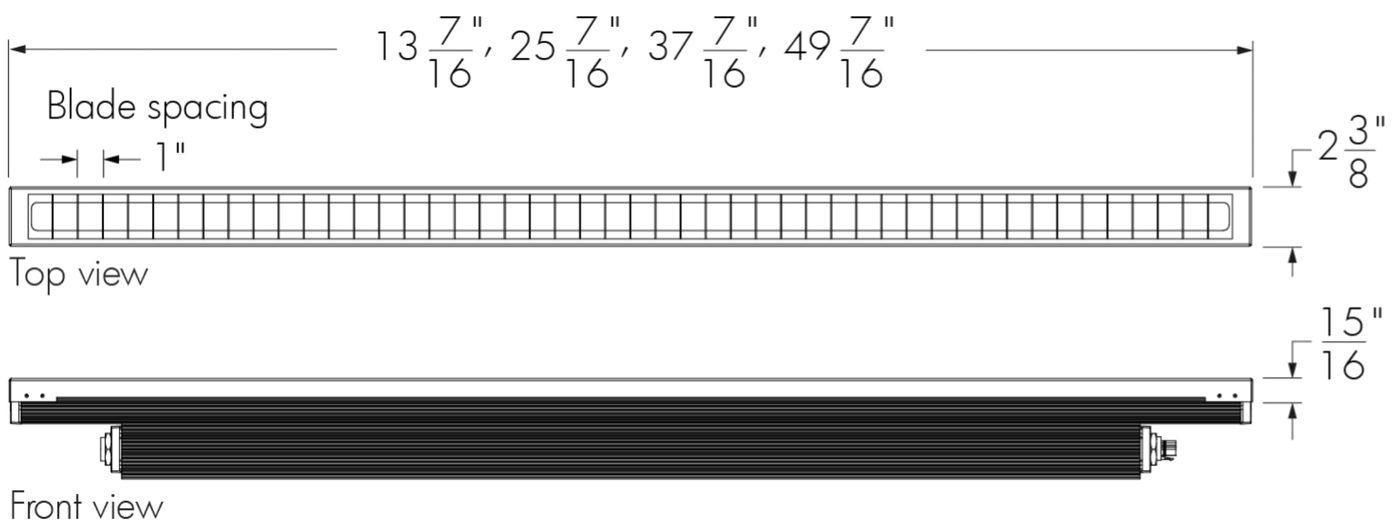


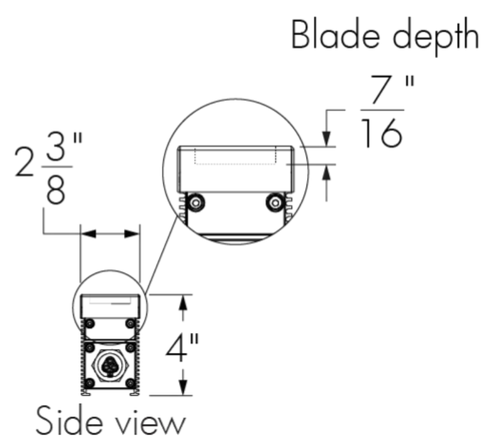
A - ETE leader cable (order separately)
B - Lumenfacade with ETE option
C - ETE 16 in black input cable
D - ETE jumper cable (order separately)

Includes a factory installed 16 in black input cable. A jumper cable is not required for minimum spacing between two end-to-end (ETE) fixtures. An ETE jumper cable is required only if a longer distance between two adjacent ETE fixtures is needed, or to connect two continuous runs of ETE fixtures together.

Optical accessories (order separately)

LOGRD - Radial louver for Lumenfacade





LOGRD-**LENGTH-FINISH-OPTIONS**

Please specify:
LENGTH: 12 in, 24 in, 36 in or 48 in; **FINISH**: BK - Black Sandtex®, BRZ - Bronze Sandtex®, SI - Silver Sandtex®, WH - Smooth white or CC - custom color and finish (please specify RAL color); **OPTIONS**: CRC - Corrosion-resistant coating for hostile environments

- The addition of a louver will affect beam distribution. Consult factory for application support.
- Not suitable for asymmetric wallwash optic.

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Cables (order separately)

LOGLC - Leader cable for Lumenfacade



Standard construction
LOGLC-**CERTIFICATION**-STD-**LENGTH-CABLE COLOR**

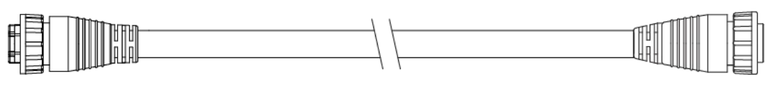


End-to-end (ETE) option
LOGLC-**CERTIFICATION**-ETE-**LENGTH-CABLE COLOR**

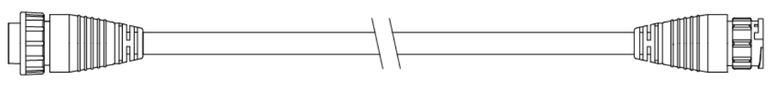
Please specify:
CERTIFICATION: UL or CE; **LENGTH**: 10 ft, 25 ft, 50 ft, 100 ft, 150 ft or 200 ft; **CABLE COLOR**: black or white (connectors are black as standard; ETE fixture input cables are black as standard)

- Suitable for dimming/data and non-dimming applications.
- Sealing end cap is mandatory for any unused connector. One (1) included with every leader cable.
- Consult Lumenfacade leader cable specification sheet for details.

LOGJC - Jumper cable for Lumenfacade



Standard construction
LOGJC-**CERTIFICATION**-STD-**LENGTH-CABLE COLOR**



End-to-end (ETE) option
LOGJC-**CERTIFICATION**-ETE-**LENGTH-CABLE COLOR**

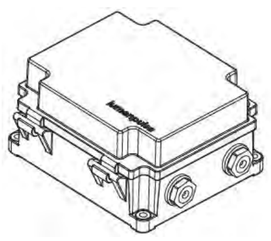
Please specify:
CERTIFICATION: UL or CE; **LENGTH**: 1 ft (available for ETE option only), 2 ft to 30 ft (available in 1 ft increments) or 50 ft; **CABLE COLOR**: black or white (connectors are black as standard; ETE fixture input cables are black as standard)

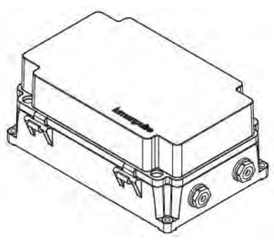
- Suitable for dimming/data and non-dimming applications.
- Consult Lumenfacade jumper cable specification sheet for details.

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Control boxes (order separately)

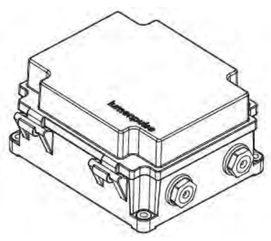
CBX-DMX/RDM - DMX/RDM enabled (daisy chain or star configuration)

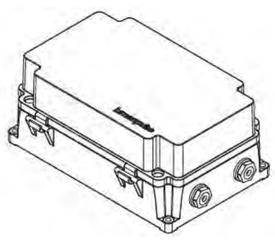




DMX/RDM control box. Up to six power and data outputs to fixtures or fixture runs. Consult CBX specification sheet and installation instructions for details. Lumenterminators provided with CBX (2x for daisy chain configuration, 6x for star configuration), consult factory to order spares.

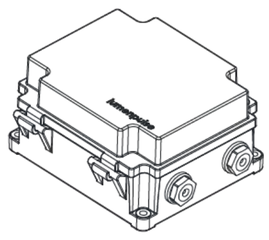
CBX-ENET - Ethernet enabled (daisy chain or star configuration)





Ethernet control box. Up to four power and data outputs to fixture or fixture runs. Consult Ethernet CBX specification sheet and installation instructions for details.

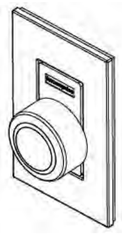
LDB - Lumentalk Data Bridge



Lumentalk Data Bridge, 0-10V or DMX output. Consult LDB specification sheet for details.

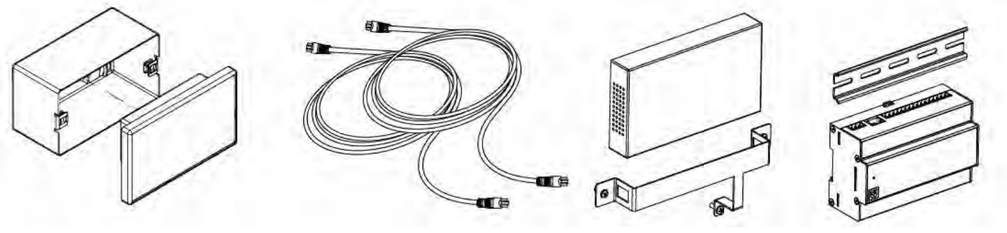
Control systems (order separately)

LTN2 - Lumentone™ 2



Lumentone 2 is a simple pre-programmed DMX 512 controller with a push button rotary dial and live feedback.

PHAROS - Pharos® kit



The Pharos kit, available for 1 or 2 DMX universes, allows for complete control of large lighting installations. 2 DMX universes kit shown.

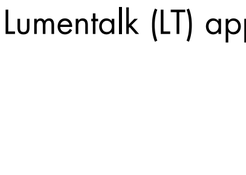
Diagnostic and addressing tools (order separately)

LID - LumenID



LumenID is a diagnostic and addressing DMX/RDM tool. It must be specified on all DMX applications. Consult LID specification sheet for details.

LID-LT - LumentalkID

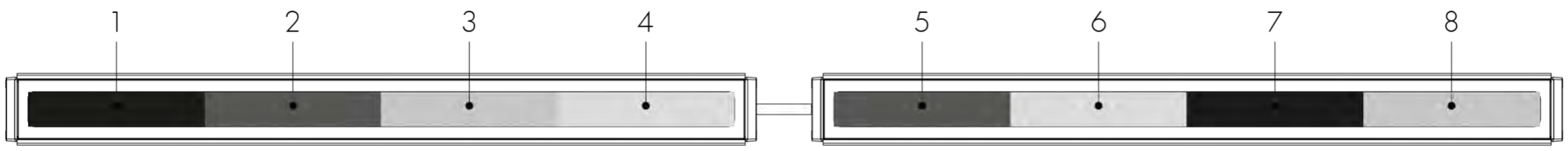


LumentalkID is a diagnostic and addressing tool. It must be specified for all Lumentalk (LT) applications. Consult LID-LT specification sheet for details.

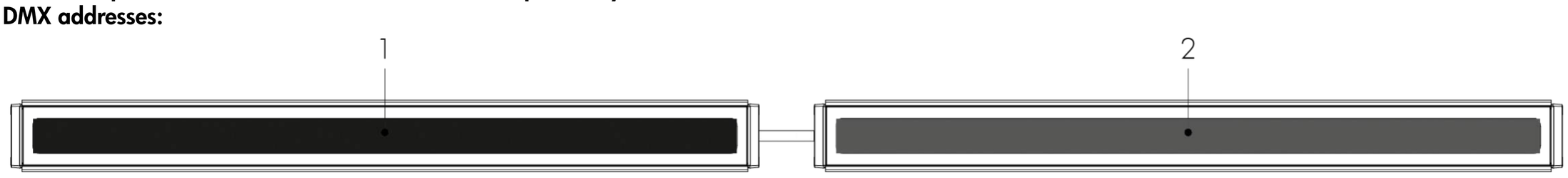
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Resolution details

Resolution per foot: each 12 in section is addressed independently
DMX addresses:



Resolution per fixture: each fixture is addressed independently
DMX addresses:



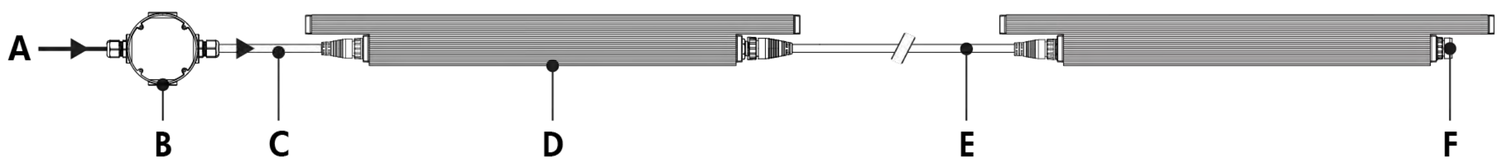
- 48 in fixtures shown.
- Applicable for DMX/RDM control option only. Fixture resolution can be configured on-site within the LumenID V3 software. A DMX/RDM enabled CBX is required.

Typical wiring diagrams

Wiring color code

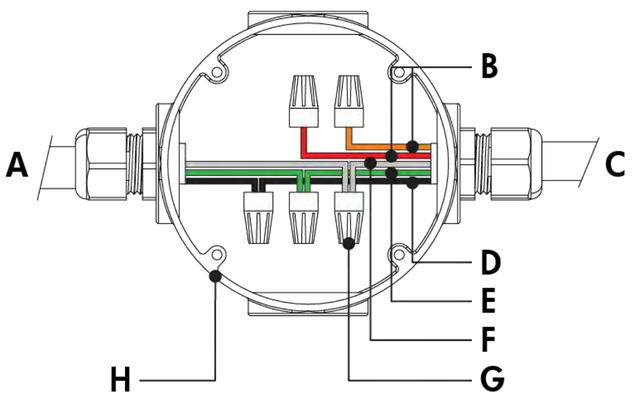
UL Color Code	USE
Green	Ground
Black	Line
White	Line/Neutral
Red or Purple	0-10V / Data +
Orange	0-10V / Data -

On/Off control (NO)



A - Power input (100-277V, wiring by others)
B - Junction box (by others)
C - Leader cable (LOGLC)
D - Lumenfacade
E - Jumper cable (LOGJC)
F - Sealing end cap

On/Off control (NO) - wiring detail

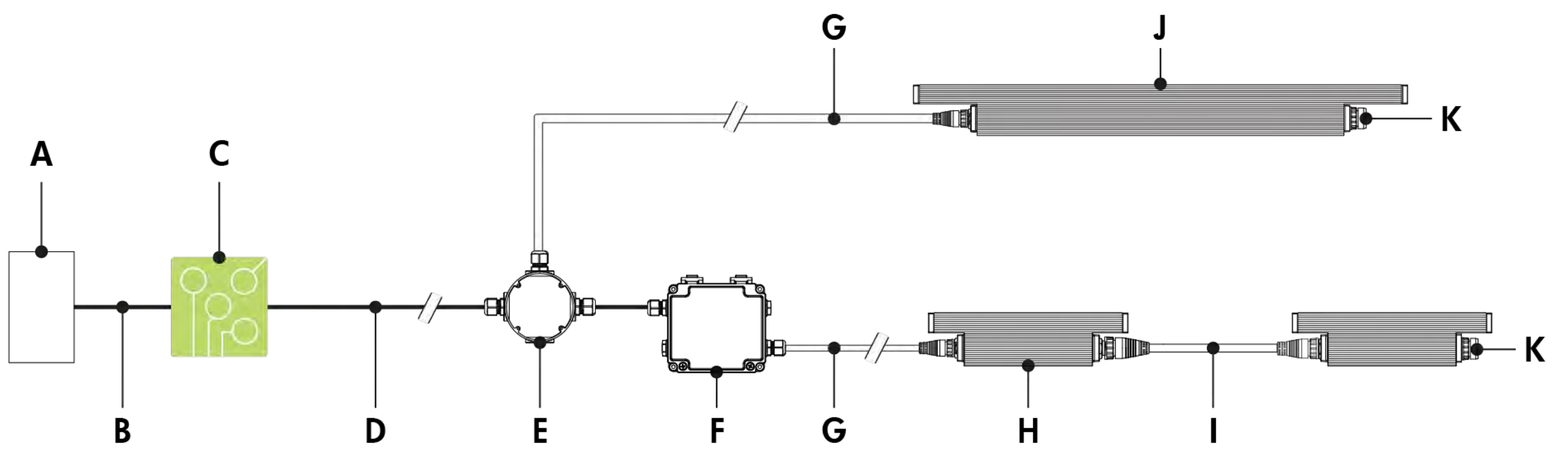


A - Power input
B - Not required
C - To fixture
D - Line
E - Ground
F - Line/Neutral
G - Wire-nuts (by others)
H - Junction box (by others)

- Consult factory for specific applications and maximum fixture count/cable length recommendations.
- ASHRAE version (not available for 12 in fixture lengths): 5 W/ft; Regular Output version: 8.5 W/ft; High Output version: 15.25 W/ft.

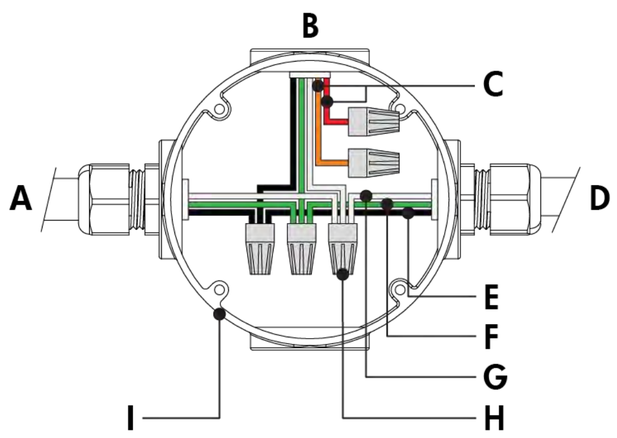
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Lumentalk (LT)



A - Dimmer/controller (order separately from Lumenpulse, or by others)
B - Data wiring (by others)
C - Lumentranslator (LTL-010, -DMX, -TRIAC, -DALI)
D - Power line (120-277V AC, wiring by others)
E - Junction box (by others)
F - Lumentalk Data Bridge (LDB-DIM or LDB-DMX)
G - Leader cable (LOGLC)
H - Lumenfacade 12 in
I - Jumper cable (LOGJC)
J - Lumenfacade (24 in, 36 in or 48 in fixture lengths)
K - Sealing end cap

Lumentalk (LT) - wiring detail



A - Power input (control over power line via Lumentalk system)
B - To fixture
C - Not required
D - To Lumentalk Data Bridge (for run lengths with 12 in fixtures)
E - Line
F - Ground
G - Line/Neutral
H - Wire-nuts (by others)
I - Junction box (by others)

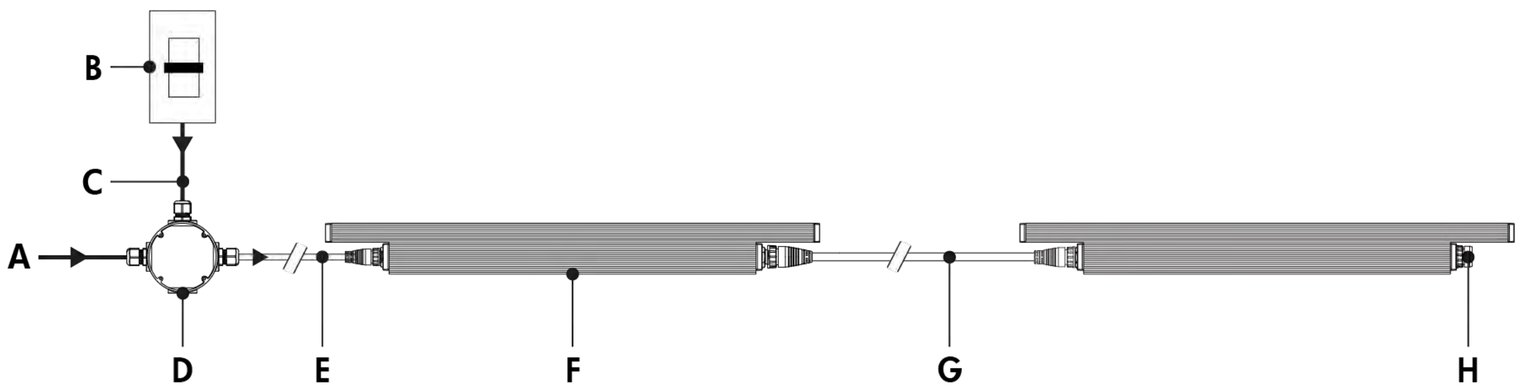
- Consult factory for specific applications and maximum fixture count/cable length recommendations.
- Lumentalk Data Bridge required for 12 in fixture lengths, see LDB installation instructions for details.

- For applications with all fixtures controlled as 1 zone: fixtures and Lumentalk Data Bridge must be specified as DIM. Maximum of 10 fixtures per LDB-DIM, consult factory for applications that require additional capabilities.
- For applications with fixtures controlled individually: fixtures and Lumentalk Data Bridge must be specified as DMX, 2-step commissioning process: 1 - DMX/RDM system using LumenID software and a LID, 2 - Lumentalk system using LumentalkID software and a LID-LT. Maximum of 32 fixtures per LDB-DMX. Consult factory for details.

- For DMX applications: 1 DMX controller per Lumentalk network, maximum of 48 DMX channels per Lumentalk network (minimum step transition update rate is 1 second, minimum fade time between two colors is 1 minute). Consult factory for applications that require additional capabilities.
- Maximum of 1 transmitter (Lumentranslator or Lumenlink) per system.
- No third party fixtures allowed on the same circuit.
- Consult factory for DALI Lumentalk applications.
- 1% minimum dimming value.
- ASHRAE version (not available for 12 in fixture lengths): 5 W/ft; Regular Output version: 8.5 W/ft; High Output version: 15.25 W/ft.

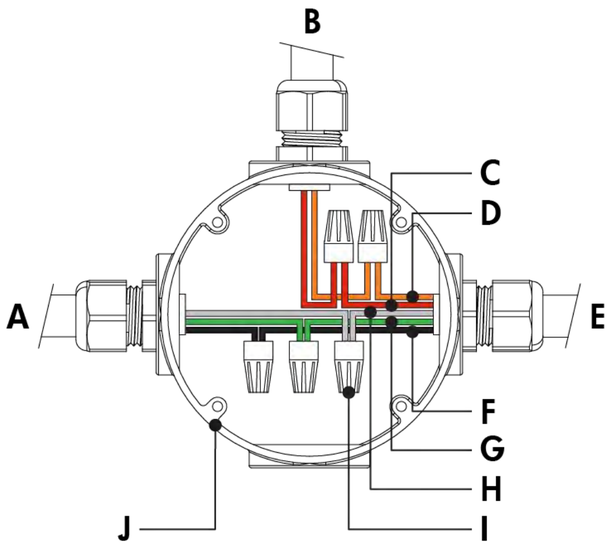
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0-10V dimming (DIM)



A - Power input (100-277V, wiring by others)
B - Dimmer (by others)
C - Data wiring (by others)
D - Junction box (by others)
E - Leader cable (LOGLC)
F - Lumenfacade
G - Jumper cable (LOGJC)
H - Sealing end cap

0-10V dimming (DIM) - wiring detail



A - Power input
B - From dimmer (by others)
C - 0-10 V +
D - 0-10 V -
E - To fixture
F - Line
G - Ground
H - Neutral
I - Wire-nuts (by others)
J - Junction box (by others)

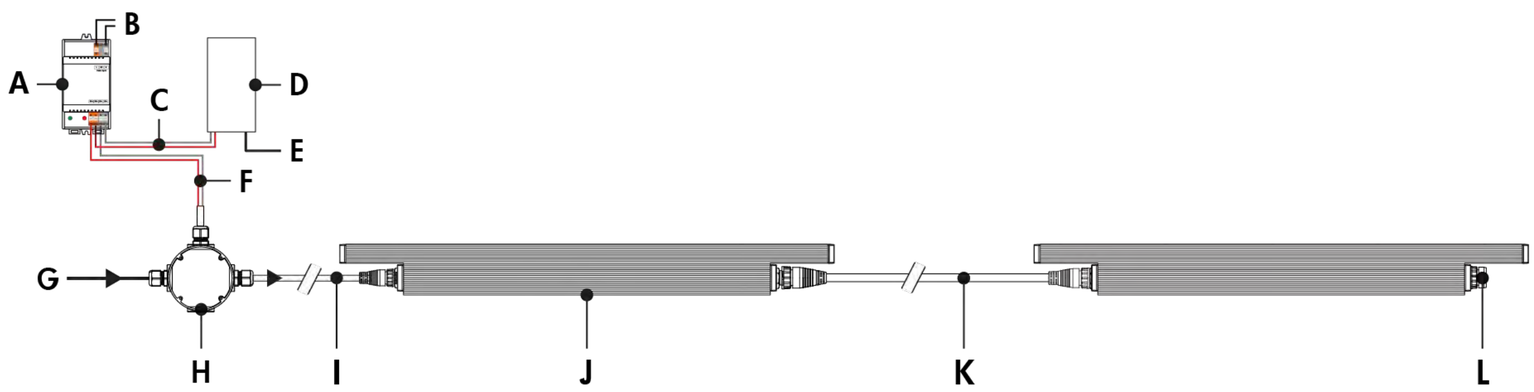
- Consult factory for specific applications and maximum fixture count/cable length recommendations.
- 0-10V mA ratings: passive dimmer (Current Sink): 3 mA per fixture, active dimmer (Current Source): 0.5 mA per fixture.
- 10% minimum dimming value.
- ASHRAE version (not available for 12 in fixture lengths): 5 W/ft; Regular Output version: 8.5 W/ft; High Output version: 15.25 W/ft.

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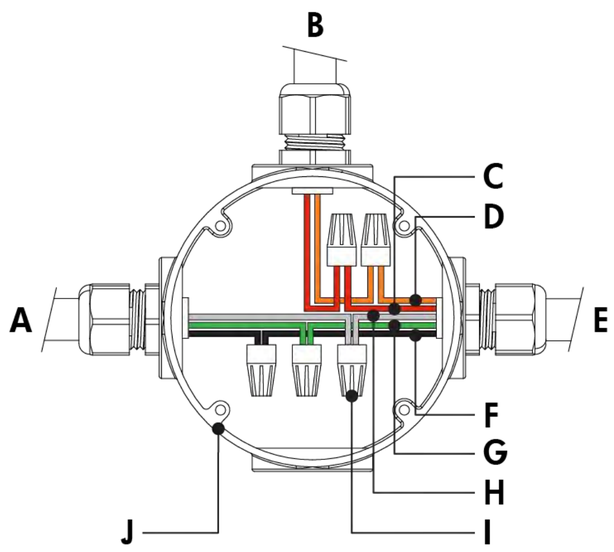
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DALI dimming (DALI)



A - DALI bus power supply (by others)
B - Power input for DALI bus power supply (wiring by others)
C - Data output to DALI controller (wiring by others)
D - DALI controller (by others)
E - Power input for DALI controller (wiring by others)
F - Data output to fixture (wiring by others)
G - Power input (100-277V, wiring by others)
H - Junction box (by others)
I - Leader cable (LOGLC)
J - Lumenfacade
K - Jumper cable (LOGJC)
L - Sealing end cap

DALI dimming (DALI) - wiring detail

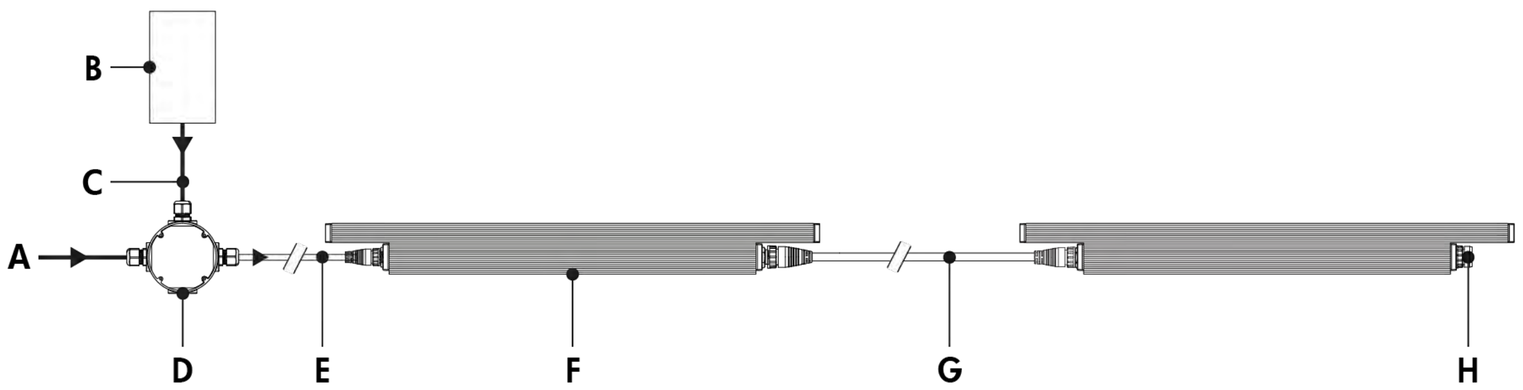


A - Power input
B - From DALI controller (by others)
C - Data +
D - Data -
E - To fixture
F - Line
G - Ground
H - Neutral
I - Wire-nuts (by others)
J - Junction box (by others)

- Consult factory for specific applications and maximum fixture count/cable length recommendations.
- Maximum of 64 DALI fixtures per DALI loop.
- 1% minimum dimming value.
- ASHRAE version (not available for 12 in fixture lengths): 5 W/ft; Regular Output version: 8.5 W/ft; High Output version: 15.25 W/ft.

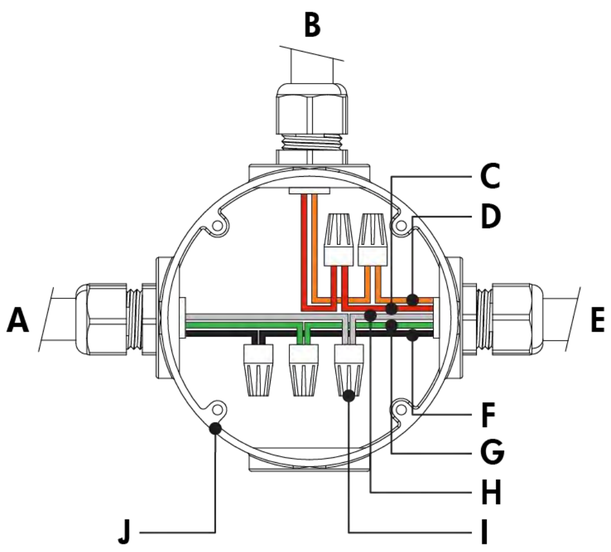
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Lutron® EcoSystem® Enabled dimming (ES)



A - Power input (100-277V, wiring by others)
B - Lutron® EcoSystem® controller (by others)
C - Data wiring (by others)
D - Junction box (by others)
E - Leader cable (LOGLC)
F - Lumenfacade (24 in, 36 in or 48 in fixture lengths)
G - Jumper cable (LOGJC)
H - Sealing end cap

Lutron® EcoSystem® Enabled dimming (ES) - wiring detail

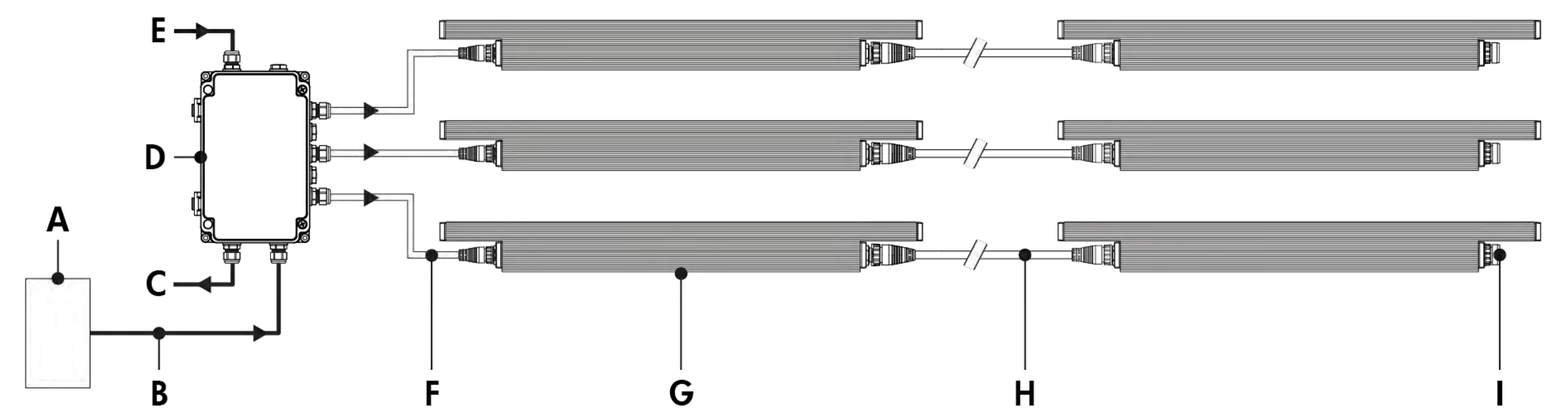


A - Power input
B - From Lutron® EcoSystem® controller (by others)
C - Data +
D - Data -
E - To fixture
F - Line
G - Ground
H - Neutral
I - Wire-nuts (by others)
J - Junction box (by others)

- Consult factory for specific applications and maximum fixture count/cable length recommendations.
- Each Lutron® EcoSystem® enabled fixture has its own address; for the example shown, there are a total of 2 EcoSystem® addresses.
- 1% minimum dimming value.
- ASHRAE version (not available for 12 in fixture lengths): 5 W/ft; Regular Output version: 8.5 W/ft; High Output version: 15.25 W/ft.

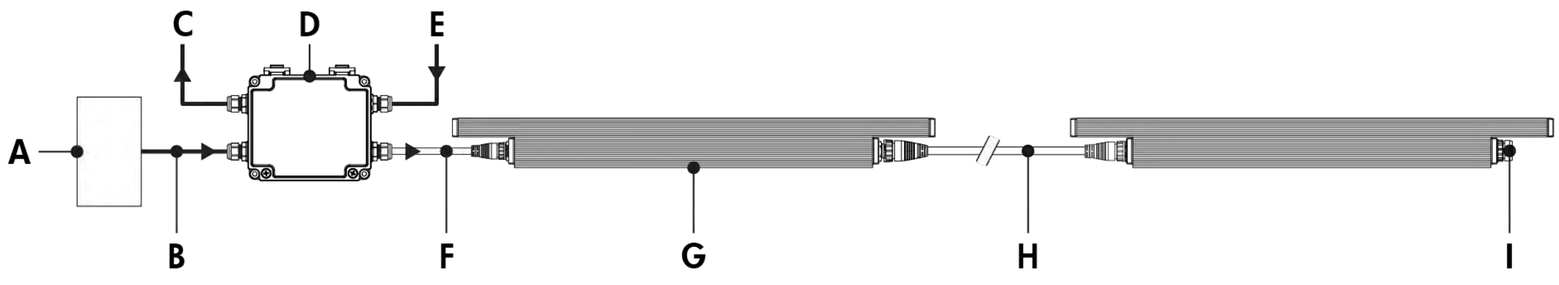
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Star Layout (DMX/RDM)



A - DMX/RDM controller (order separately from Lumenpulse, or by others)
B - Data input (Belden 9841 or equivalent, by others)
C - Data output to next CBX (optional, not isolated/not boosted)
D - CBX-ST
E - Power input (100-277V, wiring by others)
F - Leader cable (LOGLC)
G - Lumenfacade
H - Jumper cable (LOGJC)
I - Sealing end cap

Daisy Chain Layout (DMX/RDM)



A - DMX/RDM controller (order separately from Lumenpulse, or by others)
B - Data input (Belden 9841 or equivalent, by others)
C - Data output to next CBX (optional, not isolated/not boosted)
D - CBX-DS
E - Power input (100-277V, wiring by others)
F - Leader cable (LOGLC)
G - Lumenfacade
H - Jumper cable (LOGJC)
I - Sealing end cap

Maximum run length

Configuration/Voltage	**120V**	**240V**	**277V**
LOG HO	68ft	76ft	84ft
LOG RO	120ft	128ft	128ft
LOG ASHRAE	128ft	128ft	128ft

Based on 15A maximum, 50 ft leader cable.

- Consult CBX installation instructions for additional wiring details.
- Consult factory for specific applications and maximum fixture count/cable length recommendations. Maximum run length calculations are typically based on 48 in fixtures.
- The DMX/RDM protocol states a maximum of 32 DMX/RDM enabled fixtures on any single run.
- Maximum of 4 DMX/RDM repeaters/CBX cascading in line.
- Maximum of 6 outputs per CBX-ST; maximum of 1 output per CBX-DS.
- Each fixture requires 1 DMX address.
- 1% minimum dimming value.
- ASHRAE version (not available for 12 in fixture lengths): 5 W/ft; Regular Output version: 8.5 W/ft; High Output version: 15.25 W/ft.

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How to order

1	2	3	4	5	6	7	8

9

1 . Housing [1]

LOG ASHRAE	Lumenfacade™, 5 W/ft ASHRAE compliant [2]
LOG RO	Lumenfacade™ Regular Output, 8.5 W/ft
LOG HO	Lumenfacade™ High Output, 15.25 W/ft

[1] Power consumption is typically 20% higher for 12 in fixture lengths.

[2] ASHRAE version not available for 12 in fixture lengths.

2 . Voltage

100	100 volts
120	120 volts
208	208 volts
220	220 volts
240	240 volts
277	277 volts

3 . Length

12	13 3/8 in (4.5 lbs) [1] [2]
24	25 3/8 in (7 lbs)
36	37 3/8 in (10.5 lbs)
48	49 3/8 in (14 lbs)

[1] Power consumption is typically 20% higher for 12 in fixture lengths.

[2] To connect 12 in fixture lengths to the Lumentalk system, DIM or DMX/RDM must be specified as the control option, and a Lumentalk Data Bridge (LDB) is required. See the typical wiring diagrams in the specification sheet for details.

4 . Color and Color Temperature [1]

22K	2200K
27K	2700K
30K	3000K
35K	3500K
40K	4000K
RD	Red [2]
GR	Green [2]
BL	Blue [2]

[1] Consult factory for availability of static Royal Blue, 6500K and 90+ CRI.

[2] Static colors made to order 8-10 weeks.

5 . Optics

WWLF	Asymmetric Wallwash, left feed
WWRF	Asymmetric Wallwash, right feed
8x8	8° x 8° [1]
10x10	10° x 10° [1]
10x30	10° x 30°
10x60	10° x 60°
10x90	10° x 90°
15x25	15° x 25°
30x30	30° x 30°
30x60	30° x 60°
35x35	35° x 35°
50x80	50° x 80°
60x60	60° x 60°
80x80	80° x 80°
90x90	90° x 90

[1] For best results use with HO fixtures at a 6 in setback from surface. Contact factory for application support.

6 . Mounting Options

SAM	Slim Adjustable Mounting
UMP	Fixed Mounting [1]
UMAS	Universal Adjustable Mounting [1]
WAM2	Adjustable Wall Mounting 2 in
WAM6	Adjustable Extended Arm Mounting 6 in
WAM12	Adjustable Extended Arm Mounting 12 in
WAM18	Adjustable Extended Arm Mounting 18 in

[1] Suitable to use when 3GV option is specified.

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7 . Finish

BK	Black Sandtex®
BRZ	Bronze Sandtex®
SI	Silver Sandtex®
WH	Smooth white
CC	Custom color and finish (please specify RAL color) (1)

(1) Lumenpulse offers a wide selection of RAL CLASSIC (K7) colors with a smooth texture and high-gloss finish. Please consult factory for a list of available K7 colors, other RAL textures and glosses, or to match alternate color charts. Final color matching results may vary.

8 . Control

NO	On/Off control
LT	Lumentalk (1) (2)
DIM	0-10V dimming
DALI	DALI dimming
ES	Lutron® EcoSystem® Enabled dimming (3)
DMX/RDM	DMX/RDM enabled (4)

(1) To connect 12 in fixture lengths to the Lumentalk system, DIM or DMX/RDM must be specified as the control option, and a Lumentalk Data Bridge (LDB) is required. See the typical wiring diagrams in the specification sheet for details.

(2) A Lumentranslator and LumentalkID (LIDLT) must be specified for Lumentalk applications. Consult Lumentranslator and Lumentalk pages and specification sheets for details.

(3) Available for 24 in (ASHRAE and RO only), 36 in and 48 in fixture lengths only.

(4) A control box (CBX) and LumenID (LID) must be specified.

9 . Options

ETE	End-to-end configuration (factory installed 16 in black input cable included)
CRC	Corrosion-resistant coating for hostile environments (1)
3GV	3G ANSI C136.31 Vibration Rating for bridge applications (2)
CE	CE (certification covers European Economic Area) (3)

(1) Use only when exposed to salt spray and harsh chemicals. This option is not required for normal outdoor exposure.

(2) Available with UMP and UMAS mounting options only.

(3) Consult European specification sheet and installation instructions for CE wiring information.

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Specification Sheet

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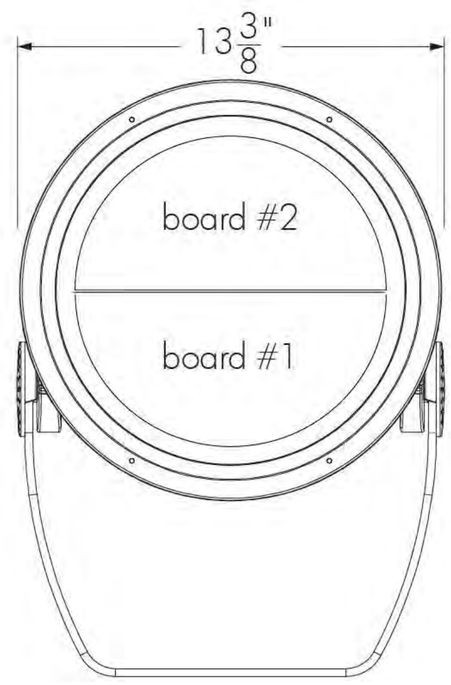
Grande

WHITE AND STATIC COLOURS

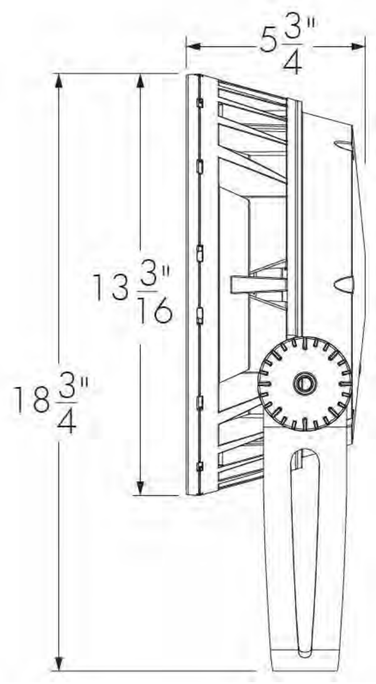
Project Name _____ **Qty** _____

Type _____ **Catalog / Part Number** _____





Front view



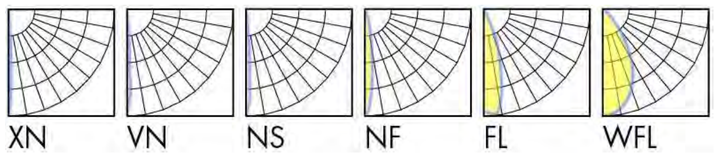
Side view

Photometric Summary

4000K	Delivered output (lm)	Intensity (peak cd)
XN	8,425	593,570
VN	6,313	361,807
NS	6,667	222,046
NF	6,437	44,962
FL	6,286	16,798
WFL	5,635	5,469

Photometric performance is measured in compliance with IESNA LM-79-08.

Optics



Control

ON/OFF 1-10V DALI

lumentalk DMXrdm LUTRON EcoSystem Enabled

Rating

cULus CE RoHS

Description

The Lumenbeam Grande is a high-performance, 100W luminaire for lighting architectural exteriors and facades. It has numerous options including optics for flood or accent lighting; a choice of colour temperatures and colours; various mounting options, accessories, spread lenses and controls.

Features

Colour and Colour Temperature	2200K, 2700K, 3000K, 3500K, 4000K, 5700K, Red, Green, Blue
Optics (nominal distribution)	4°, 6°, 10°, 20°, 40°, 60°
Optical Option	Linear spread lens horizontal distribution, Linear spread lens vertical distribution
Options	Short Yoke, 3G ANSI C136.31 Vibration Rating for bridge applications, Corrosion-resistant coating for hostile environments
Power Consumption	100 W
Warranty	5-year limited warranty

Performance

Delivered Output	8,425 lm (4000K, XN optic)
Delivered Intensity	593,570 cd at nadir (4000K, XN optic)
Illuminance at Distance	Minimum 1 lx at 2526.2 ft distance (4000K, XN optic)
Colour Consistency	2 SDCM
Colour Rendering	CRI 80+
Lumen Maintenance	L70 120,000 hrs (Ta 25 °C)

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Specification Sheet

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Grande

WHITE AND STATIC COLOURS

Physical

Housing Material	Low copper content high pressure die-cast aluminium
Yoke Material	Heavy aluminium (standard yoke included)
Lens Material	Clear tempered glass
Hardware Material	Stainless steel
Surface Finish	Electrostatically applied polyester powder coat
Weight	24 lbs
EPA	Front = 1.6 sq ft, Side = 0.97 sq ft

Electrical and control

Voltage	100 to 277 volts
Fixture Cable	Power and data in 1 cable, 3 ft cord standard (5 x 1.5 sq mm), other lengths available
Inrush Current (peak)	55A @230VAC
Resolution (DMX/RDM)	Per fixture, 8-bit or 16-bit
Control	On/Off control, Lumentalk, 1-10V dimming, DALI dimming, Lutron® EcoSystem® Enabled dimming, DMX/RDM enabled

Environmental

Operating Temperature	-13 °F to 122 °F
IP Rating	IP66
IK Rating	IK09

Accessories (order separately)

Control Boxes	Power and control box - daisy chain configuration, Power and control box - star configuration
Control Systems	Lumentouch 2.0™, Lumencue
Diagnostic and Addressing Tools	LumenID, LumentalkID

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Specification Sheet

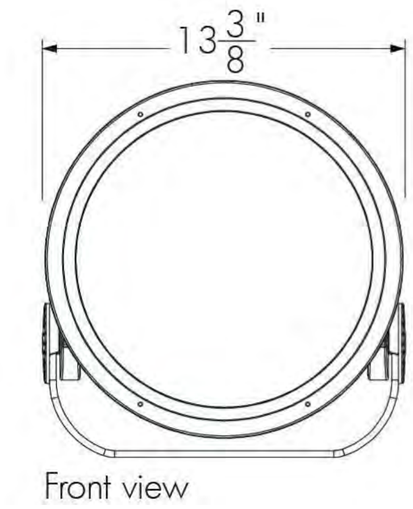
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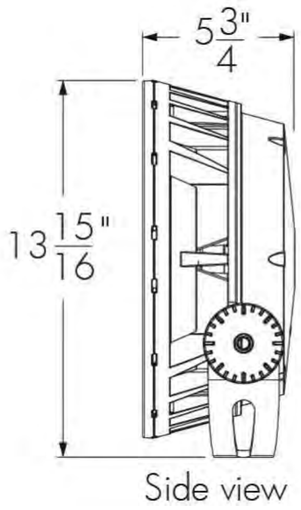
WHITE AND STATIC COLOURS

Mounting options

SY - Short yoke



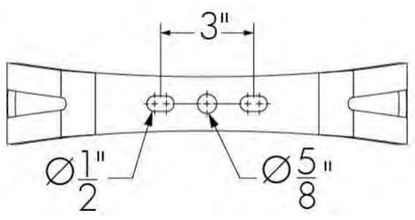
Front view



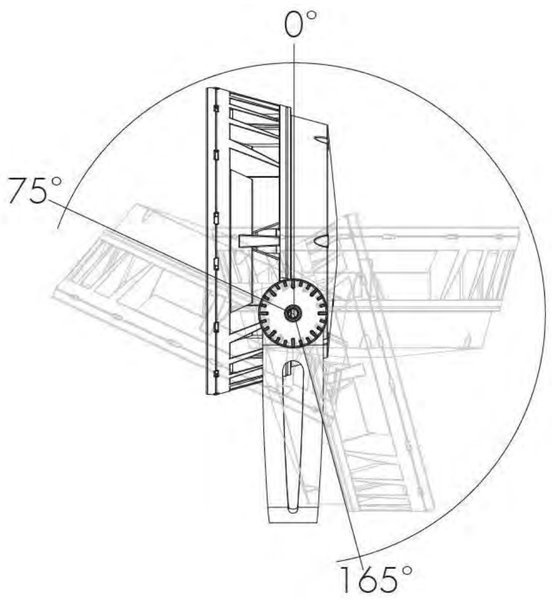
Side view

Mounting details

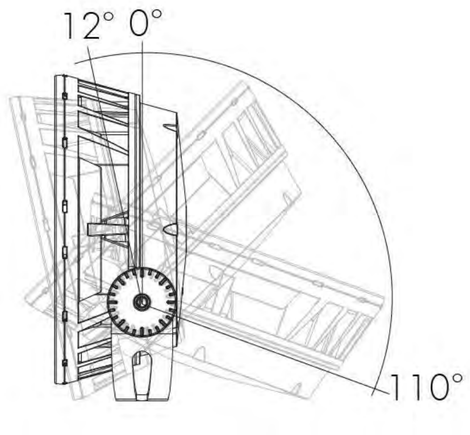
Mounting hole pattern - standard and short yoke



Adjustable pivot limits



Standard yoke



Short yoke

Optical options

LSLH - Linear spread lens horizontal distribution
LSLV - Linear spread lens vertical distribution



LSLH



LSLV

	Beam angle with LSLH/LSLV
XN	5° x 57°
VN	8° x 60°
NS	9° x 60°
NF	18° x 65°
FL	32° x 72°

Factory installed, not adjustable on site. Not available for WFL optic.
See 'Optical Accessories' section for field adjustable spread lens (LSLA).

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Specification Sheet

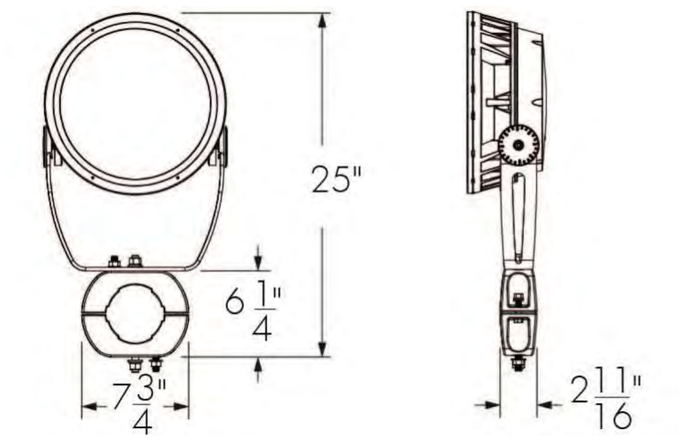
lumenbeam

Grande

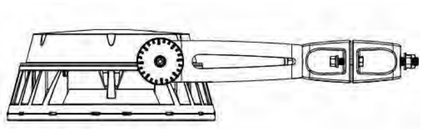
WHITE AND STATIC COLOURS

Mounting accessories (order separately)

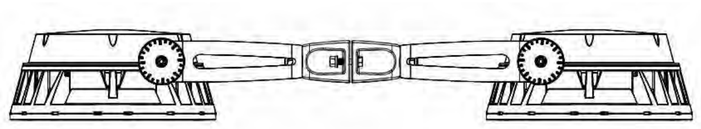
Round pole mounting accessory



PM4 model shown.
Consult factory for square pole section.



PM4-1, PM4.5-1, PM5-1 - Round pole mounting accessory - single fixture

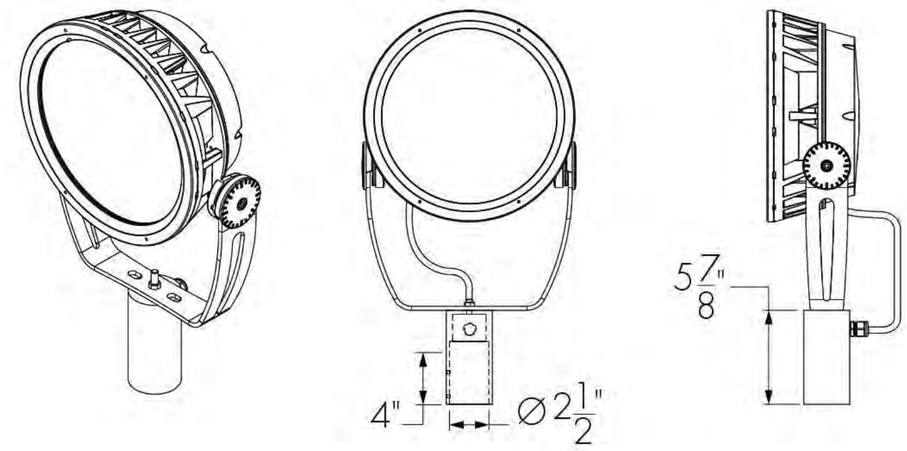


PM4-5, PM4.5-2, PM5-2 - Round pole mounting accessory - twin fixtures
*One bracket assembly is supplied per 2 fixtures unless otherwise specified.

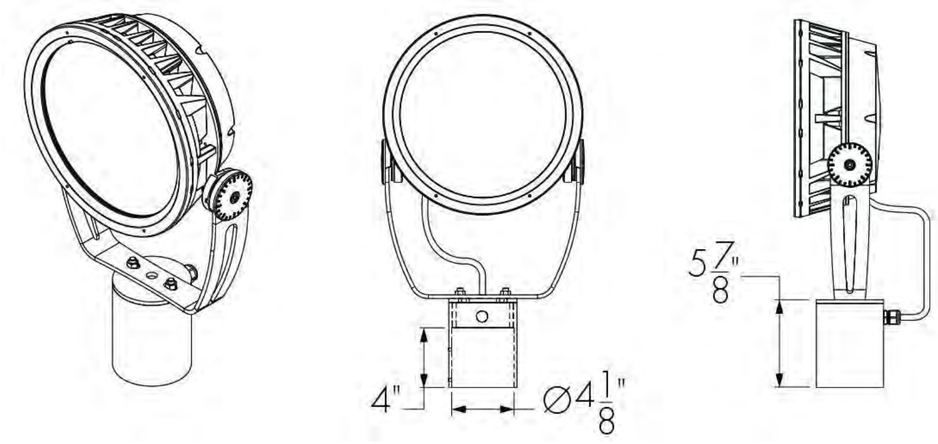
	PM4	PM4.5	PM5
For pole Ø	4" ± 1/16	4.5" ± 1/16	5" ± 1/16

Consult factory for other pole diameters.

Tenon adapter



TN2 - Tenon adapter to fit on 2 3/8 in O.D. tenon



TN4 - Tenon adpater to fit on 4 in O.D. tenon

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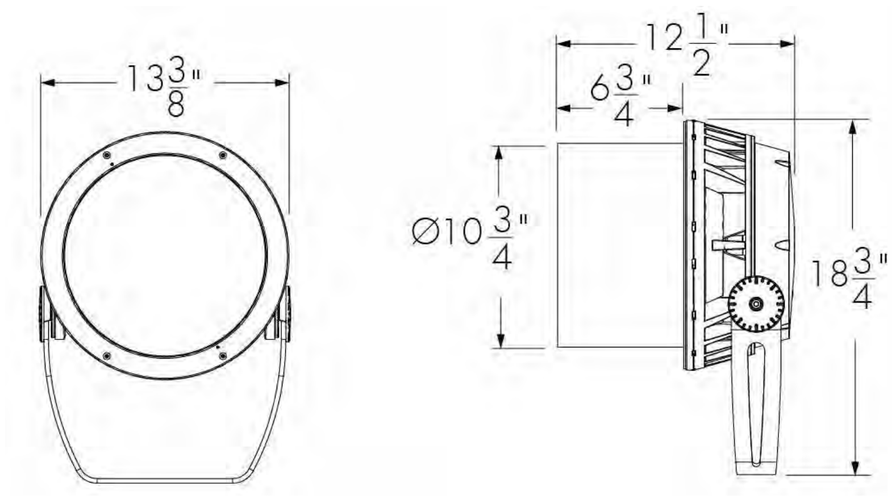
Grande

WHITE AND STATIC COLOURS

Optical accessories (order separately)

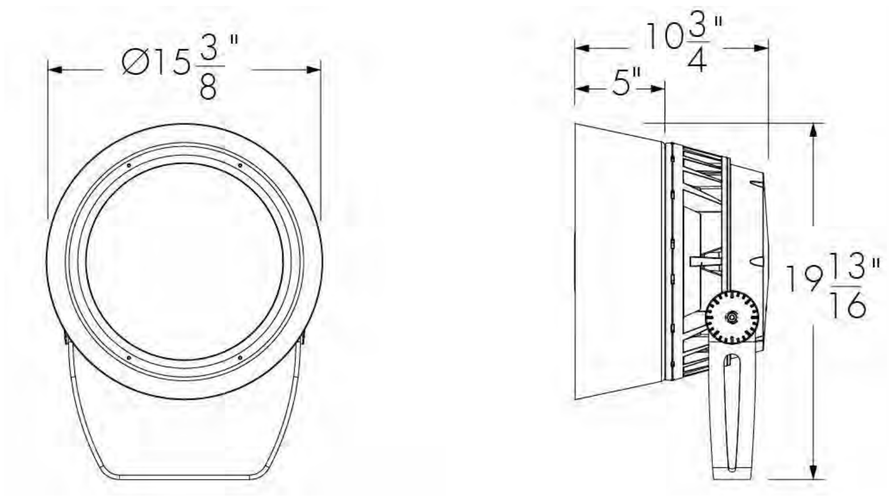
Installed optical accessories will affect the maximum pivot limits for each mounting option, consult factory for details.

SN - Snoot



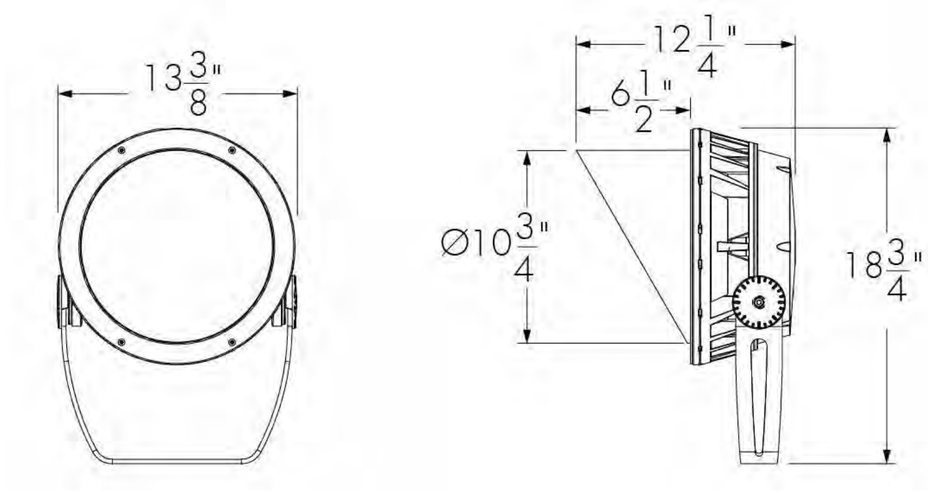
LBGSN-FINISH-BK
Interior surface painted black. Please specify desired exterior FINISH from list of available finishes.

SNW - Snoot wide



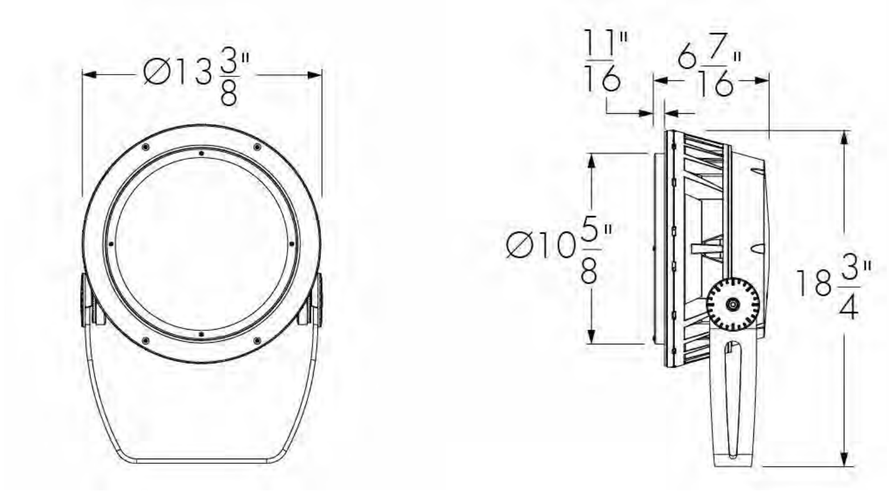
LBGSNW-FINISH-BK
Interior surface painted black. Please specify desired exterior FINISH from list of available finishes.

VS - Visor



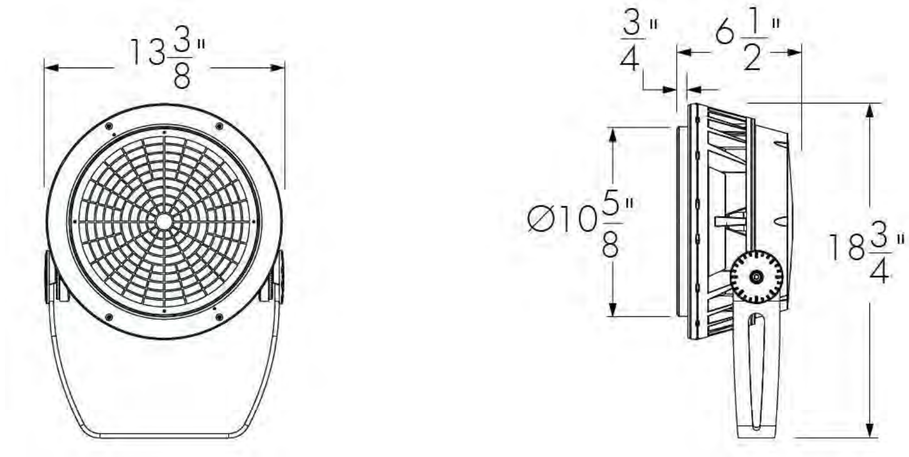
LBGVS-FINISH-BK
Interior surface painted black. Please specify desired exterior FINISH from list of available finishes.

LSLA - Linear spread lens adjustable



LBGLSLA-FINISH
Please specify desired exterior FINISH from list of available finishes.

WG - Wire guard



LBGWG-FINISH
Please specify desired exterior FINISH from list of available finishes.

Accessory combinations

+	Snoot	Snoot wide	Visor
Linear spread lens adjustable	YES	NO*	YES
Wire guard	YES	NO	YES

Accessory combinations must be ordered together on a single line
Ex: A snoot + wire guard combination order code is LBGSNWG-BK-BK.
*Consult factory for a linear spread lens adjustable + snoot wide combination.

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WHITE AND STATIC COLOURS

Available exterior finishes for optical accessories

BK - Black Sandtex®
BRZ - Bronze Sandtex®
SI - Silver Sandtex®
WH - Smooth white
BKTX - Textured black
BRZTX - Textured bronze, non-metallic
GRATX - Textured medium grey
GRNTX - Textured green
WHTX - Textured white
CC - Custom colour and finish (please specify RAL colour)*

*Lumenpulse offers a wide selection of RAL CLASSIC (K7) colours with a smooth texture and high-gloss finish. Please consult factory for a list of available K7 colours, other RAL textures and glosses, or to match alternate colour charts. Final colour matching results may vary.

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WHITE AND STATIC COLOURS

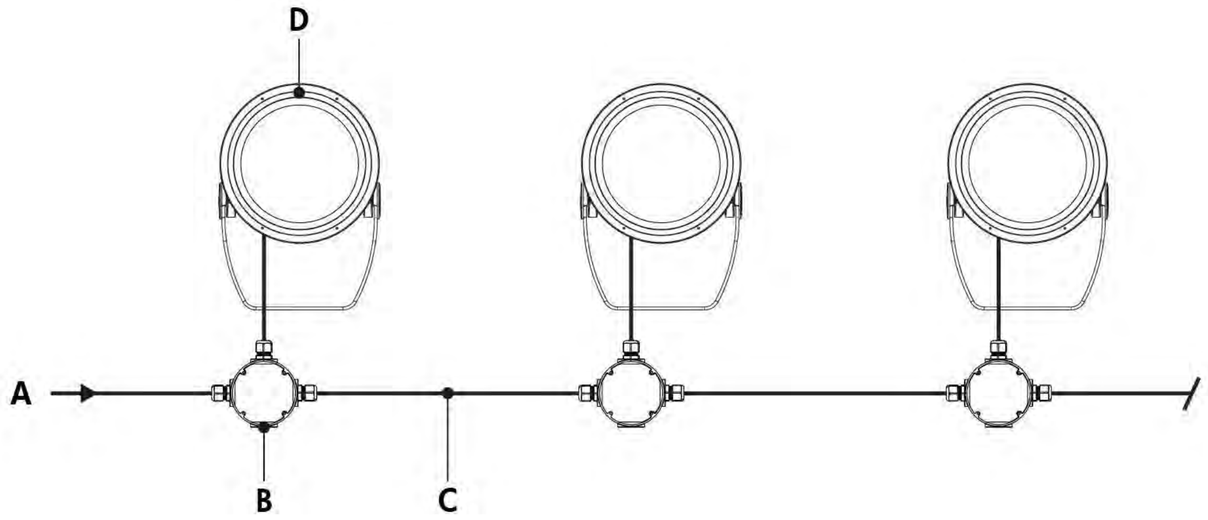
Typical wiring diagrams

Wiring colour code

CE Colour Code	USE
Yellow/Green Brown Blue Black Grey	Ground Live 100-277V Neutral 1-10V / Data + 1-10V / Data -

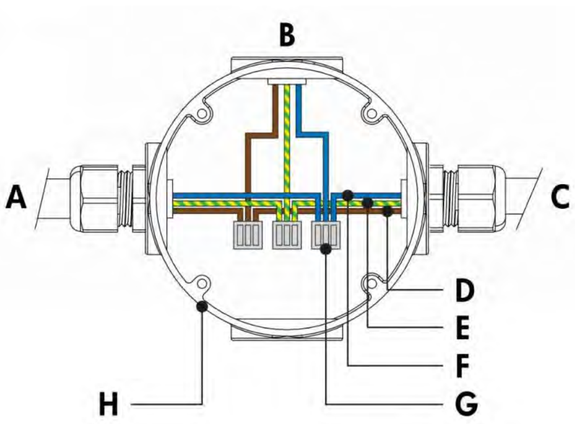
CE Class II Colour Code	USE
Brown Blue Black 1 Black 2 Grey	Live 100-277V Neutral Signal common (DMX/RDM only) 1-10V / Data + 1-10V / Data -

On/Off control (NO)



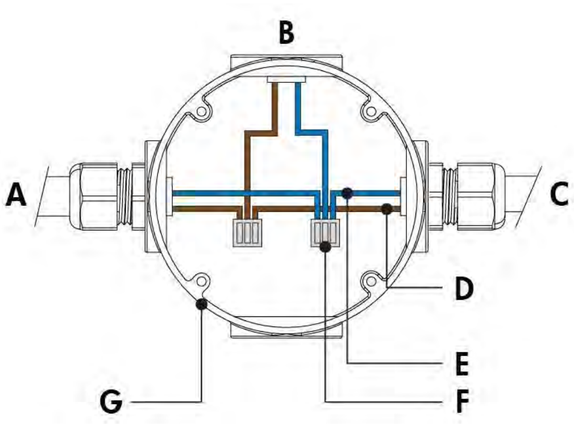
A - Power input (100-277V)
B - Junction box (by others)
C - Power wiring (by others)
D - Lumenbeam Grande

On/Off control (NO) - wiring detail - CE



A - Power input or from previous fixture
B - To fixture
C - To next fixture
D - Live
E - Ground
F - Neutral
G - Terminal connector (by others)
H - Junction box (by others)

On/Off control (NO) - wiring detail - CE Class II option



A - Power input or from previous fixture
B - To fixture
C - To next fixture
D - Live
E - Neutral
F - Terminal connector (by others)
G - Junction box (by others)

- Consult factory for specific applications and maximum fixture count/cable length recommendations.
- 100 watts per fixture.

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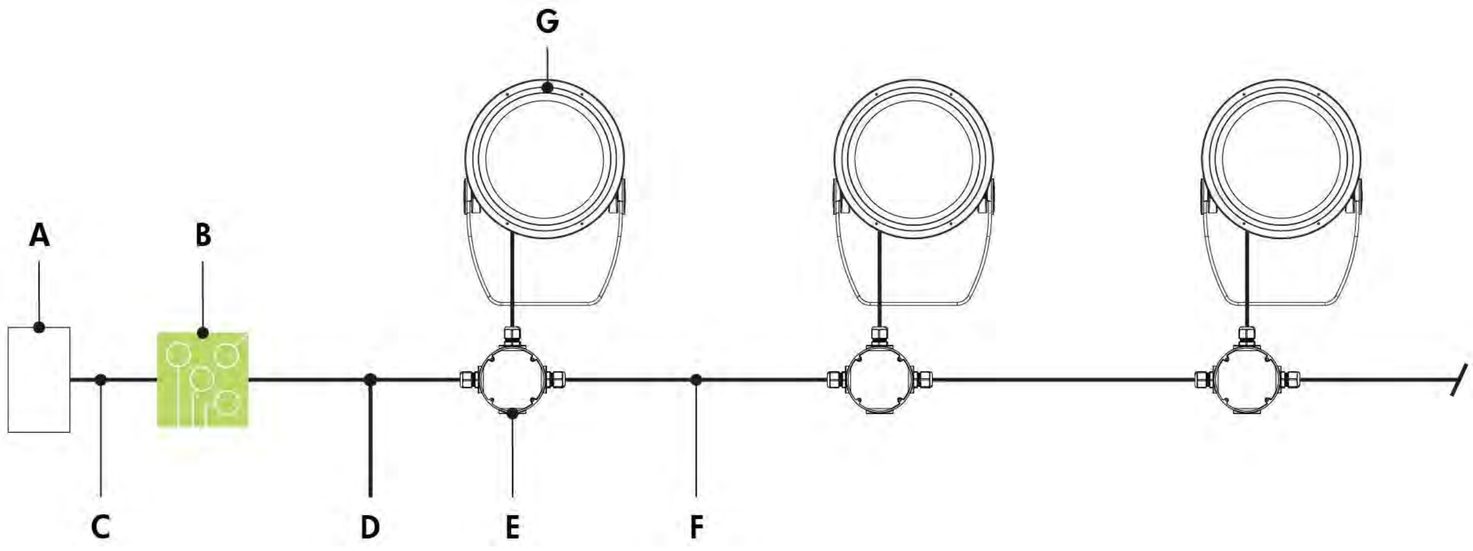
Specification Sheet

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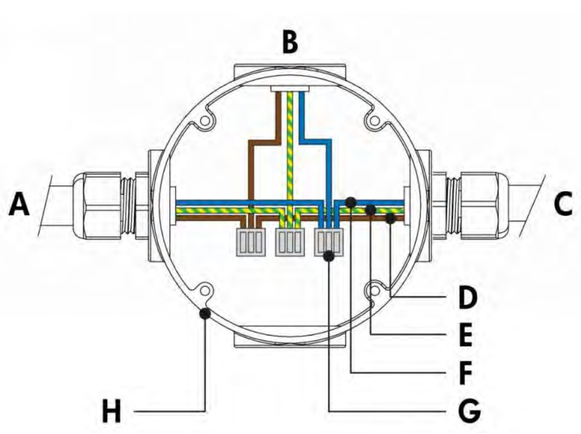
WHITE AND STATIC COLOURS

Lumentalk (LT)



A - Third party dimmer/controller
B - Lumentranslator (LTL-010, -DMX, -TRIAC, -DALI)
C - Data wiring (by others)
D - Power line (120-277V AC)
E - Junction box (by others)
F - Power wiring (by others)
G - Lumenbeam Grande

Lumentalk (LT) - wiring detail



A - Power input (control over power line via Lumentalk system) or from previous fixture
B - To fixture
C - To next fixture
D - Live
E - Ground
F - Neutral
G - Terminal connector (by others)
H - Junction box (by others)

- Consult factory for specific applications and maximum fixture count/cable length recommendations.
- Lumentalk enabled fixtures must be commissioned using LumentalkID software and a LID-LT. Consult factory for details.
- Maximum of 1 transmitter (Lumentranslator or Lumenlink) per system.
- No third party fixtures allowed on the same circuit.
- For DMX applications: 1 DMX controller per Lumentalk network, maximum of 48 DMX channels per Lumentalk network (minimum step transition update rate is 1 second, minimum fade time between two colours is 1 minute). Consult factory for applications that require additional capabilities.
- Consult factory for DALI Lumentalk applications.
- 1% minimum dimming value.
- 100 watts per fixture.

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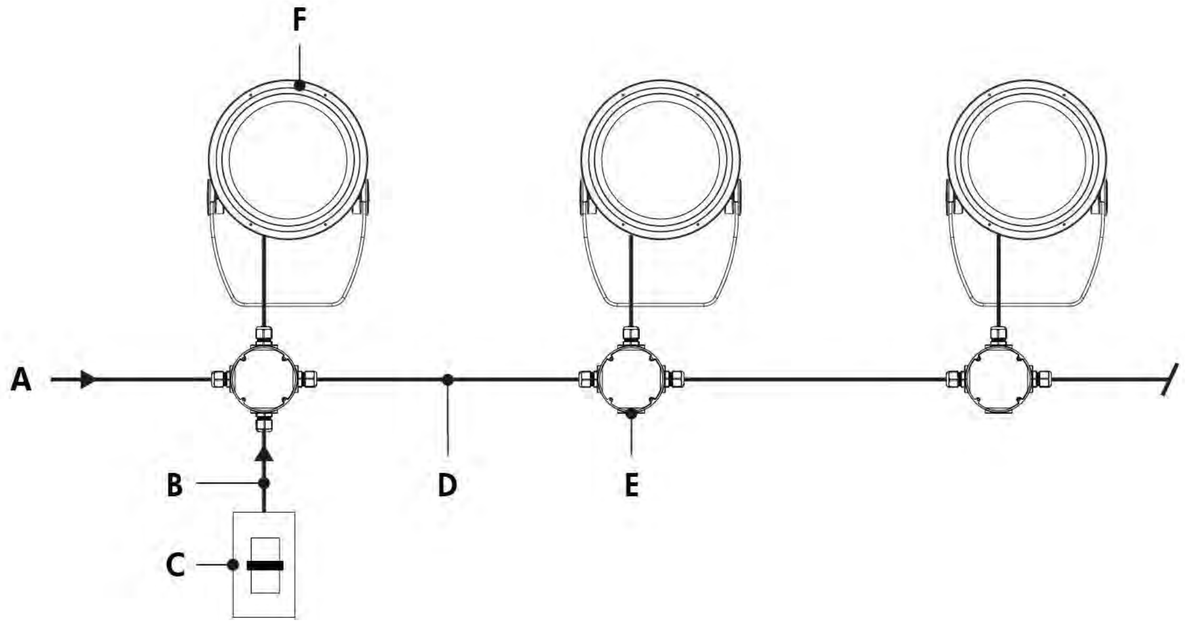
Specification Sheet

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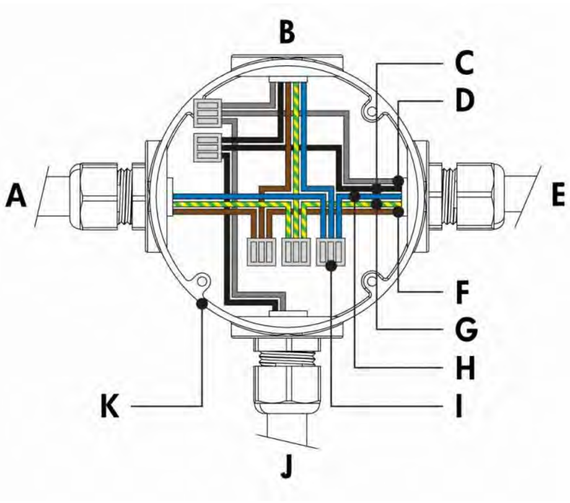
WHITE AND STATIC COLOURS

1-10V dimming (DIM)



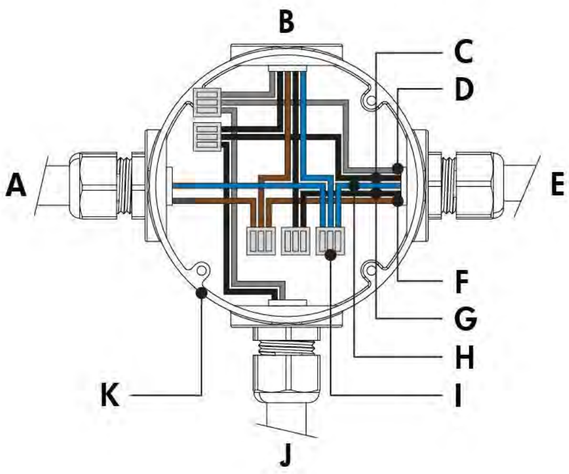
A - Power input (100-277V)
B - Data wiring (by others)
C - Third party dimmer
D - Power and data wiring (by others)
E - Junction box (by others)
F - Lumenbeam Grande

1-10V dimming (DIM) - wiring detail - CE



A - Power input or from previous fixture
B - To fixture
C - 1-10 V +
D - 1-10 V -
E - To next fixture
F - Live
G - Ground
H - Neutral
I - Terminal connector (by others)
J - From third party dimmer
K - Junction box (by others)

1-10V dimming (DIM) - wiring detail – CE Class II



A - Power input or from previous fixture
B - To fixture
C - 1-10 V +
D - 1-10 V -
E - To next fixture
F - Live
G - Signal common
H - Neutral
I - Terminal connector (by others)
J - From third party dimmer
K - Junction box (by others)

- Consult factory for specific applications and maximum fixture count/cable length recommendations.
- 1-10V mA ratings: passive dimmer (Current Sink): 3mA per fixture, active dimmer (Current Source): 0.5mA per fixture.
- 10% minimum dimming value.
- 100 watts per fixture.

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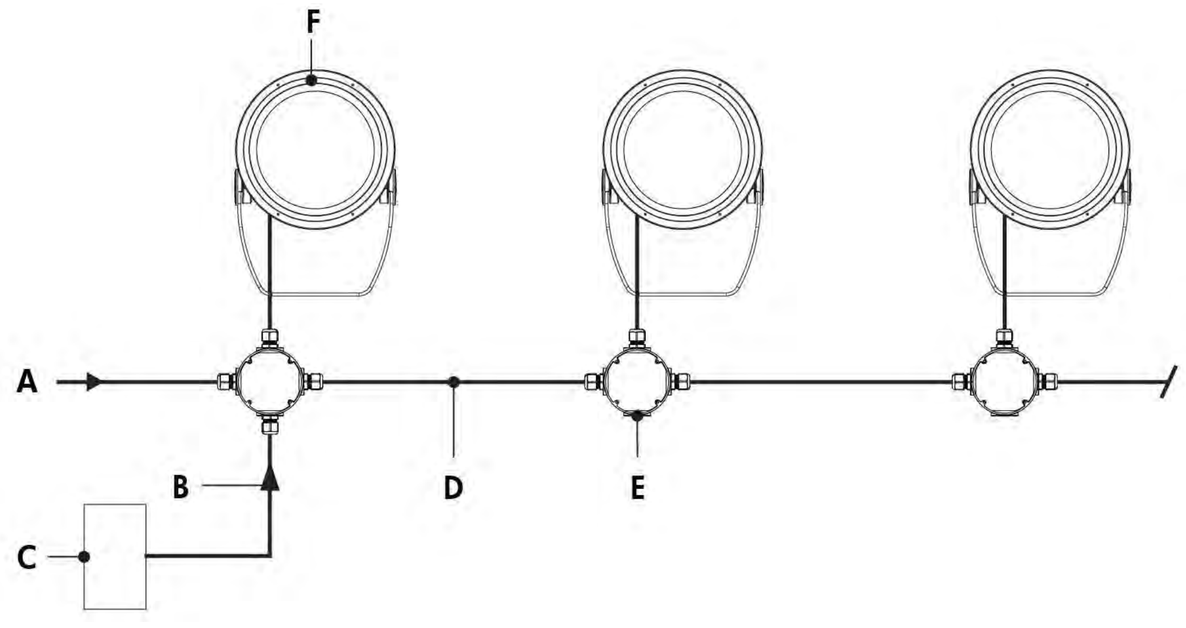
Specification Sheet

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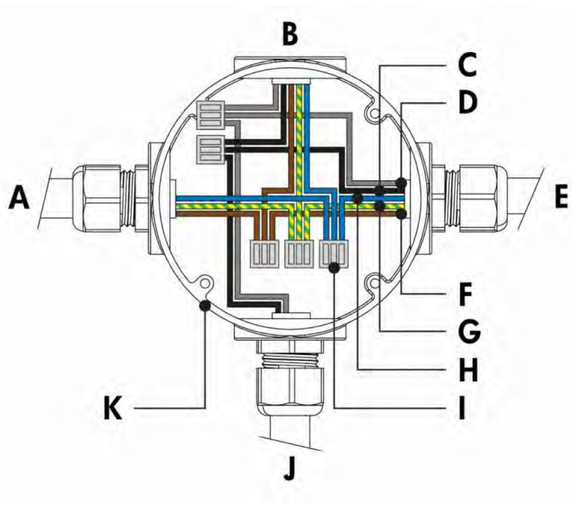
WHITE AND STATIC COLOURS

DALI dimming (DALI)



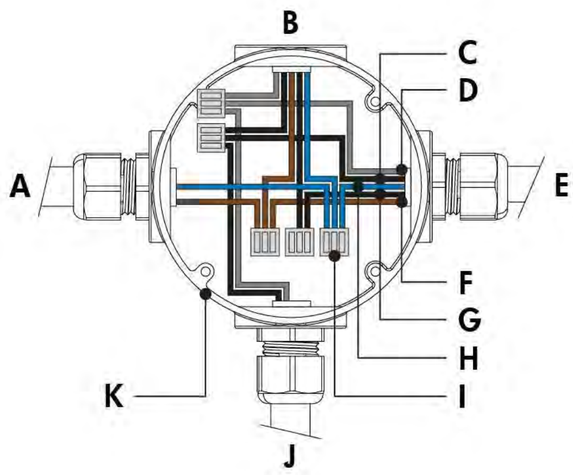
A - Power input (100-277V)
B - Data wiring (by others)
C - Third party DALI controller
D - Power and data wiring (by others)
E - Junction box (by others)
F - Lumenbeam Grande

DALI dimming (DALI) - wiring detail - CE



A - Power input or from previous fixture
B - To fixture
C - Data +
D - Data -
E - To next fixture
F - Live
G - Ground
H - Neutral
I - Terminal connector (by others)
J - From third party DALI controller
K - Junction box (by others)

DALI dimming (DALI) - wiring detail - CE Class II option



A - Power input or from previous fixture
B - To fixture
C - Data +
D - Data -
E - To next fixture
F - Live
G - Signal common
H - Neutral
I - Terminal connector (by others)
J - From third party DALI controller
K - Junction box (by others)

- Consult factory for specific applications and maximum fixture count/cable length recommendations.
- Maximum of 64 DALI fixtures per DALI loop.
- 1% minimum dimming value.
- 100 watts per fixture.

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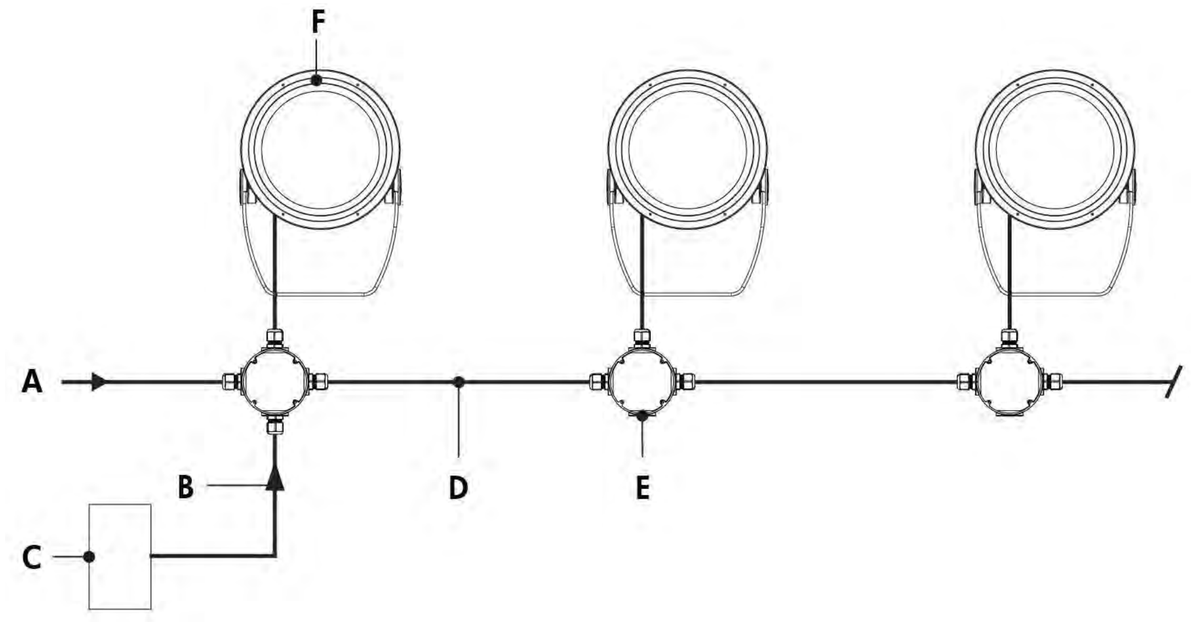
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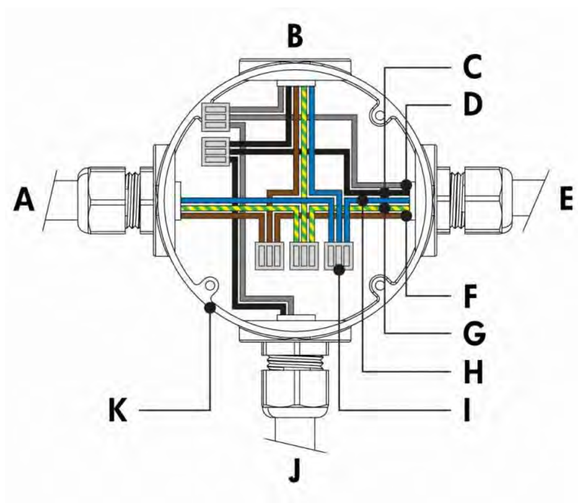
WHITE AND STATIC COLOURS

Lutron® EcoSystem® Enabled dimming (ES)



A - Power input (100-277V)
B - Data wiring (by others)
C - Lutron® EcoSystem® controller
D - Power and data wiring (by others)
E - Junction box (by others)
F - Lumenbeam Grande

Lutron® EcoSystem® Enabled dimming (ES) - wiring detail



A - Power input or from previous fixture
B - To fixture
C - Data +
D - Data -
E - To next fixture
F - Live
G - Ground
H - Neutral
I - Terminal connector (by others)
J - From Lutron® EcoSystem® controller
K - Junction box (by others)

- Consult factory for specific applications and maximum fixture count/cable length recommendations.
- Each Lutron® EcoSystem® enabled fixture has its own address; for the example shown, there are a total of 3 EcoSystem® addresses.
- 1% minimum dimming value.
- 100 watts per fixture.

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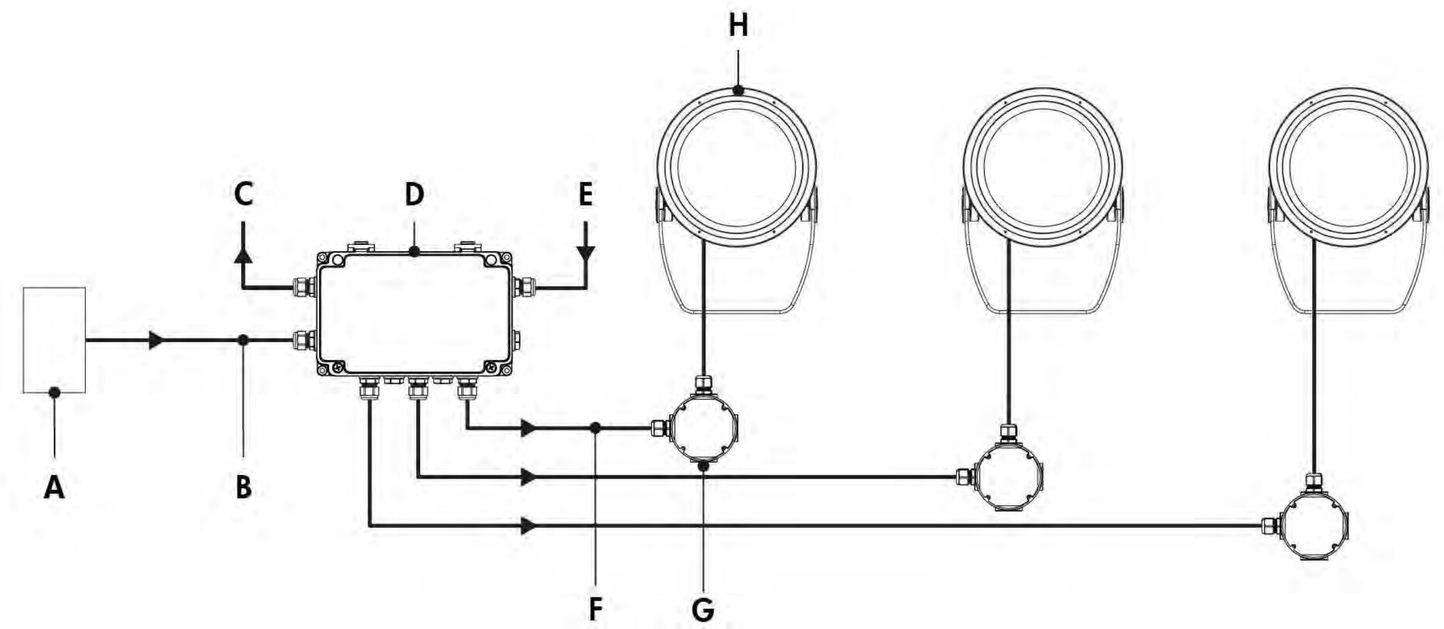
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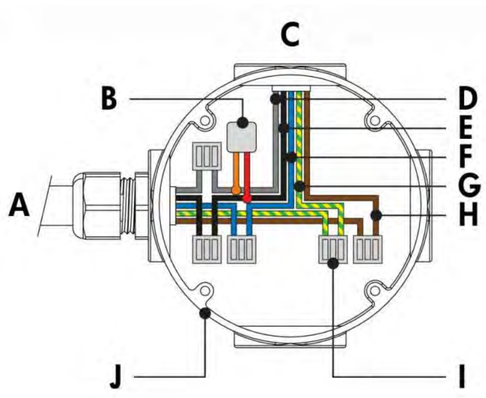
WHITE AND STATIC COLOURS

Star Layout (DMX/RDM)



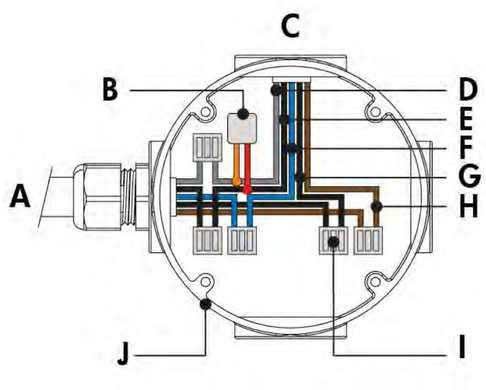
A - Third party DMX/RDM controller
B - Data input (Belden 9841 or equivalent, by others)
C - Data output to next CBX (optional, not isolated/not boosted)
D - CBX-ST
E - Power input (100-277V)
F - Power and data output to fixture (wiring by others)
G - Junction box (by others)
H - Lumenbeam Grande

Star Layout (DMX/RDM) - wiring detail - CE



A - From CBX or previous fixture
B - Lumenterminator*
C - To fixture
D - Data -
E - Data +
F - Neutral
G - Ground
H - Live
I - Terminal connector (by others)
J - Junction box (by others)

Star Layout (DMX/RDM) - wiring detail - CE Class II option



A - From CBX or previous fixture
B - Lumenterminator*
C - To fixture
D - Data -
E - Data +
F - Neutral
G - Signal common
H - Live
I - Terminal connector (by others)
J - Junction box (by others)

Maximum number of fixtures per run (Based on16A maximum, 1,5mm² cable, fixtures spaced 10ft on center, first fixture 50ft from CBX)				
Configuration/Voltage	**120V**	**208V**	**240V**	**277V**
LBG	10	16	18	21

- Consult factory for specific applications and maximum fixture count/cable length recommendations.
- Run length calculations are based on a voltage drop of no more than 25V.
- The DMX/RDM protocol states a maximum of 32 DMX/RDM enabled fixtures on any single run.
- Maximum of 4 DMX/RDM repeaters/CBX cascading in line.
- Maximum of 6 outputs per CBX-ST.
- Each fixture requires 1 DMX address.
- 1% minimum dimming value.
- 100 watts per fixture.

*DMX terminator is required at the end of each run to maintain data integrity. (6x) DMX lumenterminators included per CBX-ST. See installation instructions for details.

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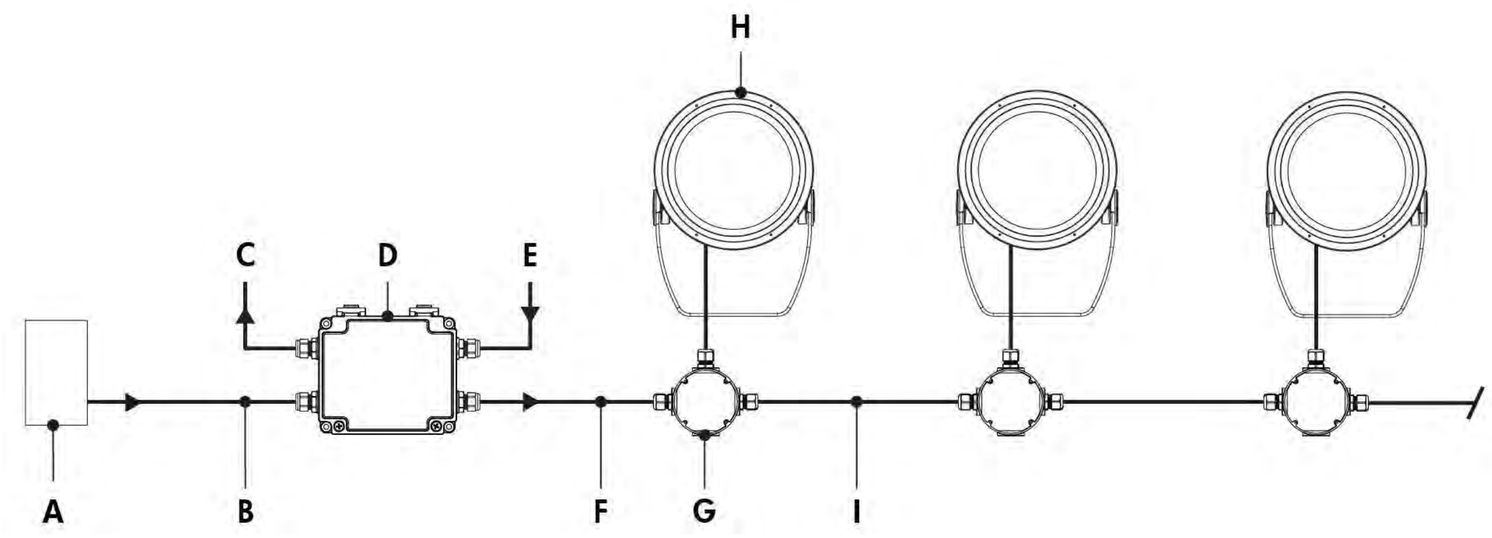
Specification Sheet

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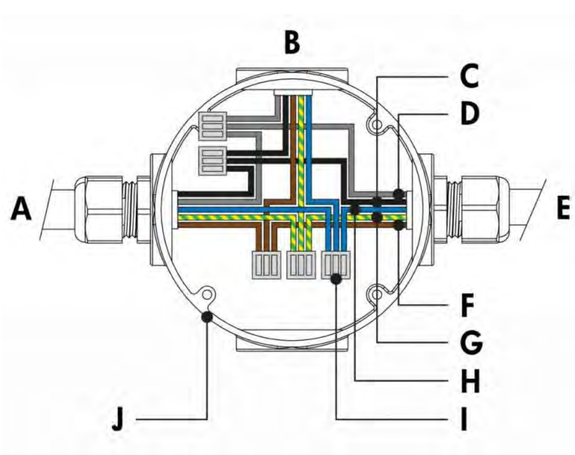
WHITE AND STATIC COLOURS

Daisy Chain Layout (DMX/RDM)



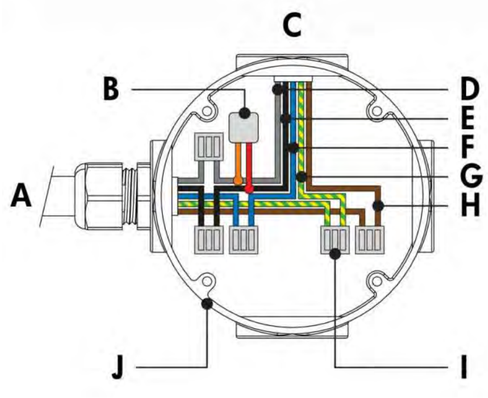
A - Third party DMX/RDM controller
B - Data input (Belden 9841 or equivalent, by others)
C - Data output to next CBX (optional, not isolated/not boosted)
D - CBX-DS
E - Power input (100-277V)
F - Power and data output to fixture (wiring by others)
G - Junction box (by others)
H - Lumenbeam Grande
I - Power and data wiring (by others)

Daisy Chain Layout (DMX/RDM) - wiring detail (first or middle of run) - CE



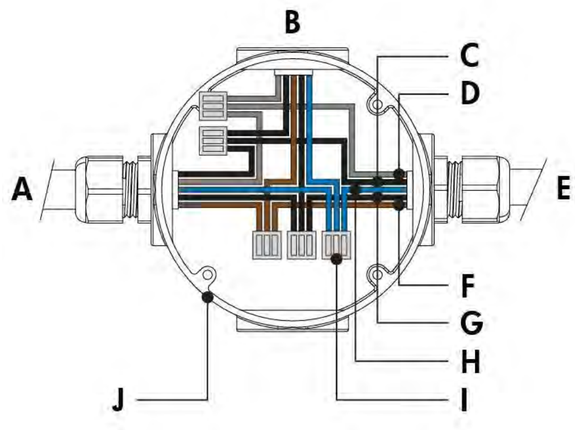
A - From CBX or previous fixture
B - To fixture
C - Data +
D - Data -
E - To next/from previous fixture
F - Live
G - Ground
H - Neutral
I - Terminal connector (by others)
J - Junction box (by others)

Daisy Chain Layout (DMX/RDM) - wiring detail (end of run) - CE



A - From CBX or previous fixture
B - Lumenterminator*
C - To fixture
D - Data -
E - Data +
F - Neutral
G - Ground
H - Live
I - Terminal connector (by others)
J - Junction box (by others)

Daisy Chain Layout (DMX/RDM) - wiring detail (first or middle of run) - CE Class II option



A - From CBX or previous fixture
B - To fixture
C - Data +
D - Data -
E - To next/from previous fixture
F - Live
G - Signal common
H - Neutral
I - Terminal connector (by others)
J - Junction box (by others)

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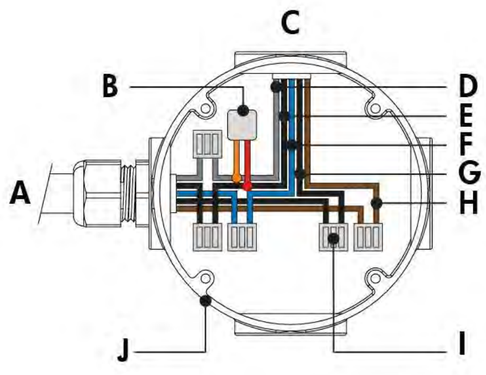
Specification Sheet

lumenbeam

Grande

WHITE AND STATIC COLOURS

Daisy Chain Layout (DMX/RDM) - wiring detail (end of run) - CE Class II option



A - From CBX or previous fixture
B - Lumenterminator*
C - To fixture
D - Data -
E - Data +
F - Neutral
G - Signal common
H - Live
I - Terminal connector (by others)
J - Junction box (by others)

Maximum number of fixtures per run (Based on16A maximum, 1,5mm² cable, fixtures spaced 10ft on center, first fixture 50ft from CBX)				
Configuration/Voltage	**120V**	**208V**	**240V**	**277V**
LBG	10	16	18	21

- Consult factory for specific applications and maximum fixture count/cable length recommendations.
- Run length calculations are based on a voltage drop of no more than 25V.
- The DMX/RDM protocol states a maximum of 32 DMX/RDM enabled fixtures on any single run.
- Maximum of 4 DMX/RDM repeaters/CBX cascading in line.
- Maximum of 1 output per CBX-DS.
- Maximum of 3 ft cable length between fixture and next junction box for daisy chain layout.
- Each fixture requires 1 DMX address.
- 1% minimum dimming value.
- 100 watts per fixture.

* DMX terminator is required at the end of each run to maintain data integrity. (2x) DMX lumenterminators included per CBX-DS. See installation instructions for details.

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Specification Sheet

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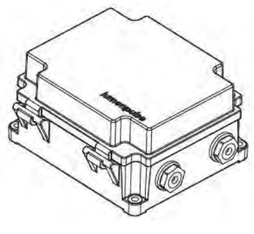
Grande

WHITE AND STATIC COLOURS

Accessories (order separately)

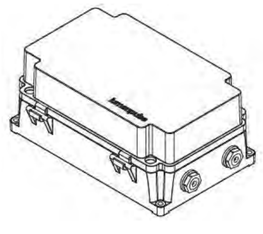
Control Boxes

CBX-DS-Power and control box - daisy chain configuration



DMX/RDM control box. One power and data output to fixture or fixture run. Ethernet enabled option. Refer to CBX specification sheet for details.

CBX-ST-Power and control box - star configuration



DMX/RDM control box. Up to six power and data outputs to fixtures or fixture runs. Ethernet enabled option. Refer to CBX specification sheet for details.

Control Systems

LTO2-Lumentouch 2.0™



Lumentouch is a wall mount DMX 512 controller keypad.

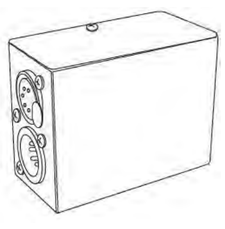
LCU-Lumencue



Lumencue is a USB / mini SD DMX 512 controller.

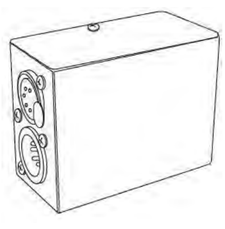
Diagnostic and Addressing Tools

LID-LumenID



LumenID is a diagnostic and addressing DMX/RDM tool. It must be specified on all DMX applications. Refer to LID specification sheet for details.

LID-LT-LumentalkID



LumentalkID is a diagnostic and addressing tool. It must be specified for all Lumentalk (LT) applications. Refer to LID-LT specification sheet for details.

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Specification Sheet

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WHITE AND STATIC COLOURS

How to order

1	2	3	4	5	6	7	8
LBG							

9	10	11

1 . Housing

LBG	Lumenbeam™ Grande

2 . Voltage

100	100 volts
120	120 volts
208	208 volts
220	220 volts
240	240 volts
277	277 volts

3 . Colour and Colour Temperature (1)

22K	2200K
27K	2700K
30K	3000K
35K	3500K
40K	4000K
57K	5700K
RD	Red
GR	Green
BL	Blue

4 . Optic1

XN	Extra Narrow 4°
VN	Very Narrow 6°
NS	Narrow Spot 10°
NF	Narrow Flood 20°
FL	Flood 40°
WFL	Wide Flood 60° (2)

5 . Optic2

XN	Extra Narrow 4°
VN	Very Narrow 6°
NS	Narrow Spot 10°
NF	Narrow Flood 20°
FL	Flood 40°
WFL	Wide Flood 60° (2)

6 . Optical Option

LSLH	Linear spread lens horizontal distribution (3)
LSLV	Linear spread lens vertical distribution (3)

7 . Finish

BK	Black Sandtex®
BRZ	Bronze Sandtex®
SI	Silver Sandtex®
WH	Smooth white
BKTX	Textured black
BRZTX	Textured bronze non-metallic
GRATX	Textured medium grey
GRNTX	Textured green
WHTX	Textured white
CC	Custom colour and finish (please specify RAL colour) (4)

lumenpulse™ 11/13 Weston Street, Unit no 13.3.2 London, SE1 3ER GB **T** +44 (0) 2031 765370 info@lumenpulse.com **www.lumenpulsegroup.com**

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Specification Sheet

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WHITE AND STATIC COLOURS

8 . Control

NO	On/Off control
LT	Lumentalk [5] [6]
DIM	1-10V dimming
DALI	DALI dimming
ES	Lutron® EcoSystem® Enabled dimming [6]
DMX/RDM	DMX/RDM enabled

11 . Cable Length [8]

1M	3.3 ft [8] [9]
5M	16.4 ft
10M	32.8 ft
15M	49.2 ft
20M	65.6 ft
30M	98.4 ft

9 . Options

SY	Short Yoke
3GV	3G ANSI C136.31 Vibration Rating for bridge applications
CRC	Corrosion-resistant coating for hostile environments [7]

10 . Certification

UL	UL compliant
CE	CE compliant
CEII	CE compliant Class II double insulated

Notes:

[1] Consult factory for availability of static Royal Blue, 6500K and 90+ CRI.

[2] Cannot be combined with other optics.

[3] Factory installed, not available for 60° optic. Field adjustable spread lens optical accessory available, order separately.

[4] Lumenpulse offers a wide selection of RAL CLASSIC (K7) colours with a smooth texture and high-gloss finish. Please consult factory for a list of available K7 colours, other RAL textures and glosses, or to match alternate colour charts. Final colour matching results may vary.

[5] A Lumentranslator and LumentalkID (LIDLT) must be specified for Lumentalk applications. Consult Lumentranslator and Lumentalk pages and specification sheets for details.

[6] Not available with Class II double insulated option.

[7] Use only when exposed to salt spray and harsh chemicals. This option is not required for normal outdoor exposure.

[8] 1 m cable length is standard unless otherwise specified.

[9] Maximum of 3.3 ft cable length for daisy chain DMX applications with CBX-DS.

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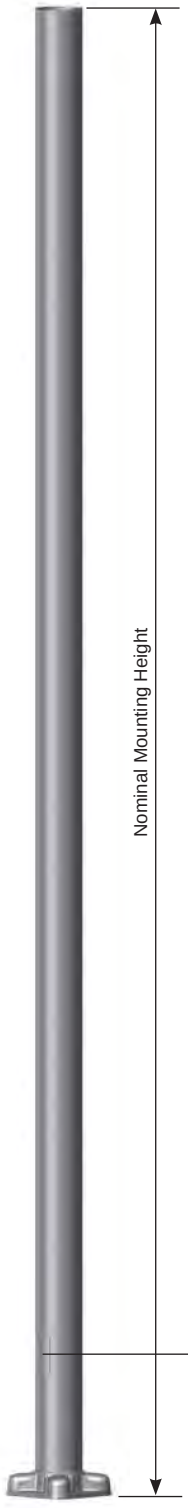
valmont STRUCTURES

8' Round Non-Tapered Alu
4-Bolt Anchor Base Pole

YS4

Lam Partners ARCHITECTURAL LIGHTING DESIGN

Job Name:	Client Name:
Job Location - City: State:	Created By: Date:
Product: Quote:	Customer Approval: Date:



Tenon Top



Pole Cap



Cross Section



Handhole



Nut Covers (Standard)



Dart Square - 2T (Optional)



SPECIFICATIONS

Pole - The pole shaft is extruded from seamless 6000 series alloy aluminum.

Pole Top - A pole top tenon is provided for top mount luminaire and/or bracket. A removable pole cap is available for poles receiving drilling patterns for side-mount luminaire arm assemblies.

Handhole - A covered handhole with hardware and grounding provision are provided.

Base Cover - Optional Dart Square-2T cast and decorative base covers available as special order.

Anchor Base - The anchor base is cast from 356 alloy aluminum. The completed assembly is heat-treated to a T6 temper. Aluminum nut covers are included with anchor base unless otherwise specified.

Anchor Bolts - Anchor bolts conform to ASTM F1554 Grade 55 and are provided with two hex nuts and two flat washers. Bolts have an “L” bend on one end and are galvanized a minimum of 12" on the threaded end.

Finish - The standard finish for the pole assembly and components is satin brushed, natural anodize, duranodic or polyester powder applied coating in accordance with Valmont’s Specifications. Additional finish options available upon request.

8' to 14'
Round Non-Tapered Aluminum
4-Bolt Anchor Base Pole

valmont STRUCTURES

YS4

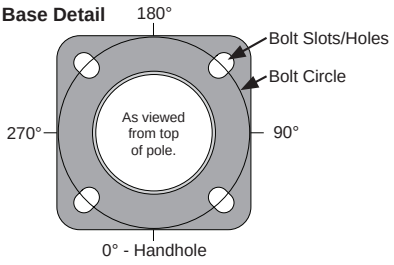
Lam Partners ARCHITECTURAL LIGHTING DESIGN

Job Name:	Client Name:
Job Location - City: State:	Created By: Date:
Product: Quote:	Customer Approval: Date:

ANCHORAGE DATA

POLE		BASE PLATE				ANCHOR BOLTS		
BASE OD (IN)	WALL THK (IN)	BOLT CIRCLE DIA (IN)	BOLT CIRCLE ± (IN)	SQUARE (IN)	THK (IN)	DIA x LENGTH x HOOK (IN)	PROJECTION (IN)	± (IN)
4.00	0.125	7.50	0.75	8.91	0.630	0.75 x 17.00 x 3.00	3.25	N/A
4.50	0.125	7.84	0.78	9.26	0.630	0.75 x 17.00 x 3.00	3.25	N/A
4.50	0.188	7.84	0.78	9.26	0.630	0.75 x 17.00 x 3.00	3.25	N/A
5.00	0.125	8.63	0.88	9.61	0.630	0.75 x 17.00 x 3.00	3.25	N/A
5.00	0.156	8.63	0.88	9.61	0.630	0.75 x 17.00 x 3.00	3.25	N/A
5.00	0.188	8.63	0.88	9.61	0.630	0.75 x 17.00 x 3.00	3.25	N/A

Anchor Base Detail



LOAD AND DIMENSIONAL DATA

DESIGN INFORMATION											POLE DIMENSIONS					
	70 MPH w/1.3 GUST		80 MPH w/1.3 GUST		90 MPH w/1.3 GUST		100 MPH w/1.3 GUST		110 MPH w/1.3 GUST[1]							
NOMINAL MOUNTING HEIGHT	MAX EPA[2] (SQ FT)	MAX WEIGHT (LBS)	MAX EPA[2] (SQ FT)	MAX WEIGHT (LBS)	MAX EPA[2] (SQ FT)	MAX WEIGHT (LBS)	MAX EPA[2] (SQ FT)	MAX WEIGHT (LBS)	MAX EPA[2] (SQ FT)	MAX WEIGHT (LBS)	POLE HEIGHT	BASE OD (IN)	TOP OD (IN)	WALL THK (IN)	STRUTURE WEIGHT[3] (LBS)	MODEL NUMBER
8'-0"	10.7	75	7.9	75	6.0	75	4.7	75	3.9	75	8'-0"	4.00	4.00	0.125	19	080040404S4
	14.9	75	11.2	75	8.6	75	6.9	75	5.7	75	8'-0"	4.50	4.50	0.125	21	080045454S4
	22.0	75	16.6	75	12.9	75	10.4	75	8.5	75	8'-0"	4.50	4.50	0.188	29	080045456S4
10'-0"	8.1	75	5.9	75	4.3	75	3.3	75	2.7	75	10'-0"	4.00	4.00	0.125	22	100040404S4
	11.5	100	8.4	100	6.4	100	5.1	100	4.1	100	10'-0"	4.50	4.50	0.125	25	100045454S4
	17.3	100	12.8	100	9.9	100	7.9	100	6.5	100	10'-0"	4.50	4.50	0.188	35	100045456S4
	15.4	100	11.5	100	8.9	100	7.1	100	5.8	100	10'-0"	5.00	5.00	0.125	27	100050504S4
12'-0"	6.2	75	4.3	75	3.0	75	2.2	75	1.7	75	12'-0"	4.00	4.00	0.125	26	120040404S4
	9.0	75	6.5	75	4.8	75	3.8	75	3.0	75	12'-0"	4.50	4.50	0.125	29	120045454S4
	13.9	75	10.2	75	7.7	75	6.2	75	5.0	75	12'-0"	4.50	4.50	0.188	41	120045456S4
	12.2	100	9.0	100	6.9	100	5.5	100	4.4	100	12'-0"	5.00	5.00	0.125	32	120050504S4
	15.5	100	11.5	100	8.9	100	7.1	100	5.8	100	12'-0"	5.00	5.00	0.156	38	120050505S4
	18.8	100	14.0	100	10.9	100	8.7	100	7.1	100	12'-0"	5.00	5.00	0.188	45	120050506S4
14'-0"	4.6	100	3.0	100	1.9	100	1.2	100	0.9	100	14'-0"	4.00	4.00	0.125	30	140040404S4
	6.9	100	4.7	100	3.4	100	2.6	100	2.0	100	14'-0"	4.50	4.50	0.125	33	140045454S4
	11.1	100	7.9	100	5.9	100	4.6	100	3.7	100	14'-0"	4.50	4.50	0.188	47	140045456S4
	9.7	100	6.9	100	5.3	100	4.1	100	3.3	100	14'-0"	5.00	5.00	0.125	36	140050504S4
	12.5	100	9.1	100	7.0	100	5.5	100	4.4	100	14'-0"	5.00	5.00	0.156	44	140050505S4
	15.3	100	11.2	100	8.7	100	6.9	100	5.6	100	14'-0"	5.00	5.00	0.188	52	140050506S4

1. EPA values are calculated using fastest mile winds.
2. EPA represents the Effective Projected Area of each luminaire. Designs are limited to top mount or side-mount luminaires. Variations from sizes above are available upon inquiry at the factory. Satisfactory performance of poles is dependent upon the pole being properly attached to a supporting foundation of adequate design.
3. Structure weight is a nominal value which includes the pole shaft and base plate.

PRODUCT ORDERING CODES

CROSS SECTION	MODEL NUMBER	FIXTURE MOUNTING	COLOR		OPTIONS
R		--		_	
R = Round	080040404S4 080045454S4 080045456S4 100040404S4 100045454S4 100045456S4 100050504S4 120040404S4 120045454S4 120045456S4 120050504S4 120050505S4 120050506S4 140040404S4 140045454S4 140045456S4 140050504S4 140050505S4 140050506S4	**Drill Mounting** D1 = 1 Luminaire D2 = 2 @ 180° D3 = 3 @ 120° D4 = 4 @ 90° D5 = 2 @ 90° D6 = 3 @ 90° **Tenon Mounting** P2 = 2.38" OD x 4.00" P3 = 3.50" OD x 6.00" P4 = 4.00" OD x 6.00" P5 = 2.88" OD x 4.00" P7 = 2.38" OD x 5.00" PQ = 2.38" OD x 12.00" PD = 3.00" OD x 3.00" -- = Plain Top P9 = Other Tenon (Contact Factory)	**Polyester Powder** DWH = White DSS = Sandstone HTG = Hunter Green DNA = Natural Aluminum DCG = Charcoal Gray DMB = Medium Bronze DNB = New Dark Bronze DDB = Dark Bronze DBL = Black DSB = Steel Blue DTG = Dark Green DBR = Red SC = Special Color (Contact Factory)	**Anodized** 204 = Clear Natural 311 = Light Bronze* 312 = Medium Bronze* 313 = Dark Bronze* 335 = Black* *Duranodic Anodize **Brushed** SBF = Satin Brushed	See Accessories at valmontstructures.com (Please Specify with Code)

SPC7074 09/17 valmontstructures.com carries the most current spec information and supersedes these guidelines.

GEN LED acolyte® Architectural Lighting Solutions

Date | Project

Notes

YS5

Lam Partners ARCHITECTURAL LIGHTING DESIGN

STATIC WHITE SERIES 2 RIBBONLYTE 2.2

GENLED Acolyte®'s Series 2 RibbonLyte product line provides a 40% or more increase of lumens per watt, lumens per foot, and LEDs per foot. Also, RibbonLyte now has tighter LED spacing and shorter cuttable lengths.

- 2.2 W/ft (7.2 W/m)
- Create a custom fixture with our channels
- 6 white color temperatures
- 90+ CRI
- 2-Step MacAdam's ellipse binning





Applications:

Commercial
Entertainment
Healthcare

Hospitality
Museums
Public Spaces

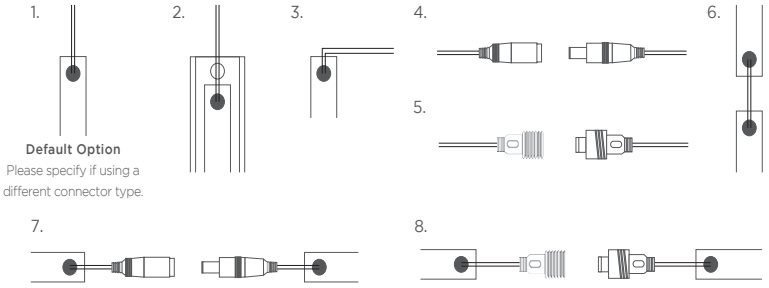
Residential
Retail

ETL US | CE | RoHS | IP20 | IP65 | IP68

ORDERING GUIDE

Category	CRI	Ribbon Type & IP Rating	Wattage & Color	
RB	**90**			
RB - RIBBONLYTE	**90** - 90+ CRI Static White	**SWS220** - Static White Series 2 IP20	**2.224** - 2.2 W/ft 2400K	**2.235** - 2.2 W/ft 3500K
		SWS265 - Static White Series 2 IP65	**2.227** - 2.2 W/ft 2700K	**2.240** - 2.2 W/ft 4000K
		SWS268 - Static White Series 2 IP68	**2.230** - 2.2 W/ft 3000K	**2.260** - 2.2 W/ft 6000K

CONNECTION OPTIONS



Default Option
Please specify if using a different connector type.

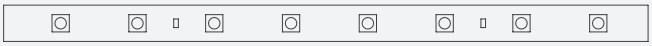
1 - End Feed Hard Wire Connection
2 - Back Feed Hard Wire Through Channel
3 - Side Feed Hard Wire Connection
4 - IP20 Connector Input
5 - IP67 Connector Input
6 - Soldered Daisy-Chain
7 - Daisy Chain with IP20 Connectors
8 - Daisy Chain with IP67 Connectors

AVAILABLE COLOR TEMPERATURES

2400K | 2700K | 3000K | 3500K | 4000K | 6000K

SPECIFICATIONS / DIAGRAM / USAGE GUIDELINES

	STATIC WHITE SERIES 2 RIBBONLYTE 2.2					
Operating Voltage	24 V					
Power Consumption	2.2 W/ft (7.2 W/m)					
Current (mA) - 24V	92 mA/ft (302 mA/m)					
LED Pitch	24 LEDs/ft (80 LEDs/m)					
Protection Rating	IP20, IP65, IP68					
Dimming/Control	ELV / MLV / 0-10 Volt / DMX / Lutron A-Series 1% dimming LED drivers / DALI					
Operating Temperature	-40° F to 158° F (-40° C to 70° C)					
Colors Temperatures	2400K	2700K	3000K	3500K	4000K	6000K
MacAdam's Ellipses (SDCM)	2-Step Binning					
Lumens	242 lm/ft (794 lm/m)	271 lm/ft (888 lm/m)	290 lm/ft (953 lm/m)	297 lm/ft (974 lm/m)	293 lm/ft (960 lm/m)	284 lm/ft (931 lm/m)
Binning Tolerance	+/- 100K					
LED Beam Angle	120°					
Lamp Life	50,000 Hrs					
Cuttable Length	3.94 in (100 mm)					
CRI - All Color Temp.	90+ CRI					
Lumens/Watt	110 lm/W	123 lm/W	132 lm/W	135 lm/W	133 lm/W	129 lm/W
Constant Voltage	✓					
Certifications	CE, ETL, RoHS					
Warranty	IP20: 6 years, IP65/68: 3 years					

24V DIMENSIONS	Top View	Side View	Dimensions
IP20	 CUTTABLE EVERY: 3.94 in (100 mm)		**Width** 0.31 in (8 mm) **Max Length*** 42 ft (12.8 m) **Height** 0.06 in (1.45 mm)
IP65	 CUTTABLE EVERY: 3.94 in (100 mm)		**Width** 0.31 in (8 mm) **Max Length*** 32.8 ft (10 m) **Height** 0.1 in (2.5 mm)
IP68	 CUTTABLE EVERY: 3.94 in (100 mm)		**Width** 0.44 in (11.18 mm) **Max Length*** 32.8 ft (10 m) **Height** 0.18 in (4.5 mm)

*Max length before additional power is introduced
Maximum run length for IP68 waterproof RibbonLyte is 10 m (32.8 ft). For single runs longer than 10 m, RibbonLyte will be daisy chained.

USAGE GUIDELINES

- **When installing this product take into account the surface temperature of the material this product is mounted to. Many building surfaces which are exposed to direct sunlight exceed the 70° C / 158° F maximum that our product is rated for. High risk locations like this should be avoided.**
- **Our IP65 can be used in wet, outdoor locations around swimming pools and spa tubs, but our products are not intended to be submerged in pools and fountains and do not carry UL676 certification to do so.**
- Please refer to our RibbonLyte Proper Use Guide in our *Application Guide* for more information. Available for download at www.**GEN**LEDBrands.com/Home/Acolyte
- Compatible with a wide variety of control products including the entire line of Lutron dimming systems.
- For use with **GEN**LED Acolyte® drivers, 0-10V dimming modules and interface controllers (DMXINF models).
- Use with non-**GEN**LED Acolyte® supplied Triac, MLV or ELV drivers is not supported or warrantied.
- Due to the nature of the product, RibbonLyte cuttable lengths are generally longer or shorter than the customer requested length. Unless specified, RibbonLyte is factory cut at the shorter cuttable point.
- We reserve the right to make changes to product lineup, specifications, design and finishes at any time without notice.

GENLED Acolyte® does not warrant or represent that the information is free from errors or omission. The information may change without notice and **GEN**LED Acolyte® is not in any way liable for the accuracy of any information printed and stored or in any way interpreted or used.

CHANNEL COMPATIBILITY / CHANNEL OPTIONS

	IP20/IP65	IP68
AC1	✓	✓
AC2	✓	✓
AC3	✓	✓
AC4	✓	✓
AC5	✓	✓
AP1	✓	✓
AR1	✓	
AR2	✓	✓
AR3	✓	✓
AS1	✓	
AS2	✓	✓
AS3	✓	✓
AS6	✓	✓
AS20G	✓	
AT4	✓	✓
AT5	✓	✓
AT11	✓	✓
AW35	✓	✓
B1	✓	
C22	✓	✓
GL1	✓	✓
GL2	✓	✓
ROUND	✓	✓
W31	✓	✓
WH35	✓	✓

SURFACE MOUNTED CHANNELS

LENS OPTIONS: **C** - Clear **F** - Frosted **M** - Milky **G** - Grazer



AC1
C, F, M



AC2
C, F, M



AC3
C, F, M



AC4
C, F, M



AC5
C, F, M



AP1
C, F, M



AS1
C, F, M



AS2
C, F, M



AS3
C, F, M



AS6
C, F, M



AS20G
G



AT4
C, F, M



AT5
C, F, M



AT11
C, F, M



AW35
C, F, M



B1
C, F, M



C22
C, F, M



GL2
C, F, M



ROUND
C, F, M



WH35
C, F, M

RECESSED CHANNELS

LENS OPTIONS: **C** - Clear **F** - Frosted **M** - Milky



AR1
C, F, M



AR2
C, F, M



AR3
C, F, M



W31
C, F, M



GL1
C, F, M

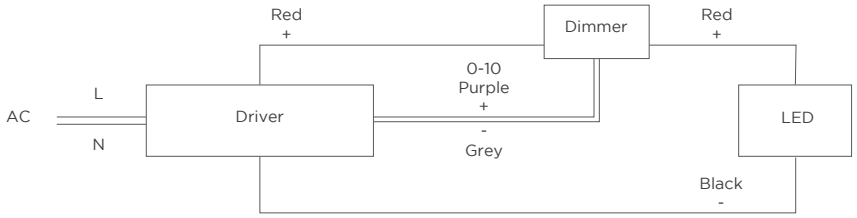
DISCLAIMER

When installing this product take into account the surface temperature of the material this product is mounted to. Many building surfaces which are exposed to direct sunlight exceed the 70°C/158°F maximum that our product is rated for. High risk locations like this should be avoided.

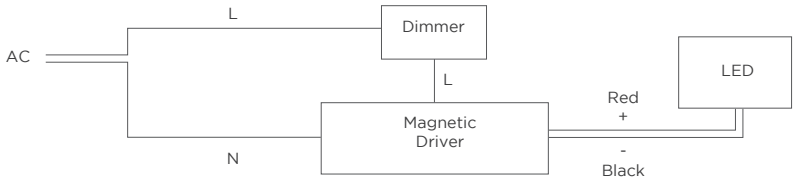
Our IP68 product is not intended to be submerged in pools and fountains and does not carry UL676 certification to do so.

WIRING DIAGRAMS

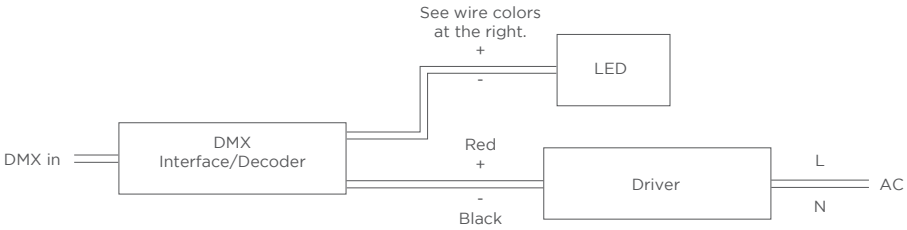
0-10V



MAGNETIC + ELV



DMX



WIRE COLORS PER RIBBONLYTE COLOR

STATIC WHITE SERIES 2

Red Wire (+) Positive

Black Wire (-) Negative

GEN LED acolyte® Architectural Lighting Solutions

Date | Project | YS5 | Lam Partners ARCHITECTURAL LIGHTING DESIGN

Notes

0-10V DIMMABLE 96W WATERPROOF DRIVER



This Constant Voltage Class 2 LED Driver is UL Listed. The UL Listed type enclosure has a built-in junction box on both the input and output. This driver is IP65 rated and is suitable for both indoor and outdoor installations. With universal input voltage ranging from 120 to 277VAC, DRVW2496-10 driver is designed for commercial, industrial and residential applications. The 0-10V dimming on DRVW2496-10 delivers smooth, flicker-free linear dimming down to 1% with most LED's and a wide variety of compatible dimmers.

- UL Listed Enclosure - With Built-In Junction Boxes
- Universal Input Voltage
- 0-10V Dimmable - Flicker Free Down to 1%
- IP65 - For Both Indoor and Outdoor Use, UL 8750 Approved
- Class 2, Class P
- Auto-Reset Protection for Short Circuit and Over-Temperature
- Over Load Protection - CC Mode
- 5-year warranty

Applications:

Commercial
Entertainment
Healthcare
Hospitality
Museums
Public Spaces
Residential
Retail

UL IP65

SPECIFICATIONS / COMPATIBLE 0-10 DIMMER LIST

DRVW2496-10			
Compatible Dimming	0-10V	**DIMMING**	PART NUMBER
Output Voltage (DC)	24 V	**LUTRON**	Diva-DVTV
Max Output Current	4 A	**LUTRON**	Nova T - NFTV
Input Voltage Range (VAC)	120 - 277VAC	**LUTRON**	Nova T - NTFTV
Input Frequency	50 / 60Hz	**LEVITON**	illumaTech - IP7
Efficiency (Typ.)	87%	**WATT STOPPER**	DCLV1
Max Input Current	0.96 A	**LIGHTOLIER CONTROLS**	ZP600FAM120
Expected Life Time	50,000 Hours (< 65° C)	**PHILLIPS**	Sunrise - SR1200ZTUNV
Operating Temperature	-13° F to 104° F (-25° C to 40° C)		
Safety Standards	UL 8750 Approved, UL Listed Enclosure		
Dimensions	11.4 in (290.5 mm) x 2.36 in (59.9 mm) x 1.4 in (35 mm) (L x W x H)		

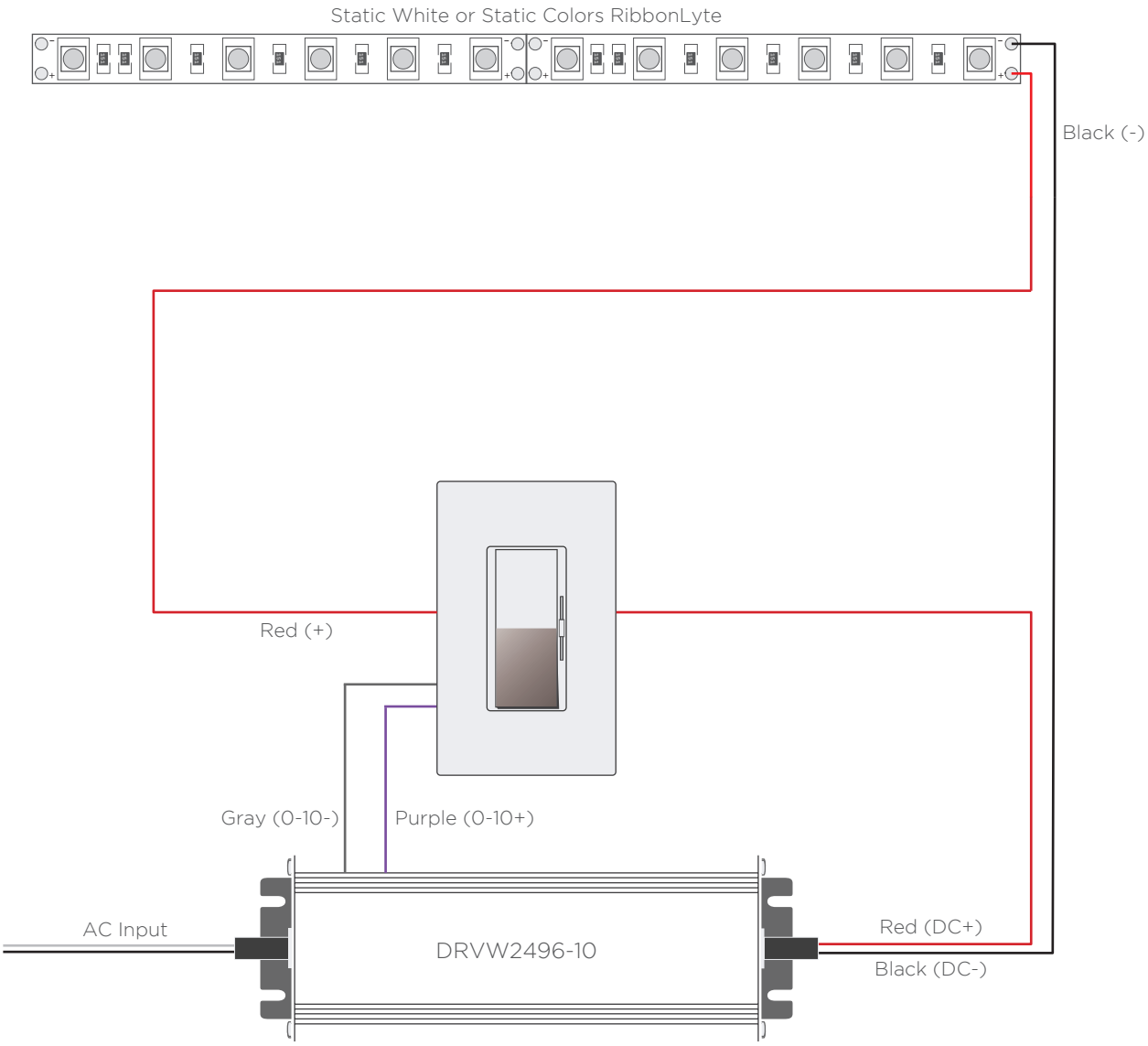
ORDERING GUIDE

Category	Voltage	Wattage	Dimming Option
DRVW	**24**	**96**	**-10**
DRVW - Waterproof Driver	**24** - 24 V	**96** - 96W	**-10** - 0-10V

MAXIMUM DISTANCE FROM DRIVER TO LED AT FULL LOAD		
96 + 100 W		
Wire Gauge	**Feet**	**Meters**
24 AWG	5.5	1.68
22 AWG	9	2.74
20 AWG	14	4.27
18 AWG	23	7.01
16 AWG	37	11.28
14 AWG	59	17.99
12 AWG	94	28.66
10 AWG	150	45.73
8 AWG	239	72.87

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WIRING DIAGRAM



REV.29MAY2019

GEN LED acolyte® Architectural Lighting Solutions

Date | Project

YS5

Lam Partners ARCHITECTURAL LIGHTING DESIGN

Notes

AS2 SERIES 2 CHANNEL FIXTURE

AS2 Series 2 Channel Fixture is a slim channel with a 66-degree narrow beam angle ideal for a controlled spread of light. This channel is ideal for compact cove applications, and can also be used in conjunction with our tiltable stands. The AS2 Series 2 Channel Fixture includes a choice of clear, frosted or milky lens. Custom design a fixture with our AS2 Series 2 Channel and RibbonLyte products.

- Beam Angle 66°
- Wattage Range from 1.5 W/ft (4.9 W/m) to 6.0 W/ft (19.7 W/m)
- Static White delivered lumen range from 116 lm/ft (381 lm/m) up to 729 lm/ft (2391 lm/m)
- Assembled in USA

Applications:

Commercial
Entertainment
Healthcare
Hospitality
Museums
Public Spaces
Residential
Retail





AVAILABLE LENS FINISHES



Clear Lens
92% Light Transmission



Frosted Lens
85% Light Transmission



Milky Lens
70% Light Transmission

ORDERING GUIDE

CATEGORY	LENS	CRI	RIBBON TYPE & IP RATING
CHAS2			
CHAS2- AS2 Channel	**0** - No Lens	**0** - Static Color	**SWS220** - Static White Series 2 IP20
	C -Clear	**90** - 90+ CRI Static White	**SWS265** - Static White Series 2 IP65
	F - Frosted		**SWS268** - Static White Series 2 IP68
	M - Milky		**SCS220** - Static Color Series 2 IP20
			SCS265 - Static Color Series 2 IP65
			SCS268 - Static Color Series 2 IP68

WATTAGE	COLOR		CONNECTION OPTIONS
1.5 - 1.5 W/ft (4.9 W/m - Static White, Static Color)	**24** - 2400K	**R** - Red	**1** - End Feed Hard Wired Connection
2.2 - 2.2 W/ft (7.2 W/m - Static White, Static Color)	**27** - 2700K	**A** - Amber	**2** - Back Feed Hard Wire Connection
3.0 - 3.0 W/ft (9.8 W/m - Static White, Static Color)	**30** - 3000K	**G** - Green	**3** - Side Feed Hard Wire Connection
4.4 - 4.4 W/ft (14.4 W/m - Static White, Static Color)	**35** - 3500K	**B** - Blue	**4** - IP20 Connector Input
5.0 - 5.0 W/ft (16.4 W/m - Static White, Static Color)	**40** - 4000K		**5** - IP67 Connector Input
6.0 - 6.0 W/ft (19.7 W/m - Static White, Static Color)	**60** - 6000K		**6** - Soldered Daisy-Chain
			7 - Daisy-Chain With IP20 Connectors
			8 - Daisy-Chain With IP67 Connectors
			** See last page for connection diagram*

Included Accessories:
1. Mounting Clip

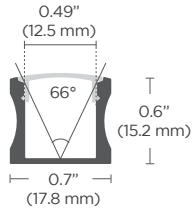
Optional Accessories:
1. Tiltable Stand (Part No.: TILTSTAND)

AVAILABLE COLORS AND COLOR TEMPERATURES

2400K 2700K 3000K 3500K 4000K 6000K Red Amber Green Blue

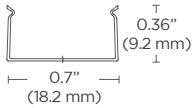
SPECIFICATIONS

Series 2 AS2 Channel

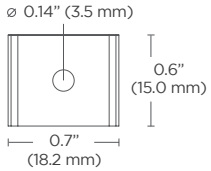


Mounting Clip (Included Accessory)

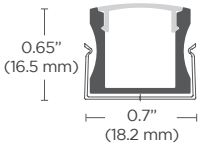
Side View



Top View



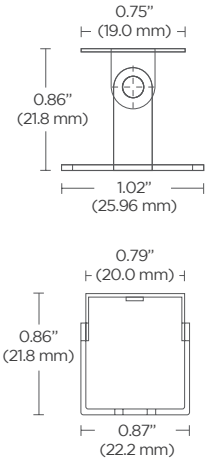
Assembled View



* Each section of channel includes 3 mounting clips.

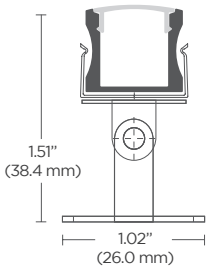
Tiltable Stand (Optional Accessory)

Side Views



* Height does not include height of mounting clip, channel and lens.
Part Number: TILTSTAND

Assembled View



Beam Angle	66°		
Lens Type	Clear, Frosted, Milky		
Width	0.7 in (17.78 mm)	0.7 in (18.2 mm)	Base: 1.02 in (25.96 mm) / Tabletop: 0.75 in (19.0 mm)
Height	0.60 in (15.2 mm)	0.36 in (9.2 mm)	0.86 in (21.8 mm)
Internal	0.49 in (12.45 mm)	--	Screw hole: Size #4-40
Length	Channel is sold by the foot and cut to your exact desired length. Required amount of mounting clips included. Tiltable stands are sold separately		
Operating Voltage	24V		
Dimming	MLV / 0-10 Volt / Lutron A-Series 1% dimming LED drivers / Lutron VIVE code compliance available / ELV / DALI / DMX		
Operating Temperature	-40 F to 158 F (-40 C to 70 C)		
Colors	2400K, 2700K, 3000K, 3500K, 4000K, 6000K, Red, Amber, Green, Blue		
CRI	90+ CRI (Static white only)		
Lamp Life	L70 at 50,000 Hours		
MacAdam's Ellipses (SDCM)	2-Step Binning (For Static White LEDs only)		
Certifications	ETL Listed: UL 2108 Issued: 2004/02/27 Ed: 1 Rev: 2014/02/24 Low Voltage Lighting Systems CSA C22.2#9.0 Issued: 1996/06/01 Ed: 1 (R2011) General Requirements for Luminaries; with Gen. Inst. 1: 1997, Gen Inst. 2: 1998. ROHS compliant UL 2108 - Low Voltage Lighting Systems UL 8750 - Light Emitting Diode (LED) Equipment for Use in Lighting Products UL 1598 / CSA 250.0-08 - Luminaires		

ASSEMBLY OPTIONS



ON-SITE ASSEMBLY
Cut to length with soldered leads, assembled on-site

BENEFITS:
Run Lengths can be trimmed in the field
Last minute adjustments
Shorter lead time



FACTORY ASSEMBLY
Pre-assembled factory finished fixtures
(Max assembled length is 78")

BENEFITS:
Easy and quick installation
Shipped as a complete unit
Plug-and-play installation

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SPECIFICATIONS

Available Wattages	Cuttable Length	LED Pitch	Color Temp.	lm/W without Lens	Delivered Lumens with Clear Lens	Delivered Lumens with Frosted Lens	Delivered Lumens with Milky Lens	Standard Cable Length	Compatible with Channel		
									IP20	IP65	IP68
1.5 White Series 2	3.94 in (100 mm)	24 LEDs/ft (80 LEDs/m)	2400K	110.7	152.7 lm/ft (500.8 lm/m)	141.1 lm/ft (462.7 lm/m)	116.2 lm/ft (381.1 lm/m)	12 in (30.5 cm)	✓	✓	✓
			2700K	123.8	171.1 lm/ft (561.2 lm/m)	157.9 lm/ft (517.9 lm/m)	130 lm/ft (426.5 lm/m)				
			3000K	131	180.9 lm/ft (593.4 lm/m)	167 lm/ft (547.7 lm/m)	137.5 lm/ft (451 lm/m)				
			3500K	134	185.1 lm/ft (607.2 lm/m)	170.9 lm/ft (560.4 lm/m)	140.7 lm/ft (461.5 lm/m)				
			4000K	134	185.1 lm/ft (607.2 lm/m)	170.9 lm/ft (560.4 lm/m)	140.7 lm/ft (461.5 lm/m)				
			6000K	127.9	176.7 lm/ft (579.6 lm/m)	163.1 lm/ft (534.9 lm/m)	134.3 lm/ft (440.5 lm/m)				
2.2 White Series 2	3.94 in (100 mm)	24 LEDs/ft (80 LEDs/m)	2400K	108.2	218.9 lm/ft (718 lm/m)	202.3 lm/ft (663.5 lm/m)	166.6 lm/ft (546.4 lm/m)	12 in (30.5 cm)	✓	✓	✓
			2700K	121.1	245.3 lm/ft (804.7 lm/m)	226.4 lm/ft (742.6 lm/m)	186.5 lm/ft (611.6 lm/m)				
			3000K	128	259.4 lm/ft (850.8 lm/m)	239.4 lm/ft (785.2 lm/m)	197.2 lm/ft (646.7 lm/m)				
			3500K	131	265.4 lm/ft (870.6 lm/m)	245 lm/ft (803.5 lm/m)	201.7 lm/ft (661.7 lm/m)				
			4000K	131	265.4 lm/ft (870.6 lm/m)	245 lm/ft (803.5 lm/m)	201.7 lm/ft (661.7 lm/m)				
			6000K	125	253.4 lm/ft (831 lm/m)	233.8 lm/ft (767 lm/m)	192.6 lm/ft (631.6 lm/m)				
3.0 White Series 2	1.97 in (50 mm)	48 LEDs/ft (160 LEDs/m)	2400K	109.8	303.1 lm/ft (994.1 lm/m)	280.1 lm/ft (918.6 lm/m)	230.6 lm/ft (756.5 lm/m)	12 in (30.5 cm)	✓	✓	✓
			2700K	122.9	339.6 lm/ft (1114 lm/m)	313.5 lm/ft (1028.1 lm/m)	258.1 lm/ft (846.7 lm/m)				
			3000K	130	359.1 lm/ft (1177.9 lm/m)	331.4 lm/ft (1087.1 lm/m)	273 lm/ft (895.3 lm/m)				
			3500K	133	367.5 lm/ft (1205.3 lm/m)	339.2 lm/ft (1112.4 lm/m)	279.3 lm/ft (916.1 lm/m)				
			4000K	133	367.5 lm/ft (1205.3 lm/m)	339.2 lm/ft (1112.4 lm/m)	279.3 lm/ft (916.1 lm/m)				
			6000K	127	350.8 lm/ft (1150.5 lm/m)	323.7 lm/ft (1061.8 lm/m)	266.6 lm/ft (874.5 lm/m)				
4.4 White Series 2	1.97 in (50 mm)	48 LEDs/ft (160 LEDs/m)	2400K	109	441.2 lm/ft (1447 lm/m)	407.7 lm/ft (1337.1 lm/m)	335.7 lm/ft (1101.2 lm/m)	12 in (30.5 cm)	✓	✓	✓
			2700K	122	494.4 lm/ft (1621.6 lm/m)	456.3 lm/ft (1496.6 lm/m)	375.8 lm/ft (1232.5 lm/m)				
			3000K	129	522.8 lm/ft (1714.7 lm/m)	482.5 lm/ft (1582.5 lm/m)	397.3 lm/ft (1303.2 lm/m)				
			3500K	132	534.9 lm/ft (1754.5 lm/m)	493.7 lm/ft (1619.3 lm/m)	406.6 lm/ft (1333.5 lm/m)				
			4000K	132	534.9 lm/ft (1754.5 lm/m)	493.7 lm/ft (1619.3 lm/m)	406.6 lm/ft (1333.5 lm/m)				
			6000K	126	510.6 lm/ft (1674.8 lm/m)	471.2 lm/ft (1545.7 lm/m)	388.1 lm/ft (1272.9 lm/m)				
5.0 White Series 2	1.4 in (35.7 mm)	68 LEDs/ft (224 LEDs/m)	2400K	109.8	505.1 lm/ft (1656.8 lm/m)	466.8 lm/ft (1531 lm/m)	384.4 lm/ft (1260.8 lm/m)	12 in (30.5 cm)	✓	✓	
			2700K	122.9	566.1 lm/ft (1856.7 lm/m)	522.4 lm/ft (1713.6 lm/m)	430.2 lm/ft (1411.2 lm/m)				
			3000K	130	598.5 lm/ft (1963.2 lm/m)	552.4 lm/ft (1811.9 lm/m)	454.9 lm/ft (1492.1 lm/m)				
			3500K	133	612.5 lm/ft (2008.9 lm/m)	565.3 lm/ft (1854 lm/m)	465.5 lm/ft (1526.8 lm/m)				
			4000K	133	612.5 lm/ft (2008.9 lm/m)	565.3 lm/ft (1854 lm/m)	465.5 lm/ft (1526.8 lm/m)				
			6000K	127	584.6 lm/ft (1917.6 lm/m)	539.6 lm/ft (1769.7 lm/m)	444.3 lm/ft (1457.4 lm/m)				
6.0 White Series 2	1.4 in (35.7 mm)	68 LEDs/ft (224 LEDs/m)	2400K	109	601.6 lm/ft (1973.2 lm/m)	555.9 lm/ft (1823.4 lm/m)	457.8 lm/ft (1501.6 lm/m)	12 in (30.5 cm)	✓	✓	
			2700K	122	674.2 lm/ft (2211.3 lm/m)	622.2 lm/ft (2040.8 lm/m)	512.4 lm/ft (1680.7 lm/m)				
			3000K	129	712.9 lm/ft (2338.2 lm/m)	657.9 lm/ft (2157.9 lm/m)	541.8 lm/ft (1777.1 lm/m)				
			3500K	132	729.4 lm/ft (2392.5 lm/m)	673.2 lm/ft (2208.1 lm/m)	554.4 lm/ft (1818.4 lm/m)				
			4000K	132	612.5 lm/ft (2008.9 lm/m)	673.2 lm/ft (2208.1 lm/m)	554.4 lm/ft (1818.4 lm/m)				
			6000K	126	696.3 lm/ft (2283.8 lm/m)	642.6 lm/ft (2107.7 lm/m)	529.2 lm/ft (1735.8 lm/m)				

SPECIFICATIONS

Available Wattages	Cuttable Length	LED Pitch	Color Temp.	lm/W without Lens	Delivered Lumens with Clear Lens	Delivered Lumens with Frosted Lens	Delivered Lumens with Milky Lens	Standard Cable Length	Compatible with Channel		
									IP20	IP65	IP68
1.5 Color Series 2	3.94 in (100 mm)	24 LEDs/ft (80 LEDs/m)	Red	41.0	56.6 lm/ft (185.6 lm/m)	52.3 lm/ft (171.5 lm/m)	43.1 lm/ft (141.4 lm/m)	12 in (30.5 cm)	✓	✓	✓
			Green	123.0	169.9 lm/ft (557.4 lm/m)	156.8 lm/ft (514.4 lm/m)	129.2 lm/ft (423.612 lm/m)				
			Blue	25.0	34.5 lm/ft (113.3 lm/m)	31.9 lm/ft (104.6 lm/m)	26.3 lm/ft (86.1 lm/m)				
			Amber	31.0	42.8 lm/ft (140.5 lm/m)	39.5 lm/ft (129.6 lm/m)	32.6 lm/ft (106.764 lm/m)				
2.2 Color Series 2	3.94 in (100 mm)	24 LEDs/ft (80 LEDs/m)	Red	40.0	80.9 lm/ft (265.5 lm/m)	74.8 lm/ft (245.3 lm/m)	61.6 lm/ft (202.048 lm/m)	12 in (30.5 cm)	✓	✓	✓
			Green	113.0	229.0 lm/ft (751.0 lm/m)	211.3 lm/ft (693.1 lm/m)	174.0 lm/ft (570.7856 lm/m)				
			Blue	23.0	46.6 lm/ft (152.9 lm/m)	43.0 lm/ft (141.1 lm/m)	35.4 lm/ft (116.1776 lm/m)				
			Amber	31.0	62.8 lm/ft (206.6 lm/m)	58.0 lm/ft (190.1.5 lm/m)	47.7 lm/ft (165.5872 lm/m)				
3.0 Color Series 2	1.97 in (50 mm)	48 LEDs/ft (160 LEDs/m)	Red	40.0	110.4 lm/ft (362.1 lm/m)	102.0 lm/ft (334.6 lm/m)	84.0 lm/ft (275.52 lm/m)	12 in (30.5 cm)	✓	✓	✓
			Green	127.0	350.9 lm/ft (1151.0 lm/m)	323.9 lm/ft (1062.2 lm/m)	266.7 lm/ft (874.776 lm/m)				
			Blue	25.0	69.1 lm/ft (226.6 lm/m)	63.8 lm/ft (209.1 lm/m)	52.5 lm/ft (172.2 lm/m)				
			Amber	28.0	80.1 lm/ft (262.8 lm/m)	74.0 lm/ft (242.6 lm/m)	60.9 lm/ft (199.752 lm/m)				
4.4 Color Series 2	1.97 in (50 mm)	48 LEDs/ft (160 LEDs/m)	Red	38.0	153.8 lm/ft (504.5 lm/m)	142.1 lm/ft (466.2 lm/m)	117.0 lm/ft (383.8912 lm/m)	12 in (30.5 cm)	✓	✓	✓
			Green	117.0	474.1 lm/ft (1555.1 lm/m)	437.6 lm/ft (1435.3 lm/m)	360.4 lm/ft (1181.981 lm/m)				
			Blue	24.0	97.3 lm/ft (319.0 lm/m)	89.8 lm/ft (294.4 lm/m)	73.9 lm/ft (242.4576 lm/m)				
			Amber	25.0	101.3 lm/ft (332.2 lm/m)	93.5 lm/ft (306.7 lm/m)	77.0 lm/ft (252.56 lm/m)				
5.0 Color Series 2	1.4 in (35.7 mm)	68 LEDs/ft (224 LEDs/m)	Red	37.0	170.2 lm/ft (558.2 lm/m)	157.3 lm/ft (515.8 lm/m)	129.5 lm/ft (424.76 lm/m)	12 in (30.5 cm)	✓	✓	
			Green	116.0	534.2 lm/ft (1752.1 lm/m)	493.0 lm/ft (1617.0 lm/m)	406.0 lm/ft (1331.68 lm/m)				
			Blue	24.0	110.5 lm/ft (362.5 lm/m)	102.0 lm/ft (334.6 lm/m)	84.0 lm/ft (275.52 lm/m)				
			Amber	26.0	119.7 lm/ft (392.7 lm/m)	110.5 lm/ft (362.4 lm/m)	91.0 lm/ft (298.48 lm/m)				
6.0 Color Series 2	1.4 in (35.7 mm)	68 LEDs/ft (224 LEDs/m)	Red	37.0	204.2 lm/ft (669.8 lm/m)	188.7 lm/ft (618.9 lm/m)	155.4 lm/ft (509.712 lm/m)	12 in (30.5 cm)	✓	✓	
			Green	113.0	624.4 lm/ft (2048.2 lm/m)	576.3 lm/ft (1890.3 lm/m)	474.6 lm/ft (1556.688 lm/m)				
			Blue	23.0	127.1 lm/ft (416.9 lm/m)	96.6 lm/ft (384.7 lm/m)	316.848 lm/ft (1777.1 lm/m)				
			Amber	24.0	132.6 lm/ft (435.0 lm/m)	100.8 lm/ft (401.5 lm/m)	330.624 lm/ft (1818.4 lm/m)				

AVAILABLE DRIVERS

NON-DIMMING ELECTRONIC DRIVERS



60W, 100W Non-Dimming Electronic Class 2 Drivers

Part No.:
- DRVW2460HTC (60 Watt)
- DRV24100HTC (100 Watt)

Output Voltage: 24 V
Voltage Range: 120-277 VAC
IP Rating: Dry or Damp
UL Listed



240W, 320W Non-Dimming Electronic Drivers

Part No.:
- DRVW24240 (240 Watt)
- DRVW24320 (320 Watt)

Output Voltage: 24 V
Voltage Range: 90-305 VAC
IP Rating: Dry or Damp
UL Recognized

LUTRON HI-LUME DRIVERS



40W, 96W Class 2 Lutron Hi-Lume Drivers

Part No.:
- DRVLUT24403W (40 Watt)
- DRVLUT24402W (40 Watt)
- DRVLUT24963W (96 Watt)

Output Voltage: 24 V
Voltage Range: 120-277 VAC or 120V (2-wire model)
IP Rating: Dry or Damp
Dimmable using 2-wire forward phase
or 3-wire ecosystem
UL Listed

MAGNETIC, ELV & MLV DRIVERS WITH COMPATIBLE DIMMERS.



60W, 96W, 200W, 300W Class 1 & 2 Magnetic Drivers

Part No.:
- DRVWDIM2460 (60 Watt)
- DRVWDIM24100, (96 Watt)
- DRVWDIM24200 (200 Watt)
- DRVWDIM24300 (300 Watt)

Magnetic Driver
Output Voltage: 24 V
Voltage Range: 120-277 VAC
IP Rating: Dry or Damp
Forward Phase Dimming
ETL Listed



60W, 96W, 150W, 200W ELV & MLV Drivers

Part No.:
- DRVW2460ELV (60 Watt)
- DRVW2496ELV (96 Watt)
- DRVW24150ELV (150 Watt)
- DRVW24200ELV (200 Watt)

Line Voltage Dimmable Drivers
Output Voltage: 24 V
Voltage Range: 100-130 VAC
IP Rating: Dry or Damp
Dimmable
ETL, UL and CSA Listed



LUTRON Skylark Contour Dimmer

Part No.: TRIDIMSKY
Width: 2.94 in (75 mm)
Length: 4.69 in (120 mm)
Depth: 0.30 in (7.6 mm)

· Single pole and 3-way versions
· Compatible with **GEN**LED Acolyte Triac Dimmer
· Slide adjusts brightness and On/Off control
· 30 mA max control current
· Available in White finish



LUTRON NOVA-T Dimmer

Part No.: TRIDIMNOVA
Width: 2.75 in (70 mm)
Length: 4.56 in (116 mm)
Depth: 0.30 in (7.6 mm)

· Slide adjusts brightness and On/Off control
· 30 mA max control current
· Available in White finish



LUTRON DIVA Dimmer

Part No.: TRIDIMDIVA
(With Locator Light) TRIDIMDIVAL
Width: 2.94 in (75 mm)
Length: 4.69 in (120 mm)
Depth: 0.30 in (7.6 mm)

· Large paddle switch with a captive linear-slide dimmer
· 30 mA max control current
· Available in White finish
· Available with locator light which glows green when the switch is off

*For more options, please reference the Optional Dimmer List on **GEN**LED Acolyte®'s product website page.

AVAILABLE DRIVERS / WIRE GAUGE CHART

0-10V DRIVERS AND DIMMERS



96W 0-10V Electronic Driver

Part No.: DRVW2496-10
Output Voltage: 24 V
Voltage Range: 120-277 VAC
IP Rating: IP65
0-10V dimming with
no module needed
UL Listed



LUTRON DIVA Dimmer

Part No.: LVDIMDIVA
Width: 2.94 in (75 mm)
Length: 4.69 in (120 mm)
Depth: 0.30 in (7.6 mm)

· Compatible with 0-10 V Dimming Module
· Large paddle switch with a captive linear-slide dimmer
· 30 mA max control current
· Available in White finish



LUTRON NOVA-T Dimmer

Part No.: LVDIMNOVA
Width: 2.75 in (70 mm)
Length: 4.56 in (116 mm)
Depth: 0.30 in (7.6 m m)

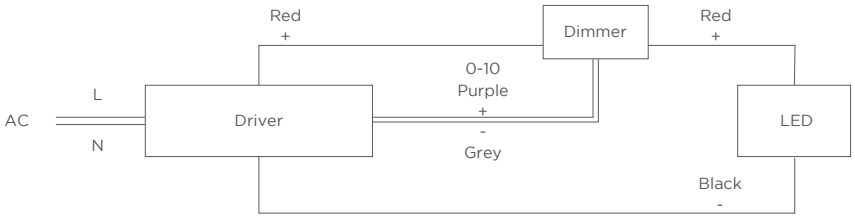
· Compatible with 0-10 V Dimming Module
· Slide adjusts brightness and On/Off control
· 30 mA max control current
· Available in White finish

DRIVER AND RIBBONLYTE AT FULL LOAD

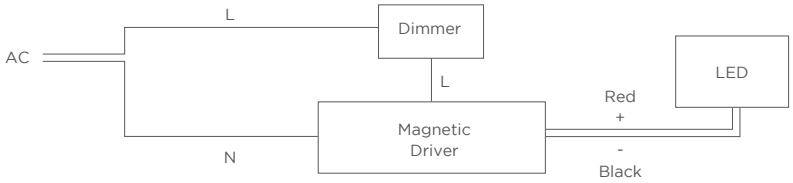
Wattages	40		60		96 + 100		150		200		240		300		320	
Wire Gauge	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters
24 AWG	14	4.27	9	2.74	5.5	1.68	3.75	1.14	2.75	0.84	2.25	0.69	1.75	0.53	1.75	0.53
22 AWG	22	6.71	14	4.27	9	2.74	5.75	1.75	4.5	1.37	3.5	1.07	2.75	0.84	2.75	0.84
20 AWG	35	10.67	23	7.01	14	4.27	9	2.74	7	2.13	5.75	1.75	4.5	1.37	4.25	1.30
18 AWG	56	17.07	37	11.28	23	7.01	15	4.57	11	3.35	9	2.74	7.5	2.29	7	2.13
16 AWG	90	27.44	60	18.29	37	11.28	24	7.32	18	5.49	15	4.57	12	3.66	11	3.35
14 AWG	142	43.29	95	28.96	59	17.99	38	11.59	28	8.54	23	7.01	19	5.79	17	5.18
12 AWG	226	68.90	151	46.04	94	28.66	60	18.29	45	13.72	37	11.28	30	9.15	28	8.54
10 AWG	360	109.76	240	73.17	150	45.73	96	29.27	72	21.95	60	18.29	48	14.63	45	13.72
8 AWG	574	175.00	381	116.16	239	72.87	153	46.65	115	35.06	95	28.96	76	23.17	71	21.65

WIRING DIAGRAMS

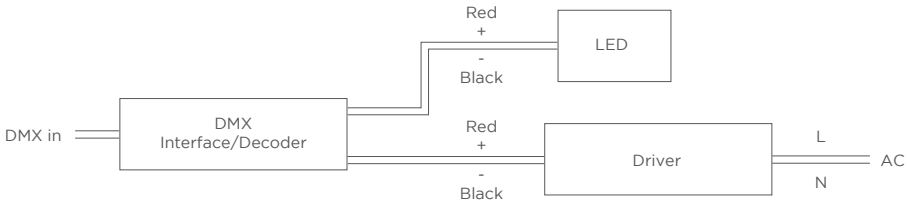
0-10V



MAGNETIC + ELV



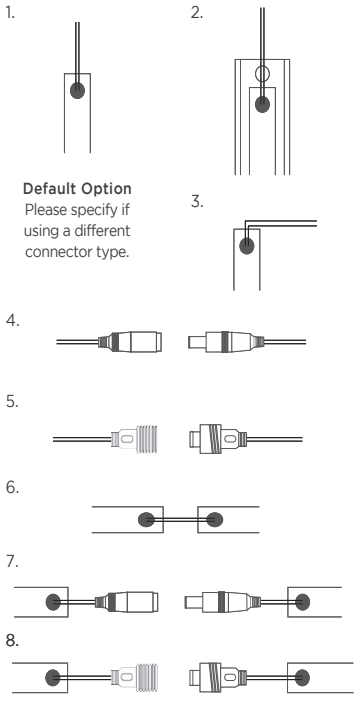
DMX



WIRE COLORS PER RIBBONLYTE COLOR

STATIC WHITE + STATIC COLOR
Red Wire (+) Positive
Black Wire (-) Negative

CONNECTION OPTIONS



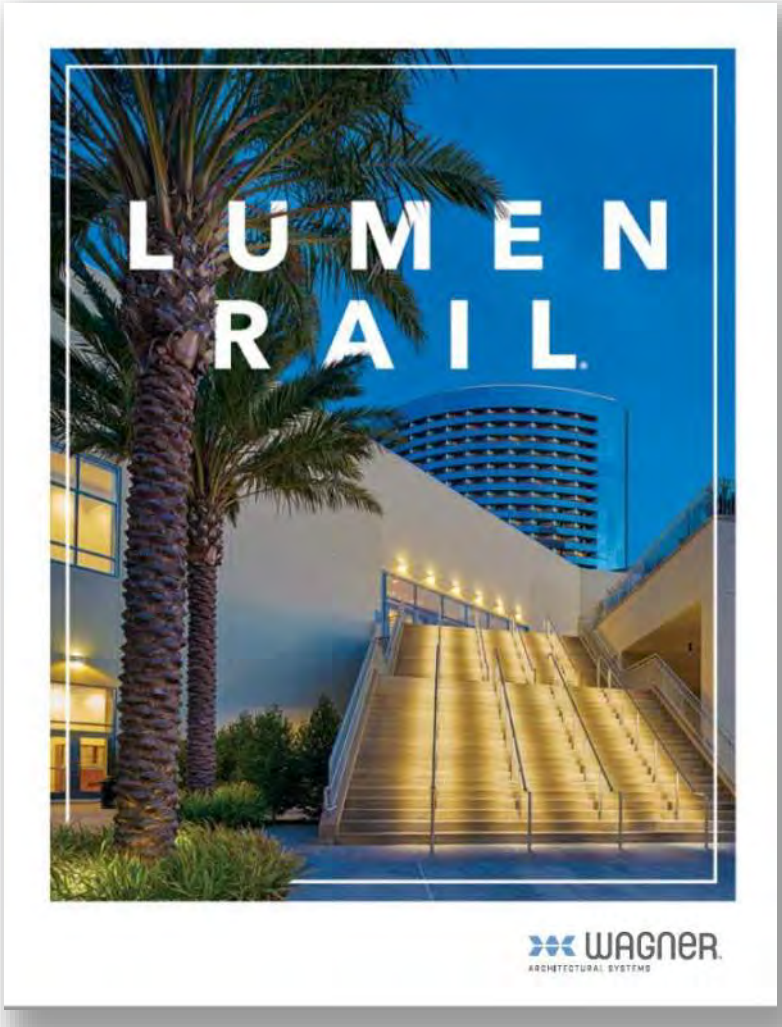
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Lam Partners
ARCHITECTURAL LIGHTING DESIGN

WAGNER
ARCHITECTURAL SYSTEMS





LUMENRAIL DESIGN SPECIFICATION GUIDE

2018 EDITION

Welcome to Wagner™ Architectural Systems. We are a leading global provider of architecturalrailing systems dedicated to producing life safety and lighting products that meet the highest standards of quality, engineering and code compliance.We work with architects, lighting designers, engineers and contractors to deliver complete product systems, or custom engineer and fabricate design-specific railing and panel solutions that provide safety, assist navigation, and elevate the architectural aesthetic of common space designs.

With expertise in manufacturing, code requirements and addressing LEED building standards, we are a partner who can meet your specifications and deliver installations with the fit, finish, beauty and performance you desire.

Common areas and pedestrian walkways have specific lighting requirements to ensure safe navigation and access in dark or lowlight conditions. These same walkways also require the use of handrails to protect, guide and assist pedestrians on ramps, landings, stairs and balconies. Lumenrail combines these lighting and safety requirements into one seamless, illuminated, protective assembly.

To learn more about working with Wagner Architectural Systems or to discuss your project, visit us at **wagnerarchitectural.com**, or call us at 888.243.6914

Specification Process - Customer - Wagner Architectural

1. RFQ - rfq@mailwagner.com
    a. Drawings - elevation and plan views
        i. Providing highlighted drawings, has proven to reduce our turn-around time on quotation requests.
    b. Schedule - occupancy, concrete or off-site date
    c. Specifications - luminaires, metal, finish, design details
2. Per/Foot quote based on review of submitted information
3. Quote review - quote modifications - quote approval
4. PO for Wagner Engineering drawings, 50%
    a. Customer packet review
    b. Site dimensions or schedule for site dimensions
5. Code review, design detail revisions (3 rounds included)
    a. Approved signed Wagner Engineering drawings
    b. Project release
6. Final production engineering
7. Production
    a. Balance due 50%
8. Shipment - Customer support

Please visit **wagnerarchitectural.com** for specification sheets, photometric information and installation instructions.

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LUSY GUIDE R1

DESIGN SPECIFICATIONS
LUMENRAIL LUMINAIRES

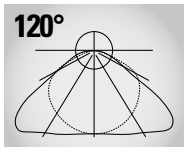
ETL LISTED	CLASS 2 REQUIRED	5 YEARS	24VDC	80+
	DRIVER	WARRANTY	INPUT VOLTAGE	CRI

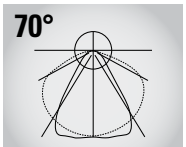
LUMENRAIL® AVAILABLE CONTROL & SAFETY OPTIONS	- 0-10V (PWM) STD - DALI - DMX	- REMOTE 100W STD DIMMING - REMOTE MADE IN USA 100W DIMMING - INTEGRATED POST 100W DIMMING	- SURGE PROTECTION - FUSING	NOT ALL OPTIONS ARE COMPATABLE. PLEASE VERIFY COMBINATIONS WITH YOUR LOCAL REPRESENTATIVE
	DIMMING PROTOCOLS	DRIVER OPTIONS	PROTECTION OPTIONS	OPTION COMPATABILITY

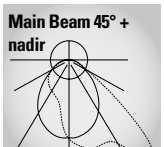
LUMINIARE **PART NUMBER BUILDER**



LULS						
FIXTURE TYPE	COLOR TEMP	FIXTURE WATTAGE	BEAM ANGLE	LENS / OPTIC	LENGTH NOMINAL - ASSEMBLED	
LULS - Lumenlinear™	**27K** - 2700° K **30K** - 3000° K **35K** - 3500° K **40K** - 4000° K **50K** - 5000° K	**20** - 1.85 W/FT **40** - 3.57 W/FT **60** - 5.45 W/FT	**70** - 70° Spread *Main Beam @ 45° above nadir* OR **70** - 70° Spread **120** - 120° Spread	**TA** - Transparent Asymmetric **MA** - Matte Asymmetric **TS** - Transparent Symmetric **MS** - Matte Symmetric	**6** - 7.64″ **12** - 13.51″ **18** - 19.39″ **24** - 25.33″ **30** - 31.23″ **36** - 37.14″ **42** - 43.07″	**48** - 48.95″ **54** - 54.89″ **60** - 60.83″ **66** - 67.20″ **72** - 73.20″ **78** - 79.20″ **84** - 85.20″



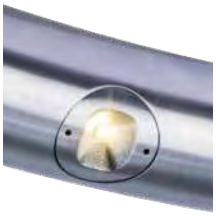






LULR					
FIXTURE TYPE	RAIL SIZE	COLOR TEMP	OPTIC	DRIVE CURRENT	
LULR - Lumenpod® 28	**50** - 1.50" (38mm) Dia .120" Wall Tube **66** - 1.66" (42mm) Dia Schedule 40 Pipe **90** - 1.90" (48mm) Dia Schedule 40 Pipe	**27K** - 2700° K **30K** - 3000° K **40K** - 4000° K **50K** - 5000° K **BLU** - Blue **GRN** - Green **RED** - Red **AMB** - Amber	**A** - ASYMMETRIC	**5** - 500 mA **3** - 350 mA **1.7 W @** 350 mA 2.4 W @ 500 mA FIXTURE WATTAGE	





LULR					
FIXTURE TYPE	RAIL SIZE	COLOR TEMP	OPTIC	DRIVE CURRENT	
LULR - Lumenpod® 28	**50** - 1.50" (38mm) Dia .120" Wall Tube **66** - 1.66" (42mm) Dia Schedule 40 Pipe **90** - 1.90" (48mm) Dia Schedule 40 Pipe	**27K** - 2700° K **30K** - 3000° K **40K** - 4000° K **50K** - 5000° K **BLU** - Blue **GRN** - Green **RED** - Red **AMB** - Amber	**S** - SYMMETRIC	**5** - 500 mA **3** - 350 mA **1.7 W @** 350 mA 2.4 W @ 500 mA FIXTURE WATTAGE	



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DESIGN SPECIFICATIONS
LUMENRAIL LUMINAIRES

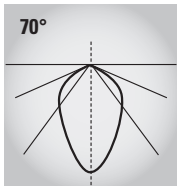
ETL LISTED	CLASS 2 REQUIRED	5 YEARS	24VDC	80+
	DRIVER	WARRANTY	INPUT VOLTAGE	CRI

LUMENRAIL® AVAILABLE CONTROL & SAFETY OPTIONS	0-10V (PWM), DALI, DMX	REMOTE 100W STD DIMMING REMOTE MADE IN USA 100W DIMMING INTEGRATED POST 100W DIMMING	SURGE PROTECTION FUSING	NOT ALL OPTIONS ARE COMPATABLE. PLEASE VERIFY COMBINATIONS WITH YOUR LOCAL REPRESENTATIVE
	DIMMING PROTOCOLS	DRIVER OPTIONS	PROTECTION OPTIONS	OPTION COMPATABILITY

LUMINIARE **PART NUMBER BUILDER**



LULF			
FIXTURE TYPE	COLOR TEMP	OPTIC	DRIVE CURRENT
LULF - Lumenpod® 16 * Indicates Stock Options	**27K** - 2700° K *30K - 3000° K *40K - 4000° K **50K** - 5000° K **BLU** - Blue **GRN** - Green **RED** - Red **AMB** - Amber	**16** - 16° beam **23** - 23° beam **46** - 46° beam *70 - 70° beam **94** - 94° beam	*5 - 500 mA *3 - 350 mA *Extended life 100,000HR version requires 350 mA*



Symmetric Orientation



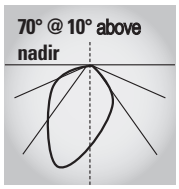
Asymmetric Orientation

Asymmetric performance can be fine tuned on fabricated systems by rotating the fixture around the rail diameter. A 25° angle provides superb illumination results in most applications. IES reports to view or download are available by scanning the QR code or visiting our website. The 70° optic is our standard, stock option, all other options are available, but support a longer lead time.

FIXTURE WATTAGE
1.7 W @ 350 mA 2.4 W @ 500 mA



LULF				
FIXTURE TYPE	COLOR TEMP	OPTIC	DRIVE CURRENT	BANTAM
LULF-XT - Bantam™ * Indicates Stock Options	**27K** - 2700° K *30K - 3000° K *40K - 4000° K **50K** - 5000° K **BLU** - Blue **GRN** - Green **RED** - Red **AMB** - Amber	**16** - 16° beam **23** - 23° beam **46** - 46° beam *70 - 70° beam **94** - 94° beam	*5 - 500 mA *3 - 350 mA *Extended life 100,000HR version requires 350 mA*	**XTR** - Machined 316 SS, post mount housing **XTF** - Machined 316 SS, flat surface-mount housing



Bantam is designed with an inherent 10° bias above nadir. This asymmetric feature projects the output from the mounting surface towards the path or feature. IES reports to view or download are available by scanning the QR code or visiting our website. The 70° optic is our standard, stock option, all other options are available, but support a longer lead time.

FIXTURE WATTAGE
1.7 W @ 350 mA 2.4 W @ 500 mA

Specifications may change without prior notice, verify data at time of order, all rights reserved

WAGNER ARCHITECTURAL SYSTEMS
888.243.6914 // SYSTEMS@MAILWAGNER.COM
10600 West Brown Deer Road // Milwaukee, WI 53224, USA

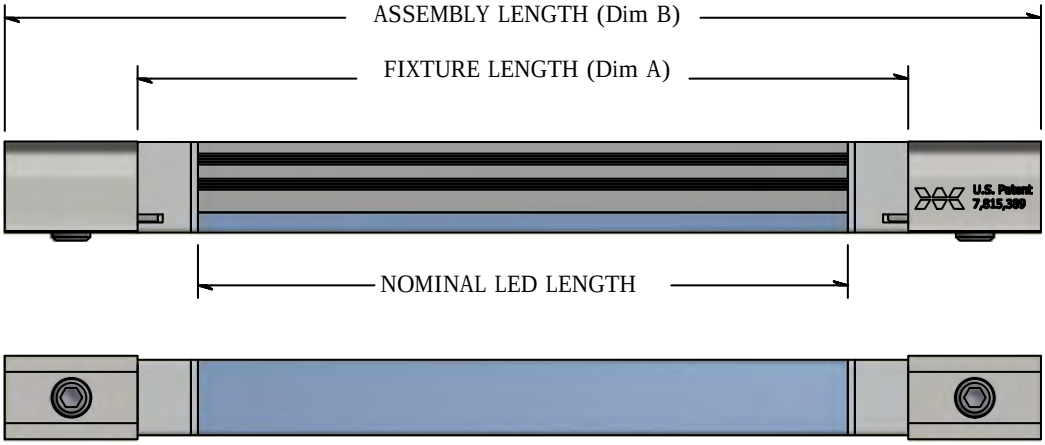
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DESIGN SPECIFICATIONS
LUMENLINEAR



Our linear product is a state-of-the-art, low-voltage LED light fixture that provides exceptional lighting performance to enhance any stairway, ramp or walkway application. Its soft light provides ample illumination for safety and ambiance without the glare or harshness of overhead lighting. Available with warm, neutral or cool white color temperatures, and a range of solid color options for static hues. Standard, mid and high output offerings make Lumenlinear a highly flexible and practical solution for adding beauty and light to your life safety installations.

SCAN QR CODE or visit our web site for additional technical information, product specification sheets, downloads, instructions, and system configuration guides. **wagnerarchitectural.com**



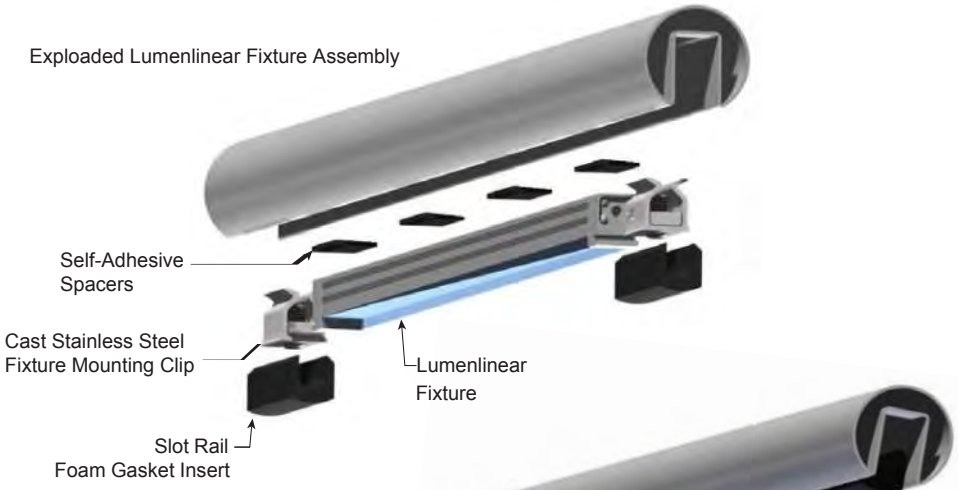
LED LENGTHS (In)			
Nominal	Dim A	Dim B	Opening
6	7.7	10.3	13.3
12	13.6	16.2	19.3
18	19.4	22.1	25.1
24	25.4	28.1	31.1
30	31.4	34.1	37.1
36	37.6	40.3	43.3
42	43.2	45.8	48.8
48	49.1	51.8	54.8
54	55.1	57.7	60.7
60	60.9	63.6	66.6
66	67.2	69.8	72.8
72	73.2	75.8	78.8
78	79.2	81.7	84.7
84	85.2	87.6	90.6

NOTE:
WAGNER RECOMMENDS 1.5" CLEARANCE ON EACH SIDE OF FIXTURE ASSEMBLY TO ACCOMMODATE WIRING CONNECTIONS. THE LENGTH IN THE "OPENING" COLUMN HAS THIS CLEARANCE ADDED.

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DESIGN SPECIFICATIONS
LUMENLINEAR

Installation Assembly




CAST LIGHT CLIP DETAIL

Performance & Capabilities



LUMENRAIL: CONDUCTOR QTY. BY-PASS LIMITATIONS			
WIRE GUAGE	1.5" D	1.66" D	1.90" D
14 AWG	2	2	6
12 AWG	X	X	4
10 AWG	X	X	2

Conductor supply and guage specification by others

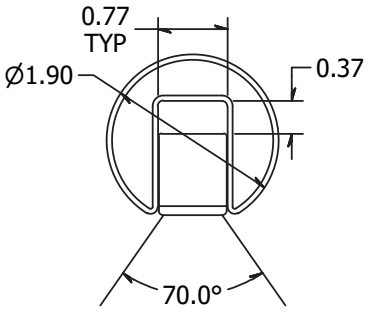
LUMENLINEAR: QUANTITY, DISTANCE & CONDUCTOR SPECIFICATION EXAMPLE					
WIRE GUAGE	18 AWG	16 AWG	14 AWG	12 AWG	10AWG
REMOTE DISTANCE TO LAST FIXTURE	18'	29'	46'	71'	120'

SUITABLE VALUES FOR 100W, 24VDC @ 500mA DRIVE CURRENT.
Actual distances will vary depending on the total load, drive current, wire guage and fixture spacing.
Verify all distance caculations with overall design of system. Conductor supply and guage specification by others.

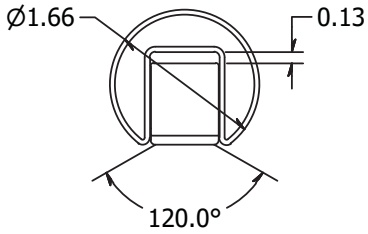
LUMENLINEAR - LUMENS/FT SPECIFICATIONS USING 120° OUTPUT:						
	2W/FT		4W/FT		6W/FT	
LENS SPECIFICATION	MATTE	TRANSPARENT	MATTE	TRANSPARENT	MATTE	TRANSPARENT
CCT 3000° K	131 lm	147 lm	235 lm	268 lm	336 lm	383 lm
CCT 4000° K	132 lm	152 lm	247 lm	284 lm	361 lm	413 lm

Download IES files from our web site or contact factory for other configuration data.

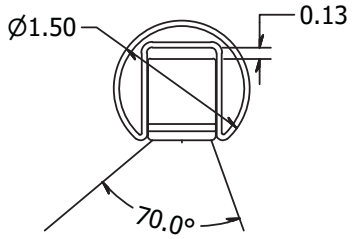
Cap-Rail Dimensions



70° SYMMETRIC
IN 1.90 RAIL



120° SYMMETRIC
IN 1.66 RAIL



70° ASYMMETRIC
IN 1.50 RAIL
THROW DIRECTION DETERMINED
AT INSTALLATION

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888.243.6914 // SYSTEMS@MAILWAGNER.COM
10600 West Brown Deer Road // Milwaukee, WI 53224, USA

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DESIGN SPECIFICATIONS

LUMENPOD 28



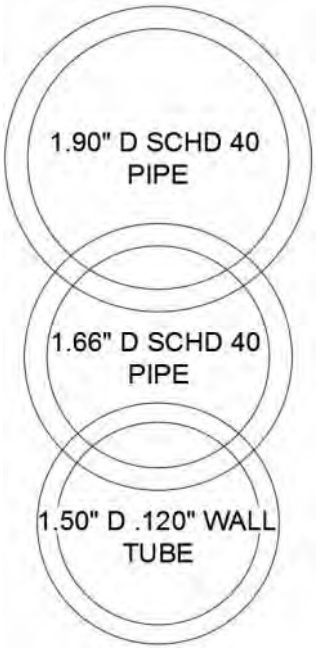
The evolution of the handrail point source from Wagner Architectural Systems has performance that leverages the latest LED technology and manufacturing techniques. This USA engineered and manufactured luminaire is designed for pathway, stair and ramp illumination. Both the asymmetric and symmetric versions have optical characteristics developed specifically for these applications. The Lumenpod 28 provides a flush-profile architectural solution for new or retrofit projects, including egress compliance opportunities.

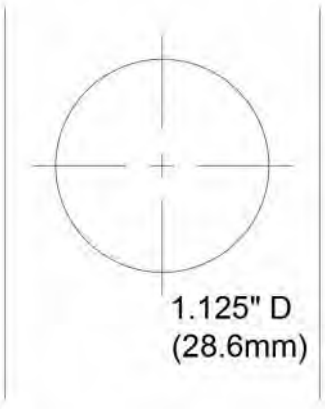
SCAN QR CODE or visit our web site for additional technical information, product specification sheets, downloads, instructions, and system configuration guides. **wagnerarchitectural.com**



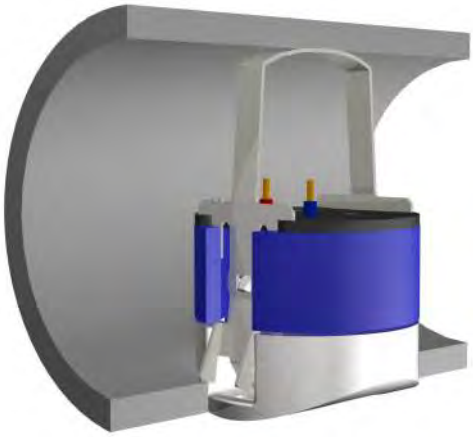
Lumenpod 28 has a patent pending design that features a simple push in installation and is provided with our specifically designed de-installation tool when service might be required.

Lumenpod 28 is specifically toleranced to fit these handrail materials:





Wagner Architectural will machine our material specifically for your project or you can machine the required mounting holes in the field for retrofit applications. Annular cutters are recommended for stainless steel handrails.



LUMENPOD 28: QUANTITY, DISTANCE & CONDUCTOR SPECIFICATION SAMPLE				
WIRE GUAGE	16 AWG	14 AWG	12 AWG	10AWG
REMOTE DISTANCE TO FIRST POD	20'	45'	70'	95'

SUITABLE VALUES FOR 100W, 24VDC @ 500mA DRIVE CURRENT WITH:

- **34** Lumenpods on 2' spacing using our 100W standard driver
- **26** Lumenpods on 2' spacing using our 100W USA driver

Actual distances will vary depending on the total load, drive current, wire guage and fixture spacing.

Verify all distance caculations with overall design of system. Conductor supply and guage specification by others.

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DESIGN SPECIFICATIONS
LUMENPOD16

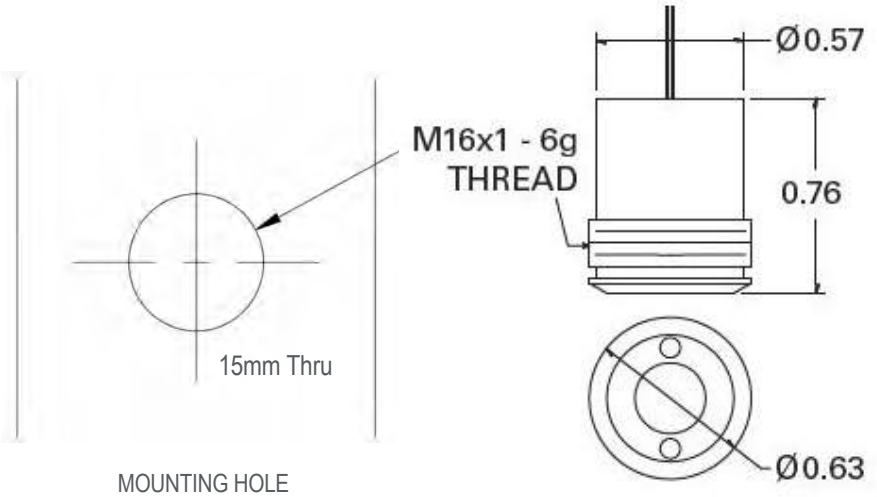


The next generation point source from Wagner Architectural Systems has performance that far exceeds the expectations of its discreet 5/8" diameter. The mechanically threaded luminaire is designed for pathway illumination with mounting options for hand rail, guardrail, decks, and shelter or entry structures. Asymmetric performance can be precisely achieved, and superior harsh environment protection and vandal resistance are combined with a simple installation.

SCAN QR CODE or visit our web site for additional technical information, product specification sheets, downloads, instructions, and system configuration guides. **wagnerarchitectural.com**



The Lumenpod 16 installation tool is provided to engage the tamper resistant design



MOUNTING HOLE

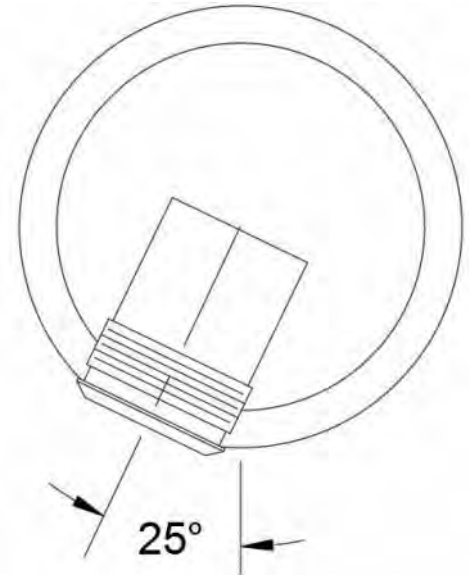
Wagner Architectural will drill and tap our material specifically for your project or you can use the following in the field for retrofit applications:
M15 Cutter - annular cutters are recommended for stainless steel applications
M16 Tap - Fastenal Part Number: 3157793

LUMENPOD 16: QUANTITY, DISTANCE & CONDUCTOR SPECIFICATION SAMPLE				
WIRE GUAGE	16 AWG	14 AWG	12 AWG	10AWG
REMOTE DISTANCE TO FIRST POD	20'	45'	70'	95'

SUITABLE VALUES FOR 500mA DRIVE CURRENT WITH:

- **34** Pods on 2' spacing using our 100W standard driver
- **26** Pods on 2' spacing using our 100W USA driver

Actual distances will vary depending on the total load, drive current, wire guage and fixture spacing.
Verify all distance caculations with overall design of system. Conductor supply and guage specification by others.



Lumenpod 16 can achieve specific asymmetric performance by rotating its orientation around the diameter of the handrail. 25 degrees from NADIR is a standard reference angle for a fixture with the 70 degree optic.

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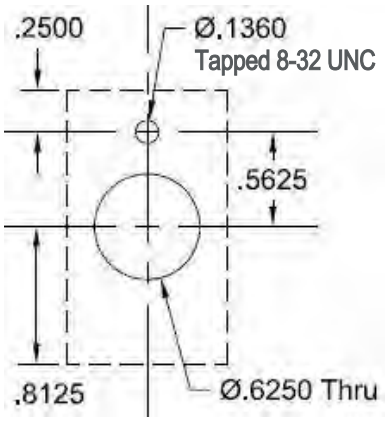
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DESIGN SPECIFICATIONS
BANTAM

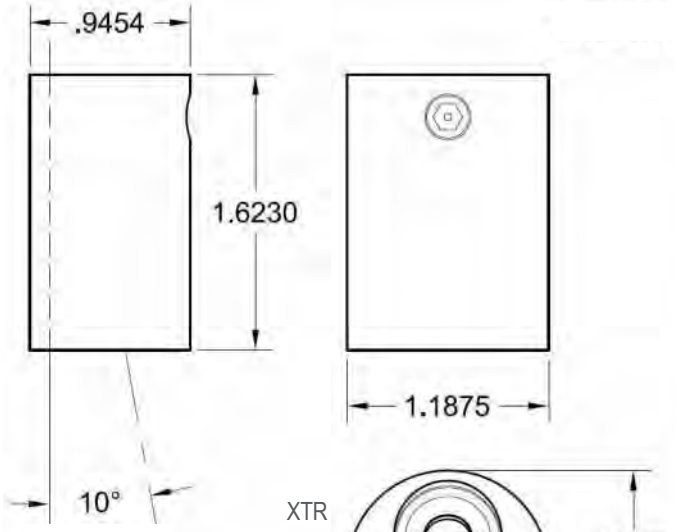


This post mount luminaire is designed for wall grazing and pathway illumination with mounting options for railings, walls, decks, and entry structures. Superior harsh environment protection and vandal resistance are combined with a simple field or factory prepared installation using included 316 stainless steel hardware. The Bantam provides an inconspicious architectural solution for new or retrofit applications and egress compliance opportunities.

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MOUNTING PATTERN



BANTAM QUANTITY & DISTANCE SPECIFICATION SAMPLE	
BANTAM QTY	34
TOTAL CONDUCTOR LENGTH	80'
BANTAM QTY	24
TOTAL CONDUCTOR LENGTH	125'
BANTAM QTY	20
TOTAL CONDUCTOR LENGTH	140'

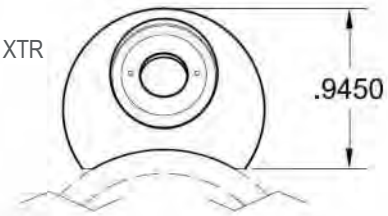
SUITABLE VALUES FOR 100W, 24VDC @ 500mA DRIVE CURRENT, A 20 FOOT REMOTE DISTANCE:

- Bantams with 7 foot intermediate conductors with our 100W standard driver
- Intermediate conductors can be 18 or 16 AWG

Actual distances will vary depending on the total load, drive current, wire guage and fixture spacing.

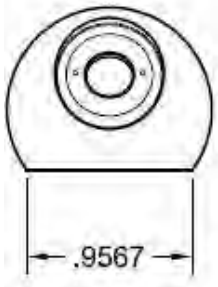
Verify all distance caculations with overall design of system. Conductor supply and guage specification by others.

XTR



BANTAM IS AVAILABLE WITH A RADIUSED BACK (XTR) FOR 1.66" AND 1.90" POST MOUNTING OR WITH A FLAT BACK (XTF) FOR SQUARE POST OR WALL MOUNTING

XTF



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DESIGN SPECIFICATIONS
LUMENRAIL SYSTEM POWER COMPONENTS

Wagner offers multiple ETL listed options for both 24VDC power supplies and NEMA enclosures. Quantities and types will be configured based on your specifications and design.

- Additional specification options are available by request.
- Not all options apply to all products, please verify compatibility with the factory.

CLASS II DRIVERS:
- STD 100W Dimming
- Dali, DMX, 0-10V Dimming Protocols
- Made in USA Units Available

LUMENPOST™:
- Integrated 100W, 0-10V DIM

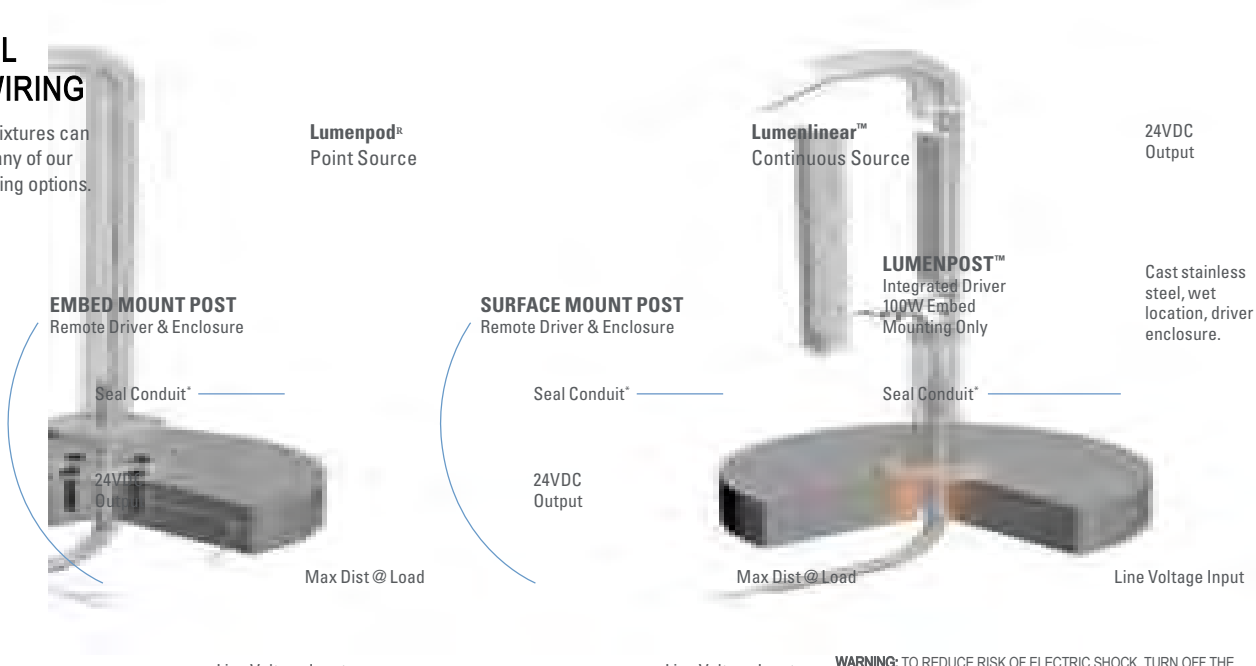
4X NEMA ENCLOSURES:
- Molded Polycarbonate
- Painted Steel
- Stainless Steel

OPTIONS:
- Fusing
- Surge Protection

SCAN QR CODE for technical information, downloads, instructions, and system configuration guides

LUMENRAIL SYSTEM WIRING

Most Lumenrail® Fixtures can be specified with any of our post or wall mounting options.



WARNING: TO REDUCE RISK OF ELECTRIC SHOCK, TURN OFF THE ELECTRICAL SUPPLY BEFORE INSTALLING OR SERVICING THE LIGHT FIXTURES AND DRIVER. FAILURE TO DO SO MAY RESULT IN SERIOUS INJURY AND/OR DAMAGE TO THE COMPONENTS.

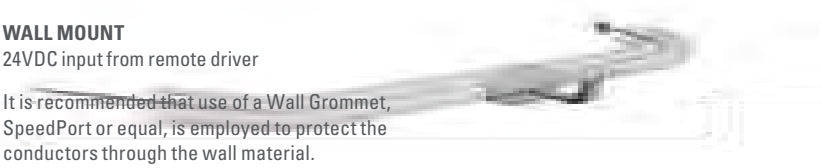
*Seal conduit with RTV or silicone, prior to rail installation, to prevent moisture intrusion.

MAXIMUM REMOTE DISTANCE - 100W / 24VDC DRIVER					
Fixture Type	**10AWG**	**12AWG**	**14AWG**	**16AWG**	**18AWG**
Lumenlinear™	120′	71′	46′	29′	18′
Lumenpod™	—	—	—	134′	80′
Bantam™	—	—	—	152′	98′

Actual distances may vary depending on the total load, DC/DC current and fixture spacing. Verify all distance calculations with overall design of system. Conductor supply and project gauge specification by others.

WALL MOUNT
24VDC input from remote driver

It is recommended that use of a Wall Grommet, SpeedPort or equal, is employed to protect the conductors through the wall material.



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DESIGN SPECIFICATIONS
LUMENRAIL

HANDRAILS AND GUARDS

Defined by building codes, handrails are in place to provide guidance while the purpose of a guard is to prevent accidental falls.

Handrails are located between 34" and 38" and have dimensional limitations for graspability. Most codes and standards limit handrail size to be between 11/4" and 2" in diameter or provide equivalent graspability.
Guards are generally required for ramps, stairs or landings above 30". The height will vary depending on the code.

Commercial codes commonly require a guard to be a minimum of 42" in height, while residential codes only require a guard to be a minimum of 36" in height. Always confirm these dimensions with your local code authorities.

If a 42" guard is called for on a stair or ramp, it will also require a handrail at the appropriate height. Guards also have opening limitations to consider. The most common requirement is that no opening be large enough to allow a 4" sphere to pass.



This specification guide has been developed to assist with the understanding, nomenclature and design development of Lumenrail illuminated hand rail systems. Our fabricated solutions are constructed from architectural grade materials with industry best fit and finishing. Each installation is custom engineered to adhere to building codes through structural and design requirements. Use this guide to select the construction details for your project and aesthetic requirements.

JUNCTIONS & CHANGES IN DIRECTION



MPT $

WELDED OR MECHANICAL POST TOP
Cast and machined 316 stainless steel post top necks down for a sleek connection.



CPT $$$

COPED & WELDED POST TOP
Coped post continiously seam welded to rail for a uniform presence



$

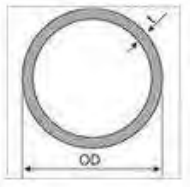
ROTARY BEND CORNER
Continuous pipe from rail to post, mechanically bent for smooth transition.



$$$

WELDED MITER CORNER
Machined angled segments fused with a blended seam weld.

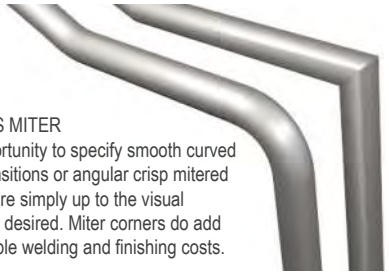
MATERIAL



1.50" 0.120" Wall, 316 Stainless Steel	15S	$
1.66" Schedule 40, 316 Stainless Steel	16S	$
1.90" Schedule 40, 316 Stainless Steel	19S	$
1.66" Schedule 40, 6063 Aluminum (Wall Mount Only)	16A	$
1.90" Schedule 40, 6063 Aluminum	19A	$

FINISHES

Stainless Steel	Satin Brushed, #4 Circumferential	4CS	$
	Satin Brushed, #4 Longitudinal	4LS	$$
	Brite Polished #7 Mirror-Like	7PS	$$$
Aluminum	Satin Brushed #4 With:		
	Anodized Clear Silver	4CA	$
	Anodized Deep Bronze	4BA	$



BEND VS MITER
The opportunity to specify smooth curved bend transitions or angular crisp mitered corners are simply up to the visual presence desired. Miter corners do add appreciable welding and finishing costs.

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DESIGN SPECIFICATIONS
LUMENRAIL

HANDRAIL LWM -
Lumenrail wall mount

Lumenrail is also available for mounting to guardrail, glass and post systems by others. Contact your local agent for details.

BRACKETS AND WIRING



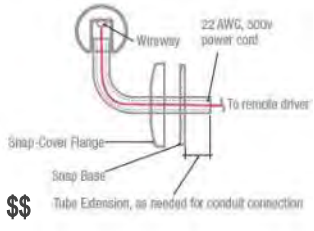
SBK $

STANDARD WALL BRACKET
Solid stainless steel bar arm, welded flange with snap cover, mechanical or weld saddle for structural simplicity.



CBK $$$

CUSTOM WALL BRACKET
Solid stainless steel construction per specified design, structural certification requires additional testing charges.

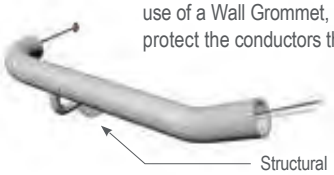


WBK $$

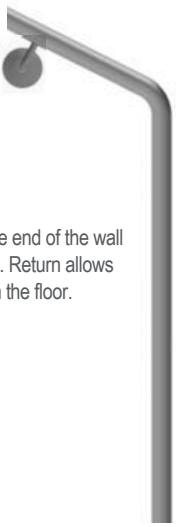
WIREWAY WALL BRACKET
Heavy wall tube stainless steel arm, welded flange with snap cover, mechanical or weld saddle for structural simplicity.

RTW $

RETURN TOWARD WALL
Typical return bend at the end of the wall mount hand rail assembly. Return allows for wire entry. It is recommended that use of a Wall Grommet, SpeedPort or equal, is employed to protect the conductors through the wall material.



Structural blocking, by others, is typically required to meet code.



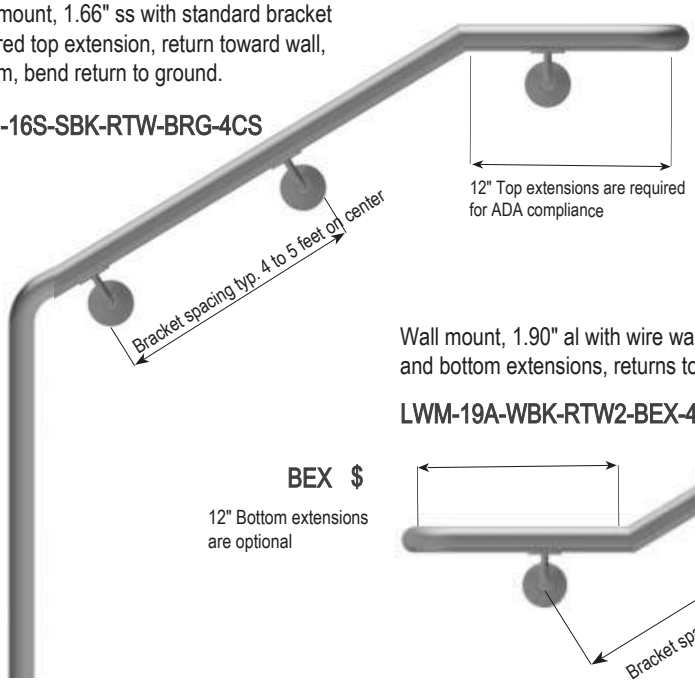
BRG $

RETURN TO GROUND
Optional return bend at the end of the wall mount hand rail assembly. Return allows for conduit wire entry from the floor.

WALL & GUARD MOUNT ASSEMBLY EXAMPLES

Wall mount, 1.66" ss with standard bracket required top extension, return toward wall, bottom, bend return to ground.

LWM-16S-SBK-RTW-BRG-4CS

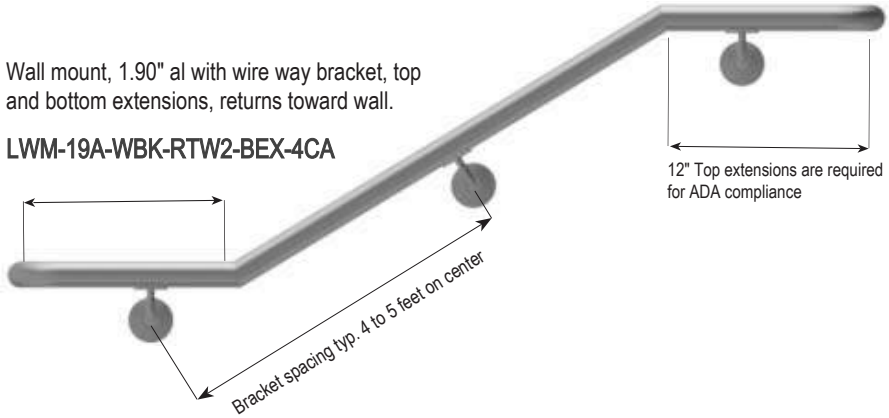


Wall mount, 1.90" al with wire way bracket, top and bottom extensions, returns toward wall.

LWM-19A-WBK-RTW2-BEX-4CA

BEX $

12" Bottom extensions are optional



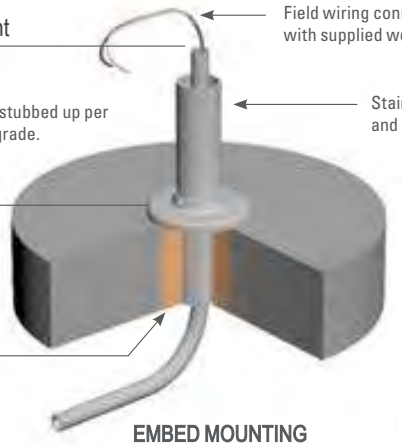
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DESIGN SPECIFICATIONS
LUMENRAIL

POST MOUNTED HANDRAIL

LPM - luxrail post mount



Field wiring connects to system components with supplied wet location wire nuts.

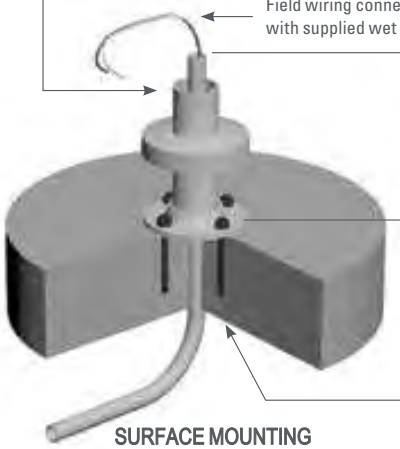
½" electrical conduit (max) stubbed up per code requirements, above grade.

Stainless steel internal sleeve standard in 1.66" and 1.50" posts to meet IBC load requirements.

Embed mounting (min 6" or specify deeper) anchored with Rockite®, Kwixset® or equal.

EZ Sleeves, for poured hole locations, are available from shopwagner.com Item # **EZ3006-10**

EMBED MOUNTING
EBM $



Field wiring connects to system components with supplied wet location wire nuts.

½" electrical conduit (max) stubbed up per code requirements, above grade.

Surface mount hardware supplied by others, per code requirements.

SURFACE MOUNTING
SFM $

IDP $$

INTEGRATED DRIVER POST OPTION
Cast stainless in-post enclosure can be combined with most post return design options.



24VDC Output

LUMENPOST™
Integrated Driver
100W Embed
Mounting Only

Cast stainless steel, wet location, driver enclosure.

Seal Conduit®

REMOTE DRIVER STANDARD



POST RETURN OPTIONS



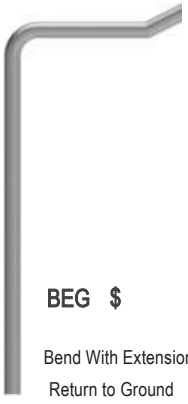
BRG $
Bend Return to Ground



RLR $$
Round Loop Return to Post



SEG $$
7 Bend Extension Return to Ground Aluminum 1.9 only



BEG $
Bend With Extension Return to Ground



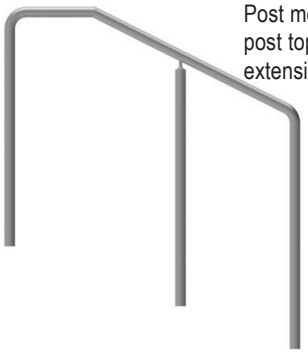
SLR $$
Square Loop Return to Post



MLR $$$
Mitered Loop Return to Post

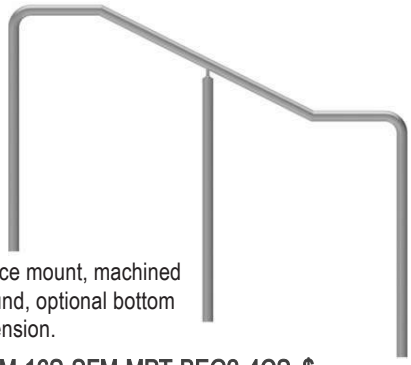
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DESIGN SPECIFICATIONS
LUMENRAIL



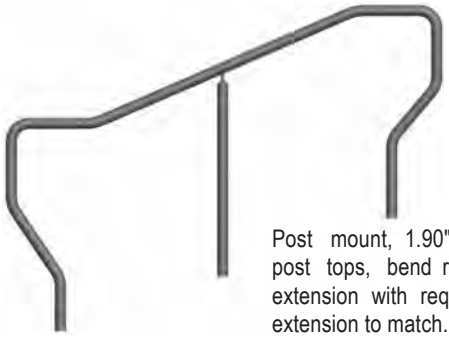
Post mount, 1.90" ss with embed mount, machined post tops, bend returns to ground with required top extension.

LPM-19S-EBM-MPT-ERG-4CS $



Post mount, 1.66" ss with surface mount, machined post tops, bend returns to ground, optional bottom extension with required top extension.

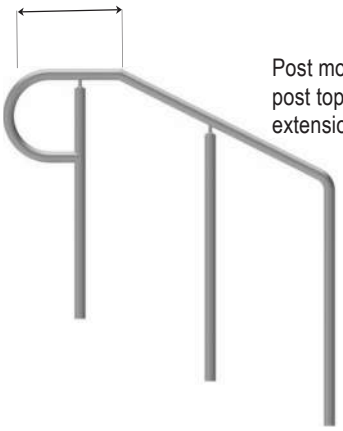
LPM-16S-SFM-MPT-BEG2-4CS $



Post mount, 1.90" al with embed mount, machined post tops, bend returns to ground, optional bottom 7 extension with required top extension, specified as 7 extension to match.

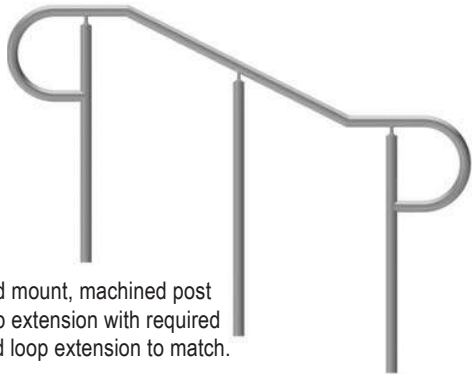
LPM-19A-EMB-MPT-SEG2-4CA $$

12" Top extensions are required for ADA compliance



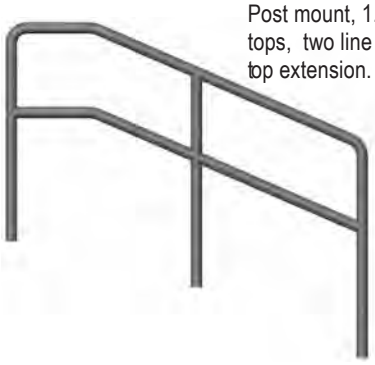
Post mount, 1.66" ss with surface mount, machined post tops, bend return to ground with required top extension, round loop extension specified.

LPM-16S-SFM-MPT-RLR-4LS $$



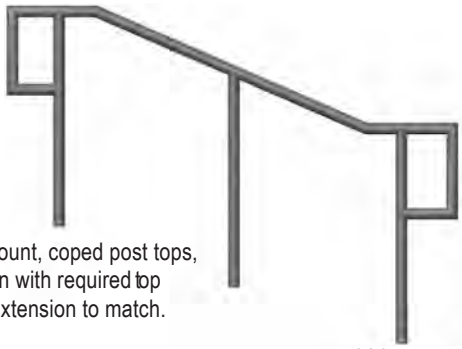
Post mount, 1.90" ss with embed mount, machined post tops, optional bottom round loop extension with required top extension, specified as round loop extension to match.

LPM-19S-EBM-MPT-RLR2-4CS $$



Post mount, 1.66" ss with surface mount, coped post tops, two line rail, bend returns to ground with required top extension.

LPM-16S-SFM-CPT-TLR-BRG-4CS $$$



Post mount, 1.90" al with embed mount, coped post tops, optional bottom miter loop extension with required top extension, specified as miter loop extension to match.

LPM-19A-EBM-CPT-MLR2-4BA $$$

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DESIGN SPECIFICATIONS
LUMENRAIL

WALL & GUARD MOUNT ASSEMBLY SUFFIX EXAMPLES

R1	LWM	16S	SWB	RTW	BRG	4CS

TYPE
This field should be used to identify the rail through a lighting fixture schedule or site location on the construction drawings.

WALL
Lumenail wall or guard mount assemblies.

MATERIAL
Stainless Steel
15S - 1.50" X 0.120" wall, 316 stainless

16S - 1.66" schedule 40, 316 stainless

19S - 1.90" schedule 40, 316 stainless

Aluminum
16A - 1.66" schedule 40,6063 Aluminum (Wall Mount Only)

19A - 1.90" schedule 40, 6063 Aluminum

BRACKET
SBK - Standard wall bracket, solid stainless steel bar arm, welded flange with snap cover, mechanical or weld saddle for structural simplicity.

WBK - Wire-way wall bracket, heavy wall tube stainless steel arm, welded flange with snap cover, mechanical or weld saddle for structural simplicity.

CBK - Custom wall bracket, solid stainless steel construction per specified design, structural certification requires additional testing charges.

TOP RETURN
12" Top extensions are required for ADA compliance

RTW - Return bend toward the wall at the end of the hand rail assembly.

TRG -Top return to ground, optional return bend at the end of the wall mount hand rail assembly.

BOTTOM RETURN
RTW - Return bend toward the wall at the end of the hand rail assembly.

BRG -Bottom return to ground, optional return bend at the end of the wall mount hand rail assembly.

BEX - 12" Bottom extensions are optional

FINISH
Stainless Steel
4CS -Satin Brushed, #4 Circumferential
4LS -Satin Brushed, #4 Longitudinal
7PS -Polished #7 Mirror-like

Aluminum
4CA -Satin Brushed, #4 Anodized Clear
4BA -Satin Brushed, #4 Anodized Bronze

PLEASE NOTE:
Due to fabrication processes, color variation will be visible through anodized finishes.

Indicates duplicate return treatments, top & bottom

POSTMOUNTASSEMBLY SUFFIX EXAMPLES

R2	LPM	19S	EMB	RTW	BRG2	4LS

TYPE
This field should be used to identify the rail through a lighting fixture schedule or site location on the construction drawings.

POST
Lumenrail post mount assemblies.

MATERIAL
Stainless Steel
15S - 1.50" X 0.120" wall, 316 stainless (Embed Only)

16S - 1.66" schedule 40, 316 stainless

19S - 1.90" schedule 40, 316 stainless

Aluminum
19A - 1.90" schedule 40, 6063 Aluminum

MOUNTING
EMB - Embed mounting (min 6" or specify deeper) anchored with Rockite®, Kwixset® or equal. ½" electrical conduit (max) stubbed up per code requirements, above grade. Stainless steel internal sleeve standard in 1.66" and 1.50" posts to meet IBC load requirements.

SFM - Surface mounting, hardware supplied by others, per code requirements. ½" electrical conduit (max) stubbed up per code requirements, above grade. Stainless steel internal sleeve standard in 1.66" and 1.50" posts to meet IBC load requirements.

POST TOP
MPT- Cast and machined 316 stainless steel post top necks down for a sleek connection.

CPT -Coped post continuously seam welded to rail for a uniform presence.

TOP/BOTTOM RETURN
12" Top extensions are required for ADA compliance

BRG-Bend return to ground.

SEG- 7 Bend return to ground.

RLR-Round loop return to post.

SLR -Square loop return to post.

MLR-Mitered loop return to post.

BEG-Bend extension (bottom)return to ground.

FINISH
Stainless Steel
4CS -Satin Brushed, #4 Circumferential
4LS -Satin Brushed, #4 Longitudinal
7PS -Polished #7 Mirror-like

Aluminum
4CA -Satin Brushed, #4 Anodized Clear
4BA -Satin Brushed, #4 Anodized Bronze

PLEASE NOTE:
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DESIGN SPECIFICATIONS
LUMENRAIL™

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WALL & GUARD MOUNT ASSEMBLY SUFFIXES

TYPE	WALL	MATERIAL	BRACKET	TOP RETURN	BOTTOM RETURN	FINISH
This field should be used to identify the rail through a lighting fixture schedule or site location on the construction drawings.	Lumenail wall or guard mount assemblies.	**Stainless Steel** **15S -** 1.50" X 0.120" wall, 316 stainless **16S -** 1.66" schedule 40, 316 stainless **19S -** 1.90" schedule 40, 316 stainless **Aluminum** **16A -** 1.66" schedule 40,6063 Aluminum (Wall Mount Only) **19A -** 1.90" schedule 40, 6063 Aluminum	**SBK** - Standard wall bracket, solid stainless steel bar arm, welded flange with snap cover, mechanical or weld saddle for structural simplicity. **WBK** - Wire-way wall bracket, heavy wall tube stainless steel arm, welded flange with snap cover, mechanical or weld saddle for structural simplicity. **CBK** - Custom wall bracket, solid stainless steel construction per specified design, structural certification requires additional testing charges.	12" Top extensions are required for ADA compliance **RTW -** Return bend toward the wall at the end of the hand rail assembly. **TRG -** Top return to ground, optional return bend at the end of the wall mount hand rail assembly.	**RTW -** Return bend toward the wall at the end of the hand rail assembly. **BRG -** Bottom return to ground, optional return bend at the end of the wall mount hand rail assembly. **BEX** - 12" Bottom extensions are optional	**Stainless Steel** **4CS** -Satin Brushed, #4 Circumferential **4LS** -Satin Brushed, #4 Longitudinal **7PS** -Polished #7 Mirror-like **Aluminum** **4CA** -Satin Brushed, #4 Anodized Clear **4BA** -Satin Brushed, #4 Anodized Bronze **PLEASE NOTE:** Due to fabrication processes, color variation will be visible through anodized finishes.

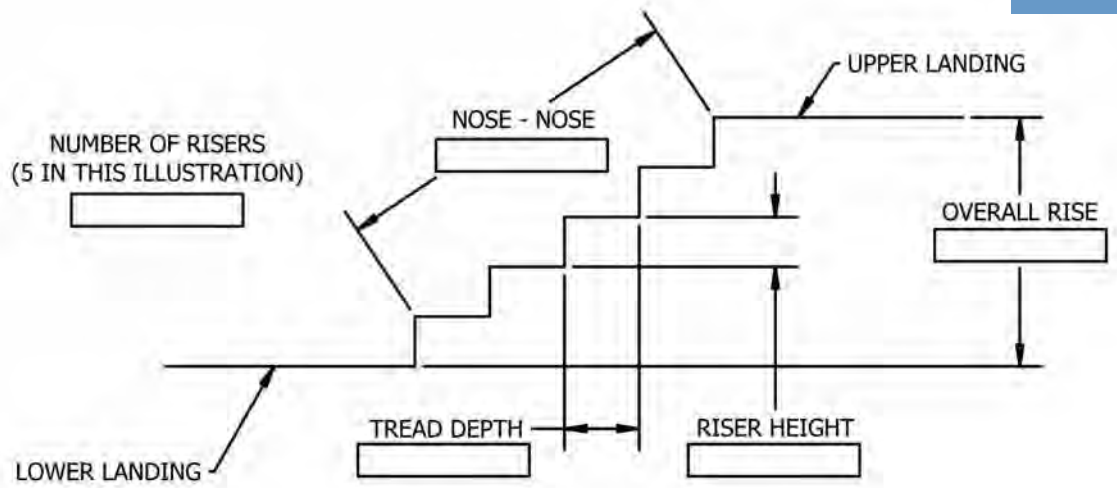
POST MOUNT ASSEMBLY SUFFIXES

TYPE	POST	MATERIAL	MOUNTING	POST TOP	TOP/BOTTOM RETURN	FINISH
This field should be used to identify the rail through a lighting fixture schedule or site location on the construction drawings.	Lumenrail post mount assemblies.	**Stainless Steel** **15S -** 1.50" X 0.120" wall, 316 stainless (Embed Only) **16S -** 1.66" schedule 40, 316 stainless **19S -** 1.90" schedule 40, 316 stainless **Aluminum** **19A -** 1.90" schedule 40, 6063 Aluminum	**EMB** - Embed mounting (min 6" or specify deeper) anchored with Rockite®, Kwixset® or equal. ½" electrical conduit (max) stubbed up per code requirements, above grade. Stainless steel internal sleeve standard in 1.66" and 1.50" posts to meet IBC load requirements. **SFM** - Surface mounting, hardware supplied by others, per code requirements. ½" electrical conduit (max) stubbed up per code requirements, above grade. Stainless steel internal sleeve standard in 1.66" and 1.50" posts to meet IBC load requirements.	**MPT -** Cast and machined 316 stainless steel post top necks down for a sleek connection. **CPT -** Coped post continuously seam welded to rail for a uniform presence.	12" Top extensions are required for ADA compliance **BRG -** Bend return to ground. **SEG -** 7 Bend return to ground. **RLR -** Round loop return to post. **SLR -** Square loop return to post. **MLR -** Mitered loop return to post. **BEG -** Bend extension (bottom)return to ground.	**Stainless Steel** **4CS** -Satin Brushed, #4 Circumferential **4LS** -Satin Brushed, #4 Longitudinal **7PS** -Polished #7 Mirror-like **Aluminum** **4CA** -Satin Brushed, #4 Anodized Clear **4BA** -Satin Brushed, #4 Anodized Bronze **PLEASE NOTE:** Due to fabrication processes, color variation will be visible through anodized finishes.

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LUSY GUIDE R1

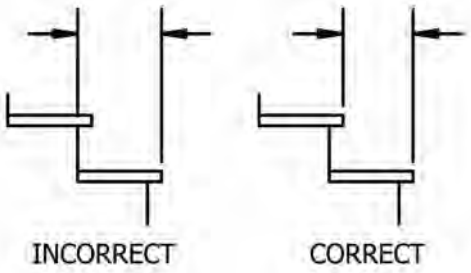
STAIR AND RAMP MEASURING SHEET
LUMENRAIL

* It is recommended that a professional hand rail installer be involved in planning and installation of custom fabricated handrails.

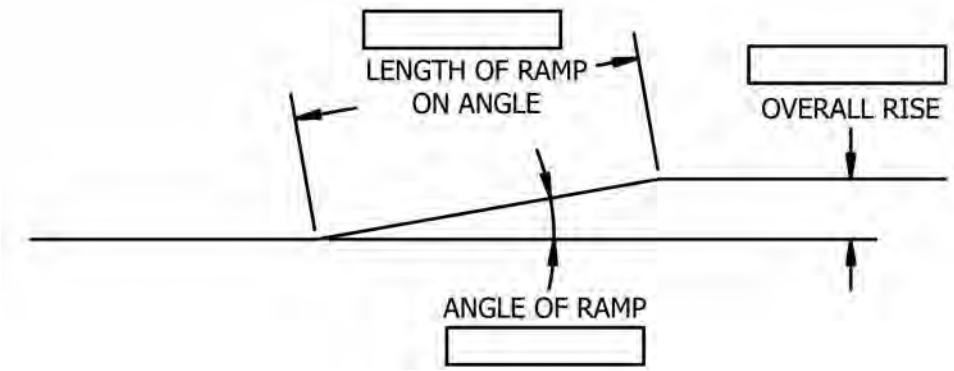


STAIR INFORMATION

1) Make a complete sketch of the stairs with correct number of tread and risers.
2) Measure the nose to nose and overall rise of the stairs. These are the most critical dimensions for Wagner.
3) Measure all of the other dimensions if possible, including individual tread depth and riser height for each step. Any additional measurements are helpful.



CORRECT MEASURING OF TREAD



RAMP INFORMATION

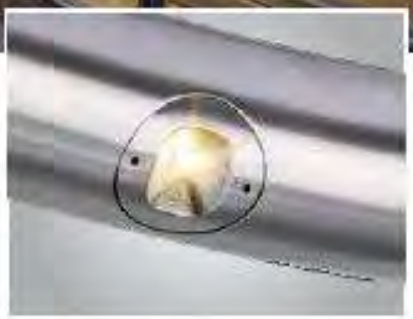
1) Make a complete sketch of the ramp.
2) Measure the length of ramp on angle and overall rise of ramp. These are the most critical dimensions for Wagner.
3) Measure angle of ramp if possible. Any additional measurments are helpful

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LUSY GUIDE R1

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SAN DIEGO, CA
ARCHITECT: TVSDESIGN



LUMENPOD®28

The evolution of the handrail point source from Wagner Architectural Systems has performance that leverages the latest LED technology and manufacturing techniques. This USA engineered and manufactured luminaire is designed for pathway, stair and ramp illumination.

The Lumenpod 28 provides a flush-profile architectural solution with push-in installation. Let us help you make a great entrance.

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NEW *Featuring Tegan's Exclusive "Powerspan Cable"*

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ARCHITECTURAL LIGHTING DESIGN



Exton Powerspan Cable System

Kore-EX5 IP65 Powe
Pendant with “G” Envelope

Remote Power Supply: The Exton System is designed for use with a Remote Power Supply Enclosure and Driver. Refer to Exton Power Supply IP20 Specsheet, IP24 Specsheet or IP66 Specsheet for details. Use of Tegan Lighting Power Enclosures and Drivers only. If supplied “by others” the warranty and listing are void.

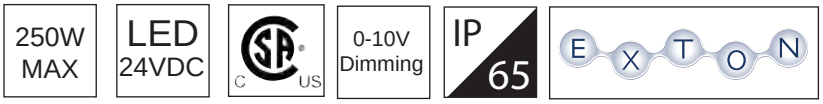
Envelopes: “G” (Globe) Glass Envelope Frosted, “G” (Globe) Glass Envelope Silver Bowl, “G” (Globe) Glass Envelope Copper Bowl.

Accessories: Exton Sandblasted Lens (EX5-SBL), Exton Solite Lens (EX5-SOL), Exton Honeycomb Louver 16 - Black (EX-HCLB-BLK), 22K Color Correction Filter (CCT-22K), 24K Color Correction Filter (CCT-24K), Honeycomb Louver 16 - Black (HCLB-16). **Note:** CCT22/24 = Kelvin Temperature results when used with the standard 27K Cree LED.

Engineering: Due to mathematical laws, tightening and loading any taut end-supported flexible cable puts tensile loads upon its supports (walls, trees, posts, etc.) that is orders of magnitude greater than the weight of the cable and its dynamic loading. Taut/tensioned installations require extremely strong end supports, and it is up to the Structural Engineer/specifier and installer to match the strength of the end support structures with the combined level of tautness and static (weight of cable/fixtures) and dynamic (e.g. wind/ice/vermin) load of the cable. Refer to Installation Instructions for details.

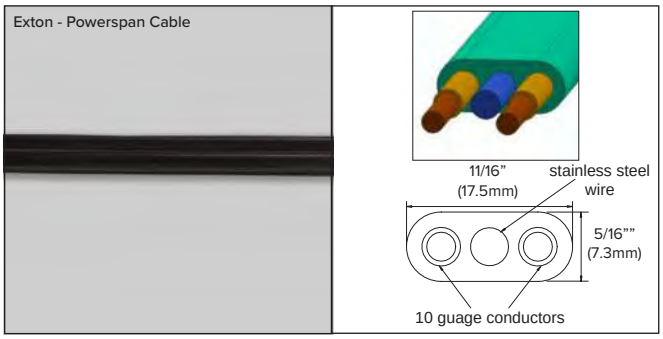
Installation: Exton is not approved or listed for indoor pool/sauna installations. Refer to Installation Instructions #23 for details. For system layout, and specification assistance, refer to the Exton Application Guide for details.

Labels: ETL Listed; Tested to UL 2108 Low Voltage Lighting Systems. In a continuing effort to offer the best product possible we reserve the right to change, without notice, specifications or materials. Technical specification sheets that appear on teganlighting.com are the most recent version and supersede all other versions that exist in any other printed or electronic form. Kore-EX5 Module and Powerspan Cable - 3 year warranty. Envelopes: limited three year warranty. Refer to Exton Application Guide for details. Consult with an Arborist for proper tree installation per the type of tree(s). Tegan Lighting is not liable for any damage/injury as a result of tree installation. Refer to Installation Instructions for more details.



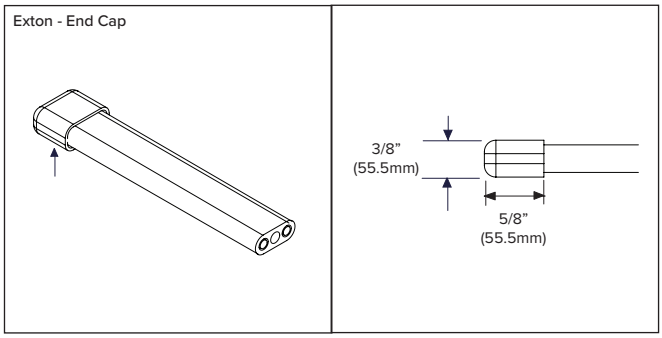
Exton Powerspan Cable System

Exton - Powerspan Cable



Exton - Powerspan Cable - Black (EX-C-BLK)

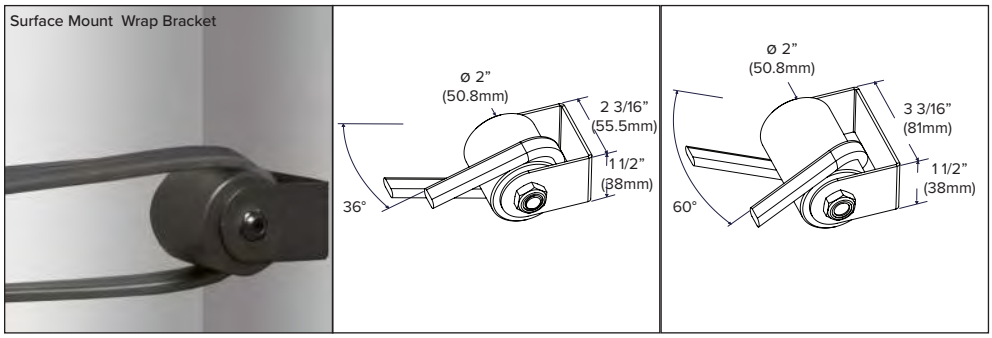
Exton Self-Sealing Powerspan Cable is IP-65 for interior/exterior applications. Order in 1’ (30.5cm) increments. Exton Powerspan Cable contains two #10 AWG stranded copper conductors alongside a central strand of steel support cable. Field cuttable. 24VDC at 250W Max. per run. Polarity does not matter. Available in Black finish (only). Refer to Installation Instructions Sheet and Exton Application Guide for details.



Exton End Cap - Black Finish (EX-EC-BLK)

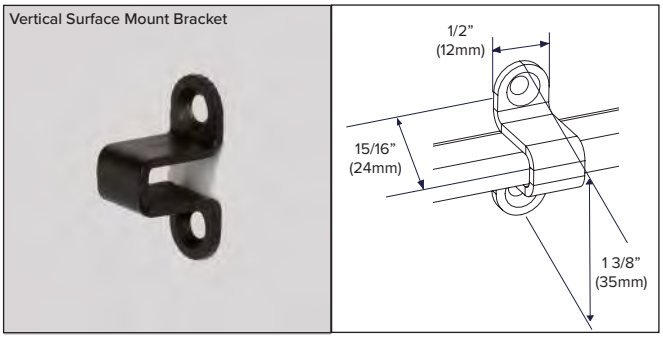
Exton End Cap is for interior/exterior applications. One (1) required per run. Available in Black finish (only). Refer to Installation Instructions Sheet and Exton Application Guide for details.

Exton - Cable - Mounting Brackets



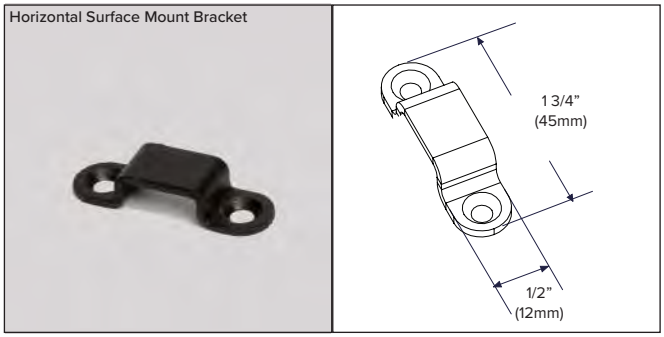
Surface Mount 2” Wrap Bracket, Black (EX-SWB-2-BLK)
Surface Mount 3” Wrap Bracket, Black (EX-SWB-3-BLK)

Surface Mount Wrap Bracket, 2 3/16” (55.5mm) or 3 3/16” (81mm), for Exton Powerspan Cable mounting to any suitable surface; wall, tree, pole, beam, etc. to continue up to a 110’ (33.5m) run. 250W per run. Available in anodized Black (BLK) finish. Can be field painted or contact factory for custom colors. Hardware provided by others. Use fasteners as per the specification of a licensed structural engineer for the mounting substrate. Refer to Installation Instructions Sheet and Exton Application Guide for details. Refer to page one for mounting Exton Brackets to Pole(s).



Vertical Surface Mount Bracket, Black (EX-VSB-BLK)

Vertical Surface Mount Bracket for Exton Powerspan Cable can be mounted to any suitable surface; wall, tree, pole, beam, etc. Use with Standoff Bracket if an EX5 module will be positioned cloes to the mounting surface, use Standoff Brackets as needed to allow room for the module and the cable clamp. Available in anodized Black (BLK) finish. Can be field painted or contact factory for custom colors. Hardware provided by others. Use fasteners as per the specification of a licensed structural engineer for the mounting substrate. Refer to Installation Instructions Sheet and Exton Application Guide for details. Refer to page one for mounting Exton Brackets to Pole(s).

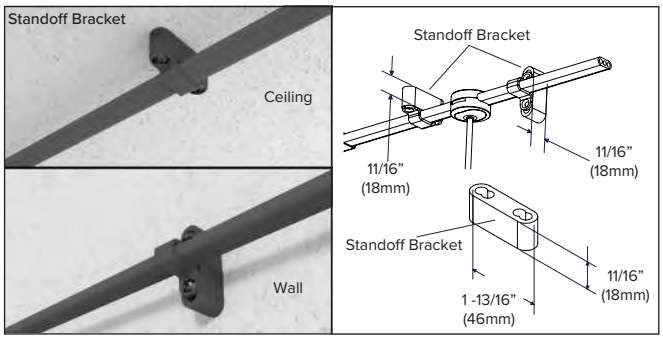


Horizontal Surface Mount Bracket, Black (EX-HSMB-BLK)

Horizontal Surface Mount Bracket for Exton Powerspan Cable can be mounted to any suitable surface; wall, tree, pole, beam, etc. Use with Standoff Bracket if an EX5 module will be positioned close to the mounting surface, use Standoff Brackets as needed to allow room for the module and the cable clamp. Available in anodized Black (BLK). Can be field painted or contact factory for custom colors. Hardware provided by others. Use fasteners as per the specification of a licensed structural engineer for the mounting substrate. Refer to Installation Instructions Sheet and Exton Application Guide for details. Refer to page one for mounting Exton Brackets to Pole(s).

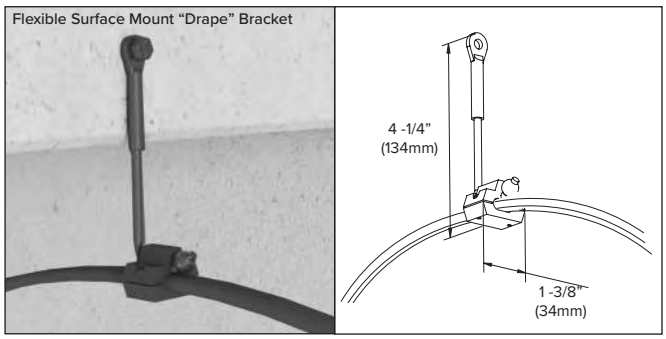
Exton Powerspan Cable System

Exton - Cable - Mounting Brackets



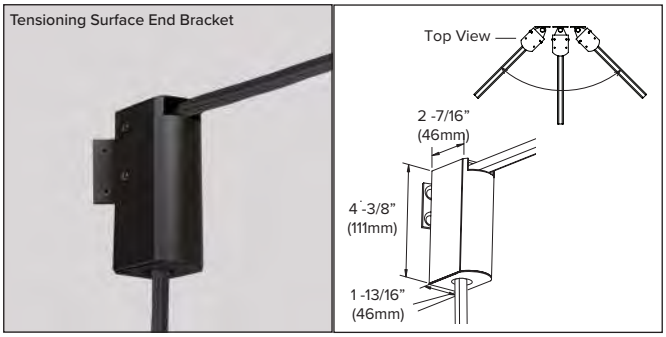
Standoff Bracket, Black (EX-SOBR-BLK)

Standoff to be used with Vertical or Horizontal Surface Mount Brackets to allow room for the EX5 module and the cable clamp when the module is positioned close to the mounting surface. Available in Black (BLK). Hardware provided by others. Use fasteners as per the specification of a licensed structural engineer for the mounting substrate. Refer to Installation Instructions Sheet and Exton Application Guide for details.



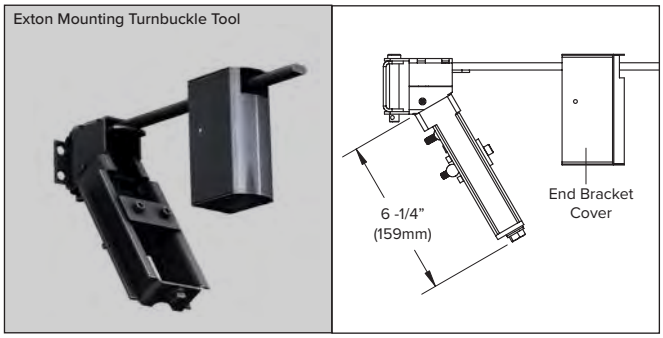
Flexible Surface Mount “Drape” Bracket, Black (EX-FSDB-BLK)

Flexible Surface Mount Bracket for Exton Powerspan Cable “Draped” installations. Can mount to any suitable surface; wall, tree, pole, beam, etc. 4.25” (115mm) AC length. Contact factory for alternative lengths. Stainless steel and Black anodized aluminum. Hardware provided by others. Use fasteners as per the specification of a licensed structural engineer for the mounting substrate. Refer to Installation Instructions Sheet and Exton Application Guide for details. Refer to page one for mounting Exton Brackets to Pole(s).



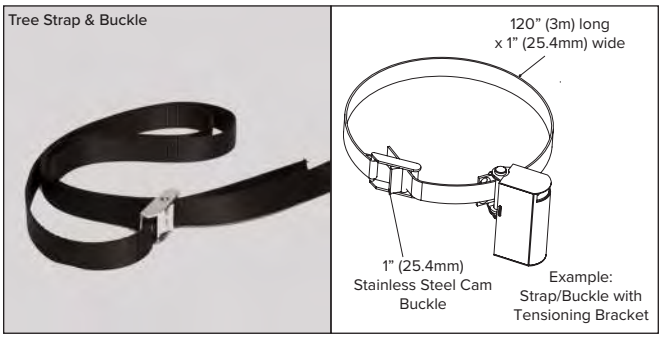
Tensioning Surface End Bracket, Black (EX-TSEB-BLK)

Tensioning Surface End Bracket for Exton Powerspan Cable installations. Can be mounted to any suitable surface; wall, tree, pole, beam, etc. 25° Horizontal side adjustment. Two Tensioning brackets required per tensioned run. Brackets can be installed side-by-side for multiple runs. Tension Mount Brackets can hold Powerspan Cable so it angles at up to 45° away from perpendicular, for a total adjustability of 90° left and right. The Tension Mount Bracket can be used in tensioned or loose “swagged” installations. Available in anodized Black (BLK) finish. Can be field painted or contact factory for custom colors. Hardware provided by others. Use fasteners as per the specification of a licensed structural engineer for the mounting substrate. Refer to Installation Instructions Sheet and Exton Application Guide for details.



Exton Mounting Turnbuckle Tool (EX-MTBT-BLK)

The Turnbuckle Tool’s Sliding Clamp is used to incrementally pull and make the Powerspan Cable taught. Tighten cable by manually pulling it through the End Mount before using the Tool. The Tensioning Tool should only be used to taughten away the last few inches off swag. Be sure to loosen the End Mount Screws before using the Bolt, or you may damage the cable. Allow 6” of sag in the middle of the Powerspan Cable per 20’ of span. For example, 40’ of span (2 x 20’) requires 2 x 6” (12”) of sag. Keeping it tighter may create higher tension than the cable can withstand. Do not exceed 450 lbs of tension. Use provided tensioning device if necessary. Maximum Span: 110’ (33” sag). Maximum # of LED Modules per Run/Circuit: 40. Maximum Shade weight: 5lb.

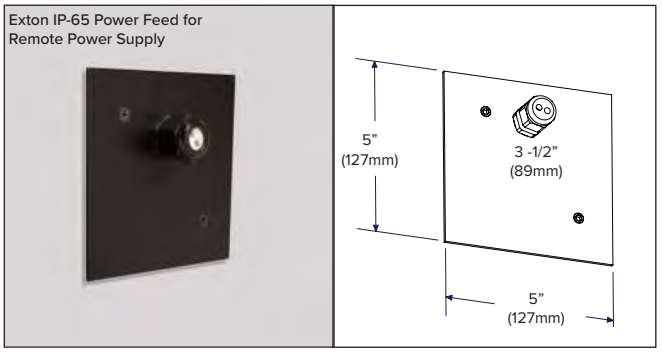


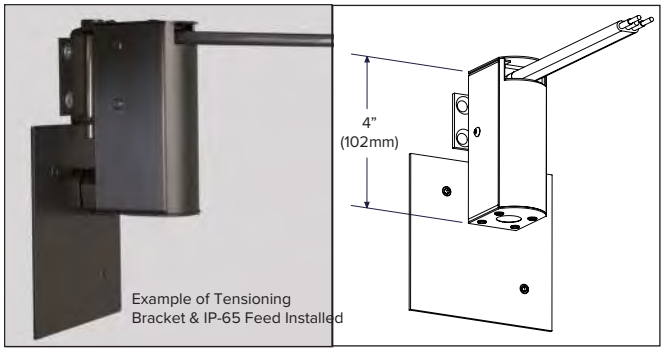
Tree Strap & Buckle (EX-10-TSB)

Tree Strap & Buckle Bracket for Exton Powerspan Cable mounting to a tree. 1500 lb. test, UV-resistant, water-resistant. Field-cuttable. 10’ (3m) Strap length; contact factory for alternative strap lengths over 10’ in 1’ increments. Strap available in Black (BLK) finish (only). Galvanized Stainless Steel buckle (only). Tensioning Bracket shown is ordered separately. Refer to Installation Instructions Sheet and Exton Application Guide for details.

Exton Powerspan Cable System

Exton - Cable - Power Feed



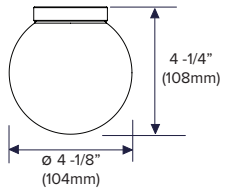


Exton IP-65 Power Feed for Remote Power Supply (EX-PF-BLK)

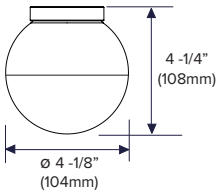
The IP-65 Power Feed will allow the Exton Power Cable to feed into a building or Pole for connection to a Remote Power Supply. The Power Feed is not structural. It is for feeding wire (only) into a building, pole, etc. to make an electrical connection. It can not be used alone for tensioning/swag mounting. Field-paintable. Can mount to a building structure or pole. Available in Black (BLK) finish. Contact factory for custom colors (backplate only). **Tensioning Bracket shown is ordered separately**. Remote Power Supply; refer to Specification Sheet 24 for options. Refer to Installation Instructions Sheet and Exton Application Guide for details.

Exton Powerspan Cable System

Exton - Glass Envelope - Globe “G” Type



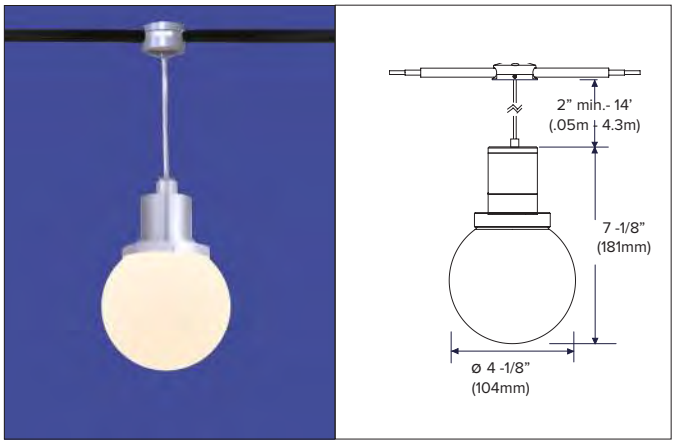
“G” Glass Envelope, Frosted
Hand Blown, Globe (G) Shape, Frosted Glass Envelope for Kore-EX5.



“G” Glass Envelope, Silver/Copper Bowl
Hand Blown, Globe (G) Shape,Glass Silver/Copper Bowl for Kore-EX5.

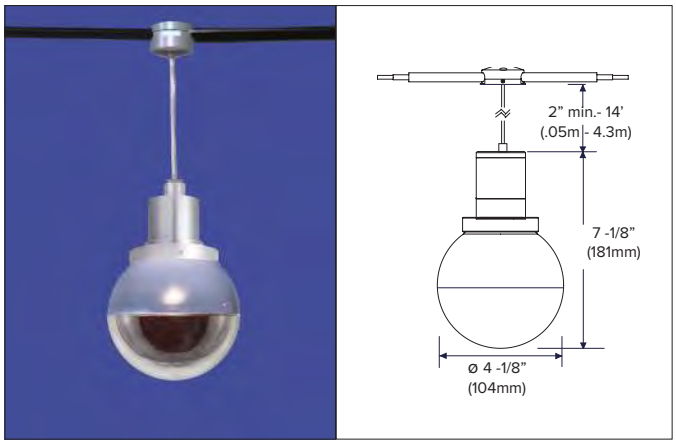
1. Contact Factory for a alternative color options. Refer to page 1 for minimum units.

Exton - Cable - Kore-EX5 24VDC Pendant with “G” Glass Envelope - Combinations



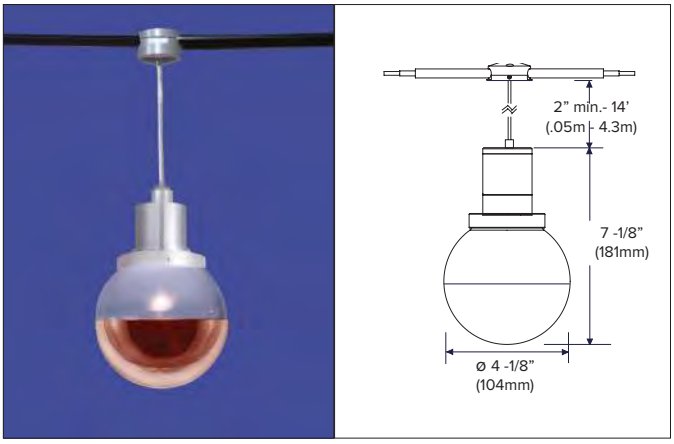
Kore-EX5 LED Pendant, Cable Mount, G Envelope Frosted
Aluminum or Black finish.

(EX5-K-PX-C-GEF-AL)
(EX5-K-PX-C-GEF-BLK)



Kore-EX5 LED Pendant, Cable Mount, G Envelope Silver Bowl
Aluminum or Black finish.

(EX5-K-PX-C-GESB-AL)
(EX5-K-PX-C-GESB-BLK)



Kore-EX5 LED Pendant, Cable Mount, G Envelope Copper Bowl
Aluminum or Black finish.

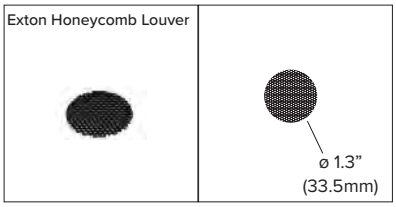
(EX5-K-PX-C-GECB-AL)
(EX5-K-PX-C-GECB-BLK)

1. Order Power Supplies separately. Refer to Exton Power Supply IP20 Specsheet, IP24 Specsheet or IP66 Specsheet for options.
2. Order Accessories on p. 2 separately.
3. Power Cord is factory cut (X) to 1” increments between **2” min. to 14’ max. length standard** (specified Cord length, not overall length). Specify desired length, not field cuttable. Contact factory for longer lengths

Exton Powerspan Cable System

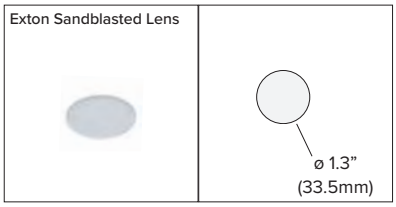
Exton - Kore-EX5 LED - Accessories

Exton Honeycomb Louver



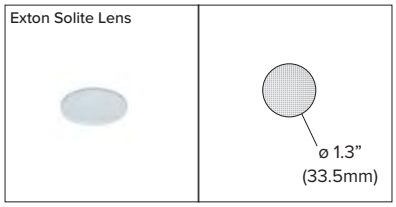
Exton Honeycomb Louver, Black (EX5-HCL-BLK)
1/8” Hexcell black metal. Controls spill illumination and glare.

Exton Sandblasted Lens



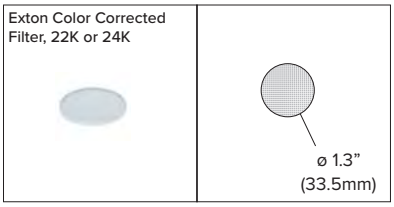
Exton Sandblasted Lens (EX5-SBL)
Creates an uniform beam pattern that is useful for wall washing. Tempered glass.

Exton Solite Lens



Exton Solite Lens (EX5-SOL)
Tempered glass with a stipple effect that that provides obscurity while retaining high transmission values. This low-iron optically clear glass offers maximum transmission and minimal absorption.

Exton Color Corrected Filter, 22K or 24K



Exton Color Corrected Filter, 22K or 24K (EX5-CCT-22K/24K)
22K or 24K Kelvin Temperature results when used with the standard 27K Cree LED.

Note: Honeycomb Louver, Sandblasted or Solite Lenses recommended for Clear Envelopes.

Click on the linked images below to visit the Exton Gallery.



Kore-EX5 LED Pendant, Cable Mount,
Black Finish,
G Envelope Frosted



Kore-EX5 LED Pendant, Cable Mount,
Black Finish,
G Envelope Silver Bowl

Click on the image below to visit the Exton Application Guide.



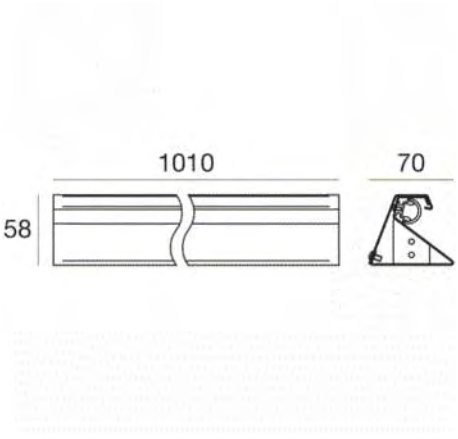
Dirigo_M1

YS9

Lam Partners
ARCHITECTURAL LIGHTING DESIGN

Lines | Modular Master
64591





Technical data	
Designer	Studio RIGO
Type	Surface
Installation position	Floor
Installation environment	Outdoor
Glow wire test	850°
Direct mounting on normally flammable surfaces	Yes
CE	Yes
ETL	No
Fire Rated (BS 476 PT21 compliant)	No
Induction	No
Motion sensor	No
Directional	No
Tilting	No
Walk-over	Yes
Drive-over	No
Cable included	No
Resin potting	No

Finishing casing	
Material	AISI 316L steel
Processing	Satin finishing

Finishing diffuser	
Material	UV Resistant Polymethylmethacrylate
Colour	opaline

Dirigo_M1

Lines | Modular Master
64591

Single emission lines for outdoor application.

The device body is made of aisi 316l steel, processed by means of satin finishing; the diffuser is made of uv resistant polymethylmethacrylate.

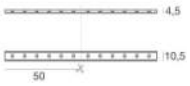
and can be floor-mounted.

Compliant with the EN 60598-1 standard and its specific provisions.

Dirigo_M1

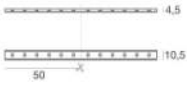
Lines | Modular Master
64591

Components



silicone_c - LED Strip | stripLED 72 W 24 V

Code
62403

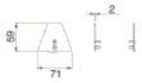


silicone_c - LED Strip | stripLED 72 W 24 V

Code
62403N

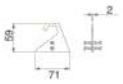
Dirigo_M1

Dirigo_M1 | Lines | Accessories
64591



Closing cap

Code
64592



Closing cap

Code
64593

YS10

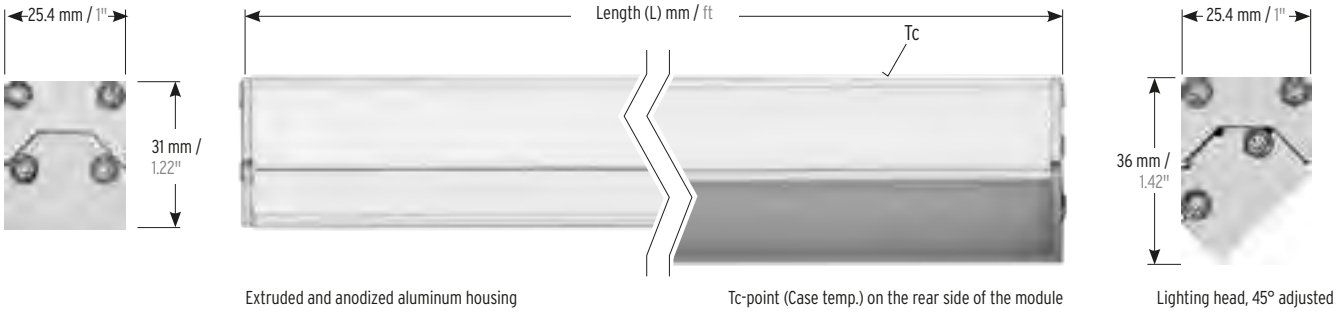
Lam Partners

XOOLUM™ HYDRA White IP67



24 V compact modular linear LED luminaire in IP67 with adjustable luminaire head (45°). Full polyurethane encapsulation with an opal polyurethane top layer offering a premium water proof sealing (values), UV resistance (no coloration or increase of absorption) chemical stability against urban gazes and protection against abrasion. The absence of air gap between the encapsulation material and the optics reduces the cleaning and maintenance costs. Robust housing made from extruded and anodized aluminum profile and screwed aluminum end caps available in silver or black color as surface-mounted or pendant version. Delivered with 2 m (6.56') open end black cable. Ideal solution for general, sign or accent lighting in outdoor or humid environments. Light source assembled using state of the art automated Reel to Reel (R2R) production process supporting LED Linear™ Tj Away® thin flexible circuit board technology. In combination with ceramic LED packages a thermal resistivity of 18.5 K/W is achieved for an optimal heat dissipation (junction to profile) which guarantees an outstanding lifetime of > 60,000 hrs L80/B10. Embeds high quality japanese LEDs with 3 step MacAdams (SDCM3) binning centered on target CCT (One Bin Only) with an extended photometric code of Wxxx/339 ensuring an exceptional color consistency over the rated lifetime. Premium color rendition with a CRI of 95 and TM-30-15 up to R_f = 91 / R_g = 100 ensuring a remarkable light quality. Consistent light intensity all along the luminaire length is obtained thanks to active current regulation operated by dedicated integrated circuits (ICs) on each step. Protected against electrostatic discharge ± 2,000 V and polarity miswiring. Fully PWM dimmable for frequency > 0 Hz up to 2 kHz (flicker free for frequency higher then 1.2 kHz according to IEEE P1789 standard). Engineered and produced in Germany.

Dimensions & available lengths



Extruded and anodized aluminum housing

Tc-point (Case temp.) on the rear side of the module

Lighting head, 45° adjusted

Fixture build to length (not field cuttable):

L_{min}: 198 mm; L_{max}: 4,010 mm (HD25: 3,010 mm); in 62.5 mm increments
L_{min}: 7.8"; L_{max}: 13.16' (HD25: 9.88'); in 2.46" increments

Electrical & output data

Voltage	24 Volt (23 V_{min}, 25 V_{max})
Temperature[B]	Tc_{min} = -25°C / -13°F, Tc_{max} = specific, see Table below
Storage temperature	Ts_{min} = -30°C / -22°F, Ts_{max} = 85°C / 185°F
Ambient temperature	Ta_{min} = -25°C / -13°F, Ta_{max} = specific, see Table below
CRI / R9	up to 95 / up to 65

XOOLUM™ HYDRA	HD6	HD10	HD15	HD25
Power (W/m / W/ft)[A]	6 / 1.8	10 / 3.1	15 / 4.6	25 / 7.6
Efficacy (lm/W)[A] @ W850	52	51	55	53
max. length (m / ft)	4 / 13.1	4 / 13.1	4 / 13.1	3 / 9.8
Temperature Tc-point (Tc_{max})[B]	60°C / 140°F	60°C / 140°F	60°C / 140°F	65°C / 149°F
Ambient temperature (Tc_{max})	40°C / 104°F	40°C / 104°F	40°C / 104°F	35°C / 95°F

Color temperature LED tape used[C]			Color temperature delivered finished fixture		HD6	HD10	HD15	HD25
					low output → high output			
					lumen/meter (lm/m)[A] lumen/feet (lm/ft)[A]			
W820		2,000 K	2,400 K		180 / 54	300 / 90	480 / 145	770 / 234
W822		2,200 K	2,700 K		200 / 60	340 / 103	540 / 164	880 / 267
W825		2,500 K	3,000 K		230 / 69	390 / 118	620 / 188	1,010 / 307
W827	W927	2,700 K	3,500 K	3,400 K	210 / 63	350 / 106	660 / 200	1,070 / 325
W830	W930	3,000 K	3,900 K	3,800 K	210 / 63	350 / 106	700 / 212	1,140 / 346
W835	W935	3,500 K	4,600 K	4,400 K	220 / 66	360 / 109	730 / 222	1,190 / 362
W840	W940	4,000 K	5,500 K	5,600 K	220 / 66	370 / 112	750 / 228	1,220 / 371
W850		5,000 K	7,200 K		310 / 93	510 / 154	820 / 249	1,330 / 404

[A] The given data are typical values. Due to tolerances of the production process and the electrical components, values for light output and electrical power can vary up to 10%.

[B] The Tc-point should be measured in thermal equilibrium according to IEC EN 60598-1.

[C] In case of IP67 products, tolerances in the color temperature can occur.

ONE BIN ONLY

Lifetime: L80/B10 > 60.000 h

Photometric code: Wxxx/339

LM 79 compliant

LM 80 compliant

UV protected

Resistant to solvents

Saltwater resistant

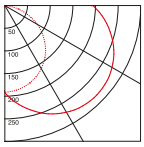
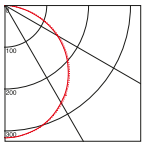
Temporary immersion protection

Impact resistant (suitable for walk over): IK10

Order code

Your order code	XOOLUM HYD	HD__	W_	__	_____	_	__	__	IP67
Order code example	XOOLUM HYD	HD25	W8	27	2010	S	A	BS	IP67



opal encapsulation

DIN 5040:A50

LED tape
HYDRA HD6 ..... HD6
HYDRA HD10 ..... HD10
HYDRA HD15 ..... HD15
HYDRA HD25 ..... HD25

Color rendering
> 80 8
> 90 (only HD6, HD10) 9

Color temperature delivered finished fixture	Color temperature LED tape used	
2,400 K	2,000 K	20
2,700 K	2,200 K	22
3,000 K	2,500 K	25
3,500 K 3,400 K	2,700 K	27
3,900 K 3,800 K	3,000 K	30
4,600 K 4,400 K	3,500 K	35
5,500 K 5,600 K	4,000 K	40
7,200 K	5,000 K	50

Length
L_{min}: 198 mm (7.8");
L_{max}: 4,010 mm (13.16'); HD25: 3,010 mm (9.88');
in 62.5 mm (2.46") increments

Profile color
Silver ..... S
Black ..... B

Options
Non adjustable ..... NA
Adjustable ..... A

Cable feed[D]
Back side, 2 m / 6.56'
(through mounting channel) ..... BS
Front side, 2 m / 6.56'
(through end caps) ..... FS

Ingress protection
IP67 ..... IP67

[D] **Cable feed**







Please choose your accessories

☑ Fixture comes with 2 m / 6.56' open end cable.

Mounting	
☑ no further accessories required, fixture base profile = mounting channel	

Mounting (optional)	Art.-#	
☐ XOOLUM™ 007 Swivel-Angle Set +/- 45°	13000081	
☐ VarioPendant 007 Slide Silver	13000157	
☐ VarioPendant 007 Slide black	13000158	

For max. cable length between driver and fixture please visit **www.led-linear.com/cable-length**

Recommended power supply	Art.-#	
☐ Power Supply Unit IP67	16000153	

Recommended control unit	Art.-#	
☐ Control System White/IQ-White	16000268-DT6	

Specification Sheet

lumenbeam

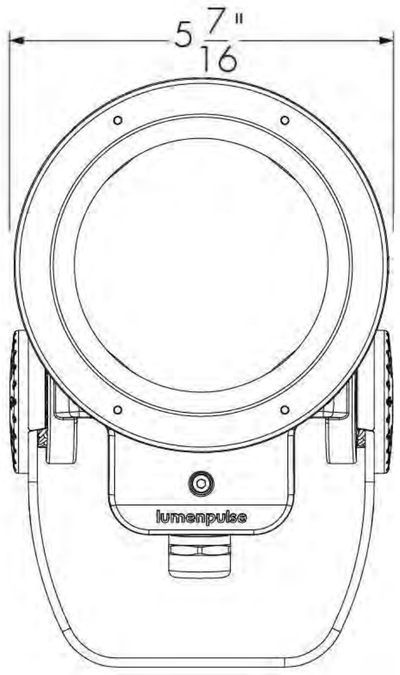
Small

WHITE AND STATIC COLORS

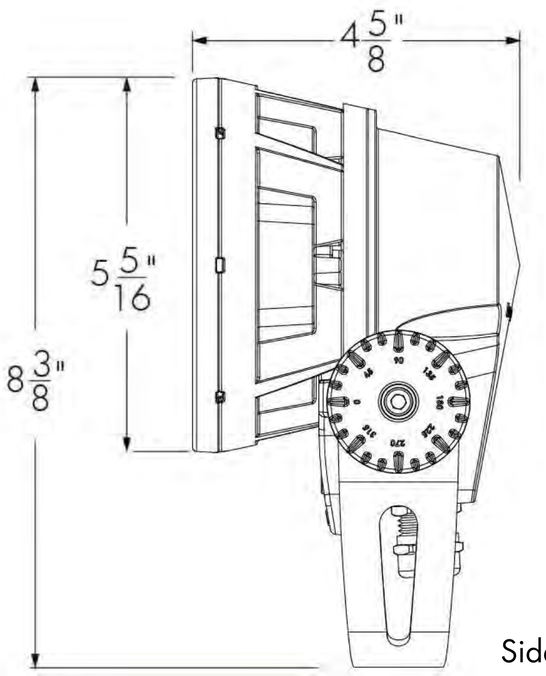
Project Name _____ **Qty** _____

Type _____ **Catalog / Part Number** _____





Front view



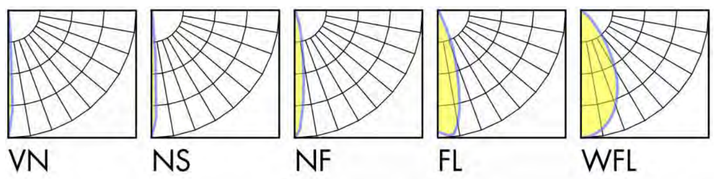
Side view

Photometric Summary

4000K	Delivered output (lm)	Intensity (peak cd)
VN	853	37,291
NS	750	23,839
NF	668	4,235
FL	639	1,770
WFL	660	664

Photometric performance is measured in compliance with IESNA LM-79-08.

Optics



Control

ON/OFF 0-10V DALI DMXrdm

Rating

cULus CE RoHS

Description

The Lumenbeam Small is a high-performance, 14W luminaire for lighting landscapes, trees, columns, monuments and architectural details. It offers a flexible package of options: a choice of optics for flood or accent lighting; a number of color temperatures and colors; various mounting options, accessories, spread lenses and controls.

Features

Color and Color Temperature	2200K, 2700K, 3000K, 3500K, 4000K, 5700K, Red, Green, Blue
Optics (nominal distribution)	6°, 10°, 20°, 40°, 60°, Elliptical distribution on 10° to 40° optics
Optical Option	Linear spread lens horizontal distribution, Linear spread lens vertical distribution
Mounting Option	Stake Mounting, Knuckle Mounting, Canopy Cover Mounting
Options	3G ANSI C136.31 Vibration Rating for bridge applications, Corrosion-resistant coating for hostile environments
Power Consumption	14 W
Warranty	5-year limited warranty

Performance

Delivered Output	853 lm (4000K, VN optic)
Delivered Intensity	37,291 cd at nadir (4000K, VN optic)
Illuminance at Distance	Minimum 1 fc at 193 ft distance (4000K, VN optic)
Color Consistency	2 SDCM
Color Rendering	CRI 80+
Lumen Maintenance	L70 120,000 hrs (Ta 25 °C)

lumenpulse™

1220 Marie-Victorin Blvd., Longueuil, QC J4G 2H9 CA **T** 1.877.937.3003 | 514.937.3003 **F** 514.937.6289
info@lumenpulse.com **www.lumenpulsegroup.com**

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Specification Sheet

lumenbeam

Small

WHITE AND STATIC COLORS

Physical

Housing Material	Low copper content high pressure die-cast aluminum
Yoke Material	Heavy aluminum
Lens Material	Clear tempered glass
Hardware Material	Stainless steel
Gasket Material	Silicone
Surface Finish	Electrostatically applied polyester powder coat
Weight	5.2 lbs
EPA	Front = 0.35 sq ft, Side = 0.31 sq ft

Electrical and control

Voltage	100 to 277 volts
Fixture Cable	Power and data in 1 cable, 3 ft cord standard (#16-5), other lengths available
Resolution (DMX/RDM)	Per fixture, 8-bit or 16-bit
Control	On/Off control, 0-10V dimming, DALI dimming, DMX/RDM enabled, Lumentalk system is enabled with LDB accessory - see typical wiring diagrams for details

Environmental

Operating Temperature	-13 °F to 122 °F
IP Rating	IP66
IK Rating	IK07

Accessories (order separately)

Control Boxes	Power and control box - daisy chain configuration, Power and control box - star configuration, Lumentalk Data Bridge
Control Systems	Lumentouch 2.0™, Lumencue, Lumentone
Diagnostic and Addressing Tools	LumenID, LumentalkID

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Specification Sheet

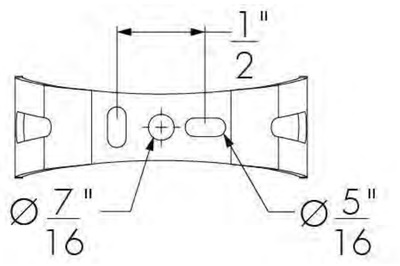
lumenbeam

Small

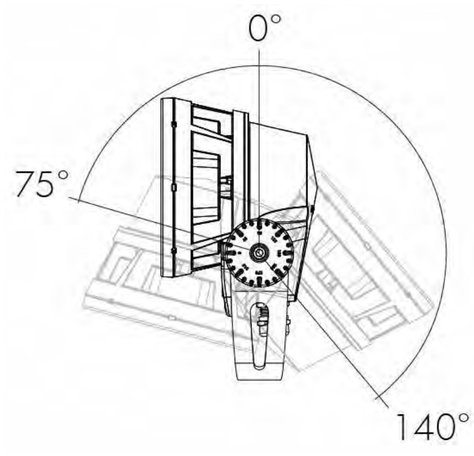
WHITE AND STATIC COLORS

Mounting details

Mounting hole pattern - standard yoke

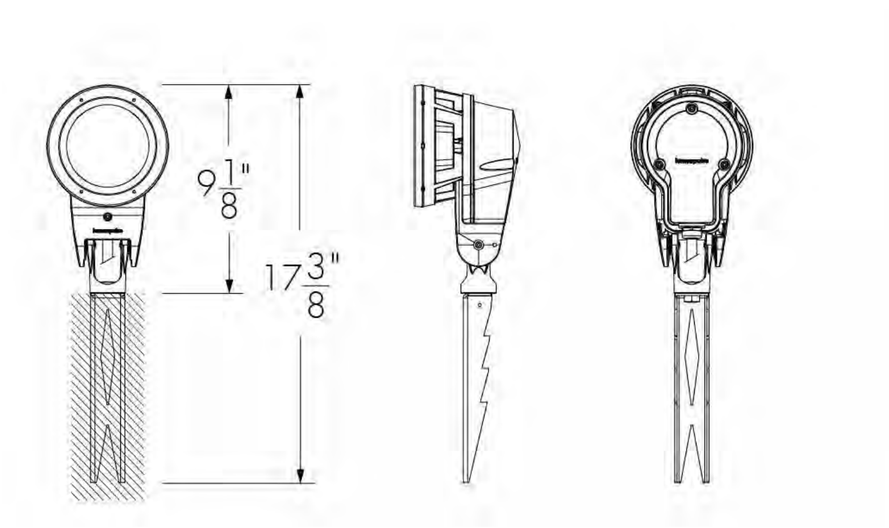


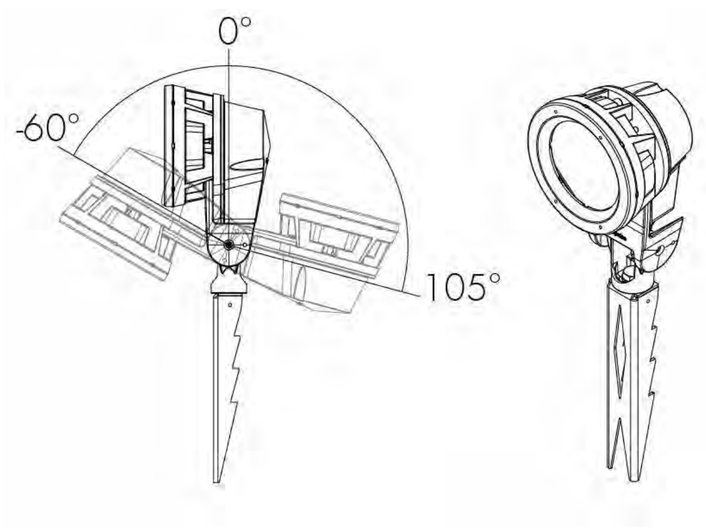
Adjustable pivot limits



Mounting options

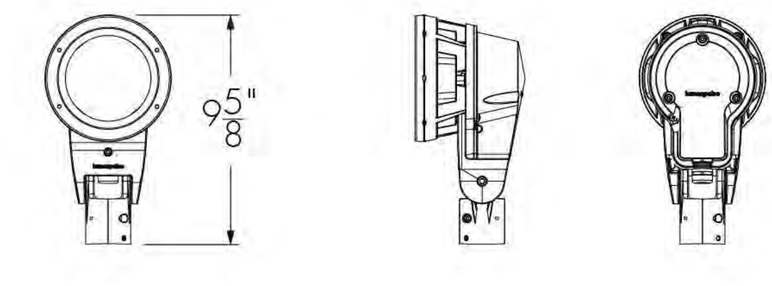
SK - Stake mounting



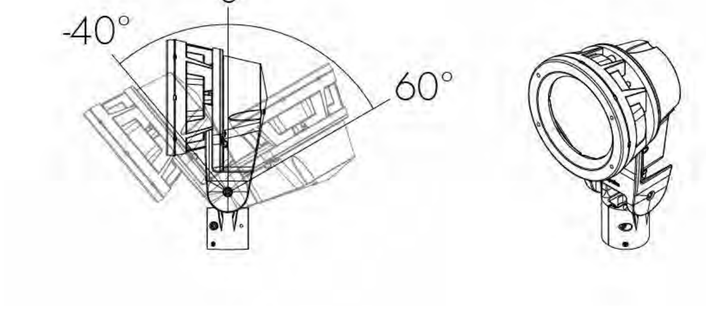


Adjustable pivot limits

KN - Knuckle mounting

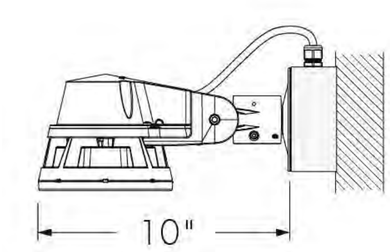


Suitable for 1/2 in, 3/4 in, and 1 in pipe diameter

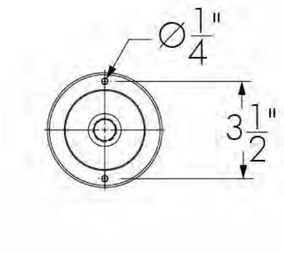


Adjustable pivot limits

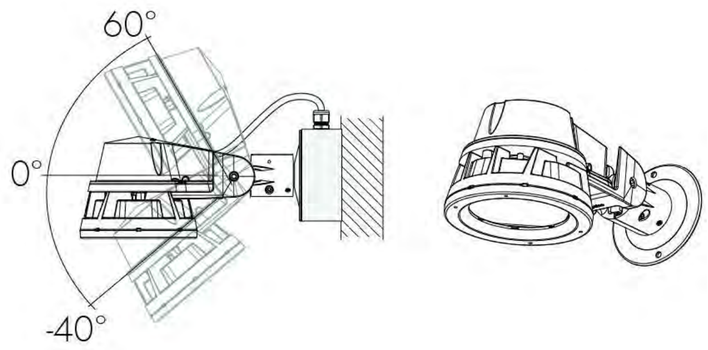
CN - Canopy cover



Suitable for standard round junction boxes, surface mounted



Mounting hole pattern



Adjustable pivot limits

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MG - R20

Specification Sheet

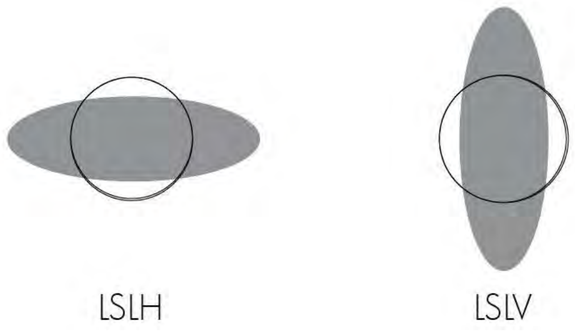
lumenbeam

Small

WHITE AND STATIC COLORS

Optical options

LSLH - Linear spread lens horizontal distribution
LSLV - Linear spread lens vertical distribution

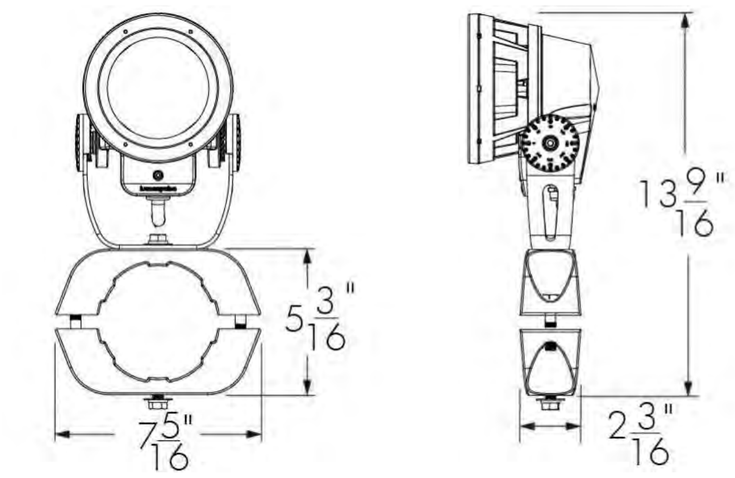


	Beam angle with LSLH/LSLV
VN	8° x 60°
NS	9° x 60°
NF	18° x 65°
FL	32° x 72°

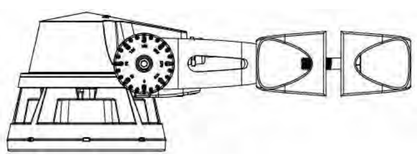
Factory installed, not adjustable on site. Not available for WFL optic.
See 'Optical Accessories' section for field adjustable spread lens (LSLA).

Mounting accessories (order separately)

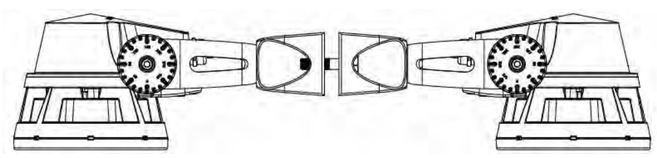
Round pole mounting accessory



PM4 model shown.
Consult factory for square pole section.



PM4-1, PM4.5-1, PM5-1 - Round pole mounting accessory - single fixture

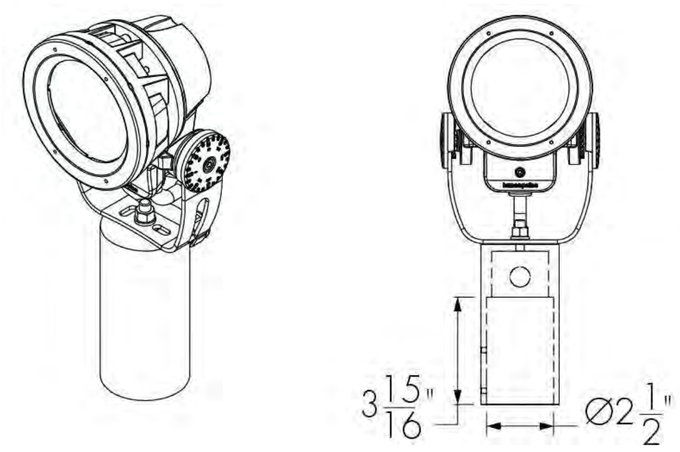


PM4-2, PM4.5-2, PM5-2 - Round pole mounting accessory - twin fixures
*One bracket assembly is supplied per 2 fixtures unless otherwise specified.

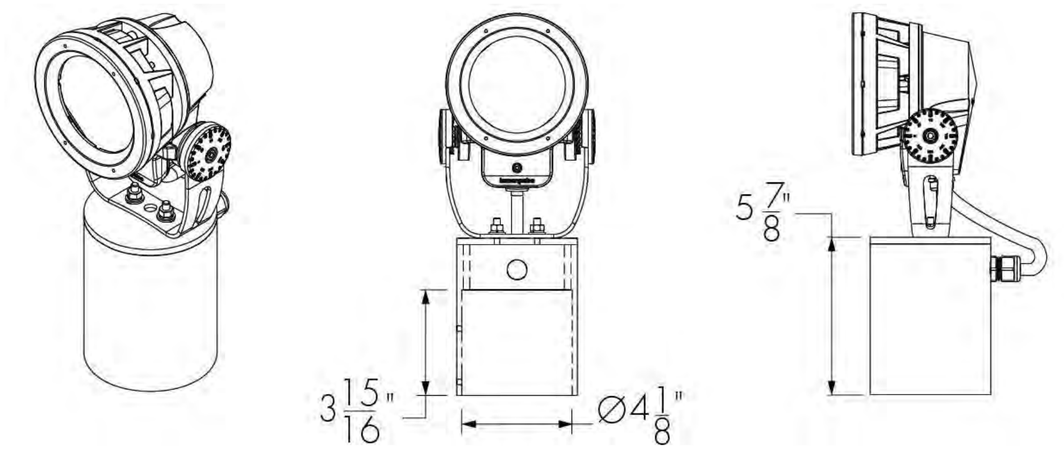
	PM4	PM4.5	PM5
For pole Ø	4" ± 1/16"	4.5" ± 1/16"	5" ± 1/16"

Consult factory for other pole diameters.

Tenon adapter



TN2 - Tenon adapter to fit on 2 3/8 in O.D. tenon



TN4 - Tenon adpater to fit on 4 in O.D. tenon

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Specification Sheet

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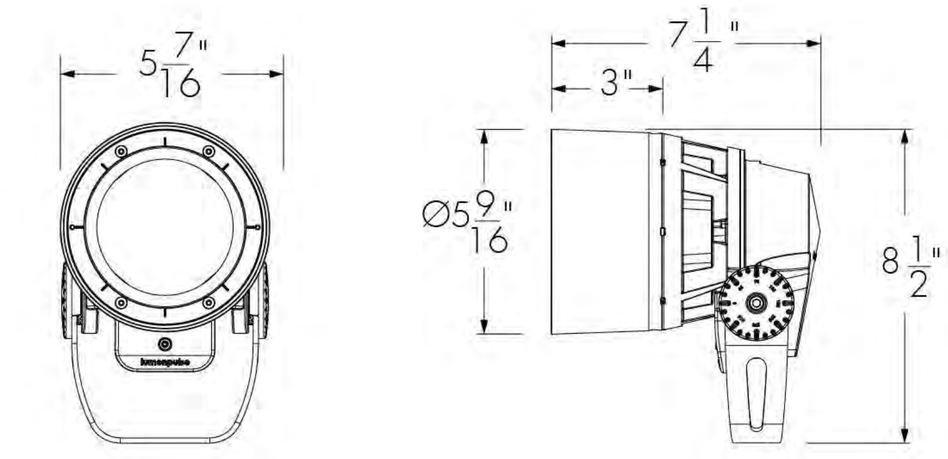
Small

WHITE AND STATIC COLORS

Optical accessories (order separately)

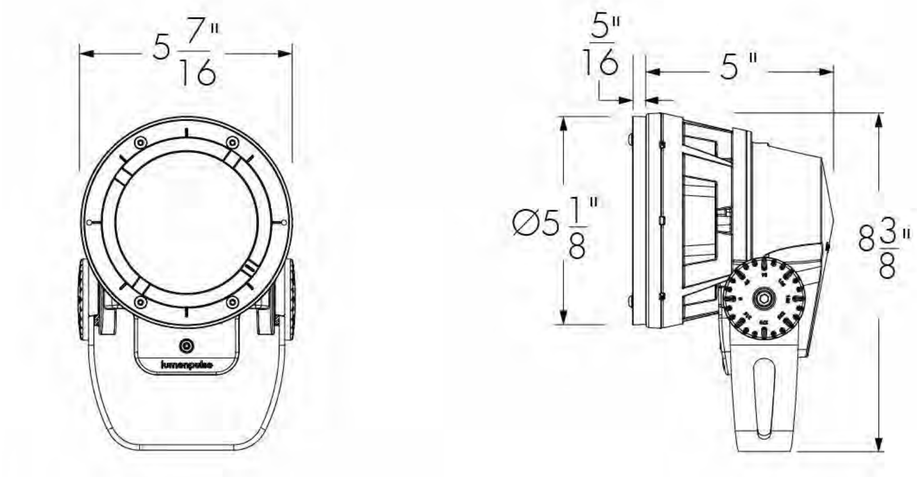
Installed optical accessories will affect the maximum pivot limits for each mounting option, consult factory for details.

SN - Snoot



LBSSN-FINISH-BK
Interior surface painted black. Please specify desired exterior FINISH from list of available finishes.

LSLA - Linear spread lens adjustable



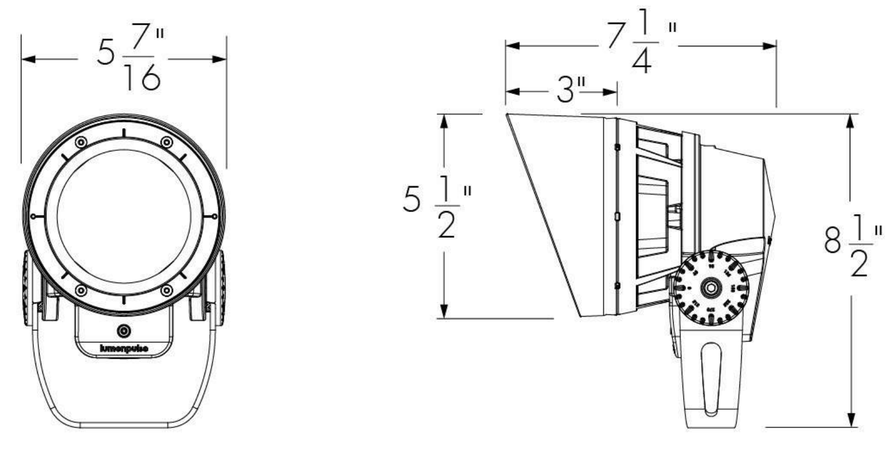
LBSLSLA-FINISH
Please specify desired exterior FINISH from list of available finishes.

Accessory combinations

+	Snoot	Visor
Linear spread lens adjustable	YES	YES
Wire guard	YES	YES

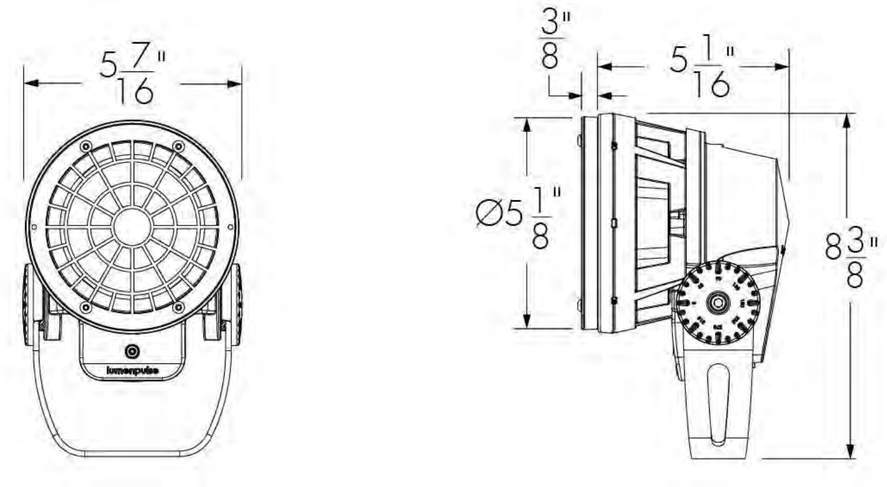
Accessory combinations must be ordered together on a single line.
Ex: A snoot + wire guard combination order code is LBSSNWG-BK-BK.

VS - Visor



LBSVS-FINISH-BK
Interior surface painted black. Please specify desired exterior FINISH from list of available finishes.

WG - Wire guard



LBSWG-FINISH
Please specify desired exterior FINISH from list of available finishes.

Available exterior finishes for optical accessories

BK - Black Sandtex®
BRZ - Bronze Sandtex®
SI - Silver Sandtex®
WH - Smooth white
BKTX - Textured black
BRZTX - Textured bronze, non-metallic
GRATX - Textured medium gray
GRNTX - Textured green
WHTX - Textured white
CC - Custom color and finish (please specify RAL color)*

*Lumenpulse offers a wide selection of RAL CLASSIC (K7) colors with a smooth texture and high-gloss finish. Please consult factory for a list of available K7 colors, other RAL textures and glosses, or to match alternate color charts. Final color matching results may vary.

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Specification Sheet

lumenbeam

Small

WHITE AND STATIC COLORS

How to order

1	2	3	4	5	6	7	8
LBS							

9	10	11

1 . Housing

LBS	Lumenbeam™ Small

2 . Voltage

100	100 volts
120	120 volts
208	208 volts
220	220 volts
240	240 volts
277	277 volts

3 . Color and Color Temperature (1)

22K	2200K
27K	2700K
30K	3000K
35K	3500K
40K	4000K
57K	5700K
RD	Red
GR	Green
BL	Blue

4 . Optics

VN	Very Narrow 6°
NS	Narrow Spot 10°
NF	Narrow Flood 20°
FL	Flood 40°
WFL	Wide Flood 60°

5 . Optical Option

LSLH	Linear spread lens horizontal distribution (2)
LSLV	Linear spread lens vertical distribution (2)

6 . Finish

BK	Black Sandtex®
BRZ	Bronze Sandtex®
SI	Silver Sandtex®
WH	Smooth white
BKTX	Textured black
BRZTX	Textured bronze non-metallic
GRATX	Textured medium gray
GRNTX	Textured green
WHTX	Textured white
CC	Custom color and finish (please specify RAL color) (3)

7 . Control (4) (5)

NO	On/Off control
DIM	0-10V dimming
DALI	DALI dimming
DMX/RDM	DMX/RDM enabled

8 . Mounting Option (6)

SK	Stake Mounting
KN	Knuckle Mounting
CN	Canopy Cover Mounting

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Specification Sheet

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Small

WHITE AND STATIC COLORS

9 . Options

3GV	3G ANSI C136.31 Vibration Rating for bridge applications [7]
CRC	Corrosion-resistant coating for hostile environments [8]

10 . Certification

UL	UL compliant
CE	CE compliant

11 . Cable Length [9]

3FT	3 ft [9] [10]
10FT	10 ft
20FT	20 ft
30FT	30 ft
50FT	50 ft
70FT	70 ft
100FT	100 ft

Notes:

[1] Consult factory for availability of static Royal Blue, 6500K and 90+ CRI.

[2] Factory installed, not available for 60° optic. Field adjustable spread lens optical accessory available, order separately.

[3] Lumenpulse offers a wide selection of RAL CLASSIC (K7) colors with a smooth texture and high-gloss finish. Please consult factory for a list of available K7 colors, other RAL textures and glosses, or to match alternate color charts. Final color matching results may vary.

[4] Lumentalk system is enabled with LDB accessory, DIM or DMX/RDM must be specified in the order code. See the typical wiring diagrams in the specification sheet for details.

[5] A Lumentranslator and LumentalkID (LIDLT) must be specified for Lumentalk applications. Consult Lumentranslator and Lumentalk pages and specification sheets for details.

[6] The standard yoke is provided unless an alternate mounting option is specified as part of the order code.

[7] 3GV option is available for standard yoke mounting only.

[8] Use only when exposed to salt spray and harsh chemicals. This option is not required for normal outdoor exposure.

[9] 3 ft cable length is standard unless otherwise specified.

[10] Maximum of 3 ft cable length for daisy chain DMX applications with CBX-DS.

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v2 Lighting Group™

CORE 200 surface mount

YS12

Lam Partners ARCHITECTURAL LIGHTING DESIGN

PROJECT

Job _____

Type _____

Part # _____

Notes

SPECIFICATIONS

Source	Xicato XTM LED module - up to 2000 lumens
C.C.T.	2700K, 3000K, 3500K or 4000K
Color Consistency	1x2 SDCM (MacAdam) along BBL, CCT +/- 40K to 70K, Duv +/- .001
CRI (Ra)	83 or 98
Driver / Location	Included / Remote mount or deep canopy options
Dimming	0-10V or phase dimming to 10% standard; DALI, DMX and 1% dimming available
Input Voltage	100 to 277VAC, phase dimmable versions are 120VAC only
Power	Up to 24 watts max, depending on LED module / driver
Reflector	20°, 40° or 60° - field replaceable without tools
Material	CNC machined aluminum with stainless steel hardware
Finish	Powder coat - TGIC polyester for exterior and interior use
Weight	1.6 lb. [0.7 kg]
Location	Listed for Wet & Damp locations
Approvals	ETL Listed to UL 1598, 2108, 8750 and CSA C22.2# 9 & #250.0
L80 Life	> 50,000 hours at 80% lumen maintenance based on IESNA LM-80-08
Warranty	Lifetime Limited Warranty - see warranty for details
IES Files	LM-79-08 IES files available at www.v2LightingGroup.com/downloads
Modifications	Any modification or customization is possible - consult factory



LED · INDOOR OUTDOOR · WET LOCATION · DIMMABLE · LIGHTSOURCE BY XICATO® · MADE IN U.S.A. · TITLE 24 COMPLIANT · c ETL us LISTED Intertek 4001580

ORDERING LOGIC

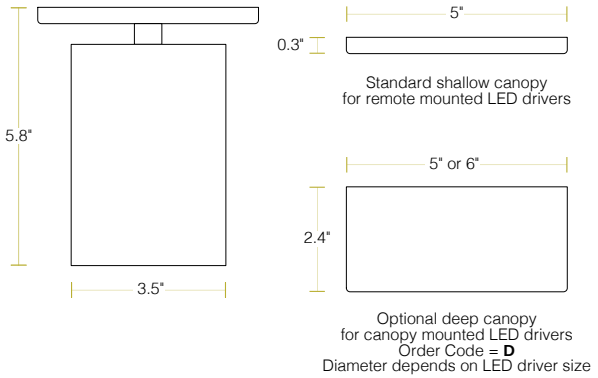
Model	Driver Location	Dimming	Mounting Location	Output	CRI *	C.C.T.	Reflector	Shell Color	Options
C2SM -				-				-	-
	R=Remote	**N**=None	**D**=Damp	**07**=700 lm	**83**=83	**27**=2700K	**20**=20°	**XX**	
	D=Deep Canopy	**P**=Phase	**W**=Wet	**10**=950 lm	**98**=98*	**30**=3000K	**40**=40°	(see chart on page 4)	
		V=0-10V		**13**=1300 lm		**35**=3500K	**60**=60°		
		Z=Other		**20**=2000 lm		**40**=4000K		**ZZ**=Custom	

* 98 CRI not available in 2000 lm

Example Part Number: **C2SM-RND-13832740-S3**
CORE **2**00 **S**X Surface **M**ount **- R**emote Driver, **N**o Dimming, **D**amp Location **- 13**00 lm, **83** CRI, **27**00K, **40**° Reflector **- S3** Red Shell

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DIMENSIONS



All canopies fit standard 3.5" and 4" round and octagonal junction boxes

Not to scale, dimensions are nominal
Consult factory for CAD drawings

LED OPTIONS

Reflector Option	LED Specifications				
	LES[1]	CRI	Lumens[2, 3, 4]	Wattage[5] (W)	Efficacy[6] (lm/W)
20°, 40° & 60°	19mm	Ra = 83 ± 3	700	5.6	129
			950	8.2	118
			1300	11.7	111
			2000	19.5	102
		Ra = 98 R9 ≥ 90 R15 ≥ 95	700	7.4	97
			950	10.9	89
			1300	15.6	83

1 LES: Light Emitting Surface diameter
2 ±10%
3 Source lumens - see photometrics on page 3 for LOR to calculate delivered lumens
4 Higher lumen outputs are available in CORE / QUBE 300 and 400 series
5 Maximum luminaire wattage including LED driver = LED wattage x 1.2
6 Higher efficacies are available via lower drive currents - consult factory

CONTROL OPTIONS

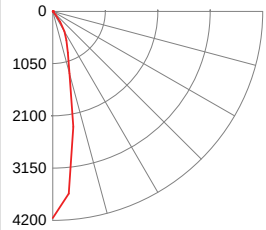
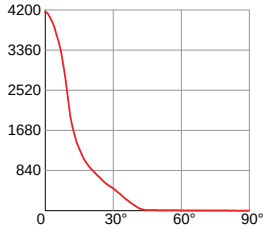
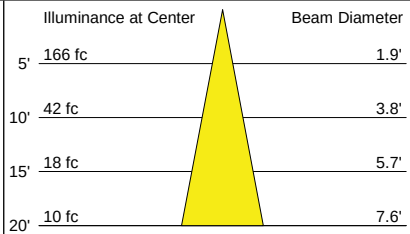
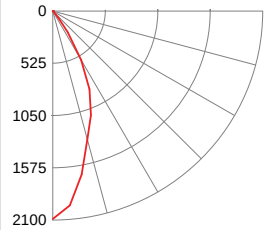
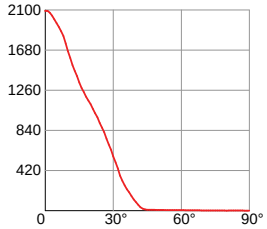
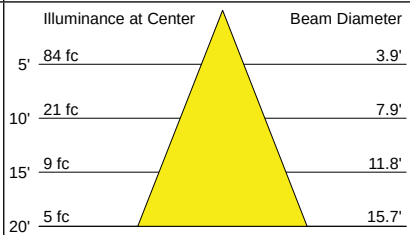
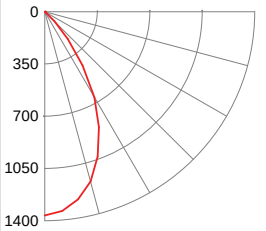
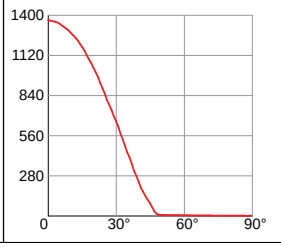
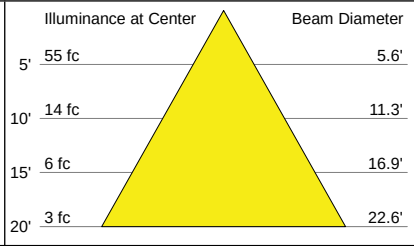
Standard LED Drivers* (included in base price)	Order Code **V** = 0-10V dimming to 10%
	Order Code **P** = Phase dimming to 10% Compatible with both forward and reverse phase dimmers
Optional LED Drivers*	eldoLED 0-10V, DALI, or DMX dimming to 0%
	Lutron Hi-lume™ A-series, EcoSystem or forward phase dimming to 1%
	Lutron Hi-lume™ 5-series, EcoSystem dimming to 5%

* All LED drivers must be mounted in a deep canopy or remote
* Standard LED drivers are suitable for Wet Location
* Optional LED drivers are suitable for Damp Location
* For EM applications:
  All LED drivers may be used with 3rd party inverter style systems

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PHOTOMETRICS

LM-79-08 IES files available at www.v2LightingGroup.com/downloads

Beam Angle	Order Code	Intensity Plot (cd) (1300lm)	Polar Plot (cd) (1300lm)	Cone Diagram (1300lm)	Description
20°	**20**				CBCP = 3195 cd/klm Beam Angle = 21° Field Angle = 63° LOR = 89.4% Beam = full width @ 50% Field = full width @ 90%
40°	**40**				CBCP = 1607 cd/klm Beam Angle = 43° Field Angle = 73° LOR = 88.7% Beam = full width @ 50% Field = full width @ 90%
60°	**60**				CBCP = 1050 cd/klm Beam Angle = 59° Field Angle = 86° LOR = 85.2% Beam = full width @ 50% Field = full width @ 90%

Beam Shaping Options

Add the order code shown below to the options box at the end of the part number:

Order Code	Description
-HL	Honeycomb Louver
-DF	Diffusion Lens
-SF	Satin finish on any standard reflector
-LS	Linear Spread Lens (60° x 1°)
-WW	Wall Wash Lens (shifts beam 20° from vertical)

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COLOR OPTIONS

Anodized Effect


A1 Clear Silver


A2 Champagne


A3 Light Bronze


A4 Medium Bronze


A5 Dark Bronze


A6 Black

Metallic


M1 Pearl


M2 Sea Foam


M3 Forest Gray


M4 Charcoal Gray


M5 Gunmetal Gray


M6 Dove Gray


M7 Old Copper


M8 Old Brass

Basic

L1 Gloss White


L2 Gloss Light Gray


L3 Gloss Dark Gray


L4 Gloss Black

T1 Textured Matte White


T2 Textured Matte Light Gray


T3 Textured Metallic Dark Gray


T4 Textured Matte Black

Sparkle


S1 Light Orange


S2 Deep Orange


S3 Red


S4 Burgundy


S5 Violet


S6 Deep Blue


S7 Sky Blue


S8 Bright Green

The complete range of powder coat colors from Tiger Drylac is available - consult factory
Custom match powder coat colors are available - consult factory
Printed or on-screen colors are only approximations - consult v2 Color Chip Set Rev.4 before specifying

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YS13

Lam Partners
ARCHITECTURAL LIGHTING DESIGN

CYLINDER
CY3-FB

CYLINDER LED LUMINAIRE
FIXED SURFACE MOUNT



Fixed 3.25" diameter 7.40" tall LED for ceiling mount. Perfect for applications having no plenum recess depth. Available in 80+, 90+, 97+ CRI & Warm Dim. Delivered lumen range of 640lm to 1993lm. Lucifer Lighting developed proprietary field-changeable optics available in 15°, 25°, 40° & 60° beams. Dry / Damp location.

PERFORMANCE

80+ CRI (40° OPTIC)

LED Configuration	Delivered Lumens lm	Power Consumption W	Luminous Efficacy lm/W
80C25A	1527	23	65
80C32A	1993	33	60

90+ CRI (40° OPTIC)

LED Configuration	Delivered Lumens lm	Power Consumption W	Luminous Efficacy lm/W
90C20A	1308	23	56
90C27A	1708	33	52

97+ CRI (40° OPTIC)

LED Configuration	Delivered Lumens lm	Power Consumption W	Luminous Efficacy lm/W
97C19A	1171	23	50
97C24A	1528	33	46

WARM DIM 90+ CRI (40° OPTIC)

LED Configuration	Delivered Lumens lm	Power Consumption W	Luminous Efficacy lm/W
90W13A	990	16	62

ORDERING INFORMATION - CYLINDER

JA8-2016 INDICATED BY SHADING

CY3 – FB 1 – _____ _____ _____ _____ _____ _____ _____ _____

- **CY3** — CY3 CYLINDER
- **FB** — FIXED UNIBODY
- **1** — RATING: 1 Dry / Damp
- **FINISH**: WH White (Powder Coat); BK Black (Powder Coat); AB Architectural Bronze (Powder Coat)[1]; CF Custom Finish[1,2]
- **BAFFLE FINISH**: WH White (Powder Coat); BK Black (Powder Coat); AB Architectural Bronze (Powder Coat)[1]; CF Custom Finish[1,2]
- **CRI / LED**: 80C 80+ CRI; 90C 90+ CRI; 97C 97+ CRI; 90W 90+ CRI
- **SOURCE LUMEN**: 25A 2503lm; 32A 3268lm; 20A 2145lm; 27A 2800lm; 19A 1919lm; 24A 2505lm; 13A 1360lm
- **CCT**: 1 2700K; 2 3000K; 3 3500K; 4 4000K; W Warm Dim
- **OPTIC**: 10 15°[3]; 20 25°; 30 40°; 40 60°
- **POWER SUPPLY**: CA2 120-277V 50Hz/60Hz 0-10V Analog; CE2 120V 50Hz/60Hz Electronic ELV Forward / Reverse Phase; RMT Remote Driver[4] (See Remote Power Supply, see page 2)
- **STANDARD EFFECTS DEVICE**: 40 Soft Focus Lens
- **OPTIONAL EFFECTS DEVICE**: 00 No Lens[5]; 20 Honeycomb Louver[5]; 30 Clear Glass Lens[5]; 50 Frosted Glass Lens; 60 Frosted Soft Focus Lens; 70 Frosted Linear Spread Lens

[1] Subject to increased lead time
[2] Powder coat only, no plated finishes; custom finishes assigned unique suffix upon receipt of order, consult factory for additional cost

[3] Not available with 90W13A Warm Dim, consult factory for details

[4] Reduces delivered output up to 12% on all lumen packages, 14% on Warm Dim

[5] Not available with 90W13A Warm Dim

MOUNTING OPTIONS - SELECT ONLY ONE (SEE PAGE 3 FOR MOUNTING PROVISION DETAILS)

ROUGH-IN
Concealed mounting plate

☐ **CY2/3 – JBMP**

OR

FINISH-OUT
3" or 4" junction box surface mount kit

☐ **CY2/3 – SMK – _____ – _____**

- **J-BOX**: 3/0 3" j-box; 4/0 4" j-box
- **FINISH**: WH White; BK Black; AB Architectural Bronze[1]; CF Custom Finish[2]

[1] Subject to increased lead time
[2] Powder coat only, no plated finishes; custom finishes assigned unique suffix upon receipt of order, consult factory for additional cost

OR

FINISH-OUT
Ceiling mount j-box for 3/4" EMT conduit (Dry / Damp location only)

☐ **CY3 – CMJB – 2I – 1T – _____ – 3/4**

- **FINISH**: WH White; BK Black; AB Architectural Bronze[1]; CF Custom Finish[1,2]
- **CONDUIT**: 3/4 3/4" conduit

[1] Subject to increased lead time
[2] Powder coat only, no plated finishes; custom finishes assigned unique suffix upon receipt of order, consult factory for additional cost

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CYLINDER CY3-FB

ACCESSORIES

ALTERNATE BAFFLE AND EFFECTS DEVICE
Includes baffle with sealed lens. Must specify baffle finish.

- ☐ **RBA-CY3-**-HCL** Honeycomb Louver [5]
- ☐ **RBA-CY3-**-CGL** Clear Glass Lens [5]
- ☐ **RBA-CY3-**-SFL** Soft Focus Lens
- ☐ **RBA-CY3-**-FGL** Frosted Glass Lens
- ☐ **RBA-CY3-**-FSFL** Frosted Soft Focus Lens
- ☐ **RBA-CY3-**-FLSL** Frosted Linear Spread Lens

****** Baffle finish: Specify **WH** for white, **BK** for black or **AB** for architectural bronze.

[5] Not available with 90W13A Warm Dim

REPLACEMENT SUCTION TOOL
Included with each order (1 per 10 fixtures).

- ☐ **CY-SQ-TOOL-SUCTION** Baffle assembly removal tool

REPLACEMENT OPTICS
Interchangeable optics accessible by removing snoot.

- ☐ **RO-70-15-1** 15° optic [3]
- ☐ **RO-70-25-1** 25° optic
- ☐ **RO-70-40-1** 40° optic
- ☐ **RO-70-60-1** 60° optic

[3] Not Available with 90W13A Warm Dim, consult factory for details

BLANK OFF PLUG
For use with ceiling mount j-box.

☐ **CY3 – CMJB –** [3/4] **– PLG –** [ ]

- EMT SIZE: **3/4** 0.75" conduit plug
- FINISH: **WH** White; **BK** Black; **AB** Architectural Bronze [1]; **CF** Custom Finish [1,2]

[1] Subject to increased lead time
[2] Powder coat only, no plated finishes; custom finishes assigned unique suffix upon receipt of order, consult factory for additional cost

REMOTE POWER SUPPLY - REDUCES DELIVERED OUTPUT UP TO 12% ON ALL LUMEN PACKAGES, 14% ON WARM DIM

PS – **RMT** – [ ] – [ ]

- PS: CYLINDER REMOTE POWER SUPPLY
- RMT: INSTALLATION TYPE — **RMT** Remote
- SYSTEM CONFIGURATION [6]: **80C25A**, **80C32A**, **90W13A**, **90C20A**, **90C27A**, **97C19A**, **97C24A**
- INPUT VOLTAGE: **1** 120V 60Hz; **U** 120V-277V 50Hz/60Hz
- POWER SUPPLY: **L23** Lutron Forward Phase 2-Wire; **LH1** Lutron Hi-lume 1% EcoSystem with Soft-On, Fade-to-Black; **AN4** 0-10V Analog; **EA2** eldoLED 0-10V Analog, Loganthmic; **ED1** eldoLED DALI; **ND4** Non-Dimming [7]

[6] Must match system configuration selected for cylinder
[7] Not available with 90W13A Warm Dim

EMERGENCY LIGHTING - REMOTE MOUNT ONLY

- ☐ **EMB-S-20/25-120/277-LEDX** 20/25 watt max capacity, 120 or 277 VAC 60Hz
- ☐ **EMB-S-100-120-LEDX** 100 watt max capacity, 120 VAC 60Hz
- ☐ **EMB-S-100-277-LEDX** 100 watt max capacity, 277 VAC 60Hz
- ☐ **EMB-S-250-120/277-LEDX** 250 watt max capacity, 120 or 277 VAC 60Hz

During disruption of main power, emergency battery inverter provides temporary 120V or 277V to fixture.

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[DATE OF REV: 053119]

TECHNICAL

CONSTRUCTION

Cylinder: Machined aluminum body; extruded aluminum internal heat-sink; painted finishes are granulated powder coat.
CY3-CMJB: Die-cast aluminum body; painted finishes are granulated powder coat.
Remote Power Supply: 22 Gauge galvanized steel.

LED

Proprietary Citizen 2 step MacAdam ellipse LED module available in 80+, 90+ and 97+ CRI configurations in color temperatures of 2700K, 3000K, 3500K and 4000K. Average rated lamp life of 50,000 hours. LED and driver assemblies are field-replaceable.

WARM DIM LED

Proprietary 3 step MacAdam ellipse warm dim LED module available in 90+ CRI configuration. 3200K at full brightness, warming to 1800K at full dim. Average rated lamp life of 50,000 hours. LED and driver assemblies are field-replaceable.

POWER SUPPLY PERFORMANCE AND DIMMING INFORMATION

Power Supply	CA2	CE2	L23	LH1	AN4	ND4	EA2	ED1
Minimum °C	-20 °C	-20 °C	0 °C	0 °C	-20 °C	-20 °C	-20 °C	-20 °C
Maximum °C	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Dimming %	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	0.1%	0.1%

Note: For EA2 and L23 drivers consult chart on page 5 to confirm appropriate dimming curve for compatibility with selected control.

MOUNTING

Cylinder is supplied with a mounting adaptor plate, which integrates with required additional mounting accessories specified separately according to field application conditions, providing a minimalist transition from standard 3/0, 4/0, or 4" square junction boxes and accommodating ceiling thicknesses of 0.44" (7/16", 12mm) to 0.75" (3/4", 19mm). Ceiling-mount junction box available for 3/4" (19mm) conduit and feature concealed internal clamps for clean fitting-free conduit exit and entry.

LISTING

cTUVus listed to UL1598 standard for Dry / Damp locations. Title 24 JA8-2016 Listed.

WARRANTY

Manufacturer's 1-year warranty guarantees product(s) listed to be free from defects in material and workmanship under normal use and service. 5-year warranty on LED and power supply to operate with 70% of the original flux and remain within a range of 3 duv. 10-year Lutron Advantage limited warranty available on Lutron equipped systems. Warranty period begins from the date of shipment by Seller and conditional upon the use of manufacturer-supplied power supply. Consult website for full warranty terms and conditions.

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CYLINDER CY3-FB

YS13

Lam Partners ARCHITECTURAL LIGHTING DESIGN

CYLINDER

A LUMINAIRE
Machined aluminum body with integrated heat sink and LED. Conceals hidden twist-on mounting hardware. Power supply may be integral or remote mount.

B OPTICS
Proprietary field-changeable optics available in 15°, 25°, 40° & 60° beams.

C EFFECTS DEVICES
Cylinder baffle lens assembly can accept 1 lens sealed in place; soft focus lens included as standard. Suction tool provided for removal of baffle lens assembly.

MOUNTING

D CY2/3-JBMP *
Mounting plate (concealed) for standard j-box. To be installed during rough-in prior to substrate. Fixture to mount flush with minimalist transition to ceiling.

E CY2/3-SMK-3/0-(finish) *
Surface mount kit includes mounting plate and 4" concealer plate that installs between fixture and standard 3" 3/0 j-box for existing applications where standard j-box cutout is to be concealed.

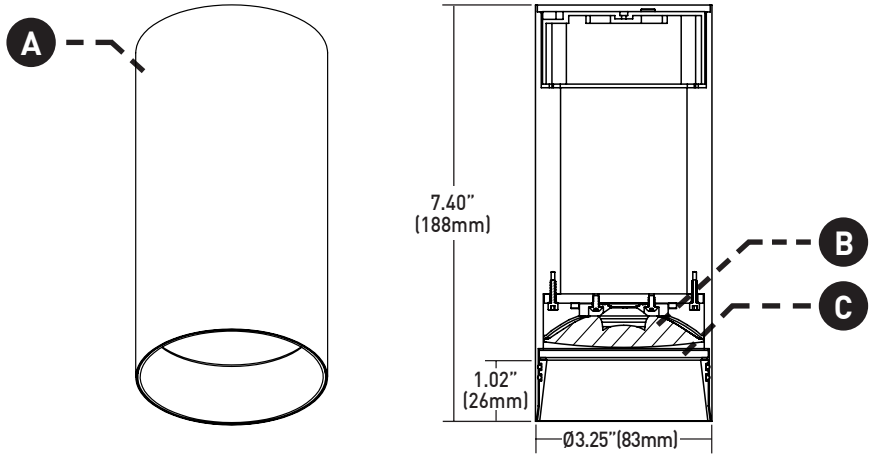
F CY2/3-SMK-4/0-(finish) *
Surface mount kit includes mounting plate and 5" concealer plate that installs between fixture and standard 4" 4/0 j-box for existing applications where standard j-box cutout is to be concealed.

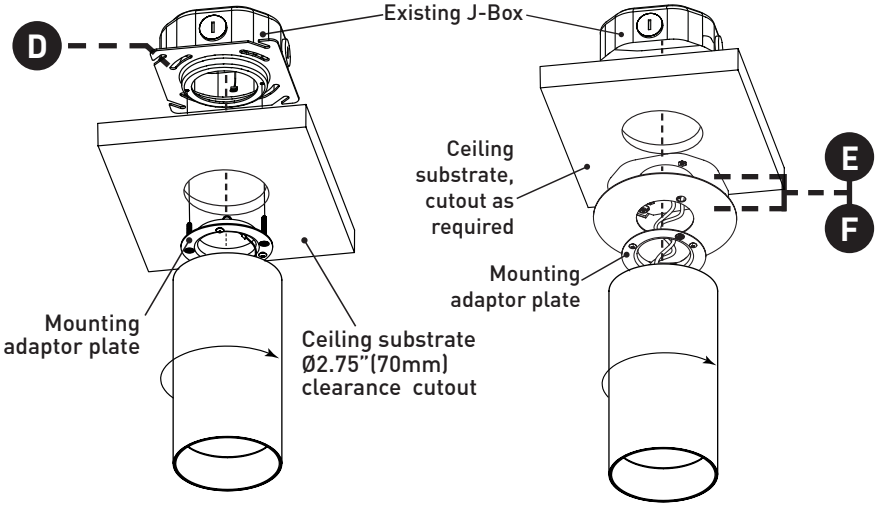
G CY3-CMJB-2I-1T-(finish)-3/4
Ceiling mount junction box perfectly matches the cylinder profile for a continuous, integrated look where exposed ceiling mount junction box and conduit applications apply. For use with 3/4" EMT conduit only. Features two conduit entrances on either side and 1 conduit entrance on top of j-box. J-box is IP10 rated; painted finishes only. One blank off plug included; additional plugs may be ordered. Conforms to NYC code.

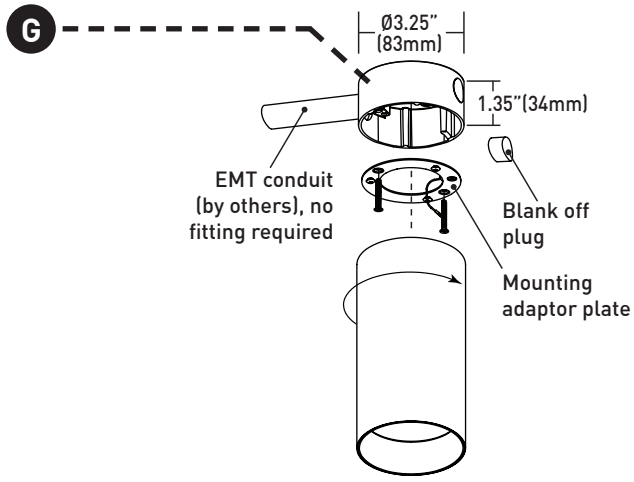
MOUNTING NOTES

* CY2/3-JBMP and CY2/3-SMK-3/0 & 4/0 not recommended for use with pancake style j-box.

DIMENSIONS / DRAWINGS





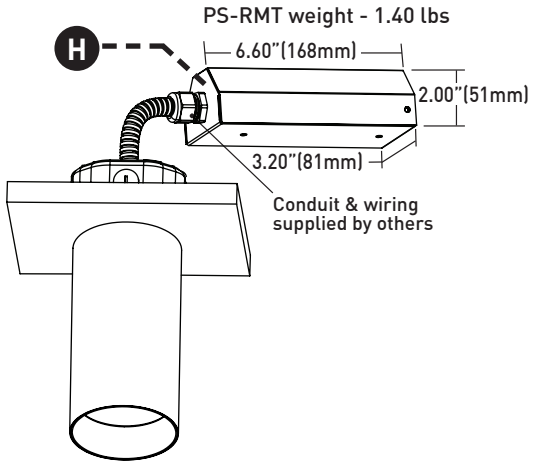


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REMOTE POWER SUPPLY

H PS-RMT
Remote power supply provides additional driver options, see page 2 for selections. Mounting device still required. Consult factory for maximum allowable secondary run lengths between PS-RMT and cylinder.



Fixture weight - 2.20 lbs

DIMMING COMPATIBILITY

eldoLED DRIVER COMPATIBILITY

Power supply **EA2** **Dimmer / Switch Control Manufacturer**	**Family/Model #**	**Recom-mended Curve**
Busch-Jaeger	2112U-101	Logarithmic
Jung	240-10	Logarithmic
Leviton Lighting Controls	IP710-DLX	Logarithmic
Lightolier Controls	ZP600FAM120	Logarithmic
Lutron Electronics	Nova T® - NTFTV	Linear
Lutron Electronics	Diva® - DVTV	Linear
Lutron Electronics	Nova® - NFTV	Linear
Merten	5729	Logarithmic
Pass & Seymour	CD4FB-W	Logarithmic
The Watt Stopper	DCLV1	Logarithmic
Sensor Switch	nIO EZ	Linear
Synergy	ISD BC	Logarithmic
Lighting Control Systems		
Lutron Electronics	GrafixEye® GRX-TVI w GRX3503	Linear
Lutron Electronics	Energy Savr Node™ - QSN-4T16-S	Linear
Lutron Electronics	TVM2 Module	Linear
Crestron®	GLX-DIMFLV8	Logarithmic
Crestron®	GLXP-DIMFLV8	Logarithmic
Crestron®	GLPAC-DIMFLV4-*	Logarithmic
Crestron®	GLPAC-DIMFLV8-*	Logarithmic
Crestron®	GLPP-DIMFLVEX-PM	Logarithmic
Crestron®	GLPP-1DIMFLV2EX-PM	Logarithmic
Crestron®	GLPP-1DIMFLV3EX-PM	Logarithmic
Crestron®	DIN-AO8	Logarithmic
Crestron®	DIN-4DIMFLV4	Logarithmic
Crestron®	CLS-EXP-DIMFLV	Logarithmic
Crestron®	CLCI-1DIMFLV2EX	Logarithmic
ABB	SD/S 2.16.1	Logarithmic

LUTRON DRIVER COMPATIBILITY

Power supply **L23 Product Family**	**Part No.**	**Fixtures Per Control (120V only)**
Maestro WirelessR 600 W dimmer	MRF2-6ND-120-	1-8
Maestro WirelessR 1000 W dimmer	MRF2-10ND-120-	1-13
Caséta® Wireless Pro 1000 W dimmer	PD-10NXD-	1-13
GRAFIK T™ CL® dimmer	GT-250M-, GTJ-250M-	1-10
HomeWorks® QS adaptive dimmer	HQRD-6NA-	1-8
HomeWorks® QS 600 W dimmer	HQRD-6ND-	1-8
HomeWorks® QS 1000 W dimmer	HQRD-10ND-	1-13
RadioRA® 2 adaptive dimmer	RRD-6NA-	1-8
RadioRA® 2 1000 W dimmer	RRD-10ND	1-13
myRoom™ DIN power module	MQSE-4A1-D	1-6 (per output), 1A max driver input current
HomeWorks® QS DIN power module	LQSE-4A1-D	1-6 (per output), 1A max driver input current
HomeWorks® QS wallbox power module	HQRJ-WPM-6D-120	2-10 (per output), 26 total per module
HomeWorks® wallbox power module	HWI-WPM-6D-120	2-10 (per output), 26 total per module
GRAFIK Eye® QS control unit	QSGR-, QSGRJ-	2-10 (per output), 26 total per module
GRAFIK Eye® 3000 control unit	GRX-3100-, GRX-3500-	2-10 (per output), 26 total per module
RPM-4U module (LCP, HomeWorks® QS, GRAFIK Systems™, Quantum®)	HW-RPM-4U-120, LP-RPM-4U-120	2-26 (per output), 26 total per module
RPM-4A module (LCP, HomeWorks® QS, GRAFIK Systems™, Quantum®)	HW-RPM-4A-120, LP-RPM-4A-120	1-13 (per output), 26 total per module
GP dimming panels	Various	1-26
Ariadni CL 250W dimmer	AYCL-253P-	1-8
Diva CL 250W dimmer	DVCL-253P- DCSCCL-253P-	1-8
Nova T CL 250W dimmer	NTCL-250-	1-10

LUTRON
2016 OEM ADVANTAGE ACCOUNT

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YW3
Lam Partners

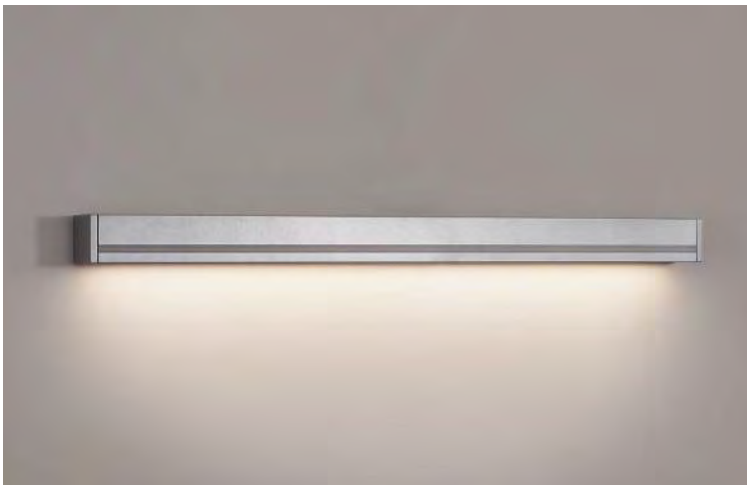
OW2480 – PASSAGE™
Mullion Mount with Remote Power Supply

VISA LIGHTING

Type: Project: VisaLighting.com/products/Passage

Fill in shaded boxes using information listed below

Order Code:	OW2480		–	MVOLT					
	MODEL	Ⓐ SOURCE		VOLTAGE	Ⓑ OPTIC OPTION		Ⓒ FINISH		Ⓓ OPTION



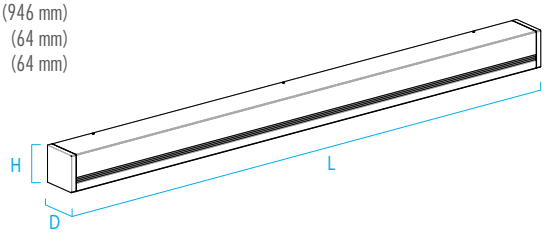
Passage is a sleek outdoor fixture for mounting horizontally over doorways, on facades, along paths of egress and window mullions.

DIMENSIONS

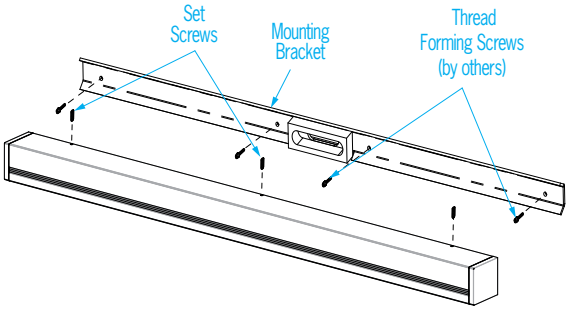
Depth is measured from wall to front of fixture

L = Length H = Height D = Depth

L	37-1/4″	(946 mm)
H	2-1/2″	(64 mm)
D	2-1/2″	(64 mm)



MULLION MOUNTING DETAIL



Ⓐ SOURCE (Select one) and VOLTAGE

MVOLT fixture accepts 120 through 277 input voltage
Dimmable 0-10V to 1%
82CRI, within 3-step MacAdam

Source	CCT	FT Delivered Lumens	LUM Delivered Lumens	Power (Watts)	Voltage
L30K-L	3000K	900	650	14	**MVOLT**
L35K-L	3500K				
L40K-L	4000K				
L30K-H	3000K	2700	1900	40	
L35K-H	3500K				
L40K-H	4000K				

Ⓑ OPTIC OPTION (Select one)

LUM Luminous Lens **FT** Forward Throw Optic

Ⓒ FINISH OPTIONS (Select one trim finish)

See page 3 for color chart

Powder Coat Painted Finishes (Standard)

AG7038	Agate Grey	**GLIM**	Glimmer	**PB1035**	Pearl Beige
BMAT	Bronze Matte	**GSIL**	Graphite Silver	**RUST**	Rust
BRNZ	Bronze	**GW9002**	Grey White	**SUNG**	Sungold
BSIL	Blade Silver	**HTHR**	Heather	**TW9016**	Traffic White
CVBL	Cove Blue	**JB9005**	Jet Black		
CW9001	Cream	**OBRZ**	Old Bronze		

Wood Sublimated Metal Finishes (Premium)

MCA Mediterranean Cherry Metal Based Wood Alternative
NOA Natural Oak Metal Based Wood Alternative

Ⓓ OPTION

⚠ Option availability may be interdependent with Voltage, Source or Other Options

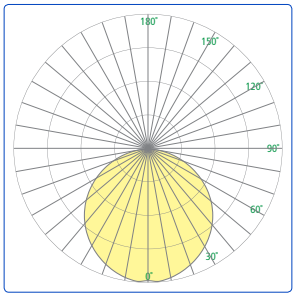
DS Dual circuit switching (includes 2 drivers).
Lumen output and wattage is split in half for each circuit

IP65 Rated · LED · ADA Compliant · ETL Listed · 5 Year Warranty

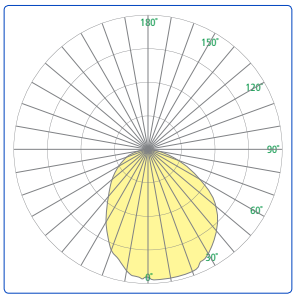
OW2480 – PASSAGE
Mullion Mount with Remote Power Supply

VISA LIGHTING

Photometrics



LUM (Luminous Lens)

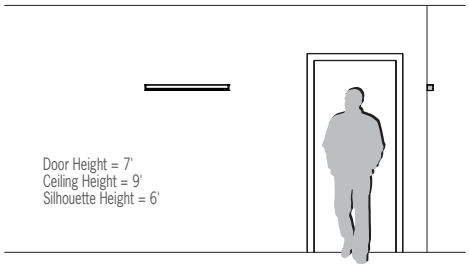


FT (Forward Throw Optic)

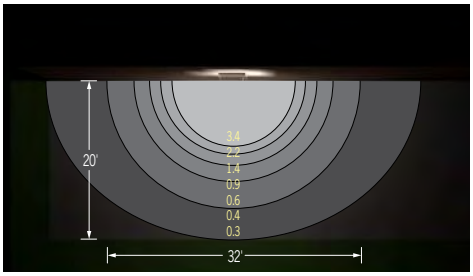
Technical Information

- Modular design for replacement of the LED source and power supply
- High or low lumen output options
- Light Engines by Visa Lighting
- Luminous or Forward Throw output
- Remote power supply included (suitable for indoor, Type IC)
- Orient as uplight or downlight
- Optional dual circuit switching
- IP65 rated
- Bracket mounting system simplifies installation and maintenance
- Window mullion mount; minimum mullion width 2.5″
- Tamper resistant fasteners
- Polycarbonate diffuser
- No VOC powder coat paint finish; metal based sublimated wood look finish
- ETL Listed for wet location mounting 4′ above grade

Relative Scale Drawing

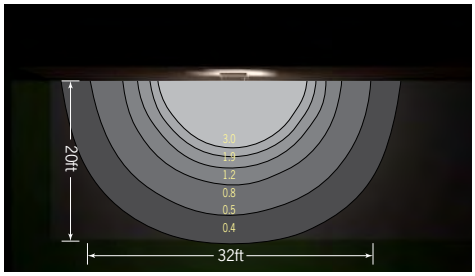


Path of Egress – Luminous Lens



OW2482 –H Downlight, Mounted at 10′ AFF, .70 light loss factor used

Path of Egress – Forward Throw

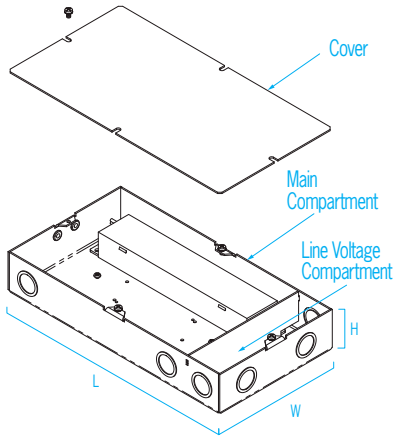


OW2482 –H Downlight, Mounted at 10′ AFF, .70 light loss factor used

Wood Sublimated Metal Finish



Remote Power Supply Enclosure



L	12″	(305 mm)
W	6-3/8″	(162 mm)
H	2″	(51 mm)

YW3
Lam Partners ARCHITECTURAL LIGHTING DESIGN

OW2480 – PASSAGE
Mullion Mount with Remote Power Supply

VISA LIGHTING

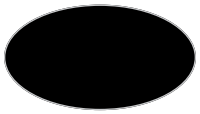
Specify color code when ordering. For accurate color matching, individual paint and finish samples are available upon request
For additional information see VisaLighting.com/materials-finishes

Painted Finishes (Standard)

TW9016
Traffic White (RAL9016)

CW9001
Cream (RAL9001)

GW9002
Grey White (RAL9002)



JB9005
Jet Black (RAL9005)



AG7038
Agate Grey (RAL7038)



HTHR
Heather



CVBL
Cove Blue



BSIL
Blade Silver



GSIL
Graphite Silver



GLIM
Glimmer



SUNG
Sungold



BRNZ
Bronze



OBRZ
Old Bronze



BMAT
Bronze Matte



PB1035
Pearl Beige (RAL1035)



RUST
Rust

Wood Sublimated Metal Finishes (Premium)



MCA
Mediterranean Cherry
Metal Based
Wood Alternative



NOA
Natural Oak
Metal Based
Wood Alternative

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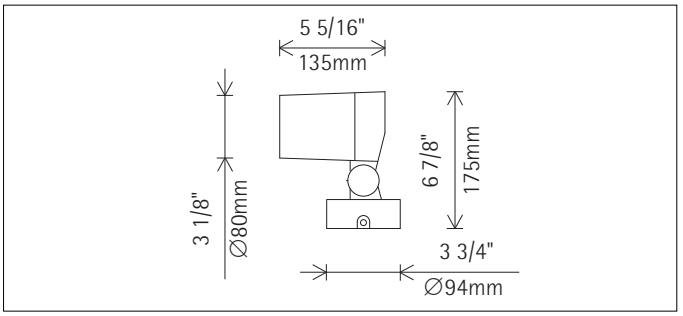
ERCO

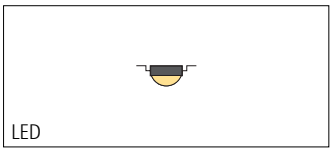
Kona XS Projector

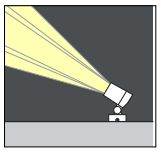
YW5

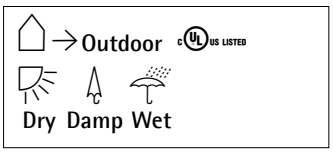
Lam Partners
ARCHITECTURAL LIGHTING DESIGN

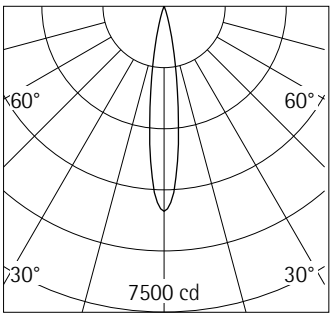












h(ft)	E(fc)	D
		16°
6	140	1'8"
12	35	3'4"
18	16	5'1"
24	9	6'9"
30	6	8'5"

34832.023 Graphit m
LED 6W 630lm 3000K warm white
Switchable
Version 4
Spherolit lens, spot

Product description
Housing, hinge and mounting plate: corrosion-resistant aluminum, No-Rinse surface treatment. Double powder-coated. Optimized surface for reduced accumulation of dirt. Hinge with internal wiring, 130° tilt. Mounting plate rotatable through 350°.
Control gear 120V/277V, 60Hz. 1 cable entry. 3 terminals
LED module: high-power LEDs on metal-core PCB. Collimating lens made of optical polymer.
Luminaire head with non-reflective safety glass: corrosion-resistant aluminum, double powder-coated. Internal anti-glare cone, polymer, black.
Suitable for wet location (IP65): dust-proof and water jet-proof.
Weight 2.43lbs / 1.10kg
Housing temperature 99°F / 37°C
Maximum wind load area 0.18ft^2 / 0.017m^2
Version with 3000K CRI 95 or 2700K, 3500K, 4000K CRI 92 available on request.

Technical data

Luminous flux of the luminaire	520lm
Connected load	8.0W
Luminaire efficacy	65lm/W
Color deviation	1.5 SDCM
Color rendition index	CRI 92
Lumen maintenance (LED manufacturer specifications)	L90/B10 ≤50000h L90 ≤100000h
LED failure rate	0.1% ≤50000h
LMF	E
Temperature on the cover glass	99°F / 37°C

For your regional contact in the ERCO Sales network click here
www.erco.com/contact

Technical region: 120V/60Hz, 277V/60Hz
We reserve the right to make technical and design changes.
Edition: 20.02.2019
Current version under
www.erco.com/34832.023

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Kona XS Projector

Planning data

Cleaning (a)	1				2				3			
Ambient conditions	P	C	N	D	P	C	N	D	P	C	N	D
LMF	0.96	0.94	0.90	0.86	0.93	0.91	0.86	0.81	0.92	0.90	0.84	0.79
RSMF	0.99	0.97	0.95	0.92	0.98	0.97	0.95	0.92	0.98	0.97	0.95	0.92

Hours of operation (h)	1000	5000	10000	20000	30000	40000	50000
LLMF	1.00	0.99	0.98	0.96	0.94	0.92	0.90
LSF	1	1	1	1	1	1	1

MF	LMFxRSMFxLLMFxLSF
MF	Maintenance Factor
LMF	Luminaire Maintenance Factor
RSMF	Room Surface Maintenance Factor
LLMF	Lamp Lumens Maintenance Factor
LSF	Lamp Survival Factor
P	Room pure
C	Room clean
N	Room normal
D	Room dirty

Technical data based on international standards and directives

IEC 60598	Luminaires – Parts 1 + 2: General requirements, particular requirements and tests
IEC 62031	LED modules for general lighting – Safety specifications
IEC 62471	Photobiological safety of lamps and lamp systems
UL 1598	Luminaires
UL 1574	Standard for Track Lighting Systems
UL 8750	Standard for Light Emitting Diode (LED) Equipment for Use in Lighting Products
IES LM-79-08	Electrical and Photometric Measurements of Solid-State Lighting Products
IES LM-80-08	Measuring Lumen Maintenance of LED Light Sources
CIE 13	Method of measuring and specifying color rendering properties of light sources

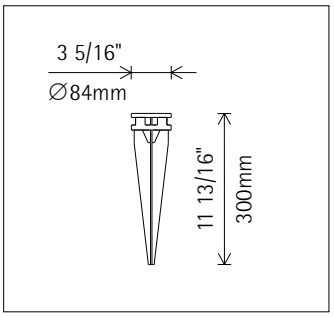
All technical data are subject to industry standard tolerances.
See also www.erco.com/erco-led

Kona XS Projector

Accessories

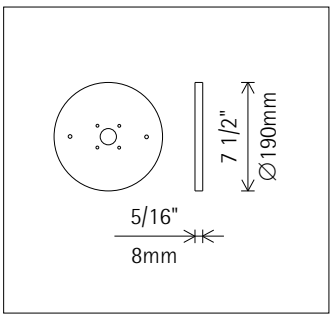


33973.000
Ground spike
Metal, hot-dip galvanised.
Cable entry.
Weight 1.06lbs / 0.48kg





34853.000
Mounting plate
Corrosion-resistant cast aluminum, No-Rinse surface treatment. Graphit m, double powder-coated.



Specification Sheet

lumenbeam

Large

WHITE AND STATIC COLOURS

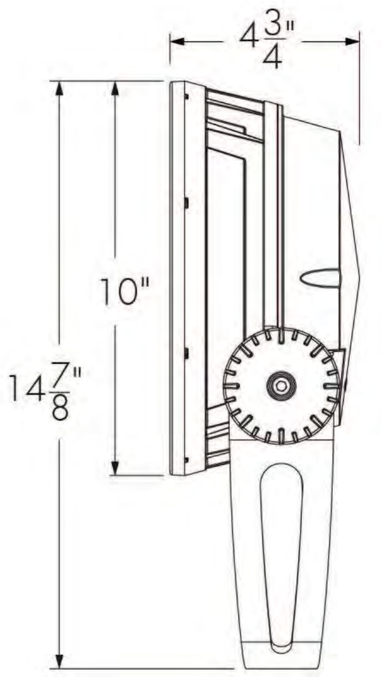
Project Name _____ **Qty** _____

Type _____ **Catalog / Part Number** _____





Front view



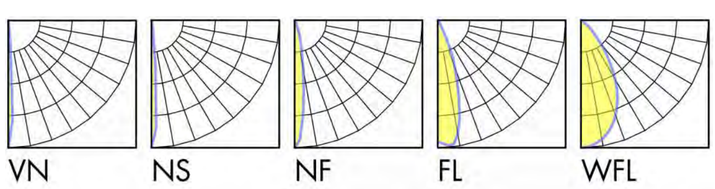
Side view

Photometric Summary

4000K	Delivered output (lm)	Intensity (peak cd)
VN	3,271	144,794
NS	2,896	98,556
NF	2,673	19,635
FL	2,692	7,448
WFL	2,623	2,480

Photometric performance is measured in compliance with IESNA LM-79-08.

Optics



Control

ON/OFF 1-10V DALI

lumentalk DMXrdm EcoSystem Enabled

Rating

c UL us CE RoHS

Description

The Lumenbeam Large is a high-performance, 50W luminaire for solving complex lighting challenges such as multi-story building exteriors. It offers a wide array of options including a choice of optics for floodlighting or accent lighting; a number of colour temperatures and colours; various mounting options, accessories, spread lenses and controls.

Features

Colour and Colour Temperature	2200K, 2700K, 3000K, 3500K, 4000K, 5700K, Red, Green, Blue
Optics (nominal distribution)	6°, 10°, 20°, 40°, 60°
Optical Option	Linear spread lens horizontal distribution, Linear spread lens vertical distribution
Options	Short Yoke, 3G ANSI C136.31 Vibration Rating for bridge applications, Corrosion-resistant coating for hostile environments
Power Consumption	50 W
Warranty	5-year limited warranty

Performance

Delivered Output	3,271 lm (4000K, VN optic)
Delivered Intensity	144,794 cd at nadir (4000K, VN optic)
Illuminance at Distance	Minimum 1 fc at 381 ft distance (4000K, VN optic)
Colour Consistency	2 SDCM
Colour Rendering	CRI 80+
Lumen Maintenance	L70 120,000 hrs (Ta 25 °C)

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Specification Sheet

lumenbeam

Large

WHITE AND STATIC COLOURS

Physical

Housing Material	Low copper content high pressure die-cast aluminium
Yoke Material	Heavy aluminium (standard yoke included)
Lens Material	Clear tempered glass
Hardware Material	Stainless steel
Gasket Material	Silicone
Surface Finish	Electrostatically applied polyester powder coat
Weight	12 lbs
EPA	Front = 0.94 sq ft, Side = 0.56 sq ft

Electrical and control

Voltage	100 to 277 volts
Fixture Cable	Power and data in 1 cable, 3 ft cord standard (5 x 1.5 sq mm), other lengths available
Inrush Current (peak)	55A @230VAC
Resolution (DMX/RDM)	Per fixture, 8-bit or 16-bit
Control	On/Off control, Lumentalk, 1-10V dimming, DALI dimming, Lutron® EcoSystem® Enabled dimming, DMX/RDM enabled

Environmental

Operating Temperature	-13 °F to 122 °F
IP Rating	IP66
IK Rating	IK10

Accessories (order separately)

Control Boxes	Power and control box - daisy chain configuration, Power and control box - star configuration
Control Systems	Lumentouch 2.0™, Lumencue
Diagnostic and Addressing Tools	LumenID, LumentalkID

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Specification Sheet

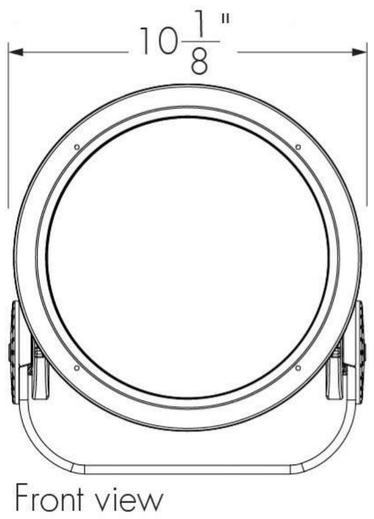
lumenbeam

Large

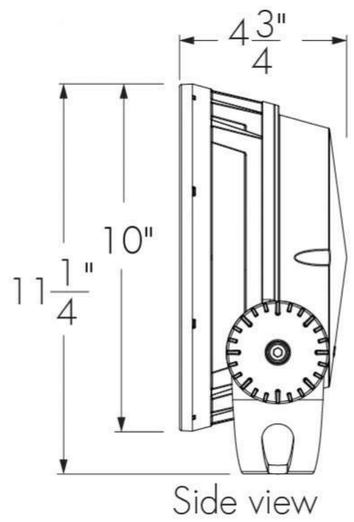
WHITE AND STATIC COLOURS

Mounting options

SY - Short yoke



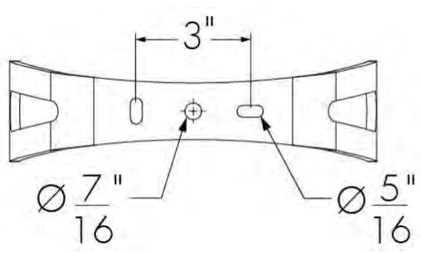
Front view



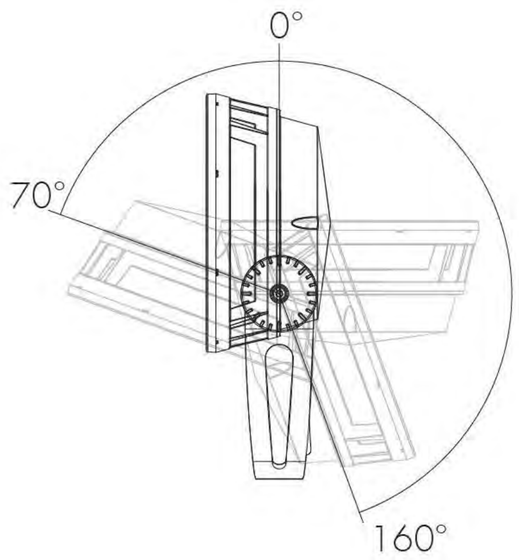
Side view

Mounting details

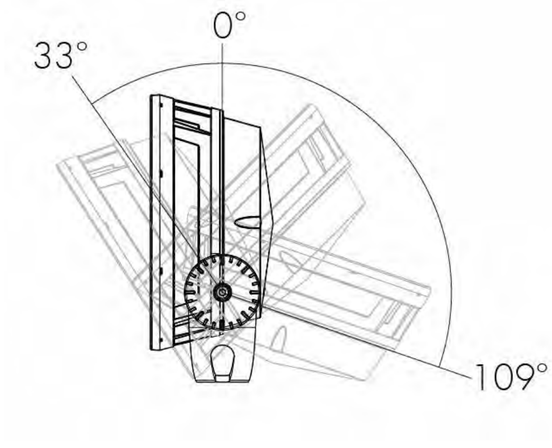
Mounting hole pattern - standard and short yoke



Adjustable pivot limits



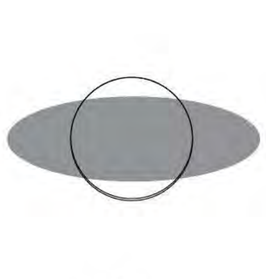
Standard yoke



Short yoke

Optical options

LSLH - Linear spread lens horizontal distribution
LSLV - Linear spread lens vertical distribution



LSLH



LSLV

	Beam angle with LSLH/LSLV
VN	8° x 60°
NS	9° x 60°
NF	18° x 65°
FL	32° x 72°

Factory installed, not adjustable on site. Not available for WFL optic.
See 'Optical Accessories' section for field adjustable spread lens (LSLA).

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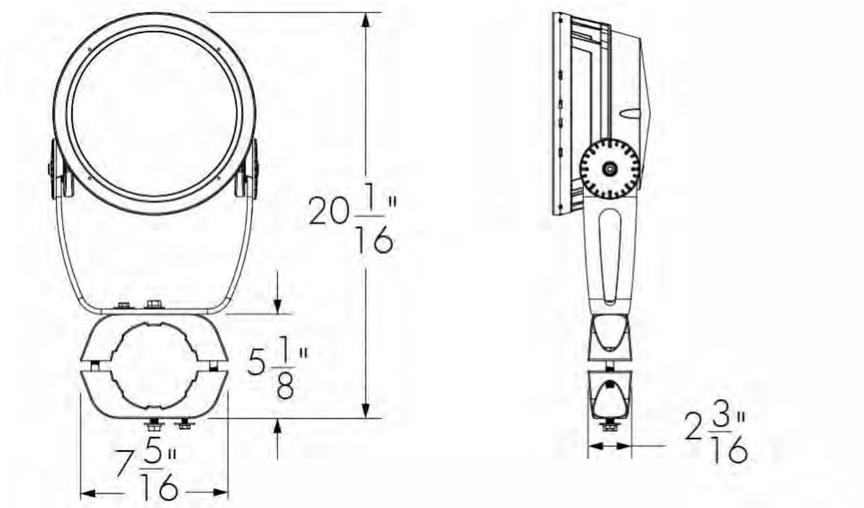
lumenbeam

Large

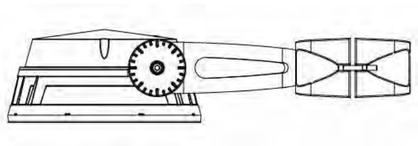
WHITE AND STATIC COLOURS

Mounting accessories (order separately)

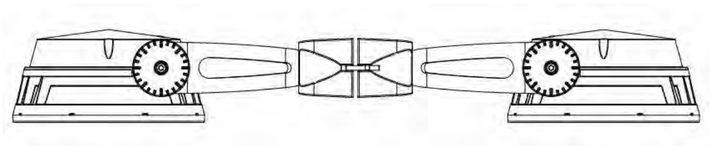
Round pole mounting accessory



PM4 model shown.
Consult factory for square pole section.



PM4-1, PM4.5-1, PM5-1 - Round pole mounting accessory - single fixture

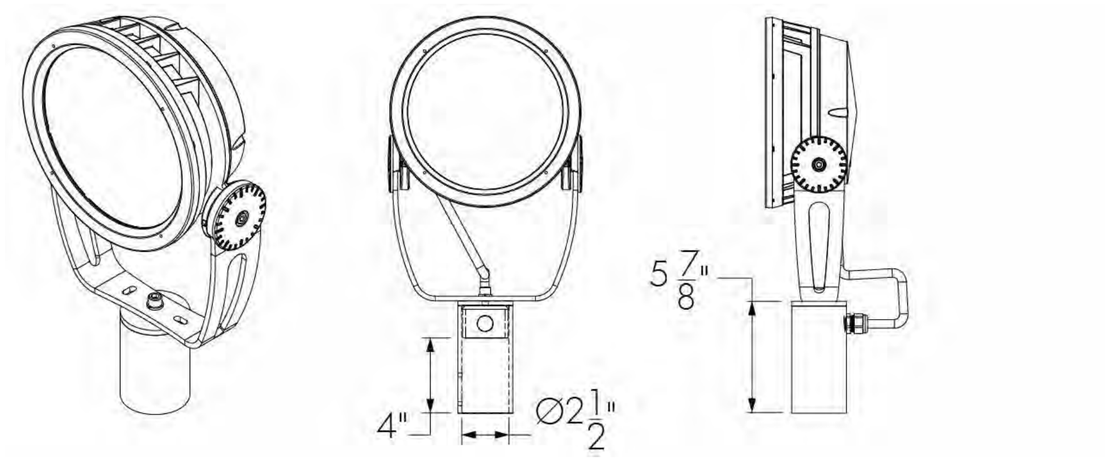


PM4-2, PM4.5-2, PM5-2 - Round pole mounting accessory - twin fixures
*One bracket assembly is supplied per 2 fixtures unless otherwise specified.

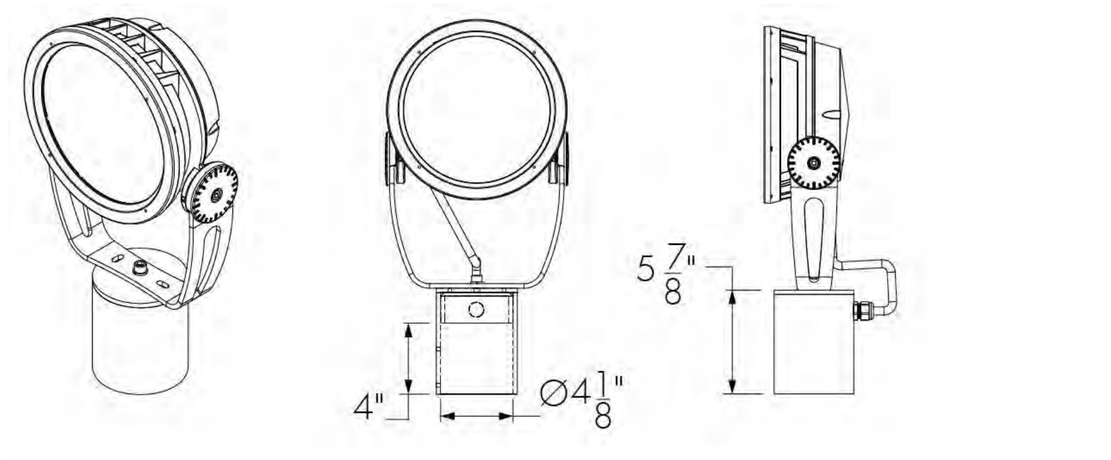
	PM4	PM4.5	PM5
For pole Ø	4" ± 1/16"	4.5" ± 1/16"	5" ± 1/16"

Consult factory for other pole diameters.

Tenon adapter



TN2 - Tenon adapter to fit on 2 3/8 in O.D. tenon



TN4 - Tenon adpater to fit on 4 in O.D. tenon

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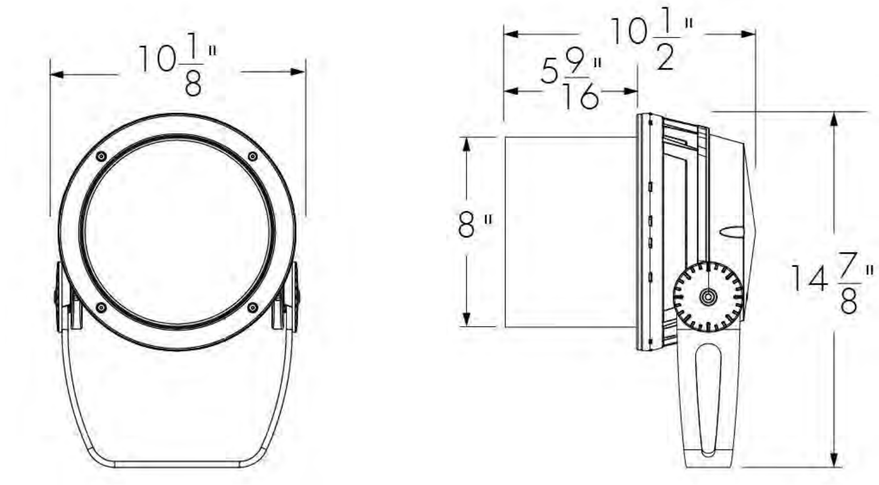
Large

WHITE AND STATIC COLOURS

Optical accessories (order separately)

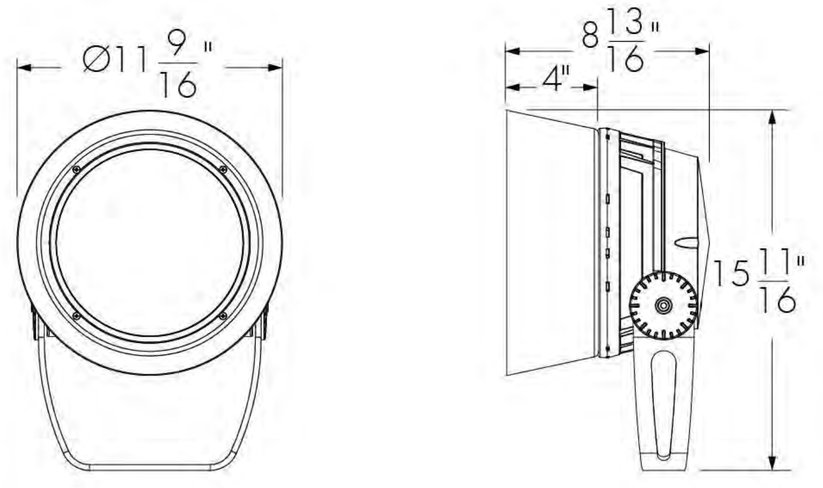
Installed optical accessories will affect the maximum pivot limits for each mounting option, consult factory for details.

SN - Snoot



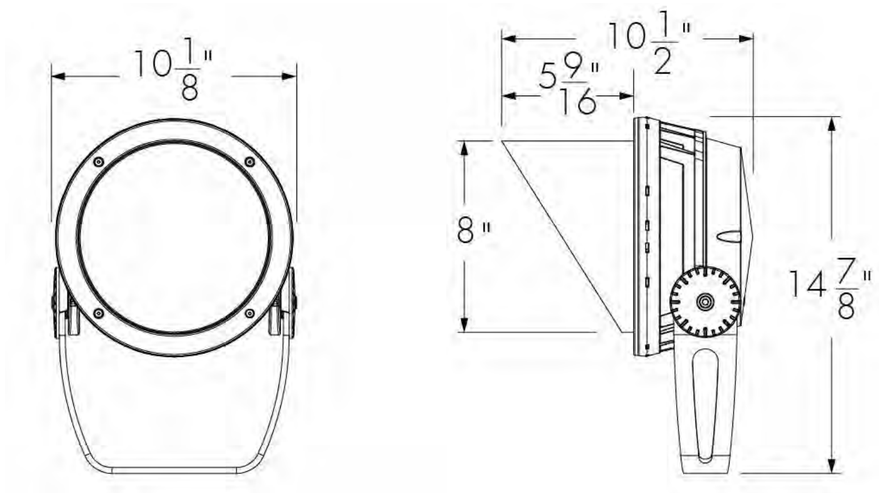
LBLSN-FINISH-BK
Interior surface painted black. Please specify desired exterior FINISH from list of available finishes.

SNW - Snoot wide



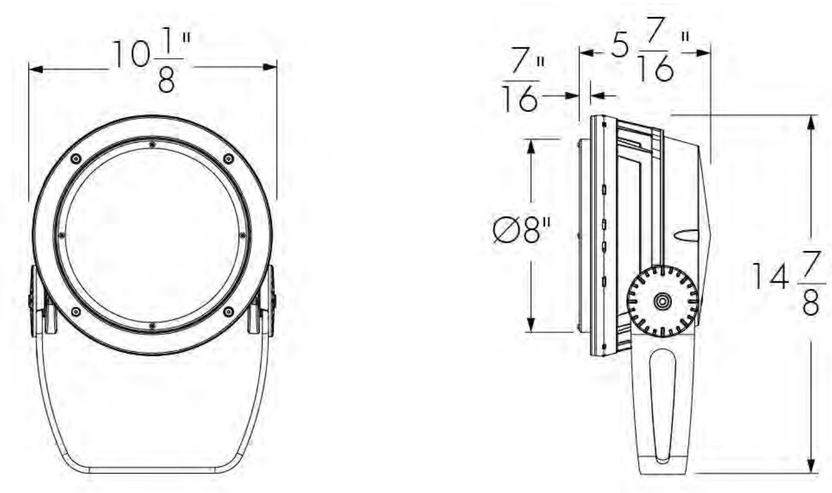
LBLSNW-FINISH-BK
Interior surface painted black. Please specify desired exterior FINISH from list of available finishes.

VS - Visor



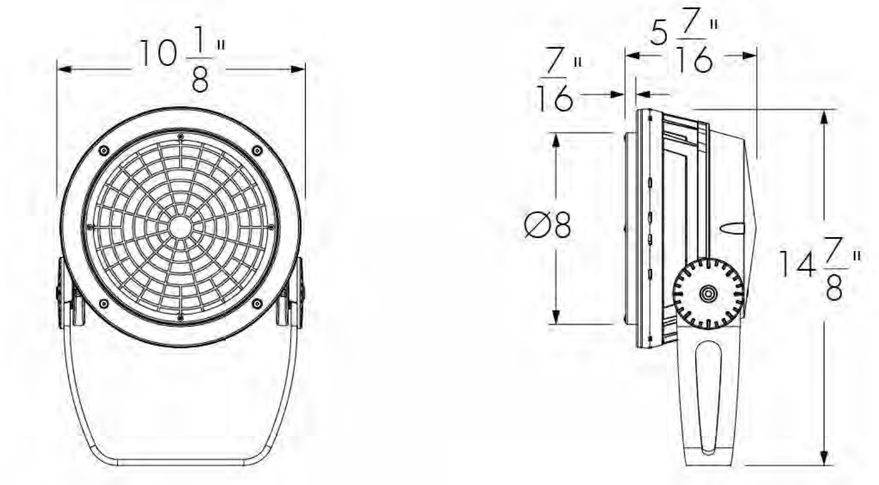
LBLVS-FINISH-BK
Interior surface painted black. Please specify desired exterior FINISH from list of available finishes.

LSLA - Linear spread lens adjustable



LBLLSLA-FINISH
Please specify desired exterior FINISH from list of available finishes.

WG - Wire guard



LBLWG-FINISH
Please specify desired exterior FINISH from list of available finishes.

Accessory combinations

+	Snoot	Snoot wide	Visor
Linear spread lens adjustable	YES	NO*	YES
Wire guard	YES	NO	YES

Accessory combinations must be ordered together on a single line
Ex: A snoot + wire guard combination order code is LBLSNWG-BK-BK.
*Consult factory for a linear spread lens adjustable + snoot wide combination.

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WHITE AND STATIC COLOURS

Available exterior finishes for optical accessories

BK - Black Sandtex®
BRZ - Bronze Sandtex®
SI - Silver Sandtex®
WH - Smooth white
BKTX - Textured black
BRZTX - Textured bronze, non-metallic
GRATX - Textured medium grey
GRNTX - Textured green
WHTX - Textured white
CC - Custom colour and finish (please specify RAL colour)*

*Lumenpulse offers a wide selection of RAL CLASSIC (K7) colours with a smooth texture and high-gloss finish. Please consult factory for a list of available K7 colours, other RAL textures and glosses, or to match alternate colour charts. Final colour matching results may vary.

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WHITE AND STATIC COLOURS

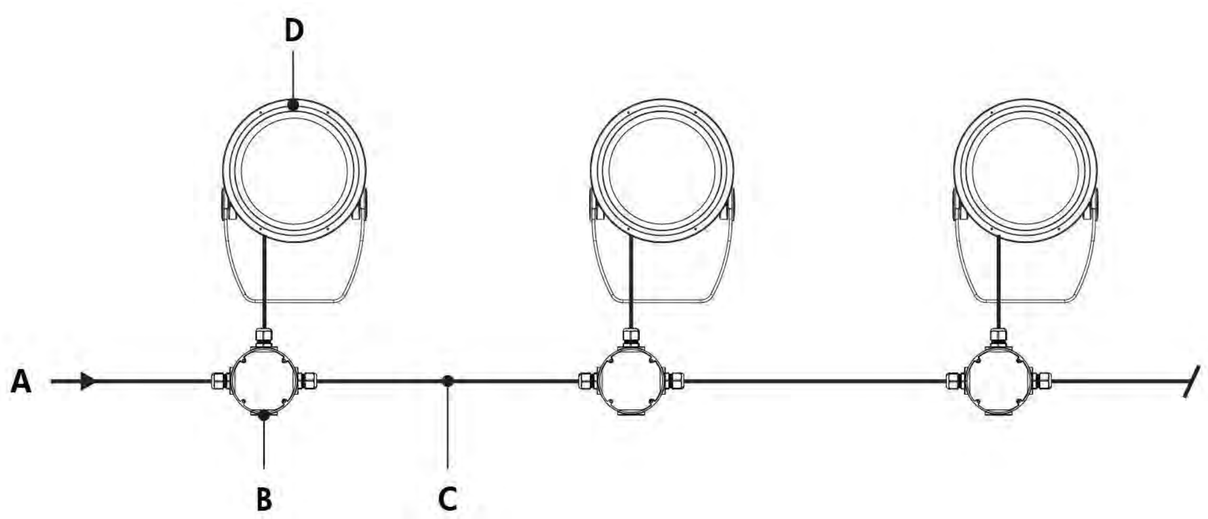
Typical wiring diagrams

Wiring colour code

CE Colour Code	USE
Yellow/Green Brown Blue Black Grey	Ground Live 100-277V Neutral 1-10V / Data + 1-10V / Data -

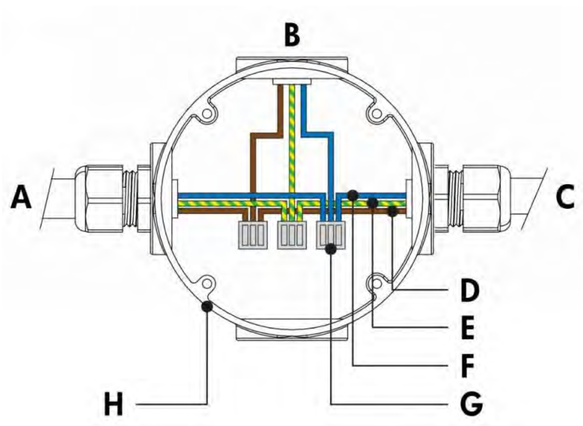
CE Class II Colour Code	USE
Brown Blue Black 1 Black 2 Grey	Live 100-277V Neutral Signal common (DMX/RDM only) 1-10V / Data + 1-10V / Data -

On/Off control (NO)



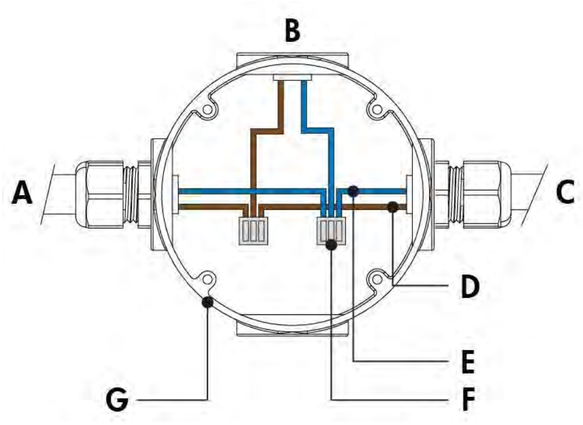
A - Power input (100-277V)
B - Junction box (by others)
C - Power wiring (by others)
D - Lumenbeam Large

On/Off control (NO) - wiring detail - CE



A - Power input or from previous fixture
B - To fixture
C - To next fixture
D - Live
E - Ground
F - Neutral
G - Terminal connector (by others)
H - Junction box (by others)

On/Off control (NO) - wiring detail - CE Class II option



A - Power input or from previous fixture
B - To fixture
C - To next fixture
D - Live
E - Neutral
F - Terminal connector (by others)
G - Junction box (by others)

- Consult factory for specific applications and maximum fixture count/cable length recommendations.
- 50 watts per fixture.

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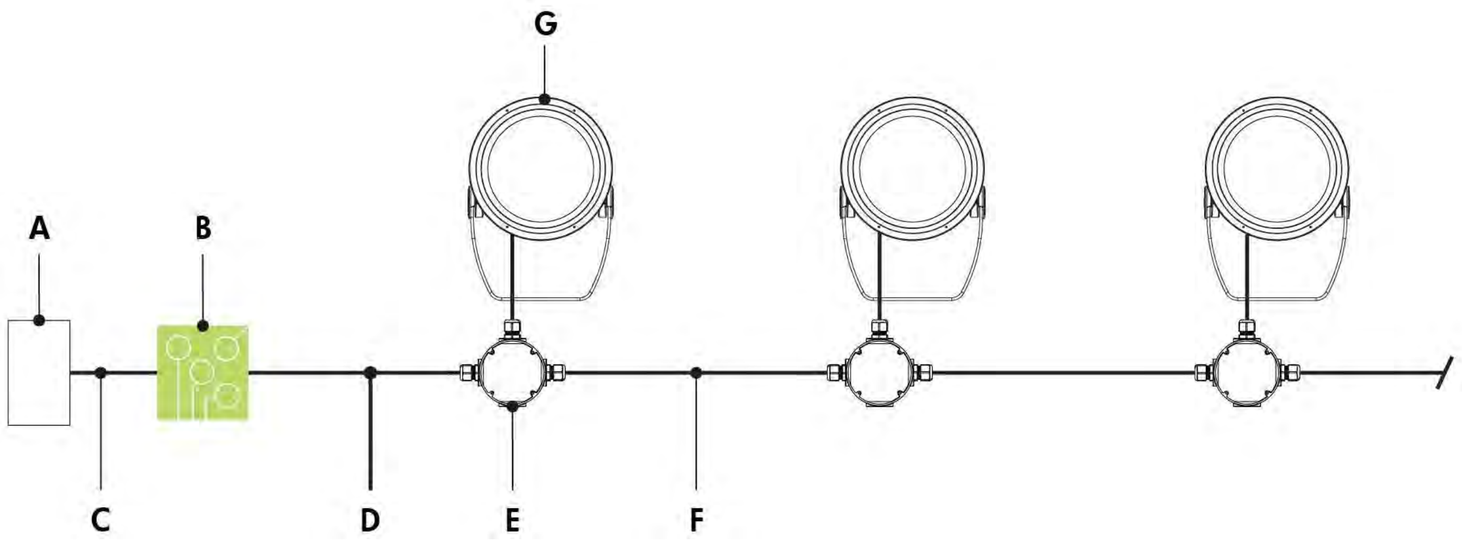
Specification Sheet

lumenbeam

Large

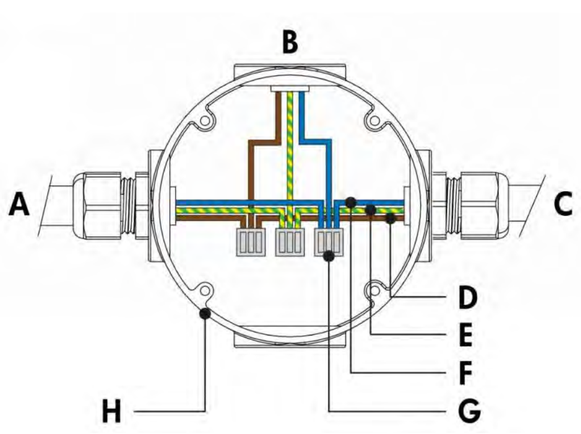
WHITE AND STATIC COLOURS

Lumentalk (LT)



A - Third party dimmer/controller
B - Lumentranslator (LTL-010, -DMX, -TRIAC, -DALI)
C - Data wiring (by others)
D - Power line (120-277V AC)
E - Junction box (by others)
F - Power wiring (by others)
G - Lumenbeam Large

Lumentalk (LT) - wiring detail



A - Power input (control over power line via Lumentalk system) or from previous fixture
B - To fixture
C - To next fixture
D - Live
E - Ground
F - Neutral
G - Terminal connector (by others)
H - Junction box (by others)

- Consult factory for specific applications and maximum fixture count/cable length recommendations.
- Lumentalk enabled fixtures must be commissioned using LumentalkID software and a LID-LT. Consult factory for details.
- Maximum of 1 transmitter (Lumentranslator or Lumenlink) per system.
- No third party fixtures allowed on the same circuit.
- For DMX applications: 1 DMX controller per Lumentalk network, maximum of 48 DMX channels per Lumentalk network (minimum step transition update rate is 1 second, minimum fade time between two colours is 1 minute). Consult factory for applications that require additional capabilities.
- Consult factory for DALI Lumentalk applications.
- 1% minimum dimming value.
- 50 watts per fixture.

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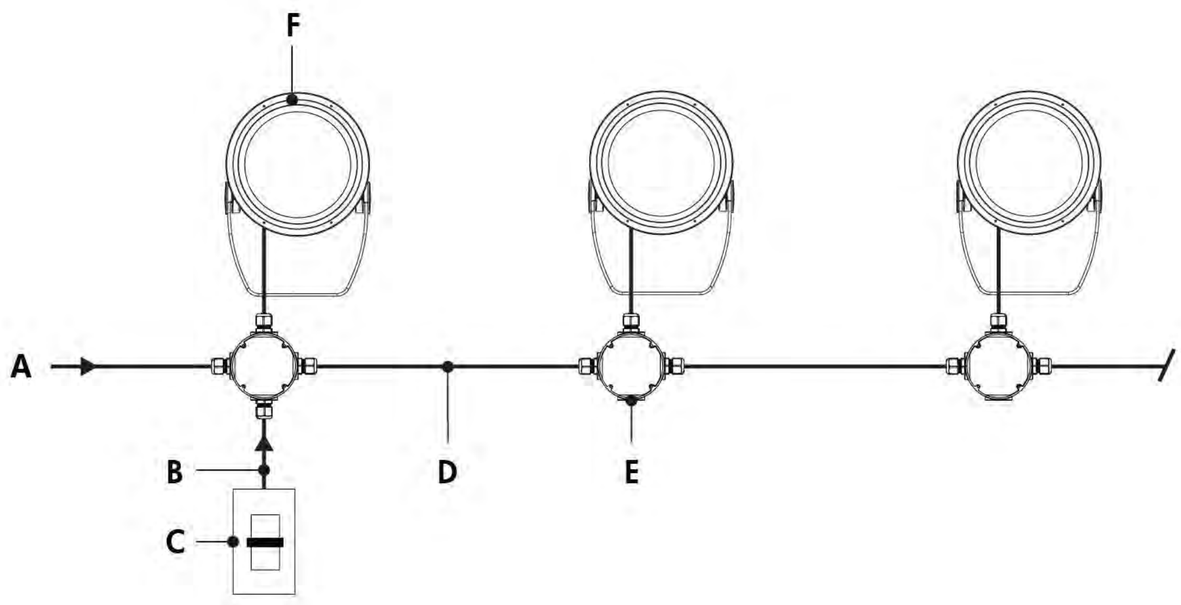
Specification Sheet

lumenbeam

Large

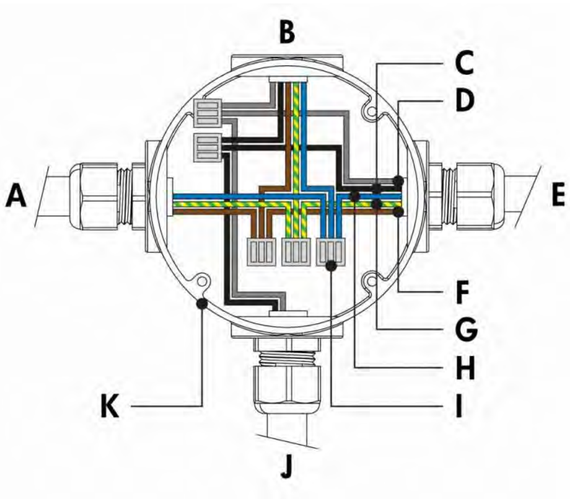
WHITE AND STATIC COLOURS

1-10V dimming (DIM)



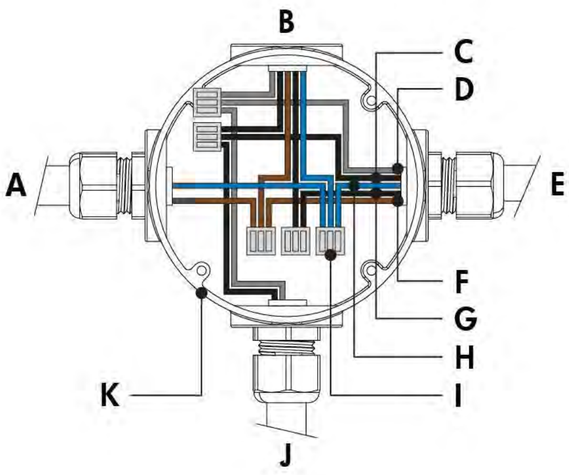
A - Power input (100-277V)
B - Data wiring (by others)
C - Third party dimmer
D - Power and data wiring (by others)
E - Junction box (by others)
F - Lumenbeam Large

1-10V dimming (DIM) - wiring detail - CE



A - Power input or from previous fixture
B - To fixture
C - 1-10 V +
D - 1-10 V -
E - To next fixture
F - Live
G - Ground
H - Neutral
I - Terminal connector (by others)
J - From third party dimmer
K - Junction box (by others)

1-10V dimming (DIM) - wiring detail – CE Class II



A - Power input or from previous fixture
B - To fixture
C - 1-10 V +
D - 1-10 V -
E - To next fixture
F - Live
G - Signal common
H - Neutral
I - Terminal connector (by others)
J - From third party dimmer
K - Junction box (by others)

- Consult factory for specific applications and maximum fixture count/cable length recommendations.
- 1-10V mA ratings: passive dimmer (Current Sink): 3mA per fixture, active dimmer (Current Source): 0.5mA per fixture.
- 10% minimum dimming value.
- 50 watts per fixture.

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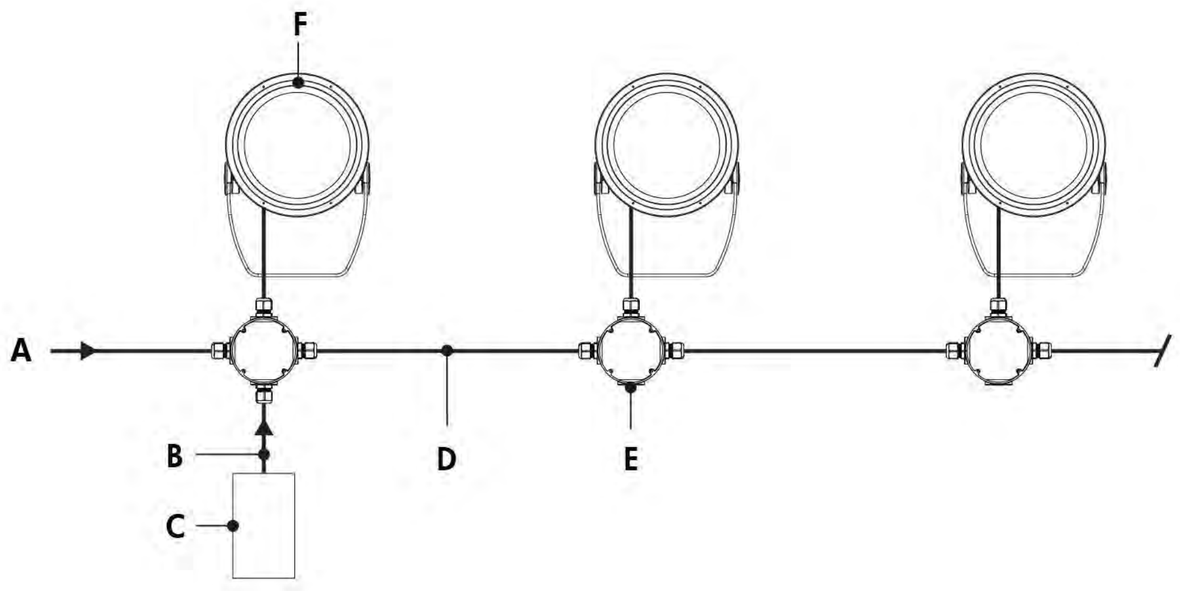
Specification Sheet

lumenbeam

Large

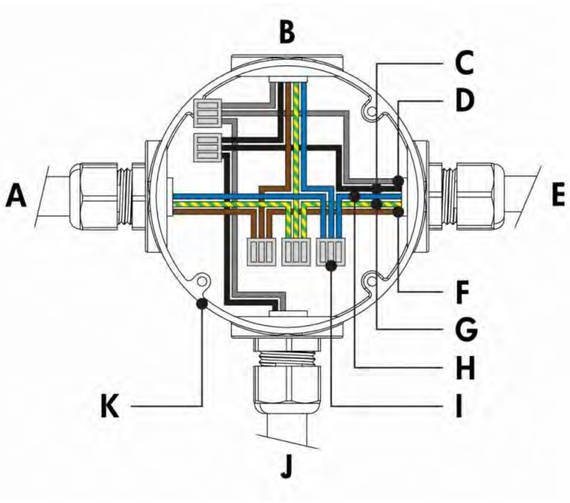
WHITE AND STATIC COLOURS

DALI dimming (DALI)



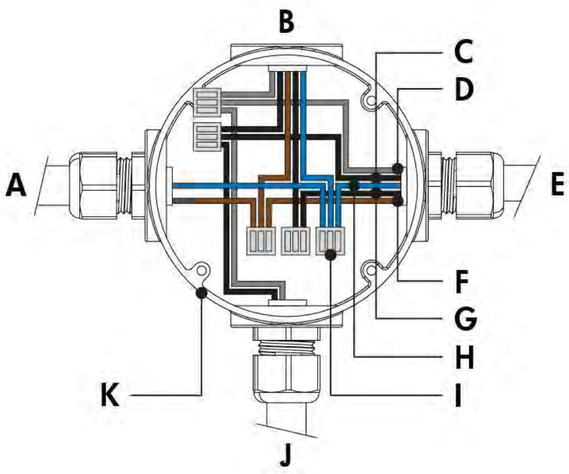
A - Power input (100-277V)
B - Data wiring (by others)
C - Third party DALI controller
D - Power and data wiring (by others)
E - Junction box (by others)
F - Lumenbeam Large

DALI dimming (DALI) - wiring detail - CE



A - Power input or from previous fixture
B - To fixture
C - Data +
D - Data -
E - To next fixture
F - Live
G - Ground
H - Neutral
I - Terminal connector (by others)
J - From third party DALI controller
K - Junction box (by others)

DALI dimming (DALI) - wiring detail - CE Class II option



A - Power input or from previous fixture
B - To fixture
C - Data +
D - Data -
E - To next fixture
F - Live
G - Signal common
H - Neutral
I - Terminal connector (by others)
J - From third party DALI controller
K - Junction box (by others)

- Consult factory for specific applications and maximum fixture count/cable length recommendations.
- Maximum of 64 DALI fixtures per DALI loop.
- 1% minimum dimming value.
- 50 watts per fixture.

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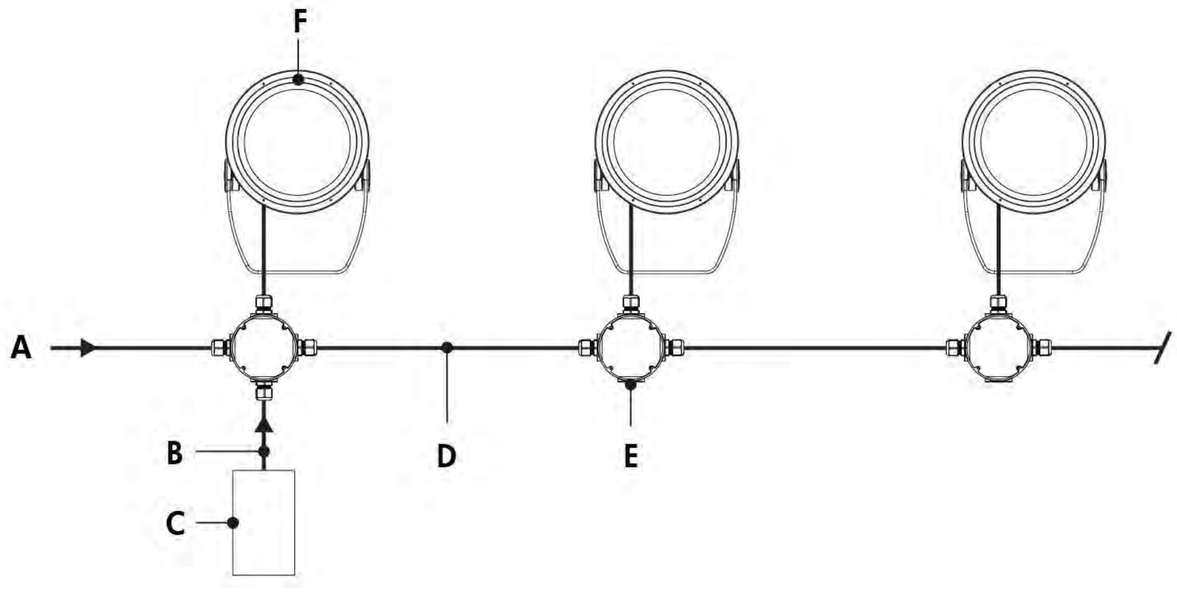
Specification Sheet

lumenbeam

Large

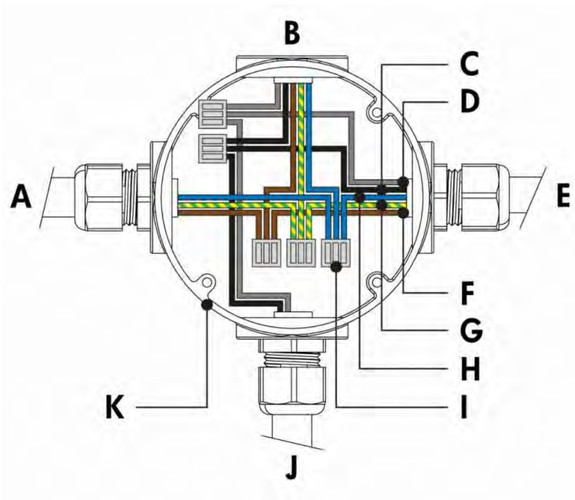
WHITE AND STATIC COLOURS

Lutron® EcoSystem® Enabled dimming (ES)



A - Power input (100-277V)
B - Data wiring (by others)
C - Lutron® EcoSystem® controller
D - Power and data wiring (by others)
E - Junction box (by others)
F - Lumenbeam Large

Lutron® EcoSystem® Enabled dimming (ES) - wiring detail



A - Power input or from previous fixture
B - To fixture
C - Data +
D - Data -
E - To next fixture
F - Live
G - Ground
H - Neutral
I - Terminal connector (by others)
J - From Lutron® EcoSystem® controller
K - Junction box (by others)

- Consult factory for specific applications and maximum fixture count/cable length recommendations.
- Each Lutron® EcoSystem® enabled fixture has its own address; for the example shown, there are a total of 3 EcoSystem® addresses.
- 1% minimum dimming value.
- 50 watts per fixture.

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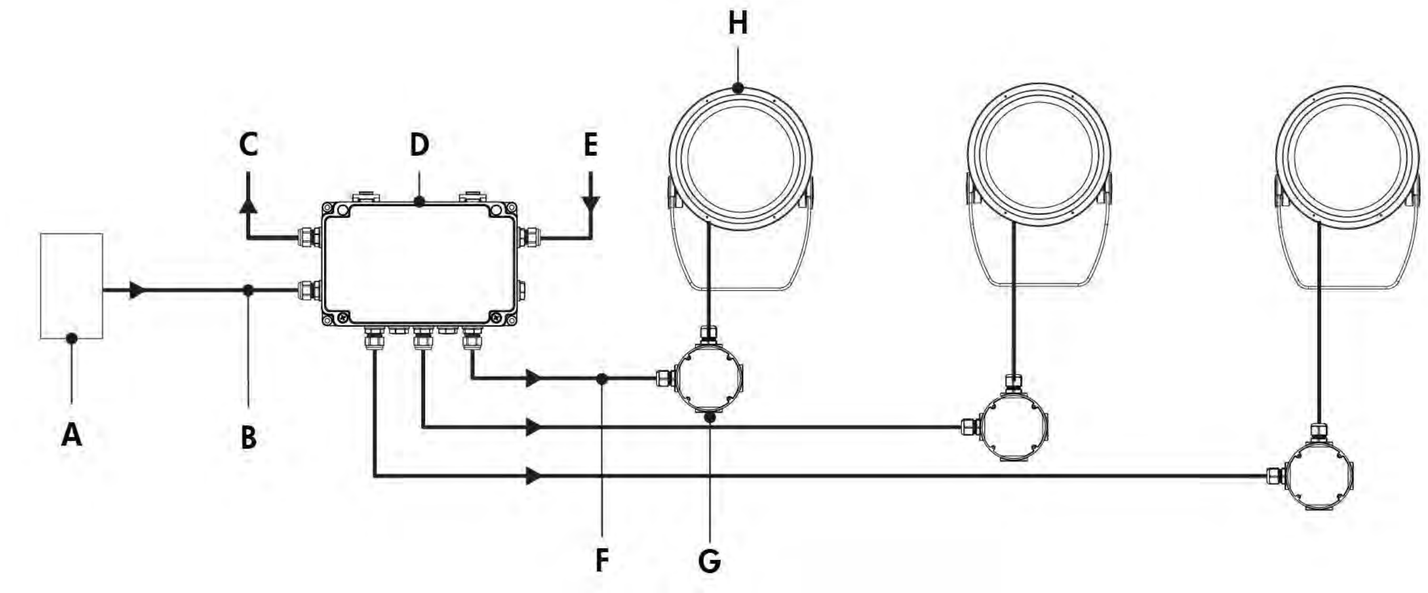
Specification Sheet

lumenbeam

Large

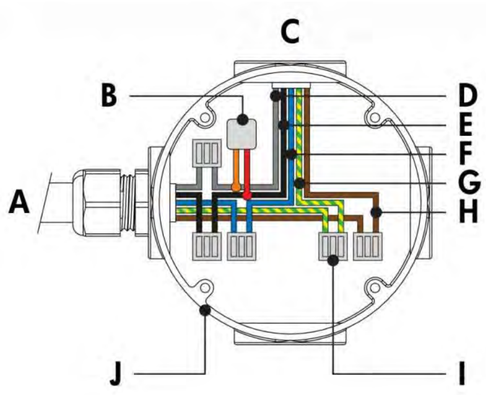
WHITE AND STATIC COLOURS

Star Layout (DMX/RDM)



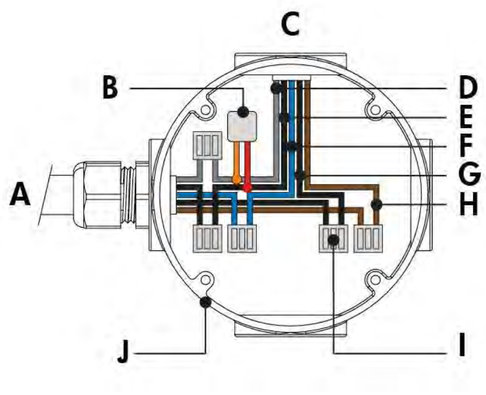
A - Third party DMX/RDM controller
B - Data input (Belden 9841 or equivalent, by others)
C - Data output to next CBX (optional, not isolated/not boosted)
D - CBX-ST
E - Power input (100-277V)
F - Power and data output to fixture (wiring by others)
G - Junction box (by others)
H - Lumenbeam Large

Star Layout (DMX/RDM) - wiring detail - CE



A - From CBX or previous fixture
B - Lumenterminator*
C - To fixture
D - Data -
E - Data +
F - Neutral
G - Ground
H - Live
I - Terminal connector (by others)
J - Junction box (by others)

Star Layout (DMX/RDM) - wiring detail - CE Class II option



A - From CBX or previous fixture
B - Lumenterminator*
C - To fixture
D - Data -
E - Data +
F - Neutral
G - Signal common
H - Live
I - Terminal connector (by others)
J - Junction box (by others)

Maximum number of fixtures per run (Based on16A maximum, 1,5mm² cable, fixtures spaced 10ft on center, first fixture 50ft from CBX)				
Configuration/Voltage	**120V**	**208V**	**240V**	**277V**
LBL	18	28	32	32

- Consult factory for specific applications and maximum fixture count/cable length recommendations.
- Run length calculations are based on a voltage drop of no more than 25V.
- The DMX/RDM protocol states a maximum of 32 DMX/RDM enabled fixtures on any single run.
- Maximum of 4 DMX/RDM repeaters/CBX cascading in line.
- Maximum of 6 outputs per CBX-ST.
- Each fixture requires 1 DMX address.
- 1% minimum dimming value.
- 50 watts per fixture.

*DMX terminator is required at the end of each run to maintain data integrity. (6x) DMX lumenterminators included per CBX-ST. See installation instructions for details.

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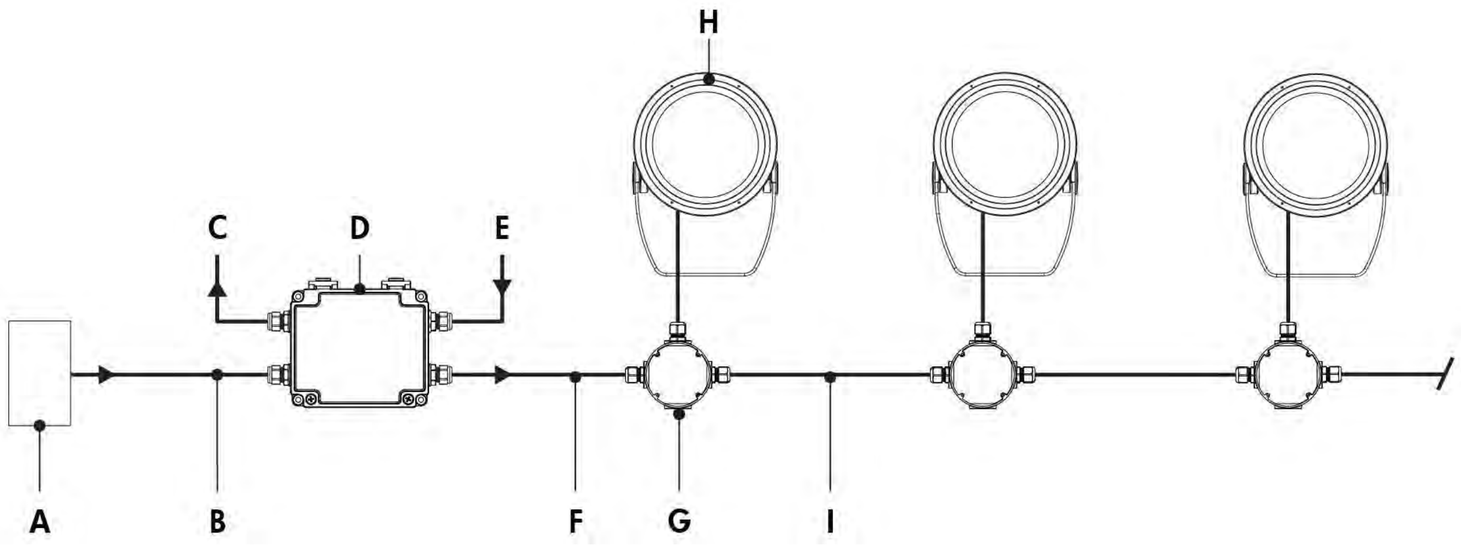
Specification Sheet

lumenbeam

Large

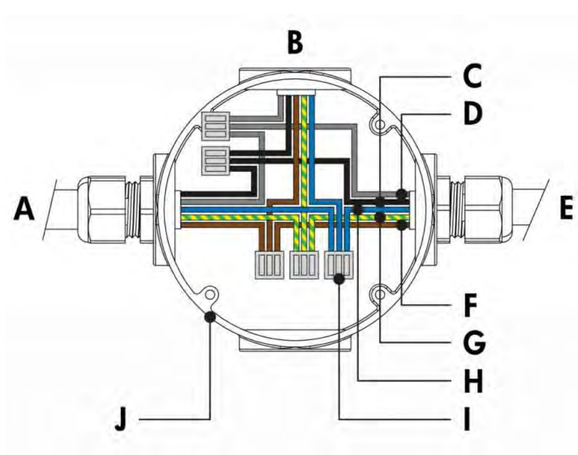
WHITE AND STATIC COLOURS

Daisy Chain Layout (DMX/RDM)



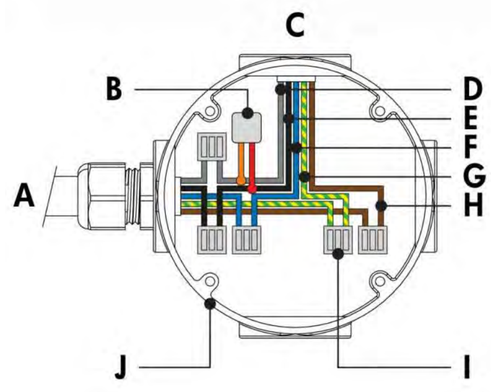
A - Third party DMX/RDM controller
B - Data input (Belden 9841 or equivalent, by others)
C - Data output to next CBX (optional, not isolated/not boosted)
D - CBX-DS
E - Power input (100-277V)
F - Power and data output to fixture (wiring by others)
G - Junction box (by others)
H - Lumenbeam Large
I - Power and data wiring (by others)

Daisy Chain Layout (DMX/RDM) - wiring detail (first or middle of run) - CE



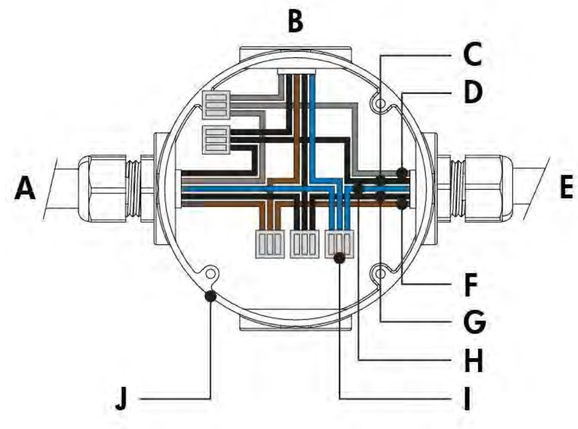
A - From CBX or previous fixture
B - To fixture
C - Data +
D - Data -
E - To next/from previous fixture
F - Live
G - Ground
H - Neutral
I - Terminal connector (by others)
J - Junction box (by others)

Daisy Chain Layout (DMX/RDM) - wiring detail (end of run) - CE



A - From CBX or previous fixture
B - Lumenterminator*
C - To fixture
D - Data -
E - Data +
F - Neutral
G - Ground
H - Live
I - Terminal connector (by others)
J - Junction box (by others)

Daisy Chain Layout (DMX/RDM) - wiring detail (first or middle of run) - CE Class II option



A - From CBX or previous fixture
B - To fixture
C - Data +
D - Data -
E - To next/from previous fixture
F - Live
G - Signal common
H - Neutral
I - Terminal connector (by others)
J - Junction box (by others)

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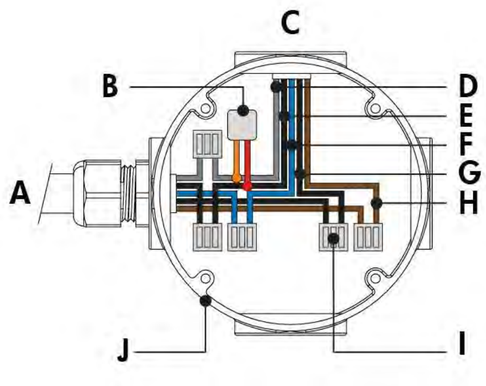
Specification Sheet

lumenbeam

Large

WHITE AND STATIC COLOURS

Daisy Chain Layout (DMX/RDM) - wiring detail (end of run) - CE Class II option



A - From CBX or previous fixture
B - Lumenterminator*
C - To fixture
D - Data -
E - Data +
F - Neutral
G - Signal common
H - Live
I - Terminal connector (by others)
J - Junction box (by others)

Maximum number of fixtures per run (Based on16A maximum, 1,5mm² cable, fixtures spaced 10ft on center, first fixture 50ft from CBX)				
Configuration/Voltage	**120V**	**208V**	**240V**	**277V**
LBL	18	28	32	32

- Consult factory for specific applications and maximum fixture count/cable length recommendations.
- Run length calculations are based on a voltage drop of no more than 25V.
- The DMX/RDM protocol states a maximum of 32 DMX/RDM enabled fixtures on any single run.
- Maximum of 4 DMX/RDM repeaters/CBX cascading in line.
- Maximum of 1 output per CBX-DS.
- Maximum of 3 ft cable length between fixture and next junction box for daisy chain layout.
- Each fixture requires 1 DMX address.
- 1% minimum dimming value.
- 50 watts per fixture.

* DMX terminator is required at the end of each run to maintain data integrity. (2x) DMX lumenterminators included per CBX-DS. See installation instructions for details.

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Specification Sheet

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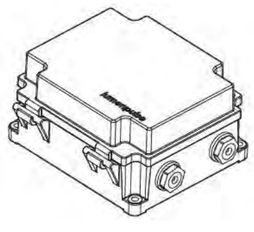
Large

WHITE AND STATIC COLOURS

Accessories (order separately)

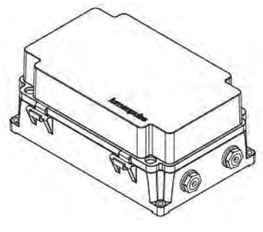
Control Boxes

CBX-DS-Power and control box - daisy chain configuration



DMX/RDM control box. One power and data output to fixture or fixture run. Ethernet enabled option. Refer to CBX specification sheet for details.

CBX-ST-Power and control box - star configuration



DMX/RDM control box. Up to six power and data outputs to fixtures or fixture runs. Ethernet enabled option. Refer to CBX specification sheet for details.

Control Systems

LTO2-Lumentouch 2.0™



Lumentouch is a wall mount DMX 512 controller keypad.

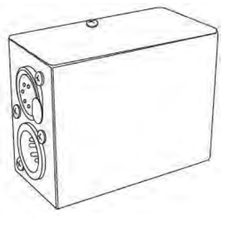
LCU-Lumencue



Lumencue is a USB / mini SD DMX 512 controller.

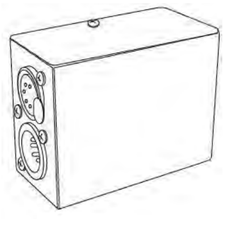
Diagnostic and Addressing Tools

LID-LumenID



LumenID is a diagnostic and addressing DMX/RDM tool. It must be specified on all DMX applications. Refer to LID specification sheet for details.

LID-LT-LumentalkID



LumentalkID is a diagnostic and addressing tool. It must be specified for all Lumentalk (LT) applications. Refer to LID-LT specification sheet for details.

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Specification Sheet

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Large

WHITE AND STATIC COLOURS

How to order

1	2	3	4	5	6	7	8
LBL							

9	10

1 . Housing

LBL	Lumenbeam™ Large

2 . Voltage

100	100 volts
120	120 volts
208	208 volts
220	220 volts
240	240 volts
277	277 volts

3 . Colour and Colour Temperature [1]

22K	2200K
27K	2700K
30K	3000K
35K	3500K
40K	4000K
57K	5700K
RD	Red
GR	Green
BL	Blue

4 . Optics

VN	Very Narrow 6°
NS	Narrow Spot 10°
NF	Narrow Flood 20°
FL	Flood 40°
WFL	Wide Flood 60°

5 . Optical Option

LSLH	Linear spread lens horizontal distribution [2]
LSLV	Linear spread lens vertical distribution [2]

6 . Finish

BK	Black Sandtex®
BRZ	Bronze Sandtex®
SI	Silver Sandtex®
WH	Smooth white
BKTX	Textured black
BRZTX	Textured bronze non-metallic
GRATX	Textured medium grey
GRNTX	Textured green
WHTX	Textured white
CC	Custom colour and finish (please specify RAL colour) [3]

7 . Control

NO	On/Off control
LT	Lumentalk [4] [5]
DIM	1-10V dimming
DALI	DALI dimming
ES	Lutron® EcoSystem® Enabled dimming [5]
DMX/RDM	DMX/RDM enabled

8 . Options

SY	Short Yoke
3GV	3G ANSI C136.31 Vibration Rating for bridge applications
CRC	Corrosion-resistant coating for hostile environments [6]

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Specification Sheet

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WHITE AND STATIC COLOURS

9 . Certification

UL	UL compliant
CE	CE compliant
CEII	CE compliant Class II double insulated

10 . Cable Length [7]

1M	3.3 ft [7] [8]
5M	16.4 ft
10M	32.8 ft
15M	49.2 ft
20M	65.6 ft
30M	98.4 ft

Notes:

[1] Consult factory for availability of static Royal Blue, 6500K and 90+ CRI.

[2] Factory installed, not available for 60° optic. Field adjustable spread lens optical accessory available, order separately.

[3] Lumenpulse offers a wide selection of RAL CLASSIC (K7) colours with a smooth texture and high-gloss finish. Please consult factory for a list of available K7 colours, other RAL textures and glosses, or to match alternate colour charts. Final colour matching results may vary.

[4] A Lumentranslator and LumentalkID (LIDLT) must be specified for Lumentalk applications. Consult Lumentranslator and Lumentalk pages and specification sheets for details.

[5] Not available with Class II double insulated option.

[6] Use only when exposed to salt spray and harsh chemicals. This option is not required for normal outdoor exposure.

[7] 1 m cable length is standard unless otherwise specified.

[8] Maximum of 3.3 ft cable length for daisy chain DMX applications with CBX-DS.

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Specification Sheet

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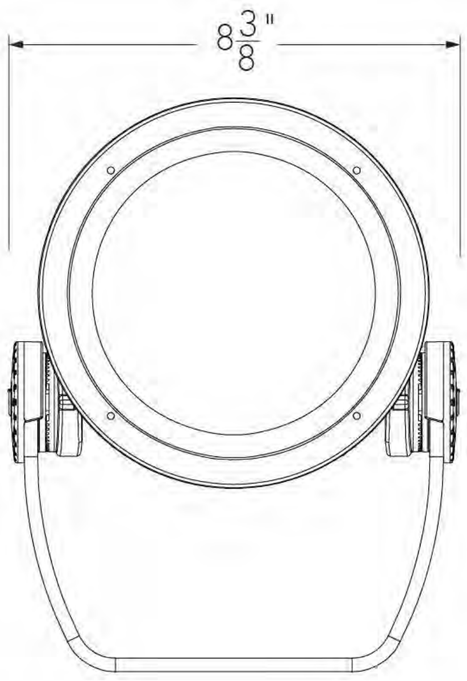
Medium

WHITE AND STATIC COLORS

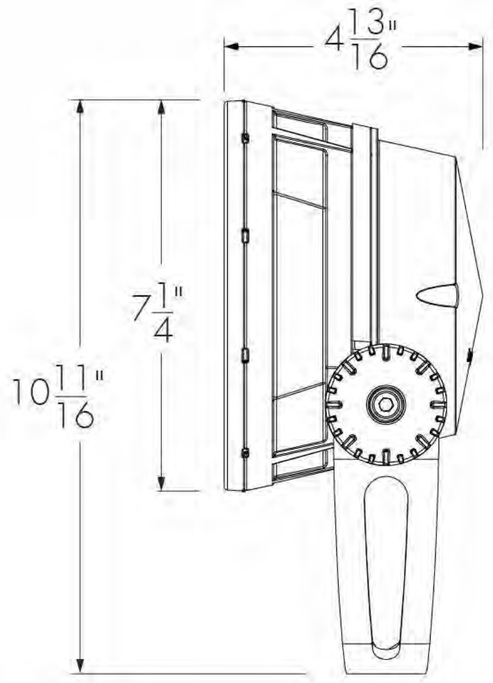
Project Name _____ **Qty** _____

Type _____ **Catalog / Part Number** _____





Front view



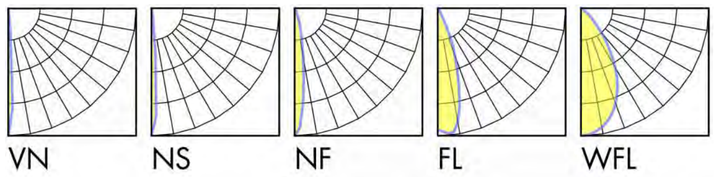
Side view

Photometric Summary

4000K	Delivered output (lm)	Intensity (peak cd)
VN	1,754	75,278
NS	1,552	56,914
NF	1,484	10,878
FL	1,428	4,003
WFL	1,370	1,312

Photometric performance is measured in compliance with IESNA LM-79-08.

Optics



Control

ON/OFF 0-10V DALI DMXrdm

Rating

c UL us CE RoHS

Description

The Lumenbeam Medium is a high-performance, 28W luminaire for solving numerous interior and exterior challenges such as facades, columns, trees or other architectural and landscape features. It offers a flexible package of options: a choice of optics for flood or accent lighting; a number of color temperatures and colors; various mounting options, accessories, spread lenses and controls.

Features

Color and Color Temperature	2200K, 2700K, 3000K, 3500K, 4000K, 5700K, Red, Green, Blue
Optics (nominal distribution)	6°, 10°, 20°, 40°, 60°
Optical Option	Linear spread lens horizontal distribution, Linear spread lens vertical distribution
Options	Short Yoke, 3G ANSI C136.31 Vibration Rating for bridge applications, Corrosion-resistant coating for hostile environments
Power Consumption	28 W
Warranty	5-year limited warranty

Performance

Delivered Output	1,754 lm (4000K, VN optic)
Delivered Intensity	75,278 cd at nadir (4000K, VN optic)
Illuminance at Distance	Minimum 1 fc at 274 ft distance (4000K, VN optic)
Color Consistency	2 SDCM
Color Rendering	CRI 80+
Lumen Maintenance	L70 120,000 hrs (Ta 25 °C)

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Specification Sheet

lumenbeam

Medium

WHITE AND STATIC COLORS

Physical

Housing Material	Low copper content high pressure die-cast aluminum
Yoke Material	Heavy aluminum (standard yoke included)
Lens Material	Clear tempered glass
Hardware Material	Stainless steel
Gasket Material	Silicone
Surface Finish	Electrostatically applied polyester powder coat
Weight	6.7 lbs
EPA	Front = 0.46 sq ft, Side = 0.37 sq ft

Electrical and control

Voltage	100 to 277 volts
Fixture Cable	Power and data in 1 cable, 3 ft cord standard (#16-5), other lengths available
Resolution (DMX/RDM)	Per fixture, 8-bit or 16-bit
Control	On/Off control, Dim to Warm via 0-10V (DWW only), DALI dimming, DMX/RDM enabled, Lumentalk system is enabled with LDB accessory - see typical wiring diagrams for details

Environmental

Operating Temperature	-13 °F to 122 °F
IP Rating	IP66
IK Rating	IK09

Accessories (order separately)

Control Boxes	Power and control box - daisy chain configuration, Power and control box - star configuration, Lumentalk Data Bridge
Control Systems	Lumentouch 2.0™, Lumencue, Lumentone
Diagnostic and Addressing Tools	LumenID, LumentalkID

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Specification Sheet

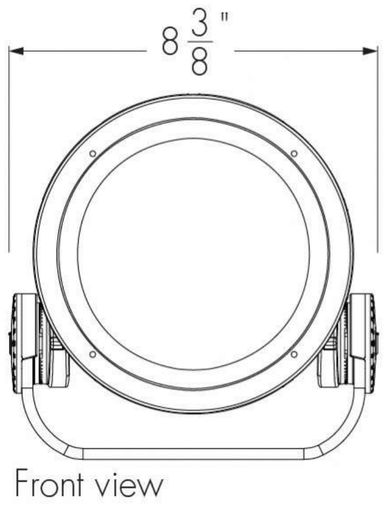
lumenbeam

Medium

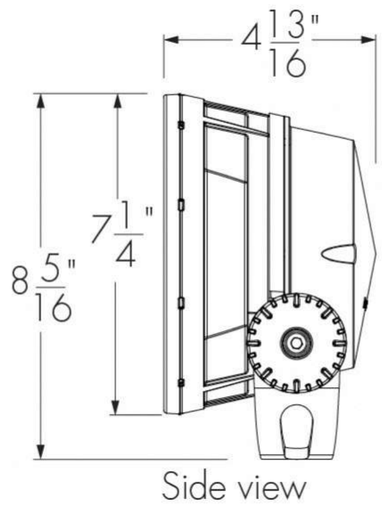
WHITE AND STATIC COLORS

Mounting options

SY - Short yoke



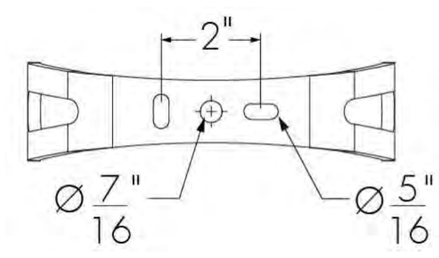
Front view



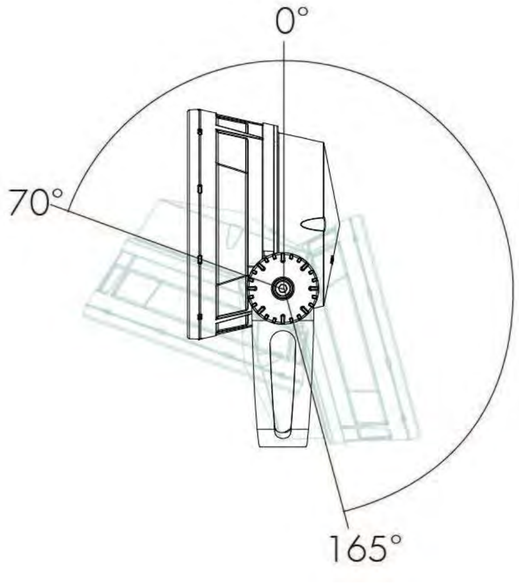
Side view

Mounting details

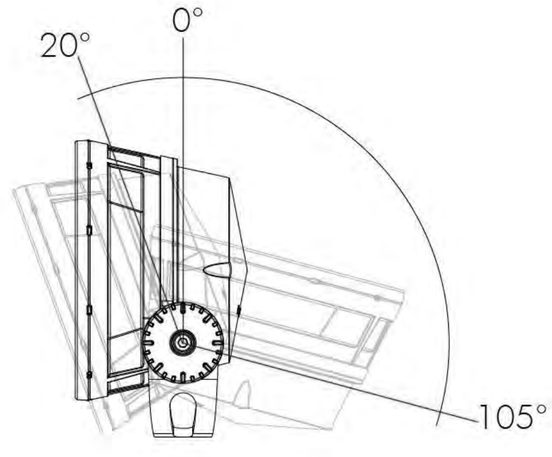
Mounting hole pattern - standard and short yoke



Adjustable pivot limits



Standard yoke



Short yoke

Optical options

LSLH - Linear spread lens horizontal distribution
LSLV - Linear spread lens vertical distribution



LSLH



LSLV

	Beam angle with LSLH/LSLV
VN	8° x 60°
NS	9° x 60°
NF	18° x 65°
FL	32° x 72°

Factory installed, not adjustable on site. Not available for WFL optic.
See 'Optical Accessories' section for field adjustable spread lens (LSLA).

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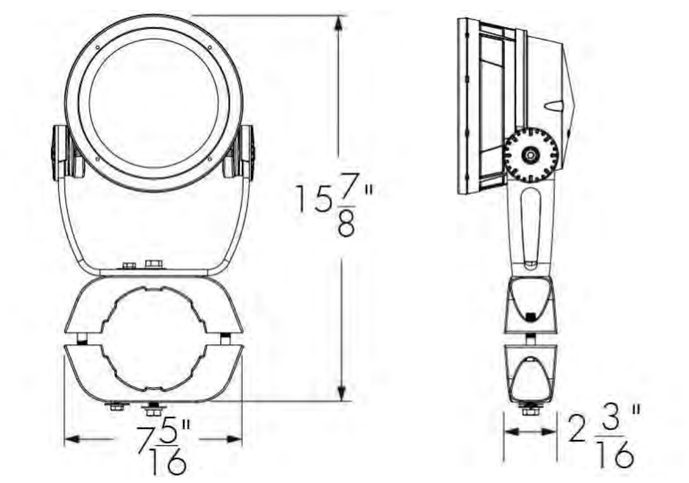
lumenbeam

Medium

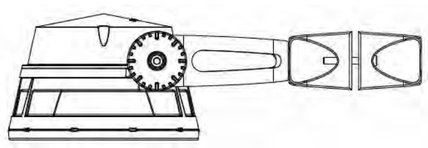
WHITE AND STATIC COLORS

Mounting accessories (order separately)

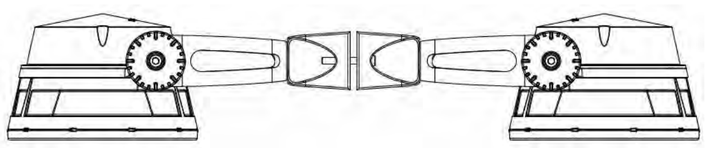
Round pole mounting accessory



PM4 model shown.
Consult factory for square pole section.



PM4-1, PM4.5-1, PM5-1 - Round pole mounting accessory - single fixture

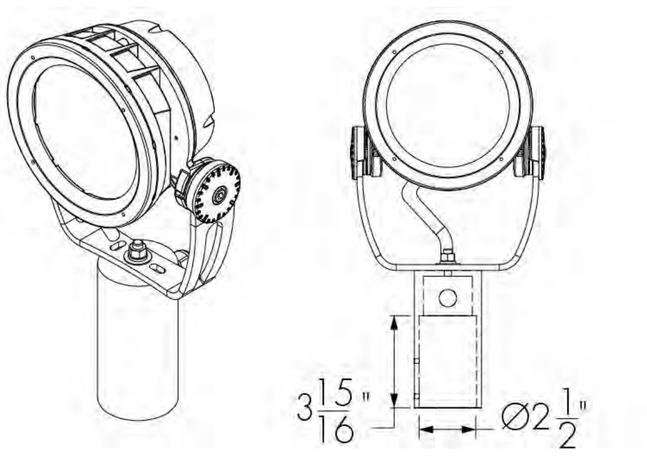


PM4-2, PM4.5-2, PM5-2 - Round pole mounting accessory - twin fixures
*One bracket assembly is supplied per 2 fixtures unless otherwise specified.

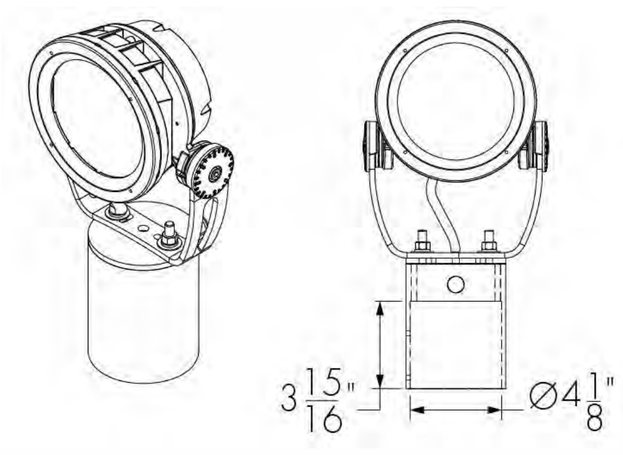
	PM4	PM4.5	PM5
For pole Ø	4" ± 1/16"	4.5" ± 1/16"	5" ± 1/16"

Consult factory for other pole diameters.

Tenon adapter

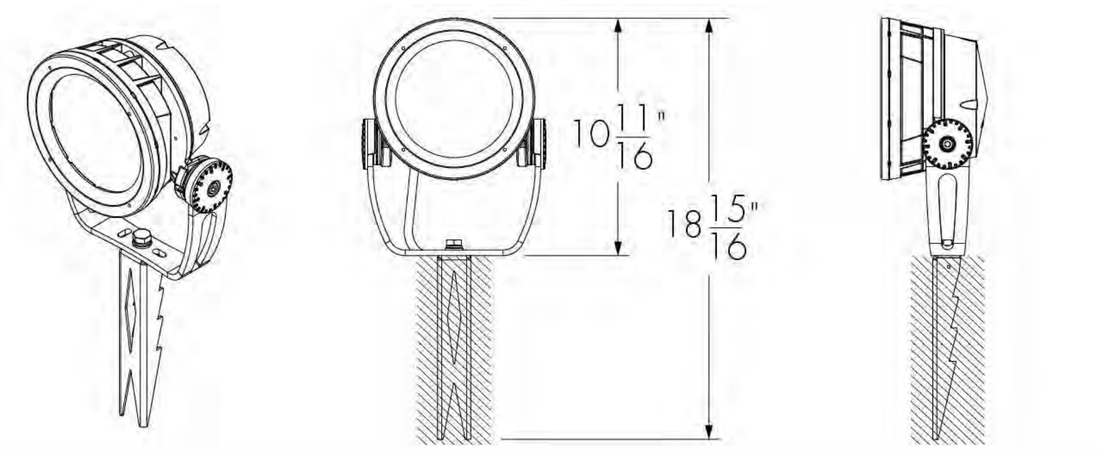


TN2 - Tenon adapter to fit on 2 3/8 in O.D. tenon



TN4 - Tenon adpater to fit on 4 in O.D. tenon

SK - Stake mounting



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Specification Sheet

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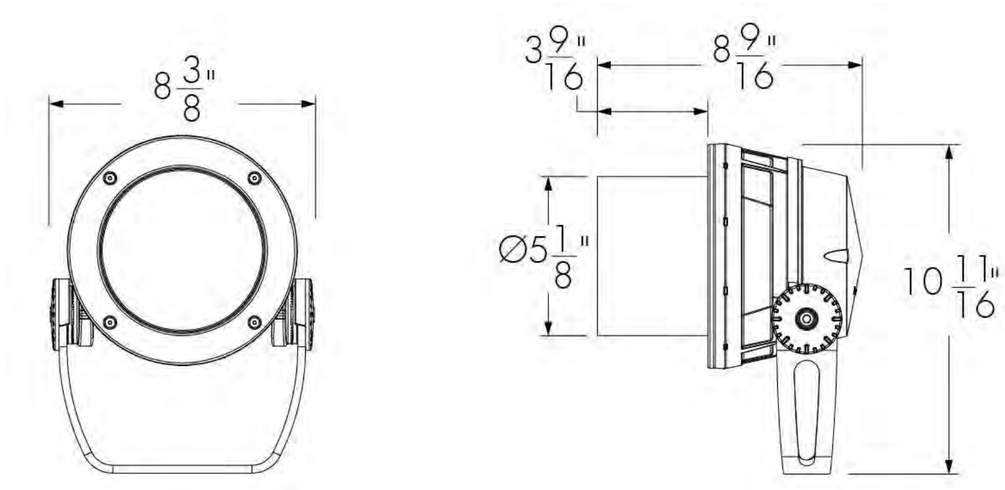
Medium

WHITE AND STATIC COLORS

Optical accessories (order separately)

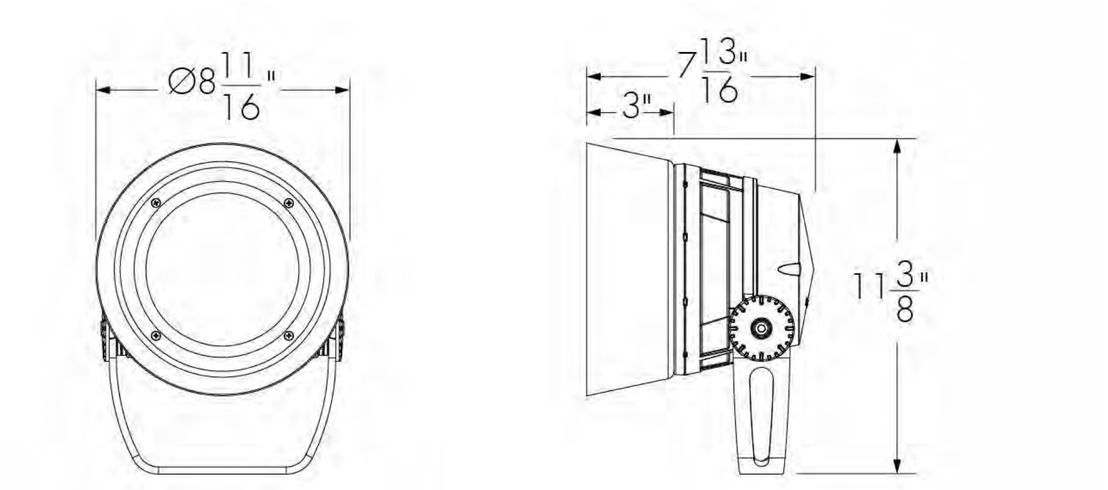
Installed optical accessories will affect the maximum pivot limits for each mounting option, consult factory for details.

SN - Snoot



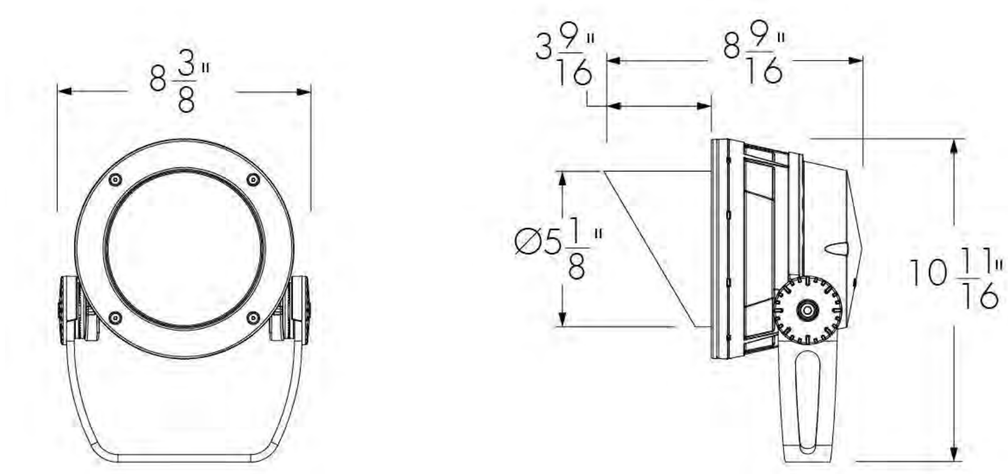
LBMSN-FINISH-BK
Interior surface painted black. Please specify desired exterior FINISH from list of available finishes.

SNW - Snoot wide



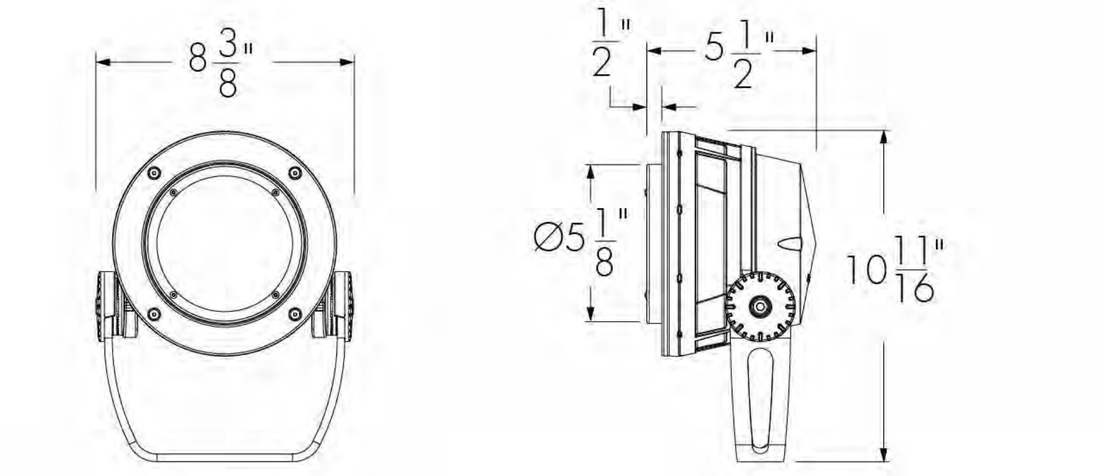
LBMSNW-FINISH-BK
Interior surface painted black. Please specify desired exterior FINISH from list of available finishes.

VS - Visor



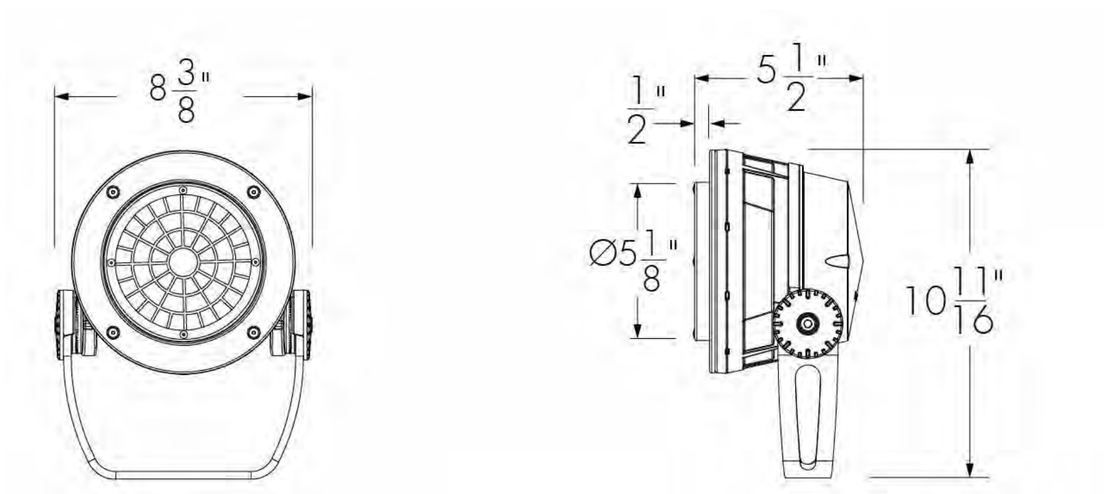
LBMVS-FINISH-BK
Interior surface painted black. Please specify desired exterior FINISH from list of available finishes.

LSLA - Linear spread lens adjustable



LBMLSLA-FINISH
Please specify desired exterior FINISH from list of available finishes.

WG - Wire guard



LBMWG-FINISH
Please specify desired exterior FINISH from list of available finishes.

Accessory combinations

+	Snoot	Snoot wide	Visor
Linear spread lens adjustable	YES	NO*	YES
Wire guard	YES	NO	YES

Accessory combinations must be ordered together on a single line.
Ex: A snoot + wire guard combination order code is LBMSNWG-BK-BK.
*Consult factory for a linear spread lens adjustable + snoot wide combination.

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Specification Sheet

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Medium

WHITE AND STATIC COLORS

Available exterior finishes for optical accessories

BK - Black Sandtex®
BRZ - Bronze Sandtex®
SI - Silver Sandtex®
WH - Smooth white
BKTX - Textured black
BRZTX - Textured bronze, non-metallic
GRATX - Textured medium gray
GRNTX - Textured green
WHTX - Textured white
CC - Custom color and finish (please specify RAL color)*

*Lumenpulse offers a wide selection of RAL CLASSIC (K7) colors with a smooth texture and high-gloss finish. Please consult factory for a list of available K7 colors, other RAL textures and glosses, or to match alternate color charts. Final color matching results may vary.

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Specification Sheet

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Medium

WHITE AND STATIC COLORS

How to order

1	2	3	4	5	6	7	8
LBM							

9	10

1 . Housing

LBM	Lumenbeam™ Medium

2 . Voltage

100	100 volts
120	120 volts
208	208 volts
220	220 volts
240	240 volts
277	277 volts

3 . Color and Color Temperature (1)

22K	2200K
27K	2700K
30K	3000K
35K	3500K
40K	4000K
57K	5700K
RD	Red
GR	Green
BL	Blue

4 . Optics

VN	Very Narrow 6°
NS	Narrow Spot 10°
NF	Narrow Flood 20°
FL	Flood 40°
WFL	Wide Flood 60°

5 . Optical Option

LSLH	Linear spread lens horizontal distribution (2)
LSLV	Linear spread lens vertical distribution (2)

6 . Finish

BK	Black Sandtex®
BRZ	Bronze Sandtex®
SI	Silver Sandtex®
WH	Smooth white
BKTX	Textured black
BRZTX	Textured bronze non-metallic
GRATX	Textured medium gray
GRNTX	Textured green
WHTX	Textured white
CC	Custom color and finish (please specify RAL color) (3)

7 . Control (4) (5)

NO	On/Off control
DIM	0-10V dimming
DALI	DALI dimming
DMX/RDM	DMX/RDM enabled

8 . Options

SY	Short Yoke
3GV	3G ANSI C136.31 Vibration Rating for bridge applications
CRC	Corrosion-resistant coating for hostile environments (6)

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Specification Sheet

lumenbeam

Medium

WHITE AND STATIC COLORS

9 . Certification

UL	UL compliant
CE	CE compliant

10 . Cable Length [7]

3FT	3 ft [7] [8]
10FT	10 ft
20FT	20 ft
30FT	30 ft
50FT	50 ft
70FT	70 ft
100FT	100 ft

Notes:

[1] Consult factory for availability of static Royal Blue, 6500K and 90+ CRI.

[2] Factory installed, not available for 60° optic. Field adjustable spread lens optical accessory available, order separately.

[3] Lumenpulse offers a wide selection of RAL CLASSIC (K7) colors with a smooth texture and high-gloss finish. Please consult factory for a list of available K7 colors, other RAL textures and glosses, or to match alternate color charts. Final color matching results may vary.

[4] Lumentalk system is enabled with LDB accessory, DIM or DMX/RDM must be specified in the order code. See the typical wiring diagrams in the specification sheet for details.

[5] A Lumentranslator and LumentalkID (LIDLT) must be specified for Lumentalk applications. Consult Lumentranslator and Lumentalk pages and specification sheets for details.

[6] Use only when exposed to salt spray and harsh chemicals. This option is not required for normal outdoor exposure.

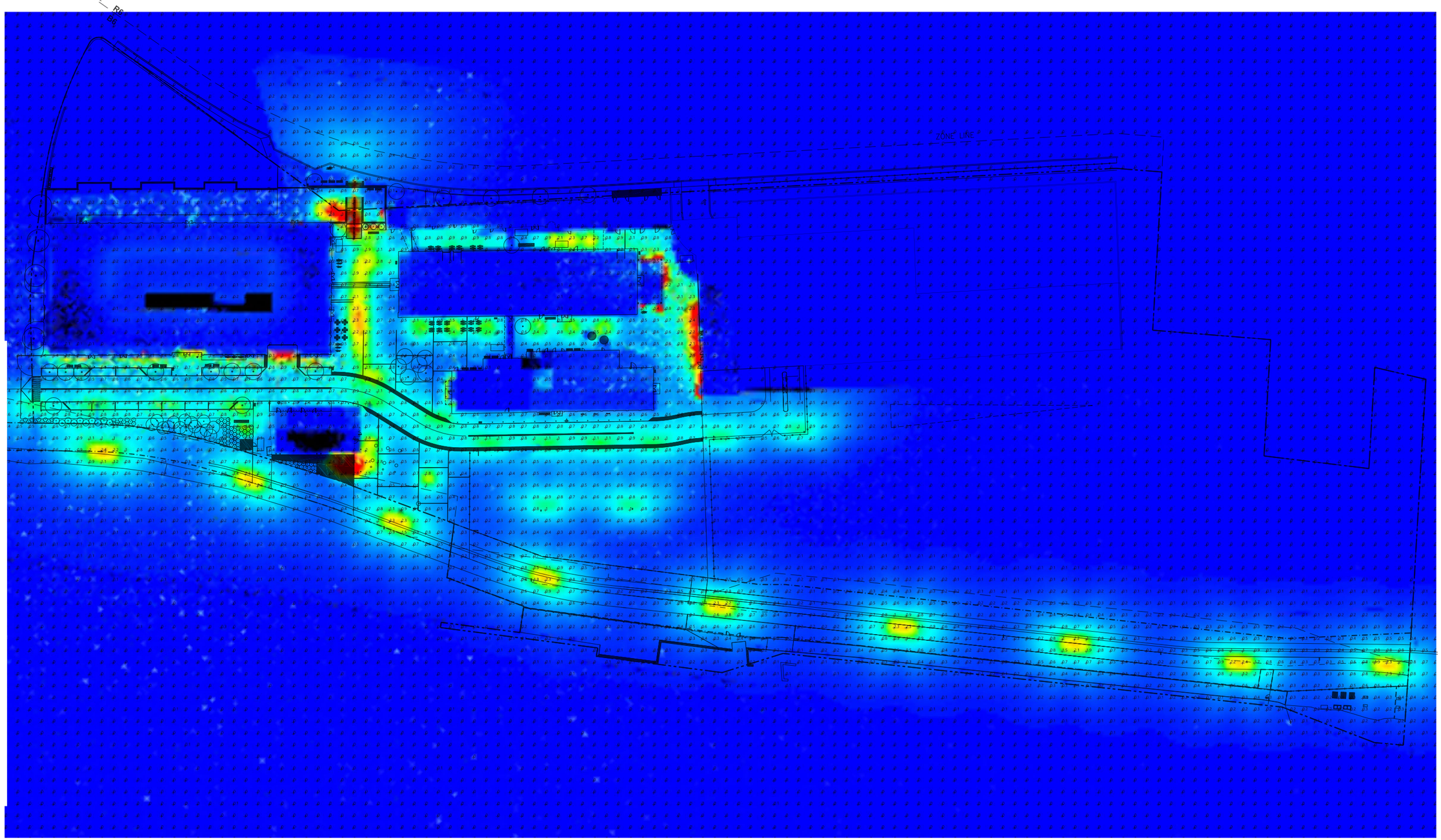
[7] 3 ft cable length is standard unless otherwise specified.

[8] Maximum of 3 ft cable length for daisy chain DMX applications with CBX-DS.

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illuminance (FC)

0.0 0.5 1.0 1.5 2.0 2.5 3.0

Lam Partners
ARCHITECTURAL LIGHTING DESIGN

18145 Portland Foreside Illuminance Calculations
Level 3 Site Application (Overall Site)
November 8, 2019

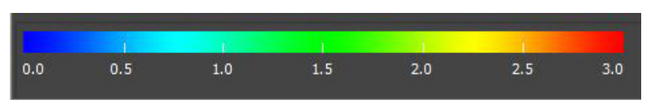
illuminance (FC)

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Lam Partners
ARCHITECTURAL LIGHTING DESIGN

18145 Portland Foreside Illuminance Calculations
Level 3 Site Application (Blocks 1/2/3/4)
November 8, 2019

illuminance (FC)

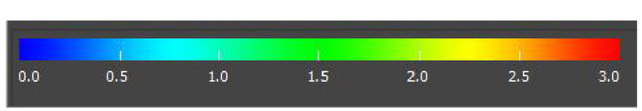


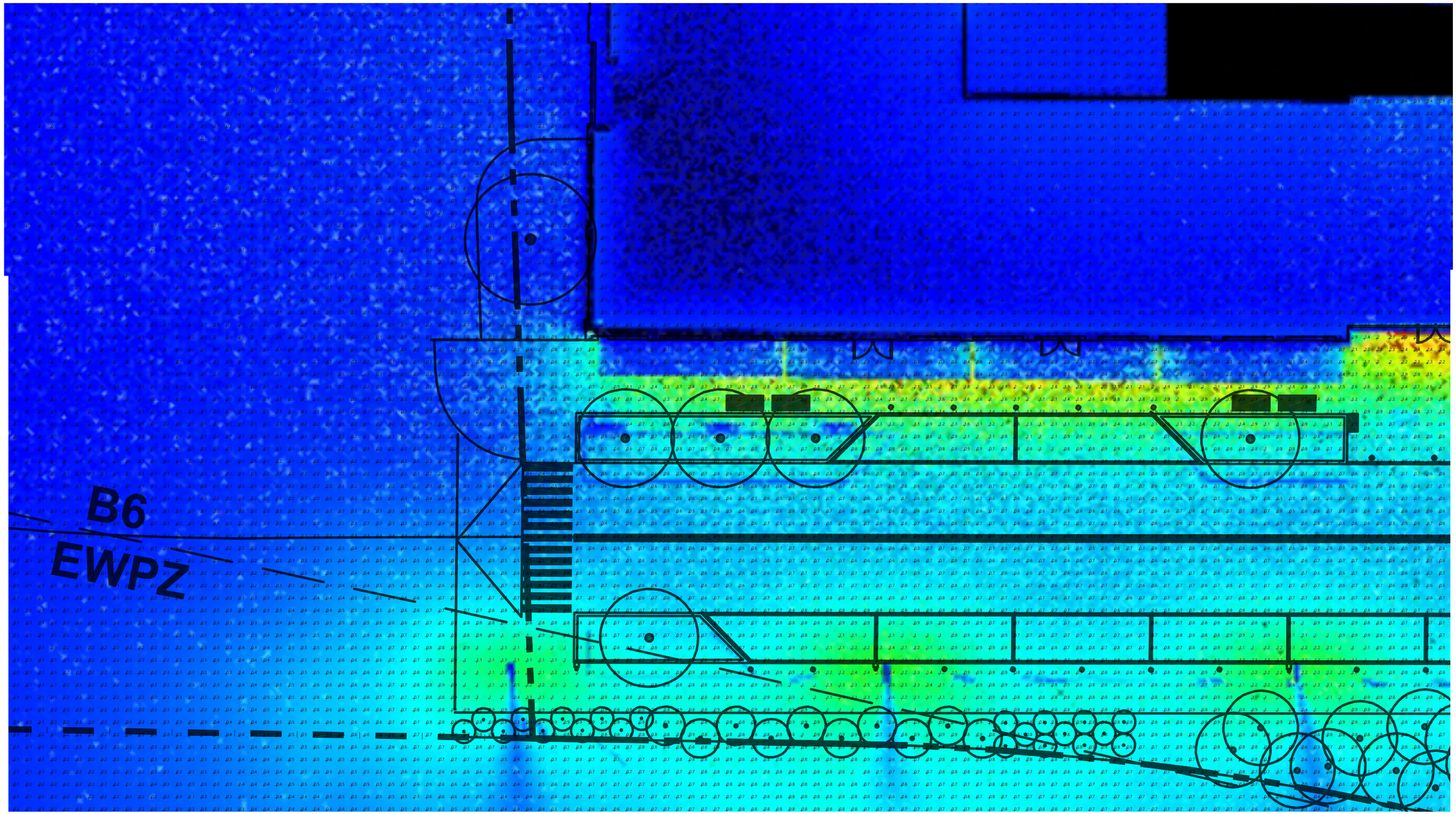
Lam Partners
ARCHITECTURAL LIGHTING DESIGN

18145 Portland Foreside Illuminance Calculations
Level 3 Site Application (Blocks 1/2/3/4)
November 8, 2019

Lam Partners
ARCHITECTURAL LIGHTING DESIGN

18145 Portland Foreside Illuminance Calculations
Level 3 Site Application (Site details)
November 8, 2019





illuminance (FC)

0.0 0.5 1.0 1.5 2.0 2.5 3.0

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18145 Portland Foreside Illuminance Calculations
Level 3 Site Application (Site details)
November 8, 2019

10. ZONING ASSESSMENT

Phase 1 of the 58 Fore Street Master Development Plan is located within the City of Portland B-6 Eastern Waterfront Mixed Zone (B6), Eastern Waterfront Port Zone (EWPZ) and the Shoreland Overlay Zone. The B-6, EWPZ and Shoreland Overlay zones are regulated by Divisions 15.1, 17.5 and 26 of the City of Portland Land Use Ordinance.

Development Block	Zone*
Block 1	B6
Block 2	B6
Block 4	B6
Infrastructure, Utilities & Access Improvements	B6, EWPZ

*Portions of the site are located within the Shoreland Overlay Zone.

Uses associated with each of the Development Blocks such as office, restaurant, parking, retail, and residential are permitted within the zone or zones where they have been included. Structured parking is a permitted conditional use, given that first floor retail space is provided on the street frontages. The proposed structured parking on Block 1 and Block 4 includes a first-floor retail wrap along the frontage of the new roadway, as required in the B-6 zone.

The attached Zoning Assessment Table shows the project complies with dimensional requirements specified in the City's Land Use Ordinance.

10.1 Attachments

- City of Portland Zoning Assessment Table

ZONING ANALYSIS Relevant Zone(s) B-6 & Shoreland Overlay

All Projects:

	Required	Proposed
Lot Size	None	Varies
Area Per Dwelling Unit	None	Varies
Minimum Street Frontage	None	Varies
Front Yard Minimum	None	0
Front Yard Maximum	None	0
Rear Yard	None	0
Yard Right	None	0
Yard Left	None	0
Side Street Setback	N/A	N/A
Step Back	N/A	N/A
Maximum Lot Coverage	100%	100%
Minimum Lot Coverage	N/A	N/A
Maximum Height	See B6 Map	Per B6 Map
Open Space	N/A	N/A
Maximum Impervious Area	N/A	N/A
Pavement Setback	N/A	N/A
Floor Area Ratio	N/A	N/A
Off Street Parking Spaces	TBD**	
Loading Bays	N/A	N/A
Other 1 View Corridors	See B6 Map	Per B6 Map
Other 2		
Other 3		

**Note: Per Section 14-332.2(c) of the City's Ordinance, the Planning Board shall establish the parking requirements based upon parking analysis submitted by the Applicant.

N/A

Planned Residential Unit Developments (PRUD) Requirements

	Required	Proposed
Minimum Lot Size		
Minimum Lot Area per Dwelling		
Maximum # Units per Building		
Maximum Building Length		
Maximum Accessory Building Length		
Minimum Setbacks		
Minimum Building Separation		
Minimum Open Space		

N/A

Affordable Housing Density Bonuses (if applicable)

	Bonus Increase or Decrease	Maximum Allowable With Bonus	Proposed
Density			
Height			
Setback Reduction			
Recreation Space			
Maximum Accessory Building Length			
Minimum Setbacks			
Minimum Building Separation			
Minimum Open Space			
Explanatory Text 1 (optional):			
Explanatory Text 2 (optional):			
Explanatory Text 3 (optional):			

11. CONSISTENCY WITH CITY COMPREHENSIVE PLAN

The City of Portland's broad planning efforts have provided a solid foundation for the Phase 1 of the 58 Fore Street Master Development Plan. During the Master Development Plan process for the entire site in 2016, the project demonstrated consistency with the following documents:

- City of Portland Comprehensive Plan updated in 2005;
- Eastern Waterfront Master Plan (adopted into the 2005 Comprehensive Plan); and
- Design Guidelines for the Eastern Waterfront.

The City's current Comprehensive Plan (Portland's Plan 2030) completed in 2017 articulates a vision of Portland's values and provides a framework for decision making revolving around the values, goals, and strategies of the City over the next decade. The proposed development remains consistent with the previous planning documents and is also consistent with Portland's Plan 2030.

11.1 Comprehensive Plan Vision Statement

Portland's Plan 2030 is guided by a vision statement for the City that includes six interconnected themes, which provide the foundation for focusing City policies and priorities identified for gauging success. The goals and implementation strategies in the Plan support the vision statement.



Figure 11-1: *Six Interconnected Themes Identified During Portland's Comprehensive Planning Process*

The Portland Foreside Development Co Phase 1 project aligns with all six themes of the vision statement, with focus on many of the specific points (listed below in italics) highlighted within those themes.

Equitable – *We (City) will remain an open and inclusive city, celebrating diversity and providing a welcoming and safe place for residents and visitors alike.*

The Portland Foreside Development provides connectivity to neighboring uses, welcoming residents of surrounding neighborhoods, visitors to the City from Ocean Gateway and the adjacent Fore Points Marina, and employees of nearby businesses. The proposed site features stairs, plaza areas and trail improvements that create permeability, are welcoming to pedestrians, and provide important public access to the waterfront. Coastal view corridors for the public are maintained and public access easements provide assurance that the site will remain open and accessible by the public.

Sustainable – *Portland has been built and rebuilt to endure; we will balance our historic fabric, sound infrastructure, and the best of new technology and design for the future.*

Portland will grow in order to sustain our community, infrastructure, and economy.

Growth should respect and seek to preserve our spectacular natural resources.

The Portland Foreside Development revitalizes and invests in the site's historic core and provides infrastructure improvements to support sustainable growth. The development provides an opportunity to grow the City's tax base, add housing, and create jobs.

Dynamic – *We will embrace innovation in order for our community to thrive.*

We will welcome new residents into our community because they enrich and sustain our city

Portland will plan for a built environment that encourages an active citizenry.

The development supports the City's continuing efforts to link its vibrant downtown to the commercial waterfront. Improvements to the Eastern Promenade trail reinforce important pedestrian and bike links to the downtown, while the shared street design prioritizes pedestrian access through the site. The space will be accessible to residents, visitors and employees from within the development, from the surrounding Portland neighborhoods, and beyond.

Secure – *We will strive to create a resilient economy through innovation, investment, and commitment to diversity.*

Portland Foreside's goal is to add to support the City's desire for a resilient economy by creating a neighborhood with a mix of uses that will enhance the Eastern Waterfront and provide opportunities for economic growth in an area that has been underutilized for decades. A well-organized development with a variety of uses will encourage t locals and visitors to enjoy the area.

Authentic – *We (City) will celebrate our city's incredible history.*

The uniqueness and integrity of our neighborhoods will be maintained and enhanced.

We will invest in and support our local economy.

We will maintain our character through preservation, innovation, and excellence in design for the built environment.

The proposed development will include a mix of new and historic buildings that will work together to create a welcoming space in Portland. High quality finishes and new construction will integrate closely with the remaining historic structures to create a neighborhood that is authentic to Portland's existing downtown but is also modern and efficient. Retail and market spaces will provide opportunities for local businesses to showcase themselves, further creating an extension of the City's existing Old Port neighborhood; while office and residential spaces will bring more people to the neighborhood on a regular basis as patrons of these local businesses.

Connected – *We will foster accessible linkages between where we live, work, shop, and play.*

We will enable meaningful access to the natural world and recreational opportunities as a central component of community health.

The new neighborhood at 58 Fore Street will remain physically connected to the rest of the City and surrounding areas through street connections on Thames Street Extension and Fore Street, as well as through pedestrian connection from the Eastern Promenade Trail and water connection from the newly constructed Fore Points Marina. The Maine Narrow Gauge Railroad will also be maintained as a vestige of the transportation rail corridor through the site. These pedestrian, water, and rail connections will all help to foster the City's goal of providing meaningful access to the nature and recreational opportunities. With office, retail, including restaurant, and residential all proposed as part of the Phase 1 Portland Foreside development, the project will create a complete neighborhood experience within itself, while also remaining connected to the adjacent Old Port neighborhood, India Street neighborhood and greater Portland.

The proposed Phase 1 development supports Portland's desire to endure by offering an opportunity to grow, change, and revitalize an area of the City that has been underutilized for many years and to support redevelopment where it makes sense within the City. The following sections describe how the proposed development will align with the policy guides associated with Portland's Plan 2030.

11.2 Comprehensive Plan Policy Guides

The City of Portland Comprehensive Plan includes eight specific policy guides focused on the topics of environment, historic resources, waterfront, economy, housing, recreation and open space, facilities and services and transportation. The discussion below emphasizes how the proposed development is consistent with each individual policy guide.

Environment Policy Guide

- Within the Environment Policy Guide, one of the local goals is to develop climate resilience through specific carbon reduction goals, comprehensive climate adaptation strategies, and protections for the City's most vulnerable infrastructure. The design team has specifically considered resiliency as part of the proposed development through building design and site layout.

- The Policy Guide also has a local goal to adopt sustainable land use and transportation policies that support connectivity, walkable neighborhoods, and multi-modal transportation. The proposed development is the first phase of the overall 58 Fore Street Master Development Plan to move forward and it was conceptualized around the ideas of connectivity and walkability. The proposed shared street concept will prioritize pedestrian movements through the site, and parking garages have been efficiently incorporated into the site layout. Pedestrians will be able to access the site directly from Munjoy Hill.

- One future strategy is improving water quality. As described by the Stormwater Management Plan attached to Section 9 of this Report, stormwater best management practices will be incorporated into the Site to provide water quality treatment.

- Another future strategy is to develop climate resilience by pursuing strategic investment where storm surge and sea level rise will have impacts, including the waterfront. The design team has considered future sea level rise, storm surge, and flooding scenarios and Phase 1 been designed to prioritize resiliency on the Site. Building finish floor elevations are established in consideration of future sea level rise. The development enables continued maintenance and improvements at the site's seawall, including the addition of Tideflex valves for backflow prevention during storm events. The development also includes the addition of stormwater treatment and conveyance systems to improve drainage and water quality.

Phase 1 of the 58 Fore Street Master Development Plan will have a positive impact on maintaining and enhancing connectivity and walkability in the east end of the City. This downtown development is in line with the goals of the City's environmental policy.

Historic Resources Policy Guide

The proposed development supports the Historic Resources Policy Guide by aligning with the following goals:

- Promote historic preservation as a key economic, sustainability, and community development strategy.
- Stabilize and enhance historic areas of the city by ensuring quality investment in existing structures and compatible infill development.
- Ensure an appropriate balance of continuity and change as Portland grows and evolves.

Portions of the proposed development are located within the Portland Company Historic District and Phase 1 of the 58 Fore Street Master Development Plan will be compatible with the major character defining elements of the district. The development has been designed to promote historic preservation as an economic, sustainability, and community development strategy. The redevelopment of this Site is based on enhancing the former Portland Company Complex components that remain through quality investment and compatible adaptive reuse. The project balances continuity and change in an evolving Portland by preserving the historic character of the site while helping to meet the demand for sustainable growth. The proposed Phase 1 work in the Portland Company Historic District has been submitted to the Portland Historic Preservation Board for a Certificate of Appropriateness. Building 12 has received a Certificate of Appropriateness from the Historic Preservation Board.

Waterfront Policy Guide

The proposed development includes the creation of a staircase associated with a public access easement from Fore Street, down through the site between Building 1A and Block 2 and connecting to the waterfront area. Promoting passive and active recreational access to the waterfront is a key goal in the Waterfront Policy Guide. This development will create public access to the waterfront in an area of the City where direct access does not currently exist by creating thoughtful linkages at the pedestrian level in a built environment. The proposed development will also promote the City's connectivity by maintaining and enhancing the existing Eastern Promenade Trail, which provides pedestrian access to both the Site and the waterfront area.

Economy Policy Guide

The proposed development directly supports goals within the Economy Policy Guide including:

- Create economic prosperity by growing Portland's tax and employment base.
- Reinforce the waterfront as a key component of Portland's economic health, balancing traditional and emerging industries with tourism and recreation.

Office and retail space created by the development will help to grow Portland's tax and employment base. Locating these types of uses in this development helps to balance activity in this part of the City between tourism and recreation and traditional and emerging industries. The proposed development intends to encourage public access by creating an authentic and dynamic environment, which will help stimulate use of the businesses located in the City's east end. Additionally, the proposed development will revitalize the area, which will ultimately result in an increased valuation of the surrounding properties.

Housing Policy Guide

The proposed development includes residential uses and supports the goals of the City's Housing Policy Guide to create complete neighborhoods. The proposed development will provide housing in close proximity to the City's urban center and transportation hubs in support of a walkable and vibrant neighborhood.

Recreation and Open Space Policy Guide

The public access to the waterfront from Fore Street being created as part of the proposed development is exciting and directly consistent with goals in this policy guide including:

- Sustain and build our system of parks, trails, and open spaces to enhance our quality of life, protect our environment, and promote the economic well-being of our remarkable city by the sea.
- Strengthen connections between open spaces.

As previously described, the proposed development will provide a public access to the waterfront directly from Fore Street, which will serve to strengthen the connection to the waterfront and provide a passive open space area that promotes quality of life. As stated in the policy guide, this connection is integral to the health and well-being of Portland's residents and visitors. The preservation of open space and revitalization of the downtown area will help the City to maintain its authentic character.

Facilities and Services Policy Guide

The infrastructure associated with the proposed development is supportive of the goal in the Facilities and Services Policy Guide focused on coordinating infrastructure planning and investments with areas of greatest anticipated growth. The buildings will require connections to water, sewer, gas, and electric utilities. Some of the infrastructure investments will be paid for privately, but the coordination and additional investments by the City are in an area where growth is supported and has been planned for. The City will realize a reduced cost for public infrastructure operations and maintenance by permitting a downtown development and leveraging existing utilities when compared to developments in other areas of Portland where new utilities are required.

11.3 Eastern Waterfront Master Plan

The Master Plan for Redevelopment of the Eastern Waterfront (EWMP) specifically acknowledges the vacant, underutilized land in the area of the project site at 58 Fore Street. The EWMP notes that, given the location of the site and proximity to water views, urban amenities, vehicular access, port access and integration with the City trail system, significant redevelopment potential exists. Redevelopment such as parking structures, intensive reuse of historic buildings, replacement of non-historic structures, and open space enhancement were all anticipated in the EWMP and are included in Phase 1 of the 58 Fore Street Master Development Plan Several principles and associated objectives for redevelopment are identified in the EWMP, including :

- *"Development within the eastern waterfront will be compatible with the surrounding areas, neighborhoods, natural environment and maritime uses."* Objectives associated with this principle that are consistent with the proposed redevelopment are the use of compatible architecture, historic preservation and adaptive reuse of

contributing historic structures, establishment of a new street and pedestrian network that integrates with the surrounding street and trail network and preservation of significant view corridors to the water and along the waterfront.

- *"Development within the eastern waterfront will create a vital and active mixed-use urban area that generates life and use every day of the year and all hours of the day."* Objectives associated with this principle that are consistent with the proposed redevelopment are the creation of mixed-used non-marine development and activities that are compatible with the use of maritime resources, the increase of the public's use of the water, waterfront and shore through public access, and maintaining and enhancing recreational trail access.
- *"Development in the eastern waterfront on piers, bulkheads and on land within 75' of mean high-water line, will give priority to compatible water-dependent and maritime uses."* Objectives associated with this principle that are consistent with the proposed redevelopment are preserving and enhancing water dependent uses by providing public physical and visual access to the water.
- *"Development in the eastern waterfront will provide a significant benefit to the City and the regional economy."* Objectives associated with this principle that are consistent with the proposed redevelopment are creating a positive economic return to City, sustaining and strengthening water-related tourism, enhancing the economic viability of the eastern waterfront's property and facilities, and assuring that development benefits the residents of the greater Portland community.

The vision for Phase 1 of the 58 Fore Street Master Development Plan was built on the foundation of the EWMP with the intent of connecting the waterfront to the City of Portland with inspiring design focused on mixed-uses, public spaces, revitalized historic structures and access to marina operations.

11.4 Design Guidelines for the Eastern Waterfront

The Design Guidelines for the Eastern Waterfront have been considered as part of the master planning of the proposed project. In general, it was noted that encouraging the adaptive reuse and sensitive rehabilitation of historic structures, increasing connections to Commercial Street and promoting shared parking with abutting uses were key points to consider in the design of the proposed project. The design team has made the following considerations:

- **Streets**
    - **Appropriate Street Design** – The proposed shared roadway has been designed to accommodate expected vehicles and pedestrians safely and efficiently while encouraging appropriate speeds. On-street parking has been provided wherever possible to provide a buffer between pedestrians and moving traffic and to serve the retail, residential, and commercial uses in the area.
    - **Sidewalks** – The proposed shared street concept along with sufficient additional walkways will accommodate pedestrians comfortably and safely. The pedestrian environment will be further enhanced using fixed street furniture, compatible and consistent lighting, and landscaping. Sidewalk cafes, temporary art installations, and seasonal lighting will also be considered to encourage year-round activity**.**
    - **View Corridors** – The site has been designed to provide for views to and from the water.
    - **Railroad Right of Way** - The adjacent rail line will be relocated and integrated with the proposed project.
    - **Underground Utilities** - Overhead utilities have been avoided; utilities have been designed to be located underground to the maximum extent practicable**.**
    - **Bicycle Safety** - The proposed roadway has been designed to accommodate bicycle traffic and safety. Bicycle racks will be provided throughout the site and in the parking garage.

- **Buildings/Architecture**
    - **Contextual Design** - Buildings have been designed in response to their context and will be compatible with the surrounding neighborhood.
    - **Pedestrian Environment -** Large expanses of blank walls have been avoided and multiple entries will be provided into buildings. Amenities such as street furniture and lighting will encourage year-round pedestrian use.
    - **Primary Entrances and Service Entrances** - Service entrances and loading facilities have been strategically located such that they will not directly impact primary entrances.
    - **Parking Structures** - Parking structures will be compatible with adjacent uses and architecture.
    - **Historic Structures** - Historically and architecturally significant structures and sites will be carefully rehabilitated in a way that is consistent with their original architectural intent.
- **Open Space**
    - **Public Open Space and Plazas** – The proposed project will contribute to the public realm through enhancement of the pedestrian environment and increased recreational opportunities.
- **Waterfront**
    - **The Eastern Waterfront** - The function of this area as an intermodal transportation center has been designed to facilitate integration and coordination of the various current and potential future modes of transportation.

The overall intent of the project has been to create a vibrant, usable space that will become an extension of the City of Portland's existing downtown. Throughout design, the project team has considered the City's various master plans, policies and guidelines with the goal of integrating the project into the existing City fabric.

13. BOUNDARY SURVEY

A boundary and topographic survey of the Site was completed by Owen Haskell, Inc. Professional Land Surveyors. The original survey was completed in August of 2016 and was revised in February of 2019. The revised survey is included with the project drawings.

13.1 Attachments

- Boundary & Topographic Survey, prepared by Owen Haskell, Inc. (uploaded to Drawings folder in Eplan)

14. AVAILABILITY & ADEQUACY OF PUBLIC UTILITIES

The proposed development will be serviced by public water, sewer, gas, and electric utilities. The proposed locations of the utility services are shown on the Utility Plan included in the Design Drawings attached to Section 3. The proposed development will also generate waste as a result of construction and post-construction operations.

14.1 Water

The proposed development will be provided with both fire protection water service and domestic water service as shown on the drawings via a private water system that will connect to the public water main on Fore Street. Woodard & Curran has been working directly with the Portland Water District (PWD) to determine the appropriate design for this work. Most recently, we have met with PWD to review the project needs and design requirements on August 16, 2019, October 8, 2019, and October 18, 2019. Based on the results of these meetings, we are in the process of designing a private water system, and we will be scheduling a follow-up meeting with PWD to review our system design. An ability to serve determination will be provided upon receipt.

14.2 Sewer

The proposed development will be provided with sanitary sewer service as shown on the drawings. The private system on the site will include a combination of gravity sewer and forcemain with a pump station that will discharge to the sewer on the Thames Street Extension. The existing sewer service on Fore Street will be abandoned. The proposed development will include restaurants, kitchens, and parking garages; grease traps and oil/water separators will be provided as shown on the drawings. The attached letter is provided to request confirmation of ability to serve the proposed development; the Wastewater Capacity Application was submitted with this letter. A copy of the City's determination will be provided upon receipt.

14.3 Gas

The proposed development will utilize natural gas service provided by Unitil. Proposed infrastructure is shown on the Utility Plan. The location and size of the gas service is being coordinated with Unitil. Most recently, we met with Unitil on September 6, 2019 to review the project needs. With final meter locations selected, the utility plan will be provided to Unitil for their review. An ability to serve determination will be provided upon receipt.

14.4 Electric

The proposed development will utilize underground electric service. Proposed infrastructure is shown on the Utility Plan. The design of the electric service is being coordinated with Central Maine Power (CMP). We met with CMP on August 29 to review the proposed Phase 1 work. We also met with CMP and the City of Portland Department of Public Works to discuss possible opportunities to collaborate with the City on utility infrastructure. Final electric layouts will be provided to CMP for their review and an ability to serve determination will be provided upon receipt.

14.5 Solid Waste

Adequate provisions for recycling and solid waste disposal have been made. All solid waste materials and recyclables generated by the proposed development will be transported and disposed of or recycled in accordance with applicable laws and regulations. Solid waste will be managed in full accordance with all applicable laws and regulations.

14.6 Construction & Demolition Debris

The proposed development will generate construction waste and demolition debris (CDD). The Contractor will be responsible for properly disposing of the CDD. The Contractor will be responsible for handling, managing, and

disposing of all waste generated by construction in accordance with the Maine Solid Waste Management Regulations and all other applicable local, state, and federal regulations.

14.7 Special & Hazardous Waste

The proposed development is not anticipated to produce any hazardous waste. Environmental assessments of the Site have been conducted and the Owner is a participant in the Maine Department of Environmental Protection Voluntary Response Action Program (VRAP). A soil management plan has been developed for the site.

14.8 Attachments

- Portland Department of Public Works Request for Ability to Serve Letter and Wastewater Capacity Application

CITY OF PORTLAND WASTEWATER CAPACITY APPLICATION

Portland Dept. of Public Works -
Water Resources
55 Portland Street,
Portland, Maine 04101-2991

Bradley Roland, P.E.
Water Resources Division
Department of Public Works
55 Portland Street
Portland, ME 04103

Date: **November 2019**

1. Please, Submit Utility, Site, and Locus Plans.

Site Address: **58 Fore Street**

Chart Block Lot Number: **018 A001**

Proposed Use: **Mixed Use Development**
Previous Use: **Industrial**
Existing Sanitary Flows: **0** GPD
Existing Process Flows: **0** GPD
Description and location of City sewer that is to receive the proposed building sewer lateral.

Proposed on-site sewer main

Site Category		
	Commercial *(see part 4 below)*	X
	Industrial *(complete part 5 below)*	
	Governmental	
	Residential	X
	Other *(specify)*	X

Clearly, indicate the proposed connections, on the submitted plans.

2. Please, Submit Contact Information.

City Planner's Name: **TBD** Phone: _____
Owner/Developer Name: **Portland Foreside Development Company, c/o David Senus, PE**
Owner/Developer Address: **254 Commercial Street, Suite 118, Portland, ME 04101**
Phone: **(207) 558-3704** Fax: **N/A** E-mail: **das@portlandforeside.com**
Engineering Consultant Name: **Woodard & Curran**
Engineering Consultant Address: **41 Hutchins Drive, Portland, ME 04101**
Phone: **(207) 558-3763** Fax: **N/A** E-mail: **lswett@woodardcurran.com**

Note: Consultants and Developers should allow +/- 15 days, for capacity status, prior to Planning Board Review.

3. Please, Submit Domestic Wastewater Design Flow Calculations.

Estimated Domestic Wastewater Flow Generated: **113,300 GPD**
Peaking Factor/ Peak Times: _____
Specify the source of design guidelines: *(i.e.__"Handbook of Subsurface Wastewater Disposal in Maine," "Plumbers and Pipe Fitters Calculation Manual," __ Portland Water District Records, __ Other (specify)*
_____

Note: Please submit calculations showing the derivation of your design flows, either on the following page, in the space provided, or attached, as a separate sheet.

4. Please, Submit External Grease Interceptor Calculations.

Total Drainage Fixture Unit (DFU) Values:
Size of External Grease Interceptor:
Retention Time:
Peaking Factor/ Peak Times:

Complete grease trap needs are TBD. 3,000 gallon grease traps have been located throughout the site to manage restaurant spaces. As final design layout progresses, more information can be provided.

Note: In determining your restaurant process water flows, and the size of your external grease interceptor, please use The Uniform Plumbing Code. Note: In determining the retention time, sixty (60) minutes is the minimum retention time. Note: Please submit detailed calculations showing the derivation of your restaurant process water design flows, and please submit detailed calculations showing the derivation of the size of your external grease interceptor, either in the space provided below, or attached, as a separate sheet.

5. Please, Submit Industrial Process Wastewater Flow Calculations **N/A**

Estimated Industrial Process Wastewater Flows Generated: _____ GPD
Do you currently hold Federal or State discharge permits? Yes ____ No ____
Is the process wastewater termed categorical under CFR 40? Yes ____ No ____
OSHA Standard Industrial Code (SIC): *(http://www.osha.gov/oshstats/sicser.html)*
Peaking Factor/Peak Process Times: _____

Note: On the submitted plans, please show where the building's domestic sanitary sewer laterals, as well as the building's industrial-commercial process wastewater sewer laterals exits the facility. Also, show where these building sewer laterals enter the city's sewer. Finally, show the location of the wet wells, control manholes, or other access points; and, the locations of filters, strainers, or grease traps.

Note: Please submit detailed calculations showing the derivation of your design flows, either in the space provided, or attached, as a separate sheet.

Portland Water District
FROM SEBAGO LAKE TO CASCO BAY

November 17, 2016

Ashley Auger, PE
Woodard and Curran
41 Hutchins Drive
Portland, ME 04102

RE: 58 Fore Street, Capacity to Serve

Dear Ashley:

Based on the information provided to date, the Portland Water District can grant a conceptual level Capacity to Serve for the above referenced project with respect to water and sewer treatment capacity.

The District owns and operates water mains in Fore Street and Thames Street immediately adjacent to the proposed project at 58 Fore Street, which have the capacity to serve the site. Additional coordination is required between the District, the City of Portland, and the design engineers representing the project in order to configure the extension of the water system to properly serve the site.

The East End Wastewater Treatment Facility has the capacity to serve the expected wastewater generated at this site. Conveyance from the site to the plant is still under review by the District and the design engineers.

District approval of final plans is required prior to construction. As the project progresses, we advise you to submit any preliminary design plans to the MEANS Group for water and sewer infrastructure for District review and approval. The District will work with you to ensure that designs meet our current standards.

Sincerely,
Portland Water District

Robert Bartels, PE
Senior Project Engineer

225 DOUGLASS STREET P.O. BOX 3553 PORTLAND, MAINE 04104-3553
PHONE: 207.774.5961 FAX: 207.523.5440 WEB: WWW.PWD.ORG

CITY OF PORTLAND
Department of Public Works
Christopher C. Branch, P.E., Director

Date: January 24, 2020

Re: Wastewater Capacity Authorization

Address: 58 Fore Street – Phase 1
Applicant: Portland Foreside Development Company

Planner: Christian Roadman

Anticipated Wastewater Flow:

Estimate of Anticipated Design Flows				
Development	Unit Size	Number of Units	Gallons per Day per Unit	Total Gallons per Day
Existing flow to be removed				
Vacant				0
Proposed flow				
PFDC Phase 1 - Building 1A & Building 12				
Development	Unit Size	Number of Units	Gallons per Day per Unit	Total Gallons per Day
Parking Garage	Toilet	2	325	650
Restaurant (Eating place, 3 meals/day)	Seat	417	30	12510
	Employee	83	12	996
Office (Employees at place of employment with no showers)	Employee	983	12	11796
Residential (multiple family dwelling unit)	Dwelling Unit (w/ 2 or less bedrooms)	2	180	360
			Net Change	**+ 26312**
*Values based on STATE OF MAINE: SUBSURFACE WASTEWATER DISPOSAL RULES, most recent edition				

212 Canco Road, Ste B · Portland, ME 04103 · 207-874-8801
cbranch@portlandmaine.gov · www.portlandmaine.gov

Proposed flow				
PFDC Phase 1 – Block 2				
Development	Unit Size	Number of Units	Gallons per Day per Unit	Total Gallons per Day
Office (Employees at place of employment with no showers)	Employee	124	12	1488
Restaurant (Eating place, 3 meals/day)	Seat	598	30	17940
	Employee	239	12	2868
Assembly Area (meeting hall, no seats)	Person	1193	2	2386
			Net Change	**+ 24682**
*Values based on STATE OF MAINE: SUBSURFACE WASTEWATER DISPOSAL RULES, most recent edition				

Proposed flow				
PFDC Phase 1 - Building 4				
Development	Unit Size	Number of Units	Gallons per Day per Unit	Total Gallons per Day
Parking Garage	Toilet	5	325	1625
Restaurant (Eating place, 3 meals/day)	Seat	18	30	540
	Employee	7	12	84
Residential (multiple family dwelling unit)	Dwelling Unit (w/ 2 or less bedrooms)	12	180	2160
			Net Change	**+ 4409**
*Values based on STATE OF MAINE: SUBSURFACE WASTEWATER DISPOSAL RULES, most recent edition				

Combined Proposed flow		
PFDC Phase 1 - Building 1A & Building 12	Net Change	+ 26312
PFDC Phase 1 – Block 2	Net Change	+ 24682
PFDC Phase 1 - Building 4	Net Change	+ 4409
	Net Total Change	**+ 55403**

Comments:
The Department of Public Works, which includes the Water Resource Division, have reviewed and determined that the downstream sewers from the project address have the capacity to convey the estimated dry weather wastewater flows which will be generated from this Phase 1 development. Continued communication and assessment of future project phases will be required.

If the City can be of further assistance, please contact me at all 874-8840 or brad@portlandmaine.gov

Sincerely,



Bradley A. Roland, P.E.
Senior Project Engineer

Lauren Swett

From: Cough, Jamie <Jamie.Cough@cmpco.com>
Sent: Thursday, January 9, 2020 6:37 AM
To: Denise Cameron
Cc: Lauren Swett; Ann Marie Shumway (ashumway@rfsengineering.com)
Subject: CMP Ability to Serve Request and Three Phase Service Process-Portland Foreside Development Company-Phase 1 Blocks 1,2 and 4
Attachments: Easement_Information_Worksheet.doc; Standard Easement Sample.pdf; Jan 3.1 2020 EDET.XLSX

1/9/2020

Denise Cameron, P.E.
Principal | Project Manager
Woodard & Curran

RE: Portland Foreside Development Company
Request for Ability to Serve Letter

SAP Notifications
TBD

Project Description: Development of Blocks 1, 2 and a portion of 4.

Block 1 includes the construction of Building 1A and the relocation and reconstruction of historic building 12. Building 1A will be an office building with ground floor retail on the south side and a single deck of parking. Building 12 will include a fine dining restaurant office space and two residential units.

Use	Building 1A (Parcel 1A)	Building 12 (Parcel 1C)	Total Phase 1 Block 1
	Area (SF)		
Residential	N/A	3,200 (2 units)	3,200
Office	95,100	3,200	98,300
Retail/Service/Restaurant	9,300	3,200	12,500
Event	N/A	N/A	N/A
Parking	26,500 (70 spaces)	N/A	26,500
Total	**130,900**	**9,600**	**140,500**

Block 2 is the Historic Core of the redevelopment project which includes the adaptive reuse of 7 historic buildings from the former Portland Company complex. The ground floor of these buildings include a market hall, restaurant and retail. Upper floors will be utilized
primarily for event space. A portion of the upper floors will also be utilized as office space. New residential townhomes will also be constructed along Fore Street.

Use	Block 2 (Parcels 2A, 2B, & 2C)
	Area (SF)
Residential	N/A

Office	12,400
Retail/Service/Restaurant	35,900
Event	17,900
Parking	N/A
Total	**66,200**

Block 4 is primarily structured parking with residential units and retail space along the western side of the garage. The structured parking built during Phase 1 will form the foundation for the future build out of residential (above) and ground floor retail (south elevation).

Use	**Block 4 (Parcel 4)**
	Area (SF)
Residential	12,900 (12 units)
Office	N/A
Retail/Service/Restaurant	1,100
Event	N/A
Parking	221,800 (652 spaces)
Total	**235,800**

CMP has the ability to serve the proposed project in accordance with our CMP Handbook (web link below). We can provide you the desired pad or pole mounted transformers per your request and city approval, in accordance with our CMP Handbook of Standard Requirements. If there are any additional off-site improvements to the electrical system, the customer may be responsible for some or all of these costs. If the loads warrant, there may be additional load study requirements from our Distribution Engineering and Transmission Engineering teams. These typically add several weeks to a project and will require study agreements as well as loading in order to complete these tasks. If you have any questions on the process, or need help in completion of the documents, **please contact me at 207-629-1489.**

Here is our typical process for getting your three phase or CT rated single phase service installed. If you have any questions, please let me know. The underlined links will redirect you to the appropriate site for additional information. If this is a single phase service with all self-contained metering, the process is simplified, but still begins with a call to CMP.

Service Milestones for Three Phase Services and CT Rated Single Phase Services. Please refer to CMP Installation Checklists for other installations.

- Call 1-800-565-3181 to establish a new account (if needed) and an SAP work order. Please provide both of these to me.
- Submit Load information. Please complete the attached EDET (excel file) using load information. . Please complete this and email back to me.
- Submit the easement information worksheet. Please complete this form and either email or fax back to me.
- Submit any electronic drawings (PDF (preferred) or DWG files) of the site layout and proposed electrical connections if you have them.
- Preliminary meetings with CMP Advisor and Engineer to determine details of job (I will need to schedule with your electrician/contractor-please let me know who this is)
- Field planner design appointment to cost out job and develop CMP Invoice. The invoice is typically generated 5-6 weeks after the design appointment. This expires after 90 days from the invoice date.
- CMP submits invoice to the customer for payment (typically via email). Payment received from customer.
- Easements (based on easement information worksheet) sent out, signed and originals returned to CMP.

- Job scheduled for completion after the electrical inspection has been received.

This process can take several months, depending upon several factors including transformer or materials delivery, return of completed paperwork, and other jobs in the system that may be ahead of yours. In addition, contact with the other utilities, including telephone and cable, should be commenced as soon as practical. They may have additional work or charges in addition to the CMP work required to bring your project on line.

Please complete the attached forms (the specific instructions are on each form) and email them back to me at your earliest convenience.

For your convenience, here is a link to the CMP Website which contains our Handbook with details on most service requirements: CMP Handbook of Standard Requirements

You will be responsible for installing the customer connections, conduits, and metering in accordance with the CMP Handbook of Standard Requirements. The transformer will be sized based on your submitted load sheets.

Your deposit amount will be typically based on an estimated two month bill, calculated from your completed load sheet unless otherwise determined by CMP.

Metering:

All metering (including locations) must be preapproved by CMP.

Chapter 324 Interconnections:

Please be advised that if you plan to install solar/wind/hydro generation, you must complete an application under the MPUC mandated Chapter 324 Interconnection Standards. If you go to Chapter 324 Interconnection Standards and follow the instructions for the Small Generator Interconnection Procedures, CMP can do this work in parallel to your service request that will be handled by me. If you project is under 660 KW You will be able to have a Customer Net Energy Billing contract. Information concerning Customer Net Energy Billing can be accessed thru the Chapter 324 website or by clicking here: Net Energy Billing

Reallocation/Line Extensions:

Recently, changes were made to the three-phase construction policy, which require CMP to reallocate construction costs paid by customers. If applicable, those projects identified as “developments” do not qualify for reallocation of funds. Please see this document at our website for details about the reallocation conditions. Any reallocation charges will be specifically denoted on your invoice. The website address for this is: PolyphaseLineExtension .

This line extension will be part of Central Maine Power’s distribution system. In the event the property served under this Agreement is sold or otherwise conveyed, all rights and obligations of the Agreement shall stay with the property. Please note that if you rent or lease this property to another and you want to receive the reimbursement payments, you must make special arrangements with the Central Maine Power Company. Otherwise, any reimbursement payments will be sent to the “Customer” taking service at the service location.

Electricity Supplier Information:

Central Maine Power Company (CMP) will provide your facility with electric delivery service. If you don’t already have a provider, you will need to make arrangements with a competitive electricity provider in order to receive electricity supply for your facility. In the event you fail to choose a competitive electricity provider, you will receive Standard Offer service arranged by the Maine Public Utilities Commission. If you wish to be served by a competitive electricity provider immediately upon establishment of delivery service, you must arrange for this service directly through your chosen

competitive electricity provider, who must enroll your account no later than 5 PM on the business day prior initiation of delivery service by CMP. An up-to-date list of competitive suppliers can be found at the:

1) Maine Public Utilities Commission (MPUC) web site- **Maine PUC**
2) By calling the MPUC at (207) 287-3831

Attachments:

Excel Load Sheet (EDET)
Easement Worksheet and Sample Standard Easement

Regards,

Jamie

Jamie Cough
Energy Services Advisor
Central Maine Power Company
162 Canco Road
Portland, ME 04103
207-629-1489 office

CENTRAL MAINE POWER

==========

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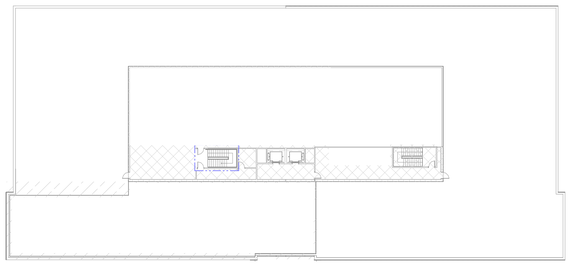
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15. PORTLAND FIRE DEPARTMENT SITE REVIEW CHECKLIST

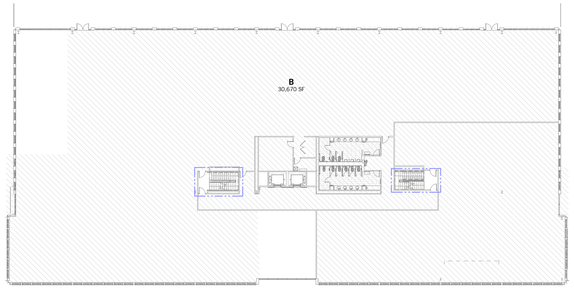
The items in the Portland Fire Department Site Review Checklist are addressed as follows:

- Name, address, telephone number of applicant:
  - Portland Foreside Development Company, c/o David Senus, PE
  - 254 Commercial Street, Suite 118, Portland, ME 04101
  - (207) 558-3704
- Name, address, telephone number of architect:
  - Perkins+Will, c/o Derek Johnson, LEED AP BD+C
    - 225 Franklin St, Boston, MA 02110
    - (617) 406-3430
  - Bruner/Cott, c/o Henry Moss
    - 225 Friend Street, Suite 701, Boston, MA 02114
    - (617) 492-8400
- Proposed uses of any structures [NFPA and IBC classification]:
  - The structures are mixed-use. Use classifications are provided on the code summaries included in the architectural plans.
  - Please note that Building 1A is designed to accommodate a future roof terrace. Initial construction will include perimeter 42" guardrail and two remote stairs designed to accommodate egress loading of the future building / tenant occupants of A-Assembly Use gathering. At the time of initial construction, no occupiable roof terrace area will be submitted.
- Square footage of all structures [total and per story]:
  - The square footage of all structures is provided on the architectural plans.
- Elevations of all structures:
  - The elevations of all structures are provided on the architectural plans.
- Proposed fire protection of all structures:
  - All structures shall be sprinkled.
- Hydrant locations:
  - Hydrant locations are shown on the Utility Plan.
- Water main size and location:
  - Watermain locations and sizes are shown on the Utility Plan.
- Access to all structures [min. 2 sides]:
  - Access will be provided to a minimum of two sides of all structures.
- A code summary shall be included referencing NFPA 1 and all fire department technical standards:

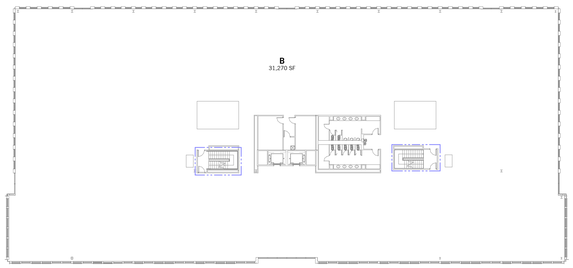
- The buildings will be compliant with requirements of NFPA 101: Uniform Fire Code. Automatic sprinkler systems and fire alarms will be provided as required by Use and Occupancy types. Code summaries are provided on the architectural plans.



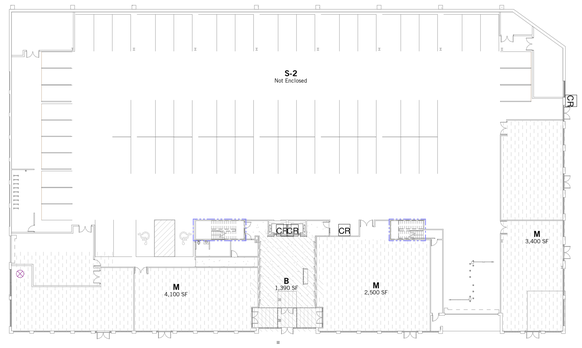
5 PENTHOUSE / ROOF CODE PLAN
1" = 30'-0"



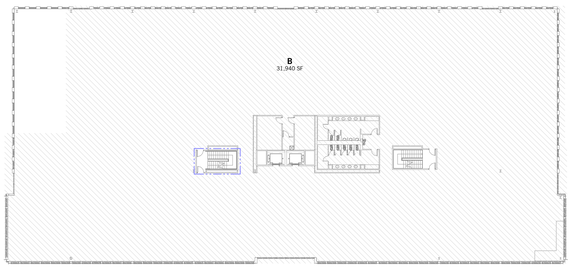
2 LEVEL 2 CODE PLAN
1" = 30'-0"



4 LEVEL 4 CODE PLAN
1" = 30'-0"



1 LEVEL 1 CODE PLAN
1" = 30'-0"



3 LEVEL 3 CODE PLAN
1" = 30'-0"

USE LEGEND

- B, BUSINESS
- M, MERCANTILE
- S-2, LOW HAZARD STORAGE

LIFE SAFETY AREA SCHEDULE	
USE CLASSIFICATION	AREA
LEVEL 1	
B, BUSINESS	1,390 SF
M, MERCANTILE	9,990 SF
S-2, LOW HAZARD STORAGE	0 SF
	11,380 SF
LEVEL 2	
B, BUSINESS	30,670 SF
	30,670 SF
LEVEL 3	
B, BUSINESS	31,940 SF
	31,940 SF
LEVEL 4	
B, BUSINESS	31,270 SF
	31,270 SF
PENTHOUSE / ROOF	
A-2, ASSEMBLY	5,550 SF
S-2, LOW HAZARD STORAGE	6,050 SF
	11,600 SF
TOTAL BUILDING SF: 10	116,850 SF

PROJECT DATA & CODE REFERENCES

PROJECT LOCATION: 58 FORE ST, PORTLAND, ME 04101
AUTHORITY HAVING JURISDICTION: PERMITTING & INSPECTIONS DEPARTMENT, CITY OF PORTLAND
PROJECT DESCRIPTION: NEW CORE & SHELL CONSTRUCTION OF 4 STORY OFFICE AND RETAIL BUILDING WITH PARKING GARAGE

APPLICABLE CODES:

BUILDING CODE:	2015 IBC, AS AMENDED BY MUBEC CHAPTER 6 + PORTLAND MUNICIPAL CODE CHAPTER 6
FIRE CODE:	NFPA 1 AND 101, AS AMENDED BY 25 M.R.S. §§ 2452 & 2465 + PORTLAND MUNICIPAL CODE CHAPTER 10
PLUMBING CODE:	2015 UPC, AS AMENDED BY 32 M.R.S. §3403-B
MECHANICAL CODE:	GUIDELINES, NOT MANDTORY: ASHRAE 62.1, ASHRAE 62.2, ASHRAE 90.1; E-1465-2008
ELECTRICAL CODE:	2017 NEC, AS AMENDED BY M.R.S. §3403-B.
ENERGY CODE:	2009 IECC, AS AMENDED BY MUBEC CHAPTER 6
ELEVATOR CODE:	MAINE ELEVATOR CODE, 32 M.R.S. §15206
ACCESSIBILITY:	MAINE HUMAN RIGHTS ACT, ADOPTED 5 M.R.S. CHAPTER 4 & 5 + 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN
OTHER:	VARIOUS CODES AND STANDARDS FOR FUEL / OIL / PROPANE / GAS BURNING EQUIPMENT

GENERAL CODE SUMMARY

USES & OCCUPANCY CLASSIFICATION:

BUSINESS GROUP (B)	UPPER LEVELS
MERCANTILE (M)	LEVEL 1 RETAIL
LOW HAZARD STORAGE (S-2)	LEVEL 1 PARKING GARAGE, MEP ROOMS, PENTHOUSE

TYPE OF CONSTRUCTION:

CONSTRUCTION TYPE	IIA
FIRE PROTECTION	BUILDING IS FULLY SPRINKLERED
NUMBER OF STORIES	4 LEVELS AT OR BELOW GRADE PLUS MECHANICAL PENTHOUSE
BUILDING HEIGHT	VARIES; 59.5' MAX ABOVE GRADE (PER ZONING), 46.5' AVG HEIGHT

FLOOR AREAS

LEVEL 1	43,240 SF	
LEVEL 2	34,330 SF	
LEVEL 3	34,330 SF	
LEVEL 4	34,330 SF	
PENTHOUSE	6,450 SF	(UNOCCUPIED)
TOTAL GSF	152,670 SF	

BUILDING ELEMENT FIRE RESISTANCE RATINGS	**CONSTRUCTION:**
SHAFTS	2 HR (≥ 4 STORIES), 1 HR (< 4 STORIES)
ELEVATOR MACHINE / CONTROLS ROOM	2 HR
NON-SPRINKLERED ELECTRICAL ROOM	2 HR
EMERGENCY GENERATOR ROOM	2 HR FIRE BARRIER
DRY TYPE TRANSFORMER ROOM > 35,000V	3 HR
DRY TYPE TRANSFORNER ROOM > 112.5 KVA	1 HR
BOILER ROOM WHERE LARGEST PIECE OF EQUIPMENT IS > 15 PSI AND 10 HP	SMOKE TIGHT
FURNACE ROOM ANY EQUIPMENT IS > 400,000 BTU PER HOUR INPUT	SMOKE TIGHT

MINIMUM INTERIOR WALL & CEILING FINISH REQ'S (PER ASTM E84 OR UL 723)

OCCUPANCY CLASSIFICATION	EXIT ENCLOSURES	CORRIDORS, EXIT ACCESS, STAIRWAYS, RAMPS	ROOMS AND ENCLOSED SPACES
A	B	B	B
B	B	C	C
S	C	C	C

INTERIOR FLOOR FINISH: INTERIOR FLOOR COVERING MATERIALS TO COMPY W/ DOC FF-1 PILL TEST (CPSC 16 CFR PART 1630), 780 CMR 804.4.1. NEW FLOOR FINISHES AND COVERINGS OF A TRADITIONAL TYPE, SUCH AS WOOD, VINYL, LINOLEUM, AND RESILIENT FLOOR COVERING MATERIALS NOT COMPOSED OF FIBERS ARE PERMITTED THROUGHOUT (780 CMR 804.1 EXCEPTION)

CODE COMPLIANCE PLAN LEGEND

- NEW PARTITION
- NON-RATED SMOKE PARTITION
- 1 HR FIRE BARRIER PARTITION
- 2 HR FIRE BARRIER PARTITION
- FIRE EXTINGUISHER
- 00'-0" — TRAVEL DISTANCE - LONGEST ROUTE TO AN EXIT
- EXIT — EXIT LOCATION
- MHO — MAGNETIC HOLD OPEN

DOOR	
34" CLR	ACTUAL CLEAR WIDTH PROVIDED
0.2" / OCC	EXIT WIDTH FACTOR
226 OCC	MAX OCCUPANT LOAD SUPPORTED
192 OCC	ACTUAL OCCUPANT LOAD

STAIR 1	
44" CLR	ACTUAL STAIR WIDTH PROVIDED
0.3" / OCC	STAIR WIDTH FACTOR
226 OCC	MAX OCCUPANT LOAD SUPPORTED
192 OCC	ACTUAL OCCUPANT LOAD

Perkins&Will
225 Franklin Street, Suite 1100
Boston, MA 02110
t 617.478.0300
www.perkinswill.com

CONSULTANTS

LANDSCAPE ARCHITECT
Michael Boucher
457 US Route 1 Suite 2
Freeport, Maine
t 207.865.1080

CIVIL ENGINEER
Woodard & Curran
41 Hutchins Dr
Portland, ME 04102
t 207.774.2112

STRUCTURAL + MEP ENGINEER
Rist-Frost-Shumway Engineering
50 Milk Street, 16th Floor
Boston, MA 02109
t 617.494.1464

PROJECT

BUILDING 1A
58 FORE ST
PORTLAND, ME 04101

FORESIDE
PORTLAND, MAINE
254 COMMERCIAL ST
SUITE 118
PORTLAND, ME 04101

KEYPLAN

NOT FOR CONSTRUCTION

ISSUE CHART

MARK	ISSUE	DATE

DESIGN DEVELOPMENT
JULY 26, 2019

Job Number	157087.000
Drawn	Author
Checked	Checker
Approved	Approver

TITLE

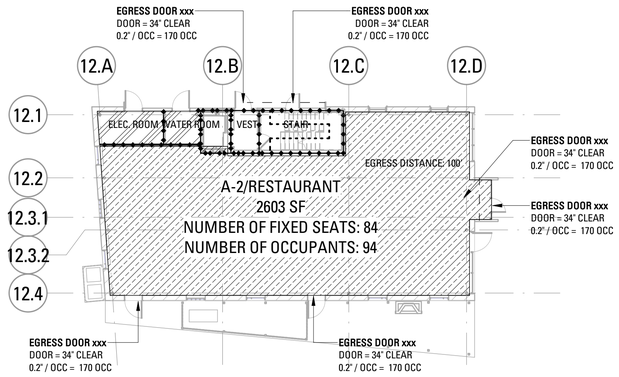
CODE COMPLIANCE DIAGRAMS

SHEET NUMBER

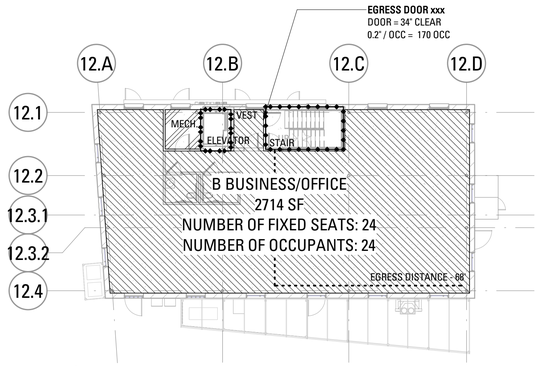
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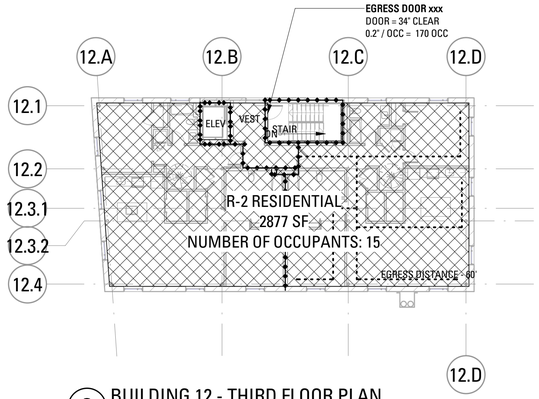
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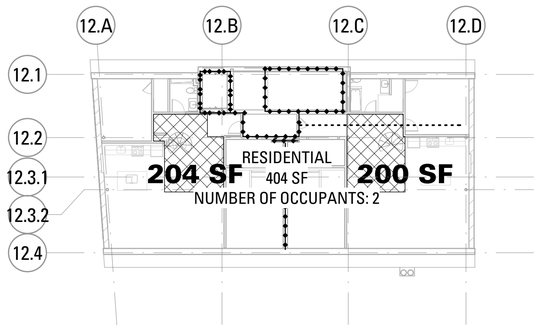
1 BUILDING 12 - GROUND FLOOR PLAN
SCALE: 1/16" = 1'-0"



2 BUILDING 12 - SECOND FLOOR PLAN
SCALE: 1/16" = 1'-0"



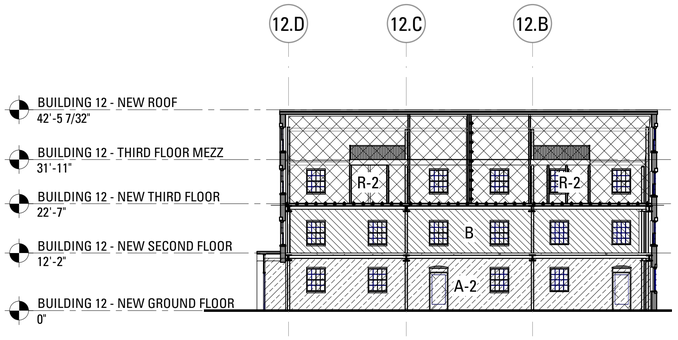
3 BUILDING 12 - THIRD FLOOR PLAN
SCALE: 1/16" = 1'-0"



4 BUILDING 12 - THIRD FLOOR MEZZ LEVEL
SCALE: 1/16" = 1'-0"

CODE KEY

- A-2 ASSEMBALY/RESTAURANT
- B BUSINESS
- S-2 STORAGE / MECHANICAL
- R-2 RESIDENTIAL
- 1-HOUR FIRE RESISTANT ASSEMBLY
- 2-HOUR FIRE RESISTANT ASSEMBLY
- SMOKE BARRIER ASSEMBLY
- OCCUPANT LOAD
- PATH OF TRAVEL



5 BUILDING 12 - LONG SECTION CODE
SCALE: 1/16" = 1'-0"

PROJECT DATA

PROJECT LOCATION: BUILDING 12, BLOCK 1 DEVELOPMENT
PORTLAND, ME 04101

AUTHORITY HAVING JURISDICTION: PERMITTING & INSPECTIONS DEPARTMENT, CITY OF PORTLAND
MAINE OFFICE OF THE STATE FIRE MARSHAL

PROJECT DESCRIPTION: NEW CONSTRUCTION OF A 3 STORY MIXED USE BUILDING CONTAINING ASSEMBLY, OFFICE, AND RESIDENTIAL USES.

APPLICABLE CODES

BUILDING MUBC – MAINE UNIFORM BUILDING CODE, AN AMENDED VERSION OF THE 2015 INTERNATIONAL BUILDING CODE (IBC).
PORTLAND MUNICIPAL CODE CHAPTER 6

FIRE PORTLAND MUNICIPAL CODE CHAPTER 10
NFPA 1, UNIFORM FIRE CODE, 2006 EDITION AS ADOPTED BY THE RULES OF THE STATE FIRE MARSHAL
NFPA 1, UNIFORM FIRE CODE, 2015 EDITION AS ADOPTED BY THE MUBC NFPA 101, LIFE SAFETY CODE, 2009 EDITION AS ADOPTED AND AMENDED BY THE RULES OF THE STATE FIRE MARSHAL

PLUMBING MAINE STATE PLUMBING CODE, AN AMENDED VERSION OF THE 2015 UNIFORM PLUMBING CODE (UPC)

MECHANICAL 2013 ASHRAE 62.1, VENTILATION FOR ACCEPTABLE INDOOR AIR QUALITY

ELECTRICAL 2014 NFPA 70, NATIONAL ELECTRIC CODE

ENERGY MUBEC – MAINE UNIFORM BUILDING AND ENERGY CODE, AN AMENDED VERSION OF THE 2009 INTERNATIONAL ENERGY CONSERVATION CODE

ELEVATOR MAINE ELEVATOR & TRAMWAY RULES & LAWS, AN AMENDED VERSION OF THE 2013 ASME A.17.1, SAFETY CODE FORE ELEVATORS AND ESCALATORS

ACCESSIBILITY: 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN
2009 ICC A117.1, ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES

OTHER: NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) CODES AND STANDARDS, AS REFERENCED BY THE ABOVE CODES AND THE RULES OF THE STATE FIRE MARSHAL

GENERAL CODE SUMMARY

USE & OCCUPANCY CLASSIFICATION:

CLASSIFICATION	FLOOR	USE
ASSEMBLY (GROUP A-2)	GROUND FLOOR	RESTAURANT
BUSINESS (GROUP B)	SECOND FLOOR	OFFICES
RESIDENTIAL (GROUP R-2)	THIRD FLOOR	APARTMENTS
STORAGE (GROUP S-2)	ALL FLOORS	MEP/BACK OF HOUSE

TYPE OF CONSTRUCTION

CONSTRUCTION TYPE VB, V (000)

GIVEN THE USES WITHIN THE BUILDING, A 1-HOUR HORIZONTAL SEPARATION IS REQUIRED BETWEEN FLOOR 2 AND FLOOR 3 TO PROVIDE AN OCCUPANCY SEPARATION (BASED ON HEIGHT LIMITATIONS FOR GROUP A) AS WELL AS A DWELLING UNIT SEPARATION FOR THE THIRD FLOOR RESIDENTIAL UNITS. SUPPORTING CONSTRUCTION IS REQUIRED FOR THE 1-HOUR OCCUPANCY SEPARATION PER MUBC 711.2.3.
THE THIRD FLOOR AND MEZZANINE WILL ALSO REQUIRE VERTICAL DWELLING UNIT SEPARATIONS BETWEEN UNITS. THE WALLS MUST BE CONSTRUCTED AS 30-MINUTE FIRE PARTITIONS.

FIRE PROTECTION

THE BUILDING WILL BE PROVIDED WITH A NEW SPRINKLER SYSTEM COMPLYING WITH NFPA 13. THE BUILDING WILL BE PROVIDED WITH A NEW FIRE ALARM SYSTEM COMPLYING WITH NFPA 72.

NUMBER OF STORIES

3 STORIES, WITH MEZZANINE ABOVE THE THIRD FLOOR WITHIN THE RESIDENTIAL UNITS.

THE MEZZANINE IS REQUIRED TO MEASURE LESS THAN 1/3 THE AREA OF THE ROOM TO WHICH IT IS OPEN TO (MUBC 505.2.1 AND NFPA 101 8.6.9.2.1). THE MEZZANINE MEASURE APPROXIMATELY 612 SF, AND ARE OPEN TO LIVING AREAS THAT MEASURE APPROXIMATELY 790 SF RESULTING IN COMPLIANCE AS A MEZZANINE.

BUILDING HEIGHT 42'-5 7/32" ABOVE GRADE

FLOOR AREA

GROUND FLOOR	2,603 SF
SECOND FLOOR	2,714 SF
THIRD FLOOR	2,877 SF
MEZZANINE	404 SF
TOTAL	**8,598 SF**

BUILDING ELEMENT FIRE RESISTANCE RATINGS **CONSTRUCTION:**

SHAFTS	1 HOUR
ELEVATOR MACHINE/ CONTROLS	2 HOUR
NON-SPRINKLERED ELECTRICAL ROOM	2 HOUR
EMERGENCY GENERATOR ROOM	2 HOUR
EMERGENCY ELECTRICAL ROOM	2 HOUR
DRY TYPE TRANSFORMER ROOM > 35,000 V	3 HOUR
DRY TYPE TRANSFORMER ROOM > 112.5 KVA	1 HOUR
HORIZONTAL EXIT	2 HOUR
BOILER ROOM WHERE LARGEST PIECE OF EQUIPMENT IS > 15 PSI AND 10 HP	SMOKE TIGHT
FURNACE ROOM WHERE ANY EQUIPMENT IS > 400,000 BTU PER HOUR INPUT	SMOKE TIGHT

MINIMUM INTERIOR WALL & CEILING FINISH REQ'S (PER ASTM E84 OR UL 723)

OCCUPANCY CLASSIFICATION	EXIT ENCLOSURES	CORRIDORS, EXIT ACCESS, STAIRWAYS, RAMPS	ROOMS AND ENCLOSED SPACES
A-2	B	B	C
B	B	C	C
R-2	C	C	C
S-2	C	C	C

INTERIOR FLOOR FINISH

INTERIOR FLOOR COVERING MATERIALS TO COMPLY WITH DOC FF-1 PILL TEST (CPSC 16 CFR PART 1630), MUBC 804.4.1. NEW FLOOR FINISHES AND COVERINGS OF A TRADITIONAL TYPE, SUCH AS WOOD, VINYL, LINOLEUM, AND RESILIENT FLOOR COVERING MATERIAL NOT COMPOSED OF FIBERS ARE PERMITTED THROUGHOUT (MUBC 804.1 EXCEPTION).

MEANS OF EGRESS

THE BUILDING IS PROVIDED WITH A SINGLE EXIT. THIS CONFIGURATION RESULTS IN THE FOLLOWING RESTRICTIONS TO THE SECOND AND THIRD FLOORS.
THE SECOND FLOOR IS LIMITED TO A TOTAL OCCUPANT LOAD OF 29 PEOPLE AND THE SINGLE STAIR MUST BE REACHABLE WITHIN 75 FEET FROM THE MOST REMOTE CORNER OF THE FLOOR (MUBC TABLE 1006.3.2(2)). ADDITIONALLY, THE OFFICE SPACE MUST BE FOR A SINGLE TENANT ONLY AND THE TOTAL TRAVEL DISTANCE FROM THE MOST REMOTE AREA OF THE FLOOR TO THE OUTSIDE MUST BE 100 FEET OR LESS WHICH IS MORE RESTRICTIVE THAN THE BUILDING CODE TRAVEL DISTANCE REQUIREMENTS (NFPA 101 38.2.4.6). THE THIRD FLOOR/MEZZANINE IS LIMITED TO A MAXIMUM OF FOUR (4) DWELLING UNITS AND THE SINGLE STAIR MUST BE REACHABLE WITHIN 125 FEET FROM THE MOST REMOTE AREA OF THE UNITS (INCLUDING TRAVEL DOWN THE INTERIOR UNIT STAIRS) (MUBC TABLE 1006.3.2(1). ADDITIONALLY, THE CORRIDOR AT THE THIRD FLOOR IS REQUIRED TO BE 1-HOUR FIRE RATED AND THE MAXIMUM DISTANCE FROM THE UNIT DOOR TO THE STAIR DOOR IS LIMITED TO 35 FEET (NFPA 101 30.2.4.4). THE MEZZANINE WITHIN THE RESIDENTIAL UNITS IS SERVED BY A SPIRAL STAIR. A SPIRAL STAIR IS PERMITTED IN ACCORDANCE WITH MUBC 1011.10 AND NFPA 101 30.2.2.3.3.

LIFE SAFETY AREA SCHEDULE

	OCCUPANCY	FUNCTION	LOAD FACTOR	AREA	OCCUPANTS
GROUND FLOOR	A-2 ASSEMBALY	RESTAURANT	15 SF	2,604 SF	SEE PLAN
	ACCESSORY / MECHANICAL		300 SF	149 SF	
SECOND FLOOR	B BUSINESS	OFFICE	15 SF	2,714 SF	SEE PLAN
	ACCESSORY / MECHANICAL		300 SF	63 SF	
THIRD FLOOR	R-2 RESIDENTIAL	APARTMENT	200 SF	2877 SF	SEE PLAN
	ACCESSORY / MECHANICAL		300 SF		
THIRD FL. MEZZ	R-2 RESIDENTIAL	APARTMENT	200 SF	404 SF	SEE PLAN
	ACCESSORY / MECHANICAL		300 SF	200 SF	

Bruner/Cott
ARCHITECTS
225 Friend St., Suite 701
Boston, MA 02114
617.492.8400
www.brunercott.com

Rev.	Date	Remarks

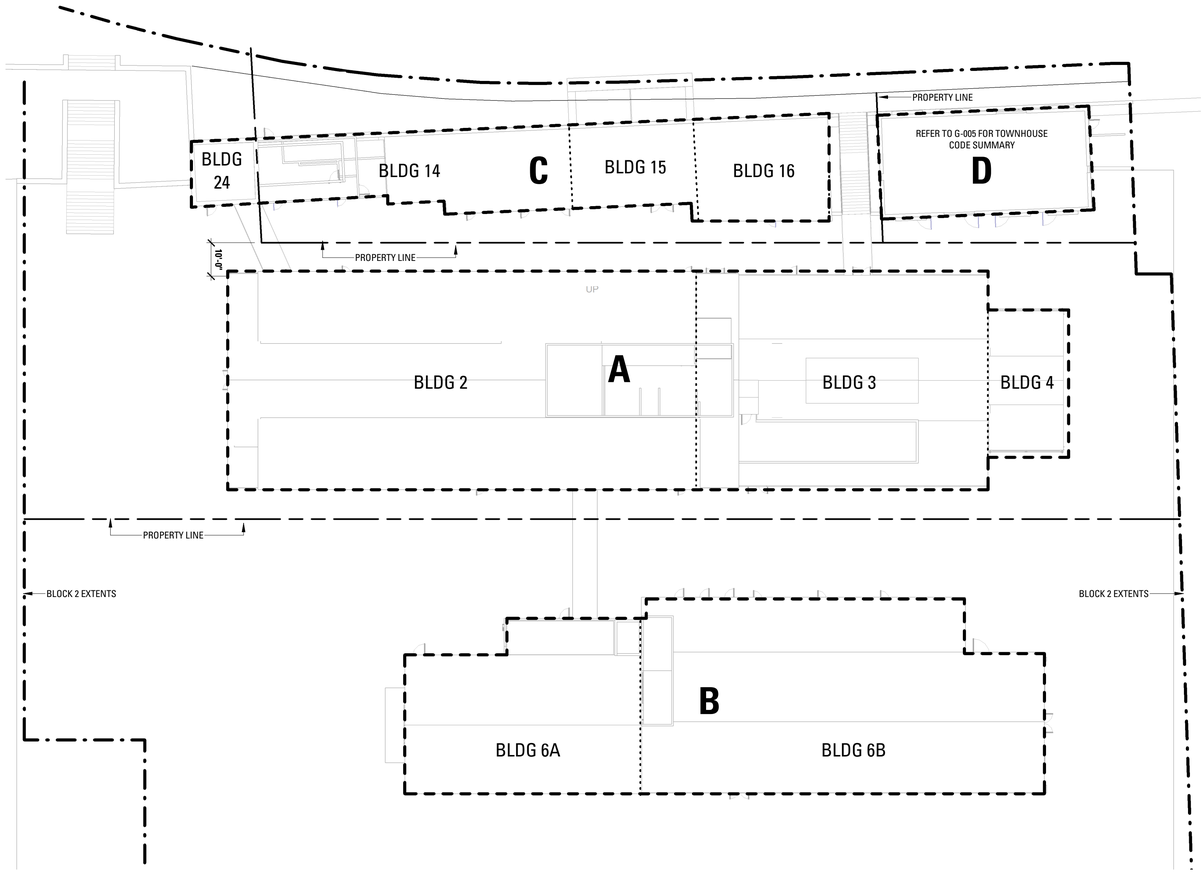
PORTLAND FORESIDE - BUILDING 12

Date	OCTOBER 25, 2019
Scale	1/16" = 1'-0"
Project Number	19.007
Drawn By	Author

NOT FOR CONSTRUCTION

CODE SUMMARY

LS-000



BLOCK 2 KEY PLAN

PROJECT DATA

PROJECT LOCATION:	58 FORE STREET, PORTLAND, ME 04101 BLOCK 2 DEVELOPMENT
AUTHORITY HAVING JURISDICTION:	PERMITTING & INSPECTIONS DEPARTMENT, CITY OF PORTLAND MAINE OFFICE OF THE STATE FIRE MARSHAL
PROJECT DESCRIPTION:	RENOVATION OF COMPLEX OF HISTORIC BUILDINGS OF THE PORTLAND COMPANY. SEE PROJECT DESCRIPTIONS OF EACH BUILDING.

APPLICABLE CODES

BUILDING	MUBC – MAINE UNIFORM BUILDING CODE, AN AMENDED VERSION OF THE 2015 INTERNATIONAL BUILDING CODE (IBC). MUEBC – MAINE UNIFORM EXISTING BUILDING CODE, AN AMENDED VERSION OF THE 2015 INTERNATIONAL EXISTING BUILDING CODE. PORTLAND MUNICIPAL CODE CHAPTER 6
FIRE	PORTLAND MUNICIPAL CODE CHAPTER 10 NFPA 1, UNIFORM FIRE CODE, 2006 EDITION AS ADOPTED BY THE RULES OF THE STATE FIRE MARSHAL NFPA 1, UNIFORM FIRE CODE, 2015 EDITION AS ADOPTED BY THE MUBC NFPA 101, LIFE SAFETY CODE, 2009 EDITION AS ADOPTED AND AMENDED BY THE RULES OF THE STATE FIRE MARSHAL
PLUMBING	MAINE STATE PLUMBING CODE, AN AMENDED VERSION OF THE 2015 UNIFORM PLUMBING CODE (UPC)
MECHANICAL	2013 ASHRAE 62.1, VENTILATION FOR ACCEPTABLE INDOOR AIR QUALITY
ELECTRICAL	2014 NFPA 70, NATIONAL ELECTRIC CODE
ENERGY	MUBEC – MAINE UNIFORM BUILDING AND ENERGY CODE, AN AMENDED VERSION OF THE 2009 INTERNATIONAL ENERGY CONSERVATION CODE
ELEVATOR	MAINE ELEVATOR & TRAMWAY RULES & LAWS, AN AMENDED VERSION OF THE 2013 ASME A.17.1, SAFETY CODE FORE ELEVATORS AND ESCALATORS
ACCESSIBILITY:	2010 ADA STANDARDS FOR ACCESSIBLE DESIGN 2009 ICC A117.1, ACCESSIBLE AND USABLE BUILDINGS AND F FACILITIES
OTHER:	NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) CODES AND STANDARDS, AS REFERENCED BY THE ABOVE CODES AND THE RULES OF THE STATE FIRE MARSHAL

GENERAL CODE SUMMARY

BLOCK 2, GROUP A, BUILDINGS 2, 3, 4

PROJECT DESCRIPTION:
CHANGE OF USE OF A 3-STORY EXISTING BUILDING CONTAINING INDUSTRIAL, FACTORY, AND BUSINESS USE, WHICH IS CURRENTLY BEING USED FOR TEMPORARY SPECIAL ASSEMBLY EVENTS. THE PROPOSED USES INCLUDE OFFICE AND ASSEMBLY SPACE. THE PROJECT WILL ALSO INCLUDE A BUILDING ADDITION, WHICH IS A MECHANICAL/STORAGE MEZZANINE.

USE & OCCUPANCY CLASSIFICATION:

CLASSIFICATION	FLOOR	USE
ASSEMBLY (GROUP A-2)	GROUND FLOOR	RESTAURANT
ASSEMBLY (GROUP A-3)	SECOND FLOOR	EVENT SPACE
BUSINESS (GROUP B)	THIRD FLOOR	OFFICES
STORAGE (GROUP S-2)	ALL FLOORS	MEP/BACK OF HOUSE

TYPE OF CONSTRUCTION

CONSTRUCTION TYPE IIIB, III (200)
THE PROJECT WILL BE APPLYING FOR A COMPLIANCE ALTERNATIVE TO ADDRESS THE OVERALL CONSTRUCTION TYPE OF THE BUILDING RELATIVE TO THE ASSEMBLY USE AND OCCUPANT LOAD ON THE SECOND FLOOR (EXCEEDS THE 300 PERSON LIMIT AT THE SECOND FLOOR PER TYPE IIIB CONSTRUCTION). THE COMPLIANCE ALTERNATIVE WILL COMMIT TO A 1-HOUR FLOOR/CEILING ASSEMBLY BETWEEN THE FIRST AND SECOND FLOOR, WITH SUPPORTING CONSTRUCTION THROUGHOUT THE FIRST FLOOR.

FIRE PROTECTION THE BUILDING WILL BE PROVIDED WITH A NEW SPRINKLER SYSTEM COMPLYING WITH NFPA 13. THE BUILDING WILL BE PROVIDED WITH A NEW VOICE EVACUATION FIRE ALARM SYSTEM COMPLYING WITH NFPA 72.

NUMBER OF STORIES 3 STORIES, WITH MEZZANINE.

THE PROJECT INCLUDES THE ADDITION OF A MEZZANINE ABOVE THE FIRST FLOOR. THE MEZZANINE IS REQUIRED TO MEASURE LESS THAN 1/3 THE AREA OF THE ROOM TO WHICH IT IS OPEN TO (MUBC 505.2.1 AND NFPA 101 8.6.9.2.1). THE MEZZANINE MEASURES 3,789 SF, REQUIRING THE FIRST FLOOR TO HAVE AN OPEN AREA OF AT LEAST 11,367 SF.

BUILDING HEIGHT 43'-9" ABOVE GRADE

FLOOR AREAS

GROUND FLOOR	14,110 SF
MEZZANINE	3,789 SF
SECOND FLOOR	14,725 SF
THIRD FLOOR	8,730 SF
TOTAL	41,354 SF

BUILDING ELEMENT FIRE RESISTANCE RATINGS **CONSTRUCTION**

SHAFTS	1 HOUR
ELEVATOR MACHINE/ CONTROLS	2 HOUR
NON-SPRINKLERED ELECTRICAL ROOM	2 HOUR
EMERGENCY GENERATOR ROOM	2 HOUR
EMERGENCY ELECTRICAL ROOM	2 HOUR
DRY TYPE TRANSFORMER ROOM > 35,000 V	3 HOUR
DRY TYPE TRANSFORMER ROOM > 112.5 KVA	1 HOUR
HORIZONTAL EXIT	2 HOUR
BOILER ROOM WHERE LARGEST PIECE OF EQUIPMENT IS > 15 PSI AND 10 HP	SMOKE TIGHT
FURNACE ROOM WHERE ANY EQUIPMENT IS > 400,000 BTU PER HOUR INPUT	SMOKE TIGHT

MINIMUM INTERIOR WALL & CEILING FINISH REQ'S (PER ASTM E84 OR UL 723)

OCCUPANCY CLASSIFICATION	EXIT ENCLOSURES	CORRIDORS, EXIT ACCESS, STAIRWAYS, RAMPS	ROOMS AND ENCLOSED SPACES
A-2, A-3	B	B	B
B	B	C	C
S-2	C	C	C

INTERIOR FLOOR FINISH

INTERIOR FLOOR COVERING MATERIALS TO COMPLY WITH DOC FF-1 PILL TEST (CPSC 16 CFR PART 1630), MUBC 804.4.1. NEW FLOOR FINISHES AND COVERINGS OF A TRADITIONAL TYPE, SUCH AS WOOD, VINYL, LINOLEUM, AND RESILIENT FLOOR COVERING MATERIAL NOT COMPOSED OF FIBERS ARE PERMITTED THROUGHOUT (MUBC 804.1 EXCEPTION).

MEANS OF EGRESS
THE MEZZANINE IS PROVIDED WITH ACCESS TO TWO (2) INTERIOR EXIT STAIR ENCLOSURES. SINCE THE MEZZANINE IS PROVIDED WITH TWO (2) MEANS OF EGRESS THE MEZZANINE CAN BE ENCLOSED IN FULL HEIGHT WALLS (MUBC 505.2.3 AND NFPA 101 8.6.9.3.2).

THE COMPLIANCE ALTERNATIVE FOR THE BUILDING WILL REQUEST A MAXIMUM OCCUPANT LOAD OF 800 PEOPLE FOR THE SECOND FLOOR. THE FLOOR IS SERVED BY TWO (2) INTERIOR EXIT STAIR ENCLOSURES AT THE CENTER OF THE FLOOR PLAN. ADDITIONALLY, THE PROJECT WILL BE PROVIDED WITH AN EXIT VIA A PEDESTRIAN WALKWAY (BRIDGE) TO BUILDING 24 WITHIN BLOCK 2 AND A PEDESTRIAN WALKWAY (BRIDGE) TO FORE STREET.

THE THIRD FLOOR CONSISTS PRIMARILY OF OFFICE SPACE AND IS PROVIDED WITH ACCESS TO TWO (2) INTERIOR EXIT STAIR ENCLOSURES AND THE BRIDGE TO BUILDING 24.

NOTE THAT PEDESTRIAN WALKWAYS/BRIDGES ARE REQUIRED TO COMPLY WITH MUBC 3104 AND NFPA 101 7.2.4.4 AND SERVE AS HORIZONTAL EXITS FROM BUILDING 2/3. THE EXTERIOR WALL OF BUILDING 2/3 AT THE PEDESTRIAN WALKWAYS/BRIDGES MUST BE 2-HOUR FIRE RATED FOR 10 FEET IN ALL DIRECTIONS. OPENINGS MUST BE ¾-HOUR FIRE RATED DOORS OR FIXED WINDOWS (NFPA 101 7.2.4.4.2). THE PEDESTRIAN WALKWAYS/BRIDGES WILL BE OPEN ALONG THE SIDES AND MUST BE PROTECTED TO PREVENT THE ACCUMULATION OF SNOW AND ICE (NFPA 101 7.2.4.4.7).

BLOCK 2, GROUP B, BUILDING 6A/6B

PROJECT DESCRIPTION: CHANGE OF USE OF A 3 STORY EXISTING BUILDING CONTAINING INDUSTRIAL, FACTORY, AND BUSINESS USE TO OFFICE, RETAIL, AND ASSEMBLY SPACE.

USE & OCCUPANCY CLASSIFICATION:

CLASSIFICATION	FLOOR	USE
ASSEMBLY (GROUP A-2)	GROUND FLOOR	RESTAURANT
ASSEMBLY (GROUP A-3)	SECOND FLOOR	EVENT SPACE
BUSINESS (GROUP B)	THIRD FLOOR	OFFICES
RETAIL (GROUP M)	GROUND FLOOR	VARIETY STORES
STORAGE (GROUP S-2)	ALL FLOORS	MEP/BACK OF HOUSE

TYPE OF CONSTRUCTION:

CONSTRUCTION TYPE IIIB, III (200)

FIRE PROTECTION THE BUILDING WILL BE PROVIDED WITH A NEW SPRINKLER SYSTEM COMPLYING WITH NFPA 13. THE BUILDING WILL BE PROVIDED WITH A NEW VOICE EVACUATION FIRE ALARM SYSTEM COMPLYING WITH NFPA 72.

NUMBER OF STORIES 3 STORIES

BUILDING HEIGHT 36'-0" ABOVE GRADE

FLOOR AREAS

GROUND FLOOR	10,135 SF
SECOND FLOOR	3,625 SF
THIRD FLOOR	3,620 SF
TOTAL	17,380 SF

BUILDING ELEMENT FIRE RESISTANCE RATINGS **CONSTRUCTION:**

SHAFTS	1 HOUR
ELEVATOR MACHINE/ CONTROLS	2 HOUR
NON-SPRINKLERED ELECTRICAL ROOM	2 HOUR
EMERGENCY GENERATOR ROOM	2 HOUR
EMERGENCY ELECTRICAL ROOM	2 HOUR
DRY TYPE TRANSFORMER ROOM > 35,000 V	3 HOUR
DRY TYPE TRANSFORMER ROOM > 112.5 KVA	1 HOUR
HORIZONTAL EXIT	2 HOUR
BOILER ROOM WHERE LARGEST PIECE OF EQUIPMENT IS > 15 PSI AND 10 HP	SMOKE TIGHT
FURNACE ROOM WHERE ANY EQUIPMENT IS > 400,000 BTU PER HOUR INPUT	SMOKE TIGHT

MINIMUM INTERIOR WALL & CEILING FINISH REQ'S (PER ASTM E84 OR UL 723)

OCCUPANCY CLASSIFICATION	EXIT ENCLOSURES	CORRIDORS, EXIT ACCESS, STAIRWAYS, RAMPS	ROOMS AND ENCLOSED SPACES
A-2	B	B	C
M	B	C	C
S-2	C	C	C

INTERIOR FLOOR FINISH

INTERIOR FLOOR COVERING MATERIALS TO COMPLY WITH DOC FF-1 PILL TEST (CPSC 16 CFR PART 1630), MUBC 804.4.1. NEW FLOOR FINISHES AND COVERINGS OF A TRADITIONAL TYPE, SUCH AS WOOD, VINYL, LINOLEUM, AND RESILIENT FLOOR COVERING MATERIAL NOT COMPOSED OF FIBERS ARE PERMITTED THROUGHOUT (MUBC 804.1 EXCEPTION).

BLOCK 2, GROUP C, BUILDINGS 14, 15, 16, 24

PROJECT DESCRIPTION: CHANGE OF USE OF A 3 STORY EXISTING BUILDING CONTAINING INDUSTRIAL, FACTORY, AND BUSINESS USE TO RETAIL AND ASSEMBLY SPACE.

USE & OCCUPANCY CLASSIFICATION:

CLASSIFICATION	FLOOR	USE
ASSEMBLY (GROUP A-2)	ALL FLOORS	RESTAURANT
RETAIL (GROUP M)	GROUND FLOOR	SHOPS
STORAGE (GROUP S-2)	ALL FLOORS	MEP/BACK OF HOUSE

TYPE OF CONSTRUCTION:
CONSTRUCTION TYPE VA, V (111)
MINIMALLY THE BUILDING IS REQUIRED TO BE OF TYPE VA CONSTRUCTION (1-HOUR) TO PERMIT AN ASSEMBLY USE AT THE THIRD FLOOR. FIRE PROTECTION THE BUILDING WILL BE PROVIDED WITH A NEW SPRINKLER SYSTEM COMPLYING WITH NFPA 13. THE BUILDING WILL BE PROVIDED WITH A NEW VOICE EVACUATION FIRE ALARM SYSTEM COMPLYING WITH NFPA 72.

NUMBER OF STORIES 3 STORIES
BUILDING HEIGHT 50' ABOVE GRADE [60' MAX FOR TYPE VA]
FLOOR AREAS

GROUND FLOOR	5,775 SF
SECOND FLOOR	2,000 SF
THIRD FLOOR	710 SF
TOTAL	8,485 SF

BUILDING ELEMENT FIRE RESISTANCE RATINGS **CONSTRUCTION:**

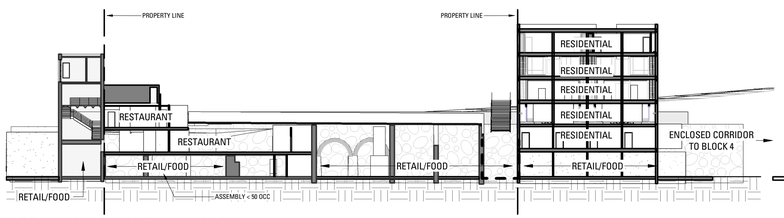
SHAFTS	1 HOUR
ELEVATOR MACHINE/ CONTROLS	2 HOUR
NON-SPRINKLERED ELECTRICAL ROOM	2 HOUR
EMERGENCY GENERATOR ROOM	2 HOUR
EMERGENCY ELECTRICAL ROOM	2 HOUR
DRY TYPE TRANSFORMER ROOM > 35,000 V	3 HOUR
DRY TYPE TRANSFORMER ROOM > 112.5 KVA	1 HOUR
HORIZONTAL EXIT	2 HOUR
BOILER ROOM WHERE LARGEST PIECE OF EQUIPMENT IS > 15 PSI AND 10 HP	SMOKE TIGHT
FURNACE ROOM WHERE ANY EQUIPMENT IS > 400,000 BTU PER HOUR INPUT	SMOKE TIGHT

MINIMUM INTERIOR WALL & CEILING FINISH REQ'S (PER ASTM E84 OR UL 723)

OCCUPANCY CLASSIFICATION	EXIT ENCLOSURES	CORRIDORS, EXIT ACCESS, STAIRWAYS, RAMPS	ROOMS AND ENCLOSED SPACES
A-2	B	B	C
M	B	C	C
S-2	C	C	C

INTERIOR FLOOR FINISH

INTERIOR FLOOR COVERING MATERIALS TO COMPLY WITH DOC FF-1 PILL TEST (CPSC 16 CFR PART 1630), MUBC 804.4.1. NEW FLOOR FINISHES AND COVERINGS OF A TRADITIONAL TYPE, SUCH AS WOOD, VINYL, LINOLEUM, AND RESILIENT FLOOR COVERING MATERIAL NOT COMPOSED OF FIBERS ARE PERMITTED THROUGHOUT (MUBC 804.1 EXCEPTION).



NARROW ALLEY USE SUMMARY



MARKET HALL USE SUMMARY

B - BLDG 6A - USE SUMMARY



B - BLDG 6B - USE SUMMARY

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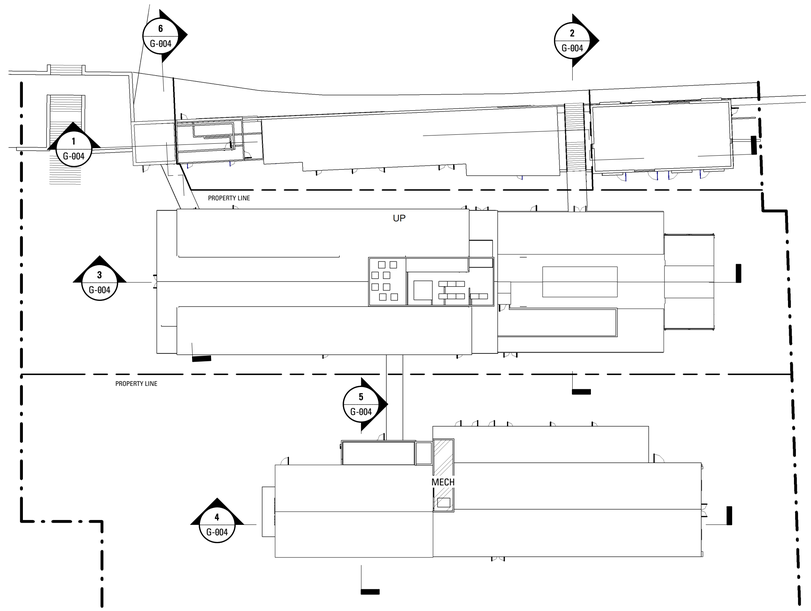
Rev.	Date	Remarks

PORTLAND FORESIDE BLOCK 2

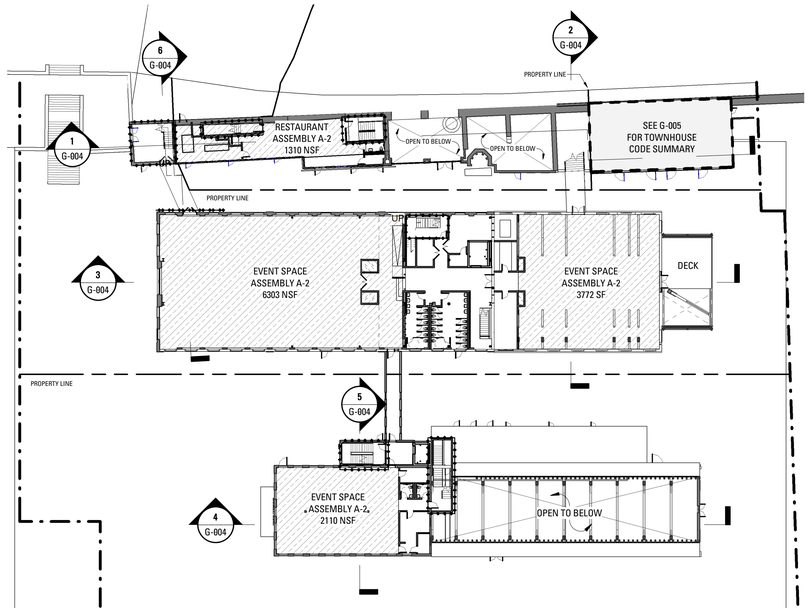
Date	OCTOBER 25, 2019
Scale	As indicated
Project Number	
Drawn By	Author

CODE KEY PLAN & SUMMARY

G-002



5 BLOCK 2 - ROOF LEVEL - OCCUPANCY PLAN
SCALE: 1/32" = 1'-0"



2 BLOCK 2 - SECOND LEVEL - OCCUPANCY PLAN
SCALE: 1/32" = 1'-0"

OCCUPANCY LEGEND

- ASSEMBLY, A-2
- BUSINESS, B
- ACCESSORY, MECHANICAL
- LOW-HAZARD STORAGE, S-2
- RESIDENTIAL, R-3

A BLDG 2, 3, 4, 24

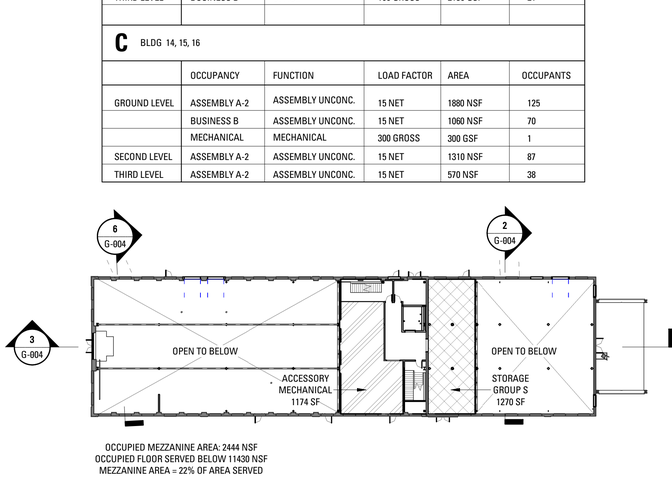
	USE GROUP	FUNCTION	LOAD FACTOR	AREA	OCCUPANTS
GROUND LEVEL	ASSEMBLY A-2	ASSEMBLY UNCONC.	15 NET	11430 NSF	762
	BUSINESS B (ASSEMBLY <50)	ASSEMBLY CONC.	7 NET	300 NSF	42
SECOND LEVEL	ASSEMBLY A-2	ASSEMBLY UNCONC.	15 NET	10075 NSF	671
THIRD LEVEL	ASSEMBLY A-2	ASSEMBLY UNCONC.	15 NET	715 NSF	47
	BUSINESS B	OFFICE	100 GROSS	6500 GSF	65

B BLDG 6A, 6B

	USE GROUP	FUNCTION	LOAD FACTOR	AREA	OCCUPANTS
GROUND LEVEL	ASSEMBLY A-2	ASSEMBLY UNCONC.	15 NET	6110 NSF	407
	BUSINESS B	ASSEMBLY UNCONC.	15 NET	900 NSF	60
	MECHANICAL	MECHANICAL	300 GROSS	160 GSF	1
SECOND LEVEL	ASSEMBLY A-2	ASSEMBLY UNCONC.	15 NET	2110 NSF	140
THIRD LEVEL	BUSINESS B	OFFICE	100 GROSS	2130 GSF	21

C BLDG 14, 15, 16

	OCCUPANCY	FUNCTION	LOAD FACTOR	AREA	OCCUPANTS
GROUND LEVEL	ASSEMBLY A-2	ASSEMBLY UNCONC.	15 NET	1880 NSF	125
	BUSINESS B	ASSEMBLY UNCONC.	15 NET	1060 NSF	70
	MECHANICAL	MECHANICAL	300 GROSS	300 GSF	1
SECOND LEVEL	ASSEMBLY A-2	ASSEMBLY UNCONC.	15 NET	1310 NSF	87
THIRD LEVEL	ASSEMBLY A-2	ASSEMBLY UNCONC.	15 NET	570 NSF	38



OCCUPIED MEZZANINE AREA: 2444 NSF
OCCUPIED FLOOR SERVED BELOW 11430 NSF
MEZZANINE AREA = 22% OF AREA SERVED

3 BLOCK 2 - A - BLDG 2/3 MEZZANINE - OCCUPANCY PLAN
SCALE: 1/32" = 1'-0"

4 BLOCK 2 - THIRD LEVEL - OCCUPANCY PLAN
SCALE: 1/32" = 1'-0"

1 BLOCK 2 - GROUND LEVEL - OCCUPANCY PLAN
SCALE: 1/32" = 1'-0"

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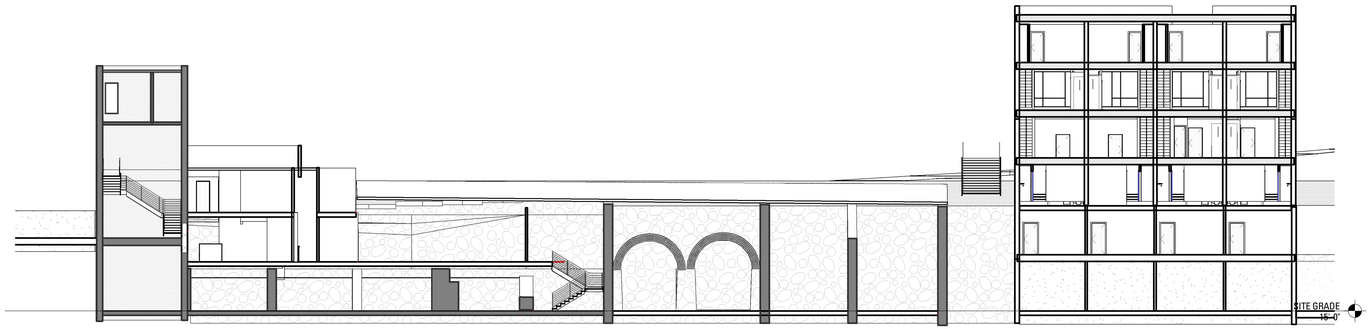
Rev.	Date	Remarks

PORTLAND FORESIDE BLOCK 2

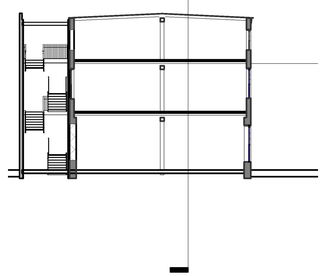
Date	OCTOBER 25, 2019
Scale	As indicated
Project Number	
Drawn By	Author

CODE PLANS - BLOCK 2

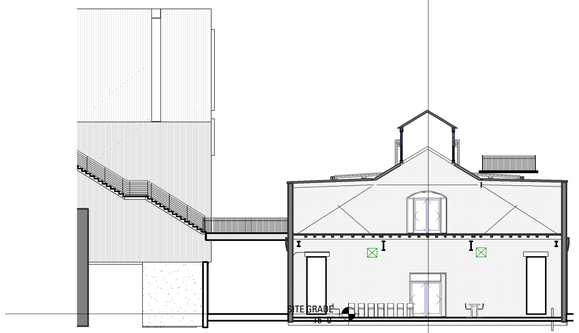
G-003



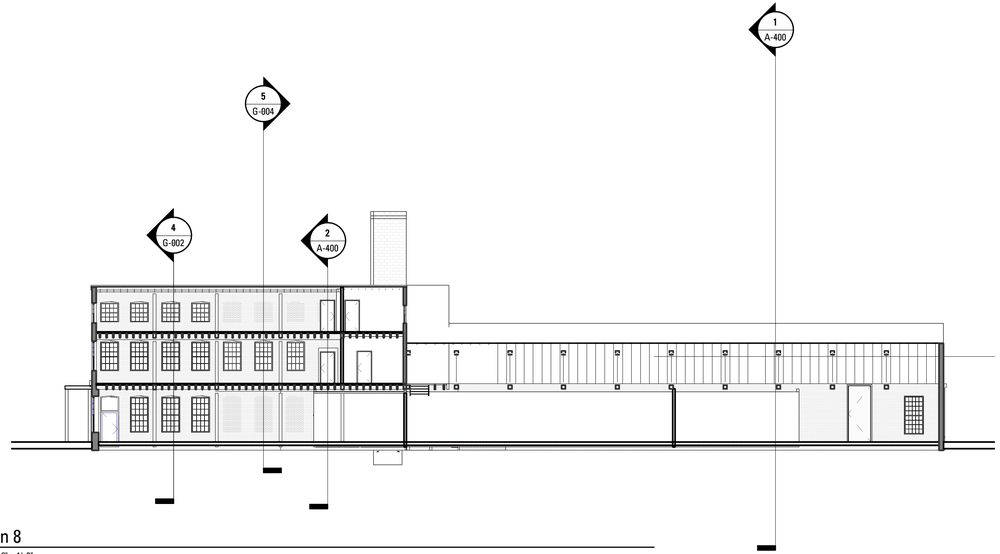
1 C - LONGITUDINAL CODE SECTION
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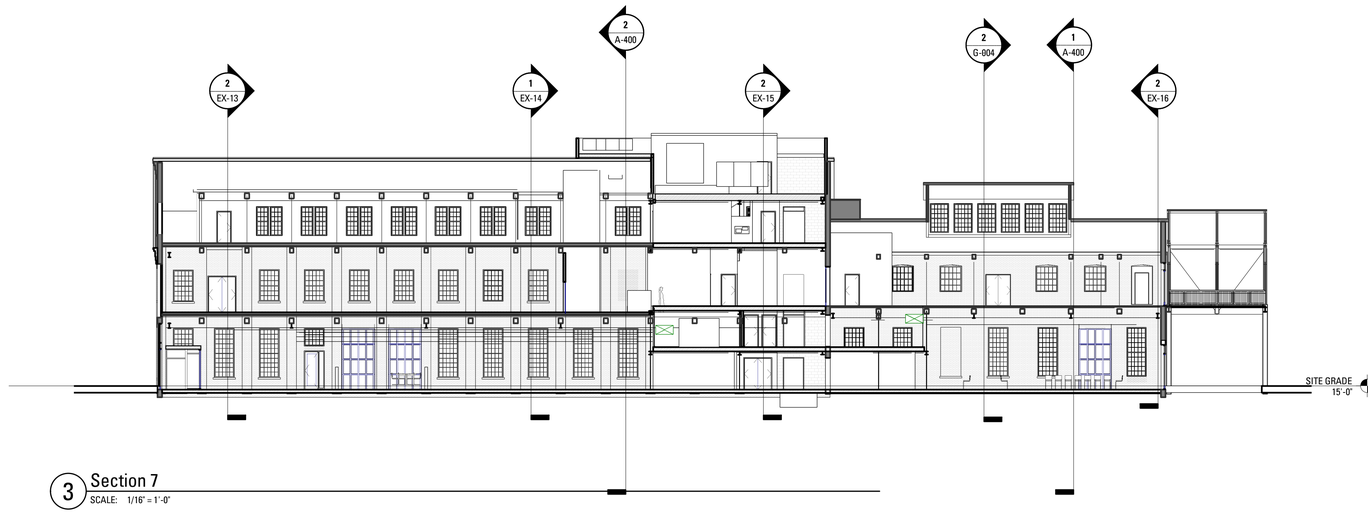
5 Section 9
SCALE: 1/16" = 1'-0"



2 Section 5
SCALE: 1/16" = 1'-0"



4 Section 8
SCALE: 1/16" = 1'-0"



3 Section 7
SCALE: 1/16" = 1'-0"

6 Section 10
SCALE: 1/16" = 1'-0"

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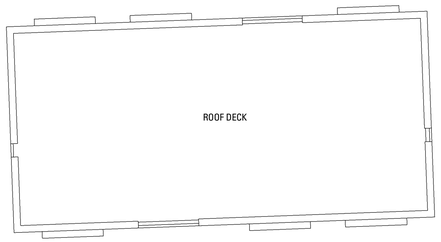
Rev.	Date	Remarks

PORTLAND FORESIDE BLOCK 2

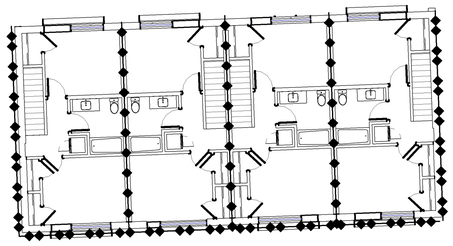
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Project Number	
Drawn By	Author

BLOCK 2 CODE SECTIONS

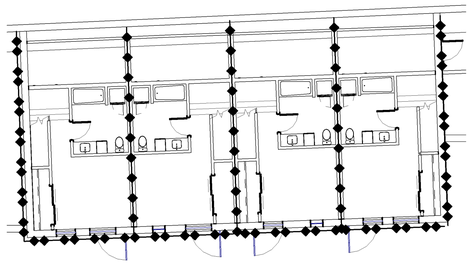
G-004



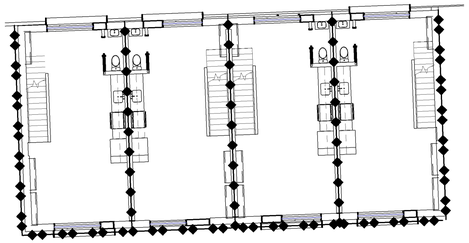
7 ROOF LEVEL
SCALE: 3/32" = 1'-0"



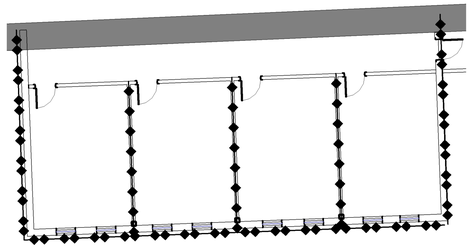
6 THIRD LEVEL
SCALE: 3/32" = 1'-0"



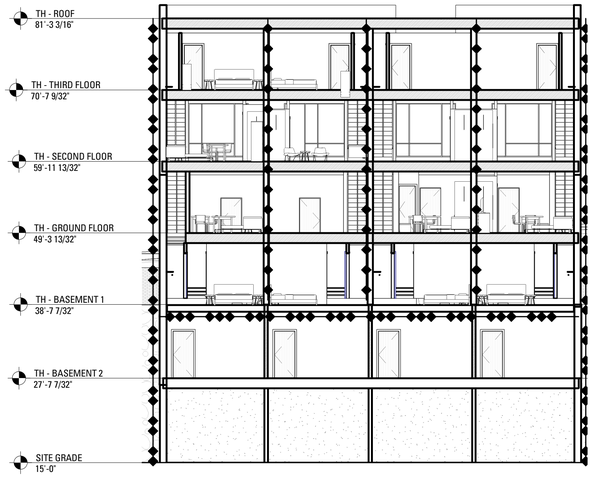
3 BASEMENT 1 LEVEL
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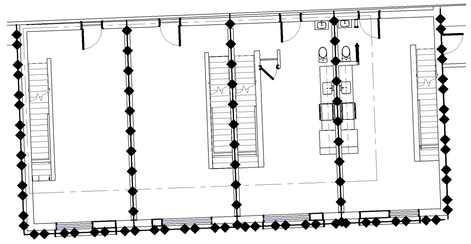
5 SECOND LEVEL
SCALE: 3/32" = 1'-0"



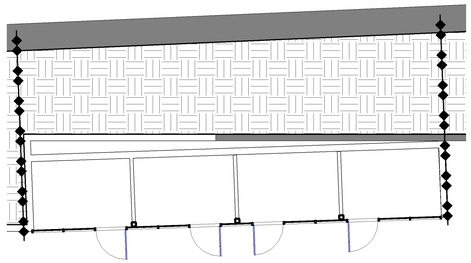
2 BASEMENT 2 LEVEL
SCALE: 3/32" = 1'-0"



8 SECTION
SCALE: 3/32" = 1'-0"



4 GROUND LEVEL
SCALE: 3/32" = 1'-0"



1 ALLEY LEVEL
SCALE: 3/32" = 1'-0"

PROJECT DATA

PROJECT LOCATION:	58 FORE STREET, PORTLAND, ME 04101 BLOCK 2 DEVELOPMENT
AUTHORITY HAVING JURISDICTION:	PERMITTING & INSPECTIONS DEPARTMENT, CITY OF PORTLAND MAINE OFFICE OF THE STATE FIRE MARSHAL
PROJECT DESCRIPTION:	RENOVATION OF COMPLEX OF HISTORIC BUILDINGS OF THE PORTLAND COMPANY. SEE PROJECT DESCRIPTIONS OF EACH BUILDING.

APPLICABLE CODES

BUILDING	MUBC – MAINE UNIFORM BUILDING CODE, AN AMENDED VERSION OF THE 2015 INTERNATIONAL BUILDING CODE (IBC). MUEBC – MAINE UNIFORM EXISTING BUILDING CODE, AN AMENDED VERSION OF THE 2015 INTERNATIONAL EXISTING BUILDING CODE. PORTLAND MUNICIPAL CODE CHAPTER 6
FIRE	PORTLAND MUNICIPAL CODE CHAPTER 10 NFPA 1, UNIFORM FIRE CODE, 2006 EDITION AS ADOPTED BY THE RULES OF THE STATE FIRE MARSHAL NFPA 1, UNIFORM FIRE CODE, 2015 EDITION AS ADOPTED BY THE MUBC NFPA 101, LIFE SAFETY CODE, 2009 EDITION AS ADOPTED AND AMENDED BY THE RULES OF THE STATE FIRE MARSHAL
PLUMBING	MAINE STATE PLUMBING CODE, AN AMENDED VERSION OF THE 2015 UNIFORM PLUMBING CODE (UPC)
MECHANICAL	2013 ASHRAE 62.1, VENTILATION FOR ACCEPTABLE INDOOR AIR QUALITY
ELECTRICAL	2014 NFPA 70, NATIONAL ELECTRIC CODE
ENERGY	MUBEC – MAINE UNIFORM BUILDING AND ENERGY CODE, AN AMENDED VERSION OF THE 2009 INTERNATIONAL ENERGY CONSERVATION CODE
ELEVATOR	MAINE ELEVATOR & TRAMWAY RULES & LAWS, AN AMENDED VERSION OF THE 2013 ASME A.17.1, SAFETY CODE FORE ELEVATORS AND ESCALATORS
ACCESSIBILITY:	2010 ADA STANDARDS FOR ACCESSIBLE DESIGN 2009 ICC A117.1, ACCESSIBLE AND USABLE BUILDINGS AND F FACILITIES
OTHER:	NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) CODES AND STANDARDS, AS REFERENCED BY THE ABOVE CODES AND THE RULES OF THE STATE FIRE MARSHAL

GENERAL CODE SUMMARY

BLOCK 2, GROUP D, TOWNHOUSES

PROJECT DESCRIPTION:
NEW CONSTRUCTION OF A 6 STORY MIXED USE BUILDING CONTAINING ASSEMBLY AND RESIDENTIAL TOWNHOUSES.

USE & OCCUPANCY CLASSIFICATION:

CLASSIFICATION	FLOOR	USE
ASSEMBLY (GROUP A-2)	SITE GRADE	RESTAURANT
RESIDENTIAL (GROUP R-2)	BASEMENT 2 - THIRD FLOOR	APARTMENTS
STORAGE (GROUP S-2)	ALL FLOORS	MEP/BACK OF HOUSE

TYPE OF CONSTRUCTION

CONSTRUCTION TYPE	IA AND VA, I (332) AND V (111) BUILDING CONSISTS OF PODIUM CONSTRUCTION PER MUBC 510.2, REQUIRING TWO (2) FLOORS OF TYPE IA CONSTRUCTIONS WITH THE UPPER LEVELS CONSTRUCTED OF TYPE VA CONSTRUCTION.
FIRE PROTECTION	THE BUILDING WILL BE PROVIDED WITH A NEW SPRINKLER SYSTEM COMPLYING WITH NFPA 13. THE BUILDING WILL BE PROVIDED WITH A NEW FIRE ALARM SYSTEM COMPLYING WITH NFPA 72.
NUMBER OF STORIES	6 STORIES
BUILDING HEIGHT	66'-3 3/16" ABOVE GRADE (70' LIMIT FOR TYPE VA)

BUILDING ELEMENT FIRE RESISTANCE RATINGS CONSTRUCTION:

SHAFTS	2 HOUR
ELEVATOR MACHINE/ CONTROLS	2 HOUR
NON-SPRINKLERED ELECTRICAL ROOM	2 HOUR
EMERGENCY GENERATOR ROOM	2 HOUR
EMERGENCY ELECTRICAL ROOM	2 HOUR
DRY TYPE TRANSFORMER ROOM > 35,000 V	3 HOUR
DRY TYPE TRANSFORMER ROOM > 112.5 KVA	1 HOUR
HORIZONTAL EXIT	2 HOUR
BOILER ROOM WHERE LARGEST PIECE OF EQUIPMENT IS > 15 PSI AND 10 HP	SMOKE TIGHT
FURNACE ROOM WHERE ANY EQUIPMENT IS > 400,000 BTU PER HOUR INPUT	SMOKE TIGHT

MINIMUM INTERIOR WALL & CEILING FINISH REQ'S (PER ASTM E84 OR UL 723)

OCCUPANCY CLASSIFICATION	EXIT ENCLOSURES	CORRIDORS, EXIT ACCESS, STAIRWAYS, RAMPS	ROOMS AND ENCLOSED SPACES
A-2	B	B	C
R-2	C	C	C
S-2	C	C	C

INTERIOR FLOOR FINISH
INTERIOR FLOOR COVERING MATERIALS TO COMPLY WITH DOC FF-1 PILL TEST (CPSC 16 CFR PART 1630), MUBC 804.4.1. NEW FLOOR FINISHES AND COVERINGS OF A TRADITIONAL TYPE, SUCH AS WOOD, VINYL, LINOLEUM, AND RESILIENT FLOOR COVERING MATERIAL NOT COMPOSED OF FIBERS ARE PERMITTED THROUGHOUT (MUBC 804.1 EXCEPTION).

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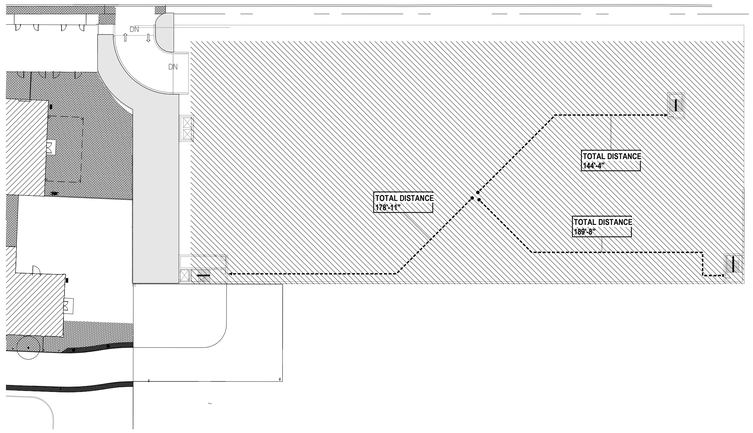
Rev.	Date	Remarks

PORTLAND FORESIDE BLOCK 2

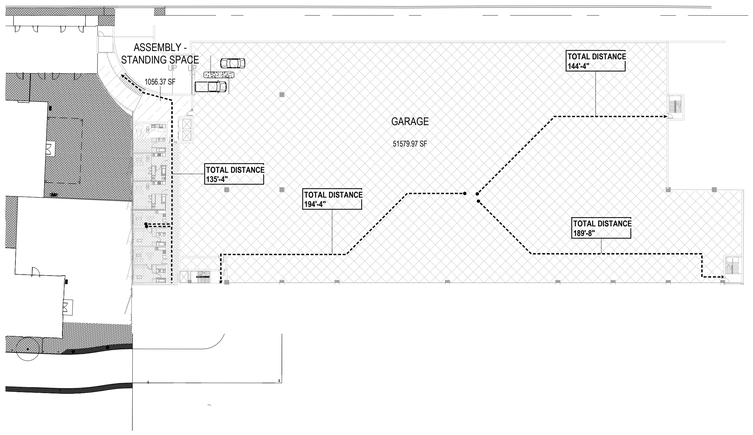
Date	OCTOBER 25, 2019
Scale	3/32" = 1'-0"
Project Number	
Drawn By	Author

CODE PLANS - TOWNHOUSES

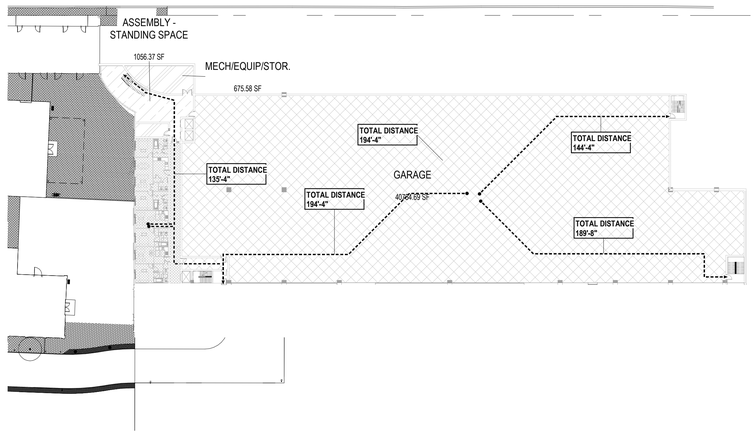
G-005



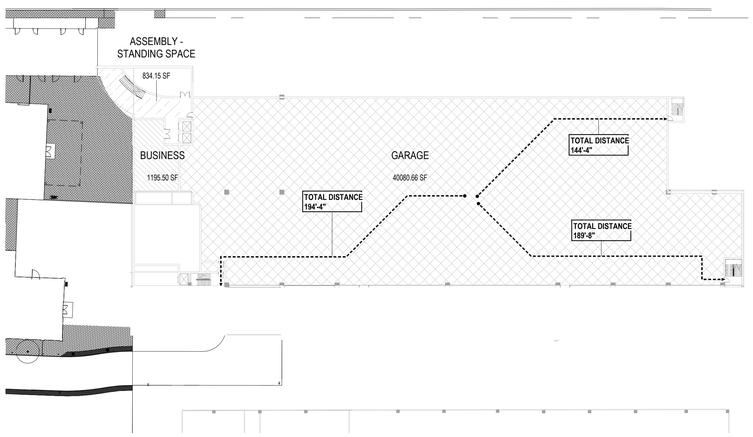
5 ROOF - ELEV. 59'-0": PHASE ONE
1" = 40'-0"



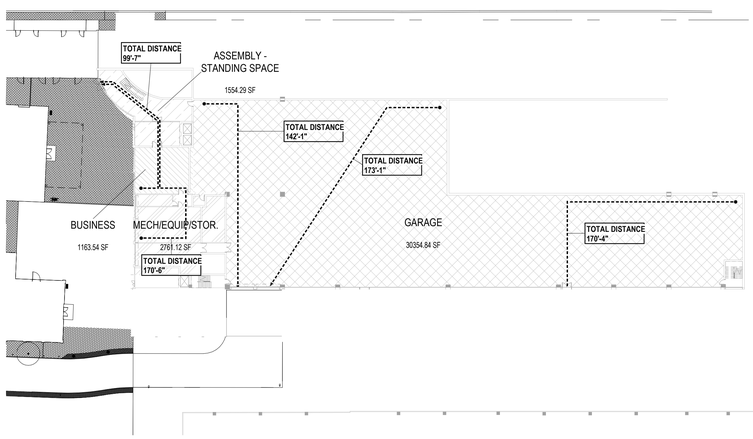
4 LEVEL 04 - PHASE I
1" = 40'-0"



3 LEVEL 03 - PHASE I
1" = 40'-0"



2 LEVEL 02 - PHASE I
1" = 40'-0"



1 LEVEL 01 - GRADE LEVEL - PHASE I
1" = 40'-0"

PROJECT DATA & CODE REFERENCES

PROJECT LOCATION: 58 FORE ST, PORTLAND, ME 04101
AUTHORITY HAVING JURISDICTION: PERMITTING & INSPECTIONS DEPARTMENT, CITY OF PORTLAND
PROJECT DESCRIPTION: NEW GARAGE W/ RESIDENTIAL & RETAIL

APPLICABLE CODES:

BUILDING CODE:	2015 IBC, AS AMENDED BY MUBEC CHAPTER 6 + PORTLAND MUNICIPAL CODE CHAPTER 6
FIRE CODE:	NFPA 1 AND 101, AS AMENDED BY 25 M.R.S. §§ 2452 & 2465 + PORTLAND MUNICIPAL CODE CHAPTER 10
PLUMBING CODE:	2015 UPC, AS AMENDED BY 32 M.R.S. §3403-B
MECHANICAL CODE:	GUIDELINES, NOT MANDTORY: ASHRAE 62.1, ASHRAE 62.2, ASHRAE 90.1; E-1465-2008
ELECTRICAL CODE:	2017 NEC, AS AMENDED BY M.R.S. §3403-B.
ENERGY CODE:	2009 IECC, AS AMENDED BY MUBEC CHAPTER 6
ELEVATOR CODE:	MAINE ELEVATOR CODE, 32 M.R.S. §15206
ACCESSIBILITY:	MAINE HUMAN RIGHTS ACT, ADOPTED 5 M.R.S. CHAPTER 4 & 5 + 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN
OTHER:	VARIOUS CODES AND STANDARDS FOR FUEL / OIL / PROPANE / GAS BURNING EQUIPMENT

GENERAL CODE SUMMARY

USES & OCCUPANCY CLASSIFICATION:

RESIDENTIAL (R-2)	UPPER LEVELS
BUSINESS GROUP (B)	LEVEL 1 RETAIL
LOW HAZARD STORAGE (S-2)	PARKING GARAGE, MEP ROOMS, BUILDING STORAGE

TYPE OF CONSTRUCTION: APARTMENTS
PHASE I

CONSTRUCTION TYPE	**IIIA**
FIRE PROTECTION	BUILDING IS FULLY SPRINKLERED
NUMBER OF STORIES	2 APARTMENT LEVELS AT OR BELOW GRADE
BUILDING HEIGHT	VARIES 53.5' MAX ABOVE GRADE (PER ZONING), 49' AVG HEIGHT
FLOOR AREAS	

(UNOCCUPIED)
TOTAL GSF

BUILDING ELEMENT FIRE RESISTANCE RATINGS	**CONSTRUCTION:**
SHAFTS	**2 HR (≥ 4 STORIES), 1 HR (< 4 STORIES)**
ELEVATOR MACHINE / CONTROLS ROOM	**2 HR**
NON-SPRINKLERED ELECTRICAL ROOM	**2 HR**
EMERGENCY GENERATOR ROOM	**2 HR FIRE BARRIER**
DRY TYPE TRANSFORMER ROOM > 35,000V	**3 HR**
DRY TYPE TRANSFORNER ROOM > 112.5 KVA	**1 HR**
BOILER ROOM WHERE LARGEST PIECE OF EQUIPMENT IS > 15 PSI AND 10 HP	**SMOKE TIGHT**
FURNACE ROOM ANY EQUIPMENT IS > 400,000 BTU PER HOUR INPUT	**SMOKE TIGHT**

TYPE OF CONSTRUCTION: GARAGE

CONSTRUCTION TYPE	**IB**
FIRE PROTECTION	BUILDING IS FULLY SPRINKLERED
NUMBER OF STORIES	5 LEVELS AT OR BELOW GRADE
BUILDING HEIGHT	VARIES:53.5' MAX ABOVE GRADE (PER ZONING), 49' AVG HEIGHT
FLOOR AREAS	

(UNOCCUPIED)
TOTAL GSF

BUILDING ELEMENT FIRE RESISTANCE RATINGS	**CONSTRUCTION:**
SHAFTS	**2 HR (≥ 4 STORIES), 1 HR (< 4 STORIES)**
ELEVATOR MACHINE / CONTROLS ROOM	**2 HR**
NON-SPRINKLERED ELECTRICAL ROOM	**2 HR**
EMERGENCY GENERATOR ROOM	**2 HR FIRE BARRIER**
DRY TYPE TRANSFORMER ROOM > 35,000V	**3 HR**
DRY TYPE TRANSFORNER ROOM > 112.5 KVA	**1 HR**
BOILER ROOM WHERE LARGEST PIECE OF EQUIPMENT IS > 15 PSI AND 10 HP	**SMOKE TIGHT**
FURNACE ROOM ANY EQUIPMENT IS > 400,000 BTU PER HOUR INPUT	**SMOKE TIGHT**

MINIMUM INTERIOR WALL & CEILING FINISH REQ'S (PER ASTM E84 OR UL 723)

OCCUPANCY CLASSIFICATION	EXIT ENCLOSURES	CORRIDORS, EXIT ACCESS, STAIRWAYS, RAMPS	ROOMS AND ENCLOSED SPACES
A	B	B	B
B	B	C	C
S	C	C	C

INTERIOR FLOOR FINISH: INTERIOR FLOOR COVERING MATERIALS TO COMPY W/ DOC.FF-1 PILL TEST (CPSC 16 CFR PART 1630), 780 CMR 804.4.1. NEW FLOOR FINISHES AND COVERINGS OF A TRADITIONAL TYPE, SUCH AS WOOD, VINYL, LINOLEUM, AND RESILIENT FLOOR COVERING MATERIALS NOT COMPOSED OF FIBERS ARE PERMITTED THROUGHOUT (780 CMR 804.1 EXCEPTION)

CODE COMPLIANCE PLAN LEGEND

- NEW PARTITION
- NON-RATED SMOKE PARTITION
- 1 HR FIRE BARRIER PARTITION
- 2 HR FIRE BARRIER PARTITION
- FIRE EXTINGUISHER
- 50'-0" — TRAVEL DISTANCE - LONGEST ROUTE TO AN EXIT
- EXIT — EXIT LOCATION
- MHO — MAGNETIC HOLD OPEN

DOOR
7" CLR — ACTUAL CLEAR WIDTH PROVIDED
7" / OCC — EXIT WIDTH FACTOR
? OCC — MAX OCCUPANT LOAD SUPPORTED
? OCC — ACTUAL OCCUPANT LOAD

?
? CLR — ACTUAL STAIR WIDTH PROVIDED
? / OCC — STAIR WIDTH FACTOR
? OCC — MAX OCCUPANT LOAD SUPPORTED
? OCC — ACTUAL OCCUPANT LOAD

USE LEGEND

- A-2, ASSEMBLY
- B, BUSINESS
- M, MERCANTILE
- S-1
- S-2, LOW HAZARD STORAGE

Perkins&Will
225 Franklin Street, Suite 1100
Boston, MA 02110
t 617.478.0300
f 617.478.0321
www.perkinswill.com

CONSULTANTS

STRUCTURAL ENGINEER
Thornton Tomasetti / Becker Structural Engineers
75 York St
Portland, ME 04101
t 207.879.1838
f 207.879.1822

MEP ENGINEER
Rist-Frost-Shumway Engineering
50 Milk St
Boston, MA 02110
t 617.494.1464

OWNER'S CONSULTANTS

CIVIL ENGINEER
Woodard & Curran
51 Hutchins Dr
Portland, ME 04102
t 207.774.2112

LANDSCAPE ARCHITECT
Michael Boucher Landscape Architecture
457 US Route 1, Suite 2
Freeport, ME 04032
t 207.865.1080
f 207.865.1455

GENERAL CONSTRACTOR
Consigli
15 Franklin St
Portlan, ME 04101
t 207.773.3000

PROJECT

BLOCK FOUR

FORESIDE
PORTLAND, MAINE

PORTLAND FORESIDE DEVELOPMENT COMPANY
254 COMMERCIAL ST SUITE 118
PORTLAND, ME 04101

KEYPLAN

ISSUE CHART

MARK	ISSUE	DATE

100% SCHEMATIC DESIGN 11/08/2019

Job Number	157031.001
Drawn	Author
Checked	Checker
Approved	Approver

TITLE

PHASE I CODE COMPLIANCE DIAGRAMS

SHEET NUMBER

G00-01

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11/11/2019 6:54:49 PM C:\Temp\58 FORE ST MASTERPLAN_Block Four_v2019_MrietaMonteiro.rvt

Attachment N.

PORTLAND FORESIDE DEVELOPMENT – PHASE 1

Site Location of Development

41 Hutchins Drive
Portland, ME 04102
800-426-4262

woodardcurran.com
COMMITMENT & INTEGRITY DRIVE RESULTS

0227007.16
Portland Foreside Development Co.
November 2019

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1. DEVELOPMENT DESCRIPTION

This narrative report is in support of a Site Location of Development (SLOD) Permit Application for Phase 1 of the Portland Foreside Development located at 58 Fore Street in Portland, Maine. A portion of this development was initiated prior to obtaining a SLOD Permit; the Maine Department of Environmental Protection (MaineDEP) provided a Site Law Determination for the proposed development via a letter dated August 12, 2019, in response to the letter submitted by Woodard & Curran on September 16, 2016. Work completed prior to obtaining a SLOD permit consists of building demolition as well as utilities and temporary site improvements associated with the adjacent marina; stormwater management measures and final site conditions for the marina are included as part of the applications for Phase 1 of the Portland Foreside Development.

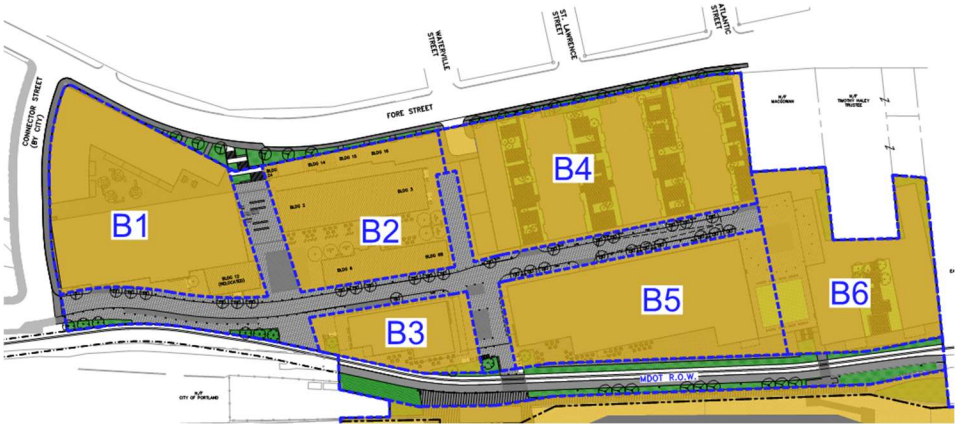
In accordance with Title 38, Chapter 3, Subchapter 1, Article 6 of the Maine Statutes, it is our understanding that demolition of buildings is considered exempt from Site Law. It is also our understanding that the MaineDEP has determined that the City of Portland has delegated review authority over this project.

1.1 OBJECTIVES & DETAILS

The proposed development is the first phase of the 58 Fore Street Master Development Plan, approved by the City of Portland Planning Board (Project ID: 2016-224) on December 22, 2016, to redevelop and revitalize the 10-acre former Portland Company complex into a mixed-use development.

The redevelopment of 58 Fore Street into a mixed-use neighborhood highlights the historical significance of the area, access to the waterfront and provides a direct connection from the adjacent neighborhoods to the waterfront. The result is a vibrant revitalization of the City's eastern waterfront. The Phase 1 development program for the project was considered and designed around the overall vision of creating this mixed-use neighborhood and proposes commercial, residential, office, retail, restaurant, marina and public open space uses which are consistent with the Master Development Plan for the site. Open space proposed for Phase 1 includes plazas for pedestrian use between the individual building components as well as a public access easement, view corridors and access to the waterfront via a walkway along the water's edge.

The 58 Fore Street Master Development Plan consists of six "blocks" of development as shown by the below figure:



Phase 1 of the development includes the following work:

- Block 1:

Block 1 marks a prominent entry point to the 58 Fore Street property from Thames Street for vehicles and pedestrians. Visitors are introduced to the revitalized area by the strong visual prominence of reconstructed historical Building 12 as they walk alongside ground-level retail associated with a new office building. Other points of entry are along the realigned Eastern Promenade Trail, which will have a closer connection to the waterfront, and through the public access easement which resides over an entry stair with adjacent public view vantage points that provides pedestrian access on the east side of Block 1 to the core of the abutting historic district.

Parcel 1A is the construction of a Class A office building with round floor retail on the south side and a single deck of parking. Parcel 1C highlights the reconstruction of Building 12 which was meticulously catalogued and disassembled with approval from Historic Preservation Board and will be rebuilt in the more prominent location detailed in the site plan with uses that include a fine dining restaurant, office space, and two residential units.

- Block 2:

  Block 2 is the Historic Core of the redevelopment project which highlights the adaptive reuse of 7 historic buildings from the former Portland Company complex. Along with the historic buildings, this block brings to life two alleys and two plazas that will serve pedestrians as they move throughout the site. The reuse of these 7 historic buildings for a market hall and ground floor retail will invigorate the neighborhood and provide a strong sense of place rooted in the masonry style and form of Portland's industrial past. Upper floors will be utilized primarily for event space, preserving the historic industrial character of the space, a visual element that patrons have enjoyed during many events that were hosted at this location in the recent past. A portion of the upper floors will also be utilized as office space. New residential townhomes along Fore Street will complement the retail, commercial and office uses. The redeveloped historic core reveals itself to pedestrians and vehicles by emphasizing openness and flexibility. Considerations for public access include a new staircase providing access from Fore Street to plaza spaces within the site that continue all the way down to the waterfront.

  Parcels 2A, 2B and 2C are all associated with the renovation of the site's historic core buildings (Building 2, Building 3, Building 4, Building 6A, Building 6B, Building 24, Building 14, Building 15 and Building 16) into restaurant, office, residential and event space, along with a market hall that will showcase local food/beverage vendors, chefs, and culinary focused entrepreneurs.

- Block 3:

  In order to create a complete, functional site at the completion of Phase 1, Block 3 will be paved to provide temporary access to the adjacent Fore Points Marina. Block 3 will be developed as part of future phases of the project; permit applications for this future development will be submitted under separate cover at a future date. The future development of Block 3 will be served by the infrastructure constructed as part of Phase 1, as described further throughout this Report.

- Block 4:

  Block 4 provides the initial levels of common, structured parking that will serve all uses associated with each development block at 58 Fore Street. Residential units and retail space along the western side of the garage are proposed during Phase 1 for Block 4. The structured parking built during Phase 1 will form the foundation for the future buildout of residential (above) and ground floor retail (south elevation) during Phase 2, along with an expansion of the parking in that future phase. Block 4 will provide the entire development with centralized parking to support the full buildout. Parcel 4 is the construction of 5 levels of the parking garage with residential units, storage and retail on the west elevation. Blocks 5 & 6:

No new development is proposed within Blocks 5 or 6 at this time. However, minor site improvements such as grading and utility installations will be required in this area in order to support the Phase 1 work. These blocks will be developed as part of future phases of the project; permit applications for this future development will be submitted under separate cover at a future date.

- Shared Space:

  In addition to the block development described above, shared street infrastructure and utilities will be installed throughout the site to support the proposed development. The Phase 1 work will also include the relocation of the Maine Narrow Gauge Railroad and the Eastern Promenade Trail as well as access improvements on property owned by the MaineDOT and City of Portland.

The Phase 1 area of disturbance is approximately 7.88-acres and will include approximately 6.7-acres of impervious area. The proposed development is a critical piece to Portland's future for a number of reasons including:

- The overall Project Site is large (+/- 10 acres) and strategically located between Portland's vibrant downtown, its working waterfront, and the beginning of its Eastern Promenade residential neighborhoods. Phase I will begin the connection of an underutilized part of the City to adjacent neighborhoods, the waterfront and the Old Port.

- The Project Site represents a keystone piece in the City's continuing efforts to link its vibrant downtown to the vast potential of its commercial waterfront. Phase 1 will help the City further realize the benefits of its investments in the Ocean Gateway marine terminal facility and related infrastructure;

- The development will help stimulate other investments in the eastern waterfront with the anticipation that investment in the Project Site will result in investment in underdeveloped public and private lands situated between the India Street neighborhood and the Project Site;

- As a whole, this proposed development presents an unparalleled opportunity to grow the City's tax base, add housing, and create jobs; and

- The development can act as a catalyst for change in this area, improve the quality of life for all Portland residents by facilitating access to the waterfront, adding capacity for events that draw residents and visitors and enable the City's cruise ship terminal to live up to its name as a truly memorable gateway.

In addition to the SLOD permit, the proposed work requires the following permits:

- City of Portland Level III Site Plan & Subdivision;
- City of Portland Flood Hazard Development Permits;
- City of Portland Historic Preservation Application for Certificate of Appropriateness;
- MaineDEP Natural Resources Protection Act Permit-by-Rule;
- Maine Construction General Permit Notice of Intent; and
- FAA Notice of Proposed Construction.

1.2 EXISTING FACILITIES

The proposed development will be located on a portion of an approximately 10-acre property previously developed as the Portland Company Complex, the Maine Narrow Gauge Railroad, Eastern Promenade Trail, and the Fore Points Marina. Existing site conditions consist primarily of impervious paved and gravel areas, with some areas of sparse vegetation. The Site is adjacent to the Fore River. There are no significant natural features or wetlands on-site. A survey of the Site was completed by Owen Haskell, Inc. on February 26, 2019.

The former Portland Company Complex contained various industrial uses and many of the existing buildings have been demolished. The Site previously served as a pre-Civil War locomotive manufacturing site and components of that past still stand today. Historically significant facades include the Portland Company Vault, the Machine Shop, The Pattern Storehouse, and the Blacksmith Shop. The development team has included these historic facades, along with the character and linear orientation of the alleyways between, in the redevelopment planning for the site.

1.3 TOPOGRAPHIC MAP

A USGS topographic map showing the approximate location of proposed development is attached to this Section for your reference. The proposed development is located within the Portland East Quadrangle.

1.4 CONSTRUCTION PLAN

The proposed development will be constructed in phases. Construction of Phase 1 is anticipated to begin in April of 2020. Erosion and sediment control measures will be installed prior to any ground disturbing activities, as described in Section 14 of this Report. The Contractor will be required to provide a construction management plan for the project, subject to the review and approval of the City and Engineer.

The Site will be managed during construction to minimize impacts to the adjacent land uses. Maintaining access to adjacent properties and public facilities will be a priority. Traffic impacts to adjacent roadways, including Thames Street Extension, Fore Connector, and Fore Street, will be minimized during construction to the greatest extent possible. Traffic controls will consist of temporary signage and barriers where necessary to manage vehicle, pedestrian, and bicycle traffic and direct it safely around the construction area. Work affecting traffic circulation such as underground utility work and grading activities will be conducted during periods of low traffic to reduce potential impacts.

Below is the anticipated sequence of construction activities for major aspects of the development:

- Installation of erosion and sediment control measures and traffic control measures;
- Demolition and site preparation activities;
- Construction of utilities, stormwater management system, and the roadway;
- Construction of buildings;
- Installation of landscaping and final surface materials; and
- Removal of erosion and sediment control measures.

1.5 DRAWINGS

Design drawings showing the proposed development are attached to this Section.

1.6 LIST OF ATTACHMENTS

The following documents are attached to this Section:

- Topographic Map; and
- Design Drawings (Bound Separately).

2. TITLE, RIGHT, OR INTEREST

The proposed development is located on properties owned by the Applicant and identified as Tax Map 18, Lots A001 and A002. Additionally, the Applicant has obtained easements for work that will occur on the adjacent Narrow Gauge Railroad property owned by the Maine Department of Transportation (Tax Map 18, Lot A013). Attached are copies of the deeds and easements associated with these properties.

2.1 LIST OF ATTACHMENTS

- Deeds; and
- Easements.

TRUSTEES' DEED

Maine Statutory Short Form

KNOW ALL BY THESE PRESENTS THAT **ELIZABETH M. SPRAGUE, ERIC THOMAS SPRAGUE and PHINEAS M. SPRAGUE, as Trustees of THE BUENA VISTA TRUST**, under indenture dated December 20, 2011, with a principal place of business in Cape Elizabeth, Maine, by the power conferred by law, and every other power, for consideration paid, grant to **CPB2 LLC**, a Delaware limited liability company, with a place of business c/o Blue Water Construction, 41 Glendale Place, Gilford, New Hampshire 03249, the land, together with any improvements thereon, situated in the City of Portland, County of Cumberland, State of Maine, described on Exhibit A attached hereto.

MAINE REAL ESTATE TAX PAID

Pursuant to Title 18-B M.R.S. § 1013, we, in our capacities, do hereby certify that (1) we are all of the Trustees of said Trust; (2) the Trust exists as the date of this Agreement; (3) we have power under said Trust to convey any trust asset in our sole discretion and need no consent from any beneficial interests; (4) we are the trustees authorized to execute or otherwise authenticate any and all documents in the exercise of our power; (5) in making this conveyance, we have in all respects acted in pursuance of the authority granted in and by said Trust; and (6) the Trust has not been revoked, modified, amended or terminated in any way that would cause the representations contained in this certificate to be incorrect.

[signatures on next page]

Witness our hands and seals this 19 day of the month of July, 2013.

WITNESS:

THE BUENA VISTA TRUST

_____

By_____
Eric Thomas Sprague, Trustee

_____

By_____
Elizabeth M. Sprague, Trustee

_____

By_____
Phineas M. Sprague, Trustee

STATE OF MAINE
COUNTY OF CUMBERLAND

July __, 2013

Then personally appeared the above named Eric Thomas Sprague, in his said capacity and acknowledged the foregoing instrument to be his free act and deed.

Before me,

_____
Notary Public/Attorney at Law

Witness our hands and seals this 26 day of the month of July, 2013.

WITNESS:

THE BUENA VISTA TRUST

By _____
Eric Thomas Sprague, Trustee

By _____
Elizabeth M. Sprague, Trustee

By _____
Phineas M. Sprague, Trustee

STATE OF MAINE
COUNTY OF CUMBERLAND

July 26, 2013

Then personally appeared the above named Eric Thomas Sprague, in his said capacity and acknowledged the foregoing instrument to be his free act and deed.

Before me,

~~Notary Public~~/Attorney at Law
Drew A. Ardelean

EXHIBIT A

A certain lot or parcel of land together with the buildings thereon situated on the southerly side of Fore Street in the City of Portland, County of Cumberland and State of Maine bounded and described as follows:

Beginning at a point on the southerly sideline of Fore Street at the northeasterly corner of Tract I as shown on "ALTA/ACSM Land Title Survey 58 Fore Street, Portland, Cumberland County, Maine made for CPB2 LLC" dated May 22, 2013 by Owen Haskell, Inc., thence N53°19'30"E along the southerly sideline of said Fore Street 140.00 feet;

Thence, N 61° 01' 30" E along the southerly sideline of said Fore Street 43.36 feet to land now or formerly of Macgowan as described in the Deed recorded in Cumberland County Registry of Deeds in Book 15773, Page 153;

Thence, S 31° 18' 30" E along land of said Macgowan 150.00 feet;

Thence, N 61° 01' 30" E along land of said Macgowan 112.00 feet to land now or formerly of Timothy Haley, Trustee, as described in the Deed recorded in the said Registry of Deeds in Book 24759, Pages 67 & 69;

Thence, S 31° 18' 30" E along land of said Haley 110.28 feet;

Thence, N 63° 18' 30" E along land of said Haley 100.00 feet;

Thence, N 31° 18' 30" W along land of said Haley 95.88 feet;

Thence, N 69° 31' 20" E along land of said Haley 49.73 feet to land now or formerly of Eastern Promenade Condominium;

Thence, S 31° 18' 26" E along land of said Eastern Promenade Condominium 240.48 feet to an iron rod found and to land now or formerly of the State of Maine as described in the Deed recorded in said Registry of Deeds in Book 10924, Page 91;

Thence, S 63° 18' 30" W along land of said State of Maine 430.00 feet to the easterly line of said Tract I;

Thence, N 33° 29 '33" W along said Tract I 381.17 feet to the point of beginning containing 2.87 acres.

The premises are conveyed together with the right of access and egress running from the existing paved driveway over land now or formerly of The Portland Company to the

premises conveyed herein as described in a deed to Elizabeth M. Sprague, Eric Thomas Sprague and Phineas M. Sprague, Trustees of The Buena Vista Trust by Warranty deed of The Portland Company dated December 30, 1012 and recorded in the Cumberland County Registry of Deeds in Book 30265, Page 32.

Meaning and intending to convey and hereby conveying the same premises conveyed to Elizabeth M. Sprague, Eric Thomas Sprague and Phineas M. Sprague, Trustees of The Buena Vista Trust by Warranty Deed of The Portland Company, dated December 30, 2012 and recorded in the Cumberland County Registry of Deeds in Book 30265, Page 32.

S:\P\POCO14\Prentice Purchase\Sale Documents\Deed of Trustees.doc

Received
Recorded Register of Deeds
Jul 29,2013 03:54:21P
Cumberland County
Pamela E. Lovley

Doc#: 13675 Bk:31425 Pg: 267

QUITCLAIM DEED WITH COVENANT

Maine Statutory Short Form

KNOW ALL BY THESE PRESENTS, that **THE PORTLAND COMPANY**, a Maine corporation and having a place of business at 58 Fore Street, County of Cumberland, and State of Maine, for consideration paid, grants to **CPB2 LLC**, a Delaware limited liability company, with an address of P.O. Box 7987, Portland, Maine 04112, with **QUITCLAIM COVENANTS,** the land located in Portland, County of Cumberland and State of Maine, and more particularly described in Exhibit "A" attached hereto and made a part hereof.

MAINE REAL ESTATE TAX PAID

IN WITNESS WHEREOF, said THE PORTLAND COMPANY has caused this instrument to be signed and sealed this 1st day of April, 2014.

WITNESS:

THE PORTLAND COMPANY

Phineas Sprague Jr

By: Phineas Sprague, Jr.
Its: President

STATE OF MAINE
COUNTY OF CUMBERLAND

April 1, 2014

Personally appeared the above-named Phineas Sprague, Jr. in his said capacity, and acknowledged the foregoing to be his free act and deed and that of said corporation, The Portland Company, before me.

~~Notary Public~~/Attorney at Law

Drew A. Anderson

Printed Name

EXHIBIT A

TRACT I

A certain lot or parcel of land together with the buildings thereon situated on the southerly side of Fore Street, City of Portland, County of Cumberland and State of Maine bounded and described as follows:

Beginning at a point on the southerly sideline of Fore Street at a railroad spike at the northeasterly corner of land now or formerly of Hope 1 LLC as described in deed Book 22261, Page 50, thence S 87° 34' 45" E along the southerly sideline of said Fore Street 287.74 feet;

Thence, N 53° 19' 30" E along the southerly sideline of said Fore Street 594.45 feet to the northwesterly corner of Tract III, as shown on "ALTA/ACSM Land Title Survey, 58 Fore Street, Portland, Cumberland County, Maine made for CPB2 LLC" by Owen Haskell, Inc. dated May 22, 2013.

Thence, S 33° 29' 33" E along the westerly side of said Tract III 381.17 feet to land now or formerly of the State of Maine as described in deed Book 10924, Page 91;

Thence, S 63° 18' 30" W along land of said State of Maine 255.00 feet;

Thence, S 68° 31' 30" W along land of said State of Maine 442.91 feet to an iron rod found (bent) and land now or formerly of City of Portland as described in deed Book 21951, Page 341;

Thence, N 88° 12' 30" W along land of said City of Portland 137.25 feet to a non-tangent curve to the right;

Thence, following the curve to the right, along land of said City of Portland and land of said Hope 1 LLC, having a radius of 274.33 feet, an arc length of 337.36 feet, a chord bearing of N 38° 35' 30" W, and a chord length of 316.50 feet, to the southerly sideline of Fore Street and the point of beginning containing 6.04 acres.

Basis of bearings: Magnetic 1967.

TRACT II

A certain lot or parcel of land together with the buildings thereon situated southerly of but not adjacent to Fore Street, in the City of Portland, County of Cumberland and State of Maine bounded and described as follows:

Commencing at a point on the southerly line of Tract I, at an iron rod found (bent) at the southeasterly corner of land now or formerly of the City of Portland as described in deed Book 21951, Page 341, on the northerly line of land now or formerly of the State of Maine as described in deed Book 10924, Page 91, as shown on "ALTA/ACSM Land Title Survey, 58 Fore Street, Portland, Cumberland County, Maine made for CPB2 LLC" by Owen Haskell, Inc. dated May 22, 2013.

Thence, N 68° 31' 30" E along the northerly line of land of said State of Maine 215.11 feet;

Thence, S 27° 09' 40" E across land of said State of Maine and along the easterly line of land now or formerly of the City of Portland 50.25 feet to the true point of beginning;

Thence, N 68° 31' 30" E along the southerly sideline of land of said State of Maine 225.10 feet;

Thence, N 63° 18' 30" E along the southerly sideline of land of said State of Maine 690.74 feet;

Thence, S 30° 39' 00" E along land of said State of Maine 56.34 feet;

Thence, S 61° 35' 30" W 27.46 feet;

Thence, S 77° 24' 52" W 94.07 feet;

Thence, S 62° 35' 30" W 475.00 feet;

Thence, S 38° 50' 30" W 60.00 feet;

Thence, S 63° 50' 30" W 120.00 feet;

Thence, N 26° 10' 00" W 8.00 feet;

Thence, S 63° 49' 37" W 150.00 feet to land of said City of Portland;

Thence, N 27° 09' 40" W along land of said City of Portland 74.89 feet to the point of beginning containing 44,274 sq. ft.

Basis of bearings: Magnetic 1967.

ALSO CONVEYING two crossings for vehicular, pedestrian and utility access to and from other land now or formerly of Phineas Sprague to the most immediately above described parcel across the area shown on Exhibit B of Indenture Deed by and between the Maine Department of Transportation and Phineas Sprague, dated August 30, 1993 and recorded in Book 10924, Page 97, as the "Rail-Trail Corridor." Each crossing shall be 50 feet in width over the 50 foot wide "Rail-Trail Corridor" plus turning radii, as necessary, at the entrances to the crossings from the above described parcel of land. Such crossings may be moved from time to time by the Grantee at its expense upon proper notice to and approval by the Maine Department of Transportation, provided that the distance between the centerlines of the two crossings shall never be less than 200 feet; and further provided that in the event of any relocation, any former crossing shall be restored to the condition it would have been in had the crossing not been placed in that location.

TOGETHER WITH any upland including the seawall which immediately adjoin the above described premises.

Received
Recorded Register of Deeds
Apr 03,2014 12:25:29P
Cumberland County
Pamela E. Lovley

QUITCLAIM DEED WITHOUT COVENANT

CITY OF PORTLAND, a body corporate and politic and Maine municipal corporation ("Grantor"), FOR CONSIDERATION PAID, releases to **CPB2 I LLC**, a Delaware limited liability company with a mailing address of Merrill's Wharf, 254 Commercial Street, Suite 118, Portland, Maine 04101 ("Grantee"), certain real property, together with any improvements thereon, located southerly of Fore Street, in the City of Portland, County of Cumberland and State of Maine (the "Premises"), more particularly described on Exhibit A attached hereto and made a part hereof.

MAINE REAL ESTATE TAX PAID

Grantee covenants and agrees by acceptance of this Deed that the Premises herein conveyed is subject to the Declaration of Covenants and Option to Repurchase the Premises set forth in Exhibit B attached hereto and hereby made a part hereof.

IN WITNESS WHEREOF, Grantor has caused this instrument to be executed on its behalf by Jon P. Jennings, its City Manager, duly authorized, on this 2 day of November, 2018.

WITNESS:

CITY OF PORTLAND

Jon P. Jennings
Its City Manager

STATE OF MAINE
COUNTY OF CUMBERLAND

November 2, 2018

Personally appeared the above-named Jon P. Jennings, City Manager of the City of Portland, as aforesaid, and acknowledged the foregoing to be his free act and deed in his said capacity, and the free act and deed of said City of Portland.

Before me,

Attorney-at-Law/~~Notary Public~~
Commission Expires:
Print Name: Michael Goldman Bar No. 9842

EXHIBIT A

A certain lot or parcel of land situated southerly of but not adjacent to Fore Street in the City of Portland, County of Cumberland and State of Maine bounded and described as follows:

Beginning at a point on the southerly line of land of CPB2 at the southeasterly corner of land now or formerly of 100 Fore Street LLC as described in deed book 33748, page 1;

Thence, southeasterly along the southerly line of land of said CPB2 along a curve to the left having a radius of 274.33 feet, an arc length of 86.71, chord bearing of S 80°30'39" E and chord length of 86.35;

Thence, N 76°02'49" E along the southerly line of said CPB2 a distance of 137.25 feet to land of the State of Maine;

Thence, S 57°47'32" W across land of said City of Portland 11.22 feet to a point of curvature;

Thence, southwesterly across land of said City of Portland along a curve to the left, having a radius of 466.50 feet an arc length of 133.12 feet chord bearing of S 49°37'02" W and chord length of 132.67 feet;

Thence, S 41°26'32" W across land of the City of Portland 17.92 feet;

Thence, S 46°01'18" W along land of the State of Maine 31.95 feet;

Thence, N 52°05'24" W across land of the City of Portland 97.53 feet to a point of curvature;

Thence, northwesterly across land of the City of Portland along a curve to the right having a radius of 370.00 feet, an arc length of 47.73 feet, chord bearing of N 48°23'40" W and chord length of 47.70 feet to the southerly line of land of said 100 Fore Street LLC;

Thence, N 66°39'40" E along the southerly line of land of said 100 Fore Street LLC 43.19 feet to land of said CPB2 and the point of beginning containing 12,087 square feet more or less and being a portion of the property described in deed book 10924, page 84.

The above described parcel of land is shown on "Exhibit Plan Proposed Parcel City to CPB2 Fore Street Portland, Maine" dated July 2018 by Owen Haskell, Inc.

Bearings are based on Maine State Plane Coordinate System.

EXHIBIT B

Declaration of Covenants, Restrictions, And Option to Repurchase

1. This Declaration of Covenants, Restrictions, and Option to Repurchase (the "Declaration") was contemplated by the terms and conditions of a certain Purchase and Sale Agreement dated December 5, 2016 between Grantor and Grantee, as amended to date, a copy of which is on file with the City of Portland's Department of Finance and incorporated by reference herein (the "Agreement").

2. Access Road.

a. Grantee covenants and agrees to commence construction of a certain Access Road to CPB2's Property, as those terms are defined in the Agreement, within 36 months after the date of the deed to which these Covenants are attached (the "Closing Date"). After the construction of the Access Road has commenced, Grantor shall execute and record an affidavit indicating that the Option (as defined in Section 5 below), including Grantor's right and option to repurchase the Premises, has terminated and is on no further force or effect.

b. In the event that Grantor does not construct the Thames Street Extension (as defined in the Agreement) prior to Grantee's commencement of construction on CPB2's Property, and provided that Grantee, and/or its successors and assigns, is unable to access CPB2's Property from Fore Street, Grantor shall enter into a revocable license agreement with Grantee, and/or its successors or assigns, in a form satisfactory to Grantor, in order to provide the owner of the Premises and the owner of CPB2's Property, and their respective contractors, tenants, and invitees, with access to the Premises and/or to CPB2's Property across other property owned by Grantor that is contiguous to the western boundary of the Premises. Such license agreement shall only be available to Grantee and/or its successors and assigns from the time Grantee loses access to its property from Fore Street until the City completes the construction of the Thames Street Extension.

3. Payment In Lieu Of Property Taxes. Grantee covenants and agrees in the event that the Premises or any portion thereof shall be exempt from real and personal property taxes, by transfer, conversion, or otherwise, then the then-owner of the exempt portion shall make annual payments to the Grantor in lieu of taxes in the amount equal to the amount of property taxes that would have been assessed on the exempt portion of the real and personal property situated on the Premises had such property remained taxable. Grantor hereby confirms that Grantee and its successors and assigns shall possess and be vested with all rights and privileges as to abatement and appeal of valuations, rates, and the like as are accorded owners of real and personal property in Maine.

4. Grantee covenants and agrees to indemnify, defend, and hold Grantor harmless from and against any and all claims, damages, losses, liabilities, obligations, settlement payments, penalties, assessments, citations, directives, claims, litigation, demands, defenses, judgments, costs, or expenses of any kind, including, without limitation, reasonable attorneys', consultants', and experts' fees incurred in investigating, defending, settling, or prosecuting any claim, litigation or proceeding, that may at any time be imposed upon, incurred by or asserted or awarded against Grantee or Grantor and relating directly or indirectly to the violation of or compliance with any federal, state, or local environmental laws, rules, or regulations governing the release, handling or storage of hazardous wastes or hazardous materials and affecting all or any portion of the Premises, except to the extent that such a claim results directly from the Grantor's release, handling or storage of hazardous wastes or hazardous materials on the Premises.

5. Grantor's Option to Repurchase. Subject at all times to the remaining terms and conditions in this Section 5, if Grantee fails to commence construction of the Access Road as described in Section 2 above within 36 months after the Closing Date, Grantor shall have the right, during the one (1) year period from the third (3rd) anniversary of the Closing Date to, and including, the day immediately preceding the fourth (4th) anniversary of the Closing Date (the "Option Period"), but not the obligation, to repurchase the Premises at the Purchase Price set forth in the Agreement (such right set forth above and described below is hereinafter referred to as the "Option").

a. In order to exercise this Option to repurchase, Grantor must notify Grantee in writing (the "Notice") of its intent to do so during the Option Period. If Grantor gives Grantee the Notice during the Option Period, then Grantee shall have the right, but not the obligation, to commence construction of the Access Road within sixty (60) days after Grantee's receipt of the Notice. If Grantee commences construction of the Access Road within sixty (60) days after its receipt of the Notice, then, upon return to Grantor of the Earnest Money described below, the Notice shall be deemed automatically rescinded, and the provisions of this Section 5 shall be deemed of no further force or effect, as of the date of such commencement of construction. If Grantee fails to commence construction of the Access Road within sixty (60) days after its receipt of the Notice, then Grantee agrees that it will reconvey to Grantor the Premises within ten (10) business days after the expiration of said sixty (60) day period for the Purchase Price paid by Grantee to Grantor. The time, place and exact date of the closing shall be agreed to by the parties.

b. In the event Grantor provides the Notice of its intent to exercise the option, the Notice is to be accompanied by a payment to Grantee or its successors or assigns of earnest money in the amount of One Thousand Dollars ($1,000.00) (the "Earnest Money").

c. If Grantor exercises this Option to purchase the Premises, then in consideration of the terms, covenants and conditions contained herein, the parties mutually agree as follows:

i. Upon the giving of the Notice together with the Earnest Money, Grantee shall thereby be bound to sell and City shall thereby be bound to purchase the Premises upon the terms and conditions set forth herein, except as otherwise provided in clause 5.a above. Grantee or its successors, transferees or assigns shall execute, acknowledge and deliver to Grantor a quitclaim deed conveying to Grantor good and marketable title to the Premises, free and clear of all encumbrances and defects in title, except for utility and public easements of record servicing the Premises, and except for those approved by Grantor in its sole discretion. The closing shall be held at the date, time and place agreed to by the parties, or at such reasonable date thereafter as may be required to clear any encumbrance and defects in title, and Grantee or its successors, transferees or assigns shall then and there deliver the deed to Grantor upon tender of the balance of the Purchase Price by wire transfer, certified check, cashier's check, or cash. The balance to be tendered to Grantee or its successors or assigns shall be the Purchase Price, less the Earnest Money and any other option consideration actually received by Grantee.

ii. If counsel for Grantor, or its successors or assigns, shall be of the opinion, given in good faith, that the title to said Premises is defective or is otherwise not free and clear of all material encumbrances or that the title is not marketable, then Grantor, its successors or assigns, shall have the right, provided it or they shall have exercised this Option, to extend the time for conveyance of the Premises, during which time Grantee or its successors, transferees or assigns shall make a reasonable effort to remove such defects at its own expense, to the satisfaction of counsel of Grantor, its successors or assigns. If record title proves defective and Grantee or its successors or assigns shall fail to remove such defect within a reasonable time after notice from Grantor of the nature of the defect, Grantor may, at its election, (a) cure any such defect and deduct the cost thereof from the Purchase Price at closing, or (b) elect to close notwithstanding any such defect, or (c) terminate this Option by written notice to Grantee or its successors or assigns, whereupon all Earnest Money paid by Grantor to Grantee or its successors or assigns shall immediately be returned to Grantor and thereafter the parties shall be relieved of all obligations and this Option shall terminate.

iii. If all obligations of this agreement have been performed, excepting that Grantor does not complete the purchase, Grantee or its successors or assigns shall retain the Earnest Money as full liquidated damages, and without recourse to any other remedies, and whereupon this Option shall terminate and shall be of no further force or effect.

iv. Full possession of the Premises, free of all encumbrances except as aforesaid, is to be delivered to Grantor at closing, with the Premises to be in the reasonably functional condition, reasonable wear and tear excepted.

v. Real estate taxes and utilities shall be prorated as of the time of the passing of title. Real estate transfer taxes, if any, arising in connection with the conveyance of the Premises shall be paid by Grantor and/or Grantee or its successors or assigns in accordance with the custom of the locality where the Premises are situated.

d. Notwithstanding anything else to the contrary herein, in the event that (a) Grantor fails to give the Notice on or before the expiration of the Option Period, (b) Grantee commences construction of the Access Road on or before the third (3rd) anniversary of the Closing Date, or (3) Grantee commences construction of the Access Road within sixty (60) days after Grantee's receipt of the Notice and returns the Earnest Money to Grantor in accordance with Section 5(a) above, the Option, including Grantor's right and option to repurchase the Premises, shall terminate and shall be of no further force or effect, and upon such termination, Grantor shall execute and record an affidavit indicating that the Option, including Grantor's right and option to repurchase the Premises, has terminated and is of no further force or effect.

e. The parties hereto hereby agree that this right and option to purchase, and the Grantor's rights in the Premises thereby created, are immediately fully vested and are hereby deemed to be fully vested in any event, not contingent, and shall, by agreement, not be subject to the Rule Against Perpetuities, or any statutory enactment thereof, or similar law.

f. This Option is personal to Grantor (City of Portland) and cannot be assigned to or exercised by any other person or entity.

6. This Declaration may be amended or modified in whole or in part only by written agreement of Grantee and Grantor.

7. The covenants and option to repurchase set forth herein are intended to, and shall, run with the Premises and shall bind all subsequent owners of the Premises.

8. Except as specifically set forth herein, this Declaration shall survive a sale, transfer, foreclosure or transfer of title in lieu of foreclosure, or other disposition of the Premises.

9. This Declaration is enforceable by Grantor as a contract and shall inure to the benefit of and be enforceable by Grantor, its successors, and assigns.

10. The validity of any clause, part or provision of this Declaration shall not affect the validity of the remaining portions of thereof.

Received
Recorded Register of Deeds
Nov 05,2018 09:28:05A
Cumberland County
Nancy A. Lane

Doc#: 14813 Bk:35576 Pg: 153

MAINE REAL ESTATE TAX PAID

SHORT FORM QUITCLAIM DEED WITH COVENANT

DLN No. 1001940054598

100 FORE STREET, LLC, a Maine limited liability company with a mailing address of P.O. Box 910, Westbrook, Maine 04098-0910 ("Grantor") FOR CONSIDERATION PAID, grants to **CPB2 I LLC** ("Buyer"), a Delaware limited liability company, having an address at Merrill's Wharf, 254 Commercial Street, Suite 118, Portland, Maine 04101 ("Grantee") with QUITCLAIM COVENANT, certain real property, with any improvements thereon, located at or near 100 Fore Street, Portland, Cumberland County, Maine, and more particularly described on **Exhibit A** attached hereto and made a part hereof.

Being a portion of the premises described in Quitclaim Deed with Covenant granted by Hope 1, LLC to the Grantor dated January 6, 2017 and recorded in the Cumberland County Registry of Deeds in Book 33748, Page 1.

IN WITNESS WHEREOF, 100 Fore Street, LLC has caused this instrument to be executed and delivered by Jonathan S. Cohen, its duly-authorized Manager as of this 10th day of April, 2019.

WITNESS:

100 FORE STREET, LLC

By: MANAGER
Jonathan S. Cohen Manager

State of Maine
County of Cumberland

April 10, 2019

PERSONALLY APPEARED before me the above-named Jonathan S. Cohen, Manager of 100 Fore Street, LLC, and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of said limited liability company.

Before me,

Name: Hawley Strait
~~Notary Public~~/Attorney at Law
~~Commission Expires~~

EXHIBIT A

A certain lot or parcel of land situated southerly of but not adjacent to Fore Street in the City of Portland, County of Cumberland and State of Maine bounded and described as follows:

Beginning at a point on the southerly line of land of CPB2 LLC at the southeasterly corner of land now or formerly of 100 Fore Street, LLC as described in deed book 33748, page 1;

Thence, S 66°39'40" W along the southerly line of land of said 100 Fore Street LLC 43.19 feet;

Thence, the following courses and distances through the land of the grantor:

Northwesterly along a curve to the right having a radius of 370.00 feet, an arc length of 13.77 feet, chord bearing of N 43°37'59" W and chord length of 13.77 feet;

N 42°34'01" W 68.76 feet;

Northwesterly along a curve to the right having a radius of 370.24 feet, an arc length of 134.07 feet, chord bearing of N 32°11'34" W and chord length of 133.34 feet the easterly line of land of said CPB2, LLC;

Thence, southeasterly along a curve to the left having a radius of 274.33, an arc length of 235.73 feet, chord bearing of S 46°50'20" E and chord length of 228.54 feet to the point of beginning, containing 2,247 square feet, more or less and being a portion of the property described in deed book 33748, page 1.

The above described parcel of land is shown on "Exhibit Plan Proposed Parcel to be Conveyed Fore Street Portland, Maine" dated February 2018 by Owen Haskell, Inc.

Bearings are based on Maine State Plane Coordinate System.

Received
Recorded Register of Deeds
Apr 12,2019 01:15:52P
Cumberland County
Nancy A. Lane

EXCHANGE AGREEMENT

THIS EXCHANGE AGREEMENT (this "Agreement") made this 21st day of June, 2017 by and between the CITY OF PORTLAND, a body politic and corporate located in Cumberland County, Maine (hereinafter referred to as "CITY"), CPB2 LLC, a Delaware limited liability company, having a mailing address of c/o CPB2 Management LLC, P.O. Box 7987, Portland, Maine 04112 (hereinafter referred to as "CPB2"), and STATE OF MAINE DEPARTMENT OF TRANSPORTATION, an agency of the State of Maine, having a mailing address of 16 State House Station, Augusta, Maine 04333-0016 (hereinafter referred to as "DOT"). For the purposes of this Agreement, the CITY, CPB2 and DOT are sometimes hereinafter collectively referred to as the "Parties" and individually as a "Party."

RECITALS

WHEREAS, CITY is the owner of that certain real property located along the eastern waterfront that is designated on the official tax map for the City of Portland as Block 448, Lot A-1 (the "CITY Property"); and

WHEREAS, CPB2 is the owner of that certain real property known as 58 Fore Street in the City of Portland, County of Cumberland and State of Maine, which is more particularly described in deeds dated July 19, 2013 and April 1, 2014 and recorded in the Cumberland County Registry of Deeds in Book 30879, Page 75 and Book 31425, Page 267 respectively (the "CPB2 Property"); and

WHEREAS, DOT is the owner of that certain right of way along the eastern waterfront that is designated on the official tax map for the City of Portland as Block 18, Lot A-13 (the "DOT Right of Way"); and

WHEREAS, in connection with the construction of the Thames Street extension and the development of the CPB2 Property, CITY and CPB2 have proposed the relocation of a portion of the DOT Right of Way in the manner shown on the Land Transfer Plan prepared by Woodard & Curran dated December 1, 2016 and revised January 10, 2017, a copy of which is attached hereto as Exhibit A (the "Plan"); and

WHEREAS, DOT has approved the relocation of the DOT Right of Way, as shown on the Plan; and

WHEREAS, in order to accomplish such relocation, the parties have agreed to certain property transfers, as identified herein; and

WHEREAS, the parties hereto desire to memorialize their agreements;

NOW THEREFORE, in consideration of the foregoing and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties, intending to be legally bound, hereby agree as follows:

1. **EXCHANGE.** In accordance with the terms and conditions set forth in this Agreement, (i) CITY agrees to transfer to DOT the property designated on the Plan as "City to MDOT" (the "CITY/DOT Exchange Property") by municipal quitclaim deed, (ii) DOT agrees to transfer to CITY the property designated on the Plan as "DOT to City" (the "DOT/CITY Exchange Property") by deed of vacation, (iii) DOT agrees to transfer to CPB2 the property designated on the Plan as "DOT to CPB2" (the "DOT/CPB2 Exchange Property") by deed, of vacation (iv) CPB2 agrees to transfer to DOT the property designated on the Plan as "CPB2 to DOT" (the "CBP2/DOT Exchange Property") by quitclaim deed, and (v) CPB2 agrees to transfer to CITY the property designated on the Plan as "CPB2 to City" (the "CPB2/CITY Exchange Property") by quitclaim deed, together with an easement in a form satisfactory to the CITY and CPB2 allowing public access over the entire five foot strip of land separating the CPB2/CITY Exchange Property from the water(said properties being hereinafter collectively referred to as the "Exchange Properties" and individually referred to as an "Exchange Property").

2. **CONSIDERATION**. The parties agree that the properties being conveyed are of a comparable size and value and that there is no additional consideration being paid or received by any party in connection with the exchanges.

3. **SURVEY.** CPB2 shall, at is sole expense, cause an ALTA survey to be prepared that will more specifically describe, by metes and bounds, the Exchange Properties. CPB2 shall provide such survey and associated property descriptions to the CITY and to DOT on or before the expiration of the Due Diligence Period (as defined in Paragraph 4.a) for their review and approval.

4. **TITLE.**

   a. Due Diligence Period. Each Party will have from the date of this Agreement until 4:00 PM Eastern Daylight Savings Time on the day that is one hundred eighty (180) days after the date of this Agreement (the "Due Diligence Period") to complete its title and survey examinations.

   b. Title and Survey Objections. Each Party will have thirty (30) days from the expiration of the Due Diligence Period (the "Due Diligence Response Period") to deliver to the other Parties any written objections to title or survey matters (other than the permitted exceptions identified herein), including, but not limited to, those affecting marketability or use. Objections not made prior to the end of the Due Diligence Response Period will be deemed waived; provided, however, that objections pertaining to matters of record first appearing after the date of this Agreement may be made at any time prior to the closing.

   c. Option to Cure. In the event of (i) an objection to the title or the survey pursuant to Paragraph 4.b or (ii) an objection to the results of the Inspection (as defined in Paragraph 5.a) pursuant to Paragraph 5.f, the Party who owns the property to which such objection relates (the "Notice Recipient") will have the option, but not the obligation, to cure the objection and will notify the

Party who gave the objection notice (the "Notice Sender") of its election within ten (10) business days after receipt of the objection. In the event that the Notice Recipient elects to cure the objection, it will have sixty (60) days from the date of the notice of election, or such other reasonable time as the Parties may agree, to cure the objection to the satisfaction of the Notice Sender. In the event that the Notice Recipient does not elect to cure the objection, or, having elected to cure the objection fails to timely do so to the satisfaction of the Notice Sender, then the Notice Sender will have the option to (1) terminate this Agreement (after which the Parties will not have any further obligation or liability to the other Parties under this Agreement), (2) waive the objection and close, or (3) undertake the cure of such objection at its own expense (in which case it shall have 60 days to do so). In the event the Notice Sender elects to cure such objection, but the Notice Sender is unable to cure such objection to its reasonable satisfaction within said 60-day period, then the Notice Sender will have the option to (1) terminate this Agreement (after which the Parties will not have any further obligation or liability to the other under this Agreement), or (2) waive the objection and close.

d. CPB2 shall convey its property at the closing in fee simple by a quitclaim deed. The City shall convey its property at the closing in fee simple by municipal quitclaim deed. Title shall be free and clear of all encumbrances, except (i) easements for utilities servicing the property, (ii) zoning ordinances, and (iii) real estate taxes not yet due and payable.

e. DOT shall convey its property at the closing as a full release of whatever property interest(s) DOT holds by a deed of vacation. Title shall be free and clear of all encumbrances, except (i) easements for utilities servicing the property, and (ii) zoning ordinances.

5. <u>INSPECTIONS</u>.

a. During the Due Diligence Period and the Due Diligence Response Period, each Party and their respective employees, consultants, contractors and agents shall have the right, at such Party's expense (except as otherwise set forth herein), to enter on the Exchange Property being conveyed to them, at reasonable times, in order to (i) inspect the same, (ii) conduct engineering studies, percolation tests, geotechnical exams, environmental assessments, and other such studies, tests, exams, and assessments, and (iii) do such other things as such Party determines, in its sole discretion, to be required to determine the suitability of such Exchange Property for such Party's intended use (collectively, the "Inspections"). The Parties acknowledge that such Inspections may include the digging of test pits, which each Party hereby approves.

b. To the extent permitted by law, the Party performing the Inspections agrees to defend, indemnify and hold harmless the Party on whose property the Inspections are being performed against any mechanics' liens that may

arise from the activities of said Party and its employees, consultants, contractors and agents on the property.

c. Each Party shall exercise the access and inspection rights granted hereunder at its sole risk and expense, and the Party performing the Inspections hereby releases the Party on whose property the Inspections are being performed from, and agrees to indemnify, defend, and hold said Party harmless, to the extent permitted by law, against, any and all losses, costs, claims, expenses and liabilities (including without limitation reasonable attorney fees and costs) (collectively, "Damages") suffered by said Party on account of any injury to person or damage to property arising out of the exercise by the other Party of its rights hereunder, except to the extent that such Damages result from the act or omission of the Party on whose property the Inspections are being performed. Nothing in this Agreement shall waive any defense, immunity or limitation of liability that may be available to CITY and/or DOT under the Maine Tort Claims Act (14 M.R.S. § 8101 et seq.) or any other privileges or immunities provided by law. Any other provision of this Agreement to the contrary notwithstanding, this provision shall survive any termination or expiration of this Agreement.

d. The Party (other than DOT and the CITY) performing the Inspections shall cause any contractors, consultants or any other party conducting the Inspections to procure automobile insurance and general commercial or public liability insurance coverage in amounts of not less than Four Hundred Thousand Dollars ($400,000.00) per occurrence for bodily injury, death and property damage and also Workers' Compensation Insurance coverage to the extent required by law. DOT and the City are self-insured.

e. In the event that the Party performing the Inspections does not acquire the property in question for any reason or for no reason, said Party agrees to either return the property in question as nearly as possible to its original condition after conducting the Inspections, or, at the option of the Party who owns the property in question, reimburse the Party owning the property for any physical damage caused to the property in question in connection with the Inspections; provided, however, the Parties hereby acknowledge and agree that the term "physical damage" does not include any disturbance of any pre-existing environmental contamination on the property caused by such inspections, studies, tests, exams, and assessments, and that the Party performing such Inspections shall have no obligation to clean-up, remove or take any other action with respect to any pre-existing environmental contamination disturbed thereby.

f. The parties hereto acknowledge and agree that it is a condition to each Party's obligations under this Agreement that the results of the Inspections be acceptable to the Party performing such Inspections in its sole discretion. If the results of such due diligence are not acceptable to the Party performing such Inspections in its sole discretion, then such Party

shall notify the Party who owns the property to which such results relate, and the provisions of Paragraph 4.c shall apply. If such Party ultimately exercises its right to terminate this Agreement, then the Parties shall not have any further obligations or liabilities under this Agreement to each other except as expressly set forth in this Agreement.

6. **TAXES, PRORATIONS AND RECORDING FEES.**

   a. CPB2 shall be liable for all real estate taxes attributable to the CPB2/DOT Exchange Property and the CPB2/CITY Exchange Property through the end of the fiscal year in which the closing occurs. CPB2 shall be liable for all real estate taxes attributable to the DOT/CPB2 Exchange Property beginning as of the start of the fiscal year following the closing and continuing thereafter. Because the DOT/CPB2 Exchange Property, the DOT/CITY Exchange Property, and the CITY/DOT Exchange Property are currently owned by entities that are exempt from real estate taxes, no taxes have been assessed or will be due for any portion of the current fiscal year, and no taxes will be prorated for those properties at the closing.

   b. The DOT/CPB2 Exchange Property and the CPB2/CITY Exchange Property are the only Exchange Properties subject to Maine real estate transfer tax at closing, and any transfer tax due shall be paid for by CPB2 in accordance with 36 M.R.S. § 4641-A. CITY and DOT are exempt from paying the transfer tax pursuant to 36 M.R.S. § 4641-C, and the transfer of the CPB2/DOT Exchange Property is exempt because it is a conveyance to DOT for transportation purposes..

   c. The recording fees for the various deeds shall be paid for by CPB2.

7. **DEFAULT AND REMEDIES**. In the event that any Party defaults under this Agreement, any of the non-defaulting Parties shall have the right (i) to the extent permitted by law, to pursue specific performance or (ii) in lieu of specific performance, as its sole remedy to terminate this Agreement (after which the Parties will not have any further obligation or liability to the other under this Agreement).

8. **RISK OF LOSS.** The risk of loss or damage to any of the Exchange Properties by fire, eminent domain, condemnation, or otherwise, until transfer of title hereunder, is assumed by the owner of the Exchange Property in question. The Exchange Properties are to be delivered in substantially the same condition as of the date of this Agreement unless otherwise stated. In the event any Party is not able to deliver their Exchange Property as stated, any of the other Parties may terminate this Agreement, and the Parties shall not have any further obligations or liabilities under this Agreement except as expressly set forth in this Agreement.

9. **PROPERTY SOLD "AS IS, WHERE IS**." Except as otherwise set forth in this Agreement, each Party acknowledges (i) that, by the end of the Due Diligence Response Period, it will have had an opportunity to inspect the Exchange Property it is receiving, or to hire professionals to do so; (ii) that such Exchange Property will be

sold "as is, where is" and "with all faults;" and (iii) that the current owner of such Exchange Property, and its agents, shall not be deemed to have made any representations or warranties with respect to such Exchange Property, including, without limitation, the accuracy of any statement relating to boundaries or acreage, or relating to any other matters contained in any description of such Exchange Property, or relating to the fitness of such Exchange Property for a particular purpose, or relating to development rights, merchantability, habitability, or as to any other matter, including without limitation, land use, zoning and subdivision issues or the environmental, mechanical, or structural condition of such Exchange Property. Acceptance by a Party of the deed at closing to the Exchange Property it is receiving shall be deemed to be full performance and discharge by the Party conveying such Exchange Property of every agreement and obligation contained herein.

10. **CLOSING**. Time is of the essence in the performance of this Agreement. The closing shall be held at the offices of CPB2's counsel at a time agreeable to the Parties on or before the earlier of that date that is 30 days after the date that the CITY receives the last of the Thames Street Extension Approvals, as that term is defined below, or January 31, 2018, so long as the Due Diligence Response Period has expired. Provided, however, that if the CITY has not received the last of the Thames Street Extension Approvals by January 1, 2018, the closing date, may, upon the mutual agreement of the Parties, be extended to a later date agreed to by the Parties. At the closing:

    a. each Party shall execute, acknowledge and deliver the deed required under this Agreement to convey title to the Exchange Property in question, free and clear of all encumbrances other than those approved by the recipient of such Exchange Property in its sole discretion;

    b. each Party shall execute, acknowledge and deliver such affidavits and indemnifications, to the extent permitted by law, in form and substance reasonably satisfactory to the applicable Parties, regarding mechanics' liens, materialmen's' liens and parties in possession sufficient to eliminate any title insurance exceptions for these matters;

    c. each Party shall deliver to the others such other documents, certificates and the like as may be required herein or as may be necessary to carry out the obligations under this Agreement; and

    d. DOT will grant to CPB2 an easement in accordance with the provisions of Paragraph 1(b) of an associated MOU, as such MOU is defined in Paragraph 11 below.

    For the purposes of this Agreement, the term "Thames Street Extension Approvals" shall mean CITY'S receipt of all necessary permits and regulatory approvals to construct the Thames Street extension and related utilities and the appropriation by the Portland City Council of the funds necessary to do so.

11. CONTINGENCIES. DOT and CPB2 entered into a certain Memorandum of Understanding dated March 31, 2015 relating to the portion DOT Right of Way that bisects the CPB2 Property, which memorandum contemplated the exchange of property between the parties thereto (the "MOU"). DOT and CPB2 acknowledge and agree that DOT's obligations under this Agreement are contingent upon (i) the submission to DOT of the geological tests of the soils required by Paragraph 3 of the MOU and, if applicable, the performance of the work described in Paragraph 3.b of the MOU, (ii) the consent of the CITY to the relocation of the Trail Corridor (as defined in the MOU), as contemplated by Paragraph 7 of the MOU, and (iii) if applicable, CPB2 obtaining the consent of the Trust for the Preservation of Maine Industrial History and Technology (the "Narrow Gauge") to the relocation of the narrow gauge railroad track or to the terms of a lease agreement between the Narrow Gauge and CPB2 to replace the terms of the Narrow Gauge's existing lease with DOT, as contemplated by Paragraphs 4 and 7 of the MOU.

12. ENVIRONMENTAL ASSESSMENT.

As outlined in the MOU, if it is determined by CPB2 that a Phase I Environmental Site Assessment of the existing Rail Corridor, as such is defined in the MOU, is required in connection with the exchange contemplated herein, CPB2 agrees to obtain, at its sole cost and expense, such Phase I Assessment and to submit the resulting report to DOT for review.

a. If, as a result of the findings of the Phase I Assessment, it is determined that a Phase II Environmental Site Assessment is required, CPB2 agrees to obtain, at its sole cost and expense, such Phase II Assessment and to submit the resulting report and all data and associated documentation to DOT for review.

b. If it is determined that environmental remediation is required in connection with the existing Rail Corridor, the Parties acknowledge that DOT shall not be required to perform such remediation unless CPB2 agrees to pay for all associated costs or DOT is otherwise reimbursed for such costs.

13. RELATED WORK.

a. If CPB2 elects to relocate the narrow gauge railroad track, as contemplated by Paragraph 4.a of the MOU, and if the Narrow Gauge has consented to such relocation, then CPB2 agrees to relocate the same at no expense to DOT or to the Narrow Gauge. DOT acknowledges that such work will be done in connection with the redevelopment of the portion of the DOT/CPB2 Exchange Property on which the narrow gauge railroad tracks currently exist and will likely occur after the closing.

b. CPB2 agrees further to relocate the Trail Corridor (as defined in the MOU) at no expense to DOT or to CITY. DOT and CITY acknowledge that such work will be done in connection with the redevelopment of the marina or the redevelopment of the portion of the CPB2 Property that runs along the shoreline, and will likely occur after the closing. If the new location of the Trail Corridor, as shown on an

approved site plan, is partly on the CPB2 Property, then CPB2 agrees to grant to CITY an easement over such portion on substantially the same terms and conditions as set forth in the easement granted by DOT to CITY.

c. In connection with the relocation of the narrow gauge railroad tracks and/or the relocation of the Trail Corridor, DOT agrees to grant to CPB2 a temporary, construction right over the relocated DOT Right of Way to the extent reasonably required to relocate the narrow gauge railroad tracks and/or the Trail Corridor. If requested by CPB2, CITY also agrees to grant to CPB2 a temporary, construction right in form and substance reasonably satisfactory to the CITY, over the relocated Trail Corridor to the extent reasonably required to relocate the narrow gauge railroad tracks and/or the Trail Corridor.

d. DOT acknowledges that the relocation of the narrow gauge railroad tracks and/or the Trail Corridor may require site plan approval or other governmental approval, and DOT agrees to reasonably cooperate with CPB2 in connection with such approvals and to execute and deliver any documents reasonably requested by CPB2 or any governmental entity, department or agency in connection therewith, provided such documents are in form and substance reasonably satisfactory to DOT and do not require DOT to undertake any construction work in connection with such relocation or relocations.

e. The provisions of this Paragraph 13 shall survive the closing.

14. ENTIRE AGREEMENT. This Agreement represents the entire and complete Agreement and understanding between the Parties and supersedes any prior agreement or understanding, written or oral, between the Parties with respect to the acquisition or exchange of the Exchange Properties hereunder. This Agreement cannot be amended except by written instrument executed by the CITY, CPB2 and DOT.

15. NON-WAIVER. No waiver of any breach of any one or more of the conditions of this Agreement by a Party shall be deemed to imply or constitute a waiver of any succeeding or other breach hereunder.

16. HEADINGS AND CAPTIONS. The headings and captions appearing herein are for the convenience of reference only and shall not in any way affect the substantive provisions hereof.

17. BINDING EFFECT. This Agreement shall be binding upon and inure to the benefit of the Parties and their respective heirs, administrators, successors and assigns.

18. TIME IS OF THE ESSENCE. The CITY, CPB2 and DOT each confirm and agree that each of the time periods set forth herein are essential provisions of the terms of this Agreement.

19. GOVERNING LAW. This Agreement shall be construed in all respects in accordance with, and governed by, the laws of the State of Maine. The Parties hereto hereby consent to the exclusive jurisdiction of the Superior Court for the County of

Cumberland in the State of Maine, for all actions, proceedings and litigation arising from or relating directly or indirectly to this Agreement or any of the obligations hereunder, and any dispute not otherwise resolved as provided herein shall be litigated solely in said Court. If any provision of this Agreement is determined to be invalid or unenforceable, it shall not affect the validity or enforcement of the remaining provisions hereof.

20. NOTICE. All notices, demands and other communications hereunder shall be in writing and shall be deemed to have been duly given on the date of service if served personally on the party to whom notice is to be given, or on the first business day after mailing if mailed to the party to whom notice is to be given by first class mail, postage prepaid, certified, return receipt requested, addressed to the recipient at the addresses set forth below. Either party may change addresses for purposes of this paragraph by giving the other party notice of the new address in the manner described herein.

FOR THE CITY:	City of Portland ATTN: CITY MANAGER 389 Congress Street Portland, ME 04101
With a copy to:	The Office of the Corporation Counsel at the same address.
FOR CPB2:	CPB2 LLC c/o CPB2 Management LLC P.O. Box 7987 Portland, Maine 04112
With a copy to:	Bernstein, Shur, Sawyer & Nelson, P.A. Attention: Mary E. Costigan, Esq. 100 Middle Street, West Tower Portland, Maine 04101
FOR DOT:	STATE OF MAINE DEPARTMENT OF TRANSPORTATION Attention: Toni Kemmerle, Esq. 16 State House Station Augusta, Maine 04333-0016

21. SIGNATURES; MULTIPLE COUNTERPARTS. This Agreement may be executed in any number of counterparts and by different parties in separate counterparts. Each counterpart when so executed shall be deemed to be an original and all of which together shall constitute one and the same agreement.

22. BROKERS. The CITY, CPB2 and DOT each represent and warrant that they have not dealt with a real estate broker in connection with this transaction. CPB2 agrees to indemnify and hold harmless the CITY and DOT from any claims made by any broker

should CPB2's representation in this paragraph be false. To the extent permitted by law, the CITY and DOT agree to indemnify and hold harmless CPB2 from any claims made by any broker should the representation by the CITY or DOT in this paragraph be false. The foregoing indemnities shall include all legal fees and costs incurred in defense against any such claim, and shall survive the closing.

IN WITNESS WHEREOF, the Parties have hereunto set their hands and seals on the day and year first written above.

CITY OF PORTLAND

Judith Rosen
WITNESS

By: Jon P. Jennings
Jon P. Jennings
Its: City Manager

CPB2 LLC
By: CPB2 Management LLC, Manager

Richard A. Crontici
WITNESS

By: _____
Name: Casey Prentice
Its: Manager

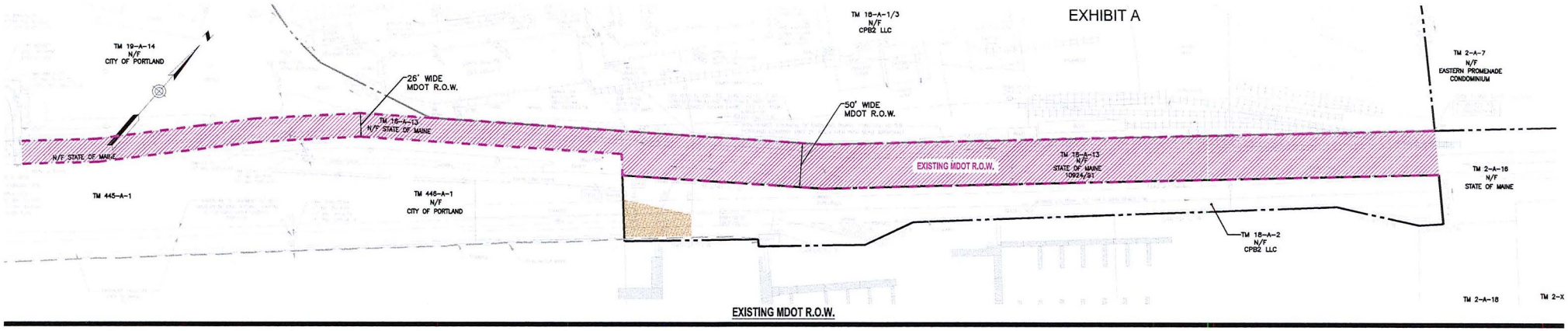
MAINE DEPARTMENT OF TRANSPORTATION

Melissa Pushard
WITNESS

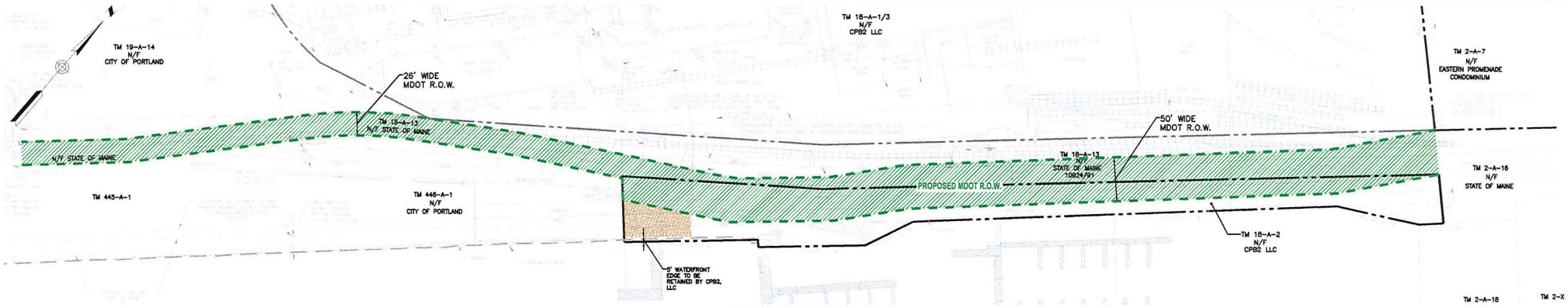
By: _____
David Bernhardt
Its Commissioner

Approved as to Form:
MB
Corporation Counsel's Office

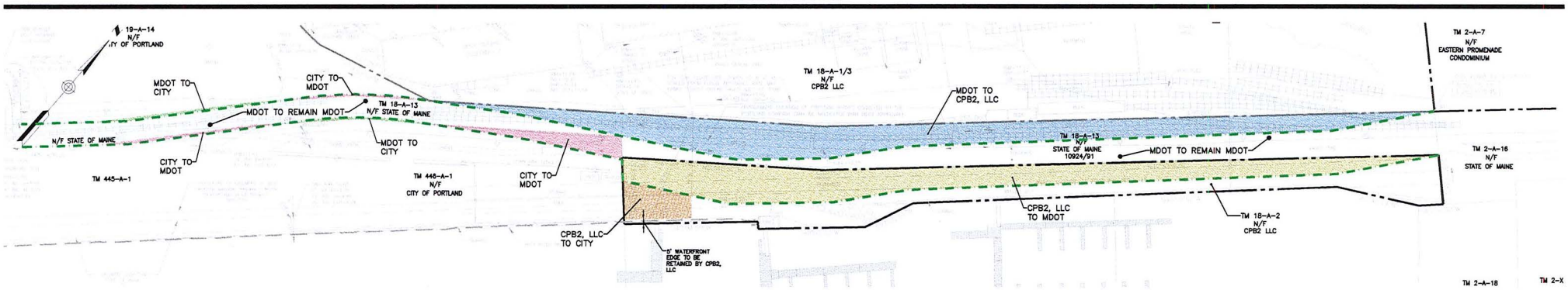
EXHIBIT A



EXISTING MDOT R.O.W.



PROPOSED MDOT R.O.W.



Scale: 1" = 50'
12/1/2016

CPB2 LLC
EASTERN WATERFRONT DEVELOPMENT PORTLAND, MAINE

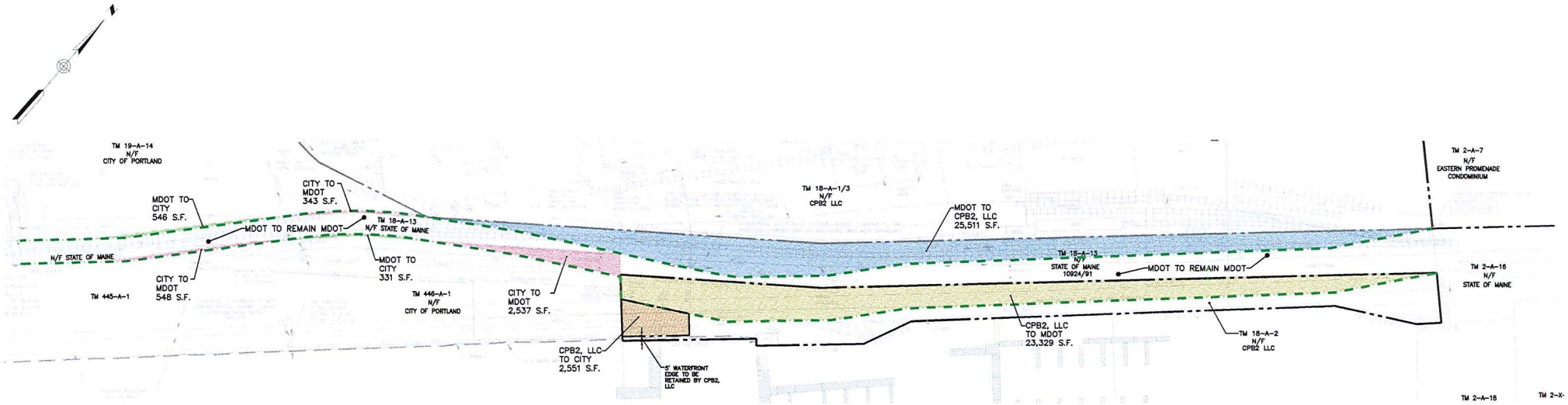
50' 0 50' 100'
BAR SCALE
1" = 50'
CHECK GRAPHIC SCALE BEFORE USING

PLAN REFERENCE
SOURCE OF EXISTING CONDITIONS: PLAN ENTITLED "BOUNDARY & TOPOGRAPHIC SURVEY AT 58 FORE STREET, PORTLAND, ME" PREPARED BY OWEN HASKELL, INC., FALMOUTH, ME 04105, DATED AUGUST 19, 2016 (REV. DATE 10/3/2016).
HORIZONTAL DATUM: NAD83, MAINE STATE PLAIN, WEST ZONE, US FOOT
VERTICAL DATUM: CITY OF PORTLAND DATUM

PROPOSED LAND TRANSFERS

58 FORE STREET
MDOT R.O.W. FIGURE - 1

WOODARD & CURRAN



PROPOSED LAND TRANSFERS

CITY

EXISTING CITY LAND TRANSFERRED TO:		NEW CITY LAND TRANSFERRED FROM:	
MDOT	548 S.F.	MDOT	546 S.F.
	343 S.F.		331 S.F.
	2,537 S.F.		
CPB2	0 S.F.	CPB2	2,551 S.F.
	TOTAL: 3,428 S.F.		TOTAL: 3,428 S.F.

MDOT

EXISTING MDOT LAND TRANSFERRED TO:		NEW MDOT LAND TRANSFERRED FROM:	
CITY	546 S.F.	CITY	548 S.F.
	331 S.F.		343 S.F.
			2,537 S.F.
CPB2	25,511 S.F.	CPB2	23,329 S.F.
	TOTAL: 26,388 S.F.		TOTAL: 26,757 S.F.

CPB2

EXISTING CPB2 LAND TRANSFERRED TO:		NEW CPB2 LAND TRANSFERRED FROM:	
CITY	2,551 S.F.	CITY	0 S.F.
MDOT	23,329 S.F.	MDOT	25,511 S.F.
	TOTAL: 25,880 S.F.		TOTAL: 25,511 S.F.

Scale: 1" = 50'
1/10/2017

CPB2 LLC
EASTERN WATERFRONT DEVELOPMENT PORTLAND, MAINE

50' 0 50' 100'
BAR SCALE
1" = 50'
CHECK GRAPHIC SCALE BEFORE USING

PLAN REFERENCE
SOURCE OF EXISTING CONDITIONS: PLAN ENTITLED "BOUNDARY & TOPOGRAPHIC SURVEY AT 58 FORE STREET, PORTLAND, ME" PREPARED BY OWEN HASKELL, INC., FALMOUTH, ME 04105, DATED AUGUST 19, 2016 (REV. DATE 10/3/2016).
HORIZONTAL DATUM: NAD83, MAINE STATE PLAIN, WEST ZONE, US FOOT
VERTICAL DATUM: CITY OF PORTLAND DATUM

58 FORE STREET
MDOT R.O.W. FIGURE - 2

WOODARD & CURRAN

FIRST AMENDMENT TO
EXCHANGE AGREEMENT

THIS FIRST AMENDMENT TO EXCHANGE AGREEMENT (this "Amendment") dated as of the _____ day of January , 2018 (the "Effective Date"), is made by and between the City of Portland, a body politic and corporate, having an address of 389 Congress Street, Portland, Maine ("City"), CPB2 LLC , a Delaware Limited Liability Company , having a mailing address of P.O. Box 7987, Portland, Maine (the "CPB2") and the State of Maine Department of Transportation, an agency of the State of Maine, having a mailing address of 16 State House Station, Augusta, Maine 04333-0016 ("DOT"). All capitalized terms not otherwise defined herein shall have the meaning given them in the Agreement (as such term is defined below).

WHEREAS, the City, CPB2 and DOT entered into a certain Exchange Agreement dated as of June 21, 2017 (the "Agreement");

WHEREAS, Section 10 of the Agreement currently provides for closing to occur on or before the earlier of the date that is 30 days after the date that the City receives the last of the Thames Street Extension Approvals or January 31, 2018; and

WHEREAS, the City, CPB2, and DOT desire to extend the closing date to April 1, 2018;

NOW THEREFORE, in consideration of the mutual covenants and agreements set forth herein below, and for other good and valuable consideration, the parties hereto agree as follows:

1. **Amendment to Agreement.** The first paragraph of Section 10 of the Agreement is hereby amended to replace "January 31, 2018" with "April 1, 2018."

2. **Ratification.** The parties hereto hereby reaffirm and ratify the continued effectiveness of the Agreement as modified by this Amendment. The parties agree, affirm, and reaffirm that each and every term, condition, and covenant of the Agreement, shall continue in effect except as specifically modified by this Amendment.

3. **Amendments, Etc.** No amendment, modification, or waiver of any provision of this Amendment, or consent to any departure from the terms of this Amendment by any party hereto shall be effective unless the same shall be in writing and signed by all the parties hereto, and then such waiver or consent shall be effective only in the specific instance and for the specific purpose for which given.

4. **No Waiver; Remedies.** No failure on the part of any party hereto to exercise, and no delay in exercising, any right hereunder shall operate as a waiver thereof, nor shall any single or partial exercise of any right hereunder preclude any other or further exercise thereof or the exercise of any other right. The remedies herein provided, and provided in the Agreement, are cumulative and not exclusive of any remedies provided by law.

5. **Successors and Assigns.** This Amendment shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns.

6. **Severability.** Each provision of this Amendment is intended to be severable and, if any term or provision of this Amendment is determined to be illegal or invalid for any reason whatsoever, such illegality or invalidity shall not affect the validity or legality of the remainder of this Amendment.

7. **Counterparts.** This Amendment may be signed in any number of counterparts, each of which shall be an original and, when taken together, shall constitute one agreement.

IN WITNESS WHEREOF, the parties hereto have caused this Amendment to be executed by a duly authorized officer of each of them as of the date first written above.

CITY OF PORTLAND:

By: _____
Name: Jon P. Jennings
Title: City Manager

CPB2:

By: _____
Name: Casey Prentice
Title: Manager

MAINE DEPARTMENT OF TRANSPORTATION:

By: _____
Name: David Bernhardt
Title: Commissioner

SECOND AMENDMENT TO
EXCHANGE AGREEMENT

THIS SECOND AMENDMENT TO EXCHANGE AGREEMENT (this "Amendment"), dated as of the 3rd day of August, 2018, is made by and between the City of Portland, a body politic and corporate, having an address of 389 Congress Street, Portland, Maine 04101 ("City"), CPB2 I LLC , doing business as CPB2 LLC, a Delaware Limited Liability Company, having a mailing address of Merrill's Wharf, 254 Commercial Street, Suite 118, Portland, Maine 04101 ("CPB2"), and the State of Maine Department of Transportation, an agency of the State of Maine, having a mailing address of 16 State House Station, Augusta, Maine 04333-0016 ("DOT"). All capitalized terms not otherwise defined herein shall have the meaning given them in the Agreement (as such term is defined below).

WHEREAS, the City, CPB2 and DOT entered into a certain Exchange Agreement dated as of June 21, 2017, as amended by a certain First Amendment To Exchange Agreement dated January 2018 (collectively, the "Agreement");

WHEREAS, Section 10 of the Agreement currently provides for closing to occur on or before the earlier of the date that is 30 days after the date that the City receives the last of the Thames Street Extension Approvals or April 1, 2018; and

WHEREAS, the City, CPB2, and DOT desire to affirm the continued effectiveness of the Agreement and to extend further the closing date to December 1, 2018;

NOW THEREFORE, in consideration of the mutual covenants and agreements set forth herein below, and for other good and valuable consideration, the parties hereto agree as follows:

1. **Name and Address Update; Effective Date.** The reference to "CPB2" is hereby amended to replace CPB2 LLC with CPB2 I LLC, doing business as CPB2 LLC, and to update the associated address to Merrill's Wharf, 254 Commercial Street, Suite 118, Portland, Maine 04101. In addition, notwithstanding the date of the Amendment set forth above, the parties hereto agree that the Amendment shall be deemed effective as of March 30, 2018 (the "Effective Date").

2. **Amendment to Agreement.** The first paragraph of Section 10 of the Agreement is hereby amended further to replace "April 1, 2018" with "December 1, 2018."

3. **Ratification.** The parties hereto hereby reaffirm and ratify the continued effectiveness of the Agreement as modified by this Amendment. The parties agree, affirm, and reaffirm that each and every term, condition, and covenant of the Agreement, shall continue in effect except as specifically modified by this Amendment.

4. **Amendments, Etc.** No amendment, modification, or waiver of any provision of this Amendment, or consent to any departure from the terms of this Amendment by any party hereto shall be effective unless the same shall be in writing and signed by all the parties hereto, and then such waiver or consent shall be effective only in the specific instance and for the specific purpose for which given.

5. **No Waiver; Remedies.** No failure on the part of any party hereto to exercise, and no delay in exercising, any right hereunder shall operate as a waiver thereof, nor shall any single or partial exercise of any right hereunder preclude any other or further exercise thereof or the exercise of any other right. The remedies herein provided, and provided in the Agreement, are cumulative and not exclusive of any remedies provided by law.

6. **Successors and Assigns.** This Amendment shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns.

7. **Severability.** Each provision of this Amendment is intended to be severable and, if any term or provision of this Amendment is determined to be illegal or invalid for any reason whatsoever, such illegality or invalidity shall not affect the validity or legality of the remainder of this Amendment.

8. **Counterparts.** This Amendment may be signed in any number of counterparts, each of which shall be an original and, when taken together, shall constitute one agreement.

[END OF DOCUMENTS; SIGNATURES ON NEXT PAGE]

IN WITNESS WHEREOF, the parties hereto have caused this Amendment to be executed by a duly authorized officer of each of them as of the date first written above.

CITY OF PORTLAND

By: _____
Name: Jon P. Jennings
Title: City Manager

APPROVED AS TO FORM:
_____
CORPORATION COUNSEL'S OFFICE

CPB2 I LLC
By: CPB2 Management LLC, Manager

By: _____
Name: Casey W. Prentice
Title: Manager

MAINE DEPARTMENT OF TRANSPORTATION

By: _____
Name: David Bernhardt
Title: Commissioner

THIRD AMENDMENT TO
EXCHANGE AGREEMENT

THIS THIRD AMENDMENT TO EXCHANGE AGREEMENT (this "Amendment"), dated as of the 4th day of ~~February~~ March, 2019, is made by and between the City of Portland, a body politic and corporate, having an address of 389 Congress Street, Portland, Maine 04101 ("City"), CPB2 I LLC, doing business as CPB2 LLC, a Delaware Limited Liability Company, having a mailing address of Merrill's Wharf, 254 Commercial Street, Suite 118, Portland, Maine 04101 ("CPB2"), and the State of Maine Department of Transportation, an agency of the State of Maine, having a mailing address of 16 State House Station, Augusta, Maine 04333-0016 ("DOT"). All capitalized terms not otherwise defined herein shall have the meaning given them in the Agreement (as such term is defined below).

WHEREAS, the City, CPB2 and DOT entered into a certain Exchange Agreement dated as of June 21, 2017, as amended by a certain First Amendment To Exchange Agreement dated January 2018 and by a certain Second Amendment To Exchange Agreement dated as of August 3, 2018 (collectively, the "Agreement");

WHEREAS, Section 10 of the Agreement currently provides for closing to occur on or before the earlier of the date that is 30 days after the date that the City receives the last of the Thames Street Extension Approvals or December 1, 2018; and

WHEREAS, the City, CPB2, and DOT desire to affirm the continued effectiveness of the Agreement and to extend further the closing date to June 4, 2019;

NOW THEREFORE, in consideration of the mutual covenants and agreements set forth herein below, and for other good and valuable consideration, the parties hereto agree as follows:

1. **Effective Date**. Notwithstanding the date of this Amendment set forth above, the parties hereto agree that this Amendment shall be deemed effective as of December 1, 2018.

2. **Amendment to Agreement.** The first paragraph of Section 10 of the Agreement, as previously amended, is hereby deleted in its entirety and replaced by the following: "Time is of the essence in the performance of this Agreement. The closing shall be held at the offices of CPB2's counsel at a time agreeable to the Parties on June 4, 2019, or such later date approved by the Parties. If the City has not received the last of the Thames Street Extension Approvals, as that term is defined below, as of the closing date, then the Parties may, upon the mutual agreement of the Parties, extend further the closing date to a later date agreed to by the Parties. At the closing:"

3. **Ratification.** The parties hereto hereby reaffirm and ratify the continued effectiveness of the Agreement as modified by this Amendment. The parties agree, affirm, and reaffirm that each and every term, condition, and covenant of the Agreement, shall continue in effect except as specifically modified by this Amendment.

4. **Amendments, Etc.** No amendment, modification, or waiver of any provision of this Amendment, or consent to any departure from the terms of this Amendment by any party hereto shall be effective unless the same shall be in writing and signed by all the parties hereto,

and then such waiver or consent shall be effective only in the specific instance and for the specific purpose for which given.

5. **No Waiver; Remedies.** No failure on the part of any party hereto to exercise, and no delay in exercising, any right hereunder shall operate as a waiver thereof, nor shall any single or partial exercise of any right hereunder preclude any other or further exercise thereof or the exercise of any other right. The remedies herein provided, and provided in the Agreement, are cumulative and not exclusive of any remedies provided by law.

6. **Successors and Assigns.** This Amendment shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns.

7. **Severability.** Each provision of this Amendment is intended to be severable and, if any term or provision of this Amendment is determined to be illegal or invalid for any reason whatsoever, such illegality or invalidity shall not affect the validity or legality of the remainder of this Amendment.

8. **Counterparts.** This Amendment may be signed in any number of counterparts, each of which shall be an original and, when taken together, shall constitute one agreement.

[END OF DOCUMENTS; SIGNATURES ON NEXT PAGE]

IN WITNESS WHEREOF, the parties hereto have caused this Amendment to be executed by a duly authorized officer of each of them as of the date first written above.

CITY OF PORTLAND

APPROVED AS TO FORM:
CORPORATION COUNSEL

By:_____
Name: Jon P. Jennings
Title: City Manager

CPB2 I LLC
By: CPB2 Management LLC, Manager

By:_____
Name: Casey W. Prentice
Title: Manager

MAINE DEPARTMENT OF TRANSPORTATION

By:_____
Name: Bruce A. Van Note
Title: Commissioner

IN WITNESS WHEREOF, the parties hereto have caused this Amendment to be executed by a duly authorized officer of each of them as of the date first written above.

CITY OF PORTLAND

By:_____
Name: Jon P. Jennings
Title: City Manager

CPB2 I LLC
By: CPB2 Management LLC, Manager

By:_____
Name: Casey W. Prentice
Title: Manager

MAINE DEPARTMENT OF TRANSPORTATION

By: _____
Name: Bruce A. Van Note
Title: Commissioner

FOURTH AMENDMENT TO EXCHANGE AGREEMENT

THIS FOURTH AMENDMENT TO EXCHANGE AGREEMENT (this "Amendment"), dated as of the 13th day of June, 2019, is made by and between the City of Portland, a body politic and corporate, having an address of 389 Congress Street, Portland, Maine 04101 ("City"), CPB2 I LLC, doing business as CPB2 LLC, a Delaware Limited Liability Company, having a mailing address of Merrill's Wharf, 254 Commercial Street, Suite 118, Portland, Maine 04101 ("CPB2"), and the State of Maine Department of Transportation, an agency of the State of Maine, having a mailing address of 16 State House Station, Augusta, Maine 04333-0016 ("DOT"). All capitalized terms not otherwise defined herein shall have the meaning given them in the Agreement (as such term is defined below).

WHEREAS, the City, CPB2 and DOT entered into a certain Exchange Agreement dated as of June 21, 2017, as amended by a certain First Amendment To Exchange Agreement dated January 2018, by a certain Second Amendment To Exchange Agreement dated as of August 3, 2018 and by a certain Third Amendment To Exchange Agreement dated as of March 4, 2019 (collectively, the "Agreement");

WHEREAS, Section 10 of the Agreement currently provides for closing to occur on June 4, 2019, or such later date approved by the Parties; and

WHEREAS, the City, CPB2, and DOT desire to affirm the continued effectiveness of the Agreement and to extend further the closing date to June 30, 2020;

NOW THEREFORE, in consideration of the mutual covenants and agreements set forth herein below, and for other good and valuable consideration, the parties hereto agree as follows:

1. **Effective Date**. Notwithstanding the date of this Amendment set forth above, the parties hereto agree that this Amendment shall be deemed effective as of June 4, 2019.

2. **Amendment to Agreement**. The first paragraph of Section 10 of the Agreement, as previously amended, is amended further to replace "June 4, 2019" with "June 30, 2020."

3. **Ratification**. The parties hereto hereby reaffirm and ratify the continued effectiveness of the Agreement as modified by this Amendment. The parties agree, affirm, and reaffirm that each and every term, condition, and covenant of the Agreement, shall continue in effect except as specifically modified by this Amendment.

4. **Amendments, Etc**. No amendment, modification, or waiver of any provision of this Amendment, or consent to any departure from the terms of this Amendment by any party hereto shall be effective unless the same shall be in writing and signed by all the parties hereto, and then such waiver or consent shall be effective only in the specific instance and for the specific purpose for which given.

5. **No Waiver; Remedies**. No failure on the part of any party hereto to exercise, and no delay in exercising, any right hereunder shall operate as a waiver thereof, nor shall any

single or partial exercise of any right hereunder preclude any other or further exercise thereof or the exercise of any other right. The remedies herein provided, and provided in the Agreement, are cumulative and not exclusive of any remedies provided by law.

6. **Successors and Assigns.** This Amendment shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns.

7. **Severability.** Each provision of this Amendment is intended to be severable and, if any term or provision of this Amendment is determined to be illegal or invalid for any reason whatsoever, such illegality or invalidity shall not affect the validity or legality of the remainder of this Amendment.

8. **Counterparts.** This Amendment may be signed in any number of counterparts, each of which shall be an original and, when taken together, shall constitute one agreement.

[END OF DOCUMENTS; SIGNATURES ON NEXT PAGE]

IN WITNESS WHEREOF, the parties hereto have caused this Amendment to be executed by a duly authorized officer of each of them as of the date first written above.

CITY OF PORTLAND

By: _____
Name: Jon P. Jennings
Title: City Manager

APPROVED AS TO FORM:
_____
CORPORATION COUNSEL'S OFFICE

CPB2 I LLC
By: CPB2 Management LLC, Manager

By: _____
Name: Casey W. Prentice
Title: Manager

MAINE DEPARTMENT OF TRANSPORTATION

By: _____
Name: Bruce A. Van Note
Title: Commissioner

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

MASTER UTILITY LICENSE

This License, made in duplicate this 2nd day of April, 2019, by and between the **STATE OF MAINE DEPARTMENT OF TRANSPORTATION** (hereinafter called "DEPARTMENT") and **CPB2 1 LLC**, a Delaware Limited Liability Company, with a mailing address of Merrill's Wharf, 254 Commercial Street, Suite 118, Portland, ME 04101 (hereinafter called "LICENSEE").

WITNESSETH:

WHEREAS, LICENSEE herein acknowledges that the term DEPARTMENT, wherever used in this License shall include not only the Maine Department of Transportation, but also any operator licensed by the Department of Transportation to provide rail service over the Berlin Subdivision rail line; and,

WHEREAS, LICENSEE and DEPARTMENT are desirous of entering into a Master Utility License (hereinafter called "License") regarding the construction, installation, maintenance, repair and use of the following underground utilities:

> Transmission and distribution of electrical energy, telecommunications, water, sewer, storm water drain, and diesel and gas fuel lines (hereinafter collectively called "Facilities") under the railroad property and tracks of DEPARTMENT in the City of Portland, Cumberland County, State of Maine;

NOW THEREFORE, for the mutual benefits between the parties, it is hereby understood and agreed as follows:

1. Permit for Facilities

DEPARTMENT agrees that it will permit LICENSEE to construct, install, maintain, repair and use the Facilities at or near railroad milepost 0.35 located under the property and tracks of DEPARTMENT located in the City of Portland, as shown on Attachment A attached hereto and by reference made a part hereof, subject to the terms and conditions hereinafter set out.

2. Specifications

(a) LICENSEE shall, at its sole expense, prior to the installation of any Facilities, submit plans and specifications which shall meet DEPARTMENT'S Standard Specifications (latest edition), as well as the provisions of applicable statutes, orders, rules or regulations of any competent public authority having jurisdiction in the matter.

(b) If, any of DEPARTMENT'S Standard Specifications conflict with any statutes or with any orders, rules, or regulations of any competent public authority having jurisdiction in the matter, then such statutes, orders, rules, or regulations shall prevail, but in all other particulars DEPARTMENT'S Standard Specifications shall govern.

(c) In the event that there is any issue which concerns DEPARTMENT and which is not addressed by the DEPARTMENT'S Standard Specifications or by any statutes, orders, rules, or regulations of any competent public authority having jurisdiction in the matter hereinabove described, the Director of Rail Transportation of Department shall in all such cases have the final decision-making authority as to the acceptability of the installation proposed.

(d) LICENSEE shall, at its sole expense, construct and install, and at all times during the term of this License, maintain Facilities in accordance with the design indicated on the aforesaid plans and specifications.

3. Construction and Maintenance

(a) Should emergency work be necessary, LICENSEE shall make every reasonable effort to notify DEPARTMENT that such work is to be done. In the event of an emergency, contact should be made to the following:

DEPARTMENT:	Director, Rail Transportation (207) 624-3042
LICENSEE:	CPB2 1 LLC (207) 517-1100, ext. 1

(b) LICENSEE, in constructing, installing, maintaining, repairing and using Facilities, shall exercise every reasonable precaution and use all reasonable diligence to avoid interference with the operation of trains, locomotives and maintenance-of-way equipment, or with the use and enjoyment of the property by DEPARTMENT or its independent operators.

(c) LICENSEE shall, except in emergency situations, give not less than ten (10) days written notice to DEPARTMENT of the day and hour it proposes to construct, install, repair, remove or maintain the Facilities. In the event DEPARTMENT considers the time specified in such notice to be unsatisfactory or inconvenient, DEPARTMENT shall, within five (5) days after receipt of such notice, notify LICENSEE to that effect in writing and shall specify a time satisfactory or convenient to DEPARTMENT.

(d) If LICENSEE shall fail to properly maintain Facilities or if Facilities interfere with drainage or other uses of DEPARTMENT**'s** property, then DEPARTMENT may order repairs to the construction at LICENSEE's expense or may (but shall have no obligation to do so) make such repairs to the Facilities of LICENSEE as may be immediately necessary for the safety of trains and property of DEPARTMENT. DEPARTMENT shall promptly notify LICENSEE of the making of such repairs. DEPARTMENT shall not incur any liability as a result of performing such repairs and the provisions of Paragraph 6 shall apply.

(e) LICENSEE agrees to pay to DEPARTMENT the cost of such repairs on or before the fifteenth (15th) day of the month next succeeding that in which a bill therefore is rendered.

4. Use

LICENSEE shall use Facilities solely for purposes of delivery of utilities and services to the adjoining marina currently owned by PF Marina LLC and LICENSEE shall make no change in the Facilities without first obtaining, in writing, the approval of DEPARTMENT. LICENSEE shall be solely responsible for acquiring and complying with federal, state or local permits required for its intended use.

5. Protection of Other Utilities

LICENSEE shall protect power, communication, signal and other utility lines and facilities on, over, or under the property of DEPARTMENT from damage of any kind by or because of the construction, installation, maintenance, repair, relocation, removal or use of said Facilities, and shall construct, install, maintain and use said Facilities in such a manner as will not damage or injuriously affect the use of power, communication, signal or other utility uses of DEPARTMENT or other companies which may have under contract the right to maintain such facilities on the property of DEPARTMENT.

6. Liability and Risk

(a) LICENSEE and DEPARTMENT agree that all cost or expense resulting from any and all loss of life or property, or injury or damage to the person or property of any person, firm or corporation (including the parties hereto and their respective officers, agents and employees), and any and all claims, demands or actions for such loss, injury or damage, caused by or arising out of the presence or use, or the construction, installation, maintenance, repair, relocation or removal of Facilities, shall be borne by LICENSEE. LICENSEE shall also bear the cost of inspections performed by DEPARTMENT to determine whether LICENSEE is in compliance with this License.

(b) LICENSEE assumes all risk of loss or damage to LICENSEE**'s** property, inclusive of free or unused materials, supplies and equipment, however caused, resulting directly or indirectly, by reason of the construction, installation, maintenance, repair, relocation, use, existence or removal of Facilities, and hereby releases DEPARTMENT from any and all liability on account of such loss or damage, whether or not the negligence of DEPARTMENT caused thereto in whole or in part.

7. Insurance

LICENSEE shall at all times carry personal property and equipment insurance sufficient to cover the value of all of LICENSEE'S personal property and equipment on the DEPARTMENT'S property. LICENSEE shall carry commercial general liability insurance coverage in an amount not less than $2,000,000.00 for both personal injury and property damage occurring as a result of

LICENSEE'S activities and presence on, and its use, alteration and occupation of any of the DEPARTMENT"S property. This coverage shall apply to any and all claims or causes of action resulting in death, bodily injury or property damage and shall be applicable to all such claims brought by any person or arising out of any single occurrence or in the aggregate. LICENSEE shall provide proof of the above-described insurances upon request by the DEPARTMENT. Failure to maintain this required insurance coverage shall result in the automatic termination of this License.

8. Changes or Relocation

LICENSEE shall, at its sole expense, within ninety (90) days after receipt of written notice from DEPARTMENT, make such changes in the Facilities, including relocation, as may be required by DEPARTMENT, if such changes or relocation shall, in the judgment of DEPARTMENT, be needed for the better development, or use of the property of DEPARTMENT, or if such changes or relocation shall, in the judgment of DEPARTMENT, be needed to protect its requirements, or contractual obligations, or if such change or relocation is required, directly or indirectly by statute or by any order of any competent public authority having jurisdiction in the matter. Provided, however, that the term "contractual obligation" used in this paragraph shall not be construed as including obligations similar hereto, entered into subsequent to the date of this License.

9. Discontinuance

LICENSEE shall, at its sole expense, upon termination of this License, or upon the abandonment or discontinuance of use of the Facilities, promptly remove its property from the premises of DEPARTMENT and restore such premises disturbed by the construction to a condition satisfactory to DEPARTMENT.

10. Cost of Changes

If LICENSEE fails to change or relocate the Facilities within ninety (90) days after the expiration of notice given as provided in Paragraph 8 hereof, or to remove its property as provided in Paragraph 9 hereof, DEPARTMENT may, without further notice, in case of necessary alteration, and in the case of apparent abandonment, after written notice sent to LICENSEE and the expiration of five (5) days after such notice is sent, remove, change or relocate the Facilities and render bills for the cost of such removal, change or relocation to LICENSEE which bills LICENSEE agrees to pay on or before the fifteenth (15^{th}) of the month next succeeding that in which such bill is rendered.

11. Taxes

LICENSEE shall pay all taxes assessed upon the Facilities, if assessed or on account of the existence or use of the Facilities, and shall indemnify DEPARTMENT against the payment of such taxes.

12. Waiver

It is expressly understood and agreed that any waiver on the part of DEPARTMENT of any term, provision or covenant of this License shall not constitute a precedent, nor bind DEPARTMENT to a waiver of any similar or succeeding breach of same or any other terms, provisions or covenants of this License.

13. Execution Official Act Only

The individuals executing this License on behalf of DEPARTMENT do so only in their official capacity and none of the covenants herein contained are to be held or construed as their individual acts, or acts for which they may be individually liable in any way. In exercising the rights granted hereunder, LICENSEE shall not be deemed to be acting as an officer, agent, or employee of the State of Maine.

14. No Warranty of Title

No warranty of title to any property is given hereunder, and the permission herein given to LICENSEE is subject to all encumbrances, conditions and reservations upon or under which DEPARTMENT holds its property. The rights of LICENSEE are limited solely to the License herein granted and LICENSEE shall not acquire by virtue of this License or otherwise any easement or other greater interest in the property of DEPARTMENT.

15. Fees and Rental

(a) LICENSEE shall pay to DEPARTMENT an administrative fee of One Hundred Dollars ($100.00) for expenses in connection with the preparation and execution of this License. LICENSEE shall further pay to DEPARTMENT a fee of One Hundred Dollars ($100.00) for expenses incurred in connection with the examination of each set of plans and specifications submitted for any *new* Facilities constructed after the date of this License.

(b) LICENSEE shall pay to DEPARTMENT for the privileges herein granted and for inspection expenses the sum of; $25 per annum for water line, $25 per annum for Drainage pipe 12 inches or less in diameter, $50 per annum for Drainage pipe greater than 12 inches in diameter, $50 per annum for manhole or catch basin, $100 per annum for each fiber optic crossing, $50.00 per annum for each electric wire crossing up to 7.2 KV, $75.00 per annum for each electric wire crossing from 7.2 KV up to 34.5 KV, $100.00 per annum for each electric wire crossing from 34.5 KV up to 115 KV, $150.00 per annum for each electric wire crossing from 115 KV up to 345 KV, $50/inch for pipelines carrying flammable substances 12 inches or less in diameter per annum, $75/inch for pipelines carrying flammable substances greater than 12 inches in diameter per annum and $1.00 per foot for longitudinal lines (aerial or underground) per annum. The annual charges are to be payable in advance each year to "Treasurer, State of Maine." on the date of this License and on each anniversary date. The current sites and charges for each underground utility are delineated in Attachment B, attached hereto and by reference made a part hereof.

(c) Department reserves the right to review the rental rate at each five-year (5) anniversary date of this License. Written notice will be provided to Licensee of any rate adjustment at least thirty (30) days before the effective date of the rent increase.

(d) Attachment B shall be updated by the deletion or addition of any Facilities whenever applicable, but shall at all times reflect the locations of all such Facilities in existence, and no Facility shall be deemed valid unless it appears on an amended Attachment B.

16. Notification

All communications and notices required or permitted under this License shall be in writing and shall be deemed sufficiently served if served in hand or by certified mail addressed as follows or such other address as each party may designate in writing from time to time:

TO DEPARTMENT:

State of Maine
Department of Transportation
#16 State House Station
Augusta, Maine 04333-0016

Attention: Director, Rail Program

TO LICENSEE:

CPB2 1 LLC
Merrill's Wharf
254 Commercial Street, Ste 118
Portland, Maine 04101

Primary Contact: Casey W. Prentice @
cwp@portlandforeside.com

17. Subordinate to Railroad Operations

The Utility Crossing rights are expressly subordinate to all rights of the DEPARTMENT, and of the Trust for the Preservation of Maine Industrial History and Technology (the "Narrow Gauge Railroad") pursuant to its lease with the DEPARTMENT, and subject to termination at the DEPARTMENT'S discretion if the DEPARTMENT determines that the Utility Crossing Rights interfere in any way with the safe and efficient operation of any rail service performed thereon. In such instance, the DEPARTMENT will provide the LICENSEE with at least ninety (90) days' prior written notice of termination unless such termination is required because of safety concerns, in which case, the DEPARTMENT reserves the right to terminate the License immediately, or with a notice period shorter than ninety (90) days at the DEPARTMENT'S sole discretion.

18. Termination

Except as provided in Paragraph 17 above and/or in the event of public safety concerns, the LICENSEE agrees that any and all rights conveyed by this License may be terminated and revoked by the DEPARTMENT if the DEPARTMENT in its sole discretion determines: a) that the rail line is needed for transportation purposes; b) that the use of the rail line as permitted by this License impairs or compromises the public safety; or c) that the LICENSEE has breached the terms and conditions of this License. In the event of such termination, unless the termination is associated with a public safety issue, the DEPARTMENT shall give the LICENSEE written notice, which shall provide that the LICENSEE has ninety (90) days to discontinue its use of the rail line and remove any improvement therefrom if so directed by the DEPARTMENT at the LICENSEE'S sole expense. The LICENSEE shall not be entitled to compensation in the event the DEPARTMENT terminates this License for any reason.

19. Successors

This License shall inure to the benefit of and be binding upon the parties hereto, their successors or assigns, provided that LICENSEE shall not transfer, assign or permit the use of the Facilities hereby granted by any person or corporation (other than PF Marina LLC, or its successors or assigns) without the prior consent and agreement, in writing, of the DEPARTMENT.

20. Survival

Any covenants and representations contained herein, and any obligations which by their nature can be or are to be performed after the termination of this License, shall survive such termination.

IN WITNESS WHEREOF, the parties have executed this License on the date first written above.

LICENSOR:

STATE OF MAINE DEPARTMENT
OF TRANSPORTATION

Witness

By: _____
Nathan Moulton, Director
Office of Freight and Business Services

LICENSEE:

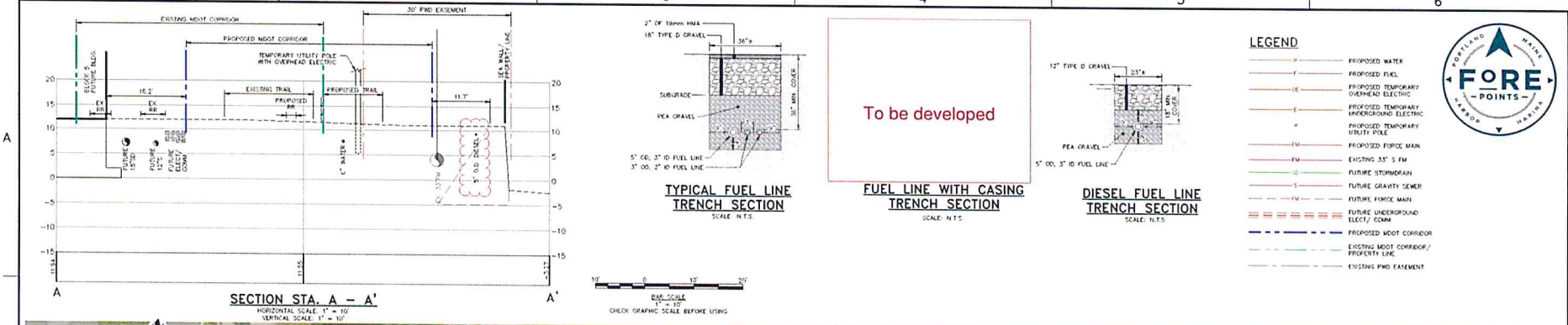
CPB2 1 LLC

Witness

By: _____
Casey W. Prentice
CPB2 Management LLC, Manager

ATTACHMENT A

Facilities Map



SECTION STA. A – A'

HORIZONTAL SCALE: 1" = 10'
VERTICAL SCALE: 1" = 10'

TYPICAL FUEL LINE TRENCH SECTION

SCALE: N.T.S.

To be developed

FUEL LINE WITH CASING TRENCH SECTION

SCALE: N.T.S.

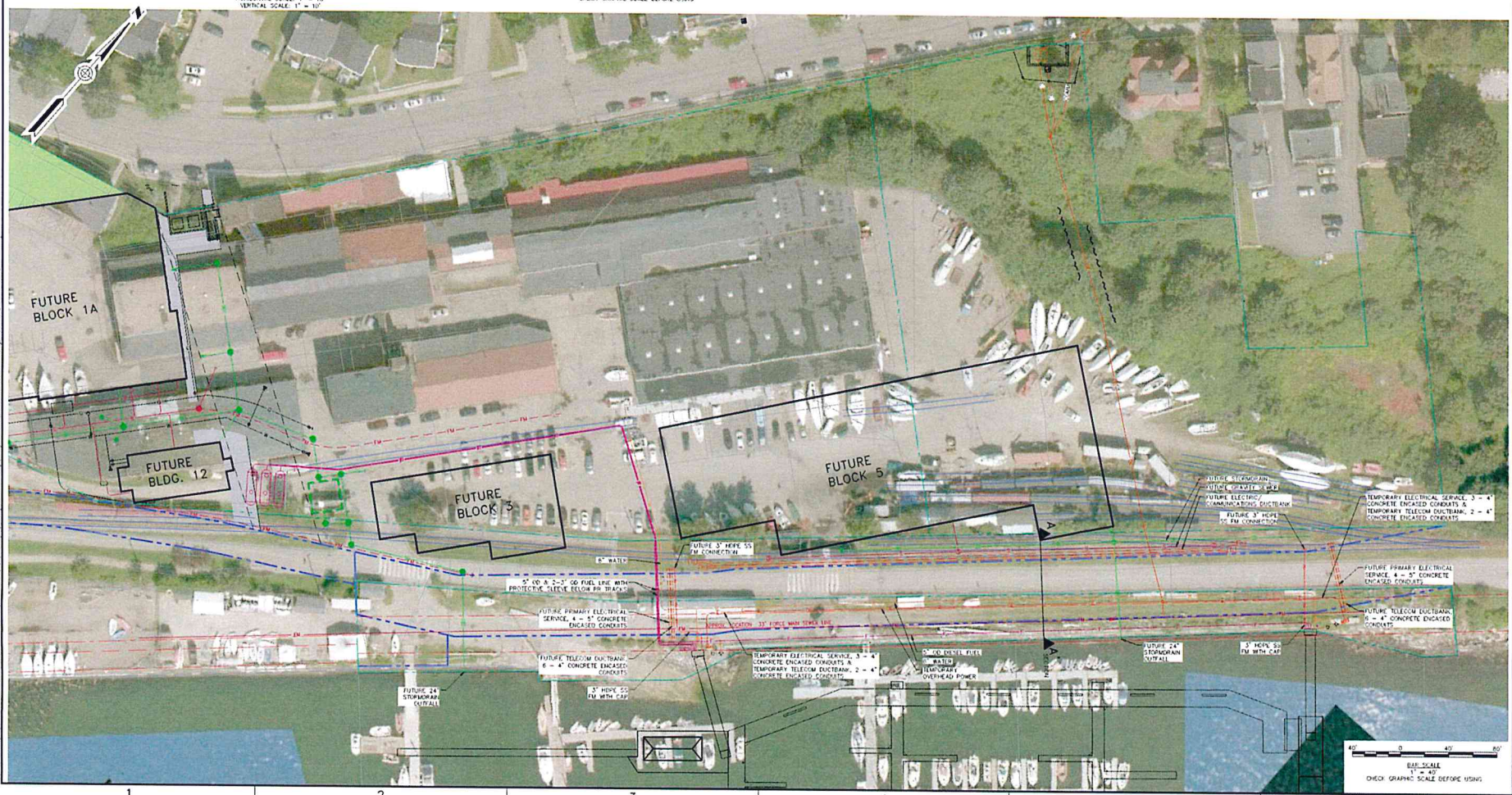
DIESEL FUEL LINE TRENCH SECTION

SCALE: N.T.S.

BAR SCALE
1" = 10'
CHECK GRAPHIC SCALE BEFORE USING

LEGEND

- PROPOSED WATER
- PROPOSED FUEL
- PROPOSED TEMPORARY OVERHEAD ELECTRIC
- PROPOSED TEMPORARY UNDERGROUND ELECTRIC
- PROPOSED TEMPORARY UTILITY POLE
- PROPOSED FORCE MAIN
- EXISTING 33" S FM
- FUTURE STORMDRAIN
- FUTURE GRAVITY SEWER
- FUTURE FORCE MAIN
- FUTURE UNDERGROUND ELECT/ COMM
- PROPOSED MDOT CORRIDOR
- EXISTING MDOT CORRIDOR/ PROPERTY LINE
- EXISTING PRO EASEMENT



BAR SCALE
1" = 40'
CHECK GRAPHIC SCALE BEFORE USING

FORE POINTS

41 Hutchins Drive
Portland, Maine 04102
800.426.4262 | www.woodardcurran.com

COMMITMENT & INTEGRITY DRIVE RESULTS

THIS DOCUMENT IS THE PROPERTY OF WOODARD & CURRAN, INC. AND ITS CLIENT AND IS NOT TO BE USED FOR ANY PURPOSE OR MODIFICATION WITHOUT WRITTEN PERMISSION OF WOODARD & CURRAN, INC.

REV	DESCRIPTION	DATE
1	REVISIONS PER CITY COMMENTS	11/26/18

DESIGNED BY: KJT
DRAWN BY: BCM
CHECKED BY: ECC
CERTIFICATION BLOCK

MARINA UTILITY FIGURE

PF MARINA, LLC
PORTLAND, MAINE

FORE POINTS
MARINA SITE PLAN APPLICATION

JOB NO.: 227007.50
DATE: JANUARY 15, 2019
SCALE: AS NOTED
SHEET: 1 OF 1

FIG. 1

24x36 SHEET

ATTACHMENT B

Underground Utilities

Milepost	Stationing	Railroad Val Plan	Remarks	Annual Fee
.35		V-26, Sheet 24	Underground 24" storm drain pipe (eastern gangway)	$50
.35		V-26, Sheet 24	Underground 24" storm drain pipe (western gangway)	$50
.35		V-26, Sheet 24	Underground 6" water line to run longitudinally within the ROW for 545'.	$545
.35		V-26, Sheet 24	Underground 5" diesel fuel line, double wall pipe (monitored and alarmed); contained within a single protective sleeve under RR tracks	$250
.35		V-26, Sheet 24	Underground 3" Diesel fuel line (monitored and alarmed) contained within 2 single protective sleeves under RR tracks	$150
.35		V-26, Sheet 24	Underground 3" gasoline double wall fuel lines (monitored and alarmed) contained within a single protective sleeve under RR tracks	$150
.35		V-26, Sheet 24	Underground 12.47 KV Primary Electrical Service; four 5" concrete encased conduits located within an electrical duct bank (eastern gangway)	$75
.35		V-26, Sheet 24	Underground 12.47 KV Primary Electrical Service; four 5" concrete encased conduits located within an electrical duct bank (western gangway)	$75
.35		V-26, Sheet 24	Underground Telecom service six 4"concrete encased conduits located within a Telecom duct bank	$100
.35		V-26, Sheet 24	Underground Telecom service six 4" concrete encased conduits located within a Telecom duct bank	$100
.35		V-26, Sheet 24	3" HDPC 55 FM with cap (eastern gangway)	$25
.35		V-26, Sheet 24	3" HDPC 55 FM with cap (western gangway)	$25

TOTAL ANNUAL FEE: $1595

PUBLIC ACCESS EASEMENT

KNOW ALL PERSONS BY THESE PRESENTS, that CPB2 I LLC, a Delaware limited liability company, with a place of business in Portland, Maine and mailing address of Merrill's Wharf, 254 Commercial Street, Suite, 118, Portland, Maine 04101 (the "Grantor"), FOR CONSIDERATION PAID, hereby GRANTS to the CITY OF PORTLAND, a Maine body corporate and politic, with a mailing address of City Hall, 389 Congress Street, Portland, Maine 04101 (the "Grantee" or the "City"), a fifty-foot wide public access easement (the "Access Easement") for the purpose described below, across a portion of Grantor's property in Portland, Maine, running from Fore Street to the southerly boundary of Grantor's property, in the general location depicted on the drawing attached hereto as Exhibit A and made a part hereof (the "Easement Area"), subject to the terms set forth below. The precise location of the Easement Area shall be flexible prior to final design and construction of permanent improvements to the Easement Area. When the final design of the Easement Area has been completed and prior to construction of said improvements, the Easement Area shall be more particularly described by metes and bounds in an Addendum to this Access Easement, signed by both Parties and recorded in the Cumberland County Registry of Deeds.

The purpose of the Access Easement granted herein is to provide physical and visual public access to the waterfront for pedestrians within the Easement Area, which access shall include an ADA compliant access way for pedestrians, including but not limited to wheelchair access on the southern end of the Easement Area. Additional accommodations may be provided if and as required by applicable state or federal law, including the ADA.

The Easement Area shall be subject to such rules or ordinances that Grantee may adopt from time to time in the interests of public safety. Wheelchairs and emergency vehicles as well as snow removal equipment shall be permitted in accordance with applicable federal and/or state laws regulating accessibility for such devices, vehicles or equipment. Maintenance, repair and snow removal responsibilities within the Easement Area shall belong solely to Grantor, its successors and assigns; however, Grantee shall have the right, but not the obligation, to maintain or repair the Easement Area, or to remove snow therefrom, when Grantee, in its sole discretion, deems such maintenance, repair or snow removal necessary to ensure public safety and Grantor has failed to perform the same within a reasonable time after notice from Grantee.

Grantor agrees not to use or permit any use, condition or state of disrepair that would be contrary to or otherwise unreasonably interfere with the use of the Easement Area by pedestrians in the manner contemplated herein. Provided, however, Grantor may temporarily close all or a portion of the Easement Area during construction, maintenance or repair activities if required to safeguard public safety. Grantor shall promptly correct any condition and complete any maintenance or construction activities necessitating such closure in order to minimize the duration of the closure or restriction of public access to the Easement Area. Any closures that prevent public access from Fore Street through to the waterfront shall be pursuant to and in accordance with an Access Easement Closure plan filed with and approved in advance by the City of Portland's Planning Authority.

Nothing herein contained shall be deemed to be a gift or dedication of the fee interest in the Easement Area or any portion thereof to Grantee or to the general public.

The Easement Area is and shall remain private property, and Grantor hereby expressly reserves and retains for itself and for any subsequent owner of the Easement Area, all rights of ownership to the extent the exercise thereof does not unreasonably limit or unreasonably interfere with the use of the Easement Area by pedestrians; such rights include, without limitation, (i) the right to adopt reasonable rules and regulations governing the use of the Easement Area, (ii) the right to use, or to grant to others the right to use, the surface and subsurface of and air space above the Easement Area for any use or purpose (including, without limitation, the right to install, inspect, operate, maintain, repair, replace and remove electric lines, gas lines, underground fuel tanks, telecommunication lines (such as telephone, cable and internet lines), water lines, storm sewers, sanitary sewers, catch basins, manholes, clean-outs, curbing, driveways, surface parking areas, sidewalks, landscaping, benches, information kiosks, light pole bases, lighting fixtures, retaining walls, monument signs, fountains, statues, art pieces and the like, and (iii) the right to make changes, alterations and/or improvements to the Easement Area from time to time.

This easement is given for recreational use and the Grantor and Grantee claim the rights and protections against liability in accordance with Title 14 MRS §159-A to the maximum extent permitted by law.

TO HAVE AND TO HOLD the aforegranted and bargained public access easement, with all privileges and appurtenances thereof, to the Grantee, its successors and assigns, to its and their use and behoof, forever.

IN WITNESS WHEREOF, the Grantor has caused this instrument to be executed by Casey Prentice, its Manager thereunto duly authorized, this 27 day of March, 2019.

CPB2 I LLC
By: CPB2 Management LLC, Manager

By: _____
Name: Casey Prentice
Title: Manager

STATE OF MAINE
CUMBERLAND, ss

March 27, 2019

Personally appeared the above-named Casey Prentice, for CPB2 I LLC as aforesaid, and acknowledged the foregoing instrument to be his/her free act and deed in his/her said capacity and the free act and deed of said limited liability company.

Before me,
Janet L. Davis
Notary Public/Attorney at Law

Print name: Janet L. Davis SEAL
My commission expires: 01-18-2021

JANET L. DAVIS
NOTARY PUBLIC
State of Maine
My Commission Expires
January 18, 2021

GRANTEE ACCEPTANCE:

The City of Portland does hereby accept the foregoing Public Access Easement, by and through City Manager Jon Jennings.

CITY OF PORTLAND

By: Jon Jennings
Its: City Manager

STATE OF MAINE
CUMBERLAND, ss

March 28th, 2019

Personally appeared the above-named Jon Jennings, for the City of Portland as aforesaid, and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of said City of Portland.

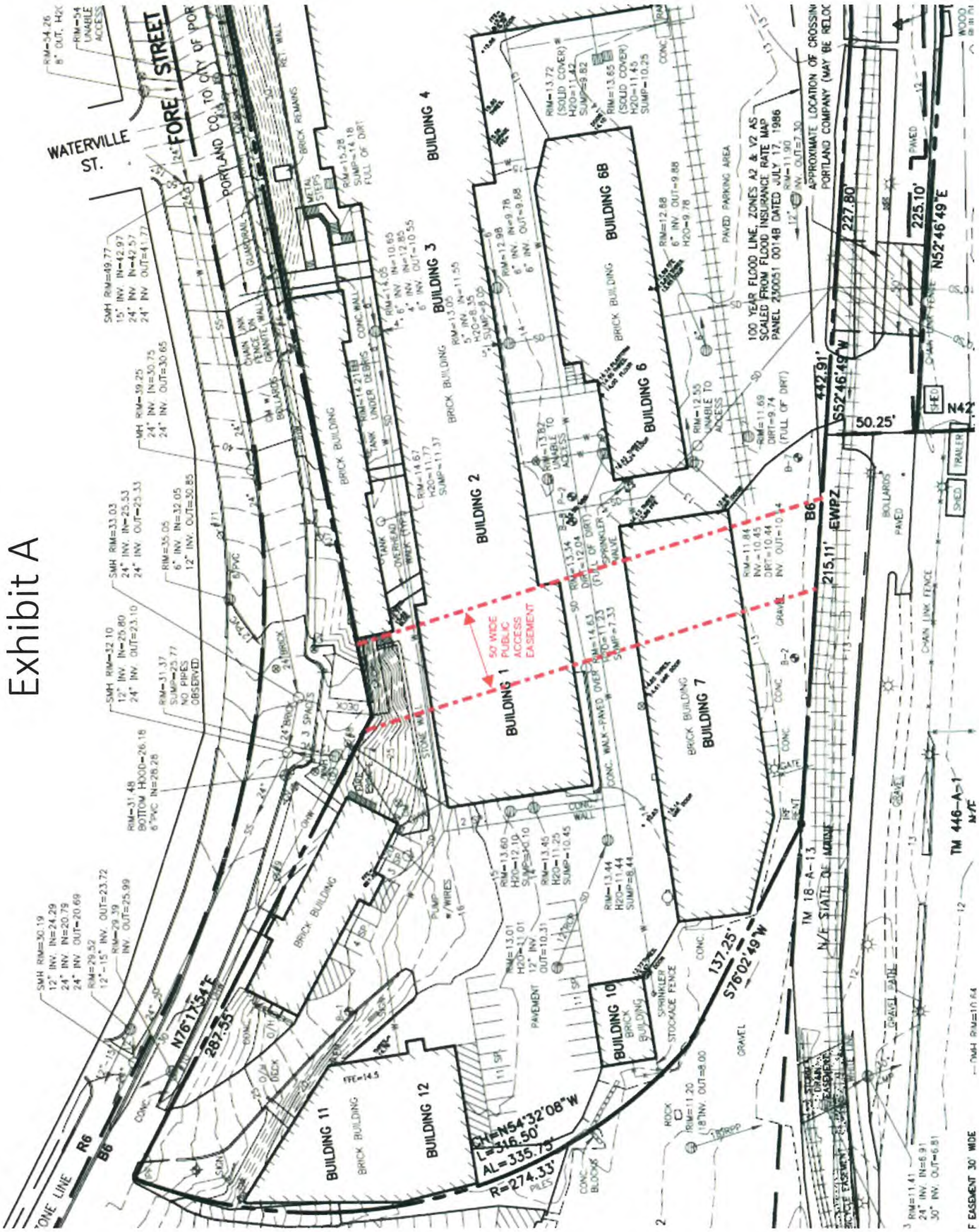
Before me,

Notary Public/Attorney at Law

Print name: Deivy Periana
My commission expires: April 9, 2021

DEIVY PERIANA
NOTARY PUBLIC
CUMBERLAND COUNTY
MAINE
MY COMMISSION EXPIRES APRIL 9, 2021

Exhibit A



Received
Recorded Register of Deeds
Apr 05,2019 03:47:04P
Cumberland County
Nancy A. Lane

3. FINANCIAL CAPACITY

3.1 FINANCING

A copy of a letter verifying the Applicant's financial capacity to undertake the project is attached to this Section.

3.2 CERTIFICATE OF GOOD STANDING

A copy of the Secretary of State's Certificate of Good Standing for Portland Foreside Management Company, LLC (the Applicant) is attached to this Section.

3.3 LIST OF ATTACHMENTS

- Financial Capacity Letter; and
- Certificate of Good Standing.

ACKMAN | ZIFF

REAL ESTATE CAPITAL ADVISORS

October 2, 2019

Ms. Christine Grimando,
AICP Planning Director
Planning & Urban Development
Department 389 Congress Street 4th
Floor
Portland, ME 04101

Re: 58 Fore Street Phase I Development - Financial Capacity to Serve

Dear Ms. Grimando,

It's my pleasure to provide this memorandum confirming Ackman-Ziff's ("AZ") relationship with Portland Foreside Development Company (PFDC) and its managing partners Casey Prentice and Kevin Costello. We believe that the management team possess the relevant knowledge and experience to design, coordinate and construct a multi-phased development plan – Phase 1 being Block 1A, building 12, Block 2 and Block 4 as described by the approved Master Development Plan. The managing partners have proven their development expertise with numerous successful Portland projects.

The management team possesses relationships with capital partners, banks, and financial institutions demonstrating the financial capacity necessary to obtain project financing for Phase 1. In our role as financial intermediary for the project, AZ will work with PFDC to arrange the appropriate capitalization for each phase of the development.

Ackman-Ziff Real Estate Group is the industry's preeminent boutique real estate capital advisory firm. In business for over 90 years, the privately held company offers a wide variety of cutting-edge commercial real estate capital markets solutions, including debt and mezzanine financing, preferred and joint venture equity, sponsor equity, and investment sales.

AZ looks forward to working with PFDC on the financing aspects of the project as it moves forward from the Master Development Plan submission to phased vertical developments.

AZ's unique knowledge, broad capital markets relationships and national platform enable the firm to be in the position to arrange financing for a wide range of commercial real estate projects and we're proud of our history of performance spanning more than 90 years.

Thank you and best regards,

Jason Krane
Principal

MAINE
Department of the Secretary of State
Bureau of Corporations, Elections and Commissions

Corporate Name Search

Information Summary

Subscriber activity report

This record contains information from the CEC database and is accurate as of: Wed Oct 02 2019 11:14:12. Please print or save for your records.

Legal Name	Charter Number	Filing Type	Status
PORTLAND FORESIDE MANAGEMENT COMPANY LLC	20175674DC	LIMITED LIABILITY COMPANY (DOMESTIC)	GOOD STANDING

Filing Date	Expiration Date	Jurisdiction
05/15/2017	N/A	MAINE

Other Names **(A=Assumed ; F=Former)**

NONE

Clerk/Registered Agent

HELEN STERLING COBURN, ESQ.
BERNSTEIN SHUR
PO BOX 9729
PORTLAND, ME 04104 5029

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4. TECHNICAL ABILITY

On behalf of the Applicant, Woodard & Curran is preparing this application for the proposed development. Woodard & Curran has extensive experience with design for site development projects and specifically on the peninsula within the City of Portland. Woodard & Curran, a 1,000-person Portland-based firm, has provided engineering services to the public and private sector for over 40 years, including permitting, civil/site engineering, stormwater and construction management services. The project is also supported by a design team including Perkins+Will and Bruner/Cott for architecture and Michael Boucher Landscape Architecture (MBLA) for landscape architecture.

Perkins+Will architects is a firm consisting of twenty-four domestic and international offices with a depth of technical and management skill employed to execute projects of great complexity. Perkins+Will maintains a full-time QA/QC leader in each office to provide ongoing quality assurance for projects. These experts are guided by a national project delivery system that has resulted from the best practices from around the firm.

Bruner/Cott is a 35-person historic preservation architecture firm located in Boston, Massachusetts. Their leadership team brings a broad, integrated perspective to design, giving depth to each of their practice areas. Bruner/Cott's work has been recognized for award-winning design from preservation to adaptive reuse and new construction, with a focus on educational and cultural institutions. Bruner/Cott partners with private developers for residential and commercial buildings. Bruner/Cott is known for creativity in inventing new solutions to complex programs and as design leaders for historic renewal and contemporary design in the context of urban revitalization and institutional re-invention.

MBLA is a professional design firm located in Freeport, Maine. MBLA practices nationally and internationally, and over the past twenty-five years, the office has collaborated on diverse and notable projects, located in a wide range of settings and climates and across the state of Maine. MBLA projects range in scale and complexity including plazas, courtyards, university building projects, private school facilities, master plans, museums, churches, resorts, parks, and residential landscape projects. Many of MBLA's design projects have focused on creating places for people to gather while addressing issues of circulation, security, and programming.

Copies of resumes can be provided upon request.

5. NOISE

The noise impact from the proposed development will be minor. The primary source of noise from the proposed project will be the result of construction. Construction activities will be limited to the hours permitting by the City. HVAC and primary mechanical equipment will be located and screened to mitigate noise impacts. Noise associated with the proposed development will not exceed regulated levels and is not anticipated to negatively impact surrounding development in its urban setting.

6. VISUAL QUALITY & SCENIC CHARACTER

As further described in the City of Portland Site Plan Application for the proposed development, the architecture and landscaping have been designed to be consistent with the scenic and historic character of the surrounding urban waterfront area. The Site Plan Application includes renderings showing how view corridors will be preserved. A Certificate of Appropriateness will also be obtained from the City of Portland Historic Preservation Board. It is not anticipated that the proposed development will result in any negative visual impacts.

7. WILDLIFE & FISHERIES

The Site has been previously developed and there are no known areas of significant natural features, including areas of significant wildlife habitats or wetlands. The attached Official Species List identifies the northern long-eared bat, which has been listed as a Federally Threatened Species, in association with the project area; however, there are no critical habitat areas located within the project area. Based on US Fish & Wildlife information, the northern long-eared bat typically lives in caves during the winter months and in trees larger than three inches in diameter during the summer, with migration between these two habitats in the spring in the fall. Tree-clearing for this project will be minimal.

A letter has been sent to the Maine Department of Inland Fisheries and Wildlife (MDIFW) requesting information regarding any known threatened or endangered species or critical habitat relative to the project area; a copy of this letter is attached to this Section for your reference. A copy of the MDIFW response can be provided upon receipt. It is not anticipated that the proposed development will have a negative impact on the northern long-eared bat.

7.1 LIST OF ATTACHMENTS

- Official Species List; and
- MDIFW Environmental Review Request Letter.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Maine Ecological Services Field Office
P. O. Box A
East Orland, ME 04431
Phone: (207) 469-7300 Fax: (207) 902-1588
http://www.fws.gov/mainefieldoffice/index.html

In Reply Refer To:
Consultation Code: 05E1ME00-2019-SLI-1102
Event Code: 05E1ME00-2019-E-02986
Project Name: Portland Foreside Development

August 29, 2019

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies the threatened, endangered, candidate, and proposed species and designated or proposed critical habitat that may occur within the boundary of your proposed project or may be affected by your proposed project. This species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC Web site at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the Endangered Species Consultation Handbook at: http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

This species list also identifies candidate species under review for listing and those species that the Service considers species of concern. Candidate species have no protection under the Act but are included for consideration because they could be listed prior to completion of your project. Species of concern are those taxa whose conservation status is of concern to the Service (i.e., species previously known as Category 2 candidates), but for which further information is needed.

If a proposed project may affect only candidate species or species of concern, you are not required to prepare a Biological Assessment or biological evaluation or to consult with the Service. However, the Service recommends minimizing effects to these species to prevent future conflicts. Therefore, if early evaluation indicates that a project will affect a candidate species or species of concern, you may wish to request technical assistance from this office to identify appropriate minimization measures.

Please be aware that bald and golden eagles are not protected under the Endangered Species Act but are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.). Projects affecting these species may require development of an eagle conservation plan: http://www.fws.gov/windenergy/eagle_guidance.html Information on the location of bald eagle nests in Maine can be found on the Maine Field Office Web site: http://www.fws.gov/mainefieldoffice/Project%20review4.html

Additionally, wind energy projects should follow the wind energy guidelines: http://www.fws.gov/windenergy/ for minimizing impacts to migratory birds and bats. Projects may require development of an avian and bat protection plan.

Migratory birds are also a Service trust resource. Under the Migratory Bird Treaty Act, construction activities in grassland, wetland, stream, woodland, and other habitats that would result in the take of migratory birds, eggs, young, or active nests should be avoided. Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g.,

cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm and at: http://www.towerkill.com; and at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Maine Ecological Services Field Office
P. O. Box A
East Orland, ME 04431
(207) 469-7300

Project Summary

Consultation Code: 05E1ME00-2019-SLI-1102

Event Code: 05E1ME00-2019-E-02986

Project Name: Portland Foreside Development

Project Type: DEVELOPMENT

Project Description: 58 Fore Street

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/43.66255329831206N70.24375990552419W



Counties: Cumberland, ME

Endangered Species Act Species

There is a total of 1 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

8. HISTORIC SITES

A letter has been sent to the Maine Historic Preservation Commission (MHPC) requesting a review of the project area relative to historic properties; a copy of this letter is attached to this Section for your reference. A copy of the MHPC response can be provided upon receipt. Portions of the site are also being reviewed by the City of Portland's Historic Preservation Board. A Certificate of Appropriateness has been received for Building 12, and the review process is underway for the Block 2 historic core of buildings and will soon be started for Buildings 1A and 4.

8.1 LIST OF ATTACHMENTS

- MHPC Project Review Request Letter.

9. UNUSUAL NATURAL AREAS

The Site has been previously developed and there are no known unusual natural areas. A letter has been sent to the Maine Natural Areas Program (MNAP) requesting a review of the Site relative to rare and exemplary botanical features; a copy of this letter is attached to this Section for your reference. A copy of the MNAP response can be provided upon receipt.

9.1 LIST OF ATTACHMENTS

- MNAP Site Review Request Letter.

10. BUFFERS

The Site has been previously developed. There are no existing or proposed buffers. This Section is not applicable.

11. SOILS

Copies of the United States Department of Agriculture Natural Resources Conservation Service Web Soil Survey and the Geotechnical Report prepared for the Site are attached to this Section for your reference. Environmental assessments of the Site have been conducted and the Owner is a participant in the Maine Department of Environmental Protection Voluntary Response Action Program (VRAP). A soil management plan will be developed for the site.

11.1 LIST OF ATTACHMENTS

- United States Department of Agriculture Natural Resources Conservation Service Web Soil Survey

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Cumberland County and Part of Oxford County, Maine

58 Fore Street



August 29, 2019

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

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Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



Map Scale: 1:2,910 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 40 80 160 240

Feet: 0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Cumberland County and Part of Oxford County, Maine
Survey Area Data: Version 15, Sep 6, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Data not available.

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Cu	Cut and fill land	11.1	91.9%
HIB	Hinckley loamy sand, 3 to 8 percent slopes	0.1	0.5%
HID	Hinckley loamy sand, 15 to 25 percent slopes	0.4	3.5%
W	Water	0.5	4.0%
Totals for Area of Interest		**12.0**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or

landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Cumberland County and Part of Oxford County, Maine

Cu—Cut and fill land

Map Unit Composition

Cut and fill land: 90 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cut And Fill Land

Typical profile

H1 - 0 to 65 inches: very gravelly sandy loam

Properties and qualities

Slope: 0 to 35 percent

Natural drainage class: Moderately well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to very high (0.06 to 20.00 in/hr)

Depth to water table: About 24 to 42 inches

Available water storage in profile: Moderate (about 6.6 inches)

HIB—Hinckley loamy sand, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2svm8

Elevation: 0 to 1,430 feet

Mean annual precipitation: 36 to 53 inches

Mean annual air temperature: 39 to 55 degrees F

Frost-free period: 140 to 240 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Hinckley and similar soils: 85 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hinckley

Setting

Landform: Kame terraces, kames, outwash terraces, outwash deltas, outwash plains, eskers, moraines

Landform position (two-dimensional): Summit, backslope, footslope, shoulder

Landform position (three-dimensional): Nose slope, side slope, base slope, crest, tread, riser

Down-slope shape: Linear, convex, concave

Across-slope shape: Convex, linear, concave

Parent material: Sandy and gravelly glaciofluvial deposits derived from gneiss and/or granite and/or schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material

A - 1 to 8 inches: loamy sand

Bw1 - 8 to 11 inches: gravelly loamy sand

Bw2 - 11 to 16 inches: gravelly loamy sand
BC - 16 to 19 inches: very gravelly loamy sand
C - 19 to 65 inches: very gravelly sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water storage in profile: Very low (about 3.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: A
Hydric soil rating: No

HID—Hinckley loamy sand, 15 to 25 percent slopes

Map Unit Setting

National map unit symbol: 2svmc
Elevation: 0 to 1,460 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Hinckley and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hinckley

Setting

Landform: Outwash plains, eskers, moraines, outwash terraces, outwash deltas, kame terraces, kames
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope, crest, head slope, nose slope, riser
Down-slope shape: Convex, linear, concave
Across-slope shape: Linear, convex, concave
Parent material: Sandy and gravelly glaciofluvial deposits derived from gneiss and/or granite and/or schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material

A - 1 to 8 inches: loamy sand
Bw1 - 8 to 11 inches: gravelly loamy sand
Bw2 - 11 to 16 inches: gravelly loamy sand
BC - 16 to 19 inches: very gravelly loamy sand
C - 19 to 65 inches: very gravelly sand

Properties and qualities

Slope: 15 to 25 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Excessively drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water storage in profile: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: A
Hydric soil rating: No

W—Water

Map Unit Composition

Water: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Water

Setting

Landform: Lakes

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12. STORMWATER MANAGEMENT

The attached Stormwater Management Plan describes the proposed stormwater management measures for the project, as shown on the design drawings attached to Section 1 of this Report. A USGS map and a soils map are attached to Section 1 and Section 11 of this Report, respectively.

12.1 LIST OF ATTACHMENTS

- Stormwater Management Plan (Bound Separately)

13. URBAN IMPAIRED STREAM

The proposed development is not located within the watershed of an Urban Impaired Stream; the Urban Impaired Stream Standard does not apply.

14. BASIC STANDARD

The proposed development is adjacent to the Fore River; there are no other known protected resources associated with the Site. As shown by the soil survey attached to Section 11 of this Report, the Site is comprised primarily of urban fill. The Soil Erosion and Sediment Control Plan and compliance with the Basic Standard is described in the Stormwater Management provided as part of Section 12 of this Report.

During construction, the Contractor will be responsible for conducting inspections in accordance with the attached *Stormwater Erosion & Sediment Control Inspection Report Form* (or equivalent). Inspections shall be performed at least once a week, as well as before and after storm events. A person with knowledge of stormwater management and erosion and sediment control, including the standards and conditions of the permit approvals, shall conduct the inspections and perform maintenance of the facilities. If maintenance or modifications are necessary, implementation will be completed within seven days and prior to any rainfall event. After construction, the Owner will be responsible for inspecting and maintaining the Site's stormwater system.

14.1 LIST OF ATTACHMENTS

- Erosion & Sediment Control Inspection Report Form.

EROSION & SEDIMENT CONTROL
INSPECTION REPORT FORM

Inspectors: Date: ___ / ___ / _____

_____ of _____ (Project Owner)
_____ of _____ (Contractor)
_____ of _____
_____ of _____

Storm Event? ☐ Yes ☐ No Rainfall Amount _____ Storm Duration _____ hours

Visual Observations of Activity and Site Conditions:

Disturbed Soil Areas:

Storage Of Soils:

Sediment & Erosion Control Measures:

Construction Site Entrance:

Surface Stabilization:

Corrective Action Taken:

Attachments (if any):

Signature:

Name Title Date

15. GROUNDWATER

The proposed development is not located within a Significant Sand and Gravel Aquifer; as previously noted, the Site is comprised primarily of urban fill. Environmental assessments of the Site have been conducted and the Owner is a participant in the Maine Department of Environmental Protection Voluntary Response Action Program (VRAP). The proposed development will not infiltrate to or extract groundwater and is not anticipated to produce any hazardous waste. It is not anticipated that the proposed development will result in any impacts to groundwater.

16. WATER SUPPLY

The proposed development will be provided with both fire protection water service and domestic water service as shown on the drawings via a private water system that will connect to the public water main on Fore Street. Woodard & Curran has been working directly with the Portland Water District to determine the appropriate design for this work. An ability to serve determination will be provided upon receipt.

17. WASTEWATER DISPOSAL

The proposed development will be provided with sanitary sewer service as shown on the drawings. The private system on the site will include a combination of gravity sewer and forcemain with a pump station that will discharge to the sewer on the Thames Street Extension. The existing sewer service on Fore Street will be abandoned. The proposed development will include restaurants, kitchens, and parking garages; grease traps and oil/water separators will be provided as shown on the drawings. The attached letter is provided to request confirmation of ability to serve the proposed development; the Wastewater Capacity Application was submitted with this letter. A copy of the City's determination will be provided upon receipt.

17.1 LIST OF ATTACHMENTS

- Portland Department of Public Works Request for Ability to Serve Letter.

18. SOLID WASTE

18.1 SOLID WASTE

All solid waste materials and recyclables from the proposed development will be transported and disposed of or recycled in accordance with applicable laws and regulations.

18.2 CONSTRUCTION & DEMOLITION DEBRIS

The proposed development will generate construction waste and demolition debris (CDD). The Contractor will be responsible for properly disposing of the CDD. The Contractor will be responsible for handling, managing, and disposing of all waste generated by construction in accordance with the Maine Solid Waste Management Regulations and all other applicable local, state, and federal regulations.

18.3 SPECIAL & HAZARDOUS WASTE

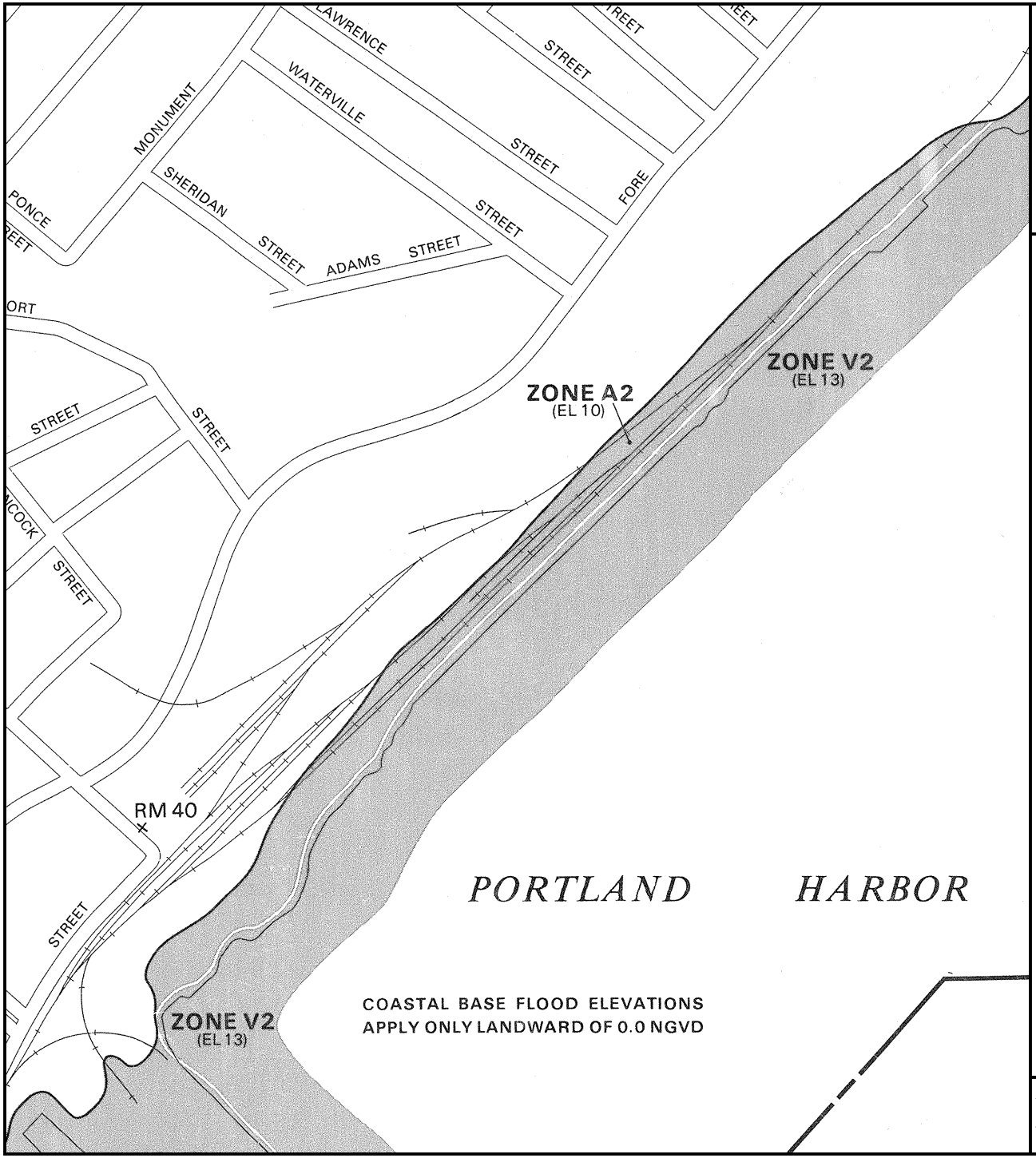
The proposed development is not anticipated to produce any hazardous waste. Environmental assessments of the Site have been conducted and the Owner is a participant in the Maine Department of Environmental Protection Voluntary Response Action Program (VRAP). A soil management plan will be developed for the site to address management of "urban fill" special waste anticipated to be encountered during the construction process.

19. FLOODING

The proposed development is partially located within a flood hazard zone, as shown on the FEMA Flood Insurance Rate Map attached to this Section. An application for a Flood Hazard Development Permit is being submitted to the City of Portland. The proposed development will not cause or increase flooding or cause an unreasonable flood hazard to any adjacent structures. The flood zones are located along the southern portions of the proposed development, as shown on the drawings.

19.1 LIST OF ATTACHMENTS

- FEMA Flood Insurance Rate Map.



NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

CITY OF
PORTLAND, MAINE
CUMBERLAND COUNTY

PANEL 14 OF 17
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
230051 0014 B

EFFECTIVE DATE:
JULY 17, 1986

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

20. BLASTING

Haley & Aldrich, the geotechnical engineer for the project has confirmed that based on investigations completed to date, no blasting is anticipated for this project.

21. AIR EMISSIONS

The project will not require an air emissions license; this Section is not applicable.

22. ODORS

The proposed development will not involve any processes that emit significant odors; this Section is not applicable.

23. WATER VAPOR

The proposed development will not use water for any processes that would emit water vapor; this Section is not applicable.

24. SUNLIGHT

The proposed development will not block access to sunlight for any structures utilizing solar energy; this Section is not applicable.

25. NOTICES

The City of Portland has Delegated Review Authority for this application; as such, it is our understanding that the public notice requirements associated with MaineDEP Site Law do not apply.

WOODARD &CURRAN

woodardcurran.com

COMMITMENT & INTEGRITY DRIVE RESULTS

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November 8, 2019

James Rather
City of Portland Development Review Services Manager
389 Congress Street
Portland, ME 04101

Re: Portland Foreside Development Co. – Phase 1 | 58 Fore Street
Level III Site Plan Application
Subdivision Application
Site Location of Development Application

Dear James:

On behalf of Portland Foreside Development Co, Woodard & Curran is pleased to submit Phase 1 of the Portland Foreside Development project located at 58 Fore Street in Portland, Maine for review of a Level III Site Plan Application, a Subdivision Application, and a Site Location of Development Application.

The proposed development is the first phase of the 58 Fore Street Master Development Plan, unanimously approved by the Portland Planning Board (Project ID: 2016-224) on December 22, 2016, to redevelop and revitalize the 10-acre former Portland Company Complex into a mixed-use development. The Master Development Plan consists of six development "blocks" consisting of new buildings, renovated historic buildings, open space plazas, public access easements, view corridors to the waterfront, and a private roadway that provides shared access for both vehicular and pedestrian traffic through the Site. Phase 1 of the development includes the following:

- Block 1
  - Parcel 1A – Construction of a Class A office building with ground floor retail and a single parking deck.
  - Parcel 1C – Reconstruction of Building 12 which was meticulously catalogued and disassembled with approval from Historic Preservation Board and will be rebuilt in the more prominent location detailed in the site plan with uses that include a fine dining restaurant, office space, and two residential units.
- Block 2
  - Parcels 2A, 2B, and 2C – Renovation of the site's historic core buildings (Building 2, Building 3) into a local food market, restaurant, office space, and event spaces.
- Block 4
  - Parcel 4 – Construction of 5 levels of a parking garage with residential units and retail.
- Infrastructure
  - Remaining Land By Developer – Construction of a shared street, public plazas, and subsurface utilities to support the development.
  - Adjacent City of Portland Maine DOT and City of Portland Properties – Adjustment of the Maine Narrow Gauge Railroad and the Eastern Promenade Trail to a location closer to the water.
- Interim Conditions
  - Block 1 – Regrading and loam and seed on Parcel 1B.

- Block 3 – Minor surface improvements, grading, and utility work in Parcel 3 to provide temporary access to the adjacent Fore Points Marina.
- Blocks 5 and 6 – Minor surface improvements, grading, and utility work within Parcel 5 to enable the surrounding work. No development is proposed in association with these blocks.

The Site Plan and Subdivision Application documents were prepared in accordance with the City of Portland's Chapter 14, Land Use Code of Ordinances and meet the applicable sections of the City of Portland Design and Technical Manuals. The Site Location of Development Application has been prepared in accordance with Maine Department of Environmental Protection Chapter 500 regulations, and it is our understanding that the City will be reviewing under their Delegated Review Authority. The Application reports, attachments and design drawings will be uploaded into the Eplan folder when it is available for the project. If there are any questions on the uploaded materials, please don't hesitate to let me know. Thank you for coordinating the review of this project. If you have any questions regarding this application, please feel free to contact me at (207) 558-3763 or by email at lswett@woodardcurran.com.

Sincerely,

WOODARD & CURRAN INC.

Lauren Swett, PE
Technical Manager

Denise Cameron, PE
Project Manager

cc: David Senus, PE, Portland Foreside Development Co.
Mary McCrann, AICP, Portland Foreside Development Co.

Attachment P.

STORMWATER MANAGEMENT PLAN

58 Fore Street
Phase 1

41 Hutchins Drive
Portland, ME 04102
800-426-4262

woodardcurran.com
COMMITMENT & INTEGRITY DRIVE RESULTS

0227007.16
Portland Foreside Development Co.
November 2019

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APPENDICES

Appendix A: Stormwater Inspection & Maintenance Plan
Appendix B: Stormwater Quality Calculations
Appendix C: HydroCAD Report
Appendix D: Figures

1. STORMWATER MANAGEMENT PLAN

This Stormwater Management Plan (SWMP) describes existing site conditions, the proposed development, compliance with applicable stormwater standards, and inspection and maintenance requirements for the proposed stormwater system associated with Phase 1 of the Portland Foreside Development located at 58 Fore Street in Portland, Maine.

1.1 Existing Conditions

The project site is a portion of an approximately 10-acre property adjacent to the Fore River. The property was previously developed as the Portland Company Complex, which contained various industrial uses. Many of the existing buildings located within the project area have previously been demolished. Current conditions consist primarily of impervious paved and gravel areas, with some areas of sparse vegetation.

The project site is bordered by Fore Street to the north, the Fore Connector Road to the west, the Maine Narrow Gauge Railroad to the south, and the remainder of the existing Portland Company Complex to the east. Runoff from the Site drains via sheet flow in a southerly direction to a series of catch basins that ultimately discharge to the Fore River. A portion of the Site is located within the FEMA Flood Zone.

1.2 Proposed Development

The proposed development will result in approximately 8-acres of disturbance and approximately 6.7-acres of impervious area. Proposed work includes the following:

- Construction of an office building with retail wrap and a single parking deck.
- Relocation and reconstruction of historic "Building 12" with a restaurant, office, and two residences.
- Renovation of the site's historic core buildings into market, restaurant, office, and multi-use spaces.
- Construction of a parking garage with residential space, and a small amount of retail.
- Construction of a shared street, plazas, and subsurface utilities to support the development.
- Relocation of the Maine Narrow Gauge Railroad and the Eastern Promenade Trail
- Placement of pavement to provide temporary access to the adjacent Fore Points Marina.
- Landscaping and other site improvements to enable the surrounding work.

The proposed drainage system will be comprised of a series of catch basins and trench drains located along the centerline of the new roadway, which discharge to a subsurface stormwater management system that will provide storage and treatment for site runoff prior to discharging to the Fore River. The subsurface stormwater management system will consist of R-Tanks for storage and Jellyfish Filters for stormwater treatment. The proposed stormwater management systems are discussed in further detail in the following sections.

1.3 Stormwater Standards

The project is subject to the MaineDEP Chapter 500 Stormwater Standards. The project is not located within the watershed of an Urban Impaired Stream and is therefore not subject to the Urban Impaired Stream Standard. The following sections describe the project's compliance with the applicable stormwater standards.

1.3.1 Basic Standard (Soil Erosion & Sediment Control)

A variety of erosion and sediment control measures will be utilized during construction, including but not limited to the following:

- Stabilized construction entrances;
- Up-gradient runoff diversion barriers;
- Downgradient sediment barriers;
- Catch basin inlet protection devices;
- Preservation and maintenance of vegetated areas to the maximum extent possible;
- Temporary stabilization of disturbed areas to be exposed for more than seven days;
- Permanent stabilization of final graded areas;
- Controls for fugitive dust, debris, and other materials; and
- Inspection of all measures until the Site is permanently stabilized.

Structural measures will be installed as shown on the design drawings. Details and specifications for these measures are included on the drawings. All measures will be implemented in accordance with the "Maine Erosion and Sedimentation Handbook for Construction: Best Management Practices". All temporary measures will be installed prior to any earth-disturbing activities and will be removed upon permanent stabilization of the Site. The Contractor will be responsible for implementing and maintaining all erosion and sediment control measures in an effective operating condition during construction. Permanent erosion control measures will include vegetation and pavement. After construction, the Owner will be responsible for inspecting and maintaining the Site as described in Section 1.4 of this Report.

1.3.2 Flooding Standard (Stormwater Quantity)

Runoff from the proposed project will ultimately discharge to the adjacent Fore River, which is a tidal waterbody, via either sheet flow, the on-site stormdrain system, or the City's 60-inch stormdrain located within the adjacent Fore Connector roadway. In accordance with Section 4.F(3) of the MaineDEP Chapter 500 Stormwater Standards, a project is eligible for a waiver from the Flooding Standard if it discharges to a coastal wetland or a major river segment. Per the Master Development Plan Approval letter dated December 22, 2016, the City of Portland Planning Board voted to grant a waiver from the Flooding Standard for future site plan applications associated with the 58 Fore Street Site.

The stormwater management system has been adequately sized to safely convey runoff from the proposed Site. The stormwater management system was designed utilizing the HydroCAD 10.00 Stormwater Modeling System by Applied Microcomputer Systems. Utilizing the HydroCAD software, a 24-hour duration and Type-III rainfall distribution was applied to the rainfall depths provided in Appendix H of the MaineDEP Chapter 500 Rules in order to estimate the peak flows that the stormwater management system will need to accommodate. For your reference, a copy of the HydroCAD Report and the Drainage Area Figure for the proposed site are provided in Appendix C and D of this Report, respectively. It should be noted that the stormwater management system has been over-sized in order to accommodate future development.

HydroCAD provides a lookup table for curve number (CN), which is a measure of the retention and runoff properties of various surfaces based on the Hydrological Soil Group (HSG) and land cover type. According to the latest NRCS Web Soil Survey data, the Site consists largely of urban fill, which is assumed to be equivalent to HSG A soils. The area of each land cover type was delineated utilizing survey information and HydroCAD computed the final CN for each subcatchment based on an area-weighted average.

The Time of Concentration (Tc) is the time required for runoff to travel from the most hydrologically distant point of a subcatchment to the point of discharge. The Tc for each subcatchment was computed within HydroCAD as the sum of the travel times for each consecutive segment along the longest flow path. The longest flow path was delineated utilizing topographic survey data and partitioned into segments based on flow types and land cover. The primary types of flow include sheet flow, shallow concentrated flow, and channel flows. A minimum Tc of six minutes was utilized for all subcatchment areas.

1.3.3 General & Redevelopment Standards (Stormwater Quality)

The proposed project is considered redevelopment and for stormwater quality is subject to the redevelopment standards. A figure showing the area of redevelopment is included in Appendix D of this Report. Calculations have been prepared in accordance with Section 4.C(2)(d) of the MaineDEP Chapter 500 Stormwater Standards to determine how much treatment is required for the proposed redevelopment project. Based on the calculations provided in Appendix B of this Report, it has been determined that the proposed project is required to provide treatment for 50% of the redevelopment area. Approximately 58% of the Phase 1 redevelopment area will be captured and treated. It should be noted that future phases of the project are anticipated to improve the overall pollutant impact of the project, as they plan to convert open gravel and paved parking areas to roof area and include green roof areas and additional stormwater treatment measures. The redevelopment calculations will be re-evaluated as part of the design of future phases to determine if treatment requirements change.

Based on recent discussions with Jeff Dennis, MaineDEP Watershed Management Unit Biologist, it is our understanding that the project will not be required to provide storage for the full water quality channel protection volume (typically 1-inch over impervious areas and 0.4-inches over landscaped areas) because the project ultimately discharges to the Fore River. Some storage will be provided by proposed R-Tanks, which will increase the time of concentration on-site. The treatment calculations provided in Appendix B of this Report include a summary of the water quality volume that will be provided. We will continue to coordinate with the MaineDEP to obtain approval for the reduced water quality volume.

Jellyfish Filters will provide stormwater quality treatment for the Site. The system has been designed in accordance with the MaineDEP proprietary BMP approval letter to Contech dated January 21, 2015. The Jellyfish Filters have been sized to accommodate the water quality flow from 1-inch of runoff over the entire drainage area. Larger storm events will bypass the filter cartridges via an internal weir. A letter demonstrating that the design of the Jellyfish Filters has been reviewed and approved by the manufacturer is provided in Appendix B of this Report. It should also be noted that the stormwater management system has been over-sized to treat and convey runoff from future phases of the project.

1.4 Inspection & Maintenance Requirements

General inspection and maintenance of stormwater systems will take place during and after construction. During construction, the Contractor will be responsible for inspecting and maintaining the Site, as described in Section 1.3.1 of this Report. Upon completion of construction, the property owner will be responsible for implementing the Inspection and Maintenance Plan for the proposed stormwater system, which is provided in Appendix A of this Report.

APPENDIX A: STORMWATER INSPECTION & MAINTENANCE PLAN

STORMWATER INSPECTION & MAINTENANCE PLAN

Portland Foreside Development – Phase 1, Portland Maine

General inspection and maintenance during and after construction must take place in accordance with the requirements outlined in Appendix B of the Maine Department of Environmental Protection (MaineDEP) Chapter 500 Rules. Upon completion of the project, the Owner will assume responsibility for overseeing the property, including the inspection and maintenance of the Site's stormwater drainage system and treatment measures outlined herein. A person with knowledge of stormwater management and erosion and sediment control, including the standards and conditions in the permit, shall conduct the inspections and perform maintenance of the facilities.

Inspection and maintenance activities will be performed per the attached checklist, schedule, and manufacturer guidelines; an example page of the BMP Maintenance Log that shall be kept on-site is also attached.

INSPECTION AND MAINTENANCE OF STORMWATER SYSTEMS

Trash, debris, and sediment shall be removed from stormdrain pipes and catch basins as needed on a semi-annual basis. In addition to the inspection and maintenance of stormwater systems, paved areas will be inspected annually each spring. These areas will be kept clean and clear through periodic sweeping and winter plowing as required. Inspections will also ensure pavement markings are repainted as needed to maintain proper traffic circulation. Paved areas will be plowed and sanded as often as necessary to maintain public safety. Periodic sweeping of pavement will reduce the amount of sediment available to enter the stormwater systems, in turn reducing the need to clean the stormwater systems. The R-Tank and Jellyfish systems must be inspected and maintained per the manufacturer's guidelines, which are outlined in the attached guidance documents.

STORMWATER INSPECTION CHECKLIST

Inspection by: _____ Date: _____

Stormwater Management Feature	Condition						Comments
Vegetative cover	no bare spots, no evidence of rill erosion		some bare spots, some rill erosion		large bare areas, extensive erosion		
Subsurface Drainage System	no siltation		some siltation		heavily silted in		
Subsurface Drainage System	no clogging/flooding		some clogging/flooding		heavy clogging/flooding		
Subsurface Drainage System	outlet free of erosion		some erosion at outlet		outlet heavily eroded		
Subsurface Drainage System	inlet/outlet clear		some debris		completely blocked		
Jellyfish System*	Cartridges are in good condition		Cartridges in need of cleaning		Cartridges in need of replacement		
Jellyfish System*	no clogging/flooding		some clogging/flooding		heavy clogging/flooding		

**See attached manufacturer's guidelines for Jellyfish System maintenance and inspection.*

Recommended Actions: _____

_____

Actions Completed: _____ Date: _____

MAINTENANCE TASKS	**SCHEDULE**
Inspect for sediment accumulation	Spring and Fall
Remove sediment accumulation	As needed
Clean debris	As needed
Inspect for erosion	As needed
Reestablish vegetation in erosion areas	Early spring
Replace stone rip-rap	Every 3 – 5 years as needed
Inspect structural elements during wet weather and compare to as-built plans	Annually
Make adjustments or replacements as determined by wet weather observations	As needed
Keep records of all inspections and maintenance activities	Annually
Have a professional engineer perform emergency inspections upon identification of severe problems	As needed

R-TANK OPERATION, INSPECTION & MAINTENANCE

Operation

Your ACF R-Tank System has been designed to function in conjunction with the engineered drainage system on your site, the existing municipal infrastructure, and/or the existing soils and geography of the receiving watershed. Unless your site included certain unique and rare features, the operation of your R-Tank System will be driven by naturally occurring systems and will function autonomously. However, upholding a proper schedule of Inspection & Maintenance is critical to ensuring continued functionality and optimum performance of the system.

Inspection

Both the R-Tank and all stormwater pre-treatment features incorporated into your site must be inspected regularly. Inspection frequency for your system must be determined based on the contributing drainage area, but should never exceed one year between inspections (six months during the first year of operation).

Inspections may be required more frequently for pre-treatment systems. You should refer to the manufacturer requirements for the proper inspection schedule.

With the right equipment your inspection and measurements can be accomplished from the surface without physically entering any confined spaces. If your inspection does require confined space entry, you MUST follow all local/regional requirements as well as OSHA standards.

R-Tank Systems may incorporate Inspection Ports, Maintenance Ports, and/or adjoining manholes. Each of these features are easily accessed by removing the lid at the surface. With the cover removed, a visual inspection can be performed to identify sediment deposits within the structure. Using a flashlight, ALL access points should be examined to complete a thorough inspection.

Inspection Ports
Usually located centrally in the R-Tank System, these perforated columns are designed to give the user a base-line sediment depth across the system floor.

Maintenance Ports
Usually located near the inlet and outlet connections, you'll likely find deeper deposits of heavier sediments when compared to the Inspection Ports.

Manholes
Most systems will include at least two manholes - one at the inlet and another at the outlet. There may be more than one location where stormwater enters the system, which would result in additional manholes to inspect.

Bear in mind that these manholes often include a sump below the invert of the pipe connecting to the R-Tank. These sumps are designed to capture sediment before it reaches the R-Tank, and they should be kept clean to ensure they function properly. However, existence of sediment in the sump does NOT necessarily mean sediment has accumulated in the R-Tank.

After inspecting the bottom of the structure, use a mirror on a pole (or some other device) to check for sediment or debris in the pipe connecting to the R-Tank.

R-TANK OPERATION INSPECTION & MAINTENANCE

If sediment or debris is observed in any of these structures, you should determine the depth of the material. This is typically accomplished with a stadia rod, but you should determine the best way to obtain the measurement.

All observations and measurements should be recorded on an Inspection Log kept on file. We've included a form you can use at the end of this guideline.

Maintenance

The R-Tank System should be back-flushed once sediment accumulation has reached 6" or 15% of the total system height. Use the chart below as a guideline to determine the point at which maintenance is required on your system.

R-Tank Unit	Height	Max Sediment Dept
Mini	9.5"	1.5"
Single	17"	3"
Double	34"	5"
Triple	50"	6"
Quad	67"	6"
Pent	84"	6"

Before any maintenance is performed on your system, be sure to plug the outlet pipe to prevent contamination of the adjacent systems.

To back-flush the R-Tank, water is pumped into the system through the Maintenance Ports as rapidly as possible. Water should be pumped into ALL Maintenance Ports. The turbulent action of the water moving through the R-Tank will suspend sediments which may then be pumped out.

If your system includes an Outlet Structure, this will be the ideal location to pump contaminated water out of the system. However, removal of back-flush water may be accomplished through the Maintenance Ports, as well.

For systems with large footprints that would require extensive volumes of water to properly flush the system, you should consider performing your maintenance within 24 hours of a rain event. Stormwater entering the system will aid in the suspension of sediments and reduce the volume of water required to properly flush the system.

Once removed, sediment-laden water may be captured for disposal or pumped through a Dirtbag™ (if permitted by the locality).

ACF ENVIRONMENTAL
LET'S GET IT DONE

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Richmond, Virginia, 23234
800.448.3636
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Step-By-Step Inspection & Maintenance Routine

1) **Inspection**
    a. Inspection Port
        i. Remove Cap
        ii. Use flashlight to detect sediment deposits
        iii. If present, measure sediment depth with stadia rod
        iv. Record results on Maintenance Log
        v. Replace Cap
    b. Maintenance Port/s
        i. Remove Cap
        ii. Use flashlight to detect sediment deposits
        iii. If present, measure sediment depth with stadia rod
        iv. Record results on Maintenance Log
        v. Replace Cap
        vi. Repeat for ALL Maintenance Ports
    c. Adjacent Manholes
        i. Remove Cover
        ii. Use flashlight to detect sediment deposits
        iii. If present, measure sediment depth with stadia rod, accounting for depth of sump (if present)
        iv. Inspect pipes connecting to R-Tank
        v. Record results on Maintenance Log
        vi. Replace Cover
        vii. Repeat for ALL Manholes that connect to the R-Tank

2) **Maintenance**
    a. Plug system outlet to prevent discharge of back-flush water
    b. Determine best location to pump out back-flush water
    c. Remove Cap from Maintenance Port
    d. Pump water as rapidly as possible (without over-topping port) into system until at least 1”
    of water covers system bottom
    e. Replace Cap
    f. Repeat at ALL Maintenance Ports
    g. Pump out back-flush water to complete back-flushing
    h. Vacuum all adjacent structures and any other structures or stormwater pre-treatment systems that require attention
    i. Sediment-laden water may be captured for disposal or pumped through a Dirtbag™.
    j. Replace any remaining Caps or Covers
    k. Record the back-flushing event in your Maintenance Log with any relevant specifics

R-Tank Maintenance Log

Site Name:_____

Location:_____

System Owner:_____

Company Responsible for Maintenance:_____

Contact:_____

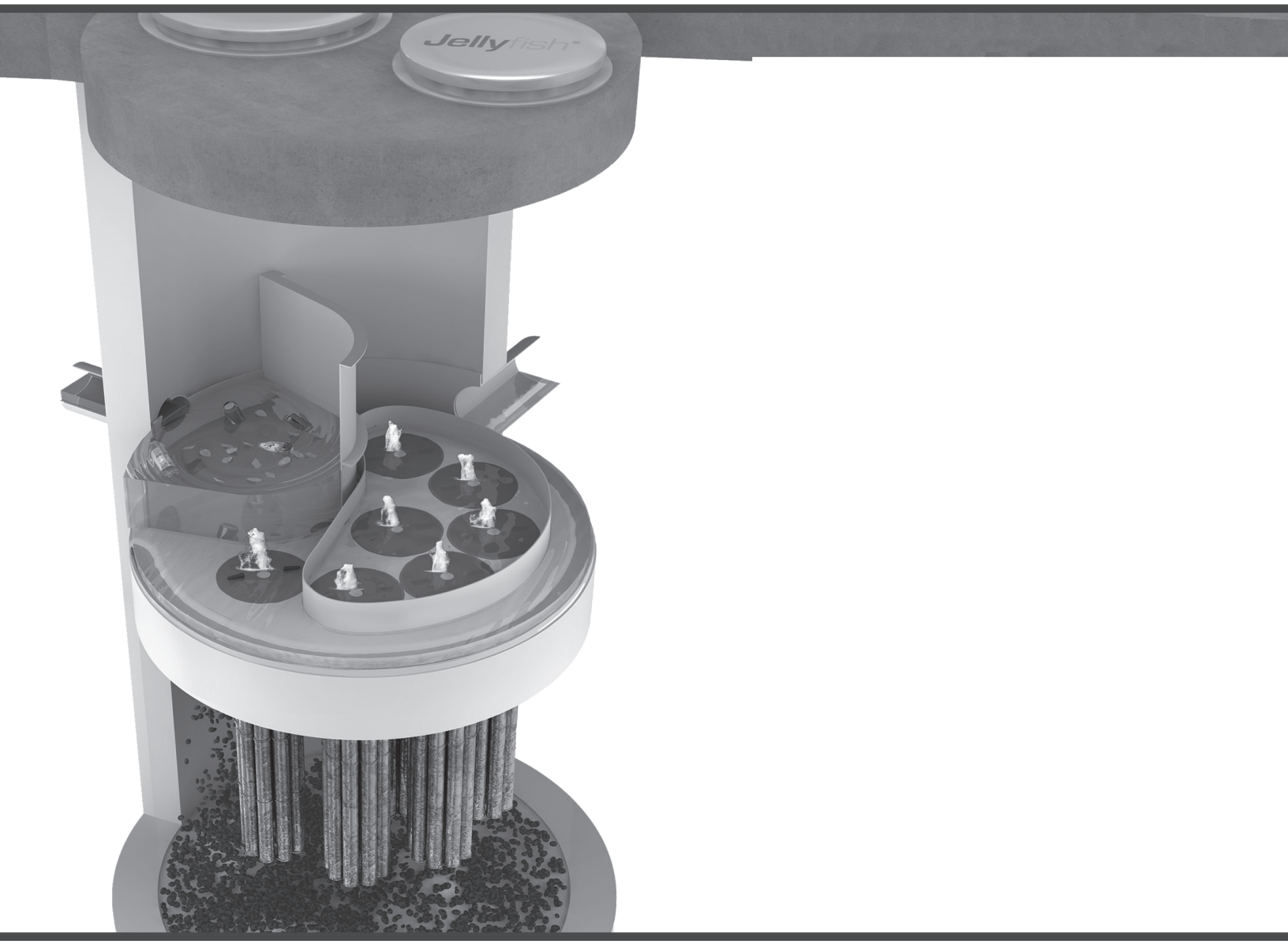
Phone Number:_____

Date	Location	Depth to Bottom	Depth to Sediment	Sediment Depth	Observations/Notes	Initials

For more information about our products, contact Inside Sales at 800.448.3636 or email at info@acfenv.com

CONTECH®
ENGINEERED SOLUTIONS

Jellyfish® Filter Maintenance Guide



Jellyfish®

JELLYFISH® FILTER
INSPECTION & MAINTENANCE GUIDE

Jellyfish units are often just one of many structures in a more comprehensive stormwater drainage and treatment system.

In order for maintenance of the Jellyfish filter to be successful, it is imperative that all other components be properly maintained. The maintenance and repair of upstream facilities should be carried out prior to Jellyfish maintenance activities.

In addition to considering upstream facilities, it is also important to correct any problems identified in the drainage area. Drainage area concerns may include: erosion problems, heavy oil loading, and discharges of inappropriate materials.

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Maintenance Procedure.....4

Cartridge Assembly & Cleaning.....5

Inspection Process 7

1.0 Inspection and Maintenance Overview

The primary purpose of the Jellyfish® Filter is to capture and remove pollutants from stormwater runoff. As with any filtration system, these pollutants must be removed to maintain the filter's maximum treatment performance. Regular inspection and maintenance are required to insure proper functioning of the system.

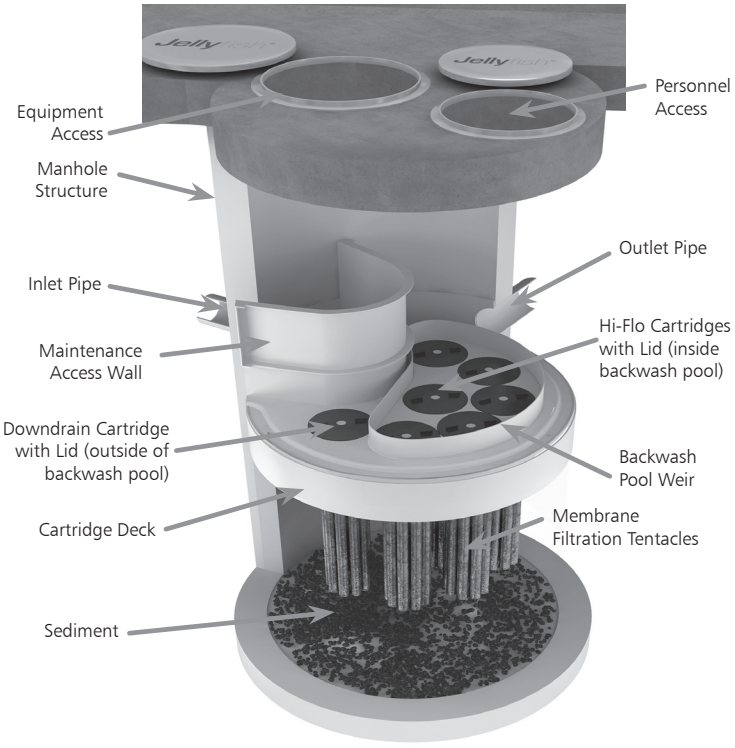
Maintenance frequencies and requirements are site specific and vary depending on pollutant loading. Additional maintenance activities may be required in the event of non-storm event runoff, such as base-flow or seasonal flow, an upstream chemical spill or due to excessive sediment loading from site erosion or extreme runoff events. It is a good practice to inspect the system after major storm events.

Inspection activities are typically conducted from surface observations and include:

- Observe if standing water is present
- Observe if there is any physical damage to the deck or cartridge lids
- Observe the amount of debris in the Maintenance Access Wall (MAW) or inlet bay for vault systems

Maintenance activities include:

- Removal of oil, floatable trash and debris
- Removal of collected sediments
- Rinsing and re-installing the filter cartridges
- Replace filter cartridge tentacles, as needed



Note: Separator Skirt not shown

2.0 Inspection Timing

Inspection of the Jellyfish Filter is key in determining the maintenance requirements for, and to develop a history of, the site's pollutant loading characteristics. In general, inspections should be performed at the times indicated below; *or per the approved project stormwater quality documents (if applicable), whichever is more frequent*.

1. A minimum of quarterly inspections during the first year of operation to assess the sediment and floatable pollutant accumulation, and to ensure proper functioning of the system.
2. Inspection frequency in subsequent years is based on the inspection and maintenance plan developed in the first year of operation. Minimum frequency should be once per year.
3. Inspection is recommended after each major storm event.
4. Inspection is required immediately after an upstream oil, fuel or other chemical spill.

3.0 Inspection Procedure

The following procedure is recommended when performing inspections:

1. Provide traffic control measures as necessary.
2. Inspect the MAW or inlet bay for floatable pollutants such as trash, debris, and oil sheen.
3. Measure oil and sediment depth in several locations, by lowering a sediment probe until contact is made with the floor of the structure. Record sediment depth, and presences of any oil layers.
4. Inspect cartridge lids. Missing or damaged cartridge lids to be replaced.
5. Inspect the MAW (where appropriate), cartridge deck and receptacles, and backwash pool weir, for damaged or broken components.

3.1 Dry weather inspections

- Inspect the cartridge deck for standing water, and/or sediment on the deck.
- No standing water under normal operating conditions.
- Standing water inside the backwash pool, but not outside the backwash pool indicates, that the filter cartridges need to be rinsed.



Inspection Utilizing Sediment Probe

- Standing water outside the backwash pool is not anticipated and may indicate a backwater condition caused by high water elevation in the receiving water body, or possibly a blockage in downstream infrastructure.
- Any appreciable sediment (≥1/16") accumulated on the deck surface should be removed.

3.2 Wet weather inspections

- Observe the rate and movement of water in the unit. Note the depth of water above deck elevation within the MAW or inlet bay.
- Less than 6 inches, flow should be exiting the cartridge lids of each of the draindown cartridges (i.e. cartridges located outside the backwash pool).
- Greater than 6 inches, flow should be exiting the cartridge lids of each of the draindown cartridges and each of the hi-flo cartridges (i.e. cartridges located inside the backwash pool), and water should be overflowing the backwash pool weir.
- 18 inches or greater and relatively little flow is exiting the cartridge lids and outlet pipe, this condition indicates that the filter cartridges need to be rinsed.

4.0 Maintenance Requirements

Required maintenance for the Jellyfish Filter is based upon results of the most recent inspection, historical maintenance records, or the site specific water quality management plan; whichever is more frequent. In general, maintenance requires some combination of the following:

1. Sediment removal for depths reaching 12 inches or greater, or within 3 years of the most recent sediment cleaning, whichever occurs sooner.
2. Floatable trash, debris, and oil removal.
3. Deck cleaned and free from sediment.
4. Filter cartridges rinsed and re-installed as required by the most recent inspection results, or within 12 months of the most recent filter rinsing, whichever occurs sooner.
5. Replace tentacles if rinsing does not restore adequate hydraulic capacity, remove accumulated sediment, or if damaged or missing. It is recommended that tentacles should remain in service no longer than 5 years before replacement.
6. Damaged or missing cartridge deck components must be repaired or replaced as indicated by results of the most recent inspection.
7. The unit must be cleaned out and filter cartridges inspected immediately after an upstream oil, fuel, or chemical spill. Filter cartridge tentacles should be replaced if damaged or compromised by the spill.

5.0 Maintenance Procedure

The following procedures are recommended when maintaining the Jellyfish Filter:

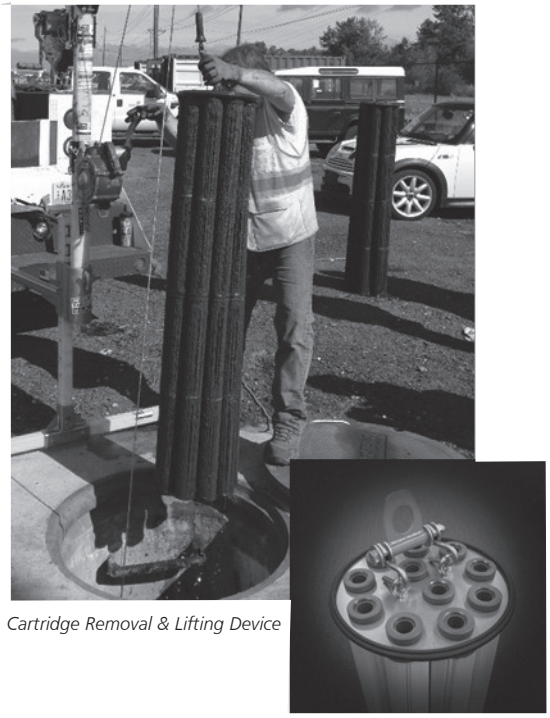
1. Provide traffic control measures as necessary.
2. Open all covers and hatches. Use ventilation equipment as required, according to confined space entry procedures. *Caution: Dropping objects onto the cartridge deck may cause damage*.
3. Perform Inspection Procedure prior to maintenance activity.
4. To access the cartridge deck for filter cartridge service, descend into the structure and step directly onto the deck. Caution: Do not step onto the maintenance access wall (MAW) or backwash pool weir, as damage may result. Note that the cartridge deck may be slippery.
5. Maximum weight of maintenance crew and equipment on the cartridge deck not to exceed 450 lbs.

5.1 Filter Cartridge Removal

1. Remove a cartridge lid.
2. Remove cartridges from the deck using the lifting loops in the cartridge head plate. Rope or a lifting device (available from Contech) should be used. *Caution: Should a snag occur, do not force the cartridge upward as damage to the tentacles may result. Wet cartridges typically weigh between 100 and 125 lbs*.
3. Replace and secure the cartridge lid on the exposed empty receptacle as a safety precaution. Contech does not recommend exposing more than one empty cartridge receptacle at a time.

5.2 Filter Cartridge Rinsing

1. Remove all 11 tentacles from the cartridge head plate. Take care not to lose or damage the O-ring seal as well as the plastic threaded nut and connector.



Cartridge Removal & Lifting Device

2. Position tentacles in a container (or over the MAW), with the threaded connector (open end) facing down, so rinse water is flushed through the membrane and captured in the container.
3. Using the Jellyfish rinse tool (available from Contech) or a low-pressure garden hose sprayer, direct water spray onto the tentacle membrane, sweeping from top to bottom along the length of the tentacle. Rinse until all sediment is removed from the membrane. *Caution: Do not use a high pressure sprayer or focused stream of water on the membrane. Excessive water pressure may damage the membrane*.

4. Collected rinse water is typically removed by vacuum hose.
5. Reassemble cartridges as detailed later in this document. Reuse O-rings and nuts, ensuring proper placement on each tentacle.

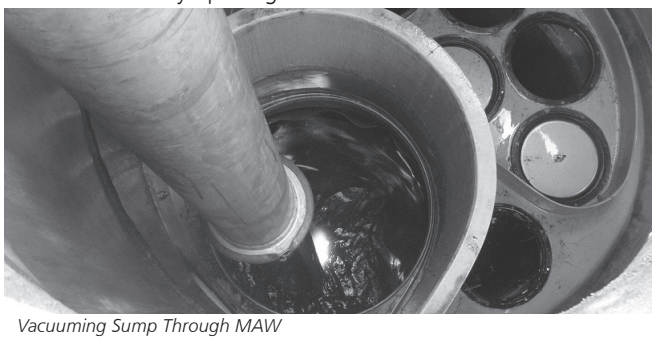
5.3 Sediment and Flotables Extraction

1. Perform vacuum cleaning of the Jellyfish Filter only after filter cartridges have been removed from the system. Access the lower chamber for vacuum cleaning only through the maintenance access wall (MAW) opening. Be careful not to damage the flexible plastic separator skirt that is attached to the underside of the deck on manhole systems. Do not lower the vacuum wand through a cartridge receptacle, as damage to the receptacle will result.
2. Vacuum floatable trash, debris, and oil, from the MAW opening or inlet bay. Alternatively, floatable solids may be removed by a net or skimmer.



Vacuuming Sump Through MAW

3. Pressure wash cartridge deck and receptacles to remove all sediment and debris. Sediment should be rinsed into the sump area. Take care not to flush rinse water into the outlet pipe.
4. Remove water from the sump area. Vacuum or pump equipment should only be introduced through the MAW or inlet bay.
5. Remove the sediment from the bottom of the unit through the MAW or inlet bay opening.



Vacuuming Sump Through MAW

6. For larger diameter Jellyfish Filter manholes (≥8-ft) and some vaults complete sediment removal may be facilitated by removing a cartridge lid from an empty receptacle and inserting a jetting wand (not a vacuum wand) through the receptacle. Use the sprayer to rinse loosened sediment toward the vacuum hose in the MAW opening, being careful not to damage the receptacle.

5.4 Filter Cartridge Reinstallation and Replacement

1. Cartridges should be installed after the deck has been cleaned. It is important that the receptacle surfaces be free from grit and debris.
2. Remove cartridge lid from deck and carefully lower the filter cartridge into the receptacle until head plate gasket is seated squarely in receptacle. ***Caution: Do not force the cartridge downward; damage may occur.***
3. Replace the cartridge lid and check to see that both male threads are properly seated before rotating approximately 1/3 of a full rotation until firmly seated. Use of an approved rim gasket lubricant may facilitate installation. See next page for additional details.
4. If rinsing is ineffective in removing sediment from the tentacles, or if tentacles are damaged, provisions must be made to replace the spent or damaged tentacles with new tentacles. Contact Contech to order replacement tentacles.

5.5 Chemical Spills

Caution: If a chemical spill has been captured, do not attempt maintenance. Immediately contact the local hazard response agency and contact Contech.

5.6 Material Disposal

The accumulated sediment found in stormwater treatment and conveyance systems must be handled and disposed of in accordance with regulatory protocols. It is possible for sediments to contain measurable concentrations of heavy metals and organic chemicals (such as pesticides and petroleum products). Areas with the greatest potential for high pollutant loading include industrial areas and heavily traveled roads. Sediments and water must be disposed of in accordance with all applicable waste disposal regulations. When scheduling maintenance, consideration must be made for the disposal of solid and liquid wastes. This typically requires coordination with a local landfill for solid waste disposal. For liquid waste disposal a number of options are available including a municipal vacuum truck decant facility, local waste water treatment plant or on-site treatment and discharge.

Jellyfish Filter Components & Filter Cartridge Assembly and Installation

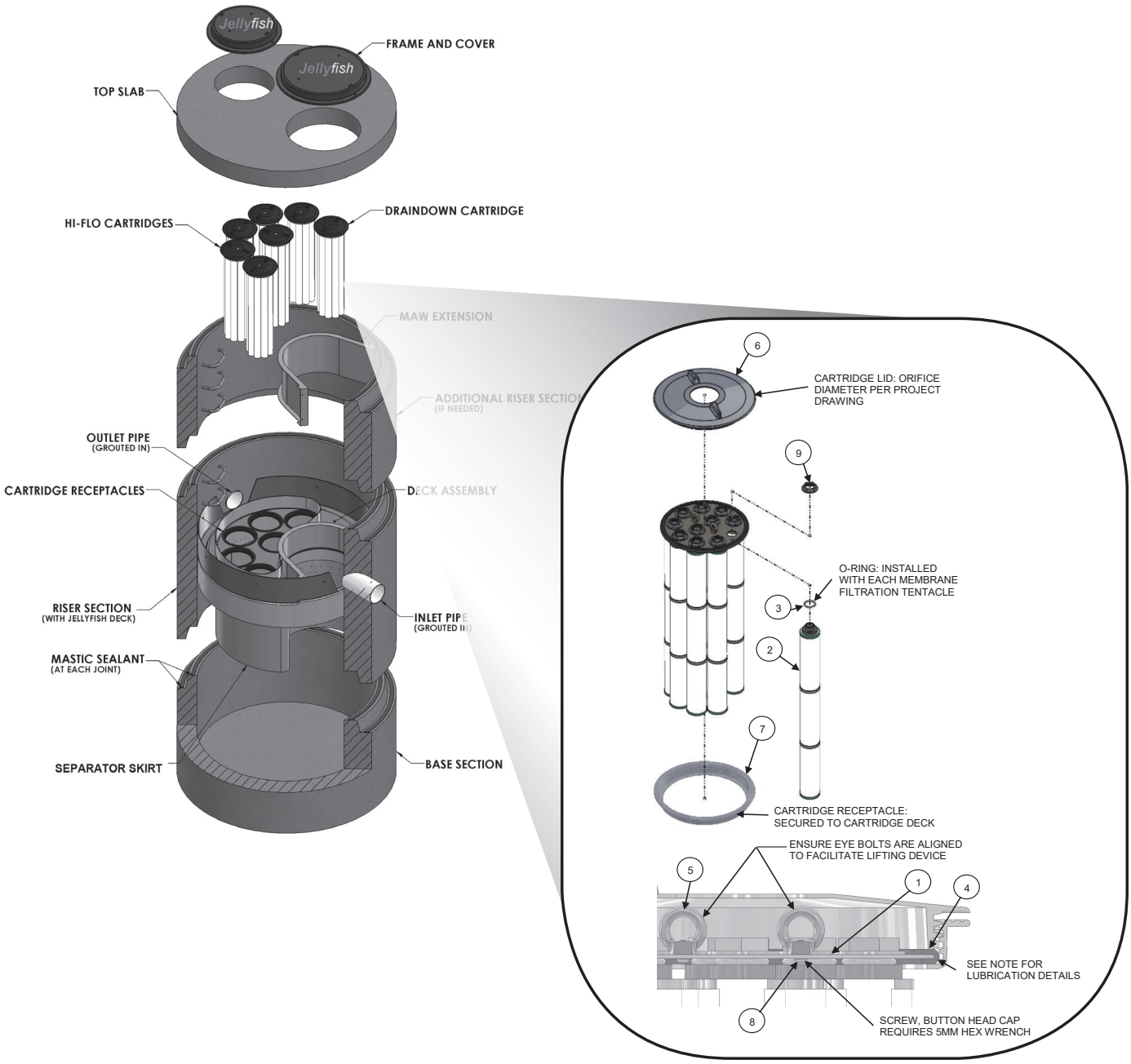


TABLE 1: BOM

ITEM NO.	DESCRIPTION
1	JF HEAD PLATE
2	JF TENTACLE
3	JF O-RING
4	JF HEAD PLATE GASKET
5	JF CARTRIDGE EYELET
6	JF 14IN COVER
7	JF RECEPTACLE
8	BUTTON HEAD CAP SCREW M6X14MM SS
9	JF CARTRIDGE NUT

TABLE 2: APPROVED GASKET LUBRICANTS

PART NO.	MFR	DESCRIPTION
78713	LA-CO	LUBRI-JOINT
40501	HERCULES	DUCK BUTTER
30600	OATEY	PIPE LUBRICANT
PSLUBXL1Q	PROSELECT	PIPE JOINT LUBRICANT

NOTES:

Head Plate Gasket Installation:
Install Head Plate Gasket (Item 4) onto the Head Plate (Item 1) and liberally apply a lubricant from Table 2: Approved Gasket Lubricants onto the gasket where it contacts the Receptacle (Item 7) and Cartridge Lide (ITem 6). Follow Lubricant manufacturer's instructions.

Lid Assembly:
Rotate Cartridge Lid counter-clockwise until both male threads drop down and properly seat. Then rotate Cartridge Lid clock-wise approximately one-third of a full rotation until Cartridge Lid is firmly secured, creating a watertight seal.

Jellyfish Filter Inspection and Maintenance Log

Owner:				Jellyfish Model No:		
Location:				GPS Coordinates:		
Land Use:	Commercial:		Industrial:		Service Station:	
	Roadway/Highway:		Airport:		Residential:	

Date/Time:						
Inspector:						
Maintenance Contractor:						
Visible Oil Present: (Y/N)						
Oil Quantity Removed:						
Floatable Debris Present: (Y/N)						
Floatable Debris Removed: (Y/N)						
Water Depth in Backwash Pool						
Draindown Cartridges externally rinsed and recommissioned: (Y/N)						
New tentacles put on Draindown Cartridges: (Y/N)						
Hi-Flo Cartridges externally rinsed and recommissioned: (Y/N)						
New tentacles put on Hi-Flo Cartridges: (Y/N)						
Sediment Depth Measured: (Y/N)						
Sediment Depth (inches or mm):						
Sediment Removed: (Y/N)						
Cartridge Lids intact: (Y/N)						
Observed Damage:						
Comments:						



Jellyfish®

CONTECH ENGINEERED SOLUTIONS

800.338.1122
www.ContechES.com

Support

- Drawings and specifications are available at www.conteches.com/jellyfish.
- Site-specific design support is available from Contech Engineered Solutions.
- Find a Certified Maintenance Provider at www.conteches.com/ccmp

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Stormwater BMP Maintenance Log

BMP Structure	Inspector (Name)	Work Performed	Date Performed	Comments
Pavement Sweeping				
Catch Basins				
R-Tank System				
Jellyfish System				
Other				
Additional Comments:				

APPENDIX B: STORMWATER QUALITY CALCULATIONS

WOODARD & CURRAN COMMITMENT & INTEGRITY DRIVE RESULTS
41 HUTCHINS DRIVE
PORTLAND, MAINE 04102

CLIENT: PFDC
PROJECT: Phase 1 Development
CALCS BY: AL/AEF
DATE: 10/31/2019
PROJECT NO.: 227007.16

Redevelopment Treatment Calculations - Per Section 4.C.2.d of the MaineDEP Chapter 500 Rules

Area of Redevelopment (acres) = 7.88

a. Existing Pollutant Impact

Land Use	Pollutant Ranking	Land Area (Ac.)	Impact
High Use Roads/Parking Lot	5	0.13	0.64
Other Roads/Medium Use Parking Lot	4	2.85	11.42
Other Parking Lots/Flat Asphalt Roofs/Industrial Roofs	3	1.66	4.97
Other Roofs/Landscaped Area/Paved Walkway	2	2.37	4.73
Non-grass Landscaping/Stormwater	1	0.87	0.87
Forest/Meadow	0	0.00	0.00
			22.63

b. Proposed Pollutant Impact

Land Use	Pollutant Ranking	Land Area (Ac.)	Impact
High Use Roads/Parking Lot	5	0.76	3.80
Other Roads/Medium Use Parking Lot	4	2.14	8.55
Other Parking Lots/Flat Asphalt Roofs/Industrial Roofs	3	0.85	2.56
Other Roofs/Landscaped Area/Paved Walkway	2	3.93	7.86
Non-grass Landscaping/Stormwater	1	0.19	0.19
Forest/Meadow	0	0.00	0.00
			22.97

c. Existing Impact/Total Redevelopment Acres

2.9

d. Proposed Impact/Total Redevelopment Acres

2.9

e. Item D Minus Item C

0.0

Ranked Impact Change Due to Redevelopment	Percentage of Developed Area that Must be Treated
0.0 or less	0% (Stormwater projects)
	50% (Site projects)
≥ 0.0 to ≤ 1.0	60%
> 1.0 to ≤ 2.0	70%
> 2.0 to ≤ 3.0	80%
> 3.0	Same treatment level as for new development

Stormwater Treatment Summary	*Treatment Percentage*	*Treated Area (SF)*
Required	50%	171,525
Provided	58%	198,198

WQV Summary	*System 1*	*System 2*
Proposed Treated Area (SF)	84,114	114,084
Future Treated Areas (SF)	94,090	149,106
WQV Required (CF)	7,841	12,425
WQ Design Storm Event (in.)	1.00	1.00
WQV Provided (CF)	2,859	6,035
*WQ Storm Event Provided (in.)**	0.36	0.49

**Note: Based on recent discussions with Jeff Dennis, MaineDEP Watershed Management Unit Biologist, it is our understanding that the project will not be required to provide storage for the full Water Quality Volume (WQV) because the project ultimately discharges to the Fore River. Additional area will be directed to the treatment system as part of future phases of development. The WQ storm event that the proposed WQV will be able to accommodate has been calculated based upon the total future treated area.*

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dadams@ContechES.com
www.ContechES.com

Ashley Fletcher, PE
Woodard & Curran
41 Hutchins Drive
Portland, ME 04102

November 5, 2019

RE: The Portland Complex Co. (Contech Reference No. 632415)
Review of Jellyfish Filter Design

Dear Ms. Fletcher:

The purpose of this letter is to document Contech Engineered Solutions' review of the plans and the proposed application of the Jellyfish filter as water quality units for the Portland Complex Co., Portland, ME.

Contech Engineered Solutions (Contech) has reviewed the Jellyfish designs for this project. We believe the Jellyfish filters are appropriate water quality solutions for this site. The Jellyfish filter system is approved for use by MEDEP meeting the General Standards (Section 4.B.) of the Stormwater Management Rules (Chapter 500) when sized, installed, and maintained in accordance with the provisions noted in the January 21, 2015 approval letter from the MEDEP.

The Jellyfish filter is designed in accordance with the 54" High Flow (HF) cartridge filtration rate of 80 gallons per minute and 54" Drain Down (DD) cartridge of 40 gallons per minute. The Engineer of Record's design for the WQ Volume should be detained and routed through the Jellyfish filter in accordance with the required offline bypass weir to route the flows above the WQv around the filter and have an emptying time of a minimum of 24-hours and a maximum of 48-hours.

Filter 1 – Jellyfish filter vault:
The engineer of record reports a Water Quality Storm Flow (Qwq) of 0.95 cfs outlet flow from an upstream detention system. In order to adequately treat the runoff from this area, Contech recommends a Jellyfish filter Peak Diversion vault model JFPD0806-5-2 with 5 HF cartridges and 2 DD cartridges.

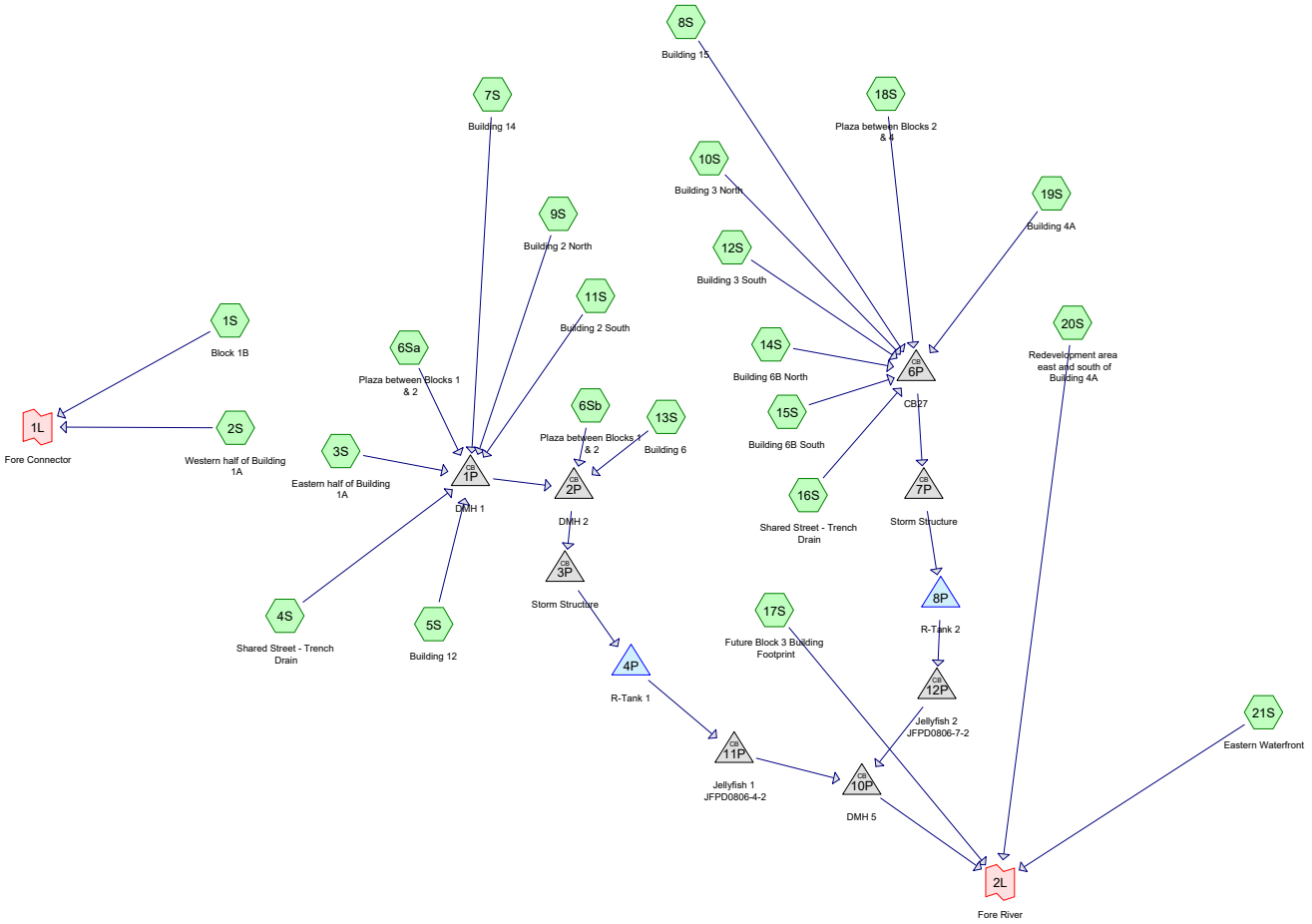
Filter 2 – Jellyfish filter vault:
The engineer of record reports a Qwq of 1.63 cfs outlet flow from an upstream detention system. In order to adequately treat the runoff from this area, Contech recommends a Jellyfish filter Peak Diversion vault model JFPD0806-9-2 with 9 HF cartridges and 2 DD cartridges.

By request, Contech representatives can be on-site during the installation of Contech products. Contech requires at least two weeks' notice in advance of the requested visit. Our systems require periodic maintenance to continue operating properly. Given typical runoff pollutant loading rates, Contech recommends maintenance inspections on an annual basis.

These systems are expected to operate in accordance with Contech's design intent. Please feel free to contact me if you have any questions or concerns.

Sincerely,
David Adams, Sr. Design Engineer

APPENDIX C: HYDROCAD REPORT



Subcat Reach Pond Link

Routing Diagram for C. Phase 1 Model for City

Prepared by Woodard Curran, Printed 11/6/2019

HydroCAD® 10.00-21 s/n 01204 © 2018 HydroCAD Software Solutions LLC

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: Block 1B Runoff Area=27,045 sf 29.55% Impervious Runoff Depth=0.00"
Tc=6.0 min CN=56 Runoff=0.00 cfs 0.000 af

Subcatchment2S: Western half of Runoff Area=17,090 sf 100.00% Impervious Runoff Depth>0.79"
Tc=6.0 min CN=98 Runoff=0.34 cfs 0.026 af

Subcatchment3S: Eastern half of Runoff Area=17,090 sf 100.00% Impervious Runoff Depth>0.79"
Tc=6.0 min CN=98 Runoff=0.34 cfs 0.026 af

Subcatchment4S: Shared Street - Trench Runoff Area=24,890 sf 82.54% Impervious Runoff Depth>0.25"
Tc=6.0 min CN=88 Runoff=0.15 cfs 0.012 af

Subcatchment5S: Building 12 Runoff Area=3,244 sf 100.00% Impervious Runoff Depth>0.79"
Tc=6.0 min CN=98 Runoff=0.06 cfs 0.005 af

Subcatchment6Sa: Plaza between Blocks Runoff Area=20,337 sf 94.84% Impervious Runoff Depth>0.56"
Tc=6.0 min CN=95 Runoff=0.30 cfs 0.022 af

Subcatchment6Sb: Plaza between Blocks 1 Runoff Area=3,122 sf 71.75% Impervious Runoff Depth>0.10"
Tc=6.0 min CN=81 Runoff=0.00 cfs 0.001 af

Subcatchment7S: Building 14 Runoff Area=2,572 sf 100.00% Impervious Runoff Depth>0.79"
Tc=6.0 min CN=98 Runoff=0.05 cfs 0.004 af

Subcatchment8S: Building 15 Runoff Area=4,507 sf 100.00% Impervious Runoff Depth>0.79"
Tc=6.0 min CN=98 Runoff=0.09 cfs 0.007 af

Subcatchment9S: Building 2 North Runoff Area=4,695 sf 100.00% Impervious Runoff Depth>0.79"
Tc=6.0 min CN=98 Runoff=0.09 cfs 0.007 af

Subcatchment10S: Building 3 North Runoff Area=2,212 sf 100.00% Impervious Runoff Depth>0.79"
Tc=6.0 min CN=98 Runoff=0.04 cfs 0.003 af

Subcatchment11S: Building 2 South Runoff Area=4,855 sf 100.00% Impervious Runoff Depth>0.79"
Tc=6.0 min CN=98 Runoff=0.10 cfs 0.007 af

Subcatchment12S: Building 3 South Runoff Area=2,326 sf 100.00% Impervious Runoff Depth>0.79"
Tc=6.0 min CN=98 Runoff=0.05 cfs 0.004 af

Subcatchment13S: Building 6 Runoff Area=3,304 sf 100.00% Impervious Runoff Depth>0.79"
Tc=6.0 min CN=98 Runoff=0.07 cfs 0.005 af

Subcatchment14S: Building 6B North Runoff Area=3,873 sf 100.00% Impervious Runoff Depth>0.79"
Tc=6.0 min CN=98 Runoff=0.08 cfs 0.006 af

Subcatchment15S: Building 6B South Runoff Area=2,512 sf 100.00% Impervious Runoff Depth>0.79"
Tc=6.0 min CN=98 Runoff=0.05 cfs 0.004 af

Subcatchment16S: Shared Street - Trench Runoff Area=8,931 sf 100.00% Impervious Runoff Depth>0.79"
Tc=6.0 min CN=98 Runoff=0.18 cfs 0.014 af

Subcatchment17S: Future Block 3 Runoff Area=9,998 sf 100.00% Impervious Runoff Depth>0.79"
Tc=6.0 min CN=98 Runoff=0.20 cfs 0.015 af

Subcatchment18S: Plaza between Blocks Runoff Area=20,458 sf 99.48% Impervious Runoff Depth>0.79"
Tc=6.0 min CN=98 Runoff=0.41 cfs 0.031 af

Subcatchment19S: Building 4A Runoff Area=69,274 sf 100.00% Impervious Runoff Depth>0.79"
Tc=6.0 min CN=98 Runoff=1.38 cfs 0.105 af

Subcatchment20S: Redevelopment area Runoff Area=4,759 sf 52.30% Impervious Runoff Depth>0.00"
Tc=6.0 min CN=70 Runoff=0.00 cfs 0.000 af

Subcatchment21S: Eastern Waterfront Runoff Area=86,899 sf 73.10% Impervious Runoff Depth>0.11"
Tc=6.0 min CN=82 Runoff=0.13 cfs 0.019 af

Pond 1P: DMH 1 Peak Elev=10.33' Inflow=1.10 cfs 0.083 af
21.0" Round Culvert n=0.013 L=61.0' S=0.0038 '/' Outflow=1.10 cfs 0.083 af

Pond 2P: DMH 2 Peak Elev=10.05' Inflow=1.16 cfs 0.089 af
21.0" Round Culvert n=0.013 L=31.0' S=0.0048 '/' Outflow=1.16 cfs 0.089 af

Pond 3P: Storm Structure Peak Elev=9.75' Inflow=1.16 cfs 0.089 af
15.0" Round Culvert x 3.00 n=0.013 L=4.0' S=0.0000 '/' Outflow=1.16 cfs 0.089 af

Pond 4P: R-Tank 1 Peak Elev=8.12' Storage=857 cf Inflow=1.16 cfs 0.089 af
21.0" Round Culvert n=0.013 L=4.0' S=0.0000 '/' Outflow=0.80 cfs 0.083 af

Pond 6P: CB27 Peak Elev=10.30' Inflow=2.28 cfs 0.173 af
24.0" Round Culvert n=0.013 L=22.0' S=0.0064 '/' Outflow=2.28 cfs 0.173 af

Pond 7P: Storm Structure Peak Elev=9.95' Inflow=2.28 cfs 0.173 af
15.0" Round Culvert x 3.00 n=0.013 L=4.0' S=0.0000 '/' Outflow=2.28 cfs 0.173 af

Pond 8P: R-Tank 2 Peak Elev=8.47' Storage=2,089 cf Inflow=2.28 cfs 0.173 af
24.0" Round Culvert n=0.013 L=4.0' S=0.0000 '/' Outflow=1.36 cfs 0.159 af

Pond 10P: DMH 5 Peak Elev=7.67' Inflow=2.16 cfs 0.242 af
30.0" Round Culvert n=0.013 L=83.1' S=0.0100 '/' Outflow=2.16 cfs 0.242 af

Pond 11P: Jellyfish 1 JFPD0806-4-2 Peak Elev=8.99' Inflow=0.80 cfs 0.083 af
Outflow=0.80 cfs 0.083 af

Pond 12P: Jellyfish 2 JFPD0806-7-2 Peak Elev=9.28' Inflow=1.36 cfs 0.159 af
Outflow=1.36 cfs 0.159 af

Link 1L: Fore Connector Inflow=0.34 cfs 0.026 af
Primary=0.34 cfs 0.026 af

Link 2L: Fore River Inflow=2.41 cfs 0.276 af
Primary=2.41 cfs 0.276 af

Total Runoff Area = 7.897 ac Runoff Volume = 0.321 af Average Runoff Depth = 0.49"
14.85% Pervious = 1.173 ac 85.15% Impervious = 6.724 ac

Summary for Subcatchment 1S: Block 1B

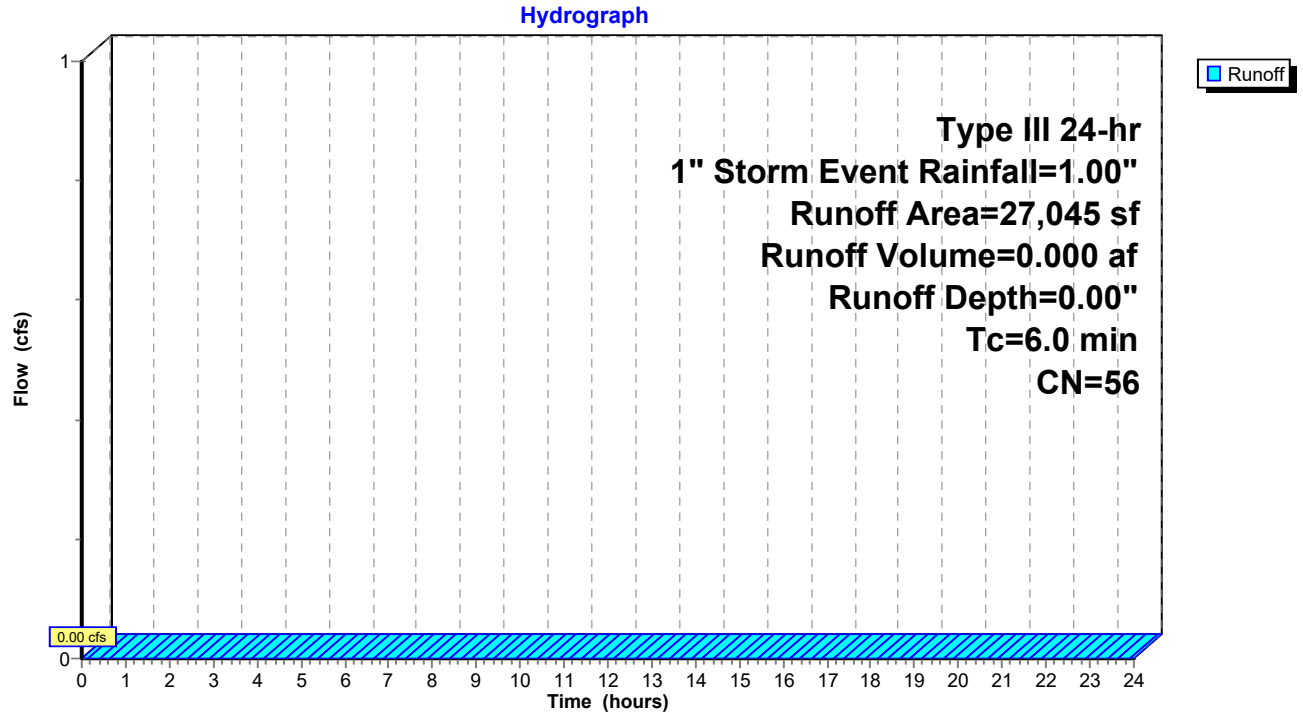
Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	7,991	98	Impervious
	19,054	39	>75% Grass cover, Good, HSG A
	27,045	56	Weighted Average
	19,054		70.45% Pervious Area
	7,991		29.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1S: Block 1B



Summary for Subcatchment 2S: Western half of Building 1A

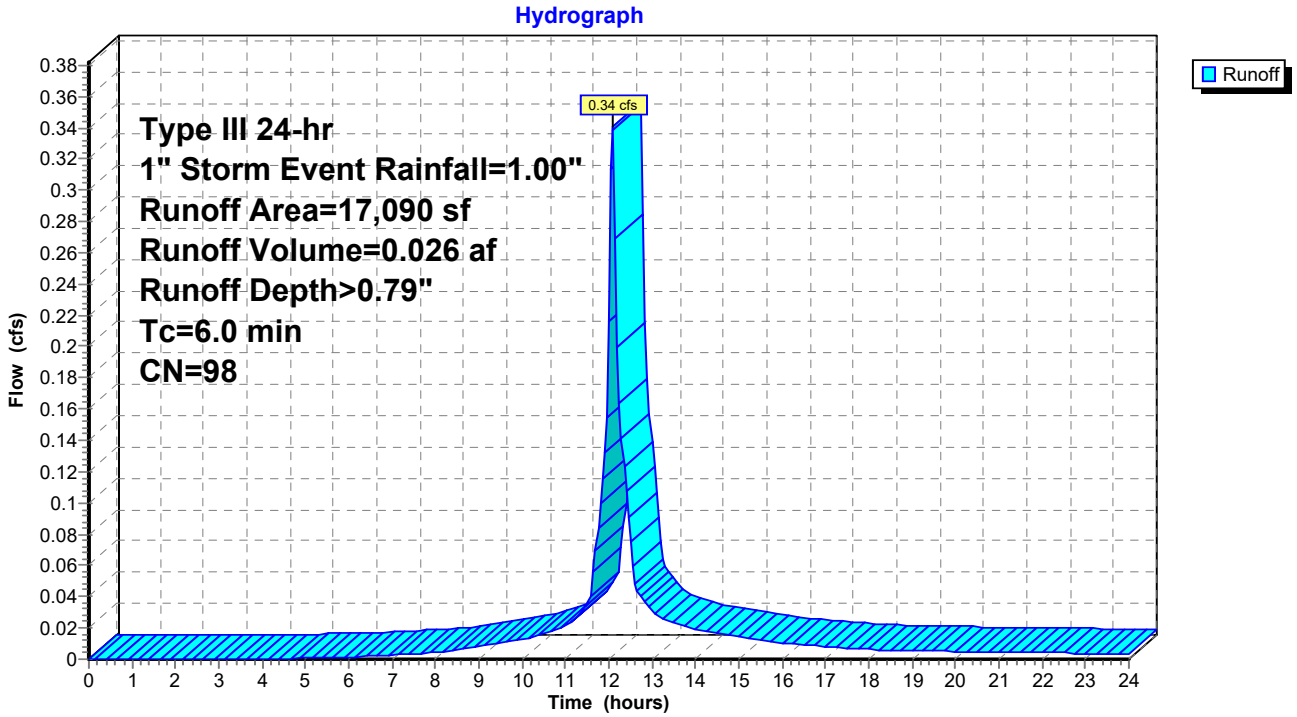
Runoff = 0.34 cfs @ 12.09 hrs, Volume= 0.026 af, Depth> 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	17,090	98	Roof
	17,090		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 2S: Western half of Building 1A



Summary for Subcatchment 3S: Eastern half of Building 1A

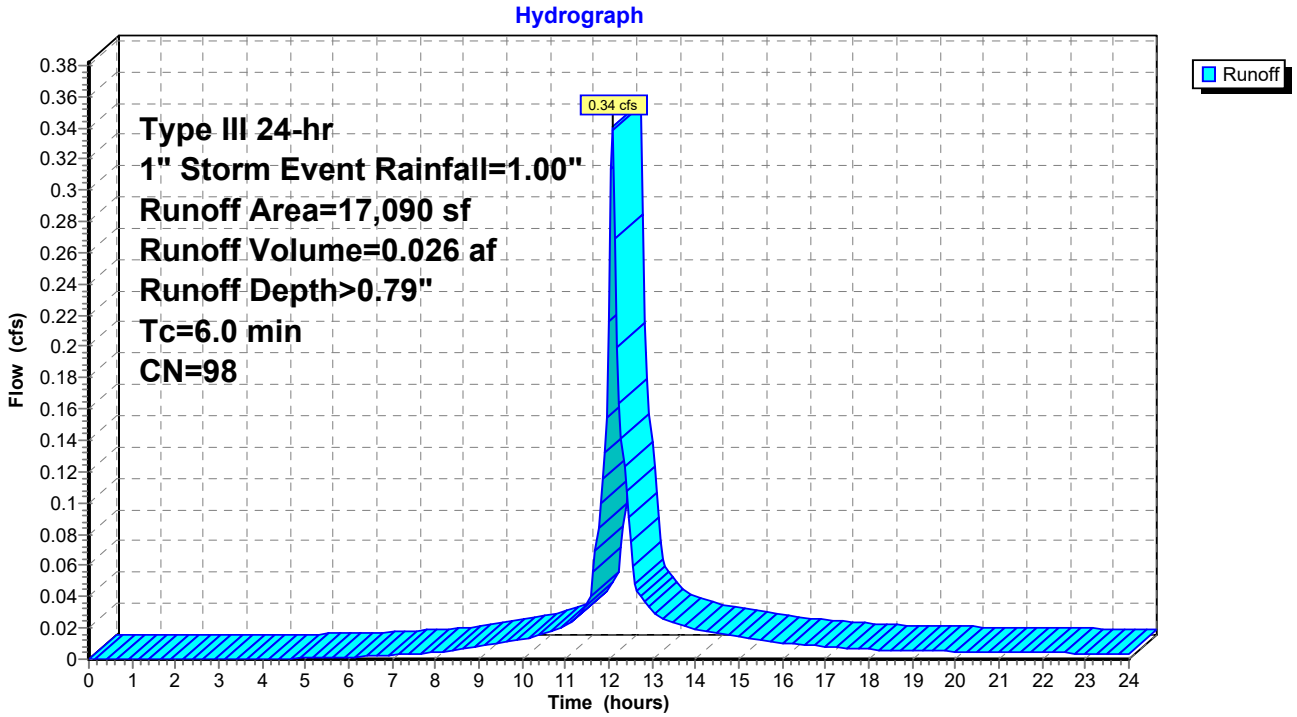
Runoff = 0.34 cfs @ 12.09 hrs, Volume= 0.026 af, Depth> 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	17,090	98	Roof
	17,090		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 3S: Eastern half of Building 1A



Summary for Subcatchment 4S: Shared Street - Trench Drain

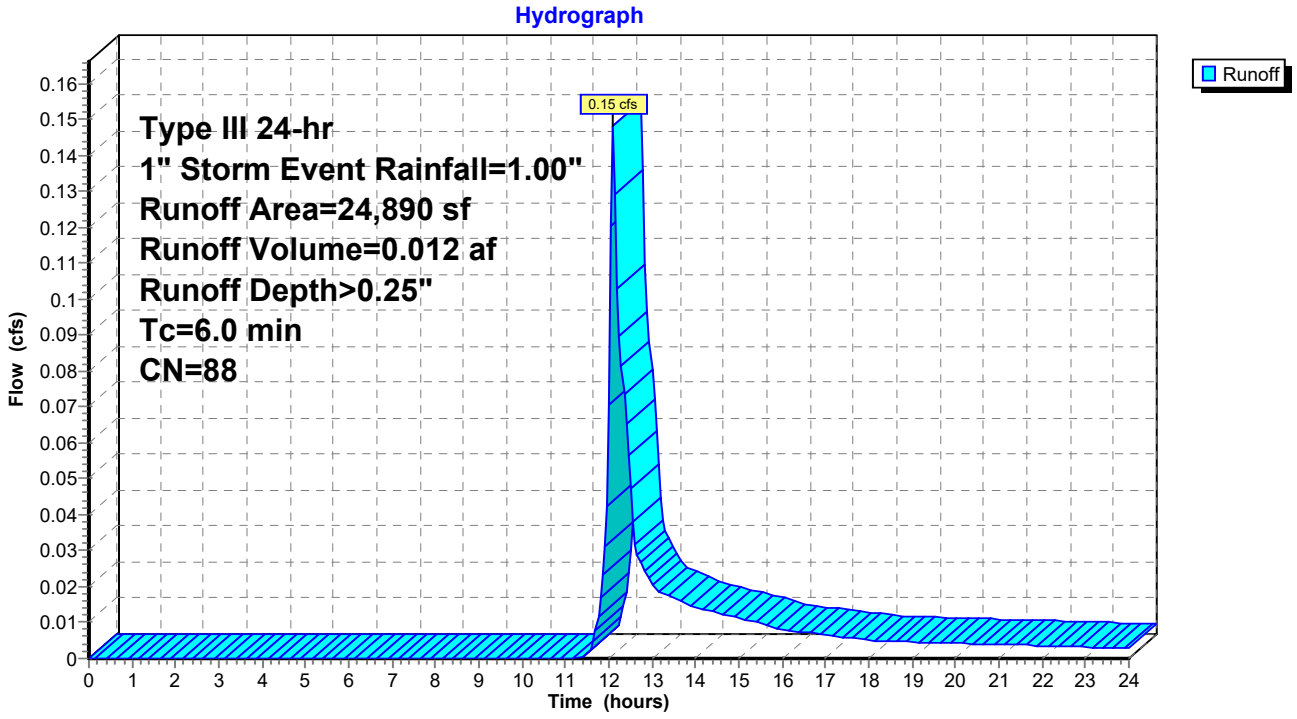
Runoff = 0.15 cfs @ 12.10 hrs, Volume= 0.012 af, Depth> 0.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
	4,345	39	>75% Grass cover, Good, HSG A
*	20,545	98	Impervious Shared Street and Plaza
	24,890	88	Weighted Average
	4,345		17.46% Pervious Area
	20,545		82.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 4S: Shared Street - Trench Drain



Summary for Subcatchment 5S: Building 12

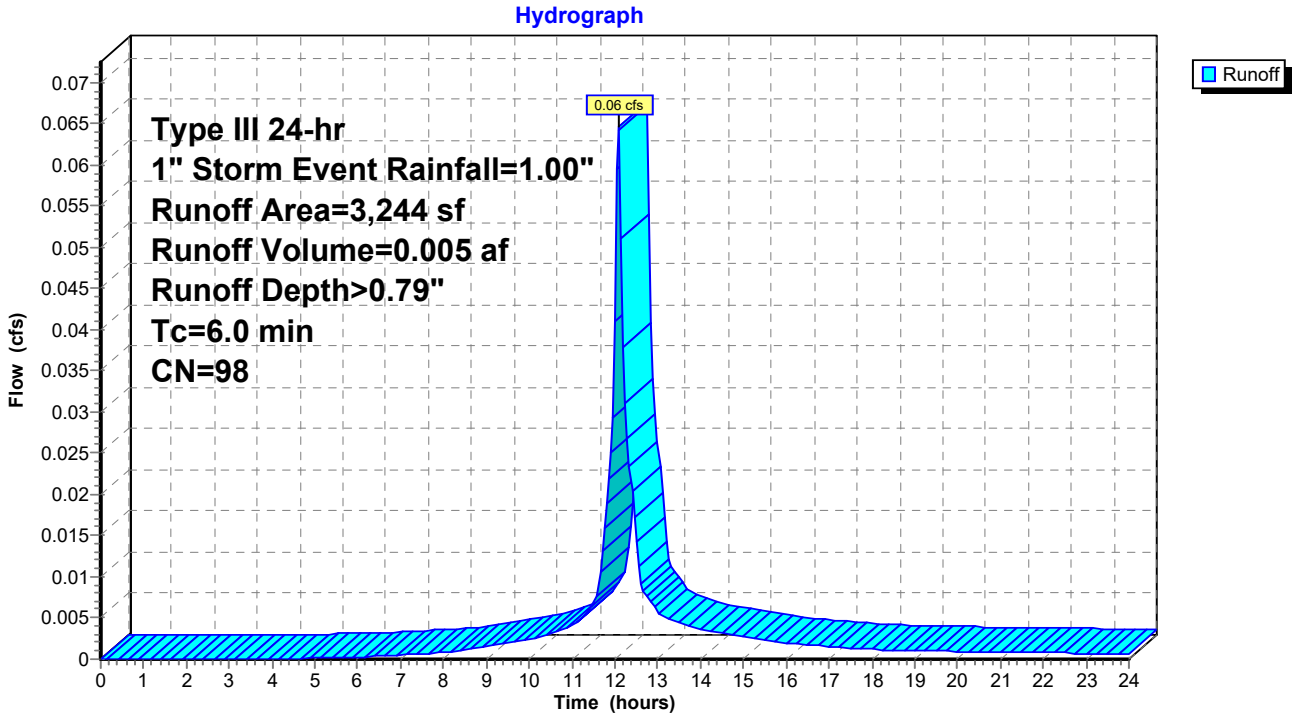
Runoff = 0.06 cfs @ 12.09 hrs, Volume= 0.005 af, Depth> 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	3,244	98	Roof
	3,244		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 5S: Building 12



Summary for Subcatchment 6Sa: Plaza between Blocks 1 & 2

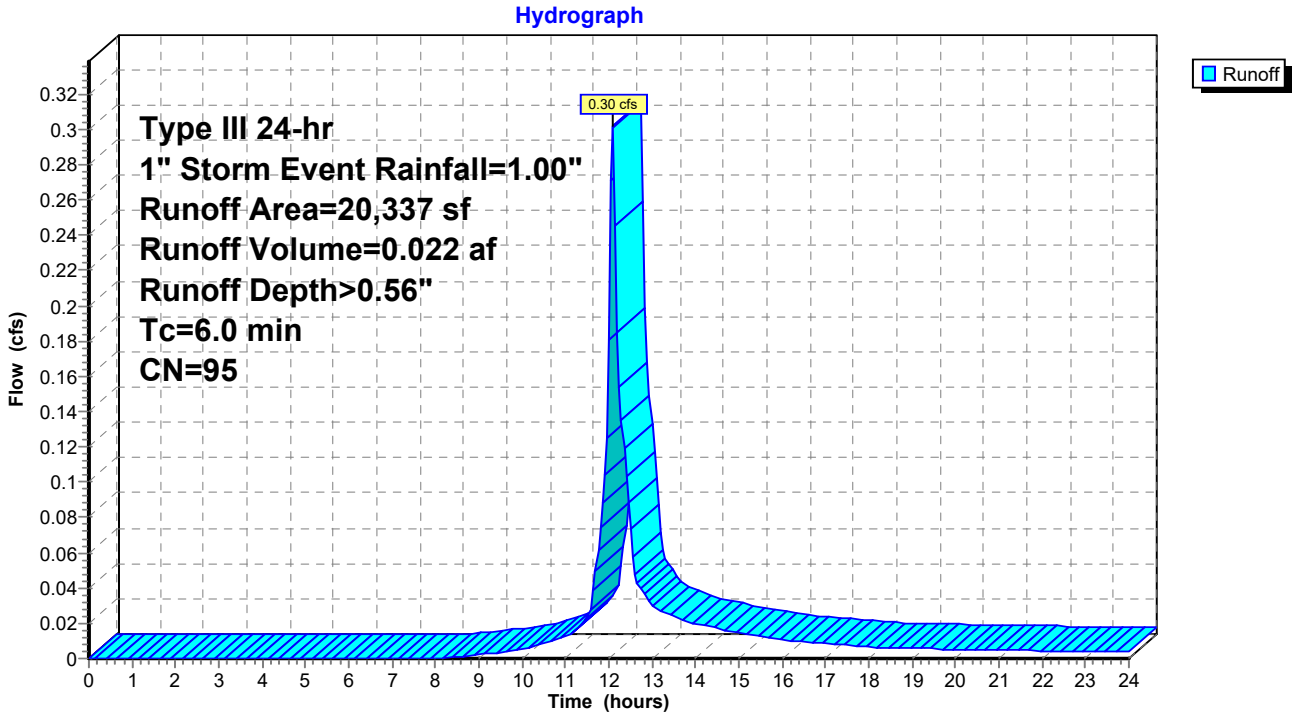
Runoff = 0.30 cfs @ 12.09 hrs, Volume= 0.022 af, Depth> 0.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	19,288	98	Impervious
	1,049	39	>75% Grass cover, Good, HSG A
	20,337	95	Weighted Average
	1,049		5.16% Pervious Area
	19,288		94.84% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 6Sa: Plaza between Blocks 1 & 2



Summary for Subcatchment 6Sb: Plaza between Blocks 1 & 2

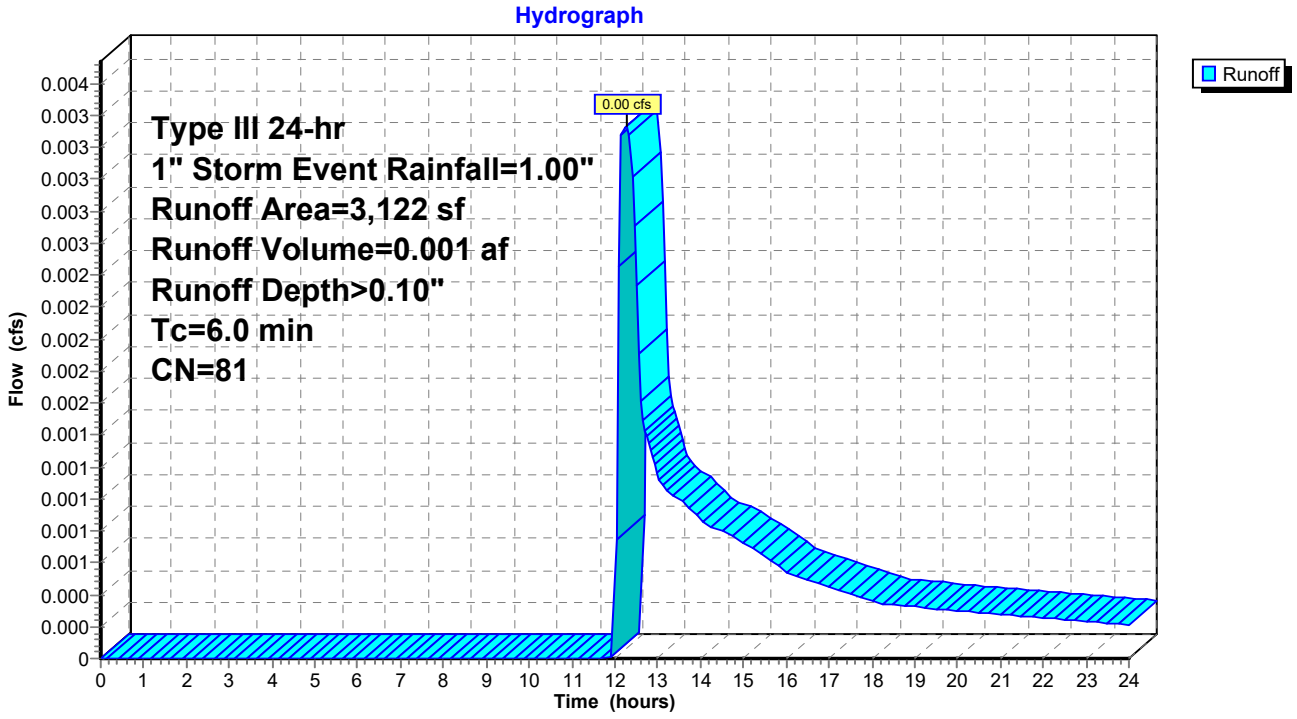
Runoff = 0.00 cfs @ 12.27 hrs, Volume= 0.001 af, Depth> 0.10"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	2,240	98	Impervious
	882	39	>75% Grass cover, Good, HSG A
	3,122	81	Weighted Average
	882		28.25% Pervious Area
	2,240		71.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 6Sb: Plaza between Blocks 1 & 2



Summary for Subcatchment 7S: Building 14

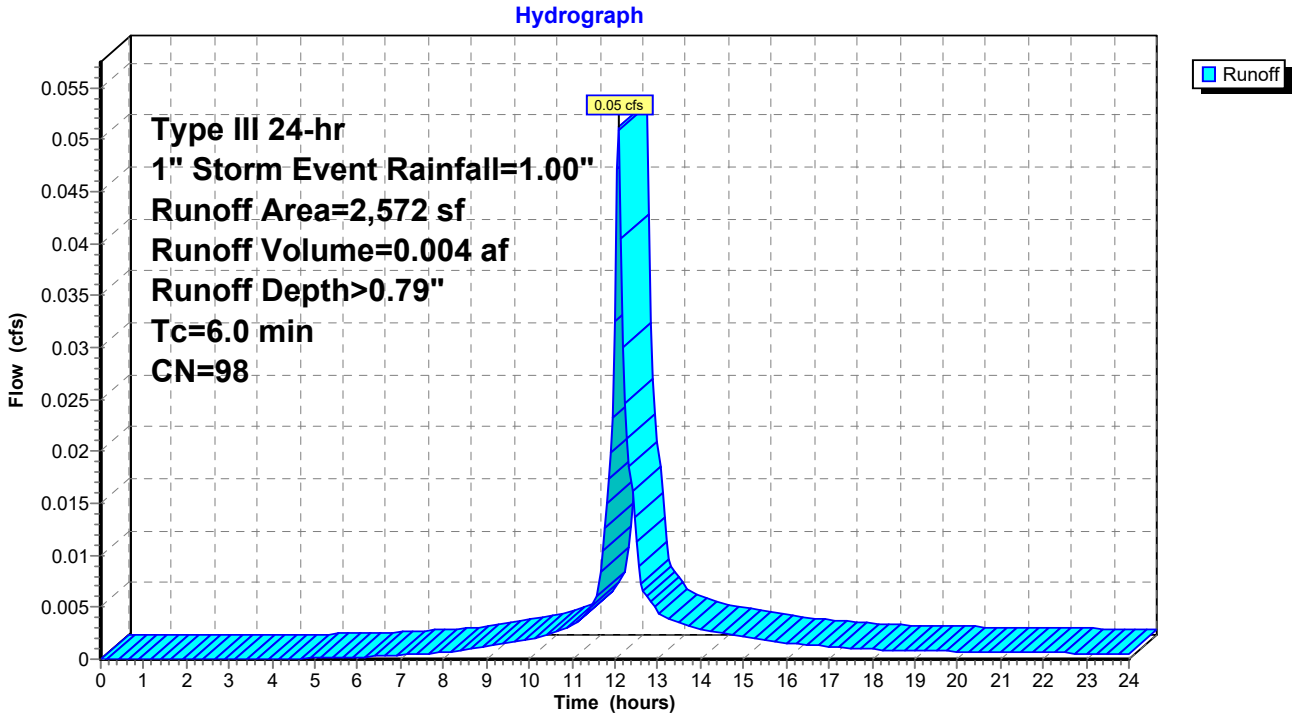
Runoff = 0.05 cfs @ 12.09 hrs, Volume= 0.004 af, Depth> 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	2,572	98	Roof
	2,572		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 7S: Building 14



Summary for Subcatchment 8S: Building 15

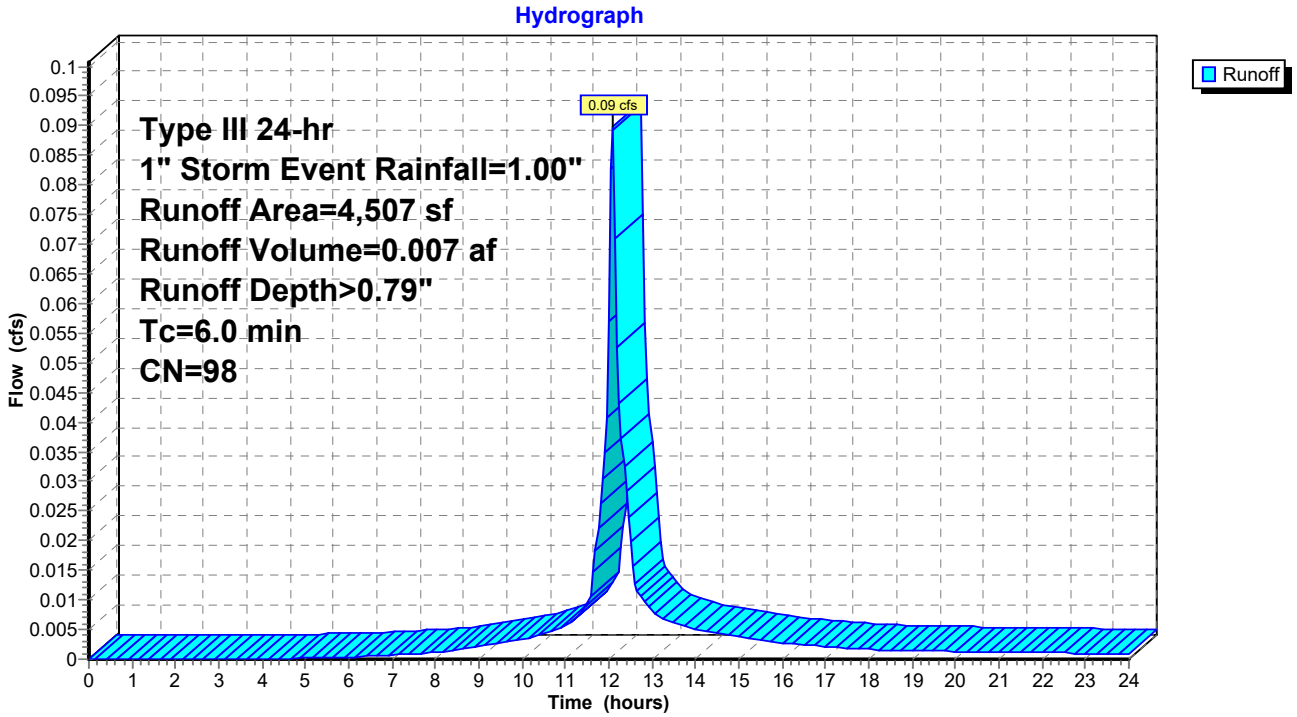
Runoff = 0.09 cfs @ 12.09 hrs, Volume= 0.007 af, Depth> 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	4,507	98	Roof
	4,507		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 8S: Building 15



Summary for Subcatchment 9S: Building 2 North

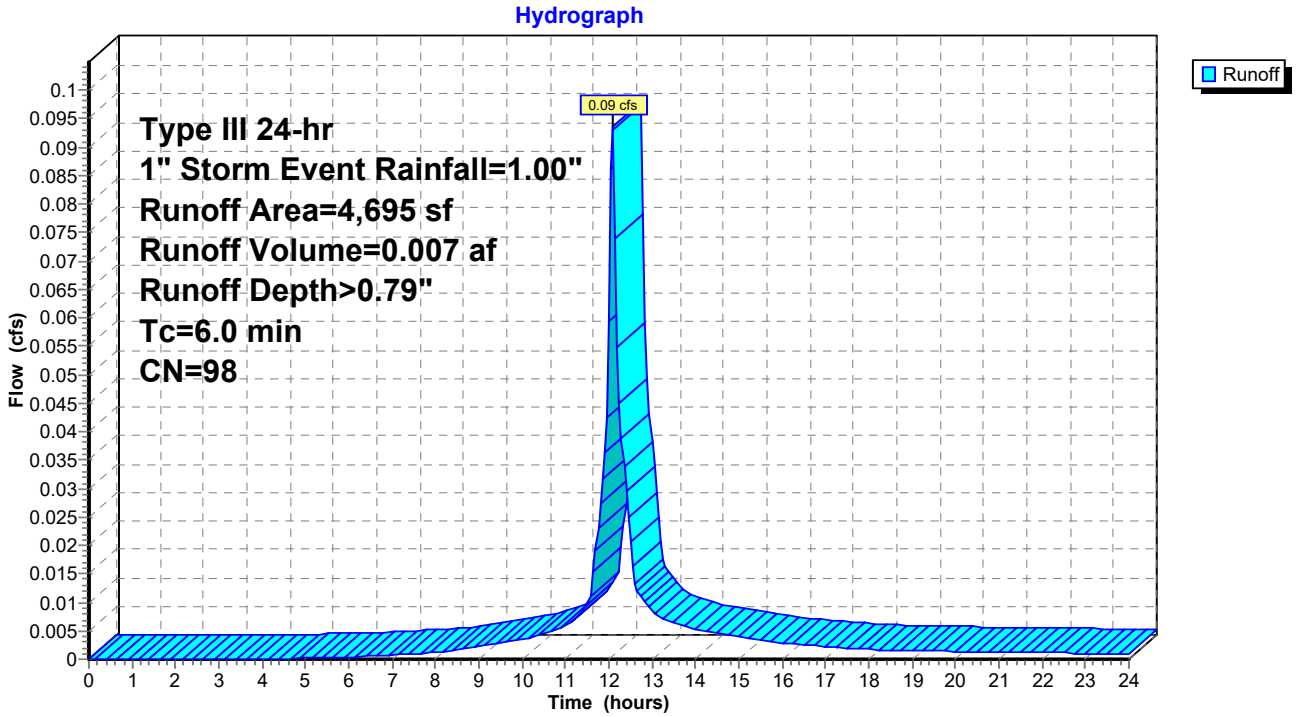
Runoff = 0.09 cfs @ 12.09 hrs, Volume= 0.007 af, Depth> 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	4,695	98	Roof
	4,695		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 9S: Building 2 North



Summary for Subcatchment 10S: Building 3 North

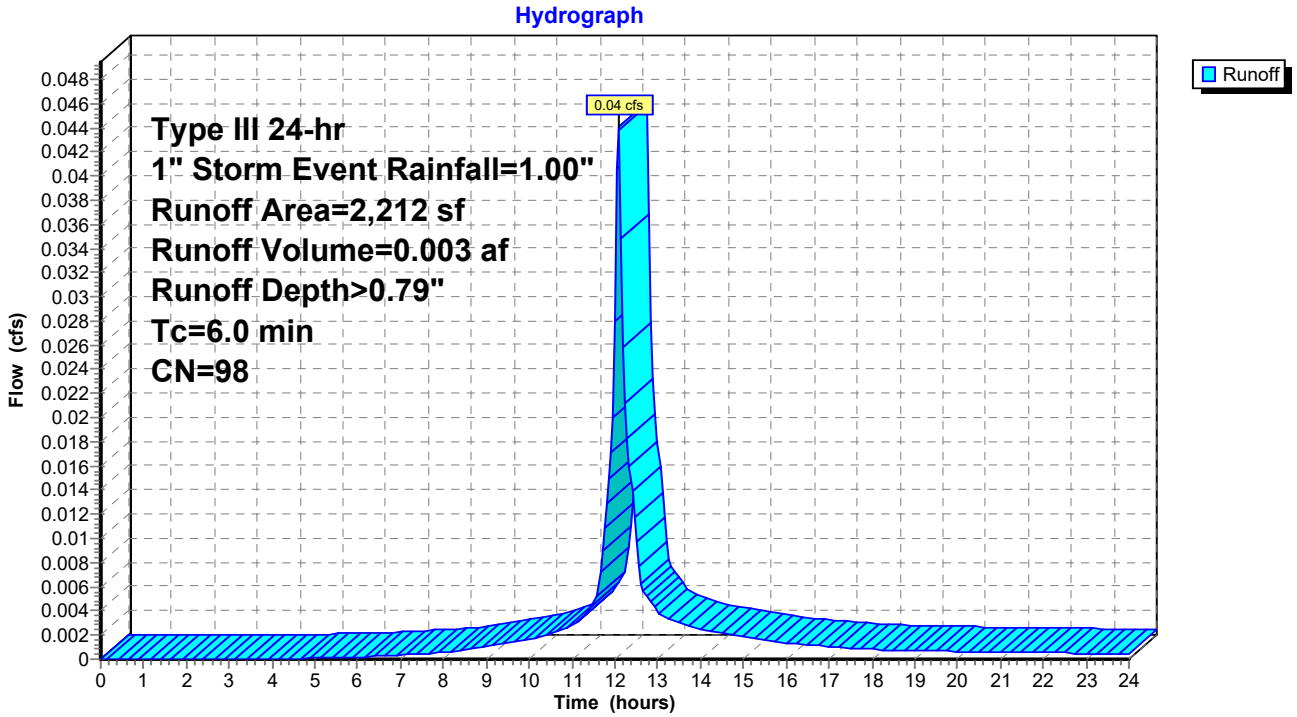
Runoff = 0.04 cfs @ 12.09 hrs, Volume= 0.003 af, Depth> 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	2,212	98	Roof
	2,212		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 10S: Building 3 North



Summary for Subcatchment 11S: Building 2 South

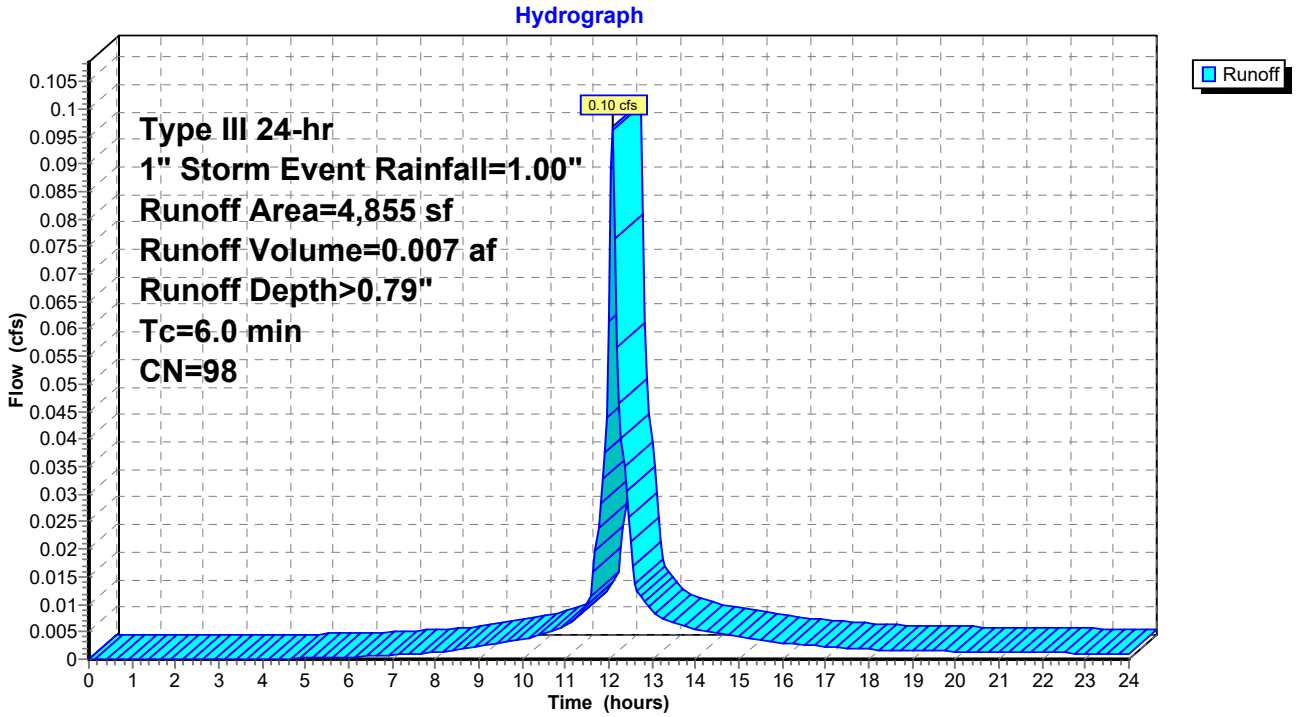
Runoff = 0.10 cfs @ 12.09 hrs, Volume= 0.007 af, Depth> 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	4,855	98	Roof
	4,855		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 11S: Building 2 South



Summary for Subcatchment 12S: Building 3 South

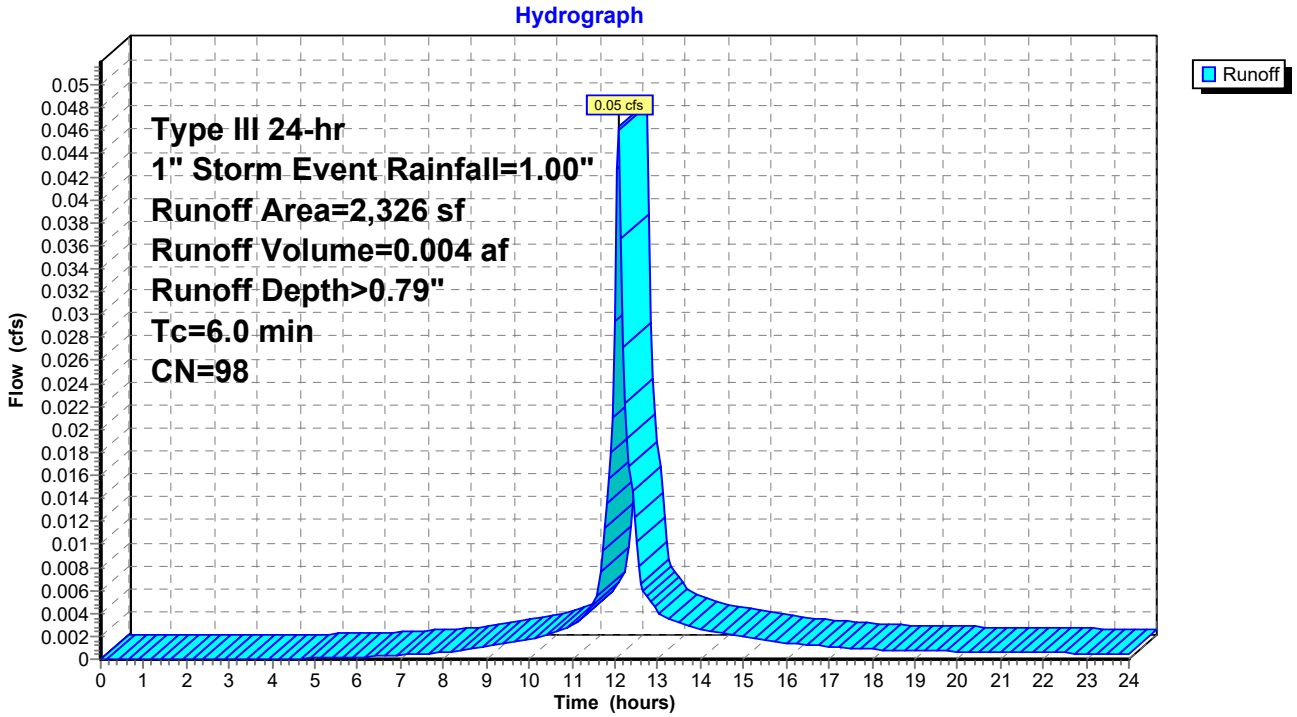
Runoff = 0.05 cfs @ 12.09 hrs, Volume= 0.004 af, Depth> 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	2,326	98	Roof
	2,326		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 12S: Building 3 South



Summary for Subcatchment 13S: Building 6

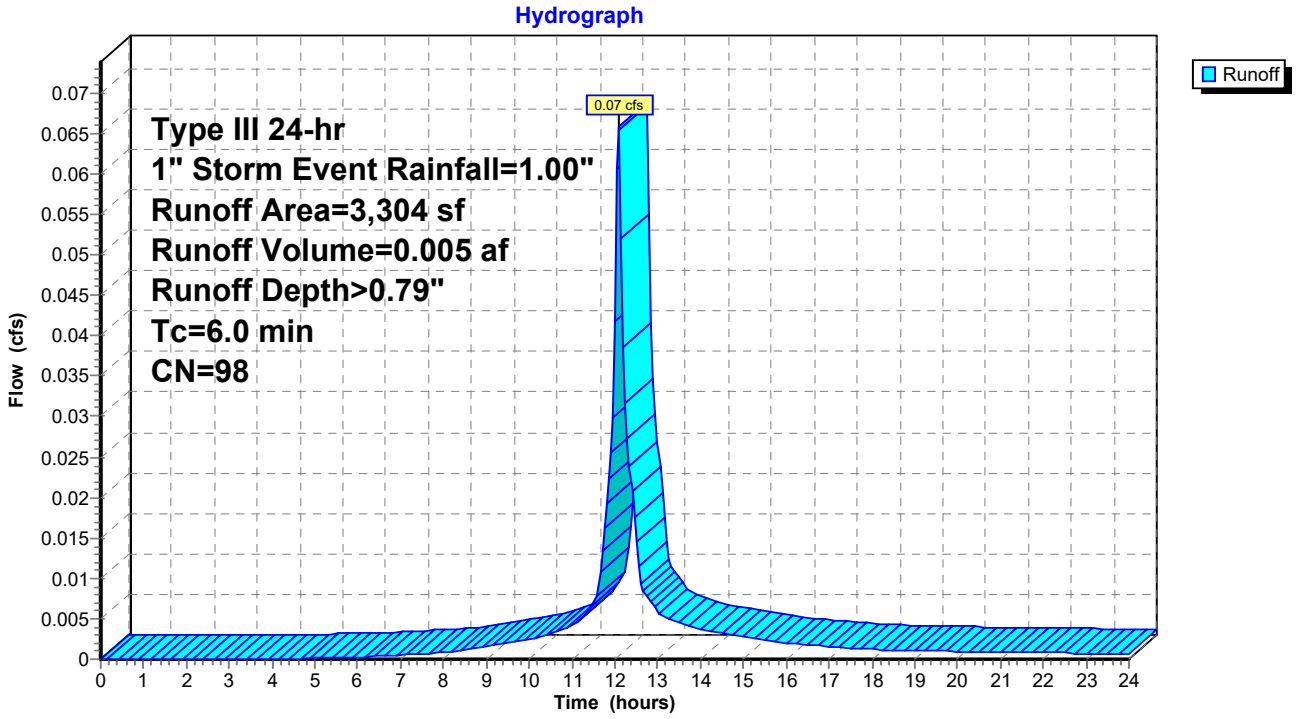
Runoff = 0.07 cfs @ 12.09 hrs, Volume= 0.005 af, Depth> 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	3,304	98	Roof
	3,304		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 13S: Building 6



Summary for Subcatchment 14S: Building 6B North

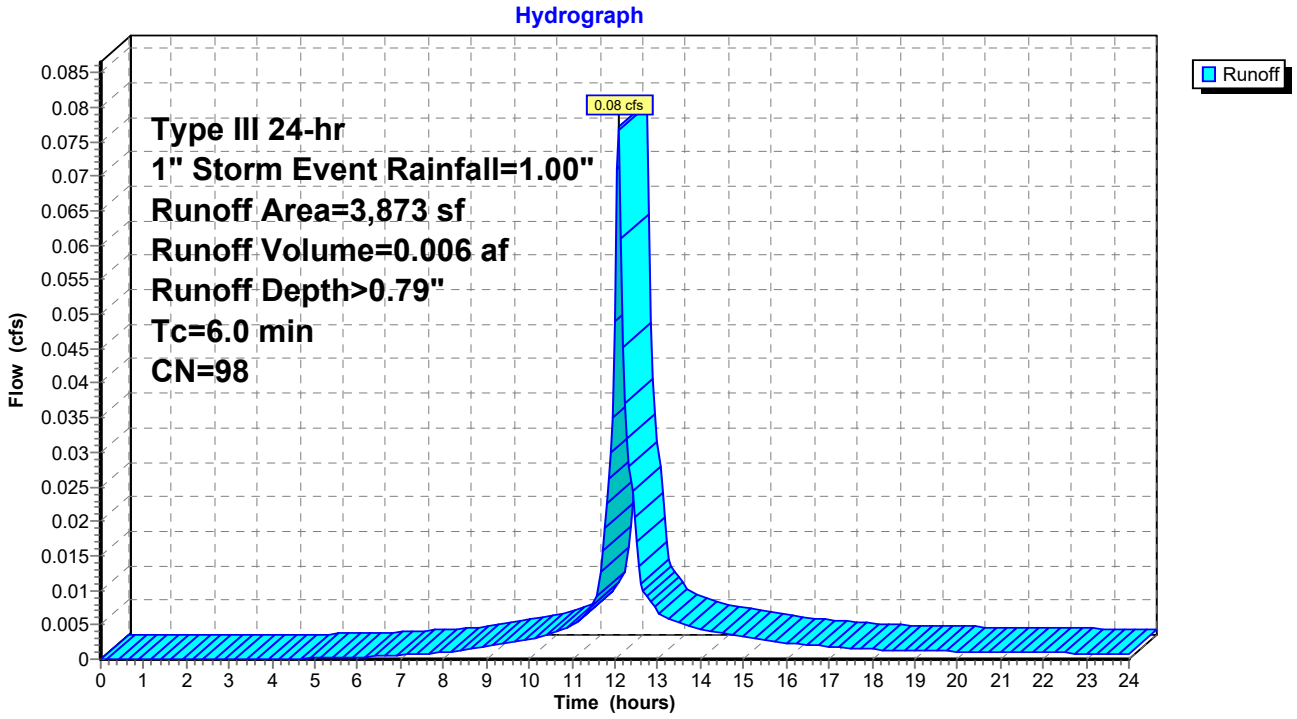
Runoff = 0.08 cfs @ 12.09 hrs, Volume= 0.006 af, Depth> 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	3,873	98	Roof
	3,873		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 14S: Building 6B North



Summary for Subcatchment 15S: Building 6B South

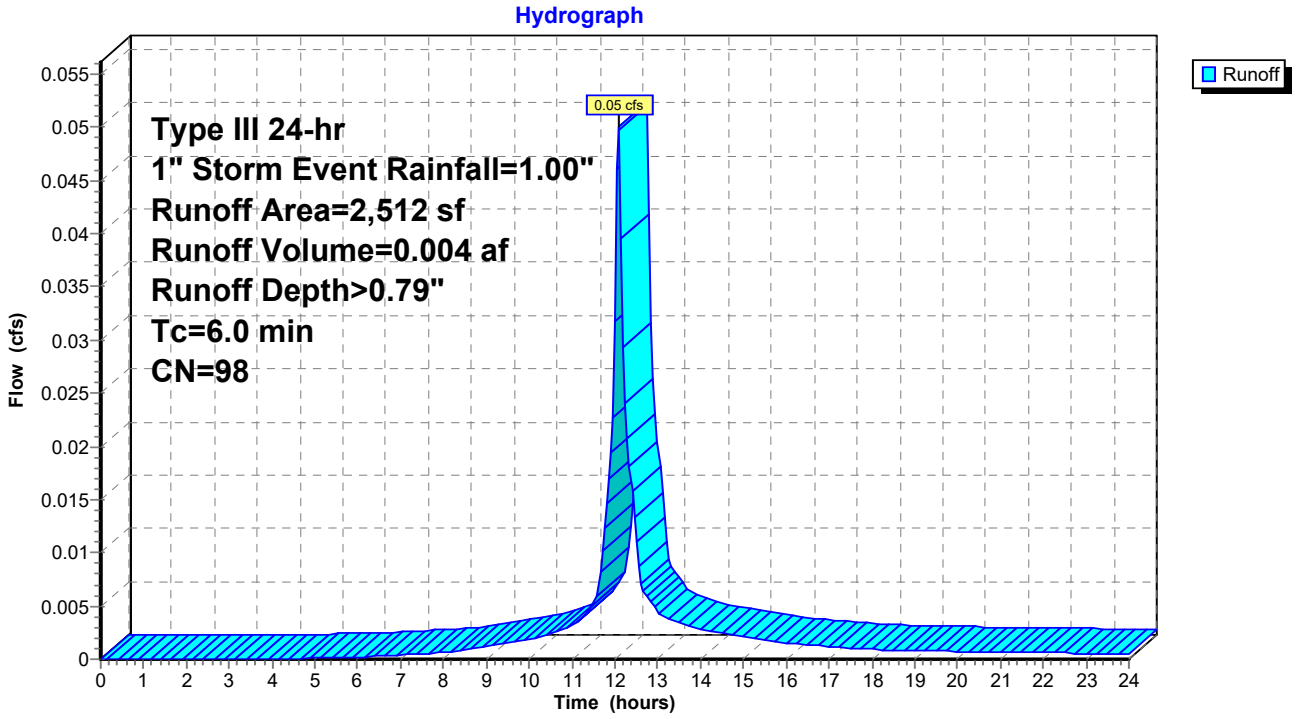
Runoff = 0.05 cfs @ 12.09 hrs, Volume= 0.004 af, Depth> 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	2,512	98	Roof
	2,512		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 15S: Building 6B South



Summary for Subcatchment 16S: Shared Street - Trench Drain

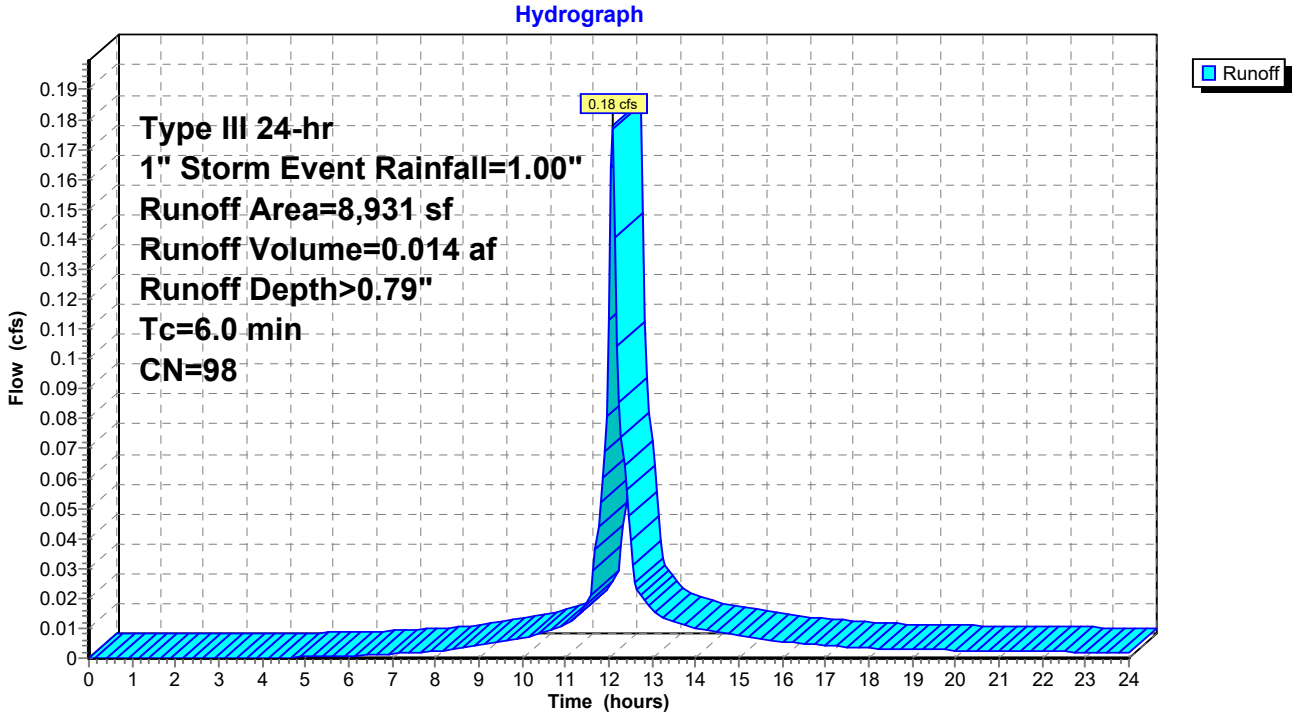
Runoff = 0.18 cfs @ 12.09 hrs, Volume= 0.014 af, Depth> 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
	0	39	>75% Grass cover, Good, HSG A
*	8,931	98	Impervious Shared Street
	8,931	98	Weighted Average
	8,931		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 16S: Shared Street - Trench Drain



Summary for Subcatchment 17S: Future Block 3 Building Footprint

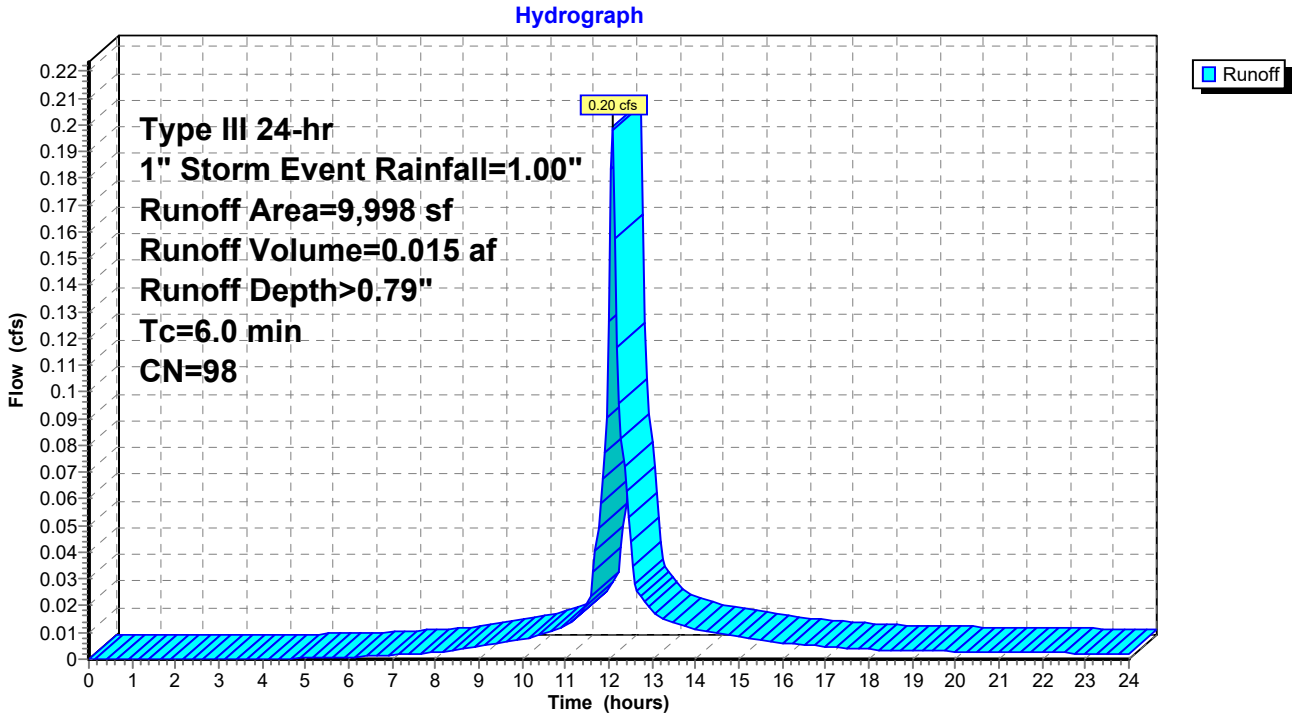
Runoff = 0.20 cfs @ 12.09 hrs, Volume= 0.015 af, Depth> 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	9,998	98	Gravel
	9,998		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 17S: Future Block 3 Building Footprint



Summary for Subcatchment 18S: Plaza between Blocks 2 & 4

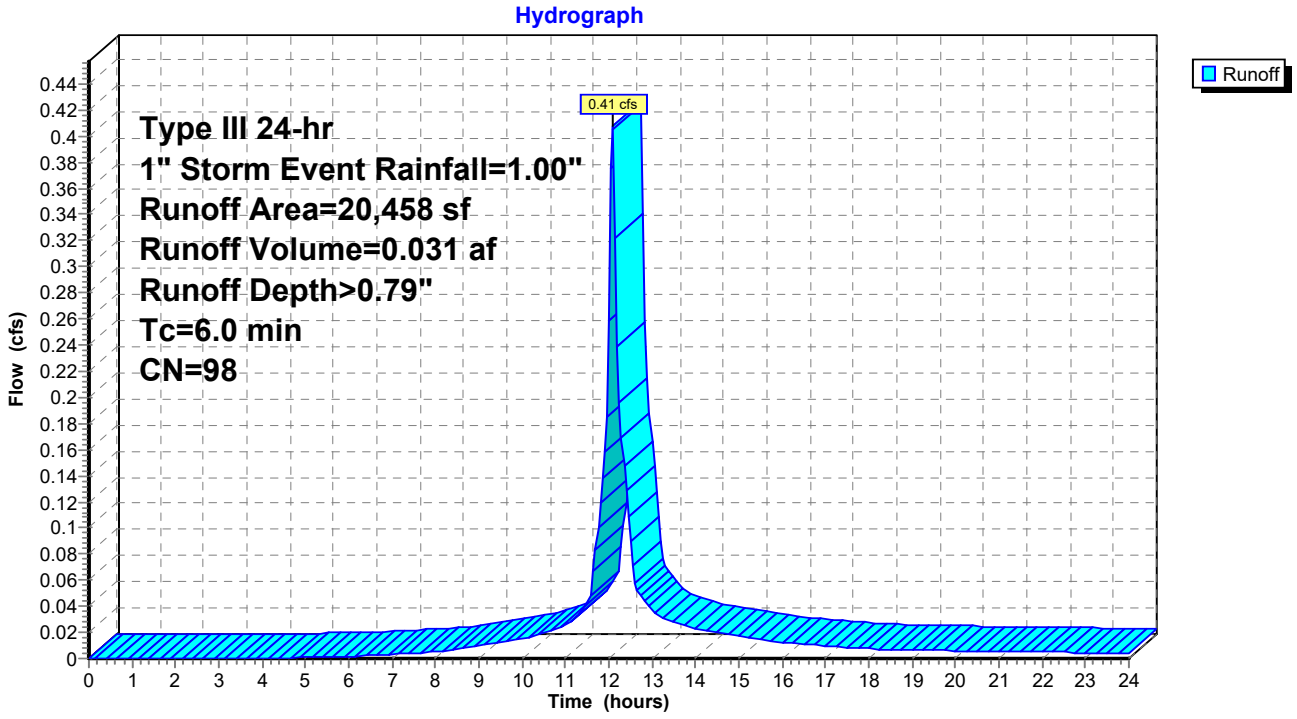
Runoff = 0.41 cfs @ 12.09 hrs, Volume= 0.031 af, Depth> 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	20,352	98	Impervious
	106	39	>75% Grass cover, Good, HSG A
	20,458	98	Weighted Average
	106		0.52% Pervious Area
	20,352		99.48% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 18S: Plaza between Blocks 2 & 4



Summary for Subcatchment 19S: Building 4A

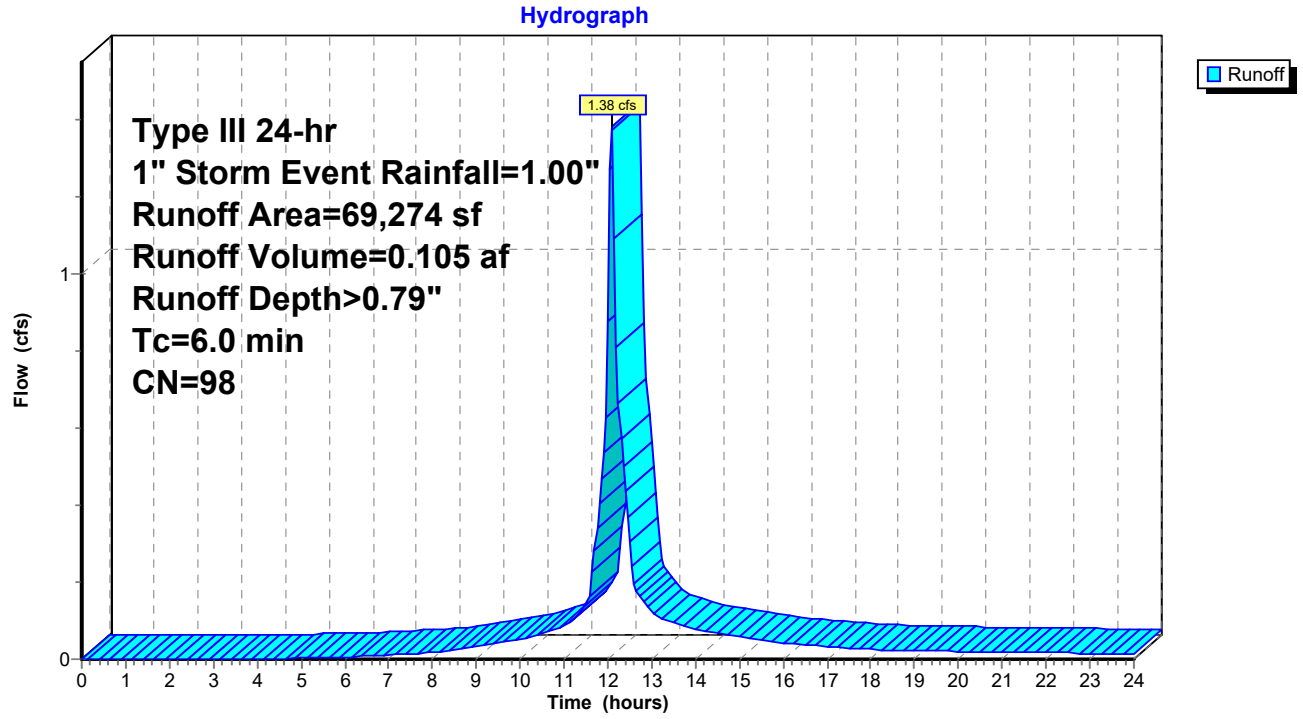
Runoff = 1.38 cfs @ 12.09 hrs, Volume= 0.105 af, Depth> 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	69,274	98	Roof
	69,274		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 19S: Building 4A



Summary for Subcatchment 20S: Redevelopment area east and south of Building 4A

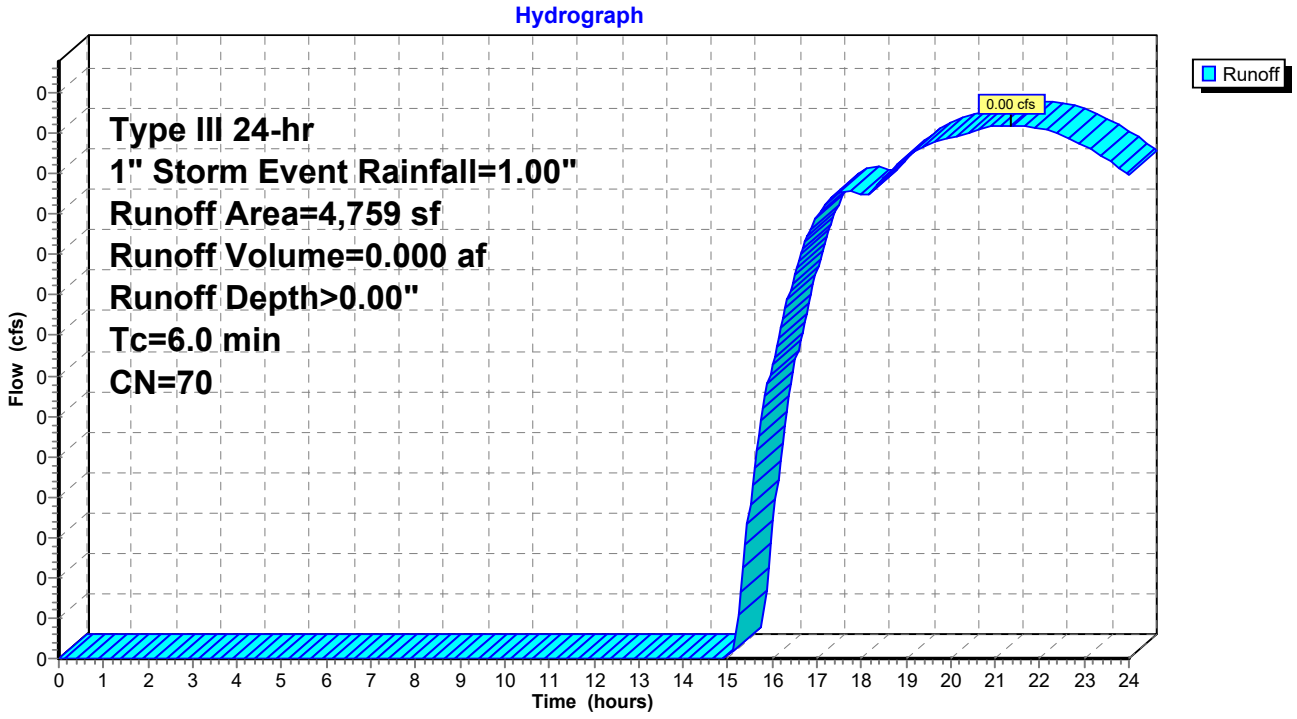
Runoff = 0.00 cfs @ 21.36 hrs, Volume= 0.000 af, Depth> 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	2,489	98	Impervious
	2,270	39	>75% Grass cover, Good, HSG A
	4,759	70	Weighted Average
	2,270		47.70% Pervious Area
	2,489		52.30% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 20S: Redevelopment area east and south of Building 4A



Summary for Subcatchment 21S: Eastern Waterfront

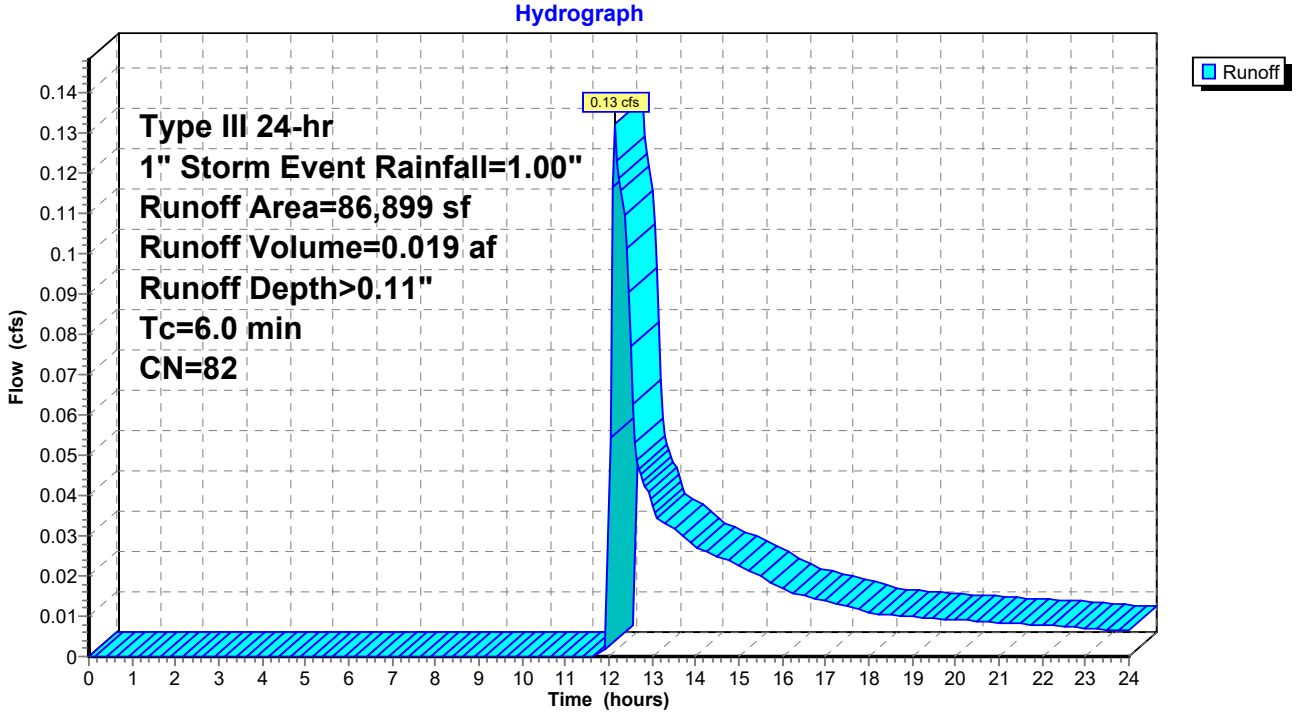
Runoff = 0.13 cfs @ 12.16 hrs, Volume= 0.019 af, Depth> 0.11"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	63,527	98	Impervious
	23,372	39	>75% Grass cover, Good, HSG A
	86,899	82	Weighted Average
	23,372		26.90% Pervious Area
	63,527		73.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 21S: Eastern Waterfront



Summary for Pond 1P: DMH 1

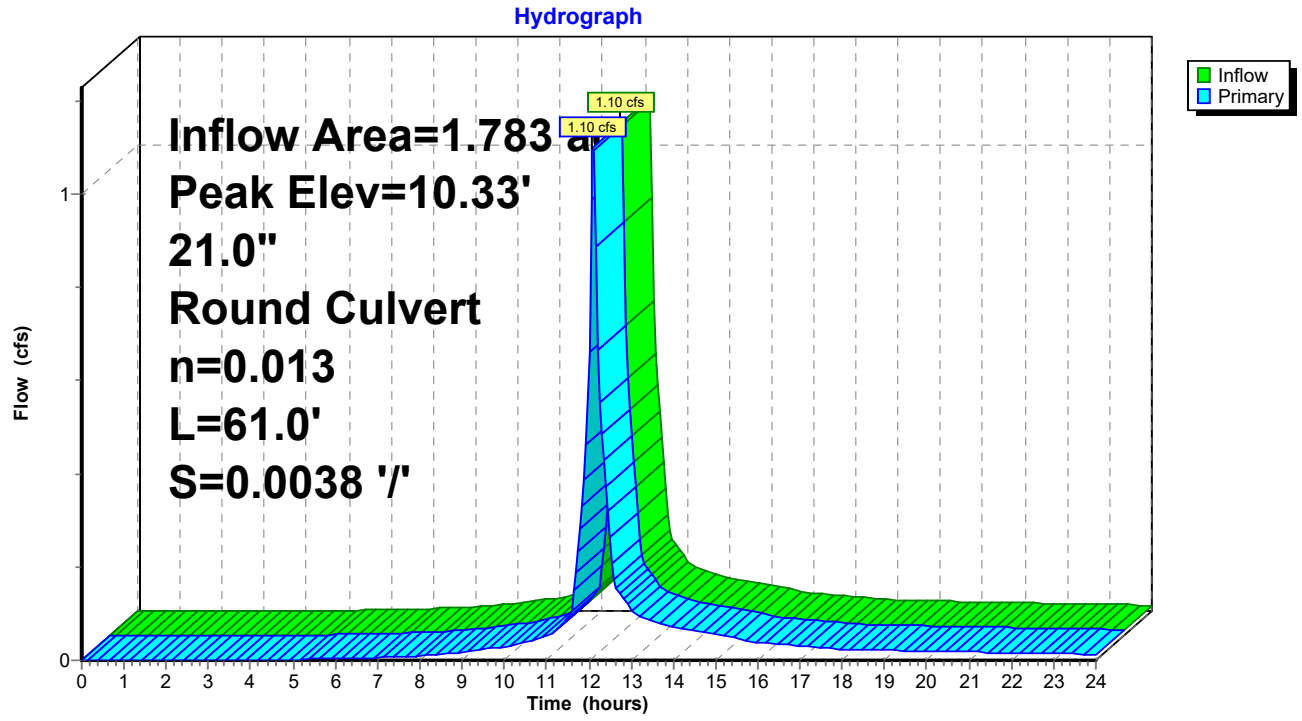
Inflow Area = 1.783 ac, 93.06% Impervious, Inflow Depth > 0.56" for 1" Storm Event event
Inflow = 1.10 cfs @ 12.09 hrs, Volume= 0.083 af
Outflow = 1.10 cfs @ 12.09 hrs, Volume= 0.083 af, Atten= 0%, Lag= 0.0 min
Primary = 1.10 cfs @ 12.09 hrs, Volume= 0.083 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 10.33' @ 12.09 hrs
Flood Elev= 14.71'

Device	Routing	Invert	Outlet Devices
#1	Primary	9.77'	**21.0" Round Culvert** L= 61.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 9.77' / 9.54' S= 0.0038 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 2.41 sf

Primary OutFlow Max=1.07 cfs @ 12.09 hrs HW=10.32' (Free Discharge)
1=Culvert (Barrel Controls 1.07 cfs @ 2.47 fps)

Pond 1P: DMH 1



Summary for Pond 2P: DMH 2

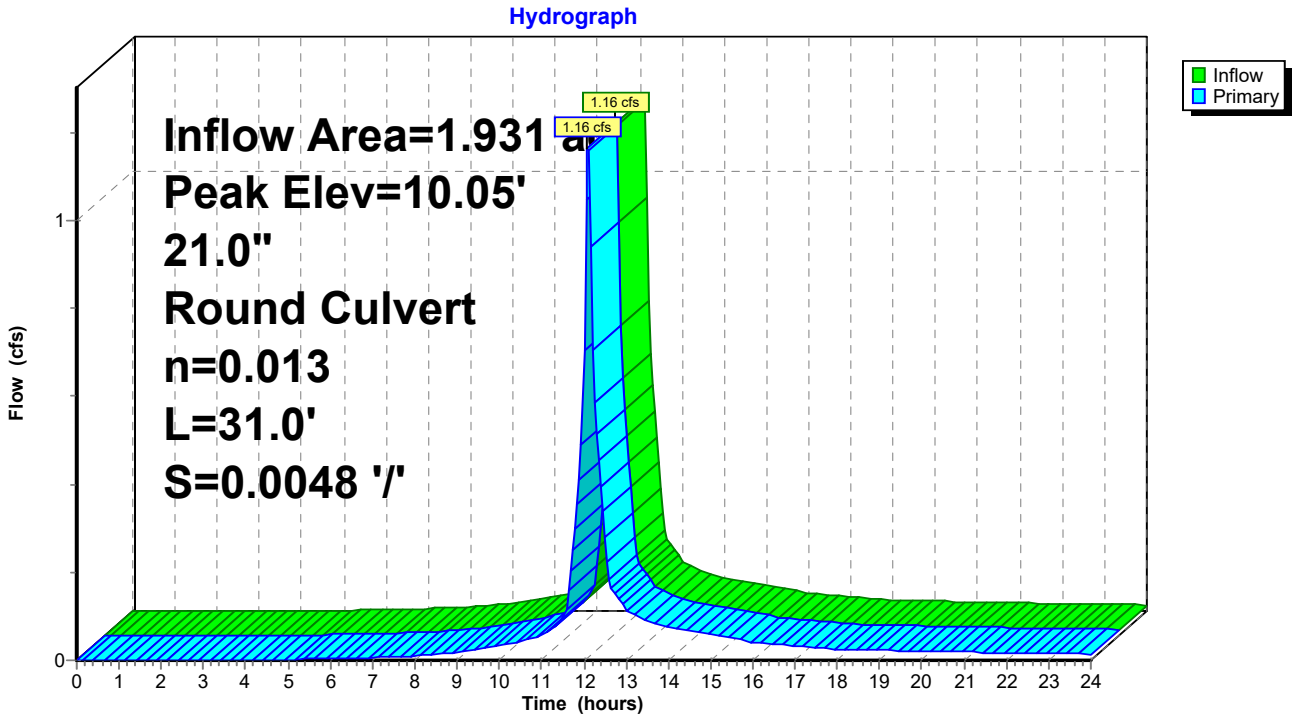
Inflow Area = 1.931 ac, 92.54% Impervious, Inflow Depth > 0.55" for 1" Storm Event event
Inflow = 1.16 cfs @ 12.09 hrs, Volume= 0.089 af
Outflow = 1.16 cfs @ 12.09 hrs, Volume= 0.089 af, Atten= 0%, Lag= 0.0 min
Primary = 1.16 cfs @ 12.09 hrs, Volume= 0.089 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 10.05' @ 12.09 hrs
Flood Elev= 14.63'

Device	Routing	Invert	Outlet Devices
#1	Primary	9.50'	**21.0" Round Culvert** L= 31.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 9.50' / 9.35' S= 0.0048 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 2.41 sf

Primary OutFlow Max=1.14 cfs @ 12.09 hrs HW=10.04' (Free Discharge)
1=Culvert (Barrel Controls 1.14 cfs @ 2.70 fps)

Pond 2P: DMH 2



Summary for Pond 3P: Storm Structure

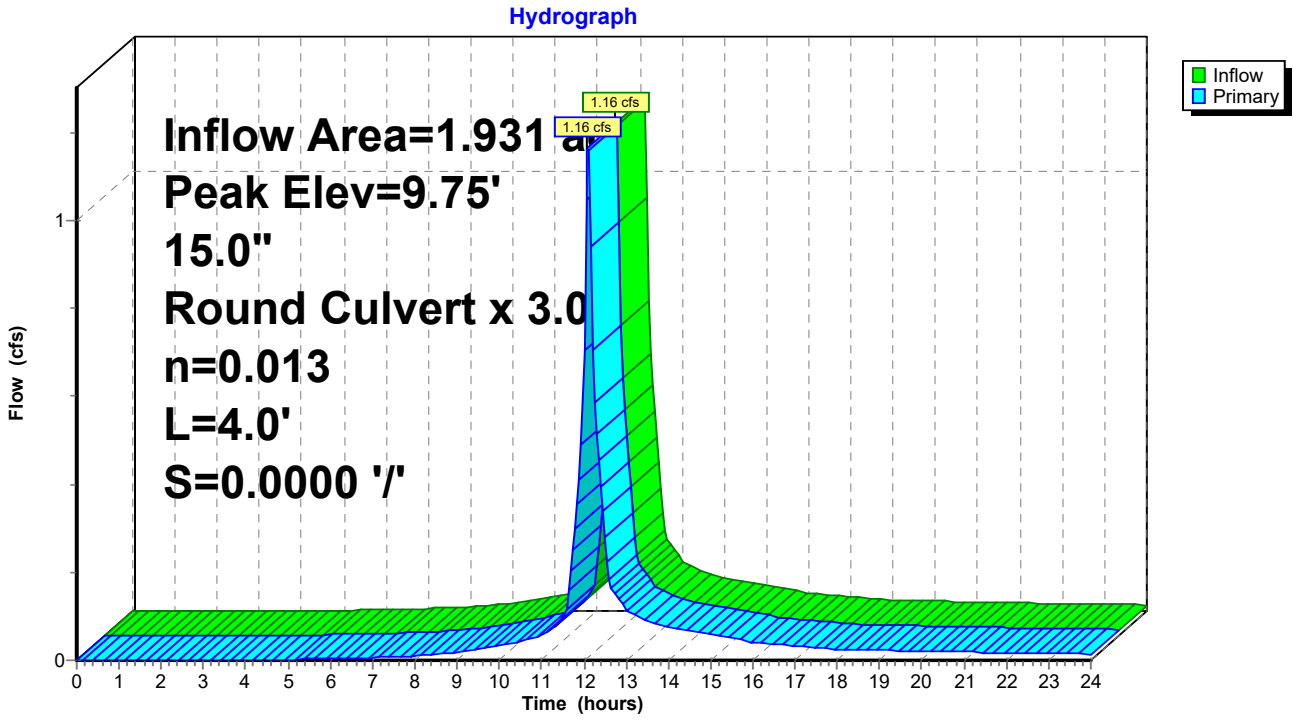
Inflow Area = 1.931 ac, 92.54% Impervious, Inflow Depth > 0.55" for 1" Storm Event event
Inflow = 1.16 cfs @ 12.09 hrs, Volume= 0.089 af
Outflow = 1.16 cfs @ 12.09 hrs, Volume= 0.089 af, Atten= 0%, Lag= 0.0 min
Primary = 1.16 cfs @ 12.09 hrs, Volume= 0.089 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 9.75' @ 12.09 hrs
Flood Elev= 14.51'

Device	Routing	Invert	Outlet Devices
#1	Primary	9.35'	**15.0" Round Culvert X 3.00** L= 4.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 9.35' / 9.35' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=1.14 cfs @ 12.09 hrs HW=9.74' (Free Discharge)
1=Culvert (Barrel Controls 1.14 cfs @ 1.73 fps)

Pond 3P: Storm Structure



Summary for Pond 4P: R-Tank 1

Inflow Area = 1.931 ac, 92.54% Impervious, Inflow Depth > 0.55" for 1" Storm Event event
Inflow = 1.16 cfs @ 12.09 hrs, Volume= 0.089 af
Outflow = 0.80 cfs @ 12.19 hrs, Volume= 0.083 af, Atten= 31%, Lag= 5.6 min
Primary = 0.80 cfs @ 12.19 hrs, Volume= 0.083 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 8.12' @ 12.19 hrs Surf.Area= 1,597 sf Storage= 857 cf
Flood Elev= 10.42' Surf.Area= 1,597 sf Storage= 3,504 cf

Plug-Flow detention time= 73.5 min calculated for 0.082 af (93% of inflow)
Center-of-Mass det. time= 38.0 min (847.4 - 809.4)

Volume	Invert	Avail.Storage	Storage Description
#1	7.35'	1,478 cf	**Stone Envelope (Prismatic)** Listed below (Recalc) 6,500 cf Overall - 2,806 cf Embedded = 3,694 cf x 40.0% Voids
#2	7.60'	2,666 cf	**R-Tank Double Modules (Prismatic)** Listed below (Recalc) Inside #1 2,806 cf Overall x 95.0% Voids
		4,143 cf	Total Available Storage

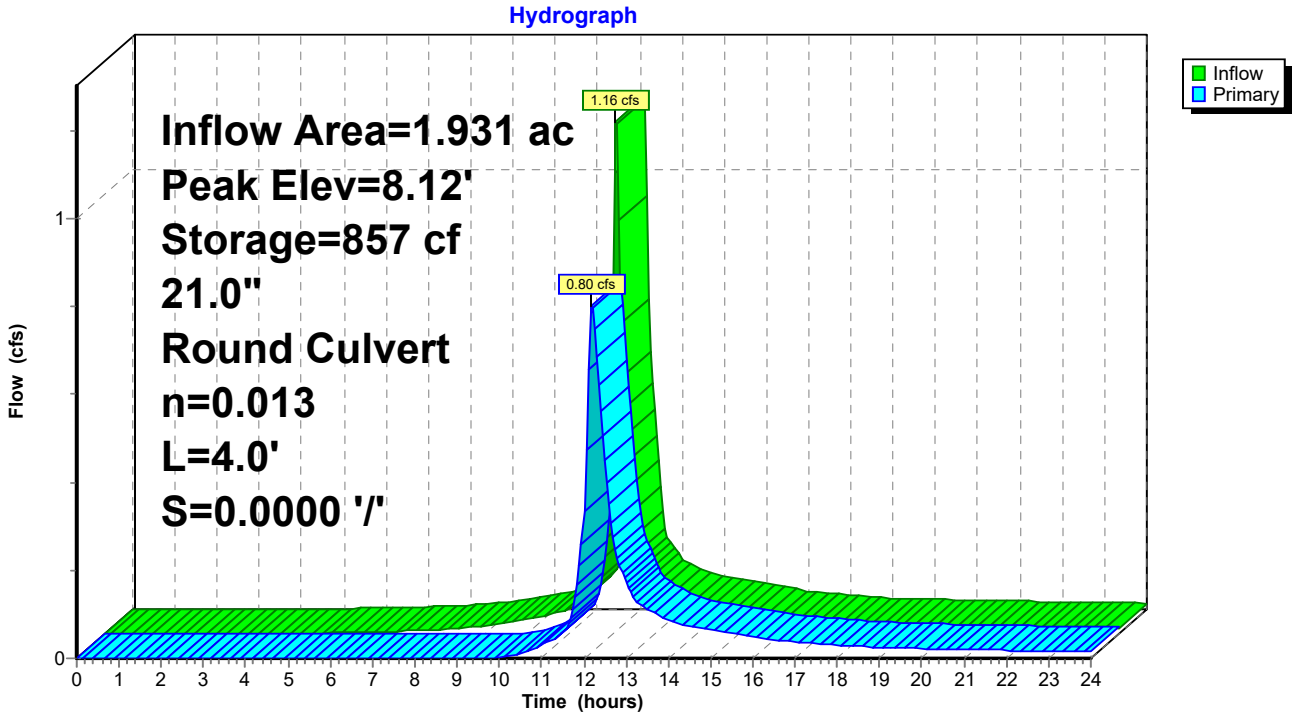
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
7.35	1,597	0	0
11.42	1,597	6,500	6,500

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
7.60	1,293	0	0
9.77	1,293	2,806	2,806

Device	Routing	Invert	Outlet Devices
#1	Primary	7.60'	**21.0" Round Culvert to Filter** L= 4.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 7.60' / 7.60' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 2.41 sf

Primary OutFlow Max=0.79 cfs @ 12.19 hrs HW=8.11' (Free Discharge)
↑**1=Culvert to Filter** (Barrel Controls 0.79 cfs @ 2.02 fps)

Pond 4P: R-Tank 1



Summary for Pond 6P: CB27

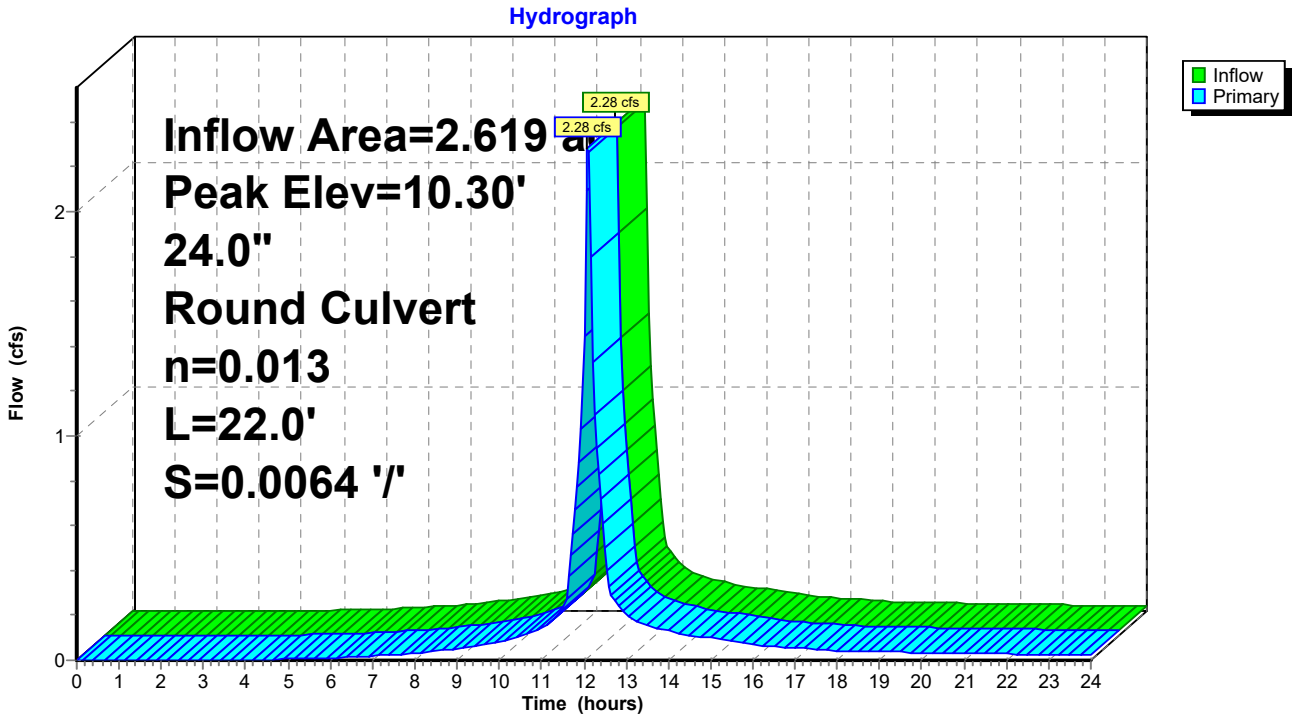
Inflow Area = 2.619 ac, 99.91% Impervious, Inflow Depth > 0.79" for 1" Storm Event event
Inflow = 2.28 cfs @ 12.09 hrs, Volume= 0.173 af
Outflow = 2.28 cfs @ 12.09 hrs, Volume= 0.173 af, Atten= 0%, Lag= 0.0 min
Primary = 2.28 cfs @ 12.09 hrs, Volume= 0.173 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 10.30' @ 12.09 hrs
Flood Elev= 14.57'

Device	Routing	Invert	Outlet Devices
#1	Primary	9.53'	**24.0" Round Culvert** L= 22.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 9.53' / 9.39' S= 0.0064 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=2.22 cfs @ 12.09 hrs HW=10.29' (Free Discharge)
1=Culvert (Barrel Controls 2.22 cfs @ 2.99 fps)

Pond 6P: CB27



Summary for Pond 7P: Storm Structure

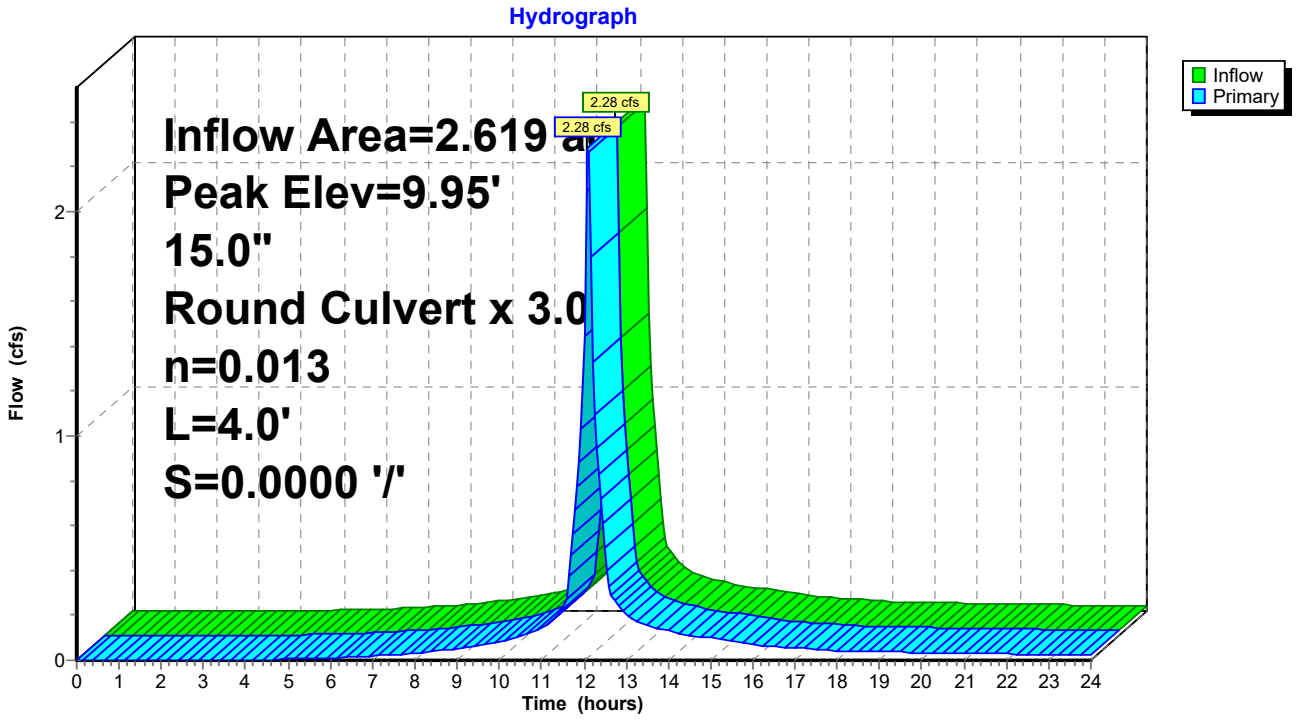
Inflow Area = 2.619 ac, 99.91% Impervious, Inflow Depth > 0.79" for 1" Storm Event event
Inflow = 2.28 cfs @ 12.09 hrs, Volume= 0.173 af
Outflow = 2.28 cfs @ 12.09 hrs, Volume= 0.173 af, Atten= 0%, Lag= 0.0 min
Primary = 2.28 cfs @ 12.09 hrs, Volume= 0.173 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 9.95' @ 12.09 hrs
Flood Elev= 14.25'

Device	Routing	Invert	Outlet Devices
#1	Primary	9.39'	**15.0" Round Culvert X 3.00** L= 4.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 9.39' / 9.39' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=2.22 cfs @ 12.09 hrs HW=9.94' (Free Discharge)
1=Culvert (Barrel Controls 2.22 cfs @ 2.09 fps)

Pond 7P: Storm Structure



Summary for Pond 8P: R-Tank 2

Inflow Area = 2.619 ac, 99.91% Impervious, Inflow Depth > 0.79" for 1" Storm Event event
Inflow = 2.28 cfs @ 12.09 hrs, Volume= 0.173 af
Outflow = 1.36 cfs @ 12.21 hrs, Volume= 0.159 af, Atten= 40%, Lag= 7.1 min
Primary = 1.36 cfs @ 12.21 hrs, Volume= 0.159 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 8.47' @ 12.21 hrs Surf.Area= 3,128 sf Storage= 2,089 cf
Flood Elev= 12.71' Surf.Area= 3,128 sf Storage= 8,290 cf

Plug-Flow detention time= 89.3 min calculated for 0.159 af (92% of inflow)
Center-of-Mass det. time= 50.4 min (837.8 - 787.4)

Volume	Invert	Avail.Storage	Storage Description
#1	7.57'	2,767 cf	**Stone Envelope (Prismatic)** Listed below (Recalc) 12,731 cf Overall - 5,813 cf Embedded = 6,918 cf x 40.0% Voids
#2	7.82'	5,523 cf	**R-Tank Double Modules (Prismatic)** Listed below (Recalc) Inside #1 5,813 cf Overall x 95.0% Voids
		8,290 cf	Total Available Storage

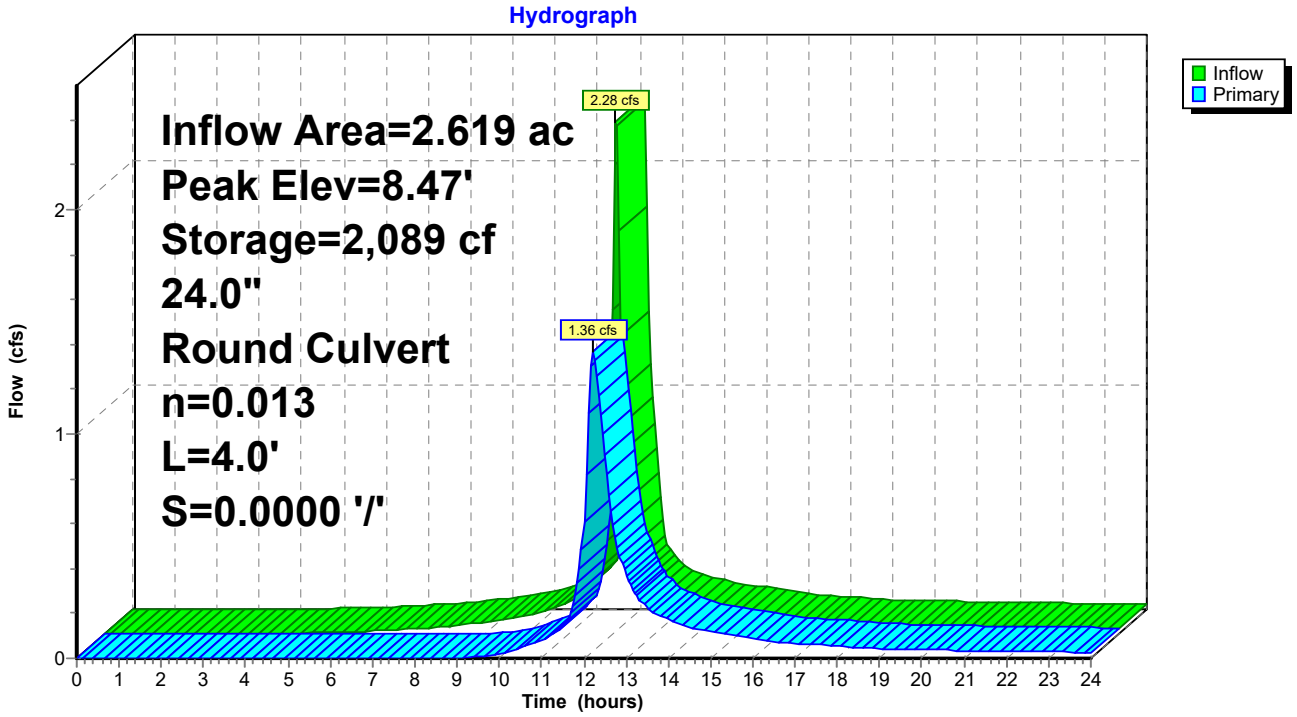
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
7.57	3,128	0	0
11.64	3,128	12,731	12,731

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
7.82	2,679	0	0
9.99	2,679	5,813	5,813

Device	Routing	Invert	Outlet Devices
#1	Primary	7.82'	**24.0" Round Culvert to Filter** L= 4.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 7.82' / 7.82' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=1.36 cfs @ 12.21 hrs HW=8.47' (Free Discharge)
1=Culvert to Filter (Barrel Controls 1.36 cfs @ 2.29 fps)

Pond 8P: R-Tank 2



Summary for Pond 10P: DMH 5

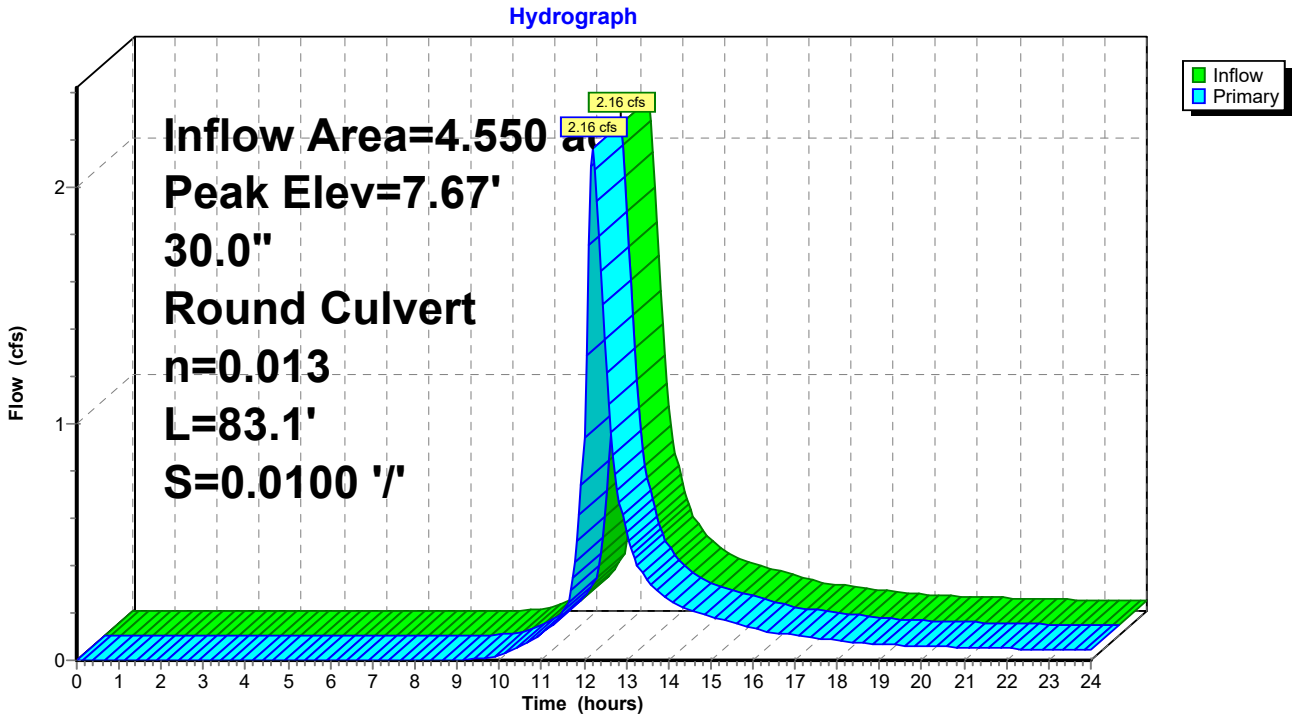
Inflow Area = 4.550 ac, 96.78% Impervious, Inflow Depth > 0.64" for 1" Storm Event event
Inflow = 2.16 cfs @ 12.20 hrs, Volume= 0.242 af
Outflow = 2.16 cfs @ 12.20 hrs, Volume= 0.242 af, Atten= 0%, Lag= 0.0 min
Primary = 2.16 cfs @ 12.20 hrs, Volume= 0.242 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 7.67' @ 12.20 hrs
Flood Elev= 13.56'

Device	Routing	Invert	Outlet Devices
#1	Primary	7.03'	**30.0" Round Culvert** L= 83.1' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 7.03' / 6.20' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=2.16 cfs @ 12.20 hrs HW=7.67' (Free Discharge)
1=Culvert (Inlet Controls 2.16 cfs @ 2.16 fps)

Pond 10P: DMH 5



Summary for Pond 11P: Jellyfish 1 JFPD0806-4-2

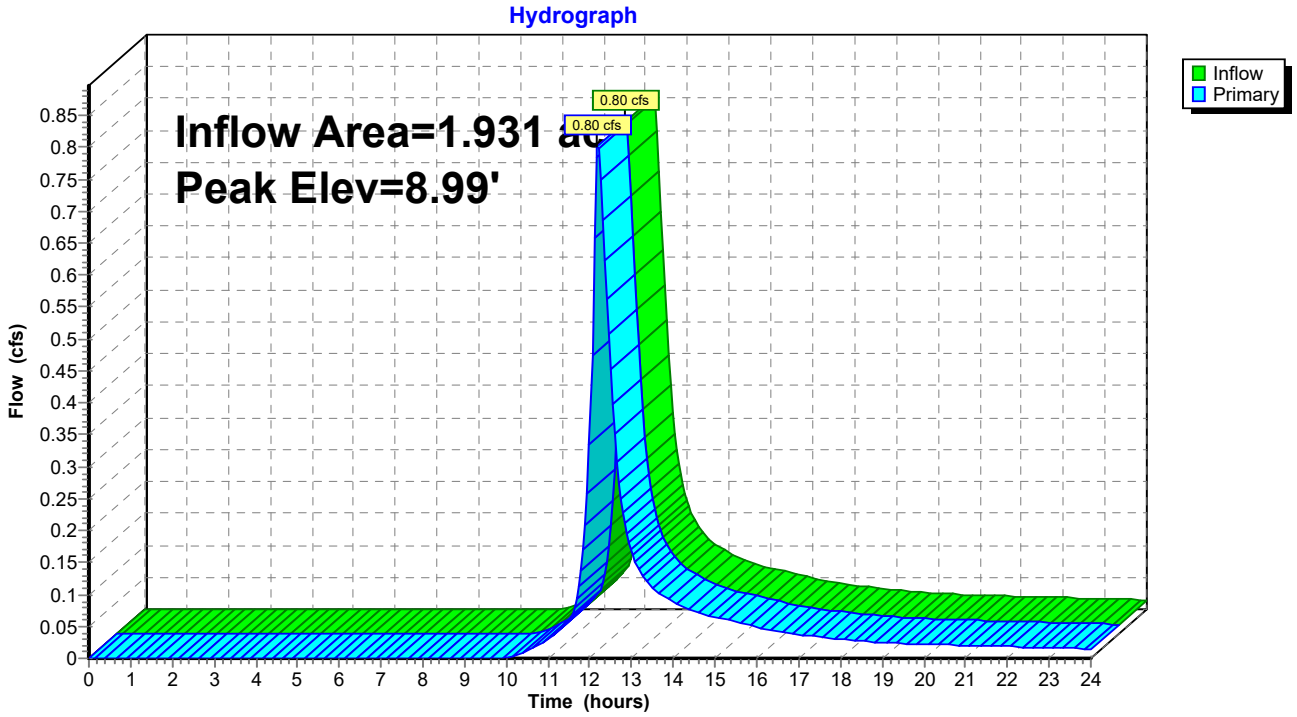
Inflow Area = 1.931 ac, 92.54% Impervious, Inflow Depth > 0.51" for 1" Storm Event event
Inflow = 0.80 cfs @ 12.19 hrs, Volume= 0.083 af
Outflow = 0.80 cfs @ 12.19 hrs, Volume= 0.083 af, Atten= 0%, Lag= 0.0 min
Primary = 0.80 cfs @ 12.19 hrs, Volume= 0.083 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 8.99' @ 12.19 hrs
Flood Elev= 14.79'

Device	Routing	Invert	Outlet Devices
#1	Primary	7.60'	**21.0" Round Filter Culvert Out** L= 90.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 7.60' / 7.13' S= 0.0052 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 2.41 sf
#2	Device 1	7.60'	**JF Filter-1 CSV File** Head (feet) 0.00 0.08 0.17 0.25 0.33 0.42 0.50 0.58 0.67 0.75 0.83 0.92 1.00 1.08 1.17 1.25 1.33 1.42 1.50 Disch. (cfs) 0.000 0.010 0.020 0.030 0.040 0.050 0.059 0.129 0.198 0.267 0.337 0.406 0.475 0.545 0.614 0.683 0.753 0.822 0.891
#3	Device 1	9.59'	**2.8' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=0.79 cfs @ 12.19 hrs HW=8.98' (Free Discharge)
└**1=Filter Culvert Out** (Passes 0.79 cfs of 6.14 cfs potential flow)
  ├**2=JF Filter-1 CSV File** (Custom Controls 0.79 cfs)
  └**3=Broad-Crested Rectangular Weir**(Controls 0.00 cfs)

Pond 11P: Jellyfish 1 JFPD0806-4-2



Summary for Pond 12P: Jellyfish 2 JFPD0806-7-2

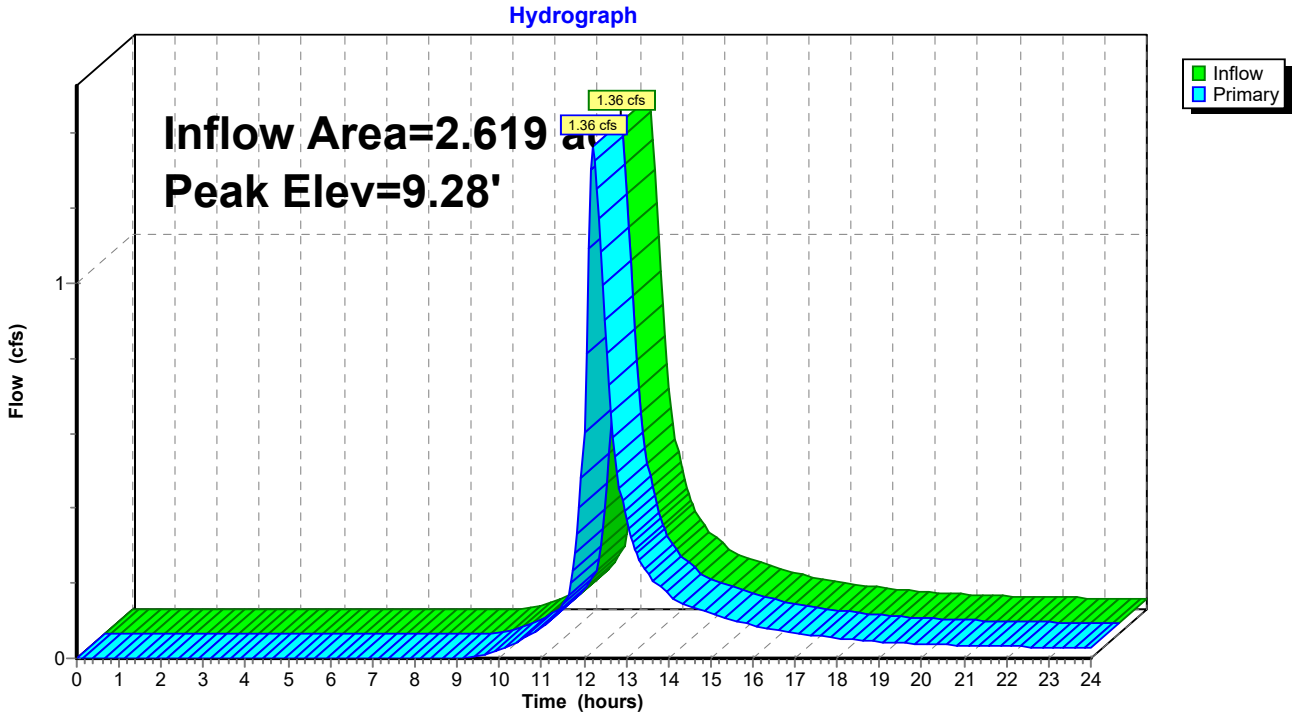
Inflow Area = 2.619 ac, 99.91% Impervious, Inflow Depth > 0.73" for 1" Storm Event event
Inflow = 1.36 cfs @ 12.21 hrs, Volume= 0.159 af
Outflow = 1.36 cfs @ 12.21 hrs, Volume= 0.159 af, Atten= 0%, Lag= 0.0 min
Primary = 1.36 cfs @ 12.21 hrs, Volume= 0.159 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 9.28' @ 12.21 hrs
Flood Elev= 12.70'

Device	Routing	Invert	Outlet Devices
#1	Primary	7.82'	**24.0" Round Filter Culvert Out** L= 114.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 7.82' / 7.13' S= 0.0061 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Device 1	7.82'	**JF Filter-2 CSV File** Head (feet) 0.00 0.08 0.17 0.25 0.33 0.42 0.50 0.58 0.67 0.75 0.83 0.92 1.00 1.08 1.17 1.25 1.33 1.42 1.50 Disch. (cfs) 0.000 0.010 0.020 0.030 0.040 0.050 0.059 0.173 0.287 0.401 0.515 0.629 0.743 0.857 0.970 1.084 1.198 1.312 1.426
#3	Device 1	9.95'	**2.8' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=1.36 cfs @ 12.21 hrs HW=9.27' (Free Discharge)
└**1=Filter Culvert Out** (Passes 1.36 cfs of 7.92 cfs potential flow)
  ├**2=JF Filter-2 CSV File** (Custom Controls 1.36 cfs)
  └**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 12P: Jellyfish 2 JFPD0806-7-2

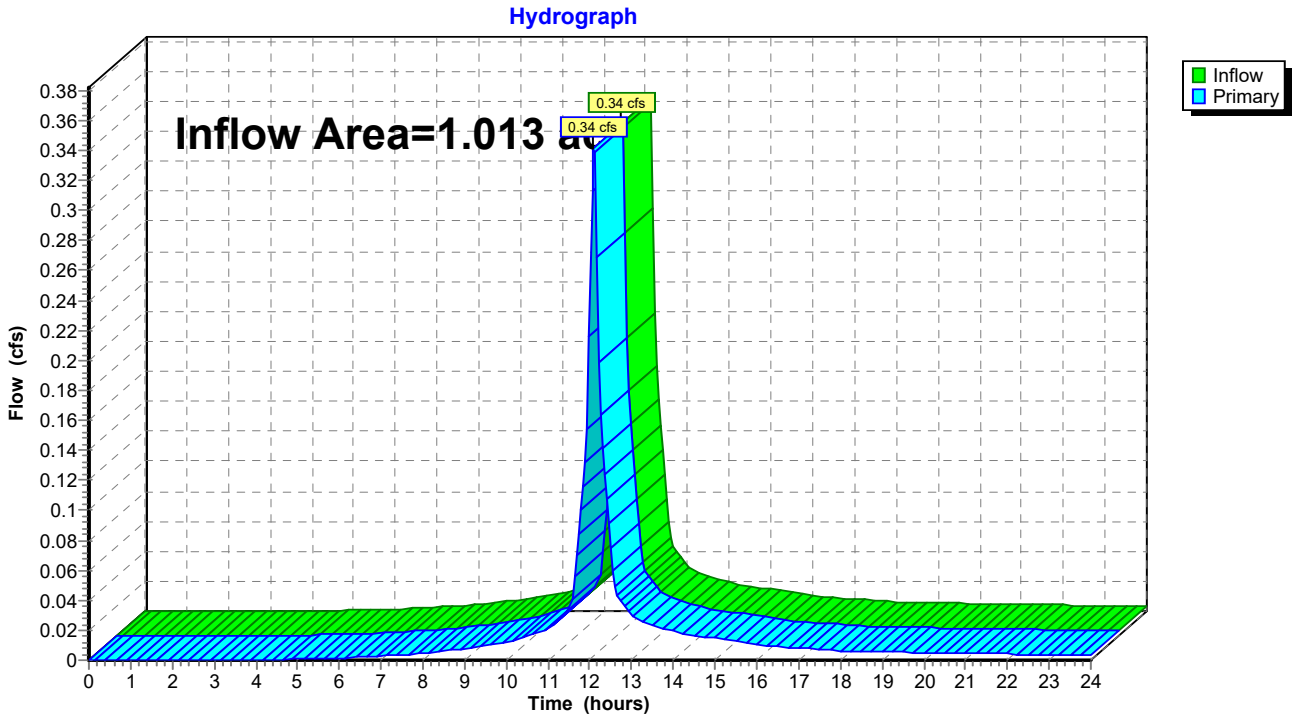


Summary for Link 1L: Fore Connector

Inflow Area = 1.013 ac, 56.83% Impervious, Inflow Depth > 0.31" for 1" Storm Event event
Inflow = 0.34 cfs @ 12.09 hrs, Volume= 0.026 af
Primary = 0.34 cfs @ 12.09 hrs, Volume= 0.026 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 1L: Fore Connector

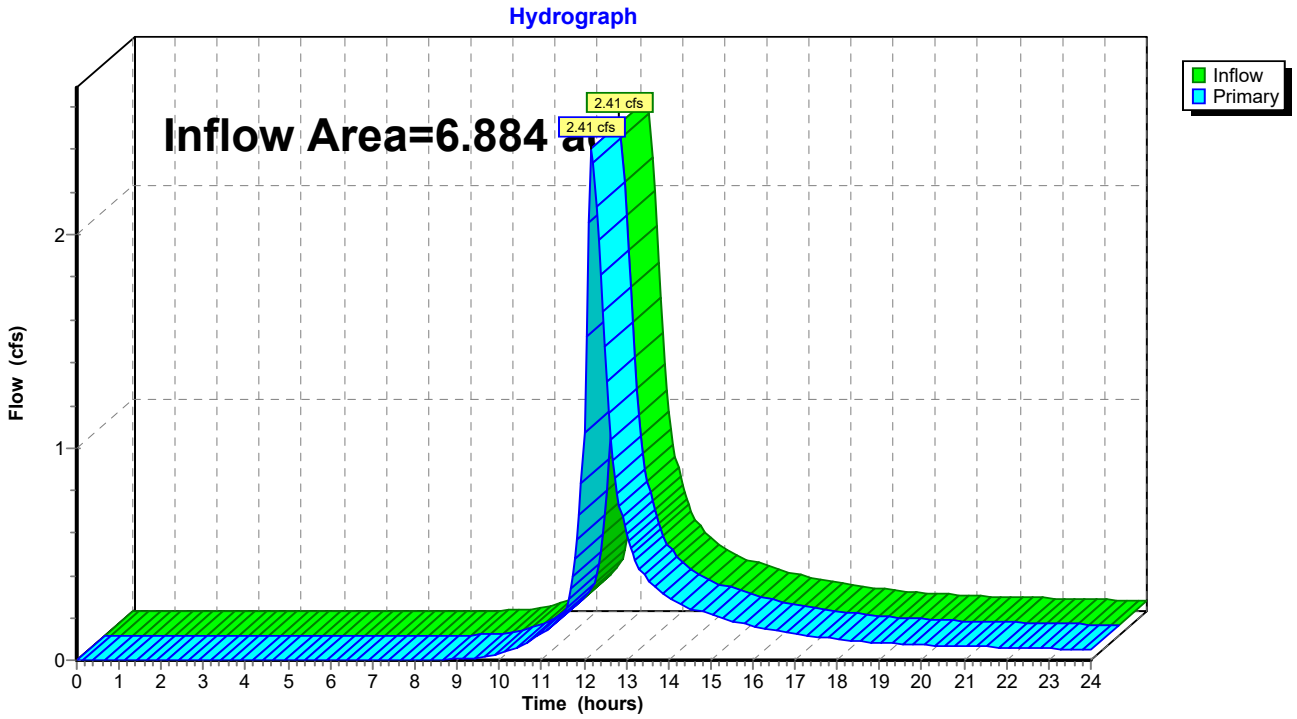


Summary for Link 2L: Fore River

Inflow Area = 6.884 ac, 89.32% Impervious, Inflow Depth > 0.48" for 1" Storm Event event
Inflow = 2.41 cfs @ 12.18 hrs, Volume= 0.276 af
Primary = 2.41 cfs @ 12.18 hrs, Volume= 0.276 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 2L: Fore River



Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: Block 1B Runoff Area=27,045 sf 29.55% Impervious Runoff Depth>1.48"
Tc=6.0 min CN=56 Runoff=0.95 cfs 0.076 af

Subcatchment2S: Western half of Runoff Area=17,090 sf 100.00% Impervious Runoff Depth>5.56"
Tc=6.0 min CN=98 Runoff=2.18 cfs 0.182 af

Subcatchment3S: Eastern half of Runoff Area=17,090 sf 100.00% Impervious Runoff Depth>5.56"
Tc=6.0 min CN=98 Runoff=2.18 cfs 0.182 af

Subcatchment4S: Shared Street - Trench Runoff Area=24,890 sf 82.54% Impervious Runoff Depth>4.43"
Tc=6.0 min CN=88 Runoff=2.81 cfs 0.211 af

Subcatchment5S: Building 12 Runoff Area=3,244 sf 100.00% Impervious Runoff Depth>5.56"
Tc=6.0 min CN=98 Runoff=0.41 cfs 0.034 af

Subcatchment6Sa: Plaza between Blocks Runoff Area=20,337 sf 94.84% Impervious Runoff Depth>5.21"
Tc=6.0 min CN=95 Runoff=2.54 cfs 0.203 af

Subcatchment6Sb: Plaza between Blocks 1 Runoff Area=3,122 sf 71.75% Impervious Runoff Depth>3.70"
Tc=6.0 min CN=81 Runoff=0.30 cfs 0.022 af

Subcatchment7S: Building 14 Runoff Area=2,572 sf 100.00% Impervious Runoff Depth>5.56"
Tc=6.0 min CN=98 Runoff=0.33 cfs 0.027 af

Subcatchment8S: Building 15 Runoff Area=4,507 sf 100.00% Impervious Runoff Depth>5.56"
Tc=6.0 min CN=98 Runoff=0.57 cfs 0.048 af

Subcatchment9S: Building 2 North Runoff Area=4,695 sf 100.00% Impervious Runoff Depth>5.56"
Tc=6.0 min CN=98 Runoff=0.60 cfs 0.050 af

Subcatchment10S: Building 3 North Runoff Area=2,212 sf 100.00% Impervious Runoff Depth>5.56"
Tc=6.0 min CN=98 Runoff=0.28 cfs 0.024 af

Subcatchment11S: Building 2 South Runoff Area=4,855 sf 100.00% Impervious Runoff Depth>5.56"
Tc=6.0 min CN=98 Runoff=0.62 cfs 0.052 af

Subcatchment12S: Building 3 South Runoff Area=2,326 sf 100.00% Impervious Runoff Depth>5.56"
Tc=6.0 min CN=98 Runoff=0.30 cfs 0.025 af

Subcatchment13S: Building 6 Runoff Area=3,304 sf 100.00% Impervious Runoff Depth>5.56"
Tc=6.0 min CN=98 Runoff=0.42 cfs 0.035 af

Subcatchment14S: Building 6B North Runoff Area=3,873 sf 100.00% Impervious Runoff Depth>5.56"
Tc=6.0 min CN=98 Runoff=0.49 cfs 0.041 af

Subcatchment15S: Building 6B South Runoff Area=2,512 sf 100.00% Impervious Runoff Depth>5.56"
Tc=6.0 min CN=98 Runoff=0.32 cfs 0.027 af

Subcatchment16S: Shared Street - Trench Runoff Area=8,931 sf 100.00% Impervious Runoff Depth>5.56"
Tc=6.0 min CN=98 Runoff=1.14 cfs 0.095 af

Subcatchment17S: Future Block 3 Runoff Area=9,998 sf 100.00% Impervious Runoff Depth>5.56"
Tc=6.0 min CN=98 Runoff=1.27 cfs 0.106 af

Subcatchment18S: Plaza between Blocks Runoff Area=20,458 sf 99.48% Impervious Runoff Depth>5.56"
Tc=6.0 min CN=98 Runoff=2.61 cfs 0.218 af

Subcatchment19S: Building 4A Runoff Area=69,274 sf 100.00% Impervious Runoff Depth>5.56"
Tc=6.0 min CN=98 Runoff=8.82 cfs 0.737 af

Subcatchment20S: Redevelopment area Runoff Area=4,759 sf 52.30% Impervious Runoff Depth>2.64"
Tc=6.0 min CN=70 Runoff=0.33 cfs 0.024 af

Subcatchment21S: Eastern Waterfront Runoff Area=86,899 sf 73.10% Impervious Runoff Depth>3.80"
Tc=6.0 min CN=82 Runoff=8.64 cfs 0.632 af

Pond 1P: DMH 1 Peak Elev=11.80' Inflow=9.48 cfs 0.759 af
21.0" Round Culvert n=0.013 L=61.0' S=0.0038 '/' Outflow=9.48 cfs 0.759 af

Pond 2P: DMH 2 Peak Elev=11.46' Inflow=10.20 cfs 0.816 af
21.0" Round Culvert n=0.013 L=31.0' S=0.0048 '/' Outflow=10.20 cfs 0.816 af

Pond 3P: Storm Structure Peak Elev=10.66' Inflow=10.20 cfs 0.816 af
15.0" Round Culvert x 3.00 n=0.013 L=4.0' S=0.0000 '/' Outflow=10.20 cfs 0.816 af

Pond 4P: R-Tank 1 Peak Elev=9.59' Storage=2,853 cf Inflow=10.20 cfs 0.816 af
21.0" Round Culvert n=0.013 L=4.0' S=0.0000 '/' Outflow=8.90 cfs 0.807 af

Pond 6P: CB27 Peak Elev=12.00' Inflow=14.53 cfs 1.213 af
24.0" Round Culvert n=0.013 L=22.0' S=0.0064 '/' Outflow=14.53 cfs 1.213 af

Pond 7P: Storm Structure Peak Elev=11.13' Inflow=14.53 cfs 1.213 af
15.0" Round Culvert x 3.00 n=0.013 L=4.0' S=0.0000 '/' Outflow=14.53 cfs 1.213 af

Pond 8P: R-Tank 2 Peak Elev=9.98' Storage=6,202 cf Inflow=14.53 cfs 1.213 af
24.0" Round Culvert n=0.013 L=4.0' S=0.0000 '/' Outflow=11.56 cfs 1.193 af

Pond 10P: DMH 5 Peak Elev=9.46' Inflow=20.41 cfs 2.000 af
30.0" Round Culvert n=0.013 L=83.1' S=0.0100 '/' Outflow=20.41 cfs 2.000 af

Pond 11P: Jellyfish 1 JFPD0806-4-2 Peak Elev=10.50' Inflow=8.90 cfs 0.807 af
Outflow=8.90 cfs 0.807 af

Pond 12P: Jellyfish 2 JFPD0806-7-2 Peak Elev=11.01' Inflow=11.56 cfs 1.193 af
Outflow=11.56 cfs 1.193 af

Link 1L: Fore Connector Inflow=3.11 cfs 0.258 af
Primary=3.11 cfs 0.258 af

Link 2L: Fore River

Inflow=29.77 cfs 2.762 af
Primary=29.77 cfs 2.762 af

Total Runoff Area = 7.897 ac Runoff Volume = 3.050 af Average Runoff Depth = 4.63"
14.85% Pervious = 1.173 ac 85.15% Impervious = 6.724 ac

Summary for Subcatchment 1S: Block 1B

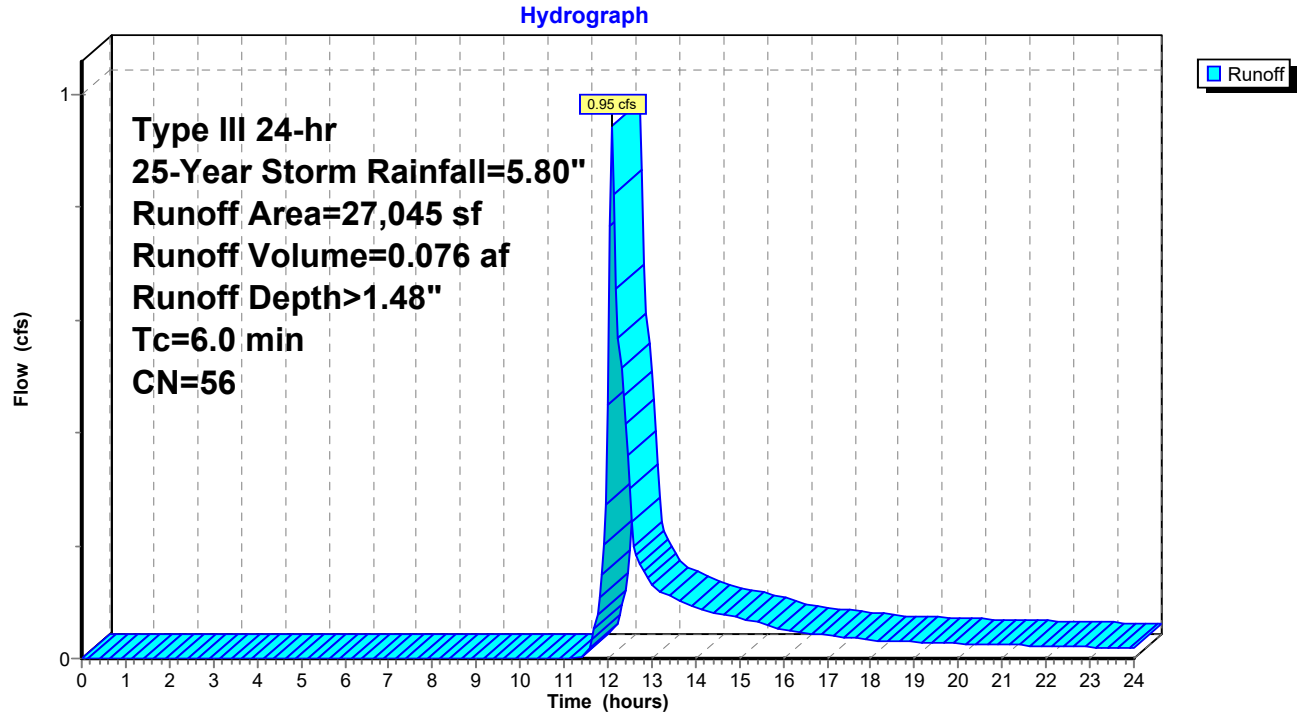
Runoff = 0.95 cfs @ 12.10 hrs, Volume= 0.076 af, Depth> 1.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	7,991	98	Impervious
	19,054	39	>75% Grass cover, Good, HSG A
	27,045	56	Weighted Average
	19,054		70.45% Pervious Area
	7,991		29.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1S: Block 1B



Summary for Subcatchment 2S: Western half of Building 1A

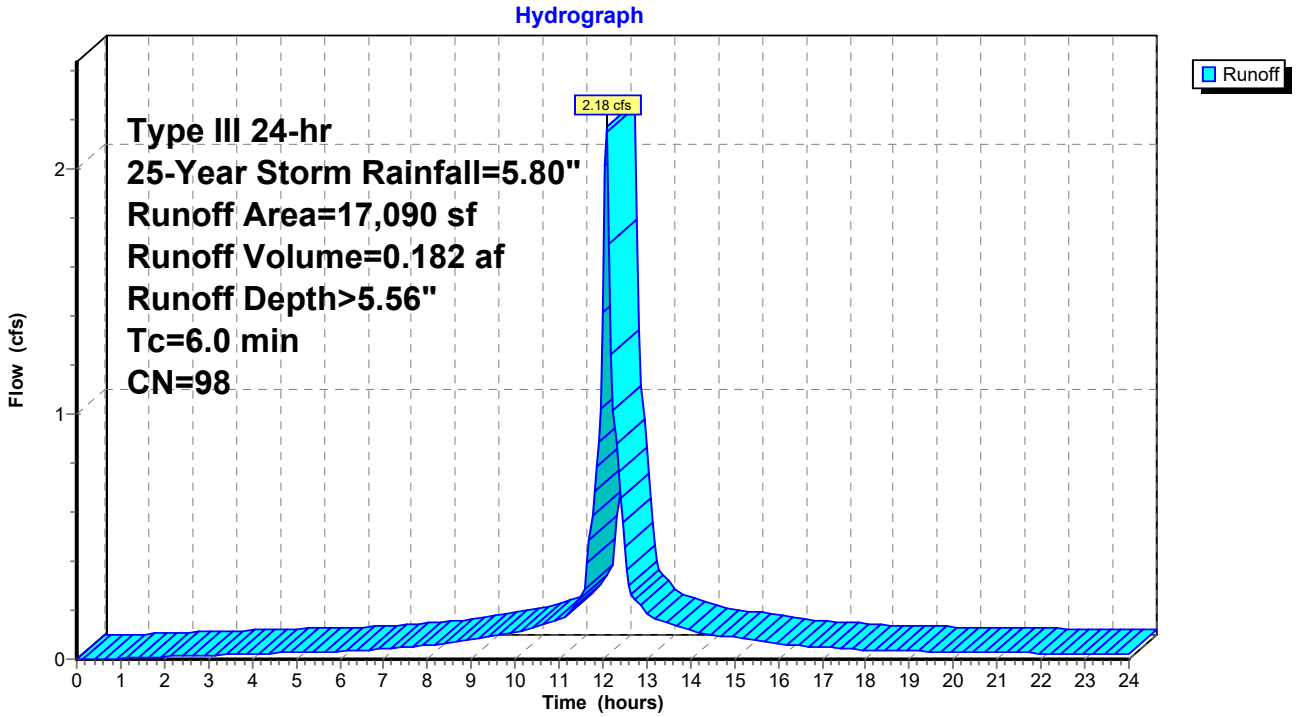
Runoff = 2.18 cfs @ 12.09 hrs, Volume= 0.182 af, Depth> 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	17,090	98	Roof
	17,090		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 2S: Western half of Building 1A



Summary for Subcatchment 3S: Eastern half of Building 1A

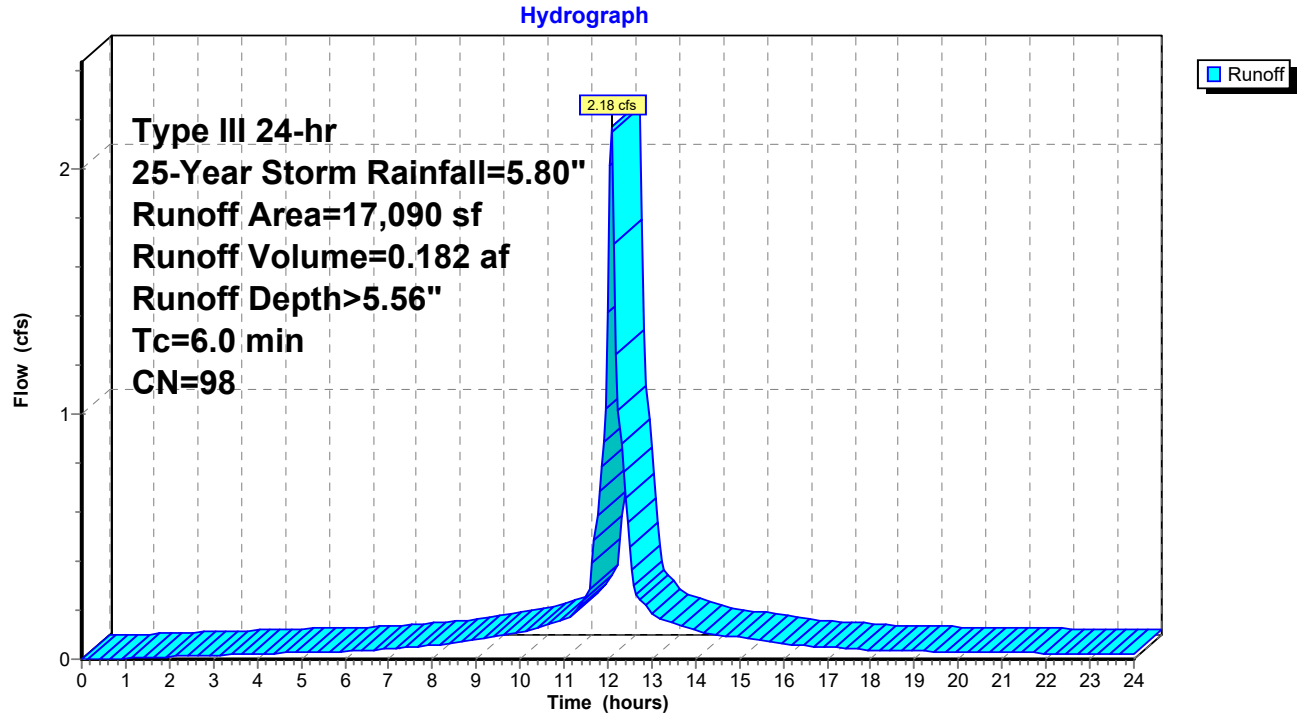
Runoff = 2.18 cfs @ 12.09 hrs, Volume= 0.182 af, Depth> 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	17,090	98	Roof
	17,090		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 3S: Eastern half of Building 1A



Summary for Subcatchment 4S: Shared Street - Trench Drain

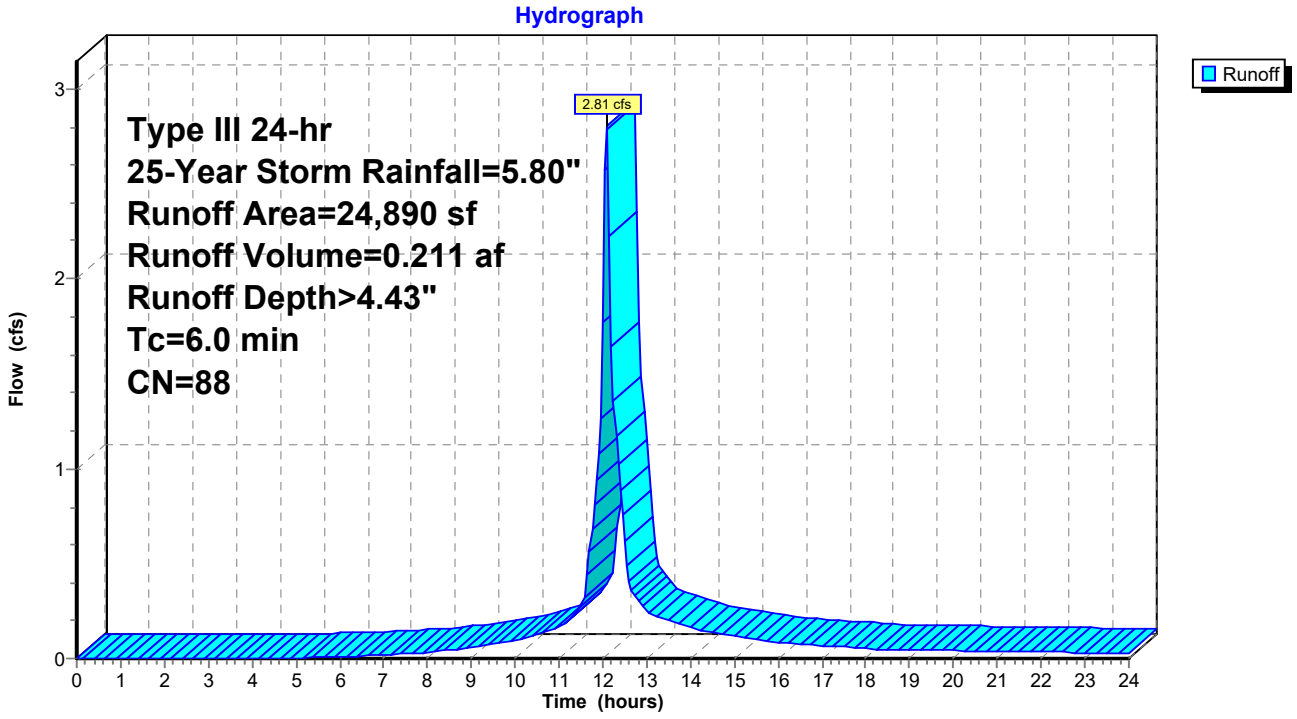
Runoff = 2.81 cfs @ 12.09 hrs, Volume= 0.211 af, Depth> 4.43"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
	4,345	39	>75% Grass cover, Good, HSG A
*	20,545	98	Impervious Shared Street and Plaza
	24,890	88	Weighted Average
	4,345		17.46% Pervious Area
	20,545		82.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 4S: Shared Street - Trench Drain



Summary for Subcatchment 5S: Building 12

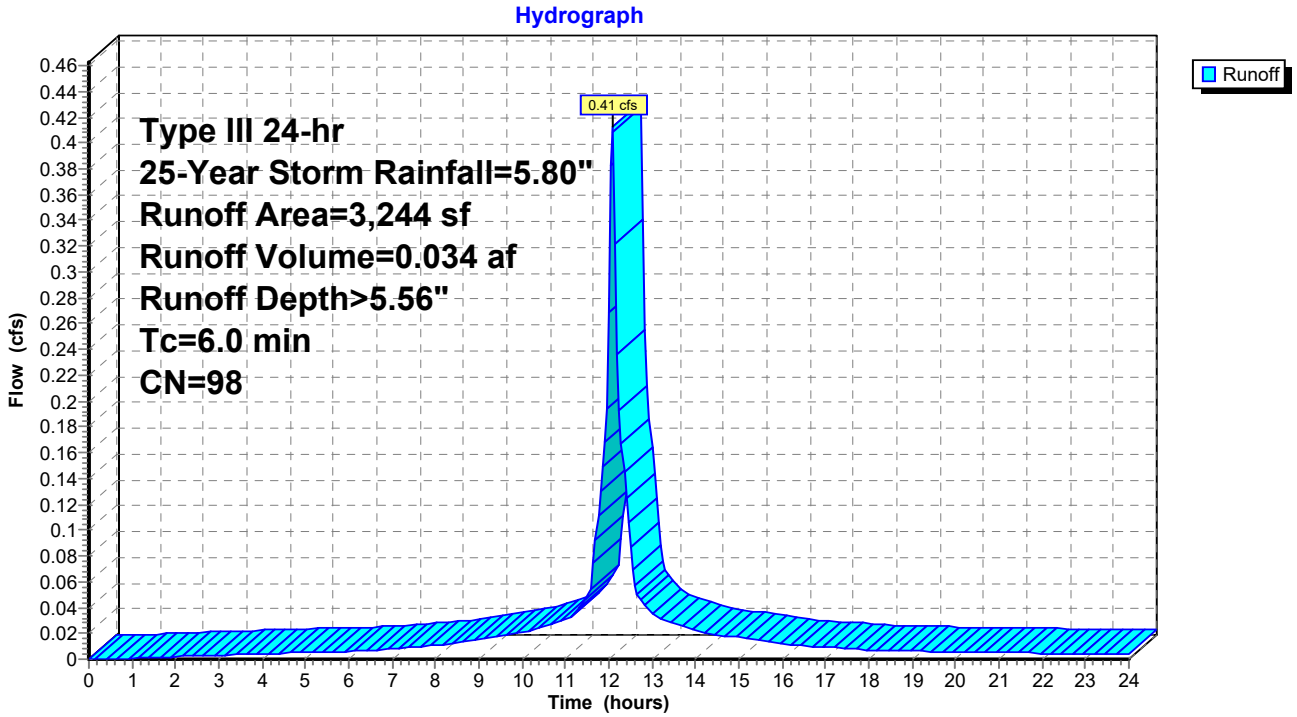
Runoff = 0.41 cfs @ 12.09 hrs, Volume= 0.034 af, Depth> 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	3,244	98	Roof
	3,244		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 5S: Building 12



Summary for Subcatchment 6Sa: Plaza between Blocks 1 & 2

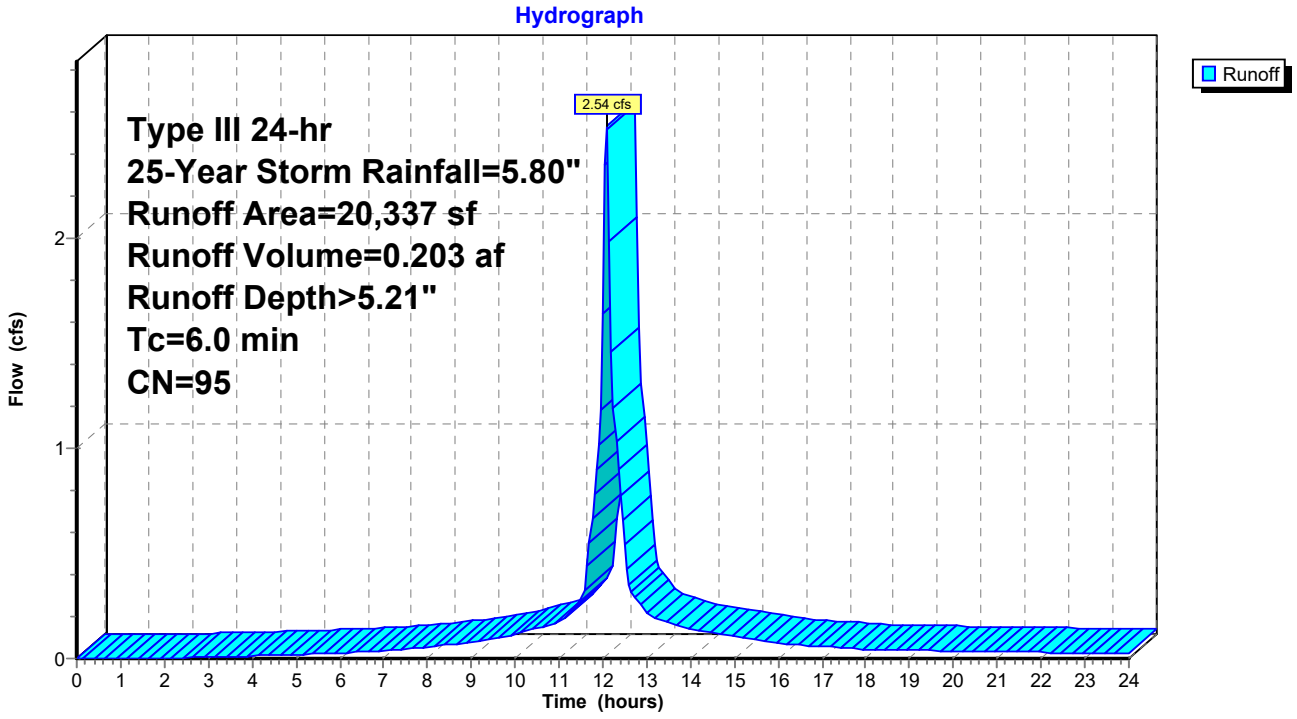
Runoff = 2.54 cfs @ 12.09 hrs, Volume= 0.203 af, Depth> 5.21"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	19,288	98	Impervious
	1,049	39	>75% Grass cover, Good, HSG A
	20,337	95	Weighted Average
	1,049		5.16% Pervious Area
	19,288		94.84% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 6Sa: Plaza between Blocks 1 & 2



Summary for Subcatchment 6Sb: Plaza between Blocks 1 & 2

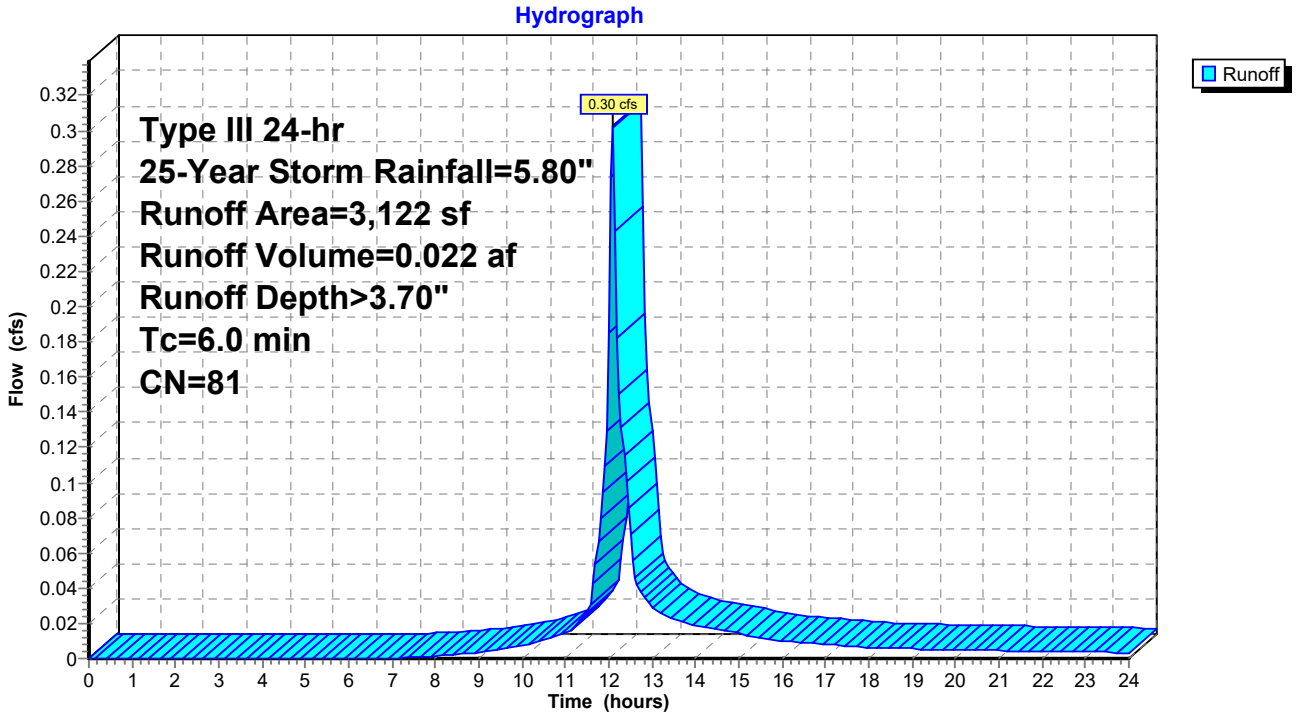
Runoff = 0.30 cfs @ 12.09 hrs, Volume= 0.022 af, Depth> 3.70"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	2,240	98	Impervious
	882	39	>75% Grass cover, Good, HSG A
	3,122	81	Weighted Average
	882		28.25% Pervious Area
	2,240		71.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 6Sb: Plaza between Blocks 1 & 2



Summary for Subcatchment 7S: Building 14

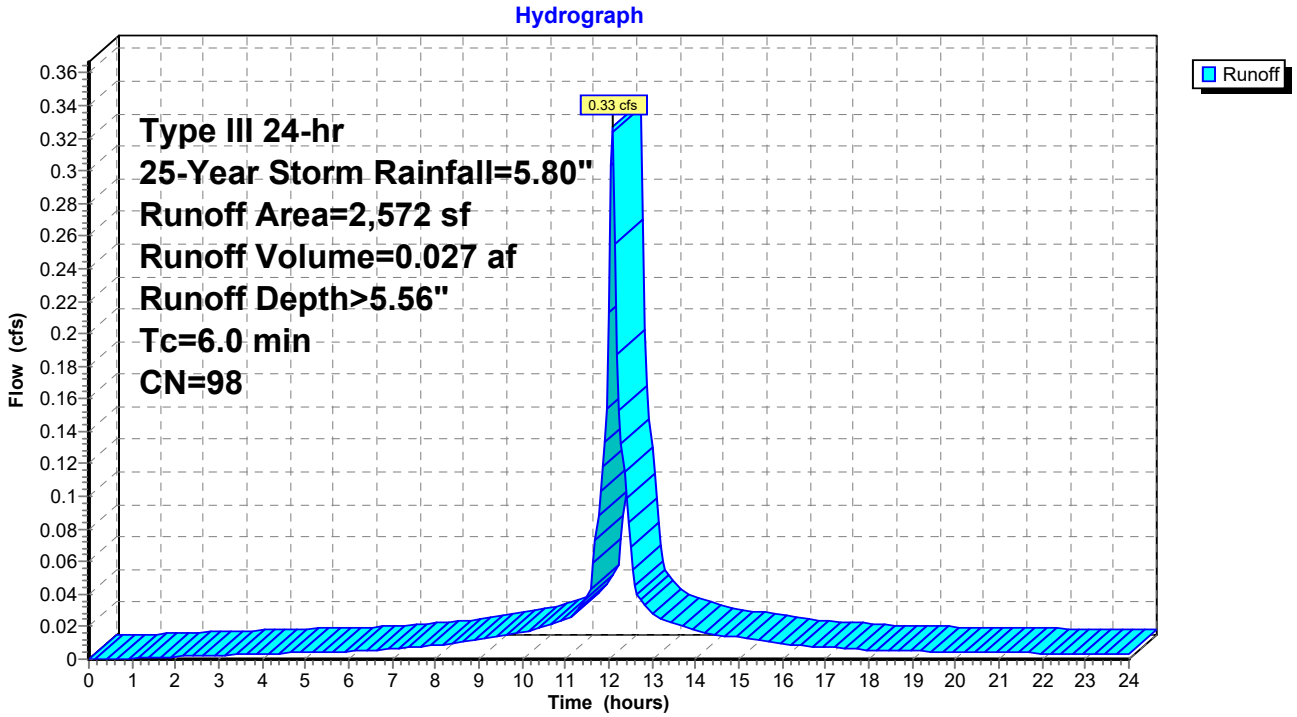
Runoff = 0.33 cfs @ 12.09 hrs, Volume= 0.027 af, Depth> 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	2,572	98	Roof
	2,572		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 7S: Building 14



Summary for Subcatchment 8S: Building 15

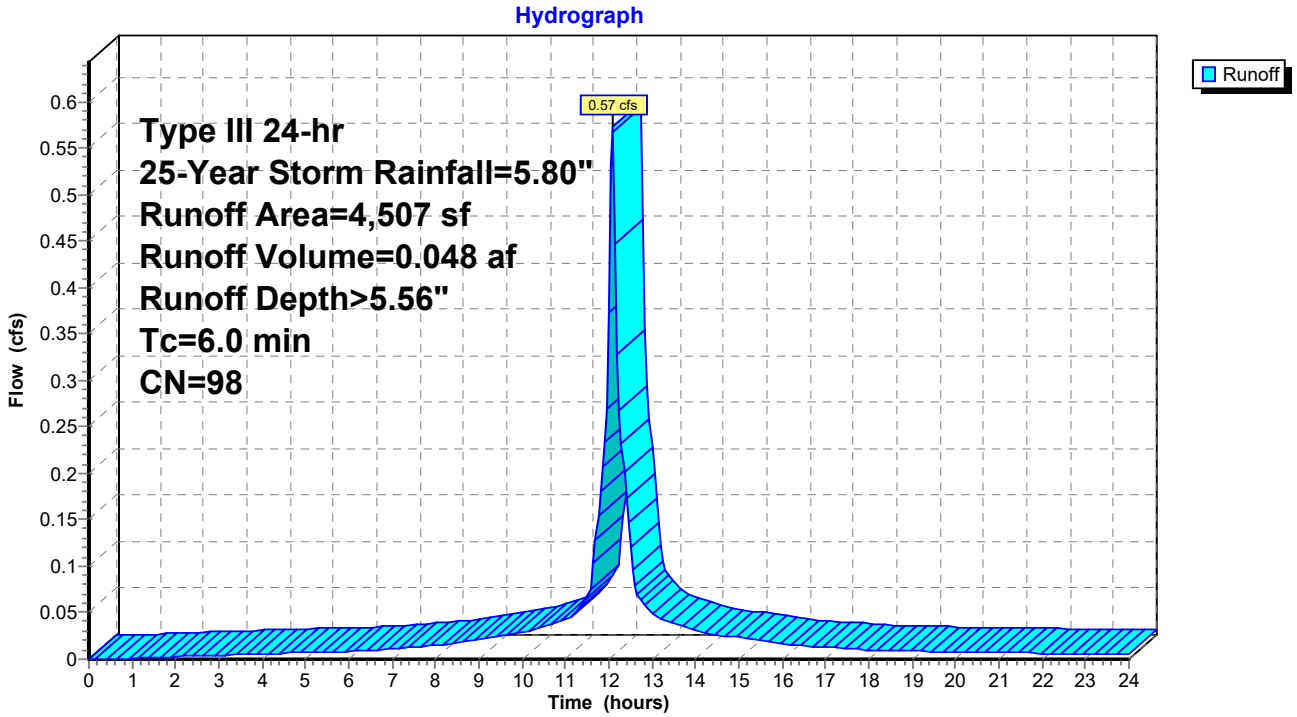
Runoff = 0.57 cfs @ 12.09 hrs, Volume= 0.048 af, Depth> 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	4,507	98	Roof
	4,507		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 8S: Building 15



Summary for Subcatchment 9S: Building 2 North

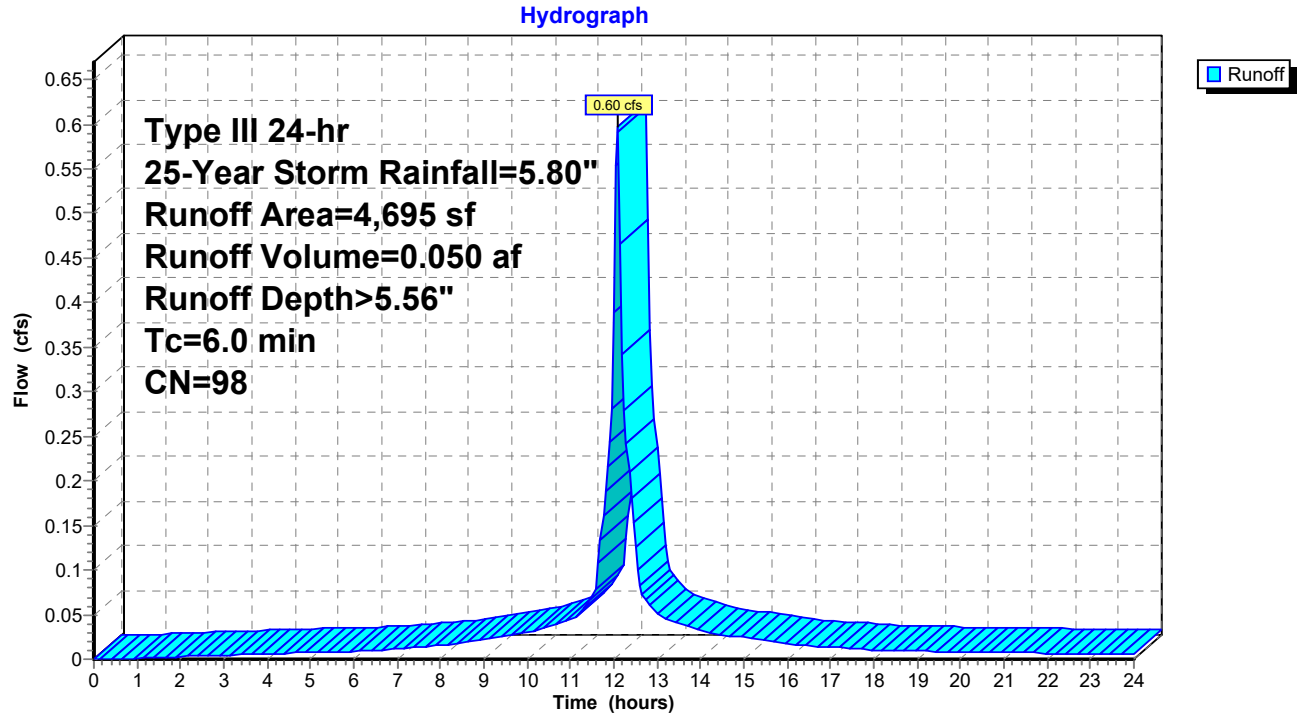
Runoff = 0.60 cfs @ 12.09 hrs, Volume= 0.050 af, Depth> 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	4,695	98	Roof
	4,695		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 9S: Building 2 North



Summary for Subcatchment 10S: Building 3 North

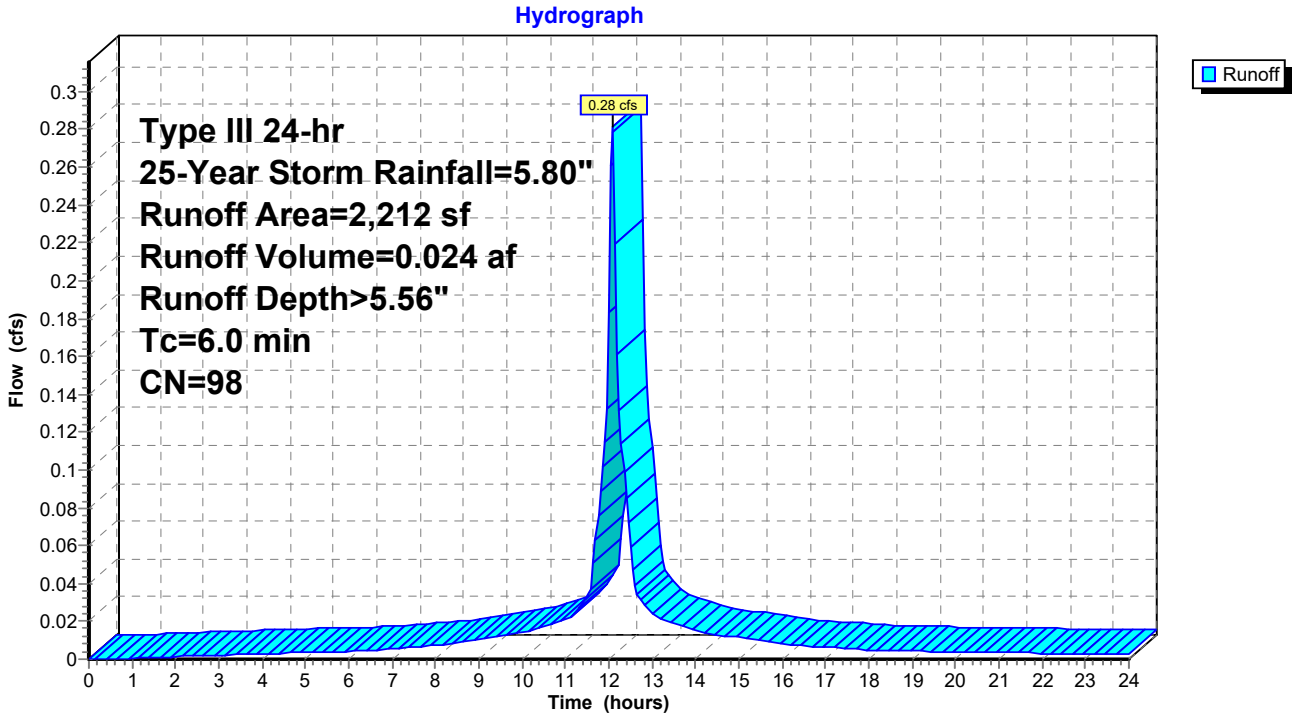
Runoff = 0.28 cfs @ 12.09 hrs, Volume= 0.024 af, Depth> 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	2,212	98	Roof
	2,212		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 10S: Building 3 North



Summary for Subcatchment 11S: Building 2 South

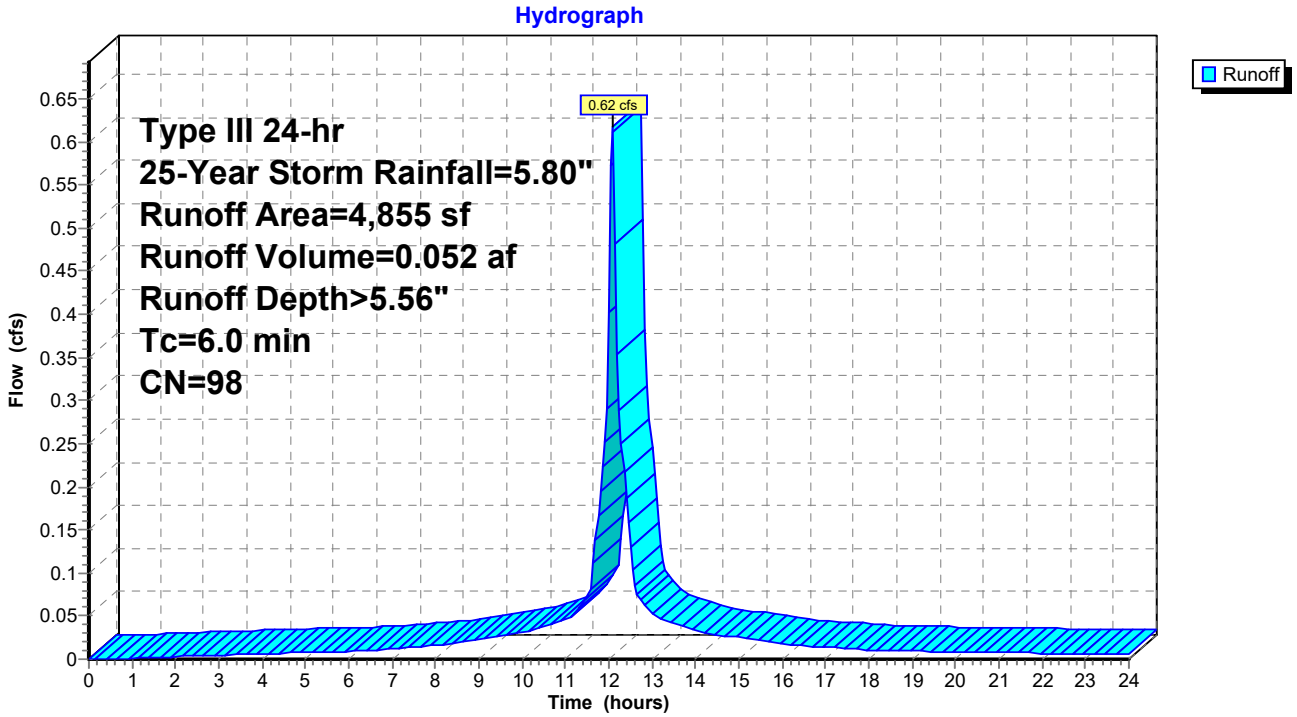
Runoff = 0.62 cfs @ 12.09 hrs, Volume= 0.052 af, Depth> 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	4,855	98	Roof
	4,855		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 11S: Building 2 South



Summary for Subcatchment 12S: Building 3 South

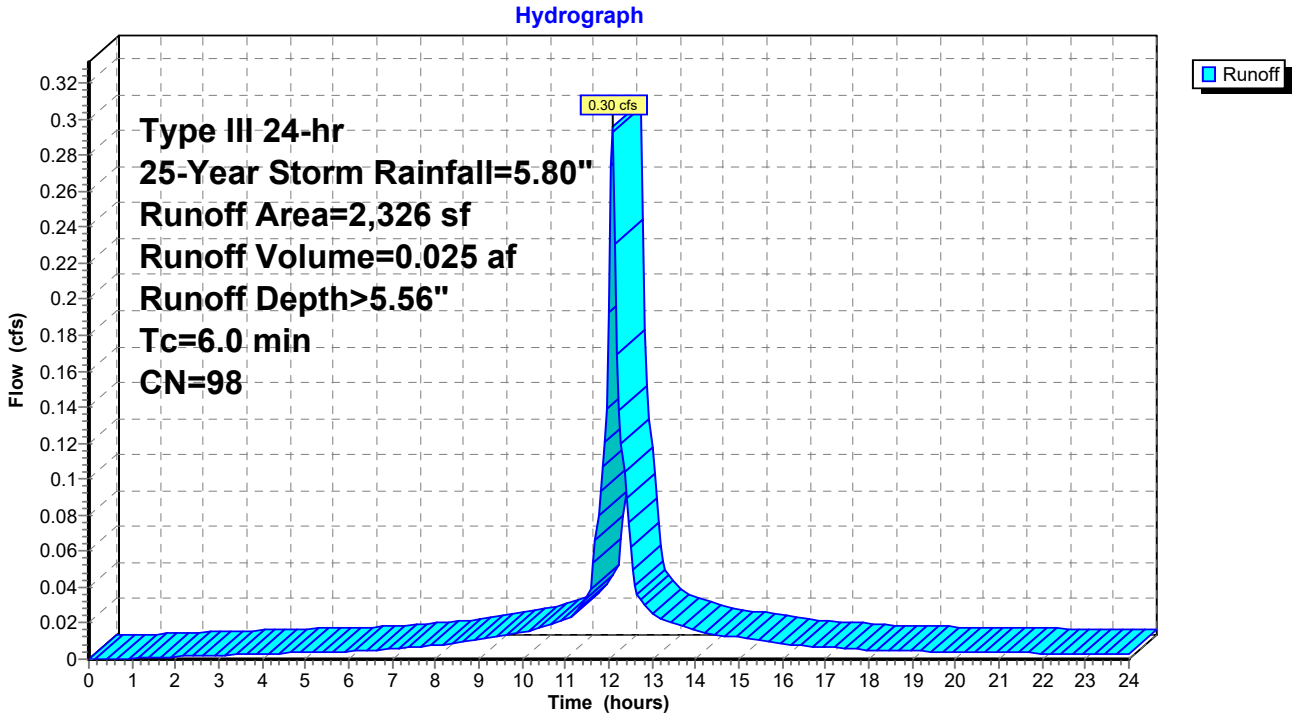
Runoff = 0.30 cfs @ 12.09 hrs, Volume= 0.025 af, Depth> 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	2,326	98	Roof
	2,326		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 12S: Building 3 South



Summary for Subcatchment 13S: Building 6

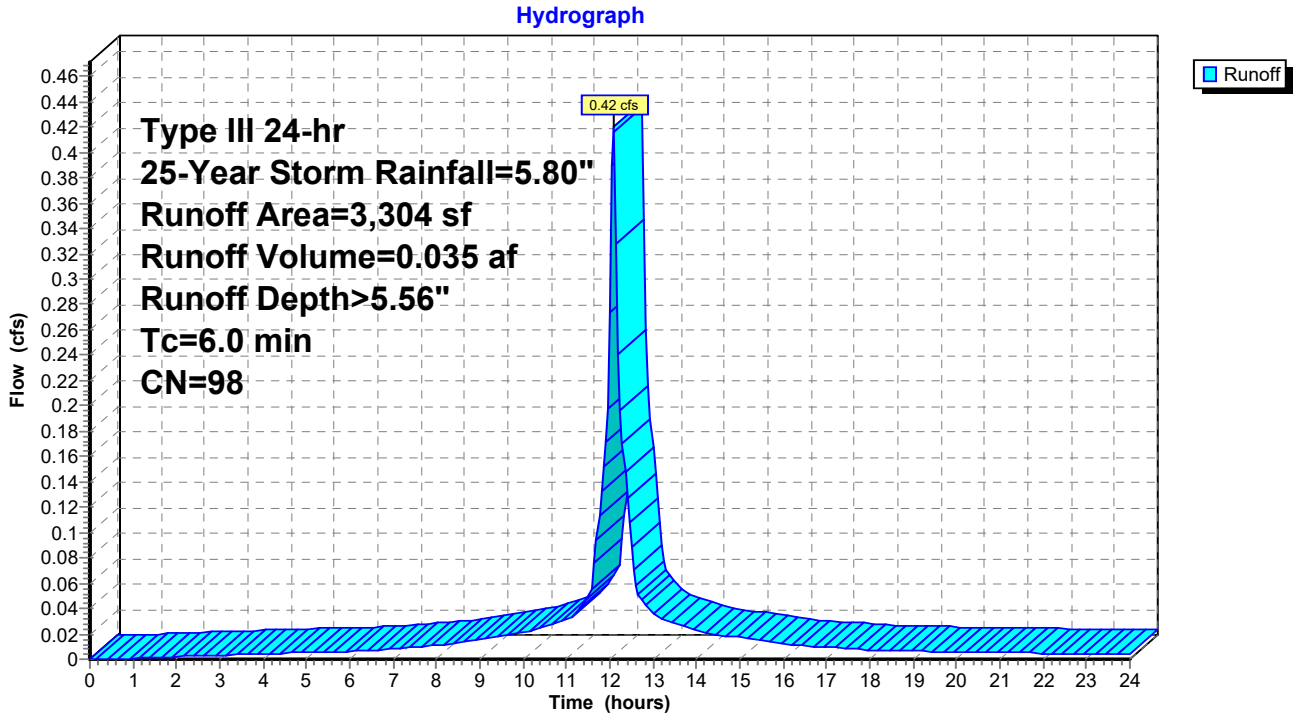
Runoff = 0.42 cfs @ 12.09 hrs, Volume= 0.035 af, Depth> 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	3,304	98	Roof
	3,304		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 13S: Building 6



Summary for Subcatchment 14S: Building 6B North

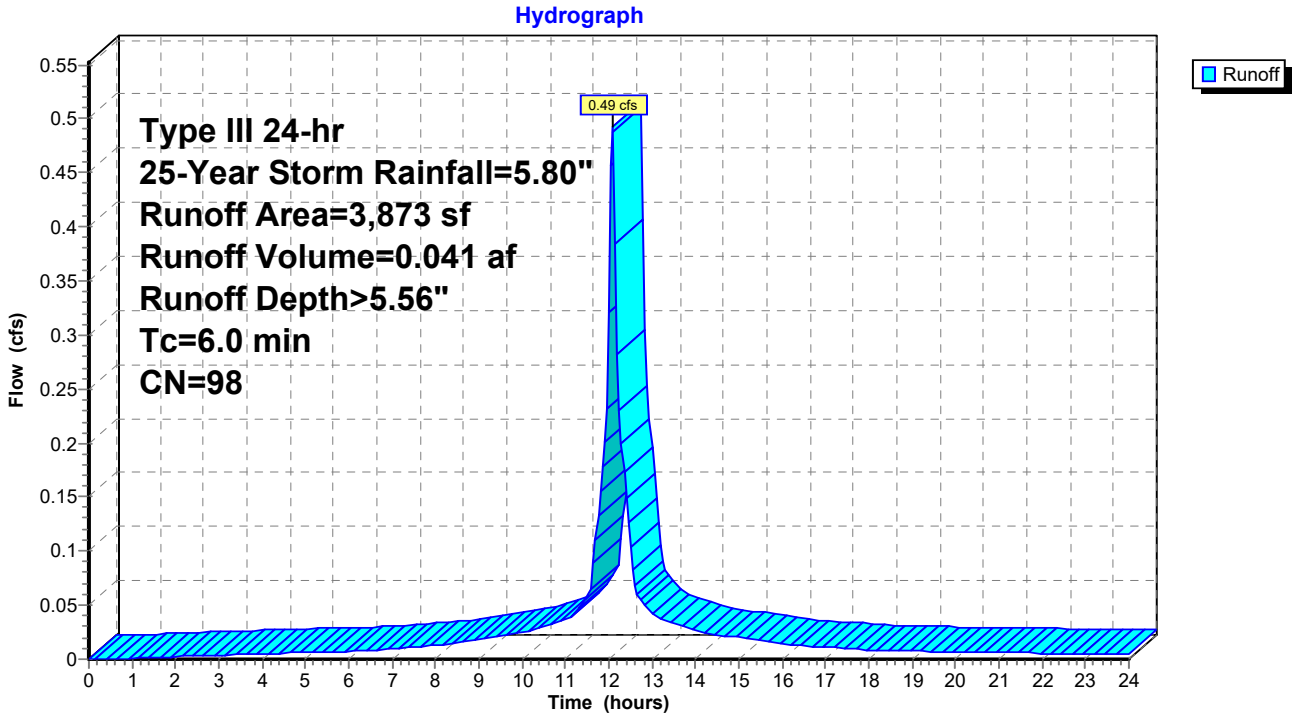
Runoff = 0.49 cfs @ 12.09 hrs, Volume= 0.041 af, Depth> 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	3,873	98	Roof
	3,873		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 14S: Building 6B North



Summary for Subcatchment 15S: Building 6B South

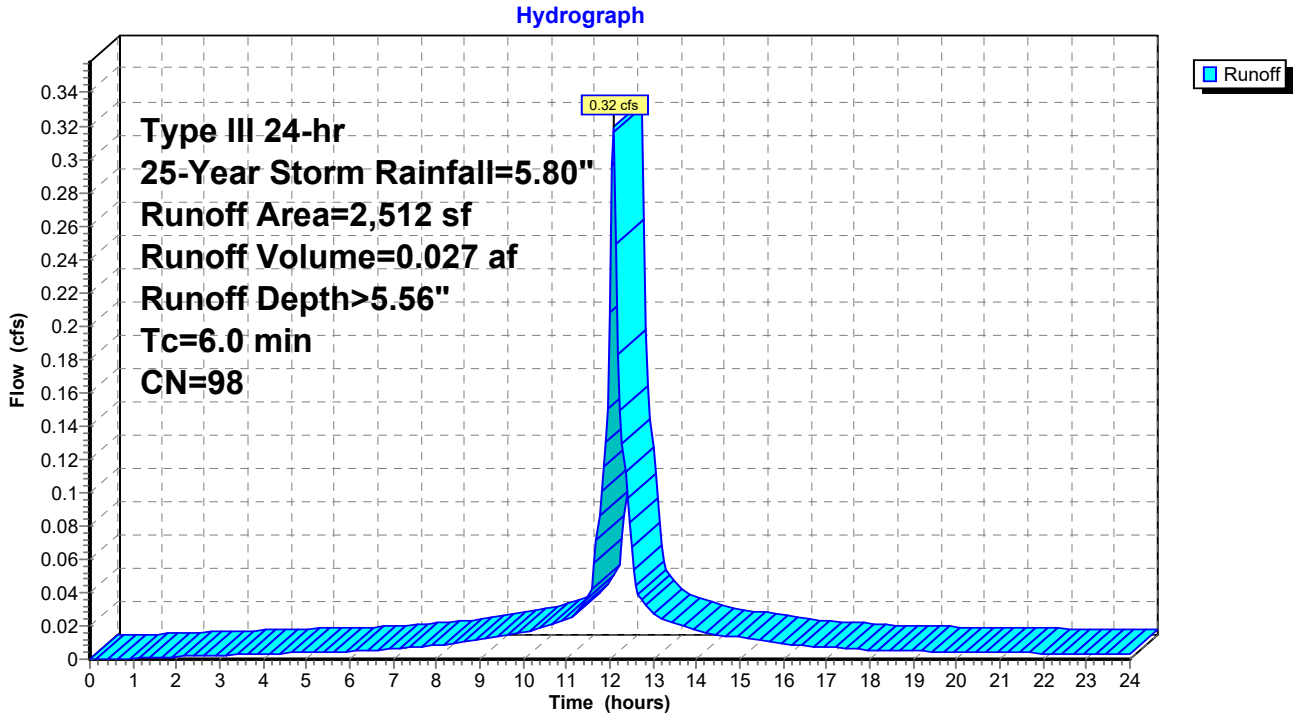
Runoff = 0.32 cfs @ 12.09 hrs, Volume= 0.027 af, Depth> 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	2,512	98	Roof
	2,512		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 15S: Building 6B South



Summary for Subcatchment 16S: Shared Street - Trench Drain

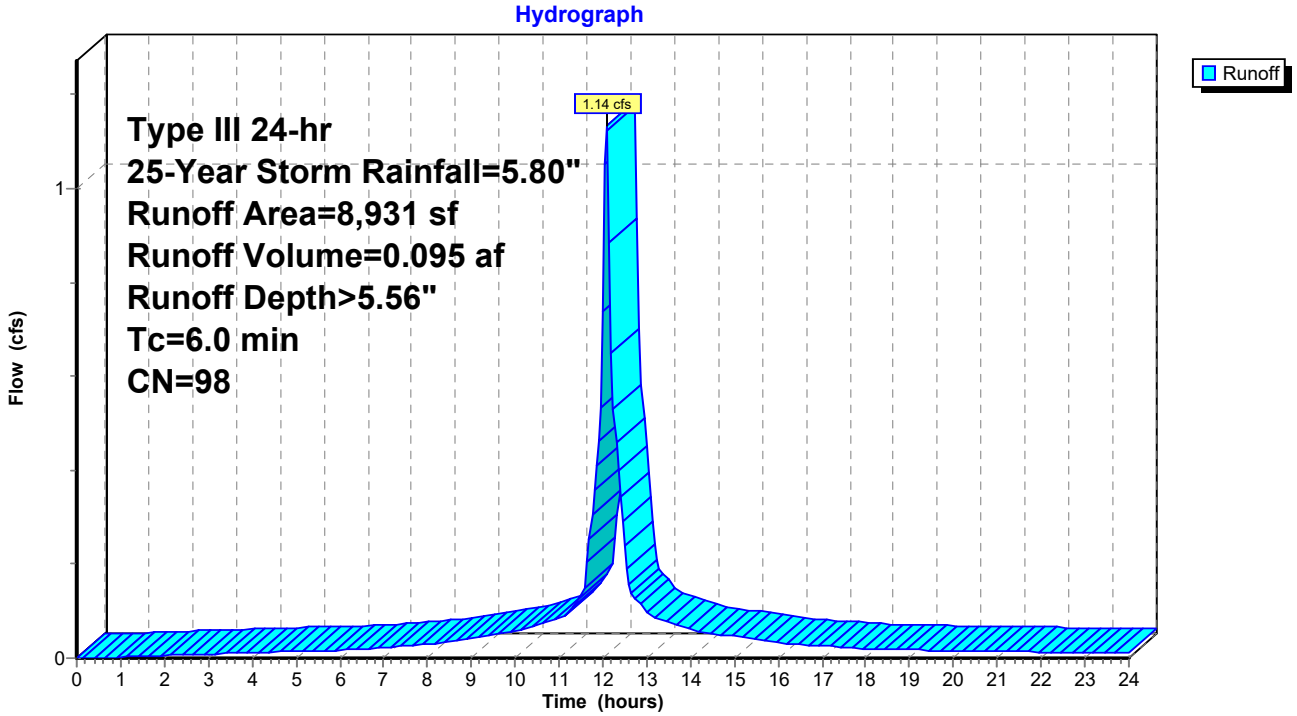
Runoff = 1.14 cfs @ 12.09 hrs, Volume= 0.095 af, Depth> 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
	0	39	>75% Grass cover, Good, HSG A
*	8,931	98	Impervious Shared Street
	8,931	98	Weighted Average
	8,931		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 16S: Shared Street - Trench Drain



Summary for Subcatchment 17S: Future Block 3 Building Footprint

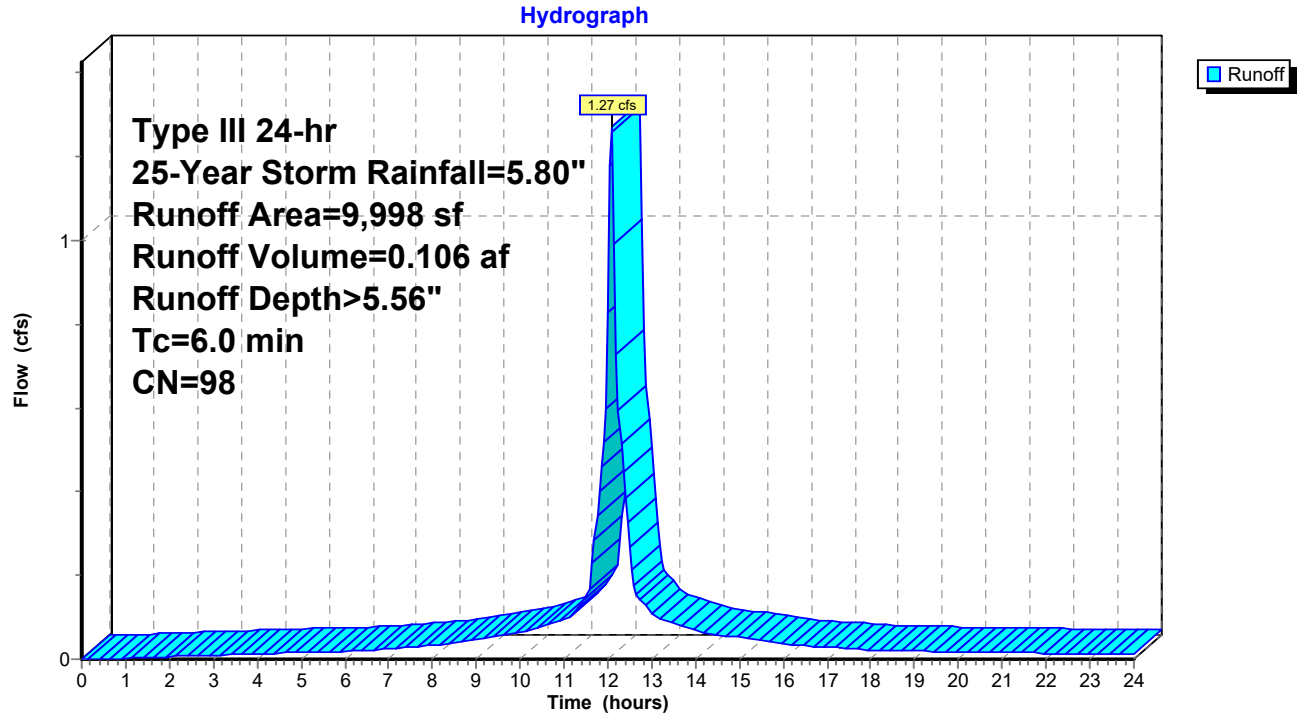
Runoff = 1.27 cfs @ 12.09 hrs, Volume= 0.106 af, Depth> 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	9,998	98	Gravel
	9,998		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 17S: Future Block 3 Building Footprint



Summary for Subcatchment 18S: Plaza between Blocks 2 & 4

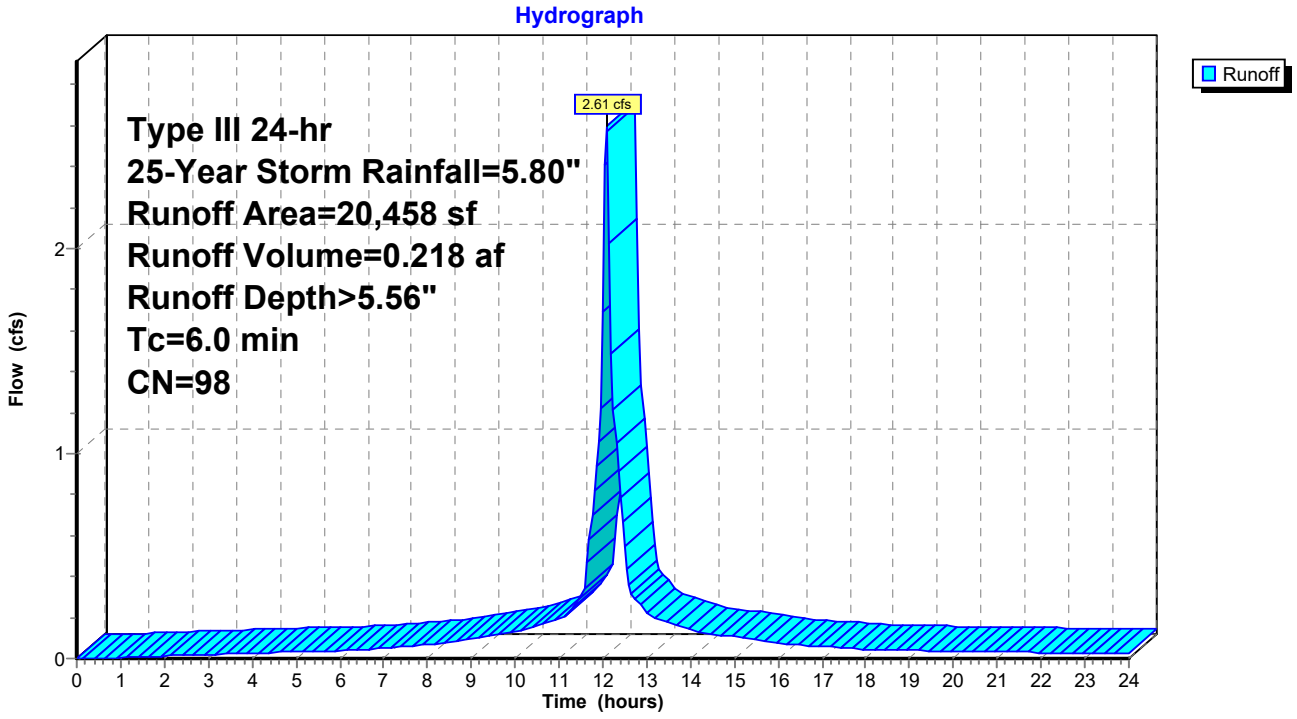
Runoff = 2.61 cfs @ 12.09 hrs, Volume= 0.218 af, Depth> 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	20,352	98	Impervious
	106	39	>75% Grass cover, Good, HSG A
	20,458	98	Weighted Average
	106		0.52% Pervious Area
	20,352		99.48% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 18S: Plaza between Blocks 2 & 4



Summary for Subcatchment 19S: Building 4A

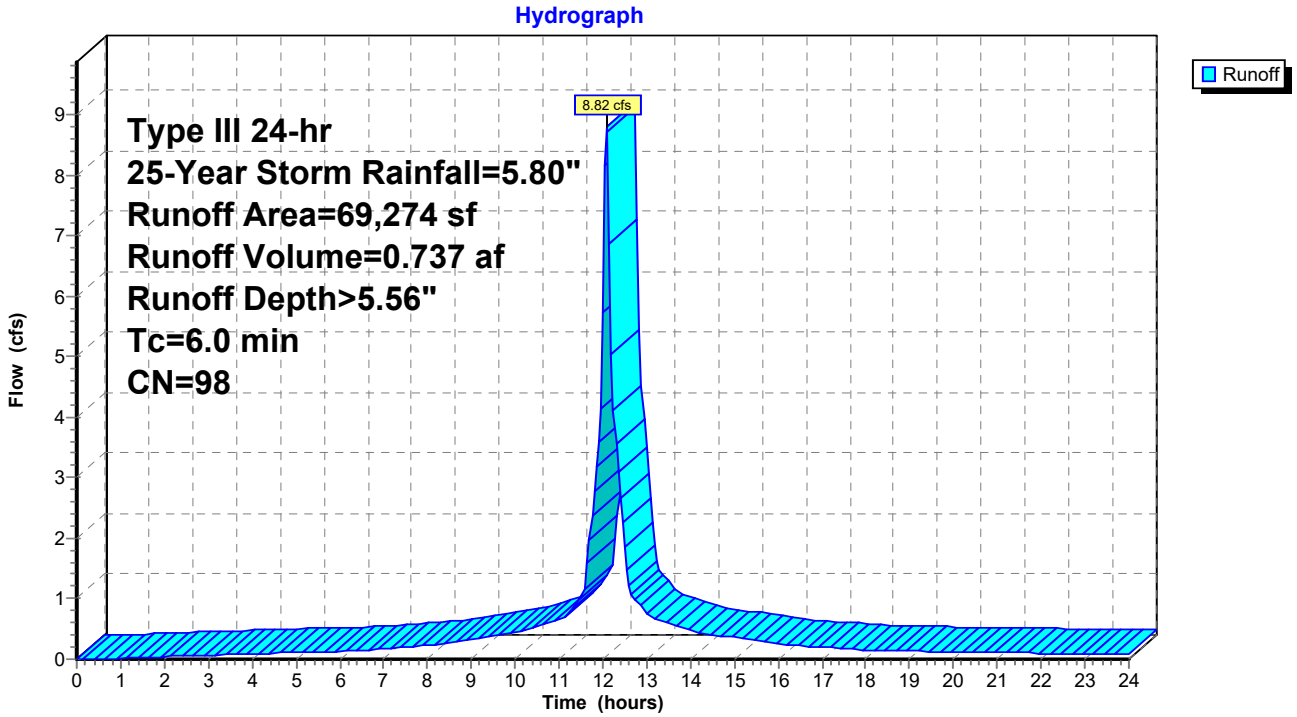
Runoff = 8.82 cfs @ 12.09 hrs, Volume= 0.737 af, Depth> 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	69,274	98	Roof
	69,274		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 19S: Building 4A



Summary for Subcatchment 20S: Redevelopment area east and south of Building 4A

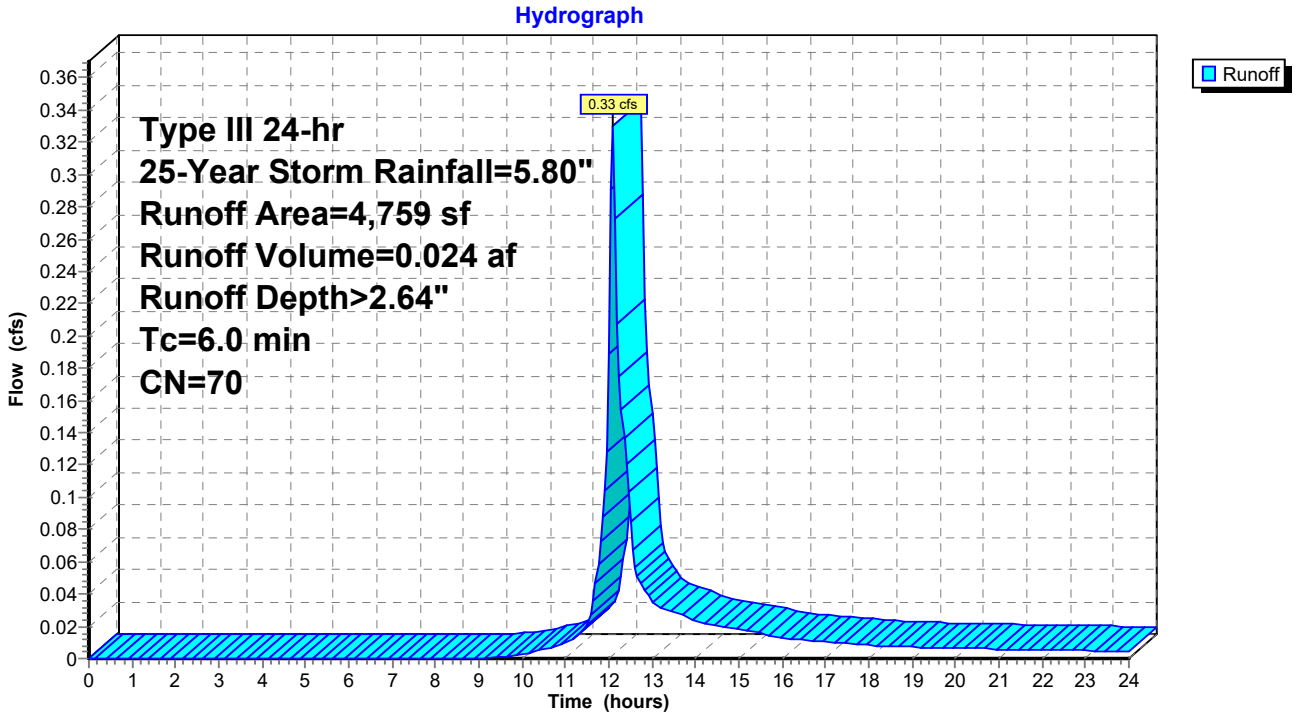
Runoff = 0.33 cfs @ 12.10 hrs, Volume= 0.024 af, Depth> 2.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	2,489	98	Impervious
	2,270	39	>75% Grass cover, Good, HSG A
	4,759	70	Weighted Average
	2,270		47.70% Pervious Area
	2,489		52.30% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 20S: Redevelopment area east and south of Building 4A



Summary for Subcatchment 21S: Eastern Waterfront

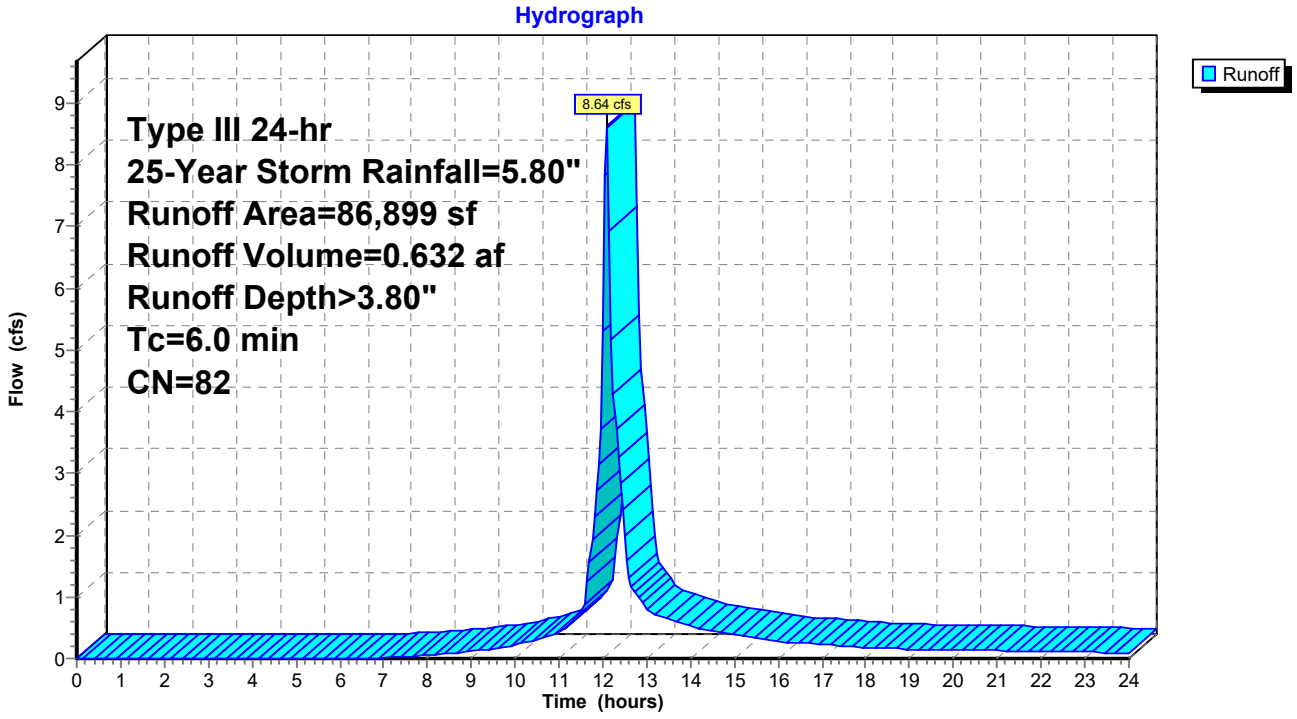
Runoff = 8.64 cfs @ 12.09 hrs, Volume= 0.632 af, Depth> 3.80"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	63,527	98	Impervious
	23,372	39	>75% Grass cover, Good, HSG A
	86,899	82	Weighted Average
	23,372		26.90% Pervious Area
	63,527		73.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 21S: Eastern Waterfront



Summary for Pond 1P: DMH 1

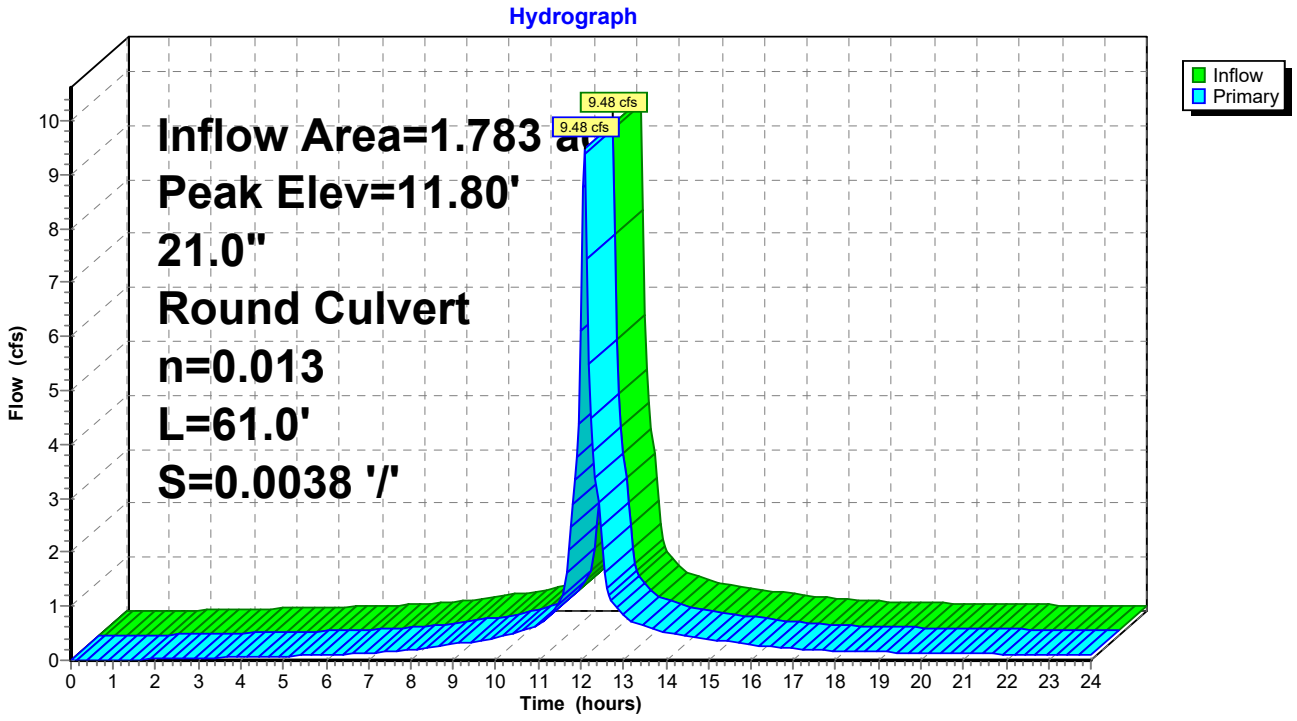
Inflow Area = 1.783 ac, 93.06% Impervious, Inflow Depth > 5.11" for 25-Year Storm event
Inflow = 9.48 cfs @ 12.09 hrs, Volume= 0.759 af
Outflow = 9.48 cfs @ 12.09 hrs, Volume= 0.759 af, Atten= 0%, Lag= 0.0 min
Primary = 9.48 cfs @ 12.09 hrs, Volume= 0.759 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 11.80' @ 12.09 hrs
Flood Elev= 14.71'

Device	Routing	Invert	Outlet Devices
#1	Primary	9.77'	**21.0" Round Culvert** L= 61.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 9.77' / 9.54' S= 0.0038 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 2.41 sf

Primary OutFlow Max=9.24 cfs @ 12.09 hrs HW=11.75' (Free Discharge)
1=Culvert (Barrel Controls 9.24 cfs @ 4.24 fps)

Pond 1P: DMH 1



Summary for Pond 2P: DMH 2

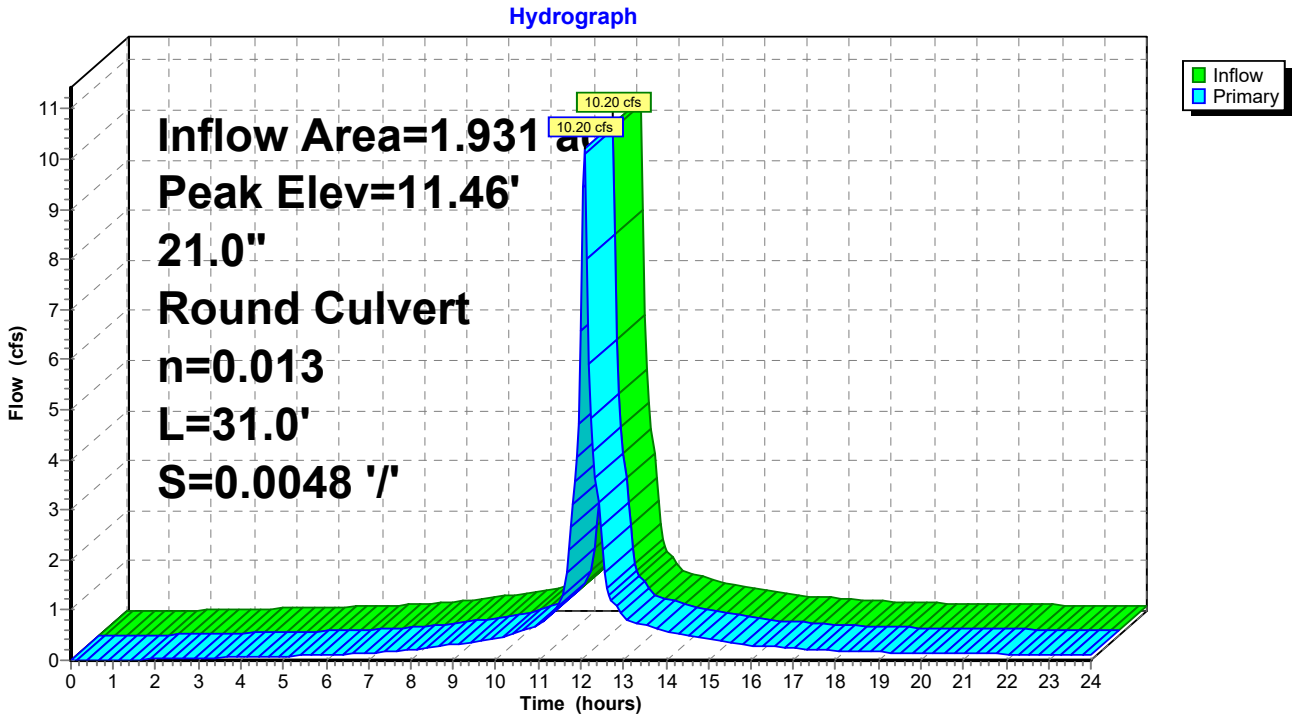
Inflow Area = 1.931 ac, 92.54% Impervious, Inflow Depth > 5.07" for 25-Year Storm event
Inflow = 10.20 cfs @ 12.09 hrs, Volume= 0.816 af
Outflow = 10.20 cfs @ 12.09 hrs, Volume= 0.816 af, Atten= 0%, Lag= 0.0 min
Primary = 10.20 cfs @ 12.09 hrs, Volume= 0.816 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 11.46' @ 12.09 hrs
Flood Elev= 14.63'

Device	Routing	Invert	Outlet Devices
#1	Primary	9.50'	**21.0" Round Culvert** L= 31.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 9.50' / 9.35' S= 0.0048 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 2.41 sf

Primary OutFlow Max=9.94 cfs @ 12.09 hrs HW=11.43' (Free Discharge)
1=Culvert (Barrel Controls 9.94 cfs @ 4.68 fps)

Pond 2P: DMH 2



Summary for Pond 3P: Storm Structure

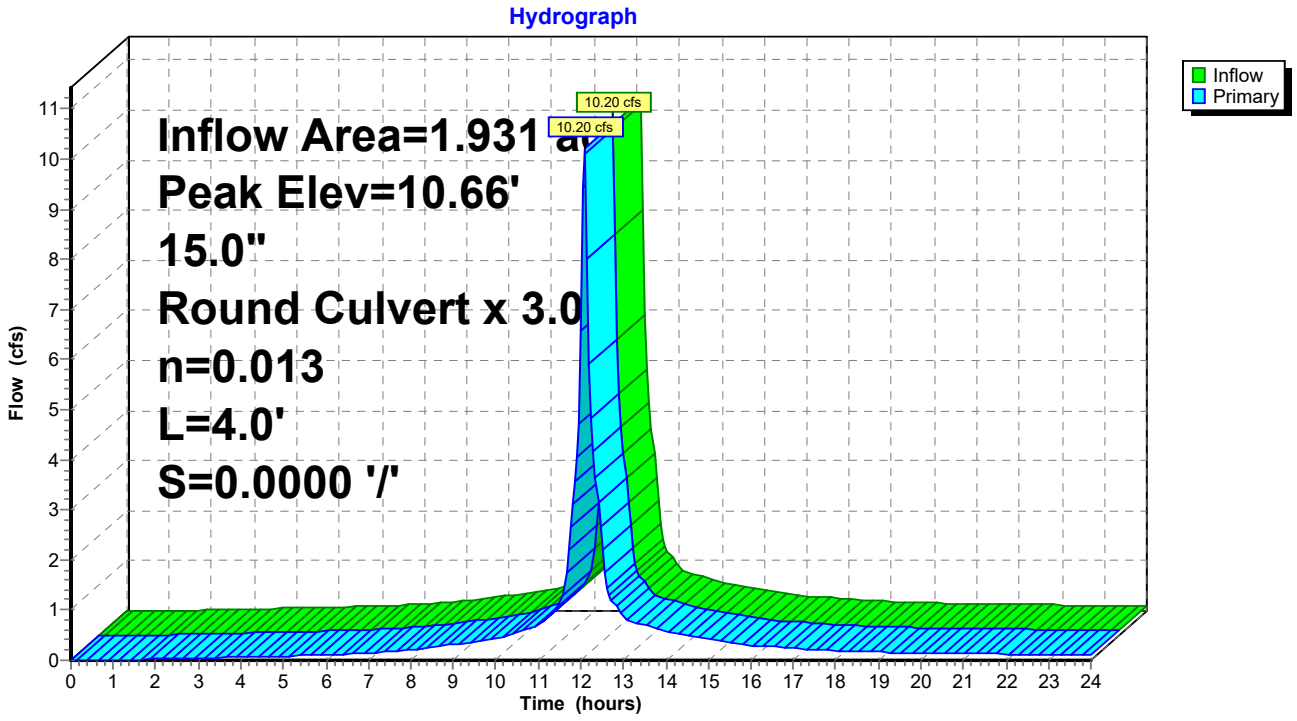
Inflow Area = 1.931 ac, 92.54% Impervious, Inflow Depth > 5.07" for 25-Year Storm event
Inflow = 10.20 cfs @ 12.09 hrs, Volume= 0.816 af
Outflow = 10.20 cfs @ 12.09 hrs, Volume= 0.816 af, Atten= 0%, Lag= 0.0 min
Primary = 10.20 cfs @ 12.09 hrs, Volume= 0.816 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 10.66' @ 12.09 hrs
Flood Elev= 14.51'

Device	Routing	Invert	Outlet Devices
#1	Primary	9.35'	**15.0" Round Culvert X 3.00** L= 4.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 9.35' / 9.35' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=9.94 cfs @ 12.09 hrs HW=10.64' (Free Discharge)
1=Culvert (Barrel Controls 9.94 cfs @ 3.25 fps)

Pond 3P: Storm Structure



Summary for Pond 4P: R-Tank 1

Inflow Area = 1.931 ac, 92.54% Impervious, Inflow Depth > 5.07" for 25-Year Storm event
Inflow = 10.20 cfs @ 12.09 hrs, Volume= 0.816 af
Outflow = 8.90 cfs @ 12.14 hrs, Volume= 0.807 af, Atten= 13%, Lag= 2.9 min
Primary = 8.90 cfs @ 12.14 hrs, Volume= 0.807 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 9.59' @ 12.14 hrs Surf.Area= 1,597 sf Storage= 2,853 cf
Flood Elev= 10.42' Surf.Area= 1,597 sf Storage= 3,504 cf

Plug-Flow detention time= 21.0 min calculated for 0.807 af (99% of inflow)
Center-of-Mass det. time= 13.7 min (777.5 - 763.9)

Volume	Invert	Avail.Storage	Storage Description
#1	7.35'	1,478 cf	**Stone Envelope (Prismatic)** Listed below (Recalc) 6,500 cf Overall - 2,806 cf Embedded = 3,694 cf x 40.0% Voids
#2	7.60'	2,666 cf	**R-Tank Double Modules (Prismatic)** Listed below (Recalc) Inside #1 2,806 cf Overall x 95.0% Voids
		4,143 cf	Total Available Storage

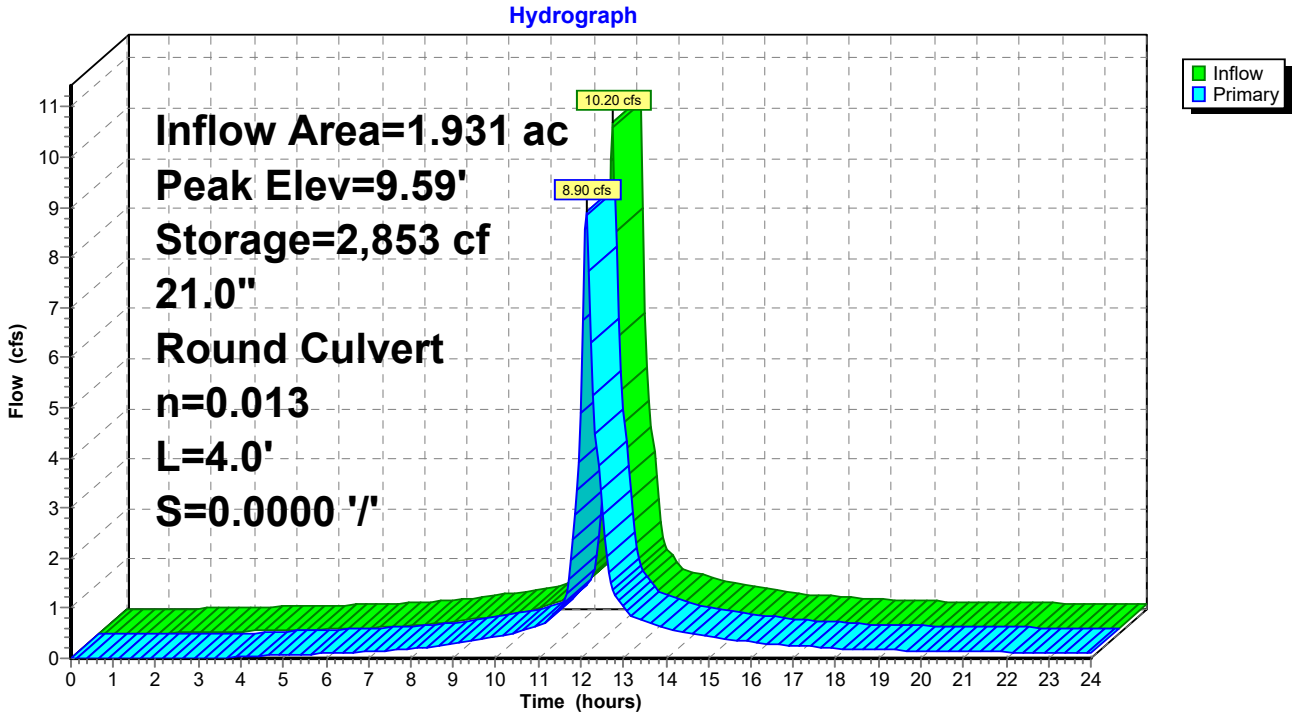
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
7.35	1,597	0	0
11.42	1,597	6,500	6,500

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
7.60	1,293	0	0
9.77	1,293	2,806	2,806

Device	Routing	Invert	Outlet Devices
#1	Primary	7.60'	**21.0" Round Culvert to Filter** L= 4.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 7.60' / 7.60' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 2.41 sf

Primary OutFlow Max=8.76 cfs @ 12.14 hrs HW=9.57' (Free Discharge)
1=Culvert to Filter (Barrel Controls 8.76 cfs @ 4.04 fps)

Pond 4P: R-Tank 1



Summary for Pond 6P: CB27

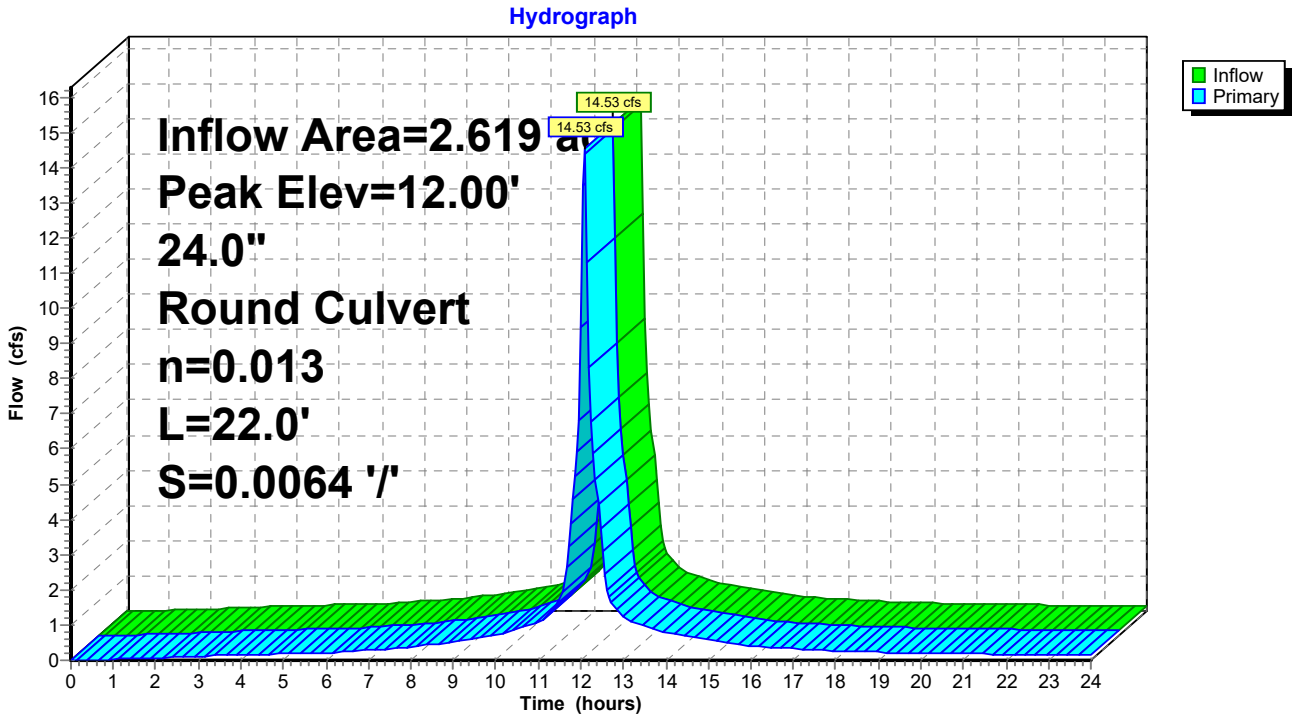
Inflow Area = 2.619 ac, 99.91% Impervious, Inflow Depth > 5.56" for 25-Year Storm event
Inflow = 14.53 cfs @ 12.09 hrs, Volume= 1.213 af
Outflow = 14.53 cfs @ 12.09 hrs, Volume= 1.213 af, Atten= 0%, Lag= 0.0 min
Primary = 14.53 cfs @ 12.09 hrs, Volume= 1.213 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 12.00' @ 12.09 hrs
Flood Elev= 14.57'

Device	Routing	Invert	Outlet Devices
#1	Primary	9.53'	**24.0" Round Culvert** L= 22.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 9.53' / 9.39' S= 0.0064 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=14.19 cfs @ 12.09 hrs HW=11.94' (Free Discharge)
1=Culvert (Inlet Controls 14.19 cfs @ 4.52 fps)

Pond 6P: CB27



Summary for Pond 7P: Storm Structure

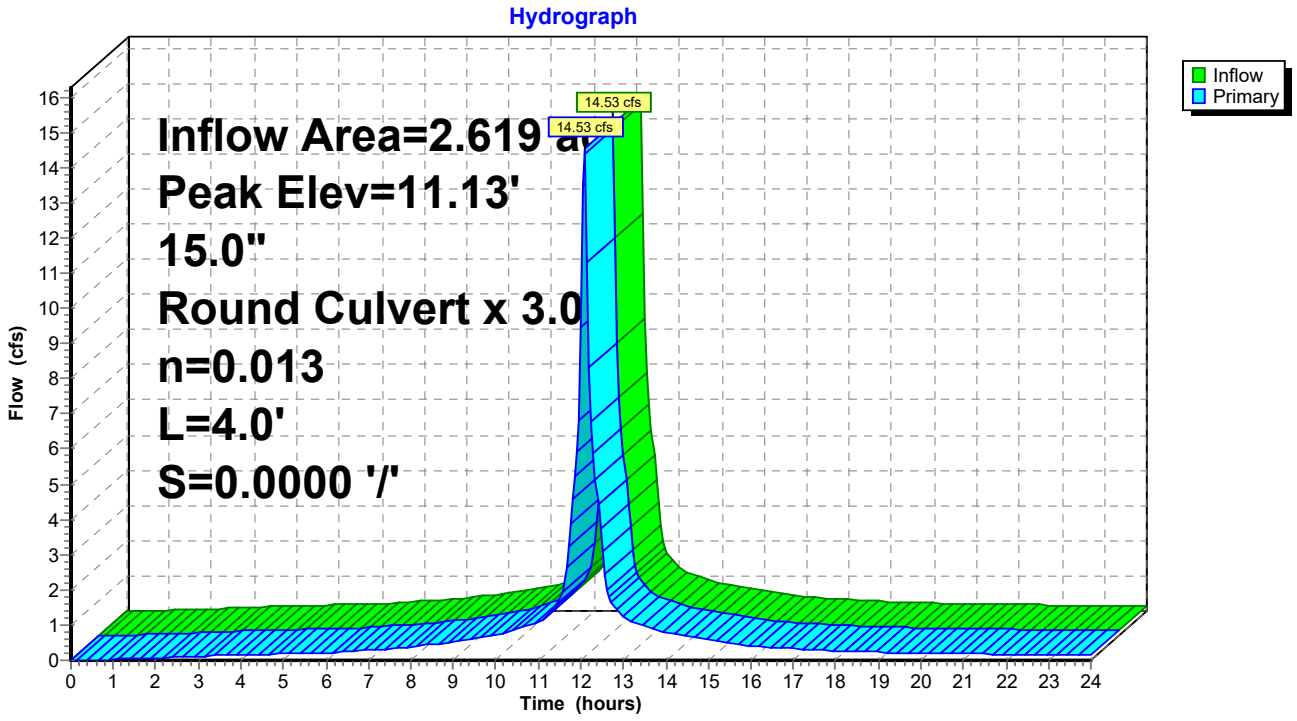
Inflow Area = 2.619 ac, 99.91% Impervious, Inflow Depth > 5.56" for 25-Year Storm event
Inflow = 14.53 cfs @ 12.09 hrs, Volume= 1.213 af
Outflow = 14.53 cfs @ 12.09 hrs, Volume= 1.213 af, Atten= 0%, Lag= 0.0 min
Primary = 14.53 cfs @ 12.09 hrs, Volume= 1.213 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 11.13' @ 12.08 hrs
Flood Elev= 14.25'

Device	Routing	Invert	Outlet Devices
#1	Primary	9.39'	**15.0" Round Culvert X 3.00** L= 4.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 9.39' / 9.39' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=14.10 cfs @ 12.09 hrs HW=11.09' (Free Discharge)
1=Culvert (Barrel Controls 14.10 cfs @ 3.83 fps)

Pond 7P: Storm Structure



Summary for Pond 8P: R-Tank 2

Inflow Area = 2.619 ac, 99.91% Impervious, Inflow Depth > 5.56" for 25-Year Storm event
Inflow = 14.53 cfs @ 12.09 hrs, Volume= 1.213 af
Outflow = 11.56 cfs @ 12.15 hrs, Volume= 1.193 af, Atten= 20%, Lag= 4.0 min
Primary = 11.56 cfs @ 12.15 hrs, Volume= 1.193 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 9.98' @ 12.15 hrs Surf.Area= 3,128 sf Storage= 6,202 cf
Flood Elev= 12.71' Surf.Area= 3,128 sf Storage= 8,290 cf

Plug-Flow detention time= 32.5 min calculated for 1.193 af (98% of inflow)
Center-of-Mass det. time= 21.6 min (766.9 - 745.2)

Volume	Invert	Avail.Storage	Storage Description
#1	7.57'	2,767 cf	**Stone Envelope (Prismatic)** Listed below (Recalc) 12,731 cf Overall - 5,813 cf Embedded = 6,918 cf x 40.0% Voids
#2	7.82'	5,523 cf	**R-Tank Double Modules (Prismatic)** Listed below (Recalc) Inside #1 5,813 cf Overall x 95.0% Voids
		8,290 cf	Total Available Storage

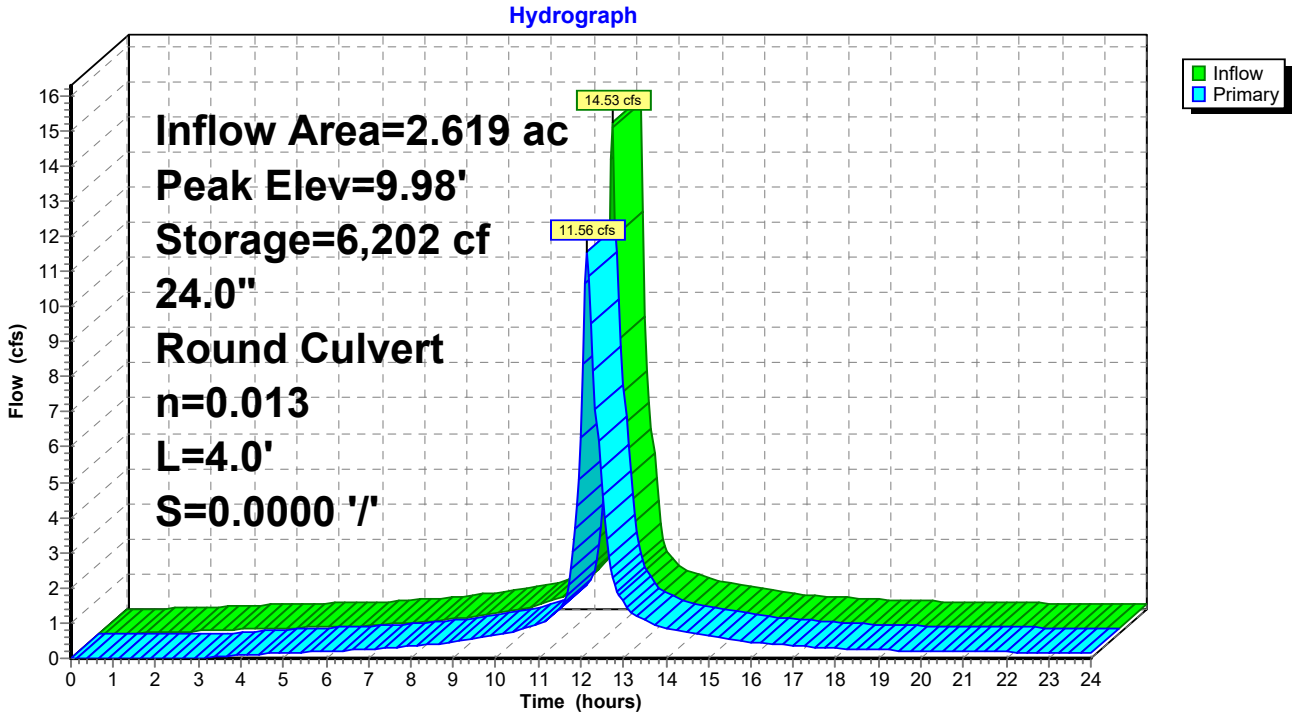
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
7.57	3,128	0	0
11.64	3,128	12,731	12,731

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
7.82	2,679	0	0
9.99	2,679	5,813	5,813

Device	Routing	Invert	Outlet Devices
#1	Primary	7.82'	**24.0" Round Culvert to Filter** L= 4.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 7.82' / 7.82' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=11.51 cfs @ 12.15 hrs HW=9.98' (Free Discharge)
1=Culvert to Filter (Barrel Controls 11.51 cfs @ 4.23 fps)

Pond 8P: R-Tank 2



Summary for Pond 10P: DMH 5

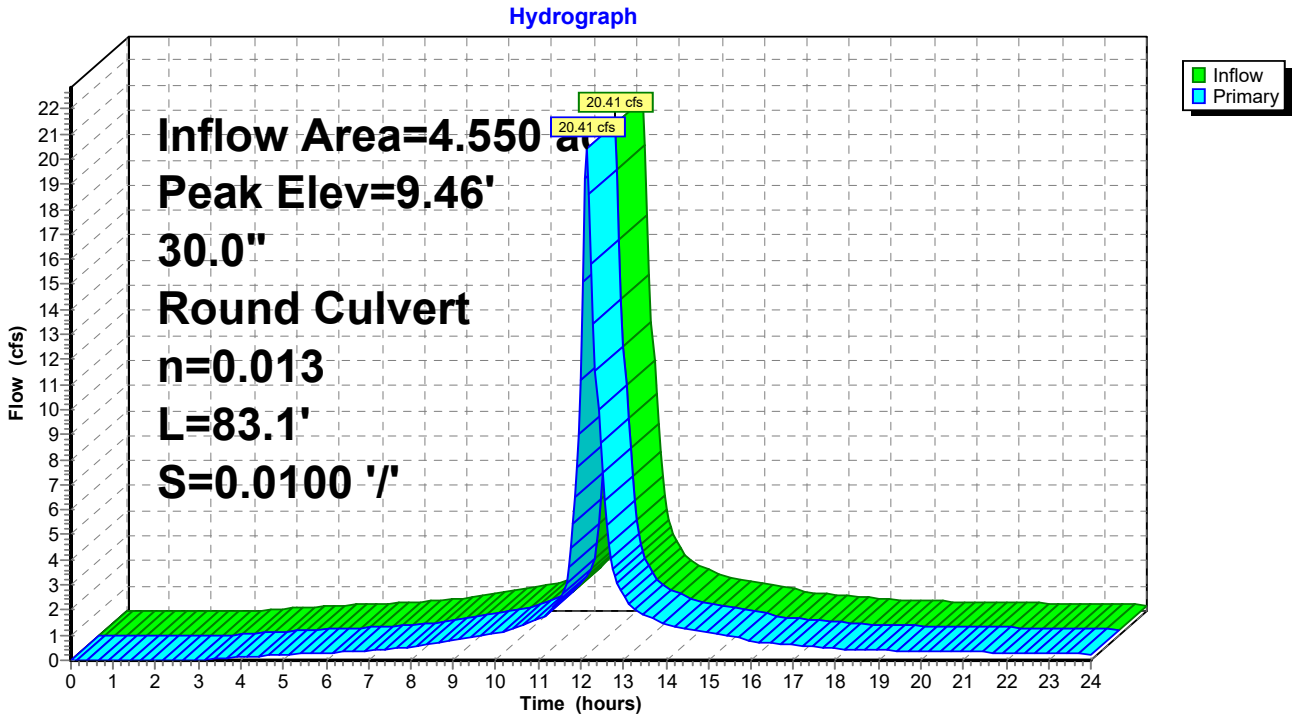
Inflow Area = 4.550 ac, 96.78% Impervious, Inflow Depth > 5.27" for 25-Year Storm event
Inflow = 20.41 cfs @ 12.14 hrs, Volume= 2.000 af
Outflow = 20.41 cfs @ 12.14 hrs, Volume= 2.000 af, Atten= 0%, Lag= 0.0 min
Primary = 20.41 cfs @ 12.14 hrs, Volume= 2.000 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 9.46' @ 12.15 hrs
Flood Elev= 13.56'

Device	Routing	Invert	Outlet Devices
#1	Primary	7.03'	**30.0" Round Culvert** L= 83.1' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 7.03' / 6.20' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=20.29 cfs @ 12.14 hrs HW=9.45' (Free Discharge)
1=Culvert (Inlet Controls 20.29 cfs @ 4.18 fps)

Pond 10P: DMH 5



Summary for Pond 11P: Jellyfish 1 JFPD0806-4-2

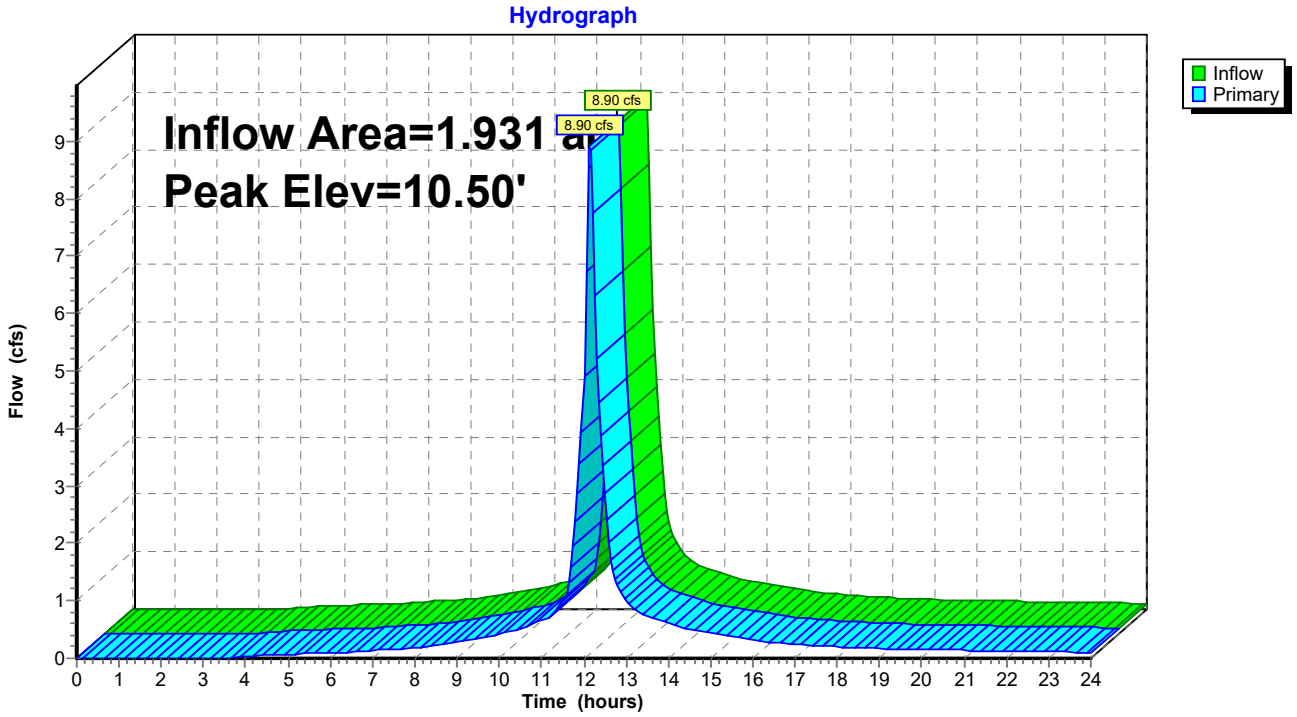
Inflow Area = 1.931 ac, 92.54% Impervious, Inflow Depth > 5.01" for 25-Year Storm event
Inflow = 8.90 cfs @ 12.14 hrs, Volume= 0.807 af
Outflow = 8.90 cfs @ 12.14 hrs, Volume= 0.807 af, Atten= 0%, Lag= 0.0 min
Primary = 8.90 cfs @ 12.14 hrs, Volume= 0.807 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 10.50' @ 12.14 hrs
Flood Elev= 14.79'

Device	Routing	Invert	Outlet Devices
#1	Primary	7.60'	**21.0" Round Filter Culvert Out** L= 90.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 7.60' / 7.13' S= 0.0052 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 2.41 sf
#2	Device 1	7.60'	**JF Filter-1 CSV File** Head (feet) 0.00 0.08 0.17 0.25 0.33 0.42 0.50 0.58 0.67 0.75 0.83 0.92 1.00 1.08 1.17 1.25 1.33 1.42 1.50 Disch. (cfs) 0.000 0.010 0.020 0.030 0.040 0.050 0.059 0.129 0.198 0.267 0.337 0.406 0.475 0.545 0.614 0.683 0.753 0.822 0.891
#3	Device 1	9.59'	**2.8' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=8.75 cfs @ 12.14 hrs HW=10.49' (Free Discharge)
└**1=Filter Culvert Out** (Passes 8.75 cfs of 12.97 cfs potential flow)
  ├**2=JF Filter-1 CSV File** (Custom Controls 0.89 cfs)
  └**3=Broad-Crested Rectangular Weir** (Weir Controls 7.86 cfs @ 3.13 fps)

Pond 11P: Jellyfish 1 JFPD0806-4-2



Summary for Pond 12P: Jellyfish 2 JFPD0806-7-2

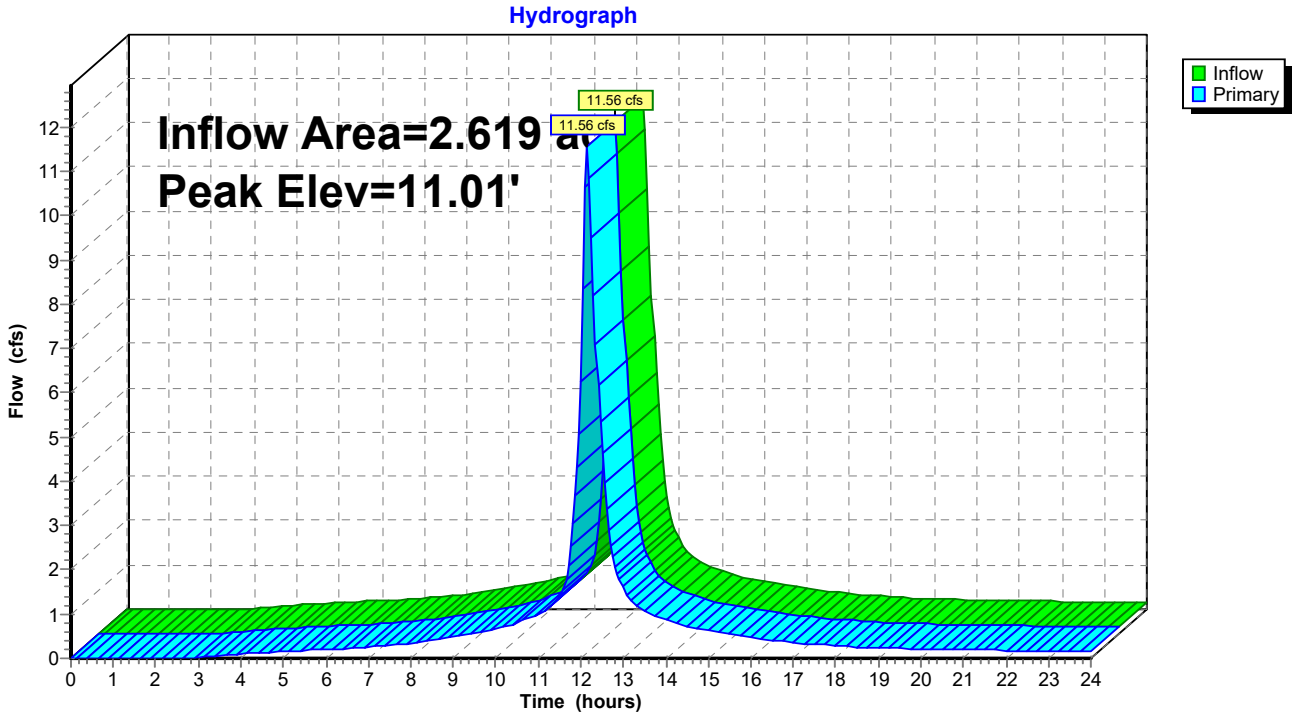
Inflow Area = 2.619 ac, 99.91% Impervious, Inflow Depth > 5.47" for 25-Year Storm event
Inflow = 11.56 cfs @ 12.15 hrs, Volume= 1.193 af
Outflow = 11.56 cfs @ 12.15 hrs, Volume= 1.193 af, Atten= 0%, Lag= 0.0 min
Primary = 11.56 cfs @ 12.15 hrs, Volume= 1.193 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 11.01' @ 12.15 hrs
Flood Elev= 12.70'

Device	Routing	Invert	Outlet Devices
#1	Primary	7.82'	**24.0" Round Filter Culvert Out** L= 114.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 7.82' / 7.13' S= 0.0061 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Device 1	7.82'	**JF Filter-2 CSV File** Head (feet) 0.00 0.08 0.17 0.25 0.33 0.42 0.50 0.58 0.67 0.75 0.83 0.92 1.00 1.08 1.17 1.25 1.33 1.42 1.50 Disch. (cfs) 0.000 0.010 0.020 0.030 0.040 0.050 0.059 0.173 0.287 0.401 0.515 0.629 0.743 0.857 0.970 1.084 1.198 1.312 1.426
#3	Device 1	9.95'	**2.8' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=11.51 cfs @ 12.15 hrs HW=11.01' (Free Discharge)
└**1=Filter Culvert Out** (Passes 11.51 cfs of 17.66 cfs potential flow)
  ├**2=JF Filter-2 CSV File** (Custom Controls 1.43 cfs)
  └**3=Broad-Crested Rectangular Weir** (Weir Controls 10.09 cfs @ 3.41 fps)

Pond 12P: Jellyfish 2 JFPD0806-7-2

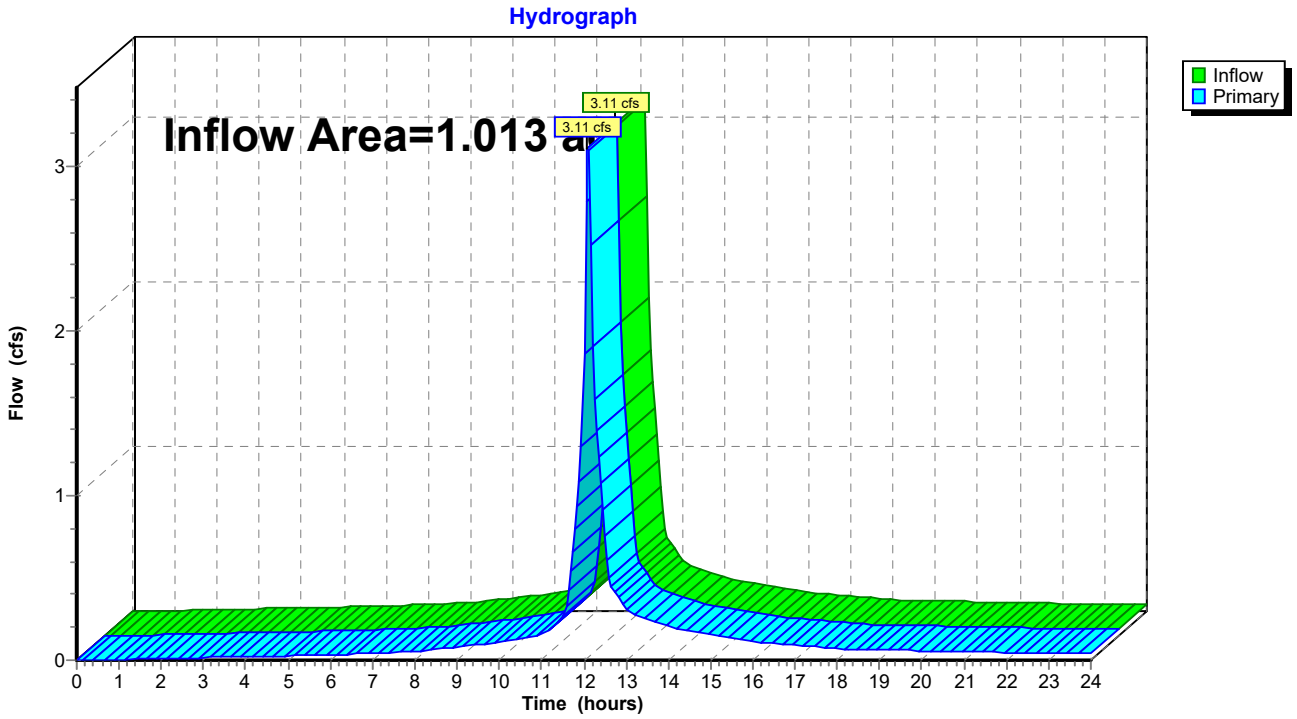


Summary for Link 1L: Fore Connector

Inflow Area = 1.013 ac, 56.83% Impervious, Inflow Depth > 3.06" for 25-Year Storm event
Inflow = 3.11 cfs @ 12.09 hrs, Volume= 0.258 af
Primary = 3.11 cfs @ 12.09 hrs, Volume= 0.258 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 1L: Fore Connector

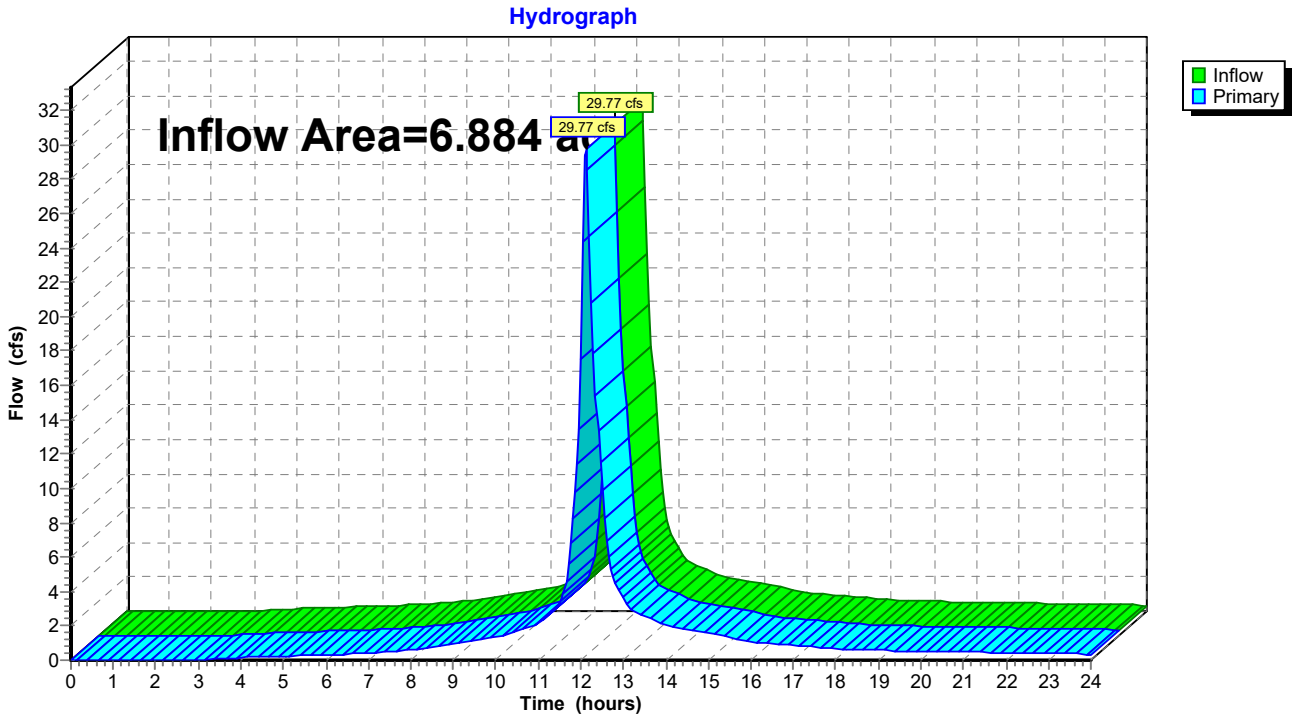


Summary for Link 2L: Fore River

Inflow Area = 6.884 ac, 89.32% Impervious, Inflow Depth > 4.81" for 25-Year Storm event
Inflow = 29.77 cfs @ 12.12 hrs, Volume= 2.762 af
Primary = 29.77 cfs @ 12.12 hrs, Volume= 2.762 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 2L: Fore River



APPENDIX D: FIGURES

42x30 SHEET
1:1

FORE CONNECTOR

FORE STREET

THAMES STREET EXTENSION

REDEVELOPMENT AREA

BUILDING 1A
BUILDING 2
BUILDING 3
BUILDING 4
BUILDING 6
BUILDING 6B
BUILDING 12
BUILDING 14
BUILDING 15
BUILDING 16
BUILDING 24
TOWNHOUSES

SUBSURFACE R-TANK STORMWATER TREATMENT SYSTEM

SUBSURFACE R-TANK STORMWATER TREATMENT SYSTEM

SMH RIM=28.50
INV. IN=18.7
INV. OUT=18.6

SMH RIM=30.19
12" INV. IN=24.29
36" INV. IN=20.79
42" INV. OUT=20.69
RIM=29.52
12"-15" INV. OUT=23.72
RIM=29.39
INV. OUT=25.99

RIM=31.48
BOTTOM HOOD=26.18
6"PVC IN=28.28

SMH RIM=32.10
12" INV. IN=25.80
24" INV. OUT=23.10

SMH RIM=33.03
24" INV. IN=25.53
24" INV. OUT=25.33

RIM=35.05
6" INV. IN=32.05
12" INV. OUT=30.85

MH RIM=39.25
24" INV. IN=30.75
24" INV. OUT=30.65

SMH RIM=49.77
15" INV. IN=42.97
24" INV. IN=42.57
24" INV. OUT=41.77

RIM=54.26
8" OUT, H2O=50.26

RIM=54.15
UNABLE TO ACCESS

RIM=67.72
UNABLE TO OPEN

RIM=72.06
8" INV. OUT=67.16

SMH RIM=87.47
INV. IN=79.57
18" INV. IN=79.57
24" INV. OUT=79.27

RIM=89.04
8" INV. OUT=86.04

RIM=87.07
8" INV. OUT=83.57
HOOD

RIM=11.17

100 YEAR FLOOD LINE, ZONE V2 (EL +9') AS SCALED FROM FLOOD INSURANCE RATE MAP PANEL 230051 0014B DATED JULY 17, 1986

100 YEAR FLOOD LINE, ZONE A3 (EL 10) AS SCALED FROM FLOOD INSURANCE RATE MAP PANEL 230051 0014B DATED JULY 17, 1986

CITY FORCE MAIN SEWER LINE

BAR SCALE
1" = 30'
CHECK GRAPHIC SCALE BEFORE USING
30' 0 30' 60'

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REV	DESCRIPTION	DATE
	DESIGNED BY: LJS	
	DRAWN BY: BCM	
	CHECKED BY: DLC	
	DESCRIPTION	DATE
	1 SUBMISSION	12/20/19

REDEVELOPMENT FIGURE

PORTLAND FORESIDE DEVELOPMENT CO
PORTLAND, ME 04102

PHASE 1 SITE PLAN SUBMISSION

JOB NO.: 0227007
DATE: NOVEMBER 2019
SCALE: 1"=40'
SHEET: 1 OF 1

2

\\woodardcurran.net\shared\Projects\0227007.07 PRDC - 58 Fore Block 1\wip\Drawings\Phase 1 - Site Plan Submission\Stormwater Figures.dwg, Nov 13, 2019 - 7:23pm

42x30 SHEET
1:1

FORE STREET

FORE CONNECTOR

THAMES STREET EXTENSION

BUILDING 1A

BUILDING 2

BUILDING 3

BUILDING 4

BUILDING 6

BUILDING 15

BUILDING 24

TOWNHOUSES

1S 2S 3S 4S 5S 6Sa 6Sb 7S 8S 9S 10S 11S 12S 13S 14S 15S 16S 17S 18S 19S 20S 21S

1L 2L

1P 2P 3P 4P 5P 6P 7P 8P 9P 10P

SUBSURFACE STORMWATER TREATMENT SYSTEM

SMH RIM=28.50
INV. IN=18.7
INV. OUT=18.6

SMH RIM=30.19
12" INV. IN=24.29
36" INV. IN=20.79
42" INV. OUT=20.69

RIM=29.52
12"–15" INV. OUT=23.72

RIM=29.39
INV. OUT=25.99

RIM=31.48
BOTTOM HOOD=26.18
6"PVC IN=28.28

SMH RIM=32.10
12" INV. IN=25.80
24" INV. OUT=23.10

SMH RIM=33.03
24" INV. IN=25.53
24" INV. OUT=25.33

RIM=35.05
6" INV. IN=32.05
12" INV. OUT=30.85

MH RIM=39.25
24" INV. IN=30.75
24" INV. OUT=30.65

SMH RIM=49.77
15" INV. IN=42.97
24" INV. IN=42.57
24" INV. OUT=41.77

RIM=54.26
8" OUT, H2O=50.26

RIM=54.15
UNABLE TO ACCESS

RIM=67.72
UNABLE TO OPEN

RIM=72.06
8" INV. OUT=67.16

SMH RIM=87.47
INV. IN=79.57
18" INV. IN=79.57
24" INV. OUT=79.27

RIM=89.04
8" INV. OUT=86.04

RIM=87.07
8" INV. OUT=83.57
HOOD

100 YEAR FLOOD LINE, ZONE X2 (EL 10) AS SCALED FROM FLOOD INSURANCE RATE MAP PANEL 230051 00149 DATED JULY 17, 1986

100 YEAR FLOOD LINE, ZONE V2 (EL 13) AS SCALED FROM FLOOD INSURANCE RATE MAP PANEL 230051 00148 DATED JULY 17, 1986

STORMWATER LEGEND

- 1S — SUBCATCHMENT AREAS
- LIMIT OF DRAINAGE AREA
- SP1 — STUDY POINT
- xx — POND

BAR SCALE
1" = 40'
CHECK GRAPHIC SCALE BEFORE USING

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REV	DESCRIPTION	DATE
	DESIGNED BY: LJS	
	DRAWN BY: BDM	
	CHECKED BY: DLC	
	TOWNSITE 100B15.dwg	

DRAINAGE AREA FIGURE

PORTLAND FORESIDE DEVELOPMENT CO
PORTLAND, ME 04102

PHASE 1 SITE PLAN SUBMISSION

JOB NO.: 0227007
DATE: NOVEMBER 2019
SCALE: 1"=20'
SHEET: 1 OF 1

1

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GORRILL PALMER

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Transportation Demand Management (TDM) Plan
Phase 1 | Portland Foreside
Portland, Maine

January 2020 - JN 3138.03

Introduction

Portland Foreside Development Company LLC provides this Transportation Demand Management (TDM) Plan for the 58 Fore Street, Portland Foreside site. The Master Development Plan was approved by the City of Portland and received a MaineDOT Traffic Movement Permit (TMP) from the City of Portland dated May 26, 2017. The TMP requires that as part of the Site Plan Review, a Transportation Demand Management (TDM) Plan be approved for each phase. This TDM Plan will be updated and expanded, as necessary, as additional phases undergo Site Plan approvals. Site Plan permitting for the site may be requested to encompass an entire block, or a portion of a block. The following table includes a summary of all permitting completed and in progress to date.

Portland Foreside Phases Summary

Block(s)	Project	Permit	Date
Waterfront Block 7	Marina	Level II Site Plan	Permit Issued January 2019
Phase 1: Blocks 1A, 2 & 4	Block 1A, 2, 4 and Building 12	Level III Site Plan	Permit Application November 2019 (current application)

The redevelopment of 58 Fore Street is a transformative project for the City of Portland. Set on 10.5 acres, this mixed-use development will revitalize the former Portland Company complex into seven blocks of urban infill development complemented by multiple open space plazas, improved public access to this neighborhood, view corridors to the water, improved access to the adjacent shared use path, and new connections from Munjoy Hill to the waterfront.

Transportation Demand Management is creating and executing a comprehensive strategy around utilizing existing infrastructure in more efficient ways to influence people to use transit, carpools and/or leveraging and expanding existing bike and trail opportunities – all with a goal of reducing single occupancy vehicle trips. Thinking about, and modifying, people's behavior to move about the built environment in ways other than a car is a fundamental principle of TDM. Portland Foreside has focused on this important element throughout the design process of the Master

Development Plan and Phase 1 design, and has incorporated numerous TDM strategies into the 58 Fore Street redevelopment project.

Transportation Context

Transportation Demand Management is inherent, built-in, and fundamental to the Portland Foreside redevelopment project, and has been since the earliest planning efforts commenced. Portland Foreside is a true mixed-use redevelopment project with commercial, office, residential, retail, event space and restaurant uses along with multiple public plazas and increased accessibility to both the waterfront and the Eastern Promenade Trail. Development characterized by higher densities and mixed uses is transportation efficient and encourages multi-modal uses. Access to transit services and opportunities for pedestrian and bicycle trips, as well as connections to a mix of uses and destinations is critical. The redevelopment of 58 Fore Street is envisioned to be an extension of Portland's Old Port which offers this type of multi-modal, bike and pedestrian access. Importantly, a mixed use development design is widely recognized as a TDM "best practice" and a successful strategy for managing congestion, ultimately making it safer and easier to bike, walk and utilize public transit.

Portland Foreside is a multi-phased development that began with the construction of a marina and will continue with a mix of development phases that includes commercial, retail, restaurants office, and residential space. The development is located within walking distance of several bus stops. The closest stop, Atlantic Street, is an approximate 3-5 minute walk and is located on METRO Route 1 / Congress Street. The India Street bus stop for METRO Route 8, the peninsula circulator route is located approximately a 7-8 minute walk from the site. The site is also a 5 minute walk from the Ocean Gateway Pier and approximately a 10 minute walk from the Maine State Pier, which is the location of the Casco Bay Lines Ferry Terminal.

Portland Foreside Development Company's approach to minimizing vehicle-based traffic impacts on the City's roadway network started with a focus on integrating the site into Portland's existing urban fabric. The site serves as a seamless expansion of urban mixed uses along Portland's eastern waterfront. Starting with the rezoning and the use programming for the site that occurred in 2014, thru 2016, the project has been developed in a way that will serve the needs of the existing neighborhoods, becoming an integrated element of those neighborhoods. This was the goal of the City's Eastern Waterfront Master Plan and is included in the Comprehensive Plan as well. The office users on the site, and on the other nearby office buildings, will visit the new market, vendors, and restaurants. Many of the new residents of the site will work in the nearby offices, both on and off the site, within an easy walking distance and/or bike ride from their homes. The 58 Fore Market will also become a destination for the adjacent Munjoy Hill neighborhood. All of these scenarios, and many more, reflect shared-use and alternate mode of transportation scenarios which effectively reduce vehicle-based trips associated with the proposed uses when compared to single use or suburban development.

Often, companies looking to move their offices to Portland's waterfront are focused on recruiting young professionals who are overwhelmingly attracted to the characteristics of urban settings. Many of these individuals choose to live in nearby, convenient urban neighborhoods, close to work and close to shops, restaurants and other amenities similar to what this development will provide.

One of the many benefits of being located in Portland's downtown area is that there is a complete network of sidewalks in the surrounding vicinity of the site, which encourages walking to and from the site. Additionally, the Eastern Promenade Trail, which connects to a 70 mile pedestrian and bicycle network, runs directly through the site. The City in partnership with Portland Trails, supports this network. This is a unique attribute that encourages increased bicycle and pedestrian use. The Eastern Promenade Trail provides a primary point of connection to these bicycle commuters and market visitors arriving from other areas both on and off peninsula in Portland, and from nearby communities. The City of Portland, in line with other urban areas of the country, has seen an increase in bicycle commuters. We anticipate that the Eastern Promenade Trail and its associated network will serve as a strong conduit for promoting bicycle commuting opportunities for workers on-site, in addition to promoting biking and walking to the on-site market and retail establishments.

The 58 Fore Market Hall, highlighting the historic core of this project, is a mixed-use destination on its own. Serving various prepared and packaged foods, the market is expected to be much more than a single stop for visitors. We anticipate that visitors can buy specialty goods, prepared foods, meats and produce, and made to order foods at this location as part of a multi-vendor visit to the 58 Fore Street site. The nature of the retail in the market and on the site promotes extended visits, not high-turnover trips.

This mixed-use development is designed to encourage people to live, work, and play within walking distance. Not only is it thoroughly connected to existing transit, pedestrian, and bicycle systems, the site itself provides connectivity throughout. Between the offices, retail, restaurant, and residential, the site contains many of the types of destinations that people seek in a downtown setting, all without needing a vehicle. The uses have been selected to work effectively together and draw visitors, employees, and guests from the other uses on the site.

TDM & City of Portland Transit and Parking Studies

The Portland Peninsula Transit Study from 2008 specifically detailed parking and Transportation Demand Management strategies and suggestions based on a review of best practices conducted in communities throughout the United States. Two of the strategies are particularly relevant to the Portland Foreside project.

1) **Pursuing a "Park Once" Strategy** was highlighted in this study as a best practice for TDM. PFDC has focused on a park once strategy throughout the planning and redevelopment effort. Making efficient use of parking supply, employing "smart" technology for the efficient operation and management of our structured parking, and installing clear signage and wayfinding are all included as part of our project design. For those who do drive, we will encourage employees and visitors of Portland Foreside to park once and conduct multiple tasks on foot prior to returning to their vehicle.

2) The entire Portland Foreside project was also formulated and designed around **prioritizing pedestrians and pedestrian-oriented strategies** which is highlighted in the 2008 report as well. These considerations include improving and relocating the Eastern Promenade Trail closer to the water, implementing a shared-street network, and creating numerous public spaces and plazas for the community to enjoy. The project maximizes its connection to the Eastern Promenade Trail and City sidewalk network with a focus on pedestrian and bicycle movement.

This TDM Plan for Portland Foreside also aligns well with the City of Portland's *"Parking Study for Downtown, the Old Port and the Eastern Waterfront"* from 2017. This plan recommended several strategies to address parking and transportation challenges unique to this area of the City and these recommendations have been considered in the completion of this Plan including improving parking management technology and increasing car share use. Our approach to these strategies is discussed further in this TDM.

Transportation-efficient development is characterized by higher density, a diversity of users through a mix of uses, access to frequent transit service, and opportunities for short pedestrian and bicycle trips to a rich mix of desired destinations. Mixing housing and employment with other services and retail opportunities allows residents to make necessary daily and weekly trips without using a car. Land use policy impacts transportation, sustainability and public health as a properly designed community encourages a healthy mix of walking and biking while also reducing the need to drive for daily needs. To achieve the maximum benefit, the mixed use redevelopment at Portland Foreside is focused in an area of the City of Portland with good access to transit service, the ability to be coordinated with new transit investments such as METRO, and the ability to leverage a growing existing bicycle and pedestrian network.

TDM Coordinator

Portland Foreside will appoint a TDM Coordinator charged with administering and coordinating the TDM Plan. The TDM Coordinator will communicate with each of the tenant organizations in order to create an effective overall approach to the TDM goals. As more phases are developed, the TDM Coordinator will have increasing responsibilities with the additional site users. The

TDM Coordinator has not yet been identified, but will be selected and the City will be notified prior to occupancy of the site.

The TDM Coordinator will be responsible for the following items:

- Coordinate and promote rideshare opportunities.
- Coordinate and promote the use of the following alternatives to single occupant vehicle travel:
    - Providing METRO information to tenants
    - Providing Car Share service information to tenants
- Monitoring parking usage and promoting shared use parking.
- Monitoring bike rack usage and making recommendations as needed to accommodate demand.
- Encouraging greater use of bicycling and walking through education and promotion of available amenities and infrastructure in the area.
- Overseeing ongoing monitoring and updating of this TDM plan on a yearly basis.
- Creating and overseeing a committee representing each of the tenants in the development who will assist in TDM planning and assessment.
- Creating tenant profiles that describe the unique TDM strategies and monitoring procedures for each type of tenant in the development.
- Administering and reviewing TDM surveys on a yearly basis.
- Filing annual TDM reports with the City and working with them on strategies for improvement.

The TDM Coordinator will be the primary point of contact for employers and tenants regarding TDM. The Coordinator will help tenants develop strategies and incentives for employees and customers where applicable. The TDM Coordinator will also help tenants finalize their TDM strategies and the implementation of those strategies. This will occur when tenants are selected and before they occupy their space.

Trip and Parking Reduction Targets

In addition to the shared use reduction and other modes reduction that were applied to the trip generation and parking demand in the approved Traffic Movement Permit, an additional reduction of 5% is targeted for both trip generation and parking demand. This yields a reduction of 10 trip ends during the AM peak hour, 16 trip ends during the PM peak hour, and 14 parking spaces. The timeline for achieving this goal is 2-3 years after full occupancy of each phase. It should be noted that this reduction target will be reevaluated as each phase of development goes through the Site Plan Approval process. Once the development phases are completed and occupied, the

reduction targets will also be reassessed to ensure that targets and mode reduction assumptions made in the TMP are being met, and if not, modifications to this TDM plan will be required.

Trip and Parking Reduction Strategies

The proposed trip and parking reductions strategies have been divided into three categories; infrastructure, incentives, and information. The following summarizes the proposed strategies for each category.

Infrastructure Strategies

Infrastructure strategies primarily include modifications and improvements to the accessibility of modes of transportation other than single occupant vehicles. The following summarizes the proposed infrastructure strategies for the site.

Public Transit Access

Pedestrian access to the closest METRO stops appears acceptable. One of the benefits of being located in a downtown area is the sidewalk network connecting all parts of the downtown area. The condition of the sidewalks in front of the site are consistent with others around the area; however, utility poles and sign posts are within the sidewalk width in several places. The project proposes to update the Fore Street streetscape, which includes updates to the sidewalks.

To increase METRO use, the development has discussed with METRO the potential for an additional bus stop at the corner of the site's vehicular access point on Thames Street. PFDC commits to educating and encouraging employers who are located at Portland Foreside to investigate potentially offering employees the option of purchasing a pre-tax monthly transit pass which is a TDM strategy. METRO's new electronic fare system, that is proposed to be launched in Spring of 2020, will further encourage participation in using public transit.

The Portland Peninsula Transit Study made transit service recommendations and indicated those that have yet to be achieved. One of those was providing a direct link between the Portland Transportation Center and Downtown/Waterfront as development on the Eastern Waterfront progresses. While this recommendation has not been fulfilled to date, PFDC is highly supportive and commits to collaborating with this effort. Providing this link was identified in the study as a TDM strategy to address parking challenges.

Portland Foreside met directly with METRO in November 2019 and anticipates additional ongoing discussions. In addition, PFDC makes the following commitments:

- Promotion of METRO on the 58 Fore Market Hall website which indicates how to get to the site, this link will be available as an online resource for all tenants on the site.
- Participating in meetings and conversations between tenants and METRO representatives to inform and encourage use of public transit and how it can be a viable transportation option for employees and visitors.
- Ensuring that 58 Fore is included in the METRO Transit Guide.
- Having METRO bus passes available for purchase on site through our TDM Coordinator.
- Providing information about public transportation to clients who schedule events using the space available at 58 Fore Street via email or an information packet at the time of booking.

Pedestrian and Bicycle Access

One of the many benefits of being located in the downtown area is that there is a complete network of sidewalks in the vicinity of the site, which encourages walking to and from the site. Additionally, the Eastern Promenade Trail (a pedestrian and bicycle shared use pathway that connects to a 70- mile pedestrian and bicycle network) runs through the site, which efficiently draws pedestrian and bicycle traffic to this area of the City. The TDM Coordinator will work to promote this path and the on-site bicycle racks to increase the number of bicyclists. It is recommended that bicycle parking be provided in key locations around the site and monitored by the TDM Coordinator, who will identify if additional bicycle parking is warranted. Shower and locker facilities will be considered, to encourage further bicycle use in future development. With substantial bicycle facilities, the development will consider a bicycle share program to encourage visitors or residents who do not own bicycles to use them as an alternative mode of transportation.

While developing broad bicycle and pedestrian networks is generally a municipal or regional effort, PFDC is committed to making a significant investment in the Portland Foreside project by providing bicycle and pedestrian connections and accommodations throughout the site and to the adjacent pathway and downtown where they have not previously existed. Making it safe and aesthetically pleasing to get from the transportation networks that currently exist along Munjoy Hill, the Eastern Promenade Trail and Thames Street to the mixed use site will have a positive benefit. We are accommodating bikes and pedestrians by focusing on orienting the entrances toward these users (not vehicles), creating seamless pedestrian areas, welcoming lighting and landscaping and visible and secure bicycle accommodations and storage. The Portland Foreside project also successfully includes another TDM best practice focused on improving bicycling and walking conditions associated with the Eastern Promenade Trail that runs through and adjacent to the Portland Foreside site. This pathway will be relocated closer to the waterfront as a part

of the project. Pathway users will benefit from the addition of a more leisurely pedestrian pathway adjacent to the water as well as the continuation of a higher speed bikeway component for bikers, runners and commuters.

PFDC makes the following commitments:

- Encouraging employers to make shower and changing facilities available along with bike share programs to further enhance pedestrian and bicycle movement.
- Facilitating conversations with tenants to encourage them to promote the use of bike racks for employees, visitors and guests.
- Increase bicycle parking when it is warranted.

Shared Mobility

The TDM Coordinator will monitor the use of bicycle facilities and create a bikeshare program for the site. In addition to shared bicycles, a carshare program will also be considered. Importantly, Maine is one of 20 states served by Uhaul CarShare in the United States. In Portland, the service currently provides a total of eight vehicles, one of which is located at 30 Commercial Street, near its intersection with Franklin Street, and another at 115 Congress Street, near its intersection with St. Lawrence Street. These vehicles are available on an hourly or daily basis. This will allow for the use of a car for certain trips, which can aid in a traveler to or from the development to choose transit. Following the first survey regarding car share, additions to the shared vehicles will be made if employees or visitors desire their use in significant numbers. A Car Share program is an attractive option, particularly for local residents who are employed by one of the various tenants in the development and do not otherwise need a vehicle.

PFDC makes the following commitments:

- Providing a car share pick-up space on site at Portland Foreside and giving consideration to the use of additional vehicles such as a car rental agency on, or near, the site for visitors to use on an as-needed basis.
- Encouraging transportation network companies (Uber and Lyft) to use designated drop-off locations at the site that maximize the pedestrian experience and limit vehicle use within the site (likely Thames Street).
- The TDM Coordinator will educate employers, residents, businesses and visitors about various car sharing apps that facilitate the coordination and transactions necessary to rent and share. The TDM Coordinator will be responsible for educating, as well as monitoring use, data gathering (to the extent possible) and reporting.
- The TDM Coordinator will create a bikeshare program for the site.

Flexible Work Options

To reduce the number of employee trips to work during peak hours, employers have an opportunity to encourage telecommuting, flextime, or other flexible scheduling. Telecommuting allows employees to work from home, eliminating trips to the office. Both flextime and flexible scheduling allow employees to work hours convenient to their schedules and reduce the employee trips during the peak hours, by allowing employees to travel to or from work earlier or later in the day. We anticipate that some office tenants will implement a shared desk strategy that encourages employees to work remotely instead of in the office by reserving a desk when they are planning to work in the office. There would be fewer desks available than total employees, which would eliminate trips to the office.

Unbundled Parking for Residential Units

The first phase of development at Portland Foreside includes the construction of residential units and structured parking. Tenants who chose to live at the residential units will not be required to have a parking space with their apartment unit, condo or townhouse. The unbundling of parking and residential units ensures that residents are not obligated to take a parking space if they do not want to have a car. Residents of 58 Fore Street will have no obligation to rent a parking space should they choose to live in one of the units constructed as part of the development. Residents will be offered a parking space as one of several value add options they may select depending on individual interest. With monthly parking rates around the City ranging from $175 to $225 this could be a substantial savings to the resident who opts out, and further encourage a car-free, transit friendly life style. This strategy is consistent with the 2017 parking study for downtown, the Old Port and the Eastern Waterfront as a TDM strategy to address parking challenges.

Future Downtown Connections

In addition to supporting existing multi-modal transit options, PFDC commits to supporting the City of Portland and other interested organizations on the topic of transportation alternatives along Commercial Street from the eastern waterfront to the western waterfront. Potential future linkages could continue to Thompson's Point, the Portland Transportation Center, the Portland Jetport and even locations such as Rock Row in Westbrook. Portland Foreside Development Company will participate in meetings regarding future downtown connections and help create awareness for alternative transit options.

Project Specific Infrastructure Improvements

PFDC is making the following infrastructure improvements that are related to mobility and pedestrian and bicycle safety and access:

- As detailed in the approved Traffic Movement Permit for the site, PFDC will contribute $650 per PM peak hour trip impact that can be used by the City for any transportation mitigation and/or improvement related to addressing the transportation impacts of the project.
- Relocation and expansion of the Eastern Promenade Trail closer to the waterfront. The expansion will construct a new section of trail that will be for more leisurely enjoyment of Casco Bay while also preserving the parallel portion of the pathway for bicycle commuters or faster moving pedestrians.
- Reconstruction of a portion of sidewalk along the Fore Street frontage.
- Provision of bicycle racks on site.
- Creation of a shared street network that provides access to the site from Thames Street extension and prioritizes the pedestrian experience.

Incentives

Incentives can be used to encourage employees and visitors to reduce trip generation and parking demand. These incentives will be different for each tenant to cater to the various needs and desires of different site groups. The TDM Coordinator is responsible for aiding the employers in developing suitable incentives.

Employee Incentives

Employer incentives to encourage employee use of alternative modes of transportation currently under consideration include:

- A "parking cash out" where employees receive monetary payments in lieu of provided parking, free or reduced public transit passes, or periodic prize drawings for employees using alternative modes of transportation.
- Enrollment of office employees, as well as employees for other tenants, in METRO's employee badge and METRO smart card payment program.
- Establishment of a carpool system and convenient parking spaces reserved for carpoolers.
- Leveraging GO MAINE programs for employees who use an alternative mode of transportation to travel to work, such as transit or carpool and an emergency ride home benefit to further encourage employees to use alternative means to get to work. GO MAINE also includes a rewards program for current users and a preferential parking

program. Employers promote utilization of the GO MAINE programs by streamlining the process to enroll in their programs.

PFDC commits to tasking the TDM Coordinator with educating employers and tenants about the employee incentives listed above and helping them facilitate participation in these programs and benefits. The TDM Coordinator will conduct education and outreach to employers and tenants four times a year, which will be documented and summarized in an annual TDM report for the overall site. The annual report will be provided to each employer and tenant with suggested follow up action items and modifications to the Tenant Profiles.

Visitor / Event Incentives

Visitor incentives will be coordinated by the TDM Coordinator in conjunction with retail and/or commercial owners. Incentives such as offers, coupons or discounts for using alternative modes of transportation in order to encourage visitors to reach the site in a variety of ways. PFDC commits to tasking the TDM Coordinator with researching and developing proven visitor incentives, that can be marketed and advertised to site visitors, and will encourage their arrival and departure from the site in ways other than a single occupancy vehicle. The TDM Coordinator will develop these visitor incentives, educate tenants about the incentives and encourage their use and then document, track and provide summaries in the annual report on how they have been pushed out to the public on a monthly basis. The TDM Coordinator will also include feedback from site visitors on how these incentives are being received by the public.

Parking Management & Technology

Parking management is defined by strategies that encourage more efficient use of existing parking facilities, reduced parking demand and shift travel to non-SOV (single occupancy vehicle) modes. Managing parking helps to reduce the undesirable impacts of parking demand on local and regional traffic levels and the resulting impacts on community livability. At the same time, smart management of parking helps to ensure access to retail businesses, provides access for visitors to regional and neighborhood attractions and supports neighborhood vitality. Parking management is a nationally recognized TDM best practice.

Improving the management of parking spaces through the use of technology is consistent with the 2017 parking study for downtown, the Old Port and the Eastern Waterfront as a TDM strategy to address parking challenges. Offering a "smart" garage at Portland Foreside will also incentivize users to use this garage and leverage the mixed-use opportunities offered by the site and connection to the rest of the City of Portland. The structured parking associated with Portland Foreside will be operated by utilizing latest technology to manage the supply by considering pricing, hours and real-time occupancy data with customers via smartphone apps. The recommendation in the 2017 study acknowledges that the more customers know about

where parking is available and at which price before departure or en route, the better the parking experience and more efficient use of available parking spaces. This recommendation also discussed Transportation Systems Management to better utilize existing parking supplies through parking signage and wayfinding. Implementing this also further addresses recommendations of the Portland Peninsula Vehicular Wayfinding Plan specifically related to parking signage and wayfinding in the Old Port, Waterfront, Arts District and Eastern Waterfront. This study also indicated that a City effort be considered to study how parking wayfinding can be optimized through signage and technology and encouraging maximum use of technological tools that guide the public to available parking spaces. Such programs through smart phone apps maximize the efficiency of existing parking while reducing congestion and vehicle miles traveled.

PFDC is excited about, and commits to leveraging, technology in the parking garage at Portland Foreside in order to maximize efficiency and user experience which will further enhance the "park once" concept and TDM best practice and in monitoring parking utilization.

Information & Marketing

One static kiosk or bulletin board on the project site will post transit resources, rideshare opportunities, bicycle and pedestrian information, and any promotions that are beneficial to promoting vehicle trip reduction. This kiosk will be informative and include flyers advertising upcoming multimodal events, transit and bike maps, trail maps as well as other information relevant to a mixed-use development community. Additionally, the TDM Coordinator will coordinate with employers and tenants to maintain TDM kiosks or bulletin boards in the lobbies of the buildings to provide publicly available transit maps and schedules, information on bicycling routes, parking infrastructure, and walking infrastructure, and information on transportation and guaranteed ride home programs. Alternative modes of transportation information will be promoted, such as the advantages and cost-saving opportunities, as well as incentives offered by employers. PFDC commits to:

- Providing employers with a new tenant packet through our TDM Coordinator that provides information and resources which will include employee commute incentive suggestions, where transit resources are posted on the site and other relevant information.
- Encouraging employers to participate in rideshare groups, lists and use smart phone apps to inform their employees about carpooling options.
- Encouraging employers to promote alternative modes of transportation.
- Authorizing our TDM Coordinator to create and market ride sharing connections and matching programs for employees, visitors and residents to use at their own purview.
- Continued outreach to and collaboration with METRO, Portland Trails, Bicycle Coalition, etc.

- Communicate with tenants and employers about tying into national multi-modal campaigns such as the National Bike Challenge, National Bike to Work Day and Commute Another Way Day.
- Issuing semi-annual newsletters to employers and tenants communicating about TDM strategies.
- Communicating with other TDM Coordinators in the area about TDM through our TDM Coordinator.

A critical component of PFDCs success with our TDM strategies and commitments is a marketing plan that considers employees, residents and visitors to the 58 Fore Street site. Since Phase 1 of the redevelopment effort is bringing forward two condominiums, 4 townhouses and 6 apartments, a more robust residential marketing effort will be developed with future phases of the project that will incorporate more substantial residential development. The overall marketing strategy for TDM associated with this site is built around efforts being undertaken in the City to encourage walking, bicycling, ride share and the use of public transit. PFDC makes the following commitments to a marketing plan for 58 Fore Street and TDM strategies:

- A transportation orientation and welcome packet to all employers and tenants who locate at 58 Fore Street, educating them about options for accessing the site and providing contact information where feedback or questions can be sent.
- The TDM Coordinator will reach out to all employers and tenants regarding opportunities for one-on-one consultations to discuss ways to access the 58 Fore Street site. Consultations will also include specific requests for feedback.
- The TDM Coordinator will partner with Go Maine and the Bicycle Coalition of Maine to offer all employers and tenants "commute coaching" at least once annually. A summary of commute coaching events will be provided in the annual report.
- Recognition for employers and tenants on the website for the project (if they so choose) acknowledging their participation and commitment to TDM. This recognition will also be available for their own marketing use as a tool.
- Actively maintain a "transit options" portion of the project website that includes:
    - All modes of transportation that can be used to access 58 Fore Street.
    - Messaging about the positive impacts of multi-modal transportation for employees, visitors and residents.
    - Incentives available for using preferred modes of transportation (walking, bicycling, public transit)
    - Instructions for local public transit options, GO MAINE carpool matching, bikeshare and carshare availability, and links to various programs and web tools (including the Google Maps transit trip planner or other similar technology).
    - Rideshare opportunities for tenants and visitors

- A multi-modal map identifying transit stops and routes, common walk routes, bike lanes and paths, bicycle parking and estimate bike and walking travel times from various locations throughout the City.
- Story sharing, such as employee commuter profiles and the results of transportation surveys on the project website.
- The TDM Coordinator will post through a social media account associated with the site about relevant TDM topics.

Monitoring and Reporting Plan

As part of the TDM Plan monitoring program, the TDM Coordinator will be responsible for overseeing the assessment of the TDM Plan use of its various operational components. The monitoring will be through the surveys, direct observation, and interaction with employees, residents, and visitors. The following summarizes the components of the monitoring and reporting plan.

Employee Surveys

Six months after initial occupancy of each phase and annually thereafter, the on-site employees will be surveyed regarding their transportation choices such as automobile / bicycle / motorcycle-scooter ownership, parking demand, and the frequency of trips using bicycling, walking, Car Share, carpool/vanpool, and the bus. The survey will be updated periodically by the TDM Coordinator. The surveys will be conducted to determine:

- Mode of travel to and from work (car/carpool/biking/walking/bus)
- Preferences or barriers to use of the modes of travel
- The flexibility and receptivity of employees to utilizing various travel modes (and to ascertain whether individual employees make use of multiple modes during the course of a given year or season)

Various questions will be created in the survey to determine which measures to encourage increased use of transit are most effective.

Visitor Surveys

For visitors to the site, surveys will also be included. These can be provided with meal receipts at the restaurant or via website codes on menus. The surveys will be conducted to gather the following information:

- Mode of travel to and from the hotel, restaurant, retail center, or events (car/carpool/biking/ walking/bus)

- Preferences or concerns with modes of travel
- Barriers to using alternative modes of transportation
- The flexibility and receptivity of visitors to utilizing various travel modes to access the site

All visitor surveys will need to be simple and convenient. They will be made accessible with a link online or a QR code on receipts or fliers posted on the site that can be scanned with a smartphone. Various questions will be created in the survey to determine measures to encourage increased use of transit, for example, either via costs for parking or greater promotion of transit uses. The TDM Coordinator will work with the tenants at the micro TDM level to determine what kinds of incentives elicit consistent and engaged participation in these surveys. The TDM Coordinator will document, track and summarize the information collected from visitor surveys in the annual report. The visitor surveys will be summarized on a monthly basis so that PFDC can develop a history of how visitor arrival trends change over time and document feedback for potential incentives for multimodal transit use.

Reporting

The monitoring will be on-going and will result in updates to the TDM Plan to be submitted to the City's TDM Manger for review and an annual summary report to the City. The report will include information from the employee and visitor surveys and parking garage data such as:

- Number of people walking to the site
- Number of people bicycling to the site
- Number of people using transit
- Carpooling usage
- Parking utilization
- Parking garage utilization
- Bicycle parking data from periodic field reviews
- Tenant collected data (if permission is granted from the tenants)
- Summary of how we are meeting the TMP Other Modes Reduction and additional TDM reduction targets
- Estimated mode split usage
- Tenant profiles

In addition, as part of the TMP for 58 Fore Street, there was an Other Modes Reduction of 18% taken. The number of trips associated with this 18% is 44 in the AM Peak Hour and 68 in the PM Peak Hour.

As we implement this TDM, our TDM Coordinator will be working to monitor and provide evidence or documentation of this mode reduction. We will do this through the previously

discussed employee and visitor surveys to evaluate and document the effectiveness of our TDM program. Understanding the magnitude of how our TDM strategies are impacting the actual alternate modes of travel on site will be informative and beneficial. Based on what we learn, the TDM Coordinator will work with the City to adjust if necessary our strategies and/or share where we have seen substantial improvements to alternate modes of travel.

The TDM Coordinator will need to discuss future options as they become available with the City and GO MAINE, an organization charged with finding transportation options for the state, and consider them for use on the site.

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Fore Street Connector Assessment
Portland Foreside – Combined Blocks 1, 2, 4, and Building 12
Portland, Maine
JN 3138.03

Date: January 7, 2020
Subject: Portland Foreside - Fore Street Connector Assessment
Portland, Maine
To: Lauren Swett / Denise Cameron, Woodard & Curran
From: Randy Dunton / Emily Leighton, Gorrill Palmer

When the Portland Foreside (aka 58 Fore Street) project was going through the City Review process for approval of the Master Development Plan (MDP), one item of discussion was a potential connector between Thames Street extension and Fore Street. The potential connector was thoroughly vetted and the eventual Traffic Movement Permit (ID # 2016-224) does not require this connector to be constructed as part of the MDP approval.

The presence or absence of a connector road between Thames Street extension and Fore Street would not be expected to change the resulting conclusions of the traffic impact study or required mitigation. A connector would serve as a secondary access to Fore Street. With the current site design, an access is already being provided from the site, via the parking garage, to Fore Street. A second access to/from the site is being provided via Thames Street. Consistent with the TMP, a connector road is not being provided and is not needed for the site to operate as designed.

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Response to Comments
Portland Foreside Combined Blocks
Portland, Maine
JN 3138.03

Date: January 9, 2020
Subject: Response to City Comments
Phase 1 | Portland Foreside Combined Blocks – Portland, Maine
To: Christian Roadman, City Planner
From: Randy Dunton, Gorrill Palmer

Gorrill Palmer (GP) is pleased to provide responses to comments provided by Mr. Tom Errico of TYLin and Mike Tremblay of the City of Portland. In speaking with the Portland Foreside Team, discussions with Mr. Errico, and review of email chains provided, it is our understanding that there are primarily two traffic items in which additional information is being requested. Those items are discussed in more detail as follows:

Change in traffic distribution as a result of not having a Thames Street – Fore Street "Connector":

The traffic impact study for the Master Development Plan (MDP) for this project included vehicular use of a Connector between Thames Street extension and Fore Street; however, it was identified in subsequent evaluations and in the traffic movement permit (ID 2016-224) that the Connector was not required to support the traffic for the MDP.

As part of the review for this phase of the project, more clarification is being requested as to the qualitative impacts from the phase on the adjacent roadway network if the Connector is not in place. To address this request, we are providing the following information:

- MDP Traffic Volumes – The MDP was thoroughly vetted and as a result had numerous revisions throughout the process. For ease of review, we have attached Figures 1 & 2 which show the approved MDP volumes.

Sensitivity Assessment – In addition to removal of the Connector, to provide a sense of what traffic assignments this phase of the project may have on the adjacent roadway network, we have completed a sensitivity analysis, with 25% use of the Garage / Fore Access and 60% use of the Garage / Fore Street Access. Those are described in more detail as follows:

- 25% Use of Garage / Fore Street Access - In reviewing the trip generation of the uses on the site, where they are located on the site, and where they are most likely to park once they get onto the site, it was identified that for this phase of the project, up to 75% of the traffic could potentially use the Thames Street extension access. This would result in approximately 25% of the traffic

using the Garage / Fore Street access. This use of Fore Street is relatively consistent with the approved MDP.

The attached Figures 3 & 4 show the traffic assignment should the 25% use come to fruition. As can be seen in comparing this distribution with the approved MDP, all the intersections on the adjacent roadway network are forecast to experience less traffic than what has previously been approved.

- 60% Use of Garage / Fore Street Access – As a conservative assumption for the Traffic Assessment, we also analyzed the site assuming that 60% of the traffic will use Fore Street to access the Garage.

  The attached Figures 5 & 6 show the traffic distribution should the 60% use come to fruition without a Connector. As can be seen in comparing this distribution with the approved MDP, almost all of the intersections are forecast to have less overall traffic traveling through the intersection. The intersection of India / Fore is the primary exception with a forecasted increase in traffic from the MDP should the 60% use of the Garage Access come to fruition. This intersection has previously been reviewed and continues to be reviewed as more development in the area occurs. The levels of service for the MDP were "A"s and "B"s and is not expected to significantly change if some additional traffic is added to the intersection as a result of greater use by the Garage / Fore Street access.

  It should also be noted that this project is required as part of the MDP approval to pay a traffic impact fee of $650 per PM peak hour trip end, which is intended to be used for traffic upgrades at the City's discretion.

Conclusion:

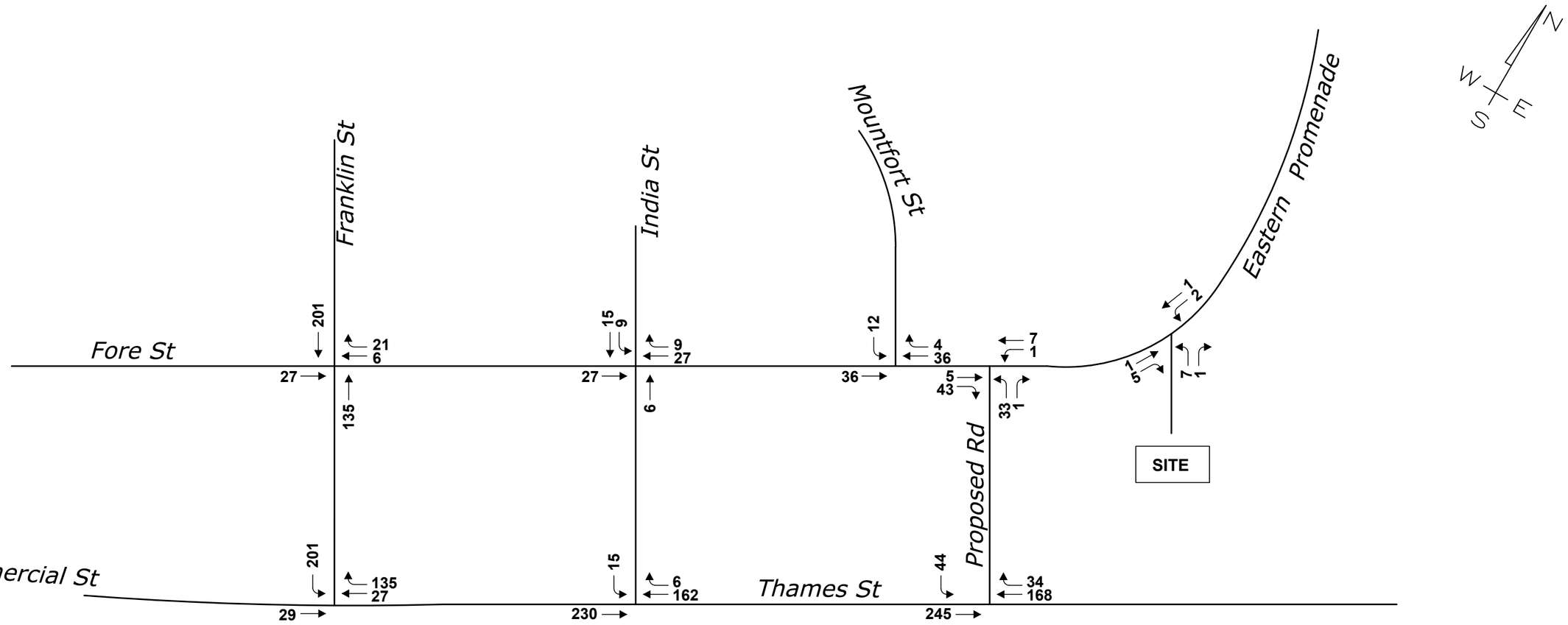
Based on the information above, it does not appear that the percent use of the Garage / Fore Street access would significantly change the overall impacts to the adjacent roadway network from the original approved MDP, and in most cases the overall intersections will experience less traffic than the MDP.

Garage Gate Operations at the Fore Street Access:

The proposed parking garage will be pay to park. As such, there will be gates at each of the accesses to the garage. We understand that the City is requesting information regarding queue length associated with the gate location at Fore Street. We are currently assembling this information and will provide additional information under separate cover.

AM Trip Assignment Master Development Plan

Figure No. 1



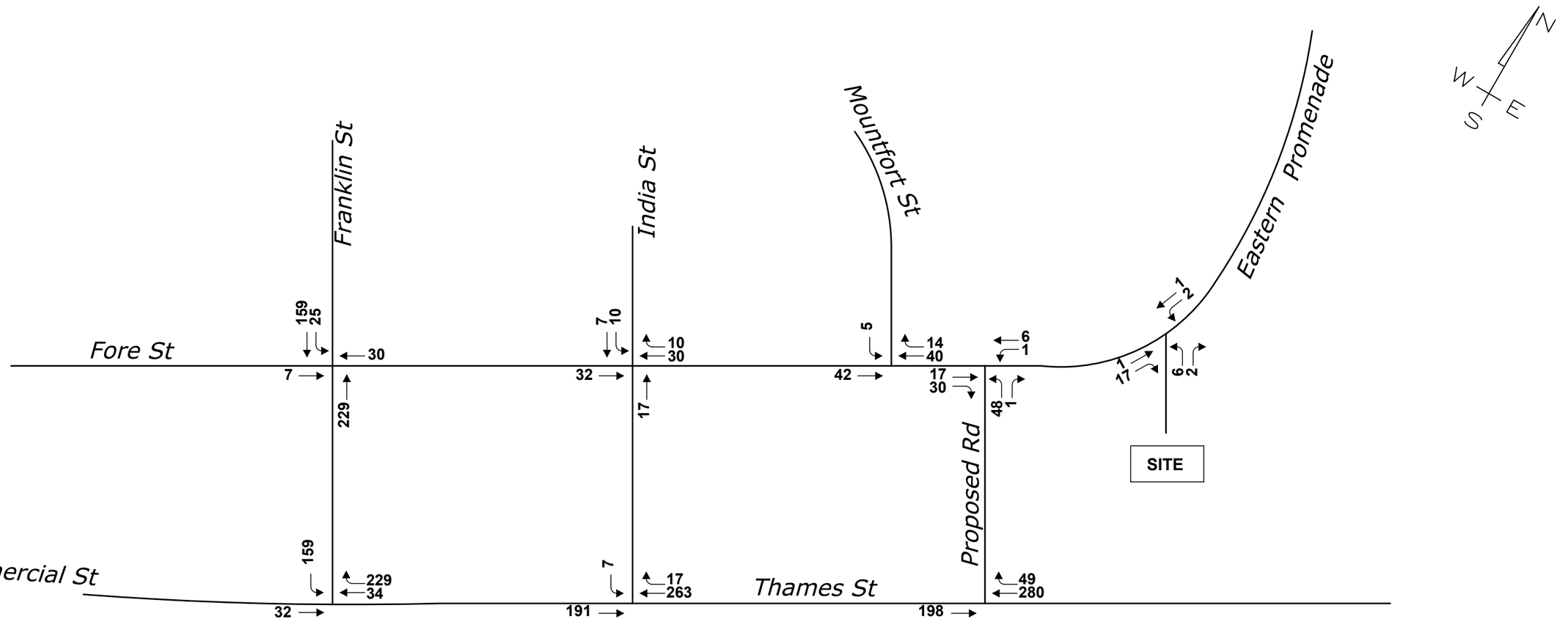
PORTLAND FORESIDE
PORTLAND, MAINE

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Draft: TPG
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Date: JANUARY 2020
File Name: 3138.03 Trip Assignment.dwg

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PM Trip Assignment Master Development Plan

Figure No. 2



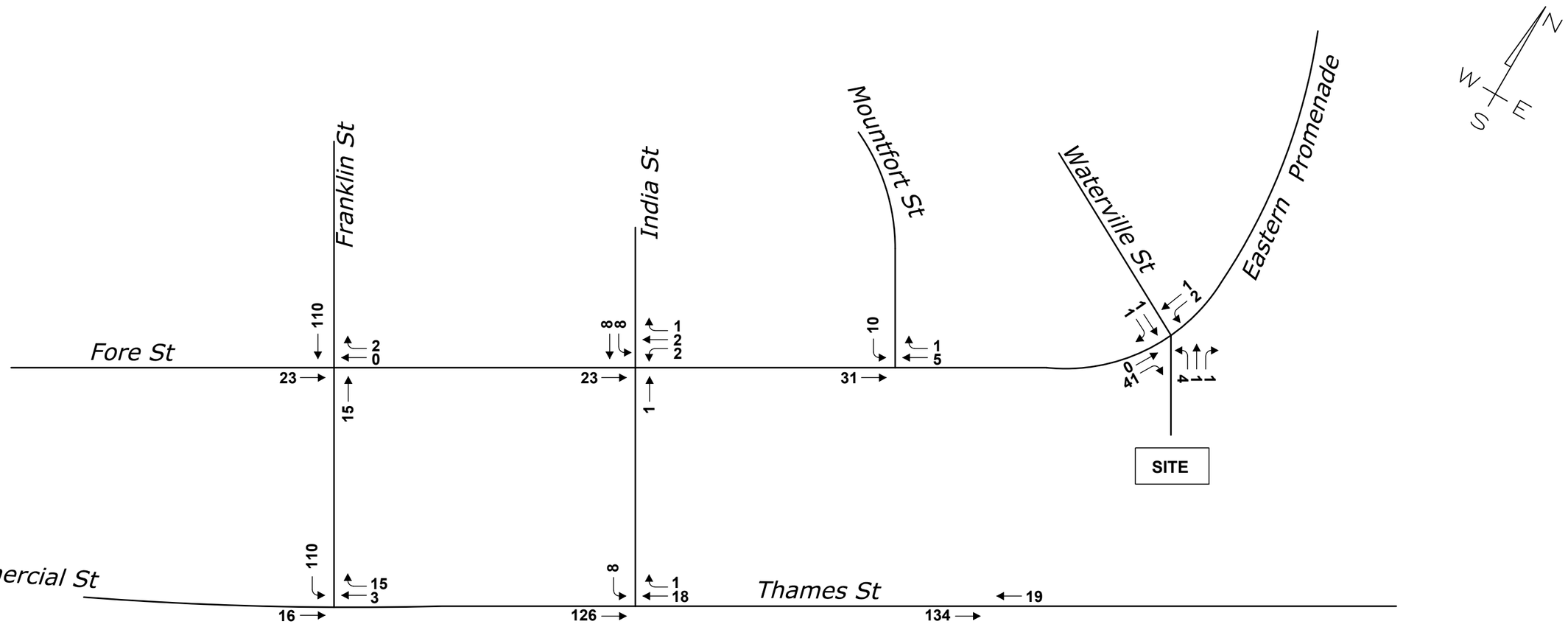
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Date: JANUARY 2020
File Name: 3138.03 Trip Assignment.dwg

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AM Trip Assignment 25% Garage Access/Fore Street Use

Figure No. 3



	AM
ENTER	178
EXIT	25
TOTAL	203

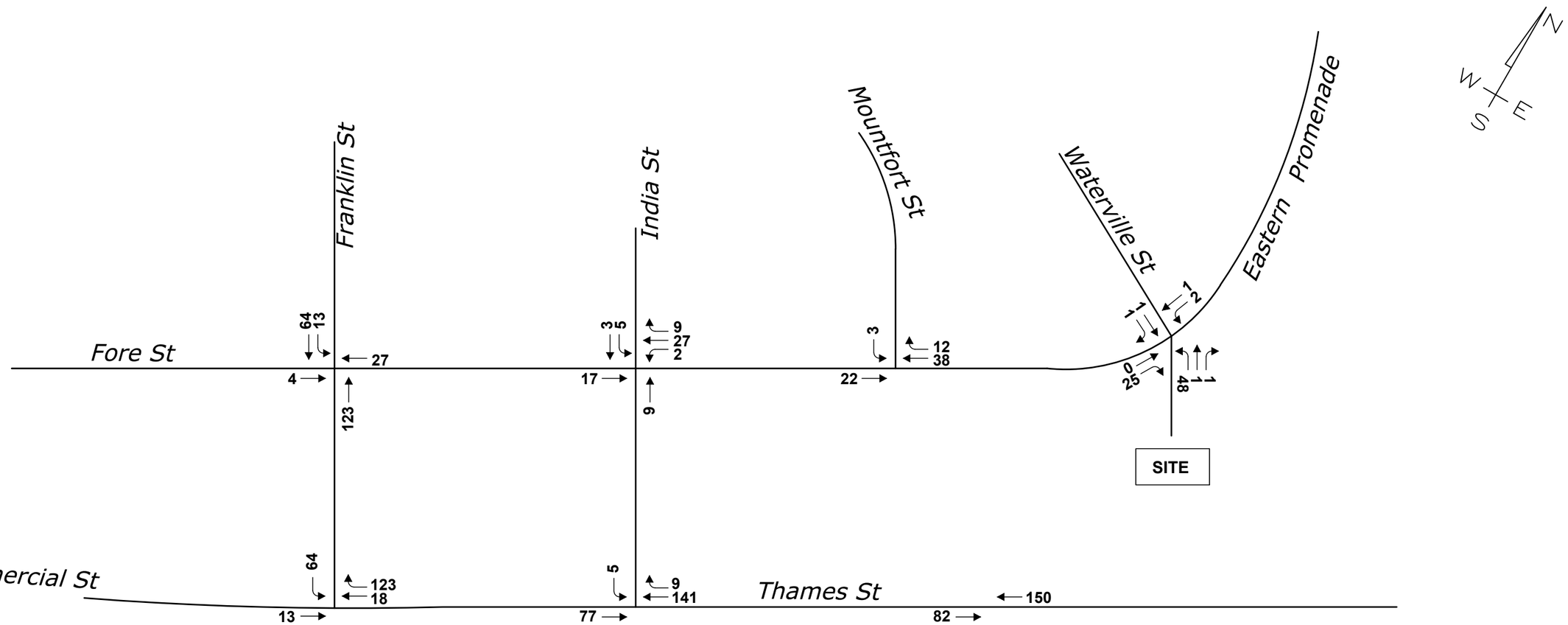
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PM Trip Assignment 25% Garage Access/Fore Street Use

Figure No. 4



	PM
ENTER	110
EXIT	200
TOTAL	310

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Design: RED Scale: NONE
Draft: TPG Date: JANUARY 2020
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AM Trip Assignment 60% Garage Access/Fore Street Use

Figure No. 5



	AM
ENTER	178
EXIT	25
TOTAL	203

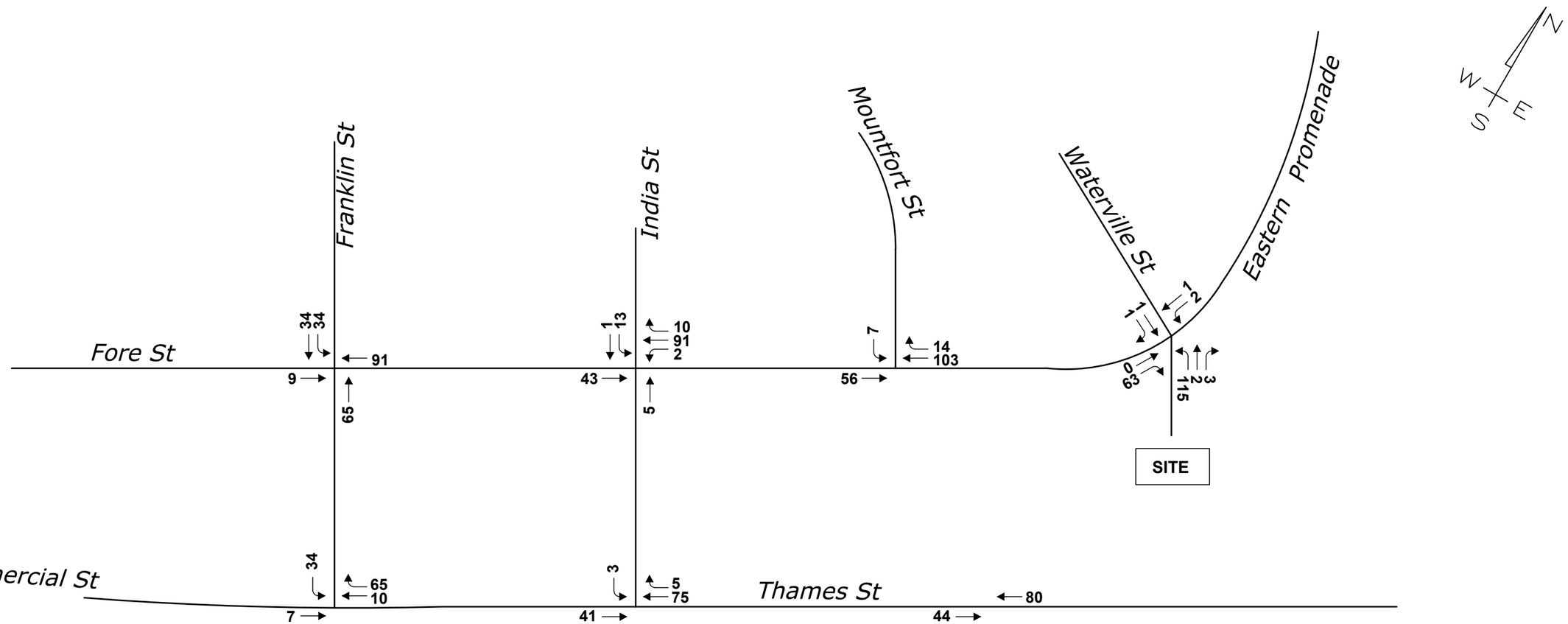
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PM Trip Assignment 60% Garage Access/Fore Street Use

Figure No. 6



	PM
ENTER	110
EXIT	200
TOTAL	310

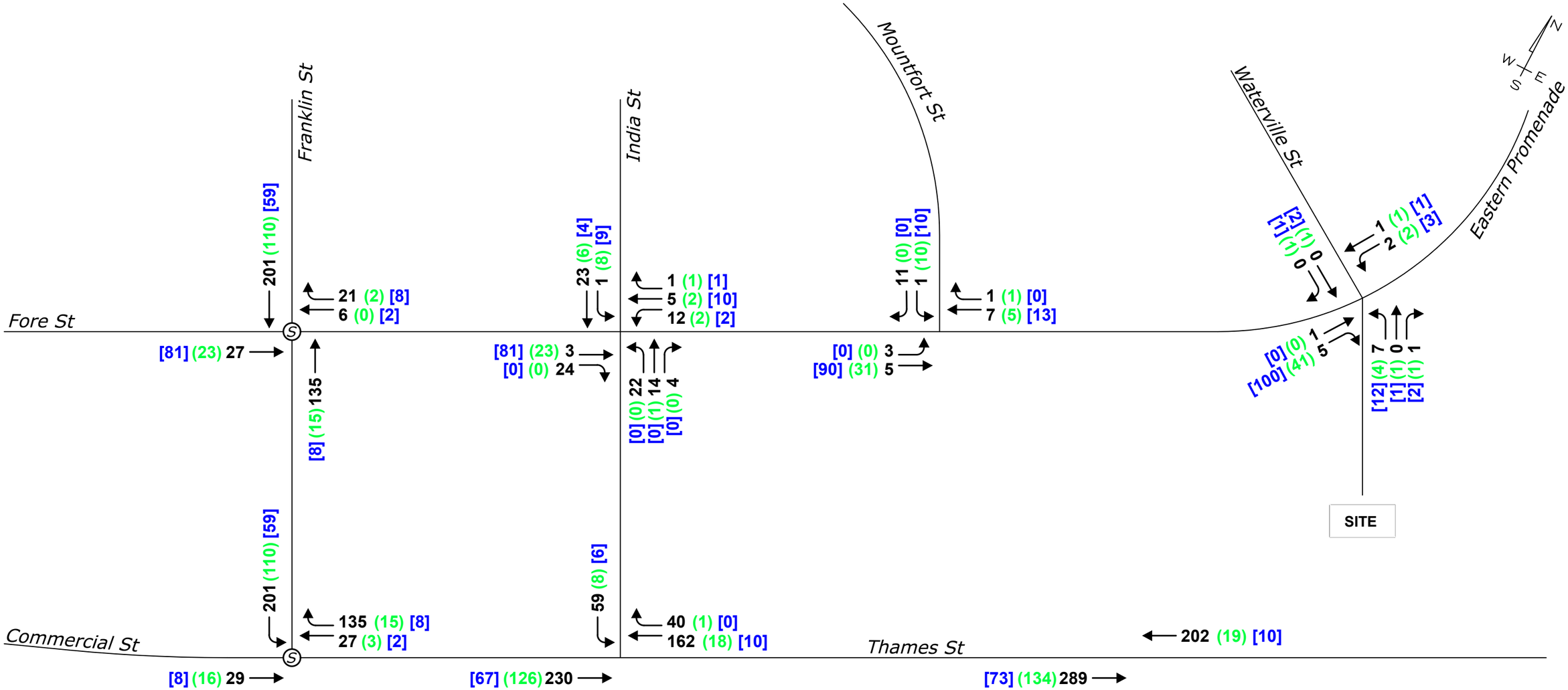
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File Name: 3138.03 Trip Assignment.dwg

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AM Trip Assignment

Figure No. 1



NOTE: MASTER DEVELOPMENT PLAN TRIP ASSIGNMENT HAS BEEN REVISED TO ELIMINATE THE USE OF THE POTENTIAL FORE STREET CONNECTOR.

XX = MASTER DEVELOPMENT PLAN
(XX) = 25% GARAGE ACCESS/FORE ST USE
[XX] = 60% GARAGE ACCESS/FORE ST USE

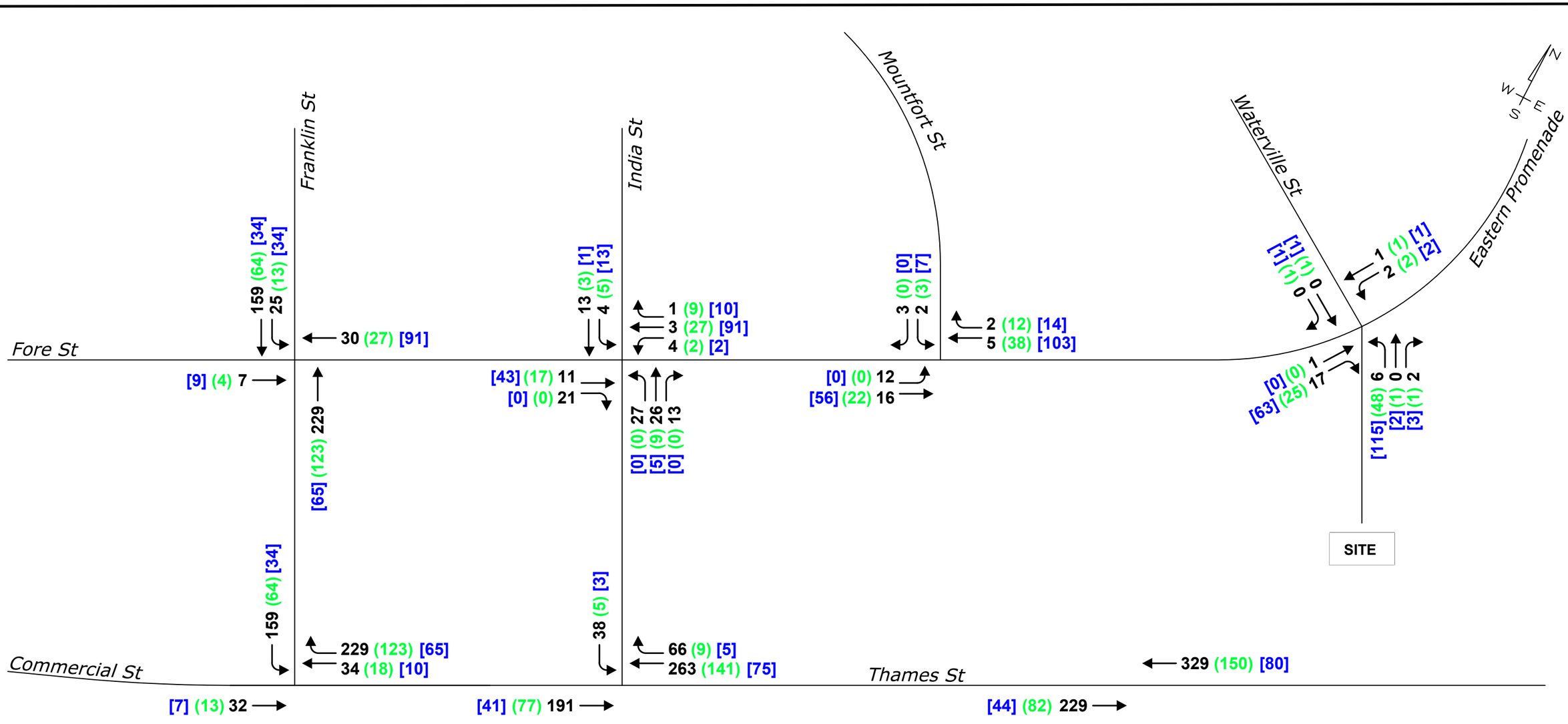
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File Name: Revised Figure Set

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PM Trip Assignment

Figure No. 2



NOTE: MASTER DEVELOPMENT PLAN TRIP ASSIGNMENT HAS BEEN REVISED TO ELIMINATE THE USE OF THE POTENTIAL FORE STREET CONNECTOR.

XX = MASTER DEVELOPMENT PLAN
(XX) = 25% GARAGE ACCESS/FORE ST USE
[XX] = 60% GARAGE ACCESS/FORE ST USE

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Scale: NONE
Date: JANUARY 2020
File Name: Revised Figure Set

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Traffic Assessment
Portland Foreside – Combined Blocks 1, 2, 4, and Building 12
Portland, Maine
JN 3138.03

Date: November 13, 2019
Subject: Portland Foreside Combined Blocks Traffic Assessment
Portland, Maine
To: Lauren Swett PE, Woodard & Curran
From: Randy Dunton / Emily Leighton, Gorrill Palmer

Introduction

Gorrill Palmer (GP) has been retained by Woodard & Curran to complete a traffic assessment for the proposed Blocks 1, 2, 4, and Building 12 of the 58 Fore Street Master Development Plan. The combined blocks are proposed to consist of the following:

- Block 1:
  - 95,100 sf of office space
  - 9,300 sf of specialty retail
- Building 12
  - 3,200 sf restaurant
  - 3,200 sf office
  - 3,200 sf residential (2 units)
- Block 2:
  - 17,950 sf restaurant
  - 17,950 sf specialty retail
  - 17,900 sf of event center
  - 12,400 sf office
- Block 4:
  - 1,100 sf retail
  - 12,900 sf residential (12 units)

The 58 Fore Master Development Plan received a Traffic Movement Permit (TMP #2016-224) from the City of Portland dated May 26, 2017. The TMP requires, as a condition of approval, that as part of the Site Plan Review by the Planning Board, updated traffic analyses be approved for each phase of development. The following summarizes the updated traffic analysis for the combined Blocks 1, 2, 4, and Building 12.

Trip Generation

The trip generation for the proposed combined Blocks of the Portland Foreside Master Development Plan has been calculated to ensure that it is less than the trip generation approved in the overall site TMP. The Master Development Plan was permitted for 506 trip ends during the AM peak hour of the adjacent street and 585 trip ends during the PM peak hour of the adjacent street. The following summarizes the trip generation calculations for the combined blocks of 1, 2, 4 and building 12 and the comparison to the total site approved TMP trip generation.

ITE Trip Generation

The trip generation for the combined blocks has been calculated using the Institute of Transportation Engineers (ITE) publication, *Trip Generation*, Seventh Edition. Although there are more recent editions of ITE available, the Seventh Edition is the most recent edition that has been accepted by MaineDOT for use in TMPs. The exception to this is General Office, where the MaineDOT accepts the Eighth Edition. The City of Portland has delegated review authority for TMPs, but they are still required to be in accordance with MaineDOT rules. This methodology is consistent with that used for calculating the trip generation for the approved TMP. The trip generation for the combined blocks has been calculated using the following Land Use Codes (LUCs):

- LUC 710 – General Office
- LUC 931 – Quality Restaurant
- LUC 220 – Apartment
- LUC 814 – Specialty Retail

The following table summarizes the ITE trip generation for the site. Detailed trip generation calculations are attached. It should be noted that due to the types of restaurants proposed and that they are expected to be destinations that would draw visitors for at least an hour, they are assumed to operate similarly to quality restaurants. Additionally, the event space that is proposed is smaller than the existing event space on site. No credit was taken in the original TMP for the event space. Since the proposed event space is smaller than the existing event space and the uses will be similar, no increase in trips is expected. Therefore, the trip generation for the event space has not been included.

ITE Trip Generation Summary

Use	Size	AM Adj St	PM Adj St
Block 1			
Office	95,100 sf	180	173
Retail	9,300 sf	7	25
Subtotal		187	198
Block 2			
Restaurant	17,950 sf	15	134
Retail	17,950 sf	13	49
Office	12,400 sf	35	34
Subtotal		63	217
Block 4			
Retail	1,100 sf	1	3
Residential	12 units	6	7
Subtotal		7	10
Building 12			
Office	3,200 sf	12	12
Restaurant	3,200 sf	3	24
Residential	2 units	1	1
Subtotal		16	37
Total		**273**	**462**

As shown in the table, the ITE trip generation is forecast to be 273 trip ends during the AM peak hour of the adjacent street and 462 trip ends during the PM peak hour of the adjacent street. A trip end is a trip into or out of the site, thus a round trip is equal to two trip ends.

Shared Use Reduction

The National Cooperative Highway Research Program (NCHRP) 684 Internal Capture Estimation Tool has been used to estimate the traffic that will visit more than one destination without leaving the site. The NCHRP 684 spreadsheet uses the ITE forecast trip generation for each type of land use (office, retail, residential, and hotel) and estimates the trips that will travel between two uses without leaving the site. This yields an internal trip capture percentage, which is the percentage of trip ends that will travel between two uses. This methodology is consistent with that used for the TMP. It should be noted that the residential units were not included in this reduction due to the very low trip generation. The following table summarizes the AM and PM peak hour internal trip capture percentages for the proposed site.

AM Peak Hour Adjacent Street NCHRP 684 Internal Trip Capture

Land Use	ITE Trip Generation		Internal Capture %		Internal Capture Trip Ends		
	Enter	Exit	Enter	Exit	Enter	Exit	Total
Office	205	22	2%	27%	4	6	10
Retail	13	8	38%	38%	5	3	8
Restaurant	10	8	40%	38%	4	3	7
Residential	1	6	0%	17%	0	1	1
Total	**229**	**44**	**6%**	**30%**	**13**	**13**	**26**

*These values are taken directly from the NCHRP spreadsheets (Attachment 1C), which may not match exact calculations due to rounding in the spreadsheet.

PM Peak Hour Adjacent Street NCHRP 684 Internal Trip Capture

Land Use	ITE Trip Generation		Internal Capture %		Internal Capture Trip Ends		
	Enter	Exit	Enter	Exit	Enter	Exit	Total
Office	33	186	9%	3%	3	5	8
Retail	34	43	62%	37%	21	16	37
Restaurant	103	55	14%	36%	14	20	34
Residential	6	2	67%	50%	4	1	5
Total	**276**	**286**	**24%**	**15%**	**42**	**42**	**84**

*These values are taken directly from the NCHRP spreadsheets (Attachment 1C), which may not match exact calculations due to rounding in the spreadsheet.

The NCHRP 684 spreadsheet does not have information for the Saturday peak hour of the generator. To estimate a reduction for a Saturday, the AM and PM trip capture percentages were averaged and applied to the Saturday peak hour of the generator. This resulted in a Saturday internal trip capture of approximately 5% of total trips which results in a reduction of 4 trip ends (2 entering and 2 exiting).

The following table summarizes the reduced trip generation for the proposed site due to shared use trips:

Shared Use Reduced Trip Generation Summary

Building Use	Trip Generation	
	AM Adj St	PM Adj St
ITE Total	273	462
Shared Use Reduction	-26	-84
Reduced Subtotal	**247**	**378**

As shown in the table, the proposed site with the shared use reduction is forecast to generate 247 trip ends and 378 trip ends during the AM and PM peak hours of the adjacent street respectively.

Other Modes Reduction

In addition to a shared use reduction, a reduction for other modes of transportation can be applied to the trip generation. It can be expected for a site in a downtown area that other modes of transportation will be used to go to and from the site. These other modes could include things such as transit, bicycle, carpooling, or walking. This site is adjacent to an existing bus route, as well as located on a pedestrian and bicycle path, so full use of other modes of transportation are readily available. The other modes reduction that was calculated for the TMP application for non-residential uses has been applied to the trip generation with the shared use reduction. The reduction of 18% was calculated based on the 2010 CTPP data for Tract 3, where the site is located. This reduction was approved by the City during the TMP process. An other modes reduction for residential uses was also applied in the TMP application, however, due to the very low residential trip generation in the combined blocks it was not applied. The following table summarizes the trip generation including the other modes reduction:

Other Modes Reduced Trip Generation Summary

Building Use	Trip Generation	
	AM Adj St	PM Adj St
Reduced Subtotal	247	378
Other Modes Reduction	-44	-68
Reduced Site Total	**203**	**310**

As shown in the table, the reduced site trip generation for Blocks 1, 2, 4 and 12 is 203 trip ends during the AM peak hour of the adjacent street and 310 trip ends during the PM peak hour of the adjacent street.

Master Plan Trip Generation Comparison

The trip generation for the combined Blocks 1, 2, 4 and 12 has been compared to the permitted trip generation to ensure that it does not exceed the permitted amount. The site was permitted for 506 trip ends during the AM peak hour of the adjacent street and 585 trip ends during the PM peak hour of the adjacent street. The following table summarizes the trip generation comparison:

Trip Generation Comparison Summary

Trip Generation	Trip Generation	
	AM Adj St	PM Adj St
Permitted	506	585
Forecast Combined Blocks	203	310
Remaining Permitted Trips	**303**	**275**

As shown in the table, the combined blocks trip generation is 303 trip ends and 275 trip ends **less** than the permitted site trip generation during the AM and PM peak hours of the adjacent street. Therefore, no TMP modification is needed.

It should be noted that the methodology used to arrive at this trip generation will need to be generated every time new development is proposed, because the results are dependent on the overall total uses on the site and the mixture of those uses. The results would be inaccurate to simply calculate the trip generation of new uses and subtract from the 303 & 275 trips identified above.

Parking Demand

The forecast parking demand for the combined blocks has been based on a combination of City Ordinance parking demand, the ITE Parking Generation Manual, 4th Edition, and published data / engineering judgement. Additionally, the shared use and other modes reductions that were applied to the trip generation were also applied to the parking demand calculations. This is the same methodology as that approved by the City during the Master Development Plan approval. Shared parking methodology reflects that the demand for different uses will peak during different times of day; however, when parking spaces are designated for a single use, they cannot be used to satisfy shared parking demand.

It has been assumed that the combined blocks will all utilize the parking garage on Block 4 and that no parking spaces are designated for a specific use. Since no parking spaces are designated for a single use, the shared parking demand methodology is applicable.

Based on the methodology described above, the peak parking demand for the combined blocks is forecast to be 159 spaces and is forecast to occur from 11:00 AM to 12:00 PM. It should be noted that a parking facility can be considered full when it is approximately 85% occupied. This is because a driver may not see empty parking spaces when the lot is almost completely occupied, especially in a larger parking area. To ensure the parking demand is met, the recommended number of parking spaces is 187 spaces.

Bicycle Parking

Per City Ordinance, new uses are required to provide bicycle accommodations based on the type of use. Residential structures are required to provide 2 bicycle spaces for every 5 dwelling units. Non-residential structures are required to provide 2 bicycle parking spaces for every 10 vehicle parking spaces for the first 100 required spaces, plus one bicycle parking space for every 20 required vehicle parking spaces over the 100 vehicle parking spaces. The following table shows the required bicycle parking for the Ordinance vehicle parking demand and the Shared Parking demand:

Bicycle Parking Summary

Use	Bicycle parking Demand
Parking Variables	183 Non-Residential Spaces, 14 Units
Residential Bicycle Spaces	6
Non-Residential Bicycle Spaces	25
Total	**31**

As shown in the table, the site will require 31 bicycle parking spaces to meet the City Ordinance Requirements for bicycle accommodations. It should be noted that the actual bicycle demand use is expected to be less than that identified above, since the peak of the non-residential bicycle demand occurs when residential demand is lowest.

Event Center Trip Generation

Although the event space is not forecast to draw additional traffic to the site from the existing or recent past use, the event traffic is still anticipated to utilize the parking garage. To include the impact of the event center, the trip generation for the forecast occupancy has been estimated. Based on information provided by Woodard & Curran, the future occupancy (without booths) is anticipated to be 988 people. ITE does not have any applicable LUCs for this type of use, so to calculate the trip generation the following assumptions were made:

- Events do not start early enough to generate significant AM peak hour traffic
- 80% of visitors arrive during the PM peak hour of the adjacent street and leave after the PM peak hour of the adjacent street
- The average vehicle occupancy is 2.5 people per vehicle

Based on these assumptions, the event space is forecast to generate 316 trip ends during the PM peak hour of the adjacent street. These have been assigned to the site driveways with the estimation that approximately 60% of the traffic will use the garage access on Fore Street.

Driveway Evaluation

The proposed parking garage access on Fore Street is intended to accommodate the majority of the site traffic. There are other accesses to the site such as Thames Street extension. Since the trip generation is less than permitted, the focus of the evaluation is on the garage driveway onto Fore Street. An evaluation has been completed for the proposed driveway to determine if mitigation will be required. The trip assignment for the proposed Fore Street parking garage access is shown on the attached Figure 3 and is forecast to be approximately 60% of the site generated traffic.

Capacity Analysis

GP completed a capacity analysis for the proposed site driveway using Synchro/SimTraffic computer analysis software. Level of service rankings are similar to the academic ranking system where an 'A' is good with little control delay and an 'F' represents poor traffic conditions. If the level of service falls below a 'D', an evaluation should be made to determine if mitigation is warranted. The following tables summarize the relationship between control delay per vehicle and level of service:

Level of Service Criteria for Unsignalized Intersections

Level of Service	Control Delay per Vehicle (s)
A	Less than 10.0
B	10.1 to 15.0
C	15.1 to 25.0
D	25.1 to 35.0
E	35.1 to 50.0
F	Greater than 50.0

The capacity and queue analysis results have been based on the average of five SimTraffic runs and using the 2027 Postdevelopment Design Hour Volumes (DHV). These volumes are the same as those used in the Traffic Impact Study completed in 2016 for the Master Plan. Additionally, the analysis assumes separate left and right turn lanes exiting the garage. A separate analysis was completed to determine if a single exit lane from the garage would have any effect on the LOS and it did not, the LOS remained the same. A brief lane warrant analysis was completed for Fore Street and neither a left or right turn lane was warranted, so Fore Street has been modeled as a single lane. The following tables summarize the capacity analysis results for the intersection. The detailed analyses are attached.

Capacity Analysis Results Summary

Approach	Level of Service	
	AM Peak Hour	PM Peak Hour
Driveway NW	A	B
Fore Street NE	A	A
Fore Street SW	A	A

As shown in the table, the proposed garage access is forecast to operate at acceptable levels of service during both peak hours.

Queues

The proposed exit is forecast to have an AM 95th percentile queue of approximately 40 feet and a PM 95th percentile queue of approximately 95 feet. These are with a single exit lane. If there are two exit lanes, this would be reduced. The parking exit and garage design should ensure this queue can be accommodated without significantly effecting operations at the exit.

Sight distance

As identified in the original master plan, sight distance exiting the garage is dependent on on-street parking. We recommend that the City revisit their parking zones to potentially address any restrictions to sight distance.

Conclusions

The following is a summary of the conclusions:

1. The trip generation for the combined blocks is forecast to be 203 trip ends during the AM peak hour of the adjacent street and 310 trip ends during the PM peak hour of the adjacent street. This level of trip generation is 303 trip ends less than the permitted trip generation during the AM peak hour of the adjacent street and 275 trip ends less than the permitted trip generation during the PM peak hour of the adjacent street. Therefore, no TMP modification is needed. We recommend counting the multi-purpose facility once it is operational and comparing the trip generation to that provided herein.

2. The peak parking demand for the site is forecast to be 159 spaces, and it is forecast to occur from 11:00 AM to 12:00 PM. To accommodate vehicles when the parking garage is near full, the recommended number of parking spaces is 187 spaces. This methodology assumes that no parking spaces are dedicated to a specific use.

3. The combined blocks are required to provide 31 bicycle parking spaces, based on the non-residential vehicle spaces and the residential units.

4. We recommend the multi-purpose use be monitored to ensure parking is available during its use.

5. The site driveway is forecast to operate at acceptable levels of service during the AM and PM peak hours in 2027, provided adequate queue is provided on the site driveway.

6. On-street parking on Fore Street at the site driveway across from Waterville Street should be evaluated by the City and parking spaces removed if they effect sight distance.

JN: 3138.03
Project Description: Portland Foreside
Project Location: Portland, Maine
Date: 11/11/2019
Calculated By: EAL

Gorrill Palmer Consulting Engineers
707 Sable Oaks Drive
South Portland, ME 04106

General Office Building
Land Use Code (LUC) 710

Square Feet 95,100

Trip Ends Based on Fitted Curve Equation

Time Period	ITE Trip Rate	Trip Ends	Number of Studies	Directional Split *		Directional Distribution		R^2
				IN	OUT	IN	OUT	
Weekday	Ln (T) = 0.77 Ln (X) + 3.65	1283	78	50%	50%	642	641	0.80
AM Peak Hour	**Ln (T) = 0.80 Ln (X) + 1.55**	**180**	**217**	**90%**	**10%**	**162**	**18**	**0.83**
PM Peak Hour	**T = 1.12 (X) + 78.81**	**185**	**235**	**15%**	**85%**	**28**	**157**	**0.82**
Saturday	T = 2.14 (X) + 18.47	222	17	50%	50%	111	111	0.66
Peak Hour of Generator	Ln (T) = 0.81 Ln (X) - 0.12	35	10	55%	45%	19	16	0.59

* Percentages rounded to nearest 5%

Trip Ends Based on Average Rate

Time Period	ITE Trip Rate	Trip Ends	Number of Studies	Directional Split *		Directional Distribution		R^2
				IN	OUT	IN	OUT	
Weekday	T = 11.01 (X)	1047	78	50%	50%	524	523	---
AM Peak Hour	T = 1.55 (X)	147	217	90%	10%	132	15	---
PM Peak Hour	T = 1.49 (X)	142	235	15%	85%	21	121	---
Saturday	T = 2.37 (X)	225	17	50%	50%	113	112	---
Saturday Peak Hour of Gen.	**T = 0.41 (X)**	**39**	**10**	**50%**	**50%**	**20**	**19**	**---**

* Percentages rounded to nearest 5%

PM Peak Hour:	T = 1.49/1.55 (AM Peak)	173		15%	85%	26	147	0.82

JN: 3138.03
Project Description: Portland Foreside
Project Location: Portland, Maine
Date: 11/11/2019
Calculated By: EAL
Checked By:

Gorrill Palmer Consulting Engineers
707 Sable Oaks Drive
Suite 30
South Portland, Maine 04106

Specialty Retail Center- (7th Edition)
Land Use Code (LUC) 814

Gross Floor Area (ft^2): 9,300

Average Rate

Time Period	ITE Trip Rate	Trip Ends	Number of Studies	Directional Split * IN	Directional Split * OUT	Directional Distribution IN	Directional Distribution OUT	R^2
Weekday	T = 44.32 (X)	412	4	50%	50%	206	206	---
Peak Hour of Adjacent Street Traffic 7-9 AM**	---	---	---	---	---	---	---	---
Peak Hour of Adjacent Street Traffic 4-6 PM	**T = 2.71 (X)**	**25**	**5**	**45%**	**55%**	**11**	**14**	**---**
AM Peak Hour of Generator	**T = 6.84 (X)**	**64**	**4**	**50%**	**50%**	**32**	**32**	**---**
PM Peak Hour of Generator	**T = 5.02 (X)**	**47**	**3**	**55%**	**45%**	**26**	**21**	**---**
Saturday	T = 42.04 (X)	391	3	50%	50%	196	195	---
Saturday Peak Hour of Gen.***	---	---	---	---	---	---	---	---
AM Peak of Adjacent Street 7-9 AM**	**T = 0.275 (PM Peak Hour)**	**7**		**60%**	**40%**	**4**	**3**	
Saturday Peak Hour***	**T = 1.325 (PM Peak Hour)**	**33**		**50%**	**50%**	**17**	**16**	

**Based on ratio of AM/PM traffic for LUC 820, Shopping Center
***Saturday Peak Hour comes from a ratio of PM to Saturday trip rates from LUC 820 - Shopping Center
* Percentages rounded to nearest 5%

Fitted Curve Equation

Time Period	ITE Trip Rate	Trip Ends	Number of Studies	Directional Split * IN	Directional Split * OUT	Directional Distribution IN	Directional Distribution OUT	R^2
Weekday	T = 42.78 (X) + 37.66	436	4	50%	50%	218	218	0.69
Peak Hour of Adjacent Street Traffic 7-9 AM	---	---	---	---	---	---	---	---
Peak Hour of Adjacent Street Traffic 4-6 PM	T = 2.40 (X) + 21.48	44	5	45%	55%	20	24	0.98
AM Peak Hour of Generator	T = 4.91 (X) + 115.59	161	4	50%	50%	81	80	0.90
PM Peak Hour of Generator	---	---	---	---	---	---	---	---
Saturday	---	---	---	---	---	---	---	---
Saturday Peak Hour of Gen.	---	---	---	---	---	---	---	---
AM Peak of Adjacent Street 7-9 AM***	T = 0.275 (PM Peak Hour)	12		60%	40%	7	5	
Saturday Peak Hour***	T = 1.325 (PM Peak Hour)	58		50%	50%	29	29	

* Percentages rounded to nearest 5%
(---) Not Given

**Based on ratio of AM/PM traffic for LUC 820, Shopping Center
***Saturday Peak Hour comes from a ratio of PM to Saturday trip rates from LUC 820 - Shopping Center

JN: 3138.03
Project Description: Portland Foreside
Project Location: Portland, Maine
Date: 11/11/2019
Calculated By: EAL

Gorrill Palmer Consulting Engineers
707 Sable Oaks Drive
South Portland, ME 04106

Quality Restaurant
Land Use Code (LUC) 931

Gross Floor Area (ft^2): 3,200

Time Period	ITE Trip Rate (Average Rate)	Trip Ends	Directional Split		Directional Distribution	
			IN	OUT	IN	OUT
Weekday	T = 89.95 (X)	288	50%	50%	144	144
AM Peak Adjacent Street	T = 0.81 (X)	3	50%	50%	2	1
PM Peak Adjacent Street	T = 7.49 (X)	24	65%	35%	16	8
AM Peak of Generator	T = 5.57 (X)	18	80%	20%	14	4
PM Peak of Generator	T = 9.02 (X)	29	60%	40%	17	12
Saturday	T = 94.36 (X)	302	50%	50%	151	151
Saturday Peak Hour of Gen.	T = 10.82 (X)	35	60%	40%	21	14

JN: 3138.03
Project Description: Portland Foreside
Project Location: Portland, Maine
Date: 11/11/2019
Calculated By: EAL

Gorrill Palmer Consulting Engineers
707 Sable Oaks Drive
South Portland, ME 04106

General Office Building
Land Use Code (LUC) 710

Square Feet 3,200

Trip Ends Based on Fitted Curve Equation

Time Period	ITE Trip Rate	Trip Ends	Number of Studies	Directional Split *		Directional Distribution		R^2
				IN	OUT	IN	OUT	
Weekday	Ln (T) = 0.77 Ln (X) + 3.65	94	78	50%	50%	47	47	0.80
AM Peak Hour	**Ln (T) = 0.80 Ln (X) + 1.55**	**12**	**217**	**90%**	**10%**	**11**	**1**	**0.83**
PM Peak Hour	**T = 1.12 (X) + 78.81**	**82**	**235**	**15%**	**85%**	**12**	**70**	**0.82**
Saturday	T = 2.14 (X) + 18.47	25	17	50%	50%	13	12	0.66
Peak Hour of Generator	Ln (T) = 0.81 Ln (X) - 0.12	2	10	55%	45%	1	1	0.59

* Percentages rounded to nearest 5%

Trip Ends Based on Average Rate

Time Period	ITE Trip Rate	Trip Ends	Number of Studies	Directional Split *		Directional Distribution		R^2
				IN	OUT	IN	OUT	
Weekday	T = 11.01 (X)	35	78	50%	50%	18	17	---
AM Peak Hour	T = 1.55 (X)	5	217	90%	10%	5	0	---
PM Peak Hour	T = 1.49 (X)	5	235	15%	85%	1	4	---
Saturday	T = 2.37 (X)	8	17	50%	50%	4	4	---
Saturday Peak Hour of Gen.	**T = 0.41 (X)**	**1**	**10**	**50%**	**50%**	**1**	**0**	**---**

* Percentages rounded to nearest 5%

PM Peak Hour:	T = 1.49/1.55 (AM Peak)	12		15%	85%	2	10	0.82

JN: 3138.03
Project Description: Portland Foreside
Project Location: Portland, Maine
Date: 11/11/2019
Calculated By: EAL
Checked By:

Gorrill Palmer Consulting Engineers
707 Sable Oaks Drive
South Portland, ME 04106

Apartment
Land Use Code (LUC) 220

Dwelling Units: 2

Average Rate

Time Period	ITE Trip Rate	Sample Size	Trip Ends		Directional Split * IN	Directional Split * OUT	Directional Distribution IN	Directional Distribution OUT	R^2
Weekday	T = 6.72 (X)	86	13		50%	50%	7	6	N/A
AM Peak Hour of Adj. Street Traffic	**T = 0.51 (X)**	**78**	**1**		**20%**	**80%**	**0**	**1**	**N/A**
PM Peak Hour of Adj. Street Traffic	**T = 0.62 (X)**	**90**	**1**		**65%**	**35%**	**1**	**0**	**N/A**
AM Peak Hour of Generator	**T = 0.55 (X)**	**81**	**1**		**30%**	**70%**	**0**	**1**	**N/A**
PM Peak Hour of Generator	**T = 0.67 (X)**	**83**	**1**		**60%**	**40%**	**1**	**0**	**N/A**
Saturday	T = 6.39 (X)	15	13		50%	50%	7	6	N/A
Saturday Peak Hour of Gen.	**T = 0.52 (X)**	**14**	**1**	**	**50%**	**50%**	**1**	**0**	**N/A**

* Percentages rounded to nearest 5%
** Not Available (Assumption)

Fitted Curve Equation

Time Period	ITE Trip Rate	Sample Size	Trip Ends		Directional Split * IN	Directional Split * OUT	Directional Distribution IN	Directional Distribution OUT	R^2
Weekday	T = 6.01 (X) + 150.35	86	162		50%	50%	81	81	0.88
AM Peak Hour of Adj. Street Traffic	T = 0.49 (X) + 3.73	78	5		20%	80%	1	4	0.83
PM Peak Hour of Adj. Street Traffic	T = 0.55 (X) + 17.65	90	19		65%	35%	12	7	0.77
AM Peak Hour of Generator	T = 0.53 (X) + 4.21	81	5		30%	70%	2	3	0.82
PM Peak Hour of Generator	T = 0.60 (X) + 17.52	83	19		60%	40%	11	8	0.80
Saturday	T = 7.85 (X) - 256.19	15	-240		50%	50%	-120	-120	0.85
Saturday Peak Hour of Gen.	T = 0.41 (X) + 19.23	14	20	**	50%	50%	10	10	0.56

* Percentages rounded to nearest 5%
** Not Available (Assumption)

JN: 3138.03
Project Description: Portland Foreside
Project Location: Portland, Maine
Date: 11/11/2019
Calculated By: EAL

Gorrill Palmer Consulting Engineers
707 Sable Oaks Drive
South Portland, ME 04106

Quality Restaurant
Land Use Code (LUC) 931

Gross Floor Area (ft^2): 17,950

Time Period	ITE Trip Rate (Average Rate)	Trip Ends	Directional Split		Directional Distribution	
			IN	OUT	IN	OUT
Weekday	T = 89.95 (X)	1615	50%	50%	808	807
AM Peak Adjacent Street	T = 0.81 (X)	15	50%	50%	8	7
PM Peak Adjacent Street	T = 7.49 (X)	134	65%	35%	87	47
AM Peak of Generator	T = 5.57 (X)	100	80%	20%	80	20
PM Peak of Generator	T = 9.02 (X)	162	60%	40%	97	65
Saturday	T = 94.36 (X)	1694	50%	50%	847	847
Saturday Peak Hour of Gen.	T = 10.82 (X)	194	60%	40%	116	78

JN: 3138.03
Project Description: Portland Foreside
Project Location: Portland, Maine
Date: 11/11/2019
Calculated By: EAL
Checked By:

Gorrill Palmer Consulting Engineers
707 Sable Oaks Drive
Suite 30
South Portland, Maine 04106

Specialty Retail Center- (7th Edition)
Land Use Code (LUC) 814

Gross Floor Area (ft^2): 17,950

Average Rate

Time Period	ITE Trip Rate	Trip Ends	Number of Studies	Directional Split * IN	Directional Split * OUT	Directional Distribution IN	Directional Distribution OUT	R^2
Weekday	T = 44.32 (X)	796	4	50%	50%	398	398	---
Peak Hour of Adjacent Street Traffic 7-9 AM**	---	---	---	---	---	---	---	---
Peak Hour of Adjacent Street Traffic 4-6 PM	**T = 2.71 (X)**	**49**	**5**	**45%**	**55%**	**22**	**27**	**---**
AM Peak Hour of Generator	**T = 6.84 (X)**	**123**	**4**	**50%**	**50%**	**62**	**61**	**---**
PM Peak Hour of Generator	**T = 5.02 (X)**	**90**	**3**	**55%**	**45%**	**50**	**40**	**---**
Saturday	T = 42.04 (X)	755	3	50%	50%	378	377	---
Saturday Peak Hour of Gen.***	---	---	---	---	---	---	---	---
AM Peak of Adjacent Street 7-9 AM**	**T = 0.275 (PM Peak Hour)**	**13**		**60%**	**40%**	**8**	**5**	
Saturday Peak Hour***	**T = 1.325 (PM Peak Hour)**	**65**		**50%**	**50%**	**33**	**32**	

**Based on ratio of AM/PM traffic for LUC 820, Shopping Center
***Saturday Peak Hour comes from a ratio of PM to Saturday trip rates from LUC 820 - Shopping Center
* Percentages rounded to nearest 5%

Fitted Curve Equation

Time Period	ITE Trip Rate	Trip Ends	Number of Studies	Directional Split * IN	Directional Split * OUT	Directional Distribution IN	Directional Distribution OUT	R^2
Weekday	T = 42.78 (X) + 37.66	806	4	50%	50%	403	403	0.69
Peak Hour of Adjacent Street Traffic 7-9 AM	---	---	---	---	---	---	---	---
Peak Hour of Adjacent Street Traffic 4-6 PM	T = 2.40 (X) + 21.48	65	5	45%	55%	29	36	0.98
AM Peak Hour of Generator	T = 4.91 (X) + 115.59	204	4	50%	50%	102	102	0.90
PM Peak Hour of Generator	---	---	---	---	---	---	---	---
Saturday	---	---	---	---	---	---	---	---
Saturday Peak Hour of Gen.	---	---	---	---	---	---	---	---
AM Peak of Adjacent Street 7-9 AM***	T = 0.275 (PM Peak Hour)	18		60%	40%	11	7	
Saturday Peak Hour***	T = 1.325 (PM Peak Hour)	86		50%	50%	43	43	

* Percentages rounded to nearest 5%
(---) Not Given

**Based on ratio of AM/PM traffic for LUC 820, Shopping Center
***Saturday Peak Hour comes from a ratio of PM to Saturday trip rates from LUC 820 - Shopping Center

JN: 3138.03
Project Description: Portland Foreside
Project Location: Portland, Maine
Date: 11/11/2019
Calculated By: EAL

Gorrill Palmer Consulting Engineers
707 Sable Oaks Drive
South Portland, ME 04106

General Office Building
Land Use Code (LUC) 710

Square Feet 12,400

Trip Ends Based on Fitted Curve Equation

Time Period	ITE Trip Rate	Trip Ends	Number of Studies	Directional Split *		Directional Distribution		R^2
				IN	OUT	IN	OUT	
Weekday	Ln (T) = 0.77 Ln (X) + 3.65	267	78	50%	50%	134	133	0.80
AM Peak Hour	**Ln (T) = 0.80 Ln (X) + 1.55**	**35**	**217**	**90%**	**10%**	**32**	**3**	**0.83**
PM Peak Hour	**T = 1.12 (X) + 78.81**	**93**	**235**	**15%**	**85%**	**14**	**79**	**0.82**
Saturday	T = 2.14 (X) + 18.47	45	17	50%	50%	23	22	0.66
Peak Hour of Generator	Ln (T) = 0.81 Ln (X) - 0.12	7	10	55%	45%	4	3	0.59

* Percentages rounded to nearest 5%

Trip Ends Based on Average Rate

Time Period	ITE Trip Rate	Trip Ends	Number of Studies	Directional Split *		Directional Distribution		R^2
				IN	OUT	IN	OUT	
Weekday	T = 11.01 (X)	137	78	50%	50%	69	68	---
AM Peak Hour	T = 1.55 (X)	19	217	90%	10%	17	2	---
PM Peak Hour	T = 1.49 (X)	18	235	15%	85%	3	15	---
Saturday	T = 2.37 (X)	29	17	50%	50%	15	14	---
Saturday Peak Hour of Gen.	**T = 0.41 (X)**	**5**	**10**	**50%**	**50%**	**3**	**2**	**---**

* Percentages rounded to nearest 5%

PM Peak Hour:	T = 1.49/1.55 (AM Peak)	34		15%	85%	5	29	0.82

JN: 3138.03
Project Description: Portland Foreside
Project Location: Portland, Maine
Date: 11/11/2019
Calculated By: EAL
Checked By:

Gorrill Palmer Consulting Engineers
707 Sable Oaks Drive
Suite 30
South Portland, Maine 04106

Specialty Retail Center- (7th Edition)
Land Use Code (LUC) 814

Gross Floor Area (ft^2): 1,100

Average Rate

Time Period	ITE Trip Rate	Trip Ends	Number of Studies	Directional Split * IN	Directional Split * OUT	Directional Distribution IN	Directional Distribution OUT	R^2
Weekday	T = 44.32 (X)	49	4	50%	50%	25	24	---
Peak Hour of Adjacent Street Traffic 7-9 AM**	---	---	---	---	---	---	---	---
Peak Hour of Adjacent Street Traffic 4-6 PM	**T = 2.71 (X)**	**3**	**5**	**45%**	**55%**	**1**	**2**	**---**
AM Peak Hour of Generator	**T = 6.84 (X)**	**8**	**4**	**50%**	**50%**	**4**	**4**	**---**
PM Peak Hour of Generator	**T = 5.02 (X)**	**6**	**3**	**55%**	**45%**	**3**	**3**	**---**
Saturday	T = 42.04 (X)	46	3	50%	50%	23	23	---
Saturday Peak Hour of Gen.***	---	---	---	---	---	---	---	---
AM Peak of Adjacent Street 7-9 AM**	**T = 0.275 (PM Peak Hour)**	**1**		**60%**	**40%**	**1**	**0**	
Saturday Peak Hour***	**T = 1.325 (PM Peak Hour)**	**4**		**50%**	**50%**	**2**	**2**	

**Based on ratio of AM/PM traffic for LUC 820, Shopping Center
***Saturday Peak Hour comes from a ratio of PM to Saturday trip rates from LUC 820 - Shopping Center
* Percentages rounded to nearest 5%

Fitted Curve Equation

Time Period	ITE Trip Rate	Trip Ends	Number of Studies	Directional Split * IN	Directional Split * OUT	Directional Distribution IN	Directional Distribution OUT	R^2
Weekday	T = 42.78 (X) + 37.66	85	4	50%	50%	43	42	0.69
Peak Hour of Adjacent Street Traffic 7-9 AM	---	---	---	---	---	---	---	---
Peak Hour of Adjacent Street Traffic 4-6 PM	T = 2.40 (X) + 21.48	24	5	45%	55%	11	13	0.98
AM Peak Hour of Generator	T = 4.91 (X) + 115.59	121	4	50%	50%	61	60	0.90
PM Peak Hour of Generator	---	---	---	---	---	---	---	---
Saturday	---	---	---	---	---	---	---	---
Saturday Peak Hour of Gen.	---	---	---	---	---	---	---	---
AM Peak of Adjacent Street 7-9 AM***	T = 0.275 (PM Peak Hour)	7		60%	40%	4	3	
Saturday Peak Hour***	T = 1.325 (PM Peak Hour)	32		50%	50%	16	16	

**Based on ratio of AM/PM traffic for LUC 820, Shopping Center
***Saturday Peak Hour comes from a ratio of PM to Saturday trip rates from LUC 820 - Shopping Center
* Percentages rounded to nearest 5%
(---) Not Given

JN: 3138.03
Project Description: Portland Foreside
Project Location: Portland, Maine
Date: 11/11/2019
Calculated By: EAL
Checked By:

Gorrill Palmer Consulting Engineers
707 Sable Oaks Drive
South Portland, ME 04106

Apartment
Land Use Code (LUC) 220

Dwelling Units: 12

Average Rate

Time Period	ITE Trip Rate	Sample Size	Trip Ends		Directional Split * IN	Directional Split * OUT	Directional Distribution IN	Directional Distribution OUT	R^2
Weekday	T = 6.72 (X)	86	81		50%	50%	41	40	N/A
AM Peak Hour of Adj. Street Traffic	**T = 0.51 (X)**	**78**	**6**		**20%**	**80%**	**1**	**5**	**N/A**
PM Peak Hour of Adj. Street Traffic	**T = 0.62 (X)**	**90**	**7**		**65%**	**35%**	**5**	**2**	**N/A**
AM Peak Hour of Generator	**T = 0.55 (X)**	**81**	**7**		**30%**	**70%**	**2**	**5**	**N/A**
PM Peak Hour of Generator	**T = 0.67 (X)**	**83**	**8**		**60%**	**40%**	**5**	**3**	**N/A**
Saturday	T = 6.39 (X)	15	77		50%	50%	39	38	N/A
Saturday Peak Hour of Gen.	**T = 0.52 (X)**	**14**	**6**	**	**50%**	**50%**	**3**	**3**	**N/A**

* Percentages rounded to nearest 5%
** Not Available (Assumption)

Fitted Curve Equation

Time Period	ITE Trip Rate	Sample Size	Trip Ends		Directional Split * IN	Directional Split * OUT	Directional Distribution IN	Directional Distribution OUT	R^2
Weekday	T = 6.01 (X) + 150.35	86	222		50%	50%	111	111	0.88
AM Peak Hour of Adj. Street Traffic	T = 0.49 (X) + 3.73	78	10		20%	80%	2	8	0.83
PM Peak Hour of Adj. Street Traffic	T = 0.55 (X) + 17.65	90	24		65%	35%	16	8	0.77
AM Peak Hour of Generator	T = 0.53 (X) + 4.21	81	11		30%	70%	3	8	0.82
PM Peak Hour of Generator	T = 0.60 (X) + 17.52	83	25		60%	40%	15	10	0.80
Saturday	T = 7.85 (X) - 256.19	15	-162		50%	50%	-81	-81	0.85
Saturday Peak Hour of Gen.	T = 0.41 (X) + 19.23	14	24	**	50%	50%	12	12	0.56

* Percentages rounded to nearest 5%
** Not Available (Assumption)

NCHRP 8-51 Internal Trip Capture Estimation Tool			
Project Name:	58 Fore Street Redevelopment	**Organization:**	GP
Project Location:	Portland, Maine	**Performed By:**	EAL
Scenario Description:	Block 1	**Date:**	11/11/2019
Analysis Year:		**Checked By:**	
Analysis Period:	**AM Street Peak Hour**	**Date:**	

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office	710			227	205	22
Retail				21	13	8
Restaurant	932			18	10	8
Cinema/Entertainment				0		
Residential				7	1	6
Hotel				0		
All Other Land Uses[2]	435			0	0	0
Total				273	229	44

Table 2-A: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses[2]						

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		4	2	0	0	0
Retail	2		1	0	0	0
Restaurant	2	1		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	1	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary

	Total	Entering	Exiting
All Person-Trips	273	229	44
Internal Capture Percentage	10%	6%	30%
External Vehicle-Trips[3]	247	216	31
External Transit-Trips[4]	0	0	0
External Non-Motorized Trips[4]	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	2%	27%
Retail	38%	38%
Restaurant	40%	38%
Cinema/Entertainment	N/A	N/A
Residential	0%	17%
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Informational Report*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

[3]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

[4]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

Project Name:	58 Fore Street Redevelopment
Analysis Period:	**AM Street Peak Hour**

Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	205	205	1.00	22	22
Retail	1.00	13	13	1.00	8	8
Restaurant	1.00	10	10	1.00	8	8
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	1	1	1.00	6	6
Hotel	1.00	0	0	1.00	0	0

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		6	14	0	0	0
Retail	2		1	0	1	0
Restaurant	2	1		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	1	0		0
Hotel	0	0	0	0	0	

Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		4	2	0	0	0
Retail	8		5	0	0	0
Restaurant	29	1		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	6	2	2	0		0
Hotel	6	1	1	0	0	

Table 9-A (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	4	201	205	201	0	0
Retail	5	8	13	8	0	0
Restaurant	4	6	10	6	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	1	1	1	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-A (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	6	16	22	16	0	0
Retail	3	5	8	5	0	0
Restaurant	3	5	8	5	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	1	5	6	5	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

NCHRP 8-51 Internal Trip Capture Estimation Tool			
Project Name:	58 Fore Street Redevelopment	**Organization:**	GP
Project Location:	Portland, Maine	**Performed By:**	EAL
Scenario Description:	Block 1	**Date:**	11/11/2019
Analysis Year:		**Checked By:**	
Analysis Period:	**PM Street Peak Hour**	**Date:**	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office	710			219	33	186
Retail				77	34	43
Restaurant	932			158	103	55
Cinema/Entertainment				0		
Residential				8	6	2
Hotel				0		
All Other Land Uses[2]	435			0	0	0
Total				462	176	286

Table 2-P: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses[2]						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		3	2	0	0	0
Retail	1		12	0	3	0
Restaurant	2	17		0	1	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	1	0	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	462	176	286
Internal Capture Percentage	18%	24%	15%
External Vehicle-Trips[3]	378	134	244
External Transit-Trips[4]	0	0	0
External Non-Motorized Trips[4]	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	9%	3%
Retail	62%	37%
Restaurant	14%	36%
Cinema/Entertainment	N/A	N/A
Residential	67%	50%
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Informational Report*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

[3]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

[4]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

Project Name:	58 Fore Street Redevelopment
Analysis Period:	**PM Street Peak Hour**

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	33	33	1.00	186	186
Retail	1.00	34	34	1.00	43	43
Restaurant	1.00	103	103	1.00	55	55
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	6	6	1.00	2	2
Hotel	1.00	0	0	1.00	0	0

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		37	7	0	4	0
Retail	1		12	2	11	2
Restaurant	2	23		4	10	4
Cinema/Entertainment	0	0	0		0	0
Residential	0	1	0	0		0
Hotel	0	0	0	0	0	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		3	2	0	0	0
Retail	10		30	0	3	0
Restaurant	10	17		0	1	0
Cinema/Entertainment	2	1	3		0	0
Residential	19	3	14	0		0
Hotel	0	1	5	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	3	30	33	30	0	0
Retail	21	13	34	13	0	0
Restaurant	14	89	103	89	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	4	2	6	2	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	5	181	186	181	0	0
Retail	16	27	43	27	0	0
Restaurant	20	35	55	35	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	1	1	2	1	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

11-11-19 Combined Shared Parking Demand.xlsx

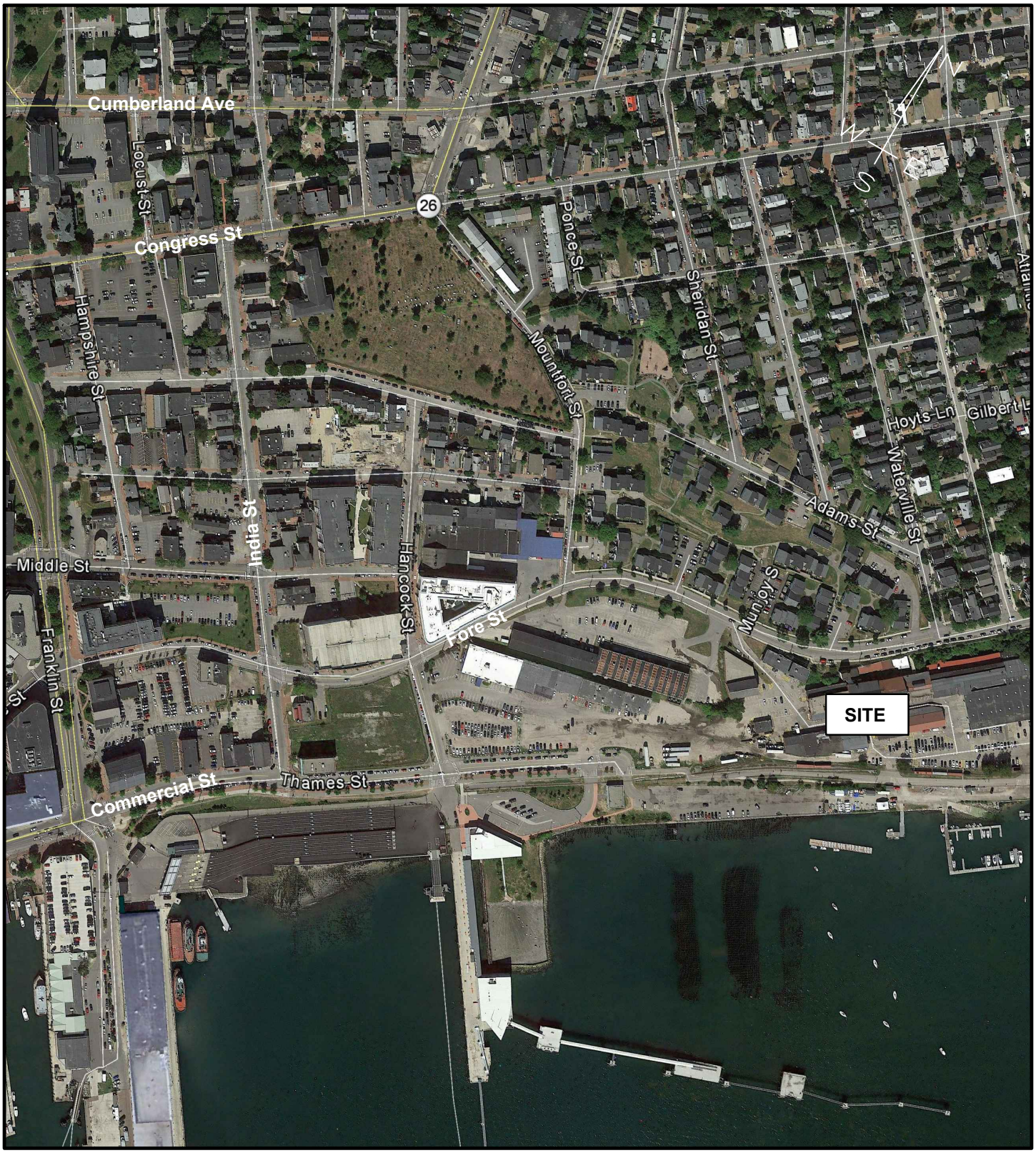
	Block 1A					Block 4					Building 12							Block 2							Shared Spaces			
	Block 1A		Block 1A		Total for Block 1A	Block 1A		Block 4		Total for Block 4	Building 12		Building 12		Building 12		Total for Building 12	Block 2		Block 2		Block 2		Total for Block 2	Combined Subtotal			
	Office		Specialty Retail			Specialty Retail		Residential			Office		Restaurant		Residential			Office		Restaurant		Specialty Retail						
Rate	400	1/400 sf	200	1 / 200 sf		200	1 / 200 sf	1	1 per Unit		400	1/400 sf	153.8462	6.5/1000 6:00AM-4:00PM	1	1 per Unit		400	1/400 sf	153.8462	6.5/1000 6:00AM-4:00PM	200	1 / 200 sf			Mixed Use Reduction (1)	Non-Residential Other Modes Reduction (2)	Building 12 Total
Monthly Adjustment				1			1		1				100	10/1000 4:00PM-11:00PM		1				100	10/1000 4:00PM-11:00PM		1			14%	18.0%	
SQF or Unit	95,100	95100 sf	9,300	9300 sf		1,100	1100 sf	12	12 Units		3,200	3,200 sf	3,200	3,200 sf	2	2 Units		12,400	12400 sf	17,950	17950 sf	17,950	17950 sf					
6:00AM	0.00	0	0.00	0	0	0.00	0	0.84	10	10	0.00	0	0.00	0	0.84	2	2	0.00	0	0.00	0	0.00	0	0	12	2	2	8
7:00AM	0.20	48	0.20	9	57	0.20	1	0.62	7	9	0.20	2	0.10	2	0.62	1	5	0.20	6	0.10	12	0.20	18	36	36	5	6	25
8:00AM	0.64	152	0.64	30	181	0.64	4	0.41	5	8	0.64	5	0.10	2	0.41	1	8	0.64	20	0.10	12	0.64	57	89	89	12	14	63
9:00AM	0.93	221	0.93	43	265	0.93	5	0.34	4	9	0.93	7	0.20	4	0.34	1	12	0.93	29	0.20	23	0.93	84	136	136	19	21	96
10:00AM	1.00	238	1.00	46	284	1.00	5	0.32	4	9	1.00	8	0.30	6	0.32	1	15	1.00	31	0.30	35	1.00	90	156	156	22	24	110
11:00AM	1.00	238	1.00	46	284	1.00	5	0.31	4	9	1.00	8	0.90	19	0.31	1	27	1.00	31	0.90	105	1.00	90	226	226	32	35	159
12:00PM	0.90	213	0.90	42	255	0.90	5	0.30	4	9	0.90	7	1.00	21	0.30	1	29	0.90	28	1.00	117	0.90	80	225	225	32	35	158
1:00PM	0.90	213	0.90	42	255	0.90	5	0.31	4	9	0.90	7	0.90	19	0.31	1	27	0.90	28	0.90	105	0.90	80	213	213	30	33	150
2:00PM	1.00	238	1.00	47	284	1.00	6	0.33	4	9	1.00	8	0.65	14	0.33	1	22	1.00	31	0.65	76	1.00	90	197	197	28	30	139
3:00PM	1.00	238	1.00	47	284	1.00	6	0.37	4	10	1.00	8	0.35	7	0.37	1	16	1.00	31	0.35	41	1.00	90	162	162	23	25	114
4:00PM	0.93	221	0.93	43	265	0.93	5	0.45	5	11	0.93	7	0.35	11	0.45	1	20	0.93	29	0.35	63	0.93	84	175	175	25	27	123
5:00PM	0.64	152	0.64	30	181	0.64	4	0.61	7	11	0.64	5	0.60	19	0.61	1	26	0.64	20	0.60	108	0.64	57	185	185	26	29	130
6:00PM	0.20	48	0.20	9	57	0.20	1	0.69	8	9	0.20	2	0.90	29	0.69	1	32	0.20	6	0.90	162	0.20	18	186	186	26	29	131
7:00PM	0.10	24	0.00	0	24	0.00	0	0.72	9	9	0.10	1	1.00	32	0.72	1	34	0.10	3	1.00	180	0.00	0	183	183	26	28	129
8:00PM	0.10	24	0.00	0	24	0.00	0	0.80	10	10	0.10	1	1.00	32	0.80	2	34	0.10	3	1.00	180	0.00	0	183	183	26	28	129
9:00PM	0.10	24	0.00	0	24	0.00	0	0.89	11	11	0.10	1	1.00	32	0.89	2	35	0.10	3	1.00	180	0.00	0	183	183	26	28	129
10:00PM	0.10	24	0.00	0	24	0.00	0	0.92	11	11	0.10	1	0.75	24	0.92	2	27	0.10	3	0.75	135	0.00	0	138	138	19	21	98
Dedicated spaces	0.00	0	0.00	0	0	0.00	0			#REF!	0.00	0	0.00	0			0	0.00	0	0.00	0	0.00	0	0				

(1) Based on the results from the NCHRP 684 Internal Trip Capture Estimation Tool

(2) Based on Commute to Work data from the 2009-2013 ACS by Census Tract for the City of Portland provided by GPCOG

Location Map

Figure No. 1



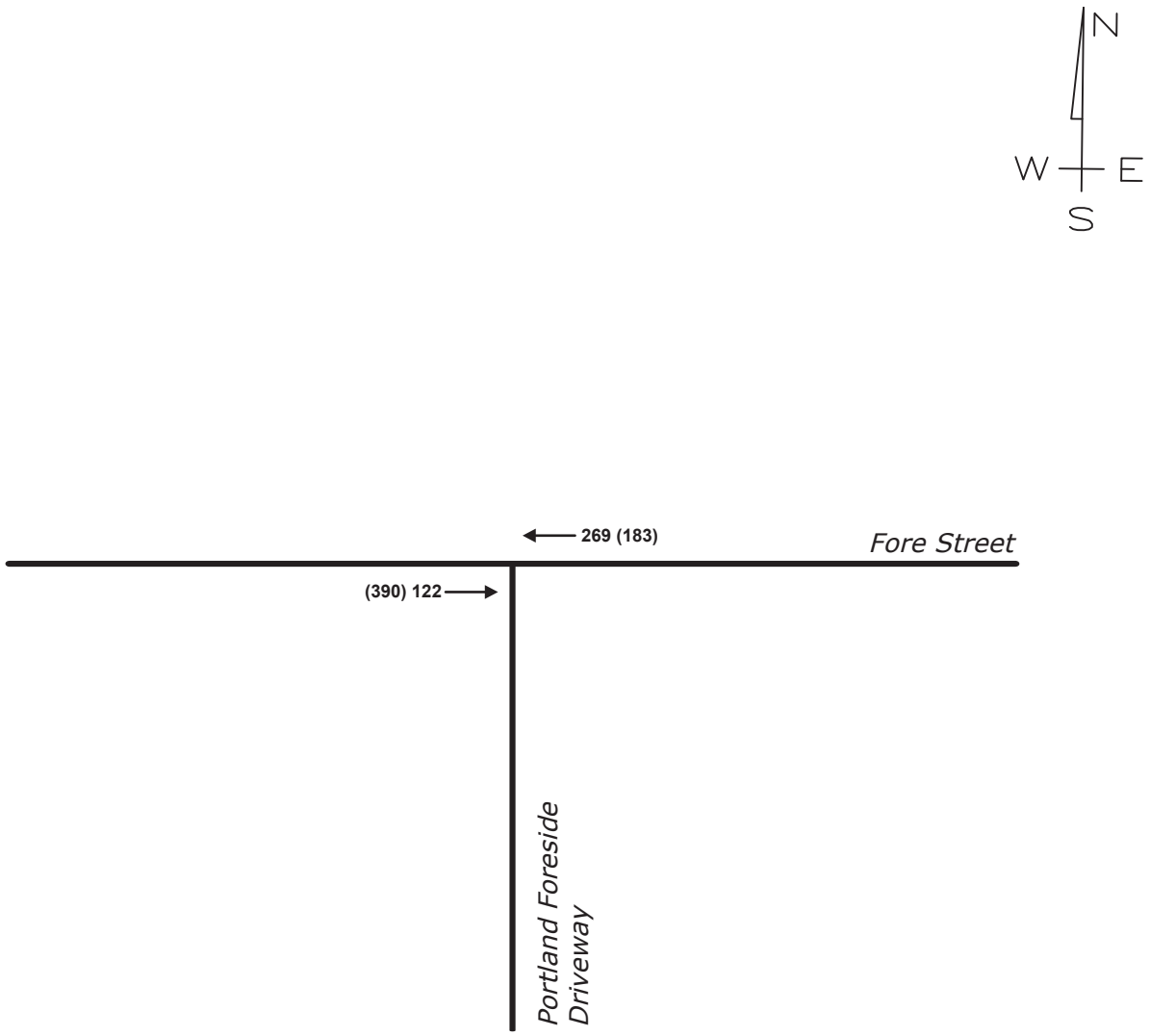
PORTLAND FORESIDE
PORTLAND, MAINE

Design:	ET	Scale:	NONE
Draft:	LAN	Date:	OCT 2015
Checked:	RED	File Name:	3138-TRAFF.dwg

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2027 Predevelopment DHV

Figure No. 2



XX = AM Peak Hour
(XX) = PM Peak Hour

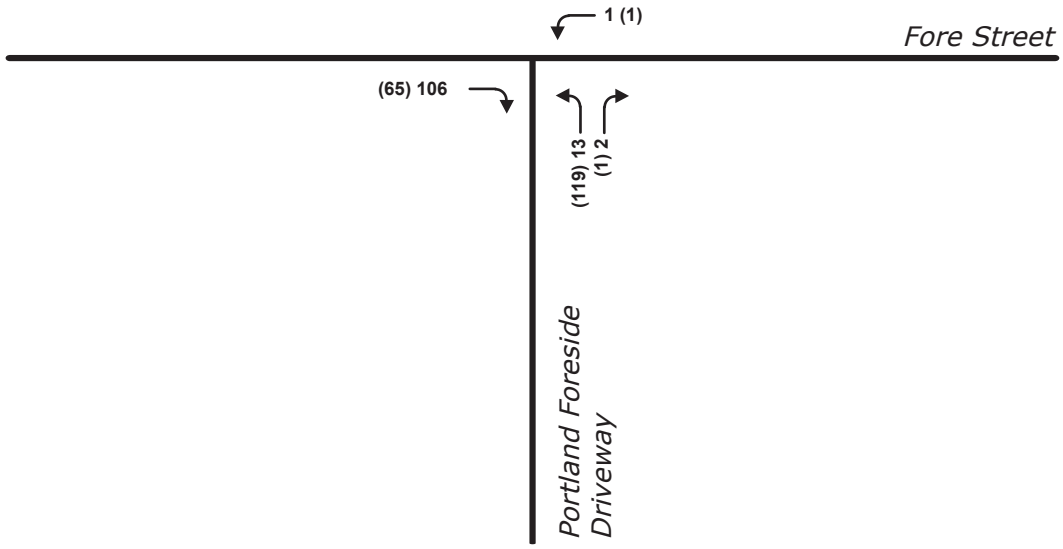
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PORTLAND, MAINE

Design:	MC	Scale:	NONE
Draft:		Date:	November 7, 2019
Checked:	EAL	File Name:	3138.03 Figures

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Trip Assignment

Figure No. 3



	AM	PM
IN	178	110
OUT	25	200
TOTAL	203	310

Note: This driveway expected to expierence 60% of overall traffic

XX = AM Peak Hour
(XX) = PM Peak Hour

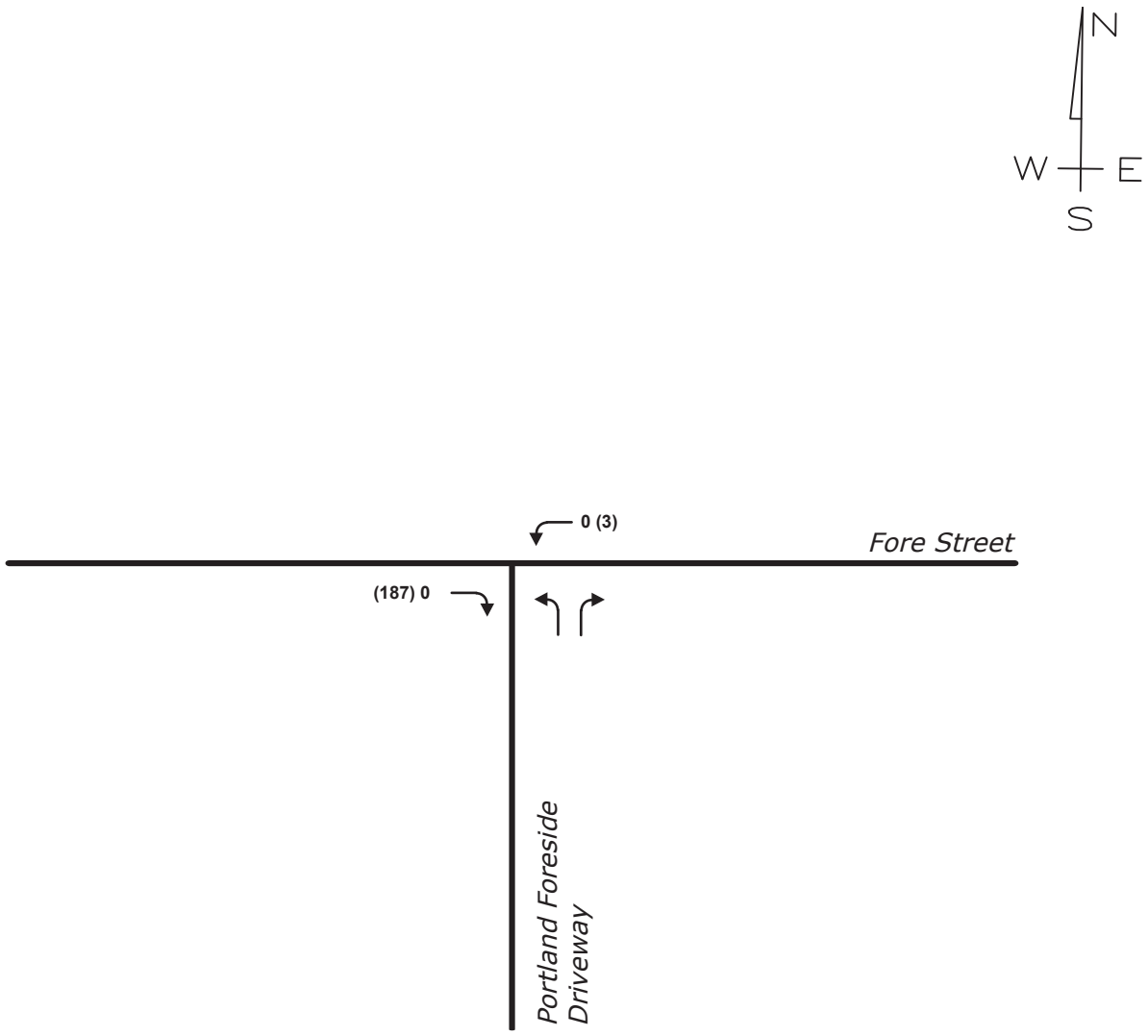
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Event Space Trip Assignment

Figure No. 4



	AM	PM
IN	0	316
OUT	0	0
TOTAL	0	316

Note: This driveway expected to expierence 60% of overall traffic

XX = AM Peak Hour
(XX) = PM Peak Hour

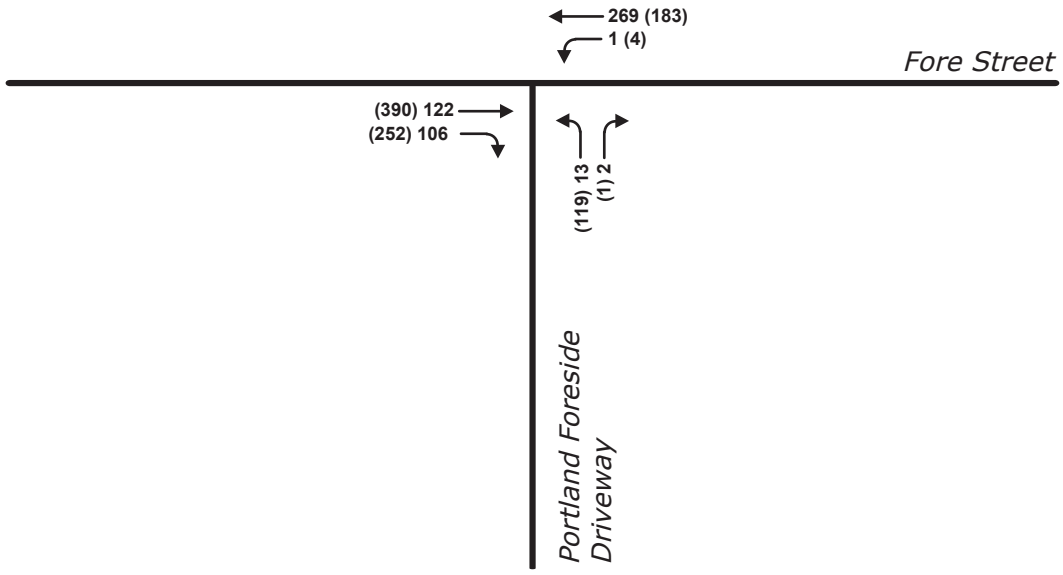
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Design: MC Scale: NONE
Draft: Date: November 7, 2019
Checked: EAL File Name: 3138.03 Figures

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Postdevelopment DHV

Figure No. 4



XX = AM Peak Hour
(XX) = PM Peak Hour

PORTLAND FORESIDE
PORTLAND, MAINE

Design:	MC	Scale:	NONE
Draft:		Date:	November 7, 2019
Checked:	EAL	File Name:	3138.03 Figures

GORRILL PALMER
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Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:57	6:57	6:57	6:57	6:57	6:57
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	63	63	63	63	63	63
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	521	554	522	541	481	522
Vehs Exited	524	553	525	542	480	525
Starting Vehs	4	3	3	2	1	1
Ending Vehs	1	4	0	1	2	1
Denied Entry Before	0	0	0	0	0	0
Denied Entry After	0	1	0	0	0	0
Travel Distance (mi)	81	86	81	84	74	81
Travel Time (hr)	3.1	3.2	3.0	3.2	2.8	3.1
Total Delay (hr)	0.2	0.1	0.1	0.2	0.1	0.1
Total Stops	19	14	18	16	14	15
Fuel Used (gal)	2.7	2.9	2.6	2.9	2.4	2.7

Interval #0 Information Seeding

Start Time	6:57
End Time	7:00
Total Time (min)	3

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	8:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	521	554	522	541	481	522
Vehs Exited	524	553	525	542	480	525
Starting Vehs	4	3	3	2	1	1
Ending Vehs	1	4	0	1	2	1
Denied Entry Before	0	0	0	0	0	0
Denied Entry After	0	1	0	0	0	0
Travel Distance (mi)	81	86	81	84	74	81
Travel Time (hr)	3.1	3.2	3.0	3.2	2.8	3.1
Total Delay (hr)	0.2	0.1	0.1	0.2	0.1	0.1
Total Stops	19	14	18	16	14	15
Fuel Used (gal)	2.7	2.9	2.6	2.9	2.4	2.7

3: Fore Street & Proposed Driveway Performance by approach

Approach	NW	NE	SW	All
Denied Del/Veh (s)	0.1	0.2	0.2	0.2
Total Del/Veh (s)	5.3	0.8	0.1	0.6
Denied Entry Before	0	0	0	0
Denied Entry After	0	0	0	0

Total Network Performance

Denied Del/Veh (s)	0.2
Total Del/Veh (s)	0.8
Denied Entry Before	0
Denied Entry After	0

Intersection: 3: Fore Street & Proposed Driveway

Movement	NW	NE
Directions Served	LR	TR
Maximum Queue (ft)	35	17
Average Queue (ft)	12	1
95th Queue (ft)	37	9
Link Distance (ft)	436	411
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 0

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:57	6:57	6:57	6:57	6:57	6:57
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	63	63	63	63	63	63
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	931	996	910	1004	920	954
Vehs Exited	925	993	910	998	916	949
Starting Vehs	2	6	4	3	8	4
Ending Vehs	8	9	4	9	12	9
Denied Entry Before	0	0	0	0	3	0
Denied Entry After	0	0	0	1	0	0
Travel Distance (mi)	146	157	143	158	145	150
Travel Time (hr)	6.4	7.4	6.3	7.3	6.6	6.8
Total Delay (hr)	1.0	1.5	1.0	1.4	1.1	1.2
Total Stops	123	146	100	137	129	128
Fuel Used (gal)	5.7	6.5	5.6	6.4	5.8	6.0

Interval #0 Information Seeding

Start Time	6:57
End Time	7:00
Total Time (min)	3

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	8:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	931	996	910	1004	920	954
Vehs Exited	925	993	910	998	916	949
Starting Vehs	2	6	4	3	8	4
Ending Vehs	8	9	4	9	12	9
Denied Entry Before	0	0	0	0	3	0
Denied Entry After	0	0	0	1	0	0
Travel Distance (mi)	146	157	143	158	145	150
Travel Time (hr)	6.4	7.4	6.3	7.3	6.6	6.8
Total Delay (hr)	1.0	1.5	1.0	1.4	1.1	1.2
Total Stops	123	146	100	137	129	128
Fuel Used (gal)	5.7	6.5	5.6	6.4	5.8	6.0

3: Fore Street & Proposed Driveway Performance by approach

Approach	NW	NE	SW	All
Denied Del/Veh (s)	0.2	0.6	0.2	0.5
Total Del/Veh (s)	14.9	2.3	0.3	3.5
Denied Entry Before	0	0	0	0
Denied Entry After	0	0	0	0

Total Network Performance

Denied Del/Veh (s)	0.5
Total Del/Veh (s)	4.0
Denied Entry Before	0
Denied Entry After	0

Intersection: 3: Fore Street & Proposed Driveway

Movement	NW	NE	SW
Directions Served	LR	TR	LT
Maximum Queue (ft)	118	78	47
Average Queue (ft)	50	6	3
95th Queue (ft)	92	37	20
Link Distance (ft)	436	411	329
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 0

11-22-19 Combined Shared Parking Demand.xlsx

	Block 1A					Block 4					Building 12							Block 2							Shared Spaces			
	Block 1A		Block 1A		Total for Block 1A	Block 4		Block 4		Total for Block 4	Building 12		Building 12		Building 12		Total for Building 12	Block 2		Block 2		Block 2		Total for Block 2	Combined Subtotal			
	Office		Specialty Retail			Specialty Retail		Residential			Office		Restaurant		Residential			Office		Restaurant		Specialty Retail						
Rate	400	1/400 sf	200	1 / 200 sf		200	1 / 200 sf	1	1 per Unit		400	1/400 sf	153.8462	6.5/1000 6:00AM-4:00PM	1	1 per Unit		400	1/400 sf	153.8462	6.5/1000 6:00AM-4:00PM	200	1 / 200 sf		Combined Subtotal	Mixed Use Reduction (1)	Non-Residential Other Modes Reduction (2)	Reduced Total
Monthly Adjustment				1			1		1				100	10/1000 4:00PM-11:00PM		1				100	10/1000 4:00PM-11:00PM		1			14%	18.0%	
SQF or Unit	95,100	95100 sf	9,300	9300 sf		1,100	1100 sf	12	12 Units		3,200	3,200 sf	3,200	3,200 sf	2	2 Units		12,400	12400 sf	17,950	17950 sf	17,950	17950 sf					
6:00AM	0.00	0	0.00	0	0	0.00	0	0.84	10	10	0.00	0	0.00	0	0.84	2	2	0.00	0	0.00	0	0.00	0	0	12	2	2	8
7:00AM	0.20	48	0.20	9	57	0.20	1	0.62	7	8	0.20	2	0.10	2	0.62	1	5	0.20	6	0.10	12	0.20	18	36	106	15	16	75
8:00AM	0.64	152	0.64	30	182	0.64	4	0.41	5	9	0.64	5	0.10	2	0.41	1	8	0.64	20	0.10	12	0.64	57	89	288	40	45	203
9:00AM	0.93	221	0.93	43	264	0.93	5	0.34	4	9	0.93	7	0.20	4	0.34	1	12	0.93	29	0.20	23	0.93	84	136	421	59	65	297
10:00AM	1.00	238	1.00	46	284	1.00	5	0.32	4	9	1.00	8	0.30	6	0.32	1	15	1.00	31	0.30	35	1.00	90	156	464	65	72	327
11:00AM	1.00	238	1.00	46	284	1.00	5	0.31	4	9	1.00	8	0.90	19	0.31	1	28	1.00	31	0.90	105	1.00	90	226	547	77	85	385
12:00PM	0.90	213	0.90	42	255	0.90	5	0.30	4	9	0.90	7	1.00	21	0.30	1	29	0.90	28	1.00	117	0.90	80	225	518	73	80	365
1:00PM	0.90	213	0.90	42	255	0.90	5	0.31	4	9	0.90	7	0.90	19	0.31	1	27	0.90	28	0.90	105	0.90	80	213	504	71	78	355
2:00PM	1.00	238	1.00	47	285	1.00	6	0.33	4	10	1.00	8	0.65	14	0.33	1	23	1.00	31	0.65	76	1.00	90	197	515	72	80	363
3:00PM	1.00	238	1.00	47	285	1.00	6	0.37	4	10	1.00	8	0.35	7	0.37	1	16	1.00	31	0.35	41	1.00	90	162	473	66	73	334
4:00PM	0.93	221	0.93	43	264	0.93	5	0.45	5	10	0.93	7	0.35	11	0.45	1	19	0.93	29	0.35	63	0.93	84	176	469	66	73	330
5:00PM	0.64	152	0.64	30	182	0.64	4	0.61	7	11	0.64	5	0.60	19	0.61	1	25	0.64	20	0.60	108	0.64	57	185	403	56	62	285
6:00PM	0.20	48	0.20	9	57	0.20	1	0.69	8	9	0.20	2	0.90	29	0.69	1	32	0.20	6	0.90	162	0.20	18	186	284	40	44	200
7:00PM	0.10	24	0.00	0	24	0.00	0	0.72	9	9	0.10	1	1.00	32	0.72	1	34	0.10	3	1.00	180	0.00	0	183	250	35	39	176
8:00PM	0.10	24	0.00	0	24	0.00	0	0.80	10	10	0.10	1	1.00	32	0.80	2	35	0.10	3	1.00	180	0.00	0	183	252	35	39	178
9:00PM	0.10	24	0.00	0	24	0.00	0	0.89	11	11	0.10	1	1.00	32	0.89	2	35	0.10	3	1.00	180	0.00	0	183	253	35	39	179
10:00PM	0.10	24	0.00	0	24	0.00	0	0.92	11	11	0.10	1	0.75	24	0.92	2	27	0.10	3	0.75	135	0.00	0	138	200	28	31	141
Dedicated spaces	0.00	0	0.00	0	0	0.00	0			#REF!	0.00	0	0.00	0			0	0.00	0	0.00	0	0.00	0	0				

(1) Based on the results from the NCHRP 684 Internal Trip Capture Estimation Tool

(2) Based on Commute to Work data from the 2009-2013 ACS by Census Tract for the City of Portland provided by GPCOG

PFDC Phase 1 Parking Dimensions

Block 1A Garage

Parking Space Size	*Level 1*
9'x18'	57

Total number of parking spaces with standard or larger dimensions: 57

8'x15'	13

Total number of parking spaces with reduced dimensions: 13

Block 4 Garage

Parking Space Size	*Level 1*	*Level 2*	*Level 3*	*Level 4*	*Level 5*
9' x 18				25	
9'2" x 18'	5	16	16	16	18
9'6" x 18'					5
9'8" x 18'	21	24	24	24	15
10'1" x 18'		7			
10'4" x 18'					3
11' x 18'		6	6	6	8

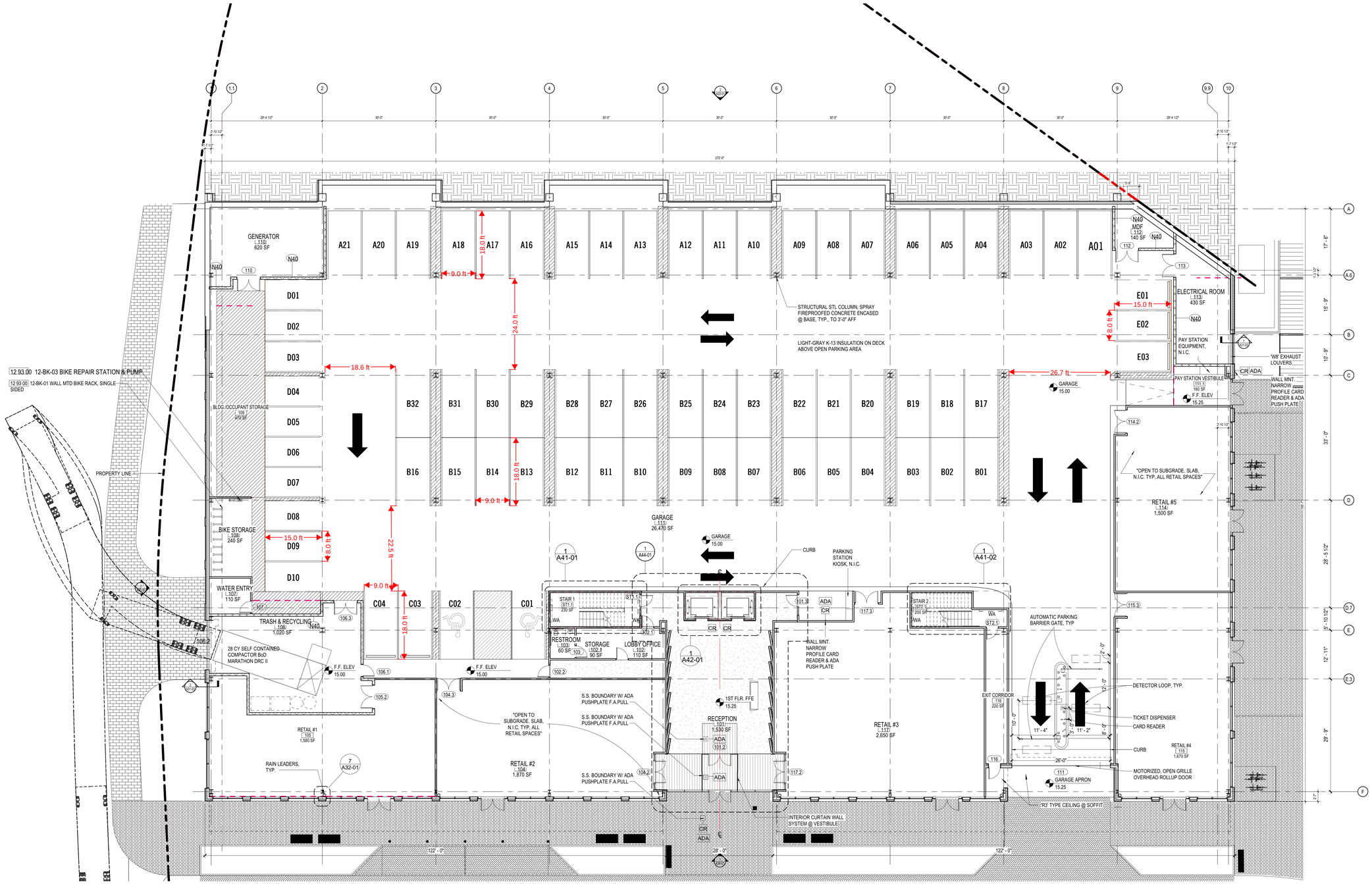
Total number of parking spaces with standard or larger dimensions: 245

8'4" x 18'	4				
8'7" x 18'			4		15
8'8" x 18'	17	29	37		4
8'9" x 18'			37	37	76
8'10" x 18'				30	
8'11" x 18'	12				
8'8" x 17'	33	37			
8'6" x 17.5'				4	
8'8" x 17.5'				4	

Total number of parking spaces with reduced dimensions: 380

All Parking Garages:

Total Number of Spaces	695	
Total Standard Spaces	302	43%
Total Reduced Size Spaces	393	57%



PARTITION & DOOR NOTES

1. PARTITIONS LOCATED BY DIMENSION STRING ARE DIMENSIONED TO THE UNFINISHED FACE OF THE WALL UNLESS NOTED OTHERWISE.

2. PARTITIONS NOT DIMENSIONED ARE GENERALLY LOCATED BY ONE OF THE FOLLOWING CRITERIA:

   2.1 CENTERLINE - CENTER OF PARTITION ALIGNS WITH THE CENTER OF GRIDLINE OR OBJECT CENTERLINE (SUCH AS A COLUMN OR WINDOW MULLION).
   CENTER THE OVERALL PARTITION WIDTH, RATHER THAN STUD WIDTH ON THE RELATED CENTERLINE.

   2.2 ALIGN - LOCATE PARTITION FLUSH WITH FACE OF ANOTHER PARTITION OR ANOTHER SURFACE AS INDICATED.

   2.3 SPECIFICALLY MAINTAIN DIMENSIONS NOTED AS "MINIMUM" OR "CLEAR".

3. DOOR OPENINGS ARE DIMENSIONED TO CENTERLINE OF OPENING. IF NOT DIMENSIONED, THE HINGE SIDE OF DOOR SHALL BE SPACED 4" (INCLUDING THE JAMB) FROM THE ADJACENT WALL.

4. ALL INTERIOR PARTITIONS TO BE TYPE 'A41' U.N.O.

1 LEVEL 1 PLAN
3/32" = 1'-0"

PARKING SCHEDULE	CURRENT - 07.08.2019	SD - 10.31.2018
ACCESSIBLE/VAN	2	3
COMPACT (8'x15')	13	4
REGULAR (9' x 18')	55	53
Grand total: 70	70	60

397 SF/SPACE

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PROJECT

BUILDING 1A
58 FORE ST
PORTLAND, ME 04101

FORESIDE
254 COMMERCIAL ST
SUITE 118
PORTLAND, ME 04101

KEYPLAN

NOT FOR CONSTRUCTION

ISSUE CHART

MARK	ISSUE	DATE

DESIGN DEVELOPMENT
JULY 26, 2019

Job Number	157087.000
Drawn	Author
Checked	Checker
Approved	Approver

TITLE

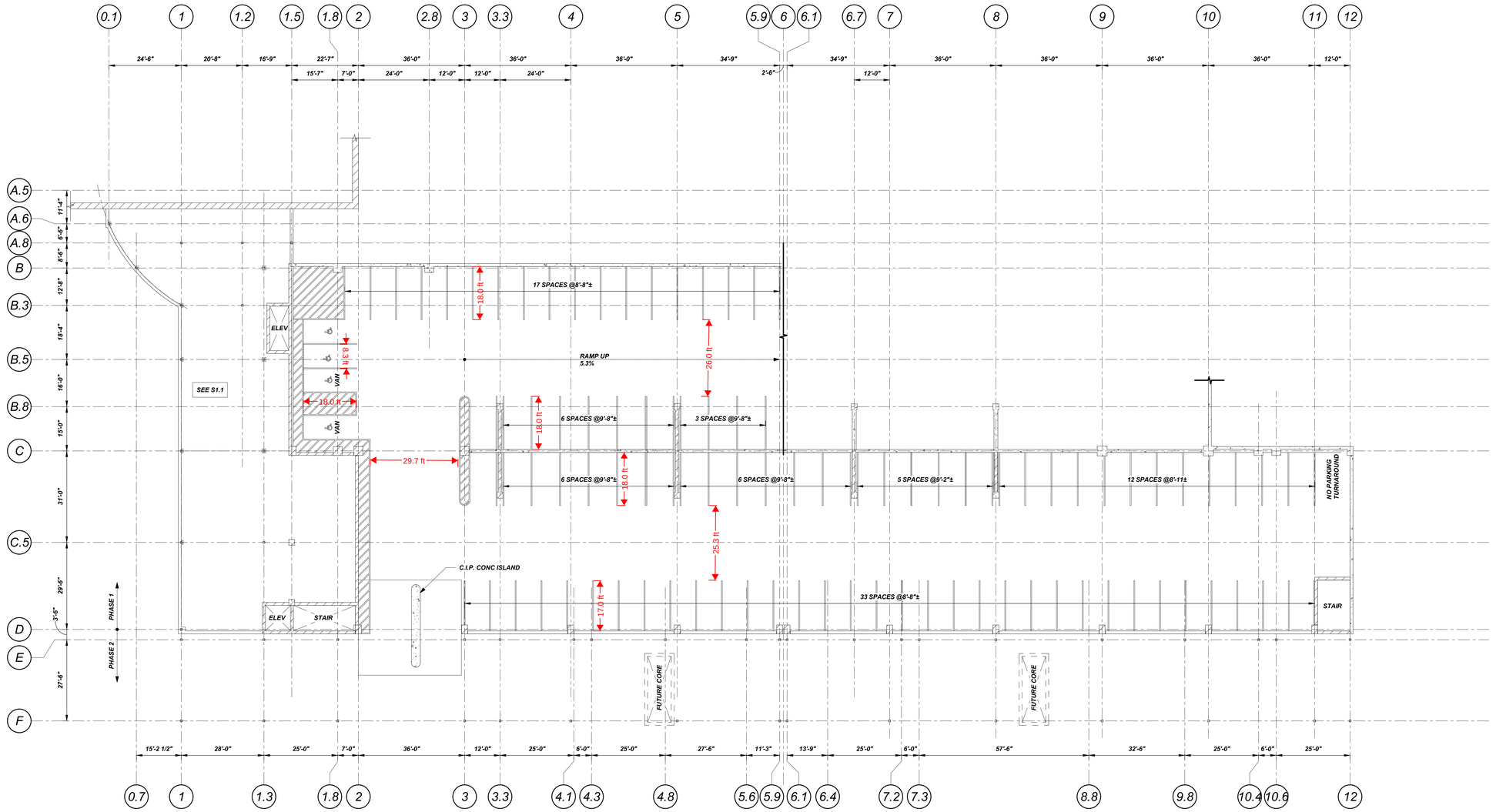
LEVEL 1 PLAN

SHEET NUMBER

A10-01

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GARAGE PARKING COUNT

LEVEL	TYP SPACES	COMPACT SPACES	ACCESSIBLE SPACES	VAN ACCESSIBLE SPACES	LEVEL TOTAL	NOTES
LEVEL 1	88	0	2	2	92	
LEVEL 2	119	0	0	0	119	
LEVEL 3	124	0	0	0	124	
LEVEL 4	146	0	0	0	146	
LEVEL 5	145	0	0	0	145	
TOTAL GARAGE SPACES	621	0	2	2	621	

LEVEL 1 PARKING LAYOUT

1/16"=1'-0"

SIZE	QTY
HC	2
HC VAN	2
REGULAR	88
TOTAL	92

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PROJECT

BLOCK FOUR

FORESIDE
PORTLAND, MAINE

PORTLAND FORESIDE DEVELOPMENT COMPANY
254 COMMERCIAL ST SUITE 118
PORTLAND, ME 04101

KEYPLAN

ISSUE CHART

MARK	ISSUE	DATE

100% SCHEMATIC DESIGN 12/20/2019

Job Number	AC19081
Drawn	CHF
Checked	TMN
Approved	TMN

TITLE

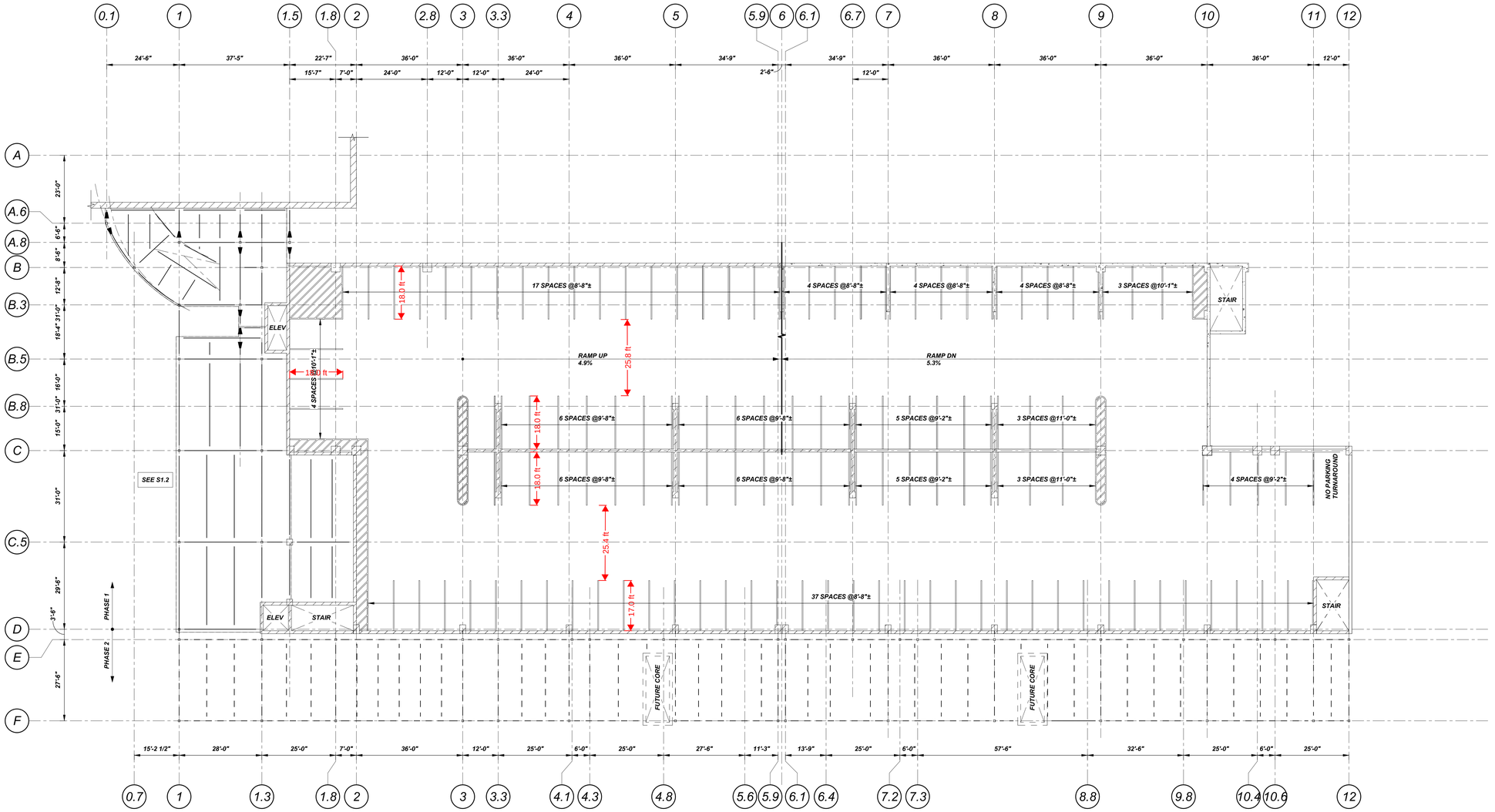
LEVEL 1 PARKING LAYOUT

SHEET NUMBER

PS1

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LEVEL 2 PARKING LAYOUT

1/16"=1'-0"

SIZE	QTY
HC	0
HC VAN	0
REGULAR	119
TOTAL	119

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PROJECT

BLOCK FOUR

FORESIDE
PORTLAND, MAINE

PORTLAND FORESIDE DEVELOPMENT COMPANY

254 COMMERCIAL ST SUITE 118
PORTLAND, ME 04101

KEYPLAN

ISSUE CHART

MARK	ISSUE	DATE

100% SCHEMATIC DESIGN 12/20/2019

Job Number	AC19081
Drawn	CHF
Checked	TMN
Approved	TMN

TITLE

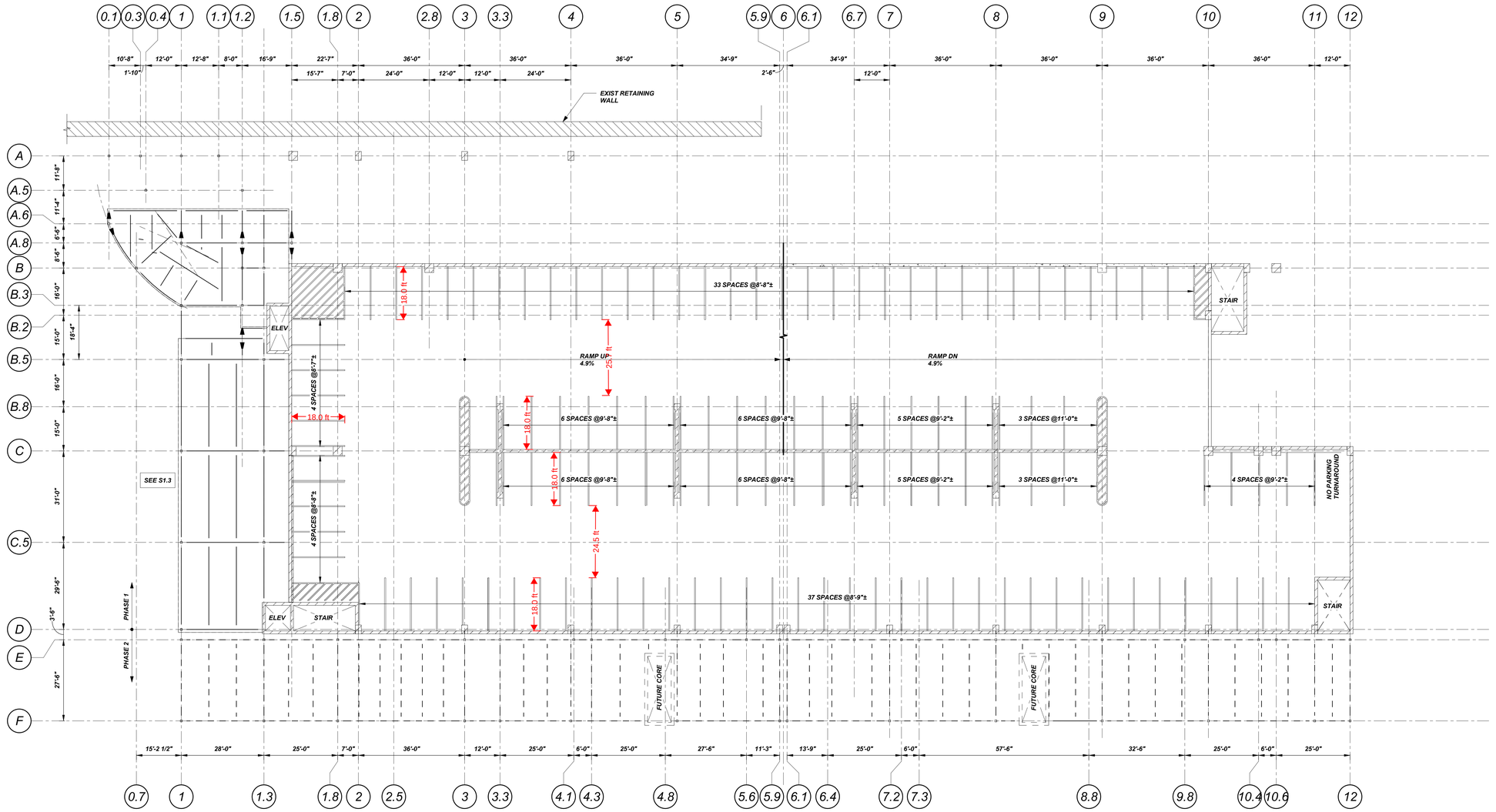
LEVEL 2 PARKING LAYOUT

SHEET NUMBER

PS2

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LEVEL 3 PARKING LAYOUT

1/16"=1'-0"

SIZE	QTY
HC	0
HC VAN	0
REGULAR	124
TOTAL	124

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PROJECT

BLOCK FOUR

FORESIDE
PORTLAND, MAINE

PORTLAND FORESIDE DEVELOPMENT COMPANY
254 COMMERCIAL ST SUITE 118
PORTLAND, ME 04101

KEYPLAN

ISSUE CHART

MARK	ISSUE	DATE

100% SCHEMATIC DESIGN 12/20/2019

Job Number	AC19081
Drawn	CHF
Checked	TMN
Approved	TMN

TITLE

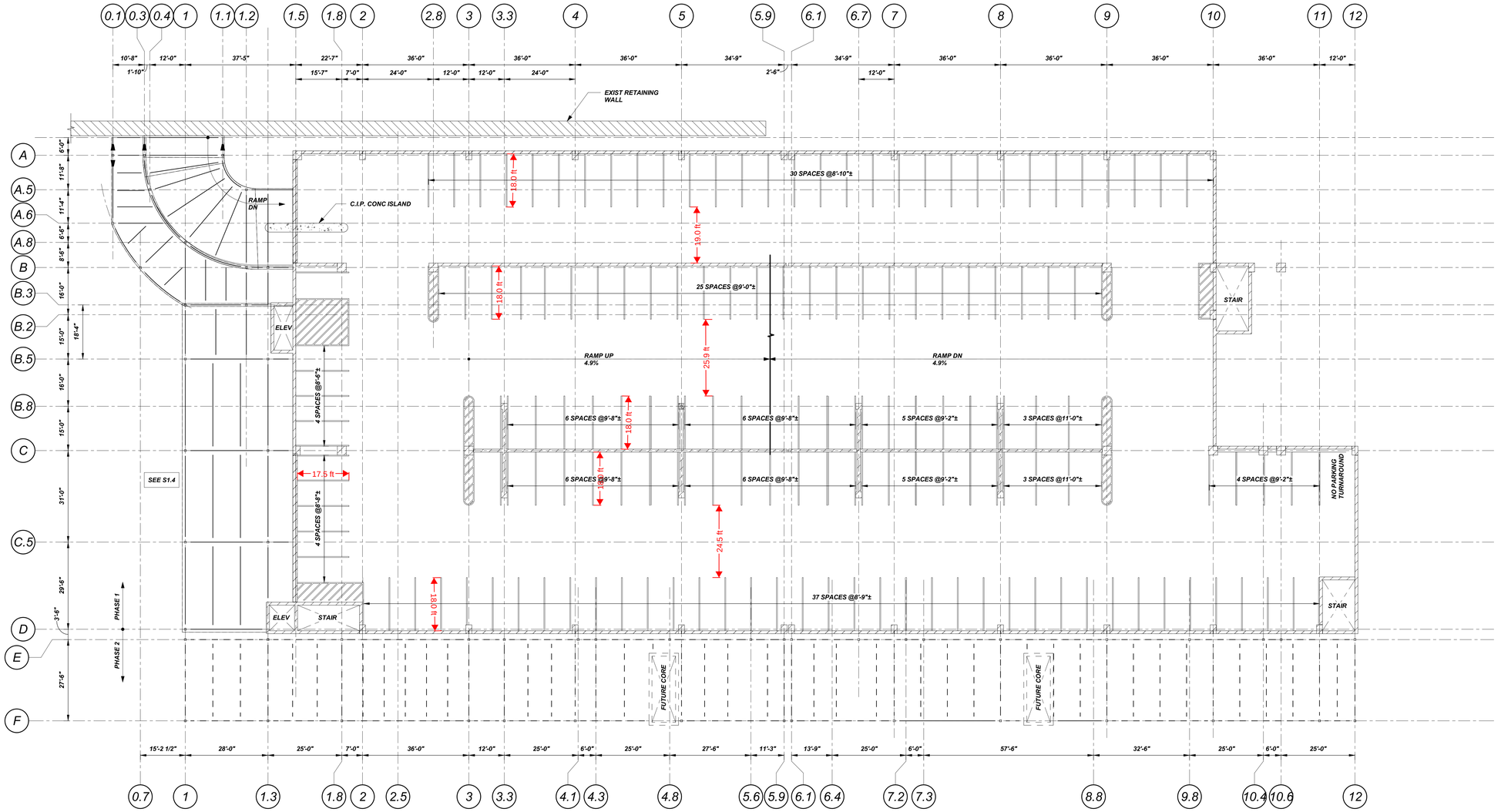
LEVEL 3 PARKING LAYOUT

SHEET NUMBER

PS3

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LEVEL 4 PARKING LAYOUT

1/16"=1-0"

SIZE	QTY
HC	0
HC VAN	0
REGULAR	146
TOTAL	146

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Portlan, ME 04101
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PROJECT

BLOCK FOUR

FORESIDE
PORTLAND, MAINE

PORTLAND FORESIDE DEVELOPMENT COMPANY

254 COMMERCIAL ST SUITE 118
PORTLAND, ME 04101

KEYPLAN

ISSUE CHART

MARK	ISSUE	DATE

100% SCHEMATIC DESIGN 12/20/2019

Job Number	AC19081
Drawn	CHF
Checked	TMN
Approved	TMN

TITLE

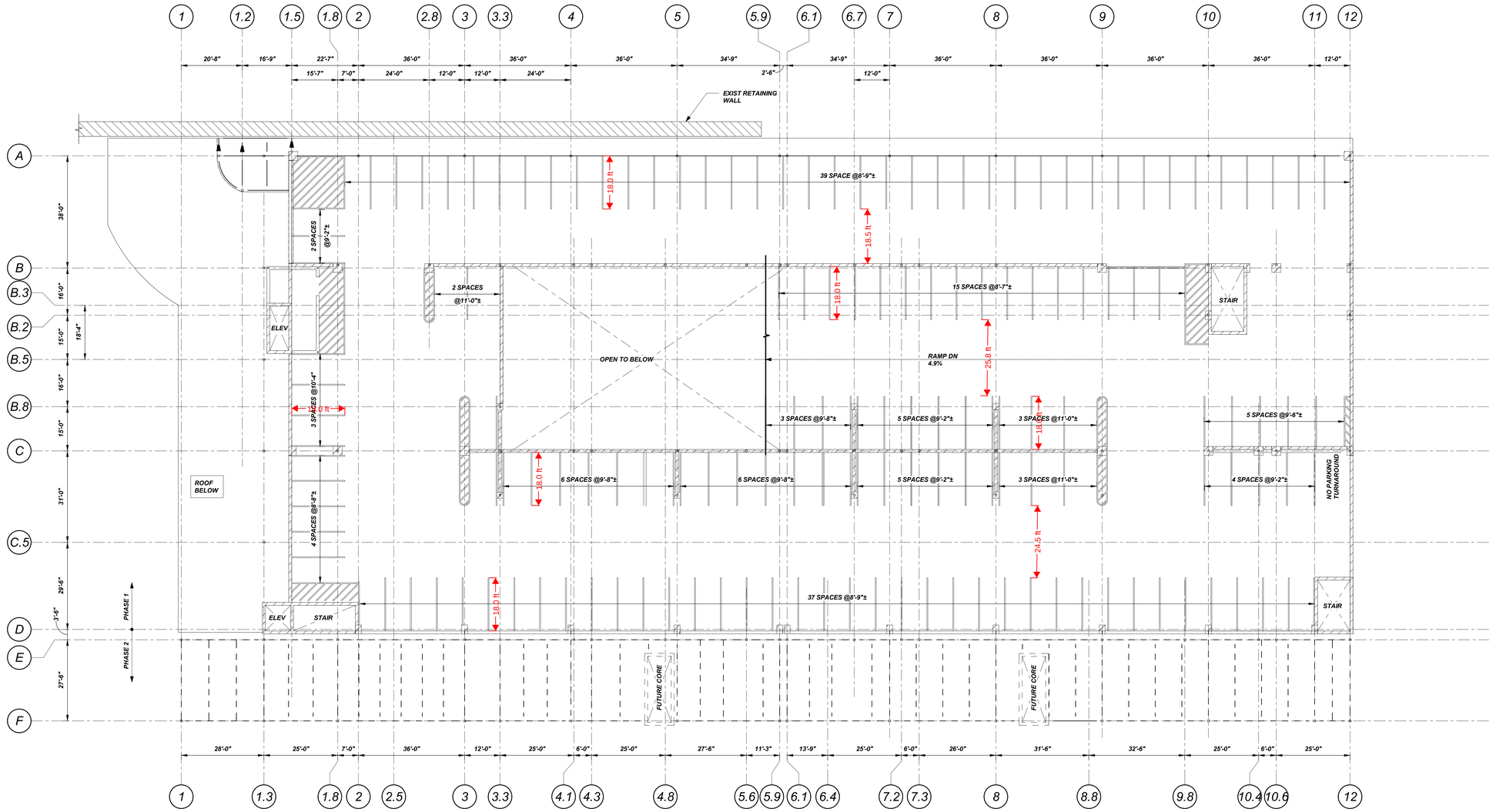
LEVEL 4 PARKING LAYOUT

SHEET NUMBER

PS4

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12/18/2019 3:57:21 PM C:\Users\cfoguest\Documents\AC19081.58 Fore Block 4 PG_R19_cfoguestFMPH4.rvt



LEVEL 5 PARKING LAYOUT

1/16"=1'-0"

SIZE	QTY
HC	0
HC VAN	0
REGULAR	145
TOTAL	145

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PROJECT

BLOCK FOUR

FORESIDE
PORTLAND, MAINE

PORTLAND FORESIDE DEVELOPMENT COMPANY
254 COMMERCIAL ST SUITE 118
PORTLAND, ME 04101

KEYPLAN

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TITLE

LEVEL 5 PARKING LAYOUT

SHEET NUMBER

PS5

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12/18/2019 3:07:23 PM C:\Users\cfergues\Documents\AC19081-58 Fore Block 4 PG_R19_cfergueFMPH4.rvt

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January 24, 2020

Christian Roadman, Planner
City of Portland Planning Division
389 Congress Street
Portland, ME 04101

Re: Portland Foreside Phase 1 Level III Site Plan Submittal – Portland Foreside Development Co.
Response to Planning Staff Comments

Dear Christian:

Thank you for coordinating the review of the proposed development of Phase 1 of the Portland Foreside Project located at 58 Fore Street in Portland, Maine. The following letter compiles responses to comments received from staff, third party reviewers, and from the Planning Board.

Comments from Staff and Peer Reviewers

January 23, 2020 Email from Christian Roadman

An updated subdivision plat is being submitted as part of this response to comments. The plat addresses the following comments:

- Please provide an updated utility plan per a conversation with Lauren yesterday.
  - The Utility Plan and Grading & Drainage Plan have been revised accordingly and are being resubmitted with this response to comments.
- Please provide an updated waiver request table.
  - An updated waiver table is being submitted with this response to comments.
- To my knowledge, Corporation Counsel hasn't yet received follow up from your legal team. I can't say whether or not they will view their argument as acceptable, but obviously it needs to be made in order to be vetted / considered.
  - A letter from Bernstein, Shur, Sawyer & Nelson, P.A. (BSSN) is being submitted with this response to comments.
- The additional information /documentation (presented yesterday) of final --> potential interim --> master plan site implementation is not yet uploaded.
  - Additional documentation regarding site implementation, entitled "2020.01.24 Timeline of Interim Conditions – PDF", was uploaded to the Eplan Documents Folder on January 23, 2020.
- The landscape sketch proposal for the 1B parcel should be submitted as a clearly labeled, standalone document. I will need to include it as an attachment and refer to that attachment within the expected condition of approval.
  - A Block 1B Contingency Planting Plan was uploaded to the Eplan Documents Folder on January 23, 2020.

January 23, 2020 Email from Mike Tremblay

- The Applicant should show additional detail regarding the southern sidewalk on Fore Street. It is our understanding that the Applicant will a) widen the sidewalk as much as possible between the existing sidewalk and the site; and b) coordinate with the City's CSO project on Fore Street,

scheduled to begin in September 2020, to move the curb line along Fore Street northward by two feet, and coordinating with CMP to move utility poles to the back of the new curb line to create as wide a pedestrian walkway as possible.

- PFDC is planning to widen a section of the southern sidewalk on Fore Street. These drawings show a widened sidewalk with a typical width of 7'-6" east of the Building 4 garage entrance and 8-foot min sidewalk west of that entrance. We understand that the City's planned Fore Street sewer separation project will involve a significant reconstruction of the roadway and utilities in this area; however, these plans are not yet finalized. We have also not been provided with a copy of the City-commissioned study on undergrounding overhead power and telecommunication utilities along Fore Street. We strongly support undergrounding the overhead power and telecommunications utilities along Fore Street as part of the City's roadway improvement project, although we recognize that this comes at a large cost. We do not agree with paying for minor relocation of utility poles in this area as we feel this is short sighted and will result in sunk costs for infrastructure that we hope would be placed below ground. PFDC commits to continued collaboration with the City and CMP on this topic.

  The work along Fore Street will be coordinated with the City's CSO project, as noted in the updated Construction Management Plan.

- It is our understanding that all sidewalks on Fore Street will be reconstructed for the full length of the Project's Fore Street frontage as part of this phase. The portions of sidewalk fronting Building 12 and the grand staircase will be reconstructed in brick, and the remaining portions (along future Building 1B and along future Building 4/parking garage) will be temporarily reconstructed in bituminous. The Applicant should be required to reconstruct all temporary bituminous sidewalks in brick if the next phase of development does not begin within two years' time (same timeline as the enhancements in the green space in Lot 1B). Limits of sidewalk work, including material proposed for Phase 1, as well as sidewalk cross-slope and width, should be clearly noted on plans.
  - PFDC anticipates moving forward with applications for a Phase 2 development program for Block 1B and Block 4 in 2023; however, market conditions may result in Phase 2 proceeding under a quicker or slower timeline. Reconstructing all temporary bituminous sidewalks in brick along the same timeline as installing trees on Block 1B or those items conditioned for Block 4 is not a preferred option. There is an extensive cost to constructing brick sidewalks, which would then be replaced (rework/more cost) if we proceeded with these projects after installation. We request that the requirement for installing brick sidewalks be at least 5 years after the certificate of occupancy is issued for Block 1 B or 4, whichever COO is later.
- The Applicant should confirm that the parking space dimensions in the final design of the parking garage are consistent with the plans shown in the document "Parking Space Layout", dated 1-20-2020, rather than the architectural plans uploaded to ePlan (which are likely not intended to show the minutiae of parking dimensions, but rather structural features).
  - This statement is confirmed
- The Building 4 garage design does not appear to have the number of required accessible parking spaces, and in one instance does not have proper design of accessible parking spaces. According to ADA, for a parking area of 625 parking spaces, 2% of the total parking spaces, or 13 spaces, must be accessible, with three (1 out of every 6 accessible spaces, rounded up) spaces being van-accessible. According to the plans in the same "Parking Space Layout" document, four accessible spaces are provided on Level 1. One of the four spaces on level 1 does not have a proper landing area and is not a valid accessible space; therefore, only 3 of the

required 13 spaces are provided in the garage. All spaces should be provided on Level 1, as close to the pedestrian entrance(s) as possible. Van-accessible spaces, and the routes serving them, must have a vertical clearance of at least 98 inches. The Applicant should reissue the parking layout of Building 4 to comply with ADA, providing at least the minimum number of accessible spaces required by ADA, and designed to ADA standards.

  - Drawings will be updated per the City's request and all final parking layouts will be in conformance with ADA. These drawings will be provided prior to or with the building permit application for the Building 4 garage. ADA spaces will be located as close to entrances as possible.

- The Building 1A garage has 70 total spaces. One accessible space is required per 25 parking spaces, rounded up, in garages less than 100 spaces; therefore, three accessible spaces are required. One of these spaces must be van-accessible. See ADA and the above comment for other considerations. The Applicant should reissue the parking layout of Building 1A to comply with ADA, providing at least the minimum number of accessible spaces required by ADA, and designed to ADA standards.

  - Please see attached updated Building 1A Level 1 Floor Plan.

- One waiver is required: The Applicant will require a waiver for percentage of compact parking spaces in the Block 4 garage. DPW supports this waiver. Most of the substandard spaces are larger than 8.5' x 18' and will not be noticeably smaller than a standard space for most users. Additionally, the applicant proposes some 220 spaces that are slightly or somewhat larger than the standard space, so larger vehicles will be able to utilize these wider spaces if they are not able to comfortably use one of the slightly substandard spaces. None of the spaces in the Block 4 garage are designed to be truly compact spaces (only 8 feet wide and/or 15 feet deep).

  - The updated waiver table submitted with this response to comments includes a waiver request for substandard spaces in the Block 4 garage.

January 23, 2020 Email from Caitlin Cameron

- What fence is being proposed between the sidewalk and parking structure on Fore Street Block 4? How does this fence interact with the weathered steel wall? A cut sheet or detail of this fence should be part of the submission being approved.

  - The temporary fence between the sidewalk and Block 4 will be black, vinyl-coated chain link fence. The mesh will be 2", 6-gauge wire. The fence runs parallel to the building and will not interact with the weathered steel wall.

- What is the edge treatment between the landscape areas and the sidewalk on Fore Street? None is represented in the plans or renderings. The interim condition at 1B is not necessarily in need of an edge but the permanent landscape areas should have a defined edge (curb, planter wall, etc.) for the viability of the landscape.

  - The planting areas along Block 2 section of sidewalk will be separated from the sidewalk by a Portland City standard stone curb.

- What articulation elements are being introduced to Building 1A? None are represented in the elevations or renderings.

  - Building 1A will include horizontal projecting canopies for retail entrances, comprised of black channel shape profiles and exposed fasteners as armatures for tenant signage, signs complying to City Standards. These details will be developed as retail locations and tenant needs are developed and submitted for appropriate reviews.

- Would weathering steel be used on all elevations of the garage? Why was this selected?

- Weathering steel will be used on all elevations of the garage. Weathering Steel affords a richness and warmth of tone in dialogue with the existing brick buildings of the campus, but will render the buildings in a contemporary, complementary appearance.

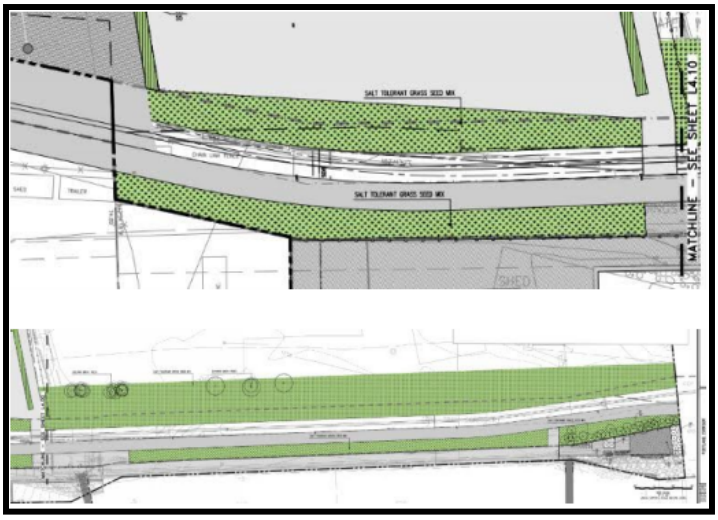
- Is the pedestrian entrance to the garage from Fore Street emphasized in some way? Canopy, lighting, signage, materials?
    - Building 4 will include horizontal projecting canopies for future retail entrance and parking garage entrance, comprised of black channel shape profiles and exposed fasteners. These details will be developed as retail locations and tenant needs are developed and submitted for appropriate reviews.

Lighting

- The correct fixture on the trail is the "Trail/Waterfront" fixture shown in figure X-8B - this is incorrect in the lighting schedule.
    - Noted. An updated lighting schedule will be provided under separate cover with the corrected fixture type.
- Indicate which trail fixtures are being replaced.
    - Nine light fixtures will be installed along the length of relocated trail, which will match the other trail light fixtures in type, height and finish. The new lights will be LED versions of those fixtures.
- Fore Street is designated for the "Peninsula" decorative fixture - please explain why this is not shown in the Site Plan for the sidewalk design of Fore Street?
    - The City's lighting standards appears to show the zone for this light fixture along Fore Street from points west of the property up to Waterville Street, but not beyond. This comment was received on January 23rd; to date the City has not inquired about the applicant providing street lighting along Fore Street New pole-mounted streetlights along Fore Street would require study and would likely be in conflict with the overhead wires along the southern side of the roadway. Additionally, we understand that the City's planned Fore Street sewer separation project will involve a significant reconstruction of the roadway and utilities in this area; however, we do not have copies of the final design plans.

January 23, 2020 Emails from Jeff Tarling

- Two question areas shown below, would we like to see landscape treatment more in keeping with the Eastern Prom Trail which included groups of trees and shrubs in the green shaded areas?



- MBLA can meet onsite with Jeff Tarling to walk through the areas in question.

- One other topic for the site is the invasive Japanese Knotweed, "hopefully" the site work will be removing all of it... If not we can add into the review that the project should review the invasive plants currently on site and make plans to remove it. This is currently near the Fore Street / Portland House edge.
    - Any Japanese Knotweed within the areas of work will be removed. A maintenance plan will be created for suppressing it's further growth and spread.

In addition to the items noted above, we are also submitting the Wastewater Capacity Authorization from the City of Portland, dated January 24, 2020. We will be meeting with the Portland Water District on Monday to further review the proposed layout and will submit the Phase 1 Water Capacity Authorization upon receipt. Please note, the Water District also reviewed the development for Water Capacity during the Master Development Plan phase, and a copy of their previous approval (dated November 17, 2016) is also attached for your reference.

If you have any questions or require additional information, please do not hesitate to contact me at (207) 558-3763 or by email at lswett@woodardcurran.com.

Sincerely,

WOODARD & CURRAN INC.

Denise Cameron, PE
Project Manager

Files Uploaded to Eplan Drawings Folder:
Civil Grading and Drainage Plan
Civil Utility Plan
Building 1A Level 1 Floor Plan (A10-01)

Files Uploaded to Eplan Documents Folder:
Updated Waiver Table
Bernstein Shur Letter

58 Fore Street - Phase 1

Average Height Calculations

Building 1A

	Grade
1	15.21
2	16
3	31.25
4	35
5	35
6	35
7	35
8	35
9	35
10	35
11	35
12	35
13	35
14	31.25
15	31.25
16	31.25
17	31.25
Average:	**31.62**

Building 12

	Grade
1	15.01
2	15.01
3	14.75
4	14.48
Average:	**14.81**

Townhouses

	Grade
1	46.5
2	48.5
3	48.5
4	50.6
5	14.96
6	14.96
Average:	**37.34**

Building 4

	Grade
1	51.1
2	53
3	52
4	52
5	84.5
6	14.96
7	14.96
8	14.96
9	14.96
Average:	**39.16**

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January 21, 2020

Christian Roadman, Planner
City of Portland Planning Division
389 Congress Street
Portland, ME 04101

Re: Portland Foreside Phase 1 Level III Site Plan Submittal – Portland Foreside Development Co.
Response to Planning Staff Comments

Dear Christian:

Thank you for coordinating the review of the proposed development of Phase 1 of the Portland Foreside Project located at 58 Fore Street in Portland, Maine. The following letter compiles responses to comments received from staff, third party reviewers, and from the Planning Board. We have also updated the landscape plans, and the civil site, drainage, and utility plans.

Comments from Staff and Peer Reviewers

November 27, 2019 Email from Christian Roadman with Subdivision Comments from Bill Scott

An updated subdivision plat is being submitted as part of this response to comments. The plat addresses the following comments:

- The property labeled "Remaining Land by Developer - Not a Parcel" should be more clearly defined, probably in its own note stating that this is not a proposed street being dedicated as a future public street, and identifying who has rights to use or cross it, as well as if utilities are allowed.
    - Note 8 has been added to the attached subdivision plat addressing the "Remaining Land by Developer."
- Since Thames Street is not part of this subdivision, there should probably be a note to that effect so that future reversionary rights to Thames are clear. This plan should also note that Thames Street Extension is not an accepted City street as of the date of this plan.
    - Note 7 has been added to the subdivision plat addressing the status of Thames Street.
- This plan should show proposed boundary markers to be set.
    - The plan shows both boundary markers to be set and to be found, as identified by the symbols shown in the legend.
- Have the monuments on Thames Street been set as of yet? They're labeled as "found" on this plan. These should probably read "set" or "to be set."
    - Monuments on Thames Street have been set as part of another project, and are accurately labeled as "found" as part of the current subdivision plat for the 58 Fore Street property.
- From a planning perspective, we'll need the proposed final conditions of the Phase 1 buildout reflected on the site plan. Other affected buildings should probably be labeled as to be demolished or otherwise correctly noted on the plan. I'll also expect that the building square footage and number of residential units will be added. Additionally, if the site is being considered a condominium, please identify how many proposed residential units vs commercial units.
    - The attached Site Plan has been updated to reflect the comments.

January 9, 2020 Emails from Mike Tremblay

- We would prefer that the service entrance off the connector road ramps up to sidewalk level, rather than having the sidewalk ramp down. You mentioned yesterday that there may be clearance issues that may require the driveway to be lower. If this is the case, please let me know. If it's borderline, we may consider a "meet in the middle" situation where the sidewalk tips down somewhat, and there is a mountable curb at the service driveway, or similar.
    - The plans have been updated to reflect a continuous sidewalk in this area, with 2" high mountable curb provided to accommodate service vehicles.
- The TDM plan suggests that they will "coordinate and promote rideshare opportunities". Some specificity here is requested. Will there be a website or bulletin board to find a carpool partner, etc.
    - The attached TDM plan has been revised to specify that rideshare opportunities will be promoted on a website and site bulletin board/kiosk, as noted on pages 12 and 13.
- Unbundled parking for residential units is a crucial part of parking demand management for residences. I am pleased to see it included here. However, unbundling is ultimately a financial incentive not to own a car; it is not clear that residents will be charged for a parking space if they do request a space (the words "not required to have a parking space" and "not obligated to take a parking space", emphasis mine, appear to avoid the idea that the spaces will cost tenants any money). The Applicant should, to the extent possible, discuss the level of financial incentive this unbundling carries. About how much (in a dollar amount, or as a percent of their lease) will residents be charged for parking above and beyond their lease?
    - Residents of 58 Fore Street will have no obligation to rent a parking space should they choose to live in one of the units constructed as part of the development. Residents will be offered a parking space as one of several value-add options they may select depending on individual interest. With monthly parking rates around the City ranging from $175 to $225 this could be a substantial savings to the resident who opts out, and further encourage a car-free, transit friendly lifestyle.
- The approximate number of short- and long-term bicycle parking spaces should be stated in the TDM plan. The Applicant should commit to providing additional on-site bicycle parking if use patterns indicate a need.
    - Currently 44 on-site bicycle parking spaces are required. PFDC will provide an additional 4 on-site bicycle parking spaces (109% of the required spaces). PFDC will provide additional on-site bicycle parking if use patterns and demand indicate a need. This will be monitored by the TDM Coordinator.
- The Applicant suggests they will support future streetcars along Commercial Street. However, there is no commitment or suggestion as to how they may support this, or some other transit service.
    - In addition to supporting existing multi-modal transit options, PFDC commits to supporting the City of Portland and other interested organizations on the topic of transportation alternatives along Commercial Street from the eastern waterfront to the western waterfront. Potential future linkages could continue to Thompson's Point, the Portland Transportation Center, the Portland Jetport and even locations such as Rock Row in Westbrook. Portland Foreside Development Company will participate in meetings regarding future downtown connections and help create awareness for alternative transit options.

January 9, 2020 Email from Bruce Hyman

We understand from this email that additional detailed comments are forthcoming from the City. We will work directly with the City to address requested changes. We provide responses to the comments we've received so far as follows:

- The TDM Plan does not show a direct relationship to the development of the Traffic Movement Permit (issued May 2017) nor to the traffic study being completed for the Phase I development. The TMP included credits for "other modes trip reductions" that will rely on robust TDM measures to be accomplished and are to be assessed as part of the TDM monitoring regime to be done. They should not be assumed to "just happen." These reductions are to be documented in the TDM plan itself and reflected in the monitoring.
    - The TDM Plan has been revised to be more connected to the TMP, including references to the other modes trip reductions. The TDM strategies will help in achieving the 18% reduction identified in the TMP.
- The Plan sets additional targets of 5% for vehicle trip reduction and parking demand reduction beyond those included in the TMP. These percentage targets should be translated into absolute numbers for easier tracking of progress by a specified year, assuming a base year for occupancy.
    - The trip generation and parking demand targets have been converted to numbers of trips and parking spaces and are listed in the TDM on page 5. The trip generation reduction targets are 10 trip ends during the AM peak hour and 16 trip ends during the PM peak hour. The parking demand reduction target is 14 spaces.
- The development of 'Tenant Profiles' (similar to those done in a sample plan provided to the applicant) is encouraged to be implemented as part of the Portland Foreside TDM Plan as a tool to tailor specific TDM strategies and monitoring to individual tenants. It helps to standardize data related to tenants and TDM efforts and outcomes.
    - The development of Tenant Profiles has been added to the TDM Plan as a responsibility of the TDM Coordinator, so the profiles can be developed as tenants are confirmed.
- The monitoring plan is to be more specific in terms of what it will report. The monitoring component of the Plan does not make reference to the parking demand reduction targets; parking utilization data from the parking garages is to be used to inform both trip-making and parking usage overall levels and time of day usage.
    - Additional details have been added to page 15 of the TDM plan that describe the type of data and information that is anticipated to be provided in the TDM reports.

January 9, 2020 Design Review Memo from Caitlin Cameron

City of Portland Design Manual

- The public edges of Fore Street and the Trail require further iteration or information regarding the landscape edges, the extent of street trees and landscape on these edges.
    - The public edges of Fore Street and the Trail are important spaces. PFDC is focused on making these areas successful and attractive for residents, employees and visitors.
        - Five street trees have been added to the design along the existing Fore St sidewalk within the future Building 1B footprint. Trees are added to the east, as space allows without negatively impacting the Fore Street retaining wall.
        - Existing trees and low vegetation along the north side of the rail and trail will be maintained. Both sides of the rail/trail will be planted with a mix of native, salt-tolerant grasses typically found in coastal zones.

- Ten trees will be planted along the south side of Block 4 as part of our Phase 1 finished condition.

Sidewalk/Pedestrian Environment

- The "connector road" is a B-street and likely will not be a connected public way. The applicant is not proposing to connect the upper plaza area with the sidewalk. There is little to no active retail frontage on the street. Therefore, staff support the current design with clear width of sidewalk and street trees at the garage entrance. Staff would like to see a proposal for how the future phase will connect this sidewalk to Fore Street.
    - Previously approved plans for the 100 Fore Street project included a sidewalk along the length of the "connector road". Our intent was for this sidewalk connection from Thames Street Extension to Fore Street to be maintained, and the grading on the 58 Fore Street property was proposed to accommodate the sidewalk. In the future, if the "connector road" becomes a public street, the 58 Fore Street development can accommodate an adjacent sidewalk.
- Fore Street: The developing pattern on this side of the street is to place landscape between the sidewalk and the private property. Staff would like to see more trees incorporated into this design where feasible. The landscape areas adjacent to the sidewalk need a protected edge – provide more information about this transition.
    - Trees, low shrubs and groundcover plants will be added to the design as space allows and is proved to not negatively impact the Fore Street retaining wall. Any planted areas will be separated from the sidewalk by a curbed edge.
- Internal Plazas: There appears to be a lack of seating opportunities within the plaza and staircase areas and some benches are placed in places that don't seem comfortable or conducive to desire lines and comfort.
    - Seating areas have been incorporated into the design of the stairs. The plaza design accommodates travel lanes for emergency and service vehicles to access the buildings. The desired intent of the applicant is to maximize flexibility of use of the plazas. Moveable furniture will be used to provide seating opportunities throughout the plaza spaces. Fixed wood benches with back rests have been placed around the buildings to replace the stone benches previously shown.

Contextual Design: Building 1A

- Staff do not support the inclusion of "alternative materials" – brick would be approved, the applicant would need to propose an amendment at a future time if needed.
    - Agreed, brick as indicated on drawings will utilized. Note as to "Alternative Materials" is obsolete and no longer considered.
- Please provide more information on the glazing – level of tint and reflectivity/transparency.
    - Glazing will be a "Vitro - Solarban 70xl" product which is high performing and relatively neutral in color. This product includes a Visible Light Transmittance of 64% and exterior reflectance of 12%. A 12" square sample can be brought to next meeting for in person review.

Contextual Design: Block 4 Garage

- Please clarify the materials for the garage.
    - Garage materials consist of a medium neutral precast concrete spandrel panel, in counterpoint to vertical & elevator towers clad in a black metal panel, similar to the

material included at Block Four Ground Floor. Panels facing the Fore Street entrance will include warm, red-hued metal panel cladding in keeping with the residential portion of Block Four's Western façade.

- The garage is designed to be recessive to liner buildings – most of these will be in a future phase. The design review is treating the garage as an interim condition. However, if those future phases are not implemented, staff would support measures that address the interface of the garage to Fore Street and the trail.
    - Ten trees will be planted along the south side of Block 4 as part of our Phase 1 finished condition.

Clear conveyance of the function and significance of buildings

- Staff question the lack of special architectural lighting on the historic architecture – if such emphasis is to be given to the new commercial building, comparable highlighting of the historic buildings is appropriate, especially Building 12 and the Portland Company sign which are most visible from Thames and the trail. Standard 3. Historic Sites also comments that "Sites of historic interest should be appropriately commemorated and marked . . . Specific emphasis should be paid to the maritime and transportation heritage of the Eastern Waterfront."
    - Two of the historic buildings are emphasized with architectural lighting: the Portland Company sign on Building 24 and the West Façade of Building 6A that is visible from Thames Street. Milder additions to façade lighting come from pedestrian-scaled pole lights along the south façade of Buildings 2 and 3; wall mounted fixtures on those buildings' north elevation to light the Narrow Alley; catenary lights suspended over the Narrow Alley; and linear LEDs and downlights at the remaining bay of Building 4. Accent lighting to the relocated boiler and tank will be visible from the main plaza and the internal plaza east of the bridge between Buildings 2 and 6A. The plaza, steps, and sidewalk areas associated with the 50' wide public easement are largely illuminated with evenly distributed soft lighting from the rooftop of Building 1A. Additionally, the historic buildings are programmed to be alive and alight after dark with their large multi-paned windows lit from within.

Building Interface with Pedestrian Environment

- Building 1A/Interior plaza interface: More articulation or scaling elements are needed to create a sense of enclosure and pedestrian-level comfort. This could be accomplished with metal canopies or awnings at the ground level either at the entrances or within each bay.
    - Agreed. Black steel frame canopies will be introduced at both Building Entry bay (South Elevation) and retail entrances (South and East elevations) as part of Tenant signage and branding, with submission via future Signage application.

Entrances

- The smaller retail entrances are oriented towards the internal street and plaza providing active edges for these spaces. These entrances should be further emphasized with canopies/awnings that will also address the concern regarding the building interface with the Pedestrian Environment.
    - Please refer to the previous response.

Public Access Easement Design

- Design of the public easement entrance on Fore Street shall be revised to provide accessibility and increased viewing opportunities in that location, as well as enhanced streetscape treatment for the public to appreciate and experience the historic building complex and the waterfront.

Benches/seating opportunities should be designed to orient to circulation and viewing in both sun and shade conditions. Seating opportunities or planters will provide a much-needed human scale to this grand staircase which currently has limited soft-scape and moments to pause.

- As shown on the plans and renderings, the design of the stairs and sidewalk has been altered to address these concerns. Integral seating has been added to the stair design. An ADA compliant lift is being added into the stair design.

Water's Edge

- The bench placement is minimal and questionable in terms of functionality and orientation – bench seating oriented towards trail or plaza spaces is more logical and conducive to the active corridor.
  - The applicant's intent is for a site design that maximizes flexibility of use. In addition access lanes need to be maintained for emergency and service vehicles. Moveable furniture will be used throughout the outdoor spaces. Fixed wood benches with back rests have been placed around the buildings to replace the stone benches previously shown.
- The dumpster enclosure adjacent to the trail and across from Building 12 compromises the trail and pedestrian experience of the trail and historic building. This should be relocated.
  - The Building 12 refuse enclosure is an architectural enclosure that conceals individual trash cans. The location and position of the enclosure was the result of multiple meetings with the HP Board, who strongly preferred an architectural enclosure over a shed attachment to the building. The enclosure is designed to be compatible with Building 12 through continuation of the design treatment along the south side of Building 12 (steel frame and stained vertical siding). In addition, the enclosure is positioned within a planting area containing trees, shrubs and native grasses.
- Additional screening or landscape may be desired due to the proximity to the trail, though the impact of 10 parking spaces is not of high concern to staff. The lack of trees lining the trail is notable.
  - New planted areas of native coastal grasses along the south side of the relocated trail are indicated. An additional area is shown between the relocated rail and the Block 3 location. Existing trees and grasses along the north side of the rail will be maintained. Any areas disturbed by the rail relocation will be planted with a mix of native grasses typically found in coastal zones.
- The current phase under review leaves significant portions of the site adjacent to the trail in an interim condition - most notably, the exposed elevation of a large parking garage structure with no active liner facing the water/trail, and a vacant lot which is proposed to have flexible program to activate the space but will otherwise be vacant and without much landscape treatment. Both of these conditions do not meet the expectations of the standards as long-term treatments. Staff suggest conditions of approval requiring improvements made to these vacant lots/parking structure elevation if subsequent building phases do not happen within 3 years.
  - Ten trees will be planted along the south side of Block 4 as part of our Phase 1 finished condition. As a Condition of Approval, we will also submit a Site Plan application for review by the Planning Authority, (if we do not come forward with a Site Plan application for Phase 2 within three years from the COO of Block 4) that presents improvements and visual enhancements along Fore Street and the south side of Block 4 (the area anticipated for future Block 5) which may include fence improvements, site improvements, increased vegetation and screening measures for the top deck of the garage. Defining these long-term treatments with the actual garage in place would be

more beneficial since there would be a full and clear understanding on where improvements are needed.

January 10, 2020 Email from Tom Errico

- The trip generation estimate is consistent with previously approved methods and I find the estimate to be reasonable.
    - Noted.
- Refer to Bruce Hyman's comments regarding trip reduction assumptions used in the Traffic Impact Study and TDM trip reduction targets.
    - Noted.
- The applicant has noted that the Event space will be reduced significantly. The applicant did account for the Event traffic volumes in the assessment of traffic operations in the November 2019 traffic study (see below for more comments). I continue to review the impact of Events on the transportation system in the vicinity of the project and whether traffic management strategies are required.
    - Noted.
- The applicant has revised the parking demand analysis and is estimating between 288 spaces (based on the ITE Parking Generation Manual) and 385 spaces using City zoning requirements. Parking demand would not be expected to exceed supply, but I do have the following questions:
    - The estimate does not include Event vehicles. An explanation should be provided.
        - Events are variable and there is sufficient supply to accommodate the occasional event that may occur during other onsite peak uses. The actual garage utilization will be monitored by the smart parking system and this information will help inform parking demand for future phases of the development.
    - The parking demand estimate assumes 227 to 238 parking spaces for the Sun Life office space. According to ITE, 468 employees would require 393 parking spaces (0.84 spaces per employee). It seems like the estimate is low.
        - The 227 and 238 parking space calculations were based on ITE 5th Edition and City Ordinance respectively and both used square footage of the office building, not the number of employees. This procedure is consistent with previously completed evaluations as well as other projects on the peninsula. Actual garage utilization will be monitored by the smart parking system of Phase 1 and this information will help inform parking demand for future phases of the development.
- Compare the number of employees in the Sunlife office to the ITE Trip Generation for their office. The applicant has provided a trip generation estimate based on expected employee levels and the magnitude is similar to the estimate assuming building floor area.
    - Noted.
- All dimensions within the parking garages shall be provided and the applicant shall request waivers from the City's Technical standards if required. Based upon available information, a number of the parking spaces do not comply with dimensional standards.

- We have reviewed the Building 1A and Block 4 parking garage layout for vehicle aisle widths and parking spaces sizes. There are minor deviations in aisle widths requiring waivers as summarized below, and as shown on the enclosed parking layout plans.
    - Building 1A – The southern and western aisle widths will be 22.5 ft and 18.6 ft respectively. These reduced widths are primarily next to single rows of parking spaces.
    - Block 4 – Level 4 of the garage will have a northern aisle width of 19 ft and Level 5 of the garage will have a northern aisle width of 18.5 ft. These reduced widths are next to single rows of parking spaces.
  - There are also varied parking space sizes due to the locations of structural columns within the buildings. A majority of the reduced parking spaces are the full required length of 18 ft, with reduced widths. The enclosed parking layout plans identify the various parking space sizes, and the sizes are also summarized on the attached parking demand table.

- Given the potential for peak entry movements at the Fore Street garage entrance, a vehicle queuing analysis shall be performed assuming the parking garage is fully occupied. The analysis shall document that vehicles will not spill back and block Fore Street. The applicant has noted this request and is conducting the analysis.
  - Per direction from the City, we have completed a review of potential queuing at the Fore Street parking garage access similar to the 100 Fore Street Traffic Impact Study. Consistent with the 100 Fore Street study, the headway can be expected to be approximately 15 seconds, or approximately 240 vehicles per hour. Assuming the worst case scenario of 60% of the site traffic using this access (January 9, 2020 Response to Comments Memo) in the AM peak hour, there was 105 trip ends entering, which is less than half of the capacity of the system and therefore there should not be any queuing. In addition to the demand being less than half of what the system can accommodate, the proposed design allows for 5 or 6 vehicle queue before traffic would back onto Fore Street. Therefore, queuing from the gate access onto Fore Street should not be an issue.

- Previous analysis assumed traffic associated with Events would impact the PM peak hour. Those volumes now do not seem to be included in the material transmitted on January 10, 2020. An explanation should be provided. It is also unclear how Events would impact area traffic operations given no recent Events and traffic would be new or added to traffic volumes.
  - The January 9, 2020 Memo was intended to compare the approved Master Development Plan volumes to a sensitivity analysis of the forecast Phase 1 volumes. Events could potentially occur, but the intensity of the events are considerably less than events that have occurred over the last ten years, which is the benchmark used for the TMP process.

- The applicant provided information comparing traffic volumes in the project vicinity between the Master Development Plan TMP and this application with assumptions on assignment of trips to the Fore Street garage (25% and 60%). Given general roadway network conditions, I would expect conditions to reflect the 60% assignment. I compared the change in traffic volumes at area intersections between the MDP and this phase under the 60% assignment and most have less impact with the exception of the Fore Street intersections with India Street and Mountfort Street. The applicant should note how this change may impact those intersections.
  - The Eastern Waterfront Transportation District (EWTD) project currently under review by the MaineDOT includes four new projects in the area, as well as numerous other projects that had previously been approved in their background traffic. The Portland

Foreside Development Project was one of the previously approved projects accounted for in the Eastern Waterfront Transportation District. Based on that study, the Fore Street / Mountfort Street intersection was not required to be reviewed. The Fore Street / India Street intersection was forecast to operate at a high level of service. The exception was the Fore Street westbound approach, but that was due to queues from the intersection with Franklin Street backing into this intersection. This project is already required to contribute a traffic impact fee toward Franklin Street improvements.

- The applicant has noted that the traffic analysis/impact study conclusions would not change without the Fore Street Connector. I continue to review this and request that the applicant provide a graphic summarizing the peak hour volume changes at area intersections with and without the Connector.
    - The figures provided in the January 9, 2020 memo provided turning movement volumes assuming the Connector is not in place. It should be noted that the Master Development Plan Traffic Impact Study did show some traffic using a connector; however, the TMP did not require the Connector to be constructed as part of the TMP.

Energov Comments from Chief Robert Thompson

- All areas using pavers shall be constructed to support a 50 ton emergency vehicle.
    - The paver sections will conform to geotechnical recommendations provided by Haley & Aldrich, Inc., as outlined in the attached memorandum dated January 21, 2020. As described in the memorandum, pavers in areas with heavy vehicle use will be constructed to support a 50 ton emergency vehicle.
- Bollards must be retractable or spring loaded to allow emergency access to the site.
    - Stone bollards used at locations where emergency vehicles need access have been spaced far enough apart to accommodate these vehicles.
- Additional fire hydrants will be required within the property. Developer should coordinate with the Fire Department Fire Prevention Bureau for the number and location of these hydrants.
    - We met with the Fire Department to review the hydrant requirements for the site on January 15, 2020. Chief Thompson indicated that he will be providing a plan markup that shows the appropriate hydrant locations. We will incorporate hydrants as required.
- New overhead obstructions shall maintain a vertical clearance of no less than 13'6" high.
    - Noted.

January 13, 2020 Email from Christian Roadman

- I also want to note that there are several items I'm seeking clarity on in the very near future, including:
    - Plan for required IZ units (paying into fund, including on site, or combination)
        - As previously noted via email on January 13, 2020, 14 residential units are proposed, and Portland Foreside Development Company is required to provide for a total of 1.4 IZ units. To accomplish this requirement, one IZ unit will be constructed as part of this project, and the Applicant will pay the fee for the remaining 0.4 units. We are finalizing the details of the proposed IZ unit and will be filing the required application.

- Consistent site plan <--> Landscaping documents
    - The site plan and landscaping documents have been updated to be consistent. The civil and landscaping plans are being resubmitted with this response to comments.
- Updated subdivision plat
    - An updated subdivision plat is being submitted with this response to comments. Specific comments related to the plat have been addressed earlier in this letter.
- Garage lighting: the garage lighting plan appears to be prepared by a different company, and doesn't seem to be conforming to the Technical Manual / site plan standards. Since it's not included in the overall LAM photometric plan, and doesn't include lighting impacts off your site, I also can't tell if it's exceeding light spillage limits.
    - Noted. See attached revised photometrics plan for the garage. The lighting has been modified to achieve a maximum 0.1 footcandles at the Fore Street curb.

Comments from January 14, 2020 Planning Board Report by Christian Roadman

We have reviewed the January 14, 2020 Planning Board Report, and the following comments were taken from the report as comments or questions that have not explicitly been included in other communications.

- "The applicant is expected to submit a flood hazard development permit for this project."
    - A Flood Hazard Development Permit has been submitted to the Zoning Department.
- "Additionally, the City Arborist requires that street trees be included in the current plan, regardless of whether a building or more intensive landscaping is installed in the future (beyond the currently proposed loam and seed)."
    - Five street trees have been added to the design along the existing Fore St sidewalk within the future Building 1B footprint.
- "Staff…communicated to the applicant that additional attention to the southern face of the parking garage is merited. This could potentially be achieved via landscaping, public art, or both. Similar to the wedge parcel, both an initial landscape treatment and a more intensive option (if no development follows within a certain number of years) may be appropriate."
    - Ten trees will be planted along the south side of Block 4 as part of our Phase 1 finished condition. As a Condition of Approval, we will submit a Site Plan application for review by the Planning Authority, (if we do not come forward with a Site Plan application for Phase 2 within three years from the COO of Block 4) that presents improvements and visual enhancements along Fore Street and the south side of Block 4 (the area anticipated for future Block 5) which may include fence improvements, site improvements, increased vegetation and screening measures for the top deck of the garage. Defining these long-term treatments with the actual garage in place would be more beneficial since there would be a full and clear understanding on where improvements are needed.
- "Because the proposed project includes fourteen residential units, it must provide fourteen street trees. The project also must account for an appropriate number of street trees for commercial development, per the City's Technical Manual. Staff calculate the total number of required street trees as approximately 40, while approximately nine are accounted for on the current

landscaping plan. Additional street trees are expected along Fore Street, and the applicant may pay into the City's street tree fund at a rate of $400 per tree."

- Five street trees have been added to the design along the existing Fore St sidewalk within the future Building 1B footprint. Trees and groundcover plants will be added to the design as space allows and is proved to not negatively impact the retaining wall. It is unlikely the site conditions will be able to accommodate the required number of trees. Should that be the case, the applicant will contribute to the street tree fund as necessary.

- "Staff also note that the elevations for the proposed building 1A (attachment P12) include a noted alternate which may reduce the amount of brick used on the building. The applicant should remove alternates from elevation drawings; significant changes to design will require a return to the Planning Board."
    - Agreed, brick as indicated on drawings will utilized. Note as to "Alternative Materials" is obsolete and no longer considered.

Comments from January 14, 2020 Planning Board Workshop

During the January 14, 2020 Planning Board Workshop, we heard the following comments from the Planning Board that are in addition to comments already addressed in this letter or in previous response to comments:

- Provide additional renderings
    - Block 4 garage views from Fore Street (ground plane)
    - Block 4, south face and from the trail
    - View Corridors at Waterville, Atlantic, and St Lawrence Streets
    - The requested renderings are attached.
- Provide additional clarity regarding landscaping at Building 1B, Block 4 and along the Eastern Promenade Trail. Specifically clarify which conditions will be installed as part of Phase 1 and which will be contingency planting.
    - During Phase 1, existing trees and vegetation along the north side of the track will be protected and preserved. Any areas disturbed by the rail relocation will be seeded with a mix of salt-tolerant native grasses typically found in coastal zones.
    - During future phases, the areas alongside the rail and trail will be planted with a mix of native shrubs, grasses and groundcovers in patterns consistent with those found in coastal areas.
    - Ten trees will be planted along the south side of Block 4 as part of our Phase 1 finished condition. As a Condition of Approval, we will submit a Site Plan application for review by the Planning Authority, (if we do not come forward with a Site Plan application for Phase 2 within three years from the COO of Block 4) that presents improvements and visual enhancements along Fore Street and the south side of Block 4 (the area anticipated for future Block 5) which may include fence improvements, site improvements, increased vegetation and screening measures for the top deck of the garage. Defining these long-term treatments with the actual garage in place would be more beneficial since there would be a full and clear understanding on where improvements are needed.
- Confirm timing of contingency obligations for Block 1B, Block 4 (South Façade), Block 4 parking deck, and along the Eastern Promenade Trail.

- Prior to the Planning Board Meeting, we will submit a presentation proposing timing for all interim and contingency conditions.

- Provide information regarding the team's technical capacity and a narrative to address the existing retaining wall along Fore Street.
  - Information regarding the team's technical capacity is included as an attachment.
- Confirm details for Block 4 garage including number of parking spaces, stall dimensions, building elevations, materials and lighting. Consider possible landscape or architectural improvements to the garage entrance
  - As noted above, a waiver will be required for some of the aisle and parking space sizes. The dimensions are provided on the enclosed parking layout plans.
  - The area between the sidewalk and retaining wall along Fore Street will be a planted with low shrubs and groundcovers. Attention will be given to avoid plants which will negatively impact the retaining wall. Additionally, ten trees will be planted along the south side of Block 4 as part of our Phase 1 finished condition.
- Updates to Building 1A design
  - Remove reference to bid alternate for different Building 1A material
  - Address the need for "human scale" features i.e. introduce awning/canopies at retail openings
  - Agreed, brick as indicated on drawings will utilized. Note as to "Alternative Materials" is obsolete and no longer considered.
  - Agreed. Black steel frame canopies will be introduced at both Building Entry bay (South Elevation) and retail entrances (South and East elevations) as part of Tenant signage and branding, with submission via future Signage application.
- Consider providing more bike parking spaces than is required by code
  - The bicycle requirement for Phase 1 is 44 spaces. An additional 2 racks, accommodating 4 bicycles, have been added to the site (109% of the required spaces). We will provide additional on-site bicycle parking if use patterns and demand indicate a need. This will be monitored by our TDM Coordinator.
- Consider increasing the size of the bollard at the shared street or provide information on snow removal
  - The stone bollard design has been adjusted in response to this comment. The new height is 30".
- Consider adding seating integral to the stair and review seating locations throughout the site
  - The applicant's intention is to incorporate seating into the Fore St Stair. Renderings for integral seating are included.
- Provide updated stair design incorporating the lift for ADA accessibility
  - The applicant's intention is to incorporate an ADA acceptable lift into the Fore St Stair. Renderings are included.

Utility Updates

We have been working with the relevant utilities to finalize our design and receive ability to serve confirmation. We can provide the following updates on these utilities:

- We met with Central Maine Power on January 8, 2020 to review the project's electrical needs. We received an ability to serve from CMP on January 9, and a copy is attached.

- We met with Brad Roland to discuss sewer requirements for the site on January 17, 2020. We are providing updated information to Brad and anticipate receiving confirmation of ability to serve this week.
- We have been coordinating with Portland Water District, and they are reviewing our current plans. We will be meeting with them on January 27, 2020 to discuss the proposed water system further. We will be working with them to receive a confirmation of ability to serve at that meeting, but we anticipate that a condition of approval may be necessary.

If you have any questions or require additional information, please do not hesitate to contact me at (207) 558-3763 or by email at lswett@woodardcurran.com.

Sincerely,

WOODARD & CURRAN INC.

Lauren Swett, PE
Technical Manager

Denise Cameron
Project Manager

Files Uploaded to Eplan Drawings Folder:
Updated Civil Plans
Updated Landscape Plans
Updated Building 1A Elevations
Subdivision Plat
Building Renderings
Site Renderings

Files Uploaded to Eplan Documents Folder:
Updated TDM Plan
Updated Garage Roof Photometrics
Paver Design Memo
Geotechnical Technical Ability Documentation
Parking Garage Layout Summary and Figures
CMP Ability to Serve

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December 4, 2019

Christian Roadman, Planner
City of Portland Planning Division
389 Congress Street
Portland, ME 04101

Re: Portland Foreside Phase 1 Level III Site Plan Submittal – Portland Foreside Development Co.
Additional Submittal Information

Dear Christian:

Thank you for coordinating the review of the proposed development of Phase 1 of the Portland Foreside Project located at 58 Fore Street in Portland, Maine. We appreciated the opportunity to meet with staff today. We are in the process of reviewing and responding to all of the comments we have received from you to date through the Level III Site Plan process and a complete response to comments will follow after next week's Planning Board Workshop. To support the continuing discussion, we are providing the following additional information on building height and parking.

Average Grade/Height Calculations

Enclosed with this letter, please find copies of the average grade calculations that identify that the proposed buildings 1A and the Townhouses are in conformance with the B6 Building Height Overlay and Building 4 is in conformance with the required Waterville Street view corridor. As Planning and Zoning review these calculations, we're happy to meet again, maybe at a future Wednesday meeting, to discuss the approach further.

I am also uploading to Eplan updated building elevations for Building 1A (file "Block 1 Build 1A A20-01 Exterior Elevation Plan (North & South)"). An elevation drawing that included incorrect floor elevations and an incorrect datum was submitted with the original application, and the new version corrects this error.

Parking Calculations

Enclosed, please find an updated parking calculation table. There was an error in the calculations previously submitted. The peak parking demand has now been calculated to be 385 spaces. With consideration given to typical parking garage capacity, to meet the parking demand, the recommended number of parking spaces for this Phase 1 project is updated to 453 spaces.

We hope the provided information is helpful in clarifying some of the items that have been discussed to date. If you have any questions or require additional information, please do not hesitate to contact me at (207) 558-3763 or by email at lswett@woodardcurran.com.

Sincerely,

WOODARD & CURRAN INC.

Lauren Swett

Lauren Swett, PE
Technical Manager

Attachments

1. Height Calculations (Building 1A, Building 4, Townhouses)
2. Updated Parking Calculations

	Block 1A					Block 4					Building 12							Block 2							Shared Spaces
	Block 1A					Block 4					Building 12							Block 2							Combined Subtotal
	Block 1A		Block 1A		Total for Block 1A	Block 4		Block 4		Total for Block 4	Building 12		Building 12		Building 12		Total for Building 12	Block 2		Block 2		Block 2		Total for Block 2	Combined Subtotal	Mixed Use Reduction (1)	Non-Residential Other Modes Reduction (2)	Reduced Total
	Office		Specialty Retail			Specialty Retail		Residential			Office		Restaurant		Residential			Office		Restaurant		Specialty Retail						
Rate	400	1/400 sf	200	1 / 200 sf		200	1 / 200 sf	1	1 per Unit		400	1/400 sf	153.8462	6.5/1000 6:00AM-4:00PM	1	1 per Unit		400	1/400 sf	153.8462	6.5/1000 6:00AM-4:00PM	200	1 / 200 sf					
Monthly Adjustment				1			1		1				100	10/1000 4:00PM-11:00PM		1				100	10/1000 4:00PM-11:00PM		1			14%	18.0%	
SQF or Unit	95,100	95100 sf	9,300	9300 sf		1,100	1100 sf	12	12 Units		3,200	3,200 sf	3,200	3,200 sf	2	2 Units		12,400	12400 sf	17,950	17950 sf	17,950	17950 sf					
6:00AM	0.00	0	0.00	0	0	0.00	0	0.84	10	10	0.00	0	0.00	0	0.84	2	2	0.00	0	0.00	0	0.00	0	0	12	2	2	8
7:00AM	0.20	48	0.20	9	57	0.20	1	0.62	7	8	0.20	2	0.10	2	0.62	1	5	0.20	6	0.10	12	0.20	18	36	106	15	16	75
8:00AM	0.64	152	0.64	30	182	0.64	4	0.41	5	9	0.64	5	0.10	2	0.41	1	8	0.64	20	0.10	12	0.64	57	89	288	40	45	203
9:00AM	0.93	221	0.93	43	264	0.93	5	0.34	4	9	0.93	7	0.20	4	0.34	1	12	0.93	29	0.20	23	0.93	84	136	421	59	65	297
10:00AM	1.00	238	1.00	46	284	1.00	5	0.32	4	9	1.00	8	0.30	6	0.32	1	15	1.00	31	0.30	35	1.00	90	156	464	65	72	327
11:00AM	1.00	238	1.00	46	284	1.00	5	0.31	4	9	1.00	8	0.90	19	0.31	1	28	1.00	31	0.90	105	1.00	90	226	547	77	85	385
12:00PM	0.90	213	0.90	42	255	0.90	5	0.30	4	9	0.90	7	1.00	21	0.30	1	29	0.90	28	1.00	117	0.90	80	225	518	73	80	365
1:00PM	0.90	213	0.90	42	255	0.90	5	0.31	4	9	0.90	7	0.90	19	0.31	1	27	0.90	28	0.90	105	0.90	80	213	504	71	78	355
2:00PM	1.00	238	1.00	47	285	1.00	6	0.33	4	10	1.00	8	0.65	14	0.33	1	23	1.00	31	0.65	76	1.00	90	197	515	72	80	363
3:00PM	1.00	238	1.00	47	285	1.00	6	0.37	4	10	1.00	8	0.35	7	0.37	1	16	1.00	31	0.35	41	1.00	90	162	473	66	73	334
4:00PM	0.93	221	0.93	43	264	0.93	5	0.45	5	10	0.93	7	0.35	11	0.45	1	19	0.93	29	0.35	63	0.93	84	176	469	66	73	330
5:00PM	0.64	152	0.64	30	182	0.64	4	0.61	7	11	0.64	5	0.60	19	0.61	1	25	0.64	20	0.60	108	0.64	57	185	403	56	62	285
6:00PM	0.20	48	0.20	9	57	0.20	1	0.69	8	9	0.20	2	0.90	29	0.69	1	32	0.20	6	0.90	162	0.20	18	186	284	40	44	200
7:00PM	0.10	24	0.00	0	24	0.00	0	0.72	9	9	0.10	1	1.00	32	0.72	1	34	0.10	3	1.00	180	0.00	0	183	250	35	39	176
8:00PM	0.10	24	0.00	0	24	0.00	0	0.80	10	10	0.10	1	1.00	32	0.80	2	35	0.10	3	1.00	180	0.00	0	183	252	35	39	178
9:00PM	0.10	24	0.00	0	24	0.00	0	0.89	11	11	0.10	1	1.00	32	0.89	2	35	0.10	3	1.00	180	0.00	0	183	253	35	39	179
10:00PM	0.10	24	0.00	0	24	0.00	0	0.92	11	11	0.10	1	0.75	24	0.92	2	27	0.10	3	0.75	135	0.00	0	138	200	28	31	141
Dedicated spaces	0.00	0	0.00	0	0	0.00	0			#REF!	0.00	0	0.00	0			0	0.00	0	0.00	0	0.00	0	0				

(1) Based on the results from the NCHRP 684 Internal Trip Capture Estimation Tool

(2) Based on Commute to Work data from the 2009-2013 ACS by Census Tract for the City of Portland provided by GPCOG

N

FORE STREET

FORE CONNECTOR

Fore Street ROW
Grade: 30.8

Fore Street ROW
Grade: 31.8

Fore Street ROW
Grade: 31.3

100'

100'

100'

Top of Building
Elevation: 35.0
Height: 4.2'

Top of Building
Elevation: 66.33
Height: 34.5'

Top of Building
Elevation: 66.33
Height: 35.0'

100' Height Setback from
Fore Street

BUILDING 1A

TRENCH DRAIN AT BASE OF
EACH SET OF STEPS (TYP.)
(SEE LANDSCAPE PLAN)

SERTA-TEE
CONNECTION

INSERTA-WYE CONNECTION
AT EACH TRENCH DRAIN
(TYP. OF 4)

Calculation or Height Compliance @ Fore Street:	
Adjacent Grade at Fore Street:	31.3'
Max. Height Above Fore Street:	35'
Maximum Elevation:	66.3'
Building Height	66.3'

3. N/S RETAINING WALL: 31.25'

2. SECOND FLOOR SW CORNER: 31.25

4.,5. SECOND FLOOR SW CORNERS: 35

6.,7. SECOND FLOOR SW CORNERS: 35

8., 9. SECOND FLOOR MID CORNERS: 35

10., 11. SECOND FLOOR MID-CORNERS: 35

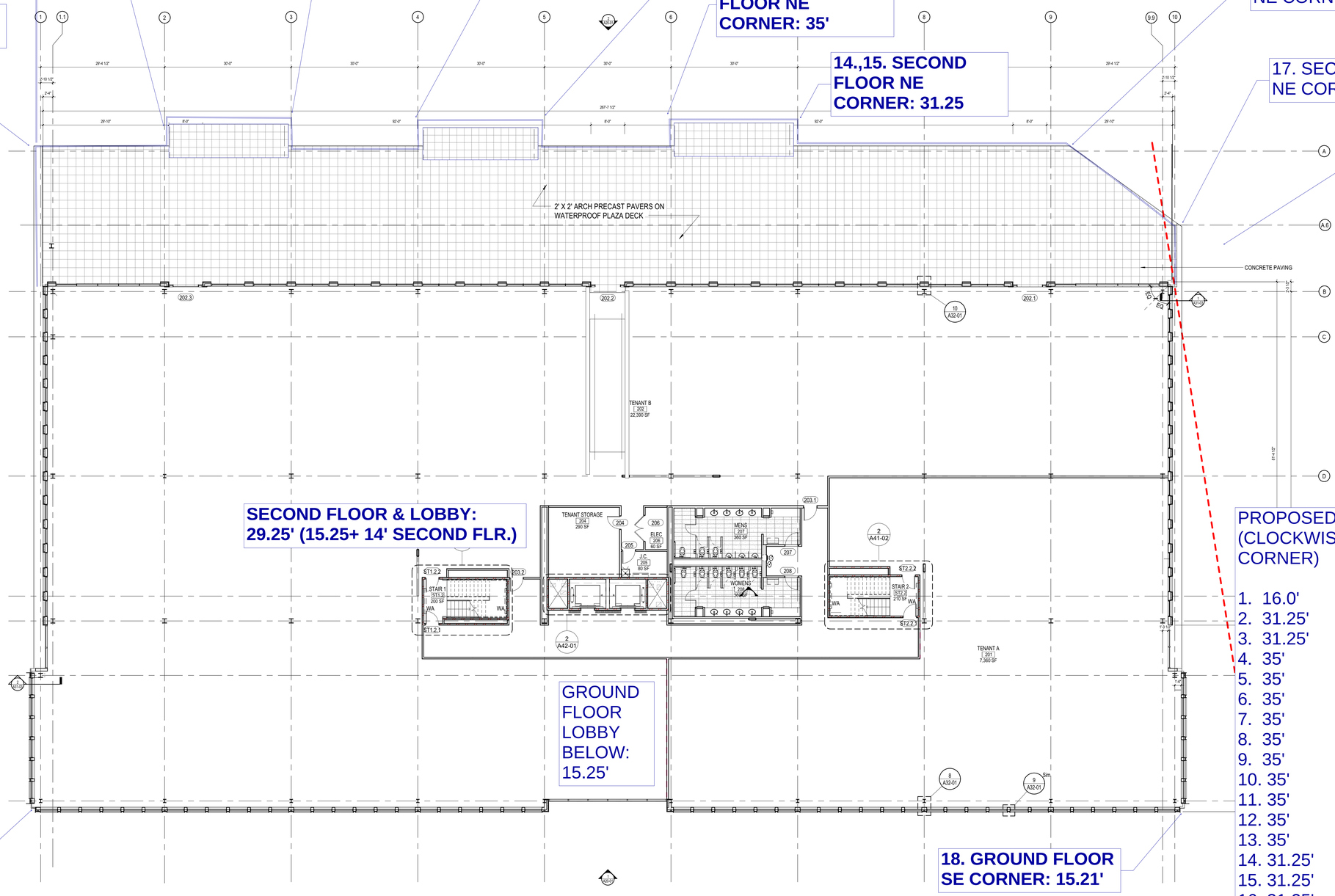
12, 13. SECOND FLOOR NE CORNER: 35'

14.,15. SECOND FLOOR NE CORNER: 31.25

16. SECOND FLOOR NE CORNER: 31.25

17. SECOND FLOOR NE CORNER: 31.25

(EXISTING PLAZA DESIGN & GRAND STAIR: 31.25)



SECOND FLOOR & LOBBY: 29.25' (15.25+ 14' SECOND FLR.)

GROUND FLOOR LOBBY BELOW: 15.25'

1. GROUND FLOOR SW CORNER: 16.0'

18. GROUND FLOOR SE CORNER: 15.21'

PARTITION & DOOR NOTES

1. PARTITIONS LOCATED BY DIMENSION STRING ARE DIMENSIONED TO THE UNFINISHED FACE OF THE WALL UNLESS NOTED OTHERWISE.

2. PARTITIONS NOT DIMENSIONED ARE GENERALLY LOCATED BY ONE OF THE FOLLOWING CRITERIA:

2.1 CENTERLINE - CENTER OF PARTITION ALIGNS WITH THE CENTER OF GRIDLINE OR OBJECT CENTERLINE (SUCH AS A COLUMN OR WINDOW MULLION).
CENTER THE OVERALL PARTITION WIDTH, RATHER THAN STUD WIDTH ON THE RELATED CENTERLINE.

2.2 ALIGN - LOCATE PARTITION FLUSH WITH FACE OF ANOTHER PARTITION OR ANOTHER SURFACE AS INDICATED.

2.3 SPECIFICALLY MAINTAIN DIMENSIONS NOTED AS "MINIMUM" OR "CLEAR".

3. DOOR OPENINGS ARE DIMENSIONED TO CENTERLINE OF OPENING. IF NOT DIMENSIONED, THE HINGE SIDE OF DOOR SHALL BE SPACED 4" (INCLUDING THE JAMB) FROM THE ADJACENT WALL.

4. ALL INTERIOR PARTITIONS TO BE TYPE 'A41' U.N.O.

1 LEVEL 2 PLAN
3/32" = 1'-0"

PROPOSED DESIGN: (CLOCKWISE FROM SW CORNER)

1. 16.0'
2. 31.25'
3. 31.25'
4. 35'
5. 35'
6. 35'
7. 35'
8. 35'
9. 35'
10. 35'
11. 35'
12. 35'
13. 35'
14. 31.25'
15. 31.25'
16. 31.25'
17. 31.25'
18. 15.21'

TOTAL:
568.71 / 18 = 31.5

Perkins&Will

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CONSULTANTS

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STRUCTURAL + MEP ENGINEER
Rist-Frost-Shumway Engineering
50 Milk Street, 16th Floor
Boston, MA 02109
t 617.494.1464

OWNER'S CONSULTANT

LANDSCAPE ARCHITECT
Michael Boucher
457 US Route 1 Suite 2
Freeport, Maine
t 207.865.1080

PROJECT

BUILDING 1A
58 FORE ST
PORTLAND, ME 04101

FORESIDE
254 COMMERCIAL ST
SUITE 118
PORTLAND, ME 04101

KEYPLAN

NOT FOR CONSTRUCTION

ISSUE CHART

#	ISSUE	DATE

DESIGN DEVELOPMENT
JULY 26, 2019

Number	157087.000
wn	Author
cked	Checker
roved	Approver

TITLE

LEVEL 2 PLAN

SHEET NUMBER

A10-02

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EDGE OF VIEW CORRIDOR

SPOT GRADE 46.1

SPOT GRADE 48.3

AVERAGE GRADE
(46.1 + 48.3 + 48.3 + 50.6 + 14.96 + 14.96) / 6 = 37.2

ALLOWED BUILDING HEIGHT
45' from average grade
37.2' + 45" = 82.2'

PROPOSED BUILDING HEIGHT
82'

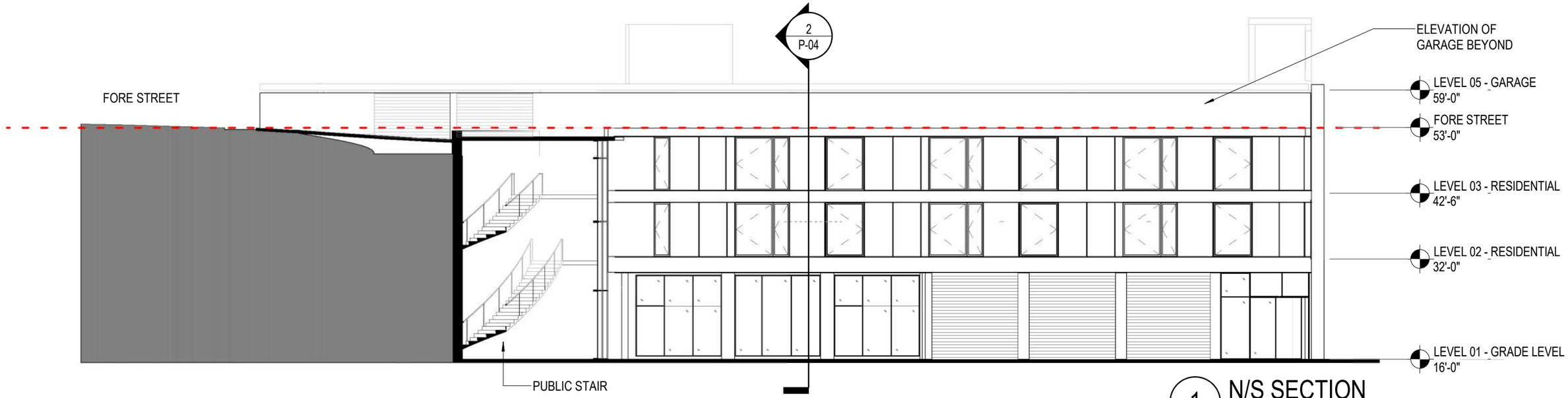
SPOT GRADE 50.6

SPOT GRADE AT BASE OF BUILDING
14.96

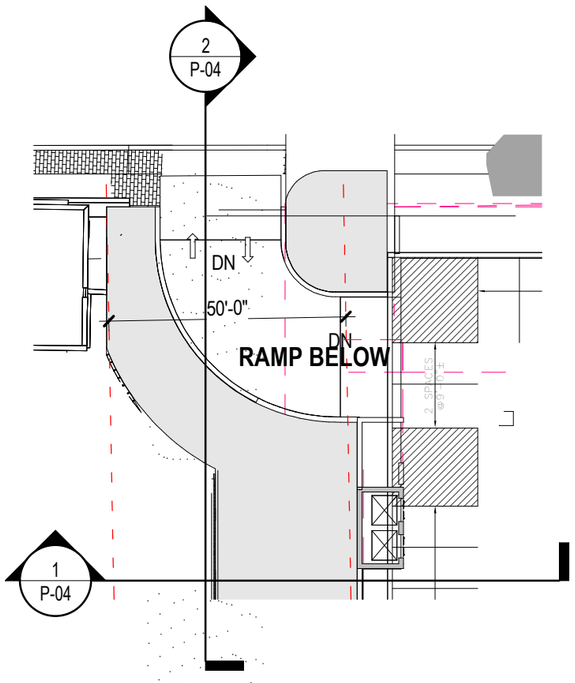
SPOT GRADE
14.96

CANTILEVER FROM BASE

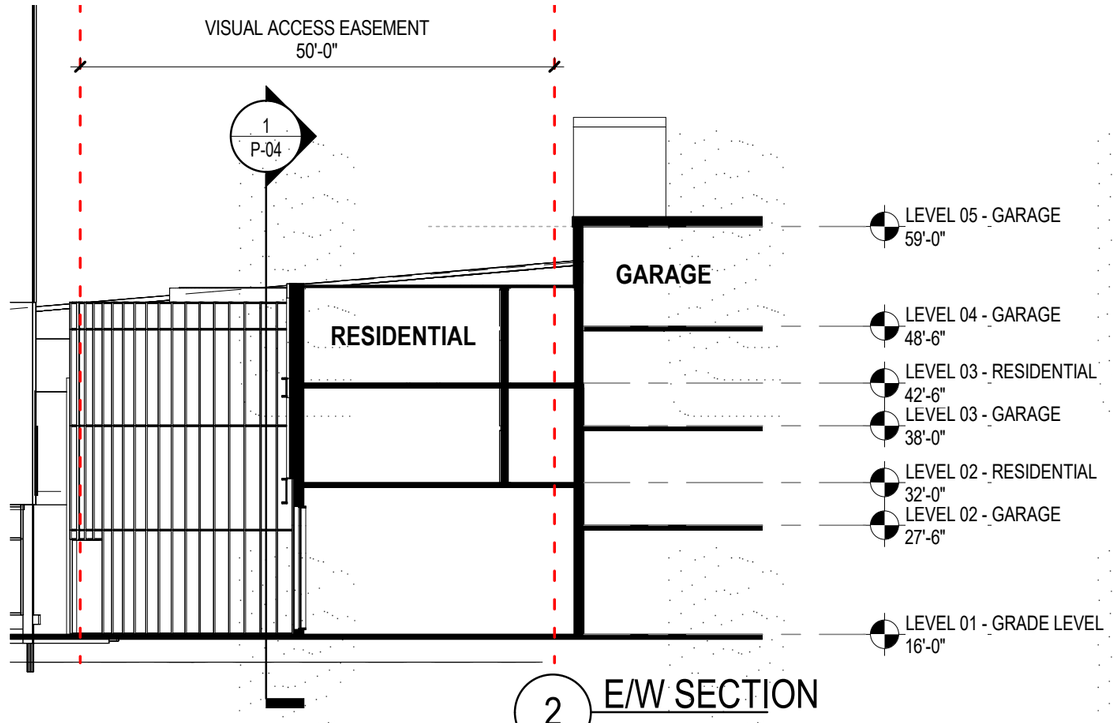
LOT LINE



1 N/S SECTION
1/16" = 1'-0"



3 ROOF - ELEV. 59'-0'
1/32" = 1'-0"



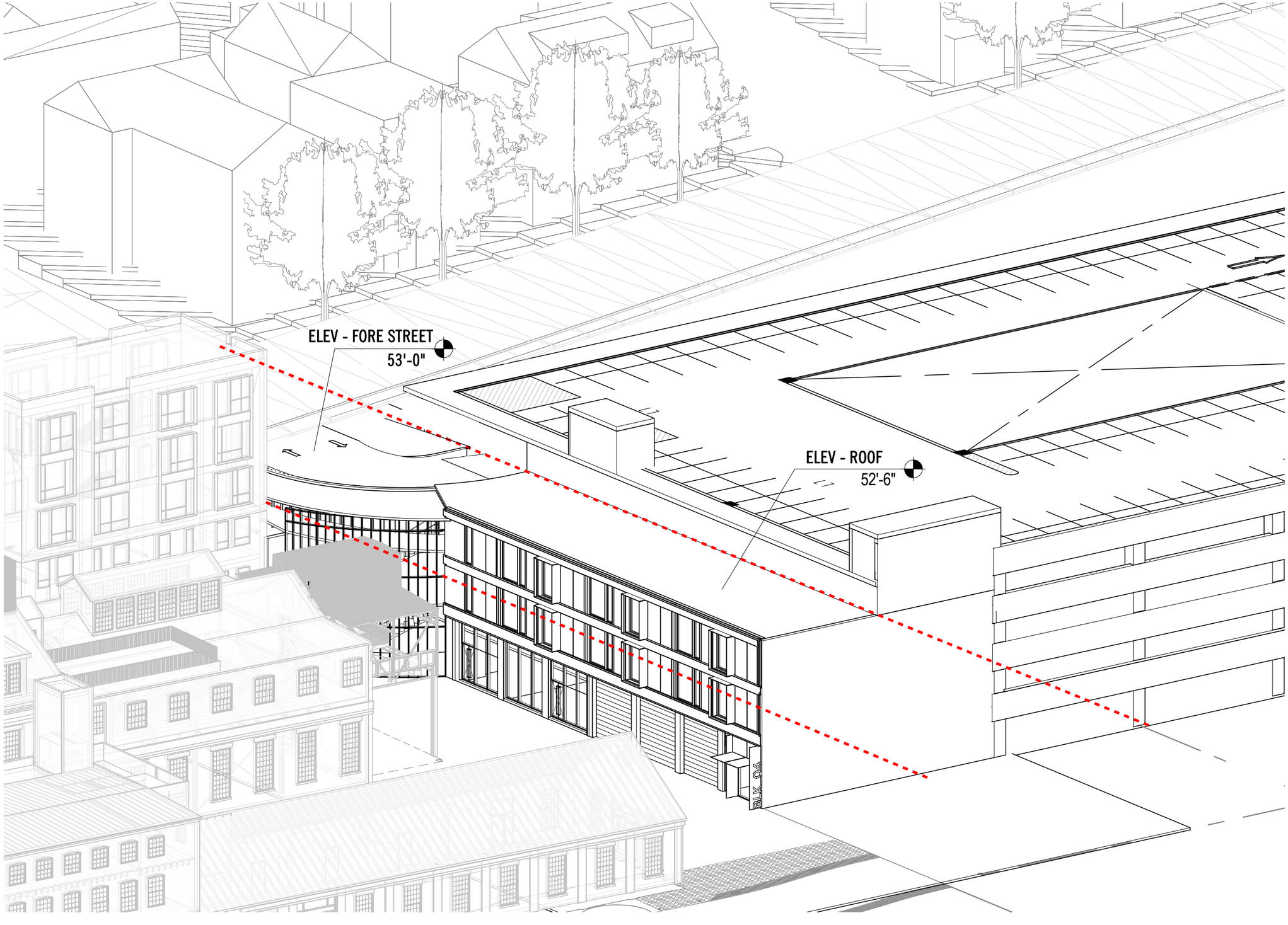
2 E/W SECTION
1/16" = 1'-0"

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BLOCK FOUR

BLOCK FOUR - VISUAL EASEMENT COMPLIANCE

Perkins&Will
12/03/19



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BLOCK FOUR

BLOCK FOUR - SOUTH VIEW - LOOKING NORTHEAST

Perkins&Will
12/03/19

COMMITMENT & INTEGRITY
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December 20, 2019

Christian Roadman, Planner
City of Portland Planning Division
389 Congress Street
Portland, ME 04101

Re: Portland Foreside Phase 1 Level III Site Plan Submittal – Portland Foreside Development Co.
Response to Planning Staff Comments

Dear Christian:

Thank you for coordinating the review of the proposed development of Phase 1 of the Portland Foreside Project located at 58 Fore Street in Portland, Maine. To support the Level III Site Plan process, we provide the following responses to the comments we received from the City:

Initial Traffic Overview Comments from Thomas Errico from November 21, 2019 email:

- *In conjunction with the Master Development Plan approval the applicant was issued a MaineDOT Traffic Movement Permit (TMP) for the full buildout of the project. The applicant has conducted a traffic assessment for the current phase and my initial conclusion is that trip generation levels are under the TMP permitted trip bank for the site. I would note that I continue to review methods for the trip generation estimate.*
    - Noted.
- *I have not reviewed the Transportation Demand Management Plan (TDM) provided for the project but would note that the trip generation analysis for the project assumes a "multi-modal" (walk, bike, transit, carpool) reduction of 18% and thus the TDM plan should reflect strategies and targets accordingly.*
    - Please refer to the attached response to comments letter provided by Gorrill Palmer.
- *The application indicates the project will include a new Events Space and that traffic levels are not expected to change from prior occupancy given that historically events have been held at the site. I would like to fully understand both historic and future event programs before supporting the conclusion that no additional new traffic is expected.*
    - Please refer to the attached response to comments letter provided by Gorrill Palmer. Additional information regarding past and anticipated future event space at 58 Fore Street property is also attached for your reference.
- *The application notes a parking demand estimate for the site of 159 parking spaces. The applicant should provide analysis in support of this estimate. I would note that the parking demand analysis shall be based on the most current best practice methods available and proposed TDM Plan Strategies.*
    - Please refer to the attached response to comments letter provided by Gorrill Palmer.

Preliminary Comments from Bruce Hyman from November 21, 2019 email:

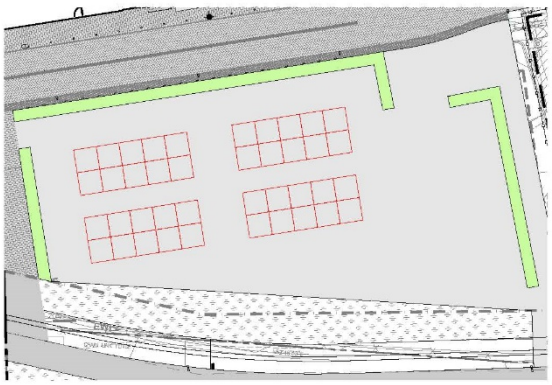
LD2.0 Landscaping

- *Item 3. The applicant should submit manufacturers specifications related to the bike racks to be used for the outdoor racks - it is unclear based on the design detail sheet.*
    - The bike rack selection will be submitted to Historic Preservation for review in early January and a cut sheet of the fixture will be provided at that time.

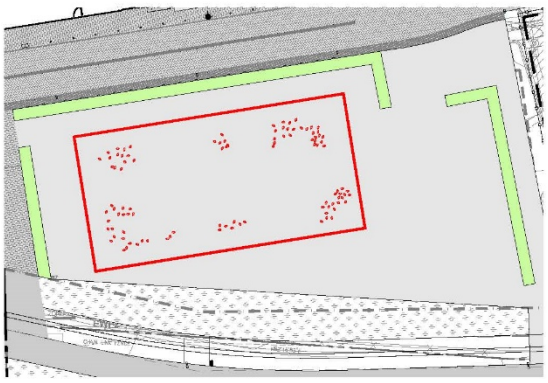
C-100 Site Plan

- *There should be a better distribution of outdoors bike racks (and possibly more given the event nature of some of the facilities) to be installed to serve visitors/customers throughout the site in proximity to and visible at primary/main building entrances (which are hard to determine).*
    - With the revised parking calculation, the number of required bicycle spaces is now 44. The current design provides 9 spaces in the 1A garage and 12 racks with space for 24 bicycles throughout the remainder of the site. An additional 6 racks (12 spaces) will be incorporated into the updated landscape plans to be provided in early January, for a total of 45 bicycle spaces. The bicycle racks will be located near crossings with the eastern prom trail, where possible. The design team has, and will continue to, consider locations for the bike racks that offer a high degree of visibility, uniform distribution across the site, while allowing for comfortable pedestrian circulation.
- *Transitions from 58 Fore St property to the relocated rail/MaineDOT and Eastern Prom pathway alignments. It is unclear what the character of these wide open spaces will be like. There are wide swaths of asphalt between the 58 Fore Street property (pavers surface) and the asphalt area (~100'). This asphalt area also abuts the area shown to be fenced in areas of reclaim pavement (~225' along the property line) which shows a 'planting area' of salt tolerant grass seed between the rail line and the reclaim area within the DOT ROW.*
    - This portion of the site (described as Block 3 in the approved Master Development Plan) will be developed as a building in future phases. Prior to the building development, PFDC intends to keep the space activated and visible for various potential interim programming uses, such as:
        - Farmers Markets
        - Food trucks
        - Ice Skating Rink
        - Community Events

      To support these various uses, the block will be paved with 2" binder course. The north and east edges will be landscaped, and large planters will be utilized to help add vegetation while maintaining flexibility for the various programs. These planted areas will be further detailed in the updated landscape drawings to be submitted in early January.



FARMER'S MARKET



ICE SKATING RINK

TDM Plan

- *The TDM Plan is generally vague and weak on the types of actual programs/incentives that will be offered and in its commitments. This can be difficult at this stage but with at least one known larger office tenant/employer, more commitments can and should be provided in the plan. The city can provide examples of recent more robust TDM plans for review by the applicant team.*
    - An updated TDM Plan is included with this memo.

Initial Comments from DPW (Mike Trembley and Keith Gray) from November 20, 2019 and November 22, 2019 emails:

- *While DPW is open to and encouraging of the shared-use driveway extending from the end of Thames Street, we will want to ensure that the shared driveway considers the following: a) amount and hours of traffic that will be using this driveway, and the safety and comfort of pedestrians during periods of heavy use; b) the ability to delineate a dedicated pedestrian area, so that modes may position themselves accordingly during peak periods; additionally, how this delineation may be accomplished (vertical barriers, paver color/orientation changes, etc); and c) the ability of the shared driveway to accommodate future construction phases adequately, while maintaining vehicle and pedestrian access as needed.*
    - Vehicular vs pedestrian surfaces are distinguished by several means. The paving patterns are distinct between the two zones. In addition, pedestrian areas are separated from vehicular travel lanes by parallel parking spaces, planting zones, bollards, light poles, and a band of 4" stone setts for both visual and textural distinction. PFDC has engaged with code consultants from KMA, LLC to review warning detection at the pedestrian crossing zones and will incorporate their recommendations in upcoming drawing updates.
    - PFDC has also engaged with Construction Managers from Consigli to review site access for this and future phases. A separate Construction Management Plan will be provided for future phases at the time of site plan submission. The Eastern Prom Trail access will be maintained with appropriate separation from construction activities during this Phase 1 and future phases. Future phases of work will be accessed from the shared drive – signage, fencing, etc. will be deployed similar to any other shared street/access requirements.
- *The Applicant should widen the sidewalk along Fore Street to the property line, rather than providing a landscape area between the property line and sidewalk. Sidewalks on streets with high anticipated pedestrian volumes should ideally be at least 8 feet wide. Additionally, the current sidewalk width presents challenges at pinch points for persons with disabilities and for sidewalk plows.*
    - As discussed during our recent meeting with City Staff, PFDC and their consulting team will attend a site walk with City Staff to determine feasibility for widening of the sidewalk.
- *The Applicant should explore the feasibility of providing accessible access from the site via Fore Street. The grade differential may prove this difficult; however, the lack of accessibility from Fore Street forces persons with disabilities to travel another 700 feet or so to reach the Thames Street entrance; this inconvenience may be even more pronounced if the person's destination is Building 2 or the embankment building. If a ramp is not feasible, the Applicant should explore other options for providing accessible access to the site via Fore Street.*
    - An accessible entrance to the site is provided from Thames Street. The plazas and sidewalks are designed to maintain ADA accessible access to Thames Street, the Eastern Prom Trail, public access easements, and buildings. In addition, PFDC is engaging with code consultants at KMA to determine if modifications to the Fore Street stairs are required in order to meet federal ADA law.

- *There is a large amount of impervious area on the site, both in terms of pavers that will remain in the completed stage of the project and a reclaim asphalt area that will be developed in future phases. The Applicant should consider ways to reduce the impervious area of the site, using additional landscaped areas and/or permeable pavers. The reclaim asphalt area, which is proposed to be used for miscellaneous marina vehicle storage, drop-off, and emergency vehicle access, can be reduced and/or constructed with permeable materials, this would be preferred.*
    - As discussed above, Block 3 will be developed as a building during future phases of the Master Development Plan. During the interim, the site will be paved with a bituminous binder course. Planting beds will be added to the northern and western edges and large portable planters will be incorporated, providing flexibility needed for the various programming identified for this area.
- *The retaining wall on the connector road is described as being constructed "by others". Additional clarity as to who will be designing this wall and when will be helpful.*
    - The retaining wall along the Fore Connector will be integrated into the design of Building 1A and designed by the project architect and structural engineer. The wall will be submitted as part of the Building Permit application process.
- *An alternate material for the reclaim asphalt area, such as crushed stone or a structural soil allowing for some permeability, should be considered. The temporary reclaim asphalt area should not be approved for an indefinite period of time. If future phases of the project do not proceed as expected, an alternate treatment for this area should be required.*
    - The area in question is intended to function as a space for a wide variety of uses from open air markets, a food truck venue, as well as wintertime uses such as a skating rink. The finish surface needs to be smooth, durable, plowable and able to support vehicular traffic. We have considered a variety of options for the paving surface and they would not perform as needed. The attached drawings have been updated to remove references to reclaim asphalt and now indicate bituminous pavement surface.
- *The parking cut-out on Fore Street should be constructed with radial curb. Blunt angles are difficult to maintain. Additional clarity should be provided as to the intended purpose of this area.*
    - Radial curb has been added to the plans in this area. The intended purpose of this cut-out is as a vehicular drop off area.

Initial Review Comments from Wright-Pierce from memo dated November 20, 2019:

<u>*Basic Standard*</u>

- *Additional clarification is needed on blank spaces on the soils, erosion control notes regarding the timeframe of application, Sheet C-201. Further clarification of the placement and location of erosion control, including stockpiling of construction materials and devices will need to be implemented into the design, and discussed in the Construction Management Plan.*
    - The blank spaces on the Erosion and Sediment Control Notes on Sheet C-201 have been filled in. The Temporary Erosion Control table on Sheet C-201 describes requirements for material stockpiles. Material stockpile locations are shown on the Site Access & Work Zone figures in the Construction Management Plans for each Block.

General Standard

- *The written analysis indicated that the proposed development had a lower pollutant ranking than the existing site and is therefore required to treat 50% of the proposed site's disturbed surface area, with priority placed on the highest-ranked pollutant for the site. However, the calculations show a very small increase in the proposed pollutant ranking when carried out to several digits. The way the MaineDEP table is structured, a pollutant ranking value of 0.0 can be interpreted to require 60% of a site's redeveloped area treatment, or 50% treatment. To better understand and evaluate the minor changes in pollutant ranking, the following items should be identified on the Redevelopment Figures and further discussed in the stormwater management plan:*
    - *Parking lot pollutant rankings are generally based on turnover rate. Additional information is needed on which parking lot spaces are low-use, medium-use, and high-use.*
        - In the existing condition, the primary travel ways were designated high-use, and parking areas on the site were designated as medium-use. In the proposed condition, the primary travel ways including the shared street, train tracks, and parking spaces along the shared sheet, were designated high-use. The lower-turnover parking areas, including the garage and temporary marina parking area, were designated as medium-use.
    - *High-pollutant surface areas should be prioritized for stormwater treatment under the redevelopment standard. Following the above comment, please add additional information on the plans to provide a better understanding of which surfaces are receiving stormwater treatment, and calculations identifying which percentage of the highest pollutant rankings are receiving treatment.*
        - Stormwater treatment systems were located to capture the maximum area of the project site practicable. This includes many of the high-pollutant surface areas, including the shared street and associated parking and Building 4A parking. Untreated areas are largely located along the waterfront downgradient of the proposed stormwater systems. In addition, a portion of Building 1A will remain untreated as will the future Building 1B site. The treatment area is shown on the Redevelopment figure.
    - *Per the City of Portland Technical Manual, Section 5 redevelopment standards, 50% of impervious surfaces require treatment for projects without an existing SLODA permit. An existing SLODA permit was not identified in the application, although application for such permit was referenced. Application shall provide additional information is to existing permits, or discussion on adherence or exception from the 50% impervious treatment requirement.*
        - A SLODA permit application was submitted to the City on November 13, 2019. The same Stormwater Management Report was submitted for both the Site Plan Application and SLODA permit application.
- *The R-Tank system is proposed to be sized below the standard requirement of providing channel protection volume for 1.0" of impervious area and 0.4" of landscaped area for the proposed SF subcatchment areas. Whereas the City's requirement references the MaineDEP's regulations on this item, approval will need to be granted by MaineDEP for any variance.*
    - Woodard & Curran has discussed this with Jeff Dennis from the Maine DEP. He noted that his interpretation of the Maine DEP's Chapter 500 is that a waiver of the channel protection volume is implied in situations such as this where discharge is to a body of

water requires no channel protection. Per Chapter 500, Section 4, C, (2), it notes that treatment measures should "mitigate for the increased frequency and duration of channel erosive flows due to runoff from smaller storms and potential temperature impacts, unless the Department determines that channel protection and/or temperature control are unnecessary due to the nature of the resource". Please see the attached email for confirmation.

- *Hydrologic Soil Group (HSG) "A" has been modeled for portions of the site that are urban fill. Whereas urban fill can substantially vary in porosity, and HSG A soils typically have very low runoff, incorporating the existing urban fill soils as a low-runoff option without advanced soil information may not provide an accurate representation of the runoff from urban fill soils. Additional soil information may be necessary to complete the model, and additional discussion on which modeling assumptions provide conservative final results may also be appropriate.*
    - There is minimal pervious surface located on the site and modifying the hydrologic soil group does not have a large impact on runoff calculations. We completed a HydroCAD analysis assuming HSG D soils for all pervious areas. This analysis yielded the following results:

Study Point	1" Storm Event		25-Year Storm Event	
	HSG A	HSG D	HSG A	HSG D
1L (Fore Connector)	0.34	0.43	3.11	3.42
2L (Fore River)	2.41	5.06	29.77	32.13
Total	2.75	5.49	32.88	35.55

There is minimal change in flow to the Fore Connector, and the drainage system will adequately manage this flow. The proposed stormdrain outfalls on the project site are also adequately designed to manage this level of flow.

We did a similar analysis, looking at our two stormwater treatment systems, to ensure that a change in soil group does not impact the design. Most of the area draining to the stormwater treatment systems is impervious and does not impact this design.

Study Point	1" Storm Event		25-Year Storm Event	
	HSG A	HSG D	HSG A	HSG D
Stormwater Treatment System 1	1.16	1.49	10.2	10.62
Stormwater Treatment System 2	2.28	2.28	14.53	14.53

- *An executed maintenance contract for the BMP systems is required and may be included as a Condition of Approval.*
    - Noted. A maintenance agreement will be provided.

Flooding Standard

- *The applicant has submitted information regarding a waiver to the flooding standard due to discharges to tidal waters. The applicant will need to provide appropriate discussion and calculations as to how the flooding standard is met for runoff at other down-slope property lines.*
    - A waiver for the Flooding Standard was granted during the Master Development Plan process for future site plan applications, due to direct discharge into the ocean, a great pond, or major river segment (Technical Manual 4.E.(2), waiver criteria). Ultimately, all flow from all properties discharge to the tidal Fore River.

General Engineering

- *The applicant has indicated that a Maine Construction General Permit will be issued for the project prior to construction.*
    - Noted.
- *Grading and Drainage at the Fore Street sidewalk location may need additional evaluation in locations where the curb line will be reset in a different location from its current placement.*
    - Woodard & Curran is currently working with the City of Portland on the design of the Fore Street sewer separation project. We are coordinating sidewalk and curbing grades with this project, and additional spot grades will be provided on the plans.
- *Ability to serve letters have not been provided for utilities impacted by the proposed project, but have been requested by the applicant for applicable utilities. The applicant has indicated that ability to serve letters will be submitted to Planning upon receipt.*
    - Noted.
- *It is understood that grease trap sizing is being reviewed by Department of Public Works. Applicant shall defer to comments from Department of Public Works on this item.*
    - Noted.
- *Details for the water system have been provided on Sheet C-202. Adherence to PWD standards is typically provided by the water utility for water connections, and would be addressed in an accepted ability to serve letter.*
    - Noted.
- *Details for the electrical conduit and natural gas pipe have been provided on Sheet C-200. Details and siting for the electrical transformer vaults was not provided.*
    - Electrical transformer locations are provided on Sheet C-202. Transformer vault details have been added to the attached plan set.
- *Connection to Existing Stormwater Systems: E-mail, or otherwise written, confirmation from the Department of Public Works accepting this connection is requested to confirm that this connection is appropriate under Land Use section 14-526 (b) 3 a. (iv); and 14-526 (c) 3 a.*
    - It is our understanding that stubs have already been installed for future connection from 58 Fore Street to the stormdrain located within the City's easement on the adjacent property. The stormdrain stub was sized based on anticipated site flows. The "Fore Connector" has been modeled as a study point in our HydroCAD model. It is our understanding that there is ongoing discussion on the status of the Fore Connector.

Additional Review Comments from Wright-Pierce from memo dated December 16, 2019:

Utility Conflicts

- *There are several areas where proposed utility lines horizontally cross other utilities. Details for non-drainage utilities typically include minimum installation depths or other general installation guidance where final pipe elevations may vary. Additional detailing or notes should be provided to identify minimum clearances between pipes where crossings occur.*
    - The details and notes identifying minimum clearances will be accommodated on our construction drawings and will be provided to the City as part of the final plan set.
- *Additional information as noted in Comment 4)a. and 4)b. is needed to determine if conflicts between drainage pipes are present.*
    - Noted. Please refer to the Drainage Structures Table and Pipe Schedule comments below.

HydroCAD calculations

- *Jellyfish filter design is consistent between plans and modeling output.*
    - Noted.
- *Additional detailing on the plans is needed to confirm that the R-Tank systems are designed consistently with the project plans and the project HydroCAD calculations. Applicant should submit the following:*
    - *Numbering on site plans (such as R-Tank System 1; R-Tank System 2);*
        - *R-Tank numbering has been added to the grading and drainage plans.*
    - *Grid alignment for R-Tank cells to confirm total capacity of system on project plans or details to confirm total storage capacity;*
        - *See following comment response.*
    - *Storage elevation and pipe elevations in detail, table, or plan locations.*
        - The R-Tank design has been closely coordinated with ACF. Attached please find detailed design drawings produced by ACF. These details will be incorporated into the Construction Documents and provided to the City as part of the final plan set.

Drainage Structures Table and Pipe Schedule

- *Minimum velocities for drain pipes should be greater than 3 feet/second per the City Technical Manual. Due to the flat nature of the site and proximity to tidal areas, this may not be feasible to obtain while meeting other site needs. If the applicant is not able to meet this standard, a waiver request with a brief statement discussing the need for waiver, and calculations showing the ability of the drain system to adequately convey flows, would likely be supported. The following pipes were identified to have limited peak velocity: Pipe SD 19, Pipe SD 20, Pipe SD 38, Pipe SD 40, Pipe SD 44, Pipe SD 56, Pipe SD 57, Pipe SD 58, Pipes SD 60-62, Pipes SD 64-67, and Pipe SD 73.*
    - The above referenced pipes are located on the private site, drain to private stormwater infrastructure and ultimately discharge to the Fore River. Due to elevation constraints on the site, adherence to the City standard of 3 feet/second was not possible. All pipes meet the TR-16 standard of 2 feet/second minimum velocity and we are comfortable with this design for our site.

- *28 pipe slopes were not able to be evaluated due to the unknown elevation of their connection with the existing and proposed buildings. Reference to detail, other sheet set, or invert elevation at building should be made on the plans for these pipes.*
    - Building roof drainage pipe invert elevations are currently being coordinated with the structural and mechanical engineers for the buildings and will be provided on construction documents to be provided to the City. We will ensure all roof drainpipes adequately convey roof runoff to the drainage system.
- *Two structures are labeled as CB-7 on the structure table.*
    - The structure table has been revised accordingly.

Grading Limitations

- *Riprap Drainage Swale and associated level spreader should be evaluated and sized to meet the Distribution of Concentrated Flows requirements under MaineDEP Chapter 500.*
    - The design of the rip rap swale is being coordinated with Geotechnical Engineers from Haley & Aldrich as part of the overall earth retaining approach and will be incorporated in the final construction documents provided to the City.

Utilities in Shoreland Zone

- *In Zoning Section 26: Erosion and Sedimentation Control: All activities which involve filling, grading, excavation or other similar activities which result in unstabilized soil conditions and which require a permit shall require a written soil erosion and sedimentation control plan in accordance with Maine Erosion and Sediment Control Handbook for Construction. The applicant has provided this information, with a level of further review comments dated 11/20/2019.*
    - Noted.
- *In Zoning Section 26: Installation of Public Utility Service: No public utility shall install services to new structures until applicable City Permits are obtained. Applicant shall not begin any utility construction until permits are obtained.*
    - Noted.
- *In Section 26.5, Flood Zone: Water Supply and Sanitary Sewage Systems: All new and replacement water supply systems and sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters and discharges, as applicable. The applicant has provided that information in project details.*
    - Noted.

Comments from Caitlin Cameron from memo dated November 20, 2019:

Appropriate Street Design

- *Staff are generally supportive of the treatment of the internal street as a shared space delineated with bollards and differentiated paving.*
    - Noted.

Sidewalks

- *Staff need further review of the sidewalks seeking a balance of landscape/planting with passable sidewalk widths in proportion to the building scale and street widths. Some sidewalks seem quite narrow in this regard. Street trees and plantings are provided between the sidewalk and the residential buildings – this is logical to provide a transition and privacy interface but staff question the viability of the trees and plantings in these locations – edge treatments and interactions with utilities should be considered.*

Staff typically recommend new development provide a streetscape design consistent with existing patterns. The developing pattern on this side of the street is to place landscape between the sidewalk and the private property.

- The design along the edge of Fore Street needs to balance historic buildings, the existing seawall, access to new buildings, modern building codes, and existing utilities. As discussed during our recent meeting with City Staff, PFDC and their consulting team will attend a site walk with City Staff to review these conditions in the field and will provide an updated landscape plan thereafter.

Contextual Design

- *Additional information/views are needed to understand how these new buildings relate to the adjacent residential and commercial blocks.*
  - Fore Street continuation of brick wall panels from Building 24 uphill will be reconstructed. New railings protect pedestrians where copings fall below 42". Townhouses respond to horizontal clapboard facades of residential buildings across Fore Street. Additional information/views will be reviewed as part of the Historic Preservation applications for Certificate of Appropriateness.
- *Staff request additional views or information about how the proposed buildings/streetscape design connects at the edges of the site. Fore Street, the Connector Road, and the trail are different contexts requiring different kinds of design. Staff are generally supportive of the design approach for building 1A as a subtle, contemporary backdrop to the historic buildings. Staff are concerned about the lack of articulation and human-scale elements, especially at the ground level. The material and color palette of the new architecture coordinates well with the historic structures and conveys a complex while keeping the contemporary buildings clearly as an expression of their own time. The proportions of openings, the fine-grain materials, the simple forms help to relate these larger, contemporary buildings to the context.*
  - Additional views, including along Fore Street at View Corridors, and evidence of legibility of function and entrance, will be prepared for Historic Preservation Commission Workshops, and will be provided to you for review and comment. The 1A Team will also provide further detail at larger scale of Ground Floor articulation and material detailing, focused on the pedestrian experience at street level.
- *Staff observe that in some locations, there is a variety of styles proposed within a single vantage point – coordinated and simplified character is recommended. For example, similar character and design treatment of residential buildings in contrast with the historic buildings or the public stairs to convey the private nature of the uses in contrast with the other, more public uses.*
  - Stylistic variations within the Portland Company Historic District are limited to compatible contemporary expressions of replacement buildings next to retained and restored original elevations. Colors and textures are strictly limited to simplify overall appearance within the district.

Clear Conveyance of the Function and Significance of Buildings

- *Staff identified three opportunities to improve the legibility of the site in regards to building function and significance. First, the hotel use should be distinguished in character or form from the residential uses. Second, on Fore Street the transition from residential uses to the historic Portland Company buildings and public easement access should reflect in the streetscape experience the change of use, the historic fabric, and public open space components. Third, on the new street extension, the building edges should be designed to differentiate the residential from the office uses which will also provide some variation and visual interest to the less active streetscape.*

- Views into Portland Company Historic District from Fore Street and Munjoy Hill retain simplicity of roofscape with horizontal expression of rooftop mechanical enclosures and continuity of color with shingles.

- *In preliminary review, the buildings are designed to give clear conveyance of the function and distinguish between uses.*
  - Noted.
- *The differentiation of public versus private uses is being well conveyed in the architecture, especially related to the public stair and the more active, retail locations.*
  - Noted.

Building Interface with Pedestrian Environment

- *Buildings shall engage the street and be designed with consideration for the impact on the pedestrian environment, especially in the case of Fore Street, the new public street, and the trail. Massing, scale, and articulation should create comfortable and active spaces. Specifically, articulation can be used to provide a human scale, break up the length of the building at grade, and mitigate the impact of the building height making the space more comfortable.*
  - New entrances through brick wall at Building 24 and seating areas at the stairs down into Portland Company Historic District introduce new public connections from Fore Street to plazas below and waterside at multiple levels.
- *Articulation on the new street extension facades should also be employed to provide a visually interesting street wall. Comfort in the pedestrian environment should also consider wind and shadow impacts. The design development of garages should meet the guideline in terms of achieving a visually attractive pedestrian environment, with the expectation that the articulation and materials will be compatible with the new and existing buildings.*
  - The Portland Company Historic District's circulation, landscape, and entrance locations to buildings are designed to work with pedestrian and vehicular flows from Fore Street, Thames Street extension, marina, and cycle/pedestrian pathway.
- *Is it acceptable for the connector road to be treated like a B-street with less activity, grade changes, minimal transparency, entrances, or public-facing uses?*
  - It is our understanding that the Fore Street Connector is not an accepted City street.
- *More consideration is needed regarding active edges versus more private edges – is the amount of active retail frontage proposed feasible? Where are the active edges most critical?*
  - Entrances to historic buildings allow for outdoor activity in good weather and continue original fenestration pattern while enclosing new market hall, retail units, and restaurants inside.
- *Staff supports public, accessible viewing opportunities and a realistic approach to the pedestrian environment that provides scale and comfort, opportunities for sun and shade.*
  - Noted.
- *Careful consideration of where to appropriately introduce landscape and plantings versus hardscape – industrial past versus contemporary uses and comfort. More articulation and scaling elements may be appropriate to create a sense of enclosure and pedestrian-level comfort.*
  - Careful consideration was given to where plants are placed. The effort was to balance the intended use with the historic character and proposed utility locations. The proposed paving and plantings are intended as a respectful nod to how the site was

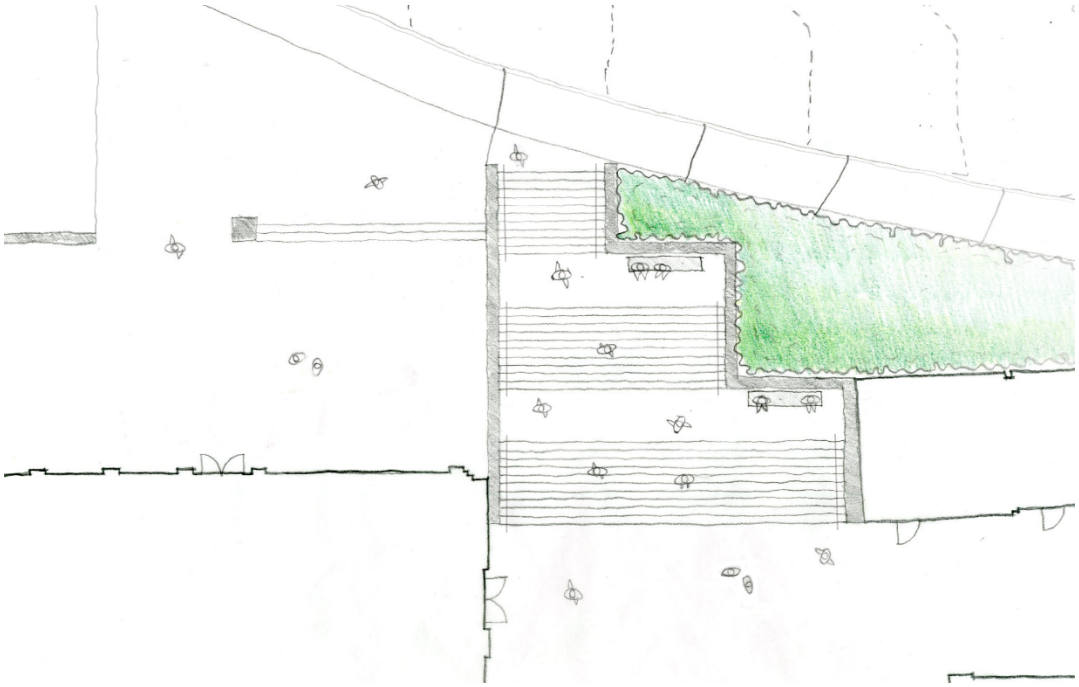
occupied historically. At the same time, future uses will require flexibility, adaptability, and comfort. The scale of the outdoor spaces has been studied to provide a varied degree of enclosure and intimacy. The client's intent is to create spaces for small enterprises as well as larger outdoor events. The design accounts for necessary service and emergency vehicle access as well as an extensive utility system required by the program.

Entrances

- *Pedestrian building entrances shall be oriented towards streets whenever possible. Service entrances should be internal to the site with shared infrastructure whenever possible. Staff seek more emphasis and legibility of entrances, especially distinguishing retail/active uses from more private office and residential uses.*
    - Entrances to historic structures retain original openings with new entrances to enliven street, plazas, and Narrow Alley at embankment along Fore Street.
- *Staff support the treatment of the Connector Road as a B-street with less activity and engagement to the street. However, further evaluation and feedback should be provided regarding the orientation, emphasis, and legibility of the various entrances and their relationship to site and public way circulation for the whole site.*
    - It is our understanding that the Fore Street Connector is not an accepted City street.

Public Access Easement Design

- *The public easement through the site provides visual and physical connections to and through the site and to the public trail and waterfront. Design of the public easement entrance on Fore Street shall be revised to provide accessibility and increased viewing opportunities in that location, as well as enhanced streetscape treatment for the public to appreciate and experience the historic building complex and the waterfront. Staff suggest equal accommodation/universal design of the easement to the extent possible.*
    - The design of the entrance at Fore Street is undergoing review and development in response to comments from the Historic Preservation and Planning Boards. The following sketch was presented to City Staff during a review meeting on December 18, 2019. This concept will be further explored with both boards during upcoming workshops. Updates to the stair configuration will be provided as part of future plan set submissions to the City.



- *The landscape placement should relate to sight lines and desire lines through the site. It appears some of the trees and landscaping might interfere with natural movements through this public space.*
    - The lines of travel were considered heavily in determining tree placement. The design team is available to meet with staff to more specifically review the trees in question.
- *The benches/seating opportunities should be designed to orient to circulation and viewing in both sun and shade conditions.*
    - Fixed seating is located to account for circulation, views, and proximity to the functions within the adjacent buildings. The design leaves areas of the site open for moveable/seasonal furniture to allow maximum flexibility of use.

Water's Edge

- *The MDP successfully meets the B6 design criteria regarding the water's edge. Future coordination will be required to integrate the design of the public and private waterfront properties in a way that is seamless and creates an enhanced public experience of the trail and waterfront access.*
    - Noted.
- *Consideration shall be given to the pedestrian level facades, buffers, and other design techniques that shall be utilized to transition between the waterfront and the upland development. The interaction with the trail is a critical public-facing component of the site plan. Staff are concerned about the functional/back-of-house components of buildings facing towards this well-used trail.*
    - Building 12 will be reconstructed adjacent to the rail and trail and the building will be visible from all sides. There is a planting area screening the building service area from the trail. The remainder of the space facing the trail is an outdoor dining terrace for the restaurant within. This area is enclosed by a wood fence and gate as well as robust plantings to screen from view. There is a trash enclosure on the west side of Building 12 and its placement and treatment was preferred by the Historic Preservation Board.

- *Additional screening may be desired due to the proximity to the trail, though the impact of 10 parking spaces is not of high concern to staff.*
    - Noted.
- *What is the site treatment of the future phases as they relate to the trail? What is the experience of those vacant areas. How will those interfaces be treated in the event that future phases are not built?*
    - The portion of the site described as Block 3 in the approved Master Development Plan is intended to function as a space for a wide variety of uses (open air markets, a food truck venue, or potentially a skating rink). To support these various uses, the block will be paved with 2" binder course. The north and east edges will be landscaped, and large planters will be utilized to help add vegetation while maintaining flexibility for the various programs. Undeveloped areas to the east of Block 3, outside the limits of the project, will remain as existing conditions.
- *Staff request more information about the elevations and views of the buildings from the trail.*
    - Elevations of buildings from the trail are generally unaltered although restored to historic appearance. Building 6B will have more doorways on south façade.

Comments from Jeff Tarling from November 25, 2019 email:

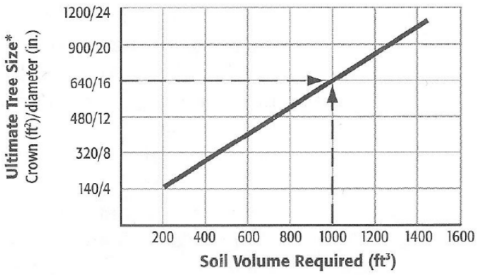
Landscape Theme

- *We often see a wide variety of trends for site planning projects, 58 Fore Street since it is such a large, prominent space on the Portland Waterfront would like to share some desired concepts. Too often we see trees and landscape that can be 'anywhere USA', we know the project team also wants to reflect a vibrant site that reflects or identifies 'Portland Maine'. In the quick view of the proposed plan we do see the inclusion of native plants, Nyssa, Red Maple, Amelanchier for example - which is good. Our recommendation would be to strengthen that effort to the extent possible. 'Groves' of plants (trees & shrubs) where appropriate vs single trees, we note the existing line of Grey Birch near the MNGRR and the inclusion of Grey Birch on the proposed plan. Nearby at the Ocean Gateway the island of Amelanchier and Blueberry has been an attractive, low maintenance landscape feature that speaks 'Maine'. Thus trees, shrubs and herbaceous plant material that are native and conducive to the shoreline are encouraged.*
    - The plant palette is created from an informal survey of the plants currently growing along the coastline of Portland and the nearby islands. When space allows for trees, shrubs, and groundcovers, they will be grouped in ways similar to how they occur naturally.

Tree and Landscape

- *Root Zone and protection measures, as the project design evolves and is refined we would like to see measures included to ensure that the plants have adequate root zone space to grow and protection measures like low granite curbing to protect planting spaces from deicing salts and compaction. Thoughtful approaches to winter snow & ice management, where does the snow get plowed to and the impact of winter to the landscape planned in. The proposed landscape plan calls for several larger, 4-5" caliper trees which to be successful needs designed in soil volume, (see below recommendations) and the project should have space available if prioritized.*

SOIL VOLUME FOR TREES



* The ultimate tree size is defined by the projected size of the crown and the diameter of the tree at breast height.

Note
For example, a 16 in. diameter tree requires 1000 cu ft of soil.

- The planting design includes the use of a pavement support system around the trees planted in the plazas. The design team is working with a representative from Green Blue Urban on the details of their RootSpace product.

  The trees planted along the vehicular travel lanes are in 8' wide planting beds with 48" of soil and a stone curb to keep salt and debris from washing into the area.

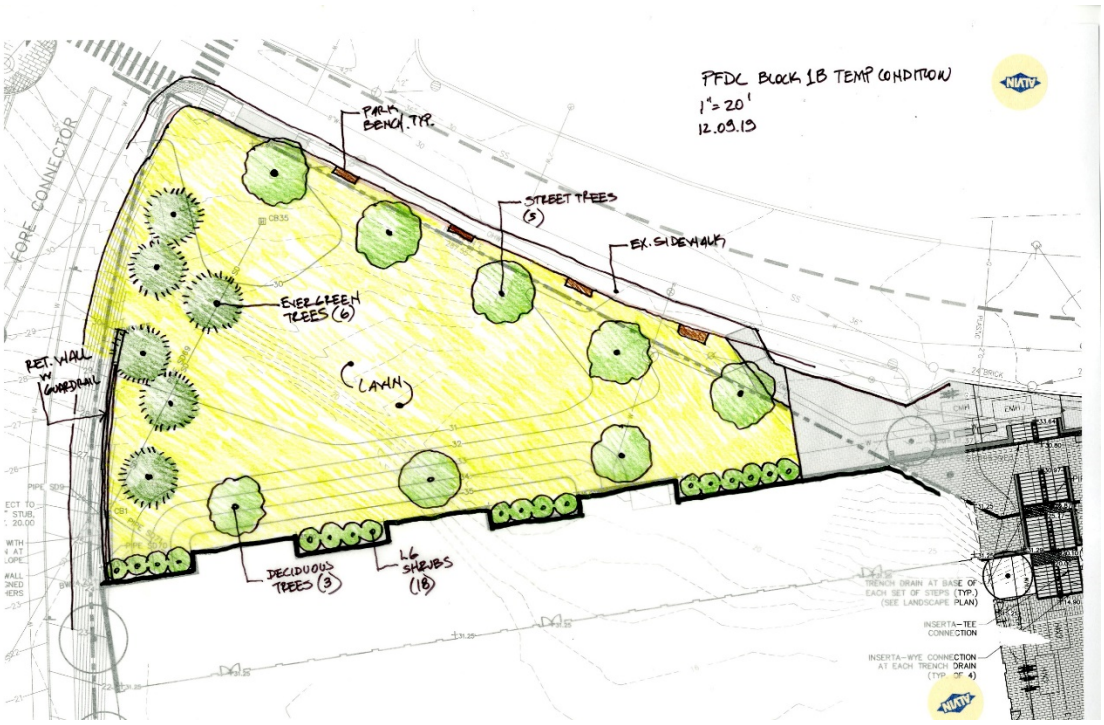
  An automated irrigation system will be used throughout the project.

Stormwater / Green Infrastructure

- *Will the project be using any stormwater green infrastructure as part of their plan?*
  - The proposed project will utilize two subsurface detention and treatment systems for stormwater management. The proposed stormwater management system meets stormwater design standards, as discussed above.

Fore Street Streetscape

- *We should evaluate the best treatment for the Fore Street edge. Unsure of underground & overhead utilities, sidewalk width and grading. More info is needed.*
  - The design for the Fore Street edge currently includes groundcover plantings with small trees to account for the overhead electric lines. The addition of a guardrail and fence are being studied and will be updated on landscape plans provided in January.
  - As discussed during the previous Planning Board Workshop, PFDC has committed to providing additional plantings, benches, and site features at the corner of Fore Street and the Connector, in the case that the Building 1B development is not initiated within a certain time period after issuance of the Building 1A certificate of occupancy. A sketch of the future landscape improvements is included below for reference.



The PFDC team has also received comments regarding lighting for the development. We appreciate the time City staff has spent reviewing the lighting plans, and we are in the process of responding to those items discussed during our meeting on December 10, 2019. These lighting responses will be incorporated in the updated plans early January.

We have also received comments from Christian Roadman dated December 13, 2019. The PFDC team are reviewing these comments and will provide a response as part of our future submission. If you have any questions or require additional information, please do not hesitate to contact me at (207) 558-3763 or by email at lswett@woodardcurran.com.

Sincerely,

WOODARD & CURRAN INC.

Lauren Swett

Lauren Swett, PE
Technical Manager

Denise Cameron

Denise Cameron
Project Manager

GORRILL PALMER

707 Sable Oaks Drive, Suite 30
South Portland, Maine 04106
207.772.2515

Response to Comments
Phase 1 | Portland Foreside Combined Blocks
Portland, Maine
JN 3138.03

Date:	December 20, 2019
Subject:	Response to City Comments Phase 1 | Portland Foreside Combined Blocks – Portland, Maine
To:	Christian Roadman, City Planner
From:	Randy Dunton and Emily Leighton, Gorrill Palmer

Gorrill Palmer (GP) is pleased to provide responses to the review comments provided by Mr. Tom Errico of TYLin, Mr. Mike Tremblay of the City of Portland, and Mr. Bruce Hyman of the City of Portland, summarized in the Planning and Urban Development Department Memorandum dated November 21, 2019, regarding the Phase 1 | Portland Foreside Combined Blocks project. These comments are associated with the Level III Phase 1 Site Plan that PFDC submitted to the City of Portland for Phase 1 on November 8, 2019. Additional comments were received at a meeting with City Staff held on December 18, 2019. For ease of review, each of the City's comments has been repeated below in **Bold** followed by our response.

Comment / Responses

Comments from Tom Errico:

Comment: "In conjunction with the Master Development Plan approval the applicant was issued a MaineDOT Traffic Movement Permit (TMP) for the full buildout of the project. The applicant has conducted a traffic assessment for the current phase and my initial conclusion is that trip generation levels are under the TMP permitted trip bank for the site. I would note that I continue to review methods for the trip generation estimate."

Response: Comment acknowledged. Please note that the trip generation was calculated using the same methodology that was approved when obtaining the TMP for the full buildout of the project.

Comment: "I have not reviewed the Transportation Demand Management Plan (TDM) provided for the project but would note that the trip generation analysis for the project assumes a "multimodal" (walk, bike, transit, carpool) reduction of 18% and thus the TDM plan should reflect strategies and targets accordingly."

Response: GP contacted Tom Errico for additional clarification on this comment. This multimodal reduction of 18% is based on existing Census data for the project Tract and has been used in several projects approved by the City. This reduction accounts for existing multimodal use and is not a TDM

goal, since it is anticipated that this percentage of the trip generation will not use single occupant vehicles, consistent with existing behaviors in this area of the City.

Comment: "The application indicates the project will include a new Events Space and that traffic levels are not expected to change from prior occupancy given that historically events have been held at the site. I would like to fully understand both historic and future event programs before supporting the conclusion that no additional new traffic is expected."

Response: A memo will be provided to the City, under separate cover, detailing the previous events that were held on the site. The future events are proposed to be the same events, or events that are similar in nature, thus resulting in no increase in site generated traffic. It should be noted that the existing event space on the site is approximately 100,000 sf and the proposed event space on the site is 17,000 sf, which is a significant reduction in total event area.

Comment: "The application notes a parking demand estimate for the site of 159 parking spaces. The applicant should provide analysis in support of this estimate. I would note that the parking demand analysis shall be based on the most current best practice methods available and proposed TDM Plan Strategies."

Response: The parking demand has been revised since the previous submittal. The revised parking demand for the site is 385 spaces and is forecast to occur between 11:00 AM and 12:00 PM. The supporting materials are included as an attachment to this memo. The parking demand evaluation was completed using the same methodology that was approved during the Master Plan approval process.

Comments from Bruce Hyman:

Comment: "The TDM Plan is generally vague and weak on the types of actual programs/incentives that will be offered and in its commitments. This can be difficult at this stage but with at least one known larger office tenant/employer, more commitments can and should be provided in the plan. The city can provide examples of recent more robust TDM plans for review by the applicant team."

Response: A revised TDM Plan is being submitted with this memorandum (under separate cover). The Plan has been revised to include additional strategies that will be considered by tenants. A number of commitments have been made in this updated TDM. As tenants are confirmed, additional TDM commitments will be made and detailed further in revised TDM Plans.

Comments from Meeting on December 11, 2019:

Comment: Compare the number of employees in the Sunlife office to the ITE Trip Generation for their office.

Response: The Sunlife office is anticipated to accommodate 468 employees in their building. This number of employees is based on 384 parking spaces leased to Sunlife, with an 18% adjustment for other modes

of transportation. The ITE Trip Generation (no shared use or other modes reductions) is forecast to be 180 trip ends and 185 trip ends during the AM and PM peak hours respectively.

Comment: Recalculate the parking demand using ITE Parking Demand 5th Edition.

Response: The parking demand spreadsheet has been revised to use the 5th Edition of ITE. Based on the revised calculations with the 5th Edition, the parking demand is forecast to be 288 spaces. The previous parking demand was forecast to be 385 spaces, which was based on a combination of ITE 4th Edition and City Ordinance requirements. Based on ITE 5th Edition, the practical demand (considered 85% occupancy) is 338 spaces, which includes consideration for when the garage is considered full, as discussed in the previous memo. These numbers assume shared parking. If parking spaces are designated, the parking requirement would increase. Additionally, the following table summarizes the new bicycle parking demand based on City Ordinance requirements:

Bicycle Parking Summary

Use	Bicycle Parking Requirements
Parking Variables	333 Non-Residential Spaces*, 14 Units
Residential Bicycle Spaces	6
Non-Residential Bicycle Spaces	32
Total	**38**

*This is the practical demand of the non-residential uses which includes the shared use and other modes reductions as well as the 85% adjustment.

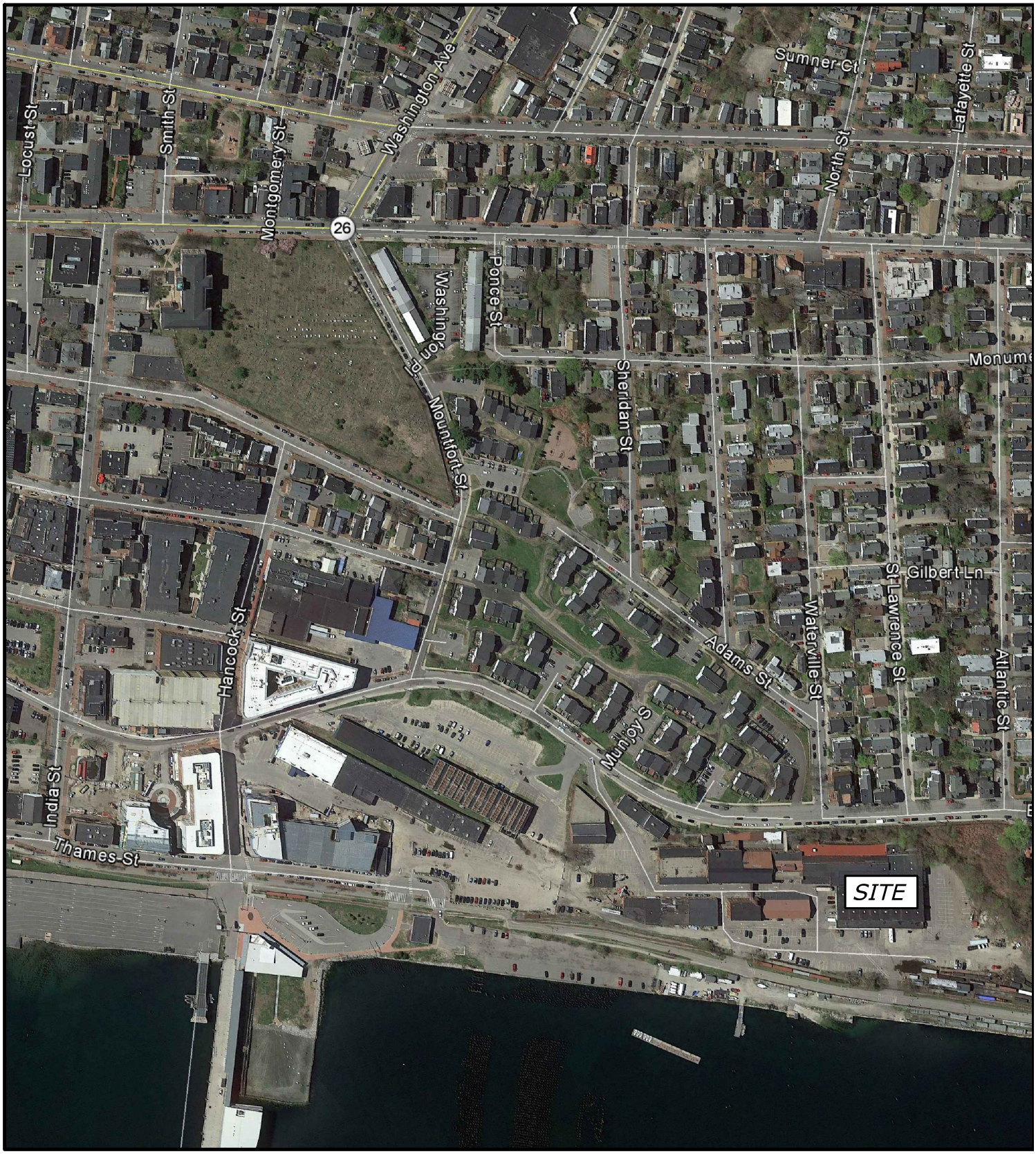
As shown in the table, the site will require 38 bicycle parking spaces to meet the City Ordinance Requirements for bicycle accommodations.

Comment: Expand the trip generation to show the Thames Street Extension and proposed Fore Street Connector. Increase the trip assignment on Waterville Street and toward the Eastern Prom. Compare the new trip assignment volumes to those in the MDP, assuming that the Fore Street Connector will be completed.

Attached are the revised trip assignment figures (Figure 3) as requested, as well as a site location map on Figure 1, predevelopment traffic volumes on Figure 2, existing event center trip assignment on Figure 4, and postdevelopment traffic volumes on Figure 5. Additionally, the trip assignment figures that were previously included in the MDP have been attached (Figures 10 and 11). We also understand that it was recently requested that the trip assignment be revised to **not** include traffic on the proposed Fore Street Connector. These will be provided at a later date under separate cover.

Site Location

Figure No. 1



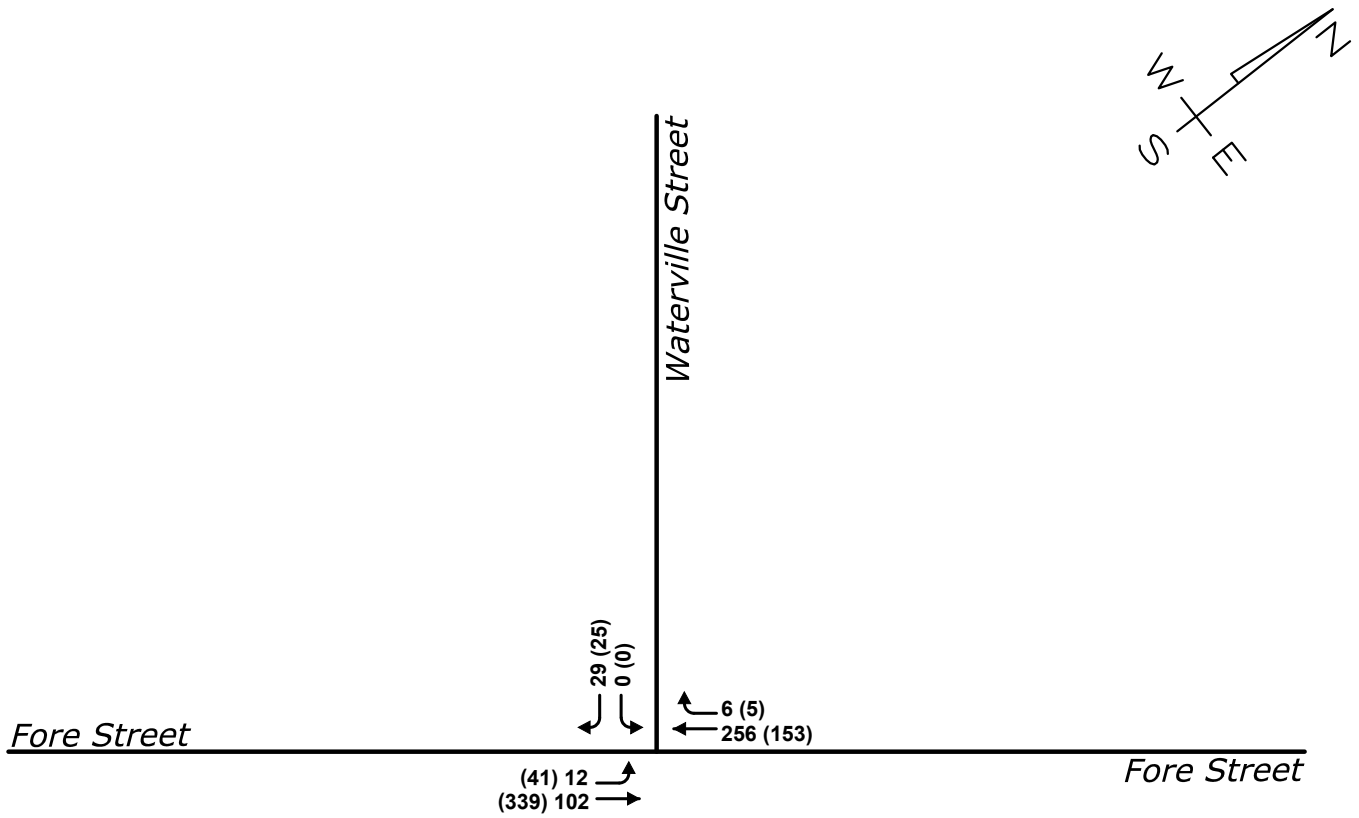
PORTLAND FORESIDE
PORTLAND, MAINE

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2027 Predevelopment DHV

Figure No. 2



XX = AM PEAK HOUR
(XX) = PM PEAK HOUR

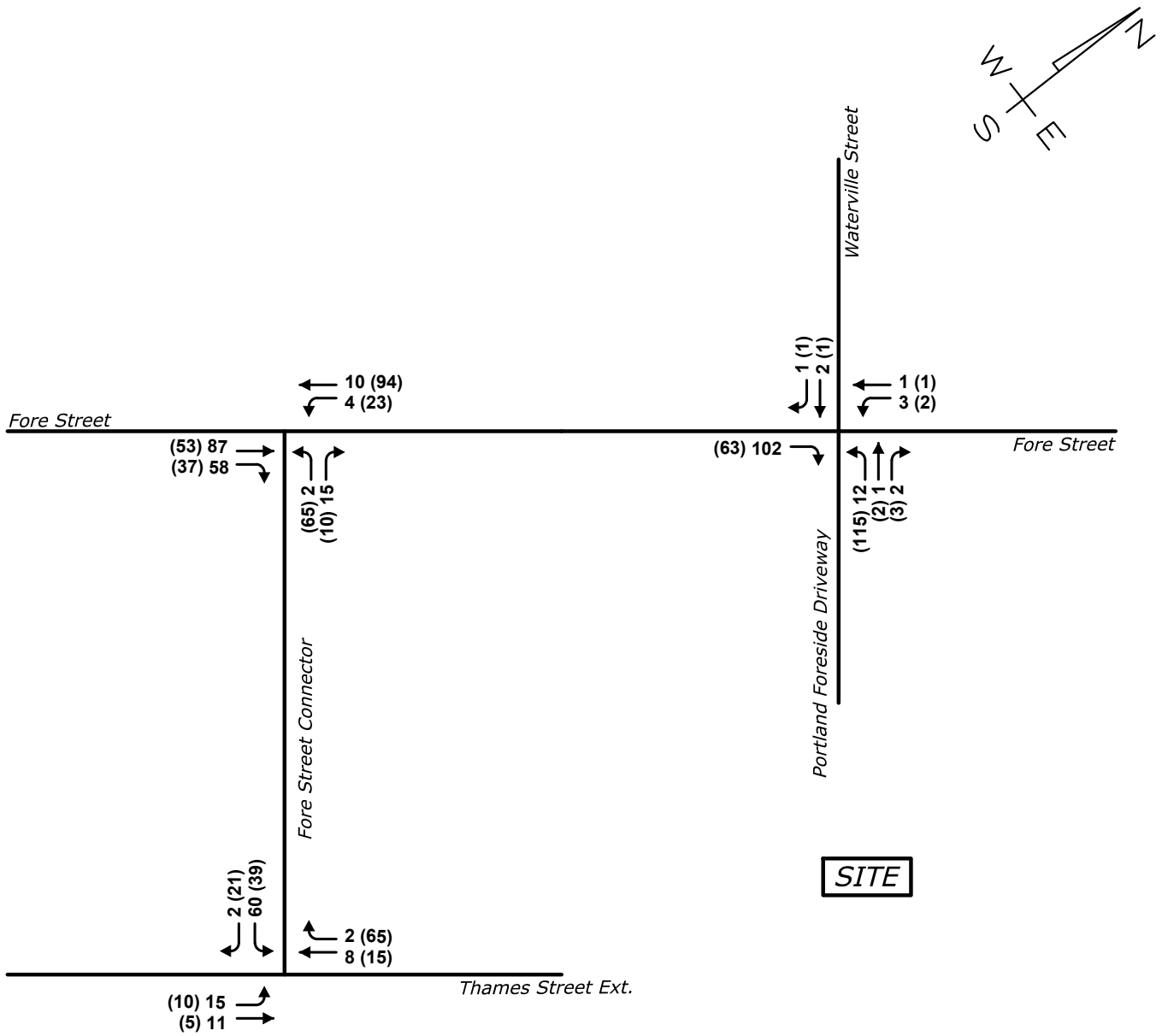
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Trip Assignment

Figure No. 3



	AM	PM
ENTER	178	110
EXIT	25	200
TOTAL	203	310

XX = AM PEAK HOUR
(XX) = PM PEAK HOUR

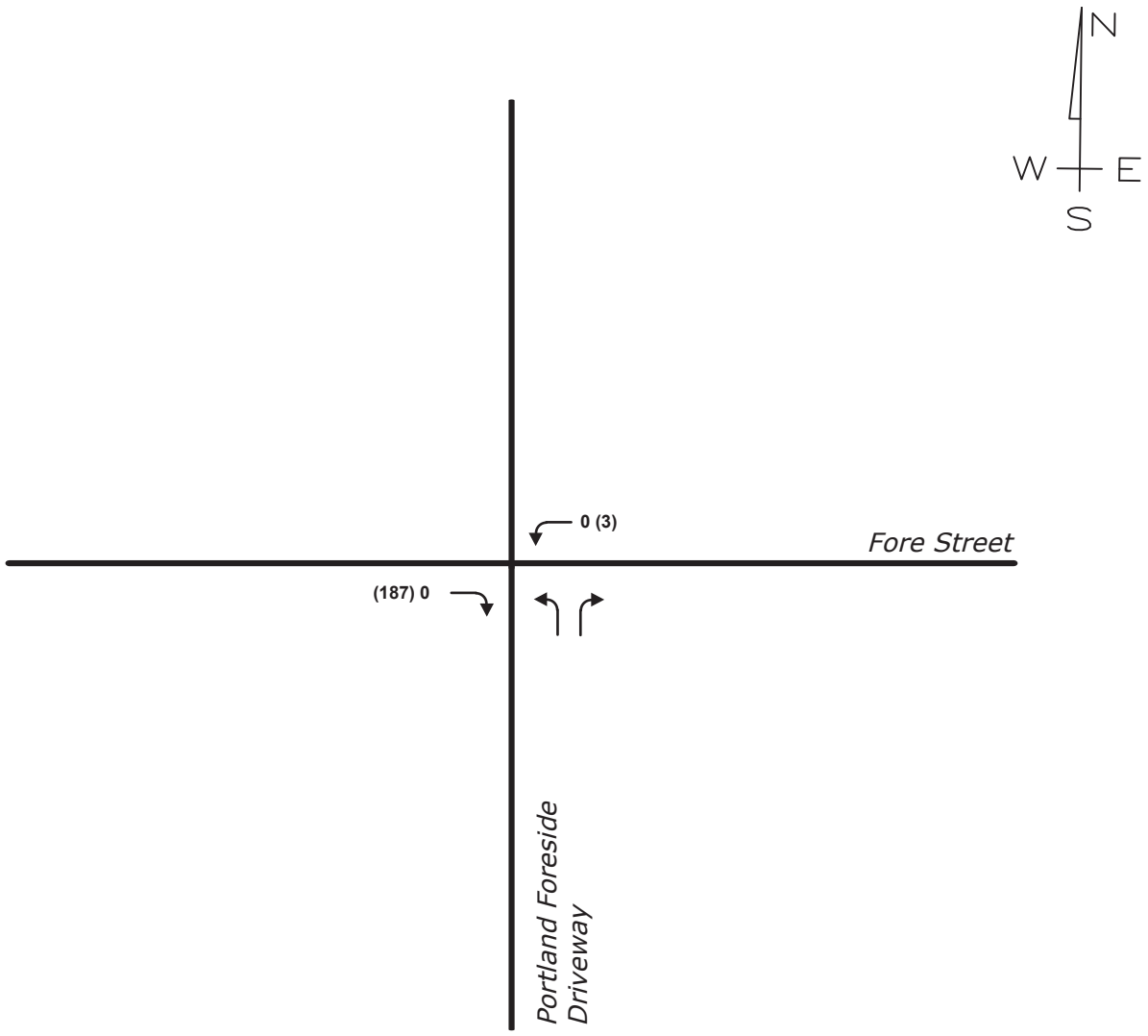
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Draft: TPG Date: DECEMBER 2019
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Event Space Trip Assignment

Figure No. 4



	AM	PM
IN	0	316
OUT	0	0
TOTAL	0	316

Note: This driveway expected to expierence 60% of overall traffic

XX = AM Peak Hour
(XX) = PM Peak Hour

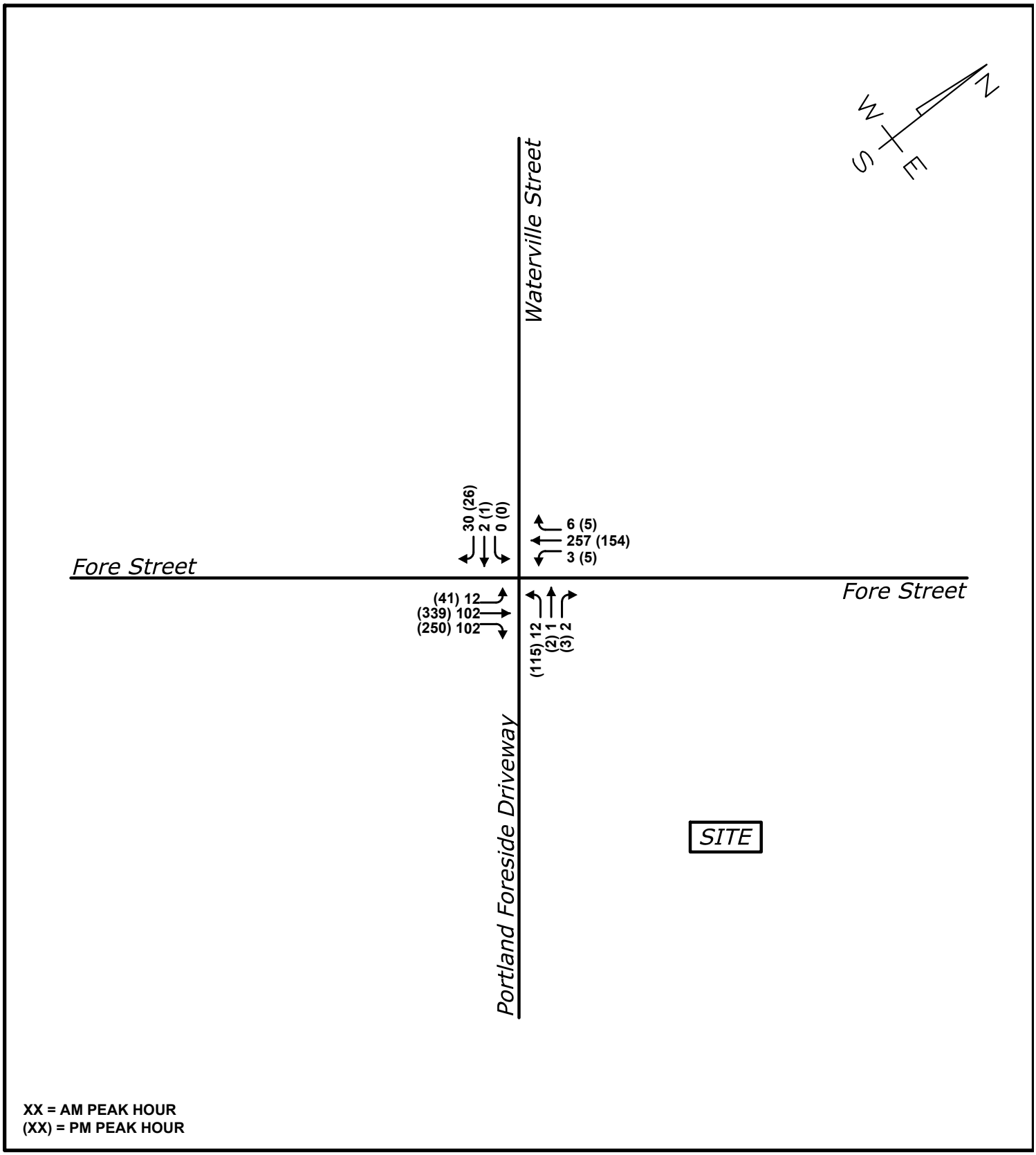
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Draft: Date: November 7, 2019
Checked: EAL File Name: 3138.03 Figures

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2027 Postdevelopment DHV

Figure No. 5



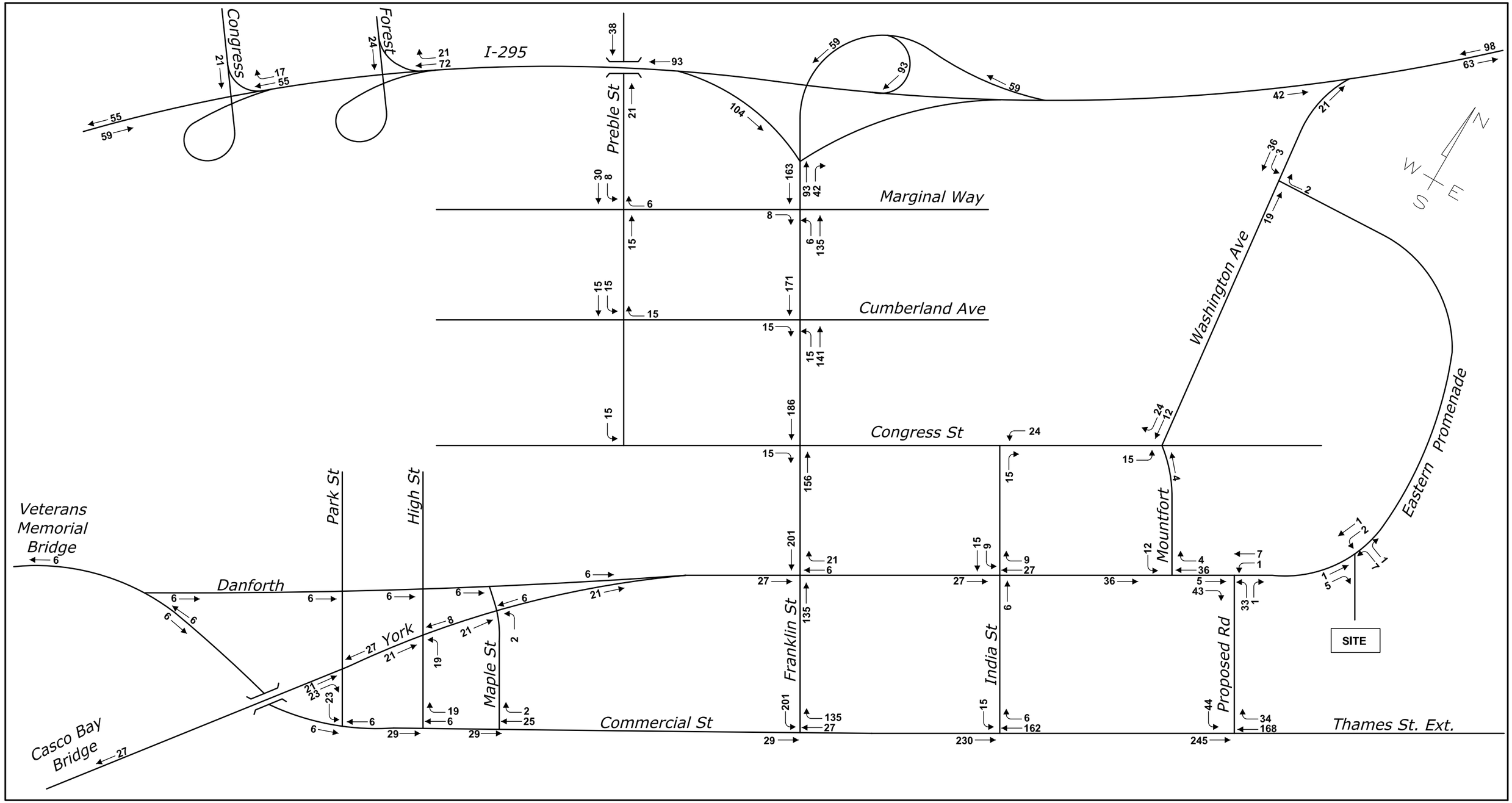
PORTLAND FORESIDE
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AM Trip Assignment

Figure No. 10



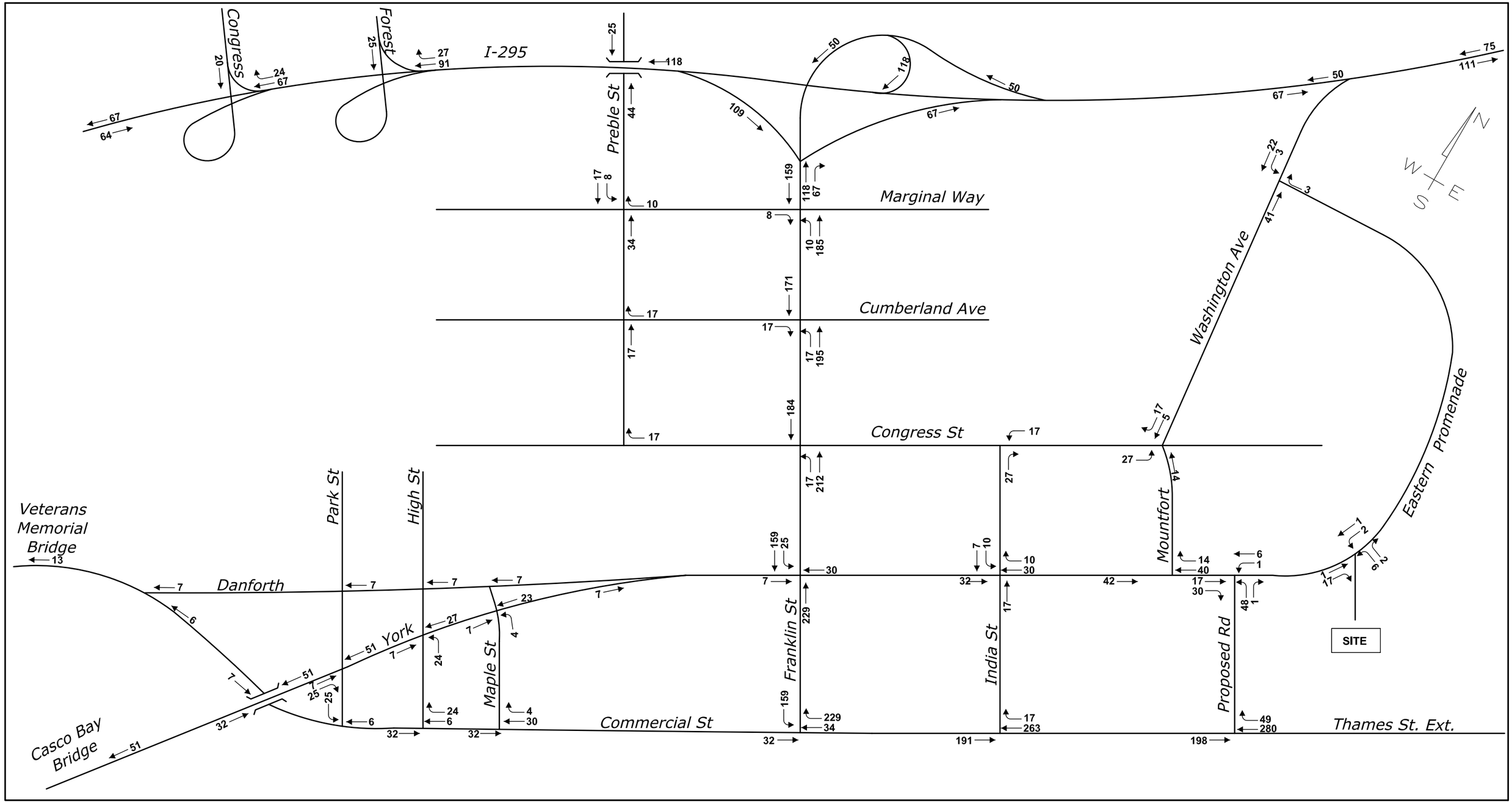
58 FORE STREET REDEVELOPMENT
PORTLAND, MAINE

Design: ET
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Scale: NONE
Date: DEC 2016
File Name: 3138-TRAFF3.dwg

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PM Trip Assignment

Figure No. 11



58 FORE STREET REDEVELOPMENT
PORTLAND, MAINE

Design: ET
Draft: LAN
Checked: RED
Scale: NONE
Date: DEC 2016
File Name: 3138-TRAFF3.dwg

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12-18-19 Combined Shared Parking Demand 5th Edition.xlsx

	Block 1A					Block 4					Building 12							Block 2							Shared Spaces Combined Subtotal			
	Block 1A		Block 1A		Total for Block 1A	Block 4		Block 4		Total for Block 4	Building 12		Building 12		Building 12		Total for Building 12	Block 2		Block 2		Block 2		Total for Block 2	Combined Subtotal	Mixed Use Reduction (1)	Non-Residential Other Modes Reduction (2)	Reduced Total
	Office (4)		Specialty Retail (5)			Specialty Retail (5)		Residential (3)			Office (4)		Restaurant (6)		Residential (3)			Office (4)		Restaurant (6)		Specialty Retail (5)						
Rate	2.39	2.39 / 1,000 sf	1.95	1.95 / 1,000 sf		1.95	1.95 / 1,000 sf	1.21	1.21 per Unit		2.39	2.39/1,000 sf	95.0570	10.52 / 1000 sf	1.21	1.21 per Unit		2.39	2.39 / 1,000 sf	95.0570	10.52/1000	1.95	1.95 / 1,000 sf					
Monthly Adjustment	1000		1000	1		1000	1		1		1000					1		1000				1000	1			14%	18.0%	
SQF or Unit	95,100	95100 sf	9,300	9300 sf		1,100	1100 sf	12	12 Units		3,200	3,200 sf	3,200	3,200 sf	2	2 Units		12,400	12400 sf	17,950	17950 sf	17,950	17950 sf					
6:00AM	0.00	0	0.00	0	0	0.00	0	0.90	13	13	0.00	0	0.00	0	0.90	2	2	0.00	0	0.00	0	0.00	0	0	15	2	2	11
7:00AM	0.13	30	0.00	0	30	0.00	0	0.77	11	11	0.13	1	0.00	0	0.77	2	3	0.13	4	0.00	0	0.00	0	4	48	7	7	34
8:00AM	0.48	109	0.15	3	112	0.15	0	0.56	8	8	0.48	4	0.00	0	0.56	1	5	0.48	14	0.00	0	0.15	5	19	144	20	22	102
9:00AM	0.88	200	0.32	6	206	0.32	1	0.45	7	8	0.88	7	0.00	0	0.45	1	8	0.88	26	0.00	0	0.32	11	37	259	36	40	183
10:00AM	1.00	227	0.54	10	237	0.54	1	0.40	6	7	1.00	8	0.00	0	0.40	1	9	1.00	30	0.00	0	0.54	19	49	302	42	47	213
11:00AM	1.00	227	0.71	13	240	0.71	2	0.37	5	7	1.00	8	0.20	7	0.37	1	16	1.00	30	0.20	38	0.71	25	93	356	50	55	251
12:00PM	0.85	193	0.99	18	211	0.99	2	0.36	5	7	0.85	7	0.51	17	0.36	1	25	0.85	25	0.51	96	0.99	35	156	399	56	62	281
1:00PM	0.84	191	1.00	18	209	1.00	2	0.36	5	7	0.84	6	0.56	19	0.36	1	26	0.84	25	0.56	106	1.00	35	166	408	57	63	288
2:00PM	0.93	211	0.90	16	227	0.90	2	0.37	5	7	0.93	7	0.40	13	0.37	1	21	0.93	28	0.40	76	0.90	32	136	391	55	60	276
3:00PM	0.94	214	0.83	15	229	0.83	2	0.43	6	8	0.94	7	0.27	9	0.43	1	17	0.94	28	0.27	51	0.83	29	108	362	51	56	255
4:00PM	0.85	193	0.81	15	208	0.81	2	0.45	7	9	0.85	7	0.27	9	0.45	1	17	0.85	25	0.27	51	0.81	28	104	338	47	52	239
5:00PM	0.56	127	0.84	15	142	0.84	2	0.55	8	10	0.56	4	0.39	13	0.55	1	18	0.56	17	0.39	74	0.84	29	120	290	41	45	204
6:00PM	0.20	45	0.86	16	61	0.86	2	0.66	10	12	0.20	2	0.71	24	0.66	2	28	0.20	6	0.71	134	0.86	30	170	271	38	42	191
7:00PM	0.11	25	0.80	15	40	0.80	2	0.73	11	13	0.11	1	1.00	34	0.73	2	37	0.11	3	1.00	189	0.80	28	220	310	43	48	219
8:00PM	0.00	0	0.63	11	11	0.63	1	0.77	11	12	0.00	0	0.97	33	0.77	2	35	0.00	0	0.97	183	0.63	22	205	263	37	41	185
9:00PM	0.00	0	0.42	8	8	0.42	1	0.86	12	13	0.00	0	0.00	0	0.86	2	2	0.00	0	0.00	0	0.42	15	15	38	5	6	27
10:00PM	0.00	0	0.15	3	3	0.15	0	0.92	13	13	0.00	0	0.00	0	0.92	2	2	0.00	0	0.00	0	0.15	5	5	23	3	4	16
Dedicated spaces	0.00	0	0.00	0	0	0.00	0			0	0.00	0	0.00	0			0	0.00	0	0.00	0	0.00	0	0				

(1) Based on the results from the NCHRP 684 Internal Trip Capture Estimation Tool

(2) Based on Commute to Work data from the 2009-2013 ACS by Census Tract for the City of Portland provided by GPCOG

(3 Time of Day distrubution for Dense Multi-use Urban, Rate for General Urban/Suburban

(4) Time of day distribution and rate based on General Urban/Suburban

(5) Time of day distrubution and rate based on Shopping Center, General Urban/Suburban, weekday (non-December)

(6) Time of day distrubution and rate based on Quality Restaurant, General Urban/Suburban, weekday (Monday-Thursday)

Lauren Swett

From: Dennis, Jeff <Jeff.Dennis@maine.gov>
Sent: Thursday, December 19, 2019 3:10 PM
To: Lauren Swett
Subject: RE: Chapter 500 Channel Protection

Yes. Channel protection storage is not required in this instance.

Jeff

Jeff Dennis, Biologist
Watershed Management Unit
Division of Environmental Assessment
Maine Department of Environmental Protection
State House Station #17
28 Tyson Drive, Augusta, ME 04333
Phone: 207-215-6376
Fax: 207-287-7826
jeff.dennis@maine.gov

From: Lauren Swett <lswett@woodardcurran.com>
Sent: Thursday, December 19, 2019 3:04 PM
To: Dennis, Jeff <Jeff.Dennis@maine.gov>
Subject: Chapter 500 Channel Protection

EXTERNAL: This email originated from outside of the State of Maine Mail System. Do not click links or open attachments unless you recognize the sender and know the content is safe.
Hi Jeff,

Thanks for discussing this today relative to the 58 Fore Street project.

My understanding is that a channel protection volume is not required here, as we are discharging to the Fore River. I will refer the City and their reviewer to the following section of Maine DEP Chapter 500 which implies that channel protection volume would not be necessary due to the nature of the resource:

> (2) **Treatment requirements**. To meet the general standards, the applicant must demonstrate that a project's stormwater management system includes treatment measures that will provide pollutant removal or treatment, and mitigate for the increased frequency and duration of channel erosive flows due to runoff from smaller storms and potential temperature impacts, unless the Department determines that channel protection and/or temperature control are unnecessary due to the nature of the resource. This must be achieved by using one or more of the methods described in this Section as follows:

Let me know if that makes sense to you! We'll continue to keep in mind the conversion of open parking to covered parking – I think it does apply in pieces around the work we are doing now so we won't quantify it necessarily, but it will apply at a greater level in future phases when we cover open parking areas with further development. I look forward to seeing more on this as you're working through the details – I bet we can find some projects to apply it to!

Thanks again for your guidance on this.

Lauren

Lauren Swett, P.E.*
Technical Manager
Woodard & Curran
41 Hutchins Drive
Portland, Maine 04102
Phone: (207)558-3763 (direct)
(207)219-3591 (cell)
(800)426-4262 (office)
Email: lswett@woodardcurran.com

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M.ASCE
Chair, Leader Training Committee
American Society of Civil Engineers
http://regions.asce.org/leader-training-committee/



30' 0 30' 60'

BAR SCALE
1" = 30'
CHECK GRAPHIC SCALE BEFORE USING

NOT FOR CONSTRUCTION

41 Hutchins Drive
Portland, Maine 04102
800.426.4262 | www.woodardcurran.com

COMMITMENT & INTEGRITY DRIVE RESULTS

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REV	DESCRIPTION	DATE
	CHECKED BY: DLC	
	DRAWN BY: BDM	
	DESIGNED BY: DJS	

REDEVELOPMENT FIGURE

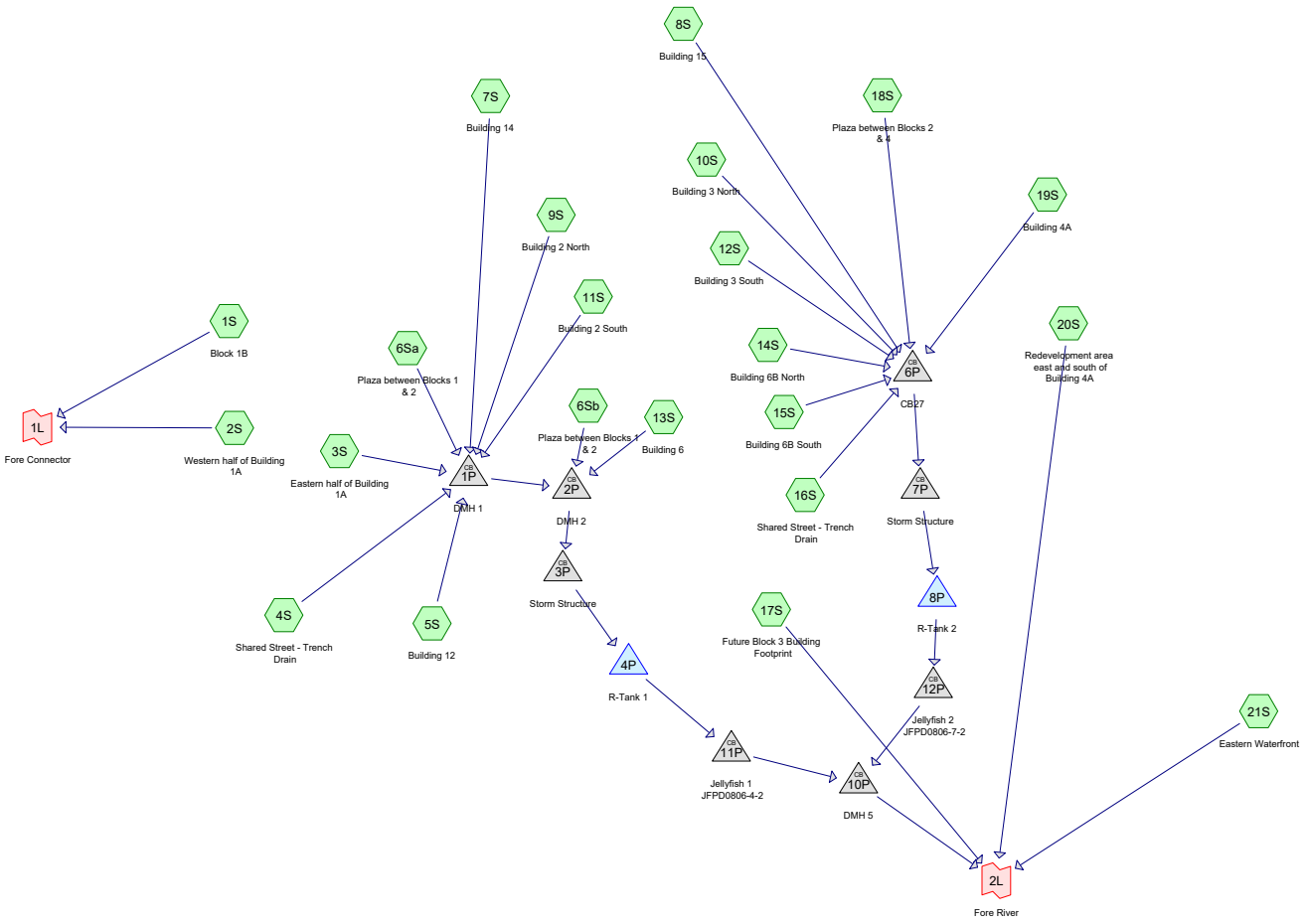
PORTLAND FORESIDE DEVELOPMENT CO.
PORTLAND, ME 04102

PHASE 1 SITE PLAN SUBMISSION

JOB NO.: 0227007
DATE: NOVEMBER 2019
SCALE: 1"=40'
SHEET: 1 OF 1

2

\\woodardcurran.net\shared\Projects\0227007.07 PFDC – 58 Fore Block 1\wip\Drawings\Phase 1 – Site Plan Submission\Stormwater Figures.dwg, Dec 04, 2019 - 10:58am



Routing Diagram for 07 - C. Phase 1 Model for City - HSGD Soils (ASHLEY TO PDF)

Prepared by Woodard Curran, Printed 12/20/2019

HydroCAD® 10.00-21 s/n 01204 © 2018 HydroCAD Software Solutions LLC

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: Block 1B Runoff Area=27,045 sf 29.55% Impervious Runoff Depth>0.17"
Tc=6.0 min CN=85 Runoff=0.09 cfs 0.009 af

Subcatchment2S: Western half of Runoff Area=17,090 sf 100.00% Impervious Runoff Depth>0.79"
Tc=6.0 min CN=98 Runoff=0.34 cfs 0.026 af

Subcatchment3S: Eastern half of Runoff Area=17,090 sf 100.00% Impervious Runoff Depth>0.79"
Tc=6.0 min CN=98 Runoff=0.34 cfs 0.026 af

Subcatchment4S: Shared Street - Trench Runoff Area=24,890 sf 82.54% Impervious Runoff Depth>0.56"
Tc=6.0 min CN=95 Runoff=0.37 cfs 0.027 af

Subcatchment5S: Building 12 Runoff Area=3,244 sf 100.00% Impervious Runoff Depth>0.79"
Tc=6.0 min CN=98 Runoff=0.06 cfs 0.005 af

Subcatchment6Sa: Plaza between Blocks Runoff Area=20,337 sf 94.84% Impervious Runoff Depth>0.71"
Tc=6.0 min CN=97 Runoff=0.37 cfs 0.027 af

Subcatchment6Sb: Plaza between Blocks 1 Runoff Area=3,122 sf 71.75% Impervious Runoff Depth>0.45"
Tc=6.0 min CN=93 Runoff=0.04 cfs 0.003 af

Subcatchment7S: Building 14 Runoff Area=2,572 sf 100.00% Impervious Runoff Depth>0.79"
Tc=6.0 min CN=98 Runoff=0.05 cfs 0.004 af

Subcatchment8S: Building 15 Runoff Area=4,507 sf 100.00% Impervious Runoff Depth>0.79"
Tc=6.0 min CN=98 Runoff=0.09 cfs 0.007 af

Subcatchment9S: Building 2 North Runoff Area=4,695 sf 100.00% Impervious Runoff Depth>0.79"
Tc=6.0 min CN=98 Runoff=0.09 cfs 0.007 af

Subcatchment10S: Building 3 North Runoff Area=2,212 sf 100.00% Impervious Runoff Depth>0.79"
Tc=6.0 min CN=98 Runoff=0.04 cfs 0.003 af

Subcatchment11S: Building 2 South Runoff Area=4,855 sf 100.00% Impervious Runoff Depth>0.79"
Tc=6.0 min CN=98 Runoff=0.10 cfs 0.007 af

Subcatchment12S: Building 3 South Runoff Area=2,326 sf 100.00% Impervious Runoff Depth>0.79"
Tc=6.0 min CN=98 Runoff=0.05 cfs 0.004 af

Subcatchment13S: Building 6 Runoff Area=3,304 sf 100.00% Impervious Runoff Depth>0.79"
Tc=6.0 min CN=98 Runoff=0.07 cfs 0.005 af

Subcatchment14S: Building 6B North Runoff Area=3,873 sf 100.00% Impervious Runoff Depth>0.79"
Tc=6.0 min CN=98 Runoff=0.08 cfs 0.006 af

Subcatchment15S: Building 6B South Runoff Area=2,512 sf 100.00% Impervious Runoff Depth>0.79"
Tc=6.0 min CN=98 Runoff=0.05 cfs 0.004 af

Subcatchment16S: Shared Street - Trench Runoff Area=8,931 sf 100.00% Impervious Runoff Depth>0.79"
Tc=6.0 min CN=98 Runoff=0.18 cfs 0.014 af

Subcatchment17S: Future Block 3 Runoff Area=9,998 sf 100.00% Impervious Runoff Depth>0.79"
Tc=6.0 min CN=98 Runoff=0.20 cfs 0.015 af

Subcatchment18S: Plaza between Blocks Runoff Area=20,458 sf 99.48% Impervious Runoff Depth>0.79"
Tc=6.0 min CN=98 Runoff=0.41 cfs 0.031 af

Subcatchment19S: Building 4A Runoff Area=69,274 sf 100.00% Impervious Runoff Depth>0.79"
Tc=6.0 min CN=98 Runoff=1.38 cfs 0.105 af

Subcatchment20S: Redevelopment area Runoff Area=4,759 sf 52.30% Impervious Runoff Depth>0.28"
Tc=6.0 min CN=89 Runoff=0.03 cfs 0.003 af

Subcatchment21S: Eastern Waterfront Runoff Area=86,899 sf 73.10% Impervious Runoff Depth>0.45"
Tc=6.0 min CN=93 Runoff=1.03 cfs 0.075 af

Pond 1P: DMH 1 Peak Elev=10.40' Inflow=1.39 cfs 0.103 af
21.0" Round Culvert n=0.013 L=61.0' S=0.0038 '/' Outflow=1.39 cfs 0.103 af

Pond 2P: DMH 2 Peak Elev=10.12' Inflow=1.49 cfs 0.111 af
21.0" Round Culvert n=0.013 L=31.0' S=0.0048 '/' Outflow=1.49 cfs 0.111 af

Pond 3P: Storm Structure Peak Elev=9.80' Inflow=1.49 cfs 0.111 af
15.0" Round Culvert x 3.00 n=0.013 L=4.0' S=0.0000 '/' Outflow=1.49 cfs 0.111 af

Pond 4P: R-Tank 1 Peak Elev=8.21' Storage=979 cf Inflow=1.49 cfs 0.111 af
21.0" Round Culvert n=0.013 L=4.0' S=0.0000 '/' Outflow=1.10 cfs 0.105 af

Pond 6P: CB27 Peak Elev=10.30' Inflow=2.28 cfs 0.173 af
24.0" Round Culvert n=0.013 L=22.0' S=0.0064 '/' Outflow=2.28 cfs 0.173 af

Pond 7P: Storm Structure Peak Elev=9.95' Inflow=2.28 cfs 0.173 af
15.0" Round Culvert x 3.00 n=0.013 L=4.0' S=0.0000 '/' Outflow=2.28 cfs 0.173 af

Pond 8P: R-Tank 2 Peak Elev=8.47' Storage=2,089 cf Inflow=2.28 cfs 0.173 af
24.0" Round Culvert n=0.013 L=4.0' S=0.0000 '/' Outflow=1.36 cfs 0.159 af

Pond 10P: DMH 5 Peak Elev=7.72' Inflow=2.43 cfs 0.264 af
30.0" Round Culvert n=0.013 L=83.1' S=0.0100 '/' Outflow=2.43 cfs 0.264 af

Pond 11P: Jellyfish 1 JFPD0806-4-2 Peak Elev=9.67' Inflow=1.10 cfs 0.105 af
Outflow=1.10 cfs 0.105 af

Pond 12P: Jellyfish 2 JFPD0806-7-2 Peak Elev=9.28' Inflow=1.36 cfs 0.159 af
Outflow=1.36 cfs 0.159 af

Link 1L: Fore Connector Inflow=0.43 cfs 0.035 af
Primary=0.43 cfs 0.035 af

Link 2L: Fore River

Inflow=3.42 cfs 0.357 af
Primary=3.42 cfs 0.357 af

Total Runoff Area = 7.897 ac Runoff Volume = 0.411 af Average Runoff Depth = 0.62"
14.85% Pervious = 1.173 ac 85.15% Impervious = 6.724 ac

Summary for Subcatchment 1S: Block 1B

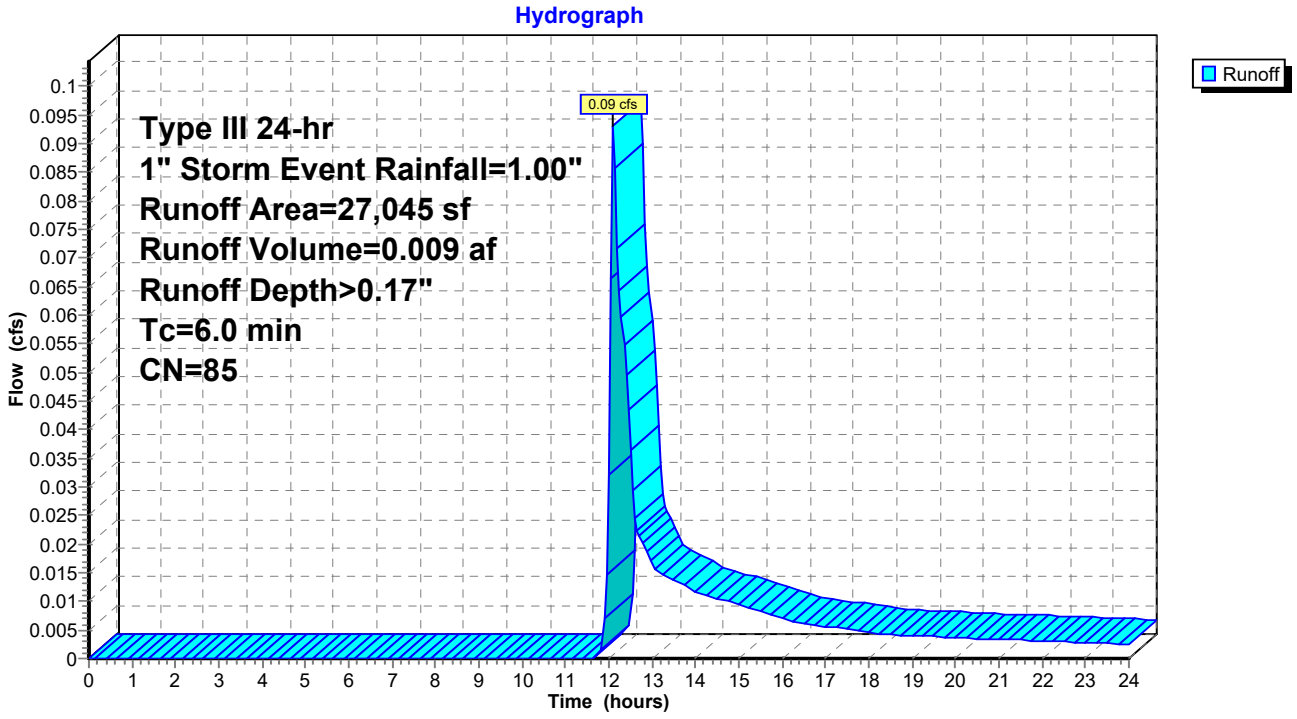
Runoff = 0.09 cfs @ 12.12 hrs, Volume= 0.009 af, Depth> 0.17"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	7,991	98	Impervious
	19,054	80	>75% Grass cover, Good, HSG D
	27,045	85	Weighted Average
	19,054		70.45% Pervious Area
	7,991		29.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1S: Block 1B



Summary for Subcatchment 2S: Western half of Building 1A

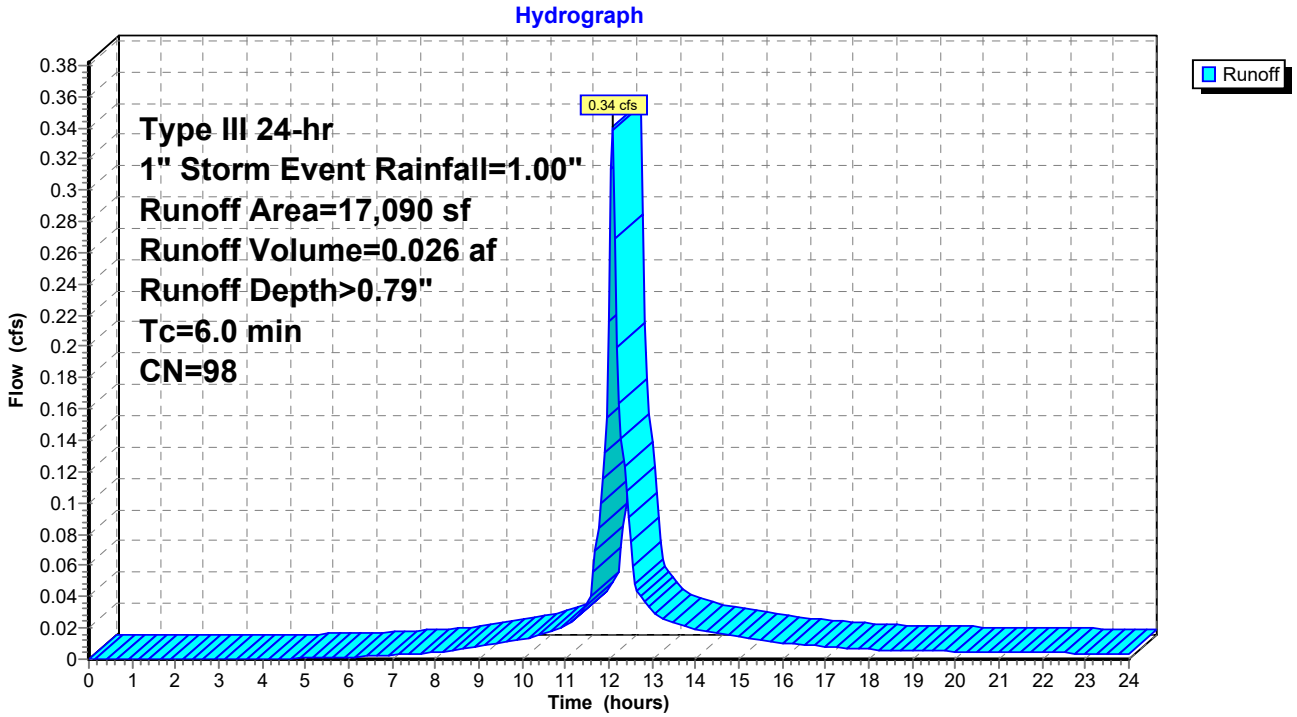
Runoff = 0.34 cfs @ 12.09 hrs, Volume= 0.026 af, Depth> 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	17,090	98	Roof
	17,090		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 2S: Western half of Building 1A



Summary for Subcatchment 3S: Eastern half of Building 1A

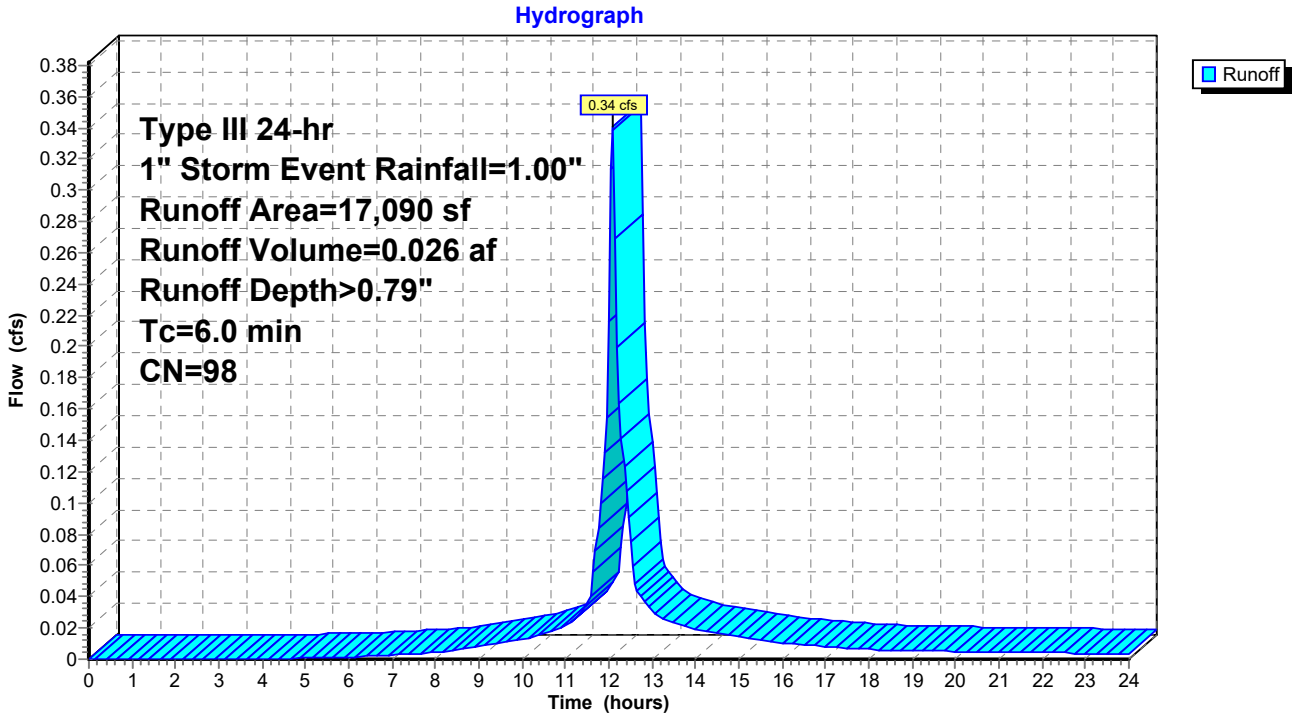
Runoff = 0.34 cfs @ 12.09 hrs, Volume= 0.026 af, Depth> 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	17,090	98	Roof
	17,090		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 3S: Eastern half of Building 1A



Summary for Subcatchment 4S: Shared Street - Trench Drain

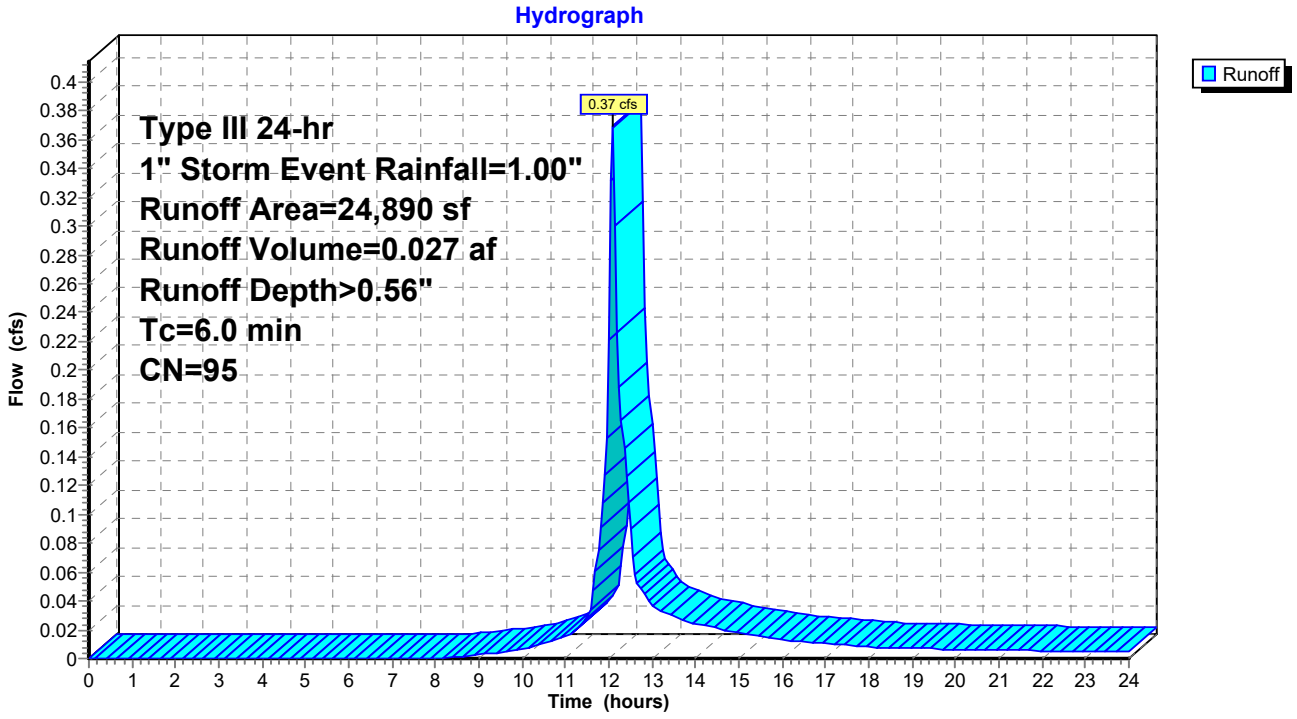
Runoff = 0.37 cfs @ 12.09 hrs, Volume= 0.027 af, Depth> 0.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
	4,345	80	>75% Grass cover, Good, HSG D
*	20,545	98	Impervious Shared Street and Plaza
	24,890	95	Weighted Average
	4,345		17.46% Pervious Area
	20,545		82.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 4S: Shared Street - Trench Drain



Summary for Subcatchment 5S: Building 12

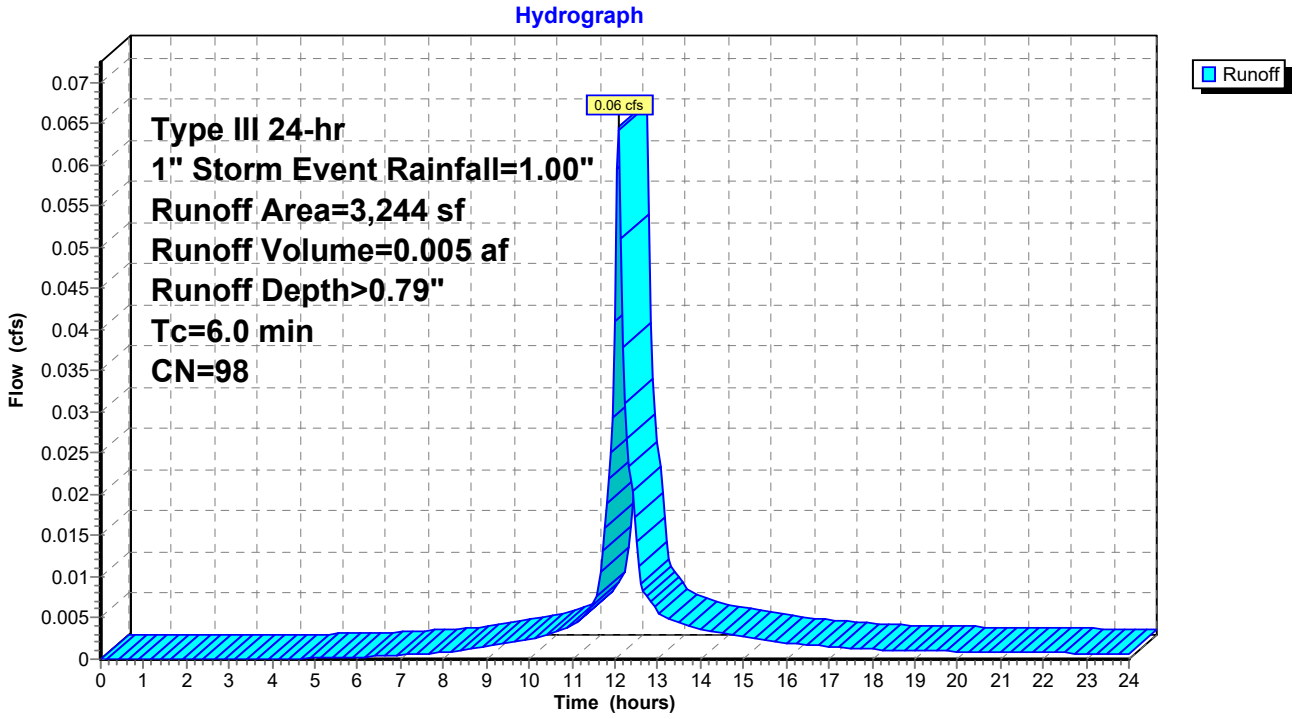
Runoff = 0.06 cfs @ 12.09 hrs, Volume= 0.005 af, Depth> 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	3,244	98	Roof
	3,244		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 5S: Building 12



Summary for Subcatchment 6Sa: Plaza between Blocks 1 & 2

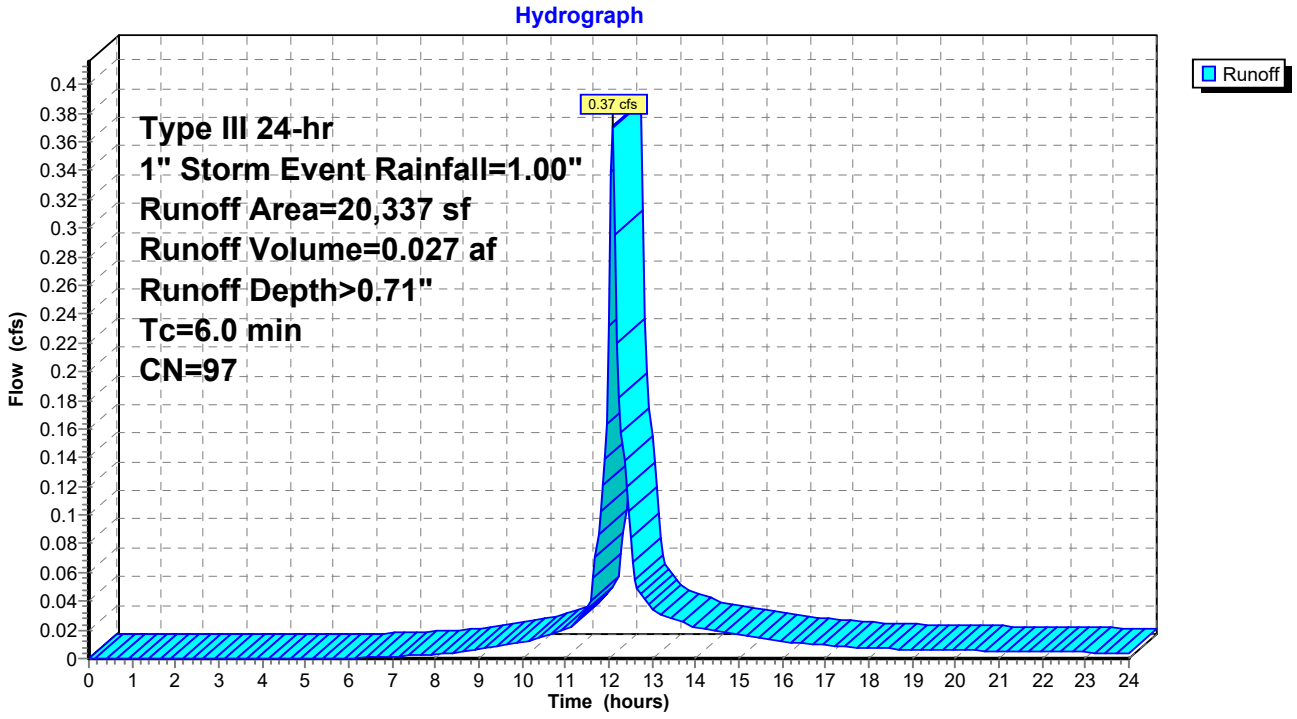
Runoff = 0.37 cfs @ 12.09 hrs, Volume= 0.027 af, Depth> 0.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	19,288	98	Impervious
	1,049	80	>75% Grass cover, Good, HSG D
	20,337	97	Weighted Average
	1,049		5.16% Pervious Area
	19,288		94.84% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 6Sa: Plaza between Blocks 1 & 2



Summary for Subcatchment 6Sb: Plaza between Blocks 1 & 2

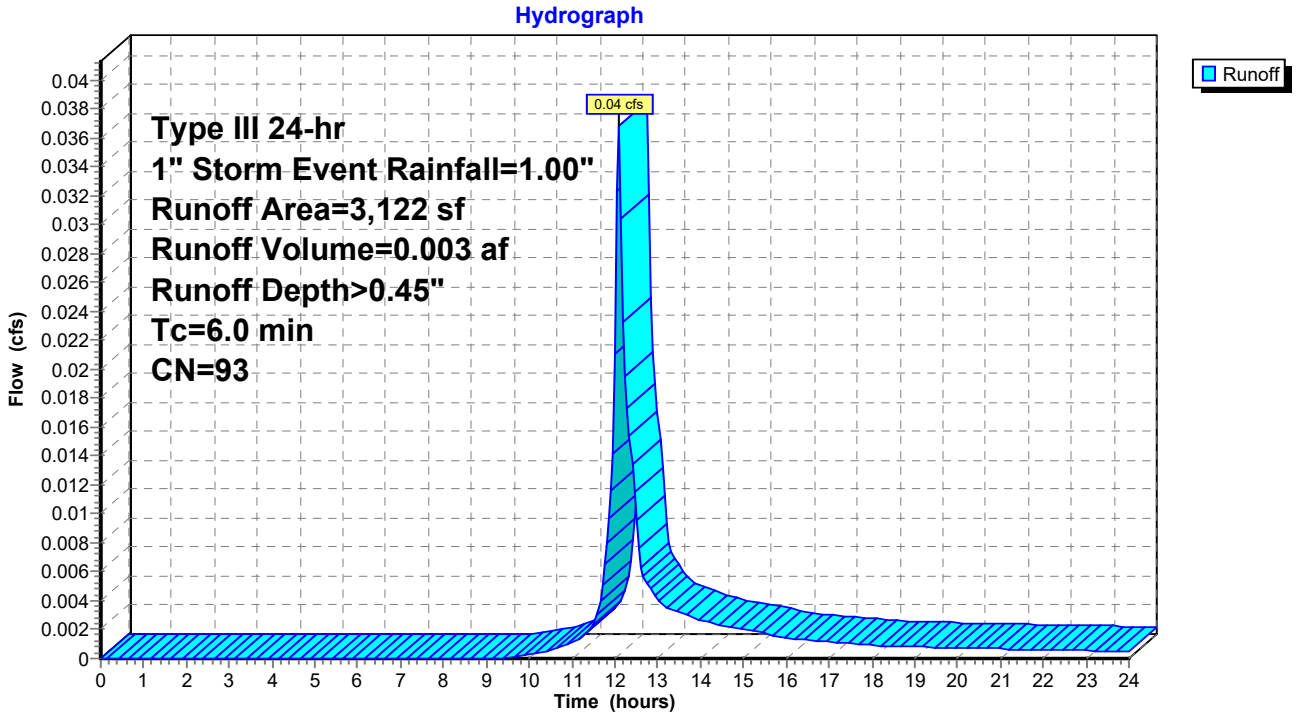
Runoff = 0.04 cfs @ 12.10 hrs, Volume= 0.003 af, Depth> 0.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	2,240	98	Impervious
	882	80	>75% Grass cover, Good, HSG D
	3,122	93	Weighted Average
	882		28.25% Pervious Area
	2,240		71.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 6Sb: Plaza between Blocks 1 & 2



Summary for Subcatchment 7S: Building 14

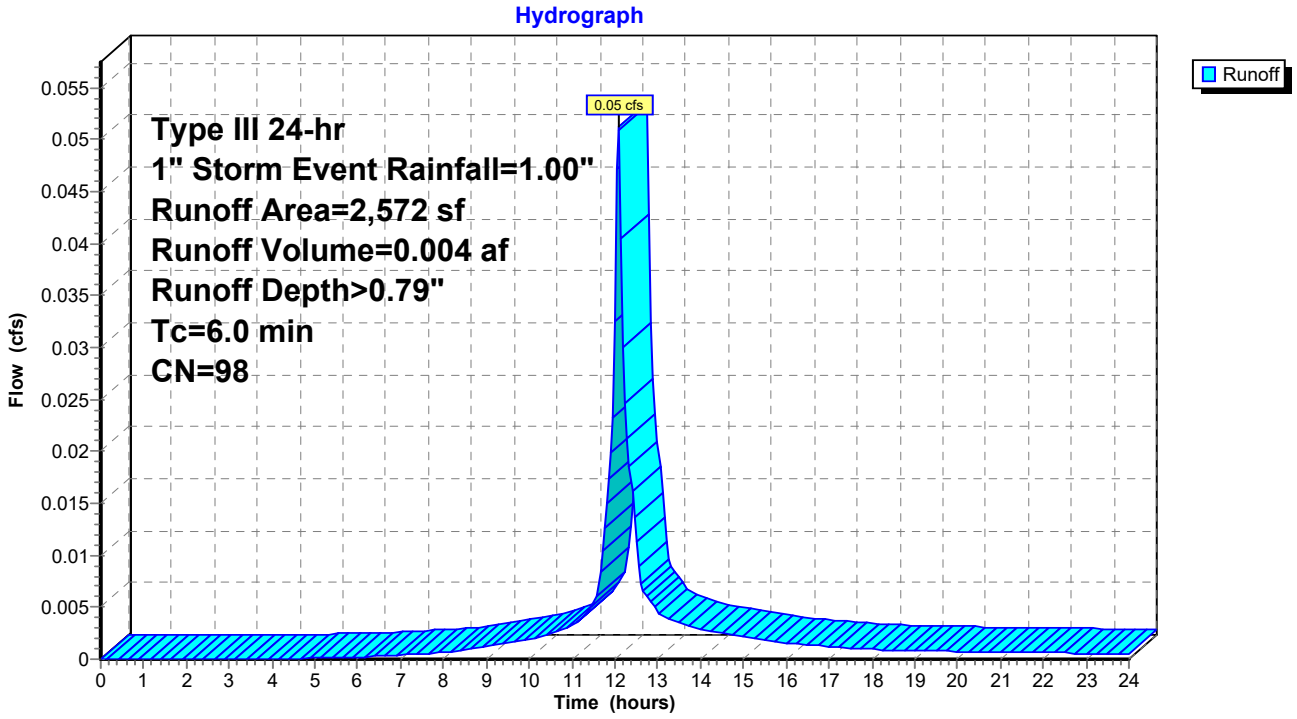
Runoff = 0.05 cfs @ 12.09 hrs, Volume= 0.004 af, Depth> 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	2,572	98	Roof
	2,572		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 7S: Building 14



Summary for Subcatchment 8S: Building 15

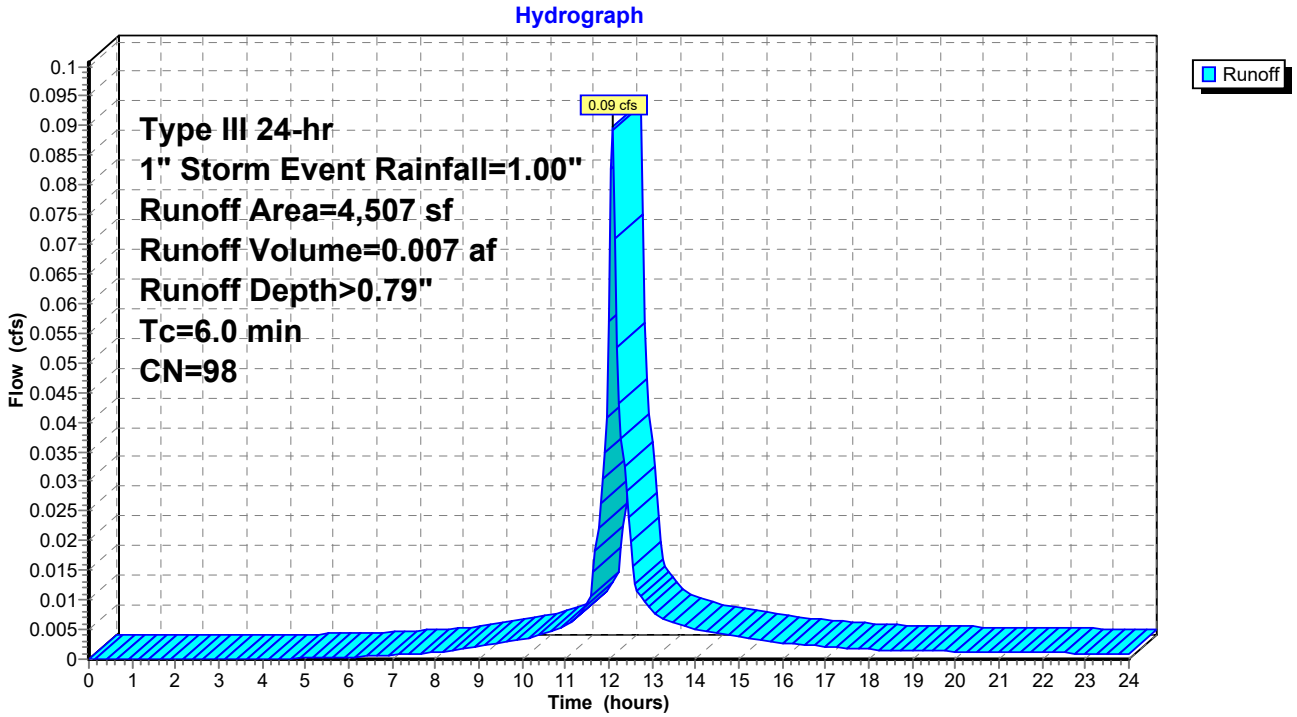
Runoff = 0.09 cfs @ 12.09 hrs, Volume= 0.007 af, Depth> 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	4,507	98	Roof
	4,507		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 8S: Building 15



Summary for Subcatchment 9S: Building 2 North

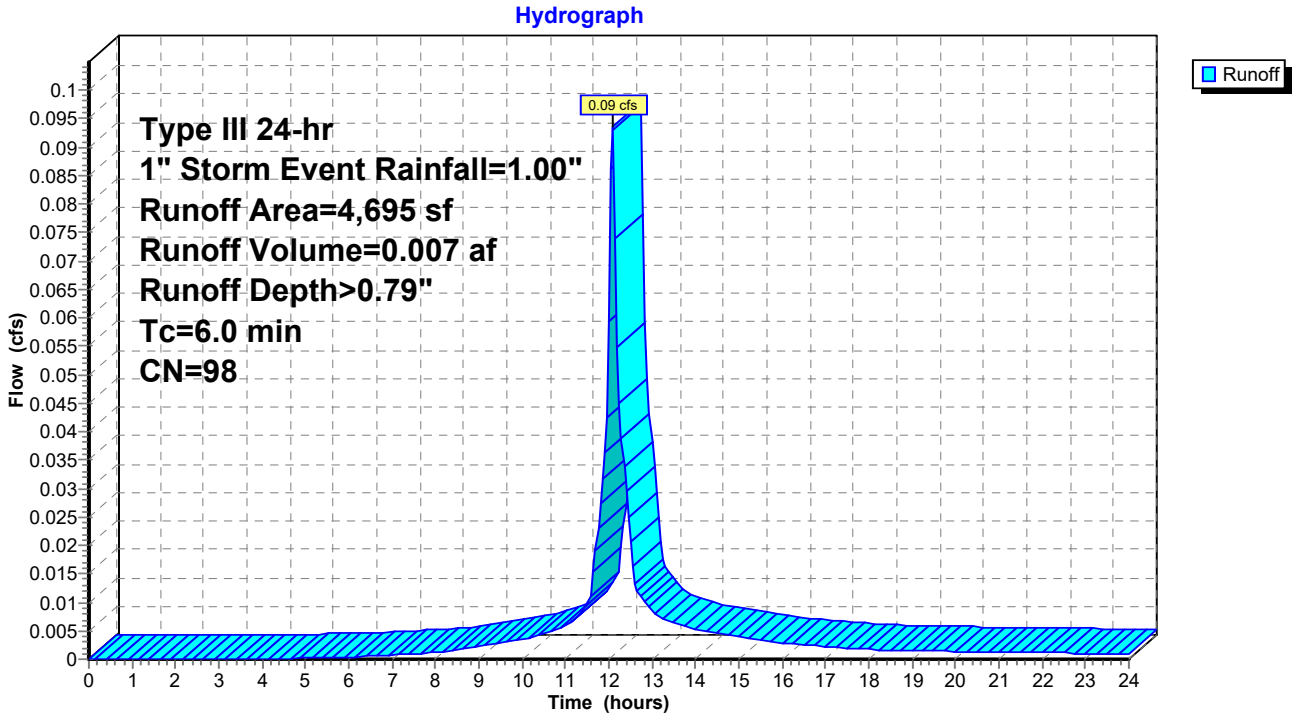
Runoff = 0.09 cfs @ 12.09 hrs, Volume= 0.007 af, Depth> 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	4,695	98	Roof
	4,695		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 9S: Building 2 North



Summary for Subcatchment 10S: Building 3 North

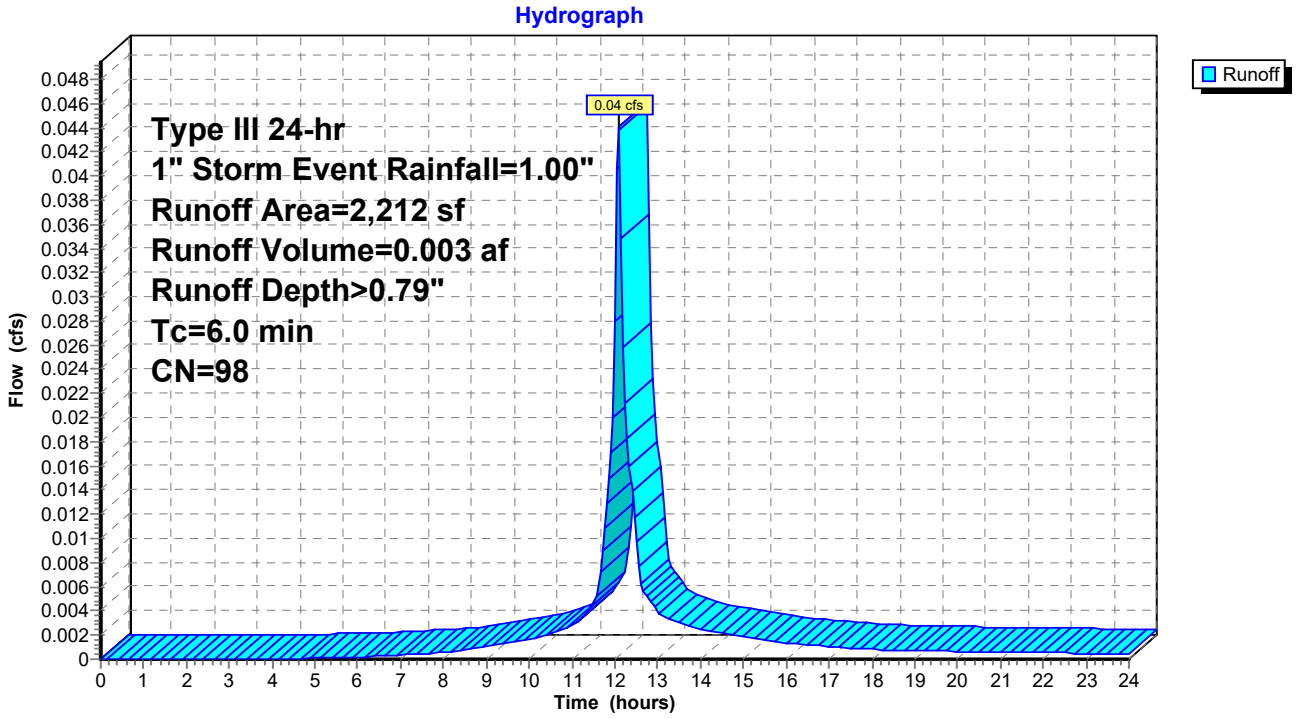
Runoff = 0.04 cfs @ 12.09 hrs, Volume= 0.003 af, Depth> 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	2,212	98	Roof
	2,212		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 10S: Building 3 North



Summary for Subcatchment 11S: Building 2 South

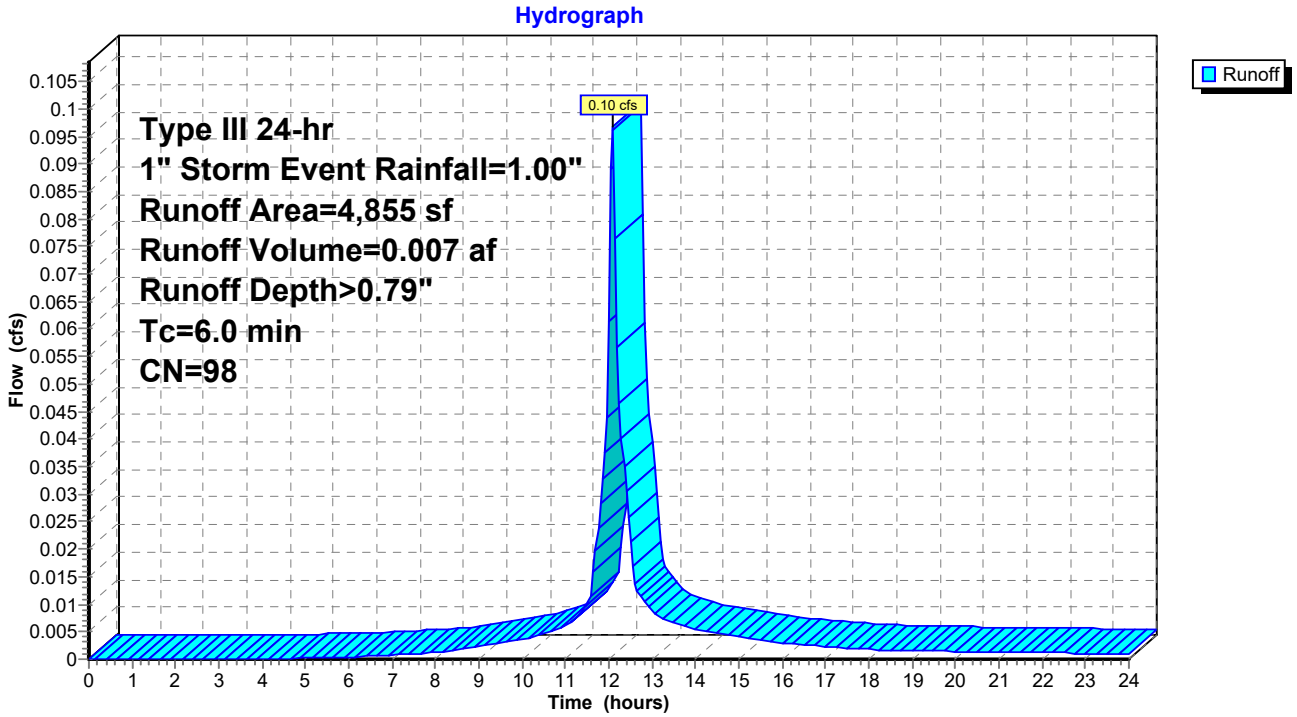
Runoff = 0.10 cfs @ 12.09 hrs, Volume= 0.007 af, Depth> 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	4,855	98	Roof
	4,855		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 11S: Building 2 South



Summary for Subcatchment 12S: Building 3 South

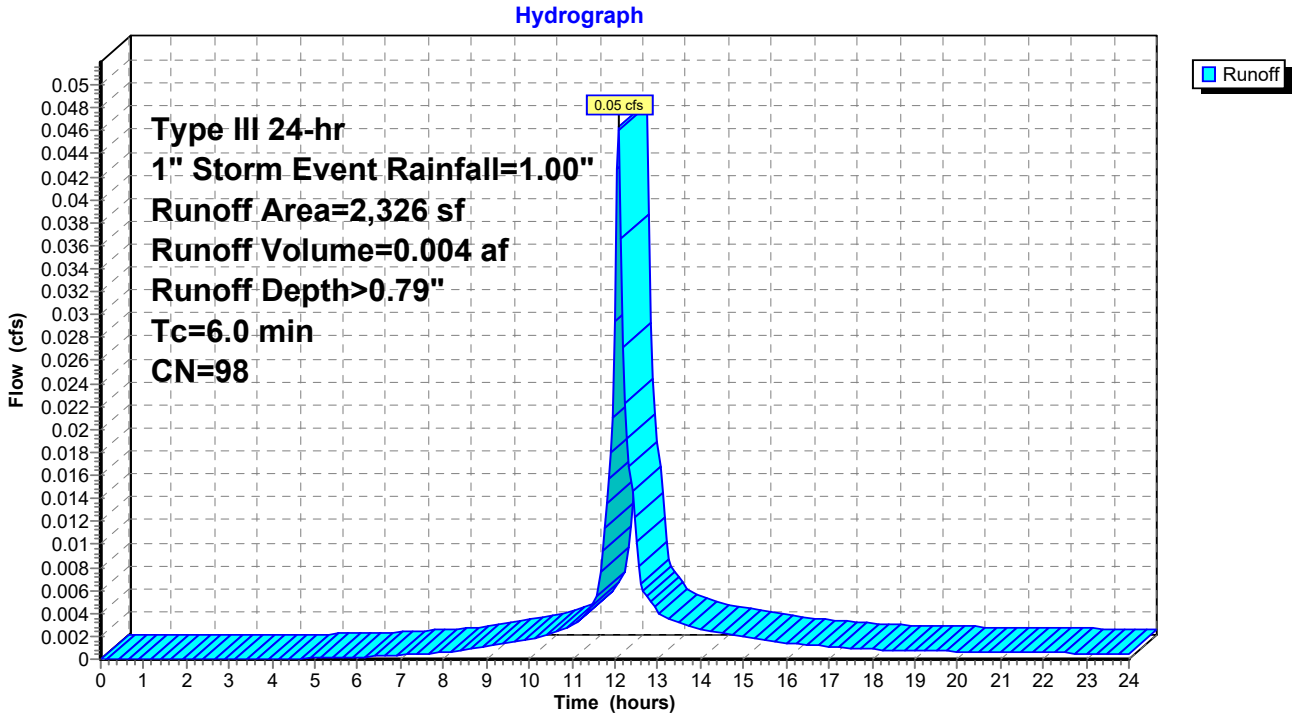
Runoff = 0.05 cfs @ 12.09 hrs, Volume= 0.004 af, Depth> 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	2,326	98	Roof
	2,326		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 12S: Building 3 South



Summary for Subcatchment 13S: Building 6

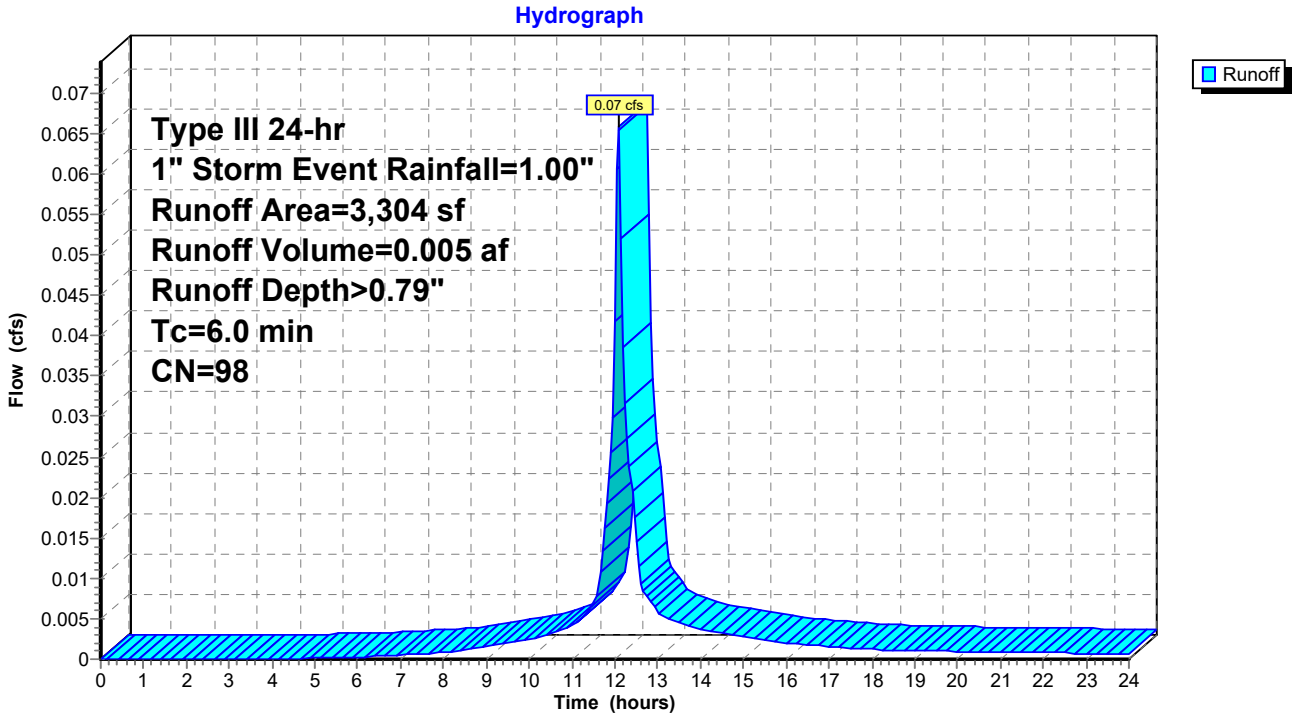
Runoff = 0.07 cfs @ 12.09 hrs, Volume= 0.005 af, Depth> 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	3,304	98	Roof
	3,304		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 13S: Building 6



Summary for Subcatchment 14S: Building 6B North

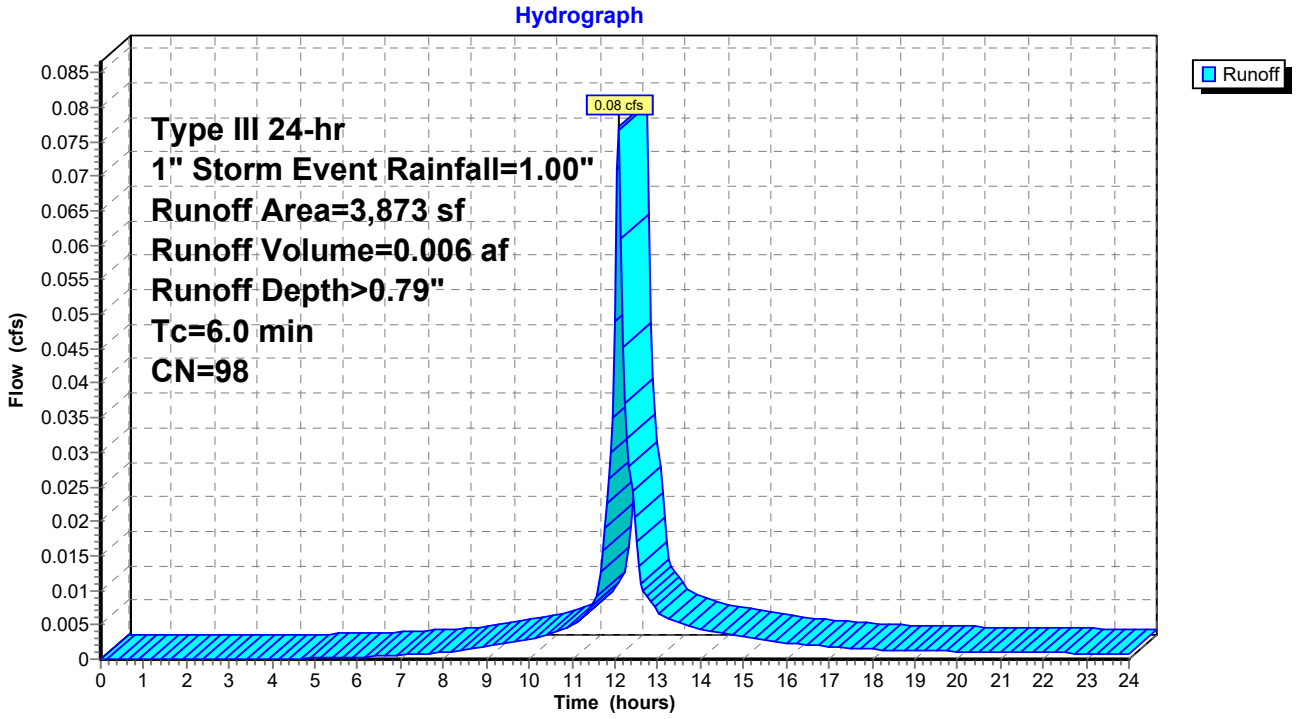
Runoff = 0.08 cfs @ 12.09 hrs, Volume= 0.006 af, Depth> 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	3,873	98	Roof
	3,873		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 14S: Building 6B North



Summary for Subcatchment 15S: Building 6B South

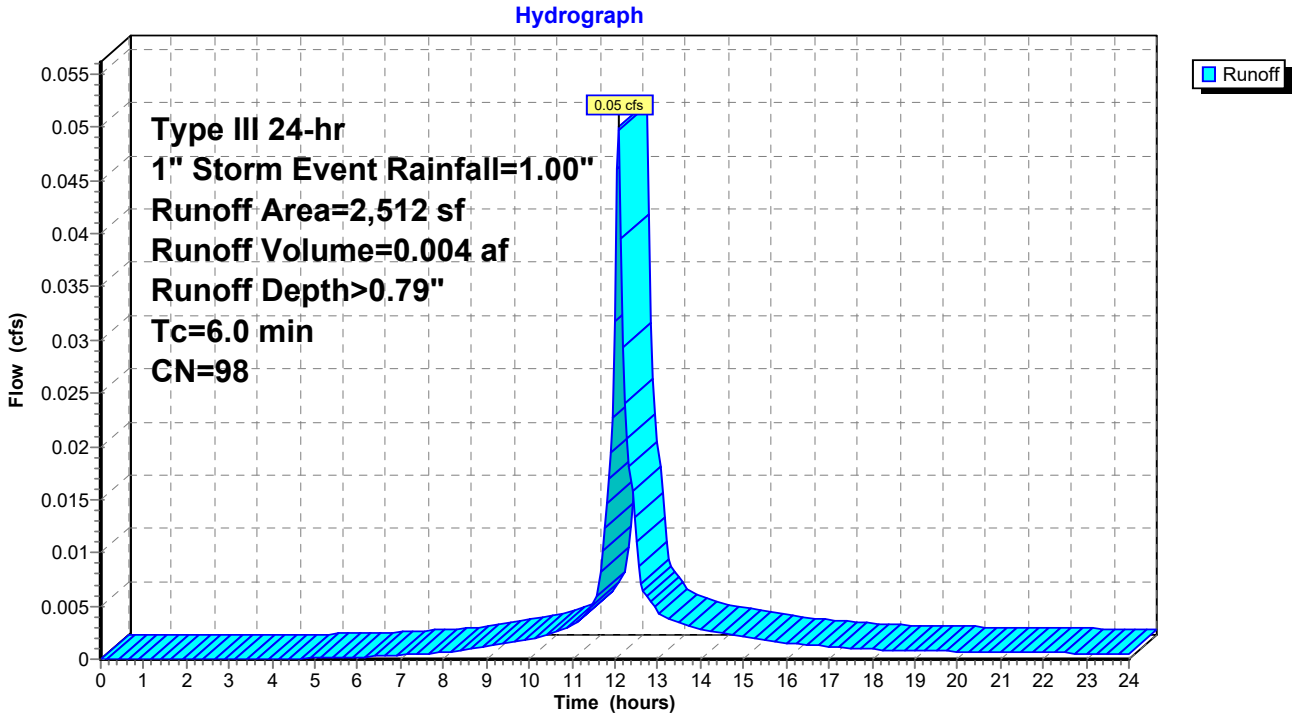
Runoff = 0.05 cfs @ 12.09 hrs, Volume= 0.004 af, Depth> 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	2,512	98	Roof
	2,512		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 15S: Building 6B South



Summary for Subcatchment 16S: Shared Street - Trench Drain

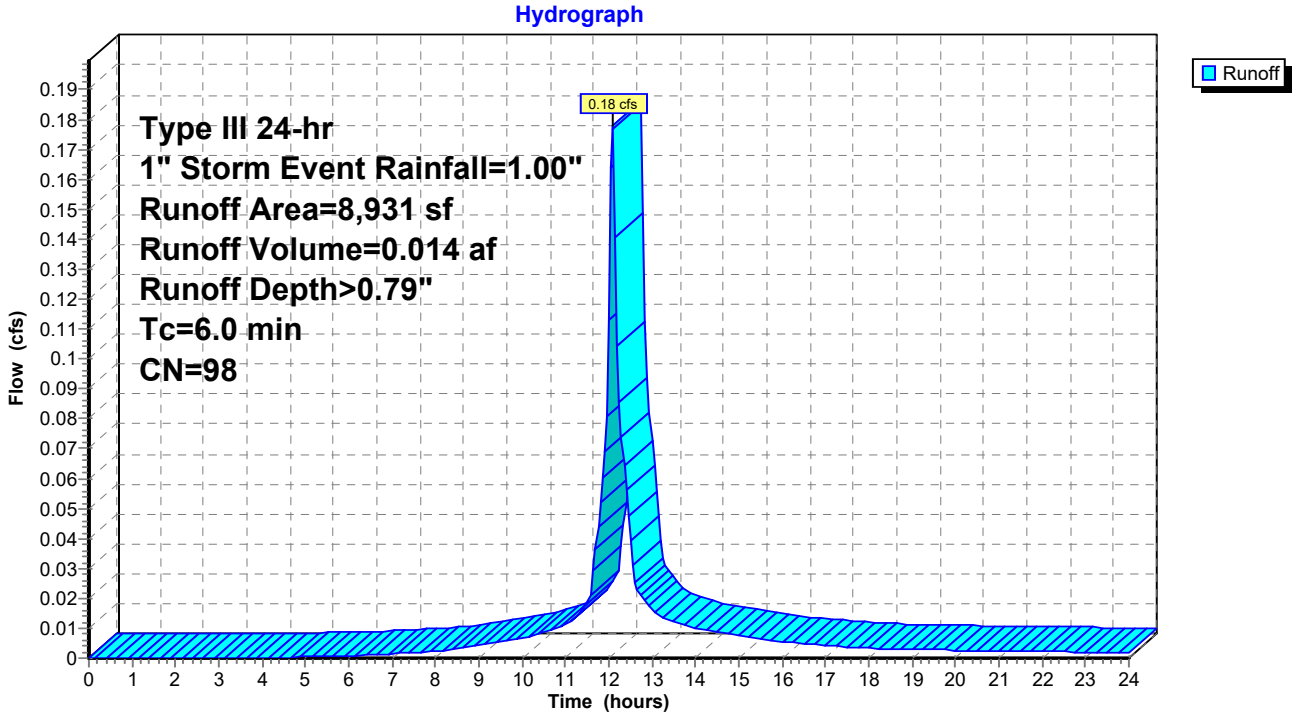
Runoff = 0.18 cfs @ 12.09 hrs, Volume= 0.014 af, Depth> 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
	0	80	>75% Grass cover, Good, HSG D
*	8,931	98	Impervious Shared Street
	8,931	98	Weighted Average
	8,931		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 16S: Shared Street - Trench Drain



Summary for Subcatchment 17S: Future Block 3 Building Footprint

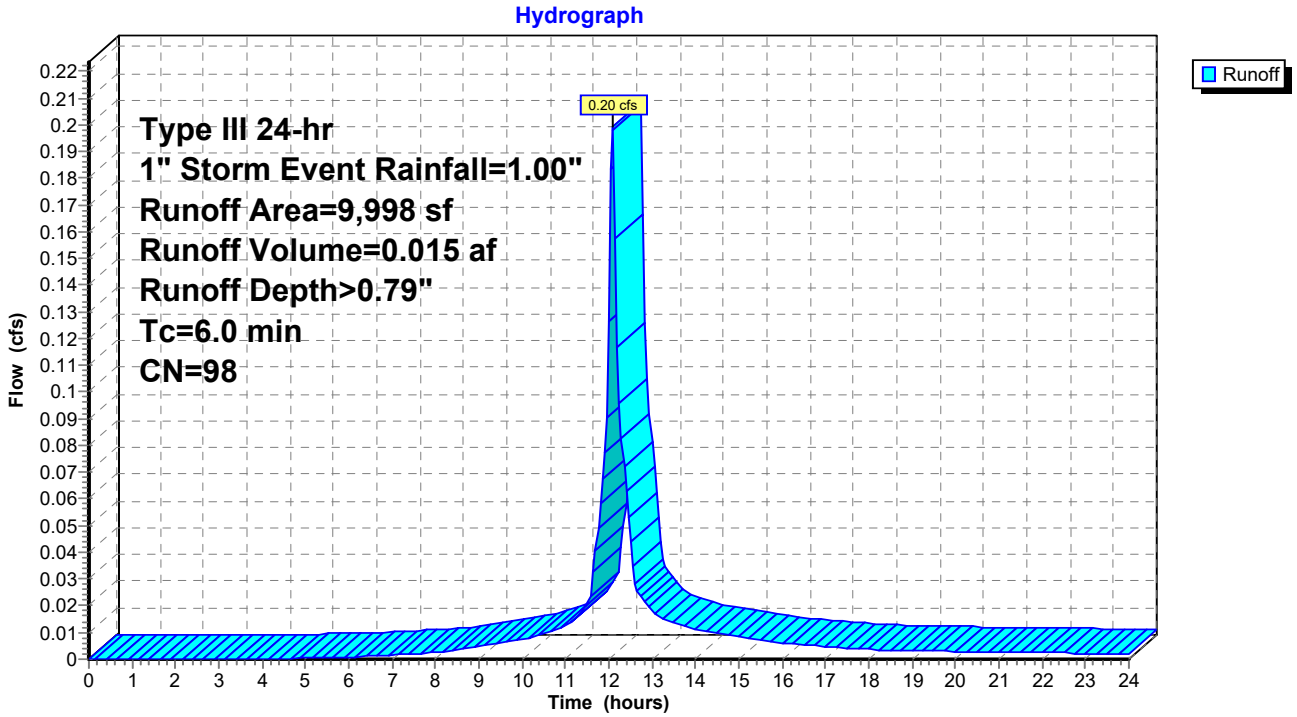
Runoff = 0.20 cfs @ 12.09 hrs, Volume= 0.015 af, Depth> 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	9,998	98	Gravel
	9,998		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 17S: Future Block 3 Building Footprint



Summary for Subcatchment 18S: Plaza between Blocks 2 & 4

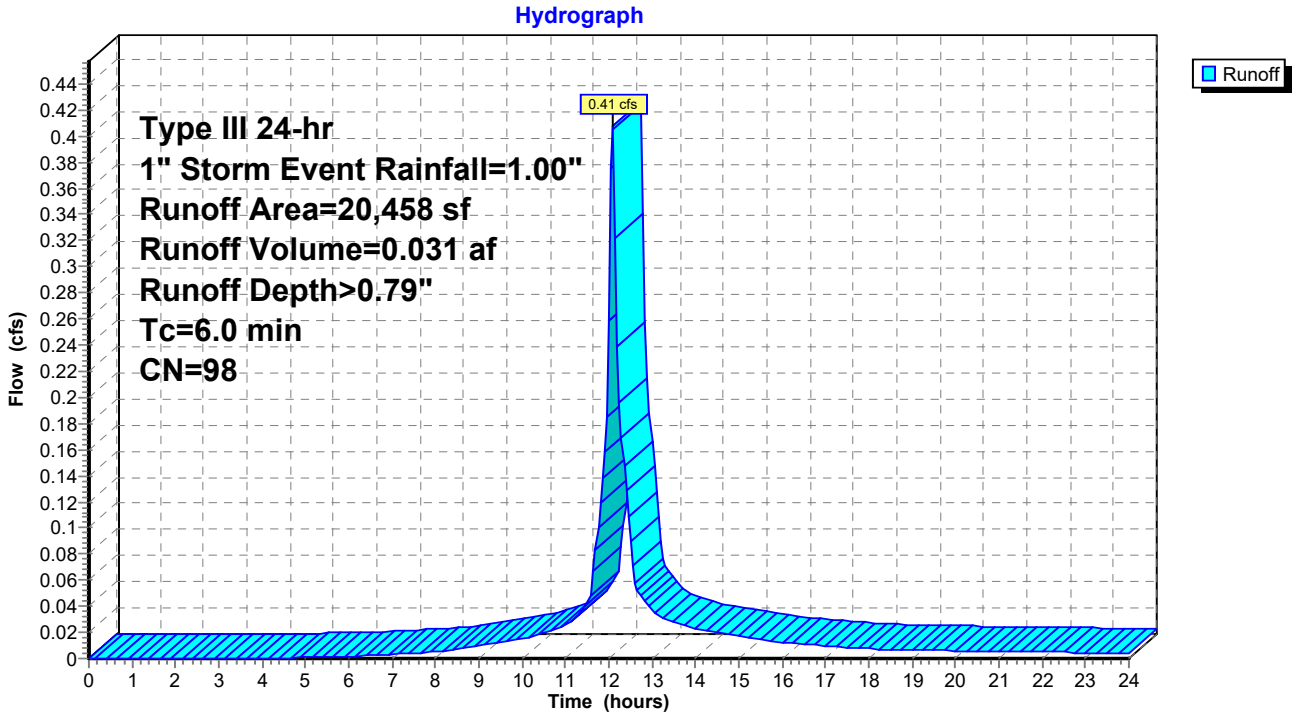
Runoff = 0.41 cfs @ 12.09 hrs, Volume= 0.031 af, Depth> 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	20,352	98	Impervious
	106	80	>75% Grass cover, Good, HSG D
	20,458	98	Weighted Average
	106		0.52% Pervious Area
	20,352		99.48% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 18S: Plaza between Blocks 2 & 4



Summary for Subcatchment 19S: Building 4A

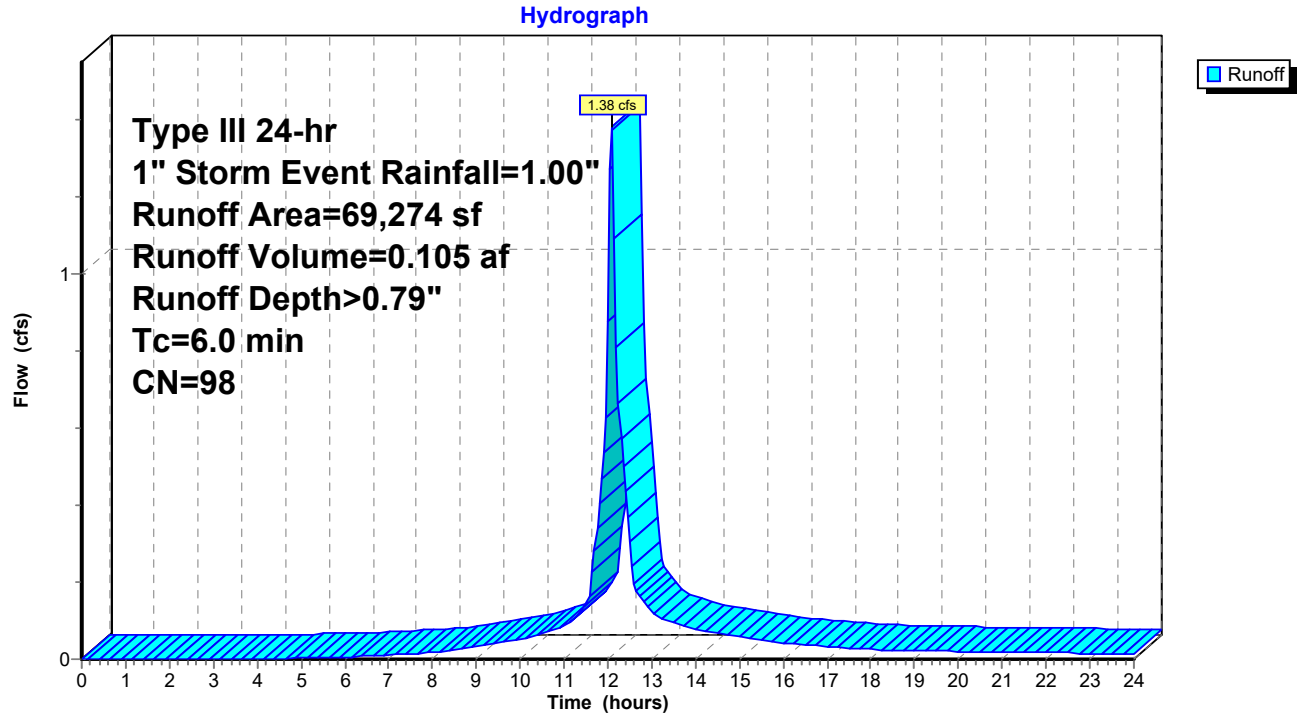
Runoff = 1.38 cfs @ 12.09 hrs, Volume= 0.105 af, Depth> 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	69,274	98	Roof
	69,274		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 19S: Building 4A



Summary for Subcatchment 20S: Redevelopment area east and south of Building 4A

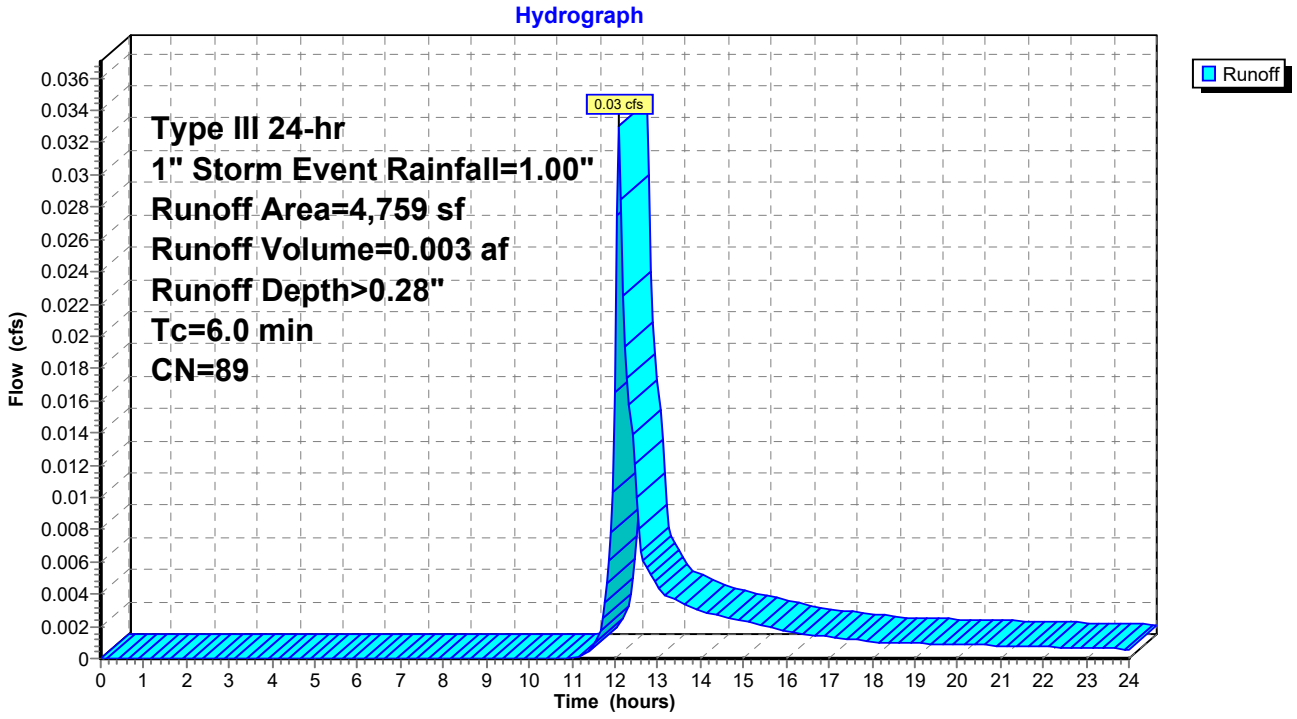
Runoff = 0.03 cfs @ 12.10 hrs, Volume= 0.003 af, Depth> 0.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	2,489	98	Impervious
	2,270	80	>75% Grass cover, Good, HSG D
	4,759	89	Weighted Average
	2,270		47.70% Pervious Area
	2,489		52.30% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 20S: Redevelopment area east and south of Building 4A



Summary for Subcatchment 21S: Eastern Waterfront

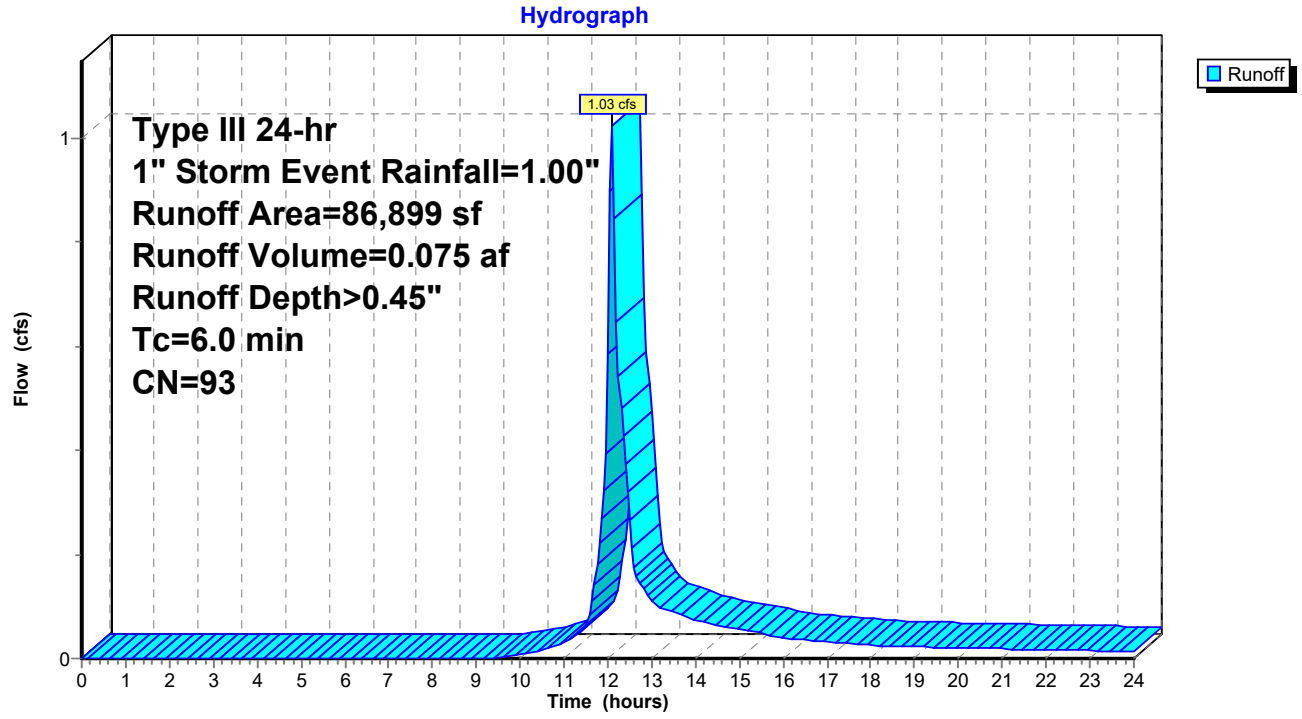
Runoff = 1.03 cfs @ 12.10 hrs, Volume= 0.075 af, Depth> 0.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	63,527	98	Impervious
	23,372	80	>75% Grass cover, Good, HSG D
	86,899	93	Weighted Average
	23,372		26.90% Pervious Area
	63,527		73.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 21S: Eastern Waterfront



Summary for Pond 1P: DMH 1

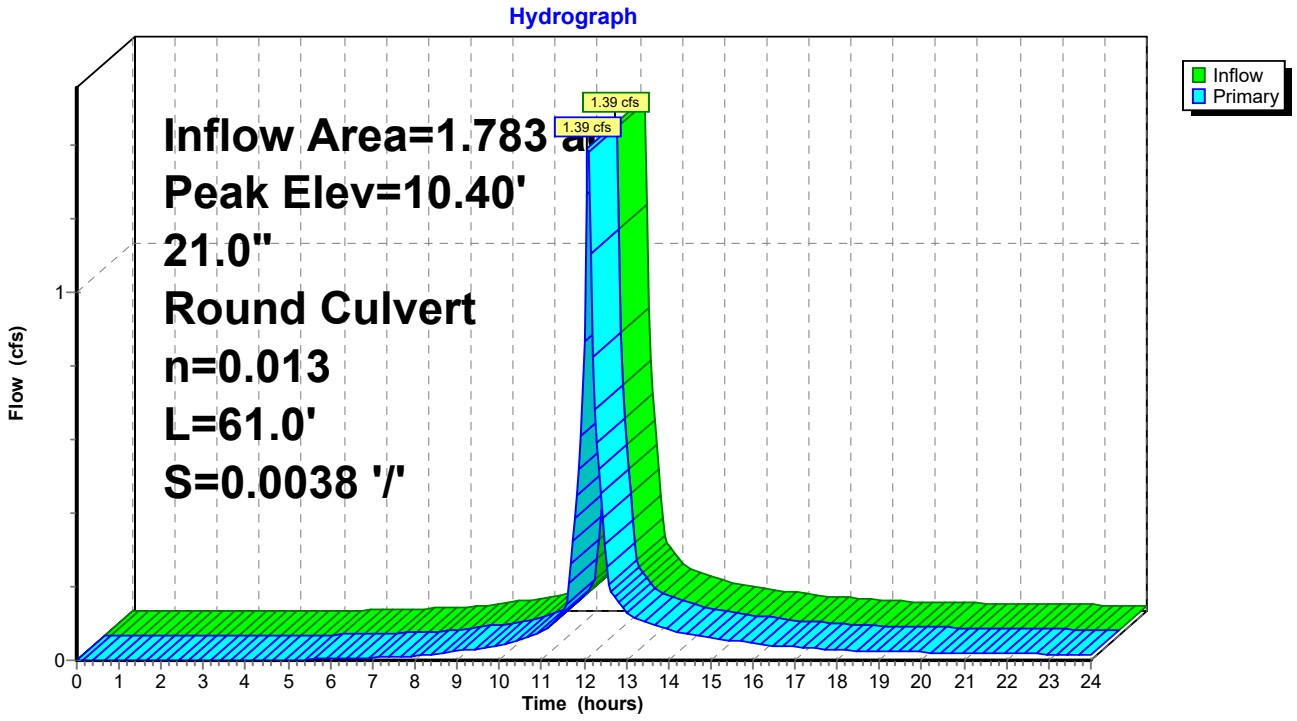
Inflow Area = 1.783 ac, 93.06% Impervious, Inflow Depth > 0.70" for 1" Storm Event event
Inflow = 1.39 cfs @ 12.09 hrs, Volume= 0.103 af
Outflow = 1.39 cfs @ 12.09 hrs, Volume= 0.103 af, Atten= 0%, Lag= 0.0 min
Primary = 1.39 cfs @ 12.09 hrs, Volume= 0.103 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 10.40' @ 12.09 hrs
Flood Elev= 14.71'

Device	Routing	Invert	Outlet Devices
#1	Primary	9.77'	**21.0" Round Culvert** L= 61.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 9.77' / 9.54' S= 0.0038 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 2.41 sf

Primary OutFlow Max=1.36 cfs @ 12.09 hrs HW=10.39' (Free Discharge)
1=Culvert (Barrel Controls 1.36 cfs @ 2.62 fps)

Pond 1P: DMH 1



Summary for Pond 2P: DMH 2

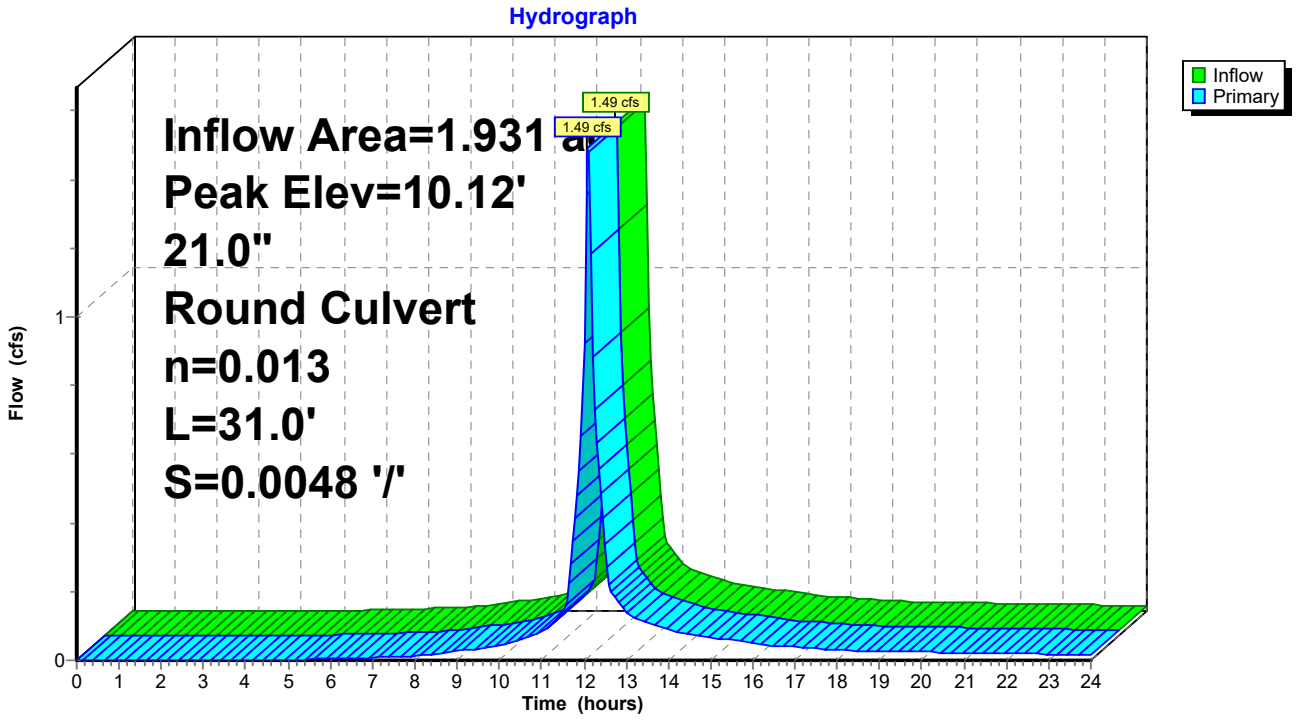
Inflow Area = 1.931 ac, 92.54% Impervious, Inflow Depth > 0.69" for 1" Storm Event event
Inflow = 1.49 cfs @ 12.09 hrs, Volume= 0.111 af
Outflow = 1.49 cfs @ 12.09 hrs, Volume= 0.111 af, Atten= 0%, Lag= 0.0 min
Primary = 1.49 cfs @ 12.09 hrs, Volume= 0.111 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 10.12' @ 12.09 hrs
Flood Elev= 14.63'

Device	Routing	Invert	Outlet Devices
#1	Primary	9.50'	**21.0" Round Culvert** L= 31.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 9.50' / 9.35' S= 0.0048 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 2.41 sf

Primary OutFlow Max=1.46 cfs @ 12.09 hrs HW=10.12' (Free Discharge)
1=Culvert (Barrel Controls 1.46 cfs @ 2.87 fps)

Pond 2P: DMH 2



Summary for Pond 3P: Storm Structure

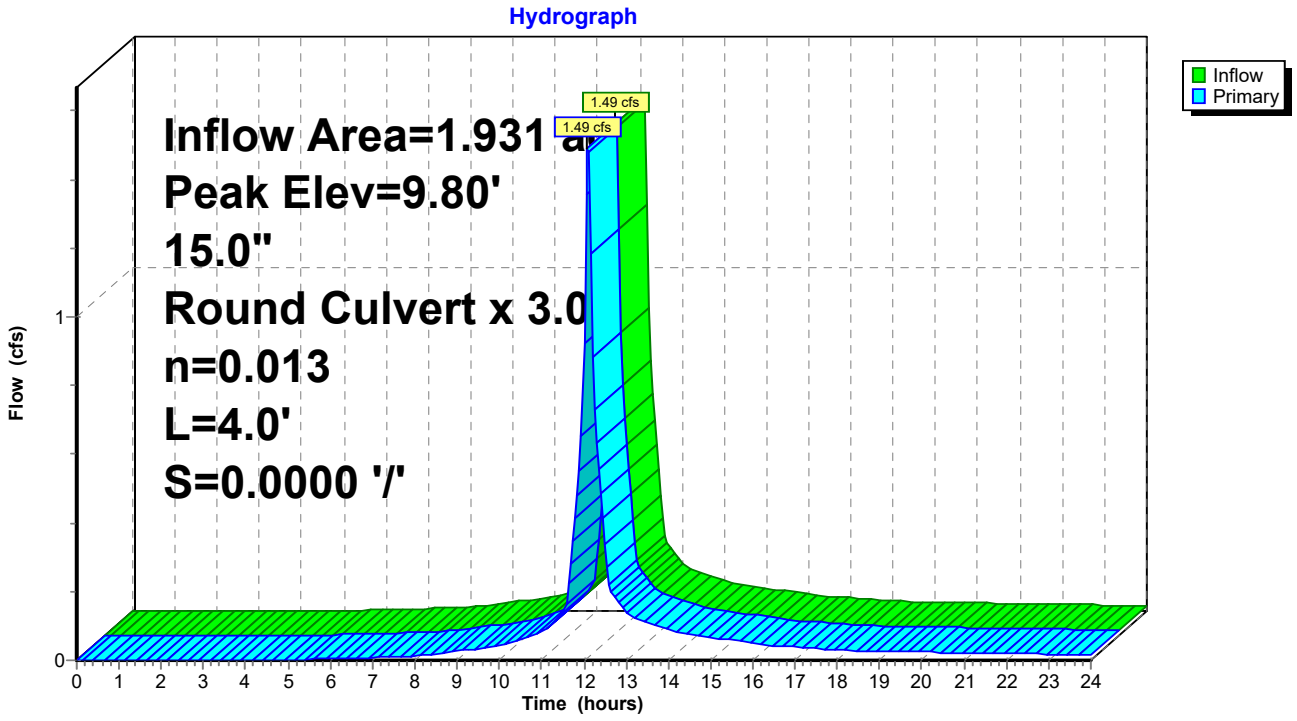
Inflow Area = 1.931 ac, 92.54% Impervious, Inflow Depth > 0.69" for 1" Storm Event event
Inflow = 1.49 cfs @ 12.09 hrs, Volume= 0.111 af
Outflow = 1.49 cfs @ 12.09 hrs, Volume= 0.111 af, Atten= 0%, Lag= 0.0 min
Primary = 1.49 cfs @ 12.09 hrs, Volume= 0.111 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 9.80' @ 12.09 hrs
Flood Elev= 14.51'

Device	Routing	Invert	Outlet Devices
#1	Primary	9.35'	**15.0" Round Culvert X 3.00** L= 4.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 9.35' / 9.35' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=1.45 cfs @ 12.09 hrs HW=9.79' (Free Discharge)
1=Culvert (Barrel Controls 1.45 cfs @ 1.85 fps)

Pond 3P: Storm Structure



Summary for Pond 4P: R-Tank 1

Inflow Area = 1.931 ac, 92.54% Impervious, Inflow Depth > 0.69" for 1" Storm Event event
Inflow = 1.49 cfs @ 12.09 hrs, Volume= 0.111 af
Outflow = 1.10 cfs @ 12.17 hrs, Volume= 0.105 af, Atten= 27%, Lag= 4.8 min
Primary = 1.10 cfs @ 12.17 hrs, Volume= 0.105 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 8.21' @ 12.17 hrs Surf.Area= 1,597 sf Storage= 979 cf
Flood Elev= 10.42' Surf.Area= 1,597 sf Storage= 3,504 cf

Plug-Flow detention time= 63.2 min calculated for 0.105 af (94% of inflow)
Center-of-Mass det. time= 33.5 min (834.5 - 801.0)

Volume	Invert	Avail.Storage	Storage Description
#1	7.35'	1,478 cf	**Stone Envelope (Prismatic)** Listed below (Recalc) 6,500 cf Overall - 2,806 cf Embedded = 3,694 cf x 40.0% Voids
#2	7.60'	2,666 cf	**R-Tank Double Modules (Prismatic)** Listed below (Recalc) Inside #1 2,806 cf Overall x 95.0% Voids
		4,143 cf	Total Available Storage

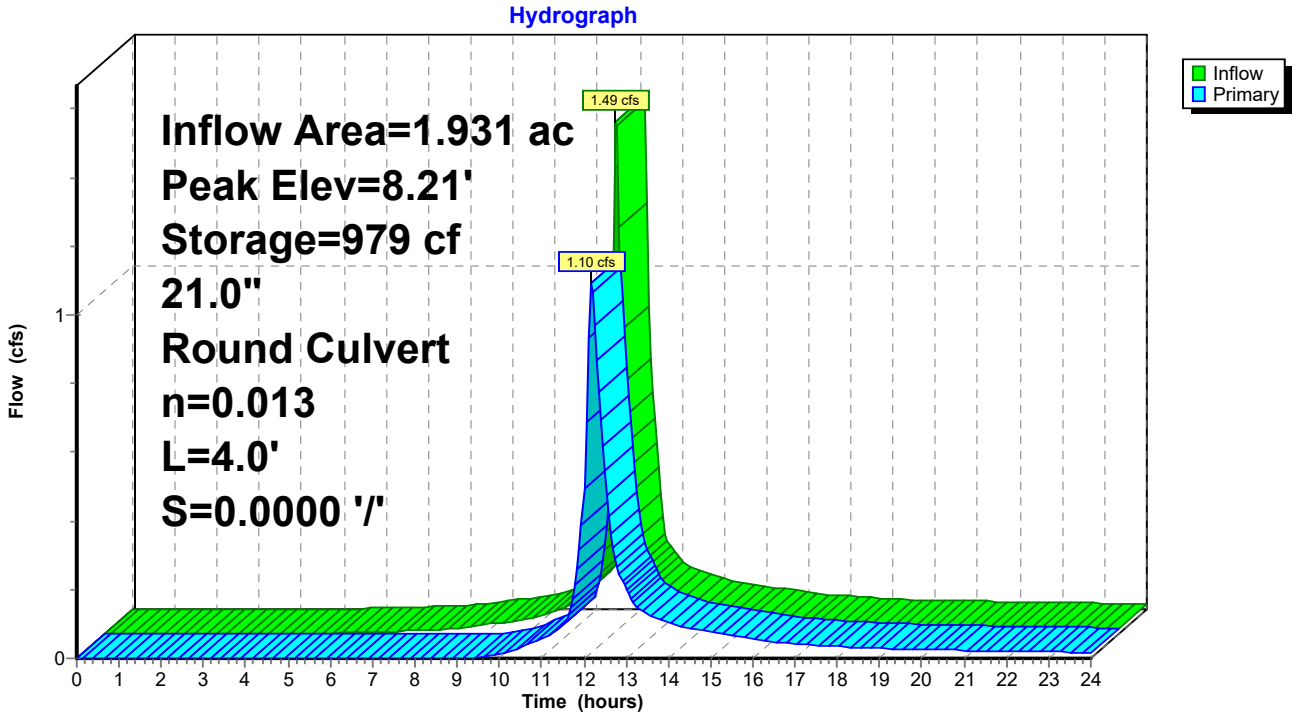
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
7.35	1,597	0	0
11.42	1,597	6,500	6,500

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
7.60	1,293	0	0
9.77	1,293	2,806	2,806

Device	Routing	Invert	Outlet Devices
#1	Primary	7.60'	**21.0" Round Culvert to Filter** L= 4.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 7.60' / 7.60' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 2.41 sf

Primary OutFlow Max=1.08 cfs @ 12.17 hrs HW=8.20' (Free Discharge)
↑—**1=Culvert to Filter** (Barrel Controls 1.08 cfs @ 2.19 fps)

Pond 4P: R-Tank 1



Summary for Pond 6P: CB27

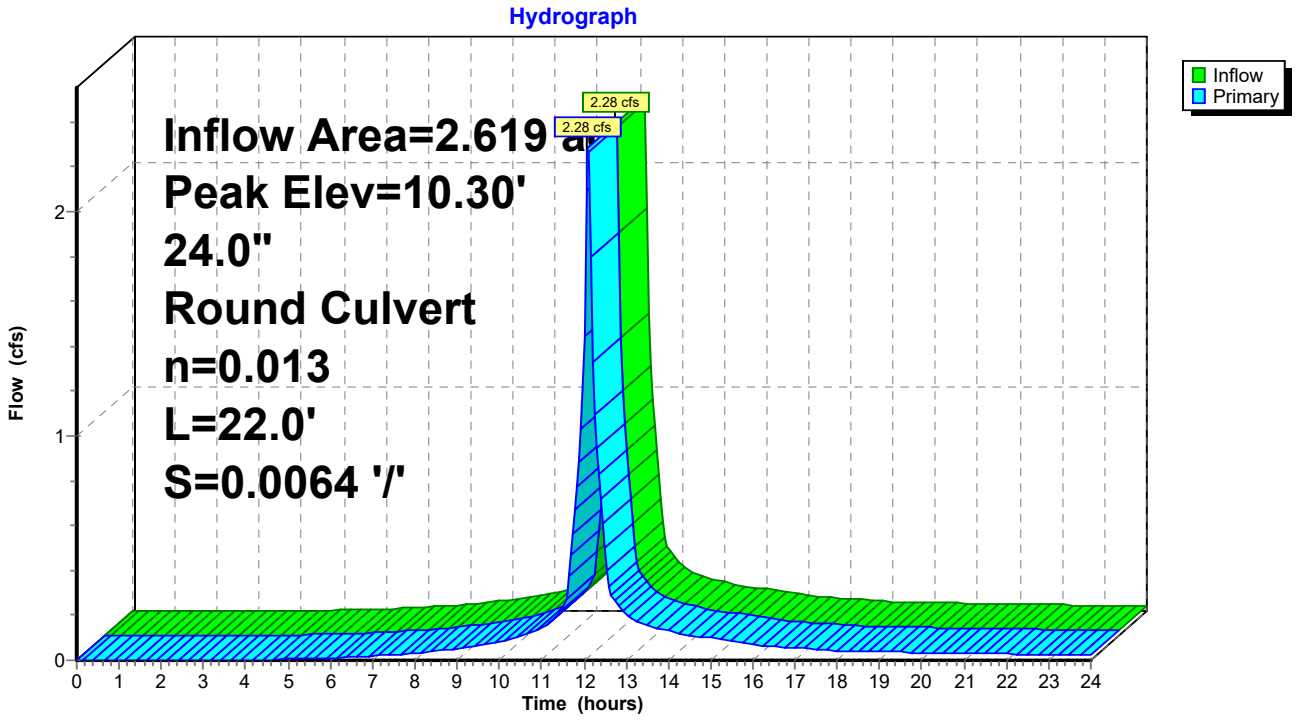
Inflow Area = 2.619 ac, 99.91% Impervious, Inflow Depth > 0.79" for 1" Storm Event event
Inflow = 2.28 cfs @ 12.09 hrs, Volume= 0.173 af
Outflow = 2.28 cfs @ 12.09 hrs, Volume= 0.173 af, Atten= 0%, Lag= 0.0 min
Primary = 2.28 cfs @ 12.09 hrs, Volume= 0.173 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 10.30' @ 12.09 hrs
Flood Elev= 14.57'

Device	Routing	Invert	Outlet Devices
#1	Primary	9.53'	**24.0" Round Culvert** L= 22.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 9.53' / 9.39' S= 0.0064 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=2.22 cfs @ 12.09 hrs HW=10.29' (Free Discharge)
1=Culvert (Barrel Controls 2.22 cfs @ 2.99 fps)

Pond 6P: CB27



Summary for Pond 7P: Storm Structure

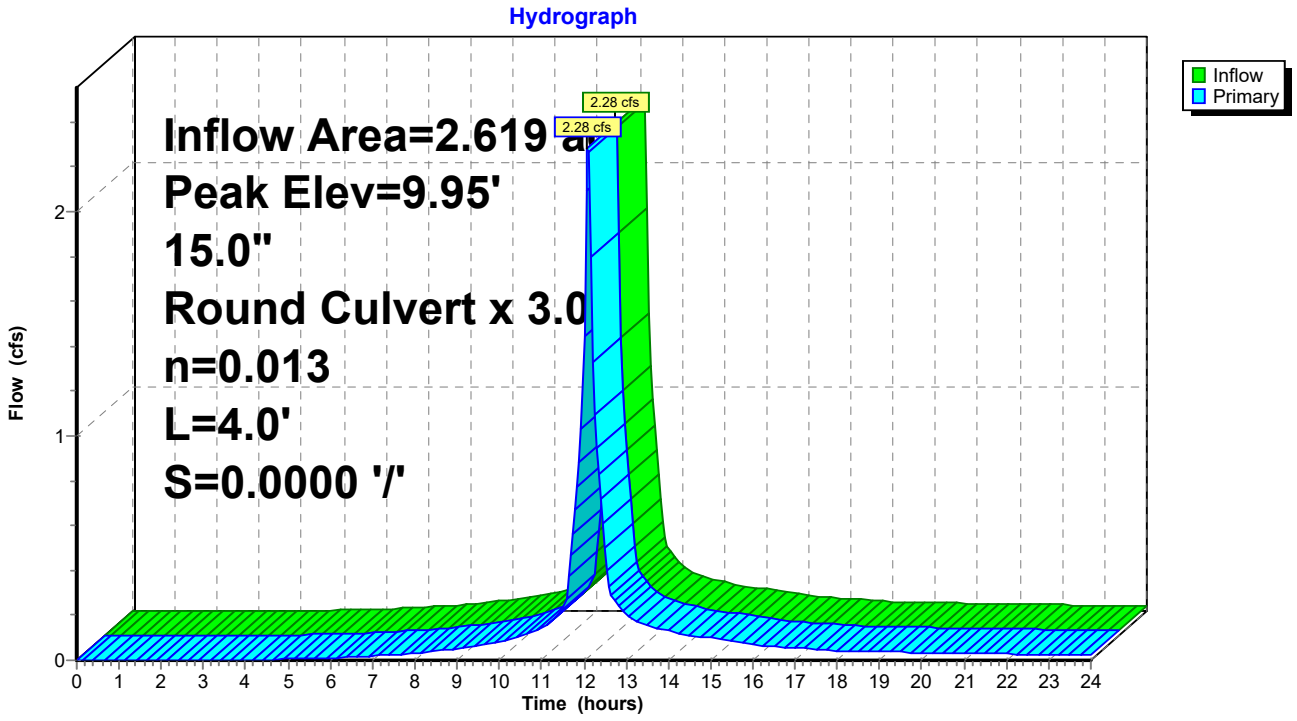
Inflow Area = 2.619 ac, 99.91% Impervious, Inflow Depth > 0.79" for 1" Storm Event event
Inflow = 2.28 cfs @ 12.09 hrs, Volume= 0.173 af
Outflow = 2.28 cfs @ 12.09 hrs, Volume= 0.173 af, Atten= 0%, Lag= 0.0 min
Primary = 2.28 cfs @ 12.09 hrs, Volume= 0.173 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 9.95' @ 12.09 hrs
Flood Elev= 14.25'

Device	Routing	Invert	Outlet Devices
#1	Primary	9.39'	**15.0" Round Culvert X 3.00** L= 4.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 9.39' / 9.39' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=2.22 cfs @ 12.09 hrs HW=9.94' (Free Discharge)
1=Culvert (Barrel Controls 2.22 cfs @ 2.09 fps)

Pond 7P: Storm Structure



Summary for Pond 8P: R-Tank 2

Inflow Area = 2.619 ac, 99.91% Impervious, Inflow Depth > 0.79" for 1" Storm Event event
Inflow = 2.28 cfs @ 12.09 hrs, Volume= 0.173 af
Outflow = 1.36 cfs @ 12.21 hrs, Volume= 0.159 af, Atten= 40%, Lag= 7.1 min
Primary = 1.36 cfs @ 12.21 hrs, Volume= 0.159 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 8.47' @ 12.21 hrs Surf.Area= 3,128 sf Storage= 2,089 cf
Flood Elev= 12.71' Surf.Area= 3,128 sf Storage= 8,290 cf

Plug-Flow detention time= 89.3 min calculated for 0.159 af (92% of inflow)
Center-of-Mass det. time= 50.4 min (837.8 - 787.4)

Volume	Invert	Avail.Storage	Storage Description
#1	7.57'	2,767 cf	**Stone Envelope (Prismatic)** Listed below (Recalc) 12,731 cf Overall - 5,813 cf Embedded = 6,918 cf x 40.0% Voids
#2	7.82'	5,523 cf	**R-Tank Double Modules (Prismatic)** Listed below (Recalc) Inside #1 5,813 cf Overall x 95.0% Voids
		8,290 cf	Total Available Storage

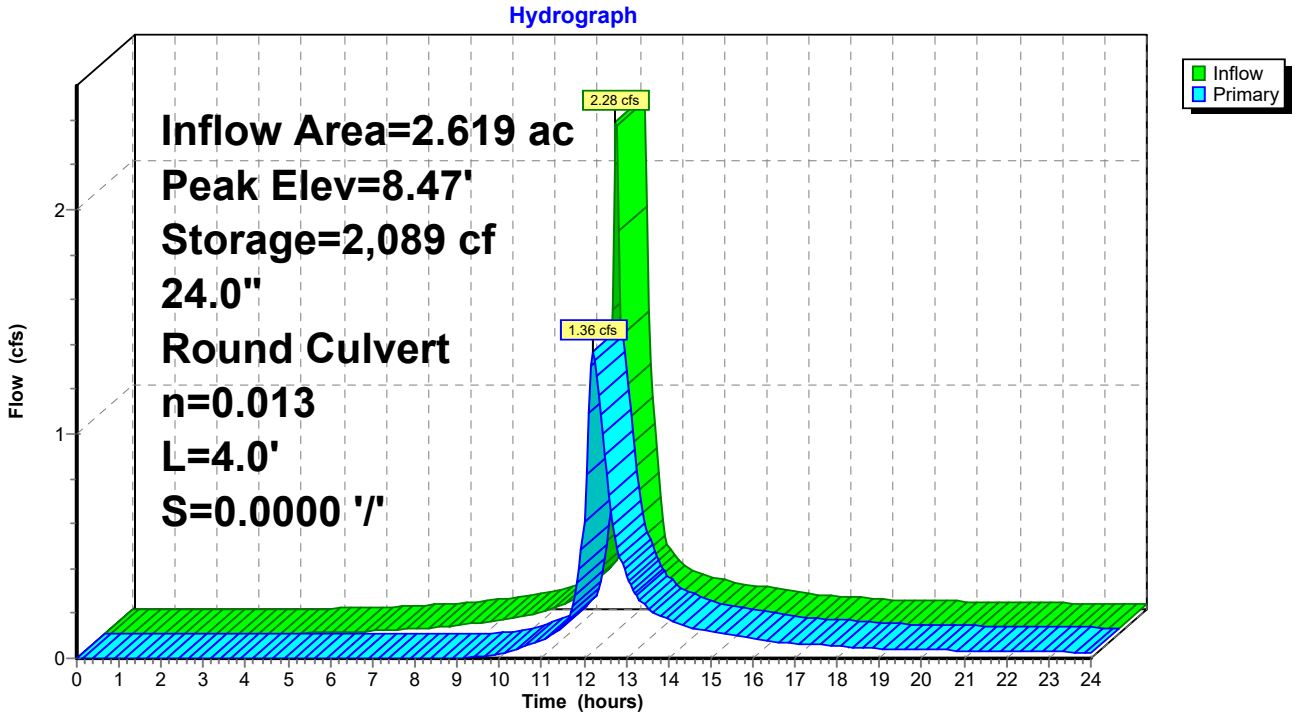
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
7.57	3,128	0	0
11.64	3,128	12,731	12,731

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
7.82	2,679	0	0
9.99	2,679	5,813	5,813

Device	Routing	Invert	Outlet Devices
#1	Primary	7.82'	**24.0" Round Culvert to Filter** L= 4.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 7.82' / 7.82' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=1.36 cfs @ 12.21 hrs HW=8.47' (Free Discharge)
1=Culvert to Filter (Barrel Controls 1.36 cfs @ 2.29 fps)

Pond 8P: R-Tank 2



Summary for Pond 10P: DMH 5

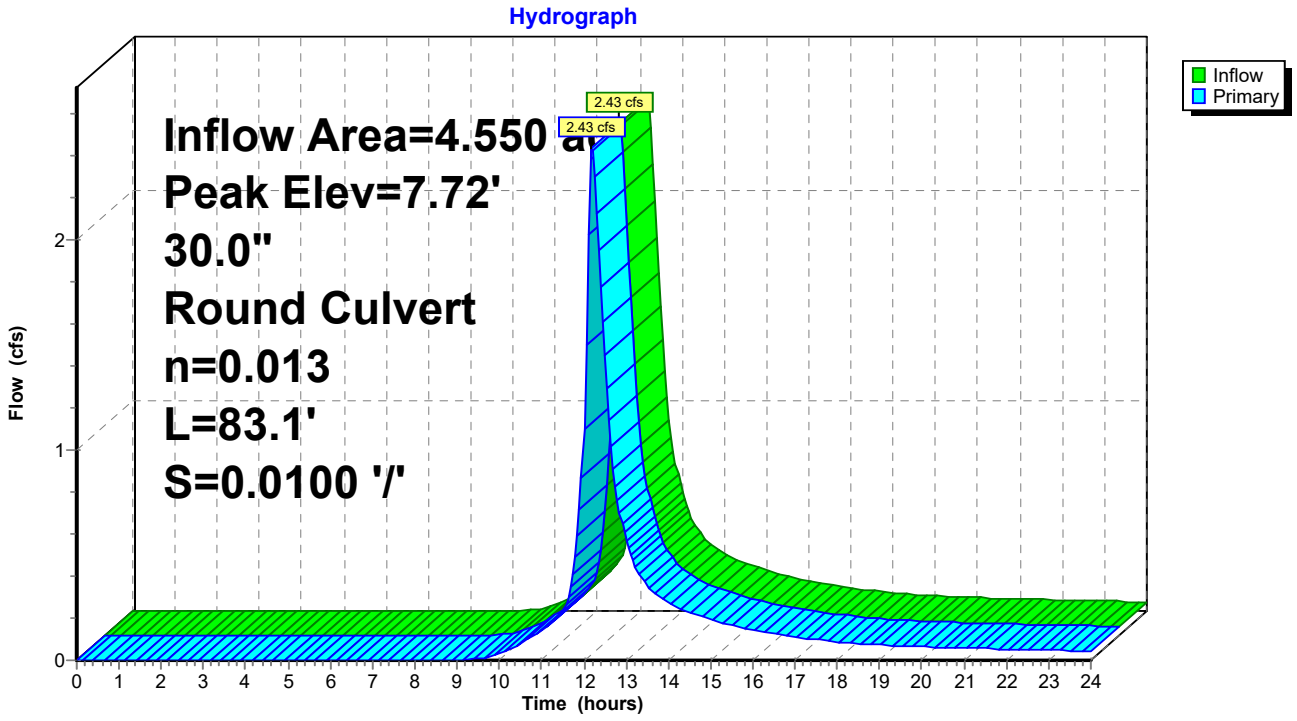
Inflow Area = 4.550 ac, 96.78% Impervious, Inflow Depth > 0.70" for 1" Storm Event event
Inflow = 2.43 cfs @ 12.19 hrs, Volume= 0.264 af
Outflow = 2.43 cfs @ 12.19 hrs, Volume= 0.264 af, Atten= 0%, Lag= 0.0 min
Primary = 2.43 cfs @ 12.19 hrs, Volume= 0.264 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 7.72' @ 12.19 hrs
Flood Elev= 13.56'

Device	Routing	Invert	Outlet Devices
#1	Primary	7.03'	**30.0" Round Culvert** L= 83.1' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 7.03' / 6.20' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=2.41 cfs @ 12.19 hrs HW=7.71' (Free Discharge)
1=Culvert (Inlet Controls 2.41 cfs @ 2.22 fps)

Pond 10P: DMH 5



Summary for Pond 11P: Jellyfish 1 JFPD0806-4-2

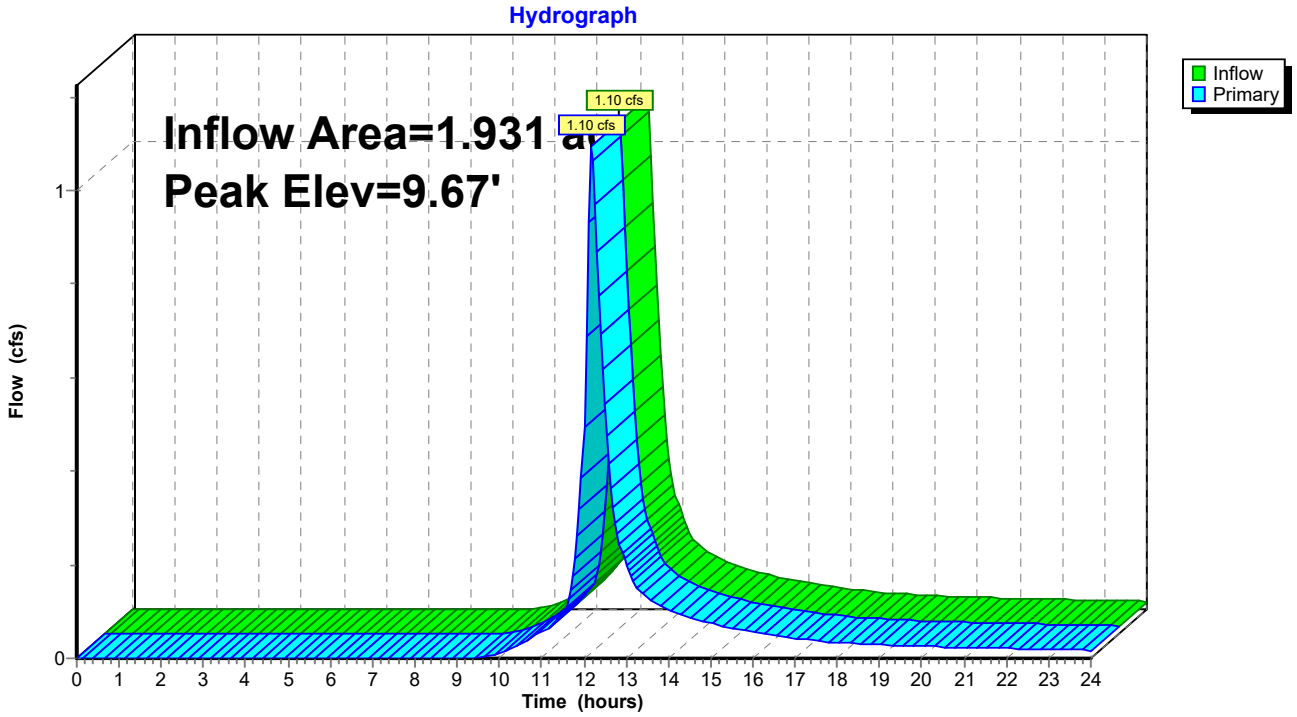
Inflow Area = 1.931 ac, 92.54% Impervious, Inflow Depth > 0.65" for 1" Storm Event event
Inflow = 1.10 cfs @ 12.17 hrs, Volume= 0.105 af
Outflow = 1.10 cfs @ 12.17 hrs, Volume= 0.105 af, Atten= 0%, Lag= 0.0 min
Primary = 1.10 cfs @ 12.17 hrs, Volume= 0.105 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 9.67' @ 12.15 hrs
Flood Elev= 14.79'

Device	Routing	Invert	Outlet Devices
#1	Primary	7.60'	**21.0" Round Filter Culvert Out** L= 90.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 7.60' / 7.13' S= 0.0052 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 2.41 sf
#2	Device 1	7.60'	**JF Filter-1 CSV File** Head (feet) 0.00 0.08 0.17 0.25 0.33 0.42 0.50 0.58 0.67 0.75 0.83 0.92 1.00 1.08 1.17 1.25 1.33 1.42 1.50 Disch. (cfs) 0.000 0.010 0.020 0.030 0.040 0.050 0.059 0.129 0.198 0.267 0.337 0.406 0.475 0.545 0.614 0.683 0.753 0.822 0.891
#3	Device 1	9.59'	**2.8' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=1.07 cfs @ 12.17 hrs HW=9.67' (Free Discharge)
└**1=Filter Culvert Out** (Passes 1.07 cfs of 9.99 cfs potential flow)
  ├**2=JF Filter-1 CSV File** (Custom Controls 0.89 cfs)
  └**3=Broad-Crested Rectangular Weir** (Weir Controls 0.17 cfs @ 0.79 fps)

Pond 11P: Jellyfish 1 JFPD0806-4-2



Summary for Pond 12P: Jellyfish 2 JFPD0806-7-2

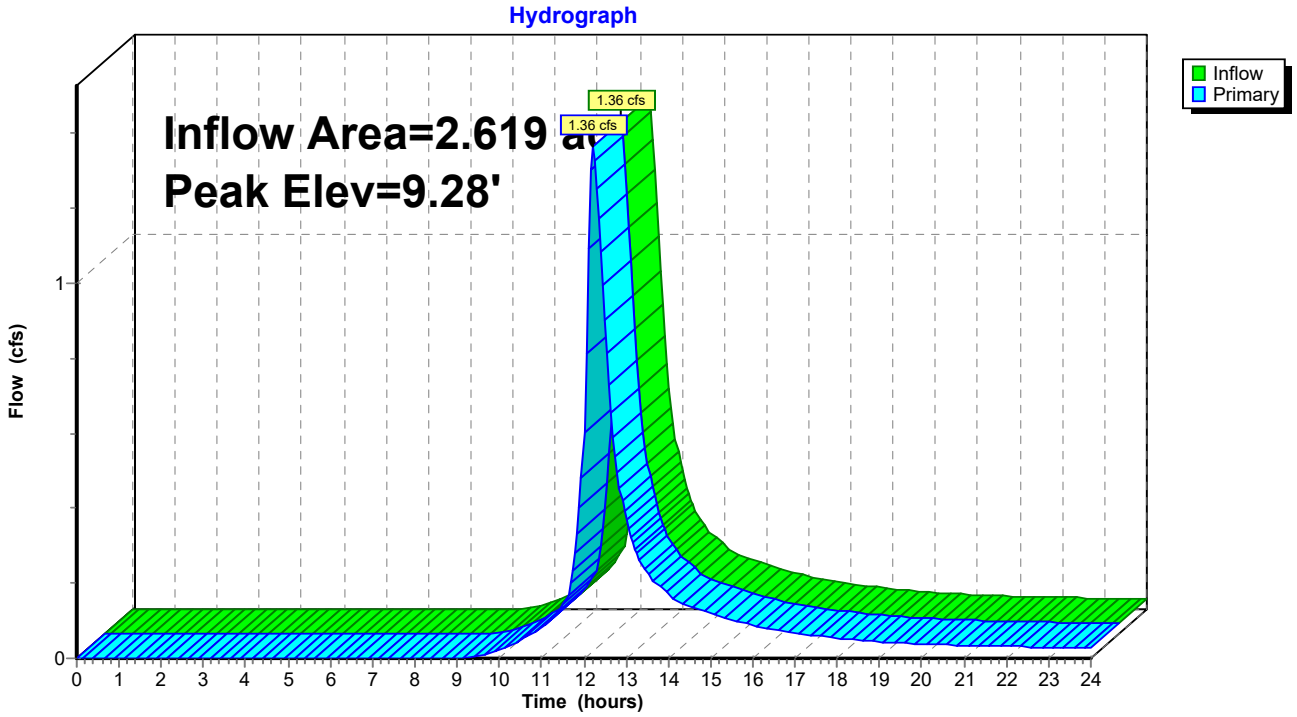
Inflow Area = 2.619 ac, 99.91% Impervious, Inflow Depth > 0.73" for 1" Storm Event event
Inflow = 1.36 cfs @ 12.21 hrs, Volume= 0.159 af
Outflow = 1.36 cfs @ 12.21 hrs, Volume= 0.159 af, Atten= 0%, Lag= 0.0 min
Primary = 1.36 cfs @ 12.21 hrs, Volume= 0.159 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 9.28' @ 12.21 hrs
Flood Elev= 12.70'

Device	Routing	Invert	Outlet Devices
#1	Primary	7.82'	**24.0" Round Filter Culvert Out** L= 114.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 7.82' / 7.13' S= 0.0061 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Device 1	7.82'	**JF Filter-2 CSV File** Head (feet) 0.00 0.08 0.17 0.25 0.33 0.42 0.50 0.58 0.67 0.75 0.83 0.92 1.00 1.08 1.17 1.25 1.33 1.42 1.50 Disch. (cfs) 0.000 0.010 0.020 0.030 0.040 0.050 0.059 0.173 0.287 0.401 0.515 0.629 0.743 0.857 0.970 1.084 1.198 1.312 1.426
#3	Device 1	9.95'	**2.8' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=1.36 cfs @ 12.21 hrs HW=9.27' (Free Discharge)
└**1=Filter Culvert Out** (Passes 1.36 cfs of 7.92 cfs potential flow)
  ├**2=JF Filter-2 CSV File** (Custom Controls 1.36 cfs)
  └**3=Broad-Crested Rectangular Weir**(Controls 0.00 cfs)

Pond 12P: Jellyfish 2 JFPD0806-7-2

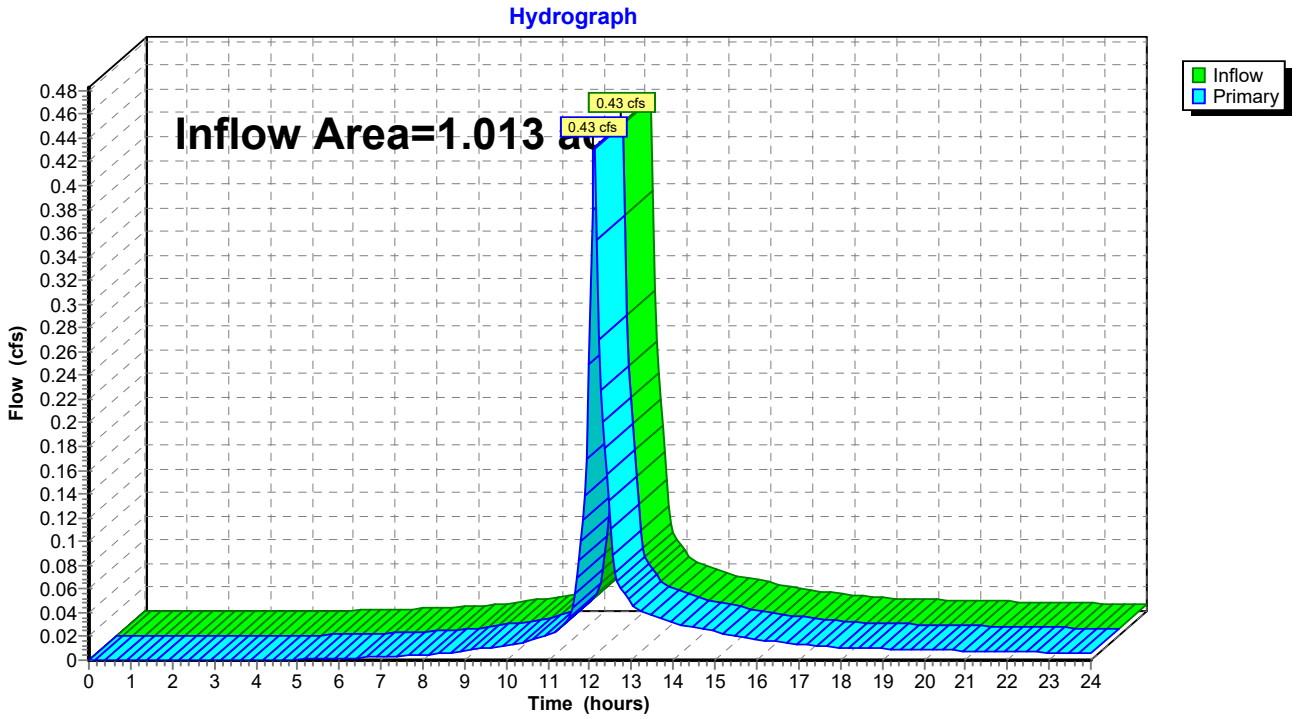


Summary for Link 1L: Fore Connector

Inflow Area = 1.013 ac, 56.83% Impervious, Inflow Depth > 0.41" for 1" Storm Event event
Inflow = 0.43 cfs @ 12.09 hrs, Volume= 0.035 af
Primary = 0.43 cfs @ 12.09 hrs, Volume= 0.035 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 1L: Fore Connector

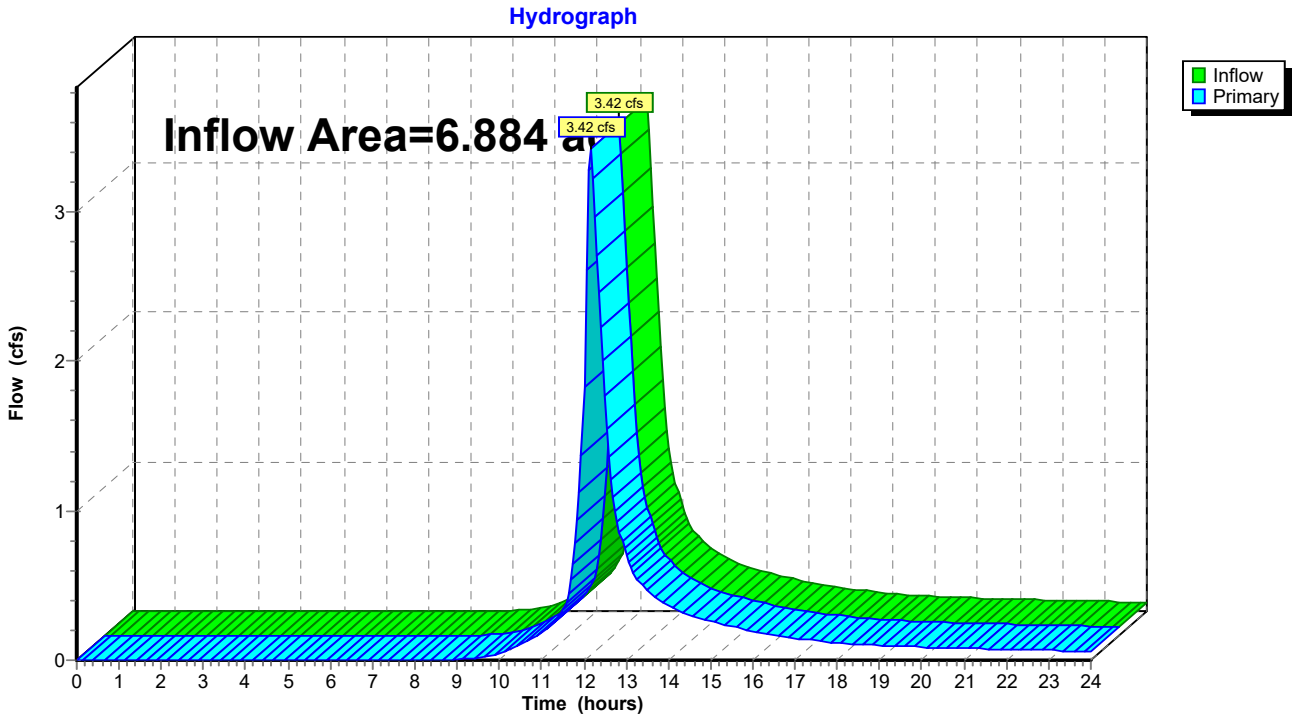


Summary for Link 2L: Fore River

Inflow Area = 6.884 ac, 89.32% Impervious, Inflow Depth > 0.62" for 1" Storm Event event
Inflow = 3.42 cfs @ 12.14 hrs, Volume= 0.357 af
Primary = 3.42 cfs @ 12.14 hrs, Volume= 0.357 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 2L: Fore River



Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: Block 1B Runoff Area=27,045 sf 29.55% Impervious Runoff Depth>4.11"
Tc=6.0 min CN=85 Runoff=2.88 cfs 0.213 af

Subcatchment2S: Western half of Runoff Area=17,090 sf 100.00% Impervious Runoff Depth>5.56"
Tc=6.0 min CN=98 Runoff=2.18 cfs 0.182 af

Subcatchment3S: Eastern half of Runoff Area=17,090 sf 100.00% Impervious Runoff Depth>5.56"
Tc=6.0 min CN=98 Runoff=2.18 cfs 0.182 af

Subcatchment4S: Shared Street - Trench Runoff Area=24,890 sf 82.54% Impervious Runoff Depth>5.21"
Tc=6.0 min CN=95 Runoff=3.10 cfs 0.248 af

Subcatchment5S: Building 12 Runoff Area=3,244 sf 100.00% Impervious Runoff Depth>5.56"
Tc=6.0 min CN=98 Runoff=0.41 cfs 0.034 af

Subcatchment6Sa: Plaza between Blocks Runoff Area=20,337 sf 94.84% Impervious Runoff Depth>5.44"
Tc=6.0 min CN=97 Runoff=2.58 cfs 0.212 af

Subcatchment6Sb: Plaza between Blocks 1 Runoff Area=3,122 sf 71.75% Impervious Runoff Depth>4.98"
Tc=6.0 min CN=93 Runoff=0.38 cfs 0.030 af

Subcatchment7S: Building 14 Runoff Area=2,572 sf 100.00% Impervious Runoff Depth>5.56"
Tc=6.0 min CN=98 Runoff=0.33 cfs 0.027 af

Subcatchment8S: Building 15 Runoff Area=4,507 sf 100.00% Impervious Runoff Depth>5.56"
Tc=6.0 min CN=98 Runoff=0.57 cfs 0.048 af

Subcatchment9S: Building 2 North Runoff Area=4,695 sf 100.00% Impervious Runoff Depth>5.56"
Tc=6.0 min CN=98 Runoff=0.60 cfs 0.050 af

Subcatchment10S: Building 3 North Runoff Area=2,212 sf 100.00% Impervious Runoff Depth>5.56"
Tc=6.0 min CN=98 Runoff=0.28 cfs 0.024 af

Subcatchment11S: Building 2 South Runoff Area=4,855 sf 100.00% Impervious Runoff Depth>5.56"
Tc=6.0 min CN=98 Runoff=0.62 cfs 0.052 af

Subcatchment12S: Building 3 South Runoff Area=2,326 sf 100.00% Impervious Runoff Depth>5.56"
Tc=6.0 min CN=98 Runoff=0.30 cfs 0.025 af

Subcatchment13S: Building 6 Runoff Area=3,304 sf 100.00% Impervious Runoff Depth>5.56"
Tc=6.0 min CN=98 Runoff=0.42 cfs 0.035 af

Subcatchment14S: Building 6B North Runoff Area=3,873 sf 100.00% Impervious Runoff Depth>5.56"
Tc=6.0 min CN=98 Runoff=0.49 cfs 0.041 af

Subcatchment15S: Building 6B South Runoff Area=2,512 sf 100.00% Impervious Runoff Depth>5.56"
Tc=6.0 min CN=98 Runoff=0.32 cfs 0.027 af

Subcatchment16S: Shared Street - Trench Runoff Area=8,931 sf 100.00% Impervious Runoff Depth>5.56"
Tc=6.0 min CN=98 Runoff=1.14 cfs 0.095 af

Subcatchment17S: Future Block 3 Runoff Area=9,998 sf 100.00% Impervious Runoff Depth>5.56"
Tc=6.0 min CN=98 Runoff=1.27 cfs 0.106 af

Subcatchment18S: Plaza between Blocks Runoff Area=20,458 sf 99.48% Impervious Runoff Depth>5.56"
Tc=6.0 min CN=98 Runoff=2.61 cfs 0.218 af

Subcatchment19S: Building 4A Runoff Area=69,274 sf 100.00% Impervious Runoff Depth>5.56"
Tc=6.0 min CN=98 Runoff=8.82 cfs 0.737 af

Subcatchment20S: Redevelopmentarea Runoff Area=4,759 sf 52.30% Impervious Runoff Depth>4.54"
Tc=6.0 min CN=89 Runoff=0.55 cfs 0.041 af

Subcatchment21S: Eastern Waterfront Runoff Area=86,899 sf 73.10% Impervious Runoff Depth>4.98"
Tc=6.0 min CN=93 Runoff=10.60 cfs 0.828 af

Pond 1P: DMH 1 Peak Elev=11.86' Inflow=9.82 cfs 0.805 af
21.0" Round Culvert n=0.013 L=61.0' S=0.0038 '/' Outflow=9.82 cfs 0.805 af

Pond 2P: DMH 2 Peak Elev=11.53' Inflow=10.62 cfs 0.870 af
21.0" Round Culvert n=0.013 L=31.0' S=0.0048 '/' Outflow=10.62 cfs 0.870 af

Pond 3P: Storm Structure Peak Elev=10.70' Inflow=10.62 cfs 0.870 af
15.0" Round Culvert x 3.00 n=0.013 L=4.0' S=0.0000 '/' Outflow=10.62 cfs 0.870 af

Pond 4P: R-Tank 1 Peak Elev=9.66' Storage=2,934 cf Inflow=10.62 cfs 0.870 af
21.0" Round Culvert n=0.013 L=4.0' S=0.0000 '/' Outflow=9.25 cfs 0.860 af

Pond 6P: CB27 Peak Elev=12.00' Inflow=14.53 cfs 1.213 af
24.0" Round Culvert n=0.013 L=22.0' S=0.0064 '/' Outflow=14.53 cfs 1.213 af

Pond 7P: Storm Structure Peak Elev=11.13' Inflow=14.53 cfs 1.213 af
15.0" Round Culvert x 3.00 n=0.013 L=4.0' S=0.0000 '/' Outflow=14.53 cfs 1.213 af

Pond 8P: R-Tank 2 Peak Elev=9.98' Storage=6,202 cf Inflow=14.53 cfs 1.213 af
24.0" Round Culvert n=0.013 L=4.0' S=0.0000 '/' Outflow=11.56 cfs 1.193 af

Pond 10P: DMH 5 Peak Elev=9.51' Inflow=20.76 cfs 2.053 af
30.0" Round Culvert n=0.013 L=83.1' S=0.0100 '/' Outflow=20.76 cfs 2.053 af

Pond 11P: Jellyfish 1 JFPD0806-4-2 Peak Elev=10.52' Inflow=9.25 cfs 0.860 af
Outflow=9.25 cfs 0.860 af

Pond 12P: Jellyfish 2 JFPD0806-7-2 Peak Elev=11.01' Inflow=11.56 cfs 1.193 af
Outflow=11.56 cfs 1.193 af

Link 1L: Fore Connector Inflow=5.06 cfs 0.394 af
Primary=5.06 cfs 0.394 af

Link 2L: Fore River

Inflow=32.13 cfs 3.029 af
Primary=32.13 cfs 3.029 af

Total Runoff Area = 7.897 ac Runoff Volume = 3.453 af Average Runoff Depth = 5.25"
14.85% Pervious = 1.173 ac 85.15% Impervious = 6.724 ac

Summary for Subcatchment 1S: Block 1B

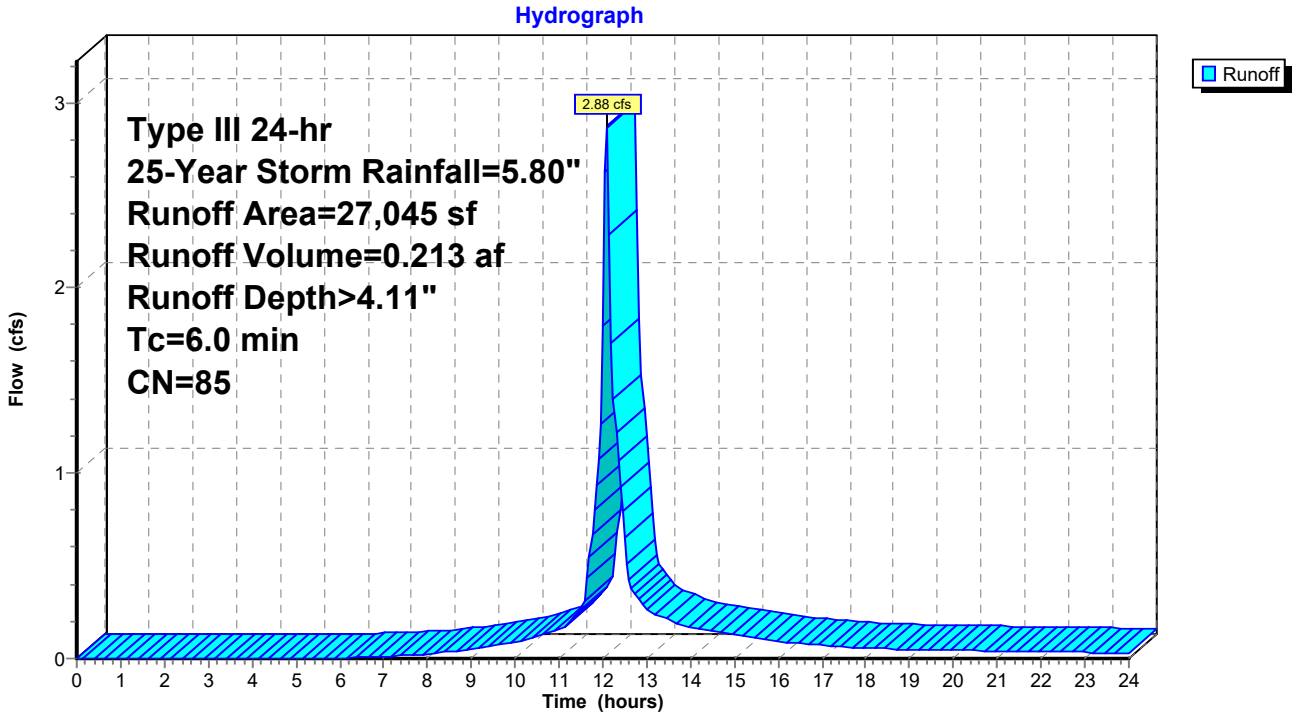
Runoff = 2.88 cfs @ 12.09 hrs, Volume= 0.213 af, Depth> 4.11"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	7,991	98	Impervious
	19,054	80	>75% Grass cover, Good, HSG D
	27,045	85	Weighted Average
	19,054		70.45% Pervious Area
	7,991		29.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1S: Block 1B



Summary for Subcatchment 2S: Western half of Building 1A

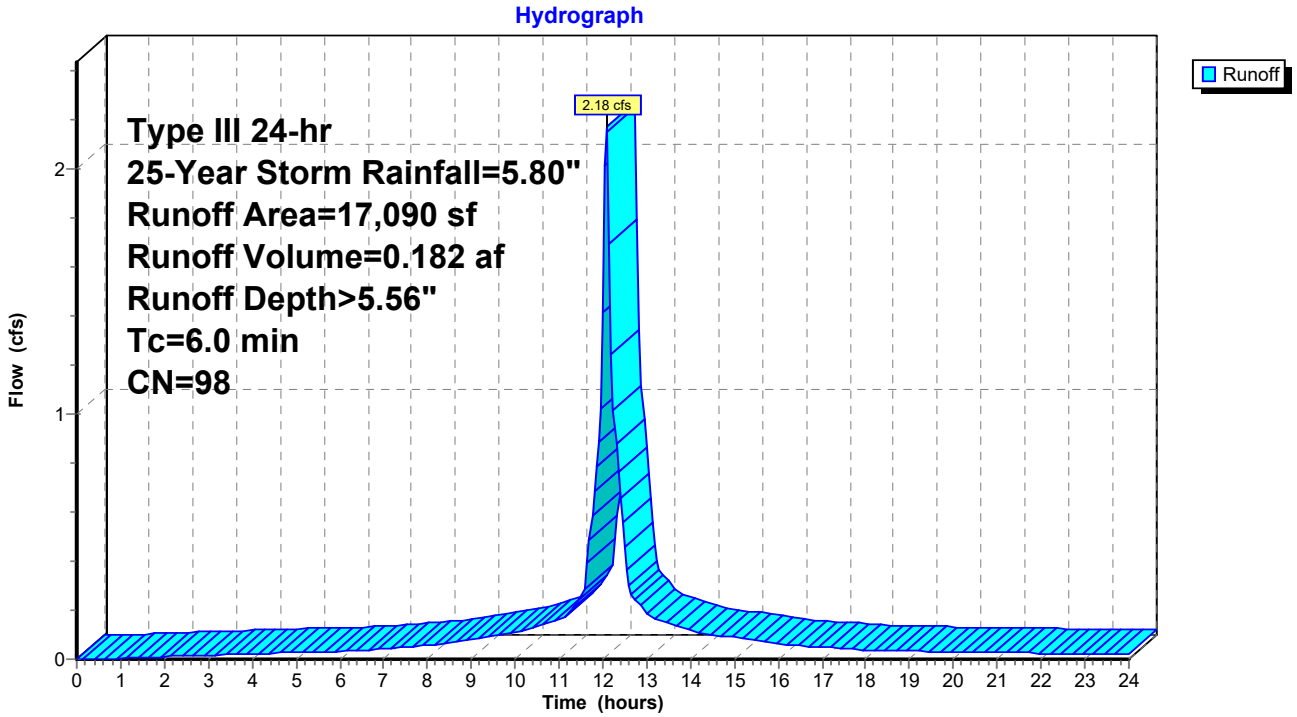
Runoff = 2.18 cfs @ 12.09 hrs, Volume= 0.182 af, Depth> 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	17,090	98	Roof
	17,090		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 2S: Western half of Building 1A



Summary for Subcatchment 3S: Eastern half of Building 1A

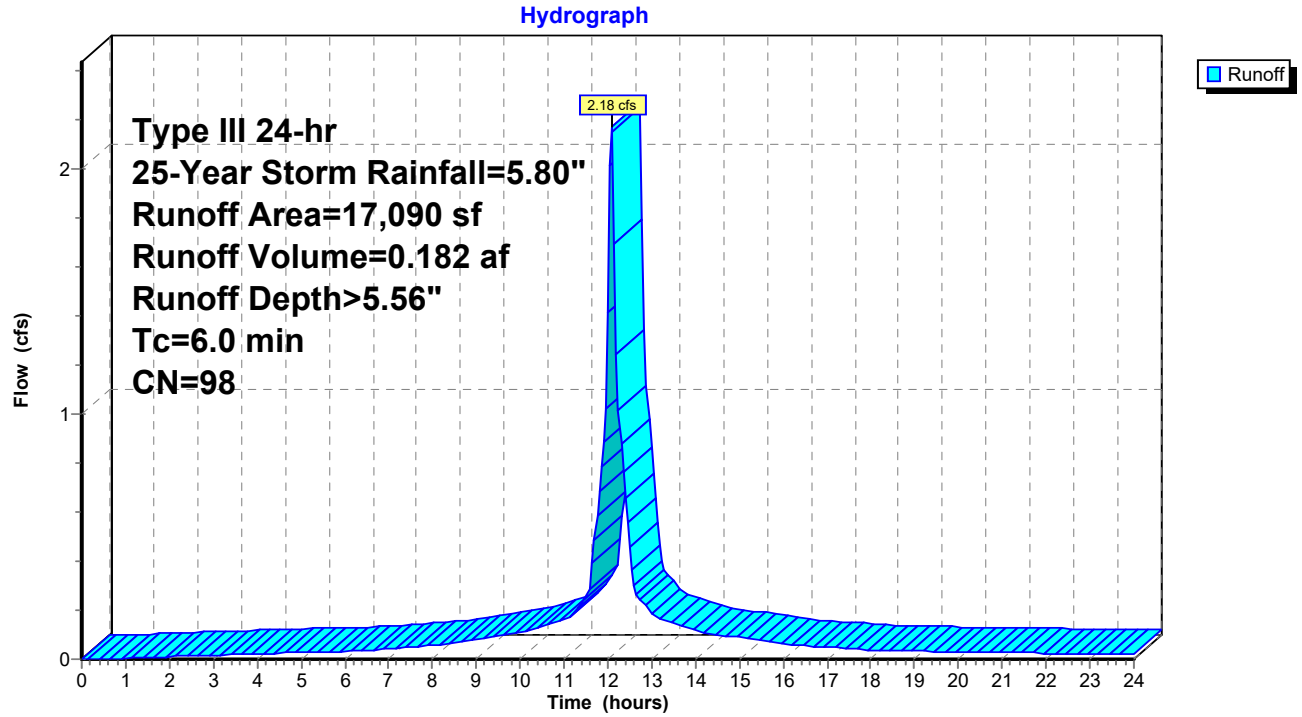
Runoff = 2.18 cfs @ 12.09 hrs, Volume= 0.182 af, Depth> 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	17,090	98	Roof
	17,090		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 3S: Eastern half of Building 1A



Summary for Subcatchment 4S: Shared Street - Trench Drain

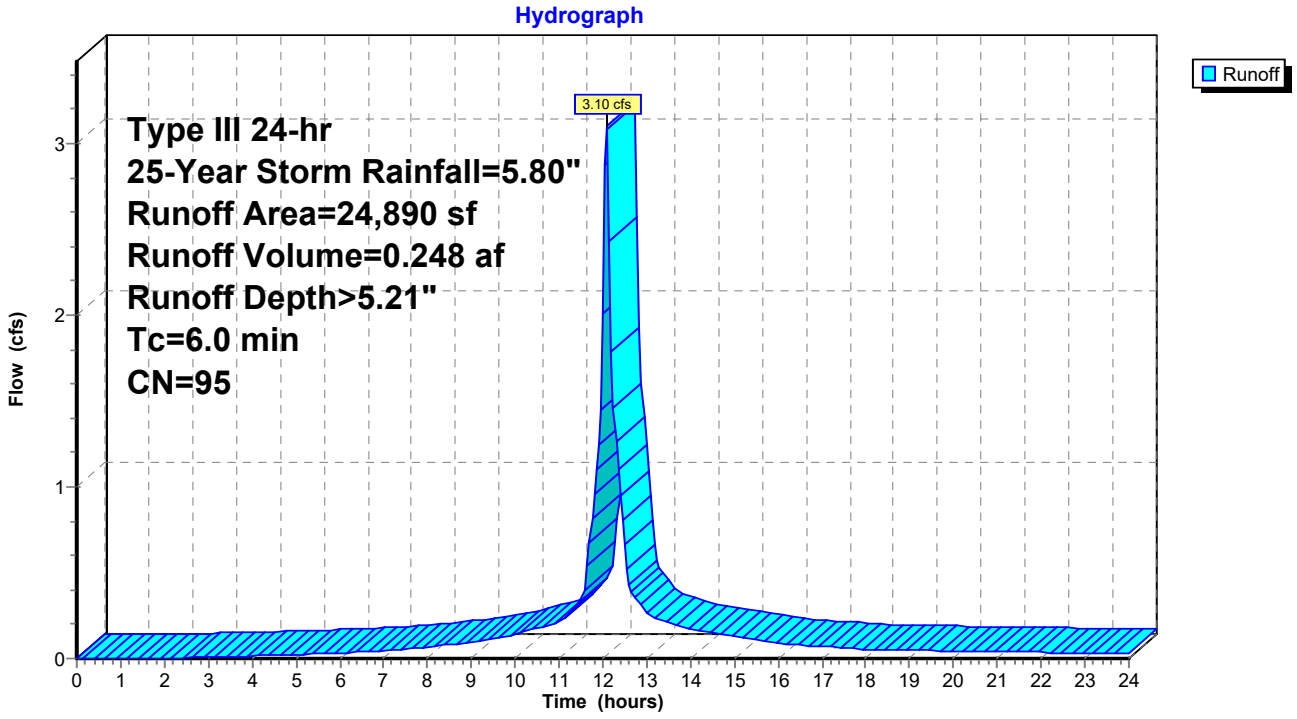
Runoff = 3.10 cfs @ 12.09 hrs, Volume= 0.248 af, Depth> 5.21"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
	4,345	80	>75% Grass cover, Good, HSG D
*	20,545	98	Impervious Shared Street and Plaza
	24,890	95	Weighted Average
	4,345		17.46% Pervious Area
	20,545		82.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 4S: Shared Street - Trench Drain



Summary for Subcatchment 5S: Building 12

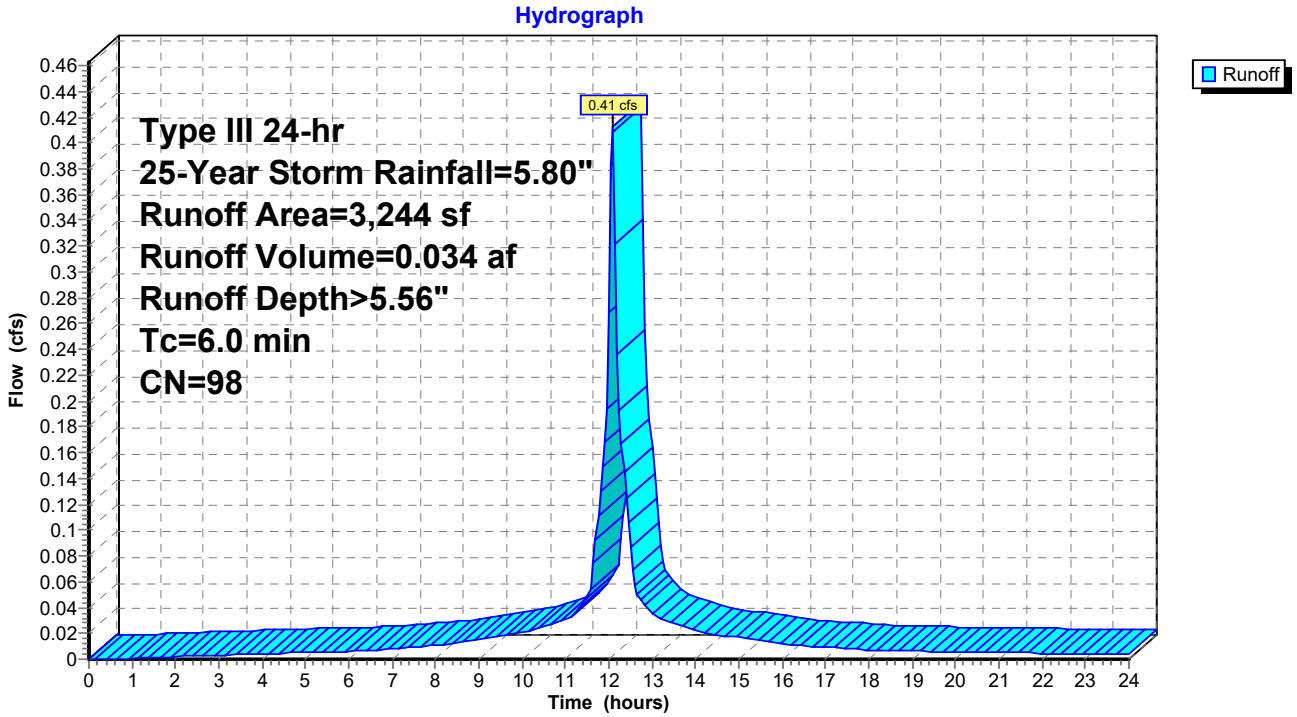
Runoff = 0.41 cfs @ 12.09 hrs, Volume= 0.034 af, Depth> 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	3,244	98	Roof
	3,244		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 5S: Building 12



Summary for Subcatchment 6Sa: Plaza between Blocks 1 & 2

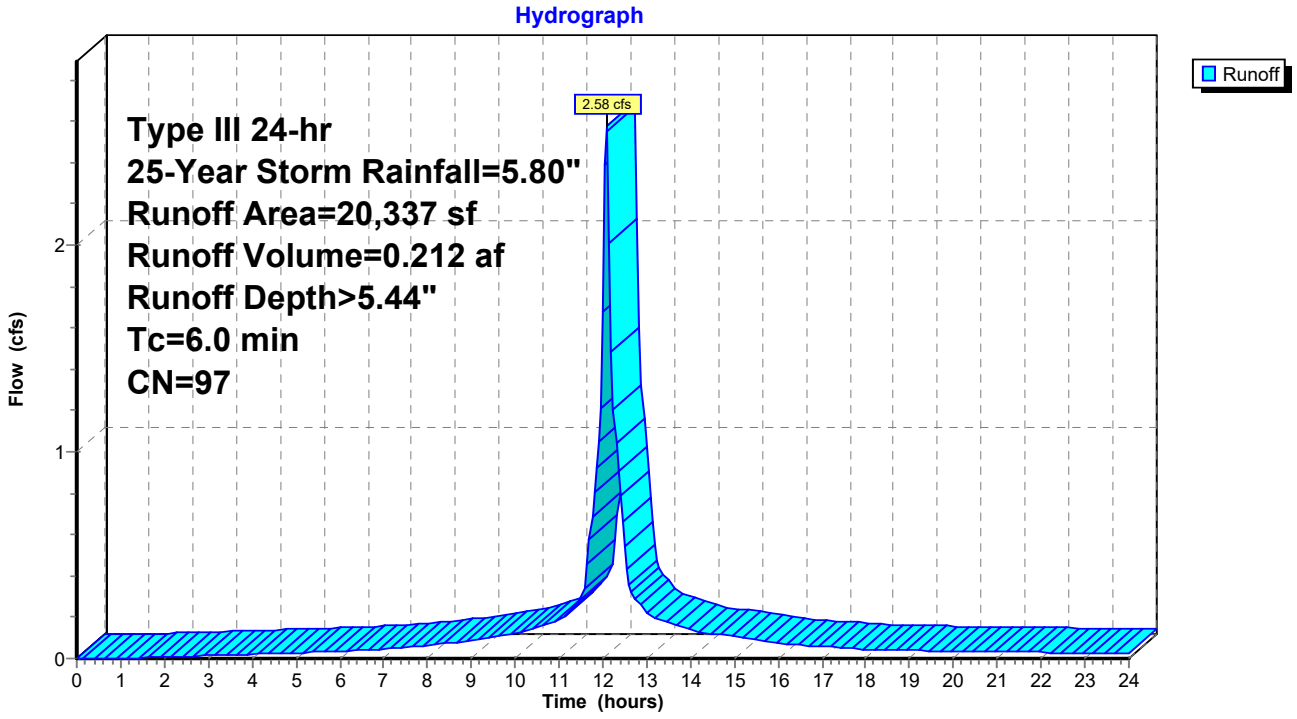
Runoff = 2.58 cfs @ 12.09 hrs, Volume= 0.212 af, Depth> 5.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	19,288	98	Impervious
	1,049	80	>75% Grass cover, Good, HSG D
	20,337	97	Weighted Average
	1,049		5.16% Pervious Area
	19,288		94.84% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 6Sa: Plaza between Blocks 1 & 2



Summary for Subcatchment 6Sb: Plaza between Blocks 1 & 2

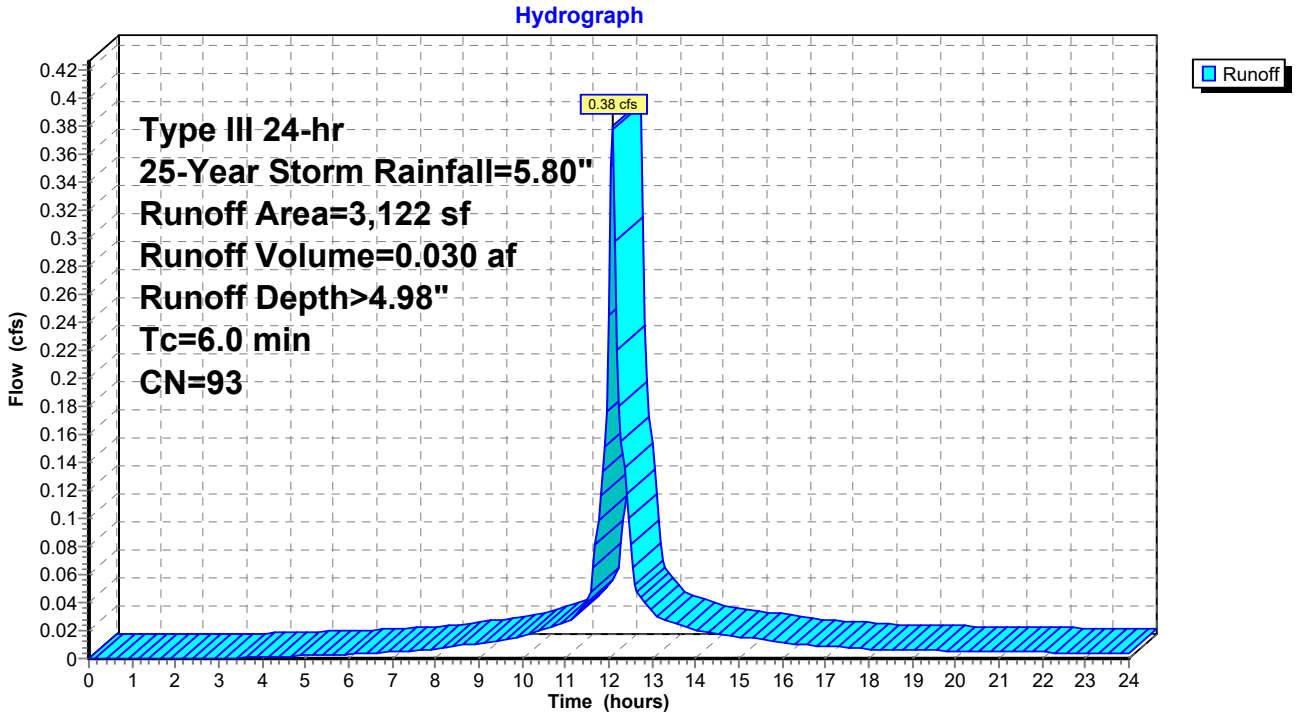
Runoff = 0.38 cfs @ 12.09 hrs, Volume= 0.030 af, Depth> 4.98"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	2,240	98	Impervious
	882	80	>75% Grass cover, Good, HSG D
	3,122	93	Weighted Average
	882		28.25% Pervious Area
	2,240		71.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 6Sb: Plaza between Blocks 1 & 2



Summary for Subcatchment 7S: Building 14

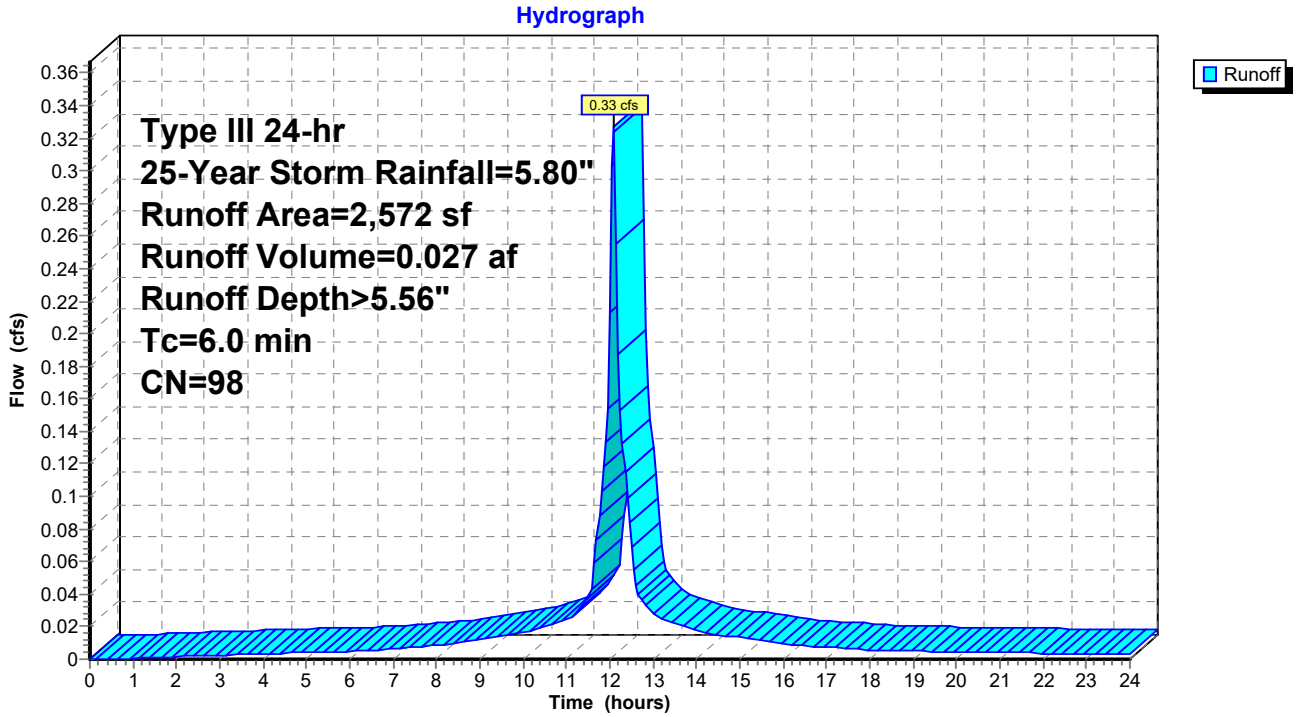
Runoff = 0.33 cfs @ 12.09 hrs, Volume= 0.027 af, Depth> 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	2,572	98	Roof
	2,572		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 7S: Building 14



Summary for Subcatchment 8S: Building 15

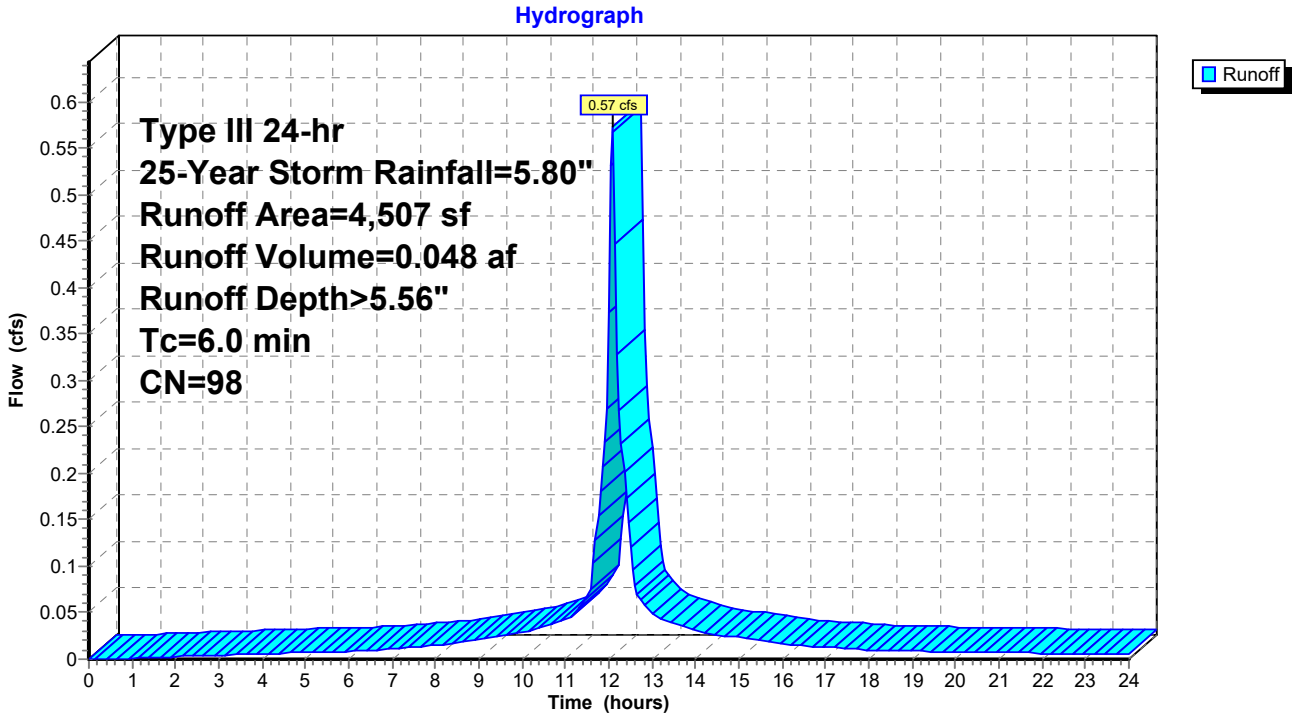
Runoff = 0.57 cfs @ 12.09 hrs, Volume= 0.048 af, Depth> 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	4,507	98	Roof
	4,507		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 8S: Building 15



Summary for Subcatchment 9S: Building 2 North

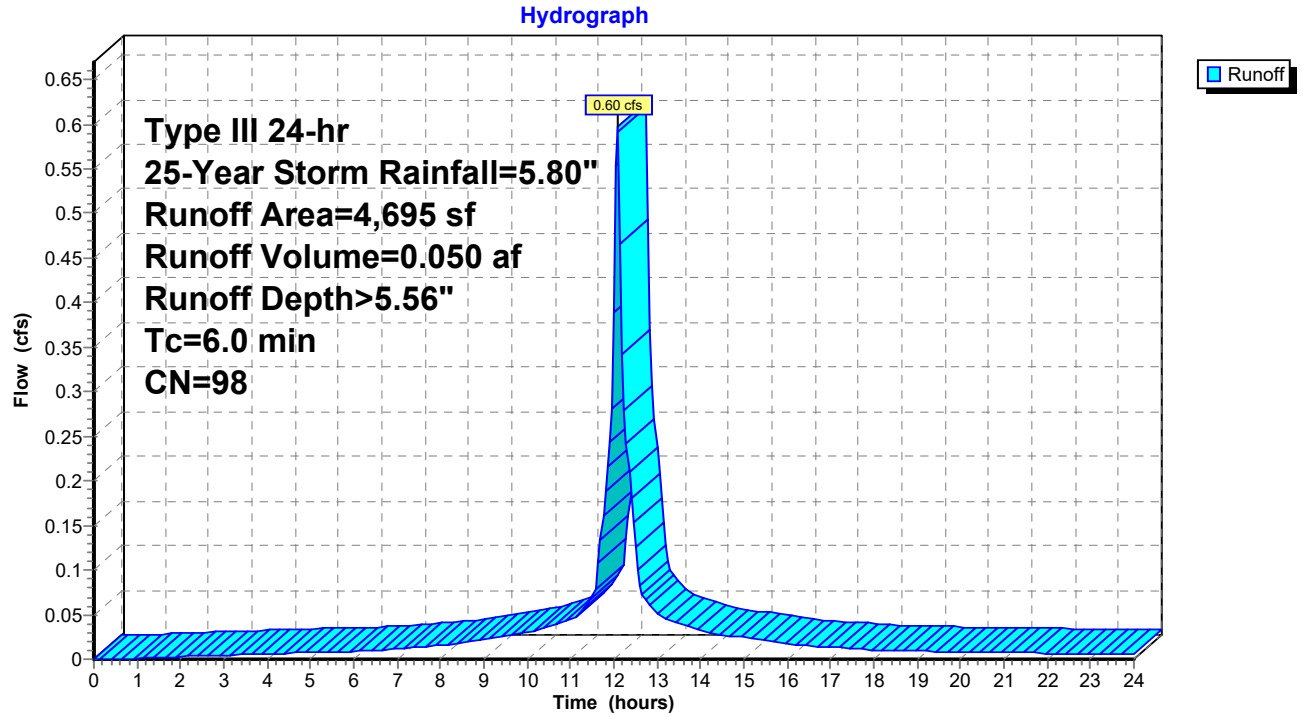
Runoff = 0.60 cfs @ 12.09 hrs, Volume= 0.050 af, Depth> 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	4,695	98	Roof
	4,695		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 9S: Building 2 North



Summary for Subcatchment 10S: Building 3 North

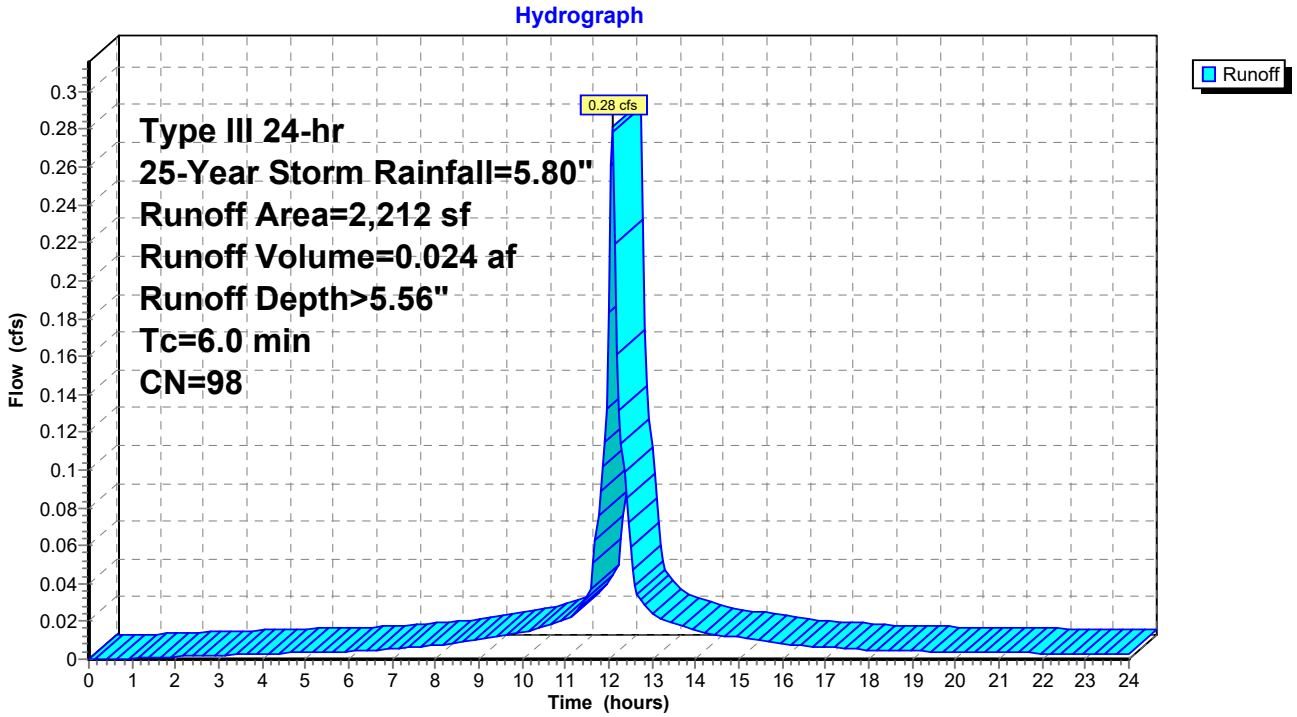
Runoff = 0.28 cfs @ 12.09 hrs, Volume= 0.024 af, Depth> 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	2,212	98	Roof
	2,212		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 10S: Building 3 North



Summary for Subcatchment 11S: Building 2 South

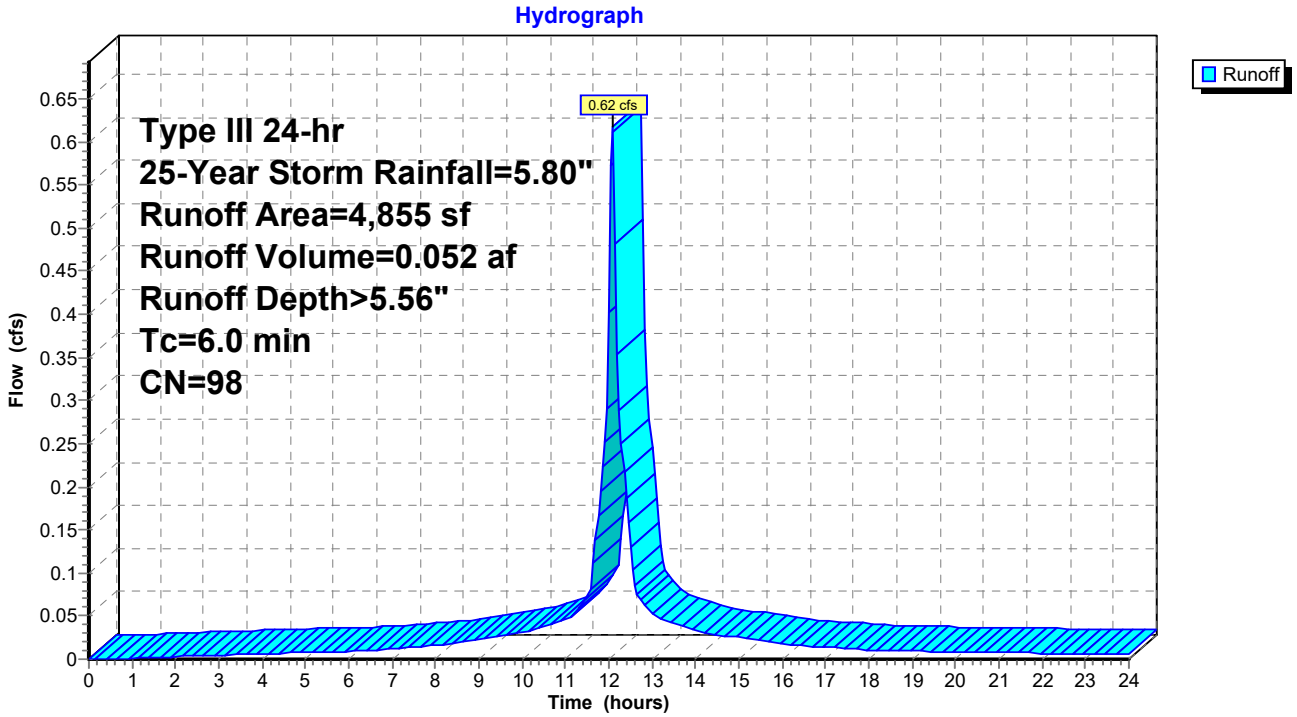
Runoff = 0.62 cfs @ 12.09 hrs, Volume= 0.052 af, Depth> 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	4,855	98	Roof
	4,855		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 11S: Building 2 South



Summary for Subcatchment 12S: Building 3 South

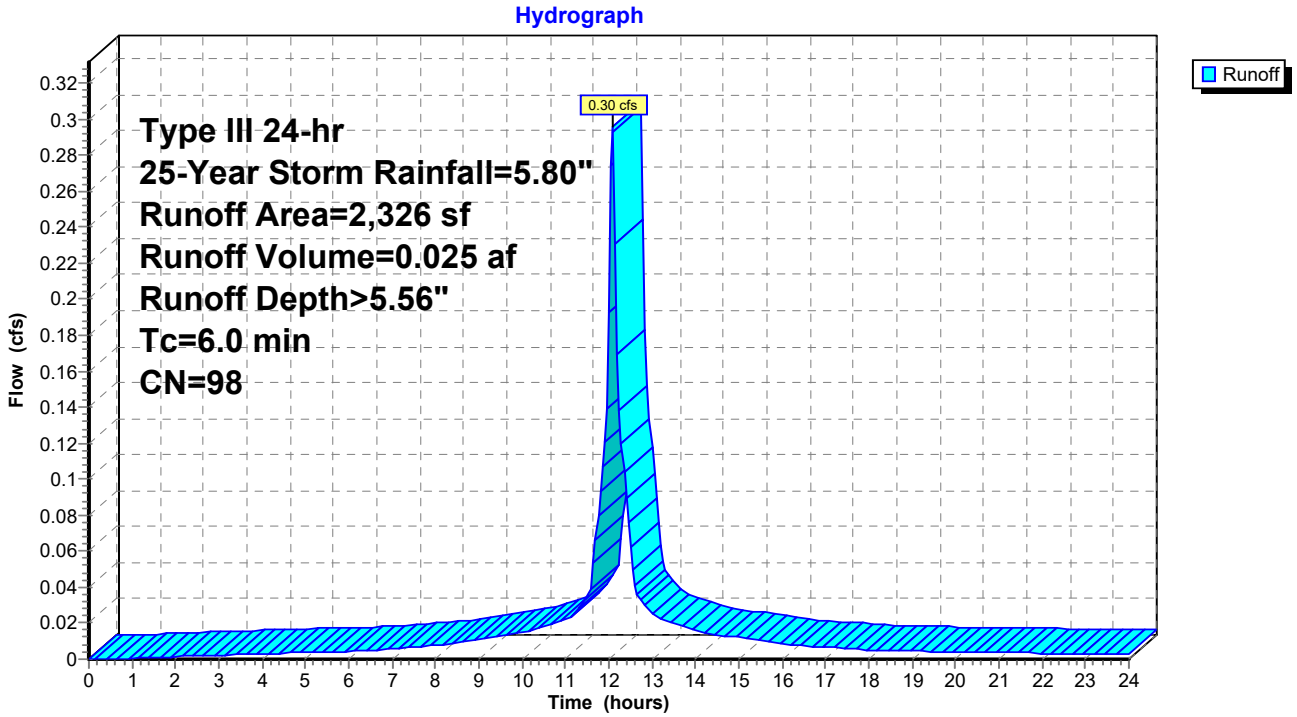
Runoff = 0.30 cfs @ 12.09 hrs, Volume= 0.025 af, Depth> 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	2,326	98	Roof
	2,326		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 12S: Building 3 South



Summary for Subcatchment 13S: Building 6

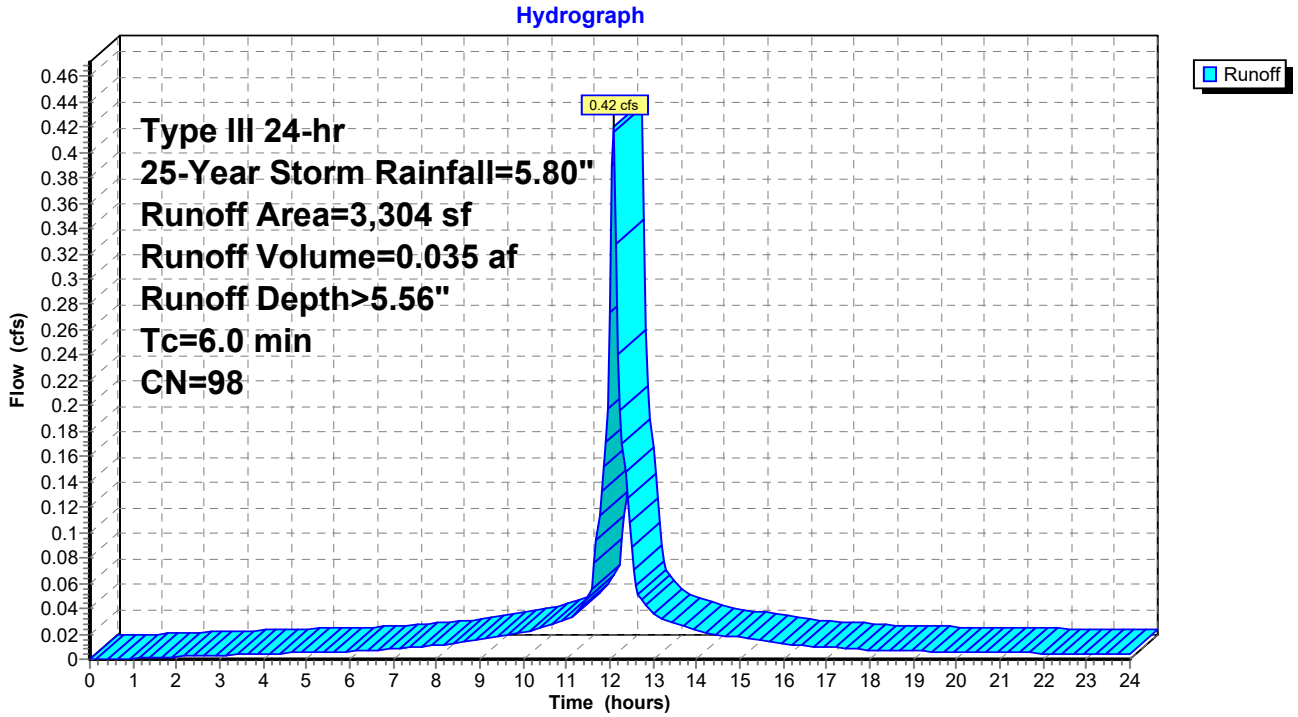
Runoff = 0.42 cfs @ 12.09 hrs, Volume= 0.035 af, Depth> 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	3,304	98	Roof
	3,304		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 13S: Building 6



Summary for Subcatchment 14S: Building 6B North

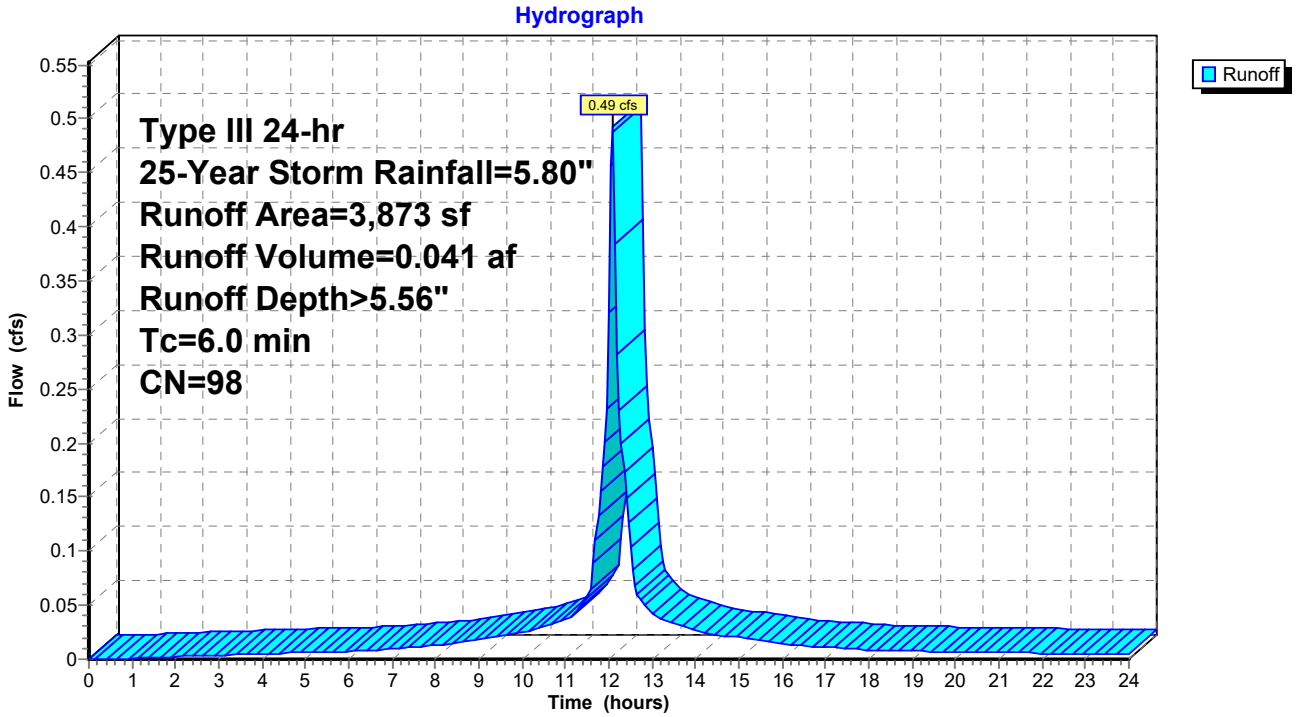
Runoff = 0.49 cfs @ 12.09 hrs, Volume= 0.041 af, Depth> 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	3,873	98	Roof
	3,873		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 14S: Building 6B North



Summary for Subcatchment 15S: Building 6B South

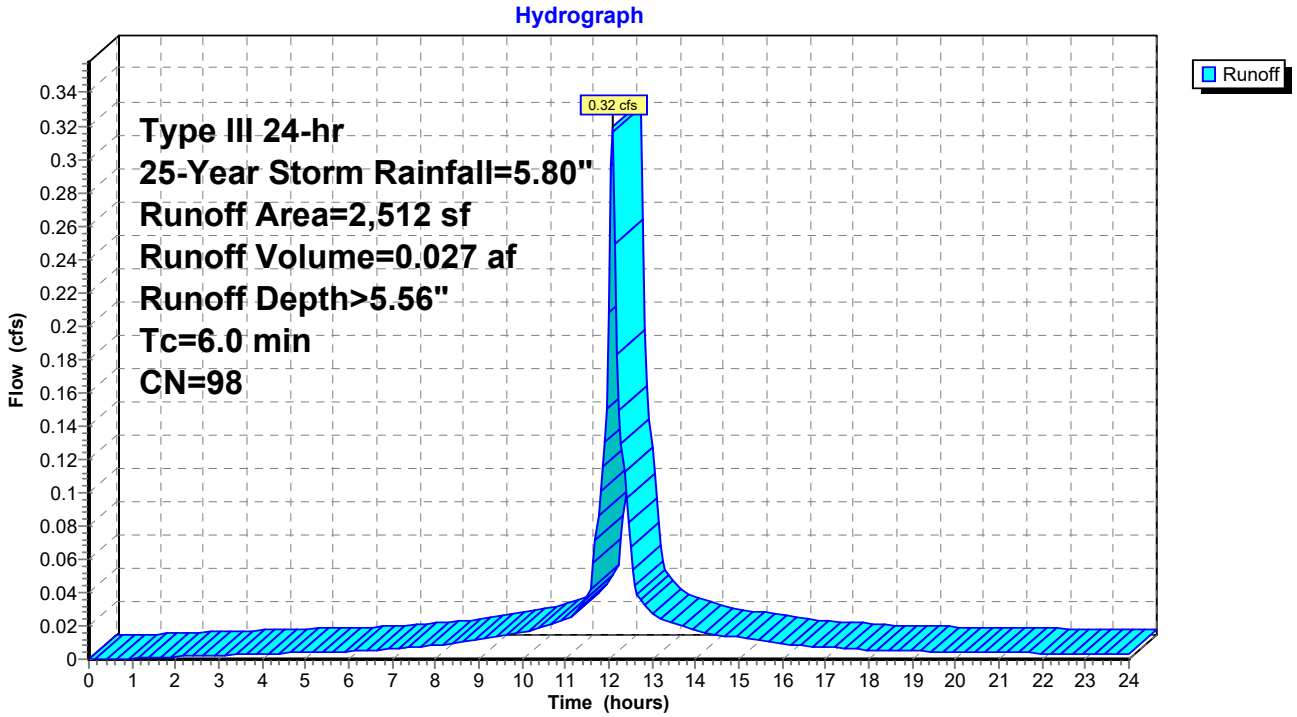
Runoff = 0.32 cfs @ 12.09 hrs, Volume= 0.027 af, Depth> 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	2,512	98	Roof
	2,512		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 15S: Building 6B South



Summary for Subcatchment 16S: Shared Street - Trench Drain

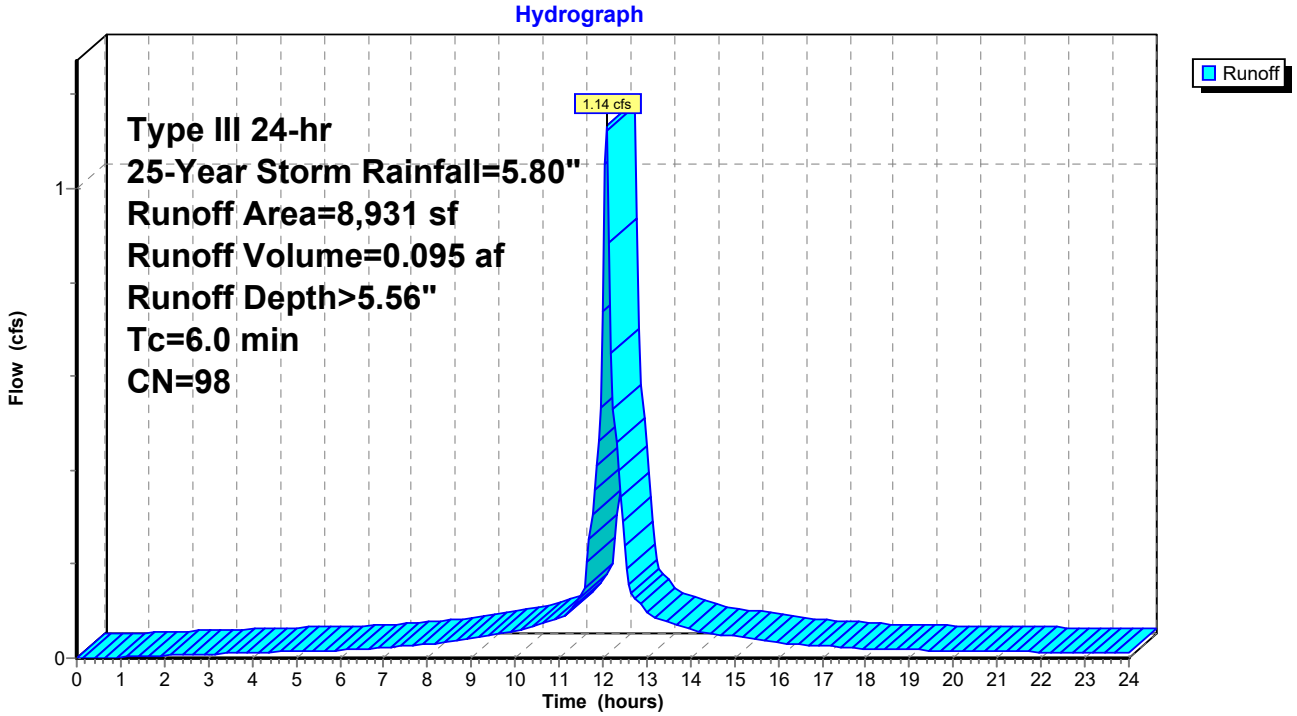
Runoff = 1.14 cfs @ 12.09 hrs, Volume= 0.095 af, Depth> 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
	0	80	>75% Grass cover, Good, HSG D
*	8,931	98	Impervious Shared Street
	8,931	98	Weighted Average
	8,931		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 16S: Shared Street - Trench Drain



Summary for Subcatchment 17S: Future Block 3 Building Footprint

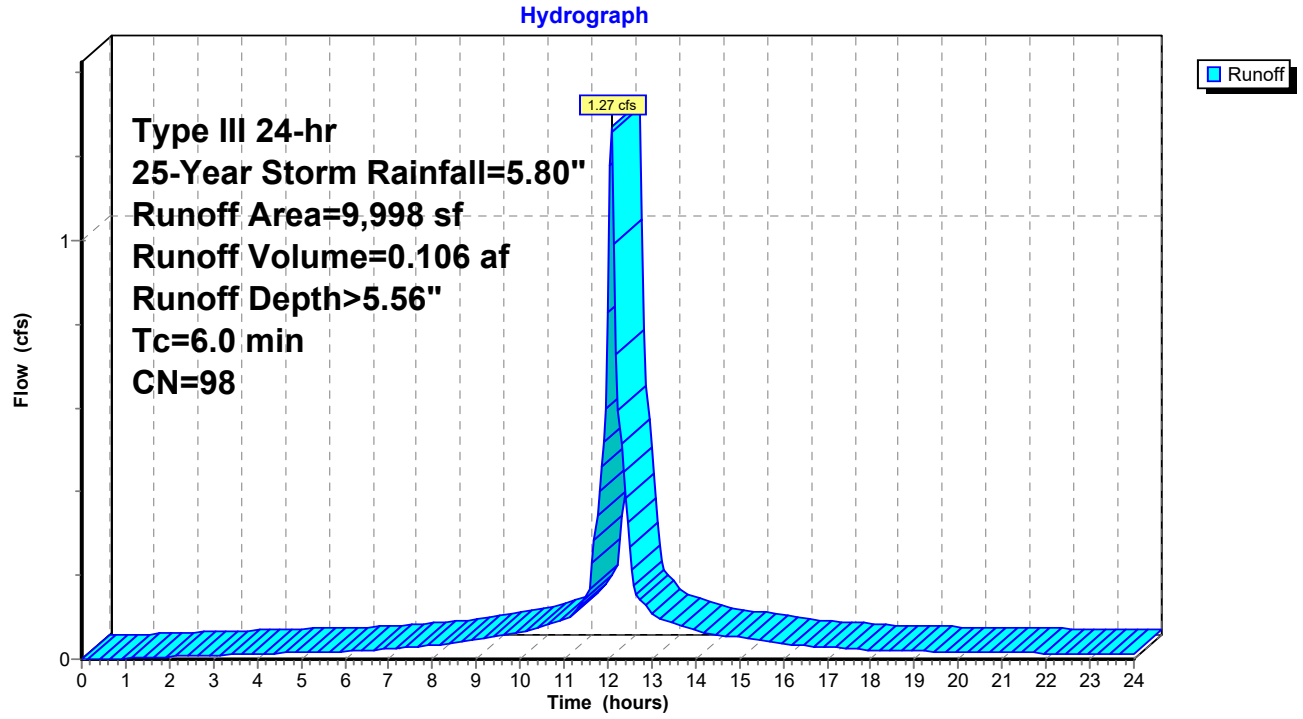
Runoff = 1.27 cfs @ 12.09 hrs, Volume= 0.106 af, Depth> 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	9,998	98	Gravel
	9,998		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 17S: Future Block 3 Building Footprint



Summary for Subcatchment 18S: Plaza between Blocks 2 & 4

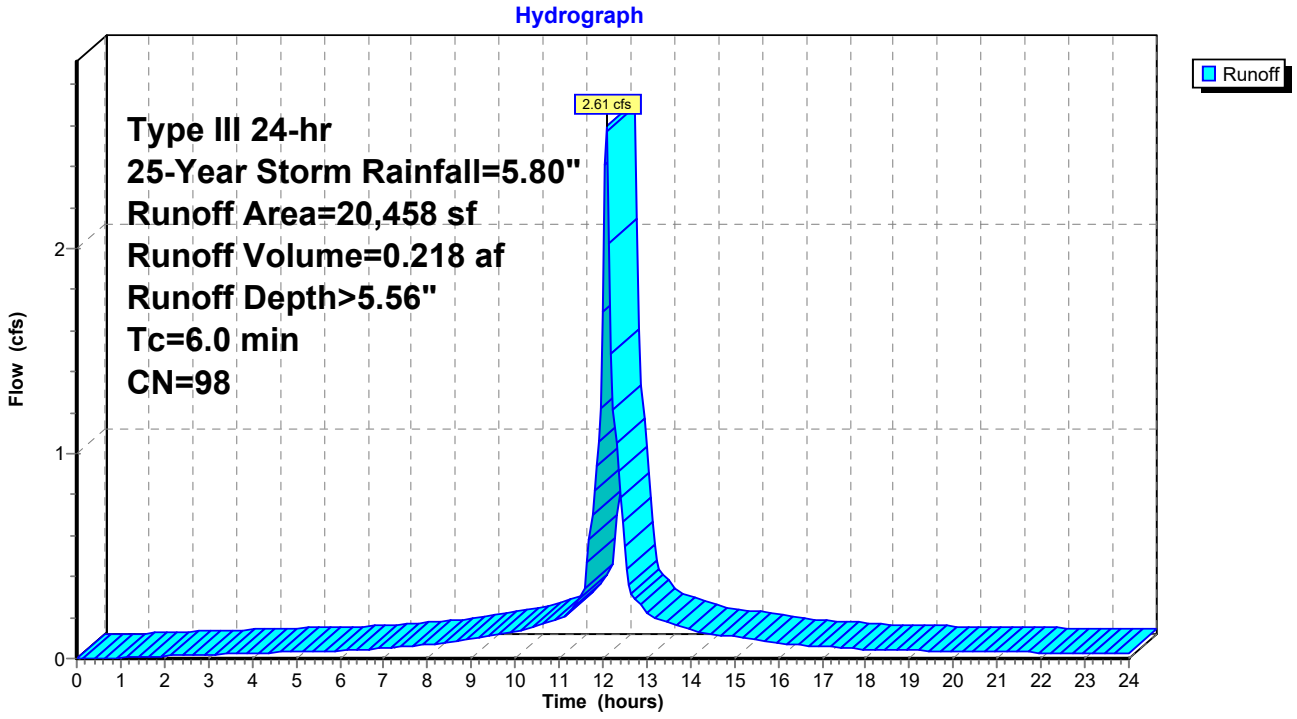
Runoff = 2.61 cfs @ 12.09 hrs, Volume= 0.218 af, Depth> 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	20,352	98	Impervious
	106	80	>75% Grass cover, Good, HSG D
	20,458	98	Weighted Average
	106		0.52% Pervious Area
	20,352		99.48% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 18S: Plaza between Blocks 2 & 4



Summary for Subcatchment 19S: Building 4A

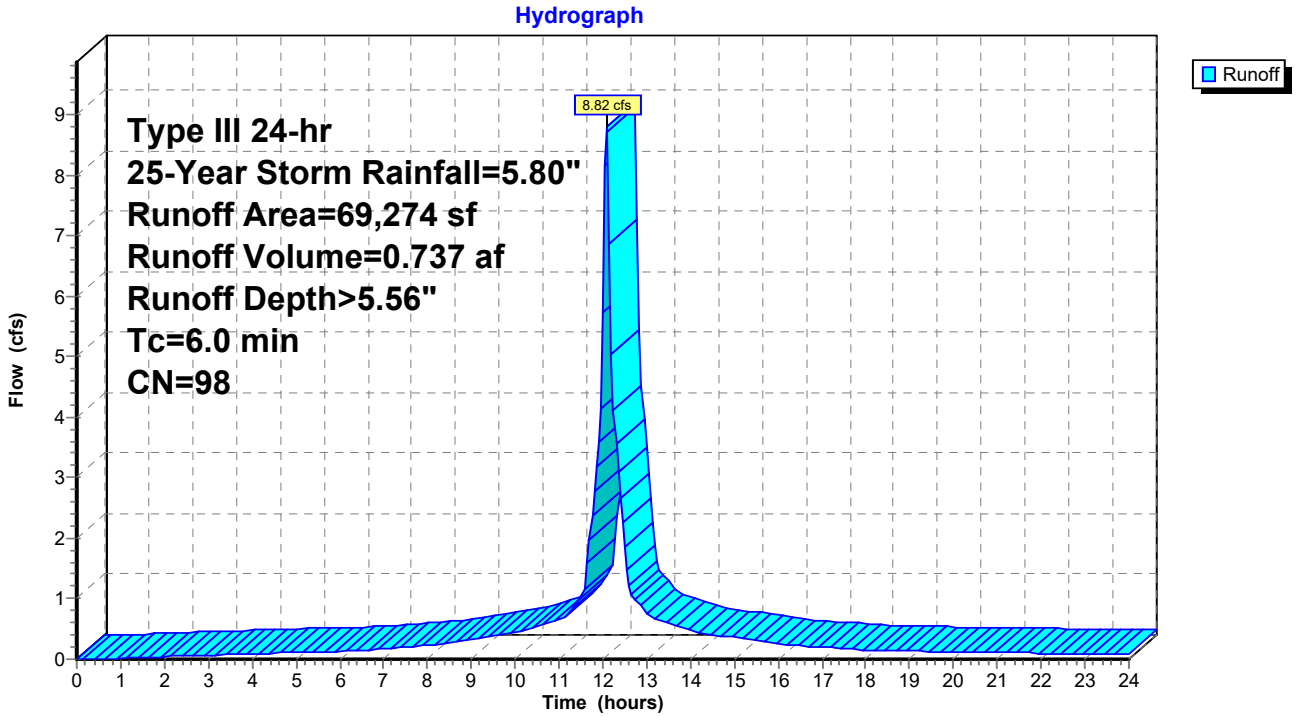
Runoff = 8.82 cfs @ 12.09 hrs, Volume= 0.737 af, Depth> 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	69,274	98	Roof
	69,274		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 19S: Building 4A



Summary for Subcatchment 20S: Redevelopment area east and south of Building 4A

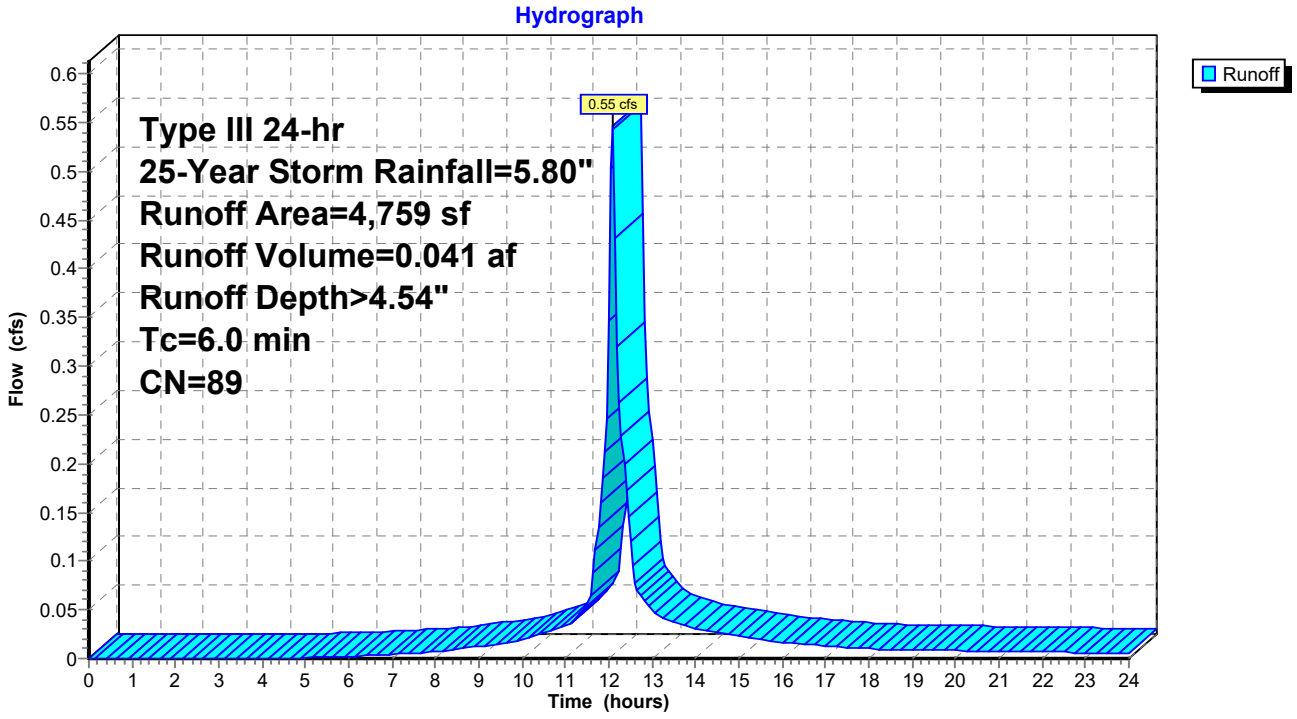
Runoff = 0.55 cfs @ 12.09 hrs, Volume= 0.041 af, Depth> 4.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	2,489	98	Impervious
	2,270	80	>75% Grass cover, Good, HSG D
	4,759	89	Weighted Average
	2,270		47.70% Pervious Area
	2,489		52.30% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 20S: Redevelopment area east and south of Building 4A



Summary for Subcatchment 21S: Eastern Waterfront

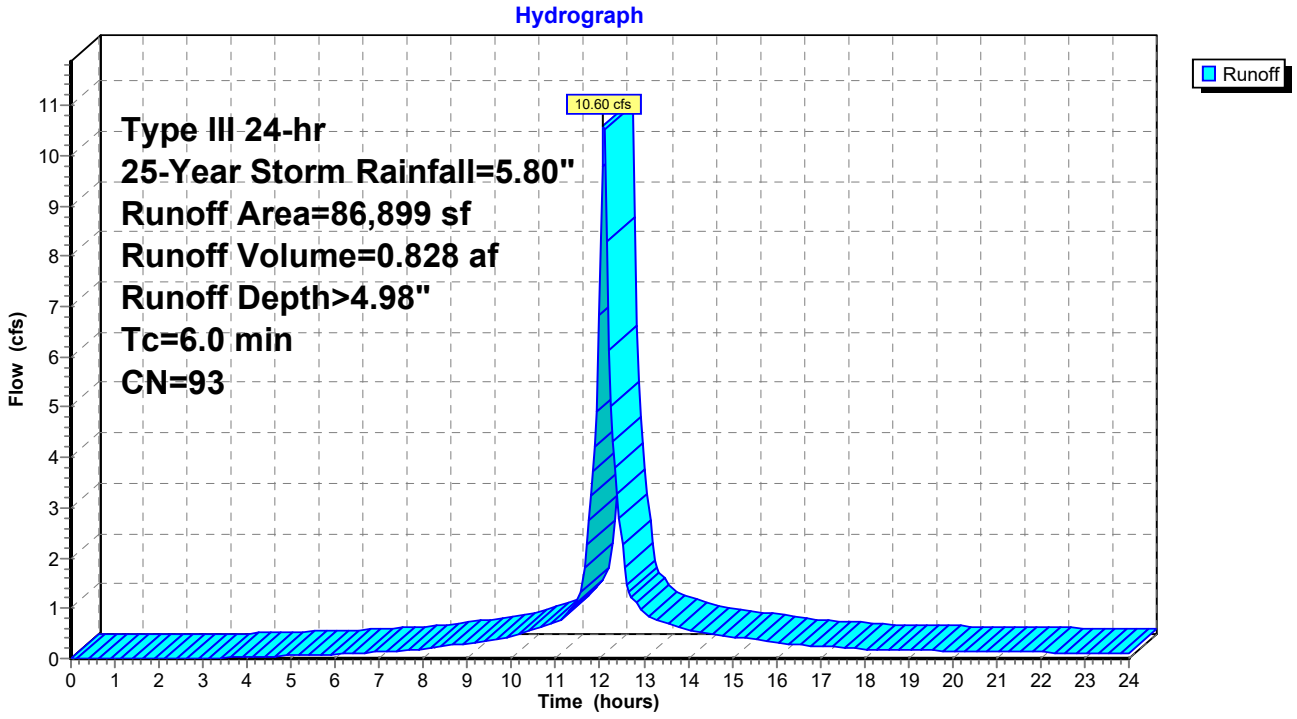
Runoff = 10.60 cfs @ 12.09 hrs, Volume= 0.828 af, Depth> 4.98"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	63,527	98	Impervious
	23,372	80	>75% Grass cover, Good, HSG D
	86,899	93	Weighted Average
	23,372		26.90% Pervious Area
	63,527		73.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 21S: Eastern Waterfront



Summary for Pond 1P: DMH 1

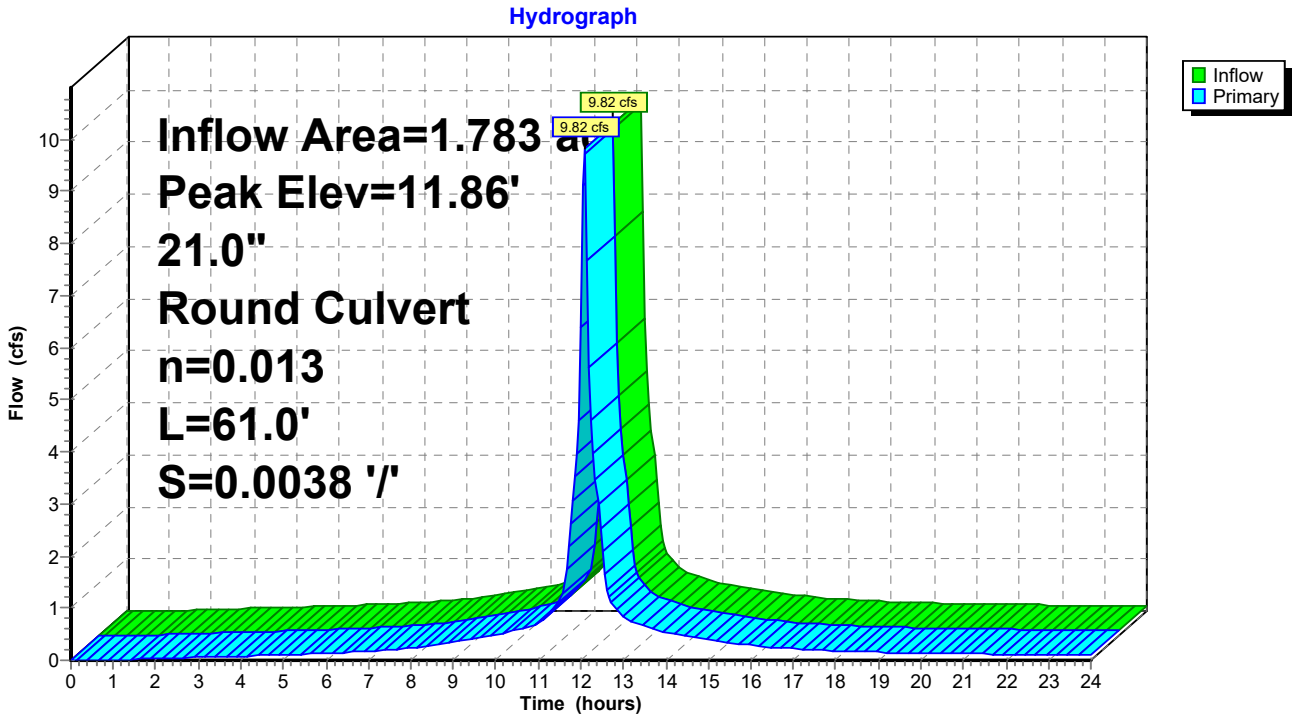
Inflow Area = 1.783 ac, 93.06% Impervious, Inflow Depth > 5.42" for 25-Year Storm event
Inflow = 9.82 cfs @ 12.09 hrs, Volume= 0.805 af
Outflow = 9.82 cfs @ 12.09 hrs, Volume= 0.805 af, Atten= 0%, Lag= 0.0 min
Primary = 9.82 cfs @ 12.09 hrs, Volume= 0.805 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 11.86' @ 12.09 hrs
Flood Elev= 14.71'

Device	Routing	Invert	Outlet Devices
#1	Primary	9.77'	**21.0" Round Culvert** L= 61.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 9.77' / 9.54' S= 0.0038 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 2.41 sf

Primary OutFlow Max=9.56 cfs @ 12.09 hrs HW=11.82' (Free Discharge)
1=Culvert (Barrel Controls 9.56 cfs @ 4.28 fps)

Pond 1P: DMH 1



Summary for Pond 2P: DMH 2

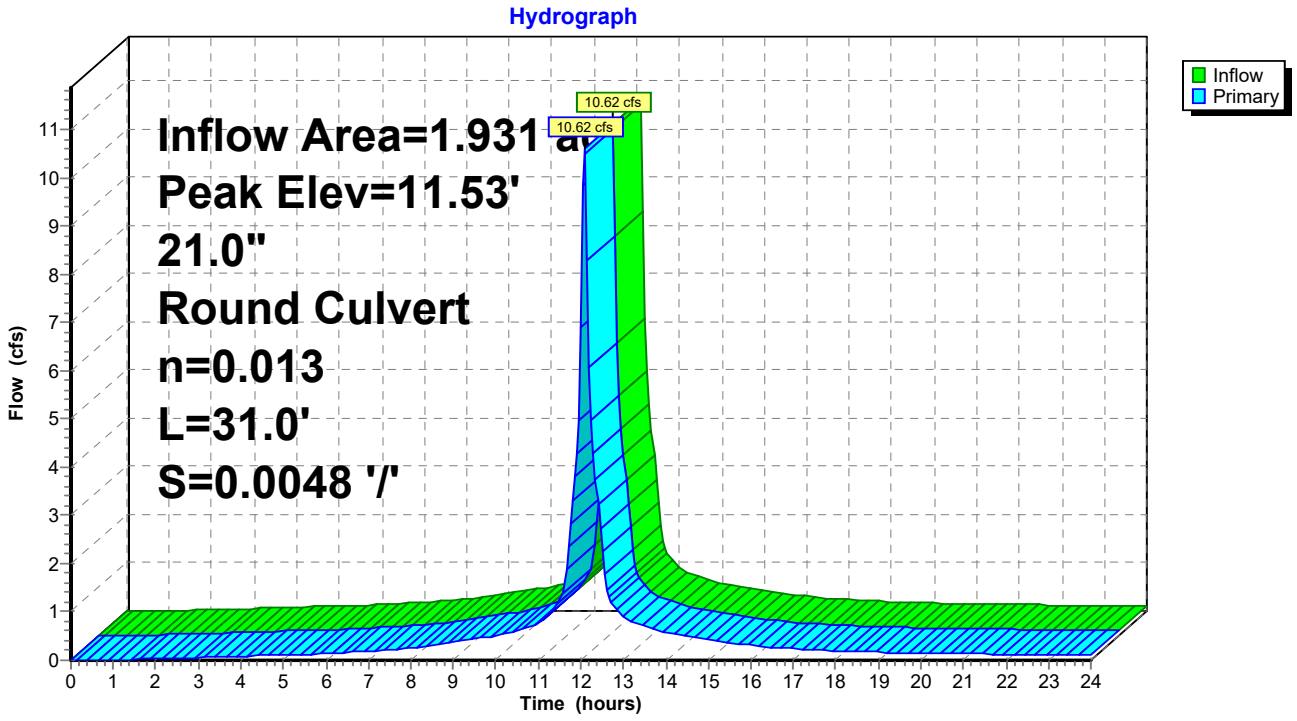
Inflow Area = 1.931 ac, 92.54% Impervious, Inflow Depth > 5.41" for 25-Year Storm event
Inflow = 10.62 cfs @ 12.09 hrs, Volume= 0.870 af
Outflow = 10.62 cfs @ 12.09 hrs, Volume= 0.870 af, Atten= 0%, Lag= 0.0 min
Primary = 10.62 cfs @ 12.09 hrs, Volume= 0.870 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 11.53' @ 12.09 hrs
Flood Elev= 14.63'

Device	Routing	Invert	Outlet Devices
#1	Primary	9.50'	**21.0" Round Culvert** L= 31.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 9.50' / 9.35' S= 0.0048 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 2.41 sf

Primary OutFlow Max=10.34 cfs @ 12.09 hrs HW=11.49' (Free Discharge)
1=Culvert (Barrel Controls 10.34 cfs @ 4.74 fps)

Pond 2P: DMH 2



Summary for Pond 3P: Storm Structure

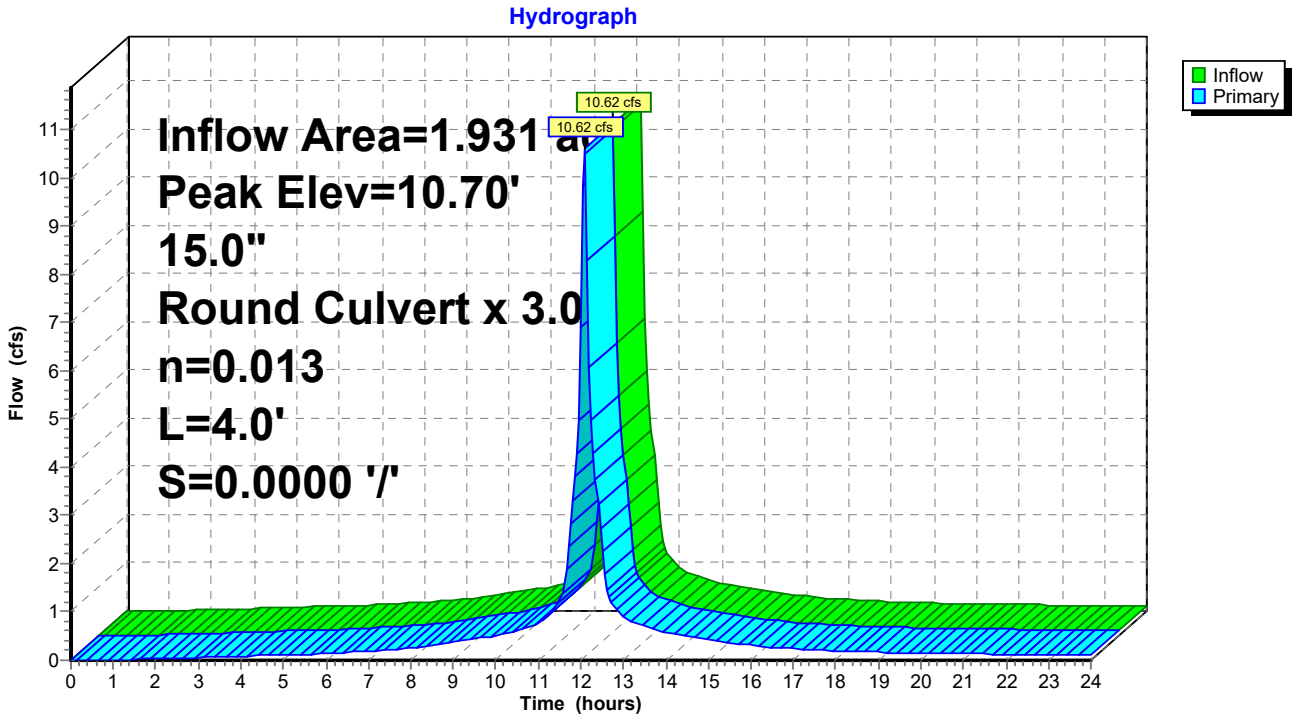
Inflow Area = 1.931 ac, 92.54% Impervious, Inflow Depth > 5.41" for 25-Year Storm event
Inflow = 10.62 cfs @ 12.09 hrs, Volume= 0.870 af
Outflow = 10.62 cfs @ 12.09 hrs, Volume= 0.870 af, Atten= 0%, Lag= 0.0 min
Primary = 10.62 cfs @ 12.09 hrs, Volume= 0.870 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 10.70' @ 12.09 hrs
Flood Elev= 14.51'

Device	Routing	Invert	Outlet Devices
#1	Primary	9.35'	**15.0" Round Culvert X 3.00** L= 4.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 9.35' / 9.35' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=10.33 cfs @ 12.09 hrs HW=10.68' (Free Discharge)
1=Culvert (Barrel Controls 10.33 cfs @ 3.29 fps)

Pond 3P: Storm Structure



Summary for Pond 4P: R-Tank 1

Inflow Area = 1.931 ac, 92.54% Impervious, Inflow Depth > 5.41" for 25-Year Storm event
Inflow = 10.62 cfs @ 12.09 hrs, Volume= 0.870 af
Outflow = 9.25 cfs @ 12.13 hrs, Volume= 0.860 af, Atten= 13%, Lag= 2.9 min
Primary = 9.25 cfs @ 12.13 hrs, Volume= 0.860 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 9.66' @ 12.13 hrs Surf.Area= 1,597 sf Storage= 2,934 cf
Flood Elev= 10.42' Surf.Area= 1,597 sf Storage= 3,504 cf

Plug-Flow detention time= 20.5 min calculated for 0.860 af (99% of inflow)
Center-of-Mass det. time= 13.4 min (766.7 - 753.3)

Volume	Invert	Avail.Storage	Storage Description
#1	7.35'	1,478 cf	**Stone Envelope (Prismatic)** Listed below (Recalc) 6,500 cf Overall - 2,806 cf Embedded = 3,694 cf x 40.0% Voids
#2	7.60'	2,666 cf	**R-Tank Double Modules (Prismatic)** Listed below (Recalc) Inside #1 2,806 cf Overall x 95.0% Voids
		4,143 cf	Total Available Storage

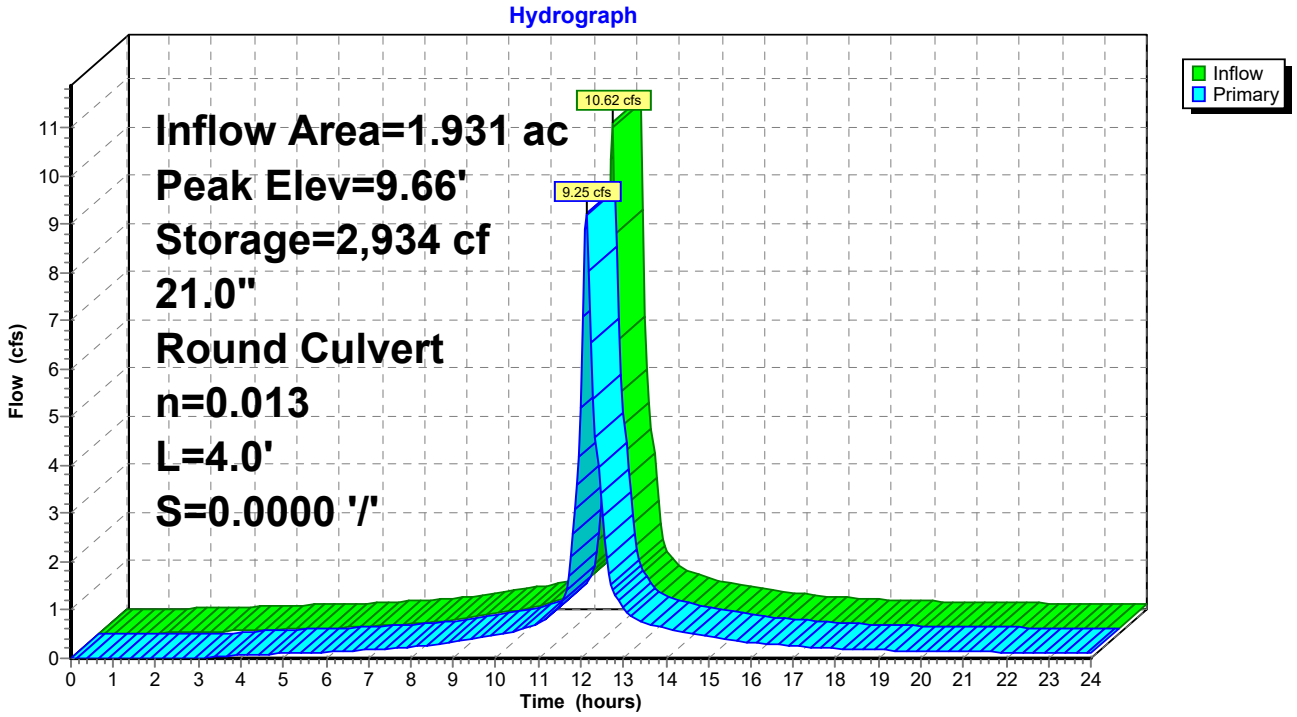
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
7.35	1,597	0	0
11.42	1,597	6,500	6,500

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
7.60	1,293	0	0
9.77	1,293	2,806	2,806

Device	Routing	Invert	Outlet Devices
#1	Primary	7.60'	**21.0" Round Culvert to Filter** L= 4.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 7.60' / 7.60' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 2.41 sf

Primary OutFlow Max=9.10 cfs @ 12.13 hrs HW=9.63' (Free Discharge)
↑**1=Culvert to Filter** (Barrel Controls 9.10 cfs @ 4.10 fps)

Pond 4P: R-Tank 1



Summary for Pond 6P: CB27

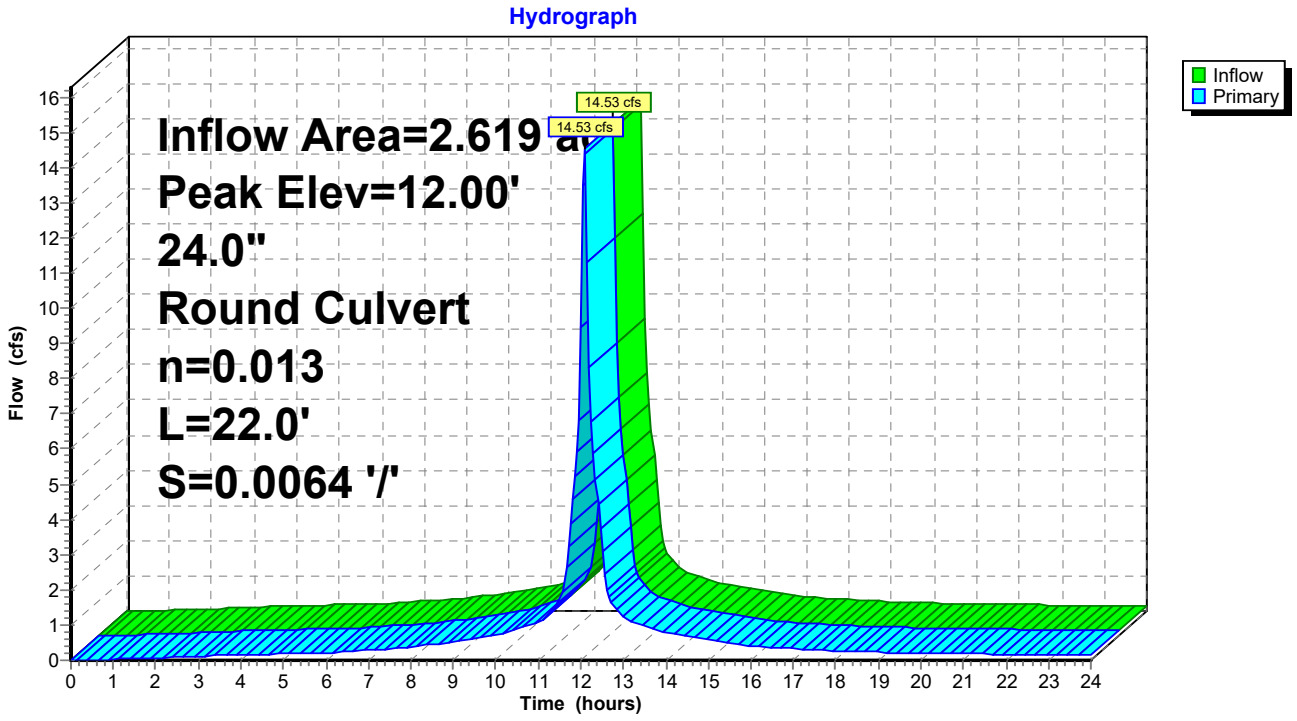
Inflow Area = 2.619 ac, 99.91% Impervious, Inflow Depth > 5.56" for 25-Year Storm event
Inflow = 14.53 cfs @ 12.09 hrs, Volume= 1.213 af
Outflow = 14.53 cfs @ 12.09 hrs, Volume= 1.213 af, Atten= 0%, Lag= 0.0 min
Primary = 14.53 cfs @ 12.09 hrs, Volume= 1.213 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 12.00' @ 12.09 hrs
Flood Elev= 14.57'

Device	Routing	Invert	Outlet Devices
#1	Primary	9.53'	**24.0" Round Culvert** L= 22.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 9.53' / 9.39' S= 0.0064 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=14.19 cfs @ 12.09 hrs HW=11.94' (Free Discharge)
1=Culvert (Inlet Controls 14.19 cfs @ 4.52 fps)

Pond 6P: CB27



Summary for Pond 7P: Storm Structure

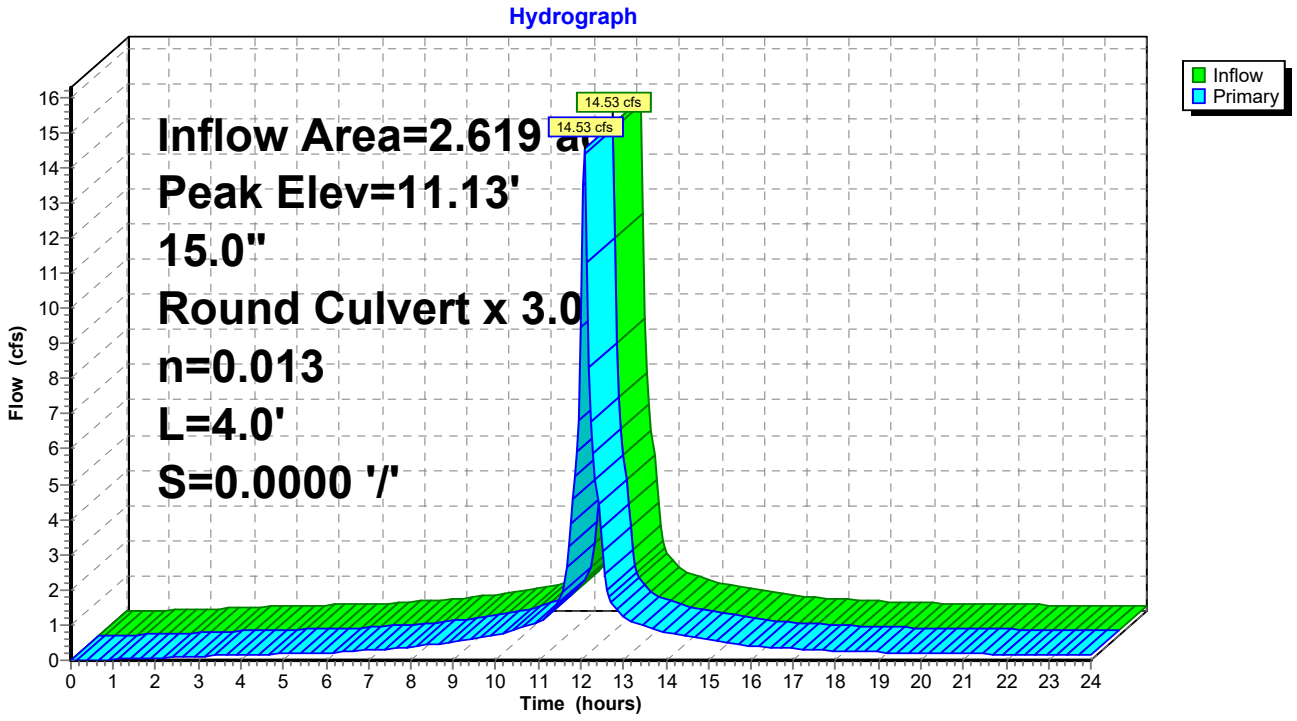
Inflow Area = 2.619 ac, 99.91% Impervious, Inflow Depth > 5.56" for 25-Year Storm event
Inflow = 14.53 cfs @ 12.09 hrs, Volume= 1.213 af
Outflow = 14.53 cfs @ 12.09 hrs, Volume= 1.213 af, Atten= 0%, Lag= 0.0 min
Primary = 14.53 cfs @ 12.09 hrs, Volume= 1.213 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 11.13' @ 12.08 hrs
Flood Elev= 14.25'

Device	Routing	Invert	Outlet Devices
#1	Primary	9.39'	**15.0" Round Culvert X 3.00** L= 4.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 9.39' / 9.39' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=14.10 cfs @ 12.09 hrs HW=11.09' (Free Discharge)
1=Culvert (Barrel Controls 14.10 cfs @ 3.83 fps)

Pond 7P: Storm Structure



Summary for Pond 8P: R-Tank 2

Inflow Area = 2.619 ac, 99.91% Impervious, Inflow Depth > 5.56" for 25-Year Storm event
Inflow = 14.53 cfs @ 12.09 hrs, Volume= 1.213 af
Outflow = 11.56 cfs @ 12.15 hrs, Volume= 1.193 af, Atten= 20%, Lag= 4.0 min
Primary = 11.56 cfs @ 12.15 hrs, Volume= 1.193 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 9.98' @ 12.15 hrs Surf.Area= 3,128 sf Storage= 6,202 cf
Flood Elev= 12.71' Surf.Area= 3,128 sf Storage= 8,290 cf

Plug-Flow detention time= 32.5 min calculated for 1.193 af (98% of inflow)
Center-of-Mass det. time= 21.6 min (766.9 - 745.2)

Volume	Invert	Avail.Storage	Storage Description
#1	7.57'	2,767 cf	**Stone Envelope (Prismatic)** Listed below (Recalc) 12,731 cf Overall - 5,813 cf Embedded = 6,918 cf x 40.0% Voids
#2	7.82'	5,523 cf	**R-Tank Double Modules (Prismatic)** Listed below (Recalc) Inside #1 5,813 cf Overall x 95.0% Voids
		8,290 cf	Total Available Storage

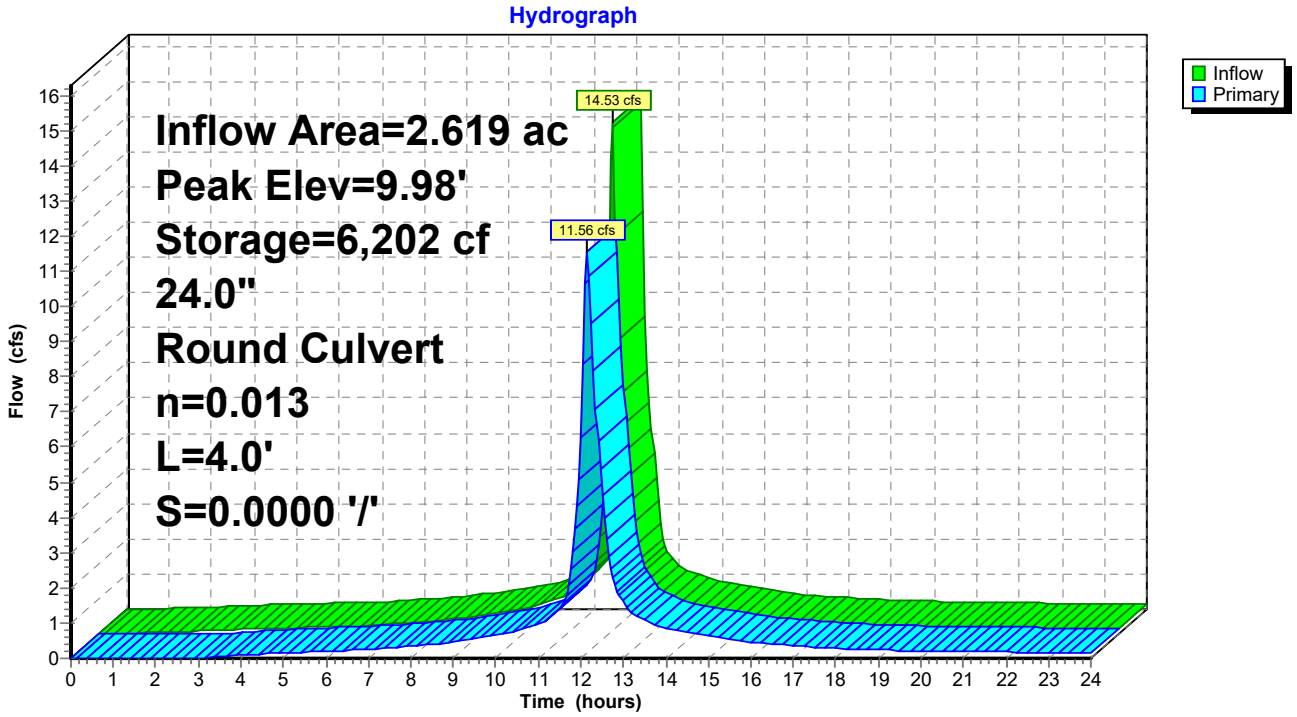
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
7.57	3,128	0	0
11.64	3,128	12,731	12,731

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
7.82	2,679	0	0
9.99	2,679	5,813	5,813

Device	Routing	Invert	Outlet Devices
#1	Primary	7.82'	**24.0" Round Culvert to Filter** L= 4.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 7.82' / 7.82' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=11.51 cfs @ 12.15 hrs HW=9.98' (Free Discharge)
1=Culvert to Filter (Barrel Controls 11.51 cfs @ 4.23 fps)

Pond 8P: R-Tank 2



Summary for Pond 10P: DMH 5

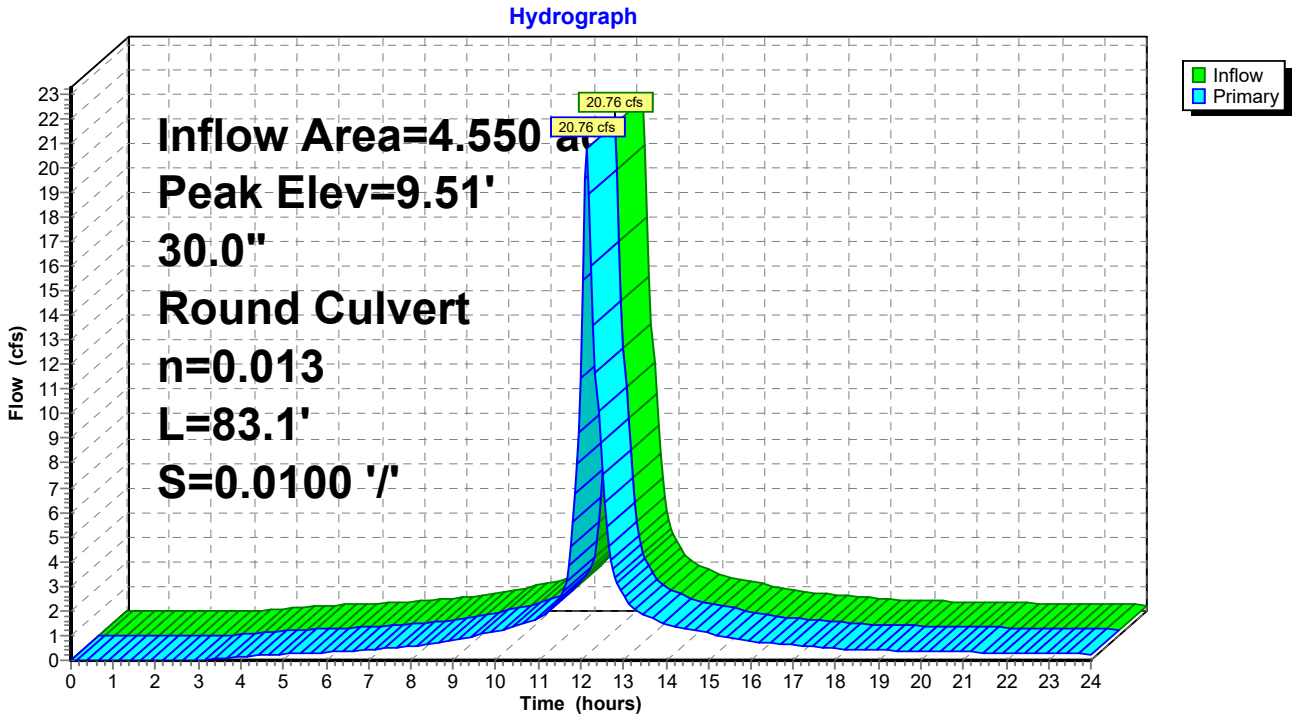
Inflow Area = 4.550 ac, 96.78% Impervious, Inflow Depth > 5.42" for 25-Year Storm event
Inflow = 20.76 cfs @ 12.14 hrs, Volume= 2.053 af
Outflow = 20.76 cfs @ 12.14 hrs, Volume= 2.053 af, Atten= 0%, Lag= 0.0 min
Primary = 20.76 cfs @ 12.14 hrs, Volume= 2.053 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 9.51' @ 12.15 hrs
Flood Elev= 13.56'

Device	Routing	Invert	Outlet Devices
#1	Primary	7.03'	**30.0" Round Culvert** L= 83.1' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 7.03' / 6.20' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=20.63 cfs @ 12.14 hrs HW=9.49' (Free Discharge)
1=Culvert (Inlet Controls 20.63 cfs @ 4.22 fps)

Pond 10P: DMH 5



Summary for Pond 11P: Jellyfish 1 JFPD0806-4-2

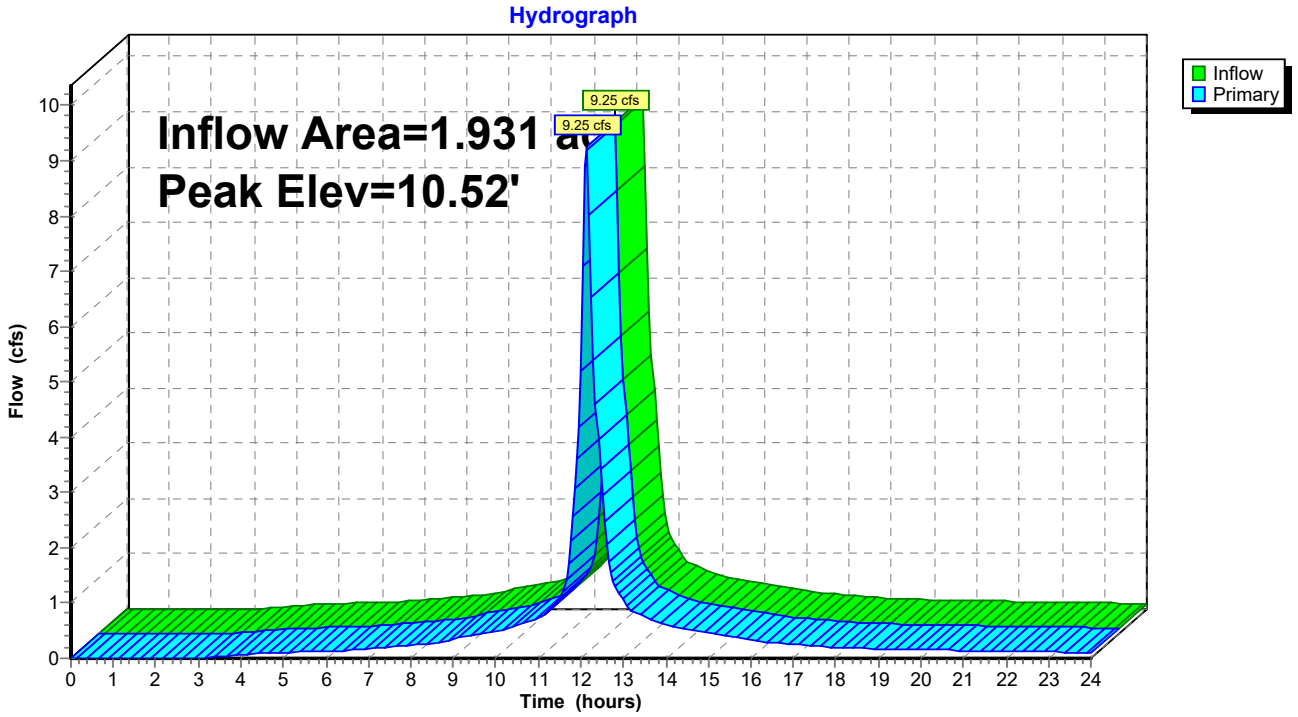
Inflow Area = 1.931 ac, 92.54% Impervious, Inflow Depth > 5.35" for 25-Year Storm event
Inflow = 9.25 cfs @ 12.13 hrs, Volume= 0.860 af
Outflow = 9.25 cfs @ 12.13 hrs, Volume= 0.860 af, Atten= 0%, Lag= 0.0 min
Primary = 9.25 cfs @ 12.13 hrs, Volume= 0.860 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 10.52' @ 12.13 hrs
Flood Elev= 14.79'

Device	Routing	Invert	Outlet Devices
#1	Primary	7.60'	**21.0" Round Filter Culvert Out** L= 90.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 7.60' / 7.13' S= 0.0052 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 2.41 sf
#2	Device 1	7.60'	**JF Filter-1 CSV File** Head (feet) 0.00 0.08 0.17 0.25 0.33 0.42 0.50 0.58 0.67 0.75 0.83 0.92 1.00 1.08 1.17 1.25 1.33 1.42 1.50 Disch. (cfs) 0.000 0.010 0.020 0.030 0.040 0.050 0.059 0.129 0.198 0.267 0.337 0.406 0.475 0.545 0.614 0.683 0.753 0.822 0.891
#3	Device 1	9.59'	**2.8' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=9.10 cfs @ 12.13 hrs HW=10.51' (Free Discharge)
└**1=Filter Culvert Out** (Passes 9.10 cfs of 13.05 cfs potential flow)
  ├**2=JF Filter-1 CSV File** (Custom Controls 0.89 cfs)
  └**3=Broad-Crested Rectangular Weir** (Weir Controls 8.20 cfs @ 3.18 fps)

Pond 11P: Jellyfish 1 JFPD0806-4-2



Summary for Pond 12P: Jellyfish 2 JFPD0806-7-2

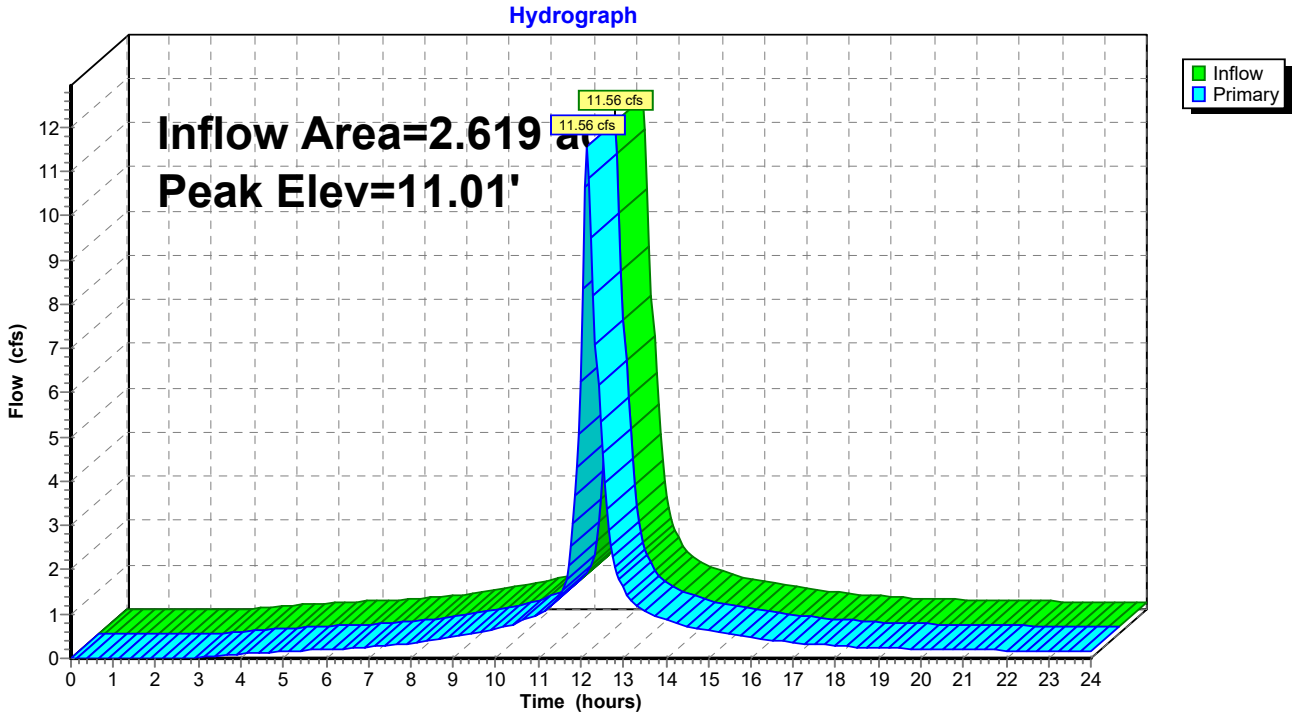
Inflow Area = 2.619 ac, 99.91% Impervious, Inflow Depth > 5.47" for 25-Year Storm event
Inflow = 11.56 cfs @ 12.15 hrs, Volume= 1.193 af
Outflow = 11.56 cfs @ 12.15 hrs, Volume= 1.193 af, Atten= 0%, Lag= 0.0 min
Primary = 11.56 cfs @ 12.15 hrs, Volume= 1.193 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 11.01' @ 12.15 hrs
Flood Elev= 12.70'

Device	Routing	Invert	Outlet Devices
#1	Primary	7.82'	**24.0" Round Filter Culvert Out** L= 114.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 7.82' / 7.13' S= 0.0061 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Device 1	7.82'	**JF Filter-2 CSV File** Head (feet) 0.00 0.08 0.17 0.25 0.33 0.42 0.50 0.58 0.67 0.75 0.83 0.92 1.00 1.08 1.17 1.25 1.33 1.42 1.50 Disch. (cfs) 0.000 0.010 0.020 0.030 0.040 0.050 0.059 0.173 0.287 0.401 0.515 0.629 0.743 0.857 0.970 1.084 1.198 1.312 1.426
#3	Device 1	9.95'	**2.8' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=11.51 cfs @ 12.15 hrs HW=11.01' (Free Discharge)
└**1=Filter Culvert Out** (Passes 11.51 cfs of 17.66 cfs potential flow)
  ├**2=JF Filter-2 CSV File** (Custom Controls 1.43 cfs)
  └**3=Broad-Crested Rectangular Weir** (Weir Controls 10.09 cfs @ 3.41 fps)

Pond 12P: Jellyfish 2 JFPD0806-7-2

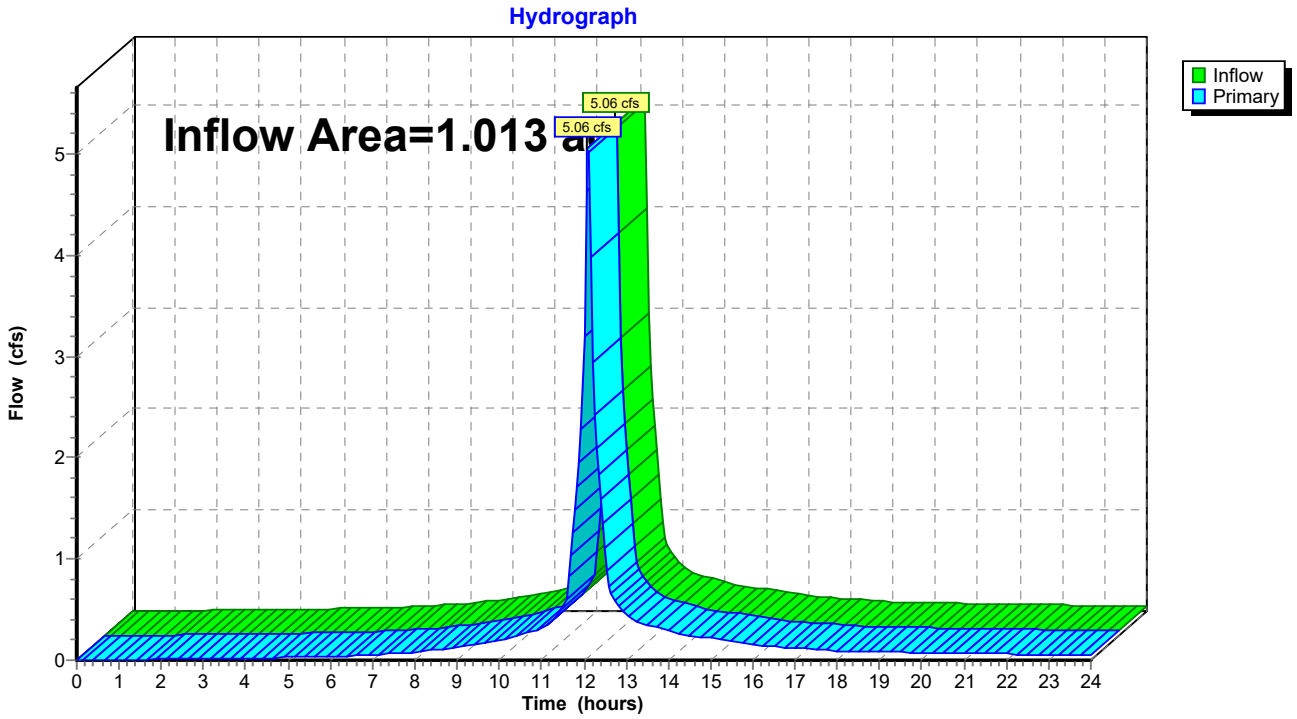


Summary for Link 1L: Fore Connector

Inflow Area = 1.013 ac, 56.83% Impervious, Inflow Depth > 4.67" for 25-Year Storm event
Inflow = 5.06 cfs @ 12.09 hrs, Volume= 0.394 af
Primary = 5.06 cfs @ 12.09 hrs, Volume= 0.394 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 1L: Fore Connector

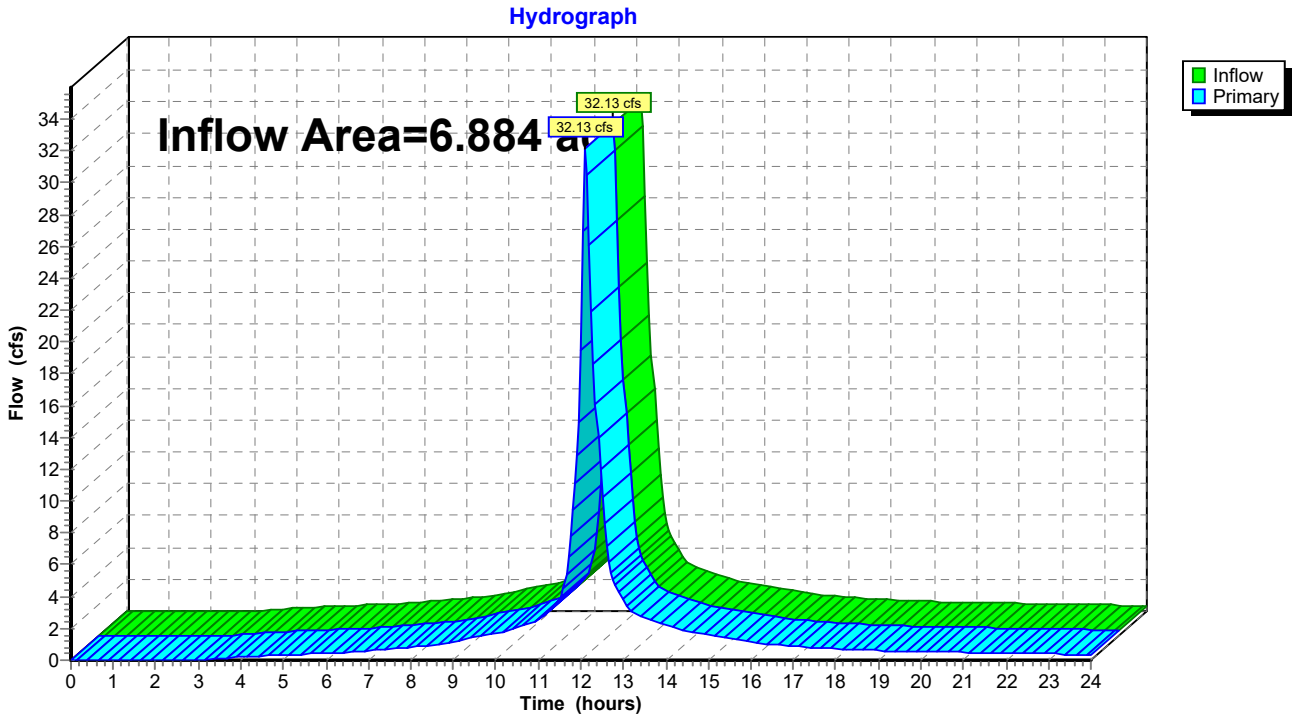


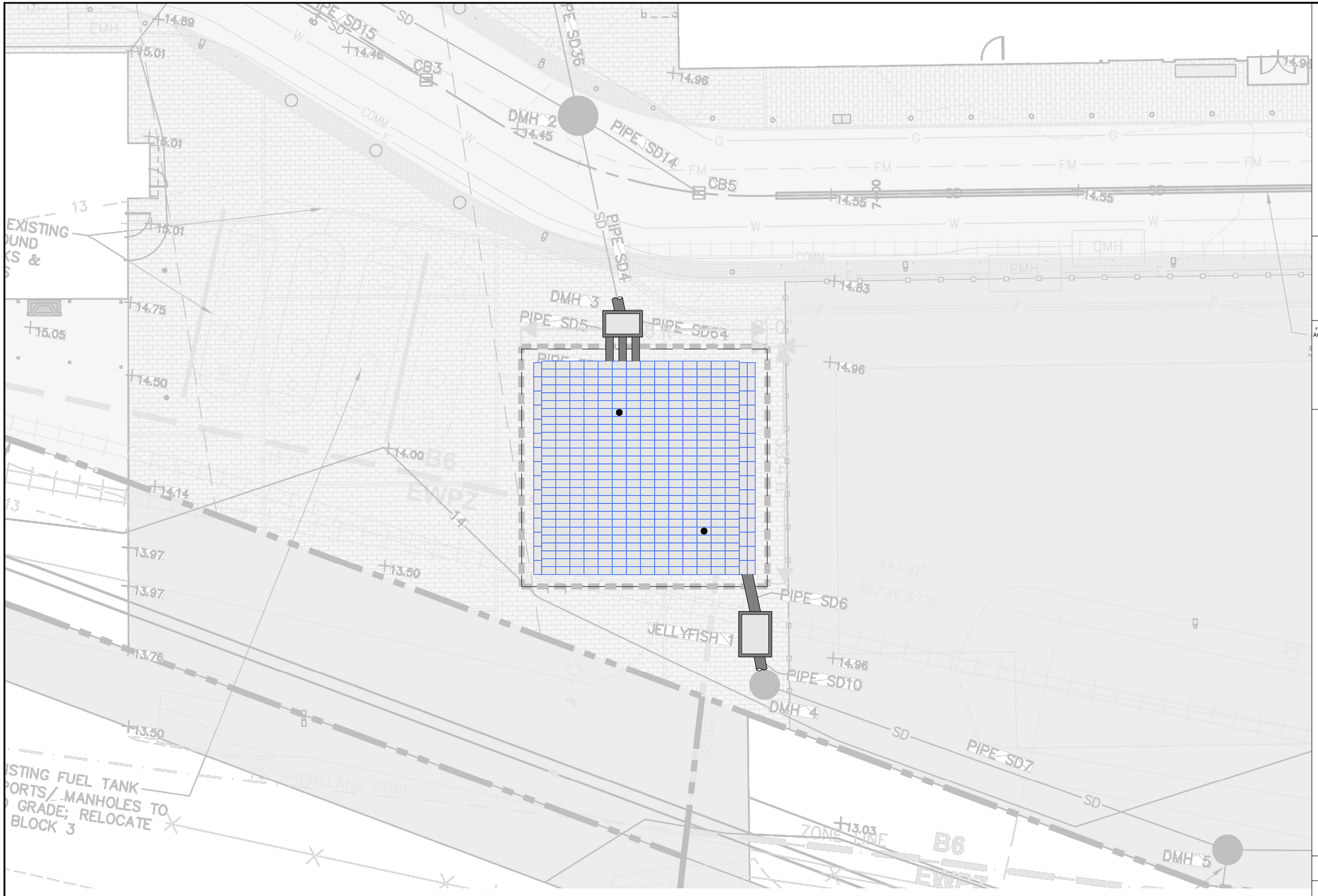
Summary for Link 2L: Fore River

Inflow Area = 6.884 ac, 89.32% Impervious, Inflow Depth > 5.28" for 25-Year Storm event
Inflow = 32.13 cfs @ 12.11 hrs, Volume= 3.029 af
Primary = 32.13 cfs @ 12.11 hrs, Volume= 3.029 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 2L: Fore River





R-TANK^{HD} SYSTEM OVERLAY
SCALE: 1" = 15'

0 15' 30'
SCALE 1" = 15'

ENGINEER OF RECORD TO REVIEW, APPROVE AND ENDORSE FINAL SITE SPECIFIC DESIGN.

FOR ADDITIONAL INFORMATION PLEASE CONTACT:
ACF ENVIRONMENTAL 1-800-448-3636
www.acfenvironmental.com

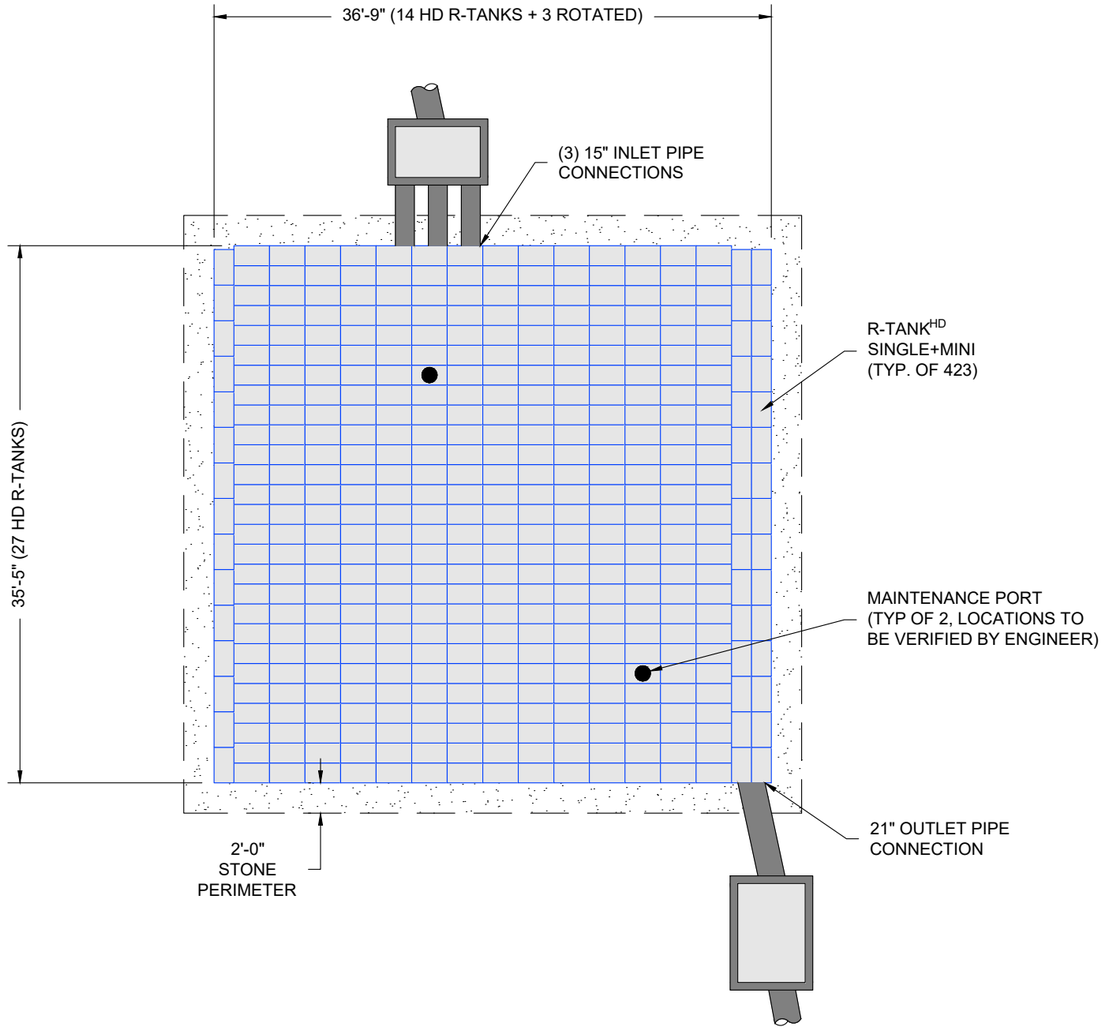
ACF ENVIRONMENTAL
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R-TANK^{HD} SYSTEM OVERLAY
PORTLAND FORESIDE
PORTLAND, ME
SITE DESIGNATION: R-TANK #1
ACF ENVIRONMENTAL, 1-800-448-3636, www.acfenvironmental.com

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DATE
12/12/19

SHEET NO.
1 of 6

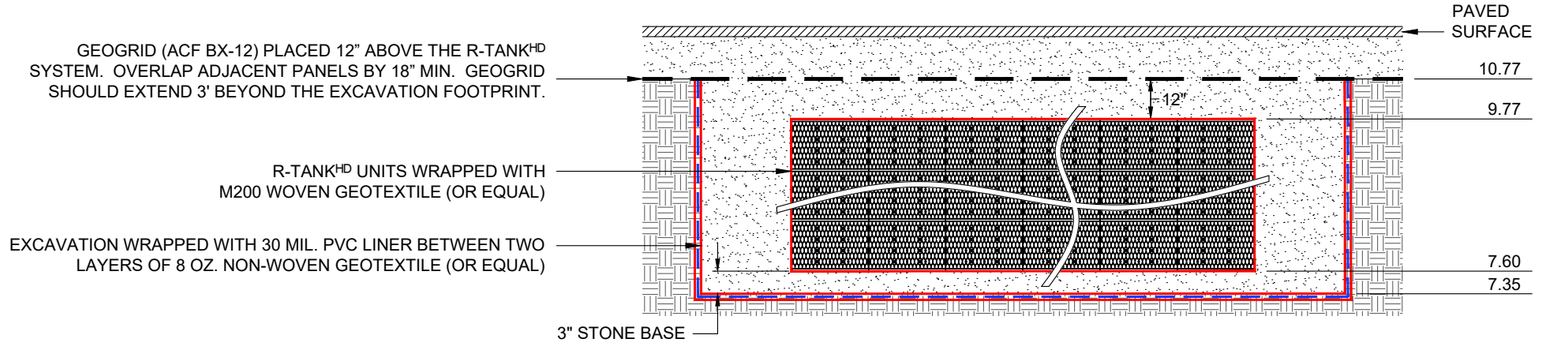


NOTE:
BASE STONE STORAGE NOT INCLUDED IN VOLUMES.

0 10' 20'

SCALE 1" = 10'

LAYOUT SCALE	1" = 10'
R-TANK^{HD} MODULE TYPE	SINGLE+MINI
TRAFFIC LOAD	HS-20
# OF SINGLE+MINI R-TANKS	423
TOTAL SYSTEM STORAGE	3,586 CF
R-TANK STORAGE VOLUME	2,678 CF
STONE STORAGE VOLUME (40% VOID RATIO)	908 CF
TOP OF COVER STONE ELEV. (12")	10.77
ACF BX-12 GEOGRID ELEV.	10.77
TOP OF R-TANK ELEV.	9.77
TANK INVERT	7.60
INVERT OF STONE BASE (3")	7.35
MIN. STONE PERIMETER WIDTH	2.0 FT
SEE SHEETS 3 - 6 FOR DETAILS AND ADDITIONAL INFORMATION	



R-TANK^{HD} TANK WRAP & EXCAVATION ENVELOPE DETAIL

ENGINEER OF RECORD TO REVIEW, APPROVE AND ENDORSE FINAL SITE SPECIFIC DESIGN.

FOR ADDITIONAL INFORMATION PLEASE CONTACT:
ACF ENVIRONMENTAL 1-800-448-3636
www.acfenvironmental.com

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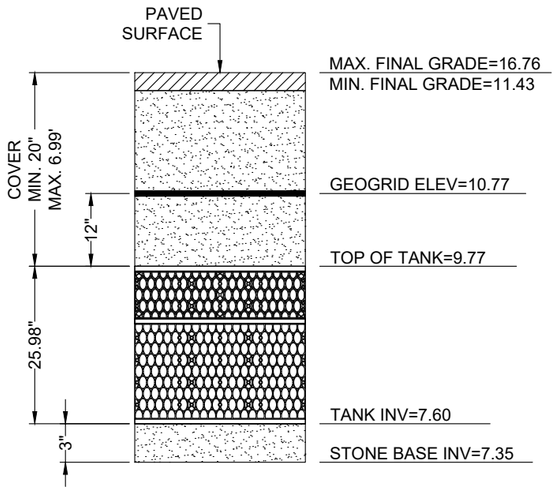
R-TANK^{HD} SYSTEM LAYOUT
PORTLAND FORESIDE
PORTLAND, ME
SITE DESIGNATION: R-TANK #1

ACF ENVIRONMENTAL, 1-800-448-3636, www.acfenvironmental.com

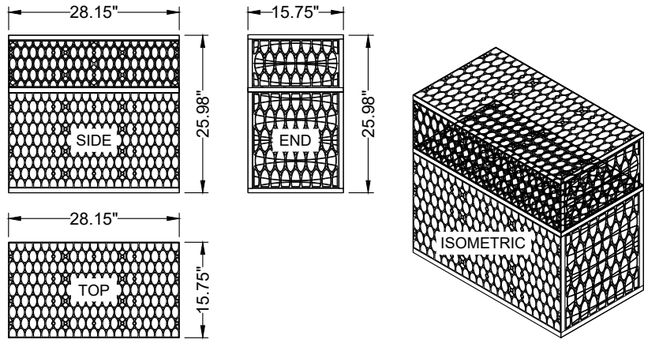
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SINGLE + MINI R-TANK^{HD} - ELEVATION



MODULE DATA

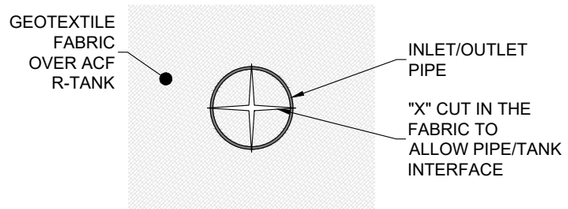
GEOMETRY:	**LOAD RATING:**
LENGTH = 28.15 IN. (715 MM)	33.4 PSI, (MODULE ONLY)
WIDTH = 15.75 IN. (400 MM)	HS20, (WITH ACF COVER SYSTEM)
HEIGHT = 25.98 IN. (660 MM)	**MATERIAL:**
TANK VOLUME = 6.67 CF	100% RECYCLED POLYPROPYLENE
STORAGE VOLUME = 6.33 CF	**SMALL PLATES PER**
VOID INTERNAL VOLUME: 95%	**SEGMENT/TOTAL:**
VOID SURFACE AREA: 90%	5/10

SINGLE + MINI R-TANK^{HD} - MODULE DETAIL

R-TANK^{HD} QUANTITIES	
R-TANK^{HD} MODULE TYPE	SINGLE+MINI
# OF SINGLE+MINI R-TANKS	423
TOTAL SYSTEM STORAGE	3,586 CF
R-TANK STORAGE VOLUME	2,678 CF
STONE STORAGE VOLUME (40% VOID RATIO)	908 CF
STONE BED FOOTPRINT	1,608 SF
STONE QUANTITY	99 CY
M200 WOVEN GEOTEXTILE TANK WRAP	3,356 SF (373 SY)
30 MIL. PVC LINER EXCAVATION WRAP	4,331 SF (481 SY)
8 OZ. NON-WOVEN GEOTEXTILE LINER PROTECTION	8,662 SF (962 SY)
ACF BX-12 GEOGRID	2,444 SF (272 SY)
12" MAINTENANCE PORTS	2
15" PIPE BOOTS	3
21" PIPE BOOTS	1
NOTE: STONE QUANTITY INCLUDES 12" OF COVER AND 3" OF BASE.	
NOTE: GEOTEXTILE / LINER QUANTITIES INCLUDE A 15% WASTE FACTOR.	

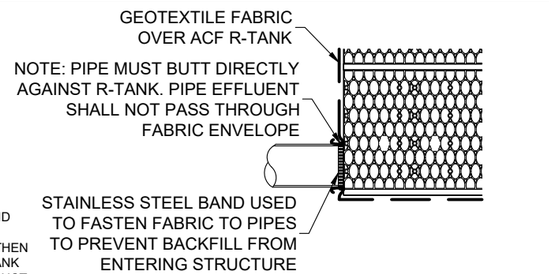
NOTE:
BASE STONE STORAGE NOT INCLUDED IN VOLUMES.

CUT AN "X" IN THE FABRIC ENVELOPE THAT IS SLIGHTLY LARGER THAN THE PIPE. PULL THE FABRIC FLAPS AROUND THE PIPE, AND SEAL WITH A STAINLESS STEEL BAND.

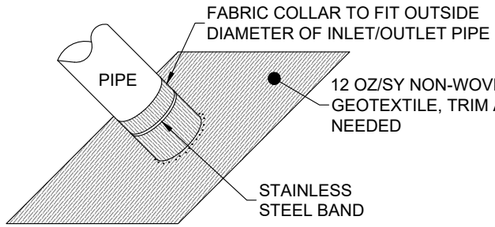


END VIEW OF PIPE/FABRIC CONNECTION

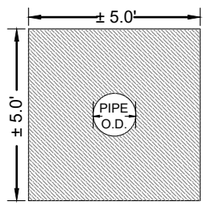
AFTER TANK WRAP IS SECURED TO PIPE, SLIDE BOOT AGAINST R-TANK AND SECURE WITH SECOND STAINLESS STEEL BAND, THEN ATTACH BOOT FLAP TO TANK ENVELOPE FABRIC WITH DUCT TAPE OR OTHER ADHESIVE.



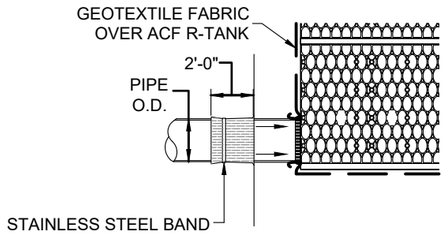
SIDE VIEW OF PIPE/FABRIC CONNECTION



GEOTEXTILE BOOT



FRONT VIEW OF GEOTEXTILE BOOT



SIDE VIEW OF GEOTEXTILE BOOT

R-TANK^{HD} TYPICAL TANK INLET/OUTLET W/ GEOTEXTILE PIPE BOOT DETAIL

ENGINEER OF RECORD TO REVIEW, APPROVE AND ENDORSE FINAL SITE SPECIFIC DESIGN.

FOR ADDITIONAL INFORMATION PLEASE CONTACT:
ACF ENVIRONMENTAL 1-800-448-3636
www.acfenvironmental.com

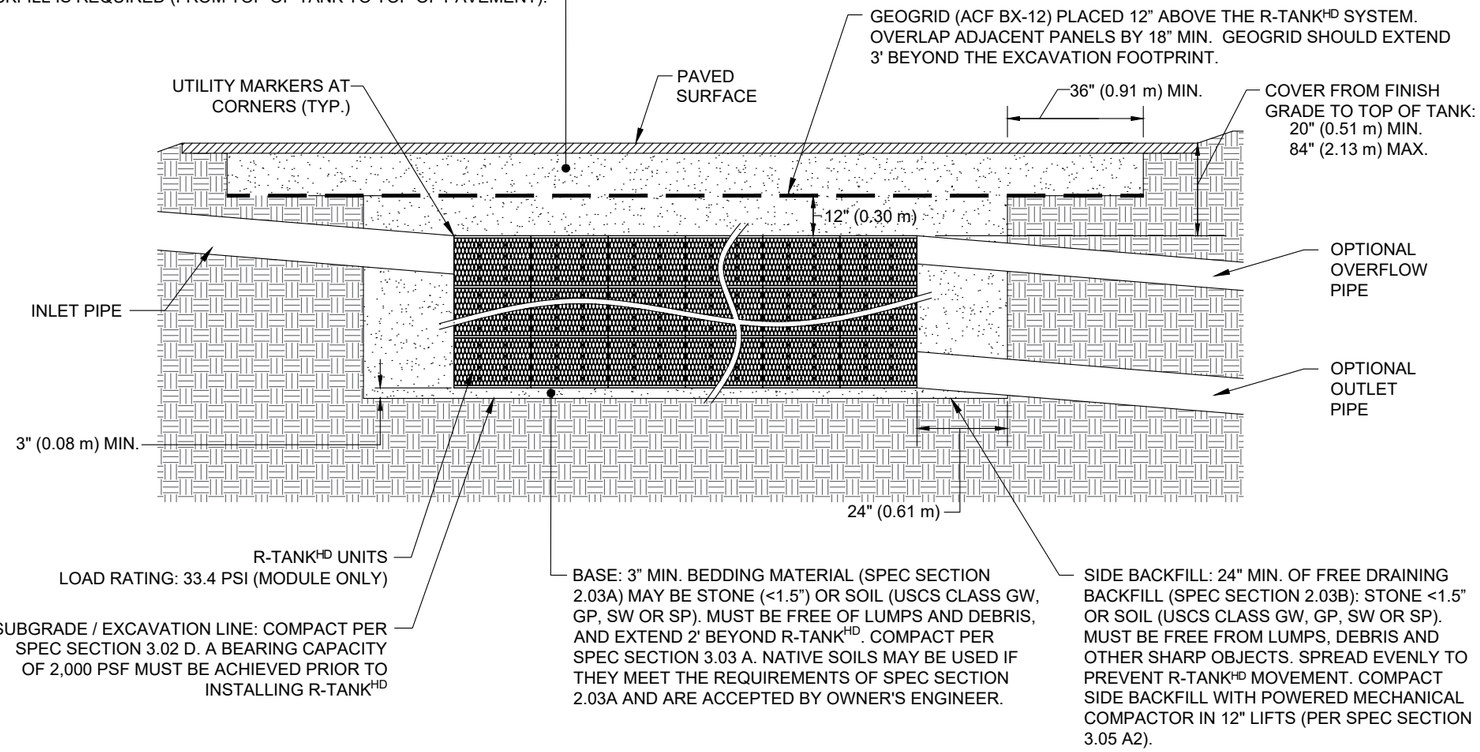
ACF ENVIRONMENTAL
LET'S GET IT DONE

R-TANK^{HD} SYSTEM DETAILS
PORTLAND FORESIDE
PORTLAND, ME
SITE DESIGNATION: R-TANK #1
ACF ENVIRONMENTAL, 1-800-448-3636, www.acfenvironmental.com

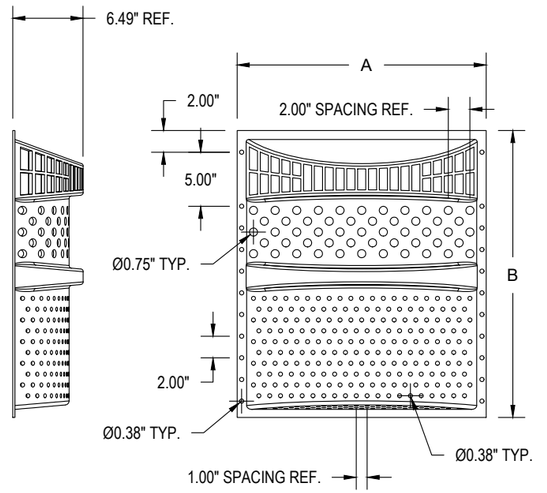
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12/12/19
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3 of 6

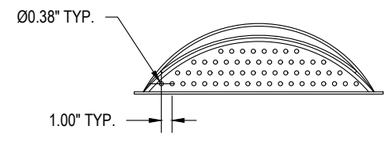
TOTAL COVER: 20” MINIMUM AND 84” MAXIMUM. FIRST 12” MUST BE FREE DRAINING BACKFILL (SPEC SECTION 2.03B): STONE <1.5” OR SOIL (USCS CLASS GW, GP, SW OR SP). ADDITIONAL FILL MAY BE STRUCTURAL FILL (SPEC SECTION 2.03C): STONE OR SOIL (USCS CLASS SM, SP, SW, GM, GP OR GW) WITH MAX CLAY CONTENT<10%, MAX 25% PASSING NO. 200 SIEVE, AND MAX PLASTICITY INDEX OF 4. A MIN. 12” COVER MUST BE MAINTAINED BETWEEN BACKFILL EQUIPMENT AND THE TOP OF THE R-TANK™ SYSTEM AT ALL TIMES. TOTAL HEIGHT OF TOP BACKFILL SHOULD NOT EXCEED 7'. CONTACT ACF ENVIRONMENTAL IF MORE THAN 7' OR LESS THAN 20" OF TOP BACKFILL IS REQUIRED (FROM TOP OF TANK TO TOP OF PAVEMENT).

NOTES:
1. FOR COMPLETE MODULE DATA, SEE APPROPRIATE R-TANK^{HD} MODULE SHEET .
2. INSTALLATIONS PER THIS DETAIL MEET GUIDELINES OF HL-93 LOADING PER THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, CUSTOMARY U.S. UNITS, 7TH EDITION, 2014 WITH 2015 AND 2016 INTERIM REVISIONS.
3. PRE-TREATMENT STRUCTURES NOT SHOWN.
4. FOR INFILTRATION APPLICATIONS, GEOTEXTILE ENVELOPING R-TANK SHALL BE ACF M200 (PER SPEC SECTION 2.02A) AND BASE SHALL BE 4" MIN. UNCOMPACTED FREE DRAINING BACKFILL (SPEC SECTION 2.03A) TO PROVIDE A LEVEL BASE. SURFACE MUST BE SMOOTH, FREE OF LUMPS OR DEBRIS, AND EXTEND 2' BEYOND R-TANK^{HD} FOOTPRINT.



R-TANK^{HD} & H-20 LOADS - SECTION VIEW



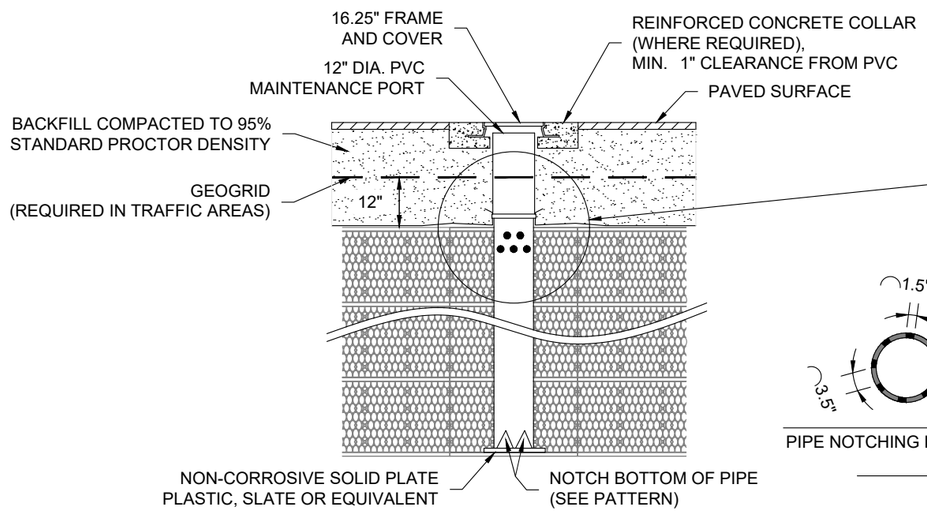


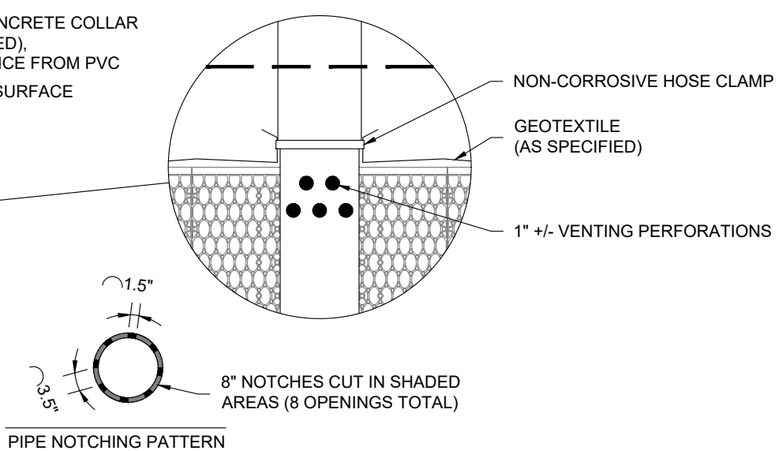
SIZE	A	B
23" x 24"	23"	26.51"
28" x 30"	28"	33.15"
34" x 36"	34"	38.69"

±0.25" TOLERANCE ON DIMENSIONS

TRASHGUARD PLUS PRETREATMENT DETAIL

NOTES
1. THIS PORT IS USED TO PUMP WATER INTO THE SYSTEM AND RE-SUSPEND ACCUMULATED SEDIMENT SO THAT IT MAY BE PUMPED OUT.
2. MINIMUM REQUIRED MAINTENANCE INCLUDES A QUARTERLY INSPECTION DURING THE FIRST YEAR OF OPERATION AND A YEARLY INSPECTION THEREAFTER. FLUSH AS NEEDED.
3. ONLY R-TANK^{HD} AND R-TANK^{SD} MAY BE USED IN TRAFFIC APPLICATIONS.
4. SEE TRAFFIC LOADING DETAIL FOR MINIMUM & MAXIMUM COVER REQUIREMENTS.





PIPE NOTCHING PATTERN

R-TANK^{HD} TYPICAL MAINTENANCE PORT

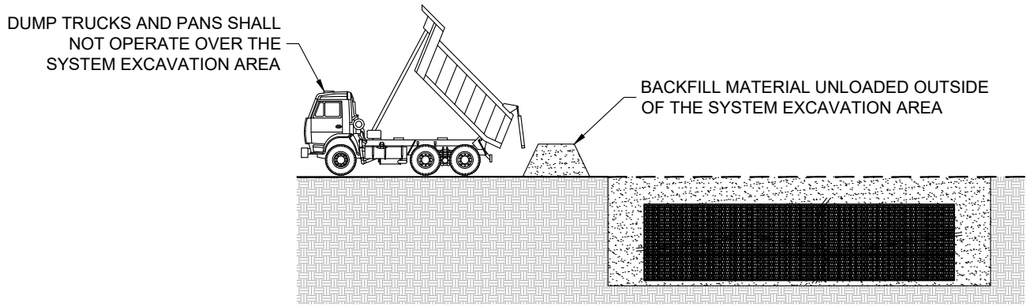
ENGINEER OF RECORD TO REVIEW, APPROVE AND ENDORSE FINAL SITE SPECIFIC DESIGN.

FOR ADDITIONAL INFORMATION PLEASE CONTACT:
ACF ENVIRONMENTAL 1-800-448-3636
www.acfenvironmental.com

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R-TANK^{HD} SYSTEM DETAILS
PORTLAND FORESIDE
PORTLAND, ME
SITE DESIGNATION: R-TANK #1
ACF ENVIRONMENTAL, 1-800-448-3636, www.acfenvironmental.com

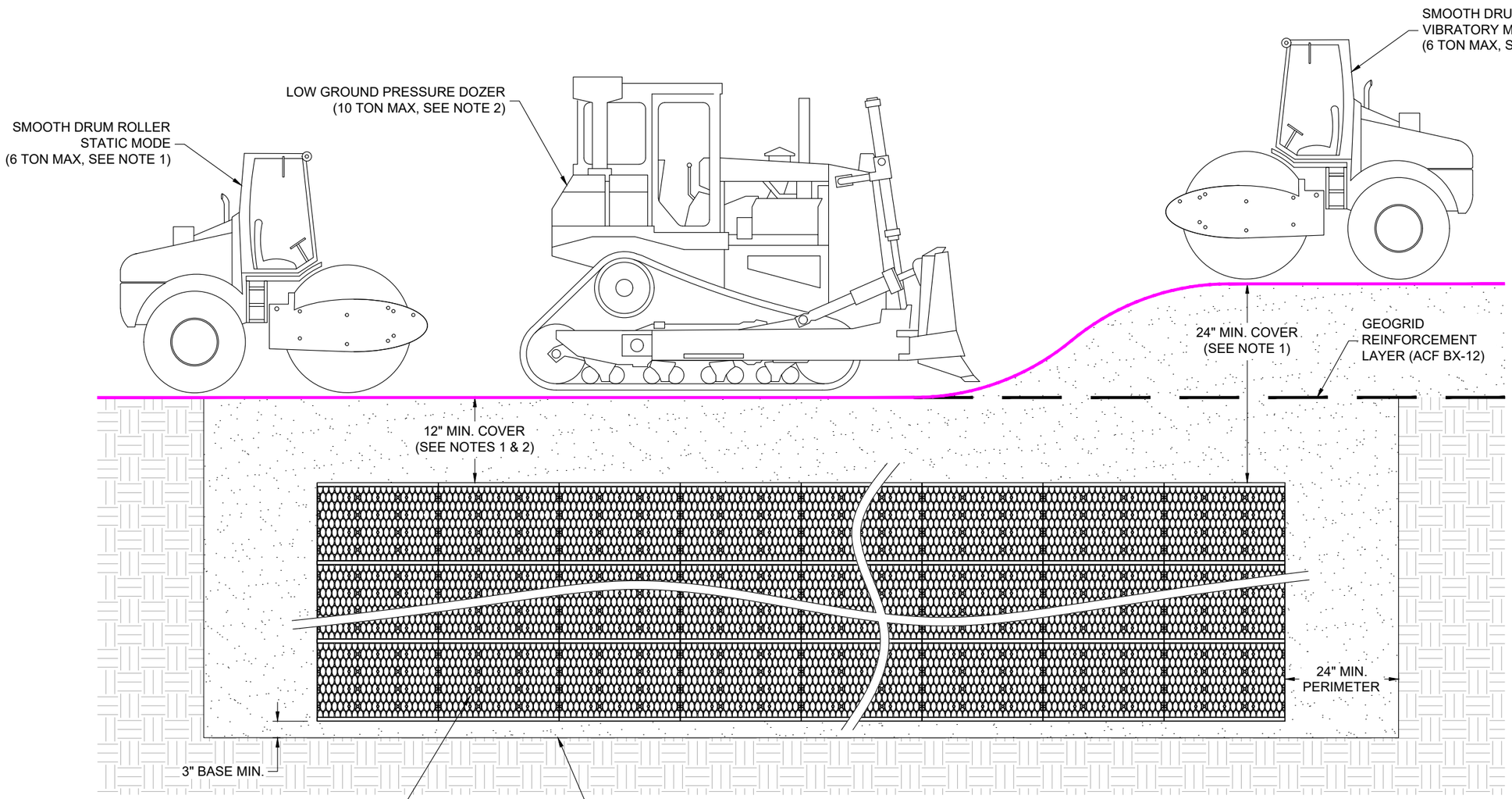
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DATE: 12/12/19
SHEET NO.: 4 of 6



DUMP TRUCK DETAIL (SEE NOTE 3)

NOTES:

1. FOLLOWING PLACEMENT OF SIDE BACKFILL, A UNIFORM 12" LIFT OF THE FREELY DRAINING MATERIAL (SPEC SECTION 2.03 B) SHALL BE PLACED OVER THE R-TANK AND LIGHTLY COMPACTED USING A WALK-BEHIND TRENCH ROLLER. ALTERNATELY, A ROLLER (MAXIMUM GROSS VEHICLE WEIGHT OF 6 TONS) MAY BE USED. ROLLER MUST REMAIN IN STATIC MODE UNTIL A MINIMUM OF 24" OF COVER HAS BEEN PLACED OVER THE MODULES. SHEEP FOOT ROLLERS SHOULD NOT BE USED. **SPEC SECTION 3.05 A**
2. ONLY LOW PRESSURE TIRE OR TRACK VEHICLES (LESS THAN 7 PSI AND OPERATING WEIGHT OF LESS THAN 20,000 LBS) SHALL BE OPERATED OVER THE R-TANK SYSTEM DURING CONSTRUCTION. **SPEC SECTION 3.05 B**
3. DUMP TRUCKS AND PANS SHALL NOT BE OPERATED WITHIN THE R-TANK SYSTEM AT ANY TIME. WHERE NECESSARY, THE HEAVY EQUIPMENT SHOULD UNLOAD IN AN AREA ADJACENT TO THE R-TANK SYSTEM AND THE MATERIAL SHOULD BE MOVED OVER THE SYSTEM WITH TRACKED EQUIPMENT. **SPEC SECTION 3.05 B**
4. ENSURE THAT ALL UNRELATED CONSTRUCTION TRAFFIC IS KEPT AWAY FROM THE LIMITS OF EXCAVATION UNTIL THE PROJECT IS COMPLETE AND FINAL SURFACE MATERIALS ARE IN PLACE. NO NON-INSTALLATION RELATED LOADING SHOULD BE ALLOWED OVER THE R-TANK SYSTEM UNTIL THE FINAL DESIGN SECTION HAS BEEN CONSTRUCTED (INCLUDING PAVEMENT). **SPEC SECTION 3.05 C**
5. SEE R-TANK INSTALLATION GUIDE OR CONTACT YOUR LOCAL ACF REPRESENTATIVE FOR ADDITIONAL INFORMATION.



CONSTRUCTION EQUIPMENT COVER DETAIL - VEHICULAR TRAFFIC

ENGINEER OF RECORD TO REVIEW, APPROVE AND ENDORSE FINAL SITE SPECIFIC DESIGN.

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R-TANK^HD CONSTRUCTION EQUIPMENT COVER DETAIL
PORTLAND FORESIDE
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5 of 6

R-TANK SPECIFICATION

PART 1 - GENERAL

1.01 Related Documents

A. Drawings, technical specification and general provisions of the Contract as modified herein apply to this section.

1.02 Description of Work Included

A. Provide excavation and base preparation per geotechnical engineer's recommendations and/or as shown on the design drawings, to provide adequate support for project design loads and safety from excavation sidewall collapse. Excavations shall be in accordance with the owner's and OSHA requirements.

B. Provide and install R-Tank^{LD}, R-Tank^{HD}, R-Tank^{SD}, or R-Tank^{UD} system (hereafter called R-Tank) and all related products including fill materials, geotextiles, geogrids, inlet and outlet pipe with connections per the manufacturer's installation guidelines provided in this section.

C. Provide and construct the cover of the R-Tank system including; stone backfill, structural fill cover, and pavement section as specified.

D. Protect R-Tank system from construction traffic after installation until completion of all construction activity in the installation area.

1.03 Quality Control

A. All materials shall be manufactured in ISO certified facilities.

B. Installation Contractor shall demonstrate the following experience:

1. A minimum of three R-Tank or equivalent projects completed within 2 years; and,
2. A minimum of 25,000 cubic feet of storage volume completed within 2 years.
3. Contractor experience requirement may be waived if the manufacturer's representative provides on-site training and review during construction.

C. Installation Personnel: Performed only by skilled workers with satisfactory record of performance on bulk earthworks, pipe, chamber, or pond/landfill construction projects of comparable size and quality.

D. Contractor must have manufacturer's representative available for site review if requested by Owner.

1.04 Submittals

A. Submit proposed R-Tank layout drawings. Drawings shall include typical section details as well as the required base elevation of stone and tanks, minimum cover requirements and tank configuration.

B. Submit manufacturer's product data, including compressive strength and unit weight.

C. Submit manufacturer's installation instructions.

D. Submit R-Tank sample for review. Reviewed and accepted samples will be returned to the Contractor.

E. Submit material certificates for geotextile, geogrid, base course and backfill materials.

F. Submit required experience and personnel requirements as specified in Section 1.03.

G. Any proposed equal alternative product substitution to this specification must be submitted for review and approved prior to bid opening. Review package should include third party reviewed performance data that meets or exceeds criteria in Table 2.01 B.

1.05 Delivery, Storage, and Handling

A. Protect R-Tank and other materials from damage during delivery, and store UV sensitive materials under tarp to protect from sunlight when time from delivery to installation exceeds two weeks. Storage of materials should be on smooth surfaces, free from dirt, mud and debris.

B. Handling is to be performed with equipment appropriate to the materials and site conditions, and may include hand, handcart, forklifts, extension lifts, etc.

C. Cold weather:

1. Care must be taken when handling plastics when air temperature is 40 degrees or below as plastic becomes brittle.
2. Do not use frozen materials or materials mixed or coated with ice or frost.
3. Do not build on frozen ground or wet, saturated or muddy subgrade.

1.06 Preinstallation Conference.

A. Prior to the start of the installation, a preinstallation conference shall occur with the representatives from the design team, the general contractor, the excavation contractor, the R-Tank installation contractor, and the manufacturer's representative.

1.07 Project Conditions

A. Coordinate installation for the R-Tank system with other on-site activities to eliminate all non-installation related construction traffic over the completed R-Tank system. No loads heavier than the design loads shall be allowed over the system, and in no case shall loads higher than a standard AASHTO HS20 (or HS25, depending on design criteria) load be allowed on the system at any time.

B. Protect adjacent work from damage during R-Tank system installation.

C. All pre-treatment systems to remove debris and heavy sediments must be in place and functional prior to operation of the R-Tank system. Additional pretreatment measures may be needed if unit is operational during construction due to increased sediment loads.

D. Contractor is responsible for any damage to the system during construction.

PART 2 - PRODUCTS

2.01 R-Tank Units

A. R -Tank - Injection molded plastic tank plates assembled to form a 95% void modular structure of predesigned height (custom for each project).

B. R-Tank units shall meet the following Physical & Chemical Characteristics:

PROPERTY	DESCRIPTION	R-Tank^{LD} VALUE	R-Tank^{HD} VALUE	R-Tank^{SD} VALUE	R-Tank^{UD} VALUE
Void Area	Volume available for water storage	95%	95%	95%	95%
Surface Void Area	Percentage of exterior available for infiltration	90%	90%	90%	90%
Compressive Strength	ASTM D 2412 / ASTM F 2418	30.0 psi	33.4 psi	42.9 psi	134.2 psi
HS-20 Minimum Cover	Cover required to support HS-20 loads	N/A	20"	18"	12" (STONE BACKFILL)
HS-25 Minimum Cover	Cover required to support HS-25 loads	N/A	24"	19"	15" (STONE BACKFILL)
Maximum Cover	Maximum allowable cover depth	3 feet	< 7 feet	< 10 feet	5 feet
Unit Weight	Weight of plastic per cubic foot of tank	3.29 lbs / cf	3.62 lbs/cf	3.96 lbs / cf	4.33 lbs / cf
Rib Thickness	Thickness of load-bearing members	0.18 inches	0.18 inches	0.18 inches	N/A
Service Temperature	Safe temperature range for use	-14 – 167° F	-14 – 167° F	-14 – 167° F	-14 – 167° F

C. Supplier: ACF Environmental 2831 Cardwell Road Richmond, VA 23234
(T): 800-448-3636; (F): 804-743-7779 www.acfenvironmental.com

2.02 Geosynthetics

A. Geotextile. A geotextile envelope is required to prevent backfill material from entering the R-Tank modules.

1. Standard Application: The standard geotextile shall be an 8 oz per square yard nonwoven geotextile (ACF N080 or equivalent).
2. Infiltration Applications: When water must infiltrate/exfiltrate through the geotextile as a function of the system design, a woven monofilament (ACF M200 or equivalent) shall be used.

B. Geogrid. For installations subject to traffic loads and/or when required by project plans, install geogrid (ACF BX12 or equivalent) to reinforce backfill above the R-Tank system. Geogrid is not always required for R-Tank^{UD} installations, and is often not required for non-traffic load applications.

2.03 Backfill & Cover Materials

A. Bedding Materials: Stone (angular and smaller than 1.5" in diameter) or soil (GW, GP, SW, or SP as classified by the Unified Soil Classification System) shall be used below the R-Tank system (3" minimum). Material must be free from lumps, debris, and any sharp objects that could cut the geotextile. Material shall be within 3 percent of the optimum moisture content as determined by ASTM D698 at the time of installation. For infiltration applications bedding material shall be free draining.

B. Side and Top Backfill: Free draining material shall be used adjacent to (24" minimum) and above (for the first 12") the R-Tank system. Material must be free from lumps, debris and any sharp objects that could cut the geotextile. Material shall be within 3 percent of the optimum moisture content as determined by ASTM D698 at the time of installation.

1. For LD, HD, and SD modules, backfill materials shall be free draining stone (angular and smaller than 1.5" in diameter) or soil (GW, GP, SW, or SP as classified by the Unified Soil Classification System).
2. For UD modules in traffic loaded (HS-20) applications with less than 14" of top cover, side backfill materials shall be free draining stone (angular and smaller than 1.5" in diameter). The use of soil backfill on the sides of the UD module is not permitted unless the modules are installed outside of traffic areas or with cover depths of > 14". Top backfill material may be stone or soil as noted above (Section 2.03 B 1).

C. Additional Cover Materials: Structural Fill shall consist of granular materials meeting the gradational requirements of SM, SP, SW, GM, GP or GW as classified by the Unified Soil Classification System. Structural fill shall have a maximum of 25 percent passing the No. 200 sieve, shall have a maximum clay content of 10 percent and a maximum Plasticity Index of 4. Material shall be within 3 percent of the optimum moisture content as determined by ASTM D698 at the time of installation.

2.04 Other Materials

Utility Marker: Install metallic tape at corners of R-Tank system to mark the area for future utility detection.

PART 3 - EXECUTION

3.01 Assembly of R-Tank Units

A. Assembly of modules shall be performed in accordance with the R-Tank Installation Manual, Section 2.

3.02 Layout and Excavation

A. Installer shall stake out, excavate, and prepare the subgrade area to the required plan grades and dimensions, ensuring that the excavation is at least 2 feet greater than R-Tank dimensions in each direction allowing for installation of geotextile filter fabric, R-Tank modules, and free draining backfill materials.

B. All excavations must be prepared with OSHA approved excavated sides and sufficient working space.

C. Protect partially completed installation against damage from other construction traffic by establishing a perimeter with high visibility construction tape, fencing, barricades, or other means until construction is complete.

D. Base of the excavation shall be uniform, level, and free of lumps or debris and soft or yielding subgrade areas. A minimum 2,000 pounds per square foot bearing capacity is required.

1. Standard Applications: Compact subgrade to a minimum of 95% of Standard Proctor (ASTM D698) density or as required by the Owner's engineer.
2. Infiltration Applications: Subgrade shall be prepared in accordance with the contract documents. Compaction of subgrade should not be performed in infiltration applications.

E. Unsuitable Soils or Conditions: All questions about the base of the excavation shall be directed to the owner's engineer, who will approve the subgrade conditions prior to placement of stone. The owner's engineer shall determine the required bearing capacity of the R-Tank subgrade; however in no case shall a bearing capacity of less than 2,000 pounds per square foot be provided.

1. If unsuitable soils are encountered at the subgrade, or if the subgrade is pumping or appears excessively soft, repair the area in accordance with contract documents and/or as directed by the owner's engineer.
2. If indications of the water table are observed during excavation, the engineer shall be contacted to provide recommendations.
3. Do not start installation of the R-Tank system until unsatisfactory subgrade conditions are corrected and the subgrade conditions are accepted by the owner's engineer.

3.03 Preparation of Base

A. Place a thin layer (3" unless otherwise specified) of bedding material (Section 2.03 A), over the subgrade to establish a level working platform for the R-Tank modules. Level to within ½" (+/- ¼") or as shown on the plans. Native subgrade soils or other materials may be used if determined to meet the requirements of 2.03 A and are accepted by the owner's engineer.

1. Standard Applications: Static roll or otherwise compact bedding materials until they are firm and unyielding.
2. Infiltration Applications: Bedding materials shall be prepared in accordance with the contract documents.

B. Outline the footprint of the R-Tank system on the excavation floor using spray paint or chalk line to ensure a 2' perimeter is available around the R-Tank system for proper installation and compaction of backfill.

3.04 Installation of the R-Tanks

A. Where a geotextile wrap is specified on the stone base, cut strips to length and install in excavation, removing wrinkles so material lays flat. Overlap geotextile a minimum 12" or as recommended by manufacturer.

B. Where an impervious liner (for containment) is specified, install the liner per manufacturer's recommendations and the contract documents. The R-Tank units shall be separated from impervious liner by a non-woven geotextile fabric installed accordance with Section 3.04A.

C. Install R-Tank modules by placing side by side, in accordance with the design drawings. No lateral connections are required. It is advisable to use a string line to form square corners and straight edges along the perimeter of the R-Tank system. The modules are to be oriented as per the design drawing with required depth as shown on plans..

1. For LD, HD, and SD installations, the large side plate of the tank should be placed on the perimeter of the system. This will typically require that the two ends of the tank area will have a row of tanks placed perpendicular to all other tanks. If this is not shown in the construction drawings, it is a simple field adjustment that will have minimal effect on the overall system footprint. Refer to R-Tank Installation Guide for more details
2. For UD installations, there is no perpendicular end row required.

D. Wrap the R-Tank top and sides in specified geotextile. Cut strips of geotextile so that it will cover the sides and top, encapsulating the entire system to prevent backfill entry into the system. Overlap geotextile 12" or as recommended by manufacturer. Take great care to avoid damage to geotextile (and, if specified, impervious liner) during placement.

E. Identify locations of inlet, outlet and any other penetrations of the geotextile (and optional liner). These connections should be installed flush (butted up to the R-Tank) and the geotextile fabric shall be cut to enable hydraulic continuity between the connections and the R-Tank units. These connections shall be secured using pipe boots with stainless steel pipe clamps. Support pipe in trenches during backfill operations to prevent pipe from settling and damaging the geotextile, impervious liner (if specified) or pipe. Connecting pipes at 90 degree angles facilitates construction, unless otherwise specified. Ensure end of pipe is installed snug against R-Tank system.

F. Install Inspection and Maintenance Ports in locations noted on plans. At a minimum one maintenance port shall be installed within 10' of each inlet & outlet connection, and with a maximum spacing of one maintenance port for every 2,500 square feet. Install all ports as noted in the R-Tank Installation Guide.

G. If required, install ventilation pipes and vents as specified on drawings to provide ventilation for proper hydraulic performance. The number of pipes and vents will depend on the size of the system. Vents are often installed using a 90 degree elbow with PVC pipe into a landscaped area with 'U" bend or venting bollard to inhibit the ingress of debris. A ground level concrete or steel cover can be used.

3.05 Backfilling of the R-Tank Units

A. Backfill and fill with recommended materials as follows:

1. Place freely draining backfill materials (Section 2.03 B) around the perimeter in lifts with a maximum thickness of 12". Each lift shall be placed around the entire perimeter such that each lift is no more than 24" higher than the side backfill along any other location on the perimeter of the R-Tank system. No fill shall be placed over top of tanks until the side backfill has been completed.
2. Each lift shall be compacted at the specified moisture content to a minimum of 95% of the Standard Proctor Density until no further densification is observed (for self-compacting stone materials). The side lifts must be compacted with walk behind compaction equipment. Even when "self-compacting" backfill materials are selected, a walk behind vibratory compactor must be used.
3. Take care to ensure that the compaction process does not allow the machinery to come into contact with the modules due to the potential for damage to the geotextile and R-Tank units.
4. No compaction equipment is permissible to operate directly on the R-Tank modules.
5. Top Backfill:
   a. Typical Applications: Install a 12" (or as shown on plans) lift of freely draining material (Section 2.03 B) over the R-Tank Units, maintaining 12" between equipment tracks and R-Tank System.
   b. Shallow Applications (< 18" total cover): Install top backfill in accordance with plans.
   Lightly compacted using a walk-behind trench roller. Alternately, a roller (maximum gross vehicle weight of 6 tons) may be used. Roller must remain in static mode until a minimum of 24" of cover has been placed over the modules. Sheep foot rollers should not be used.
6. If required, install a geogrid as shown on plans. Geogrid shall extend a minimum of 3 feet beyond the limits of the excavation wall.
7. Following placement and compaction of the initial cover, subsequent lifts of structural fill (Section 2.03 C) shall be placed at the specified moisture content and compacted to a minimum of 95% of the Standard Proctor Density and shall cover the entire footprint of the R-Tank system. During placement of fill above the system, unless otherwise specified, a uniform elevation of fill shall be maintained to within 12" across the footprint of the R-Tank system. Do not exceed maximum cover depths listed in Table 2.01 B.
8. Place additional layers of geotextile and/or geogrid at elevations as specified in the design details. Each layer of geosynthetic reinforcement placed above the R-Tank system shall extend a minimum of 3 feet beyond the limits of the excavation wall.

B. Only low pressure tire or track vehicles shall be operated over the R-Tank system during construction. No machinery should drive on top of the tank until a minimum of 18" of backfill and compaction is achieved. Dump Trucks and Pans shall not be operated within the R-Tank system footprint at any time. Where necessary the heavy equipment should unload in an area adjacent to the R-Tank system and the material should be moved over the system with tracked equipment.

C. Ensure that all unrelated construction traffic is kept away from the limits of excavation until the project is complete and final surface materials are in place. No non-installation related loading should be allowed over the R-Tank system until the final design section has been constructed (including pavement).

D. Place surfacing materials, such as groundcovers (no large trees), or paving materials over the structure with care to avoid displacement of cover fill and damage to surrounding areas.

E. Backfill depth over R-Tank system must be within the limitations shown in the table in Section 2.01 B. If the total backfill depth does not comply with this table, contact engineer or manufacturer's representative for assistance.

PART 4 - USING THE SYSTEM

4.01 Maintenance Requirements

A. A routine maintenance effort is required to ensure proper performance of the R-Tank system. The Maintenance program should be focused on pretreatment systems. Ensuring these structures are clean and functioning properly will reduce the risk of contamination of the R-Tank system and stormwater released from the site. Pre-treatment systems shall be inspected yearly, or as directed by the regulatory agency and by the manufacturer (for proprietary systems). Maintain as needed using acceptable practices or following manufacturer's guidelines (for proprietary systems).

B. Inspection and/or Maintenance Ports in the R-Tank system will need to be inspected for accumulation of sediments at least quarterly through the first year of operation and at least yearly thereafter. This is done by removing the cap of the port and using a measuring device long enough to reach the bottom of the R-Tank system and stiff enough to push through the loose sediments, allowing a depth measurement.

C. If sediment has accumulated to the level noted in the R-Tank Maintenance Guide or beyond a level acceptable to the Owner's engineer, the R-Tank system should be flushed. A flushing event consists of pumping water into the Maintenance Port and/or adjacent structure, allowing the turbulent flows through the R-Tank system to re-suspend the fine sediments. If multiple Maintenance Ports have been installed, water should be pumped into each port to maximize flushing efficiency. Sediment-laden water can be filtered through a Dirtbag or approved equivalent if permitted by the locality.

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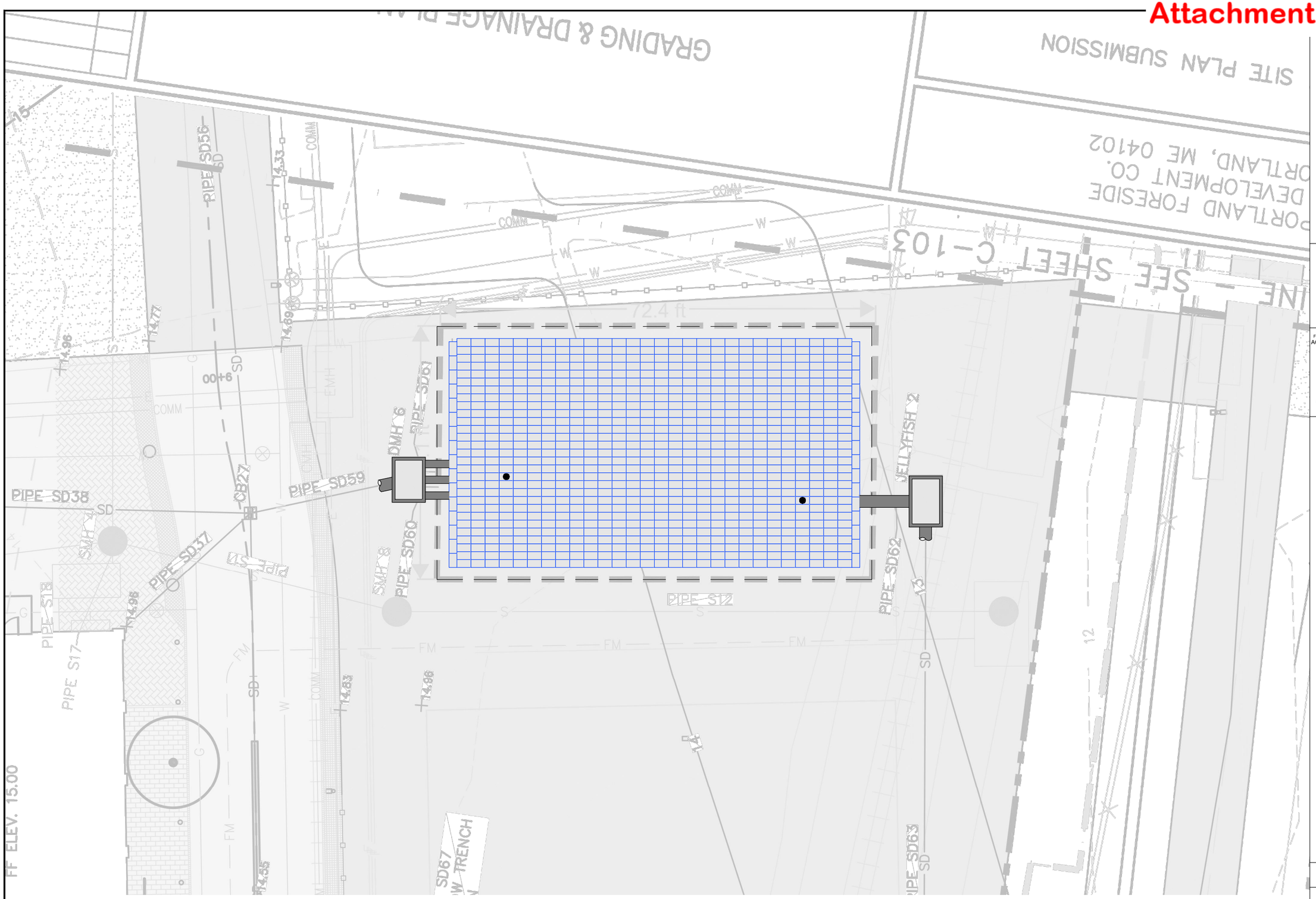
R-TANK SPECIFICATION
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PORTLAND, ME
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Attachment S.2.



R-TANK^{HD} SYSTEM OVERLAY
SCALE: 1" = 15'

0 15' 30'
SCALE 1" = 15'

R-TANK

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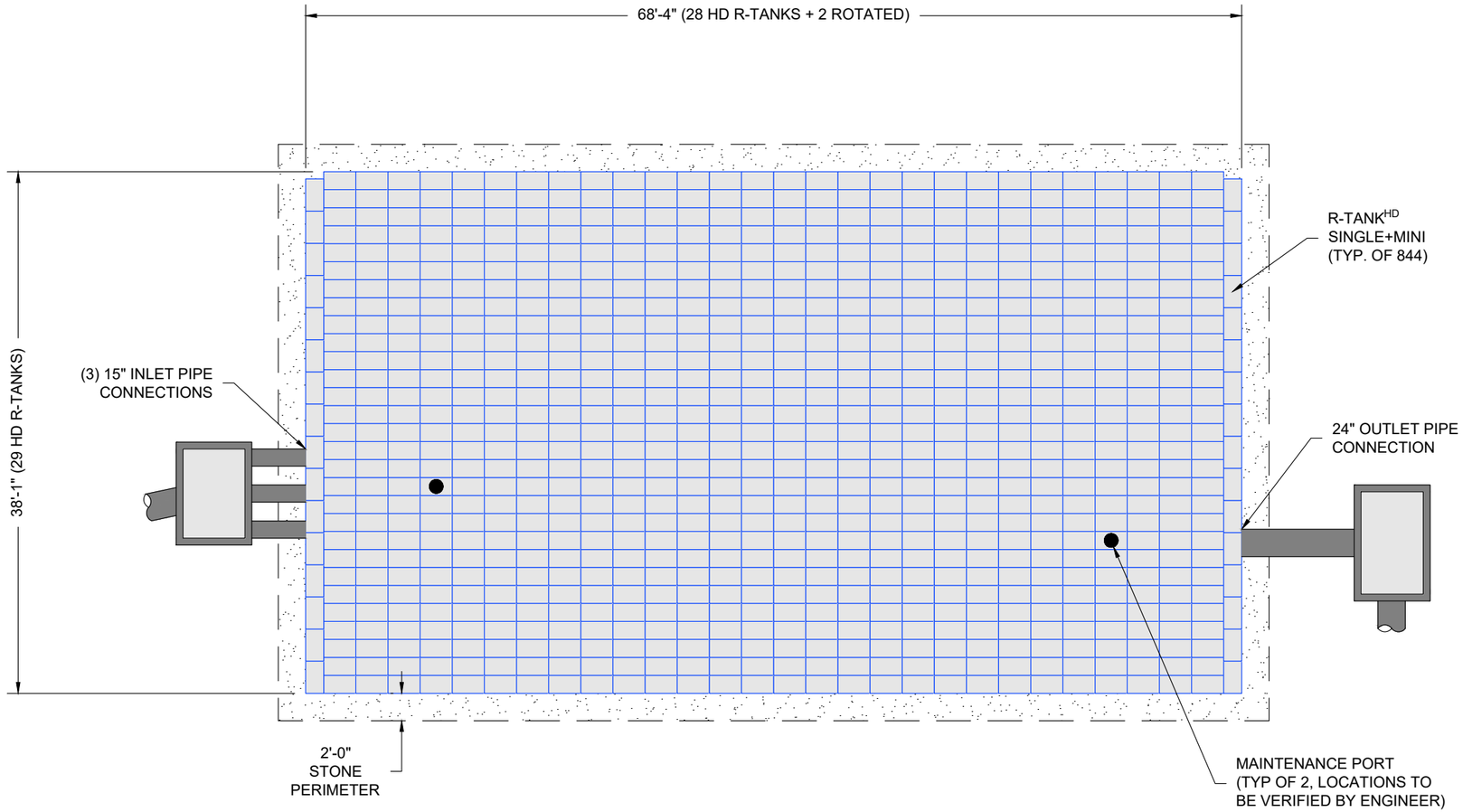
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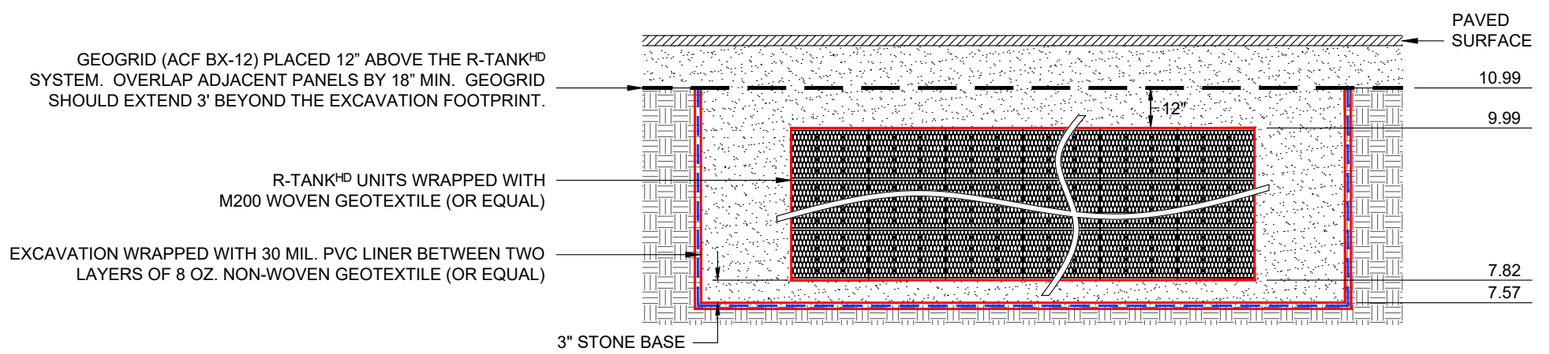


NOTE:
BASE STONE STORAGE NOT INCLUDED IN VOLUMES.

0 10' 20'

SCALE 1" = 10'

LAYOUT SCALE	1" = 10'
R-TANK^{HD} MODULE TYPE	SINGLE+MINI
TRAFFIC LOAD	HS-20
# OF SINGLE+MINI R-TANKS	844
TOTAL SYSTEM STORAGE	6,943 CF
R-TANK STORAGE VOLUME	5,343 CF
STONE STORAGE VOLUME (40% VOID RATIO)	1,600 CF
TOP OF COVER STONE ELEV. (12")	10.99
ACF BX-12 GEOGRID ELEV.	10.99
TOP OF R-TANK ELEV.	9.99
TANK INVERT	7.82
INVERT OF STONE BASE (3")	7.57
MIN. STONE PERIMETER WIDTH	2.0 FT
SEE SHEETS 3 - 6 FOR DETAILS AND ADDITIONAL INFORMATION	



R-TANK^{HD} TANK WRAP & EXCAVATION ENVELOPE DETAIL

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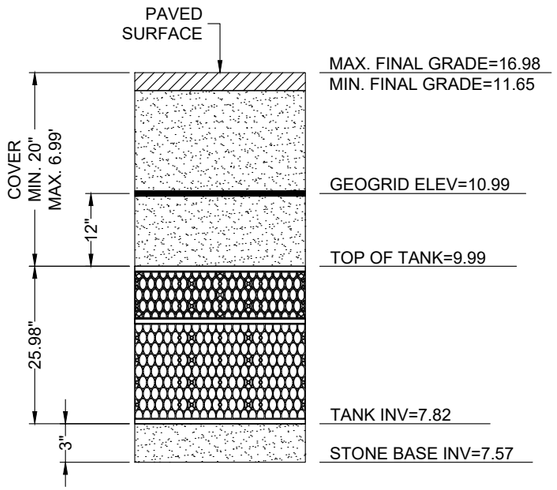
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R-TANK^{HD} SYSTEM LAYOUT
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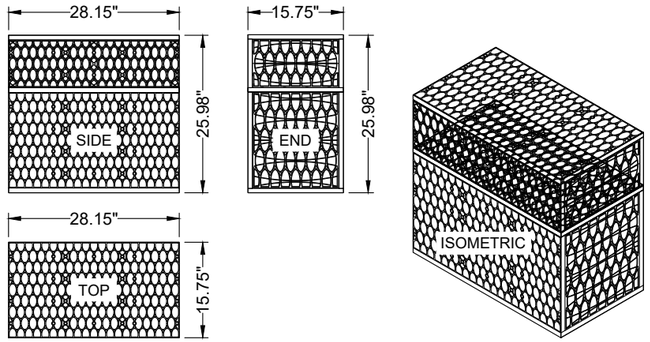
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SINGLE + MINI R-TANK^{HD} - ELEVATION



MODULE DATA

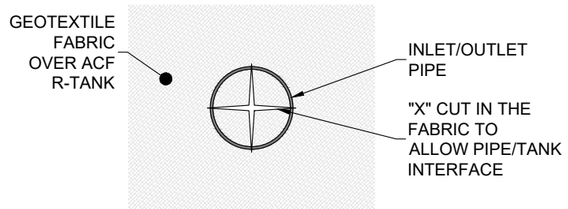
GEOMETRY:	**LOAD RATING:**
LENGTH = 28.15 IN. (715 MM)	33.4 PSI, (MODULE ONLY)
WIDTH = 15.75 IN. (400 MM)	HS20, (WITH ACF COVER SYSTEM)
HEIGHT = 25.98 IN. (660 MM)	**MATERIAL:**
TANK VOLUME = 6.67 CF	100% RECYCLED POLYPROPYLENE
STORAGE VOLUME = 6.33 CF	**SMALL PLATES PER**
VOID INTERNAL VOLUME: 95%	**SEGMENT/TOTAL:**
VOID SURFACE AREA: 90%	5/10

SINGLE + MINI R-TANK^{HD} - MODULE DETAIL

R-TANK^{HD} QUANTITIES	
R-TANK^{HD} MODULE TYPE	SINGLE+MINI
# OF SINGLE+MINI R-TANKS	844
TOTAL SYSTEM STORAGE	6,943 CF
R-TANK STORAGE VOLUME	5,343 CF
STONE STORAGE VOLUME (40% VOID RATIO)	1,600 CF
STONE BED FOOTPRINT	3,041 SF
STONE QUANTITY	176 CY
M200 WOVEN GEOTEXTILE TANK WRAP	6,507 SF (723 SY)
30 MIL. PVC LINER EXCAVATION WRAP	7,895 SF (877 SY)
8 OZ. NON-WOVEN GEOTEXTILE LINER PROTECTION	15,790 SF (1,754 SY)
ACF BX-12 GEOGRID	4,328 SF (481 SY)
12" MAINTENANCE PORTS	2
15" PIPE BOOTS	3
24" PIPE BOOTS	1
NOTE: STONE QUANTITY INCLUDES 12" OF COVER AND 3" OF BASE.	
NOTE: GEOTEXTILE / LINER QUANTITIES INCLUDE A 15% WASTE FACTOR.	

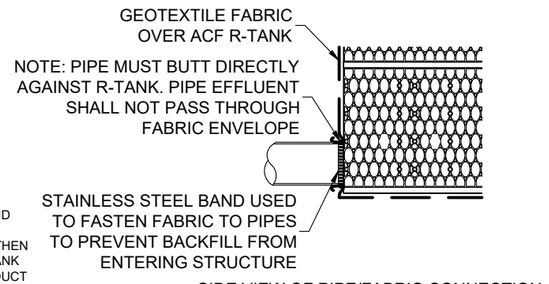
NOTE:
BASE STONE STORAGE NOT INCLUDED IN VOLUMES.

CUT AN "X" IN THE FABRIC ENVELOPE THAT IS SLIGHTLY LARGER THAN THE PIPE. PULL THE FABRIC FLAPS AROUND THE PIPE, AND SEAL WITH A STAINLESS STEEL BAND.

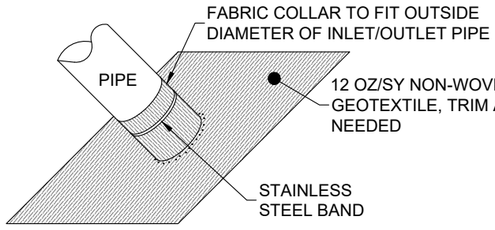


END VIEW OF PIPE/FABRIC CONNECTION

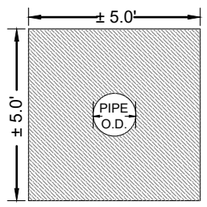
AFTER TANK WRAP IS SECURED TO PIPE, SLIDE BOOT AGAINST R-TANK AND SECURE WITH SECOND STAINLESS STEEL BAND, THEN ATTACH BOOT FLAP TO TANK ENVELOPE FABRIC WITH DUCT TAPE OR OTHER ADHESIVE.



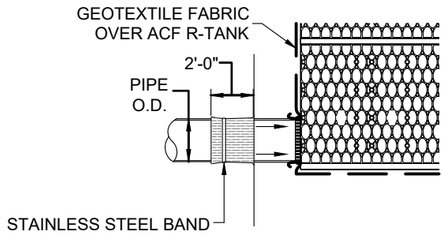
SIDE VIEW OF PIPE/FABRIC CONNECTION



GEOTEXTILE BOOT



FRONT VIEW OF GEOTEXTILE BOOT



SIDE VIEW OF GEOTEXTILE BOOT

R-TANK^{HD} TYPICAL TANK INLET/OUTLET W/ GEOTEXTILE PIPE BOOT DETAIL

ENGINEER OF RECORD TO REVIEW, APPROVE AND ENDORSE FINAL SITE SPECIFIC DESIGN.

FOR ADDITIONAL INFORMATION PLEASE CONTACT:
ACF ENVIRONMENTAL 1-800-448-3636
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R-TANK^{HD} SYSTEM DETAILS
PORTLAND FORESIDE
PORTLAND, ME
SITE DESIGNATION: R-TANK #2

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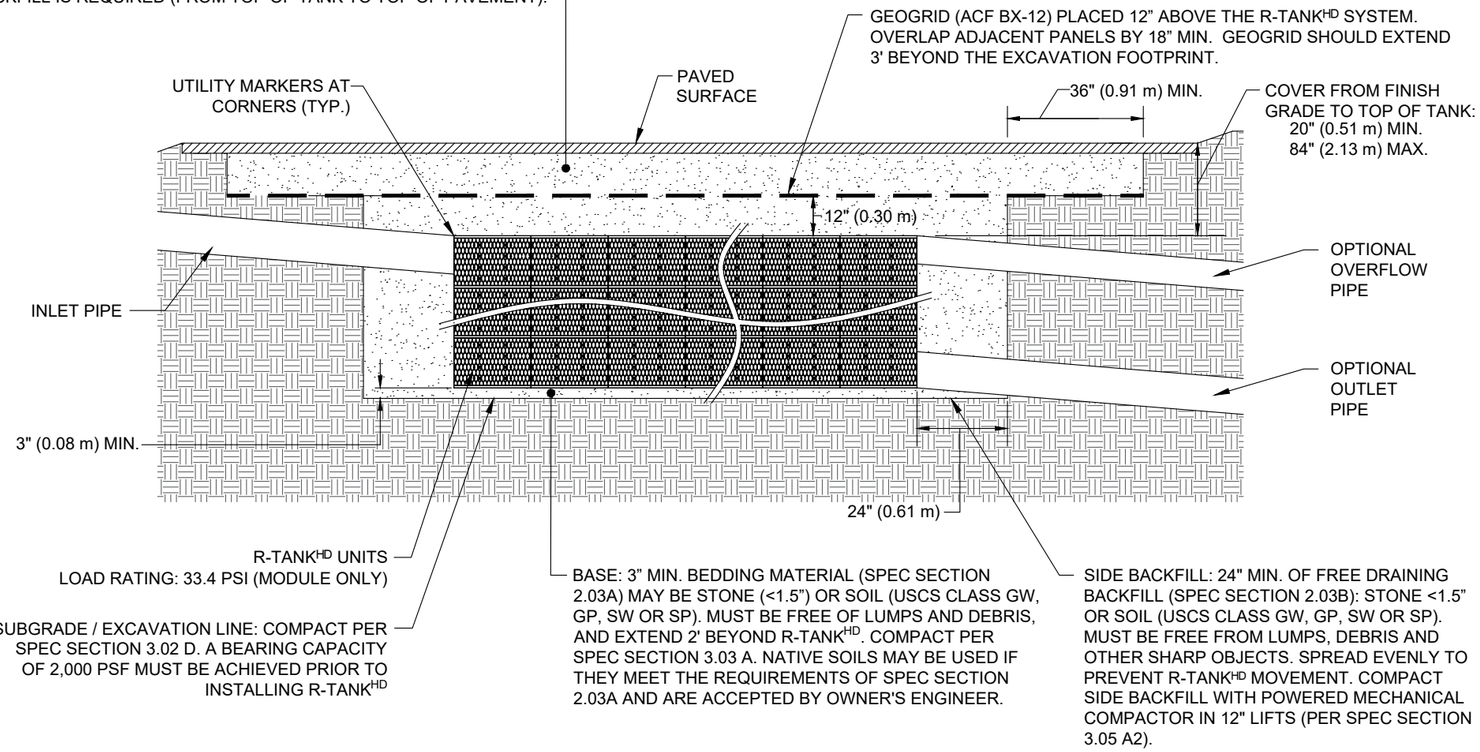
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12/12/19

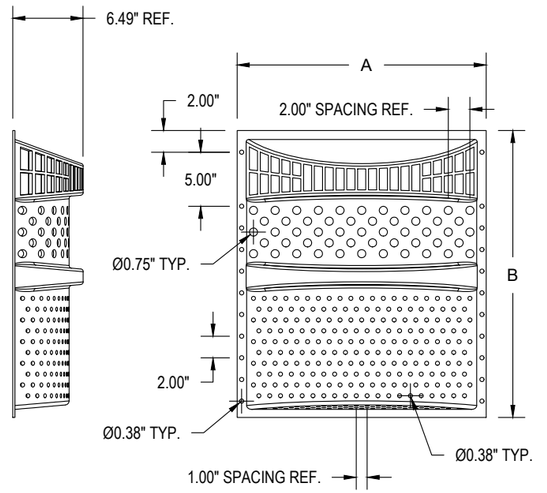
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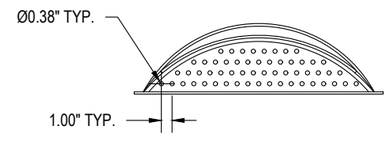
TOTAL COVER: 20” MINIMUM AND 84” MAXIMUM. FIRST 12” MUST BE FREE DRAINING BACKFILL (SPEC SECTION 2.03B): STONE <1.5” OR SOIL (USCS CLASS GW, GP, SW OR SP). ADDITIONAL FILL MAY BE STRUCTURAL FILL (SPEC SECTION 2.03C): STONE OR SOIL (USCS CLASS SM, SP, SW, GM, GP OR GW) WITH MAX CLAY CONTENT<10%, MAX 25% PASSING NO. 200 SIEVE, AND MAX PLASTICITY INDEX OF 4. A MIN. 12” COVER MUST BE MAINTAINED BETWEEN BACKFILL EQUIPMENT AND THE TOP OF THE R-TANK™ SYSTEM AT ALL TIMES. TOTAL HEIGHT OF TOP BACKFILL SHOULD NOT EXCEED 7'. CONTACT ACF ENVIRONMENTAL IF MORE THAN 7' OR LESS THAN 20" OF TOP BACKFILL IS REQUIRED (FROM TOP OF TANK TO TOP OF PAVEMENT).

NOTES:
1. FOR COMPLETE MODULE DATA, SEE APPROPRIATE R-TANK^{HD} MODULE SHEET .
2. INSTALLATIONS PER THIS DETAIL MEET GUIDELINES OF HL-93 LOADING PER THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, CUSTOMARY U.S. UNITS, 7TH EDITION, 2014 WITH 2015 AND 2016 INTERIM REVISIONS.
3. PRE-TREATMENT STRUCTURES NOT SHOWN.
4. FOR INFILTRATION APPLICATIONS, GEOTEXTILE ENVELOPING R-TANK SHALL BE ACF M200 (PER SPEC SECTION 2.02A) AND BASE SHALL BE 4" MIN. UNCOMPACTED FREE DRAINING BACKFILL (SPEC SECTION 2.03A) TO PROVIDE A LEVEL BASE. SURFACE MUST BE SMOOTH, FREE OF LUMPS OR DEBRIS, AND EXTEND 2' BEYOND R-TANK^{HD} FOOTPRINT.



R-TANK^{HD} & H-20 LOADS - SECTION VIEW



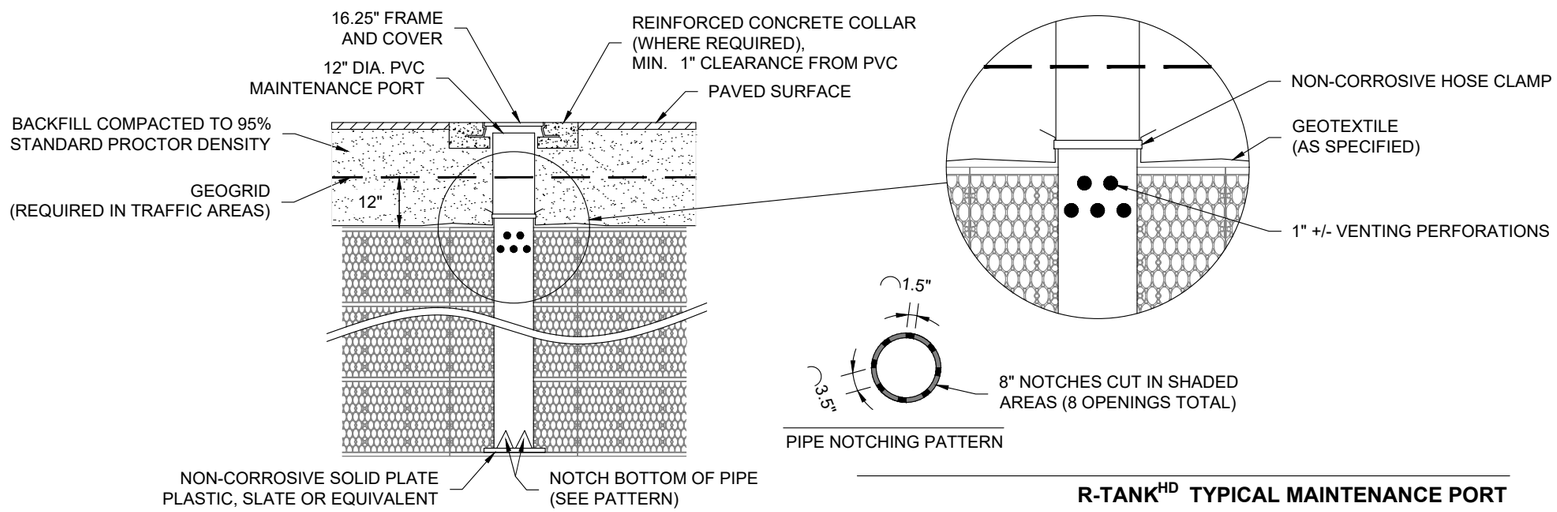


SIZE	A	B
23" x 24"	23"	26.51"
28" x 30"	28"	33.15"
34" x 36"	34"	38.69"

±0.25" TOLERANCE ON DIMENSIONS

TRASHGUARD PLUS PRETREATMENT DETAIL

NOTES
1. THIS PORT IS USED TO PUMP WATER INTO THE SYSTEM AND RE-SUSPEND ACCUMULATED SEDIMENT SO THAT IT MAY BE PUMPED OUT.
2. MINIMUM REQUIRED MAINTENANCE INCLUDES A QUARTERLY INSPECTION DURING THE FIRST YEAR OF OPERATION AND A YEARLY INSPECTION THEREAFTER. FLUSH AS NEEDED.
3. ONLY R-TANK^{HD} AND R-TANK^{SD} MAY BE USED IN TRAFFIC APPLICATIONS.
4. SEE TRAFFIC LOADING DETAIL FOR MINIMUM & MAXIMUM COVER REQUIREMENTS.



PIPE NOTCHING PATTERN

R-TANK^{HD} TYPICAL MAINTENANCE PORT

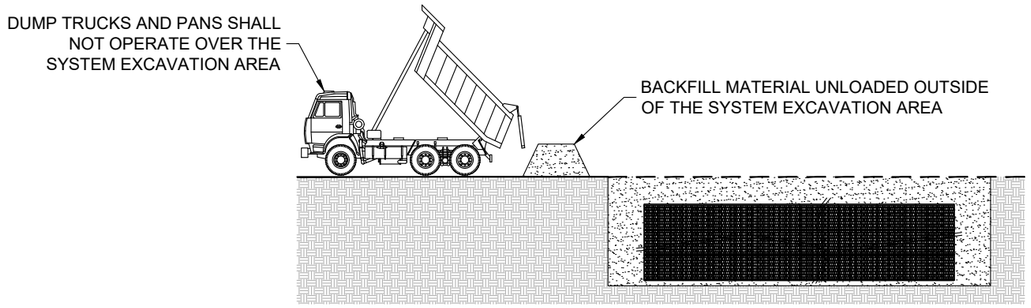
ENGINEER OF RECORD TO REVIEW, APPROVE AND ENDORSE FINAL SITE SPECIFIC DESIGN.

FOR ADDITIONAL INFORMATION PLEASE CONTACT:
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www.acfenvironmental.com

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R-TANK^{HD} SYSTEM DETAILS
PORTLAND FORESIDE
PORTLAND, ME
SITE DESIGNATION: R-TANK #2
ACF ENVIRONMENTAL, 1-800-448-3636, www.acfenvironmental.com

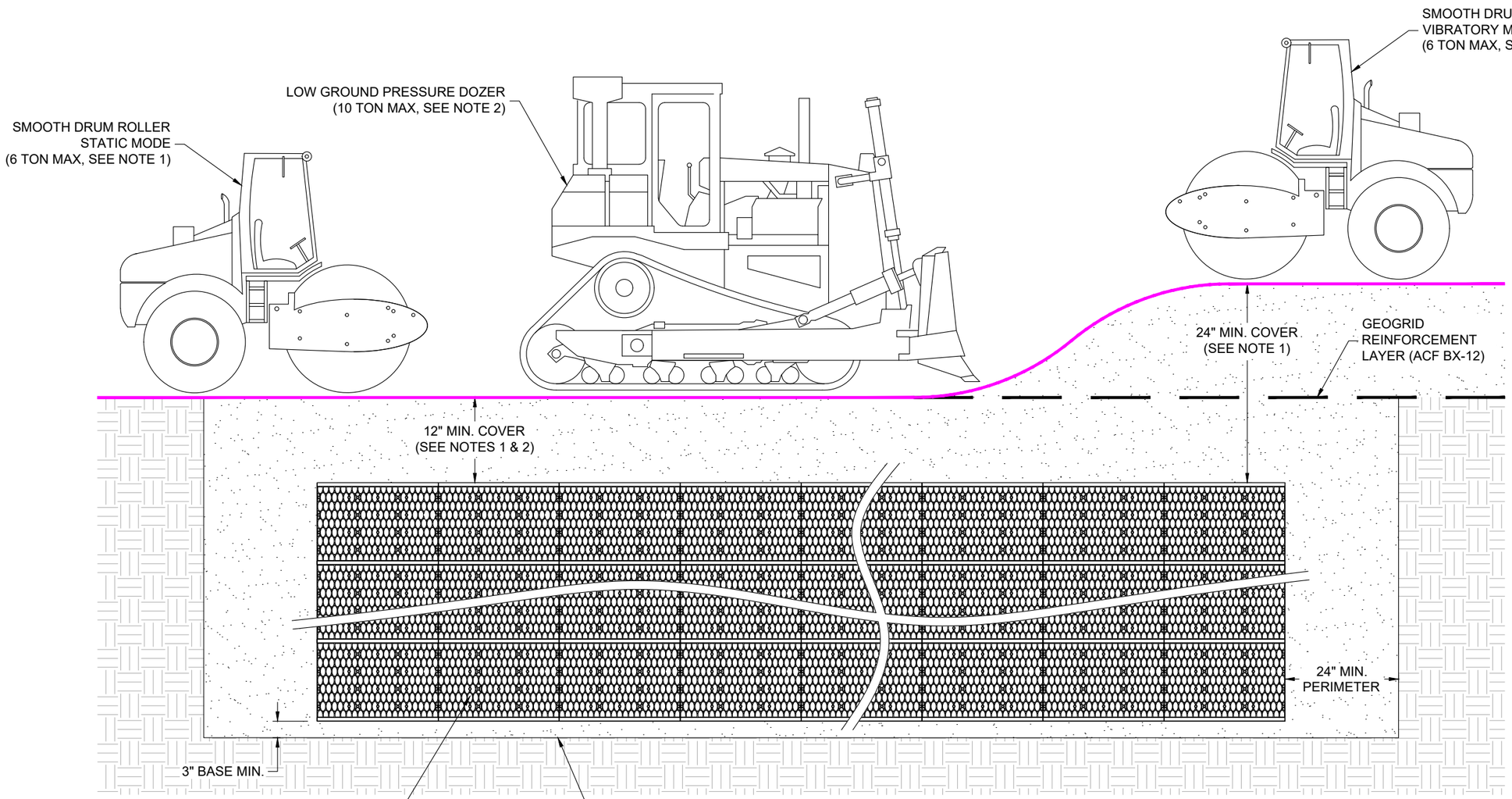
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DUMP TRUCK DETAIL (SEE NOTE 3)

NOTES:

1. FOLLOWING PLACEMENT OF SIDE BACKFILL, A UNIFORM 12" LIFT OF THE FREELY DRAINING MATERIAL (SPEC SECTION 2.03 B) SHALL BE PLACED OVER THE R-TANK AND LIGHTLY COMPACTED USING A WALK-BEHIND TRENCH ROLLER. ALTERNATELY, A ROLLER (MAXIMUM GROSS VEHICLE WEIGHT OF 6 TONS) MAY BE USED. ROLLER MUST REMAIN IN STATIC MODE UNTIL A MINIMUM OF 24" OF COVER HAS BEEN PLACED OVER THE MODULES. SHEEP FOOT ROLLERS SHOULD NOT BE USED. **SPEC SECTION 3.05 A**
2. ONLY LOW PRESSURE TIRE OR TRACK VEHICLES (LESS THAN 7 PSI AND OPERATING WEIGHT OF LESS THAN 20,000 LBS) SHALL BE OPERATED OVER THE R-TANK SYSTEM DURING CONSTRUCTION. **SPEC SECTION 3.05 B**
3. DUMP TRUCKS AND PANS SHALL NOT BE OPERATED WITHIN THE R-TANK SYSTEM AT ANY TIME. WHERE NECESSARY, THE HEAVY EQUIPMENT SHOULD UNLOAD IN AN AREA ADJACENT TO THE R-TANK SYSTEM AND THE MATERIAL SHOULD BE MOVED OVER THE SYSTEM WITH TRACKED EQUIPMENT. **SPEC SECTION 3.05 B**
4. ENSURE THAT ALL UNRELATED CONSTRUCTION TRAFFIC IS KEPT AWAY FROM THE LIMITS OF EXCAVATION UNTIL THE PROJECT IS COMPLETE AND FINAL SURFACE MATERIALS ARE IN PLACE. NO NON-INSTALLATION RELATED LOADING SHOULD BE ALLOWED OVER THE R-TANK SYSTEM UNTIL THE FINAL DESIGN SECTION HAS BEEN CONSTRUCTED (INCLUDING PAVEMENT). **SPEC SECTION 3.05 C**
5. SEE R-TANK INSTALLATION GUIDE OR CONTACT YOUR LOCAL ACF REPRESENTATIVE FOR ADDITIONAL INFORMATION.



CONSTRUCTION EQUIPMENT COVER DETAIL - VEHICULAR TRAFFIC

ENGINEER OF RECORD TO REVIEW, APPROVE AND ENDORSE FINAL SITE SPECIFIC DESIGN.

FOR ADDITIONAL INFORMATION PLEASE CONTACT:
ACF ENVIRONMENTAL 1-800-448-3636
www.acfenvironmental.com

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R-TANK^HD CONSTRUCTION EQUIPMENT COVER DETAIL
PORTLAND FORESIDE
PORTLAND, ME
SITE DESIGNATION: R-TANK #2
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R-TANK SPECIFICATION

PART 1 - GENERAL

1.01 Related Documents

A. Drawings, technical specification and general provisions of the Contract as modified herein apply to this section.

1.02 Description of Work Included

A. Provide excavation and base preparation per geotechnical engineer's recommendations and/or as shown on the design drawings, to provide adequate support for project design loads and safety from excavation sidewall collapse. Excavations shall be in accordance with the owner's and OSHA requirements.

B. Provide and install R-Tank^{LD}, R-Tank^{HD}, R-Tank^{SD}, or R-Tank^{UD} system (hereafter called R-Tank) and all related products including fill materials, geotextiles, geogrids, inlet and outlet pipe with connections per the manufacturer's installation guidelines provided in this section.

C. Provide and construct the cover of the R-Tank system including; stone backfill, structural fill cover, and pavement section as specified.

D. Protect R-Tank system from construction traffic after installation until completion of all construction activity in the installation area.

1.03 Quality Control

A. All materials shall be manufactured in ISO certified facilities.

B. Installation Contractor shall demonstrate the following experience:

1. A minimum of three R-Tank or equivalent projects completed within 2 years; and,
2. A minimum of 25,000 cubic feet of storage volume completed within 2 years.
3. Contractor experience requirement may be waived if the manufacturer's representative provides on-site training and review during construction.

C. Installation Personnel: Performed only by skilled workers with satisfactory record of performance on bulk earthworks, pipe, chamber, or pond/landfill construction projects of comparable size and quality.

D. Contractor must have manufacturer's representative available for site review if requested by Owner.

1.04 Submittals

A. Submit proposed R-Tank layout drawings. Drawings shall include typical section details as well as the required base elevation of stone and tanks, minimum cover requirements and tank configuration.

B. Submit manufacturer's product data, including compressive strength and unit weight.

C. Submit manufacturer's installation instructions.

D. Submit R-Tank sample for review. Reviewed and accepted samples will be returned to the Contractor.

E. Submit material certificates for geotextile, geogrid, base course and backfill materials.

F. Submit required experience and personnel requirements as specified in Section 1.03.

G. Any proposed equal alternative product substitution to this specification must be submitted for review and approved prior to bid opening. Review package should include third party reviewed performance data that meets or exceeds criteria in Table 2.01 B.

1.05 Delivery, Storage, and Handling

A. Protect R-Tank and other materials from damage during delivery, and store UV sensitive materials under tarp to protect from sunlight when time from delivery to installation exceeds two weeks. Storage of materials should be on smooth surfaces, free from dirt, mud and debris.

B. Handling is to be performed with equipment appropriate to the materials and site conditions, and may include hand, handcart, forklifts, extension lifts, etc.

C. Cold weather:

1. Care must be taken when handling plastics when air temperature is 40 degrees or below as plastic becomes brittle.
2. Do not use frozen materials or materials mixed or coated with ice or frost.
3. Do not build on frozen ground or wet, saturated or muddy subgrade.

1.06 Preinstallation Conference.

A. Prior to the start of the installation, a preinstallation conference shall occur with the representatives from the design team, the general contractor, the excavation contractor, the R-Tank installation contractor, and the manufacturer's representative.

1.07 Project Conditions

A. Coordinate installation for the R-Tank system with other on-site activities to eliminate all non-installation related construction traffic over the completed R-Tank system. No loads heavier than the design loads shall be allowed over the system, and in no case shall loads higher than a standard AASHTO HS20 (or HS25, depending on design criteria) load be allowed on the system at any time.

B. Protect adjacent work from damage during R-Tank system installation.

C. All pre-treatment systems to remove debris and heavy sediments must be in place and functional prior to operation of the R-Tank system. Additional pretreatment measures may be needed if unit is operational during construction due to increased sediment loads.

D. Contractor is responsible for any damage to the system during construction.

PART 2 - PRODUCTS

2.01 R-Tank Units

A. R -Tank - Injection molded plastic tank plates assembled to form a 95% void modular structure of predesigned height (custom for each project).

B. R-Tank units shall meet the following Physical & Chemical Characteristics:

PROPERTY	DESCRIPTION	R-Tank^{LD} VALUE	R-Tank^{HD} VALUE	R-Tank^{SD} VALUE	R-Tank^{UD} VALUE
Void Area	Volume available for water storage	95%	95%	95%	95%
Surface Void Area	Percentage of exterior available for infiltration	90%	90%	90%	90%
Compressive Strength	ASTM D 2412 / ASTM F 2418	30.0 psi	33.4 psi	42.9 psi	134.2 psi
HS-20 Minimum Cover	Cover required to support HS-20 loads	N/A	20"	18"	12" (STONE BACKFILL)
HS-25 Minimum Cover	Cover required to support HS-25 loads	N/A	24"	19"	15" (STONE BACKFILL)
Maximum Cover	Maximum allowable cover depth	3 feet	< 7 feet	< 10 feet	5 feet
Unit Weight	Weight of plastic per cubic foot of tank	3.29 lbs / cf	3.62 lbs/cf	3.96 lbs / cf	4.33 lbs / cf
Rib Thickness	Thickness of load-bearing members	0.18 inches	0.18 inches	0.18 inches	N/A
Service Temperature	Safe temperature range for use	-14 – 167° F	-14 – 167° F	-14 – 167° F	-14 – 167° F

C. Supplier: ACF Environmental 2831 Cardwell Road Richmond, VA 23234
(T): 800-448-3636; (F): 804-743-7779 www.acfenvironmental.com

2.02 Geosynthetics

A. Geotextile. A geotextile envelope is required to prevent backfill material from entering the R-Tank modules.

1. Standard Application: The standard geotextile shall be an 8 oz per square yard nonwoven geotextile (ACF N080 or equivalent).
2. Infiltration Applications: When water must infiltrate/exfiltrate through the geotextile as a function of the system design, a woven monofilament (ACF M200 or equivalent) shall be used.

B. Geogrid. For installations subject to traffic loads and/or when required by project plans, install geogrid (ACF BX12 or equivalent) to reinforce backfill above the R-Tank system. Geogrid is not always required for R-Tank^{UD} installations, and is often not required for non-traffic load applications.

2.03 Backfill & Cover Materials

A. Bedding Materials: Stone (angular and smaller than 1.5" in diameter) or soil (GW, GP, SW, or SP as classified by the Unified Soil Classification System) shall be used below the R-Tank system (3" minimum). Material must be free from lumps, debris, and any sharp objects that could cut the geotextile. Material shall be within 3 percent of the optimum moisture content as determined by ASTM D698 at the time of installation. For infiltration applications bedding material shall be free draining.

B. Side and Top Backfill: Free draining material shall be used adjacent to (24" minimum) and above (for the first 12") the R-Tank system. Material must be free from lumps, debris and any sharp objects that could cut the geotextile. Material shall be within 3 percent of the optimum moisture content as determined by ASTM D698 at the time of installation.

1. For LD, HD, and SD modules, backfill materials shall be free draining stone (angular and smaller than 1.5" in diameter) or soil (GW, GP, SW, or SP as classified by the Unified Soil Classification System).
2. For UD modules in traffic loaded (HS-20) applications with less than 14" of top cover, side backfill materials shall be free draining stone (angular and smaller than 1.5" in diameter). The use of soil backfill on the sides of the UD module is not permitted unless the modules are installed outside of traffic areas or with cover depths of > 14". Top backfill material may be stone or soil as noted above (Section 2.03 B 1).

C. Additional Cover Materials: Structural Fill shall consist of granular materials meeting the gradational requirements of SM, SP, SW, GM, GP or GW as classified by the Unified Soil Classification System. Structural fill shall have a maximum of 25 percent passing the No. 200 sieve, shall have a maximum clay content of 10 percent and a maximum Plasticity Index of 4. Material shall be within 3 percent of the optimum moisture content as determined by ASTM D698 at the time of installation.

2.04 Other Materials

Utility Marker: Install metallic tape at corners of R-Tank system to mark the area for future utility detection.

PART 3 - EXECUTION

3.01 Assembly of R-Tank Units

A. Assembly of modules shall be performed in accordance with the R-Tank Installation Manual, Section 2.

3.02 Layout and Excavation

A. Installer shall stake out, excavate, and prepare the subgrade area to the required plan grades and dimensions, ensuring that the excavation is at least 2 feet greater than R-Tank dimensions in each direction allowing for installation of geotextile filter fabric, R-Tank modules, and free draining backfill materials.

B. All excavations must be prepared with OSHA approved excavated sides and sufficient working space.

C. Protect partially completed installation against damage from other construction traffic by establishing a perimeter with high visibility construction tape, fencing, barricades, or other means until construction is complete.

D. Base of the excavation shall be uniform, level, and free of lumps or debris and soft or yielding subgrade areas. A minimum 2,000 pounds per square foot bearing capacity is required.

1. Standard Applications: Compact subgrade to a minimum of 95% of Standard Proctor (ASTM D698) density or as required by the Owner's engineer.
2. Infiltration Applications: Subgrade shall be prepared in accordance with the contract documents. Compaction of subgrade should not be performed in infiltration applications.

E. Unsuitable Soils or Conditions: All questions about the base of the excavation shall be directed to the owner's engineer, who will approve the subgrade conditions prior to placement of stone. The owner's engineer shall determine the required bearing capacity of the R-Tank subgrade; however in no case shall a bearing capacity of less than 2,000 pounds per square foot be provided.

1. If unsuitable soils are encountered at the subgrade, or if the subgrade is pumping or appears excessively soft, repair the area in accordance with contract documents and/or as directed by the owner's engineer.
2. If indications of the water table are observed during excavation, the engineer shall be contacted to provide recommendations.
3. Do not start installation of the R-Tank system until unsatisfactory subgrade conditions are corrected and the subgrade conditions are accepted by the owner's engineer.

3.03 Preparation of Base

A. Place a thin layer (3" unless otherwise specified) of bedding material (Section 2.03 A), over the subgrade to establish a level working platform for the R-Tank modules. Level to within ½" (+/- ¼") or as shown on the plans. Native subgrade soils or other materials may be used if determined to meet the requirements of 2.03 A and are accepted by the owner's engineer.

1. Standard Applications: Static roll or otherwise compact bedding materials until they are firm and unyielding.
2. Infiltration Applications: Bedding materials shall be prepared in accordance with the contract documents.

B. Outline the footprint of the R-Tank system on the excavation floor using spray paint or chalk line to ensure a 2' perimeter is available around the R-Tank system for proper installation and compaction of backfill.

3.04 Installation of the R-Tanks

A. Where a geotextile wrap is specified on the stone base, cut strips to length and install in excavation, removing wrinkles so material lays flat. Overlap geotextile a minimum 12" or as recommended by manufacturer.

B. Where an impervious liner (for containment) is specified, install the liner per manufacturer's recommendations and the contract documents. The R-Tank units shall be separated from impervious liner by a non-woven geotextile fabric installed accordance with Section 3.04A.

C. Install R-Tank modules by placing side by side, in accordance with the design drawings. No lateral connections are required. It is advisable to use a string line to form square corners and straight edges along the perimeter of the R-Tank system. The modules are to be oriented as per the design drawing with required depth as shown on plans..

1. For LD, HD, and SD installations, the large side plate of the tank should be placed on the perimeter of the system. This will typically require that the two ends of the tank area will have a row of tanks placed perpendicular to all other tanks. If this is not shown in the construction drawings, it is a simple field adjustment that will have minimal effect on the overall system footprint. Refer to R-Tank Installation Guide for more details
2. For UD installations, there is no perpendicular end row required.

D. Wrap the R-Tank top and sides in specified geotextile. Cut strips of geotextile so that it will cover the sides and top, encapsulating the entire system to prevent backfill entry into the system. Overlap geotextile 12" or as recommended by manufacturer. Take great care to avoid damage to geotextile (and, if specified, impervious liner) during placement.

E. Identify locations of inlet, outlet and any other penetrations of the geotextile (and optional liner). These connections should be installed flush (butted up to the R-Tank) and the geotextile fabric shall be cut to enable hydraulic continuity between the connections and the R-Tank units. These connections shall be secured using pipe boots with stainless steel pipe clamps. Support pipe in trenches during backfill operations to prevent pipe from settling and damaging the geotextile, impervious liner (if specified) or pipe. Connecting pipes at 90 degree angles facilitates construction, unless otherwise specified. Ensure end of pipe is installed snug against R-Tank system.

F. Install Inspection and Maintenance Ports in locations noted on plans. At a minimum one maintenance port shall be installed within 10' of each inlet & outlet connection, and with a maximum spacing of one maintenance port for every 2,500 square feet. Install all ports as noted in the R-Tank Installation Guide.

G. If required, install ventilation pipes and vents as specified on drawings to provide ventilation for proper hydraulic performance. The number of pipes and vents will depend on the size of the system. Vents are often installed using a 90 degree elbow with PVC pipe into a landscaped area with 'U" bend or venting bollard to inhibit the ingress of debris. A ground level concrete or steel cover can be used.

3.05 Backfilling of the R-Tank Units

A. Backfill and fill with recommended materials as follows:

1. Place freely draining backfill materials (Section 2.03 B) around the perimeter in lifts with a maximum thickness of 12". Each lift shall be placed around the entire perimeter such that each lift is no more than 24" higher than the side backfill along any other location on the perimeter of the R-Tank system. No fill shall be placed over top of tanks until the side backfill has been completed.
2. Each lift shall be compacted at the specified moisture content to a minimum of 95% of the Standard Proctor Density until no further densification is observed (for self-compacting stone materials). The side lifts must be compacted with walk behind compaction equipment. Even when "self-compacting" backfill materials are selected, a walk behind vibratory compactor must be used.
3. Take care to ensure that the compaction process does not allow the machinery to come into contact with the modules due to the potential for damage to the geotextile and R-Tank units.
4. No compaction equipment is permissible to operate directly on the R-Tank modules.
5. Top Backfill:
   a. Typical Applications: Install a 12" (or as shown on plans) lift of freely draining material (Section 2.03 B) over the R-Tank Units, maintaining 12" between equipment tracks and R-Tank System.
   b. Shallow Applications (< 18" total cover): Install top backfill in accordance with plans.
   Lightly compacted using a walk-behind trench roller. Alternately, a roller (maximum gross vehicle weight of 6 tons) may be used. Roller must remain in static mode until a minimum of 24" of cover has been placed over the modules. Sheep foot rollers should not be used.
6. If required, install a geogrid as shown on plans. Geogrid shall extend a minimum of 3 feet beyond the limits of the excavation wall.
7. Following placement and compaction of the initial cover, subsequent lifts of structural fill (Section 2.03 C) shall be placed at the specified moisture content and compacted to a minimum of 95% of the Standard Proctor Density and shall cover the entire footprint of the R-Tank system. During placement of fill above the system, unless otherwise specified, a uniform elevation of fill shall be maintained to within 12" across the footprint of the R-Tank system. Do not exceed maximum cover depths listed in Table 2.01 B.
8. Place additional layers of geotextile and/or geogrid at elevations as specified in the design details. Each layer of geosynthetic reinforcement placed above the R-Tank system shall extend a minimum of 3 feet beyond the limits of the excavation wall.

B. Only low pressure tire or track vehicles shall be operated over the R-Tank system during construction. No machinery should drive on top of the tank until a minimum of 18" of backfill and compaction is achieved. Dump Trucks and Pans shall not be operated within the R-Tank system footprint at any time. Where necessary the heavy equipment should unload in an area adjacent to the R-Tank system and the material should be moved over the system with tracked equipment.

C. Ensure that all unrelated construction traffic is kept away from the limits of excavation until the project is complete and final surface materials are in place. No non-installation related loading should be allowed over the R-Tank system until the final design section has been constructed (including pavement).

D. Place surfacing materials, such as groundcovers (no large trees), or paving materials over the structure with care to avoid displacement of cover fill and damage to surrounding areas.

E. Backfill depth over R-Tank system must be within the limitations shown in the table in Section 2.01 B. If the total backfill depth does not comply with this table, contact engineer or manufacturer's representative for assistance.

PART 4 - USING THE SYSTEM

4.01 Maintenance Requirements

A. A routine maintenance effort is required to ensure proper performance of the R-Tank system. The Maintenance program should be focused on pretreatment systems. Ensuring these structures are clean and functioning properly will reduce the risk of contamination of the R-Tank system and stormwater released from the site. Pre-treatment systems shall be inspected yearly, or as directed by the regulatory agency and by the manufacturer (for proprietary systems). Maintain as needed using acceptable practices or following manufacturer's guidelines (for proprietary systems).

B. Inspection and/or Maintenance Ports in the R-Tank system will need to be inspected for accumulation of sediments at least quarterly through the first year of operation and at least yearly thereafter. This is done by removing the cap of the port and using a measuring device long enough to reach the bottom of the R-Tank system and stiff enough to push through the loose sediments, allowing a depth measurement.

C. If sediment has accumulated to the level noted in the R-Tank Maintenance Guide or beyond a level acceptable to the Owner's engineer, the R-Tank system should be flushed. A flushing event consists of pumping water into the Maintenance Port and/or adjacent structure, allowing the turbulent flows through the R-Tank system to re-suspend the fine sediments. If multiple Maintenance Ports have been installed, water should be pumped into each port to maximize flushing efficiency. Sediment-laden water can be filtered through a Dirtbag or approved equivalent if permitted by the locality.

ENGINEER OF RECORD TO REVIEW, APPROVE AND ENDORSE FINAL SITE SPECIFIC DESIGN.

FOR ADDITIONAL INFORMATION PLEASE CONTACT:
ACF ENVIRONMENTAL 1-800-448-3636
www.acfenvironmental.com

ACF ENVIRONMENTAL
LET'S GET IT DONE

R-TANK SPECIFICATION
PORTLAND FORESIDE
PORTLAND, ME
SITE DESIGNATION: R-TANK #2
ACF ENVIRONMENTAL, 1-800-448-3636, www.acfenvironmental.com

DRAWN BY
EDQ

DATE
12/12/19

SHEET NO.
6 of 6

COMMITMENT & INTEGRITY
DRIVE RESULTS

41 Hutchins Drive
Portland, Maine 04102
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January 8, 2020

Christian Roadman, Planner
City of Portland Planning Division
389 Congress Street
Portland, ME 04101

Re: Portland Foreside Phase 1 Level III Site Plan Submittal – Portland Foreside Development Co.
Additional Information

Dear Christian:

Thank you for coordinating the review of the proposed development of Phase 1 of the Portland Foreside Project located at 58 Fore Street in Portland, Maine. To support the Level III Site Plan process, we are providing additional information for review and consideration by Planning Staff and the Planning Board.

Height Calculations & Architectural Updates

A site plan has been developed that identifies all spot grades used to calculate average grades for Building 1A, the Townhouses, and the Block 4 Garage. This plan also shows the 100-foot Fore Street setback that was used to check height restrictions relative to Fore Street grades. In addition, the elevations for Building 1A, the Townhouses, and Block 4 have been updated to identify the calculated average grades and to show Fore Street grades for reference. For the City's reference, we have also provided an elevation and height information for Building 12.

In response to requests made by Planning staff for additional project views, architectural renderings are enclosed. These renderings include views from Waterville Street.

Additionally, we received your comment asking whether the size of the rooftop penthouse on the roof of Building 1A could be reduced. After reviewing with the architect, it was determined that the footprint of the space cannot be reduced, however, the height of the screening on the roof could be shortened. The updated Building 1A elevations show that the height of the screening on the roof has been reduced from 16 feet to 12 feet.

Landscape Updates

Updated landscape plans are enclosed. These plans now show the proposed Fore Street stair modifications. MBLA will further update these plans to address items that were discussed at the site walk with the City on 1/3/20, including the addition of a cross walk on Fore Street, elimination of street trees to widen the Fore Street sidewalk, and fencing and guard rail solutions along Fore Street. These updates are being made currently and will be part of a future submission.

Lighting Updates

Updated lighting information that includes a response to comments from LAM is enclosed. This includes additional information on the proposed site lighting. Also included is a package of plans, cut sheets, and photometrics for the top floor of the Block 4 garage. Note that this Block 4 lighting is an interim condition, as future phases will cover this parking deck.

Traffic

We have received feedback from the City that the Connector Road between Thames Street and Fore Street will not be a public street. A memo from Gorrill Palmer that addresses the minimal impact that the private nature of the Connector Road has on the traffic analysis is enclosed. It is also noted that an updated Traffic Demand Management Plan was submitted to the City on December 31, 2019.

In addition to the above information, the neighborhood meeting certification and all associated components is also enclosed with this letter. If you have any questions or require additional information, please do not hesitate to contact me at (207) 558-3763 or by email at lswett@woodardcurran.com.

Sincerely,

WOODARD & CURRAN INC.



Lauren Swett, PE
Technical Manager

Enclosures:

- Height Site Plan
- Updated Elevations for Building 1A, Building 12, the Townhouses, and the Block 4 Garage
- Additional Architectural Renderings
- Updated Landscape Plans
- Updated Site Lighting Information and Block 4 Parking Garage Deck Lighting Information
- Connector Road Traffic Memo
- Neighborhood Meeting Certification

Lam Partners
ARCHITECTURAL LIGHTING DESIGN

Portland Foreside

Lighting Notes and Response to City Comments
7 January 2020

The below items refer to sections from within the Portland City Standards (Technical Manual and Site Plan Standards) that from our review and previous discussions with the City, may relate to the lighting design that has been documented for the Level 3 Site Application, dated 8 November 2019. The blue text sections are Lam comments in response to the identified sections that have been brought to our attention and are open for further discussion, if required.

Section 10 – Municipal Street Lighting Standards

10.2 General Standards - Commercial/Industrial Road Poles and **10.4** Standards for Decorative Lighting – Fixture X-8B height shall be 18'-4" height
[The Design team reevaluated the fixture hardware for the waterfront poles along Eastern Promenade Trail and will use an LED version of the existing City Standard fixture, to match the fixture currently along the waterfront promenade and the pole height will be limited to 18'-4". The roadway poles that are internal to the project site are 20' poles to maximize the fixture spacing, illumination uniformity and lighting coverage while minimizing the overall quantity of poles within the project site.]

Section 12 - Site Lighting Standards

12.3.4 Light trespass at property line – The maximum illumination level at a property line shall not exceed 0.1-foot candle, as measured at grade, except where abutting industrial, or other non-sensitive uses.
[The single, lone area of the lighting design that spills more than 0.1fc beyond the property line is along the grand stair at Fore Street. This area is currently under some redesign but the source of illumination here is a lit handrail, which provides required light levels for pedestrian safety and any minimal excess is spilling onto the surface of a public roadway for useful illumination at this pedestrian edge. The design team assumes that this minimal light spill past the property boundary at this one location is acceptable as any marginal increase in illumination at the curb edge can only be helpful at this point of possible vehicular and pedestrian conflict.]

12.3.6 Full Cut-off fixtures and shielding – All outdoor lighting fixtures, including pole mounted and wall mounted luminaires, shall be constructed "full cut-off" or with full shielding.
& **12.5.1/12.5.3** Minimize lighting of night sky and building façade lighting – Lighting shall be designed to minimize lighting of night sky and shall accentuate individual architectural or aesthetic elements, not the entire structure.
[All fixture types proposed in the lighting design are either "cut-off" fixtures, aiming downwards, or aimed at specific architectural or landscape features. The pedestrian light poles internal to the project site, are indirect "cut-off" fixtures with shielding to prevent any light exiting directly upwards into the night sky. In all cases of architectural lighting, the maximum candela is directed at vertical planes to minimize any spill light into the night sky. All spotlight fixtures will have glare snoots or micro-louvers for source shielding. The two exceptions would be several, low output uplights at the tree grove and existing reclaimed boiler units, that are both being highlighted as visual elements within the pedestrian realm and internal to the site boundaries. These fixtures are all LED, dimmable, and can be controlled via time clock to turn off at a set time every evening, to further minimize any spill into the night sky.]

12.3.8 Fixture Height – Fixtures shall be mounted at the lowest height necessary to meet city standards and the height is measured from grade to the bottom of the light fixture.
[A selection of fixtures has been proposed to be mounted along the roof of Building 1 and Building 4, which is above the 20 feet height restriction, but all will be aimed downwards to light the ground plane from discrete locations. These adjustable downlights are attached to the building rooftops and intended to replace traditional lighting hardware within the site that would otherwise become visual and physical obstructions for service trucks and pedestrians throughout the plaza areas. All of these fixtures will have glare snoots, good optical beam control, and precise aiming to softly illuminate the pedestrian areas at the ground plane without contributing to sky-glow or light trespass above horizontal or beyond the property line.]

Code of Ordinances Site Plan Standards - Chapter 14 – Land Use

6.b.ii Up-lighting by any method is prohibited except for public buildings and parklands, clock towers and steeples, landscape features, designated historic landmarks, flags of state, federal or national jurisdictions, and public art. Such light fixtures, brackets, conduits and all other components shall be designed by a lighting professional and shall be scaled and placed to minimize their visibility and installed in accordance with the standards contained in Section 12 of the Technical Manual.
[The façade lighting of Building 1A has been re-evaluated by the design team to eliminate fixtures pointing upwards and at a much less frequency. The façade uplights have been replaced by vertical cove details that will side-light small portions of the facade with a soft wash of indirect lighting. The detail will be developed so that the fixtures are fully concealed from view and all of the light intensity emitted from the fixtures will be captured by the building façade. This detail now only occurs at the major building entries to reinforce wayfinding and no longer exists at the building corners or on a regular architectural rhythm. We feel that the lighting effect now currently in the design has been adjusted to follow the spirit of the City's requirements.]

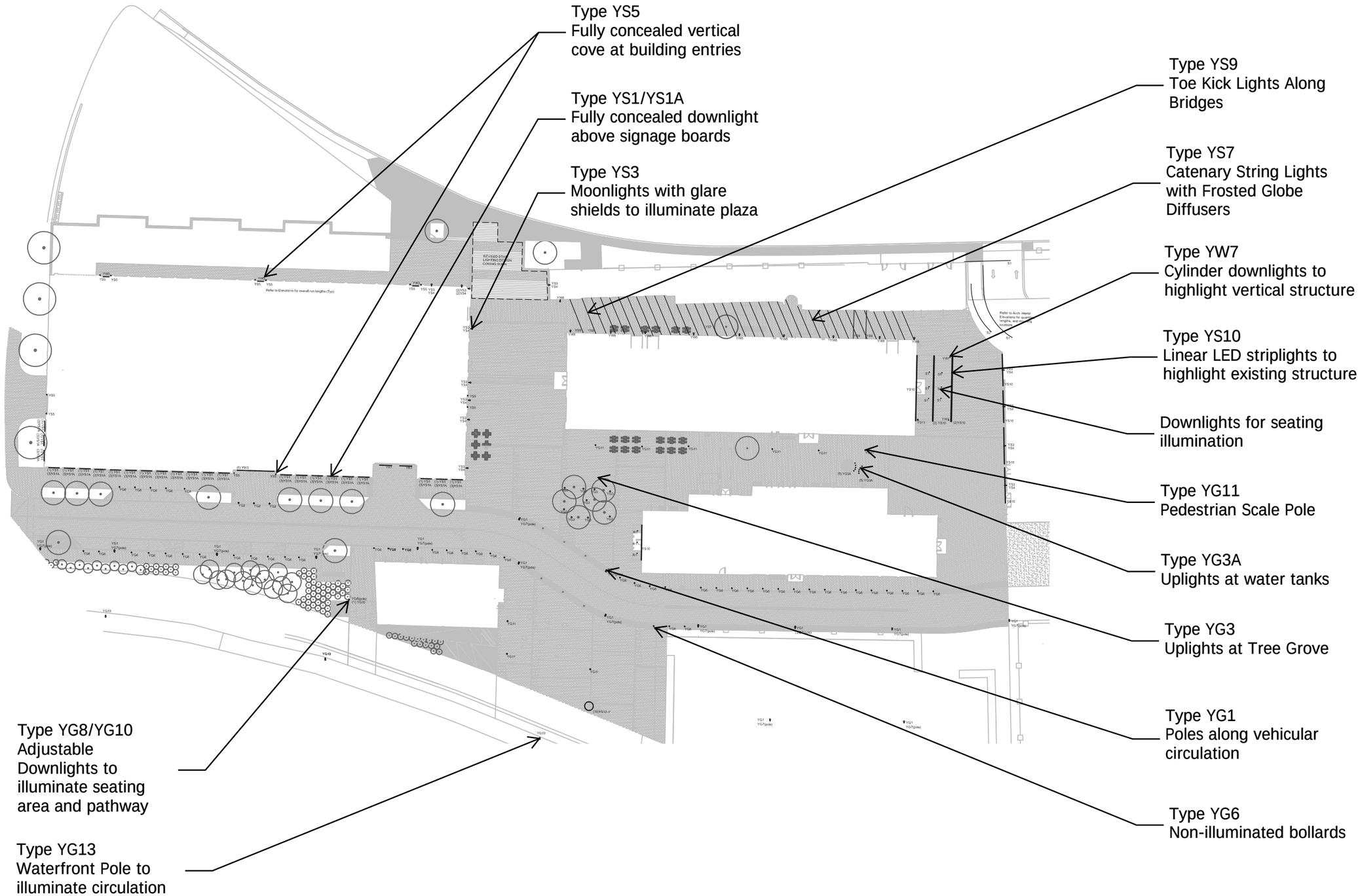
The below items are questions or specific comments from the City that relate to the lighting design that has been documented for the Level 3 Site Application, dated 8 November 2019. The blue text sections are Lam comments in response to the questions and are open for further discussion.

1. **Memorandum – Planning and Urban Development Department Planning Division dated 6 December 2019**
    a. "The applicant provided cut sheets for lights and photometric plan (attachment J). The applicant also requests a waiver from the maximum light spillage standard of the City's Technical Manual."
    [Refer to response above for Section 12 – 12.3.4]

    b. "Many of the proposed lights do not seem to conform to the requirement that they are full cut-off. Additionally, while the lighting plan requires further review, staff is concerned that architectural/projector/luminaire lighting may not conform to the spirt and directives of the City's Technical Manual. Additional applicant attention to lighting, especially in regards to

light pollution, is necessary."

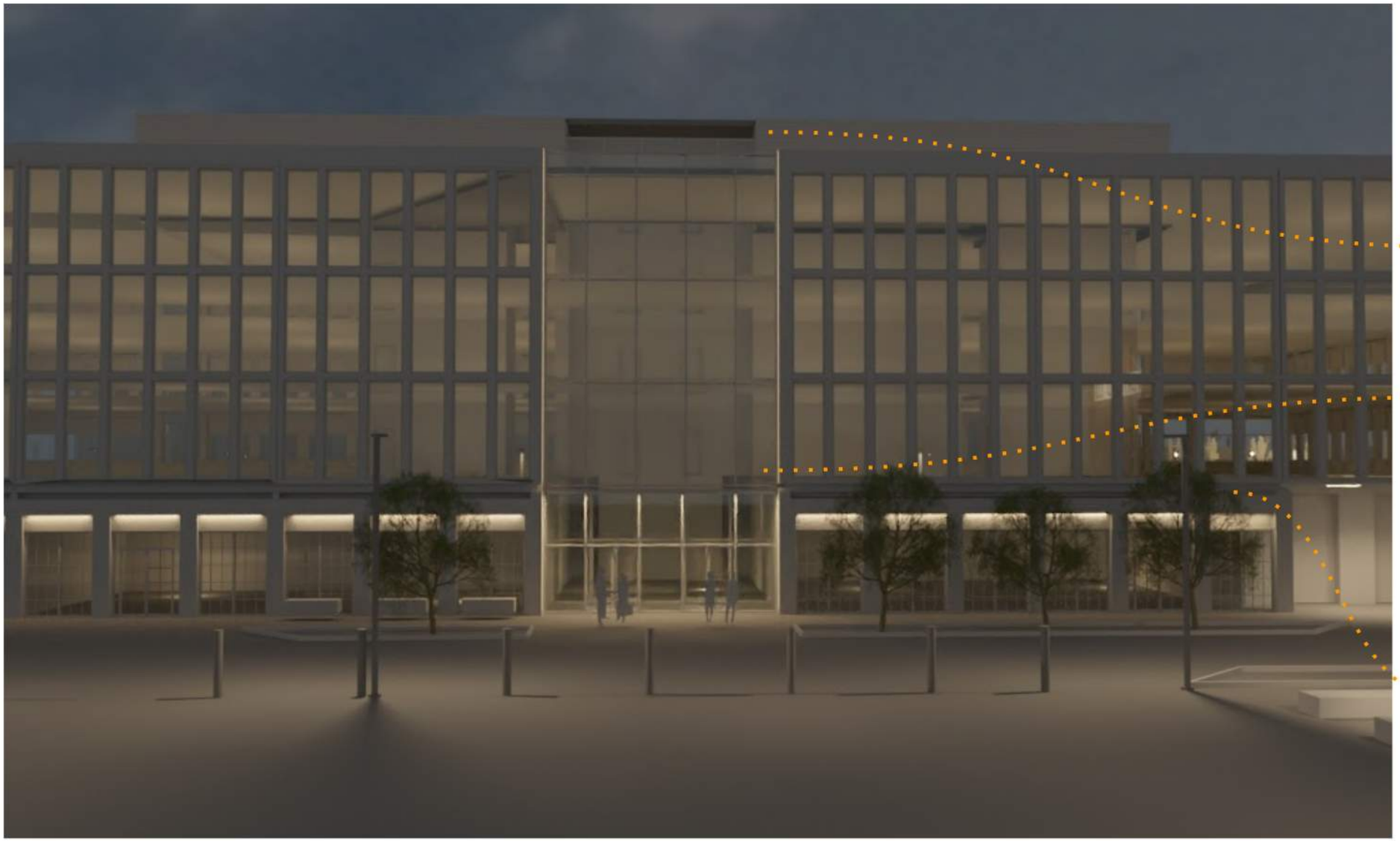
[During the call with the City on 10 December 2019, there was a question regarding fixture type YG7, which is a pole only designation. The cut sheet includes images of example fixture heads that are not full cut-off. However, the cut sheet was provided for the pole only, and not for the pole top (fixture), included on the same page. The selected fixture (YG1) is a full-cutoff fixture. That is likely the source of any confusion for Type YG7.]


Type YS5
Fully concealed vertical cove at building entries
Type YS1/YS1A
Fully concealed downlight above signage boards
Type YS3
Moonlights with glare shields to illuminate plaza
Type YS9
Toe Kick Lights Along Bridges
Type YS7
Catenary String Lights with Frosted Globe Diffusers
Type YW7
Cylinder downlights to highlight vertical structure
Type YS10
Linear LED striplights to highlight existing structure
Downlights for seating illumination
Type YG11
Pedestrian Scale Pole
Type YG3A
Uplights at water tanks
Type YG3
Uplights at Tree Grove
Type YG1
Poles along vehicular circulation
Type YG6
Non-illuminated bollards
Type YG8/YG10
Adjustable Downlights to illuminate seating area and pathway
Type YG13
Waterfront Pole to illuminate circulation



Linear LED strip within concealed vertical indirect cove for building entry wayfinding

Facade mounted linear LED downlights to aid in sidewalk illumination



Linear LED strip within concealed vertical indirect cove for building entry wayfinding

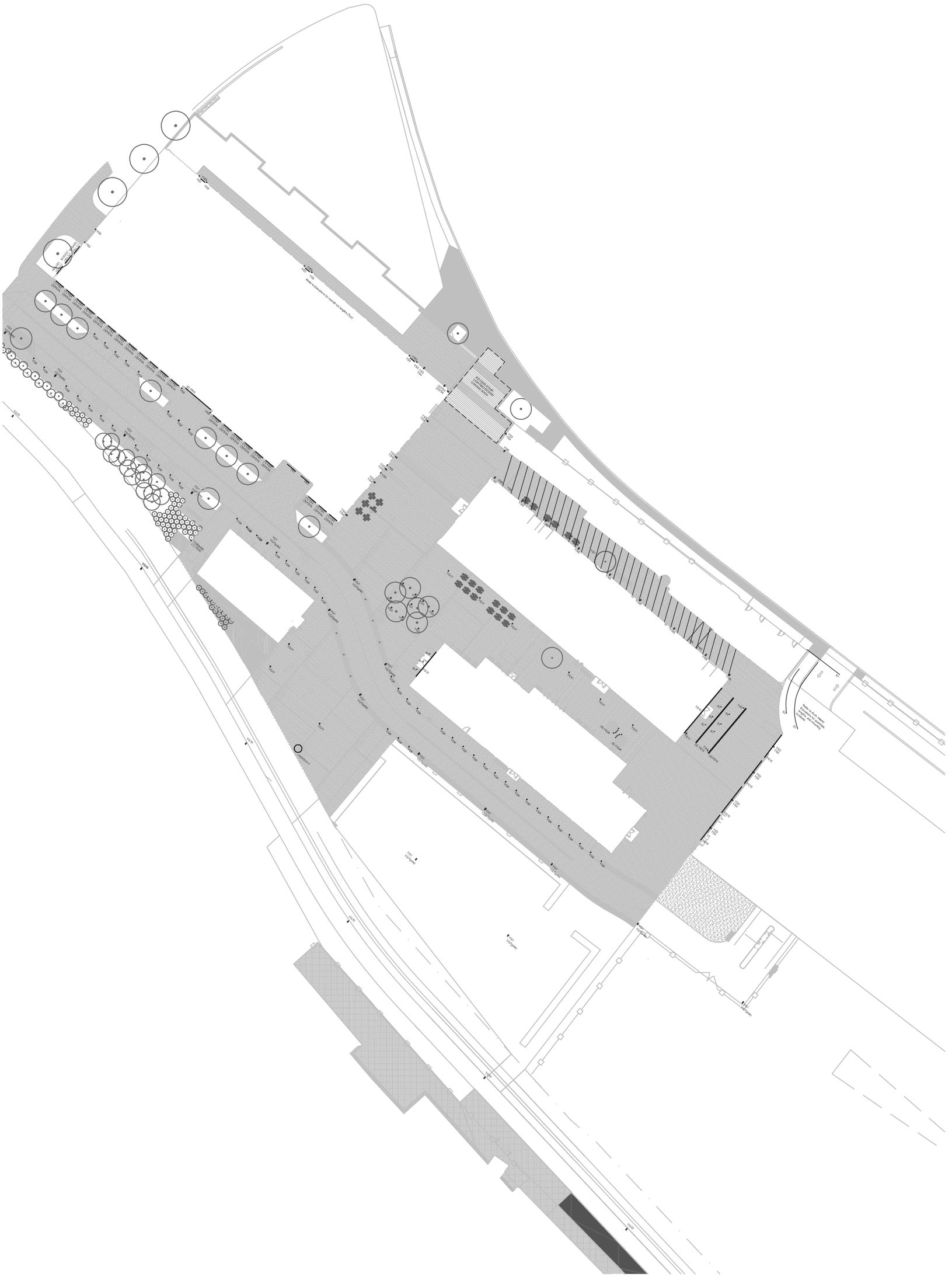
Mullion mounted linear LED downlight at entry for egress light level requirements

Facade mounted linear LED downlights to aid in sidewalk illumination



Linear LED strip within concealed vertical indirect cove for building entry wayfinding

Facade mounted linear LED downlights to aid in sidewalk illumination



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Design Development Progress

Portland Foreside Project

Date issued: 1/7/2020
Drawn by: MC/LW
Checked by: LW

Lam Project 18145
Scale: 1/64" = 1' - 0"

Lam SK008.1

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LIGHTING FIXTURE SCHEDULE

For Coordination

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Date Issued: 1/6/2019

Posting Date: 1/6/2019

Lam Project # 18145

Written by: MC/LW

Checked by: LW

Fixture Type		Description	Fixture (Manufacturers and Models)	Light Source	Fixt. Load (W) (Typical)	Controls	Location / Use	Notes
G	---	Ground surface or recessed mounting	Suffixes, like -4', -6', -8', etc. are typically used to denote a variant of a fixture type. Please note that the nomenclature is not absolute. Refer to the individual specifications for each fixture type.					Mounting heights, special notes, references to other documents, instructions to the Contractor, etc. are typically listed in the Notes column.
L	---	Linear fixture of any type						
M	---	Media or Mesh						
DP	---	Decorative Pendant						
P	---	Pendant (usually a discreet unit)						
R	---	Recessed						
S	---	Surface mounted (typically to ceiling)						
T	---	Track or track mounted						
W	---	Wall mounted						
Y		Exterior + Mount, (i.e. YG would be exterior ground mount)						
R1	Created 10/8/2019	Ceiling recessed LED downlight with 50 degree beam, frosted lens, trim flange, and integral driver	USAI Lighting BeveLED2.2 Basic Downlight	Integral LED 3000K 1000 lm delivered 50,000 hrs 80+ CRI	20 W	0-10V to 10% Integral Dimmable Driver	Canopy of Building 6 entry	Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs. EE to confirm dimming compatibility with specified lighting control system.
S1	Created 11/1/2019	Ceiling surface mounted linear LED downlight within Architectural wallslot detail	Lumenwerx Via 2 Symmetric	Integral LED 3000K 500 lm/LF delivered 50,000 hrs 80+ CRI	8 W/LF	0-10V to 5% Integral Dimmable Driver	Block 4 Interior Wall Slots	Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs. EE to confirm dimming compatibility with specified lighting control system.
S2	Created 11/1/2019	Surface mounted curvlinear LED grazer with extruded aluminum housing, frosted lens, and remote driver mounted along underside of stair	LEDLinear	Integral LED 3000K 500 lm/LF delivered 50,000 hrs 80+ CRI	3 W/LF	0-10V to 5% Integral Dimmable Driver	Block 4 Interior Stair	Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs. EE to confirm dimming compatibility with specified lighting control system.
YG1	Updated 7/9/2019	Exterior rated pole mounted Type II beam distribution downlight	Bega Head: 77930-3000K-(Finish)	Integral LED 3000K 3385 lm delivered 50,000 hrs 80+ CRI	24 W	0-10V to 10% Integral Dimmable Driver	Vehicular Pathways	To be used with Type YG7 pole. Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs. EE to confirm dimming compatibility with specified lighting control system.

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Fixture Type		Description	Fixture (Manufacturers and Models)	Light Source	Fixt. Load (W) (Typical)	Controls	Location / Use	Notes
YG2	Updated 7/9/2019	Exterior rated 41" height illuminated bollard with 360 degree light distribution and integral driver	Forms+Surfaces Helio Bollard 41" height Helio Bollard-3000K-MOD Painted "Galvanized Steel" finish Erco Castor Alternate 33943.023-3000K-(Finish)	Integral LED 3000K 700 lm delivered 50,000 hrs 80+ CRI	30 W	0-10V to 10% Integral Dimmable Driver	Building 1A South Entrance	Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs. EE to confirm dimming compatibility with specified lighting control system.
YG3	Updated 11/1/2019	Wet listed in-grade adjustable uplight with integral driver and flush trim flange	Erco Tesis wide beam distribution 35069.023-(3000K)-(Finish)	Integral LED 3000K 824 lm delivered 50,000 hrs 80+ CRI	14 W	0-10V to 10% Integral Dimmable Driver	Block 2 Tree Grove	Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs. EE to confirm dimming compatibility with specified lighting control system.
YG3A	Created 11/1/2019	Wet listed in-grade adjustable uplight with integral driver and flush trim flange	Erco Tesis spot distribution 35077.023-(3000K)-(Finish)	Integral LED 3000K 600 lm delivered 50,000 hrs 80+ CRI	8 W	0-10V to 10% Integral Dimmable Driver	Block 2 Boiler&Water Tanks	Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs. EE to confirm dimming compatibility with specified lighting control system.
YG4	Updated 6/18/2019	*Not Used (Inground Uplight)*						
YG5	Updated 6/18/2019	*Not Used (Inground Wallwasher)*						
YG6	Updated 7/9/2019	Exterior and security rated non-illuminated bollard	Forms+Surfaces Helio Bollard 41" height Helio Bollard-MOD Security-MOD Painted "Galvanized Steel" finish TBD	N/A	N/A	N/A	Pedestrian Pathways	Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs. EE to confirm dimming compatibility with specified lighting control system.
YG7	Updated 12/4/2019	Ground mounted 18'-4" height wood pole	Structura BOL round straight solid wood pole BOL-STRAIGHT POLE-18'-4"-5.5"-5.5"-(Wood Finish TBD)-(Tenon mounting)	N/A	N/A	N/A	Vehicular and Waterfront Poles	To be used with Type YG1 pole mounted head. Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs.
YG8	Updated 12/4/2019	Exterior rated ground mounted 18'-4" height pole with mounting plate	Valmont Round Non-Tapered Aluminum Pole-18'-4" Height-(Finish)	N/A	N/A	N/A	West of Buliding 12	To be used with Type YG9 & YG10 pole mounted heads Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs.

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LIGHTING FIXTURE SCHEDULE

For Coordination

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Written by: MC/LW

Checked by: LW

Fixture Type		Description	Fixture (Manufacturers and Models)	Light Source	Fixt. Load (W) (Typical)	Controls	Location / Use	Notes
YG10	Created 7/25/2019	Pole mounted adjustable downlight with wide flood distribution, integral driver, adjustable & lockable yoke, corrosion resistant coating, tenon mounting, and snoot & cross baffle assembly to minimize glare and direct view into fixture	Lumenpulse Lumenbeam Medium LBM-277-30K-WFL-(Finish)-CRC-DIM-UL-(Cable Length) Tenon Mounting: PM4-1 Wide Snoot: LBMSNW-(Finish)-BK-MOD CROSS BAFFLE	Integral LED 3000K 1,370 lm 120,000 hrs 80+ CRI	28 W	1-10V to 10% Integral Dimmable driver	Small courtyard and pedestrian crossing over rail tracks	Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs. EE to confirm dimming compatibility with specified lighting control system.
YG11	Created 11/4/2019	14' height pole with 31-1/2" diameter white reflective disk with indirect light, integral driver	Bega 77 208-3000K-(Finish)	Integral LED 3000K 1,742 lm 120,000 hrs 80+ CRI	38 W	1-10V to 10% Integral Dimmable driver	Circulation between Buildings 3 & 6	Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs. EE to confirm dimming compatibility with specified lighting control system.
YG12	Created 10/8/2019	Surface mounted 4' linear LED uplight with snap-on radial louvers, integral driver, and Corrosion-resistant coating for hostile environments	Lumenpulse Lumen facade - exterior Fixture: LOG ASHRAE-277 (Voltage TBC)-48-3000K-10x10-SAM-(Finish)-DIM-ETE-CRC Radial Louver: LOGRD-48-BK (Finish TBC)-CRC	Integral LED 3000K TBD lm 120,000 hrs 80+ CRI	TBD	1-10V to 10% Integral Dimmable driver	Fore Street Stair stone uplight	Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs. EE to confirm dimming compatibility with specified lighting control system.
X-10B	Created 1/6/2020	Ground mounted 18'-4" height pole with LED module as specified by City of Portland Ordinance	King Luminaire/StressCrete: The Talisman - Concrete Model: KTH20-(Finish)	TBD	TBD	TBD	Eastern Promenade Trail	Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs.
YP1	Updated 1/6/2020	Suspended special element for visual interest	To be further developed with Design Team	TBD	TBD	TBD	Back Alley in front of Beer Hall	Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs.
YR1	Updated 7/9/2019	Exterior rated soffit recessed 8' linear LED downlight with integral drivers and microcell louvers to minimize glare	Lumenpulse Squero SQUR-MRO55-B-LED-80-500-30-UNV-4FT-D1-1-(Mounting)-(Finish)	Integral LED 3000K 500lm/LF delivered 50,000 hrs 80+ CRI	6 W/LF	0-10V to 10% Integral Dimmable driver	Block 1A Building and Parking Entries	Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs. EE to confirm dimming compatibility with specified lighting control system.
YS1-4'		*Not Used* *(Canopy Uplight)*						
YS1-1'		*Not Used* *(Canopy Uplight)*						
YS2		*Not Used* *(Roof Screen wallwasher)*						

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Fixture Type		Description	Fixture (Manufacturers and Models)	Light Source	Fixt. Load (W) (Typical)	Controls	Location / Use	Notes
YS3	Updated 7/9/2019	Pole mounted adjustable downlight, integral driver, adjustable & lockable yoke, corrosion resistant coating, tenon mounting, and snoot & cross baffle assembly to minimize glare and direct view into fixture	Lumenpulse Lumenbeam Large LBL-277-30K-NF-LSLV-(Finish)-DIM-CRC-(Cable Length)-YK TN4 Tenon Adapter Wide Snoot: LBLSNW-(Finish)-BK-MOD CROSS BAFFLE AND 9" DEEP SNOOT	Integral LED 3000K 1500 lm 50,000 hrs 80+ CRI	100 W	0-10V to 10% Integral Dimmable driver	Moonlighting at plaza East of Building 1A	To be coordinate with Type YS4 pole Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs. EE to confirm dimming compatibility with specified lighting control system.
YS4	Created 7/9/2019	Exterior rated roof mounted 10' height pole with mounting plate	Valmont Round Non-Tapered Aluminum Pole-10' Height-(Finish)	N/A	N/A	N/A	Moonlighting for plaza East of Building 1A	To be coordinate with Type YS3 adjustable downlight Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs.
YS5	Created 7/9/2019	Exterior rated linear LED striplight with extruded aluminum channel, frosted lens, and remote driver	Acolyte Ribbonlyte Fixture: RB-90-SWS265-2.230-(Finish) Extrusion: AS1 Surface with horizontal mounting clips Frosted Lens Remote Dimmable Driver: 0-10V Dimmable 96W Driver	Integral LED 3000K 100 lm/LF 50,000 hrs 80+ CRI	2.2 W/LF	0-10V to 10% Integral Dimmable driver	Block 1 Vertical Indirect Coves along North Entries and Volumes	Mounting detail to be coordinated with Architects Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs. Contractor to locate remote dimmable drivers at dry, accessible, and well ventilated locations. Contractor to provide all mounting clips and accessories for a complete operational system.
YS6	Created 7/25/2019	Illuminated Handrail with regressed LED modules, matte frosted lens, symmetric beam distribution, and remote driver	Wagner Lumenlinear or Lumenpod Lumenlinear TBD-LULS-30K-20-120-MS-(Length)-(Finish)	Integral LED 3000K 150 lm/LF 50,000 hrs 80+ CRI	1.85 W/LF	0-10V to 10% Remote Dimmable driver	Stair	Mounting detail to be coordinated with Architects Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs. Contractor to locate remote dimmable drivers at dry, accessible, and well ventilated locations. Contractor to provide all mounting accessories for a complete operational system.

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Fixture Type		Description	Fixture (Manufacturers and Models)	Light Source	Fixt. Load (W) (Typical)	Controls	Location / Use	Notes
YS7	Created 10/11/2019	Small scale catenary string lights with frosted globe diffusers and remote driver	Tegan Exton System Configuration TBC with Landscape Architects	Integral LED 3000K TBD lm/LF 50,000 hrs 80+ CRI	TBD	0-10V to 10% Remote Dimmable driver	Back Alley	Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs. EE to confirm dimming compatibility with specified lighting control system.
YS8		*Not Used*						
YS9	Created 10/11/2019	Surface mounted linear LED striplight with remote dimmable driver	Linea Lighting	Integral LED 3000K TBD lm/LF 50,000 hrs 80+ CRI	TBD	0-10V to 10% Remote Dimmable driver	Open Bridges	Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs. EE to confirm dimming compatibility with specified lighting control system.
YS10	Created 10/8/2019	surface mounted linear uplight	Ledlinear Xoolum	Integral LED 3000K TBD lm/LF 50,000 hrs 80+ CRI	TBD	0-10V to 10% Remote Dimmable driver	Building 6 canopy sign lighting/building 4 uplight from trusses	Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs. EE to confirm dimming compatibility with specified lighting control system.
YS11	Created 10/11/2019	building mounted exterior rated adjustable downlights with linear spread lens	Lumenpulse lumenbeam small	Integral LED 3000K TBD lm 50,000 hrs 80+ CRI	TBD	0-10V to 10% Remote Dimmable driver	Building 4 exterior canopy-on arm lighting across space to light beam	Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs. EE to confirm dimming compatibility with specified lighting control system.
YS12	Created 10/11/2019	Structure mounted cylinder downlight with frosted lens	V2 Core 200 SX Surface	Integral LED 3000K TBD lm 50,000 hrs 80+ CRI	TBD	0-10V to 10% Remote Dimmable driver	building 12 south facade restaurant area	Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs. EE to confirm dimming compatibility with specified lighting control system.
YS13	Created 10/11/2019	Exterior rated surface mounted LED downlight with 50 degree beam	Lucifer Cylinder CY3	Integral LED 3000K TBD lm 50,000 hrs 80+ CRI	TBD	0-10V to 10% Remote Dimmable driver	Canopy of Building 4 entry	Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs. EE to confirm dimming compatibility with specified lighting control system.
YW1		*Not Used* *(Column Downlight)*						

Lam Partners
ARCHITECTURAL LIGHTING DESIGN
84 SHERMAN ST, CAMBRIDGE, MA 02140
617.354.4502 LAMPARTNERS.COM

LIGHTING FIXTURE SCHEDULE
For Coordination
Portland Foreside Project

Not for bidding or construction unless fully incorporated into contract documents by Architect and/or Engineer.

Date Issued: 1/6/2019
Posting Date: 1/6/2019

Lam Project # 18145
Written by: MC/LW
Checked by: LW

Fixture Type		Description	Fixture (Manufacturers and Models)	Light Source	Fixt. Load (W) (Typical)	Controls	Location / Use	Notes
YW2		*Not Used* *(Wall mounted direct/indirect)*						
YW3	Updated 7/9/2019	Exterior rated mullion mounted 4' linear LED downlight with forward throw optic and dual circuit switching	Visa Passage OW2480-L30K-L-3000K-MVOLT0-FT-(Finish)-DS	Integral LED 3000K 650 lm delivered 50,000 hrs 80+ CRI	14 W	0-10V to 10% Integral Dimmable driver	Block 1A entries	Final mounting elevations to be confirmed with Architects. Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs. EE to confirm dimming compatibility with specified lighting control system.
YW4		*Not Used* *(Building 12 Wall Mounted Signage Light)*						
YW5		*Not Used* *(Building 1 Uplight)*						
YW6	Created 7/25/2019	Facade mounted adjustable downlight, narrow flood distribution with linear spread lens, integral driver, adjustable & lockable yoke, corrosion resistant coating, and snoot & cross baffle assembly to minimize glare and direct view into fixture	Lumenpulse Lumenbeam Medium LBL-277-30K-NF-LSLH-(Finish)-DIM-CRC-UL-(Cable Length) Wide Snoot: LBLSNW-(Finish)-BK-MOD CROSS BAFFLE	Integral LED 3000K 1500 lm 50,000 hrs 80+ CRI	28 W	0-10V to 10% Integral Dimmable driver	Moonlighting at plaza East of Building 1A	Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs. EE to confirm dimming compatibility with specified lighting control system.
YW7		*Not Used*						
YW8	Created 10/8/2019	Facade mounted adjustable downlight, medium flood distribution with linear spread lens, integral driver, adjustable & lockable yoke, corrosion resistant coating, and snoot & cross baffle assembly to minimize glare and direct view into fixture	Lumenpulse Lumenbeam Medium LBL-277-30K-F-LSLH-(Finish)-DIM-CRC-UL-(Cable Length) Wide Snoot: LBLSNW-(Finish)-BK-MOD CROSS BAFFLE	Integral LED 3000K TBD lm 50,000 hrs 80+ CRI	28 W	0-10V to 10% Remote Dimmable driver	Back Alley	Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs. EE to confirm dimming compatibility with specified lighting control system.

General Notes:

1. Fixture input power is the actual fixture input wattage, not the light source wattage. The Engineer and Contractor are responsible for confirming these values as they are provided as a convenience only. Any "Alternates", "Equals" or "Equivalents" may have different loads. A minimum of 10% spare electrical lighting capacity is recommended to account for these variances.
2. The primary manufacturer and model number listed for each fixture type shall serve as the basis of design. Any "Alternates", "Equals" or "Equivalents" subsequently listed under each primary listing may be able to provide a suitable product that closely matches the primary listing. Unless provided with a specific catalog number, those "Alternates", "Equals" or "Equivalents" may be required to modify their standard products to match the primary listing as best possible. Suitability of "Alternates", "Equals" or "Equivalents" shall be determined solely by the Lighting Designer for any fixture types listed on this Lighting Fixture Schedule, unless otherwise noted.

This information is provided for the use of the Architect and their consultants in the production of their detailed drawings and specifications. Assurances of code compliance, conformity with environmental conditions and other building systems, voltage selection, design of wiring, supports, switching, emergency and exit lighting, engineering calculations or details, and preparation of cost and power consumption estimates are the responsibility of others. Information provided by Lam Partners Inc may require coordination and development by others to a level of detail suitable for incorporation into contract documents. Lam Partners Inc's documents are not intended or represented to be suitable for reuse on extensions of the Project or on any other project, nor are they to be relied upon by anyone other than the Architect and the Architect's consultants for the Project. Lam Partners Inc is not responsible for construction means, methods, sequences, techniques, safety programs, or procedures, or the failure of any contractor to comply with the requirements of the contract documents. There are no warranties of merchantability or fitness for a particular purpose or any other warranties or guarantees whatsoever, express or implied, with respect to any materials, documents, or designs provided by Lam Partners Inc.

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January 20, 2020

Christian Roadman, Planner
City of Portland Planning Division
389 Congress Street
Portland, ME 04101

Re: Portland Foreside Phase 1 Level III Site Plan Submittal – Portland Foreside Development Co.
Response to Wright Pierce Stormwater Comments

Dear Christian:

Thank you for coordinating the review of the proposed development of Phase 1 of the Portland Foreside Project located at 58 Fore Street in Portland, Maine. We received the January 1, 2020 memo from the Wright Pierce 3rd party peer reviewer and provide the following response and additional information.

As site design has advanced since our previous submission on December 20, 2019, several changes have been made to the site that impact the stormwater management design, including elimination of landscaping due to the stair redesign, addition of interim perimeter landscaping around the Block 3 site, and the addition of a green roof/patio area over the residences adjacent to the Block 4 garage.

The Block 4 green roof/patio area is not being designed as a water quality treatment element, and the design notes that the space may be utilized as patio space available for future residences. We have conservatively assumed the surface to be roof area for stormwater quantity/quality calculations (impervious, CN=98). We have adjusted this area to be pollutant ranking 2 (other roofs/landscaped area) for the redevelopment impact analysis, which we believe to be consistent with the Phase 1 Development. With all future phases, we plan to re-evaluate the redevelopment impact analysis, and anticipate improvements as parking areas are covered.

The following stormwater management documents are enclosed with this letter. They include any changes made to account for landscaping modifications and the comments from Wright-Pierce:

- Water Quality Calculations (revised)
- HydroCAD Model (revised)
- Redevelopment Impact Analysis Figures (new in response to comments)

In addition, updated plans will be provided as part of a larger response to comments package on January 21, 2020.

To support the Level III Site Plan process, we provide the following responses to the comments we received from Wright-Pierce dated January 2, 2020.

Basic Standard

- *The applicant has updated the erosion control notes and details Sheet C-201 and removed omissions. No further action necessary.*
    - Noted.

General Standard

- *The applicant has provided additional discussion on which locations were considered which pollutant ranking. This information provides a better understanding of the existing and proposed pollutant rankings. However, is still not clear where some of the boundaries for pollutant rankings are. Given that the project is on the cusp between requiring 50% and 60% of treatment for*

disturbed areas, a full understanding on the boundary between differing pollutant rankings is critical for the reviewer to make a determination on the proposed treatment.

- *Plans indicating which areas of the site correlate with which pollutant ranking, for both existing and proposed condition, are requested to assist in this determination.*
  - The attached figures show the pollutant ranking breakdown for existing and proposed conditions for the site.
- *On these plans, please confirm if existing buildings to remain are excluded from the redevelopment land use tables.*
  - Existing buildings to remain are included in the analysis and have consistent impact ratings in the existing and proposed calculations. The interiors of these existing buildings will be renovated to support new uses, including restaurant, office, residential, event space and a market hall.
- *An area of the site at the northern and eastern perimeter is wooded and does not appear developed, and is included in the redevelopment portion of the site.*
  - *This area appears to have been identified as non-grass landscaping in the land use tables, but may be more typical of a forested condition than a landscaped condition.*
  - While the northeastern corner in the existing condition does include vegetation, we selected Pollutant Ranking 1 versus 0 due to the steepness of the slope, which will have an impact on surface flows. We felt the non-grass landscaping land use was a more appropriate representation of the pollutant ranking.
  - *Per Chapter 500 definitions, A minor amount of undeveloped land may be included within the perimeter of the existing developed area. The percentage of undeveloped land included in the redevelopment calculation should be included in the stormwater management report.*
  - The undeveloped land included in the redevelopment calculations is located at the northeastern corner of the site. This includes approximately 0.87 acres, or 11% of the total redevelopment area. Of this undeveloped land area, approximately 0.82 acres will be replaced by a portion of Building 4A. All runoff from Building 4A will be collected and conveyed to R-Tank System 2, where it will be treated prior to discharge to the Fore River. The remaining 0.05 acres of previously undeveloped land will become a riprap swale and level spreader. In future project phases, this area will also be treated.

- *The applicant has provided information identifying the treated area subcatchments, and a discussion on the ability limitations on treating areas near the waterfront.*
  - *Calculations identifying which percentage of redeveloped surface areas Pollutant Ranking 5, 4, and 3 are receiving treatment are requested to confirm that the intent of the standard is being met to the extent practicable.*
    - Approximately 59% of Pollutant Ranking 5 area, 78% of Pollutant Ranking 4 area and 54% of Pollutant Ranking 3 area will receive treatment. Please note the untreated portion of Pollutant Ranking 4 is a temporary parking lot located downgradient of the treatment area, and will eventually be replaced by building roof, which has a lower pollutant ranking.
- *The applicant has confirmed that an SLDP application has been submitted to the City. No further action is necessary.*

- Noted.

- *The applicant has provided confirmation from MaineDEP indicating that channel protection volume storage is not required for this project due the size of the receiving body. No further action is necessary.*
  - Noted.
- *The applicant has shown calculations indicating minimal differences in critical runoff rates between Hydrologic Group A and D soils. No further information on existing soils is necessary to evaluate surface runoff rates.*
  - Noted.

Flooding Standard

- *Applicant has indicated that a waiver for the Flooding Standard has been previously granted for the site, and that all discharges from the site are direct to the ocean. No further action necessary.*
  - Noted.

General Engineering

- *The applicant has indicated that work within the Fore Street corridor, including curb elevation and roadway drainage, will be evaluated as part of a sewer separation project with the City, and is not part of this project. No further action necessary.*
  - Noted.
- *Additional electrical utility information was provided on the updated Sheet C-204. No further action necessary.*
  - Noted.
- *The applicant has provided information that the existing storm drain (Fore Connector) has been installed to anticipate flows from the development's anticipated site flows, and that there are ongoing discussions regarding the Fore Connector design point. No further action on this topic by the applicant is required; final acceptance of the connection would come from the Department of Public Works.*
  - Noted.

Utility Conflicts

- *General: The applicant has indicated that final construction documents will indicate additional detailing on pipe separation requirements. No further action required for the site review.*
  - Noted.

HydroCAD Calculations

- *R-Tank System: Numbering of systems has been completed in the updated plan set. Grid alignment for R-Tank cells, as well as detailing for storage elevation and pipe elevations, has been provided by the applicant. This information is in agreement with input information for the HyrdoCAD model. No further action necessary.*
  - Noted.

Drainage Structures Table and Pipe Schedule

- *The applicant has indicated that all storm drains on the site will remain private connections and as such are not subject to the City's requirements for drainage. Applicant has further noted that the pipes have been sized to meet industry TR-16 flow rate standards. No further action necessary.*

- Noted.

- *Applicant has indicated that construction documents will have notes coordinating invert elevations between the building drawings and the grading plan. No further action necessary.*
  - Noted.
- *The structures table has been updated without duplicate basin names. No further action necessary.*
  - Noted.

Grading Limitations

- *The applicant has indicated that others will be developing the Riprap Drainage Swale and associated level spreader. When designed, this feature should be sized to meet the Distribution of Concentrated Flows requirements under MaineDEP Chapter 500.*

If you have any questions or require additional information, please do not hesitate to contact me at (207) 558-3763 or by email at lswett@woodardcurran.com.

Sincerely,

WOODARD & CURRAN INC.

Lauren Swett

Lauren Swett, PE
Technical Manager

Enclosures: Revised Water Quality Calculations
Revised HydroCAD Model
Redevelopment Impact Analysis Figures – Existing and Proposed

WOODARD &CURRAN COMMITMENT & INTEGRITY DRIVE RESULTS
41 HUTCHINS DRIVE
PORTLAND, MAINE 04102

CLIENT: PFDC
PROJECT: Phase 1 Development
CALCS BY: AL/AEF
DATE: 1/14/2020
PROJECT NO.: 227007.16

Redevelopment Treatment Calculations - Per Section 4.C.2.d of the MaineDEP Chapter 500 Rules

Area of Redevelopment (acres) = 7.88

a. Existing Pollutant Impact

Land Use	Pollutant Ranking	Land Area (Ac.)	Impact
High Use Roads/Parking Lot	5	0.13	0.64
Other Roads/Medium Use Parking Lot	4	2.85	11.42
Other Parking Lots/Flat Asphalt Roofs/Industrial Roofs	3	1.66	4.97
Other Roofs/Landscaped Area/Paved Walkway	2	2.37	4.73
Non-grass Landscaping/Stormwater	1	0.87	0.87
Forest/Meadow	0	0.00	0.00
			22.63

b. Proposed Pollutant Impact

Land Use	Pollutant Ranking	Land Area (Ac.)	Impact
High Use Roads/Parking Lot	5	0.77	3.85
Other Roads/Medium Use Parking Lot	4	1.93	7.74
Other Parking Lots/Flat Asphalt Roofs/Industrial Roofs	3	0.85	2.56
Other Roofs/Landscaped Area/Paved Walkway	2	4.10	8.21
Non-grass Landscaping/Stormwater	1	0.21	0.21
Forest/Meadow	0	0.00	0.00
			22.57

c. Existing Impact/Total Redevelopment Acres

2.874

d. Proposed Impact/Total Redevelopment Acres

2.866

e. Item D Minus Item C

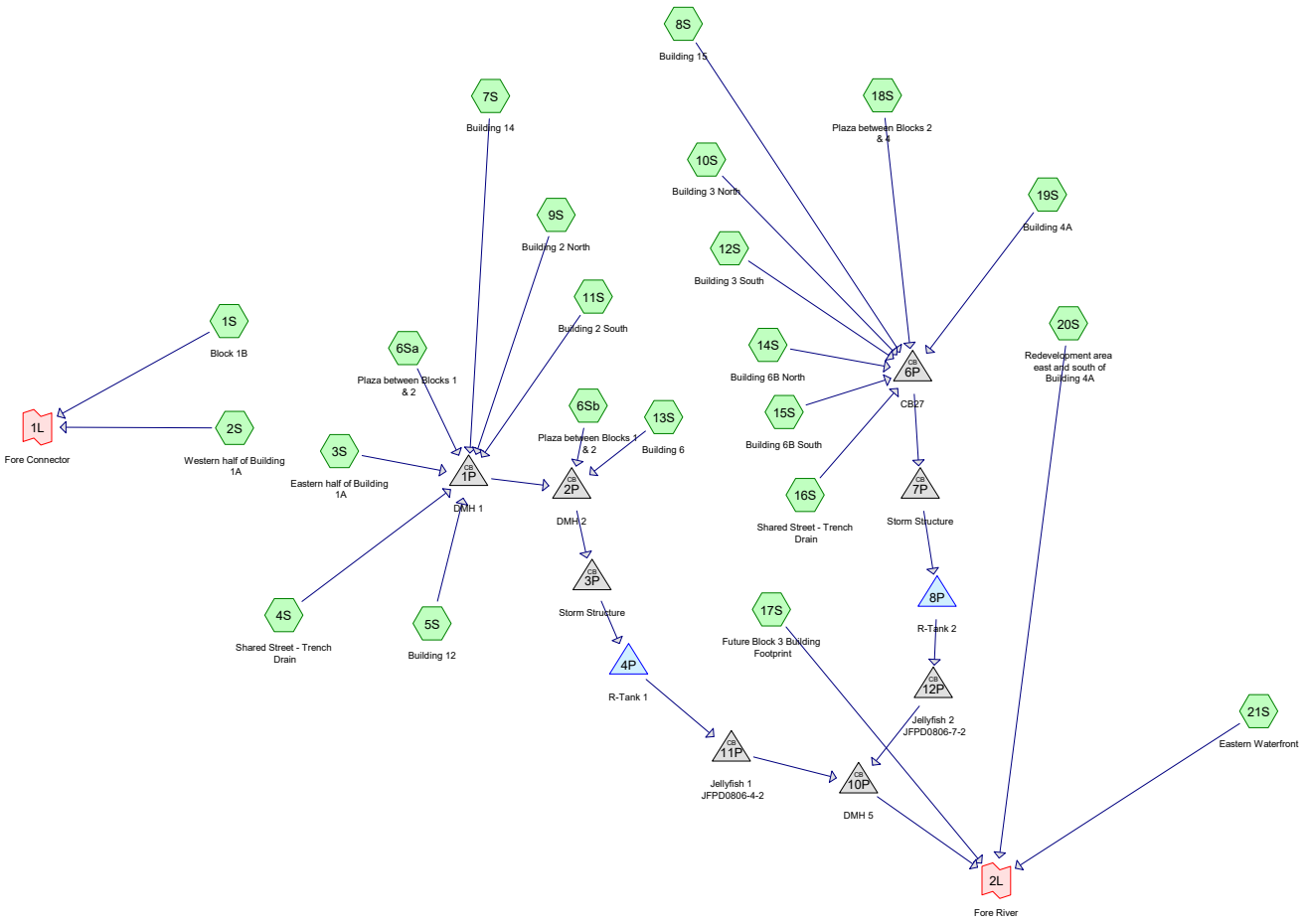
-0.01

Ranked Impact Change Due to Redevelopment	Percentage of Developed Area that Must be Treated
0.0 or less	0% (Stormwater projects)
	50% (Site projects)
≥ 0.0 to ≤ 1.0	60%
> 1.0 to ≤ 2.0	70%
> 2.0 to ≤ 3.0	80%
> 3.0	Same treatment level as for new development

Stormwater Treatment Summary	*Treatment Percentage*	*Treated Area (SF)*
Required	50%	171,525
Provided	57%	195,670

WQV Summary	*System 1*	*System 2*
Proposed Treated Area (SF)	84,114	111,557
Future Treated Areas (SF)	94,090	149,106
WQV Required (CF)	7,841	12,425
WQ Design Storm Event (in.)	1.00	1.00
WQV Provided (CF)	2,859	6,035
*WQ Storm Event Provided (in.)**	0.36	0.49

**Note: Based on recent discussions with Jeff Dennis, MaineDEP Watershed Management Unit Biologist, it is our understanding that the project will not be required to provide storage for the full Water Quality Volume (WQV) because the project ultimately discharges to the Fore River. Additional area will be directed to the treatment system as part of future phases of development. The WQ storm event that the proposed WQV will be able to accommodate has been calculated based upon the total future treated area.*



Subcat Reach Pond Link

Routing Diagram for 2020.01.14 Phase 1 Working Model
Prepared by Woodard Curran, Printed 1/20/2020
HydroCAD® 10.00-21 s/n 01204 © 2018 HydroCAD Software Solutions LLC

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Block 1B Runoff Area=27,045 sf 29.55% Impervious Runoff Depth=0.00"
Tc=6.0 min CN=56 Runoff=0.00 cfs 0.000 af

Subcatchment 2S: Western half of Runoff Area=17,090 sf 100.00% Impervious Runoff Depth>0.79"
Tc=6.0 min CN=98 Runoff=0.34 cfs 0.026 af

Subcatchment 3S: Eastern half of Runoff Area=17,090 sf 100.00% Impervious Runoff Depth>0.79"
Tc=6.0 min CN=98 Runoff=0.34 cfs 0.026 af

Subcatchment 4S: Shared Street - Trench Runoff Area=24,889 sf 82.21% Impervious Runoff Depth>0.25"
Tc=6.0 min CN=88 Runoff=0.15 cfs 0.012 af

Subcatchment 5S: Building 12 Runoff Area=3,244 sf 100.00% Impervious Runoff Depth>0.79"
Tc=6.0 min CN=98 Runoff=0.06 cfs 0.005 af

Subcatchment 6Sa: Plaza between Blocks Runoff Area=20,337 sf 96.07% Impervious Runoff Depth>0.63"
Tc=6.0 min CN=96 Runoff=0.34 cfs 0.024 af

Subcatchment 6Sb: Plaza between Blocks 1 Runoff Area=3,122 sf 71.75% Impervious Runoff Depth>0.10"
Tc=6.0 min CN=81 Runoff=0.00 cfs 0.001 af

Subcatchment 7S: Building 14 Runoff Area=2,572 sf 100.00% Impervious Runoff Depth>0.79"
Tc=6.0 min CN=98 Runoff=0.05 cfs 0.004 af

Subcatchment 8S: Building 15 Runoff Area=4,507 sf 100.00% Impervious Runoff Depth>0.79"
Tc=6.0 min CN=98 Runoff=0.09 cfs 0.007 af

Subcatchment 9S: Building 2 North Runoff Area=4,695 sf 100.00% Impervious Runoff Depth>0.79"
Tc=6.0 min CN=98 Runoff=0.09 cfs 0.007 af

Subcatchment 10S: Building 3 North Runoff Area=2,212 sf 100.00% Impervious Runoff Depth>0.79"
Tc=6.0 min CN=98 Runoff=0.04 cfs 0.003 af

Subcatchment 11S: Building 2 South Runoff Area=4,855 sf 100.00% Impervious Runoff Depth>0.79"
Tc=6.0 min CN=98 Runoff=0.10 cfs 0.007 af

Subcatchment 12S: Building 3 South Runoff Area=2,326 sf 100.00% Impervious Runoff Depth>0.79"
Tc=6.0 min CN=98 Runoff=0.05 cfs 0.004 af

Subcatchment 13S: Building 6 Runoff Area=3,304 sf 100.00% Impervious Runoff Depth>0.79"
Tc=6.0 min CN=98 Runoff=0.07 cfs 0.005 af

Subcatchment 14S: Building 6B North Runoff Area=3,873 sf 100.00% Impervious Runoff Depth>0.79"
Tc=6.0 min CN=98 Runoff=0.08 cfs 0.006 af

Subcatchment 15S: Building 6B South Runoff Area=2,512 sf 100.00% Impervious Runoff Depth>0.79"
Tc=6.0 min CN=98 Runoff=0.05 cfs 0.004 af

Subcatchment 16S: Shared Street - Trench Runoff Area=8,931 sf 90.72% Impervious Runoff Depth>0.45"
Tc=6.0 min CN=93 Runoff=0.11 cfs 0.008 af

Subcatchment 17S: Future Block 3 Runoff Area=9,998 sf 100.00% Impervious Runoff Depth>0.79"
Tc=6.0 min CN=98 Runoff=0.20 cfs 0.015 af

Subcatchment 18S: Plaza between Blocks Runoff Area=21,157 sf 99.67% Impervious Runoff Depth>0.79"
Tc=6.0 min CN=98 Runoff=0.42 cfs 0.032 af

Subcatchment 19S: Building 4A Runoff Area=66,038 sf 100.00% Impervious Runoff Depth>0.79"
Tc=6.0 min CN=98 Runoff=1.32 cfs 0.100 af

Subcatchment 20S: Redevelopment area Runoff Area=7,325 sf 69.01% Impervious Runoff Depth>0.08"
Tc=6.0 min CN=80 Runoff=0.01 cfs 0.001 af

Subcatchment 21S: Eastern Waterfront Runoff Area=86,898 sf 76.12% Impervious Runoff Depth>0.15"
Tc=6.0 min CN=84 Runoff=0.24 cfs 0.025 af

Pond 1P: DMH 1 Peak Elev=10.34' Inflow=1.13 cfs 0.086 af
21.0" Round Culvert n=0.013 L=61.0' S=0.0038 '/' Outflow=1.13 cfs 0.086 af

Pond 2P: DMH 2 Peak Elev=10.06' Inflow=1.20 cfs 0.091 af
21.0" Round Culvert n=0.013 L=31.0' S=0.0048 '/' Outflow=1.20 cfs 0.091 af

Pond 3P: Storm Structure Peak Elev=8.75' Inflow=1.20 cfs 0.091 af
15.0" Round Culvert x 3.00 n=0.013 L=4.0' S=0.0000 '/' Outflow=1.20 cfs 0.091 af

Pond 4P: R-Tank 1 Peak Elev=8.13' Storage=871 cf Inflow=1.20 cfs 0.091 af
21.0" Round Culvert n=0.013 L=4.0' S=0.0000 '/' Outflow=0.83 cfs 0.085 af

Pond 6P: CB27 Peak Elev=10.28' Inflow=2.15 cfs 0.163 af
24.0" Round Culvert n=0.013 L=22.0' S=0.0064 '/' Outflow=2.15 cfs 0.163 af

Pond 7P: Storm Structure Peak Elev=8.93' Inflow=2.15 cfs 0.163 af
15.0" Round Culvert x 3.00 n=0.013 L=4.0' S=0.0000 '/' Outflow=2.15 cfs 0.163 af

Pond 8P: R-Tank 2 Peak Elev=8.45' Storage=2,023 cf Inflow=2.15 cfs 0.163 af
24.0" Round Culvert n=0.013 L=4.0' S=0.0000 '/' Outflow=1.27 cfs 0.150 af

Pond 10P: DMH 5 Peak Elev=7.66' Inflow=2.09 cfs 0.235 af
30.0" Round Culvert n=0.013 L=83.1' S=0.0100 '/' Outflow=2.09 cfs 0.235 af

Pond 11P: Jellyfish 1 JFPD0806-4-2 Peak Elev=9.03' Inflow=0.83 cfs 0.085 af
Outflow=0.83 cfs 0.085 af

Pond 12P: Jellyfish 2 JFPD0806-7-2 Peak Elev=9.20' Inflow=1.27 cfs 0.150 af
Outflow=1.27 cfs 0.150 af

Link 1L: Fore Connector Inflow=0.34 cfs 0.026 af
Primary=0.34 cfs 0.026 af

Link 2L: Fore River

Inflow=2.44 cfs 0.277 af
Primary=2.44 cfs 0.277 af

Total Runoff Area = 7.898 ac Runoff Volume = 0.321 af Average Runoff Depth = 0.49"
14.27% Pervious = 1.127 ac 85.73% Impervious = 6.771 ac

Summary for Subcatchment 1S: Block 1B

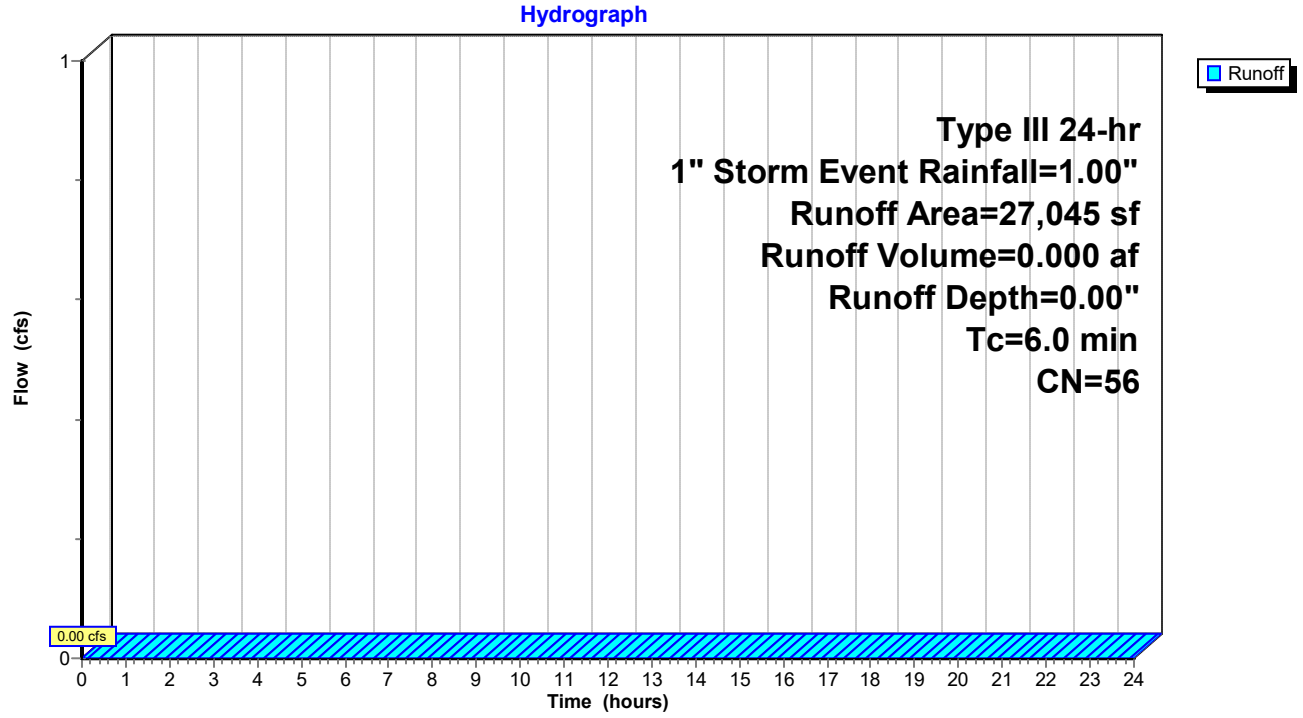
Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	7,991	98	Impervious
	19,054	39	>75% Grass cover, Good, HSG A
	27,045	56	Weighted Average
	19,054		70.45% Pervious Area
	7,991		29.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1S: Block 1B



Summary for Subcatchment 2S: Western half of Building 1A

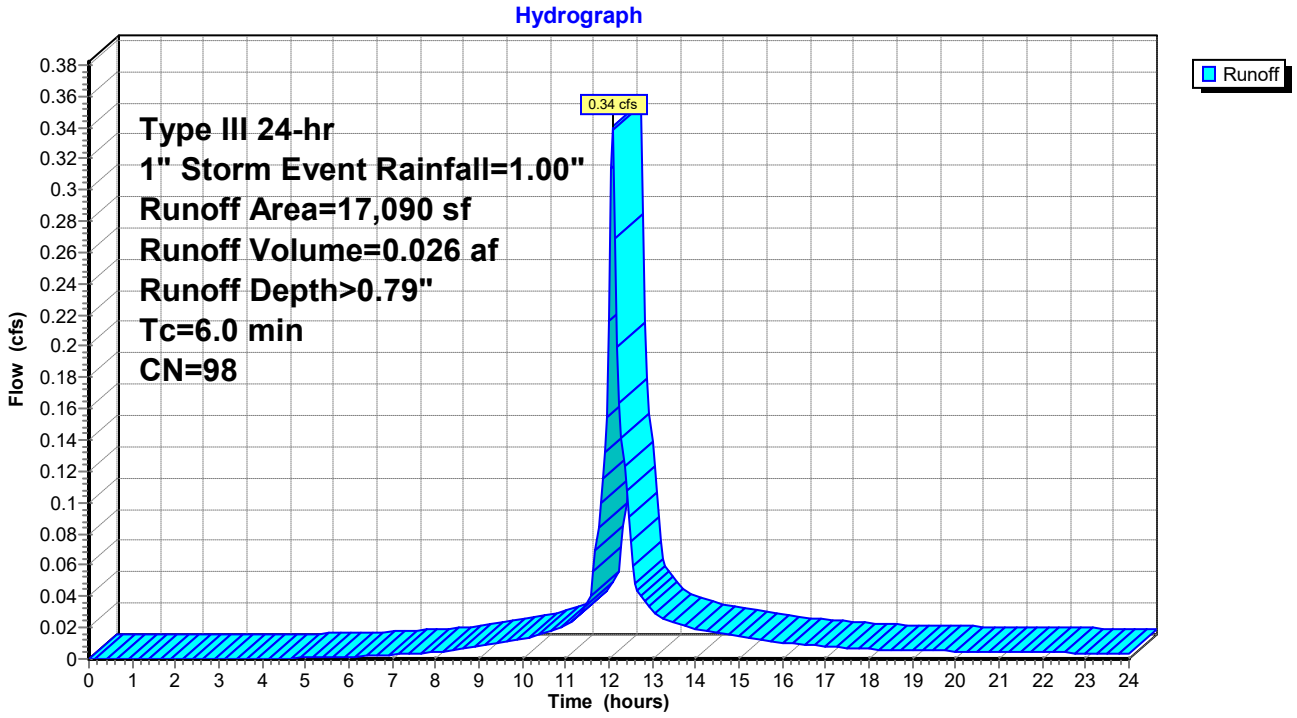
Runoff = 0.34 cfs @ 12.09 hrs, Volume= 0.026 af, Depth> 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	17,090	98	Roof
	17,090		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 2S: Western half of Building 1A



Summary for Subcatchment 3S: Eastern half of Building 1A

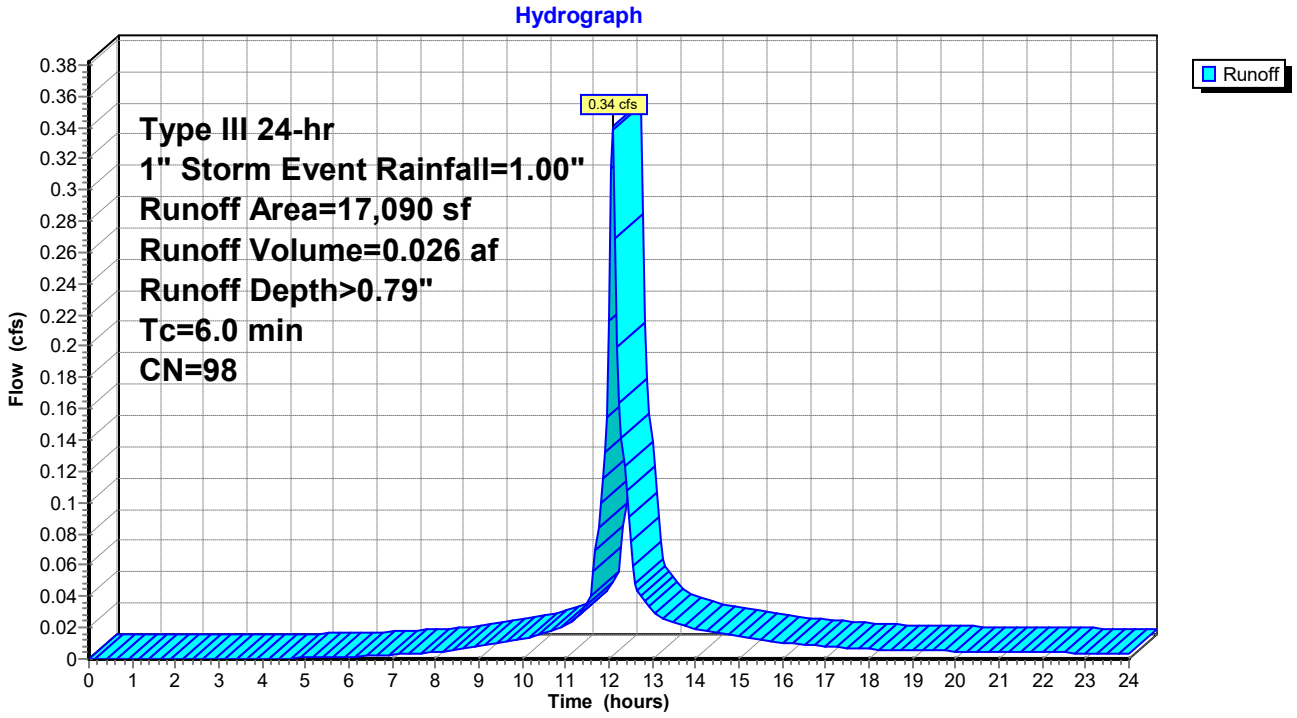
Runoff = 0.34 cfs @ 12.09 hrs, Volume= 0.026 af, Depth> 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	17,090	98	Roof
	17,090		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 3S: Eastern half of Building 1A



Summary for Subcatchment 4S: Shared Street - Trench Drain

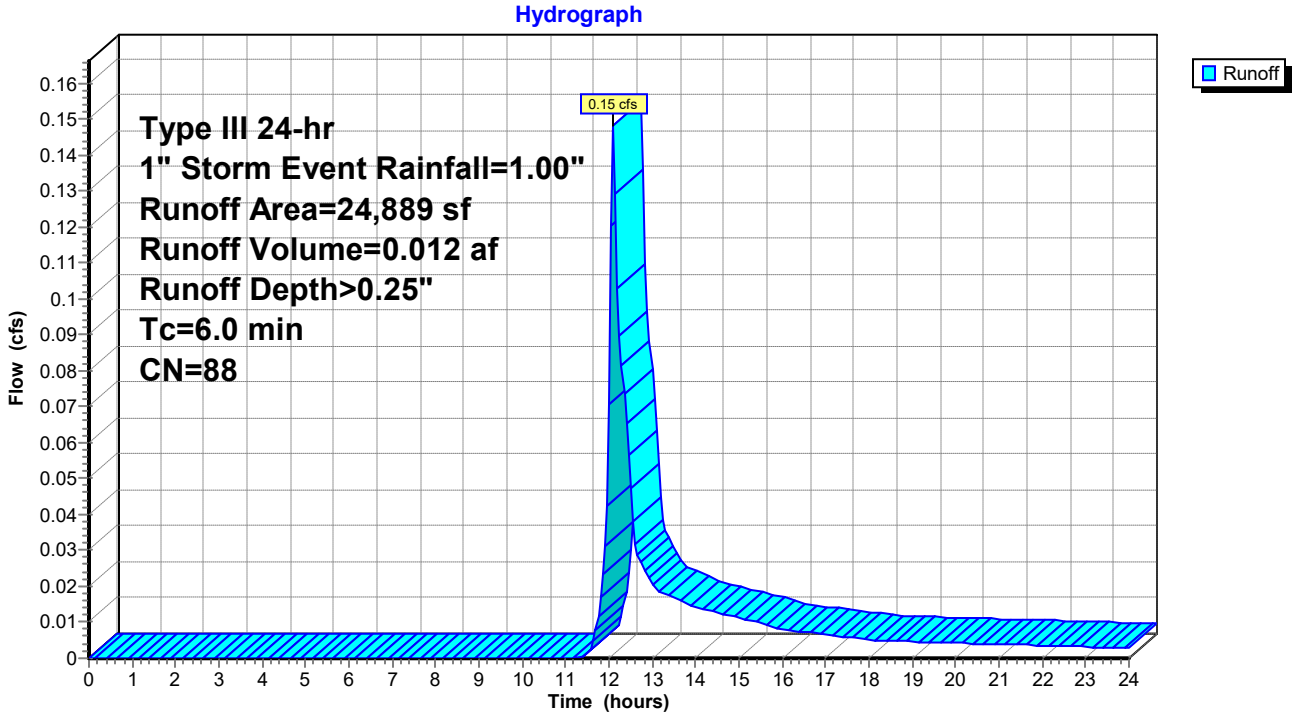
Runoff = 0.15 cfs @ 12.10 hrs, Volume= 0.012 af, Depth> 0.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
	4,428	39	>75% Grass cover, Good, HSG A
*	20,461	98	Impervious Shared Street and Plaza
	24,889	88	Weighted Average
	4,428		17.79% Pervious Area
	20,461		82.21% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 4S: Shared Street - Trench Drain



Summary for Subcatchment 5S: Building 12

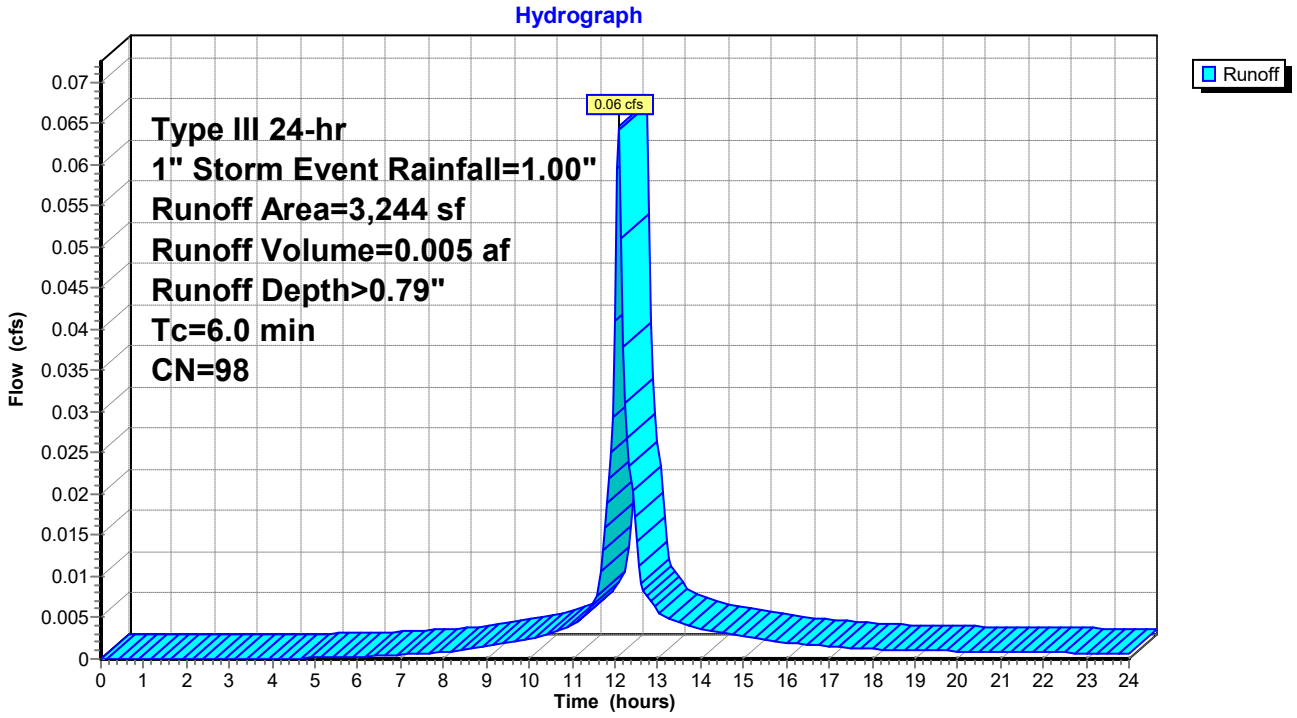
Runoff = 0.06 cfs @ 12.09 hrs, Volume= 0.005 af, Depth> 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	3,244	98	Roof
	3,244		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 5S: Building 12



Summary for Subcatchment 6Sa: Plaza between Blocks 1 & 2

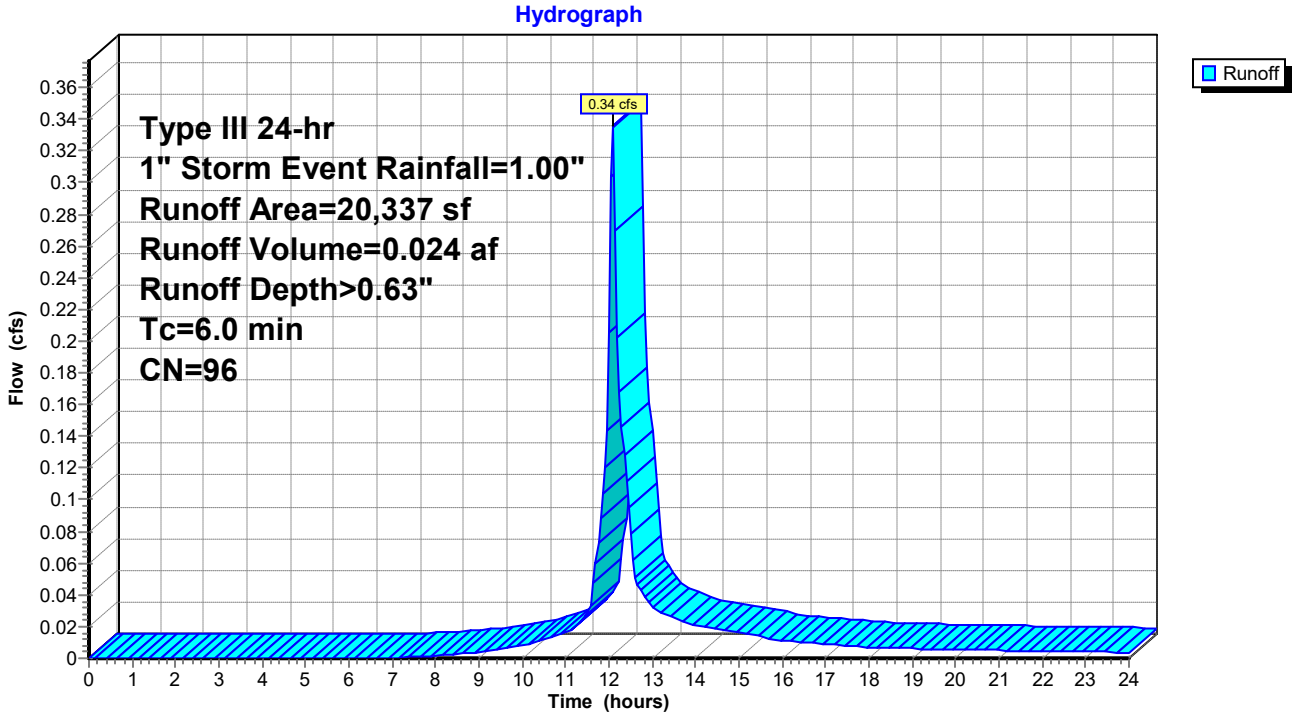
Runoff = 0.34 cfs @ 12.09 hrs, Volume= 0.024 af, Depth> 0.63"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	19,538	98	Impervious
	799	39	>75% Grass cover, Good, HSG A
	20,337	96	Weighted Average
	799		3.93% Pervious Area
	19,538		96.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 6Sa: Plaza between Blocks 1 & 2



Summary for Subcatchment 6Sb: Plaza between Blocks 1 & 2

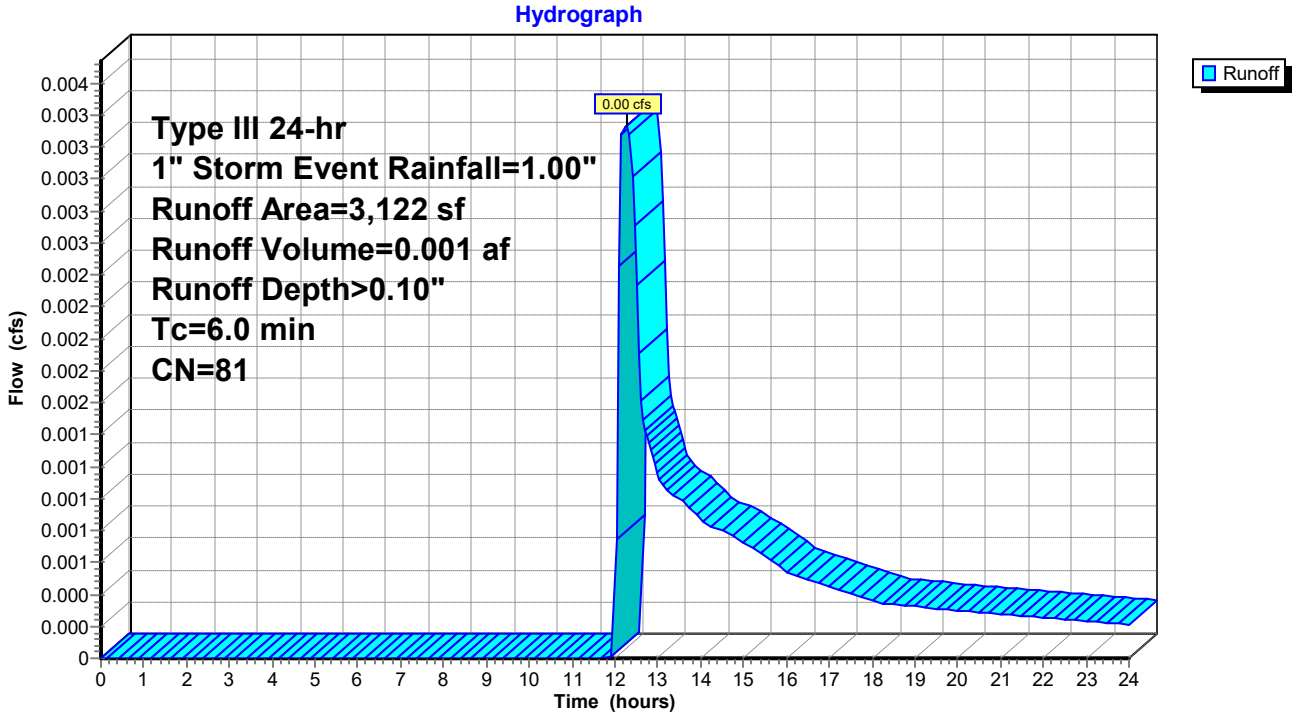
Runoff = 0.00 cfs @ 12.27 hrs, Volume= 0.001 af, Depth> 0.10"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	2,240	98	Impervious
	882	39	>75% Grass cover, Good, HSG A
	3,122	81	Weighted Average
	882		28.25% Pervious Area
	2,240		71.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 6Sb: Plaza between Blocks 1 & 2



Summary for Subcatchment 7S: Building 14

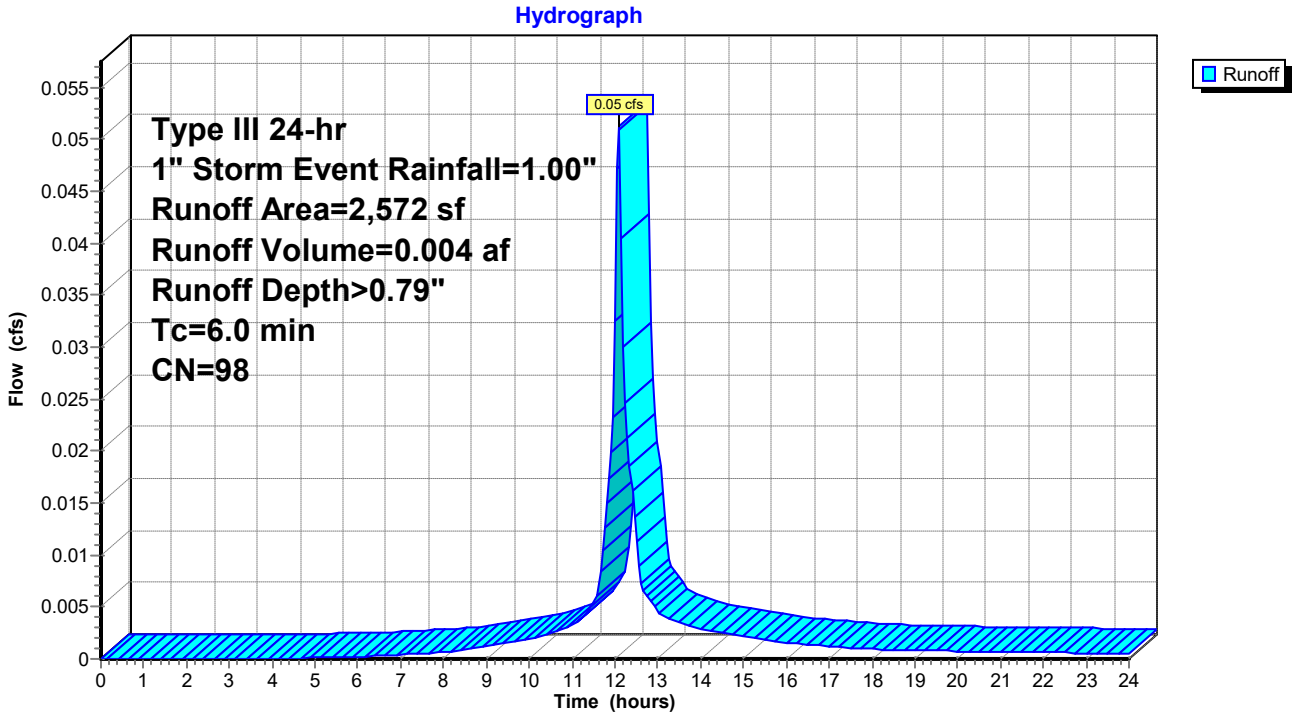
Runoff = 0.05 cfs @ 12.09 hrs, Volume= 0.004 af, Depth> 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	2,572	98	Roof
	2,572		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 7S: Building 14



Summary for Subcatchment 8S: Building 15

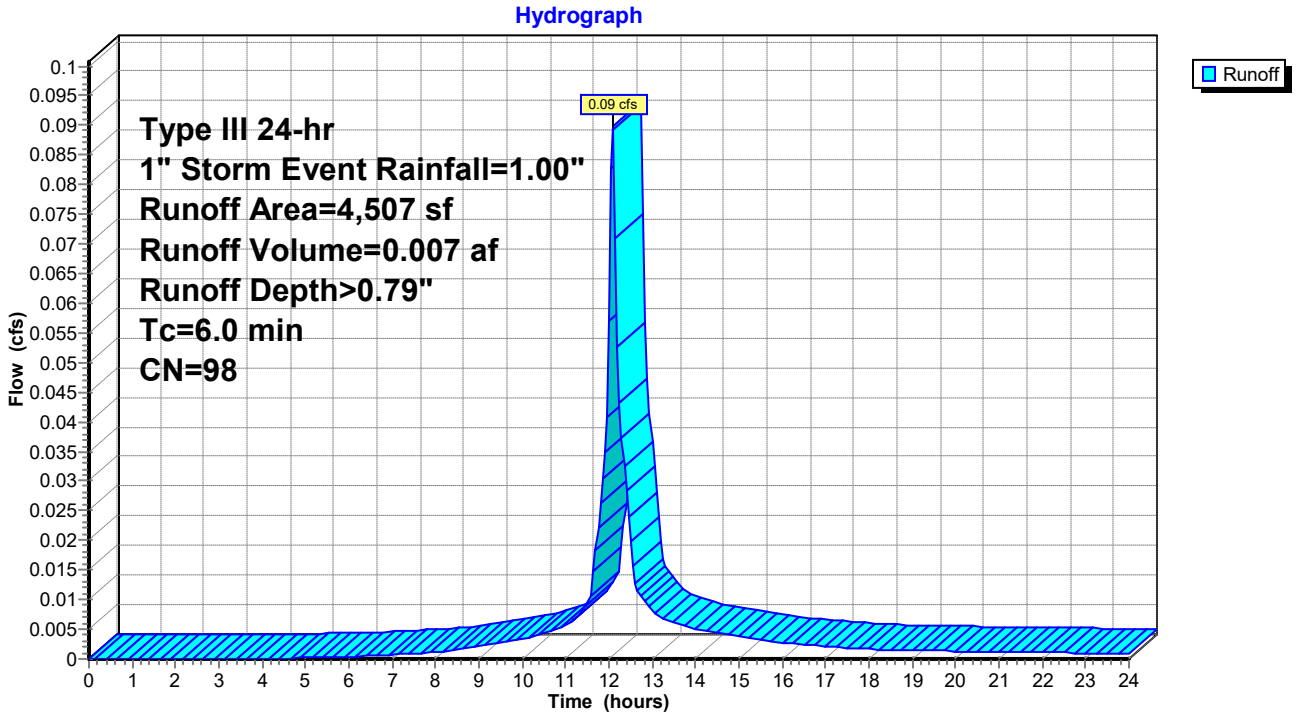
Runoff = 0.09 cfs @ 12.09 hrs, Volume= 0.007 af, Depth> 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	4,507	98	Roof
	4,507		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 8S: Building 15



Summary for Subcatchment 9S: Building 2 North

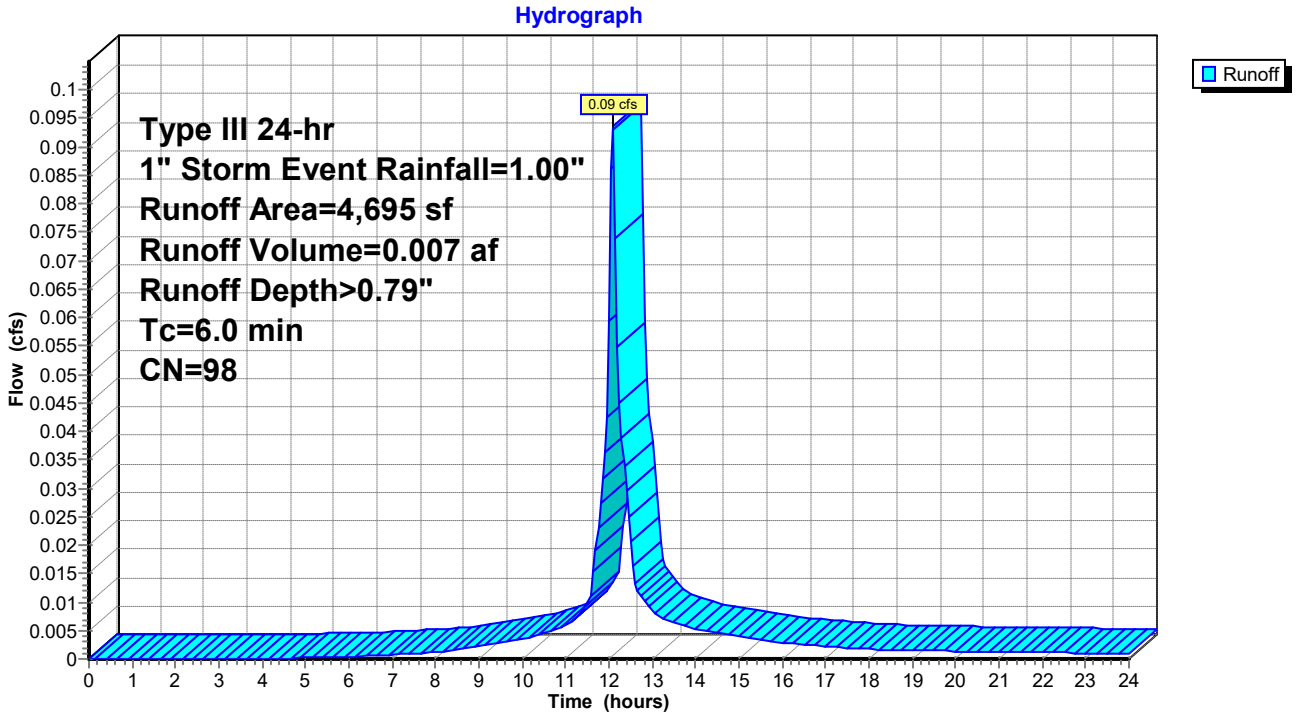
Runoff = 0.09 cfs @ 12.09 hrs, Volume= 0.007 af, Depth> 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	4,695	98	Roof
	4,695		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 9S: Building 2 North



Summary for Subcatchment 10S: Building 3 North

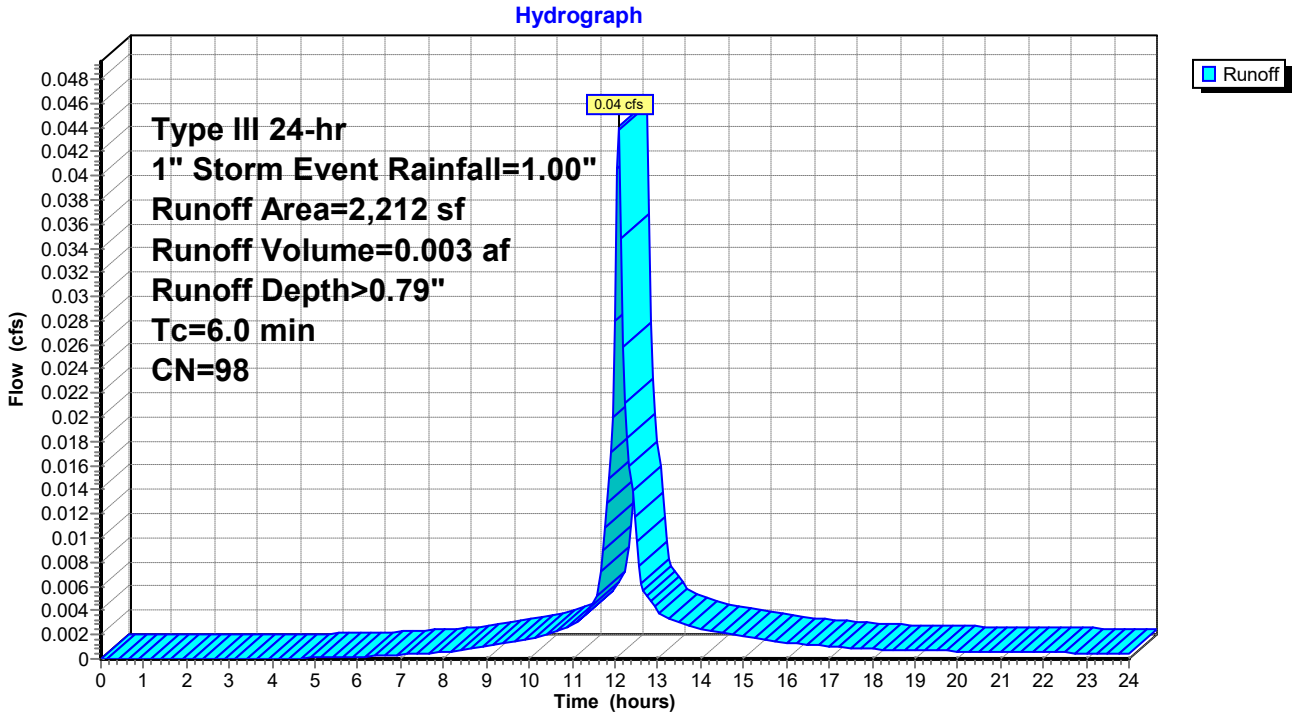
Runoff = 0.04 cfs @ 12.09 hrs, Volume= 0.003 af, Depth> 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	2,212	98	Roof
	2,212		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 10S: Building 3 North



Summary for Subcatchment 11S: Building 2 South

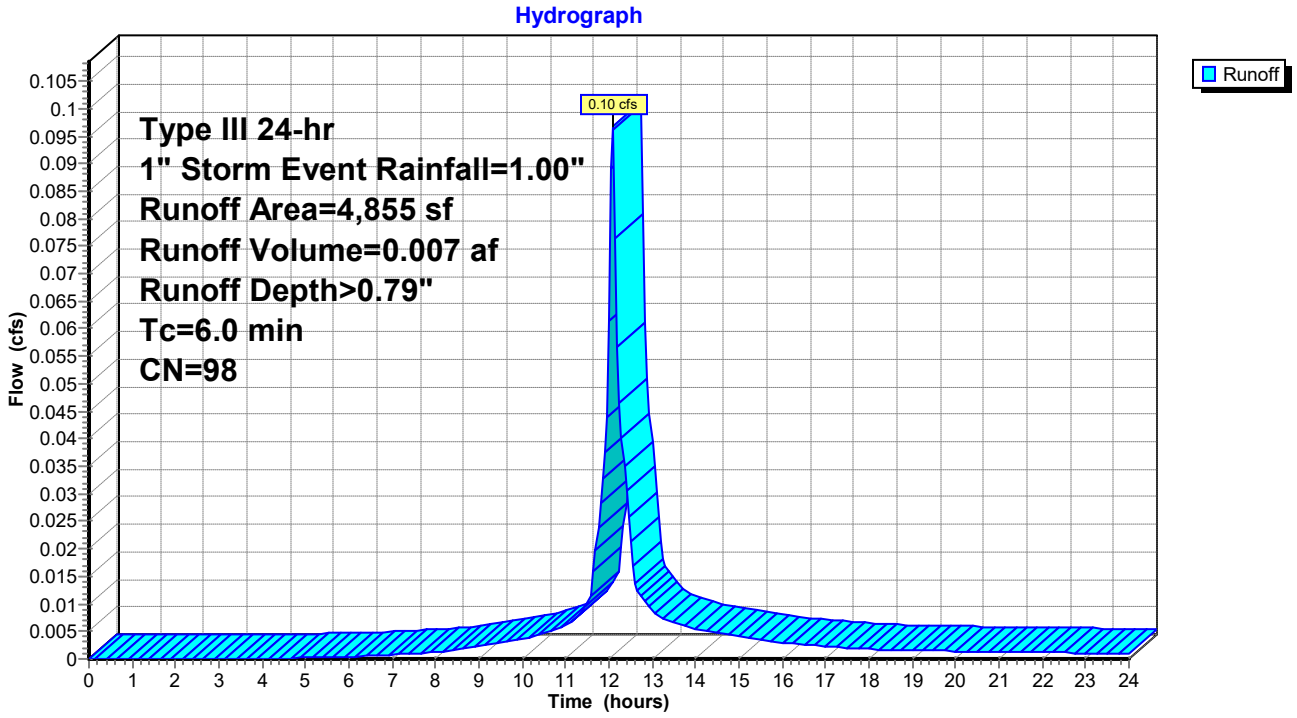
Runoff = 0.10 cfs @ 12.09 hrs, Volume= 0.007 af, Depth> 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	4,855	98	Roof
	4,855		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 11S: Building 2 South



Summary for Subcatchment 12S: Building 3 South

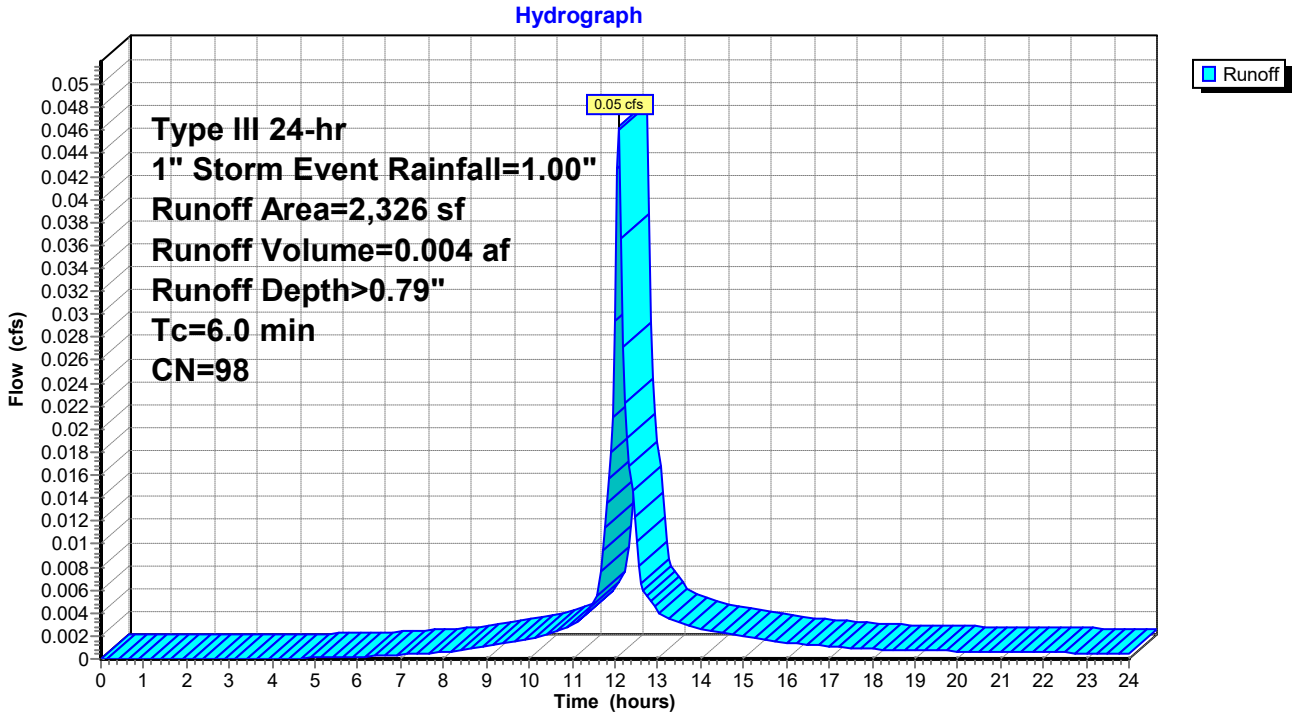
Runoff = 0.05 cfs @ 12.09 hrs, Volume= 0.004 af, Depth> 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	2,326	98	Roof
	2,326		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 12S: Building 3 South



Summary for Subcatchment 13S: Building 6

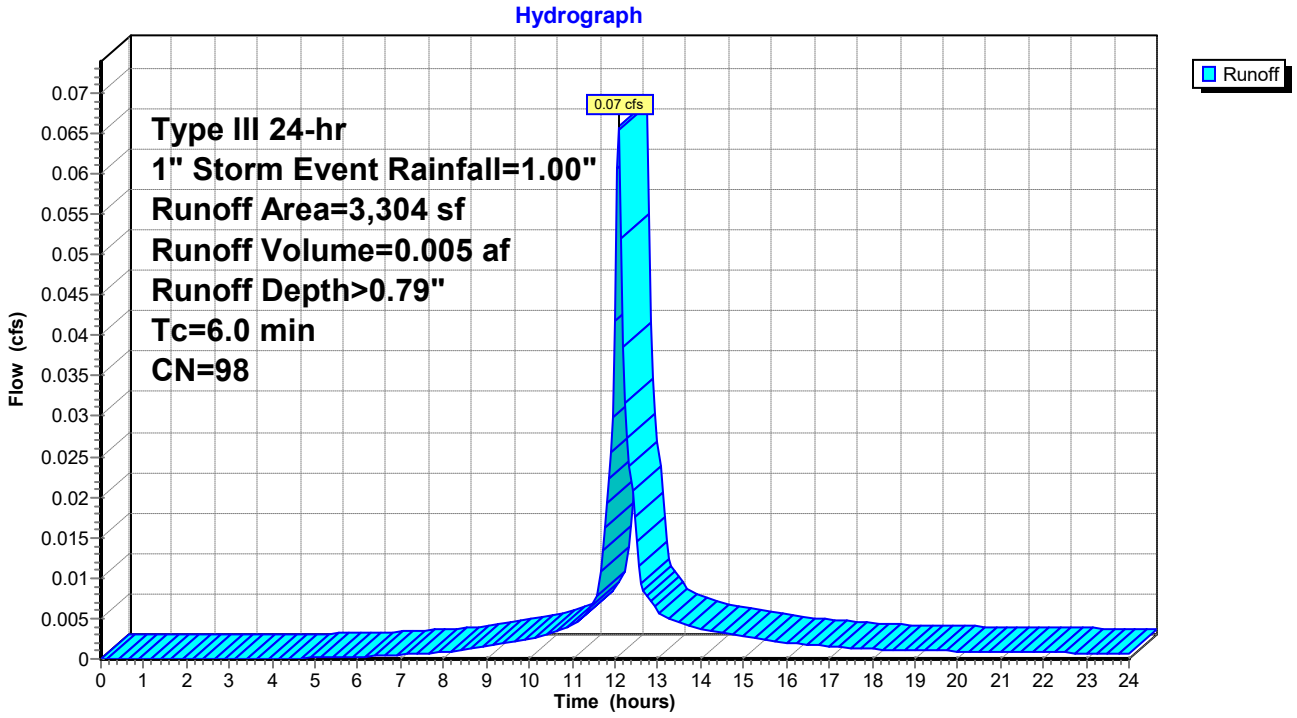
Runoff = 0.07 cfs @ 12.09 hrs, Volume= 0.005 af, Depth> 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	3,304	98	Roof
	3,304		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 13S: Building 6



Summary for Subcatchment 14S: Building 6B North

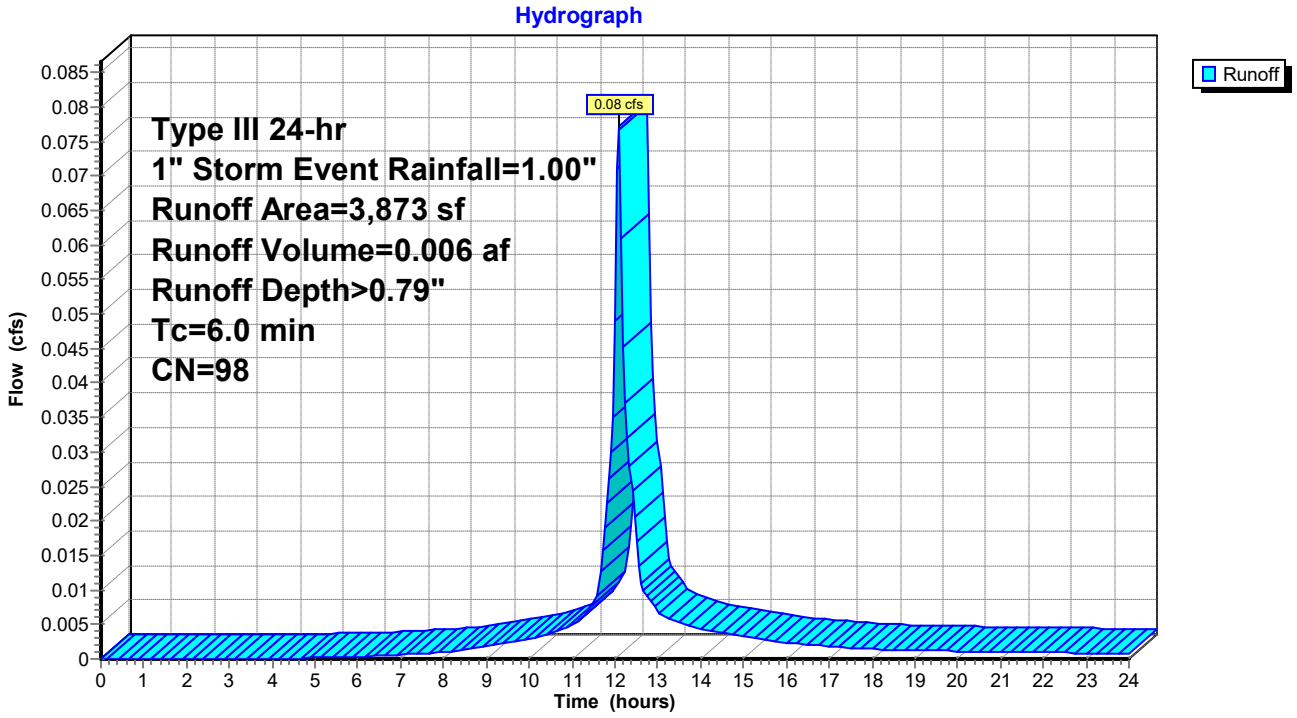
Runoff = 0.08 cfs @ 12.09 hrs, Volume= 0.006 af, Depth> 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	3,873	98	Roof
	3,873		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 14S: Building 6B North



Summary for Subcatchment 15S: Building 6B South

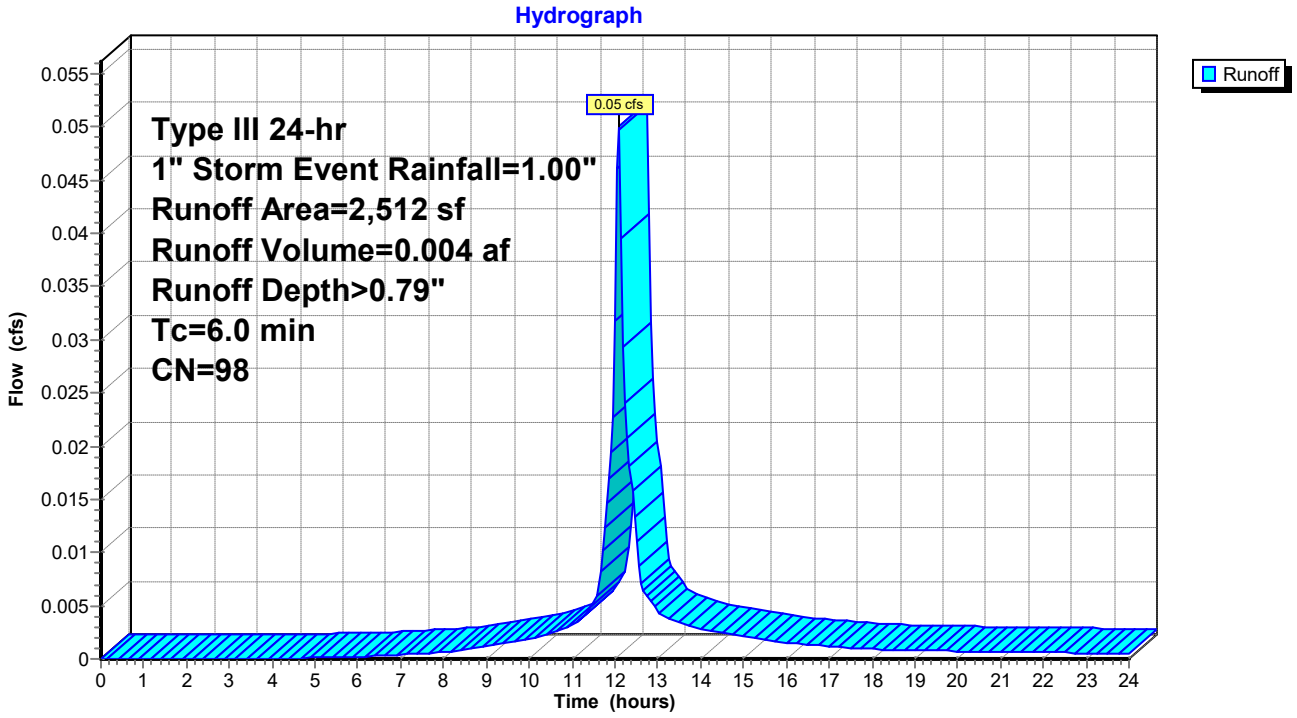
Runoff = 0.05 cfs @ 12.09 hrs, Volume= 0.004 af, Depth> 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	2,512	98	Roof
	2,512		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 15S: Building 6B South



Summary for Subcatchment 16S: Shared Street - Trench Drain

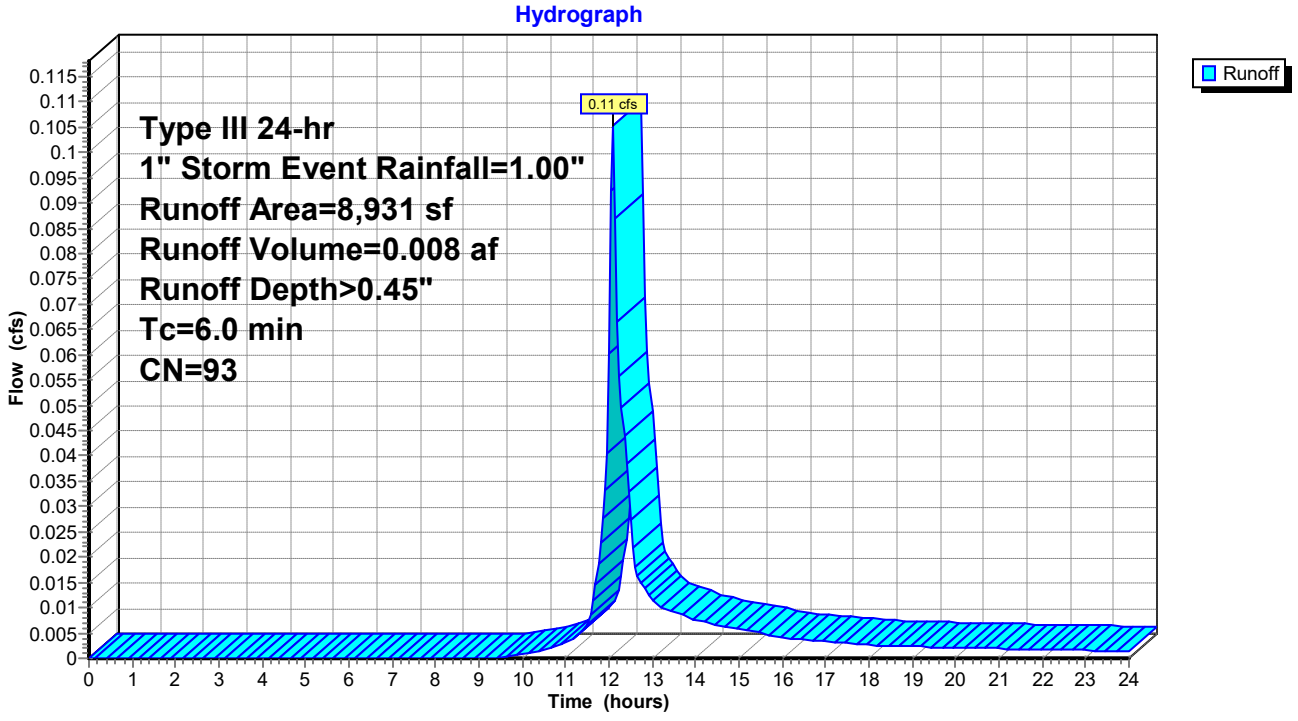
Runoff = 0.11 cfs @ 12.10 hrs, Volume= 0.008 af, Depth> 0.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
	829	39	>75% Grass cover, Good, HSG A
*	8,102	98	Impervious Shared Street
	8,931	93	Weighted Average
	829		9.28% Pervious Area
	8,102		90.72% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 16S: Shared Street - Trench Drain



Summary for Subcatchment 17S: Future Block 3 Building Footprint

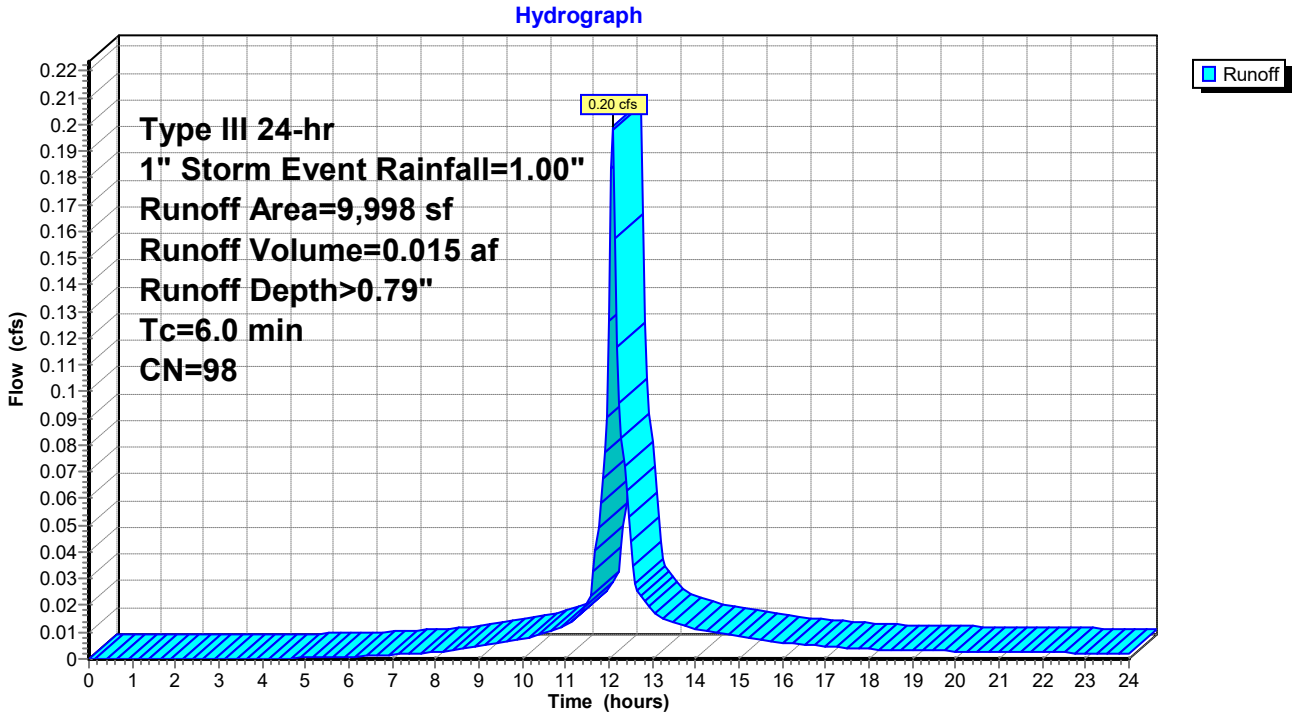
Runoff = 0.20 cfs @ 12.09 hrs, Volume= 0.015 af, Depth> 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	9,998	98	Gravel
	9,998		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 17S: Future Block 3 Building Footprint



Summary for Subcatchment 18S: Plaza between Blocks 2 & 4

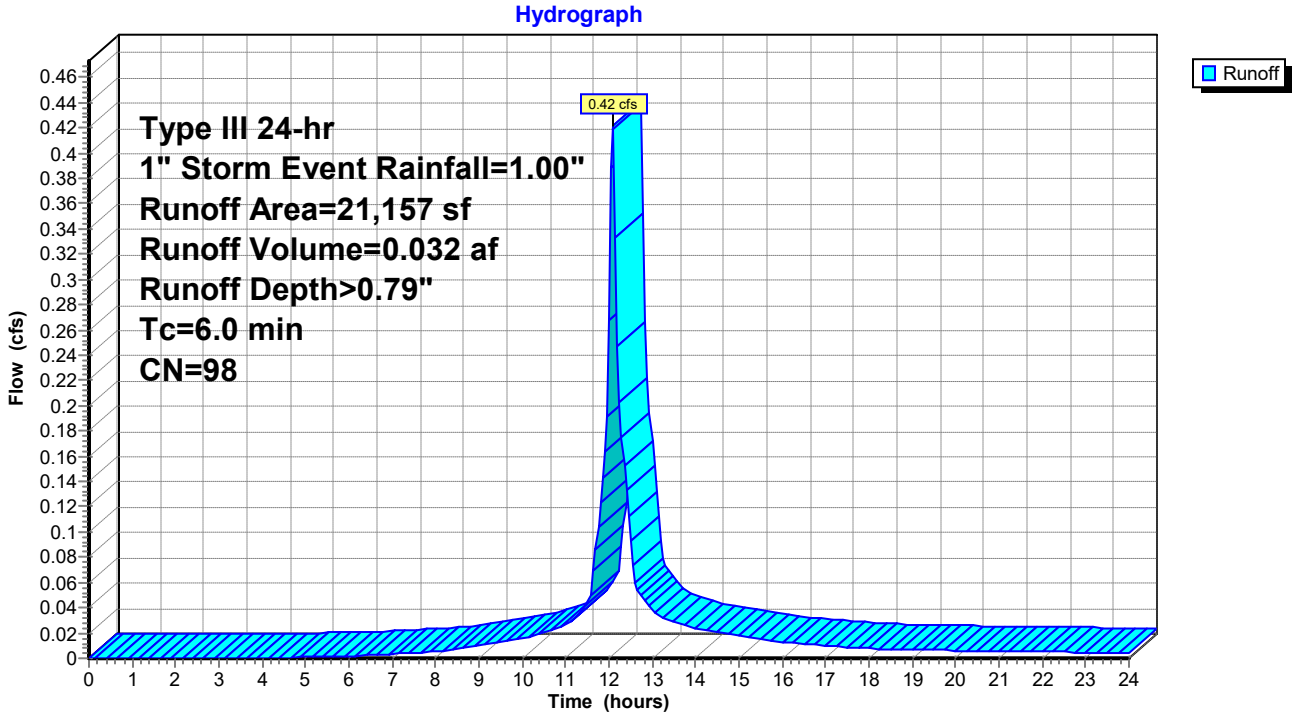
Runoff = 0.42 cfs @ 12.09 hrs, Volume= 0.032 af, Depth> 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	21,087	98	Impervious
	70	39	>75% Grass cover, Good, HSG A
	21,157	98	Weighted Average
	70		0.33% Pervious Area
	21,087		99.67% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 18S: Plaza between Blocks 2 & 4



Summary for Subcatchment 19S: Building 4A

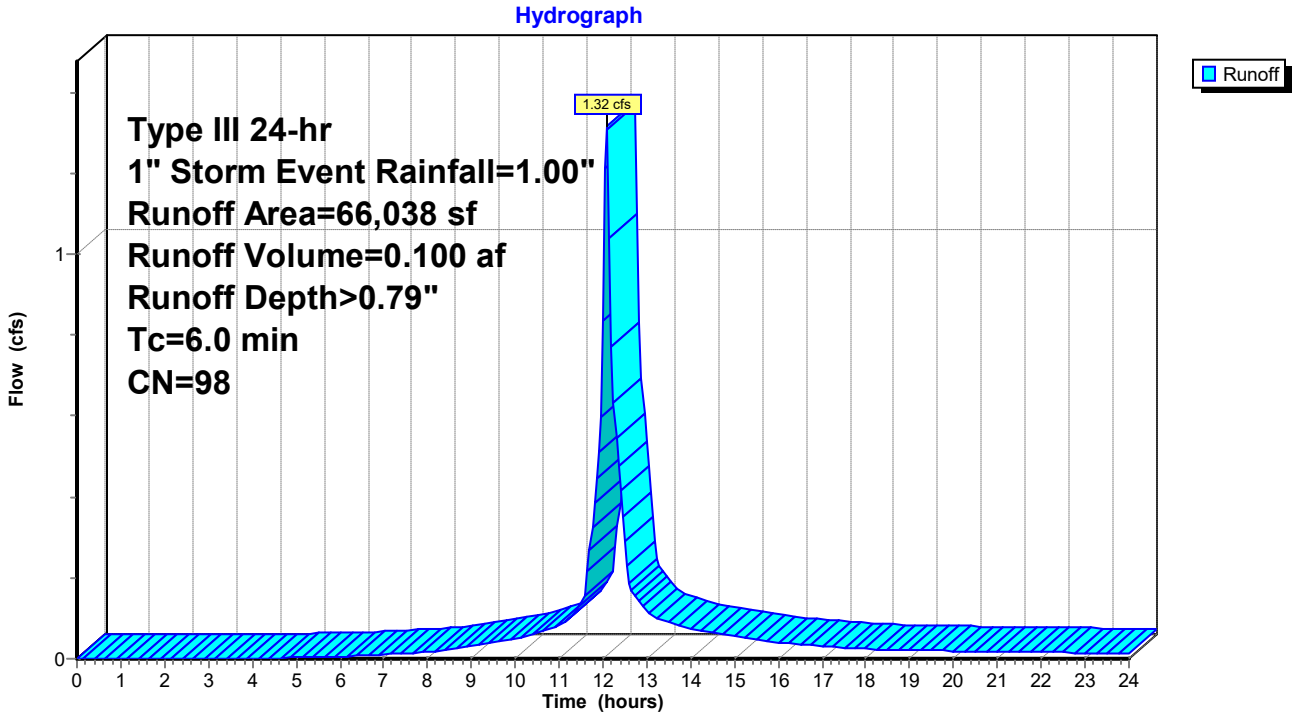
Runoff = 1.32 cfs @ 12.09 hrs, Volume= 0.100 af, Depth> 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	62,938	98	Parking garage
*	3,100	98	Roof
	66,038	98	Weighted Average
	66,038		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 19S: Building 4A



Summary for Subcatchment 20S: Redevelopment area east and south of Building 4A

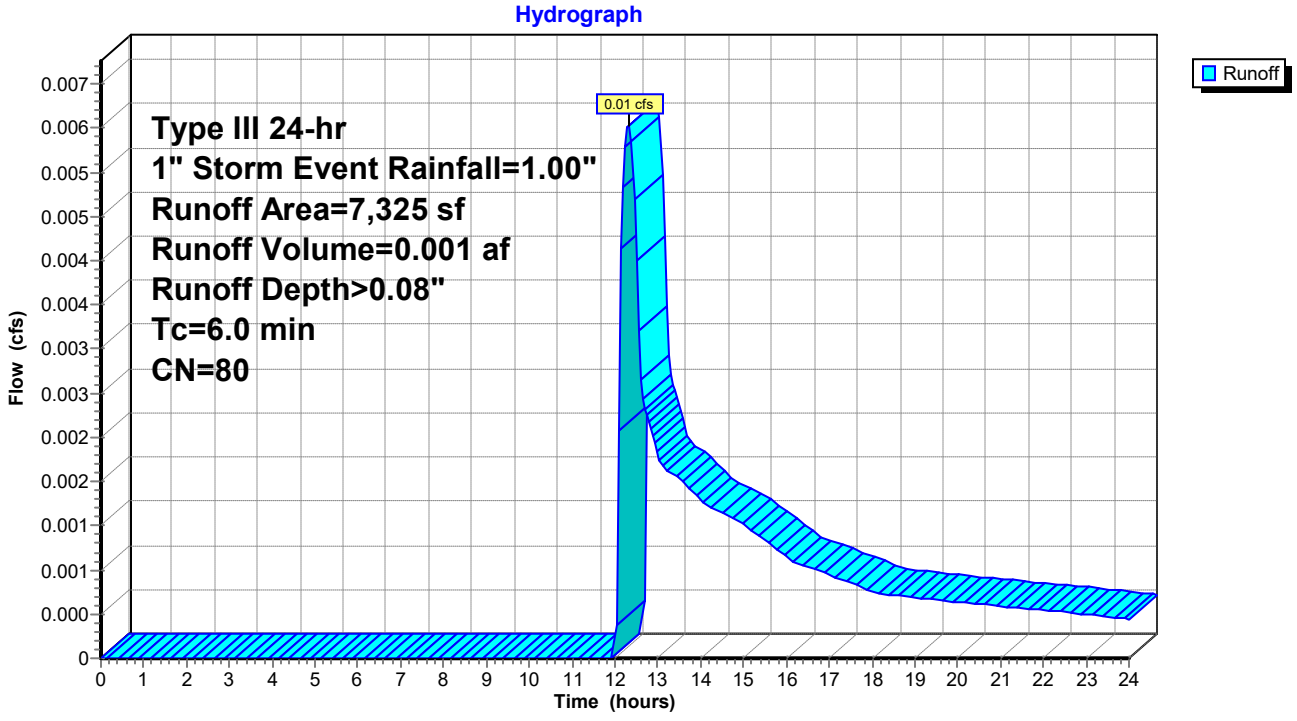
Runoff = 0.01 cfs @ 12.32 hrs, Volume= 0.001 af, Depth> 0.08"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	5,055	98	Impervious
	2,270	39	>75% Grass cover, Good, HSG A
	7,325	80	Weighted Average
	2,270		30.99% Pervious Area
	5,055		69.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 20S: Redevelopment area east and south of Building 4A



Summary for Subcatchment 21S: Eastern Waterfront

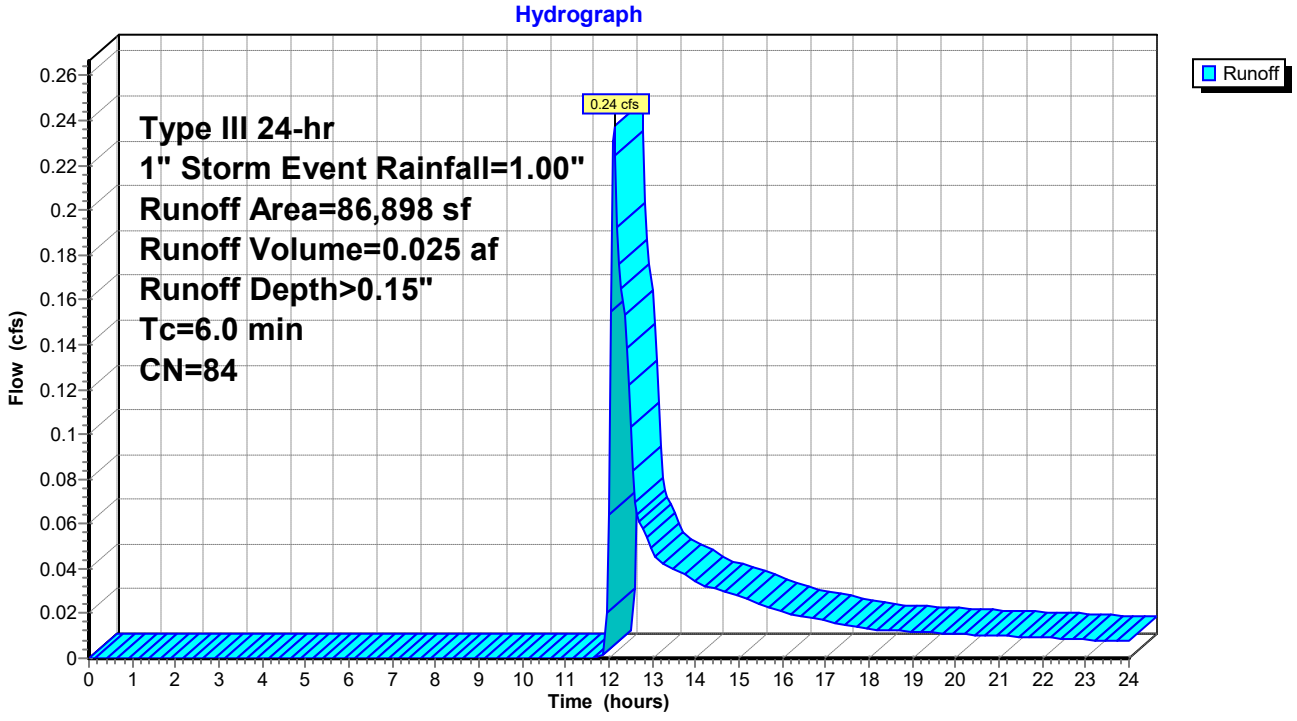
Runoff = 0.24 cfs @ 12.12 hrs, Volume= 0.025 af, Depth> 0.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 1" Storm Event Rainfall=1.00"

	Area (sf)	CN	Description
*	66,148	98	Impervious
	20,750	39	>75% Grass cover, Good, HSG A
	86,898	84	Weighted Average
	20,750		23.88% Pervious Area
	66,148		76.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 21S: Eastern Waterfront



Summary for Pond 1P: DMH 1

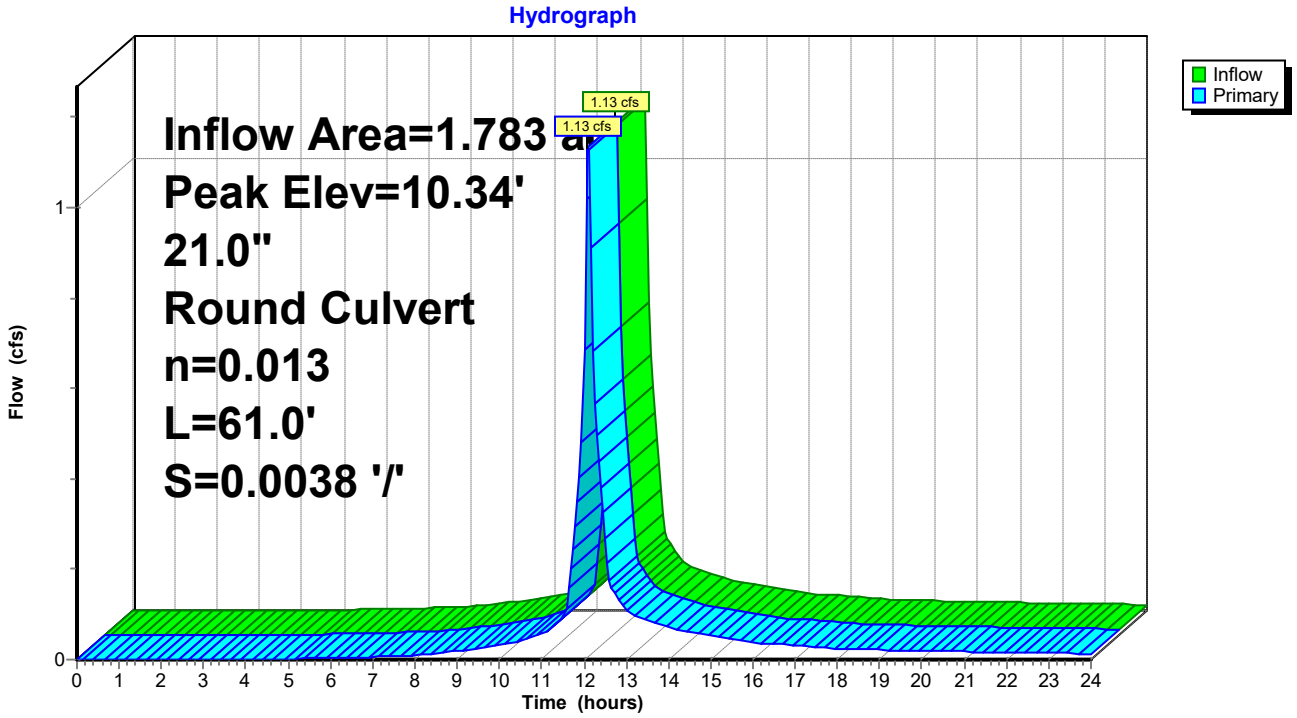
Inflow Area = 1.783 ac, 93.27% Impervious, Inflow Depth > 0.58" for 1" Storm Event event
Inflow = 1.13 cfs @ 12.09 hrs, Volume= 0.086 af
Outflow = 1.13 cfs @ 12.09 hrs, Volume= 0.086 af, Atten= 0%, Lag= 0.0 min
Primary = 1.13 cfs @ 12.09 hrs, Volume= 0.086 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 10.34' @ 12.09 hrs
Flood Elev= 14.71'

Device	Routing	Invert	Outlet Devices
#1	Primary	9.77'	**21.0" Round Culvert** L= 61.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 9.77' / 9.54' S= 0.0038 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 2.41 sf

Primary OutFlow Max=1.11 cfs @ 12.09 hrs HW=10.33' (Free Discharge)
1=Culvert (Barrel Controls 1.11 cfs @ 2.49 fps)

Pond 1P: DMH 1



Summary for Pond 2P: DMH 2

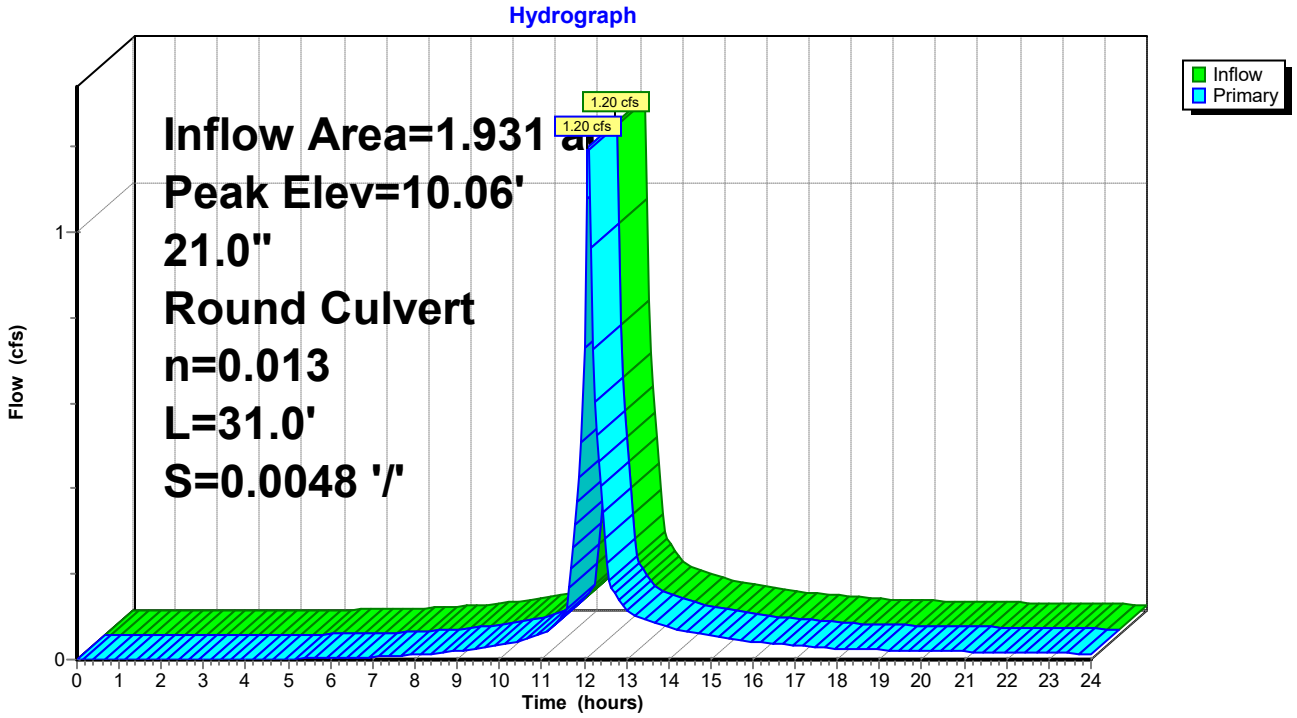
Inflow Area = 1.931 ac, 92.74% Impervious, Inflow Depth > 0.57" for 1" Storm Event event
Inflow = 1.20 cfs @ 12.09 hrs, Volume= 0.091 af
Outflow = 1.20 cfs @ 12.09 hrs, Volume= 0.091 af, Atten= 0%, Lag= 0.0 min
Primary = 1.20 cfs @ 12.09 hrs, Volume= 0.091 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 10.06' @ 12.09 hrs
Flood Elev= 14.63'

Device	Routing	Invert	Outlet Devices
#1	Primary	9.50'	**21.0" Round Culvert** L= 31.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 9.50' / 9.35' S= 0.0048 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 2.41 sf

Primary OutFlow Max=1.17 cfs @ 12.09 hrs HW=10.05' (Free Discharge)
1=Culvert (Barrel Controls 1.17 cfs @ 2.72 fps)

Pond 2P: DMH 2



Summary for Pond 3P: Storm Structure

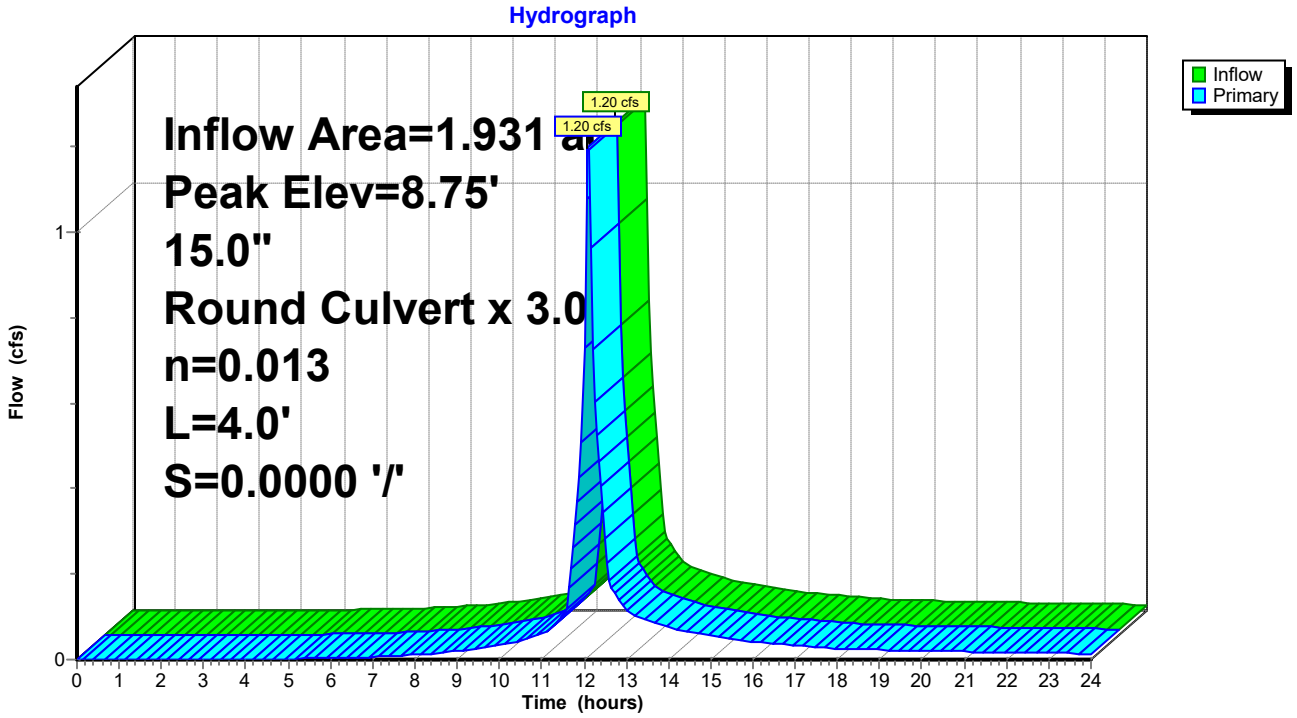
Inflow Area = 1.931 ac, 92.74% Impervious, Inflow Depth > 0.57" for 1" Storm Event event
Inflow = 1.20 cfs @ 12.09 hrs, Volume= 0.091 af
Outflow = 1.20 cfs @ 12.09 hrs, Volume= 0.091 af, Atten= 0%, Lag= 0.0 min
Primary = 1.20 cfs @ 12.09 hrs, Volume= 0.091 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 8.75' @ 12.09 hrs
Flood Elev= 14.51'

Device	Routing	Invert	Outlet Devices
#1	Primary	8.35'	**15.0" Round Culvert X 3.00** L= 4.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 8.35' / 8.35' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=1.17 cfs @ 12.09 hrs HW=8.75' (Free Discharge)
└**1=Culvert** (Barrel Controls 1.17 cfs @ 1.74 fps)

Pond 3P: Storm Structure



Summary for Pond 4P: R-Tank 1

Inflow Area = 1.931 ac, 92.74% Impervious, Inflow Depth > 0.57" for 1" Storm Event event
Inflow = 1.20 cfs @ 12.09 hrs, Volume= 0.091 af
Outflow = 0.83 cfs @ 12.18 hrs, Volume= 0.085 af, Atten= 31%, Lag= 5.5 min
Primary = 0.83 cfs @ 12.18 hrs, Volume= 0.085 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 8.13' @ 12.18 hrs Surf.Area= 1,597 sf Storage= 871 cf
Flood Elev= 10.42' Surf.Area= 1,597 sf Storage= 3,504 cf

Plug-Flow detention time= 72.3 min calculated for 0.085 af (93% of inflow)
Center-of-Mass det. time= 37.6 min (844.7 - 807.1)

Volume	Invert	Avail.Storage	Storage Description
#1	7.35'	1,478 cf	**Stone Envelope (Prismatic)** Listed below (Recalc) 6,500 cf Overall - 2,806 cf Embedded = 3,694 cf x 40.0% Voids
#2	7.60'	2,666 cf	**R-Tank Double Modules (Prismatic)** Listed below (Recalc) Inside #1 2,806 cf Overall x 95.0% Voids
		4,143 cf	Total Available Storage

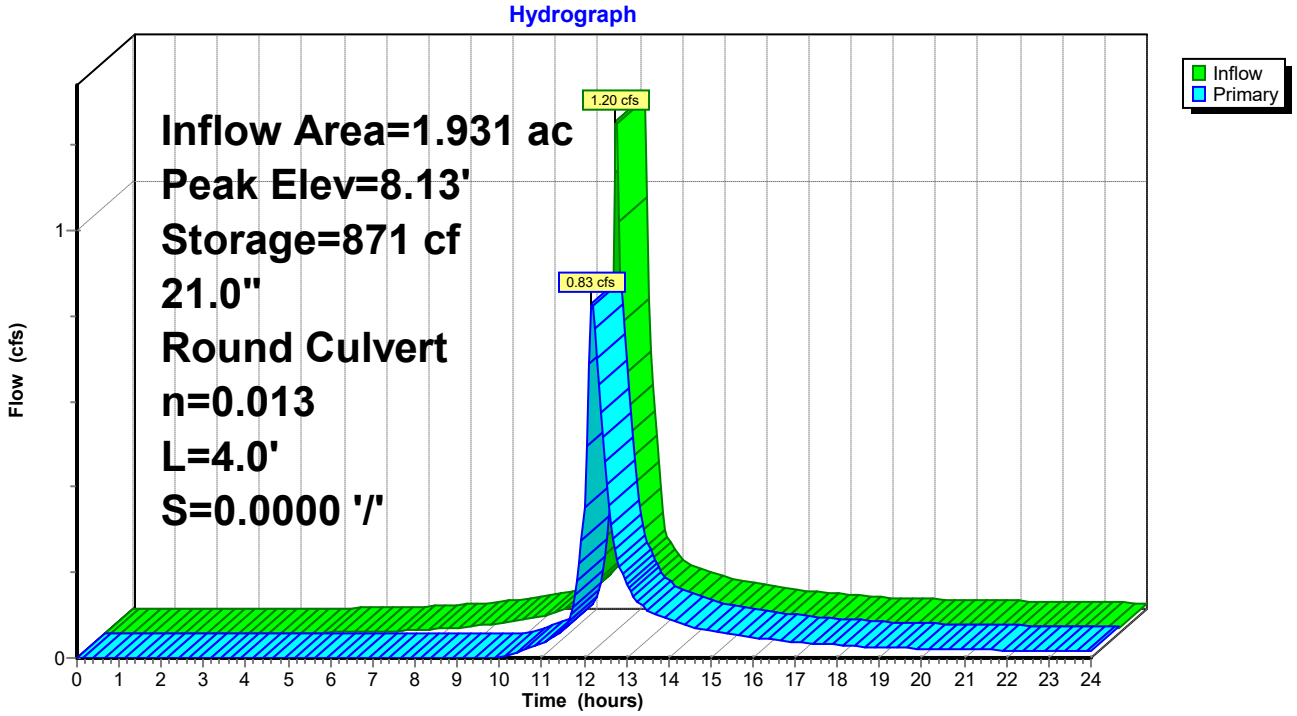
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
7.35	1,597	0	0
11.42	1,597	6,500	6,500

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
7.60	1,293	0	0
9.77	1,293	2,806	2,806

Device	Routing	Invert	Outlet Devices
#1	Primary	7.60'	**21.0" Round Culvert to Filter** L= 4.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 7.60' / 7.60' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 2.41 sf

Primary OutFlow Max=0.82 cfs @ 12.18 hrs HW=8.12' (Free Discharge)
↑—**1=Culvert to Filter** (Barrel Controls 0.82 cfs @ 2.04 fps)

Pond 4P: R-Tank 1



Summary for Pond 6P: CB27

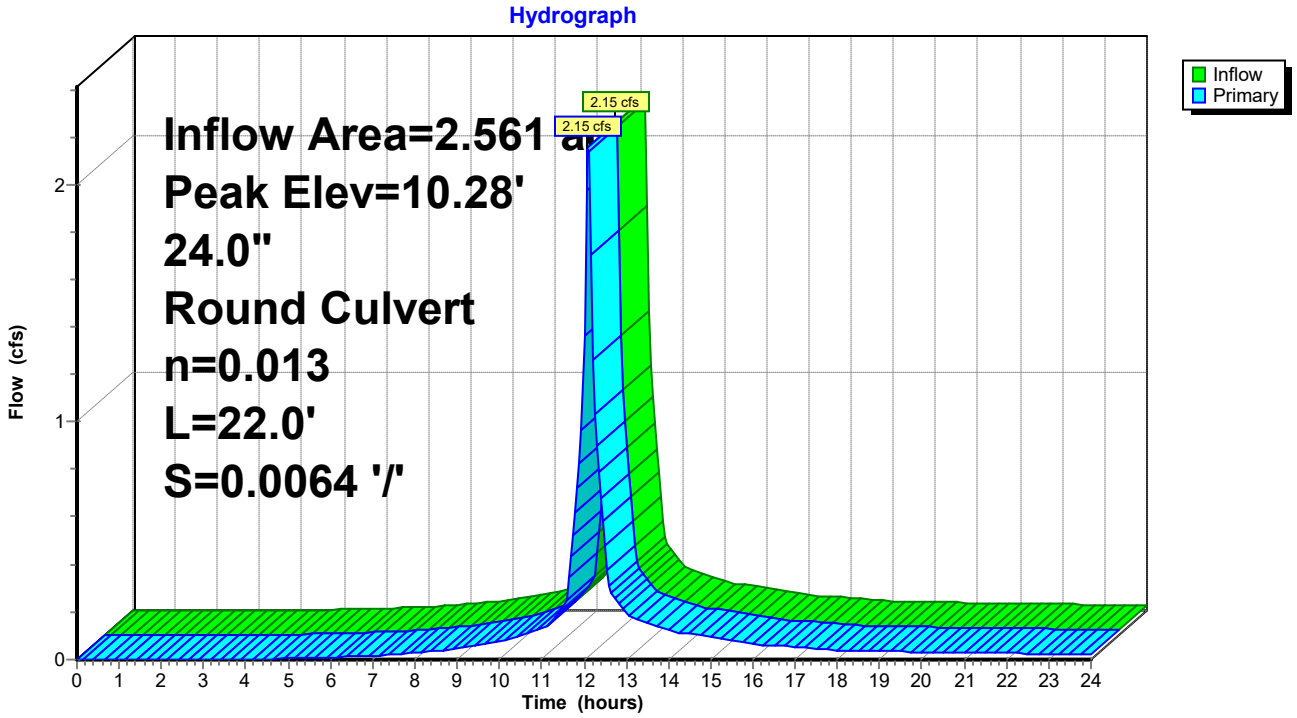
Inflow Area = 2.561 ac, 99.19% Impervious, Inflow Depth > 0.76" for 1" Storm Event event
Inflow = 2.15 cfs @ 12.09 hrs, Volume= 0.163 af
Outflow = 2.15 cfs @ 12.09 hrs, Volume= 0.163 af, Atten= 0%, Lag= 0.0 min
Primary = 2.15 cfs @ 12.09 hrs, Volume= 0.163 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 10.28' @ 12.09 hrs
Flood Elev= 14.57'

Device	Routing	Invert	Outlet Devices
#1	Primary	9.53'	**24.0" Round Culvert** L= 22.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 9.53' / 9.39' S= 0.0064 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=2.10 cfs @ 12.09 hrs HW=10.27' (Free Discharge)
1=Culvert (Barrel Controls 2.10 cfs @ 2.95 fps)

Pond 6P: CB27



Summary for Pond 7P: Storm Structure

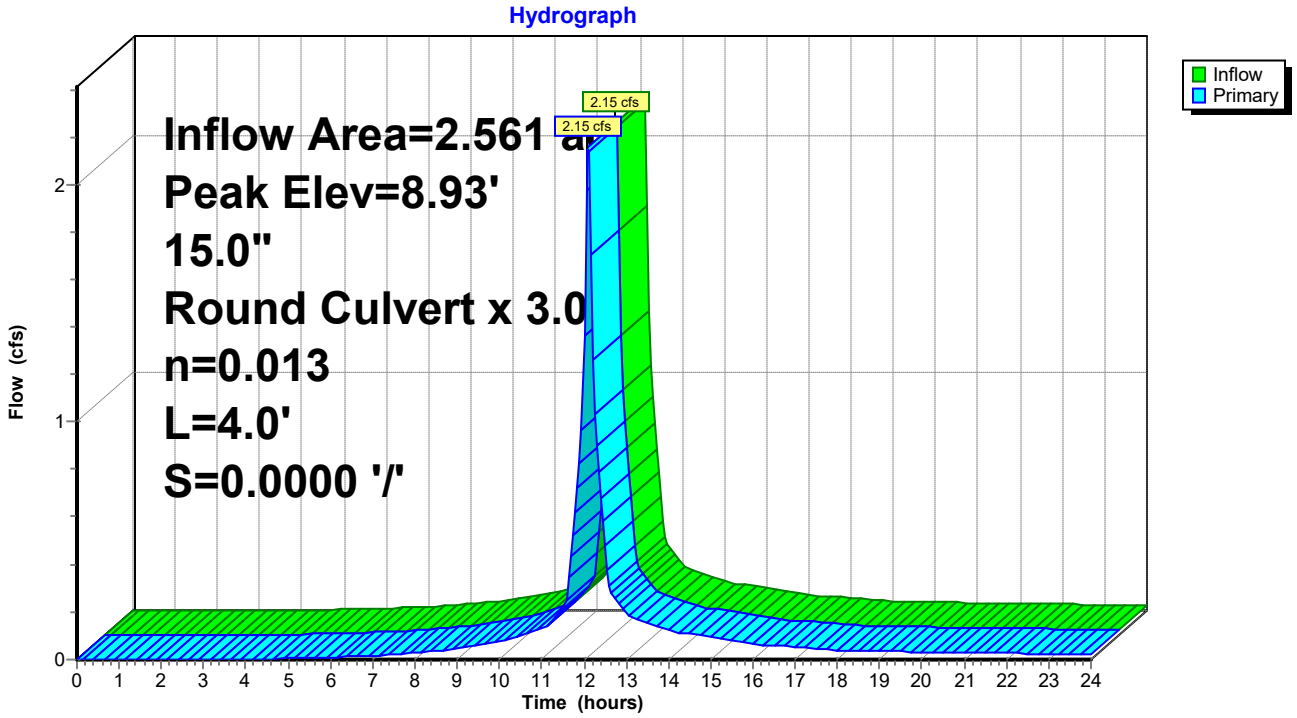
Inflow Area = 2.561 ac, 99.19% Impervious, Inflow Depth > 0.76" for 1" Storm Event event
Inflow = 2.15 cfs @ 12.09 hrs, Volume= 0.163 af
Outflow = 2.15 cfs @ 12.09 hrs, Volume= 0.163 af, Atten= 0%, Lag= 0.0 min
Primary = 2.15 cfs @ 12.09 hrs, Volume= 0.163 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 8.93' @ 12.09 hrs
Flood Elev= 14.25'

Device	Routing	Invert	Outlet Devices
#1	Primary	8.39'	**15.0" Round Culvert X 3.00** L= 4.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 8.39' / 8.39' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=2.10 cfs @ 12.09 hrs HW=8.93' (Free Discharge)
1=Culvert (Barrel Controls 2.10 cfs @ 2.05 fps)

Pond 7P: Storm Structure



Summary for Pond 8P: R-Tank 2

Inflow Area = 2.561 ac, 99.19% Impervious, Inflow Depth > 0.76" for 1" Storm Event event
Inflow = 2.15 cfs @ 12.09 hrs, Volume= 0.163 af
Outflow = 1.27 cfs @ 12.21 hrs, Volume= 0.150 af, Atten= 41%, Lag= 7.3 min
Primary = 1.27 cfs @ 12.21 hrs, Volume= 0.150 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 8.45' @ 12.21 hrs Surf.Area= 3,128 sf Storage= 2,023 cf
Flood Elev= 12.71' Surf.Area= 3,128 sf Storage= 8,290 cf

Plug-Flow detention time= 91.7 min calculated for 0.150 af (92% of inflow)
Center-of-Mass det. time= 51.7 min (841.6 - 789.9)

Volume	Invert	Avail.Storage	Storage Description
#1	7.57'	2,767 cf	**Stone Envelope (Prismatic)** Listed below (Recalc) 12,731 cf Overall - 5,813 cf Embedded = 6,918 cf x 40.0% Voids
#2	7.82'	5,523 cf	**R-Tank Double Modules (Prismatic)** Listed below (Recalc) Inside #1 5,813 cf Overall x 95.0% Voids
		8,290 cf	Total Available Storage

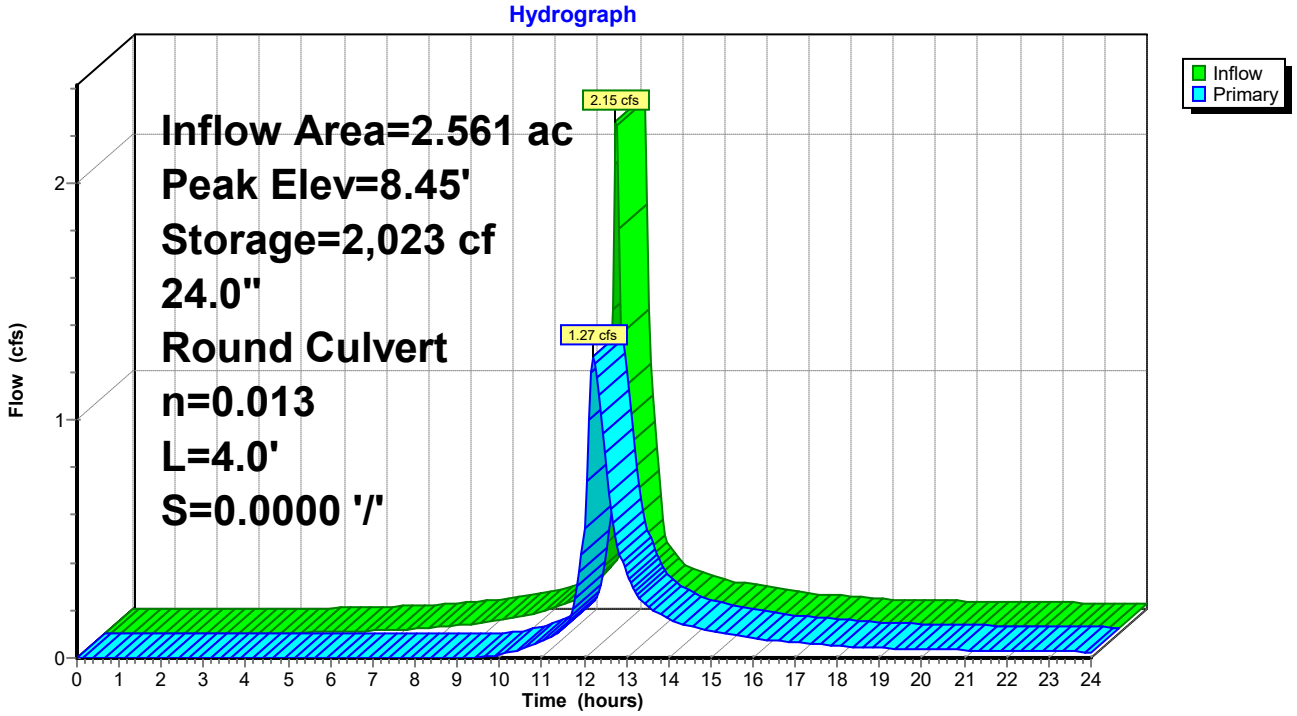
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
7.57	3,128	0	0
11.64	3,128	12,731	12,731

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
7.82	2,679	0	0
9.99	2,679	5,813	5,813

Device	Routing	Invert	Outlet Devices
#1	Primary	7.82'	**24.0" Round Culvert to Filter** L= 4.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 7.82' / 7.82' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=1.26 cfs @ 12.21 hrs HW=8.45' (Free Discharge)
↑—**1=Culvert to Filter** (Barrel Controls 1.26 cfs @ 2.24 fps)

Pond 8P: R-Tank 2



Summary for Pond 10P: DMH 5

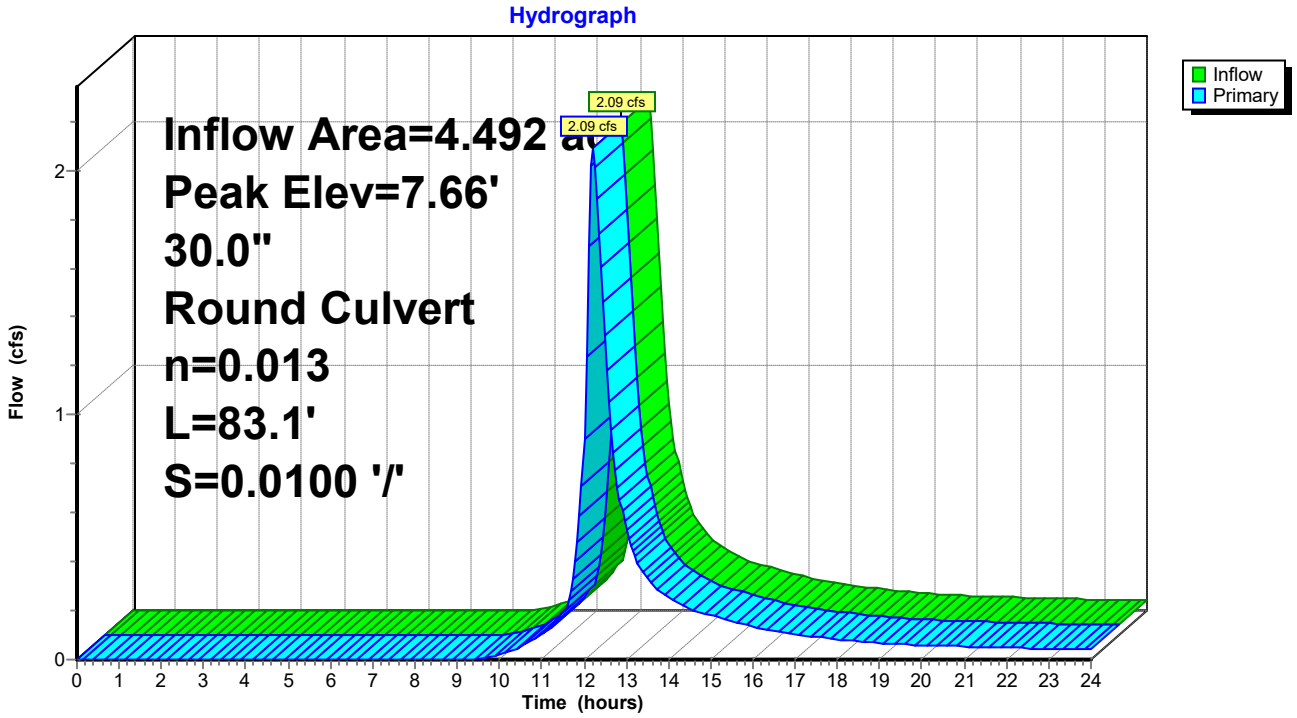
Inflow Area = 4.492 ac, 96.42% Impervious, Inflow Depth > 0.63" for 1" Storm Event event
Inflow = 2.09 cfs @ 12.20 hrs, Volume= 0.235 af
Outflow = 2.09 cfs @ 12.20 hrs, Volume= 0.235 af, Atten= 0%, Lag= 0.0 min
Primary = 2.09 cfs @ 12.20 hrs, Volume= 0.235 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 7.66' @ 12.20 hrs
Flood Elev= 13.56'

Device	Routing	Invert	Outlet Devices
#1	Primary	7.03'	**30.0" Round Culvert** L= 83.1' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 7.03' / 6.20' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=2.08 cfs @ 12.20 hrs HW=7.66' (Free Discharge)
1=Culvert (Inlet Controls 2.08 cfs @ 2.14 fps)

Pond 10P: DMH 5



Summary for Pond 11P: Jellyfish 1 JFPD0806-4-2

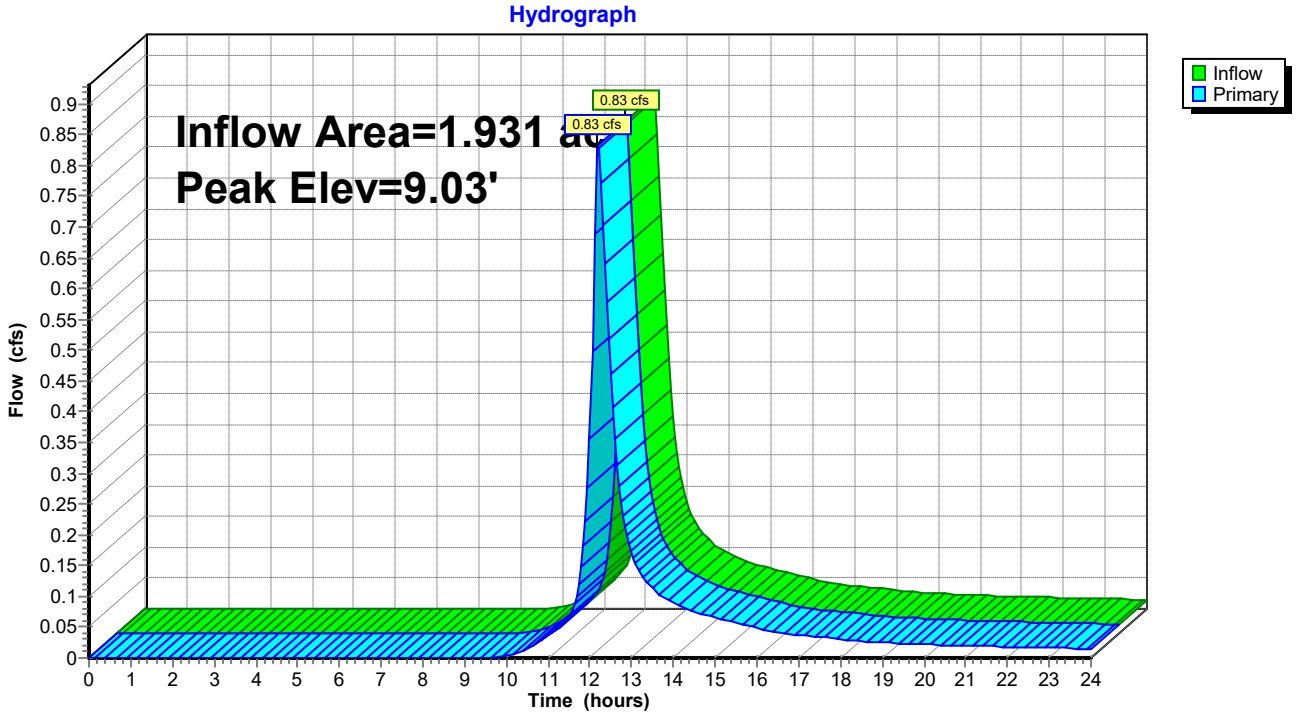
Inflow Area = 1.931 ac, 92.74% Impervious, Inflow Depth > 0.53" for 1" Storm Event event
Inflow = 0.83 cfs @ 12.18 hrs, Volume= 0.085 af
Outflow = 0.83 cfs @ 12.18 hrs, Volume= 0.085 af, Atten= 0%, Lag= 0.0 min
Primary = 0.83 cfs @ 12.18 hrs, Volume= 0.085 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 9.03' @ 12.18 hrs
Flood Elev= 14.79'

Device	Routing	Invert	Outlet Devices
#1	Primary	7.60'	**21.0" Round Filter Culvert Out** L= 90.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 7.60' / 7.13' S= 0.0052 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 2.41 sf
#2	Device 1	7.60'	**JF Filter-1 CSV File** Head (feet) 0.00 0.08 0.17 0.25 0.33 0.42 0.50 0.58 0.67 0.75 0.83 0.92 1.00 1.08 1.17 1.25 1.33 1.42 1.50 Disch. (cfs) 0.000 0.010 0.020 0.030 0.040 0.050 0.059 0.129 0.198 0.267 0.337 0.406 0.475 0.545 0.614 0.683 0.753 0.822 0.891
#3	Device 1	9.59'	**2.8' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=0.82 cfs @ 12.18 hrs HW=9.02' (Free Discharge)
└**1=Filter Culvert Out** (Passes 0.82 cfs of 6.40 cfs potential flow)
  ├**2=JF Filter-1 CSV File** (Custom Controls 0.82 cfs)
  └**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 11P: Jellyfish 1 JFPD0806-4-2



Summary for Pond 12P: Jellyfish 2 JFPD0806-7-2

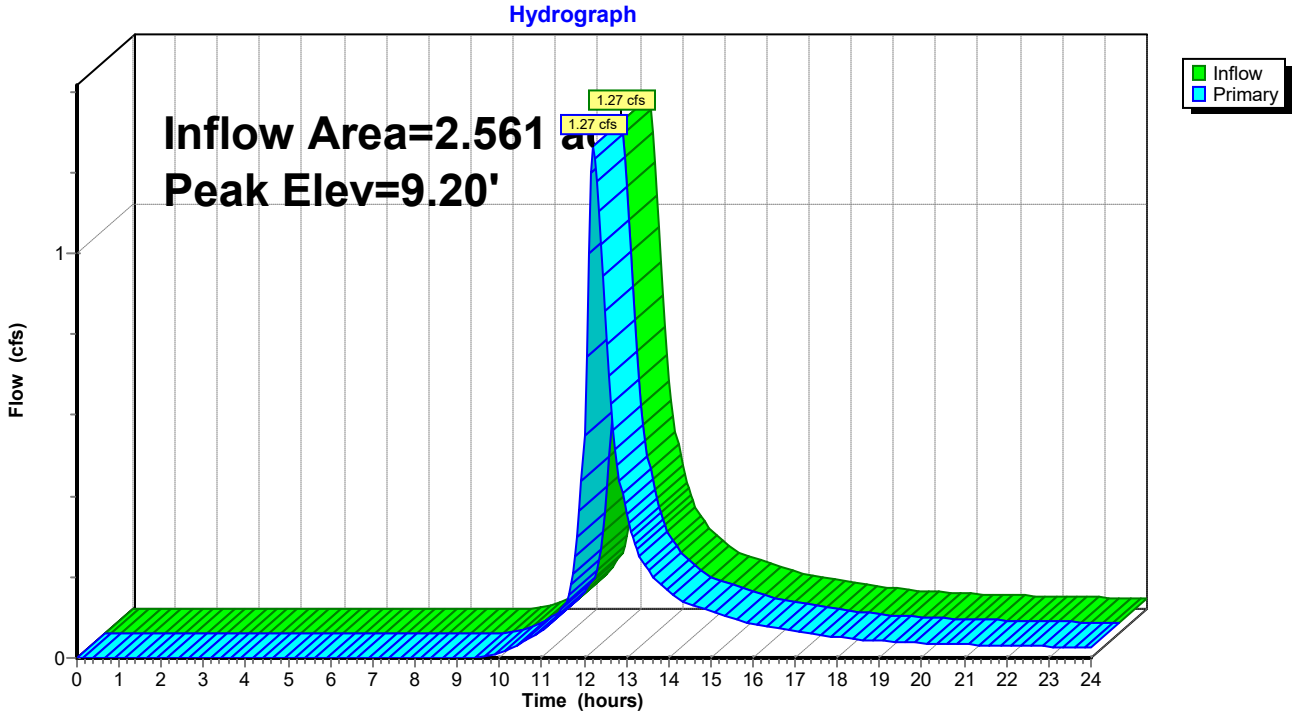
Inflow Area = 2.561 ac, 99.19% Impervious, Inflow Depth > 0.70" for 1" Storm Event event
Inflow = 1.27 cfs @ 12.21 hrs, Volume= 0.150 af
Outflow = 1.27 cfs @ 12.21 hrs, Volume= 0.150 af, Atten= 0%, Lag= 0.0 min
Primary = 1.27 cfs @ 12.21 hrs, Volume= 0.150 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 9.20' @ 12.21 hrs
Flood Elev= 12.70'

Device	Routing	Invert	Outlet Devices
#1	Primary	7.82'	**24.0" Round Filter Culvert Out** L= 114.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 7.82' / 7.13' S= 0.0061 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Device 1	7.82'	**JF Filter-2 CSV File** Head (feet) 0.00 0.08 0.17 0.25 0.33 0.42 0.50 0.58 0.67 0.75 0.83 0.92 1.00 1.08 1.17 1.25 1.33 1.42 1.50 Disch. (cfs) 0.000 0.010 0.020 0.030 0.040 0.050 0.059 0.173 0.287 0.401 0.515 0.629 0.743 0.857 0.970 1.084 1.198 1.312 1.426
#3	Device 1	9.95'	**2.8' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=1.26 cfs @ 12.21 hrs HW=9.20' (Free Discharge)
└**1=Filter Culvert Out** (Passes 1.26 cfs of 7.28 cfs potential flow)
  ├**2=JF Filter-2 CSV File** (Custom Controls 1.26 cfs)
  └**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 12P: Jellyfish 2 JFPD0806-7-2

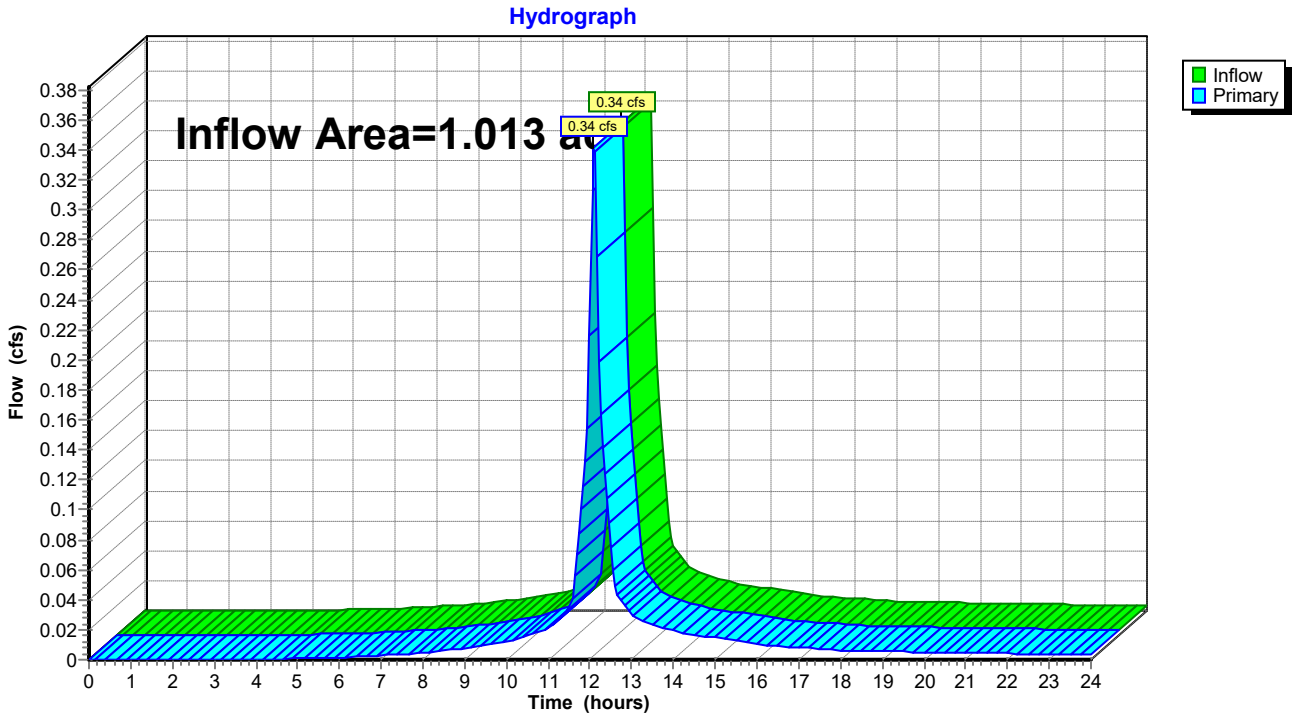


Summary for Link 1L: Fore Connector

Inflow Area = 1.013 ac, 56.83% Impervious, Inflow Depth > 0.31" for 1" Storm Event event
Inflow = 0.34 cfs @ 12.09 hrs, Volume= 0.026 af
Primary = 0.34 cfs @ 12.09 hrs, Volume= 0.026 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 1L: Fore Connector

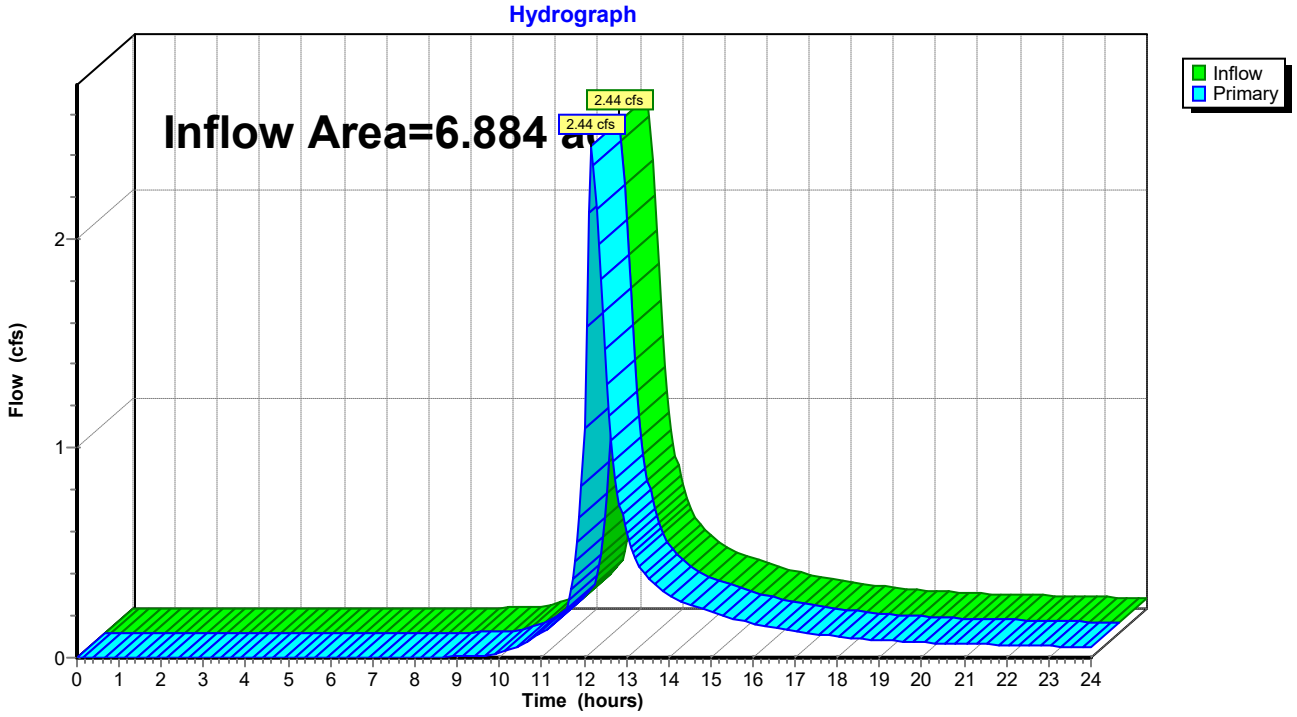


Summary for Link 2L: Fore River

Inflow Area = 6.884 ac, 89.99% Impervious, Inflow Depth > 0.48" for 1" Storm Event event
Inflow = 2.44 cfs @ 12.17 hrs, Volume= 0.277 af
Primary = 2.44 cfs @ 12.17 hrs, Volume= 0.277 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 2L: Fore River



Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Block 1B Runoff Area=27,045 sf 29.55% Impervious Runoff Depth>1.48"
Tc=6.0 min CN=56 Runoff=0.95 cfs 0.076 af

Subcatchment 2S: Western half of Runoff Area=17,090 sf 100.00% Impervious Runoff Depth>5.56"
Tc=6.0 min CN=98 Runoff=2.18 cfs 0.182 af

Subcatchment 3S: Eastern half of Runoff Area=17,090 sf 100.00% Impervious Runoff Depth>5.56"
Tc=6.0 min CN=98 Runoff=2.18 cfs 0.182 af

Subcatchment 4S: Shared Street - Trench Runoff Area=24,889 sf 82.21% Impervious Runoff Depth>4.43"
Tc=6.0 min CN=88 Runoff=2.81 cfs 0.211 af

Subcatchment 5S: Building 12 Runoff Area=3,244 sf 100.00% Impervious Runoff Depth>5.56"
Tc=6.0 min CN=98 Runoff=0.41 cfs 0.034 af

Subcatchment 6Sa: Plaza between Blocks Runoff Area=20,337 sf 96.07% Impervious Runoff Depth>5.32"
Tc=6.0 min CN=96 Runoff=2.56 cfs 0.207 af

Subcatchment 6Sb: Plaza between Blocks 1 Runoff Area=3,122 sf 71.75% Impervious Runoff Depth>3.70"
Tc=6.0 min CN=81 Runoff=0.30 cfs 0.022 af

Subcatchment 7S: Building 14 Runoff Area=2,572 sf 100.00% Impervious Runoff Depth>5.56"
Tc=6.0 min CN=98 Runoff=0.33 cfs 0.027 af

Subcatchment 8S: Building 15 Runoff Area=4,507 sf 100.00% Impervious Runoff Depth>5.56"
Tc=6.0 min CN=98 Runoff=0.57 cfs 0.048 af

Subcatchment 9S: Building 2 North Runoff Area=4,695 sf 100.00% Impervious Runoff Depth>5.56"
Tc=6.0 min CN=98 Runoff=0.60 cfs 0.050 af

Subcatchment 10S: Building 3 North Runoff Area=2,212 sf 100.00% Impervious Runoff Depth>5.56"
Tc=6.0 min CN=98 Runoff=0.28 cfs 0.024 af

Subcatchment 11S: Building 2 South Runoff Area=4,855 sf 100.00% Impervious Runoff Depth>5.56"
Tc=6.0 min CN=98 Runoff=0.62 cfs 0.052 af

Subcatchment 12S: Building 3 South Runoff Area=2,326 sf 100.00% Impervious Runoff Depth>5.56"
Tc=6.0 min CN=98 Runoff=0.30 cfs 0.025 af

Subcatchment 13S: Building 6 Runoff Area=3,304 sf 100.00% Impervious Runoff Depth>5.56"
Tc=6.0 min CN=98 Runoff=0.42 cfs 0.035 af

Subcatchment 14S: Building 6B North Runoff Area=3,873 sf 100.00% Impervious Runoff Depth>5.56"
Tc=6.0 min CN=98 Runoff=0.49 cfs 0.041 af

Subcatchment 15S: Building 6B South Runoff Area=2,512 sf 100.00% Impervious Runoff Depth>5.56"
Tc=6.0 min CN=98 Runoff=0.32 cfs 0.027 af

Subcatchment 16S: Shared Street - Trench Runoff Area=8,931 sf 90.72% Impervious Runoff Depth>4.98"
Tc=6.0 min CN=93 Runoff=1.09 cfs 0.085 af

Subcatchment 17S: Future Block 3 Runoff Area=9,998 sf 100.00% Impervious Runoff Depth>5.56"
Tc=6.0 min CN=98 Runoff=1.27 cfs 0.106 af

Subcatchment 18S: Plaza between Blocks Runoff Area=21,157 sf 99.67% Impervious Runoff Depth>5.56"
Tc=6.0 min CN=98 Runoff=2.70 cfs 0.225 af

Subcatchment 19S: Building 4A Runoff Area=66,038 sf 100.00% Impervious Runoff Depth>5.56"
Tc=6.0 min CN=98 Runoff=8.41 cfs 0.702 af

Subcatchment 20S: Redevelopment area Runoff Area=7,325 sf 69.01% Impervious Runoff Depth>3.60"
Tc=6.0 min CN=80 Runoff=0.69 cfs 0.050 af

Subcatchment 21S: Eastern Waterfront Runoff Area=86,898 sf 76.12% Impervious Runoff Depth>4.01"
Tc=6.0 min CN=84 Runoff=9.05 cfs 0.666 af

Pond 1P: DMH 1 Peak Elev=11.80' Inflow=9.50 cfs 0.763 af
21.0" Round Culvert n=0.013 L=61.0' S=0.0038 '/' Outflow=9.50 cfs 0.763 af

Pond 2P: DMH 2 Peak Elev=11.47' Inflow=10.23 cfs 0.820 af
21.0" Round Culvert n=0.013 L=31.0' S=0.0048 '/' Outflow=10.23 cfs 0.820 af

Pond 3P: Storm Structure Peak Elev=9.67' Inflow=10.23 cfs 0.820 af
15.0" Round Culvert x 3.00 n=0.013 L=4.0' S=0.0000 '/' Outflow=10.23 cfs 0.820 af

Pond 4P: R-Tank 1 Peak Elev=9.60' Storage=2,857 cf Inflow=10.23 cfs 0.820 af
21.0" Round Culvert n=0.013 L=4.0' S=0.0000 '/' Outflow=8.92 cfs 0.811 af

Pond 6P: CB27 Peak Elev=11.93' Inflow=14.16 cfs 1.176 af
24.0" Round Culvert n=0.013 L=22.0' S=0.0064 '/' Outflow=14.16 cfs 1.176 af

Pond 7P: Storm Structure Peak Elev=10.10' Inflow=14.16 cfs 1.176 af
15.0" Round Culvert x 3.00 n=0.013 L=4.0' S=0.0000 '/' Outflow=14.16 cfs 1.176 af

Pond 8P: R-Tank 2 Peak Elev=9.94' Storage=6,096 cf Inflow=14.16 cfs 1.176 af
24.0" Round Culvert n=0.013 L=4.0' S=0.0000 '/' Outflow=11.26 cfs 1.156 af

Pond 10P: DMH 5 Peak Elev=9.43' Inflow=20.13 cfs 1.967 af
30.0" Round Culvert n=0.013 L=83.1' S=0.0100 '/' Outflow=20.13 cfs 1.967 af

Pond 11P: Jellyfish 1 JFPD0806-4-2 Peak Elev=10.50' Inflow=8.92 cfs 0.811 af
Outflow=8.92 cfs 0.811 af

Pond 12P: Jellyfish 2 JFPD0806-7-2 Peak Elev=10.99' Inflow=11.26 cfs 1.156 af
Outflow=11.26 cfs 1.156 af

Link 1L: Fore Connector Inflow=3.11 cfs 0.258 af
Primary=3.11 cfs 0.258 af

Link 2L: Fore River

Inflow=30.21 cfs 2.790 af
Primary=30.21 cfs 2.790 af

Total Runoff Area = 7.898 ac Runoff Volume = 3.078 af Average Runoff Depth = 4.68"
14.27% Pervious = 1.127 ac 85.73% Impervious = 6.771 ac

Summary for Subcatchment 1S: Block 1B

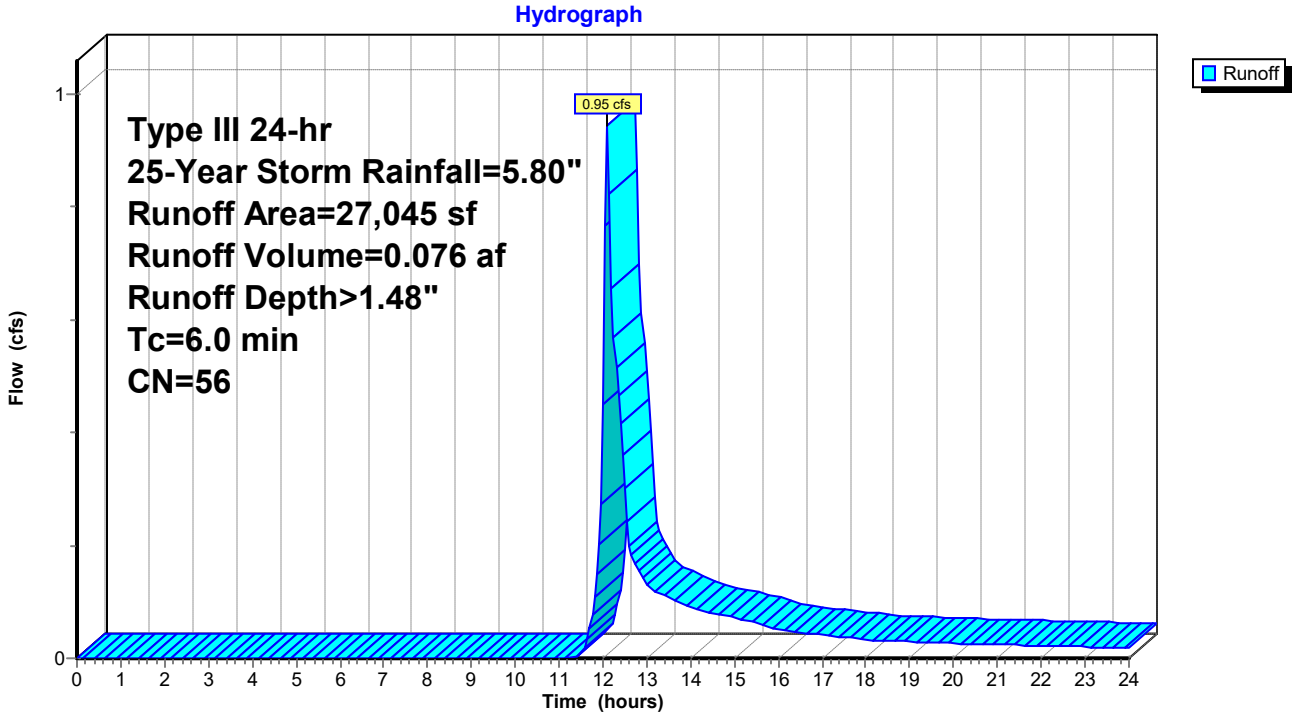
Runoff = 0.95 cfs @ 12.10 hrs, Volume= 0.076 af, Depth> 1.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	7,991	98	Impervious
	19,054	39	>75% Grass cover, Good, HSG A
	27,045	56	Weighted Average
	19,054		70.45% Pervious Area
	7,991		29.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1S: Block 1B



Summary for Subcatchment 2S: Western half of Building 1A

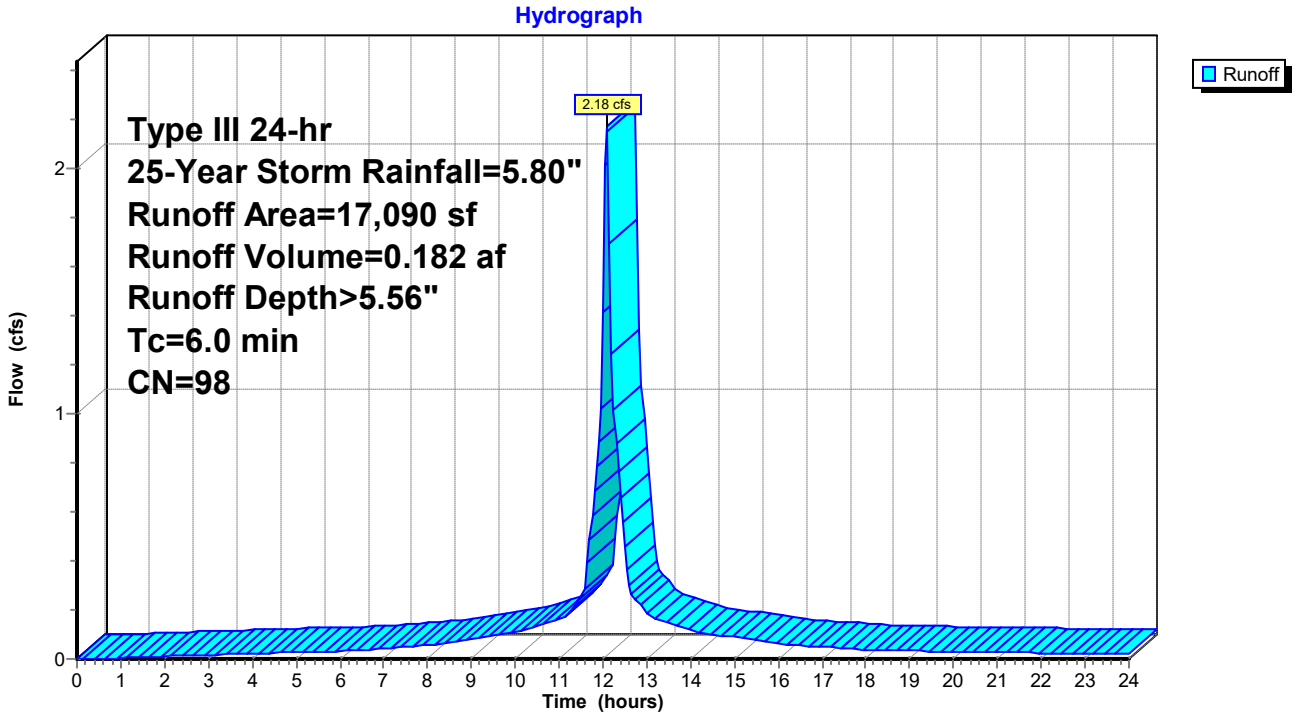
Runoff = 2.18 cfs @ 12.09 hrs, Volume= 0.182 af, Depth> 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	17,090	98	Roof
	17,090		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 2S: Western half of Building 1A



Summary for Subcatchment 3S: Eastern half of Building 1A

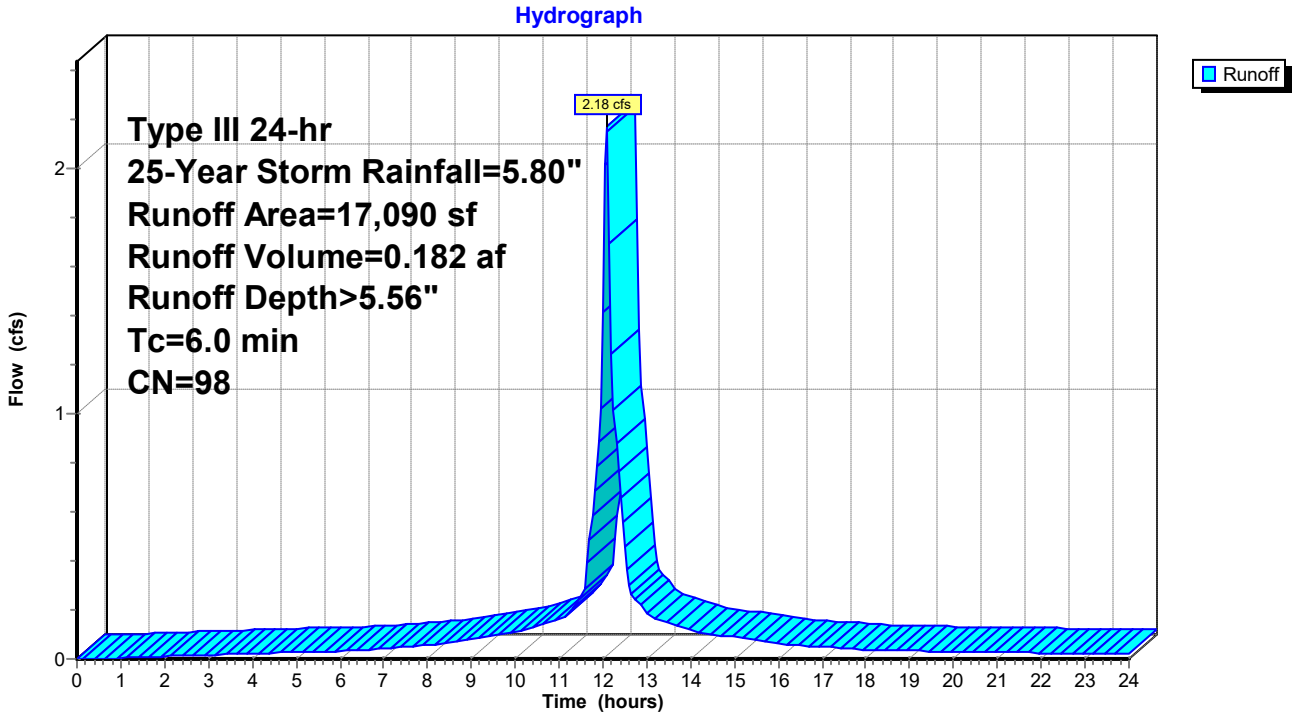
Runoff = 2.18 cfs @ 12.09 hrs, Volume= 0.182 af, Depth> 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	17,090	98	Roof
	17,090		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 3S: Eastern half of Building 1A



Summary for Subcatchment 4S: Shared Street - Trench Drain

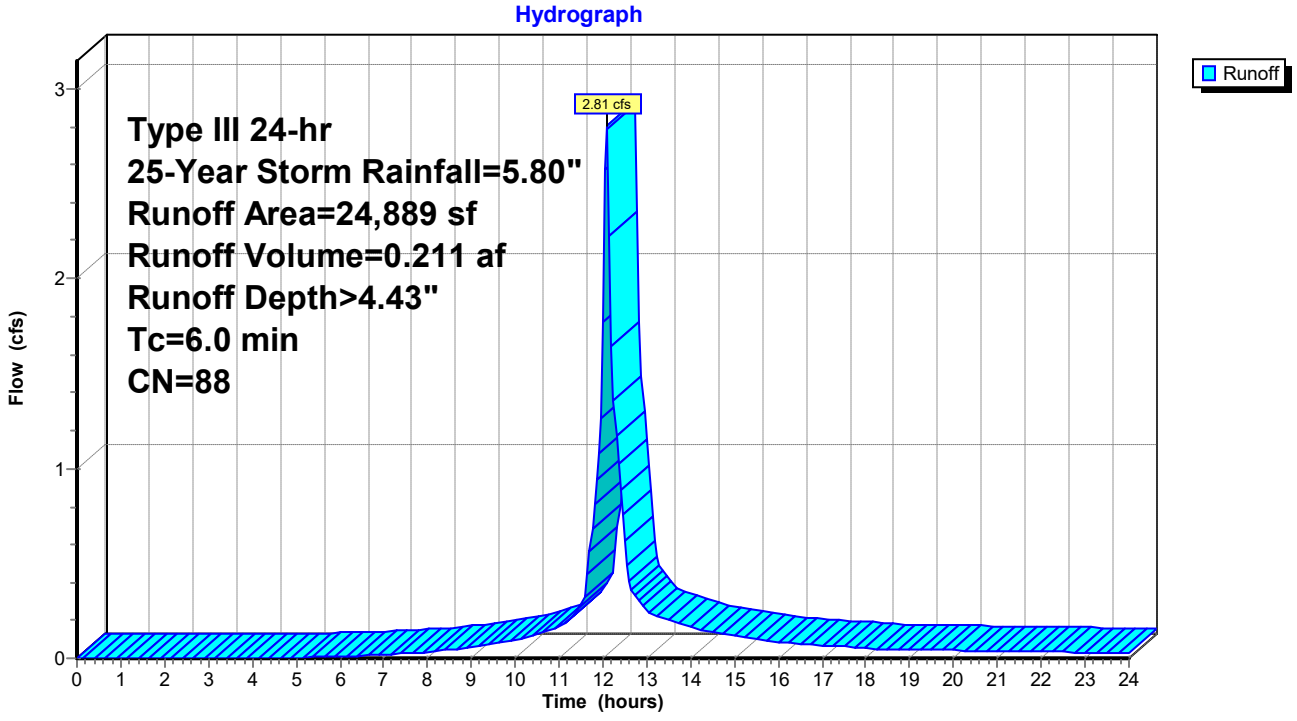
Runoff = 2.81 cfs @ 12.09 hrs, Volume= 0.211 af, Depth> 4.43"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
	4,428	39	>75% Grass cover, Good, HSG A
*	20,461	98	Impervious Shared Street and Plaza
	24,889	88	Weighted Average
	4,428		17.79% Pervious Area
	20,461		82.21% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 4S: Shared Street - Trench Drain



Summary for Subcatchment 5S: Building 12

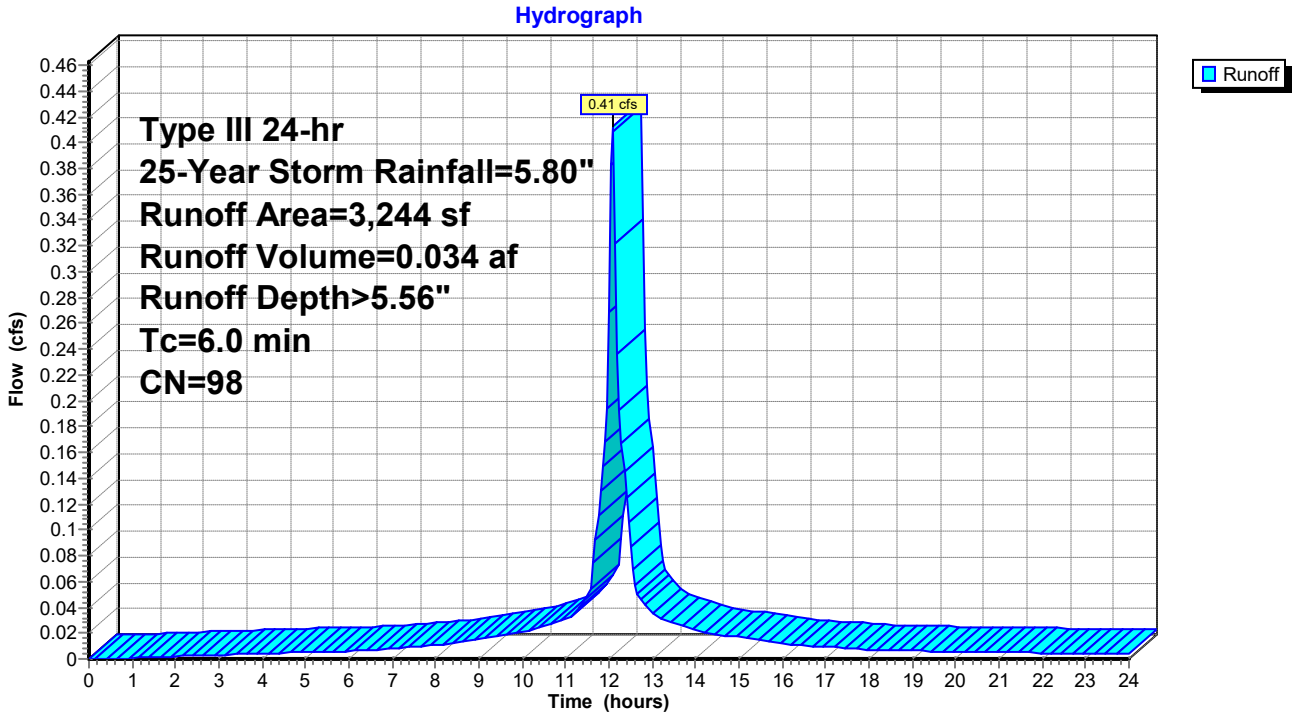
Runoff = 0.41 cfs @ 12.09 hrs, Volume= 0.034 af, Depth> 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	3,244	98	Roof
	3,244		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 5S: Building 12



Summary for Subcatchment 6Sa: Plaza between Blocks 1 & 2

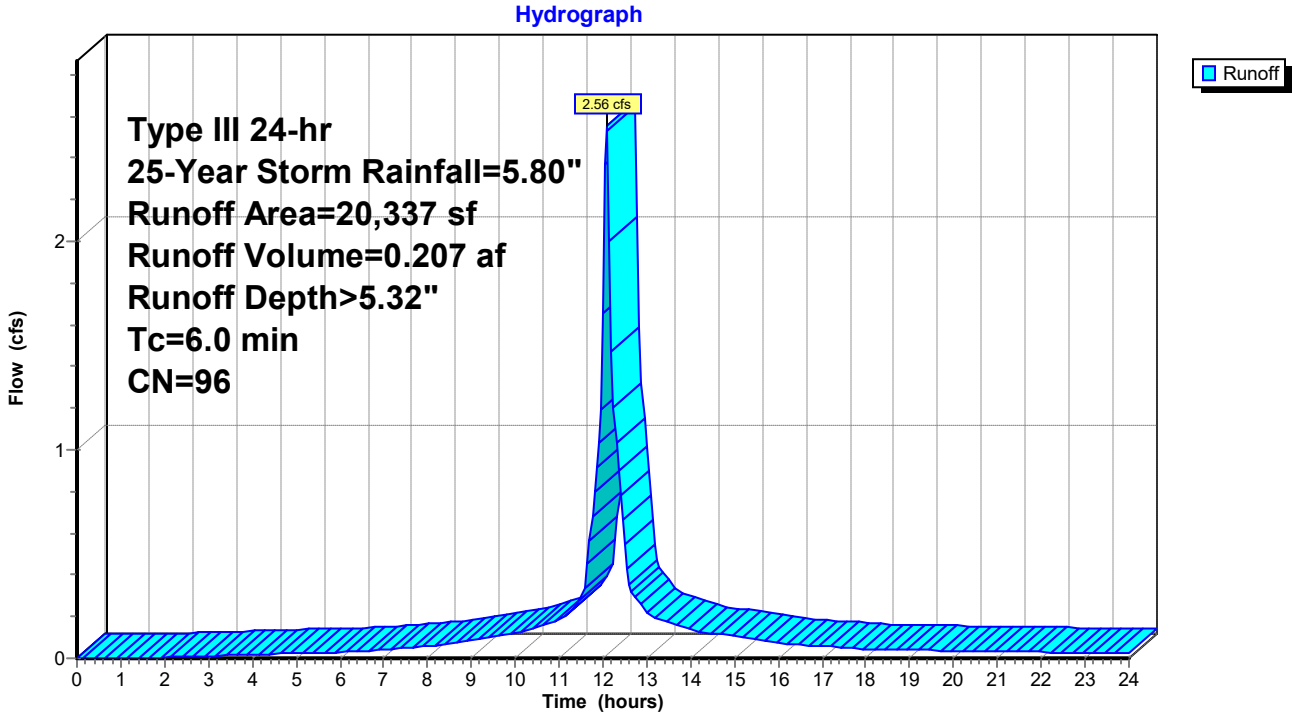
Runoff = 2.56 cfs @ 12.09 hrs, Volume= 0.207 af, Depth> 5.32"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	19,538	98	Impervious
	799	39	>75% Grass cover, Good, HSG A
	20,337	96	Weighted Average
	799		3.93% Pervious Area
	19,538		96.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 6Sa: Plaza between Blocks 1 & 2



Summary for Subcatchment 6Sb: Plaza between Blocks 1 & 2

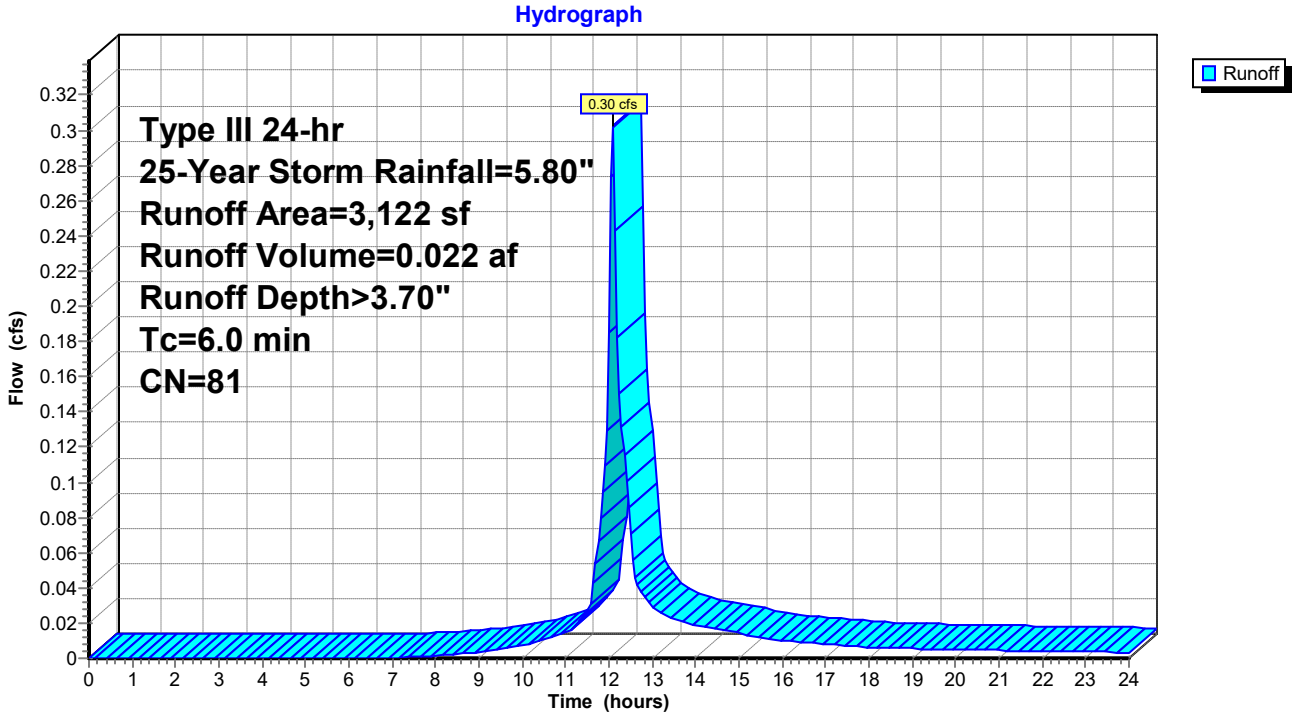
Runoff = 0.30 cfs @ 12.09 hrs, Volume= 0.022 af, Depth> 3.70"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	2,240	98	Impervious
	882	39	>75% Grass cover, Good, HSG A
	3,122	81	Weighted Average
	882		28.25% Pervious Area
	2,240		71.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 6Sb: Plaza between Blocks 1 & 2



Summary for Subcatchment 7S: Building 14

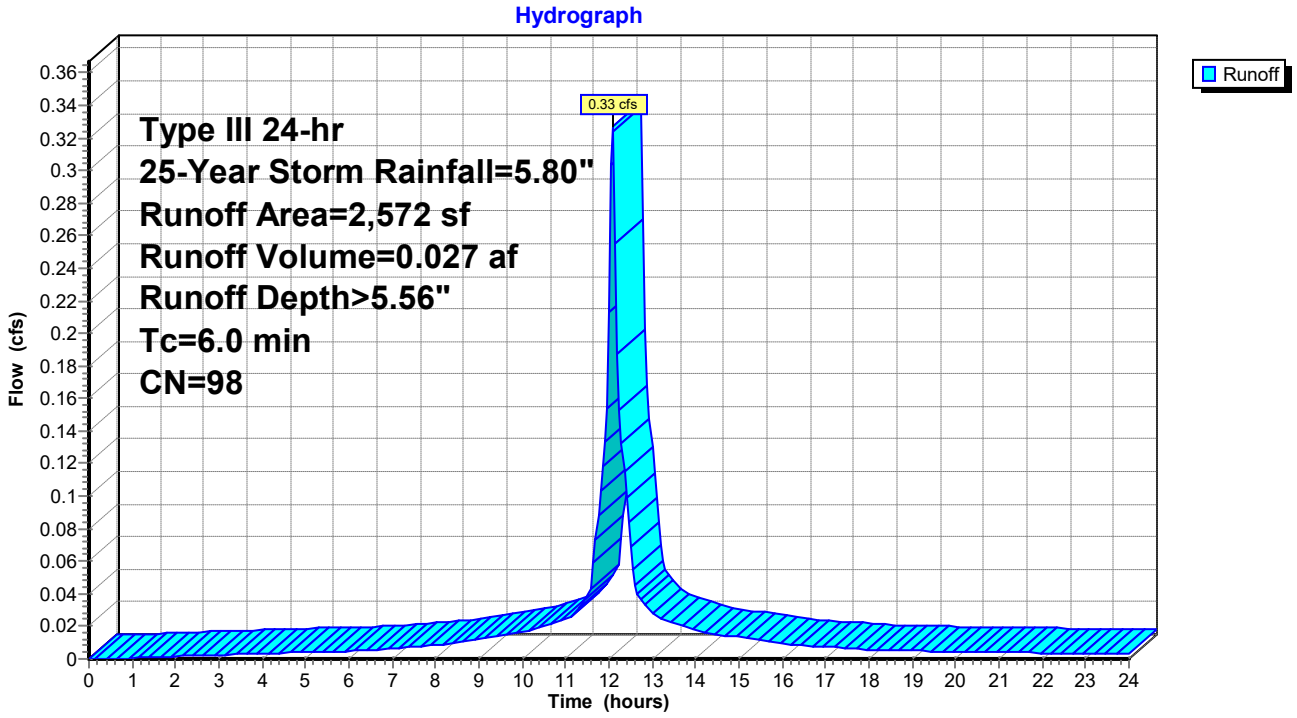
Runoff = 0.33 cfs @ 12.09 hrs, Volume= 0.027 af, Depth> 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	2,572	98	Roof
	2,572		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 7S: Building 14



Summary for Subcatchment 8S: Building 15

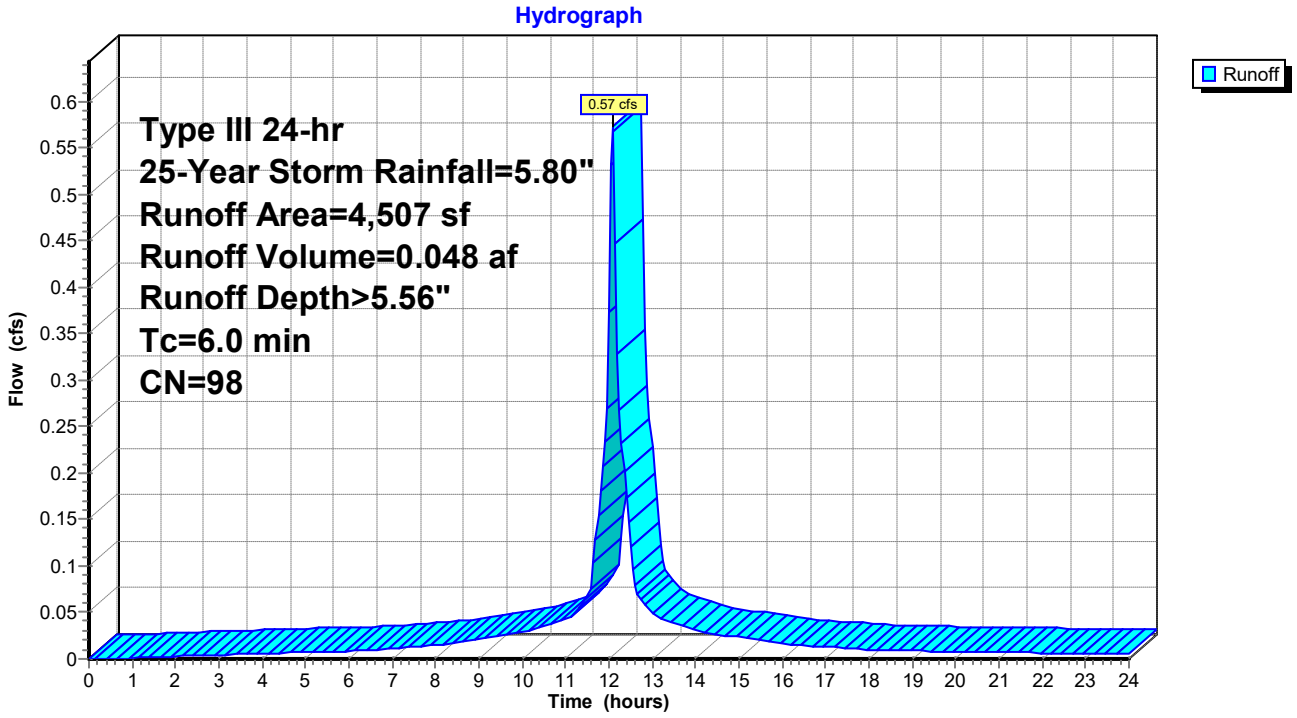
Runoff = 0.57 cfs @ 12.09 hrs, Volume= 0.048 af, Depth> 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	4,507	98	Roof
	4,507		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 8S: Building 15



Summary for Subcatchment 9S: Building 2 North

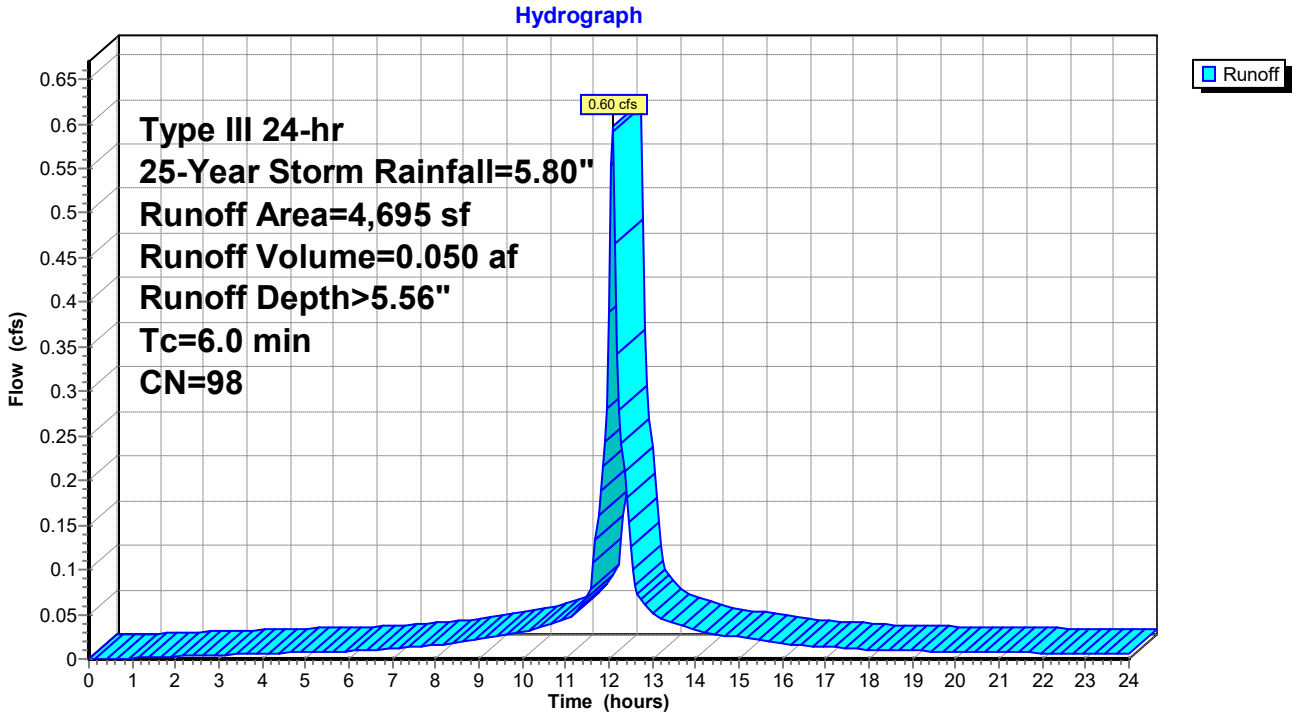
Runoff = 0.60 cfs @ 12.09 hrs, Volume= 0.050 af, Depth> 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	4,695	98	Roof
	4,695		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 9S: Building 2 North



Summary for Subcatchment 10S: Building 3 North

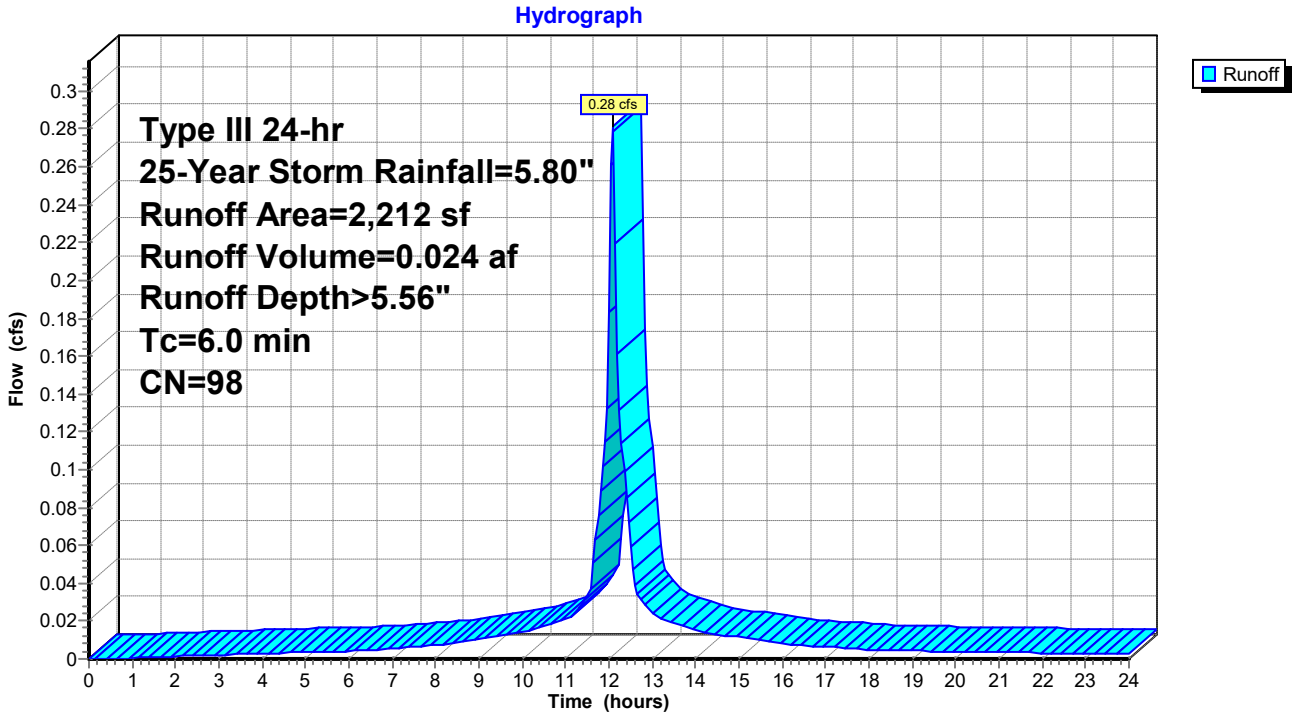
Runoff = 0.28 cfs @ 12.09 hrs, Volume= 0.024 af, Depth> 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	2,212	98	Roof
	2,212		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 10S: Building 3 North



Summary for Subcatchment 11S: Building 2 South

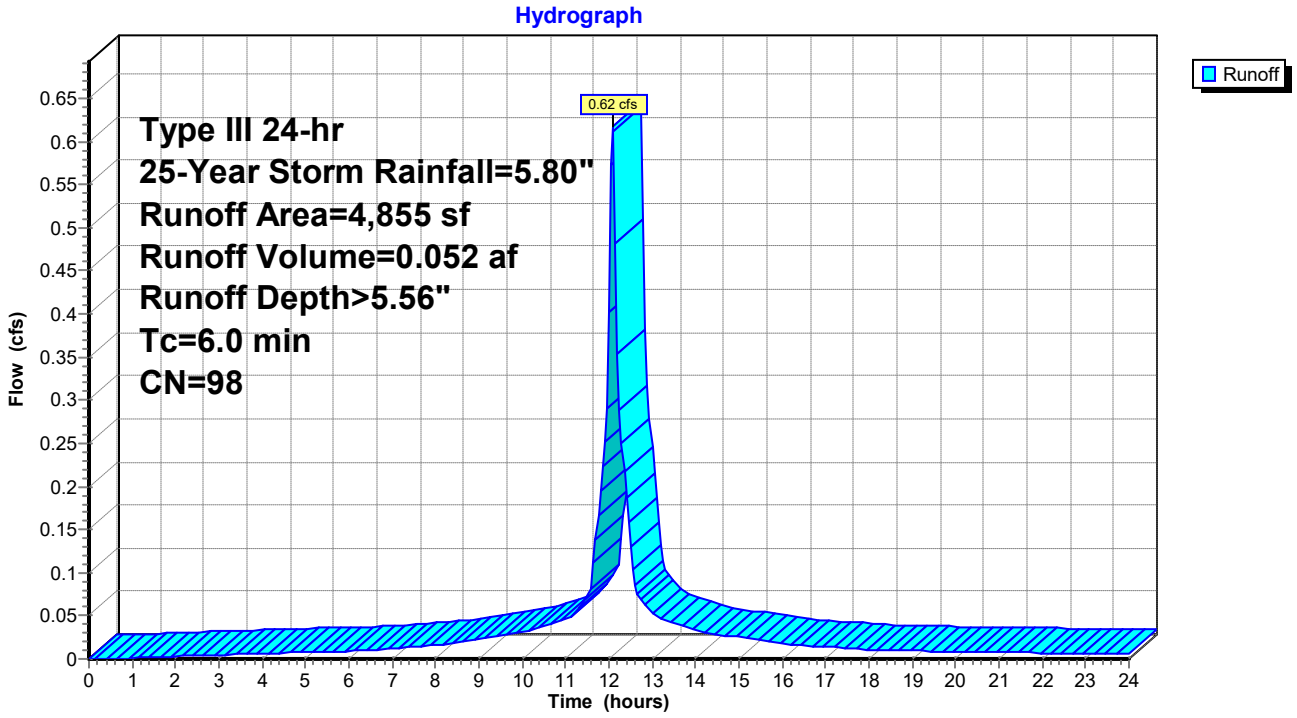
Runoff = 0.62 cfs @ 12.09 hrs, Volume= 0.052 af, Depth> 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	4,855	98	Roof
	4,855		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 11S: Building 2 South



Summary for Subcatchment 12S: Building 3 South

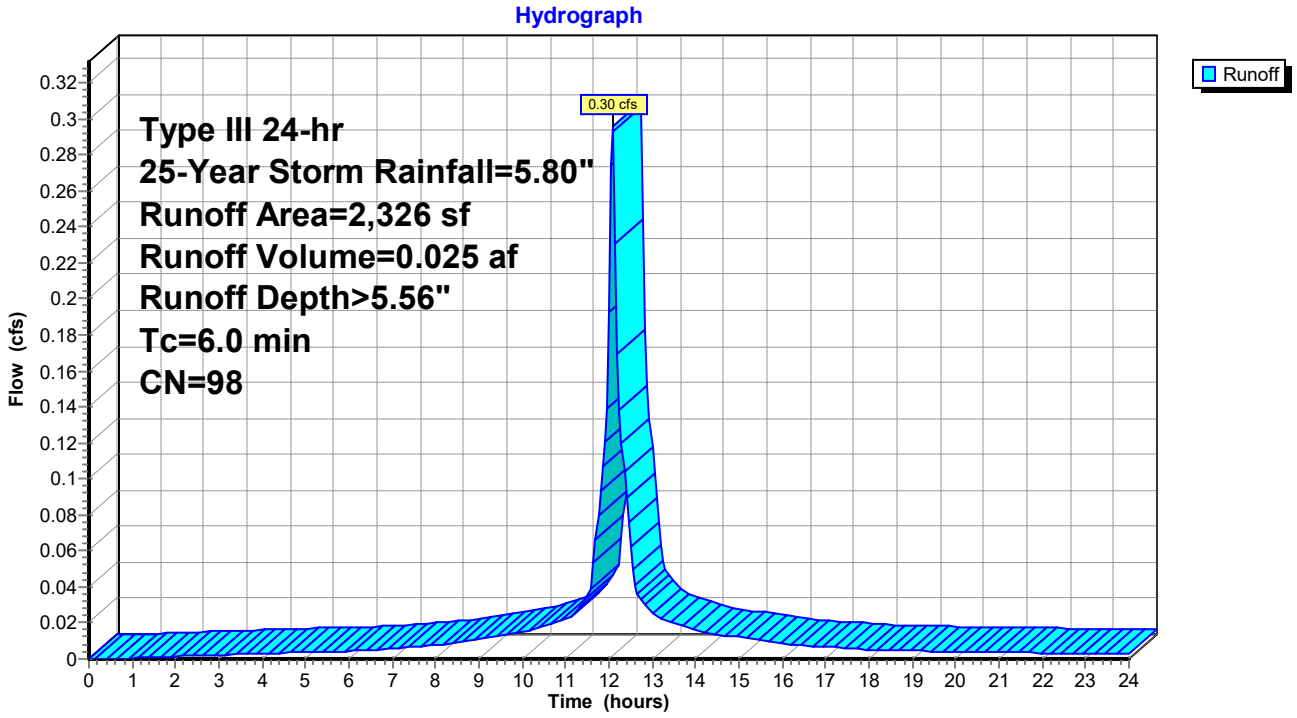
Runoff = 0.30 cfs @ 12.09 hrs, Volume= 0.025 af, Depth> 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	2,326	98	Roof
	2,326		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 12S: Building 3 South



Summary for Subcatchment 13S: Building 6

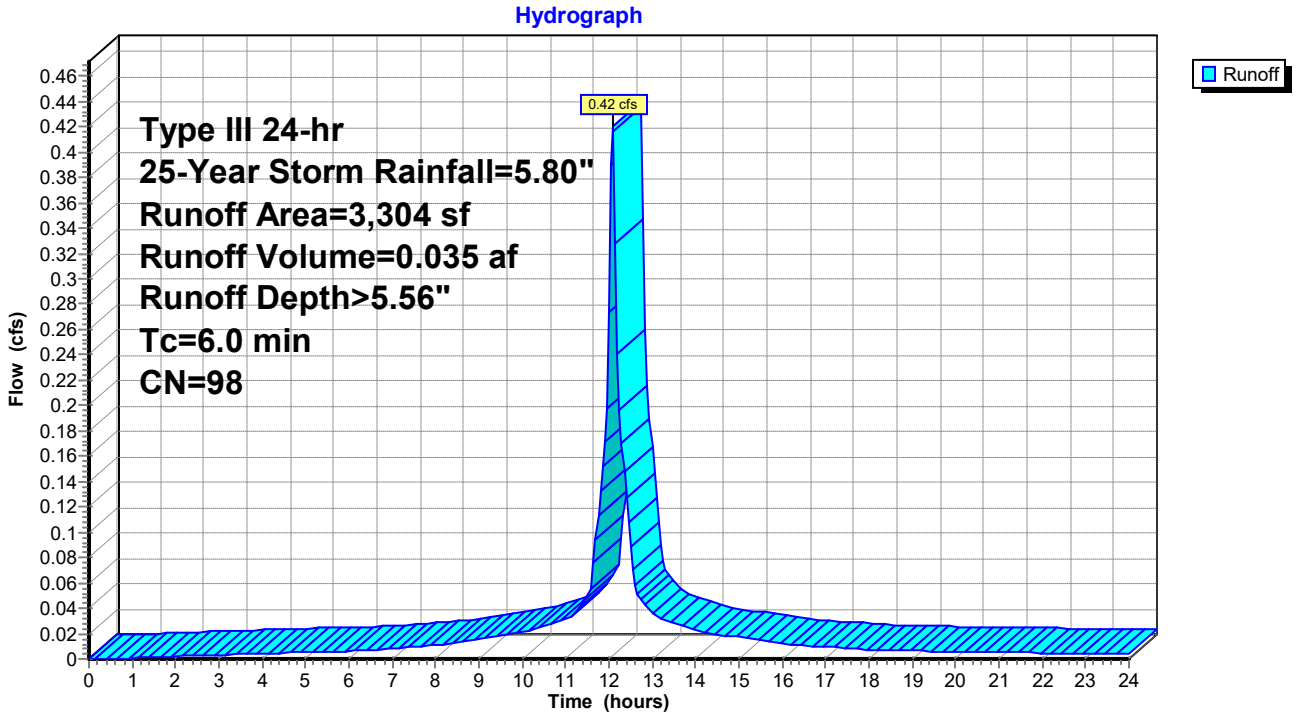
Runoff = 0.42 cfs @ 12.09 hrs, Volume= 0.035 af, Depth> 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	3,304	98	Roof
	3,304		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 13S: Building 6



Summary for Subcatchment 14S: Building 6B North

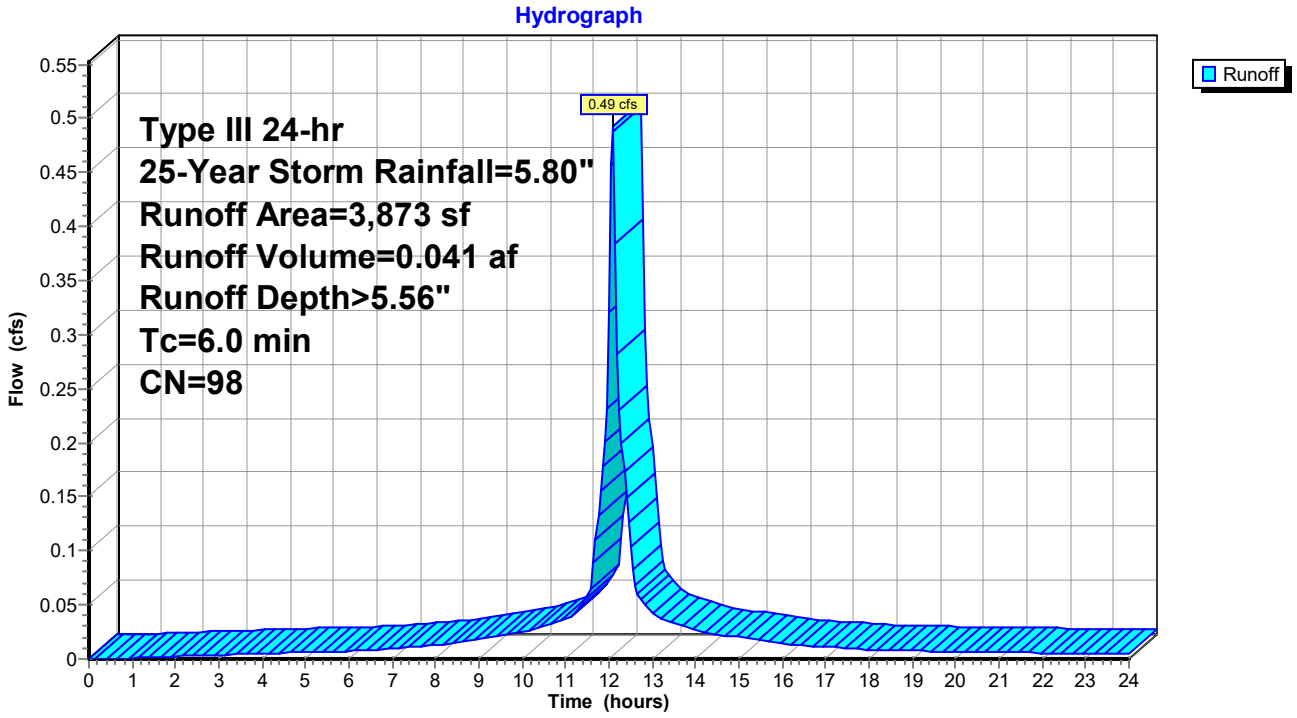
Runoff = 0.49 cfs @ 12.09 hrs, Volume= 0.041 af, Depth> 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	3,873	98	Roof
	3,873		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 14S: Building 6B North



Summary for Subcatchment 15S: Building 6B South

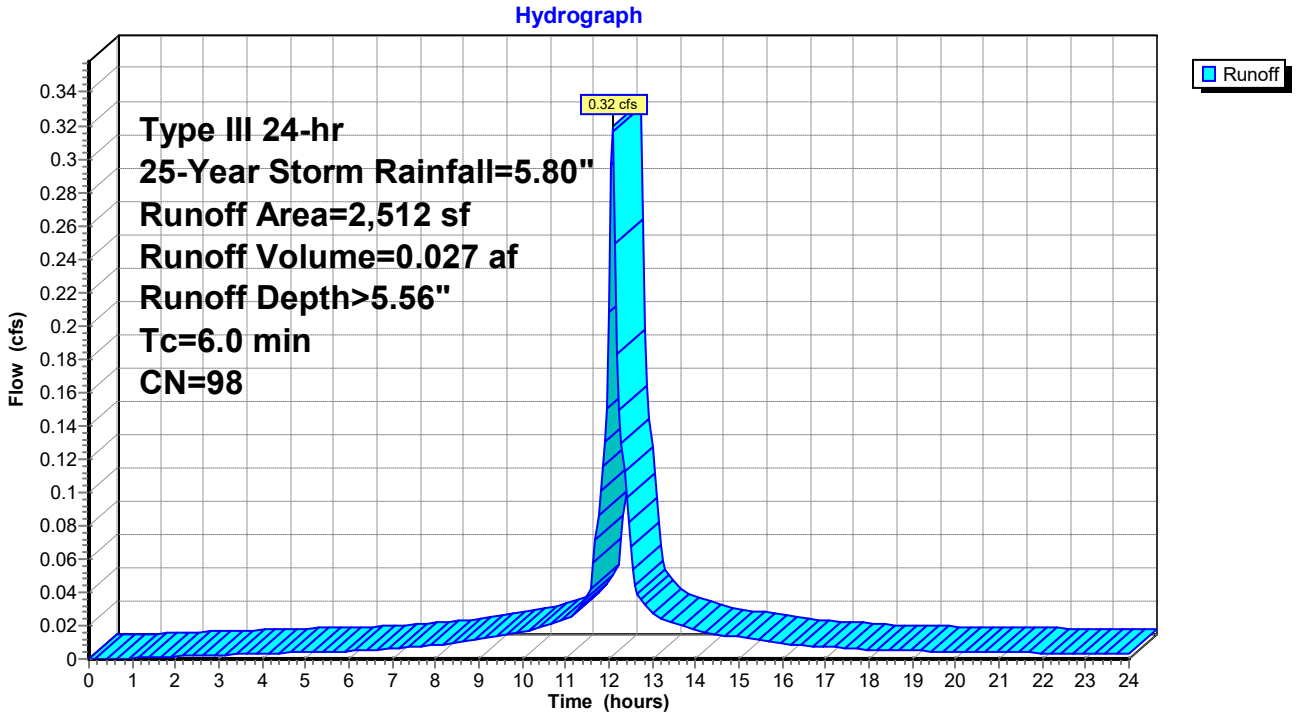
Runoff = 0.32 cfs @ 12.09 hrs, Volume= 0.027 af, Depth> 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	2,512	98	Roof
	2,512		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 15S: Building 6B South



Summary for Subcatchment 16S: Shared Street - Trench Drain

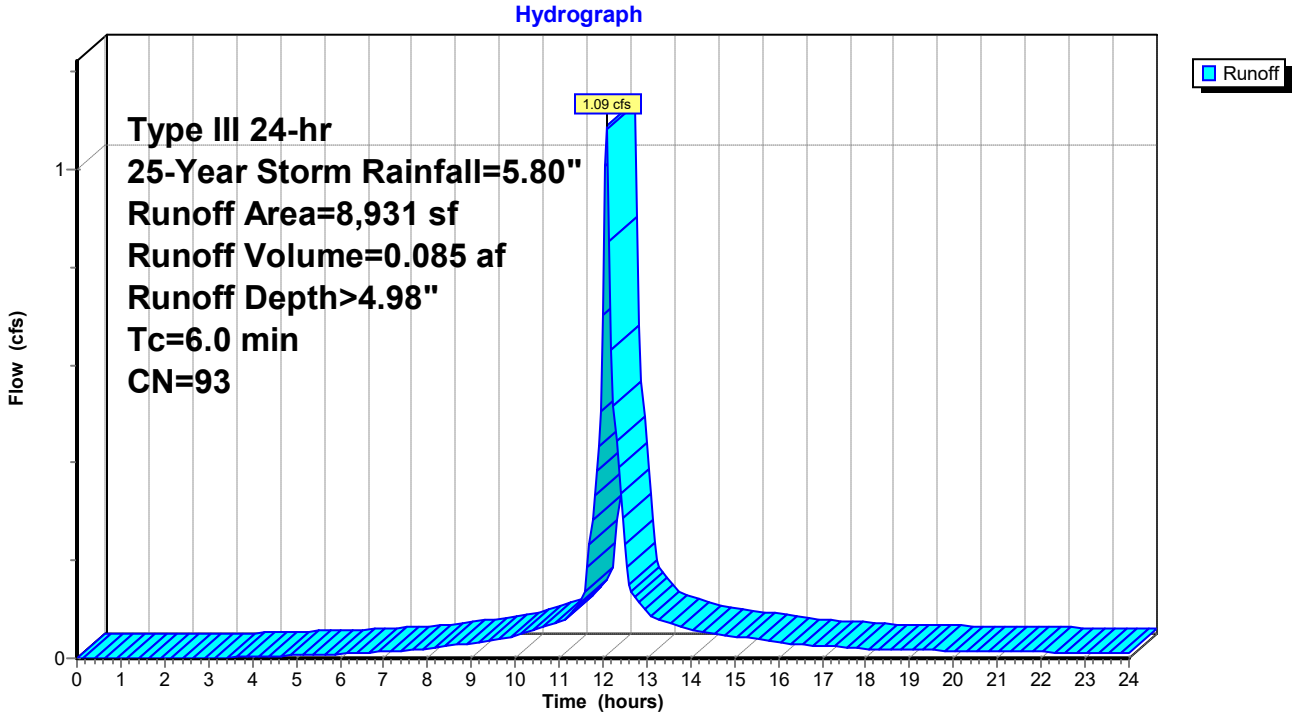
Runoff = 1.09 cfs @ 12.09 hrs, Volume= 0.085 af, Depth> 4.98"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
	829	39	>75% Grass cover, Good, HSG A
*	8,102	98	Impervious Shared Street
	8,931	93	Weighted Average
	829		9.28% Pervious Area
	8,102		90.72% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 16S: Shared Street - Trench Drain



Summary for Subcatchment 17S: Future Block 3 Building Footprint

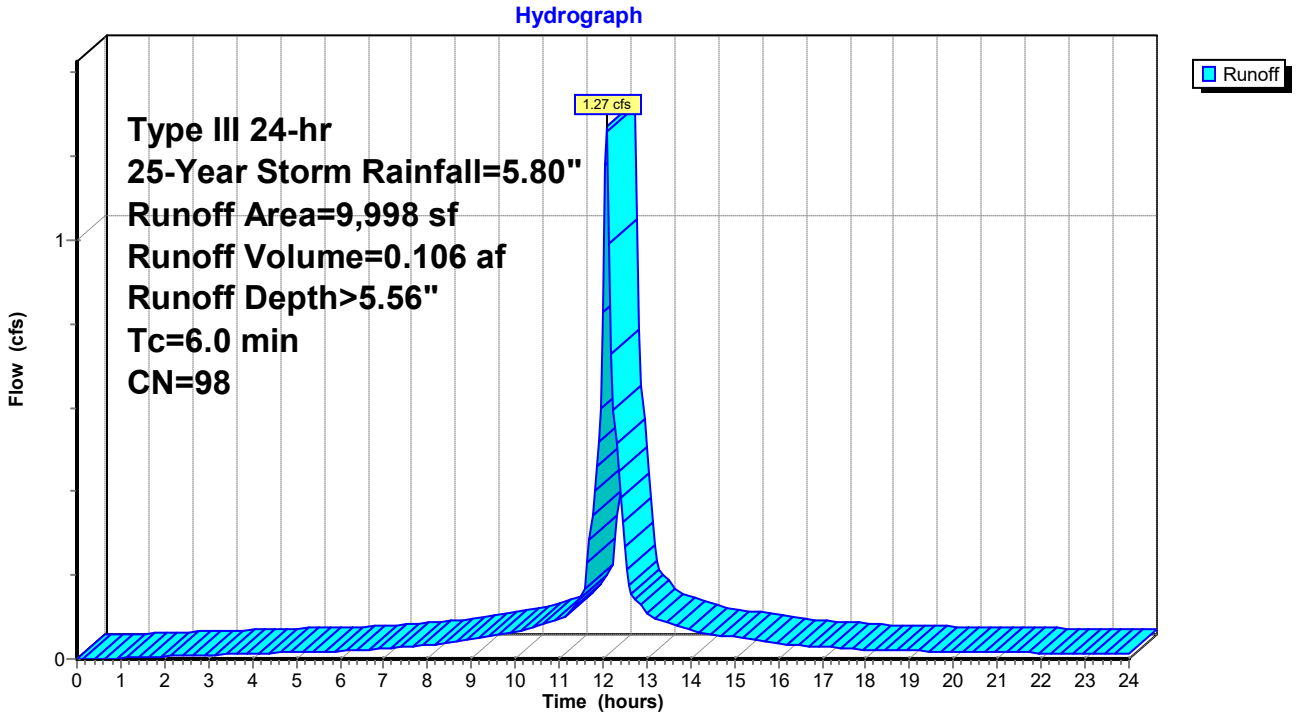
Runoff = 1.27 cfs @ 12.09 hrs, Volume= 0.106 af, Depth> 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	9,998	98	Gravel
	9,998		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 17S: Future Block 3 Building Footprint



Summary for Subcatchment 18S: Plaza between Blocks 2 & 4

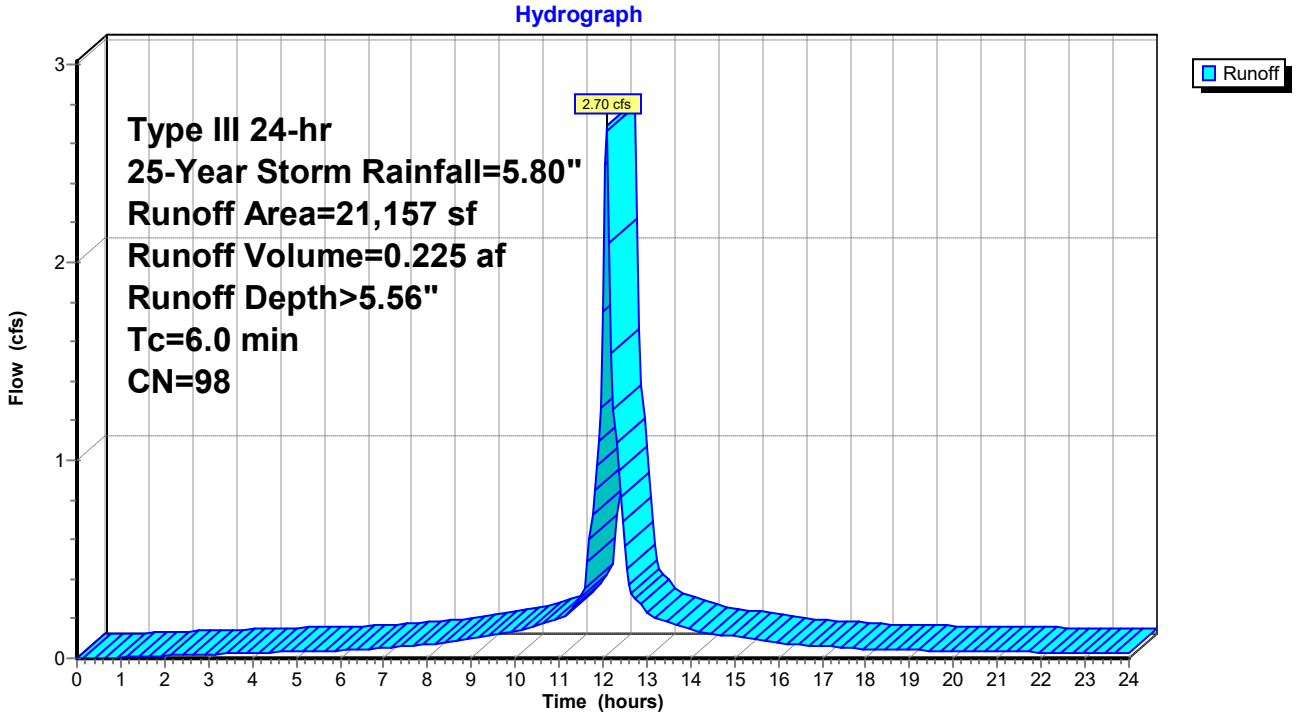
Runoff = 2.70 cfs @ 12.09 hrs, Volume= 0.225 af, Depth> 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	21,087	98	Impervious
	70	39	>75% Grass cover, Good, HSG A
	21,157	98	Weighted Average
	70		0.33% Pervious Area
	21,087		99.67% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 18S: Plaza between Blocks 2 & 4



Summary for Subcatchment 19S: Building 4A

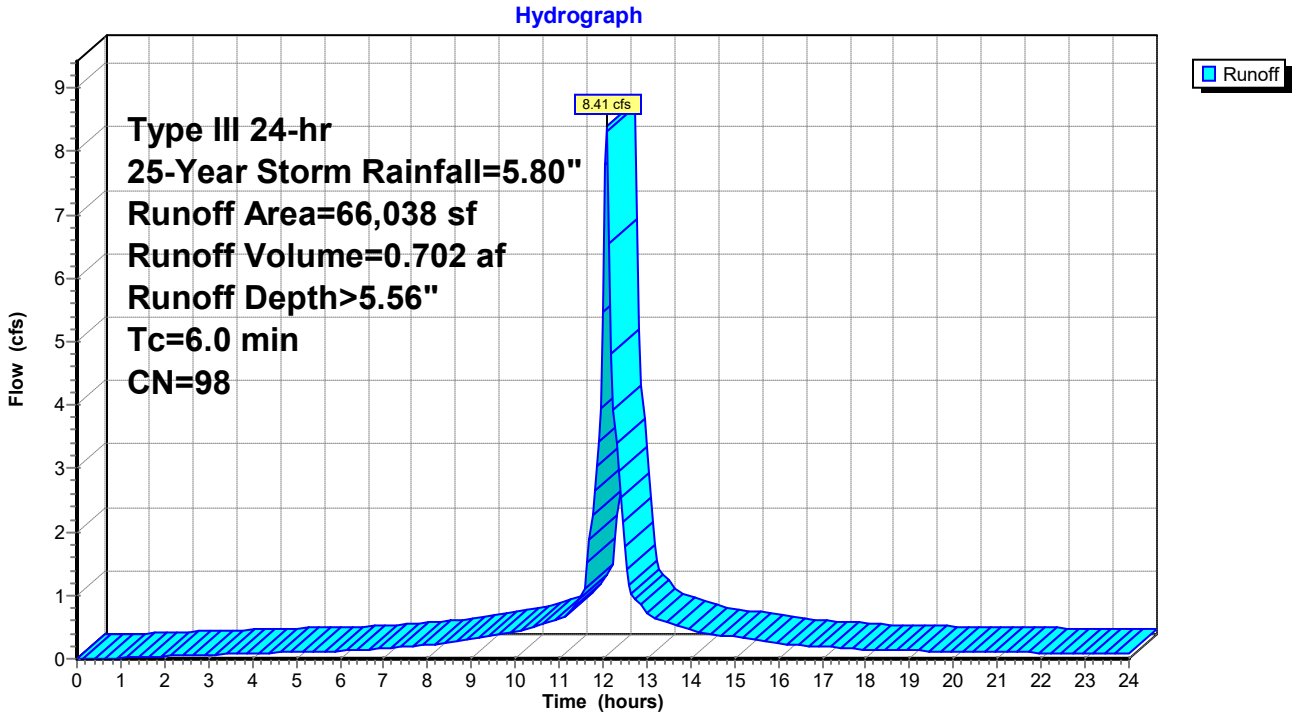
Runoff = 8.41 cfs @ 12.09 hrs, Volume= 0.702 af, Depth> 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	62,938	98	Parking garage
*	3,100	98	Roof
	66,038	98	Weighted Average
	66,038		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 19S: Building 4A



Summary for Subcatchment 20S: Redevelopment area east and south of Building 4A

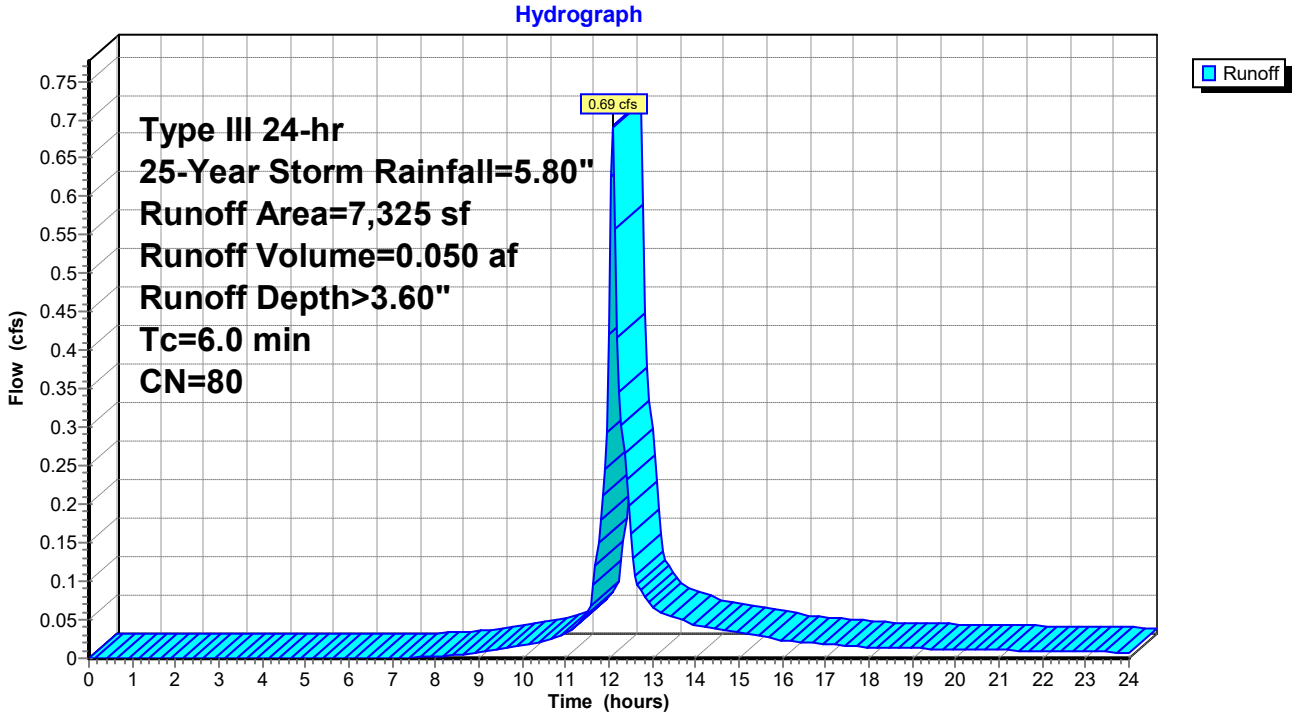
Runoff = 0.69 cfs @ 12.09 hrs, Volume= 0.050 af, Depth> 3.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	5,055	98	Impervious
	2,270	39	>75% Grass cover, Good, HSG A
	7,325	80	Weighted Average
	2,270		30.99% Pervious Area
	5,055		69.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 20S: Redevelopment area east and south of Building 4A



Summary for Subcatchment 21S: Eastern Waterfront

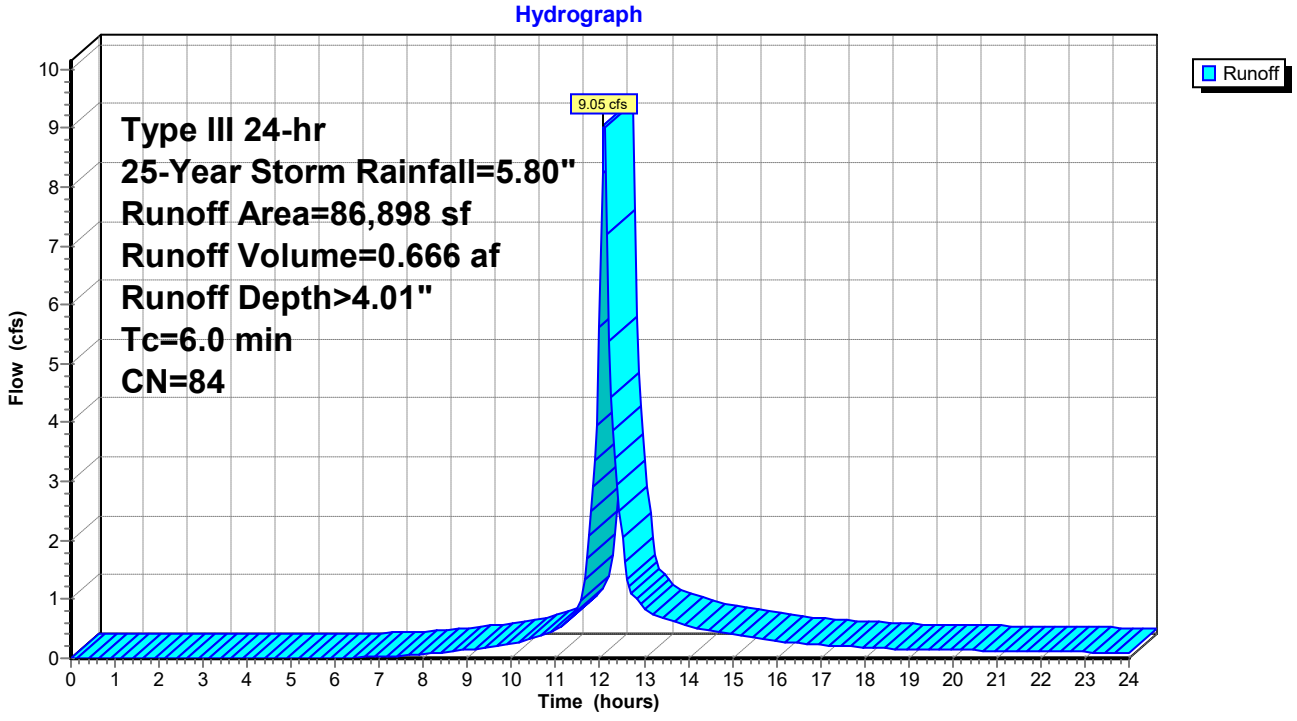
Runoff = 9.05 cfs @ 12.09 hrs, Volume= 0.666 af, Depth> 4.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	66,148	98	Impervious
	20,750	39	>75% Grass cover, Good, HSG A
	86,898	84	Weighted Average
	20,750		23.88% Pervious Area
	66,148		76.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 21S: Eastern Waterfront



Summary for Pond 1P: DMH 1

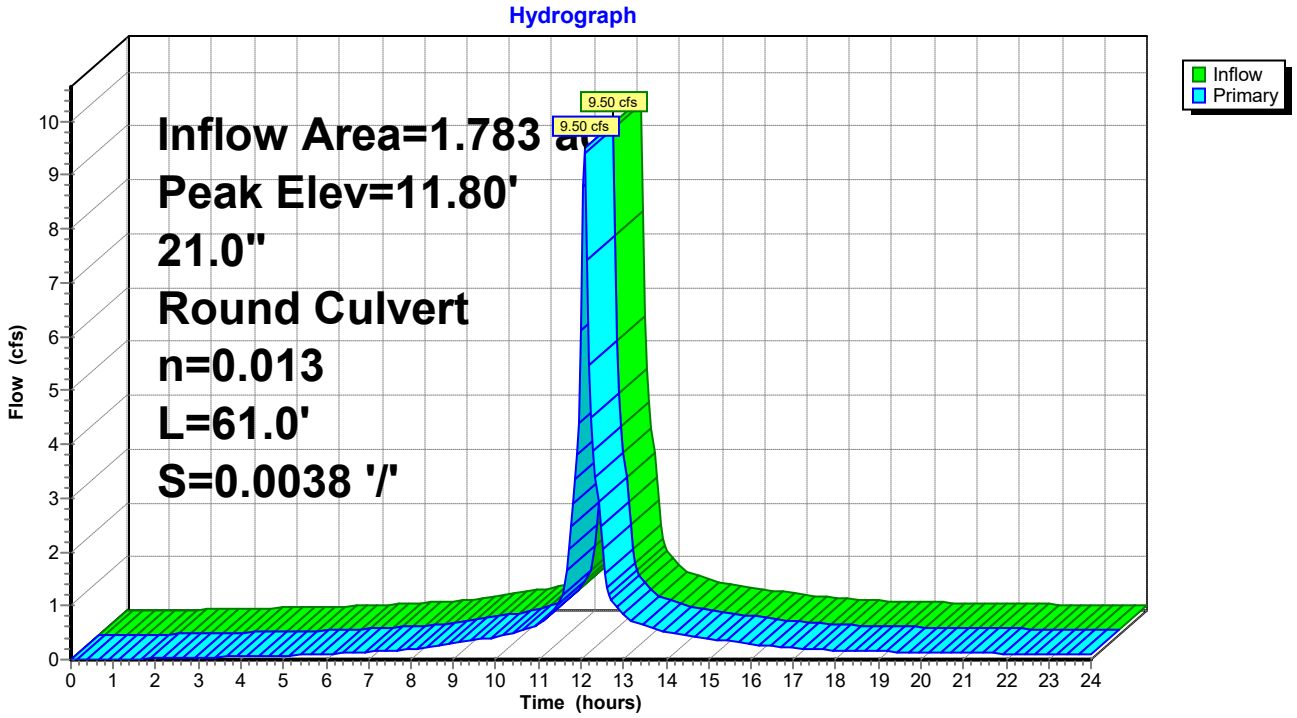
Inflow Area = 1.783 ac, 93.27% Impervious, Inflow Depth > 5.14" for 25-Year Storm event
Inflow = 9.50 cfs @ 12.09 hrs, Volume= 0.763 af
Outflow = 9.50 cfs @ 12.09 hrs, Volume= 0.763 af, Atten= 0%, Lag= 0.0 min
Primary = 9.50 cfs @ 12.09 hrs, Volume= 0.763 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 11.80' @ 12.09 hrs
Flood Elev= 14.71'

Device	Routing	Invert	Outlet Devices
#1	Primary	9.77'	**21.0" Round Culvert** L= 61.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 9.77' / 9.54' S= 0.0038 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 2.41 sf

Primary OutFlow Max=9.26 cfs @ 12.09 hrs HW=11.76' (Free Discharge)
1=Culvert (Barrel Controls 9.26 cfs @ 4.24 fps)

Pond 1P: DMH 1



Summary for Pond 2P: DMH 2

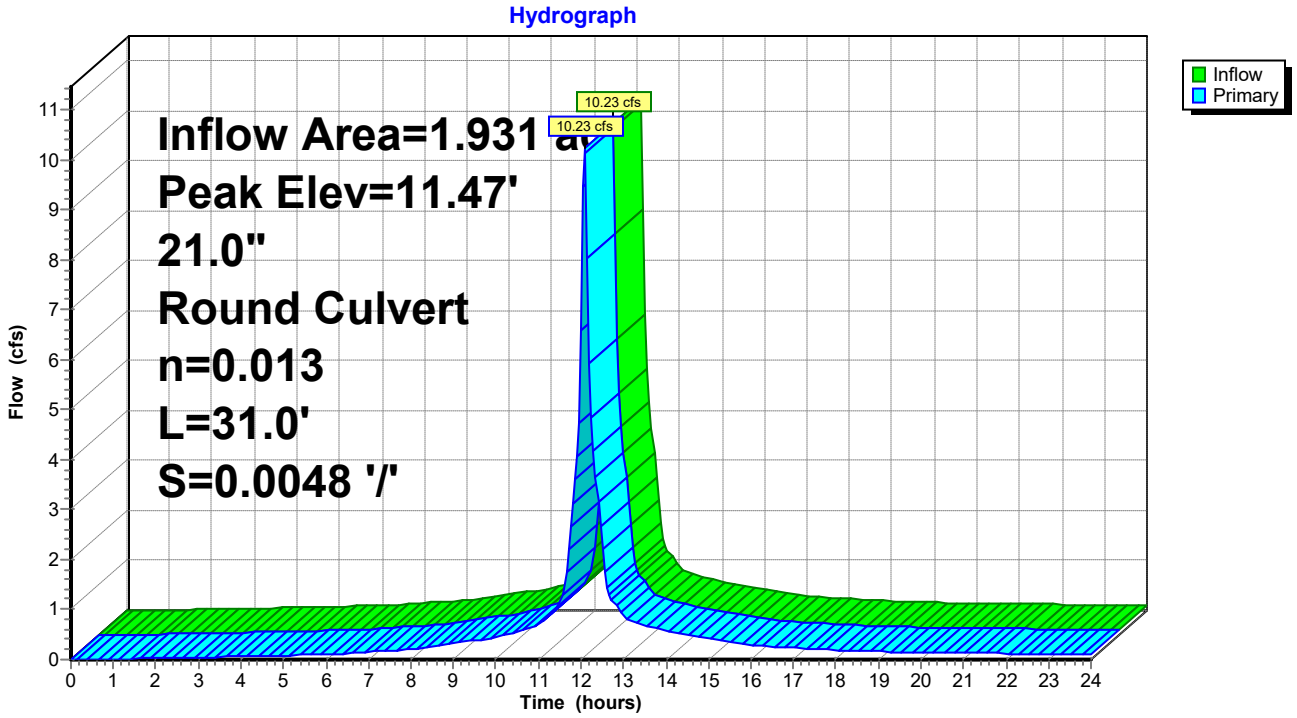
Inflow Area = 1.931 ac, 92.74% Impervious, Inflow Depth > 5.10" for 25-Year Storm event
Inflow = 10.23 cfs @ 12.09 hrs, Volume= 0.820 af
Outflow = 10.23 cfs @ 12.09 hrs, Volume= 0.820 af, Atten= 0%, Lag= 0.0 min
Primary = 10.23 cfs @ 12.09 hrs, Volume= 0.820 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 11.47' @ 12.09 hrs
Flood Elev= 14.63'

Device	Routing	Invert	Outlet Devices
#1	Primary	9.50'	**21.0" Round Culvert** L= 31.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 9.50' / 9.35' S= 0.0048 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 2.41 sf

Primary OutFlow Max=9.96 cfs @ 12.09 hrs HW=11.43' (Free Discharge)
1=Culvert (Barrel Controls 9.96 cfs @ 4.68 fps)

Pond 2P: DMH 2



Summary for Pond 3P: Storm Structure

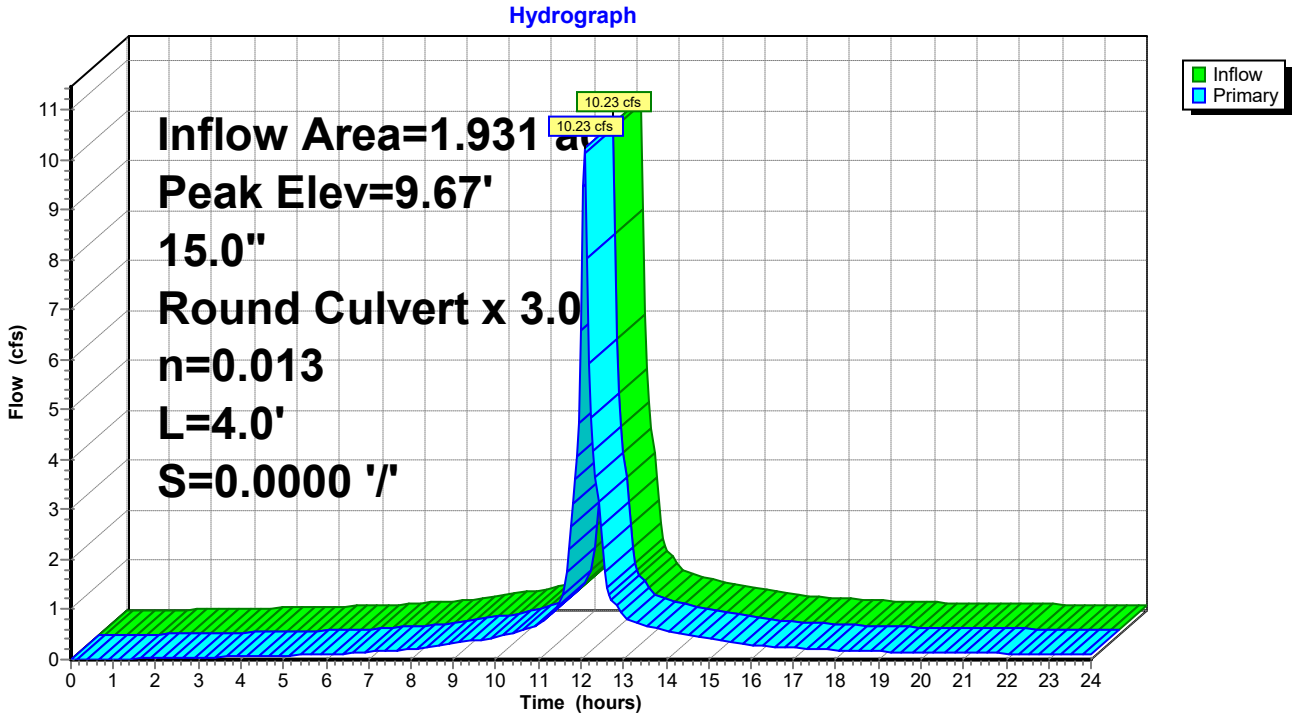
Inflow Area = 1.931 ac, 92.74% Impervious, Inflow Depth > 5.10" for 25-Year Storm event
Inflow = 10.23 cfs @ 12.09 hrs, Volume= 0.820 af
Outflow = 10.23 cfs @ 12.09 hrs, Volume= 0.820 af, Atten= 0%, Lag= 0.0 min
Primary = 10.23 cfs @ 12.09 hrs, Volume= 0.820 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 9.67' @ 12.09 hrs
Flood Elev= 14.51'

Device	Routing	Invert	Outlet Devices
#1	Primary	8.35'	**15.0" Round Culvert X 3.00** L= 4.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 8.35' / 8.35' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=9.96 cfs @ 12.09 hrs HW=9.64' (Free Discharge)
1=Culvert (Barrel Controls 9.96 cfs @ 3.25 fps)

Pond 3P: Storm Structure



Summary for Pond 4P: R-Tank 1

Inflow Area = 1.931 ac, 92.74% Impervious, Inflow Depth > 5.10" for 25-Year Storm event
Inflow = 10.23 cfs @ 12.09 hrs, Volume= 0.820 af
Outflow = 8.92 cfs @ 12.14 hrs, Volume= 0.811 af, Atten= 13%, Lag= 2.9 min
Primary = 8.92 cfs @ 12.14 hrs, Volume= 0.811 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 9.60' @ 12.14 hrs Surf.Area= 1,597 sf Storage= 2,857 cf
Flood Elev= 10.42' Surf.Area= 1,597 sf Storage= 3,504 cf

Plug-Flow detention time= 20.9 min calculated for 0.809 af (99% of inflow)
Center-of-Mass det. time= 13.7 min (776.2 - 762.5)

Volume	Invert	Avail.Storage	Storage Description
#1	7.35'	1,478 cf	**Stone Envelope (Prismatic)** Listed below (Recalc) 6,500 cf Overall - 2,806 cf Embedded = 3,694 cf x 40.0% Voids
#2	7.60'	2,666 cf	**R-Tank Double Modules (Prismatic)** Listed below (Recalc) Inside #1 2,806 cf Overall x 95.0% Voids
		4,143 cf	Total Available Storage

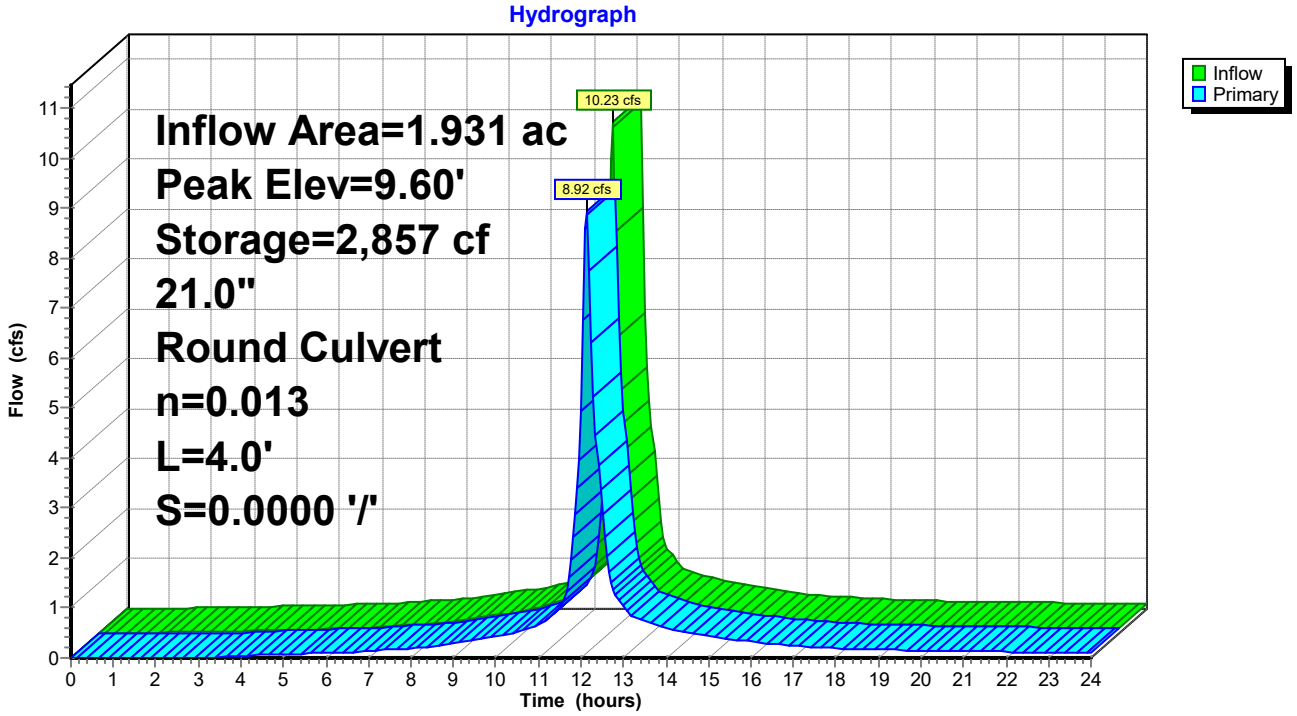
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
7.35	1,597	0	0
11.42	1,597	6,500	6,500

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
7.60	1,293	0	0
9.77	1,293	2,806	2,806

Device	Routing	Invert	Outlet Devices
#1	Primary	7.60'	**21.0" Round Culvert to Filter** L= 4.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 7.60' / 7.60' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 2.41 sf

Primary OutFlow Max=8.77 cfs @ 12.14 hrs HW=9.57' (Free Discharge)
↑—**1=Culvert to Filter** (Barrel Controls 8.77 cfs @ 4.04 fps)

Pond 4P: R-Tank 1



Summary for Pond 6P: CB27

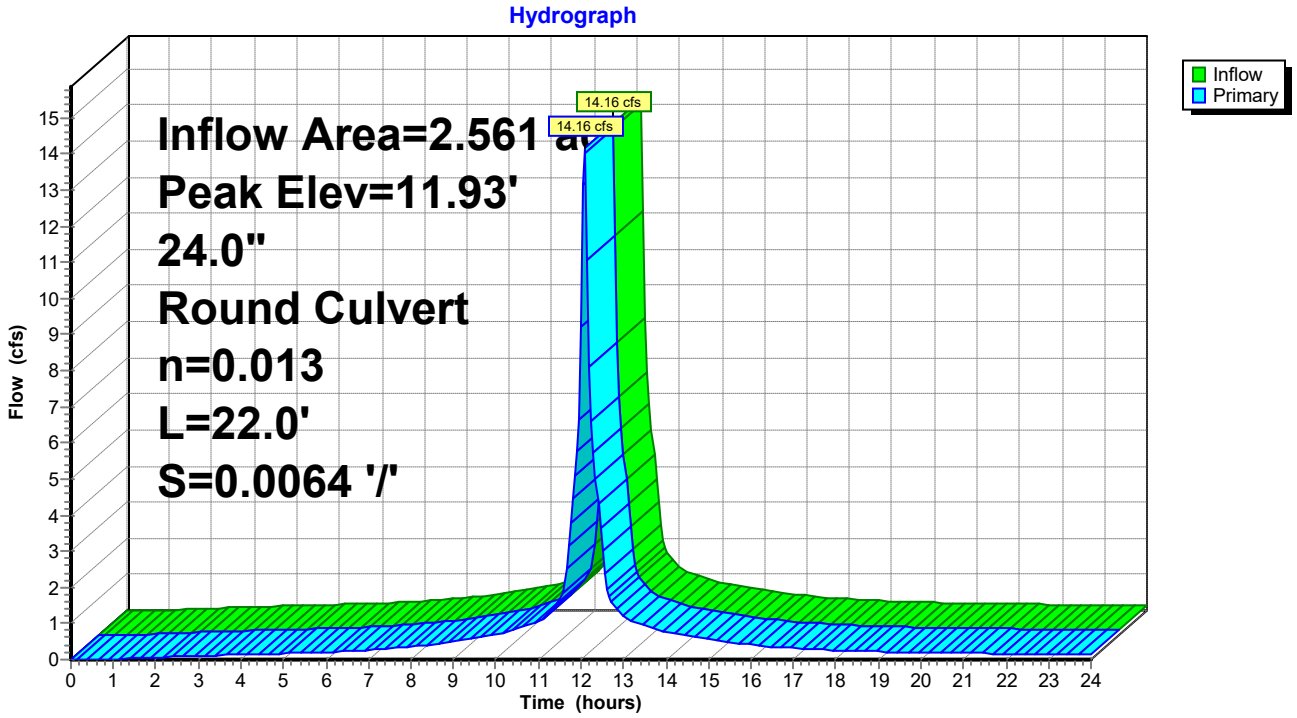
Inflow Area = 2.561 ac, 99.19% Impervious, Inflow Depth > 5.51" for 25-Year Storm event
Inflow = 14.16 cfs @ 12.09 hrs, Volume= 1.176 af
Outflow = 14.16 cfs @ 12.09 hrs, Volume= 1.176 af, Atten= 0%, Lag= 0.0 min
Primary = 14.16 cfs @ 12.09 hrs, Volume= 1.176 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 11.93' @ 12.09 hrs
Flood Elev= 14.57'

Device	Routing	Invert	Outlet Devices
#1	Primary	9.53'	**24.0" Round Culvert** L= 22.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 9.53' / 9.39' S= 0.0064 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=13.80 cfs @ 12.09 hrs HW=11.88' (Free Discharge)
1=Culvert (Barrel Controls 13.80 cfs @ 4.71 fps)

Pond 6P: CB27



Summary for Pond 7P: Storm Structure

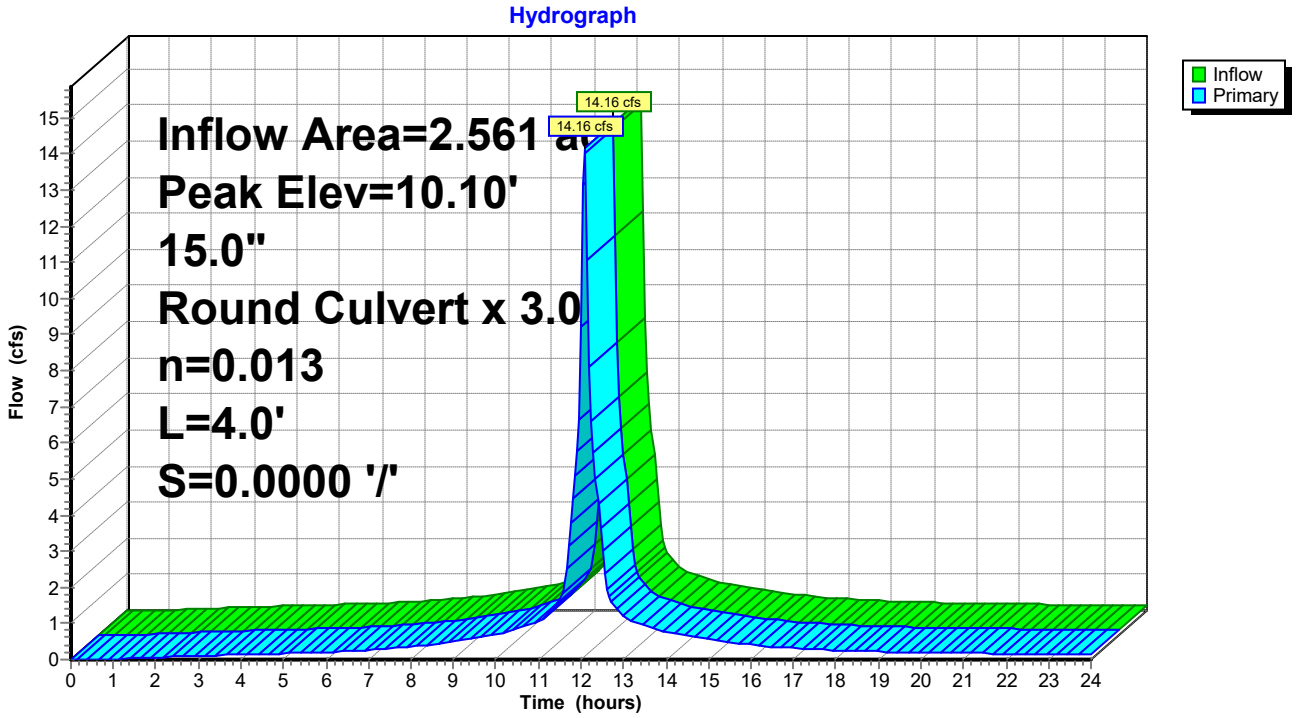
Inflow Area = 2.561 ac, 99.19% Impervious, Inflow Depth > 5.51" for 25-Year Storm event
Inflow = 14.16 cfs @ 12.09 hrs, Volume= 1.176 af
Outflow = 14.16 cfs @ 12.09 hrs, Volume= 1.176 af, Atten= 0%, Lag= 0.0 min
Primary = 14.16 cfs @ 12.09 hrs, Volume= 1.176 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 10.10' @ 12.09 hrs
Flood Elev= 14.25'

Device	Routing	Invert	Outlet Devices
#1	Primary	8.39'	**15.0" Round Culvert X 3.00** L= 4.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 8.39' / 8.39' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=13.62 cfs @ 12.09 hrs HW=10.06' (Free Discharge)
1=Culvert (Barrel Controls 13.62 cfs @ 3.70 fps)

Pond 7P: Storm Structure



Summary for Pond 8P: R-Tank 2

Inflow Area = 2.561 ac, 99.19% Impervious, Inflow Depth > 5.51" for 25-Year Storm event
Inflow = 14.16 cfs @ 12.09 hrs, Volume= 1.176 af
Outflow = 11.26 cfs @ 12.15 hrs, Volume= 1.156 af, Atten= 21%, Lag= 4.0 min
Primary = 11.26 cfs @ 12.15 hrs, Volume= 1.156 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 9.94' @ 12.15 hrs Surf.Area= 3,128 sf Storage= 6,096 cf
Flood Elev= 12.71' Surf.Area= 3,128 sf Storage= 8,290 cf

Plug-Flow detention time= 32.8 min calculated for 1.154 af (98% of inflow)
Center-of-Mass det. time= 21.9 min (769.2 - 747.3)

Volume	Invert	Avail.Storage	Storage Description
#1	7.57'	2,767 cf	**Stone Envelope (Prismatic)** Listed below (Recalc) 12,731 cf Overall - 5,813 cf Embedded = 6,918 cf x 40.0% Voids
#2	7.82'	5,523 cf	**R-Tank Double Modules (Prismatic)** Listed below (Recalc) Inside #1 5,813 cf Overall x 95.0% Voids
		8,290 cf	Total Available Storage

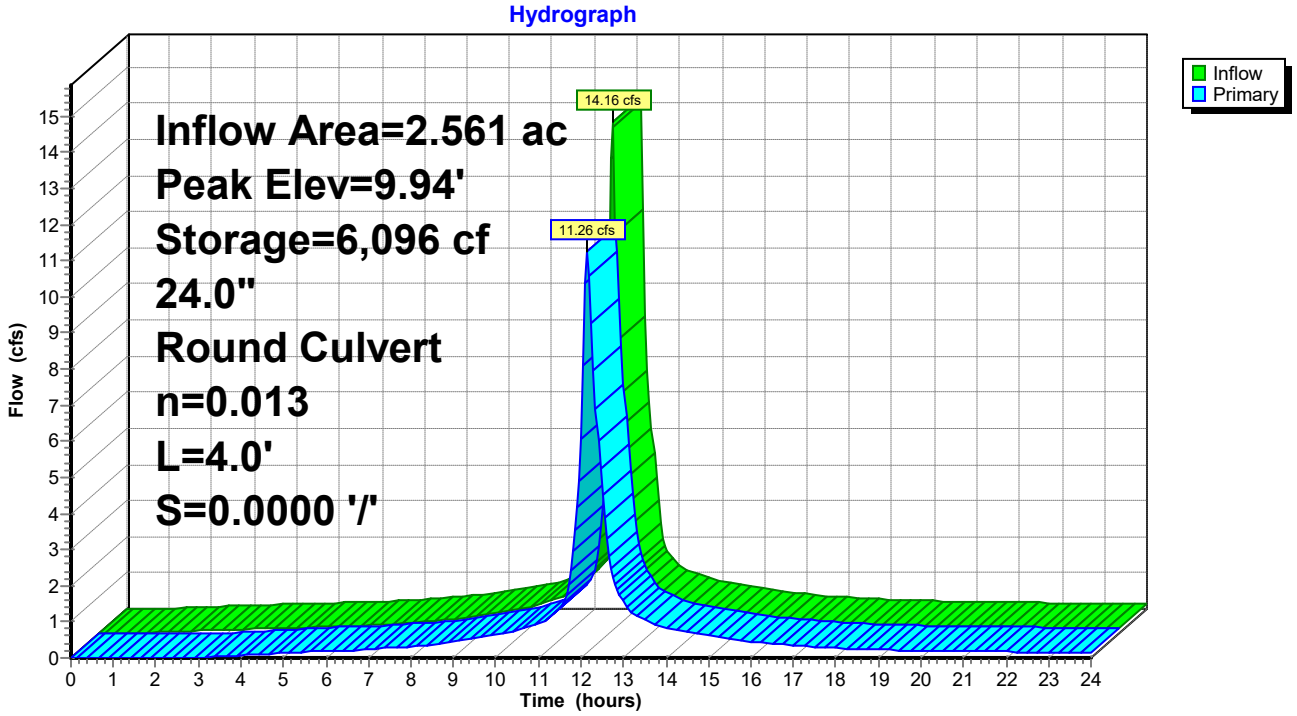
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
7.57	3,128	0	0
11.64	3,128	12,731	12,731

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
7.82	2,679	0	0
9.99	2,679	5,813	5,813

Device	Routing	Invert	Outlet Devices
#1	Primary	7.82'	**24.0" Round Culvert to Filter** L= 4.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 7.82' / 7.82' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=11.21 cfs @ 12.15 hrs HW=9.94' (Free Discharge)
↑—**1=Culvert to Filter** (Barrel Controls 11.21 cfs @ 4.19 fps)

Pond 8P: R-Tank 2



Summary for Pond 10P: DMH 5

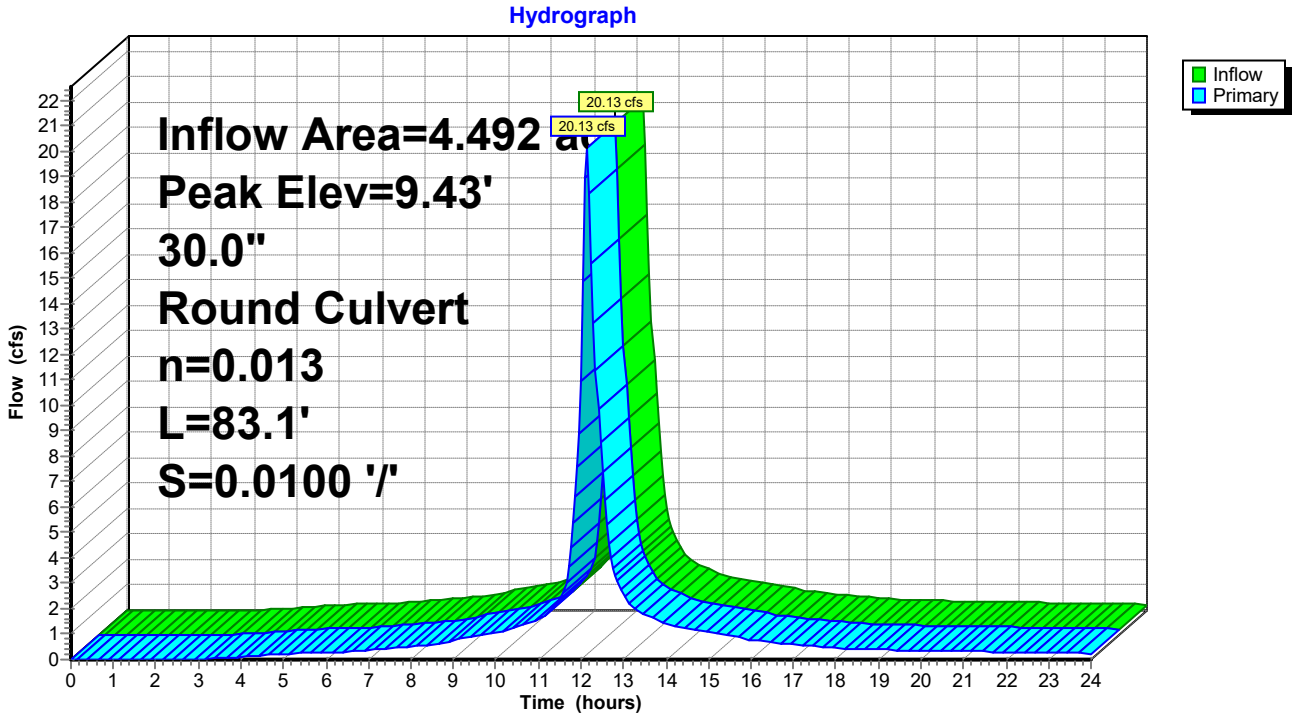
Inflow Area = 4.492 ac, 96.42% Impervious, Inflow Depth > 5.26" for 25-Year Storm event
Inflow = 20.13 cfs @ 12.14 hrs, Volume= 1.967 af
Outflow = 20.13 cfs @ 12.14 hrs, Volume= 1.967 af, Atten= 0%, Lag= 0.0 min
Primary = 20.13 cfs @ 12.14 hrs, Volume= 1.967 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 9.43' @ 12.15 hrs
Flood Elev= 13.56'

Device	Routing	Invert	Outlet Devices
#1	Primary	7.03'	**30.0" Round Culvert** L= 83.1' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 7.03' / 6.20' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=20.01 cfs @ 12.14 hrs HW=9.41' (Free Discharge)
1=Culvert (Inlet Controls 20.01 cfs @ 4.15 fps)

Pond 10P: DMH 5



Summary for Pond 11P: Jellyfish 1 JFPD0806-4-2

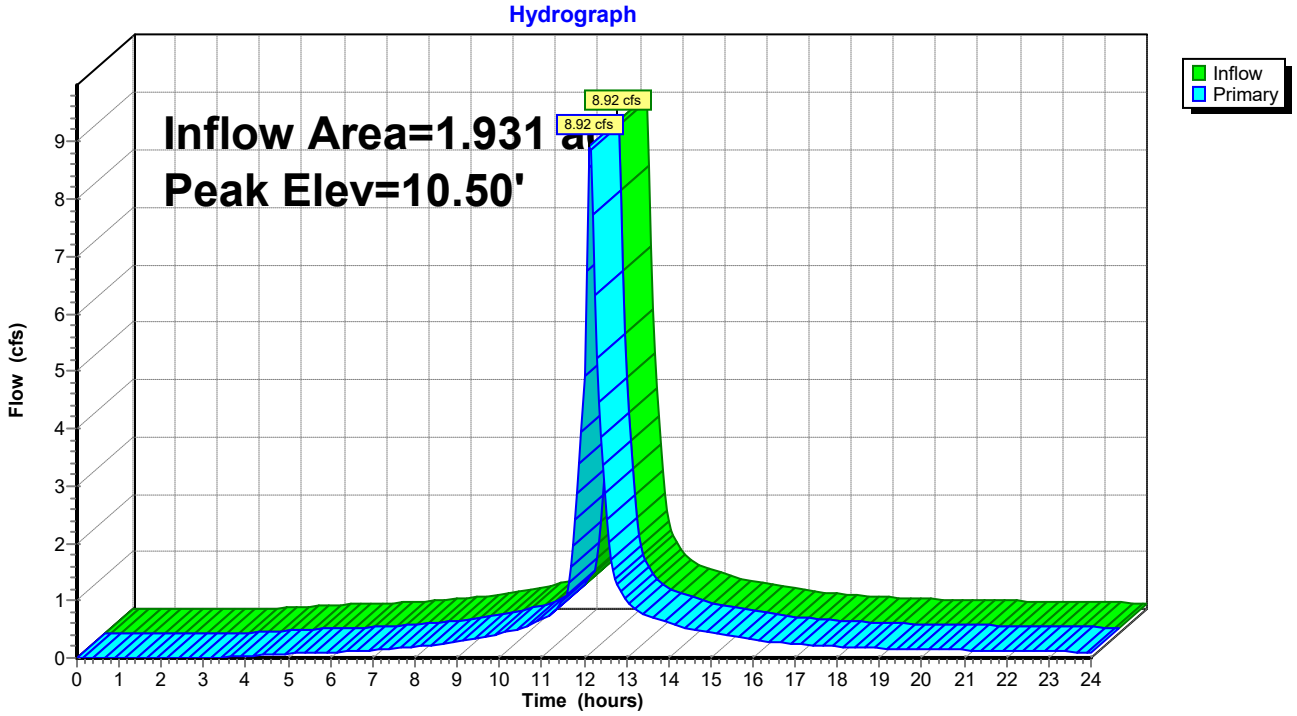
Inflow Area = 1.931 ac, 92.74% Impervious, Inflow Depth > 5.04" for 25-Year Storm event
Inflow = 8.92 cfs @ 12.14 hrs, Volume= 0.811 af
Outflow = 8.92 cfs @ 12.14 hrs, Volume= 0.811 af, Atten= 0%, Lag= 0.0 min
Primary = 8.92 cfs @ 12.14 hrs, Volume= 0.811 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 10.50' @ 12.14 hrs
Flood Elev= 14.79'

Device	Routing	Invert	Outlet Devices
#1	Primary	7.60'	**21.0" Round Filter Culvert Out** L= 90.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 7.60' / 7.13' S= 0.0052 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 2.41 sf
#2	Device 1	7.60'	**JF Filter-1 CSV File** Head (feet) 0.00 0.08 0.17 0.25 0.33 0.42 0.50 0.58 0.67 0.75 0.83 0.92 1.00 1.08 1.17 1.25 1.33 1.42 1.50 Disch. (cfs) 0.000 0.010 0.020 0.030 0.040 0.050 0.059 0.129 0.198 0.267 0.337 0.406 0.475 0.545 0.614 0.683 0.753 0.822 0.891
#3	Device 1	9.59'	**2.8' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=8.77 cfs @ 12.14 hrs HW=10.49' (Free Discharge)
└**1=Filter Culvert Out** (Passes 8.77 cfs of 12.97 cfs potential flow)
  ├**2=JF Filter-1 CSV File** (Custom Controls 0.89 cfs)
  └**3=Broad-Crested Rectangular Weir** (Weir Controls 7.88 cfs @ 3.14 fps)

Pond 11P: Jellyfish 1 JFPD0806-4-2



Summary for Pond 12P: Jellyfish 2 JFPD0806-7-2

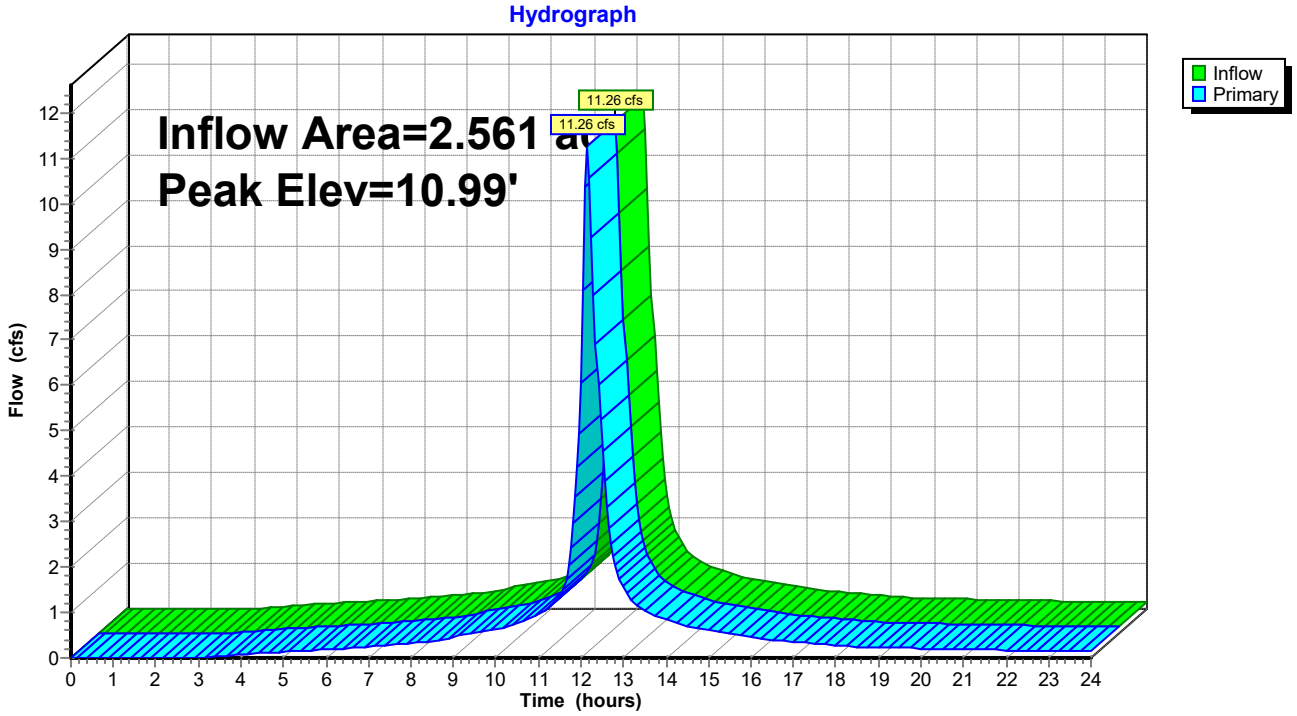
Inflow Area = 2.561 ac, 99.19% Impervious, Inflow Depth > 5.42" for 25-Year Storm event
Inflow = 11.26 cfs @ 12.15 hrs, Volume= 1.156 af
Outflow = 11.26 cfs @ 12.15 hrs, Volume= 1.156 af, Atten= 0%, Lag= 0.0 min
Primary = 11.26 cfs @ 12.15 hrs, Volume= 1.156 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 10.99' @ 12.15 hrs
Flood Elev= 12.70'

Device	Routing	Invert	Outlet Devices
#1	Primary	7.82'	**24.0" Round Filter Culvert Out** L= 114.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 7.82' / 7.13' S= 0.0061 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Device 1	7.82'	**JF Filter-2 CSV File** Head (feet) 0.00 0.08 0.17 0.25 0.33 0.42 0.50 0.58 0.67 0.75 0.83 0.92 1.00 1.08 1.17 1.25 1.33 1.42 1.50 Disch. (cfs) 0.000 0.010 0.020 0.030 0.040 0.050 0.059 0.173 0.287 0.401 0.515 0.629 0.743 0.857 0.970 1.084 1.198 1.312 1.426
#3	Device 1	9.95'	**2.8' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=11.21 cfs @ 12.15 hrs HW=10.98' (Free Discharge)
└**1=Filter Culvert Out** (Passes 11.21 cfs of 17.57 cfs potential flow)
  ├**2=JF Filter-2 CSV File** (Custom Controls 1.43 cfs)
  └**3=Broad-Crested Rectangular Weir** (Weir Controls 9.78 cfs @ 3.38 fps)

Pond 12P: Jellyfish 2 JFPD0806-7-2

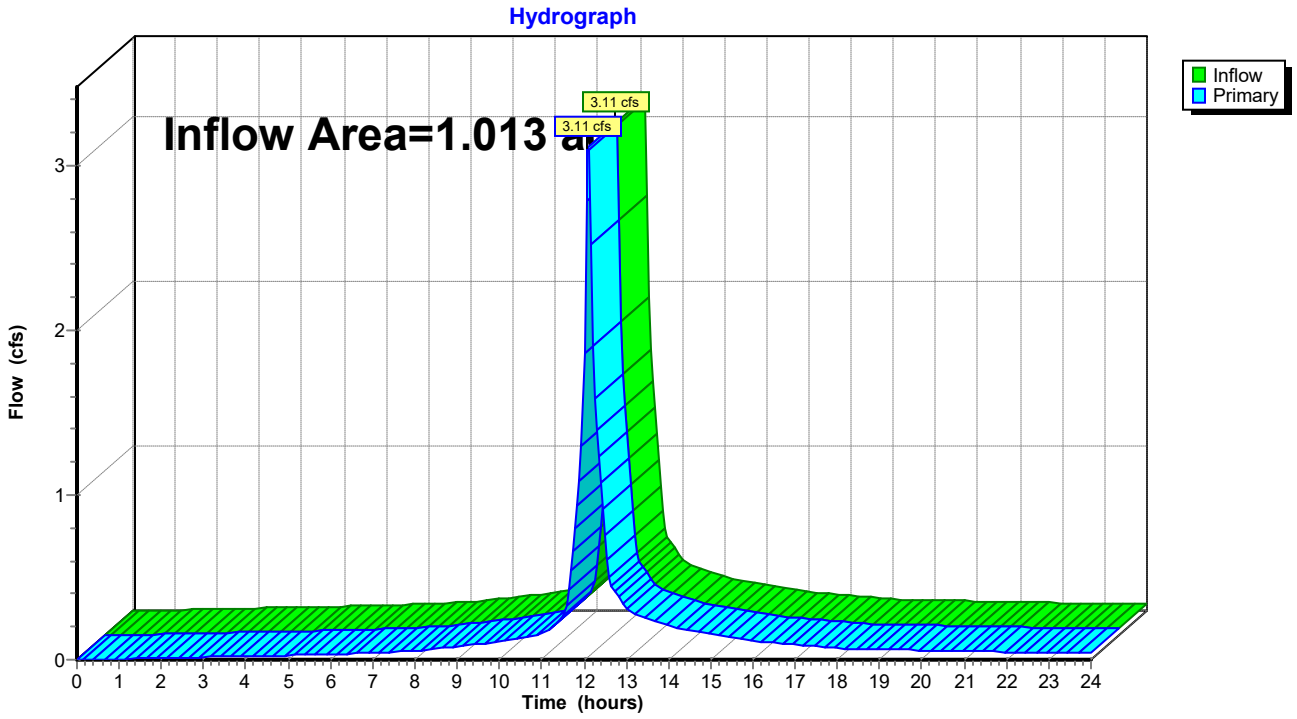


Summary for Link 1L: Fore Connector

Inflow Area = 1.013 ac, 56.83% Impervious, Inflow Depth > 3.06" for 25-Year Storm event
Inflow = 3.11 cfs @ 12.09 hrs, Volume= 0.258 af
Primary = 3.11 cfs @ 12.09 hrs, Volume= 0.258 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 1L: Fore Connector

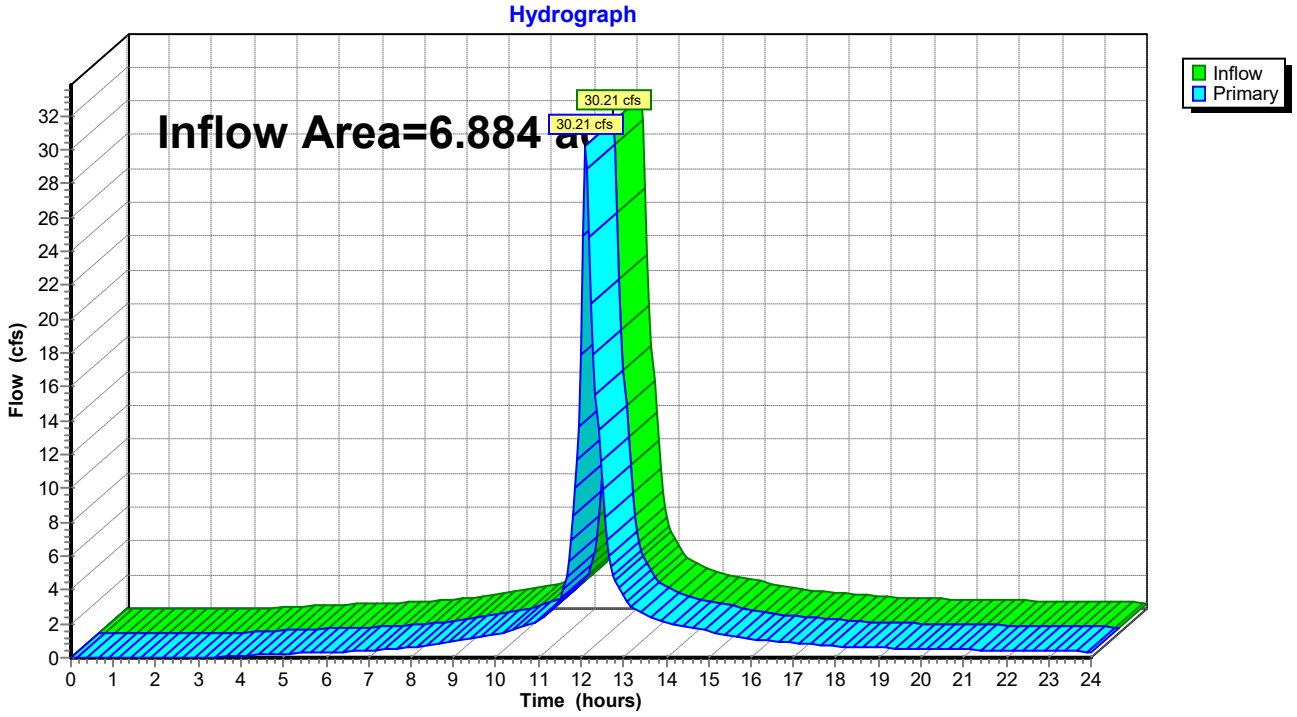


Summary for Link 2L: Fore River

Inflow Area = 6.884 ac, 89.99% Impervious, Inflow Depth > 4.86" for 25-Year Storm event
Inflow = 30.21 cfs @ 12.12 hrs, Volume= 2.790 af
Primary = 30.21 cfs @ 12.12 hrs, Volume= 2.790 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 2L: Fore River



42x30 SHEET
1:1



LEGEND

- POLLUTANT RANKING 5
- POLLUTANT RANKING 4
- POLLUTANT RANKING 3
- POLLUTANT RANKING 2
- POLLUTANT RANKING 1
- POLLUTANT RANKING 0

30' 0 30' 60'
BAR SCALE
1" = 30'
CHECK GRAPHIC SCALE BEFORE USING

NOT FOR CONSTRUCTION

WOODARD & CURRAN
41 Hutchins Drive
Portland, Maine 04102
800.426.4262 | www.woodardcurran.com

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REV	DESCRIPTION	DATE

DESIGNED BY: LJS | DRAWN BY: BCM/JWL | CHECKED BY: DLC | DESCRIPTION: 100MM/50 YEARS - 24 hr

REDEVELOPMENT IMPACT ANALYSIS
EXISTING CONDITION

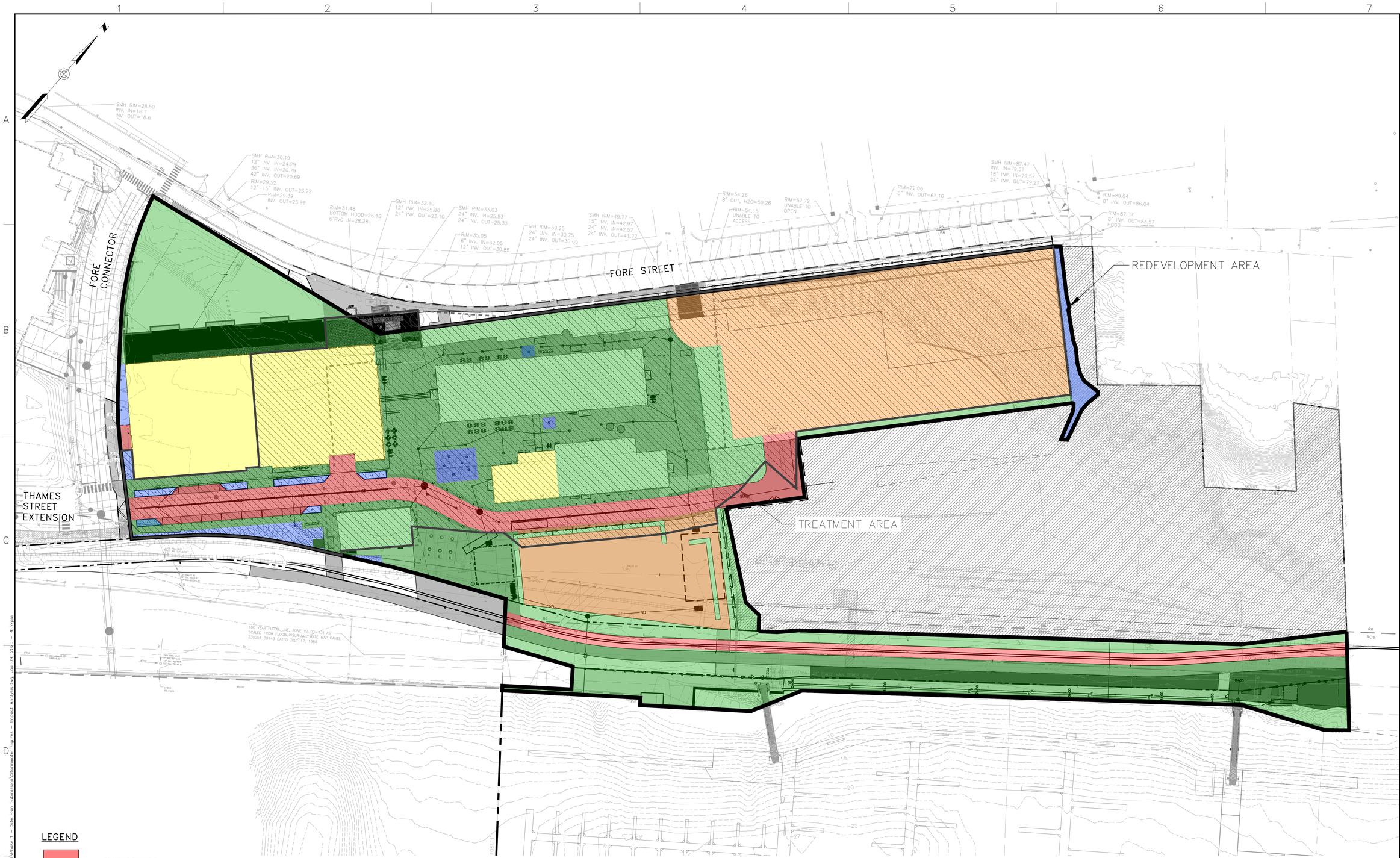
PORTLAND FORESIDE DEVELOPMENT CO.
PORTLAND, ME 04102

PHASE 1 SITE PLAN SUBMISSION

JOB NO.: 0227007
DATE: JANUARY 2020
SCALE: 1"=30'
SHEET: 1 OF 1

A

\\woodardcurran.net\shares\Projects\0227007.07 PFDC - 58 Fore Block 1\wip\Drawings\Phase 1 - Site Plan Submission\Stormwater Figures - Impact Analysis.dwg, Jan 09, 2020 - 4:38pm



LEGEND

- POLLUTANT RANKING 5
- POLLUTANT RANKING 4
- POLLUTANT RANKING 3
- POLLUTANT RANKING 2
- POLLUTANT RANKING 1
- POLLUTANT RANKING 0
- TREATMENT AREA

30' 0 30' 60'

BAR SCALE
1" = 30'
CHECK GRAPHIC SCALE BEFORE USING

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REV	DESCRIPTION	DATE
1	DRAWINGS ISSUED	9/7/20

CHECKED BY: DLC

REV	DESCRIPTION	DATE

DRAWN BY: BDM/JWL

CHECKED BY: LJS

REDEVELOPMENT IMPACT ANALYSIS
PROPOSED CONDITION

PORTLAND FORESIDE
DEVELOPMENT CO.
PORTLAND, ME 04102

PHASE 1 SITE PLAN SUBMISSION

JOB NO.: 0227007
DATE: JANUARY 2020
SCALE: 1"=30'
SHEET: 1 OF 1

B

J:\woodardcurran.net\shared\Projects\02270007.07 PTDC - 58 Fore Block 1\wip\Drawings\Phase 1 - Site Plan Submission\Stormwater Figures - Impact Analysis.dwg Jan 09, 2020 - 4:32pm

COMMITMENT & INTEGRITY
DRIVE RESULTS

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F 207.774.6635

Via Electronic Mail

January 7, 2020

Department of Planning & Development
Attn: Christian Roadman
City of Portland
389 Congress Street
Portland, ME 04101

Re: Portland Foreside Development Company | Phase 1 | Neighborhood Meeting Certification

To Whom It May Concern:

I, Lauren Swett, PE of Woodard & Curran, hereby certify that a neighborhood meeting was held on November 25, 2019 at the St. Lawrence Arts Center, 76 Congress Street, Portland, ME at 5:00pm regarding the Level III Site Plan Submittal for the proposed Portland Foreside Development Company Phase development project located at 58 Fore Street.

I also certify that on November 15, 2019, invitations were mailed to the following:

1. All addresses on the abutters list provided by the Planning Division which includes property owners within 500 feet of the proposed development.

2. Residents on the "interested parties" list.

Signed,

WOODARD & CURRAN INC.

Lauren Swett

Lauren Swett, PE
Technical Manager

Attached to this certification are:

1. Copy of the invitation sent
2. Lists of abutters and interested parties notified
3. Sign-in sheet
4. Meeting Notes
5. Copy of the Neighborhood Meeting Presentation

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41 Hutchins Drive
Portland, Maine 04102
www.woodardcurran.com

T 800.426.4262
T 207.774.2112
F 207.774.6635

November 15, 2019

Dear Neighbor:

On behalf of Portland Foreside Development Co. (Applicant), please join us for a neighborhood meeting to discuss our plans for Phase 1 of the proposed Portland Foreside Development project to be located at 58 Fore Street in Portland, Maine. A Level III Site Plan Application for the development has been filed with the City of Portland Planning Division on behalf of the Applicant.

Meeting Location: St. Lawrence Arts Facility, 76 Congress Street, Portland, Maine

Meeting Date: Monday, November 25, 2019

Meeting Time: 5:00-6:00 PM

The City code requires that property owners within 500 feet of the proposed development and residents on an "interested parties list" be invited to participate in a neighborhood meeting. A sign-in sheet will be circulated and minutes of the meeting will be taken. Both the sign-in sheet and minutes will be submitted to the Planning Board.

The Portland Foreside Development will be located on the former Portland Company Complex site at 58 Fore Street. The redevelopment of 58 Fore Street into a mixed-use neighborhood highlights the historical significance of the area, access to the waterfront and provides a direct connection from the adjacent neighborhoods to the waterfront. The result is a vibrant revitalization of the City's eastern waterfront. The Phase 1 development program for the project was considered and designed around the overall vision of creating this mixed-use neighborhood and proposes commercial, residential, office, retail, restaurant, marina and public open space uses which are consistent with the Master Development Plan for the site. Open space proposed for Phase 1 includes plazas for pedestrian use between the individual building components as well as view corridors and access to the waterfront via a walkway along the water's edge. Portions of the Maine Narrow Gauge Railroad and the Eastern Promenade Trail will be relocated closer to the waterfront as part of the proposed project. Construction is anticipated to begin in the spring of 2020.

If you have any questions, please contact Lauren Swett at (207) 558-3763 or via email at lswett@woodardcurran.com.

Sincerely,

WOODARD & CURRAN INC.

Lauren Swett

Lauren Swett, PE
Technical Manager

Note: Under Section 14-32(C) and 14-524(a)d of the City Code of Ordinances, an applicant for a Level III development is required to hold a neighborhood meeting within 30 days of submitting a preliminary application or 21 days of submitting a final site plan application, if a preliminary plan was not submitted. The neighborhood meeting must be held at least seven days prior to the Planning Board public hearing on the proposal. Should you wish to offer additional comments on this proposed development, you may contact the Planning Division at 874-8721 or send written correspondence to the Planning and Urban Development Department, Planning Division, 4th Floor, 389 Congress Street Portland, ME 04101 or by email: to jrather@portlandmaine.gov.

Abutters List for 58 Fore Street - Provided by 58 Fore Street

	Abutter Name	Address	
1	0 Hancock Street Llc	Po Box 910	Westbrook ME 04098
2	1 St Lawrence Street Llc	1190 Westbrook St	Portland ME 04102
3	100 Fore Street Llc	Po Box 910	Westbrook ME 04098
4	22 Eastern Promenade Estates Llc	106 Arbutus Ave	South Portland ME 04106
5	28 Atlantic Street Llc	1 Long Wharf	Portland ME 04101
6	45 Eastern Promenade Llc	83 County Rd	Gorham ME 04038
7	45-46 Llc	Po Box 575	Portland ME 04112
8	86 Newbury Street Llc	86 Newbury St	Portland ME 04101
9	Abt Heather S Trustee	6 Atlantic St	Portland ME 04101
10	Allen Paul S	45 Eastern Promenade # K04	Portland ME 04101
11	Anania Patricia Marie	45 Eastern Promenade # K11	Portland ME 04101
12	Angell Jean B	45 Astern Promenade # H08	Portland ME 04101
13	Ball Karen L Etal Trustees	27 Charlonne St	Jaffrey NH 03452
14	Baltos Judith A & Stephen M Baltos Jts	7 Declaration Dr	Westbrook ME 04092
15	Barry Michael	Po Box 4017	Portland ME 04101
16	Barstow F Brewer & Jean D Barstow Jts	45 Eastern Promenade # 11E	Portland ME 04101
17	Barth Denise L	31 Fore St # 4	Portland ME 04101
18	Bartlett Christopher W & Cynthia I Bartlett Jts	16 St Lawrence St # 1	Portland ME 04103
19	Bartlett Cynthia I & Stephen W Bartlett Jts	16 St Lawrence St # 2	Portland ME 04101
20	Bass Peter L & Linda B Lisberger Jts	29 Waterville St # 2	Portland ME 04101
21	Beressi Anne	45 Eastern Promenade # C03	Portland ME 04101
22	Berlin A Jan Vn Vet & Louise A Berlin Jts	45 Eastern Promenade # H10	Portland ME 04101
23	Bernstein Rosalyne	45 Eastern Promenade	Portland ME 04101
24	Bonetti Salvatore & Barbara L Bonetti Jts	45 Eastern Promenade # K01	Portland ME 04101
25	Bossart Karel Jan & Martha Vrana-Bossart Jts	31 Fore St # 2	Portland ME 04101
26	Bouchard Deborah A & William Jabine Iii Jts	26 Munjoy St	Portland ME 04101
27	Boyd Philip M Jr & Holly Harrison Jts	2 Heron Point Rd	Falmouth ME 04105
28	Braceras Christine	35 St Lawrence St	Portland ME 04101
29	Bramswig William J & Robin L Nureck-Bramswig Jts	60 Ridgewood Ter	Oxford ME 04270
30	Brennan Joseph E Kw Vet & Constance L Jts	45 Eastern Prom # C7	Portland ME 04101
31	Brennan William M	23 Atlantic St	Portland ME 04101
32	Brown Elizabeth R	12 Obrion St # 2	Portland ME 04101
33	Cadot Andrew A Vn Vet	73 Calf Pt	Roque Bluffs ME 04654
34	Campbell Derek E & Kathleen M Philbin Jts	45 Eastern Promenade # J06	Portland ME 04101
35	Campbell Marcia E Trustee	45 Eastern Promenade # 8B	Portland ME 04101
36	Carson Lydia & Mark Carson Jts	147 Allen Ave # 57	Portland ME 04103
37	Casale Mary K	39 Waterville St	Portland ME 04101
38	Chan Wendy	45 Eastern Promenade # A02	Portland ME 04101
39	Chandler Robert B Vn Vet Blind& Christine A Chandler Jts	45 Eastern Promenade # B11	Portland ME 04101
40	Chester Edwin P & Barbara A Vestal	107 Congress St	Portland ME 04101
41	Christian Lisa E	27 Munjoy St	Portland ME 04101
42	Closuis Phillip J & Merritt J Pridgeon Jts	5721 Oakshire Rd	Baltimore MD 21209
43	Compass Property Management Llc	Po Box 896	North Conway NH 03860
44	Conley Gerald F Vn Vet	16 Atlantic St	Portland ME 04101
45	Connolly Mary Frances	28 Atlantic St # 1	Portland ME 04101
46	Connolly Michael C & Rebecca S Hitchcock Jts	36 Waterville St # 4	Portland ME 04101
47	Coplon Michael & Bonnie Coplon Jts	9 Waterville St # C01	Portland ME 04101
48	Cowen Sally	10 River Place Dr # 10-311	South Portland ME 04106
49	Cpb2 I Llc	254 Commercial St Ste 118	Portland ME 04101
50	Cpb2 Llc	254 Commercial St Ste 118	Portland ME 04101
51	Cpb2 Llc	254 Commercial St Ste 122	Portland ME 04101
52	Crotty Donald E	2640 Lakeshore Dr # 2107	Riviera Beach FL 33404
53	Cushman Constance J	45 Eastern Prom #1E	Portland ME 04101
54	Cutler Judith Trustee	45 Eastern Promenade # G07	Portland ME 04101
55	Dambrie Stephanie A & Angela M Dambrie &	8 Kellogg St	Portland ME 04101
56	Dey Frederick C & Mary G Griffith Jts	6 Eastern Promenade # 2	Portland ME 04101
57	Douglas Martica S	11 Munjoy St	Portland ME 04101
58	Dowe Joann M	28 Waterville St	Portland ME 04101
59	Driskell David C & Thelma G Jts	4206 Decatur St	Hyattsville MD 20781
60	Eaton Melinda	31 Fore St	Portland ME 04101

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	Abutter Name	Address	
61	Emmerich Reid H & Katherine Panill-Siersma Jts	14 Hamilton St	South Portland ME 04106
62	Farris Richard A	19 Munjoy St	Portland ME 04101
63	Fifield Mary A	45 Eastern Promenade # C11	Portland ME 04101
64	Flanagan Sandra L	13 Waterville St	Portland ME 04101
65	Flaxman Paul & Jennifer Flaxman Jts	7 Atlantic St	Portland ME 04101
66	Frye Eileen N	45 Eastern Promenade # F04	Portland ME 04101
67	Fullam Charlotte G	45 Eastern Promenade # H07	Portland ME 04101
68	Gale Peter	45 Eastern Promenade # B04	Portland ME 04101
69	Gardner Eugene F	45 Eastern Promenade # 8E	Portland ME 04101
70	Gelfand Christoph & Kathleen Riley Jts	33 Atlantic St	Portland ME 04101
71	Gillies H Kurt	429 Fourth Range Rd	Pembroke NH 03275
72	Gls Properties Llc	Po Box 136	Standish ME 04084
73	Goldberg Stuart E Vn Vet & Melinda T Jts	45 Eastern Promenade Unit 4-J	Portland ME 04101
74	Graffam Mary Ann	45 Eastern Prom # 2J	Portland ME 04101
75	Greenstein Daniel	420 Baxter Blvd	Portland ME 04103
76	Grenergy Llc	Po Box 7149	Scarborough ME 04074
77	Grisanti Susan	29 Atlantic St	Portland ME 04101
78	Hackel Richard & Jennifer Hackel Jts	91 Sherman St # 7	Cambridge MA 02140
79	Haley Timothy Trustee	6526 South Kanner Hwy Ste 308	Stuart FL 34997
80	Hamill Sherwood N	2 Atlantic St	Portland ME 04101
81	Hansen Burnett M	2 Jaffray Park	Irvington NY 10533
82	Harthorne J Warren & Christa H M Harthorne Trustees	33 Highland Cir	Wayland MA 01778
83	Harvey Abigail	17 Waterville St	Portland ME 04101
84	Hashem Nadia	6 Eastern Promenade # 4	Portland ME 04101
85	Hernandez Guy A & Stella Hernandez Jts	12 Atlantic St	Portland ME 04101
86	Hudson Diane M	16 Obrion St	Portland ME 04101
87	Hurley Jayne G	11 St Lawrence St	Portland ME 04101
88	Ingalls Everett P & Susan W Ingalls	Po Box 7602	Portland ME 04112
89	Jablonski Gregory M & Antonio Carli Jts	6 Eastern Promenade # 1	Portland ME 04101
90	Jackrabbit Limited Liability Company	26 Phillips Rd	South Portland ME 04106
91	Jardin Properties Llc	10 Susan Ln	Falmouth ME 04105
92	Joffe Theodore	45 Eastern Promenade # B07	Portland ME 04101
93	Jordan Melinda	36 Waterville St # 3	Portland ME 04101
94	Jordan Robert K Trustee	1050 Island Ave	Long Island ME 04050
95	Kelsh Peter & Sabine Koengeter Jts	22 Irving Place # 5F	New York NY 10003
96	Kenyon Lynda G	Po Box 222	Flagler Beach FL 32136
97	Killian Marion T	45 Eastern Promenade # 8J	Portland ME 04101
98	Knight Kristina M	12 O'Brion St # 4	Portland ME 04101
99	Kowalczuk Henry & Cynthia J Kowalczuk Jts	45 Eastern Promenade # 11A	Portland ME 04101
100	Kuhlthau Gail	9 Adams St	Portland ME 04101
101	Kurtz Donald R	163 Davenport Dr	Stamford CT 06902
102	Lamont Barbara S	7 Newport Rd # 7	Cambridge MA 02140
103	Lanza Lori P & Paul J Lanza Jts	27 Valley Dr	Middletown CT 06457
104	Lawrence Whitten Llc	37 Silver St	Portland ME 04101
105	Legere Ronald J & Nancy L Legere Trustees	16265 N 115Th Place	Scottsdale AZ 85255
106	Leslie Peter M & Kathleen S Leslie	Po Box 295	Waterford ME 04088
107	Levandowski William J Sr Wwii Vet & Patricia S Levandowski Jts	45 Eastern Promenade # 1F	Portland ME 04101
108	Linsley Austin G & Katherine S Linsley Trustee	43180 Corna Cala Camino	Murrieta CA 92562
109	Listo Laurianne	222 East 39Th St # 23C	New York NY 10016
110	Livada Irene L Trustee	45 Eastern Prom # 8F	Portland ME 04101
111	Lloyd David Vn Vet & Nancy M Adams Jts	29 Waterville St # 1	Portland ME 04101
112	Loschiavo Elise M & Morgan Mccormack Jts	36 St Lawrence St	Portland ME 04101
113	Lukes Lambo Llc	307 Lewis Hill Rd	Bowdoin ME 04287
114	Macgowan Kenneth N & Caroll M Macgowan Jts	7 Carnoustie Dr	Falmouth ME 04105
115	Macleod Mark K & Roberta M Didonato Jts	81 Lowell Rd Box 99	Buxton ME 04093
116	Macomber Peter B Jr & Margaret P Macomber Jts	4 St Lawrence St	Portland ME 04101
117	Majarone Wanchai	45 Eastern Promenade # A5	Portland ME 04101
118	Mann James E & Jacqueline Mann Jts	10 Old Road Ln	Mount Kisco NY 10549
119	Mardin James A Wwii Vet	45 Eastern Promenade # U5-G	Portland ME 04101
120	Marks Fred & Kathleen Marks Jts	231 Glen Eagles Rd East	Statesville NC 28625

Abutters List for 58 Fore Street - Provided by 58 Fore Street

	Abutter Name	Address	
121	Martellucci Jenna M & Brent J Vanni Jts	21 Mayberry Ln	Yarmouth ME 04096
122	Martorella Lisa	45 Eastern Prom # J7	Portland ME 04101
123	Mazer Brandon J Etal Jts	45 Eastern Promenade # F09	Portland ME 04101
124	Mcgee Steven & Michelle Mcgee Jts	8 Mark Rd	Framingham MA 01701
125	Mcintosh Arlene G Trustee	3530 Mystic Point Dr	Aventura FL 33180
126	Mclaughlin Airadean E	18 Munjoy St	Portland ME 04101
127	Menario Antoinette	45 Eastern Promenade # 6F	Portland ME 04101
128	Michaels Linda B	45 Eastern Promenade # K10	Portland ME 04101
129	Michaels Linda B	45 Eastern Promenade #J10	Portland ME 04101
130	Miller Markos S & Heather Nichols Jts	17 Atlantic St	Portland ME 04101
131	Mills Sarah C	45 Eastern Promenade # 3K	Portland ME 04101
132	Modarressi Amir H & Negar Navai Jts	10164 Se 18Th St	Bellevue WA 98004
133	Morgan Philip H	30 Barkley Ave	Auburn ME 04210
134	Mortimer Claire	Po Box 184	Brooklin ME 04616
135	Moulton Sumner E	45 Eastern Promenade	Portland ME 04101
136	Mullin Pamela & Peter Mullin Jts	Po Box 2505	South Portland ME 04116
137	Munjoy South Townhouses Llc	One Portland Sq Ste 6A	Portland ME 04101
138	Myers Properties Llc	Po Box 81	Peaks Island ME 04108
139	Odlin James A & Teresa M Odlin Jts	45 Eastern Promenade # K08	Portland ME 04101
140	O'Donnell Francine T & Gregory F Wilfert Jts	192 Hessian Hill Rd	Cornish ME 04020
141	O'Donnell Peter & Gregory Groves Jts	45 Eastern Promenade # D05	Portland ME 04101
142	Olins Ada L	45 Eastern Promenade # 7D	Portland ME 04101
143	Omark Sigrunn	45 Eastern Promenade # B02	Portland ME 04101
144	Onion Frederick A Trustee	414 Hardscrabble Rd	Wayne ME 04284
145	Parent R Joseph & Shirley M	18 Ivy St	Portland ME 04102
146	Parker Vivian A Trustee	45 Eastern Promenade # J05	Portland ME 04101
147	Parker Vivian A Trustee Etal Jts	45 Eastern Promenade #J05	Portland ME 04101
148	Pearson Thomas L	20 Atlantic St #5	Portland ME 04101
149	Petit Michael R & Pamela J Day	25 Waterville St	Portland ME 04101
150	Pf Marina Llc	254 Commercial St Ste 118	Portland ME 04101
151	Poole Dana S	45 Eastern Promenade # H05	Portland ME 04101
152	Portland House Condo 9-B Llc	45 Eastern Promenade # B09	Portland ME 04101
153	Portland House Condo 9-B Llc	45 Eastern Promenade # E07	Portland ME 04101
154	Pratt S Mason Jr & Carol Pratt Jts	45 Eastern Prom # 4-H	Portland ME 04101
155	Preisser Gayla M & Denise E Preisser Jts	25 Fore St # A02	Portland ME 04101
156	Pulsoni Maria T	11 Adams St	Portland ME 04101
157	Raffel Janet E & David F Sandmel Jts	45 Eastern Promenade # D01	Portland ME 04101
158	Ramani Geeta & Robert C Flagg Jts	34 Atlantic St	Portland ME 04101
159	Red Dog Llc	12 Pond Rd	South Portland ME 04106
160	Risano Peter	34 Congress St # 1	Portland ME 04101
161	Rollman Wilfrid & Barbara A Chenoweth Trustees	36 Waterville St # 1	Portland ME 04101
162	Rollman Wilfrid J & Barbara A Chenoweth Trustees	36 Waterville St # 1	Portland ME 04101
163	Rowe G Steven	12 St Lawrence St	Portland ME 04101
164	Sacher Joanne & Taft Patrick Holloway Jts	36 Silkey Rd	North Granby CT 06060
165	Sankey David W & Robert A Glover Jts	45 Eastern Prom # 10B	Portland ME 04101
166	Sawin Martica	61 Jane St # 4P	New York NY 10014
167	Sawyer Charles R & Chattye B Sawyer Jts	45 Eastern Promenade # 6-C	Portland ME 04101
168	Scheu Jenny P	29 Waterville St # 3	Portland ME 04101
169	Schiffman Stephen J & Lisa S Schiffman Jts	9 Waterville St # 3	Portland ME 04101
170	Sheehan M Elizabeth	532 Heatley Ave	Vancouver BC Null
171	Short Sarah	47 Adams St	Portland ME 04101
172	Shuman Michael L	45 Eastern Promenade # A1	Portland ME 04101
173	Silverman Sally Wigon	45 Eastern Promenade #6-H	Portland ME 04101
174	Skrabalak Danielle J & Robert J Skrabalk Jts	Po Box 2981	Binghamton NY 13902
175	Smith Melody Randall Trustee	9901 Emmaus	St John VI 00830
176	Soley Joseph L	Po Box 4894	Portland ME 04112
177	Soley Joseph L Kw Vet	Po Box 4894	Portland ME 04112
178	St Onge Paula S & Michael G St Onge Jts	6445 Walters Woods Dr	Falls Church VA 22044
179	Stark Carl G Sr & Hiltrud A Stark Jts	61 White Oak St # 5G	New Rochelle NY 10801
180	State Of Maine	Null	Augusta ME 04333

Abutters List for 58 Fore Street - Provided by 58 Fore Street

	Abutter Name	Address	
181	State Of Maine	State House	Augusta ME 04330
182	Steins Karl M & Rhianne Steins Jts	4310 Sheldon Dr	La Mesa CA 91941
183	Stillwell Richard D	20 St Lawrence St	Portland ME 04101
184	Stower Real Estate Llc	136 Portland St	Yarmouth ME 04096
185	Streker Peter D & Tina M Streker Jts	10 Munjoy St	Portland ME 04101
186	Sukaskas Joseph D Vn Vet & Gayle R Briggs Jts	45 Eastern Promenade # D02	Portland ME 04101
187	Sundik Harry A Vn Vet & Patricia E Sundik Jts	45 Eastern Promenade # D03	Portland ME 04101
188	Sweet Melissa	37 St Lawrence St	Portland ME 04101
189	Szanton Nathan Stokes & Sarah Goldstein Szanton Jts	22 Eastern Promenade	Portland ME 04101
190	Thompson Jeffrey G	6 St Lawrence St	Portland ME 04101
191	Tierney Mark & Colleen B Jts	Po Box 7903	Portland ME 04112
192	Tomback Peter A	37 Church Ln	Scarsdale NY 10583
193	Tremblay Charles & Andrea Tremblay Jts	37 Bentley Ln	Ocean NJ 07712
194	Tureen Susan	45 Eastern Promenade # K06	Portland ME 04101
195	Venetian Prom Llc	241 Silver Mountain Rd	Millerton NY 12546
196	Vespa Llc	71 Foreside Rd	Cumberland Foreside ME 04110
197	Von Stade Philip R Jr Etals	9 Waterville St # 2C	Portland ME 04101
198	Wallin Joanne S	45 Eastern Promenade #10A	Portland ME 04101
199	Ward James E	45 Eastern Promenade # G-3	Portland ME 04101
200	Welton Ronald K	45 Eastern Promenade #A-G	Portland ME 04101
201	Westley John R & Joan E Westley Jts	4530 Lowell St Nw	Washington DC 20016
202	Whitten George R & Robin F Jts	23 St Lawrence St	Portland ME 04101
203	Williams Patricia Ann	45 Eastern Promenade # 1-B	Portland ME 04101
204	Williams Walter S & Kelly A Williams Jts	24 St Lawrence St	Portland ME 04101
205	Winkworth Mark J & Jule Britt Selbo Trustees	244 S Orange Grove Blvd # 103	Pasadena CA 91105
206	Winkworth Mark J & Jule Britt Selbo Trustees	45 Eastern Promenade # C09	Portland ME 04101
207	Winsten Beth Tanenhaus & Irving W Winsten Jts	4138 High Ridge	Ann Arbor MI 48105
208	Wintersteen Jeremy R	21 Harrison Ave	Newport RI 02840
209	Zelman Victor & Estelle Betty Zelman Trustee	Pmb 12258 411 Walnut St	Green Cove Springs FL 32043

City of Portland Interested Parties List

First Name	Last Name	Company Name	Street Number	Street Name	City	State	Zip
Anthony	Donovan		27	Riverview Street	Portland	ME	04102
Barbara	Wood		125	Emery Street	Portland	ME	04102
Chris	Castelsky	Fairpoint Communications	521	East Morehead Street	Charlotte	NC	28202
David	Nowlin		215	Oxford Street	Portland	ME	04102
Deb	Keenan		28	Dorothy Street	Portland	ME	04103
Devon	Platte		26	North Street, #3	Portland	ME	04101
Edward	Suslovic	District 3	46	Kenwood Street	Portland	ME	04103
		Greater Portland Council of Governments	970	Baxter Blvd., 2nd Floor	Portland	ME	04103
Janice	Carpenter		9	W. Commonwealth Drive	Portland	ME	04103
Jennifer	Munson	City of Portland	389	Congress Street	Portland	ME	04101
Jesse	Thompson	Kaplan Thompson Architects	100	Exchange Street	Portland	ME	04103
Len	Anderson		543	Allen Avenue	Portland	ME	04103
Lynn	Clarkson		145	Marlborough Road	Portland	ME	04103
Mary	Griffity		6	E. Prom, Unit #2	Portland	ME	04103
Vahan	Tufankijan	Seaside Healthcare	850	Baxter Boulevard	Portland	ME	04103
Nancy	Bartlett			PO Box 7965	Portland	ME	04112
Pam	Burnside		64	Lester Drive	Portland	ME	04103
Paul	Dubois		1915	Congress Street	Portland	ME	04102
Peggy	Morin		66	Farnham Street	Portland	ME	04101
Philip	Haughey		1660	Soldiers Field Road	Boston	MA	02135
James	Sterling	Portland Society of Architects		PO Box 7305	Portland	ME	04112
Priscilla	LaVallee		190	US Route 1, Unit 2	Falmouth	ME	04105
Rebecca	Halla	Waste Management of Maine	2000	Forest Avenue	Portland	ME	04103
REP Benjamin	Dudley III	District 30	9	Ponce Street	Portland	ME	04101
REP Glenn	Cummings	District 37	24	Nevens Street	Portland	ME	04103
Robert	Hains		250	Holm Avenue	Portland	ME	04102-1208

COMMITMENT & INTEGRITY
DRIVE RESULTS

41 Hutchins Drive
Portland, Maine 04102
www.woodardcurran.com

T 800.426.4262
T 207.774.2112
F 207.774.6635

MEMORANDUM

TO: City of Portland Planning Department
FROM: Portland Foreside Development Project Team
DATE: November 25, 2019 5:00pm
RE: Portland Foreside Phase 1 Neighborhood Meeting Sign-in Sheet

Dear Neighbors,

Thank you for attending tonight's public Neighborhood Meeting in the St. Lawrence Arts Facility for the proposed development of Phase 1 of the Portland Foreside project to be located at 58 Fore Street in Portland, Maine. Please sign in below.

Thank you,
Portland Foreside Development Project Team

	Name	Email
1	STEPHEN GAAL	STEVE@GAAL.COM
2	ADA & DON OLINS	
3	K. Snyder	Karshye yahoo.com
4	Pamela Day	pday2304@gmail.com
5	DAVID BODY	davidcbody1937
6	Katie Murphy	Katiecunivoice@hotmail.com
7	Deborah Napier	Deborah Napier history.com gmail
8	Sarah Short	sas.short@gmail.com
9	Peter Murray	pmurray@gwi.net

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Portland Foreside Development Project Team

	Name	Email
10	JAMIE ISAACSON	JakeISAAC1@AOL.com
11	PETER LINDSAY	plindsay1954@gmail.com
12	JONATHAN COHEN	
13	RUSS LONG	RLONG@IUPAT DC 35.org
14	LORI ROUNDS	LORI.J.ROUNDS@GMAIL.COM
15	Merriam Roberts	
16	Martha Duval	mduval@ [illegible]
17	Barbara Vestal	vestal@ [illegible]
18	Mark Guzzetta	mark@guzzettagroup.com
19	PETER MACOMBER	P3MAC@MAC.com
20	Phil van Fade	[illegible]
21	Crandall Toothaker	crandall toothaker@gmail.com
22	Sarah Auld	

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	Name	Email
23	Melissa Sweet	melissa@melissasweet.net
24	Eric Freeman	Freemane@bu.edu
25	Scott Episcopo	TVMAIL@WGME.COM
★ 26	Mary McCrann	mcann portlandforeside.com
27	PETER BASS	peterbass54@gmail.com
28	Richard Barringer	richard_barringer@maine.edu
★ 29	BARRY SHEFF	BSHEFF@WOODARDCURRAN.COM
30	Tony Donovan	MELIKE RAIL@GMAIL.COM
31	Vanessa Pike	vpike@forepointsmm.com
32	Barry Mantel	bmantel@juno.com
33	Chris Roberts	croberts2222@yahoo.com
34	Ed Moore	Ed@presumpscot PM.com
★ 35	KEVIN CISTELLI	KCDC@PORTLANDMAINE.GOV
36	Carol Connor	balsamique@live.com
37	Sally Oldham	oldhamseg@gmail.com

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Portland Foreside Development Project Team

	Name	Email
38	Abby Harvey	[illegible]@netscape.com
39	Margot Ecclin	mjm20@gmx.com
40	Mike Marino	mmarino48@comcast.net
* 41	Casey Prentiss	Cmprentiss@gmail.com
42	DAN HALEY	DANIEL.THALEY@GMAIL.COM
43	Ned Chester	chesterc@maine.rr.com

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	Name	Email
44	Susan Roscoe	sroscoe8245@icloud.com
45	Charles Roscoe	CROSCOE1@MAINE.RR.COM
46	Maggy Wolf	mpetit417@gmail.com
47	Keith Jalbert	
48	Michael Petit	
49	Elizabeth Miller	elizabethmiller1953@hotmail.com
50	Paul and Jennifer Flaxman	pflax94@hotmail.com
51	Pam Macomber	pam@macomber.com
* 52	Lauren Swett W+C	
* 53	Denise Cameron W+C	
* 54	David Senus PFDC	
* 55	Conrad Bollinger PFDC	

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DRIVE RESULTS

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MEETING NOTES

To: City of Portland Planning Department

From: Lauren Swett, PE (Woodard & Curran) on behalf of Portland Foreside Development Company

Date: November 25, 2019

SUBJECT: Portland Foreside Development Company Phase 1 Project – Neighborhood Meeting

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A neighborhood meeting was held on November 25, 2019 at the St. Lawrence Arts Facility located at 76 Congress Street in Portland Maine, at 5:00 PM. Per the sign in sheets, the meeting was attended by 47 "abutters" or interested members of the public, along with 8 members of the project team including the owner/developer Portland Foreside Development Company (PFDC) and the engineer Woodard & Curran (W&C). The meeting sign in sheets are attached to these minutes along with a copy of the PowerPoint presentation presented at the meeting, a signed Neighborhood Meeting Certification form and a copy of the notice letter and mailing lists. Project team members that were present at the meeting are as follows:

Project Team Members:

- Casey Prentice, PFDC
- Kevin Costello, PFDC
- David Senus, PFDC
- Mary McCrann, PFDC
- Conrad Bollinger, PFDC
- Denise Cameron, W&C
- Lauren Swett, W&C
- Barry Sheff, W&C

The meeting began at 5:00pm. David Senus provided an introduction of the project team, and he and Denise Cameron gave a brief presentation about the project. The PowerPoint (as attached) addressed the following:

- A summary of the previously approved Master Development Plan
- A description of the proposed Phase 1 project including layout and renderings
- A discussion of traffic analyses that have been completed
- A summary of utilities and stormwater management

Upon conclusion of the PowerPoint presentation, additional questions were received from attendees and recorded by Lauren Swett and Mary McCrann. Questions and comments were documented to the extent possible, and are provided below. Where direct responses were provided by PFDC or W&C, the responses are provided below in italics. In addition to responding to questions, PFDC and W&C provided information regarding the City's upcoming public Planning Board Process.

Comments/Questions

- What is the site elevation of the proposed building and what consideration has been given to sea level rise?
    - *Floor elevations are being raised and resiliency is a consideration in design.*
- The white privacy fence utilized near the marina was undesirable; what is the intent for future fencing?

- *Fence will be in place for the next year but will be removed in the future. Some fence will be necessary in the future for security.*

- What are the number of trips permitted by the TMP and how many Sun Life employees are proposed?
  - *Proposed trips for Phase 1 will be under the amount permitted by the TMP.*
- How tall is the proposed 4A building above Fore Street, how many parking spaces are proposed, and how are the view corridors to be maintained here?
  - *The parking deck for this phase of work will be at or below Fore Street with the exception of the area immediately east of the Waterville Street View Corridor. View Corridors will be maintained.*
- Where will traffic be directed during construction?
  - *Thames Street Extension*
- Will local residents be used on construction crews?
  - *PFDC has partnered with Consigli to provide Construction Management services*
- How will public access be maintained?
  - *Public Access along the Eastern Prom Trail will be maintained in accordance with the site's Construction Management Plan. This Construction Management Plan has been submitted as part of the Level III Site Plan Application and will be reviewed by the City.*
- What consideration has been made for the walking path relative to sea level rise, and how will traffic impact the path's use during construction?
  - *Improvements to the site's seawall are proposed as part of the development. Portions of the trail will be elevated, but not the entire length. Public Access along the Eastern Prom Trail will be maintained in accordance with the site's Construction Management Plan.*
- Will retail be provided towards Fore Street in the "Embankment Buildings"?
  - *Tenants for the Embankment Buildings are not yet finalized.*
- Clarify the location of the public access easement, and how to access it.
  - *PFDC showed the location on the figure.*
- How does the project take into consideration for future passenger rail?
  - *Comment was noted.*
- Metro is working to reevaluate bus routes 1 and 8, and routes 2 and 4 may also come to the Eastern Waterfront. What are plans to engage Metro in the project?
  - *A meeting is planned with Metro for the following week.*
- How is light pollution on top of the parking garage being considered?
  - *Modern cutoff fixtures and timing of lights are being considered.*
- Explain how the train and trail will interact and clarify if a full-sized train could be travelling along a pedestrian way.
  - *PFDC explained the layout of the area using the presentation board.*
- Is the project in an Opportunity Zone?
  - *Yes*
- How will this project be different than the Libra project, i.e. how will the Market Hall be successful where the previous public market has failed?
  - *PFDC feels confident in the proposed development.*
- How much accessibility will be provided to the public and how will pedestrian vs. automobile access be enforced?
  - *PFDC showed pedestrian and automobile access points on the presentation board.*
- How is the height of Block 4 calculated with the raise in grade up Fore Street?
  - *PFDC described building height using the presentation boards.*
- Has the project considered energy efficiency measures or solar?

- *PFDC is considering energy efficient measures but this has not yet been finalized.*

- Munjoy Hill residents have a hard time getting around now, and have concerns with traffic, and will be pushing on the City for more traffic improvements.
  - *Comment was noted.*
- Will the City be asking for any further financing or funding for the Thames Street?
  - *Comment was noted.*
- Is access from Fore Street ADA accessible?
  - *ADA access to the site is provided via Thames Street entrance.*
- How are pedestrians crossing the road being managed?
  - *PFDC showed pedestrian crossing locations and features on the presentation board.*
- There are concerns with air pollution relative to trains, cruise ships, and traffic in the area.
  - *Comment was noted.*
- There are concerns with the schedule and timing of the neighborhood meeting and questions whether the meeting complied with the requirements.
  - *PFDC believes the meeting meets all City requirements.*
- The neighbors are concerned with parking in the surrounding neighborhood.
  - *Comment was noted.*
- How will inclusionary zoning be met?
  - *This is under consideration.*
- How many access points will be provided to the site and will all be ADA accessible?
  - *PFDC showed access locations on the presentation board and described accessibility.*
- What is being proposed to encourage a welcoming landscape on the site (i.e. trees)?
  - *PFDC referenced the Level III Site Plan Application.*

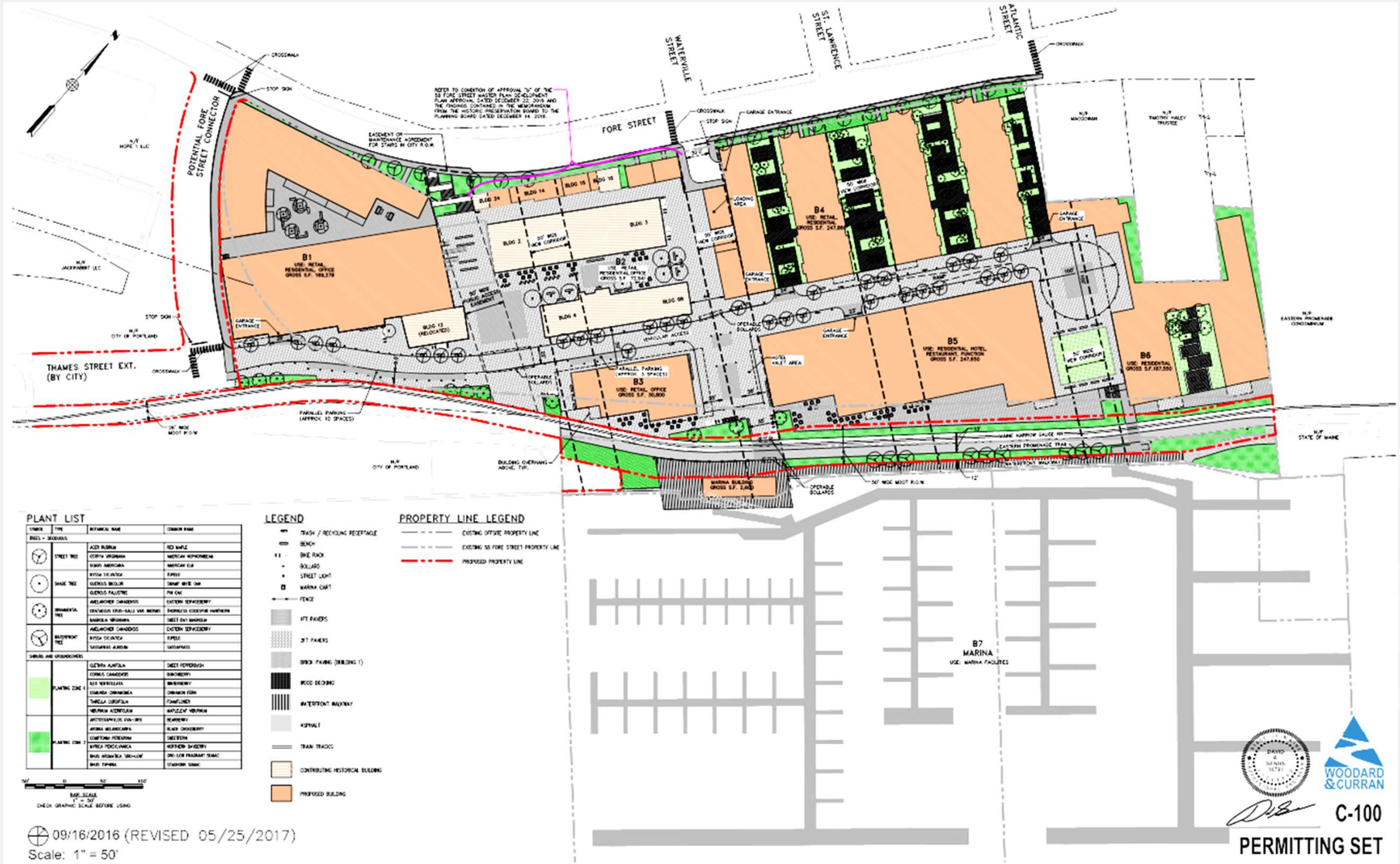
The Neighborhood Meeting officially concluded at approximately 6:00 PM.

Portland Foreside Development Company

Phase 1 Neighborhood Meeting | November 25, 2019



APPROVED MASTER DEVELOPMENT PLAN

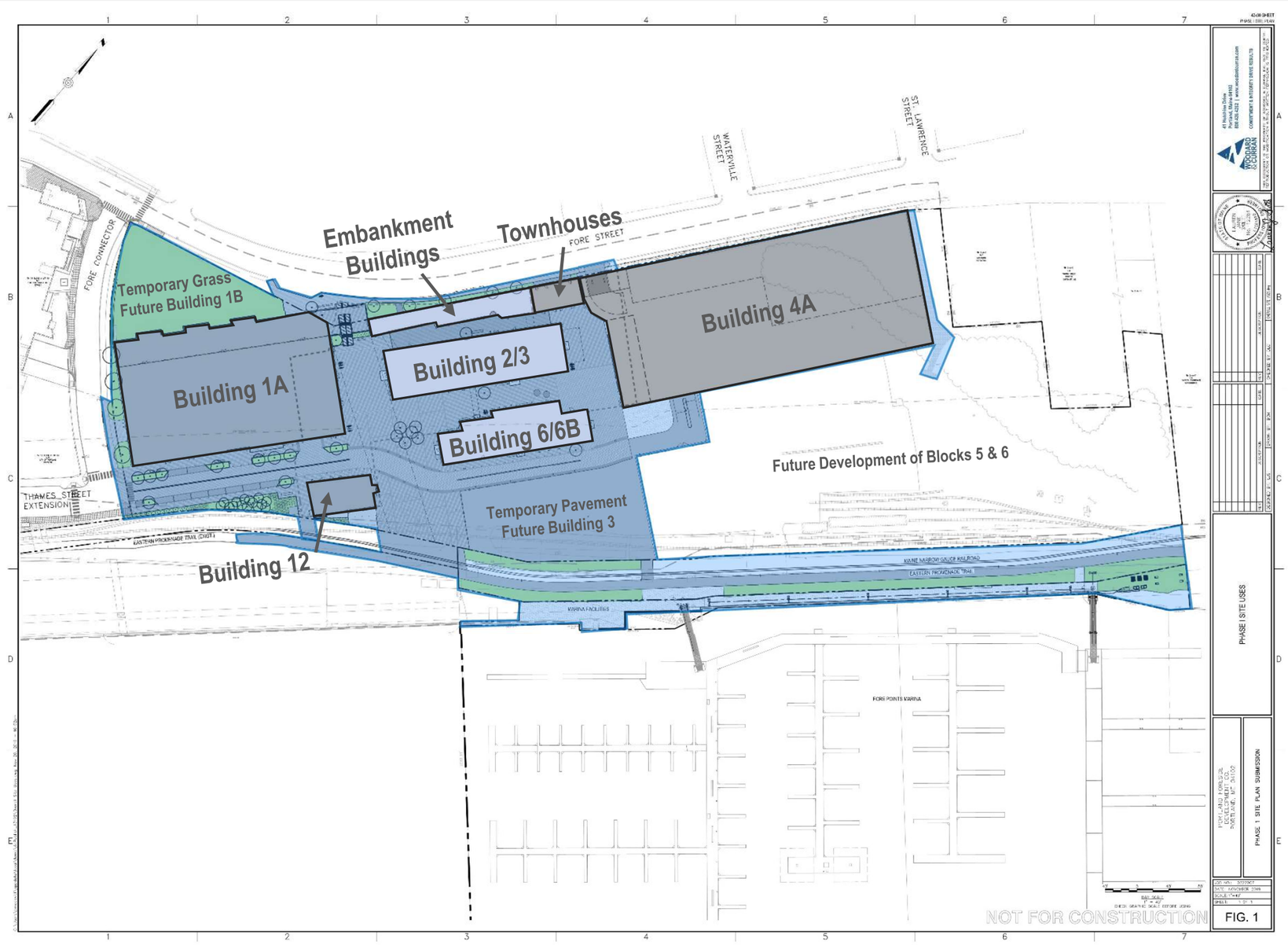


OVERALL SITE MASTER PLAN

58 FORE STREET MASTER PLAN

SCOTT SIMONS ARCHITECTS · MICHAEL BOUCHER LANDSCAPE ARCHITECTURE · WOODARD & CURRAN · THORNTON TOMASETTI · THE BIGELOW COMPANY · MASON ARCHITECTS · APPLIED TECHNOLOGY MANAGEMENT · PERKINS+WILL

PHASE 1 DEVELOPMENT



Block 1
Building 12
Building 1A

Block 2
Building 2/3
Building 6/6B
Embankment

Block 4
Building 4A
Townhouses






FORE STREET
50' WIDE PUBLIC ACCESS EASEMENT




THE
PORTLAND
COMPANY

TRAFFIC

- Traffic Movement Permit (TMP) approved by City on May 26, 2017
- Traffic Analysis
  - Phase 1 represents 40% of AM Trip Ends and 53% of PM Trip Ends
- Transportation Demand Management Plan
  - Connections to Bike/Ped
  - Public Transit
  - Car Share
  - Employer Incentives
  - Promotions
  - Education



METRO ROUTE 1



METRO ROUTE 8

UTILITY AND STORMWATER MANAGEMENT DESIGN

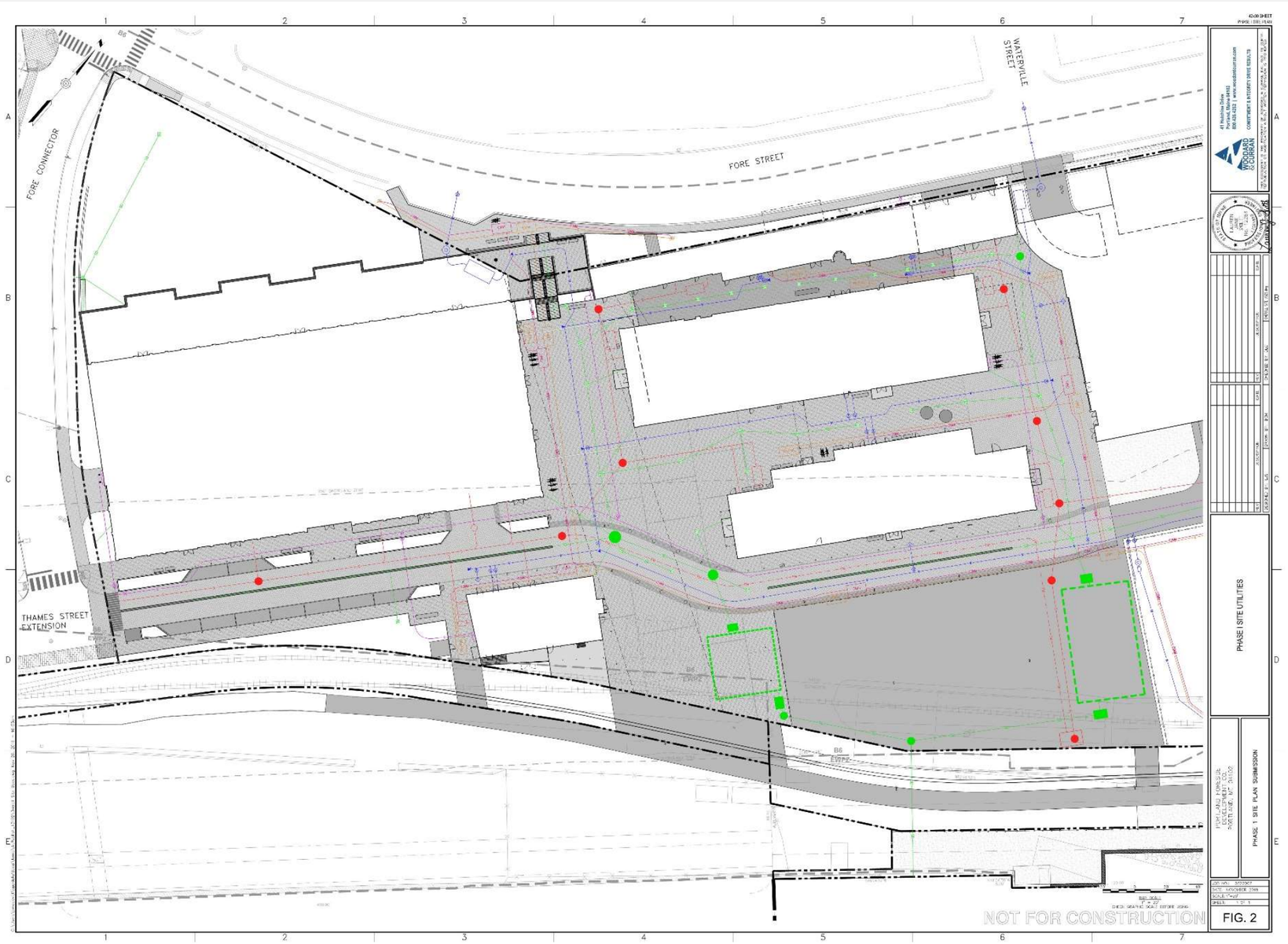
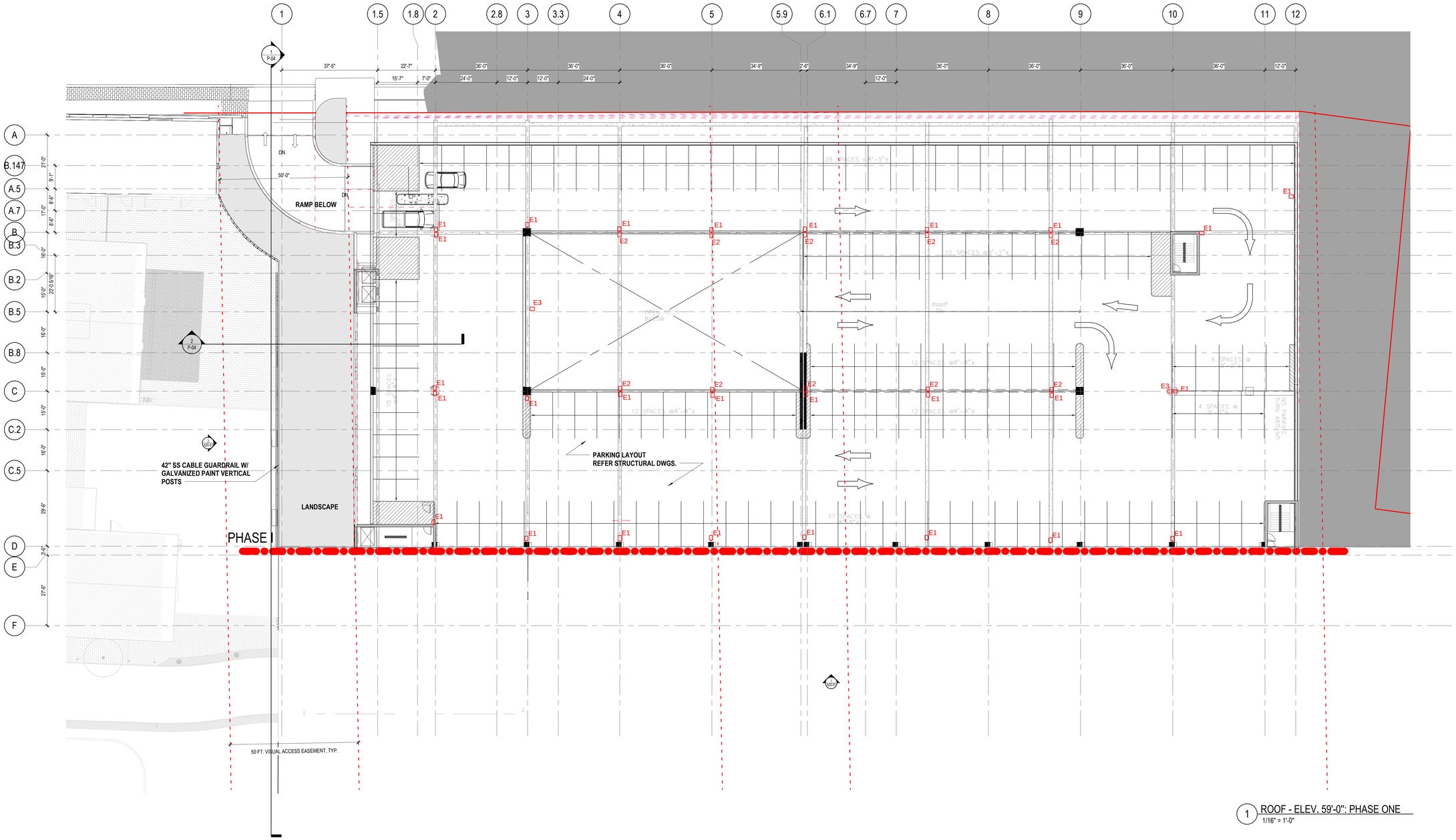


FIG. 2



THANK YOU!

Attachment U.



1 ROOF - ELEV. 59'-0": PHASE ONE
1/16" = 1'-0"

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PROJECT

BLOCK FOUR

FORESIDE
PORTLAND, MAINE

PORTLAND FORESIDE DEVELOPMENT COMPANY

254 COMMERCIAL ST SUITE 118
PORTLAND, ME 04101

KEYPLAN

ISSUE CHART

MARK	ISSUE	DATE

100% SCHEMATIC DESIGN 11/08/2019

Job Number	157031.001
Drawn	Author
Checked	Checker
Approved	Approver

TITLE

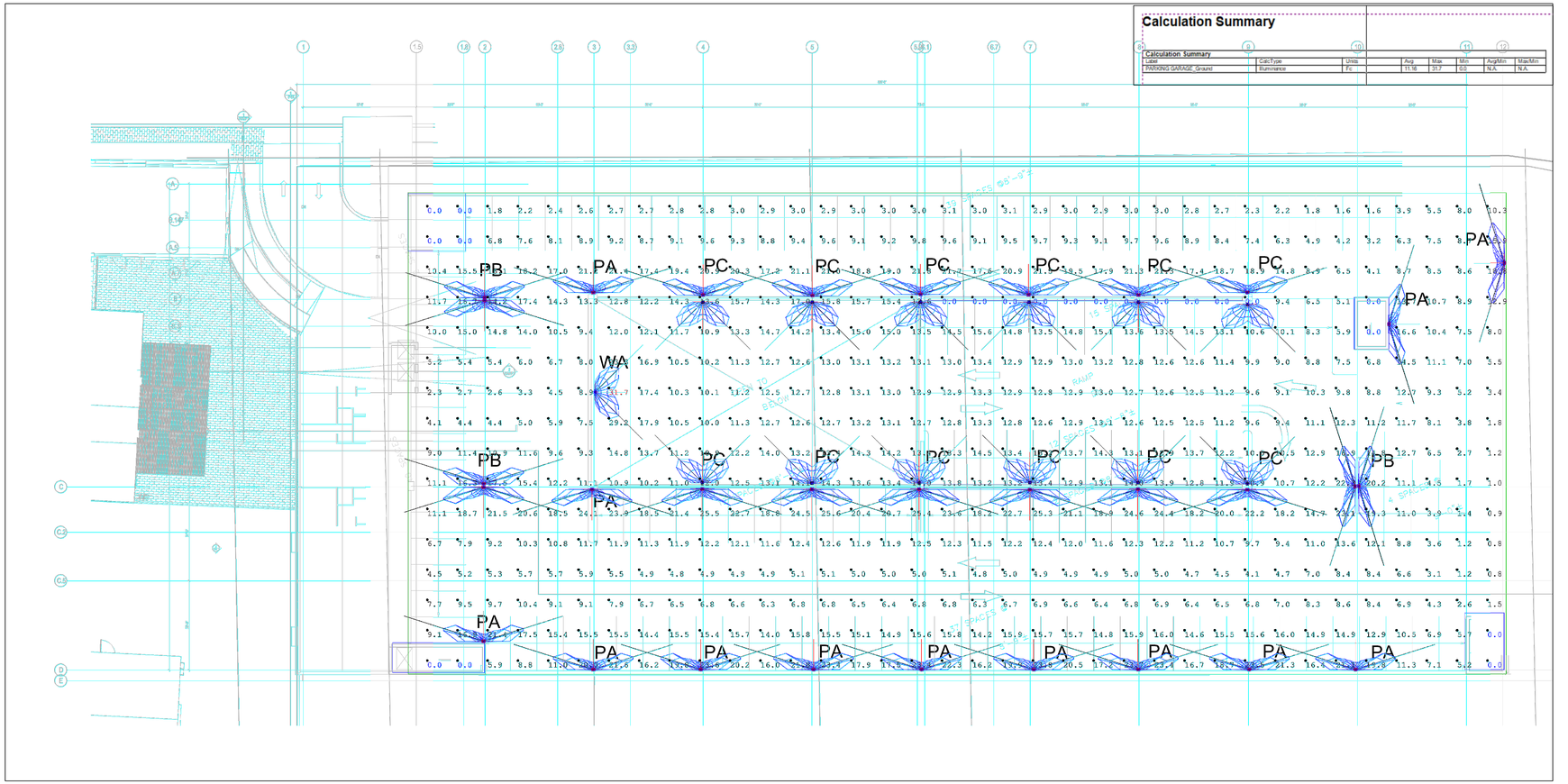
ROOF PLAN ELEV. 59'-0"

SHEET NUMBER

A10-07

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12/11/2019 9:18:02 AM C:\Users\Monteiom\Documents\58 FORE ST MASTERPLAN_Block Four_v2019_Montemofi.rvt



LIGHT FIXTURE SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER	LAMPS TYPE	VOLT.	WATTS/ FIXT.	REMARKS	EQUIVALENT BY
PA	POLE MOUNTED SINGLE HEAD AREA FIXTURE MOUNTED AT 16' AFF	HUBBELL LIGHTING VPS-60L-136-4K7-2-UNV-A-XX-SCP-/F (FIXTURE) SSS-B-16-50-B-1-BL-XX-VMX-UL (POLE) SCP-REMOTE	LED 4000K 6000 LUMENS	UNV	136W	PROVIDE ALL NECESSARY ACCESSORIES FOR A COMPLETE INSTALLATION SCP-REMOTE COORDINATE WITH MANUFACTURER FOR ACCESSORIES, SERVICE AND CONTROLS. FINISH BY ARCHITECT	McGRAW EDISON GARDCO
PB	POLE MOUNTED DOUBLE HEAD AREA FIXTURE MOUNTED AT 16' AFF	HUBBELL LIGHTING VPS-60L-136-4K7-2-UNV-A-XX-SCP-/F (FIXTURE) VPS-60L-136-4K7-2-UNV-A-XX-SCP-/F (FIXTURE) SSS-B-16-50-B-2-XX-XX-VMX-UL (POLE)	LED 4000K 12000 LUMENS	UNV	272W	PROVIDE ALL NECESSARY ACCESSORIES FOR A COMPLETE INSTALLATION FINISH BY ARCHITECT	McGRAW EDISON GARDCO
PC	POLE MOUNTED DOUBLE HEAD AREA FIXTURE MOUNTED AT 16' AFF	HUBBELL LIGHTING VPS-60L-136-4K7-2-UNV-A-XX-SCP-/F (FIXTURE) VPS-60L-136-5K7-4W-UNV-A-XX-SCP-/F (FIXTURE) SSS-B-16-50-B-2-XX-XX-VMX-UL (POLE)	LED 4000K 5000K 12000 LUMENS	UNV	272W	PROVIDE ALL NECESSARY ACCESSORIES FOR A COMPLETE INSTALLATION FINISH BY ARCHITECT	McGRAW EDISON GARDCO
WA	WALL MOUNTED SINGLE HEAD AREA FIXTURE MOUNTED AT 3' AFF	HUBBELL LIGHTING VPS-60L-136-5K7-4W-UNV-WB-XX-SCP-/F (FIXTURE)	LED 5000K 6000 LUMENS	UNV	136W	PROVIDE ALL NECESSARY ACCESSORIES FOR A COMPLETE INSTALLATION FINISH BY ARCHITECT	McGRAW EDISON GARDCO

NOTES:
1. WIRE ALL EXIT SIGNS AND EMERGENCY BATTERY PACKS AHEAD OF ALL SWITCHING
2. WHERE E/N WIRING IS INDICATED PROVIDE FIXTURE WITH TWO DRIVERS FOR EMERGENCY AND NORMAL OPERATION.
3.WHERE REMOTE DRIVERS ARE PROVIDED, LOCATE DRIVER IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS AND PROVIDE ADEQUATE WIRING.
4. PROVIDE DRIVER DISCONNECT IN ALL FIXTURES IN ACCORDANCE WITH NEC.
6. ALL 0-10VOLT LED DIMMING DRIVERS SHALL MEET THE REQUIREMENTS OF IEC 60929 AND SHALL HAVE AN ISOLATED 0-10VDC CONTROL CIRCUIT

RFS engineering
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BLOCK 4

PORTLAND FORESIDE DEVELOPMENT

MAINE

Consultants

SCHEMATIC DESIGN

Date: DECEMBER 23, 2019

Key Plan

Revisions

Rev.	Issued	Date

Title

LIGHTING CALCULATIONS

Project No.	9169.001
Drawn By	S. DUNKLEY
Checked By	S. DUNKLEY
Project Mgr.	A.M. SHUMWAY
File Name	9169 E1.DWG
Date	12/23/2019
Scale	N.T.S.

Drawing No.

E1

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SSS-B SERIES POLES

SQUARE STRAIGHT STEEL

Cat.#

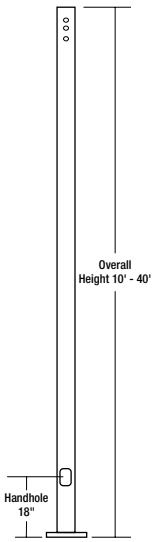
Job

Type

Appr

FIXTURE TYPE

POLE



APPLICATIONS

- Lighting installations for side and top mounting of luminaires with effective projected area (EPA) not exceeding maximum allowable loading of the specified pole in its installed geographic location

CONSTRUCTION

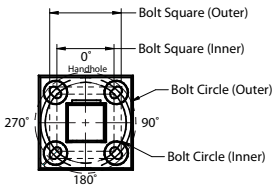
- SHAFT: One-piece straight steel with square cross section, flat sides and minimum 0.238" radius on all corners; Minimum yield of 46,000 psi (ASTM-A500, Grade B); Longitudinal weld seam to appear flush with shaft side wall; Steel base plate with axial bolt circle slots welded flush to pole shaft having minimum yield of 36,000 psi (ASTM A36)
- BASE COVER: Two-piece square aluminum base cover included standard
- POLE CAP: Pole shaft supplied with removable cover when applicable; Tenon and post-top configurations also available
- HAND HOLE: Rectangular 3x5 steel hand hole frame (2.38" x 4.38" opening); Mounting provisions for grounding lug located behind gasketed cover
- ANCHOR BOLTS: Four galvanized anchor bolts provided per pole with minimum yield of 55,000 psi (ASTM F1554). Galvanized hardware with two washers and two nuts per bolt for leveling

FINISH

- Durable thermoset polyester powder coat paint finish with nominal 3.0 mil thickness
- Powder paint prime applied over "white metal" steel substrate cleaned via mechanical shot blast method
- Decorative finish coat available in seven standard colors; Custom colors available; RAL number preferable; Internal protective coating available

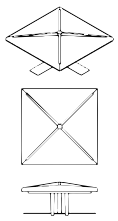
WAREHOUSE 'STOCKED' POLES:

- SSSH20-40A-4-HV-DB-RDC, SSSH25-40A-4-HV-DB-RDC and SSSH30-50B-4-HV-DB-RDC
- The HV designation in the above catalog numbers is a combination drill pattern of the Hubbell Outdoor S2 pattern and the Beacon B3/B4 Viper pattern (rectangular arm mounting)

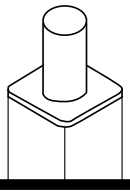


TOP VIEW

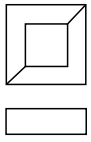
POLE CAP



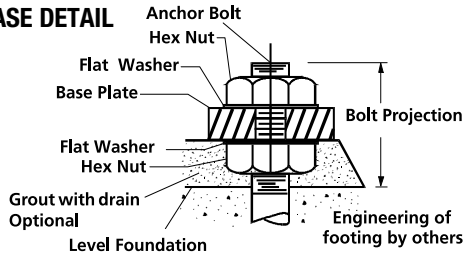
TENON



BASE COVER



BASE DETAIL



ORDERING INFORMATION

ORDERING EXAMPLE:

Reference page 2 for available configurations

SSS – B – 25 – 40 – A/B/C – 2L – B3 – BBT – UL

SERIES

SSS-B Square Straight Steel Pole Beacon

HEIGHT

Reference page 2 Ordering matrix

SHAFT

Reference page 2 Ordering matrix

THICKNESS

Reference page 2 Ordering matrix

MOUNTING

- **1** Single arm mount
- **2** Two fixtures at 180˚
- **2L** Two fixtures at 90˚
- **3T** Three fixtures at 90˚
- **4** Four fixtures at 90˚
- **TA** Tenon (2.38" OD x 4" Tall)
- **TB** Tenon (2.88" OD x 4" Tall)
- **TC** Tenon (3.5" OD x 6" Tall)
- **TR**[1] Removable Tenon (2.375 x 4.25)
- **OT** Open Top (includes pole cap)

FINISH

- **BL** Black textured
- **DB** Dark bronze textured
- **GT** Graphite textured
- **GYS** Lt. gray smooth
- **PS** Platinum silver smooth
- **WH** White textured
- **BBT** Basic black textured
- **BZT** Bronze textured
- **CC** Custom Color

DRILL PATTERN

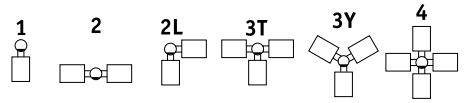
- **B1** Cruzer, "AM" arm
- **B3** 2 bolt (2-1/2" spacing) Viper 'A' arm
- **S2** 2 bolt (3-1/2" spacing) Viper 'AD' arm

OPTIONS

- **HSC** Internal Coating (Hubbell Seal)
- **GFI**[2] 20 Amp GFCI Receptacle and Cover
- **EHH**[2] Extra Handhole
- **C05**[2] .5" Coupling
- **C07**[2] .75" Coupling
- **C20**[2] 2" Coupling
- **MPB**[2] Mid-pole Luminaire Bracket
- **VM2** 2nd mode vibration damper
- **LAB** Less Anchor Bolts
- **UL** UL Certified

MOUNTING ORIENTATION

Denotes handhole location



ACCESSORIES - Order Separately

Catalog Number	Description
VM1[3]	1st mode vibration damper
VM2SXX	2nd mode vibration damper

1 Removable tenon used in conjunction with side arm mounting. First specify desired arm configuration followed by the **"TR"** notation. Example: **SSS-B-25-40-A-1-B1-TR-BBT**
2 Specify option location using logic found on page 2 **(Option Orientation)**
3 VM1 recommended on poles 20' and taller with EPA of less than 1.

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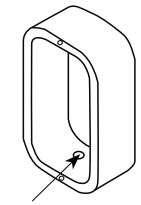
HUBBELL Lighting

ORDERING INFORMATION Cont.

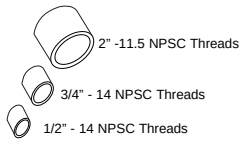
Catalog Number	Height		Nominal Shaft Dimensions	Wall Thickness	Bolt Circle (suggested)	Bolt Circle (range)	Bolt Square (range)	Base Plate Square	Anchor bolt size	Bolt Projection	Pole weight
	Feet	Meters									
SSS-B-10-40-A-XX-XX	10	3.0	4" square	0.125"	9"	8" - 10"	5.66" - 7.07"	9"	3/4" x 30" x 3"	3.5	77
SSS-B-12-40-A-XX-XX	12	3.7	4" square	0.125"	9"	8" - 10"	5.66" - 7.07"	9"	3/4" x 30" x 3"	3.5	90
SSS-B-14-40-A-XX-XX	14	4.3	4" square	0.125"	9"	8" - 10"	5.66" - 7.07"	9"	3/4" x 30" x 3"	3.5	103
SSS-B-16-40-A-XX-XX	16	4.9	4" square	0.125"	9"	8" - 10"	5.66" - 7.07"	9"	3/4" x 30" x 3"	3.5	116
SSS-B-18-40-A-XX-XX	18	5.5	4" square	0.125"	9"	8" - 10"	5.66" - 7.07"	9"	3/4" x 30" x 3"	3.5	129
SSS-B-20-40-A-XX-XX	20	6.1	4" square	0.125"	9"	8" - 10"	5.66" - 7.07"	9"	3/4" x 30" x 3"	3.5	142
SSS-B-25-40-A-XX-XX	25	7.6	4" square	0.125"	9"	8" - 10"	5.66" - 7.07"	9"	3/4" x 30" x 3"	3.5	175
SSS-B-14-40-B-XX-XX	14	4.3	4" square	.188"	11"	10" - 12"	7.07" - 8.48"	10.50"	3/4" x 30" x 3"	3.5	152
SSS-B-16-40-B-XX-XX	16	4.9	4" square	.188"	11"	10" - 12"	7.07" - 8.48"	10.50"	3/4" x 30" x 3"	3.5	171
SSS-B-18-40-B-XX-XX	18	5.5	4" square	.188"	11"	10" - 12"	7.07" - 8.48"	10.50"	3/4" x 30" x 3"	3.5	190
SSS-B-20-40-B-XX-XX	20	6.1	4" square	.188"	11"	10" - 12"	7.07" - 8.48"	10.50"	3/4" x 30" x 3"	3.5	209
SSS-B-25-40-B-XX-XX	25	7.6	4" square	.188"	11"	10" - 12"	7.07" - 8.48"	10.50"	3/4" x 30" x 3"	3.5	257
SSS-B-30-40-B-XX-XX	30	9.1	4" square	.188"	11"	10" - 12"	7.07" - 8.48"	10.50"	3/4" x 30" x 3"	3.5	304
SSS-B-16-50-B-XX-XX	16	4.9	5" square	.188"	11"	10.25" - 13.25"	7.25" - 9.37"	11.50"	1" x 36" x 4"	4.5	219
SSS-B-18-50-B-XX-XX	18	5.5	5" square	.188"	11"	10.25" - 13.25"	7.25" - 9.37"	11.50"	1" x 36" x 4"	4.5	243
SSS-B-20-50-B-XX-XX	20	6.1	5" square	.188"	11"	10.25" - 13.25"	7.25" - 9.37"	11.50"	1" x 36" x 4"	4.5	267
SSS-B-25-50-B-XX-XX	25	7.6	5" square	.188"	11"	10.25" - 13.25"	7.25" - 9.37"	11.50"	1" x 36" x 4"	4.5	327
SSS-B-30-50-B-XX-XX	30	9.1	5" square	.188"	11"	10.25" - 13.25"	7.25" - 9.37"	11.50"	1" x 36" x 4"	4.5	387
SSS-B-25-50-C-XX-XX	25	7.6	5" square	.25"	11"	10.25" - 13.25"	7.25" - 9.37"	11.50"	1" x 36" x 4"	4.5	427
SSS-B-30-50-C-XX-XX	30	9.1	5" square	.25"	11"	10.25" - 13.25"	7.25" - 9.37"	11.50"	1" x 36" x 4"	4.5	507
SSS-B-20-60-B-XX-XX	20	6.1	6" square	.188"	12"	11.00" - 13.25"	7.81" - 9.37"	12.25"	1-1/4" x 42" x 6"	5.0	329
SSS-B-25-60-B-XX-XX	25	7.6	6" square	.188"	12"	11.00" - 13.25"	7.81" - 9.37"	12.25"	1-1/4" x 42" x 6"	5.0	404
SSS-B-30-60-B-XX-XX	30	9.1	6" square	.188"	12"	11.00" - 13.25"	7.81" - 9.37"	12.25"	1-1/4" x 42" x 6"	5.0	479
SSS-B-35-60-B-XX-XX	35	10.7	6" square	.188"	12"	11.00" - 13.25"	7.81" - 9.37"	12.25"	1-1/4" x 42" x 6"	5.0	554
SSS-B-40-60-B-XX-XX	40	12.2	6" square	.188"	12"	11.00" - 13.25"	7.81" - 9.37"	12.25"	1-1/4" x 42" x 6"	5.0	629
SSS-B-30-60-C-XX-XX	30	9.1	6" square	.25"	12"	11.00" - 13.25"	7.81" - 9.37"	12.25"	1-1/4" x 42" x 6"	5.0	614
SSS-B-35-60-C-XX-XX	35	10.7	6" square	.25"	12"	11.00" - 13.25"	7.81" - 9.37"	12.25"	1-1/4" x 42" x 6"	5.0	712
SSS-B-40-60-C-XX-XX	40	12.2	6" square	.25"	12"	11.00" - 13.25"	7.81" - 9.37"	12.25"	1-1/4" x 42" x 6"	5.0	809

NOTE Factory supplied template must be used when setting anchor bolts. Beacon Products will deny any claim for incorrect anchorage placement resulting from failure to use factory supplied template and anchor bolts.

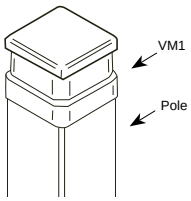
EHH - EXTRA HANDHOLE



C05 - C07 - C20 - COUPLING

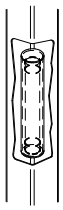


VM1 - VIBRATION DAMPER 1ST MODE



Field Installed Pole Top damper designed to reduce pole top deflection or sway. VM1 is recommended for pole systems 25' and taller with a total EPA of 1.0 or less.

VM2 - VIBRATION DAMPER 2ND MODE



Factory installed, internal damper designed to alter pole resonance to reduce movement and material fatigue caused by 2nd mode vibration.

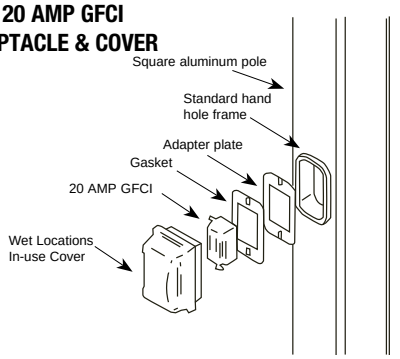
VM2SXX - VIBRATION DAMPER 2ND MODE



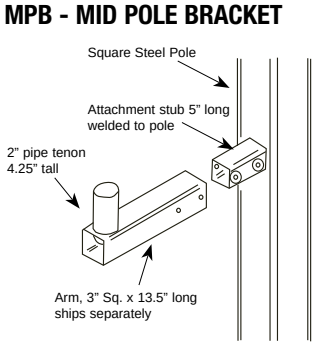
VM2S08 – 8'
VM2S12 – 12'
VM2S16 – 16'
VM2S20 – 20'
VM2S24 – 24'

Field installed, internal damper designed to alter pole resonance to reduce movement and material fatigue caused by 2nd mode vibration.

GFI – 20 AMP GFCI RECEPTACLE & COVER

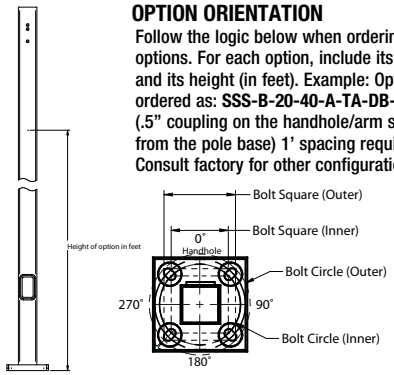


MPB - MID POLE BRACKET



OPTION ORIENTATION

Follow the logic below when ordering location specific options. For each option, include its orientation (in degrees) and its height (in feet). Example: Option C07 should be ordered as: **SSS-B-20-40-A-TA-DB-C05-0-15** (.5" coupling on the handhole/arm side of pole, 15 feet up from the pole base) 1' spacing required between option. Consult factory for other configurations.

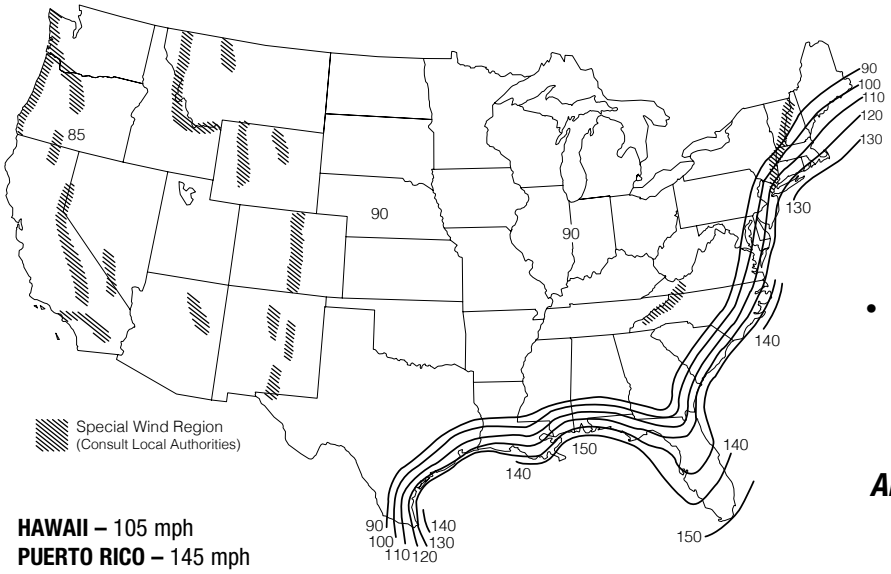


For more information about pole vibration and vibration dampers, please consult http://www.beaconproducts.com/content/products/literature/literature_files/Pole_Wind_Induced_Flyer_HL0I0022.pdf
Due to our continued efforts to improve our products, product specifications are subject to change without notice.

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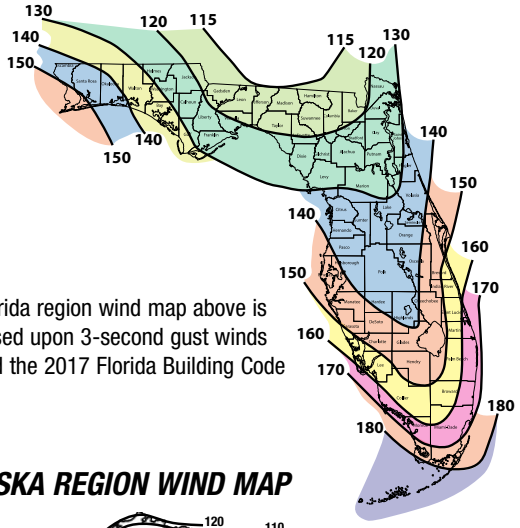
HUBBELL Lighting

ASCE7-05 WIND MAP



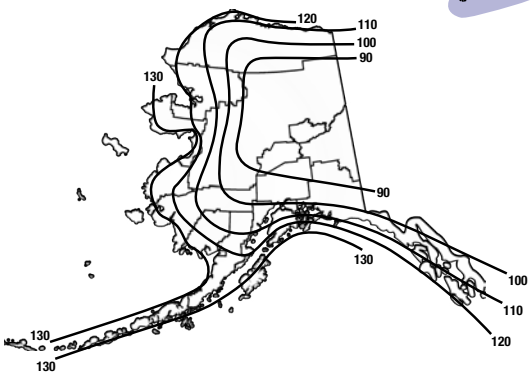
HAWAII – 105 mph
PUERTO RICO – 145 mph

FLORIDA REGION WIND *MAP*



- Florida region wind map above is based upon 3-second gust winds and the 2017 Florida Building Code

ALASKA REGION WIND MAP



ASCE 7-05 wind map EPA Load Rating - 3 second gust wind speeds (Use for all locations except Florida)										
Catalog Number	**85**	**90**	**100**	**105**	**110**	**120**	**130**	**140**	**145**	**150**
SSS-B-10-40-A	25.0	25.0	25.0	22.8	20.6	17.0	14.2	11.9	11.0	10.1
SSS-B-12-40-A	25.0	25.0	20.0	18.0	16.1	13.2	10.8	8.9	8.1	7.4
SSS-B-14-40-A	23.1	20.4	16.1	14.3	12.8	10.2	8.2	6.6	5.9	5.3
SSS-B-16-40-A	19.0	16.7	13.0	11.5	10.1	7.9	6.2	4.7	4.1	3.6
SSS-B-18-40-A	15.6	13.6	10.0	9.0	7.8	5.9	4.4	3.1	2.6	2.1
SSS-B-20-40-A	12.7	10.9	7.9	6.9	5.9	4.2	2.8	1.7	1.3	0.9
SSS-B-25-40-A	7.3	5.9	3.8	2.9	2.1	0.8	NR	NR	NR	NR
SSS-B-14-40-B	25.0	25.0	23.3	20.8	18.6	15.1	12.3	10.2	9.2	8.4
SSS-B-16-40-B	25.0	24.9	19.4	17.3	15.4	12.3	9.9	8.0	7.2	6.4
SSS-B-18-40-B	24.0	20.8	16.1	14.2	12.5	9.8	7.7	6.1	5.3	4.7
SSS-B-20-40-B	20.2	17.5	13.2	11.6	10.1	7.7	5.9	4.4	3.8	3.2
SSS-B-25-40-B	12.8	11.0	7.9	6.7	5.5	3.7	2.3	1.2	0.7	NR
SSS-B-30-40-B	8.0	6.6	4.1	3.1	2.2	0.8	NR	NR	NR	NR
SSS-B-16-50-B	25.0	25.0	25.0	25.0	24.8	20.1	16.5	13.6	12.3	11.2
SSS-B-18-50-B	25.0	25.0	25.0	22.9	20.4	16.4	13.2	10.7	9.6	8.6
SSS-B-20-50-B	25.0	25.0	21.3	18.9	16.7	13.2	10.4	8.1	7.2	6.3
SSS-B-25-50-B	20.7	17.8	13.3	11.5	9.8	7.2	5.0	3.3	2.6	1.9
SSS-B-30-50-B	13.5	11.3	7.7	6.2	4.9	2.8	1.1	NR	NR	NR
SSS-B-25-50-C	25.0	25.0	19.4	17.1	15.1	11.7	9.0	6.9	6.0	5.1
SSS-B-30-50-C	20.1	17.3	12.7	10.9	9.3	6.6	4.5	2.8	2.1	1.4
SSS-B-20-60-B	25.0	25.0	25.0	25.0	25.0	20.2	16.1	12.9	11.5	10.3
SSS-B-25-60-B	25.0	25.0	20.6	18.0	15.6	11.8	8.7	6.2	5.2	4.2
SSS-B-30-60-B	21.4	18.1	12.9	10.7	8.8	5.7	3.3	1.3	NR	NR
SSS-B-35-60-B	14.0	11.3	6.9	5.2	3.6	1.0	NR	NR	NR	NR
SSS-B-40-60-B	8.1	5.8	2.2	nr	NR	NR	NR	NR	NR	NR
SSS-B-30-60-C	24.3	20.5	14.6	12.2	10.2	6.8	4.2	2.2	1.3	0.5
SSS-B-35-60-C	16.6	13.5	8.6	6.6	4.9	2.1	NR	NR	NR	NR
SSS-B-40-60-C	10.6	7.9	3.7	2.1	0.6	NR	NR	NR	NR	NR

Florida Building Code 2017 EPA Load Rating - 3 second gust wind speeds (Use for Florida only)								
Catalog Number	**115**	**120**	**130**	**140**	**150**	**160**	**170**	**180**
SSS-B-10-40-A	25.0	25.0	25.0	25.0	21.4	18.4	15.9	13.9
SSS-B-12-40-A	25.0	25.0	23.6	19.8	16.7	14.2	12.1	10.4
SSS-B-14-40-A	25.0	23.1	19.0	15.7	13.1	10.9	9.1	7.6
SSS-B-16-40-A	20.8	18.7	15.2	12.3	10.1	8.2	6.7	5.4
SSS-B-18-40-A	16.8	15.0	11.9	9.4	7.5	5.9	4.5	3.4
SSS-B-20-40-A	13.6	11.9	9.2	7.1	5.3	3.9	2.7	1.7
SSS-B-25-40-A	7.4	6.2	4.1	2.5	1.1	NR	NR	NR
SSS-B-14-40-B	25.0	23.6	19.4	16.1	13.4	11.2	9.4	7.8
SSS-B-16-40-B	21.4	19.2	15.6	12.7	10.4	8.5	6.9	5.6
SSS-B-18-40-B	17.2	15.4	12.2	9.7	7.7	6.1	4.7	3.6
SSS-B-20-40-B	13.9	12.3	9.5	7.3	5.5	4.1	2.9	1.9
SSS-B-25-40-B	7.7	6.4	4.3	2.6	1.3	NR	NR	NR
SSS-B-30-40-B	3.2	2.1	NR	NR	NR	NR	NR	NR
SSS-B-16-50-B	25.0	25.0	25.0	25.0	25.0	21.4	18.2	15.5
SSS-B-18-50-B	25.0	25.0	25.0	24.4	20.4	17.0	14.2	11.9
SSS-B-20-50-B	25.0	25.0	24.4	19.9	1 6.3	13.4	11.0	8.9
SSS-B-25-50-B	21.8	19.3	15.0	11.5	8.8	6.5	4.7	3.1
SSS-B-30-50-B	13.7	11.7	8.2	5.5	3.3	1.5	NR	NR
SSS-B-25-50-C	21.8	19.3	15.0	11.5	8.8	6.5	4.7	3.1
SSS-B-30-50-C	13.7	11.7	8.2	5.5	3.3	1.5	NR	NR
SSS-B-20-60-B	25.0	25.0	25.0	21.9	17.8	14.5	11.7	9.4
SSS-B-25-60-B	23.8	20.9	16.1	12.3	9.2	6.6	4.5	2.8
SSS-B-30-60-B	14.6	12.3	8.4	5.3	2.8	0.8	NR	NR
SSS-B-35-60-B	7.5	5.6	2.4	NR	NR	NR	NR	NR
SSS-B-40-60-B	1.8	NR	NR	NR	NR	NR	NR	NR
SSS-B-30-60-C	14.6	12.3	8.4	5.3	2.8	0.8	NR	NR
SSS-B-35-60-C	7.5	5.6	2.4	NR	NR	NR	NR	NR
SSS-B-40-60-C	1.8	NR	NR	NR	NR	NR	NR	NR

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NOTES

Wind-speed Website disclaimer:
Hubbell Lighting has no connection to the linked website and makes no representations as to its accuracy. While the information presented on this third-party website provides a useful starting point for analyzing wind conditions, Hubbell Lighting has not verified any of the information on this third party website and assumes no responsibility or liability for its accuracy. The material presented in the windspeed website should not be used or relied upon for any specific application without competent examination and verification of its accuracy, suitability and applicability by engineers or other licensed professionals. Hubbell Lighting Inc. does not intend that the use of this information replace the sound judgment of such competent professionals, having experience and knowledge in the field of practice, nor to substitute for the standard of care required of such professionals in interpreting and applying the results of the windspeed report provided by this website. Users of the information from this third party website assume all liability arising from such use. Use of the output of these referenced websites do not imply approval by the governing building code bodies responsible for building code approval and interpretation for the building site described by latitude/longitude location in the windspeed report. http://windspeed.atcouncil.org

NOTES

- Allowable EPA, to determine max pole loading weight, multiply allowable EPA by 30 lbs.
- The tables for allowable pole EPA are based on the ASCE 7-05 Wind Map or the Florida Region Wind Map for the 2010 Florida Building Code. The Wind Maps are intended only as a general guide and cannot be used in conjunction with other maps. Always consult local authorities to determine maximum wind velocities, gusting and unique wind conditions for each specific application
- Allowable pole EPA for jobsite wind conditions must be equal to or greater than the total EPA for fixtures, arms, and accessories to be assembled to the pole. Responsibility lies with the specifier for correct pole selection. Installation of poles without luminaires or attachment of any unauthorized accessories to poles is discouraged and shall void the manufacturer's warranty
- Wind speeds and listed EPAs are for ground mounted installations. Poles mounted on structures (such as bridges and buildings) must consider vibration and coefficient of height factors beyond this general guide; Consult local and federal standards
- Wind Induced Vibration brought on by steady, unidirectional winds and other unpredictable aerodynamic forces are not included in wind velocity ratings. Consult Hubbell Lighting's Pole Vibration Application Guide for environmental risk factors and design considerations. http://www.beaconproducts.com/content/products/literature/literature_files/Pole_Wind_Induced_Flyer_HLOI0022.pdf
- Extreme Wind Events like, Hurricanes, Typhoons, Cyclones, or Tornadoes may expose poles to flying debris, wind shear or other detrimental effects not included in wind velocity ratings

Due to our continued efforts to improve our products, product specifications are subject to change without notice.

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BEACON
design . performance . technology

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

FIXTURE TYPE
E1

VIPER S

SMALL VIPER LUMINAIRE

OPTICS
STRIKE

FEATURES

- Small size companion to Viper Large
- Wide choice of different LED wattage configurations
- Nine optical distributions
- Designed to replace HID lighting up to 400W MH or HPS
- Suitable for wet locations

C US

*3000K and warmer CCTs only



RELATED PRODUCTS

Viper Large

CONTROL TECHNOLOGY

NX DISTRIBUTED INTELLIGENCE wiSCAPE energent SiteSync LIGHTING CONTROL

SPECIFICATIONS

CONSTRUCTION

- Manufactured with die cast aluminum
- Coated with a polyester finish that meets ASTM B117 corrosion test requirements and ASTM D522 cracking and loss of adhesion test requirements
- IFS polyester powder-coat electrostatically applied and thermocured. IFS finish consists of a five stage pretreatment regimen with a polymer primer sealer and top coated with a thermoset super TGIC polyester powder coat finish
- The finish meets the AAMA 2604 performance specification which includes passing a 3,000-hour salt spray test for corrosion resistance and resists cracking or loss of adhesion per ASTM D522 and resists surface impacts of up to 160 inch-pounds
- External hardware is corrosion resistant

OPTICS

- Cartridge is held together with internal brass standoffs soldered to the board so that it can be field replaced as a one-piece optical system
- One-piece silicone gasket ensures a weatherproof seal around each individual optic
- One-piece optical cartridge system consisting of an LED engine, optics, gasket and stainless steel bezel

INSTALLATION

- Mounting options for horizontal arm, vertical tenon or traditional arm mounting available. Mounting hardware included

ELECTRICAL

- Luminaire accepts 100V through 277V, 347V or 480V input 50 Hz to 60 Hz (UNV)
- Power factor is ≥ .90 at full load
- Dimming drivers are standard, but must contact factory to request wiring leads for purpose of external dimming controls
- Component-to-component wiring within the luminaire may carry no more than 80% of rated load and is certified by UL for use at 600VAC at 90°C or higher
- Plug disconnects are certified by UL for use at 600 VAC, 13A or higher. 13A rating applies to primary (AC) side only
- Fixture electrical compartment contains all LED driver components and a push-button terminal block for AC power connections
- Optional 7-pin ANSI C136.41-2013 Twist-Lock® photo control receptacle available. Compatible with ANSI C136.41 external wireless control devices
- Ambient operating temperature -40°C to 25°C
- Surge protection: 20kA
- Lifeshield™ Circuit (see Electrical Data)

CONTROLS

- Available with an optional passive infrared (PIR) motion sensor capable of detecting motion 360° around the luminaire. When no motion is detected for the specified time, the motion response system reduces the wattage to factory preset level, reducing the light level accordingly. When motion is detected by the PIR sensor, the luminaire returns to full wattage and full light output. Please contact Beacon Products if project requirements vary from standard configuration
- Available with Energeni for optional set dimming, timed dimming with simple delay, or timed dimming based on time of night
- In addition, Viper can be specified with SiteSync™ wireless control system for reduction in energy and maintenance costs while optimizing light quality 24/7

CERTIFICATIONS

- DLC® (DesignLights Consortium) Qualified. Please refer to the DLC website for specific product qualifications at www.designlights.org
- Certified to UL 1598 and UL 8750
- 3G rated for ANSI C136.31 high vibration applications with MAF mounting
- IDA approved
- This product is approved by the Florida Fish and Wildlife Conservation Commission. Separate spec available online

WARRANTY

- 5 year warranty
- See HLI Commercial and Industrial Outdoor Lighting Warranty for additional information

KEY DATA	
Lumen Range	5400–16,216
Wattage Range	55–136
Efficacy Range (LPW)	100–124
Reported Life (Hours)	L70>377,000
Input Current Range (Amps)	0.1–1.1

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HUBBELL Lighting

BEACON
design . performance . technology

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

VIPER S

SMALL VIPER LUMINAIRE

ORDERING GUIDE

Example: VPS–24L–55–4K7–4W–UNV–A–DB–TL–GENI–04–BC

CATALOG #

VPS –

Series	
VPS	Viper Small

LED Engine	
24L-55	55W, LED array
36L-65	65W, LED array
36L-80	80W, LED array
48L-110	110W, LED array
60L-136	136W, LED array

CCT/CRI [7]	
3K7	3000K, 70 CRI
4K7	4000K, 70 CRI
5K7	5000K, 70 CRI

Distribution	
FR	Type 1/Front Row
2	Type 2
3	Type 3
4	Type 4
4W	Type 4 Wide
5QM	Type 5QM
5R	Type 5R (rectangular)
5W	Type 5W (round wide)
TC	Tennis Court

Rotation	
Blank	No rotation
L	Optic rotation left [5]
R	Optic rotation right [5]

Voltage	
UNV	120–277V
347	347V
480	480V

Mounting	
A	Rectangular Arm (formerly RA) for square or round pole
MAF	Mast Arm Fitter (formerly SF2) for 2⅜" OD horizontal arm
K	Knuckle (formerly PK2) limit to 30° tilt or 2⅜" OD horizontal arm or vertical tenon
WB	Wall Bracket
AD	Universal Arm for square pole
AD3	Adapter for 2.4"–4.1" round pole
AD4	Adapter for 4.2"–5.3" round pole
AD5	Adapter for 5.5"–5.9" round pole
AD6	Adapter for 6.0"–6.5" round pole

Color	
BL	Black Textured
DB	Dark Bronze Textured
GYS	Light Gray Smooth
PS	Platinum Silver Smooth
WH	White Textured
CC	Custom Color

Control Options	
7PR	7-Pin Receptacle only (shorting cap, photo control, or wireless control provided by others)
7PR-SC	7-Pin Receptacle w/Shorting Cap
7PR-TL	7-Pin Receptacle w/Twist-Lock® photo control
SCP/_F	Programmable Occupancy Sensor w/ daylight control [1,2,6]
GENI-XX	ENERGENI [3]
SWP	SiteSync Pre-Commission [1,4]
SWPM_F	SiteSync Pre-Commission w/ Sensor [1,2,4]

Options	
F	Fusing
BSP	Bird Spikes
BC	Backshield (available for FR, 2, 3, 4, 4W Optics)

House Side Shield Accessories

- ☐ **HSS/VP-S/90-FB/XXX** 90° shield front or back
- ☐ **HSS/VP-S/90-LR/XXX** 90° shield left or right
- ☐ **HSS/VP-S/270-FB/XXX** 270° shield front or back
- ☐ **HSS/VP-S/270-LR/XXX** 270° shield left or right
- ☐ **HSS/VP-S/360/XXX** Full shield

Replace XXX with notation for desired finish color. Refer to page 8 for shield images.

Mounting Accessories

- ☐ **VPL-AD-RPA3** 2.4"–4.1" Round Pole Adapter for AD arm
- ☐ **VPL-AD-RPA4** 4.2"–5.3" Round Pole Adapter for AD arm
- ☐ **VPL-AD-RPA5** 5.5"–5.9" Round Pole Adapter for AD arm
- ☐ **VPL-AD-RPA6** 6.0"–6.5" Round Pole Adapter for AD arm

Notes:

1 Not available with other wireless control or sensor options

2 Specify mounting height; 8 = 8' or less, 40 = 9' to 40'

3 Specify routine setting code (example GENI-04). See ENERGENI brochure and instructions for setting table and options. Not available with sensor or SiteSync options

4 Specify group and zone at time of order. See www.hubbelllighting.com/sitesync for further details. Order at least one SiteSync interface accessory SWUSB or SWTAB. Each option contains SiteSync License, GUI, and Bridge Node

5 Only available with FR, 2, 3, 4, 4W and 5R distributions

6 Order at least one SCP-REMOTE per project location to program and control the occupancy sensor

Accessories and Services (Ordered Separately)

- ☐ **SCP-REMOTE** Remote Control for SCP/_F option. Order at least one per project to program and control the occupancy sensor
- ☐ **SWUSB*** SiteSync interface software loaded on USB flash drive for use with owner supplied PC (Windows based only). Includes SiteSync license, software and USB radio bridge node
- ☐ **SWTAB*** Windows tablet and SiteSync interface software. Includes tablet with preloaded software, SiteSync license and USB radio bridge node
- ☐ **SWBRG** SiteSync USB radio bridge node only. Order if a replacement is required or if an extra bridge node is requested
- ☐ **SW7PR+** SiteSync 7-Pin on fixture module On/Off/Dim, Daylight Sensor 120–480VAC

* When ordering SiteSync at least one of these two interface options must be ordered per project.
\+ Available as a SiteSync retrofit solution for fixtures with an existing 7-pin receptacle.

Hubbell Control Solutions — Accessories (Sold Separately)

NX Distributed Intelligence™

- ☐ **NXOFM-1R1D-UNV** On-fixture Module (7-pin), On / Off / Dim, Daylight Sensor with HubbNET Radio and Bluetooth® Radio, 120–480VAC

wiSCAPE® Lighting Control

- ☐ **WIR-RME-L** On-fixture Module (7-pin or 5-pin), On / Off / Dim, Daylight Sensor with wiSCAPE Radio, 110–480VAC

For additional information related to these accessories please visit www.hubbellcontrolsolutions.com. Options provided for use with integrated sensor, please view specification sheet ordering information table for details.

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TYPE: PROJECT:

CATALOG #:

VIPER S

SMALL VIPER LUMINAIRE

CONTROLS

SiteSync — Precommissioned Ordering Information:

When ordering a fixture with the SiteSync lighting control option, additional information will be required to complete the order. The SiteSync Commissioning Form or alternate schedule information must be completed. This form includes Project location, Group information, and Operating schedules. For more detailed information please visit the SiteSync family page on our website or contact Hubbell Lighting tech support at 800-888-8006.

SiteSync fixtures with Motion control (SWPM) require the mounting height of the fixture for selection of the lens.

Examples: VP-L/80L-235/4K7/3/UNV/A/DB/SWP/ SiteSync only
VP-L/80L-235/4K7/3/UNV/A/DB/SWPM-40F/ SiteSync with Motion Control

SiteSync 7-Pin Module:

- SiteSync features in a new form
- Available as an accessory for new construction or retrofit applications (with existing 7-Pin receptacle)
- Does not interface with occupancy sensors



SW7PR

NX Distributed Intelligence™ Lighting Controls:

Supports both indoor and outdoor applications in a variety of deployment options: wired, wireless and hybrid. Integrates with and enables a wide array of luminaires including those with SpectraSync Color Tuning Technology.

NX Integrated Controls Reference								
NX Option	Sensor	Networkable	Scheduling	Occupancy	Daylight Harvesting	0–10V Dimming	On/off Control	Bluetooth® App Programming
NX Networked – Wireless								
NXOFM-1R1D-UNV	SCLNX	Yes	Yes	Yes	Yes	Yes	Yes	Yes, Bluetooth App

wiSCAPE™:

Supports remote management, monitoring and metering of outdoor wireless lighting applications such as smart campuses, smart cities, parking lots, parking lots and roadways.

wiSCAPE Reference								
wiSCAPE Option	Sensor	Networkable	Scheduling	Occupancy	Daylight Harvesting	0–10V Dimming	On/off Control	Bluetooth® App Programming
Networked – Wireless								
WIR-RME-L	WIR-RME-L	Yes	Yes	No	Yes	Yes	Yes	wiSCAPE Gateway

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SMALL VIPER LUMINAIRE

DELIVERED LUMENS

# of LEDs	DRIVE CURRENT (mA)	SYSTEM WATTS	DISTRIBUTION TYPE	5K (5000K nominal, 70 CRI)					4K (4000K nominal, 70 CRI)					3K (3000K nominal, 70 CRI)				
				LUMENS	LPW	B	U	G	LUMENS	LPW	B	U	G	LUMENS	LPW	B	U	G
24	700 mA	55W	FR	6357	118	1	0	1	6486	120	1	0	1	5804	107	1	0	1
			2	6132	114	1	0	1	6257	116	1	0	2	5599	104	1	0	1
			3	6015	111	1	0	2	6137	114	1	0	2	5492	102	1	0	2
			4	5921	110	1	0	2	6034	112	1	0	2	5400	100	1	0	2
			4W	5793	108	1	0	2	5909	110	1	0	2	5272	98	1	0	2
			5QM	6022	112	2	0	1	6145	114	2	0	1	5499	102	2	0	1
			5R	6063	112	3	0	3	6187	115	3	0	3	5536	103	3	0	3
			5W	5908	109	3	0	1	6028	112	3	0	1	5908	102	3	0	1
			TC	6183	113	1	0	1	6309	118	1	0	1	5645	105	1	0	1
36	560 mA	65W	FR	7864	121	1	0	1	8041	124	1	0	1	7189	111	1	0	1
			2	7586	117	1	0	2	7757	119	1	0	2	6934	107	1	0	2
			3	7441	114	1	0	2	7609	117	1	0	2	6802	105	1	0	2
			4	7317	110	1	0	2	7482	112	1	0	2	6688	100	1	0	2
			4W	8690	108	1	0	2	8864	110	1	0	2	7908	98	1	0	2
			5QM	7450	115	3	0	1	7618	117	3	0	1	6810	105	3	0	1
			5R	7501	115	3	0	3	7670	118	3	0	3	6857	105	3	0	3
			5W	7309	112	3	0	2	7473	115	3	0	2	6681	103	3	0	1
36	700 mA	80W	FR	9535	118	1	0	1	9730	120	1	0	1	8706	107	1	0	1
			2	9197	114	1	0	2	9385	116	1	0	2	8398	104	1	0	2
			3	9022	111	1	0	2	9206	114	1	0	2	8238	102	1	0	2
			4	8871	110	1	0	2	9052	112	1	0	2	8100	100	1	0	2
			4W	11587	108	1	0	3	11819	110	1	0	3	10544	98	1	0	3
			5QM	9033	112	3	0	1	9217	114	3	0	1	8248	102	3	0	1
			5R	9095	112	3	0	3	9280	115	3	0	3	8304	103	3	0	3
			5W	8861	109	3	0	2	9043	112	3	0	2	8092	100	3	0	2
			TC	9275	115	1	0	1	9464	118	1	0	1	8468	105	1	0	1
48	700 mA	110W	FR	12713	118	1	0	1	12973	120	2	0	1	11608	107	1	0	1
			2	12263	114	2	0	2	12513	116	2	0	2	11197	104	2	0	2
			3	12029	111	2	0	2	11275	114	2	0	2	10984	102	1	0	2
			4	11828	110	1	0	3	12069	112	1	0	3	10800	100	1	0	2
			4W	14484	108	2	0	4	14774	111	2	0	4	13180	98	2	0	3
			5QM	12044	112	3	0	2	12290	114	3	0	2	10997	102	3	0	1
			5R	12126	112	3	0	3	12374	115	3	0	3	11072	103	3	0	3
			5W	12126	109	4	0	2	12057	112	4	0	2	10789	100	4	0	2
			TC	12366	115	1	0	2	12619	118	1	0	2	11290	105	1	0	2
60	700 mA	136W	FR	15891	117	2	0	2	16216	120	2	0	2	14511	107	2	0	1
			2	15329	113	2	0	2	15642	116	2	0	2	13997	103	2	0	2
			3	15037	111	2	0	3	15344	113	2	0	3	13730	101	2	0	3
			4	14784	109	1	0	3	15086	111	1	0	3	13500	100	1	0	3
			4W	14802	109	2	0	3	15104	112	2	0	3	13515	100	2	0	3
			5QM	15055	111	3	0	2	15362	114	3	0	2	13747	102	3	0	2
			5R	15158	112	4	0	4	15469	114	4	0	4	13841	102	4	0	4
			5W	14781	109	4	0	2	15083	111	4	0	2	13495	100	4	0	2
			TC	15458	115	1	0	2	15834	118	1	0	2	14113	105	1	0	2

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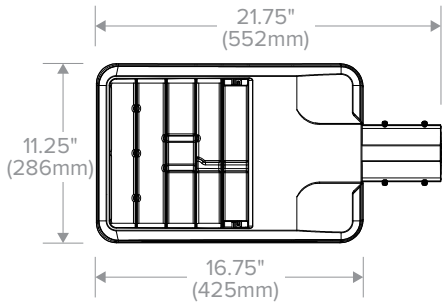
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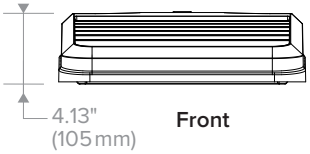
CATALOG #:

VIPER S

SMALL VIPER LUMINAIRE

DIMENSIONS





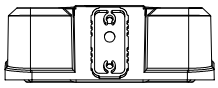
Front

Weight	15.0 lbs (6.8 kg)
EPA	.67 ft²

A Arm (formerly RA)



Side View

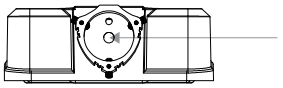


Back View

MAF (formerly SF2)



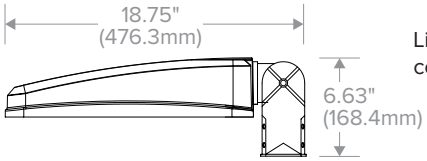
Side View



Back View

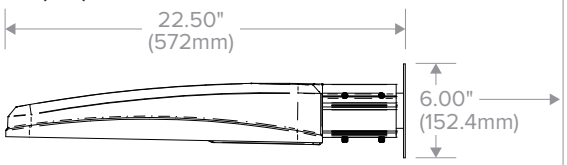
Accepts 2⅜" OD tenon, min 5" long.

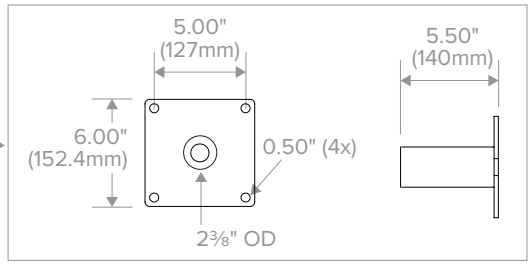
2⅜" Adjustable Knuckle (K) (formerly PK2)



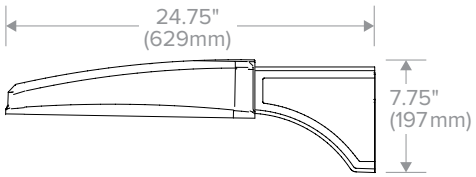
Limit to 30° tilt. Sensor, photocell and wireless controls should not be tilted above horizontal.

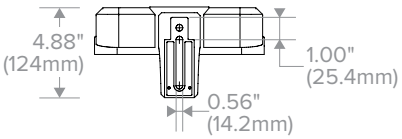
Wall Bracket (WB)





AD Decorative Arm





See page 9 for mounting details.

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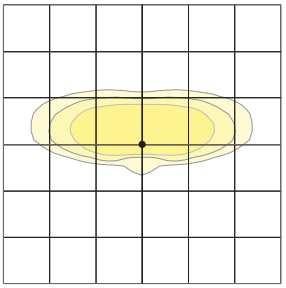
VIPER S

SMALL VIPER LUMINAIRE

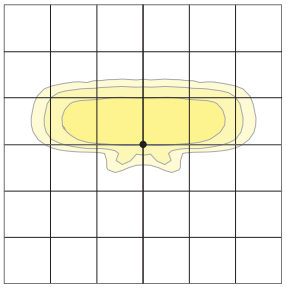
PHOTOMETRY

The following diagrams represent the general distribution options offered for this product. For detailed information on specific product configurations, see website photometric test reports.

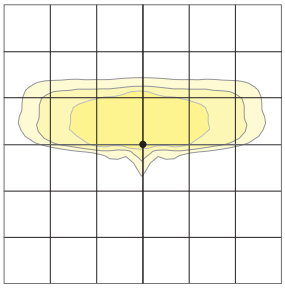
Type FR – Front Row/Auto Optic



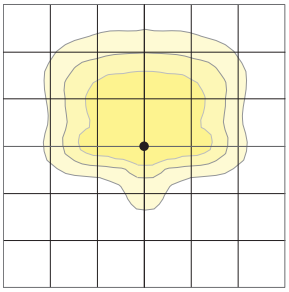
Type 2



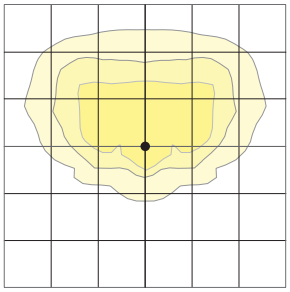
Type 3



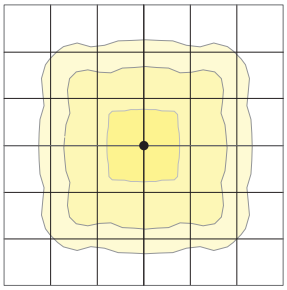
Type 4



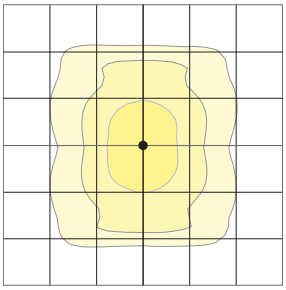
Type 4 Wide



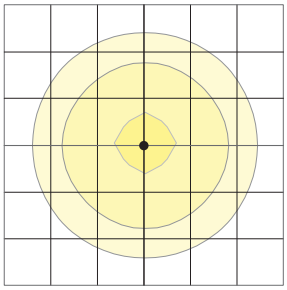
Type 5QM



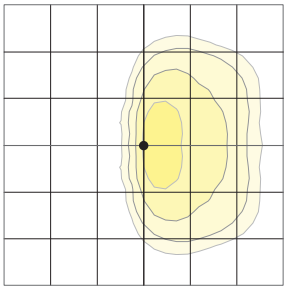
Type 5R (rectangular)



Type 5W (round wide)



Type TC



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SMALL VIPER LUMINAIRE

ELECTRICAL DATA

# OF LEDS	NUMBER OF DRIVERS	DRIVE CURRENT (mA)	INPUT VOLTAGE (V)	SYSTEM POWER (w)	CURRENT (Amps)
24	1	700 mA	120	55	0.5
			277		0.2
			347		0.2
			480		0.1
36	1	525 mA	120	65	0.65
			277		0.28
			347		0.22
			480		0.16
		700 mA	120	80	0.7
			277		0.3
			347		0.2
			480		0.2
48	1	700 mA	120	110	0.9
			277		0.4
			347		0.3
			480		0.2
60	1	700 mA	120	136	1.1
			277		0.5
			347		0.4
			480		0.3

PROJECTED LUMEN MAINTENANCE						
Ambient Temp.	0	25,000	50,000	TM-21-11 60,000[1]	100,000	Calculated L70 (HOURS)
25°C / 77°C	1	0.97	0.95	0.95	0.92	>377,000

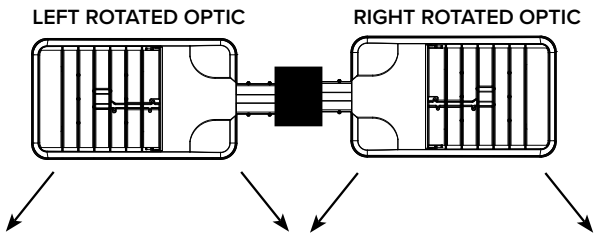
1 Projected per IESNA TM-21-11.
Data references the extrapolated performance projections for the 60 LED base model in a 25°C ambient, based on 10,000 hours of LED testing per IESNA LM-80-08.

LIFESHIELD™ CIRCUIT

Protects luminaire from excessive temperature. The device activates at a specific, factory-preset temperature and progressively reduces power over a finite temperature range. Operation is smooth and undetectable to the eye. Thermal circuit is designed to “fail on”, allowing the luminaire to revert to full power in the event of an interruption of its power supply or faulty wiring connection to the drivers. The device can co-exist with other 0–10V control devices (occupancy sensors, external dimmers, etc.)

ADDITIONAL INFORMATION

ROTATION OPTIONS



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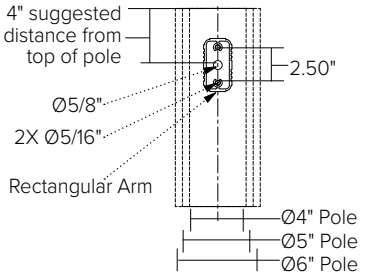
VIPER S

SMALL VIPER LUMINAIRE

ADDITIONAL INFORMATION (CONTINUED)

DRILL PATTERN

RECTANGULAR ARM (A)
Compatible with Pole drill pattern B3



EPA

Config.	EPA
1	.67
2 @ 90˚	1.06
2 @ 180˚	1.34

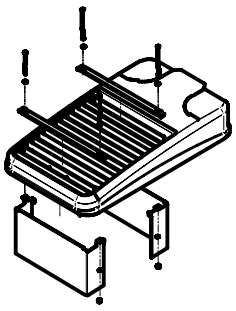
Config.	EPA
3 @ 120˚	1.68
3 @ 90˚	1.73
4 @ 90˚	2.12

TENON TOP POLE BRACKET ACCESSORIES (ORDER SEPARATELY)

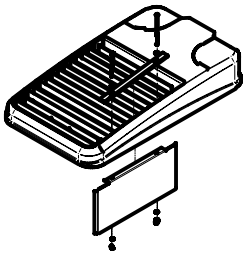
(2 3/8" OD tenon)

TENON TOP POLE BRACKET ACCESSORIES (Order Separately)	
☐ **SETAVP-XX**	Square tenon adapter (4 at 90°) for A - Rectangular Arm mounting option only
☐ **RETAVP-XX**	Round tenon adapter (4 at 90°) for A - Rectangular Arm mounting option only
☐ **SETA2XX**	Square tenon adapter (4 at 90°) for AD - Universal Arm mounting option only
☐ **RETA2XX**	Round tenon adapter (4 at 90°) for AD3 - Universal Arm mounting option only
☐ **TRETA2XX**	Hexagonal tenon adapter (3 at 120°) for AD - Universal Arm mounting option only

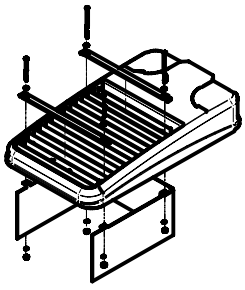
HOUSE SIDE SHIELD FIELD INSTALL ACCESSORIES



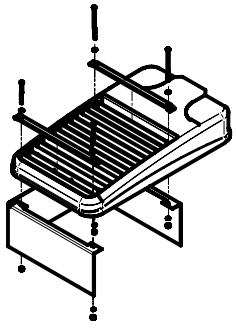
HSS/VP-S/90-FB/XXX
90° shield front or back
(2 shields shown)



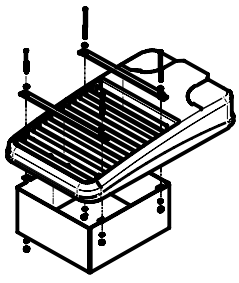
HSS/VP-S/90-LR/XXX
90° shield left or right
(1 shield shown in left orientation)



HSS/VP-S/270-FB/XXX
270° shield front or back
(1 shield shown in back orientation)



HSS/VP-S/270-LR/XXX
270° shield left or right
(1 shield shown in right orientation)



HSS/VP-S/360/XXX
Full shield
(1 shield shown)

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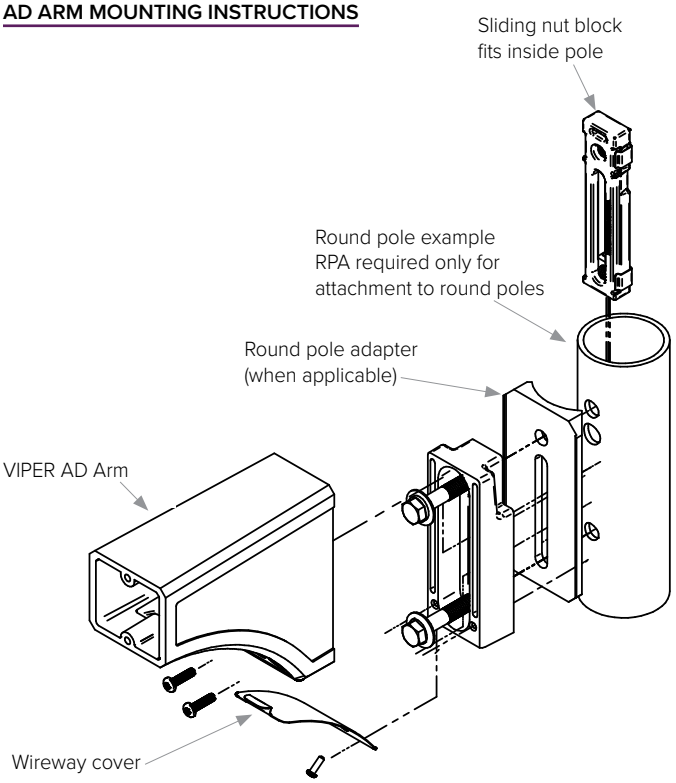
CATALOG #:

VIPER S

SMALL VIPER LUMINAIRE

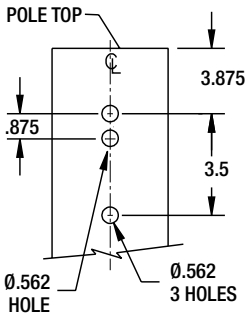
ADDITIONAL INFORMATION (CONTINUED)

AD ARM MOUNTING INSTRUCTIONS



DECORATIVE ARM (AD)

Compatible with pole drill pattern S2



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RFS Engineering
FIXTURE TYPE
E2

OPTICS
STRIKE

VIPER S

SMALL VIPER LUMINAIRE

FEATURES

- Small size companion to Viper Large
- Wide choice of different LED wattage configurations
- Nine optical distributions
- Designed to replace HID lighting up to 400W MH or HPS
- Suitable for wet locations

C SA US | DLC DLC PRO LISTED | ida DARK SKY APPROVED 2016

*3000K and warmer CCTs only



RELATED PRODUCTS

Viper Large

CONTROL TECHNOLOGY

NX DISTRIBUTED INTELLIGENCE | wiSCAPE | energent | SiteSync LIGHTING CONTROL

SPECIFICATIONS

CONSTRUCTION

- Manufactured with die cast aluminum
- Coated with a polyester finish that meets ASTM B117 corrosion test requirements and ASTM D522 cracking and loss of adhesion test requirements
- IFS polyester powder-coat electrostatically applied and thermocured. IFS finish consists of a five stage pretreatment regimen with a polymer primer sealer and top coated with a thermoset super TGIC polyester powder coat finish
- The finish meets the AAMA 2604 performance specification which includes passing a 3,000-hour salt spray test for corrosion resistance and resists cracking or loss of adhesion per ASTM D522 and resists surface impacts of up to 160 inch-pounds
- External hardware is corrosion resistant

OPTICS

- Cartridge is held together with internal brass standoffs soldered to the board so that it can be field replaced as a one-piece optical system
- One-piece silicone gasket ensures a weatherproof seal around each individual optic
- One-piece optical cartridge system consisting of an LED engine, optics, gasket and stainless steel bezel

INSTALLATION

- Mounting options for horizontal arm, vertical tenon or traditional arm mounting available. Mounting hardware included

ELECTRICAL

- Luminaire accepts 100V through 277V, 347V or 480V input 50 Hz to 60 Hz (UNV)
- Power factor is ≥ .90 at full load
- Dimming drivers are standard, but must contact factory to request wiring leads for purpose of external dimming controls
- Component-to-component wiring within the luminaire may carry no more than 80% of rated load and is certified by UL for use at 600VAC at 90°C or higher
- Plug disconnects are certified by UL for use at 600 VAC, 13A or higher. 13A rating applies to primary (AC) side only
- Fixture electrical compartment contains all LED driver components and a push-button terminal block for AC power connections
- Optional 7-pin ANSI C136.41-2013 Twist-Lock® photo control receptacle available. Compatible with ANSI C136.41 external wireless control devices
- Ambient operating temperature -40°C to 25°C
- Surge protection: 20kA
- Lifeshield™ Circuit (see Electrical Data)

CONTROLS

- Available with an optional passive infrared (PIR) motion sensor capable of detecting motion 360° around the luminaire. When no motion is detected for the specified time, the motion response system reduces the wattage to factory preset level, reducing the light level accordingly. When motion is detected by the PIR sensor, the luminaire returns to full wattage and full light output. Please contact Beacon Products if project requirements vary from standard configuration
- Available with Energeni for optional set dimming, timed dimming with simple delay, or timed dimming based on time of night
- In addition, Viper can be specified with SiteSync™ wireless control system for reduction in energy and maintenance costs while optimizing light quality 24/7

CERTIFICATIONS

- DLC® (DesignLights Consortium) Qualified. Please refer to the DLC website for specific product qualifications at www.designlights.org
- Certified to UL 1598 and UL 8750
- 3G rated for ANSI C136.31 high vibration applications with MAF mounting
- IDA approved
- This product is approved by the Florida Fish and Wildlife Conservation Commission. Separate spec available online

WARRANTY

- 5 year warranty
- See HLI Commercial and Industrial Outdoor Lighting Warranty for additional information

KEY DATA	
Lumen Range	5400–16,216
Wattage Range	55–136
Efficacy Range (LPW)	100–124
Reported Life (Hours)	L70>377,000
Input Current Range (Amps)	0.1–1.1

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SMALL VIPER LUMINAIRE

ORDERING GUIDE

Example: VPS–24L–55–4K7–4W–UNV–A–DB–TL–GENI–04–BC

CATALOG #

VPS –

Series	
VPS	Viper Small

LED Engine	
24L-55	55W, LED array
36L-65	65W, LED array
36L-80	80W, LED array
48L-110	110W, LED array
60L-136	136W, LED array

CCT/CRI [7]	
3K7	3000K, 70 CRI
4K7	4000K, 70 CRI
5K7	5000K, 70 CRI

Distribution	
FR	Type 1/Front Row
2	Type 2
3	Type 3
4	Type 4
4W	Type 4 Wide
5QM	Type 5QM
5R	Type 5R (rectangular)
5W	Type 5W (round wide)
TC	Tennis Court

Rotation	
Blank	No rotation
L	Optic rotation left [5]
R	Optic rotation right [5]

Voltage	
UNV	120–277V
347	347V
480	480V

Mounting	
A	Rectangular Arm (formerly RA) for square or round pole
MAF	Mast Arm Fitter (formerly SF2) for 2⅜" OD horizontal arm
K	Knuckle (formerly PK2) limit to 30° tilt or 2⅜" OD horizontal arm or vertical tenon
WB	Wall Bracket
AD	Universal Arm for square pole
AD3	Adapter for 2.4"–4.1" round pole
AD4	Adapter for 4.2"–5.3" round pole
AD5	Adapter for 5.5"–5.9" round pole
AD6	Adapter for 6.0"–6.5" round pole

Color	
BL	Black Textured
DB	Dark Bronze Textured
GYS	Light Gray Smooth
PS	Platinum Silver Smooth
WH	White Textured
CC	Custom Color

Control Options	
7PR	7-Pin Receptacle only (shorting cap, photo control, or wireless control provided by others)
7PR-SC	7-Pin Receptacle w/Shorting Cap
7PR-TL	7-Pin Receptacle w/Twist-Lock® photo control
SCP/_F	Programmable Occupancy Sensor w/ daylight control [1,2,6]
GENI-XX	ENERGENI [3]
SWP	SiteSync Pre-Commission [1,4]
SWPM_F	SiteSync Pre-Commission w/ Sensor [1,2,4]

Options	
F	Fusing
BSP	Bird Spikes
BC	Backshield (available for FR, 2, 3, 4, 4W Optics)

House Side Shield Accessories

- ☐ **HSS/VP-S/90-FB/XXX** 90° shield front or back
- ☐ **HSS/VP-S/90-LR/XXX** 90° shield left or right
- ☐ **HSS/VP-S/270-FB/XXX** 270° shield front or back
- ☐ **HSS/VP-S/270-LR/XXX** 270° shield left or right
- ☐ **HSS/VP-S/360/XXX** Full shield

Replace XXX with notation for desired finish color. Refer to page 8 for shield images.

Mounting Accessories

- ☐ **VPL-AD-RPA3** 2.4"–4.1" Round Pole Adapter for AD arm
- ☐ **VPL-AD-RPA4** 4.2"–5.3" Round Pole Adapter for AD arm
- ☐ **VPL-AD-RPA5** 5.5"–5.9" Round Pole Adapter for AD arm
- ☐ **VPL-AD-RPA6** 6.0"–6.5" Round Pole Adapter for AD arm

Notes:

1 Not available with other wireless control or sensor options

2 Specify mounting height; 8 = 8' or less, 40 = 9' to 40'

3 Specify routine setting code (example GENI-04). See ENERGENI brochure and instructions for setting table and options. Not available with sensor or SiteSync options

4 Specify group and zone at time of order. See www.hubbelllighting.com/sitesync for further details. Order at least one SiteSync interface accessory SWUSB or SWTAB. Each option contains SiteSync License, GUI, and Bridge Node

5 Only available with FR, 2, 3, 4, 4W and 5R distributions

6 Order at least one SCP-REMOTE per project location to program and control the occupancy sensor

Accessories and Services (Ordered Separately)

- ☐ **SCP-REMOTE** Remote Control for SCP/_F option. Order at least one per project to program and control the occupancy sensor
- ☐ **SWUSB*** SiteSync interface software loaded on USB flash drive for use with owner supplied PC (Windows based only). Includes SiteSync license, software and USB radio bridge node
- ☐ **SWTAB*** Windows tablet and SiteSync interface software. Includes tablet with preloaded software, SiteSync license and USB radio bridge node
- ☐ **SWBRG** SiteSync USB radio bridge node only. Order if a replacement is required or if an extra bridge node is requested
- ☐ **SW7PR+** SiteSync 7-Pin on fixture module On/Off/Dim, Daylight Sensor 120–480VAC

* When ordering SiteSync at least one of these two interface options must be ordered per project.
\+ Available as a SiteSync retrofit solution for fixtures with an existing 7-pin receptacle.

Hubbell Control Solutions — Accessories (Sold Separately)

NX Distributed Intelligence™

- ☐ **NXOFM-1R1D-UNV** On-fixture Module (7-pin), On / Off / Dim, Daylight Sensor with HubbNET Radio and Bluetooth® Radio, 120–480VAC

wiSCAPE® Lighting Control

- ☐ **WIR-RME-L** On-fixture Module (7-pin or 5-pin), On / Off / Dim, Daylight Sensor with wiSCAPE Radio, 110–480VAC

For additional information related to these accessories please visit www.hubbellcontrolsolutions.com. Options provided for use with integrated sensor, please view specification sheet ordering information table for details.

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VIPER S

SMALL VIPER LUMINAIRE

CONTROLS

SiteSync — Precommissioned Ordering Information:

When ordering a fixture with the SiteSync lighting control option, additional information will be required to complete the order. The SiteSync Commissioning Form or alternate schedule information must be completed. This form includes Project location, Group information, and Operating schedules. For more detailed information please visit the SiteSync family page on our website or contact Hubbell Lighting tech support at 800-888-8006.

SiteSync fixtures with Motion control (SWPM) require the mounting height of the fixture for selection of the lens.

Examples: VP-L/80L-235/4K7/3/UNV/A/DB/SWP/ SiteSync only
VP-L/80L-235/4K7/3/UNV/A/DB/SWPM-40F/ SiteSync with Motion Control

SiteSync 7-Pin Module:

- SiteSync features in a new form
- Available as an accessory for new construction or retrofit applications (with existing 7-Pin receptacle)
- Does not interface with occupancy sensors



SW7PR

NX Distributed Intelligence™ Lighting Controls:

Supports both indoor and outdoor applications in a variety of deployment options: wired, wireless and hybrid. Integrates with and enables a wide array of luminaires including those with SpectraSync Color Tuning Technology.

NX Integrated Controls Reference								
NX Option	Sensor	Networkable	Scheduling	Occupancy	Daylight Harvesting	0–10V Dimming	On/off Control	Bluetooth® App Programming
NX Networked – Wireless								
NXOFM-1R1D-UNV	SCLNX	Yes	Yes	Yes	Yes	Yes	Yes	Yes, Bluetooth App

wiSCAPE™:

Supports remote management, monitoring and metering of outdoor wireless lighting applications such as smart campuses, smart cities, parking lots, parking lots and roadways.

wiSCAPE Reference								
wiSCAPE Option	Sensor	Networkable	Scheduling	Occupancy	Daylight Harvesting	0–10V Dimming	On/off Control	Bluetooth® App Programming
Networked – Wireless								
WIR-RME-L	WIR-RME-L	Yes	Yes	No	Yes	Yes	Yes	wiSCAPE Gateway

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DELIVERED LUMENS

# of LEDs	DRIVE CURRENT (mA)	SYSTEM WATTS	DISTRIBUTION TYPE	5K (5000K nominal, 70 CRI)					4K (4000K nominal, 70 CRI)					3K (3000K nominal, 70 CRI)				
				LUMENS	LPW	B	U	G	LUMENS	LPW	B	U	G	LUMENS	LPW	B	U	G
24	700 mA	55W	FR	6357	118	1	0	1	6486	120	1	0	1	5804	107	1	0	1
			2	6132	114	1	0	1	6257	116	1	0	2	5599	104	1	0	1
			3	6015	111	1	0	2	6137	114	1	0	2	5492	102	1	0	2
			4	5921	110	1	0	2	6034	112	1	0	2	5400	100	1	0	2
			4W	5793	108	1	0	2	5909	110	1	0	2	5272	98	1	0	2
			5QM	6022	112	2	0	1	6145	114	2	0	1	5499	102	2	0	1
			5R	6063	112	3	0	3	6187	115	3	0	3	5536	103	3	0	3
			5W	5908	109	3	0	1	6028	112	3	0	1	5908	102	3	0	1
			TC	6183	113	1	0	1	6309	118	1	0	1	5645	105	1	0	1
36	560 mA	65W	FR	7864	121	1	0	1	8041	124	1	0	1	7189	111	1	0	1
			2	7586	117	1	0	2	7757	119	1	0	2	6934	107	1	0	2
			3	7441	114	1	0	2	7609	117	1	0	2	6802	105	1	0	2
			4	7317	110	1	0	2	7482	112	1	0	2	6688	100	1	0	2
			4W	8690	108	1	0	2	8864	110	1	0	2	7908	98	1	0	2
			5QM	7450	115	3	0	1	7618	117	3	0	1	6810	105	3	0	1
			5R	7501	115	3	0	3	7670	118	3	0	3	6857	105	3	0	3
			5W	7309	112	3	0	2	7473	115	3	0	2	6681	103	3	0	1
36	700 mA	80W	FR	9535	118	1	0	1	9730	120	1	0	1	8706	107	1	0	1
			2	9197	114	1	0	2	9385	116	1	0	2	8398	104	1	0	2
			3	9022	111	1	0	2	9206	114	1	0	2	8238	102	1	0	2
			4	8871	110	1	0	2	9052	112	1	0	2	8100	100	1	0	2
			4W	11587	108	1	0	3	11819	110	1	0	3	10544	98	1	0	3
			5QM	9033	112	3	0	1	9217	114	3	0	1	8248	102	3	0	1
			5R	9095	112	3	0	3	9280	115	3	0	3	8304	103	3	0	3
			5W	8861	109	3	0	2	9043	112	3	0	2	8092	100	3	0	2
			TC	9275	115	1	0	1	9464	118	1	0	1	8468	105	1	0	1
48	700 mA	110W	FR	12713	118	1	0	1	12973	120	2	0	1	11608	107	1	0	1
			2	12263	114	2	0	2	12513	116	2	0	2	11197	104	2	0	2
			3	12029	111	2	0	2	11275	114	2	0	2	10984	102	1	0	2
			4	11828	110	1	0	3	12069	112	1	0	3	10800	100	1	0	2
			4W	14484	108	2	0	4	14774	111	2	0	4	13180	98	2	0	3
			5QM	12044	112	3	0	2	12290	114	3	0	2	10997	102	3	0	1
			5R	12126	112	3	0	3	12374	115	3	0	3	11072	103	3	0	3
			5W	12126	109	4	0	2	12057	112	4	0	2	10789	100	4	0	2
			TC	12366	115	1	0	2	12619	118	1	0	2	11290	105	1	0	2
60	700 mA	136W	FR	15891	117	2	0	2	16216	120	2	0	2	14511	107	2	0	1
			2	15329	113	2	0	2	15642	116	2	0	2	13997	103	2	0	2
			3	15037	111	2	0	3	15344	113	2	0	3	13730	101	2	0	3
			4	14784	109	1	0	3	15086	111	1	0	3	13500	100	1	0	3
			4W	14802	109	2	0	3	15104	112	2	0	3	13515	100	2	0	3
			5QM	15055	111	3	0	2	15362	114	3	0	2	13747	102	3	0	2
			5R	15158	112	4	0	4	15469	114	4	0	4	13841	102	4	0	4
			5W	14781	109	4	0	2	15083	111	4	0	2	13495	100	4	0	2
			TC	15458	115	1	0	2	15834	118	1	0	2	14113	105	1	0	2

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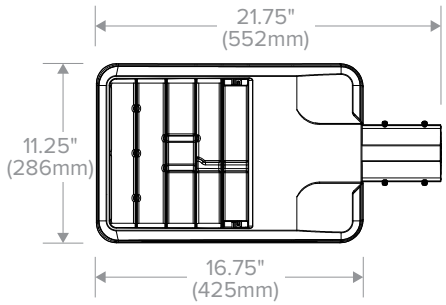
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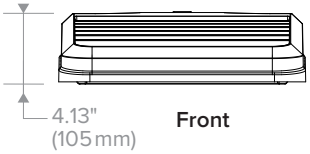
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SMALL VIPER LUMINAIRE

DIMENSIONS





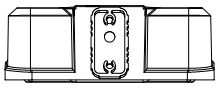
Front

Weight	15.0 lbs (6.8 kg)
EPA	.67 ft²

A Arm (formerly RA)



Side View

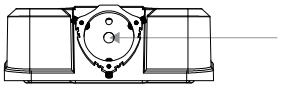


Back View

MAF (formerly SF2)



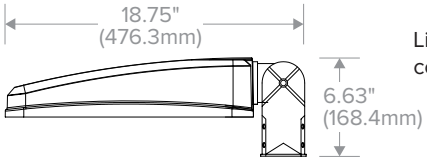
Side View



Back View

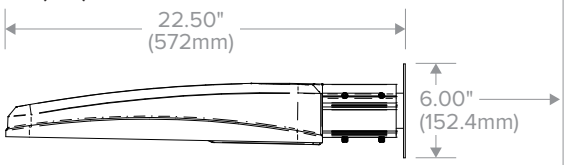
Accepts 2⅜" OD tenon, min 5" long.

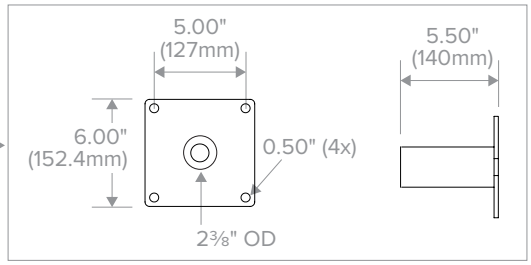
2⅜" Adjustable Knuckle (K) (formerly PK2)



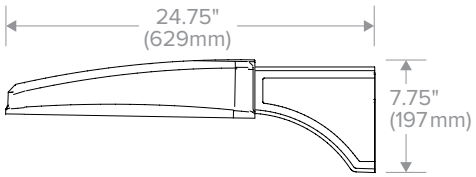
Limit to 30° tilt. Sensor, photocell and wireless controls should not be tilted above horizontal.

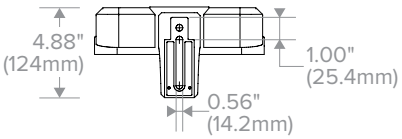
Wall Bracket (WB)





AD Decorative Arm





See page 9 for mounting details.

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TYPE: PROJECT:

CATALOG #:

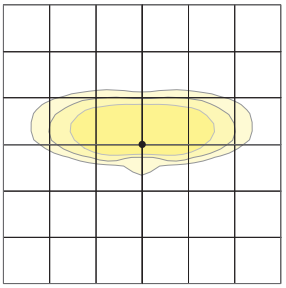
VIPER S

SMALL VIPER LUMINAIRE

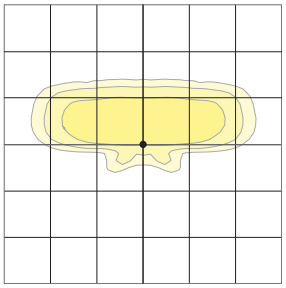
PHOTOMETRY

The following diagrams represent the general distribution options offered for this product. For detailed information on specific product configurations, see website photometric test reports.

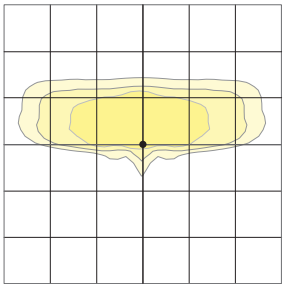
Type FR – Front Row/Auto Optic



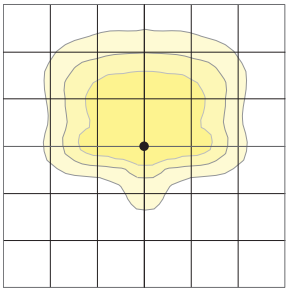
Type 2



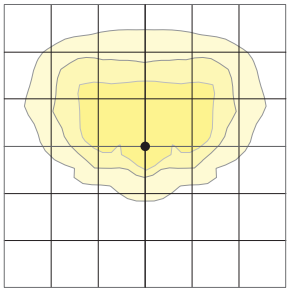
Type 3



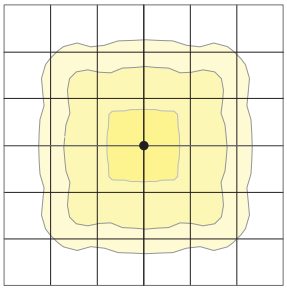
Type 4



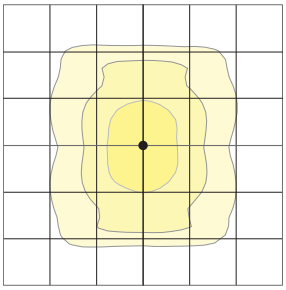
Type 4 Wide



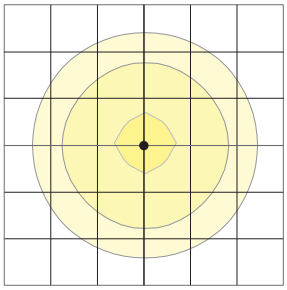
Type 5QM



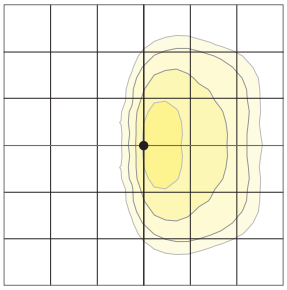
Type 5R (rectangular)



Type 5W (round wide)



Type TC



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VIPER S

SMALL VIPER LUMINAIRE

ELECTRICAL DATA

# OF LEDS	NUMBER OF DRIVERS	DRIVE CURRENT (mA)	INPUT VOLTAGE (V)	SYSTEM POWER (w)	CURRENT (Amps)
24	1	700 mA	120	55	0.5
			277		0.2
			347		0.2
			480		0.1
36	1	525 mA	120	65	0.65
			277		0.28
			347		0.22
			480		0.16
		700 mA	120	80	0.7
			277		0.3
			347		0.2
			480		0.2
48	1	700 mA	120	110	0.9
			277		0.4
			347		0.3
			480		0.2
60	1	700 mA	120	136	1.1
			277		0.5
			347		0.4
			480		0.3

PROJECTED LUMEN MAINTENANCE						
Ambient Temp.	0	25,000	50,000	TM-21-11 60,000[1]	100,000	Calculated L70 (HOURS)
25°C / 77°C	1	0.97	0.95	0.95	0.92	>377,000

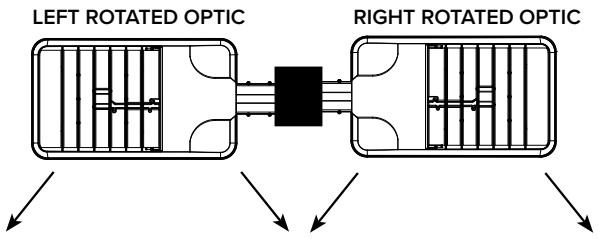
1 Projected per IESNA TM-21-11.
Data references the extrapolated performance projections for the 60 LED base model in a 25°C ambient, based on 10,000 hours of LED testing per IESNA LM-80-08.

LIFESHIELD™ CIRCUIT

Protects luminaire from excessive temperature. The device activates at a specific, factory-preset temperature and progressively reduces power over a finite temperature range. Operation is smooth and undetectable to the eye. Thermal circuit is designed to “fail on”, allowing the luminaire to revert to full power in the event of an interruption of its power supply or faulty wiring connection to the drivers. The device can co-exist with other 0–10V control devices (occupancy sensors, external dimmers, etc.)

ADDITIONAL INFORMATION

ROTATION OPTIONS



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TYPE: PROJECT:

CATALOG #:

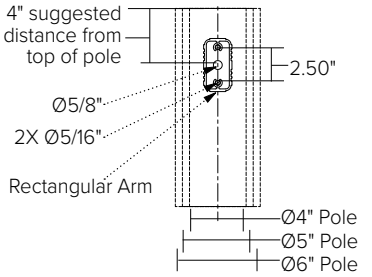
VIPER S

SMALL VIPER LUMINAIRE

ADDITIONAL INFORMATION (CONTINUED)

DRILL PATTERN

RECTANGULAR ARM (A)
Compatible with Pole drill pattern B3



EPA

Config.	EPA
1	.67
2 @ 90˚	1.06
2 @ 180˚	1.34

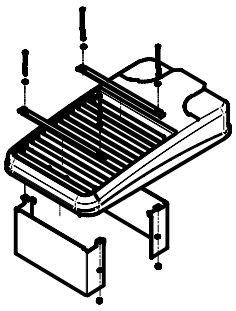
Config.	EPA
3 @ 120˚	1.68
3 @ 90˚	1.73
4 @ 90˚	2.12

TENON TOP POLE BRACKET ACCESSORIES (ORDER SEPARATELY)

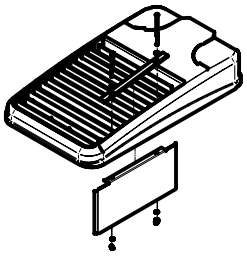
(2 3/8" OD tenon)

TENON TOP POLE BRACKET ACCESSORIES (Order Separately)	
☐ **SETAVP-XX**	Square tenon adapter (4 at 90°) for A - Rectangular Arm mounting option only
☐ **RETAVP-XX**	Round tenon adapter (4 at 90°) for A - Rectangular Arm mounting option only
☐ **SETA2XX**	Square tenon adapter (4 at 90°) for AD - Universal Arm mounting option only
☐ **RETA2XX**	Round tenon adapter (4 at 90°) for AD3 - Universal Arm mounting option only
☐ **TRETA2XX**	Hexagonal tenon adapter (3 at 120°) for AD - Universal Arm mounting option only

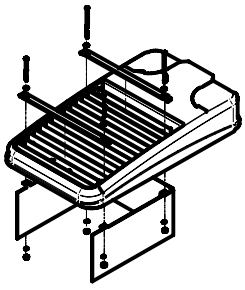
HOUSE SIDE SHIELD FIELD INSTALL ACCESSORIES



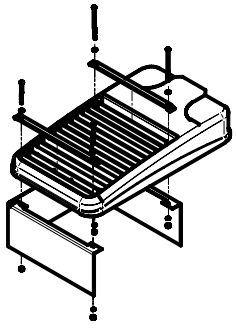
HSS/VP-S/90-FB/XXX
90° shield front or back
(2 shields shown)



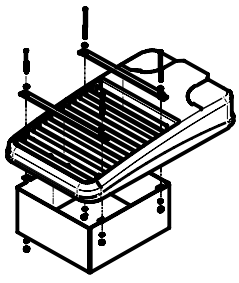
HSS/VP-S/90-LR/XXX
90° shield left or right
(1 shield shown in left orientation)



HSS/VP-S/270-FB/XXX
270° shield front or back
(1 shield shown in back orientation)



HSS/VP-S/270-LR/XXX
270° shield left or right
(1 shield shown in right orientation)



HSS/VP-S/360/XXX
Full shield
(1 shield shown)

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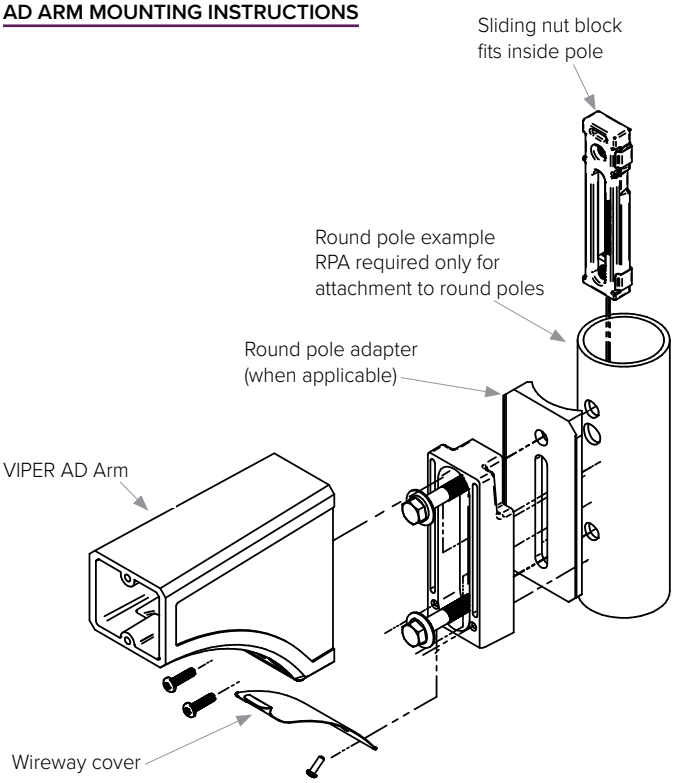
CATALOG #:

VIPER S

SMALL VIPER LUMINAIRE

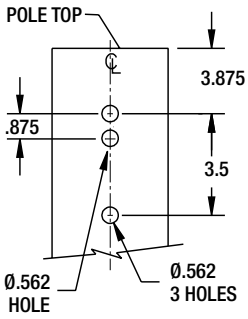
ADDITIONAL INFORMATION (CONTINUED)

AD ARM MOUNTING INSTRUCTIONS



DECORATIVE ARM (AD)

Compatible with pole drill pattern S2



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RFS Engineering
FIXTURE TYPE
E3

VIPER S

SMALL VIPER LUMINAIRE

OPTICS
STRIKE

FEATURES

- Small size companion to Viper Large
- Wide choice of different LED wattage configurations
- Nine optical distributions
- Designed to replace HID lighting up to 400W MH or HPS
- Suitable for wet locations

C US

*3000K and warmer CCTs only



RELATED PRODUCTS

Viper Large

CONTROL TECHNOLOGY

NX DISTRIBUTED INTELLIGENCE | wiSCAPE | energent | SiteSync LIGHTING CONTROL

SPECIFICATIONS

CONSTRUCTION

- Manufactured with die cast aluminum
- Coated with a polyester finish that meets ASTM B117 corrosion test requirements and ASTM D522 cracking and loss of adhesion test requirements
- IFS polyester powder-coat electrostatically applied and thermocured. IFS finish consists of a five stage pretreatment regimen with a polymer primer sealer and top coated with a thermoset super TGIC polyester powder coat finish
- The finish meets the AAMA 2604 performance specification which includes passing a 3,000-hour salt spray test for corrosion resistance and resists cracking or loss of adhesion per ASTM D522 and resists surface impacts of up to 160 inch-pounds
- External hardware is corrosion resistant

OPTICS

- Cartridge is held together with internal brass standoffs soldered to the board so that it can be field replaced as a one-piece optical system
- One-piece silicone gasket ensures a weatherproof seal around each individual optic
- One-piece optical cartridge system consisting of an LED engine, optics, gasket and stainless steel bezel

INSTALLATION

- Mounting options for horizontal arm, vertical tenon or traditional arm mounting available. Mounting hardware included

ELECTRICAL

- Luminaire accepts 100V through 277V, 347V or 480V input 50 Hz to 60 Hz (UNV)
- Power factor is ≥ .90 at full load
- Dimming drivers are standard, but must contact factory to request wiring leads for purpose of external dimming controls
- Component-to-component wiring within the luminaire may carry no more than 80% of rated load and is certified by UL for use at 600VAC at 90°C or higher
- Plug disconnects are certified by UL for use at 600 VAC, 13A or higher. 13A rating applies to primary (AC) side only
- Fixture electrical compartment contains all LED driver components and a push-button terminal block for AC power connections
- Optional 7-pin ANSI C136.41-2013 Twist-Lock® photo control receptacle available. Compatible with ANSI C136.41 external wireless control devices
- Ambient operating temperature -40°C to 25°C
- Surge protection: 20kA
- Lifeshield™ Circuit (see Electrical Data)

CONTROLS

- Available with an optional passive infrared (PIR) motion sensor capable of detecting motion 360° around the luminaire. When no motion is detected for the specified time, the motion response system reduces the wattage to factory preset level, reducing the light level accordingly. When motion is detected by the PIR sensor, the luminaire returns to full wattage and full light output. Please contact Beacon Products if project requirements vary from standard configuration
- Available with Energeni for optional set dimming, timed dimming with simple delay, or timed dimming based on time of night
- In addition, Viper can be specified with SiteSync™ wireless control system for reduction in energy and maintenance costs while optimizing light quality 24/7

CERTIFICATIONS

- DLC® (DesignLights Consortium) Qualified. Please refer to the DLC website for specific product qualifications at www.designlights.org
- Certified to UL 1598 and UL 8750
- 3G rated for ANSI C136.31 high vibration applications with MAF mounting
- IDA approved
- This product is approved by the Florida Fish and Wildlife Conservation Commission. Separate spec available online

WARRANTY

- 5 year warranty
- See HLI Commercial and Industrial Outdoor Lighting Warranty for additional information

KEY DATA	
Lumen Range	5400–16,216
Wattage Range	55–136
Efficacy Range (LPW)	100–124
Reported Life (Hours)	L70>377,000
Input Current Range (Amps)	0.1–1.1

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VIPER S

SMALL VIPER LUMINAIRE

ORDERING GUIDE

Example: VPS–24L–55–4K7–4W–UNV–A–DB–TL–GENI–04–BC

CATALOG #

VPS – _____ – _____ – _____ – _____ – _____ – _____

Series	
VPS	Viper Small

LED Engine	
24L-55	55W, LED array
36L-65	65W, LED array
36L-80	80W, LED array
48L-110	110W, LED array
60L-136	136W, LED array

CCT/CRI [7]	
3K7	3000K, 70 CRI
4K7	4000K, 70 CRI
5K7	5000K, 70 CRI

Distribution	
FR	Type 1/Front Row
2	Type 2
3	Type 3
4	Type 4
4W	Type 4 Wide
5QM	Type 5QM
5R	Type 5R (rectangular)
5W	Type 5W (round wide)
TC	Tennis Court

Rotation	
Blank	No rotation
L	Optic rotation left [5]
R	Optic rotation right [5]

Voltage	
UNV	120–277V
347	347V
480	480V

Mounting	
A	Rectangular Arm (formerly RA) for square or round pole
MAF	Mast Arm Fitter (formerly SF2) for 2⅜" OD horizontal arm
K	Knuckle (formerly PK2) limit to 30° tilt or 2⅜" OD horizontal arm or vertical tenon
WB	Wall Bracket
AD	Universal Arm for square pole
AD3	Adapter for 2.4"–4.1" round pole
AD4	Adapter for 4.2"–5.3" round pole
AD5	Adapter for 5.5"–5.9" round pole
AD6	Adapter for 6.0"–6.5" round pole

Color	
BL	Black Textured
DB	Dark Bronze Textured
GYS	Light Gray Smooth
PS	Platinum Silver Smooth
WH	White Textured
CC	Custom Color

Control Options	
7PR	7-Pin Receptacle only (shorting cap, photo control, or wireless control provided by others)
7PR-SC	7-Pin Receptacle w/Shorting Cap
7PR-TL	7-Pin Receptacle w/Twist-Lock® photo control
SCP/_F	Programmable Occupancy Sensor w/ daylight control [1,2,6]
GENI-XX	ENERGENI [3]
SWP	SiteSync Pre-Commission [1,4]
SWPM_F	SiteSync Pre-Commission w/ Sensor [1,2,4]

Options	
F	Fusing
BSP	Bird Spikes
BC	Backshield (available for FR, 2, 3, 4, 4W Optics)

House Side Shield Accessories

- ☐ **HSS/VP-S/90-FB/XXX** 90° shield front or back
- ☐ **HSS/VP-S/90-LR/XXX** 90° shield left or right
- ☐ **HSS/VP-S/270-FB/XXX** 270° shield front or back
- ☐ **HSS/VP-S/270-LR/XXX** 270° shield left or right
- ☐ **HSS/VP-S/360/XXX** Full shield

Replace XXX with notation for desired finish color. Refer to page 8 for shield images.

Mounting Accessories

- ☐ **VPL-AD-RPA3** 2.4"–4.1" Round Pole Adapter for AD arm
- ☐ **VPL-AD-RPA4** 4.2"–5.3" Round Pole Adapter for AD arm
- ☐ **VPL-AD-RPA5** 5.5"–5.9" Round Pole Adapter for AD arm
- ☐ **VPL-AD-RPA6** 6.0"–6.5" Round Pole Adapter for AD arm

Notes:

1. Not available with other wireless control or sensor options
2. Specify mounting height; 8 = 8' or less, 40 = 9' to 40'
3. Specify routine setting code (example GENI-04). See ENERGENI brochure and instructions for setting table and options. Not available with sensor or SiteSync options
4. Specify group and zone at time of order. See www.hubbelllighting.com/sitesync for further details. Order at least one SiteSync interface accessory SWUSB or SWTAB. Each option contains SiteSync License, GUI, and Bridge Node
5. Only available with FR, 2, 3, 4, 4W and 5R distributions
6. Order at least one SCP-REMOTE per project location to program and control the occupancy sensor

Accessories and Services (Ordered Separately)

- ☐ **SCP-REMOTE** Remote Control for SCP/_F option. Order at least one per project to program and control the occupancy sensor
- ☐ **SWUSB*** SiteSync interface software loaded on USB flash drive for use with owner supplied PC (Windows based only). Includes SiteSync license, software and USB radio bridge node
- ☐ **SWTAB*** Windows tablet and SiteSync interface software. Includes tablet with preloaded software, SiteSync license and USB radio bridge node
- ☐ **SWBRG** SiteSync USB radio bridge node only. Order if a replacement is required or if an extra bridge node is requested
- ☐ **SW7PR+** SiteSync 7-Pin on fixture module On/Off/Dim, Daylight Sensor 120–480VAC

* When ordering SiteSync at least one of these two interface options must be ordered per project.
\+ Available as a SiteSync retrofit solution for fixtures with an existing 7-pin receptacle.

Hubbell Control Solutions — Accessories (Sold Separately)

NX Distributed Intelligence™

- ☐ **NXOFM-1R1D-UNV** On-fixture Module (7-pin), On / Off / Dim, Daylight Sensor with HubbNET Radio and Bluetooth® Radio, 120–480VAC

wiSCAPE® Lighting Control

- ☐ **WIR-RME-L** On-fixture Module (7-pin or 5-pin), On / Off / Dim, Daylight Sensor with wiSCAPE Radio, 110–480VAC

For additional information related to these accessories please visit www.hubbellcontrolsolutions.com. Options provided for use with integrated sensor, please view specification sheet ordering information table for details.

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TYPE: PROJECT:

CATALOG #:

VIPER S

SMALL VIPER LUMINAIRE

CONTROLS

SiteSync — Precommissioned Ordering Information:

When ordering a fixture with the SiteSync lighting control option, additional information will be required to complete the order. The SiteSync Commissioning Form or alternate schedule information must be completed. This form includes Project location, Group information, and Operating schedules. For more detailed information please visit the SiteSync family page on our website or contact Hubbell Lighting tech support at 800-888-8006.

SiteSync fixtures with Motion control (SWPM) require the mounting height of the fixture for selection of the lens.

Examples: VP-L/80L-235/4K7/3/UNV/A/DB/SWP/ SiteSync only
VP-L/80L-235/4K7/3/UNV/A/DB/SWPM-40F/ SiteSync with Motion Control

SiteSync 7-Pin Module:

- SiteSync features in a new form
- Available as an accessory for new construction or retrofit applications (with existing 7-Pin receptacle)
- Does not interface with occupancy sensors



SW7PR

NX Distributed Intelligence™ Lighting Controls:

Supports both indoor and outdoor applications in a variety of deployment options: wired, wireless and hybrid. Integrates with and enables a wide array of luminaires including those with SpectraSync Color Tuning Technology.

NX Integrated Controls Reference								
NX Option	Sensor	Networkable	Scheduling	Occupancy	Daylight Harvesting	0–10V Dimming	On/off Control	Bluetooth® App Programming
NX Networked – Wireless								
NXOFM-1R1D-UNV	SCLNX	Yes	Yes	Yes	Yes	Yes	Yes	Yes, Bluetooth App

wiSCAPE™:

Supports remote management, monitoring and metering of outdoor wireless lighting applications such as smart campuses, smart cities, parking lots, parking lots and roadways.

wiSCAPE Reference								
wiSCAPE Option	Sensor	Networkable	Scheduling	Occupancy	Daylight Harvesting	0–10V Dimming	On/off Control	Bluetooth® App Programming
Networked – Wireless								
WIR-RME-L	WIR-RME-L	Yes	Yes	No	Yes	Yes	Yes	wiSCAPE Gateway

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SMALL VIPER LUMINAIRE

DELIVERED LUMENS

# of LEDs	DRIVE CURRENT (mA)	SYSTEM WATTS	DISTRIBUTION TYPE	5K (5000K nominal, 70 CRI)					4K (4000K nominal, 70 CRI)					3K (3000K nominal, 70 CRI)				
				LUMENS	LPW	B	U	G	LUMENS	LPW	B	U	G	LUMENS	LPW	B	U	G
24	700 mA	55W	FR	6357	118	1	0	1	6486	120	1	0	1	5804	107	1	0	1
			2	6132	114	1	0	1	6257	116	1	0	2	5599	104	1	0	1
			3	6015	111	1	0	2	6137	114	1	0	2	5492	102	1	0	2
			4	5921	110	1	0	2	6034	112	1	0	2	5400	100	1	0	2
			4W	5793	108	1	0	2	5909	110	1	0	2	5272	98	1	0	2
			5QM	6022	112	2	0	1	6145	114	2	0	1	5499	102	2	0	1
			5R	6063	112	3	0	3	6187	115	3	0	3	5536	103	3	0	3
			5W	5908	109	3	0	1	6028	112	3	0	1	5908	102	3	0	1
			TC	6183	113	1	0	1	6309	118	1	0	1	5645	105	1	0	1
36	560 mA	65W	FR	7864	121	1	0	1	8041	124	1	0	1	7189	111	1	0	1
			2	7586	117	1	0	2	7757	119	1	0	2	6934	107	1	0	2
			3	7441	114	1	0	2	7609	117	1	0	2	6802	105	1	0	2
			4	7317	110	1	0	2	7482	112	1	0	2	6688	100	1	0	2
			4W	8690	108	1	0	2	8864	110	1	0	2	7908	98	1	0	2
			5QM	7450	115	3	0	1	7618	117	3	0	1	6810	105	3	0	1
			5R	7501	115	3	0	3	7670	118	3	0	3	6857	105	3	0	3
			5W	7309	112	3	0	2	7473	115	3	0	2	6681	103	3	0	1
36	700 mA	80W	FR	9535	118	1	0	1	9730	120	1	0	1	8706	107	1	0	1
			2	9197	114	1	0	2	9385	116	1	0	2	8398	104	1	0	2
			3	9022	111	1	0	2	9206	114	1	0	2	8238	102	1	0	2
			4	8871	110	1	0	2	9052	112	1	0	2	8100	100	1	0	2
			4W	11587	108	1	0	3	11819	110	1	0	3	10544	98	1	0	3
			5QM	9033	112	3	0	1	9217	114	3	0	1	8248	102	3	0	1
			5R	9095	112	3	0	3	9280	115	3	0	3	8304	103	3	0	3
			5W	8861	109	3	0	2	9043	112	3	0	2	8092	100	3	0	2
			TC	9275	115	1	0	1	9464	118	1	0	1	8468	105	1	0	1
48	700 mA	110W	FR	12713	118	1	0	1	12973	120	2	0	1	11608	107	1	0	1
			2	12263	114	2	0	2	12513	116	2	0	2	11197	104	2	0	2
			3	12029	111	2	0	2	11275	114	2	0	2	10984	102	1	0	2
			4	11828	110	1	0	3	12069	112	1	0	3	10800	100	1	0	2
			4W	14484	108	2	0	4	14774	111	2	0	4	13180	98	2	0	3
			5QM	12044	112	3	0	2	12290	114	3	0	2	10997	102	3	0	1
			5R	12126	112	3	0	3	12374	115	3	0	3	11072	103	3	0	3
			5W	12126	109	4	0	2	12057	112	4	0	2	10789	100	4	0	2
			TC	12366	115	1	0	2	12619	118	1	0	2	11290	105	1	0	2
60	700 mA	136W	FR	15891	117	2	0	2	16216	120	2	0	2	14511	107	2	0	1
			2	15329	113	2	0	2	15642	116	2	0	2	13997	103	2	0	2
			3	15037	111	2	0	3	15344	113	2	0	3	13730	101	2	0	3
			4	14784	109	1	0	3	15086	111	1	0	3	13500	100	1	0	3
			4W	14802	109	2	0	3	15104	112	2	0	3	13515	100	2	0	3
			5QM	15055	111	3	0	2	15362	114	3	0	2	13747	102	3	0	2
			5R	15158	112	4	0	4	15469	114	4	0	4	13841	102	4	0	4
			5W	14781	109	4	0	2	15083	111	4	0	2	13495	100	4	0	2
			TC	15458	115	1	0	2	15834	118	1	0	2	14113	105	1	0	2

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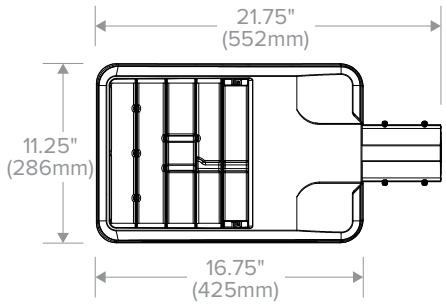
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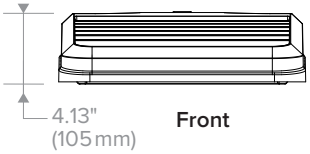
CATALOG #:

VIPER S

SMALL VIPER LUMINAIRE

DIMENSIONS





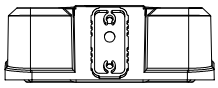
Front

Weight	15.0 lbs (6.8 kg)
EPA	.67 ft²

A Arm (formerly RA)



Side View

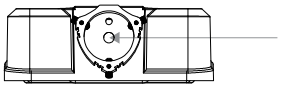


Back View

MAF (formerly SF2)



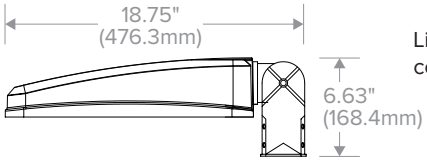
Side View



Back View

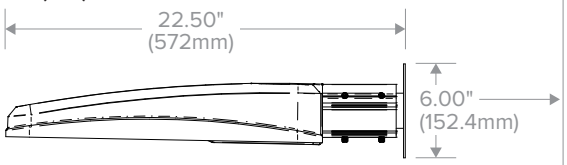
Accepts 2⅜" OD tenon, min 5" long.

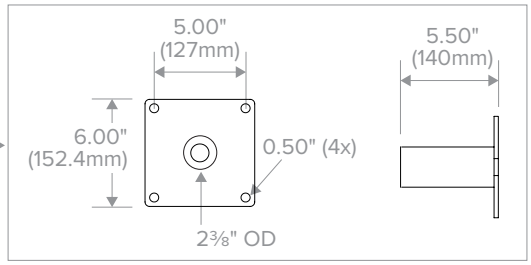
2⅜" Adjustable Knuckle (K) (formerly PK2)



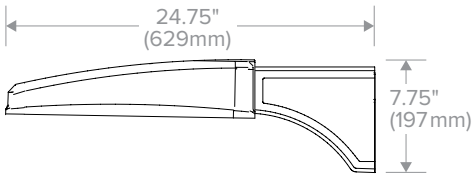
Limit to 30° tilt. Sensor, photocell and wireless controls should not be tilted above horizontal.

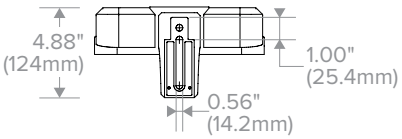
Wall Bracket (WB)





AD Decorative Arm





See page 9 for mounting details.

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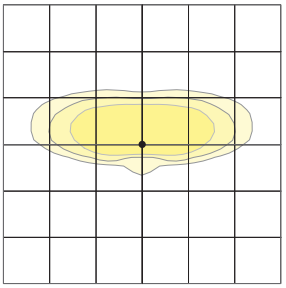
VIPER S

SMALL VIPER LUMINAIRE

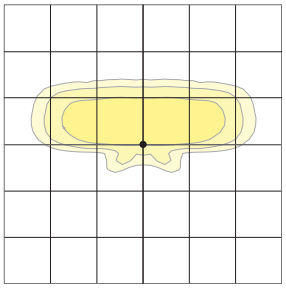
PHOTOMETRY

The following diagrams represent the general distribution options offered for this product. For detailed information on specific product configurations, see website photometric test reports.

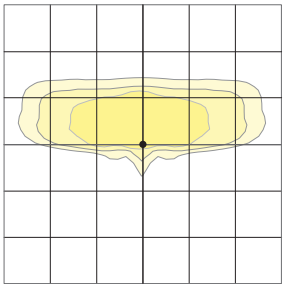
Type FR – Front Row/Auto Optic



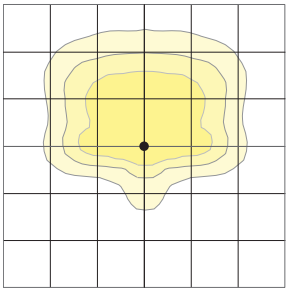
Type 2



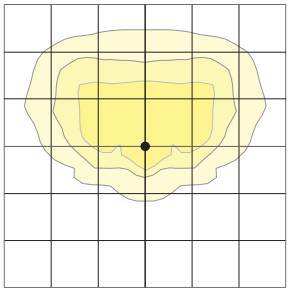
Type 3



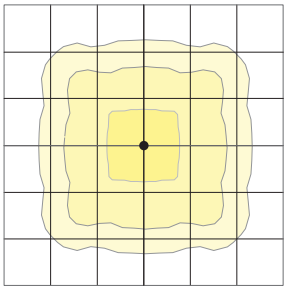
Type 4



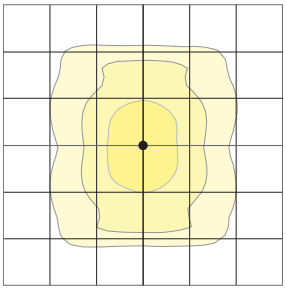
Type 4 Wide



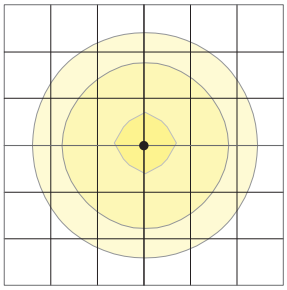
Type 5QM



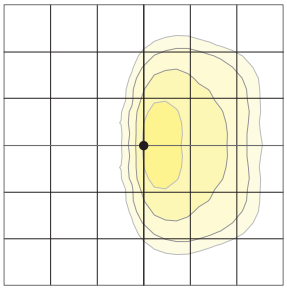
Type 5R (rectangular)



Type 5W (round wide)



Type TC



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ELECTRICAL DATA

# OF LEDS	NUMBER OF DRIVERS	DRIVE CURRENT (mA)	INPUT VOLTAGE (V)	SYSTEM POWER (w)	CURRENT (Amps)
24	1	700 mA	120	55	0.5
			277		0.2
			347		0.2
			480		0.1
36	1	525 mA	120	65	0.65
			277		0.28
			347		0.22
			480		0.16
		700 mA	120	80	0.7
			277		0.3
			347		0.2
			480		0.2
48	1	700 mA	120	110	0.9
			277		0.4
			347		0.3
			480		0.2
60	1	700 mA	120	136	1.1
			277		0.5
			347		0.4
			480		0.3

PROJECTED LUMEN MAINTENANCE						
Ambient Temp.	0	25,000	50,000	TM-21-11 60,000[1]	100,000	Calculated L70 (HOURS)
25°C / 77°C	1	0.97	0.95	0.95	0.92	>377,000

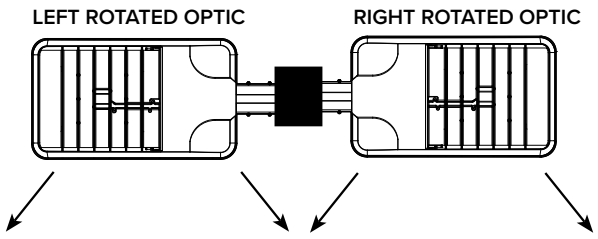
1 Projected per IESNA TM-21-11.
Data references the extrapolated performance projections for the 60 LED base model in a 25°C ambient, based on 10,000 hours of LED testing per IESNA LM-80-08.

LIFESHIELD™ CIRCUIT

Protects luminaire from excessive temperature. The device activates at a specific, factory-preset temperature and progressively reduces power over a finite temperature range. Operation is smooth and undetectable to the eye. Thermal circuit is designed to “fail on”, allowing the luminaire to revert to full power in the event of an interruption of its power supply or faulty wiring connection to the drivers. The device can co-exist with other 0–10V control devices (occupancy sensors, external dimmers, etc.)

ADDITIONAL INFORMATION

ROTATION OPTIONS



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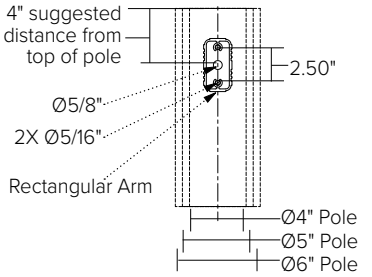
VIPER S

SMALL VIPER LUMINAIRE

ADDITIONAL INFORMATION (CONTINUED)

DRILL PATTERN

RECTANGULAR ARM (A)
Compatible with Pole drill pattern B3



EPA

Config.	EPA
1	.67
2 @ 90˚	1.06
2 @ 180˚	1.34

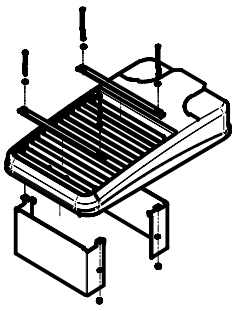
Config.	EPA
3 @ 120˚	1.68
3 @ 90˚	1.73
4 @ 90˚	2.12

TENON TOP POLE BRACKET ACCESSORIES (ORDER SEPARATELY)

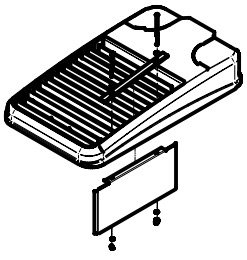
(2 3/8" OD tenon)

TENON TOP POLE BRACKET ACCESSORIES (Order Separately)	
☐ **SETAVP-XX**	Square tenon adapter (4 at 90°) for A - Rectangular Arm mounting option only
☐ **RETAVP-XX**	Round tenon adapter (4 at 90°) for A - Rectangular Arm mounting option only
☐ **SETA2XX**	Square tenon adapter (4 at 90°) for AD - Universal Arm mounting option only
☐ **RETA2XX**	Round tenon adapter (4 at 90°) for AD3 - Universal Arm mounting option only
☐ **TRETA2XX**	Hexagonal tenon adapter (3 at 120°) for AD - Universal Arm mounting option only

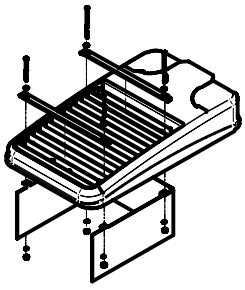
HOUSE SIDE SHIELD FIELD INSTALL ACCESSORIES



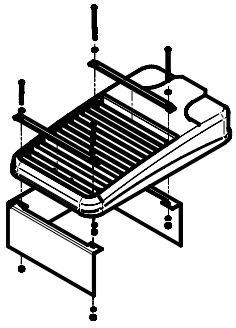
HSS/VP-S/90-FB/XXX
90° shield front or back
(2 shields shown)



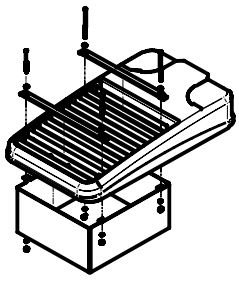
HSS/VP-S/90-LR/XXX
90° shield left or right
(1 shield shown in left orientation)



HSS/VP-S/270-FB/XXX
270° shield front or back
(1 shield shown in back orientation)



HSS/VP-S/270-LR/XXX
270° shield left or right
(1 shield shown in right orientation)



HSS/VP-S/360/XXX
Full shield
(1 shield shown)

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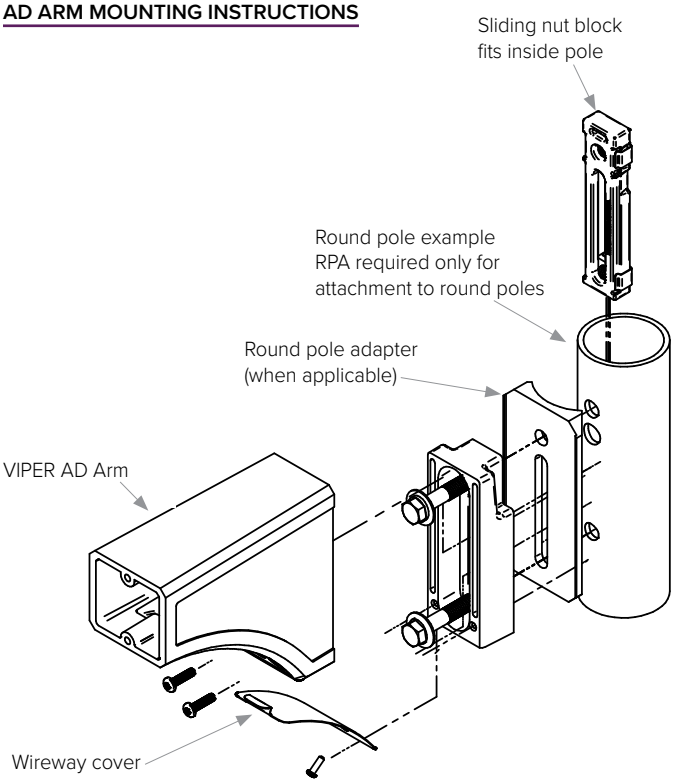
CATALOG #:

VIPER S

SMALL VIPER LUMINAIRE

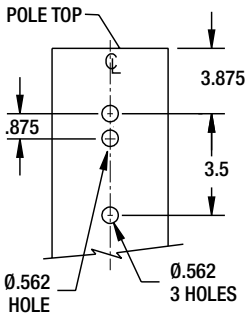
ADDITIONAL INFORMATION (CONTINUED)

AD ARM MOUNTING INSTRUCTIONS



DECORATIVE ARM (AD)

Compatible with pole drill pattern S2



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VIPER

Outstanding Performance. Exceptional Value.



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HUBBELL Lighting



Viper Large
shown with Rectangular Arm and SiteSync

Minimalist in **Form.** Robust in **Design.** Adaptable in **Application.**

Beacon Products' exclusive Strike Optics for Viper deliver category leading performance. By maximizing target efficiency, the Viper ensures simple layout design that is high in uniformity and minimal in light trespass. Such control reduces energy consumption, lowers installation costs, and improves the visual acuity.

SiteSync and Energeni integrated controls offer outstanding performance at exceptional price levels. Pre-commissioned and simple to use, Viper controls give the most novice of users the ability to create highly functional, robust control schedules for optimal luminaire usage and maximized energy savings.

Advanced luminaire design separates the Viper from other area and site products. With Lifeshield™ thermal control, an elegantly simple heat sink design and industry leading surge protection, the Viper is designed for sustained, long-term performance.

One Product Family One family, boundless configurations. Offered in two sizes, Viper optimizes performance, output, and efficiency. The Viper is ideal for applications ranging from pedestrian walkways to large logistical centers with extremely high mounting heights. Outputs begin at 5,000 lm. Maximum output exceeds 42,000 lm.



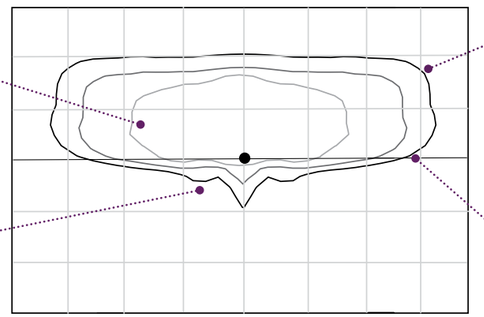


OPTICS
STRIKE

Beacon Products' exclusive Strike Optics for Viper maximizes target zone illumination with minimal losses at the house-side, greatly reducing light trespass issues. This outstanding optic control simplifies layouts and installations, reduces energy consumption, lowers installation costs and improves visual acuity.

Strike Optics - Precision Wins.

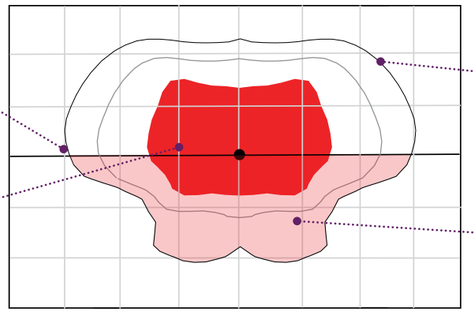
Viper Strike Optic (Type 3)



Total Delivered Lumens: 22,683 lm

Total Street Side Lumens: 19,550 lm @ 181W

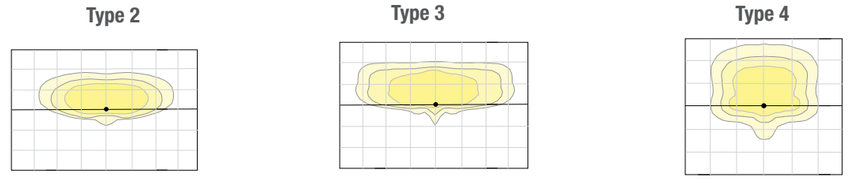
Competitor Optics (Type 3)



Total Delivered Lumens: 21,337 lm

Total Street Side Lumens: 15,947 lm @ 188W

Strike Optics - Type 2, 3 and 4...Superior Control, Outstanding Efficiency.



Symmetric Distributions - Type 5W, 5QM, 5QN and 5R...Flexibility in Application.



Specific Distributions - Type FR Automotive Front Row, Type 4W Wide Forward Throw



*Backlight control demonstrated on front roadways.

Front Row Auto Optic

Optimize merchandise display by maximizing illumination on the front row product display using the Beacon Viper FR auto optic.



Backlight Control

Reduce light trespass by up to 85% by using backlight control on the Type 4W optic without compromising fixture appearance or increasing the system EPA.

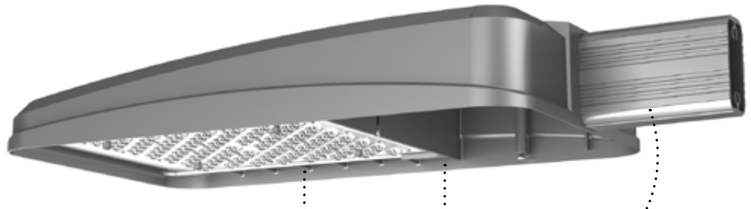


Advanced Luminaire Design

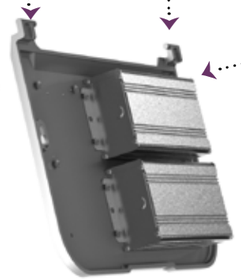
Reliability begins with design. Key design principles that are the foundation for the Beacon Viper include effective thermal management, circuit protections, and mechanical integrity. Integrated Lifeshield™ thermal controls protect the Viper from excessive temperature conditions while still providing illumination, even when ambient temperatures exceed rated limits. Complemented with an elegantly simple heat sink housing design, the Viper optimizes performance and long term reliability.

Integrated surge suppression safeguards against over voltage conditions.

Robust mechanical design begins with material selection, including die cast aluminum and stainless steel, incorporates conservative design strategies, and ends with high corrosion resistant finishes. By leveraging all of these design principles, the Viper is enduring.



Removable Door The hinged door is designed not only to swing down to allow access, but also to be removed to allow uninhibited access to the mounting hardware and wiring.



Hinged Access The swing-down, hinged door (secured with two screws) provides access to the drivers, rotatable photocell and terminal block. It allows for easy installation and hassle-free maintenance and component hardware replacement.

Mounting Options

Versatility in mounting simplifies installation and accelerates investment returns. Viper is ideal for relight or new construction projects.



Rectangular Arm (A)



Slip Fitter (MAF)



Knuckle (K)



Wall Bracket (WB)



Decorative Upswept Arm (AD)



Decorative Upswept Arm
Adjustable mounting for most 2 hole bolt patterns for a drill free retrofit. Available for both Viper Small and Large.

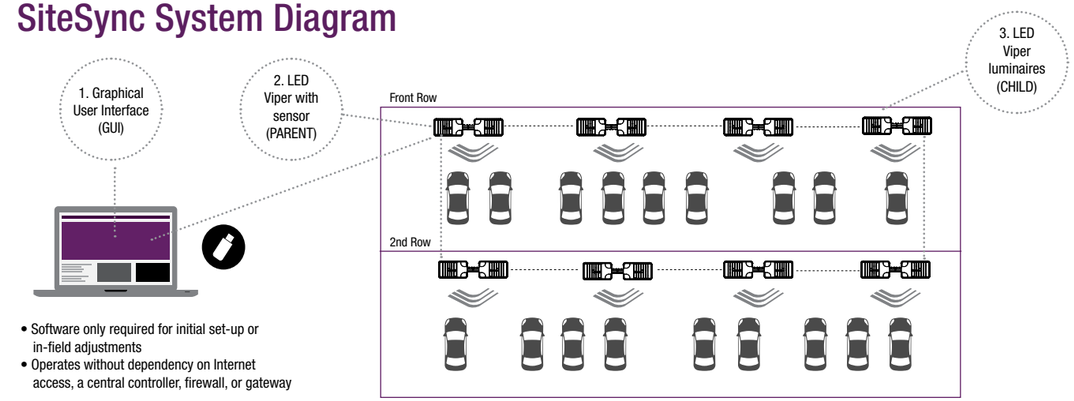
Integrated Controls

SiteSync™ LIGHTING CONTROL

Simple, Reliable and Affordable...SiteSync delivers flexible control strategies for reducing power consumption and minimizing maintenance costs while delivering the right light levels with a simple and affordable wireless solution. With SiteSync's pre-programmed approach, installation becomes a quick and easy process, greatly reducing the complexity, time, and cost compared to typical field commissioning.

SiteSync is based on a wireless mesh network architecture that enables luminaries to operate independently without the need for web based connectivity. This provides a cyber safe platform that delivers reliable communication and control versus other gateway based systems. With a complete offering of Hubbell Lighting site and area, decorative, garage, wall, and flood LED luminaries available with SiteSync, you have the flexibility to create an intelligent outdoor lighting package that will meet a wide variety of application needs.

SiteSync System Diagram



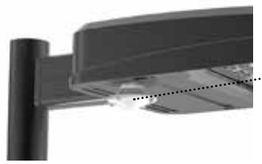
- Software only required for initial set-up or in-field adjustments
- Operates without dependency on Internet access, a central controller, firewall, or gateway

energeni

a compact control device that gives lighting owners a simple way to save on energy costs...

The **ENERGENI** lighting control system is a simple way for owners to save money by dimming the fixtures during unoccupied hours. The **ENERGENI** has flexible setting options to work with fixtures activated by photocontrols or time clocks. The delay and dimming level options can be configured at the factory or reconfigured at will in the field without the need for special cables or computers.





Occupancy Sensors
Optional sensors control light output based on area utilization. Use for energy savings and local code compliance.

HUBBELL Lighting

701 Millennium Blvd.
Greenville, SC 29607
hubbelllighting.com

ALERA LIGHTING

ARCHITECTURAL AREA LIGHTING

BEACON PRODUCTS

COLUMBIA LIGHTING

COMPASS

DUAL-LITE

HUBBELL CONTROL SOLUTIONS

HUBBELL INDUSTRIAL LIGHTING

HUBBELL OUTDOOR LIGHTING

KIM LIGHTING

KURT VERSEN

LITECONTROL

PRESCOLITE

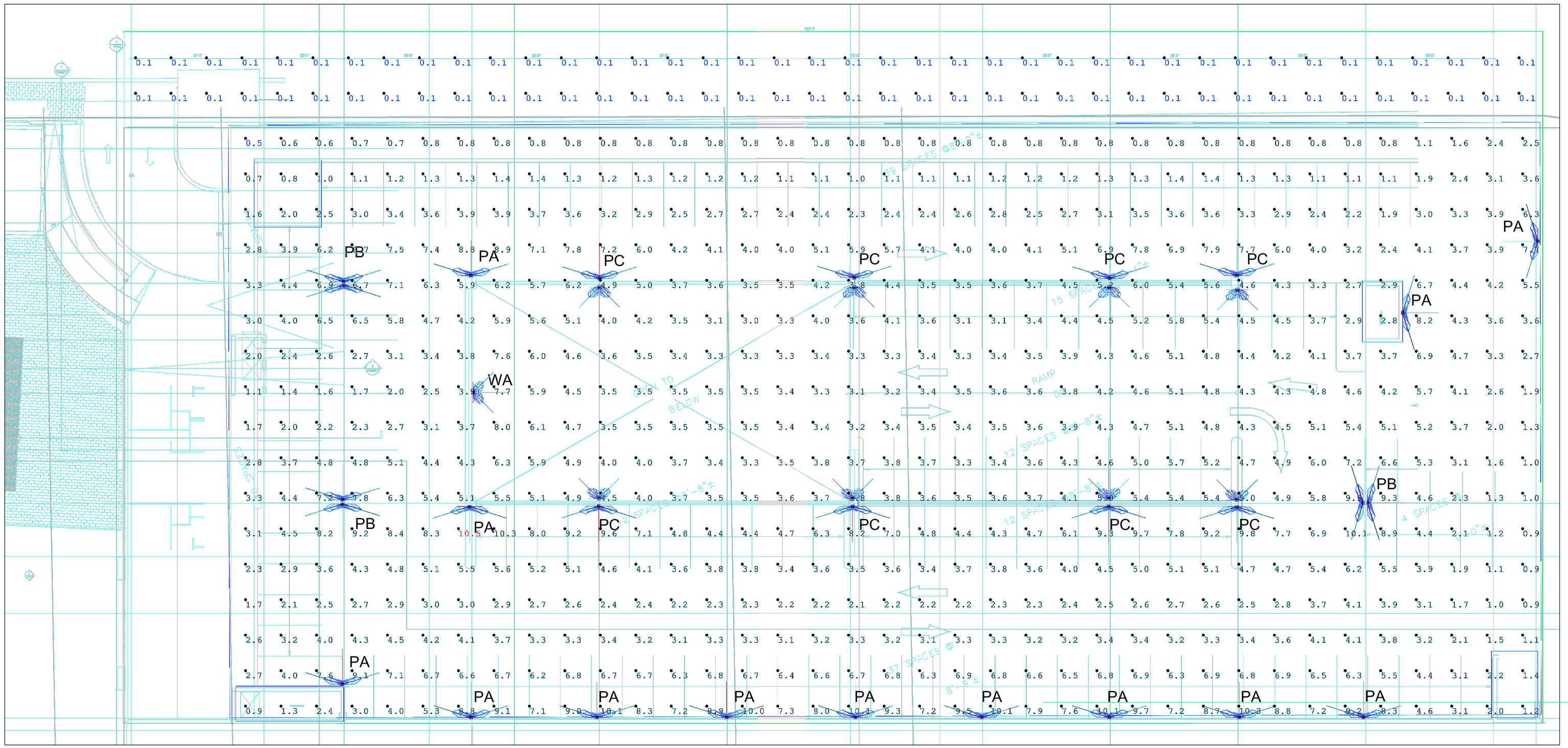
WHITEWAY

BEACON
design . performance . technology

2041 58th Avenue Circle East
Bradenton, FL 34203

t 800.345.4928
f 941.751.5535

June 19, 2017 1:10 PM



Calculation Summary

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
STREET LEVEL	Illuminance	Fc	0.10	0.1	0.1	1.00	1.00
TOP OF GARAGE	Illuminance	Fc	4.12	10.5	0.5	8.24	21.00

LIGHT FIXTURE SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER	LAMPS TYPE	VOLT.	WATTS/ FIXT.	REMARKS	EQUIVALENT BY
PA	POLE MOUNTED SINGLE HEAD AREA FIXTURE MOUNTED AT 16' AFF	HUBBELL LIGHTING VPS-24L-55-3K7-2-UNV-A-XX-SCP-/F (FIXTURE) SSS-B-16-50-B-1-BL-XX-VMX-UL (POLE) SCP-REMOTE WITH FULL SHIELD HSS/VP-S/360/XXX	LED 3000K 6132 LUMENS	UNV	55W	PROVIDE ALL NECESSARY ACCESSORIES FOR A COMPLETE INSTALLATION SCP-REMOTE COORDINATE WITH MANUFACTURER FOR ACCESSORIES, SERVICE AND CONTROLS. FINISH BY ARCHITECT	McGRAW EDISON GARDCO
PB	POLE MOUNTED DOUBLE HEAD AREA FIXTURE MOUNTED AT 16' AFF	HUBBELL LIGHTING VPS-24L-55-3K7-2-UNV-A-XX-SCP-/F (FIXTURE) VPS-24L-55-3K7-2-UNV-A-XX-SCP-/F (FIXTURE) SSS-B-16-50-B-2-XX-XX-VMX-UL (POLE) WITH FULL SHIELD HSS/VP-S/360/XXX	LED 3000K 12264 LUMENS	UNV	110W	PROVIDE ALL NECESSARY ACCESSORIES FOR A COMPLETE INSTALLATION FINISH BY ARCHITECT	McGRAW EDISON GARDCO
PC	POLE MOUNTED DOUBLE HEAD AREA FIXTURE MOUNTED AT 16' AFF	HUBBELL LIGHTING VPS-24L-55-3K7-2-UNV-A-XX-SCP-/F (FIXTURE) VPS-24L-55-3K7-4W-UNV-A-XX-SCP-/F (FIXTURE) SSS-B-16-50-B-2-XX-XX-VMX-UL (POLE)	LED 3000K 3000K 11925 LUMENS	UNV	110W	PROVIDE ALL NECESSARY ACCESSORIES FOR A COMPLETE INSTALLATION FINISH BY ARCHITECT	McGRAW EDISON GARDCO
WA	WALL MOUNTED SINGLE HEAD AREA FIXTURE MOUNTED AT 3' AFF	HUBBELL LIGHTING VPS-24L-55-3K7-4W-UNV-WB-XX-SCP-/F (FIXTURE) WITH FULL SHIELD HSS/VP-S/360/XXX	LED 3000K 5793 LUMENS	UNV	55W	PROVIDE ALL NECESSARY ACCESSORIES FOR A COMPLETE INSTALLATION FINISH BY ARCHITECT	McGRAW EDISON GARDCO

NOTES:
1. WIRE ALL EXIT SIGNS AND EMERGENCY BATTERY PACKS AHEAD OF ALL SWITCHING
2. WHERE E/N WIRING IS INDICATED PROVIDE FIXTURE WITH TWO DRIVERS FOR EMERGENCY AND NORMAL OPERATION.
3.WHERE REMOTE DRIVERS ARE PROVIDED, LOCATE DRIVER IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS AND PROVIDE ADEQUATE WIRING.
4. PROVIDE DRIVER DISCONNECT IN ALL FIXTURES IN ACCORDANCE WITH NEC.
6. ALL 0-10VOLT LED DIMMING DRIVERS SHALL MEET THE REQUIREMENTS OF IEC 60929 AND SHALL HAVE AN ISOLATED 0-10VDC CONTROL CIRCUIT

RFS engineering
Rist Frost Shumway Engineering, P.C.
NH: 71 Water St | Laconia, NH 03246
P: 603.524.4647
MA: 50 Milk St, 16th Floor | Boston, MA 02109
P: 617.494.1464
www.rfsengineering.com

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BLOCK 4

PORTLAND FORESIDE DEVELOPMENT

MAINE

Consultants

SCHEMATIC DESIGN

Date: DECEMBER 23, 2019

Key Plan

Revisions

Rev.	Issued	Date

Title

LIGHTING CALCULATIONS

Project No.	9169.001
Drawn By	S. DUNKLEY
Checked By	S. DUNKLEY
Project Mgr.	A.M. SHUMWAY
File Name	9169 E1.DWG
Date	12/23/2019
Scale	N.T.S.

Drawing No.

E1

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HALEY & ALDRICH, INC.
75 Washington Avenue
Suite 1A
Portland, ME 04101
207.482.4600

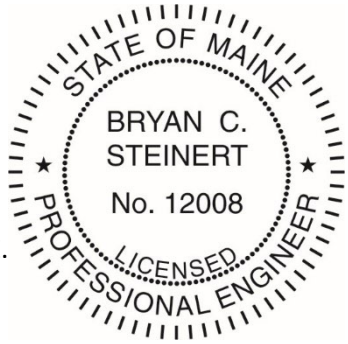
MEMORANDUM

21 January 2020
File No. 39486-877

TO: Portland Foreside Development Company
Kevin Costello, Casey Prentice

C: Woodard & Curran, Inc.
Denise Cameron, P.E.

FROM: Haley & Aldrich, Inc.
Bryan C. Steinert, P.E., Wayne A. Chadbourne, P.E.



SUBJECT: Paver Design Recommendations
Foreside Development
58 Fore Street
Portland, Maine

In accordance with your recent request, this memorandum has been prepared by Haley & Aldrich, Inc. (Haley & Aldrich) to summarize paver design recommendations for the subject project in response to recent City of Portland (City) comments regarding the ability of the paver section to support emergency vehicles that could weigh up to 50 tons. Please note that some of the information summarized herein was originally communicated to the project team via electronic mail (email) on 11 October 2019. However, this memorandum shall serve as the "official" documentation of the paver design recommendations for the subject project.

A geotechnical data report (GDR) summarizing the subsurface conditions encountered in previous and recent subsurface explorations, and the results of previous and recent laboratory testing for the subject project was issued on 20 December 2019.

Paver Design Recommendations

The near surface fill soils that are present at the site are considered to be frost-susceptible. Consequently, there is some risk that paver areas could experience some frost heaving and vertical misalignment where they are directly underlain by these soils within the depth of frost penetration. To avoid risk of any frost-induced heaving, full-depth (4.5 ft frost depth potential) non-frost susceptible paver sections would be required, which is not common practice in the Portland area. Because of this, the paver section thicknesses summarized below assume that such misalignment is tolerable, as is normal, local practice.

Area Use	Layer Thickness (in.)			
	Paver	Base	Subbase	Total
Pedestrian	2	4	16	22
	3	4	12	19
	4	4	8	16
Light Vehicle (passenger cars, box truck)	2	4	18	24
	3	4	14	21
	4	4	10	18
Heavy Vehicle (trash trucks, construction and emergency vehicles	2	6	22	30
	3	6	18	27
	4	6	14	24

The paver section thicknesses summarized above assume that some risk of misalignment is tolerable, adequate drainage is provided and a stable, firm subgrade is present beneath the subbase course layer, which can be achieved by requiring that the Contractor do the following:

- Make final excavations to the design subgrade level using a smooth-edged bucket to limit the potential for disturbance, especially if fill soils have a high percentage of fines (i.e., silt/clay size soil particles).
- All topsoil, debris and organic matter present at the design subgrade level should be excavated and replaced with subbase material.
- Prevent water from accumulating on soil surfaces to reduce the possibility of soil disturbance. Surfaces that become disturbed due to water infiltration should be excavated, stabilized and/or replaced.
- To the extent possible, limit equipment and construction worker traffic across the exposed soil bearing surfaces.
- Granular subgrade surfaces could be proofrolled with a self-propelled static or vibratory roller until firm prior to fill placement if the soil appears dry and no “free” water is observed. To minimize disturbance, fill soils having a high percentage of fines that are exposed at subgrade level should not be proofrolled.
- Exposed soil bearing surfaces should be examined in the field by a qualified geotechnical engineer as it may be necessary to remove weak, disturbed or otherwise unacceptable soils as described above.

We also recommend that base and subbase course materials meet the requirements of MaineDOT Standard Specification Section 703.06 Aggregate for Base and Subbase, Type A (base) and Type D (subbase), respectively. Excavation, subgrade preparation and material placement and compaction requirements will be included in the Contract Documents (CDs), which will be issued to prospective earthwork Contractors for bidding and construction.

In areas of the site where the static groundwater level is in close proximity to or above the design subgrade level, adequate drainage should also be provided. Paver section drainage requirements, if needed, should be incorporated into the CDs.

It is our understanding based on our recent discussions with you, that the project team has selected a heavy vehicle paver section with a total thickness of 30 in. (2-in. thick paver, 6-in. thick base course and 22-in. thick subbase course) for use on the project in the areas shown on the attached sketch. The heavy vehicle paver section selected for the subject project is considered sufficient to support various vehicle types, including emergency vehicles weighing up to 50 tons, provided that it is constructed as recommended herein.

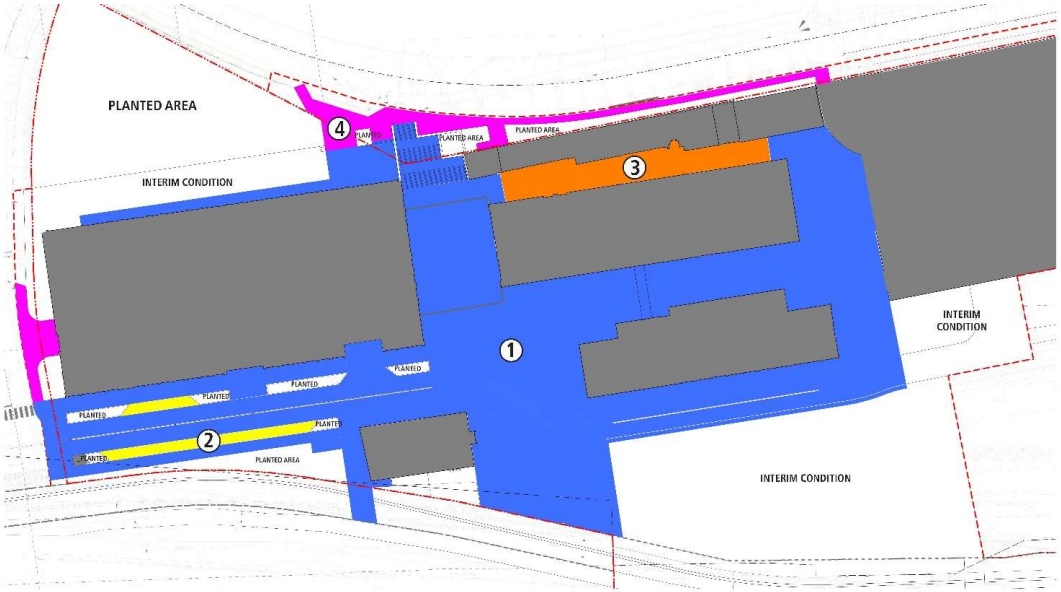
Closure

We trust this information meets your present needs. If you have any questions, comments or concerns about any of the information presented herein please do not hesitate to contact us.

Attachments:
Paver Sketch (1 page)

\\haleyaldrich.com\share\CF\Projects\39486\877 - Blocks 2-4-5-6 DD\Deliverables\2020-0121-HAI-Foreside Paver Letter-F.docx

Paving Material Palette





1 **MUSKOGEE BLACK GRANITE**
GROUND PLANE (PRIMARY)



2 **ASHTON GRAY GRANITE**
STREET PARKING



3 **ENDICOTT BRICK - MANGANESE IRONSPOT**
NARROW ALLEY



4 **PORTLAND STANDARD BRICK**
SIDEWALKS

Attachment W.

FORESIDE
PORTLAND, MAINE

254 Commercial Street, Suite 118, Portland, Maine 04101

January 23, 2020

Christian Roadman, Planner
Planning & Transportation Division
City of Portland
389 Congress Street, 4th Floor
Portland, ME 04101

Re: Portland Foreside Development Company, 58 Fore Street
Inclusionary Zoning Commitment – Phase 1 Level III Site Plan Application

Dear Christian,

As part of our Level III Site Plan Application for Phase 1 of the proposed development at 58 Fore Street, we are proposing to construct 14 residential units. There are 21 bedrooms associated with the 14 residential units. To meet the City of Portland's Inclusionary Zoning requirements, Portland Foreside Development Company (PFDC) will provide two studio units that comply with the City of Portland's Inclusionary Zoning Ordinance as part of Phase 1. We understand that by providing two units, no additional fee is required to be paid by PFDC.

Below is a breakdown of each development block, the number of units and the number of bedrooms for Phase 1. We have also attached relevant floor plans for your reference.

	Number of Residential Units	Studio	1 Bedroom	2 Bedroom	Total Bedrooms
Block 12	2	0	0	2	4
Block 1A	0	0	0	0	0
Block 2	0	0	0	0	0
Block 4 – Townhouses	4	0	0	4	8
Block 4 – Apartments	8	3	4	1	9
TOTAL	**14**	3	4	7	
TOTAL Bedrooms					**21**

Sincerely,

David Senus, PE
Project Manager

Attachment X.

CITY OF PORTLAND

Planning & Urban Development

Christine Grimando, AICP, Director

January 24, 2020

Portland Foreside Development Company LLC
Attn: David Senus
254 Commercial Street
Suite 118
Portland, ME 04101

Dear David:

On January 22, 2020, following a public hearing and final deliberations, the Historic Preservation Board voted 6-0 (Sheridan recused) to approve, subject to conditions, Portland Foreside Development Company's application for a Certificate of Appropriateness for building alterations and additions, site improvements and new construction within the boundaries of the Portland Company Historic District. This decision also represents the conclusion of the Board's advisory review of the portion of the project that is within 100 feet of the western boundary of the historic district (Block 1A office building and adjacent site improvements). This decision does not represent the conclusion of Historic Preservation's advisory review of the portion of the project within 100 feet of the eastern boundary (Block 4 garage), which is expected to follow.

The Board's approval included numerous conditions, in part because several elements of the applicant's overall development proposal were presented relatively late in the Board's preliminary review process and the design solution for these elements had not been developed to a point where a final decision was possible. This was especially the case for the new structures proposed for the northeast corner of the historic district—the rowhouses east of Building 16, the circular stair tower and Block 4's garage, the west end of which falls within the historic district boundary. When presented to the Historic Preservation Board, members of the Board expressed concern about the visual relationship of the individual structures that converge in this corner of the district and suggested that the treatment of these elements be given further consideration. Representatives of the two architectural firms working on the project indicated that this area was still under discussion.

Other details requested by the Historic Preservation Board at the final workshop, such as the addition of seating within the grand stairs and canopies over the ground floor bays of the office building (east elevation), were agreed to by the applicant but given the short amount of time

between the final workshop (January 15) and public hearing (January 22nd), these details could not be finalized in advance of the public hearing. Other aspects of the applicant's plans that had not yet been finalized included the site interpretation program, architectural lighting and signage program. Finally, the ADA lift abutting the grand stairs was shown in conceptual form for the first time at the public hearing. Design details for the lift were not yet finalized and as such required a condition of approval.

While not a condition of approval, several Board members requested that the grove of trees shown at the northwest corner of Building 6A be shifted slightly to the east so as not to obstruct views of the façade of Building 6A and the waterfront from Fore Street.

Following is the formal decision of the Historic Preservation Board, with conditions of approval:

On the basis of plans and specifications submitted by the applicant for the January 22, 2020 public hearing and information included in the accompanying staff report, the Board finds that the scope of work proposed within the Portland Company Historic District, including building alterations and additions, site improvements, and new construction ***meets*** *the historic preservation ordinance's Standards for Review of Alterations and Standards for Review of Construction* ***subject to the following conditions…….***

- *Applicant to provide on-site, readily accessible, interpretative elements that convey the history and significance of the Portland Company at the local, state and national level. This material shall include a written narrative component at or near major gateways to the historic complex, in addition to any interpretive program within the buildings themselves. Detailed plans and specifications for interpretive site features and/or exterior signage to be submitted for Historic Preservation Board review and approval within nine months of this approval. Installation of interpretive site features and/or exterior signage to be completed within one year of a Certificate of Occupancy for any historic structure within the Portland Company Historic District.*

- *Applicant to submit detailed plans, elevations, renderings, material palette and specifications (as applicable) for the following elements of the proposed development for final review and approval by the Historic Preservation Board prior to issuance of a building permit for such:*
    - *Rowhouses immediately east of Building 16*
    - *Stair tower at northeast corner of historic district*
    - *West elevation of Block 4 parking garage*
    - *Treatment of 15'-wide gap between east wall of Building 16 and proposed rowhouses*
    - *ADA lift immediately abutting grand staircase*
    - *Building signs within district boundary (individual tenant signs to be reviewed by staff)*
    - *Architectural lighting within district boundary*
    - *Seating on grand stairs*

- *Steel canopies over ground floor bays of Building 1A, east elevation. (Although not shown on plans provided for 1/22/20 public hearing, applicant agreed to provide canopies.)*

- *Applicant to submit final plans and details for the following items to staff for review and approval prior to issuance of a building permit:*

  - *entry threshold treatments on all buildings*
  - *height of mechanical screen on Buildings 2 and 3 (Applicant agreed to reduce screen height to the extent possible.)*

- *Staff to review and approve test patches for masonry repointing, reconstruction and waterproofing and attachments to seawall.*

All improvements to be carried out as shown on the plans and specifications submitted for the 1/22/20 public hearing and/or as described above. Changes to the approved plans and specifications and any additional work that may be undertaken must be reviewed and approved by this office prior to construction, alteration, or demolition. If, during the course of completing the approved work, conditions are encountered which prevent completing the approved work, or which require additional or alternative work, you must apply for and receive a Certificate of Appropriateness or Non-Applicability PRIOR to undertaking additional or alternative work.

This Certificate is granted upon condition that the work authorized herein is commenced within twelve (12) months after the date of issuance. If the work authorized by this Certificate is not commenced within twelve (12) months after the date of issuance or if such work is suspended in significant part for a period of one year after the time the work is commenced, such Certificate shall expire and be of no further effect; provided that, for cause, one or more extensions of time for periods not exceeding ninety (90) days each may be allowed in writing by the Department.

Sincerely,

Deborah Andrews
Historic Preservation Program Manager

Cc: Henry Moss, Bruner/Cott & Associates
Michael Boucher, MBLA Landscape Architects
Derek Johnson, Perkins + Will
Christian Roadman, Planner, Dept. of Planning & Urban Development

Attachment Y.

BERN
STEIN
SHUR

Bernstein, Shur,
Sawyer & Nelson, P.A.
100 Middle Street
PO Box 9729
Portland, ME 04104-5029

T (207) 774 - 1200
F (207) 774 - 1127

Mary E. Costigan
(207) 228-7147 direct
mcostigan@bernsteinshur.com

January 24, 2020

Portland Planning Board
389 Congress Street
Portland, ME 04101

Subject: Portland Foreside Development Company Level III Site Plan Application

Dear Board Members:

I am writing on behalf of Portland Foreside Development Company ("PFDC") regarding its application for Level III Site Plan and Subdivision Approval. This letter is intended to address two outstanding items as we head to public hearing on January 28th. I will first address the discussion of the parking garage as an accessory use and rationale for excess parking spaces. I will also address the retaining wall and agreements we are working on with the City regarding the wall and project features located in the Fore Street right-of-way.

Parking Garage

There are two relevant points to be addressed regarding the garage and they are related: 1) the garage is a permitted accessory use to the proposed uses on the site, and not a conditional use; and 2) the amount of parking is appropriate for the proposed use of the site. An important fact about the parking garage and the project in general is that all of the proposed uses on this Phase I development are located on the same parcel of land. Although we are also seeking subdivision approval, there is no intention to convey the garage/townhouse parcel as a separate parcel until the residences are built on top of the garage in a future phase. The garage is also depicted on our approved Master Development Plan and was purposefully located in a central, interior location on the site to best serve the needs for the entire site. For purposes of this Site Plan application in front of you for Phase I of development of this site, the garage is accessory to all of the proposed uses on the site, including predominantly the Sun Life office building, retail and event uses, and residential uses. Because the garage is accessory to the other uses on the site, and not a primary use, conditional use approval is not required. Conditional use approval is only required if the proposed use is a primary use.

Related to the accessory nature of the garage is the fact that the garage will have more off-street parking spaces than required by the minimum parking requirements for Phase I of this development. The site plan standards require developments that are proposing to exceed minimum parking requirements by 10% or more to demonstrate that the amount of parking is appropriate for the proposed use of the site. This garage, as well as the access road and open plazas on the site will be open to the public for use. The garage will be used by Sun Life employees, shoppers and diners visiting the retail and restaurants throughout the Phase I development, members of the public utilizing the access easement area and/or the eastern prom trail, and attendees at weddings, markets and other events at the site. The off-street parking demand, as required by the applicable ordinances, is narrowly focused on the definable uses of the area and the minimum amount of off-street parking required to support those uses. The garage meets that demand and will accommodate excess public parking that would otherwise spill out onto the surrounding public streets. In future phases, the excess parking will also be utilized by the users of the future development, such as the residences above the garage. The excess parking in the garage is therefore appropriate for the proposed uses of the site.

Retaining Wall Agreement and Right-of-Way Licenses

As you are aware, there is a retaining wall that borders the property line between the project site and the Fore Street right-of-way. In 1876, the City entered into an agreement with the Portland Company regarding the retaining wall (the "Agreement"). The Agreement states that the Portland Company gave the City the right to construct the wall on the property line and that the City would forever maintain the wall. The Portland Company gave the City the right to access the wall from the Portland Company property. In addition, the Portland Company agreed to not disturb the embankment or diminish the slope, unless they replace it with a complete and sufficient permanent support for the wall. The City also gave the Portland Company the right to construct a wall on top of the retaining wall, "consistent with the safety and stability of said wall."

The development of the garage will involve the construction of a supplemental retaining wall system adjacent to the existing retaining wall. We have met with the City and will be entering into an agreement in which PFDC will agree to take over the maintenance responsibility for the existing retaining wall. We will also continue to work with the City Public Works staff in the final design of the new system.

A question was raised regarding the ability to construct a driveway into the parking garage over the existing retaining wall. The proposed entry into the garage from Fore Street will be constructed in a manner in which the support for the entry will span the wall and will not rely on the wall for support. The driveway is not being built upon the wall, but rather over the wall. The Agreement does not prohibit the construction of a driveway over the wall in this manner.

Finally, you will note on the Site Plan that there are features of the site, particularly near the grand stairway, that will be located in the Fore Street right-of-way. We are working with the City on the necessary license agreements for these features and the related construction activity.

Thank you for your time and attention to this matter. Please contact me should you have any questions.

Sincerely,

Mary E. Costigan

Mary E. Costigan

Attachment Z.

FLOOD HAZARD DEVELOPMENT APPLICATION

Portland, Maine

(All applicants must complete entire application)
[60.3(e)]

Application is hereby made for a Flood Hazard Development Permit as required under Article II of the Floodplain Management Ordinance of Portland, Maine, for development as defined in said ordinance. This permit application does not preclude the need for other municipal permit applications.

Owner: Portland Foreside Development Company and Portland Foreside Marina, LLC
Address: 254 Commercial St. Merrill's Wharf, Suite 118, Portland ME 04101

Phone No.: 207-517-1102

Applicant: Portland Foreside Development Company
Address: 254 Commercial St. Merrill's Wharf, Suite 118, Portland ME 04101

Phone No.: 207-517-1102

Contractor: Consigli Construction
Address: 15 Franklin St. Portland ME 04101

Phone No.: 207-773-3000

LEGAL DESCRIPTION

Is this part of a subdivision? ☐ Yes ☒ No If yes, give the name of the subdivision and lot number:

Subdivision: _____ Lot #: _____

Tax Map: 18 Lot #: A001 and A002

Address: 58 Fore Street
Street/Road Name

Zip Code: Portland ME 04101
Town/Zip Code

General explanation of proposed development: Waterfront improvements associated with the Portland Foreside Development, including construction of a new trail.

Estimated Value of Proposed Development: $500,000

Proposed Lowest Floor elevation [for new or substantially improved structure]: N/A
(no new or improved buildings within the Flood Zone)

OTHER PERMITS

Are other permits required from State or Federal jurisdictions? ☒ Yes ☐ No
If yes, are these other permits attached? ☐ Yes ☒ No ☐ Not Applicable
Permits to be provided upon receipt

Federal and State Permits may include but are not limited to: ME/DEP/Natural Resource Protection Act, Site Location of Development Act, Metallic Mineral Exploration, Advanced Exploration and Mining; USACE/Section 9 &10 of the Rivers and Harbors Act/ Section 404 of the Clean Water Act; Federal Energy Regulation Commission.

SEWER AND WATER

Sewage Disposal: ☒ Public ☐ Private
☐ Existing ☐ Proposed ☐ Not Applicable Type _____

Water Supply: ☒ Public ☐ Private B-9

(This section to be completed by Municipal Official)

LOCATION

Flooding Source (name of river, pond, ocean, etc.): _____

☐ V1-30 Zone ☐ VE Zone ☐ AE Zone ☐ A1-30 Zone ☐ A Zone ☐ AO Zone ☐ AH Zone
☐ FRINGE ☐ FLOODWAY (1/2 width of floodplain in A Zone)

Base Flood Elevation (bfe) at the site _____ NGVD [Required for New Construction or Substantial Improvement]

Lowest floor elevation of proposed or existing structure _____ NGVD [Required for New Construction or Substantial Improvement]

If proposed development is in an AE or A1-30 Zone and cross section data is available in the Flood Insurance Study, please note the nearest cross section reference letter and elevation of base flood at nearest cross section above and below the site.

Cross Section Letter	Base Flood Elevation
Above Site _____	Above Site _____
Below Site _____	Below Site _____

Basis of unnumbered A Zone bfe determination:

☐ From a Federal Agency: ☐ USGS ☐ USDA/NRCS ☐ USACE ☐ Other _____
☐ From a State Agency: ☐ MDOT ☐ Other _____
☐ Established by Professional Land Surveyor
☐ Established by Professional Engineer ☐ HEC/RAS ☐ HEC II ☐ HY 7 ☐ TR20 ☐ TR55 ☐ Quick-2
☐ Other _____
☐ Highest Known Water Level
☐ Other (Explain) _____

VALUE

If the development involves work on an existing structure, enter the **Market Value** of existing structure before improvements:
$ _____

☐ New Construction or Substantial Improvement ☐ Minor improvement or minor addition to existing development

TYPE OF DEVELOPMENT

Check the appropriate box to the left of the type(s) of development requested and complete information for each applicable line:

	Dimensions
☐ 1. Residential Structure	
☐ 1a. New Structure	_____
☐ 1b. Add to Structure	_____
☐ 1c. Renovations/repairs/maintenance	
☐ 2. Non-Residential Structure	
☐ 2a. New Structure	_____
☐ 2b. Add to Structure	_____
☐ 2c. Renovations/repairs/maintenance	
☐ 2d. Floodproofing	
☐ 3. Accessory Structure	_____
☐ 4. Functionally Dependent Use:	
☐ 4a. Dock	_____
☐ 4b. Pier	_____
☐ 4c. Boat Ramp	_____
☐ 4d. Other	_____
☐ 5. Paving	_____
☐ 6. Conditional Use (Lobster/Fish Shed seaward of mean high tide)	

Note: Conditional Use requires add'l. information due to specific standards, public hearing, and Planning Board review.

	Cubic Yards
☐ 7. Filling[3]	_____
☐ 8. Dredging	_____
☐ 9. Excavation	_____
☐ 10. Levee	_____
☐ 11. Drilling	
	Number of Acres
☐ 12. Mining	_____
☐ 13. Dam: Water surface to be created	_____
☐ 14. Water Course Alteration	_____

Note: Detailed description must be attached with copies of all applicable notifications, state and federal permits.

☐ 15. Storage of equipment or materials
☐ 16. Sewage Disposal System
☐ 17. Water Supply System
☒ 18. Other: Explain _____

Waterfront improvements associated with the Portland Foreside Development, including construction of a new trail.

[1] Certain prohibitions apply in Velocity Zone

Attach a Site Plan – Drawn to scale with north arrow.

- Show property boundaries, floodway, and floodplain lines.
- Show dimensions of the lot.
- Show dimensions and location of existing and/or proposed development on the site.
- Show areas to be cut and filled.

Attach Statement – describing in detail how each applicable development standard in Article VI will be met.

For New Construction or Substantial Improvement also show:

- Existing and proposed grade elevations adjacent to the walls of the structure done by a Professional land Surveyor, Architect, or Engineer.
- Location and elevation of temporary elevation reference marks on the site.

Special Note:
Substantial Improvement is defined as any reconstruction, rehabilitation, addition or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the start of construction of the improvement. Please refer to the floodplain management ordinance, Article XIV, for more complete definitions of New Construction and Substantial Improvement.

Structures in Velocity Zones are not permitted on fill or excavations. Structures must be built on open foundation systems, i.e., columns, piles, posts. Certification of structural design, specifications, plans and construction methods completed by a Professional Engineer or Architect shall accompany the application as required in Article VI.L.3. of the floodplain management ordinance.

The applicant understands and agrees that:

- The permit applied for, if granted, is issued on the representations made herein;
- Any permit issued may be revoked because of any breach of representation;
- Once a permit is revoked all work shall cease until the permit is reissued or a new permit is issued;
- Any permit issued on this application will not grant any right or privilege to erect any structure or sue any premises described for any purposes or in any manner prohibited by the ordinances, codes, or regulations of the municipality;
- The applicant hereby gives consent to the Code Enforcement Officer to enter and inspect activity covered under the provisions of the Floodplain management Ordinance;
- If issued, the permit form will be posted in a conspicuous place on the premises in plain view; and,
- If issued, the permit will expire if no work is commenced within 180 days of issuance.

I hereby certify that all the statements in, and in the attachments to this application are a true description of the existing property and the proposed development project.

Owner: _____ Date: _____
Signature

or

Authorized Agent: Lauren Scott Date: 1/21/20
Signature

(This section to be completed by Municipal Official)

Date: Submitted _____; Fee Paid _____; Reviewed by CEO _____; Reviewed by Planning Board _____

Permit # _____ Issued by _____ Date _____

FLOOD HAZARD DEVELOPMENT PERMIT
For Minor Development

Portland, Maine

(For Development not considered a Substantial Improvement)

This Flood Hazard Development Permit allows minor development as provided in Article V.F.3. of the Floodplain Management Ordinance of Portland**, Maine, for development in a Special Flood Hazard Area as defined in said ordinance.** Development authorized by this permit must be adequately anchored to prevent flotation, collapse, or lateral movement resulting from hydrodynamic and hydrostatic loads. including the effects of buoyancy. be constructed with materials resistant to flood damage and be constructed by methods and practices that minimize flood damage. This permit is issued based on documentation that the information provided in the Flood Hazard Development Permit Application is in compliance with the Floodplain Management Ordinance.

Tax Map: 18 Lot #: A001 and A002

Project Description: Waterfront improvements associated with the Portland Foreside Development, including construction of a new trail.

The permittee understands and agrees that:

- The permit is issued on the representations made herein and on the application for permit;
- The permit may be revoked because of any breach of representation;
- Once a permit is revoked all work shall cease until the permit is reissued or a new permit is issued;
- The permit will not grant any right or privilege to erect any structure or use any premises described for any purposes or in any manner prohibited by the ordinances, codes, or regulations of the municipality;
- The permittee hereby gives consent to the Code Enforcement Officer to enter and inspect activity covered under the provisions of the Floodplain Management Ordinance;
- The permit form will be posted in a conspicuous place on the premises in plain view; and,
- The permit will expire if no work is commenced within 180 days of issuance.

I hereby certify that all the statements in, and in the attachments to this permit are a true description of the existing property and the proposed development project.

Owner: _____ Date: _____
Signature

or

Authorized Agent: Lauren Swett Date: 1/21/20
Signature

Issued by: _____ Date: _____

Permit #: _____

FORESIDE
PORTLAND, MAINE
254 Commercial Street, Suite 118, Portland, Maine 04101

July 25, 2019

RE: Portland Foreside Development Company LLC – Agent Authorization

To Whom It May Concern:

Woodard & Curran will be acting as our agent for all local, state, and federal permitting associated with the Portland Foreside Development Company LLC project located at 58 Fore Street in Portland, Maine.

Please contact our project manager, David Senus, if you have any questions, 207.517.1102.

Sincerely,

Casey Prentice
Manager
Portland Foreside Development Company

42x30 SHEET
1:1

FORE CONNECTOR

WATERVILLE STREET

FORE STREET

MATCHLINE – SEE SHEET C–101

PROVIDE GRANITE CURB & TEMPORARY BITUMINOUS SIDEWALK TO CLOSE EXISTING DRIVEWAY & CONNECT TO SIDEWALK & RAMP INSTALLED BY ADJACENT DEVELOPMENT

MAINTAIN EXISTING CONCRETE SIDEWALK & CURB

MATCH EXISTING CONCRETE SIDEWALK

ZONING DISTRICT BOUNDARY

BIKE RACK, SEE LANDSCAPING PLANS

STAIR & RETAINING WALLS

STREET TREES, SEE LANDSCAPING PLANS

EXISTING BELOW GRADE BUILDING 15 LIMIT

PROVIDE SIDEWALK IMPROVEMENTS ALONG FORE STREET

PROVIDE 8' WIDE PAINTED CROSSWALK; NORTH SIDE OF SIDEWALK TO BE DESIGNED BY CITY AS PART OF FORE STREET SEWER SEPARATION PROJECT

REMOVE EXISTING CURB, PROVIDE FLUSH GRANITE CURB

PROVIDE 7' LONG TIPDOWN CURB

FENCE, SEE LANDSCAPING PLANS

PROVIDE 14' LONG TIPDOWN CURB

RAMP

25.0'

LOAM & SEED

EXISTING BITUMINOUS SIDEWALK TO REMAIN

PROVIDE RETAINING WALL, SEE STRUCTURAL PLANS

LEVEL 1 ROOF

PEDESTRIAN LIFT

BLDG. 24

BLDG. 14

(24, 14, 15, 16 EXISTING BUILDING RENOVATION)

BLDG. 15

BLDG. 16

TOWNHOUSES
(NEW BUILDING CONSTRUCTION)

OVERHEAD BRIDGE

RAMP TO LEVEL 4

BUILDING 4
(NEW BUILDING CONSTRUCTION)

56.2'

PAVER PLAZA AREA

BUILDING 3
(EXISTING BUILDING RENOVATION)

BUILDING 2
(EXISTING BUILDING RENOVATION)

PAVER PLAZA AREA

OVERHEAD BRIDGE

44.0'

BUILDING 1A
(NEW BUILDING CONSTRUCTION)

PORTLAND COMPANY HISTORIC DISTRICT BOUNDARY

MATCH EXISTING BITUMINOUS SIDEWALK

PROTECT EXISTING STREET LIGHT

PROTECT EXISTING GRANITE CURB

8.0'

BRICK SIDEWALK

R10.0'

REMOVE EXISTING CURB, PROVIDE 2" MOUNTABLE GRANITE CURB

PROVIDE BOLLARDS

TRASH COMPACTOR ENTRANCE

27'

250' SHORELAND ZONE

50' PUBLIC ACCESS EASEMENT

28.0'

BENCH (TYP.), SEE LANDSCAPING PLANES

BIKE RACK, SEE LANDSCAPING PLANS

BUILDING 6B
(EXISTING BUILDING RENOVATION)

BUILDING 6
(EXISTING BUILDING RENOVATION)

STONEDUST, SEE LANDSCAPING PLANS

PROTECT EXISTING GRANITE CURB

PROTECT EXISTING ADA RAMP

RAMPED SITE ENTRANCE

12.0'

PARKING – SPACES

20.0'

PAVER SHARED STREET

22.0'

8.5'

PARKING – SPACES

BUILDING 12
(EXISTING BUILDING RECONSTRUCTION)

EXISTING UNDERGROUND FUEL TANKS

SPACE RESERVED FUTURE UNDERGROUND FUEL TANK

10.5'

22'

14'

PAVER SHARED STREET

FENCE, SEE LANDSCAPING PLANS

THAMES STREET EXTENSION

B6
EWPZ

FENCE & PLANTING AREA, SEE LANDSCAPING PLANS

PROVIDE TEMPORARY 2" BINDER COURSE PAVEMENT, SPACE FOR MARINA VEHICLES, EMERGENCY VEHICLE ACCESS & DROP–OFF

442.91'
S52°46'52"W

DEMOLISH BRICK SIDEWALK & CURB

BOLLARD (TYP.), SEE LANDSCAPE PLANS

SITE LANDSCAPING, SEE LANDSCAPING PLANS

REFUSE ENCLOSURE

MECH. ENCLOSURE

TRAIL RELOCATION TO BE COORDINATED WITH CITY OF PORTLAND

TRACK RELOCATION TO BE COORDINATED WITH MAINE NARROW GAUGE RAILROAD & MDOT

NARROW GAUGE RAILROAD; TO BE RELOCATED TO MDOT PROPERTY

MDOT PROPERTY

B6
EWPZ

442.91'
S52°46'52"W

MDOT PROPERTY

12' WIDE BITUMINOUS TRAIL

CITY OF PORTLAND PROPERTY

MDOT PROPERTY

PF

N41°54'39"E
8.00'

S48°04'59"W

MATCHLINE – SEE SHEET C–101

450.00'

NOTES:
1. SEE LANDSCAPE PLANS FOR SITE SURFACE MATERIAL ASSOCIATED WITH LANDSCAPED AREAS, PATIOS, AND NON–BITUMINOUS WALKWAYS & ROADWAYS.

2. ALL AREAS WITHIN LIMIT OF WORK NOT IDENTIFIED FOR FINISH SURFACE MATERIALS (PAVERS, BRICK, PAVEMENT, LANDSCAPING) SHALL BE FINISHED WITH 2" BINDER COURSE ASPHALT.

3. UTILITY & DRAINAGE STRUCTURES NOT SHOWN FOR CLARITY, SEE GRADING & DRAINAGE & UTILITY PLAN FOR MORE INFORMATION.

BAR SCALE
1" = 20'
CHECK GRAPHIC SCALE BEFORE USING

20' 0 20' 40'

NOT FOR CONSTRUCTION

C:\Users\brodwin\Appdata\Local\Temp\AcPublish_17224\0227007 Phase 1 Site Plan.dwg, Jan 21, 2020 - 4:29pm

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Portland, Maine 04102
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STATE OF MAINE
LAUREN JANET SWETT
No. 12284
REGISTERED PROFESSIONAL ENGINEER

REV	DESCRIPTION	DATE
1	RESPONSE TO CITY COMMENTS	01/30/20

DESIGNED BY: LJS | DRAWN BY: BDM | CHECKED BY: DLC

REV	DESCRIPTION	DATE

SITE PLAN - 1

PORTLAND FORESIDE DEVELOPMENT CO.
PORTLAND, ME 04102

PHASE 1 SITE PLAN SUBMISSION

JOB NO.: 0227007
DATE: NOVEMBER 2019
SCALE: 1"=20'
SHEET: 6 OF 17

C-100

42x30 SHEET
1:1

FORE STREET

ZONE LINE

R6
B6

MATCHLINE – SEE SHEET C-100

FENCE, SEE LANDSCAPING PLANS

PROVIDE 8' WIDE PAINTED CROSSWALK; NORTH SIDE OF SIDEWALK TO BE DESIGNED BY CITY AS PART OF FORE STREET SEWER SEPARATION PROJECT

NOTES:
1. SEE LANDSCAPE PLANS FOR SITE SURFACE MATERIAL ASSOCIATED WITH LANDSCAPED AREAS, PATIOS, AND NON-BITUMINOUS WALKWAYS & ROADWAYS.
2. ALL AREAS WITHIN LIMIT OF WORK NOT IDENTIFIED FOR FINISH SURFACE MATERIALS (PAVERS, BRICK, PAVEMENT, LANDSCAPING) SHALL BE FINISHED WITH 2" BINDER COURSE ASPHALT.
3. UTILITY & DRAINAGE STRUCTURES NOT SHOWN FOR CLARITY, SEE GRADING & DRAINAGE & UTILITY PLAN FOR MORE INFORMATION.

N45°16'52"E
140.00'

TM 2-A-2
N/F
MACGOWAN
15773/153

TM 2-A-3
N/F
TIMOTHY HALEY, TRUSTEE
24759/67, 69

TM 2-A-10

LIMIT OF LEVEL 1

BUILDING 4
(NEW BUILDING CONSTRUCTION)

N45°16'52"E
100.00'

N53°46'42"E
100.00'

N47°33'52"E
100.00'

250' SHORELAND ZONE

36.5'

22.0'

BITUMINOUS PAVEMENT

20' DOUBLE SWING GATE

MAINTAIN EXISTING SURFACE CONDITIONS

MNGRR TO REMOVE BUILDINGS & TRACKS

255.00'
S47°33'52"W

685.00'

75' SHORELAND ZONE

B6 ZONE LINE

EWPZ

430.00'

MATCH EXISTING BITUMINOUS TRAIL

12' WIDE BITUMINOUS TRAIL

MDOT PROPERTY

15' MARINA PROPERTY

N47°33'52"E
685.00'

APPROX. LOCATION, 33" FORCE MAIN SEWER LINE

MATCHLINE – SEE SHEET C-100

N41°05'52"W
S48°05'52"W

EXISTING MARINA

BAR SCALE
1" = 20'
CHECK GRAPHIC SCALE BEFORE USING

NOT FOR CONSTRUCTION

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STATE OF MAINE
LAUREN JANET SWETT
No. 12284
REGISTERED PROFESSIONAL ENGINEER

REV	DESCRIPTION	DATE
1	RESPONSE TO CITY COMMENTS	12/20/19
DESIGNED BY: LJS	DRAWN BY: BDM	CHECKED BY: DJC

SITE PLAN - 2

PORTLAND FORESIDE DEVELOPMENT CO.
PORTLAND, ME 04102

PHASE 1 SITE PLAN SUBMISSION

JOB NO.:	0227007
DATE:	NOVEMBER 2019
SCALE:	1"=20'
SHEET:	7 OF 17

C-101

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T 207.774.2112
F 207.774.6635

Portland Foreside Development – Phase 1
Statement of Compliance with City of Portland Flood Plain Management Regulations

The proposed work is located on waterfront associated with the Portland Foreside Development located at 58 Fore Street in Portland, Maine. The proposed work includes waterfront improvements including the construction of a trail within the flood plain. The work will comply with the standards provided in Section 14-450.8 of the City's Land Use Code; these standards are provided below in italics for your reference, followed by a description of how the proposed work will comply:

(a) *All development: All development shall:*

1. *Be designed or modified and adequately anchored to prevent flotation (excluding piers and docks), collapse or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy;*

   The proposed work has been designed by a licensed professional engineer. An appropriate stamp is provided on the Site Plan.

2. *Use construction materials that are resistant to flood damage;*

   Construction materials that are resistant to flood damage have been specified.

3. *Use construction methods and practices that will minimize flood damage; and*

   Construction methods and practices that will minimize flood damage will be utilized.

4. *Use electrical, heating, ventilation, plumbing, and air conditioning equipment, and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during flooding conditions.*

   The work proposed within the flood plain does not include electrical, heating, ventilation, plumbing, and air conditioning equipment, and other service facilities.

(b) *Water supply: All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the systems.*

The work proposed within the flood plain does not include new or replacement water supply systems; this Standard does not apply.

(c) *Sanitary sewage systems: All new and replacement sanitary sewage systems shall be designed and located to minimize or eliminate infiltration of flood waters into the system and discharges from the system into flood waters.*

The work proposed within the flood plain does not include new or replacement sanitary sewage systems; this Standard does not apply.

(d) *On-site waste disposal systems: On-site waste disposal systems shall be located and constructed to avoid impairment to them or contamination from them during floods.*

The work proposed within the flood plain does not include on-site waste disposal systems; this Standard does not apply.

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(e) *Watercourse carrying capacity: All development associated with altered or relocated portions of a watercourse shall be constructed and maintained in such a manner that no reduction occurs in the flood carrying capacity of the watercourse.*

The work proposed within the flood plain does not include any watercourse alterations that will result in a reduction of flood carrying capacity of the watercourse.

(f) *Residential: New construction or substantial improvement of any residential structure located within:*

1. *Zones A1-30, AE, and AH shall have the lowest floor (including basement) elevated to at least two (2) feet above the base flood elevation.*
2. *Zones AO and AH shall have adequate drainage paths around structures on slopes, to guide flood water away from the proposed structures.*
3. *Zone AO shall have the lowest floor (including basement) elevated above the highest adjacent grade:*
    a. *At least two (2) feet higher than the depth specified in feet on the community's Flood Insurance Rate Map; or*
    b. *At least three (3) feet if no depth number is specified.*
4. *Zone A shall have the lowest floor (including basement) elevated to at least two (2) feet above the base flood elevation utilizing information obtained pursuant to section 14-450.6(b)4.a.ii.; section 14-450.7(b)4; or section 14-450.7(c)1.*
5. *Zones V1-30 and VE shall meet the requirements of section 14-450.8(p).*

The work proposed within the flood plain does not include residential structures; this Standard does not apply.

(g) *Nonresidential: New construction or substantial improvement of any nonresidential structure located within:*

1. *Zones A1-30, AE, and AH shall have the lowest floor (including basement) elevated to at least two (2) feet above the base flood elevation, or together with attendant utility and sanitary facilities shall:*
    a. *Be floodproofed to at least two (2) feet above the base flood elevation so that below that elevation the structure is watertight with walls substantially impermeable to the passage of water;*
    b. *Have structural components capable of resisting hydrostatic and hydrodynamic loads and the effects of buoyancy; and*
    c. *Be certified by a registered professional engineer or architect that the design and methods of construction are in accordance with accepted standards of practice for meeting the provisions of this section. Such certification shall be provided with the application for a flood hazard development permit, as required by section 14-450.6(b)4d and shall include a record of the elevation above mean sea level to which the structure is floodproofed.*
2. *Zones AO and AH shall have adequate drainage paths around structures on slopes, to guide flood water away from the proposed structures.*
3. *Zone AO shall have the lowest floor (including basement) elevated above the highest adjacent grade:*
    a. *At least two (2) feet higher than the depth specified in feet on the community's Flood Insurance Rate Map; or*
    b. *At least three (3) feet if no depth number is specified; or*

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c. Together with attendant utility and sanitary facilities be floodproofed to meet the elevation requirements of this section and floodproofing standards of section 14-450.8(g).

4. *Zone A shall have the lowest floor (including basement) elevated to at least two (2) feet above the base flood elevation utilizing information obtained pursuant to section 14-450.6(b)4.a.ii.; section 14-450.7(b)4; section 14-450.7(c)1; or*
5. *Zones V1-30 and VE shall meet the requirements of section 14-450.8(p).*

The work proposed within Flood Zone A2 and V2 does not include any buildings or associated utilities; the work proposed within the Flood Zone will comply with the applicable requirements.

(h) Manufactured homes: New or substantially improved manufactured homes located within:

1. *Zones A1-30, AE, and AH shall:*
   - *a. Be elevated on a permanent foundation such that the lowest floor is at least two (2) feet above the base flood elevation; and*
   - *b. Be securely anchored to an adequately anchored foundation system to resist flotation, collapse, or lateral movement. Methods of anchoring may include, but are not limited to:*
     - *i. Over-the-top ties anchored to the ground at the four (4) corners of the manufactured home, plus two (2) additional ties per side at intermediate points (manufactured homes less than fifty (50) feet long require one (1) additional tie per side); or by*
     - *ii. Frame ties at each corner of the home, plus five (5) additional ties along each side at intermediate points (manufactured homes less than fifty (50) feet long require four (4) additional ties per side).*
     - *iii. All components of the anchoring system described in section 14-450.8(h)1.b.i. and ii. Shall be capable of carrying a force of four thousand eight hundred (4,800) pounds.*
2. *Zones AO and AH shall have adequate drainage paths around structures on slopes, to guide flood water away from the proposed structures.*
3. *Zone AO shall have the lowest floor (including basement) elevated above the highest adjacent grade:*
   - *a. At least two (2) feet higher than the depth specified in feet on the community's Flood Insurance Rate Map; or*
   - *b. At least three (3) feet if no depth number is specified; and*
   - *c. Meet the requirements of section 14-450.8(h)1.b.*
4. *Zone A shall:*
   - *a. Be elevated on a permanent foundation such that the lowest floor is at least two (2) feet above the base flood elevation utilizing information obtained pursuant to section 14-450.6(b)4.a.ii; section 14-450.7(b)4; section 14-450.7(c)1; and*
   - *b. Meet the requirements of section 14-450.7(2)b. 5. Zones V1-30 and VE shall meet the requirements of article VI.P.*

The work proposed within the flood plain does not include new or improved manufactured homes; this Standard does not apply.

(i) Recreational vehicles: Recreational vehicles located within:

1. *Zones A1-30, AH and AE shall either:*
   - *a. Be on the site for fewer than one hundred eighty (180) consecutive days;*

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b. Be fully licensed and ready for highway use. A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only be quick disconnect type utilities and security devices, and has no permanently attached additions; or

c. Be permitted in accordance with the elevation and anchoring requirements for "manufactured homes" in section 14-450.8(h)1a and b.

2. Zones V1-30 and VE shall meet the requirements of either section 14-450.8(i)1.a. or b. or section 14-450.8(p).

The work proposed within the flood plain does not include recreational vehicles; this Standard does not apply.

(j) Accessory structures: Accessory structures located within Zones A1-30, AE, AO, AH and A, shall be exempt from the elevation criteria required in section 14-450.8(f) and (g) above, if all other requirements of section 14-450.8 and all the following requirements are met. Accessory structures shall:

1. Be five hundred (500) square feet or less and have a value less than three thousand dollars ($3,000.00);
2. Have unfinished interiors and not be used for human habitation;
3. Have hydraulic openings, as specified in section 14-450.8(l), in at least two (2) different walls of the accessory structure;
4. Be located outside the floodway;
5. When possible be constructed and placed on the building site so as to offer the minimum resistance to the flow of flood waters and be placed further from the source of flooding than is the primary structure; and
6. Have only ground fault interrupt electrical outlets. The electric service disconnect shall be located above the base flood elevation and when possible outside the special flood hazard area.

The work proposed within the flood plain does not include accessory structures; this Standard does not apply.

(k) Floodways:

1. In Zones A1-30 and AE, encroachments, including fill, new construction, substantial improvement, and other development shall not be permitted in ravine areas, for which a regulatory floodway is designated on the community's Flood Insurance Rate Map or Flood Boundary and Floodway Map, unless a technical evaluation certified by a registered professional engineer is provided demonstrating that such encroachments will not result in any increase in flood levels within the community during the occurrence of the base flood discharge.
2. In Zones A1-30 and AE riverine areas, for which no regulatory floodway is designated, encroachments, including fill, new construction, substantial improvement, and other development shall not be permitted in the floodway as determined in section 14-450.8(11)3. unless a technical evaluation certified by a registered professional engineer is provided demonstrating that the cumulative effect of the proposed development, when combined with all other existing development and anticipated development:

a. Will not increase the water surface elevation of the base flood more than one (1) foot at any point within the community; and

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b. Is consistent with the technical criteria contained in chapter 5 entitled "Hydraulic Analyses," Flood Insurance Study — Guidelines and Specifications for Study Contractors, (FEMA 37/January 1995, as amended).

3. *In Zones A1-30, AE, and A riverine areas for which no regulatory floodway is designated, the regulatory floodway is determined to be the channel of the river or other watercourse and the adjacent land areas to a distance of one-half (1/2) the width of the flood plain as measured from the normal high water mark to the upland limit of the flood plain. Encroachments, including fill, new construction, substantial improvement, and other development shall not be permitted unless a technical evaluation certified by a registered professional engineer is provided meeting the requirements of section 14-450.8(k)2.a. and b.*

The proposed work will not result in an increase in flood levels within the community during the occurrence of base flood discharge.

(l) *Enclosed areas below the lowest floor: New construction or substantial improvement of any structure in Zones A1-30, AE, AO, AH and A that meets the development standards of article VI, including the elevation requirements of section 14-450.8, paragraphs (f), (g) or (h) and is elevated on posts, columns, piers, piles, "stilts," or crawl spaces may be enclosed below the base flood elevation requirements provided all the following criteria are met or exceeded:*

1. *Enclosed areas are not basements;*
2. *Enclosed areas shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of flood water. Designs for meeting this requirement must either:*
   - *a. Be engineered and certified by a registered professional engineer or architect; or*
   - *b. Meet or exceed the following minimum criteria:*
     - *i. A minimum of two (2) openings having a total net area of not less than one (1) square inch for every square foot of the enclosed area;*
     - *ii. The bottom of all openings shall be no higher than one (1) foot above the lowest grade; and*
     - *iii. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the entry and exit of flood waters automatically without any external influence or control such as human intervention, including the use of electrical and other non-automatic mechanical means;*
3. *The enclosed area shall not be used for human habitation; and*
4. *The enclosed areas are usable solely for building access, parking vehicles, or storing of articles and equipment used for maintenance of the building.*

The work proposed within the flood plain does not include any buildings; this Standard does not apply.

(m) *Bridges: New construction or substantial improvement of any bridge in Zones A1-30, AE, AO, AH, A, V1-30 and VE shall be designed such that:*

1. *When possible, the lowest horizontal member (excluding the pilings, or columns) is elevated to at least two (2) feet above the base flood elevation; and*
2. *A registered professional engineer shall certify that:*

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a. *The structural design and methods of construction shall meet the elevation requirements of this section and the floodway standards of section 14-450.8(k); and*
b. *The foundation and superstructure attached thereto is anchored to resist flotation, collapse and lateral movement due to the effects of wind and water loads acting simultaneously on all structural components. Water loading values used shall be those associated with the base flood.*

The work proposed within the flood plain does not include new or improved bridges; this Standard does not apply.

(n) *Containment walls: New construction or substantial improvement of any containment wall located within:*

1. *Zones A1-30, AE, AH, V1-30 and VE shall:*
   a. *Have the containment wall elevated to at least two (2) feet above the base flood elevation;*
   b. *Have structural components capable of resisting hydrostatic and hydrodynamic loads and the effects of buoyancy; and*
   c. *Be certified by a registered professional engineer or architect that the design and methods of construction are in accordance with accepted standards of practice for meeting the provisions of this section. Such certification shall be provided with the application for a flood hazard development permit, as required by section 14-450.6(b)d.4.*
2. *Zones AO and AH shall have adequate drainage paths around containment walls on slopes, to guide flood water away from the proposed walls.*
3. *Zone AO shall have the top of the containment wall elevated above the highest adjacent grade:*
   a. *At least two (2) feet higher than the depth specified in feet on the community's Flood Insurance Rate Map; or*
   b. *At least three (3) feet if no depth number is specified.*
4. *Zone A shall have the containment wall elevated to at least two (2) feet above the base flood elevation utilizing information obtained pursuant to section 14-450.6(b)4.a.ii.; section 14-450.7(a)4; or section 14-450.7(c)1.*

The work proposed within the flood plain does not include the new construction of or substantial improvement of containment walls; this Standard does not apply.

(o) *Wharves, piers and docks: New construction or substantial improvement of wharves, piers, and docks are permitted in Zones A, A1-30, AE, AO, AH, V1-30, and VE, in and over water and seaward of the mean high tide if the following requirements are met:*

1. *Wharves, piers, and docks shall comply with all applicable local, state and federal regulations; and*
2. *Commercial wharves, piers, and docks involving fill shall adhere to the design and construction standards contained in the U.S. Army Corps of Engineers' Shore Protection Manual.*

The work proposed within the flood plain does not include any wharves, piers, or docks; this Standard does not apply.

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(p) Coastal flood plains:

1. *All new construction located within Zones A1-30, AE, A, V1-30 and VE shall comply with all applicable local, state and federal regulations.*

   The proposed work will comply with all applicable local, state and federal regulations.

2. *New construction or substantial improvement of any structure located within Zones V1-30 or VE shall:*
   a. *Be elevated on posts or columns such that:*
      i. *The bottom of the lowest horizontal structural member of the lowest floor (excluding the pilings or columns) is elevated to two (2) feet above the base flood elevation;*
      ii. *The pile or column foundation and the elevated portion of the structure attached thereto is anchored to resist flotation, collapse, and lateral movement due to the effects of wind and water loads acting simultaneously on all building components; and*
      iii. *Water loading values used shall be those associated with the base flood. Wind loading values used shall be those required by applicable state and local building standards.*
   b. *Have the space below the lowest floor:*
      i. *Free of obstructions; or*
      ii. *Constructed with open wood lattice-work, or insect screening intended to collapse under wind and water without causing collapse, displacement, or other structural damage to the elevated portion of the building or supporting piles or columns; or*
      iii. *Constructed with nonsupporting breakaway walls which have a design safe loading resistance of not less than ten (10) or more than twenty (20) pounds per square foot.*

   The work proposed within the flood plain does not include any structures; this Standard does not apply.

3. *A registered professional engineer or architect shall:*
   a. *Develop or review the structural design, specifications, and plans for the construction, which must meet or exceed the technical criteria contained in the Coastal Construction Manual, (FEMA-55/February, 1986); and*
   b. *Certify that the design and methods of construction to be used are in accordance with accepted standards of practice for meeting the criteria of section 14-450.8(p)2.*

   The proposed work has been designed by a registered professional engineer and meets or exceeds the technical criteria contained in the Coastal Construction Manual. The Contractor will be Consigli Construction Company; construction methods will be in accordance with accepted standards of practice.

4. *The use of fill for structural support in Zones V1-30 and VE is prohibited.*

   The work proposed within the flood plain does not include the use of fill for structural support.

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5. *Human alteration of sand dunes within Zones V1-30 and VE is prohibited unless it can be demonstrated that such alterations will not increase potential flood damage.*

   The work proposed within the flood plain does not include the alteration of sand dunes; this Standard does not apply.

6. *The enclosed areas may be used solely for parking vehicles, building access, and storage.*

   The work proposed within the flood plain does not include any enclosed areas; this Standard does not apply.

7. *Lobster sheds and fishing sheds located seaward of mean high tide shall be exempt from the elevation requirement in section 14-450.8(g) only upon review and approval by the planning authority or Planning Board and if all the following requirements of section 14-450.8(a), (k) and (l) are met:*
   a. *The conditional use shall be limited to low value structures such as metal or wood sheds two hundred (200) square feet or less and shall not exceed more than one (1) story.*
   b. *The structure shall be securely anchored to the wharf or pier to resist flotation, collapse and lateral movement due to the effect of wind and water loads acting simultaneously on all building components.*
   c. *The structure will not adversely increase wave or debris impact forces affecting nearby buildings.*
   d. *The structure shall have unfinished interiors and shall not be used for human habitation.*
   e. *Any mechanical, utility equipment and fuel storage tanks must be anchored and either elevated or floodproofed to two (2) feet above the base flood elevation. All electrical outlets shall be ground fault interrupt type. The electrical service disconnect shall be located on shore above the base flood elevation and when possible outside the special flood hazard area. All electrical outlets shall be ground fault interrupt type. The electrical service disconnect shall be located on shore above the base flood elevation and when possible outside the special flood hazard area.*

   The work proposed within the flood plain does not include any lobster sheds or fishing sheds; this Standard does not apply.

PC1

CHESTER & VESTAL

A PROFESSIONAL ASSOCIATION
ATTORNEYS AT LAW
107 Congress Street, Portland, Maine 04101
Telephone (207) 772-7426 Fax (207) 761-5822

EDWIN P. CHESTER
BARBARA A. VESTAL
KRISTINA DOUGHERTY

chester@chesterandvestal.com
vestal@chesterandvestal.com
dougherty@chesterandvestal.com

November 21, 2019

Via planningboard@portlandmaine.gov

Sean Dundon, Chair
Portland Planning Board
389 Congress Street
Portland, Maine 04101

Re: 58 Fore Street, Phase I

Dear Chair Dundon and Planning Board Members:

I am submitting comments in writing because I am unable to attend the workshop on November 26th in person. This is a massive project. I encourage the Board to take its time in reviewing it so that it receives examination commensurate with the impact that it will have on this part of Portland.

I have been following the applicant's progress through the Historic Preservation Board. One very troubling aspect, not yet at all resolved, is the treatment of the 50-foot public access easement that was granted to the City of Portland.

Some Board members will remember that the Historic Preservation Board recommended the mandatory retention of Building 1 by designating it as a contributing building within the then-proposed Portland Company Historic District. The Planning Board reversed that determination and decided to recommend that Building 1 be designated as a non-contributing building, thus allowing its demolition, **in exchange for** the developers granting a 50-foot public access easement from Fore Street, across the site of the then demolished Building 1, to the southerly boundary of the site. This public access easement was touted as a major public benefit which would justify the demolition of a massive, prominent, otherwise significant historic building. The easement was sold as a "grand stairway" from Fore Street and public plaza within the site, designed to enhance the pedestrian experience of the public. It was represented (somewhat disingenuously I believe given the range of uses envisioned) that by virtue of the public access easement, the general population would benefit from guaranteed physical and visual access across the site, even though the rest of the development may well be private and off-limits to the public.

My concern at this time is that what is being proposed in the public access easement area is a mere shadow of what was promised. The "grand stairway" has shrunk to a 12-14 foot wide set of stairs. ADA compliance is unclear, both coming down from Fore Street and at the southerly boundary. It has not been designed to be welcoming to the public, nor does it enhance the visual and physical access. A grove of trees is proposed, a portion of which is within the easement area, which would obscure part of the visual access to the water. It is not apparent that particular provisions are being made to protect pedestrians using this easement as it is crossed by a roadway. And, even more troubling, large portions of the easement area are proposed to be appropriated for private rather than public use. The needs of the private development, rather than the benefit to the public, seem to be driving the design within this public easement area and little attention has been paid to enhancing the public experience.

The City, in particular the Planning Board, negotiated this *quid pro quo*. It is the responsibility of the Planning Board, and as it impacts the design within the designated historic district, the Historic Preservation Board, to determine the design details of this public access easement and to ensure that the public is in fact getting the full benefit of the bargain that was made, for the full extent of the easement area.

I trust that a copy of the public access easement will be provided to the Board. But in case it is not, attached is a copy of the Public Access Easement which was executed on March 28, 2019 and is recorded in the Cumberland County Registry of Deeds in Book 35564, Page 30.

As stated in the easement document, CPB2 has granted to the City a **50' wide public access easement** running from Fore St to the southerly boundary of CPB2's property. The purpose is "to provide physical and visual public access to the waterfront for pedestrians within the Easement Area, which access shall include an ADA compliant access way for pedestrians, including but not limited to wheelchair access on the southerly end of the Easement Area." CPB2 "agrees not to use or permit any use, condition or state of disrepair that would be contrary to or otherwise unreasonably interfere with the use of the Easement Area by pedestrians in the manner contemplated herein." They can temporarily close all or a portion during construction, maintenance or repair activities if required to safeguard public safety. CPB2 can adopt reasonable rules for use and can grant the right to use the surface, subsurface and air space to others over the easement area for a host of primarily utility- elated purposes.

Clearly the easement is intended to allow both physical and visual access from Fore Street to the southerly boundary of CPB2s property throughout the full easement area. By its terms, the applicant must not allow any use which would interfere with the use of the entire easement area by pedestrians for physical and visual access.

The preliminary plans presented in the last few weeks seem to be ignoring the fact that this 50' strip of land has been dedicated to **PUBLIC** use. The plans show the narrowing of the stairs to only a small portion of the 50' width. By narrowing the stairs, the applicant has created retaining

walls and platforms on either side of the stairs. On the west side, the platform has been described as a possible future area for tables and chairs for an adjacent restaurant, obviously a private use. On the east side, the platform immediately adjacent to Building 24 provides access/egress for Building 24, and is designed as the fire egress for the event space proposed for the second floor of Building 2. On both sides of the stairs, private use, not public benefit, are driving this design. As shown, these uses of the public easement area are in direct opposition to the use by the public and are an impermissible private intrusion into the 50' public easement.

It was always envisioned that the specific design and improvements within the 50-foot public easement area would be resolved in negotiation with the City, at some later date. This is that later date and the Planning Board, in conjunction with the Historic Preservation Board, should be the guardians of the public interest. Building 1 has been demolished. This public easement was to be the justification for allowing that to happen. Please pay particular attention to the plans for and design of the 50-foot public access easement, assure ADA compliance, do not allow private appropriation, and require that the public experience be well-designed and of paramount concern throughout the full extent of the easement area.

Very truly yours,



Barbara A. Vestal

BAV/om
Enclosure
cc: Christine Grimando
Deb Andrews

PUBLIC ACCESS EASEMENT

KNOW ALL PERSONS BY THESE PRESENTS, that CPB2 I LLC, a Delaware limited liability company, with a place of business in Portland, Maine and mailing address of Merrill's Wharf, 254 Commercial Street, Suite, 118, Portland, Maine 04101 (the "Grantor"), FOR CONSIDERATION PAID, hereby GRANTS to the CITY OF PORTLAND, a Maine body corporate and politic, with a mailing address of City Hall, 389 Congress Street, Portland, Maine 04101 (the "Grantee" or the "City"), a fifty-foot wide public access easement (the "Access Easement") for the purpose described below, across a portion of Grantor's property in Portland, Maine, running from Fore Street to the southerly boundary of Grantor's property, in the general location depicted on the drawing attached hereto as Exhibit A and made a part hereof (the "Easement Area"), subject to the terms set forth below. The precise location of the Easement Area shall be flexible prior to final design and construction of permanent improvements to the Easement Area. When the final design of the Easement Area has been completed and prior to construction of said improvements, the Easement Area shall be more particularly described by metes and bounds in an Addendum to this Access Easement, signed by both Parties and recorded in the Cumberland County Registry of Deeds.

The purpose of the Access Easement granted herein is to provide physical and visual public access to the waterfront for pedestrians within the Easement Area, which access shall include an ADA compliant access way for pedestrians, including but not limited to wheelchair access on the southern end of the Easement Area. Additional accommodations may be provided if and as required by applicable state or federal law, including the ADA.

The Easement Area shall be subject to such rules or ordinances that Grantee may adopt from time to time in the interests of public safety. Wheelchairs and emergency vehicles as well as snow removal equipment shall be permitted in accordance with applicable federal and/or state laws regulating accessibility for such devices, vehicles or equipment. Maintenance, repair and snow removal responsibilities within the Easement Area shall belong solely to Grantor, its successors and assigns; however, Grantee shall have the right, but not the obligation, to maintain or repair the Easement Area, or to remove snow therefrom, when Grantee, in its sole discretion, deems such maintenance, repair or snow removal necessary to ensure public safety and Grantor has failed to perform the same within a reasonable time after notice from Grantee.

Grantor agrees not to use or permit any use, condition or state of disrepair that would be contrary to or otherwise unreasonably interfere with the use of the Easement Area by pedestrians in the manner contemplated herein. Provided, however, Grantor may temporarily close all or a portion of the Easement Area during construction, maintenance or repair activities if required to safeguard public safety. Grantor shall promptly correct any condition and complete any maintenance or construction activities necessitating such closure in order to minimize the duration of the closure or restriction of public access to the Easement Area. Any closures that prevent public access from Fore Street through to the waterfront shall be pursuant to and in accordance with an Access Easement Closure plan filed with and approved in advance by the City of Portland's Planning Authority.

Nothing herein contained shall be deemed to be a gift or dedication of the fee interest in the Easement Area or any portion thereof to Grantee or to the general public.

The Easement Area is and shall remain private property, and Grantor hereby expressly reserves and retains for itself and for any subsequent owner of the Easement Area, all rights of ownership to the extent the exercise thereof does not unreasonably limit or unreasonably interfere with the use of the Easement Area by pedestrians; such rights include, without limitation, (i) the right to adopt reasonable rules and regulations governing the use of the Easement Area, (ii) the right to use, or to grant to others the right to use, the surface and subsurface of and air space above the Easement Area for any use or purpose (including, without limitation, the right to install, inspect, operate, maintain, repair, replace and remove electric lines, gas lines, underground fuel tanks, telecommunication lines (such as telephone, cable and internet lines), water lines, storm sewers, sanitary sewers, catch basins, manholes, clean-outs, curbing, driveways, surface parking areas, sidewalks, landscaping, benches, information kiosks, light pole bases, lighting fixtures, retaining walls, monument signs, fountains, statues, art pieces and the like, and (iii) the right to make changes, alterations and/or improvements to the Easement Area from time to time.

This easement is given for recreational use and the Grantor and Grantee claim the rights and protections against liability in accordance with Title 14 MRS §159-A to the maximum extent permitted by law.

TO HAVE AND TO HOLD the aforegranted and bargained public access easement, with all privileges and appurtenances thereof, to the Grantee, its successors and assigns, to its and their use and behoof, forever.

IN WITNESS WHEREOF, the Grantor has caused this instrument to be executed by Casey Prentice, its Manager thereunto duly authorized, this 27 day of March, 2019.

CPB2 I LLC
By: CPB2 Management LLC, Manager

By: _____
Name: Casey Prentice
Title: Manager

STATE OF MAINE
CUMBERLAND, ss

March 27, 2019

Personally appeared the above-named Casey Prentice, for CPB2 I LLC as aforesaid, and acknowledged the foregoing instrument to be his/her free act and deed in his/her said capacity and the free act and deed of said limited liability company.

Before me,

_____
Notary Public/Attorney at Law

Print name: Janet L. Davis SEAL
My commission expires: 01-18-2021

JANET L. DAVIS
NOTARY PUBLIC
State of Maine
My Commission Expires
January 18, 2021

GRANTEE ACCEPTANCE:

The City of Portland does hereby accept the foregoing Public Access Easement, by and through City Manager Jon Jennings.

CITY OF PORTLAND

By: Jon Jennings
Its: City Manager

STATE OF MAINE
CUMBERLAND, ss

March 28th, 2019

Personally appeared the above-named Jon Jennings, for the City of Portland as aforesaid, and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of said City of Portland.

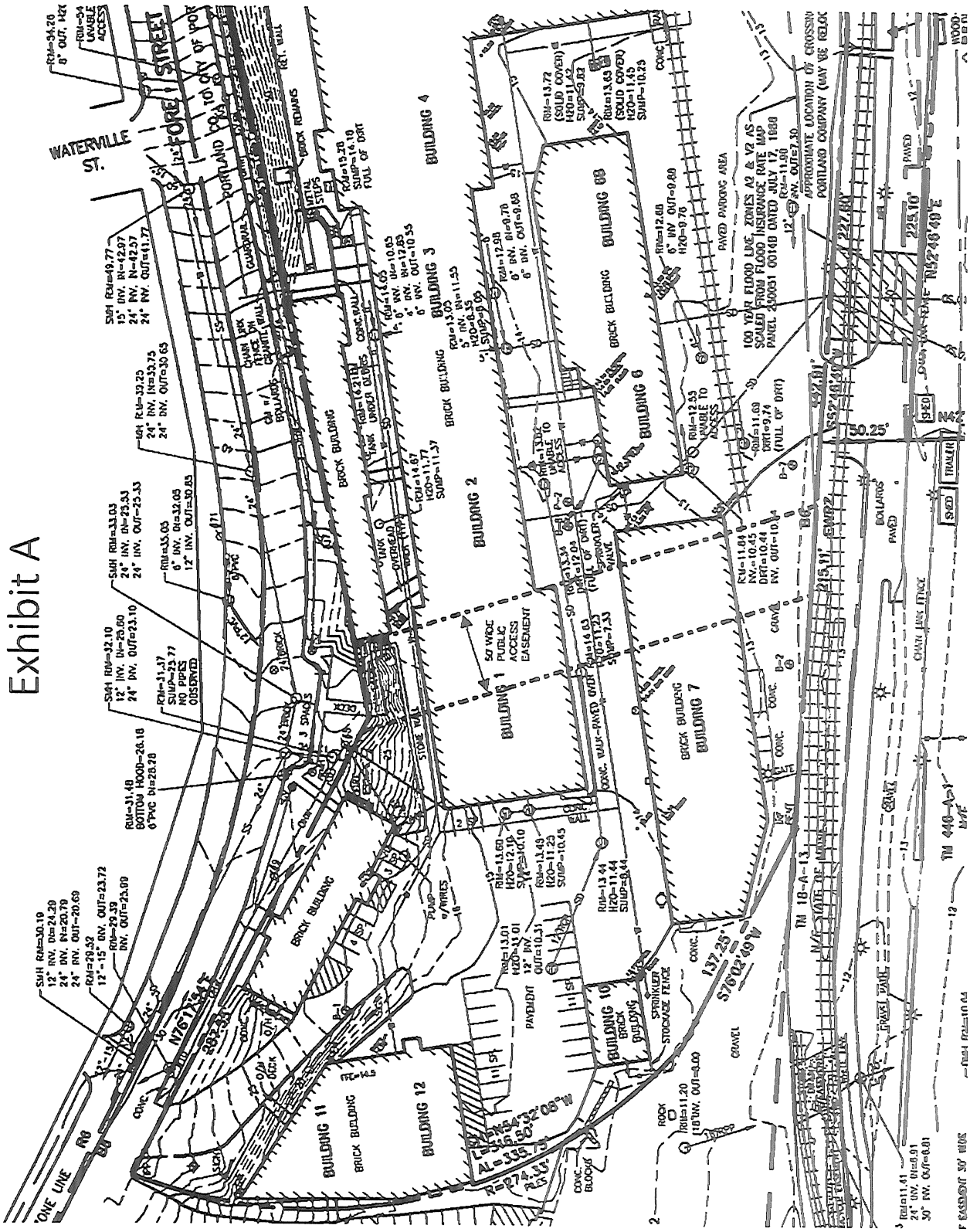
Before me,

Notary Public/Attorney at Law

Print name: Deivy Periana
My commission expires: April 9, 2021

DEIVY PERIANA
NOTARY PUBLIC
CUMBERLAND COUNTY
MAINE
MY COMMISSION EXPIRES APRIL 9, 2021

Exhibit A



Received
Recorded Register of Deeds
Apr 05,2019 03:47:04P
Cumberland County
Nancy A. Lane

Greater Portland Landmarks
Historic character enriches our lives

21 November 2019

Sean Dundon, Chair
Portland Planning Board
389 Congress Street
Portland, ME 04101

Dear Chair Dundon and members of the Planning Board,

During the master development plan process for 58 Fore Street the Historic Preservation Board recommended the designation of Building One, the former Erecting Shop, as a contributing building in the proposed Portland Company Local Historic District. Although the Planning Board agreed with the Historic Preservation Board's findings under the Historic Preservation Ordinance criteria, they decided to change the classification of Building One to non-contributing to allow for its demolition in exchange for a public access easement. The 50' wide public access easement was granted to provide physical and visual public access to the waterfront, enhance the pedestrian environment, and preserve key views of the harbor.

As part of the easement agreement, the property owners would "not use or permit any use … that would be contrary to or otherwise unreasonably interfere with the use of the easement area by pedestrians". We believe the proposed use of the platforms flanking the plaza stair for café seating or as gathering space for the event venues, the location of the grove of trees partially within the easement area, and the narrow width of the plaza stair are counter to the intent of the public access easement.

The 12/15/2016 planning staff Design Review Report identified several design parameters to be used as guidance for future site plan applications and to be taken into consideration in order to meet the design criteria during site plan approvals. One of the eight parameters the report outlined addresses the public access easement design. It states:

> "Design of the public easement entrance on Fore Street shall be revised to provide accessibility and increased viewing opportunities in that location, as well as enhanced streetscape treatment for the public to appreciate and experience the historic building complex and the waterfront."

We believe the short run of stairs from Fore Street restrict physical accessibility to the platforms on either side of the plaza stair where views to the water and historic core can be appreciated by the public.

In its 12/14/2016 findings and recommendations regarding the master development plan's conformance with the standards of the Historic Preservation Ordinance, the Historic Preservation Board stipulated a gap of underdetermined width should be left between the east end wall of Building 16 and the new Fore Street townhouses to provide views of the historic Fore Street retaining wall and to define the limits of the historic complex. The recently submitted site plan (Drawing C-100) depicts Building 16 and the townhouses as attached, which is contrary to the stipulations of the Historic Preservation Board.

Greater Portland Landmarks

Historic character enriches our lives

The approved master development plan drawings included several 50’ wide view corridors that extend across the area under current site plan review, but they are not included on the site plans recently submitted. We believe they should be depicted on the plans and any impact of the proposal on the view corridors should be considered by the planning board during its deliberations.

The proposed garage building in Block Four, on the east end of the historic district, appears to be mostly below the level of Fore Street. Will there be rooftop mechanicals or appurtenances? What will be the view from Fore Street? We urge the board to ask the applicant for a rendering of the proposed building from the public way at Fore Street to help inform its decision-making.

Thank you for considering our comments.

Sincerely,

Julie Larry
Director of Advocacy

Google Groups

11/26/2019 PB Worskhop - 58 Fore St

Karen Snyder <karsny@yahoo.com> Nov 22, 2019 2:21 PM
Posted in group: **Planning and Urban Development**

Dear Planning Board,

There is concern from Munjoy Hill property owners regarding the 58 Fore Street project in the following areas.

1) We got notified on 11/18 of the 58 Fore St Neighborhood meeting notice for next Monday 11/25 for 5pm at St. Lawrence Theater but yet immediately the next day 11/26 is the Planning Board workshop? This appears a bit rushed as to why the Planning board workshop is so soon after the neighborhood meeting.

2) The project scope in the Planning Board workshop agenda is misleading. It is only providing the initial phase renderings and not the entire project scope. There needs to be included ALL project phase renderings of this mammoth project that will affect Munjoy Hill neighborhood.

3) There is no mention or documentation of the agreed upon 50 foot wide public easement that was a "tradeoff" for taking down Building 1. This public access easement needs to be incorporated. If the agreed upon 50 wide public easement entrance is NOT being provided then like all the rest of the "historic" buildings that are being rebuilt, Building 1 needs to be rebuilt then.

4) The streets of Waterville, St. Lawrence, Atlantic, and Munjoy currently have had wide street ocean water views for over 200 years. There needs to be renderings of all the view corridors from these streets to see if 50 feet width is sufficient because this affects a substantial amount of property owners.

5) There is extreme concern about the amount of concentrated traffic and parking at the waterfront right below Munjoy Hill neighborhood. From my estimates, there are over 3,000 potential cars that will be concentrated at the base of Munjoy Hill based on below projects. How is this traffic being addressed?

Portland, ME- Continuing and Future Traffic Congestion/Parking Issues
As of: Tuesday, 10/9/2019

Street #	Street	Districts/Neighborhoods Most Affected	Proposed Parking Spaces	Status (Source:Planning Dep)
86	Newbury St.Vet Choice/Brew Hotel	Working Waterfront/Munjoy Hill	400	Under Construction: Zoning Board of Appeals Approved:9/6/2018, 9/25/2018 Site Plan Approval
100	Fore St (Hamilton Marina/Express Copy building)	Working Waterfront/Munjoy Hill	540	City council Meeting 9/17/2018 to Approve Zoning Height Change (parking was 600 to 540)
0	Hancock St. (WEX)	Working Waterfront/Munjoy Hill	??	Construction Complete 2018
383	Commecial Street (Rufus Deering)	Working Waterfront/Munjoy Hill	313	Under Construction: Planning Board Approved 6/26/2018
184	Commecial Street (Portland Lobster Company)	Working Waterfront/Munjoy Hill	188	Pending - Planning Board Workshops4/17/2018,6/22/2018, 7/14/2018 site walk. Latest Level 3 Site Plan is 4/17/2018
1	Center Street (Commercial & Center St)	Working Waterfront/Munjoy Hill	75	**Planning Board Approved: Gone through Planning Board - 2019**
58	Fore St *Sun Life Inc. (Financial Services)*	Working Waterfront/Munjoy Hill	600	Going through Historic Preservation Board 10/3/2019 https://www.pressherald.com/2019/09/26/another-major-employer-announces-move-to-portland-waterfront/
Corner	**Spring and Cross St. Across from 1 Portland Square**	Working Waterfront/Munjoy Hill	1,000	https://www.pressherald.com/2019/10/09/parking-garage-centerpiece-of-old-port-project/
		Summary of Proposed Parking Spaces		
		Working Waterfront/Munjoy Hill	3,116	

Articles regarding I-295 Congestion

I would appreciate the above be addressed in next weeks Planning Board workshop.

Karen

PC4

Portland Maine Yes. Google's good here.

Christian Roadman <croadman@portlandmaine.gov>

Fore St Neighborhood meeting

Peter Bass <peterbass54@gmail.com> Tue, Nov 26, 2019 at 9:18 AM
To: croadman@portlandmaine.gov

>
> Christian,
> I attended the neighborhood meeting for the ForeSt. Project last night and found it woefully inadequate. This is a large and complicated project that along with cumulative development in the area will have direct effects on its neighbors. The developer only planned for an hour which was not nearly enough time to address questions and concerns of the attendees. Many questions were written down but not even attempted to be answered. Presentation graphics were inadequate to understand the details of the project. The engineering team did fine with technical questions but there was a lot that was outside of their expertise that they had no answers to. Also, the code requires that the meeting be no less than 7 days before a public meeting which this was not.
> I find a lot to like about the development but along with the rest of the attendees have concerns that didn't come close to being addressed. It felt like it was a purposefully short meeting to be able to check the box. This developer knows better and needs to engage the public properly. You need to require that they hold at least one more real neighborhood meeting, but given the size of this project there should be more. They need to send their A team and their best presentation graphics and be prepared to answer the tough questions. I am afraid that I need to recommend that a representative of the planning department needs to attend as well to be sure the developer's public obligation is met.
> I went into the meeting with a positive attitude but left angry. I was not alone. More enemies than allies were made last night.
>
> Peter Bass
> 29 Waterville St

Google Groups

11/26/19 Planning Board Meeting - 58 Fore St Unanswered Questions

Karen Snyder <karsny@yahoo.com> Nov 26, 2019 9:36 AM
Posted in group: **Planning and Urban Development**

Dear Planning Board,

The 58 Fore St "neighborhood" meeting last night was very concerning.

Firstly, there was only 1 hour to be allocated to this neighborhood meeting because St. Lawrence Theater needed the meeting to end at 6pm. Note: The Root cellar was available last night to have a longer meeting and the basement holds over 100 people.

Secondly, there were about 50 concerned residents at the meeting but yet only 50% of the questions were actually answered and weakly and vaguely at that. There was no follow-up on these questions asked but not answered.

The 58 Fore St presenters would or could not answer the following questions:

1) How many parking spots is this parking garage supposed to hold?
2) What is the final height of this parking garage and the residential housing from Fore St elevation?
3) Why is the pedestrian easement stairs only 14 feet wide instead of the easement of 50 feet is width?
4) The projected traffic is unrealistically low in the TMP permit given. If Sun Life has 1,200 employees, and the TMP parking permit is for 500 cars in the AM only, how does this traffic mgmt. permit plan suppose to include all these 1,200 Sun Life employees, 600 residents, and tourists?
-In addition, with even such a unrealistic simulated amount of AM cars of 500 cars, how is all this traffic all suppose to enter and the garage entrance at Waterville St without affecting the Munjoy Hill residential streets?
5) How are the City and the developers going to mitigate the traffic congestion overflow that will be on Munjoy Hill residential streets for the people that do not want to pay for the garage?
- Note: It is assumed that Belinda Ray has all ready halted an attempt of Waterville St property owners wanting restricted parking on their street from the 10/21 City Councilor 2nd reading of this.
6) How will the developers mitigate the additional car pollution that will be generated by this projected traffic?
7) How will the developers mitigate the light pollution coming off of the parking garage that will affect the Munjoy Hill residents?
8) Will the developers "opt out" in building affordable housing? It is estimated 63 units of affordable housing could be built.
9) What is the final building renderings including the final phase of building heights off of Fore St, all easement accesses, visual corridors, etc? None of this was even presented last night.

The 58 Fore St presenters did their "duty" to have a deliberately short "neighborhood" meeting to "check the boxes" with the City without answering the majority of the concerns of Munjoy Hill residents adequately.

I hope the above questions will be answered and documented for clarity in tonight's 11/26 Planning Board workshop for 58 Fore St at 4:30pm in Room 24 basement at City Hall.

Regards,
Karen Snyder
Munjoy Hill Property Owner

November 25, 2019

Dear Belinda,

My husband and I own and reside in an historic 3-unit building on Munjoy Hill which is currently in your district. As Hill residents for over fifteen years – and frequent users of the Eastern Prom Trail – we often walked by the dilapidated and shuttered old Portland Company Complex and wondered when someone would finally clean it up.

We've been following the developments of the 58 Fore Street project with great interest since the land and buildings were purchased a number of years ago. Now that the project finally seems to be getting underway, we're writing to let you know that we fully support this project.

After expressing interest in learning more about the 58 Fore Street project a few months ago, the developers invited us to their office and spent several hours answering questions, reviewing plans and sharing their current vision and proposed timeline.

This project represents a thoughtful blend of past and present, successfully preserving important historic buildings while replacing old, crumbling buildings of no historical significance with modern structures that will support new businesses and provide the public with needed amenities. 58 Fore Street will also provide improved views and better public access to a large portion of the Eastern waterfront that has been vastly underutilized.

In addition to offering new office and retail space, the project will also add hundreds of new residential units to a City in dire need of additional housing. In doing so, the project will also infuse the City with significant new tax revenue, which is clearly a benefit for every Portland property owner.

In short, the 58 Fore Street project will create a vibrant and exciting new neighborhood and will offer a mix of beautiful old and new spaces that Portland residents and visitors can enjoy for many years to come.

We support projects that support the greater good. We believe that 58 Fore Street does exactly that. As District 1 Councilor, we ask you to fully support this vital project as well.

Kind regards,

Pamela Jack & Devon Platte
26 North Street
Portland

Google Groups

58 Fore Street

Barbara Vestal <vestal@chesterandvestal.com> Dec 5, 2019 11:58 AM
Posted in group: **Planning Board**

Dear Chair and Planning Board Members,

I am writing today to comment upon the impact of the 58 Fore Street development on the traffic and parking in the neighborhood. As part of the Master Development Plan review process, the applicant said that the parking garage entrance off of Fore Street (at the foot of Watervllle St.) would only be used by residents who would be accessing assigned parking spaces. The parking levels within the parking garage were not to be connected for purposes of ordinary circulation from the top level to the lower levels.

Now the applicant seems to be proposing a major change, with the Fore Street driveway to be used to access the entire parking structure. That is inconsistent with the prior representation. It would redirect traffic from Thames Street (where we were assured that the bulk of the traffic would be directed to minimize impact on the neighborhood) to Fore Street. This is a major problem. It is even more of a problem when combined with the cumulative impacts of all of the other traffic from nearby developments.

I urge you to take a hard look at this change in the proposal. The limited access to one level for residents only was one of the few concessions that was made to minimizing the impacts of this massive development. Please don't let the applicant reverse this as well.

Regards,
Barbara Vestal

--
Barbara A. Vestal, Esq.
Chester & Vestal, PA
107 Congress Street
Portland, Maine 04101
(207) 772-7426 - phone
(207) 761-5822 - facsimile

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Google Groups

Planning Board Workshop on 58 Fore Street

Sally Oldham <oldhamseg@gmail.com> Dec 5, 2019 11:13 AM
Posted in group: **Planning Board**

Dear Chair Dundon and Members of the Planning Board,

I would like to offer comments on the 58 Fore Street submission for a workshop review on December 10, 2019. In actions taken in 2015 and 2016 the Planning Board endorsed the offer of a public access easement 50' wide in return for the demolition of Building 1, the Erecting Shop of the Portland Company. Building 1 had been approved by the Historic Preservation Board as a contributing property in the Portland Company Historic District. The City Council accepted this recommendation based on the development team's vision of a gracious and expansive pedestrian entrance across the 50' easement extending from Fore Street to the plaza and the promise of clear views for the public from Fore Street to the waterfront and beyond.

The design before you does not meet the intent of the public easement or the promise of the original renderings for this entrance. The December 15, 2016 planning staff Design Review Report identified several design parameters to be used as guidance for future site plan applications. One of eight parameters identified addresses the public access easement design. It states:

"Design of the public easement entrance on Fore Street shall be revised to provide accessibility and increased viewing opportunities in that location, as well
as enhanced stretscape treatment for the public to appreciate and experience the historic building complex and the waterfront."

The Historic Preservation Board held a workshop on Wednesday, December 4. There was strong sentiment among Board members that significant revisions are needed to the Fore Street pedestrian entrance design. Among their comments about the stair design were these: "the entire width (of this entrance) needs to feel more of an entirety", there "needs to be a grander feature," the design needs to be "more gracious," there needs to be a "more gracious sequence" here, the "great opportunity" here is not being realized, the proposed plantings feel "like an afterthought." Clearly a narrow 14' wide stair that extends vertically at an angle quite unrelated to the sweep of the facades of the historic buildings 24, 2 and 6 does not meet the expectation of the City Council in their accepting the easement based its promised public benefits of broad access and visibility from Fore Street to the waterfront. The grove of trees proposed close to Building 6 also would appear to impact the visibility from Fore Street through the complex to the water.

At the neighborhood meeting held by the 58 Fore Street development team on Monday, November 25, there were many comments asking about accessibility from Fore Street to the plaza. It is an important expectation of neighbors that ADA accessibility be provided at this location. During the Master Plan review for this overall project the Historic Preservation Board discussed the possiblity of having an accessible elevator in Building 24. This would seem to be an idea worth pursuing.

Thank you for taking my comments into consideration as you review this project.

Sincerely,
Sally Oldham
118 Congress Street #202
Portland ME 04101



MEMO

To: City of Portland Maine Planning Board

From: Maine Rail Transit Coalition
Anthony J. Donovan, Member

Date: Tuesday, November 26, 2019

Re: Fore Street Development Re Transportation Approvals

Members of the Planning Board

In regard to the application before you for this project please consider the following material for clarification in your deliberations.

1. Relevant Pages of the Me DOT Lease to the Maine Narrow Gauge railroad of the State of Maine-owned St Lawrence and Atlantic Railroad.
2. Relevant Pages of the Me DOT Lease to the City of Portland for the Eastern Promenade Trail of the State of Maine-owned St Lawrence and Atlantic Railroad

Also, please find reference to a current plan, developed by the State of Maine and private transportation interests regarding the restoration of standard gauge railroad for passenger train service on the State-owned Railroad adjacent to the applicant land.

I share this with you to first highlight the mistaken presentation by the developers that the relocation of the railway is not in fact a relocation of the Maine Narrow Gauge railroad, but a relocation of a rail road that is in fact owned by the state of Maine and is also in fact an Active railroad, recognized as such by federal rail transportation authority.

Our group, the MRTC has been actively engaged in establishing the State plan for connecting Maine two largest urban centers of Portland and Lewiston with commuter rail service for the purpose of addressing congestion, climate pollution from cars, access to housing, jobs and services.

In respect to the proposal in front of you, we have reached out to the developers of this project for years. We have also contacted city staff and council, including a presentation of this plan to the Portland City Council Transportation and Sustainability Committee.

We share this information with you as you consider the impacts of this development on the fragile transportation system in Portland and the need for the City to give serious consideration of an alternative transportation system that is not reliant on automobiles – as this plan certainly is.

Train Time.

Thank you
Anthony J. Donovan
Maine Rail Transit Coalition
Mailto: TDonovan@Maine.RR.com

LEASE AND OPERATING AGREEMENT

BETWEEN

STATE OF MAINE

DEPARTMENT OF TRANSPORTATION

AND

THE TRUST FOR THE PRESERVATION OF MAINE INDUSTRIAL HISTORY AND TECHNOLOGY

CONCERNING THE

PORTLAND WATERFRONT LINE

FOR THE INITIAL PERIOD

OCTOBER 1, 2009 to SEPTEMBER 30, 2024

Agreement as a result of legislative, judicial, or other governmental, other than by the Department, or non-governmental action, where such action is the result of circumstances not within the control of the terminating party.

(e) If the Department determines and the Joint Standing Committee on Transportation of the Maine Legislature, with jurisdiction over the Department concurs, that a higher and better transportation use of the Leased Premises is appropriate and that funding may become available to develop such an alternative use, then the Department shall notify the Trust of its intention to pursue such alternative use. Upon such notification, this agreement becomes subject to termination upon 60 days notice by the Department, such notice to be given not less than 90 days of commencement of actual construction of alternative use. During the 60 day notice period the Trust shall be entitled to quiet enjoyment of its rights.

(f) Notice of termination from the Department due to the resumption of standard gauge operations in the corridor.

For events of termination listed under subsections (b) through (d) above, the terminating party shall provide one hundred eighty (180) days' notice of such termination to the other party.

12.2 Effect of Termination. Upon the termination of this Agreement:

(a) The Department shall be entitled to possession of the Leased Premises.

(b) The Department shall have the right to terminate the Trust's operations on the Leased Premises immediately on notice to the Trust.

(c) The Trust shall have the right, at any time within ninety (90) days of the termination of this Agreement, to enter upon the Leased Premises for the purpose of removing any property owned by the Trust (including, without limitation, rolling stock, tools, equipment, signs, structures, buildings and other leasehold improvements, including Track Structure).

SECTION 13

TERM

13.1. Initial Term. The Initial Term of this Agreement shall begin at 12.01 A.M., Eastern Time, on October 1, 2009, and shall expire, unless previously terminated pursuant to Section 12 of this Agreement, at 11.59 P.M., Eastern Time, on September 30, 2024.

13.2. Extension. Either party may elect not to extend this Agreement upon the expiration of the initial term; provided that any party electing not to extend this Agreement shall notify the other party of its election not to extend this Agreement no later than June 30, 2024. In the absence of any such notice, the term of this Agreement shall be extended and shall expire, unless previously terminated pursuant to Section 12 of this Agreement, at 11.59 P.M., Eastern Time, on September 30, 2029.

(a) In the event that this Agreement is not extended upon expiration of the term; Trust shall have one hundred eighty (180) days from expiration of this Agreement to remove and/or demolish and remove any property on the leased premises that is not mutually agreed to be transferred to the Department

EPlan Lease

EASTERN PROMENADE TRAIL CORRIDOR AGREEMENT

Agreement executed this 3rd day of MAY, 1995, by and between the **CITY OF PORTLAND**, a body politic and corporate, located in Cumberland County, Maine (hereinafter referred to as the "**CITY**") and the **STATE OF MAINE**, acting by and through its Department of Transportation, located in Augusta, Kennebec County, Maine (hereinafter referred to as the "**DEPARTMENT**").

WHEREAS, the **DEPARTMENT** purchased a certain parcel of land (hereinafter the "Department's Property") in the City of Portland shown as Parcel C on a Plan entitled "Land Title Survey and Subdivision Plan in Portland, Maine, USA," (hereinafter the "Plan") made for The Trust For Public Land, the City of Portland, the Maine Department of Transportation and the Canadian National Railway Company, Sheets 1 through 7, dated February 19, 1993, as revised through June 28, 1993, and recorded in the Cumberland County Registry of Deeds in Plan Book 193, Pages 187 to 193; and

WHEREAS, the **CITY** purchased certain parcels of land shown on the Plan as Parcel A, Parcel B and Lot 2 (hereinafter the "City's Property"); and

WHEREAS, the **DEPARTMENT** purchased the Department's Property utilizing funds available under the Intermodal Surface Transportation Efficiency Act of 1991 which provided for, among other things, the use of federal highway dollars for: (1) the preservation of the railway corridor, (2) the conversion and use of portions of such corridor for pedestrian and bicycle trails and facilities, (3) the acquisition of scenic easements and scenic or

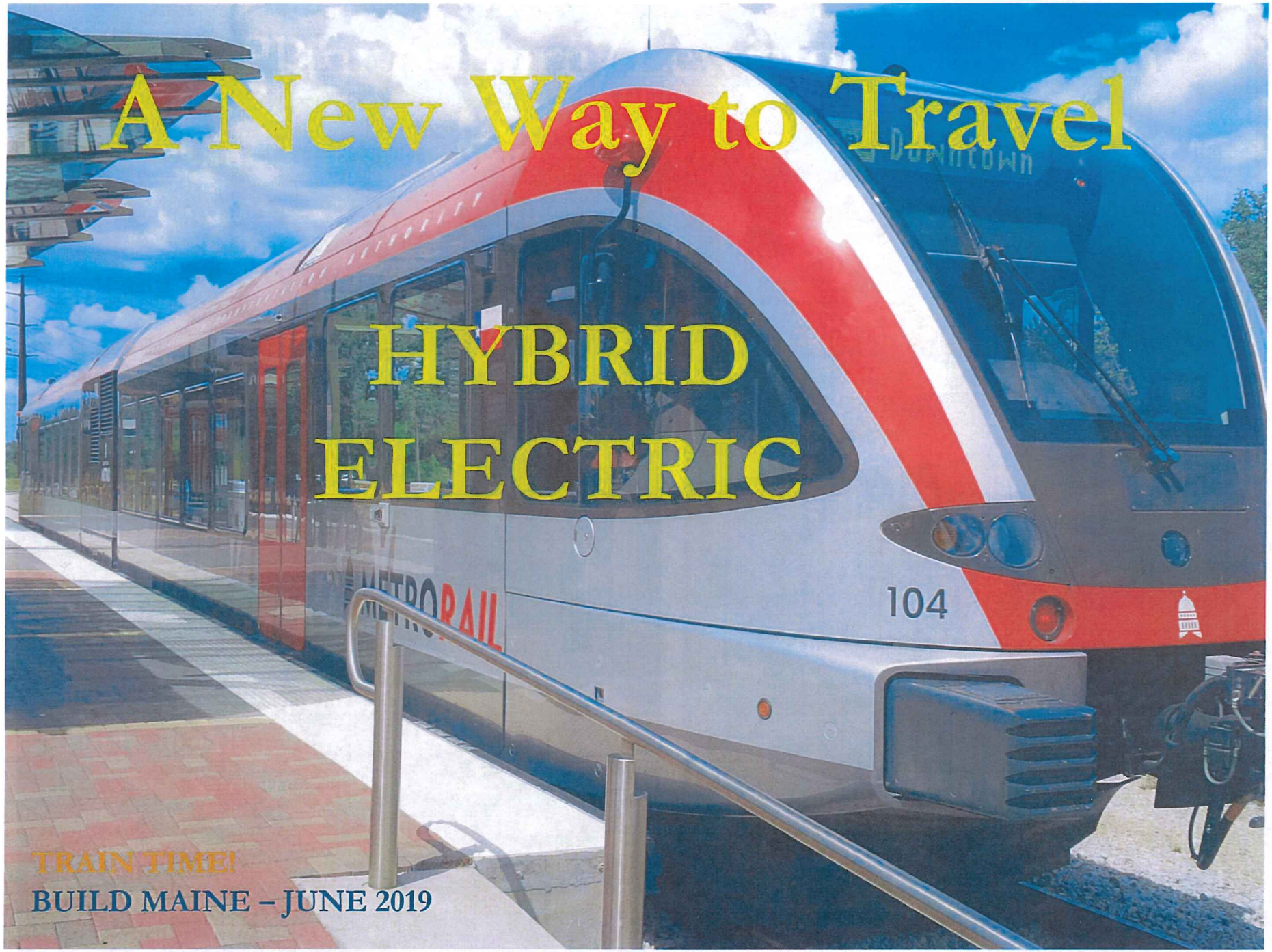
historic sites, (4) landscaping and other scenic beautifications, and (5) historic preservation; and

WHEREAS, the **CITY** purchased the City's Property in order to facilitate the construction of a shorefront pedestrian and bicycle trail and to provide for future transportation, economic development and recreational uses; and

WHEREAS, the **DEPARTMENT** desires to assure the ability to reestablish standard gauge rail service and to preserve a continuous rail corridor twenty-six (26) feet in width extending from the intersection of Commercial and India Streets in Portland at Railway Mile 0.0 to Railway Mile 1.43 on the former Atlantic and St. Lawrence Railroad Line at the location more particularly described on Exhibit A, attached hereto (hereinafter the "Rail Corridor"); and

WHEREAS, the **CITY** wishes to provide for a recreational and transportation pedestrian and bicycle trail and waterfront park over, under and along all of the Department's Property which is not within the Rail Corridor (hereinafter the "Eastern Promenade Trail Corridor"); and

WHEREAS, the **CITY** and the **DEPARTMENT** have agreed that landscaping, construction of improvements including, but not limited to, fencing, lighting, signage, and maintenance of improvements and provisions for public safety within the Eastern Promenade Trail Corridor are to be administered by the **CITY**; and


A New Way to Travel
HYBRID
ELECTRIC
104
TRAIN TIME!
BUILD MAINE – JUNE 2019



Train Time for Portland Maine:
A Multi-Modal Plan for Sustainability



THE
Grand Trunk
RAIL

workforce housing • carbon neutrality
• economic development •
congestion reduction

Hybrid-Electric
public commuter railroad
linking Maine's 2 largest downtowns
Lewiston to Portland

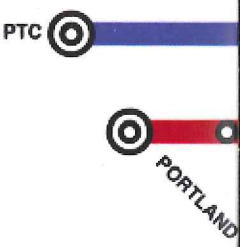


State-owned. Fully designed.
Downtown to downtown.
Public-private.

The Grand Trunk Commuter Railroad Lewiston to Portland

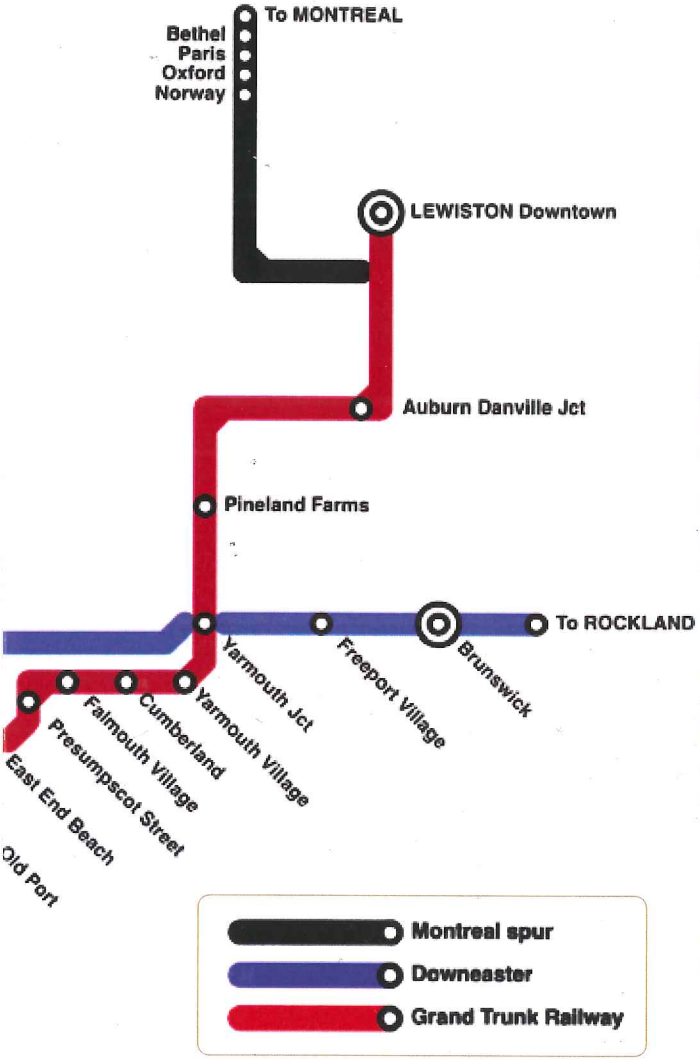
Projected capacity: 5,000 riders per day Monday-Friday

- **LEWISTON**
- **AUBURN - Danville Jct**
- **PINELAND FARMS**
- **YARMOUTH JCT**
- **YARMOUTH VILLAGE**
- **CUMBERLAND**
- **FALMOUTH VILLAGE**
- **PRESUMPSCOT STREET**
- **EAST END BEACH**
- **PORTLAND - Old Port**



"We can't pave our way out of climate change, and The Old Port shouldn't be a monument to parking garages."

Tony Donovan
Portland real estate developer



WORKFORCE SOLUTION

Boost affordable housing supply

Are your people able to get to work affordably, on time, and in shape? Priced out of Portland? Public rail can move 5,000 people a day between Maine's 2 largest downtowns.

CARBON NEUTRAL

Stopping a climate catastrophe

Maine will become carbon neutral by 2045. Taking single-passenger commuters out of CO2-emitting cars and off paved roadways will get us there faster and help The Pine Tree State breathe easier.

AFFORDABLE INFRASTRUCTURE

Less to build or maintain than highways

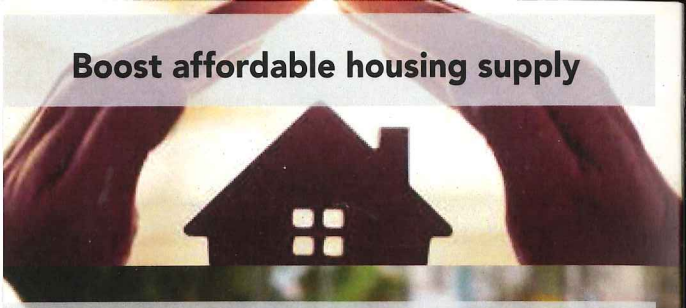
When we embarked on the great railway era in the U.S., projects were bonded over a 100-year term to ensure viability. While some bonding will be required, federal money, grants and private capital will underwrite most of the cost.

MULTI MODAL COMMUNITIES

Go anywhere... without a car

WITH LINKS TO ferries and cruise ships at Ocean Gateway, ride sharing, taxis, scooters, e-bikes, trails and more, *Grand Trunk Rail* travels from city to sea to farm, presenting innovative tourism options while bringing staff to work and tourists to destinations downtown cost-efficiently.

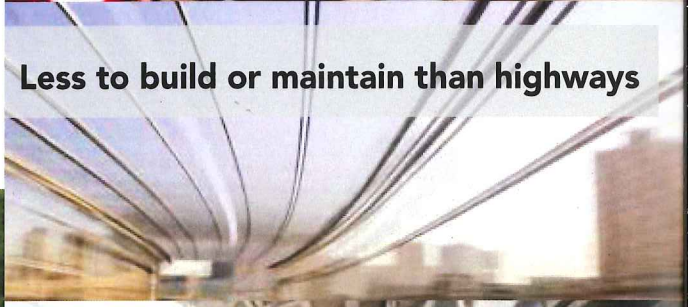
Boost affordable housing supply



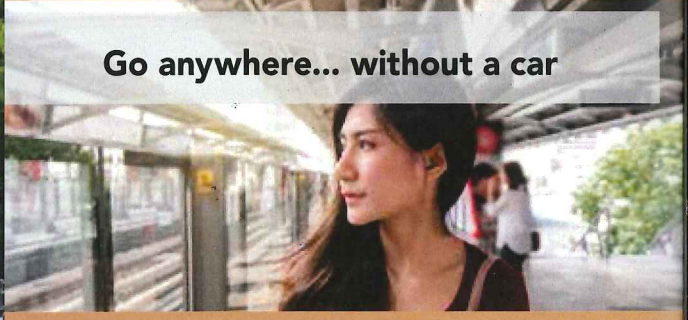
Stopping a climate catastrophe



Less to build or maintain than highways

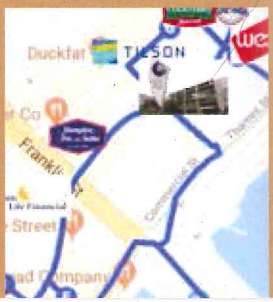


Go anywhere... without a car



The Grand Trunk Rail stakeholders in the Old Port

Casco Bay Ferries
Courtyard Marriott
Covetrus
Hampton Inn & Suites
Portland District Court
Shipyard Brewing
Sun Life Financial
Tilson
WEX





Take a look

- Maps of the entire project
  http://bit.ly/GTRailMaps
- Detail of the Portland service area
  http://bit.ly/GTRail_PWMArea

Maine Rail Transit Coalition
207-329-6732



Google Groups

TDM study for 58 Fore St.

JEAN MC MANAMY <ninimaine@aol.com> Jan 9, 2020 2:39 PM
Posted in group: **Planning Board**

Chair Dundon and members of the Planning Board:

Upon review of the draft traffic study for 58 Fore St, I have several questions for the board and staff. As you know, traffic and parking in the east end and waterfront of Portland are currently problematic for residents like myself, particularly on the south side of Munjoy Hill where Old Port workers and tourists park in residential streets, and particularly during peak commute hours of 4-6 pm when it is difficult to get on and off the Hill.
Residents of the Hill object to proposed large scale developments in the eastern waterfront area because they believe this development will exacerbate current problems. There appears to be no willingness on the part of the city to say no to projects that negatively impact already-degraded quality of life for residents, or even to restrict the size of these projects. I hope that you will take a more assertive approach going forward, in order to better comply with the comp plan's goals for transportation, sustainability and neighborhood quality of life.
1. May we have an aggregate traffic and parking impact study on ALL recent, current and proposed projects? The study before you looks only at 58 Fore St, as though the east end were a tabula rasa. Of particular concern are the impacts on eastern Commercial Street, all of Franklin Street and its intersections, Congress Street, India Street, Washington Avenue, and Fore Street. We had been told by Jeff Levine over a year ago that such a comprehensive study and plan were in the works.
2. What power does the city have to actually enforce projected traffic and parking resulting from all the proposed projects?
3. What procedures are in place in the very likely event that building ownership or use changes in the future, to prevent additional traffic and parking impacts?
4. Why was the impact of onsite events excluded from the calculations, when the current low level of event use (due to deteriorated buildings) already taxes neighboring streets heavilly? Regardless of the size of facilities, the frequency of such events will increase dramatically and the prospect of Tall Ships or Magic of Christmas level logjams on a frequent basis is unacceptable.

I am heartened to hear that the city has recently responded to concerns of neighbors of Oat Nuts Park by holding an onsite meeting devoted to traffic and parking. As a final request, I would like to ask you to make such a commitment to resolving the problems on the east end.

Jean (Nini) McManamy
10 Willis St
Portland, ME 04101

Nini McManamy
Sent from my iPad

Google Groups

58 Fore Street

Barbara Vestal <vestal@chesterandvestal.com> Jan 9, 2020 3:53 PM
Posted in group: **Planning Board**

To the Portland Planning Office for the Planning Board,

Please see the attached letter, PPH article, plan, and original and typed version of the 1876 Wall Agreement. I would appreciate it if all of these documents are included in the materials for the Portland Planning Board workshop on January 14, 2020 and as part of the public record.

Regards,

Barbara Vestal

--
Barbara A. Vestal, Esq.
Chester & Vestal, PA
107 Congress Street
Portland, Maine 04101
(207) 772-7426 - phone
(207) 761-5822 - facsimile

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AMERICAN HOIST & DERRICK CO. 1973

FORE STREET

PORTLAND CO (A WIDE WALK AGREEMENT) TO CITY OF PORTLAND 3248 / 18 NOV. 1876

WATERVILLE ST.

ST LAWRENCE ST.

ATLANTIC ST.

MUNJOY ST.

2R SPACE

S 87° 34' 45" E 281.74

W/UNDERGROUND TELEPHONE

WATER METERS

GUY

TOWER

BRICK WALL

GRANITE BLOCK WALL

FENCE 2'± INTO STREET

N 53° 19' 30" E 194.45

O.H. TEL.

PARTITION OF LITTLE PROPERTY 8 JAN. 1814 S/365

SIDEWALK

DRILL HOLE SET

N 61° 01' 30" E 43.36

RUTH E. MACGOWAN TO JOHN S. MACGOWAN 1985

FORMERLY PORTLAND CO. TO MABEL MERRILL 25 MAY 1898 667 / 58

1687 / 256 15 OCT. 1952 ME. SAVINGS BANK TO NOW OR FORMERLY DANIEL THOMAS HALEY 1981

FRITTS TO HALEY JUNE 4 1964 2328 / 15

2204 / 147 1964 JAMES TO WM. D. ROBINSON TO DANIEL HALEY 1967

150.00 N 31° 18' 30" W

N 61° 01' 30" E 112.00

N 69° 31' 20" E 69.73

N 31° 18' 30" W 95.88

110.28 N 31° 18' 30" W

B

C

GIED. TURNER TO PORTLAND CO. 5 DEC. 1846 235 / 400

GIED. TURNER TO PORTLAND CO. 11 DEC. 1847 207 / 398

A

TOTAL AREA 388033 Sq Ft 8.91 Ac.

NILSEN LITTLE LOT TO PORTLAND CO. 207 / 43 30 NOV. 1847

ON PROPERTY LINE

N 63° 18' 30" E 100.00

CLIFFORD S. RANDALL TO PORTLAND CO IRON FD.

JOHN G. MUNROE ET AL TO PORTLAND CO. 765 / 307 JAN 5. 1904

3rd. PARCEL 4876 / 268

2nd. PARCEL 4876 / 268

964 / 293 MAY 6. 1909

TRUSTEES OF WALTER M. JEFFORDS TO PORTLAND HOUSE INC. 6420 / 152 APRIL 6 1984

NOTE: APPROX. LOCATION OF EXISTING SANITARY SEWER & DRAINAGE PROPERTY

UNDERGROUND ELECTRIC

100' DEED 139.00

APPROX LOCATION SEWER LINE FROM PORT CO PLAN # D-26323

137.75 S 88° 12' 30" E

SQUADRON RD

442.91 N 68° 31' 30" E

LINE AS AGREED BY QUICK-CLAIM DEED BETWEEN ATLANTIC & ST. L. RR CO. AND PORTLAND CO. 336 / 338 25 OCT. 1865

SEWER LINES

APPROX LOCATION FROM PORT CO PLAN # D-26323

UNITED INDUSTRIAL SYNDICATE INC. TO FISH POINT ASSOCIATES 13 NOV. 1978 4340 / 117

FIRST PARCEL 4876 / 268 29 OCT. 1981

PHINEAS SPRAGUE

536.00 N 63° 18' 30" E

GRAND TRUNK RAILWAY

(N 46° 41' 11" E M.D.O.T.)

P.O.B.

450'

C.N.R.R. CO. TO STATE OF MAINE 30 NOV. 1973 3490 / 318 TO CITY OF PORTLAND

FEB'S #882

M.D.O.T TO FISH POINT ASSOC. LEASE 4368 / 119 20. OCT. 1978 1000'

PHINEAS SPRAGUE RELEASE TO M.D.O.T 22 NOV. 1983 6428 / 224 EXHIBIT B

STONE SEAWALL

ATLANTIC AND ST. L. RR. CO. TO PORTLAND CO. 226 / 277 4 OCT. 1850

450'

550'

UNITED INDUSTRIAL SYNDICATE INC. TO STATE OF MAINE 3639 / 162 2 DEC. 1974

OLD PORT CO. PIER

M.D.O.T. TO PHINEAS SPRAGUE LEASE AMENDMENT EXHIBIT C 22 NOV. 1983 6428 / 224

CURRENT LEASE TO SPRAGUE

575' E

HARBOR COMMISSIONERS LINE 1920.

LEGEND

- OVERHEAD ELECTRIC
- UTILITY POLE
- FENCE
- RE-INFORCING ROD SET

I HEREBY CERTIFY TO ( ) AND TO WILLIAM F FARLEY THAT THIS PLAN DEPICTS THE RESULT OF A FIELD SURVEY IN MARCH 1985 AND IS CORRECT ACCORDING TO THE BEST OF MY KNOWLEDGE, INFORMATION, AND BELIEF AND THAT THIS SURVEY AND PLAN CONFORMS TO A CONDITION II SURVEY BASED ON THE MAINE BOARD OF REGISTRATION FOR LAND SURVEYORS STANDARDS, AND THAT THE PROPERTY LINES AS SHOWN, DEPICT THE PROPERTY AS DESCRIBED IN DEED FROM FISH POINT ASSOCIATES TO PHINEAS SPRAGUE.

DATE: 26 MARCH 1985 SIGNED: John P.R. Cyr

REGISTERED LAND SURVEYOR: John P.R. Cyr

STATE OF MAINE JOHN P.R. COX

DATE	REVISION

PLAN OF PROPERTY IN PORTLAND MAINE

MADE FOR

WILLIAM F. FARLEY

N. JORDAN — SURVEYORS

SCALE: 1" = 40' DATE: 26 MARCH 1985

HARLAN F. SPILLER CO. INC

CHESTER & VESTAL

A PROFESSIONAL ASSOCIATION
ATTORNEYS AT LAW
107 Congress Street, Portland, Maine 04101
Telephone (207) 772-7426 Fax (207) 761-5822

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January 9, 2020

Via planningboard@portlandmaine.gov

Sean Dundon, Chair
Portland Planning Board
389 Congress Street
Portland, Maine 04101

Re: 58 Fore Street, Phase I

Dear Chair Dundon and Planning Board Members:

As you know, this is a massive project. I encourage the Board to take its time in reviewing it so that it receives examination commensurate with the impact that it will have on this part of Portland.

I am appealing to you today to take a very close look at the issues of subjacent support and possible impact of the proposed development on Fore Street and the homes abutting Fore Street. My husband and I live at 7 Fore Street, between Atlantic and St. Lawrence Streets, across from the proposed project. I am concerned that the proposed development may have adverse physical impacts upon my property and neighboring properties. This issue also has implications for traffic and parking plans, discussed further below.

CONCERNS ABOUT THE STRUCTURAL STABILITY OF FORE STREET

This concern about subjacent support has a basis in fact. Attached is a copy of a Portland Press Herald article about damage to adjacent properties suffered as new construction affected land that had been supported by a retaining wall system in the Hancock Street area. Fore Street itself is vulnerable to such a collapse. The street itself is supported by large retaining walls in the vicinity of the applicant's property and Fore Street, and in fact some of the proposed development is under Fore Street. Moreover, approximately 20 -25 years ago, a large sinkhole (maybe 20 feet in diameter) emerged in Fore Street near the intersection with St. Lawrence Street after a brick sewer collapsed. I do not have the technical capacity to address the engineering issues other than to flag them as an area of great concern which I believe the City has a responsibility to assess and resolve prior to approving the pending application.

1876 WALL AGREEMENT BETWEEN CITY AND PORTLAND COMPANY IMPOSES OBLIGATIONS ON THE APPLICANT:

In investigating the vulnerability of Fore Street, I discovered that the existing large retaining wall was built by the City upon the land of the Portland Company in 1876. At least the section from west of Waterville Street to east of St. Lawrence Street is subject to a "wall agreement" dated November 10, 1876 and recorded in the Cumberland County Registry of Deeds in Book 434, Page 368. I requested copies of relevant documents from the City's Engineering Department. Attached are copies of a plan from City of Portland Engineering showing the location of the wall subject to the agreement, a copy of the Agreement as it appears in the Registry, and a typed reproduction of the hand-written agreement, also from the City files.

Of significance, the Agreement commits the Portland Company, its successors or assigns to not disturbing the "embankment which will sustain said wall" and further commits the Portland Company, its successors or assigns, to the following:

> **If the said Company or its successors or assigns, owners of said land shall desire to disturb, dig away or remove said embankment, or diminish said slope, it, its successors and assigns, shall substitute without expense to the City a complete and sufficient permanent support for said wall.**

The proposed development affects the area which is the subject of this Wall Agreement. The Agreement places upon the owner the burden of substituting a complete and sufficient permanent support for the wall. This is complicated, particularly because portions of the proposed development not only appear to be built right up to the property line, but portions of the proposed development actually extend under the roadway of Fore Street. I have not seen any engineering studies which address the existing wall, proposed changes to the embankment, and the substitute system which will be built by the applicant as the "complete and sufficient permanent support" for the retaining wall.

SITE PLAN STANDARDS FOR APPROVAL REQUIRE A FINDING OF NO ADVERSE IMPACT ON PUBLIC INFRASTRUCTURE INCLUDING STREETS

As you know, site plan standards require that the Planning Board not approve a site plan application unless the development proposal meets all of the requirements for approval contained in 14-526. While others may also apply, subsection (c), Public Infrastructure and Community Safety Standards, 1.a states: "All developments shall be designed so as to be consistent with City Council approved master plans and facilities plans and with off-premises infrastructure, including but not limited to sewer and storm water, streets, trails, pedestrian and bicycle network, environmental management or other public facilities . . . ." In addition, the owner has a

contractual obligation pursuant to the 1876 agreement to provide for the complete and sufficient permanent support for the retaining wall. The Planning Board needs to be satisfied that the proposed development will not negatively impact off-premises public infrastructure such as Fore Street. The stability of Fore Street, a public street, is essential not only to the well-being of the residents, but also to the adjacent private property owners who rely on subjacent support from the street.

1876 AGREEMENT PRECLUDES A PARKING GARAGE ENTRANCE FROM FORE STREET

The applicant proposes to have an entrance to a proposed parking garage off of Fore Street at the foot of Waterville Street. This proposed entrance is in the area which is the subject of the 1876 Wall Agreement. It would seem that having multiple cars drive on to the site by passing over the retaining wall would be a threat to the structural stability of the retaining wall. In addition, the improvements which are proposed to be located on top of the retaining wall, both on the applicant's property and upon the land of the City, seem like they would be deleterious to the permanent stability of the retaining wall. This is an aspect that needs much more engineering study.

Furthermore, the agreement itself seems to limit by its own terms what the applicant can build upon the retaining wall to an additional wall of brick or stone. It certainly does not allow for heavy ramps to be placed upon or span over the wall. It states that the City grants to the Company:

> **The right to put upon said wall within the line of said Company's land, any wall of brick or stone which said Company desires or may desire erect thereon, consistent with the safety and stability of said wall.**

If the applicant may not in fact locate a ramp into the garage off of Fore Street, it has implications for the traffic circulation and parking issues. The Master Development Plan did include a ramp from Fore Street. That was a concept plan, subject to further refinement as the Planning Board got into site plan and subdivision issues. It did not guarantee the applicant the right to have a ramp off of Fore Street or preclude the Planning Board from further inquiry necessary to determine whether it really can meet applicable standards. It is also worth noting that as proposed in the Master Development Plan, only a small subset of parking garage users (residents of adjacent dwelling units with assigned parking spaces) were going to be able to use the proposed Fore Street access.

IDENTIFICATION OF OTHER OUTSTANDING ISSUES

Just so they do not get lost in the process, I am just noting that there are many other outstanding issues that deserve your close attention. Among those are:

- Traffic circulation issues, particularly in light of the numerous recent developments in the vicinity and the proposal to make all levels of the proposed garage accessible from Fore Street;

- Light pollution into the residential neighborhood from the top level of the proposed parking garage;

- I continue to be very concerned that the 50-foot public access easement is not yet sufficiently designed, detailed and documented so that it will provide a level of public benefit that was expected by the City and the public at the time that the Planning Board overrode the Historic Preservation Board to allow the demolition of Building 1. This public access easement was touted as a major public benefit which would justify the demolition of a massive, prominent, otherwise significant historic building. The easement was sold as a "grand stairway" from Fore Street and public plaza within the site, designed to enhance the pedestrian experience of the public. What is being proposed in the public access easement area is a mere shadow of what was promised. The "grand stairway" has shrunk to a 12-14 foot wide set of stairs. ADA compliance is unclear, both coming down from Fore Street and at the southerly boundary. Specifically, I am concerned about:

  1) A proposed grove of trees, a portion of which is within the easement area, which would obscure part of the visual access to the water;

  2) Lack of priority for and protection of pedestrians within this easement area as it is crossed over by a roadway, with the vehicle count to increase greatly over time;

  3) The design of the easement seem to be driven more by private benefit rather than public use, particularly in the unattractive platforms/massive retaining walls near Fore Street. Priority is being given to the needs of the private development (e.g egress from the 2nd floor of the event space) to the detriment of the promised public access easement; and

  4) Lack of ADA compliance and access for mobility impaired or restricted individuals such as parents with a stroller to utilize the public access easement, particularly from Fore Street into the plaza area.

Again, this is a massive project. The Board should take care to ensure that it has received submissions showing a level of detail for each component that it would require for every other development. The size and complexity of the project should not allow the applicant to skimp on proving that each building and each component meets all of the requirements of the applicable ordinances.

Very truly yours,

Barbara A. Vestal

BAV/om
Enclosure
cc: Christine Grimando
Deb Andrews

Portland halts condo project after neighboring properties damaged

pressherald.com/2015/05/28/portland-halts-condo-project-after-neighboring-properties-damaged/

By Randy Billings Staff Writer

May 28, 2015

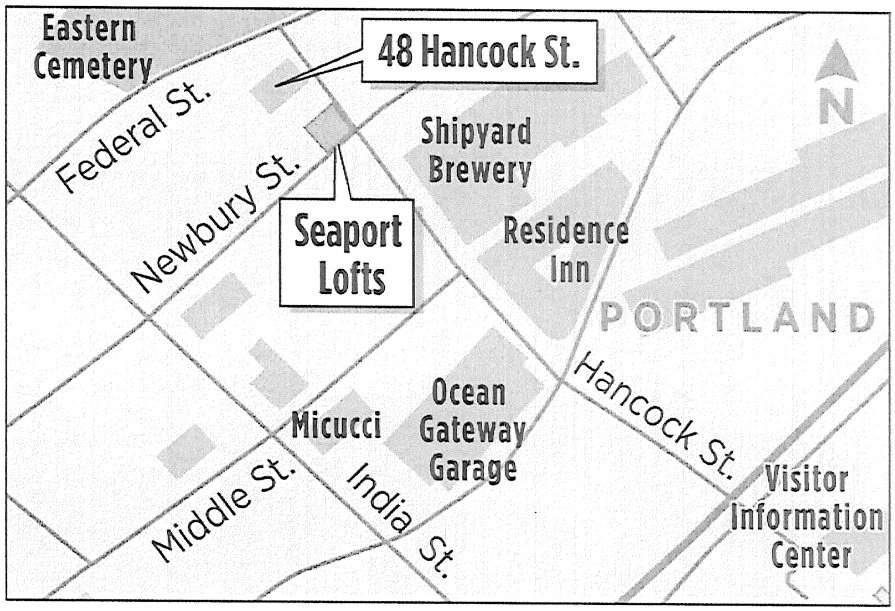
Liv Chase was standing in the backyard of the building she owns at 48 Hancock St. last month, watching the construction of a new condominium complex, when crews began to remove large sheets of metal that had been holding back the earth from a new retaining wall.

The ground began to move, Chase said, describing it as an earthquake. "I almost fell down because there was so much vibration," she said.



Brent Adler, who with his business partner Liv Chase owns the apartment building at 48 Hancock St., illuminates cracks that formed in the structure's foundation because of work being done at Seaport Lofts in Portland's East End. The city says the developers may resume work as long as they comply with four recommendations in an engineering report. John Patriquin/Staff Photographer

Construction of Seaport Lofts condominiums has been halted by the city after neighbors say it caused damage to surrounding buildings, including an apartment building at 48 Hancock St.



STAFF GRAPHIC | MICHAEL FISHER

Jerry Phair, 44, was inside his first-floor apartment and said he felt the two-family building shake when the new retaining wall collapsed and caused a portion of the building to sink.

"Everything started falling off of the shelves," including books and dishes, Phair said. "Now the windows don't shut and the doors don't shut. You really have to force them."

Construction work on the condo project, called Seaport Lofts, has been shut down since reports of large cracks and other damage to Chase's building and others prompted an unusual stop-work order from the city on April 13. On Tuesday, the city notified neighbors that it has requested an engineering study as part of a plan to secure the site before work can resume.

Stop-work orders are routinely issued when people build without a permit or exceed the scope of the permit, city officials say. However, they say it's rare that one is issued because of damage to neighboring buildings.

The city's hot real estate market could change that.

As the city runs out of vacant land to be developed, and as buyers and renters seek out urban neighborhoods and lifestyles, more development is taking place in established neighborhoods such as those on Portland's East End. That sometimes means squeezing projects onto small lots between houses that date to the early 1900s, potentially decreasing the margin for error.

Jeff Levine, the city's director of planning and urban development, isn't sure whether neighbors of other projects will experience more collateral damage as development moves deeper into established neighborhoods. And he said the age of Portland's existing housing doesn't add to the risk.

"Older buildings are not necessarily any less sturdy than new ones," Levine said.

FOUNDATION SPLITS, STAIRS DETACH, WALLS CRACK

The Seaport Lofts on Newbury Street was approved by the Planning Board in October 2013. It promised to add 39 condominiums, including seven townhouses, in the India Street neighborhood, which is undergoing a flurry of development activity.

The lofts are the second phase of the Bay House, an 86-unit condominium project at the corner of Hancock and Newbury that was completed in 2013.

On Wednesday, Chase and her partner, Brent Adler, who own 23 rental units in four buildings, showed the Press Herald some of the damage caused when the retaining wall collapsed. In the basement, a cement foundation was split apart, allowing sunshine and a warm breeze to come through. An outdoor staircase was separated from the wall, and interior walls were cracked.

Levine said in an email Wednesday that the stop-work order was issued after the city received complaints from people living in the Federal Street Townhouses who reported damage to their decks and interior drywall cause by soil movement.

Hugh Nazor, president of the India Street Neighborhood Association, said four townhouses there were damaged, as well as two houses on the corner of Federal and Hancock streets.

The city informed the developer May 19 that it needed to hire a professional engineer and "submit a fully engineered action plan to address structural failure and proposed mitigation measures." That plan also needs to be peer-reviewed.

"We are not getting ready to lift the stop-work order yet," said Jessica Grondin, the city's communications director. "We're still waiting for the fully engineered action plan to address the structural failures."

ENGINEERS WORKING TO REMEDY PROBLEM

One of the developers, Demetri Dasco, said developers are working with a team of engineers to evaluate what went wrong and to develop a plan to prevent it from happening again. He was hoping a plan would be approved within the next few days.

Dasco said the engineers are looking at ways to shore up the development site and the ground around neighboring buildings.

"Once we figure out a solution we're going to make it right," Dasco said. "Any damage that was caused by (the ground settling), as the developer, we're obviously responsible and we would evaluate that and we would fix it."

Meanwhile, city officials have informed the neighbors that the city isn't responsible for the damage.

"Damage caused by the developer or its contractor to neighboring properties is a matter to be addressed privately between those parties," the city's letter to neighbors states. "The developer therefore proceeds at its own risk and it will bear any and all responsibility for damages caused as a result of its actions."

Chase had bought the Hancock Street house with the intention of renovating or rebuilding on the site. Now she is not so sure that the ground will be stable enough to support redevelopment. She said the abutters have hired their own structural engineer to survey the extent of the damage.

Chase said her building, which dates to 1895, dropped several inches as the ground shifted beneath her.

"We're all pretty upset about what happened," she said.

Comments are not available on this story.

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Portland & Company To Portland City.

Agreement.

These articles of agreement entered into by and between the City of Portland, and the Portland Compy a corporation duly existing under the laws of the State of Maine, this ninth day of November A. D. 1876.

Witness:

1st That in consideration of the agreement in the 2d. article following, said Portland Compy hereby gives, grants, bargains and sells to the city the right to put upon the land of said company to an extent not exceeding four feet in width at the base throughout its entire length, the wall now in process of erection on the line between Fore street in said city and the real estate of said Compy and to maintain the same forever, with right of entry upon the lands of said Compy for purposes of repair.

And said Compy further agrees that the embankment which will sustain said wall shall not in any way or under any pretense be disturbed, dug away, removed or the slope diminished except under the restrictions following, viz:

If the said Compy or its successors or assigns, owners of said land shall desire to disturb, dig away or remove said embankment or diminish said slope it its successors and assigns, shall substitute without expense to the city, a complete and sufficient permanent support for said wall.

2d. Said city in consideration of the foregoing, hereby gives, grants, bargains and sells to said Compy the right to put upon said wall within the line of said Company's land, any wall of brick or stone which said Compy desire or may desire put thereon, consistent with the safety and stability of said wall.

Witness to E. H. Davies
G. F. M. Rufus D. Bean

Portland Company,
By E. H. Davies, Prest.
Countersigned by
Geo. F. Morrill Treas.

State of Maine, Cumberland, ss, November 10th 1876.
Personally appeared Edward H. Davies and acknowledged the foregoing instrument to be the free act and deed of the Portland Company,
Before me, H. I. Robinson, Justice of the Peace.
Received, Nov. 10, 1876, at 1 h. 2 m. P. M. and recorded according to the original,
Attest: Henry C. Houston, Register.

Portland Company Incorporated Aug 8, 1845

Witness: H. I. Robinson to E. H. Francis Skillen Mayor

C I T Y O F P O R T L A N D, G R A N T E E.

Portland Company 434 - 368

to Agreement

City of Portland

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Nov. 9, 1876 Portland Company

Nov. 10, 1876 by E. K. Davis, Prest.

Nov. 10, 1876 Countersigned by
Geo. F. Morse, Treas.

Google Groups

Questions for 1/14/2020 Fore St Planning Board Workshop Regarding 58 Fore St at 4:30pm

Karen Snyder <karsny@yahoo.com> Jan 10, 2020 11:02 AM
Posted in group: **Planning Board**

Dear Planning Board members,

There are many questions and concerns from Munjoy Hill residents about 58 Fore St. that have not been adequately addressed by the 58 Fore St developers in the previous Planning board workshops. The last workshop was held on 12/10/2019.

I am hoping in this next 58 Fore St Planning Board workshop being held next week on Tuesday 1/14/2020 at 4:30pm, the below questions can be answered with proper documentation by the 58 Fore St developers.

1) **58 Fore St Master Plan Concerns:** The "Master Plan" was approved for 58 Fore St in late 2016.
Question #1: ***Why is the developer only showing Phase 1 renderings rather than the other Phases that were originally approved in the Master Plan?*** Several Planning Board members indicated in last workshop, It is short sighted to only show Phase 1 plans and are requesting the additional phases. The developer needs to provide additional phase of plans since they have all ready stated they plan to put residential houses on top of the huge parking garage. This means they know what will be going on in the future phases.
Question #2: *How can there be a Master Plan approved if not ALL the phases were provided at that item?* For example, this huge parking garage starting at Waterville St going up was laying the foundation for the developer to go up even higher than what was permit because of the loop hole on the mid-grade on having 1 continuous building. Therefore, if they are proposing a huge parking garage in Phase 1, they must know the future phases what the are wanting to put.

2) **Fore Street Sea Wall Concerns**: There is a sea wall that has been holding up Fore Street for over 150 years and there concern about this sea wall structure stability.
Question #1: *Who actually owns this sea wall?*
Question #2: *Who is responsible for maintenance of the sea wall?*
Question #3: ***Who is liable for this sea wall if it becomes destabilized by 58 Fore St construction?***
Question #4: Who is responsible if the residential properties on Fore St become destabilized as a result of the sea wall becoming de-stabilized by the construction?

3) **Continued Traffic Concerns**:

It was stated in the last Planning Board workshop held on 12/10/2019 for 58 Fore St that the traffic study was to be presented in the 1/14 2020 Planning Board workshop.

Traffic Question #1: ***Why hasn't the City, Traffic Program Manager, Bruce Hyman, able to present a master plan traffic study for the waterfront since it has been known over for several years now the large amount of different developments that have been approved in this area of the waterfront?***
Below are the developments and estimate parking slots:
- Commuters are all ready diverting and using the Eastern Promenade as a commuter street rather than a residential street.

Portland, ME- Continuing and Future Traffic Congestion/Parking Issues

As of: Tuesday: 12/9/2019

Street #	Street	Districts/Neighborhoods Most Affected	Proposed Parking Spaces	Status (Source:Planning Dep)
222	St. John St. (MMC)	West End	2,400	Under Construction:Approved 9/11/2018 Planning Board Meeting
325	St. John St. (Dunkin Donuts)	West End	24	Under Construction: Approved
86	Newbury St.Vet Choice/Brew Hotel	Working Waterfront/Munjoy Hill	400	Under Construction: Zoning Board of Appeals Approved:9/6/2018, 9/25/2018 Site Plan Approval
100	Fore St (Hamilton Marina/Express Copy building)	Working Waterfront/Munjoy Hill	540	City council Meeting 9/17/2018 to Approve Zoning Height Change (parking was 600 to 540)
0	Hancock St. (WEX)	Working Waterfront/Munjoy Hill	750	Construction Complete 2018
383	Commecial Street (Rufus Deering)	Working Waterfront/Munjoy Hill	313	Under Construction: Planning Board Approved 6/26/2018
184	Commecial Street (Portland Lobster Company)	Working Waterfront/Munjoy Hill	188	Pending - Planning Board Workshops4/17/2018,6/22/2018, 7/14/2018 site walk. Latest Level 3 Site Plan is 4/17/2018
1	Center Street (Commercial & Center St)	Working Waterfront/Munjoy Hill	75	**Planning Board Approved: Gone through Planning Board - 2019**
58	Fore St - *Sun Life Inc. (Financial Services) Note: Sun Life is suppose to have 1,200 employeess on site?*	Working Waterfront/Munjoy Hill	720	Going through Historic Preservation Board 10/3/2019 https://www.pressherald.com/2019/09/26/another-major-employer-announces-move-to-portland-waterfront/
Corner	**Spring and Cross St. Across from 1 Portland Square**	Working Waterfront/Munjoy Hill	1,000	https://www.pressherald.com/2019/10/09/parking-garage-centerpiece-of-old-port-project/
155	Sheridan (Next to Ft. Sumner Park)	Munjoy Hill/East Bayside	19	Planning Board Approved 9/17-expires 9/18
180	Washington Ave (Next to East End Redemption)	Munjoy Hill/East Bayside	On-Hold	Application on-hold
149-155	Washington Ave (Bike hub)	Munjoy Hill/East Bayside	??	Planning Board Approved-4 stories
218-221	Washington Ave (On right coming off of I-295)	Munjoy Hill/East Bayside	42	Planning Board Approved with Conditions - expires 9/18
221	Congress (Next to Snug)	Munjoy Hill	Expired	Approved by Planning Board but expired
15	Washington(Opposite of Snug on Cumberland)	Munjoy Hill	Pre-App	Pre application 5/2018 with City Planner
		Summary of Proposed Parking Spaces		
		West End	2,424	
		Working Waterfront/Munjoy Hill	3,986	
		Munjoy Hill/East Bayside	61+	

Articles regarding I-295 Congestion

https://www.pressherald.com/2018/06/26/state-study-calls-for-traffic-flow-and-safety-improvements-along-congested-i-295/

Traffic Question #2: ***Shouldn't this traffic permit be reassessed and include the consideration of Sun Life insurance in which over 1,200 employees are to be based out of 58 Fore St which only was announced supposedly moving to 58 Fore St this past November 2019?*** The 58 Fore St traffic permit was given in May 2017.

Traffic Question #3: ***How can the City hold accountable Sun Life Insurance who is stating only 30% of there 1,200 employees are going to commute to 58 Fore St when companies are actually asking their employees to go into work?*** Planner, Christian Roadman indicated that Sun Life is unrealistically stated that only 30% of the 1,200 employees will be commuting into work. This claim can not be validated especially since companies are trending to have their employees work back in the office rather than remote. Therefore, the traffic plan must include at least 80% of employees going into work rather than the unrealistically stated 30% stated by Sun Life.

> https://www.nbcnews.com/business/business-news/why-are-big-companies-calling-their-remote-workers-back-office-n787101

4) **Rendering Concerns:**

Last Planning Board workshop, the developer only presented very limited renderings of Fore St at the very beginning of the development going up Fore St.

Question #1:***Why aren't there more renderings of ALL the phases as it goes up Fore St when the developer stated in that in future phases there will be housing built on top of the parking garage?***

Question #2:- ***Why isn't there a specific rendering of Waterville St of the view corridor with the parking entrance at the bottom of this street?*** How is that going to visually look with a gaping parking garage parking entrance at the bottom of Waterville St.as residents go down Waterville St?

Question #3: ***Why aren't there renderings of all the view corridors from the other affected streets of: St. Lawrence, Munjoy , and Atlantic for the visual corridors.***

5) **Public Easement , ADA Access, and Liability of Staircase Concerns:**

In the Master Plan approval from 2016, it appears the original design of the 50 foot wide public easement had a better design of this public easement in which it had wide staggered stairs with multiple landings which provided better access than the current proposal. The current design is only 12 feet wide and 17 feet of steps straight down the stair case. (Note: The public easement is 50 feet wide)

In the last Planning Board workshop, the developer again made no attempt at better design and of ADA access on the public easement.

Question #1: ***Why isn't the developer using the original proposed public easement design from the 2016 Master Plan?***
Question #2: Who will be held liable if the public trips and injures themselves on this public easement if this current design is approved?
Question #3: ***Why isn't the developer addressing ADA access on this public easement? Isn't it federally required?***

6) **Interim Plan Concerns:**
- Since the Planner appears to ignore and not provide other phases, there should be interim plans for the landscaping, the huge parking garage roof top, and open spaces pending for future development.
Question #1: ***Why isn't the developer and landscape architect providing interim "green suggestions" for the interim between phases?*** For example, a "green" roof of plants over the huge parking garage roof top that will be visible from Fore St.
Question#2: ***Why isn't there interim plans in better landscaping for the empty plots such as the triangle of land next to Fore St and the asphalt plot next to the trail?*** The developer's land scape architect seemed to be perplexed on how to plant the open land and green spaces that are to be used in future phases. The developer and landscape architect appear to be adverse in planting more trees than necessary even though trees are the single best carbon sequester of C02 of traffic pollution pulling in 50 lbs of C02 annual and can bring down ambient by 10F. Why not then plant pollinator plants? For example, the triangle, instead of a mono-culture of grass, why not plant a meadow of perennials of pollinators such as cat mint, lavender, and…annuals such as alyssum, sunflower, etc with granite rock borders. Arbor vitae for green in the winter.

7) **Environmental Concerns:**
In the last workshop, the developer was specifically asked by a board member about the mitigation of bird migration death prevention.
Question #1: *Why isn't the developer addressing the mitigation of bird migration deaths that could be caused by all the windows on the buildings?*
Question #2: ***Light pollution from this huge proposal to the residents of Munjoy Hill is still not properly addressed.***

8) **Affordability Concerns:**
- In the last workshop, the developer was evasive if they are going to pay the opt out fee for affordable housing.
Question #1: ***Is the developer going to build any affordable housing or pay the opt out in leu fee?***

In conclusion, there does seem to be more questions that need to be answered by the developer.

I hope during the January 14, 2010 Planning Board workshop, the above questions will be addressed.

Regards,

Karen Snyder

Waterville St.

Google Groups

58 Fore Street Application Comments

Mike Hoover <chzstk@gmail.com> Jan 10, 2020 10:47 AM
Posted in group: **Planning Board**

Chair Dundon and members of the Planning Board:

As a resident and residential property owner in Portland, I am submitting my comments on the proposed 58 Fore Street development. I understand that the proposed development at 58 Fore Street will have significant environmental, safety, traffic, noise, congestion, and quality of life impacts to both abutting property owners and to all of the residents of the City of Portland, and especially those currently living on Munjoy Hill. I encourage the Planning Board to very thoroughly evaluate each and every potential impact as part of your site plan review for this project.

I am specifically requesting that the Planning Board require the completion and submittal of a comprehensive traffic analysis by the developers of this proposed building that evaluates the overall impact of the development to the city of Portland as a whole, and not simply a site specific impact evaluation. The accumulated traffic demands are just too large at this time to allow the continued implemental degradation of traffic standards and quality of life for the city as a whole, which has occurred through the review and approval of site specific traffic studies.

I strongly recommend that the Planning Board require the coordination and implementation of a comprehensive traffic analysis for this project in the city (and every subsequent large project) with the City's efforts to manage traffic which will develop substantial additional traffic demands.

Thank you very much for your consideration of my requests for your review of this proposed development.

Michael Hoover
40 Melbourne Street
Portland ME 04101

Google Groups

Fore Street Development - Traffic Impact

Wayne Valzania <Wayne@redhookdesignalliance.com> Jan 10, 2020 4:57 PM
Posted in group: **Planning Board**

Hello,

My wife and I live on Munjoy Hill at 27 Merrill Street. While I have many concerns about the dense development of 58 Fore Street, Foreside, and attractions such as the Cambria Brew Hotel and how it will affect the City of Portland and it's year-round residents, for now, I will focus on traffic.

As we live close to the Eastern Promenade, we have in the past, often taken that route to the Commercial Street area for access to shops, stores, the fish markets, and restaurants. We choose this route because the view of Casco Bay is beautiful, and a constant reminder of why we live in Portland. The increased construction activity for the numerous development projects has brought an end to that simple pleasure, nor do we bring our many guests on this drive to downtown as we used to, impressing them with the beauty of the Portland waterfront. It would be dishonest of you to say that this is only a temporary inconvenience, as the construction traffic will soon be replaced by a permanent dirge of employee traffic, attempted parking during morning and evening drive times, tour buses, service and delivery vehicles, hotel guests, and last but not least the forgotten residents who are trying to live, drive, and park, in the sacrificial west end of Munjoy Hill.

As all of this unfolds, I must ask myself, and ask of you:

1) Where is the cohesive traffic study that predicts density of traffic and how it will impact this end of Commercial Street, the impacted corner of Munjoy Hill, the Franklin Street Arterial, and the established small business on Fore Street whose customers need convenient parking. I am not referring to tourist destinations but to purveyors of tile, Italian groceries, bakeries and health food stores. Are they to be considered unfortunate collateral damage or be required to change their business model to accommodate the intense development that will most likely overwhelm them in the end?

2) What is the plan for traffic flow and its management in this congested area. What is the impact on Commercial Street's commercial traffic and the working waterfront.?

3) What is the winter maintenance plan for plowing and snow management. It is already insufficient on most of the city streets.

4) What limits are being considered on future development that will lessen the opportunity for an already untenable traffic situation to be prevented from getting even worse.

These are my questions. In closing, I implore you as city planners, to consider all of this now as an exercise in foresight, rather than later as a chaotic response to poor planning.

Thank You,

Wayne Valzania

27 Merrill Street

Portland, ME 04101

Google Groups

58 Fore Street Phase I

Mary Casale <dirtgirl1@aol.com> Jan 10, 2020 1:18 PM
Posted in group: **Planning Board**

Dear Chairman Dundon and Planning Board members,

Before you is a massive development with immense consequences and life impacts not only for abutters and residents of Munjoy Hill ,but our city as whole.

Overall View of Project- it appears that the developer would like to break this project down into parcels , which would most likely appear to diminish the traffic, height , congestion, pollution etc. problems. However the greater picture and the development in its entirety should be the priority of the Board. There is too much going on to take items piecemeal, it's a domino effect . I would ask the Board to give their interpretation of weather this development should be considered in the whole or parceled out.

Height Issues- this project was approved with overall height allowances , however now we are seeing a separation of parking garage with residential development. I would ask the Board to clarify the intent of the original height restrictions, and if a parking garage with living space above affects that , along with a clear explanation of how height will be determined (in a way that the general public would understand) .

Traffic Study- A prior traffic study had identified 4-5 failed intersections. As a resident of Waterville Street ,which is directly across from property, I have stopped exiting Waterville onto Fore . The congestion, narrow streets , and huge delivery vehicles often make streets impassable, snow management is another issue. I've not seen any traffic measuring devices set out and would ask if the Board is intending to require an overall traffic study ?

Unintentional Consequences- The abutting Munjoy Hill neighborhood is a R-6 residential zone. The consequences for those of us who actually live here just keep multiplying, from parking to traffic to light pollution , shadow effects. . The Eastern Promenade which is a area for children's playground, picnicking, tennis , little leagues , and simple strolls is being overwhelmed with traffic using it as a workaround to Fore St/ Old Port. Public safety is a major concern. Without some sort of traffic measures in place I foresee this only getting worse. The lights from the buildings already in place are intrusive to say the least . The height of the buildings now allowed, cast ominous shadows and don't allow for light and the natural snow melts of winter sun. In general our quality of life is declining in direct relationship to development. Please consider these human aspects along with the intricacies of development in your role on the Planning Board .

Thank you for all the time devoted to our city , it is appreciated .
Mary Westort Casale
39 Waterville St
Portland

Sent from my iPad

Google Groups

58 Fore Street Concerns for the 1/14 Fore Street Planning Board workshop

carolyn swartz <carolynswartz@gmail.com> Jan 10, 2020 12:48 PM
Posted in group: **Planning Board**

Dear Chair and Members of the Planning Board;

My husband and I are property owners (27 Merrill Street), and we have concerns about planned development on the peninsula, particularly 58 Fore Street - for its design, potential to create unplanned for and unchecked congestion in traffic and parking, and "private" streets limiting public access to the shoreline.

To date, we have not seen visually accurate, easy-to-ead renderings of the proposed plan. When will we see what this development will actually look like - beyond the Phase 1 renderings, for example, a 3D scale model? Beyond design and landscaping - we also have concerns about light pollution negatively affecting quality of life for nearby residents and window design that makes no attempt to avoid deaths of migrating birds.

There also appear to be safety risks in the tight configuration of vehicular and pedestrian traffic from the Thames Street entrance. What is being done to study, assess and mitigate?

Among other concerns: the impact of this construction project to the Fore Street seawall - which, from our understanding, is already unstable. Again: what steps are underway to study, assess and address?

Thank you.

Carolyn Swartz

Carolyn Swartz | Writer/Director | 917.714.5743 | view my films here

Google Groups

58 Fore Street traffic

Maggy W <mswnola@gmail.com> Jan 10, 2020 11:58 AM
Posted in group: **Planning Board**

Dear members of the Planning Board,

Back when the 58 Fore St Master plan was approved, I believe it was “pending traffic management study” which then-Planning Director Jeff Levine stated was in progress, but I never heard of a subsequent public workshop to review that plan, if it was published and made accessible to the public.

So much has already been added to that congested corner in the interim, that I think a new look at the traffic patterns in the entire area, including all of the arteries of Franklin and Commercial Street, are warranted. I am concerned about the growing traffic on Fore Street, the Eastern Prom and our side streets. With construction underway for Shipyard and Covetrus and other large projects planned, how does the overall plan look?

I am also concerned that there will be no way for the city to enforce Sun Life's claim that only 25% of their workforce will actually come to the office. Sun Life says it will encourage telecommuting - that seems very vague. Limiting parking spaces for employees could have other unintended consequences, such as employees parking on our Munjoy Hill side streets. And what if Sun Life vacates that building in the future and a new tenant does not allow telecommuting?

I hope these questions and concerns will be addressed on January 14.

Thank you,
Maggy Wolf
28 Saint Lawrence

Google Groups

58 Fore Street

Carol Connor <balsamique@live.com> Jan 10, 2020 11:45 AM
Posted in group: **Planning Board**

January 10, 2020

Dear Chair and Members of the Planning Board;

As a Munjoy Hill resident and property owner, I am interested in all aspects of development in Portland and particularly on the peninsula. The 58 Fore Street project is one that interests me since it has substantial potential impact on both its immediate surroundings, and the city as a whole. I have attended two meetings related to this project and have come away with the following questions:

ADA
What progress has been made by the developer regarding opening up all access points for the disabled, for families with babies in carriages, for those using walkers or canes etc.?

Plan Renderings/3D Model
What progress has been made by developers to produce a visually accurate, clear to understand rendering of the proposed plan? Recent visual presentations have been murky and very difficult to comprehend since only the phase #1 plan is shown. Also the full neighborhood context cannot be scoped out when the focus is so limited. Have the developers been asked to present a 3D scale model? That would perhaps provide a more realistic conceptualization tool.

Vehicular Movement
The traffic from Thames Street entering the site appears to be separated from pedestrians, but not by much. Once on the site, the mix of cars and people creates potential hazards. Will there be further study that focuses on pedestrian and vehicular flow and safety?
Have there been any new developments regarding the private road from Fore Street that leads to the site? Will the access issues related to this be addressed and made public by the developers and/or the city planners?

There are many more questions to be answered as planning for this project progresses. I appreciate your care and attention to the many details that can make a huge difference to its success or failure.

Respectfully,
Carol M. Connor
12 Montreal St.
Portland ME 04101
207 232 2265
Balsamique@live.com

Sent from my iPad

Google Groups

Public Comment for Jan. 14, 2020 Planning Board Workshop

Sally Oldham <oldhamseg@gmail.com> Jan 13, 2020 10:23 PM

Posted in group: **Planning Board**

Attached please find my comments for the Planning Board workshop on the 58 Fore Street project to be held on January 14, 2020. Please forward these comments to Planning Board members for their review.

Thank you,

Sally

Dear Chair Dundon and Members of the Planning Board,

I would like to offer comments on the 58 Fore Street submission for a workshop review on January 14, 2020. I would observe that this workshop is supposed to focus on transportation issues yet none of the required information or reviews by staff and the engineering consultant seems to be complete as yet.

I would urge Planning Board members, as you have heard in other public comments, to take care to not rush to judgments but to get all required information and complete staff and consultant reviews regarding transportation issues prior to giving approval to this project. This project will have a major, long-term impact on transportation issues in this area of the city.

Transportation functions are critically important. The redesign of the stairs from Fore Street to the plaza is a great improvement toward meeting the requirements of the public access easement. Including granite benches on the stair landings would also help to meet these requirements.

The public access easement calls for clear scenic views from Fore Street to the water. The grove of trees proposed adjacent to Building 6 will obscure a portion of this view. This grove needs to be moved further to the East to allow the full scenic view.

I am concerned about accessibility and connectivity of the pedestrian experience in this project. Planning Board members have spoken clearly about the importance of ADA accessibility for all users from Fore Street to the plaza. How will this be addressed? Why is the City not requiring a sidewalk along the connector road?

I also would echo concerns voiced in other public comments about traffic impacts of a project of this scale on vehicular traffic along Fore Street given the planned location of the Fore Street garage entrance. Will the entrance to the garage on the southern face of Building 4 be the primary garage entrance? Can access to the northern entrance off Fore Street be limited in some manner to reduce impacts on the neighborhood? I understand that in earlier plans the Fore Street entrance was only to be used by cars parking in a limited number of spaces.

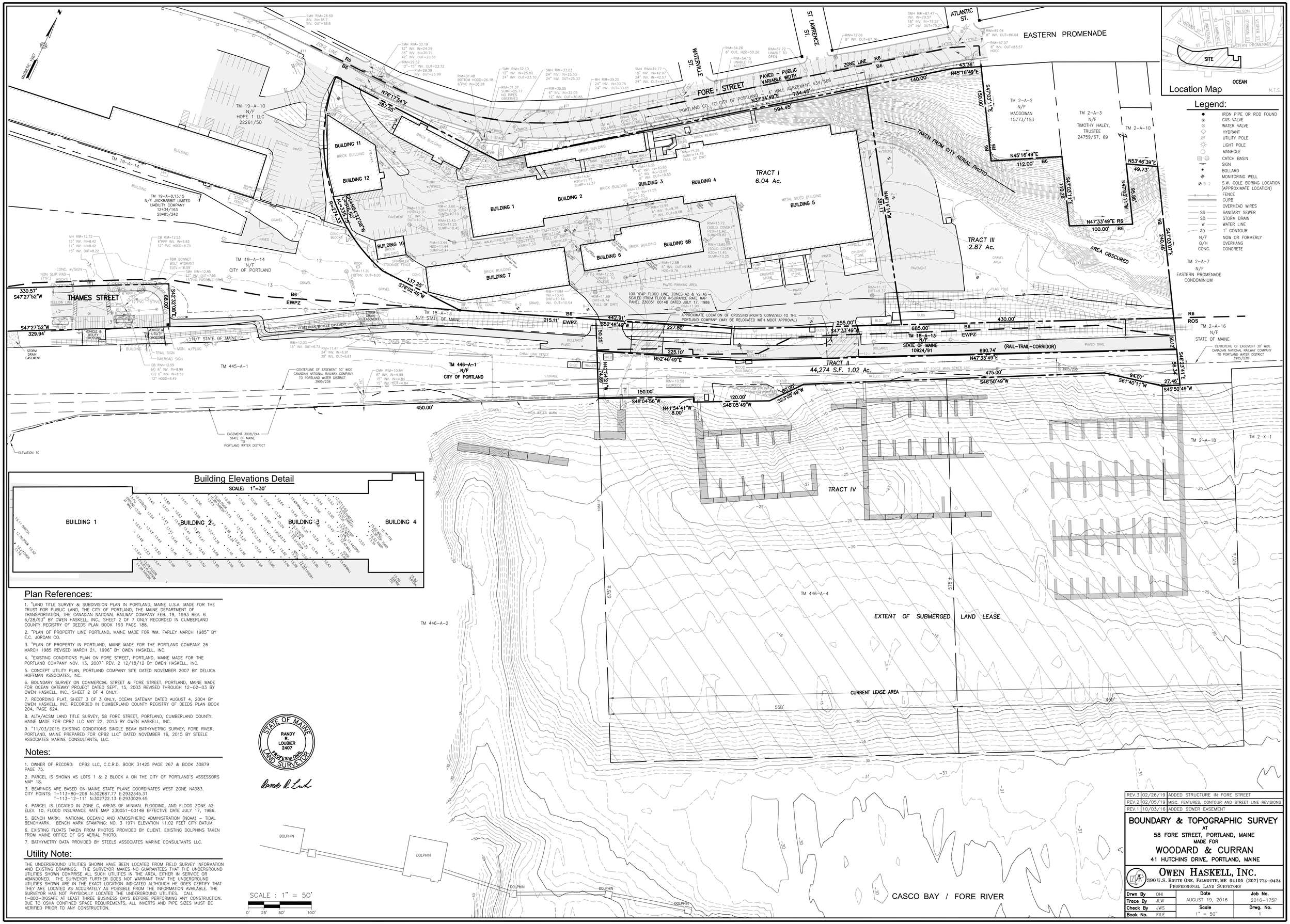
I urge Planning Board members to ensure that the design of the garage entrance meets the requirements of the scenic easement required from Waterville Street to the water. In a rendering provided with the applicant's materials this does not appear to be the case.

I have noted the information raised in one of the public comments about the 1876 wall agreement between the City and the owner of the retaining wall. I urge Planning Board members to seek professional opinions regarding the level of risk to the stability of the historic retaining wall given the applicant's plans for the garage entrance and the requirements regarding emergency and other vehicles.

Thank you for taking these comments into consideration as you review this project.

Sincerely,

Sally Oldham
118 Congress Street #202
Portland ME 04101



Location Map N.T.S.

Legend:

- IRON PIPE OR ROD FOUND
- GAS VALVE
- WATER VALVE
- HYDRANT
- UTILITY POLE
- LIGHT POLE
- MANHOLE
- CATCH BASIN
- SIGN
- BOLLARD
- MONITORING WELL
- B-2 S.W. COLE BORING LOCATION (APPROXIMATE LOCATION)
- FENCE
- CURB
- OVERHEAD WIRES
- SS SANITARY SEWER
- SD STORM DRAIN
- W WATER LINE
- 20 1' CONTOUR
- N/F NOW OR FORMERLY
- O/H OVERHANG
- CONC. CONCRETE

Building Elevations Detail

SCALE: 1"=30'

Plan References:

1. "LAND TITLE SURVEY & SUBDIVISION PLAN IN PORTLAND, MAINE U.S.A. MADE FOR THE TRUST FOR PUBLIC LAND, THE CITY OF PORTLAND, THE MAINE DEPARTMENT OF TRANSPORTATION, THE CANADIAN NATIONAL RAILWAY COMPANY FEB. 19, 1993 REV. 6 6/28/93" BY OWEN HASKELL, INC., SHEET 2 OF 7 ONLY RECORDED IN CUMBERLAND COUNTY REGISTRY OF DEEDS PLAN BOOK 193 PAGE 188.
2. "PLAN OF PROPERTY LINE PORTLAND, MAINE MADE FOR WM. FARLEY MARCH 1985" BY E.C. JORDAN CO.
3. "PLAN OF PROPERTY IN PORTLAND, MAINE MADE FOR THE PORTLAND COMPANY 26 MARCH 1985 REVISED MARCH 21, 1996" BY OWEN HASKELL, INC.
4. "EXISTING CONDITIONS PLAN ON FORE STREET, PORTLAND, MAINE MADE FOR THE PORTLAND COMPANY NOV. 13, 2007" REV. 2 12/18/12 BY OWEN HASKELL, INC.
5. CONCEPT UTILITY PLAN, PORTLAND COMPANY SITE DATED NOVEMBER 2007 BY DELUCA HOFFMAN ASSOCIATES, INC.
6. BOUNDARY SURVEY ON COMMERCIAL STREET & FORE STREET, PORTLAND, MAINE MADE FOR OCEAN GATEWAY PROJECT DATED SEPT. 15, 2003 REVISED THROUGH 12-02-03 BY OWEN HASKELL, INC., SHEET 2 OF 4 ONLY.
7. RECORDING PLAT, SHEET 3 OF 3 ONLY, OCEAN GATEWAY DATED AUGUST 4, 2004 BY OWEN HASKELL, INC. RECORDED IN CUMBERLAND COUNTY REGISTRY OF DEEDS PLAN BOOK 204, PAGE 624.
8. ALTA/ACSM LAND TITLE SURVEY, 58 FORE STREET, PORTLAND, CUMBERLAND COUNTY, MAINE MADE FOR CPB2 LLC MAY 22, 2013 BY OWEN HASKELL, INC.
9. "11/03/2015 EXISTING CONDITIONS SINGLE BEAM BATHYMETRIC SURVEY, FORE RIVER, PORTLAND, MAINE PREPARED FOR CPB2 LLC" DATED NOVEMBER 16, 2015 BY STEELE ASSOCIATES MARINE CONSULTANTS, LLC.

Notes:

1. OWNER OF RECORD: CPB2 LLC, C.C.R.D. BOOK 31425 PAGE 267 & BOOK 30879 PAGE 75.
2. PARCEL IS SHOWN AS LOTS 1 & 2 BLOCK A ON THE CITY OF PORTLAND'S ASSESSORS MAP 18.
3. BEARINGS ARE BASED ON MAINE STATE PLANE COORDINATES WEST ZONE NAD83. CITY POINTS: T-113-80-206 N:302687.77 E:2932345.31 T-113-12-111 N:302722.13 E:2933029.45
4. PARCEL IS LOCATED IN ZONE C, AREAS OF MINIMAL FLOODING, AND FLOOD ZONE A2 ELEV. 10, FLOOD INSURANCE RATE MAP 230051-0014B EFFECTIVE DATE JULY 17, 1986.
5. BENCH MARK: NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA) – TIDAL BENCHMARK. BENCH MARK STAMPING: NO. 3 1971 ELEVATION 11.02 FEET CITY DATUM.
6. EXISTING FLOATS TAKEN FROM PHOTOS PROVIDED BY CLIENT. EXISTING DOLPHINS TAKEN FROM MAINE OFFICE OF GIS AERIAL PHOTO.
7. BATHYMETRY DATA PROVIDED BY STEELS ASSOCIATES MARINE CONSULTANTS LLC.

Utility Note:

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. CALL 1-800-DIGSAFE AT LEAST THREE BUSINESS DAYS BEFORE PERFORMING ANY CONSTRUCTION. DUE TO OSHA CONFINED SPACE REQUIREMENTS, ALL INVERTS AND PIPE SIZES MUST BE VERIFIED PRIOR TO ANY CONSTRUCTION.

STATE OF MAINE
RANDY R. LOUBIER 2407
PROFESSIONAL LAND SURVEYOR

REV.3	02/26/19	ADDED STRUCTURE IN FORE STREET
REV.2	02/05/19	MISC. FEATURES, CONTOUR AND STREET LINE REVISIONS
REV.1	10/03/16	ADDED SEWER EASEMENT

BOUNDARY & TOPOGRAPHIC SURVEY

AT

58 FORE STREET, PORTLAND, MAINE

MADE FOR

WOODARD & CURRAN

41 HUTCHINS DRIVE, PORTLAND, MAINE

OWEN HASKELL, INC.
390 U.S. ROUTE ONE, FALMOUTH, ME 04105 (207) 774-0424
PROFESSIONAL LAND SURVEYORS

Drwn By	OHI	Date	Job No.
Trace By	JLW	AUGUST 19, 2016	2016-175P
Check By	JWS	Scale	Drwg. No.
Book No.	FILE	1" = 50'	1

T:\2016\2016-175 Fore St Portland\2016-175P EX CON REV 02-05-19.dwg, 2/26/2019 12:08:29 PM, CutePDF Writer

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STATE OF MAINE
LAUREN JANET SMETT
No. 12284
REGISTERED PROFESSIONAL ENGINEER

Lauren Smett

REV	DESCRIPTION	DATE
	07/07 PMS 1:38.1 Scale	
	CHECKED BY: DLC	

REV	DESCRIPTION	DATE
	DRAWN BY: BDM	
	DESIGNED BY: LJS	

EXISTING CONDITIONS

PORTLAND FORESIDE DEVELOPMENT CO.
PORTLAND, ME 04102

PHASE 1 SITE PLAN SUBMISSION

JOB NO.:	0227007
DATE:	NOVEMBER 2019
SCALE:	1"=20'
SHEET:	2 OF 17

C-001

BAR SCALE
1" = 20'
CHECK GRAPHIC SCALE BEFORE USING

NOT FOR CONSTRUCTION

MATCHLINE – SEE SHEET C-002

WATERVILLE STREET

FORE STREET

FORE CONNECTOR

FORE CONNECTOR CURRENTLY UNDER CONSTRUCTION. CONTRACTOR TO CONFIRM EXISTING CONDITIONS PRIOR TO START OF CONSTRUCTION

THAMES STREET EXT.

PORTLAND COMPANY HISTORIC DISTRICT BOUNDARY

B6 EWPZ

ZONE LINE R6 B6

250' SHORELAND ZONE

75' SHORELAND ZONE

PROPOSED WATERFRONT R.O.W.

100 YEAR FLOOD LINE, ZONE V2 (EL 13) AS SCALED FROM FLOOD INSURANCE RATE MAP PANEL 230051 0014B DATED JULY 17, 1986

N/F CPB2
31425/267
30879/75
35264/286

N/F PF MARINA
34869/50

BUILDING 2
BUILDING 3
BUILDING 4
BUILDING 6
BUILDING 6B
BLDG 16
BLDG 24

J:\woodardcurran.net\shared\Projects\0227007.07 PFDC – 58 Fore Block 1\wip\Drawings\Phase 1 – Site Plan Submission\0227007 Phase 1 Site Plan.dwg, Nov 08, 2019 – 1:57pm

42x30 SHEET
1:1

MATCHLINE – SEE SHEET C-001

FORE STREET

ZONE LINE

R6
B6

TM 2-A-2
N/F
MACCOWAN
15773/153

TM 2-A-3
N/F
TIMOTHY HALEY,
TRUSTEE
24759/67, 69

TM 2-A-10

N/F CPB2
31425/267
30879/75
35264/286

BUILDING 5

BUILDING 4

250' SHORELAND ZONE

AREA OBSCURED

WOOD DECK

CONC. RAMP

PUMP STATION

CRUSHED STONE

PAVED

PAVED WALK

LPG

100 YEAR FLOOD LINE, ZONE A2 (EL 10) AS SCALED FROM FLOOD INSURANCE RATE MAP PANEL 230051 0014B DATED JULY 17, 1986

75' SHORELAND ZONE

B6
EWPZ

100 YEAR FLOOD LINE, ZONE V2 (EL 13) AS SCALED FROM FLOOD INSURANCE RATE MAP PANEL 230051 0014B DATED JULY 17, 1986

PROPOSED MDOT R.O.W.

APPROX. LOCATION 33" FORCE MAIN SEWER LINE

FWD EASEMENT

BF MARINA

N/F PF MARINA
34869/50

MDP1A

MDP1MID

MDP1B

255.00'
S47°33'52"W

685.00'

690.74'
N47°33'52"E

430.00'

N47°33'52"E
100.00'

N42°26'08"W
49.73'

N47°33'52"E
172.80'

S42°26'08"E
24.48'

S47°50'52"W
120.00'

S47°50'52"W
176.00'

S47°50'52"W

20' 0 20' 40'
BAR SCALE
1" = 20'
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No. 12284
REGISTERED PROFESSIONAL ENGINEER

Lauren Smett

REV	DESCRIPTION	DATE
	07/07 PAGE 1 OF 1 Cmp	

REV	DESCRIPTION	DATE
DESIGNED BY: LJS	DRAWN BY: BDM	

EXISTING CONDITIONS

PORTLAND FORESIDE
DEVELOPMENT CO
PORTLAND, ME 04102

PHASE 1 SITE PLAN SUBMISSION

JOB NO.: 0227007
DATE: NOVEMBER 2019
SCALE: 1"=20'
SHEET: 3 OF 17

C-002

\\woodardcurran.net\shared\Projects\0227007.07 PFDC - 58 Fore Block 1\wip\Drawings\Phase 1 - Site Plan Submission\0227007 Phase 1 Site Plan.dwg, Nov 08, 2019 - 1:38pm

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Lauren Smett

REV	DESCRIPTION	DATE
	07007 PHASE 1 SITE PLAN SUBMISSION	

CHECKED BY: DJC

REV	DESCRIPTION	DATE

DESIGNED BY: LJS DRAWN BY: BDM

DEMOLITION PLAN - 1

PORTLAND FORESIDE DEVELOPMENT CO
PORTLAND, ME 04102

PHASE 1 SITE PLAN SUBMISSION

JOB NO.: 0227007
DATE: NOVEMBER 2019
SCALE: 1"=20'
SHEET: 4 OF 17

C-003

MATCHLINE – SEE SHEET C-004

MATCHLINE – SEE SHEET C-004

FORE CONNECTOR

FORE STREET

WATERVILLE STREET

THAMES STREET EXT.

DEMOLISH SIGN
DEMOLISH FM
DEMOLISH OHW TO UTILITY POLE
DEMOLISH WOODEN DECKING
CATCH BASIN INLET PROTECTION, TYP.
PROTECT & MAINTAIN USE OF MARINA WATER & ASSOCIATED STRUCTURES DURING CONSTRUCTION
DEMOLISH EXISTING OVERHEAD ELECTRIC & UP
PROTECT EXISTING RETAINING WALL, REFER TO STRUCTURAL PLANS
PROTECT EXISTING GAS
DEMOLISH BRICK REMAINS
RELOCATED UP #8 SEE SHT. C-102
DEMOLISH METAL STEPS
DEMOLISH CATCH BASIN
DEMOLISH DRAIN
DEMOLISH STONE RETAINING WALL
DEMOLISH WATER
DEMOLISH SEWER PUMP STATION
DEMOLISH BUILDING 4
DEMOLISH CATCH BASINS
DEMOLISH STRUCTURE
DEMOLISH SPRINKLER & WATER
DEMOLISH ELECTRIC
DEMOLISH WATER LINE & HYDRANT
DEMOLISH SPRINKLER
DEMOLISH 18" SD & CATCH BASIN
CB RIM=11.20
18"INV. OUT=8.00
DEMOLISH FENCE
RELOCATE CONCRETE BLOCKS ON SITE
REMOVE EXISTING RIPRAP
REMOVE EXISTING GUARDRAIL (IF INSTALLED AT TIME OF CONSTRUCTION)
STABILIZED CONSTRUCTION ENTRANCE
CAP SD AT PL
RELOCATION OF MNGRR SIDING
PROTECT & MAINTAIN USE OF EXISTING MARINA WATER DURING CONSTRUCTION
PROTECT & MAINTAIN USE OF MARINA WATER DURING CONSTRUCTION
DEMOLISH EXISTING RAILROAD TRACKS
DEMOLISH EXISTING PUMP STATION
PROTECT EXISTING FUEL LINES
PROTECT EXISTING MARINA WATER
PROTECT EXISTING UG FUEL TANKS FUEL LINES
SEDIMENT BARRIER, TYP.
PROVIDE CB INLET PROTECTION, TYP.
PROVIDE MASONRY PLUGS ON REMAINING DOWNSTREAM PIPES PRIOR TO DEMOLISHING UPSTREAM SD PIPING
BUILDING 2
BUILDING 3
BUILDING 6
BUILDING 6B
BLDG 16
BLDG 24
PAVEMENT
GRAVEL
ROCK
CONC. BLOCKS
B6 EWPZ
ZONE LINE
75' SHORELAND ZONE
100 YEAR FLOOD LINE, ZONE V2 (EL 13) AS SCALED FROM FLOOD INSURANCE RATE MAP PANEL 230051 0014B DATED JULY 17, 1986

DEMOLITION NOTES:

1. SEQUENCE OF WORK WILL FOLLOW THE CONSTRUCTION MANAGEMENT PLAN. DEMOLITION ACTIVITIES SHALL BE SEQUENCED TO ENSURE AREAS OF THE SITE SHALL REMAIN OPERATIONAL DURING CONSTRUCTION.
2. PRIOR TO THE START OF DEMOLITION, THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND/OR APPROVALS FROM THE CITY OF PORTLAND, AND ALL OTHER AUTHORITIES HAVING JURISDICTION.
3. THE WORD "DEMOLISH" SHALL IMPLY THE FULL REMOVAL AND PROPER DISPOSAL OF THE ITEM AND ANY APPURTENANT ITEMS, AS NOTED, OR AS DIRECTED BY THE OWNER OR THEIR REPRESENTATIVE. THE OWNER RETAINS THE RIGHT TO KEEP ANY ITEM NOTED FOR REMOVAL OR DEMOLITION AT THE REQUEST OF THE OWNER OR THEIR REPRESENTATIVE.
4. CONSTRUCTION/DEMOLITION DEBRIS NOT APPROVED FOR REUSE ON-SITE, SHALL BE REMOVED AND DISPOSED OFF SITE IN ACCORDANCE WITH THE REQUIREMENTS OF ALL AUTHORITIES HAVING JURISDICTION. WASTE MANIFEST FORMS DOCUMENTING PROPER OFF-SITE DISPOSAL SHALL BE MADE AVAILABLE TO THE SITE/CIVIL ENGINEER AND THE CITY OF PORTLAND UPON REQUEST.
5. PRIOR TO THE START OF DEMOLITION, THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING UTILITIES TO BE DEMOLISHED OR TO REMAIN PROTECTED DURING CONSTRUCTION. IF ANY DISCREPANCIES ARE FOUND, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING OF THE CONFLICT.
6. THE CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES TO REMAIN. ANY TEMPORARY SHUT DOWNS REQUIRED TO FACILITATE THE PROPOSED CONSTRUCTION, WHICH MAY AFFECT USES ON ADJACENT PROPERTIES SHALL BE COORDINATED BY THE CONTRACTOR, THE CITY OF PORTLAND AND APPLICABLE UTILITY.
7. CONTRACTOR SHALL REPAIR OR REPLACE ANY STRUCTURES OR UTILITIES DAMAGED DURING CONSTRUCTION. THE CONTRACTOR SHALL PROCEED WITH CAUTION WITHIN THE PROPOSED WORK AREA TO PREVENT ANY INTERRUPTION TO EXISTING UTILITY SERVICE.
8. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE A MAINTENANCE AND PROTECTION OF TRAFFIC (MPT) PLAN IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REQUIREMENTS.
9. CONTRACTOR SHALL COVER CONSTRUCTION DUMPSTERS AND ROLL-OFF CONTAINERS, AND STORE ALL CONSTRUCTION CHEMICALS INSIDE THE CONSTRUCTION TRAILER OR UNDER A COVERED AREA DURING PERIODS WHEN CONSTRUCTION CEASES.
10. ALL SITE FEATURES OUTSIDE LIMIT OF WORK AND NOT DESIGNATED FOR DEMOLITION SHALL BE PROTECTED.

SHEET LEGEND

- REMOVE & DISPOSE OF PAVEMENT (REMOVE PAVEMENT, CURB AND/OR STRUCTURE WITHIN ZONE)
- BUILDING DEMOLITION
- UTILITY LINE DEMOLITION
- CATCH BASIN INLET PROTECTION
- SEDIMENT BARRIER

BAR SCALE
1" = 20'
CHECK GRAPHIC SCALE BEFORE USING

NOT FOR CONSTRUCTION

\\woodardcurran.net\shared\Projects\0227007.07 PFDC - 58 Fore Block 1\wip\Drawings\Phase 1 - Site Plan Submission\0227007 Phase 1 SPS Mon, Nov 04, 2019 - 1:38pm

DEMOLITION NOTES:

1. SEQUENCE OF WORK WILL FOLLOW THE CONSTRUCTION MANAGEMENT PLAN. DEMOLITION ACTIVITIES SHALL BE SEQUENCED TO ENSURE AREAS OF THE SITE SHALL REMAIN OPERATIONAL DURING CONSTRUCTION.
2. PRIOR TO THE START OF DEMOLITION, THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND/OR APPROVALS FROM THE CITY OF PORTLAND, AND ALL OTHER AUTHORITIES HAVING JURISDICTION.
3. THE WORD "DEMOLISH" SHALL IMPLY THE FULL REMOVAL AND PROPER DISPOSAL OF THE ITEM AND ANY APPURTENANT ITEMS, AS NOTED, OR AS DIRECTED BY THE OWNER OR THEIR REPRESENTATIVE. THE OWNER RETAINS THE RIGHT TO KEEP ANY ITEM NOTED FOR REMOVAL OR DEMOLITION AT THE REQUEST OF THE OWNER OR THEIR REPRESENTATIVE.
4. CONSTRUCTION/DEMOLITION DEBRIS NOT APPROVED FOR REUSE ON-SITE, SHALL BE REMOVED AND DISPOSED OFF SITE IN ACCORDANCE WITH THE REQUIREMENTS OF ALL AUTHORITIES HAVING JURISDICTION. WASTE MANIFEST FORMS DOCUMENTING PROPER OFF-SITE DISPOSAL SHALL BE MADE AVAILABLE TO THE SITE/CIVIL ENGINEER AND THE CITY OF PORTLAND UPON REQUEST.
5. PRIOR TO THE START OF DEMOLITION, THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING UTILITIES TO BE DEMOLISHED OR TO REMAIN PROTECTED DURING CONSTRUCTION. IF ANY DISCREPANCIES ARE FOUND, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING OF THE CONFLICT.
6. THE CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES TO REMAIN. ANY TEMPORARY SHUT DOWNS REQUIRED TO FACILITATE THE PROPOSED CONSTRUCTION, WHICH MAY AFFECT USES ON ADJACENT PROPERTIES SHALL BE COORDINATED BY THE CONTRACTOR, THE CITY OF PORTLAND AND APPLICABLE UTILITY.
7. CONTRACTOR SHALL REPAIR OR REPLACE ANY STRUCTURES OR UTILITIES DAMAGED DURING CONSTRUCTION, THE CONTRACTOR SHALL PROCEED WITH CAUTION WITHIN THE PROPOSED WORK AREA TO PREVENT ANY INTERRUPTION TO EXISTING UTILITY SERVICE.
8. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE A MAINTENANCE AND PROTECTION OF TRAFFIC (MPT) PLAN IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REQUIREMENTS.
9. CONTRACTOR SHALL COVER CONSTRUCTION DUMPSTERS AND ROLL-OFF CONTAINERS, AND STORE ALL CONSTRUCTION CHEMICALS INSIDE THE CONSTRUCTION TRAILER OR UNDER A COVERED AREA DURING PERIODS WHEN CONSTRUCTION CEASES.
10. ALL SITE FEATURES OUTSIDE LIMIT OF WORK AND NOT DESIGNATED FOR DEMOLITION SHALL BE PROTECTED.

SHEET LEGEND

- REMOVE & DISPOSE OF PAVEMENT (REMOVE PAVEMENT, CURB AND/OR STRUCTURE WITHIN ZONE)
- BUILDING DEMOLITION
- UTILITY LINE DEMOLITION
- CATCH BASIN INLET PROTECTION
- SEDIMENT BARRIER

MATCHLINE – SEE SHEET C-003

FORE STREET

DEMOLISH BUILDING 4

DEMOLISH BUILDING 5

DEMOLISH EXISTING WOOD RETAINING WALL

MNGRR TO REMOVE BUILDINGS & TRACKS

PROTECT & MAINTAIN USE OF MARINA WATER DURING CONSTRUCTION

PROTECT & MAINTAIN USE OF MARINA ELECTRICAL DURING CONSTRUCTION

APPROX. LOCATION 33" FORCE MAIN SEWER LINE

100 YEAR FLOOD LINE, ZONE V2 (EL 13) AS SCALED FROM FLOOD INSURANCE RATE MAP PANEL 230051 0014B DATED JULY 17, 1986

TM 2-A-3
N/F
TIMOTHY HALEY, TRUSTEE
24759/67, 69

TM 2-A-10

ZONE LINE
250' SHORELAND ZONE
75' SHORELAND ZONE
EWPZ
B6
R6

BAR SCALE
1" = 20'
CHECK GRAPHIC SCALE BEFORE USING

NOT FOR CONSTRUCTION

WOODARD & CURRAN
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STATE OF MAINE
LAUREN JANET SMETT
No. 12284
REGISTERED PROFESSIONAL ENGINEER

REV	DESCRIPTION	DATE
1	227007 PMB 1.08.19 Ltr.	

REV	DESCRIPTION	DRAWN BY:	DESIGNED BY:	CHECKED BY:
		BDM	LJS	DLC

PORTLAND FORESIDE DEVELOPMENT CO
PORTLAND, ME 04102

DEMOLITION PLAN - 2

PHASE 1 SITE PLAN SUBMISSION

JOB NO.: 0227007
DATE: NOVEMBER 2019
SCALE: 1"=20'
SHEET: 5 OF 17

C-004

\\woodardcurran.net\shared\Projects\0227007.07 PFDC - 58 Fore Block \wpb\Drawings\Phase 1 - Site Plan Submission\0227007 Phase 1 Site Plan.dwg, Nov 08, 2019 - 1:38pm

42x30 SHEET
1:1

FORE CONNECTOR

WATERVILLE STREET

FORE STREET

MATCHLINE – SEE SHEET C–101

PROVIDE GRANITE CURB & TEMPORARY BITUMINOUS SIDEWALK TO CLOSE EXISTING DRIVEWAY & CONNECT TO SIDEWALK & RAMP INSTALLED BY ADJACENT DEVELOPMENT

MAINTAIN EXISTING CONCRETE SIDEWALK & CURB

MATCH EXISTING CONCRETE SIDEWALK

ZONING DISTRICT BOUNDARY

BIKE RACK, SEE LANDSCAPING PLANS

STAIR & RETAINING WALLS

STREET TREES, SEE LANDSCAPING PLANS

EXISTING BELOW GRADE BUILDING 15 LIMIT

PROVIDE SIDEWALK IMPROVEMENTS ALONG FORE STREET

PROVIDE 8' WIDE PAINTED CROSSWALK; NORTH SIDE OF SIDEWALK TO BE DESIGNED BY CITY AS PART OF FORE STREET SEWER SEPARATION PROJECT

REMOVE EXISTING CURB, PROVIDE FLUSH GRANITE CURB

PROVIDE 7' LONG TIPDOWN CURB

FENCE, SEE LANDSCAPING PLANS

PROVIDE 14' LONG TIPDOWN CURB

RAMP

25.0'

LOAM & SEED

EXISTING BITUMINOUS SIDEWALK TO REMAIN

PROVIDE RETAINING WALL, SEE STRUCTURAL PLANS

LEVEL 1 ROOF

PEDESTRIAN LIFT

BLDG. 24

BLDG. 14

(24, 14, 15, 16 EXISTING BUILDING RENOVATION)

BLDG. 15

BLDG. 16

TOWNHOUSES
(NEW BUILDING CONSTRUCTION)

OVERHEAD BRIDGE

RAMP TO LEVEL 4

BUILDING 4
(NEW BUILDING CONSTRUCTION)

56.2'

PAVER PLAZA AREA

BUILDING 3
(EXISTING BUILDING RENOVATION)

BUILDING 2
(EXISTING BUILDING RENOVATION)

PAVER PLAZA AREA

OVERHEAD BRIDGE

44.0'

BUILDING 1A
(NEW BUILDING CONSTRUCTION)

PORTLAND COMPANY HISTORIC DISTRICT BOUNDARY

MATCH EXISTING BITUMINOUS SIDEWALK

PROTECT EXISTING STREET LIGHT

PROTECT EXISTING GRANITE CURB

8.0'

BRICK SIDEWALK

R10.0'

REMOVE EXISTING CURB, PROVIDE 2" MOUNTABLE GRANITE CURB

PROVIDE BOLLARDS

TRASH COMPACTOR ENTRANCE

27'

250' SHORELAND ZONE

50' PUBLIC ACCESS EASEMENT

28.0'

BENCH (TYP.), SEE LANDSCAPING PLANES

BIKE RACK, SEE LANDSCAPING PLANS

BUILDING 6B
(EXISTING BUILDING RENOVATION)

BUILDING 6
(EXISTING BUILDING RENOVATION)

STONEDUST, SEE LANDSCAPING PLANS

PROTECT EXISTING GRANITE CURB

PROTECT EXISTING ADA RAMP

RAMPED SITE ENTRANCE

12.0'

PARKING – SPACES

20.0'

PAVER SHARED STREET

22.0'

8.5'

PARKING – SPACES

BUILDING 12
(EXISTING BUILDING RECONSTRUCTION)

EXISTING UNDERGROUND FUEL TANKS

SPACE RESERVED FUTURE UNDERGROUND FUEL TANK

10.5'

22'

14'

PAVER SHARED STREET

FENCE, SEE LANDSCAPING PLANS

THAMES STREET EXTENSION

B6
EWPZ

FENCE & PLANTING AREA, SEE LANDSCAPING PLANS

PROVIDE TEMPORARY 2" BINDER COURSE PAVEMENT, SPACE FOR MARINA VEHICLES, EMERGENCY VEHICLE ACCESS & DROP–OFF

442.91'
S52°46'52"W

DEMOLISH BRICK SIDEWALK & CURB

BOLLARD (TYP.), SEE LANDSCAPE PLANS

SITE LANDSCAPING, SEE LANDSCAPING PLANS

REFUSE ENCLOSURE

MECH. ENCLOSURE

TRAIL RELOCATION TO BE COORDINATED WITH CITY OF PORTLAND

TRACK RELOCATION TO BE COORDINATED WITH MAINE NARROW GAUGE RAILROAD & MDOT

NARROW GAUGE RAILROAD; TO BE RELOCATED TO MDOT PROPERTY

MDOT PROPERTY

B6
EWPZ

442.91'
S52°46'52"W

MDOT PROPERTY

12' WIDE BITUMINOUS TRAIL

CITY OF PORTLAND PROPERTY

MDOT PROPERTY

PF

N41°54'39"E
8.00'

S48°04'59"W

MATCHLINE – SEE SHEET C–101

450.00'

NOTES:
1. SEE LANDSCAPE PLANS FOR SITE SURFACE MATERIAL ASSOCIATED WITH LANDSCAPED AREAS, PATIOS, AND NON–BITUMINOUS WALKWAYS & ROADWAYS.

2. ALL AREAS WITHIN LIMIT OF WORK NOT IDENTIFIED FOR FINISH SURFACE MATERIALS (PAVERS, BRICK, PAVEMENT, LANDSCAPING) SHALL BE FINISHED WITH 2" BINDER COURSE ASPHALT.

3. UTILITY & DRAINAGE STRUCTURES NOT SHOWN FOR CLARITY, SEE GRADING & DRAINAGE & UTILITY PLAN FOR MORE INFORMATION.

BAR SCALE
1" = 20'
CHECK GRAPHIC SCALE BEFORE USING

20' 0 20' 40'

NOT FOR CONSTRUCTION

C:\Users\brodwin\Appdata\Local\Temp\AcPublish_17224\0227007 Phase 1 Site Plan.dwg, Jan 21, 2020 - 4:29pm

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STATE OF MAINE
LAUREN JANET SWETT
No. 12284
REGISTERED PROFESSIONAL ENGINEER

REV	DESCRIPTION	DATE
1	RESPONSE TO CITY COMMENTS	01/30/20

DESIGNED BY: LJS | DRAWN BY: BDM | CHECKED BY: DLC

REV	DESCRIPTION	DATE

SITE PLAN - 1

PORTLAND FORESIDE DEVELOPMENT CO.
PORTLAND, ME 04102

PHASE 1 SITE PLAN SUBMISSION

JOB NO.: 0227007
DATE: NOVEMBER 2019
SCALE: 1"=20'
SHEET: 6 OF 17

C-100

42x30 SHEET
1:1

FORE STREET

ZONE LINE

R6
B6

MATCHLINE – SEE SHEET C-100

FENCE, SEE LANDSCAPING PLANS

PROVIDE 8' WIDE PAINTED CROSSWALK; NORTH SIDE OF SIDEWALK TO BE DESIGNED BY CITY AS PART OF FORE STREET SEWER SEPARATION PROJECT

NOTES:
1. SEE LANDSCAPE PLANS FOR SITE SURFACE MATERIAL ASSOCIATED WITH LANDSCAPED AREAS, PATIOS, AND NON-BITUMINOUS WALKWAYS & ROADWAYS.
2. ALL AREAS WITHIN LIMIT OF WORK NOT IDENTIFIED FOR FINISH SURFACE MATERIALS (PAVERS, BRICK, PAVEMENT, LANDSCAPING) SHALL BE FINISHED WITH 2" BINDER COURSE ASPHALT.
3. UTILITY & DRAINAGE STRUCTURES NOT SHOWN FOR CLARITY, SEE GRADING & DRAINAGE & UTILITY PLAN FOR MORE INFORMATION.

N45°16'52"E
140.00'

TM 2-A-2
N/F
MACGOWAN
15773/153

TM 2-A-3
N/F
TIMOTHY HALEY, TRUSTEE
24759/67, 69

TM 2-A-10

LIMIT OF LEVEL 1

BUILDING 4
(NEW BUILDING CONSTRUCTION)

N45°16'52"E
100.00'

N53°46'42"E
100.00'

N47°33'52"E
100.00'

250' SHORELAND ZONE

36.5'

22.0'

BITUMINOUS PAVEMENT

20' DOUBLE SWING GATE

MAINTAIN EXISTING SURFACE CONDITIONS

MNGRR TO REMOVE BUILDINGS & TRACKS

255.00'
S47°33'52"W

685.00'

75' SHORELAND ZONE

B6 ZONE LINE

EWPZ

430.00'

MATCH EXISTING BITUMINOUS TRAIL

12' WIDE BITUMINOUS TRAIL

MDOT PROPERTY

15' MARINA PROPERTY

N47°33'52"E
685.00'

APPROX. LOCATION, 33" FORCE MAIN SEWER LINE

MATCHLINE – SEE SHEET C-100

N41°05'52"W
S48°05'52"W

EXISTING MARINA

BAR SCALE
1" = 20'
CHECK GRAPHIC SCALE BEFORE USING

NOT FOR CONSTRUCTION

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STATE OF MAINE
LAUREN JANET SWETT
No. 12284
REGISTERED PROFESSIONAL ENGINEER

REV	DESCRIPTION	DATE
1	RESPONSE TO CITY COMMENTS	12/20/19
DESIGNED BY: LJS	DRAWN BY: BDM	CHECKED BY: DJC

SITE PLAN - 2

PORTLAND FORESIDE DEVELOPMENT CO.
PORTLAND, ME 04102

PHASE 1 SITE PLAN SUBMISSION

JOB NO.:	0227007
DATE:	NOVEMBER 2019
SCALE:	1"=20'
SHEET:	7 OF 17

C-101

G:\Users\lamcdevitt\Upgrade\Vault\Temp\AcPublish_17224\0227007 Phase 1 Site Plan.dwg, Jan 21, 2020 - 3:58pm

42x30 SHEET
1:1

FORE CONNECTOR

FORE STREET

WATERVILLE STREET

THAMES STREET EXTENSION

MATCHLINE – SEE SHEET C–103

MATCHLINE – SEE SHEET C–103

CONNECT TO EXISTING 42" COMBINE SEWER WITH INSERT–TEE, INV. 21.27

ZONE LINE R6 B6

250' SHORELAND ZONE

RIPRAP WITH UNDERDRAIN AT BASE OF SLOPE

RETAINING WALL, SEE STRUCTURAL PLANS

CONNECT TO EXISTING 15" STUB, INV. 5.17

PROVIDE BACKFLOW PREVENTER IN ROOF DRAIN

12" ROOF DRAIN, REFER TO ARCHITECTURAL PLANS

PROVIDE CLEANOUT AT END OF TRENCH DRAIN

TRENCH DRAIN, SEE DETAILS

TRENCH DRAIN AT BASE OF EACH SET OF STEPS (TYP.) (SEE LANDSCAPE PLAN)

INSERT–A–TEE CONNECTION

PIPE SD1 BELOW TRENCH DRAIN

RELOCATE EXISTING CATCH BASIN, COORDINATE WITH CITY ON FINAL LOCATION

RELOCATION OF MNGRR; COORDINATE FINAL GRADES OF RAIL CORRIDOR WITH MNGRR

PROTECT EXISTING UNDERGROUND FUEL TANKS & FUEL LINES

RAISE EXISTING FUEL TANK ACCESS PORTS/ MANHOLES TO PROPOSED GRADE; RELOCATE VENTS TO BLOCK 3

CONNECT DMH 5 TO OUTFALL PREVIOUSLY INSTALLED

STORMWATER OUTFALL INV. OUT 6.30 INSTALLED UNDER SEPARATE CONTRACT

BUILDING 1A
FF ELEV. 15.25

BUILDING 2
FF ELEV. 15.00

BUILDING 3
FF ELEV. 15.00

BUILDING 4
FF ELEV. 16.00

BUILDING 6
FF ELEV. 15.00

BUILDING 6B
FF ELEV. 15.00

BUILDING 12
FF ELEV. 15.05

BLDG. 24
FF ELEV. 15.00

BLDG. 14
FF ELEV. 15.00

BLDG. 15
FF ELEV. 15.00

BLDG. 16
FF ELEV. 15.00

TOWNHOUSES

PAVED PARKING AREA

SUBSURFACE R–TANK 1

SUBSURFACE R–TANK 2

JELLYFISH 1

JELLYFISH 2

CITY OF PORTLAND PROPERTY

MARINA PROPERTY

REFER TO SHEET C–106 FOR PIPE & STRUCTURE SCHEDULES

BAR SCALE
1" = 20'
CHECK GRAPHIC SCALE BEFORE USING

NOT FOR CONSTRUCTION

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STATE OF MAINE
LAUREN JANE SMETT
No. 12284
REGISTERED PROFESSIONAL ENGINEER

REV	DESCRIPTION	DATE
1	RESPONSE TO CITY COMMENTS	12/20/19
2	2020 PAVE 1 SITE PLAN	5/26/20

DESIGNED BY: LJS | DRAWN BY: BDM | CHECKED BY: DLC

PORTLAND FORESIDE DEVELOPMENT CO.
PORTLAND, ME 04102

PHASE 1 SITE PLAN SUBMISSION

GRADING & DRAINAGE PLAN - 1

JOB NO.: D227007
DATE: NOVEMBER 2019
SCALE: 1"=20'
SHEET: 8 OF 17

C-102

C:\Users\bmcdevitt\appdata\local\temp\AcPublish_3844\D227007 Phase 1 Site Plan.dwg, Jan 24, 2020 - 8:54am

42x30 SHEET
1:1

FORE STREET

MATCHLINE - SEE SHEET C-102

MATCHLINE - SEE SHEET C-102

BUILDING 4
FF ELEV. 16.00

RIPRAP DRAINAGE SWALE

LEVEL LIP SPREADER

TM 2-A-2
N/F
MACGOWAN
15773/153

TM 2-A-3
N/F
TIMOTHY HALEY,
TRUSTEE
24759/67, 69

TM 2-A-10

250' SHORELAND ZONE

75' SHORELAND ZONE

ZONE LINE

EWPZ

R6
B6

TRANS.

PIPE SD56

PIPE SD57

PIPE SD58

PIPE SD59

PIPE SD60

PIPE SD61

PIPE SD62

PIPE SD65

CB27

CB34

DMH 6

JELLYFISH 2

MAIN PROPERTY

MARINA PROPERTY

APPROX. LOCATION 33" FORCE MAIN SEWER LINE

EXISTING MARINA

REFER TO SHEET C-106 FOR PIPE & STRUCTURE SCHEDULES

BAR SCALE
1" = 20'
CHECK GRAPHIC SCALE BEFORE USING

NOT FOR CONSTRUCTION

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STATE OF MAINE
LAUREN ANNETT SMETT
No. 12284
REGISTERED PROFESSIONAL ENGINEER

REV	DESCRIPTION	DATE
1	RESPONSE TO CITY COMMENTS	12/20/19

DESIGNED BY: LJS | DRAWN BY: BDM | CHECKED BY: DJC

GRADING & DRAINAGE PLAN - 2

PORTLAND FORESIDE
DEVELOPMENT CO.
PORTLAND, ME 04102

PHASE 1 SITE PLAN SUBMISSION

JOB NO.:	0227007
DATE:	NOVEMBER 2019
SCALE:	1"=20'
SHEET:	9 OF 17

C-103

C:\Users\dmcdevitt\AppData\Local\Temp\AcPublish_12224\0227007 Phase 1 Site Plan.dwg, Jan 21, 2020 - 3:39pm

42x30 SHEET
1:1

FORE CONNECTOR

FORE STREET

MATCHLINE – SEE SHEET C-105

CONNECT TO EXISTING WATER MAIN IN FORE STREET; COORDINATE CONNECTION TO FUTURE WATER MAIN REPLACEMENT

12" DI WATER SERVICE

WATER METER

WATER RPZ & BACKFLOW PREVENTER INSTALLED IN BUILDING 4, REFER TO BUILDING MEP PLANS

REFER TO MEP PLANS FOR UNDERGROUND TRANSFORMERS & ASSOCIATED ELECTRICAL UTILITIES

6" GREASE WASTE

EXTERNAL GREASE TRAP

FUTURE GAS MAIN, BY OTHERS

CMH

EMH

COMM

BLDG. 24

BLDG. 14

BLDG. 15

BLDG. 16

TOWNHOUSES

6" SANITARY SEWER

4" DOMESTIC & 8" FIRE PROTECTION

GAS METER

SMH 7

SMH 6

SMH 5

SMH 4

SMH 3

SMH 2

SMH 1

SMH 8

PIPE S1

PIPE S2

PIPE S3

PIPE S4

PIPE S5

PIPE S6

PIPE S7

PIPE S8

PIPE S9

PIPE S10

PIPE S11

PIPE S12

PIPE S13

PIPE S14

PIPE S15

PIPE S16

PIPE S17

PIPE S18

PIPE S19

PIPE S20

PIPE S21

PIPE S22

PIPE S23

PIPE S24

PIPE S25

12" DI WATER

TRANS.

BUILDING 3

BUILDING 2

BUILDING 1A

BUILDING 6B

BUILDING 6

BUILDING 12

(3)–6" CONCRETE ENCASED ELECTRICAL CONDUITS

(3)–6" CONCRETE ENCASED COMMUNICATION CONDUITS

CONDUITS FOR ELECTRICAL & COMMUNICATIONS, REFER TO MEP PLANS

(10) 6" POWER & (8) 4" TELECOMMUNICATIONS DUCT BANK (CONCRETE ENCASED)

OIL WATER SEPARATOR

250' SHORELAND ZONE

6" PLASTIC COATED STEEL GAS SERVICE, TYP.

6" WATER SERVICE W/ VALVE & HYDRANT

WYE INV. 9.55

WATER METER

CONNECT TO EXISTING WATER MAIN IN FORE CONNECTOR

CONNECT TO EXISTING STUB

ABANDON EXISTING WATER SERVICE STUB

(2) 4" COMMUNICATIONS CONDUITS

3" DOMESTIC & 6" FIRE PROTECTION

(3) 4" ELECT. CONDUITS

8" SANITARY SEWER INV. 12.06

4" GREASE WASTE INV. 12.48

8" SANITARY SEWER WYE INV. 11.93

GAS METERS, SEE MECH PLANS

EXTERNAL GREASE TRAP 4" INV. IN 12.30 8" INV. OUT 12.05

EXISTING SUBSURFACE MARINA FUEL TANKS

EXTERNAL GREASE TRAP

6" GREASE WASTE

6" SANITARY SEWER

4" DOMESTIC & 8" FIRE PROTECTION

(6) 6" POWER & (6) 4" TELECOMMUNICATIONS DUCT BANK (CONCRETE ENCASED)

6" HDPE SEWER FORCE MAIN

6" PLASTIC COATED STEEL GAS SERVICE, TYP.

12" DI WATER SERVICE, TYP.

PAVED PARKING AREA

WATER METER, BACKFLOW PREVENTER

CONNECT TO EXISTING MARINA FIRE SERVICE

SANITARY SEWER PUMP STATION

B6 EWPZ

442.91' S52°46'52"W

S48°54'39"W 8.00'

MATCHLINE – SEE SHEET C-105

BAR SCALE
1" = 20'
CHECK GRAPHIC SCALE BEFORE USING

NOT FOR CONSTRUCTION

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STATE OF MAINE
LAUREN JANET SMETT
No. 12284
REGISTERED PROFESSIONAL ENGINEER

REV	DESCRIPTION	DATE
1	RESPONSE TO CITY COMMENTS	2/20/20
2	2ND SUBMISSION	3/26/20

DRAWN BY: BDM
CHECKED BY: LJS

UTILITY PLAN - 1

PORTLAND FORESIDE DEVELOPMENT CO.
PORTLAND, ME 04102

PHASE 1 SITE PLAN SUBMISSION

JOB NO.: 0227007
DATE: NOVEMBER 2019
SCALE: 1"=20'
SHEET: 10 OF 17

C-104

C:\Users\lemusdevi1\appdata\local\temp\AcPublish_3844\0227007 Phase 1 Site Plan.dwg, Jan 24, 2020 - 8:50am

42x30 SHEET
1:1

FORE STREET

MATCHLINE – SEE SHEET C-104

MATCHLINE – SEE SHEET C-104

BUILDING 4

R6
B6

6" PLASTIC COATED STEEL GAS SERVICE, TYP.
GAS METER

TM 2-A-2
N/F
MACGOWAN
15773/153

TM 2-A-3
N/F
TIMOTHY HALEY, TRUSTEE
24759/67, 69

TM 2-A-10

B6
R6

TRANS.

6" SANITARY SEWER

PIPE S37

PIPE S38

OIL WATER SEPARATOR

PIPE S36

PIPE S35

8" SANITARY STUB FOR FUTURE CONNECTION

6" GAS STUB FOR FUTURE CONNECTION

12" WATER SERVICE STUB FOR FUTURE CONNECTION

ELECTRICAL & COMMUNICATIONS SERVICE STUB FOR FUTURE CONNECTION

12" DI WATER SERVICE

6" PLASTIC COATED STEEL GAS SERVICE, TYP.

PROVIDE 3" DOMESTIC MARINA WATER MAIN CONNECTION

PROVIDE 6" FIRE MARINA WATER MAIN CONNECTION

CMH

EMH

COORDINATE DEMOLITION OF OVERHEAD ELECTRICAL WITH BUILDING 4 CONSTRUCTION

250' SHORELAND ZONE

75' SHORELAND ZONE

B6 ZONE LINE

EWPZ

MDOT PROPERTY

APPROX. LOCATION 33" FORCE MAIN SEWER LINE

EXISTING MARINA

BAR SCALE
1" = 20'
CHECK GRAPHIC SCALE BEFORE USING

NOT FOR CONSTRUCTION

41 Hutchins Drive
Portland, Maine 04102
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COMMITMENT & INTEGRITY DRIVE RESULTS

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STATE OF MAINE
LAUREN JANET SWETT
No. 12284
REGISTERED PROFESSIONAL ENGINEER

REV	DESCRIPTION	DATE

CHECKED BY: DLC

REV	DESCRIPTION	DATE
1	RESPONSE TO CITY COMMENTS	12/20/19

DESIGNED BY: LJS
DRAWN BY: BDM

UTILITY PLAN - 2

PORTLAND FORESIDE DEVELOPMENT CO.
PORTLAND, ME 04102

PHASE 1 SITE PLAN SUBMISSION

JOB NO.: 0227007
DATE: NOVEMBER 2019
SCALE: 1"=20'
SHEET: 11 OF 17

C-105

C:\Users\lemcdevitt\AppData\Local\Temp\AcPublish_17224\0227007 Phase 1 Site Plan.dwg, Jan 21, 2020 - 4:09pm

STRUCTURE TABLE				
NAME	DIA.	RIM	INV IN/SIZE/FROM	INV OUT/SIZE/TO
CB1	4'	31.25	23.00/6"UD/ 25.00/10"SD/CB35 25.00/10"SD/	20.05/15"SD/
CB2	4'	14.65		10.65/10"SD/TRENCH DRAIN OUTLET 2
CB3	4'	14.40	10.30/8"SD/CB4	
CB4	4'	14.55		10.44/8"SD/CB3 9.80/8"SD/DMH 1
CB5	4'	14.50		9.67/8"SD/DMH 2
CB6	4'	14.74	10.35/8"SD/CB7 10.35/8"SD/CB31	10.30/8"SD/CB28
CB7	4'	14.74		10.45/8"SD/CB6
CB8	4'	14.71		10.29/8"SD/CB9
CB9	4'	14.71	10.15/8"SD/CB8	10.10/8"SD/CB10
CB10	4'	14.60	9.92/12"SD/CB12 9.92/8"SD/CB9 9.92/8"SD/	9.82/15"SD/CB11
CB11	4'	14.53	9.75/15"SD/CB10 9.75/8"SD/	9.70/15"SD/CB27
CB12	4'	14.42	10.08/10"SD/DMH 7	10.03/12"SD/CB10
CB13	4'	14.83	10.59/10"SD/CB14	10.54/10"SD/CB32
CB14	4'	14.78	10.68/8"SD/CB15 10.68/8"SD/	10.63/10"SD/CB13
CB15	4'	14.78	10.82/8"SD/CB16	10.77/8"SD/CB14
CB16	4'	14.72	10.97/8"SD/CB17	10.92/8"SD/CB15
CB17	4'	14.75		11.06/8"SD/CB16
CB18	4'	14.72		10.91/8"SD/CB19
CB19	4'	14.72	10.82/8"SD/CB18	10.77/8"SD/CB20
CB20	4'	14.73	10.69/8"SD/CB19	10.64/8"SD/CB21
CB21	4'	14.73	10.56/8"SD/CB20	10.51/8"SD/CB22
CB22	4'	14.76	10.43/8"SD/CB21 10.43/8"SD/	10.38/8"SD/CB23
CB23	4'	14.78	10.23/8"SD/CB22 10.23/10"SD/CB24	10.13/10"SD/CB25
CB24	4'	14.75	10.40/10"SD/	10.30/10"SD/CB23
CB25	4'	14.46	10.05/10"SD/CB23 10.05/8"SD/	10.00/12"SD/CB26
CB26	4'	14.46	9.88/12"SD/CB25 9.88/8"SD/ 9.88/8"SD/CB28	9.83/15"SD/DMH 1
CB27	5'	14.40	9.63/8"SD/ 9.63/24"SD/CB34 9.63/10"SD/ 9.63/15"SD/CB11	9.53/24"SD/DMH 6
CB28	4'	14.51	10.13/8"SD/CB6	10.08/8"SD/CB26
CB29	4'	14.60	9.76/8"SD/	9.71/8"SD/DMH 2
CB30	4'	14.71		10.70/8"SD/CB31
CB31	4'	14.66	10.54/8"SD/CB30	10.49/8"SD/CB6
CB32	4'	14.77	10.49/10"SD/CB13	10.44/10"SD/CB33
CB33	4'	14.77	10.38/10"SD/CB32 10.38/8"SD/	10.33/10"SD/DMH 7
CB34	4'	14.29	9.82/24"SD/ 9.82/24"SD/	9.72/24"SD/CB27
CB35	4'	29.50		25.50/10"SD/CB1
DMH 1	7'	14.58	9.77/12"SD/ 9.77/12"SD/ 9.77/8"SD/ 9.77/8"SD/CB4 9.77/15"SD/CB26	9.77/21"SD/DMH 2
DMH 2	6'	14.48	9.53/21"SD/DMH 1 9.60/8"SD/CB29 9.60/8"SD/CB5	9.50/21"SD/DMH 3
DMH 3	8'x6'	14.46	9.35/21"SD/DMH 2	9.35/15"SD/RTANK INLET 1 9.35/15"SD/RTANK INLET2 9.35/15"SD/RTANK INLET3
DMH 4	4'	12.18	7.55/21"SD/JELLYFISH 1	7.55/21"SD/DMH 5
DMH 5	4'	13.06	7.14/21"SD/DMH 4 7.14/24"SD/JELLYFISH 2	7.04/30"SD/
DMH 6	8'x6'	13.43	9.39/24"SD/CB27 9.39/15"SD/RTANK INLET6 9.39/15"SD/RTANK INLET5	9.39/15"SD/RTANK INLET4
DMH 7	4'	14.96	10.28/10"SD/CB33 10.28/8"SD/	10.18/10"SD/CB12
JELLYFISH 1	8'x6'	14.74	7.60/21"SD/RTANK OUTLET1	7.60/21"SD/DMH 4
JELLYFISH 2	8'x6'	12.71	7.82/24"SD/RTANK OUTLET2	7.82/24"SD/DMH 5
PS	4'	12.44	7.20/8"S/SMH 8	7.00/6"FM/SMH 1
SMH 1	4'	14.70	9.99/8"S/SMH 3 10.00/6"FM/PS	9.89/8"S/SMH 2
SMH 2	4'	14.70	9.12/8"S/SMH 1 9.12/8"S/	9.02/8"S/
SMH 3	4'	14.75	10.33/8"S/ 10.33/8"S/SMH 7	10.23/8"S/SMH 1
SMH 4	4'	14.94	8.06/8"S/SMH 5 8.00/8"S/ 8.00/6"S/	7.90/8"S/SMH 8
SMH 5	4'	14.73	8.37/6"S/SMH 6	8.27/8"S/SMH 4
SMH 6	4'	14.72	8.90/6"S/	8.80/6"S/SMH 5
SMH 7	4'	14.80	10.82/6"S/	10.72/8"S/SMH 3
SMH 8	4'	14.85	7.71/8"S/SMH 4	7.60/8"S/PS

PIPE TABLE			
PIPE NAME	SIZE	LENGTH	SLOPE
PIPE S1	8" S	189'	0.0041
PIPE S2	8" S	87'	0.0041
PIPE S3	8" S	56'	0.0043
PIPE S4	8" S	80'	0.0041
PIPE S5	8" S	94'	0.0042
PIPE S6	6" S	55'	0.0052
PIPE S7	6" S	33'	0.0050
PIPE S8	6" S	81'	0.0052
PIPE S9	8" S	50'	0.0043
PIPE S10	8" S	160'	0.0041
PIPE S11	8" S	45'	0.0044
PIPE S12	8" S	97'	0.0042
PIPE S13	8" S	25'	0.0056
PIPE S14	6" S	3'	0.0050
PIPE S15	6" S	5'	0.0050
PIPE S16	6" S	4'	0.0226
PIPE S17	6" S	2'	0.0109
PIPE S18	4" S	6'	0.0050
PIPE S19	6" S	17'	0.0050
PIPE S20	6" S	3'	0.0340
PIPE S21	6" S	1'	0.0994
PIPE S22	6" S	10'	0.0050
PIPE S23	6" S	29'	0.0050
PIPE S24	8" S	14'	0.0040
PIPE S25	6" S	11'	0.0050
PIPE S26	12" S	25'	0.0107
PIPE S27	12" S	20'	0.0131
PIPE S28	12" S	9'	0.0234
PIPE S29	12" S	25'	0.0107
PIPE S30	12" S	26'	0.0102
PIPE S31	12" S	42'	0.0063
PIPE S32	12" S	7'	0.0401
PIPE S33	6" S	5'	0.0201
PIPE S34	6" S	5'	0.0187
PIPE S35	6" S	57'	0.0050
PIPE S36	8" S	2'	0.0040
PIPE S37	8" S	32'	0.0040
PIPE S38	8" S	39'	0.0040
PIPE S39	6" S	3'	0.0040
PIPE SD1	12" SD	263'	0.0035
PIPE SD2	8" SD	25'	0.0046
PIPE SD3	21" SD	60'	0.0039
PIPE SD4	21" SD	30'	0.0050
PIPE SD5	15" SD	2'	0.0000
PIPE SD6	21" SD	5'	0.0000
PIPE SD7	21" SD	78'	0.0053
PIPE SD8	30" SD	83'	0.0100
PIPE SD9	15" SD	3'	0.0162
PIPE SD10	21" SD	3'	0.0175
PIPE SD11	12" SD	48'	0.0258
PIPE SD12	10" SD	30'	0.0054
PIPE SD13	12" SD	14'	0.0050
PIPE SD14	8" SD	19'	0.0035
PIPE SD15	8" SD	30'	0.0045
PIPE SD16	8" SD	4'	0.0094
PIPE SD17	10" SD	21'	0.0034
PIPE SD18	10" SD	22'	0.0033
PIPE SD19	12" SD	53'	0.0024
PIPE SD20	15" SD	35'	0.0017
PIPE SD21	10" SD	16'	0.0011

PIPE TABLE			
PIPE NAME	SIZE	LENGTH	SLOPE
PIPE SD22	8" SD	35'	0.0045
PIPE SD23	8" SD	9'	0.2851
PIPE SD24	8" SD	17'	0.0049
PIPE SD25	8" SD	17'	0.0049
PIPE SD26	8" SD	17'	0.0049
PIPE SD27	8" SD	17'	0.0049
PIPE SD28	8" SD	24'	0.0043
PIPE SD29	8" SD	35'	0.0325
PIPE SD30	8" SD	47'	0.0043
PIPE SD31	8" SD	38'	0.0044
PIPE SD32	8" SD	32'	0.0045
PIPE SD33	8" SD	22'	0.0047
PIPE SD34	8" SD	34'	0.0045
PIPE SD35	8" SD	21'	0.0044
PIPE SD36	8" SD	24'	0.0048
PIPE SD37	8" SD	25'	0.0044
PIPE SD38	15" SD	44'	0.0017
PIPE SD39	8" SD	23'	0.0043
PIPE SD40	15" SD	40'	0.0017
PIPE SD41	8" SD	43'	0.0044
PIPE SD42	8" SD	31'	0.0045
PIPE SD43	8" SD	34'	0.0042
PIPE SD44	12" SD	48'	0.0024
PIPE SD45	10" SD	33'	0.0031
PIPE SD46	8" SD	10'	0.0048
PIPE SD47	10" SD	14'	0.0036
PIPE SD48	8" SD	15'	0.0045
PIPE SD49	10" SD	18'	0.0034
PIPE SD50	10" SD	12'	0.0037
PIPE SD51	10" SD	12'	0.0037
PIPE SD52	8" SD	9'	0.0049
PIPE SD53	8" SD	17'	0.0049
PIPE SD54	8" SD	21'	0.0048
PIPE SD55	8" SD	19'	0.0048
PIPE SD56	24" SD	113'	0.0008
PIPE SD57	24" SD	39'	0.0008
PIPE SD58	24" SD	50'	0.0009
PIPE SD59	24" SD	22'	0.0062
PIPE SD60	15" SD	2'	0.0000
PIPE SD61	15" SD	2'	0.0000
PIPE SD62	24" SD	6'	0.0000
PIPE SD63	24" SD	114'	0.0060
PIPE SD64	15" SD	2'	0.0000
PIPE SD65	15" SD	2'	0.0000
PIPE SD66	15" SD	2'	0.0000
PIPE SD67	10" SD	191'	0.0046
PIPE SD68	24" SD	66'	0.0100
PIPE SD69	10" SD	98'	0.0051
PIPE SD70	6" UD	19'	0.0520
PIPE SD71	10" SD	30'	0.0168
PIPE SD72	10" SD	18'	0.4509
PIPE SD73	10" SD	19'	0.0010

41 Hutchins Drive
Portland, Maine 04102
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STATE OF MAINE
LAUREN JANE SMETT
No. 12284
REGISTERED PROFESSIONAL ENGINEER

REV	DESCRIPTION	DATE
1	RESPONSE TO CITY COMMENTS	12/20/19
DESIGNED BY: LJS	DRAWN BY: BDM	CHECKED BY: DLC

0200' (MIN. 1.38" X 1.5")

PIPE & STRUCTURE TABLES

PORTLAND FORESIDE
DEVELOPMENT CO.
PORTLAND, ME 04102

PHASE 1 SITE PLAN SUBMISSION

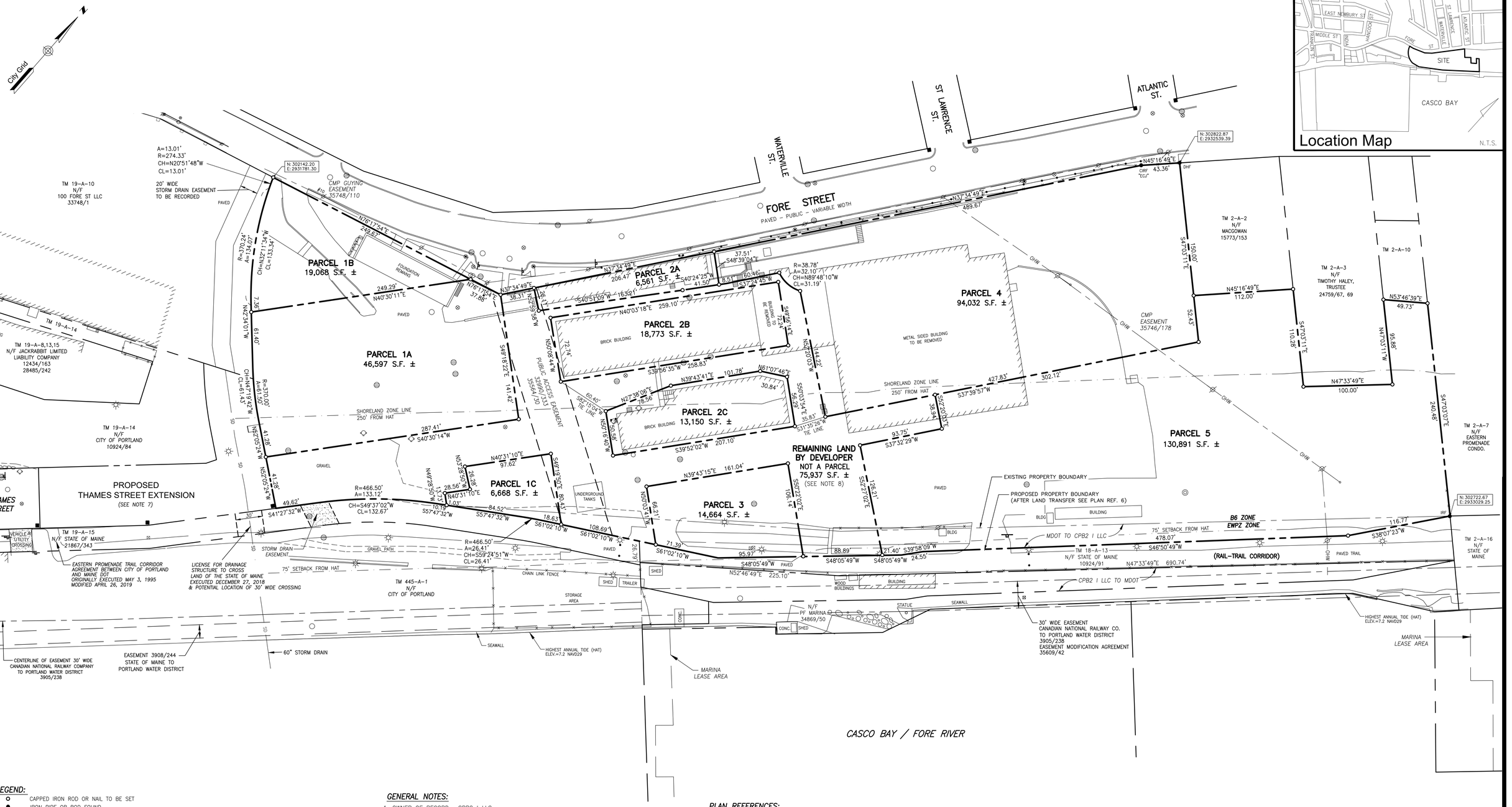
JOB NO.: 0227007
DATE: NOVEMBER 2019
SCALE: N.T.S.
SHEET: 12 OF 17

C-106

NOT FOR CONSTRUCTION

42x30 SHEET
1:1

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LEGEND:

- CAPPED IRON ROD OR NAIL TO BE SET
- IRON PIPE OR ROD FOUND
- MONUMENT FOUND
- UTILITY POLE
- MANHOLE
- ELECTRIC/GAS METER
- SIGN
- CATCH BASIN
- HYDRANT
- WATER VALVE OR SHUTOFF
- GAS VALVE
- LIGHT POLE
- FENCE
- CURB
- GUARDRAIL
- IPF/IRF — IRON PIPE OR ROD FOUND
- N/F — NOW OR FORMERLY
- 000/000 — DEED BOOK / PAGE

SCALE : 1" = 50'

0' 25' 50' 100'

APPROVED BY THE
CITY OF PORTLAND PLANNING BOARD

DATE

GENERAL NOTES:

1. OWNER OF RECORD: CPB2 I LLC
   254 COMMERCIAL STREET SUITE 118, PORTLAND, ME 04101
   C.C.R.D. BOOK 31425 PAGE 267, BOOK 30879 PAGE 75,
   BOOK 35264 PAGE 268 & BOOK 35576 PAGE 153

2. PARCEL IS SHOWN AS 18-A001, 19-A003 & P/O 19-A010 ON THE CITY OF PORTLAND'S TAX ASSESSORS MAPS.

3. BEARINGS ARE BASED ON MAINE STATE PLANE COORDINATES WEST ZONE NAD83.
   CITY POINTS: T-113-80-206 N:302687.77 E:2932345.31
   T-113-12-111 N:302722.13 E:2933029.45

4. PARCEL IS LOCATED IN ZONE C, AREAS OF MINIMAL FLOODING, AND FLOOD ZONE A2 ELEV. 10, FLOOD INSURANCE RATE MAP 230051-0014B EFFECTIVE DATE JULY 17, 1986.

5. BENCH MARK: NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA) – TIDAL BENCHMARK. BENCH MARK STAMPING: NO. 3 1971 ELEVATION 11.02 FEET CITY DATUM.

6. PARCEL IS LOCATED IN THE B6 URBAN COMMERCIAL BUSINESS ZONE AND PARTIALLY IN THE EWPZ WATERFRONT ZONE AS SHOWN ON THE CITY OF PORTLAND ZONING MAP.

7. THAMES STREET IS NOT PART OF THIS SUBDIVISION. THAMES STREET EXTENSION IS NOT AN ACCEPTED CITY STREET AS OF THE DATE OF THIS PLAN.

8. THE "REMAINING LAND BY DEVELOPER" SHALL REMAIN PRIVATE PROPERTY AND SHALL BE UTILIZED TO PROVIDE ACCESS AND UTILITIES TO THE PARCELS SHOWN.

PLAN REFERENCES:

1. LAND TITLE SURVEY & SUBDIVISION PLAN IN PORTLAND, MAINE U.S.A. MADE FOR THE TRUST FOR PUBLIC LAND, THE CITY OF PORTLAND, THE MAINE DEPARTMENT OF TRANSPORTATION, THE CANADIAN NATIONAL RAILWAY COMPANY DATED FEB. 19, 1993, REV. 9 11/04/96 BY OWEN HASKELL, INC. AND RECORDED IN PLAN BOOK 193, PAGE 187.

2. RECORDING PLAT OCEAN GATEWAY MADE FOR THE CITY OF PORTLAND AND STATE OF MAINE, BY OWEN HASKELL, INC, DATED AUGUST 4, 2004, RECORDED IN PLAN BOOK 204, PAGE 622-624

3. BOUNDARY & TOPOGRAPHY SURVEY AT 58 FORE STREET, PORTLAND, MAINE MADE FOR WOODARD & CURRAN BY OWEN HASKELL, INC. AUGUST 29, 2016, REVISED THROUGH FEB. 2019.

4. EXHIBIT PLAN PARCELS TO BE CONVEYED 58 FORE STREET, PORTLAND, MAINE MADE FOR WOODARD & CURRAN BY OWEN HASKELL, INC. DATED MARCH 21, 2018.

5. TOPOGRAPHIC SURVEY 100 FORE STREET MADE FOR JONATHAN COHEN BY OWEN HASKELL, INC DATED DECEMBER 4, 2017 REVISED THROUGH 12/17/18.

6. AMENDED SUBDIVISION PLAN, OCEAN GATEWAY, COMMERCIAL STREET, THAMES STREET & FORE STREET, PORTLAND, MAINE MADE FOR OWNER OF RECORD CITY OF PORTLAND JULY 17, 2019 BY OWEN HASKELL.

CERTIFICATE:

OWEN HASKELL, INC. HEREBY CERTIFIES THAT THIS PLAN IS BASED ON, AND THE RESULT OF, AN ON THE GROUND FIELD SURVEY AND THAT TO THE BEST OF OUR KNOWLEDGE, INFORMATION AND BELIEF, IT CONFORMS TO THE BOARD OF LICENSURE FOR PROFESSIONAL LAND SURVEYORS CURRENT STANDARDS OF PRACTICE.

DATE

RANDY R. LOUBIER, PLS #2407

Subdivision Plat
Portland Foreside
Thames Street & Fore Street
Portland, Maine
Made for Owner of Record
CPB2 I LLC
254 Commercial St. Suite 118, Portland, ME 04101

OWEN HASKELL, INC.
PROFESSIONAL LAND SURVEYORS
390 U.S. ROUTE ONE, UNIT 10, FALMOUTH, MAINE 04105

DRAWN BY: RRL / JLW	DATE: JAN. 14, 2020	JOB NO. 2019-013 P	
CHECKED BY: RRL	SCALE: 1" = 50'	DRWG. NO. SP-B	

42x30 SHEET
1:1

FORE STREET

MATCHLINE – SEE SHEET L2.10

FORE CONNECTOR

ASPHALT PAVING, SEE CIVIL DWGS

CONNECT TO EXISTING SIDEWALK

SIDEWALK DESIGN TBD. COORDINATION WITH THE CITY OF PORTLAND

3 LD2.0 BIKE RACK (CITY STANDARD), 1

5 LD2.0 MONOLITHIC GRANITE BENCH

7 LD1.0 BRICK SIDEWALK

1 LD1.0 LIGHT DUTY STONE PAVING

FENCE 3

PARKING GARAGE ACCESS, SEE ARCH.

FENCE 5

PLANTING AREA

RET. WALL, SEE OTHERS

1: L1.20 STAIR LAYOUT & MATERIALS PLAN

PIPE SD9

BUILDING 1A ROOF. SEE ARCH DRAWINGS FOR TEMPORARY ROOFTOP FINISH

BUILDING 24

BUILDING 14

BUILDING 15

BUILDING 16

TOWNHOUSES

BLOCK 4

8 LD1.0 STEEL EDGING PINNED TO CONCRETE

6 LD1.0 LIGHT DUTY STONE PAVING OVER CONCRETE SLAB

BUILDING 1A

3 LD2.0 BIKE RACKS, 3

TRAIN TRACK INLAY

2 LD1.0 HEAVY-DUTY STONE PAVING

5 LD1.0 GRANITE CURB AT PLANTING, TYP.

2 LD2.0 LITTER/RECYCLING RECEPTACLE, TYP.

3 LD2.0 BIKE RACKS, 3

BUILDINGS 2 & 3

RECLAIMED GRANITE SLAB

RELOCATED HISTORIC WATER TANK AND BOILER

3 LD2.0 BIKE RACKS, 3

CONNECT TO EXISTING SIDEWALK

4 LD2.0 METAL BOLLARD ILLUMINATED, SEE L5.00

4 LD1.0 EDGE – PAVING TO PLANTING TYP.

2 LD2.0 LITTER/RECYCLING RECEPTACLE, TYP.

1 LD2.0 BENCH TYPE B, TYP.

4 LD2.0 METAL BOLLARD, TYP.

X LD2.0 BENCH TYPE C, TYP.

BUILDING 1 MEMORY, PAVING INLAY

RECLAIMED GRANITE SLAB

POLE LIGHT, TYP. SEE L5.00

BUILDING 6

BUILDING 6B

2 LD1.0 HEAVY-DUTY STONE PAVING

2 LD2.0 LITTER/RECYC. RECEPTACLE, TYP.

3 LD2.0 BIKE RACKS, 3

X LD2.0 BENCH TYPE D, TYP.

HYDRANT

6 LD2.0 STONE BOLLARD

HYDRANT, SEE CIVIL

(2) DROP-OFF PARKING SPACES

(7) PARKING SPACES

STONE INLAY CROSSWALK

BUILDING 12

2 LD1.0 HEAVY DUTY STONE PAVING

4 LD2.0 METAL BOLLARD, NON-ILLUMINATED, TYP.

POLE LIGHT, TYP. SEE L5.00

ELEVATED TERRACE

FUEL TANK VENT PIPES RELOCATED AND ENCLOSED IN PERFORATED METAL ILLUMINATED SIGN, APPROXIMATE LOCATION SHOWN

ASPHALT PAVEMENT

3 LD2.0 BIKE RACKS, 6

4 LD1.0 EDGE, PAVING TO PLANTING, TYP.

EXISTING TRAIL

RELOCATED NARROW GAUGE RAIL

EASTERN PROMENADE TRAIL

CONNECT TO EXISTING TRAIL

5 LD2.0 MONOLITHIC GRANITE BENCH

FENCE 1

NEW SEAWALL BY OTHERS

ASPHALT PAVEMENT, SEE CIVIL

100 YEAR FLOOD LINE, ZONE V2 (EL 13) AS SCALED FROM FLOOD INSURANCE RATE MAP PANEL 230051 0014B DATED JULY 17, 1986

MATCHLINE – SEE SHEET L2.10

BAR SCALE 1" in. 20'

NOT FOR CONSTRUCTION

WOODARD & CURRAN
41 Hutchins Drive
Portland, Maine 04102
800.426.4262 | www.woodardcurran.com

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mbla inc
michael boucher landscape architecture
457 US Route 1 Suite 2
Freeport, ME 04032
t. 207.865.1080
f. 207.865.1455
www.boucherlandscape.com

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REV	DESCRIPTION	DATE
1	08.19.20 SPEC SUBMISSION	

REV	DESCRIPTION	DRAWN BY:

SITE LAYOUT & MATERIALS PLAN

PORTLAND FORESIDE DEVELOPMENT CO.
PORTLAND, ME 04102

PHASE 1 SITE PLAN SUBMISSION, REVISED

JOB NO.: 0227007
DATE: JANUARY 21, 2020
SCALE: 1"=20'
SHEET: OF

L2.00

P:\PDCV1_CAD\Projects\20102.HP submission\08 FORE STREET SPS–L2.00 LAYOUT MATERIALS PLAN.dwg, Jan 21, 2020 - 5:00pm

SITE FURNISHINGS SCHEDULE

SYM.	LABEL	QTY.	NAME	COMPANY	SIZE	NOTES
FENCING						
--		263 LF	FENCE 1	--		WOOD FENCE, HORIZ. SLAT, PAINTED WHITE
--		176 LF	FENCE 2	AMERISTAR		IMPASSE II, GAUNTLET STYLE
--		386 LF	FENCE 3	--	6' H	CHAINLINK FENCE
--		293 LF	FENCE 4	--		CHAINLINK CONSTRUCTION FENCE, SEE CONSTRUCTION MANAGEMENT PLAN
--		170 LF	FENCE 5	--		MOUNTED ON MASONRY WALL, SEE BRUNER COTT
RECEPTACLES						
--		9	SELECT RECYCLING SYSTEM	LANDSCAPE FORMS		DOUBLE UNIT (TRASH, RECYCLE)
BIKE RACKS						
--	A	19	LOTLIMIT	MMCITE		GALVANIZED METAL FINISH
--	B	2	BIKE HITCH	DERO		CITY OF PORTLAND STANDARD BIKE RACK
BENCHES						
--	A	--	BACKLESS BENCH	LANDSCAPE FORMS	23" X 70"	FGP BENCH BACKLESS
--	B	6	BACKED BENCH	LANDSCAPE FORMS	28" X 70"	FGP BENCH BACKED
--	C	7	BACKED BENCH	ESCOFET	24" X 59"	MONTSENY 150
--	D	2	BACKED BENCH	ESCOFET	24" X 118"	MONTSENY 300
--		2	RECLAIMED MONOLITHIC GRANITE BENCH	--	3' X 15'	
BOLLARDS						
--			METAL BOLLARD	FORMS + SURFACES	41" H	GALVANIZED METAL FINISH
--			METAL BOLLARD ILLUMINATED	FORMS + SURFACES	41" H	GALVANIZED METAL FINISH
--			STONE BOLLARD		18" H	

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REV	DESCRIPTION	DATE
1	90% SUBMISSION	1/21/20

CHECKED BY:

REV	DESCRIPTION	DATE

DRAWN BY:
DESIGNED BY:

SITE LAYOUT & MATERIALS PLAN

PORTLAND FORESIDE
DEVELOPMENT CO.
PORTLAND, ME 04102

PHASE 1 SITE PLAN SUBMISSION, REVISED

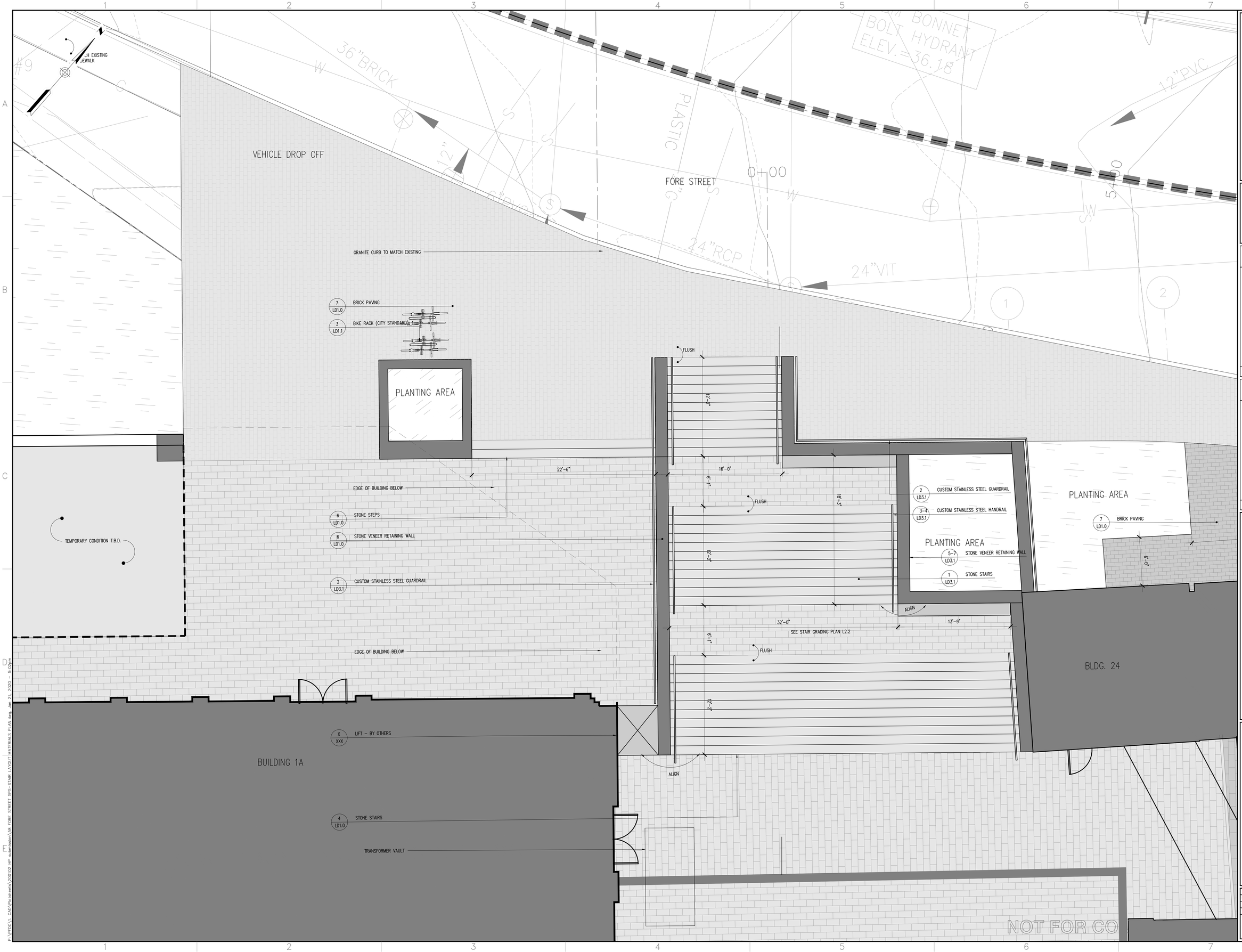
JOB NO.: 0227007
DATE: JANUARY 21, 2020
SCALE: 1"=20'
SHEET: OF

L2.10

BAR SCALE
1" = 20'
CHECK GRAPHIC SCALE BEFORE USING

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P:\PTPO\1_CAD\Plotsets\200102 HP submission\SB FORE STREET SPS-L2.00 LAYOUT MATERIALS PLAN.dwg, Jan 21, 2020 - 4:47pm



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LANDSCAPE ARCHITECT
Michael Boucher
457 US Route 1 Suite 2
Freeport, Maine
t 207.865.1080

REV	DESCRIPTION	DATE
1	90% SPR SUBMISSION	1/21/20

CHECKED BY: DLC

REV	DESCRIPTION	DATE

DRAWN BY: BDM

DESIGNED BY: BDM

SITE PLAN

**PORTLAND FORESIDE DEVELOPMENT CO.
PORTLAND, ME 04102**

BUILDING 1A, BUILDING 12 & SHARED STREET & BLOCK 2

JOB NO.: 0227007
DATE: JANUARY 21, 2020
SCALE: 1/4"=1'-0"
SHEET: OF

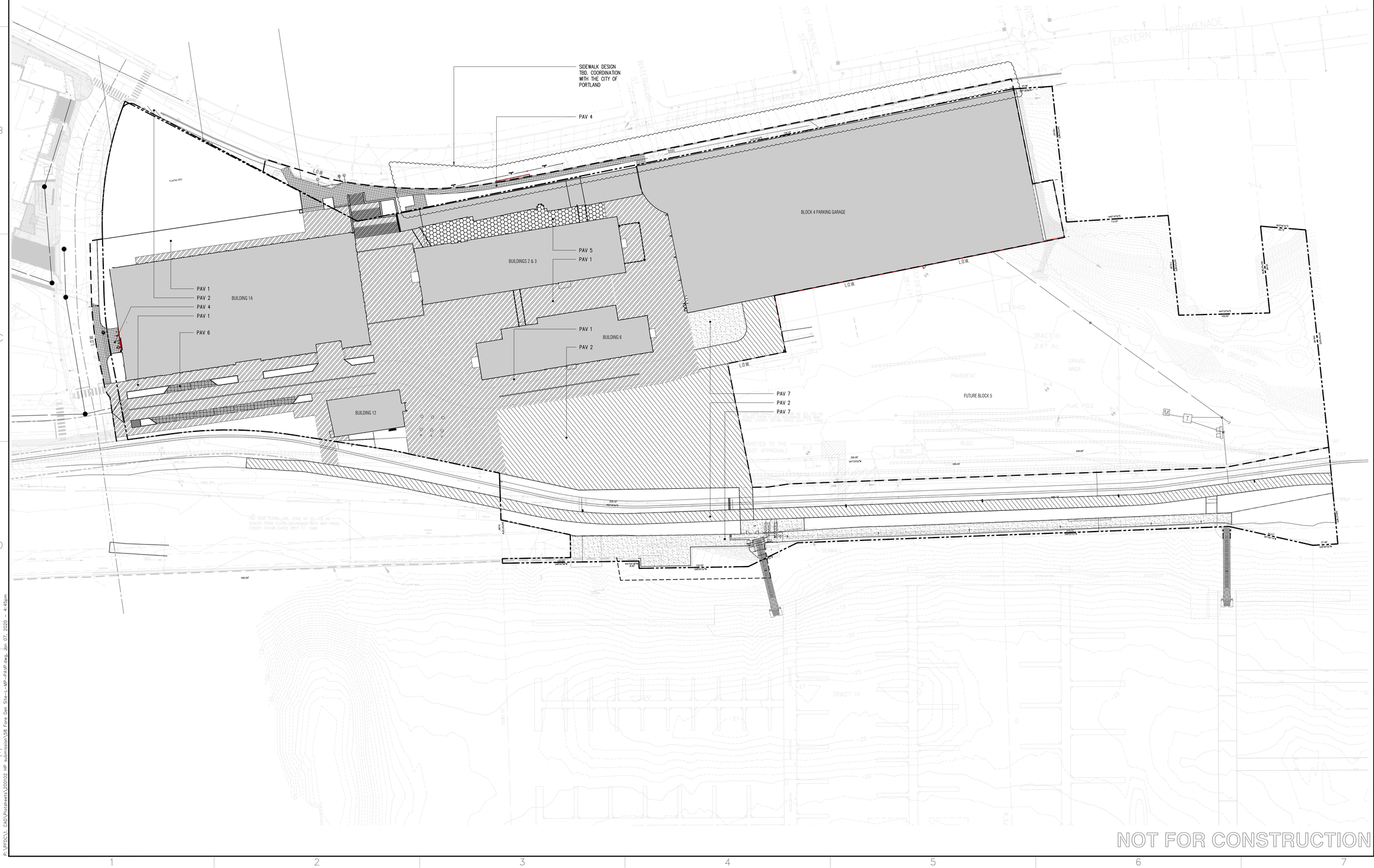
L1.20

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BASE PREP. KEY

SYM.		NAME	MATERIAL
BASE TYPE			
		PAV 1 – PEDESTRIAN AREA AND STREET	PAV 1 – MUSKOGEE BLACK GRANITE PAVERS
		PAV 2 – BITUMINOUS PAVEMENT AREAS	PAV 2 – BITUMINOUS
		PAV 3 – NOT USED	
		PAV 4 – PORTLAND CITY SIDEWALK	PAV 4 – PORTLAND CITY BRICK
		PAV 5 – ALLEY	PAV 5 – ENDICOTT BRICK, MANGANESE IRONSPOT
		PAV 6 – STREET PARKING SPACES	PAV 6 – ASHTON GRAY GRANITE
		PAV 7 – STONE DUST	PAV 7 – STONE DUST

NOTE: SEE OTHER DETAILS ON LAYOUT AND
MATERIALS PLAN L1.00, L1.10 & L1.20



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REV	DESCRIPTION	DATE

DRAWN BY:

SITE PAVING MATERIALS PLAN

**PORTLAND FORESIDE DEVELOPMENT CO.
PORTLAND, ME 04102**

BUILDING 1A, BUILDING 12 & SHARED STREET & BLOCK 2

JOB NO.: 0227007
DATE: JANUARY 7, 2020
SCALE: 1" = 40'
SHEET: OF 11

L2.10

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P:\PTDC\1_CAD\Plotsheets\200102_HP submission\X58 Fore Gen Site-L-MP-PAVP.dwg, Jan 07, 2020 - 4:45pm

42x30 SHEET
1:1

FORE STREET

FORE CONNECTOR

R6 B6

MATERVILLE STREET

MATCHLINE – SEE SHEET L4.10

MATCHLINE – SEE SHEET L4.10

BUILDING 1A

BUILDING 24

BUILDING 14

BUILDING 15

BUILDING 16

TOWNHOUSES

BLOCK 4

BUILDINGS 2 & 3

BUILDING 6

BUILDING 6B

BUILDING 12

NOTE: PLANT SCHEDULE CAN BE FOUND ON SHEET L4.10

2 LD4.0 STREET TREE PLANTING

5 LD4.0 PAVEMENT SUPPORT APPROX. EXTENTS

6 LD4.0 TREE RING TYP. ALL TREES IN PAVEMENT

BP 1

BG 1

QP 6

QP 1

RA 19

RA 46

RA 53

RA 220

RA 84

RA 78

RA 33

RA 68

RA 20

RA 30

RA 54

RA 32

RA 170

RA 98

RA 55

AR 3

AR 10

LT 4

LS 1

GT 1

AC 1

CA 10

CA 11

CA 19

MP 10

FR 1625 SF

RT 31

IV 3

B6 EWPZ

MOVABLE PLANTERS WILL BE USED IN FLEXIBLE EVENT SPACE

SALT TOLERANT GRASS SEED MIX

100 YEAR FLOOD LINE, ZONE V2 (EL 13) AS SCALED FROM FLOOD INSURANCE RATE MAP PANEL 230051 0014B DATED JULY 17, 1986

PIPE SD9

LAWN

GRAVEL PATH

GRAVEL

CHAIN LINK FENCE

GUARDRAIL

SHED

TRAILER

STORAGE AREA

CONC.

8"PVC

FORE STREET PAVED PUBLIC - VARIABLE WIDTH

PAVED ENTRANCE

SWH-2859 RIM=54.34 6" INV. IN=50.34 6" DIE W/ HOOD=49.33

SWH-0861 RIM=54.22 6" INV.IN=51.72 6" INV.OUT=51.32

SWH-0862 RIM=54.17 6" INV.IN=50.82 8"DIE=50.42

SSMH-1960 RIM=52.86 15" IN=44.16 15" OUT=43.71

SSMH-1959 RIM=49.77 15" IN=43.07 24"IN=42.62 24" OUT=41.92

SWH-552.1 RIM=34.84 6" INV. IN=32.05 12" INV. OUT=30.85

TM 16-J-26 31 FORE STREET CONDOMINIUM 34470/15

TM 17-G-7 N/F MUNJOY SOUTH TOWNHOUSES LLC 35318/45

CASCO BAY COM 16664/2

PRIVATE

S48°04'59"W

N41°54'38"E 8.00'

20' 0 20' 40'

BAR SCALE

CHECK GRAPHIC SCALE BEFORE USING

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P:\PDO\1_CAD\Plotsheets\200121_submission\L4.00 FORE STREET-L4.00 PLANTING PLAN.dwg, Jan 22, 2020 - 9:01am

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1	08.13.20 REVISED PER CITY COMMENTS	08/13/20

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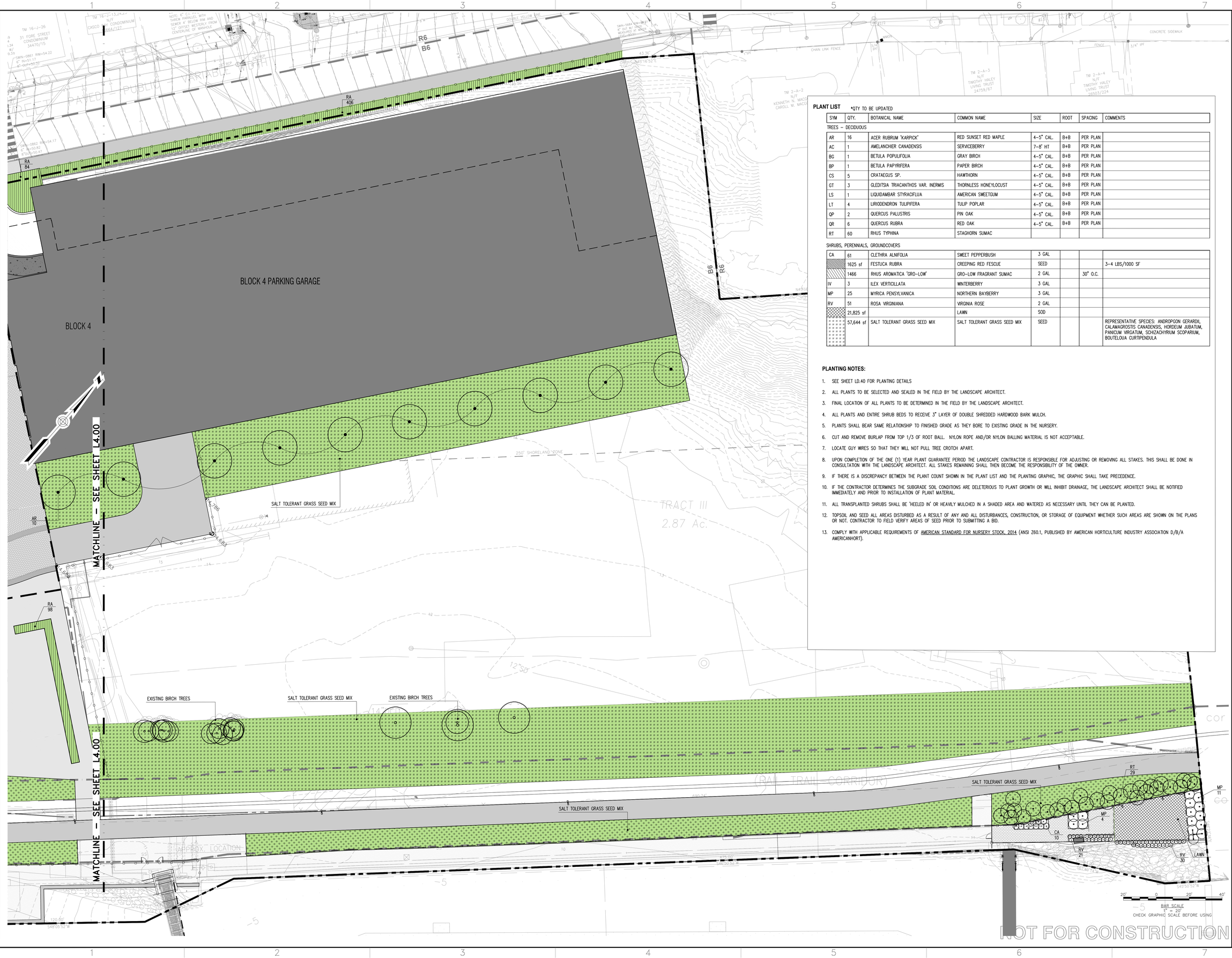
SITE PLANTING PLAN

PORTLAND FORESIDE DEVELOPMENT CO.
PORTLAND, ME 04102

PHASE 1 SITE PLAN SUBMISSION

JOB NO.: 0227007
DATE: JANUARY 21, 2020
SCALE: 1"=20'
SHEET: OF

L4.00



PLANT LIST *QTY TO BE UPDATED

SYM	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	SPACING	COMMENTS
TREES – DECIDUOUS							
AR	16	ACER RUBRUM 'KARPICK'	RED SUNSET RED MAPLE	4–5" CAL.	B+B	PER PLAN	
AC	1	AMELANCHIER CANADENSIS	SERVICEBERRY	7–8' HT	B+B	PER PLAN	
BG	1	BETULA POPULIFOLIA	GRAY BIRCH	4–5" CAL.	B+B	PER PLAN	
BP	1	BETULA PAPYRIFERA	PAPER BIRCH	4–5" CAL.	B+B	PER PLAN	
CS	5	CRATAEGUS SP.	HAWTHORN	4–5" CAL.	B+B	PER PLAN	
GT	3	GLEDITSIA TRIACANTHOS VAR. INERMIS	THORNLESS HONEYLOCUST	4–5" CAL.	B+B	PER PLAN	
LS	1	LIQUIDAMBAR STYRACIFLUA	AMERICAN SWEETGUM	4–5" CAL.	B+B	PER PLAN	
LT	4	LIRIODENDRON TULIPIFERA	TULIP POPLAR	4–5" CAL.	B+B	PER PLAN	
QP	2	QUERCUS PALUSTRIS	PIN OAK	4–5" CAL.	B+B	PER PLAN	
QR	6	QUERCUS RUBRA	RED OAK	4–5" CAL.	B+B	PER PLAN	
RT	60	RHUS TYPHINA	STAGHORN SUMAC				

SHRUBS, PERENNIALS, GROUNDCOVERS

CA	61	CLETHRA ALNIFOLIA	SWEET PEPPERBUSH	3 GAL			
	1625 sf	FESTUCA RUBRA	CREEPING RED FESCUE	SEED			3–4 LBS/1000 SF
	1466	RHUS AROMATICA 'GRO–LOW'	GRO–LOW FRAGRANT SUMAC	2 GAL		30" O.C.	
IV	3	ILEX VERTICILLATA	WINTERBERRY	3 GAL			
MP	25	MYRICA PENSYLVANICA	NORTHERN BAYBERRY	3 GAL			
RV	51	ROSA VIRGINIANA	VIRGINIA ROSE	2 GAL			
	21,825 sf		LAWN	SOD			
	57,644 sf	SALT TOLERANT GRASS SEED MIX	SALT TOLERANT GRASS SEED MIX	SEED			REPRESENTATIVE SPECIES: ANDROPGON GERARDII, CALAMAGROSTIS CANADENSIS, HORDEUM JUBATUM, PANICUM VIRGATUM, SCHIZACHYRIUM SCOPARIUM, BOUTELOUA CURTIPENDULA

PLANTING NOTES:

1. SEE SHEET LD.40 FOR PLANTING DETAILS
2. ALL PLANTS TO BE SELECTED AND SEALED IN THE FIELD BY THE LANDSCAPE ARCHITECT.
3. FINAL LOCATION OF ALL PLANTS TO BE DETERMINED IN THE FIELD BY THE LANDSCAPE ARCHITECT.
4. ALL PLANTS AND ENTIRE SHRUB BEDS TO RECEIVE 3" LAYER OF DOUBLE SHREDDED HARDWOOD BARK MULCH.
5. PLANTS SHALL BEAR SAME RELATIONSHIP TO FINISHED GRADE AS THEY BORE TO EXISTING GRADE IN THE NURSERY.
6. CUT AND REMOVE BURLAP FROM TOP 1/3 OF ROOT BALL. NYLON ROPE AND/OR NYLON BALLING MATERIAL IS NOT ACCEPTABLE.
7. LOCATE GUY WIRES SO THAT THEY WILL NOT PULL TREE CROTCH APART.
8. UPON COMPLETION OF THE ONE (1) YEAR PLANT GUARANTEE PERIOD THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR ADJUSTING OR REMOVING ALL STAKES. THIS SHALL BE DONE IN CONSULTATION WITH THE LANDSCAPE ARCHITECT. ALL STAKES REMAINING SHALL THEN BECOME THE RESPONSIBILITY OF THE OWNER.
9. IF THERE IS A DISCREPANCY BETWEEN THE PLANT COUNT SHOWN IN THE PLANT LIST AND THE PLANTING GRAPHIC, THE GRAPHIC SHALL TAKE PRECEDENCE.
10. IF THE CONTRACTOR DETERMINES THE SUBGRADE SOIL CONDITIONS ARE DELETERIOUS TO PLANT GROWTH OR WILL INHIBIT DRAINAGE, THE LANDSCAPE ARCHITECT SHALL BE NOTIFIED IMMEDIATELY AND PRIOR TO INSTALLATION OF PLANT MATERIAL.
11. ALL TRANSPLANTED SHRUBS SHALL BE 'HEELED IN' OR HEAVILY MULCHED IN A SHADED AREA AND WATERED AS NECESSARY UNTIL THEY CAN BE PLANTED.
12. TOPSOIL AND SEED ALL AREAS DISTURBED AS A RESULT OF ANY AND ALL DISTURBANCES, CONSTRUCTION, OR STORAGE OF EQUIPMENT WHETHER SUCH AREAS ARE SHOWN ON THE PLANS OR NOT. CONTRACTOR TO FIELD VERIFY AREAS OF SEED PRIOR TO SUBMITTING A BID.
13. COMPLY WITH APPLICABLE REQUIREMENTS OF AMERICAN STANDARD FOR NURSERY STOCK, 2014 (ANSI Z60.1, PUBLISHED BY AMERICAN HORTICULTURE INDUSTRY ASSOCIATION D/B/A AMERICANHORT).

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1	08.13.2020	08.14.20	MP

REV	DESCRIPTION	DATE	DRAWN BY

REV	DESCRIPTION	DATE	DESIGNED BY

SITE PLANTING PLAN

PORTLAND FORESIDE DEVELOPMENT CO.
PORTLAND, ME 04102

PHASE 1 SITE PLAN SUBMISSION

JOB NO.: 0227007
DATE: JANUARY 21, 2020
SCALE: 1"=20'
SHEET: OF

L4.10

P:\PROJ_CAD\Plotsheets\20012_submission\08 FORE STREET–L4.00 PLANTING PLAN.dwg, Jan 22, 2020 - 9:00am

42x30 SHEET
1:1

FORE CONNECTOR

FORE STREET

MATCHLINE – SEE SHEET L5.10

REFER TO ARCH. ELEVATIONS FOR OVERALL RUN LENGTHS (TYP.)

REFER TO ARCH. INTERIOR ELEVATIONS FOR QUANTITIES, LENGTHS, AND MOUNTING LOCATIONS

MATCHLINE – SEE SHEET L5.10

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SITE LIGHTING PLAN

PORTLAND FORESIDE
DEVELOPMENT CO.
PORTLAND, ME 04102

PHASE 1 SITE PLAN SUBMISSION

JOB NO.: 0227007
DATE: NOVEMBER 8, 2019
SCALE: 1"=20'
SHEET: OF
L5.00

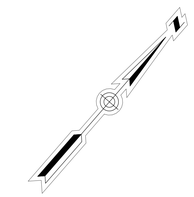
BAR SCALE
1" = 20'
0 20' 40'

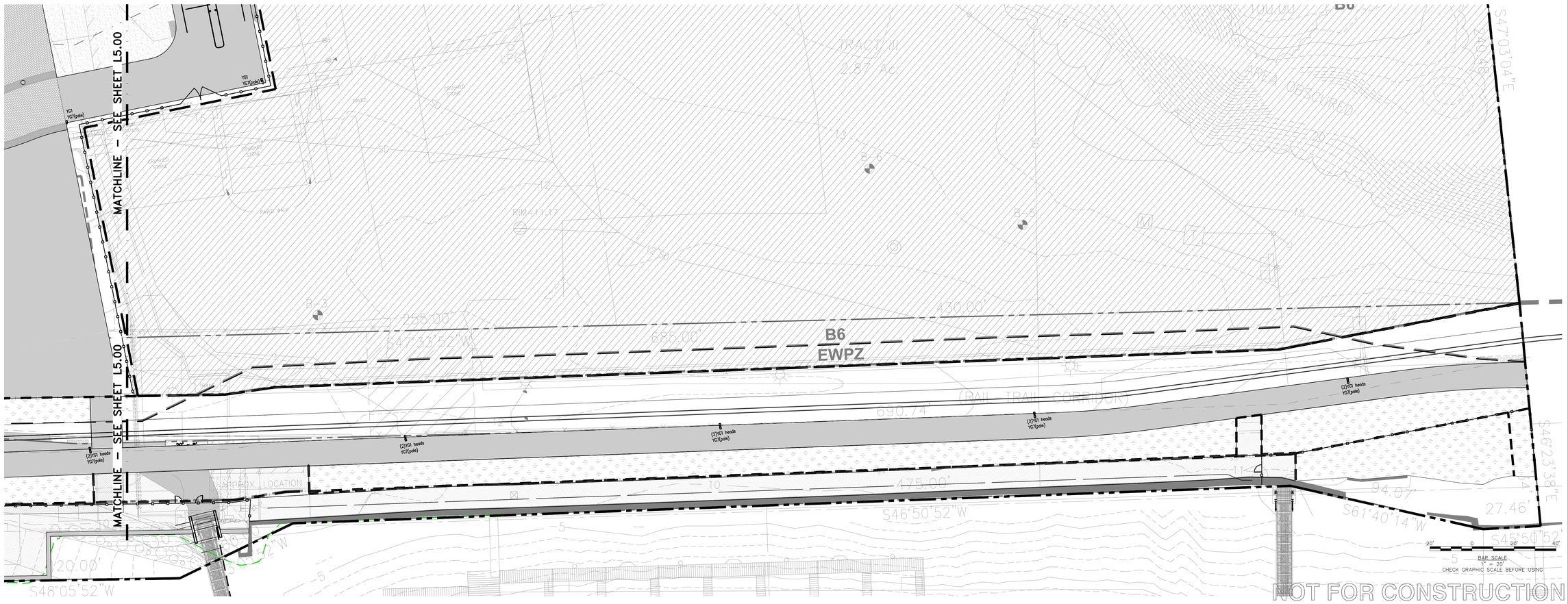
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42x30 SHEET
1:1

LIGHTING SCHEDULE

SYM.	QTY.	NAME
R1	--	USAI Lighting BeveLED2.2 Basic Downlight
S1	--	Lumenwerx Via 2 Symmetric
S2	--	LEDLinear
YG1	--	Bega Head: 77930-3000K-(Finish)
YG2	--	Forms+Surfaces Helio Bollard 41" height Helio Bollard-3000K-MOD Painted "Galvanized Steel" finish
YG3	--	Forms+Surfaces Helio Bollard 41" height Helio Bollard-3000K-MOD Painted "Galvanized Steel" finish
YG3A	--	Erco Tesis spot distribution 35077.023-(3000K)-(Finish)
YG6	-- --	Forms+Surfaces Helio Bollard 41" height Helio Bollard-MOD Security-MOD Painted "Galvanized Steel" finish TBD
YG7	--	Structura BOL round straight solid wood pole BOL-STRAIGHT POLE-20FT-5.5"-5.5"-(Wood Finish TBD)-(Tenon mounting)
YG8	--	Valmont Round Non-Tapered Aluminum Pole-20' Height-(Finish)
YG9	--	Lumenpulse Lumenbeam Medium LBM-277-30K-NS-LSLH-(Finish)-DIM-CRC-UL-(Cable Length) Tenon Mounting: PM4-1 Wide Snoot: LBMSNW-(Finish)-BK-MOD CROSS BAFFLE
YG10	--	Lumenpulse Lumenbeam Medium LBM-277-30K-WFL-(Finish)-CRC-DIM-UL-(Cable Length) Tenon Mounting: PM4-1 Wide Snoot: LBMSNW-(Finish)-BK-MOD CROSS BAFFLE
YG11	--	Bega 77 208-3000K-(Finish)
YG12	--	Lumenpulse Lumen facade – exterior Fixture: LOG ASHRAE-277 (Voltage TBC)-48- 3000K-10x10-SAM-(Finish)-DIM-ETE-CRC Radial Louver: LOGRD-48-BK (Finish TBC)-CRC
YP1	--	Santa and Cole Arne S Domus catenary cable: Tivoli TBD
YR1	--	Lumenpulse Squero SQUR-MRO55-B-LED-80-500-30-UNV-4FT-D1-1-(Mounting)-(Finish)
YS1-4'	--	Lumenpulse Lumen facade – exterior Fixture: LOG ASHRAE-277 (Voltage TBC)-48- 3000K-30x30-SAM-(Finish)-DIM-ETE-CRC Radial Louver: LOGRD-48-BK (Finish TBC)-CRC
YS1-1'	--	Lumenpulse Lumen facade – exterior Fixture: LOG ASHRAE-277 (Voltage TBC)-12- 3000K-30x30-SAM-(Finish)-DIM-ETE-CRC Radial Louver: LOGRD-48-BK (Finish TBC)-CRC
YS3	--	Lumenpulse Lumenbeam Large LBL-277-30K-NF-LSLV-(Finish)-DIM-CRC-(Cable Length)-YK TN4 Tenon Adapter Wide Snoot: LBLSNW-(Finish)-BK-MOD CROSS BAFFLE AND 9" DEEP SNOOT
YR4	--	Valmont Round Non-Tapered Aluminum Pole-10' Height-(Finish)
YS5	--	Acolyte Ribbonlyte Fixture: RB-90-SWS265-2.230-(Finish) Extrusion: AS1 Surface with horizontal mounting clips Frosted Lens Remote Dimmable Driver: 0-10V Dimmable 96W Driver
YS6	--	Wagner Lumenlinear or Lumenpod Lumenlinear TBD-LUIS-30K-20-120-MS-(Length)-(Finish)
YS7	--	Tegan Exton System Configuration TBC with Landscape Architects
YS9	--	Linea Lighting
YS10	--	Ledlinear Xoolum
YS11	--	Lumenpulse lumenbeam small
YS12	--	V2 Core 200 SX Surface
YS13	--	Lucifer Cylinder CY3
YW3	--	Visa Passage OW2480-L30K-L-3000K-MVOLTO-FT-(Finish)-DS
YW5	--	Erco Kona XS 34832.023-3000K-(Finish)
YW6	--	Lumenpulse Lumenbeam Medium LBL-277-30K-NF-LSLH-(Finish)-DIM-CRC-UL-(Cable Length) Wide Snoot: LBLSNW-(Finish)-BK-MOD CROSS BAFFLE
YW8	--	Lumenpulse Lumenbeam Medium LBL-277-30K-F-LSLH-(Finish)-DIM-CRC-UL-(Cable Length) Wide Snoot: LBLSNW-(Finish)-BK-MOD CROSS BAFFLE





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1	08 JUNE 2020 PLSUP #1	

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DRAWN BY:
DESIGNED BY:

SITE LIGHTING PLAN

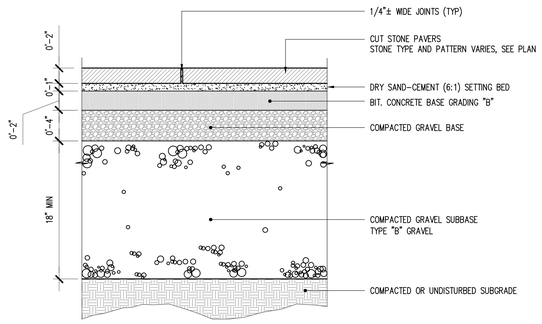
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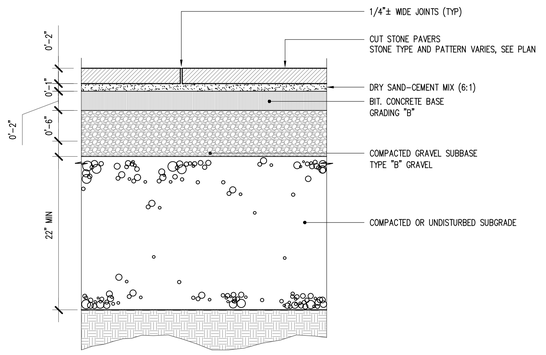
JOB NO.: 0227007
DATE: NOVEMBER 8, 2019
SCALE: 1"=20'
SHEET: OF

L5.10

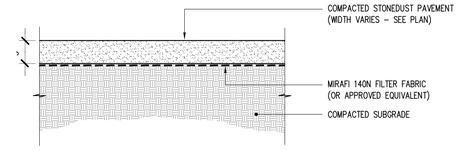
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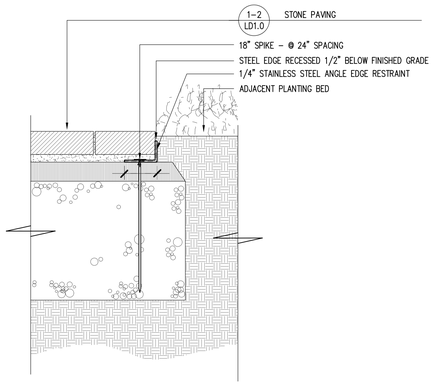
1 LIGHT DUTY STONE PAVING - TO BE COORDINATED
1 1/2" = 1'-0"



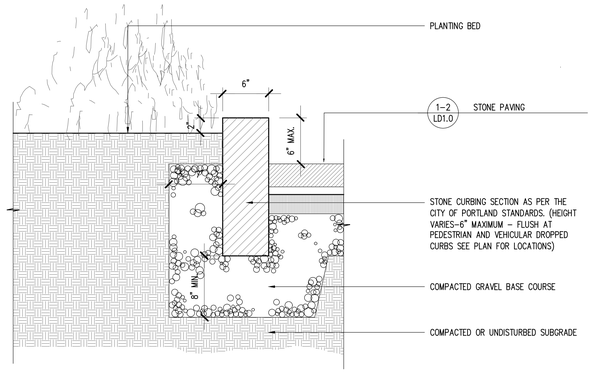
2 HEAVY-DUTY STONE PAVING - TO BE COORDINATED
1 1/2" = 1'-0"



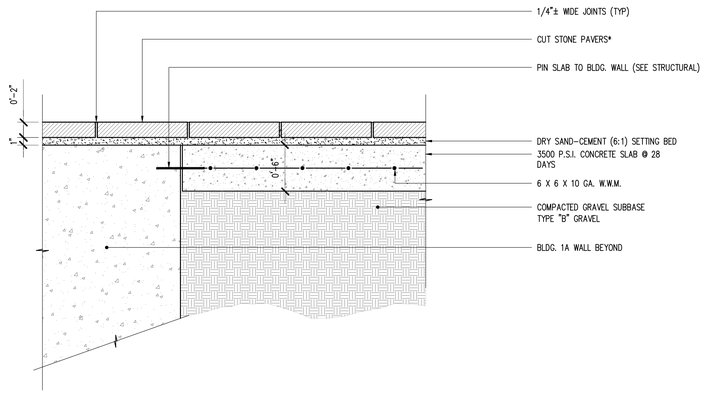
3 STONEDUST - TO BE CONFIRMED
1 1/2" = 1'-0"



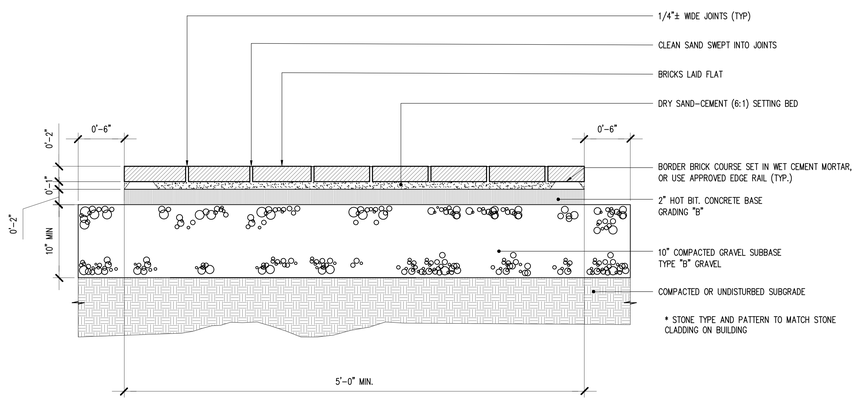
4 EDGE - PAVING TO PLANTING
1 1/2" = 1'-0"



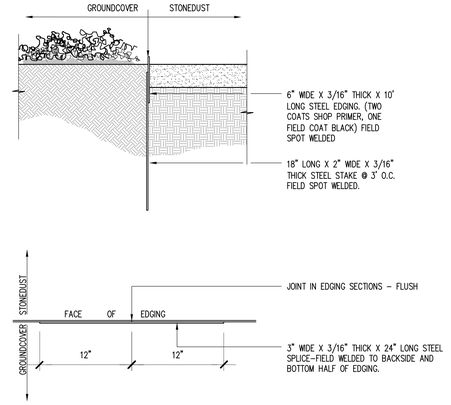
5 GRANITE CURB-PLANTING
1 1/2" = 1'-0"



6 LIGHT DUTY STONE PAVING - OVER CONCRETE SLAB
1 1/2" = 1'-0"



7 BRICK SIDEWALK
1 1/2" = 1'-0"



8 STEEL RESTRAINT EDGING
1 1/2" = 1'-0"

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1	PB 1 DOR SUBMITTAL	10/15/19	MJB

REV	DESCRIPTION	DATE	DRAWN BY:

DESIGNED BY:

SITE DETAILS

PORTLAND FORESIDE
DEVELOPMENT CO.
PORTLAND, ME 04102

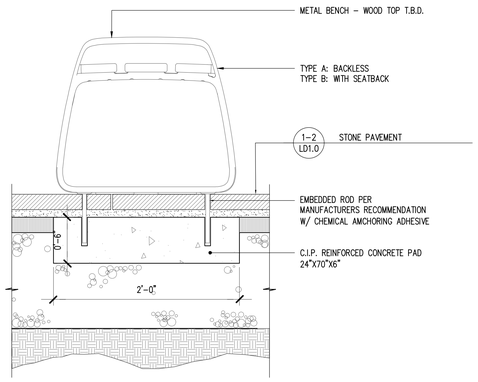
PHASE 1 SITE PLAN SUBMISSION

JOB NO.: 0227007
DATE: NOVEMBER 8, 2019
SCALE: AS NOTED
SHEET: OF

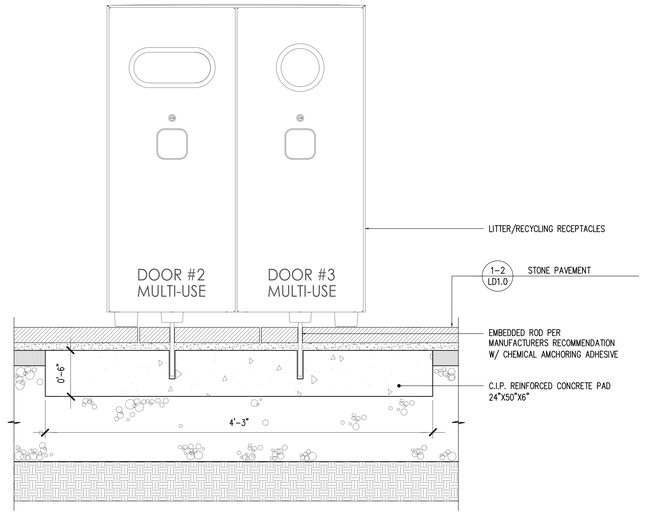
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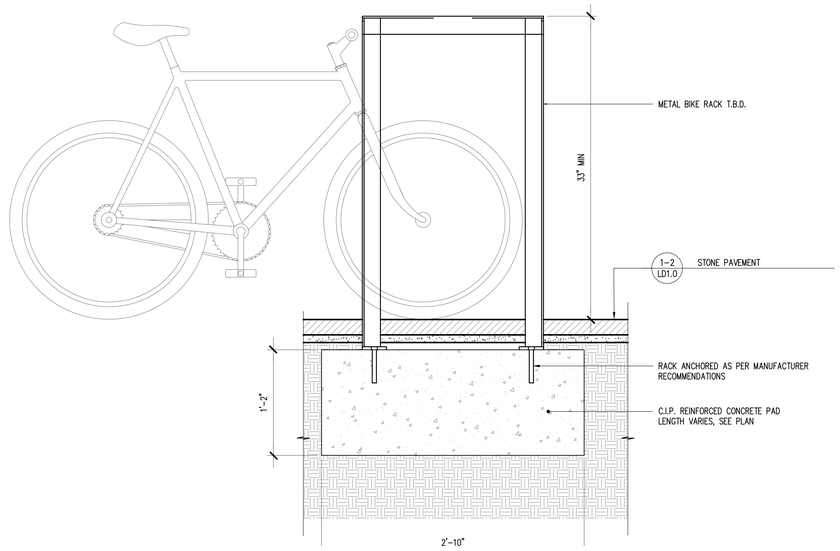
42x30 SHEET
1:1



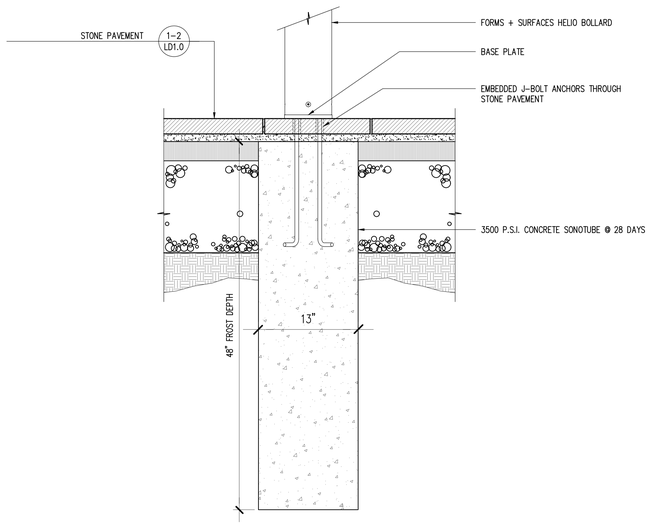
1 BENCH ATTACHMENT
1 1/2" = 1'-0"



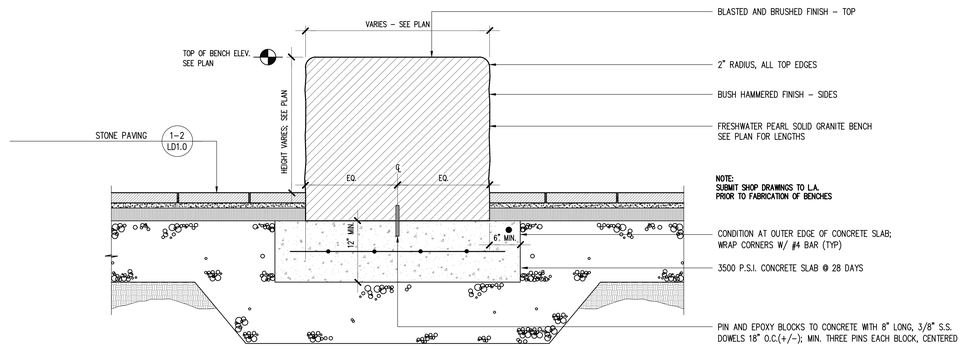
2 LITTER/RECYCLING RECEPTACLE ATTACHMENT
1 1/2" = 1'-0"



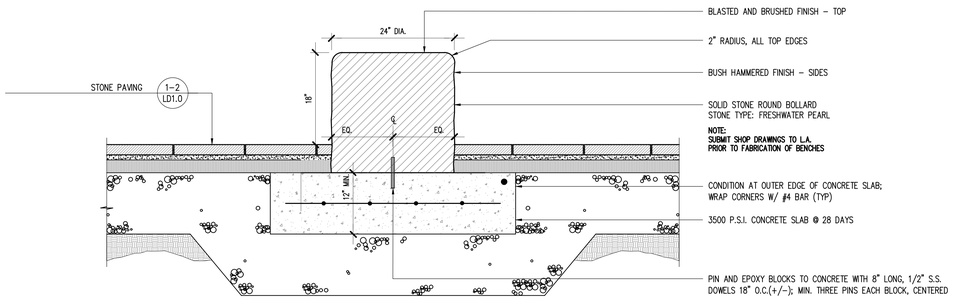
3 BIKE RACK
1 1/2" = 1'-0"



4 STEEL BOLLARD
1-1/2"=1'-0"



5 MONOLITHIC GRANITE BENCH
1"=1'-0"



6 STONE BOLLARD
1"=1'-0"

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1	08.30.19 PB SUBMITTAL	

CHECKED BY:

REV	DESCRIPTION	DATE

DESIGNED BY:
DRAWN BY:

SITE FURNISHING DETAILS

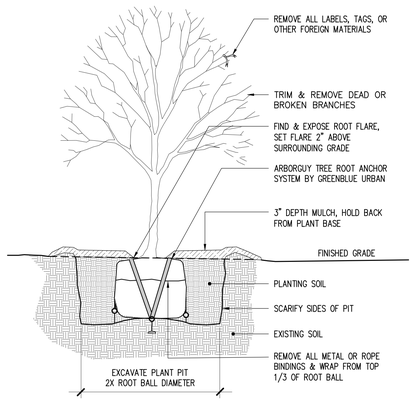
PORTLAND FORESIDE
DEVELOPMENT CO.
PORTLAND, ME 04102

PHASE 1 SITE PLAN SUBMISSION

JOB NO.: 0227007
DATE: NOVEMBER 8, 2019
SCALE: AS NOTED
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LD2.0

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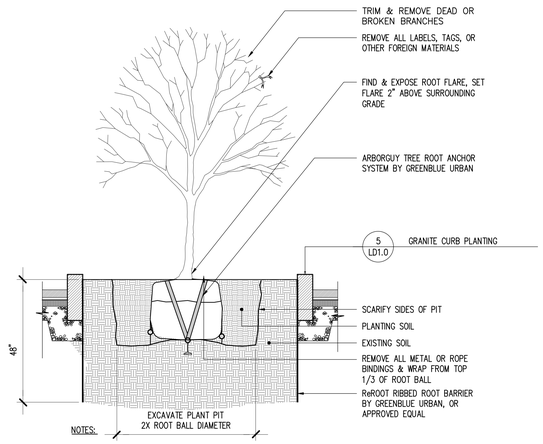


NOTES:

1. SET TREE PLUMB.
2. SECURE TREE AS REQUIRED ACCORDING TO TREE SIZE, LOCATION, & WND/WEATHER CONDITIONS.
3. IF USING ROOTBALL STABILIZATION, FOLLOW MANUFACTURER'S RECOMMENDATIONS.

1 TREE PLANTING & STAKING DETAIL

1/2" = 1'-0"

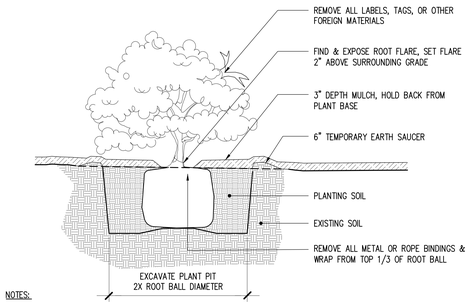


NOTES:

1. SET TREE PLUMB.
2. SECURE TREE AS REQUIRED ACCORDING TO TREE SIZE, LOCATION, & WND/WEATHER CONDITIONS.
3. IF USING ROOTBALL STABILIZATION, FOLLOW MANUFACTURER'S RECOMMENDATIONS.

2 STREET TREE PLANTING

1/2" = 1'-0"

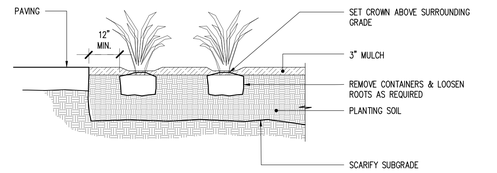


NOTES:

1. SET SHRUB PLUMB.
2. SECURE SHRUB AS MAY BE REQUIRED ACCORDING TO SIZE, LOCATION, & WND/WEATHER CONDITIONS.
3. IF USING ROOTBALL STABILIZATION, FOLLOW MANUFACTURER'S RECOMMENDATIONS.

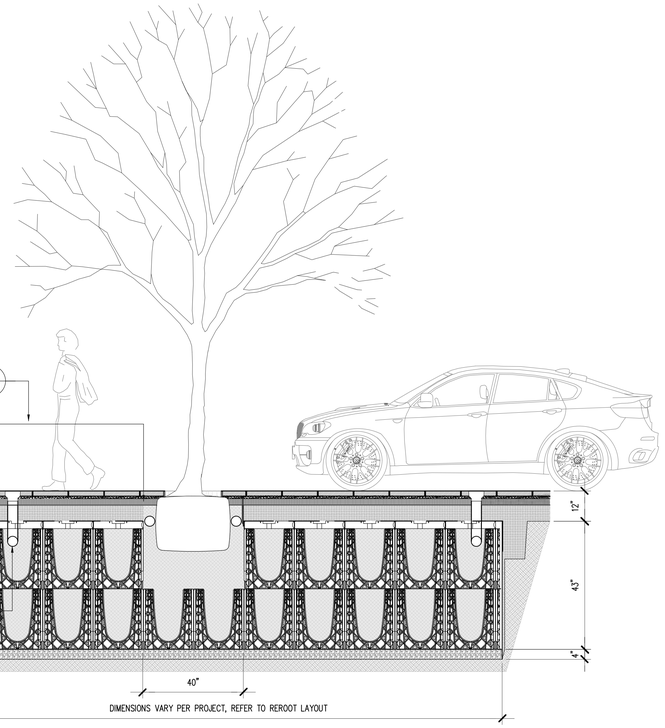
3 SHRUB PLANTING DETAIL

1/2" = 1'-0"



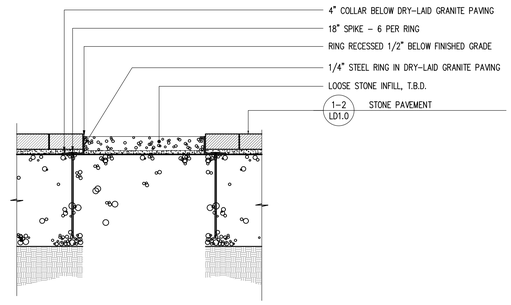
4 GROUNDCOVER PLANTING DETAIL

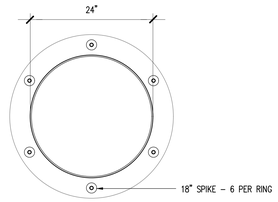
1/2" = 1'-0"

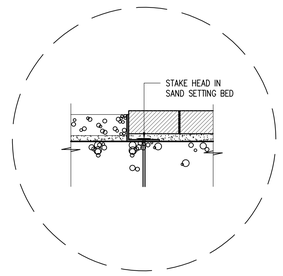


5 ROOTSPACE PLANTING SYSTEM

NOT TO SCALE







6 TREE RING IN STONE PAVEMENT

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1	08 SPEC-LD SITE PLAN		

REV	DESCRIPTION	DATE	DRAWN BY	DESIGNED BY

SITE PLANTING DETAILS

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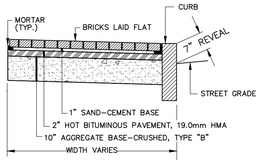
PHASE 1 SITE PLAN SUBMISSION

JOB NO.: 0227007
DATE: NOVEMBER 8, 2019
SCALE: AS NOTED
SHEET: OF

LD4.0

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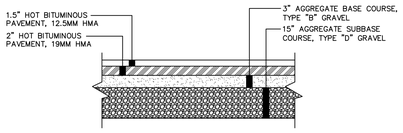
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SECTION

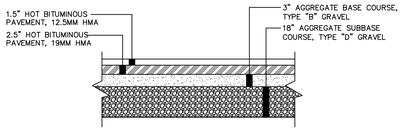
BRICK SIDEWALK DETAIL

N.T.S.



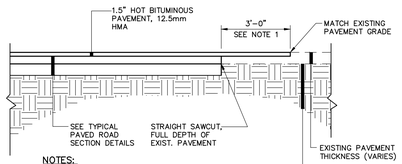
THAMES ST. PAVED ROAD & SITE PAVEMENT SECTION

N.T.S.



FORE ST. PAVED ROAD SECTION

N.T.S.

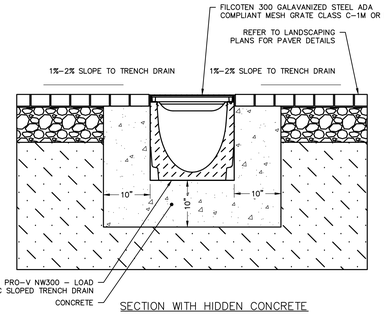


NOTES:

1. GRIND EXISTING PAVEMENT, TO 1.5" DEPTH.
2. PROVIDE BITUMINOUS TACK COAT ON VERTICAL AND HORIZONTAL SURFACES PRIOR TO PAVING.
3. DETAIL APPLICABLE TO PAVEMENT BUTT JOINTS AT ROADWAY WORK LIMITS. REFER TO PIPE INSTALLATION DTL. OR PAVED ROAD SECTION DTLS. FOR TRENCH REPAIR REQUIREMENTS.

PAVEMENT BUTT JOINT DETAIL

N.T.S.



SECTION WITH HIDDEN CONCRETE

GENERAL NOTES
THE SURFACE DRAINAGE SYSTEM SHALL BE FILCOTEN FIBER COMPOSITE NW300 CHANNEL SYSTEM WITH CONCRETED EDGE MADE OF GALVANIZED STEEL RAILS AS MANUFACTURED BY BG GRASPOINTNER, INC AND DISTRIBUTED BY HYDRO BG USA INC., A WHOLLY OWNED SUBSIDIARY, OR APPROVED EQUAL.

MATERIALS
CHANNELS SHALL BE MANUFACTURED FROM FILCOTEN FIBER COMPOSITE WITH CONCRETED EDGE GALVANIZED STEEL RAIL. MINIMUM PROPERTIES OF FILCOTEN FIBER COMPOSITE WILL BE AS FOLLOWS:

COMPRESSIVE STRENGTH:	11,700 PSI
FLEXURAL STRENGTH:	1,700 PSI
FREE OF RELEASE AGENTS:	YES
WATER ABSORPTION SUFFICIENT FOR ADHESION WITH CONCRETE SURFACES:	YES
NON FLAMMABLE:	YES
U/V RESISTANT:	YES
RECYCLABLE 100%:	YES
DILUTE ACID AND ALKALI RESISTANT:	YES
FROST THAW SALT TESTED AS PER EN1433 WITH A TEST TEMPERATURE UP TO -40°C (-40°F):	YES
MATERIAL FREE OF VOC, BIOCIDES, HEAVY METALS:	YES

THE SYSTEM SHALL BE 12" (300MM) NOMINAL INTERNAL WIDTH WITH 3 HEIGHTS 14.17" (360MM), 16.20" (410MM) AND 18.11" (460MM). ALL CHANNELS ARE EQUIPPED WITH INTERLOCKING CONNECTION MALE/FEMALE AND SEALANT JOINT.

THE COMPLETE DRAINAGE SYSTEM SHALL BE BY HYDRO BG USA, INC. ANY DEVIATION OR PARTIAL SYSTEM DESIGN AND/OR IMPROPER INSTALLATION WILL VOID ANY AND ALL WARRANTIES PROVIDED BY HYDRO BG USA, INC.

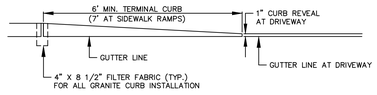
CHANNEL SHALL WITHSTAND LOADING TO PROPER LOAD CLASS AS OUTLINED BY EN 1433. GRATE TYPE SHALL BE APPROPRIATE TO MEET THE SYSTEM LOAD CLASS SPECIFIED AND INTENDED APPLICATION. GRATES SHALL BE SECURED USING 4-POINT BOLTING LOCKING SYSTEM. CHANNEL AND GRATE SHALL BE CERTIFIED TO MEET THE SPECIFIED EN 1433 LOAD CLASS. THE SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.

OPTIONS (TO BE APPROVED BY OWNER)
THE CONCRETE ENCASEMENT MAY BE EXTENDED TO THE SURFACE TO PROVIDE ADDITIONAL DURABILITY AGAINST SNOW PLOWS.

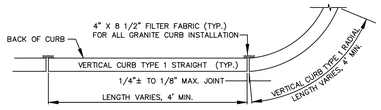
A HEATING CABLE MAY BE INSTALLED ON THE EXTERIOR OF THE TRENCH DRAIN OR WITHIN THE CONCRETE ENCASEMENT TO PREVENT ICE BUILD-UP.

TRENCH DRAIN DETAIL

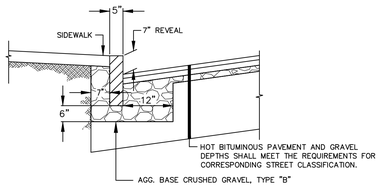
N.T.S.



TERMINAL CURB PROFILE



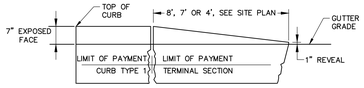
VERTICAL GRANITE CURB PLAN VIEW



VERTICAL GRANITE CURB CROSS SECTION

VERTICAL GRANITE CURB

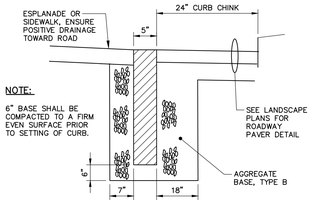
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TERMINAL SECTION TYPE "1"

TERMINAL CURB SECTION

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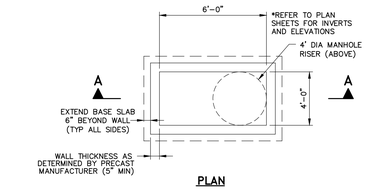


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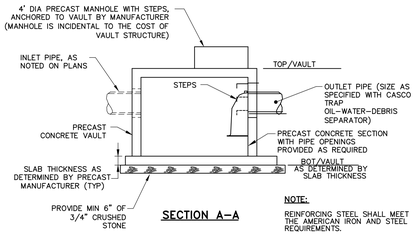
TYPICAL FLUSH CURB INSTALLATION

N.T.S.

NOTE: AGGREGATE TYPES PER MDOT SECTION 304.02



PLAN

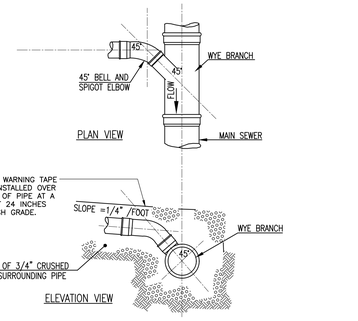


SECTION A-A

NOTE:
REINFORCING STEEL SHALL MEET THE AMERICAN IRON AND STEEL REQUIREMENTS.

PRECAST 8'X6' CONCRETE VAULT

N.T.S.

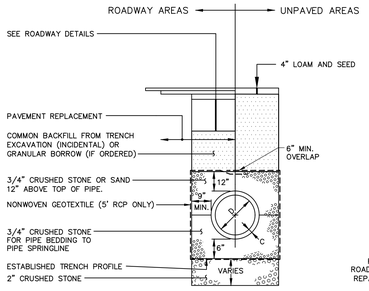


PLAN VIEW

ELEVATION VIEW

TYPICAL SEWER LATERAL WYE CONNECTION DETAILS

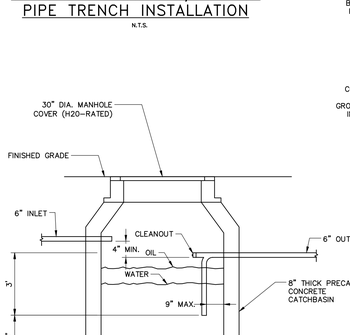
N.T.S.



NOTES:
DEPTH OF BITUMINOUS PAVEMENT AND AGGREGATE COURSES SHALL BE DETERMINED BY STREET CLASSIFICATION. SEE OTHER DETAILS.

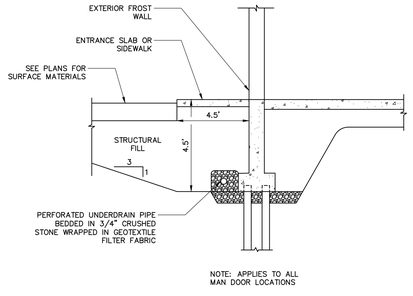
TYPICAL STORMDRAIN/ SEWER PIPE TRENCH INSTALLATION

N.T.S.



OIL WATER SEPARATOR

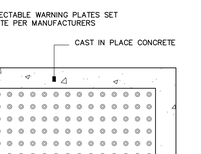
N.T.S.



NOTE: APPLIES TO ALL MAN DOOR LOCATIONS

FROST PROTECTION AT DOORWAY ENTRANCES

N.T.S.



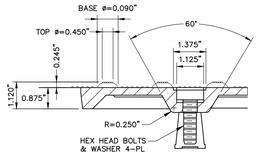
SECTION VIEW

SIDEWALK RAMP DETECTABLE WARNING

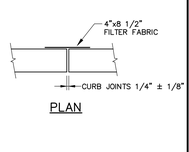
N.T.S.

NOTES:

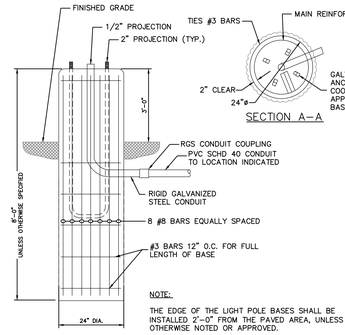
1. ALL DETECTABLE WARNING PLATES SHALL BE UNCOATED CAST IRON. FOLLOW MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION.
2. CAST IN PLACE CONCRETE SHALL MEET SPECIFICATIONS FOR MAINE D.O.T. CLASS A STRUCTURAL CONCRETE, MINIMUM COMPRESSIVE STRENGTH 4,000 PSI. THE EXPOSED CONCRETE BORDER SHALL RECEIVE A UNIFORM BROOM FINISH PERPENDICULAR TO THE FLOW OF PEDESTRIAN TRAFFIC.
3. TRUNCATED DOMES SHALL BE ALIGNED IN ROWS, PARALLEL AND PERPENDICULAR TO THE PREDOMINANT DIRECTION OF TRAVEL. TRUNCATED DOME BRICKS AND GRANITE PAVERS ARE NOT ALLOWED.
4. SIZE: THE DETECTABLE WARNING PLATES SHALL EXTEND 24 INCHES MINIMUM IN THE DIRECTION OF TRAVEL AND THE PLATE WIDTH AND CONCRETE SHALL EXTEND THE WIDTH OF THE CURB RAMP, LANDING, OR BLENDING TRANSITION TO THE STREET.
5. ORIENTATION: THE DETECTABLE WARNING PANEL SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE IS 6 INCHES MINIMUM AND 8 INCHES MAXIMUM FROM THE CURB LINE. THE PANEL SHALL BE ORIENTED TO THE DIRECTION OF TRAVEL AS IDENTIFIED BY THE POINT OF EGRESS.



BOLT DETAIL



PLAN

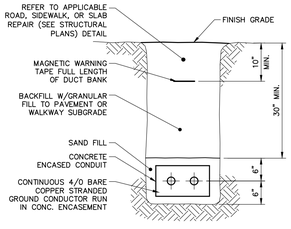


SECTION A-A

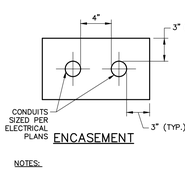
NOTE:
THE EDGE OF THE LIGHT POLE BASES SHALL BE INSTALLED 2'-0" FROM THE PAVED AREA, UNLESS OTHERWISE NOTED OR APPROVED.

LIGHT POLE BASE DETAIL

N.T.S.



TRENCH



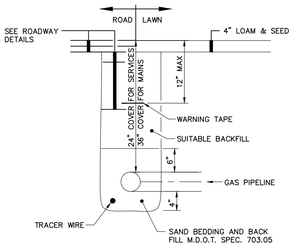
ENCASEMENT

NOTES:

1. ALL CONDUITS, INCLUDING RISER CONDUITS, NEED TO BE SLOPED TO DRAIN INTO MANHOLES OR TRANSFORMER FOUNDATIONS, 3" PER 100'.
2. INSTALL A PULLING LINE WITHIN EACH CONDUIT.
3. CONDUIT SHALL BE SCHEDULE 40 PVC, CONDUIT SWEEPS SHALL BE MIN. 48" RADIUS RIGID GALV. STEEL.

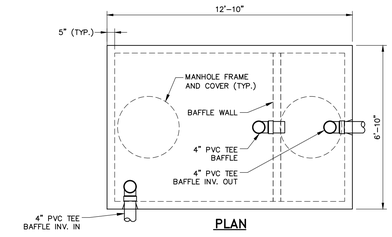
BURIED ELECTRICAL CONDUIT DETAIL

N.T.S.



NATURAL GAS PIPE

N.T.S.



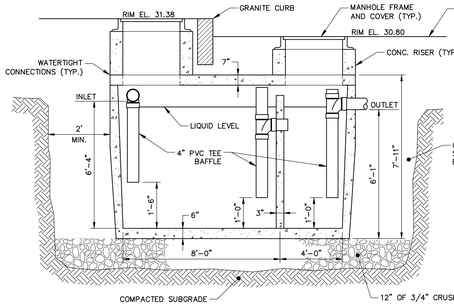
PLAN

CONCRETE SPECIFICATIONS

1. 5,000 PSI AT 28 DAYS
2. 4% - 6% ENTRAINED AIR
3. TANK PENETRATIONS ARE INTEGRALLY CAST
4. ALL JOINTS SEALED WITH BUTYL RUBBER JOINT SEALANT
5. H-20 LOADING

GREASE TRAP INFORMATION

1. TANKS SHOULD BE PUMPED AS NEEDED
2. ACCESS COVERS SHOULD HAVE RISERS TO BRING COVER ACCESS TO GRADE.



SECTION

3,000 GALLON EXTERNAL GREASE TRAP DETAIL

N.T.S.

WOODARD & CURRAN
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Portland, Maine 04102
800.426.4262 | www.woodardcurran.com
COMMITMENT & INTEGRITY DRIVE RESULTS

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STATE OF MAINE — LAUREN MARIE SMETT — No. 12284 — REGISTERED PROFESSIONAL ENGINEER

REV	DESCRIPTION	DATE
1	07/07 PWB, 1:15:10 PM	

DESIGNED BY: LJS | DRAWN BY: BDM | CHECKED BY: DLC

PORTLAND FORESIDE DEVELOPMENT CO.
PORTLAND, ME 04102

PHASE 1 SITE PLAN SUBMISSION

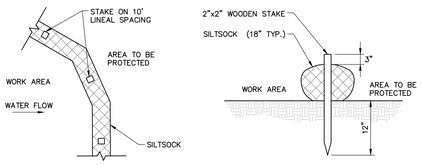
CIVIL DETAILS - 1

JOB NO.: 0227007
DATE: NOVEMBER 2019
SCALE: AS NOTED
SHEET: 13 OF 17

C-200

NOT FOR CONSTRUCTION

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PLAN VIEW

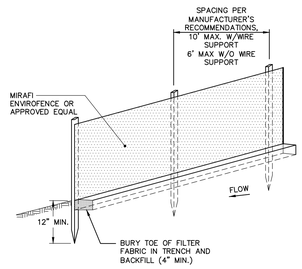
SECTION

NOTE:

1. WHEN STAKING IS NOT POSSIBLE, HEAVY CONCRETE BLOCKS SHALL BE USED BEHIND THE SEDIMENT BARRIER TO HELP STABILIZE DURING RAINFALL/RUNOFF EVENTS.

SILT SOCK

N.T.S.



NOTES:

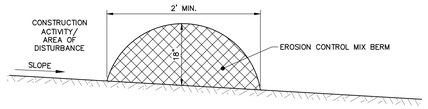
- INSTALL FABRIC ON UPHILL SIDE OF SUPPORT POSTS
- INSTALL SILT FENCE ACROSS SLOPES
- SILT FENCE SHALL NOT BE USED IN DRAINAGE WAYS

MAINTENANCE: INSPECT FOR TEARS IN THE FABRIC OR DAMAGE TO SUPPORTS. REPAIR AS NECESSARY. REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES A DEPTH OF SIX-INCHES OR LESS.

REMOVAL: WHEN UPSLOPE AREAS ARE STABILIZED, THE STRUCTURE AND ANY ACCUMULATED SEDIMENT WILL BE REMOVED.

SEDIMENT BARRIER – SILTATION FENCE DETAIL

N.T.S.

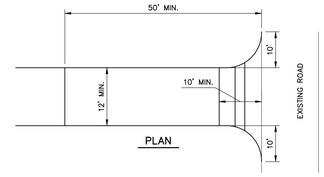


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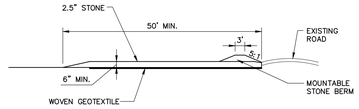
1. EROSION CONTROL MIX CAN BE MANUFACTURED ON OR OFF THE PROJECT SITE. IT MUST CONSIST PRIMARILY OF ORGANIC MATERIAL AND MAY INCLUDE: SHREDDED BARK, STUMP GRINDINGS, COMPOSTED BARK, OR ACCEPTABLE MANUFACTURED PRODUCTS. WOOD AND BARK CHIPS, GROUND CONSTRUCTION DEBRIS OR REPROCESSED WOOD PRODUCTS WILL NOT BE ACCEPTABLE AS THE ORGANIC COMPONENT OF THE MIX.
2. EROSION CONTROL MIX SHALL CONTAIN A WELL-GRADED MIXTURE OF PARTICLE SIZES AND MAY CONTAIN ROCKS LESS THAN 4" IN DIAMETER. EROSION CONTROL MIX MUST BE FREE OF REFUSE, PHYSICAL CONTAMINANTS, AND MATERIAL TOXIC TO PLANT GROWTH. THE MIX COMPOSITION SHALL MEET THE FOLLOWING STANDARDS:
   - THE ORGANIC MATTER CONTENT SHALL BE BETWEEN 80 AND 100%, DRY WEIGHT BASIS.
   - PARTICLE SIZE BY WEIGHT SHALL BE 100% PASSING A 6" SCREEN AND A MINIMUM OF 70%, MAXIMUM OF 85%, PASSING A 0.75" SCREEN.
   - THE ORGANIC PORTION NEEDS TO BE FIBROUS AND ELONGATED.
   - LARGE PORTIONS OF SILTS, CLAYS OR FINE SANDS ARE NOT ACCEPTABLE IN THE MIX.
   - SOLUBLE SALTS CONTENT SHALL BE < 4.0 MMHOS/CM.
   - THE PH SHOULD FALL BETWEEN 5.0 AND 8.0.

EROSION CONTROL MIX BERM

N.T.S.



PLAN



PROFILE

NOTES:

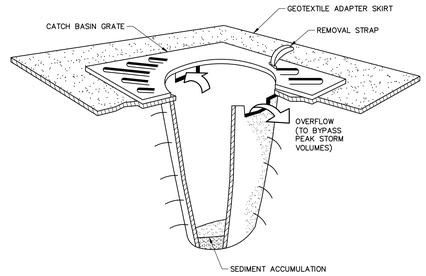
- CONSTRUCTION ENTRANCES MAY BE RELOCATED AS CONSTRUCTION PROGRESSES.
- WHEEL WASH PITS MAY ALSO BE USED, IF APPROVED.

MAINTENANCE: INSPECT FOR EFFECTIVE REMOVAL OF SOIL FROM VEHICLES PRIOR TO LEAVING THE SITE, SWEEP ANY SOIL FROM ADJACENT ROADWAYS.

REMOVAL: AT LEAST ONE CONSTRUCTION ENTRANCE SHALL BE MAINTAINED UNTIL ALL AREAS OF THE SITE ARE STABILIZED.

STABILIZED CONSTRUCTION ENTRANCE DETAIL

N.T.S.



NOTES:

CATCH BASIN PROTECTION TO BE "SILTSACK" (BY ACF ENVIRONMENTAL) OR "STREAM GUARD" (BY FOSS ENVIRONMENTAL SERVICES).

INSERT TO BE EMPTIED IN AN APPROVED MANNER WHEN IT IS 1/2 FULL OF SEDIMENT.

INSPECT INSERT AFTER ALL RAINFALL EVENTS, REPAIR AND MAINTAIN AS REQUIRED.

TEMPORARY INLET PROTECTION

N.T.S.

EROSION AND SEDIMENT CONTROL NOTES

Temporary Erosion Control

Contractor shall prepare and submit a soil erosion and water pollution control plan to engineer.

Measure	Dates For Use	Timing, Activity, and Location
Sediment Barrier	ALL	Before soil disturbance, install downhill of areas to be disturbed and around material stockpiles.
Up-slope Diversion	ALL	Before soil disturbance, install uphill of areas to be disturbed and material stockpiles.
Catch Basin Protection	ALL	Before soil or pavement disturbance, install ACF Environmental, Inc. High Flow Siltsack, Siltsaver Inlet Filter. or equal, installed per manufacturer's requirements.
Dust Control	ALL	During dry weather, apply water and calcium chloride to control dust.
Temporary Seeding	April 15 to Oct. 1	Soil stockpiles that are not covered and disturbed areas that will not be disturbed again within 14 days. If grass growth provides less than 90% soil coverage by Nov. 1, apply mulch and anchor with erosion control blanket.
Mulch	April 15 to Sept. 15	On all areas of exposed soil prior to rain events or every 7 days, apply 100–150 lbs (2.5 bales) per 1,000 sq ft. by mechanical blower.
Winter Mulch	Sept. 16 to Oct. 31	On all areas of exposed soil prior to precipitation or every 7 days, apply 150 to 170 lbs. mulch (4 bales) per 1,000 sq. ft. by mechanical blower. Erosion control blanket may be used as a substitute for winter mulch.
	Nov. 1 to April 14	On all areas of exposed soil, apply 150 to 170 lbs. mulch (4 bales) per 1,000 sq. ft. and anchor with netting at the end of each working day. Erosion control blanket may be used as a substitute for winter mulch.
Inspections	Until site is permanently stabilized	Inspect the erosion and sedimentation control measures daily, and maintain and repair as necessary.

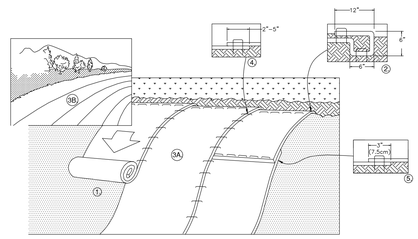
Permanent Erosion Control:

Measure	Dates For Use	Timing, Activity, and Location
Pavement – Base Course – Final Course	When no frost is in ground	Install only in areas shown on the plan, shortly after pavement base is brought to final grade. Install near completion of project.
Permanent Seeding	April 15 to Sept. 15	On final grade areas, within 7 days of grade preparation, prepare topsoil, followed by seed and mulch application.
Dormant Seeding	Sept. 16 to April 15	On final grade areas, with prepared topsoil. Apply seed at double the specified rate on bare soil, and follow with an application of winter mulch.
Ground Cover, Trees, Shrubs	April 15 to Nov. 1	Install with final landscaping.
Permanent Mulch	ALL	Install with final landscaping.

Inspections:

Regular inspections of all erosion and sedimentation controls shall be made at least weekly and prior to and following storm events. Minimum inspections shall be made as listed in the table below.

Inspected Item	Look For
Mulched Surfaces	Thin mulch or inadequate application. Wind movement.
Seeded Surfaces	Poor seed germination. Loss of mulch. Development of rivulets.
Sediment Barrier	Sediment build–up to one half the height of the barrier. Undermining of the barrier. Supporting stakes loose, toppled, or unmarked. Breaks in barrier.
Perimeter Diversion	Discharge is to stabilized area. Erosion or breaks in barrier. Supporting stakes loose, toppled or unmarked.
Catch Basin Protection	Sediment build–up and structure blockages. Slow flow/Ponding water. Breaks in fabric or voids in barrier.
Dewatering Filter	Breaks in fabric or supporting structure. Slow flow, indicating high sediment build–up.
Construction Entrance	Sedimentation of roadways. Off–site dust complaints.



1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP's), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED AS WELL AS REMOVING ANY PROTRUDING ROCKS, STUMPS OR ROOTS. DURING THE GROWING SEASON (APRIL 15– SEPTEMBER 15) USE RECP'S ON THE BASE OF GRASSED WATERWAYS, SOIL SLOPES HAVING A GRADE GREATER THAN 15%, OR ANYWHERE WHERE HAY MULCH HAS PROVEN TO BE INEFFECTIVE AT CONTROLLING SHEET EROSION. RECP'S ARE A MANUFACTURED COMBINATION OF MULCH AND NETTING DESIGNED TO PREVENT EROSION AND RETAIN SOIL MOISTURE. FOR OVER WINTER PROTECTION, APPLY RECP'S ON THE BASE AND SIDE SLOPES OF GRASSED WATERWAYS AND ON SLOPES STEEPER THAN AN 8% GRADE.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP's IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF RECP's EXTENDED BEYOND THE UP–SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP's WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF RECP's BACK OVER SEED AND COMPACTED SOIL. SECURE RECP's OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE RECP's.
3. ROLL THE RECP's (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. RECP's WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP's MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL RECP's MUST BE STAPLED WITH APPROXIMATELY 2" – 5" OVERLAP DEPENDING ON RECP's TYPE.
5. CONSECUTIVE RECP's SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE RECP's WIDTH. NOTE: *IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE RECP's.
6. UNTIL GRASS IS ABUNDANT, INSPECT PERIODICALLY AND AFTER EACH RAINSTORM TO CHECK FOR EROSION. IMMEDIATELY REPAIR AND ADD MORE MULCH UNTIL GRASSES ARE FIRMLY ESTABLISHED. DO NOT MOW THE FIRST YEAR.

ROLLED EROSION CONTROL MATTING

N.T.S.

EROSION AND SEDIMENT CONTROL NOTES

TEMPORARY EROSION CONTROL MEASURES MAY INCLUDE THE USE OF STABILIZED CONSTRUCTION ENTRANCES, HYDRAULIC MULCH, HAY AND STRAW MULCH, EROSION CONTROL BLANKET, TURF REINFORCED MATTING, RIPRAP AND TEMPORARY SEEDING. TEMPORARY SEDIMENT CONTROL MEASURES INCLUDE THE USE OF SILT FENCE, EROSION CONTROL MIX BERMS, CATCHBASIN SEDIMENT COLLECTION BAGS AND GEOTEXTILE FILTER BAGS. PERMANENT MEASURES INCLUDE PERMANENT VEGETATION OR PAVING.

GENERAL

A. THE PROJECT SHALL CONFORM WITH THE STANDARDS OF THE MAINE CONSTRUCTION GENERAL PERMIT.

B. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MAINE EROSION AND SEDIMENT CONTROL BMPS HANDBOOK PUBLISHED BY THE MAINE DEP UNLESS OTHERWISE NOTED IN THESE PLANS. HTTP://MAINE.GOV/DEP/BLWQ/DOCSTAND/ESCBMPS/

C. ANY ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES DEEMED NECESSARY BY THE OWNER'S REPRESENTATIVE, DEPARTMENT OF ENVIRONMENTAL PROTECTION, AND/OR MUNICIPAL OFFICIALS SHALL BE INSTALLED BY THE CONTRACTOR.

D. THE CONTRACTOR IS RESPONSIBLE FOR ALL FINES RESULTING FROM EROSION OR SEDIMENTATION FROM THE SITE TO SURROUNDING PROPERTIES, WATER BODIES, OR WETLANDS AS A RESULT OF THIS PROJECT.

E. THE CONTRACTOR SHALL MINIMIZE DISTURBANCE TO THE SITE WHENEVER POSSIBLE WHILE ALLOWING PROPER SITE DEVELOPMENT.

F. CONSTRUCTION STAGING SHALL BE CONDUCTED IN A WAY TO MINIMIZE THE POTENTIAL FOR STORMWATER RUN–ON TO DISTURBED AREAS.

G. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR/REPLACEMENT/MAINTENANCE OF ALL EROSION CONTROL MEASURES UNTIL ALL DISTURBED AREAS ARE STABILIZED TO THE SATISFACTION OF THE ABOVE PERSONNEL. DESCRIPTIONS OF PERMANENT STABILIZATION FOR VARIOUS COVER TYPES FOLLOWS:

i. FOR SEEDED AREAS, PERMANENT STABILIZATION MEANS THAT 90% OF THE DISTURBED AREA IS COVERED WITH REASONABLY THICK UNIFORM STAND OF PERMANENT GRASS SPECIES, FREE FROM SIZABLE THIN OR BARE SPOTS.
ii. FOR SODDED AREAS, PERMANENT STABILIZATION MEANS THAT COMPLETE BINDING OF THE SOD ROOTS INTO THE UNDERLYING SOIL WITH NO SLUMPING OF THE SOD OR DIE OFF;
iii. FOR MULCHED AREAS, PERMANENT STABILIZATION MEANS TOTAL COVERAGE OF THE EXPOSED AREA WITH AN APPROVED MULCH MATERIAL.
iv. FOR PAVED AREAS, PERMANENT STABILIZATION MEANS THE PLACEMENT OF THE ASPHALT BINDER COURSE.

H. IF THE AREA WILL REMAIN UNWORKED FOR MORE THAN ONE YEAR OR HAS BEEN BROUGHT TO FINAL GRADE AND WILL NOT BE BUILT ON, THEN IMMEDIATELY PROVIDE PERMANENT STABILIZATION USING VEGETATION THROUGH PLANTING, SEEDING, SOD OR THROUGH THE USE OF PERMANENT MULCH OR RIPRAP. IF USING VEGETATION FOR STABILIZATION, SELECT THE PROPER VEGETATION FOR THE LIGHT, MOISTURE, AND SOIL CONDITIONS. AMEND AREAS OF DISTURBED, OVERLY–COMPACTED SUBSOIL WITH TOPSOIL OR COMPOST AND LIGHTLY TILL 2–3" OF SOIL AMENDMENTS INTO THE TOP 8" OF SOIL.

I. PERMANENT SEEDING SPECIFICATION: IT IS RECOMMENDED THAT PERMANENT SEEDING BE COMPLETED BETWEEN APRIL 1 AND AUGUST 15 OF EACH YEAR. LATE SEASON SEEDING MAY BE DONE BETWEEN AUGUST 15 AND SEPTEMBER 15. AREAS NOT SEEDED OR WHICH DO NOT OBTAIN A SATISFACTORY GROWTH BY OCTOBER 1 SHALL BE SEEDED WITH AROOSTOOK WINTER RYE OR MULCHED AT SPECIFIED RATES. SEE WINTER SEEDING AND MULCHING SPECIFICATIONS FOR STABILIZATION AFTER NOVEMBER 1.

i. APPLY TOPSOIL TO A DEPTH OF 6 INCHES. IN COMPACTED AREAS TILL 2–3" OF COMPOST INTO UPPER 8" OF DISTURBED SOIL AND THEN APPLY 6 INCHES OF TOPSOIL.
ii. APPLY LIME AND FERTILIZER ACCORDING TO SOIL TESTS. IN LIEU OF SOIL TESTS, APPLY GROUND LIMESTONE AT A RATE OF 33 LBS PER 1000 SQUARE FEET AND GRANULAR, COMMERCIAL–GRADE FERTILIZER 10–10–10 AT A RATE OF 18 LBS PER 1000 SQUARE FEET.
iii. UNIFORMLY APPLY SEED MIXTURE AT THE RECOMMENDED SEEDING RATES AND DATES. APPLY HAY OR STRAW MULCH AT A RATE OF 2.5 BALES PER 1000 SQUARE FEET AND ANCHOR AS NECESSARY.

J. PROTECT ALL SEEDED AREAS WITH MULCH OR EROSION CONTROL BLANKET IN AREAS OF SHEET OR CONCENTRATED FLOWS. MULCH ALL AREAS SO THAT SOIL IS NOT VISIBLE THROUGH THE MULCH REGARDLESS OF THE APPLICATION RATE. SCHEDULE SEEDING OR SODDING TO AVOID FAILURE DUE TO SUMMER DROUGHT AND FALL FROST. NEWLY SEEDED AREAS SHOULD BE PROTECTED FROM VEHICLE TRAFFIC, PEDESTRIAN TRAFFIC AND CONCENTRATED RUNOFF UNTIL THE VEGETATION IS WELL ESTABLISHED. AREAS MUST BE REWORKED AND RESTABILIZED IF GERMINATION IS SPARSE OR SURFACE EROSION IS EVIDENT.

K. EROSION CONTROL BLANKET SHALL BE INSTALLED ON ALL PERMANENT SLOPES STEEPER THAN 3:1 OR AS OTHERWISE NOTED. EROSION CONTROL BLANKET SHALL BE NORTH AMERICAN GREEN S150BN OR APPROVED EQUAL. EROSION CONTROL BLANKET SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

L. THE CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL TEMPORARY EROSION CONTROL MEASURE UPON STABILIZATION OF PROJECT AREA & COST SHALL BE INCIDENTAL TO CONTRACT.

WNTER CONDITIONS

A. WNTER CONSTRUCTION IS CONSTRUCTION ACTIVITY PERFORMED DURING THE PERIOD FROM NOVEMBER 1 THROUGH APRIL 1. IF AREAS WITHIN THE CONSTRUCTION AREA ARE NOT STABILIZED WITH TEMPORARY OR PERMANENT MEASURES OUTLINED ABOVE BY NOVEMBER 15 THEN THE SITE MUST BE PROTECTED WITH ADDITIONAL STABILIZATION MEASURES THAT ARE SPECIFIC TO WINTER CONDITIONS.

GOOD HOUSEKEEPING AND POLLUTION PREVENTION

A. SPILL PREVENTION CONTROLS MUST BE USED TO PREVENT POLLUTANTS FROM BEING DISCHARGED FROM MATERIALS ON SITE, INCLUDING STORAGE PRACTICES TO MINIMIZE EXPOSURE OF THE MATERIALS TO STORMWATER RUNOFF AND APPROPRIATE SPILL PREVENTION, CONTAINMENT AND RESPONSE PLANNING AND IMPLEMENTATION.

B. DURING CONSTRUCTION, PETROLEUM PRODUCTS AND OTHER HAZARDOUS MATERIALS WITH THE POTENTIAL TO CONTAMINATE GROUND OR SURFACE WATERS MAY NOT BE STORED OR HANDLED IN AREAS OF THE SITE DRAINING TO INFILTRATION AREAS. AN "INFILTRATION AREA" IS ANY ARE OF THE SITE THAT BY DESIGN, OR AS A RESULT OF SOIL AND TOPOGRAPHY, ACCUMULATES RUNOFF THAT INFILTRATES IN THE SOIL. DIKES, BERMS, SUMPS AND OTHER FORMS OF TEMPORARY SECONDARY CONTAINMENT THAT PREVENT DISCHARGE TO GROUNDWATER MAY BE USED TO ISOLATE PORTIONS OF THE SITE FOR THE PURPOSES OF STORAGE AND HANDLING OF THESE MATERIALS.

C. LOCATE ALL MATERIAL STOCKPILES WITH CONSIDERATION FOR STORMWATER DRAINAGE PATTERNS AND INFRASTRUCTURE.

D. TAKE ALL REASONABLE MEASURES TO MINIMIZE DUST RESULTING FROM THE PROJECT. OIL MAY NOT BE USED FOR DUST CONTROL.

E. LOCATE ALL LITTER, CONSTRUCTION DEBRIS AND CONSTRUCTION CHEMICALS WITH CONSIDERATION FOR STORMWATER DRAINAGE PATTERNS AND INFRASTRUCTURE.

F. TRENCH OR FOUNDATION DE–WATERING MUST BE SPREAD THROUGH SUFFICIENT NATURAL BUFFERS THAT HAVE CAPACITY TO INFILTRATE THE PUMPED WATER OR SHOULD BE PUMPED TO DESIGNED CONSTRUCTION DEWATERING DEVICES AS DESCRIBED IN THE MAINE EROSION AND SEDIMENT CONTROL BMPS HANDBOOK.

G. SEDIMENTS AND SOIL MATERIALS SHOULD BE SWEPT FROM PAVED SURFACES AT THE END OF EACH WORKDAY OR PRIOR TO RAIN EVENTS, WHENEVER POSSIBLE.

INSPECTION AND MAINTENANCE

A. A PERSON WITH KNOWLEDGE OF EROSION AND STORMWATER CONTROLS, INCLUDING THE STANDARDS IN THE MAINE CONSTRUCTION GENERAL PERMIT, THE MAINE EROSION AND SEDIMENT CONTROL BMPS HANDBOOK OR ANY MUNICIPAL REQUIREMENTS MUST CONDUCT THE INSPECTION. THIS PERSON MUST BE IDENTIFIED IN THE INSPECTION LOG. IF ADDITIONAL BMPS OR MODIFICATIONS TO BMPS ARE NECESSARY, THE MODIFICATIONS MUST BE IMPLEMENTED WITH 7 CALENDAR DAYS OR PRIOR TO ANY PRECIPITATION EVENT. ALL MEASURES MUST BE MAINTAINED IN EFFECTIVE OPERATING CONDITION UNTIL AREAS ARE PERMANENTLY STABILIZED.

B. AN INSPECTION AND MAINTENANCE LOG MUST BE KEPT BY THE CONTRACTOR, SUMMARIZING THE SCOPE OF THE INSPECTION, DATE, AND MAJOR OBSERVATIONS RELATING TO THE OPERATION OF EROSION AND SEDIMENT CONTROL BMPS, MATERIAL STORAGE AREAS, AND VEHICLE ACCESS POINTS TO THE CONSTRUCTION AREA. THE INSPECTION LOG SHOULD BE DELIVERED TO THE PROPERTY OWNER OR RESPONSIBLE CONTRACTING ENTITY UPON COMPLETION OF THE PROJECT.

WOODARD & CURRAN
41 Hutchins Drive
Portland, Maine 04102
800.426.4262 | www.woodardcurran.com
COMMITMENT & INTEGRITY DRIVE RESULTS

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STATE OF MAINE — LAUREN SMETT — No. 12284 — REGISTERED PROFESSIONAL ENGINEER

REV	DESCRIPTION	DATE
1	RESPONSE TO CITY COMMENTS	12/20/19

DESIGNED BY: LJS | DRAWN BY: BDM | CHECKED BY: DLC

CIVIL DETAILS - 2

PORTLAND FORESIDE DEVELOPMENT CO. PORTLAND, ME 04102

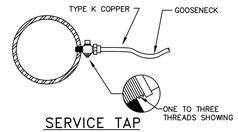
PHASE 1 SITE PLAN SUBMISSION

JOB NO.: 0227007
DATE: NOVEMBER 2019
SCALE: AS NOTED
SHEET: 14 OF 17

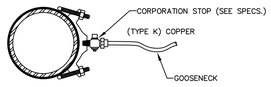
NOT FOR CONSTRUCTION

C-201

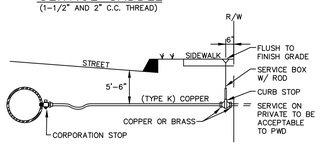
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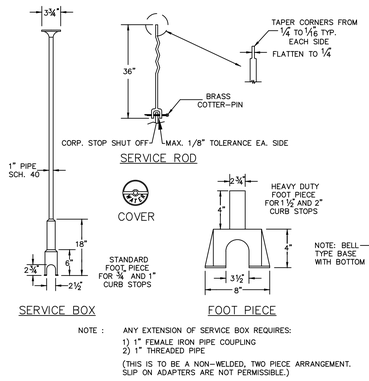
SERVICE TAP
(3/4" AND 1" C.C. THREAD)



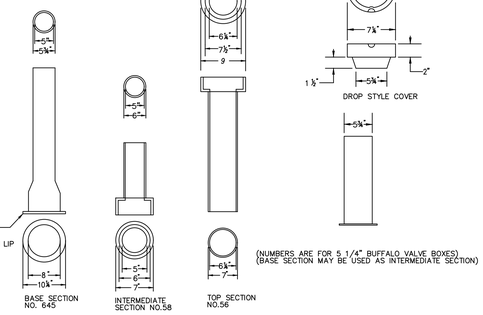
SERVICE SADDLE
(1-1/2" AND 2" C.C. THREAD)



TYPICAL SERVICE CONNECTION
N.T.S.

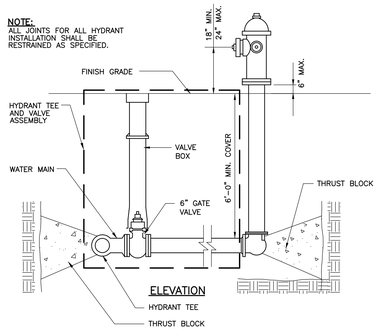


NOTE : ANY EXTENSION OF SERVICE BOX REQUIRES:
1) 1" FEMALE IRON PIPE COUPLING
2) 1" THREADED PIPE
(THIS IS TO BE A NON-WELDED, TWO PIECE ARRANGEMENT. SLIP ON ADAPTERS ARE NOT PERMISSIBLE.)

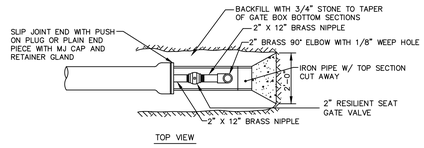


(NUMBERS ARE FOR 5 1/4" BUFFALO VALVE BOXES)
(BASE SECTION MAY BE USED AS INTERMEDIATE SECTION)

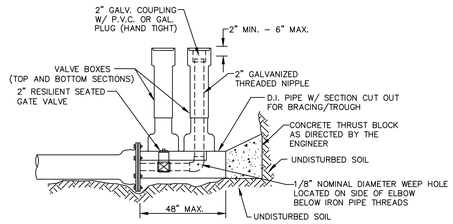
VALVE BOX & COVER
N.T.S.



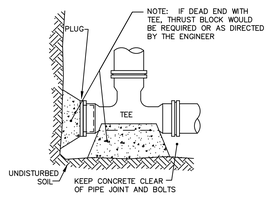
TYPICAL HYDRANT ASSEMBLY DETAIL
N.T.S.



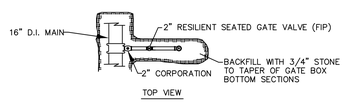
TOP VIEW

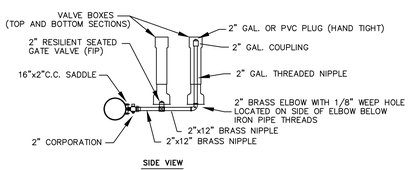


STANDARD 2" BLOW OFF
N.T.S.

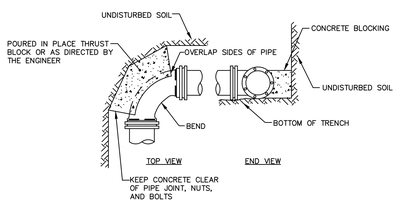


STANDARD TEE BLOCKING
N.T.S.





SIDE-ARM BLOW-OFF
4" & LARGER MAINS
N.T.S.



STANDARD BEND BLOCKING
N.T.S.

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WOODARD & CURRAN

STATE OF MAINE
LAUREN JANET SWETT
No. 12284
REGISTERED PROFESSIONAL ENGINEER

Lauren Swett

REV	DESCRIPTION	DATE
	07/07 PWB 1.13&1.14a	

CHECKED BY: DLC

REV	DESCRIPTION	DATE

DESIGNED BY: LJS DRAWN BY: BDM

CIVIL DETAILS - 3

PORTLAND FORESIDE DEVELOPMENT CO.
PORTLAND, ME 04102

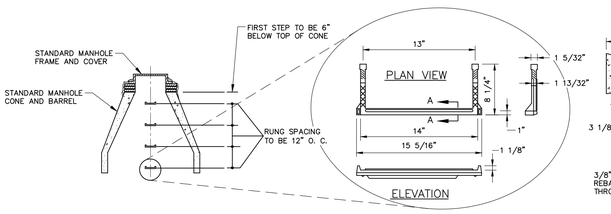
PHASE 1 SITE PLAN SUBMISSION

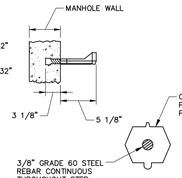
JOB NO.: 0227007
DATE: NOVEMBER 2019
SCALE: AS NOTED
SHEET: 15 OF 17

C-202

NOT FOR CONSTRUCTION

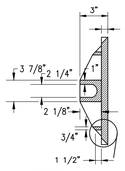
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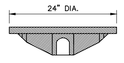


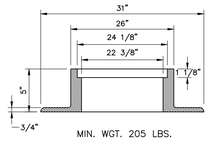


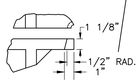
PLASTIC MANHOLE STEPS

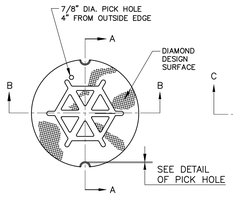
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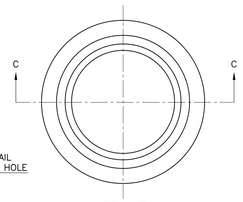












NOTE:

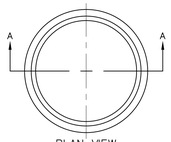
FOR ALL CROSS COUNTRY MANHOLES (LAWN AREAS), USE PAM REXUS MANHOLE COVERS BY CERTAINTEED.

TYPE "A" CAST IRON MANHOLE COVER AND FRAME

N.T.S.

GENERAL NOTES FOR MANHOLES AND CATCH BASINS

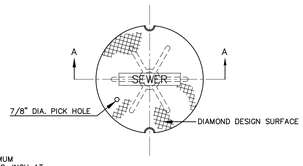
1. ALL CONCRETE SHALL BE CLASS "A" AND HAVE A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 4000 LBS. PER SQ. INCH AT THE END OF 28 DAYS, UNLESS OTHERWISE NOTED.
2. PRECAST REINFORCED CONE BARREL MANUFACTURED PER ASTM SPEC. C-478.
3. ALL MANHOLES SHALL HAVE A BITUMINOUS WATERPROOFING APPLIED TO THE EXTERIOR SURFACE. IF CONSTRUCTED OF BRICK MASONRY, SURFACE SHALL BE PLASTERED WITH A SMOOTH MORTAR FINISH 3/8" THICK. AFTER THE MORTAR HAS SET, THE SURFACE SHALL BE WATERPROOFED AS REQUIRED BY SUPPLEMENTAL SPECIFICATIONS SECTION 604.
4. CASTINGS SHALL CONFORM TO ASTM DESIGNATION A48-CLASS 35. ALL PARTS OF CASTINGS, EXCEPT FINISHED SURFACE, SHALL RECEIVE A COAT OF COAL TAR PITCH VARNISH OR ASPHALTUM PAINT WHICH SHALL BE SMOOTH AND TOUGH BUT NOT BRITTLE.
5. MANHOLES MAY BE CONSTRUCTED OF MASONRY, PRECAST REINFORCED CONCRETE, OR CAST IN PLACE.
6. CONTRACTOR SHALL SUBMIT ANTIFLOATATION CALCULATIONS FOR ALL MANHOLE AND CATCH BASIN STRUCTURES.
7. ALL PRECAST MANHOLES AND CATCH BASINS SHALL BE IDENTIFIED BY STATION, OFFSET, AND STRUCTURE ID PAINTED ON THE SIDE OF THE STRUCTURE BY THE MANUFACTURER.
8. STORM AND SEWER MANHOLES SHALL HAVE SOLID COVERS WITH ONE DRILLED PICK HOLE.
9. EXISTING MANHOLES, CATCH BASINS, FRAMES, AND COVERS SHALL BE SALVAGED BY THE CONTRACTOR, AND SHALL REMAIN THE PROPERTY OF THE CITY OF PORTLAND.
10. WHEN THE FLOW CHANGES DIRECTION IN A MANHOLE, THE CHANNEL ALIGNMENT SHALL FOLLOW A SMOOTH RADIUS. CHANNELS SHALL BE FORMED TO ACCEPT ALL INLET PIPES.
11. ON STORM AND SEWER MANHOLES, THE SHELF AND CHANNEL SHALL BE FORMED BY BRICK SET IN CEMENT MORTAR OR BY FACTORY PRE-CAST CONCRETE. SUCH PRE-CAST CONCRETE SHALL BE EPOXY COATED AND THE SHELF SHALL HAVE A PERMANENT NON-SKID SURFACE.

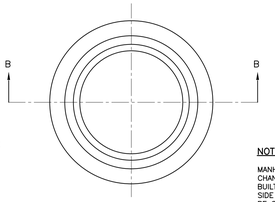


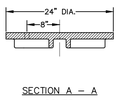
NOTE:

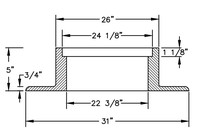
ALL MANHOLE COVERS SHALL BE SOLID AND SHALL HAVE ONE 7/8" DIAMETER DRILLED PICK HOLE, LOCATED 8" FROM THE CENTER OF THE COVER.

ALL SANITARY MANHOLE COVERS SHALL HAVE "SEWER" CAST INTO THE COVER. ALL STORMWATER/DRAIN MANHOLE COVERS SHALL HAVE "DRAIN" CAST INTO THE COVER.



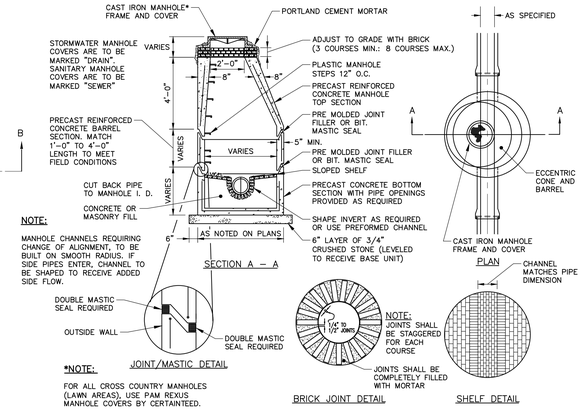






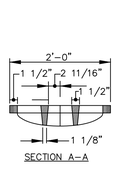
CAST IRON MANHOLE COVER AND FRAME

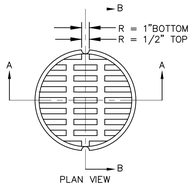
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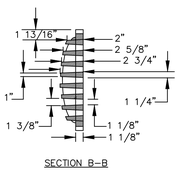


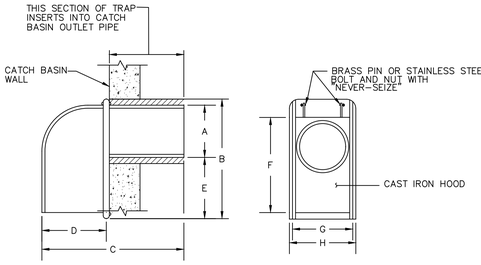
PRECAST CONCRETE MANHOLE

N.T.S.







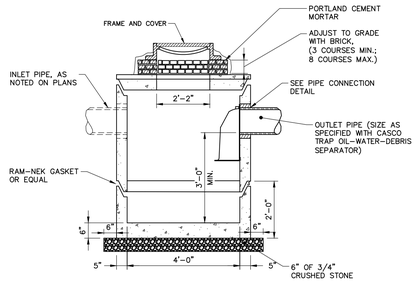


SIZE	A	B	C	D	E	F	G	H
6 in.	5 1/2"	13 3/8"	13 3/4"	5 3/8"	5 7/8"	11 5/8"	6 1/2"	7 1/4"
8 in.	7 1/2"	15"	15 3/8"	5 1/2"	5 3/8"	13 3/4"	8 3/4"	9 3/8"
10 in.	9 1/2"	16"	16 1/4"	6"	4 1/2"	14 1/8"	11 1/2"	12 3/8"
12 in.	11 1/2"	17"	22"	8"	3 1/2"	17"	12 1/2"	13 3/8"

(AS MANUFACTURED BY THE ETHERIDGE FOUNDRY IN PORTLAND, ME.)
NOTE: CONTRACTOR SHALL UTILIZE THE "CASCO TRAP" AS MANUFACTURED BY THE ETHERIDGE FOUNDRY, OR AN APPROVED EQUIVALENT.

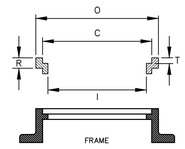
CASCO TRAP

N.T.S.



PRECAST CONCRETE CATCH BASIN

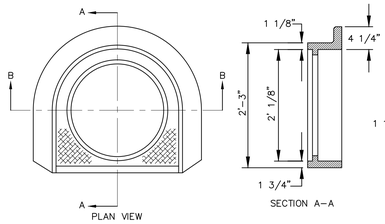
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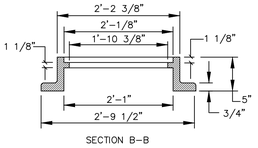


SIZE	C	R	T	O	I	Wt.
R241 1/2	24	1 1/2	1 1/8	26 1/4	22 1/2	60
R242	24	2	1 1/8	26 1/4	22 1/2	80
R242 1/2	24	2 1/2	1 1/8	26 1/4	22	100
R243	24	3	1 1/8	26 1/4	22	120

MANHOLE RISER RING

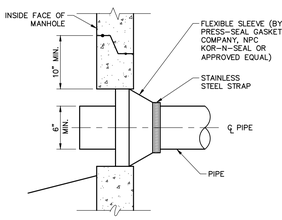
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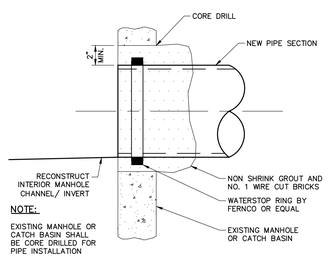
CATCH BASIN FRAME & GRATE

N.T.S.



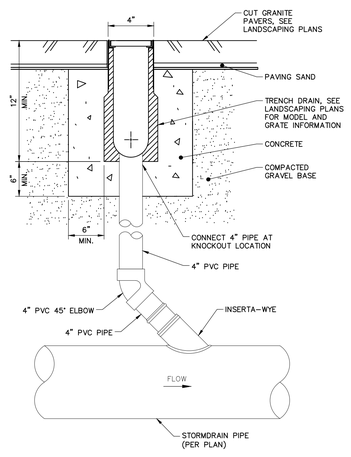
NEW PIPE TO NEW STRUCTURE CONNECTION DETAIL

N.T.S.



NEW PIPE TO EXISTING STRUCTURE

N.T.S.



TRENCH DRAIN DETAIL

N.T.S.

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STATE OF MAINE — LAUREN JANET SMETT — No. 12284 — REGISTERED PROFESSIONAL ENGINEER

REV	DESCRIPTION	DATE
	07/07 PMB 1 SUBMITTAL	

DESIGNED BY: LJS | DRAWN BY: BDM | CHECKED BY: DLC

CIVIL DETAILS - 4

PORTLAND FORESIDE DEVELOPMENT CO.
PORTLAND, ME 04102

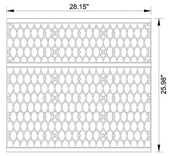
PHASE 1 SITE PLAN SUBMISSION

JOB NO.: 022700?
DATE: NOVEMBER 2019
SCALE: AS NOTED
SHEET: 16 OF 17

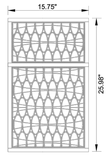
C-203

NOT FOR CONSTRUCTION

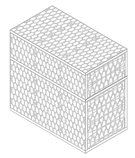
\\woodardcurran.net\shares\Projects\022700?.07 PTDC - 58 Fore Block 1\wip\Drawings\Phase 1 - Site Plan Submission\022700? Phase 1 Details.dwg, Nov 08, 2019 - 2:06pm



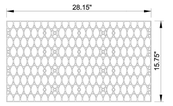
SIDE VIEW



FRONT VIEW



ISOMETRIC VIEW



PLAN VIEW

MODULE DATA

GEOMETRY: LENGTH = 28.15 IN. (715 MM)
WIDTH = 15.75 IN. (400 MM)
HEIGHT = 25.98 IN. (660 MM)
TANK VOLUME = 6.67 CF
STORAGE VOLUME = 6.33 CF
VOID INTERNAL VOLUME: 95%
VOID SURFACE AREA: 90%

LOAD RATING: 33.4 PSI, (MODULE ONLY)
HS25, (WITH ACF COVER SYSTE

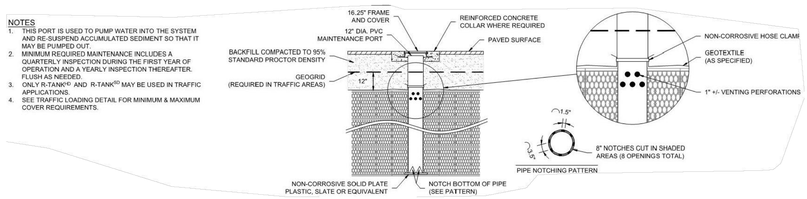
MATERIAL: 100% RECYCLED POLYPROPYLE

SMALL PLATES PER SEGMENT/TOTAL: 5/10

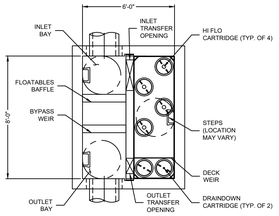
1.5 UNIT HIGH R-TANKHD MODULE DETAIL

N.T.S.

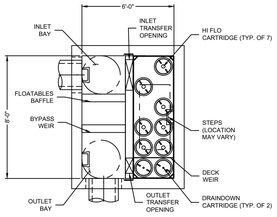
NOTES
1. THIS PORT IS USED TO PUMP WATER INTO THE SYSTEM AND RE-SUSPEND ACCUMULATED SEDIMENT SO THAT IT MAY BE PUMPED OUT.
2. MINIMUM REQUIRED MAINTENANCE INCLUDES A QUARTERLY INSPECTION DURING THE FIRST YEAR OF OPERATION AND A YEARLY INSPECTION THEREAFTER. FLUSH AS NEEDED.
3. ONLY R-TANK© AND R-TANK[D] MAY BE USED IN TRAFFIC APPLICATIONS.
4. SEE TRAFFIC LOADING DETAIL FOR MINIMUM & MAXIMUM COVER REQUIREMENTS.



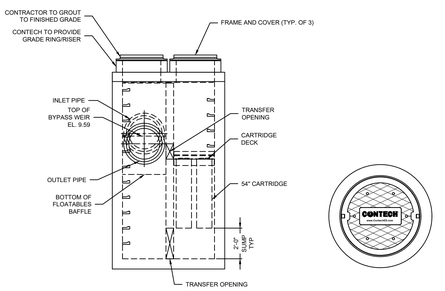
R-TANKHD TYPICAL MAINTENANCE PORT



PLAN VIEW
(TOP SLAB NOT SHOWN FOR CLARITY)

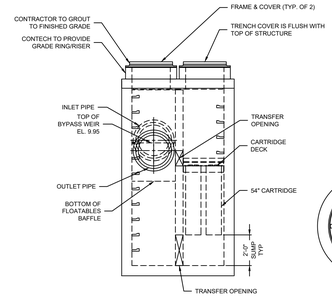


PLAN VIEW
(TOP SLAB NOT SHOWN FOR CLARITY)



ELEVATION VIEW

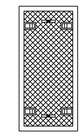
FRAME AND COVER
(DIAMETER VARIES)
N.T.S.



ELEVATION VIEW



FRAME AND COVER
(DIAMETER VARIES)
N.T.S.



24" TRENCH COVER
(LENGTH VARIES)
N.T.S.

GENERAL NOTES:
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS REPRESENTATIVE. www.ContechES.com
3. JELLYFISH WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. STRUCTURE SHALL MEET AASHTO HS-20 OR PER APPROVING JURISDICTION REQUIREMENTS, WHICHEVER IS MORE STRINGENT, ASSUMING EARTH COVER OF 0' - 10', AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. CONTRACTOR TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 LOAD RATING AND BE CAST WITH THE CONTECH LOGO.
5. STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-857, ASTM C-918, AND AASHTO LOAD FACTOR DESIGN METHOD.
6. OUTLET PIPE INVERT IS EQUAL TO THE CARTRIDGE DECK ELEVATION.

INSTALLATION NOTES
A. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STRUCTURE.
B. CONTRACTOR WILL INSTALL AND LEVEL THE STRUCTURE, SEALING THE JOINTS, LINE ENTRY AND EXIT POINTS (NON-SHRINK GROUT WITH APPROVED WATERSTOP OR FLEXIBLE BOOT).
C. CARTRIDGE INSTALLATION, BY CONTECH, SHALL OCCUR ONLY AFTER SITE HAS BEEN STABILIZED AND THE JELLYFISH UNIT IS CLEAN AND FREE OF DEBRIS. CONTACT CONTECH TO COORDINATE CARTRIDGE INSTALLATION WITH SITE STABILIZATION.

PEAK DIVERSION JELLYFISH FILTER #1

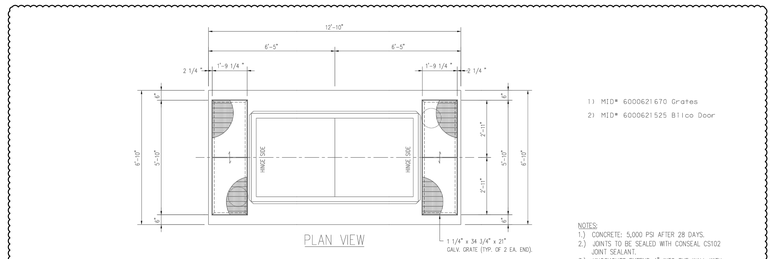
N.T.S.

GENERAL NOTES:
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2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS REPRESENTATIVE. www.ContechES.com
3. JELLYFISH WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. STRUCTURE SHALL MEET AASHTO HS-20 OR PER APPROVING JURISDICTION REQUIREMENTS, WHICHEVER IS MORE STRINGENT, ASSUMING EARTH COVER OF 0' - 10', AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. CONTRACTOR TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 LOAD RATING AND BE CAST WITH THE CONTECH LOGO.
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A. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STRUCTURE.
B. CONTRACTOR WILL INSTALL AND LEVEL THE STRUCTURE, SEALING THE JOINTS, LINE ENTRY AND EXIT POINTS (NON-SHRINK GROUT WITH APPROVED WATERSTOP OR FLEXIBLE BOOT).
C. CARTRIDGE INSTALLATION, BY CONTECH, SHALL OCCUR ONLY AFTER SITE HAS BEEN STABILIZED AND THE JELLYFISH UNIT IS CLEAN AND FREE OF DEBRIS. CONTACT CONTECH TO COORDINATE CARTRIDGE INSTALLATION WITH SITE STABILIZATION.

PEAK DIVERSION JELLYFISH FILTER #2

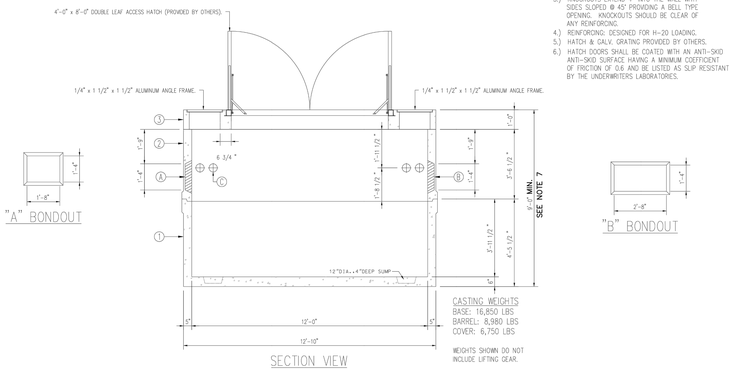
N.T.S.



PLAN VIEW

1) MID* 6000621670 Grates
2) MID* 6000621525 Bilco Door

NOTES:
1.) CONCRETE: 5,000 PSI AFTER 28 DAYS.
2.) JOINTS TO BE SEALED WITH CONSEAL CS102 JOINT SEALANT.
3.) KNOCKOUTS EXTEND 4" INTO THE WALL WITH SIDES SLOPED @ 45° PROVIDING A BELL TYPE OPENING. KNOCKOUTS SHOULD BE CLEAR OF ANY REINFORCING.
4.) REINFORCING: DESIGNED FOR H-20 LOADING.
5.) HATCH & GALV. GRATING PROVIDED BY OTHERS.
6.) HATCH DOORS SHALL BE COATED WITH AN ANTI-SKID ANTI-SKID SURFACE HAVING A MINIMUM COEFFICIENT OF FRICTION OF 0.6 AND BE LISTED AS SLIP RESISTANT BY THE UNDERWRITERS LABORATORIES.


4'-0" x 8'-0" DOUBLE LEAF ACCESS HATCH (PROVIDED BY OTHERS).
1/4" x 1 1/2" x 1 1/2" ALUMINUM ANGLE FRAME.
1/4" x 1 1/2" x 1 1/2" ALUMINUM ANGLE FRAME.
1'-6"
6 3/4"
1'-6"
1'-6"
1'-6

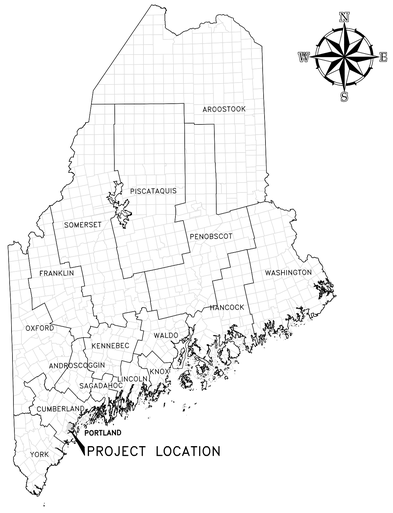
PORTLAND FORESIDE DEVELOPMENT COMPANY

PORTLAND FORESIDE - PHASE I
58 FORE STREET
PORTLAND, ME

W&C PROJECT NO. 227007

NOVEMBER 8, 2019

SITE PLAN APPLICATION SUBMISSION



PROJECT LOCATION MAP

50 0 50 100
scale mile

STATE OF MAINE
LAUREN JANE SWETT
No. 12284
LICENSED PROFESSIONAL ENGINEER

WOODARD & CURRAN

41 Hutchins Drive | Portland, Maine 04102
800.426.4262 | www.woodardcurran.com

COMMITMENT & INTEGRITY DRIVE RESULTS



SOURCE: USGS TOPOGRAPHIC MAP

SITE LOCATION MAP

1/2 0 1/2 1
scale mile

2000 0 2000 4000
scale feet

\\woodardcurran.net\shared\Projects\0227007.07 PFDC - 58 Fore Block 1\wip\Drawings\Phase 1 - Site Plan Submission\0227007 Phase 1 Cover.dwg, Nov 08, 2019 - 1:50pm

GENERAL NOTES

1. SITE AND TOPOGRAPHIC DATA TAKEN FROM PLAN ENTITLED "EXISTING CONDITIONS AT 58 FORE STREET, PORTLAND, MAINE" PREPARED BY OWEN HASKELL, INC. DATED 2/26/2019.
2. VERTICAL DATUM IS REFERENCED TO CITY DATUM WITH ONE FOOT CONTOUR INTERVALS. CITY DATUM IS +0.02 FT NGVD 1929. HORIZONTAL DATUM IS REFERENCED TO STATE PLANE NAD 1983 (FEET), MAINE WEST ZONE.
3. THE ENTIRE SITE SHALL BE DEVELOPED AND/OR MAINTAINED AS DEPICTED ON THE SITE PLAN. APPROVAL OF THE PLANNING AUTHORITY OR PLANNING BOARD SHALL BE REQUIRED FOR ANY ALTERATION TO OR DEVIATION FROM THE APPROVED SITE PLAN, INCLUDING, WITHOUT LIMITATION: TOPOGRAPHY, DRAINAGE, LANDSCAPING, RETENTION OF WOODED OR LAWN AREAS, ACCESS, SIZE, LOCATION, AND SURFACING OF PARKING AREAS, AND LOCATION AND SIZE OF BUILDINGS.
4. THE CONTRACTOR SHALL CALL "DIG SAFE" AT 811 AT LEAST 72 HOURS PRIOR TO EXCAVATION IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL SAFETY CODES.
5. PROPERLY PROTECT AND DO NOT DISTURB PROPERTY IRONS AND MONUMENTS. IF DISTURBED, THE PROPERTY MONUMENT SHALL BE RESET AT THE CONTRACTOR'S EXPENSE BY A LICENSED LAND SURVEYOR ACCEPTABLE TO THE CITY. PROPERTY MONUMENTS SHALL BE RESET IN ACCORDANCE WITH CITY OF PORTLAND STANDARDS.
6. DO NOT PARK, IMPEDE ACCESS TO, OR STORE EQUIPMENT ON ADJACENT CITY OR PRIVATELY OWNED LOTS, UNLESS PERMISSION HAS BEEN GRANTED IN ADVANCE IN WRITING BY CITY AND/OR LAND OWNER.
7. PRIOR TO CONSTRUCTION, A PRECONSTRUCTION MEETING SHALL BE HELD AT THE PROJECT SITE WITH THE CONTRACTOR, ENGINEER, CITY OF PORTLAND DEVELOPMENT REVIEW COORDINATOR, CITY OF PORTLAND DEPARTMENT OF PUBLIC WORKS REPRESENTATIVE, AND OWNER TO REVIEW THE CONSTRUCTION SCHEDULE AND CRITICAL ASPECTS OF THE SITE WORK. AT THAT TIME, THE SITE/BUILDING CONTRACTOR SHALL PROVIDE THREE (3) COPIES OF A DETAILED CONSTRUCTION SCHEDULE TO THE ATTENDING CITY REPRESENTATIVE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ARRANGE A MUTUALLY AGREEABLE TIME FOR THE PRECONSTRUCTION MEETING.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RELOCATIONS THAT CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE SITE DRAWINGS, INCLUDING BUT NOT LIMITED TO ALL UTILITIES, STORM INFRASTRUCTURE, SIGNS, UTILITY POLES, FENCES, ETC. AS REQUIRED. ALL WORK SHALL BE IN ACCORDANCE WITH THE GOVERNING AUTHORITY'S SPECIFICATIONS AND SHALL BE APPROVED BY SUCH. ALL COSTS SHALL BE INCURRED BY THE CONTRACTOR.
9. LAND OUTSIDE THE PROPOSED LIMIT OF WORK SHALL NOT BE DISTURBED BY THE CONTRACTOR. ANY LAND OUTSIDE LIMIT OF WORK DISTURBED BY CONTRACTOR SHALL BE RESTORED BY CONTRACTOR AT NO EXPENSE TO OWNER.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING ALL CONTROL POINTS AND BENCH MARKS NECESSARY FOR THE WORK.
11. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL SAFETY CODES, REGULATIONS, LEGAL REQUIREMENTS, PERMIT CONDITIONS, ETC.
12. THE CONTRACTOR SHALL TAKE ADEQUATE PRECAUTIONS TO PROTECT ALL WALKWAYS, STREETS, PAVEMENTS, CURBING, TREES, PLANTINGS, LAWN, FENCING TO REMAIN ON OR OFF THE PREMISES, AND SHALL REPAIR AND REPLACE AT HIS/HER OWN EXPENSE, AS DIRECTED BY THE ENGINEER, ANY ITEMS DAMAGED AS A RESULT OF THE CONTRACTOR'S WORK.
13. THE CONTRACTOR SHALL PROVIDE ADEQUATE BRACING AND SHORING OF ALL EXCAVATIONS IN ACCORDANCE WITH THE REQUIREMENTS OF ALL GOVERNING CODES AND REGULATIONS.
14. SAWCUTS IN EXISTING PAVEMENT SHALL BE SMOOTH AND STRAIGHT. EXISTING PAVEMENT SHALL BE SAWCUT AND BUTTED TO THE NEW PAVEMENT. NO FEATHERING OF PAVEMENT WILL BE PERMITTED.
15. WORK WITHIN PUBLIC RIGHT-OF-WAY SHALL COMPLY WITH APPLICABLE CITY OF PORTLAND AND STATE REQUIREMENTS.
16. ALL CURB DAMAGED DURING CONSTRUCTION SHALL BE REPLACED IN KIND AND SHALL CONFORM TO CITY OF PORTLAND SPECIFICATIONS. COST IS INCIDENTAL TO CONTRACT.
17. ALL FULL DEPTH PAVEMENT REPLACEMENT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF PORTLAND TECHNICAL STANDARDS.
18. ALL WORK WITHIN THE RIGHT OF WAY OF CITY STREETS SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY TRAFFIC ENGINEER. THE CONTRACTOR SHALL SUBMIT A PROPOSED TRAFFIC CONTROL PLAN TO THE TRAFFIC ENGINEER AT LEAST 7 DAYS BEFORE BEGINNING CONSTRUCTION IN ANY STREET. THE PROPOSED TRAFFIC CONTROL PLAN SHALL BE SUBJECT TO APPROVAL BY THE TRAFFIC ENGINEER, WHO MAY ATTACH SPECIAL CONDITIONS TO, OR REQUIRE MODIFICATIONS OF, THE TRAFFIC CONTROL PLAN. WORK SHALL NOT BEGIN UNTIL THE PLAN IS APPROVED BY THE TRAFFIC ENGINEER.
19. THE CONTRACTOR SHALL OBTAIN A CITY STREET OPENING PERMIT BEFORE BEGINNING CONSTRUCTION. THE CONTRACTOR WILL ALSO BE REQUIRED TO HAVE A CURRENT EXCAVATOR'S LICENSE IN THE CITY.
20. ALL WORK IN THE PUBLIC R.O.W. SHALL BE COMPLETED IN ACCORDANCE WITH THE CITY'S TECHNICAL MANUAL ARTICLES VI, VII, AND IX OF CHAPTER 25-STREETS, SIDEWALKS, AND OTHER PUBLIC PLACES OF THE CITY OF PORTLAND CODE OF ORDINANCES.
21. ALL SEWER CONSTRUCTION IN THE PUBLIC WAY SHALL BE COMPLETED IN ACCORDANCE WITH ARTICLE II OF CHAPTER 24-SEWERS OF THE CITY OF PORTLAND CODE OF ORDINANCES.
22. CONTACT CITY OF PORTLAND ARBORIST AND ENGINEER PRIOR TO CUTTING ROOTS, TRIMMING BRANCHES, OR DISTURBING TREES WITHIN THE R.O.W. THAT NOT HAVE BEEN NOTED FOR REMOVAL ON THE PLANS.
23. IF IMPORTED FILL MATERIAL IS REQUIRED, IT SHALL BE CERTIFIED IN WRITING BY CONTRACTOR AS NON-CONTAMINATED, CLEAN FILL SUITABLE FOR THE INTENDED USE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TESTING OF ENVIRONMENTAL PARAMETERS AS OUTLINED IN THE PROJECT SPECIFICATIONS.
24. RESTORE ALL AREAS DISTURBED BY CONTRACTOR'S OPERATIONS TO ORIGINAL FINISH (GRAVEL, PAVEMENT, RIPRAP, GRASS, ETC.) UNLESS OTHERWISE NOTED ON PLANS. RESTORATION OF ALL AREAS DAMAGED BY CONTRACTOR SHALL BE INCIDENTAL TO THE PROJECT.
25. ALL MATERIAL SHALL BE FURNISHED BY CONTRACTOR UNLESS OTHERWISE NOTED.
26. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF ALL DIMENSIONS PRIOR TO START OF CONSTRUCTION.
27. RESTRICT ACCESS TO SITE THROUGH THE USE OF APPROPRIATE SIGNAGE, BARRIERS, FENCES, ETC. SITE SHALL BE LEFT WITH APPROPRIATE SAFETY MEASURES IN PLACE DURING NON-WORKING HOURS. NO TRENCH SHALL BE LEFT OPEN DURING NON-WORKING HOURS. SITE SAFETY IS THE RESPONSIBILITY OF CONTRACTOR, DURING BOTH WORKING AND NON-WORKING HOURS.
28. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY CONSTRUCTION PERMITS. PERMIT APPLICATIONS SHALL BE SUBMITTED WITH ADEQUATE TIME SO AS NOT TO DELAY CONSTRUCTION.
29. CONTRACTOR SHALL PROVIDE AND MAINTAIN EROSION AND SEDIMENTATION CONTROL MEASURES IN ACCORDANCE WITH THESE PLANS AND THE LATEST EDITION OF THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION'S BEST MANAGEMENT PRACTICES MANUAL. KEEP ALL STREETS FREE OF DUST, MUD, AND DEBRIS. STREETS AND WALKWAYS SHALL BE SWEPT REGULARLY, AND TEMPORARY CONSTRUCTION ENTRANCES SHALL BE UTILIZED DURING CONSTRUCTION.
30. CONTRACTOR IS REQUIRED TO PERFORM ALL WORK IN ACCORDANCE WITH REQUIREMENTS OUTLINED WITHIN THE MAINE CONSTRUCTION GENERAL PERMIT. CONTRACTOR SHALL FILE A NOTICE OF TERMINATION WITH PHOTOGRAPHS AND REQUIRED ATTACHMENTS TO THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION UPON COMPLETION OF THE PROJECT. A DRAFT OF THE NOTICE WILL BE PROVIDED TO THE OWNER AND THE OWNER'S REPRESENTATIVE FOR REVIEW PRIOR TO SUBMISSION. A COPY OF THE NOTICE CAN BE OBTAINED AT WWW.MAINE.GOV/DEP/LAND/STORMWATER/CONSTRUCTION.HTML.
31. CONTRACTOR SHALL MAINTAIN EROSION CONTROL AND STORMWATER POLLUTION PREVENTION SYSTEMS IN COMPLIANCE WITH THE REQUIREMENTS OF THE MAINE CONSTRUCTION GENERAL PERMIT (MCGP). CONTRACTOR SHALL CONDUCT AND MAINTAIN RECORDS OF EROSION CONTROL INSPECTIONS PER THE NOTICE OF INTENT TO COMPLY WITH THE MAINE CONSTRUCTION GENERAL PERMIT. CONTRACTOR SHALL PREPARE AND SUBMIT A NOTICE OF TERMINATION TO THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, UPON COMPLETION OF THE CONSTRUCTION PROJECT. SUBMIT A COPY OF THE INSPECTION RECORDS AND THE NOTICE OF TERMINATION TO THE OWNER AND ARCHITECT.
32. THE UTILITY LOCATIONS SHOWN IN PLAN AND PROFILE ARE APPROXIMATE AND REQUIRE FIELD VERIFICATION BY THE CONTRACTOR. CONTACT THE ENGINEER AND OWNER IMMEDIATELY UPON DISCOVERING ANY CONFLICTS WITH EXISTING AND PROPOSED UTILITY LOCATIONS. NOT ALL EXISTING UTILITIES ARE SHOWN ON PLANS.
33. CONTRACTOR SHALL CLEAN AND/OR FLUSH ALL MANHOLES, CATCH BASINS, AND ASSOCIATED PIPING AFTER THE WORK HAS BEEN COMPLETED.
34. CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITY WITH UTILITY COMPANIES, EMERGENCY SERVICES AND CITY. NOTIFY UTILITY COMPANIES WITHIN 48 HOURS OF WORK ACTIVITY ADJACENT TO THOSE UTILITIES.
35. CONTRACTOR SHALL SEQUENCE THE WORK SO AS TO MAINTAIN UTILITY SERVICES FOR EXISTING OPERATIONS ON AND ADJACENT TO THE SITE. CONTRACTOR SHALL PROVIDE A PLAN FOR TEMPORARY UTILITY SERVICES OR AS REQUIRED. THE PLAN SHALL BE STAMPED BY A PROFESSIONAL ENGINEER AND SUBMITTED TO OWNER. ENGINEER AND UTILITY FOR ACCEPTANCE A MINIMUM OF 14 DAYS PRIOR TO START OF UTILITY WORK.
36. EXISTING FACILITIES (I.E. SIGNS, POLES, LIGHT POSTS, ETC.) SHALL BE REMOVED AND PROTECTED DURING CONSTRUCTION. OWNER RETAINS RIGHT TO KEEP ANY AND ALL REMOVED FACILITIES. CONTRACTOR SHALL DISPOSE OF ANY REMOVED FACILITY AT THE REQUEST OF CITY AT CONTRACTOR'S EXPENSE.
37. ALL TREES NOT NOTED TO BE REMOVED OR RELOCATED SHALL BE PROTECTED BY CONTRACTOR DURING CONSTRUCTION.
38. A COMPLETE SET OF "RECORD" DRAWINGS THAT REFLECT ANY AND ALL MODIFICATIONS TO THE SANITARY SEWER SYSTEM, STORM SEWER SYSTEM AND ANY OTHER UTILITY INSTALLATIONS OR ALTERATIONS WITHIN THE PROJECT LIMITS SHALL BE SUBMITTED TO THE CITY OF PORTLAND. THESE DRAWINGS SHALL BE SUBMITTED IN BOTH DIGITAL (ACAD) AND HARD COPY FORMAT AS DEFINED IN THE SPECIFICATIONS PRIOR TO PAYMENT OF FINAL RETAINAGE.
39. ALL UTILITY SERVICES AND MAINS ARE APPROXIMATE AS SHOWN. CONTRACTOR SHALL FIELD VERIFY LOCATION OF EXISTING SERVICES AND MAINS AND RELOCATE AS REQUIRED TO COMPLETE WORK. CONTRACTOR SHALL COORDINATE WORK WITH THE CITY OF PORTLAND, PORTLAND WATER DISTRICT, UNITIL, CMP, AND ANY OTHER UTILITY OWNERS AND PROPERTY OWNERS.
40. WORK IS PROPOSED IN CLOSE PROXIMITY TO EXISTING UTILITIES. CONTRACTOR SHALL PROTECT EXISTING UTILITIES DURING CONSTRUCTION. CONTRACTOR SHALL SUBMIT PROTECTION PLAN FOR CROSSING 33" SANITARY SEWER FORCE MAIN, STAMPED BY PROFESSIONAL ENGINEER PRIOR TO START OF WORK.
41. CAPPED PIPE STUB LOCATIONS SHALL BE MARKED WITH EMBEDDED STAKE AND A MINIMUM OF THREE TIES SHALL BE RECORDED. EMBEDDED STAKE SHALL BE 2X4 WITH PK NAIL DRIVEN IN TOP, LENGTH AS REQUIRED TO SPAN FROM TOP OF PIPE TO 6" BELOW GRADE. LOCATION AND ELEVATION OF PIPE STUB SHALL BE PROVIDED. WARNING TAPE AND WIRE SHALL BE INSTALLED OVER PIPE STUBS IN ACCORDANCE WITH SPECIFICATIONS.
42. ALL SIGNAGE SHALL CONFORM WITH MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)
43. ACTIVITIES THAT HAVE THE POTENTIAL TO DISTURB SOIL SUCH AS UTILITY AND SUBSURFACE STRUCTURE INSTALLATION/RELOCATION WORK, FOUNDATION INSTALLATION, GRADING, PAVING, AND LANDSCAPING SHALL BE CONDUCTED IN ACCORDANCE WITH THE FEBRUARY 28, 2019, SOIL MANAGEMENT PLAN FOR PORTLAND FORESIDE BLOCK 1. APPLICABLE SOIL MANAGEMENT PROCEDURES INCLUDE SITE CONTROLS AND CONSTRUCTION MEASURES TO REDUCE EXPOSURE TO SOIL DURING CONSTRUCTION, AS WELL AS TO FACILITATE THE PROPER HANDLING, STORAGE, CHARACTERIZATION, TRANSPORT, ONSITE REUSE, AND/OR OFFSITE REUSE, OR DISPOSAL, OF EXCESS SOIL THAT MAY BE GENERATED DURING CONSTRUCTION.

LEGEND

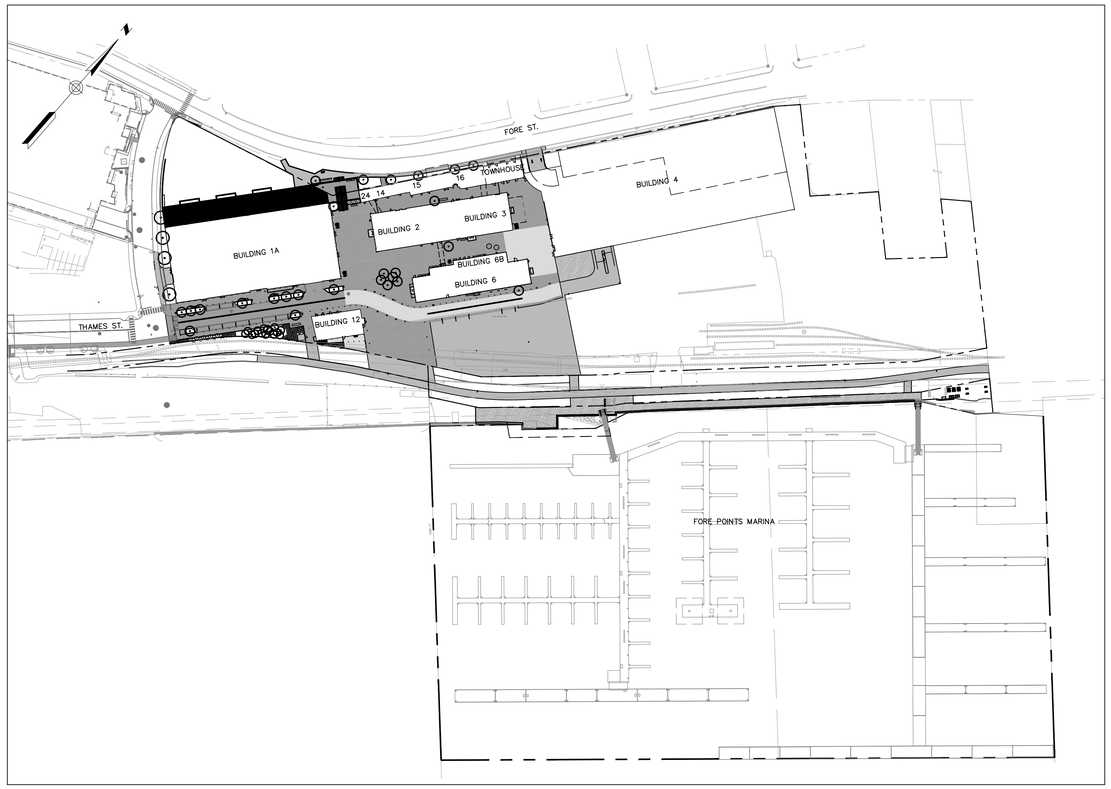
EXISTING		PROPOSED
	CONTOUR (1' INTERVAL)	
	CONTOUR (INDEX)	
S	SANITARY SEWER	S
FM	FORCEMAIN	FM
SD	STORM DRAIN	SD
UD	UNDERDRAIN	UD
W	WATER LINE	W
E	UNDERGROUND ELECTRIC	E
COMM	UNDERGROUND TELECOMMUNICATIONS	COMM
G	GAS LINE	G
OE	OVERHEAD ELECTRIC	
AS	ABANDONED SEWER	
AW	ABANDONED WATER LINE	
	PROPERTY LINE	
	RIGHT OF WAY	
	EASEMENT	
	EDGE OF VEGETATION	
X X	FENCE	
	CENTERLINE	
	RETAINING WALL	
	STONEWALL	
	CURB	
	EDGE OF PAVEMENT	
	EDGE OF GRAVEL	
T T T T T	GUARDRAIL	T T T T T
	RAILROAD TRACKS	
	DRAINAGE DITCH / SWALE	
	SEDIMENT BARRIER	
LW	LIMIT OF WORK	LW
	PAVER AREA	
	BRICK SIDEWALK	
	BITUMINOUS PAVEMENT	

LEGEND

EXISTING		PROPOSED
	SANITARY SEWER MANHOLE	
CO	CLEAN OUT	CO
	DRAINAGE MANHOLE	
	FIELD INLET CATCH BASIN	
	ELECTRICAL MANHOLE	EMH
	TELECOMMUNICATIONS MANHOLE	CMH
TELE BOX	TELEPHONE STAND BOX	
	GAS METER BOX	
	GAS VENT	
	GAS GATE	
	TRANSFORMER	TRANS.
	UTILITY POLE	
	UTILITY POLE WITH GUY	
	LIGHTPOST	
	WATER GATE	
	CURB STOP	
	REDUCER	
	COUPLING	
	WATER SHUT OFF VALVE	
	HYDRANT	
	WATER METER BOX	
	THRUST BLOCK	
	PROPERTY MONUMENT	
MB	MAIL BOX	
	STREET AND MISCELLANEOUS SIGNS	
FP	FLAGPOLE	
XXX.XX	SPOT ELEVATION	XXX.XX
	TREE/SHRUB	
TP	TEST PIT	

ABBREVIATIONS

&	AND	N.I.C.	NOT IN CONTRACT
A.G.	ABOVE GROUND	NO.	NUMBER
		NR	NO REFUSAL
BC	BOTTOM OF CURB	N.T.S.	NOT TO SCALE
BIT	BITUMINOUS		
BW	BOTTOM OF WALL	OE	OVERHEAD ELECTRIC
B/W	BETWEEN	OH	OVERHEAD
CB	CATCH BASIN	±	PLUS OR MINUS
CI	CAST IRON	LLS	LICENSED LAND SURVEYOR
CMP	CENTRAL MAINE POWER	PROP.	PROPOSED
CMP	CORRUGATED METAL PIPE	PT.	POINT
CONC	CONCRETE	PVC	POLYVINYL CHLORIDE
DI	DUCTILE IRON	R.O.W.	RIGHT-OF-WAY
DIA.	DIAMETER	RCP	REINFORCED CONCRETE PIPE
DMH	DRAIN MANHOLE	REINF.	REINFORCED
DTL.	DETAIL	REQ'D	REQUIRED
E	UNDERGROUND ELECTRICAL	S	SLOPE (FT./FT.)
EL.	ELEVATION	S	SEWER
E.O.P.	EDGE OF PAVEMENT	SD	STORM DRAIN
EXIST.	EXISTING	SMH	SEWER MANHOLE
		SCH	SCHEDULE
FF	FINISH FLOOR	STA.	STATION
FM	FORCEMAIN		
FT	FOOT/FEET	TS	TOP OF STAIRS
		TW	TOP OF WALL
G	GAS MAIN	TYP.	TYPICAL
GS	GAS SERVICE		
GALV.	GALVANIZED	UP	UTILITY POLE
GRAN.	GRANITE		
		VC	VITRIFIED CLAY
HDPE	HIGH DENSITY POLYETHYLENE	VIT.	VITRIFIED CLAY
HYD	HYDRANT		
		W	WEST
INV.	INVERT	W	WATER
		W/	WITH
LF	LINEAR FEET	W	WATERMAIN
		WS	WATER SERVICE
MAX.	MAXIMUM	WV	WATER VALVE
MDOT	MAINE DEPARTMENT OF TRANSPORTATION		
MIN.	MINIMUM		
MON	MONUMENT		



KEY PLAN
SCALE: 1=100'

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STATE OF MAINE
LAUREN SMETT
No. 12284
REGISTERED PROFESSIONAL ENGINEER

REV	DESCRIPTION	DATE
1	07/30/19 PHASE 1 SITE PLAN	

DESIGNED BY: LJS | DRAWN BY: BDM | CHECKED BY: DLC

GENERAL NOTES, LEGEND & ABBREVIATIONS

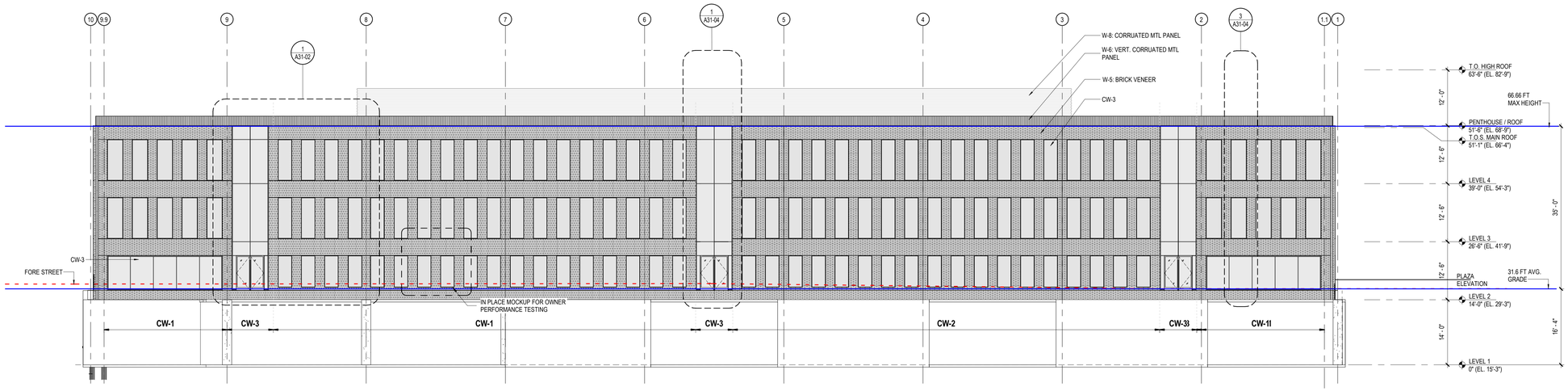
PORTLAND FORESIDE DEVELOPMENT CO.
PORTLAND, ME 04102

PHASE 1 SITE PLAN SUBMISSION

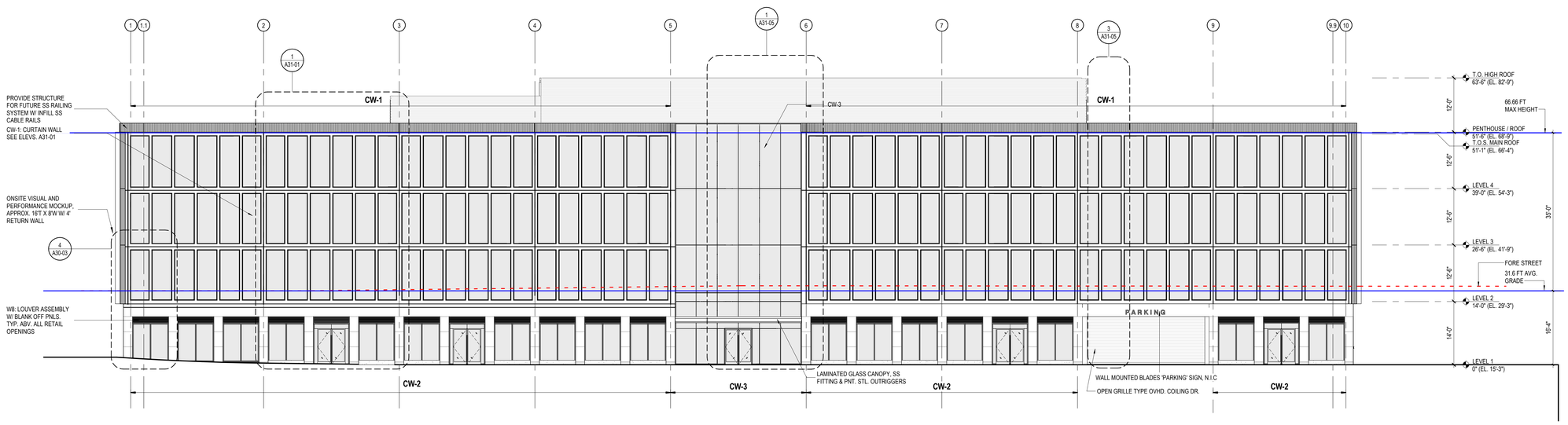
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DATE: NOVEMBER 2019
SCALE: AS NOTED
SHEET: 1 OF 17

G-001

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2 NORTH ELEVATION
3/32" = 1'-0"



1 SOUTH ELEVATION
3/32" = 1'-0"

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LANDSCAPE ARCHITECT
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PROJECT

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FORESIDE
PORTLAND, MAINE
254 COMMERCIAL ST
SUITE 118
PORTLAND, ME 04101

KEYPLAN

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ISSUE CHART

MARK	ISSUE	DATE

DESIGN DEVELOPMENT
JULY 26, 2019

Job Number	157087.000
Drawn	Author
Checked	Checker
Approved	Approver

TITLE

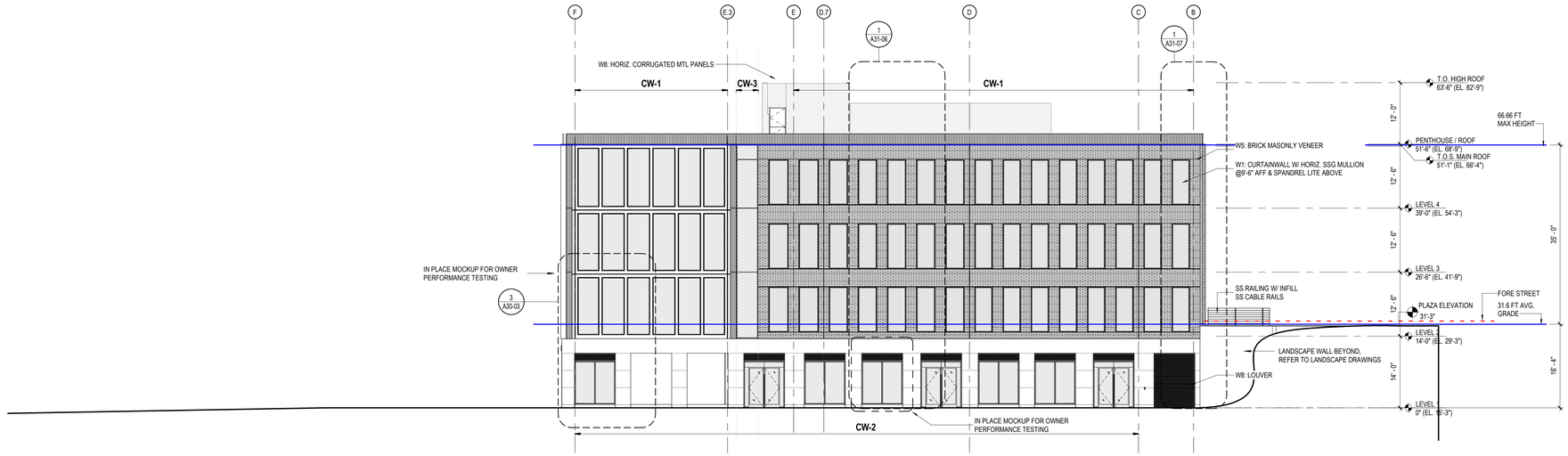
BUILDING ELEVATIONS

SHEET NUMBER

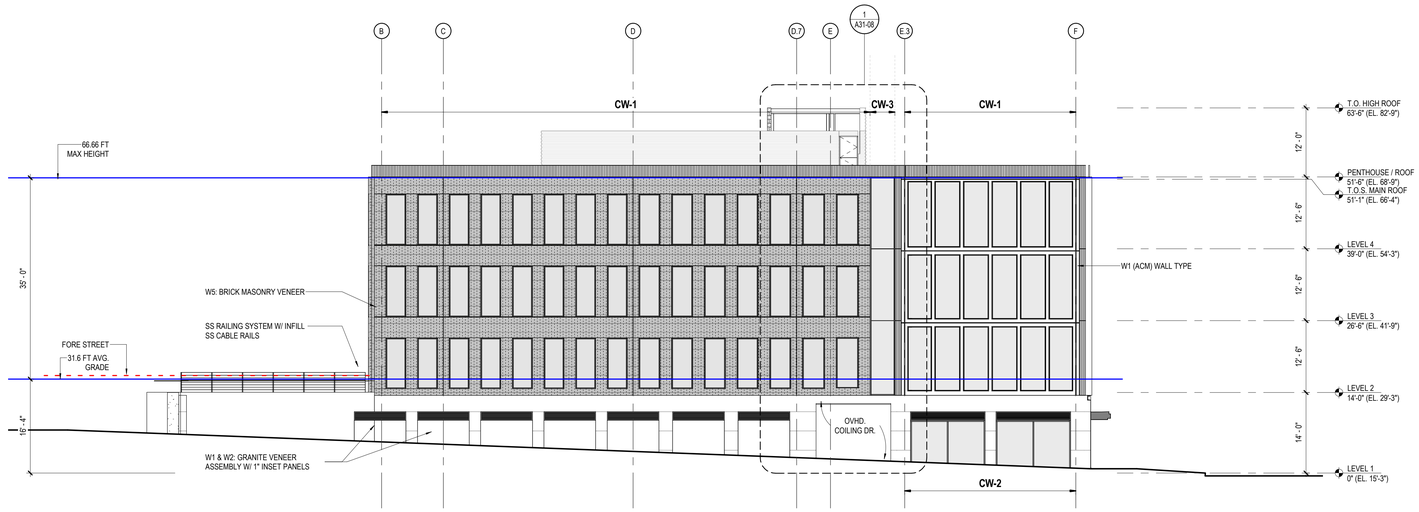
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2 EAST ELEVATION
3/32" = 1'-0"



1 WEST ELEVATION
3/32" = 1'-0"

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Checked	Checker
Approved	Approver

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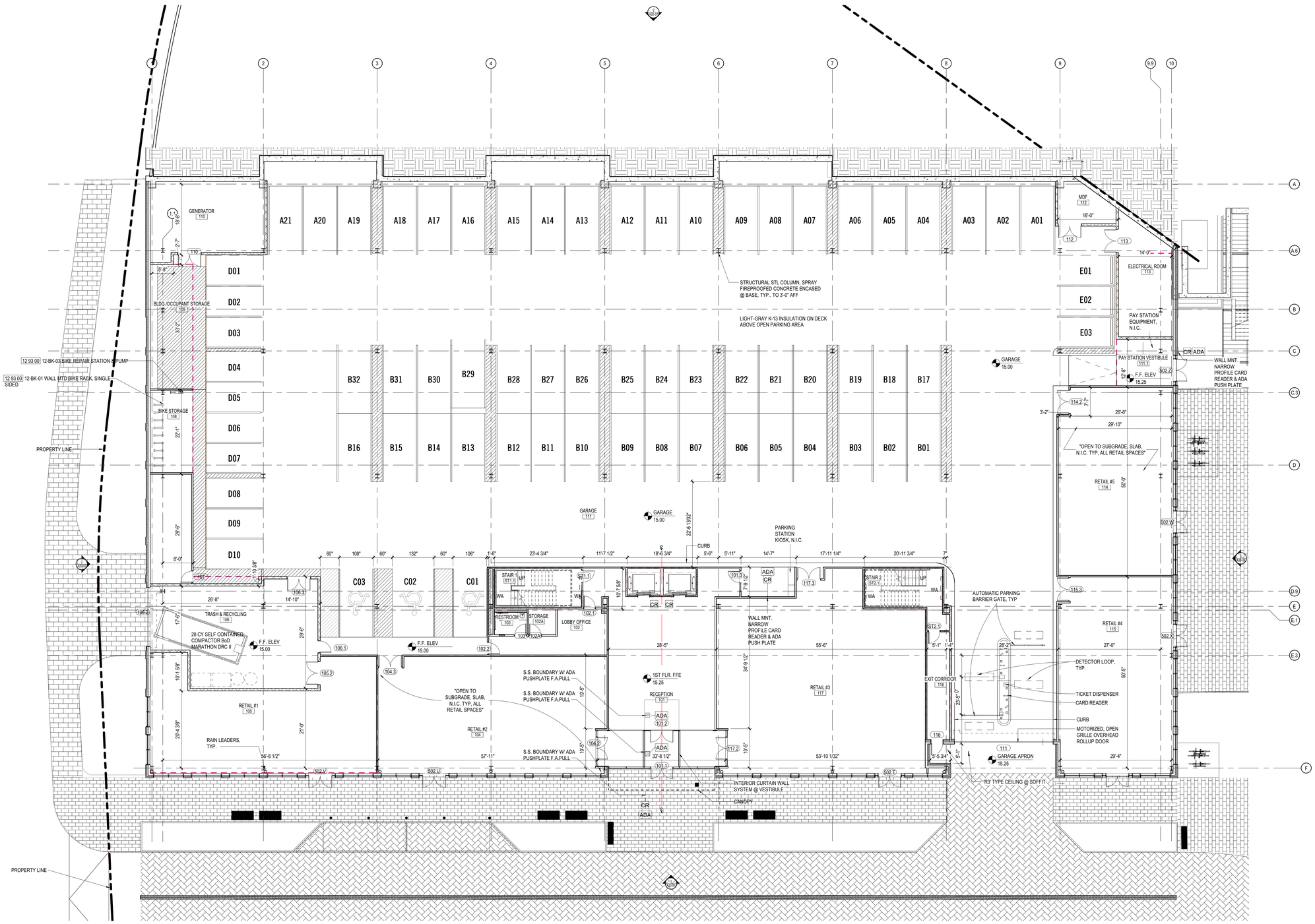
BUILDING ELEVATIONS

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A20-02

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1 LEVEL 01 PLAN

3/32" = 1'-0"

PARKING SCHEDULE	CURRENT - 02.03.2020	SD - 10.31.2018
ADA	2	4
ADA VAN	1	1
COMPACT (8'x15')	13	4
REGULAR (9' x 18')	53	51
Grand total: 69	69	60

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ISSUE CHART

MARK	ISSUE	DATE

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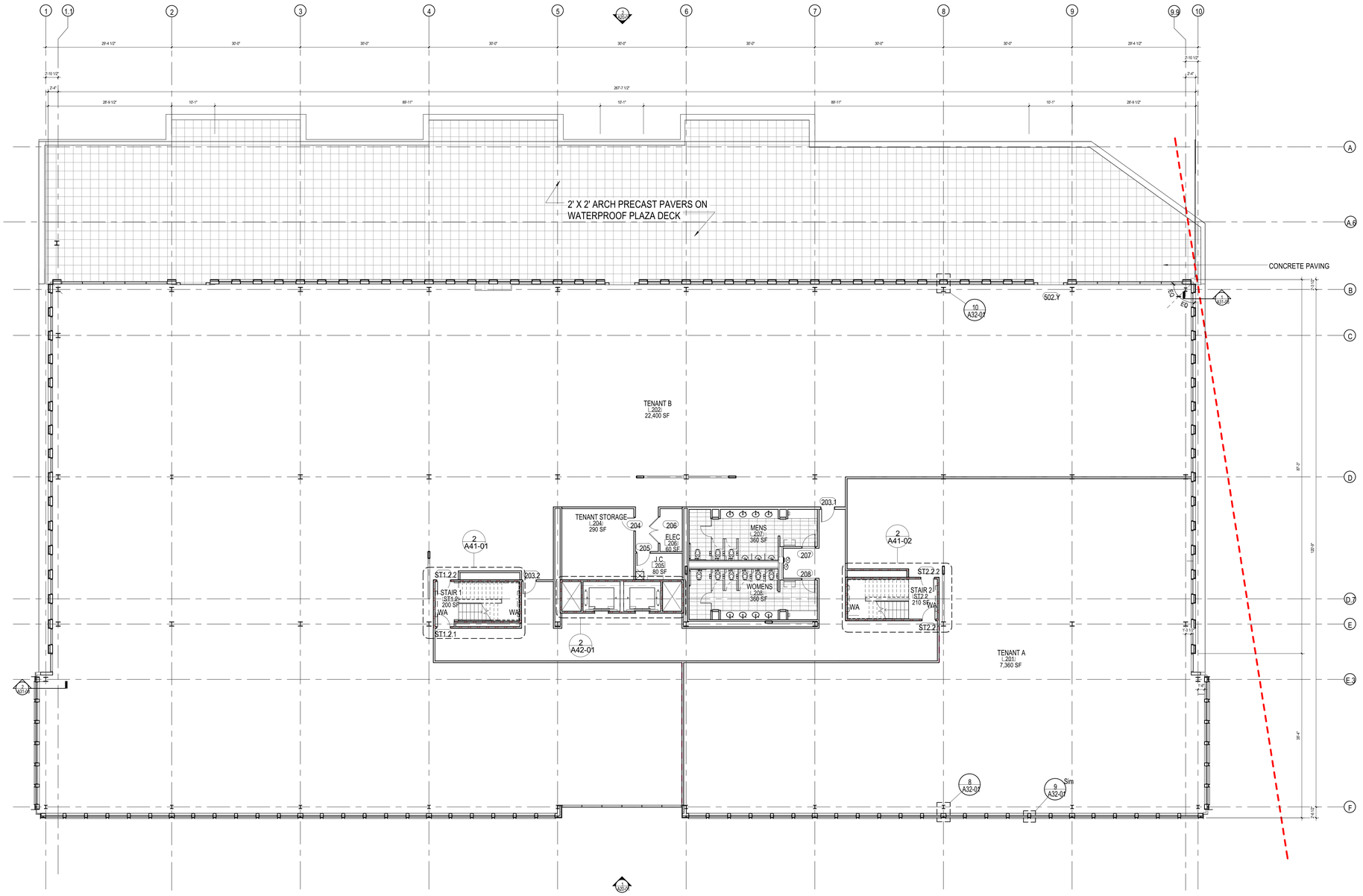
LEVEL 1 PLAN - PARKING

SHEET NUMBER

A10-01P

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PARTITION & DOOR NOTES

1. PARTITIONS LOCATED BY DIMENSION STRING ARE DIMENSIONED TO THE UNFINISHED FACE OF THE WALL UNLESS NOTED OTHERWISE.

2. PARTITIONS NOT DIMENSIONED ARE GENERALLY LOCATED BY ONE OF THE FOLLOWING CRITERIA:

   2.1 CENTERLINE - CENTER OF PARTITION ALIGNS WITH THE CENTER OF GRIDLINE OR OBJECT CENTERLINE (SUCH AS A COLUMN OR WINDOW MULLION).
   CENTER THE OVERALL PARTITION WIDTH, RATHER THAN STUD WIDTH ON THE RELATED CENTERLINE.

   2.2 ALIGN - LOCATE PARTITION FLUSH WITH FACE OF ANOTHER PARTITION OR ANOTHER SURFACE AS INDICATED.

   2.3 SPECIFICALLY MAINTAIN DIMENSIONS NOTED AS "MINIMUM" OR "CLEAR".

3. DOOR OPENINGS ARE DIMENSIONED TO CENTERLINE OF OPENING. IF NOT DIMENSIONED, THE HINGE SIDE OF DOOR SHALL BE SPACED 4" (INCLUDING THE JAMB) FROM THE ADJACENT WALL.

4. ALL INTERIOR PARTITIONS TO BE TYPE 'A41' U.N.O.

1 LEVEL 2 PLAN
3/32" = 1'-0"

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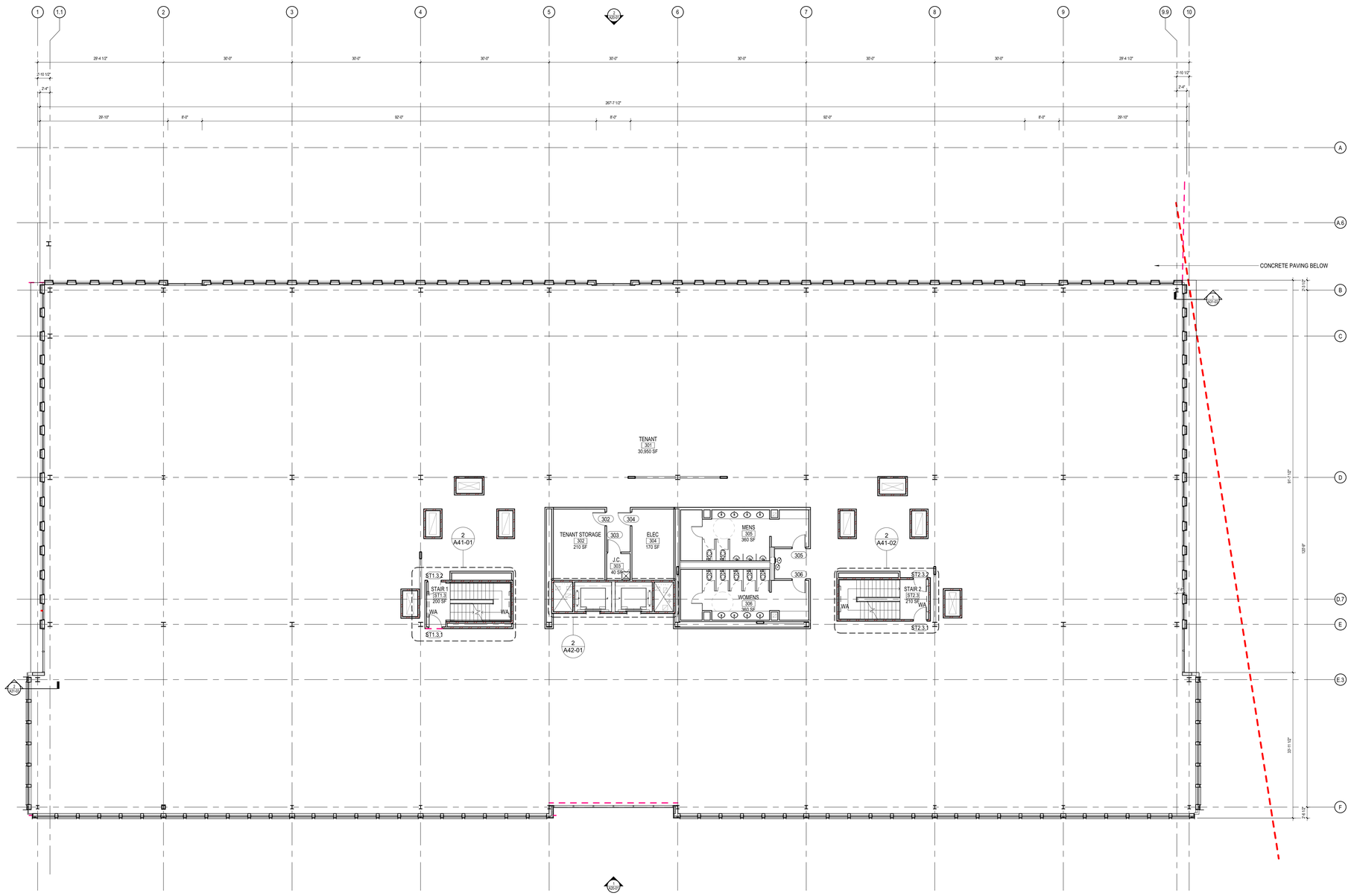
LEVEL 2 PLAN

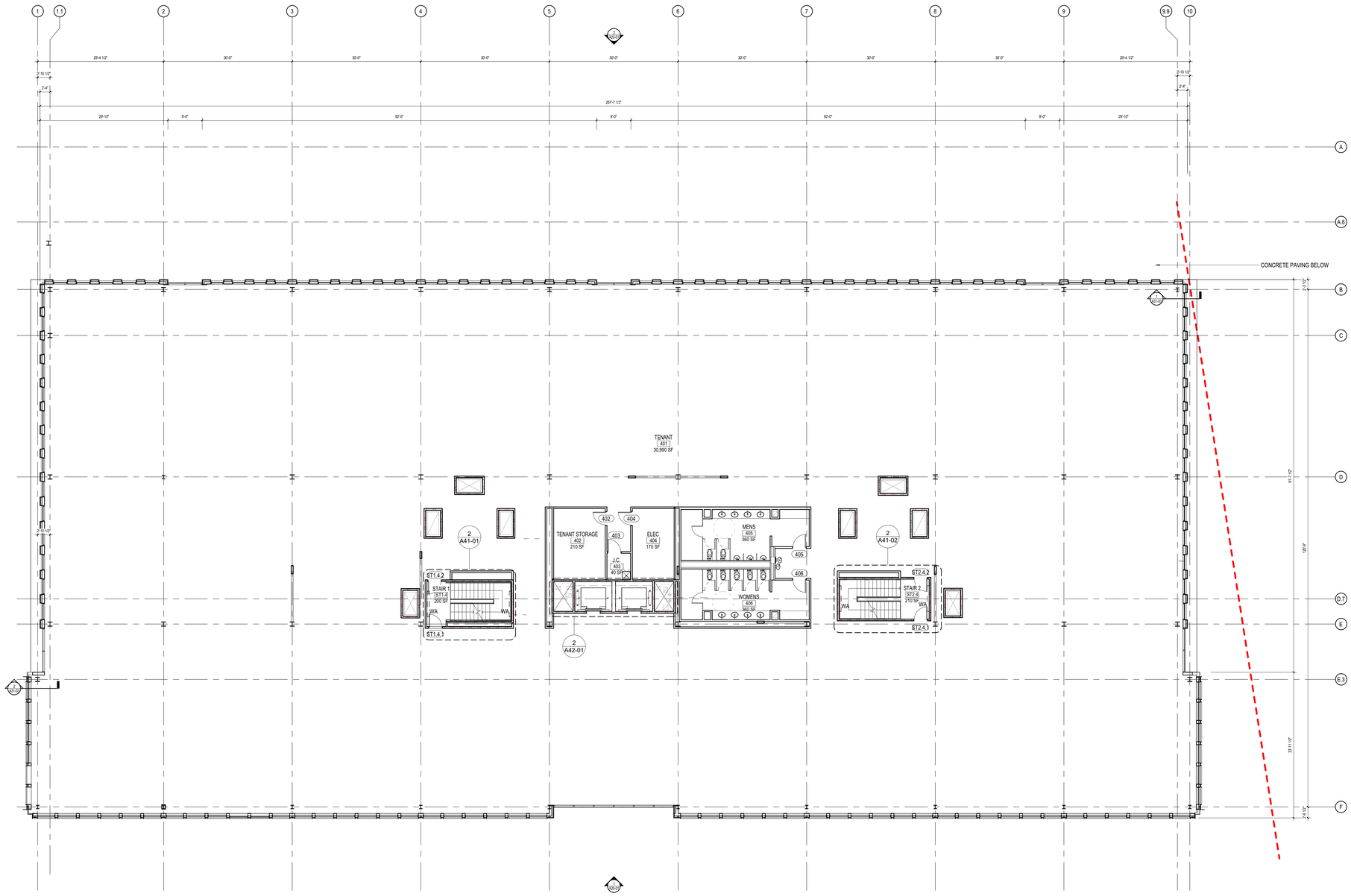
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1
1.1
2
3
4
5
6
7
8
9
9.8
10
29'-4 1/2"
30'-0"
2'-10 1/2"
2'-4"
267'-7 1/2"
28'-10"
8'-0"
92'-0"
A
A.6
B
C
D
D.7
E
E.3
F
CONCRETE PAVING BELOW
TENANT
301
30,950 SF
TENANT STORAGE
302
210 SF
302
303
304
ELEC
304
170 SF
J.C.
305
40 SF
MENS
305
360 SF
305
306
WOMENS
306
360 SF
2
A41-01
2
A42-01
2
A41-02
ST1.3.2
STAIR 1
ST1.3
200 SF
WA
ST1.3.1
ST2.3.2
STAIR 2
ST2.3
210 SF
ST2.3.1
2'-3 1/2"
4'-0"
4'-0"
4'-0



PARTITION & DOOR NOTES

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4. ALL INTERIOR PARTITIONS TO BE TYPE 'A41' U.N.O.

1 LEVEL 4 PLAN

3/32" = 1'-0"

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KEYPLAN

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ISSUE CHART

MARK	ISSUE	DATE

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JULY 26, 2019

Job Number	157087.000
Drawn	Author
Checked	Checker
Approved	Approver

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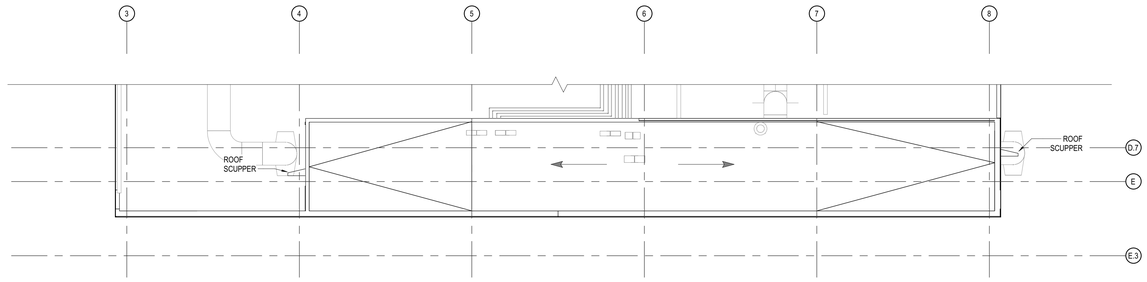
LEVEL 4 PLAN

SHEET NUMBER

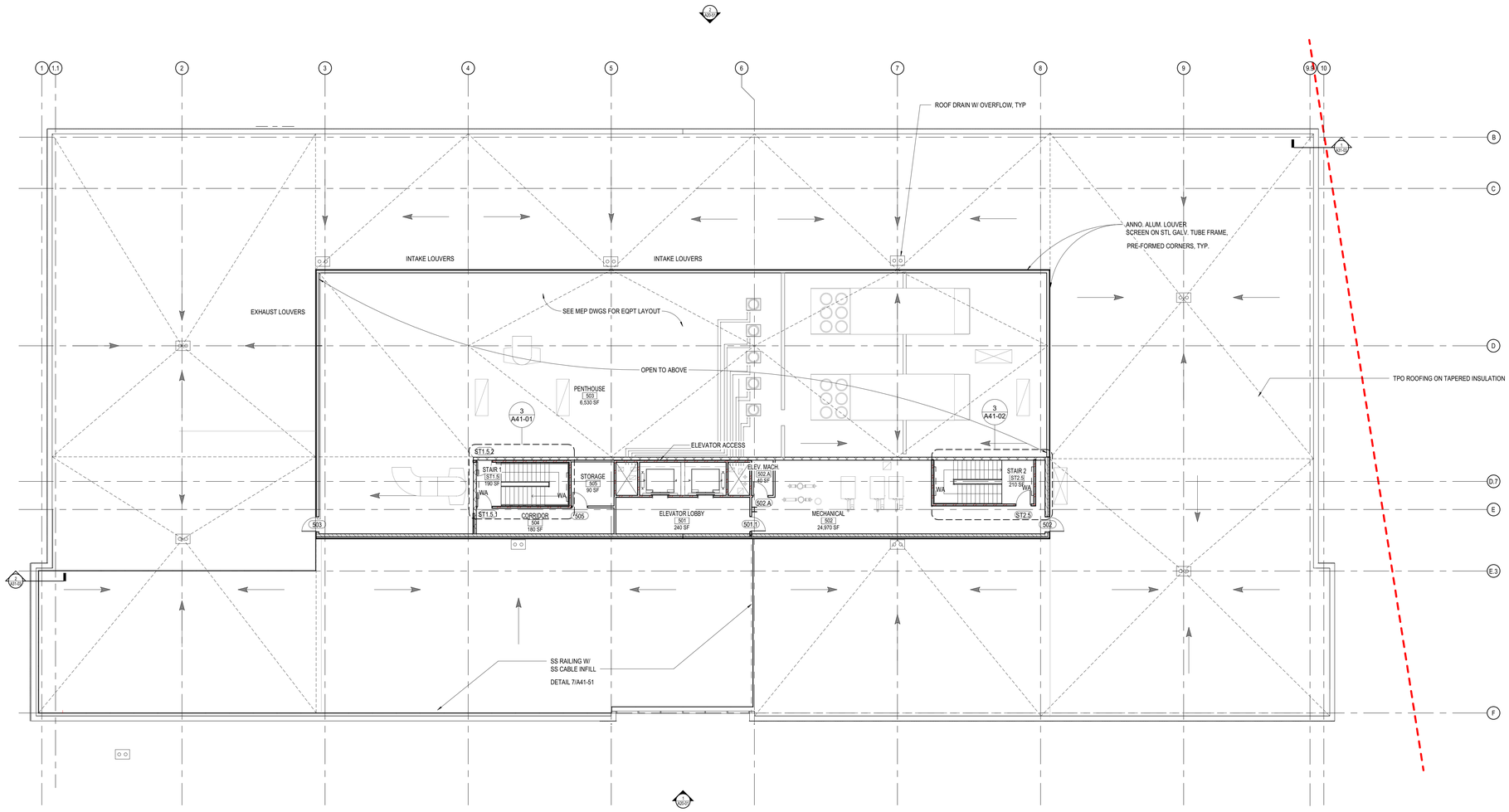
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2 HIGH ROOF PLAN
3/32" = 1'-0"



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1 PENTHOUSE & ROOF PLAN
3/32" = 1'-0"

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PENTHOUSE & HIGH ROOF PLAN

SHEET NUMBER

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2 BUILDING 12 - NORTHWEST ELEVATION
SCALE: 1/4" = 1'-0"

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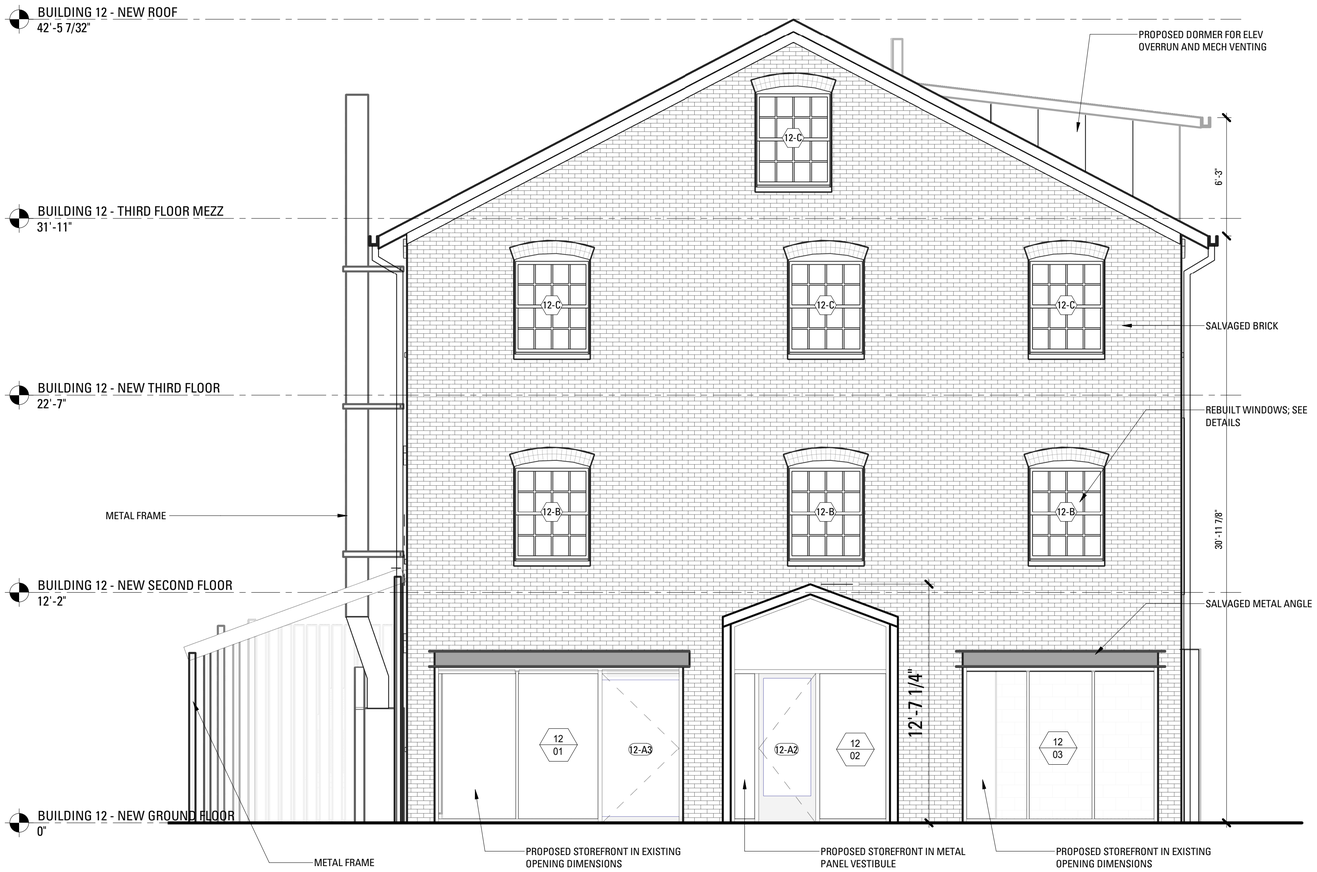
Rev.	Date	Remarks

PORTLAND FORESIDE - BUILDING 12

Date	OCTOBER 25, 2019
Scale	1/4" = 1'-0"
Project Number	19.007
Drawn By	Author

BUILDING 12 - EXTERIOR ELEVATIONS

A-301



1 BUILDING 12 - NORTHEAST ELEVATION
SCALE: 1/4" = 1'-0"

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Rev.	Date	Remarks

PORTLAND FORESIDE - BUILDING 12

Date	OCTOBER 25, 2019
Scale	1/4" = 1'-0"
Project Number	19.007
Drawn By	Author

EXTERIOR ELEVATIONS

A-302



1 BUILDING 12 - SOUTHEAST ELEVATION
SCALE: 1/4" = 1'-0"

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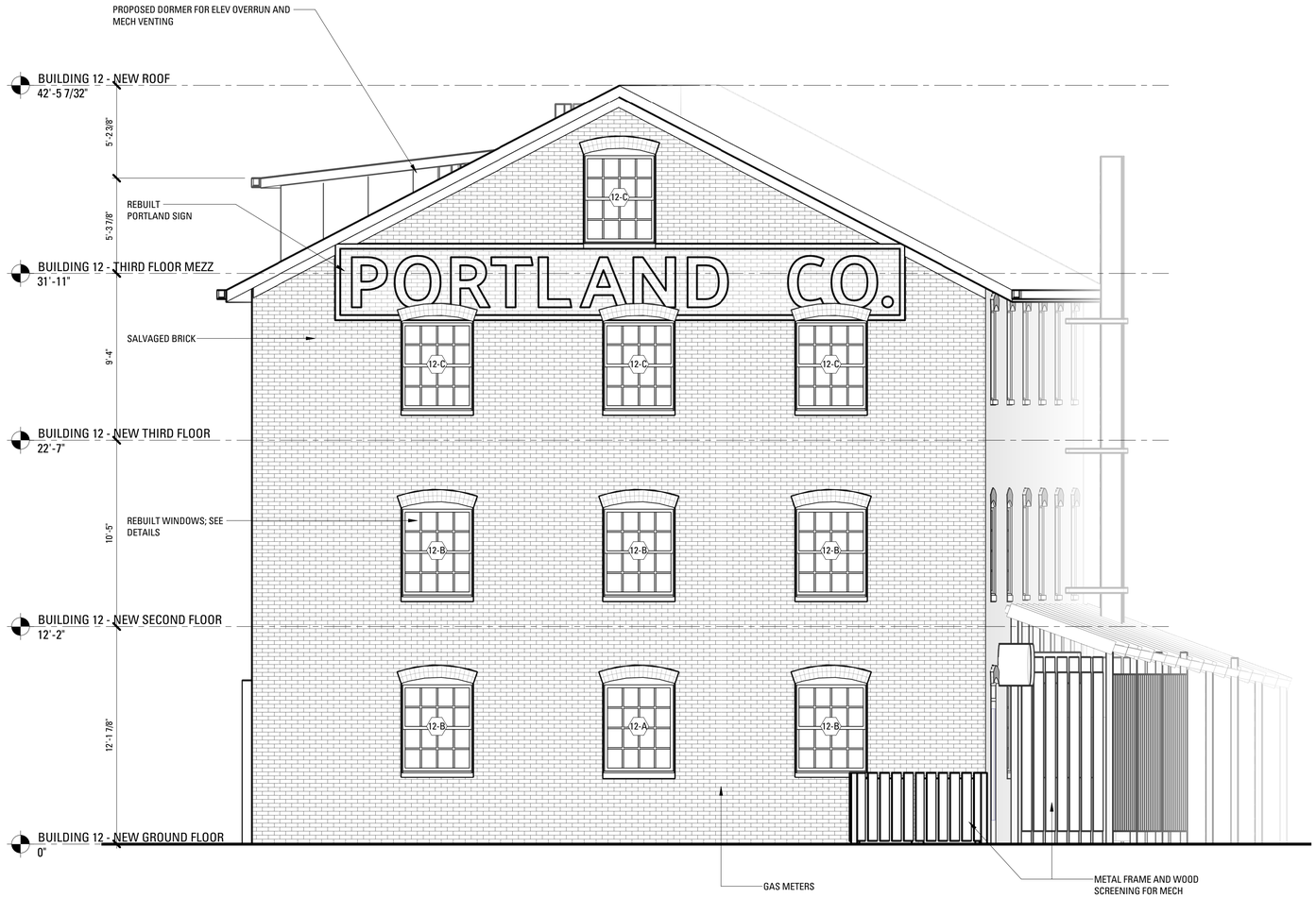
Rev.	Date	Remarks

PORTLAND FORESIDE - BUILDING 12

EXTERIOR ELEVATIONS

Date	OCTOBER 25, 2019
Scale	1/4" = 1'-0"
Project Number	19.007
Drawn By	Author

A-303



1 BUILDING 12 - SOUTHWEST ELEVATION
SCALE: 1/4" = 1'-0"

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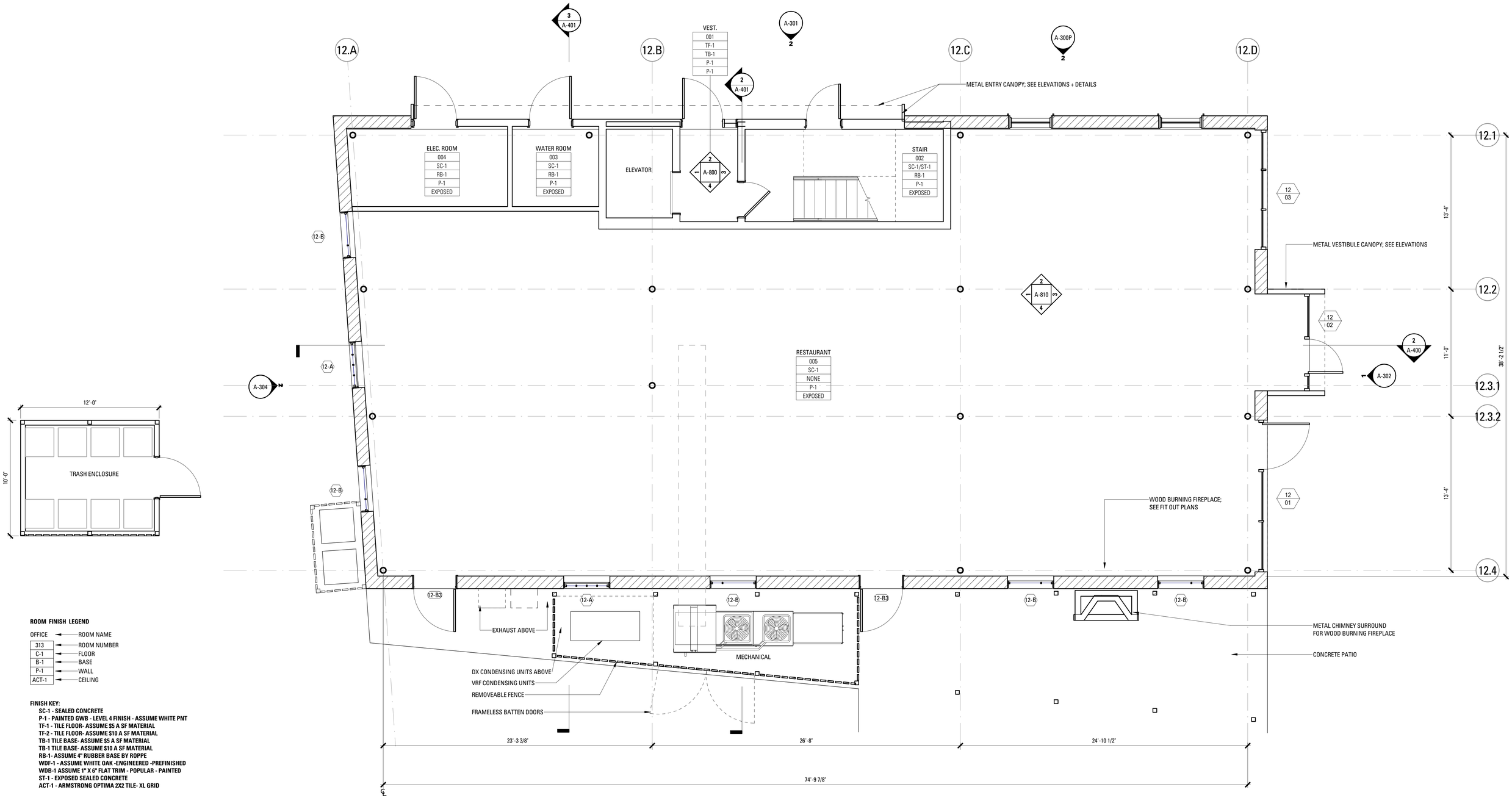
Rev.	Date	Remarks

PORTLAND FORESIDE - BUILDING 12

Date	OCTOBER 25, 2019
Scale	1/4" = 1'-0"
Project Number	19.007
Drawn By	Author

EXTERIOR ELEVATION

A-304



ROOM FINISH LEGEND

OFFICE	ROOM NAME
313	ROOM NUMBER
C-1	FLOOR
B-1	BASE
P-1	WALL
ACT-1	CEILING

FINISH KEY:

- **SC-1 - SEALED CONCRETE**
- **P-1 - PAINTED GWB - LEVEL 4 FINISH - ASSUME WHITE PNT**
- **TF-1 - TILE FLOOR- ASSUME $5 A SF MATERIAL**
- **TF-2 - TILE FLOOR- ASSUME $10 A SF MATERIAL**
- **TB-1 TILE BASE- ASSUME $5 A SF MATERIAL**
- **TB-1 TILE BASE- ASSUME $10 A SF MATERIAL**
- **RB-1- ASSUME 4" RUBBER BASE BY ROPPE**
- **WDF-1 - ASSUME WHITE OAK -ENGINEERED -PREFINISHED**
- **WDB-1 ASSUME 1" X 6" FLAT TRIM - POPULAR - PAINTED**
- **ST-1 - EXPOSED SEALED CONCRETE**
- **ACT-1 - ARMSTRONG OPTIMA 2X2 TILE- XL GRID**

FUTURE NOTE:

REFER TO REFLECTED CEILING PLANS FOR EXTENT OF GWB SOFFITS, OR SPECIAL CEILING MATERIAL LOCATIONS

1 BUILDING 12 - GROUND FLOOR PLAN
SCALE: 1/4" = 1'-0"

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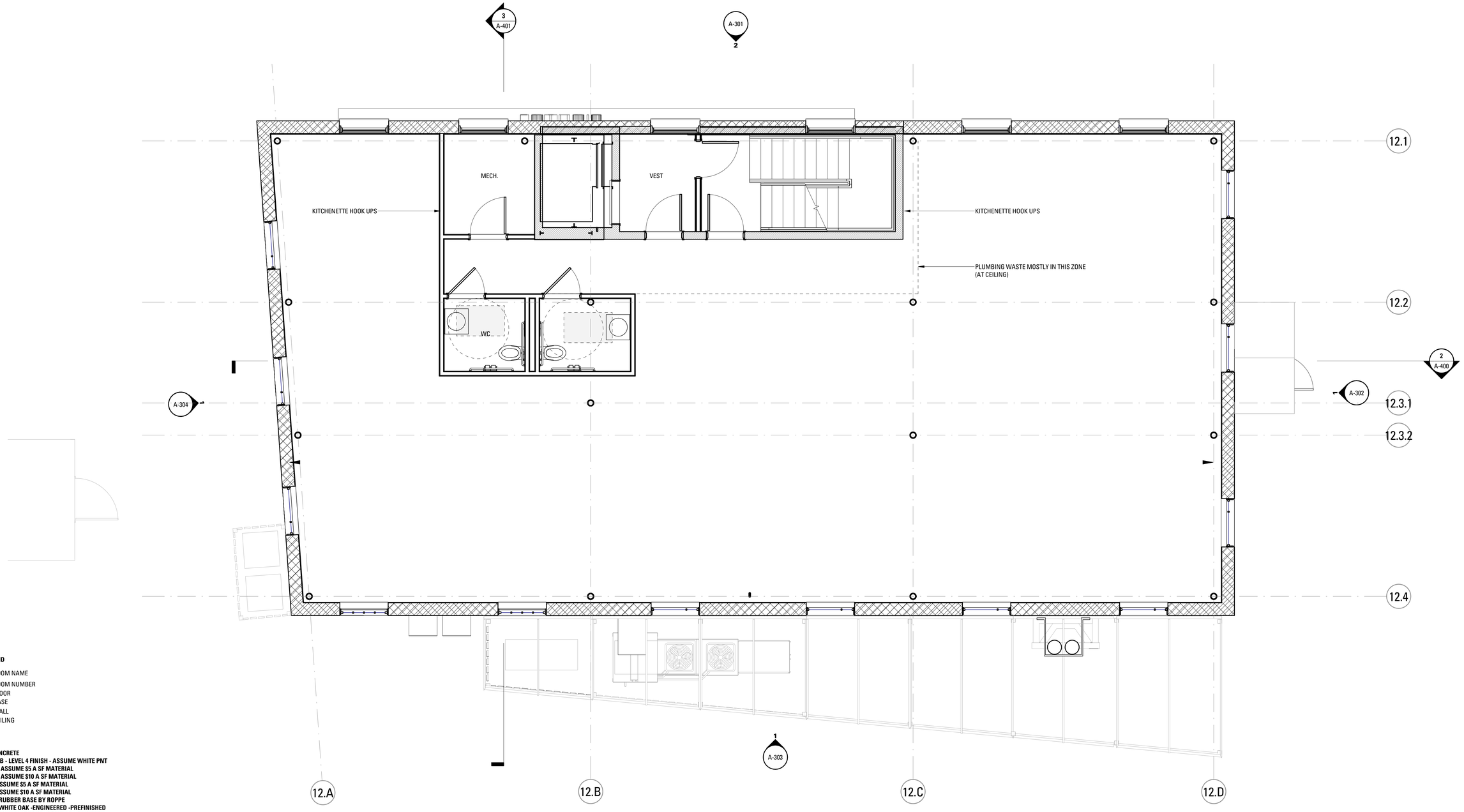
Rev.	Date	Remarks

PORTLAND FORESIDE - BUILDING 12

Date	OCTOBER 25, 2019
Scale	As indicated
Project Number	19.007
Drawn By	KPB

BUILDING 12 - GROUND FLOOR PLAN

A-101



ROOM FINISH LEGEND

OFFICE	ROOM NAME
313	ROOM NUMBER
C-1	FLOOR
B-1	BASE
P-1	WALL
ACT-1	CEILING

FINISH KEY:

- SC-1 - SEALED CONCRETE
- P-1 - PAINTED GWB - LEVEL 4 FINISH - ASSUME WHITE PNT
- TF-1 - TILE FLOOR- ASSUME $5 A SF MATERIAL
- TF-2 - TILE FLOOR- ASSUME $10 A SF MATERIAL
- TB-1 TILE BASE- ASSUME $5 A SF MATERIAL
- TB-1 TILE BASE- ASSUME $10 A SF MATERIAL
- RB-1- ASSUME 4" RUBBER BASE BY ROPPE
- WDF-1 - ASSUME WHITE OAK -ENGINEERED -PREFINISHED
- WDB-1 ASSUME 1" X 6" FLAT TRIM - POPULAR - PAINTED
- ST-1 - EXPOSED SEALED CONCRETE
- ACT-1 - ARMSTRONG OPTIMA 2X2 TILE- XL GRID

FUTURE NOTE:

REFER TO REFLECTED CEILING PLANS
FOR EXTENT OF GWB SOFFITS, OR
SPECIAL CEILING MATERIAL LOCATIONS

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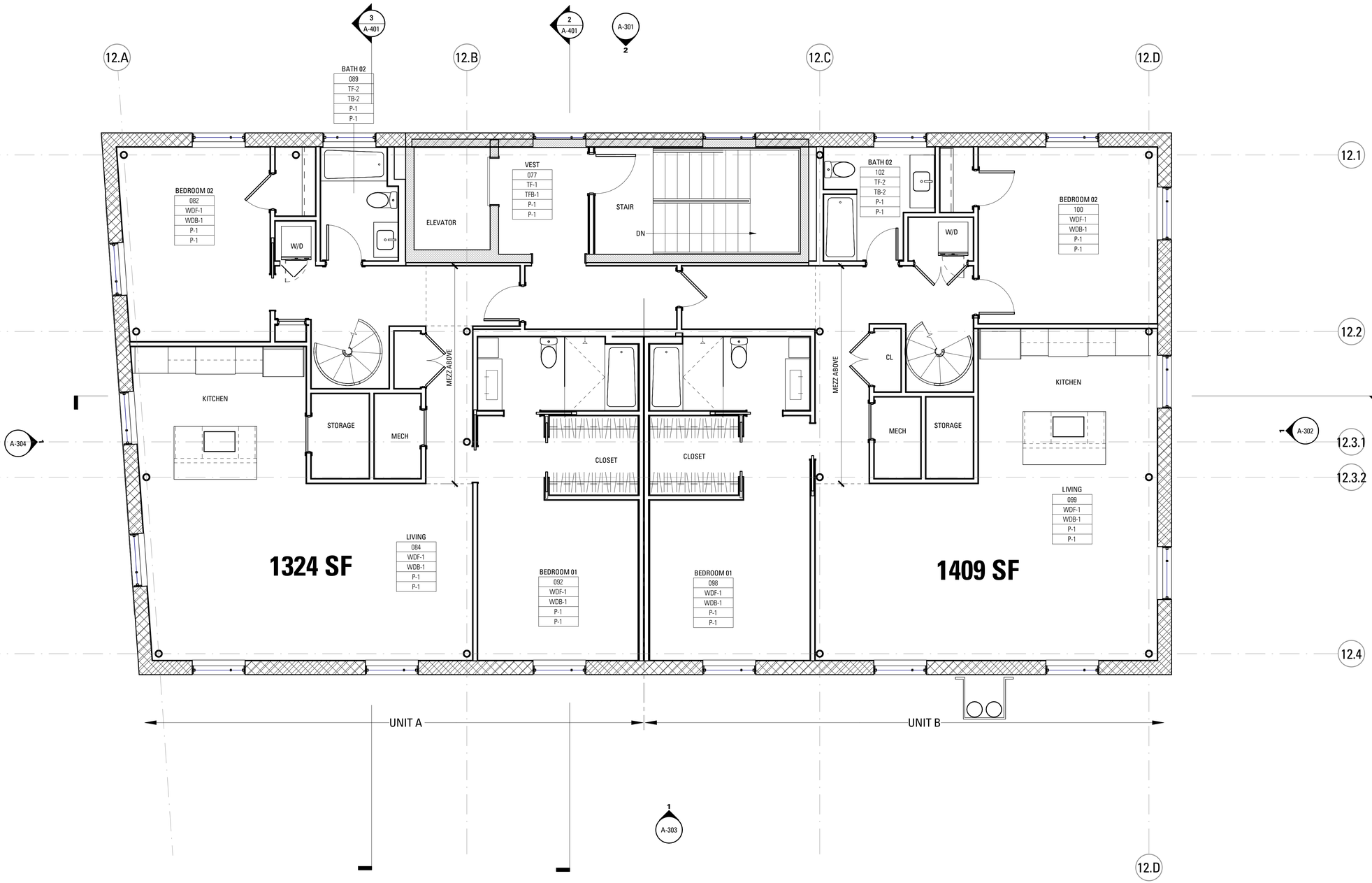
Rev.	Date	Remarks

PORTLAND FORESIDE - BUILDING 12

Date	OCTOBER 25, 2019
Scale	As indicated
Project Number	19.007
Drawn By	KPB

BUILDING 12- SECOND FLOOR PLAN

A-102



ROOM FINISH LEGEND

OFFICE	ROOM NAME
313	ROOM NUMBER
C-1	FLOOR
B-1	BASE
P-1	WALL
ACT-1	CEILING

FINISH KEY:

- **SC-1 - SEALED CONCRETE**
- **P-1 - PAINTED GWB - LEVEL 4 FINISH - ASSUME WHITE PNT**
- **TF-1 - TILE FLOOR- ASSUME $5 A SF MATERIAL**
- **TF-2 - TILE FLOOR- ASSUME $10 A SF MATERIAL**
- **TB-1 TILE BASE- ASSUME $5 A SF MATERIAL**
- **TB-1 TILE BASE- ASSUME $10 A SF MATERIAL**
- **RB-1- ASSUME 4" RUBBER BASE BY ROPPE**
- **WDF-1 - ASSUME WHITE OAK -ENGINEERED -PREFINISHED**
- **WDB-1 ASSUME 1" X 6" FLAT TRIM - POPULAR - PAINTED**
- **ST-1 - EXPOSED SEALED CONCRETE**
- **ACT-1 - ARMSTRONG OPTIMA 2X2 TILE- XL GRID**

FUTURE NOTE:

REFER TO REFLECTED CEILING PLANS FOR EXTENT OF GWB SOFFITS, OR SPECIAL CEILING MATERIAL LOCATIONS

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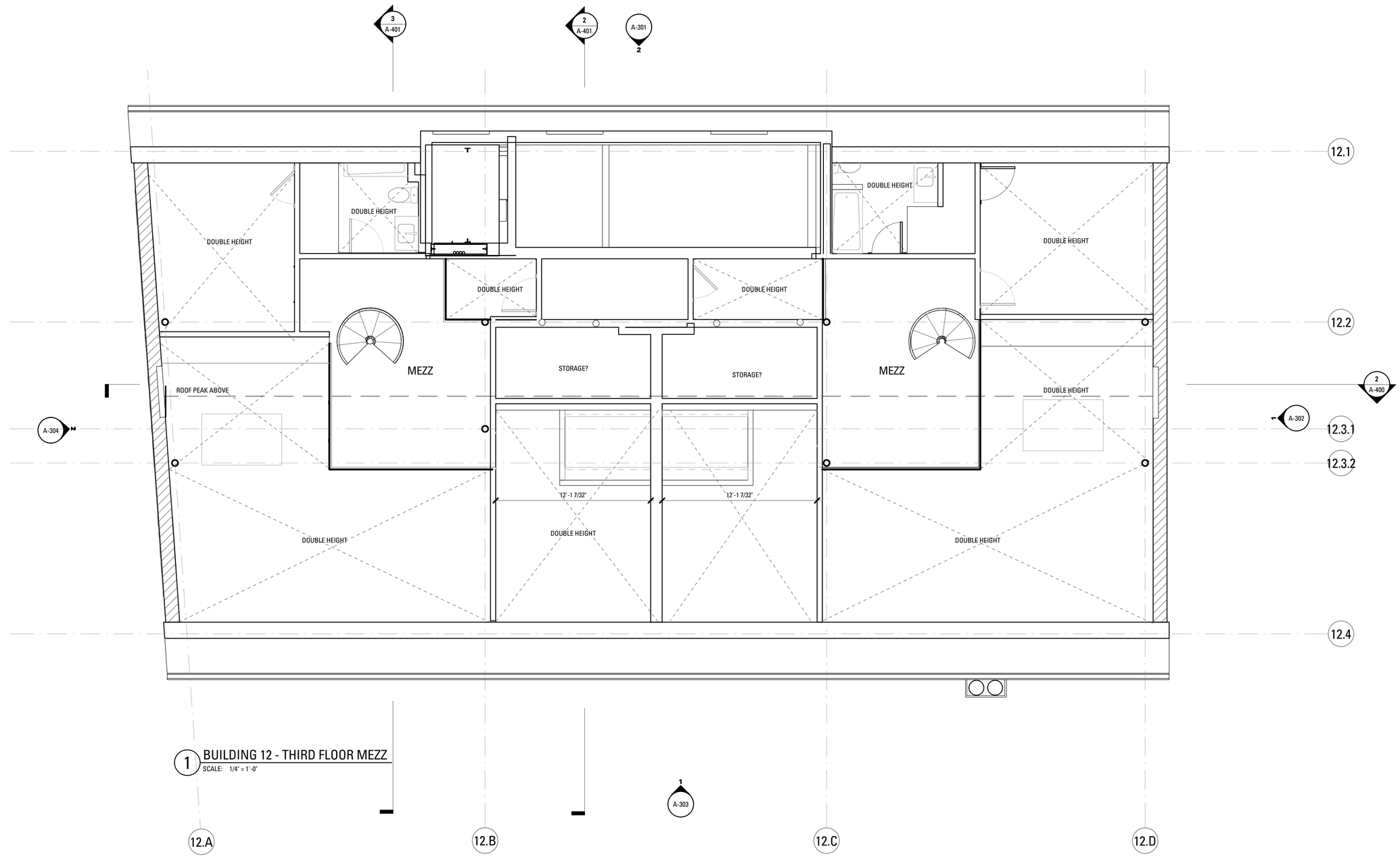
Rev.	Date	Remarks

PORTLAND FORESIDE - BUILDING 12

Date	OCTOBER 25, 2019
Scale	As indicated
Project Number	19.007
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BUILDING 12 - THIRD FLOOR PLAN

A-103



1 BUILDING 12 - THIRD FLOOR MEZZ
SCALE: 1/4" = 1'-0"

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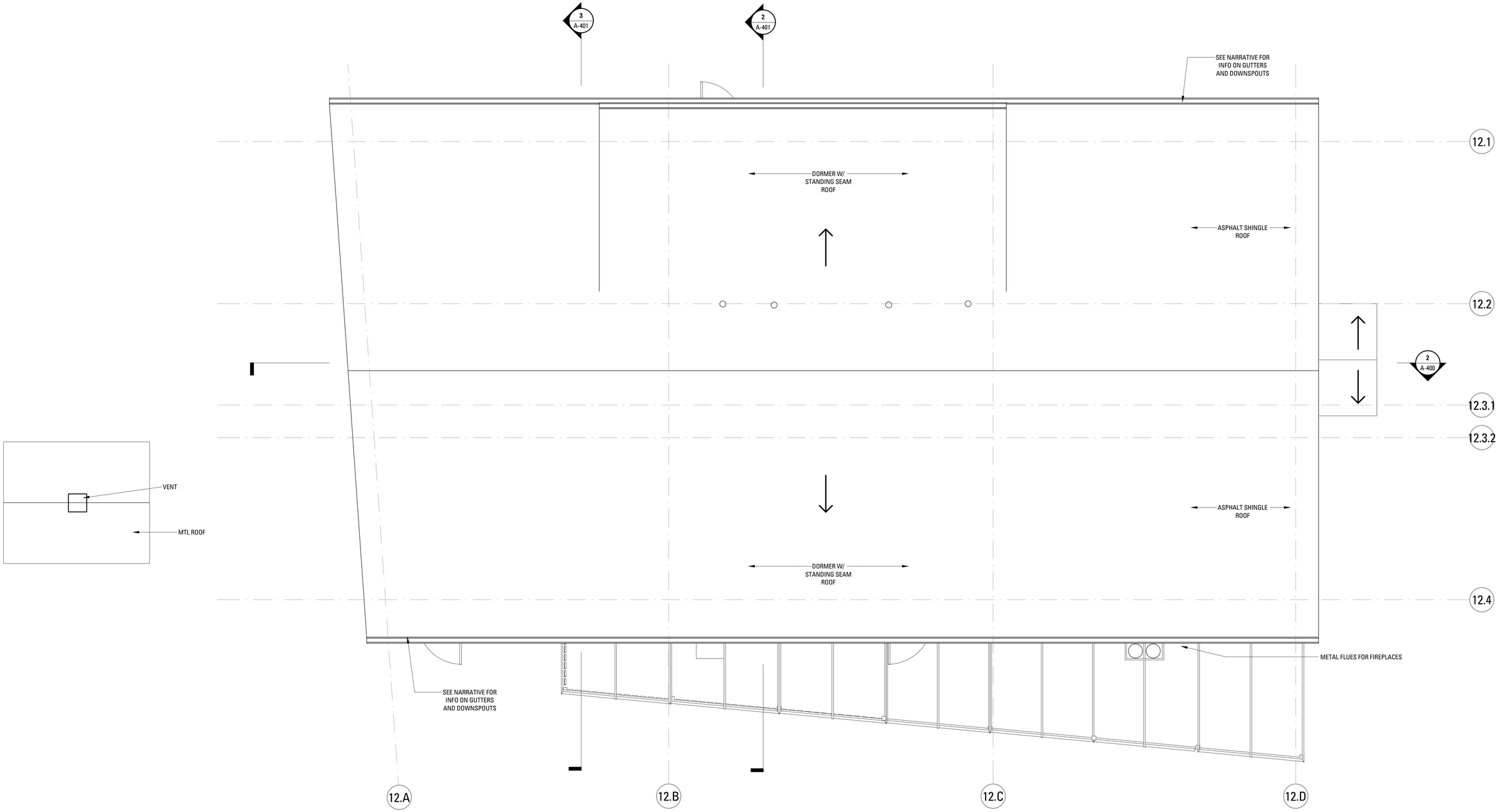
Rev.	Date	Remarks

PORTLAND FORESIDE - BUILDING 12

Date	OCTOBER 25, 2019
Scale	1/4" = 1'-0"
Project Number	19.007
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BUILDING 12- 3RD FLOOR MEZZ

A-104



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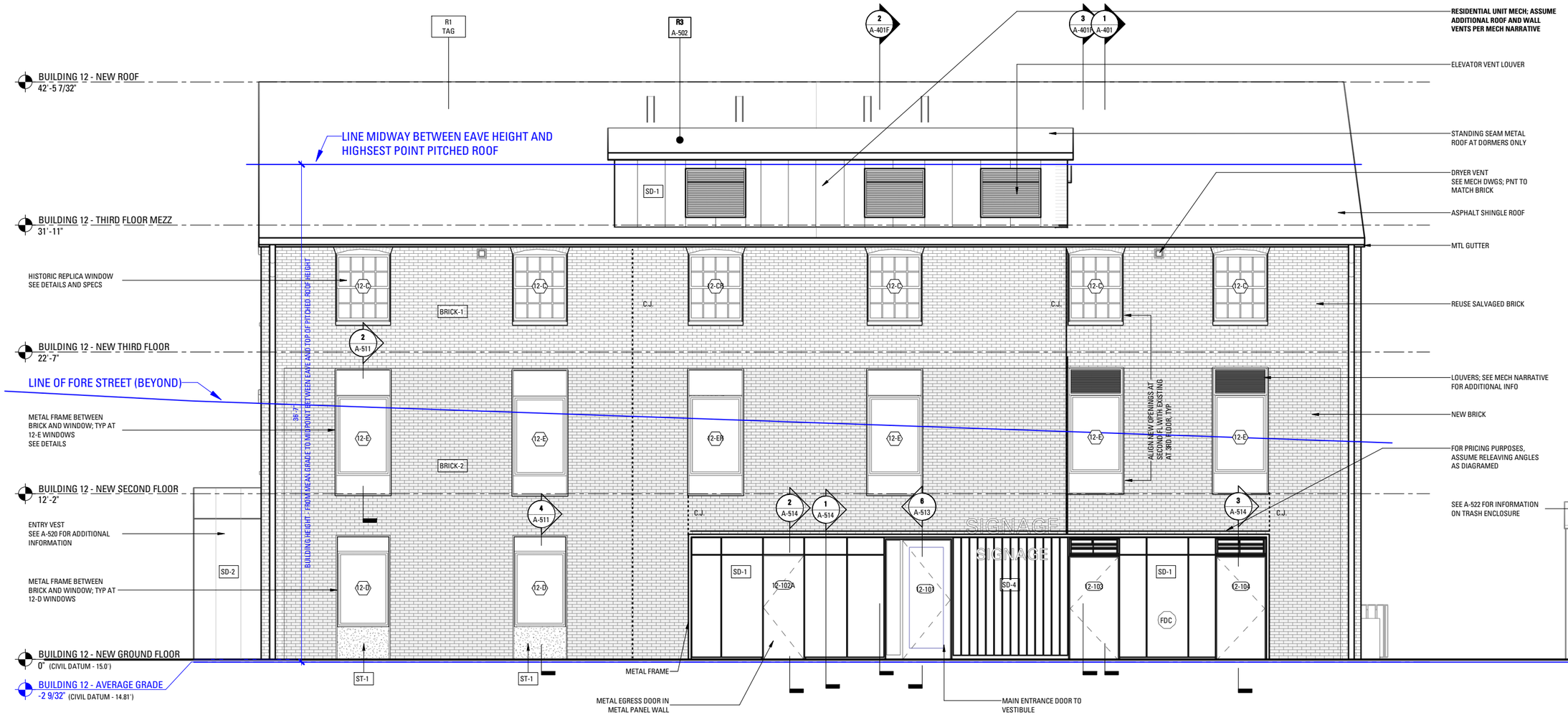
Rev.	Date	Remarks

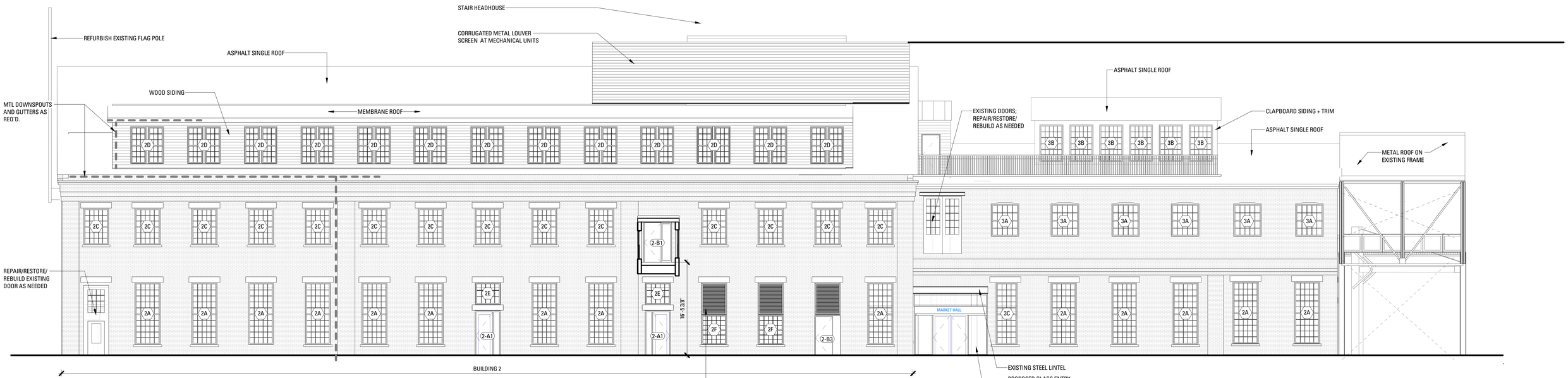
PORTLAND FORESIDE - BUILDING 12

Date	OCTOBER 25, 2019
Scale	1/4" = 1'-0"
Project Number	19.007
Drawn By	Author

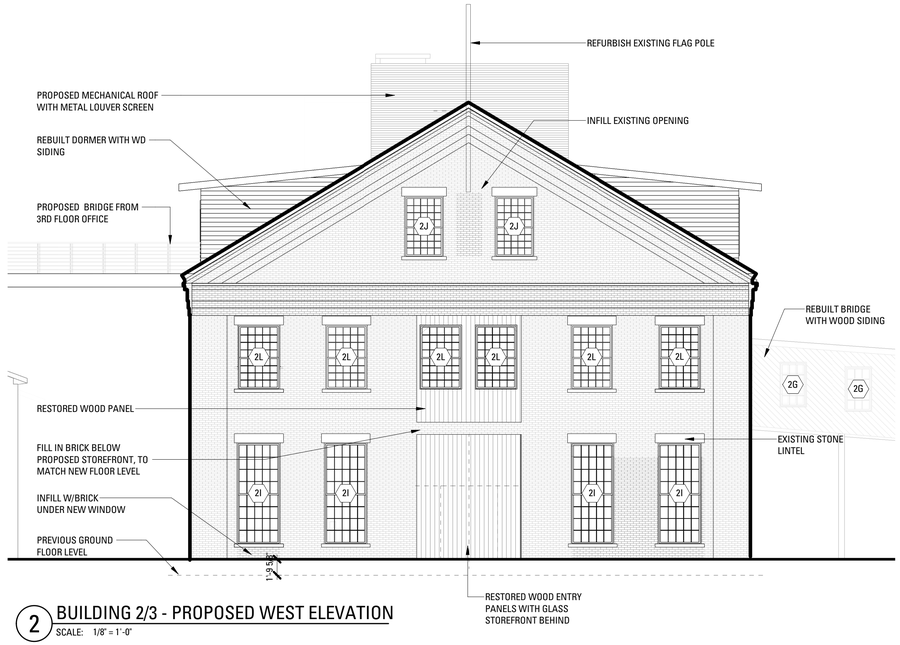
BUILDING 12- ROOF PLAN

A-105


R1
TAG
R3
A-502
2
A-401F
3
A-401A
1
A-401
RESIDENTIAL UNIT MECH; ASSUME ADDITIONAL ROOF AND WALL VENTS PER MECH NARRATIVE
ELEVATOR VENT LOUVER
BUILDING 12 - NEW ROOF
42'-5 7/32"
LINE MIDWAY BETWEEN EAVE HEIGHT AND HIGHSEST POINT PITCHED ROOF
STANDING SEAM METAL ROOF AT DORMERS ONLY
SD-1
DRYER VENT
SEE MECH DWGS; PNT TO MATCH BRICK
BUILDING 12 - THIRD FLOOR MEZZ
31'-11"
ASPHALT SHINGLE ROOF
MTL GUTTER
HISTORIC REPLICA WINDOW
SEE DETAILS AND SPECS
12-C
BRICK-1
C.J.
REUSE SALVAGED BRICK
BUILDING HEIGHT - FROM MEAN GRADE TO MIDPOINT BETWEEN EAVE AND TOP OF PITCHED ROOF HEIGHT
36'-7"
2
A-511
BUILDING 12 - NEW THIRD FLOOR
22'-7"
LOUVERS; SEE MECH NARRATIVE FOR ADDITIONAL INFO
LINE OF FORE STREET (BEYOND)
NEW BRICK
METAL FRAME BETWEEN BRICK AND WINDOW; TYP AT 12-E WINDOWS
SEE DETAILS
12-E
BRICK-2
ALIGN NEW OPENINGS AT SECOND FLWITH EXISTING AT 3RD FLOOR, TYP
FOR PRICING PURPOSES, ASSUME RELEAVING ANGLES AS DIAGRAMED
BUILDING 12 - NEW SECOND FLOOR
12'-2"
4
A-511
2
A-514
1
A-514
6
A-513
3
A-514
SIGNAGE
SEE A-522 FOR INFORMATION ON TRASH ENCLOSURE
ENTRY VEST
SEE A-520 FOR ADDITIONAL INFORMATION
SD-2
SD-1
12-102A
2-101
SD-4
2-103
FDC
2-104
METAL FRAME BETWEEN BRICK AND WINDOW; TYP AT 12-D WINDOWS
12-D
BUILDING 12 - NEW GROUND FLOOR
0" (CIVIL DATUM - 15.0')
ST-1
METAL FRAME
BUILDING 12 - AVERAGE GRADE
-2 9/32" (CIVIL DATUM - 14.81')
METAL EGRESS DOOR IN METAL PANEL WALL
MAIN ENTRANCE DOOR TO VESTIBULE



1 BUILDING 2/3 -PROPOSED SOUTH ELEVATION
SCALE: 1/8" = 1'-0"



2 BUILDING 2/3 - PROPOSED WEST ELEVATION
SCALE: 1/8" = 1'-0"

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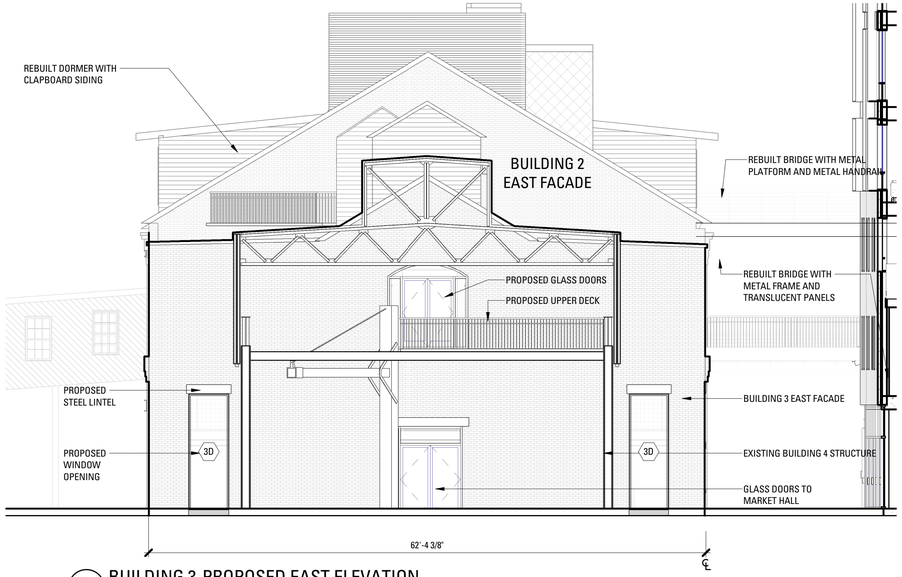
Date	OCTOBER 25, 2019
Scale	1/8" = 1'-0"
Project Number	
Drawn By	Author

BUILDING 2/3- PROPOSED FACADE

A-300P



1 Building 2/3 - PROPOSED NORTH ELEVATION
SCALE: 1/8" = 1'-0"



2 BUILDING 3-PROPOSED EAST ELEVATION
SCALE: 1/8" = 1'-0"

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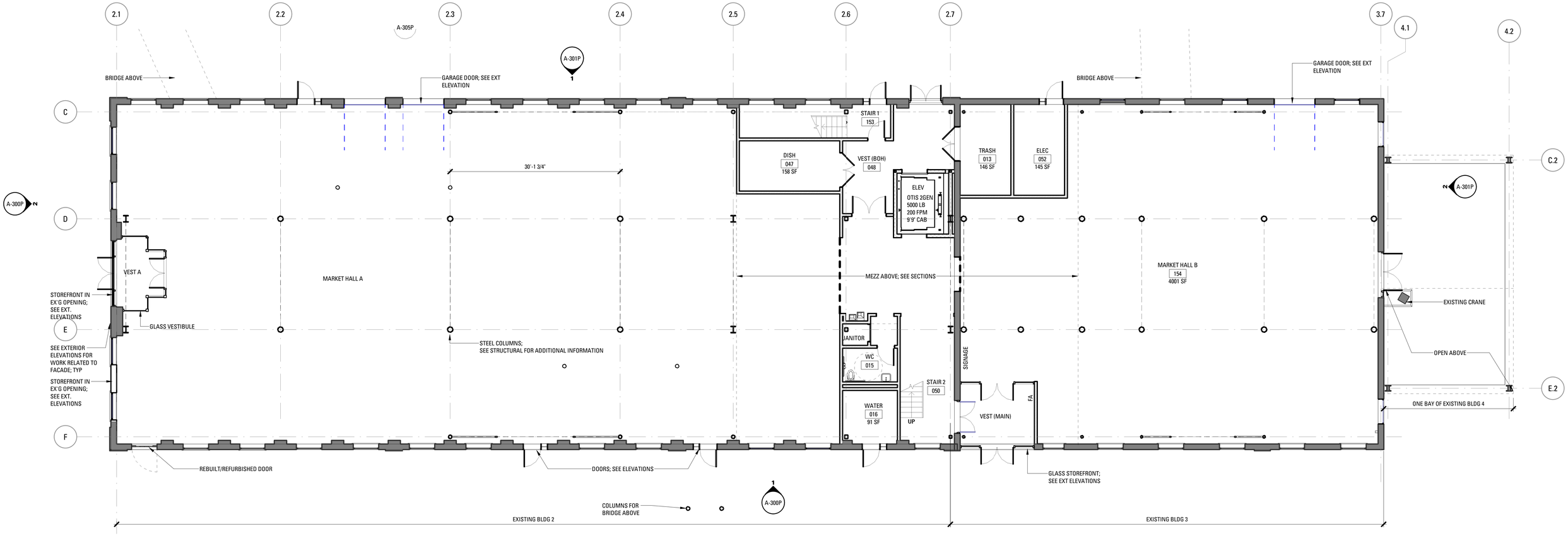
Rev.	Date	Remarks

PORTLAND FORESIDE BLOCK 2

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BUILDING 2/3- PROPOSED FACADE

A-301P



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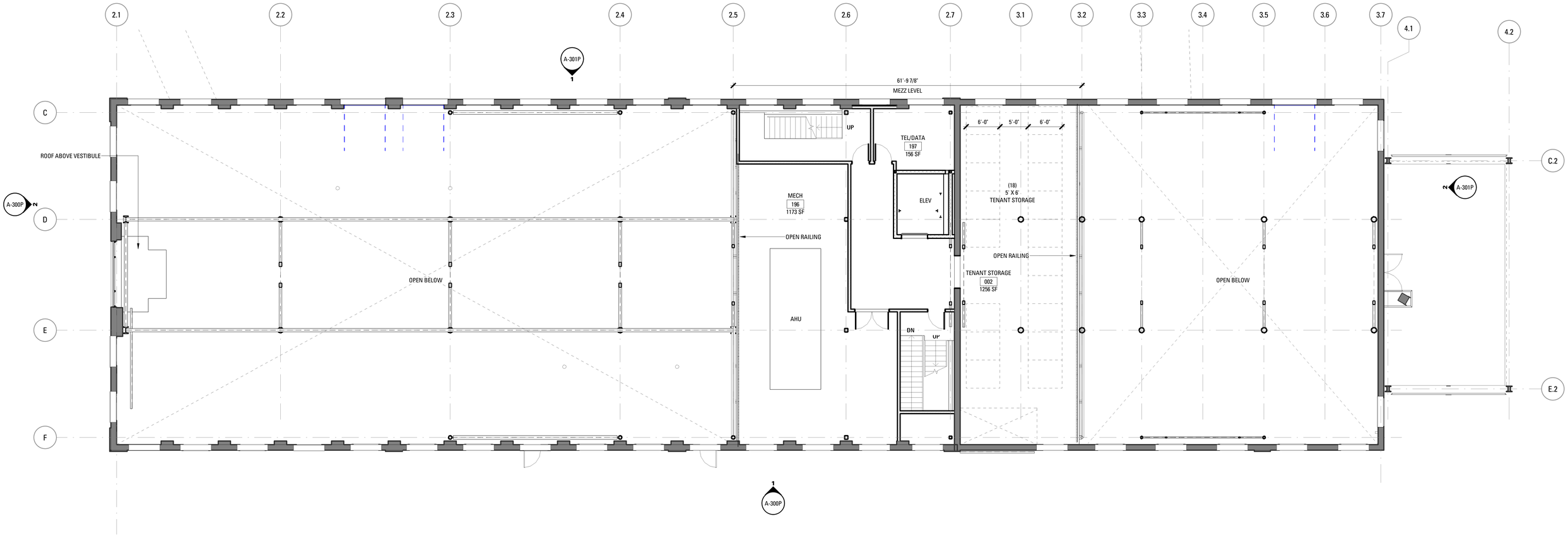
Rev.	Date	Remarks

PORTLAND FORESIDE BLOCK 2

Date	OCTOBER 25, 2019
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BUILDING 2/3- PROPOSED GROUND FLOOR PLAN

A-101P



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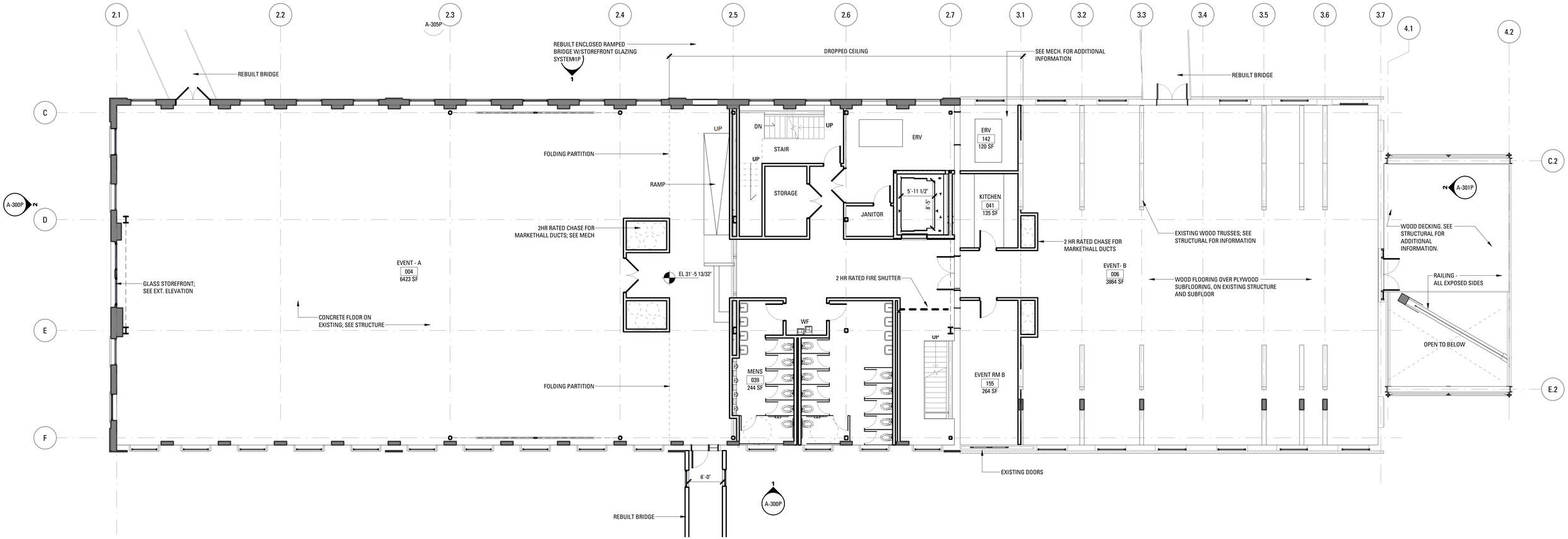
Rev.	Date	Remarks

PORTLAND FORESIDE BLOCK 2

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BUILDING 2/3 - PROPOSED MEZZ LEVEL

A-102P



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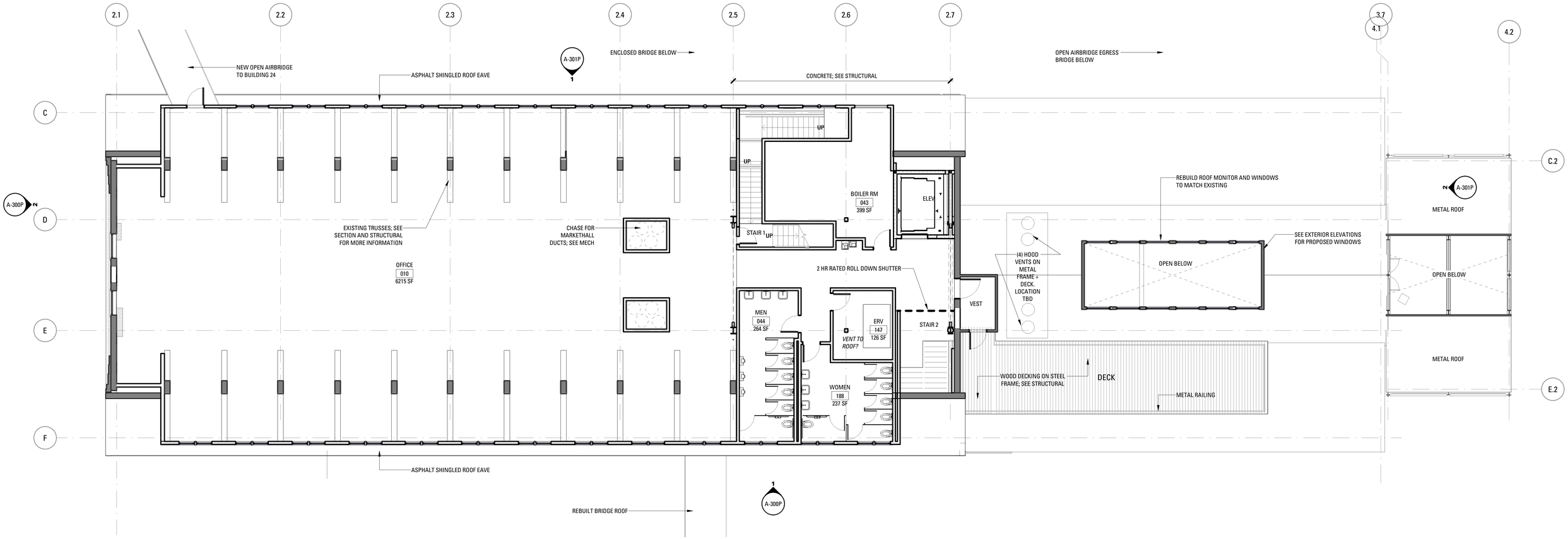
Rev.	Date	Remarks

PORTLAND FORESIDE BLOCK 2

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BUILDING 2/3 - PROPOSED SECOND FLOOR

A-103P



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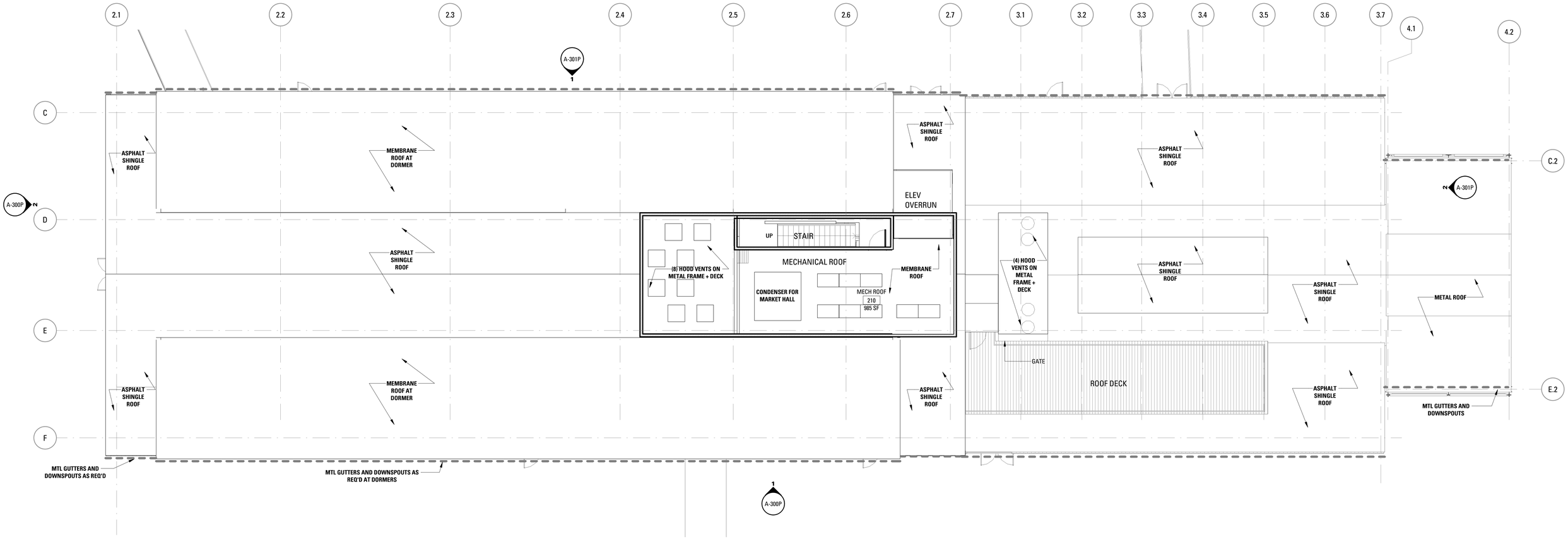
Rev.	Date	Remarks

PORTLAND FORESIDE BLOCK 2

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BUILDING 2/3 - PROPOSED THIRD FLOOR PLAN

A-104P



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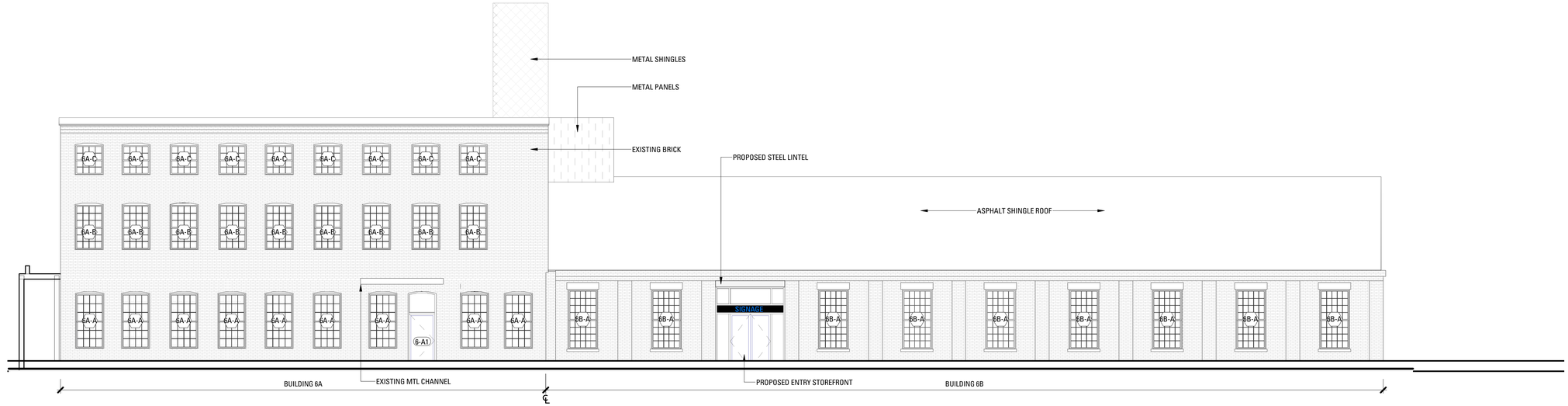
Rev.	Date	Remarks

PORTLAND FORESIDE BLOCK 2

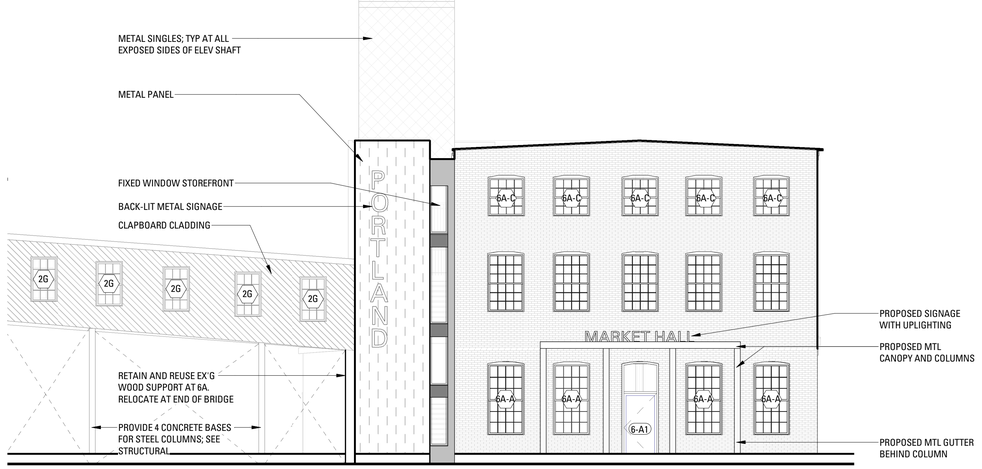
Date	OCTOBER 25, 2019
Scale	1/8" = 1'-0"
Project Number	
Drawn By	Author

BUILDING 2/3 ROOF PLAN

A-105P



2 BUILDING 6- SOUTH ELEVATION Copy 1
SCALE: 1/8" = 1'-0"



1 BUILDING 6 - WEST ELEVATION Copy 1
SCALE: 1/8" = 1'-0"

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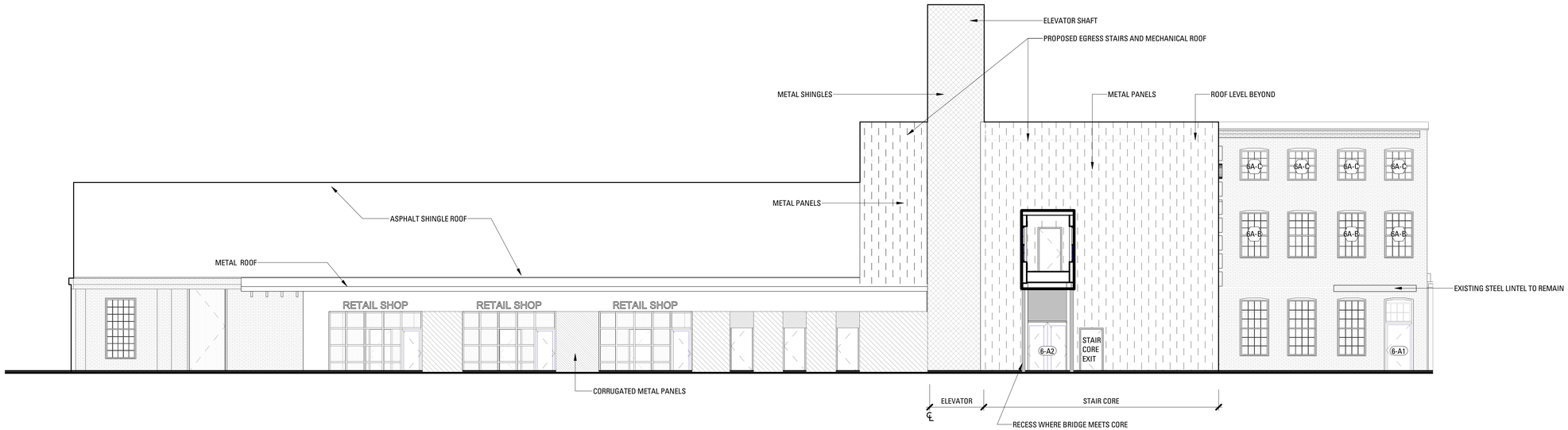
Rev.	Date	Remarks

PORTLAND FORESIDE BLOCK 2

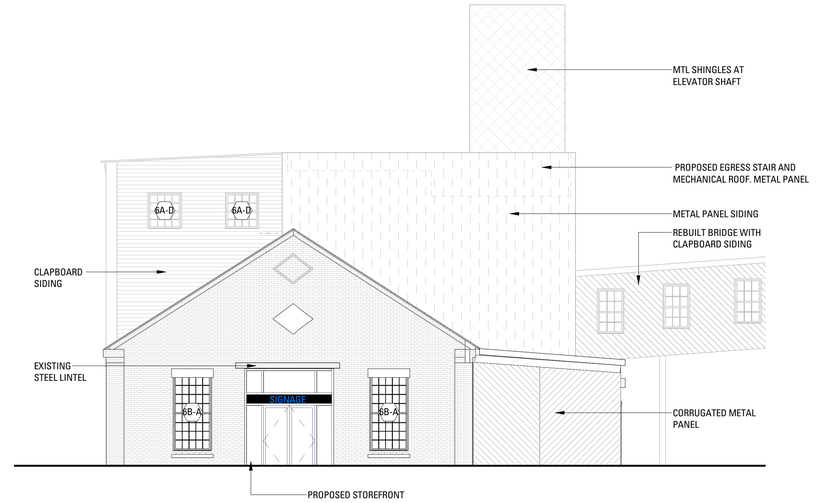
Date	OCTOBER 25, 2019
Scale	1/8" = 1'-0"
Project Number	
Drawn By	Author

BUILDING 6A/6B- PROPOSED FACADE

A-312P



1 BLDG 6 - NORTH ELEVATION
SCALE: 1/8" = 1'-0"



2 BLDG 6 - EAST ELEVATION
SCALE: 1/8" = 1'-0"

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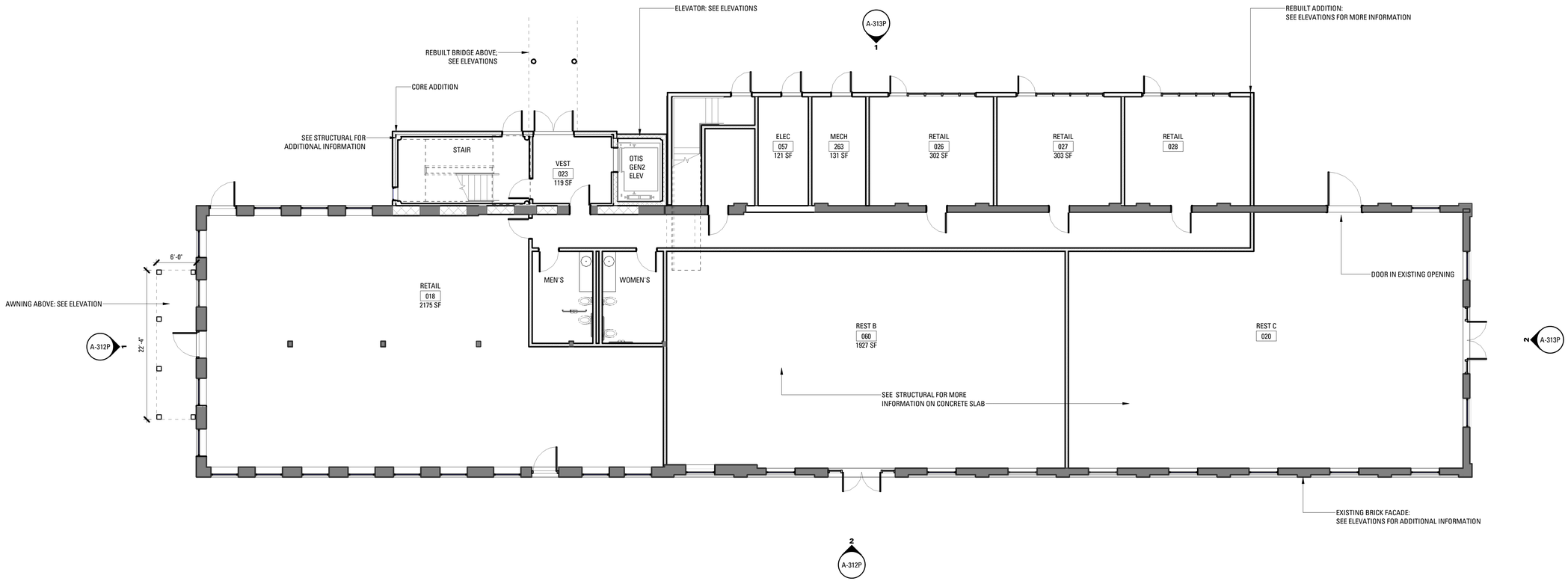
Rev.	Date	Remarks

PORTLAND FORESIDE BLOCK 2

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BUILDING 6A/6B- PROPOSED FACADE

A-313P



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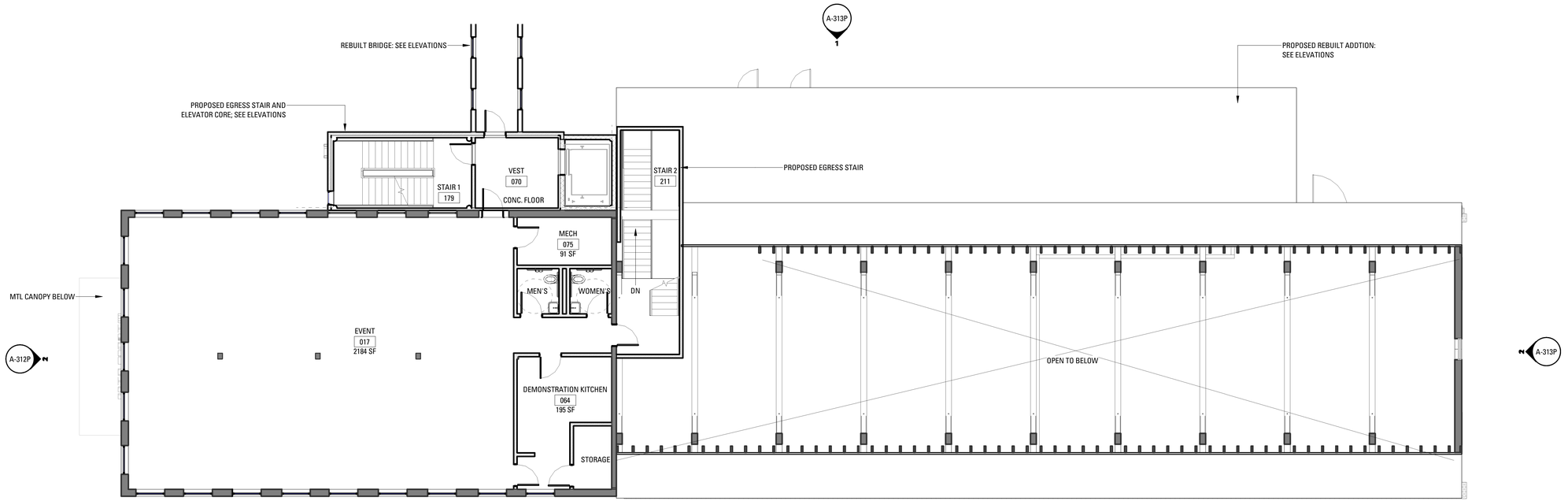
Rev.	Date	Remarks

PORTLAND FORESIDE BLOCK 2

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BUILDING 6A/6B - PROPOSED GROUND FLOOR

A-110P



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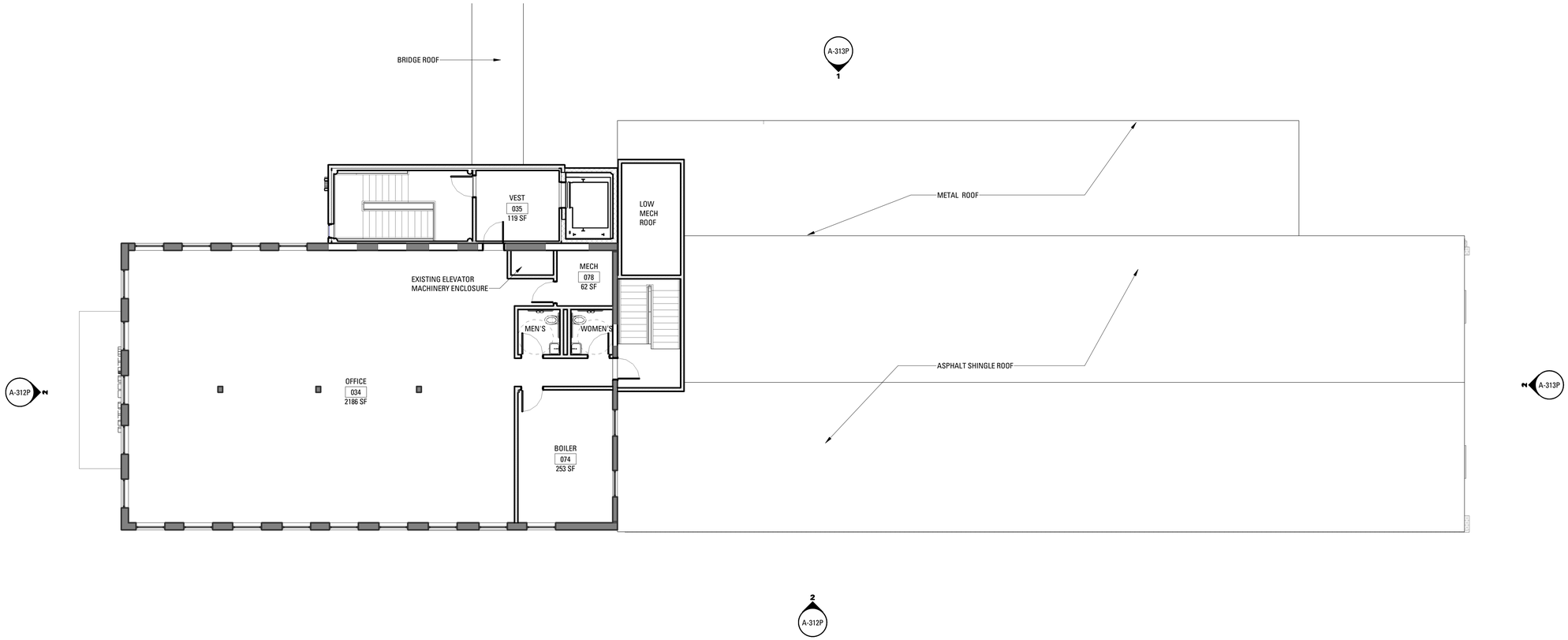
Rev.	Date	Remarks

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BUILDING 6A/6B - PROPOSED SECOND FLOOR

A-111P



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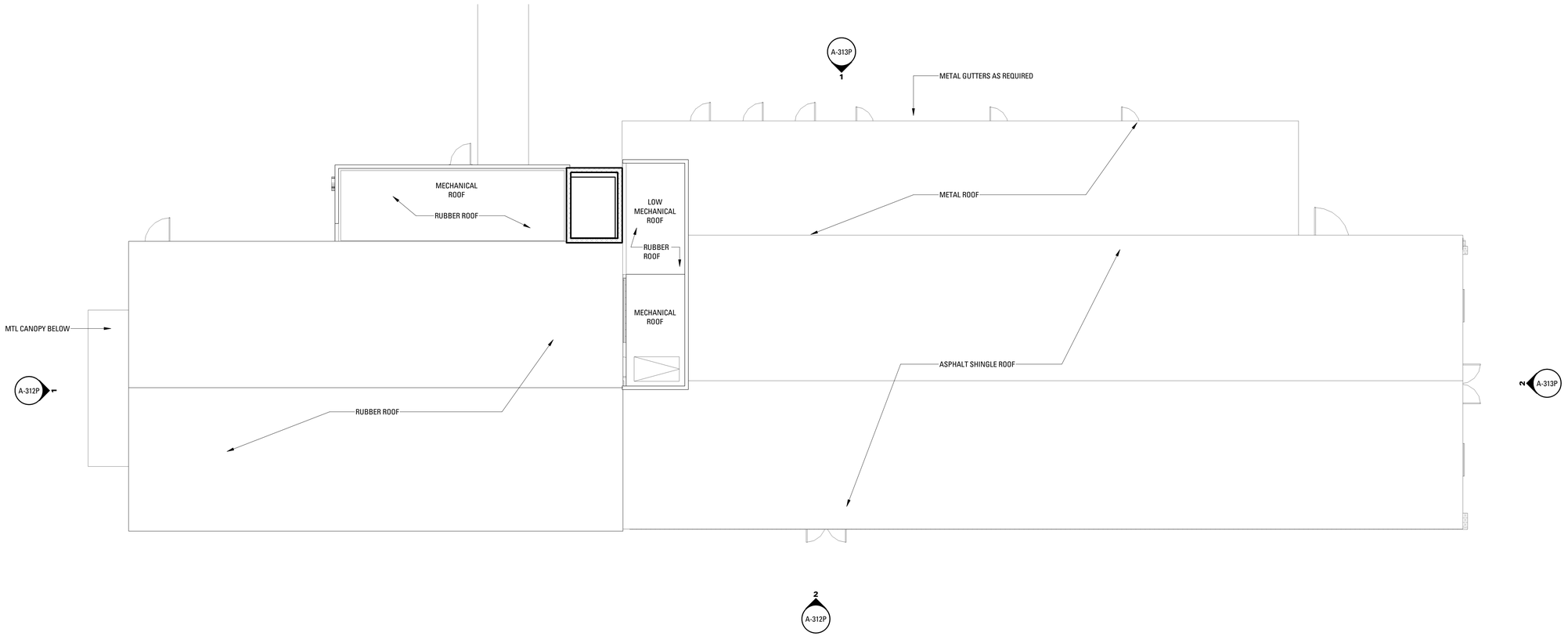
Rev.	Date	Remarks

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Project Number	
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BUILDING 6A/6B - PROPOSED THIRD FLOOR

A-112P



1 BUILDING 6A/6B - PROPOSED ROOF PLAN
SCALE: 1/8" = 1'-0"

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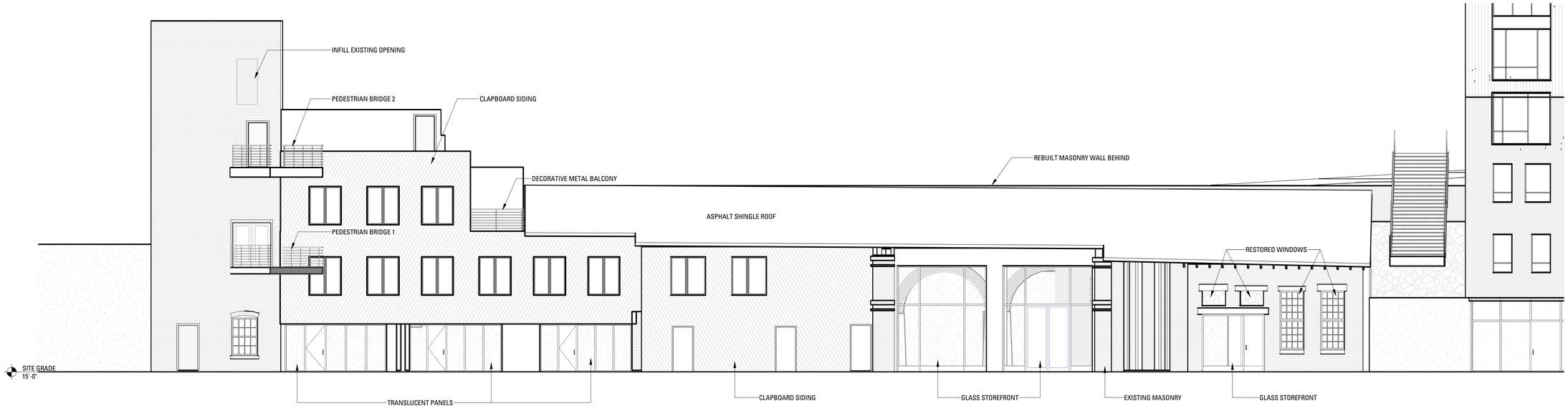
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PORTLAND FORESIDE BLOCK 2

Date	OCTOBER 25, 2019
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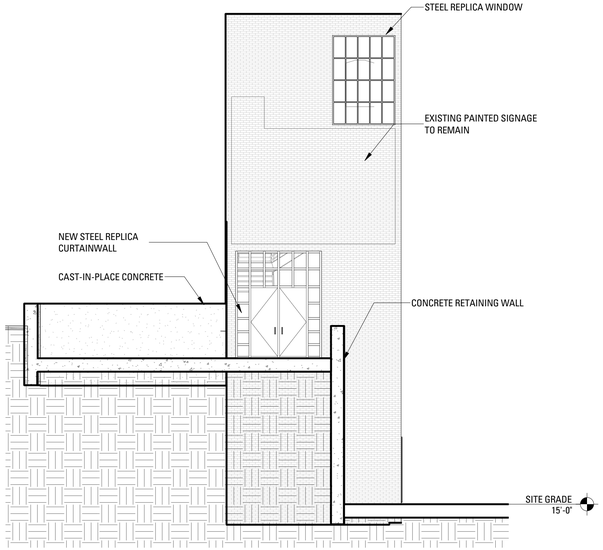
BUILDING 6A/6B - PROPOSED ROOF PLAN

A-113P



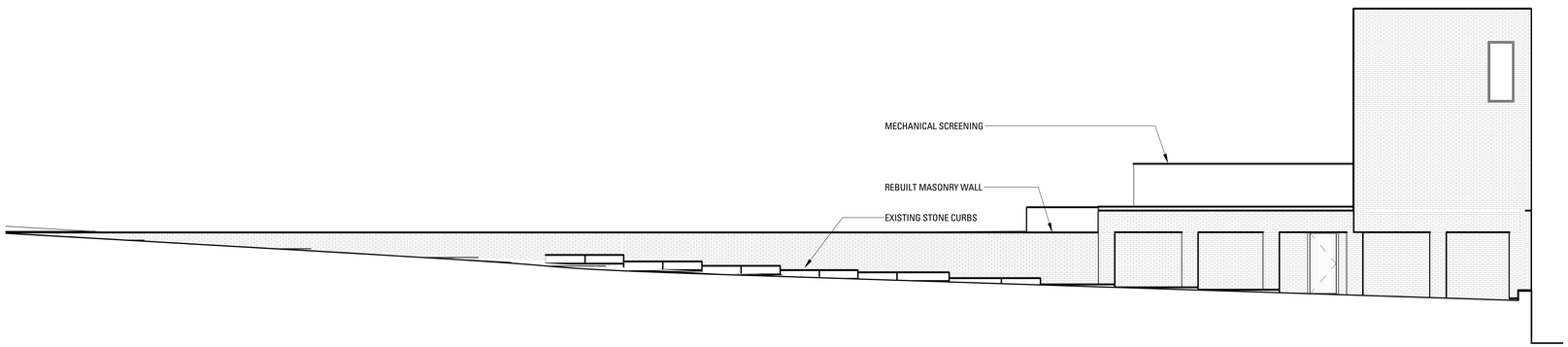
1 EMBANKMENT - PROPOSED SOUTH ELEVATION - NARROW ALLEY

SCALE: 1/8" = 1'-0"



3 EMBANKMENT - PROPOSED WEST ELEVATION

SCALE: 1/8" = 1'-0"



2 EMBANKMENT - PROPOSED NORTH ELEVATION - FORE STREET

SCALE: 1/8" = 1'-0"

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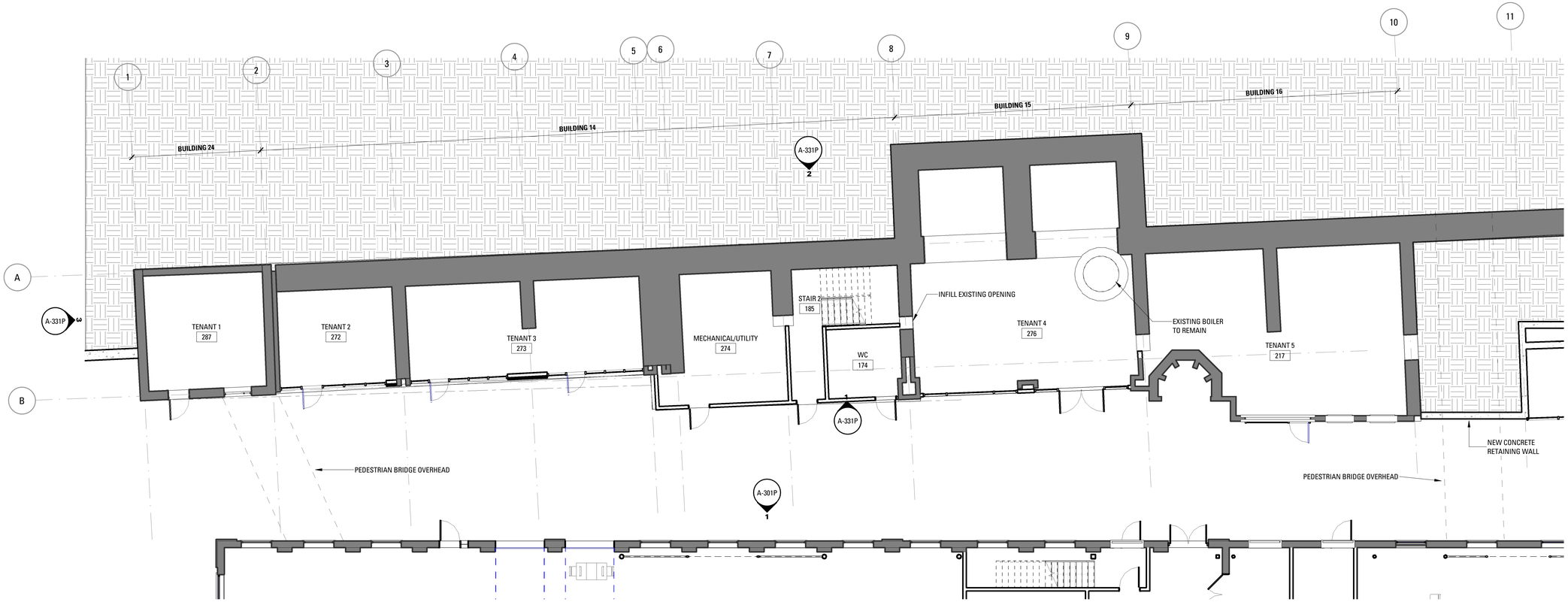
Rev.	Date	Remarks

PORTLAND FORESIDE BLOCK 2

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EMBANKMENT - PROPOSED ELEVATIONS

A-331P



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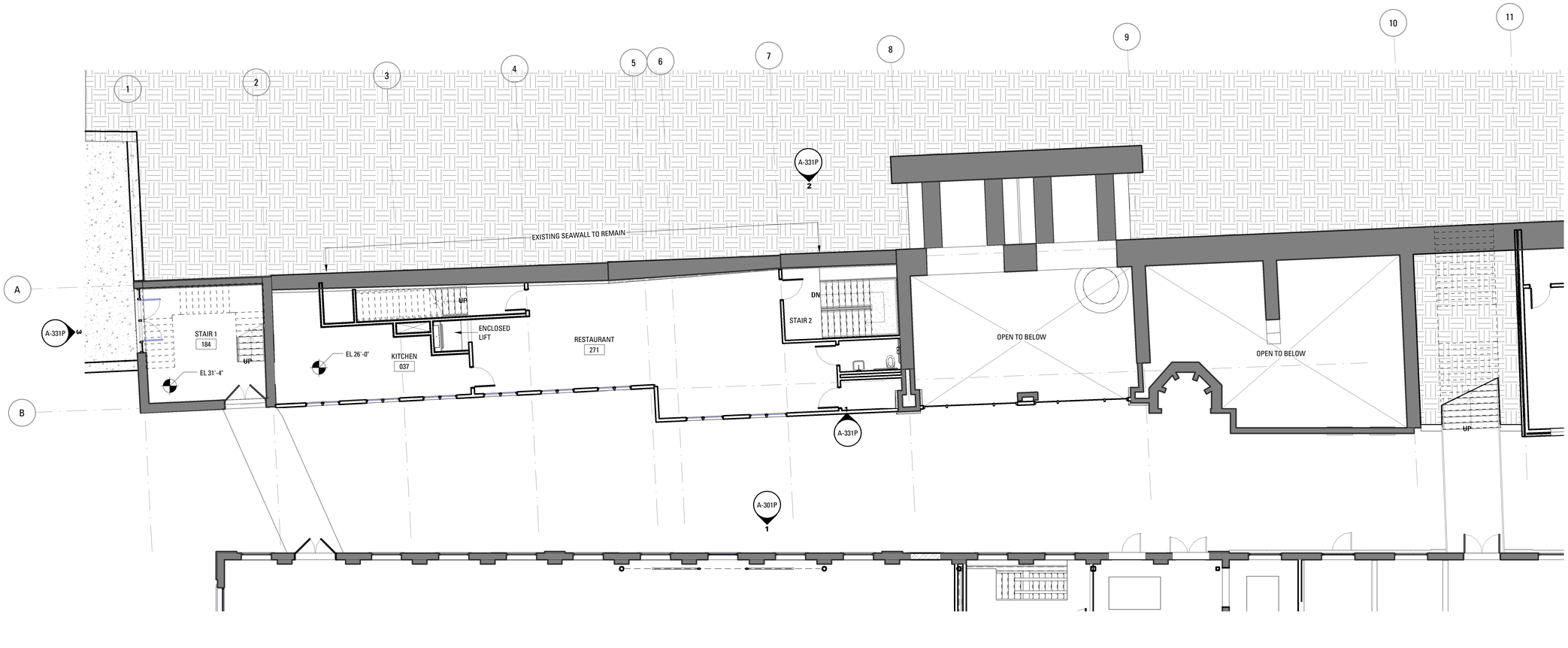
Rev.	Date	Remarks

PORTLAND FORESIDE BLOCK 2

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EMBANKMENT - PROPOSED GROUND FLOOR

A-131P



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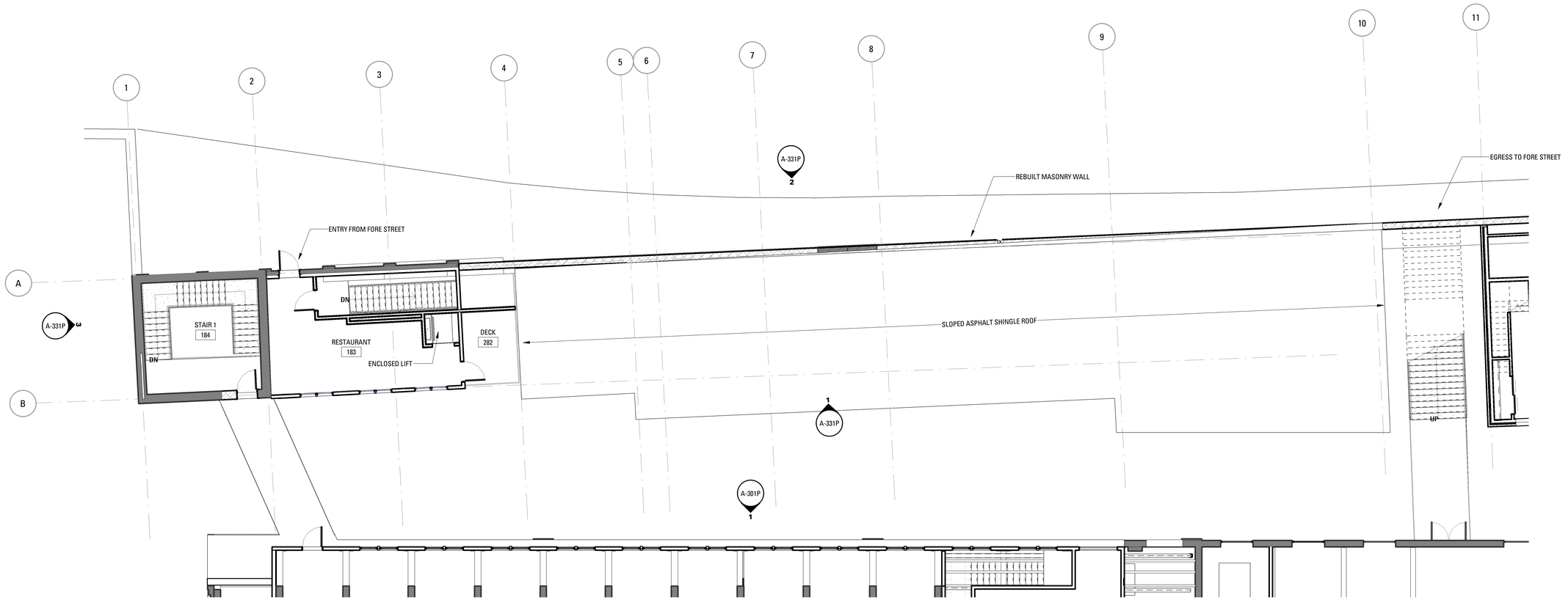
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EMBANKMENT - PROPOSED SECOND FLOOR

A-132P



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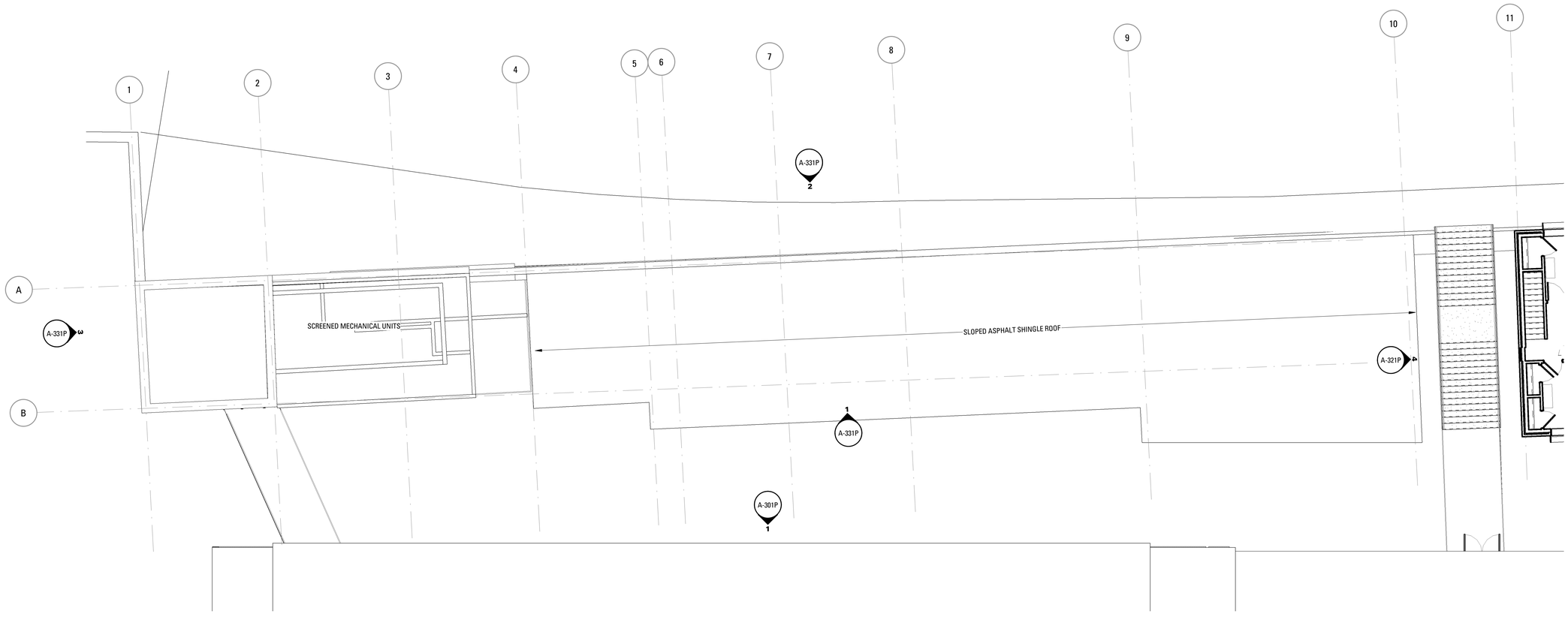
Rev.	Date	Remarks

PORTLAND FORESIDE BLOCK 2

Date	OCTOBER 25, 2019
Scale	1/8" = 1'-0"
Project Number	
Drawn By	Author

EMBANKMENT - PROPOSED THIRD FLOOR

A-133P



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Scale	1/8" = 1'-0"
Project Number	
Drawn By	Author

EMBANKMENT - PROPOSED ROOF

A-134P

MATERIALS AND ASSEMBLIES

EWA-01 - STAIR LOBBY:

EXTRUDED ALUMINUM CURTAINWALL FRAMING
WITH VERTICAL MULLION EXTENSION
CLASS 1 ANODIZED FINISH
HORIZONTAL JOINTS SSG
BOD SOLARBAN 72
1" INSULATED GLAZING UNIT: ARGON FILLED, LOW IRON W/ SOLAR COATING SURFACE 2
BLACK ALUMINUM SPACERS
EXTERIOR LITE TEMPERED WHERE REQUIRED

EWA 02 - RETAIL STOREFRONT + VESTIBULE GLAZING:
TRIFAB VERSAGLAZE 450 FRAMING SYSTEM OR SIM.
WITH VERTICAL MULLION EXTENSION
1 3/4" MULLION
4" DEPTH GLAZING SYSTEM
FRONT GLAZED
LOW IRON GLAZING
WARM EDGE: BLACK ALUMINUM SPACERS
EXTERIOR LITE TEMPERED WHERE REQUIRED

EWA 03 - RESIDENTIAL WINDOWS:
BAY WINDOW - ALUMINUM WINDOW WITH PAINTED STEEL PLATE SURROUND
COMBINATION WINDOW - VISION + OPERABLE - PAINTED ALUMINUM WINDOW

EWA 04 - METAL RAIN SCREEN #1 (HOUSING UNITS)

VENTILATED RAINSCREEN
WEATHERING STEEL CLADDING
VERTICAL AND HORIZONTAL Z-GIRTS
4" MINERAL WOOL
CONTINUOUS SELF ADHEARING AVB MEMBRANE
1/2" EXTERIOR SHEATHING
6" METAL STUD FRAMING
R22 HIGH DENSITY UNFACED FIBERGLASS BATT INSULATION
INTERIOR GWB FACING

EWA 05 - METAL RAIN SCREEN #2 (LOWER LEVEL):
VENTILATED RAINSCREEN
CORRUGATED METAL CLADDING
VERTICAL AND HORIZONTAL Z-GIRTS
4" MINERAL WOOL
CONTINUOUS SELF ADHEARING AVB MEMBRANE
1/2" EXTERIOR SHEATHING
6" METAL STUD FRAMING
R22 HIGH DENSITY UNFACED FIBERGLASS BATT INSULATION
INTERIOR GWB FACING

EWA 06 - METAL RAIN SCREEN #3 (UPPER LEVEL):
VENTILATED RAINSCREEN
ALUMINUM COMPOSITE PANEL CLADDING
VERTICAL AND HORIZONTAL Z-GIRTS
4" MINERAL WOOL
CONTINUOUS SELF ADHEARING AVB MEMBRANE
1/2" EXTERIOR SHEATHING
6" METAL STUD FRAMING
R22 HIGH DENSITY UNFACED FIBERGLASS BATT INSULATION
INTERIOR GWB FACING

MATERIALS + ASSEMBLIES

DECORATIVE METAL CHANNELS:
ALUMINUM COMPOSITE PANEL - CHANNEL WEB
EXTRUDED ALUMINUM TRIM - CHANNEL FLANGE
PAINTED TO MATCH

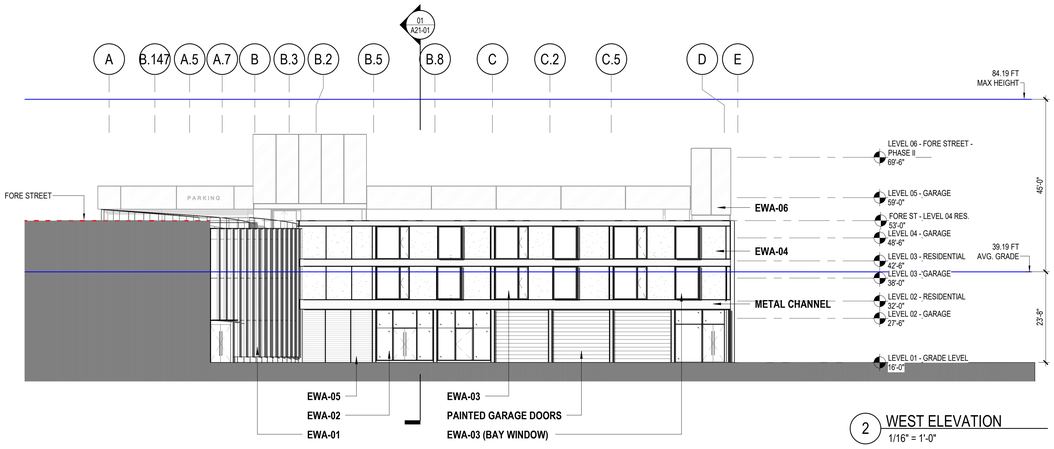
GRANITE VENEER STONE WALL BASE:
18" GRANITE CURB UNDER STAIR CURTAIN WALL

PRECAST CONCRETE:
TEXTURED PRECAST CONCRETE PANELS

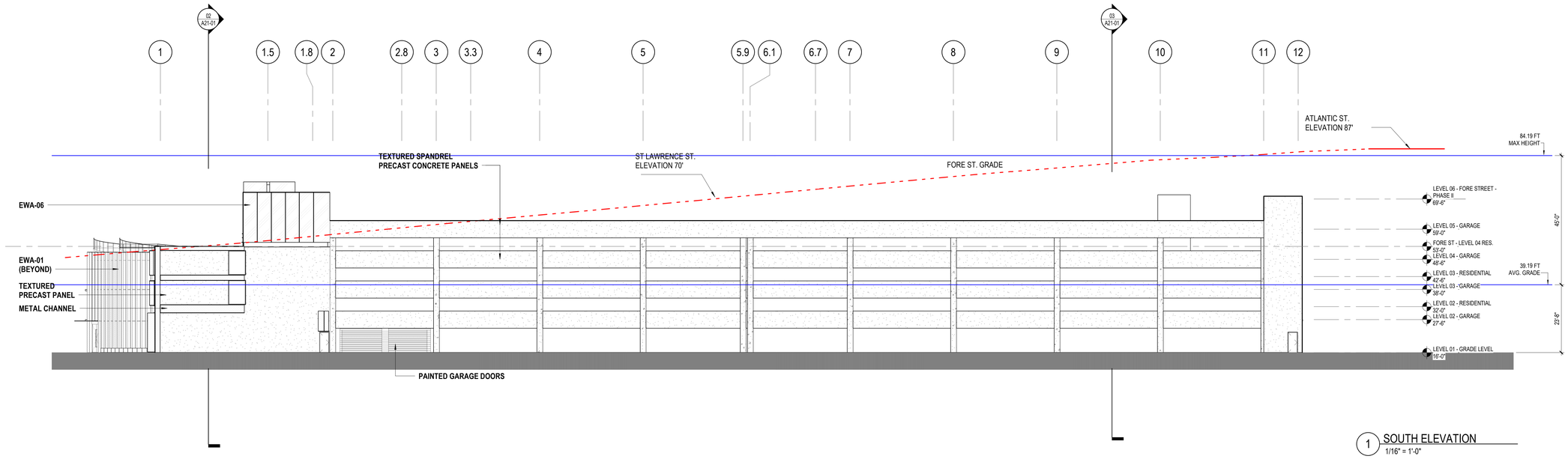
EXTERIOR ELEVATION LEGEND

1. MATERIAL SYMBOLS ON ELEVATIONS ARE TO DISPLAY THE EXTENT OF THE MATERIAL ONLY. THEY ARE NOT TO SCALE.

- GLAZING
- PRECAST CONCRETE
- EW-04 RAINSCREEN SYSTEM
- EWA-05 CORRUGATED METAL
- EW-06 ALUMINUM COMPOSITE PANEL
- PAINTED METAL CHANNELS



2 WEST ELEVATION
1/16" = 1'-0"



1 SOUTH ELEVATION
1/16" = 1'-0"

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f 207.865.1455

GENERAL CONTRACTOR
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t 207.773.3000

PROJECT

BLOCK FOUR

FORESIDE
PORTLAND, MAINE

PORTLAND FORESIDE DEVELOPMENT COMPANY
254 COMMERCIAL ST SUITE 118
PORTLAND, ME 04101

KEYPLAN

ISSUE CHART

MARK	ISSUE	DATE

100% SCHEMATIC DESIGN 12/20/2019

Job Number	157087.002
Drawn	Author
Checked	Checker
Approved	Approver

TITLE

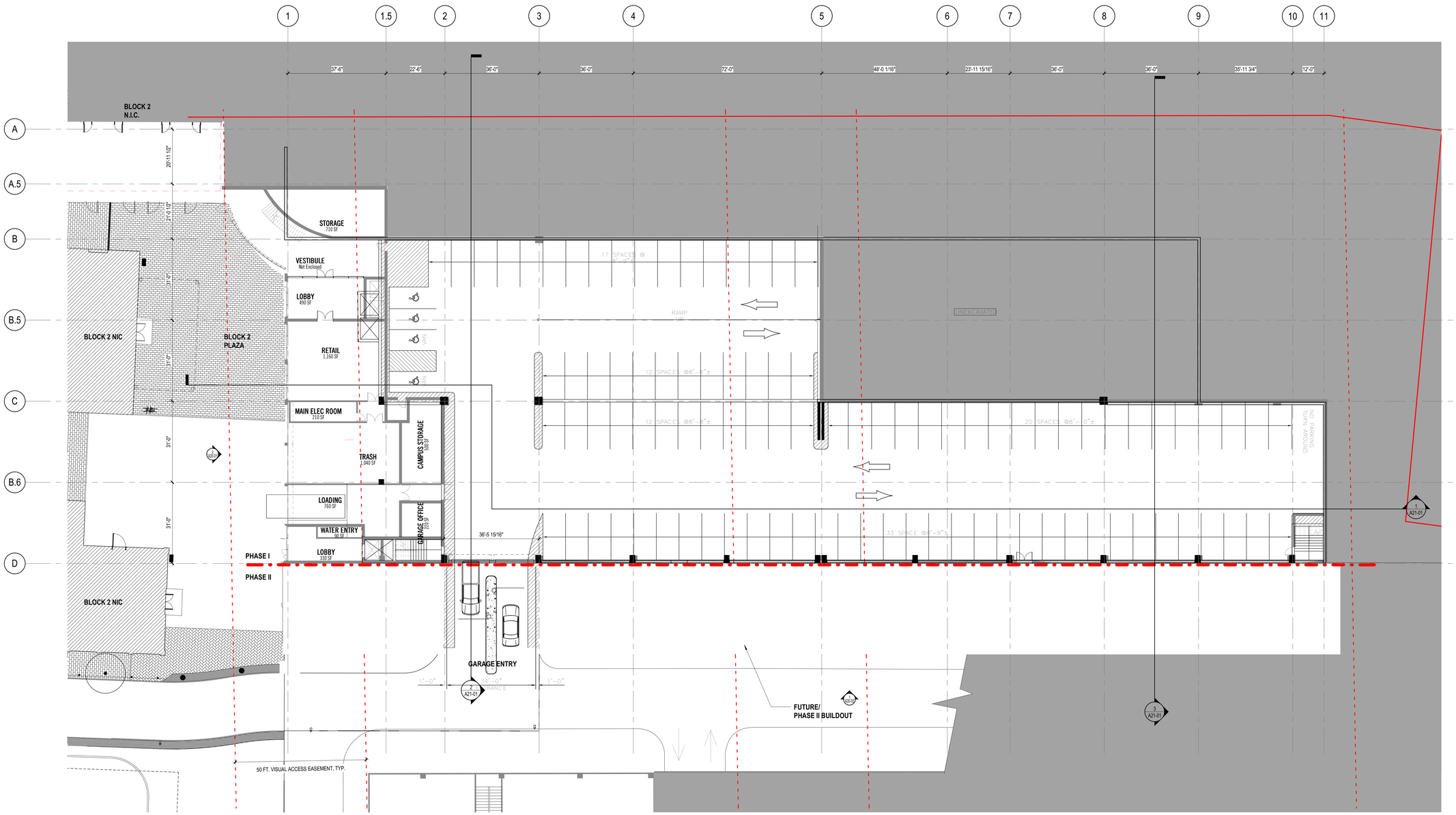
EXTERIOR ELEVATIONS - PHASE I

SHEET NUMBER

A20-01

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1/2/2020 5:36:52 PM C:\Temp\58 FORE ST MASTERPLAN_Block Four_v2019_MeketaMontieth.rvt



1 LEVEL 01 - ELEV. 16'-0": PHASE TWO
1/16" = 1'-0"

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BLOCK FOUR

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ISSUE CHART

MARK	ISSUE	DATE

SCHEMATIC DESIGN
11/08/2019

Job Number	157031.001
Drawn	Author
Checked	Checker
Approved	Approver

TITLE

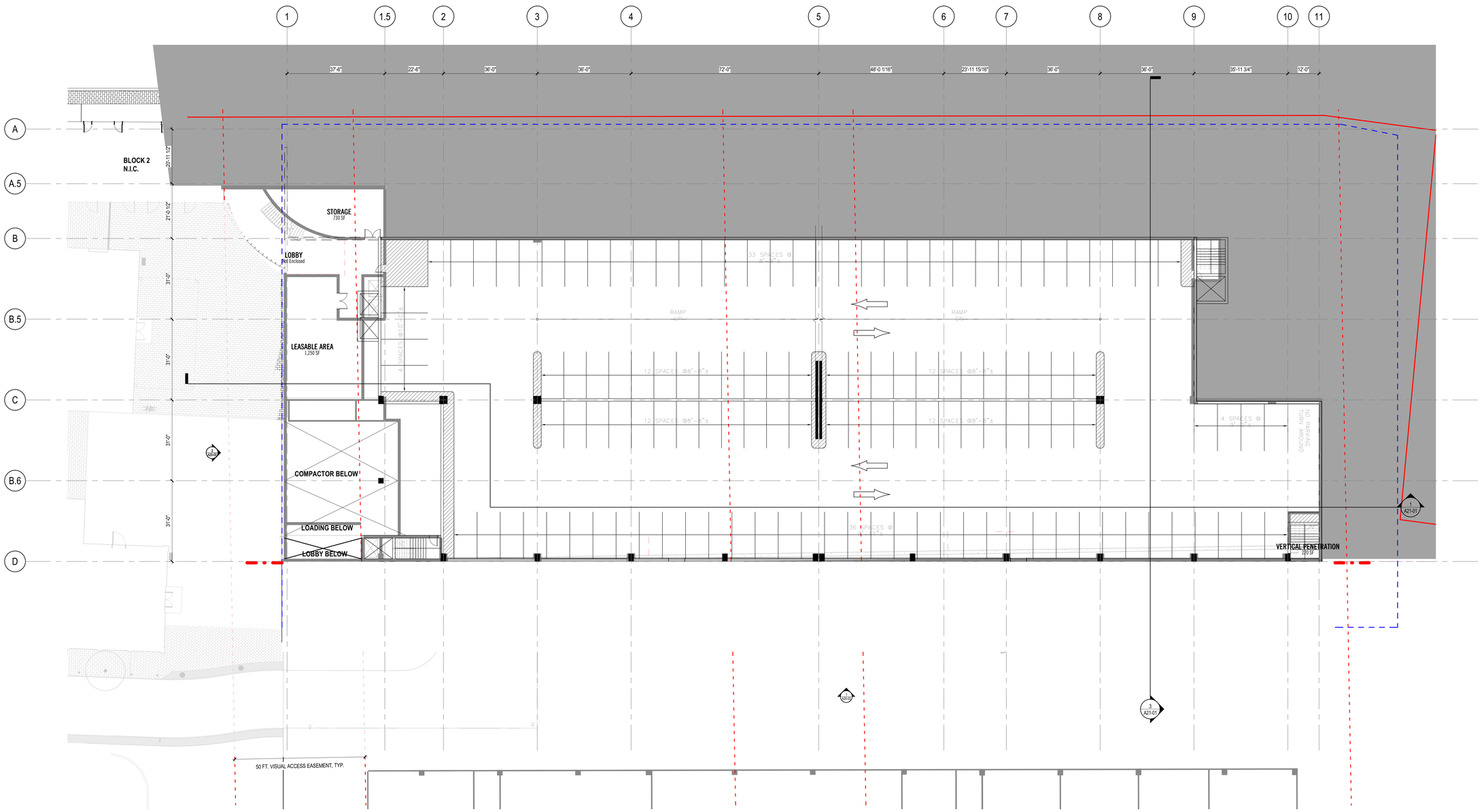
LEVEL 01 PLAN
ELEV. 16'-0"

SHEET NUMBER

A10-01

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11/8/2019 1:39:03 PM C:\Temp\58 FORE ST MASTERPLAN_Block Four_v2019_Siampakoulis#A.rvt



1 LEVEL 02 - ELEV. 27'-6": PHASE TWO
1/16" = 1'-0"

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PROJECT

BLOCK FOUR

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PORTLAND, ME 04101

KEYPLAN

ISSUE CHART

MARK	ISSUE	DATE

SCHEMATIC DESIGN
11/08/2019

Job Number	157031.001
Drawn	Author
Checked	Checker
Approved	Approver

TITLE

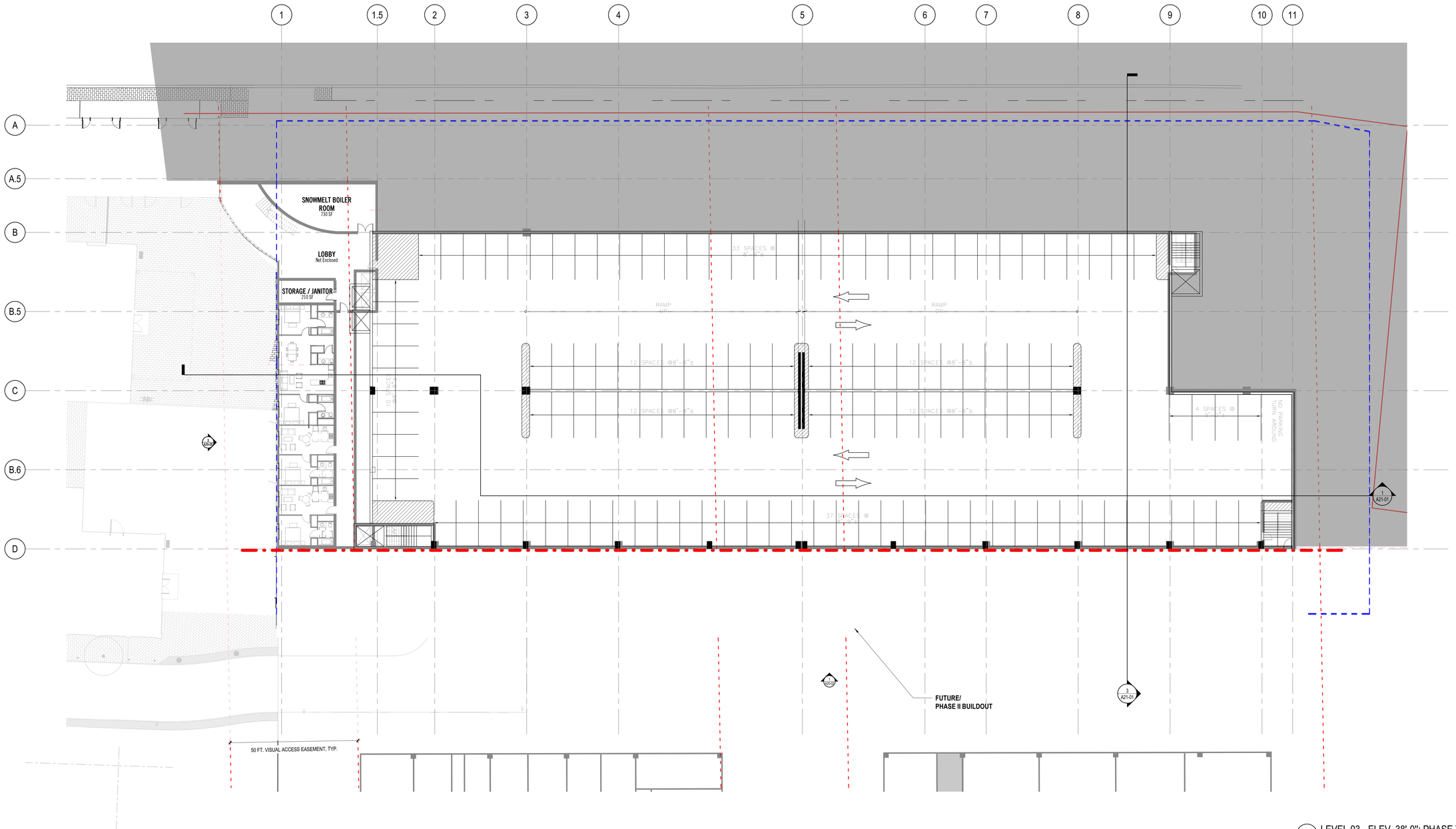
LEVEL 02 PLAN ELEV. 27'-6"

SHEET NUMBER

A10-02

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1 LEVEL 03 - ELEV. 38'-0": PHASE TWO
1/16" = 1'-0"

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ISSUE CHART

MARK	ISSUE	DATE

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Drawn	Author
Checked	Checker
Approved	Approver

TITLE

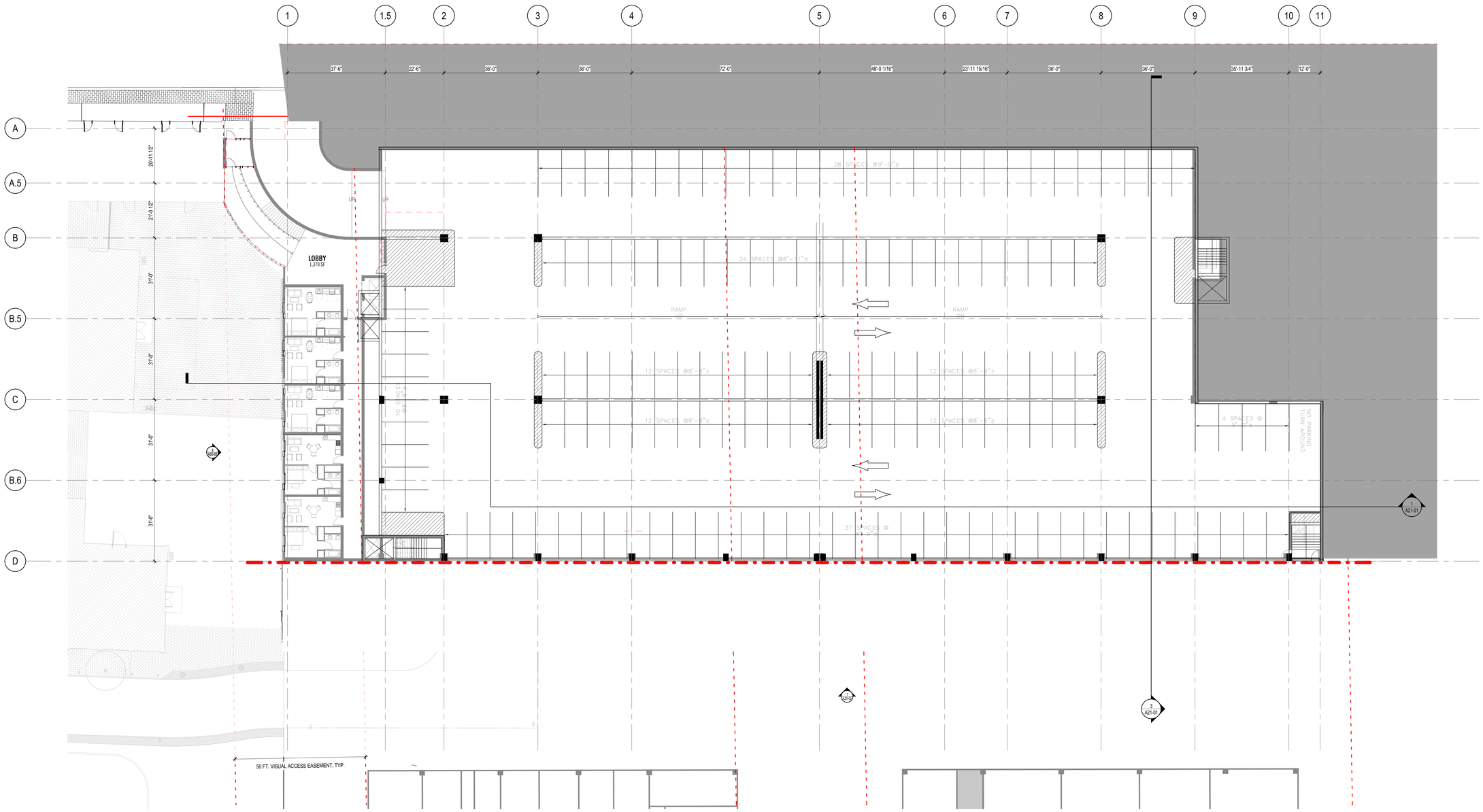
LEVEL 03 PLAN ELEV.38'-0"

SHEET NUMBER

A10-03

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1 LEVEL 04 - ELEV. 48'-6": PHASE TWO
1/16" = 1'-0"

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MARK	ISSUE	DATE

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Job Number	157031.001
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Checked	Checker
Approved	Approver

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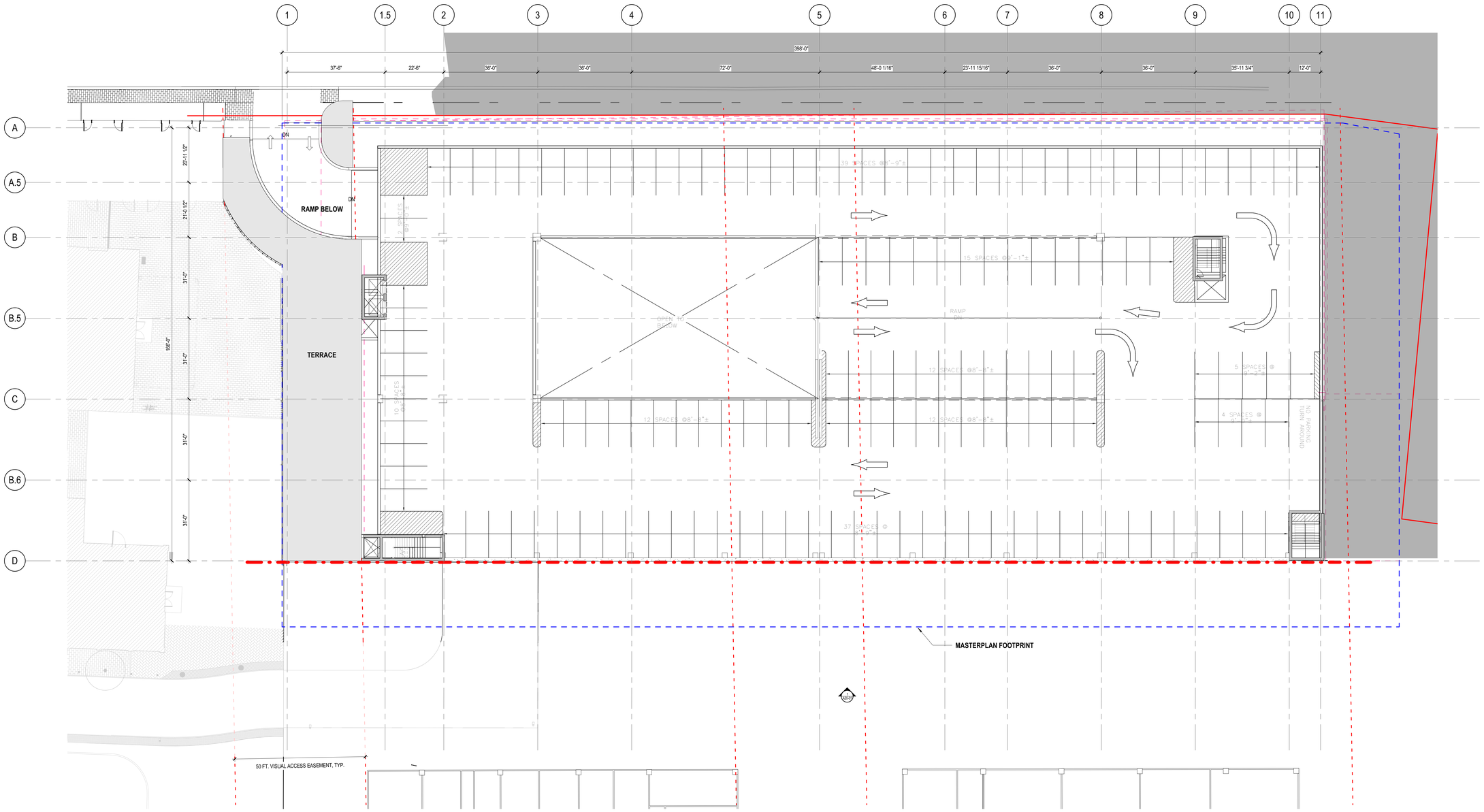
LEVEL 04 PLAN ELEV. 48'-6"

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1 ROOF - ELEV. 59'-0": PHASE ONE
1/16" = 1'-0"

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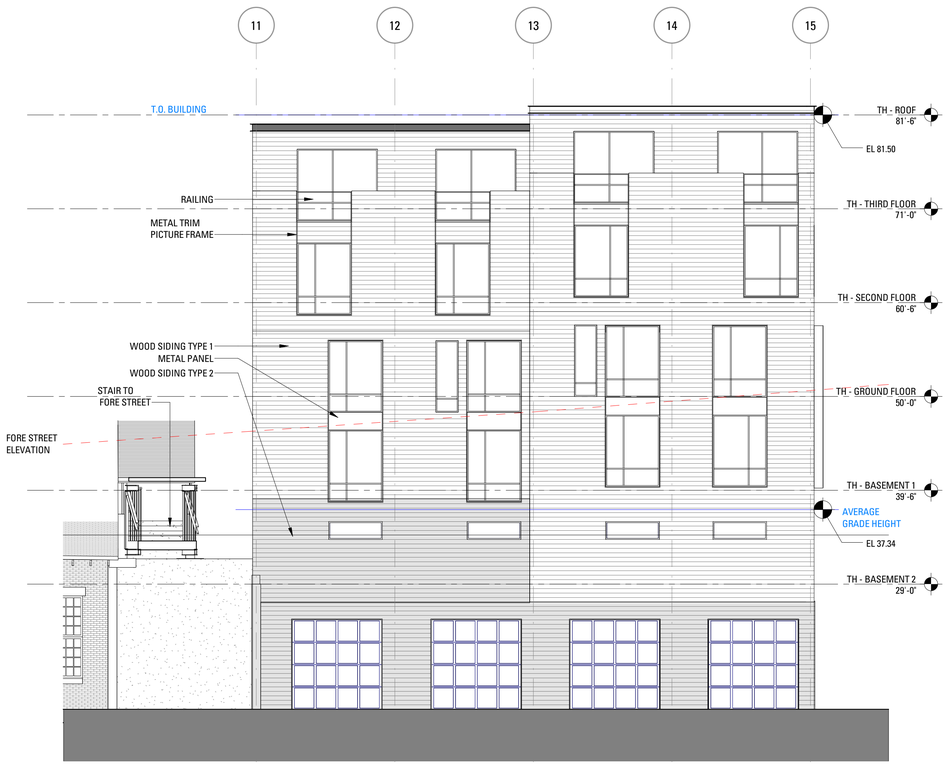
ROOF PLAN ELEV. 59'-0"

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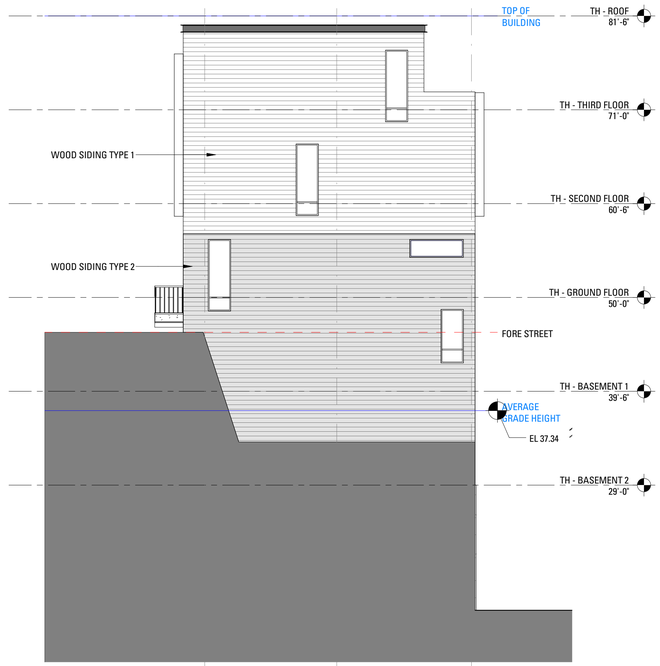
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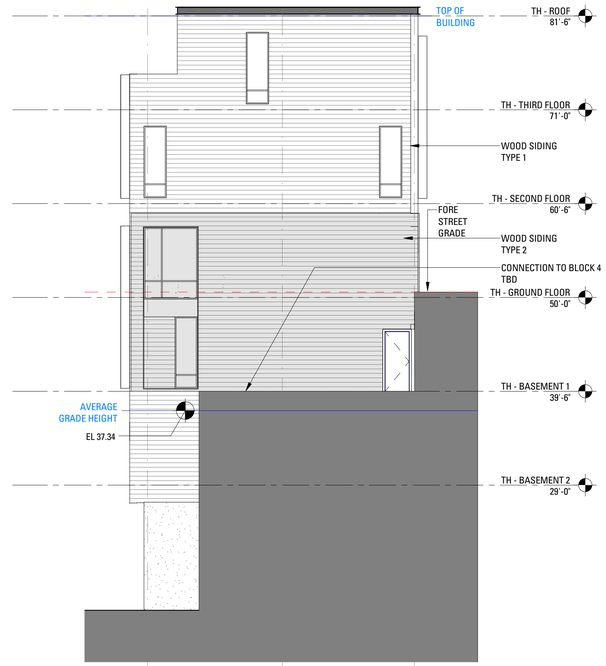
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2 Elevation 3 - a
SCALE: 1/8" = 1'-0"



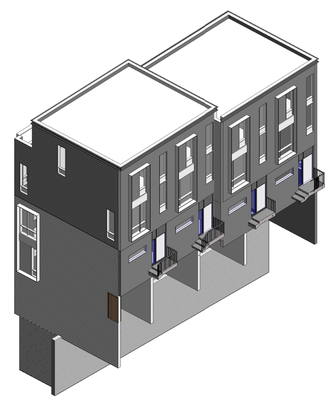
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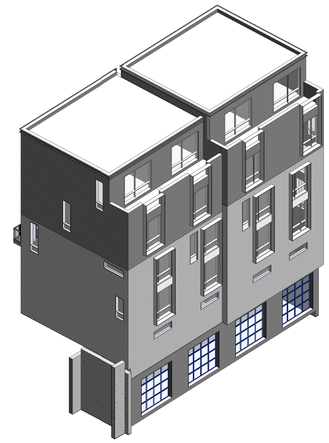
4 Elevation 5 - a
SCALE: 1/8" = 1'-0"



1 Elevation 2 - a
SCALE: 1/8" = 1'-0"



6 TOWNHOUSE AXON B
SCALE:



5 TOWNHOUSE AXON A
SCALE:

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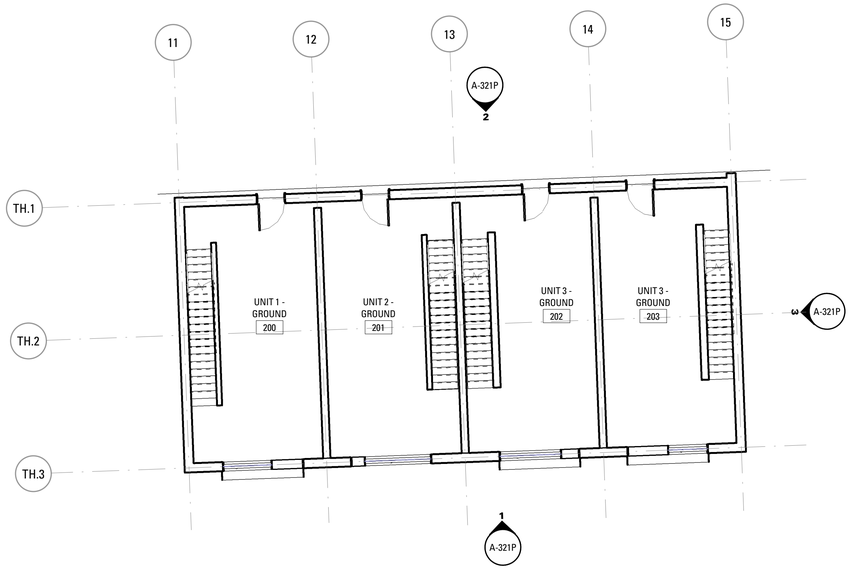
Rev.	Date	Remarks

PORTLAND FORESIDE BLOCK 2

Date	DECEMBER 20, 2019
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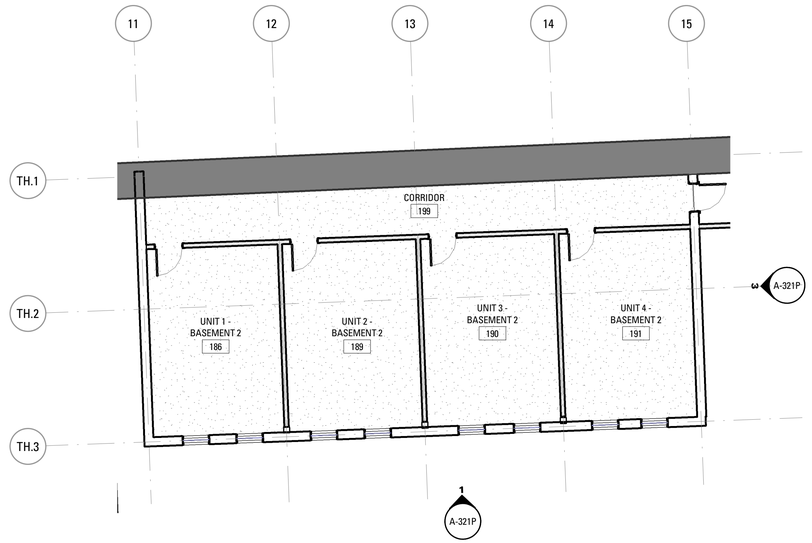
D - TOWNHOUSE EXTERIOR ELEVATIONS

A-331



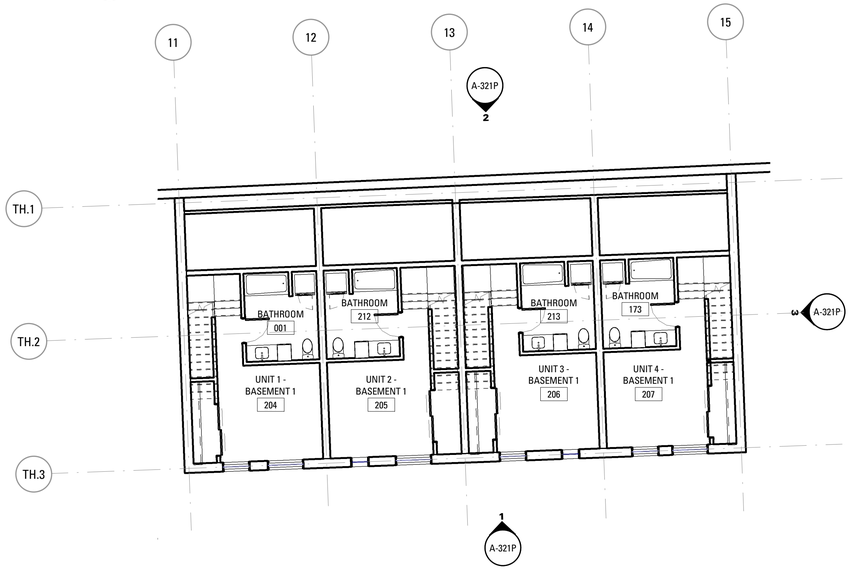
4 TOWNHOUSE - GROUND FLOOR

SCALE: 1/8" = 1'-0"



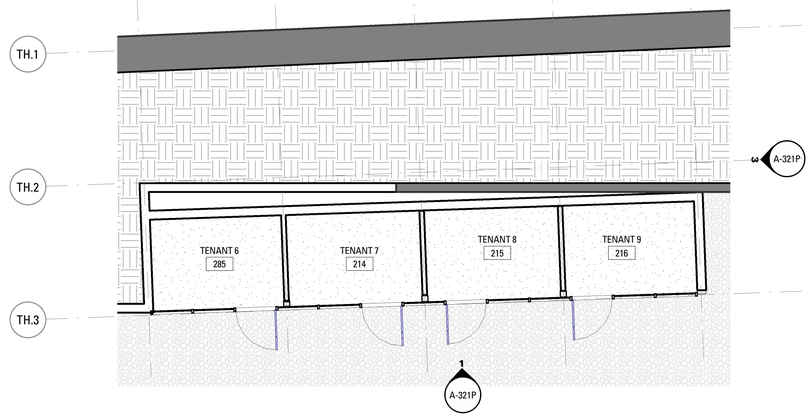
2 TOWNHOUSE- BASEMENT 2

SCALE: 1/8" = 1'-0"



3 TOWNHOUSE - BASEMENT 1

SCALE: 1/8" = 1'-0"



1 TOWNHOUSE - SITE GRADE

SCALE: 1/8" = 1'-0"

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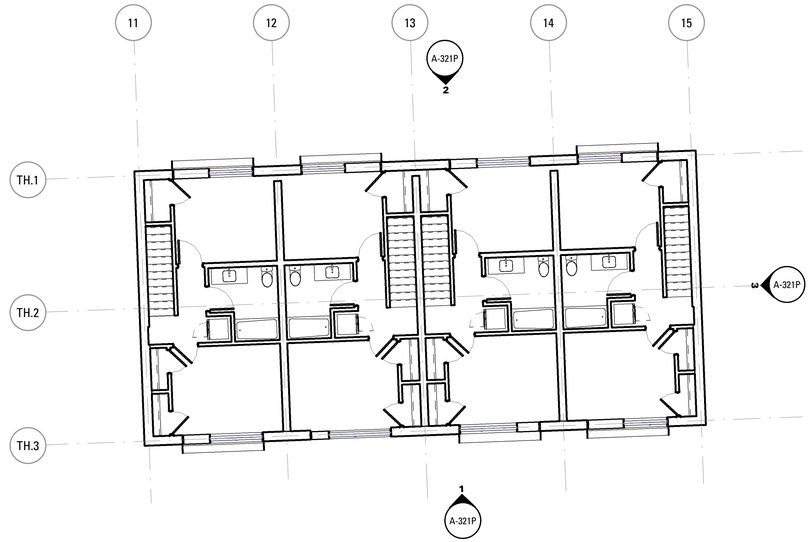
Rev.	Date	Remarks

PORTLAND FORESIDE BLOCK 2

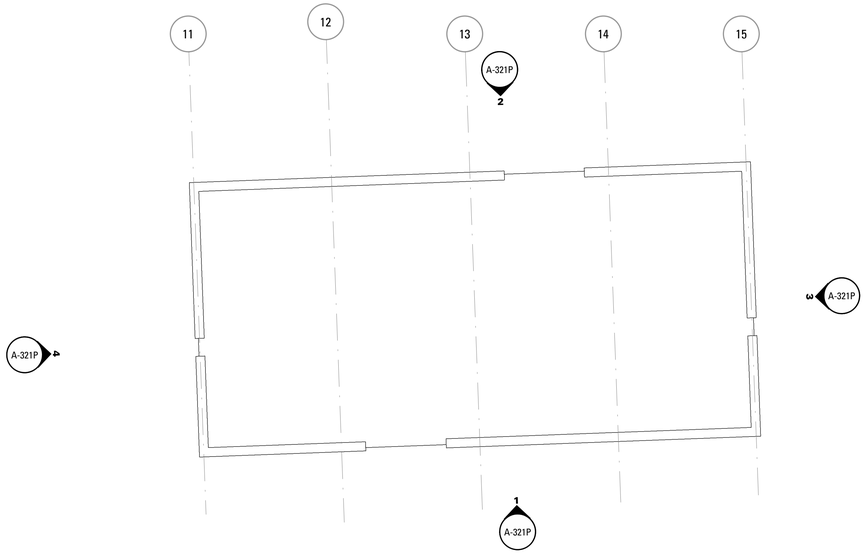
Date	OCTOBER 25, 2019
Scale	1/8" = 1'-0"
Project Number	
Drawn By	Author

TOWNHOUSE - FLOOR PLANS - SITE GRADE, BASEMENT 2, BASEMENT 1, GROUND FLOOR

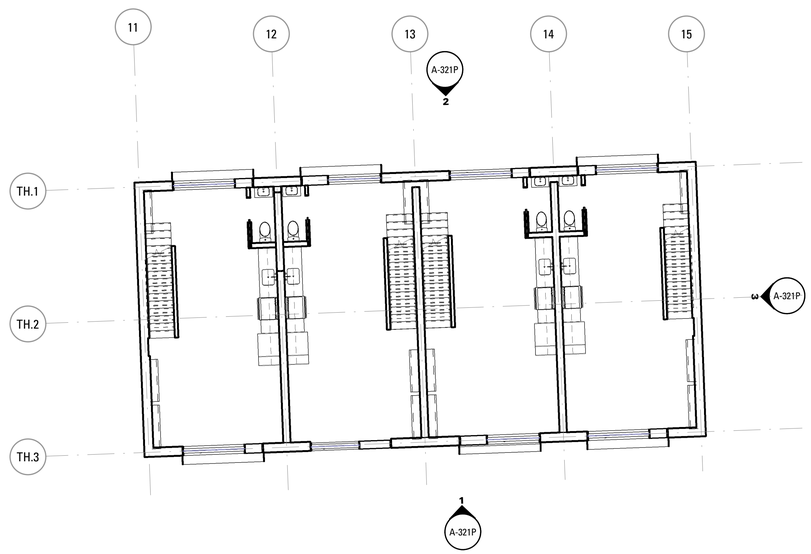
A-121P



2 TOWNHOUSE - THIRD FLOOR
SCALE: 1/8" = 1'-0"



3 TOWNHOUSE - ROOF
SCALE: 1/8" = 1'-0"



1 TOWNHOUSE - SECOND FLOOR
SCALE: 1/8" = 1'-0"

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Drawn By	Author

TOWNHOUSE - FLOOR PLANS - SECOND, THIRD, ROOF

A-122P

12. CONSTRUCTION MANAGEMENT PLAN

A Construction Management Plan has been prepared by Consigli Construction for the proposed development. The Contractor will be required to provide adequate safety fencing and signage directing pedestrians safely around the construction area. The Construction Management Plan is attached to this Section for your reference.

It should be noted that the constructability of future phases of development has been considered. The proposed development has been designed such that it will not prevent the construction of future phases of the 58 Fore Street Master Plan.

12.1 Attachments

- Construction Management Plan prepared by Consigli Construction (Uploaded to the Construction Management Plan folder on Eplan)

November 6, 2019

CONSIGLI
Est. 1905

58 Fore Street Phase 1 Summary
Construction Management Plan

Prepared For: Portland Department of Planning & Urban Development Department

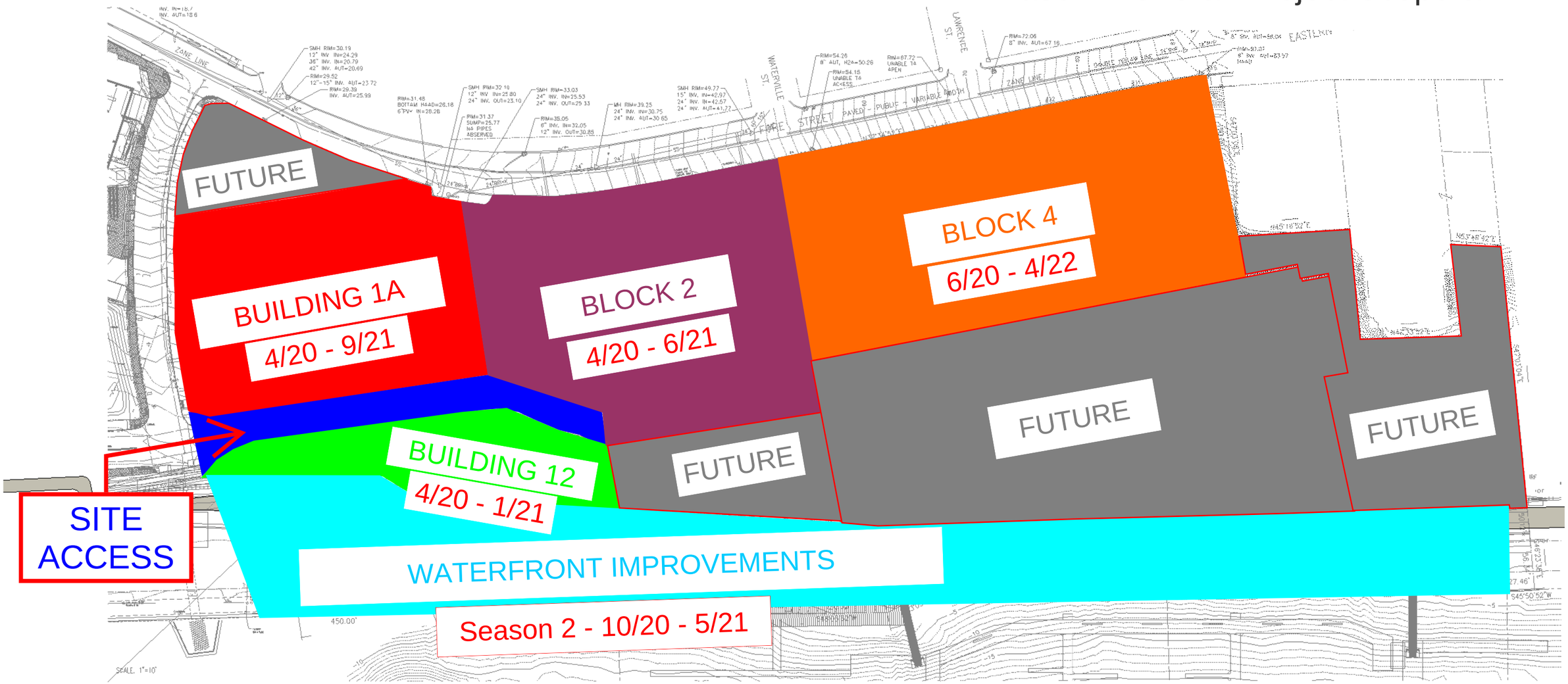
Project Proponent: Portland Foreside Development Company LLC

Construction Manager: Consigli Construction Company Inc

Portland Foreside

Master Planning | April 2020 - April 2022

Phase 1 - Overall Project Scope & Timing



CONSIGLI
Est. 1905

November 6, 2019

CONSIGLI
Est. 1905

58 Fore Street – Building 1A
Construction Management Plan

Prepared For: Portland Department of Planning & Urban Development Department

Project Proponent: Portland Foreside Development Company LLC

Construction Manager: Consigli Construction Company Inc

Table of Contents

1. Construction Principles 2
2. Construction Administration and Communication 3
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Construction Principles

The purpose of this Construction Management plan is to identify, mitigate and plan for all potential impacts throughout the duration of building the Mixed-Use Development known as Building 1A, at 58 Fore Street. Portland Foreside Development Co and Consigli Construction are committed to a seamless, incident free project by means of typical practices used to ensure that public safety and community are at the forefront of priorities.

Throughout this CM plan we will refer to specific examples of potential construction practices, traffic control scenarios, neighboring building considerations and public safety; as well as measures in which these items will be managed throughout the project to accommodate the community as much as possible. While we will take the necessary precautions to meet City and State requirements for traffic, noise, dust, vibration, etc., this project will be disruptive to adjacent properties compared to the current condition. Along with our subcontractor team members, it is imperative that we have complete participation from all parties affiliated with the project to maintain our strict safety requirements and ensure a quality building for PFDC.

The Mixed-Use Development at 58 Fore Street known as Building 1A includes the construction of a new 4 story building consisting of 94,000 SF of Occupant Office Space, 5 Retail Shell spaces, 68 structured parking spaces, and 6 surface parking spaces. The building totals approximately 157,000 SF that will be primarily built out of steel and concrete. The completion of the project is anticipated for September 2021.

Consigli has extensively planned the project's schedule, site logistics and safety protocols that will be thoroughly covered in this report with graphics and narratives. This CM plan will continually be updated to meet the needs of the project, community and the city as the project progresses. We aim to deliver a safe and quality project to PFDC, their employees and the City of Portland by means of communication, teamwork and stewardship.

Construction Administration and Communication

Consigli Construction will be the Construction Manager on site throughout the duration of the project. As such, there will be a dedicated team of individuals tasked with managing quality, schedule, site logistics and safety. These personnel will manage and enforce the proposed CMP with all associated subcontractors and material vendors.

Larry Osmer – Senior Project Manager
617.719.9835, losmer@consigli.com

Site Communication

With the proximity to occupied buildings, community outreach and communication will be imperative throughout construction to keep the public informed of the expected turbulence caused by the project. Site signage will be prominently displayed to show pedestrian access around the site and any updates to the proposed CMP.

Quarterly reporting and updating of the CMP will be required to update the City and community of the following activities:

1) Construction schedule updates
2) Material deliveries, including notice of any oversized loads that may impact public traffic
3) Requests for upcoming off-hours work including weekends and holidays
4) Notice of any upcoming activities that may produce strong noise, vibration or dust that could adversely affect the neighboring communities.
5) Requests for any street openings or public sidewalk work to be completed as part of the construction contract

Construction Schedule

Project Work Hours

Construction work hours will be in accordance with Section 17-18 of the City of Portland Code of Ordinances.

The project site is located within zoning group B6 – Eastern Waterfront Mixed Zone but is within 500 feet of buildings used for residential purposes. As such, work hours will be limited to Monday – Friday 7:00 am – 7:00 pm. Should work extend into Weekends or Holidays, the use of heavy equipment will be kept within the time constraints of 8:00 am – 4:00 pm.

Project Schedule/Logistics

The project is anticipated to be approximately 10 months in duration. Beginning in April 2020 the project will be turned over to PFDC in September 2021.

Regarding scheduled work to take place within public streets and sidewalks, this work will comply with Section 25-129 – Noise, dust and debris of the City of Portland Code of Ordinances. The connection to public utilities and sidewalk construction will require work to be executed within Fore Street and the new connector road between Fore Street and the Thames Street Extension. This work will be scheduled and planned with the City of Portland prior to the execution, and all logistical concerns will be addressed prior to starting the work. The connection to public utilities is tentatively scheduled to happen in the Spring of 2020, with sidewalk construction tentatively scheduled to occur during the Fall of 2020. Temporary barricades, fencing and signage will be required during the installation to control pedestrian and vehicular movements around the work.

Material Deliveries

The construction will require coordination of material deliveries throughout the duration of the project. The following logistical plans show the planned lay-down areas, truck routes and safety protocols that will be in place throughout the duration of construction.

1. All construction traffic will enter site through the Thames Street extension, allowing construction vehicles to pull straight onto site without impacting the public right of way. Area will be provided within the limits of disturbance for construction vehicles to off load and turn around. The same route will be used for vehicles leaving the site. A flagger will be employed if needed during utility tie in work at Fore Street and the Connector Road, however these details will require additional coordination at a later date.

Construction activities, whether it be work going in place or material and equipment deliveries, will create additional traffic along Thames Street. Impacts beyond the increased vehicle traffic

will be mitigated through the simplified path of travel to site, and ability to offload all material deliveries within the project limits of disturbance.

Material Storage and Laydown Areas

The construction will require careful planning and management of the daily occurrences within the site limits. The logistical plans currently outlined intend to keep all construction staging, lay down area and temporary storage within the project limits and secured by temporary fencing. Specified areas will be granted to on-site subcontractors for staging materials to assist in managing their installation. With designated areas delegated to subcontractors, the site will remain accessible by incoming trucks without causing a queuing effect outside of the fence.

Contractor Parking

At the peak of construction, Consigli anticipates that up to 40 people will be on site working various trades associated with the building. All contractors, subcontractors and their employees will be prohibited from parking in on-street City spaces in the vicinity of the site. To account for the anticipated parking demand, we have allowed space for 40 designated parking spaces for the personal vehicles of construction personnel. All subcontractors will be educated during the bidding process of this requirement, language regarding off-street parking will be incorporated into each subcontract agreement, and individual employees will be informed of this requirement their first day on-site during the site safety orientation.

Fire Protection for Construction Activities

The 2013 Standard for Safeguarding Construction, Alteration and Demolition Operations will be enforced on this project by utilizing best management practices to mitigate the fire risks associated with construction. Consigli and its subcontractors will execute the following measures to provide a safe and secure work place:

1) PFD Fire Command Center: This centralized location will hold all current project information and will act as the first responders meeting point to obtain the most up to date information of construction. The following documents will be found at this location:
    a. Hot Work Permits: To be filled out daily by any person performing work that will generate a spark or create a potential fire risk on the job site. The permits are to be completed and approved by Consigli prior to work starting.
    b. Current Construction Schedule
    c. Current Construction Logistics Plan
    d. Pre-Incident Fire Plan

2) On-Site Fuel Storage: The use of different flammable liquids will be required throughout construction. A free-standing, 30-minute fire-rated enclosure will be built to safely and securely store all flammable liquids and gases. Fueling trucks will be used as needed, but will not be allowed to stage or park on site for any extended period.

3) Means of Egress: The building will be permanently equipped with (2) 2-way stair assemblies for means of egress. The East stair will be installed first, and will provide emergency egress throughout construction. This stair will be identified with temporary signage throughout construction indicating the floor level and exit path direction.

4) Good Housekeeping: Consigli Construction will provide necessary dumpsters for the removal of debris from the site. All subcontractors are responsible for the daily clean-up of their work areas to ensure no materials or tools which could pose a hazard to the building are left out over night. Daily safety walks by the Construction Superintendent will be utilized to ensure that all working floors are equipped with an inspected fire extinguisher and clear means of egress in the event of an emergency. Trash chutes and/or material hoists may be utilized to safely and efficiently remove all debris from the project.

5) On-site Security: The project site will be secured everyday by means of a temporary post driven construction fence and scrim. Lockable gates will be located at (3) locations for site access.

6) Rapid Communication: Evacuation notification will be provided by means of 2-way radios/cellular devices as well as strategically positioned air horns. Upon evacuation of the building all project personnel will report to the muster point location where the Construction Manager and all subcontractor foremen will perform accountability checks. The General Contractor field staff will then be dispatched to all project entry points and the PFD Command Center. Upon arrival of the first responders to the PFD Command Center, the General Contractor will provide an accountability and incident briefing.

Public Safety

The construction will be near pedestrian right of ways and will interact with public traffic throughout the duration of the project. Material deliveries, the use of cranes, lifts, and other heavy machinery all have the potential to impact typical public activity. As a member of the Portland community, Consigli will strive to limit, mitigate and avoid these potential impacts as much as possible by means of controlling noise, on-site dust, vibrations and traffic. By educating and informing the neighborhoods to the construction activities taking place we will aim to build a project that produces minimal impacts to the Thames Street and Fore Street communities.

Noise

Construction activities throughout the project will create noise that leaves the project site. It is the intent of the project team to limit the exposure to the noise by following Section 17-18 of the City of Portland Code of Ordinances. This project site is located within 500 feet of buildings classified as residential. As such, the project hours will be limited the 7:00 am – 7:00 pm, Monday – Friday. Should any weekend or holiday work be required the use of heavy machinery will not commence before 8:00 am. When this work is required, no less than 2-week advanced notice will be provided to PFDC and the neighboring communities.

Work related to the ground improvements, foundations, and structural steel will likely be the loudest activity experienced during construction. This work will take place from February 2020 – September 2020. Recently, many local projects have utilized similar means of construction to much success around Portland.

Dust Control/Air Quality

Maintaining an environmentally conscious project site will be a major priority for the project team to ensure safety not only for the neighboring communities, but also for the construction workers on site day after day. All soils and debris will be kept within the project limits following the State of Maine Department of Environmental Protection erosion control Best Management Practices:

1) Erosion controlled construction entrances
2) Tarped dump trucks leaving the site with soil/debris
3) On-going sidewalk and street cleaning activities
4) The installation of temporary, compacted staging areas within the job site
5) Using wetting agents to control dust
6) Covering stock piles when material is to be piled for long periods of time
7) Smoking will not be allowed on the job site

Vibration Monitoring

Some construction practices required for this project will result in ground vibration waves that may transmit to nearby buildings. Prior to any potential vibration causing activities taking place a pre-construction survey will be conducted to review and document existing conditions of all adjacent structures. The survey will encompass all properties abutting the proposed project site to include the following addresses:

- 100 Fore Street (Currently Under Construction)
- 58 Fore Street (remaining buildings owned by PFDC)
- Residences Abutting Fore Street adjacent to the Project Site (private residences)
- 58 Fore Street (Fore Points Marina)

Site removals, vibratory compaction, and ground improvements will be employed on this project and will be monitored by a third-party monitoring company. A pre-construction meeting will be planned with abutting property owners to discuss geological conditions, construction specifications and methods of installation that create vibration.

As an added measure of control, vibration monitoring may be performed at stone or masonry structures within 100' of the site compaction and ground improvements scope performed.

Traffic Control

Throughout the construction process Franklin Street and Thames Street will experience increased traffic due to construction activities. Material deliveries, contractor access and public utility integration will be encountered and mitigated through coordinated logistics plans (provided within this CM Plan), on-site safety personnel, way-finding signage and well-organized traffic control devices. PFDC & Consigli will strive to inform and direct the neighborhood of the activities taking place in public areas as construction progresses through completion. During the Spring of 2020 public utility connections will be made at Fore Street and the Connector Road. During the late Summer or Fall 2020, sidewalk improvements will be made adjacent to the Connector Road.

The main access point to the construction project will be through the private road accessed at the easternmost point of Thames Street. In order to maintain access for tenants of 58 Fore Street and two-way traffic on the private road, site flaggers will be utilized as needed to direct both construction and marina traffic.

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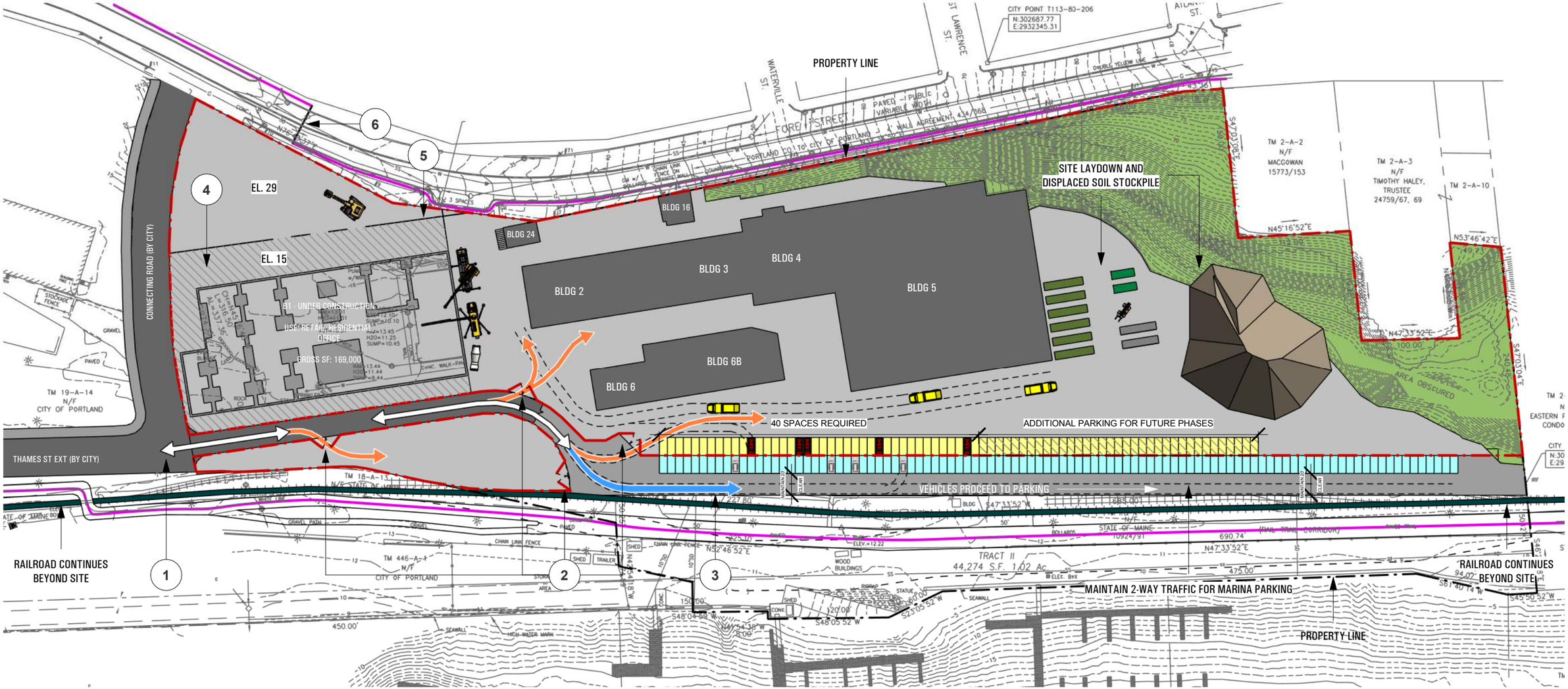
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Traffic Management Diagrams

58 FORE ST - BLOCK 1A

CONSTRUCTION MANAGEMENT PLAN

06.19.2019



PLAN LEGEND

1. MARINA AND CONSTRUCTION ACCESS VIA THAMES ST EXT
2. MAINTAIN SEPARATE, SECURE ACCESS TO SITE(S)
3. ACCESS TO MARINA PARKING; NO CONSTRUCTION PARKING
4. CONSTRUCTION UNDERWAY AT BLOCK 1A SITE
5. EDGE OF BUILDING FOOTPRINT; NO THRU ACCESS ON SITE
6. PEDESTRIANS TO UTILIZE EXISTING CROSSWALK ON FORE ST

PARKING LEGEND

PARKING: MARINA - 100 SPACES

PARKING: CONSTRUCTION - 40 SPACES

GRAPHIC KEY

MARINA TRAFFIC

CONSTRUCTION TRAFFIC

SHARED TRAFFIC

CONSTRUCTION FENCING

PEDESTRIAN ACCESS

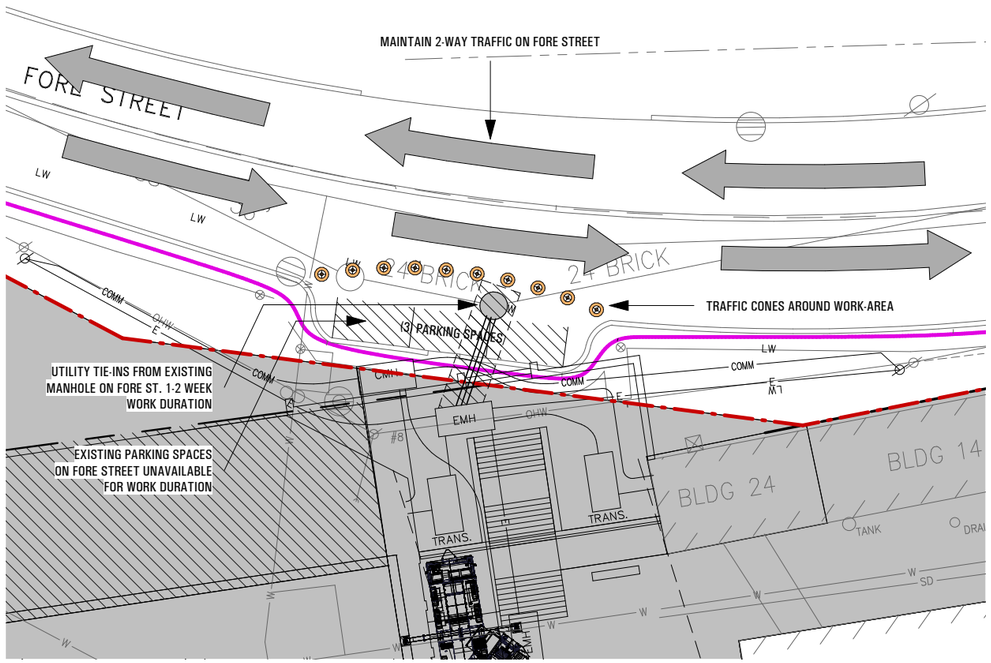
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58 FORE ST - BLOCK 1A

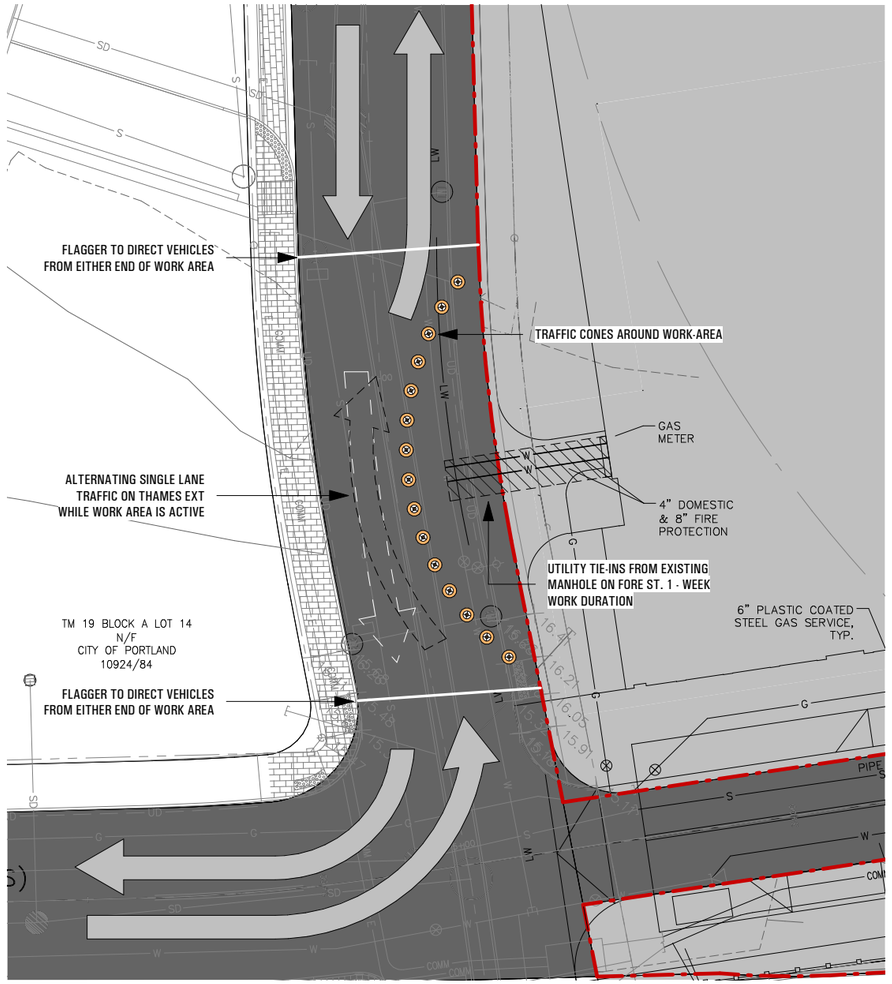
CONSTRUCTION MANAGEMENT PLAN

Utility Tie-ins

06.19.2019



1 CMP - Utility Work on Fore St.
1/32" = 1'-0"



2 Utility Work on Thames St. Extension
1/32" = 1'-0"

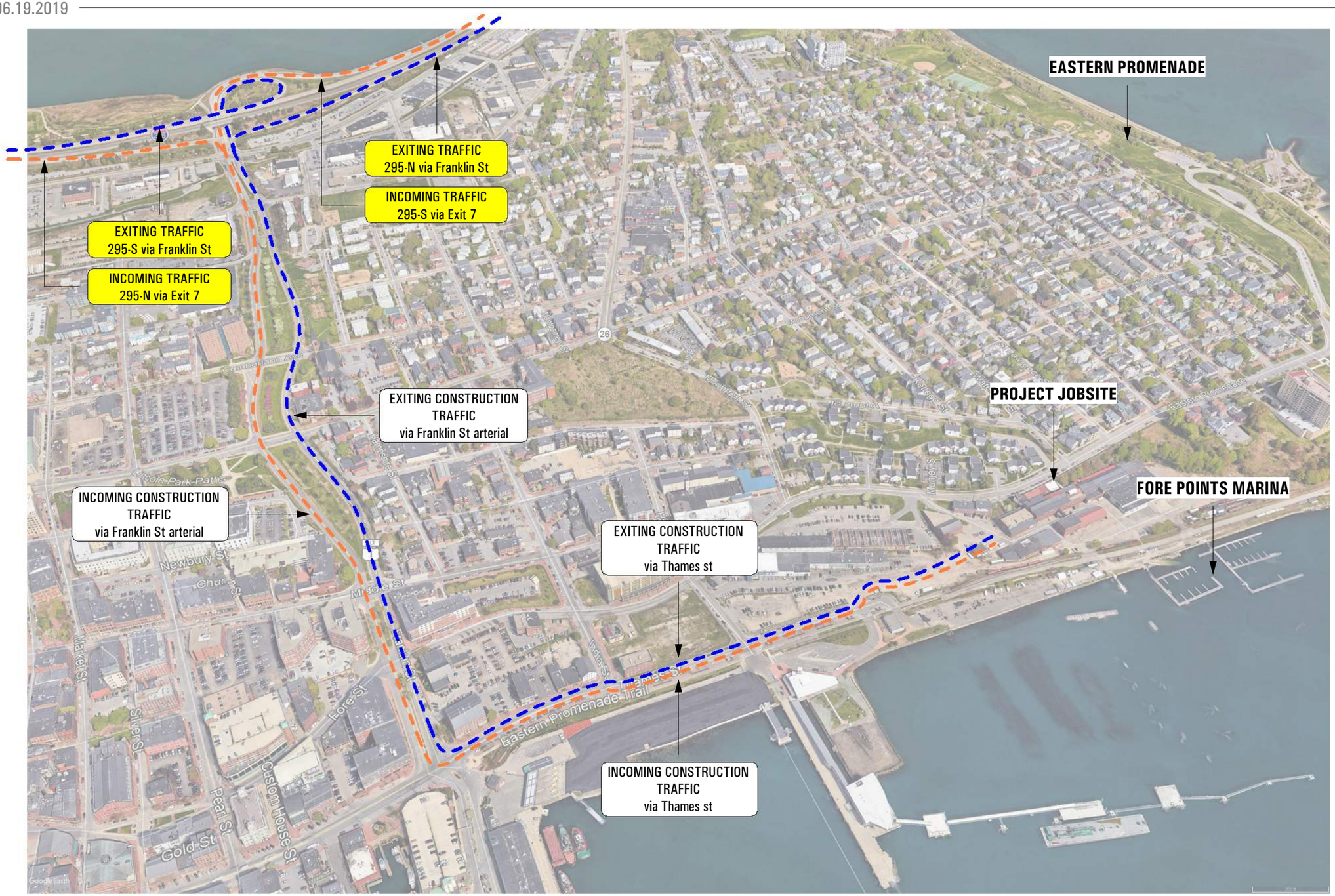
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58 FORE ST - BLOCK 1A

CONSTRUCTION MANAGEMENT PLAN

Traffic Control Plan

06.19.2019



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November 6, 2019

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58 Fore Street – Building 12
Construction Management Plan

Prepared For: Portland Department of Planning & Urban Development Department

Project Proponent: Portland Foreside Development Company LLC

Construction Manager: Consigli Construction Company Inc

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Construction Principles

The purpose of this Construction Management plan is to identify, mitigate and plan for all potential impacts throughout the duration of building the Mixed-Use Development known as Building 12, at 58 Fore Street. Portland Foreside Development Co and Consigli Construction are committed to a seamless, incident free project by means of typical practices used to ensure that public safety and community are at the forefront of priorities.

Throughout this CM plan we will refer to specific examples of potential construction practices, traffic control scenarios, neighboring building considerations and public safety; as well as measures in which these items will be managed throughout the project to accommodate the community as much as possible. While we will take the necessary precautions to meet City and State requirements for traffic, noise, dust, vibration, etc., this project will be disruptive to adjacent properties compared to the current condition. Along with our subcontractor team members, it is imperative that we have complete participation from all parties affiliated with the project to maintain our strict safety requirements and ensure a quality building for PFDC.

The Mixed-Use Development at 58 Fore Street known as Building 12 includes the construction of a new 3 story building consisting of 6,400 SF of Occupant Office Space and 1 Retail Shell space. The building totals approximately 9,700 SF that will be primarily built out of steel and concrete. The completion of the project is anticipated for December 2020.

Consigli has extensively planned the project's schedule, site logistics and safety protocols that will be thoroughly covered in this report with graphics and narratives. This CM plan will continually be updated to meet the needs of the project, community and the city as the project progresses. We aim to deliver a safe and quality project to PFDC, their employees and the City of Portland by means of communication, teamwork and stewardship.

Construction Administration and Communication

Consigli Construction will be the Construction Manager on site throughout the duration of the project. As such, there will be a dedicated team of individuals tasked with managing quality, schedule, site logistics and safety. These personnel will manage and enforce the proposed CMP with all associated subcontractors and material vendors.

Larry Osmer – Senior Project Manager
617.719.9835, losmer@consigli.com

Site Communication

With the proximity to occupied buildings, community outreach and communication will be imperative throughout construction to keep the public informed of the expected turbulence caused by the project. Site signage will be prominently displayed to show pedestrian access around the site and any updates to the proposed CMP.

Quarterly reporting and updating of the CMP will be required to update the City and community of the following activities:

1) Construction schedule updates
2) Material deliveries, including notice of any oversized loads that may impact public traffic
3) Requests for upcoming off-hours work including weekends and holidays
4) Notice of any upcoming activities that may produce strong noise, vibration or dust that could adversely affect the neighboring communities.
5) Requests for any street openings or public sidewalk work to be completed as part of the construction contract

Construction Schedule

Project Work Hours

Construction work hours will be in accordance with Section 17-18 of the City of Portland Code of Ordinances.

The project site is located within zoning group B6 – Eastern Waterfront Mixed Zone but is within 500 feet of buildings used for residential purposes. As such, work hours will be limited to Monday – Friday 7:00 am – 7:00 pm. Should work extend into Weekends or Holidays, the use of heavy equipment will be kept within the time constraints of 8:00 am – 4:00 pm.

Project Schedule/Logistics

The project is anticipated to be approximately 9 months in duration. Beginning in April 2020 the project will be turned over to PFDC in December 2020.

All utility connections are planned to be made at the Properties private entrance road, so no work will take place within public streets and sidewalks.

Material Deliveries

The construction will require coordination of material deliveries throughout the duration of the project. The following logistical plans show the planned lay-down areas, truck routes and safety protocols that will be in place throughout the duration of construction.

1. All construction traffic will enter site through the Thames Street extension, allowing construction vehicles to pull straight onto site without impacting the public right of way. Area will be provided within the limits of disturbance for construction vehicles to off load and turn around. The same route will be used for vehicles leaving the site.

Construction activities, whether it be work going in place or material and equipment deliveries, will create additional traffic along Thames Street. Impacts beyond the increased vehicle traffic will be mitigated through the simplified path of travel to site, and ability to offload all material deliveries within the project limits of disturbance.

Material Storage and Laydown Areas

The construction will require careful planning and management of the daily occurrences within the site limits. The logistical plans currently outlined intend to keep all construction staging, lay down area and temporary storage within the project limits and secured by temporary fencing. Specified areas will be granted to on-site subcontractors for staging materials to assist in managing their installation. With designated areas delegated to subcontractors, the site will remain accessible by incoming trucks without causing a queuing effect outside of the fence.

Contractor Parking

At the peak of construction, Consigli anticipates that up to 15 people will be on site working various trades associated with the building. All contractors, subcontractors and their employees will be prohibited from parking in on-street City spaces in the vicinity of the site. To account for the anticipated parking demand, we have allowed space for 5 designated parking spaces for the personal vehicles of construction personnel, as well as additional overflow spaces to be utilized as necessary. All subcontractors will be educated during the bidding process of this requirement, language regarding off-street parking will be incorporated into each subcontract agreement, and individual employees will be informed of this requirement their first day on-site during the site safety orientation.

Fire Protection for Construction Activities

The 2013 Standard for Safeguarding Construction, Alteration and Demolition Operations will be enforced on this project by utilizing best management practices to mitigate the fire risks associated with construction. Consigli and its subcontractors will execute the following measures to provide a safe and secure work place:

1) PFD Fire Command Center: This centralized location will hold all current project information and will act as the first responders meeting point to obtain the most up to date information of construction. The following documents will be found at this location:
    a. Hot Work Permits: To be filled out daily by any person performing work that will generate a spark or create a potential fire risk on the job site. The permits are to be completed and approved by Consigli prior to work starting.
    b. Current Construction Schedule
    c. Current Construction Logistics Plan
    d. Pre-Incident Fire Plan

2) On-Site Fuel Storage: The use of different flammable liquids will be required throughout construction. A free-standing, 30-minute fire-rated enclosure will be built to safely and securely store all flammable liquids and gases. Fueling trucks will be used as needed but will not be allowed to stage or park on site for any extended period.

3) Means of Egress: The building will be permanently equipped with a 2-way stair assembly for means of egress. This stair will provide emergency egress throughout construction and will be identified with temporary signage throughout construction indicating the floor level and exit path direction.

4) Good Housekeeping: Consigli Construction will provide necessary dumpsters for the removal of debris from the site. All subcontractors are responsible for the daily clean-up of their work areas to ensure no materials or tools which could pose a hazard to the building are left out over night. Daily safety walks by the Construction Superintendent will be utilized to ensure that all working floors are equipped with an inspected fire extinguisher and clear means of egress in the event of an emergency. Trash chutes and/or material hoists may be utilized to safely and efficiently remove all debris from the project.

5) On-site Security: The project site will be secured everyday by means of a temporary post driven construction fence and scrim. Lockable gates will be located at (2) locations for site access.

6) Rapid Communication: Evacuation notification will be provided by means of 2-way radios/cellular devices as well as strategically positioned air horns. Upon evacuation of the building all project personnel will report to the muster point location where the Construction Manager and all subcontractor foremen will perform accountability checks. The General Contractor field staff will then be dispatched to all project entry points and the PFD Command Center. Upon arrival of the first responders to the PFD Command Center, the General Contractor will provide an accountability and incident briefing.

Public Safety

The construction will be near pedestrian right of ways and will interact with public traffic throughout the duration of the project. Material deliveries, the use of cranes, lifts, and other heavy machinery all have the potential to impact typical public activity. As a member of the Portland community, Consigli will strive to limit, mitigate and avoid these potential impacts as much as possible by means of controlling noise, on-site dust, vibrations and traffic. By educating and informing the neighborhoods to the construction activities taking place we will aim to build a project that produces minimal impacts to the Thames Street and Fore Street communities.

Noise

Construction activities throughout the project will create noise that leaves the project site. It is the intent of the project team to limit the exposure to the noise by following Section 17-18 of the City of Portland Code of Ordinances. This project site is located within 500 feet of buildings classified as residential. As such, the project hours will be limited the 7:00 am – 7:00 pm, Monday – Friday. Should any weekend or holiday work be required the use of heavy machinery will not commence before 8:00 am. When this work is required, no less than 2-week advanced notice will be provided to PFDC and the neighboring communities.

Work related to site preparation, foundations, and structural steel will likely be the loudest activity experienced during construction. This work will take place from April 2020 – August 2020. Recently, many local projects have utilized similar means of construction to much success around Portland.

Dust Control/Air Quality

Maintaining an environmentally conscious project site will be a major priority for the project team to ensure safety not only for the neighboring communities, but also for the construction workers on site day after day. All soils and debris will be kept within the project limits following the State of Maine Department of Environmental Protection erosion control Best Management Practices:

1) Erosion controlled construction entrances
2) Tarped dump trucks leaving the site with soil/debris
3) On-going sidewalk and street cleaning activities as necessary
4) The installation of temporary, compacted staging areas within the job site
5) Using wetting agents to control dust
6) Covering stock piles when material is to be piled for long periods of time
7) Smoking will not be allowed on the job site

Vibration Monitoring

Some construction practices required for this project will result in ground vibration waves that may transmit to nearby buildings. Prior to any potential vibration causing activities taking place a pre-construction survey will be conducted to review and document existing conditions of all adjacent structures. The survey will encompass all properties abutting the proposed project site to include the following addresses:

- 100 Fore Street (Currently Under Construction)
- 58 Fore Street (Fore Points Marina)
- 58 Fore Street (remaining buildings owned by PFDC)

Site fill and vibratory compaction will be employed on this project and will be monitored by a third-party monitoring company. A pre-construction meeting will be planned with abutting property owners to discuss geological conditions, construction specifications and methods of installation that create vibration.

Traffic Control

Throughout the construction process Franklin Street and Thames Street will experience increased traffic due to construction activities. Material deliveries, contractor access and public utility integration will be encountered and mitigated through coordinated logistics plans (provided within this CM Plan), on-site safety personnel, way-finding signage and well-organized traffic control devices. PFDC & Consigli will strive to inform and direct the neighborhood of the activities taking place in public areas as construction progresses through completion.

The main access point to the construction project will be through the private road accessed at the easternmost point of Thames Street. To maintain access for tenants of 58 Fore Street and two-way traffic on the private road, site flaggers will be utilized as needed to direct both construction and marina traffic.

Historical Preservation

Historic reconstruction of the masonry façade of Building 12 is a critical aspect to the development at 58 Fore Street. A detailed scope will be developed and submitted for approval by the City's Historic Preservation Program Manager before work commences. As the scope includes the reconstruction of a brick masonry façade utilizing current construction technologies to replicate the appearance of the original Portland Company Building 12, scans, photos and other spatial documentation have been taken and will be shared during the planning of this scope to inform the design development.

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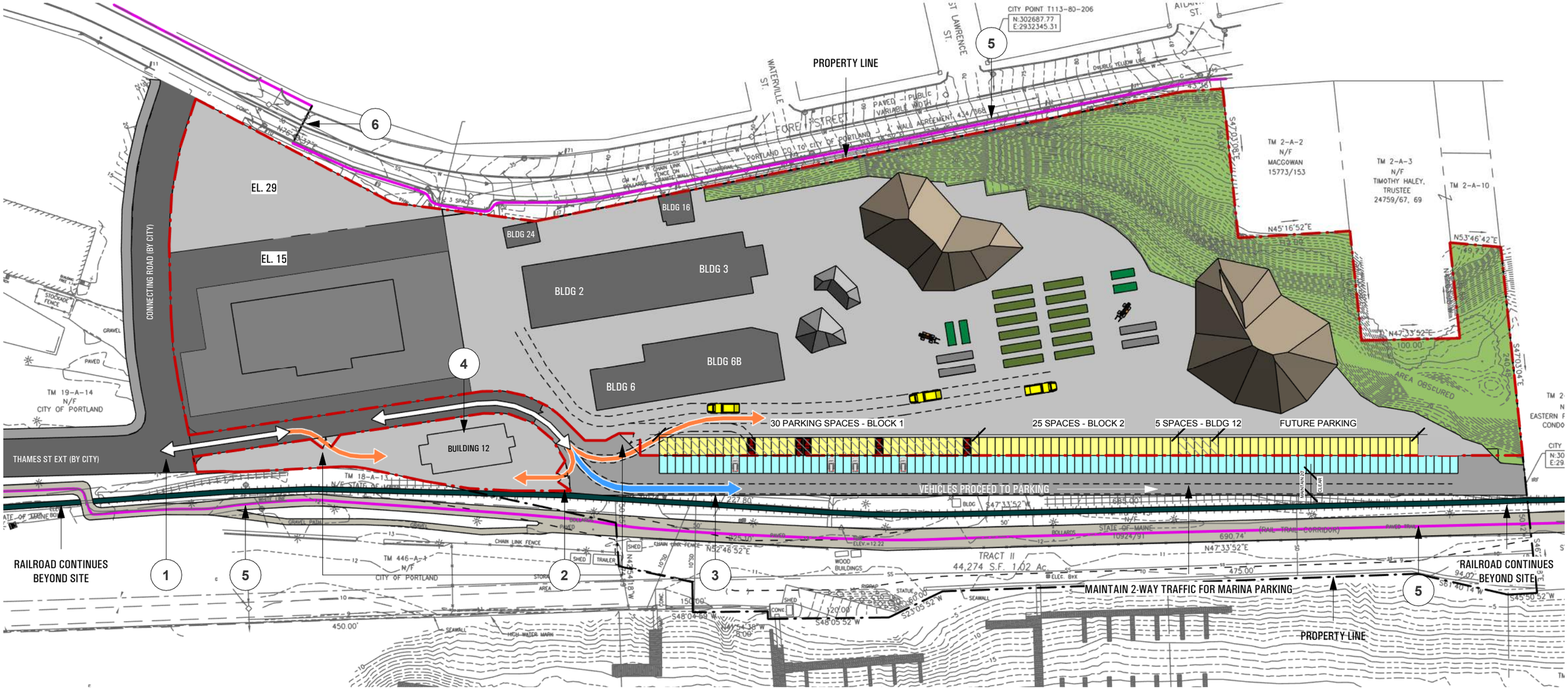
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Traffic Management Diagrams

58 FORE ST - BUILDING 12

CONSTRUCTION MANAGEMENT PLAN

07.15.2019



PLAN LEGEND

1. MARINA AND CONSTRUCTION ACCESS VIA THAMES ST EXT
2. MAINTAIN SEPARATE, SECURE ACCESS TO SITE(S)
3. ACCESS TO MARINA PARKING; NO CONSTRUCTION PARKING
4. BUILDING 12 - UNDER CONSTRUCTION
5. MAINTAIN PEDESTRIAN ACCESS THROUGHOUT PHASE
6. PEDESTRIANS TO UTILIZE EXISTING CROSSWALK ON FORE ST

PARKING LEGEND

PARKING: MARINA - 100 SPACES

PARKING: CONSTRUCTION - 30 SPACES

GRAPHIC KEY

MARINA TRAFFIC

CONSTRUCTION TRAFFIC

SHARED TRAFFIC

CONSTRUCTION FENCING

PEDESTRIAN ACCESS

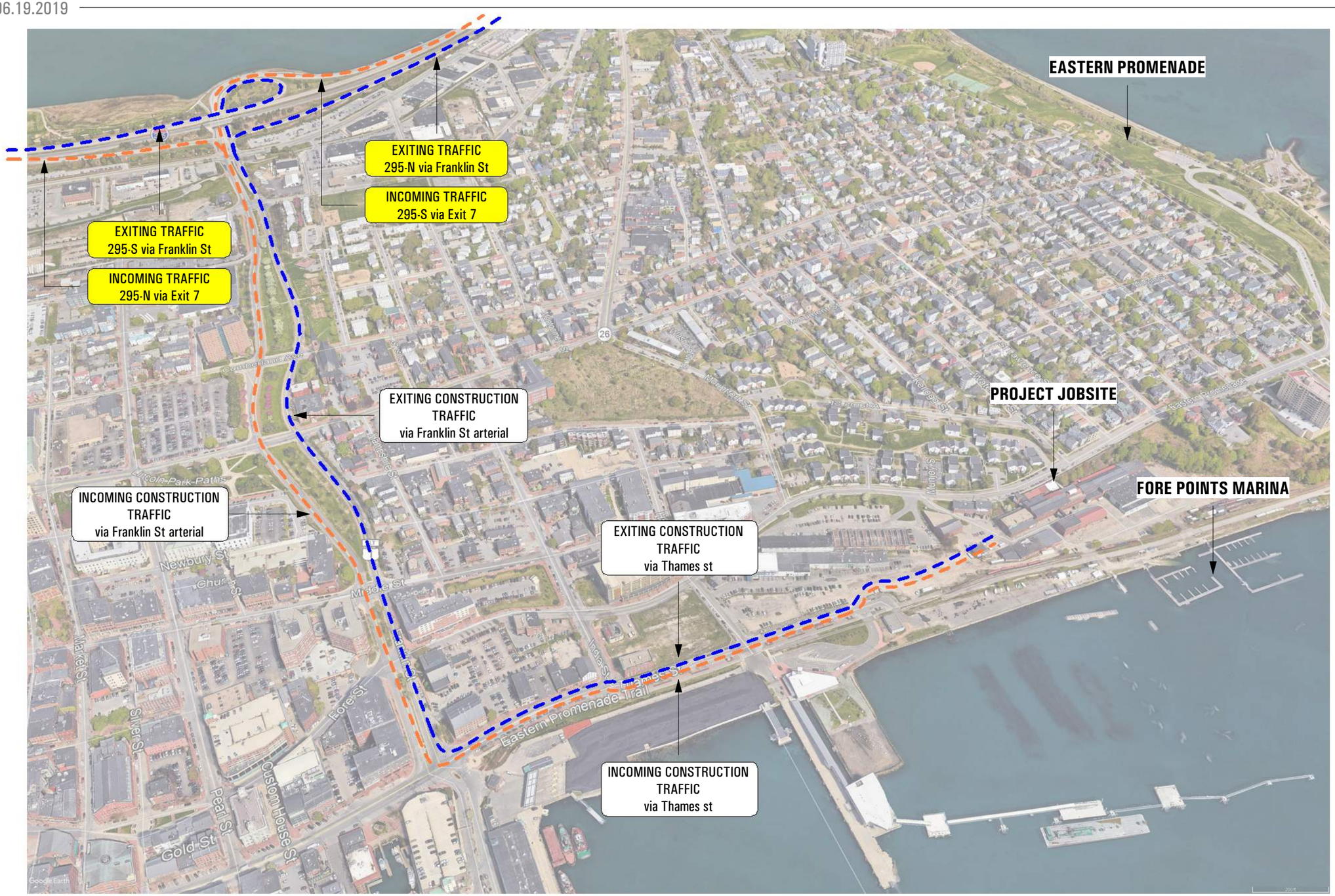
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58 FORE ST - BUILDING 12

CONSTRUCTION MANAGEMENT PLAN

Traffic Control Plan

06.19.2019



CONSIGLI
Est. 1905

November 6, 2019

CONSIGLI
Est. 1905

58 Fore Street – BLOCK 2
Construction Management Plan

Prepared For: Portland Department of Planning & Urban Development Department

Project Proponent: Portland Foreside Development Company LLC

Construction Manager: Consigli Construction Company Inc

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Est. 1905

Construction Principles

The purpose of this Construction Management plan is to identify, mitigate and plan for all potential impacts throughout the duration of building the Mixed-Use Development known as Block 2, at 58 Fore Street. Portland Foreside Development Co and Consigli Construction are committed to a seamless, incident free project by means of typical practices used to ensure that public safety and community are at the forefront of priorities.

Throughout this CM plan we will refer to specific examples of potential construction practices, traffic control scenarios, neighboring building considerations and public safety; as well as measures in which these items will be managed throughout the project to accommodate the community as much as possible. While we will take the necessary precautions to meet City and State requirements for traffic, noise, dust, vibration, etc., this project will be disruptive to adjacent properties compared to the current condition. Along with our subcontractor team members, it is imperative that we have complete participation from all parties affiliated with the project to maintain our strict safety requirements and ensure a quality building for PFDC.

The Mixed-Use Development at 58 Fore Street known as Block 2 includes renovation of the Portland Company Historic District, reconstruction of several Portland Company Buildings, and construction of 8 new Townhomes in a 4 story configuration. In aggregate, the buildings represent 17,000 SF Public Marketplace space, 12,000 SF of Occupant Office Space, 17,500 SF leasable event space, 7,600 SF Residential space, and 13 Retail Shell spaces. The buildings total approximately 70,350 SF that will be primarily built out of steel and concrete supporting wood frame construction. The completion of the project is anticipated for June 2021.

Consigli has extensively planned the project's schedule, site logistics and safety protocols that will be thoroughly covered in this report with graphics and narratives. This CM plan will continually be updated to meet the needs of the project, community and the city as the project progresses. We aim to deliver a safe and quality project to PFDC, their employees and the City of Portland by means of communication, teamwork and stewardship.

Construction Administration and Communication

Consigli Construction will be the Construction Manager on site throughout the duration of the project. As such, there will be a dedicated team of individuals tasked with managing quality, schedule, site logistics and safety. These personnel will manage and enforce the proposed CMP with all associated subcontractors and material vendors.

Larry Osmer – Senior Project Manager
617.719.9835, losmer@consigli.com

Site Communication

With the proximity to occupied buildings, community outreach and communication will be imperative throughout construction to keep the public informed of the expected turbulence caused by the project. Site signage will be prominently displayed to show pedestrian access around the site and any updates to the proposed CMP.

Quarterly reporting and updating of the CMP will be required to update the City and community of the following activities:

1) Construction schedule updates
2) Material deliveries, including notice of any oversized loads that may impact public traffic
3) Requests for upcoming off-hours work including weekends and holidays
4) Notice of any upcoming activities that may produce strong noise, vibration or dust that could adversely affect the neighboring communities.
5) Requests for any street openings or public sidewalk work to be completed as part of the construction contract

Construction Schedule

Project Work Hours

Construction work hours will be in accordance with Section 17-18 of the City of Portland Code of Ordinances.

The project site is located within zoning group B6 – Eastern Waterfront Mixed Zone but is within 500 feet of buildings used for residential purposes. As such, work hours will be limited to Monday – Friday 7:00 am – 7:00 pm. Should work extend into Weekends or Holidays, the use of heavy equipment will be kept within the time constraints of 8:00 am – 4:00 pm.

Project Schedule/Logistics

The project is anticipated to be approximately 15 months in duration. Beginning in April 2020 the project will be turned over to PFDC in July 2021.

Regarding scheduled work to take place within public streets and sidewalks, this work will comply with Section 25-129 – Noise, dust and debris of the City of Portland Code of Ordinances. The connection to public utilities and sidewalk construction will require work to be executed within Fore Street. This work will be scheduled and planned with the City of Portland prior to the execution, and all logistical concerns will be addressed prior to starting the work. The connection to public utilities is tentatively scheduled to happen in the Spring of 2020, with sidewalk construction tentatively scheduled to occur during the Fall of 2020. Temporary barricades, fencing and signage will be required during the installation to control pedestrian and vehicle movements around the work.

Material Deliveries

The construction will require coordination of material deliveries throughout the duration of the project. The following logistical plans show the planned lay-down areas, truck routes and safety protocols that will be in place throughout the duration of construction.

1. All construction traffic will enter site through the Thames Street extension, allowing construction vehicles to pull straight onto site without impacting the public right of way. Area will be provided within the limits of disturbance for construction vehicles to off load and turn around. The same route will be used for vehicles leaving the site.

Construction activities, whether it be work going in place or material and equipment deliveries, will create additional traffic along Thames Street. Impacts beyond the increased vehicle traffic will be mitigated through the simplified path of travel to site, and ability to offload all material deliveries within the project limits of disturbance.

Material Storage and Laydown Areas

The construction will require careful planning and management of the daily occurrences within the site limits. The logistical plans currently outlined intend to keep all construction staging, lay down area and temporary storage within the project limits and secured by temporary fencing. Specified areas will be granted to on-site subcontractors for staging materials to assist in managing their installation. With designated areas delegated to subcontractors, the site will remain accessible by incoming trucks without causing a queuing effect outside of the fence.

Contractor Parking

At the peak of construction, Consigli anticipates that up to 30 people will be on site working various trades associated with the building. All contractors, subcontractors and their employees will be prohibited from parking in on-street City spaces in the vicinity of the site. To account for the anticipated parking demand, we have allowed space for 30 designated parking spaces for the personal vehicles of construction personnel, as well as additional overflow spaces to be utilized as necessary. All subcontractors will be educated during the bidding process of this requirement, language regarding off-street parking will be incorporated into each subcontract agreement, and individual employees will be informed of this requirement their first day on-site during the site safety orientation.

Fire Protection for Construction Activities

The 2013 Standard for Safeguarding Construction, Alteration and Demolition Operations will be enforced on this project by utilizing best management practices to mitigate the fire risks associated with construction. Consigli and its subcontractors will execute the following measures to provide a safe and secure work place:

1) PFD Fire Command Center: This centralized location will hold all current project information and will act as the first responders meeting point to obtain the most up to date information of construction. The following documents will be found at this location:
    a. Hot Work Permits: To be filled out daily by any person performing work that will generate a spark or create a potential fire risk on the job site. The permits are to be completed and approved by Consigli prior to work starting.
    b. Current Construction Schedule
    c. Current Construction Logistics Plan
    d. Pre-Incident Fire Plan

2) On-Site Fuel Storage: The use of different flammable liquids will be required throughout construction. A free-standing, 30-minute fire-rated enclosure will be built to safely and securely store all flammable liquids and gases. Fueling trucks will be used as needed but will not be allowed to stage or park on site for any extended period.

3) Means of Egress: The buildings will each be permanently equipped with 2-way stair assemblies for means of egress. These stairs will be utilized to provide emergency egress throughout construction and will be identified with temporary signage indicating the floor level and exit path direction.

4) Good Housekeeping: Consigli Construction will provide necessary dumpsters for the removal of debris from the site. All subcontractors are responsible for the daily clean-up of their work areas to ensure no materials or tools which could pose a hazard to the building are left out over night. Daily safety walks by the Construction Superintendent will be utilized to ensure that all working floors are equipped with an inspected fire extinguisher and clear means of egress in the event of an emergency. Trash chutes and/or material hoists may be utilized to safely and efficiently remove all debris from the project.

5) On-site Security: The project site will be secured everyday by means of a temporary post driven construction fence and scrim. Lockable gates will be located at (2) locations for site access.

6) Rapid Communication: Evacuation notification will be provided by means of 2-way radios/cellular devices as well as strategically positioned air horns. Upon evacuation of the building all project personnel will report to the muster point location where the Construction Manager and all subcontractor foremen will perform accountability checks. The General Contractor field staff will then be dispatched to all project entry points and the PFD Command Center. Upon arrival of the first responders to the PFD Command Center, the General Contractor will provide an accountability and incident briefing.

Public Safety

The construction will be near pedestrian right of ways and will interact with public traffic throughout the duration of the project. Material deliveries, the use of cranes, lifts, and other heavy machinery all have the potential to impact typical public activity. As a member of the Portland community, Consigli will strive to limit, mitigate and avoid these potential impacts as much as possible by means of controlling noise, on-site dust, vibrations and traffic. By educating and informing the neighborhoods to the construction activities taking place we will aim to build a project that produces minimal impacts to the Thames Street and Fore Street communities.

Noise

Construction activities throughout the project will create noise that leaves the project site. It is the intent of the project team to limit the exposure to the noise by following Section 17-18 of the City of Portland Code of Ordinances. This project site is located within 500 feet of buildings classified as residential. As such, the project hours will be limited the 7:00 am – 7:00 pm, Monday – Friday. Should any weekend or holiday work be required the use of heavy machinery will not commence before 8:00 am. When this work is required, no less than 2-week advanced notice will be provided to PFDC and the neighboring communities.

Work related to site preparation, foundations, and structural steel will likely be the loudest activity experienced during construction. This work will take place from April 2020 – December 2020. Recently, many local projects have utilized similar means of construction to much success around Portland.

Dust Control/Air Quality

Maintaining an environmentally conscious project site will be a major priority for the project team to ensure safety not only for the neighboring communities, but also for the construction workers on site day after day. All soils and debris will be kept within the project limits following the State of Maine Department of Environmental Protection erosion control Best Management Practices:

1) Erosion controlled construction entrances
2) Tarped dump trucks leaving the site with soil/debris
3) On-going sidewalk and street cleaning activities as necessary
4) The installation of temporary, compacted staging areas within the job site
5) Using wetting agents to control dust
6) Covering stock piles when material is to be piled for long periods of time
7) Smoking will not be allowed on the job site

Vibration Monitoring

Some construction practices required for this project will result in ground vibration waves that may transmit to nearby buildings. Prior to any potential vibration causing activities taking place a pre-construction survey will be conducted to review and document existing conditions of all adjacent structures. The survey will encompass all properties abutting the proposed project site to include the following addresses:

- 100 Fore Street (Currently Under Construction)
- 58 Fore Street (Fore Points Marina)
- 58 Fore Street (remaining buildings owned by PFDC)
- Adjacent Properties across Fore Street

Deep foundations and vibratory compaction will be employed on this project and will be monitored by a third-party monitoring company. A pre-construction meeting will be planned with abutting property owners to discuss geological conditions, construction specifications and methods of installation that create vibration.

Traffic Control

Throughout the construction process Franklin Street and Thames Street will experience increased traffic due to construction activities. Material deliveries, contractor access and public utility integration will be encountered and mitigated through coordinated logistics plans (provided within this CM Plan), on-site safety personnel, way-finding signage and well-organized traffic control devices. PFDC & Consigli will strive to inform and direct the neighborhood of the activities taking place in public areas as construction progresses through completion.

The main access point to the construction project will be through the private road accessed at the easternmost point of Thames Street. To maintain access for tenants of 58 Fore Street and two-way traffic on the private road, site flaggers will be utilized as needed to direct both construction and marina traffic.

Historical Preservation

Restoration and renovation of the Portland Company Historic District is a critical aspect to the development at 58 Fore Street. Detailed scopes of work will be developed and submitted for approval by the City's Historic Preservation Program Manager before work commences. These will include restoration of the original masonry facades, new windows to match the aesthetic of the originals, and supplementation of existing structure to preserve the original timber framing while bringing the buildings into compliance with current building code. Consigli will work closely with the design firms and PFDC to ensure existing site conditions are utilized during the planning of this work, and proper coordination is implemented during the construction phase to execute the design team's vision.

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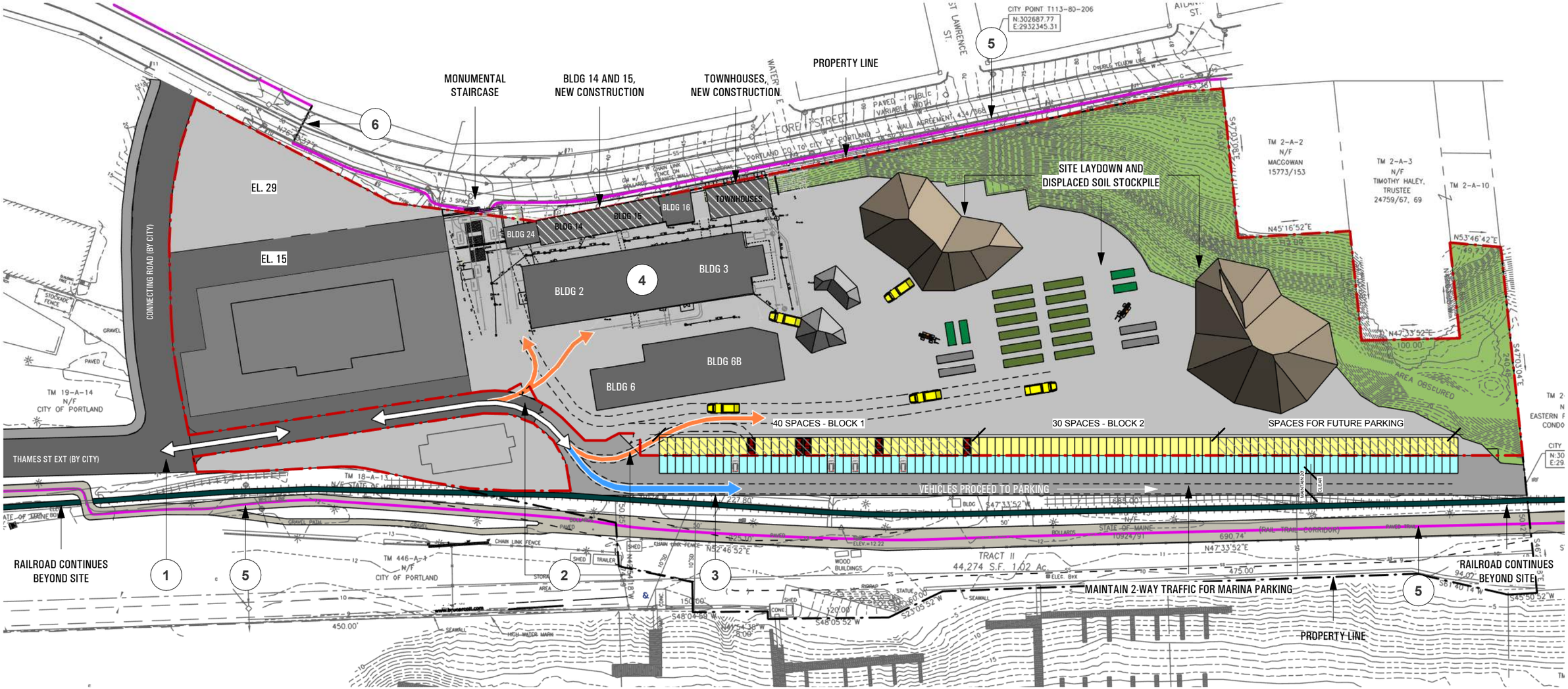
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Traffic Management Diagrams

58 FORE ST - BLOCK 2

CONSTRUCTION MANAGEMENT PLAN

07.15.2019



PLAN LEGEND

1. MARINA AND CONSTRUCTION ACCESS VIA THAMES ST EXT
2. MAINTAIN SEPARATE, SECURE ACCESS TO SITE(S)
3. ACCESS TO MARINA PARKING; NO CONSTRUCTION PARKING
4. CONSTRUCTION UNDERWAY AT BLOCK 2 SITE
5. MAINTAIN PEDESTRIAN ACCESS THROUGHOUT PHASE
6. PEDESTRIANS TO UTILIZE EXISTING CROSSWALK ON FORE ST

PARKING LEGEND

PARKING: MARINA - 100 SPACES

PARKING: CONSTRUCTION - 30 SPACES

GRAPHIC KEY

MARINA TRAFFIC

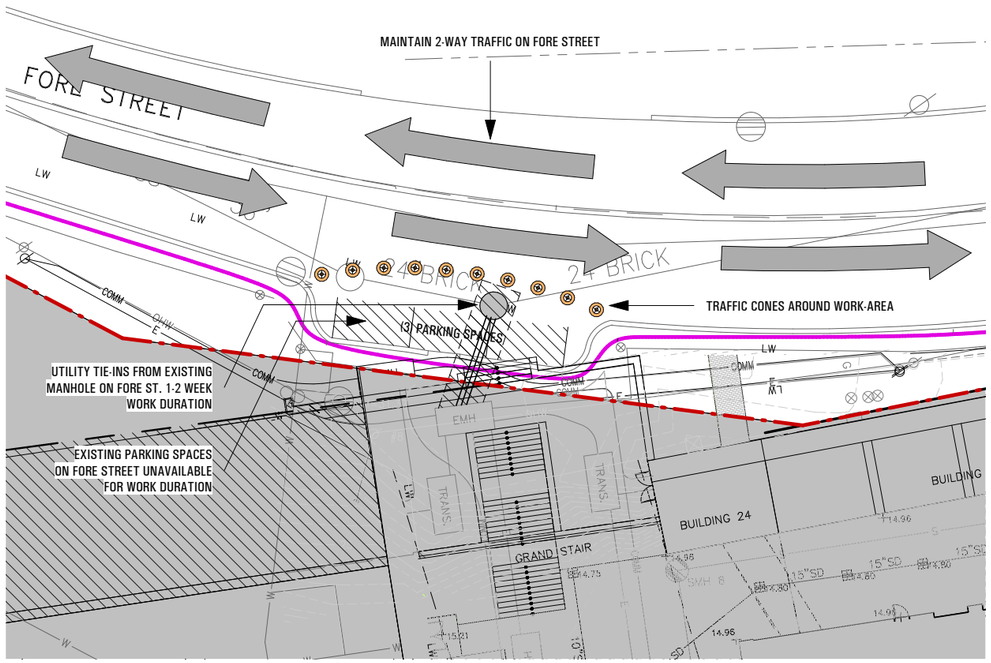
CONSTRUCTION TRAFFIC

SHARED TRAFFIC

CONSTRUCTION FENCING

PEDESTRIAN ACCESS

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1 Utility Work on Fore St.
1/32" = 1'-0"

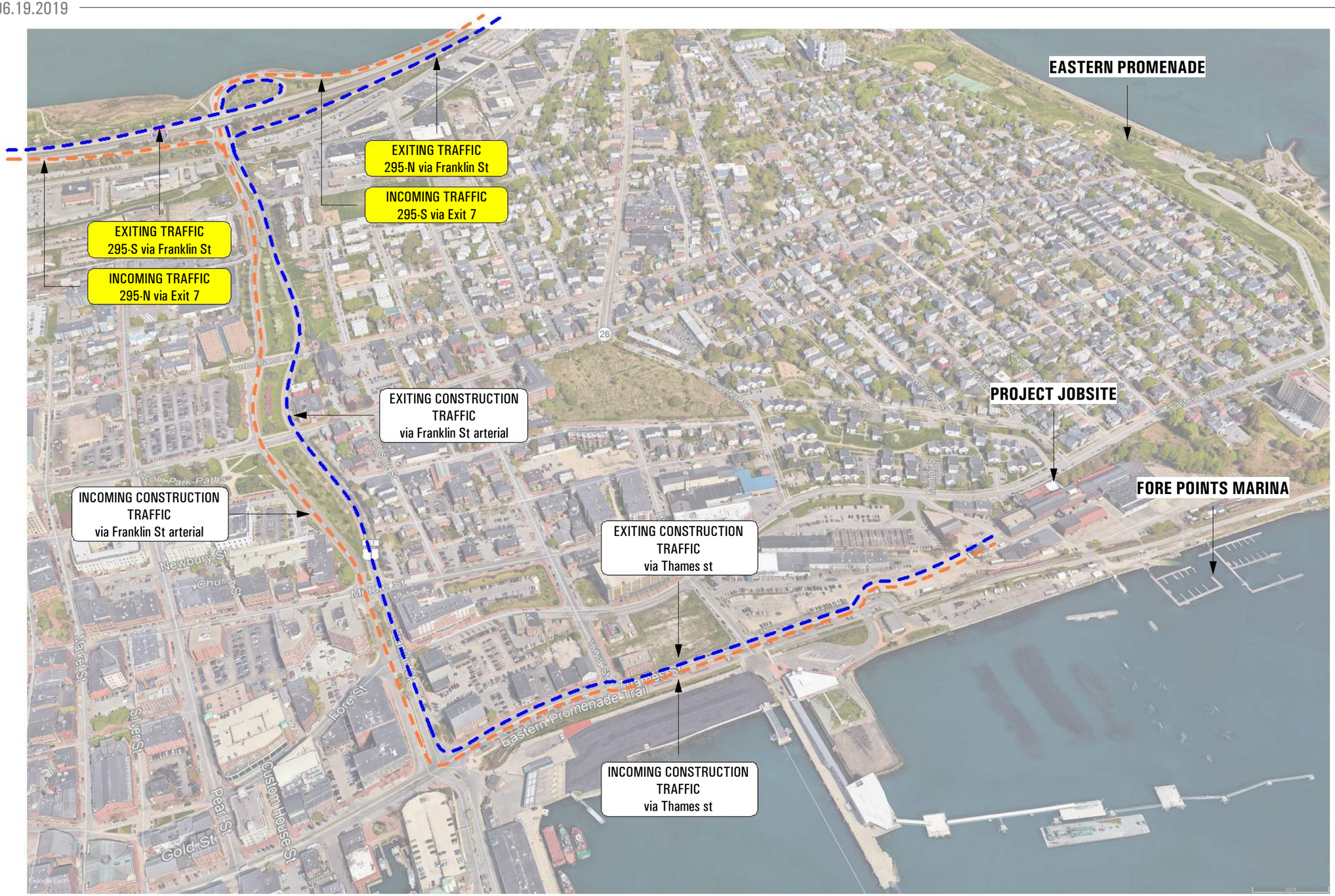
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58 FORE ST -

CONSTRUCTION MANAGEMENT PLAN

Traffic Control Plan

06.19.2019



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November 6, 2019

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58 Fore Street – Waterfront Season 2

Construction Management Plan

Prepared For: Portland Department of Planning & Urban Development Department

Project Proponent: Portland Foreside Development Company LLC

Construction Manager: Consigli Construction Company Inc

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Construction Principles

The purpose of this Construction Management plan is to identify, mitigate and plan for all potential impacts throughout the duration of rebuilding the Waterfront at 58 Fore Street. Portland Foreside Development Co and Consigli Construction are committed to a seamless, incident free project by means of typical practices used to ensure that public safety and community are at the forefront of priorities.

Throughout this CM plan we will refer to specific examples of potential construction practices, traffic control scenarios, neighboring building considerations and public safety; as well as measures in which these items will be managed throughout the project to accommodate the community as much as possible. While we will take the necessary precautions to meet City and State requirements for traffic, noise, dust, vibration, etc., this project will be disruptive to adjacent properties compared to the current condition. Along with our subcontractor team members, it is imperative that we have complete participation from all parties affiliated with the project to maintain our strict safety requirements and ensure a quality building for PFDC.

The project at 58 Fore Street known as Waterfront Season 2 includes the re-construction and repairs to approximately 900 linear feet of relocation of the Maine Gauge Railroad and Eastern Promenade Trail. The completion of the project is anticipated for May 2021.

Consigli has extensively planned the project's schedule, site logistics and safety protocols that will be thoroughly covered in this report with graphics and narratives. This CM plan will continually be updated to meet the needs of the project, community and the city as the project progresses. We aim to deliver a safe and quality project to PFDC, their employees and the City of Portland by means of communication, teamwork and stewardship.

Construction Administration and Communication

Consigli Construction will be the Construction Manager on site throughout the duration of the project. As such, there will be a dedicated team of individuals tasked with managing quality, schedule, site logistics and safety. These personnel will manage and enforce the proposed CMP with all associated subcontractors and material vendors.

Larry Osmer – Senior Project Manager
617.719.9835, losmer@consigli.com

TBD – Project Manager

TBD – Project Superintendent

Site Communication

With the proximity to occupied buildings and pedestrian trails, community outreach and communication will be imperative throughout construction to keep the public informed of the expected turbulence caused by the project. Site signage will be prominently displayed to show pedestrian access around the site and any updates to the proposed CMP.

Quarterly reporting and updating of the CMP will be required to update the City and community of the following activities:

1) Construction schedule updates
2) Material deliveries, including notice of any oversized loads that may impact public traffic
3) Requests for upcoming off-hours work including weekends and holidays
4) Notice of any upcoming activities that may produce strong noise, vibration or dust that could adversely affect the neighboring communities.
5) Requests for any street openings or public sidewalk work to be completed as part of the construction contract

Construction Schedule

Project Work Hours

Construction work hours will be in accordance with Section 17-18 of the City of Portland Code of Ordinances.

The project site is located within zoning group B6 – Eastern Waterfront Mixed Zone but is within 500 feet of buildings used for residential purposes. As such, work hours will be limited to Monday – Friday 7:00 am – 7:00 pm. Should work extend into Weekends or Holidays, the use of heavy equipment will be kept within the time constraints of 8:00 am – 4:00 pm.

Project Schedule/Logistics

The project is anticipated to be approximately 5 months in duration. Beginning in October 2021 the project will be turned over to PFDC in May 2021.

Regarding scheduled work to take place within public streets and sidewalks, this work will comply with Section 25-129 – Noise, dust and debris of the City of Portland Code of Ordinances. This work will abut the Eastern Promenade Trail and Maine Gauge Railroad. Temporary barricades, fencing and signage will be required during the installation to control pedestrian and vehicular movements around the work.

Material Deliveries

The construction will require coordination of material deliveries throughout the duration of the project. The following logistical plans show the planned lay-down areas, truck routes and safety protocols that will be in place throughout the duration of construction.

1. All construction traffic will enter site through the Thames Street extension as the Fore Street Entry will be permanently closed, allowing construction vehicles to pull straight onto site without impacting the public right of way. Area will be provided within the limits of disturbance for construction vehicles to off load and turn around. The same route will be used for vehicles leaving the site.

Construction activities, whether it be work going in place or material and equipment deliveries, will create additional traffic along Thames Street. Impacts beyond the increased vehicle traffic will be mitigated through the simplified path of travel to site, and ability to offload all material deliveries within the project limits of disturbance.

Material Storage and Laydown Areas

The construction will require careful planning and management of the daily occurrences within the site limits. The logistical plans currently outlined intend to keep all construction staging, lay down area and temporary storage within the project limits and secured by temporary fencing. Specified areas will be granted to on-site subcontractors for staging materials to assist in managing their installation. With designated areas delegated to subcontractors, the site will remain accessible by incoming trucks without causing a queuing effect outside of the fence.

Contractor Parking

At the peak of construction, Consigli anticipates that up to 15 people will be on site working various trades associated with the project. All contractors, subcontractors and their employees will be prohibited from parking in on-street City spaces in the vicinity of the site. To account for the anticipated parking demand, we have allowed space for 25 designated parking spaces for the personal vehicles of construction personnel. All subcontractors will be educated during the bidding process of this requirement, language regarding off-street parking will be incorporated into each subcontract agreement, and individual employees will be informed of this requirement their first day on-site during the site safety orientation.

Fire Protection for Construction Activities

The 2013 Standard for Safeguarding Construction, Alteration and Demolition Operations will be enforced on this project by utilizing best management practices to mitigate the fire risks associated with construction. Consigli and its subcontractors will execute the following measures to provide a safe and secure work place:

1) PFD Fire Command Center within Consigli's Field Office: This centralized location will hold all current project information and will act as the first responders meeting point to obtain the most up to date information of construction. The following documents will be found at this location:
    a. Hot Work Permits: To be filled out daily by any person performing work that will generate a spark or create a potential fire risk on the job site. The permits are to be completed and approved by Consigli prior to work starting.
    b. Current Construction Schedule
    c. Current Construction Logistics Plan
    d. Pre-Incident Fire Plan

2) On-Site Fuel Storage: The use of different flammable liquids will be required throughout construction. A free-standing, 30-minute fire-rated enclosure will be built to safely and securely store all flammable liquids and gases. Fueling trucks will be used as needed, but will not be allowed to stage or park on site for any extended period.

3) Means of Egress: The project will be equipped with means of egress through the construction fencing. This work is open sitework and not within any buildings.

4) Good Housekeeping: Consigli Construction will provide necessary dumpsters for the removal of debris from the site. All subcontractors are responsible for the daily clean-up of their work areas to ensure no materials or tools which could pose a hazard to the building are left out over night. Daily safety walks by the Construction Superintendent will be utilized to ensure that the site is equipped with an inspected fire extinguisher and clear means of egress in the event of an emergency.

5) On-site Security: The project site will be secured everyday by means of a temporary post driven construction fence and scrim. Lockable gates will be located at (3) locations for site access.

6) Rapid Communication: Evacuation notification will be provided by means of 2-way radios/cellular devices as well as strategically positioned air horns. Upon evacuation of the project all project personnel will report to the muster point location where the

Construction Manager and all subcontractor foremen will perform accountability checks. The General Contractor field staff will then be dispatched to all project entry points and the PFD Command Center. Upon arrival of the first responders to the PFD Command Center, the General Contractor will provide an accountability and incident briefing.

Public Safety

The construction will be near pedestrian right of ways and will interact with public traffic throughout the duration of the project. Material deliveries, the use of cranes, lifts, and other heavy machinery all have the potential to impact typical public activity. As a member of the Portland community, Consigli will strive to limit, mitigate and avoid these potential impacts as much as possible by means of controlling noise, on-site dust, vibrations and traffic. By educating and informing the neighborhoods to the construction activities taking place we will aim to build a project that produces minimal impacts to the Thames Street and Fore Street communities.

Noise

Construction activities throughout the project will create noise that leaves the project site. It is the intent of the project team to limit the exposure to the noise by following Section 17-18 of the City of Portland Code of Ordinances. This project site is located within 500 feet of buildings classified as residential. As such, the project hours will be limited the 7:00 am – 7:00 pm, Monday – Friday. Should any weekend or holiday work be required the use of heavy machinery will not commence before 8:00 am. When this work is required, no less than 2-week advanced notice will be provided to PFDC and the neighboring communities.

Work related to the seawall improvements, foundations, and excavation activities will likely be the loudest activity experienced during construction. This work will take place from October 2021 – May 2021. Recently, many local projects have utilized similar means of construction to much success around Portland.

Dust Control/Air Quality

Maintaining an environmentally conscious project site will be a major priority for the project team to ensure safety not only for the neighboring communities, but also for the construction workers on site day after day. All soils and debris will be kept within the project limits following the State of Maine Department of Environmental Protection erosion control Best Management Practices:

1) Erosion controlled construction entrances
2) Tarped dump trucks leaving the site with soil/debris

3) On-going sidewalk and street cleaning activities
4) The installation of temporary, compacted staging areas within the job site
5) Using wetting agents to control dust
6) Covering stock piles when material is to be piled for long periods of time
7) Smoking will not be allowed on the job site

Vibration Monitoring

Some construction practices required for this project will result in ground vibration waves that may transmit to nearby buildings. Prior to any potential vibration causing activities taking place a third-party engineer will advise if this type of work is cause for concern to any nearby structures.

Site removals, vibratory compaction, and excavation improvements will be employed on this project and will be monitored by a third-party monitoring company. A pre-construction meeting will be planned with abutting property owners to discuss geological conditions, construction specifications and methods of installation that create vibration.

As an added measure of control, vibration monitoring may be performed at stone or masonry structures within 100' of the site compaction and ground improvements scope performed.

Traffic Control

Throughout the construction process Franklin Street and Thames Street will experience increased traffic due to construction activities. Material deliveries, contractor access and public utility integration will be encountered and mitigated through coordinated logistics plans (provided within this CM Plan), on-site safety personnel, way-finding signage and well-organized traffic control devices. PFDC & Consigli will strive to inform and direct the neighborhood of the activities taking place in public areas as construction progresses through completion.

The main access point to the construction project will be through the private road accessed at the easternmost point of Thames Street. In order to maintain access for tenants of 58 Fore Street and two-way traffic on the private road, site flaggers will be utilized as needed to direct both construction and marina traffic.

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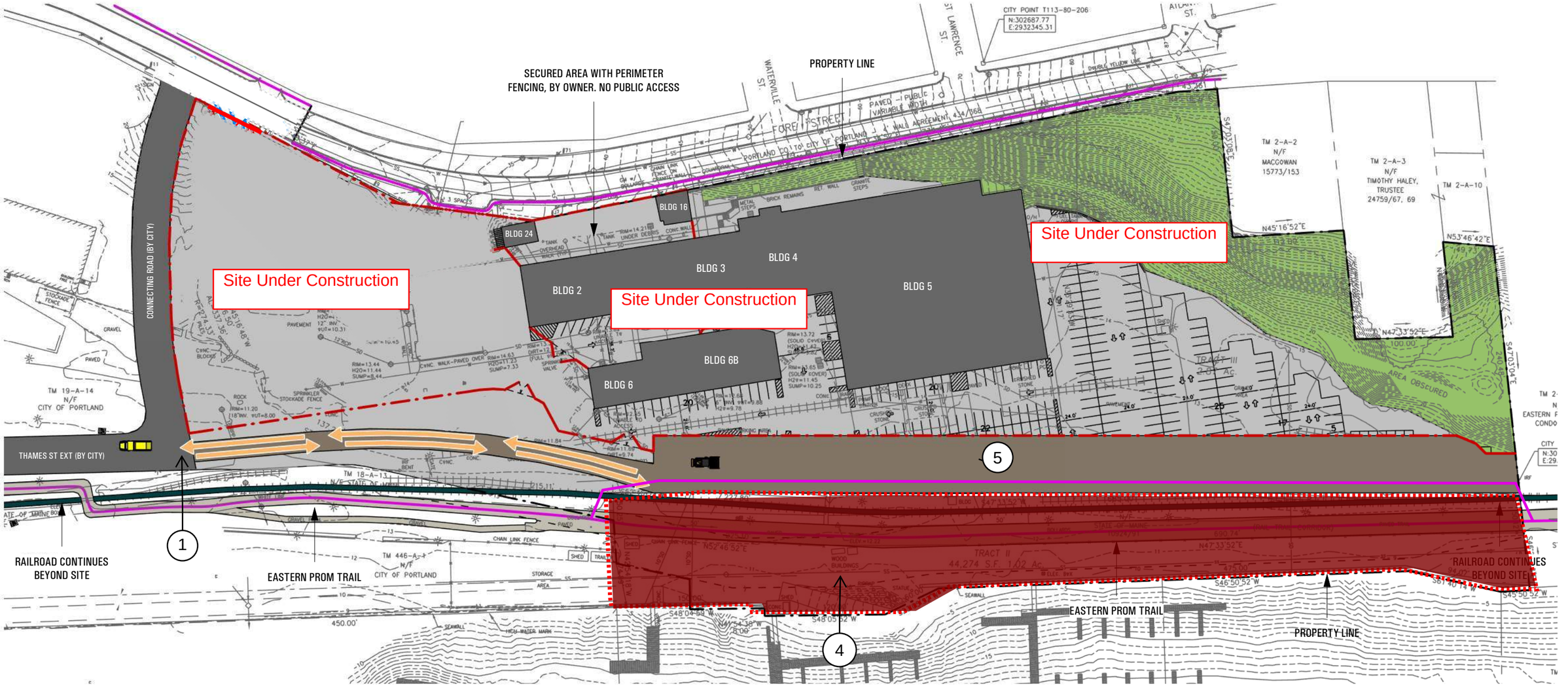
Traffic Management Diagrams

58 FORE STREET - Waterfront Season 2

CMP

Current Conditions

07.31.2019



PLAN LEGEND

1. MARINA AND CONSTRUCTION ACCESS VIA THAMES ST EXT
2. MAINTAIN SEPARATE, SECURE ACCESS TO SITE(S)
3. ACCESS TO MARINA PARKING; & Construction Parking
4. Construction Work Zone
5. Construction Staging
6. Shared Parking

PARKING LEGEND

GRAPHIC KEY

MARINA TRAFFIC

CONSTRUCTION TRAFFIC

CONSTRUCTION FENCING

PEDESTRIAN ACCESS

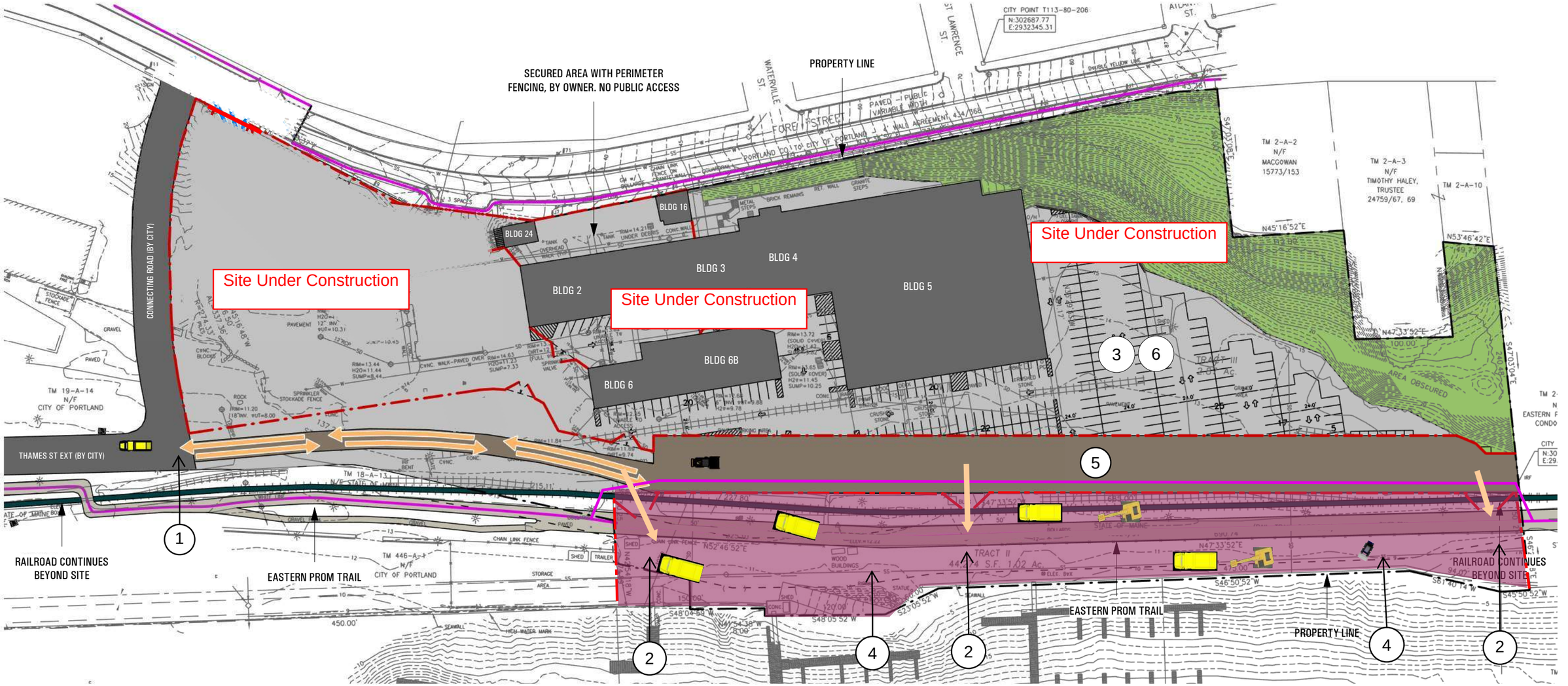
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58 FORE STREET - Waterfront Season 2

CMP

07.31.2019

Site Access & Work Zone



PLAN LEGEND

1. MARINA AND CONSTRUCTION ACCESS VIA THAMES ST EXT
2. MAINTAIN SEPARATE, SECURE ACCESS TO SITE(S)
3. ACCESS TO MARINA PARKING; & Construction Parking
4. Construction Work Zone
5. Construction Staging
6. Shared Parking

PARKING LEGEND

GRAPHIC KEY

MARINA TRAFFIC

CONSTRUCTION TRAFFIC

CONSTRUCTION FENCING

PEDESTRIAN ACCESS

CONSIGLI Est. 1905

November 6, 2019

CONSIGLI
Est. 1905

58 Fore Street – BLOCK 4
Construction Management Plan

Prepared For: Portland Department of Planning & Urban Development Department

Project Proponent: Portland Foreside Development Company LLC

Construction Manager: Consigli Construction Company Inc

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Construction Principles

The purpose of this Construction Management plan is to identify, mitigate and plan for all potential impacts throughout the duration of building the Mixed-Use Development known as Block 4, at 58 Fore Street. Portland Foreside Development Co and Consigli Construction are committed to a seamless, incident free project by means of typical practices used to ensure that public safety and community are at the forefront of priorities.

Throughout this CM plan we will refer to specific examples of potential construction practices, traffic control scenarios, neighboring building considerations and public safety; as well as measures in which these items will be managed throughout the project to accommodate the community as much as possible. While we will take the necessary precautions to meet City and State requirements for traffic, noise, dust, vibration, etc., this project will be disruptive to adjacent properties compared to the current condition. Along with our subcontractor team members, it is imperative that we have complete participation from all parties affiliated with the project to maintain our strict safety requirements and ensure a quality building for PFDC.

The Mixed-Use Development at 58 Fore Street known as Building 1A includes the construction of a new 4 story building consisting of 218,000 SF of parking. The building will be primarily built out of precast concrete. The completion of the project is anticipated for August 2022.

Consigli has extensively planned the project's schedule, site logistics and safety protocols that will be thoroughly covered in this report with graphics and narratives. This CM plan will continually be updated to meet the needs of the project, community and the city as the project progresses. We aim to deliver a safe and quality project to PFDC, their employees and the City of Portland by means of communication, teamwork and stewardship.

Construction Administration and Communication

Consigli Construction will be the Construction Manager on site throughout the duration of the project. As such, there will be a dedicated team of individuals tasked with managing quality, schedule, site logistics and safety. These personnel will manage and enforce the proposed CMP with all associated subcontractors and material vendors.

Larry Osmer – Senior Project Manager
617.719.9835, losmer@consigli.com

Andy Miller – Project Manager
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Lee Follett – Project Superintendent
207.232.8919, lfollett@consigli.com

Site Communication

With the proximity to occupied buildings, community outreach and communication will be imperative throughout construction to keep the public informed of the expected turbulence caused by the project. Site signage will be prominently displayed to show pedestrian access around the site and any updates to the proposed CMP.

Quarterly reporting and updating of the CMP will be required to update the City and community of the following activities:

1) Construction schedule updates
2) Material deliveries, including notice of any oversized loads that may impact public traffic
3) Requests for upcoming off-hours work including weekends and holidays
4) Notice of any upcoming activities that may produce strong noise, vibration or dust that could adversely affect the neighboring communities.
5) Requests for any street openings or public sidewalk work to be completed as part of the construction contract

Construction Schedule

Project Work Hours

Construction work hours will be in accordance with Section 17-18 of the City of Portland Code of Ordinances.

The project site is located within zoning group B6 – Eastern Waterfront Mixed Zone but is within 500 feet of buildings used for residential purposes. As such, work hours will be limited to Monday – Friday 7:00 am – 7:00 pm. Should work extend into Weekends or Holidays, the use of heavy equipment will be kept within the time constraints of 8:00 am – 4:00 pm.

Project Schedule/Logistics

The project is anticipated to be approximately 10 months in duration. Beginning in June 2020 the project will be turned over to PFDC in August 2022.

Regarding scheduled work to take place within public streets and sidewalks, this work will comply with Section 25-129 – Noise, dust and debris of the City of Portland Code of Ordinances. The connection to public utilities and sidewalk construction will require work to be executed within Fore Street and the new connector road between Fore Street and the Thames Street Extension. This work will be scheduled and planned with the City of Portland prior to the execution, and all logistical concerns will be addressed prior to starting the work. The connection to public utilities is tentatively scheduled to happen in the Spring of 2020, with sidewalk construction tentatively scheduled to occur during the Fall of 2020. Temporary barricades, fencing and signage will be required during the installation to control pedestrian and vehicular movements around the work.

Material Deliveries

The construction will require coordination of material deliveries throughout the duration of the project. The following logistical plans show the planned lay-down areas, truck routes and safety protocols that will be in place throughout the duration of construction.

1. All construction traffic will enter site through the Thames Street extension, allowing construction vehicles to pull straight onto site without impacting the public right of way. Area will be provided within the limits of disturbance for construction vehicles to off load and turn around. The same route will be used for vehicles leaving the site. A flagger will be employed if needed during utility tie in work at Fore Street and the Connector Road, however these details will require additional coordination at a later date.

Construction activities, whether it be work going in place or material and equipment deliveries, will create additional traffic along Thames Street. Impacts beyond the increased vehicle traffic

will be mitigated through the simplified path of travel to site, and ability to offload all material deliveries within the project limits of disturbance.

Material Storage and Laydown Areas

The construction will require careful planning and management of the daily occurrences within the site limits. The logistical plans currently outlined intend to keep all construction staging, lay down area and temporary storage within the project limits and secured by temporary fencing. Specified areas will be granted to on-site subcontractors for staging materials to assist in managing their installation. With designated areas delegated to subcontractors, the site will remain accessible by incoming trucks without causing a queuing effect outside of the fence.

Contractor Parking

At the peak of construction, Consigli anticipates that up to 40 people will be on site working various trades associated with the building. All contractors, subcontractors and their employees will be prohibited from parking in on-street City spaces in the vicinity of the site. To account for the anticipated parking demand, we have allowed space for 40 designated parking spaces for the personal vehicles of construction personnel. All subcontractors will be educated during the bidding process of this requirement, language regarding off-street parking will be incorporated into each subcontract agreement, and individual employees will be informed of this requirement their first day on-site during the site safety orientation.

Fire Protection for Construction Activities

The 2013 Standard for Safeguarding Construction, Alteration and Demolition Operations will be enforced on this project by utilizing best management practices to mitigate the fire risks associated with construction. Consigli and its subcontractors will execute the following measures to provide a safe and secure work place:

1) PFD Fire Command Center: This centralized location will hold all current project information and will act as the first responders meeting point to obtain the most up to date information of construction. The following documents will be found at this location:
    a. Hot Work Permits: To be filled out daily by any person performing work that will generate a spark or create a potential fire risk on the job site. The permits are to be completed and approved by Consigli prior to work starting.
    b. Current Construction Schedule
    c. Current Construction Logistics Plan
    d. Pre-Incident Fire Plan

2) On-Site Fuel Storage: The use of different flammable liquids will be required throughout construction. A free-standing, 30-minute fire-rated enclosure will be built to safely and securely store all flammable liquids and gases. Fueling trucks will be used as needed, but will not be allowed to stage or park on site for any extended period.

3) Means of Egress: The building will be permanently equipped with (2) 2-way stair assemblies for means of egress. Permanent or temporary stairs will provide emergency egress throughout construction. This stair will be identified with temporary signage throughout construction indicating the floor level and exit path direction.

4) Good Housekeeping: Consigli Construction will provide necessary dumpsters for the removal of debris from the site. All subcontractors are responsible for the daily clean-up of their work areas to ensure no materials or tools which could pose a hazard to the building are left out over night. Daily safety walks by the Construction Superintendent will be utilized to ensure that all working floors are equipped with an inspected fire extinguisher and clear means of egress in the event of an emergency. Trash chutes and/or material hoists may be utilized to safely and efficiently remove all debris from the project.

5) On-site Security: The project site will be secured everyday by means of a temporary post driven construction fence and scrim. Lockable gates will be located at (3) locations for site access.

6) Rapid Communication: Evacuation notification will be provided by means of 2-way radios/cellular devices as well as strategically positioned air horns. Upon evacuation of the building all project personnel will report to the muster point location where the Construction Manager and all subcontractor foremen will perform accountability checks. The General Contractor field staff will then be dispatched to all project entry points and the PFD Command Center. Upon arrival of the first responders to the PFD Command Center, the General Contractor will provide an accountability and incident briefing.

Public Safety

The construction will be near pedestrian right of ways and will interact with public traffic throughout the duration of the project. Material deliveries, the use of cranes, lifts, and other heavy machinery all have the potential to impact typical public activity. As a member of the Portland community, Consigli will strive to limit, mitigate and avoid these potential impacts as much as possible by means of controlling noise, on-site dust, vibrations and traffic. By educating and informing the neighborhoods to the construction activities taking place we will aim to build a project that produces minimal impacts to the Thames Street and Fore Street communities.

Noise

Construction activities throughout the project will create noise that leaves the project site. It is the intent of the project team to limit the exposure to the noise by following Section 17-18 of the City of Portland Code of Ordinances. This project site is located within 500 feet of buildings classified as residential. As such, the project hours will be limited the 7:00 am – 7:00 pm, Monday – Friday. Should any weekend or holiday work be required the use of heavy machinery will not commence before 8:00 am. When this work is required, no less than 2-week advanced notice will be provided to PFDC and the neighboring communities.

Work related to the ground improvements, foundations, and precast will likely be the loudest activity experienced during construction. This work will take place from June 2020 – September 2022. Recently, many local projects have utilized similar means of construction to much success around Portland.

Dust Control/Air Quality

Maintaining an environmentally conscious project site will be a major priority for the project team to ensure safety not only for the neighboring communities, but also for the construction workers on site day after day. All soils and debris will be kept within the project limits following the State of Maine Department of Environmental Protection erosion control Best Management Practices:

1) Erosion controlled construction entrances
2) Tarped dump trucks leaving the site with soil/debris
3) On-going sidewalk and street cleaning activities
4) The installation of temporary, compacted staging areas within the job site
5) Using wetting agents to control dust
6) Covering stock piles when material is to be piled for long periods of time
7) Smoking will not be allowed on the job site

Vibration Monitoring

Some construction practices required for this project will result in ground vibration waves that may transmit to nearby buildings. Prior to any potential vibration causing activities taking place a pre-construction survey will be conducted to review and document existing conditions of all adjacent structures.

Site removals, vibratory compaction, and ground improvements will be employed on this project and will be monitored by a third-party monitoring company. A pre-construction meeting will be planned with abutting property owners to discuss geological conditions, construction specifications and methods of installation that create vibration.

As an added measure of control, vibration monitoring may be performed at stone or masonry structures within 100' of the site compaction and ground improvements scope performed.

Traffic Control

Throughout the construction process Franklin Street and Thames Street will experience increased traffic due to construction activities. Material deliveries, contractor access and public utility integration will be encountered and mitigated through coordinated logistics plans (provided within this CM Plan), on-site safety personnel, way-finding signage and well-organized traffic control devices. PFDC & Consigli will strive to inform and direct the neighborhood of the activities taking place in public areas as construction progresses through completion. There is planned work along the Fore Street retaining wall that is still in the design phase. Pedestrian access and traffic control will be evaluated upn completion of the design.

The main access point to the construction project will be through the private road accessed at the easternmost point of Thames Street. In order to maintain access for tenants of 58 Fore Street and two-way traffic on the private road, site flaggers will be utilized as needed to direct both construction and marina traffic.

CONSIGLI

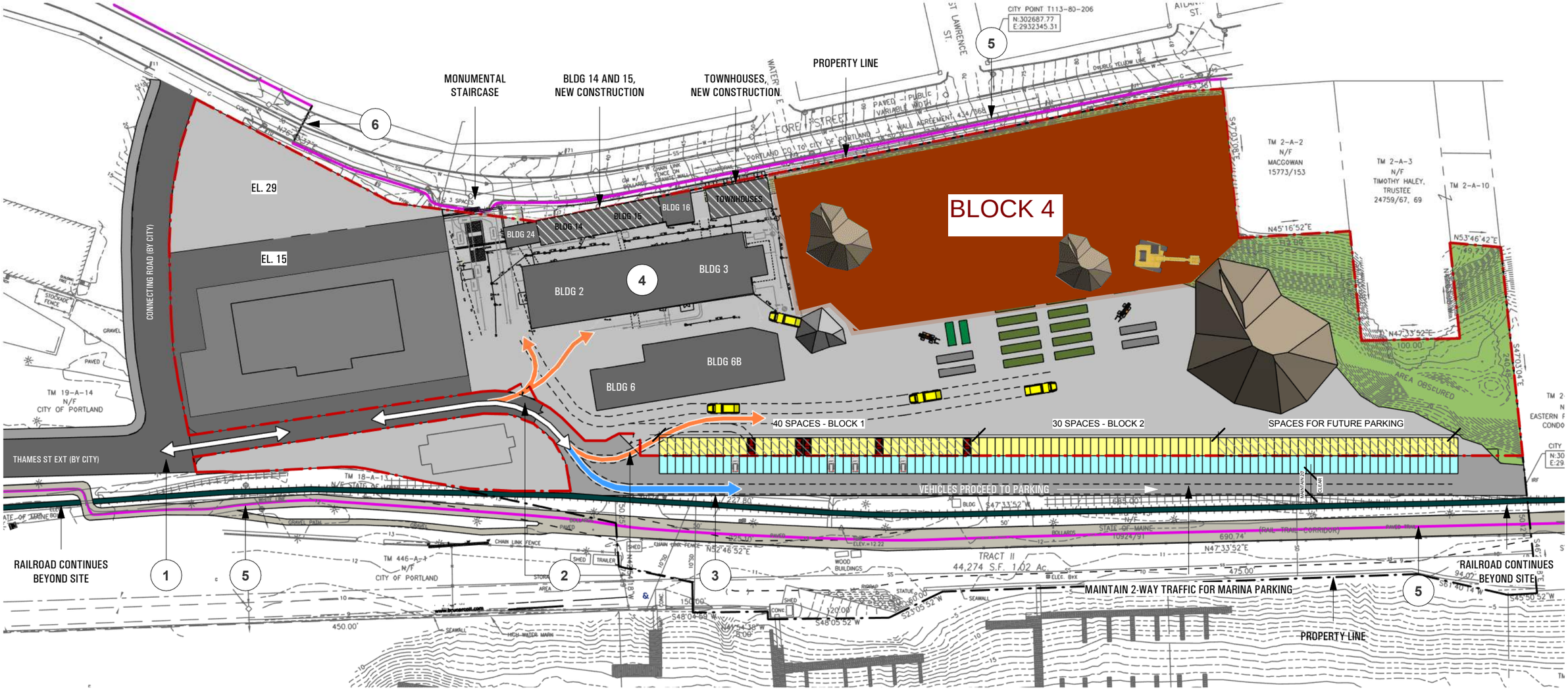
Est. 1905

Traffic Management Diagrams

58 FORE ST - BLOCK 4

CMP | Site Access & Work Zone

07.15.2019



PLAN LEGEND

1. MARINA AND CONSTRUCTION ACCESS VIA THAMES ST EXT
2. MAINTAIN SEPARATE, SECURE ACCESS TO SITE(S)
3. ACCESS TO MARINA PARKING; NO CONSTRUCTION PARKING
4. CONSTRUCTION UNDERWAY AT BLOCK 2 SITE
5. MAINTAIN PEDESTRIAN ACCESS THROUGHOUT PHASE
6. PEDESTRIANS TO UTILIZE EXISTING CROSSWALK ON FORE ST

PARKING LEGEND

GRAPHIC KEY

- MARINA TRAFFIC
- CONSTRUCTION TRAFFIC
- SHARED TRAFFIC
- CONSTRUCTION FENCING
- PEDESTRIAN ACCESS

CONSIGLI Est. 1905

CONSIGLI

Est. 1905

End of Construction Management Plan

January 23, 2020

CONSIGLI
Est. 1905

58 Fore Street – Phase 1

APPENDIX A

Prepared For: Portland Department of Planning & Urban Development Department

Project Proponent: Portland Foreside Development Company LLC

Construction Manager: Consigli Construction Company Inc

Appendix A – Issued 1/23/2020

The purpose of this Amendment to the original Construction Management Plan dated November 6th, 2109 is to respond to the comments received by the City of Portland in response to the logistics presented under the Level III Site Plan Submission prepared by Woodard & Curran.

1) Coordination with the City and other construction contractors at nearby sites (86 Newbury - Shipyard, 100 Fore Street, City sewer project on Fore Street) is critical. Any requested road/sidewalk closures, full or partial, must be communicated to me in a timely manner (2+ weeks ahead of time). The applicant should expect to host a construction coordination meeting with its contractor, appropriate City staff, utility companies, and other parties as necessary, before construction begins (this may or not be able to count as the City-required pre-construction meeting - Jodie?). The CM plan calls for quarterly reporting and updating -- this may need to occur more frequently especially if plans change substantially during construction.

   Response: It is understood that planned sidewalk and roadway closures will require advanced notice to the City, and we will provide notice 10 business days in advance of this type of request. Consigli Construction plans to attend and take part in the City pre-construction meeting and any coordination meetings that may be required with other project sites and City staff.

2) Site communication: The means of notification of neighbors to the items listed should be specified.

   Response: Consigli Construction will work with the Owner to properly identify and notify abutters in writing of any construction related impacts to them. These written communications would be at the discretion of the Owner and the Construction Manager as it relates to the level of disruption outside of normal construction operations.

3) Material deliveries may be difficult given adjacent construction activity and the general truck restriction on Fore Street/Eastern Prom. Coordination is needed, and specific approvals may need to be sought.

   Response: It is the intent as shown on the CMP logistics plan to utilize Franklin St. and the Thames St extension for all deliveries. Consigli will coordinate deliveries during normal work hours and as required with adjacent construction operations and access. Specific direction will be provided by Consigli to its subcontractors and suppliers no to utilize Fore Street and the Eastern Prominade.

4) Work hours: The 7am-7pm work hours listed for weekdays is acceptable. On Saturdays, the contractor may work from 8am-6pm. Work on Sundays and holidays is discouraged (CM plan document implies 8am-4pm Sunday hours may be sought) and requires approval.

   Response: Construction work hours will be in accordance with Section 17-18 of the City of Portland Code of Ordinances. Approvals for off-hours work permits if required will be sought and approved prior to work commencement.

5) Project schedule: There is a disagreement in the project schedule. The CM plan states a work duration of April 2020 through September 2021, but a duration of 10 months. Please clarify.

   Response: The current anticipated project schedules for the projects outlined in the Master CMP are as follows:

   - *Building 1A – 04/2020 – 09/2021 – 17 Months*
   - *Building 12 – 04/2020 – 01/2021 – 9 Months*
   - *Block 2 – 05/2020 – 07/2021 – 14 Months*
   - *Waterfront Season 2 – 10/2021 – 02/2022 – 5 Months*
   - *Block 4 – 06/2020 – 05/2021 – 10 Months*

6) Utility work on the Fore Street connector road must take place on the city-owned portion of the roadway. No construction activity, including deliveries, should assume that the full length of the connector road will be accessible.

   Response: There are no plans to utilize the Fore Street connector for access. Utility tie ins to be scheduled and coordinated with the City as required for the installation of new utilities.

7) The CM plan states that on-site off-street parking will be provided for contractor parking. This is desirable. No on-street parking by contractors shall be permitted.

   Response: Agreed and understood. No on-street parking by contractors shall be permitted.

8) Fire Protection for Construction Activities: I would ask that Chief Thompson and/or Life Safety staff review this portion of the CM plan.

   Response: 2013 Standard for Safeguarding Construction, Alteration and Demolition Operations will be enforced. Consigli Construction is open to review and further discussion with the PFD and Life Safety to ensure that best practices for mitigating fire risk during construction operations.

9) Dust control/air quality: The CM plan should specify how the project will work to prevent water used dust control activity from running directly into City infrastructure (dirt bags, drain filters, etc.)

   Response: Please refer to Dust Control / Air Quality section of the CM plan. In addition to following the MDEP erosion control best practices the project will adhere and require that the Erosion and Sediment Controls outlined in the Civil design documents of the Phase 1 Site Plan Submission (C-201 – prepared by Woodard and Curran) be followed, inspected and maintained.

10) Vibration monitoring: I would ask that Life Safety staff (or other staff as appropriate) review this section of the CM plan.

    Response: Please refer to Vibration Monitoring section of the CMP.

11) Dewatering: There is no discussion of dewatering on the site. It is likely that the site will hit ground water. A basic dewatering plan is required, and the contractor should be prepared to provide more robust dewatering treatments, including but not limited to settlement tanks, to clean ground water before it is discharged into city infrastructure. Only clean and clear water is permitted to discharge into city infrastructure.

Response: As outlined in the Erosion and Sediment Controls outlined in the Civil design documents of the Phase 1 Site Plan Submission (C-201 – prepared by Woodard and Curran), trench or foundation dewatering will be spread through sufficient natural buffers that have capacity to infiltrate pumped water or will be pumped to designed construction dewatering devices as described in the Maine Erosion and Sediment Control BMPS Handbook.

12) The utility work on Thames Street extension appears to assume that through traffic on the connector road, which should not be assumed.

Response: Through traffic on the Fore St. Connector Rd. will not be assumed.

13) While the goal of maintaining 2-way traffic on Fore Street during utility work is a good one, the contractor should plan for the eventuality that two-way alternating traffic (and flaggers) may be needed.

Response: While the scope of utility tie-ins is limited along the Fore Street profile, it is understood that if single lane/alternating traffic flow is required, plans may be updated to reflect traffic flow and flaggers.

14) The City is planning a sewer separation project along Fore Street that is expected to run from September 2020 with a final pave date of spring/summer 2022. Utility connections should be coordinated with this project if not completed before September 2020.

Response: Exact dates and schedule for utility connections as they relate to the City's planned work will be coordinated in detail during a pre-construction meeting or utility coordination meeting where final pave dates can be established.

15) If the concept of moving the southern curb line on Fore Street northward two feet is advanced, then the Applicant shall coordinate necessary curb work and utility relocations with the sewer project and utilities.

Response: The required utility tie ins, relocations and curb work will be coordinated with the City's planned work during a pre-construction meeting or utility coordination meeting.

16) The CM plan should address how the applicant plans to prevent contractors from using alternatives to Franklin Street (India and Hancock streets) to bypass Commercial Street and/or Franklin Street during peak periods (assuming we want to keep trucks on the arterials).

Response: Dedicated trucking routes to and from the project site will be conveyed and included in all subcontractor contract language. These dedicated routes will be outlined and communicated to all subcontract vendors, suppliers and freight companies during project preconstruction meetings.

17) They are not including anything on Fore Street – other than a utility connection (they don't note if this needs to prohibit parking). Seems like much more is needed. –Planning for two-way alternating traffic and coordination with sewer project is noted above.

Response: In addition to the Building 1A utility connections on Fore St. there will be two water line tie ins to the 12" DI water main. Both tie ins will likely require lane closure and single lane two-

way alternating traffic patterns will be employed. A revised Utility tie in plan for both locations can be provided in a future CMP revision.

18) There is a phase where marina vehicles will be on-site with construction vehicles. Not sure about the public in a work area and pedestrian movements to the marina.

Response: Marina parking will not be open to the public, parking is by permit only. Construction vehicle parking will be onsite delineated by site fencing while marina parking will be maintained outside of the construction barrier.

19) Seems like we will want more detail on the temporary EP Trail. We will need to be assured that the trail is open 24/7/365, that the relocated trail is safe with adequate paving and lighting, etc.

Response: Physical limits of the temporary EP Trail, as well as the duration for its use, will be coordinated with the construction activity, with the primary focus on pedestrian safety. Details for the proper transitions to the existing trail, paving, lighting, signage and protection barriers will be provided for the City's review and approval in a future CMP revision.

20) We have typically required a pre-construction meeting separate from a utility coordination meeting in order to review the remaining conditions of approval and our process for project close-out. The two meetings may be combined, provided I (JK) attend the utility coordination meeting, but I will still need to have an on-site component with the earth work contractor to discuss (and ideally inspect) erosion controls.

Response: Consigli Construction will take part in all required coordination meetings with the City and the utilities as well as facilitate any onsite inspections or reviews related to erosion controls.

21) I would add that not only are they likely to have quite a few sub-contractors parking on site, they may also have other tenants/uses/neighbors parking there as well. I'm guessing narrow gauge visitors, EP users, Sail Maine maybe? Having a parking plan will be critical. I'd suggest a plan with specific areas designated for each user and signage on site during construction.

Response: It is understood from the Owner that parking is private by permits issued to marina occupants only. Portland Foreside is not required to provide parking on their property to the public, the MNGRR, Sail Maine or other entity. As outlined, parking separation will be by means of site fencing delineating permitted marina parking and contractor parking areas. Appropriate signage will be utilized as required.

42x30 SHEET
1:1

FORE CONNECTOR
FUTURE DEVELOPMENT
BUILDING 1A
AVG. GRADE: 31.6'
TOP OF BUILDING GRADE: 66.33'
10ft FROM FORE STREET R.O.W.
THAMES STREET EXTENSION
BUILDING 12
AVG. GRADE: 14.81'
TOP OF BUILDING GRADE: 51.19'
EASTERN PROMENADE TRAIL (EXIST.)
TOWNHOUSES
AVG. GRADE: 37.34'
TOP OF BUILDING GRADE: 81.5'
WATERVILLE STREET
ST. LAWRENCE STREET
ATLANTIC STREET
FORE STREET
EMBANKMENT BUILDINGS (EXISTING BUILDING)
BUILDING 2/3 (EXISTING BUILDING)
BUILDING 6/6B (EXISTING BUILDING)
1ST, 2ND FLOOR RETAIL 3RD & 4TH FLOOR RESIDENTIAL
KELLOGG ST. VIEW CORRIDOR
WATERVILLE ST. VIEW CORRIDOR
ST. LAWRENCE ST. VIEW CORRIDOR
ATLANTIC ST. VIEW CORRIDOR
BUILDING 4
AVG. GRADE: 39.16'
TOP OF BUILDING GRADE: 58.66'
FUTURE DEVELOPMENT
TEMPORARY PAVEMENT FUTURE DEVELOPMENT
MAINE NARROW GAUGE RAILROAD
EASTERN PROMENADE TRAIL
MARINA FACILITIES
FORE POINTS MARINA
1081.11'

LEGEND

- 35 FOOT MAX HEIGHT
- 45 FOOT MAX HEIGHT
- 45 FOOT MAX HEIGHT WITH 55 FOOT EXTENSIONS
- 45 FOOT MAX HEIGHT WITH 65 FOOT EXTENSIONS

NOT FOR CONSTRUCTION

41 Hutchins Drive
Portland, Maine 04102
800.426.4262 | www.woodardcurran.com

COMMITMENT & INTEGRITY DRIVE RESULTS

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REV	DESCRIPTION	DATE
	BUILDING HEIGHT EXHIBIT (Rev)	
	CHECKED BY: DLC	

REV	DESCRIPTION	DATE
	DRAWN BY: BDM	
	DESIGNED BY: DLC	

BUILDING HEIGHT CALCULATION FIGURE

PORTLAND FORESIDE DEVELOPMENT CO.
PORTLAND, ME 04102

PHASE 1 SITE PLAN SUBMISSION

JOB NO.: 022700?
DATE: JANUARY 2020
SCALE: 1" = 40'
SHEET: 1 OF 1

FIG. 1

\\woodardcurran.net\shares\Projects\022700?.07 PFDC - 58 Fore Block 1\wip\Drawings\Phase 1 - Site Plan Submission\Figures\Building Height Figure.dwg, Jan 23, 2020 - 3:24pm

PHASE 1 SITE PLAN



Portland Foreside Development
Portland, Maine

mbla | inc

PHASE 1 CONDITIONAL SITE PLAN



Portland Foreside Development
Portland, Maine

mbla | inc

5 STREET TREES INCLUDED IN PHASE 1

TYP. WOOD BENCH TBD

SEEDED LAWN

AB
6

QP
1

VD
4

PLANT LIST

SYM	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	SPACING	COMMENTS
TREES							
AB	6	ABIES BALSAMEA	BALSAM FIR	6–7' HT	B+B	PER PLAN	
QP	3	QUERCUS PALUSTRIS	PIN OAK	2" CAL.	B+B	PER PLAN	
VD	16	VIBURNUM DENTATUM	ARROWWOOD VIBURNUM	--	B+B	PER PLAN	

20' 0 20' 40'

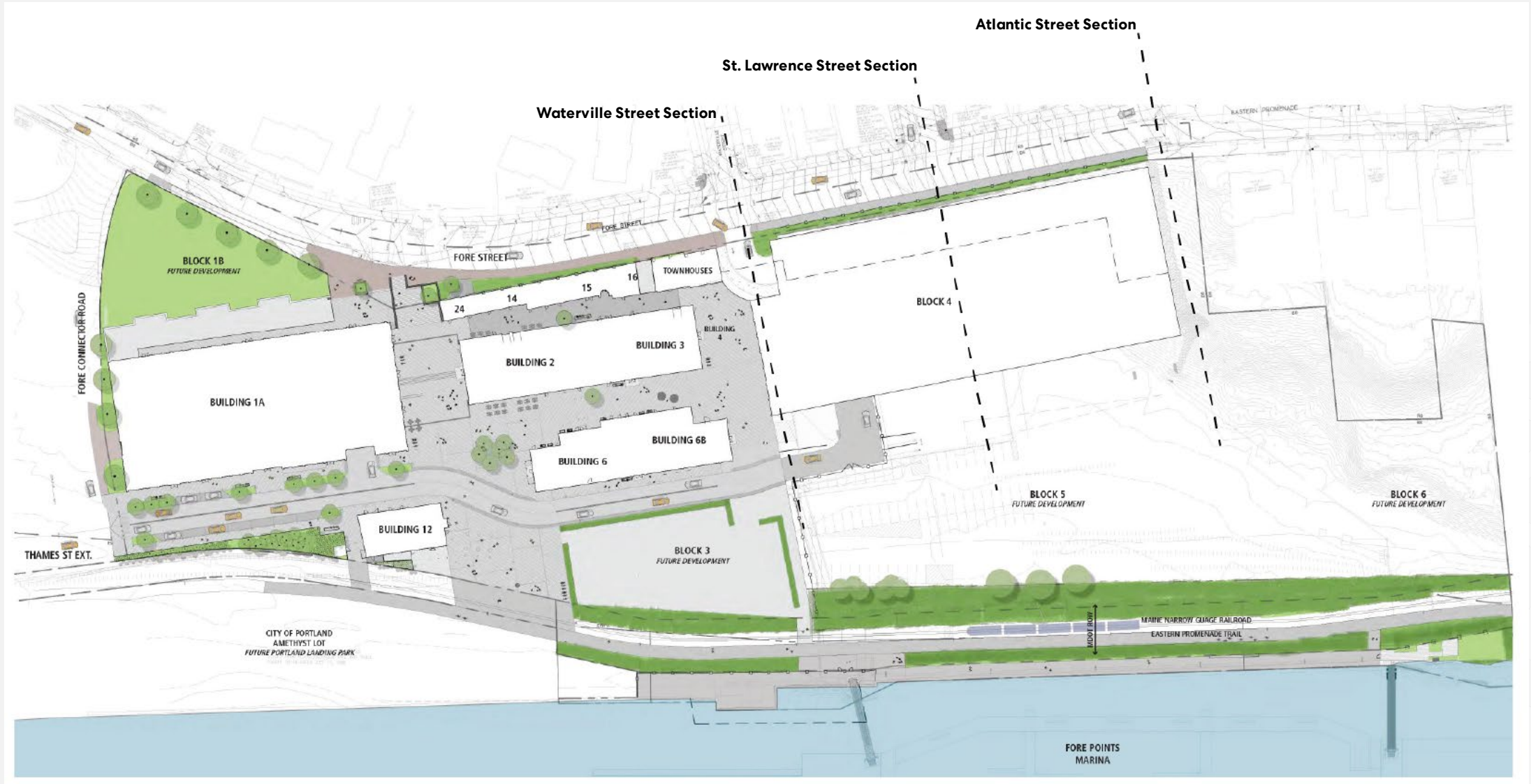
BAR SCALE
1" = 20'
CHECK GRAPHIC SCALE BEFORE USING

1/24/2020

BLOCK 1B CONDITIONAL SITE PLAN

MBLA INC.

PHASE 1 MASTERPLAN

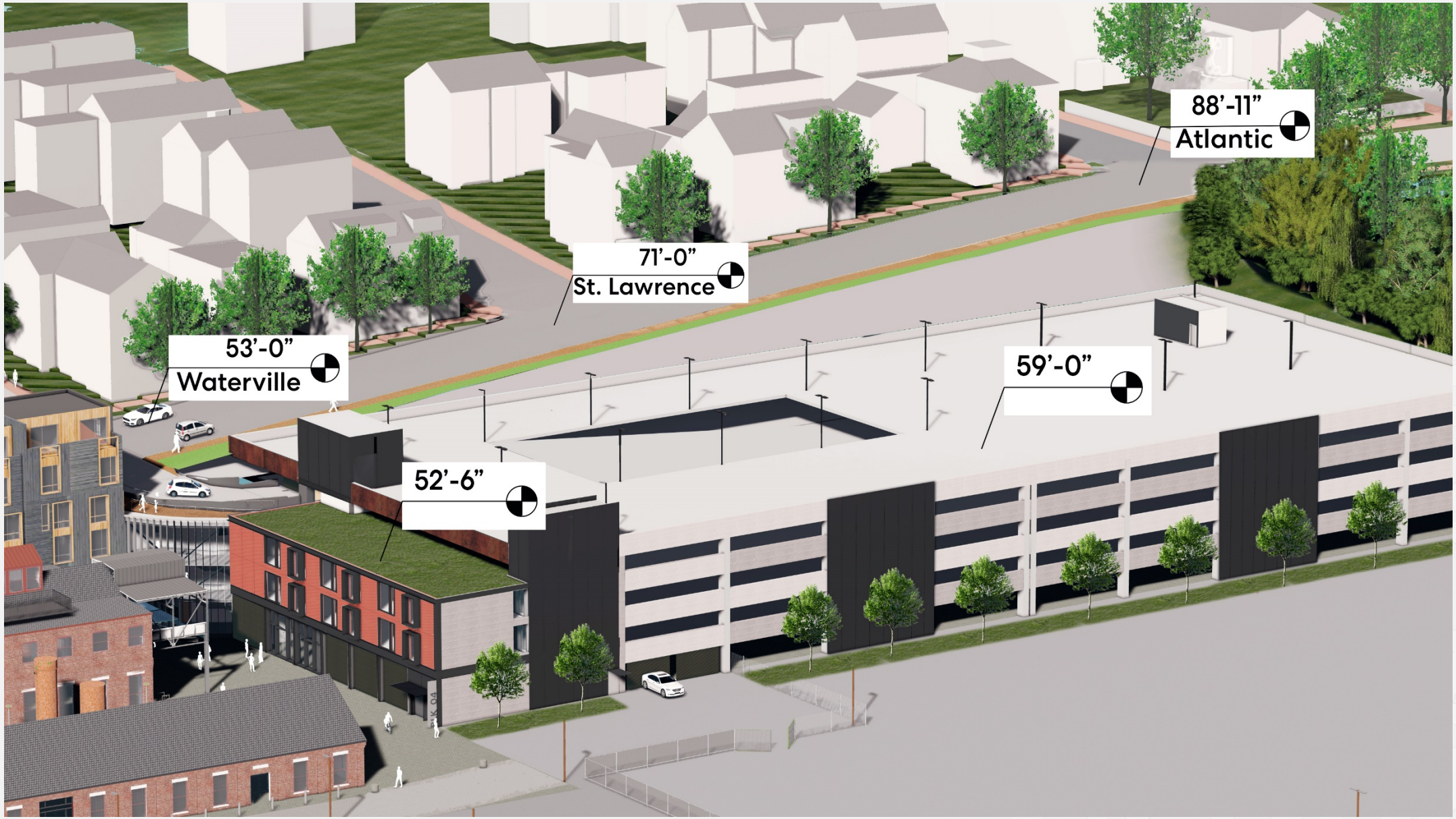


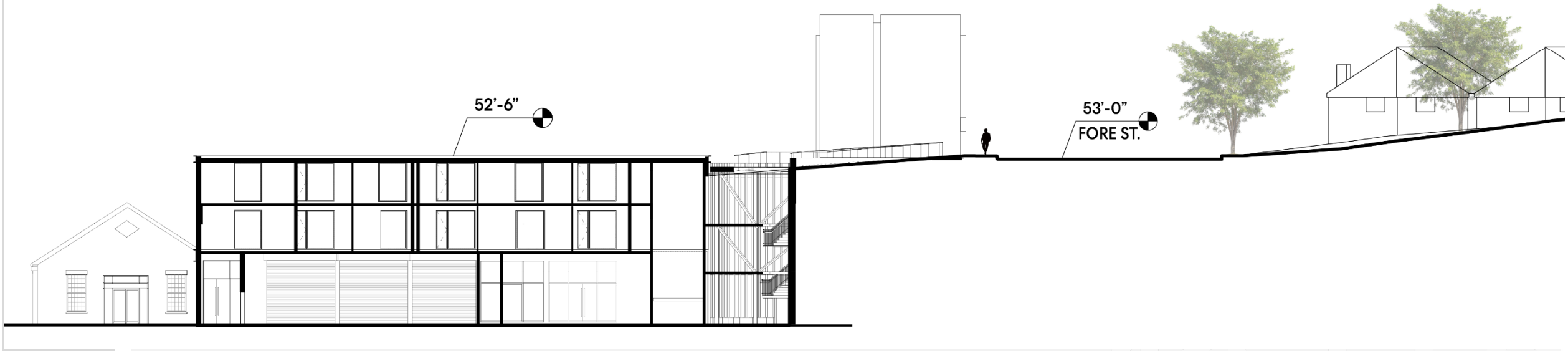









88’-11”
Atlantic
71’-0”
St. Lawrence
53’-0”
Waterville
59’-0”
52’-6”



Waterville Street Section

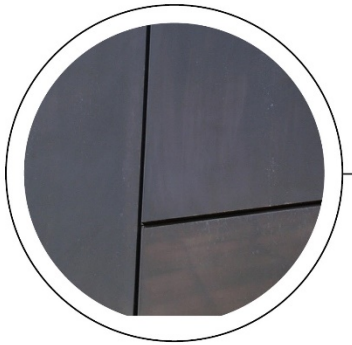
WATERVILLE STREET



WATERVILLE STREET



WATERVILLE STREET - PROPOSED



Metal Rain Screen System

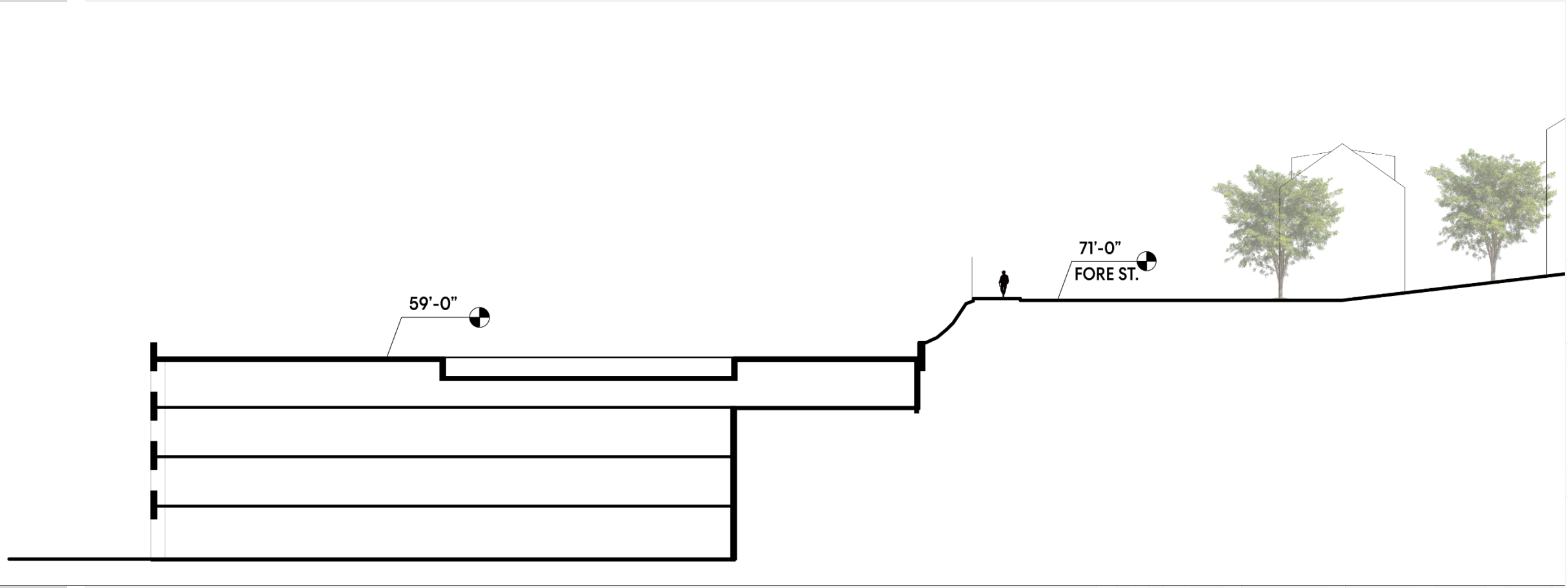


Weathering Steel Cladding



24-30” Tall Planting along sidewalk





St. Lawrence Street Section

ST. LAWRENCE STREET



ST. LAWRENCE STREET



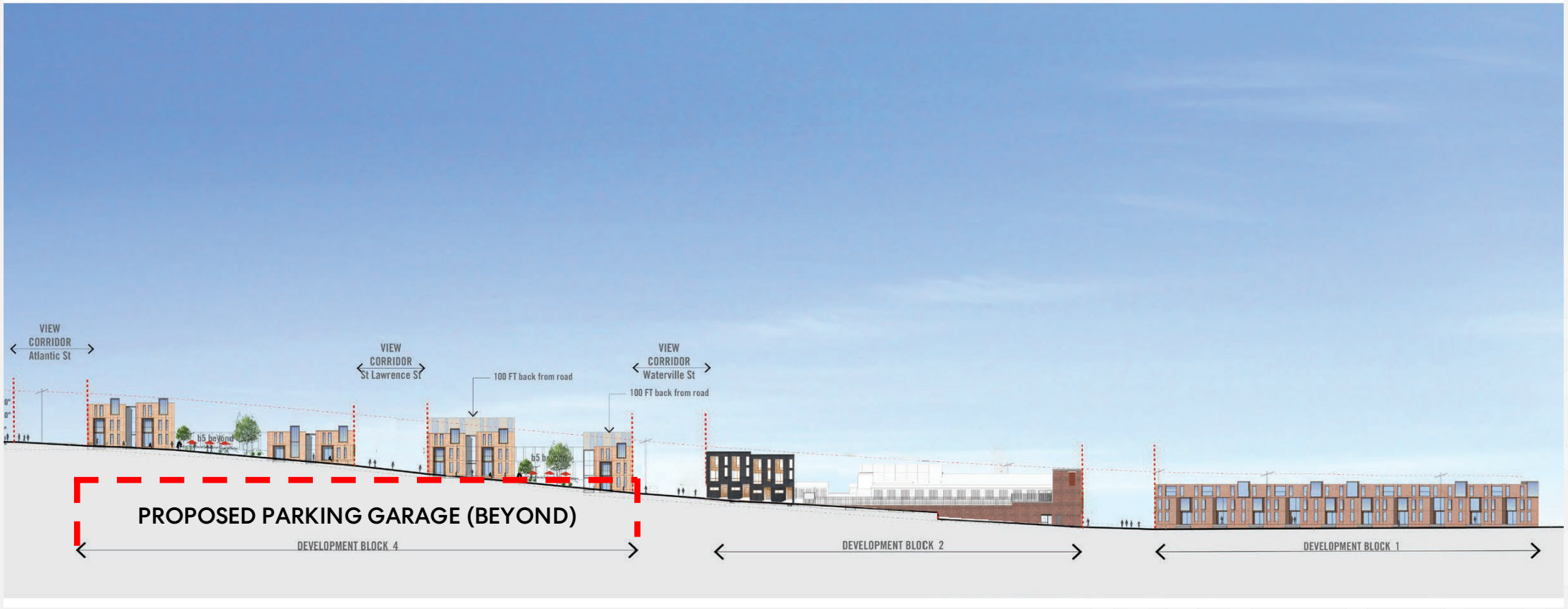
ST. LAWRENCE STREET - PROPOSED



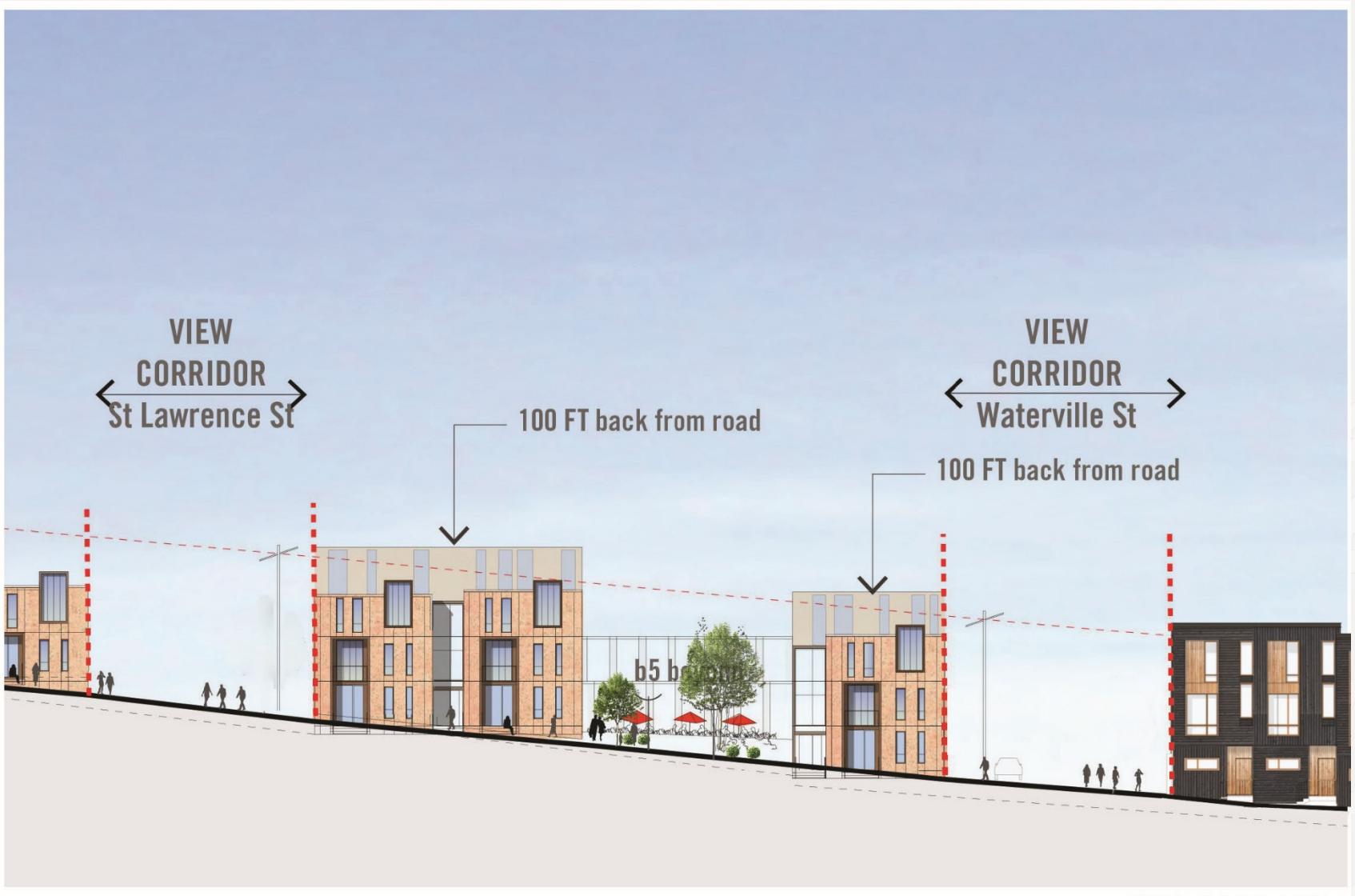
24-30” Tall Planting along sidewalk

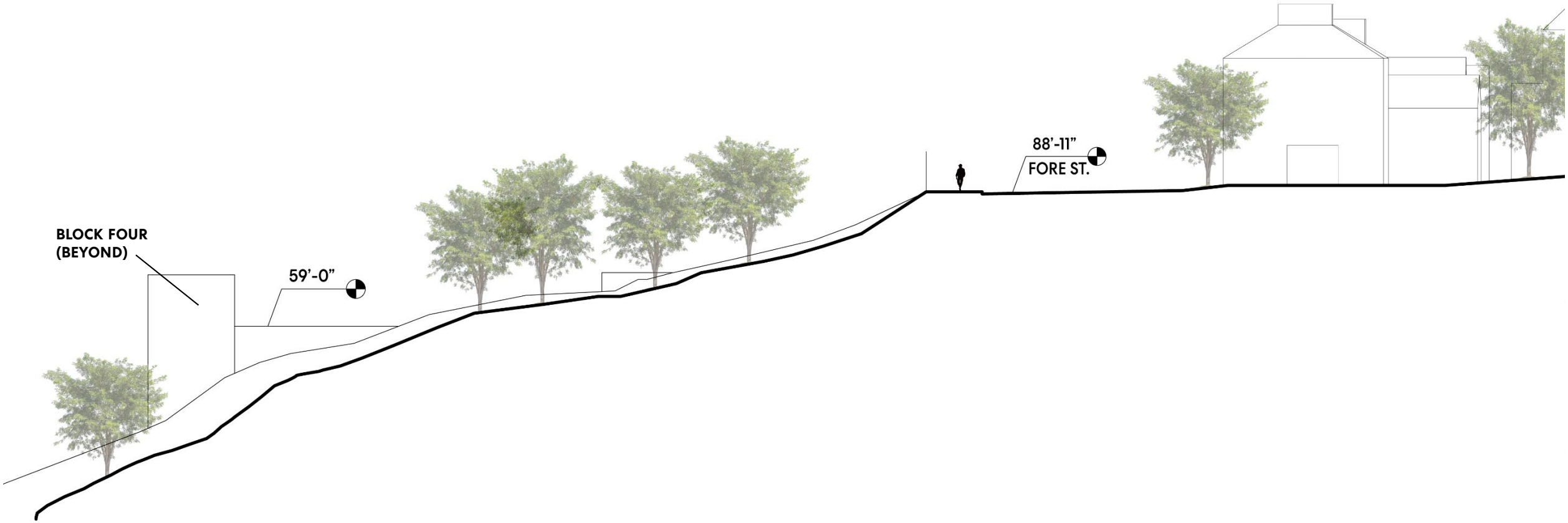


ST. LAWRENCE STREET - PROPOSED



ST. LAWRENCE STREET - PROPOSED





Atlantic Street Section

ATLANTIC STREET



ATLANTIC STREET



ATLANTIC STREET - PROPOSED



SOUTH ELEVATION



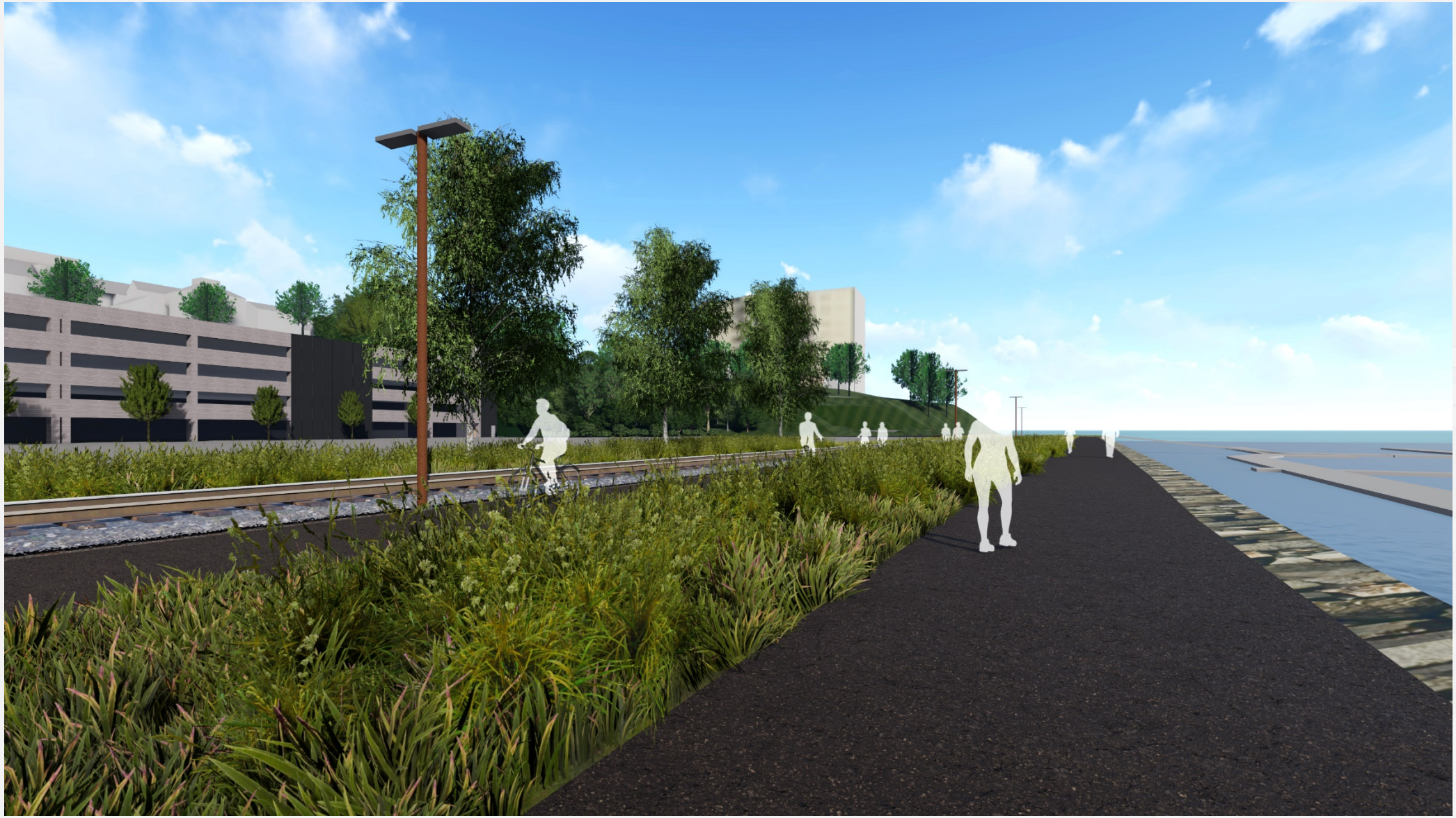
SOUTH ELEVATION



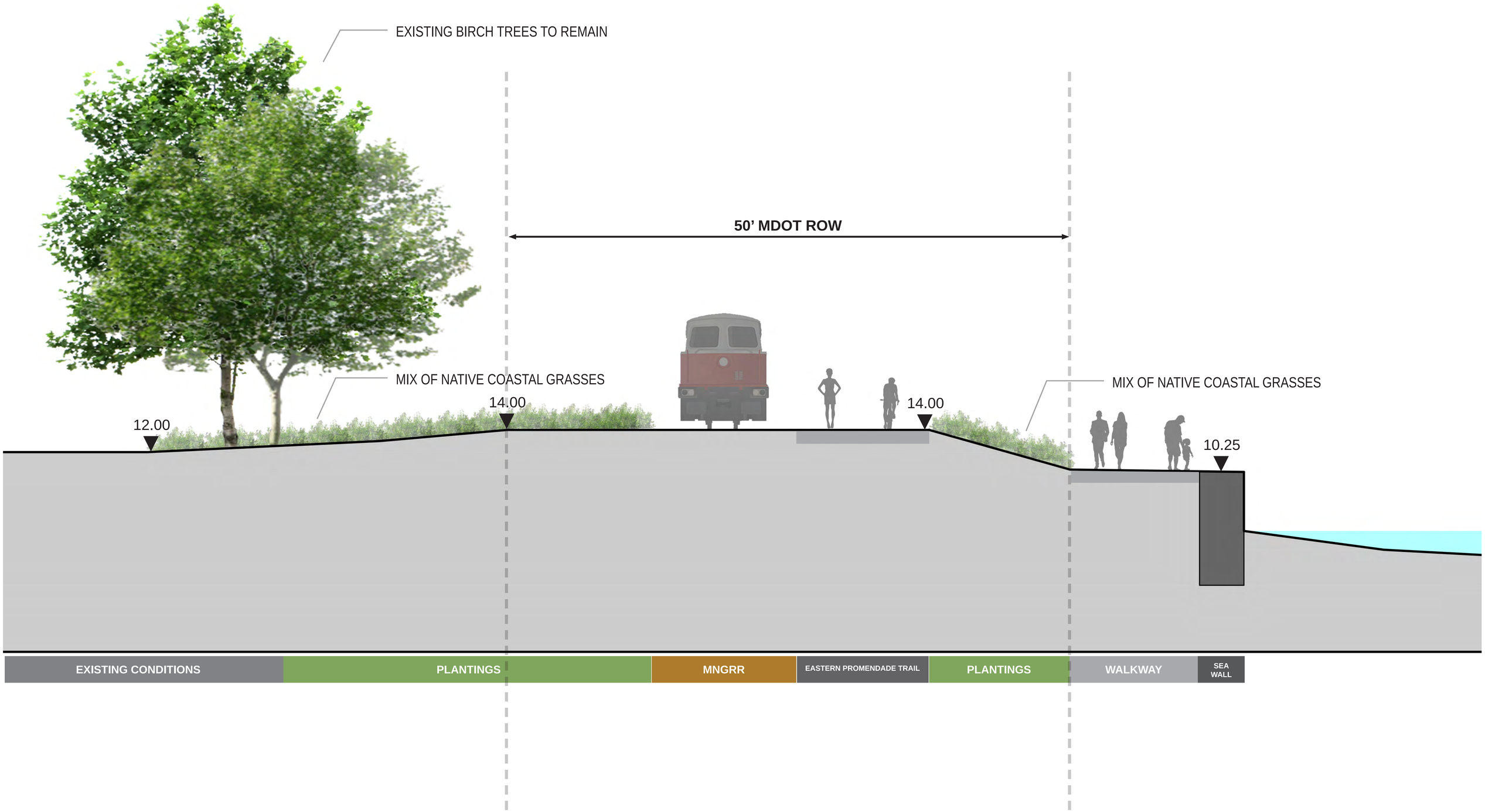
VIEW WEST



VIEW EAST



WATERFRONT SECTION



Portland Foreside Development
Portland, Maine

mbla | inc

NEW STAIR DESIGN



Portland Foreside Development
Portland, Maine

BIRD'S EYE VIEW



Portland Foreside Development
Portland, Maine

VIEW FROM FORE STREET



Portland Foreside Development
Portland, Maine

VIEW FROM FORE STREET



Portland Foreside Development
Portland, Maine

VIEW FROM TOP OF STAIR



Portland Foreside Development
Portland, Maine

VIEW FROM STAIR



Portland Foreside Development
Portland, Maine

VIEW FROM UPPER PLAZA



Portland Foreside Development
Portland, Maine

VIEW FROM LOWER PLAZA



Portland Foreside Development
Portland, Maine

VIEW FROM BUILDING 12 PLAZA



Portland Foreside Development
Portland, Maine



Image from the Maine Historical Society

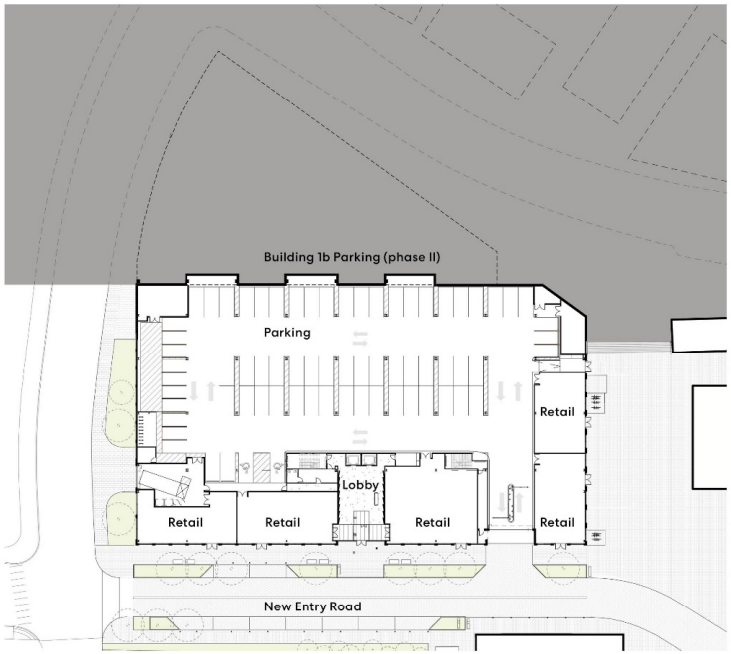
BUILDING 1A

ARCHITECTURAL DESIGN: BUILDING 1 & ARTICULATION

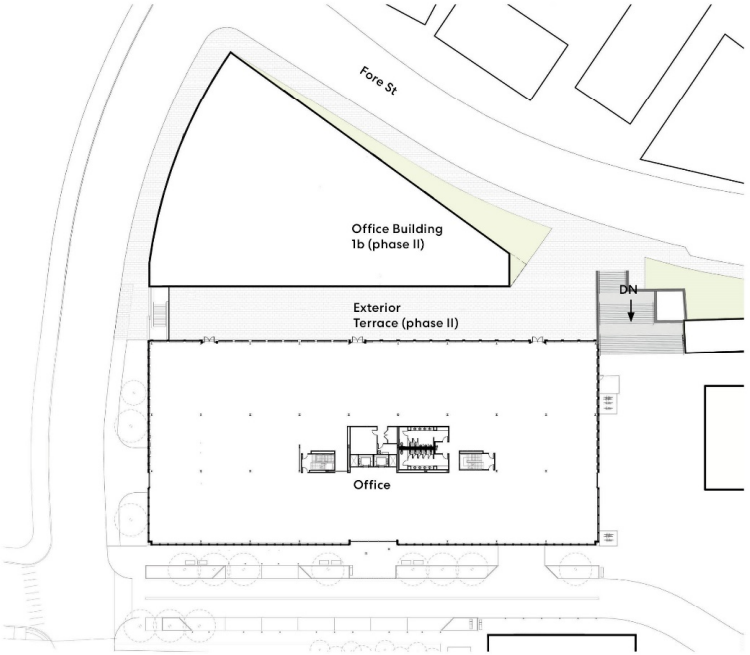





SOUTHEAST CORNER
PARKING
1B
1A
2
3
4
6
12
KEY PLAN



Ground Floor Plan



Second Floor Plan

N

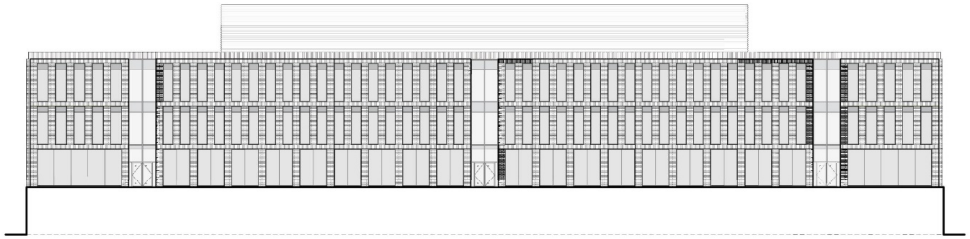
0 30' 60' 120'



South Elevation



East Elevation



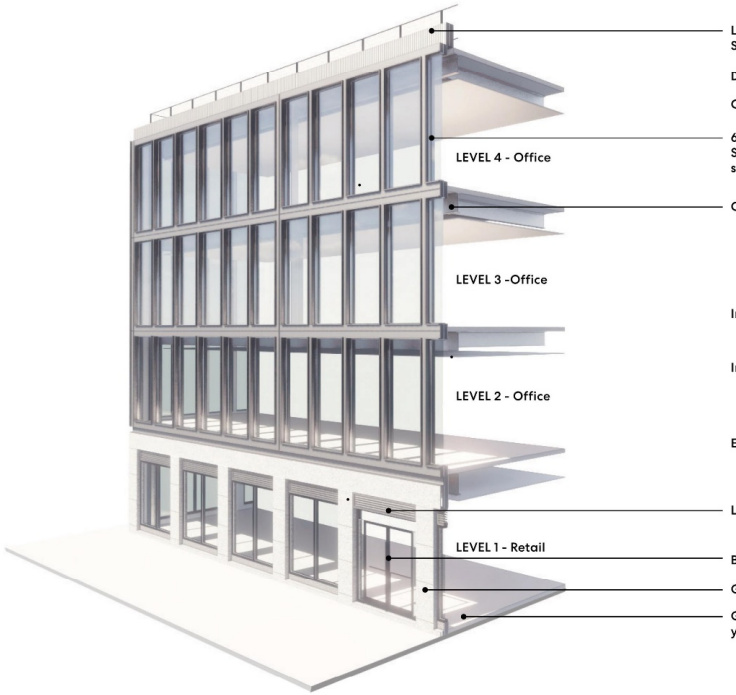
North Elevation



West Elevation

0 15' 30' 60'

Southeast facing Facade Section



Light Gray Corrugated Metal Panel, Square Profile

6" deep Extruded Aluminum Windows Surround for Southeast exposure sun-shading, Dark Gray

Ceiling and Soffit held back from glass

Louver Band

Black Aluminum Storefront

Granite cladding

Ground floor Elevated above 100 year Floor Level

Northwest facing Facade Section

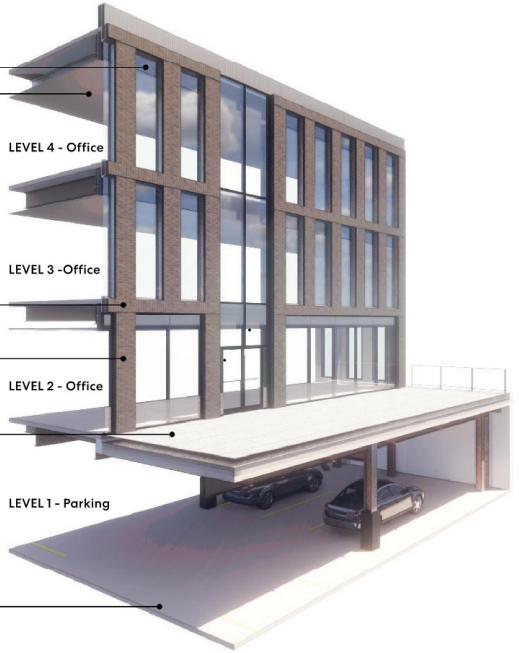
Dark Gray insulated Shadow Box

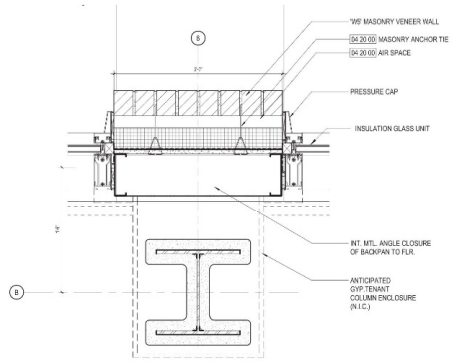
Ceiling to Insulated Shadow box

Ironspot Brick, Soldier Course

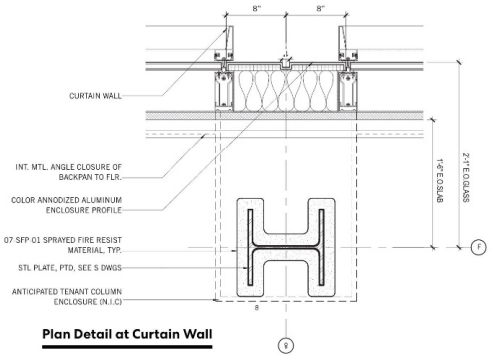
Ironspot Brick, running bond

Exterior Terrace over Structure

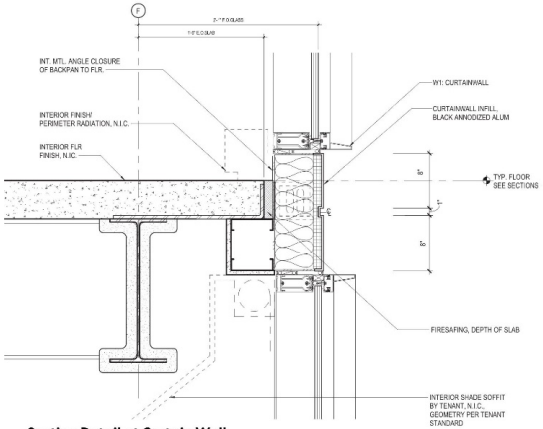




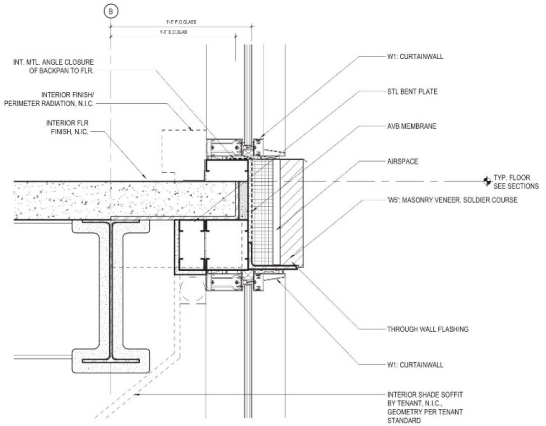
Plan Detail at Masonry



Plan Detail at Curtain Wall



Section Detail at Curtain Wall



Section Detail at Masonry

BUILDING 1A & BUILDING 1B SITE VIEW



VIEW FROM TOP OF STAIR



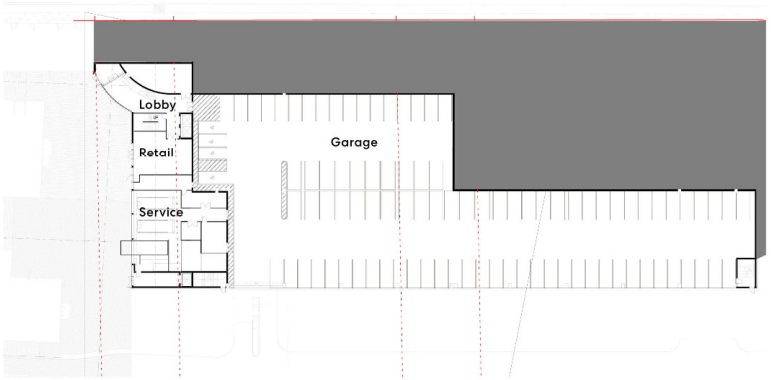
BLOCK FOUR

ARCHITECTURAL DESIGN

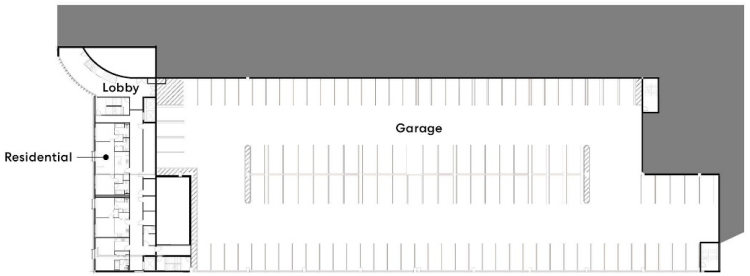
ARCHITECTURAL DESIGN: BUILDING 4 & RETAIL FRONTAGE







Ground Floor Plan



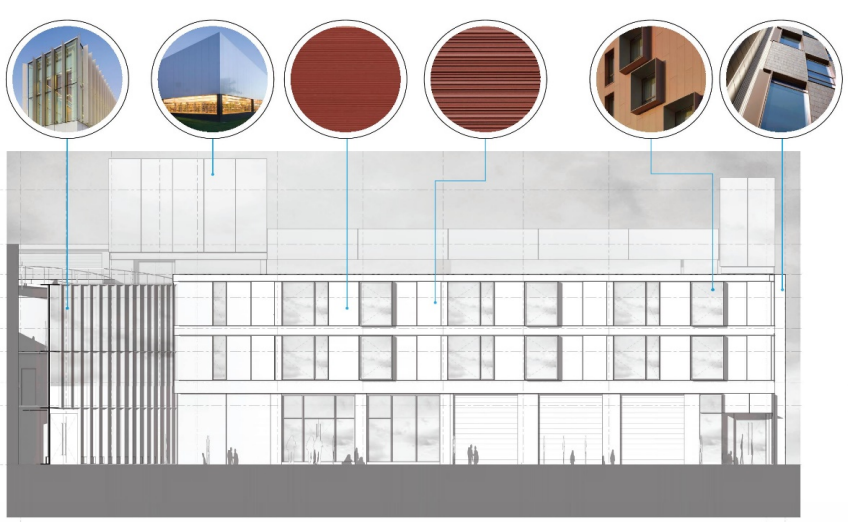
Second Floor Plan

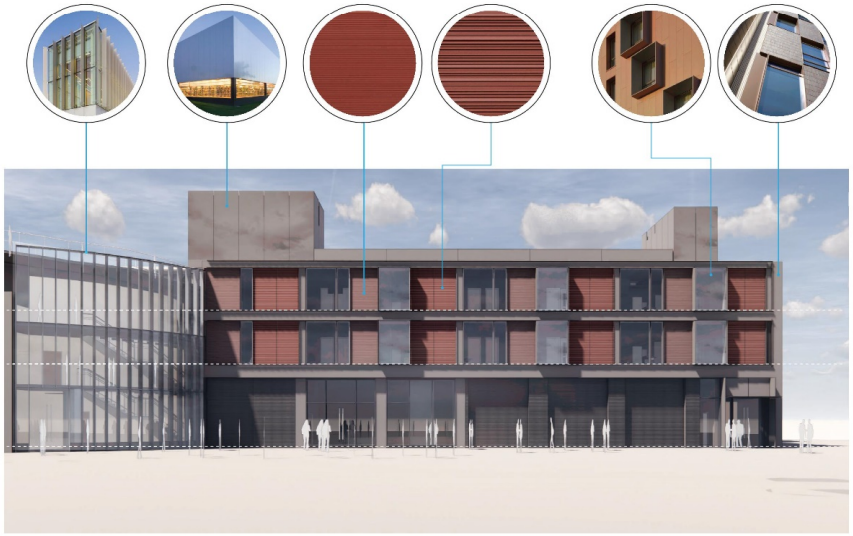


Fifth Floor Plan @ Fore Street

N

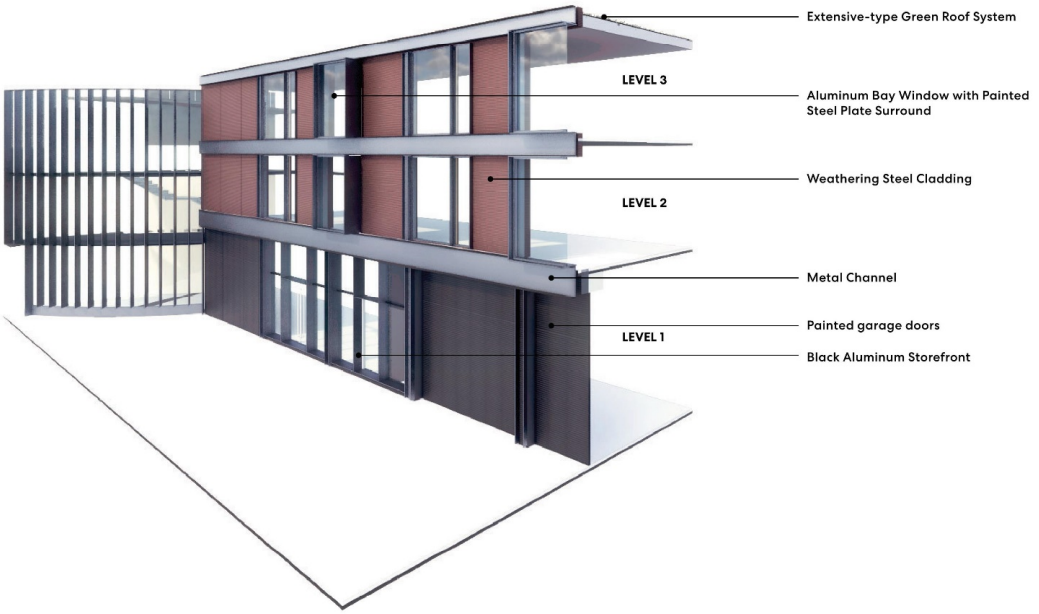
0 30' 60' 120'





West Elevation

Southwest facing Facade Section









MACHINED.
FORGED.
CRAFTED.
FORMED.
MADE.

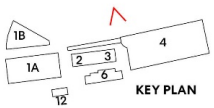
VIEW FROM WATERVILLE STREET



Existing View from Waterville



View from Waterville



KEY PLAN

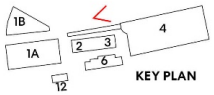
VIEW FROM FORE STREET



Existing View from Fore Street



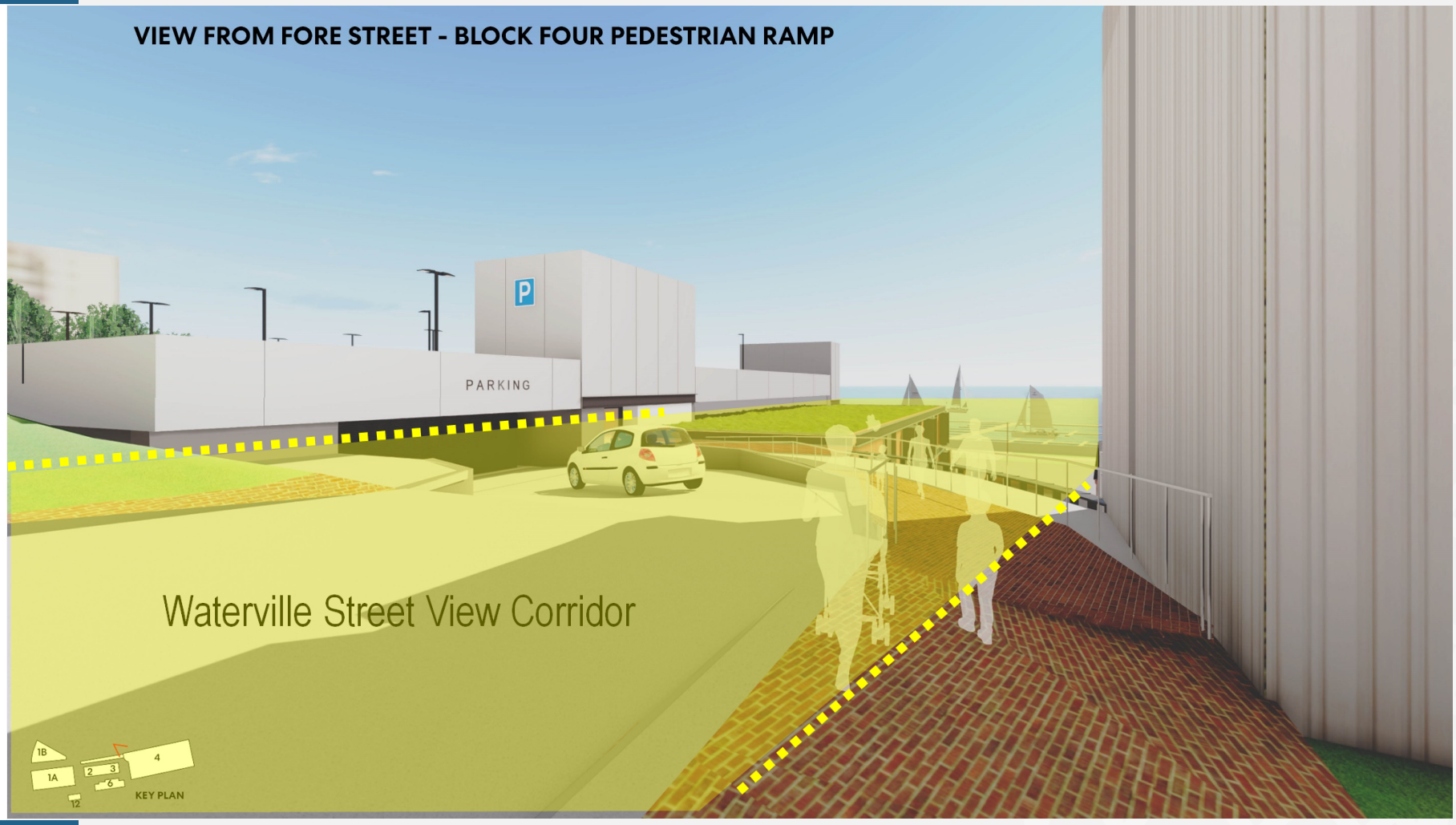
View from Fore Street



KEY PLAN

VIEW FROM FORE STREET - BLOCK FOUR PEDESTRIAN RAMP




VIEW FROM FORE STREET - BLOCK FOUR PEDESTRIAN RAMP
PARKING
Waterville Street View Corridor
1B
1A
2
3
4
6
12
KEY PLAN

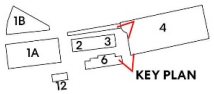
BLOCK FOUR



North View Toward Block Two and Block Four

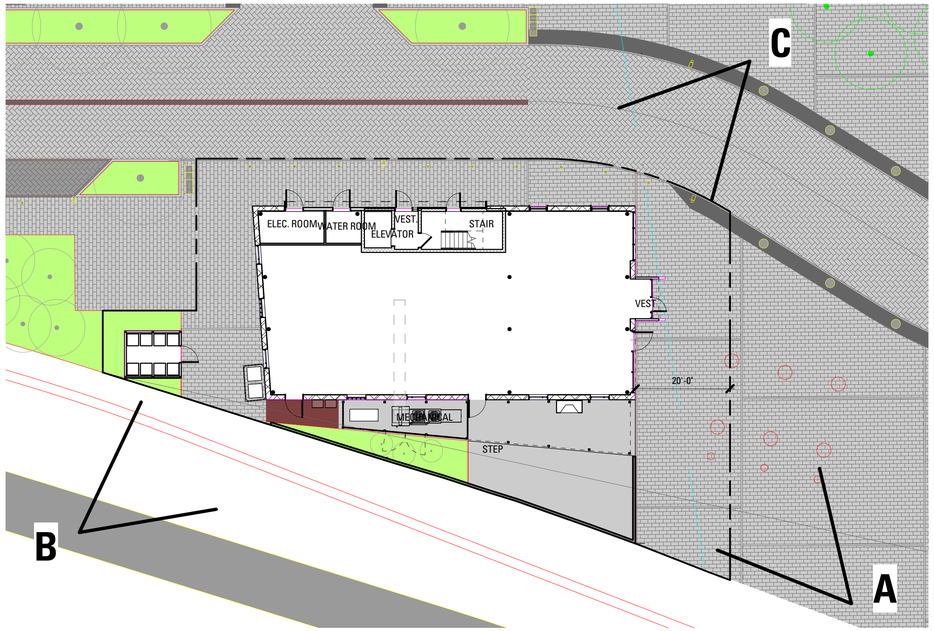


View from Block 4 Lobby











Bruner/Cott
ARCHITECTS
225 Friend St., Suite 701
Boston, MA 02114
617.492.8400
www.brunercott.com

Rev.	Date	Remarks

PORTLAND FORESIDE - BUILDING 12

RENDERINGS

Date	OCTOBER 25, 2019
Scale	1/16" = 1'-0"
Project Number	19.007
Drawn By	Author

G-000



A - 24 (FAR LEFT) 2/3 MARKETHALL (CENTER) AND 6A (RIGHT)



B - 2/3 MARKETHALL (LEFT) AND 6A (RIGHT)



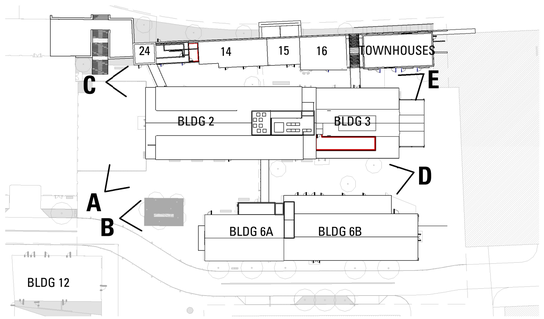
C - 24 + ALLEY BUILDINGS (LEFT/CENTER) AND 2/3 MARKETHALL (RIGHT)



D - BUILDING 6B (LEFT) AND 3/2 MARKETHALL (RIGHT)



E - BUILDING 4 AND 3/2 MARKETHALL



KEY PLAN

Bruner/Cott
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225 Friend St., Suite 701
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617.492.8400
www.brunercott.com

Rev.	Date	Remarks

PORTLAND FORESIDE BLOCK 2

Date	OCTOBER 25, 2019
Scale	1/64" = 1'-0"
Project Number	
Drawn By	Author

RENDERINGS

G-000P


BIK 04

