# CITY OF PORTLAND, MAINE

# PLANNING BOARD




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Brandon Mazer, Vice Chair
Bob Dunfey
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## AGENDA
## PORTLAND PLANNING BOARD MEETING

The Portland Planning Board will hold a meeting on Tuesday, November 26, 2019, ROOM 24, BASEMENT LEVEL OF 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 - 5:30 p.m.) The Planning Board will hold a workshop to consider a proposal for a 20,140 square foot hospital building expansion, a new 34,987 sq. foot ambulatory surgical center, additional campus parking, and associated site improvements. The subject property is a 33.5 acre medical campus zoned I-L, C26 and I-H.

ii. Level III Site Plan and Subdivision; 58 Fore Street; Portland Foreside Development Company, Applicant. (estimated time 5:30 - 6:30 p.m.) The Planning Board will hold a workshop 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.

**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 NOVEMBER 12, 2019 (ATTENDANCE WILL BE ADDED ON 11-18-19)**

**4. REPORTS OF DECISIONS AT THE MEETING HELD ON NOVEMBER 12, 2019 (THE DECISIONS FOR THE ITEMS WILL BE POSTED ON 11-18-19)**

i. Level III Site Plan and Subdivision; 47 Boyd Street; Portland Housing Development Corporation, Applicant.

ii. Zoning Map Amendment; 631 Stevens Avenue; Developers Collaborative, Applicant.

iii. Level III Site Plan and Subdivision; 30 Mellen Street; Shalom House, Inc., Applicant.

**5. NEW BUSINESS**

i. Zoning Map Amendment; 109 Harvard Street; Wescott & Payson, II, LLC., Applicant. The Planning Board will hold a public hearing to consider the rezoning of a 3.4 acre tract of land from R-3 Residential to R-5 Residential along an undeveloped portion of Harvard Street. The rezoning area includes 38 contiguous lots with approximately 1,450 feet of frontage on Harvard Street. The map amendment is subject to review and recommendation from the Planning Board to the City Council.

# Memorandum
# Department of Planning and Urban Development
# Planning Division

To: Sean Dundon, Chair and Members of the Portland Planning Board
From: Jean Fraser, Planner
Date: November 21, 2019
Re: **Mercy (Hospital) at the Fore - Phase 2 Site Plan**
**175-195 Fore River Parkway**
**Northern Light Health, Applicant**
Project #: PL-000570-2019 CBL: CBL 073-A001001
Meeting Date: November 26, 2019

## I. INTRODUCTION

Northern Light Health has applied for a Level III site plan approval to facilitate a proposal to add 54,889 sq ft of 4-level hospital building expansion floorspace, and to add a new 2-story 34,987 sq ft Ambulatory Surgical Center (ASC) building to be built on the central part of the site on an infilled portion of the existing wetland pond.

This proposal comprises phase 2 of the development originally permitted by a 2001 Conditional Zoning Agreement. The Phase 1 Site Plan consisted of the main hospital building and a medical office building which were approved, along with a Master Plan, in 2006.



*Figure 1 - Aerial of the Site*

Both phases are framed by the 2001 Conditional Zoning Agreement (CZA) that was approved for the (then) 42 acre industrial and railroad site. The Agreement allowed for a phased development of medical uses in a campus like setting that integrated with the adjacent Fore River Parkway (*Attachment 2a*).

Since the 2006 site plan approval for Phase 1 the hospital ownership has transferred to the Eastern Maine Healthcare Systems (EMHS).

It is understood that the new owners are committed to moving all of the State Street Mercy hospital operations to the Fore River site in the near future, and that the overall campus development has been re-envisioned to take account of changes in medical services delivery and the impact of the relocated Veterans Bridge intersection.

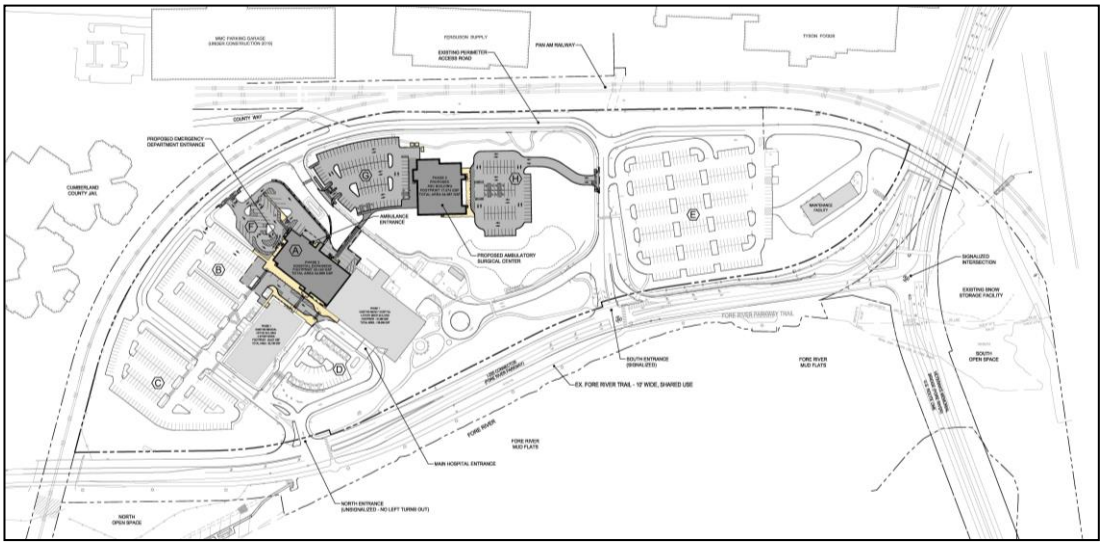



*Figure 2: Proposed Site Plan*

The proposal under consideration includes the infilling/alteration of the existing 3.5 acre wetland in the center of the site, which was preserved as part of the 2006 approval and previous MDEP permits. It was formerly a gravel pit and over time has reverted to marshland with some value for migratory birds. The applicant obtained a SLOD amendment, NRPA and Army Corps permits in 2013 (extended in 2017 – see *Attachment C*) that allowed the wetland area to be filled as justified by a much larger development program that included a larger addition to the hospital, two new medical office buildings and two parking garages. The applicant has confirmed that the State permits as issued need to be amended to reflect the smaller development and changes to the stormwater management system, as noted in *Att. G* (first page):

> *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.*

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 November 15 and16, 2019 editions of the *Portland Press Herald*. No public comment has been received to date. The project requires a Neighborhood Meeting which is being arranged for a date in early December, 2019.

**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.<br><br>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.<br><br>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 1e*) | Site Plan Standard 14-526 (a) 4b which would require 49 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<br><br>Staff Comments: this has not been reviewed in detail. | 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 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 | | | Hospital: +20,140 sq ft |
| Building Floor Area | Hospital: 138,099sq ft<br>MOB: 82,186 sq ft | Hospital: 192,988 sq ft<br>MOB:82,186 sq ft<br>ASC: 34,987 sq ft | Hospital: +54,889 sq ft<br>MOB: 0<br>New ASC: +34,987sq ft |
| Impervious Surface Area | 50% | | 66.4% |
| Parking Spaces | 762 | 857 | +95 |
| Bicycle Parking Spaces | Awaiting information | | |

## IV. EXISTING CONDITIONS

The overall site comprises 33.5 acres, of which approximately 20 acres is developable due to drainage swales, overhead infrastructure etc. It is bounded by the Fore River Parkway to the west, the industrial and commercial development along St John Street to the east, the Veterans Bridge intersection to the south, and by the County Jail to north. The overall site owned by the applicant includes the two areas on the water side of the Fore River Parkway which comprise open areas with some public access.

The proposed development subject of this site plan is located in the central part of the site shown in the aerial below:




***Figure 3: Birdseye Aerial of central area where development is proposed***

The existing phase 1 development, as completed in 2008, includes:

- Hospital building of 138,099 sq ft
- Medical Office Building of 82,186 sq ft
- Surface parking totaling 762 parking spaces
- "Marsh" Trail around and near to the existing wetland (public access easement to City and Portland Trails)
- Bus route and bus stop within the site
- Extensive landscaping to buffer surface parking

A key feature of the site is the 3.5 acres of open wetland to the south of the main hospital building, which was required to be preserved by both the MDEP and the City at the time of the previous reviews.

***Figure 4, Photo right:*** *wetland area as viewed from internal drive nearest to and parallel to the Fore River Parkway. Looking towards site of proposed ASC.*



## V. PREVIOUS APPROVALS AND BACKGROUND
**(see also the applicants submitted Project Description in *Attachment D*)**

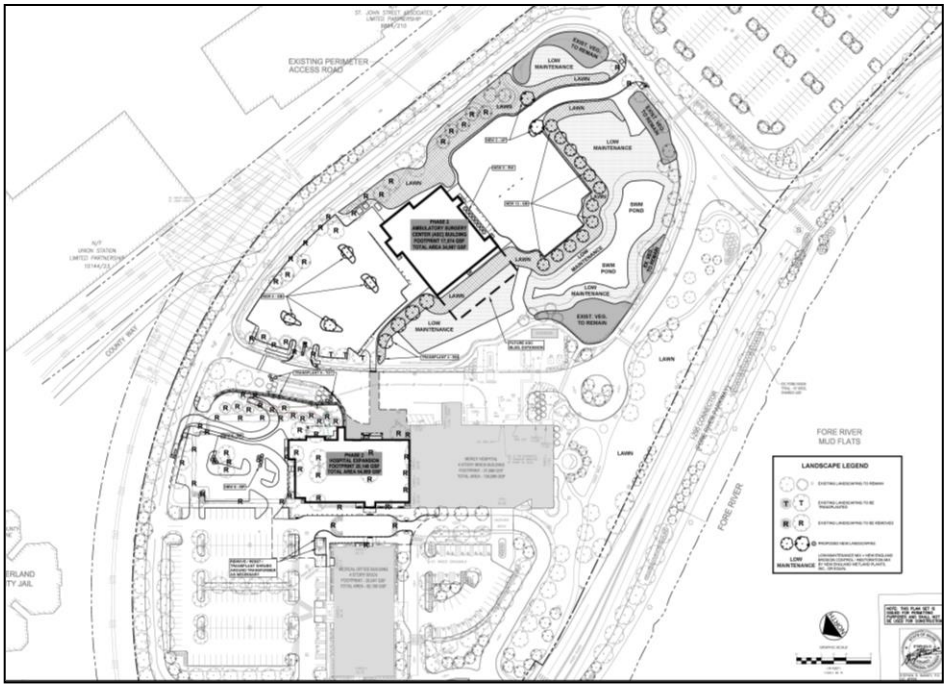
The previous permitting for this site is outlined below:

- 2001- City Council approved CZA with an attached Conceptual Master Plan (single plan)(*Attachment 2a*)
- 2002-2005 - TMP and MDEP permits obtained by Mercy
- 2006- Planning Board approved the Site Plan for Phase 1 (Hospital and Medical Office building with associated parking and landscaping) (Approval letter in *Attachment 2b*)
- 2006 – Planning Board approved (along conjunction with the Site Plan) a Master Plan document (text and several plans complying with CZA requirements) *Attachment 2c* and *Plan 15.*;
- 2007-2010- Numerous amendments to the 2006 Site Plan approval relating to the maintenance building, trails and open space, and building/siting amendments
- 2010-2013- Veterans Bridge design necessitated reconfiguration of Fore River Parkway and southern open space
- 2012-2013 MDEP amendment to Site Location of Development Act (SLODA) permit obtained by Mercy
- 2013 MDEP NRPA and Army Corps Amendment Permits for infilling of the existing wetlands for 250,000 sq ft of new building development (extended in 2017 - see *Attachment C*)

## VI. PROPOSED DEVELOPMENT

The applicant's Project Description (*Attachment D)* explains how the Fore River site was initially chosen and envisaged for relocation of the State Street Mercy hospital, the background to Phase 1, and the need for and objectives of the Phase 2 developments. The proposed new structures have been located to take advantage of the existing infrastructure, achieve connections to the existing services, and facilitate relocation of the State Street services. The hospital addition includes emergency room services.

*Figure 5: Extract from Landscape Plan (Plan 8)*




The Phase 2 proposals include:

- Net addition of 95 parking spaces for patients, visitors and staff (see Parking Demand Study, *Att. K*)
- Reduction of the natural open water area from 3.5 acres to .5 acres through infilling and regrading to create an engineered stormwater "wet pond"
- Creation of pedestrian sidewalks and connections
- New planting near the new parking lots, and "low maintenance" landscaping in the area formerly comprising the wetland area - see plan above.

## VII. ZONING ANALYSIS - CONDITONAL ZONING AGREEMENT 2001

### *Conceptual Master Plan 2001*

The City Council approved the Conditional Zoning Agreement (CZA) (*Attachment 2a*) 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.*

This Memo assumes that the applicant's proposal is "consistent with the purposes of" the CZA. Whether the proposal is, in fact, consistent with the purposes of the original CZA such that an amendment of that agreement is unnecessary, may depend on future iterations of the proposed development and the extent to which details regarding the plan change over the course of staff and the Board's review. Staff are consulting with City Management and Corporation Counsel's office on that threshold question and will update the Board in the event that a contrary determination is made.

***Figure 6: 2001 CZA "Conceptual Master Plan"***
***(this color version is an interpretation of the B/W plan attached to the CZA):***




***Development Standards set out in 2001 CZA***

The CZA includes Development Standards on page 5 (of *Attachment 2a*) as listed below in **bold.** The applicant has submitted a narrative and graphics to clarify how the current and future proposals for the site address these standards (*Attachment F and Plans 16 to 20*).

***10. 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:**

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 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.**

**REVIEW COMMENT:** 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. It includes a public trail as formalized as part of the 2006 site plan approval. The placement of the ASC and surface parking also appeared awkward in terms of pedestrian circulation, although the Design Review in *Attachment 1d* considers the architecture/buildings to meet this standard.

The Phase 2 proposals also do not appear to integrate well with the proposed future phases, particularly in relationship to the stormwater infrastructure and scale of surface parking (see section i below re Master Plan)

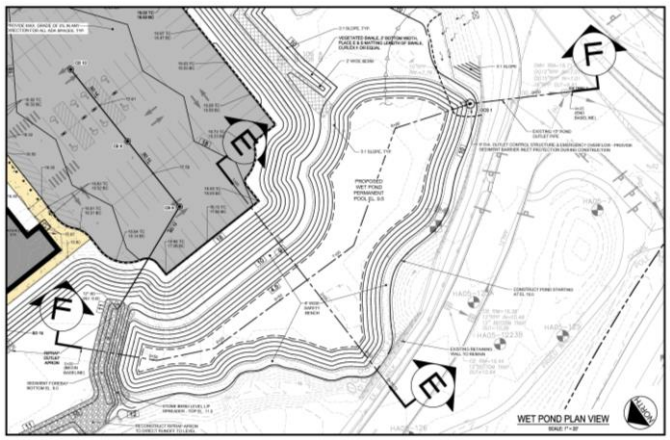
**b.** ***Landscaping:*** **Development proposals shall include a landscape program. All land areas not covered by structures, parking areas, or circulation facilities shall be landscaped and maintained. In order to soften the visual impact of large expanses of pavement in parking lots, vegetation shall 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.**

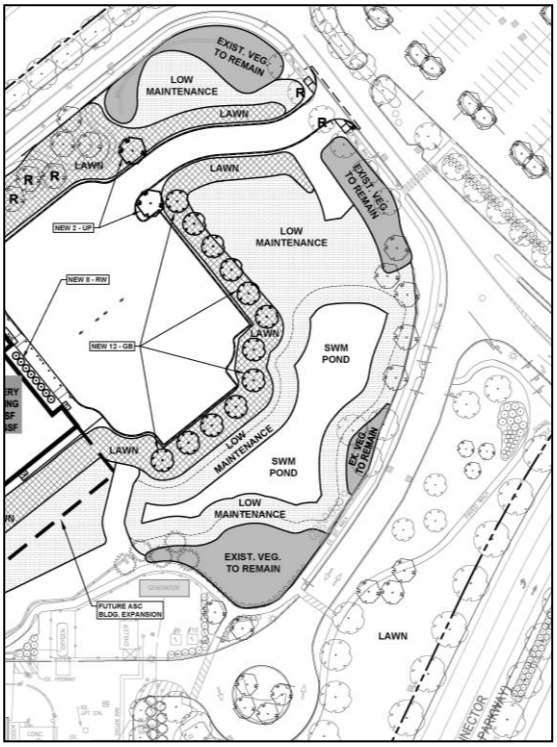
**REVIEW COMMENT:** The applicant submitted the *Landscape and Open Space Plan* (right and in *Plan 17*) to clarify the landscape and open space elements of the proposals. However, the large area of green between the new ASC and the Fore River Parkway comprises the new stormwater management system with regrading and engineering that appears to remove almost all of the existing natural wetland.

*Figure 7: Landscape and open Space (Plan 17)*




The detailed plan for the stormwater "wet pond" and the grading plan indicate the extent of disturbance to the existing wetland (see below under f for discussion of the loss of wetlands):



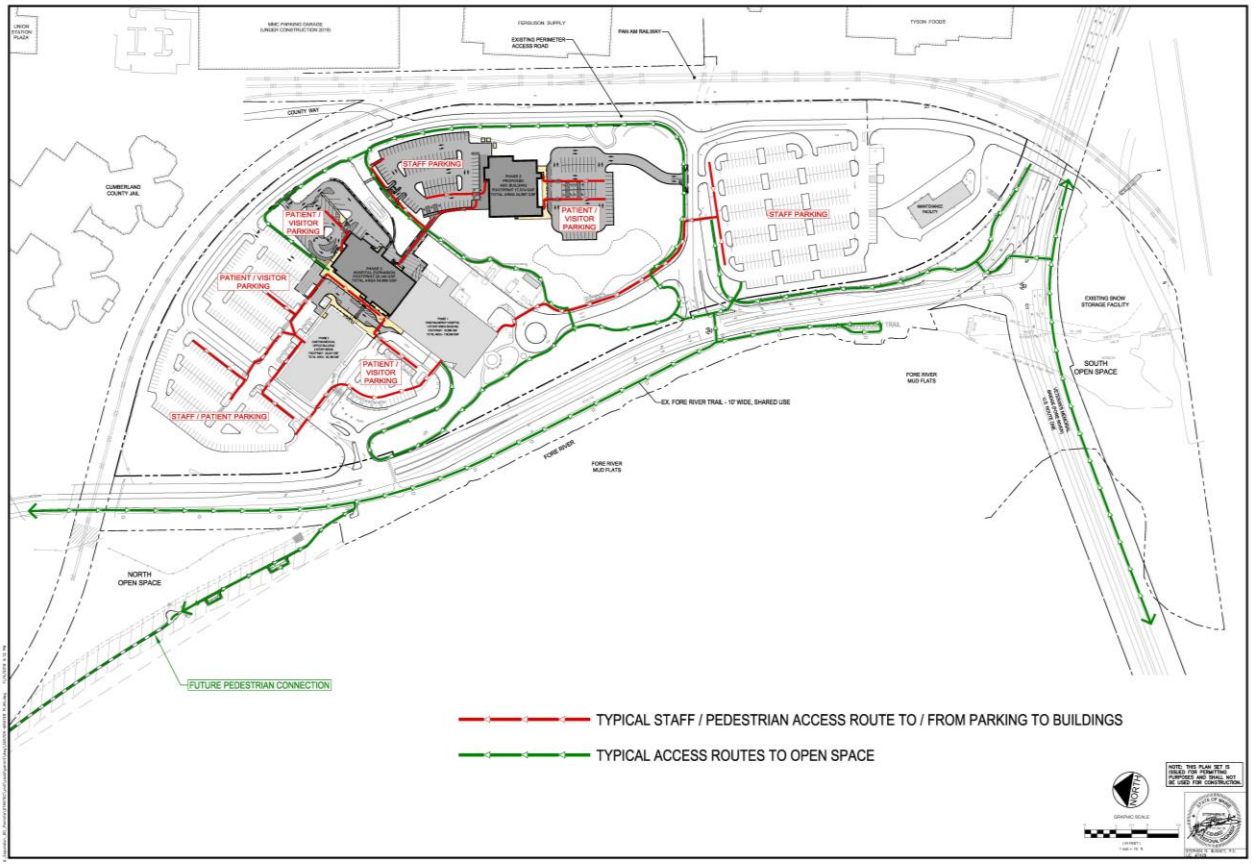

*Figures 8 and 9: Extract from Grading Plan (Plan 10) and at right from Landscape Plan (Plan 8)*

The proposals for landscape treatment and planting in and near the new surface parking lots are recommended to be enhanced to meet this and other CZA development standards as well as the site plan standards. The City Arborist has provided extensive detailed comments in *Attachment 1f*.

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 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.**

**REVIEW COMMENT:** The applicant has submitted a Pedestrian Circulation Plan as below and in *Plan 17*. This is still under review, but the Transportation Program Manager has commented that the proposals need further consideration to bring the design of the routes and walkways up to an acceptable standard (*Attachment 1e*). A further initial observation is that it does not include the new pedestrian links that would allow access to the revised bus stops shown in *Plan 18*.

***Figure 10: Pedestrian Circulation Plan (Plan 17)***




d. ***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.**

**REVIEW COMMENT:** The proposals generally meet this standard

e. ***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.**

**REVIEW COMMENT:** 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.

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.**

**REVIEW COMMENT:** As noted above, 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. The 2006 approval included a condition requiring:

> *The applicant shall provide a public access casement, in compliance with Para 6 of the Contract Zone Agreement, for the pedestrian trail and bike path network within the Mercy site (Fore River waterside trails; the loop trail around the wetland area; and the "front" trail that connects the two access drives but excluding the staff-only "spur'' path to the Phase 1 Hospital Building), to be approved by the Corporation Counsel; and*

A public access easement for a trail around the wetland was executed in 2008, with Portland Trails a party to the easement. The trail location surrounds the proposed ASC building and parking lots is shown in *Attachment 2e;* it would be impacted by the proposed ASC, parking and stormwater improvements.




***Figure 11: View towards site of the proposed ASC parking lot where the public access trail goes into the marsh area.***

The regraded stormwater wet pond that remains in the area of the wetland nearest to the Fore River Parkway is about .5 acre, though the updated Future Phases Master Plan graphic (*Attachment 16*) indicates that this would be the site of a building in the future with stormwater storage provided under the surface parking lots.

As noted above in relation the CZA Concept Plan, the loss of the wetland area is considered a key issue, especially as it does not appear to be justified in relation to the development program of Phase 2. Staff consider that part or all of the existing wetland area could and should be preserved in Phase 2 for the following reasons:

- The new stormwater system and associated regrading and engineering of the wetland area is only one option for addressing stormwater management. As noted in the Peer Engineer comments (*Attachment a2*), the option that includes placement of subsurface storage units under the new surface parking lots would minimize impacts on the wetland and be more consistent with the future phases;

- The MDEP and Army Corps permits for infilling of the wetland area (*Attachment C*) were based on a justification relating to an overall new development program of 250,000 sq ft (2 MOBs, 2 parking garages and the hospital addition). The current program is about 90,000 sq ft of new development and therefore is an amendment to the plans submitted to the MDEP in 2013; it may not fully justify the permits allowing filling of the wetlands;

- The applicant has indicated further development in the future phases plan *(Plan 16*) but its possible that some or all of the future phases do not get implemented. Staff suggest that any infilling of the pond should wait until there is a clear commitment to the development that may necessitate/justify such filling;

- As noted in the DPW comments *(Attachment a1*), the shape and location of the proposed surface parking lots could be modified to reduce impacts on the existing wetland area, the the ADA spaces could be reconfigured to reduce the size of the parking areas;

- As noted in the Traffic Engineer comments, the proposed parking supply appears above likely demand and does not take account of TDM strategies. Therefore, some of the wetland impacts result from a potential over supply of surface parking.

Staff suggest that the applicant should more fully justify the need for this scale of impact consistent with the language of the CZA, which places emphasis on sensitivity "to the need to preserve…natural features" and retain some part of the natural wetland area as an amenity with associated public trails, wildlife benefit and interest.

g. ***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 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.**

**REVIEW COMMENT:** The applicant has submitted elevations and floor plans of the hospital building addition and the ASC in *Plans 21-24*, along with renderings in *Plan 25*. 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 2d*) that were approved as a condition to the 2006 Site Plan approval to help achieve coordination of design details across the campus.




***Figure 12: Photo right:*** *looking at rear elevation of existing hospital, where addition would be added*



*Figure 13: Submitted rendering of the hospital extension*

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. Below the rooftop mechanicals are illustrated in the B/W elevations but have not been addressed fully in the renderings; given that this building is seen from a number of surrounding streets and can be viewed from a higher level, the visibility of these mechanicals is a concern.

*Figures 14/15: ACU Façade facing north (towards existing hospital)*



*Figures 16/17: ACU Façade facing west toward Fore River Parkway*



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.**

**REVIEW COMMENT:** 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 new buildings. The submissions are included in Plans 26-30.

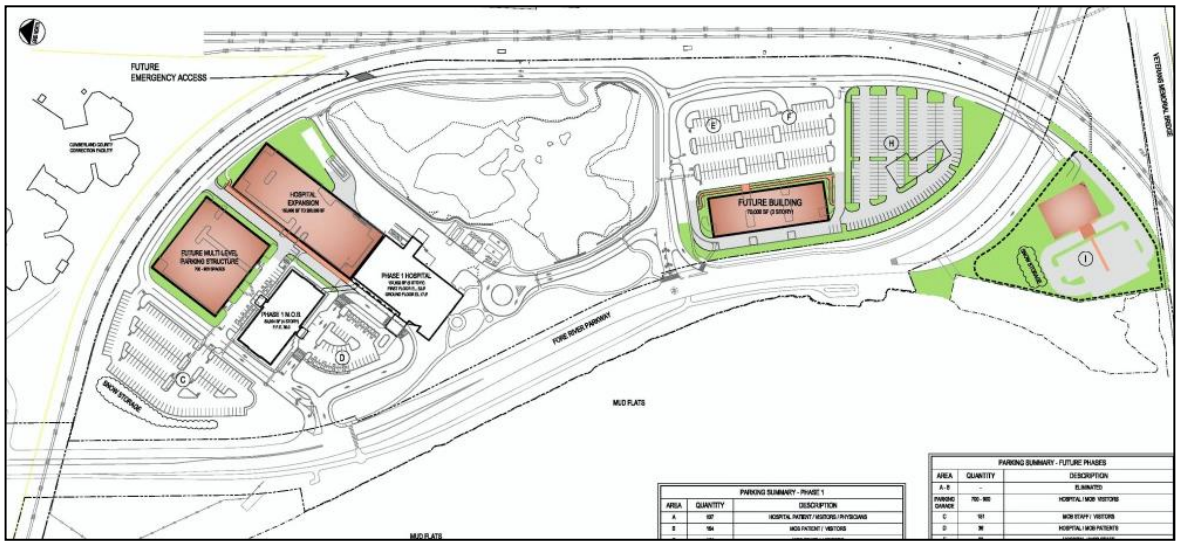
The ground level plans are still under review and there are some questions about whether the Wayfinding Plan and the other plans are consistent.

The proposed replacement and new building signage is generally acceptable except for the new sign on the hospital façade facing Fore River Parkway (where the Harry Davis sign is located). This sign replaces the word "Mercy" with "Northern Light Mercy Hospital" and the Design Review comments in *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. At that upper level the applicants propose adding a sign so that there is a large-scale sign on 3 of the 4 high level facades, so staff suggest that the one on the Fore River Parkway façade should be removed - or possibly replaced with just the new logo.

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 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.**

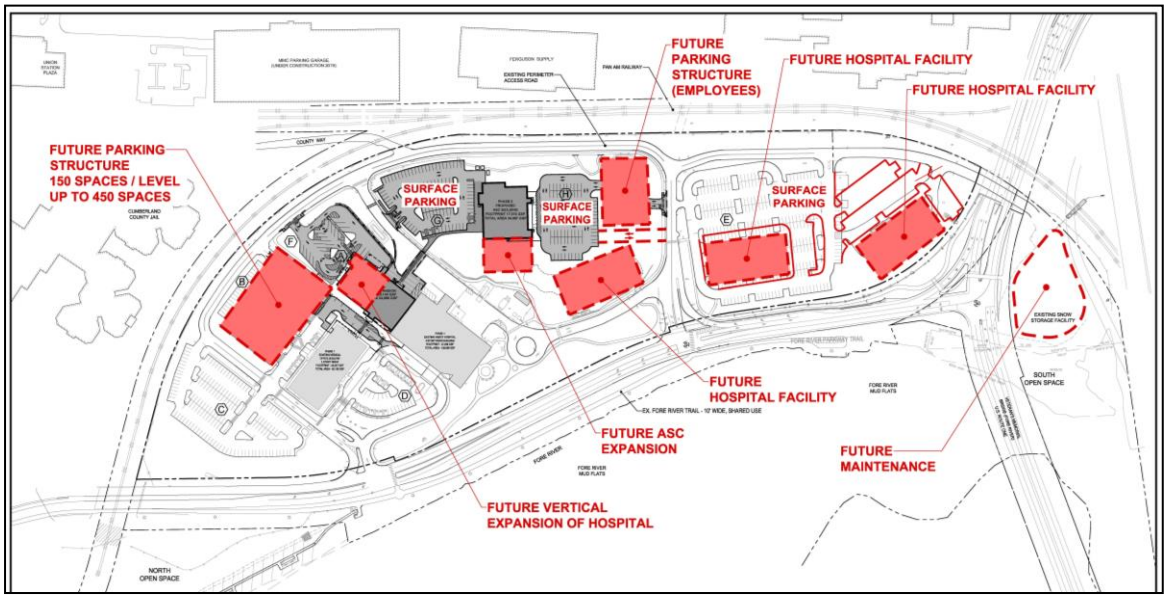
**REVIEW COMMENT:** Part of the 2006 Site Plan review included the review of a proposed Master Plan that the applicant developed to address this standard; the approved 2006 Master Plan is attached in *Attachment 2c and Plan 15*. The approved Master Plan contained graphics showing the anticipated future phases of overall campus development, along with landscape, pedestrian and traffic circulation and other plans showing how the future phases would be integrated. The Future Phases graphic is included below:

***Figure 18: Future Phases Plan Approved as part of Master Plan in 2006 (see Approval letter for 2006 Site Plan in Att. 2c***




The applicant has updated this graphic to incorporate the current Phase 2 under review and show how it would be part of the future campus- see below and in *Plan 16.*

***Figure 19: Proposed Future Phases Plan in 2019 proposed updated Master Plan (current review)***




Reviewers have noted that the future phases do not appear to be integrated with the proposed Phase 2 in terms of infrastructure, particularly regarding stormwater management and parking structures. The phasing discourages cost efficiencies and requires removing previous infrastructure to implement future phase infrastructure - see comments in *Attachments 1a.and 1b*.

There is a question as to whether the Future Phases Plan submitted with this site plan application (included above) is within the overall floorspace and trip generation maximums as allowed under the CZA, the original TMP and the State permits. The data for the approved Concept/Master Plans is noted in the table below, and further information is necessary to assess the submitted plan.

***Figure 20: 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 | Approx 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 | |

The language of the CZA does not require the Master Plan to be updated with every site plan application. However, given the loss of the wetlands and questions over the stormwater management and parking garages, staff recommend that an updating of the 2006 master plan would be appropriate.

2. *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:**
    - Maximum impervious surface ratio: Eighty (80) percent;
    - Maximum building height: Ninety (90) feet;
    - 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;
- Minimum side yards: Ten (10) feet;
- Minimum rear yard: Ten (10) feet;
- Pavement setback from lot boundaries: Fifteen (15) feet.

**REVIEW COMMENT:** The applicant has submitted a zoning analysis that confirms the proposals meet this standard.

## VIII ZONING ANALYSIS - Land Use Code Section Division 20 OFF-STREET PARKING

As noted above, the CZA is silent regarding the parking requirements and the Land Use Code applies. The applicant, at staff request, has submitted several documents outlining the existing and proposed parking, and how it relates to parking demand. The table below summarizes the parking data as it relates to overall parking spaces; within these numbers there is further information in the submissions regarding allocation of spaces to staff, patients, visitors and ambulances.

(See also the discussion below under Development Review)

***Figure 21: Summary of Parking Provision***

| *Buildings* | *Zoning requirement* | *Parking allowed by 2006 SP approval* | *Existing parking* | *Proposed parking this SP application* |
|---|---|---|---|---|
| Existing hospital | 276 | 783 | 762 (incl south lot) | 857 (incl south lot) |
| Existing MOB | 205 | | | |
| Expanded hospital subject of this review | 110 (additional) | | | |
| Proposed ASC (2 lots) | 87 | | | |
| Totals | 679 | 783 | 762 | 857 |

## VII DEVELOPMENT REVIEW

### 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
   The Traffic Engineering Reviewer has requested further information to evaluate the impacts of the proposals on the surrounding street system. The further information was recently received and is still under review (see comments in *Attachment 1c*).

2. Public Transit Access
   The applicant has submitted a Plan showing existing and future metro Routes and Stops (*Plan 18*). Further discussion is needed with METRO and reviewers in order to provide comments.

3. 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 needed to be avoided at this site and that the demand would justify parking provision substantially above the zoning requirement. This issue is still under review and may be relevant to the discussions about the impacts of the surface parking on the wetland area. DPW have also raised a concern in 1a that the ADA provision needs further consideration.

4. 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 staff look forward to working with the applicant on this plan and the development of accessible transit facilities.

**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 more of the existing wetland should be preserved. This comment is also supported by the Site Plan standards which state: "*The site plan shall preserve and protect significant natural features by incorporating them into site design.*"

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 wetpond 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. However, the comments note that the system is located where a new building is proposed as a future phase, and suggests that subsurface storage systems installed in the parking lot may be a better option as it would avoid constraining the future phases and would minimize impacts on the wetland area in the short term.

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

1. Availability and Adequate Capacity of Public Utilities - ability to serve letters have not yet been received by the applicant.

d) **Site Design Standards** - Exterior Lighting and Signage are the two standards that would apply, and a detailed review has not yet been completed.

## VI. NEXT STEPS

Suggested next steps include:

- Applicant to hold Neighborhood meeting
- City to provide further understanding of the implications of the CZA for the proposed development program and extent to which the prosed redevelopment is consistent with the CZA
- Applicant to reconsider extent to which the wetland area can be preserved, including the consideration of stormwater management alternatives, as guided by the Planning Board comments
- Applicant to further update the Master Plan and associated data, as directed by the Planning Board comments
- Determine a path forward and details of proposed building signage
- Applicant to address the detailed Planning Board and staff review comments including re landscape, pedestrian routes and design, rooftop mechanicals, vehicle and bicycle parking
- Applicant to submit TDM Plan
- Applicant to submit utility capacity letters

**ATTACHMENTS:**

**PLANNING BOARD MEMORANDUM ATTACHMENTS**

1. Staff Review Comments
    a. DPW Preliminary Review comments
    b. Peer Engineer Preliminary Review comments
    c. Traffic Engineering Reviewer Preliminary Review comments
    d. Design Review - Preliminary
    e. Transportation Program Manager Prelim Review comments
    f. City Arborist Preliminary Review comments
2. Background Documents
    a. Conditional Zoning Agreement 2001
    b. 2006 Site Plan PB approval Letter
    c. 2006 Approved Master Plan
    d. Private Development Restrictions 2006 (to meet condition of approval)
    e. Trail Easement (Public Access)
3. Public Comment
    (none received at time this Memo was completed)

**APPLICANT'S SUBMITTALS**

A. Cover Letter & checklist
B. Right, Title & Interest
C. State Permits
D. Project Description
E. Zoning Assessment
F. CZA Compliance
G. Site Plan Standards Compliance
H. Waivers
I. Financial Capacity
J. Technical Capacity
K. Traffic and Parking Information
L. TDM Narratives
M. Stormwater Management Report
N. Response letters with additional information
O. Construction Management Report

**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. Sitem Details
Plan 8. Landscape Plans and Details
Plan 9. Utility Plans and Details
Plan 10. Grading & Drainage Plans and Details
Plan 11. Erosion Control
Plan 12. Wet Pond Plans
Plan 13. Site Sections
Plan 14. Stormwater Plans

Plan 15. CZA Compliance 2006 Master Plan Graphics
Plan 16. CZA Compliance 2019 Future Phases Graphics
Plan 17. CZA Compliance 2019 Open Space, Ped Circulation & Access
Plan 18. CZA Compliance 2019 Metro Bus Routes and Stops
Plan 19. CZA Compliance 2019 Figures
Plan 20. CZA Compliance 2019 Photos

Plan 21. Hospital Addition Elevations
Plan 22. Hospital Addition Floor Plans
Plan 23. ASC Elevations

Plan 24. ASC Floor Plans
Plan 25. Renderings of new buildings
Plan 26. Proposed Signage Replacement and new on Existing Buildings
Plan 27. Proposed Signage New Building
Plan 28. Proposed Signage on Ground Replacement for Existing
Plan 29. Proposed Signage on Ground for new buildings and areas
Plan 30. Wayfinding Plan

Portland Maine | Yes. Google's good here.

Jean Fraser <jf@portlandmaine.gov>

# Mercy - 175 Fore River Parkway

1 message

**Mike Tremblay** <mtremblay@portlandmaine.gov> Wed, Nov 20, 2019 at 2:29 PM
To: Jean Fraser <jf@portlandmaine.gov>

Jean,

Here are my initial comments on the Mercy Hospital project - 175 Fore River Parkway. I am primarily reviewing plans uploaded 8/30.

- The proposed site plan, as a whole, has a significant impact on existing wetlands. These wetlands are impacted so that surface parking lots can be constructed. In the short term, only surface lots are proposed, which necessitates a significant footprint dedicated to parking. Additionally, the parking lot south of the new ambulatory surgery center is not shaped optimally to avoid affecting the existing wet pond; it could be reshaped to be longer and leaner, extending closer to the access road serving Fore River Parkway and impeding less on the existing wet pond. If the project proceeds with only surface parking lots, the current phase should minimize impacts to existing stormwater management areas as feasible within the approved master plan.

- Future phases of the project propose parking structures at several locations on the Mercy Hospital campus. Proceeding to construct surface parking lots as proposed presents a situation where future phases are reliant on the construction of multiple parking structures, which will make these phases disproportionately costly and thus somewhat less likely, which may result in a situation where the final site layout is substantially different, with more surface parking and with a smaller building program, than what was originally approved in the master plan. As such, DPW recommends that parking structures be incrementally constructed with each phase of the project so as to reduce the immediate impact of surface parking on stormwater management areas/wetlands.

- If the proposed surface lot south of the ambulatory surgery center is constructed, the stormwater storage tanks proposed in the master plan should be constructed simultaneously. Not doing so would require reconstruction of this parking lot in the future and making it less likely that the stormwater management strategies in approved master plan are implemented as approved.

-The accessible spaces that are provided in each parking area, with the exception of the northernmost lot, adjacent to the hospital expansion, are larger than required by ADA. At least 10% of visitor spaces are required to be accessible, with at least 1/6 of accessible spaces sized for van accessibility. DPW acknowledges that the Applicant may prefer to have more and wider ADA spaces than required, but justification should be provided.
--- At the southernmost lot, south of the ambulatory surgery center, the correct number of accessible spaces (8) are provided, but all of them are van accessible when only 2 of them are required to be such. Additionally, the width of the parking spaces and clear areas are 1 foot wider than required for van accessibility. This results in excessive width that is the equivalent of two parking spaces. These two spaces represent approximately 325sf of impervious area that could be reallocated to permeable planted areas and/or stormwater treatment.
--- At the centermost lot, north of the ambulatory surgery center (which is dedicated to staff/service and not visitors/patients), the correct number of accessible spaces (5) are provided; however, all of these are shown as van-accessible spaces, with 9-foot widths and 9-foot clear areas, similar to the southernmost lot. This excess width is the equivalent of one standard-sized parking space near the north end of this lot, plus an additional 200 SF split between the two accessible parking areas.

- Some or all of the larger painted hatched areas in the northernmost parking lot could feasibly be landscaped, particularly those adjacent to proposed landscaped areas.

Please let me know if I missed anything we discussed previously.

-Mike

Mike Tremblay, P.E.
Senior Engineer

Portland Maine | Yes. Google's good here.

Jean Fraser <jf@portlandmaine.gov>

# 175 Fore River Parkway Peer Review

1 message

**Lauren Swett** <lswett@woodardcurran.com> Thu, Nov 21, 2019 at 9:11 AM
To: Jean Fraser <jf@portlandmaine.gov>

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

41 Hutchins Drive

Portland, Maine 04102

Portland Maine | Yes. Google's good here.

Jean Fraser <jf@portlandmaine.gov>

# Mercy Hospital - Traffic and Parking Status Comments

1 message

**Tom Errico** <thomas.errico@tylin.com> Thu, Nov 21, 2019 at 11:36 AM
To: Jean Fraser <jf@portlandmaine.gov>
Cc: Bruce Hyman <bhyman@portlandmaine.gov>, Michael Tremblay <mtremblay@portlandmaine.gov>, Jeremiah Bartlett <JBartlett@portlandmaine.gov>

Hi Jean – This following is a status update of comments provided on October 24, 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.**

- 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.**

- 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.**

- 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.**

- 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**

- 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 |

If you have any questions, please contact me.

Best regards,

Thomas A. Errico, PE
Senior Associate
Traffic Engineering Director
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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:** Monday, November 4 2019

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, Jean Fraser, Planner, and James Rather, Development Review Manager 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: Staff review finds the scale, texture, colors, and massing of the building addition are referential of the original hospital building and relate in a coordinated way (using red brick, cultured stone). The addition is to the rear of the site and not prominent or visible from public ways. The building is placed to have a strong pedestrian connection to the neighboring office building. The massing of the addition is limited by the function of hospital buildings and there is little room for flexibility on the scale and massing. That being said, the addition is deferential to the original hospital building and compliments the original architecture in form, regulating lines, materials and character.
- ASU: Staff find the building to be coordinated in the scale, texture, colors, and massing. The building is only two stories, again regulated by the functional needs of the surgery center. Some massing variation is provided and the window and material placement gives further visual interest. The building placement is somewhat separated from the hospital complex – the orientation and main entrance face towards Fore River Parkway with staff and functional entrances to the rear connected to the parking. The people using this building will not have need to connect with the other buildings on the site and so the physical placement apart is acceptable to accommodate the circulation and parking needs.

***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 signage should be consistent in its design (layout, lettering, colors, scale) across the building. Staff do not find the sign on the Fore River Parkway façade to meet the standard – 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). This sign should either be removed or revised to relate to the façade it occupies.
- ASU: 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 sign should be scaled down to better related to the portion of the building.

***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: The applicant has adequately demonstrated through the renderings that the addition strengthens the connection and inter-relationship between the hospital functions and the office building while remaining secondary to the original hospital building in scale and as it relates to the public ways and orienting visitors to the entrances. The addition is aesthetically cohesive in material selection, placement, massing, and fenestration to the Phase I development. Regarding the contextual relationship, this campus is mostly in isolation - the nearest context is predominantly institutional and industrial buildings. Staff determined that relating internally to the campus is the most relevant context for architectural design. The hospital addition is low in height and to the rear of the existing buildings and has little bearing on

neighboring properties or public ways – long views and views from the public ways are not impacted.

- ASU: This is a two-story building with orientation towards the street. The placement, though not ideal, is acceptable given the orientation to the street and the functional needs regarding the parking and circulation. The façade composition and massing provide some visual interest and the material palette relates to the campus vocabulary while remaining more contemporary and is physically set apart from the hospital buildings. Staff determined this building to relate and be consistent with the campus aesthetic. 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. 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. Staff recommend that the design of these rooftop systems be better integrated into the overall design.

Portland Maine | Yes. Google's good here.

Jean Fraser <jf@portlandmaine.gov>

# PL820-2019 Mercy Hospital Phase II

1 message

**Bruce Hyman** <bhyman@portlandmaine.gov> Thu, Nov 21, 2019 at 2:27 PM
To: Jean Fraser <jf@portlandmaine.gov>
Cc: Tom Errico <thomas.errico@tylin.com>, Michael Tremblay <mtremblay@portlandmaine.gov>, James Rather <jrather@portlandmaine.gov>

Good afternoon, Jean,

Below are my preliminary comments on the materials submitted to date for the Planning Board Workshop on November 26th. More comments may be forthcoming.

Site Plan

- The main pedestrian access route from the newly developed ASC and parking lots to the Phase II hospital building is fair to poor in terms of its quality and the expanse of open pavement and 'back of house' operations it must traverse.
- To further incentivize bicycling and walking for commuting and physical activity purposes, it is recommended that Rectangular Rapid Flashing Beacons be provided at the westerly unsignalized entrance to the campus from the Fore River Parkway Trail shared use pathway.
- Enhancements (landscaping/trees/width/materials) to the planning and existing sidewalk/pedestrian network from the parking lots to building entrances should be contemplated to increase the quality of experience to help mitigate the long walking distances required by the automobile orientation of the campus.

Bike Rack Waiver

- The extent of the waiver requested is unclear and the existing bike racks on site would not meet our existing Technical Manual requirement for the quality of bicycle parking. Additional bicycle parking will be required of a different type and quality than the existing 'ribbon racks' currently provided.

Transportation Demand Management

- I understand an updated Transportation Demand Management Plan is in progress that will meet TDM Plan requirements outlined in the Technical Manual. We look forward to working with the applicant on this plan.

Please don't hesitate to contact me if you, the Planning Board or the applicant team have any questions.

Bruce
--
Bruce Hyman
Transportation Program Manager

Department of Planning & Urban Development
389 Congress Street
Portland, Maine 04101
(207) 874-8717 phone

bhyman@portlandmaine.gov
http://www.portlandmaine.gov/1363/Transportation-Division
http://www.portlandmaine.gov
*Yes! Transportation's Good Here ....*

Portland Maine Yes. Google's good here.

Jean Fraser <jf@portlandmaine.gov>

# Fwd: URGENT - PB memo on Mercy Phase 2 goes to PB in 3 hours and I need your comments please!!!

1 message

**Jean Fraser** <jf@portlandmaine.gov> Thu, Nov 21, 2019 at 4:03 PM
To: "Fraser, Jean" <jf@portlandmaine.gov>

## *CITY ARBORIST PRELIMINARY COMMENTS*

---------- Forwarded message ---------
From: **Jeff Tarling** <jst@portlandmaine.gov>
Date: Thu, Nov 21, 2019 at 3:12 PM
Subject: Re: URGENT - PB memo on Mercy Phase 2 goes to PB in 3 hours and I need your comments please!!!
To: Jean Fraser <jf@portlandmaine.gov>
Cc: Michael Tremblay <mtremblay@portlandmaine.gov>, Cameron, Caitlin <ccameron@portlandmaine.gov>, Hyman, Bruce <bhyman@portlandmaine.gov>

Jean -

In review of the proposed 'Fore River Campus Plan for Mercy Hospital' tree and landscape plan offer the following recommendations:

We note that this phase is challenging to meet the earlier project standards, the next phase of construction and future development for this site. Adapting what has worked well for this important facility with regards to the standards that have been set is important. The known values of human health related to greenery has recently been widely acclaimed, thus we would urge the Mercy campus to look at not only the required trees and landscape and consider the added value to healing. This aspect of landscape is highly valuble for hospitals and care facilities.

http://www.naturewithin.info/

a) Surface Parking - The surface parking to the South of the proposed Phase 2 Ambulatory Surgery Center should receive similar landscape tree & shrub planting as the nearby existing parking lot. Recommendations consider parking lot isle terminus trees and islands, parking lot landscape should meet the master plan criteria set in the original design and meet City of Portland parking lot landscape in regards to tree & shrub density. The parking lot to the north appears to have islands with trees and landscape.

b) Landscape areas listed as 'Low Maintenance'. Would recommend taking a second look at the appearance of the areas listed as 'Low Maintenance', we have seen the prescribed 'New England Wetland Mix' which takes a few seasons to mature, thus recommend a more robust approach given the high visibility from the Fore River Parkway. The extra landscape treatment might include groves of smaller sized trees & shrubs. This would be in keeping with other temporary sites that are on-hold for future development. Examples include Hampton Inn, PMA on Spring Street where temporary trees and landscape fill the void until future development takes place.
We can advise on strategies for a relatively 'low cost' approach to the 'low maintenance areas'.

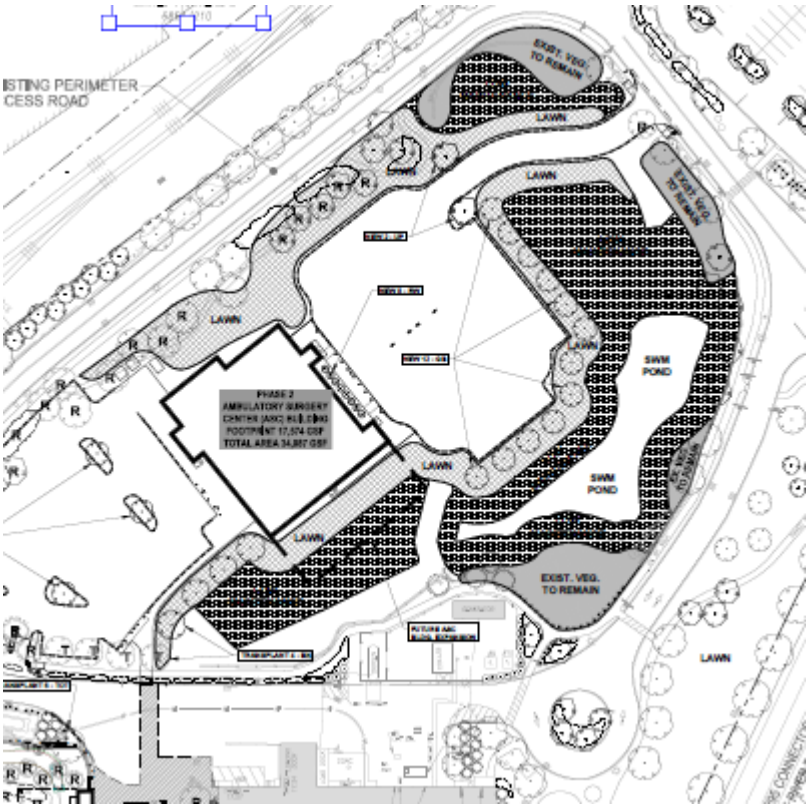
We strongly recommend that the SWM Pond be treated as an important visual and functioning amenity and attemps should be made to make this feel like a natural wetland / pond area.

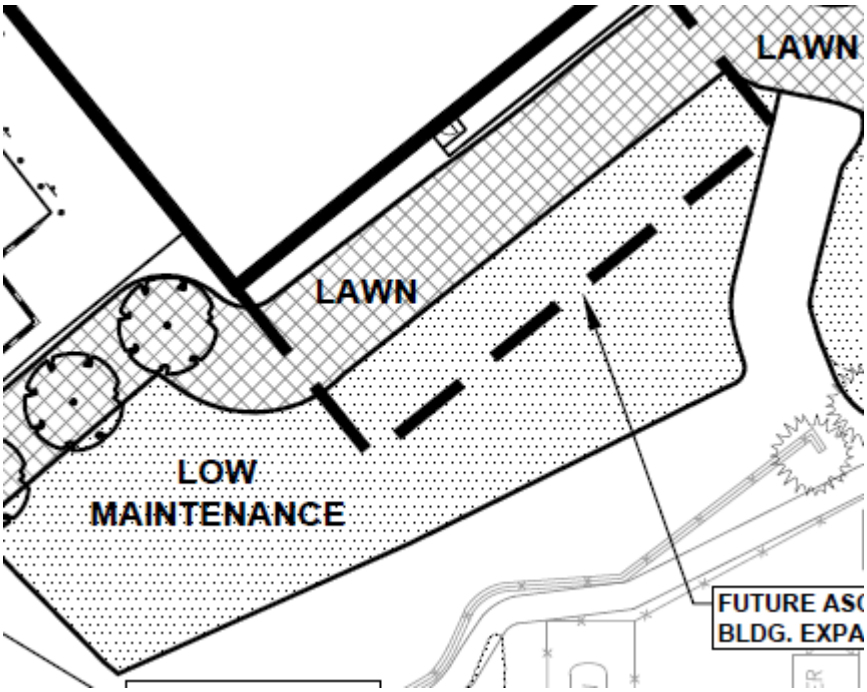
c) Parking lot screening - the parking lot on the south side of the proposed new building near the SWM Pond should be adequately buffered from the Fore River Parkway. This might include: wood guardrail fencing, groves or clumps of shrubbery that would tie into the 'Low Maintenance' and SWM Pond area. This perhaps the most notable landscape feature absent in the proposed plan due to the grade change between the parking lot and roadway.

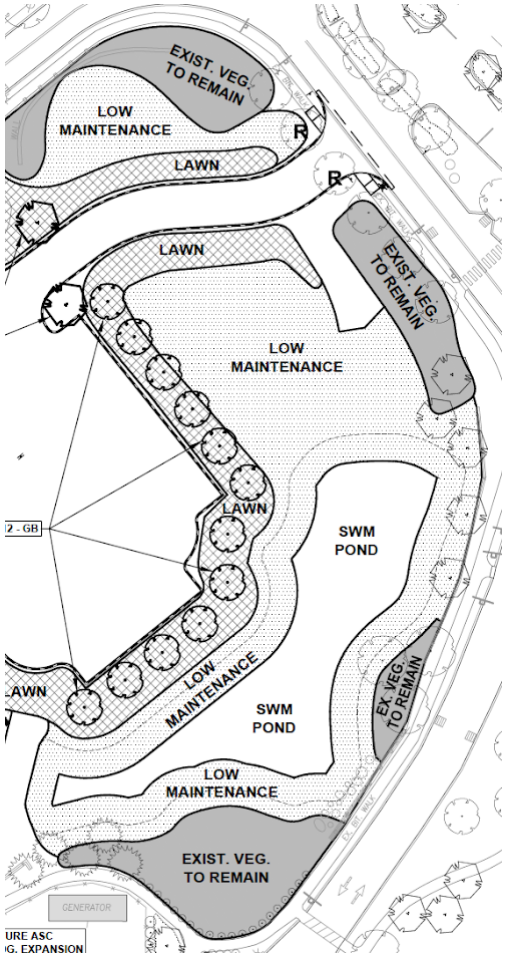
d) Existing Veg To Remain (tree save0 areas - all of the areas shown as 'Exist. Veg. To Remain' should be inspected for invasive plants that should be removed, and the areas fenced off during construction.

e) Landscape Notes & Planting Plan - As the project progresses the landscape notes and planting plan should be refined to reflect this particular project.  The landscape plan should include tree and shrub names, size, quantities and location.

f) Missing trees - since the first phase most of the trees that line the Fore River Parkway have been removed likely impacted by the change in grades or drainage.  This phase should review the missing trees and consider replacement. The project team can work with the City Arborist and Planning staff to evaluate recommendations.






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

*[Text of signed Agreement, updated to reflect minor word change made in June 2002]*

**CONTRACT ZONE AGREEMENT**
**BETWEEN**
**CITY OF PORTLAND**
**AND**
**MERCY HOSPITAL**

**AGREEMENT** made this 3rd day of December, 2001 by and between the **CITY OF PORTLAND**, a body corporate and politic, located in Cumberland County and State of Maine (hereinafter the "**CITY**") and **MERCY HOSPITAL**, a nonprofit corporation located in the City of Portland and **MERCY HEALTH SYSTEM OF MAINE**, a nonprofit corporation located in the City of Portland (hereinafter collectively "**MERCY**").

**W I T N E S S E T H**

**WHEREAS, MERCY** has determined that it can no longer meet the long term needs of the community from its 144 State Street location; and

**WHEREAS, MERCY** has located a Portland site, a contiguous tract of land (called the Fore River Site) large enough to meet **MERCY'S** long term needs (including a mix of uses both taxable and tax-exempt) while being easily accessible and convenient to doctors, public transportation, and the Maine Medical Center; and

**WHEREAS, MERCY** requested a rezoning of the Fore River Site (also referred to herein as the "**PROPERTY**"), which is located in Portland at Map 73, Block A, Lot 1; Map 73, Block B, Lot 2; Map 74, Block A, Lot 1; Map 75, Block A, Lot 3; and Map 75, Block A, Lot 33, in order to permit the establishment and operation of a hospital campus on up to 42 acres of land; and

**WHEREAS**, the Planning Board of the City of Portland, pursuant to 30-A M.R.S.A. § 4352(8) and Portland City Code §§ 14-60 to 14-62 and 14-264, and after notice and hearing and due deliberation thereon, recommended the rezoning of the **PROPERTY** as aforesaid, subject, however, to certain conditions; and

**WHEREAS**, the **CITY** by and through its City Council has determined that said rezoning would be and is pursuant to and consistent with the **CITY'S** comprehensive land use plan and consistent with the purposes of the I-H zone and its existing and permitted uses; and

**WHEREAS**, the **CITY** has determined that the proposed development will be designed and operated so that it will prevent undue adverse environmental impacts, substantial diminution of the value or utility of neighboring structures, or significant hazards to the health or safety of neighboring residents by controlling noise levels, emissions, traffic, lighting, odors, and any other potential negative impacts of the proposal; and

**WHEREAS**, the **CITY** has determined that because of the unusual nature and unique location of the proposed development it is necessary and appropriate to impose by agreement the following conditions and restrictions in order to ensure that the rezoning is consistent with the **CITY'S** comprehensive land use plan; and

**WHEREAS**, the **CITY** authorized the execution of this Agreement on December 3, 2001;

**NOW, THEREFORE,** in consideration of the mutual promises made by each party to the other, the parties covenant and agree as follows:

1. Effective upon the recording of deeds transferring title ownership from Merrill Industries, Inc. and Portland Terminal Company to **MERCY** and receipt by the

**CITY** of a statement from **MERCY** that **MERCY** has so recorded said deeds, the **CITY** hereby amends the Zoning Map of the City of Portland, dated December 2000, as amended and on file in the Department of Planning and Urban Development, and incorporated by reference into the Zoning Ordinance by § 14-49 of the Portland City Code, by adopting the map change amendment shown on Attachment 1, and by designating the **PROPERTY** a Helistop Overlay Zone limited to a single helistop; provided however, that this contract rezoning shall become null and void, and the **PROPERTY** shall revert to the I-H zone, in the event that **MERCY** fails to acquire said **PROPERTY** before August 1, 2003. The **CITY** shall not issue **MERCY** any building permits until **MERCY** has purchased the **PROPERTY**.

2. *Permitted Uses.* **MERCY** shall be authorized to establish and maintain the following uses on the **PROPERTY**:

    a. Hospitals, clinics, and medical research facilities.

    b. Community living arrangements, congregate care facilities, intermediate care facilities, long term or extended care facilities, and sheltered care group homes.

    c. Office complexes and professional offices.

    d. Day care facilities and adult day care facilities.

    e. Exercise and fitness centers and health clubs.

    f. Personal services, restaurants, and retail establishments of no more than 50,000 square feet, except that there shall be no drive through facilities.

    g. Dwellings, hotels, motels, inns, and rooming units; and lodging houses for hospital or clinic employees or volunteers and patients' family members.

    h. Teaching centers.

    i. Accessory uses, including, but not limited to, parking facilities and structures, utility services, stormwater management systems, and site amenities.

    The uses listed in subparagraphs e, f, and g shall be related and complementary to the medical uses of the site.

3. The uses on the **PROPERTY** will be within multiple buildings to be constructed in phases, some owned by **MERCY** and some owned by others. The new structures will be a mix of single and multi-level buildings developed in a campus-like setting. The buildings may be freestanding or linked, depending upon the phasing and ultimate development program proposed.

4. The first phase of construction will include a medical office building, which may be built concurrently with an ambulatory care facility. The medical office building, its associated land, and its personal property shall be taxed based on a market value of, at minimum, $7.5 million dollars. The hospital shall be built in either the first or second phase of construction.

5. A portion of the **PROPERTY** will be transferred to the Maine Department of Transportation's ("MDOT") for its construction of the proposed Commercial Street Connector roadway (hereinafter referred to as the "**CONNECTOR**").

6. Upon its purchase of the **PROPERTY**, **MERCY** shall record in the Cumberland County Registry of Deeds a deed granting to the **CITY** an easement in perpetuity over the portion of the PROPOERT identified as "Open space' on Attachment 2, which easement shall grant to the public access to such Open Space for recreational activities during daylight hours.

   Such open space may be used in the calculation of the impervious surface requirements contained in paragraph 11 of this Agreement.

   In addition, MERCY shall cooperate with the City in the creation of a pedestrian trail and bike path at least along the perimeter of the **PROPERTY** as shown, generally, on Attachment 2. Once the location of the pedestrian trail and bike path is determined, **MERCY** shall record in the Cumberland County Registry of Deeds a deed granting to the **CITY** an easement in perpetuity for the benefit of the public, which easement shall grant access along and over such path and trail for recreational activities during daylight hours and when trails are customarily available to the public for such use, covering all portions of such path and trail located on land not owned by MDOT.

   These easements shall be subject to the review and approval of the Corporation Counsel's Office.

7. For purposes of calculating impervious surface required in paragraph 11 below, land separated by the MDOT **CONNECTOR** may be included, but any intertidal lands shall not be included in said calculation.

8. Access to the **PROPERTY** via County Way shall be permitted for service vehicles only provided that **MERCY** demonstrates to the **CITY'S** Traffic Engineer that County Way provides an adequate level of service to the **PROPERTY** and **MERCY** provides evidence of its right, title or interest to access said street.

9. For purposes of front yard setbacks, the front yard for each building developed on the **PROPERTY** shall have as the front yard the area between the building and the **CONNECTOR**.

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.

10. *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:

    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 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**.

    b. *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.

    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 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.

    d. *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.

e. *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.

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.

g. *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 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.

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.

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 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.

11. *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 impervious 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.

12. The provisions of this Agreement, including the permitted uses listed in paragraph 2, are intended to replace the uses and requirements of the underlying I-H zone.

13. Pursuant to Code § 14-264(d), all development plans shall include complete information of processes, materials, or methods of storage to be used by the development and shall specify how hazardous impacts to neighboring properties will be prevented.

The above stated restrictions, provisions, and conditions are an essential part of the rezoning, shall run with the **PROPERTY**, shall bind and benefit **MERCY**, any entity affiliated with **MERCY** that takes title to the **PROPERTY**, their successors and assigns, and any party in possession or occupancy of said **PROPERTY** or any part thereof, and shall inure to the benefit of and be enforceable by the **CITY**, by and through its duly authorized representatives. **MERCY** shall file a copy of this Agreement in the Cumberland County Registry of Deeds, along with a reference to the Book and Page locations of the deeds for the **PROPERTY**.

If any of the restrictions, provisions, conditions, or portions thereof set forth herein is for any reason held invalid or unconstitutional by any court of competent jurisdiction, such portion shall be deemed as a separate, distinct, and independent provision and such determination shall not affect the validity of the remaining portions hereof.

MERCY agrees not to challenge the legality of the provisions contained within paragraph 4 of this contract.

Except as expressly modified herein, the development, use, and occupancy of the subject premises shall be governed by and comply with the provisions of the Land Use Code of the City of Portland and any applicable amendments thereto or replacement thereof.

In the event that **MERCY** or any successor fails to continue to utilize the **PROPERTY** in accordance with this Agreement, or in the event of a breach of any condition(s) set forth in this Agreement, the Planning Board shall have the authority, after hearing, to resolve the issue resulting in the breach. The resolution may include a recommendation to the City Council that the site be rezoned to only I-H or any successor zone and that the Agreement be terminated, requiring a cessation of the hospital campus use.

**WITNESS:** **CITY OF PORTLAND**

_____ By_____
Joseph E. Gray
City Manager

**WITNESS:** **MERCY HOSPITAL**

_____ By_____
Howard Buckley
President and CEO

**WITNESS:** **MERCY HEALTH SYSTEM OF MAINE**

_____ By_____
Howard Buckley
President and CEO

STATE OF MAINE
CUMBERLAND, ss. Date: _____, 2001

Personally appeared before me the above-named Joseph E. Gray, in his capacity as City Manager, and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of the City of Portland.

Before me,

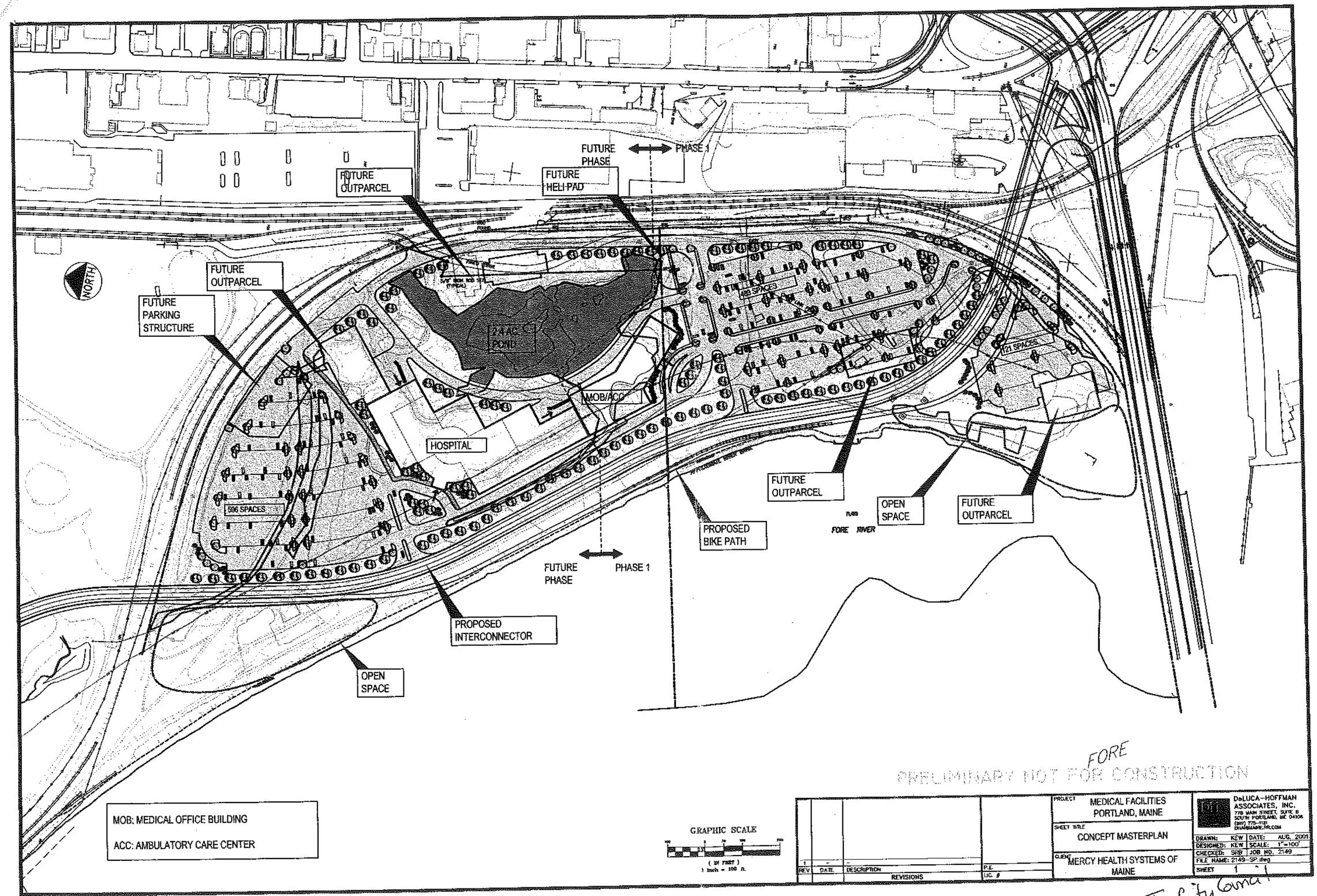
_____
Notary Public/Attorney at Law

STATE OF MAINE
CUMBERLAND, ss. Date: _____, 2001

Personally appeared before me the above-named Howard Buckley, in his capacity as President and CEO, and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of Mercy Hospital and Mercy Health System of Maine, Inc.

Before me,

_____
Notary Public/Attorney at Law




FORE

PRELIMINARY NOT FOR CONSTRUCTION

| REV | DATE | DESCRIPTION | P.E. LIC. # |
|---|---|---|---|
| 1 | -- | -- | |

REVISIONS

PROJECT: MEDICAL FACILITIES PORTLAND, MAINE

SHEET TITLE: CONCEPT MASTERPLAN

CLIENT: MERCY HEALTH SYSTEMS OF MAINE

DeLUCA–HOFFMAN ASSOCIATES, INC.
778 MAIN STREET, SUITE 8
SOUTH PORTLAND, ME 04106
(207) 775-1121
DHA@MAINE.RR.COM

| | | | |
|---|---|---|---|
| DRAWN: | KEW | DATE: | AUG. 2001 |
| DESIGNED: | KEW | SCALE: | 1"=100' |
| CHECKED: | SRB | JOB NO. | 2149 |
| FILE NAME: 2149-SP.dwg | | | |
| SHEET | 1 | | |

To City Council

# CITY OF PORTLAND, MAINE
# PLANNING BOARD

Kevin Beal, Chair
Michael Patterson, Vice Chair
John Anton
Lee Lowry III
Shalom Odokara
David Silk
Janice E. Tevanian

August 22, 2006

Mr. Stephen R. Bushey, PE
DeLuca Hoffman Associates Inc.
778 Main Street- Suite 8
South Portland, ME. 04106

Mr. Tim Prince
Vice President Planning & Ancillary Affairs
Mercy Hospital
144 State Street
Portland, ME 04101

**RE: Mercy Hospital Master Plan**
**Mercy Hospital Development Project – Phase 1**
**Vicinity of Fore River**
**Application ID Number: 2005-0192; Chart 073, Block A, Lot 1001**

Dear Mr. Bushey and Mr. Prince,

On August 8, 2006, the Portland Planning Board considered Mercy Hospital's revised Master Plan (July, 2006) and its Phase 1 proposals for a 137,832 square foot short stay Hospital Building, an 80,054 square foot Medical Office Building, 783 parking spaces and associated access, servicing, landscaping and other site features. Approval was granted for the project by the following motions:

On the basis of the Revised Master Plan, site plans and materials submitted by the applicant and on the basis of information contained in Planning Report #43-06 relevant to standards for site plan regulations set forth in or authorized by the City of Portland Code of Ordinances and the requirements of the Contract Zone Agreement, and other findings as follows:

1. The Planning Board voted 5-0 (Odokara and Anton absent) that the Revised Master Plan dated July 2006 is in conformance with the Contract Zone Agreement of 2001, subject to the following conditions of approval:

    i. That the applicant prepare and submit a Private Development Restriction document, as required by Clause 10i of the Contract Zone Agreement, which document shall be reviewed and approved by the Planning Authority; and

    ii. That the applicant shall submit to the Planning Board a Traffic Study for each phase of development (beyond the initial phase) that comports with the requirements of a Traffic Movement Permit; and

iii. That the Planning Board's approval of the Revised Master Plan does not limit the City's right to require additional site features and amenities (so far not identified or shown in the Revised Master Plan) in connection with any future Site Plan or Subdivision application for this site.

2. The Planning Board voted 5-0 (Odokara and Anton absent) to waive the City's Technical Standard (Section III 3 A which requires parking spaces to measure 19 feet by 9 feet) to allow a total of 303 parking spaces within the first phase of the Mercy Hospital development to be 18 feet in length.

3. The Planning Board voted 5-0 (Odakara and Anton absent) to waive the City's Technical Standard (Section XV 4 C relative to light pole fixture height) to allow the light pole heights to be 25 feet in the parking areas and 30 feet at the drive aisles, as shown in the plan.

4. The Planning Board voted 5-0 (Odakara and Anton absent) that the plan is in conformance with the Site Plan standards of the Land Use Code, subject to the following conditions of approval:

   i. The applicant shall amend the survey, for review and approval by the City Engineer, so that it is tied to the vertical datum of NGVD 1929 and into the Maine State Plane Coordinate System (2-zone projection), West Zone using the NAD1983(HARN) Datum and the U.S. Survey Foot as the unit of measure; and

   ii. That the applicant shall conduct a post-occupancy Parking Demand Study that documents actual field conditions for review and approval by the City. The scope of the Study shall be coordinated and approved by the City. If the Study identifies deficiencies, the applicant shall be responsible for developing a plan that addresses the problem, as approved by the City; and

   iii. That the applicant shall implement the submitted Transportation /Travel Demand Management Plan (TDM Plan) within one month from the issuance of the Certificate of Occupancy for the Phase 1 Hospital (short stay); and

   iv. The applicant shall submit an annual TDM report that outlines the program for review and approval by the Planning Authority, with an initial report submitted within 12 months following the issuance of the Certificate of Occupancy for the Phase 1 Hospital (short stay). The report shall summarize the current program elements and participation in the program. The TDM monitoring program shall be conducted in parallel with the Parking Monitoring Study, with the scope of the Study agreed with the Planning Authority prior to conducting the Study; and

   v. That the applicant shall continue to meet with METRO and use its best endeavors to ensure a reasonable public transit service is in operation to service the site prior to the issuance of the Certificate of Occupancy for the Phase 1 Hospital (short stay); and

   vi. That the applicant shall submit for review and approval by the Planning Authority, revisions related to traffic signs and road markings, the detail of several crosswalks, and annotations related to future signal installation to address the items 11-15 and 17-21 of Tom Errico's comments of August 3, 2006; and

vii. The applicant shall revise the site plan to show the location of bike racks and staff shower facilities on the site; and

viii. That no more than 783 parking spaces may be built and/or provided within Phase 1 of the Mercy Development; and

ix. That the applicant shall install on the site all of the planting and landscaping shown in Plans LP101, LP102, LP103, LP201 and LP202 within one year of the issuance of the Certificate of Occupancy for the first completed building; and

x. That the applicant shall submit revised plans for review and approval by the Planning Authority which clearly show the details and extent of tree preservation, protection methods, and other requirements. The submission should include a Tree Protection and Vegetation Management Plan that clearly identifies these elements; and

xi. That the applicant shall submit, for review and approval by the Planning Authority, further planting information and details to address the comments in the Memorandum from Pat Carroll dated August 2, 2006 and the e-mailed Recommendation from Jeff Tarling dated August 3, 2006; and

xii. That the applicant shall submit further information regarding lighting levels and submit revisions as necessary for review and approval by the Planning Authority; and

xiii. That the applicant shall submit, for review and approval by the Planning Authority, the elevations, materials and other information in respect of the maintenance building shown on the site plan; and

xiv. That the applicant shall submit revised plans, for the review and approval by the Planning Authority, to achieve improved screening and integration of the service area, and associated tanks, structures and apparatus, through baffles and relocation of planting; and

xv. That the applicant shall submit, for the review and approval by the Planning Authority, the complete information of processes, materials, or methods of storage to be used by the development and specify how hazardous impacts to neighboring properties will be prevented (as required in para 13 of the Contract Zone Agreement); and

xvi. The storage of compressed gases shall comply with NFPA 55, and the applicant shall provide a compliance letter from a design professional to the Fire Department; and

xvii. The applicant shall provide a public access easement, in compliance with Para 6 of the Contract Zone Agreement, for the pedestrian trail and bike path network within the Mercy site (Fore River waterside trails; the loop trail around the wetland area; and the "front" trail that connects the two access drives but excluding the staff-only "spur" path to the Phase 1 Hospital Building), to be approved by the Corporation Counsel; and

xviii. That the applicant shall submit, for review and approval by the Planning Authority, all outstanding capacity to serve letters; and

xix. That the applicant shall submit, for review and approval by the Planning Authority, revised plans that show 12 inches of special backfill material over all pipes to meet City standards; correct references to BMPs; and 7 inch reveals for granite curbing where it is located with the City's Right of Way (see DRC memorandum of August 3, 2006); and

xx. That the applicant shall discuss and agree with Portland Trails, the City of Portland Public Works Department and the City of Portland Department of Parks and Recreation, a co-ordinated signing, management and maintenance regime that ensures that all areas within and adjacent to the site are maintained to a high standard of amenity and safety; and

xxi. That the applicant shall provide the Portland Trail signage, subject to agreement with Portland Trails and to all necessary approvals and permits, as it relates to or is located on the Mercy site; and

xxii. That the applicant shall submit a construction program, including measures being taken to avoid any impacts to surrounding streets and properties, for review and approval by the Planning Authority prior to the start of construction; and

xxiii. That the applicant shall submit further information on the noise levels of any generator likely to be used on the site and confirm what measures will be taken to meet the noise standards of the City's Ordinance; and

xxiv. The Fire Department Connections on building #1 (Phase 1 Hospital) at the loading dock must be kept unobstructed at all times and should be striped "Fire Lane" on the plans; and

xxv. The Fire Alarm system shall require the use of Master boxes.

The approval is based on the submitted site plan and the findings related to conditional use and site plan review standards as contained in Planning Report #43-06, which is attached.

Please note the following provisions and requirements for all site plan approvals:

1. Where submission drawings are available in electronic form, the applicant shall submit any available electronic Autocad files (*.dwg), release 14 or greater, with seven (7) sets of the final plans.

2. A performance guarantee covering the site improvements as well as an inspection fee payment of 2.0% of the guarantee amount and 7 final sets of plans must be submitted to and approved by the Planning Division and Public Works prior to the release of the building permit. If you need to make any modifications to the approved site plan, you must submit a revised site plan for staff review and approval.

3. The site plan approval will be deemed to have expired unless work in the development has commenced within one (1) year of the approval or within a time period agreed upon in writing by the City and the applicant. Requests to extend approvals must be received before the expiration date.

4. A defect guarantee, consisting of 10% of the performance guarantee, must be posted before the performance guarantee will be released.

5. Prior to construction, a pre-construction meeting shall be held at the project site with the contractor, development review coordinator, Public Work's 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 representatives. It shall be the contractor's responsibility to arrange a mutually agreeable time for the pre-construction meeting.

6. If work will occur within the public right-of-way such as utilities, curb, sidewalk and driveway construction, a street opening permit(s) is required for your site. Please contact Carol Merritt at 874-8300, ext. 8828. (Only excavators licensed by the City of Portland are eligible.)

7. The Development Review Coordinator must be notified five (5) working days prior to date required for final site inspection. The Development Review Coordinator can be reached at the Planning Division at 874-8632. Please make allowances for completion of site plan requirements determined to be incomplete or defective during the inspection. This is essential as all site plan requirements must be completed and approved by the Development Review Coordinator prior to issuance of a Certificate of Occupancy. Please schedule any property closing with these requirements in mind.

If there are any questions, please contact Jean Fraser at 874-8728.

Sincerely,

Kevin Beal, Chair
Portland Planning Board

Attachments: Planning Board Report #43-06 (excluding attachments);
Comments from Tom Errico, Traffic Engineering Reviewer, dated August 3, 2006;
Memorandum from Pat Carroll dated August 2, 2006;
E-mail from Jeff Tarling dated August 3, 2006;
Memorandum from DRC (Woodard & Curran) dated August 3, 2006)

cc: Lee D. Urban, Planning and Development Department Director
Alexander Jaegerman, Planning Division Director
Sarah Hopkins, Development Review Services Manager
Jean Fraser, Planner
Jay Reynolds, Development Review Coordinator
Marge Schmuckal, Zoning Administrator
Inspections Division
Michael Bobinsky, Public Works Director
Traffic Division
Eric Labelle, City Engineer
Jeff Tarling, City Arborist
Penny Littell, Associate Corporation Counsel
Greg Cass, Fire Prevention
John Peverada, Parking control
Assessor's Office
Approval Letter File

file copy

Att. 2c

# MERCY HOSPITAL

# REVISED MASTER PLAN
# (for consideration at August 8, 2006, Public Hearing)

**Prepared for:**

**Mercy Hospital**
**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@delucahoffman.com**

**July 2006**

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# 1.0 INTRODUCTION

## 1.1 Purpose

The purpose of the Mercy Hospital Fore River Site Master Plan is to provide a guideline for the development activities for the Fore River Site as contemplated in the Mercy Hospital Contract Zone Agreement approved by the City of Portland. The Master Plan is intended as a fluid document to permit maximum flexibility in building and landscape design and to ensure high quality construction that considers the site's landscaping, building orientation and form, coordination of uses and parking, lighting and other site amenities and creation of private/public open spaces. The Master Plan is intended to fulfill the requirements of the Contract Zone Agreement that specifically requires Planning Authority approval of a Master Plan prior to Site Plan consideration.

## 1.2 Development Overview

Mercy Hospital is proposing to develop a new hospital campus on their Fore River development site. The current development plan may include the following uses:

a. Hospitals, clinics, and medical research facilities.

b. Community living arrangements, congregate care facilities, intermediate care facilities, long-term or extended-care facilities, and sheltered care group homes.

c. Office complexes and professional offices.

d. Day care facilities and adult day care facilities.

e. Exercise and fitness centers and health clubs.

f. Personal services, restaurants, and retail establishments of no more than 50,000 square feet (SF), except that there shall be no drive-through facilities.

g. Dwellings, hotels, motels, inns, and rooming units; and lodging houses for hospital or clinic employees or volunteers and patients' family members.

h. Teaching centers.

i. Accessory uses, including but not limited to, parking facilities and structures, utility services, stormwater management systems, and site amenities.

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. The current Phase 1 development proposal is for the completion of a four-story, 80,000 SF Medical Office Building (MOB) and a 137,310 SF hospital structure containing four levels plus a

ground floor. Future development on the site is anticipated to include some of the aforementioned possible uses.

Other ancillary development features will include parking facilities, utility services, stormwater management systems, and site amenities. Parking for the campus will be primarily surface lots during Phase 1 and surface and structured parking in the future. The parking needs for the project will likely exceed 780 spaces to meet local zoning requirements and facility needs during Phase 1 and over 1,300 spaces during future phases.

## 1.3 Existing Conditions

Mercy Hospital has purchased approximately 85.5 acres of land located along the Fore River in Portland, Maine (the development site). The property was formerly owned by Merrill Industries, Inc. and the Portland Terminal Company. The lands consist of approximately 43.5 acres of mudflats along the Fore River and 34.5 acres of undeveloped or semi-developed land located along the Fore River waterfront. Approximately 7.5 acres of land has been transferred to the Maine Department of Transportation to allow the construction of the I-295 Connector project. Approximately 27 acres of the remaining land is available for development. Within this area the site is basically divided into two prominent areas by the location of an existing pond in the center of the site. The pond is within a former gravel pit. The north end of the site and the south end generally define the overall development area. Figures contained in Appendix A identify the site location on various resource maps.

The site generally extends from just east of the recently constructed I-295 Exit 5 interchange ramps easterly along the Fore River to the Veteran's Memorial Bridge. The site is bounded to the north and east by an active railroad line operated by Guilford Industries. The tracks to the north are traveled multiple times each day by the Downeaster passenger train service, while the tracks to the east service both the Downeaster service as well as regular Portland Terminal freight service. Farther to the northeast, commercial development lines St. John Street. Existing commercial establishments along St. John Street include Barber Foods, Century Tire, Redlon & Johnson and the Union Station Plaza. The Cumberland County Correctional Facility is located to the north of the property on the north side of the tracks. The Correctional Facility's activities are primarily focused to the north, facing Congress Street; thus the jail facility is generally buffered from the Mercy site by existing wooded land on that site. Appendix B contains various photos depicting the site's relationship to adjacent uses and views. It is clear that while the site is located within an urban setting, it stands somewhat isolated from its neighbors due to the railroad tracks along a majority of its boundaries.

The site's topography slopes from approximately elevation 24 feet along the active rail tracks that are on the north and east sides of the site to the riverfront, where the elevation is approximately 10 feet. The higher knolls on the northerly side of the site rise to elevation 38 feet towards the northeast center of the site. It is anticipated that

the knolls will be lowered as part of the proposed project. The bottom of the former gravel pit is approximately elevation 8 feet (NGVD).

The site's wooded areas are characterized by deciduous tree growth and dense undergrowth. Approximately one half of the site is densely vegetated. The southerly side is mostly open area that contains ground vegetative cover with grasses and stockpiles of topsoil and miscellaneous debris. Some of the ground area on the southerly side is bare earth, a result of previous activity on the site.

Overall the site can generally be classified as undeveloped. The property has historically been accessed by a paved drive from County Way and Congress Street. This drive passes adjacent to the Cumberland County Jail and crosses at grade over the railroad tracks into the site. This access will be used for emergency purposes in the future. The new I-295 Connector proceeds from north to south and includes bridge overpasses over the northerly and southerly rail tracks. Each bridge provides for an elevated view of the Mercy development site, while the roadway along the middle of the site generally passes through nearer to existing grade.

The site contains multiple wetland areas. Several areas consist of former ditches adjacent to abandoned rail track beds. These will be impacted as part of the development. A wetland pond exists within the former gravel pit in the center of the site. The site design has been prepared to minimize impacts to this wetland and to maintain the tree canopy surrounding the pond as much as possible.

## 1.4 Original Master Plan

The preliminary Master Plan that was submitted in 2001 in support of the Contract Zone Agreement contained the following programming elements:

- A five story 300,000 SF Hospital
- A three story 75,000 SF Medical Office Building
- A two story 58,000 SF Ambulatory Care Center.
- Surface parking for as many as 1,000 spaces
- Outparcel development at the south end of the property

The original Master Plan was intended to depict the general site conditions and building envelopes contemplated for development. As required by the Contract Zone Agreement, this current submission is intended to update the Master Plan representation of the programming contemplated for the site development and provide a greater level of detail to the Planning Authority prior to their Site Plan review of the project. This current July 2006 Revised Master Plan is intended for consideration by the Planning Board at their August 8, 2006 scheduled Public Hearing. A copy of the original Master Plan figure submitted in 2001 in support of the original Contract Zone review and approval is contained in Appendix C to this submission.

## 2.0 APPLICABLE ORDINANCES AND CODES

### 2.1 Design and Site Development

All design and site development activities within the Fore River Site shall comply with the current applicable local, state and federal ordinances and codes including, but not limited to, City of Portland Site Plan review, Department of Environmental Protection Site Location of Development and Natural Resources Protection Acts, State of Maine Voluntary Remedial Action Plan (VRAP) requirements, and U.S. Army Corps of Engineers Water Quality Certification.

### 2.2 Americans with Disabilities Act (ADA)

All components of the Fore River Development site shall be designed to provide full accessibility in accordance with current ADA guidelines. Site and building planning shall incorporate ramps and accessible features to overcome site conditions.

## 3.0 DEVELOPMENT STANDARDS

### 3.1 Site Plans

All site plans may be approved by the Planning Board only if, in addition to the dimensional requirements outlined below and the applicable provisions of Article IV (subdivisions) and Article V (site plan) of the City of Portland Code of Ordinances, the development meets the following development standards:

3.1.1 *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 within the site. Consideration shall be given to compatibility of proposed perimeter development with the existing and future uses adjacent to the property.

3.1.2 *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.

3.1.3 *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. 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.

3.1.4 *Vehicular Access and Circulation*

The Maine Department of Transportation has used a portion of the property for the construction of the I-295/Commercial Street Connector. The connector roadway provides a new link between Outer Congress Street, I-295 and the Commercial Street Corridor. From west to east, the connector extends from the I-295 Exit 5 interchange and crosses the Guilford Transportation railroad tracks above grade and proceeds across the property generally along the Fore River frontage. The Veterans Bridge Interchange has been reconstructed for the new connector roadway. The connector work includes a pedestrian walkway/bikeway along the Fore River frontage. Two separate access drives to the hospital campus have been provided off the Commercial Street Connector. A third southbound off ramp has also been constructed to provide access for site bound traffic traveling from the Exit 5 Interchange direction. Additional gated emergency access will likely be provided off an existing access route behind the County Correctional Facility.

3.1.5 *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. Buffer plantings to provide wind buffering and reduce off-site noise shall be incorporated where feasible.

3.1.6 *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.

## 3.2 Dimensional Requirements

The following dimensional requirements shall apply to the property as a whole, and not to individual lots (if any) within the property:

3.2.1 *Maximum Impervious Surface Ratio*

Eighty (80) percent.

3.2.2 *Maximum Building Height*

Ninety (90) feet.

3.2.3 *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.

3.2.4 *Minimum Side Yards*

Ten (10) feet.

3.2.5 *Minimum Rear Yard*

Ten (10) feet.

3.2.6 *Pavement Setback from property*

Fifteen (15) feet; twenty (20) feet from connector right of way.

## 4.0 OVERALL LAYOUT

### 4.1 General Design Intent

Mercy Hospital has selected a phased development program that balances their business needs and economic capacity. The programming currently consists of the following elements:

- Initial Phase
  - 138,000-139,000 SF Hospital
  - 75,000-80,000 SF Medical Office Building

- Future Phases
  - Parking Structure(s) to support 700-900 parking spaces (to be built prior to Hospital expansion)
  - 150,000 to 200,000 SF Hospital Expansion
  - 75,000 SF Medical Office Building
  - up to 40,000 SF additional building space

- Total building space equal to 500,000 to 600,000 SF can be supported on the campus

### 4.2 Building Orientation

The development layout is governed by the following site conditions:

- Location of the driveway access locations along the Connector
- Location of the wetland pond within the center of the site

- Naturally high ground within the northern sections of the site.
- Building envelopes available within the north and south sections. Neither area is large enough by itself to support the campus program, therefore requiring a "bridge" between them.

The Master Plan building envelopes allow for the following key elements:

- Building connectivity for the Phase 1 Medical Office Building and Hospital.
- Adequacy of Phase 1 surface parking within reasonable proximity to each building's entrance.
- Future accessibility to a parking structure proximate to the Hospital, the expansion and the Phase 1 Medical Office Building.
- Remote staff parking on the south end of the site, to be facilitated by the use of onsite shuttle service to the hospital staff entrance.
- The hospital's prominence on higher elevations of the site provides for views over the Connector Road to the Fore River and also overlooks the onsite wetland pond.
- Allows capacity for building expansion.
- A designated access route from the northerly driveway to the southerly driveway.

## 5.0 ARCHITECTURE

### 5.1 General Design Intent

The client requested a building that embodies the faith-based nature of their institution. The design approach is to utilize 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. The client also wished to maintain a sense of continuity with their existing facility. Finally, the prominent waterfront location bears a direct relationship to the historic brick waterfront structures of downtown Portland.

### 5.2 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 and the pond to the east. The building's four floors above a partially exposed ground level maximize the building's height with the available program while minimizing the impact on the site. The Medical Office Building is located perpendicular to the Hospital in an L-shaped alignment so that future connections to the Hospital Expansion and a multi-level parking garage may be easily facilitated.

## 5.3 Building Massing

The massing of the building steps in, on both the east and west elevations as a response to the programmatic requirements within. A prominent location is created for the chapel with a full-height diagonal slice at the southwest corner of the building. The Medical Office Building is 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 connector road and river. The Medical Office Building is oriented in a manner that will allow access from each side. The revised building location places the MOB closer to its allocated parking areas.

## 5.4 Building Façade/Materials

The façade is composed of traditional Portland red brick with light cast stone highlights. Gothic cast stone tracery throughout and stained glass windows at the 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 will follow the Hospital's lead with a complementary building face, glass and accents to mirror the Hospital building. Future buildings will also follow these building and materials patterns and character.

## 5.5 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 the client's original building. The overall massing of the Hospital building is softened with the cascading sloped rooflines along the east and west elevations. The MOB will follow with a horizontal roofline that will fall below the Hospital's. Future buildings will follow with similar rooflines.

## 5.6 Service Areas

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 new connector road by the hospital itself. The semi-trailer loading area is located to the northeast corner and will be shielded from general view by the building. Dumpsters and other service related activities will be buffered by appropriate screening. The MOB service area will be minimal. The future hospital expansion will generally rely on the Phase 1 Hospital service area, as the loading area has been sized based on the Hospital's full build-out. Service areas for future buildings will be placed to consider buffering and shielding from important views to the extent practicable.

## 5.7 Building and Site Lighting

Ground-mounted and building-mounted lighting will provide general illumination of the building and safety and security over building entrances and walks and within parking fields. Building mounted lighting will place specific emphasis on the Phase 1 Hospital arcade and entrance canopy along the westerly elevation. Site Lighting will be provided throughout the campus with the use of "Heritage" style fixtures that blend traditional architecture with modern performance. Fixture heights shall not exceed 30 feet along primary drives, 25 feet within parking fields and 12 to 15 feet around pedestrian walks and building perimeters.

## 6.0 PARKING AND PEDESTRIAN CIRCULATION

(See Schematics 1 and 2 of 6 in Appendix D)

### 6.1 Overall Assessment of Need

Currently the Phase 1 Master Plan Schematic depicts the following parking summary.

| | | Fore River Site Parking Phase 1 | |
|---|---|---|---|
| Phase 1 Use | Building Size | Required by Code | Provided on Schematic |
| Hospital – 1 SP/500 SF | 137,832 SF | 276 | |
| MOB – 1 SP/400 SF | 80,000 SF | 200 | |
| Total | | 476 | 783 |

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

| | | Fore River Site Parking Future Phases | |
|---|---|---|---|
| Future Phases | Building Size | Required by Code | Provided on Schematic |
| Hospital – 1 SP/500 SF | 300,000 SF | 600 | Parking Garage – 900 |
| MOB/Offices – 1 SP/400 SF | 174,000 SF | 435 | Surface Parking - 611 |
| Total | | 1,035 | 1,511 |

### 6.2 Visitor/Staff/Physicians/Shifts

Walker Parking Consultants has completed an allocated parking demand analysis for the initial project phase that is summarized as follows:

| | | 2007 | | |
|---|---|---|---|---|
| | Statistics | *Daily* | Ratio | Demand |
| **HOSPITAL BUILDING** | | | | |
| Inpatient Beds | 44 | | 0.36 | 16 |
| Annual Outpatients | 87,040 | *349* | 0.36 | 126 |
| Employees | 570 | | 0.43 | 246 |
| Staff Physicians | 29 | | 0.50 | 15 |
| Admitting Physicians | 40 | | 0.50 | 20 |
| Subtotal | | | | 423 spaces |
| **MEDICAL OFFICE BUILDING** | | | | |
| Hospital Outpatient uses | 16,277 | *66* | 0.36 | 24 |
| Hospital Employees | 84 | | 0.43 | 37 |
| Physician Tenants (sq. ft.) | 53,600 | | 5.50 | 295 |
| Subtotal | | | | 356 spaces |
| Total | | | | 779 spaces |

### 6.3 Pedestrian Connectivity

Pedestrian sidewalks will link the recently constructed 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 I-295 Connector at the southerly driveway. Pedestrian linkage will include overlooks of the wetland pond and also connectivity to the open spaces at each end of the site.

The north open space area, slated for construction in Mercy's Phase 1 of development, will include pathways that will enable completion of the linkage between the Thompson's Point area to the already paved and in-place Connector sidewalk/trail system. It is understood that these pathways will be surfaced in stone dust and not cleared during the winter months, similar to the "primitive" trail from Thompson's Point to which they will join.

Mercy will extend its path system in the north open space along the river to the northernmost property line, where it is to be met by Portland Trails construction.

Plans for the south open space include pathway access similar to that in the northern area, though this will require a bridge/boardwalk type of access stemming from the southern terminus of the paved Connector walkway system below the roadways slip lane. Development of this area will not occur until the future, with completion scheduled for sometime on or about occupancy of the Phase 2 Hospital expansion. Phase 1 will include planting shade trees associated with the stormwater treatment berms, and the loaming and seeding of disturbed areas not otherwise surfaced.

Site-related pedestrian circulation will include designated sidewalk routes from the surface parking areas to the buildings. A hard surface, landscaped pedestrian sidewalk will also connect the southerly staff parking area to the staff entrance at the south end of the hospital. A shuttle van will also transport hospital staff from the employee parking lots to the hospital entrance. Appropriate signage will be provided to aid in the understanding of onsite and offsite pedestrian facilities.

## 7.0 ACCESS AND CIRCULATION

(See Schematic Figures 3 and 4 of 6 in Appendix D)

### 7.1 Major Entrances and Exits

- Northerly Driveway
  - Eastbound left and westbound right turn entering
  - Eastbound exiting only to I-295 North

- Southerly Driveway
  - Westbound right turn entering only
  - Eastbound exiting to I-295 North
  - Westbound exiting to I-295 South

- Eastbound Slip Lane
    - Eastbound entering movement into site only

### 7.2 Secondary Access

Emergency access will be provided from the existing at-grade crossing behind the Cumberland County Correctional Facility.

### 7.3 Internal Site Circulation

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

### 7.4 Bus Routes

Metro will serve the site from their Congress Street route that involves bus travel from St. John Street through the Veteran's Bridge intersection. Service will approach the site from the Connector traveling westbound and enter into northerly driveway. They will pick up at the Hospital and Medical Office Building front entrances and proceed westbound on the Connector to Congress Street. Metro service is expected to follow a routine service schedule to the site and provide linkage to many greater Portland neighborhoods for both employees and patients/visitors.

### 7.5 Alternative Transportation/Travel Demand Management Plan

The development operations will be conducted in a manner to promote transportation demand alternatives. This will include strategies that encourage employees to use alternatives to driving to work unaccompanied. This will enable Mercy and other tenants to successfully provide parking to all employees, visitors, patients, and physicians in the designed parking plan, which has been established at 5% below the anticipated parking capacity need. A Transportation Demand Management Plan will be implemented and monitored by Mercy in order to improve and measure success.

## 8.0 LANDSCAPING AND OPEN SPACE

(See Schematic Figures 5 and 6 of 6 in Appendix D)

### 8.1 Design Intent

Mercy Hospital looks to "heal" the development site through its approved remedial action plan and landscaping program. The clean up and coverage of exposed soils and disturbed areas will be accomplished in a manner that beautifies the site and builds upon its waterfront location.

The project's landscaping program will be designed to meet the City's Arboricultural Specifications and Standards of Practice and Landscape Guidelines. The design shall

species vegetation at the base of the Western Promenade. Evergreens are used on the slope between the Connector and south parking, which will screen views of the south parking areas, augmenting the street trees planted in the Connector 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.

7. Introduce accent planting in the pond area proximate to the walking path.

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

## 8.3 Open Space Design

Through constituting what essentially amounts to "leftovers" from the Connector, 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. The concepts shown seek to achieve this by:

1. 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.

2. At the south end, a boardwalk bridge connects the end of the existing trail to the open space area along remnants of an existing granite-clad wharf. Other remnants of the wharf system exist at the extreme southern end. Both offer opportunities for historic information and interpretation. Water access at the south end is possible, creating the opportunity for kayak entry.

3. 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 allees of trees, with a sitting area with benches focused on the water at their confluence.

4. Opportunities are created along stone dust pathways (south and north) for benches seating.

5. 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.

## 8.4 Phasing

Phase 1 planting and open space improvements will include:

1. Plantings in the north and south parking areas.

2. Plantings at the north and south site entrances.

3. Perimeter screen/buffer plantings.

4. Plantings around Phase 1 hospital and medical office buildings.

5. Screen plantings around service/loading area.

6. "Structural" planting in the green space south of the hospital building between the access drive and Connector to include trees and lawns only.

7. 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.

8.6.4 *Walls*

Site retaining walls, where necessary, shall be segmented block retaining walls. Decorative walls at the main entrances shall 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.

8.6.5 *Fencing*

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

## 8.7 Lighting/Signage

Parking area and pedestrian lighting shall be of high quality construction and materials and with a character that complements the architectural features and style of the building. The site lighting shall meet the City of Portland strict requirements regarding minimum, average and maximum levels of illumination, maximum wattage and mounting height. 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.

## 8.8 Open Spaces

Public open space shall be provided at each end of the property's water frontage. During the first development phase, the open spaces should generally be offered for passive recreational opportunity. The northerly open space shall be connected to the Portland Trails network by a stone dust path extension during Phase 1. The southerly open space shall be restored to a grassed condition. The primary purpose of these spaces is to allow waterfront access. Future improvements to these spaces will include an extension of the far southerly end of the Portland Trails piece to the site's southerly open space and also landscaping enhancements within these spaces.

*Existing Pond (Former Borrow Pit)*

(See Design Drawing contained in Site Development plan set)

Reclamation measures are proposed for the side slopes of the former gravel pit and as an enhancement to its wetland conditions:

- Approximately 0.5 acres of upland side slope will be stabilized with topsoil, and vegetative ground cover.
- Debris including tires, metals and other debris will be removed from around the former pit.
- Several methods are possible to complete the placement of material over the side slope areas. Reinforced turf may be used on the steeper slopes (>3:1). Alternatively, the project may involve the service of an Erosion Control vendor

such as Mulch-Maine-ia, who provides the pneumatic placement of organic soil mulch along slopes. The use of a pneumatic application of organic mulch appears appropriate and well suited to the Mercy Hospital project. The use of this type of equipment will minimize disturbances on the existing slopes, yet provide the maximum ability to place material in and around the existing tree growth.

To complement the placement of the organic soil mulch the plan includes mixing vegetative material into the compost. Mulch-Maine-ia uses Terra-seeding to inject fertilizers, grass seeds, wild flower and other granular material into the organic material. This process will result in a fully vegetated side slope surface around the wetland pond perimeter.

## 9.0 Utilities

(See Schematic Figure 6 of 6 in Appendix D)

The proposed hospital campus shall be served by public water, sewer, natural gas, and nearby communication, cable, and electric utilities. Nearby water service consists of 20" and 8" water mains near the Veteran's Bridge and off St. John Street, respectively. 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 facility on State Street in Portland. Communications, cable, and electric utilities are located in the project vicinity and will be brought in either overhead or underground into the site.

The project's proposed stormwater management systems shall provide for onsite water quality treatment prior to the discharge of runoff to the Fore River. Quantity control is not required due to the nearby tidal conditions of the Fore River. The project will include enhancements to the former borrow pit including improved vegetative buffers and side slope stabilization to aid in stormwater water quality treatment prior to discharge to the Fore River and tidal conditions.

# APPENDIX A

# FIGURES




# DeLORME LOCATION MAP

## Mercy Health System of Maine – Portland, Maine

**SOURCE:** DeLORME MAPEXPERT; **DATED:** 1993


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



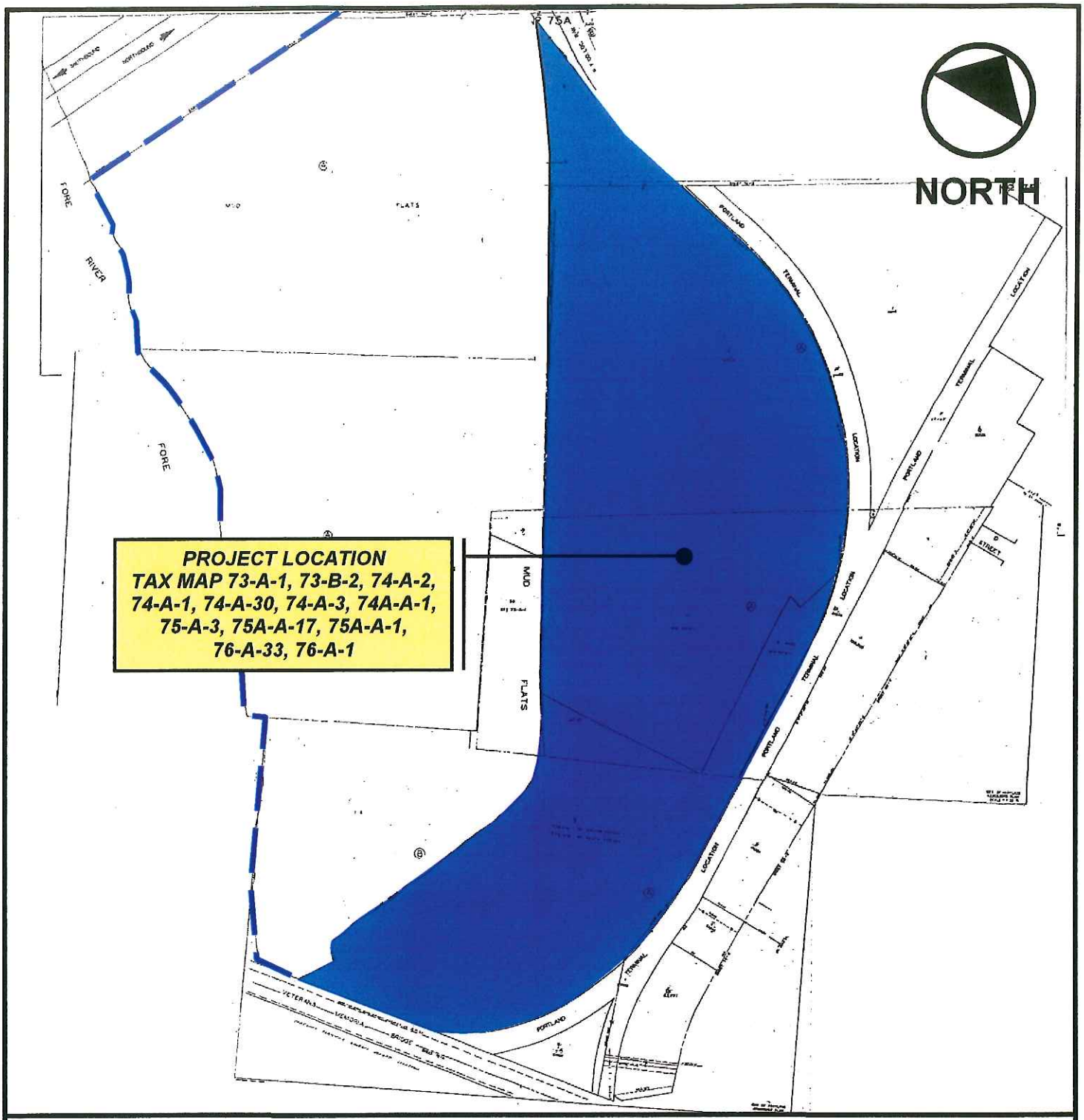

# USGS TOPOGRAPHIC MAP

## Mercy Hospital Feasibility Study – Portland, Maine

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


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FAX 207-879-0896


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



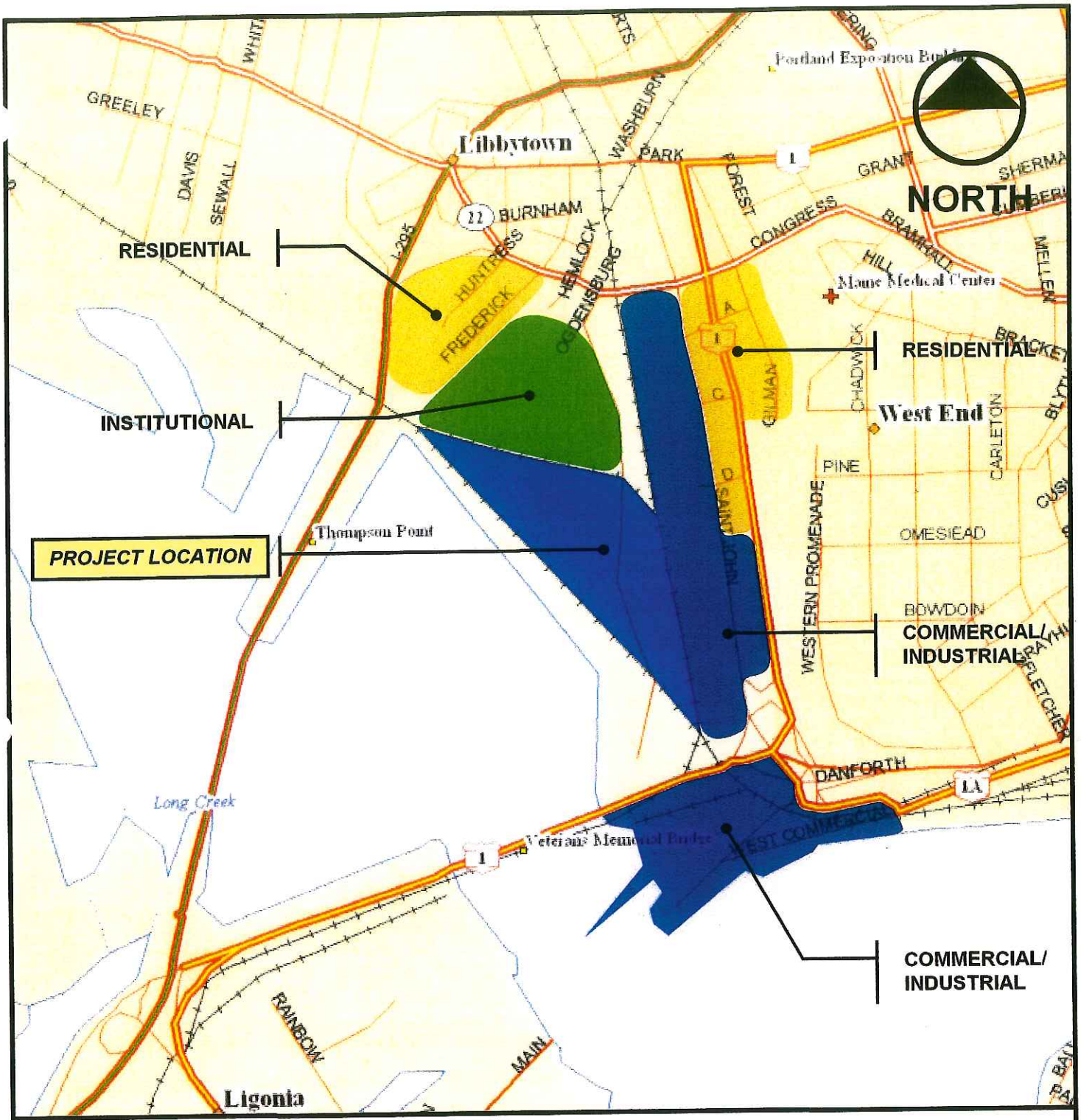

# PROPERTY TAX MAP

## Mercy Health System of Maine – Portland, Maine

**SOURCE**: CITY OF PORTLAND ASSESSORS PLAN, **MAP NUMBERS:** 73, 74, 74A, 75 & 75A


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| | | | | |
|---|---|---|---|---|
| DESIGNED | SRB | DATE | MARCH 2001 | FIGURE |
| DRAWN | JDL | SCALE | N.T.S. | 3 |
| CHECKED | SRB | JOB NO. | 2149 | |



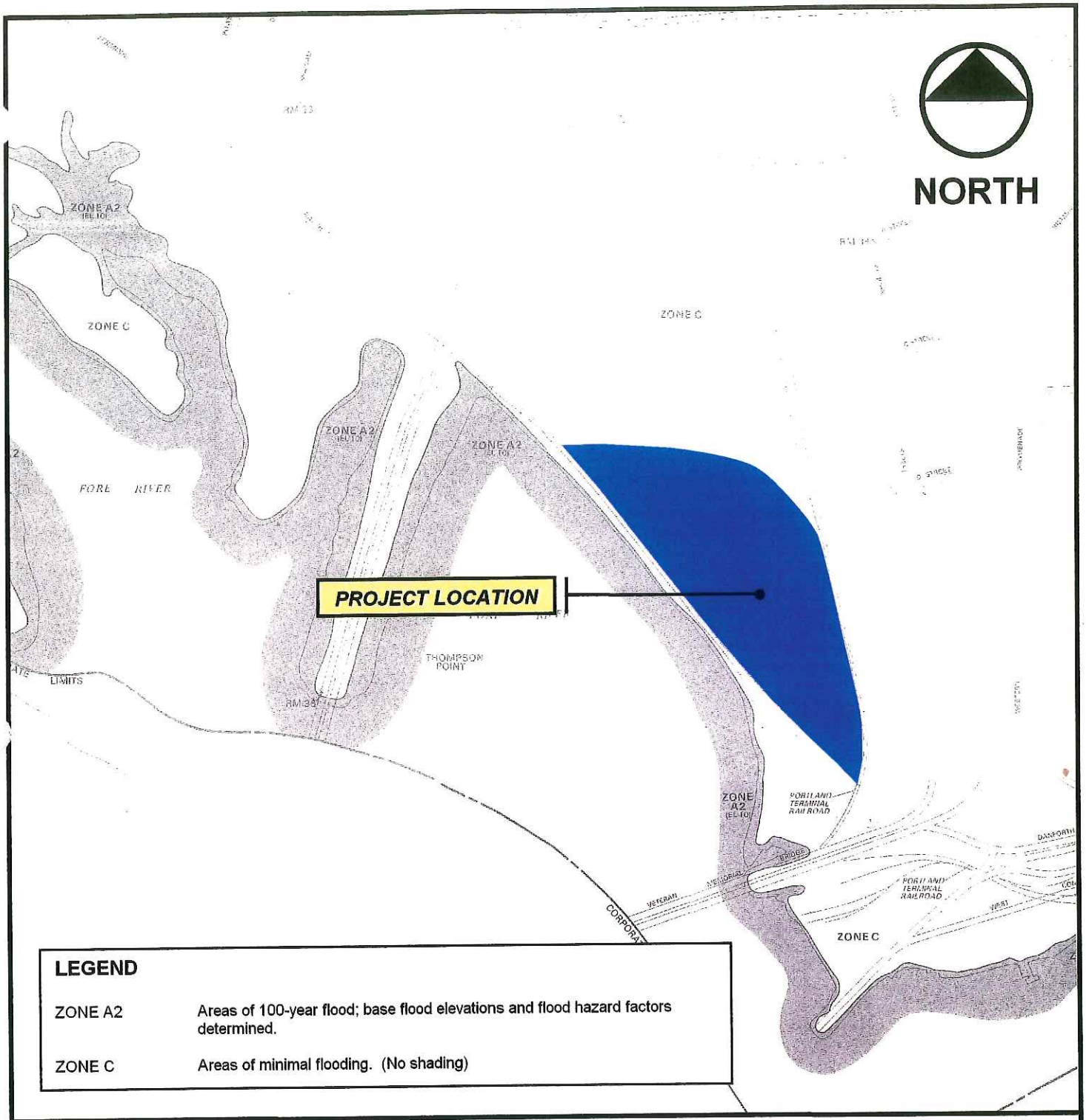

# DeLORME ABUTTING LAND USE MAP

## Mercy Health System of Maine – Portland, Maine

**SOURCE:** DeLORME MAPEXPERT; **DATED:** 1993


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| | | | | |
|---|---|---|---|---|
| DESIGNED | SRB | DATE | MARCH 2001 | FIGURE |
| DRAWN | JDL | SCALE | 1" = 1000'+- | 6 |
| CHECKED | SRB | JOB NO. | 2149 | |




**LEGEND**

| | |
|---|---|
| ZONE A2 | Areas of 100-year flood; base flood elevations and flood hazard factors determined. |
| ZONE C | Areas of minimal flooding. (No shading) |

# FLOOD MAP

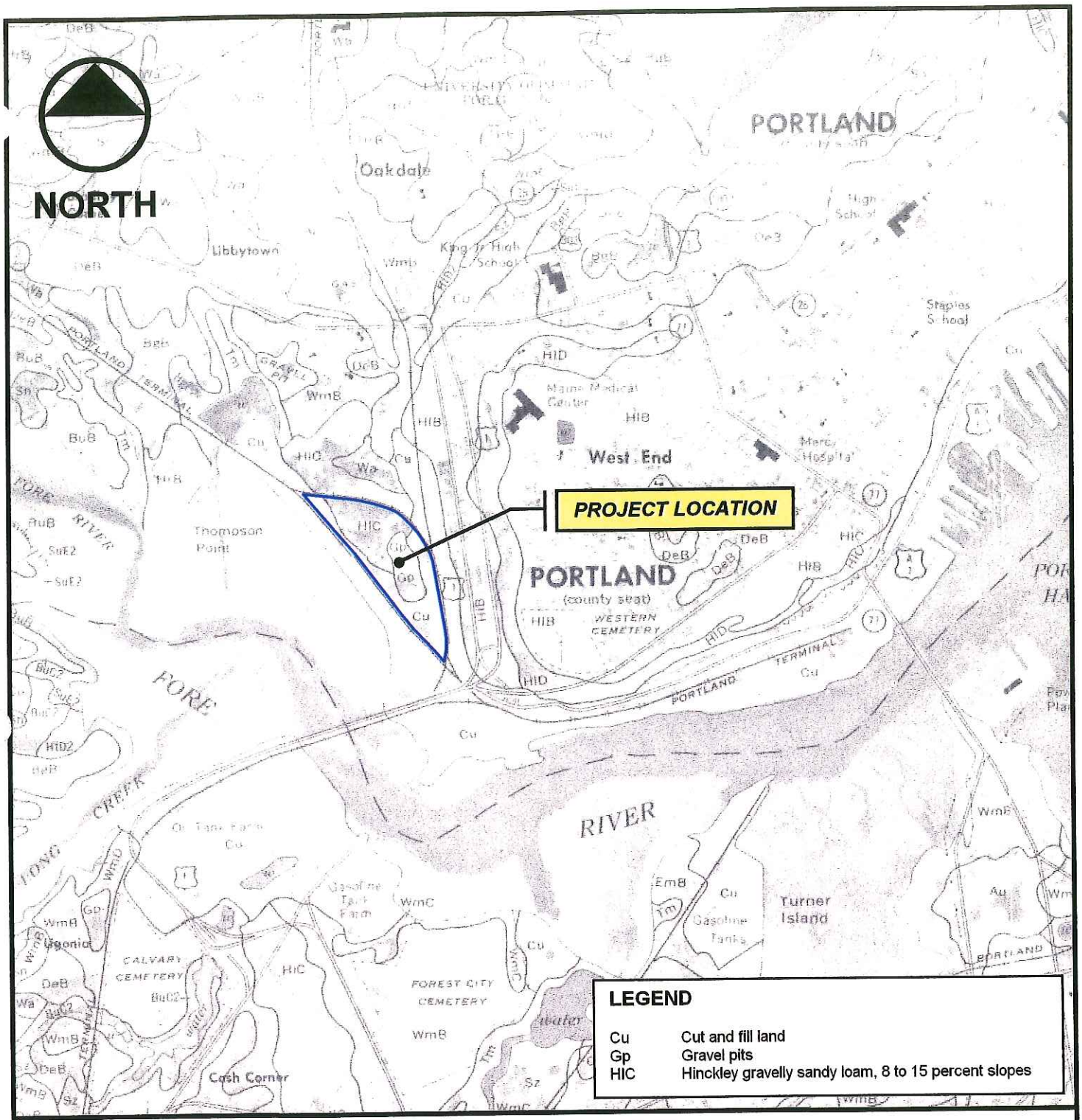
## Mercy Health System of Maine – Portland, Maine

**SOURCE:** FIRM; FLOOD INSURANCE RATE MAP, CITY OF PORTLAND, MAINE CUMBERLAND COUNTY;
**COMMUNITY-PANEL NUMBERS:** 230051 0013 B AND 230051 0016 B; **EFFECTIVE DATE:** JULY 17, 1986

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| | | | |
|---|---|---|---|
| DESIGNED | SRB | DATE | OCT. 2001 |
| DRAWN | JDL | SCALE | 1" = 800'+- |
| CHECKED | SRB | JOB NO. | 2149 |

FIGURE 7



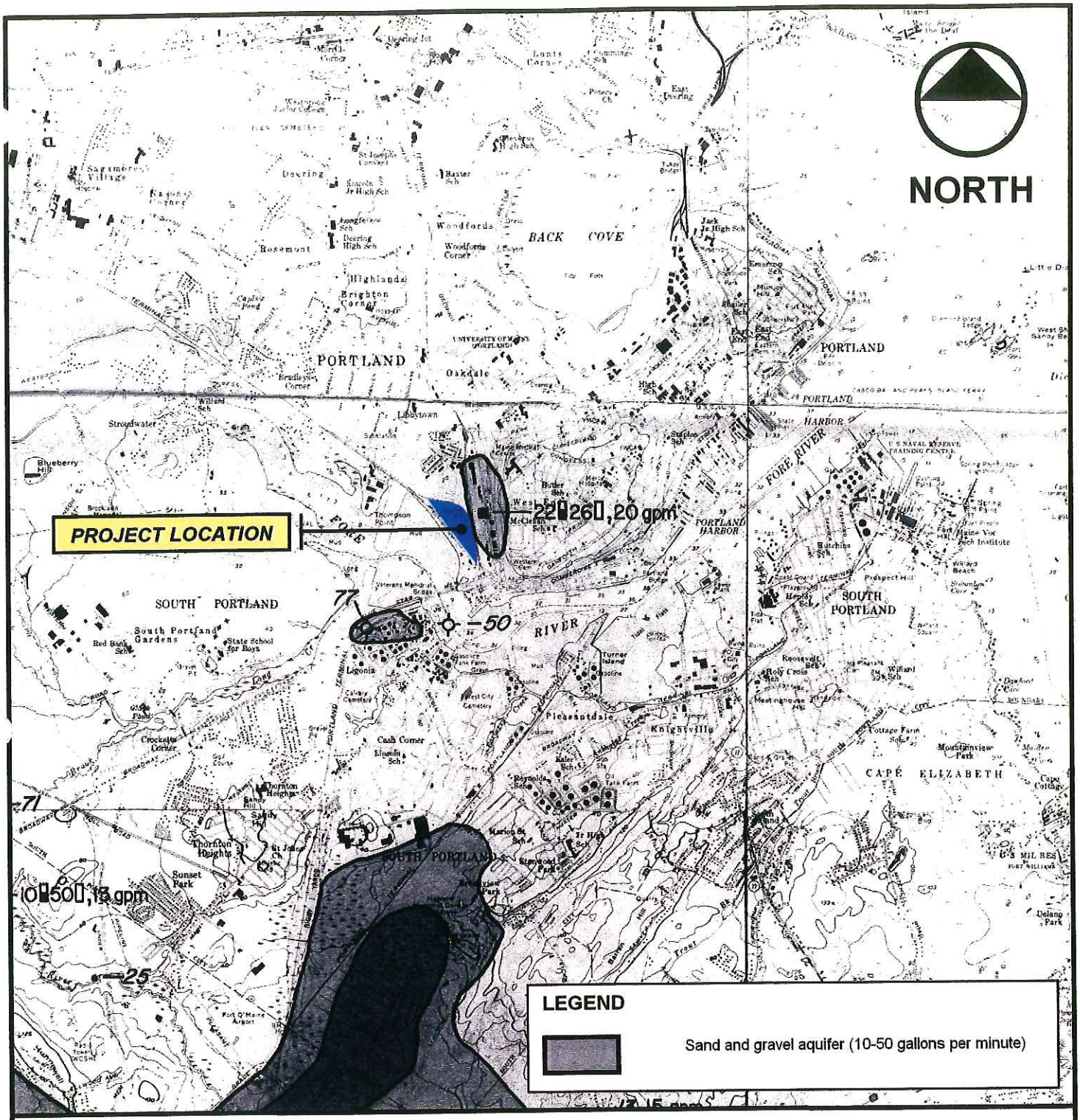

# USDA SOILS MAP

## Mercy Health System of Maine – Portland, Maine

**SOURCE:** SOIL SURVEY OF CUMBERLAND COUNTY, MAINE; **SHEET NUMBERS:** 82 & 86


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| | | | | |
|---|---|---|---|---|
| DESIGNED | SRB | DATE | MARCH 2001 | FIGURE |
| DRAWN | JDL | SCALE | 1" = 1667'+- | 8 |
| CHECKED | SRB | JOB NO. | 2149 | |



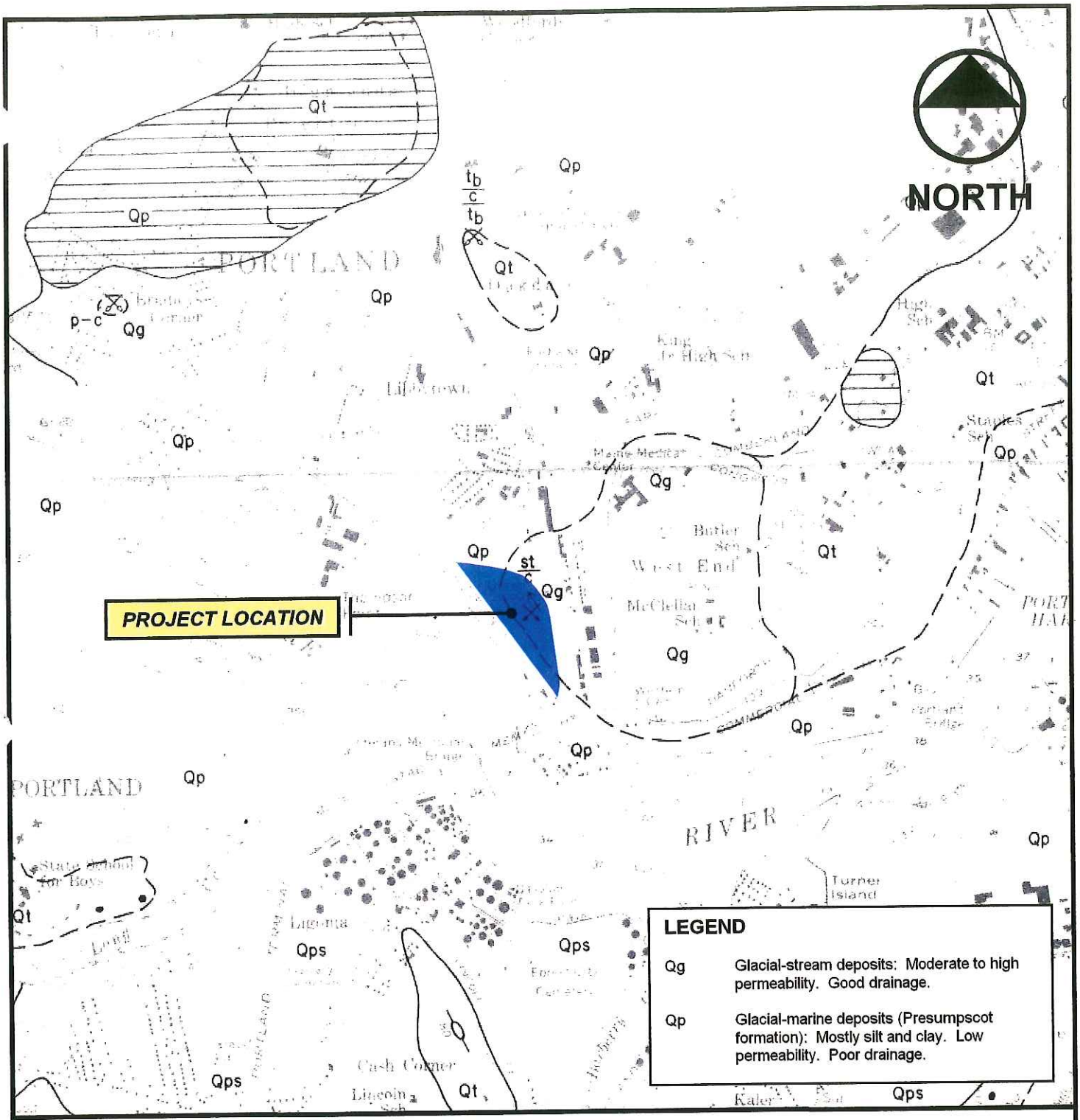

# MGS SAND AND GRAVEL AQUIFER MAP

## Mercy Health System of Maine – Portland, Maine

**SOURCE**: SAND AND GRAVEL AQUIFERS, MAP 5, CUMBERLAND AND YORK COUNTIES, MAINE; **DATED:** 1979


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| | | | | |
|---|---|---|---|---|
| DESIGNED | SRB | DATE | MARCH 2001 | FIGURE |
| DRAWN | JDL | SCALE | 1" = 4167'+- | 9 |
| CHECKED | SRB | JOB NO. | 2149 | |




# MGS SURFICIAL GEOLOGY

## Mercy Health System of Maine – Portland, Maine

**SOURCE:** RECONNAISSANCE SURFICIAL GEOLOGY OF THE PORTLAND WEST QUADRANGLE, MAINE;
**OPEN-FILE NO.** 76-47; **DATED:** 1976


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

FIGURE 10

# APPENDIX B

# PHOTOGRAPHS



PHOTO 1

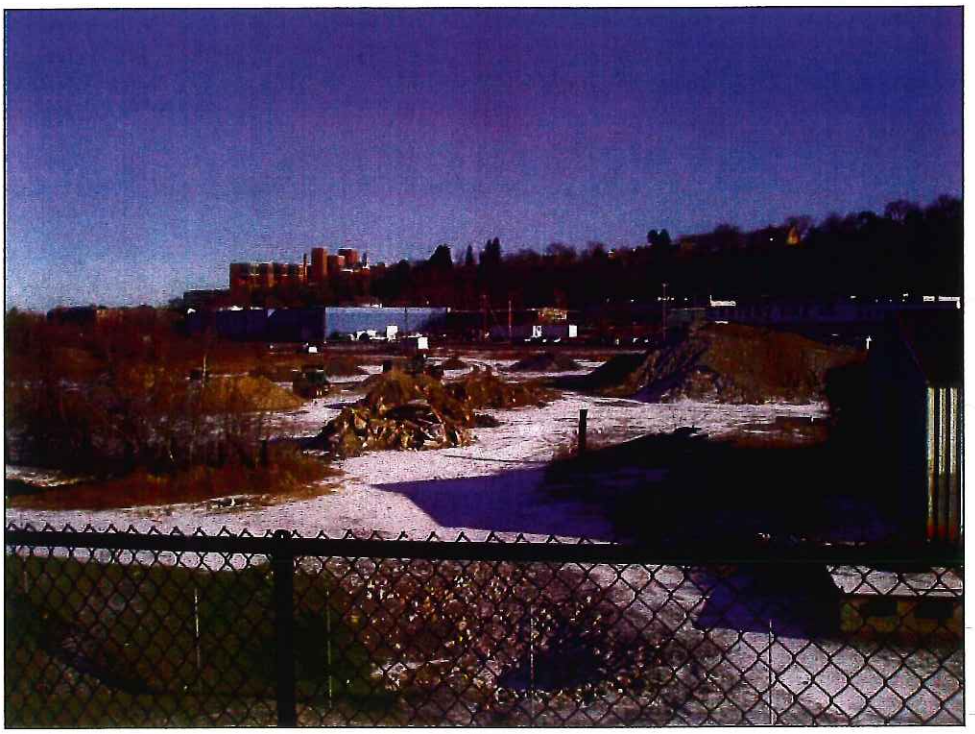


PHOTO 2

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FAX: 207-879-0896
E-MAIL: dhai@delucahoffman.com

**Mercy Hospital – Fore River Relocation Project**
Photos taken 12-5-05



PHOTO 3

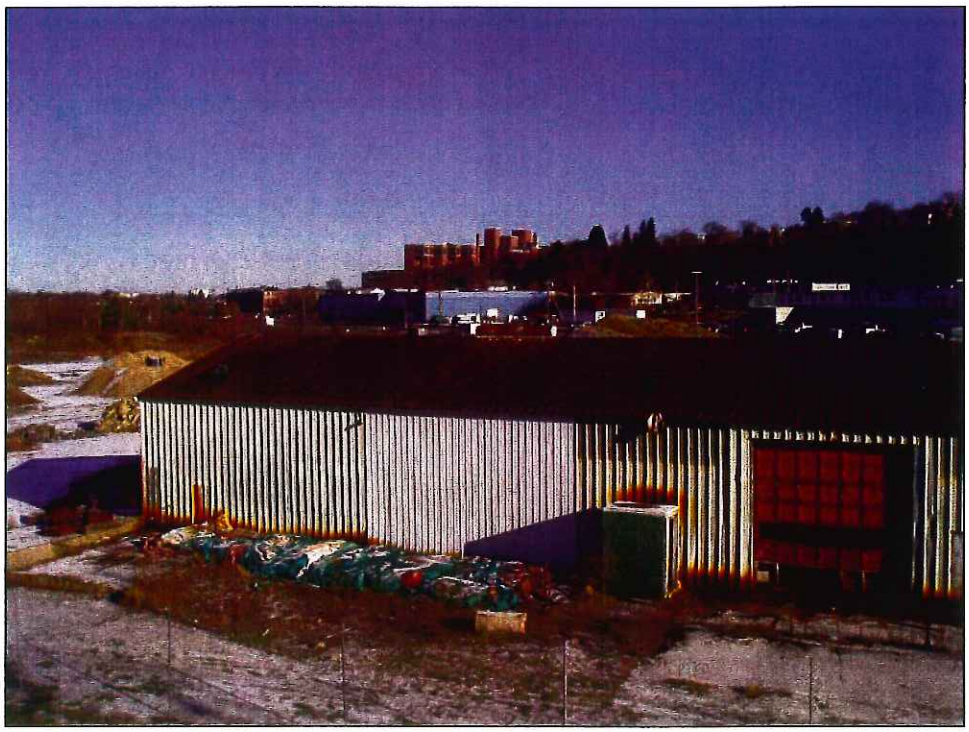


PHOTO 4

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**Mercy Hospital – Fore River Relocation Project**
Photos taken 12-5-05



PHOTO 5

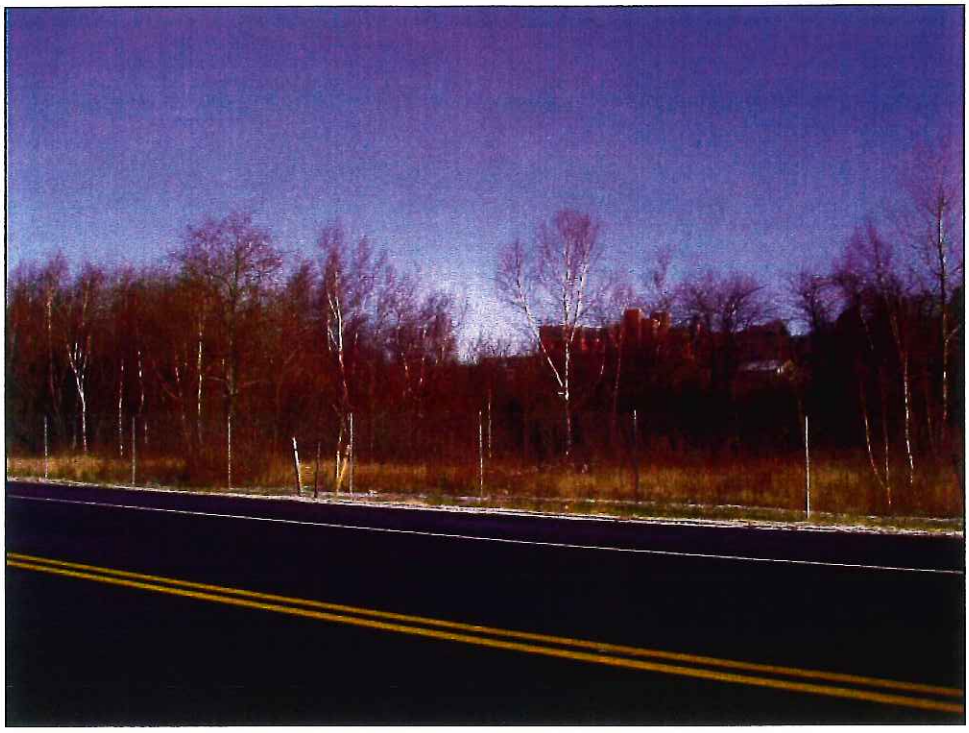


PHOTO 6

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PHOTO 7



PHOTO 8

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Photos taken 12-5-05



PHOTO 9

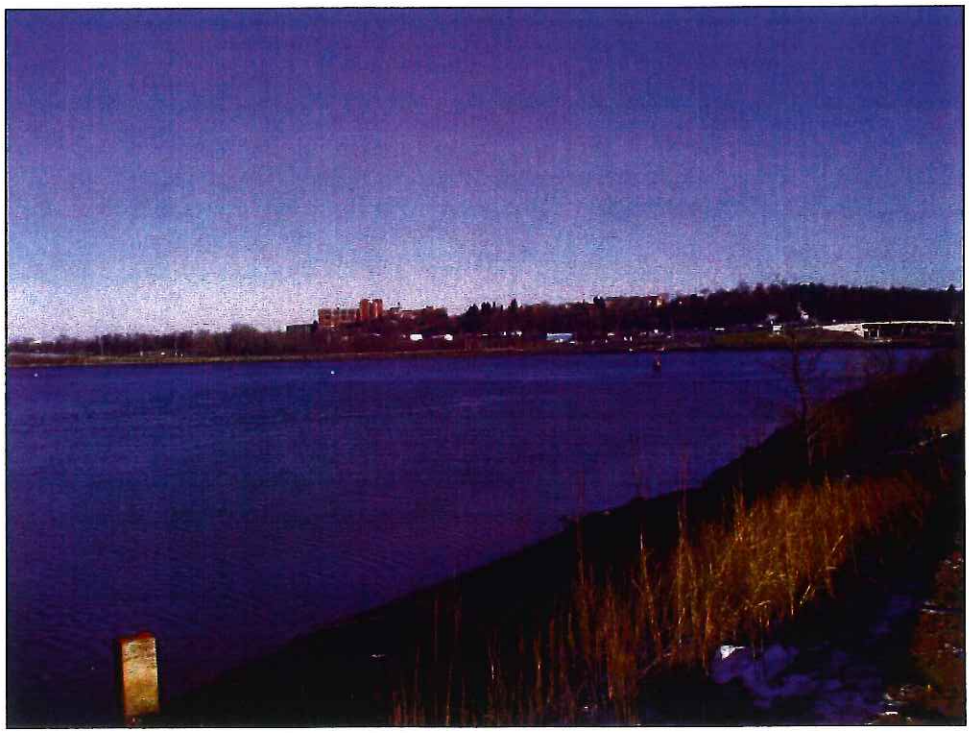


PHOTO 10

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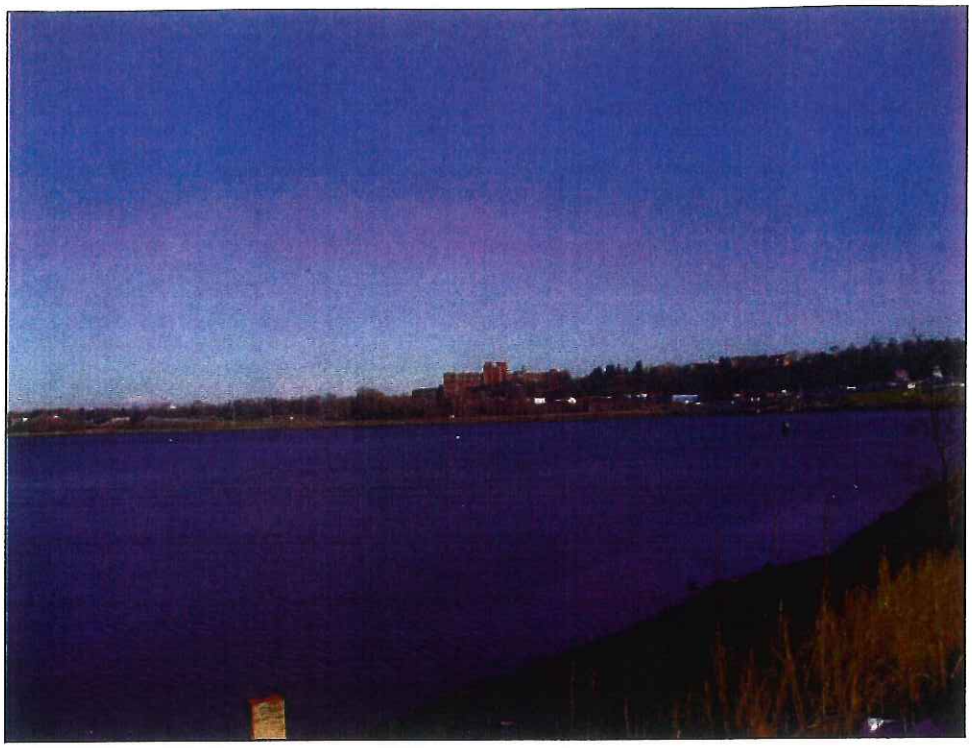


**PHOTO 11**

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# Photo074

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MercyH



Prom



# Photo024

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MercyH

Prom



# Photo029

image # 27 of 81 in All

MercyHospital :: Photos - Ground Level Western Prom ::Medium Size ::Full Size

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# Photo005

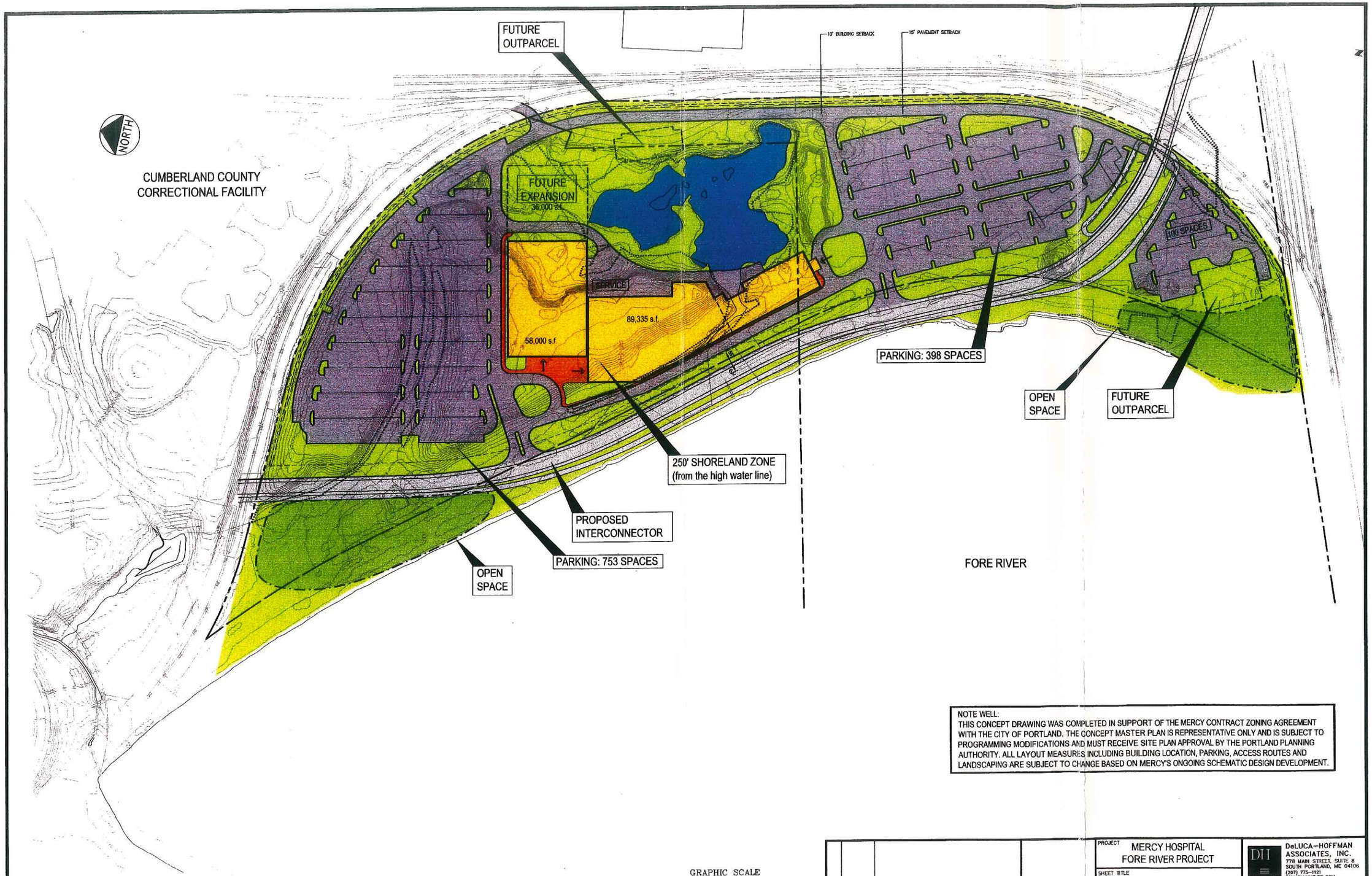
image # 39 of 81 in All

MercyHospital :: Photos - Ground Level 295 ::Medium Size ::Full Size

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# 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 | 10/15/01 | 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
DHA@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 | | |
|---|---|---|
| AREA | QUANTITY | DESCRIPTION |
| A | 107 | HOSPITAL PATIENT / VISITORS / PHYSICIANS |
| B | 164 | MOB PATIENT / VISITORS |
| C | 151 | MOB STAFF / VISITORS |
| D | 36 | HOSPITAL / MOB PATIENTS |
| E | 53 | HOSPITAL STAFF |
| F | 70 | HOSPITAL STAFF |
| G | 202 | HOSPITAL / MOB STAFF |
| TOTAL | 783 | |

GRAPHIC SCALE
( IN FEET )
1 inch = 60 ft.

| | | |
|---|---|---|
| 7.25.06 | 4 | REVISED AND RESUBMITTED TO PLANNING AUTHORITY |
| 5.31.06 | 3 | REVISED AND RESUBMITTED TO PLANNING AUTHORITY |
| 12.23.05 | 2 | REVISED AND RESUBMITTED TO PLANNING AUTHORITY |
| 12.14.05 | 1 | REVISED AND RESUBMITTED TO PLANNING AUTHORITY |

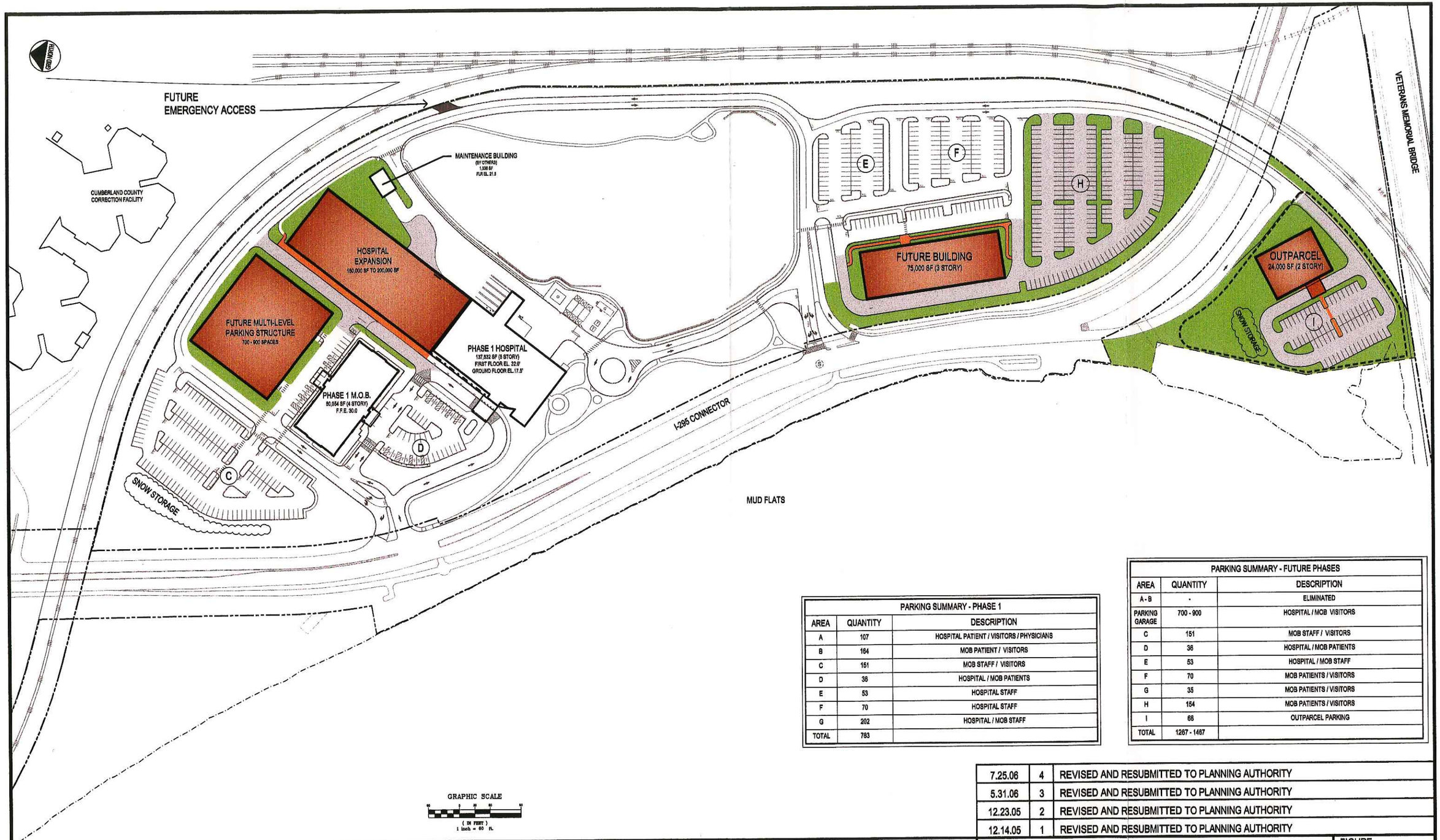
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WWW.DELUCAHOFFMAN.COM

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| FILE NAME: | 2149.01-MP3 | | |

# MERCY HOSPITAL
# FORE RIVER PROJECT

## MASTER PLAN - PHASE 1

FIGURE
1 of 6




GRAPHIC SCALE

( IN FEET )
1 inch = 60 ft.

| PARKING SUMMARY - PHASE 1 | | |
|---|---|---|
| AREA | QUANTITY | DESCRIPTION |
| A | 107 | HOSPITAL PATIENT / VISITORS / PHYSICIANS |
| B | 164 | MOB PATIENT / VISITORS |
| C | 151 | MOB STAFF / VISITORS |
| D | 36 | HOSPITAL / MOB PATIENTS |
| E | 53 | HOSPITAL STAFF |
| F | 70 | HOSPITAL STAFF |
| G | 202 | HOSPITAL / MOB STAFF |
| TOTAL | 783 | |

| PARKING SUMMARY - FUTURE PHASES | | |
|---|---|---|
| AREA | QUANTITY | DESCRIPTION |
| A - B | - | ELIMINATED |
| PARKING GARAGE | 700 - 900 | HOSPITAL / MOB VISITORS |
| C | 151 | MOB STAFF / VISITORS |
| D | 36 | HOSPITAL / MOB PATIENTS |
| E | 53 | HOSPITAL / MOB STAFF |
| F | 70 | MOB PATIENTS / VISITORS |
| G | 35 | MOB PATIENTS / VISITORS |
| H | 154 | MOB PATIENTS / VISITORS |
| I | 66 | OUTPARCEL PARKING |
| TOTAL | 1267 - 1467 | |

| | | |
|---|---|---|
| 7.25.06 | 4 | REVISED AND RESUBMITTED TO PLANNING AUTHORITY |
| 5.31.06 | 3 | REVISED AND RESUBMITTED TO PLANNING AUTHORITY |
| 12.23.05 | 2 | REVISED AND RESUBMITTED TO PLANNING AUTHORITY |
| 12.14.05 | 1 | REVISED AND RESUBMITTED TO PLANNING AUTHORITY |

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| FILE NAME: | 2149.01-MP3 | | |

# MERCY HOSPITAL
# FORE RIVER PROJECT

## MASTER PLAN - FUTURE PHASES

FIGURE
2 of 6

GRID NORTH

CUMBERLAND COUNTY CORRECTION FACILITY

MAINTENANCE BUILDING
(BY OTHERS)
1,500 SF
FLR EL. 21.5

PHASE 1 HOSPITAL
137,632 SF (5 STORY)
FIRST FLOOR EL. 32.0'
GROUND FLOOR EL. 17.5'

PHASE 1 M.O.B.
50,064 SF (4 STORY)
F.F.E. 30.0'

I-295 CONNECTOR

VETERANS MEMORIAL BRIDGE

MUD FLATS

NORTH DRIVEWAY DETAIL
SCALE: 1" = 50'

SOUTH DRIVEWAY DETAIL
SCALE: 1" = 50'

TYPICAL SERVICE VEHICLE ROUTE
BUS ROUTE
SHUTTLE SERVICE

GRAPHIC SCALE
( IN FEET )
1 inch = 60 ft.

| | | |
|---|---|---|
| 7.25.06 | 4 | REVISED AND RESUBMITTED TO PLANNING AUTHORITY |
| 5.31.06 | 3 | REVISED AND RESUBMITTED TO PLANNING AUTHORITY |
| 12.23.05 | 2 | REVISED AND RESUBMITTED TO PLANNING AUTHORITY |
| 12.14.05 | 1 | REVISED AND RESUBMITTED TO PLANNING AUTHORITY |

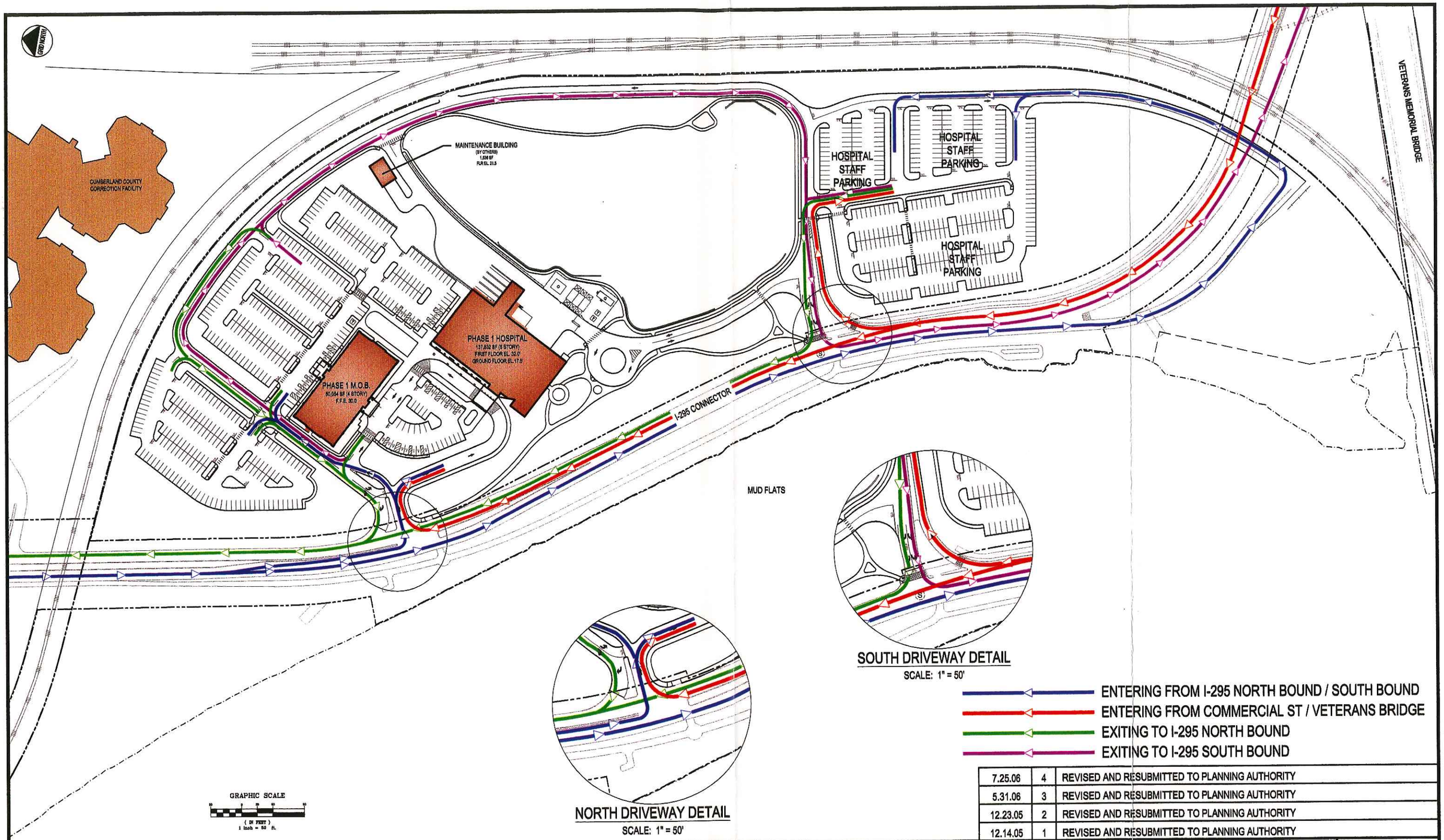
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| FILE NAME: | 2149.01-MP3 | | |

# MERCY HOSPITAL
# FORE RIVER PROJECT

## MASTER PLAN
## SERVICE & BUS CIRCULATION ROUTES

FIGURE
3 of 6




NORTH DRIVEWAY DETAIL

SCALE: 1" = 50'



SOUTH 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

| | | |
|---|---|---|
| 7.25.06 | 4 | REVISED AND RESUBMITTED TO PLANNING AUTHORITY |
| 5.31.06 | 3 | REVISED AND RESUBMITTED TO PLANNING AUTHORITY |
| 12.23.05 | 2 | REVISED AND RESUBMITTED TO PLANNING AUTHORITY |
| 12.14.05 | 1 | REVISED AND RESUBMITTED TO PLANNING AUTHORITY |

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| CHECKED: | SRB | JOB NO. | 2149.01 |
| FILE NAME: | 2149.01-MP3 | | |

# MERCY HOSPITAL
# FORE RIVER PROJECT

## MASTER PLAN
## VISITOR/STAFF CIRCULATION ROUTES

FIGURE
4 of 6

GRID NORTH

REFER TO PLANTING PLANS BY SMRT FOR LANDSCAPE PLANTING AREAS

LANDSCAPE BERM

VETERANS MEMORIAL BRIDGE

CUMBERLAND COUNTY CORRECTION FACILITY

MAINTENANCE BUILDING (BY OTHERS) 1,500 SF FLR EL. 21.0

FUTURE PARKING

PHASE 1 HOSPITAL
137,832 SF (6 STORY)
FIRST FLOOR EL. 32.0'
GROUND FLOOR EL. 17.5'

PHASE 1 M.O.B.
60,054 SF (4 STORY)
F.F.E. 30.0

FUTURE OUTPARCEL

I-295 CONNECTOR

BORROW PIT RESTORATION LIMITS (GROUND COVER ONLY)

FUTURE CONNECTION

EXISTING WATER QUALITY TREATMENT SWALE

EXISTING CONDITIONS TO REMAIN

MUD FLATS

EXISTING WATER QUALITY TREATMENT SWALE

TRAIL TO PROPERTY LINE FOR LINKAGE TO PORTLAND TRAILS

NORTH DRIVEWAY DETAIL
SCALE: 1" = 50'

SOUTH DRIVEWAY DETAIL
SCALE: 1" = 50'.

- EXISTING TREES
- EXISTING LIGHT
- PROPOSED LANDSCAPE
- OVERLOOK
- SIDEWALK
- STONE DUST PATH
- PORTLAND TRAILS
- LANDSCAPE AREAS
- GRASSED AREAS

GRAPHIC SCALE
( IN FEET )
1 inch = 60 ft.

| | | |
|---|---|---|
| 7.25.06 | 4 | REVISED AND RESUBMITTED TO PLANNING AUTHORITY |
| 5.31.06 | 3 | REVISED AND RESUBMITTED TO PLANNING AUTHORITY |
| 12.23.05 | 2 | REVISED AND RESUBMITTED TO PLANNING AUTHORITY |
| 12.14.05 | 1 | REVISED AND RESUBMITTED TO PLANNING AUTHORITY |

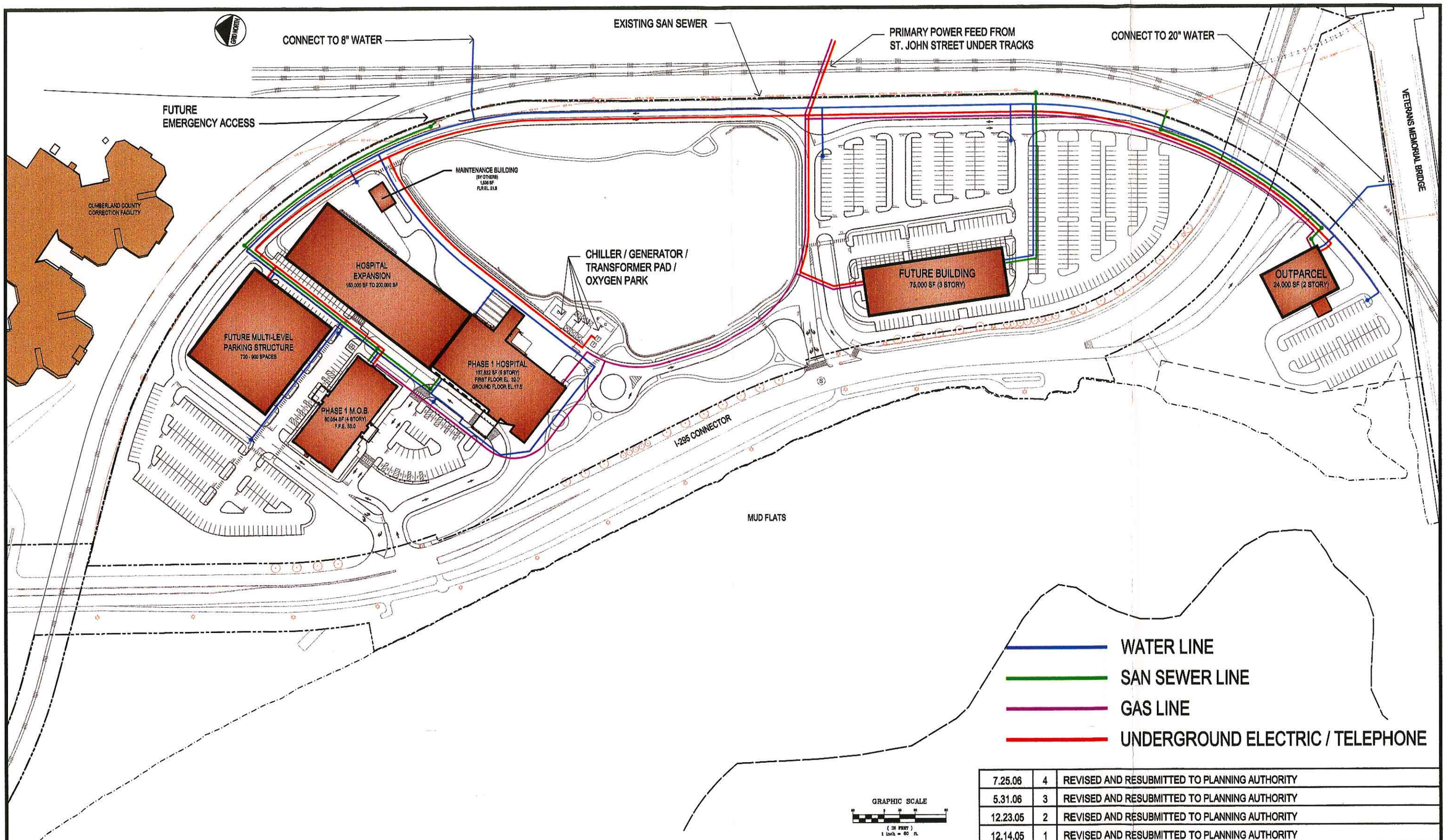
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|---|---|---|---|
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| DESIGNED: | - | SCALE: | AS NOTED |
| CHECKED: | SRB | JOB NO. | 2149.01 |
| FILE NAME: | 2149.01-MP3 | | |

# MERCY HOSPITAL
# FORE RIVER PROJECT

## MASTER PLAN
## LANDSCAPE AND OPEN SPACE

FIGURE
5 of 6




| | | |
|---|---|---|
| 7.25.06 | 4 | REVISED AND RESUBMITTED TO PLANNING AUTHORITY |
| 5.31.06 | 3 | REVISED AND RESUBMITTED TO PLANNING AUTHORITY |
| 12.23.05 | 2 | REVISED AND RESUBMITTED TO PLANNING AUTHORITY |
| 12.14.05 | 1 | REVISED AND RESUBMITTED TO PLANNING AUTHORITY |

DeLuca-Hoffman Associates, Inc.
778 MAIN STREET, SUITE 8
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207.775.1121
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| DESIGNED: | - | SCALE: | AS NOTED |
| CHECKED: | SRB | JOB NO. | 2149.01 |
| FILE NAME: | 2149.01-MP3 | | |

# MERCY HOSPITAL
# FORE RIVER PROJECT

## MASTER PLAN - UTILITY SCHEMATIC

FIGURE
6 of 6




## LEGEND

- LARGE SHADE TREES
- SMALL ACCENT TREES
- EVERGREEN TREES
- SHRUBS

SMRT
ARCHITECTURE
ENGINEERING
PLANNING

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| 5.31.06 | 3 | REVISED AND RESUBMITTED TO PLANNING AUTHORITY |
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# MERCY HOSPITAL
# FORE RIVER PROJECT

## MASTER PLAN - FUTURE PHASES
## CONCEPT PLANTING PLAN

FIGURE
-

***Version as of Aug 2008***

Mercy Health System – Fore River Campus
Private Development Restrictions – DRAFT

Outline:

1. Introduction

2. Design Goals and Objectives

    a. Site
    b. Buildings

3. Design Standards

    a. Site
    b. Buildings

4. Development Review Process

## 1. Introduction

In accordance with requirements as set forth in the Contract Zone Agreement (CZA) between the City of Portland and Mercy Hospital and Mercy Health System of Maine, hereinafter referred to as "Mercy", and conditions of Site Plan Approval, this document constitutes in its entirety Private Development Restrictions that shall apply to all development and construction on the Mercy Fore River Campus following the initial construction of the Phase I hospital and medical office building facilities.

*Background*

Located on the Fore River between I-295 and the Veterans' Memorial Bridge, the 28 +/- acre Mercy campus is a highly visible "gateway" component at the base of the Portland peninsula's west end. The site is served by the Fore River Parkway (the "Parkway") and associated pedestrian and bicycle paths, making it easily accessible in addition to being a defining element in the urban fabric of the city.

The site is roughly divided into thirds: the northernmost containing the Phase I Mercy Hospital, medical office building, and parking; the central pond related area; and the southernmost area designated for employee parking and future mixed-use development according to the Master Plan. Two small portions of the Mercy property lie to the river side of the Parkway, the northernmost being dedicated open space, and the southernmost being designated for additional mixed-use development and open space.

Per the CZA, land use on the site is restricted to:

a. Hospitals, clinics, and medical research facilities.
b. Community living arrangements, congregate care facilities, intermediate care facilities, long term or extended care facilities, and sheltered care group homes.
c. Office complexes and professional offices.
d. Day care facilities and adult day care facilities.
e. Exercise and fitness centers and health clubs.
f. Personal services, restaurants, and retail establishments of no more than 50,000 square feet, except that there shall be no drive through facilities.
g. Dwellings, hotels, motels, inns, and rooming units: and lodging houses for hospital or clinic employees or volunteers and patents' family members.
h. Teaching centers.
i. Accessory uses, including, but not limited to, parking facilities and structures, utility services, stormwater management systems, and site amenities.

The following sections address Design Goals and Objectives, and Design Standards. The first establishes the basis and framework for design of future development at the Mercy Fore River Campus. The information in this section is provided to guide and inform the overall design approach to new building and site improvements. The second – Design

Standards – is set forth as more detailed basic minimum requirements for new construction on the campus. Taken together, these will be applied to new development proposals by reviewing authorities including the Mercy Healthcare System of Maine. All future development on the Campus shall comply with these goals, objectives, and standards in addition to all applicable city, state, and federal standards and requirements. In the event there is a conflict between this and other standards, the more stringent shall apply. In the following sections, "should" means the developer/designer must make every reasonable effort to comply with a particular goal or objective. The word "shall" means the developer/designer must comply with a particular standard unless express written approval of variance or waiver from that standard is obtained from the authority having jurisdiction.

The goals, objectives, and standards contained herein are not intended to restrict creativity or innovation on the part of the developer/designer, but are intended to help create a harmonious campus development for the betterment of those who work within, visit, and otherwise experience it as part of the City of Portland.

## 2. Design Goals and Objectives

The overall objective guiding development of the Mercy Fore River Campus site is to create a medical services oriented campus consisting of an integrated assemblage of buildings of varying sizes and functions coordinated with 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. The campus shall be developed substantially in accordance with the Master Plan as approved in the CZA.

*Site Development*

Site improvements and development should be functionally efficient and support building uses while enhancing environmental and visual quality within the campus, and as it relates to the surrounding urban context. This is to be achieved as follows:

A. Site context: New development should generally be well suited to the existing site constraints of topography and natural features, and relate to the surrounding Phase I infrastructure. This recognizes the fact that the site is bounded on all sides by existing rail- and roadways, and to an extent, the Fore River, limiting somewhat its direct relation to the adjoining urban areas. Because of the tight and relatively flat nature of the site, there should be no drastic elevation changes required or proposed.

B. Vehicular circulation and parking: The development density of the site requires significant amounts of roads and parking for user, staff, emergency, and service access. These improvements are intended to be visually screened and oriented for

the greatest convenience of movement of pedestrians between vehicle and building entrances. New on-site vehicle movement shall be designed so as to not interfere with pedestrian movement. A core pedestrian zone linking major campus elements should dominate, with vehicle circulation and parking being located around its perimeter.

C. Pedestrian circulation: Pedestrian connections between buildings, from parking areas to buildings, and from the surrounding city walkway network, should be clearly defined, direct, well lit and maintained, safe, and efficient to use. They should reinforce the walkable nature of the campus and provide easy access also to related public spaces and trail amenities on- and off-site. Pedestrian-oriented plazas, entry courts, and terraces should be incorporated into new development to provide places for rest and gathering, and relate to building functions and Phase I development.

D. Planting: Existing vegetation should be preserved to the greatest extent practicable in accordance with the City of Portland standards. New planting should be used to soften and screen the impact of vehicular parking and service areas, reinforce desired visual elements and architecture, provide shade and enhance walks and drives, and provide relief and visual interest in pedestrian-oriented spaces. New planting should be appropriate for the site and growing conditions, and include native species. Invasive species shall be avoided.

E. Site furnishings and amenities: Elements such as benches, bollards, bicycle storage racks, drinking fountains, and trash receptacles, serve to provide comfort, relief, convenience, and safety, in the pedestrian environment. These elements should be consistent with existing development, and integrated into new development and included in pedestrian areas..

F. Lighting: Site lighting throughout the campus should be consistent with Phase I development with respect to fixture performance, style, and color, for general illumination of parking and roadways. Special emphasis lighting for individual buildings (architectural accent) and pedestrian-oriented spaces (lower height poles and/or bollard type). These styles may differ depending on type of area use and proximity to other areas, but should be limited to types compatible with those used for general site lighting. A related family of fixtures should be used. Overall, a sufficient and safe level of lighting shall be provided in accordance with all applicable codes and standards, in particular those of the City of Portland and the Illumination Engineering Society of North America. Lighting shall be designed to minimize or eliminate light pollution and trespass per those standards.

G. Buffers and screens: Vehicle parking, service, and utility areas shall be screened from view from adjoining properties, traveled ways, and walks. Planting, earth berms, walls, fencing, and other architectural type devices should be used to achieve maximum screening of these areas.

H. Signage: Signs help to provide the user and visitor to the campus much needed information, direction, and guidance. A comprehensive signage plan exists that provides a consistent, predictable, and legible sign system that provides easily accessible information and facilitates independent wayfinding throughout the campus.

   New signs shall be placed at locations proximate to decision points (intersections, entrances, etc.) at sufficient distance and of adequate size to be easily identifiable and readable by the viewer without having to slow drastically, preventing unsafe conditions. New signs should be graphically consistent with those throughout the campus, with an established hierarchy of size dependant upon level of importance and viewer travel speed.

*Building Development*

Building form and size will vary dependent upon function. 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: New building construction may present a strong visual impression to the Parkway while but shall maintain pedestrian level orientation with an inward focus on campus pedestrian linkages and spaces. Main entrances shall be designed and oriented to the pedestrian realm. Forms should relate to existing campus construction to create a harmonized appearance. Detailing in masonry patterns, variations in wall plane setbacks and openings, should be used to create interest and avoid a box-like appearance.

B. Scale: New building construction should relate to nearby buildings and the intervening spaces with emphasis on pedestrian orientation and the human scale. Special attention should be given to ground floor levels including entries, canopies, doors, and fenestration. The goal is to provide interest and emphasis to provide strong visual cues that will guide and direct users through use of more monumental proportioning, while maintaining a human scale in detail.

C. Massing/Composition: New construction shall relate and respond to existing buildings and landscape spaces as discussed above. Height limitations defined in the CZA shall dictate form and massing relative to desired program area, however, buildings shall be designed to positively relate to and reinforce the pedestrian environment and human scale. Architectural elements such as arcades and articulation of forms shall be used to break down large masses.

D. Materials and Color: Building materials shall be of the highest quality, and colors shall be chosen for lasting durability and shall relate well to those which exist on campus.

E. Exterior Components: Pedestrian related elements such as arcades, entry courts, etc., are encouraged wherever possible.

F. Mechanical Appurtenances: Equipment for utilities and services such as elevators (overruns), heating, ventilation, electrical supply and cooling, should be screened from public view whether roof- or ground-mounted. Penthouses, rooftop screens, or architectural screens at the ground level should be used for this purpose along with suitable landscape. The material used to screen rooftop appurtenances shall be consistent with that used elsewhere on the building.

## 3. Design Standards

The following site and building design standards shall be utilized for all new construction proposed for the Mercy Fore River Campus site to insure it is integrated into the existing Phase I campus environment, and creates a cohesive relation to the city.

*Site Development*

A. Site Context and Relation: New development shall fit to the existing topography to the greatest extent practicable, with little or no drastic change in elevation. Where applicable, natural features and elements shall be preserved. Building space and bulk requirements as defined in the CZA shall be maintained. For purpose of front yard setbacks, the front yard for each building shall be the area between the building and the Parkway.

B. Vehicular circulation and parking: Parking aisles shall be oriented towards building entries, reducing the need for pedestrians to cross traffic lanes. If required, proposed changes to established vehicular circulation and parking shall be consistent with that established in Phase I development. Planting, earth berms, or other means shall be used to screen parking from view as described herein and per City standards. Parking areas shall contain planted islands and end caps that meet or exceed City standards in terms of size and total area to reduce the heat island effect and provide visual relief.

Drives and roads shall be kept to the minimum width required for safe and efficient access. Vertical and sloped granite curbing shall be used where pedestrian walks must be located immediately at or adjacent to road edges for pedestrian safety, and to direct and control stormwater runoff in a safe and efficient manner. Pedestrian crosswalk and areas of refuge shall be located where walkways cross drives and roads, and appropriate signage and warnings installed.

C. Pedestrian circulation: Walks for primary pedestrian circulation shall be 6-feet wide, but in no instance shall pedestrian walkways be less than 5-feet wide except for limited service type access walks. This does not preclude the use of wider walks proximate to building entries as in the case of entry plazas or terraces, in which case provision shall be made for planting areas to soften the meeting of pavement to building face, where appropriate. Walks proximate to buildings shall be of well detailed and finished cast-in-place concrete. Accent paving consisting of precast concrete, brick, or natural stone pavers, is encouraged to call attention to and set apart areas of special interest such as building entries or pedestrian gathering areas. (Note: When used, these special materials shall be coordinated with the overall campus palette). Primary circulation in and around campus shall be accessible in accordance with the Americans with Disabilities Act Accessibility Guidelines (ADAAG).

D. Planting: Planting shall be installed in accordance with city requirements for buffering and screening. Street tree planting shall be installed that is well adapted to survive and thrive in the urban environment. Tree species used along drives and in parking areas shall be chosen in keeping with those currently established in Phase I development to help define different campus areas and promote wayfinding.

Special attention shall be paid to tree planting in paved areas to insure that adequate soil mix, water, and air are made available to foster healthy tree growth and reduce the risk of pre-mature death and need for replacement. A minimum 3-foot depth of planting soil shall be provided in parking islands and end caps. Plant materials shall be vigorous, healthy, and well developed, typical of their species and kind. Plant sizes shall be a minimum as listed below (proportions to be per American Association of Nurserymen Standards, latest edition):

- Large deciduous trees: 3-inch caliper
- Small flowering trees: 1.5 – 2-inch caliper
- Evergreen trees: 6-8 feet height
- Large shrubs: 3-4 foot height
- Small shrubs: 18-24-inch spread
- Groundcovers: #2 container
-

Plant choices should consist primarily of native or established species, grown in similar climatic regions (New England) and suitable for the environmental conditions found on the site. No invasive species as designated by the Maine Department of Environmental Protection shall be allowed.

Plant spacing in masses should not exceed 75% of mature plant width. Plant placement shall not create visual or physical obstruction such that unsafe or insecure conditions result.

E. Site furnishings and amenities: A palette of site elements including benches, bollards, trash receptacles, and bicycle racks has been established and shall be utilized to the greatest extent practicable. Substitutions, if necessary, or new elements, shall be consistent with this palette and subject to approval. The existing palette includes:

- Bollards: Precast concrete; 36" height, 5000 psi, reinforced, with light sand-blast finish.
- Bicycle racks: "Ribbon Rack", size varies, Schedule 40 TP 304 stainless steel (ASTM A312); available from AAA Ribbon Rack Co., Division of Brandir International, Inc., New York, NY (1-800-849-3488), or approved equal. Finish to be satin # 4. Mounting to be standard in-ground.
- Benches:
    - In building areas: Esplanade Series, Model ES-3, surface mount, color from standard manufacturer's range. FairWeather Site Furnishings, Port Orchard, Washington. 1-800-323-7198.
    - In open space areas: Landscape Series, Model L-2 with Ipe, permanent embed mount. FairWeather Site Furnishings, Port Orchard, Washington. 1-800-323-7198.
- Tree grates: R-8706 180 degree Square. Neenah Foundry Co., Neenah, WI. 1-414-725-7000.
- Aluminum edging and stone mulch:
    - Edge material to be aluminum, 6063 alloy, T-6 hardness. Size 3/16" X 4" with 4" offset interlocking snap connection system. Minimum wall thickness to be 0.110". Sections to be 16' min., with loops for stakes at 2' o.c. Stakes to be aluminum, 6061 alloy, T-6 hardness. Color and surface to be mill finish. Provide as manufactured by Permaloc Corporation, or equal
    - Stone mulch to be rounded river stone, 2"-3" diameter max. to ¾" diameter min., washed and free from all foreign and organic material.
- Trash receptacles: Esplanade Series Accessories Model TR-8 with spun steel top, surface mount, color from standard manufacturer's range. FairWeather Site Furnishings, Port Orchard, Washington. 1-800-323-7198.
- Tree pit drains and aeration sheets:
    - Tree pit drains: "Spee-D-Basin" NDS #100, with 6-inch plastic riser and plastic grate NDS #40 (black). National Diversified Sales, Newbury Park, CA. 1-800-235-3533.

- Aeration sheets: "Awkwadrain 112" and plastic end connector. American Wick Drain, Matthews, NC. 1-800-242-9425.

F. Lighting: General site lighting shall be as follows:

Kim Lighting Era® Series, pulse start metal halide, full cut-off distribution, as follows (match existing pole types and finish color):

- Drives and roadways: Kim Era® Series, 30-foot height
- Parking areas: Kim Era® Series, 25-foot height
- Building mounted – public exposure: Kim Era® Series, wall mount
- Building mounted – service areas: Kim Wall Director

Project specific lighting such as pedestrian and building accent fixtures shall be compatible with the family of fixtures defined above, subject to approval.

G. Buffers and screens: Screening shall be provided in accordance with City requirements for service and utility areas, loading areas, and vehicle parking. Screening shall be of a dense and continuous nature as described in the following options:

- Architectural screens: For building mounted (roof top) applications or areas immediate adjacent to buildings such as service and loading areas, utilize materials aesthetically compatible with building exteriors of lasting quality such as brick or metal panel systems (louvered or solid as appropriate). Concrete block systems of acceptable aesthetic quality (split or ground face, for example) may be considered, subject to approval. Screen height shall be typically 6 to 8 feet, or demonstrated to be sufficient to effectively block views.
- Earth berms: Mounded earth berms, especially when coupled with plantings or site walls, is an effective landscape screen mechanism where space allows. When employed, berms shall be of sufficient height to provide screening or sufficient buffering of areas and shall be a minimum of 3-feet high. Additional elements such as walls or planting placed on berms, when taken in conjunction with the berms, shall totally screen the areas. (Note that the berm height can effectively be used to reduce height of companion plantings and walls). Berm slopes shall be no steeper that 3H:1V. Variation of height, alignment, and side slope of berms shall be utilized as appropriate to create a more natural appearance.
- Site walls: Site walls shall be constructed of quality long-lasting materials such as brick or stone. When in close proximity to buildings, walls shall be constructed as defined in Architectural Screens (above). Precast concrete unit walls in a retaining mode may be utilized for

more utilitarian applications as grades allow where not exposed to direct view or where space is available to screen and soften the exposed wall face with planting.

- Planting: Plant materials for buffers and screens shall be of sizes listed herein and placed to effectively block views to designated areas. Evergreen species are most effective for the purpose, and shall be varied and combined with deciduous and other evergreen species to add interest and minimize large mono-cultural expanses of planting. Single-row planting shall be avoided. Double-row staggered placement of screen plants shall be employed at a minimum. Appropriate plant species shall be used with respect to available space and mature size of plants to prevent overgrown situations that may cause operational interference or security and safety issues.

H. Signage: Signs for basic traffic control and direction shall be installed in accordance with the Manual of Uniform Traffic Control Devices. Signs for campus direction, information, and wayfinding shall be graphically coordinated in accordance with a campus signage plan as discussed above. Sign materials shall be of a high and long-lasting quality subject to approval. Major site signs shall be consistent with existing and configured and placed in accordance with city requirements.

*Building Development*

The following shall be considered and incorporated into the design and construction of new buildings and building additions so they properly relate to and are consistent with Phase I development.

A. Form, massing, and scale: In elevation, buildings shall incorporate a defined base-middle-top design framework. This can be achieved through proportioning fenestration and detailing or by changing materials. Buildings shall be detailed to create vertical and horizontal articulation. Changes in wall planes, vertical window orientation, and vertical detail elements shall be employed to relieve long horizontal lines and forms and create interest. Detailing in masonry patterns, variations in wall plane setbacks, fenestration and other design details, may be used to create interest and avoid a box-like appearance. Large expanses of blank wall shall be avoided on facades visible from the public way.

B. Materials: New development shall be designed and constructed utilizing enduring materials, components, and systems which will promote building longevity. Sustainable and "green" design technologies are encouraged. Exterior materials shall be consistent with those existing. Granite, brick, precast concrete or cast stone, and high-quality metals shall be used to appropriately relate color and texture to the campus and surrounding urban context. Surfaces that are highly reflective or capable of producing excessive glare shall be avoided.

C. Exterior detail: Building elevations shall relate to existing buildings and promote a consistent image for the campus. Placement of fenestration, doorways, columns, and other components shall create a finely detailed and human-oriented environment. Large expanses of blank wall shall be avoided. Entrances shall be oriented to the pedestrian realm and emphasized with architectural form and elements such as canopies or porticoes, the rhythm of elements shall be such that monotonous repetition is minimized, and trim and detail elements shall be integrated into the design to provide interest.

D. Accessibility: All new construction shall meet or exceed accessibility requirements as defined in ADAAG. Where exterior ramps or other elements are required for accessibility, they shall be fully integrated into the overall design of building and landscape.

E. Roofs: Flat roofs shall be hidden from view by parapets. Rooftop mounted equipment shall be screened with compatible architectural screen materials or enclosed in a penthouse. Other roof forms may be employed to aid in breaking down large continuous masses in elements such as skylights, clerestories, monitors, or other raised roof areas; or in entry accent structures such as porticoes, canopies, etc. Roof materials, where possible, should be more reflective to minimize heat island effect, though should be avoided when visually obtrusive from off-site.

## 4. Development Review Process

All new development and construction on campus is subject to review and approval by the authorities having jurisdiction. This includes review under the Site Location of Development Law by the Maine Department of Environmental Protection and the City of Portland relative to the standing permits listed below.

City of Portland:

- Contract Zone Agreement (as amended June 10, 2002)
- Master Plan and Site Plan Phase I: Application #2005-0192 (approval date August 22, 2006)

Maine Department of Environmental Protection:

- Site Location of Development and Natural Resource Protection Act permits: Original Order #L-20775-19-A-N and L-20775-TG-B-N

Note: Permits and review by other state and federal agencies including the Maine Department of Transportation (Traffic Movement Permit), Maine Department of Environmental Protection (Voluntary Response Action Plan), U.S. Army Corps of Engineers (Section 404, Programmatic General Wetlands Permit), Federal Aviation Administration (Notice of Proposed Construction or Alteration; Form

7460-1), have been obtained during the course of campus development to date. It is the responsibility of the developer to determine applicability of these to proposed development and the need for additional permits or modification or amendment to standing permits.

Prior to approval by these entities, development proposals and plans shall be reviewed and approved by Mercy Hospital and Mercy Health System of Maine for compliance with these Private Development Restrictions as follows.

1. Proposals submitted for review shall be done so in triplicate to the attention of the Mercy Facilities Director. The submission and review process may occur concurrently with other reviews, but shall be completed prior to final receipt of municipal and state approvals. In no instance shall materials be submitted later than sixty (60) calendar days prior to expected receipt of municipal and state approvals, and preferably, should be submitted on or about the same time as municipal and state submissions are made.

2. At a minimum, submissions shall contain copies of plans and supporting documentation being submitted for state and municipal reviews. Additional information and details may be requested by Mercy to facilitate its review.

3. Developers may be called upon to meet with Mercy to present proposed designs and further discuss their details.

4. Final written notice of decision will be issued to the developer by Mercy, detailing areas of concern or non-compliance as may be required, which shall be revised and resubmitted by the developer for review.

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# 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;

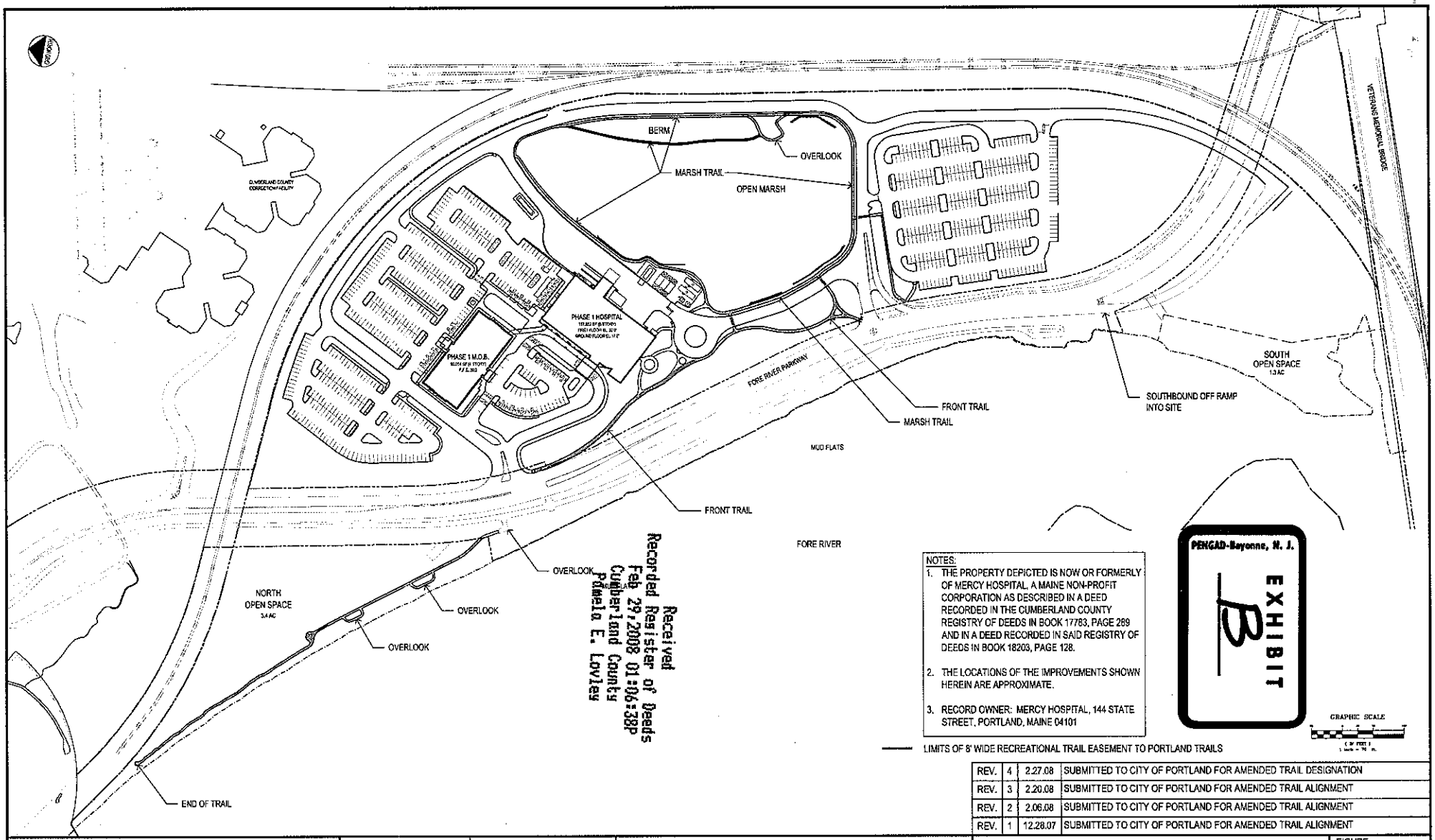
Thence continuing by said northerly right of way line of Route #1 on same course of N 71° 56' 20" E a distance of 125.37' to a tie point, said tie point being located the following courses and distances from the aforementioned tie point: S 9° 02' 28" E 1006.02 and S 16° 59' 00" W 273.21;

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

PENGAD-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 |

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

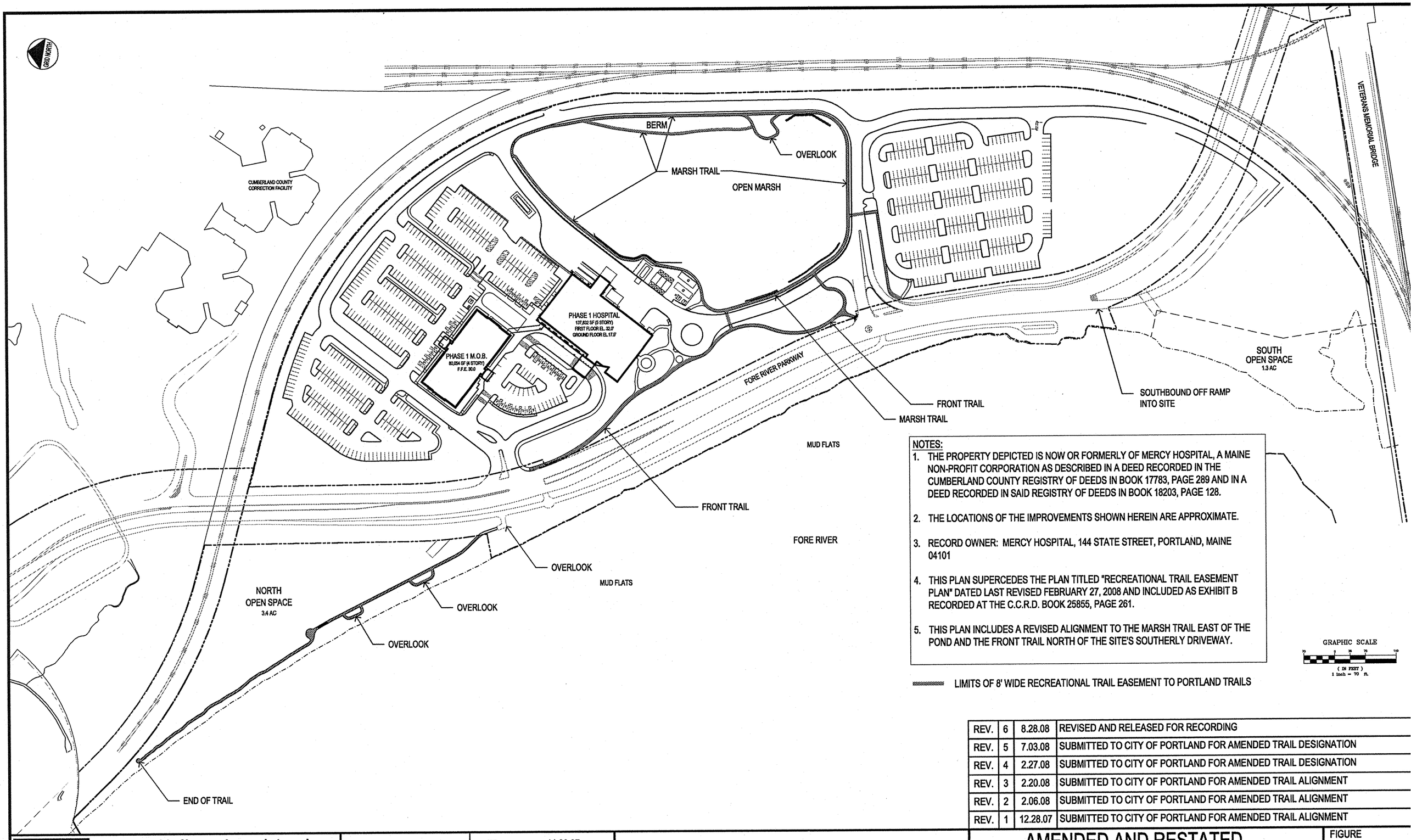
| | | | |
|---|---|---|---|
| DRAWN: | DED | DATE: | 11.20.07 |
| DESIGNED: | - | SCALE: | AS NOTED |
| CHECKED: | SRB | JOB NO. | 2149.01 |
| FILE NAME: | 2149.01-MP3 | | |

# MERCY HOSPITAL
# FORE RIVER PROJECT

## RECREATIONAL TRAIL EASEMENT PLAN

FIGURE 1

Doc#: 10512 Bk:25855 Pg: 261




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
4. THIS PLAN SUPERCEDES THE PLAN TITLED "RECREATIONAL TRAIL EASEMENT PLAN" DATED LAST REVISED FEBRUARY 27, 2008 AND INCLUDED AS EXHIBIT B RECORDED AT THE C.C.R.D. BOOK 25855, PAGE 261.
5. THIS PLAN INCLUDES A REVISED ALIGNMENT TO THE MARSH TRAIL EAST OF THE POND AND THE FRONT TRAIL NORTH OF THE SITE'S SOUTHERLY DRIVEWAY.

GRAPHIC SCALE

( IN FEET )
1 inch = 70 ft.

LIMITS OF 8' WIDE RECREATIONAL TRAIL EASEMENT TO PORTLAND TRAILS

| | | | |
|---|---|---|---|
| REV. | 6 | 8.28.08 | REVISED AND RELEASED FOR RECORDING |
| REV. | 5 | 7.03.08 | SUBMITTED TO CITY OF PORTLAND FOR AMENDED TRAIL DESIGNATION |
| 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 |

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| | | | |
|---|---|---|---|
| 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

## AMENDED AND RESTATED RECREATIONAL TRAIL EASEMENT PLAN

FIGURE
1

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<br>B-2 (MUD FLATS)<br>B-7 |
| 74 | A-1<br>A-2<br>B-3 (MUD FLATS)<br>B-11<br>B-12 |
| 74A | A-1 (MUD FLATS)<br>A-2 (MUD FLATS) |
| 75 | A-3<br>B-4<br>B-30 (MUD FLATS) |
| 75A | A-1 (MUD FLATS)<br>A-17 |
| 76 | B-33<br>B-1 (MUD FLATS)<br>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:

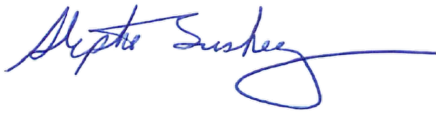
- General Application Documents
    - Project Description
    - Level III Application Checklist
    - Right, Title and Interest
    - Zoning Assessment
    - Existing and/or Proposed Easements
    - Waiver Request and Waiver Table
    - Financial Capacity
    - Technical Capability
- Transportation
    - 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*

**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**<br>• Cover Letter with detailed project description |
| Yes ☑ NA ☐ | **Completed Checklist – Level I: Site Alteration**<br>(this document) |
| Yes ☑ NA ☐ | **Right, Title and Interest**<br>• Deeds, leases, or purchase and sales agreements |
| Yes ☑ NA ☐ | **Evidence of State or Federal Approvals**<br>• Permits or letters of non-jurisdiction, if applicable |
| Yes ☑ NA ☐ | **Zoning Assessment**<br>• Table listing required and proposed uses and dimensional standards<br>Zoning Assessment Table |
| Yes ☑ NA ☐ | **Existing and/or Proposed Easements or Covenants, applicable.**<br>• Evidence of existing easements and any proposed easements |
| Yes ☑ NA ☐ | **Waiver Requests**<br>• Written request for waiver describing request and reason<br>Waiver Table |
| Yes ☑ NA ☐ | **Financial Capability**<br>• Letter or evidence from a financial institution or third party verifying financial capacity to undertake project |
| Yes ☑ NA ☐ | **Technical Capability**<br>• 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)**<br>• Provisions for pedestrian, bicycle, vehicle, and loading circulation and incremental volume of traffic impacts<br>• Traffic Impact Study (Technical Manual, Section 1) if applicable |
| ☑ | ☐ | **Access and Circulation (14-526 (a) 2 a)**<br>• Access and internal circulation, addressing ADA access<br>• Access and egress impacts on traffic flows<br>• Description and use of drive-up features, if applicable |
| ☑ | ☐ | **Loading and Servicing (14-526 (a) 2 b)**<br>• Loading and servicing needs, route and travel way geometrics for deliveries<br>• Turning templates for delivery vehicles, if applicable |
| ☑ | ☐ | **Sidewalks (14-526 (a) 2 c)**<br>• Sidewalks and condition along street frontages and internal walkways<br>• 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**<br>• Existing available transit services<br>• 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)**<br>• Expected parking demand, proposed parking supply, ADA parking, and applicable Zoning Requirements<br>• 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)**<br>• Address bicycle parking requirements and identify locations on-site<br>• Construction details for bike racks (Technical Manual, Section 1) |
| ☑ | ☐ | **Snow Storage (14-526 (a) 4 d)**<br>• Management plan for snow removal and locate snow storage areas on plan |
| ☑ | ☐ | **Traffic Demand Management (TDM) (14-526 (a) 5), if applicable**<br>• 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**<br>• Trees, plants, habitats listed on State or Federal list of endangered or threatened<br>• High and moderate value waterfowl and wading habitat<br>• Aquifers on Casco Bay Islands<br>• Waterbodies (including wetlands, watercourses, significant vernal pools and floodplains)<br>• Proposed preservation areas and protection measures<br>• Documentation from environmental consultants, determinations from applicable state agencies |
| Yes ☑ NA ☐ | **Landscaping and Landscape Preservation (14-526 (b) 2 a)**<br>• Preservation of trees and preservation within required zoning setbacks (Technical Manual, Section 4)<br>• Protection measures of existing vegetation during construction<br>• Protection measures within Shoreland Zone, if applicable |
| Yes ☑ NA ☐ | **Site Landscaping (14-526 (b) 2 b)**<br>• Screening and buffering of service areas and between non-residential and residential uses<br>• Planting plans with plant schedule and sizes (Technical Manual, Section 4) |
| Yes ☑ NA ☐ | **Parking Lot Landscaping (14-526 (b) 2 b ii), if applicable**<br>• Landscaped islands within parking areas (Technical Manual, Section 4) |
| Yes ☑ NA ☐ | **Street Trees (14-526 (b) 2 b iii)**<br>• Existing Heritage or Feature Trees on site and measures to preserve<br>• 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)**<br>• Stormwater report in compliance with Section 5 of Technical Manual and DEP Chapter 500 stormwater for basic, general and flooding standards, as applicable<br>• Erosion control plan and measures<br>• Evidence of compliance with Urban Impaired Stream Standards pursuant to DEP Chapter 500 stormwater, as applicable<br>• Subsurface sanitary sewage disposal and groundwater protection |

| PUBLIC INFRASTRUCTURE AND SAFETY | |
|---|---|
| Yes ☑ NA ☐ | **Consistency with City Master Plans (14-526 (c) 1)**<br>• Identify consistency with master plans<br>• 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))**<br>• Address Crime Prevention through Environmental Design (CPTED) (Technical Manual, Section 3)<br>• Emergency vehicle access<br>• Address consistency with public safety standards (Technical Manual, Section 3)<br>• 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)**<br>• Electrical services, including providing underground services<br>• Identify existing and proposed connections for public utilities and required public utility upgrades<br>• Sewer line connections are required, if there is a main within 200 feet<br>• Proposed solid waste management facilities on-site and management for the site<br>• 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)**<br>• Wind and ventilation impacts on adjoining structures and/or adjacent public spaces. Wind study, if applicable<br>• Bulk, location or height impacts on adjoining structures<br>• Identify and locate HVAC equipment and venting away from public spaces and residential properties<br>• Identify screening and manufacturing specifications for noise, if applicable |
| Yes ☑ NA ☐ | **Shadows (14-526 (d) 2), if applicable**<br>• Shadow analysis of impacts on publicly accessible open space (Technical Manual, Section 11) |
| Yes ☑ NA ☐ | **Snow and Ice Loading (14-526 (d) 3)**<br>• 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**<br>• Protection of designated view corridors (Portland Design Manual, Appen. 1) |

| | |
|---|---|
| Yes ☐ NA ☑ | **Historic Resources (14-526 (d) 5), if applicable**<br>• Identify developments within Historic Districts or affecting Designated Landmarks<br>• Certificate of Appropriateness or other evidence<br>• Identify Developments within 100 feet of Historic Districts or affecting Designated Landmarks. Advisory HP review may be required<br>• Address preservation and documentation of Archaeological Resources |
| Yes ☑ NA ☐ | **Exterior Lighting (14-526 (d) 6)**<br>• Cut sheets of on-site light fixtures and any architectural or specialty lights (Technical Manual, Section 12)<br>• Engineered details for any lights proposed in street right-of-way (Technical Manual, Section 10) |
| Yes ☑ NA ☐ | **Noise and Vibration (14-526 (d) 7)**<br>• 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**<br>• 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<br>• Proposed commercial and directional signage on site |
| Yes ☑ NA ☐ | **Zone Related Design Standards (14-526 (d) 5)**<br>• Address Historic Preservation Design Review, if applicable<br>• Address any applicable design review standards by zone<br>• Address submission requirements from Design Manual, page 1, addressing neighborhood context<br>• Description of exterior materials, color, finish, and samples |
| **Construction Management Plan** | |
| Yes ☑ NA ☐ | **Construction Management Plan**<br>• 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;

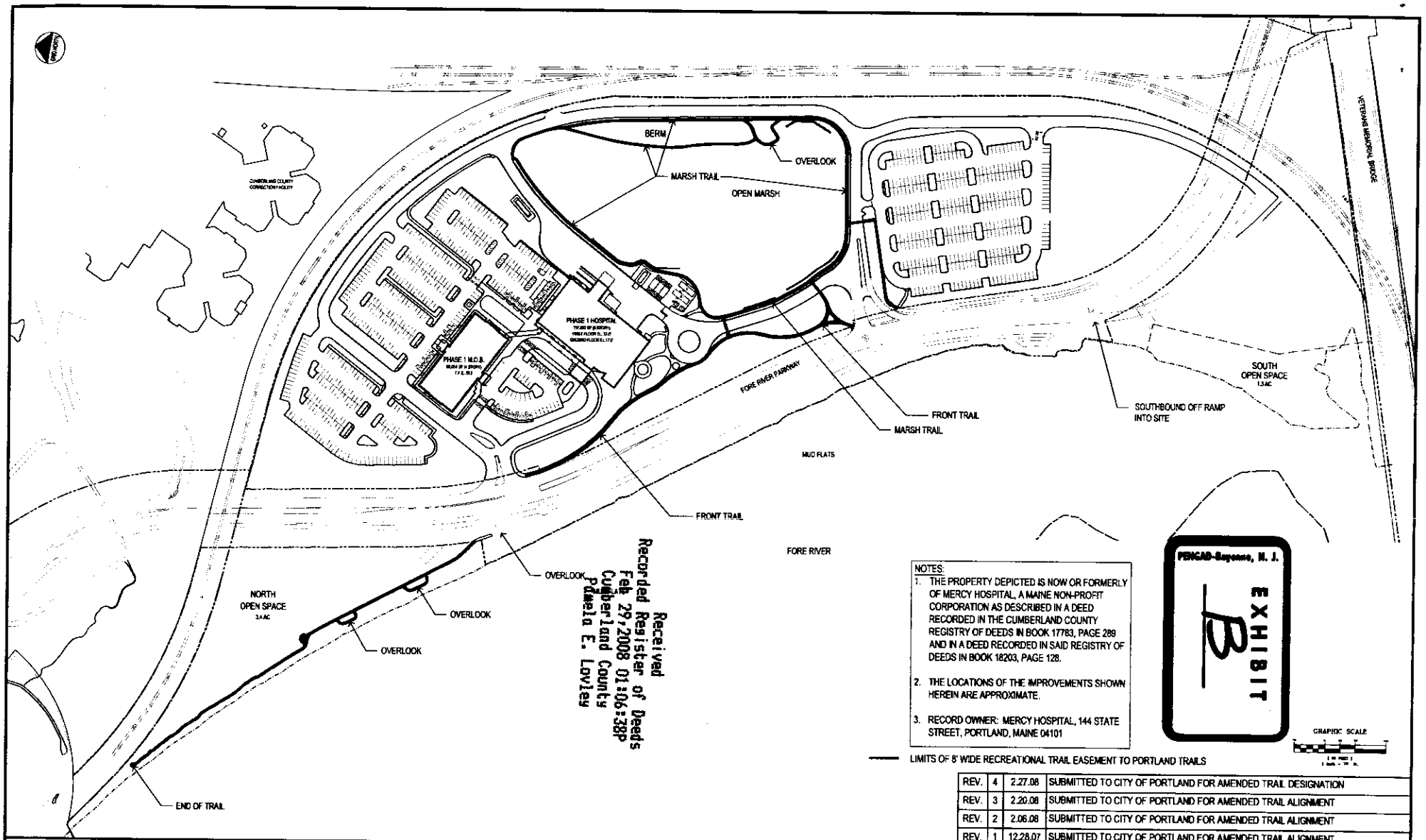
Thence continuing by said northerly right of way line of Route #1 on same course of N 71° 56' 20" E a distance of 125.37' to a tie point, said tie point being located the following courses and distances from the aforementioned tie point: S 9° 02' 28" E 1006.02 and S 16° 59' 00" W 273.21;

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

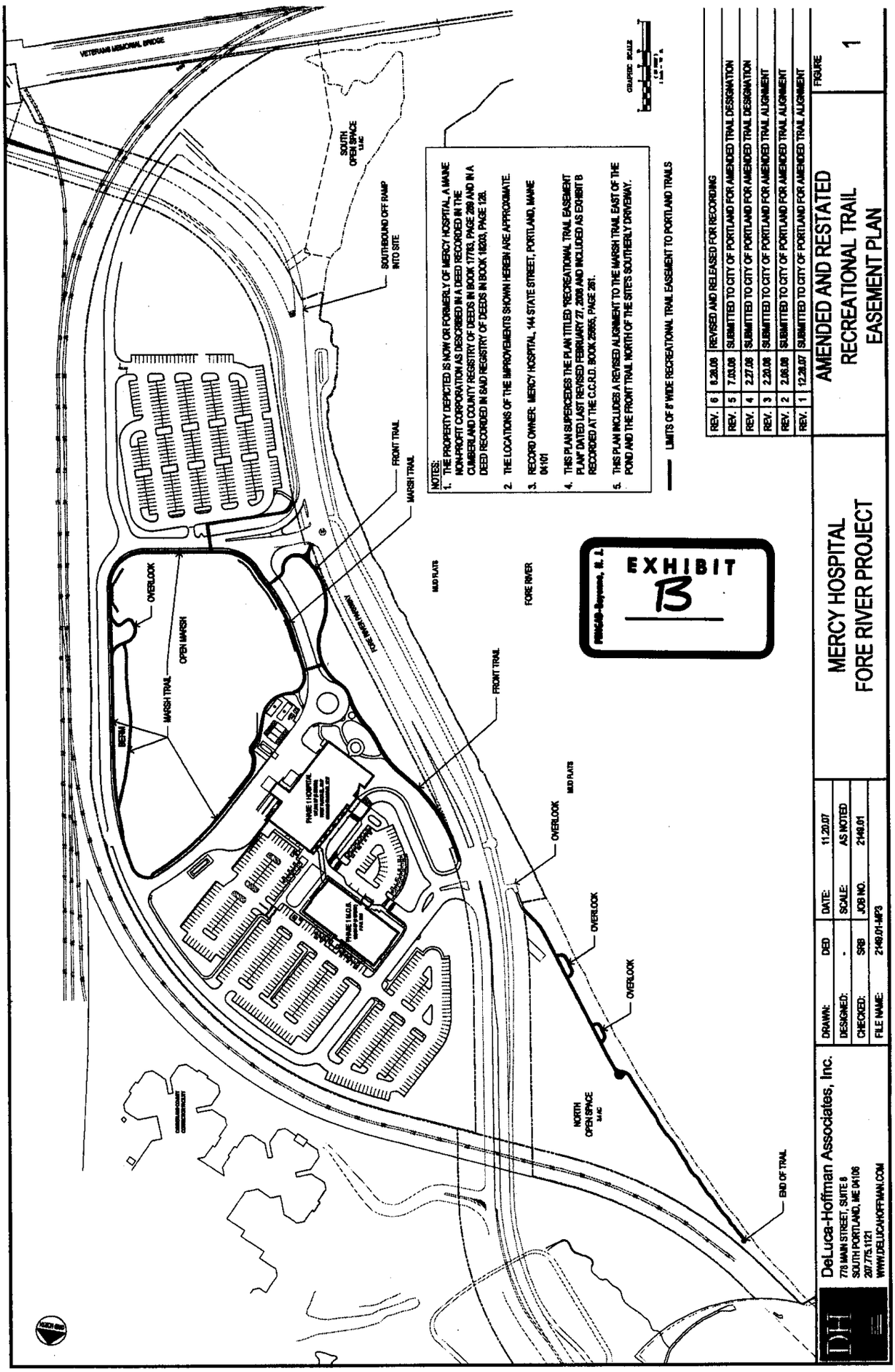
STATE OF MAINE
COUNTY OF CUMBERLAND, s.s.

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

Att. C

**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.**

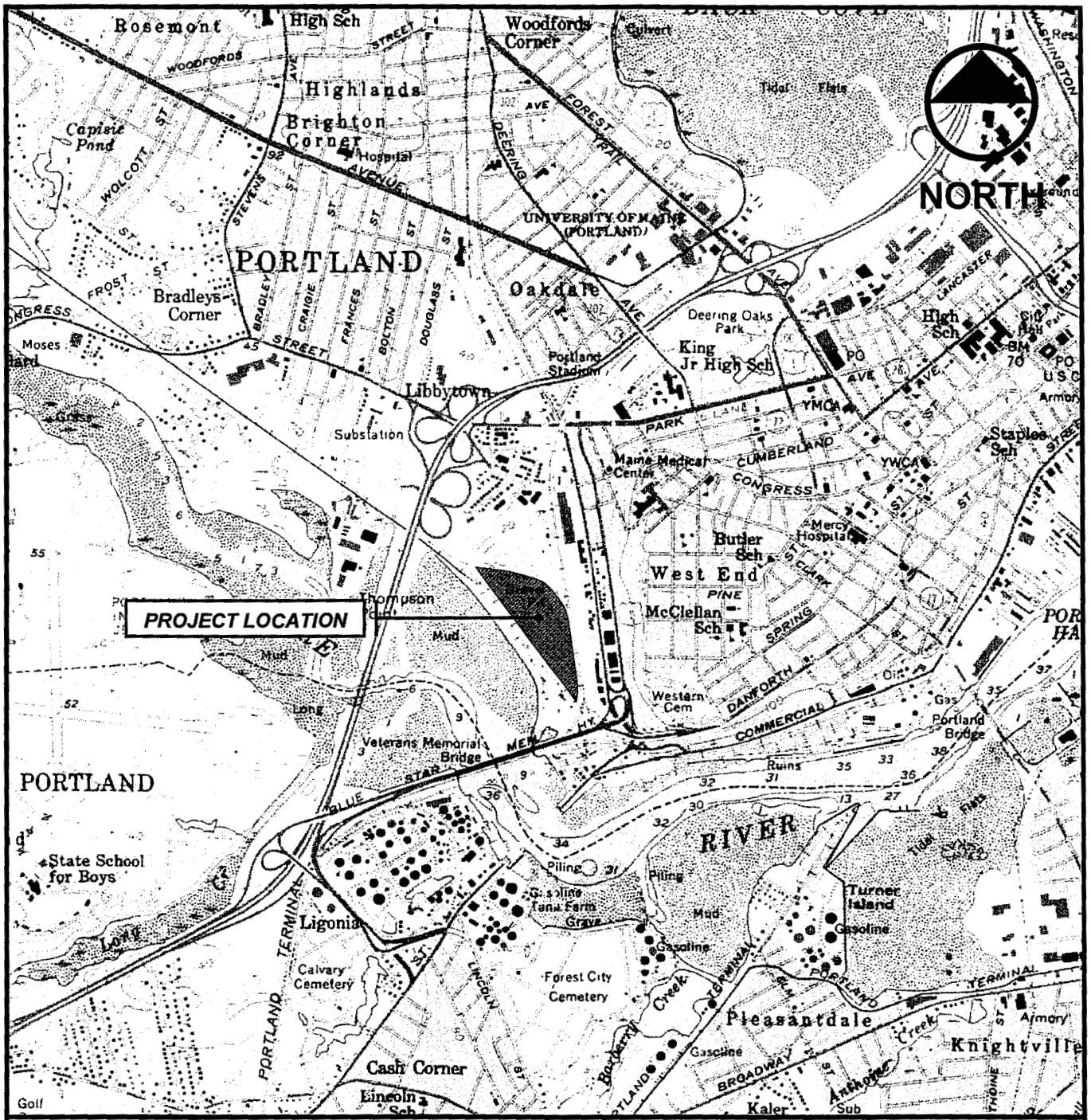
# Resource(s) Impacted:

**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. |



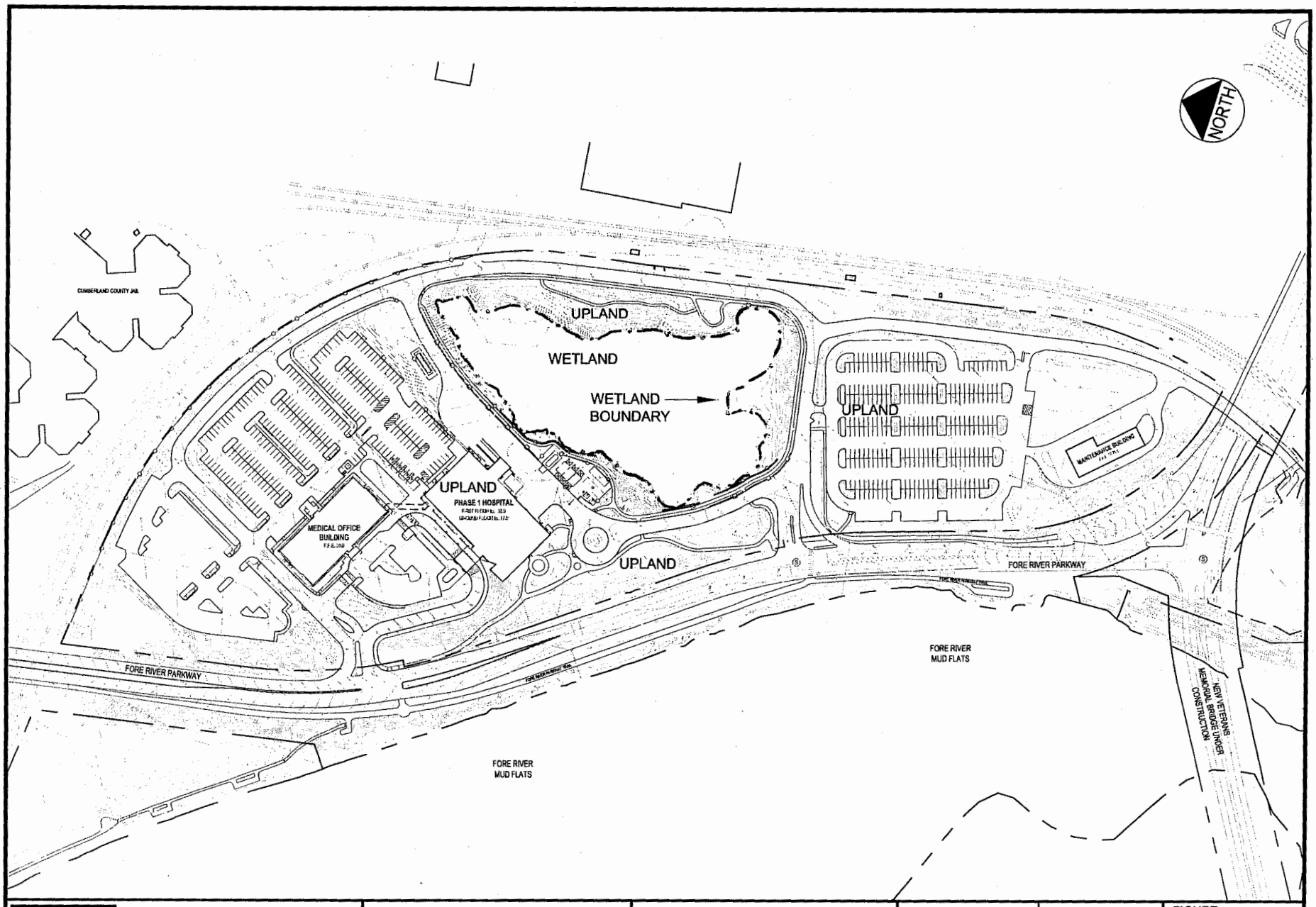

# USGS TOPOGRAPHIC MAP

## Mercy Health System of Maine – Portland, Maine

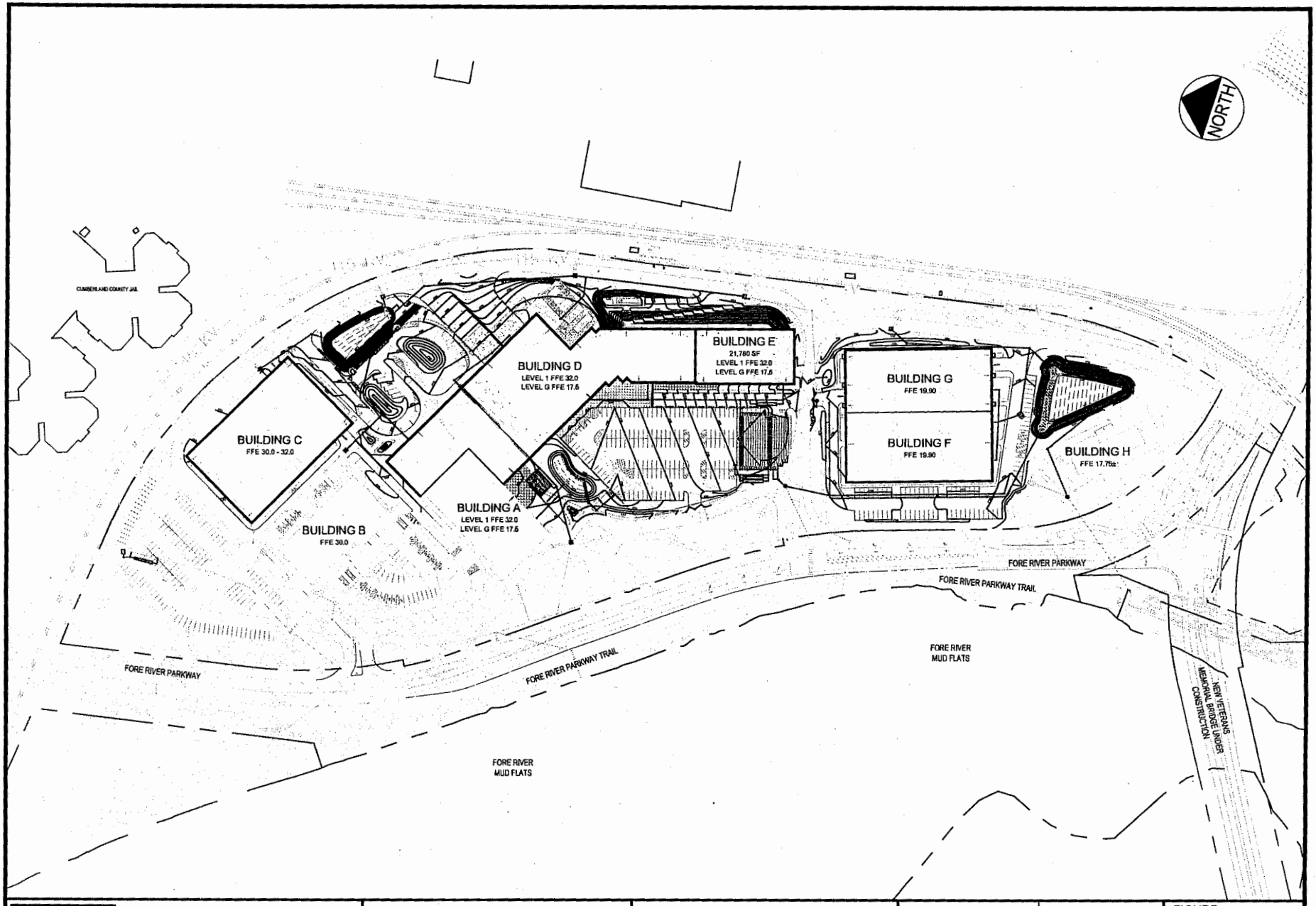
**SOURCE**: TOPOSCOUT; Coastal Maine CD-ROM, USGS Portland West Quadrangle, 7.5 Minute Series (Topographic)


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

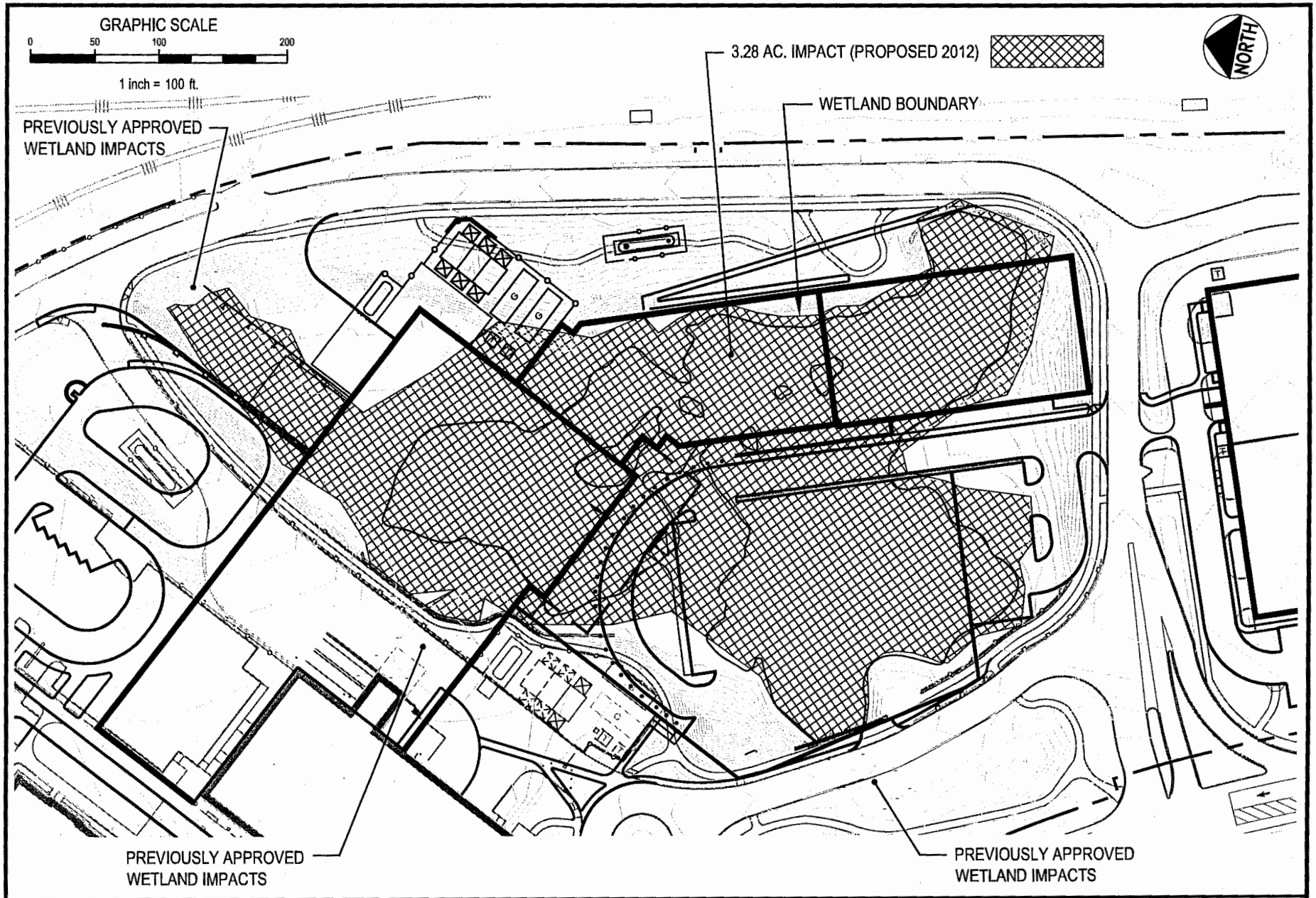

| | | | | |
|---|---|---|---|---|
| DESIGNED | SRB | DATE | MARCH 2001 | FIGURE |
| DRAWN | JDL | SCALE | 1" = 2000'+- | 2 |
| CHECKED | SRB | JOB NO. | 2149 | |



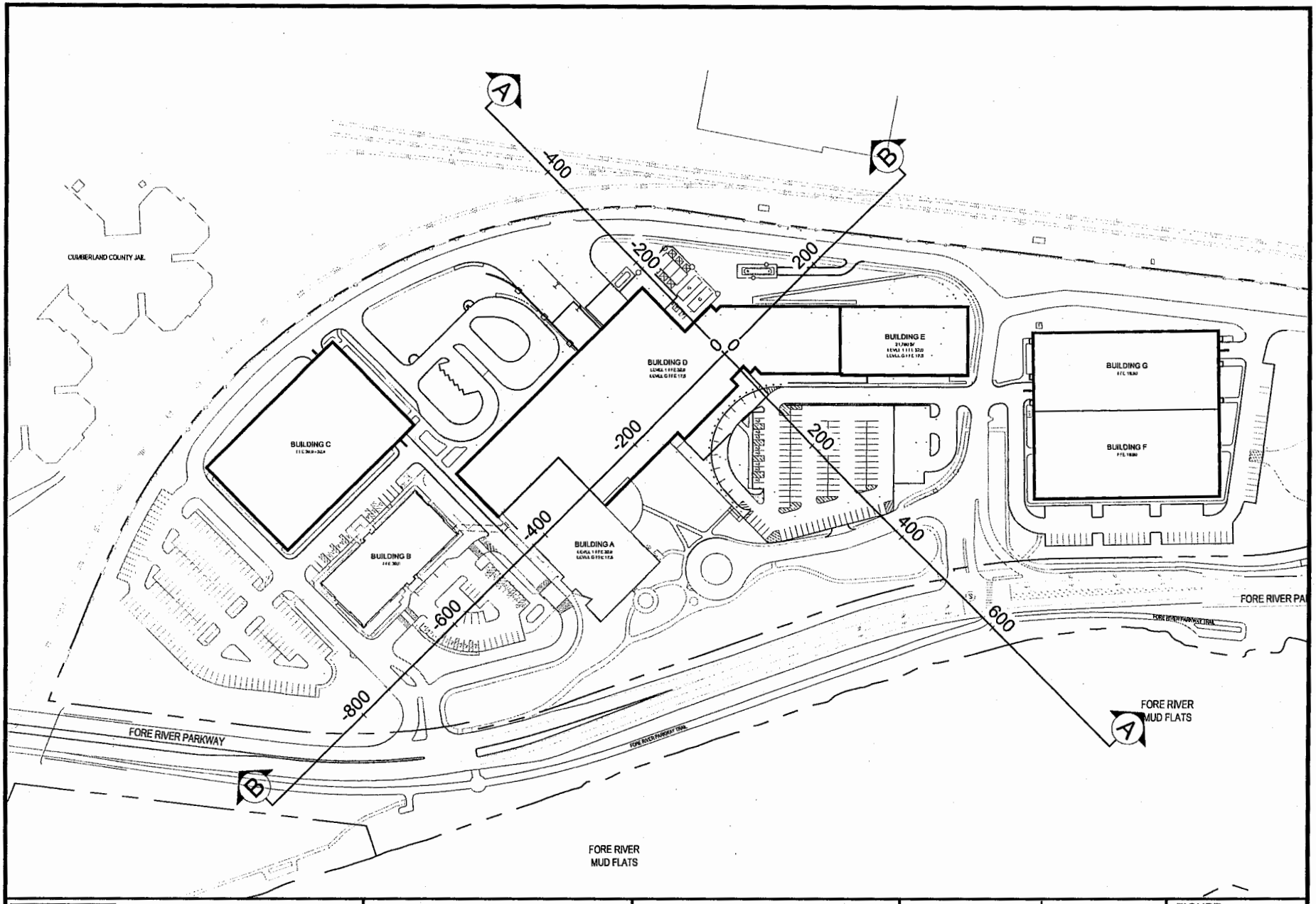

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| DH | DeLuca-Hoffman Associates, Inc.<br>778 MAIN STREET, SUITE 8<br>SOUTH PORTLAND, ME 04106<br>207.775.1121<br>WWW.DELUCAHOFFMAN.COM | MERCY AT THE FORE MASTER PLAN | EXISTING CONDITIONS | DRAWN: DED \| DATE: 07.10.12<br>DESIGNED: BEK \| SCALE: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




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

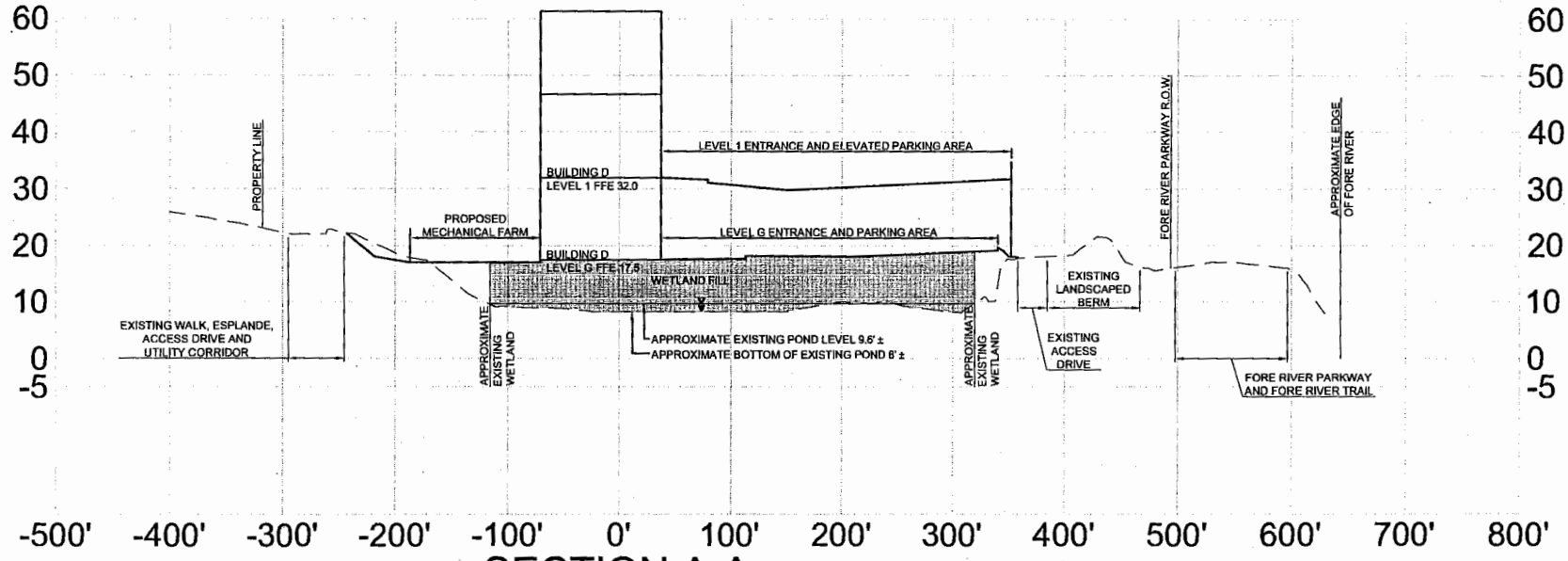



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| DH<br>DeLuca-Hoffman Associates, Inc.<br>778 MAIN STREET, SUITE 8<br>SOUTH PORTLAND, ME 04106<br>207.775.1121<br>WWW.DELUCAHOFFMAN.COM | MERCY AT THE FORE<br>MASTER PLAN | 100 SCALE FIGURE OF<br>WETLAND FILL AREA | DRAWN: DED<br>DESIGNED: BEK<br>CHECKED: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




| | | | |
|---|---|---|---|
| DH | DeLuca-Hoffman Associates, Inc.<br>778 MAIN STREET, SUITE 8<br>SOUTH PORTLAND, ME 04106<br>207.775.1121<br>WWW.DELUCAHOFFMAN.COM | MERCY AT THE FORE<br>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'

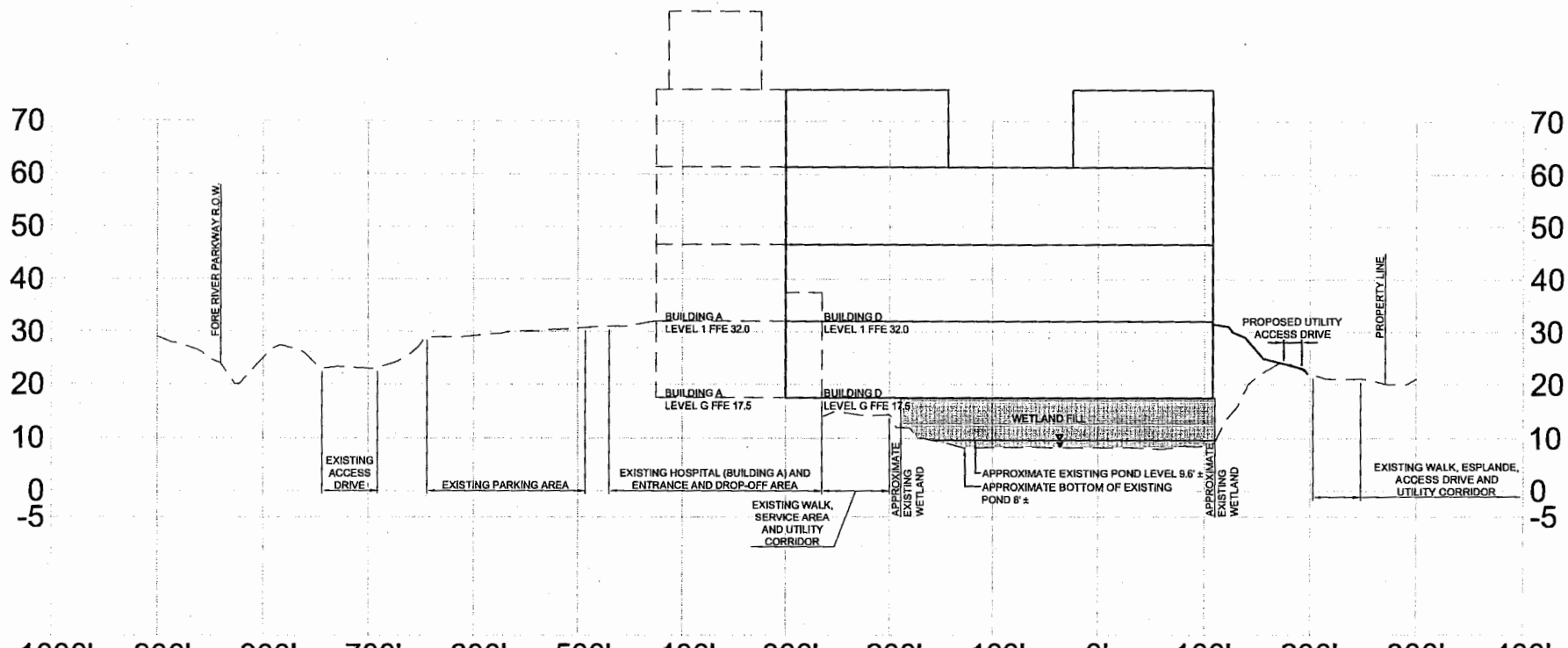
DeLuca-Hoffman Associates, Inc.
778 MAIN STREET, SUITE 8
SOUTH PORTLAND, ME 04106
207.775.1121
WWW.DELUCAHOFFMAN.COM

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.
778 MAIN STREET, SUITE 8
SOUTH PORTLAND, ME 04106
207.775.1121
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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.**

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

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 1 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.**

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.**

# 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): | | | |

# 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**
**707 Sable Oaks Drive**
**South Portland, Maine 04106**
**(207) 772-2515**

**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.

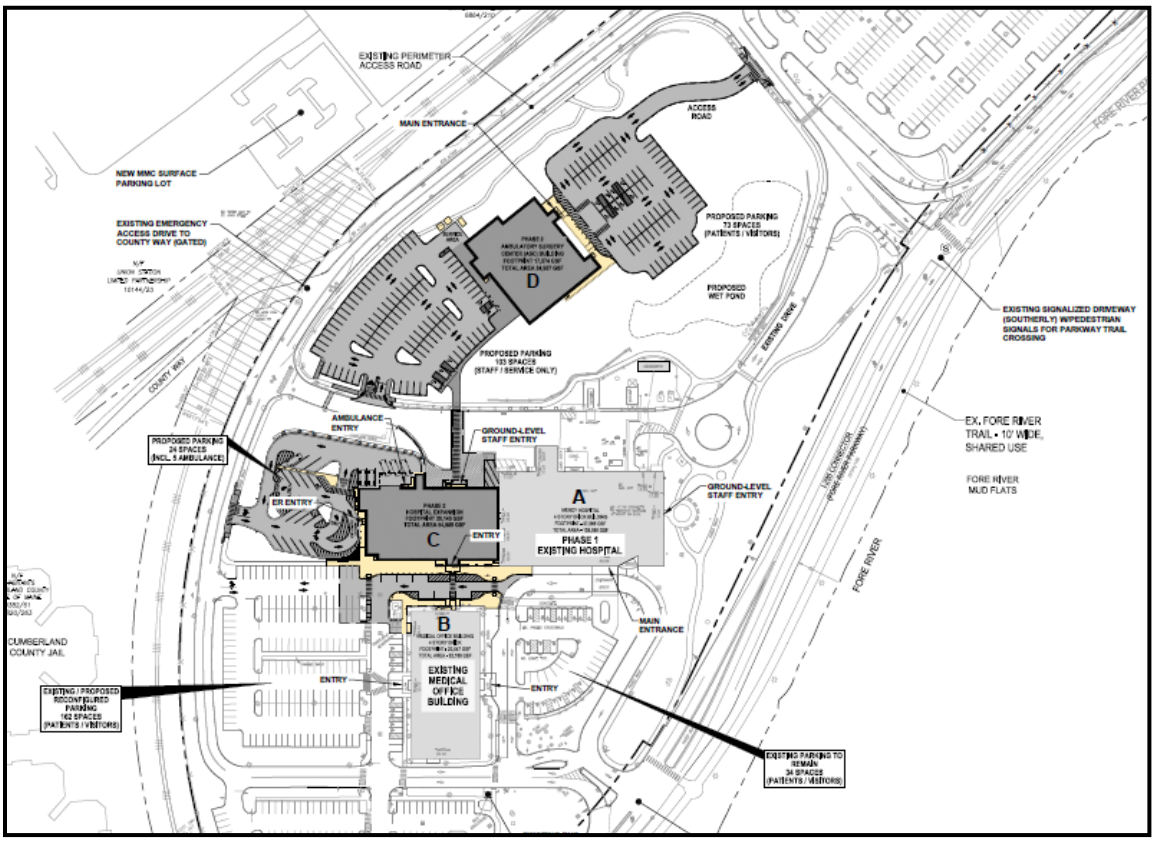


Finally, the prominent waterfront location bears a direct relationship to the historic brick waterfront structures of downtown Portland. The Phase 2 expansion will continue to reflect this design intent. Future buildings will adhere to the Private Development Restrictions previously prepared as a condition 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.

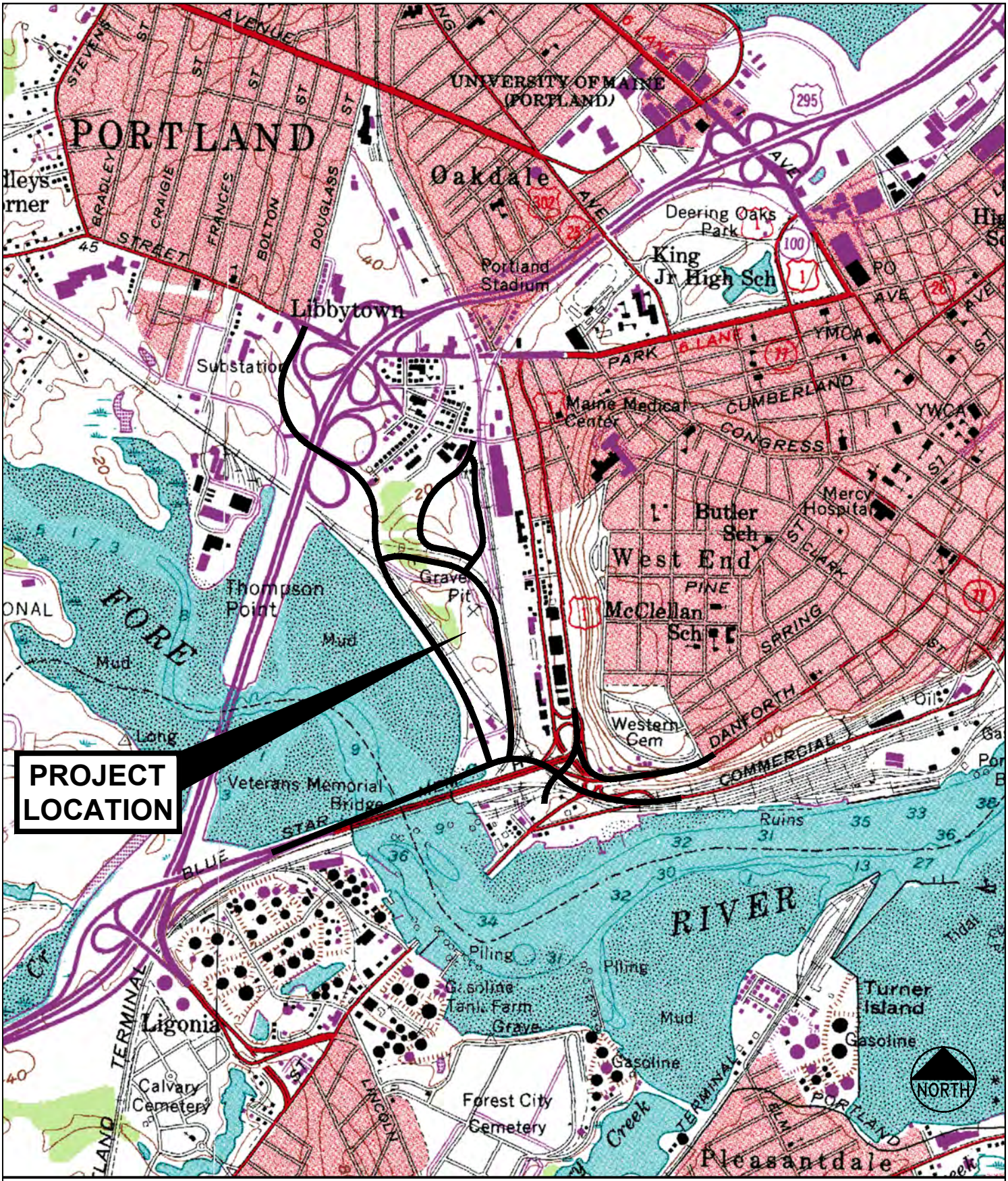
***Pavement Setback from property***

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

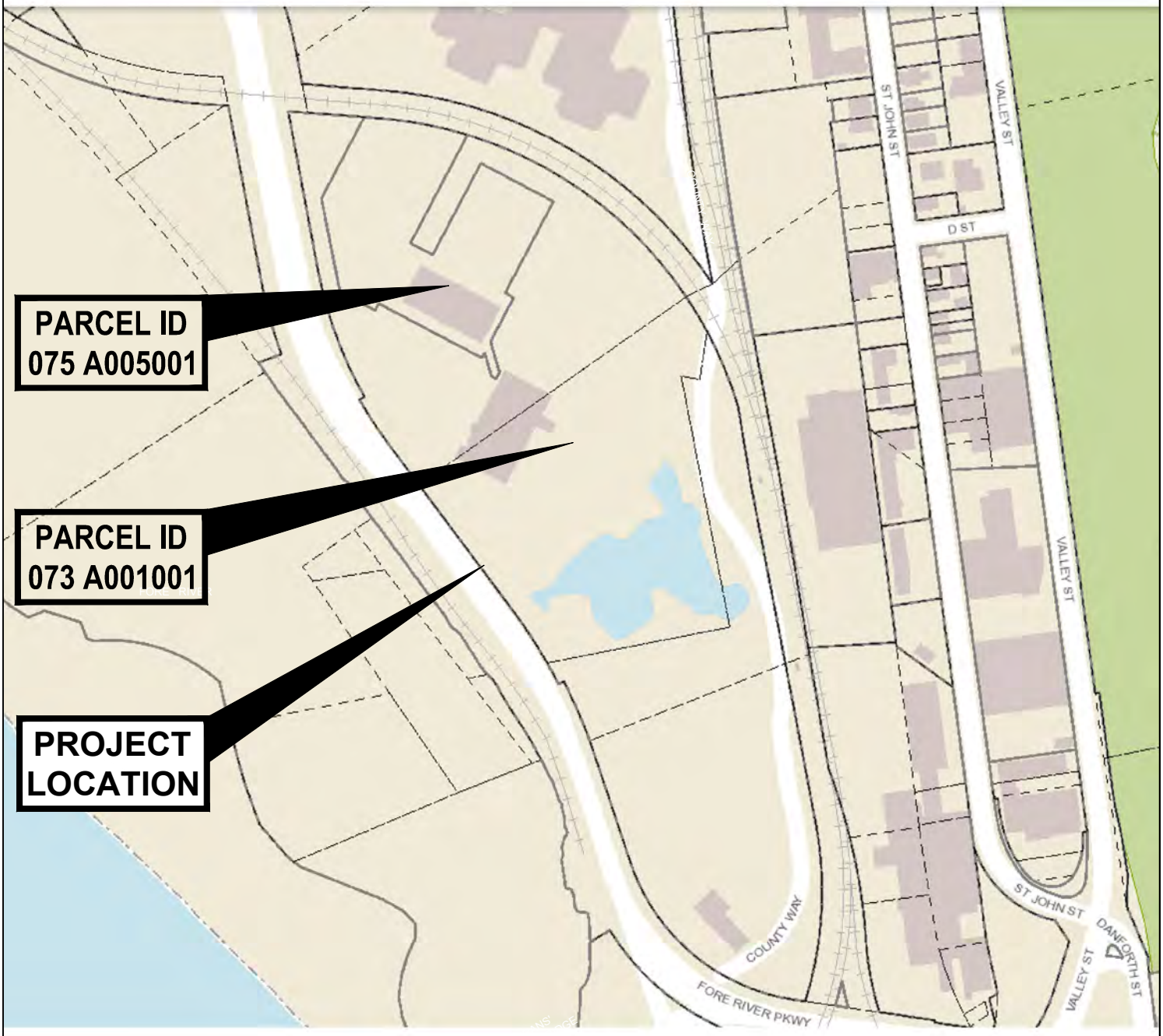
NLH Mercy Hospital, Fore River Campus Consolidation, Portland, Maine
U.S.G.S. Portland West, State-7.5 Minute Series (Topographic)

| | |
|---|---|
| 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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# Property Tax Map

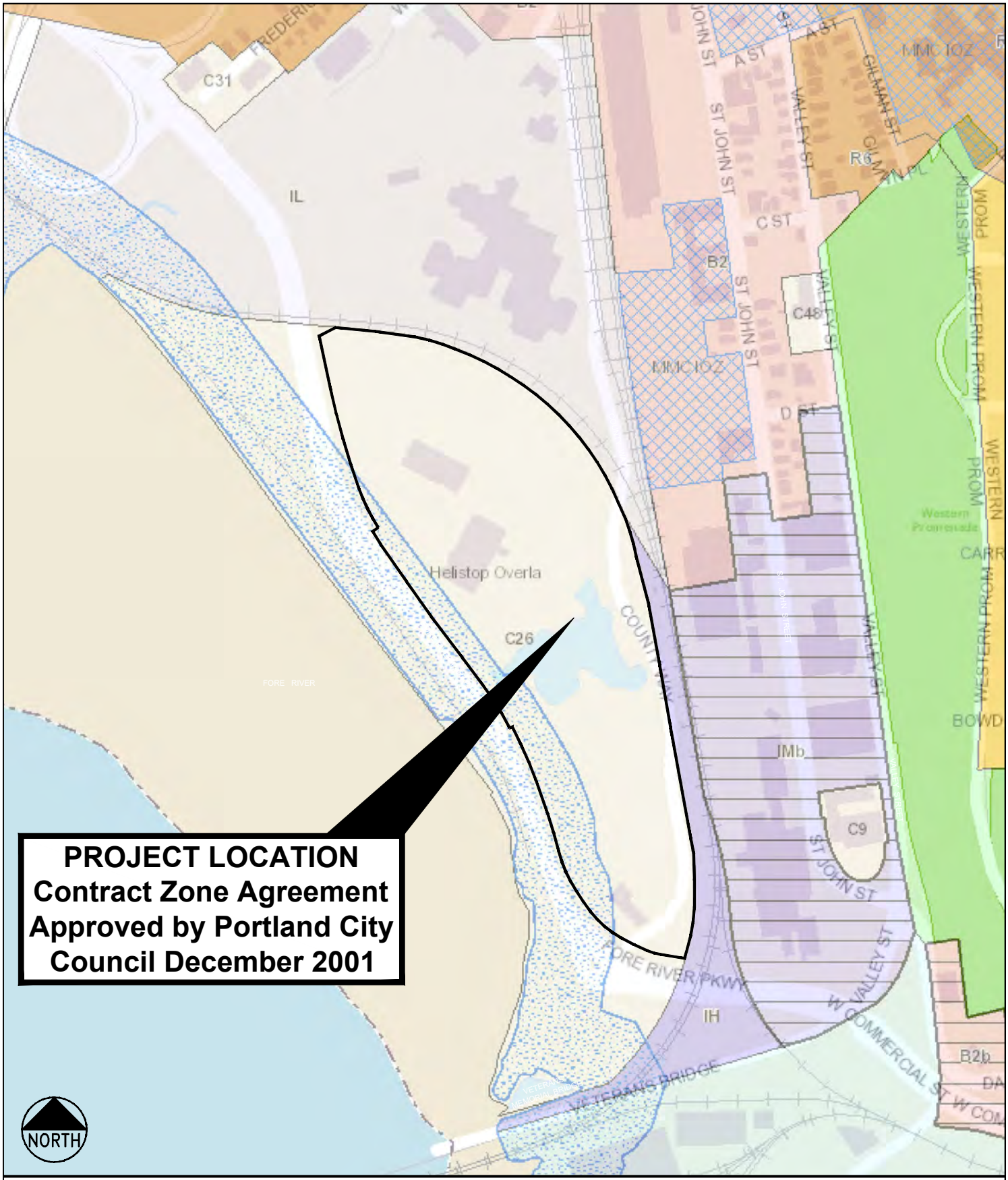
NLH Mercy Hospital, Fore River Campus Consolidation, Portland, Maine
City of Portland Maine Parcel Viewer

| | | |
|---|---|---|
| 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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207.772.2515

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

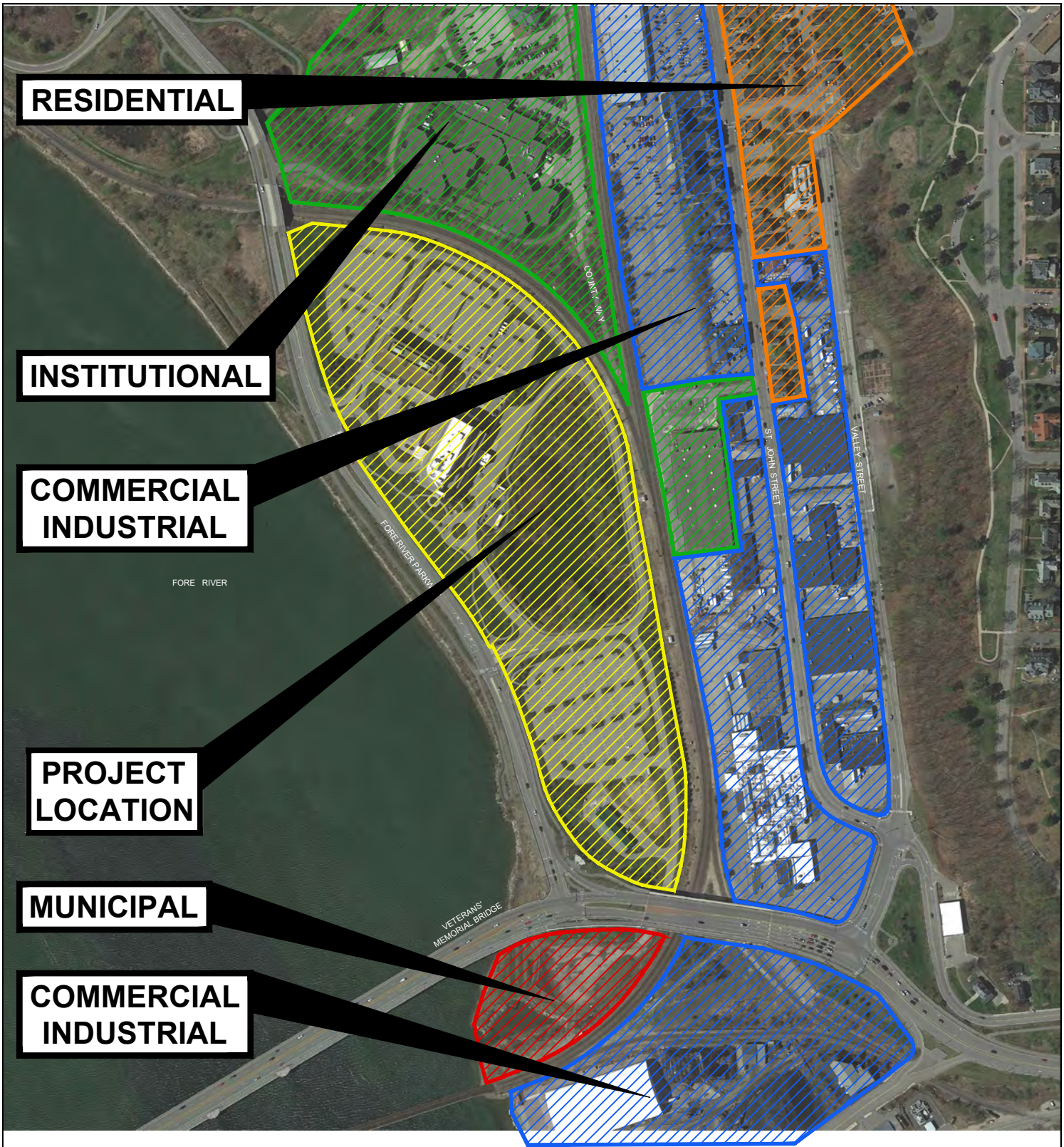
NLH Mercy Hospital, Fore River Campus Consolidation, Portland, Maine
City of Portland Maine Aerial Imagery 2018

| | |
|---|---|
| Design: JTA | Date: AUG. 2019 |
| Draft: CDD | Job No.: 3257.04 |
| Checked: SRB | Scale: N.T.S. |
| File Name: 325704–DEP FIGURES.dwg | |

GORRILL PALMER

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207.772.2515

Figure
4




# Abutting Land Use Map

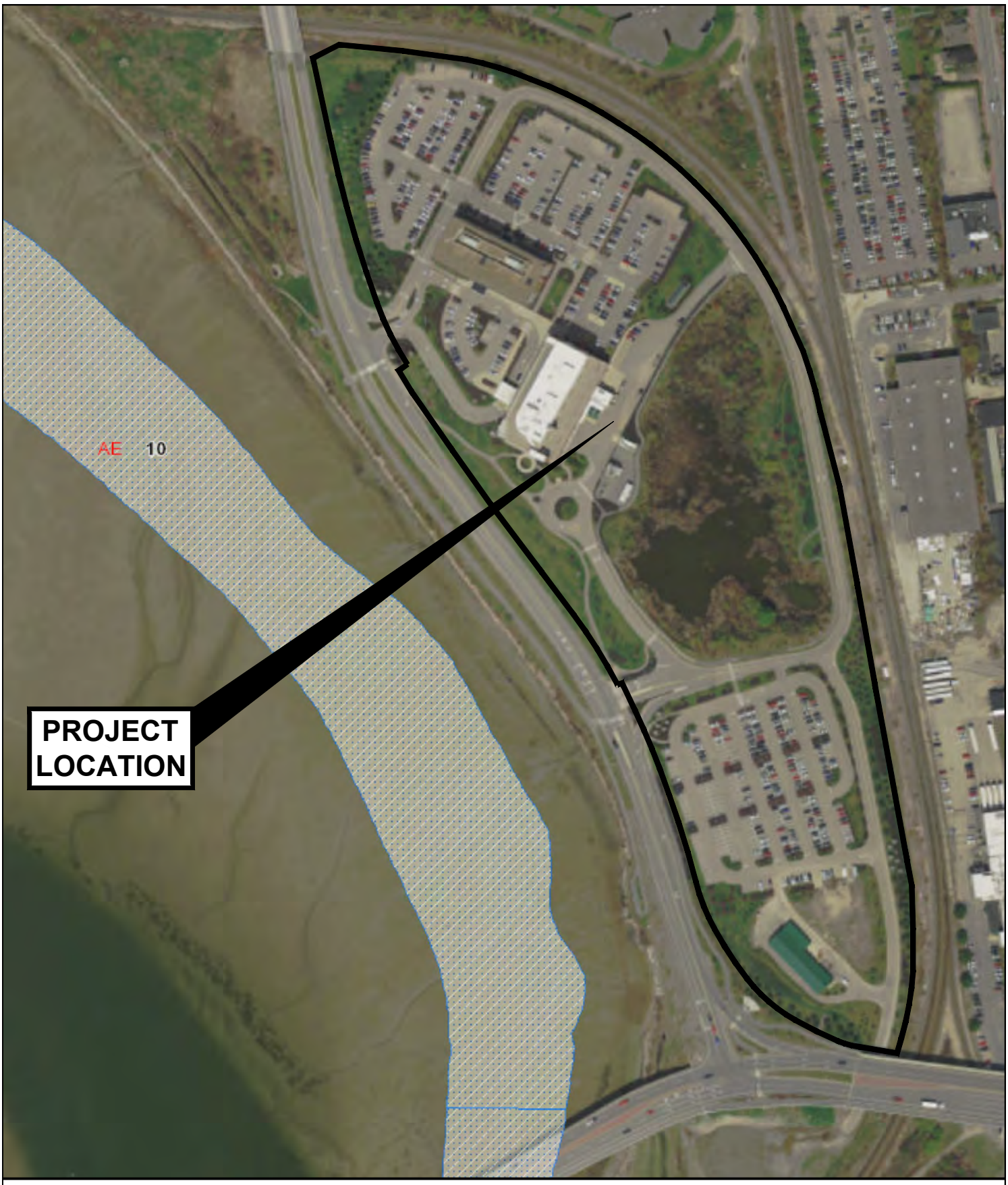
NLH Mercy Hospital, Fore River Campus Consolidation, Portland, Maine
City of Portland Maine Aerial Imagery 2018

| | |
|---|---|
| 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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207.772.2515

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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207.772.2515

Figure
6




# USDA Soils Map

NLH Mercy Hospital, Fore River Campus Consolidation, Portland, Maine
Soil Survey of Cumberland County, Maine

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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207.772.2515

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 | |

GORRILL PALMER

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207.772.2515

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 | |

GORRILL PALMER
Relationships. Responsiveness. Results.
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207.772.2515

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**

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 7**



**PHOTO 8**

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 9**

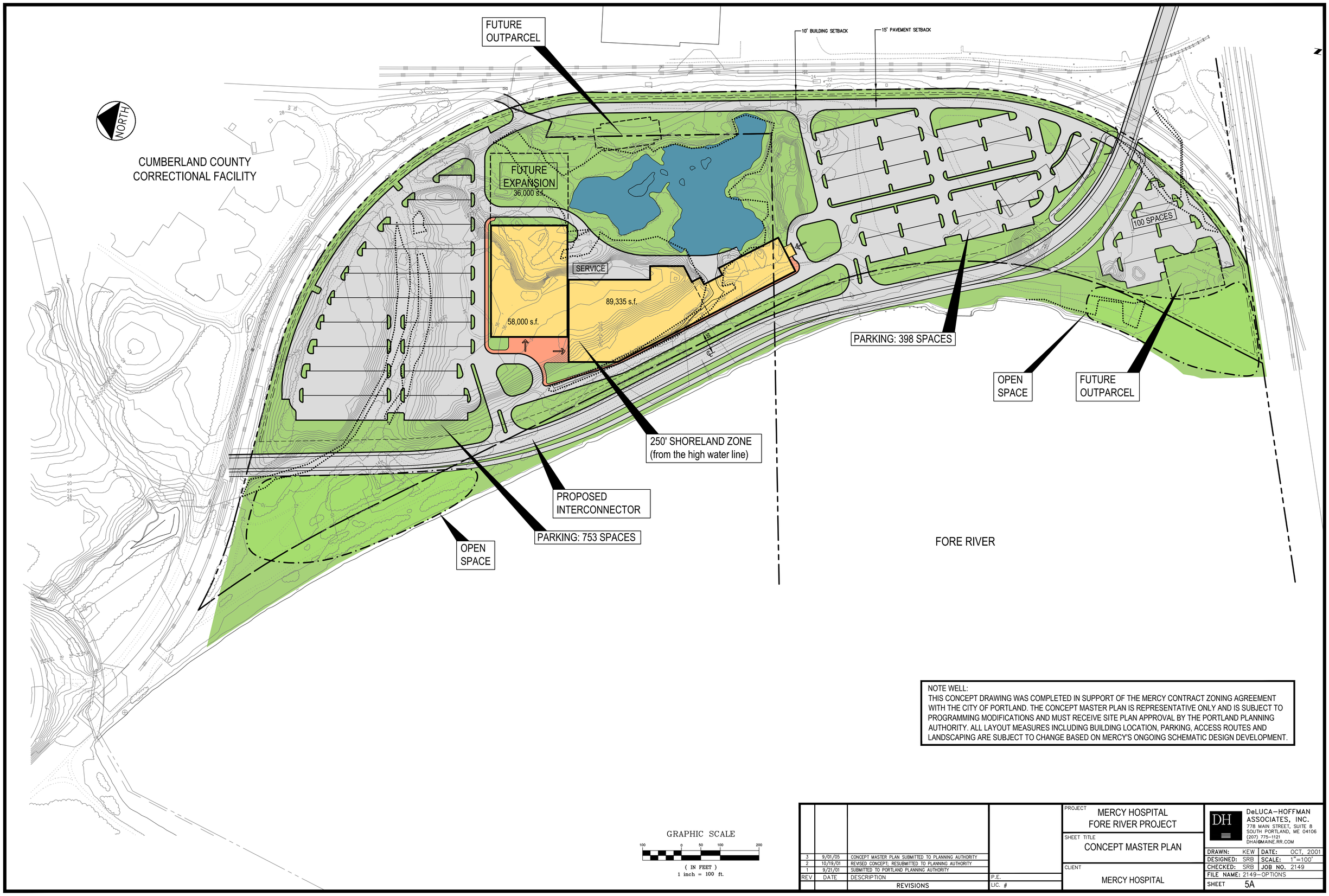


GORRILL PALMER
707 Sable Oaks Drive
Suite 30
So. Portland, ME 04106
207.772.2515

**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

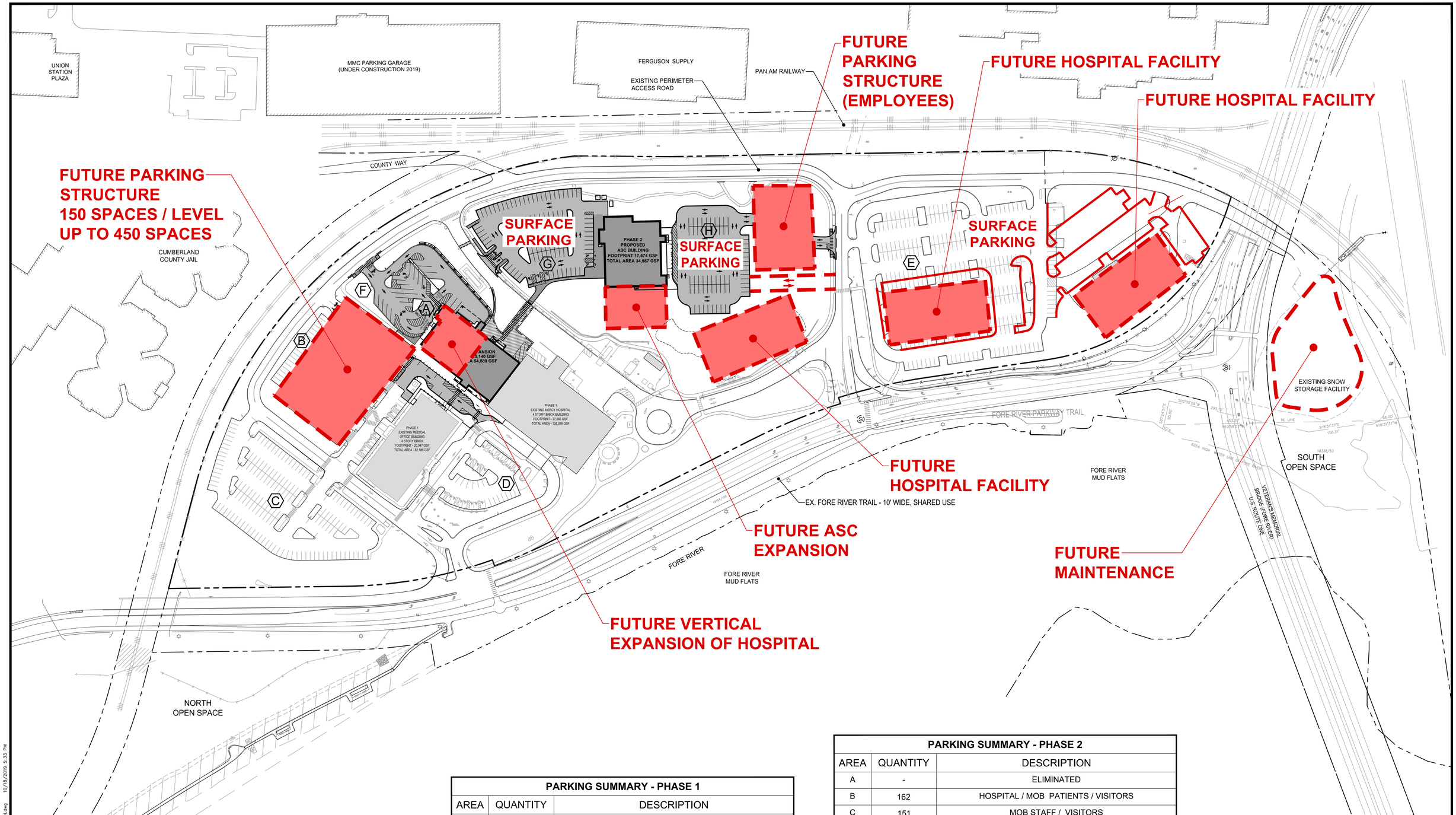
CLIENT
MERCY HOSPITAL

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 |
|---|---|---|
| – | – | – |

| 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 – 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

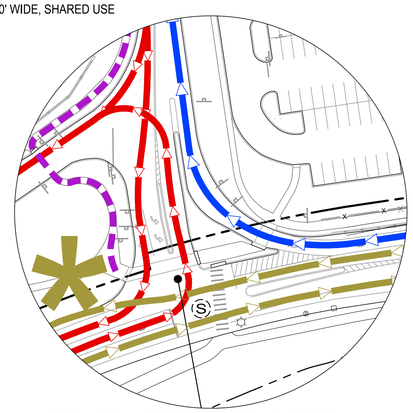
MAIN HOSPITAL ENTRANCE

NORTH ENTRANCE (UNSIGNALIZED - NO LEFT TURNS OUT)

NORTH OPEN SPACE

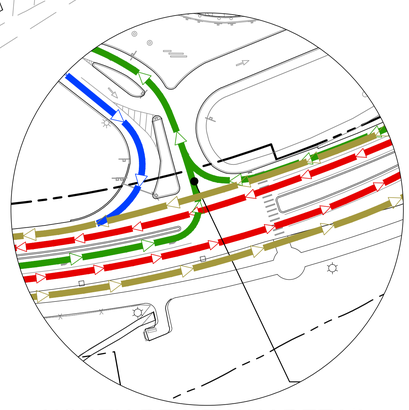
SOUTH OPEN SPACE

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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|---|---|---|
| – | – | – |

| Issued For | Date | By |
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| PERMIT APPROVAL SUBMISSION | 08.30.19 | SRB |
| DESIGN DEVELOPMENT SUBMISSION TO OWNER | 07.31.19 | SRB |

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|---|---|---|
| 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 – 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 |

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 – 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

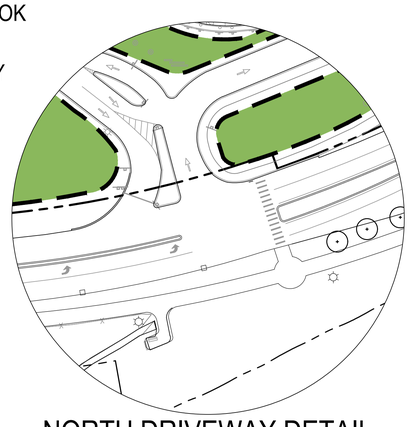
FORE RIVER MUD FLATS

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

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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 – 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 |

| | | |
|---|---|---|
| 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

# 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.

# 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.

# 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.

# 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



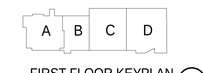

GROUND FLOOR - FACILITY PLAN (K1)
3/32" = 1'-0"




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

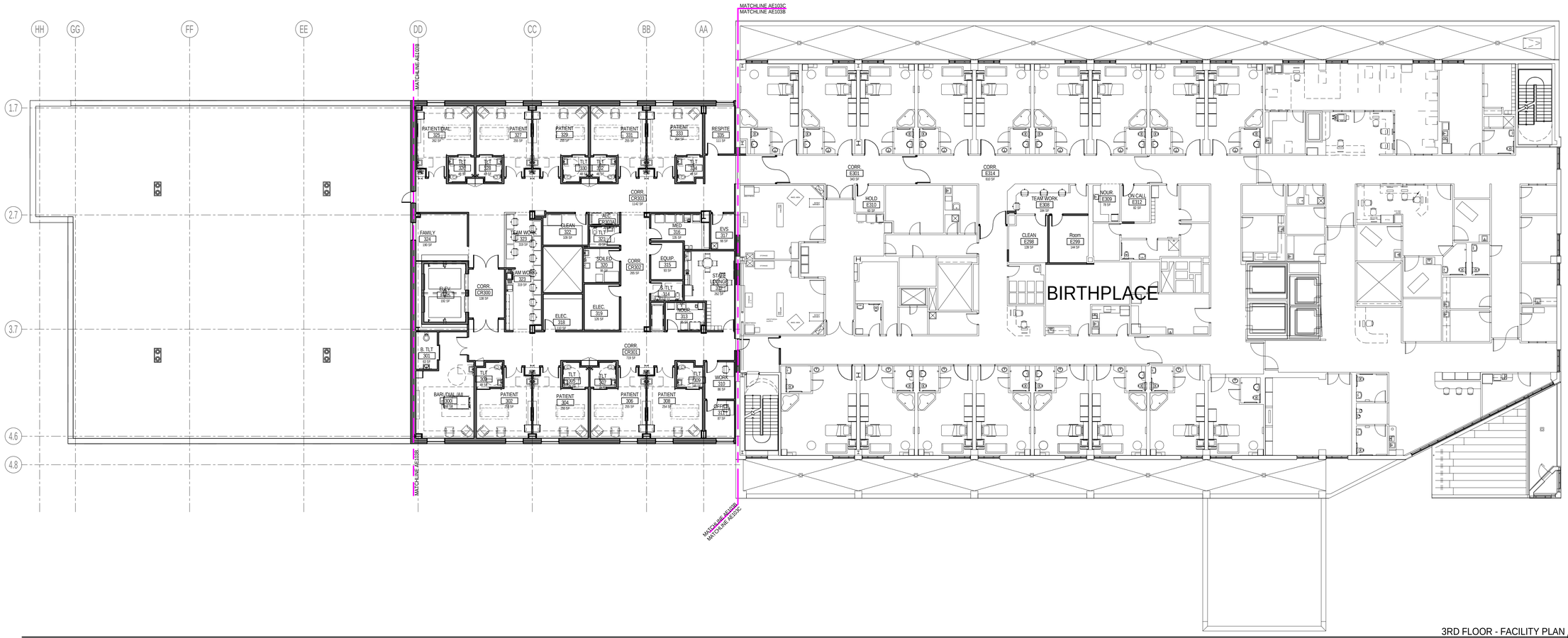
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|---|---|---|---|
| PROJECT MANAGER: | KD | PROJECT NO: | 19002 |
| A/E OF RECORD: | KD | | |
| JOB CAPTAIN: | JCH | | A-100 |
| DRAWN BY: | JCH | SHEET No. | |
| SMRT FILE: | A-100-19002 | | |

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NOT FOR CONSTRUCTION




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

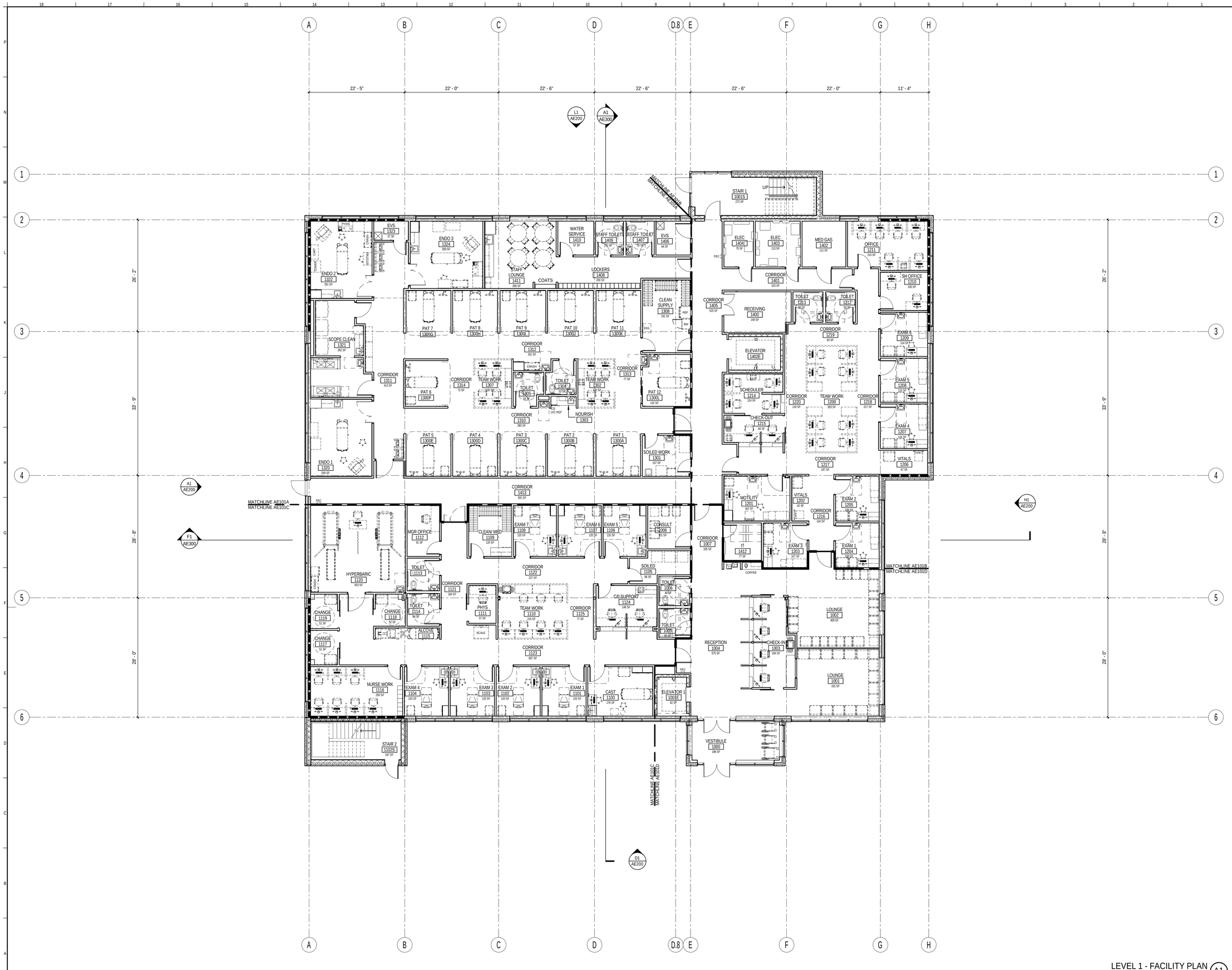
SHEET TITLE:

0" 1/4" 1/2" 1" 2" 3"
SCALE: AS NOTED

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|---|---|---|---|
| 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"

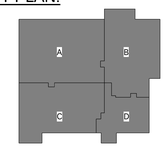
## PLAN NOTES:

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

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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:

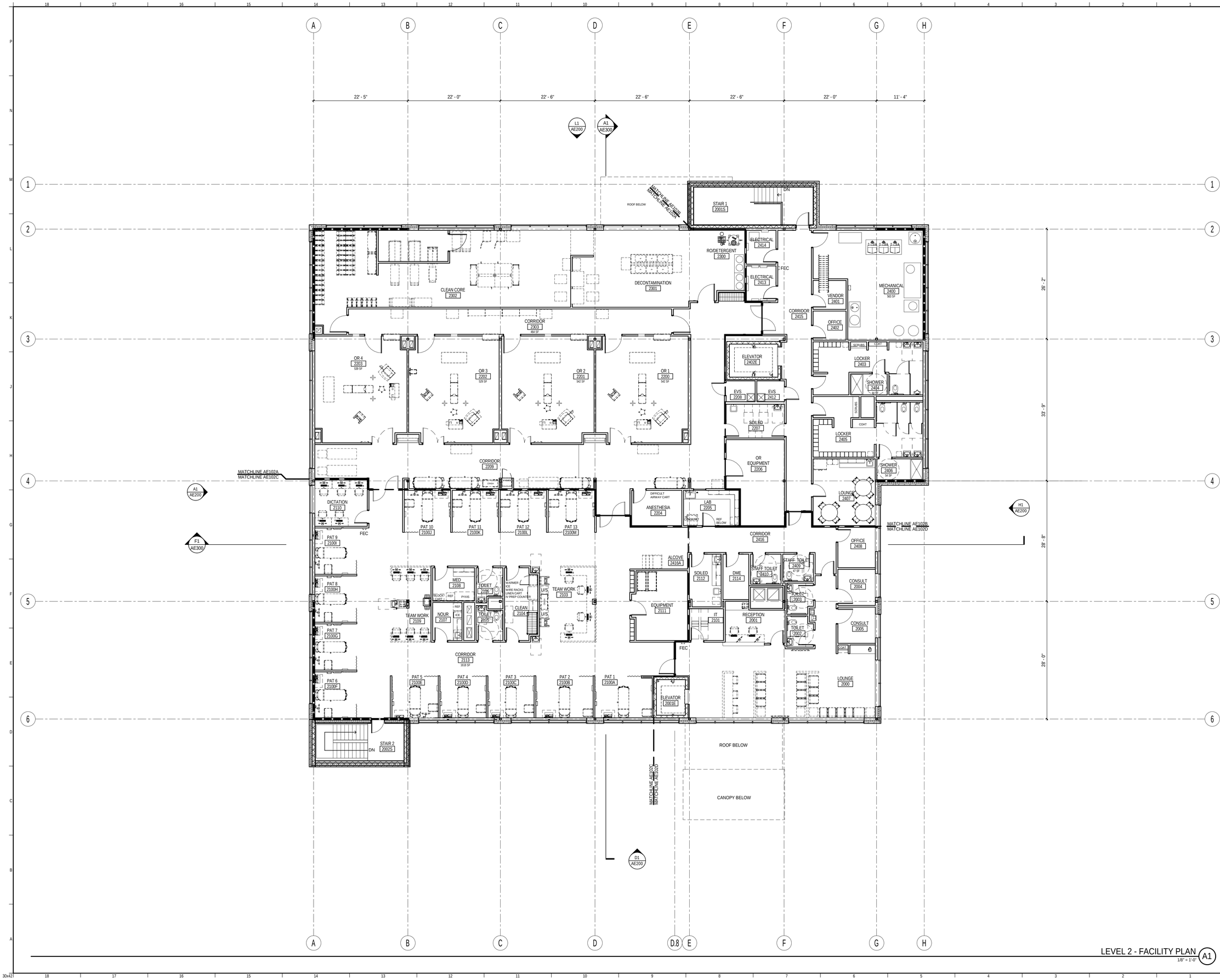
SCALE: AS NOTED

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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"

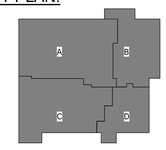
## PLAN NOTES:

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.
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## LEGEND:

STRUCTURAL BRACING

## KEY PLAN:




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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. | |

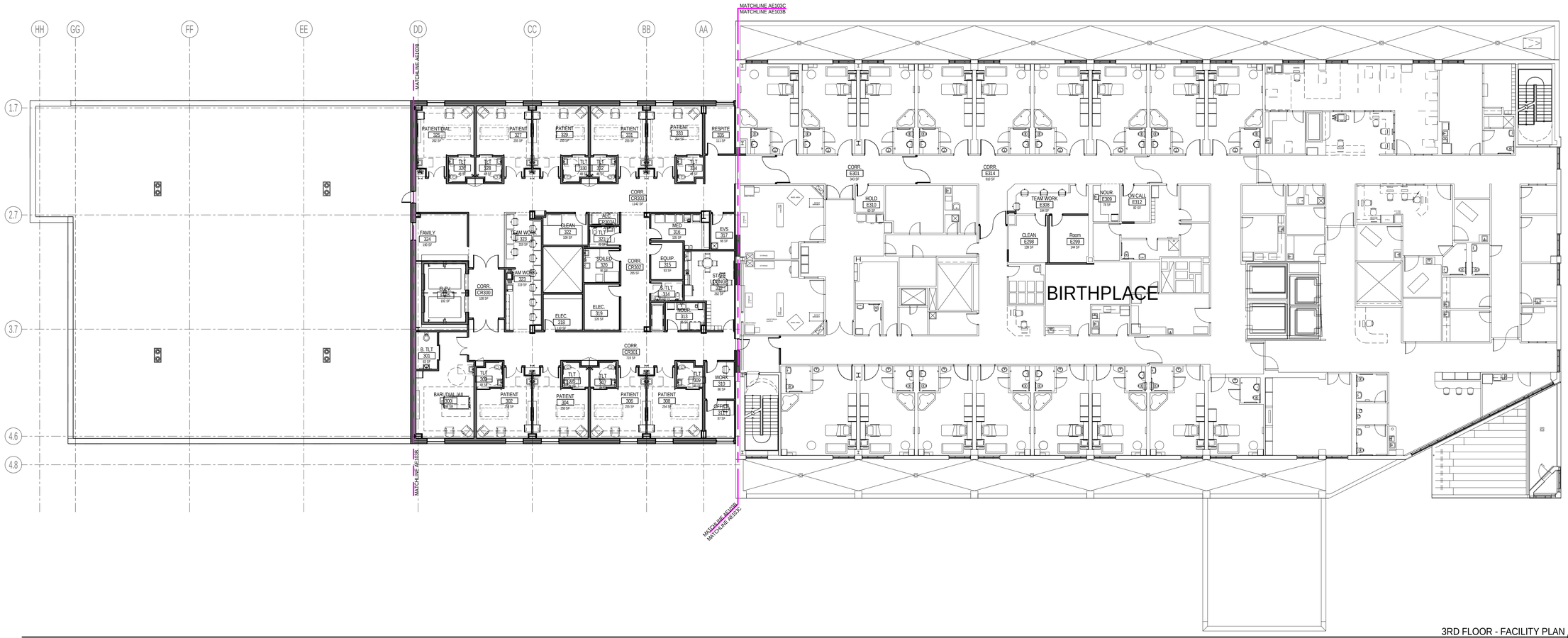
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2ND FLOOR - FACILITY PLAN J1
3/32" = 1'-0"




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 |
|---|---|---|

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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

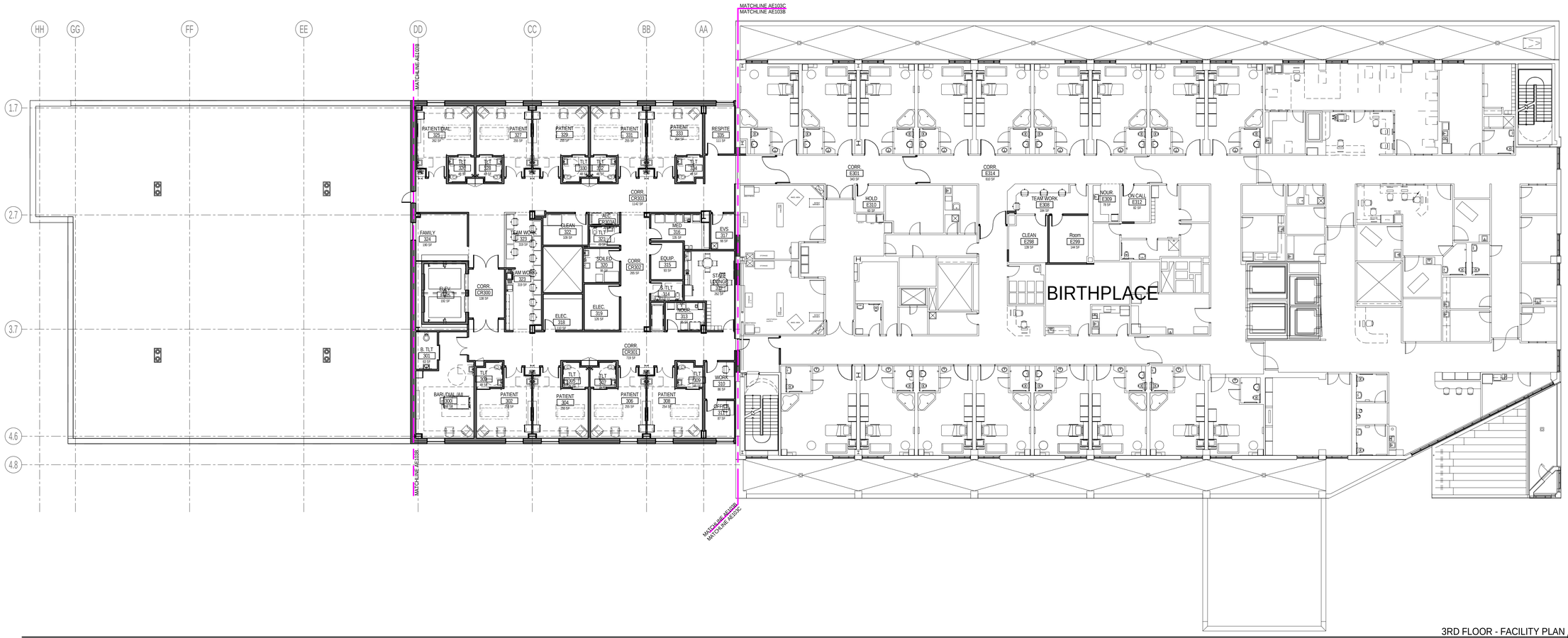
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| PROJECT MANAGER: | KD | PROJECT NO: | 19002 |
| A/E OF RECORD: | KD | | |
| JOB CAPTAIN: | JCH | | A-101 |
| DRAWN BY: | JCH | | |
| SMRT FILE: | A-101-19002 | SHEET No. | |

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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 |
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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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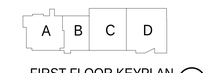

GROUND FLOOR - FACILITY PLAN (K1)
3/32" = 1'-0"




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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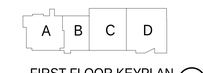

GROUND FLOOR - FACILITY PLAN (K1)
3/32" = 1'-0"




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"

| REV | DESCRIPTION | DATE |
|---|---|---|

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MERCY HOSPITAL - PHASE 2
175 FORE RIVER PARKWAY

GROUND FLOOR AND FIRST FLOOR FACILITY PLANS

SHEET TITLE:

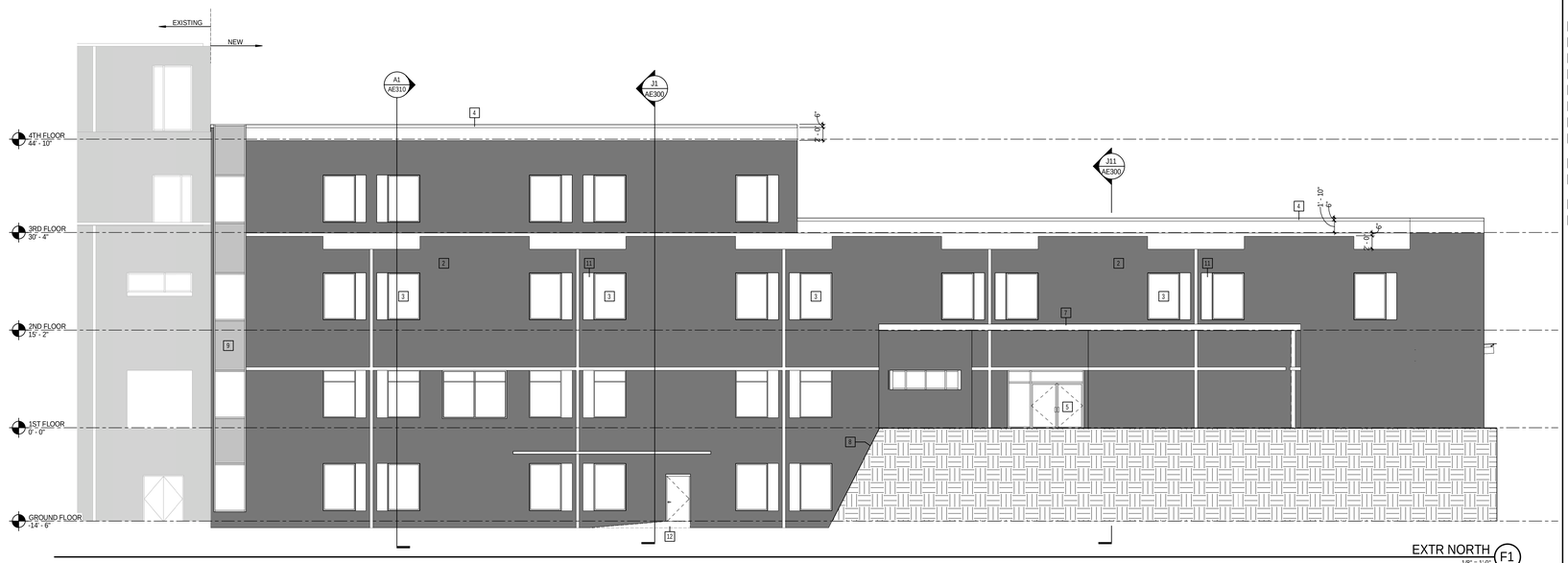
0" 1/4" 1/2" 1" 2" 3"

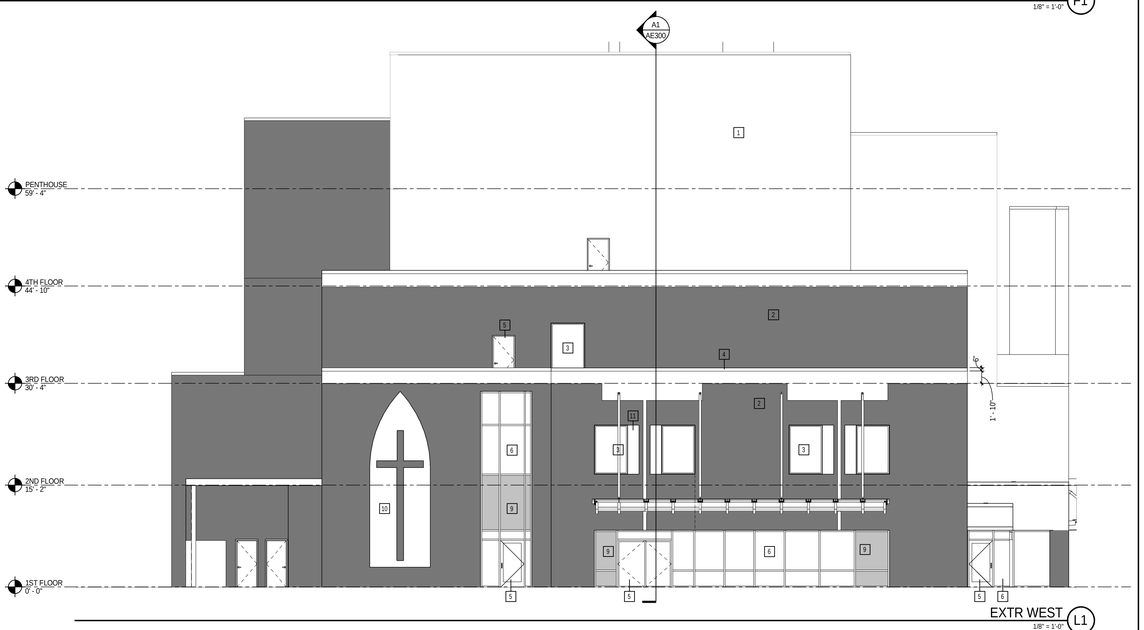
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| PROJECT MANAGER: | KD | PROJECT NO: | 19002 |
| A/E OF RECORD: | KD | | |
| JOB CAPTAIN: | JCH | | A-100 |
| DRAWN BY: | JCH | SHEET No. | |
| SMRT FILE: | A-100-19002 | | |

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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

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MERCY HOSPITAL - PHASE 2
175 FORE RIVER PARKWAY

EXTERIOR ELEVATIONS

SHEET TITLE:

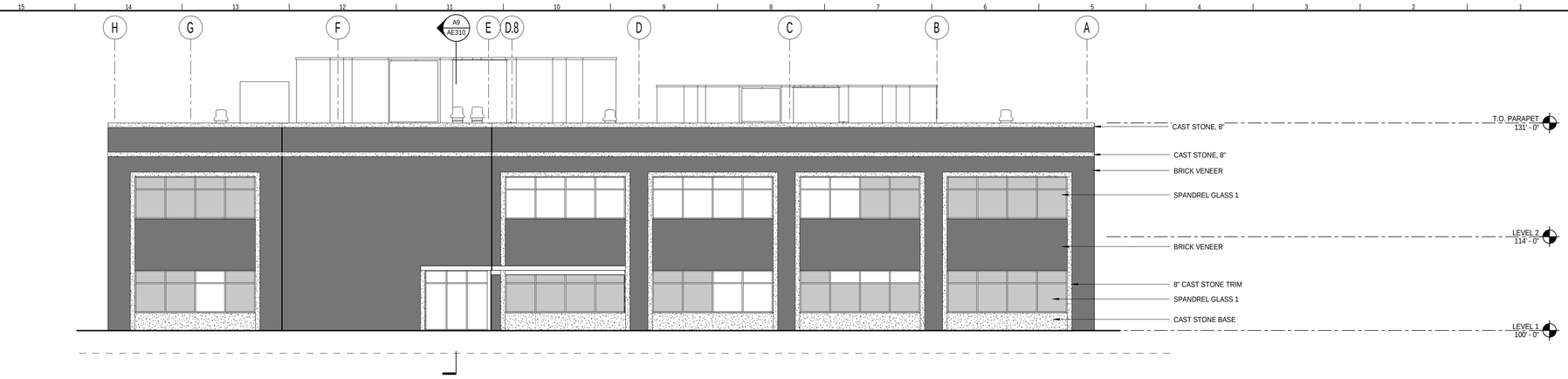
0' 1/4" 1/2" 1' 2' 3'

SCALE: AS NOTED

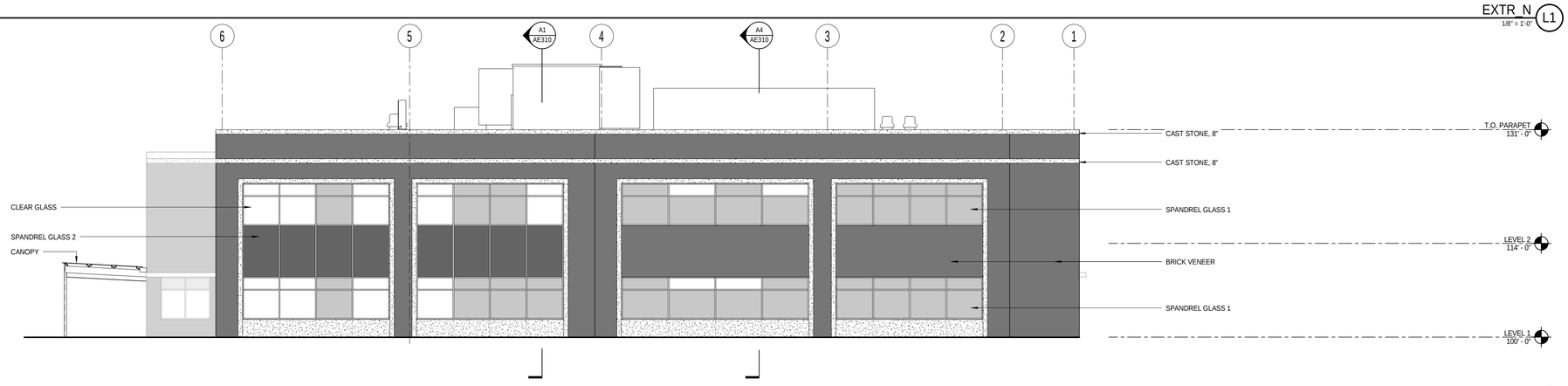
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| PROJECT MANAGER: | KD | PROJECT NO: | 19002 |
| A/E OF RECORD: | KD | | |
| JOB CAPTAIN: | JCH | | |
| DRAWN BY: | JCH | | |
| SMRT FILE: | AE200-19002 | SHEET No. | AE200 |

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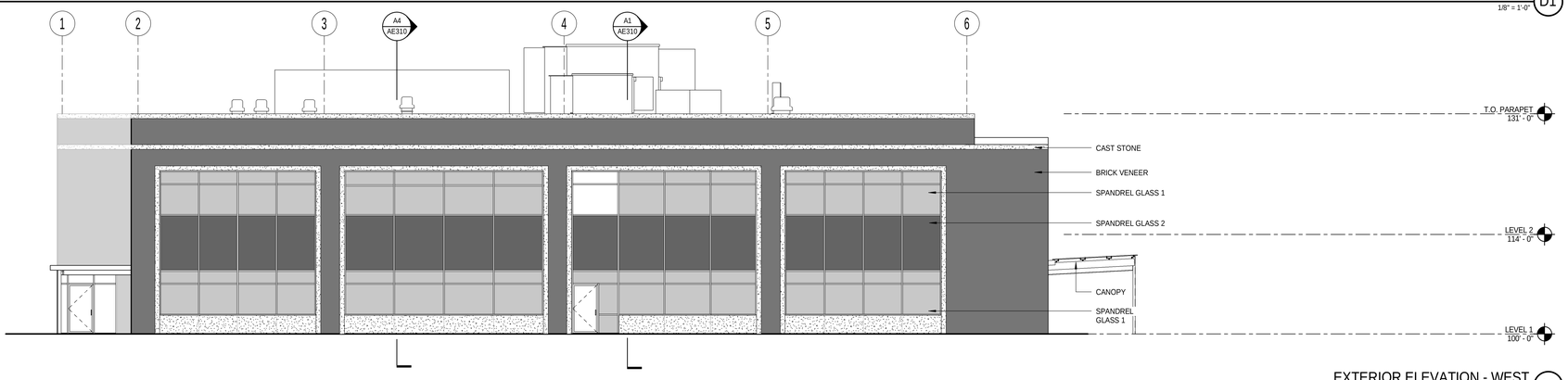

EXTR_N
1/8" = 1'-0" L1




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
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MERCY HOSPITAL
AMBULATORY SURGERY CENTER

Portland, ME

EXTERIOR ELEVATIONS

SHEET TITLE:

0" 1/4" 1/2" 1" 2" 3"

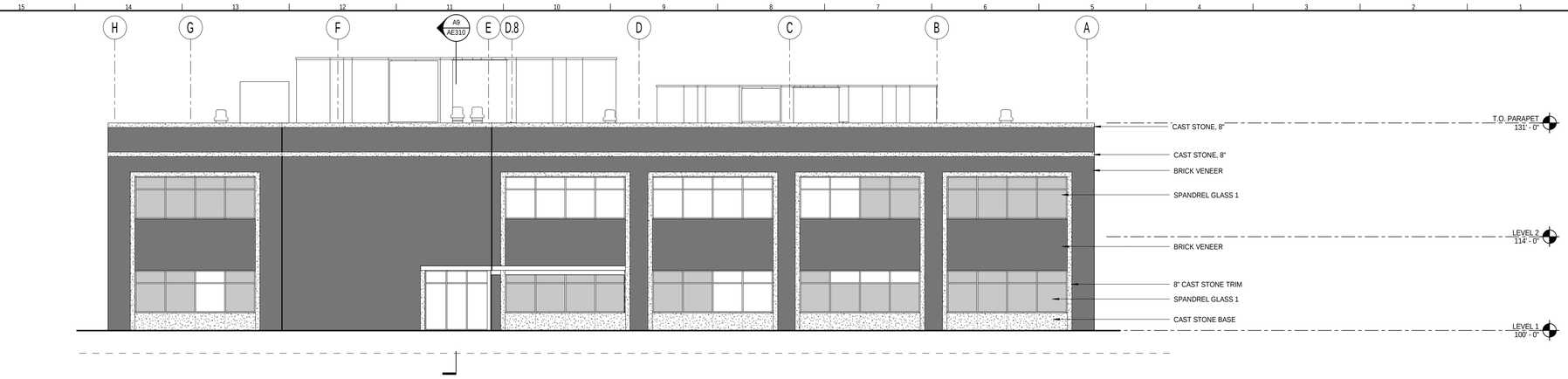
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| PROJECT MANAGER: | KD | PROJECT NO: | 19004 |
| A/E OF RECORD: | KD | | |
| JOB CAPTAIN: | CAH | AE200 | |
| DRAWN BY: | CAH | | |
| SMRT FILE: | AE200-19004 | SHEET No. | |

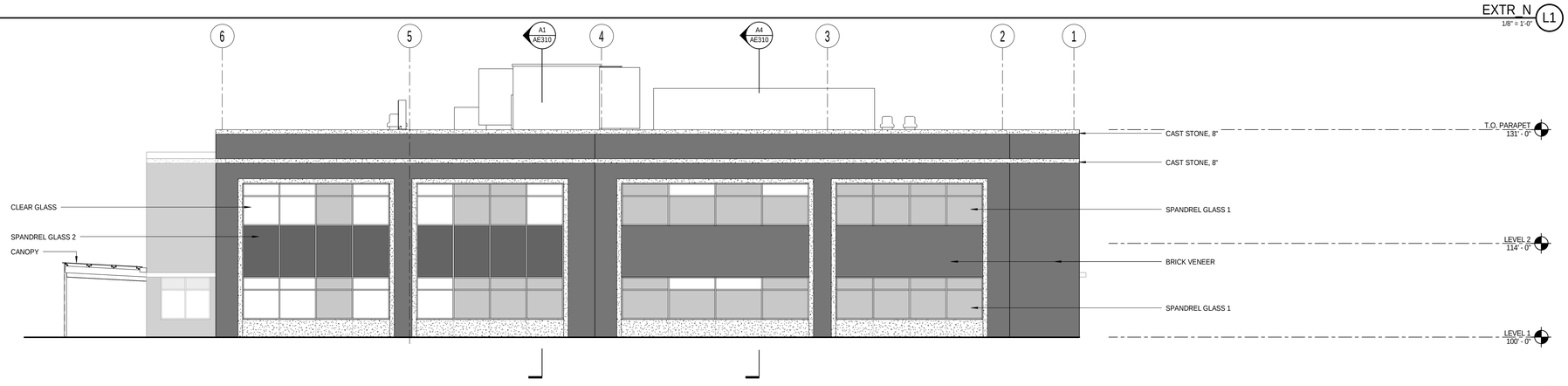
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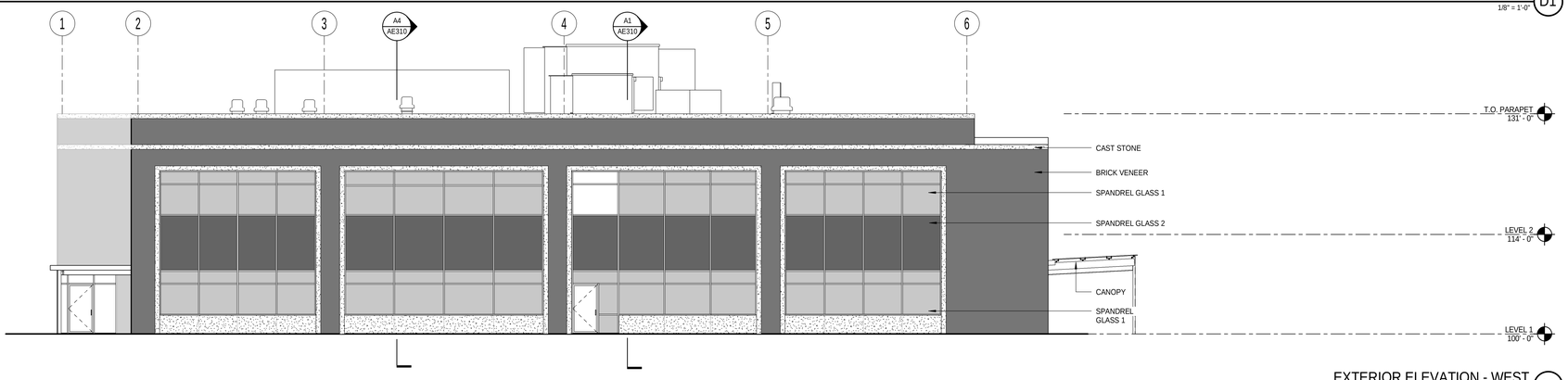

EXTR_N
1/8" = 1'-0" L1




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1/8" = 1'-0" H1




EXTERIOR ELEVATION - SOUTH
1/8" = 1'-0" D1




EXTERIOR ELEVATION - WEST
1/8" = 1'-0" A1

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AMBULATORY SURGERY CENTER

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EXTERIOR ELEVATIONS

SHEET TITLE:

0" 1/4" 1/2" 1" 2" 3"

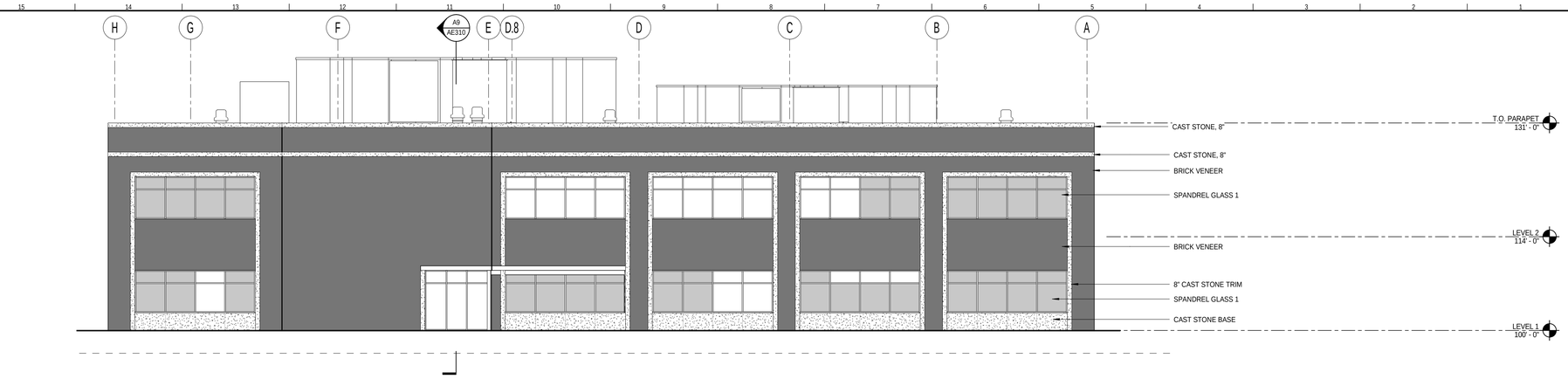
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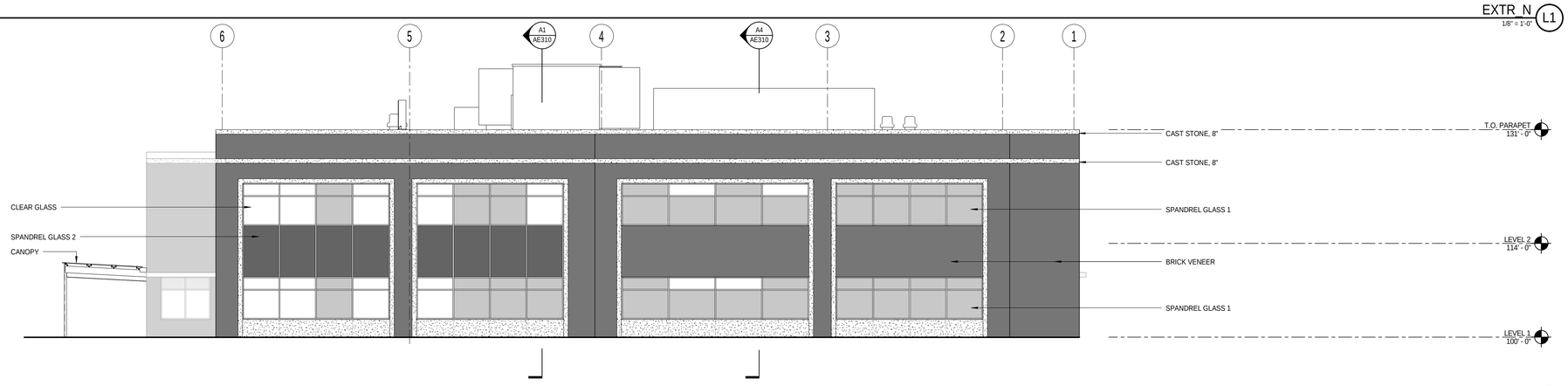
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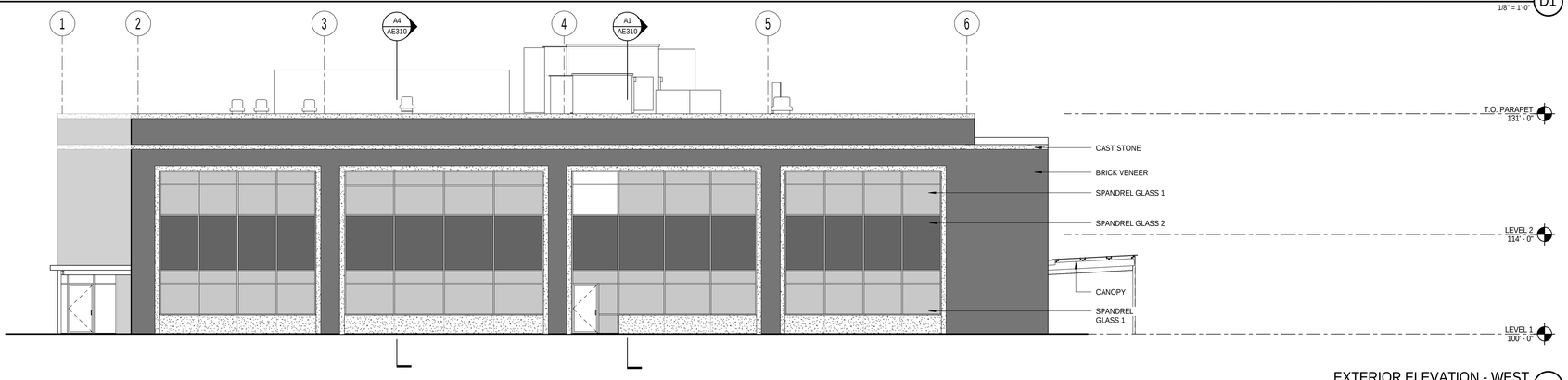

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AMBULATORY SURGERY CENTER

Portland, ME

EXTERIOR ELEVATIONS

SHEET TITLE:

0" 1/4" 1/2" 1" 2" 3"

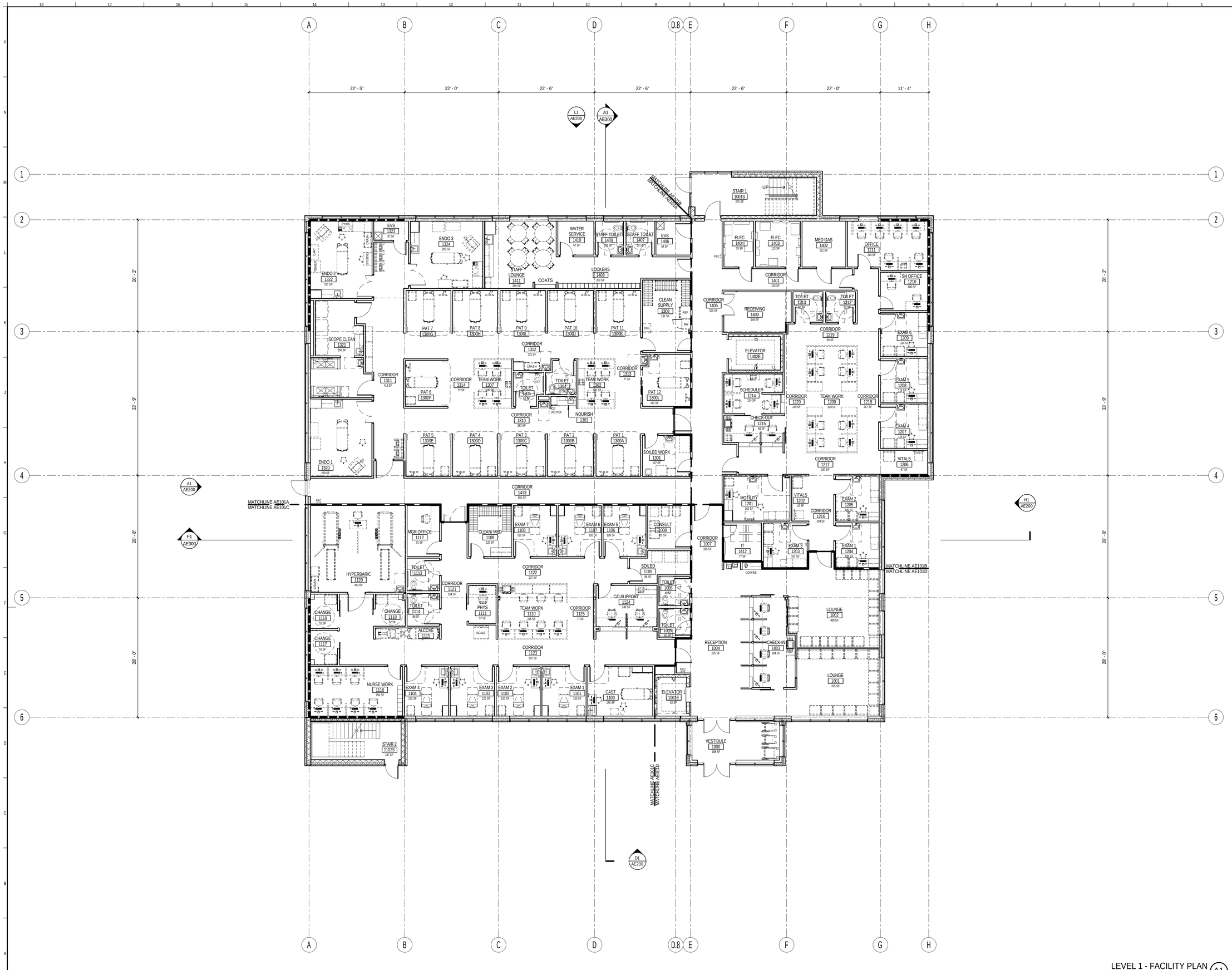
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| PROJECT MANAGER: | KD | PROJECT NO: | 19004 |
| A/E OF RECORD: | KD | | |
| JOB CAPTAIN: | CAH | AE200 | |
| DRAWN BY: | CAH | | |
| SMRT FILE: | AE200-19004 | SHEET No. | |

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LEVEL 1 - FACILITY PLAN A1

1/8" = 1'-0"

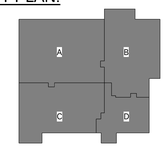
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## LEGEND:

STRUCTURAL BRACING

## KEY PLAN:




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AMBULATORY SURGERY CENTER

Portland, ME

LEVEL 1 FACILITY PLAN

SHEET TITLE:

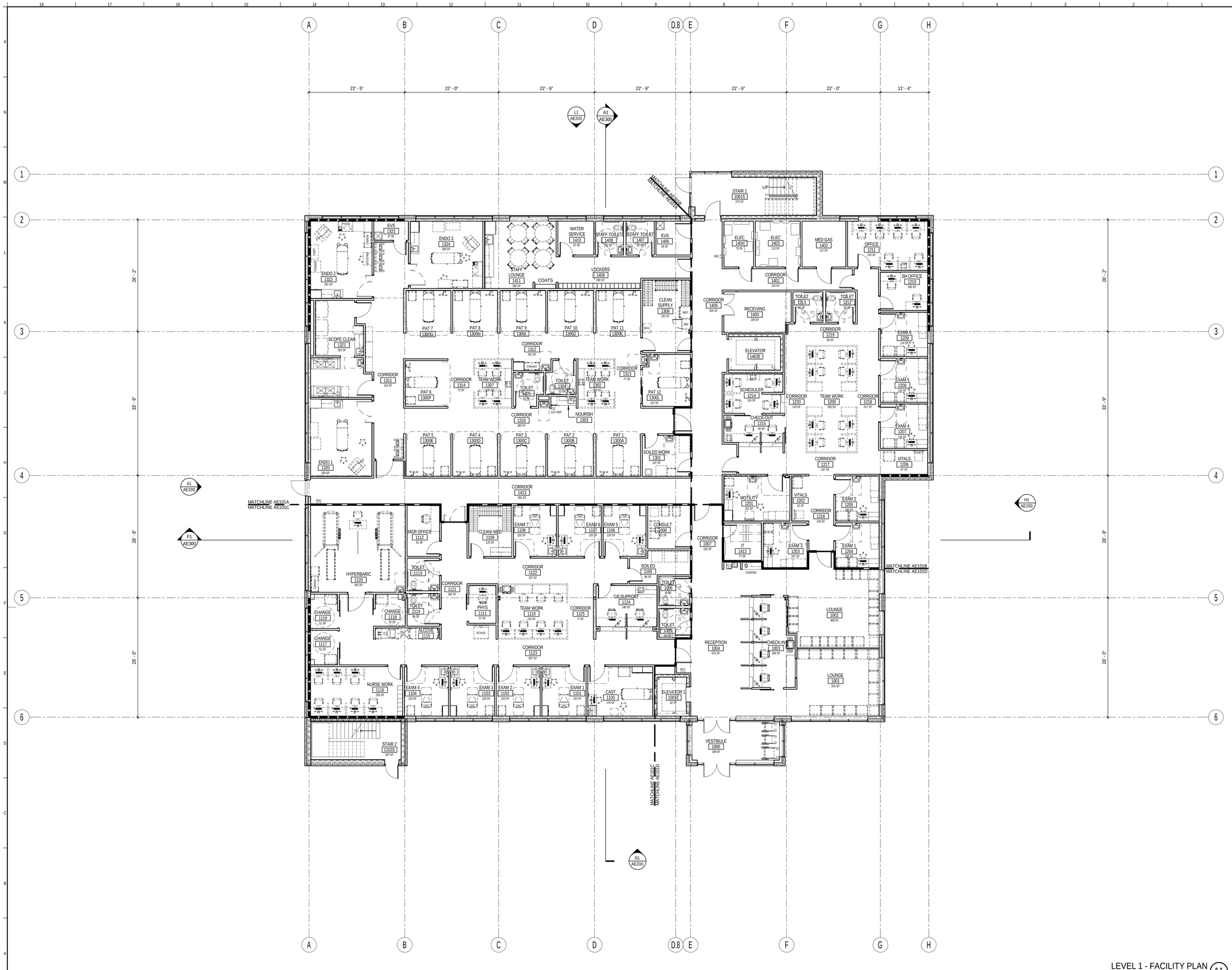
SCALE: AS NOTED

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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 1 - FACILITY PLAN A1

1/8" = 1'-0"

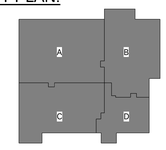
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## LEGEND:

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:

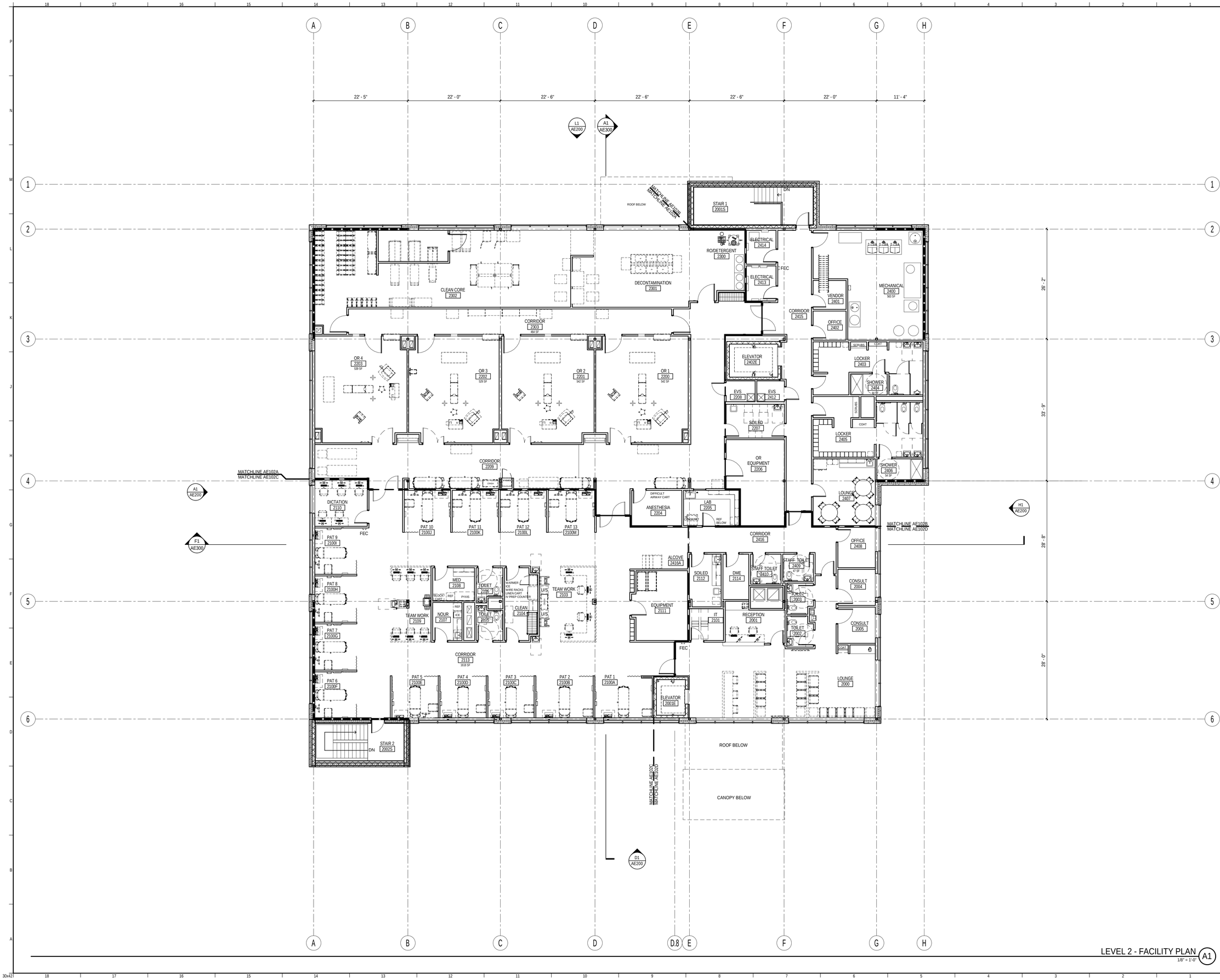
SCALE: AS NOTED

| | | | |
|---|---|---|---|
| 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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LEVEL 2 - FACILITY PLAN A1
1/8" = 1'-0"

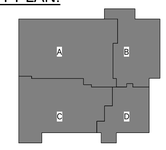
## PLAN NOTES:

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 |
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DESIGN DEVELOPMENT
7-31-2019

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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"

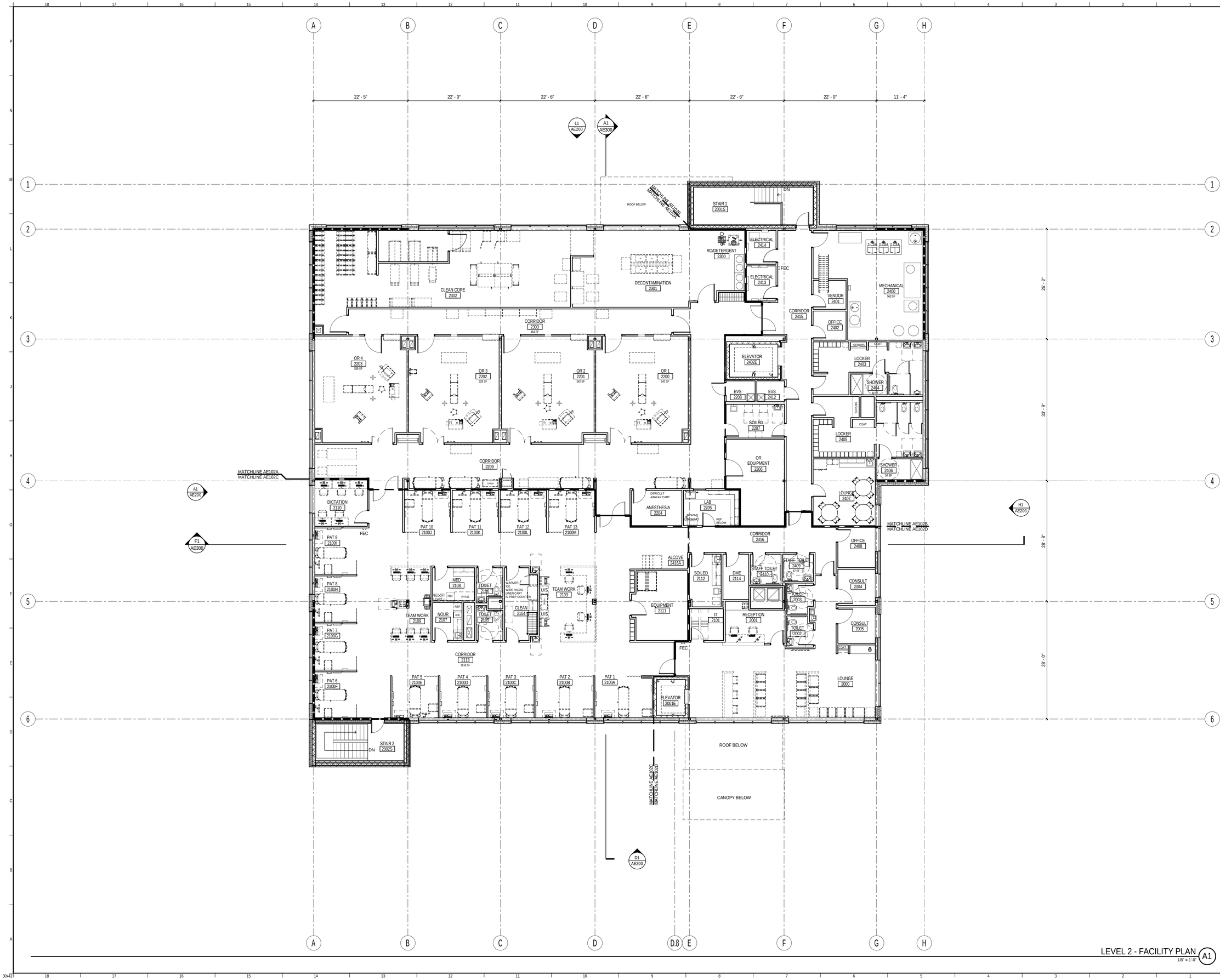
SCALE: AS NOTED

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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
1/8" = 1'-0"

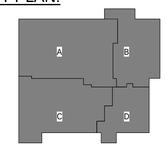
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1. SEE G-001 FOR GENERAL PROJECT NOTES, LEGENDS AND ABBREVIATIONS.
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## LEGEND:

STRUCTURAL BRACING

## KEY PLAN:




| REV | DESCRIPTION | DATE |
|---|---|---|

DESIGN DEVELOPMENT
7-31-2019

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SMRT Architects and Engineers
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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 |
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| DRAWN BY: | CAH | | |
| SMRT FILE: | A-102-19004 | SHEET No. | |

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# 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:**<br>Cite Ordinance or Technical Manual Standard | **Cite Standard Language:**<br>Cite specific language of applicable Ordinance or Technical Manual Standard | **Waiver Being Sought:**<br>Describe waiver being sought. Ex. – We are requesting a two-way parking lot drive aisle width of 20'. | **Justification for Waiver:**<br>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.<br>Gorrill-Palmer Consulting Engineers<br>707 Sable Oaks Drive<br>South Portland, Maine 04106<br>(207) 772-2515 – Work<br>sbushey@gorrillpalmer.com |
| *Architect* | SMRT Architects and Engineers<br>144 Fore Street Ste A<br>Portland, Maine 04101<br>(207) 772-3846<br>Attn: Kristen Damuth, AIA, CSI<br>KDamuth@smrtinc.com |
| *Surveyor* | Randy Loubier<br>Owen Haskell, Inc.<br>390 US Route 1, Unit 10<br>Falmouth, ME 04105<br>(207) 774-0424 – Work (207) 774-0511 – Fax<br>rloubier@ownehaskell.com |
| *Traffic Engineer* | Randy Dunton, P.E.<br>Gorrill-Palmer Consulting Engineers<br>707 Sable Oaks Drive<br>South Portland, Maine 04106<br>(207) 772-2515 – Work<br>rdunton@gorrillpalmer.com |
| *Geotechnical Consultant* | Bryan Steinert, P.E.<br>Haley & Aldrich, Inc.<br>75 Washington Ave, Ste 1A<br>Portland, Maine 04101<br>(207)482-4600<br>BSteinert@haleyaldrich.com |
| *Mercy Facilities* | Nick Munro – Facility Project Manager<br>Northern Light Healthcare<br>43 Witing Hill Road<br>Brewer, ME 04412<br>(207)553-6633<br>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.

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 | | |

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 11/4/2019 4:12 PM

# Site Location

Figure No. 1



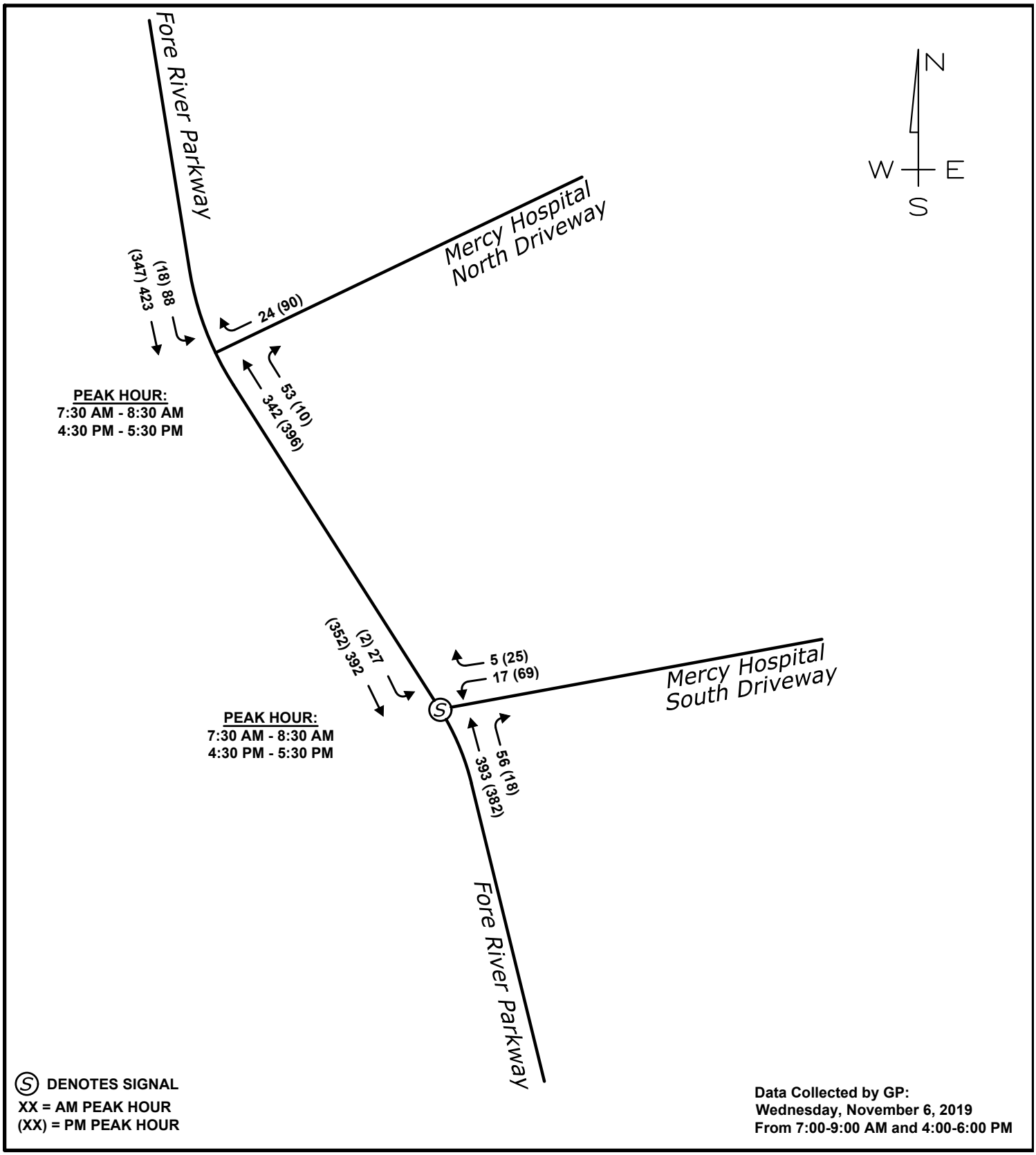

## MERCY HOSPITAL
## PORTLAND, MAINE

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| Checked: | RED | File Name: | Figure Set.dwg |

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# Raw Volumes

Figure No. 2



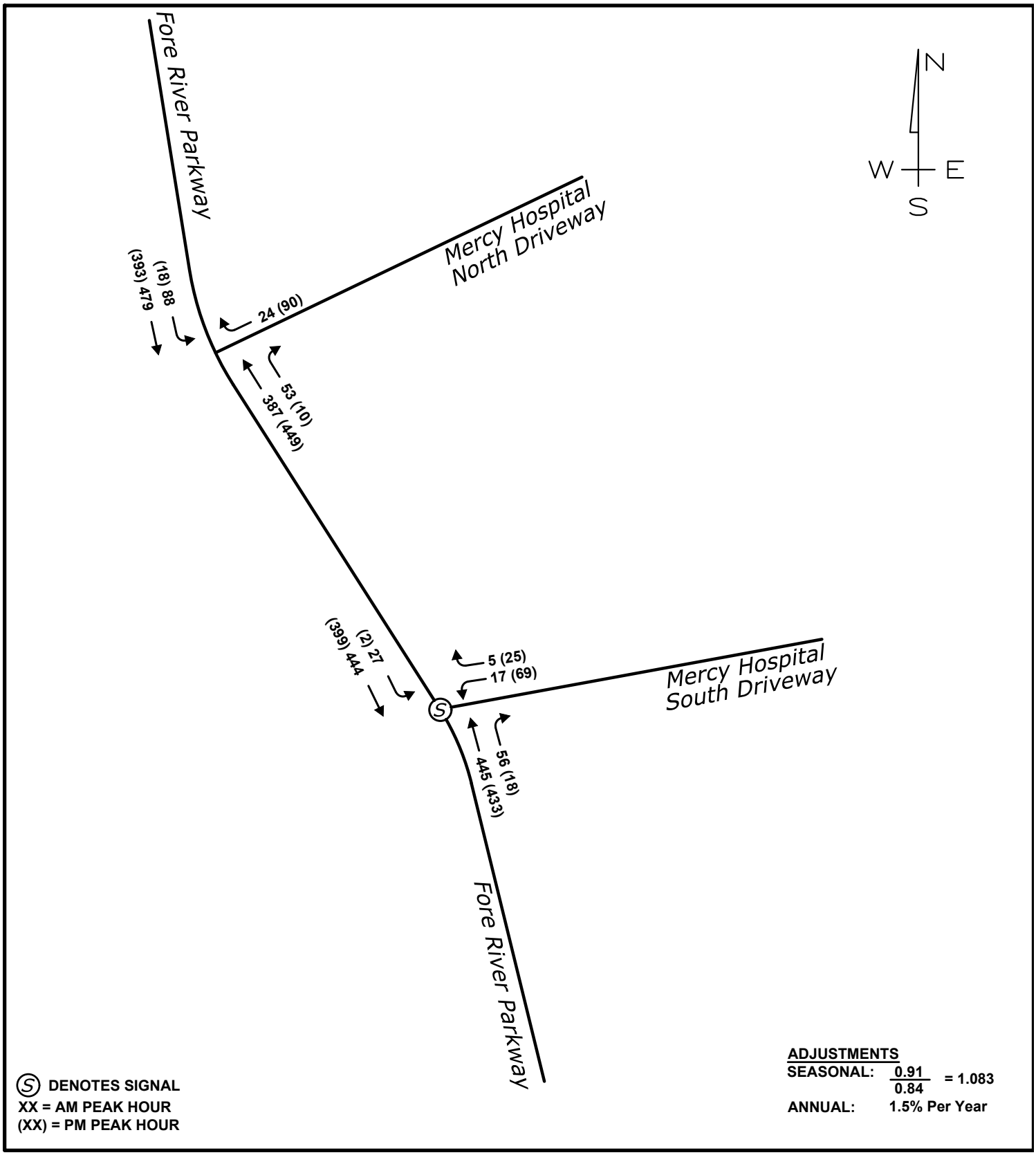

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## PORTLAND, MAINE

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



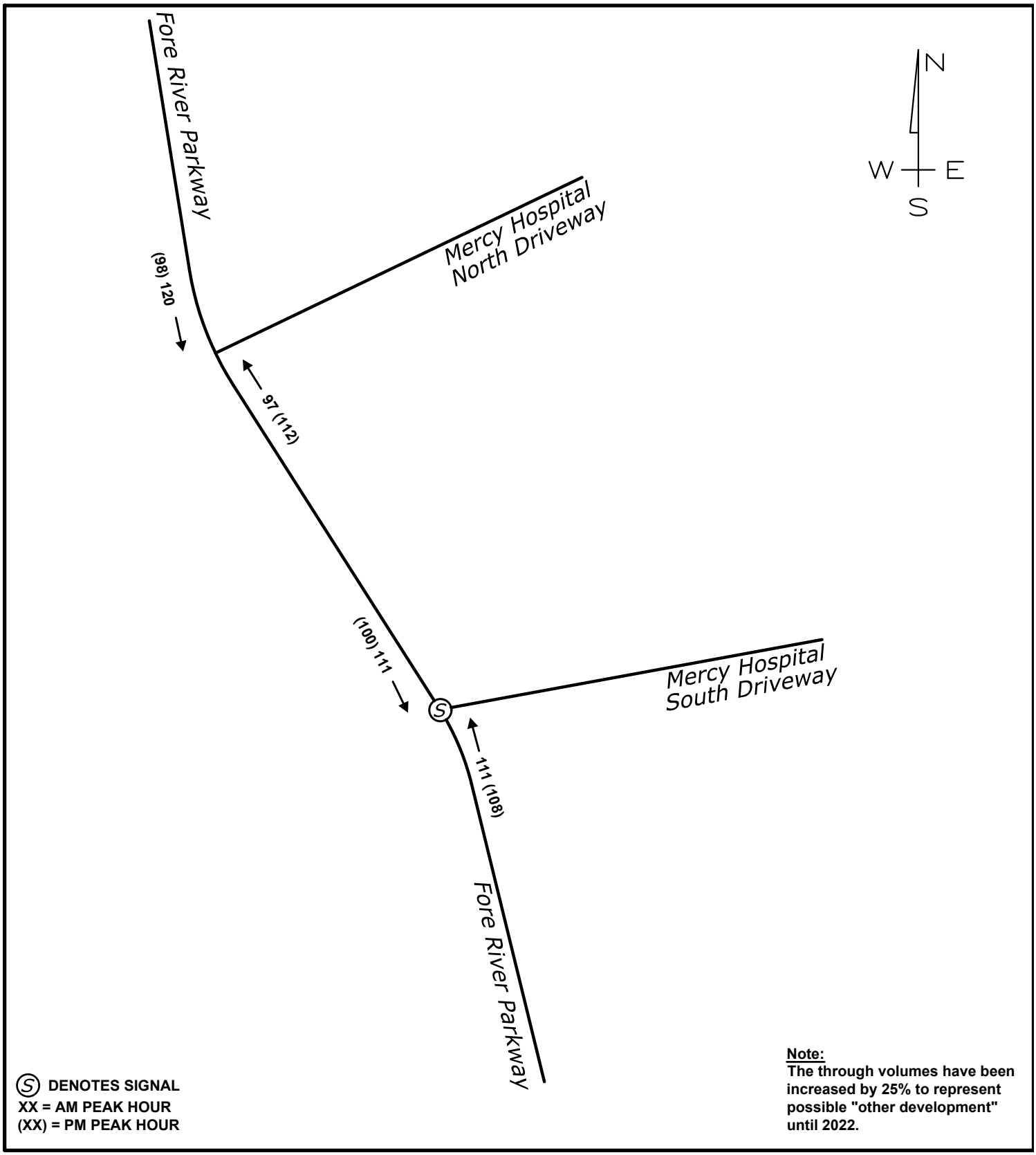

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## PORTLAND, MAINE

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| Checked: | RED | File Name: | Figure Set.dwg |

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# Other Developments

Figure No. 4



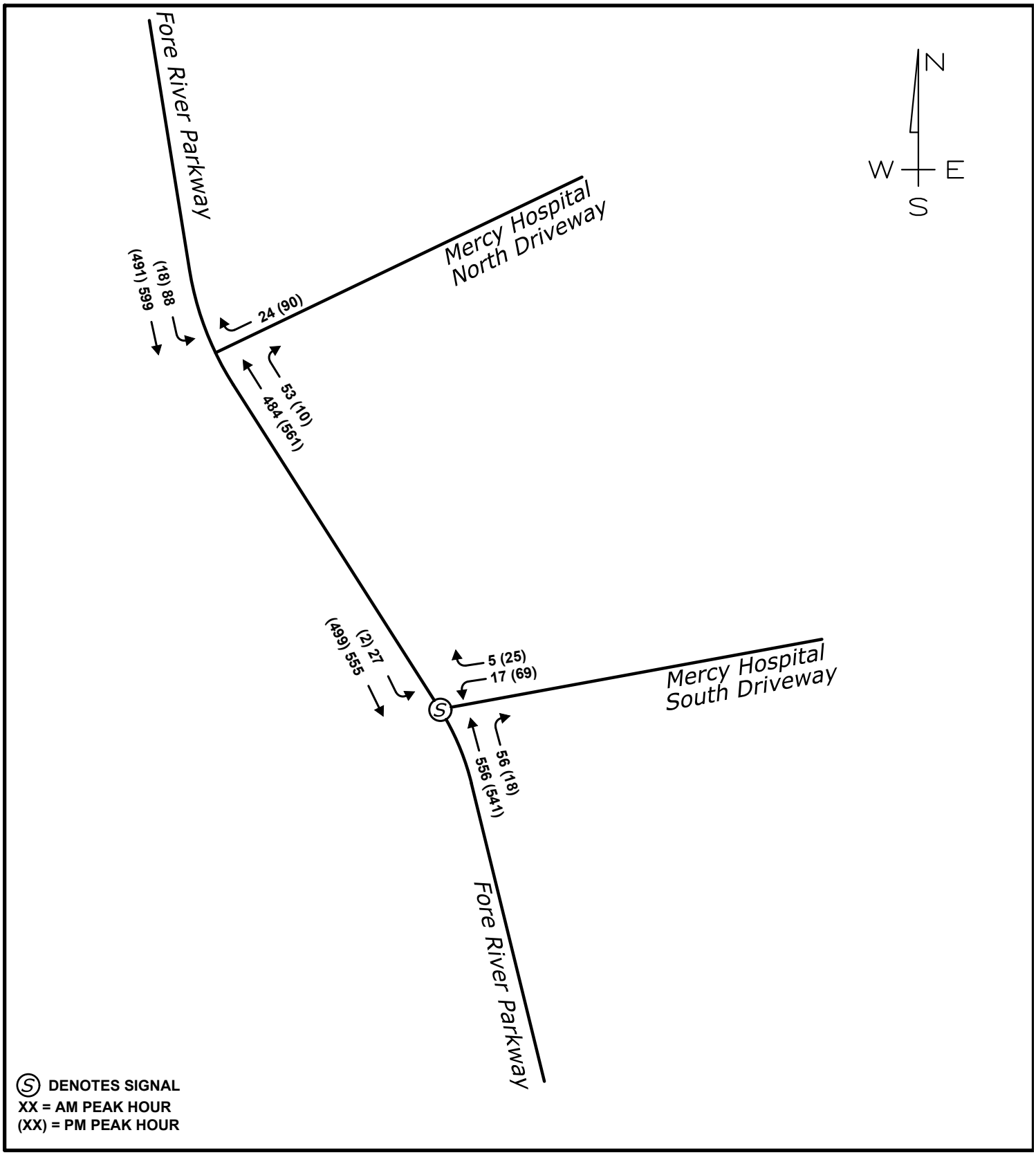

## MERCY HOSPITAL
## PORTLAND, MAINE

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| Checked: | RED | File Name: | Figure Set.dwg |

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# 2022 Predevelopment DHV

Figure No. 5



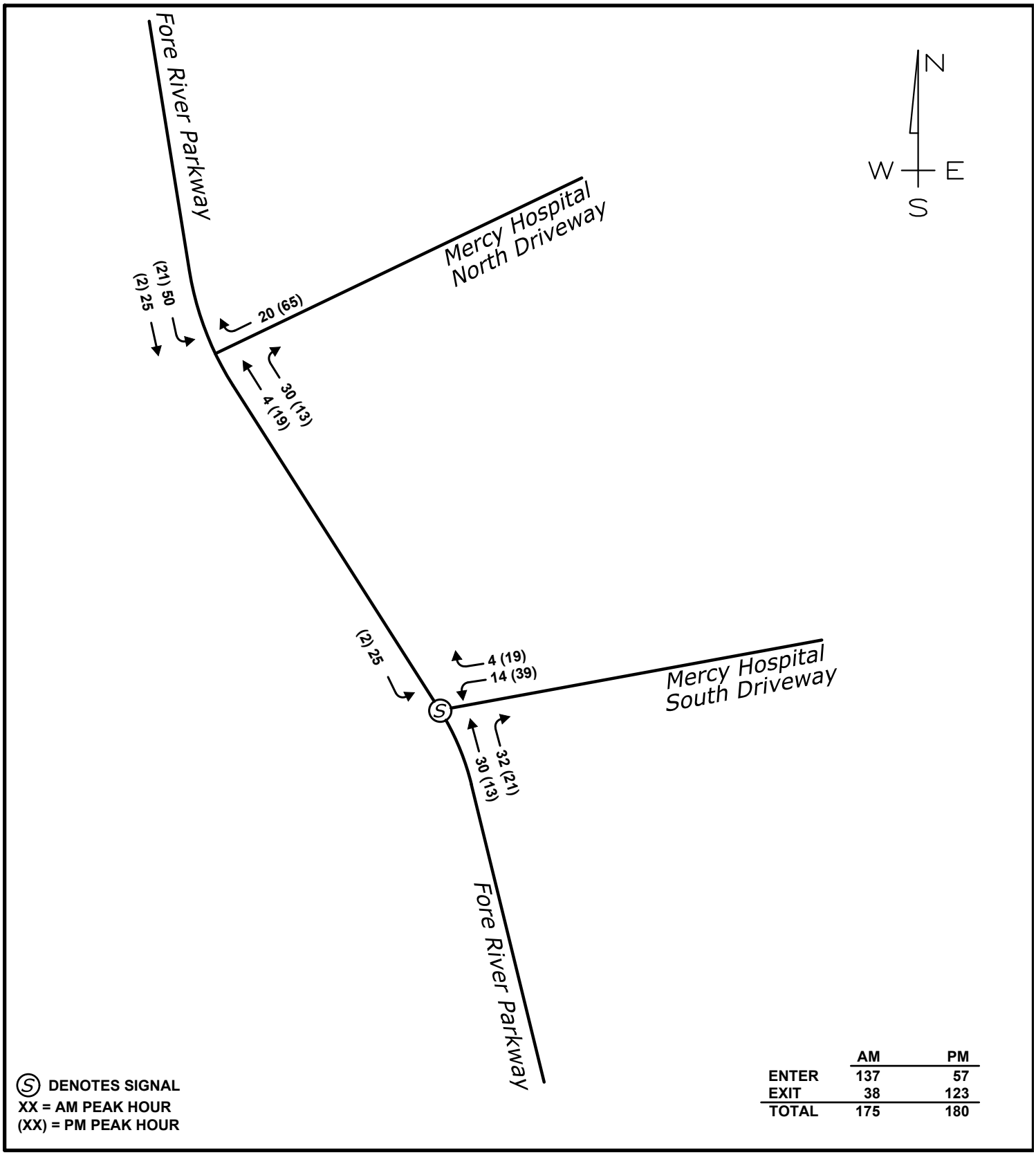

## MERCY HOSPITAL
## PORTLAND, MAINE

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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 |

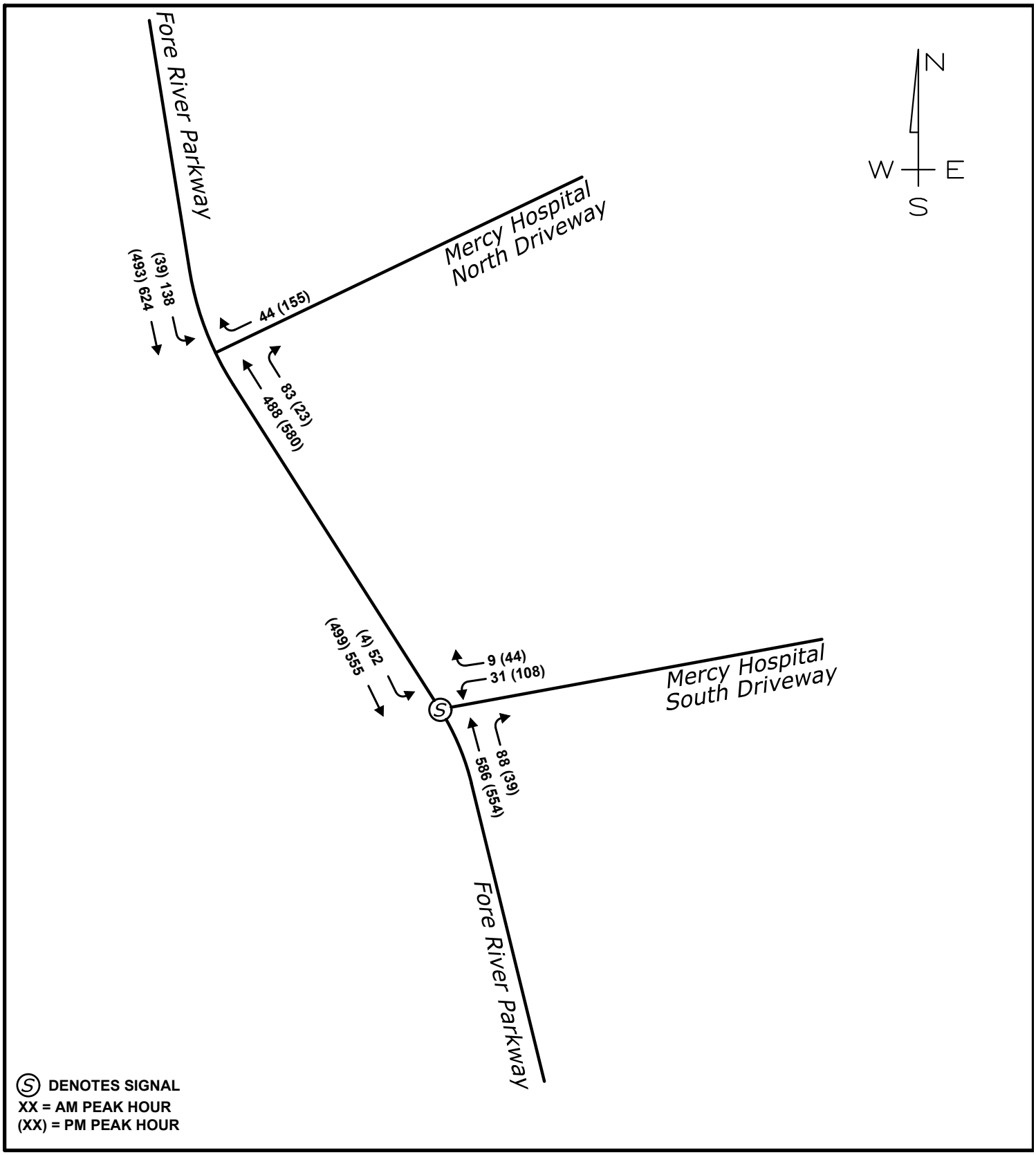
# MERCY HOSPITAL
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Draft: TPG Date: 11/6/2019
Checked: RED File Name: Figure Set.dwg

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# 2022 Postdevelopment DHV

Figure No. 7




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## PORTLAND, MAINE

| | | | |
|---|---|---|---|
| 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<br>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<br>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**

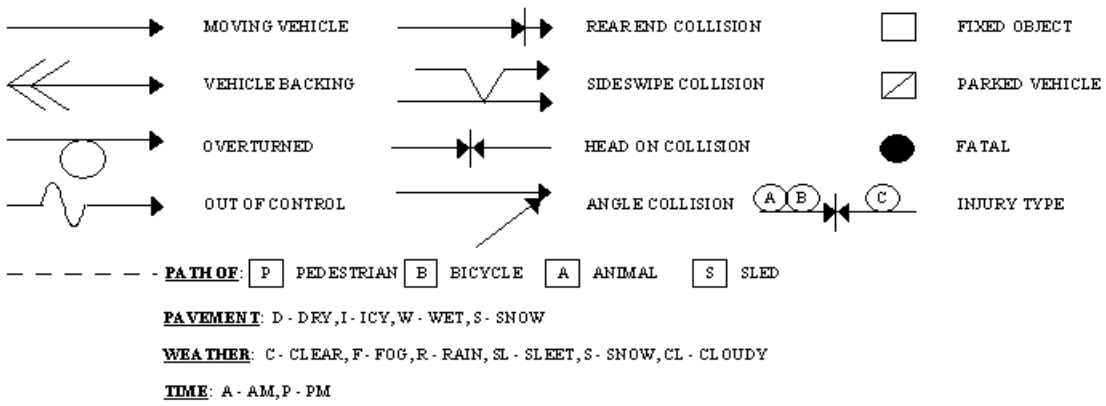
DESCRIPTION: **Jct Congress St & Fore River Pkwy/I-295 SB Off**

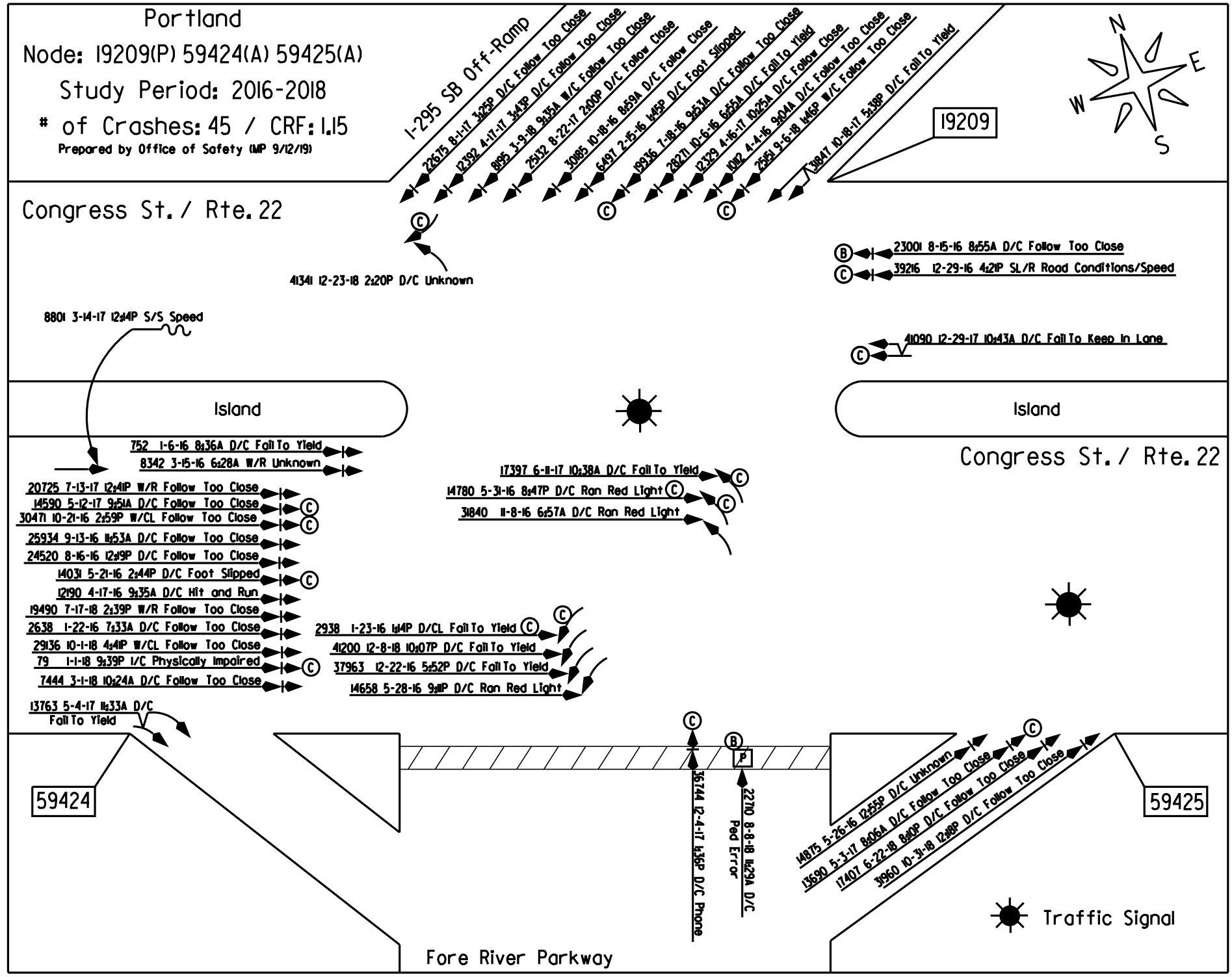
RTE # / RD #: **0022S** DATE DRAWN: **9/12/2019** DRAWN BY: **Michelle**

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

November 4, 2019

**Ms. Jean Fraser**
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**
**Supplemental Information**

Dear Jean:

We have received your October 28, 2019 email transmission requesting additional information related to the proposed Mercy Hospital Expansion at the Fore River Campus. The following is provided per your request.

## Tom Errico Comments

*Comment #1 - Further Parking and Traffic information as outlined in the attached e-mail from the City's Traffic Engineering reviewer Tom Errico.*

- *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.*
- *For comparison purposes, parking demand estimates using the Parking Generation Manual, ITE, 5th edition shall be provided.*
- *A pedestrian facilities/routing graphic for the entire site shall be provided with anticipated origin-destination patterns to and from each parking area.*
- *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.*
- *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";*

**Existing trip generation from the site was based upon on a single traffic count sample performed in January 2017.*

Response:

Gorrill Palmer (GP) has scheduled additional onsite parking counts the week of November 4th along with completion of updated traffic counts at the project driveways the same week. We expect to provide a summary of findings the week of November 11th.

Using data from the 4th and 5th Edition ITE Parking Generation Manual, we provide the following summary of anticipated parking demand from these sources:

**ITE 4th Edition Parking Generation vs 5th Edition**

| Site Data | Supply Ratio | | Mercy Phase 1 & 2 | | Parking Required | |
|---|---|---|---|---|---|---|
| | 4th Edition | 5th Edition | 4th Edition | 5th Edition | 4th Edition | 5th Edition |
| Hospitals (610) Parking Supply per 1,000 SF GFA | 3.03/1,000 SF | 2.6/1000 SF | 192,998 SF | 192,998 SF | 584 spaces | 502 spaces |
| Or Parking Supply per Bed | 4.7/bed | 4.2/bed | 71 beds | 71 beds | 334 spaces | 298 spaces |
| | | | | | | |
| Surgery Center (612) | 1.67-5.67 spaces/ operating room | 8.5/operating room | 4 operating rooms | 4 operating rooms | 7 to 23 spaces | 34 spaces |
| | | | | | | |
| Medical Office (720) | 4.0 spaces/1000 SF GFA | 4.3/1000 SF GFA | 82,186 SF | 82,186 SF | 328 spaces | 353 spaces |
| **Total** | | | | | **669-935** | **685-889** |

**City of Portland Ordinance Requirements**

| Land Use | Supply Ratio | Size | Parking Required (spaces) |
|---|---|---|---|
| 14-332 (f) Hospitals | 1 space/ 500 SF | 192,998 | 386 |
| 14-332 (j) Offices | 1 space/400 SF | 117,173 | 293 |
| | | **Total** | **679** |

**GP Parking Analysis**

| Land Use | Supply Ratio | Size | Parking Required (spaces) |
|---|---|---|---|
| Hospital | 1.27 space/500 SF | 192,998 | 490 |
| MOB | 0.85 space/400 SF | 117,173 | 249 |
| | | **Total** | **739** |

The proposed plan includes a revised parking supply of 857 parking spaces, which is a net increase of 95 spaces on the site.

We have prepared the accompanying Figure 5 that depicts the designated parking areas for Staff, Patients/ Visitors as well as the walking routes from each parking area to the buildings. The site has over 7,765 LF (1.47 mile) of pedestrian sidewalk that Mercy maintains on a year-round basis for access throughout the property. Figure 5 identifies the basic parking and access conditions for staff, visitors/patients as follows:

- Hospital Physicians and Staff – Primary parking will be the new parking lot within the basin area and behind the Hospital Expansion. Staff will proceed to a ground level entrance (security controlled) at the rear of the proposed Hospital Expansion to access an elevator providing access to the entire hospital. This lot also will be used by ASC physicians and staff.
- Hospital Staff – Secondary staff parking will be in the south lot located off the Southerly entrance drive. A sidewalk system provides access to a ground level staff entrance (security controlled) at the south end of the existing hospital. This parking and access condition have been in place since the original Hospital opening in 2008.
- Emergency Department – Primary parking will be on the north end of the proposed Hospital Expansion.
- Existing MOB Staff – Primary parking is within the lot NW of the MOB building with sidewalk access to either MOB entrance.
- Existing MOB Patient/Visitor – Primary parking is within the lot on the north side of the MOB
- Existing Hospital Patient/Visitor – Primary parking at the front of the existing Hospital or secondary parking in the lot on the North side of the MOB.
- Proposed ASC – Patient/Visitor parking will be in the new parking lot on the south side of the building with access off the southerly entrance drive. A new sidewalk will connect to the existing sidewalk system that circles the basin area and also connects to the Hospital access routes.

We have reposted the Parking and Mitigation Memo along with the supporting figures and Synchro results.

We are in the process of reviewing the HCL at the Congress and Fore River Parkway intersection and will provide findings within the next two weeks.

**Planning Requests**

- *Data re the area of wetland lost (wetland area before the proposals, and open wetland area after);*

Response:

The existing resource area within the former gravel pit was identified as 3.49 acres by Normandeau Associates who performed a wetland delineation associated with the MeDEP/USACOE permitting that was approved in 2013. The entirety of this area will impacted by the current proposal, although a new stormwater management wet pond measuring approximately 21,798 SF (0.5 ac) in size will be created.

- *Pedestrian circulation plan including all walkways, sidewalks and trails, including any relocated public access easement around pond (this is not in the most recent set of plans);*

Response:

The accompanying Figure 5 depicts the existing and proposed sidewalk network within the property. There are approximately 7,765 LF of existing sidewalk and an additional 400-500 LF will be constructed as part of the project. A small area of stone dust walking path of approximately 360 LF will be impacted on the east side of the basin as a result of the ASC construction. An existing paved sidewalk will remain around the full perimeter of the basin area. Public access will continue to be provided around the entirety of the former pit area.

- *The submitted narrative regarding compliance with the CZA does not address the requirement (10f) to "identify the extent to which the developer will preserve natural features including ...and wetlands". Please clarify what part of the existing wetland will be preserved and how the current proposals show sensitivity to the need to preserve this feature;*

Response:

An updated CZA compliance narrative has been completed with information regarding compliance with part 10f of the Contract Zone Agreement. The revised document has been uploaded to ePlan.

- *What is the surface treatment of the area shown as "open space" on the updated master plan graphic, i.e. around the new pond area and between the pond area and the new parking lot and nearby trails. This is not shown on the Landscape Plan, and on the Grading Plans this appears to be heavily regraded with areas of rip rap and we would like clarification re:*

    - *Specific detail of ground cover and scope for vegetation? (see 10b Landscaping in the CZA)*
    - *Whether this will be fenced or provide publicly accessible open space (with benches and other amenities)?*
    - *Whether the formal public access easement (trails) will be modified/expanded to go closely along any retained wetland area?*

Response:

The proposal includes the restoration of proposed graded areas with lawn and/or low maintenance grass cover mixed with some landscape plantings to be consistent with the current campus landscaping. The low maintenance grass cover will be similar to several zones on the campus where ground cover is only mowed once or twice a season and the coverage includes grasses and some mixture of wildflowers. Currently, the impervious coverage on the site is approximately 50%. Upon completion of Phase 2, the impervious coverage on the site will increase to 66.4%, which remains substantially below the allowed 80% maximum impervious lot coverage under the Contract Zone Agreement. Most of the Campus contains a significant number of now mature trees and various planting beds with both annual and perennial plants. The North Open Space consists of 3.32 acres along the waterfront that have been maintained as naturally vegetated except for the stormwater filter swales that contain planted vegetation that provides water quality treatment of stormwater runoff before discharging into the Fore River. The South Open Space contains 1.33 acres of low maintenance grassed area with direct proximity to the River and a view of the Veterans Bridge. Mercy contracts with a professional landscape service provider for the ongoing

maintenance and care of the campus landscaping and this will continue into the future. There will be some area of stone riprap for the purpose of providing stabilization for concentrated runoff flow conditions for water directed to the wet pond. These riprap areas will be generally concealed from view, certainly from the Parkway and surrounding properties, as these areas will be within the lower sections of the fill zones in the basin.

The proposed stormwater management basin is designed with relatively shallow slopes on most of its perimeter and the pond will allow people to walk down to it. We note that the current basin conditions do not actually allow convenient access to the water, although it can be easily viewed from much of its perimeter. The stormwater management wet pond will be similarly viewable. Mercy is contemplating the placement of fencing and/or benches in the vicinity of the wet pond. Any amenities would be considered supplemental to the existing benches and views available within the North Open space and Fore River Parkway Trail, where there is far greater opportunity for visual enjoyment and benefit overlooking the Fore River.

- *As indicated above, we are not clear as to how the new surface parking lots, and the engineered and regraded wet pond edges and pool, will look as viewed from the Fore River Parkway - we would like to see a section (between new building and Fore River Parkway) and a sketch montage as viewed from the Fore River Parkway, to help the Board and reviewers to understand how this area is integrated into a unified design for the campus.*

Response:

We have prepared the attached cross section which extends from a point east of the site all the way to the Fore River. This section shows the relationship of various locations on or near the property, including the nearby MMC Parking garage, the Railroad tracks, the proposed ASC location and parking lots, the wet pond, the site frontage along the Parkway and the Parkway down to the waterfront. The section shows that the proposed wet pond will remain concealed from view from the Fore River Parkway as its water surface elevation will be at elevation 9.5' (NGVD29). The existing driveway located between the SWM pond and the Site frontage is roughly at elevation 16.5' at its lowest and up to elevation 19.0'. The site frontage drops back to grade on the Parkway at Elevation 15.0'±. Therefore, the traveling public will not see any significant change in the view into the site from the Parkway, albeit that view now includes the substantial MMC 9 level parking garage structure in the background. Similarly, the parking lots on each side of the ASC building will remain largely concealed from view from the Parkway based on the surface grades that range from elevation 17.0' to 20.0'±. The ASC building finish floor elevation will be at elevation 19.0' and the building height is approximately 31' (Elevation 50.0'), so the ASC will be slightly visible from the Parkway, although existing vegetation to remain will buffer these views somewhat. Again, the MMC garage in the background extends to a height greater than 90' and a top elevation of approximately 116' or twice the elevation of the proposed ASC building.

We believe that the layout does achieve a unified design for the site for the following reasons:

- The ASC is not connected to the Hospital since that would complicate the utility/service corridor and parking and it is Mercy's objective to provide outpatient services in a setting discreet from Mercy's acute hospital services. 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 was locates in the hospital or otherwise not well positioned on the site.

- The layout positions the ASC building in a manner where it best benefits from existing utility infrastructure that is located at the rear of the site and is located within the Hospital service area.
- The layout provides direct proximity behind the hospital building, allowing for physician and staff parking that can be shared between the ASC and the Hospital.
- It provides for convenient patient/visitor direct vehicular and pedestrian access off the existing southerly, signalized entrance driveway.
- The positioning will minimize the visual impact of the ASC building and the proposed parking since these site features will be largely concealed from view from the Parkway.
- The positioning meets Mercy's objectives of providing discreet infrastructure for their outpatient services programming while also maintaining connectivity to the acute care facilities.
- The ASC location provides overlapping use of the Hospital service area, utilities, med-gases etc. between the ASC and Hospital thus creating efficiency and costs benefits.
- Other potential functions that could be shared between the hospital and ASC through this corridor include materials management, clinical engineering, housekeeping and security.

The Hospital expansion is a straightforward extension of the existing Hospital footprint and its placement is largely concealed by the existing MOB. Much of the Fore River Campus is surrounded by rail track and heavy development to the east. Each of these building pieces also is positioned in a manner that will coalesce with future development activity that may include continued acute care expansion, structured parking and additional heath care facilities on the campus, in our opinion.

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

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

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

EXIST. VEG. TO REMAIN

FUTURE ASC BLDG. EXPANSION

GENERATOR

TRANSPLANT 4 - BN

TRANSPLANT 6 - TOT

REMOVE / RESET / TRANSPLANT SHRUBS AROUND TRANSFORMER AS NECESSARY

TRANS. #2-4

TRANS. #1

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

BRICK

PAVED WALK

PAVED ISLAND

EX. RAISED CROSSWALK

EX. VEG. TO REMAIN

LAWN

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

| 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: 1" = 40' | Job No.: 3257.04 | |
| File Name: 325704-LANDSCAPE.dwg | | | |

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207.772.2515

Drawing Name: LANDSCAPE PLAN
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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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

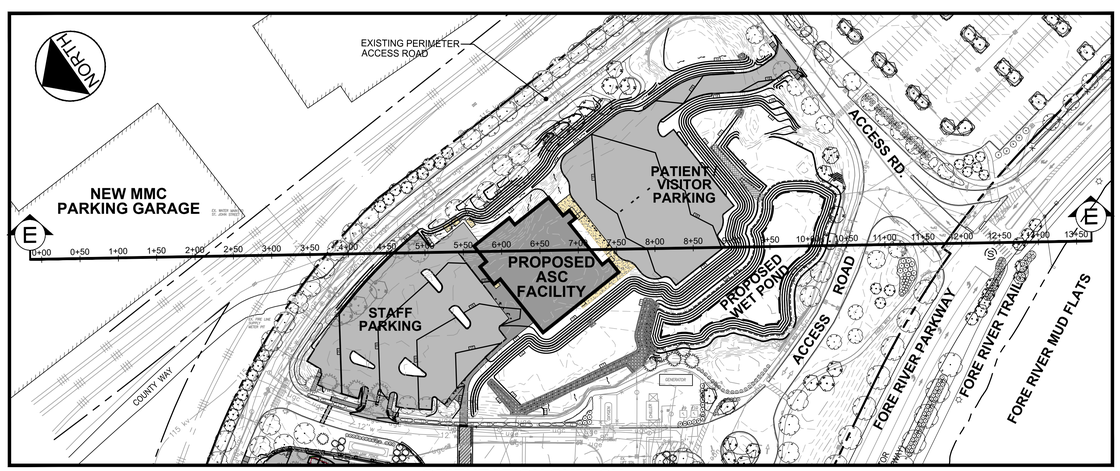
130 120 110 100 90 80 70 60 50 40 30 20 10 0 -10

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.
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| | | |
|---|---|---|
| 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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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

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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 – 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

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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 30$^{th}$ 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 95$^{th}$ percentile queue length to the available storage length. The following table summarizes the storage lengths and the 95$^{th}$ 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:

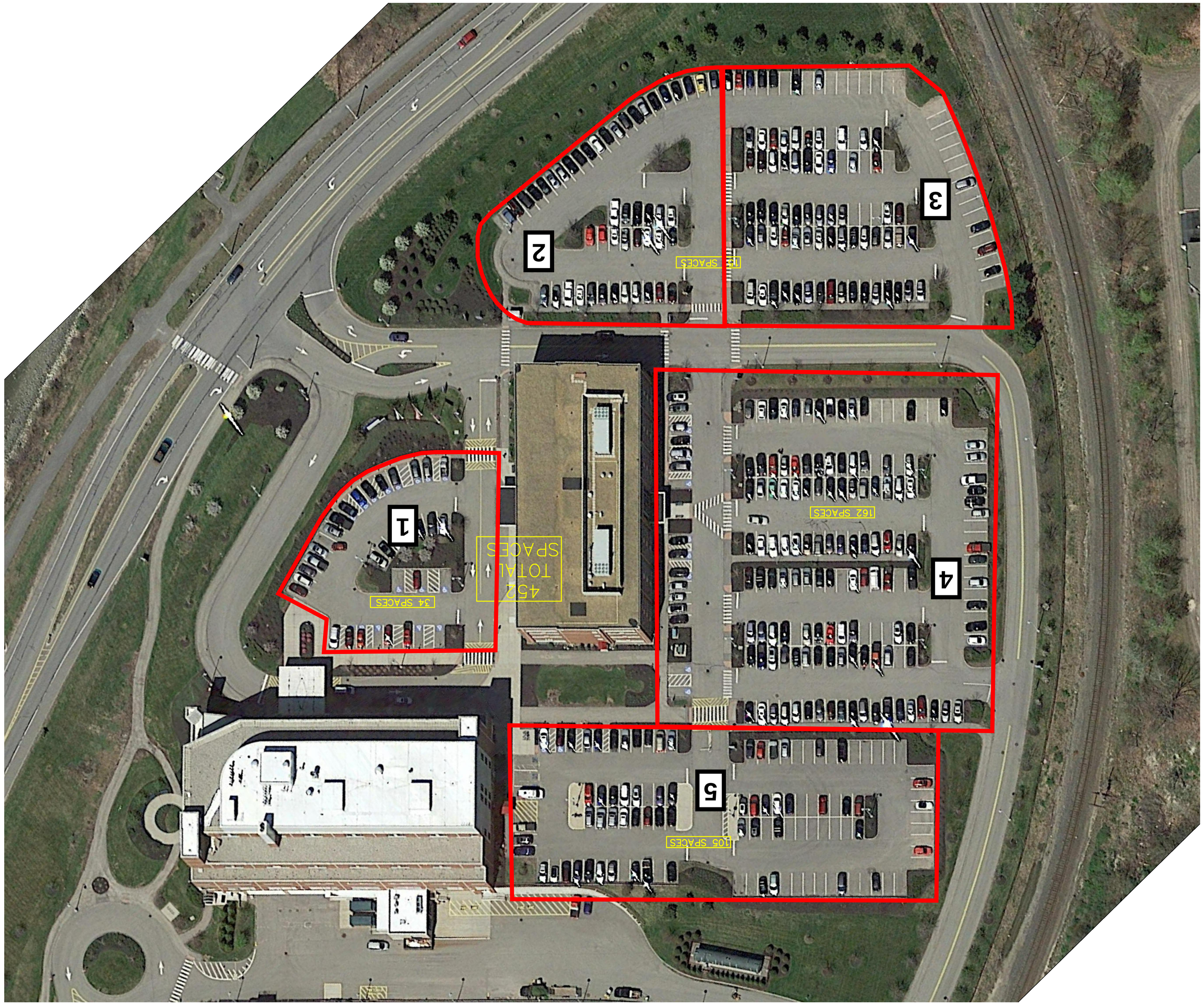
1. The recommended on-site parking supply after the construction of the proposed campus expansion and including adjustment for "practical capacity" is 831 to 851 parking spaces. The expansion will supply 857 parking spaces, a surplus of 6 to 26 spaces more than what is needed.

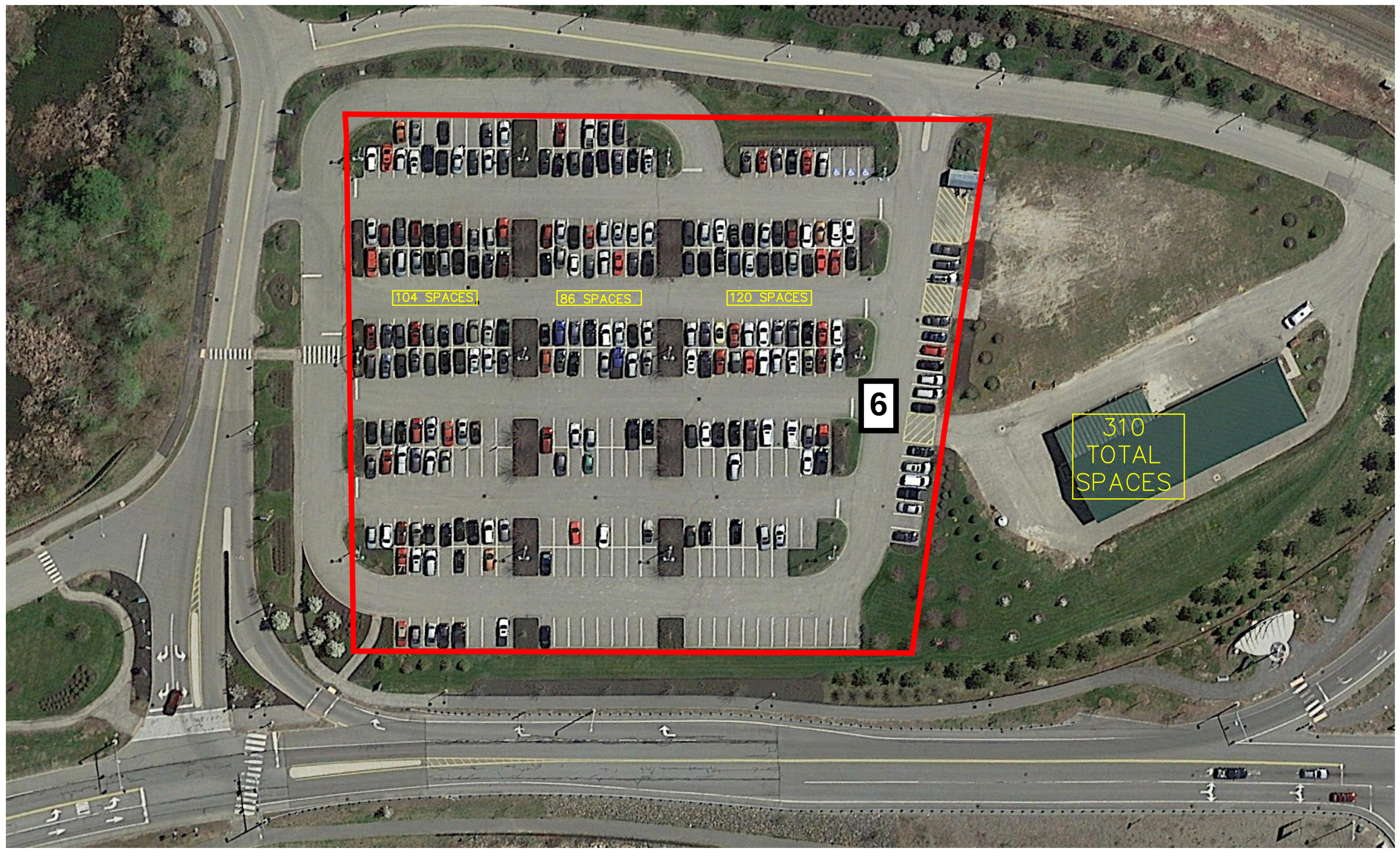
2. The campus expansion and ASC facility is forecast to generate 175 trip ends during the AM peak hour of the adjacent street and 180 trip ends during the PM peak hour of the adjacent street. In reviewing the previously issued MaineDOT Traffic Movement Permit for this

project, the site is forecast to still be well below the permitted trip generations and therefore will not require any modifications to the permit.

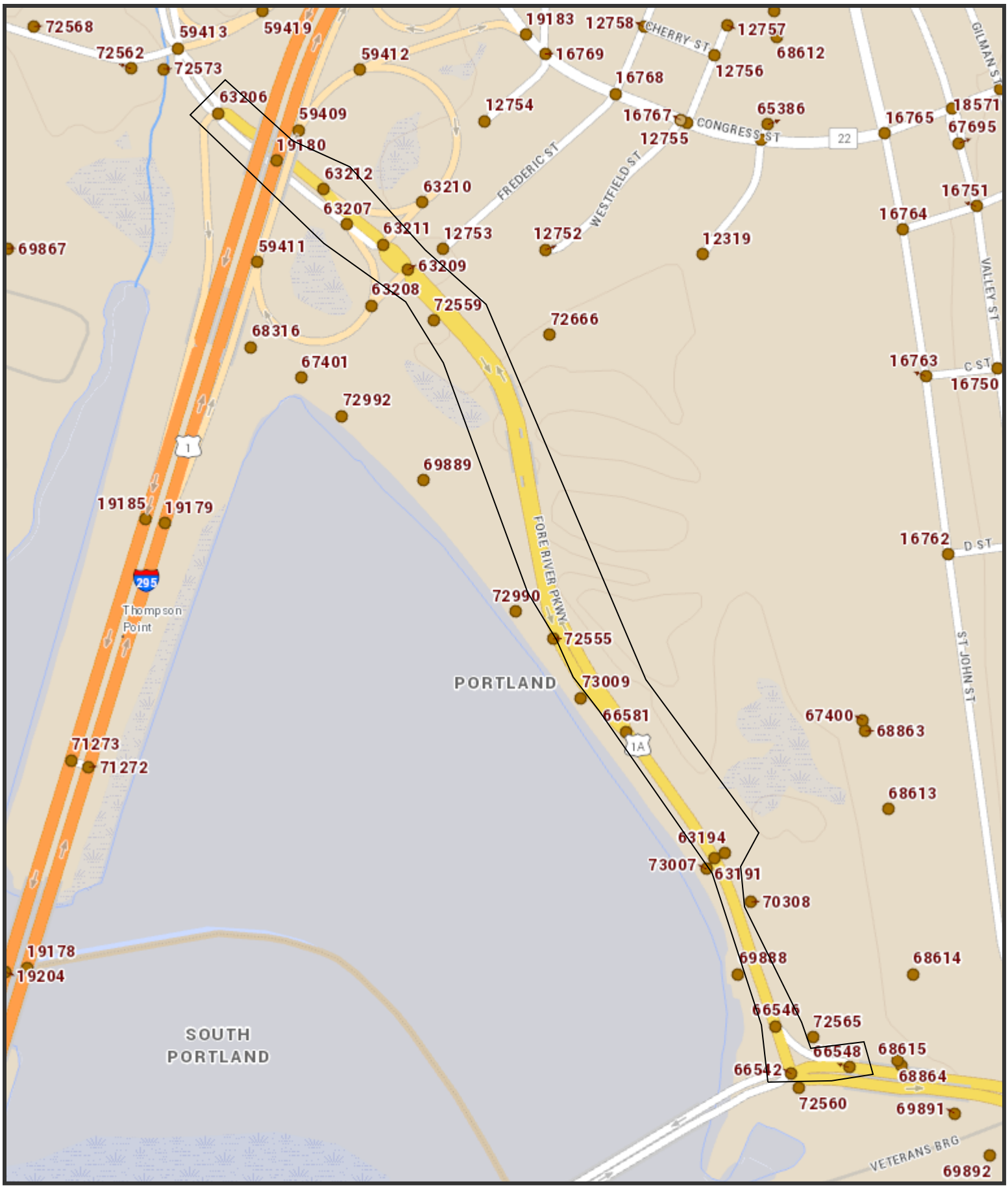
3. The MaineDOT crash data indicates that there are no high crash locations in the vicinity of the site.

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:

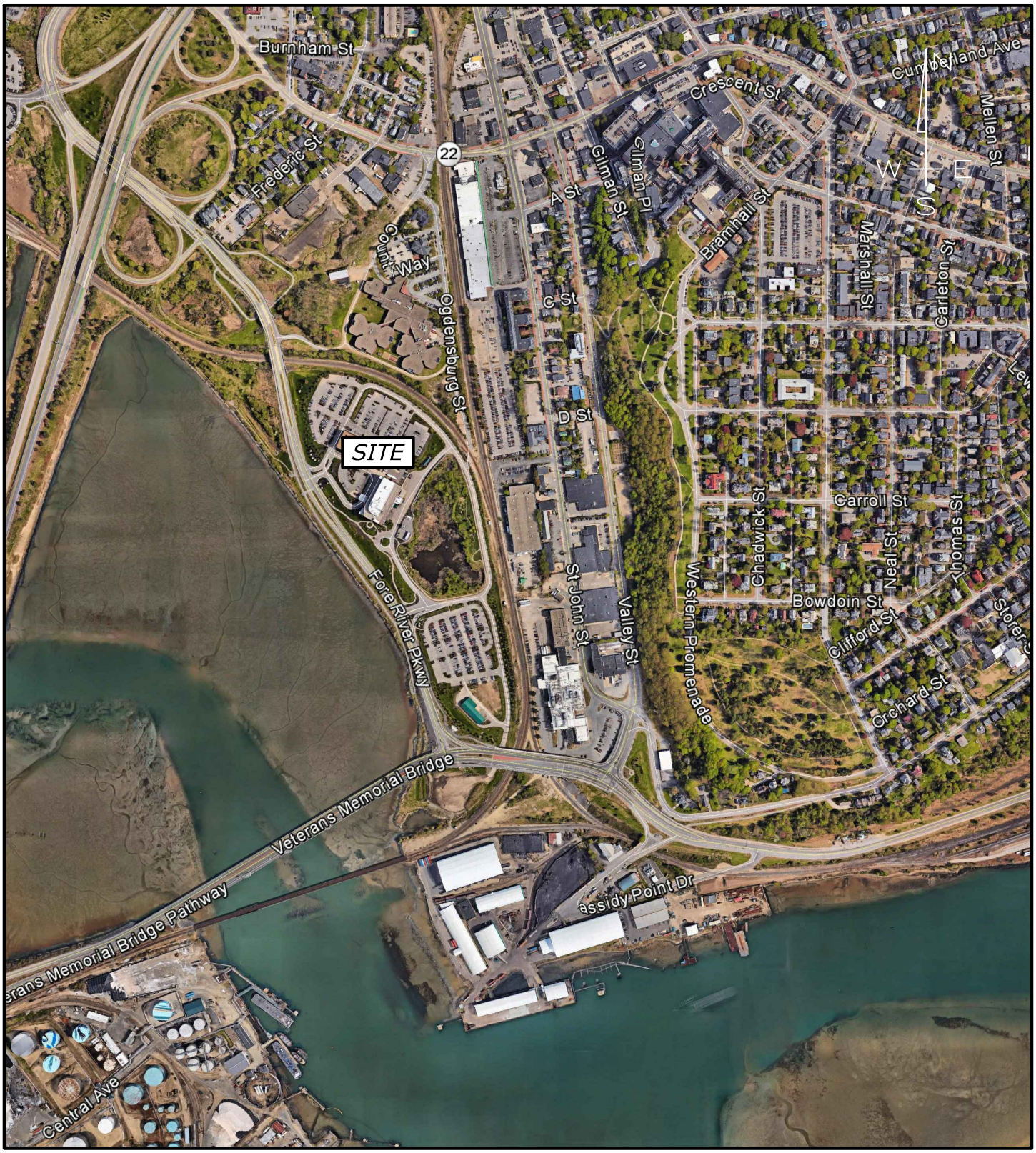
Based on GFA (Per thousand #)

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



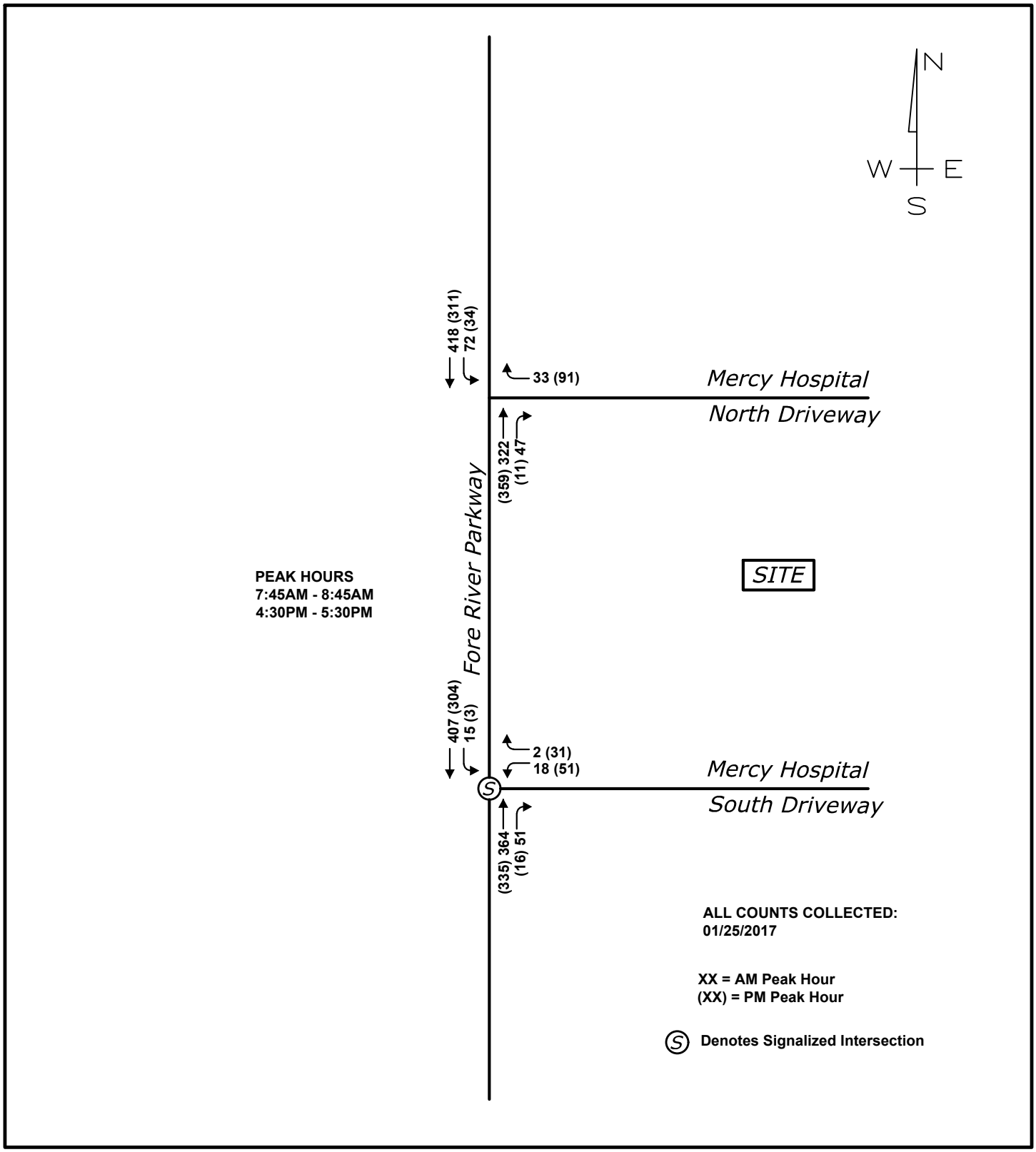

# MERCY EXPANSION
# PORTLAND, MAINE

| | | | |
|---|---|---|---|
| Design: | ET | Scale: | NONE |
| Draft: | LAN | Date: | FEB 2017 |
| Checked: | RED | File Name: | 3257.04-TRAFF.dwg |

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207.772.2515

# Raw Volumes

Figure No. 2



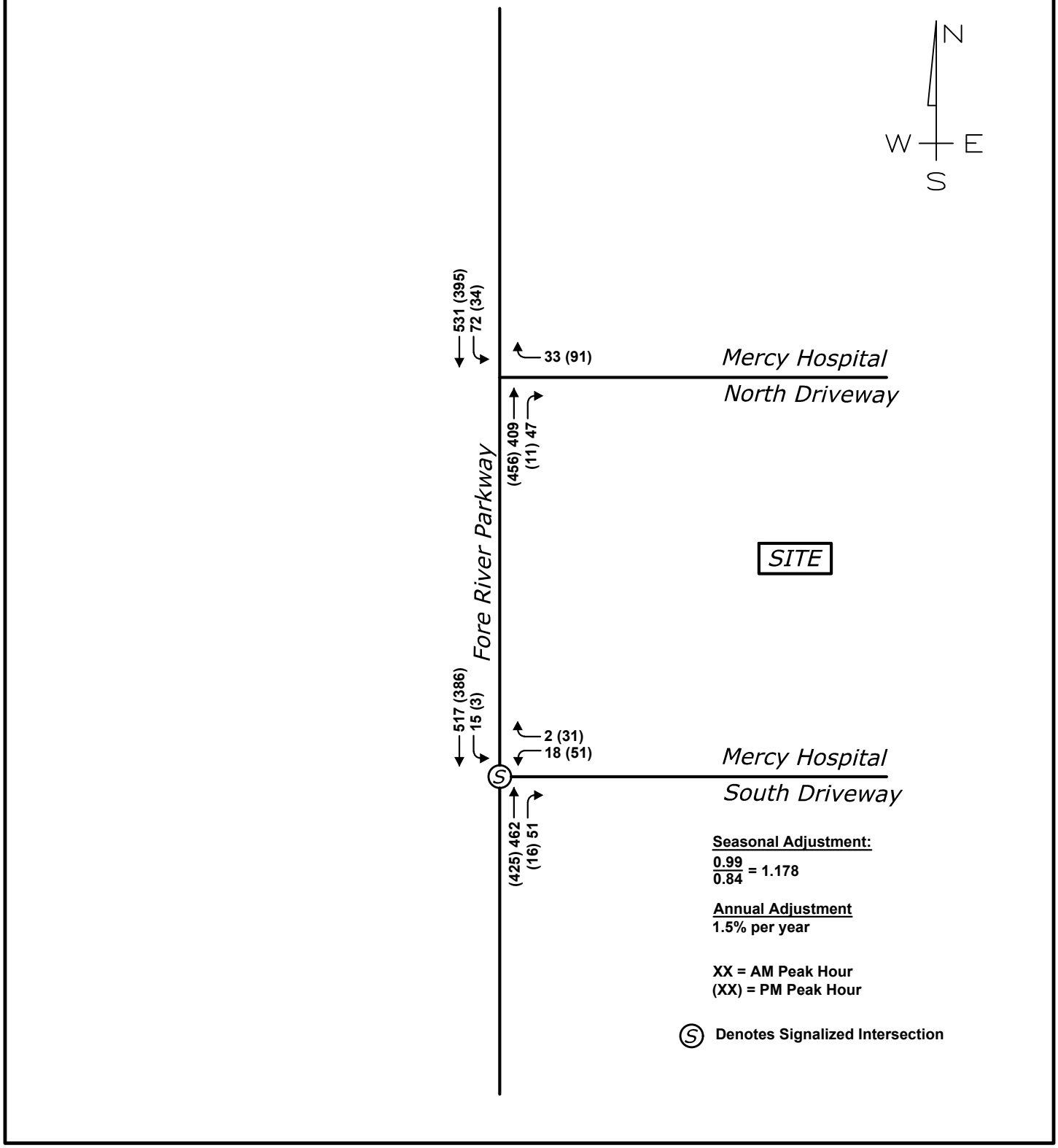

## MERCY EXPANSION
## PORTLAND, MAINE

| | | | |
|---|---|---|---|
| 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



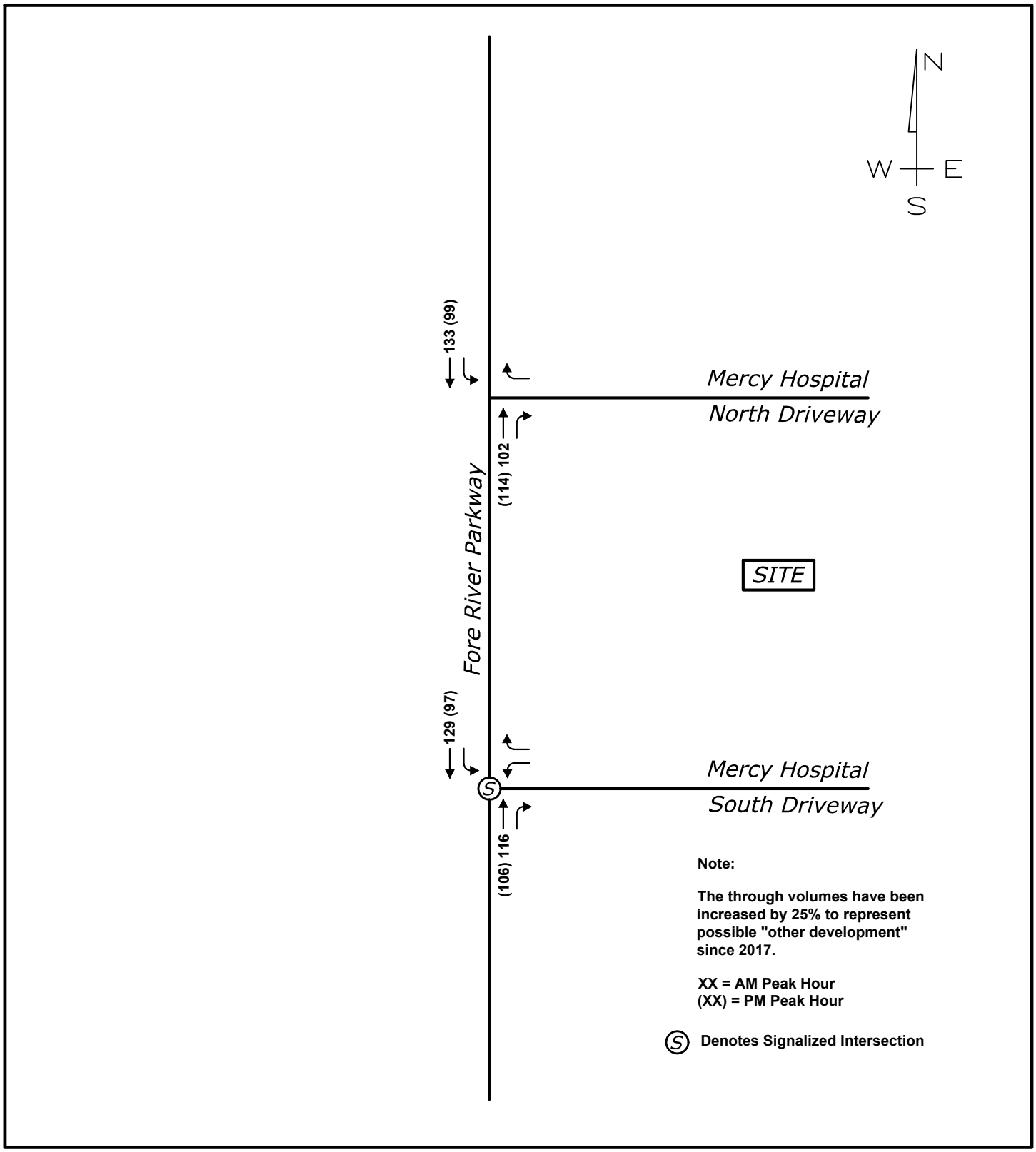

## MERCY EXPANSION
## PORTLAND, MAINE

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



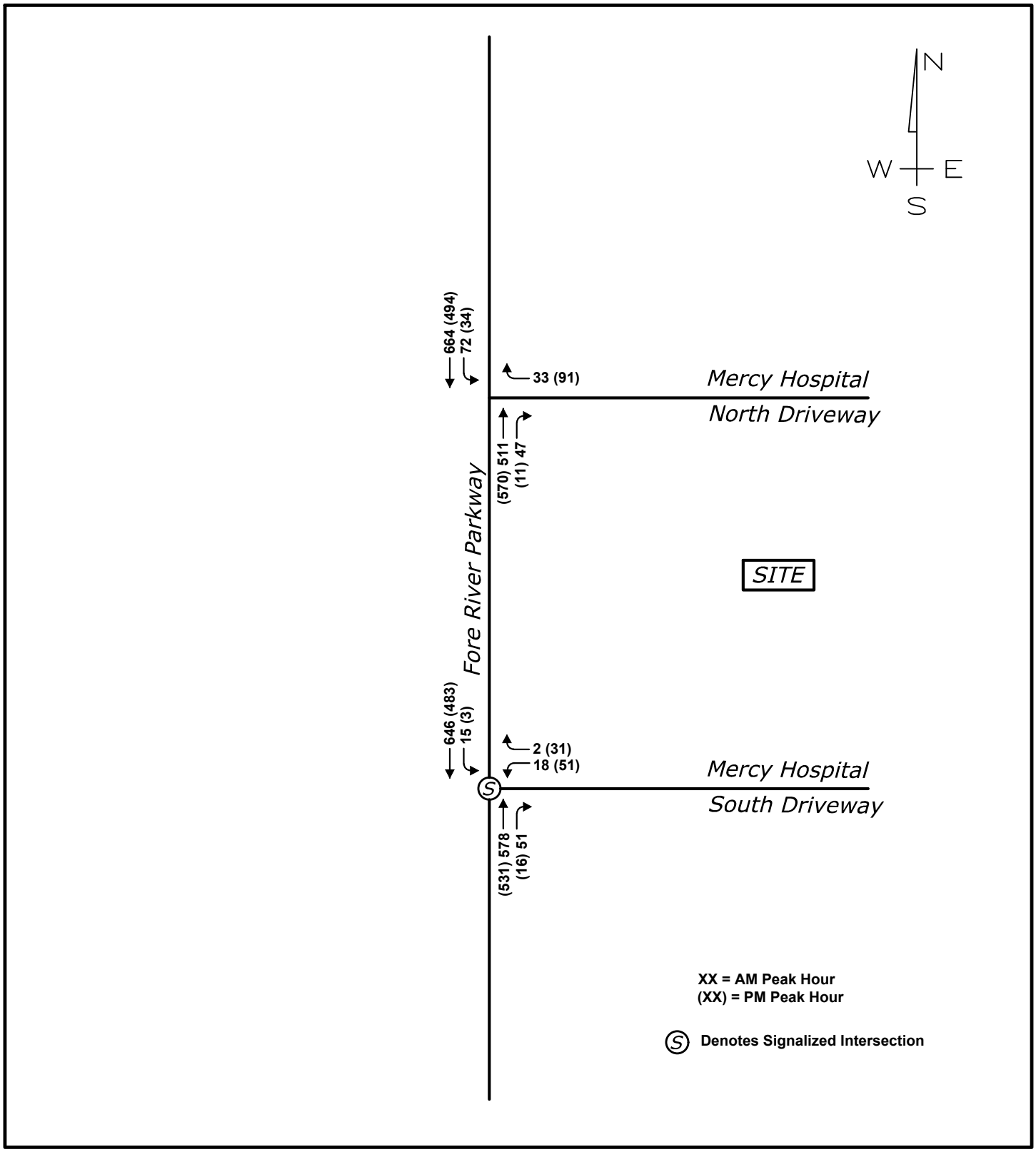

## MERCY EXPANSION
## PORTLAND, MAINE

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



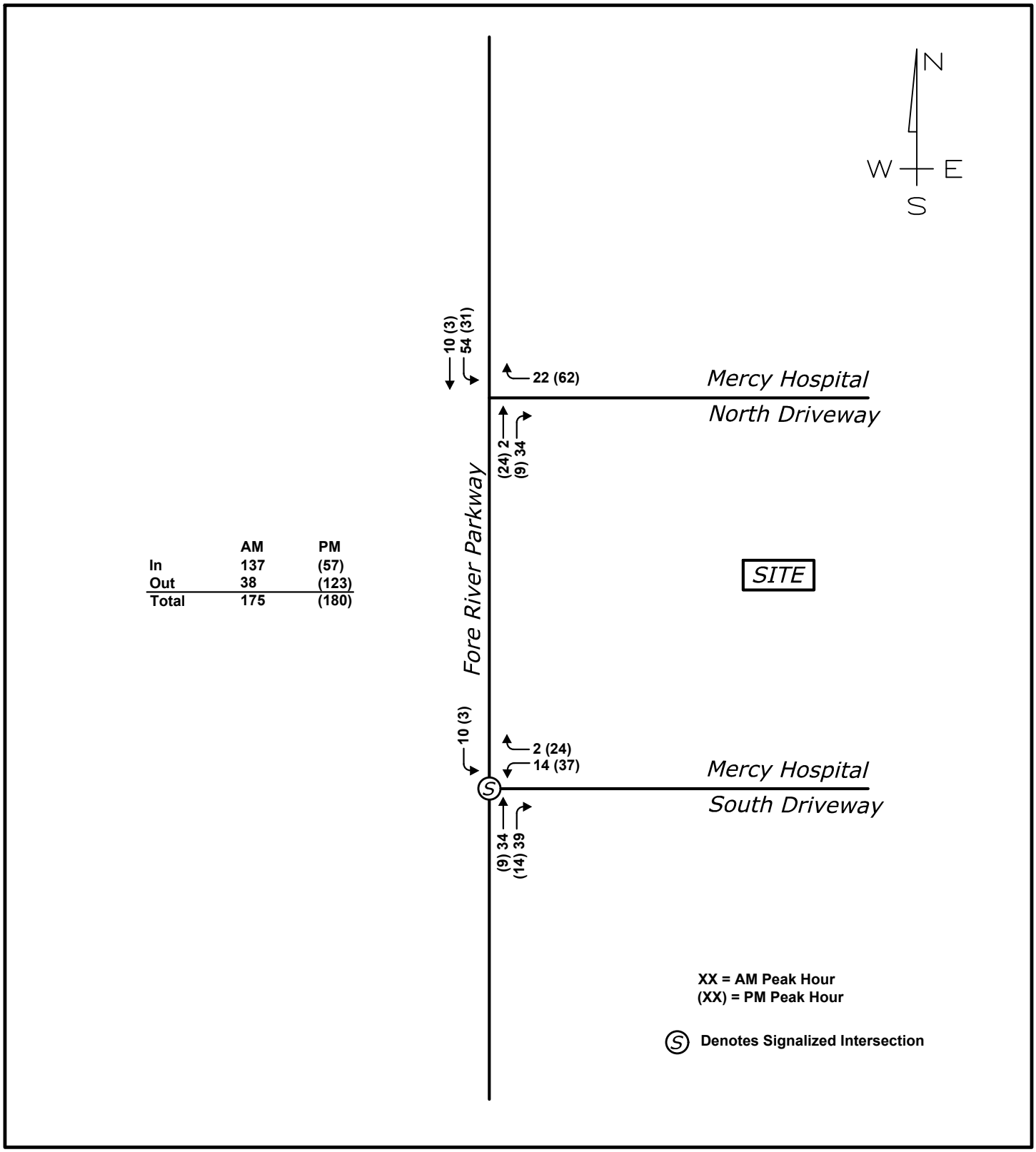

## MERCY EXPANSION
## PORTLAND, MAINE

| | | | |
|---|---|---|---|
| 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) |

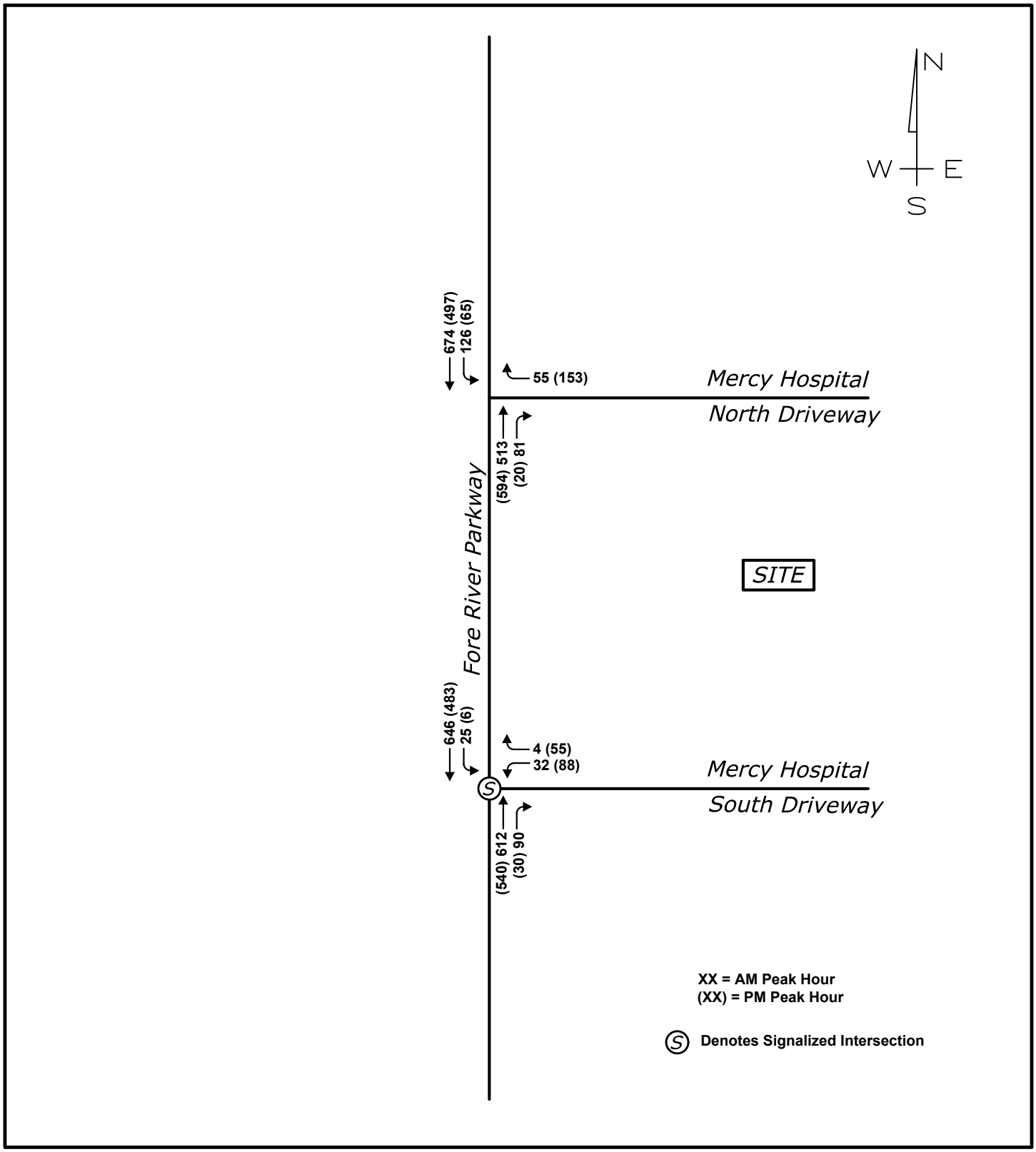
## MERCY EXPANSION
## PORTLAND, MAINE

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




## 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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# 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

RECEIVED
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

**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.

Att. L

Northern Light Health

**Mercy Hospital**
144 State Street
Portland, ME 04101

**Office** 207-879-3433
**Fax** 207-879-3429

November 2019

**Re: Transportation Demand Management Plan**

Objective:

To establish a set of strategies that encourage employees to use alternatives to driving to work. This not only optimizes the on-site parking for patients, visitors, physicians and employees, but it also reduces the demand on city streets.

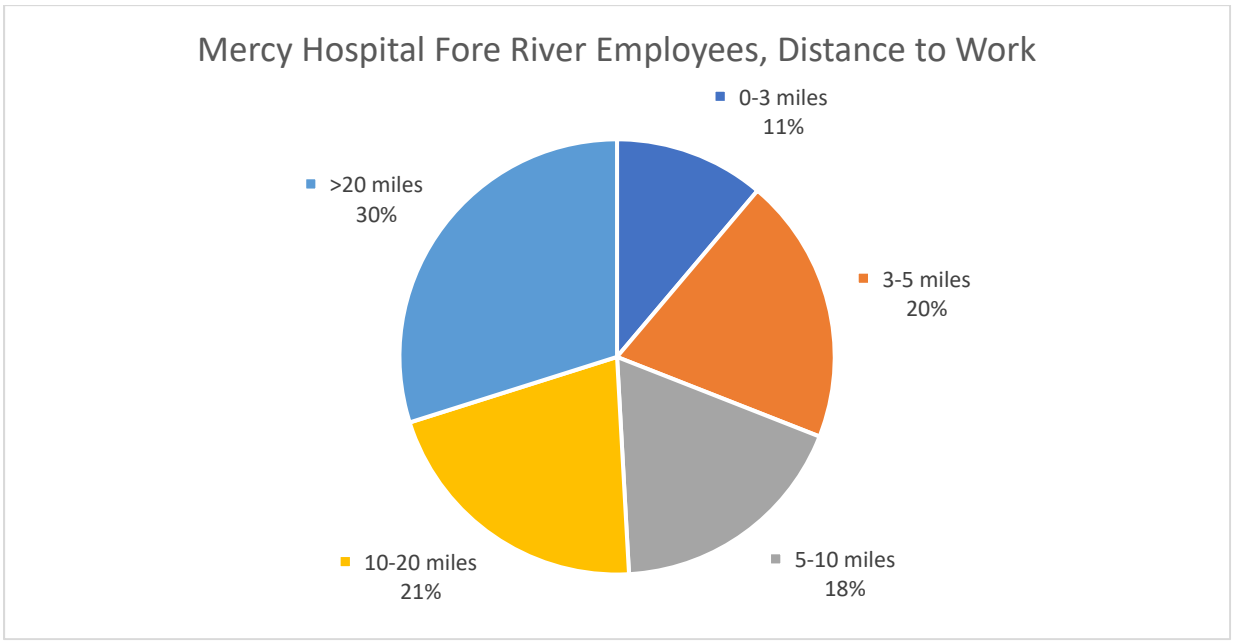
Tactics to decrease driving and parking congestion in downtown Portland:

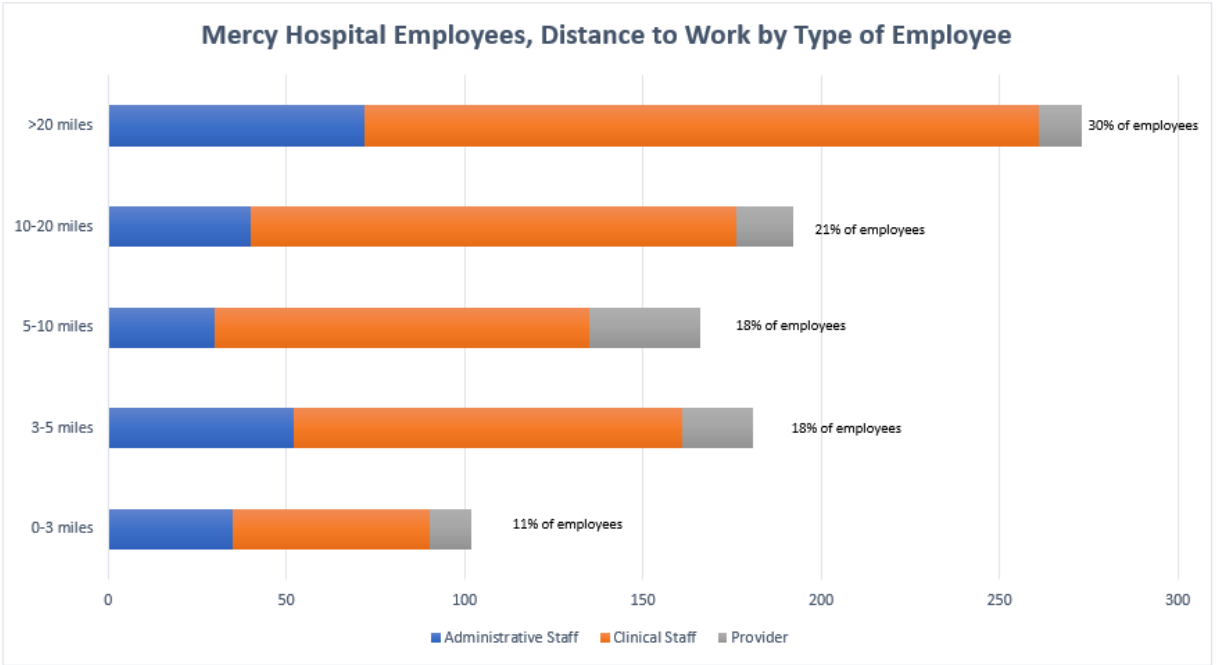
1) Currently, we resource two shuttles that run continuously between Street and Fore River. Consolidation of State Street services to Fore River would eliminate the daily employee shuttle that currently operates 5 days per week, 14 hours per day. Eliminating the shuttle reduces 39 hours of daily travel time Monday – Friday , and 421 miles per day, 107,406 miles per year on downtown city roads.

2) In the first 10 months for calendar year 2019, Mercy was the recipient of 4,500 EMS arrivals to the emergency department at State Street. With the consolidation, the traffic on downtown streets would be eliminated and moved to the area around the Fore River campus.

3) Employees that choose to drive and not use the shuttle, which occurs primarily Monday – Friday from 7 am – 5 pm, are utilizing on-street parking around the State Street hospital. Consolidation to the Fore River campus would result in additional parking for residents and guests of the area.

The following charts provide a summary of the distance employees travel to work that are, or will be, working at the Fore River campus:



Tactics to reduce overall employee vehicle traffic to the Fore River campus:

1) Promotion of public transportation
    a. Actively encourage use of public transportation alternatives through employee orientation, on-going communications, and intranet reminders
    b. Provide employees discounted metro bus passes

2) Promote carpool/van pool (ride share) opportunities
    a. Designate preferential parking for ride shares of two or more persons at the Fore River campus
    b. Implement a ride share registry to match employees interested in ride share

3) Promote bicycle use with the availability of bike racks and staff showers and lockers

4) Explore relationship with local transportation services to offer visitors to and from the Fore River campus - on-site parking demand

5) Continued growth of part-time, supplemental labor. Currently 27% of employees on the Fore River campus work 4 days per week or less, and 13% work 3 days per week or less.

6) Develop internal marketing program offering ideas, rewards and prizes for those using alternative modes of transportation

7) Implement regular surveys to employees on their commuting practices

Mercy Hospital's Transportation Demand Management Coordinator is our Director of Security. He/she, working with human resources, marketing, and communications, will administer the plan outlined in this document.

Mercy Hospital
Shuttle Runs and Distance
Monday - Friday

| | Shuttle 1 | Shuttle 2 | Shuttle 3 | |
|---|---|---|---|---|
| 4:30 | 1 | 1 | | |
| 5 | 3 | 3 | | |
| 6 | 3 | 3 | 3 | |
| 7 | 3 | 3 | 3 | |
| 8 | 3 | 3 | 3 | |
| 9 | 3 | 3 | 3 | |
| 10 | 3 | 3 | | |
| 11 | 3 | 3 | | |
| 12 | 3 | 3 | | |
| 1 | 3 | 3 | | |
| 2 | 3 | 3 | | |
| 3 | 3 | 3 | 3 | |
| 4 | 3 | 3 | 3 | |
| 5 | 3 | 3 | 3 | |
| 6 | 3 | 3 | 3 | |
| 7 | 3 | 1 | | |
| 8 | 3 | | | |
| | 49 | 44 | 24 | 117 |
| | | | | 2340 mins |
| | | | | 39 hours |
| 1.8 miles between state and fore river | | | | 9945 |
| | | | | 421.2 miles per day |
| | | | | 2106 miles per week |
| | | | | 107406 miles per year |

North East
Mobile Health Services

**SCHEDULE A**

**Shuttle Service**

It is further agreed by and between the parties that NORTH EAST shall provide shuttle bus service for employees of Mercy Hospital between the Mercy campus located at 144 State Street in Portland and the Mercy Fore River campus under the following terms and conditions:

1. NORTH EAST shall operate the shuttle service during the following hours:

   a. One (1) shuttle bus will operate continuously between the hours of 4:30 AM and 9 PM five days per week, Monday through Friday

   b. One (1) shuttle bus will operate continuously between the hours of 4:30 AM and 8:30 PM five days per week, Monday through Friday

   c. One (1) shuttle bus shall operate during peak periods between the hours of 6 AM and 10 AM and from 3 PM through 7 PM five days per week, Monday through Friday.

   d. Shuttles will not run on major holidays. MERCY will notify NORTH EAST in advance of these dates.

Buses will run continuously so that there is a 15-minute turn time with approximately 7 ½ minutes between pickups on either end.

Northern Light Health

**Mercy Hospital**
144 State Street
Portland, ME 04101

**Office** 207-879-3433
**Fax** 207-879-3429

November 2019

**Re: Transportation Demand Management Plan**

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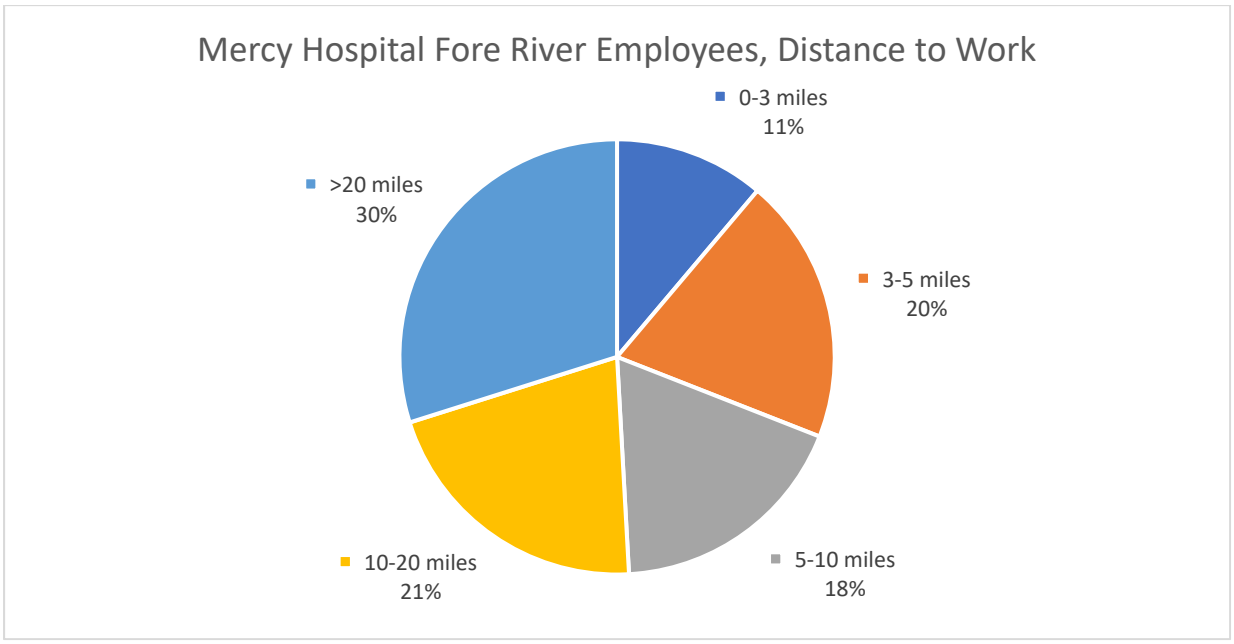
Tactics to decrease driving and parking congestion in downtown Portland:

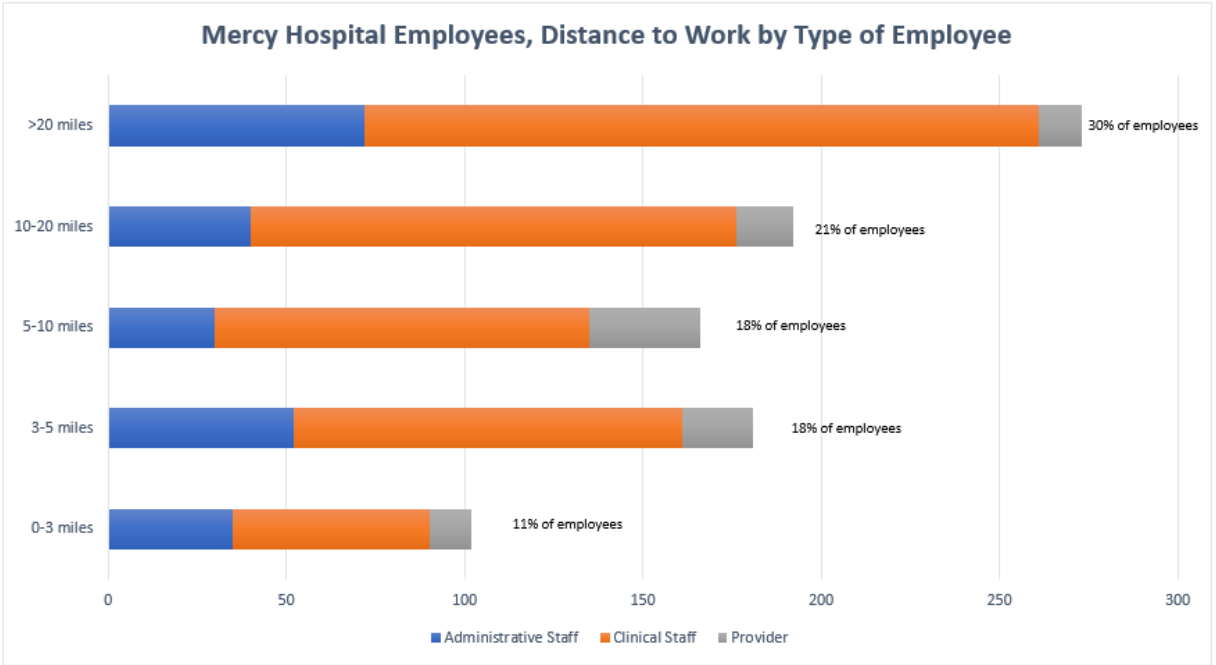
1) Currently, we resource two shuttles that run continuously between Street and Fore River. Consolidation of State Street services to Fore River would eliminate the daily employee shuttle that currently operates 5 days per week, 14 hours per day. Eliminating the shuttle reduces 39 hours of daily travel time Monday – Friday , and 421 miles per day, 107,406 miles per year on downtown city roads.

2) In the first 10 months for calendar year 2019, Mercy was the recipient of 4,500 EMS arrivals to the emergency department at State Street. With the consolidation, the traffic on downtown streets would be eliminated and moved to the area around the Fore River campus.

3) Employees that choose to drive and not use the shuttle, which occurs primarily Monday – Friday from 7 am – 5 pm, are utilizing on-street parking around the State Street hospital. Consolidation to the Fore River campus would result in additional parking for residents and guests of the area.

The following charts provide a summary of the distance employees travel to work that are, or will be, working at the Fore River campus:



Tactics to reduce overall employee vehicle traffic to the Fore River campus:

1) Promotion of public transportation
    a. Actively encourage use of public transportation alternatives through employee orientation, on-going communications, and intranet reminders
    b. Provide employees discounted metro bus passes

2) Promote carpool/van pool (ride share) opportunities
    a. Designate preferential parking for ride shares of two or more persons at the Fore River campus
    b. Implement a ride share registry to match employees interested in ride share

3) Promote bicycle use with the availability of bike racks and staff showers and lockers

4) Explore relationship with local transportation services to offer visitors to and from the Fore River campus - on-site parking demand

5) Continued growth of part-time, supplemental labor. Currently 27% of employees on the Fore River campus work 4 days per week or less, and 13% work 3 days per week or less.

6) Develop internal marketing program offering ideas, rewards and prizes for those using alternative modes of transportation

7) Implement regular surveys to employees on their commuting practices

Mercy Hospital's Transportation Demand Management Coordinator is our Director of Security. He/she, working with human resources, marketing, and communications, will administer the plan outlined in this document.

Mercy Hospital
Shuttle Runs and Distance
Monday - Friday

| | Shuttle 1 | Shuttle 2 | Shuttle 3 | |
|---|---|---|---|---|
| 4:30 | 1 | 1 | | |
| 5 | 3 | 3 | | |
| 6 | 3 | 3 | 3 | |
| 7 | 3 | 3 | 3 | |
| 8 | 3 | 3 | 3 | |
| 9 | 3 | 3 | 3 | |
| 10 | 3 | 3 | | |
| 11 | 3 | 3 | | |
| 12 | 3 | 3 | | |
| 1 | 3 | 3 | | |
| 2 | 3 | 3 | | |
| 3 | 3 | 3 | 3 | |
| 4 | 3 | 3 | 3 | |
| 5 | 3 | 3 | 3 | |
| 6 | 3 | 3 | 3 | |
| 7 | 3 | 1 | | |
| 8 | 3 | | | |
| | 49 | 44 | 24 | 117 |
| | | | | 2340 mins |
| | | | | 39 hours |
| 1.8 miles between state and fore river | | | | 9945 |
| | | | | 421.2 miles per day |
| | | | | 2106 miles per week |
| | | | | 107406 miles per year |

North East
Mobile Health Services

**SCHEDULE A**

**Shuttle Service**

It is further agreed by and between the parties that NORTH EAST shall provide shuttle bus service for employees of Mercy Hospital between the Mercy campus located at 144 State Street in Portland and the Mercy Fore River campus under the following terms and conditions:

1. NORTH EAST shall operate the shuttle service during the following hours:

   a. One (1) shuttle bus will operate continuously between the hours of 4:30 AM and 9 PM five days per week, Monday through Friday

   b. One (1) shuttle bus will operate continuously between the hours of 4:30 AM and 8:30 PM five days per week, Monday through Friday

   c. One (1) shuttle bus shall operate during peak periods between the hours of 6 AM and 10 AM and from 3 PM through 7 PM five days per week, Monday through Friday.

   d. Shuttles will not run on major holidays. MERCY will notify NORTH EAST in advance of these dates.

Buses will run continuously so that there is a 15-minute turn time with approximately 7 ½ minutes between pickups on either end.

# 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

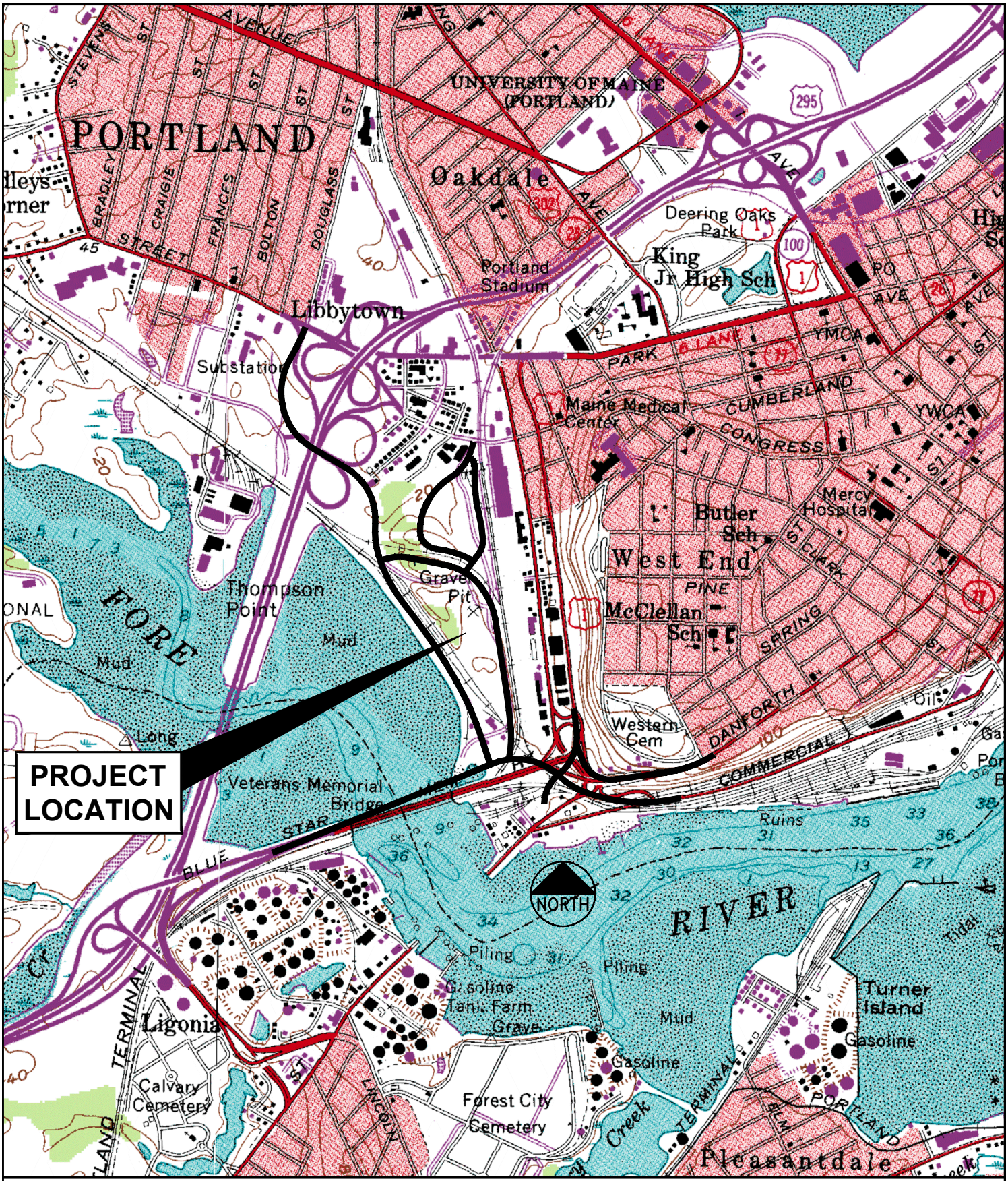
## 12.0 INTRODUCTION

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)

| | |
|---|---|
| Design: JTA | Date: AUG. 2019 |
| Draft: CDD | Job No.: 3257.04 |
| Checked: SRB | Scale: N.T.S. |
| File Name: 325704–COVER.dwg | |

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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<br>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<br>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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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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| 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.

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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: SRB | Drafted: CDD | Date: AUG. 2019
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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

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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| Issued For | Date | By |
|---|---|---|
| PERMIT APPROVAL SUBMISSION | 08.30.19 | SRB |
| DESIGN DEVELOPMENT SUBMISSION TO OWNER | 07.31.19 | SRB |

| | | | |
|---|---|---|---|
| Design: SRB | Drafft: CDD | Date: AUG. 2019 | |
| Checked: SRB | Scale: | Job No.: 3257.04 | |
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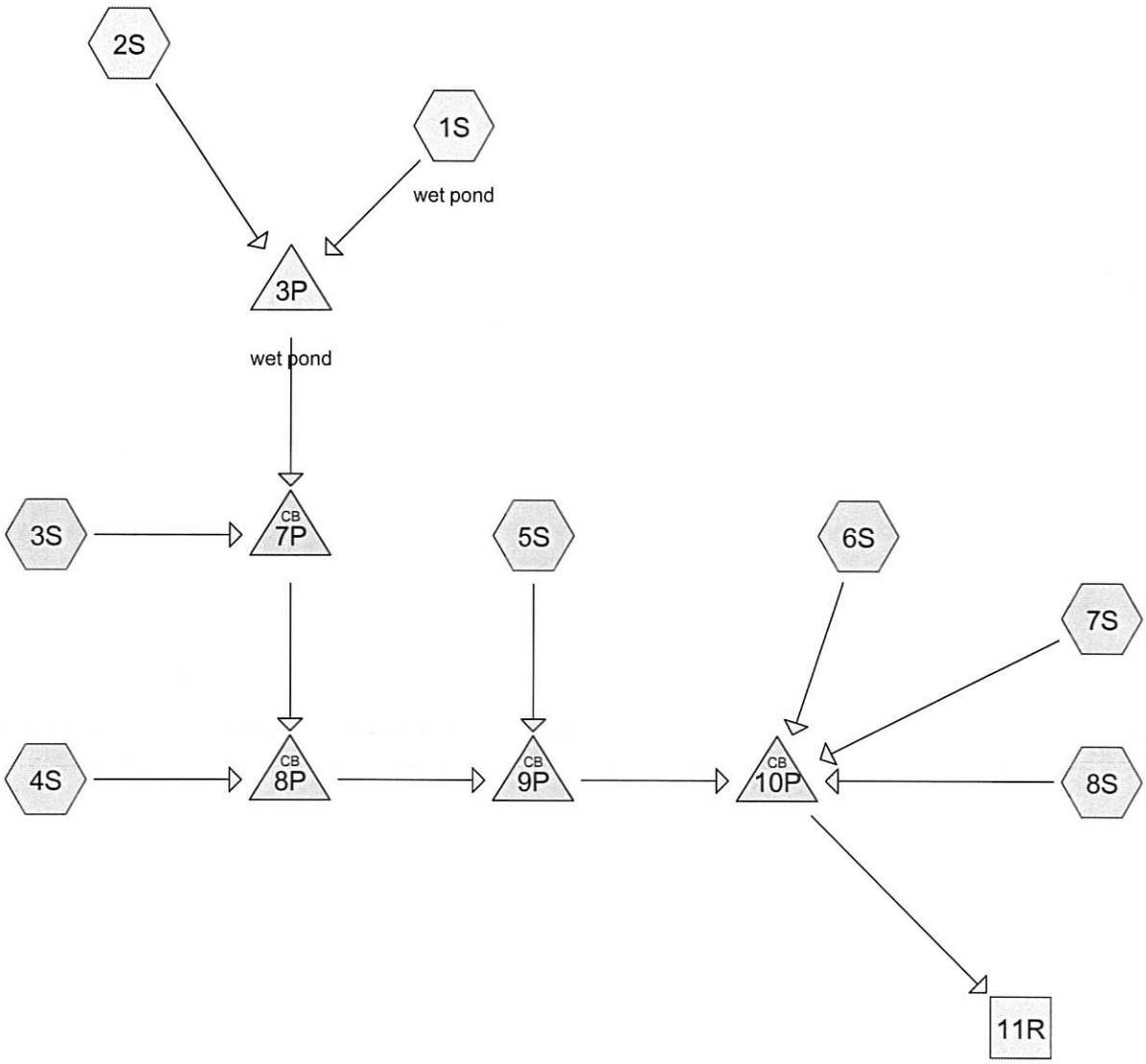
| | |
|---|---|
| Drawing Name: | Water Quality Map |
| Project: | Fore River Campus Consolidation<br>Portland, Maine |
| Client: | Northern Light Mercy Hospital<br>144 State Street, Portland, Maine 04101 |

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

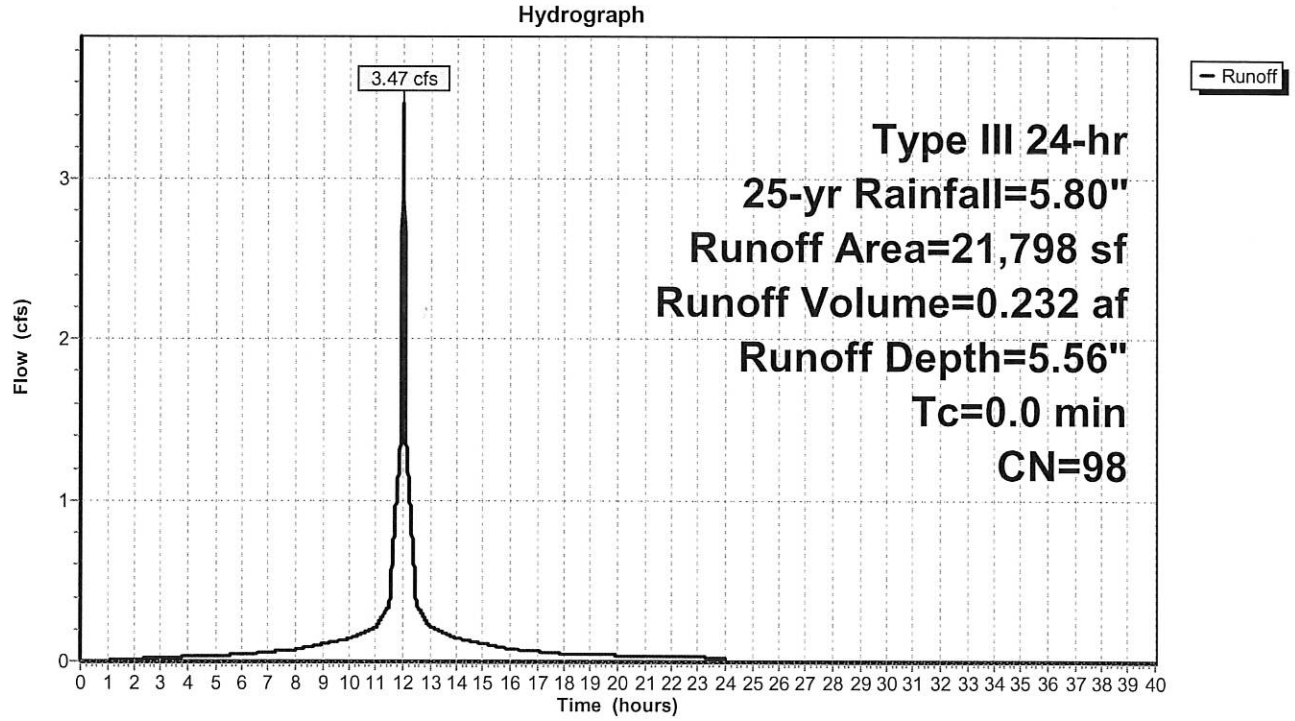
Runoff = 3.47 cfs @ 12.00 hrs, Volume= 0.232 af, Depth= 5.56"

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:

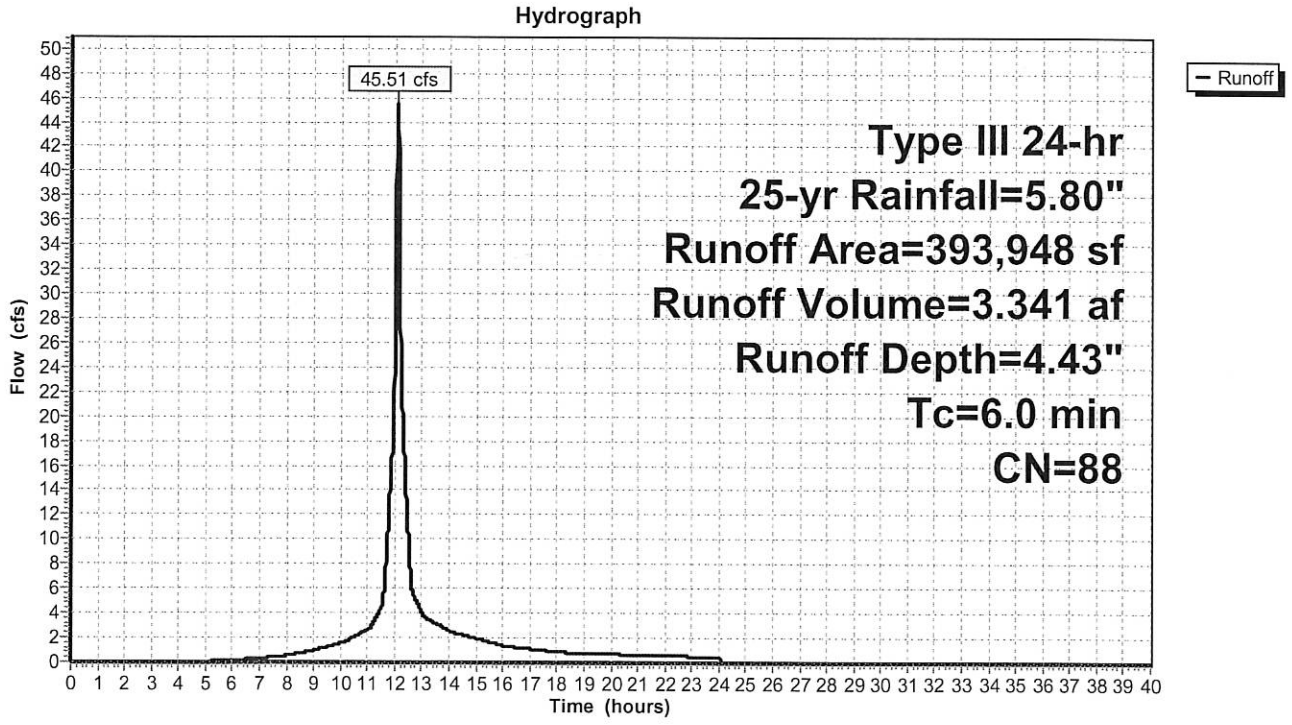
Runoff = 45.51 cfs @ 12.09 hrs, Volume= 3.341 af, Depth= 4.43"

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:

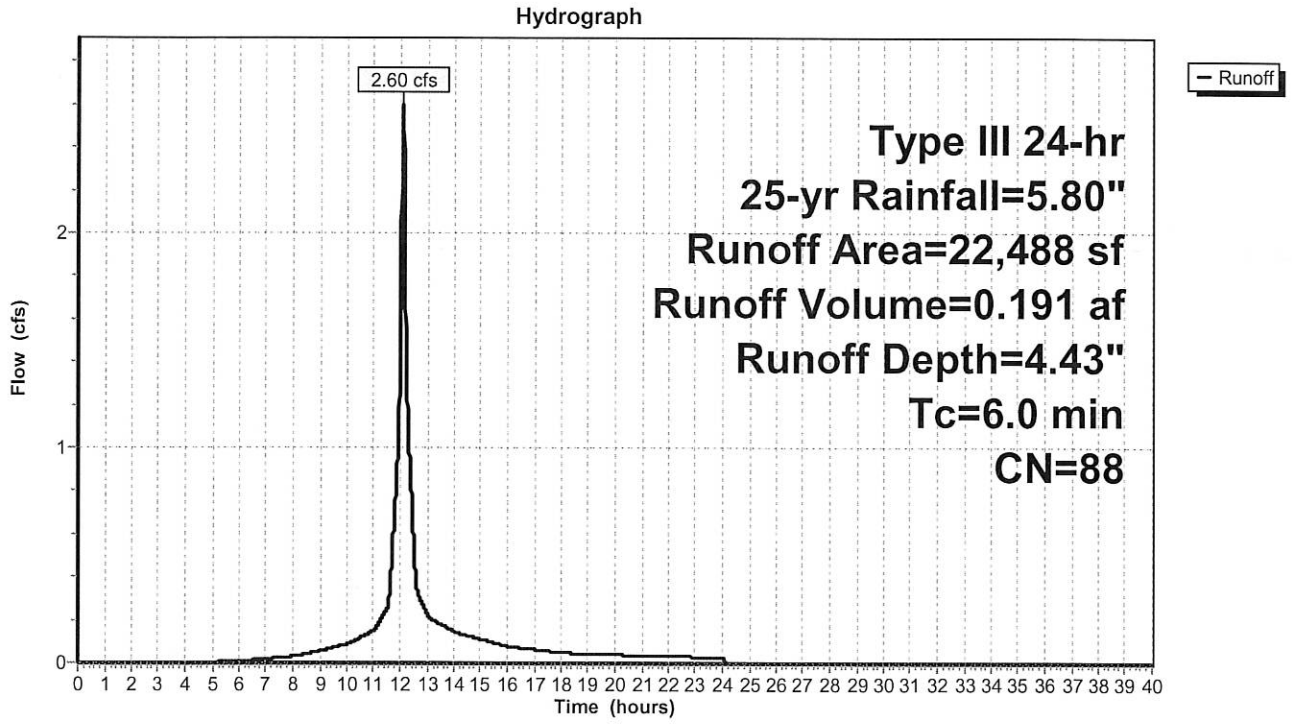
Runoff = 2.60 cfs @ 12.09 hrs, Volume= 0.191 af, Depth= 4.43"

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:

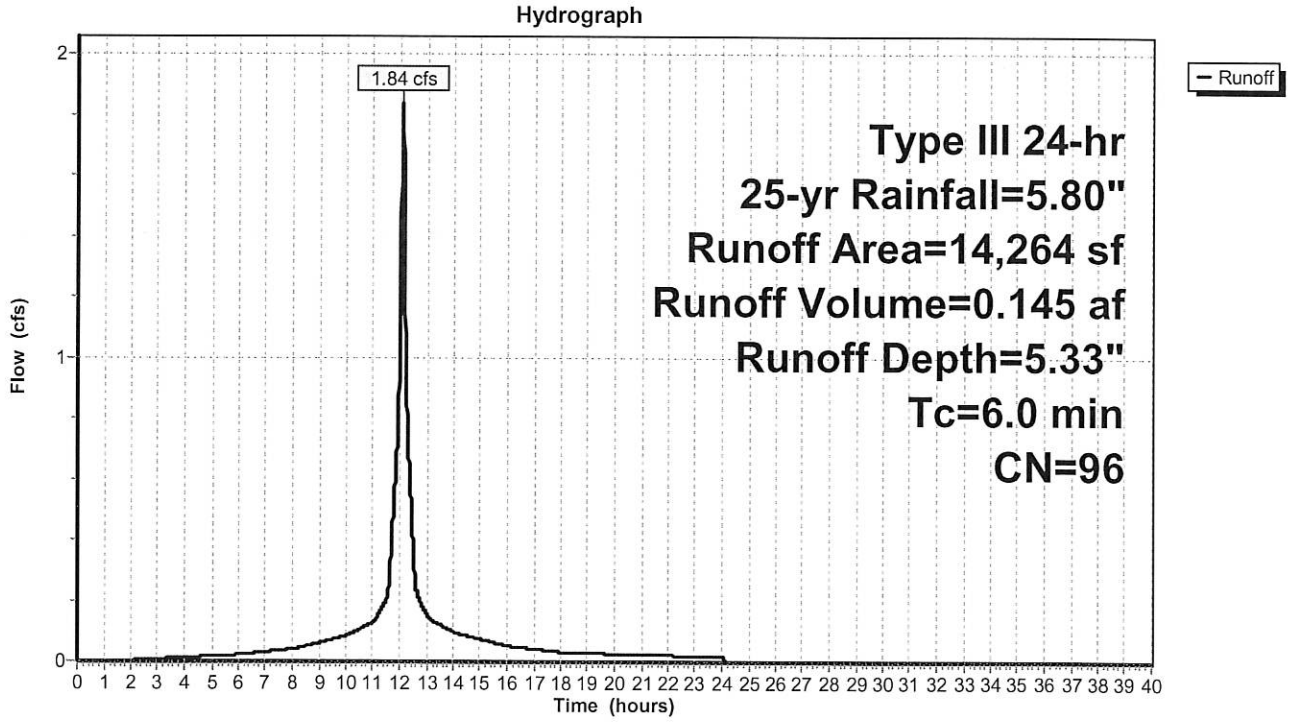
Runoff = 1.84 cfs @ 12.08 hrs, Volume= 0.145 af, Depth= 5.33"

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:

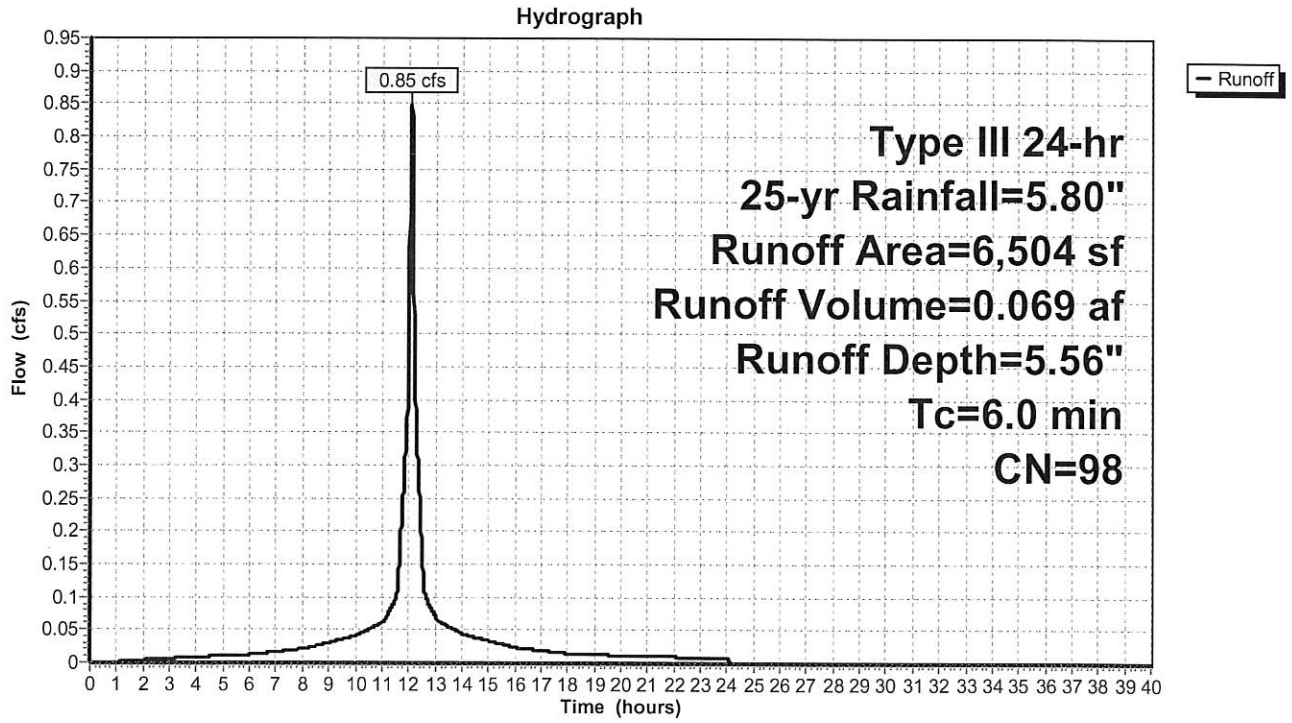
Runoff = 0.85 cfs @ 12.08 hrs, Volume= 0.069 af, Depth= 5.56"

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:

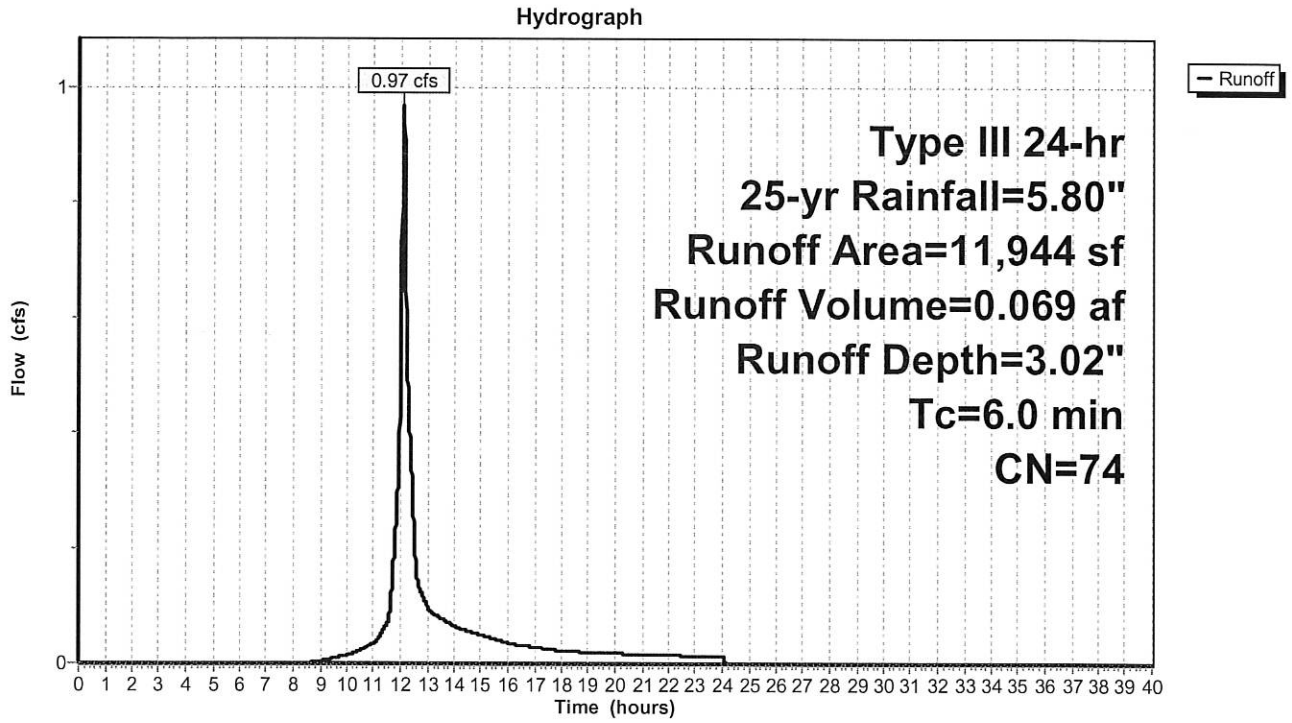
Runoff = 0.97 cfs @ 12.09 hrs, Volume= 0.069 af, Depth= 3.02"

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:

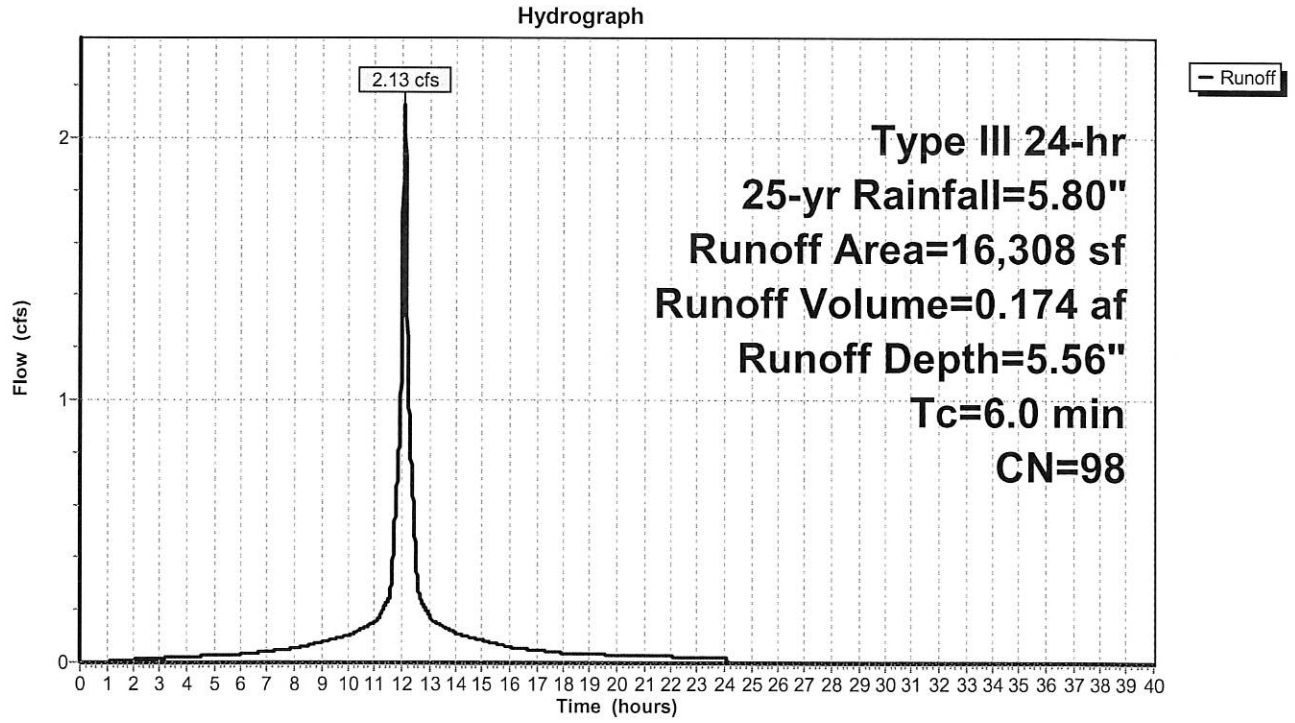
Runoff = 2.13 cfs @ 12.08 hrs, Volume= 0.174 af, Depth= 5.56"

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:

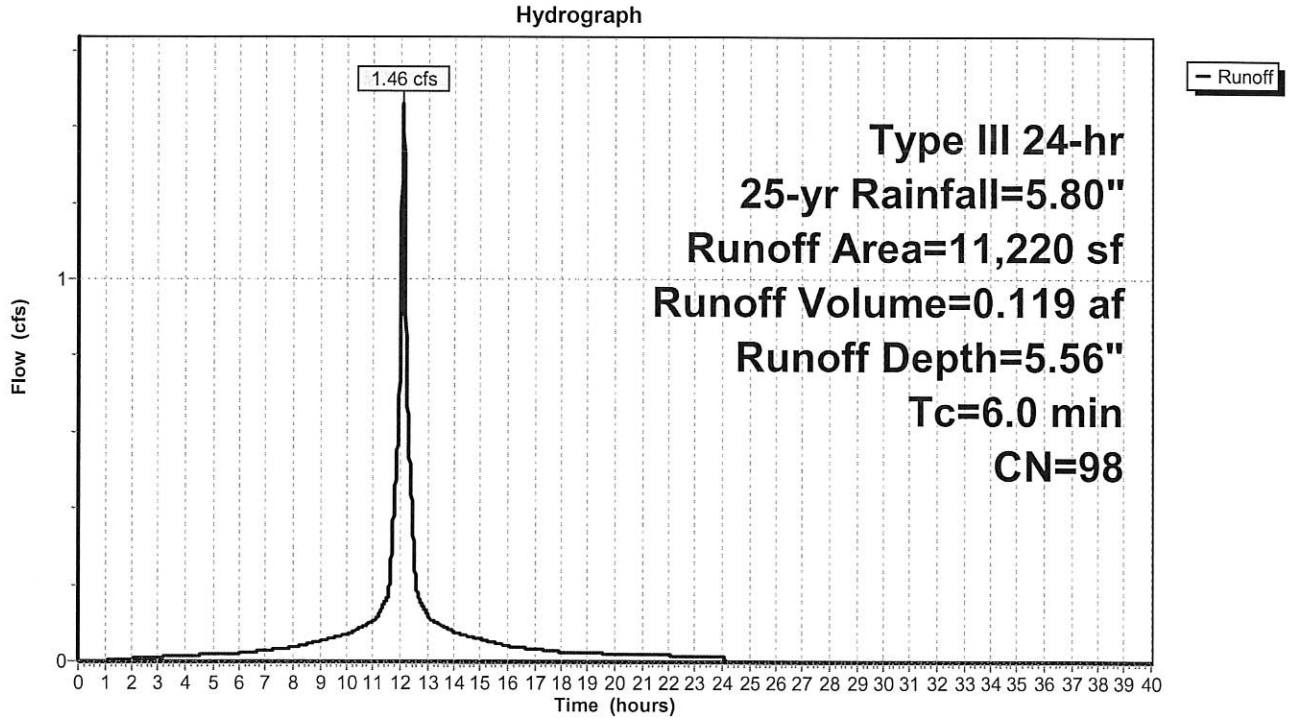
Runoff = 1.46 cfs @ 12.08 hrs, Volume= 0.119 af, Depth= 5.56"

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:

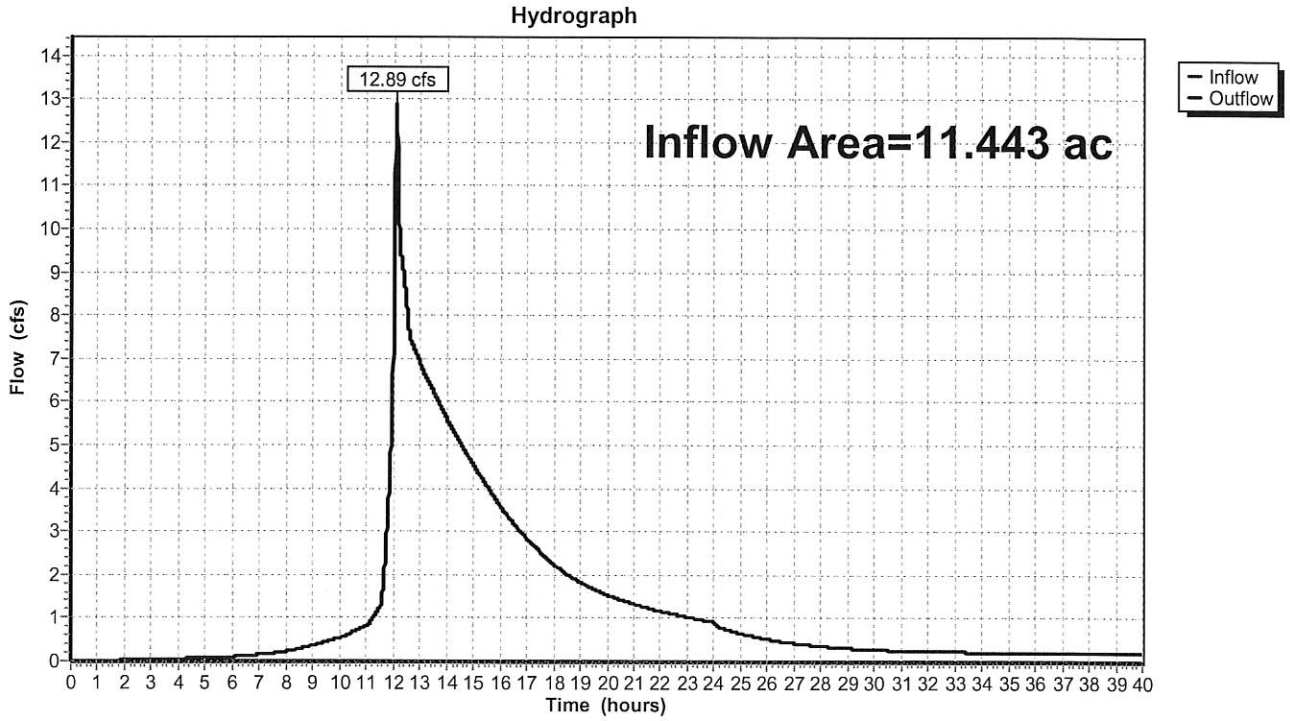


## Summary for Reach 11R:

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 )

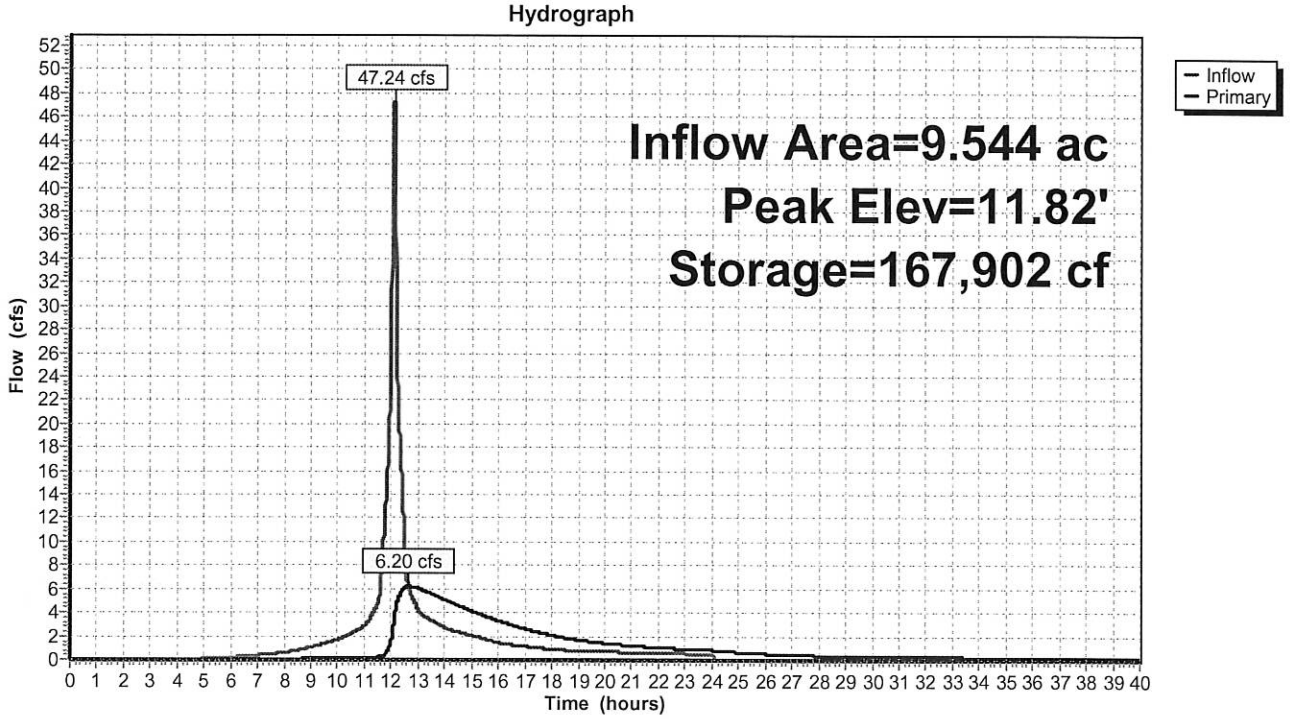
| Volume | Invert | Avail.Storage | Storage Description |
|---|---|---|---|
| #1 | 4.50' | 238,036 cf | **Custom Stage Data (Irregular)** Listed below (Recalc) |

| 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**<br>L= 60.0' CPP, square edge headwall, Ke= 0.500<br>Inlet / Outlet Invert= 7.78' / 7.01' S= 0.0128 '/' Cc= 0.900<br>n= 0.013, Flow Area= 1.23 sf |
| #2 | Device 1 | 12.00' | **14.0' long x 0.7' breadth Broad-Crested Rectangular Weir**<br>Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50<br>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**<br>Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50<br>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**<br>Head (feet) 0.20 0.40 0.60 0.80 1.00<br>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:

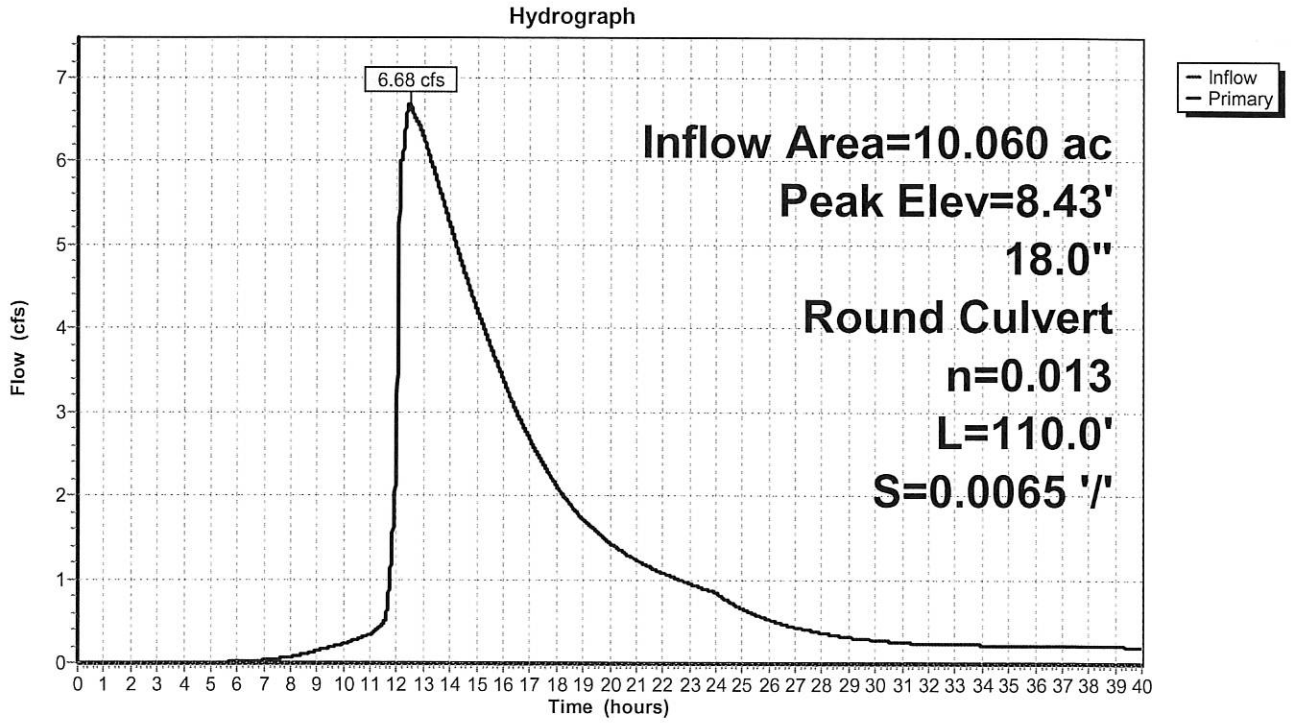
Inflow Area = 10.060 ac, 61.52% Impervious, Inflow Depth > 3.97" for 25-yr event
Inflow = 6.68 cfs @ 12.47 hrs, Volume= 3.329 af
Outflow = 6.68 cfs @ 12.47 hrs, Volume= 3.329 af, Atten= 0%, Lag= 0.0 min
Primary = 6.68 cfs @ 12.47 hrs, Volume= 3.329 af

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**<br>L= 110.0' CPP, square edge headwall, Ke= 0.500<br>Inlet / Outlet Invert= 6.91' / 6.19' S= 0.0065 '/' Cc= 0.900<br>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:

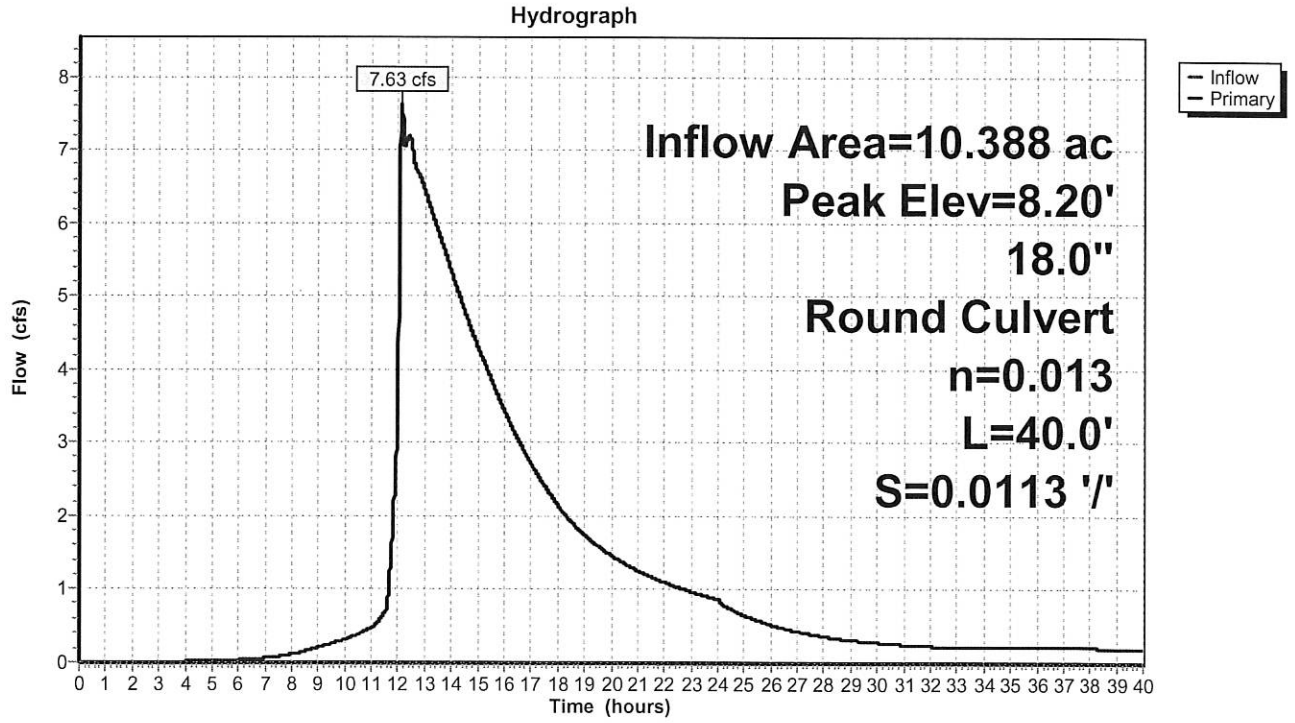
Inflow Area = 10.388 ac, 62.49% Impervious, Inflow Depth > 4.01" for 25-yr event
Inflow = 7.63 cfs @ 12.11 hrs, Volume= 3.475 af
Outflow = 7.63 cfs @ 12.11 hrs, Volume= 3.475 af, Atten= 0%, Lag= 0.0 min
Primary = 7.63 cfs @ 12.11 hrs, Volume= 3.475 af

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**<br>L= 40.0' RCP, square edge headwall, Ke= 0.500<br>Inlet / Outlet Invert= 5.99' / 5.54' S= 0.0113 '/' Cc= 0.900<br>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:

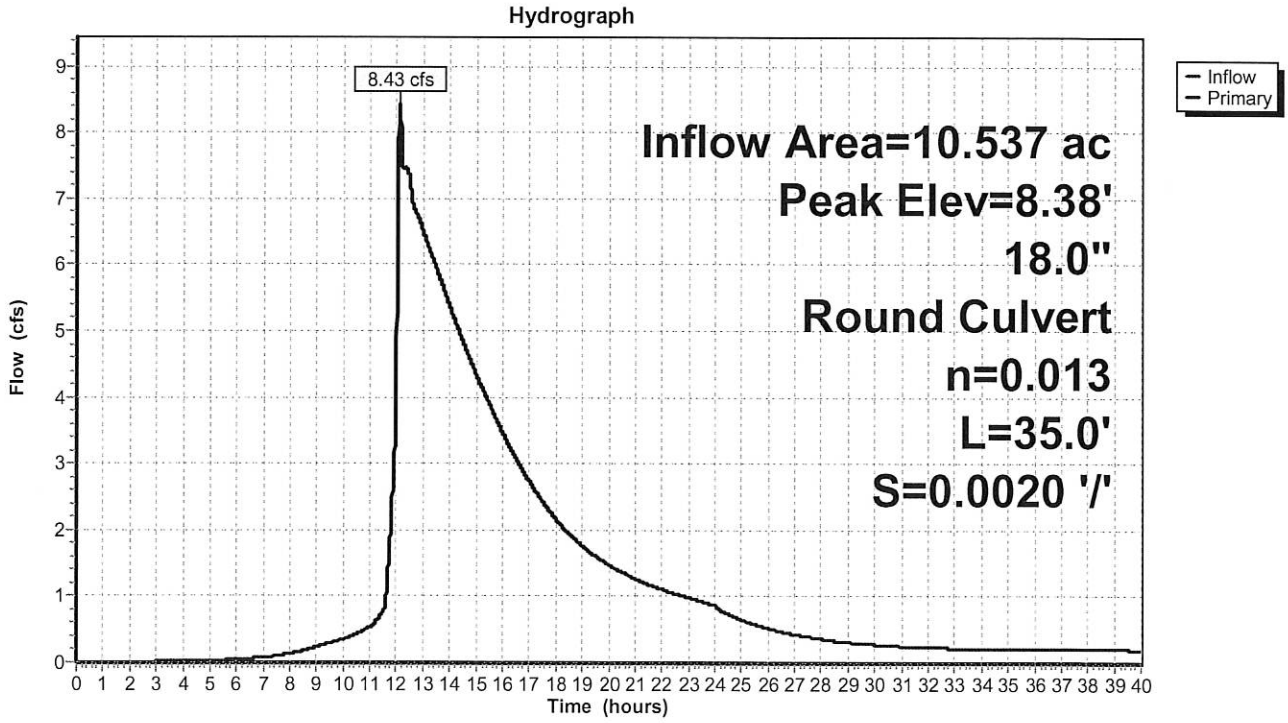
Inflow Area = 10.537 ac, 63.03% Impervious, Inflow Depth > 4.04" for 25-yr event
Inflow = 8.43 cfs @ 12.11 hrs, Volume= 3.544 af
Outflow = 8.43 cfs @ 12.11 hrs, Volume= 3.544 af, Atten= 0%, Lag= 0.0 min
Primary = 8.43 cfs @ 12.11 hrs, Volume= 3.544 af

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**<br>L= 35.0' RCP, square edge headwall, Ke= 0.500<br>Inlet / Outlet Invert= 5.34' / 5.27' S= 0.0020 '/' Cc= 0.900<br>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:

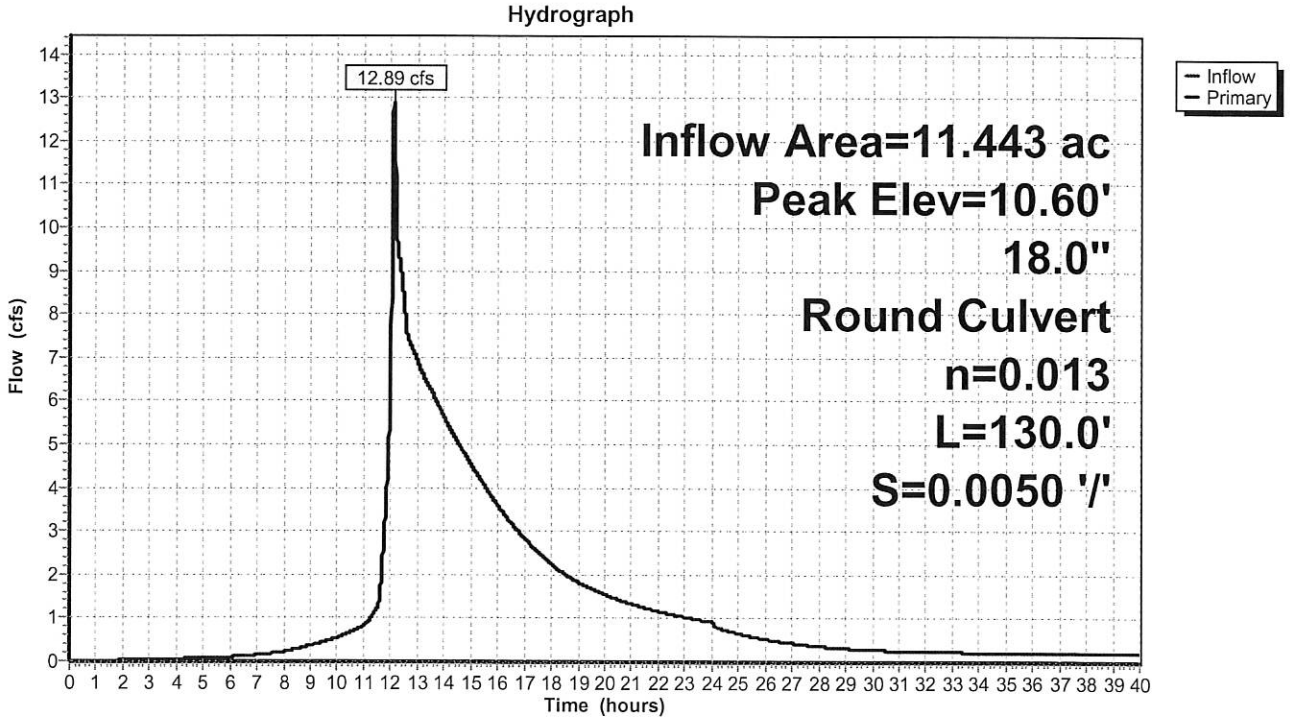
Inflow Area = 11.443 ac, 63.56% Impervious, Inflow Depth > 4.10" for 25-yr event
Inflow = 12.89 cfs @ 12.10 hrs, Volume= 3.906 af
Outflow = 12.89 cfs @ 12.10 hrs, Volume= 3.906 af, Atten= 0%, Lag= 0.0 min
Primary = 12.89 cfs @ 12.10 hrs, Volume= 3.906 af

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**<br>L= 130.0' RCP, square edge headwall, Ke= 0.500<br>Inlet / Outlet Invert= 4.77' / 4.12' S= 0.0050 '/' Cc= 0.900<br>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

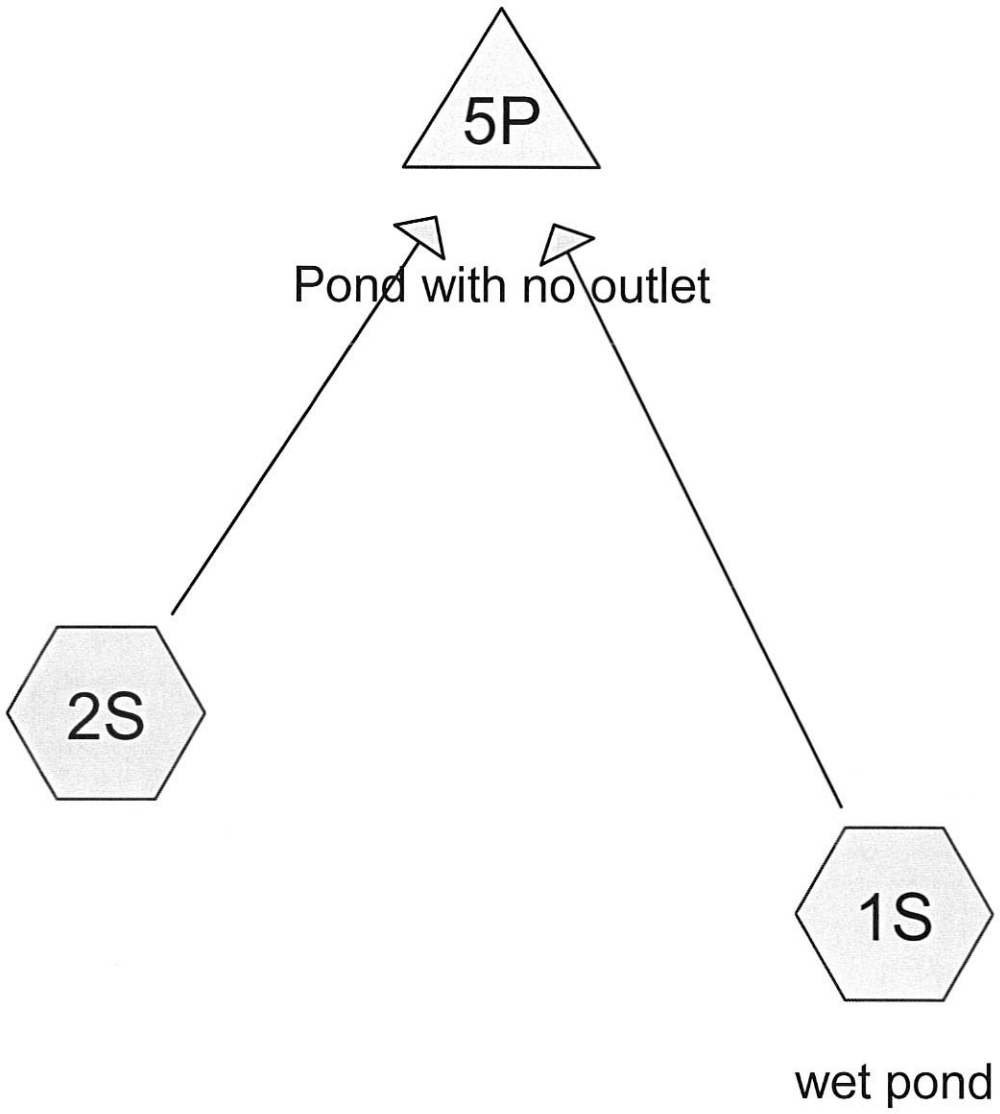
## Stage-Area-Storage for Pond 3P: wet pond (continued)

| 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

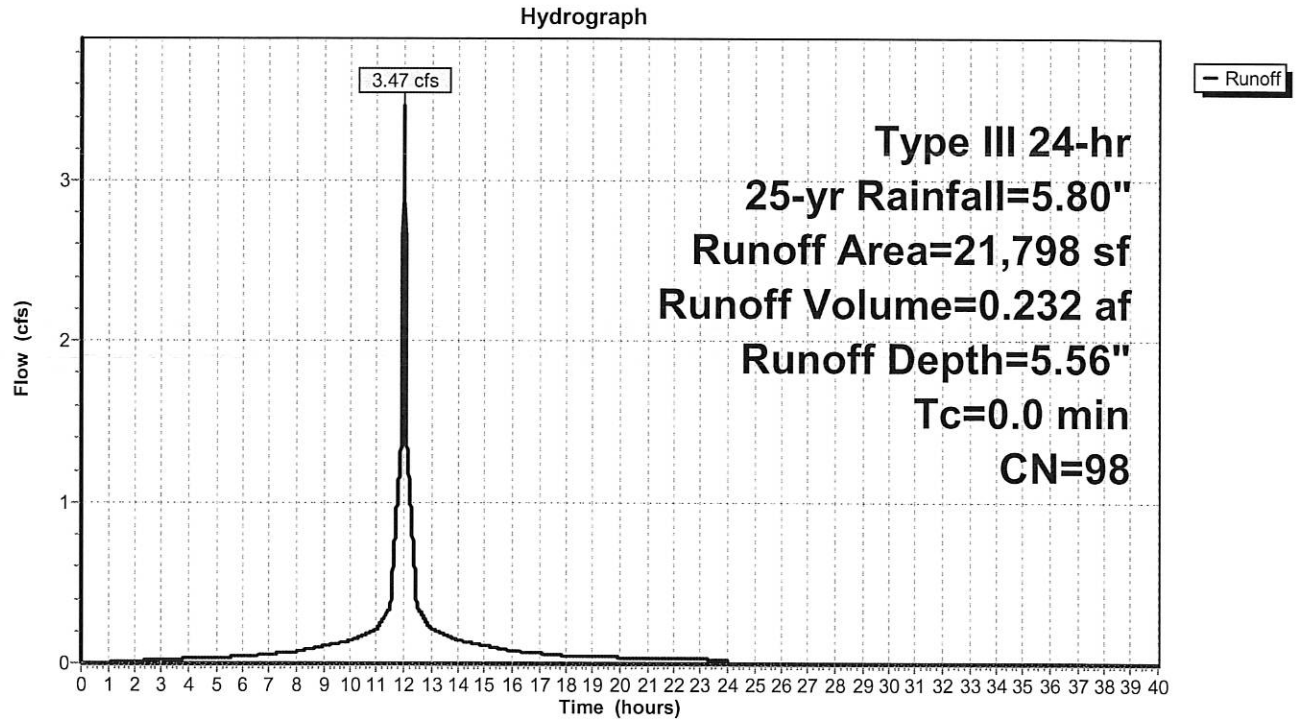
Runoff = 3.47 cfs @ 12.00 hrs, Volume= 0.232 af, Depth= 5.56"

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:

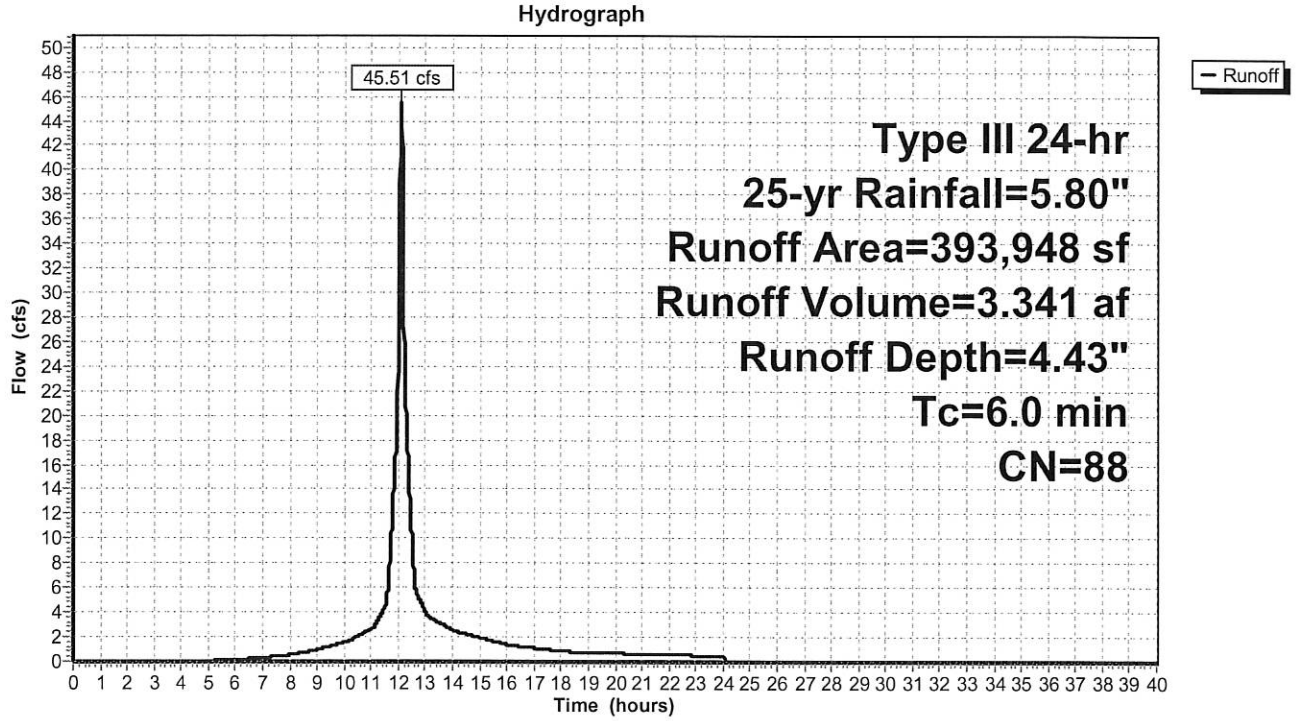
Runoff = 45.51 cfs @ 12.09 hrs, Volume= 3.341 af, Depth= 4.43"

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

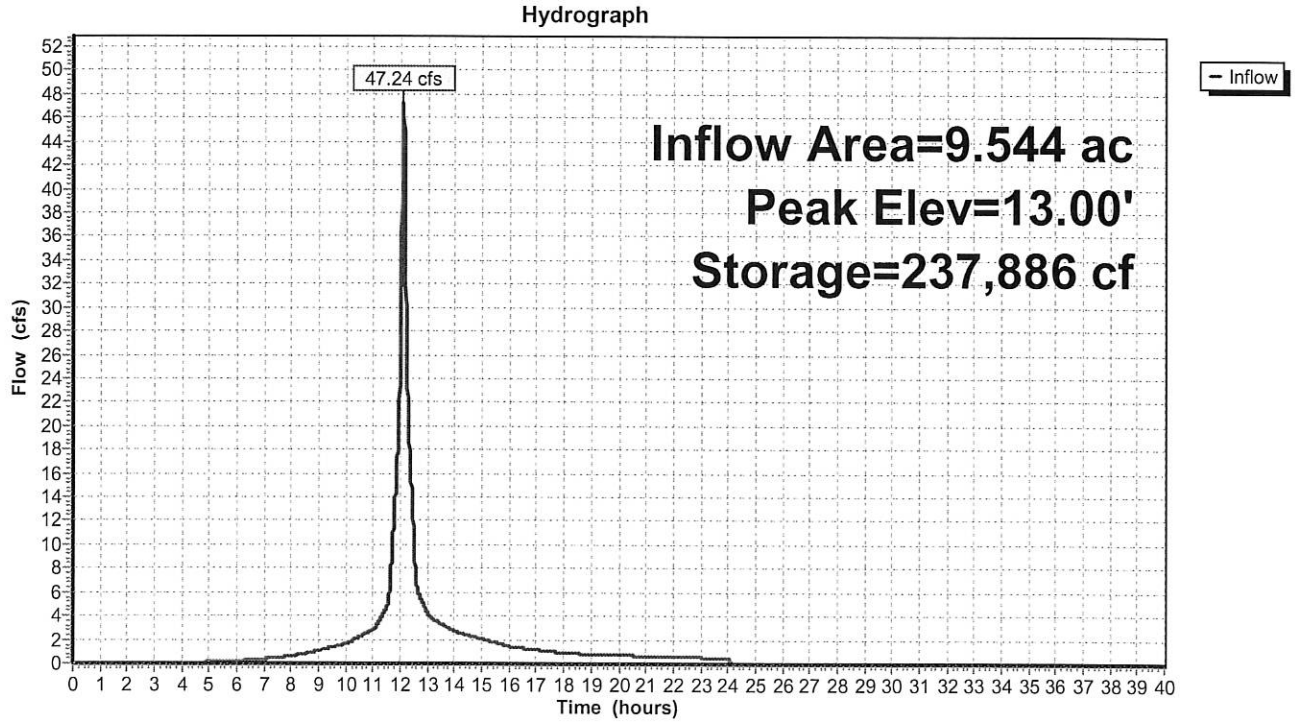
Routing by Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
Starting Elev= 9.50' Surf.Area= 21,798 sf Storage= 82,236 cf
Peak Elev= 13.00' @ 24.34 hrs Surf.Area= 64,071 sf Storage= 237,886 cf (155,650 cf above start)

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<br>Maintenance Program<br>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<br>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

November 15, 2019

**Ms. Jean Fraser**
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**
**Supplemental Information**

Dear Jean:

We have received your November 13, 2019 email transmission requesting additional information related to the proposed Mercy Hospital Expansion at the Fore River Campus. The following is provided per your request.

1) *Parking and traffic info as requested by Tom Errico*

A supplemental response prepared by Randy Dunton of this office was uploaded to EPlan this morning. The response package includes the data collection results and analysis requested by Tom Errico. The supplemental material did not result in any changes to our original findings and recommendations for parking supply for the campus or the operational conditions at the development driveways expected upon completion of the Phase 2 project. A high level of service for the project driveways is expected to occur upon the completion of Phase 2. The information also included an analysis of accident conditions at the Fore River Parkway/Congress Street intersection and GP has noted that the intersection is included in the existing MaineDOT/City corridor study for coordination signals along Congress Street and that it might be expected that the signal coordination by the City may address and/or change the existing crash patterns.

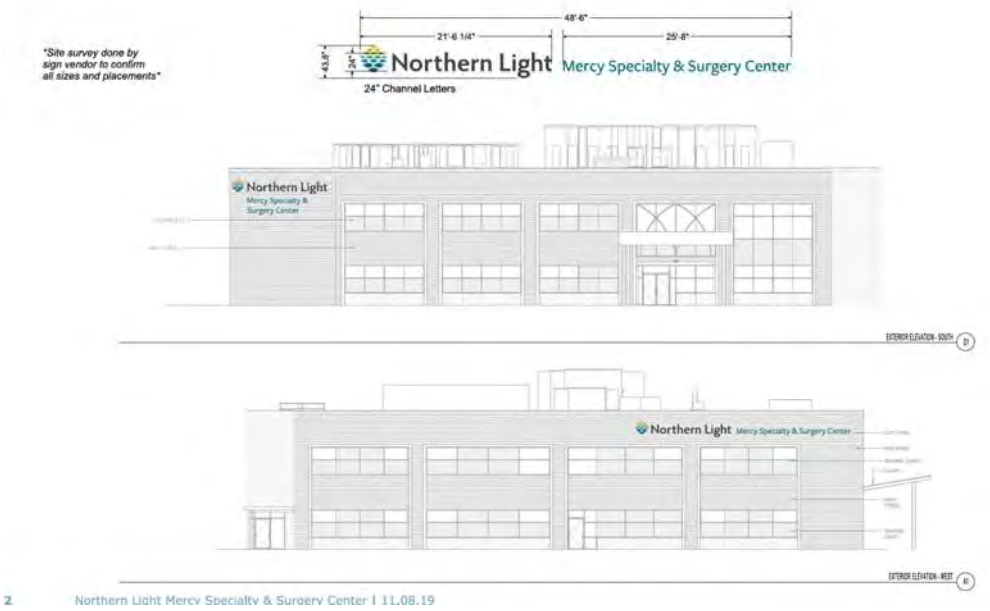
2) *Updated TDM*

Mercy Hospital is currently completing an updated census of employees that will be used to help update their TDM. They have provided the attached information on their TDM and their shuttle run analysis.

3) *Clarification as to what Building signage to include for PB review.*

A building elevation similar to that shown below will be uploaded to Eplan on Monday to show the proposed ASC building and Hospital mounted signage. The signage on the ASC is located along the front face of the building and will be visible from the interior of the site and specifically from the southerly entrance drive and parking lots. The front face of the ASC is not visible from

the I-295 corridor and is scaled sufficiently to not be clearly visible from Route 1 (Veterans Bridge) in our opinion, thus we believe this signage is clearly compliant with the signage framework contained in the Contract Zone Agreement. The new signage proposed for the Hospital also complies with the CZA standard requiring that "*Signs shall be designed in proportion and character with the building facades*", in our opinion.




4) *Caitlin Cameron comments from 11/4 meeting*

SMRT has prepared the accompanying renderings for the Hospital expansion and ASC building. The renderings of the ASC include the rooftop units, which due to the building height and angle of view from the Parkway are largely concealed in my opinion. The ASC signage is identified as shown above and will be shown on the elevation views. These materials will be available to upload on Monday November 18th.

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

Sincerely,

**GORRILL-PALMER**
*Stephen Bushey*

**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

*U:\3257.04_Mercy Hospital_Expansion_DD_Permits\P Applications\Local\Level III site plan\LOR\lor_2_fraser_addl_info_2019.11.15_final.docx*

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.*

# Site Location

Figure No. 1



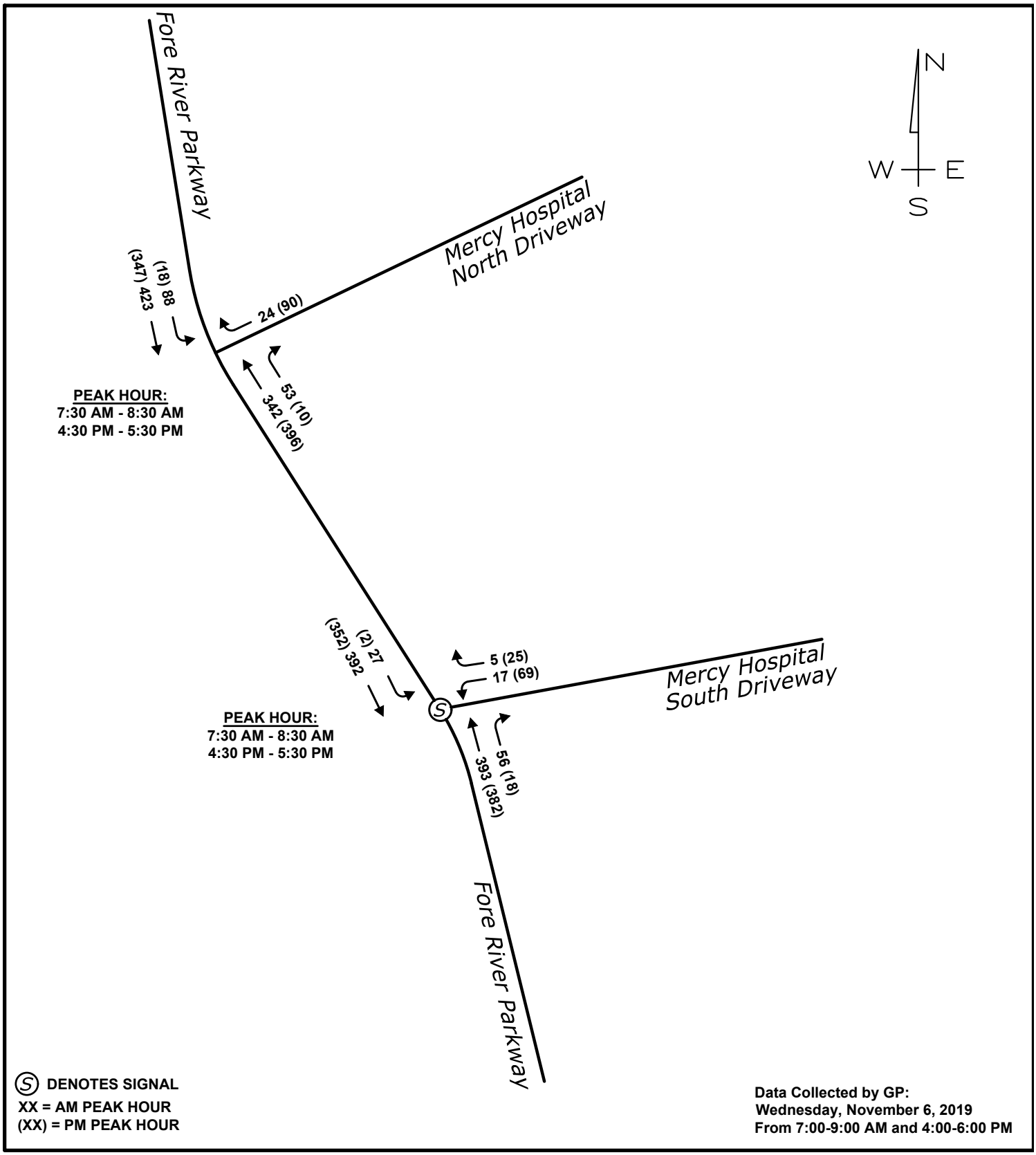

## MERCY HOSPITAL
## PORTLAND, MAINE

| | | | |
|---|---|---|---|
| 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



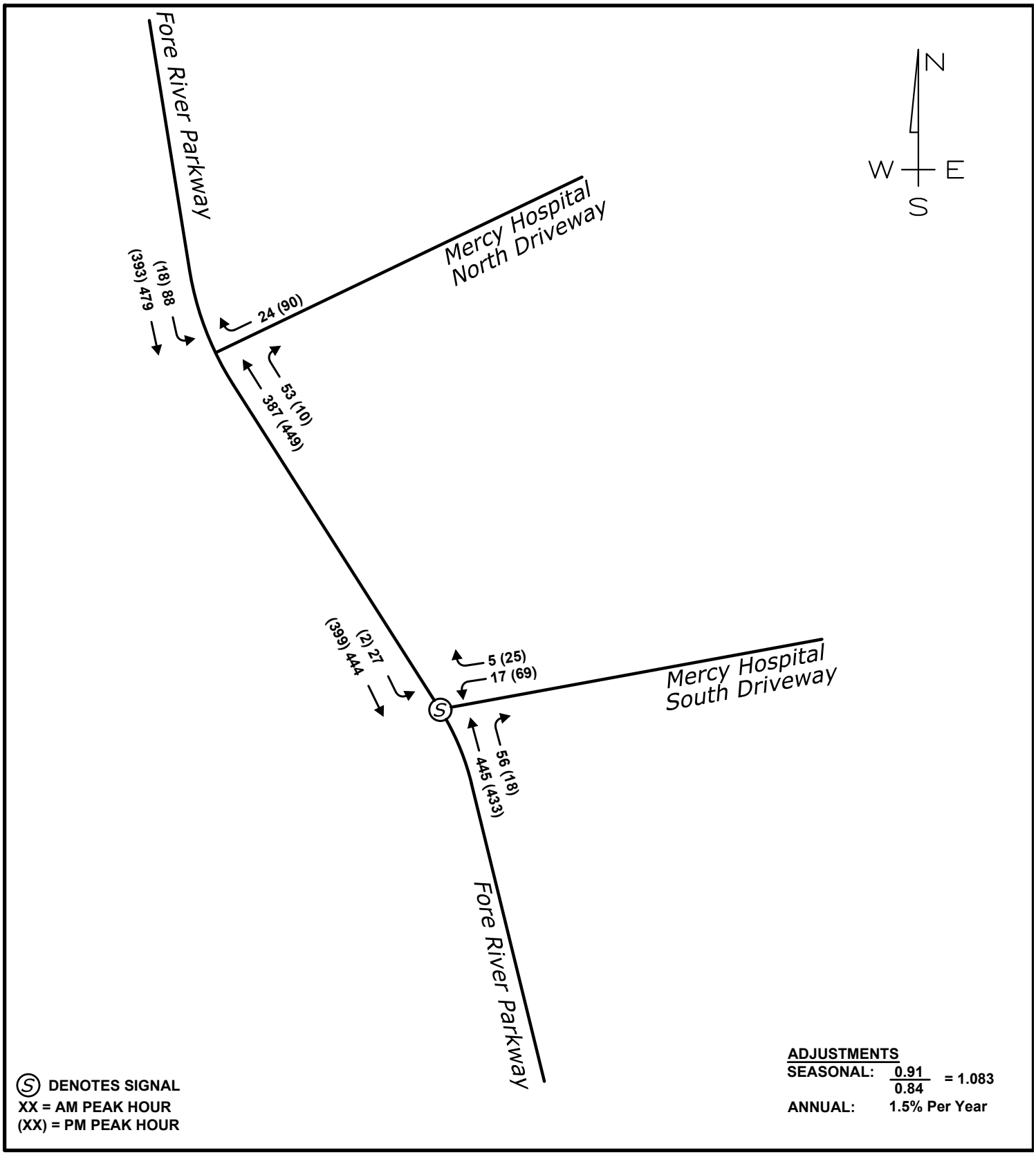

## MERCY HOSPITAL
## PORTLAND, MAINE

| | | | |
|---|---|---|---|
| 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



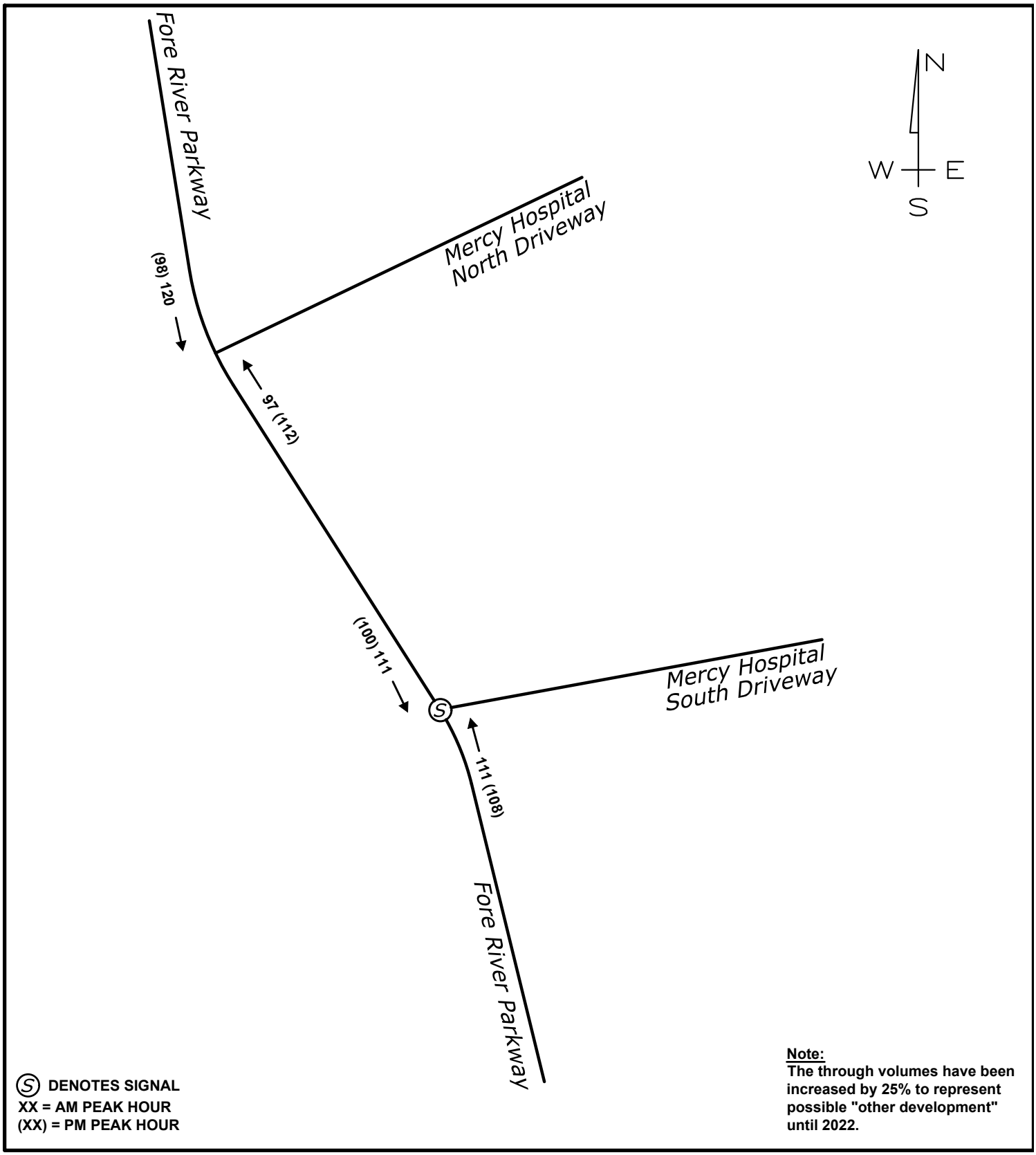

## MERCY HOSPITAL
## PORTLAND, MAINE

| | | | |
|---|---|---|---|
| Design: | TPG | Scale: | NONE |
| Draft: | TPG | Date: | 11/6/2019 |
| Checked: | RED | File Name: | Figure Set.dwg |

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# Other Developments

Figure No. 4



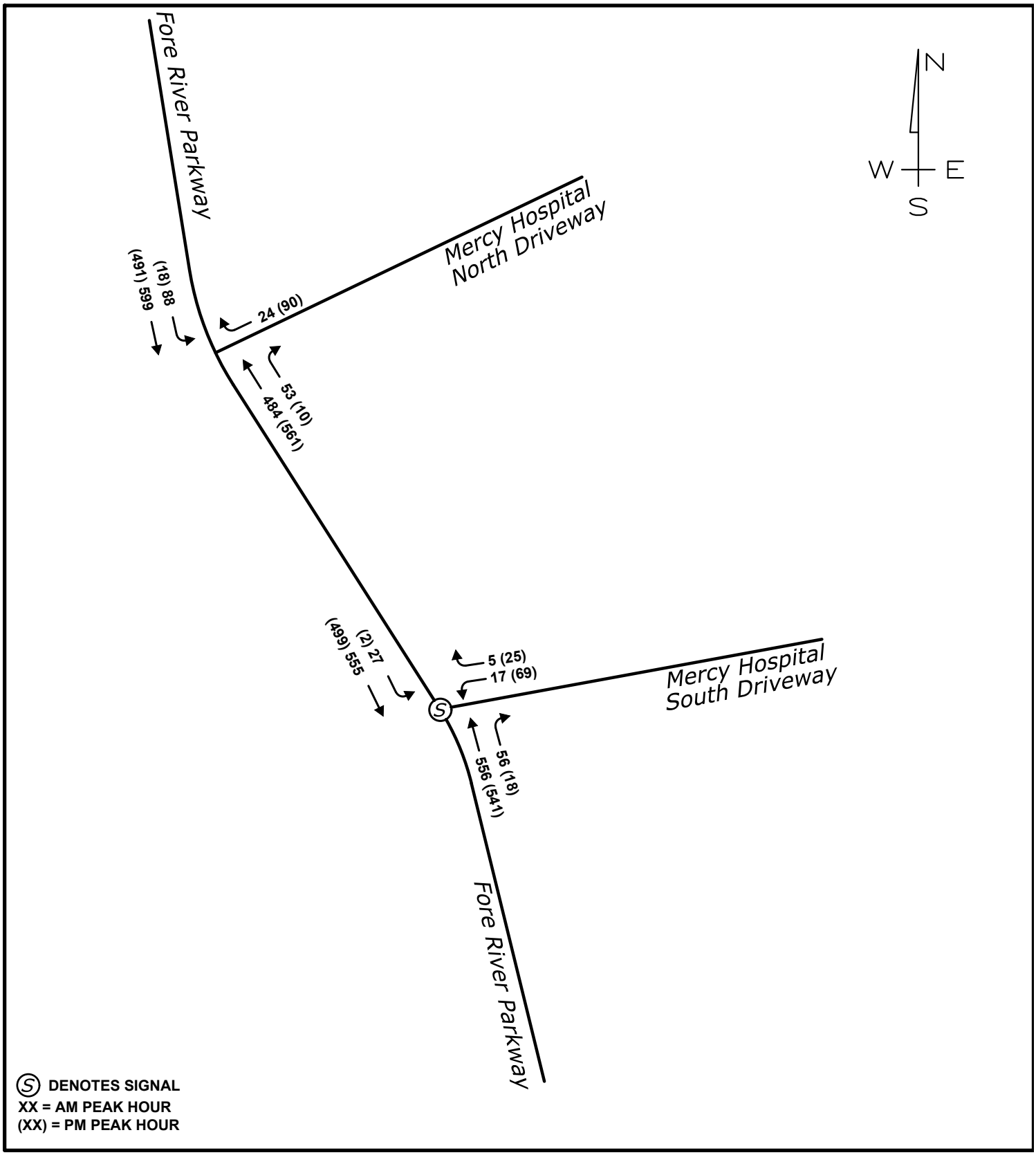

## MERCY HOSPITAL
## PORTLAND, MAINE

| | | | |
|---|---|---|---|
| Design: | TPG | Scale: | NONE |
| Draft: | TPG | Date: | 11/6/2019 |
| Checked: | RED | File Name: | Figure Set.dwg |

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# 2022 Predevelopment DHV

Figure No. 5



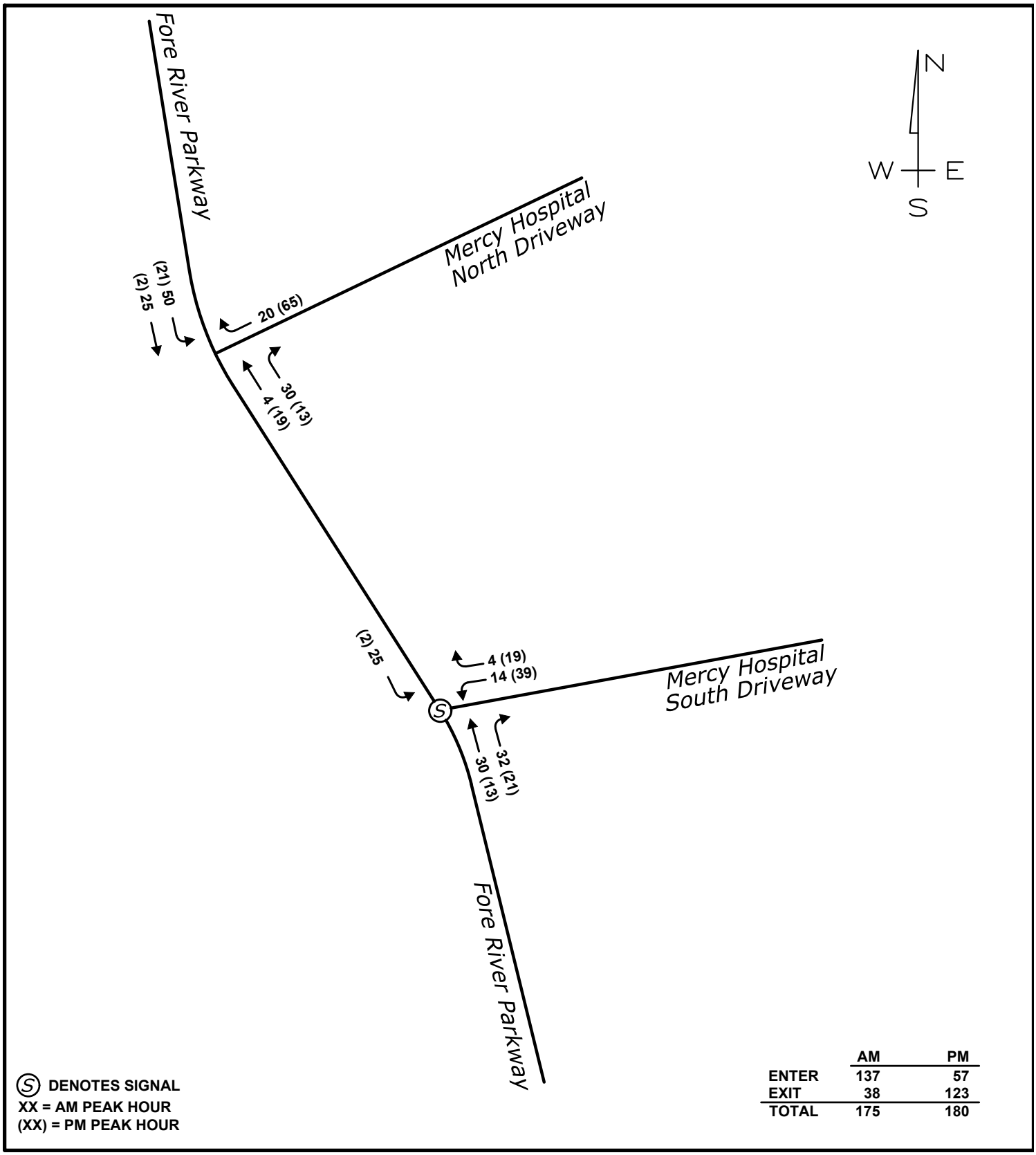

## MERCY HOSPITAL
## PORTLAND, MAINE

| | | | |
|---|---|---|---|
| Design: | TPG | Scale: | NONE |
| Draft: | TPG | Date: | 11/6/2019 |
| Checked: | RED | File Name: | Figure Set.dwg |

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# Trip Assignment

Figure No. 6




| | AM | PM |
|---|---|---|
| ENTER | 137 | 57 |
| EXIT | 38 | 123 |
| TOTAL | 175 | 180 |

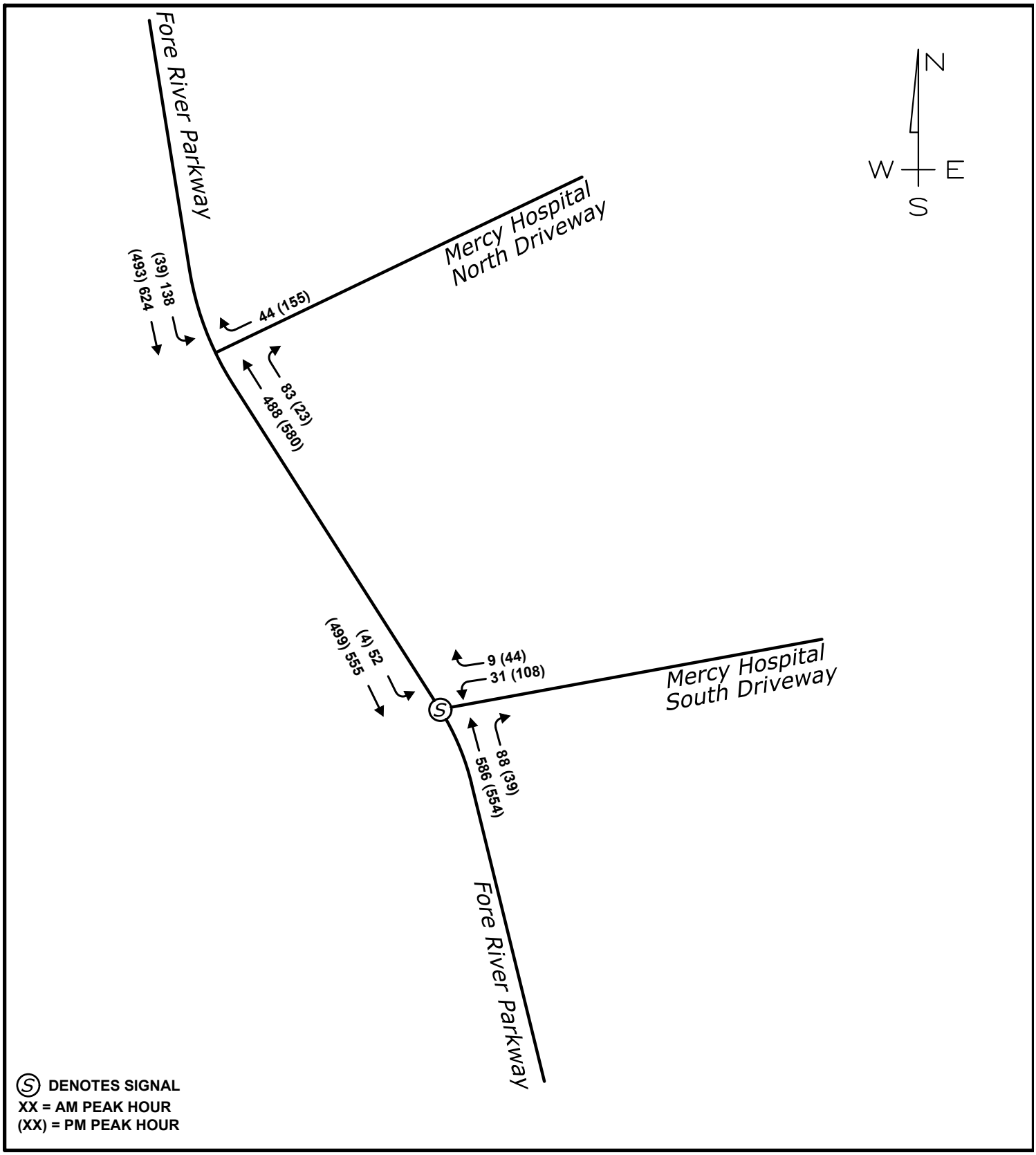
## MERCY HOSPITAL
## PORTLAND, MAINE

Design: TPG Scale: NONE
Draft: TPG Date: 11/6/2019
Checked: RED File Name: Figure Set.dwg

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# 2022 Postdevelopment DHV

Figure No. 7




## 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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## 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

Maine Department Of Transportation - Traffic Engineering, Crash Records Section

# 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<br>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<br>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**

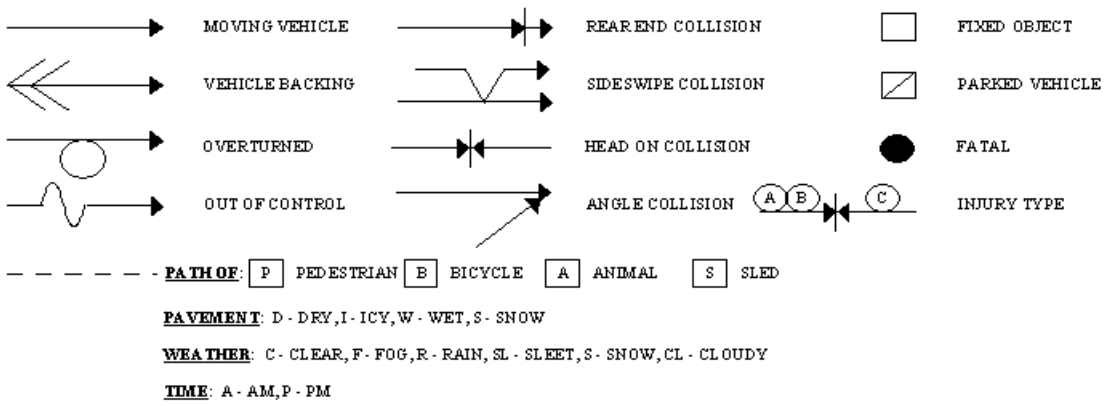
DESCRIPTION: **Jct Congress St & Fore River Pkwy/I-295 SB Off**

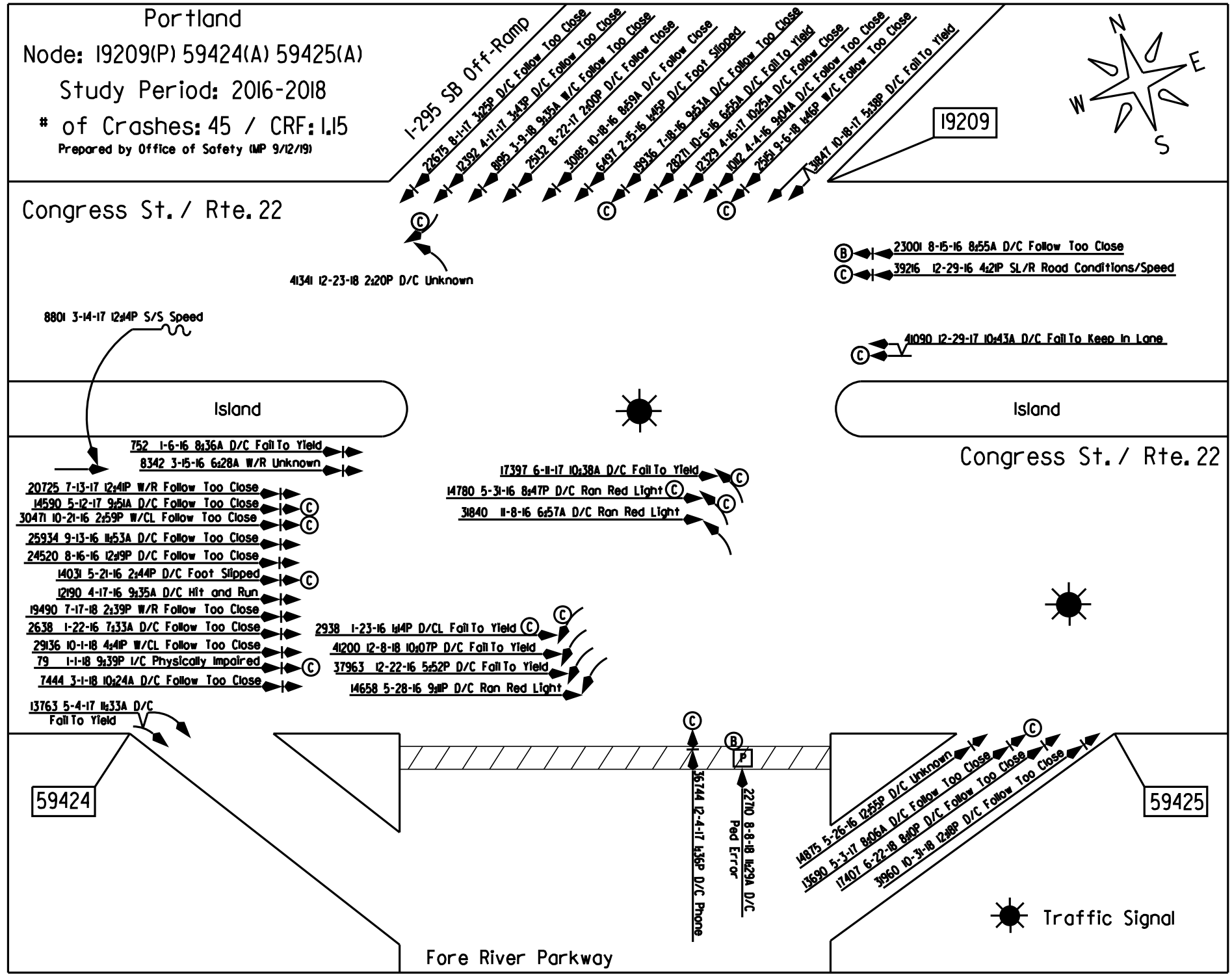
RTE # / RD #: **0022S** DATE DRAWN: **9/12/2019** DRAWN BY: **Michelle**

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

Northern Light Health

**Mercy Hospital**
144 State Street
Portland, ME 04101

**Office** 207-879-3433
**Fax** 207-879-3429

November 2019

**Re: Transportation Demand Management Plan**

Objective:

To establish a set of strategies that encourage employees to use alternatives to driving to work. This not only optimizes the on-site parking for patients, visitors, physicians and employees, but it also reduces the demand on city streets.

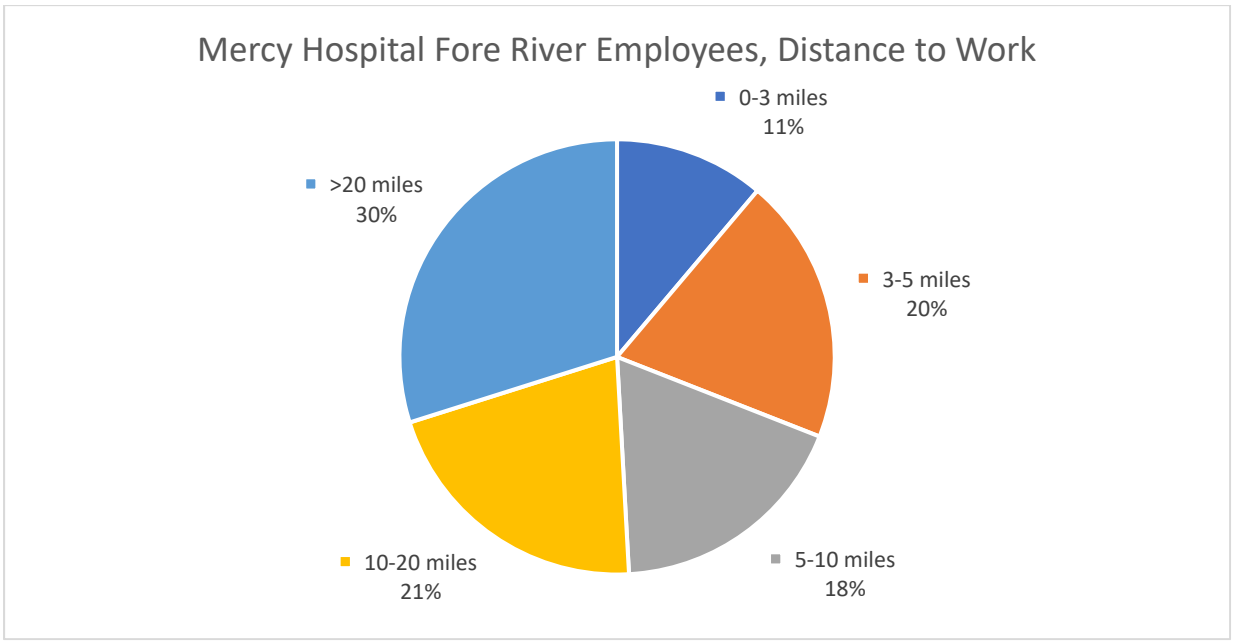
Tactics to decrease driving and parking congestion in downtown Portland:

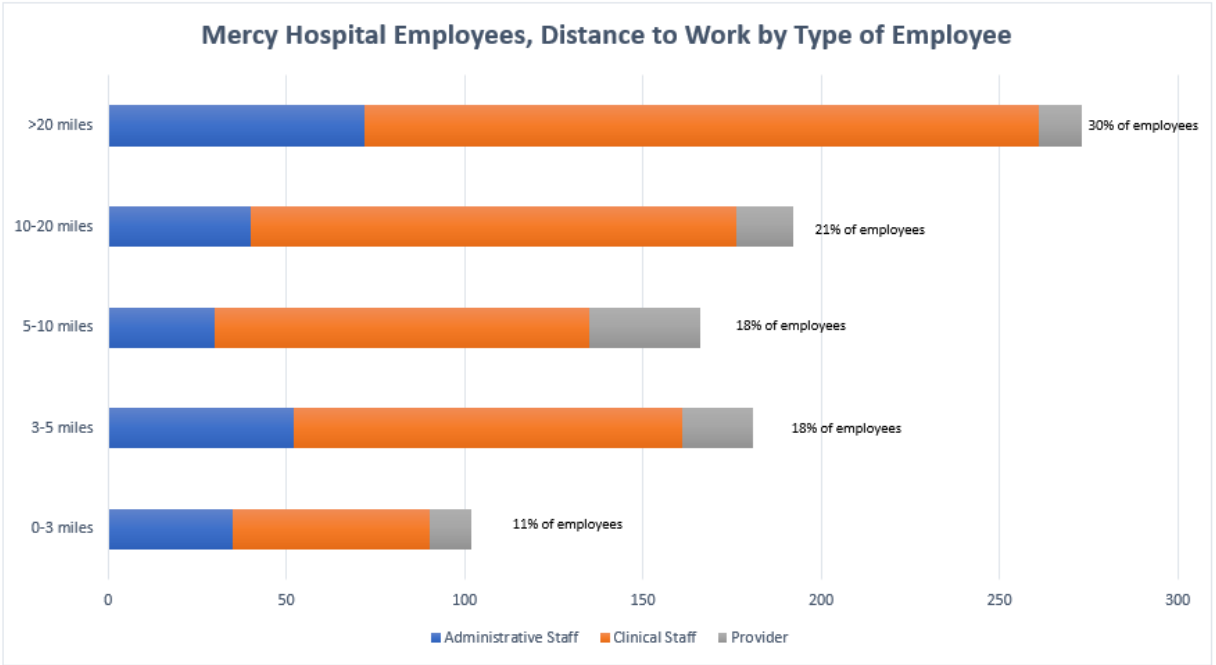
1) Currently, we resource two shuttles that run continuously between Street and Fore River. Consolidation of State Street services to Fore River would eliminate the daily employee shuttle that currently operates 5 days per week, 14 hours per day. Eliminating the shuttle reduces 39 hours of daily travel time Monday – Friday , and 421 miles per day, 107,406 miles per year on downtown city roads.

2) In the first 10 months for calendar year 2019, Mercy was the recipient of 4,500 EMS arrivals to the emergency department at State Street. With the consolidation, the traffic on downtown streets would be eliminated and moved to the area around the Fore River campus.

3) Employees that choose to drive and not use the shuttle, which occurs primarily Monday – Friday from 7 am – 5 pm, are utilizing on-street parking around the State Street hospital. Consolidation to the Fore River campus would result in additional parking for residents and guests of the area.

The following charts provide a summary of the distance employees travel to work that are, or will be, working at the Fore River campus:



Tactics to reduce overall employee vehicle traffic to the Fore River campus:

1) Promotion of public transportation
    a. Actively encourage use of public transportation alternatives through employee orientation, on-going communications, and intranet reminders
    b. Provide employees discounted metro bus passes

2) Promote carpool/van pool (ride share) opportunities
    a. Designate preferential parking for ride shares of two or more persons at the Fore River campus
    b. Implement a ride share registry to match employees interested in ride share

3) Promote bicycle use with the availability of bike racks and staff showers and lockers

4) Explore relationship with local transportation services to offer visitors to and from the Fore River campus - on-site parking demand

5) Continued growth of part-time, supplemental labor. Currently 27% of employees on the Fore River campus work 4 days per week or less, and 13% work 3 days per week or less.

6) Develop internal marketing program offering ideas, rewards and prizes for those using alternative modes of transportation

7) Implement regular surveys to employees on their commuting practices

Mercy Hospital's Transportation Demand Management Coordinator is our Director of Security. He/she, working with human resources, marketing, and communications, will administer the plan outlined in this document.

Mercy Hospital
Shuttle Runs and Distance
Monday - Friday

| | Shuttle 1 | Shuttle 2 | Shuttle 3 | |
|---|---|---|---|---|
| 4:30 | 1 | 1 | | |
| 5 | 3 | 3 | | |
| 6 | 3 | 3 | 3 | |
| 7 | 3 | 3 | 3 | |
| 8 | 3 | 3 | 3 | |
| 9 | 3 | 3 | 3 | |
| 10 | 3 | 3 | | |
| 11 | 3 | 3 | | |
| 12 | 3 | 3 | | |
| 1 | 3 | 3 | | |
| 2 | 3 | 3 | | |
| 3 | 3 | 3 | 3 | |
| 4 | 3 | 3 | 3 | |
| 5 | 3 | 3 | 3 | |
| 6 | 3 | 3 | 3 | |
| 7 | 3 | 1 | | |
| 8 | 3 | | | |
| | 49 | 44 | 24 | 117 |
| | | | | 2340 mins |
| | | | | 39 hours |
| 1.8 miles between state and fore river | | | | 9945 |
| | | | | 421.2 miles per day |
| | | | | 2106 miles per week |
| | | | | 107406 miles per year |

North East
Mobile Health Services

**SCHEDULE A**

**Shuttle Service**

It is further agreed by and between the parties that NORTH EAST shall provide shuttle bus service for employees of Mercy Hospital between the Mercy campus located at 144 State Street in Portland and the Mercy Fore River campus under the following terms and conditions:

1. NORTH EAST shall operate the shuttle service during the following hours:

   a. One (1) shuttle bus will operate continuously between the hours of 4:30 AM and 9 PM five days per week, Monday through Friday

   b. One (1) shuttle bus will operate continuously between the hours of 4:30 AM and 8:30 PM five days per week, Monday through Friday

   c. One (1) shuttle bus shall operate during peak periods between the hours of 6 AM and 10 AM and from 3 PM through 7 PM five days per week, Monday through Friday.

   d. Shuttles will not run on major holidays. MERCY will notify NORTH EAST in advance of these dates.

Buses will run continuously so that there is a 15-minute turn time with approximately 7 ½ minutes between pickups on either end.




Northern Light
Mercy Specialty &
Surgery Center


DR. HARRY E. DAVIS WING

GORRILL PALMER

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

November 4, 2019

**Ms. Jean Fraser**
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**
**Supplemental Information**

Dear Jean:

We have received your October 28, 2019 email transmission requesting additional information related to the proposed Mercy Hospital Expansion at the Fore River Campus. The following is provided per your request.

## Tom Errico Comments

*Comment #1 - Further Parking and Traffic information as outlined in the attached e-mail from the City's Traffic Engineering reviewer Tom Errico.*

- *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.*
- *For comparison purposes, parking demand estimates using the Parking Generation Manual, ITE, 5th edition shall be provided.*
- *A pedestrian facilities/routing graphic for the entire site shall be provided with anticipated origin-destination patterns to and from each parking area.*
- *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.*
- *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";*

**Existing trip generation from the site was based upon on a single traffic count sample performed in January 2017.*

Response:

Gorrill Palmer (GP) has scheduled additional onsite parking counts the week of November 4th along with completion of updated traffic counts at the project driveways the same week. We expect to provide a summary of findings the week of November 11th.

Using data from the 4th and 5th Edition ITE Parking Generation Manual, we provide the following summary of anticipated parking demand from these sources:

**ITE 4th Edition Parking Generation vs 5th Edition**

| Site Data | Supply Ratio | | Mercy Phase 1 & 2 | | Parking Required | |
|---|---|---|---|---|---|---|
| | 4th Edition | 5th Edition | 4th Edition | 5th Edition | 4th Edition | 5th Edition |
| Hospitals (610) Parking Supply per 1,000 SF GFA | 3.03/1,000 SF | 2.6/1000 SF | 192,998 SF | 192,998 SF | 584 spaces | 502 spaces |
| Or Parking Supply per Bed | 4.7/bed | 4.2/bed | 71 beds | 71 beds | 334 spaces | 298 spaces |
| | | | | | | |
| Surgery Center (612) | 1.67-5.67 spaces/ operating room | 8.5/operating room | 4 operating rooms | 4 operating rooms | 7 to 23 spaces | 34 spaces |
| | | | | | | |
| Medical Office (720) | 4.0 spaces/1000 SF GFA | 4.3/1000 SF GFA | 82,186 SF | 82,186 SF | 328 spaces | 353 spaces |
| **Total** | | | | | **669-935** | **685-889** |

**City of Portland Ordinance Requirements**

| Land Use | Supply Ratio | Size | Parking Required (spaces) |
|---|---|---|---|
| 14-332 (f) Hospitals | 1 space/ 500 SF | 192,998 | 386 |
| 14-332 (j) Offices | 1 space/400 SF | 117,173 | 293 |
| | | **Total** | **679** |

**GP Parking Analysis**

| Land Use | Supply Ratio | Size | Parking Required (spaces) |
|---|---|---|---|
| Hospital | 1.27 space/500 SF | 192,998 | 490 |
| MOB | 0.85 space/400 SF | 117,173 | 249 |
| | | **Total** | **739** |

The proposed plan includes a revised parking supply of 857 parking spaces, which is a net increase of 95 spaces on the site.

We have prepared the accompanying Figure 5 that depicts the designated parking areas for Staff, Patients/ Visitors as well as the walking routes from each parking area to the buildings. The site has over 7,765 LF (1.47 mile) of pedestrian sidewalk that Mercy maintains on a year-round basis for access throughout the property. Figure 5 identifies the basic parking and access conditions for staff, visitors/patients as follows:

- Hospital Physicians and Staff – Primary parking will be the new parking lot within the basin area and behind the Hospital Expansion. Staff will proceed to a ground level entrance (security controlled) at the rear of the proposed Hospital Expansion to access an elevator providing access to the entire hospital. This lot also will be used by ASC physicians and staff.
- Hospital Staff – Secondary staff parking will be in the south lot located off the Southerly entrance drive. A sidewalk system provides access to a ground level staff entrance (security controlled) at the south end of the existing hospital. This parking and access condition have been in place since the original Hospital opening in 2008.
- Emergency Department – Primary parking will be on the north end of the proposed Hospital Expansion.
- Existing MOB Staff – Primary parking is within the lot NW of the MOB building with sidewalk access to either MOB entrance.
- Existing MOB Patient/Visitor – Primary parking is within the lot on the north side of the MOB
- Existing Hospital Patient/Visitor – Primary parking at the front of the existing Hospital or secondary parking in the lot on the North side of the MOB.
- Proposed ASC – Patient/Visitor parking will be in the new parking lot on the south side of the building with access off the southerly entrance drive. A new sidewalk will connect to the existing sidewalk system that circles the basin area and also connects to the Hospital access routes.

We have reposted the Parking and Mitigation Memo along with the supporting figures and Synchro results.

We are in the process of reviewing the HCL at the Congress and Fore River Parkway intersection and will provide findings within the next two weeks.

**Planning Requests**

- *Data re the area of wetland lost (wetland area before the proposals, and open wetland area after);*

Response:

The existing resource area within the former gravel pit was identified as 3.49 acres by Normandeau Associates who performed a wetland delineation associated with the MeDEP/USACOE permitting that was approved in 2013. The entirety of this area will impacted by the current proposal, although a new stormwater management wet pond measuring approximately 21,798 SF (0.5 ac) in size will be created.

- *Pedestrian circulation plan including all walkways, sidewalks and trails, including any relocated public access easement around pond (this is not in the most recent set of plans);*

Response:

The accompanying Figure 5 depicts the existing and proposed sidewalk network within the property. There are approximately 7,765 LF of existing sidewalk and an additional 400-500 LF will be constructed as part of the project. A small area of stone dust walking path of approximately 360 LF will be impacted on the east side of the basin as a result of the ASC construction. An existing paved sidewalk will remain around the full perimeter of the basin area. Public access will continue to be provided around the entirety of the former pit area.

- *The submitted narrative regarding compliance with the CZA does not address the requirement (10f) to "identify the extent to which the developer will preserve natural features including ...and wetlands". Please clarify what part of the existing wetland will be preserved and how the current proposals show sensitivity to the need to preserve this feature;*

Response:

An updated CZA compliance narrative has been completed with information regarding compliance with part 10f of the Contract Zone Agreement. The revised document has been uploaded to ePlan.

- *What is the surface treatment of the area shown as "open space" on the updated master plan graphic, i.e. around the new pond area and between the pond area and the new parking lot and nearby trails. This is not shown on the Landscape Plan, and on the Grading Plans this appears to be heavily regraded with areas of rip rap and we would like clarification re:*

    - *Specific detail of ground cover and scope for vegetation? (see 10b Landscaping in the CZA)*
    - *Whether this will be fenced or provide publicly accessible open space (with benches and other amenities)?*
    - *Whether the formal public access easement (trails) will be modified/expanded to go closely along any retained wetland area?*

Response:

The proposal includes the restoration of proposed graded areas with lawn and/or low maintenance grass cover mixed with some landscape plantings to be consistent with the current campus landscaping. The low maintenance grass cover will be similar to several zones on the campus where ground cover is only mowed once or twice a season and the coverage includes grasses and some mixture of wildflowers. Currently, the impervious coverage on the site is approximately 50%. Upon completion of Phase 2, the impervious coverage on the site will increase to 66.4%, which remains substantially below the allowed 80% maximum impervious lot coverage under the Contract Zone Agreement. Most of the Campus contains a significant number of now mature trees and various planting beds with both annual and perennial plants. The North Open Space consists of 3.32 acres along the waterfront that have been maintained as naturally vegetated except for the stormwater filter swales that contain planted vegetation that provides water quality treatment of stormwater runoff before discharging into the Fore River. The South Open Space contains 1.33 acres of low maintenance grassed area with direct proximity to the River and a view of the Veterans Bridge. Mercy contracts with a professional landscape service provider for the ongoing

maintenance and care of the campus landscaping and this will continue into the future. There will be some area of stone riprap for the purpose of providing stabilization for concentrated runoff flow conditions for water directed to the wet pond. These riprap areas will be generally concealed from view, certainly from the Parkway and surrounding properties, as these areas will be within the lower sections of the fill zones in the basin.

The proposed stormwater management basin is designed with relatively shallow slopes on most of its perimeter and the pond will allow people to walk down to it. We note that the current basin conditions do not actually allow convenient access to the water, although it can be easily viewed from much of its perimeter. The stormwater management wet pond will be similarly viewable. Mercy is contemplating the placement of fencing and/or benches in the vicinity of the wet pond. Any amenities would be considered supplemental to the existing benches and views available within the North Open space and Fore River Parkway Trail, where there is far greater opportunity for visual enjoyment and benefit overlooking the Fore River.

- *As indicated above, we are not clear as to how the new surface parking lots, and the engineered and regraded wet pond edges and pool, will look as viewed from the Fore River Parkway - we would like to see a section (between new building and Fore River Parkway) and a sketch montage as viewed from the Fore River Parkway, to help the Board and reviewers to understand how this area is integrated into a unified design for the campus.*

Response:

We have prepared the attached cross section which extends from a point east of the site all the way to the Fore River. This section shows the relationship of various locations on or near the property, including the nearby MMC Parking garage, the Railroad tracks, the proposed ASC location and parking lots, the wet pond, the site frontage along the Parkway and the Parkway down to the waterfront. The section shows that the proposed wet pond will remain concealed from view from the Fore River Parkway as its water surface elevation will be at elevation 9.5' (NGVD29). The existing driveway located between the SWM pond and the Site frontage is roughly at elevation 16.5' at its lowest and up to elevation 19.0'. The site frontage drops back to grade on the Parkway at Elevation 15.0'±. Therefore, the traveling public will not see any significant change in the view into the site from the Parkway, albeit that view now includes the substantial MMC 9 level parking garage structure in the background. Similarly, the parking lots on each side of the ASC building will remain largely concealed from view from the Parkway based on the surface grades that range from elevation 17.0' to 20.0'±. The ASC building finish floor elevation will be at elevation 19.0' and the building height is approximately 31' (Elevation 50.0'), so the ASC will be slightly visible from the Parkway, although existing vegetation to remain will buffer these views somewhat. Again, the MMC garage in the background extends to a height greater than 90' and a top elevation of approximately 116' or twice the elevation of the proposed ASC building.

We believe that the layout does achieve a unified design for the site for the following reasons:

- The ASC is not connected to the Hospital since that would complicate the utility/service corridor and parking and it is Mercy's objective to provide outpatient services in a setting discreet from Mercy's acute hospital services. 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 was locates in the hospital or otherwise not well positioned on the site.

- The layout positions the ASC building in a manner where it best benefits from existing utility infrastructure that is located at the rear of the site and is located within the Hospital service area.
- The layout provides direct proximity behind the hospital building, allowing for physician and staff parking that can be shared between the ASC and the Hospital.
- It provides for convenient patient/visitor direct vehicular and pedestrian access off the existing southerly, signalized entrance driveway.
- The positioning will minimize the visual impact of the ASC building and the proposed parking since these site features will be largely concealed from view from the Parkway.
- The positioning meets Mercy's objectives of providing discreet infrastructure for their outpatient services programming while also maintaining connectivity to the acute care facilities.
- The ASC location provides overlapping use of the Hospital service area, utilities, med-gases etc. between the ASC and Hospital thus creating efficiency and costs benefits.
- Other potential functions that could be shared between the hospital and ASC through this corridor include materials management, clinical engineering, housekeeping and security.

The Hospital expansion is a straightforward extension of the existing Hospital footprint and its placement is largely concealed by the existing MOB. Much of the Fore River Campus is surrounded by rail track and heavy development to the east. Each of these building pieces also is positioned in a manner that will coalesce with future development activity that may include continued acute care expansion, structured parking and additional heath care facilities on the campus, in our opinion.

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

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

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

EXIST. VEG. TO REMAIN

FUTURE ASC BLDG. EXPANSION

GENERATOR

TRANSPLANT 4 - BN

TRANSPLANT 6 - TOT

REMOVE / RESET / TRANSPLANT SHRUBS AROUND TRANSFORMER AS NECESSARY

TRANS. #2-4

TRANS. #1

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

BRICK

PAVED WALK

PAVED ISLAND

EX. RAISED CROSSWALK

EX. VEG. TO REMAIN

LAWN

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

| 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: 1" = 40' | Job No.: 3257.04 | |
| File Name: 325704-LANDSCAPE.dwg | | | |

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207.772.2515

Drawing Name: LANDSCAPE PLAN
Project: Fore River Campus Consolidation
Portland, Maine
Client: Northern Light Mercy Hospital
144 State Street, Portland, Maine 04101

Drawing No. C-6.0

U:\3257.04_Mercy Hospital_Expansion_DD_Permits\STANTEC\civil\cadd\permit\dwg\325704-LANDSCAPE.dwg 11/5/2019 9:01 AM

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

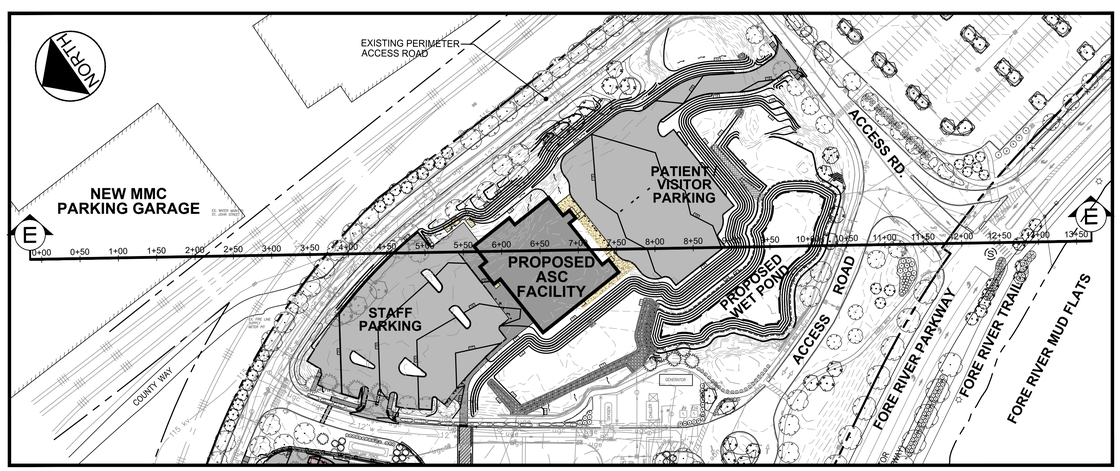
130 120 110 100 90 80 70 60 50 40 30 20 10 0 -10

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.
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| Rev. | Date | Revision |
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| | | |
|---|---|---|
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| Checked: SRB | Scale: | Job No.: 3257.04 |

File Name: 325704-GRADING.dwg

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207.772.2515

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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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

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# 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.

DRAFT

# 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.

DRAFT

# 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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# SITE DEVELOPMENT PLANS

FOR

# Northern Light℠ Mercy Hospital

## FORE RIVER CAMPUS CONSOLIDATION

## PORTLAND, MAINE

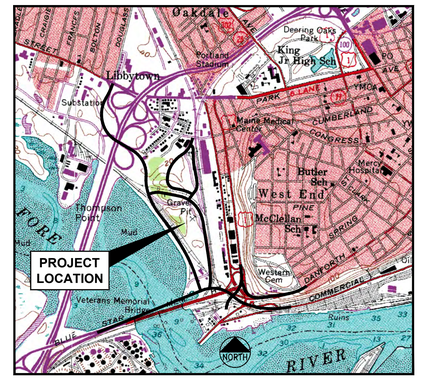
AUGUST 2019

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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| | |
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| C-1.1 | GENERAL NOTES & LEGEND |
| C-2.0A | EXISTING CONDITIONS - 1 OF 2 (BY OWEN HASKELL, INC.) |
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| C-3.0 | OVERALL CAMPUS MAP |
| C-3.1 | OVERALL SITE LAYOUT PLAN |
| C-3.2 | WAYFINDING PLAN |
| C-4.0 | OVERALL GRADING, DRAINAGE & EROSION CONTROL PLAN |
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| C-7.6 | EROSION CONTROL NOTES & SEEDING PLAN |
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| WQ | WATER QUALITY MAP |


*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<br>CITY HALL, CONGRESS STREET<br>PORTLAND, MAINE 04103<br>207.874.8608<br>CONTACT: CHRISTINE GRIMANDO | LEVEL III SITE PLAN APPLICATION - TENTATIVE SUBMITTAL AUGUST 2019 |
| BUILDING PERMIT: | CITY OF PORTLAND CODE ENFORCEMENT OFFICE<br>CITY HALL, CONGRESS STREET<br>PORTLAND, MAINE 04103<br>207.874.8900 | TO BE DETERMINED |
| STATE | | |
| MAINE DEP SITE LOCATION OF DEVELOPMENT ACT PERMIT: | MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION<br>312 CANCO ROAD<br>PORTLAND, MAINE 04103<br>207.822.6300<br>CONTACT: CHRISTINE WOODRUFF | PERMIT ORDER<br>L-20775-19-W-B (APPROVAL) 11/27/2017<br>L-20775-TG-X-M (APPROVAL) 11/27/2017<br>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<br>312 CANCO ROAD<br>PORTLAND, MAINE 04103<br>207.822.6300<br>CONTACT: CHRISTINE WOODRUFF | L-20775-TG-X-M (APPROVAL)<br>IN LIEU FEE PAID PREVIOUSLY BY OWNER |
| UTILITY OPENING PERMITS: | CITY OF PORTLAND PUBLIC SERVICES DIVISION<br>212 CANCO ROAD<br>PORTLAND, ME 04103 | TO BE DETERMINED |
| MAINE DOT TRAFFIC PERMIT: | MAINE DEPARTMENT OF TRANSPORTATION<br>SOUTHERN REGION (REGION 1)<br>51 PLEASANT HILL ROAD<br>SCARBOROUGH, MAINE 04074<br>207.885.7000 | ORIGINAL TRAFFIC MOVEMENT PERMIT APPROVED 05/13/2002<br>DIV. 06-00035-A-N |
| MAINE VOLUNTARY RESPONSE ACTION PLAN (VRAP): | MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION<br>BUREAU OF REMEDIATION AND WASTE MANAGEMENT<br>17 STATE HOUSE STATION<br>AUGUSTA, MAINE 04333-0017<br>ATTN: NICHOLAS HODGKINS<br>207.623.8367 | CERTIFICATE OF COMPLETION<br>ISSUED 04/12/2011 |
| FEDERAL | | |
| NPDES PERMIT: | U.S. ENVIRONMENTAL PROTECTION AGENCY REGION 1<br>JFK FEDERAL BUILDING, ROOM 2209<br>BOSTON, MASSACHUSETTS<br>02203-2211 | - |
| ARMY CORPS OF ENGINEERS SECTION 404 PERMIT | U.S.ARMY CORPS OF ENGINEERS<br>442 CIVIC CENTER DRIVE, SUITE 350<br>AUGUSTA, MAINE 04330<br>207.623.8367<br>ATTENTION: JAY CLEMENT | NAE-2012-00084 AND EXTENSION APPROVED<br>TIME LIMIT TO COMPLETE WORK IS DECEMBER 31, 2022 |

### CONSULTANT LIST

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207.772.3846
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207.791.2502
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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 |
| OVERHEAD ELECTRIC LINES | VERTICAL GRANITE |
| UNDERGROUND ELECTRIC LINE | SLOPED GRANITE |
| UNDERGROUND TELEPHONE LINE | EDGE OF PAVEMENT |
| WATER LINE | GRADING CONTOUR LINE (100) |
| STORM DRAIN LINE | SPOT ELEVATION 100.31 |
| SANITARY SEWER LINE | GUARD POST/BOLLARD |
| OXYGEN | POLE WITH LIGHT FIXTURE(S) |
| GAS | FREESTANDING SIGN |
| FENCE | PYLON SIGN |
| EXISTING CONTOUR LINE | BARRIER FREE PARKING SYMBOL |
| EXISTING WETLANDS | PEDESTRIAN CROSSWALK |
| RAILROAD TRACKS | PAINTED DIRECTIONAL TRAFFIC ARROW |
| UTILITY POLE | UNDERGROUND TELEPHONE / CABLE |
| SIGN | UNDERGROUND ELECTRIC/TELEPHONE |
| LIGHT POLE | WATER LINE |
| CATCH BASIN | SEWER LINE |
| SEWER MANHOLE | GAS LINE |
| ELECTRICAL/COMMUNICATIONS VAULT | STORM DRAIN LINE |
| ELECTRICAL/COMMUNICATIONS PULL BOX | HYDRANT |
| HYDRANT | WATER GATE VALVE |
| TREE | WATER SHUT OFF VALVE |
| TELEPHONE MANHOLE | MANHOLE |
| WELL | CATCH BASIN |
| | EXISTING CATCH BASIN TO BE ALTERED |
| | RIPRAP |
| | SILT FENCE |
| | CHAIN LINK OR SAFETY FENCE |
| | WOOD FENCE |
| | GUIDE RAIL |
| | LIMIT OF WORK |
| | EXISTING UTILITY LINE TO BE REMOVED |
| | STONE SEDIMENT BARRIER |
| | TRANSFORMER PAD |

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

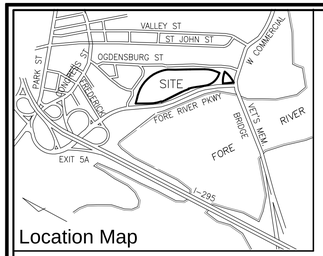
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Drawing Name: General Notes & Legend
Project: Fore River Campus Consolidation, Portland, Maine
Client: Northern Light Mercy Hospital, 144 State Street, Portland, Maine 04101

Drawing No. C–1.1

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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

S11°03'06"E 86.50'

S11°04'37"E 150.16'

N78°56'54"E 67.78'

S78°55'23"W 62.13'

PARCEL A TRACT TWO UTILITY AREA 1 23723/214 26738/60 22764/198 17783/298

42" SEWER 3975/262 SMH

N/F ST. JOHN STREET ASSOCIATES LIMITED PARTNERSHIP 6864/210

GAS FACILITIES EASEMENT 25696/212

N79°02'06"E 88.25'

N10°46'19"W

S09°29'00"E 197.09'

S10°57'07"E 290.08'

PARCEL A TRACT THREE LICENSE AGREEMENT 17783/322 LICENSE AGREEMENT 14203/252

L=176.13'

R=988.37' L=535°35'48"E 175.90

N09°42'42"E 110.67'

N78°59'25"W 142.80'

S10°55'38"E 580.68'

UNDERGROUND UTILITY LINE EASEMENT MAIN LINE

PORTLAND WATER DISTRICT WATER LINE EASEMENT 25624/210

RECREATIONAL TRAIL EASEMENT 25855/253 26346/137

UNDERGROUND UTILITY LINE EASEMENT MAIN LINE 25971/306

L=1102.20'

GAS FACILITIES EASEMENT 25696/212

N/F INHABITANTS CUMBERLAND COUNTY STATE OF MAINE 9382/61 9820/263

POND EASEMENT AREA 25591/149

PARCEL A

PARCEL B

S78°59'25"W 1165'± TO LOW WATER

R=922.37' L=502.60'

PARCEL A TRACT 1

UNDERGROUND UTILITY LINE EASEMENT SPUR 25971/306

S27°46'25"W 136.00'

S62°13'35"E 136.00'

N27°46'25"E 210.00'

S27°46'25"W 276.95'

N62°13'35"W 232.00'

S62°13'35"E 24.00'

S27°46'25"W 210.00'

N62°13'35"W 90.00'

S27°46'25"W 114.37'

N27°46'25"E 194.62'

27" FORCE MAIN SEWER LINE 3975/262

MERCY HOSPITAL 4 STORY BRICK BUILDING

MEDICAL OFFICE BUILDING 4 STORY BRICK

CONNECTOR

OVERHANG BRICK

PAVED WALK

PAVED ISLAND

CHAIN LINK FENCE

CONCRETE

FLAG POLES

SIGNS

BUS ENCLOSURE

DOWNSTREAM DEFENDER

ICV

TRANS #9.4 GENERATOR

CHILLER

GENERATOR

OXYGEN

CONC PAD

CRASH DOOR

THRES= 17.57

THRES= 17.54

THRES= 32.06

THRES= 32.01

THRES= 30.04

THRES= 30.13

THRES= 30.14

THRES= 30.10

THRES= 30.12

THRES= 13.39

THRES= 17.46

THRES= 17.61

RIM=15.62

S27°46'25"W 43.64'

S85°15'29"E 216.19'

N27°46'25"E 207.26'

172.55'

216.11' N11°13'35"W

364.57' N10°36'53"W

RIPRAP

15"RCP INV.=29.65

L=309.49' R=935.04'

S60°25'15"W 13.12'

L=118.68' R=948.16'

12"RCP INV.=12.69

(FORE RIVER PARKWAY)

HIGH WATER LINE OF FORE RIVER

FORE RIVER

BRIDGE OVER RAILROAD

136.09'

PARCEL A TRACT FOUR 50' WIDE ABOVE GRADE CROSSING EASEMENT

18338/53 OPEN SPACE-NORTH

S10°36'53"E

L=185.42' R=1197.50'

N62°48'29"E 13.12'

L=197.60' R=1184.38'

472.69' N36°45'03"W

I-295 CONNECTOR 19154/155

138'± TO HIGHWATER

SIDELINE PER 19154/555

RECREATIONAL TRAIL EASEMENT 25855/253 26346/137

STORM SEWER OUTLET 22266/52

PORTLAND WATER

WATER LINE E

AREA BETWEEN HIGH & LOW WATER OWNED BY MERCY HOSPITAL

SIGNAL POLE

X-ING SIGNAL POLE

UNABLE TO OPEN

UNABLE TO SEE

## 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.

SCALE : 1" = 50'

0' 25' 50' 100'

## 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

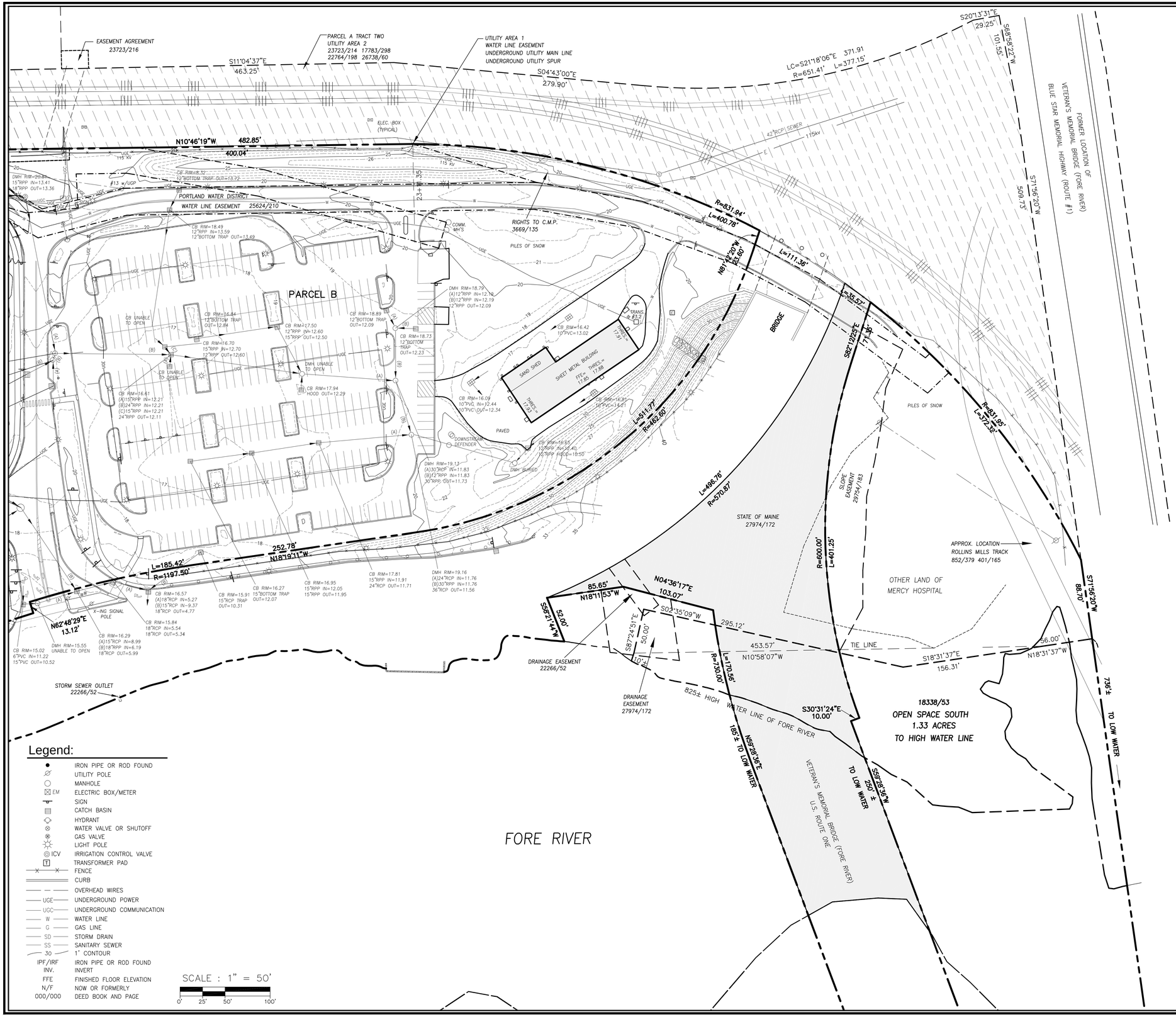
MADE FOR

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
22764/156 & 17783/298

S09°29'00"E
197.09'

EX. WATER MAIN TO ST. JOHN STREET

S11°04'47"E
150.16'

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

(SEE NOTE 7) EDGE OF POND

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

APPROXIMATE LIMIT OF DISTURBANCE

PROTECT UNDERGROUND UTILITIES, TYP.

SAWCUT & REMOVE PAVEMENT

SOLID WASTE CONTAINERS (TO REMAIN)

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

PROTECT EXISTING UTILITIES

PROTECT EXISTING ASPHALT

PROTECT EXISTING HYDRANT, SIGN, LIGHT POLE & UGE, TYP.

REMOVE CURB

PROTECT CURB

PLUG EX. CB INLET & ADJUST RIM TO GRADE

RESET SMH RIM TO GRADE

REMOVE SIGNS

PROTECT EXISTING BUILDING

REMOVE CONCRETE SIDEWALK TO NEAREST JOINT, TYP.

REMOVE & RESET SIGN

PROTECT EX. LIGHT / GAS SERVICE METER

PROTECT EXISTING BUILDING

PROTECT EXISTING BUILDING

PROTECT SMH, TYP.

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. GREASE TANK

EX. LIFT STA.

EX. SAN. OUT

EX. 4" FM (CONNECTS TO TERMINUS MANHOLE AT FRONT OF BLDG.

EX. SMH

LOAD DOCK

CONC.

BRICK

OVERHANG

CONCRETE

PAVED WALK

GRASS

CHAIN LINK FENCE

GUARDRAIL

N48°17'54"E
66.00'

N36°45'03"W
472.82'

I-295 CONNECTOR
(FORE RIVER PARKWAY)
19144/155

L=197.60'
R=1184.38'

N62°48'26"E
12.12'
(S)

L=185.42'
R=197.50'

N18°19'11"W
252.78'

S18°19'11"E
118.88'

S71°40'49"W
118.16'

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

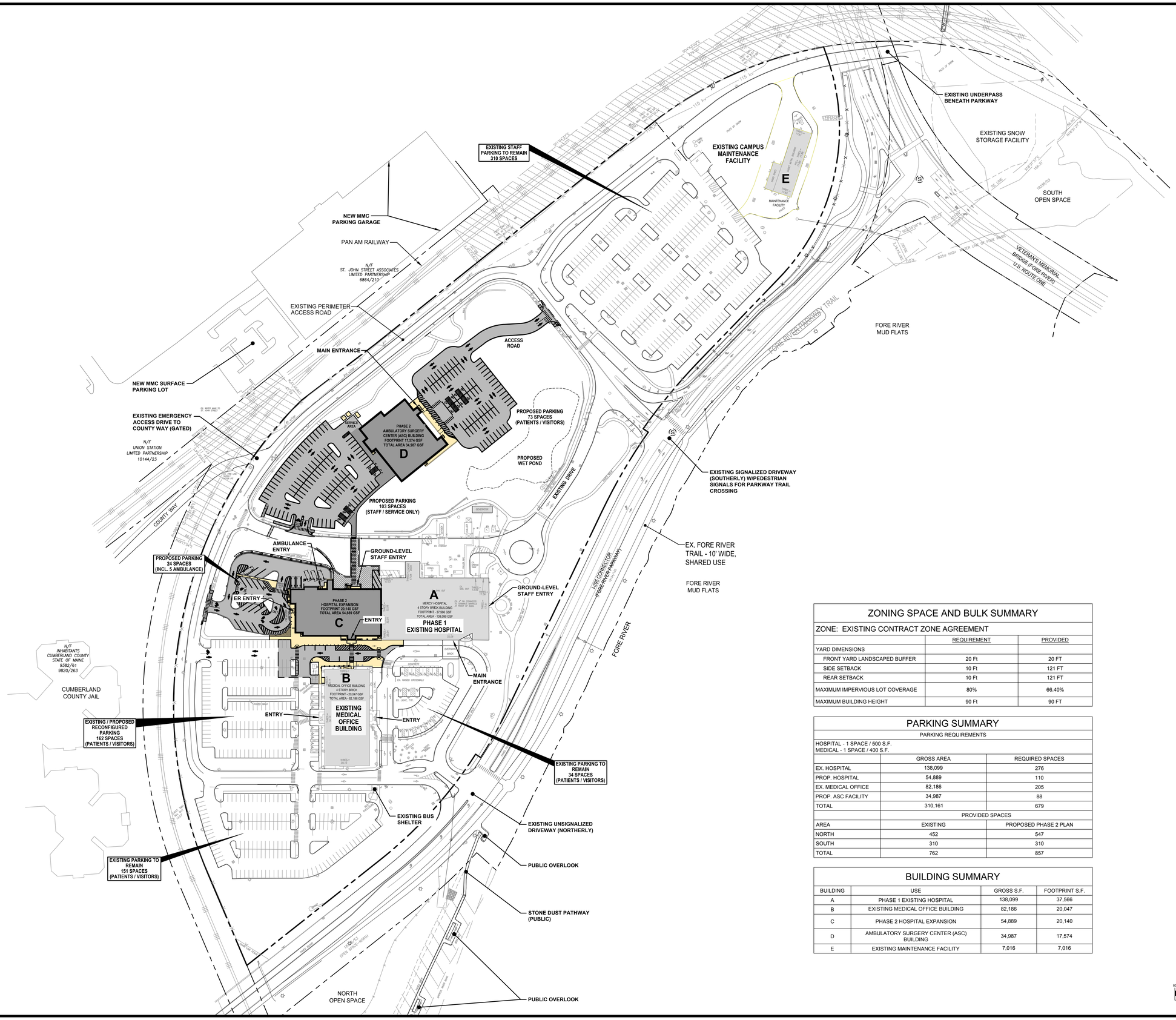
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Drawing Name: Overall Existing Conditions & Removals Plan
Project: Fore River Campus Consolidation
Portland, Maine
Client: Northern Light Mercy Hospital
144 State Street, Portland, Maine 04101

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" 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 |

## 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.

## 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) |

PHASE 2
AMBULATORY SURGERY CENTER (ASC) BUILDING
FOOTPRINT 17,574 GSF
TOTAL AREA 34,987 GSF

PROPOSED PARKING
73 SPACES
(PATIENTS / VISITORS)

PROPOSED PARKING
103 SPACES
(STAFF / SERVICE ONLY)

PROPOSED PARKING
24 SPACES
(INCL. 5 AMBULANCE)

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

MEDICAL OFFICE BUILDING
4 STORY BRICK
FOOTPRINT - 20,047 GSF
TOTAL AREA - 82,186 GSF

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

PHASE 1
EXISTING HOSPITAL

PROPOSED WET POND

ACCESS ROAD

EXISTING DRIVE

COUNTY WAY

I-295 CONNECTOR
(FORE RIVER PARKWAY)

MATCH LINE - SEE INSET BELOW

MATCH LINE - SEE MAIN PLAN

INSET - SAME SCALE AS MAIN PLAN

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

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

GRAPHIC SCALE
30 0 15 30 60
( IN FEET )
1 inch = 30 ft.

| 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

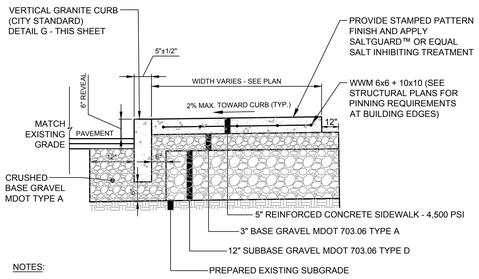
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Drawing Name: Overall Site Layout Plan
Project: Fore River Campus Consolidation, Portland, Maine
Client: Northern Light Mercy Hospital, 144 State Street, Portland, Maine 04101

Drawing No. C–3.1

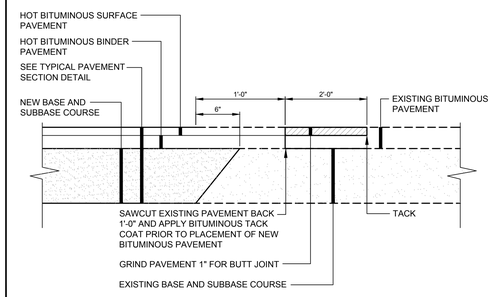
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NOTES:

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.

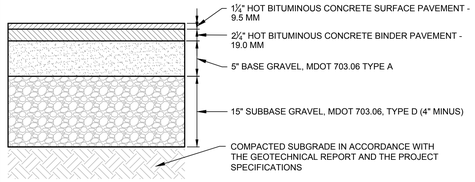
Ⓐ CONCRETE SIDEWALK DETAIL
N.T.S.



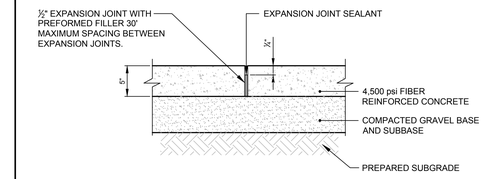

Ⓔ PAVEMENT SAWCUT DETAIL
N.T.S.

**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.



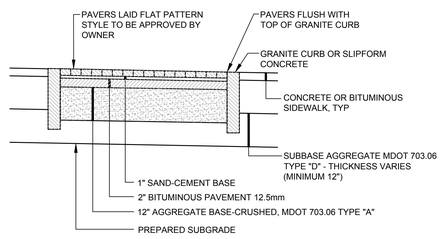

Ⓘ STANDARD DUTY BITUMINOUS CONCRETE PAVEMENT SECTION
N.T.S.



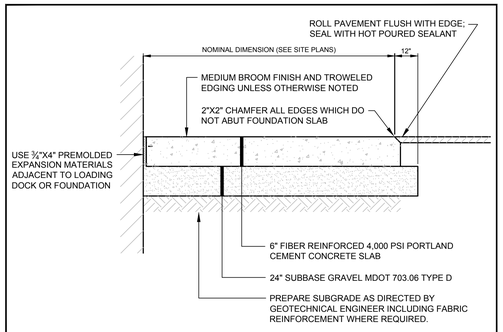

NOTE:
CONCRETE SIDEWALK TO HAVE FINE TO MEDIUM BROOM FINISH PERPENDICULAR TO CURB LINE.

PROVIDE 1/2" WIDE EXPANSION JOINT BETWEEN SIDEWALK AND ALL FIXED OBJECTS.

Ⓜ SIDEWALK EXPANSION JOINT
N.T.S.



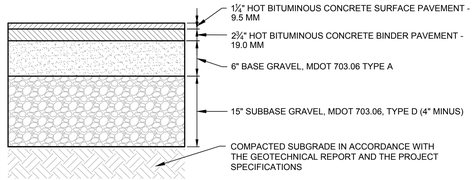

Ⓑ PAVER SIDEWALK OR ENTRY PLAZA DETAIL
N.T.S.



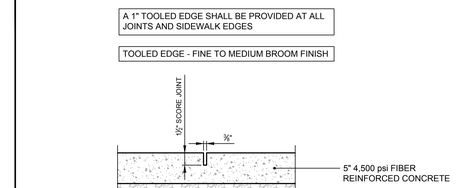

Ⓕ CONCRETE SLAB DETAIL
N.T.S.

**NOTES:**

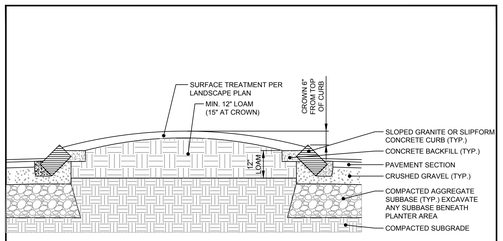
1. SEE OVERALL SITE LAYOUT PLAN (SHEET C-3.1) FOR LOCATION(S) OF DIFFERENT PAVEMENT TYPES.
2. APPLY TACK COAT BETWEEN BINDER AND SURFACE COURSES.
3. ALL MATERIALS SHALL CONFORM TO MDOT SPECIFICATIONS, LATEST REVISION. COMPACTION OF ALL MATERIALS TO BE IN ACCORDANCE WITH THE SPECIFICATIONS AND GEOTECHNICAL 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.



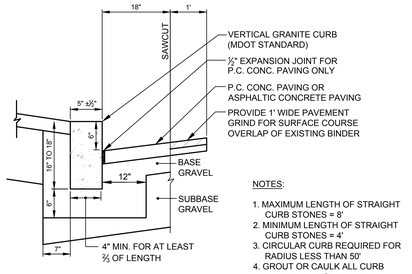

Ⓙ HEAVY DUTY BITUMINOUS CONCRETE PAVEMENT SECTION
N.T.S.




Ⓝ SIDEWALK SCORE JOINT
N.T.S.



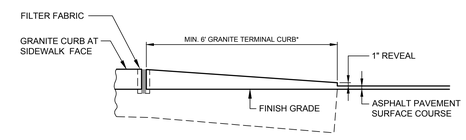

Ⓒ TYPICAL ISLAND PLANTING BEDS WITHOUT SIDEWALK
N.T.S.




NOTES:

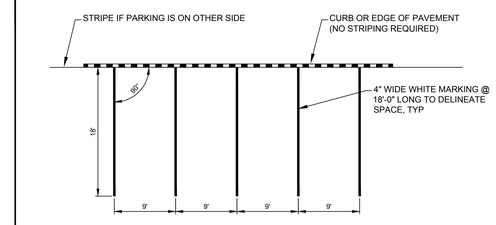
1. MAXIMUM LENGTH OF STRAIGHT CURB STONES = 8'
2. MINIMUM LENGTH OF STRAIGHT CURB STONES = 4'
3. CIRCULAR CURB REQUIRED FOR RADIUS LESS THAN 50'
4. GROUT OR CAULK ALL CURB JOINTS OVER ¼" IN WIDTH. INSTALL STRIP OF FILTER FABRIC BEHIND EACH CURB JOINT.

Ⓖ VERTICAL GRANITE CURB DETAIL
N.T.S.



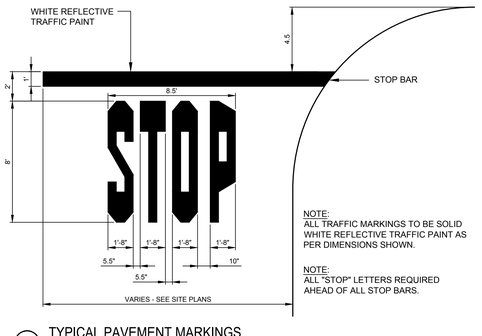

* 6'-0" IS MINIMUM - LENGTH MAY NEED TO BE EXTENDED TO MEET ADA REQUIREMENTS

Ⓚ 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.

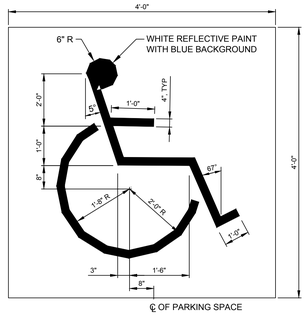
Ⓞ STANDARD PARKING STALL STRIPING
N.T.S.




NOTE:
ALL TRAFFIC MARKINGS TO BE SOLID WHITE REFLECTIVE TRAFFIC PAINT AS PER DIMENSIONS SHOWN.

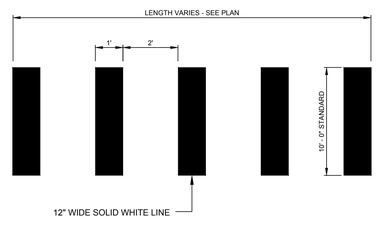
NOTE:
ALL "STOP" LETTERS REQUIRED AHEAD OF ALL STOP BARS.

Ⓓ TYPICAL PAVEMENT MARKINGS
N.T.S.




℄ OF PARKING SPACE

Ⓗ INTERNATIONAL BARRIER FREE SYMBOL
N.T.S.




Ⓛ CROSSWALK STRIPING DETAIL
N.T.S.

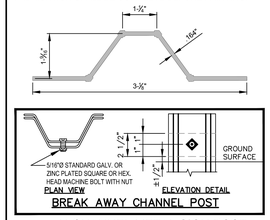
LENGTH: AS REQUIRED

WEIGHT PER LINEAR FOOT: 2.50 LBS. MIN.

HOLES: ⅜" DIAMETER, 1" C-C FULL LENGTH

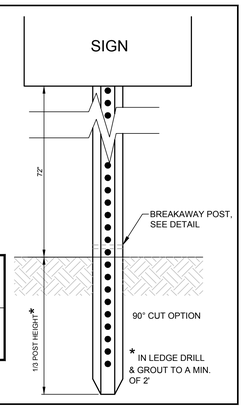
STEEL: SHALL CONFORM TO ASTM A-499 (GRADE 60) OR ASSTM A-576 (GRADE 1070 - 1080)

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 |
|---|---|---|
| – | – | – |

| 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: 3257O4-DET.dwg

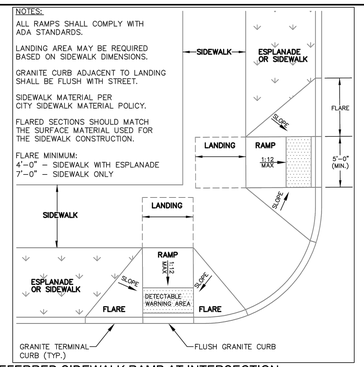
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Drawing Name: Site Details
Project: Fore River Campus Consolidation, Portland, Maine
Client: Northern Light Mercy Hospital, 144 State Street, Portland, Maine 04101

Drawing No. C–7.0

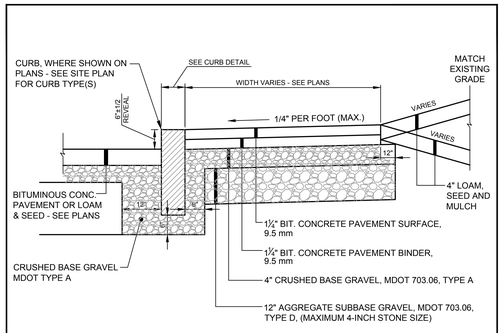
U:\3257.04_Mercy Hospital_Expansion_DD_Permits\STANTEC\civil\cadd\permit\dwg\325704-DET.dwg 8/30/2019 12:16 PM




A PREFERRED SIDEWALK RAMP AT INTERSECTION

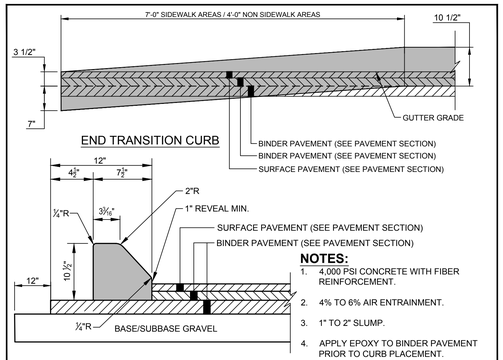
N.T.S.

AS OBTAINED FROM THE CITY OF PORTLAND "TECHNICAL MANUAL"




D BITUMINOUS SIDEWALK WITH CURB DETAIL

N.T.S.

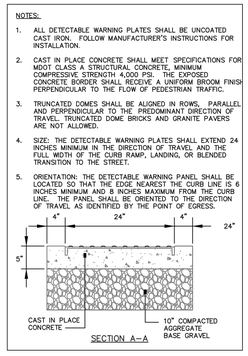


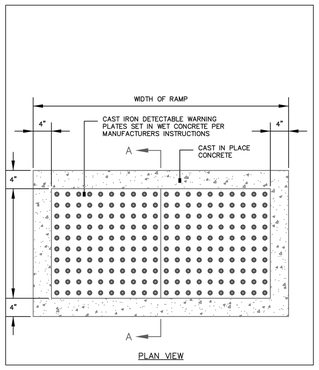

**NOTES:**

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.

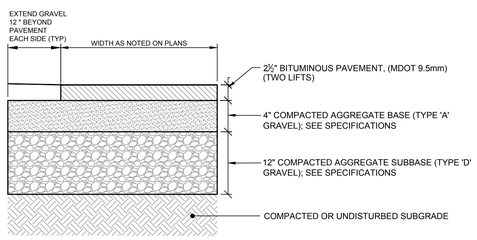



B SIDEWALK RAMP DETECTABLE WARNING PANEL

N.T.S.

AS OBTAINED FROM THE CITY OF PORTLAND "TECHNICAL MANUAL"

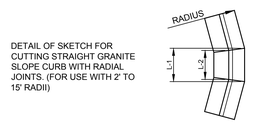


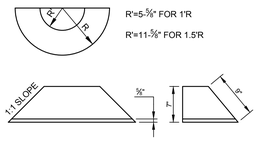

NOTES:

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.

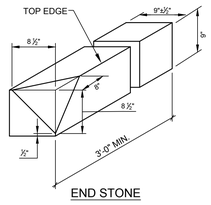
C BITUMINOUS ASPHALT SIDEWALK

N.T.S.



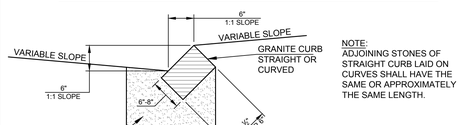




DETAIL FOR CUTTING CURVED CURB




END STONE

| L-1 | RADIUS 2' | 2.5' | 3' | 3.5' | 4' | 5' | 6' | 8' | 10' | 12' | 14' | 15' |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | L-2 | | | | | | | | | | | |
| 0'-9" | 0'-8-1/2" | | | | | | | | | | | |
| 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'-3-3/4" | 1'-4-1/2" | 1'-5" | | 1'-5-1/4" | 1'-5-1/2" | 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'-7-3/4" | 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" | 2'-4" |
| 2'-7" | | | | | | | | | | | 2'-5-3/4" | 2'-5-3/4" |
| 2'-8" | | | | | | | | | | | 2'-6-3/4" | 2'-6-3/4" |




SECTION

NOTE:
ADJOINING STONES OF STRAIGHT CURB LAID ON CURVES SHALL HAVE THE SAME OR APPROXIMATELY THE SAME LENGTH.

| 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' |

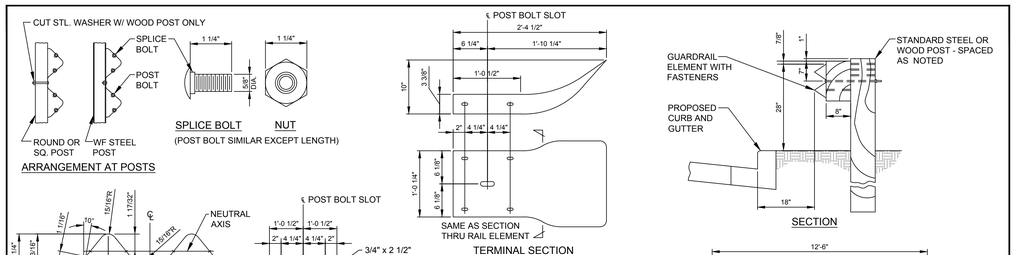
MINIMUM LENGTH OF STRAIGHT CURB STONES-18"

MAXIMUM LENGTH OF STRAIGHT CURB STONES-8'

MAXIMUM LENGTH OF STRAIGHT CURB STONES LAID ON CURVES-SEE CHART

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<br>Portland, Maine |
| Client: | Northern Light Mercy Hospital<br>144 State Street, Portland, Maine 04101 |

Drawing No. C–7.1

U:\3257.04_Mercy Hospital_Expansion_DD_Permits\STANTEC\civil\cadd\permit\dwg\325704–DET.dwg 8/30/2019 12:17 PM

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

PHASE 2
AMBULATORY SURGERY
CENTER (ASC) BUILDING
FOOTPRINT 17,574 GSF
TOTAL AREA 34,987 GSF

SWM
POND

EX. VEG.
TO REMAIN

EXIST. VEG.
TO REMAIN

FUTURE ASC
BLDG. EXPANSION

GENERATOR

TRANSPLANT 4 - BN

TRANSPLANT 6 - TOT

NEW 6 - MP

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

REMOVE / RESET /
TRANSPLANT SHRUBS
AROUND TRANSFORMER
AS NECESSARY

MEDICAL OFFICE BUILDING
4 STORY BRICK
FOOTPRINT - 20,047 GSF
TOTAL AREA - 82,186 GSF

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

EX. RAISED CROSSWALK

PAVED WALK

PAVED ISLAND

OVERHANG BRICK

CHILLER

OXYGEN

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

| 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: 1" = 40' | Job No.: 3257.04
File Name: 325704-LANDSCAPE.dwg

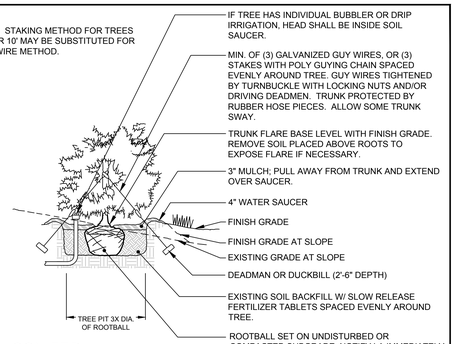
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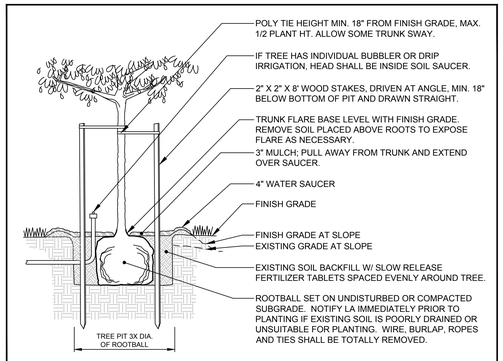
Drawing Name: LANDSCAPE PLAN
Project: Fore River Campus Consolidation
Portland, Maine
Client: Northern Light Mercy Hospital
144 State Street, Portland, Maine 04101

Drawing No. C-6.0

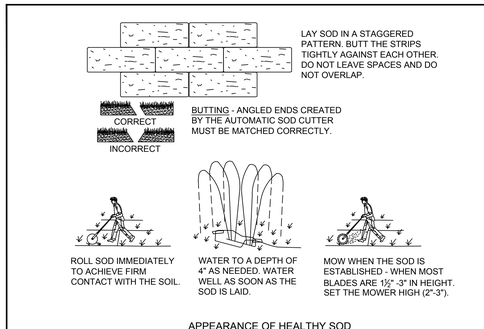
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## A CONIFER INSTALLATION DETAIL
N.T.S.




## 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.

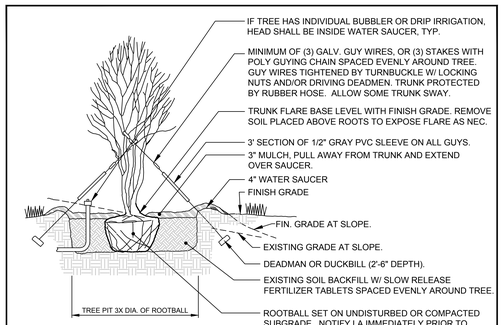
(d) ALL OTHER SPECIFICATIONS FOR THIS PRACTICE SHALL BE ADHERED TO WHEN SODDING A WATERWAY.

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.

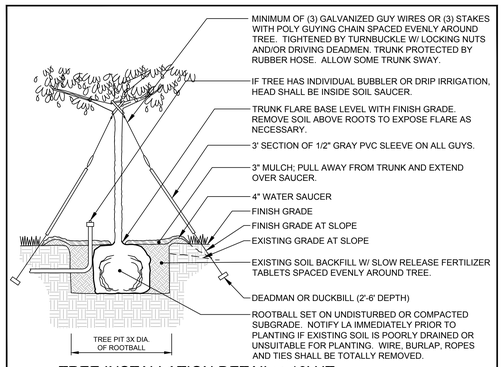
MAINTENANCE
(a) AFTER THE FIRST WEEK, SOD SHALL BE WATERED AS NECESSARY TO MAINTAIN ADEQUATE MOISTURE IN THE ROOT ZONE AND PREVENT DORMANCY OF SOD.

(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.

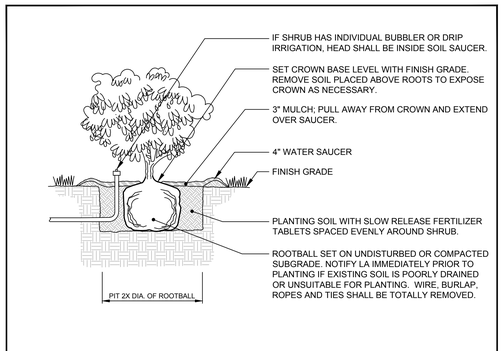
(c) AFTER THE FIRST GROWING SEASON, ESTABLISHED SOD WILL REQUIRE FERTILIZATION AND MAY REQUIRE LIME. FOLLOW SOIL TEST RECOMMENDATIONS.



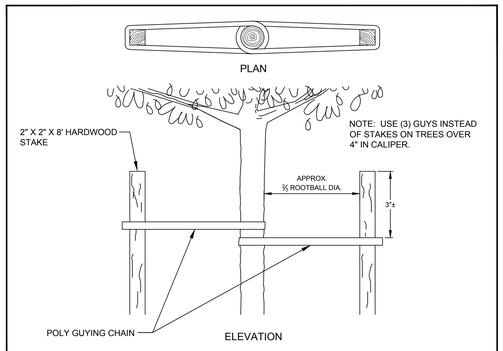

## B MULTI-TRUNKED TREE INSTALLATION DETAIL
N.T.S.



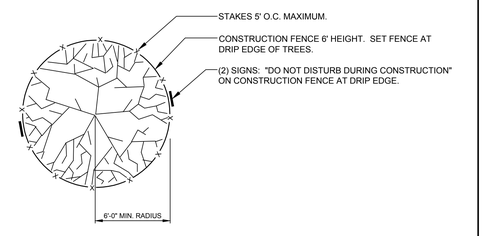

## F TREE INSTALLATION DETAIL: >10' HT.
N.T.S.




## 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 |
|---|---|---|
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| Issued For | Date | By |
|---|---|---|
| PERMIT APPROVAL SUBMISSION | 08.30.19 | SRB |
| DESIGN DEVELOPMENT SUBMISSION TO OWNER | 07.31.19 | SRB |

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| 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

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EXISTING PERIMETER ACCESS ROAD

NEW MMC SURFACE PARKING LOT

EXISTING 115 KVA POWER UNDERGROUND OIL ENCASED

S10°57'07"E 290.08'

EXISTING P.W.D. 12" SUPPLY MAIN (PVC)

EXISTING HYDRANT LOCATED APPROXIMATELY 80' SOUTH OF THIS LOCATION

TEST PIT TO DETERMINE EXACT LOCATION AND DEPTH OF EXISTING UTILITIES, TYP.

EX SMH

CONNECT TO EXISTING SANITARY SEWER MANHOLE 8" INV. IN = 11.72

CROSSING OF THE EXISTING 115KVA OIL ENCASED LINE SHALL INVOLVE HAND EXCAVATION WITH 5 FEET OF THE PIPE, IN ACCORDANCE WITH CENTRAL MAINE POWER CO. (CMP) REQUIREMENTS. CMP SHALL BE NOTIFIED 14 DAYS IN ADVANCE PRIOR TO ANY EXCAVATION WORK, TYP.

S09°29'00"E 197.09

SMH 2

SMH 1

PROPOSED 8" SANITARY SEWER

SAN. SEWER EXIT POINT, INV. = 13.5 COORDINATE WITH PLUMBING PLANS

PROPOSED GAS SERVICE - COORDINATE WITH GAS UTILITY CO.

PROPOSED TRANSFORMERS ON REINFORCED CONCRETE PADS

GENERATOR PAD

ASC BLDG

PROPOSED UNDERGROUND ELECTRIC & COMMUNICATIONS TWO 6" PVC CONDUITS (POWER) TO EACH TRANSFORMER FOUR 4" PVC CONDUITS (TEL / CABLE / SPARE)

EXISTING 115 KVA POWER UNDERGROUND OIL ENCASED

TEST PIT TO DETERMINE EXACT LOCATION AND DEPTH OF EXISTING UTILITIES, TYP.

3.5' MIN. SEPARATION

12"x6" TS & VALVE

12"x4" TS & VALVE

ASC FACILITY
F.F.E. = 19.00

PROPOSED 4" DOMESTIC SERVICE AND 6" FIRE SERVICE

EXISTING HYDRANT

WATER SERVICE ROOM

4" DOMESTIC WATER SERVICE ENTRY POINT AN RPZ AND A TESTABLE DOUBLE CHECK BACKFLOW PREVENTER ASSEMBLY IS REQUIRED AFTER THE DOMESTIC METER IN ACCORDANCE WITH P.W.D. REQUIREMENTS

½ BENDS, TYP.

PROPOSED OXYGEN LINE - SEE MEDIGAS PLANS FOR DETAILS

6" FIRE SERVICE ENTRY POINT

GRAPHIC SCALE
30 0 15 30 60
( IN FEET )
1 inch = 30 ft.

N/F
UNION STATION
LIMITED PARTNERSHIP
10144/23

COUNTY WAY

L=384.91'

L=176.13'

R=988.32'

L=175.00'

N48°17'54"E 66.00'

L=1102.20'

R=922.37'

L=522.60'

S11°24'37"E 150.16'

S11°03'05"E 86.50'

N78°56'54"E 67.28'

S78°56'23"W 82.43'

RELOCATE LIGHT POLE, TYP.

EXISTING HYDRANT

ADJUST VALVE BOXES TO GRADE, TYP.

EXISTING HYDRANT

GROUND FLOOR
F.F.E. = 17.55

HOSPITAL ADDITION
FIRST FLOOR
F.F.E. = 32.00

NOTE: SANITARY SEWER, WATER & ELECTRICAL SERVICES PROVIDED INTERNALLY FROM EXISTING BUILDING

ADJUST UTILITY MANHOLE RIM TO GRADE, TYP.

ADJUST PHONE CABINET TO GRADE

ADJUST SMH RIM TO GRADE, TYP.

ADJUST VALVE COVERS TO GRADE, TYP.

RELOCATED SPRINKLER / FDC (SEE PLUMBING PLANS)

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

TERMINUS SMH (FM DISCHARGE)

EXISTING HYDRANT

GENERATOR

CHILLER

OXYGEN

EX. LIFT STA.

EX. GREASE TANK

EX. SMH

CONC. RAMP

LOAD DOCK

LOADING DOCK

EX. SAN. OUT

EX. 4" FM (CONNECTS TO TERMINUS MANHOLE AT FRONT OF BLDG.

PAVED WALK

BRICK

OVERHANG

CONCRETE

FFE= 32.06

I-295 CONNECTOR
(FORE RIVER PARKWAY)
19154/155

472.62'
N36°45'03"W

L=197.60'
R=1184.38'

N62°48'29"E 13.12'

EX. FORE RIVER TRAIL - 10' WIDE SHARED USE

HIGH WATER LINE OF FORE RIVER

FORE RIVER

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" = 30' | Job No.: 3257.04 |
| File Name: 3257.04–UTILITY.dwg | | |

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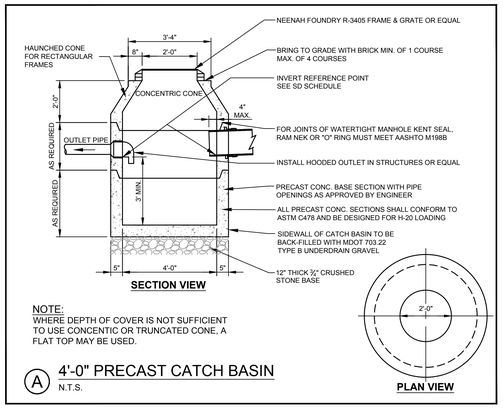
Drawing Name: Overall Utility Plan – North

Project: Fore River Campus Consolidation
Portland, Maine

Client: Northern Light Mercy Hospital
144 State Street, Portland, Maine 04101

Drawing No. C–5.0

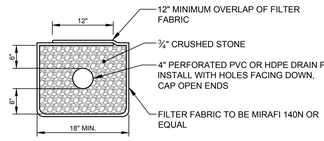
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**SECTION VIEW**

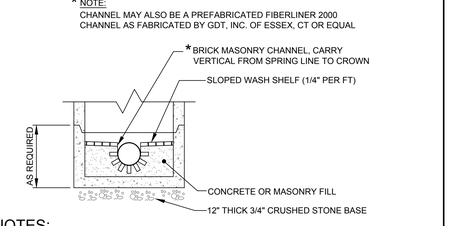
NOTE:
WHERE DEPTH OF COVER IS NOT SUFFICIENT TO USE CONCENTIC OR TRUNCATED CONE, A FLAT TOP MAY BE USED.

## (A) 4'-0" PRECAST CATCH BASIN
N.T.S.




NOTE:
LOCATIONS AS NOTED ON PLANS - COORDINATE WITH ARCHITECTURAL AND / OR STRUCTURAL PLANS.

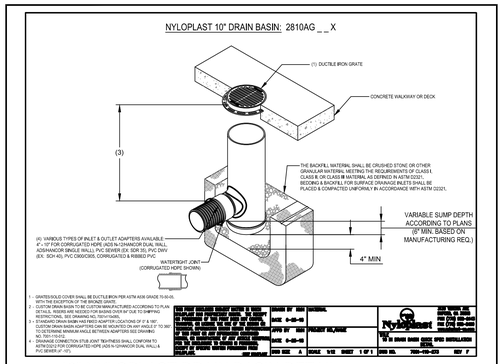
## (D) TYPICAL FOUNDATION DRAIN DETAIL
N.T.S.




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.

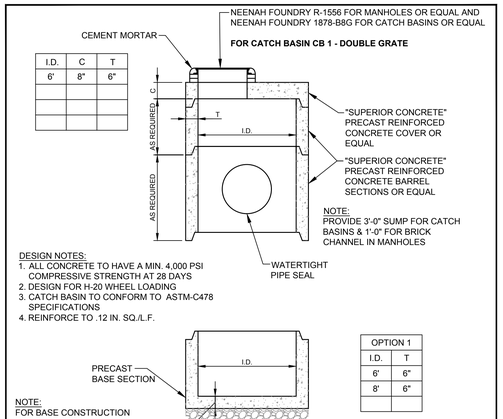



1. GRATES/SOLID COVER SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05 WITH THE EXCEPTION OF THE BRONZE GRATE.
2. DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RISERS ARE NEEDED FOR BASINS OVER 24" DUE TO SHIPPING RESTRICTIONS. SEE DRAWING NO. TB1H-11A/B5.
3. STANDARD DRAIN BASIN HAS TWO 8" INSERT ADAPTER LOCATIONS OF 0' & 180°. CUSTOM DRAIN BASIN ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN MAINLINE AND LATERAL ADAPTERS SEE DRAWING NO. TB2H-11A/B12.
4. DRAINAGE CONNECTION STUB (JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL) & PVC SEWER (F, GC).

| Test Hole Data | Drawn By: MJM | Material: |
|---|---|---|
| Test Hole Data Unless Noted Otherwise, Soil Types Are Based On Visual Classification In Accordance With ASTM D2488. | Date: 6-6-19 | |
| | Checked By: MJM | Nyloplast |
| | Date: 6-6-19 | Title: |
| | Project No. | 10" 2-Hole Round Base Style Installation Detail |
| | Scale: NTS | |
| | Size: A | Sheet: 1 of 1 |

Dwg. No. 7000-10-2810 Rev. F

## (L) 10" NYLOPLAST DRAIN BASIN DETAIL
N.T.S.




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**

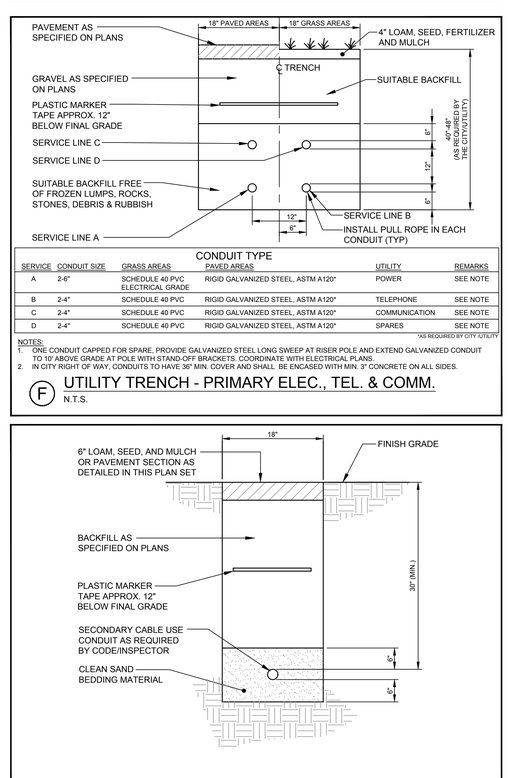



| OPTION 2 | |
|---|---|
| I.D. | W |
| 6' | 9' |
| 8' | 11'-4" |
| | |

**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.



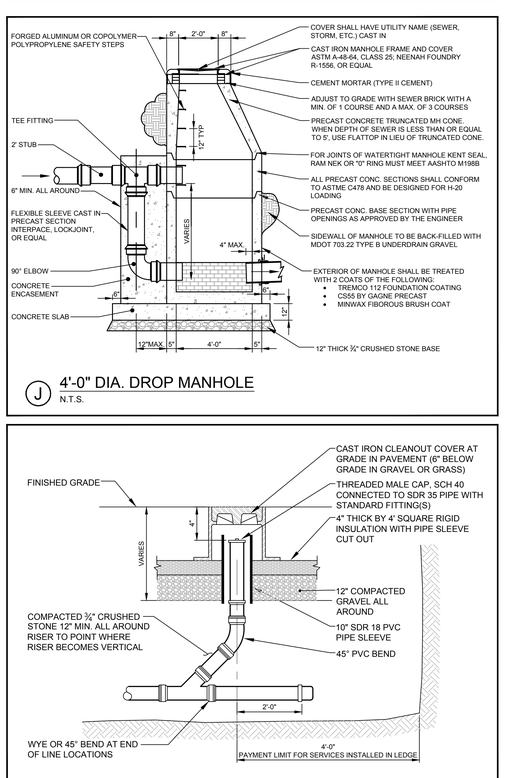

NOTES

1. ALTERNATIVE CONSTRUCTION METHODS OR PAYMENT METHODS SHALL BE APPROVED IN ADVANCE BY THE CITY.
2. IN PAVED AREAS, DEPTH OF GRAVEL AND HOT MIX ASPHALT SHALL BE EQUAL TO OR 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 |

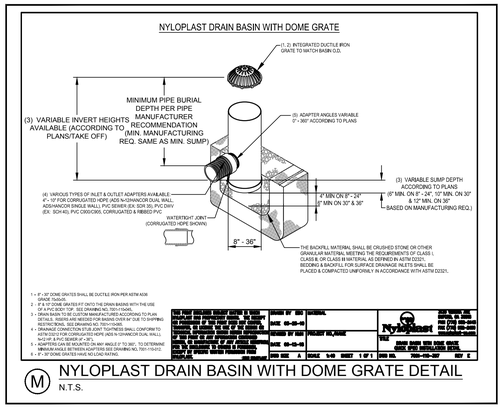
## (E) TYPICAL PIPE TRENCH INSTALLATION AND NOTES
N.T.S.

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" x 30" DOME GRATES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
2 = 8" INLET ADAPTER WATERS FIT ONTO THE DRAIN BASINS WITH THE USE OF A PVC BODY TOP. SEE DRAWING NO. TB1H-11A/B4.
3 = DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RISERS ARE NEEDED FOR BASINS OVER 24" DUE TO SHIPPING RESTRICTIONS. SEE DRAWING NO. TB1H-11A/B5.
4 = DRAINAGE CONNECTION STUB (JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL) w/24" & PVC SEWER (F, GC).
5 = 8" DOME GRATES MAY BE ROTATED IN ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. TB2H-11A/B12.
6 = 8" - 30" DOME GRATES HAVE NO LOAD RATING.

| Test Hole Data | Drawn By: MJM | Material: |
|---|---|---|
| Test Hole Data Unless Noted Otherwise, Soil Types Are Based On Visual Classification In Accordance With ASTM D2488. | Date: 6-6-19 | |
| | Checked By: MJM | Nyloplast |
| | Date: 6-6-19 | Title: |
| | Project No. | 8" 2-Hole Round Base Style Installation Detail |
| | Scale: NTS | |
| | Size: A | Sheet: 1 of 1 |

Dwg. No. 7000-10-2407 Rev. E

## (M) NYLOPLAST DRAIN BASIN WITH DOME GRATE 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.

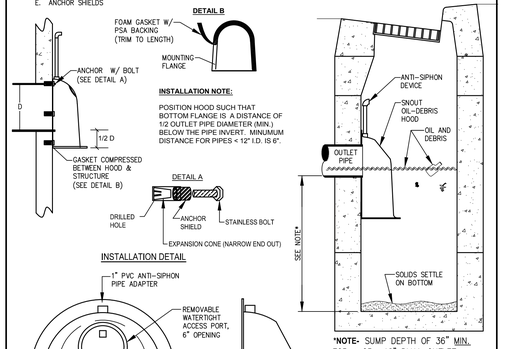



## (J) 4'-0" DIA. DROP MANHOLE
N.T.S.

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




*NOTE- SUMP DEPTH OF 36" MIN. FOR < OR= 12" DIAM. OUTLET. FOR OUTLETS >OR= 15", DEPTH = 2.5–3X DIAM.

TYPICAL INSTALLATION

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.




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.




## (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 |
|---|---|---|
| – | – | – |

| 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 | | |

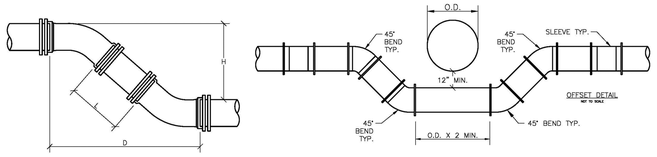
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207.772.2515

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–7.2

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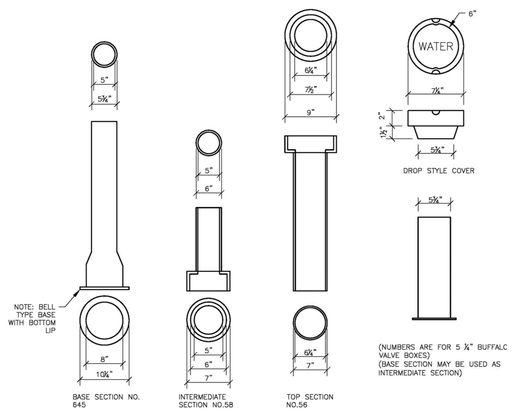






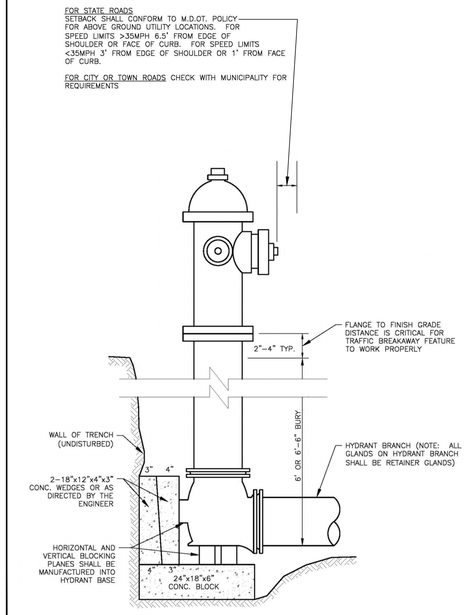
TYPICAL MAIN OFFSET

| | 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

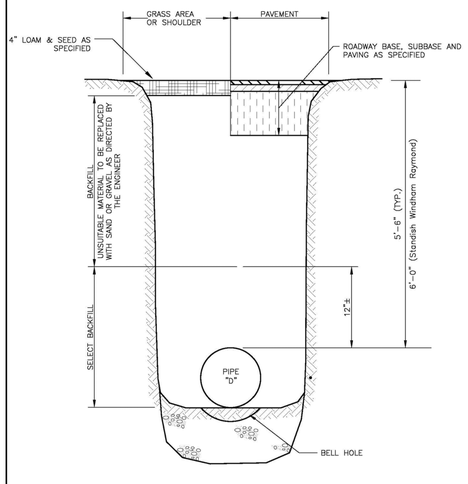
Ⓐ STANDARD WATER DETAILS
N.T.S.



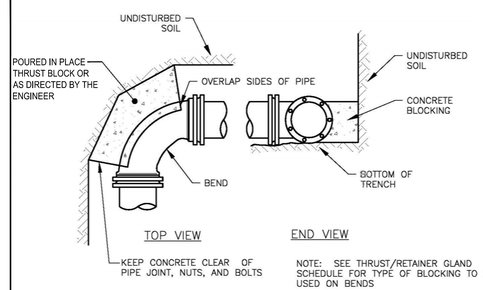

Ⓔ HYDRANT INSTALLATION DETAIL
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TRENCH NOTES

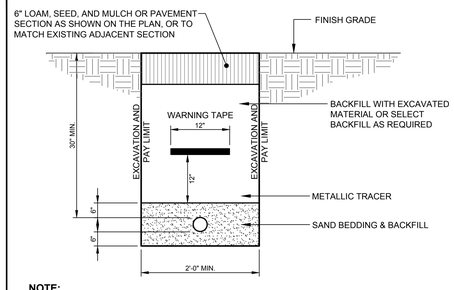
1. MAX PAY LIMITS SHALL BE 1.5 TIMES THE PIPE DIAMETER ON EACH SIDE OF PIPE
2. CLAY DAMS WILL BE INSTALLED IN LEDGE TRENCHES EVERY 100'± IN AREAS OF MORE THAN 3% SLOPE.




Ⓑ TYPICAL WATER TRENCH DETAIL
N.T.S.

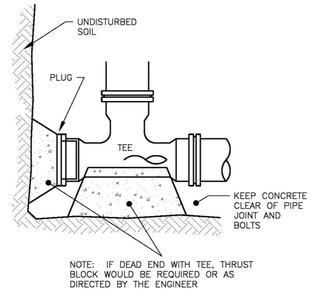



Ⓒ STANDARD BEND BLOCKING
N.T.S.




**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

| 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 | | |

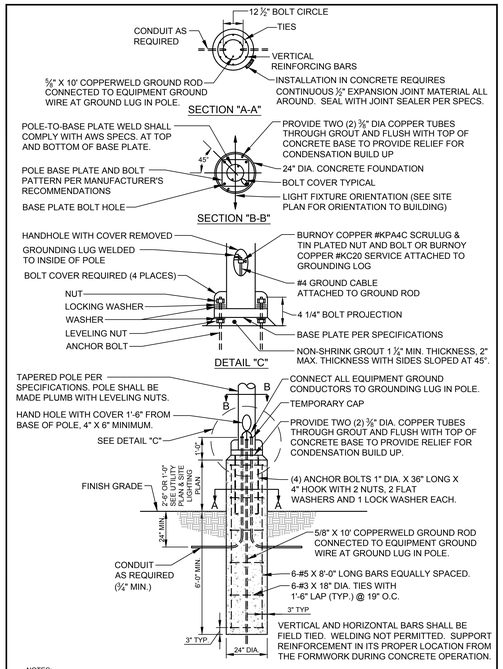
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| | |
|---|---|
| Drawing Name: | Storm Drain & Utility Details |
| Project: | Fore River Campus Consolidation<br>Portland, Maine |
| Client: | Northern Light Mercy Hospital<br>144 State Street, Portland, Maine 04101 |

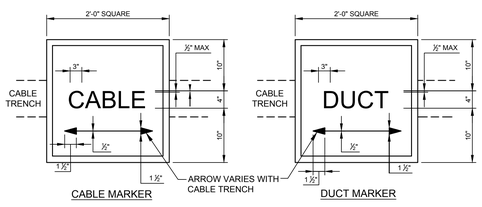
Drawing No. C–7.3

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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.

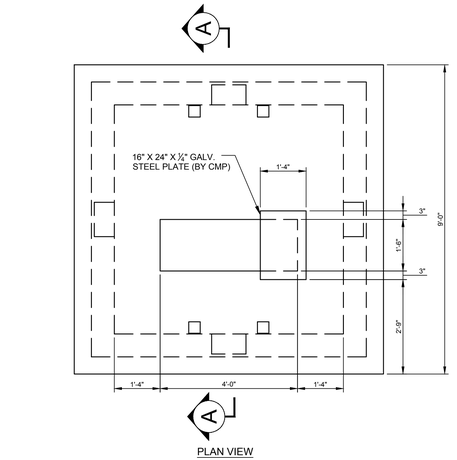



CABLE MARKER

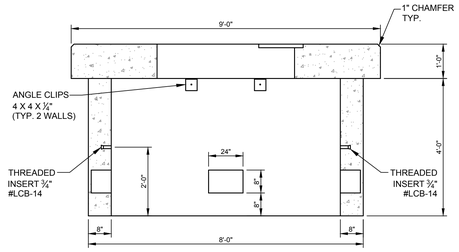
DUCT MARKER

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.

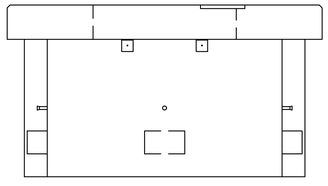
## (B) ELECTRICAL MARKERS
N.T.S.




PLAN VIEW




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
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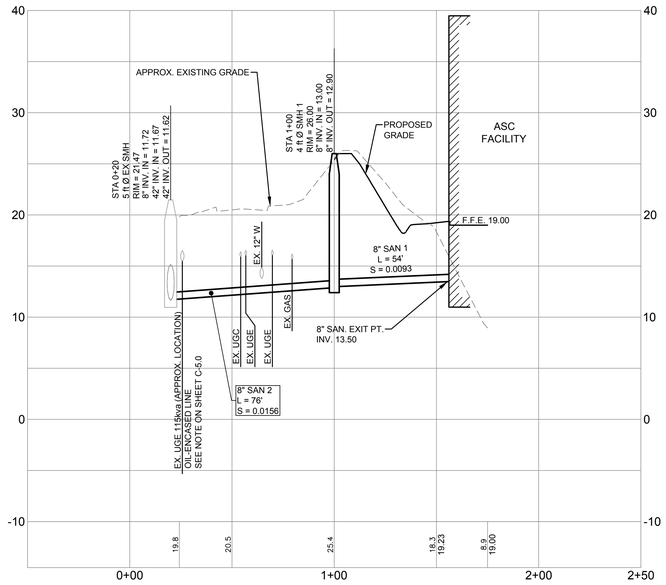
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Drawing Name: Storm Drain & Utility Details
Project: Fore River Campus Consolidation, Portland, Maine
Client: Northern Light Mercy Hospital, 144 State Street, Portland, Maine 04101

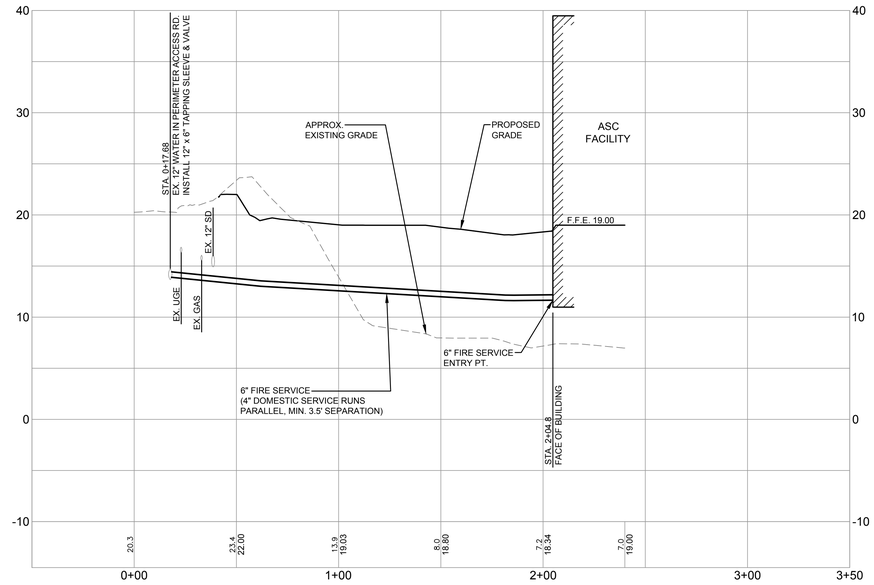
Drawing No. C–7.4

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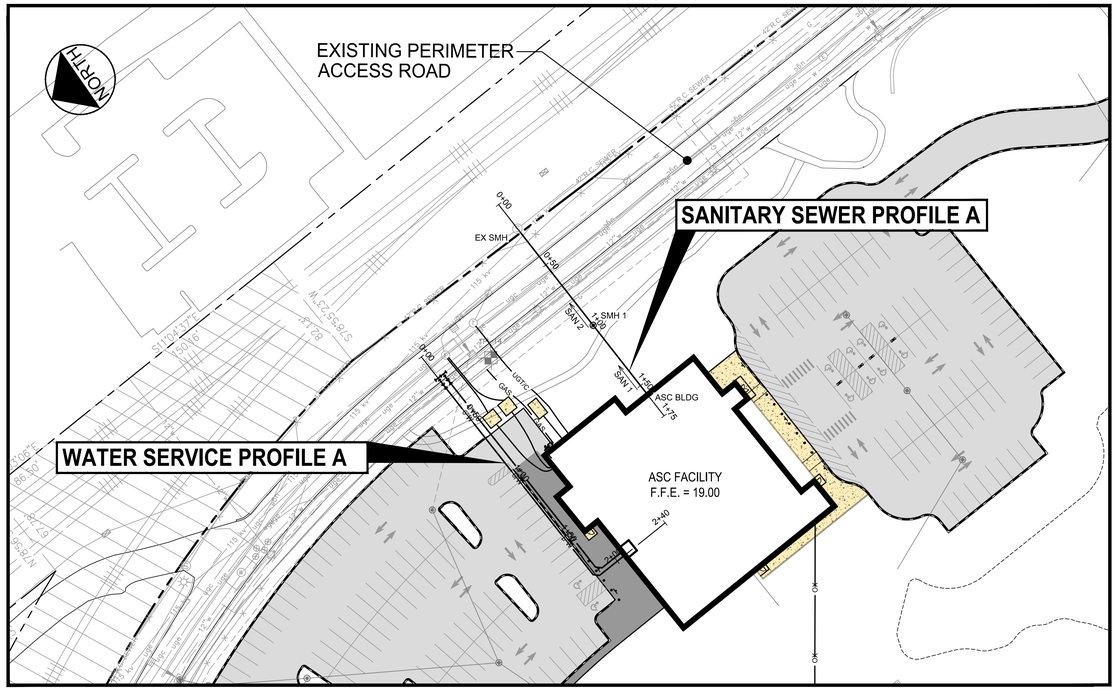

## SANITARY SEWER PROFILE A

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
0+00
0+50
SMH 1
1+30
SAN 2
1+00
SAN 1
1+54
ASC BLDG
1+75
ASC FACILITY
F.F.E. = 19.00
2+40
GAS
UGTC
6"DOM
6"FIRE
EX. 12" SEWER
EX. 8" SEWER
EX. 12" W
EX. 8" W
EX. 6" W
EX. 4" W
EX. 6" FIRE
EX. 4" DOM
EX. 2" GAS
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| 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<br>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<br>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<br>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<br>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

## EXISTING PERIMETER ACCESS ROAD

**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.

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

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.

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

CONNECT EXISTING STORM DRAIN TO DMH 2

CONNECT EXISTING STORM DRAIN TO DMH 4

EX. WATER MAIN TO ST. JOHN STREET

EX. FIRE LINE, SUPPLY METER PIT

GRADE TO DIRECT RUNOFF TO SWALE

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

EXCESS FILL MAY BE PLACED IN THIS AREA (TYP.)

SEDIMENT FOREBAY BOTTOM EL. 9.0

RIPRAP OUTLET APRON

RIPRAP OUTLET APRON, TYP.

OUTFALL 1

10" SD INV. 13.00

12" SD INV. 9.00

18" SD INV. 11.00

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

GRADE TO DIRECT RUNOFF TO SWALE

GRADE TO DIRECT RUNOFF TO CULVERT

12" SD INV. 13.00

12" SD INV. 12.00

REMOVE TRAIL, RESTORE TO LAWN

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

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'

S11°01'05"E 86.50'

N78°36'54"E 67.78'

L=384.91'

L=1102.20'

L=522.60'

R=922.37'

L=197.60'

R=1184.38'

L=185.42'

R=1197.50'

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
LICENSED PROFESSIONAL ENGINEER
08.30.19

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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HOSPITAL EXPANSION

GROUND FLOOR
F.F.E. 17.55

FIRST FLOOR
F.F.E. 32.00

4 ST
FO
TOT

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" FOUNDATION DRAIN OUTLET

DIRECT RUNOFF TO CATCH BASIN

4" PERFORATED FOUNDATION DRAIN COORDINATE WITH ARCHITECTURAL / STRUCTURAL PLANS

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.

12" ROOF DRAIN EXIT POINT INV. 28.00 COORDINATE WITH ARCHITECTURAL PLANS

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

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

EMERGENCY VEHICLES ONLY

EMERGENCY DROP-OFF ONLY

ONLY

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 |
|---|---|---|
| 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

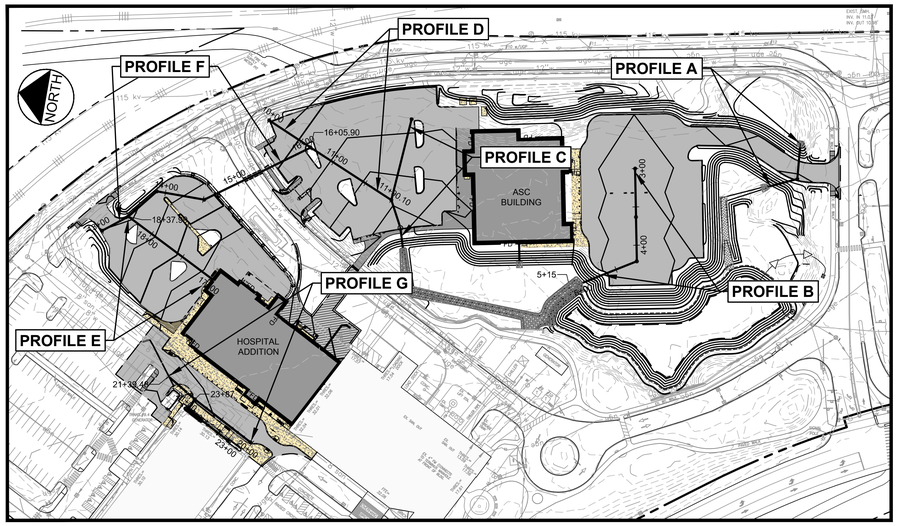
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Drawing Name: Detailed Grading Plan
Project: Fore River Campus Consolidation, Portland, Maine
Client: Northern Light Mercy Hospital, 144 State Street, Portland, Maine 04101

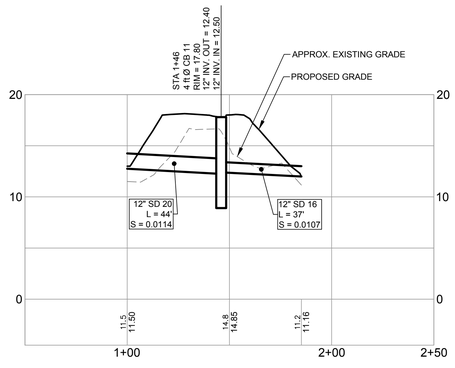
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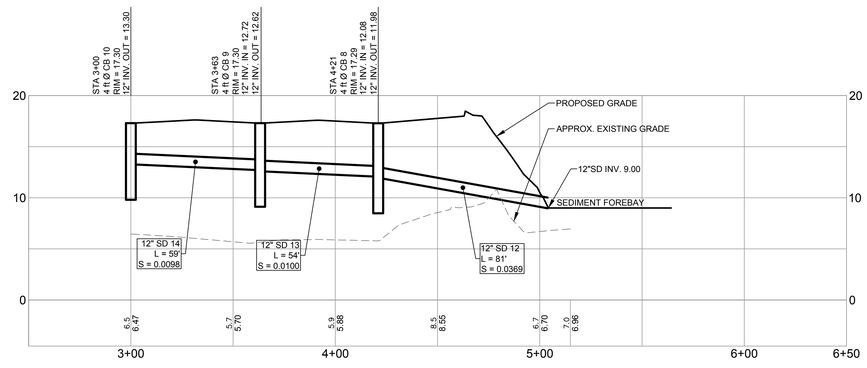

## ORIENTATION SKETCH

SCALE: 1" = 80'



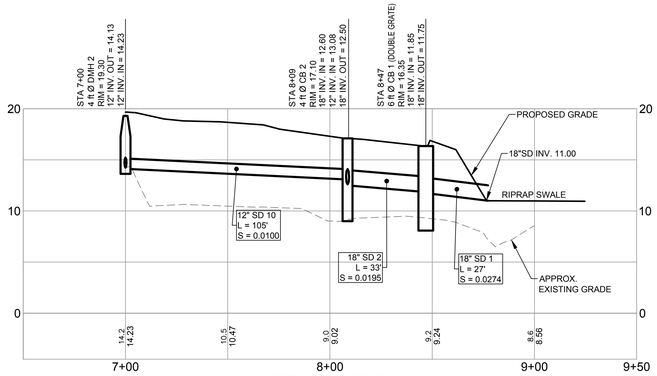

## PROFILE A

SCALE: 1" = 30' HORZ.
1" = 6' VERT.



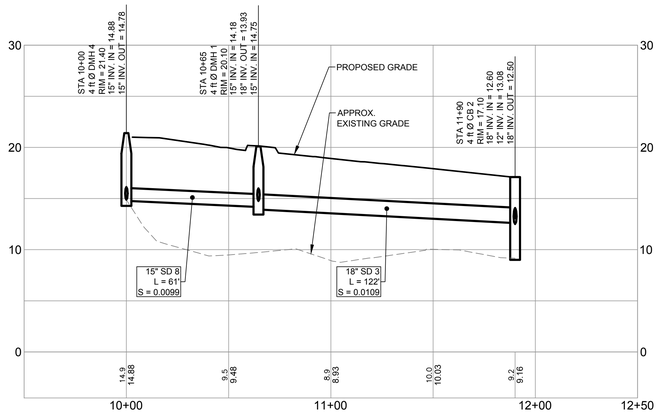

## PROFILE B

SCALE: 1" = 30' HORZ.
1" = 6' VERT.



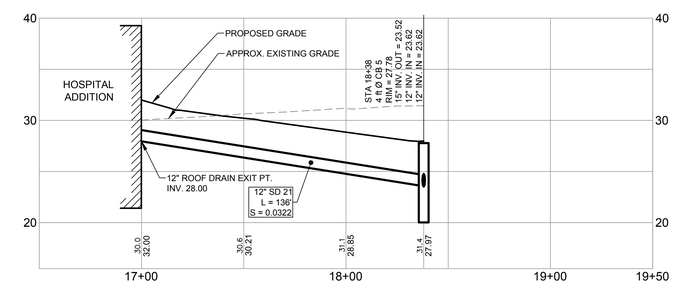

## PROFILE C

SCALE: 1" = 30' HORZ.
1" = 6' VERT.



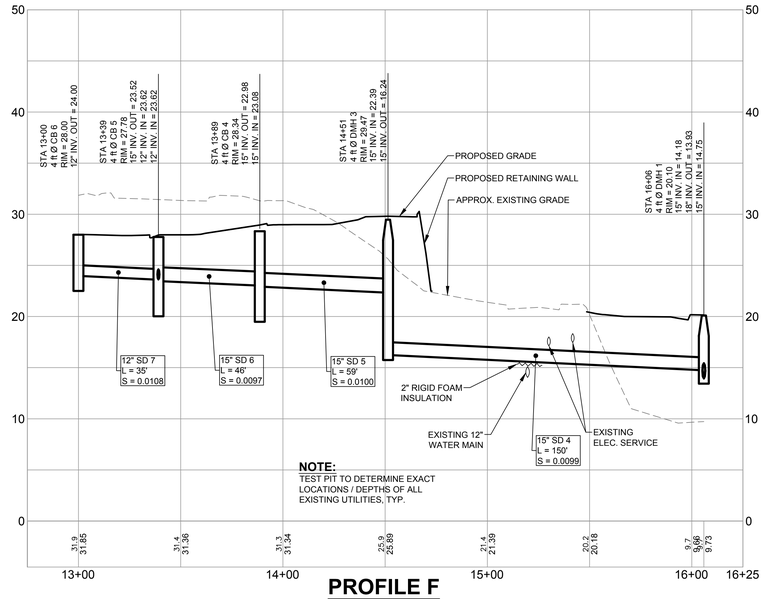

## PROFILE D

SCALE: 1" = 30' HORZ.
1" = 6' VERT.



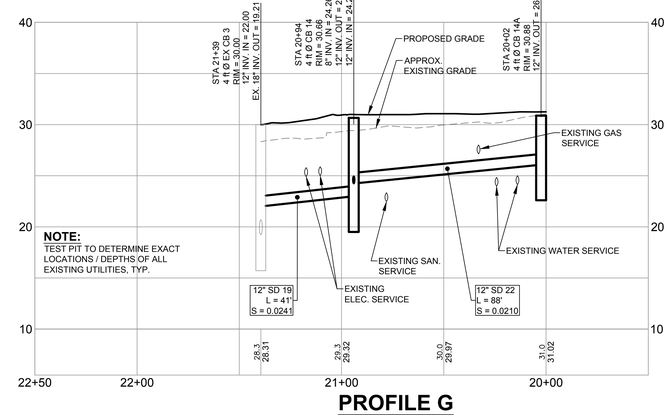

## PROFILE E

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.

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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| PERMIT APPROVAL SUBMISSION | 08.30.19 | SRB |
| DESIGN DEVELOPMENT SUBMISSION TO OWNER | 07.31.19 | SRB |

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| Checked: SRB | Scale: | Job No.: 3257.04 | |
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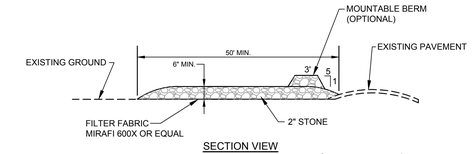
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| | |
|---|---|
| Drawing Name: | Storm Drain Profiles |
| Project: | Fore River Campus Consolidation<br>Portland, Maine |
| Client: | Northern Light Mercy Hospital<br>144 State Street, Portland, Maine 04101 |

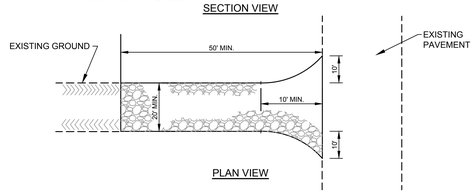
Drawing No. C–10.0

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NOTE:
CONTRACTOR SHALL ADD STONE TO OR REMOVE AND RECONSTRUCT THE STABILIZED CONSTRUCTION ENTRANCE AS MUD/SILT MATERIAL ACCUMULATES

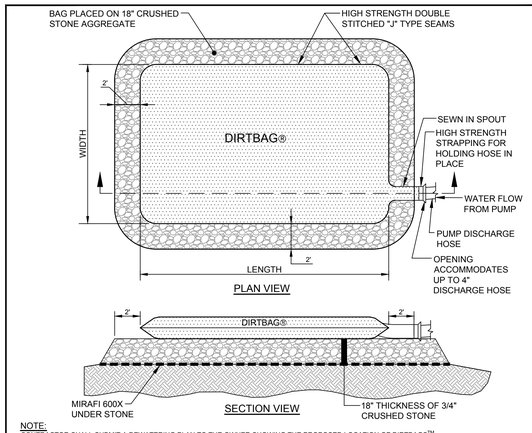



SECTION VIEW




PLAN VIEW

## A STABILIZED CONSTRUCTION ENTRANCE DETAIL
N.T.S.




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.

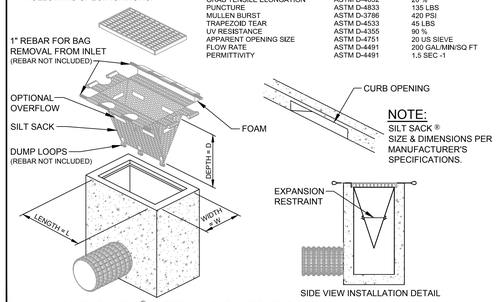
## D DIRTBAG® DETAIL AND SPECIFICATIONS
N.T.S.

NOTE: THE SILT SACK ® WILL BE MANUFACTURED FROM A WOVEN POLYPROPYLENE FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS:

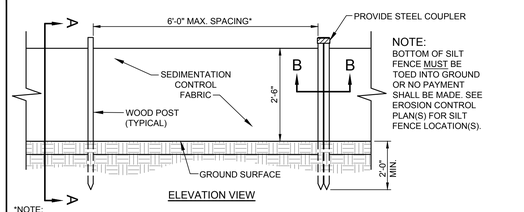
HIGH-FLOW SILT SACK ® (FOR USE IN LOW POINTS/SAGS)

(FOR AREAS OF MODERATE TO HEAVY PRECIPITATION AND RUN-OFF)

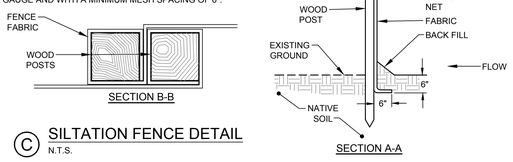
| PROPERTIES | TEST METHOD | UNITS |
|---|---|---|
| GRAB TENSILE STRENGTH | ASTM D-4632 | 265 LBS |
| GRAB TENSILE ELONGATION | ASTM D-4632 | 20 % |
| PUNCTURE | ASTM D-4833 | 135 LBS |
| MULLEN BURST | ASTM D-3786 | 420 PSI |
| TRAPEZOID TEAR | ASTM D-4533 | 45 LBS |
| UV RESISTANCE | ASTM D-4355 | 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.

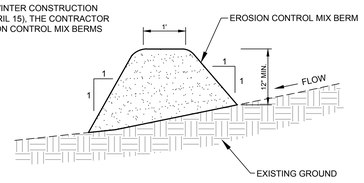



*NOTE:
THE SILT FENCE SHOULD HAVE A MAXIMUM STAKING DISTANCE OF 6', UNLESS THE FENCE IS SUPPORTED BY WIRE FENCE REINFORCEMENT, A MAXIMUM 14 GAUGE AND WITH A MINIMUM MESH SPACING OF 6".




## 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.

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 | | |

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: | Erosion Control Details |
| Project: | Fore River Campus Consolidation<br>Portland, Maine |
| Client: | Northern Light Mercy Hospital<br>144 State Street, Portland, Maine 04101 |

Drawing No. C–7.5

U:\3257.04_Mercy Hospital_Expansion_DD_Permits\STANTEC\civil\cadd\permit\dwg\325704–DET.dwg 8/30/2019 12:18 PM

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 prorected 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, final 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.

.

## 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 |
|---|---|---|
| – | – | – |

| 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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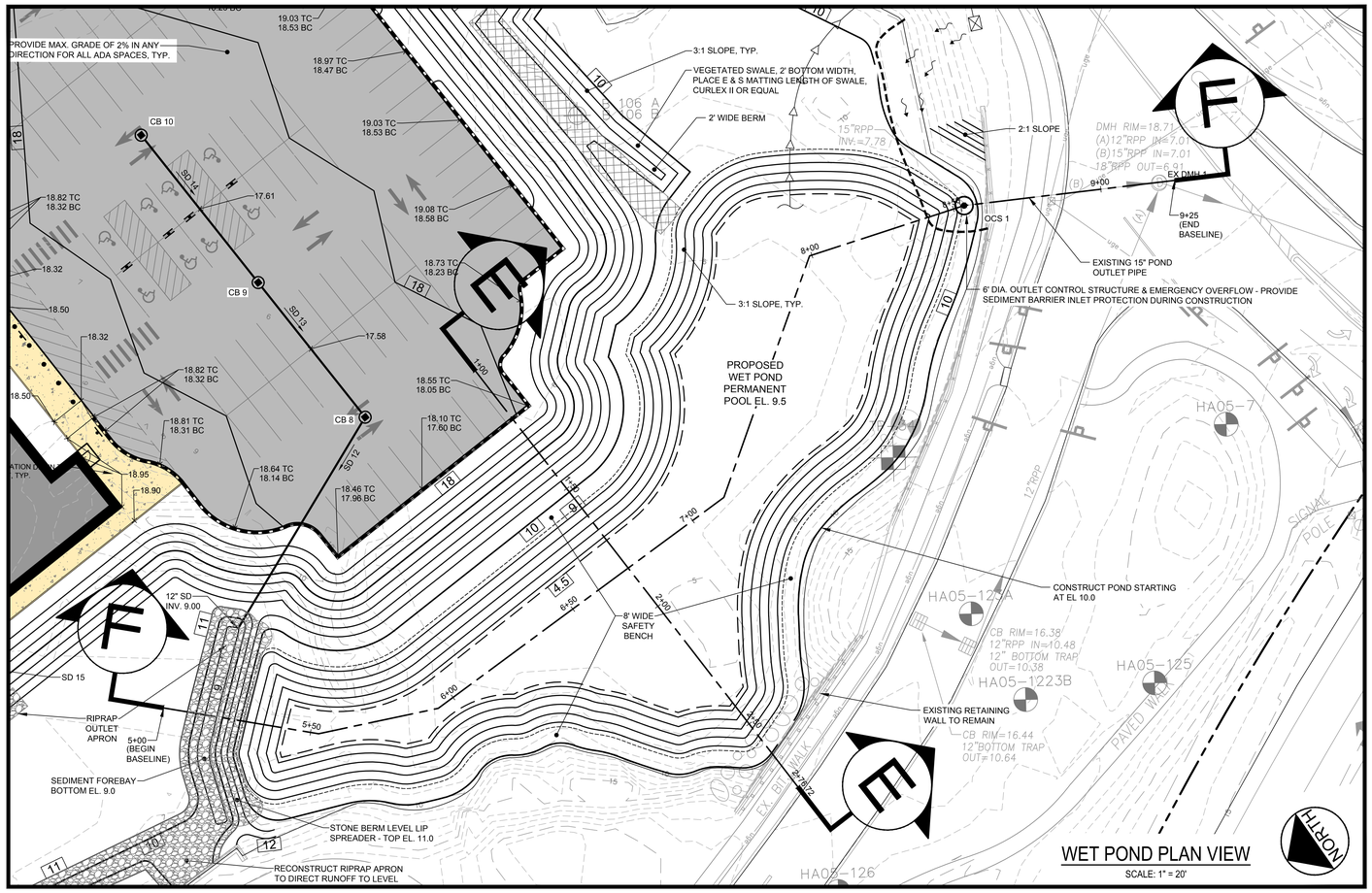
Drawing Name: Erosion Control Notes & Seeding Plan

Project: Fore River Campus Consolidation
Portland, Maine

Client: Northern Light Mercy Hospital
144 State Street, Portland, Maine 04101

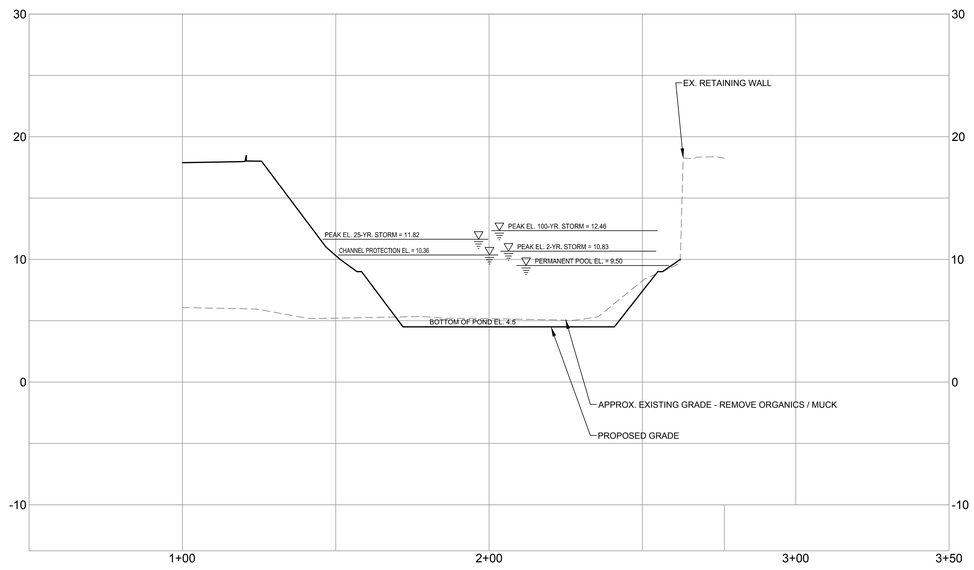
Drawing No. C–7.6

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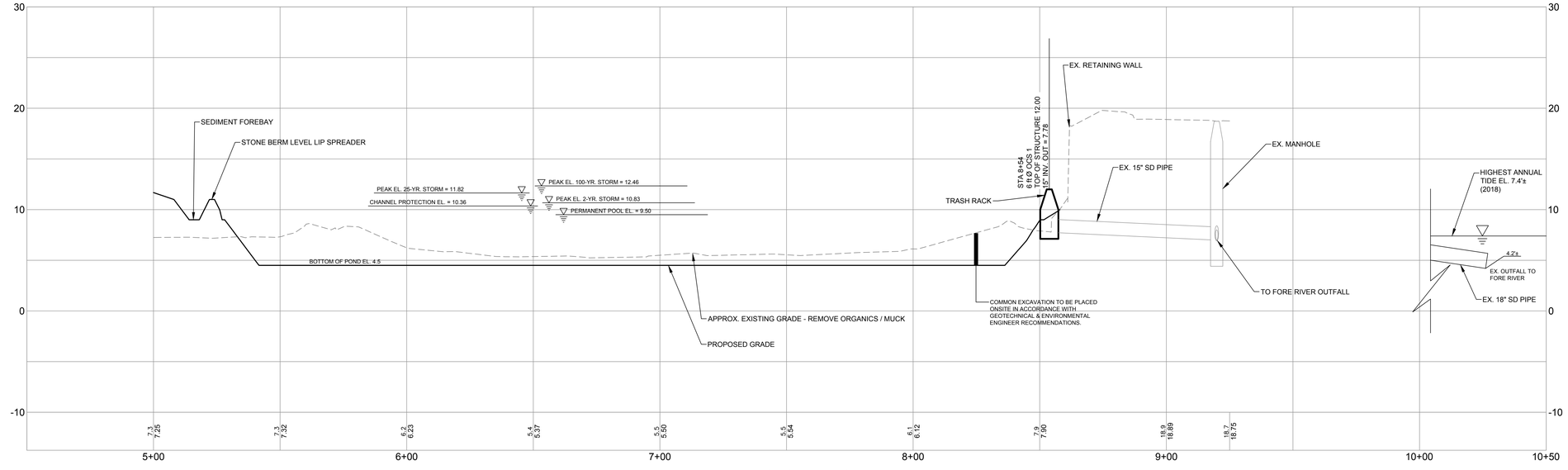

WET POND PLAN VIEW

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.

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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| PERMIT APPROVAL SUBMISSION | 08.30.19 | SRB |
| DESIGN DEVELOPMENT SUBMISSION TO OWNER | 07.31.19 | SRB |

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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 | | | |

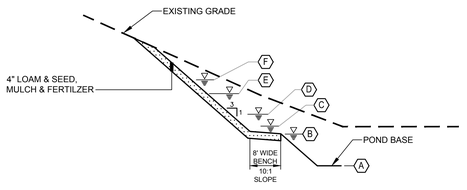
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Drawing Name: Wet Pond Plan & Cross Sections
Project: Fore River Campus Consolidation
Portland, Maine
Client: Northern Light Mercy Hospital
144 State Street, Portland, Maine 04101

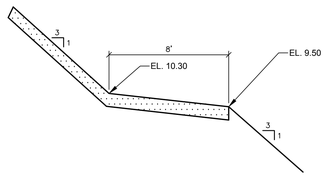
Drawing No. C-8.0

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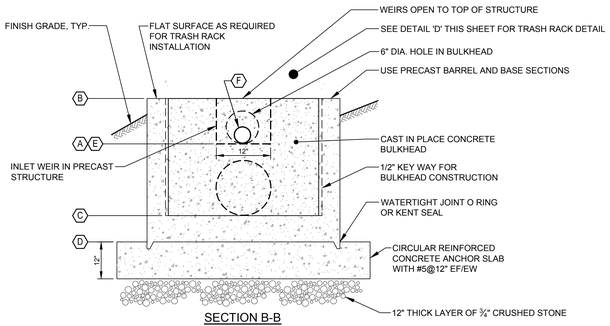



| SCHEDULE A EMBANKMENT SCHEDULE | |
|---|---|
| ITEM DESCRIPTION | DIMENSION/ELEVATION |
| (A) POND BASE ELEVATION | 4.5 |
| (B) PERMANENT POOL ELEVATION | 9.5 |
| (C) PEAK ELEVATION – CHANNEL PROTECTION VOLUME | 10.36 |
| (D) PEAK ELEVATION – 2 YEAR STORM | 10.83 |
| (E) PEAK ELEVATION – 25 YEAR STORM | 11.82 |
| (F) PEAK ELEVATION – 100 YEAR STORM | 12.46 |

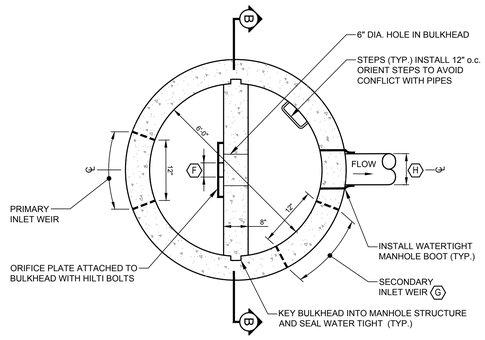
## (A) TYPICAL WET POND CROSS SECTION
N.T.S.




## (B) 8' WIDE BENCH DETAIL
N.T.S.




SECTION B-B
SEE SCHEDULE 'B'

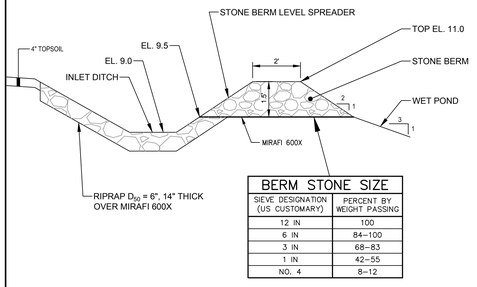



PLAN VIEW
SEE SCHEDULE 'B'

## SCHEDULE 'B' OUTLET CONTROL STRUCTURE

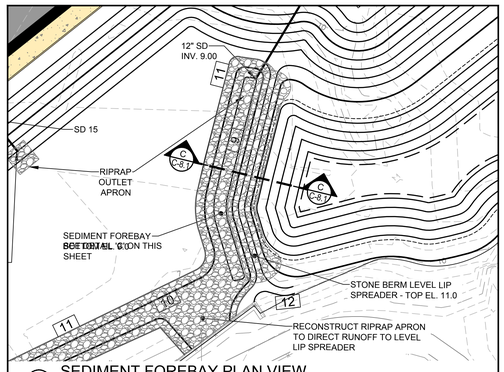
| | DESCRIPTION | DIM./ELEV. |
|---|---|---|
| A | PRIMARY WEIR INVERT | 9.50 |
| B | TOP OF STRUCTURE / TOP OF BULKHEAD | 12.00 |
| C | MANHOLE INVERT | 7.78 |
| D | BOTTOM OF STRUCTURE | 6.78 |
| E | ORIFICE INVERT | 9.50 |
| F | ORIFICE DIAMETER | 3.25" |
| G | SECONDARY WEIR INVERT | 10.36 |
| H | PIPE DIAMETER | 15" - EXIST. PIPE |
| | INVERT OUT | 7.78 - EXIST. INVERT |

## (E) 6' DIA. OUTLET CONTROL STRUCTURE (OCS 1) DETAILS
N.T.S.

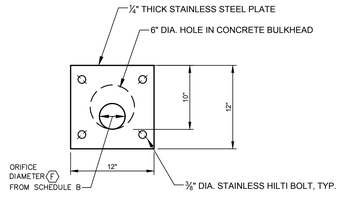



| BERM STONE SIZE | |
|---|---|
| SIEVE DESIGNATION (US CUSTOMARY) | PERCENT BY WEIGHT PASSING |
| 12 IN | 100 |
| 6 IN | 84–100 |
| 3 IN | 68–83 |
| 1 IN | 42–55 |
| NO. 4 | 8–12 |

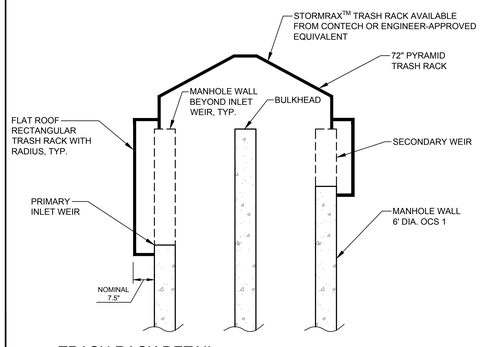
## (C) SEDIMENT FOREBAY - SECTION C-C (SEE DETAIL F FOR PLAN)
N.T.S.




## (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

| Rev. | Date | Revision |
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| PERMIT APPROVAL SUBMISSION | 08.30.19 | SRB |
| DESIGN DEVELOPMENT SUBMISSION TO OWNER | 07.31.19 | SRB |

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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 | | |

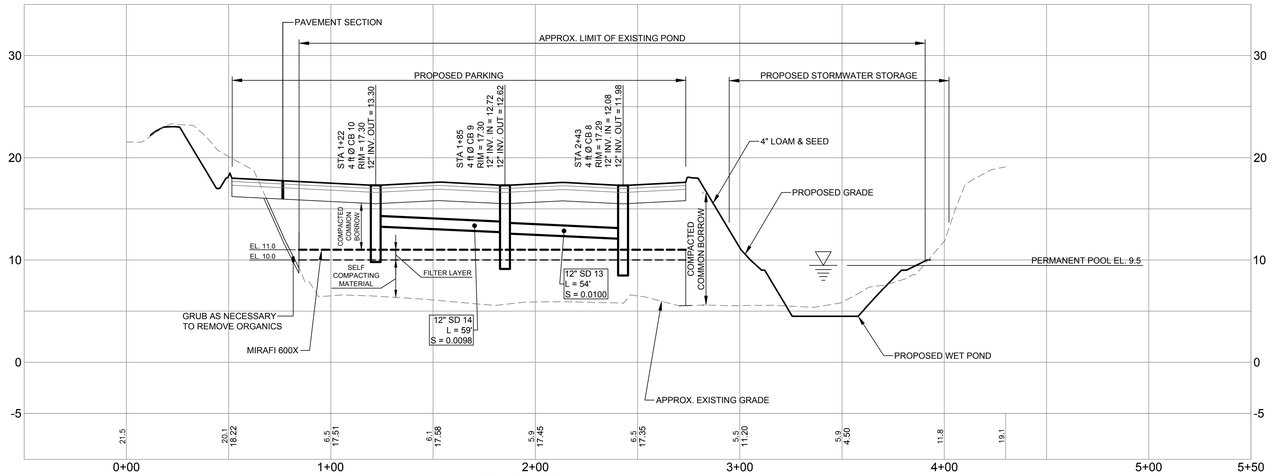
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| | |
|---|---|
| Drawing Name: | Wet Pond Details |
| Project: | Fore River Campus Consolidation<br>Portland, Maine |
| Client: | Northern Light Mercy Hospital<br>144 State Street, Portland, Maine 04101 |

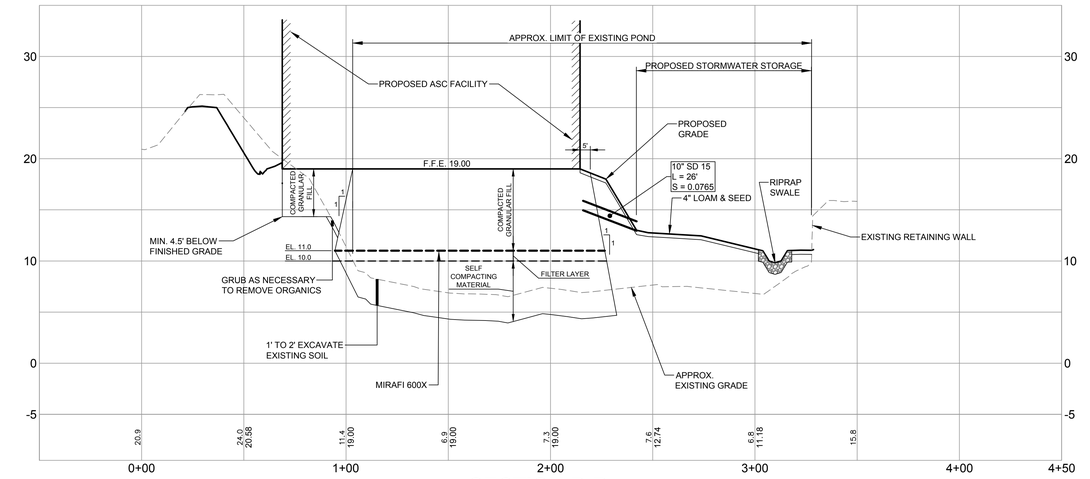
Drawing No.
C–8.1

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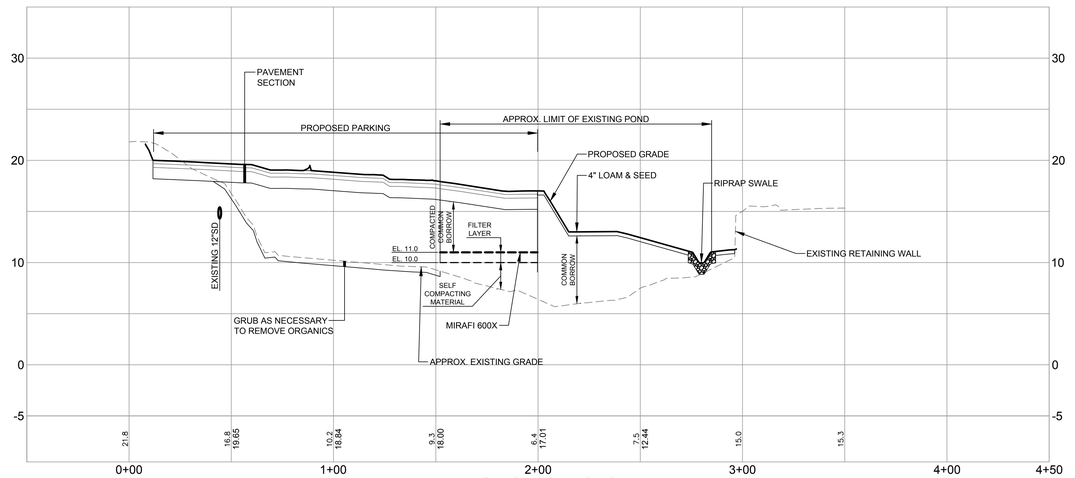

## SECTION A-A

SCALE: 1" = 30' HORZ.
1" = 6' VERT.



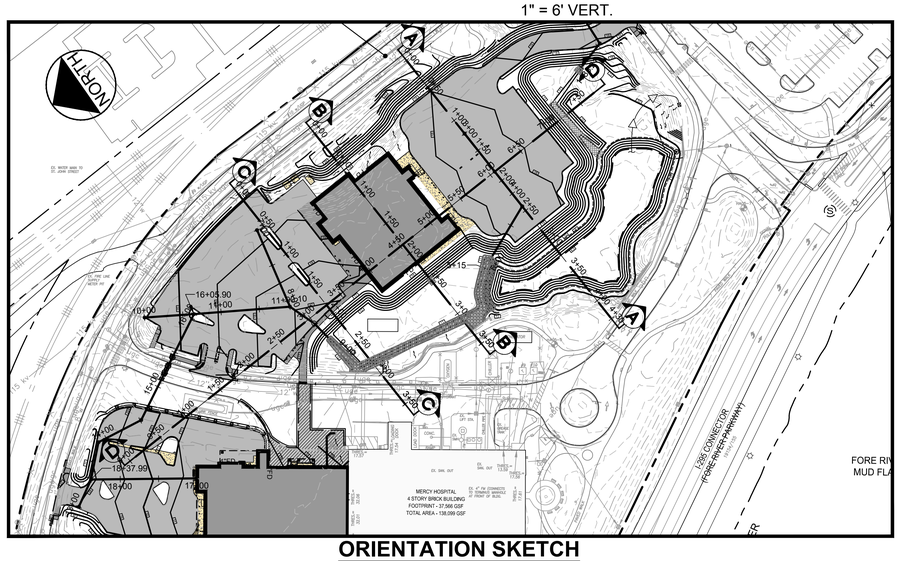

## SECTION B-B

SCALE: 1" = 30' HORZ.
1" = 6' VERT.



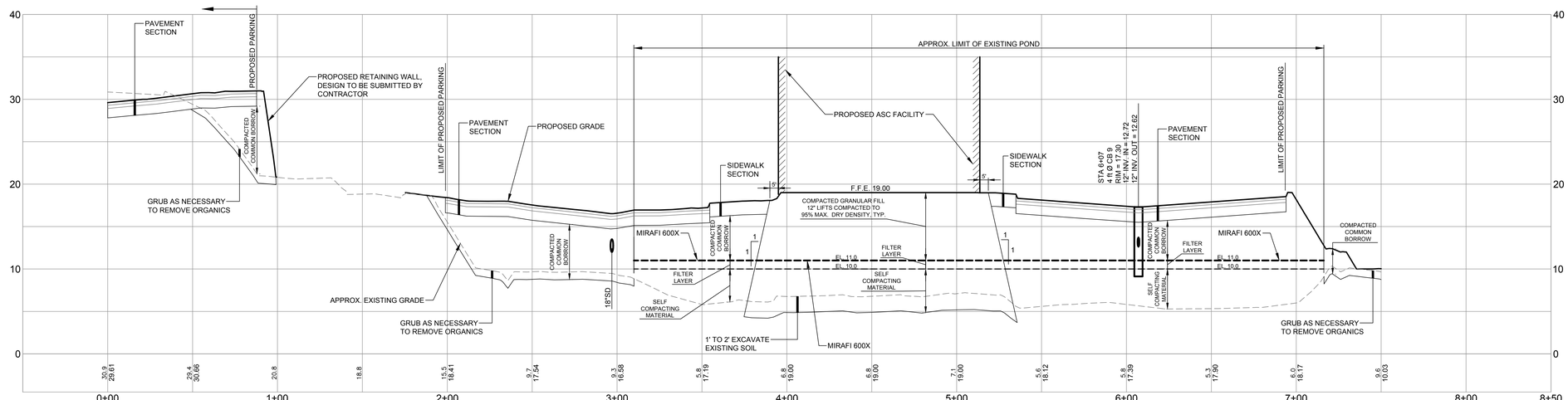

## SECTION C-C

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

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

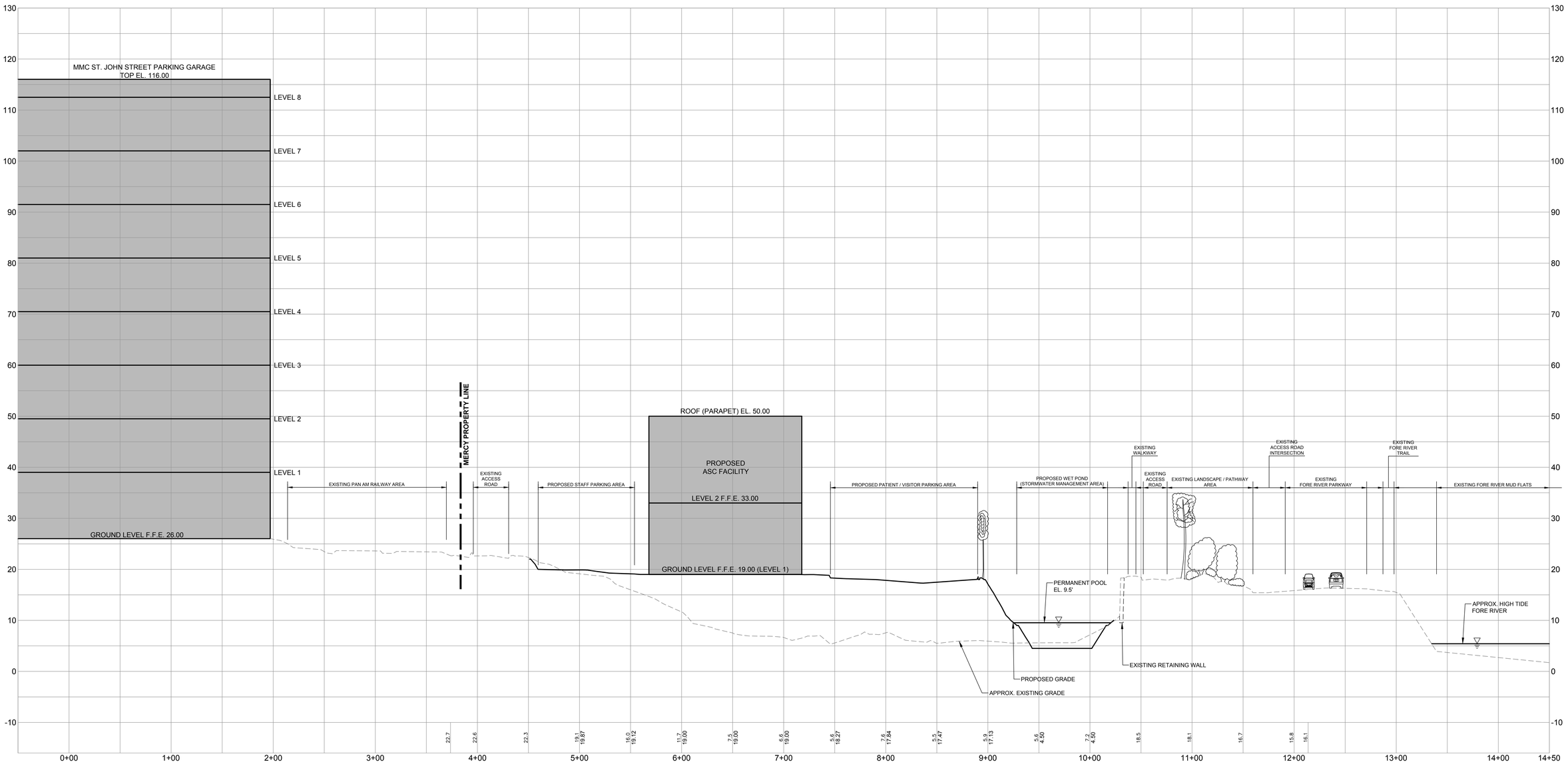
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Drawing Name: Site Sections
Project: Fore River Campus Consolidation
Portland, Maine
Client: Northern Light Mercy Hospital
144 State Street, Portland, Maine 04101

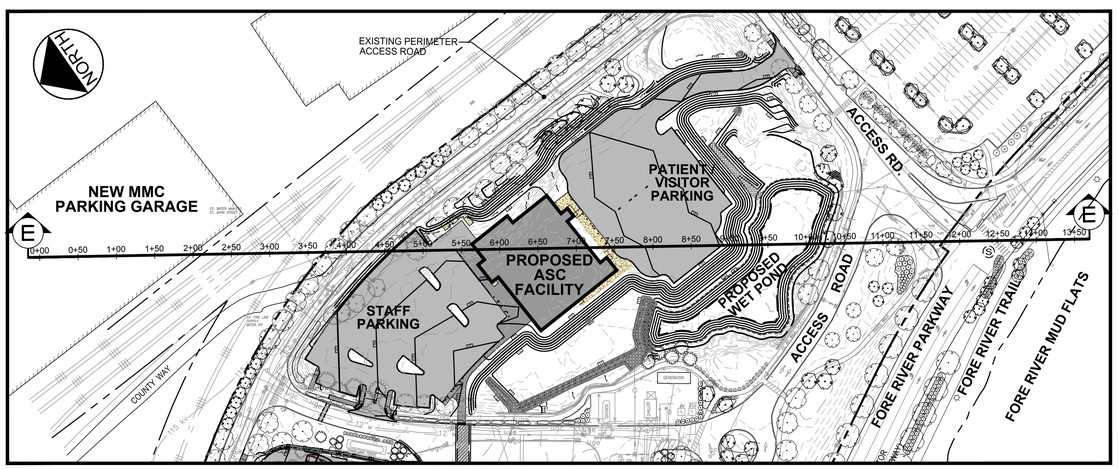
Drawing No. C–9.0

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## 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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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
22764/166 & 17783/296

S09°29'00"E
197.09'

S17°04'47"E
150.16'

S19°55'25"E
41.28'

EX. WATER MAIN TO
ST. JOHN STREET

S17°00'00"E
186.50'

42" SEWER 29175/262

R=4749'
3°45'05"ΔIN

N/F
UNION STATION
LIMITED PARTNERSHIP
10144/23

PARCEL A TRACT THREE
LICENSE AGREEMENT
17783/322
LICENSE AGREEMENT
14203/252

L=384.91'

COUNTY WAY

R=988.37'
66.00' R/W
N49°17'54"E

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

(SEE NOTE 7)
EDGE OF POND

EDGE OF POND
POND EASEMENT AREA
25591/149

THIS AREA INCLUDED IS
VOLUME CALCULATION
(SEE NOTE 7)

REDEVELOPMENT BOUNDARY

UNDERGROUND UTILITY
LINE EASEMENT SOUR
25971/306

GENERATOR

OXYGEN

CHILLER

PIPELINE PER
19154/555

LOAD DOCK

CONC.
RAMP

EX. SMOKE
PIT

EX. GREASE
TANK

EX. LIFT STA.

EX. 4" FM (CONNECTS
TO TERMINUS MANHOLE
AT FRONT OF BLDG.

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

OVERHANG
BRICK

CONCRETE

EX. RAISED CROSSWALK

EX. CONC.

TRANS. PAD
W/GENERATOR

PAVED WALK

EX. FIRE LINE
SUPPLY
METER PIT

STORM SEWER OUTLET
22266/52

L=185.42'
R=197.50'
N18°18'41"W
252.78'

N62°48'26"E
13.12'
(S)

L=197.60'
R=1184.38'

N56°45'03"W
472.62'

I-295 CONNECTOR
(FORE RIVER PARKWAY)
19154/555

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

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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

I-295 CONNECTOR
(FORE RIVER PARKWAY)
1915/1735

FORE RIVER
MUD FLATS

FORE RIVER

**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

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NORTH

GRAPHIC SCALE
40 0 20 40 80
( IN FEET )
1 inch = 40 ft.

STATE OF MAINE
STEPHEN R. BUSHEY
LICENSED
PROFESSIONAL ENGINEER
08.30.19
STEPHEN R. BUSHEY, P.E.
LIC. #7429

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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

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## 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

10P

9P

8P

STORM DRAIN OUTLET LOCATION

7P

WET POND

FORE RIVER MUD FLATS

N/F
UNION STATION
LIMITED PARTNERSHIP
10144/23

COUNTY WAY

MERCY HOSPITAL
6 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

N/F
INHABITANTS
CUMBERLAND COUNTY
STATE OF MAINE
9382/61
9820/263

CUMBERLAND COUNTY JAIL

WATERSHED BOUNDARY

EXISTING DOWNSTREAM DEFENDER

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.

NORTH

GRAPHIC SCALE
40 0 20 40 80
( IN FEET )
1 inch = 40 ft.

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STEPHEN R. BUSHEY
08.30.19
LICENSED PROFESSIONAL ENGINEER

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

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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 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

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

**WET POND**

FORE RIVER MUD FLATS

I-295 CONNECTOR (FORE RIVER PARKWAY)
1915#/1155

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

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| | |
|---|---|
| Drawing Name: | Water Quality Map |
| Project: | Fore River Campus Consolidation<br>Portland, Maine |
| Client: | Northern Light Mercy Hospital<br>144 State Street, Portland, Maine 04101 |

Drawing No.
WQ

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# MERCY HOSPITAL

# REVISED MASTER PLAN
# (for consideration at August 8, 2006, Public Hearing)

**Prepared for:**

**Mercy Hospital**
**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@delucahoffman.com**

**July 2006**

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# 1.0 INTRODUCTION

## 1.1 Purpose

The purpose of the Mercy Hospital Fore River Site Master Plan is to provide a guideline for the development activities for the Fore River Site as contemplated in the Mercy Hospital Contract Zone Agreement approved by the City of Portland. The Master Plan is intended as a fluid document to permit maximum flexibility in building and landscape design and to ensure high quality construction that considers the site's landscaping, building orientation and form, coordination of uses and parking, lighting and other site amenities and creation of private/public open spaces. The Master Plan is intended to fulfill the requirements of the Contract Zone Agreement that specifically requires Planning Authority approval of a Master Plan prior to Site Plan consideration.

## 1.2 Development Overview

Mercy Hospital is proposing to develop a new hospital campus on their Fore River development site. The current development plan may include the following uses:

a. Hospitals, clinics, and medical research facilities.

b. Community living arrangements, congregate care facilities, intermediate care facilities, long-term or extended-care facilities, and sheltered care group homes.

c. Office complexes and professional offices.

d. Day care facilities and adult day care facilities.

e. Exercise and fitness centers and health clubs.

f. Personal services, restaurants, and retail establishments of no more than 50,000 square feet (SF), except that there shall be no drive-through facilities.

g. Dwellings, hotels, motels, inns, and rooming units; and lodging houses for hospital or clinic employees or volunteers and patients' family members.

h. Teaching centers.

i. Accessory uses, including but not limited to, parking facilities and structures, utility services, stormwater management systems, and site amenities.

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. The current Phase 1 development proposal is for the completion of a four-story, 80,000 SF Medical Office Building (MOB) and a 137,310 SF hospital structure containing four levels plus a

ground floor. Future development on the site is anticipated to include some of the aforementioned possible uses.

Other ancillary development features will include parking facilities, utility services, stormwater management systems, and site amenities. Parking for the campus will be primarily surface lots during Phase 1 and surface and structured parking in the future. The parking needs for the project will likely exceed 780 spaces to meet local zoning requirements and facility needs during Phase 1 and over 1,300 spaces during future phases.

## 1.3 Existing Conditions

Mercy Hospital has purchased approximately 85.5 acres of land located along the Fore River in Portland, Maine (the development site). The property was formerly owned by Merrill Industries, Inc. and the Portland Terminal Company. The lands consist of approximately 43.5 acres of mudflats along the Fore River and 34.5 acres of undeveloped or semi-developed land located along the Fore River waterfront. Approximately 7.5 acres of land has been transferred to the Maine Department of Transportation to allow the construction of the I-295 Connector project. Approximately 27 acres of the remaining land is available for development. Within this area the site is basically divided into two prominent areas by the location of an existing pond in the center of the site. The pond is within a former gravel pit. The north end of the site and the south end generally define the overall development area. Figures contained in Appendix A identify the site location on various resource maps.

The site generally extends from just east of the recently constructed I-295 Exit 5 interchange ramps easterly along the Fore River to the Veteran's Memorial Bridge. The site is bounded to the north and east by an active railroad line operated by Guilford Industries. The tracks to the north are traveled multiple times each day by the Downeaster passenger train service, while the tracks to the east service both the Downeaster service as well as regular Portland Terminal freight service. Farther to the northeast, commercial development lines St. John Street. Existing commercial establishments along St. John Street include Barber Foods, Century Tire, Redlon & Johnson and the Union Station Plaza. The Cumberland County Correctional Facility is located to the north of the property on the north side of the tracks. The Correctional Facility's activities are primarily focused to the north, facing Congress Street; thus the jail facility is generally buffered from the Mercy site by existing wooded land on that site. Appendix B contains various photos depicting the site's relationship to adjacent uses and views. It is clear that while the site is located within an urban setting, it stands somewhat isolated from its neighbors due to the railroad tracks along a majority of its boundaries.

The site's topography slopes from approximately elevation 24 feet along the active rail tracks that are on the north and east sides of the site to the riverfront, where the elevation is approximately 10 feet. The higher knolls on the northerly side of the site rise to elevation 38 feet towards the northeast center of the site. It is anticipated that

the knolls will be lowered as part of the proposed project. The bottom of the former gravel pit is approximately elevation 8 feet (NGVD).

The site's wooded areas are characterized by deciduous tree growth and dense undergrowth. Approximately one half of the site is densely vegetated. The southerly side is mostly open area that contains ground vegetative cover with grasses and stockpiles of topsoil and miscellaneous debris. Some of the ground area on the southerly side is bare earth, a result of previous activity on the site.

Overall the site can generally be classified as undeveloped. The property has historically been accessed by a paved drive from County Way and Congress Street. This drive passes adjacent to the Cumberland County Jail and crosses at grade over the railroad tracks into the site. This access will be used for emergency purposes in the future. The new I-295 Connector proceeds from north to south and includes bridge overpasses over the northerly and southerly rail tracks. Each bridge provides for an elevated view of the Mercy development site, while the roadway along the middle of the site generally passes through nearer to existing grade.

The site contains multiple wetland areas. Several areas consist of former ditches adjacent to abandoned rail track beds. These will be impacted as part of the development. A wetland pond exists within the former gravel pit in the center of the site. The site design has been prepared to minimize impacts to this wetland and to maintain the tree canopy surrounding the pond as much as possible.

## 1.4 Original Master Plan

The preliminary Master Plan that was submitted in 2001 in support of the Contract Zone Agreement contained the following programming elements:

- A five story 300,000 SF Hospital
- A three story 75,000 SF Medical Office Building
- A two story 58,000 SF Ambulatory Care Center.
- Surface parking for as many as 1,000 spaces
- Outparcel development at the south end of the property

The original Master Plan was intended to depict the general site conditions and building envelopes contemplated for development. As required by the Contract Zone Agreement, this current submission is intended to update the Master Plan representation of the programming contemplated for the site development and provide a greater level of detail to the Planning Authority prior to their Site Plan review of the project. This current July 2006 Revised Master Plan is intended for consideration by the Planning Board at their August 8, 2006 scheduled Public Hearing. A copy of the original Master Plan figure submitted in 2001 in support of the original Contract Zone review and approval is contained in Appendix C to this submission.

## 2.0 APPLICABLE ORDINANCES AND CODES

### 2.1 Design and Site Development

All design and site development activities within the Fore River Site shall comply with the current applicable local, state and federal ordinances and codes including, but not limited to, City of Portland Site Plan review, Department of Environmental Protection Site Location of Development and Natural Resources Protection Acts, State of Maine Voluntary Remedial Action Plan (VRAP) requirements, and U.S. Army Corps of Engineers Water Quality Certification.

### 2.2 Americans with Disabilities Act (ADA)

All components of the Fore River Development site shall be designed to provide full accessibility in accordance with current ADA guidelines. Site and building planning shall incorporate ramps and accessible features to overcome site conditions.

## 3.0 DEVELOPMENT STANDARDS

### 3.1 Site Plans

All site plans may be approved by the Planning Board only if, in addition to the dimensional requirements outlined below and the applicable provisions of Article IV (subdivisions) and Article V (site plan) of the City of Portland Code of Ordinances, the development meets the following development standards:

3.1.1 *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 within the site. Consideration shall be given to compatibility of proposed perimeter development with the existing and future uses adjacent to the property.

3.1.2 *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.

3.1.3 *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. 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.

3.1.4 *Vehicular Access and Circulation*

The Maine Department of Transportation has used a portion of the property for the construction of the I-295/Commercial Street Connector. The connector roadway provides a new link between Outer Congress Street, I-295 and the Commercial Street Corridor. From west to east, the connector extends from the I-295 Exit 5 interchange and crosses the Guilford Transportation railroad tracks above grade and proceeds across the property generally along the Fore River frontage. The Veterans Bridge Interchange has been reconstructed for the new connector roadway. The connector work includes a pedestrian walkway/bikeway along the Fore River frontage. Two separate access drives to the hospital campus have been provided off the Commercial Street Connector. A third southbound off ramp has also been constructed to provide access for site bound traffic traveling from the Exit 5 Interchange direction. Additional gated emergency access will likely be provided off an existing access route behind the County Correctional Facility.

3.1.5 *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. Buffer plantings to provide wind buffering and reduce off-site noise shall be incorporated where feasible.

3.1.6 *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.

## 3.2 Dimensional Requirements

The following dimensional requirements shall apply to the property as a whole, and not to individual lots (if any) within the property:

3.2.1 *Maximum Impervious Surface Ratio*

Eighty (80) percent.

3.2.2 *Maximum Building Height*

Ninety (90) feet.

3.2.3 *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.

3.2.4 *Minimum Side Yards*

Ten (10) feet.

3.2.5 *Minimum Rear Yard*

Ten (10) feet.

3.2.6 *Pavement Setback from property*

Fifteen (15) feet; twenty (20) feet from connector right of way.

## 4.0 OVERALL LAYOUT

### 4.1 General Design Intent

Mercy Hospital has selected a phased development program that balances their business needs and economic capacity. The programming currently consists of the following elements:

- Initial Phase
  - 138,000-139,000 SF Hospital
  - 75,000-80,000 SF Medical Office Building

- Future Phases
  - Parking Structure(s) to support 700-900 parking spaces (to be built prior to Hospital expansion)
  - 150,000 to 200,000 SF Hospital Expansion
  - 75,000 SF Medical Office Building
  - up to 40,000 SF additional building space

- Total building space equal to 500,000 to 600,000 SF can be supported on the campus

### 4.2 Building Orientation

The development layout is governed by the following site conditions:

- Location of the driveway access locations along the Connector
- Location of the wetland pond within the center of the site

- Naturally high ground within the northern sections of the site.
- Building envelopes available within the north and south sections. Neither area is large enough by itself to support the campus program, therefore requiring a "bridge" between them.

The Master Plan building envelopes allow for the following key elements:

- Building connectivity for the Phase 1 Medical Office Building and Hospital.
- Adequacy of Phase 1 surface parking within reasonable proximity to each building's entrance.
- Future accessibility to a parking structure proximate to the Hospital, the expansion and the Phase 1 Medical Office Building.
- Remote staff parking on the south end of the site, to be facilitated by the use of onsite shuttle service to the hospital staff entrance.
- The hospital's prominence on higher elevations of the site provides for views over the Connector Road to the Fore River and also overlooks the onsite wetland pond.
- Allows capacity for building expansion.
- A designated access route from the northerly driveway to the southerly driveway.

## 5.0 ARCHITECTURE

### 5.1 General Design Intent

The client requested a building that embodies the faith-based nature of their institution. The design approach is to utilize 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. The client also wished to maintain a sense of continuity with their existing facility. Finally, the prominent waterfront location bears a direct relationship to the historic brick waterfront structures of downtown Portland.

### 5.2 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 and the pond to the east. The building's four floors above a partially exposed ground level maximize the building's height with the available program while minimizing the impact on the site. The Medical Office Building is located perpendicular to the Hospital in an L-shaped alignment so that future connections to the Hospital Expansion and a multi-level parking garage may be easily facilitated.

## 5.3 Building Massing

The massing of the building steps in, on both the east and west elevations as a response to the programmatic requirements within. A prominent location is created for the chapel with a full-height diagonal slice at the southwest corner of the building. The Medical Office Building is 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 connector road and river. The Medical Office Building is oriented in a manner that will allow access from each side. The revised building location places the MOB closer to its allocated parking areas.

## 5.4 Building Façade/Materials

The façade is composed of traditional Portland red brick with light cast stone highlights. Gothic cast stone tracery throughout and stained glass windows at the 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 will follow the Hospital's lead with a complementary building face, glass and accents to mirror the Hospital building. Future buildings will also follow these building and materials patterns and character.

## 5.5 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 the client's original building. The overall massing of the Hospital building is softened with the cascading sloped rooflines along the east and west elevations. The MOB will follow with a horizontal roofline that will fall below the Hospital's. Future buildings will follow with similar rooflines.

## 5.6 Service Areas

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 new connector road by the hospital itself. The semi-trailer loading area is located to the northeast corner and will be shielded from general view by the building. Dumpsters and other service related activities will be buffered by appropriate screening. The MOB service area will be minimal. The future hospital expansion will generally rely on the Phase 1 Hospital service area, as the loading area has been sized based on the Hospital's full build-out. Service areas for future buildings will be placed to consider buffering and shielding from important views to the extent practicable.

## 5.7 Building and Site Lighting

Ground-mounted and building-mounted lighting will provide general illumination of the building and safety and security over building entrances and walks and within parking fields. Building mounted lighting will place specific emphasis on the Phase 1 Hospital arcade and entrance canopy along the westerly elevation. Site Lighting will be provided throughout the campus with the use of "Heritage" style fixtures that blend traditional architecture with modern performance. Fixture heights shall not exceed 30 feet along primary drives, 25 feet within parking fields and 12 to 15 feet around pedestrian walks and building perimeters.

## 6.0 PARKING AND PEDESTRIAN CIRCULATION

(See Schematics 1 and 2 of 6 in Appendix D)

### 6.1 Overall Assessment of Need

Currently the Phase 1 Master Plan Schematic depicts the following parking summary.

| | | Fore River Site Parking Phase 1 | |
|---|---|---|---|
| Phase 1 Use | Building Size | Required by Code | Provided on Schematic |
| Hospital – 1 SP/500 SF | 137,832 SF | 276 | |
| MOB – 1 SP/400 SF | 80,000 SF | 200 | |
| Total | | 476 | 783 |

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

| | | Fore River Site Parking Future Phases | |
|---|---|---|---|
| Future Phases | Building Size | Required by Code | Provided on Schematic |
| Hospital – 1 SP/500 SF | 300,000 SF | 600 | Parking Garage – 900 |
| MOB/Offices – 1 SP/400 SF | 174,000 SF | 435 | Surface Parking - 611 |
| Total | | 1,035 | 1,511 |

### 6.2 Visitor/Staff/Physicians/Shifts

Walker Parking Consultants has completed an allocated parking demand analysis for the initial project phase that is summarized as follows:

| | | **2007** | | |
|---|---|---|---|---|
| | Statistics | *Daily* | Ratio | Demand |
| **HOSPITAL BUILDING** | | | | |
| Inpatient Beds | 44 | | 0.36 | 16 |
| Annual Outpatients | 87,040 | *349* | 0.36 | 126 |
| Employees | 570 | | 0.43 | 246 |
| Staff Physicians | 29 | | 0.50 | 15 |
| Admitting Physicians | 40 | | 0.50 | 20 |
| Subtotal | | | | 423 spaces |
| **MEDICAL OFFICE BUILDING** | | | | |
| Hospital Outpatient uses | 16,277 | *66* | 0.36 | 24 |
| Hospital Employees | 84 | | 0.43 | 37 |
| Physician Tenants (sq. ft.) | 53,600 | | 5.50 | 295 |
| Subtotal | | | | 356 spaces |
| Total | | | | 779 spaces |

### 6.3 Pedestrian Connectivity

Pedestrian sidewalks will link the recently constructed 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 I-295 Connector at the southerly driveway. Pedestrian linkage will include overlooks of the wetland pond and also connectivity to the open spaces at each end of the site.

The north open space area, slated for construction in Mercy's Phase 1 of development, will include pathways that will enable completion of the linkage between the Thompson's Point area to the already paved and in-place Connector sidewalk/trail system. It is understood that these pathways will be surfaced in stone dust and not cleared during the winter months, similar to the "primitive" trail from Thompson's Point to which they will join.

Mercy will extend its path system in the north open space along the river to the northernmost property line, where it is to be met by Portland Trails construction.

Plans for the south open space include pathway access similar to that in the northern area, though this will require a bridge/boardwalk type of access stemming from the southern terminus of the paved Connector walkway system below the roadways slip lane. Development of this area will not occur until the future, with completion scheduled for sometime on or about occupancy of the Phase 2 Hospital expansion. Phase 1 will include planting shade trees associated with the stormwater treatment berms, and the loaming and seeding of disturbed areas not otherwise surfaced.

Site-related pedestrian circulation will include designated sidewalk routes from the surface parking areas to the buildings. A hard surface, landscaped pedestrian sidewalk will also connect the southerly staff parking area to the staff entrance at the south end of the hospital. A shuttle van will also transport hospital staff from the employee parking lots to the hospital entrance. Appropriate signage will be provided to aid in the understanding of onsite and offsite pedestrian facilities.

## 7.0 ACCESS AND CIRCULATION

(See Schematic Figures 3 and 4 of 6 in Appendix D)

### 7.1 Major Entrances and Exits

- Northerly Driveway
  - Eastbound left and westbound right turn entering
  - Eastbound exiting only to I-295 North

- Southerly Driveway
  - Westbound right turn entering only
  - Eastbound exiting to I-295 North
  - Westbound exiting to I-295 South

- Eastbound Slip Lane
    - Eastbound entering movement into site only

### 7.2 Secondary Access

Emergency access will be provided from the existing at-grade crossing behind the Cumberland County Correctional Facility.

### 7.3 Internal Site Circulation

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

### 7.4 Bus Routes

Metro will serve the site from their Congress Street route that involves bus travel from St. John Street through the Veteran's Bridge intersection. Service will approach the site from the Connector traveling westbound and enter into northerly driveway. They will pick up at the Hospital and Medical Office Building front entrances and proceed westbound on the Connector to Congress Street. Metro service is expected to follow a routine service schedule to the site and provide linkage to many greater Portland neighborhoods for both employees and patients/visitors.

### 7.5 Alternative Transportation/Travel Demand Management Plan

The development operations will be conducted in a manner to promote transportation demand alternatives. This will include strategies that encourage employees to use alternatives to driving to work unaccompanied. This will enable Mercy and other tenants to successfully provide parking to all employees, visitors, patients, and physicians in the designed parking plan, which has been established at 5% below the anticipated parking capacity need. A Transportation Demand Management Plan will be implemented and monitored by Mercy in order to improve and measure success.

## 8.0 LANDSCAPING AND OPEN SPACE

(See Schematic Figures 5 and 6 of 6 in Appendix D)

### 8.1 Design Intent

Mercy Hospital looks to "heal" the development site through its approved remedial action plan and landscaping program. The clean up and coverage of exposed soils and disturbed areas will be accomplished in a manner that beautifies the site and builds upon its waterfront location.

The project's landscaping program will be designed to meet the City's Arboricultural Specifications and Standards of Practice and Landscape Guidelines. The design shall

use tree and landscaping species that are suitable for the property's environmental conditions. All materials shall be of appropriate hardiness, be suitable to the site's soils conditions and generally complement existing landscaping in the surrounding areas, including the I-295 Connector. All areas not otherwise used for buildings, paved parking areas, landscaping or otherwise naturally vegetated will be covered with topsoil and grassed. Specific landscape detail and emphasis will be placed on the open spaces between the buildings and the Connector Road simply due to the visual importance and site appearance from the Connector, I-295, and the Veteran's Bridge viewsheds.

## 8.2 Planting Design

Plantings utilized throughout the site are chosen 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:

1. Establish a hierarchical planting structure defining major site components.

2. Use 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).

3. Use Ginkgo and Red Maple to line and identify secondary circulation drives adjoining the hospital and through the southern parking area.

4. Use 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.

5. Use flowering accent trees such as Crabapple, Ornamental Pear, and Serviceberry, to highlight primary intersections and points of emphasis.

6. 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 Connector and south parking, which will screen views of the south parking areas, augmenting the street trees planted in the Connector 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.

7. Introduce accent planting in the pond area proximate to the walking path.

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

## 8.3 Open Space Design

Through constituting what essentially amounts to "leftovers" from the Connector, 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. The concepts shown seek to achieve this by:

1. 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.

2. At the south end, a boardwalk bridge connects the end of the existing trail to the open space area along remnants of an existing granite-clad wharf. Other remnants of the wharf system exist at the extreme southern end. Both offer opportunities for historic information and interpretation. Water access at the south end is possible, creating the opportunity for kayak entry.

3. 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 allees of trees, with a sitting area with benches focused on the water at their confluence.

4. Opportunities are created along stone dust pathways (south and north) for benches seating.

5. 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.

## 8.4 Phasing

Phase 1 planting and open space improvements will include:

1. Plantings in the north and south parking areas.

2. Plantings at the north and south site entrances.

3. Perimeter screen/buffer plantings.

4. Plantings around Phase 1 hospital and medical office buildings.

5. Screen plantings around service/loading area.

6. "Structural" planting in the green space south of the hospital building between the access drive and Connector to include trees and lawns only.

7. 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.

8. 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:

1. Plantings in the expanded south parking area.

2. Plantings at the Phase 2 hospital building expansion.

3. Plantings at the Phase 2 medical office building.

4. Development of garden areas for staff, patients, and visitors, south of the hospital building between the access drive and Connector, building upon the "structure" of trees installed in Phase 1.

5. Completion of the south open space to include stone dust paths, footbridges, benches, and plantings.

## 8.5 Wind Buffering

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

## 8.6 General Site Character/Construction Materials

### 8.6.1 *Parking Lot Surfaces*

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

### 8.6.2 *Walkways*

Walks within reasonable proximity to the building shall be reinforced concrete. More remote walks may consist of poured, integrally tinted concrete, pervious concrete or 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.

### 8.6.3 *Curbs/Islands*

Curbs shall be vertical or sloped granite. Landscaped islands shall also be sloped or vertical granite.

8.6.4 *Walls*

Site retaining walls, where necessary, shall be segmented block retaining walls. Decorative walls at the main entrances shall 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.

8.6.5 *Fencing*

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

## 8.7 Lighting/Signage

Parking area and pedestrian lighting shall be of high quality construction and materials and with a character that complements the architectural features and style of the building. The site lighting shall meet the City of Portland strict requirements regarding minimum, average and maximum levels of illumination, maximum wattage and mounting height. 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.

## 8.8 Open Spaces

Public open space shall be provided at each end of the property's water frontage. During the first development phase, the open spaces should generally be offered for passive recreational opportunity. The northerly open space shall be connected to the Portland Trails network by a stone dust path extension during Phase 1. The southerly open space shall be restored to a grassed condition. The primary purpose of these spaces is to allow waterfront access. Future improvements to these spaces will include an extension of the far southerly end of the Portland Trails piece to the site's southerly open space and also landscaping enhancements within these spaces.

*Existing Pond (Former Borrow Pit)*

(See Design Drawing contained in Site Development plan set)

Reclamation measures are proposed for the side slopes of the former gravel pit and as an enhancement to its wetland conditions:

- Approximately 0.5 acres of upland side slope will be stabilized with topsoil, and vegetative ground cover.
- Debris including tires, metals and other debris will be removed from around the former pit.
- Several methods are possible to complete the placement of material over the side slope areas. Reinforced turf may be used on the steeper slopes (>3:1). Alternatively, the project may involve the service of an Erosion Control vendor

such as Mulch-Maine-ia, who provides the pneumatic placement of organic soil mulch along slopes. The use of a pneumatic application of organic mulch appears appropriate and well suited to the Mercy Hospital project. The use of this type of equipment will minimize disturbances on the existing slopes, yet provide the maximum ability to place material in and around the existing tree growth.

To complement the placement of the organic soil mulch the plan includes mixing vegetative material into the compost. Mulch-Maine-ia uses Terra-seeding to inject fertilizers, grass seeds, wild flower and other granular material into the organic material. This process will result in a fully vegetated side slope surface around the wetland pond perimeter.

## 9.0 Utilities

(See Schematic Figure 6 of 6 in Appendix D)

The proposed hospital campus shall be served by public water, sewer, natural gas, and nearby communication, cable, and electric utilities. Nearby water service consists of 20" and 8" water mains near the Veteran's Bridge and off St. John Street, respectively. 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 facility on State Street in Portland. Communications, cable, and electric utilities are located in the project vicinity and will be brought in either overhead or underground into the site.

The project's proposed stormwater management systems shall provide for onsite water quality treatment prior to the discharge of runoff to the Fore River. Quantity control is not required due to the nearby tidal conditions of the Fore River. The project will include enhancements to the former borrow pit including improved vegetative buffers and side slope stabilization to aid in stormwater water quality treatment prior to discharge to the Fore River and tidal conditions.

# APPENDIX A

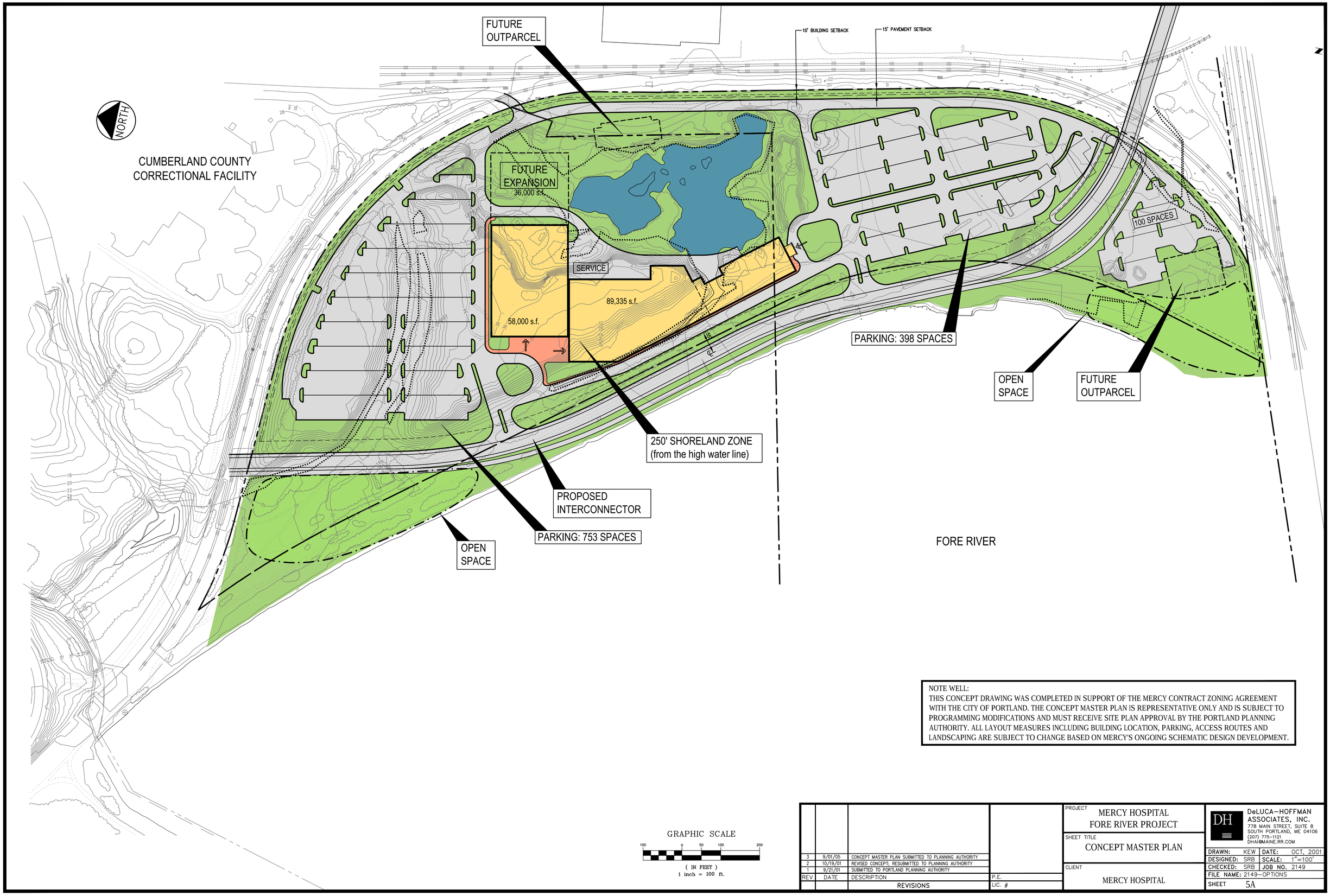
# FIGURES

# APPENDIX B

# PHOTOGRAPHS

# 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.
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| | |
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| 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 | | |
|---|---|---|
| AREA | QUANTITY | DESCRIPTION |
| A | 108 | HOSPITAL PATIENT / VISITORS / PHYSICIANS |
| B | 168 | MOB PATIENT / VISITORS |
| C | 151 | MOB STAFF / VISITORS |
| D | 48 | HOSPITAL / MOB PATIENTS |
| E | 79 | HOSPITAL STAFF |
| F | 109 | HOSPITAL STAFF |
| G | 118 | HOSPITAL / MOB STAFF |
| TOTAL | 781 | |

| | | |
|---|---|---|
| 5.31.06 | 3 | REVISED AND RESUBMITTED TO PLANNING AUTHORITY |
| 12.23.05 | 2 | REVISED AND RESUBMITTED TO PLANNING AUTHORITY |
| 12.14.05 | 1 | REVISED AND RESUBMITTED TO PLANNING AUTHORITY |

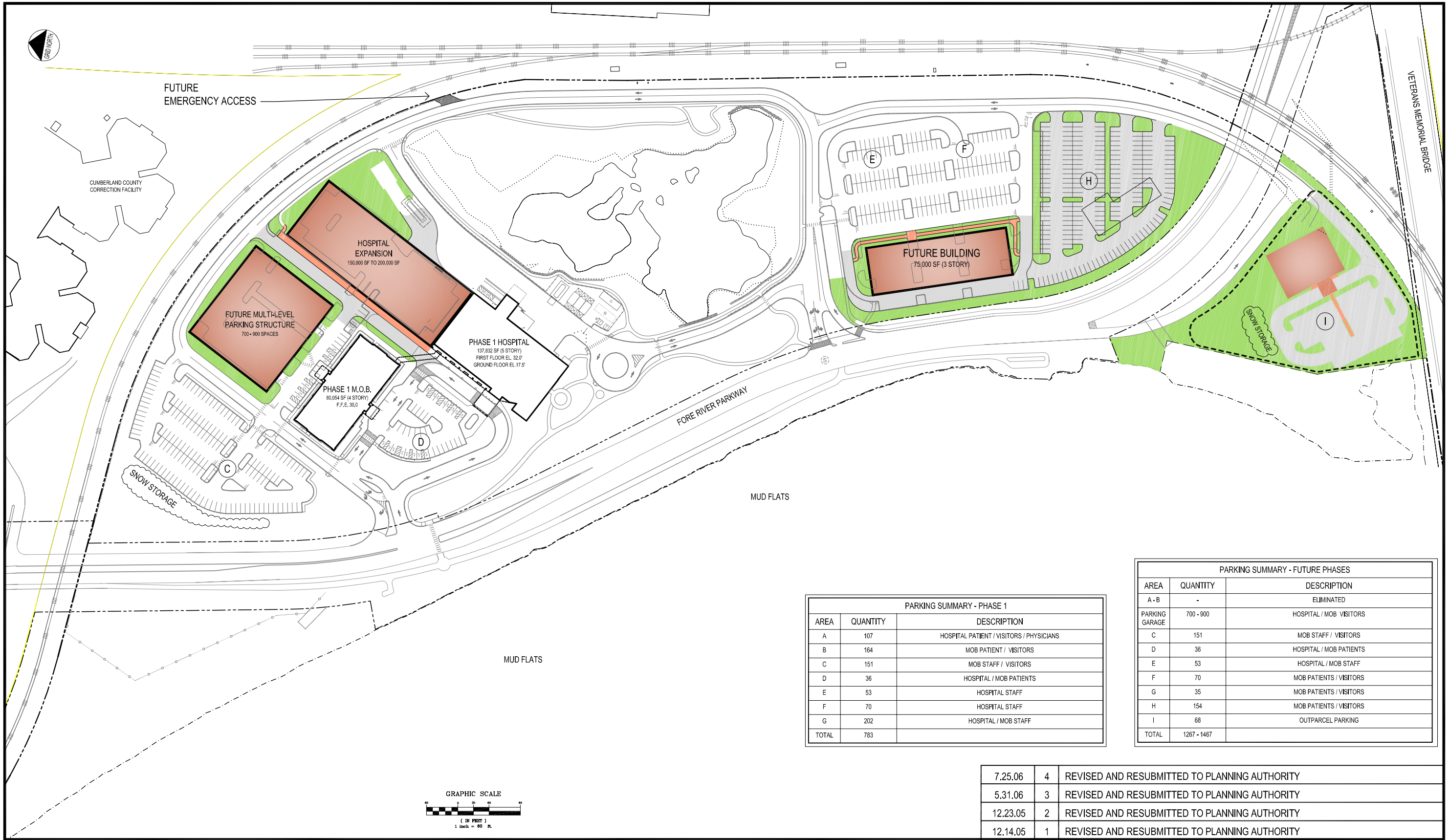
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| DRAWN: | DED | DATE: | 12.07.05 |
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| FILE NAME: | 2149.01-MP3 | | |

# MERCY HOSPITAL
# FORE RIVER PROJECT

## MASTER PLAN - PHASE 1

FIGURE
1 of 6




| PARKING SUMMARY - PHASE 1 | | |
|---|---|---|
| AREA | QUANTITY | DESCRIPTION |
| A | 107 | HOSPITAL PATIENT / VISITORS / PHYSICIANS |
| B | 164 | MOB PATIENT / VISITORS |
| C | 151 | MOB STAFF / VISITORS |
| D | 36 | HOSPITAL / MOB PATIENTS |
| E | 53 | HOSPITAL STAFF |
| F | 70 | HOSPITAL STAFF |
| G | 202 | HOSPITAL / MOB STAFF |
| TOTAL | 783 | |

| PARKING SUMMARY - FUTURE PHASES | | |
|---|---|---|
| AREA | QUANTITY | DESCRIPTION |
| A - B | - | ELIMINATED |
| PARKING GARAGE | 700 - 900 | HOSPITAL / MOB VISITORS |
| C | 151 | MOB STAFF / VISITORS |
| D | 36 | HOSPITAL / MOB PATIENTS |
| E | 53 | HOSPITAL / MOB STAFF |
| F | 70 | MOB PATIENTS / VISITORS |
| G | 35 | MOB PATIENTS / VISITORS |
| H | 154 | MOB PATIENTS / VISITORS |
| I | 68 | OUTPARCEL PARKING |
| TOTAL | 1267 - 1467 | |

| | | |
|---|---|---|
| 7.25.06 | 4 | REVISED AND RESUBMITTED TO PLANNING AUTHORITY |
| 5.31.06 | 3 | REVISED AND RESUBMITTED TO PLANNING AUTHORITY |
| 12.23.05 | 2 | REVISED AND RESUBMITTED TO PLANNING AUTHORITY |
| 12.14.05 | 1 | REVISED AND RESUBMITTED TO PLANNING AUTHORITY |

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| DRAWN: | DED | DATE: | 12.07.05 |
| DESIGNED: | - | SCALE: | AS NOTED |
| CHECKED: | SRB | JOB NO. | 2149.01 |
| FILE NAME: | 2149.01-MP3 | | |

# MERCY HOSPITAL
# FORE RIVER PROJECT

## MASTER PLAN - FUTURE PHASES

FIGURE
2 of 6

GRID NORTH

PHASE 1 HOSPITAL
137,832 SF (5 STORY)
FIRST FLOOR EL. 32.0'
GROUND FLOOR EL.17.5'

PHASE 1 M.O.B.
60,054 SF (4 STORY)
F.F.E. 30.0

FORE RIVER PARKWAY

VETERANS MEMORIAL BRIDGE

MUD FLATS

MUD FLATS

SOUTH DRIVEWAY DETAIL
SCALE: 1" = 50'

NORTH DRIVEWAY DETAIL
SCALE: 1" = 50'

TYPICAL SERVICE VEHICLE ROUTE

BUS ROUTE

SHUTTLE SERVICE

GRAPHIC SCALE
60 0 30 60 120
( IN FEET )
1 inch = 60 ft.

| | | |
|---|---|---|
| 7.25.06 | 4 | REVISED AND RESUBMITTED TO PLANNING AUTHORITY |
| 5.31.06 | 3 | REVISED AND RESUBMITTED TO PLANNING AUTHORITY |
| 12.23.05 | 2 | REVISED AND RESUBMITTED TO PLANNING AUTHORITY |
| 12.14.05 | 1 | REVISED AND RESUBMITTED TO PLANNING AUTHORITY |

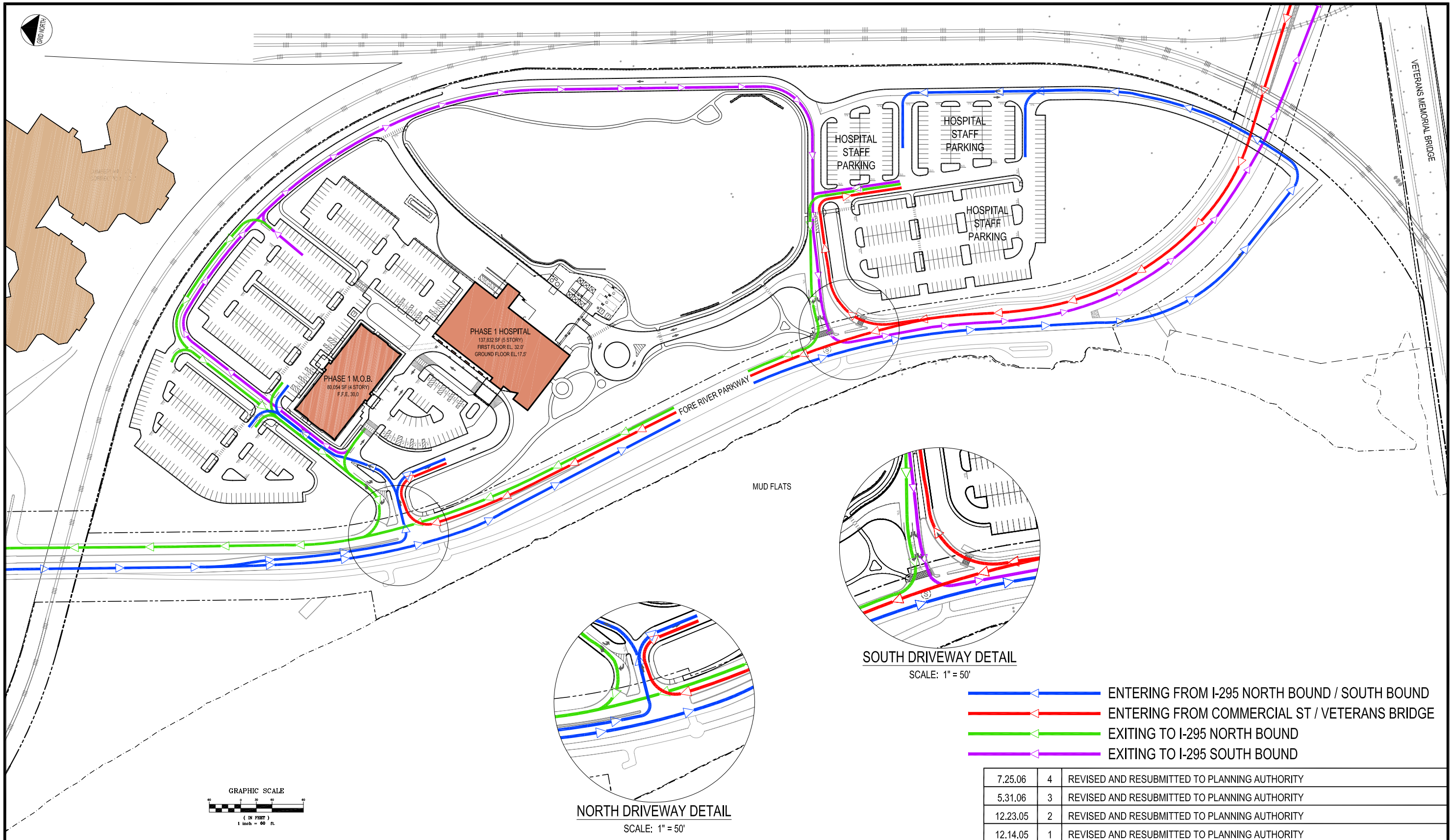
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207.775.1121
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| DRAWN: | DED | DATE: | 12.07.05 |
| DESIGNED: | - | SCALE: | AS NOTED |
| CHECKED: | SRB | JOB NO. | 2149.01 |
| FILE NAME: | 2149.01-MP3 | | |

# MERCY HOSPITAL
# FORE RIVER PROJECT

## MASTER PLAN
## SERVICE & BUS CIRCULATION ROUTES

FIGURE
3 of 6




NORTH DRIVEWAY DETAIL

SCALE: 1" = 50'

SOUTH 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

| | | |
|---|---|---|
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| 5.31.06 | 3 | REVISED AND RESUBMITTED TO PLANNING AUTHORITY |
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| DESIGNED: | - | SCALE: | AS NOTED |
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| FILE NAME: | 2149.01-MP3 | | |

# MERCY HOSPITAL
# FORE RIVER PROJECT

## MASTER PLAN
## VISITOR/STAFF CIRCULATION ROUTES

FIGURE

4 of 6

GRID NORTH

REFER TO PLANTING PLANS BY SMRT FOR LANDSCAPE PLANTING AREAS

CUMBERLAND COUNTY CORRECTION FACILITY

LANDSCAPE BERM

VETERANS MEMORIAL BRIDGE

FUTURE PARKING

FUTURE OUTPARCEL

PHASE 1 HOSPITAL
137,832 SF (5 STORY)
FIRST FLOOR EL. 32.0'
GROUND FLOOR EL.17.5'

PHASE 1 M.O.B.
80,054 SF (4 STORY)
F.F.E. 30.0

FORE RIVER PARKWAY

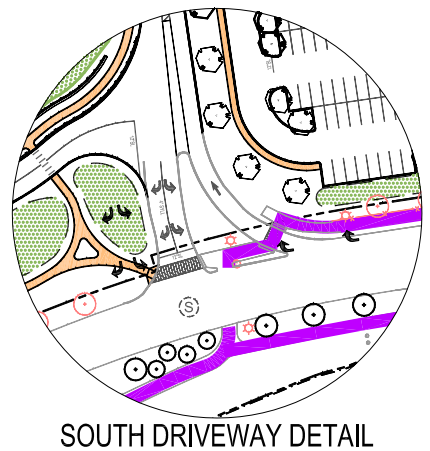
BORROW PIT RESTORATION LIMITS (GROUND COVER ONLY)

FUTURE CONNECTION

EXISTING WATER QUALITY TREATMENT SWALE

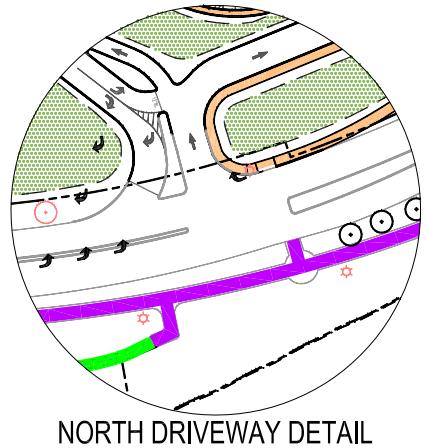
EXISTING CONDITIONS TO REMAIN

MUD FLATS



SOUTH DRIVEWAY DETAIL
SCALE: 1" = 50'

MUD FLATS



NORTH DRIVEWAY DETAIL
SCALE: 1" = 50'

EXISTING WATER QUALITY TREATMENT SWALE

TRAIL TO PROPERTY LINE FOR LINKAGE TO PORTLAND TRAILS

EXISTING TREES
EXISTING LIGHT
PROPOSED LANDSCAPE
OVERLOOK
SIDEWALK
STONE DUST PATH
PORTLAND TRAILS
LANDSCAPE AREAS
GRASSED AREAS

GRAPHIC SCALE
60 0 30 60 120
( IN FEET )
1 inch = 60 ft.

| | | |
|---|---|---|
| 7.25.06 | 4 | REVISED AND RESUBMITTED TO PLANNING AUTHORITY |
| 5.31.06 | 3 | REVISED AND RESUBMITTED TO PLANNING AUTHORITY |
| 12.23.05 | 2 | REVISED AND RESUBMITTED TO PLANNING AUTHORITY |
| 12.14.05 | 1 | REVISED AND RESUBMITTED TO PLANNING AUTHORITY |

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| DESIGNED: | - | SCALE: | AS NOTED |
| CHECKED: | SRB | JOB NO. | 2149.01 |
| FILE NAME: | 2149.01-MP3 | | |

# MERCY HOSPITAL
# FORE RIVER PROJECT

## MASTER PLAN
## LANDSCAPE AND OPEN SPACE

FIGURE
5 of 6

GRID NORTH

CONNECT TO 8" WATER

EXISTING SAN SEWER

PRIMARY POWER FEED FROM
ST. JOHN STREET UNDER TRACKS

CONNECT TO 20" WATER

FUTURE
EMERGENCY ACCESS

42"SEWER
3975/262
SMH

3975/262
42"SEWER

42"RCP SEWER

VETERANS MEMORIAL BRIDGE

MAINTENANCE BUILDING
1,536 SF
FLR EL. 21.5

CUMBERLAND COUNTY
CORRECTION FACILITY

SMH

HOSPITAL
EXPANSION
150,000 SF TO 200,000 SF

CHILLER / GENERATOR /
TRANSFORMER PAD /
OXYGEN PARK

FUTURE BUILDING
75,000 SF (3 STORY)

OUTPARCEL
24,000 SF (2 STORY)

FUTURE MULTI-LEVEL
PARKING STRUCTURE
700 - 900 SPACES

PHASE 1 HOSPITAL
137,832 SF (5 STORY)
FIRST FLOOR EL. 32.0

SMH

27" RCP/CP MAIN
SEWER LINE
3978/262

PHASE 1 M.O.B.
80,054 SF (4 STORY)
F.F.E. 33.0

I-295 CONNECTOR

MUD FLATS

WATER LINE

SAN SEWER LINE

GAS LINE

UNDERGROUND ELECTRIC / TELEPHONE

GRAPHIC SCALE
60 0 30 60 120
( IN FEET )
1 inch = 60 ft.

| | | |
|---|---|---|
| 5.31.06 | 3 | REVISED AND RESUBMITTED TO PLANNING AUTHORITY |
| 12.23.05 | 2 | REVISED AND RESUBMITTED TO PLANNING AUTHORITY |
| 12.14.05 | 1 | REVISED AND RESUBMITTED TO PLANNING AUTHORITY |

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| DRAWN: | DED | DATE: | 12.07.05 |
| DESIGNED: | - | SCALE: | AS NOTED |
| CHECKED: | SRB | JOB NO. | 2149.01 |
| FILE NAME: | 2149.01-MP3 | | |

# MERCY HOSPITAL
# FORE RIVER PROJECT

## MASTER PLAN - UTILITY SCHEMATIC

FIGURE
6 of 6

UNION STATION PLAZA

MMC PARKING GARAGE (UNDER CONSTRUCTION 2019)

FERGUSON SUPPLY

EXISTING PERIMETER ACCESS ROAD

PAN AM RAILWAY

TYSON FOODS

FUTURE MOB

FUTURE MOB / GARAGE

FUTURE PARKING GARAGE

COUNTY WAY

CUMBERLAND COUNTY JAIL

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

PHASE 2 HOSPITAL EXPANSION FOOTPRINT 30,140 GSF TOTAL AREA 54,889 GSF

PHASE 1 EXISTING MEDICAL OFFICE BUILDING 4 STORY BRICK FOOTPRINT - 20,047 GSF TOTAL AREA - 82,186 GSF

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

PARKING

FUTURE PARKING

MAINTENANCE FACILITY

EXISTING SNOW STORAGE FACILITY

FORE RIVER PARKWAY TRAIL

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

FUTURE ASC EXPANSION

FUTURE MOB / MAINTENANCE

FUTURE VERTICAL EXPANSION OF HOSPITAL

FORE RIVER

FORE RIVER MUD FLATS

SOUTH OPEN SPACE

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

NORTH OPEN SPACE

| 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 |
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| 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: 325704–MASTER PLAN.dwg

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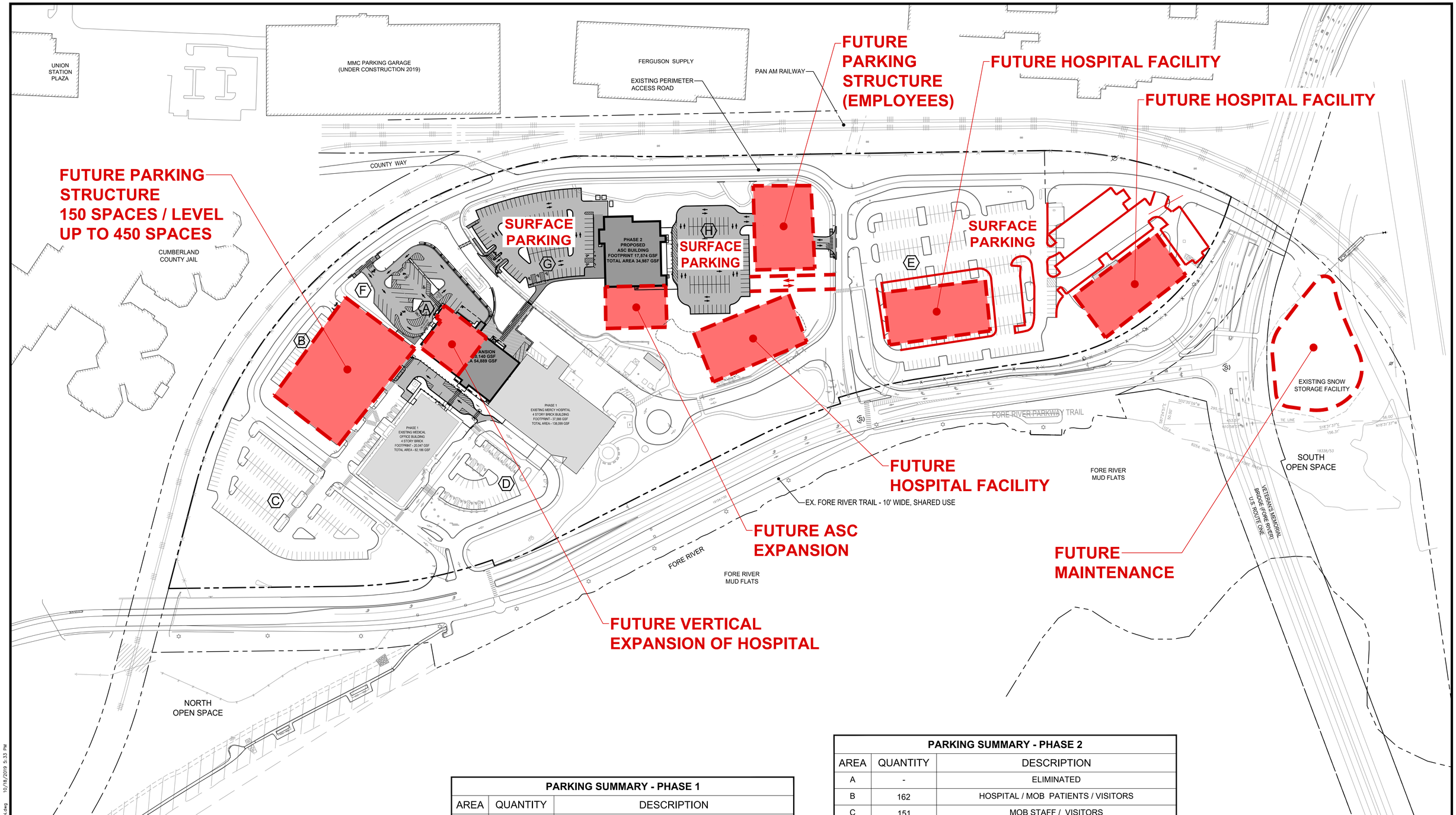
Drawing Name: Master Plan – Phases

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 |
| 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

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| – | – | – |

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| DESIGN DEVELOPMENT SUBMISSION TO OWNER | 07.31.19 | SRB |

| | | |
|---|---|---|
| Design: SRB | Draft: CDD | Date: AUG. 2019 |
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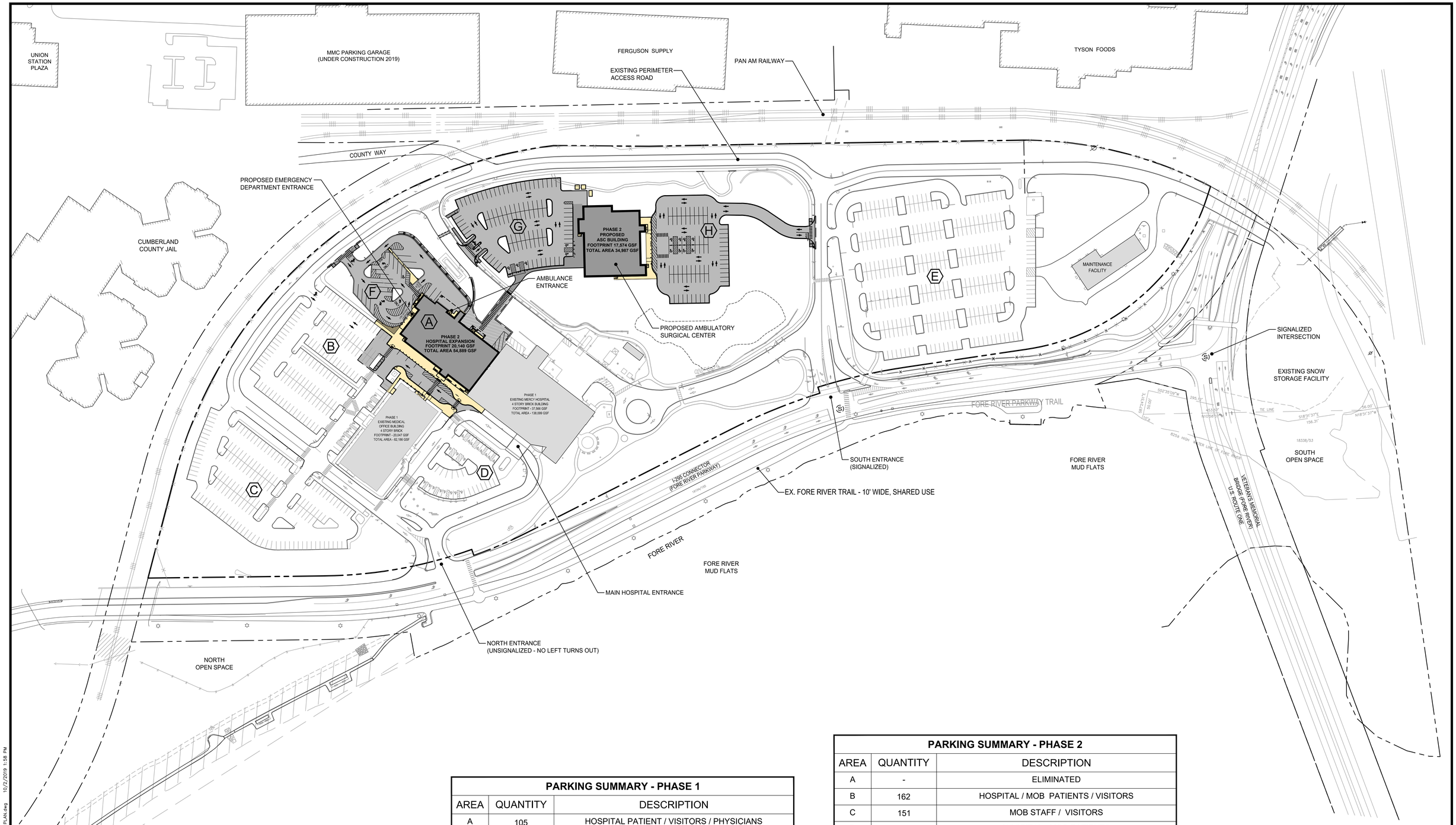
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Drawing Name: Master Plan – Phases
Project: Fore River Campus Consolidation, Portland, Maine
Client: Northern Light Mercy Hospital, 144 State Street, Portland, Maine 04101

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 |
| 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

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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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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

S00°25'09"E 495.15'

S87°54'51"E 50.00'

N10°58'51"E 43.10'

TIE LINE

S18°31'37"E 156.31'

N18°31'37"W 156.00'

18338/53

8252 HIGH WATER LINE OF FORE RIVER

## SOUTH DRIVEWAY DETAIL

SCALE: 1" = 50'

## NORTH DRIVEWAY DETAIL

SCALE: 1" = 50'

NORTH

GRAPHIC SCALE

75 0 37.5 75 150

( IN FEET )

1 inch = 75 ft.

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

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

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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

FORE RIVER MUD FLATS

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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| 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 – 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 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

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

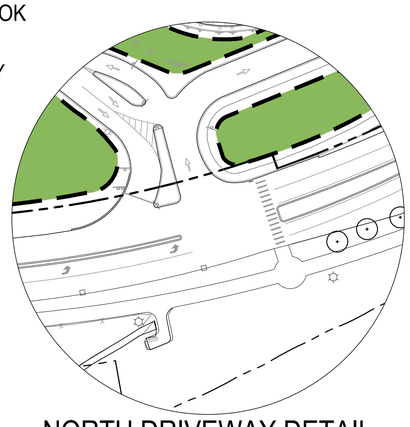
FORE RIVER MUD FLATS

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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|---|---|---|
| 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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207.772.2515

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

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

PATIENT / VISITOR PARKING

PATIENT / VISITOR PARKING

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 |

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| PERMIT APPROVAL SUBMISSION | 08.30.19 | SRB |
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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

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

S00°25'09"E 495.15'

S87°54'51"E 50.00'

N10°58'51"E 43.10'

TIE LINE

S18°31'37"E 156.31'

N18°31'37"W 156.00'

18338/53

8252 HIGH WATER LINE OF FORE RIVER

## SOUTH DRIVEWAY DETAIL

SCALE: 1" = 50'

## NORTH DRIVEWAY DETAIL

SCALE: 1" = 50'

NORTH

GRAPHIC SCALE

75 0 37.5 75 150

( IN FEET )

1 inch = 75 ft.

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

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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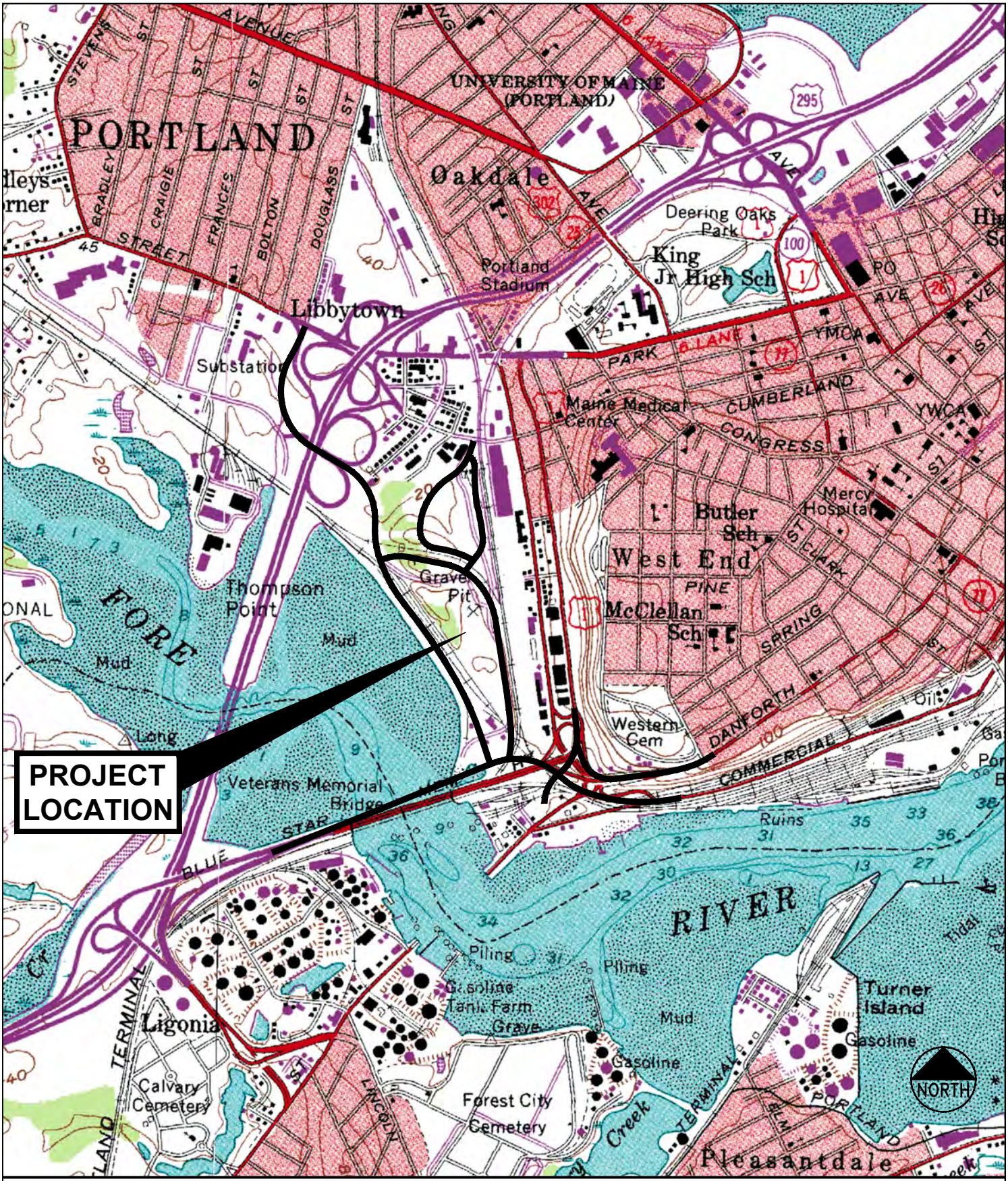
Drawing Name: Master Plan – Service & Bus Circulation Routes

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




# U.S.G.S. Location Map

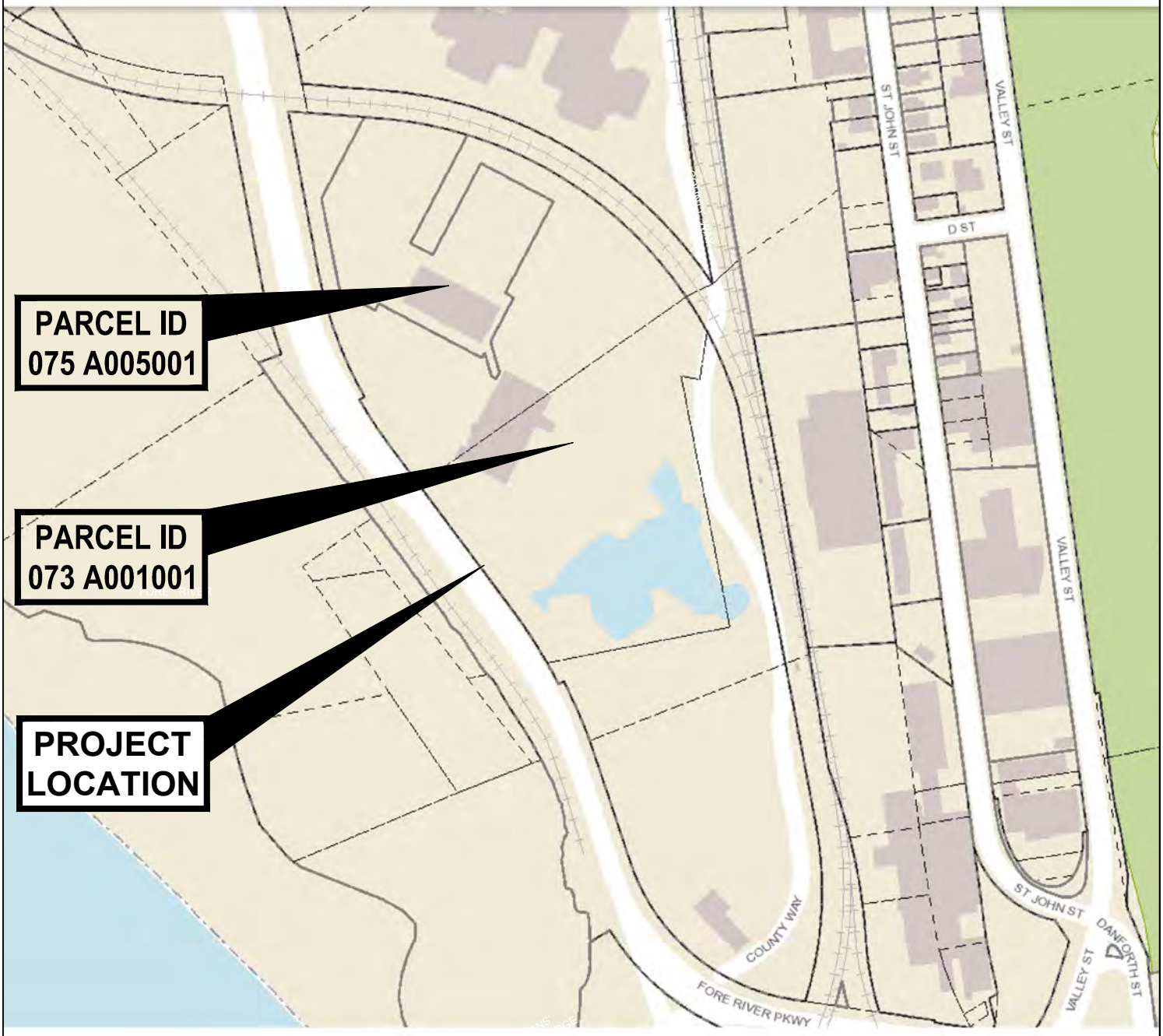
NLH Mercy Hospital, Fore River Campus Consolidation, Portland, Maine
U.S.G.S. Portland West, State-7.5 Minute Series (Topographic)

| | |
|---|---|
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| File Name: 325704–DEP FIGURES.dwg | |

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Figure
1




# Property Tax Map

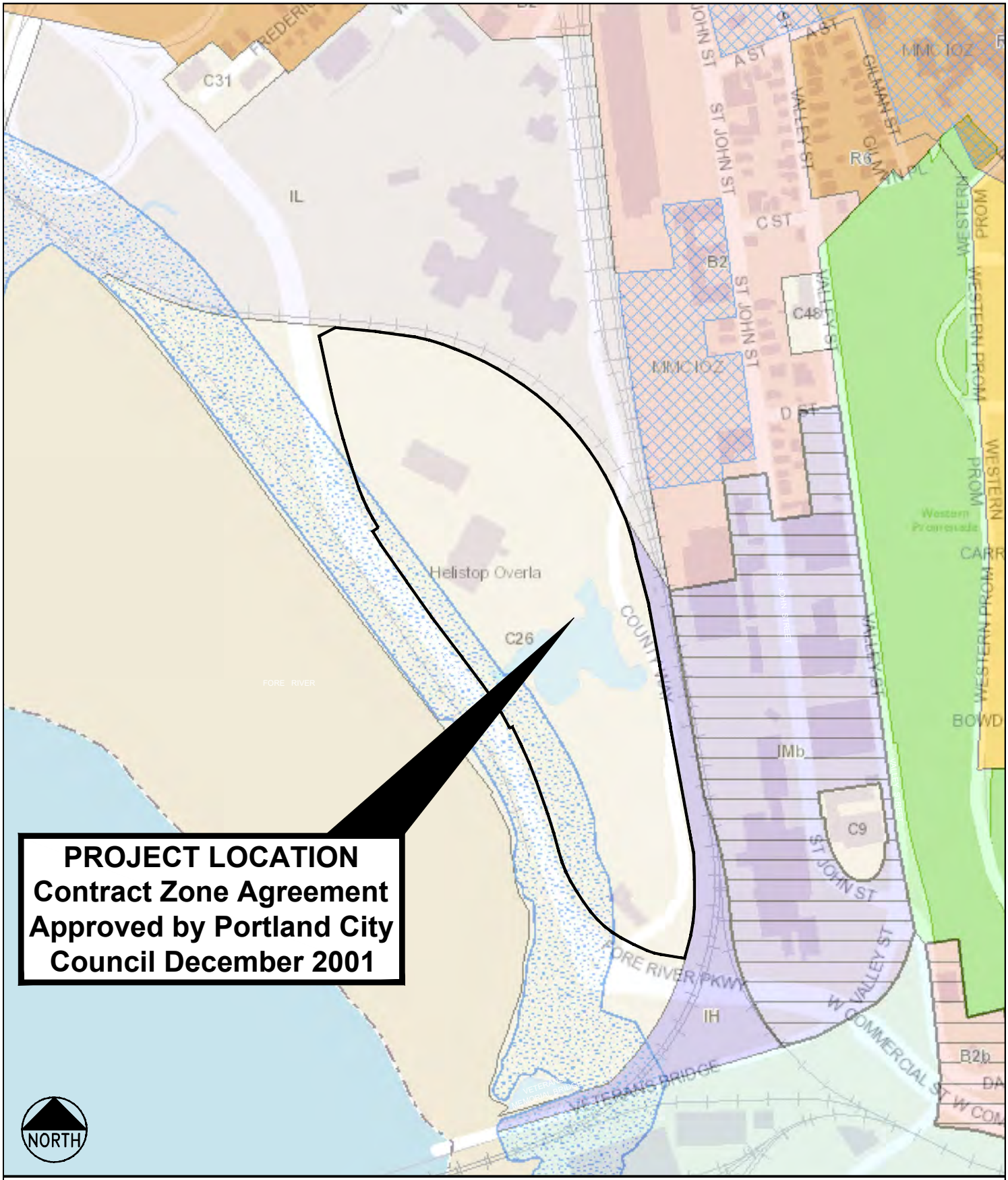
NLH Mercy Hospital, Fore River Campus Consolidation, Portland, Maine
City of Portland Maine Parcel Viewer

| | | |
|---|---|---|
| Design: JTA | Date: AUG. 2019 | |
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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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Figure
3




# Aerial Photograph

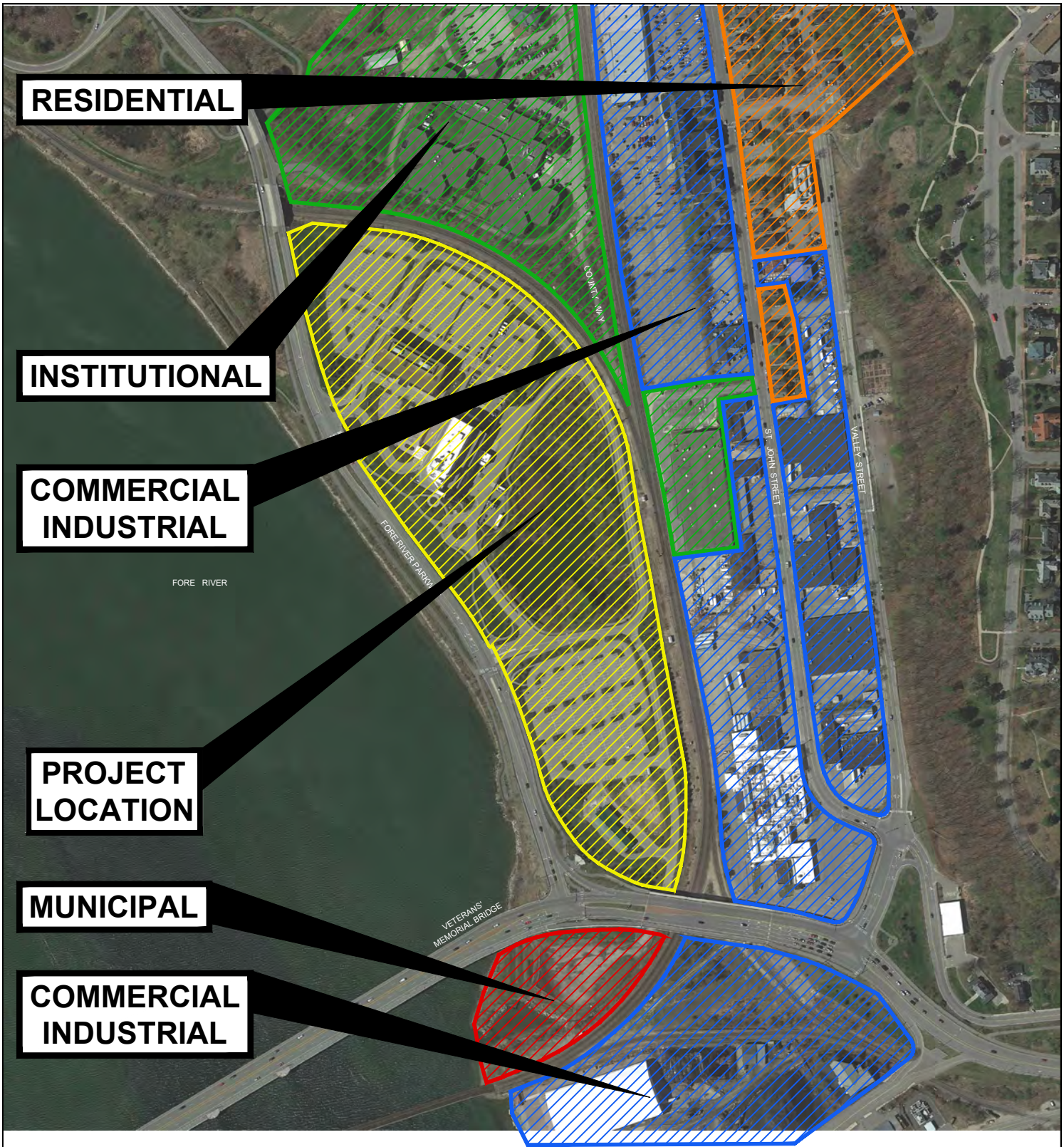
NLH Mercy Hospital, Fore River Campus Consolidation, Portland, Maine
City of Portland Maine Aerial Imagery 2018

| | |
|---|---|
| Design: JTA | Date: AUG. 2019 |
| Draft: CDD | Job No.: 3257.04 |
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Figure
4




# Abutting Land Use Map

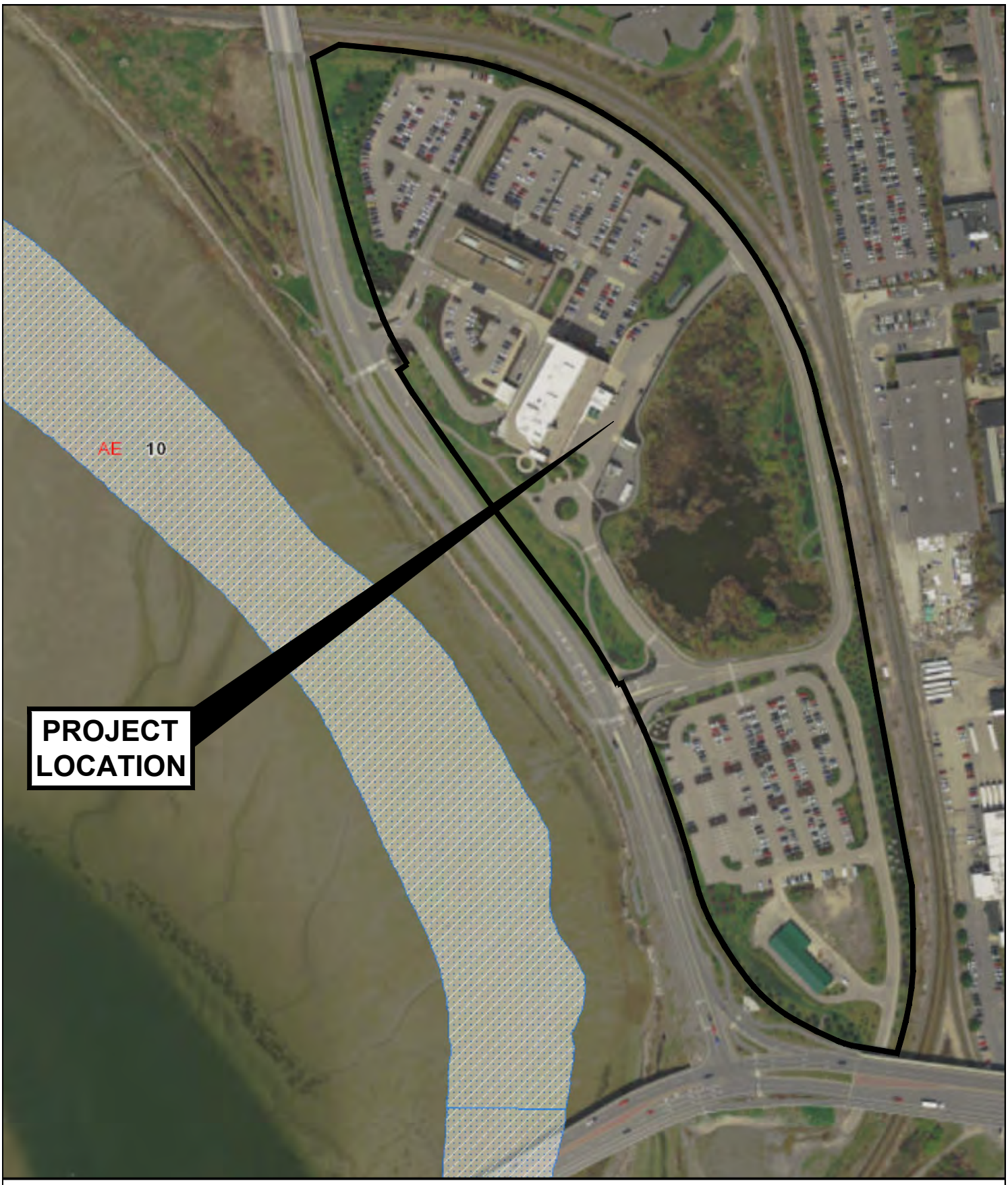
NLH Mercy Hospital, Fore River Campus Consolidation, Portland, Maine
City of Portland Maine Aerial Imagery 2018

| | |
|---|---|
| Design: JTA | Date: AUG. 2019 |
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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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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. |
| File Name: 325704–DEP FIGURES.dwg | |

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Figure
9



**PHOTO 1**



**PHOTO 2**

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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**

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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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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 7**



**PHOTO 8**

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**

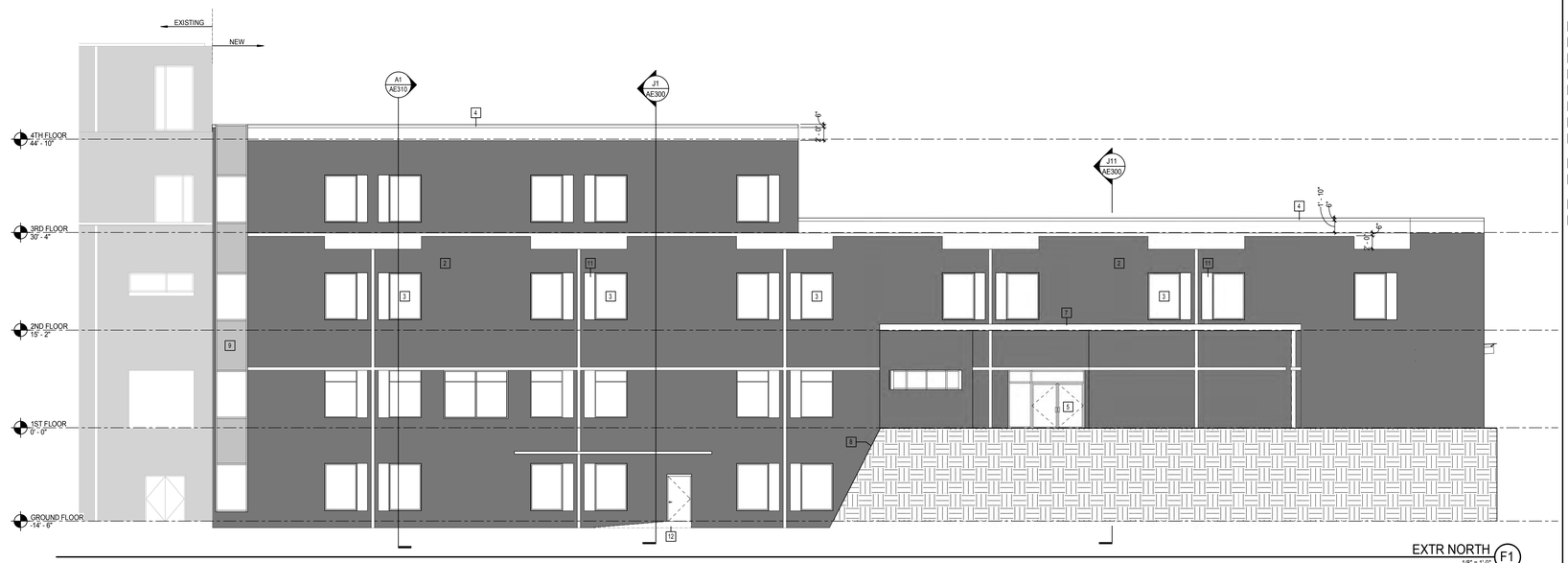


**PHOTO 9**



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207.772.2515

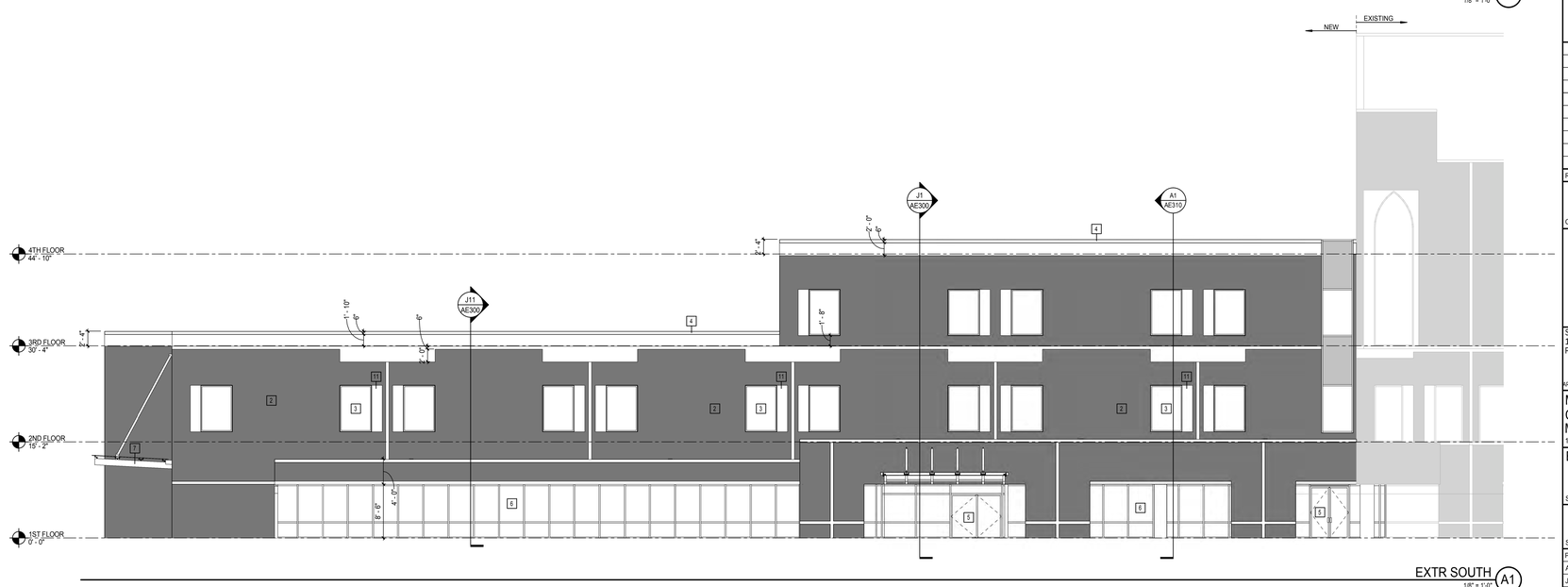
**Northern Light Mercy Hospital – Fore River Campus**
**Existing Photographs**
**Photos on October 21, 2019**




EXTR NORTH
1/8" = 1'-0" F1




EXTR WEST
1/8" = 1'-0" L1




EXTR SOUTH
1/8" = 1'-0" A1

## 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/ C/VIL 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:

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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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36x48




GROUND FLOOR - FACILITY PLAN (K1)
3/32" = 1'-0"




FIRST FLOOR - FLOOR PLAN AREA A (A1)
3/32" = 1'-0"

A B C D
GROUND FLOOR KEYPLAN 2
1" = 160'-0"

A B C D
FIRST FLOOR KEYPLAN 1
1" = 160'-0"

| REV | DESCRIPTION | DATE |
|---|---|---|

DESIGN DEVELOPMENT
7-31-2019
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PROJECT NORTH:

SMRT Architects and Engineers
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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

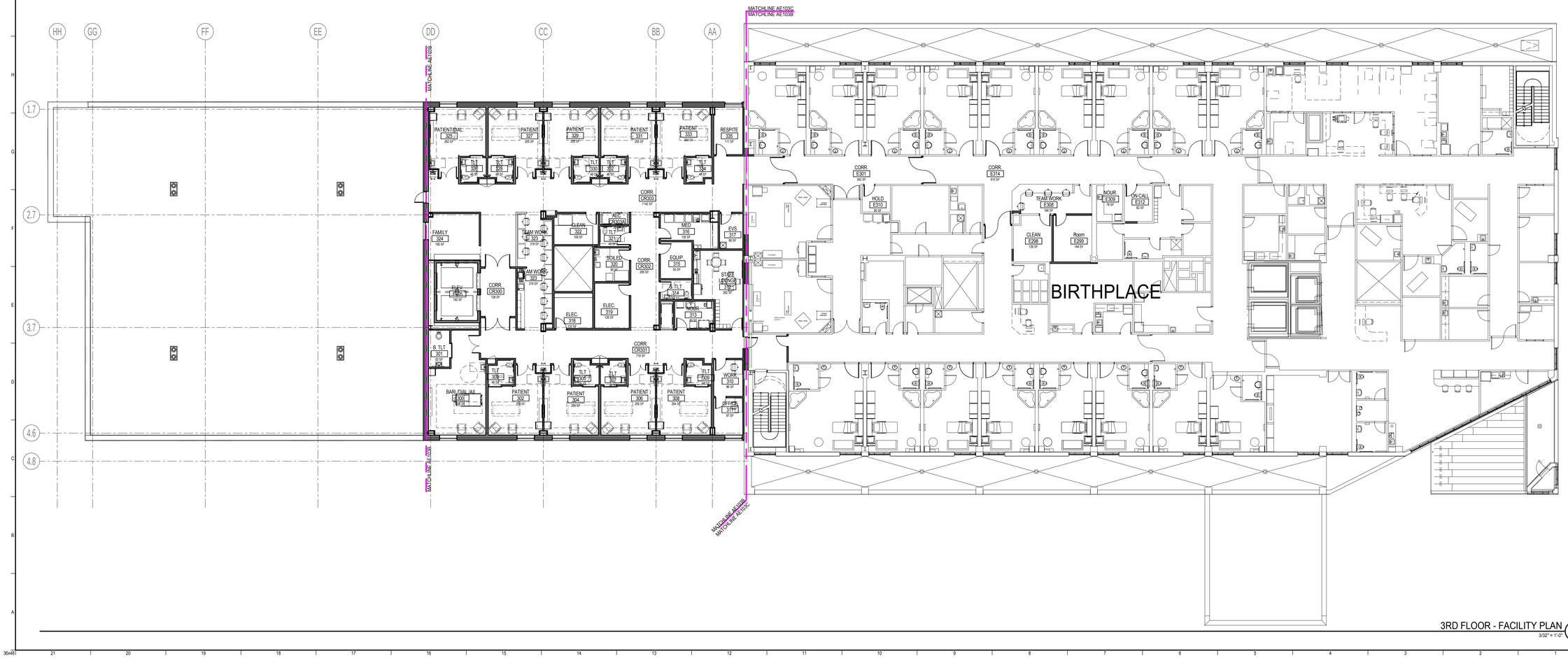
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| A/E OF RECORD: | KD | | |
| JOB CAPTAIN: | JCH | | A-100 |
| DRAWN BY: | JCH | | |
| SMRT FILE: | A-100-19002 | SHEET No. | |

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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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144 Fore Street/P.O. Box 618
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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"

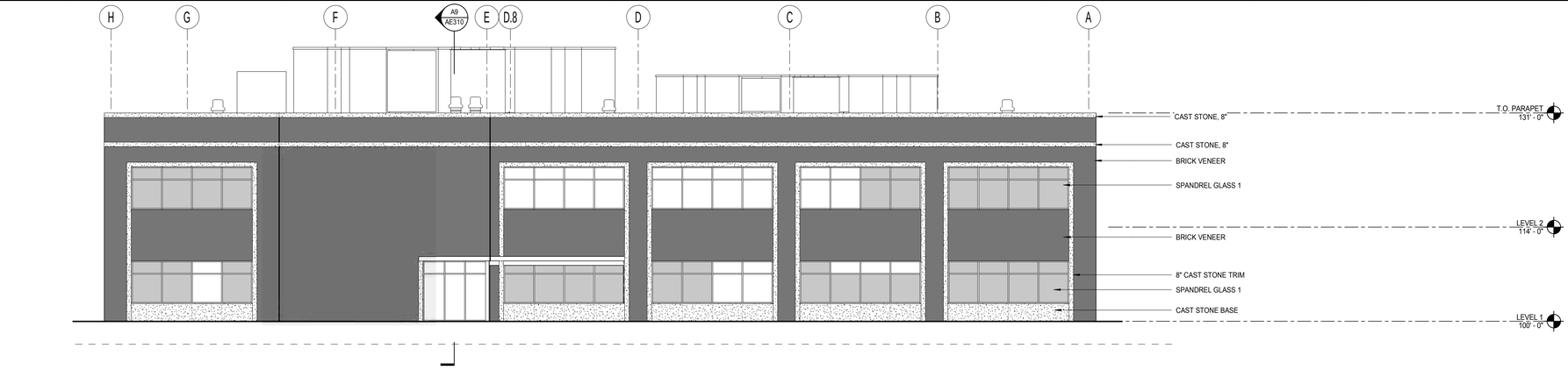
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| A/E OF RECORD: | KD | | |
| JOB CAPTAIN: | JCH | | |
| DRAWN BY: | JCH | | |
| SMRT FILE: | A-101-19002 | SHEET No. | A-101 |

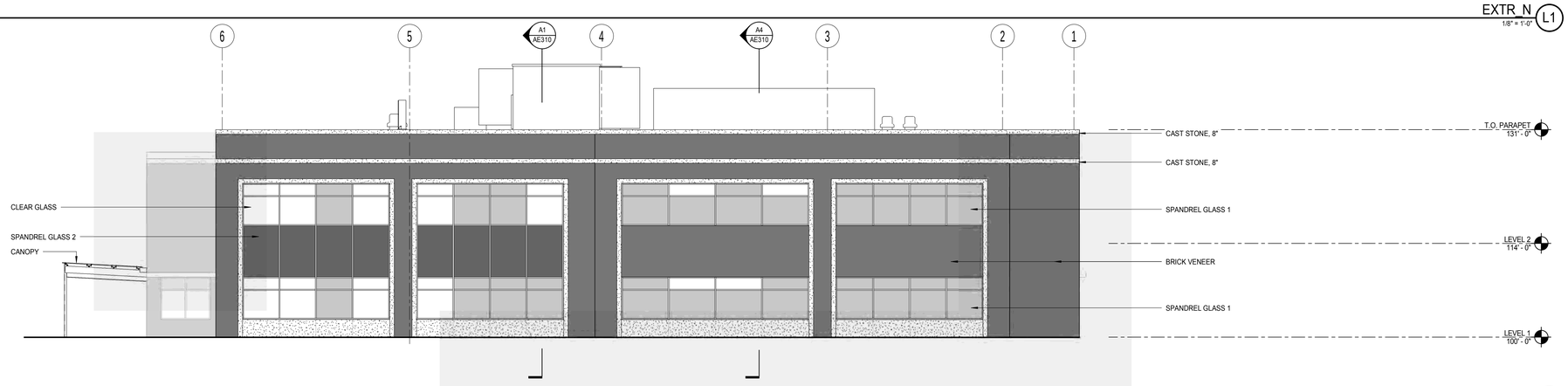
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30x42



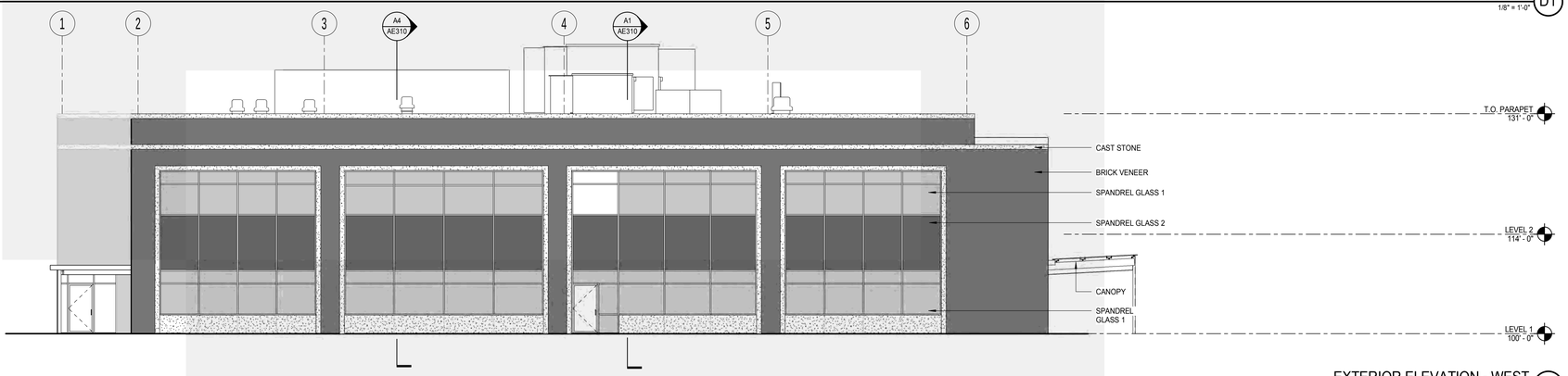

EXTR_N
1/8" = 1'-0" L1




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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7-31-2019

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MERCY HOSPITAL
AMBULATORY SURGERY CENTER

Portland, ME

EXTERIOR ELEVATIONS

SHEET TITLE:

0" 1/4" 1/2" 1" 2" 3"

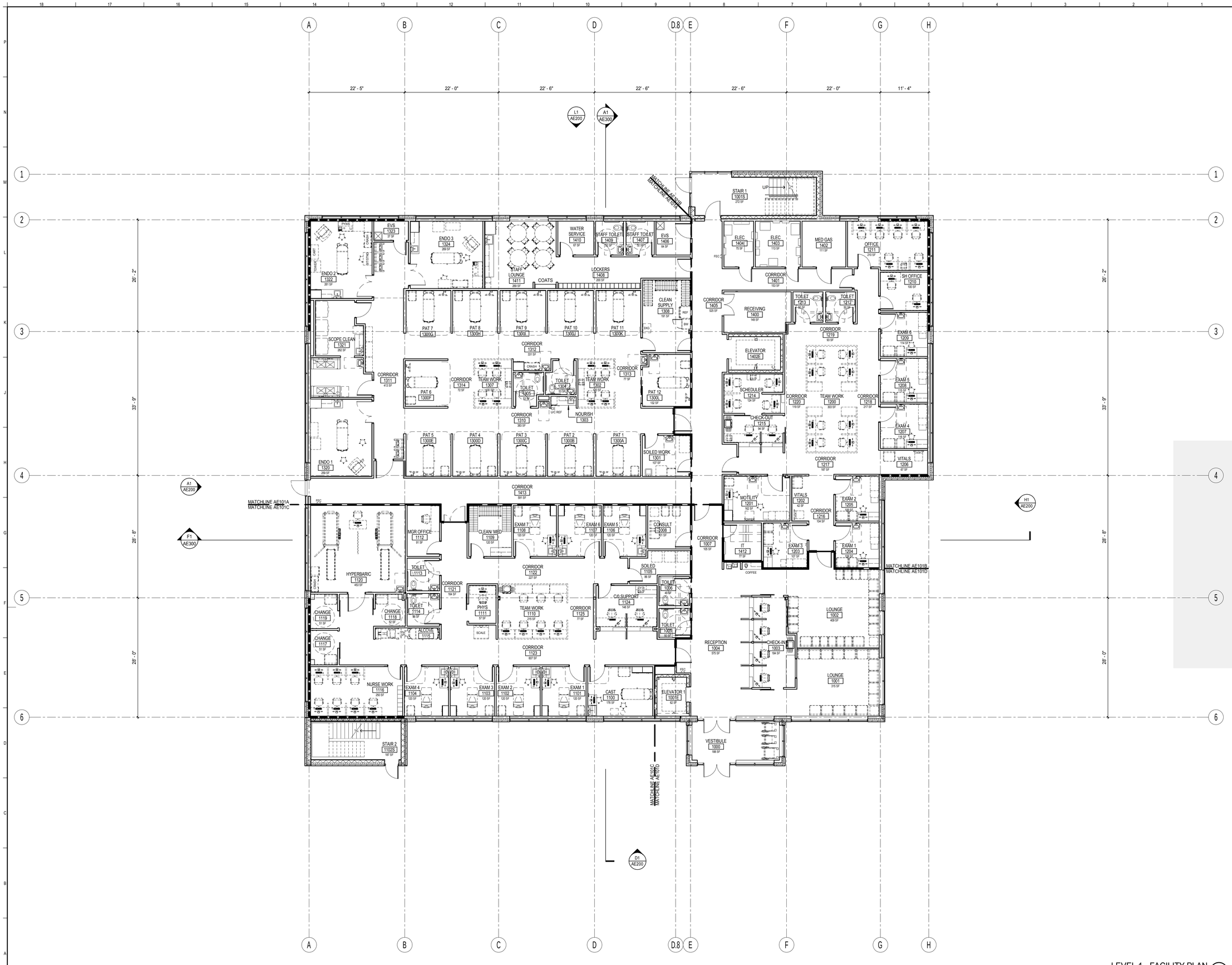
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| | | | |
|---|---|---|---|
| PROJECT MANAGER: | KD | PROJECT NO: | 19004 |
| A/E OF RECORD: | KD | | |
| JOB CAPTAIN: | CAH | AE200 | |
| DRAWN BY: | CAH | | |
| SMRT FILE: | AE200-19004 | SHEET No. | |

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NOT FOR CONSTRUCTION

30x42




LEVEL 1 - FACILITY PLAN (A1)
1/8" = 1'-0"

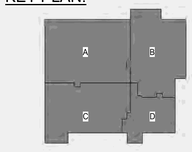
## PLAN NOTES:

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 8" 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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NOT FOR CONSTRUCTION

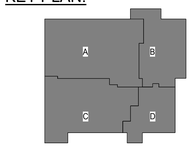
## PLAN NOTES:

1. SEE G-001 FOR GENERAL PROJECT NOTES, LEGENDS AND ABBREVIATIONS.
2. SEE G-003 FOR GENERAL TOP OF WALL DETAILS AND PARTITION TYPES.
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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:

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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LEVEL 2 - FACILITY PLAN (A1)
1/8" = 1'-0"

NOT FOR CONSTRUCTION

30x42




Northern Light
Mercy Specialty &
Surgery Center


DR. HARRY E. DAVIS WING

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







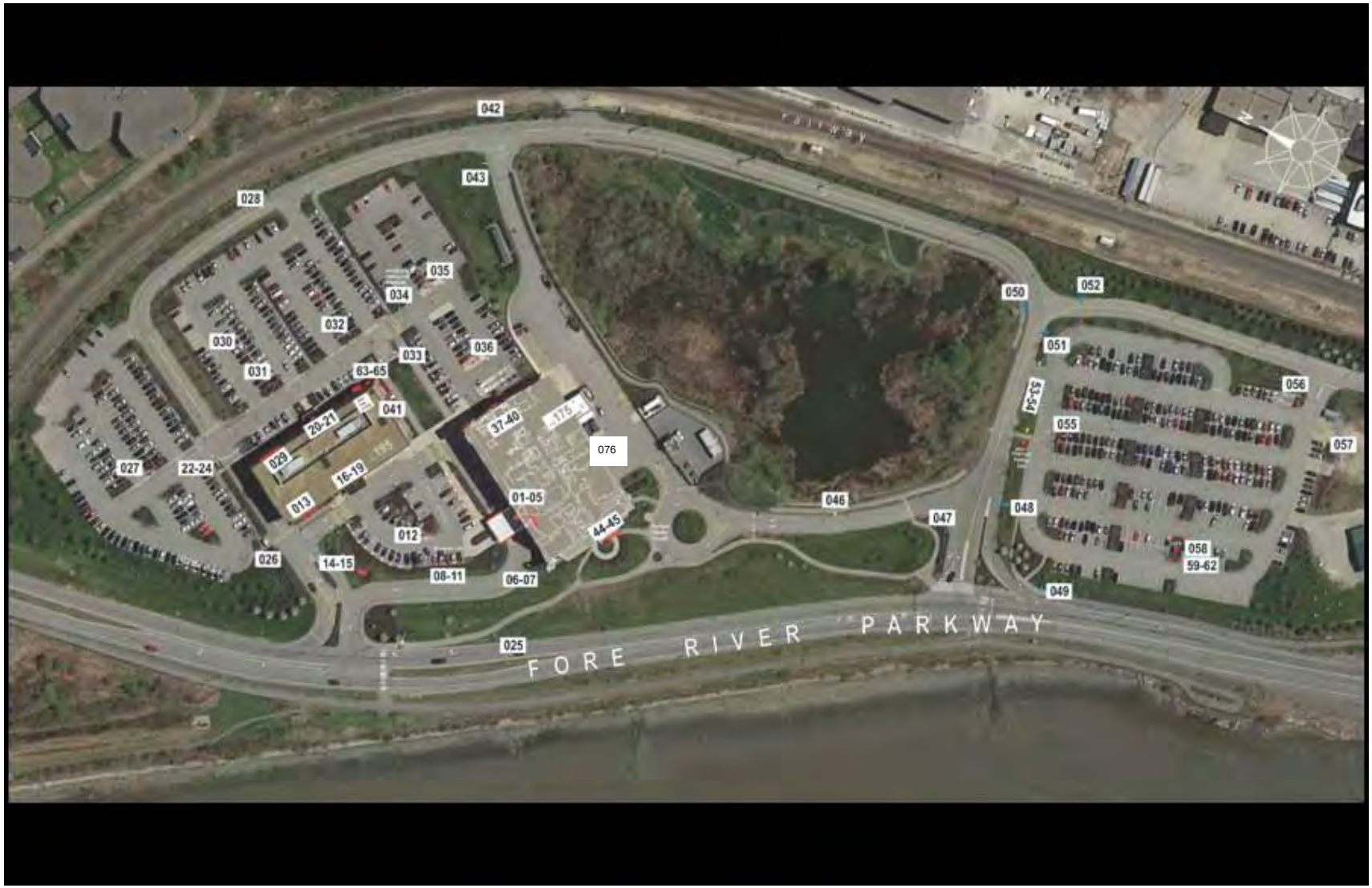
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EMHS

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 |

*(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 |

*(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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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

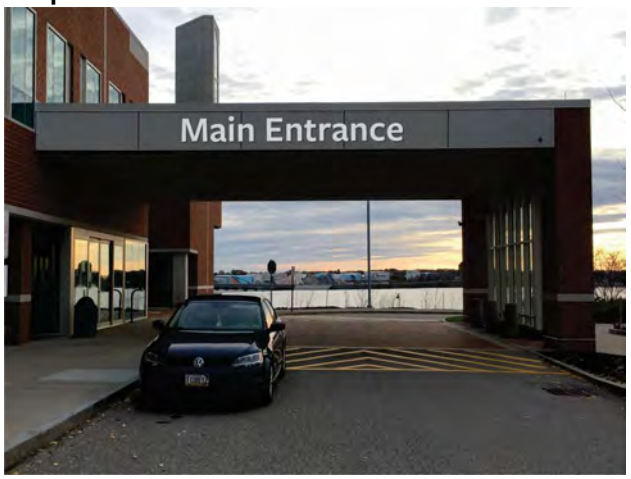
Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

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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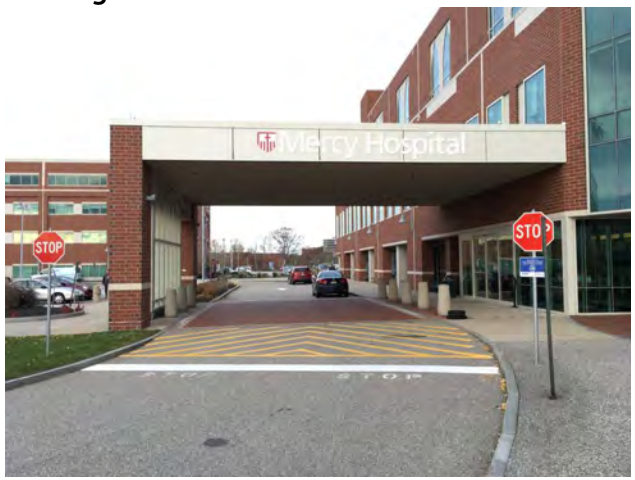
EMHS

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:** | 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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Site Number: 000048

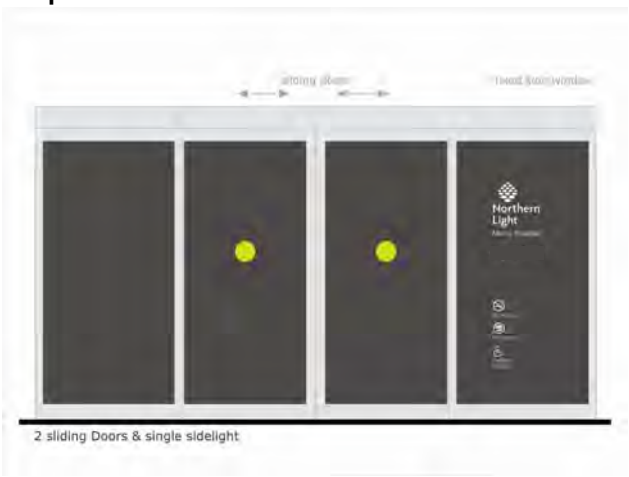
Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

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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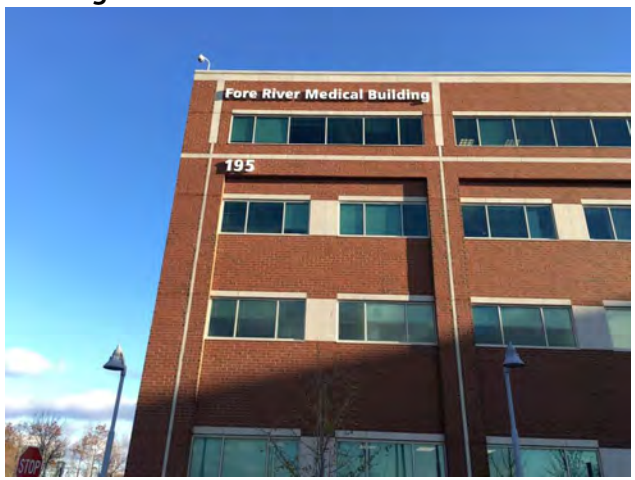
EMHS

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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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:** | 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

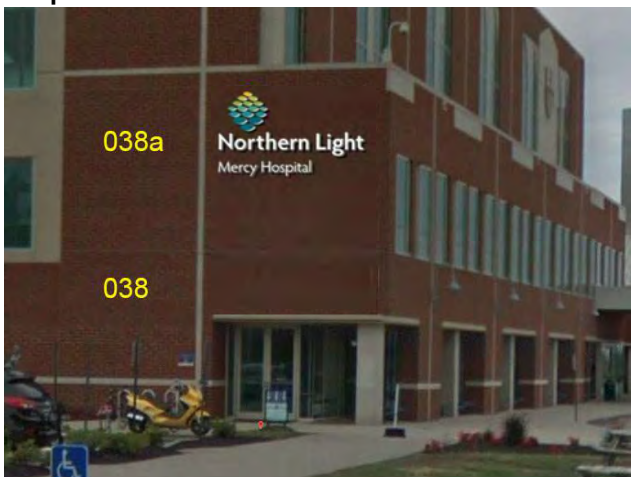
Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

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

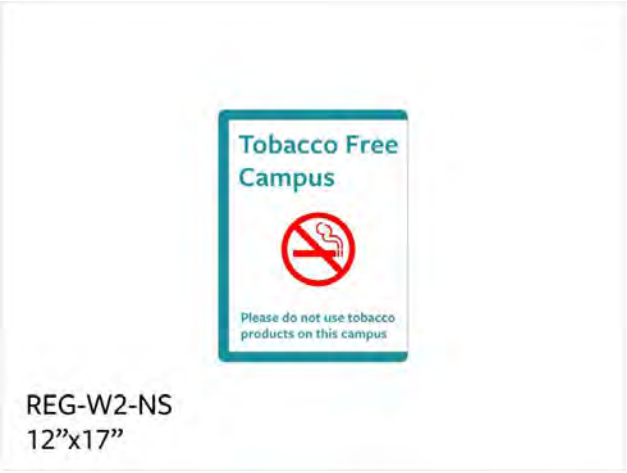
Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

## Existing Photo




## Proposed Photo




## 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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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:** | 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

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City/State: ,

Recommendation Completed: 2018-06-13
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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

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Site Name: Fore River Hospital
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City/State: ,

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## 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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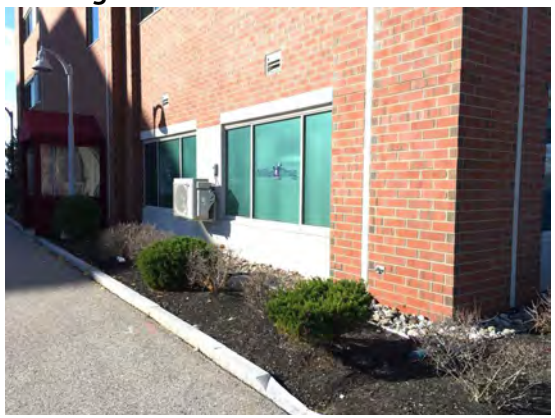
EMHS

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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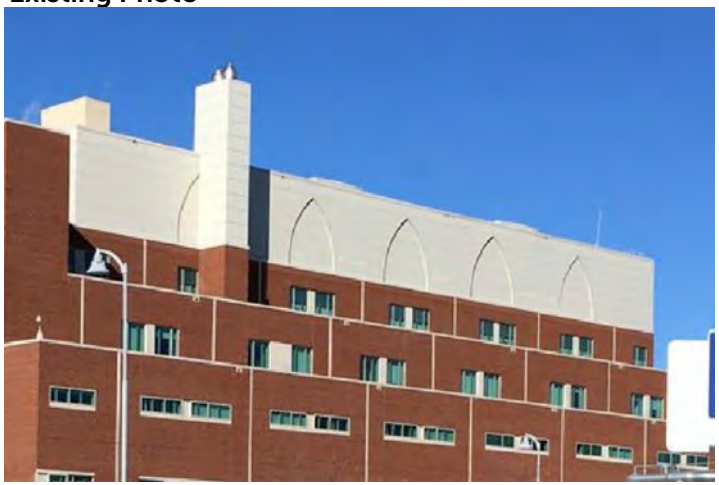
EMHS

Site Number: 000048

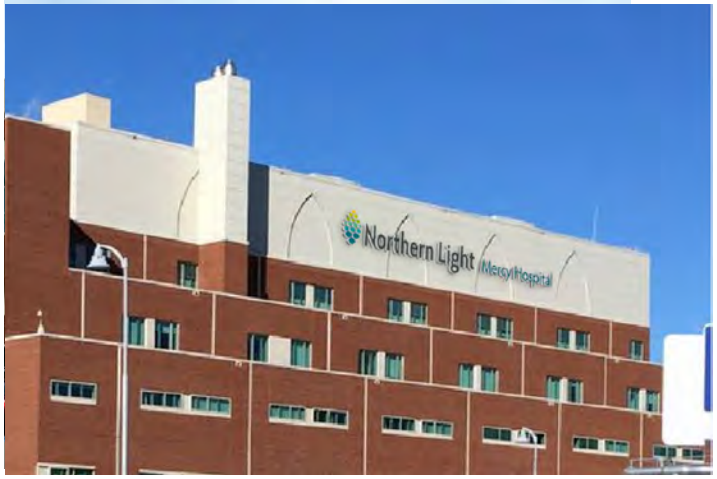
Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

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 |

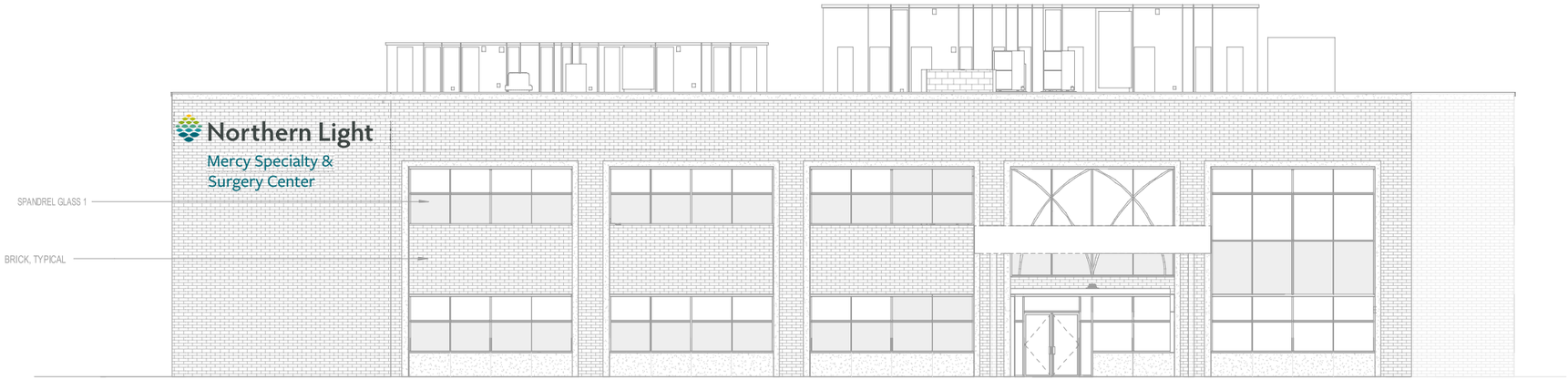
| | |
|---|---|
| **Overall Height:** | 5'-5 5/8" |
| **Overall Width:** | 45'-7 1/4" |
| **Logo Height:** | 4'-6" |
| **Letter Height:** | 3'-0" |
| **Illuminated:** | Illuminated |

**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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# Concept Signage Proposals - New Surgery Center




EXTERIOR ELEVATION - SOUTH D1

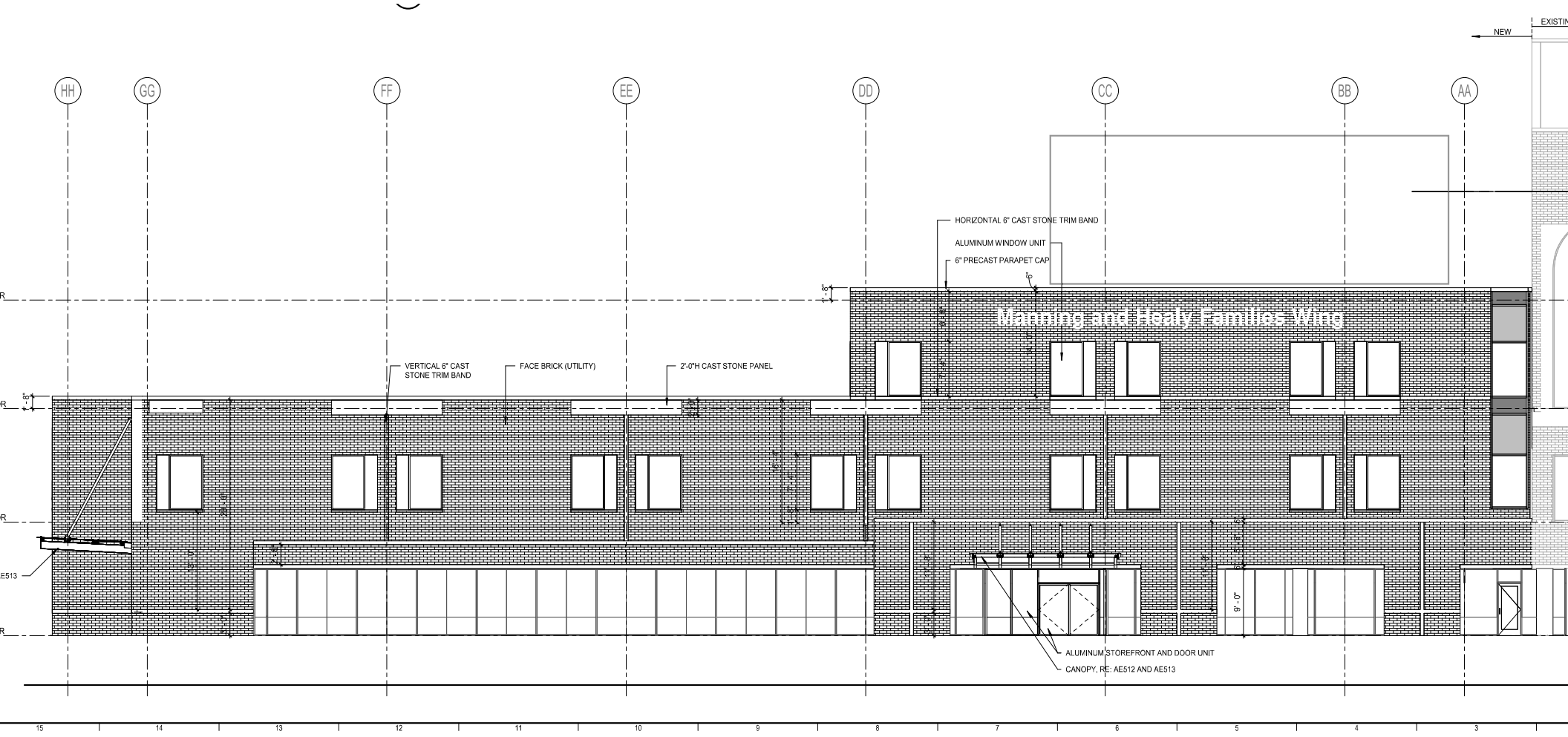



EXTERIOR ELEVATION - WEST A1

# Concept Signage Proposals - Hospital Expansion West Facade



# Concept Signage Proposals - Hospital Expansion South Facade



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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## 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

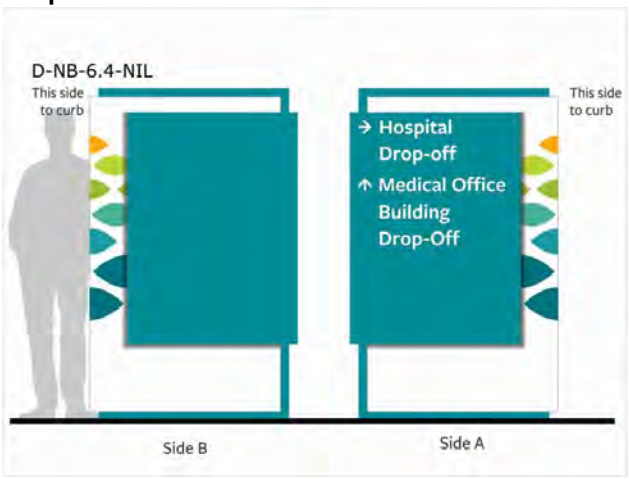
Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

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




## 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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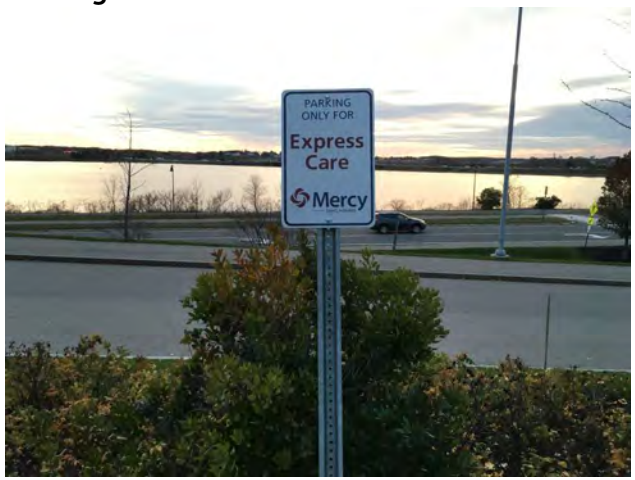
EMHS

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




## 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




## 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




## 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




## 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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Site Number: 000048

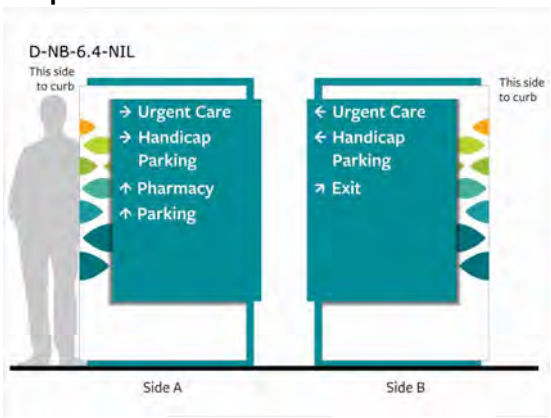
Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

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




## 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




## 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




## 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




## 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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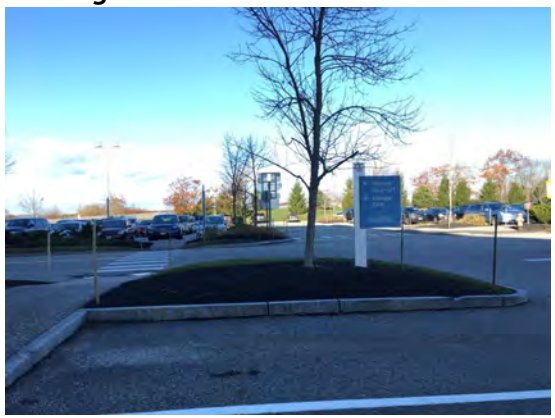
EMHS

Site Number: 000048

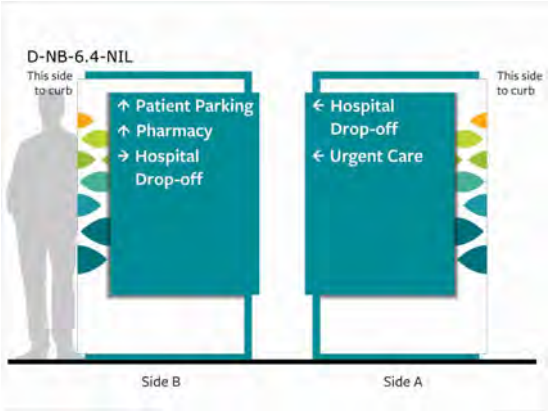
Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

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




## 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




## 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

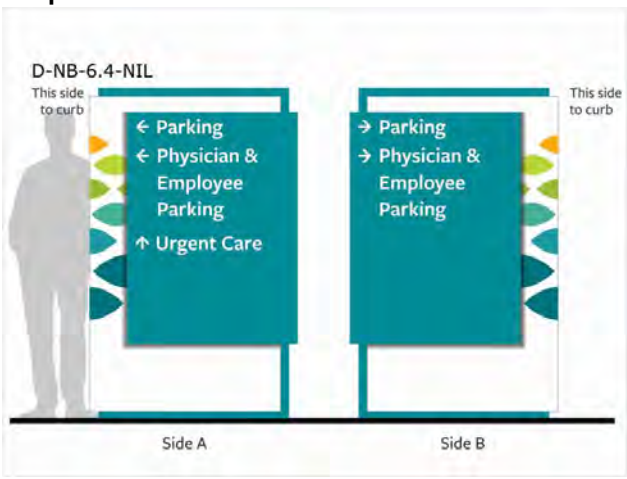
Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

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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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:** | 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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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:** | 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. |
| **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:** | 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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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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EMHS

Site Number: 000048

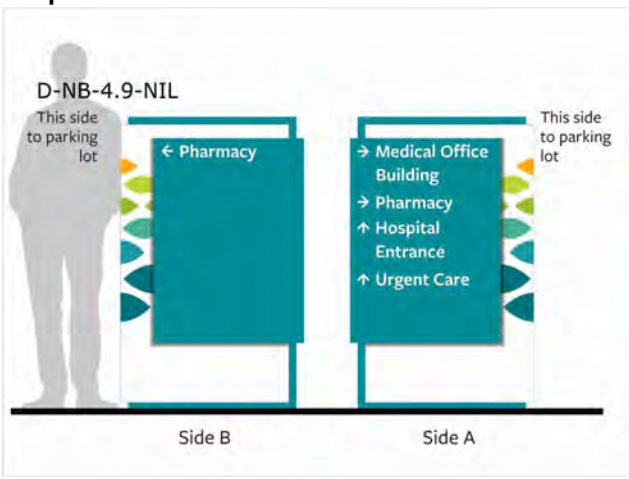
Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

## Existing Photo




## Proposed Photo




## Existing

| | |
|---|---|
| **Sign Number:** | 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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EMHS

Site Number: 000048

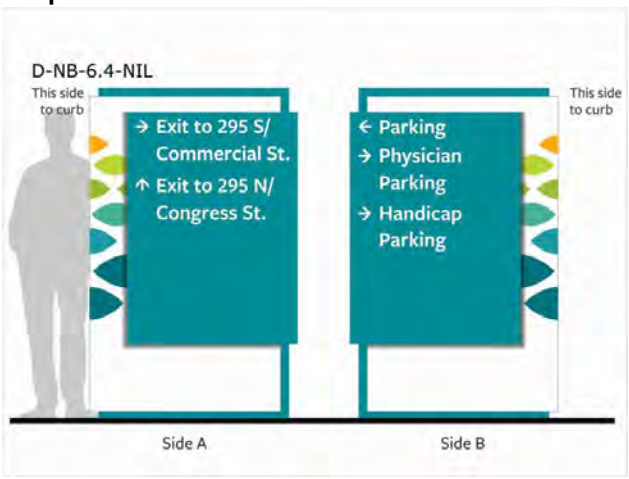
Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

## Existing Photo




## Proposed Photo




## Existing

| | |
|---|---|
| **Sign Number:** | 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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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:** | 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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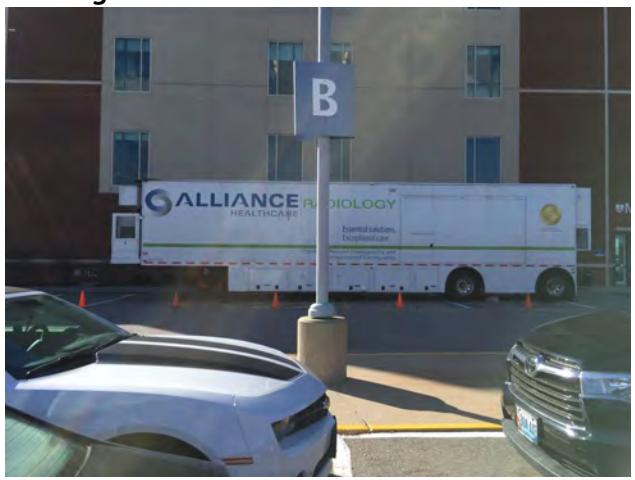
EMHS

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:** | 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:** | |
| **Comments:** | Verify copy and arrows directions w/ hospital prior to fabrication. |

| | |
|---|---|
| **Overall Height:** | 1'-6" |
| **Overall Width:** | 2'-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 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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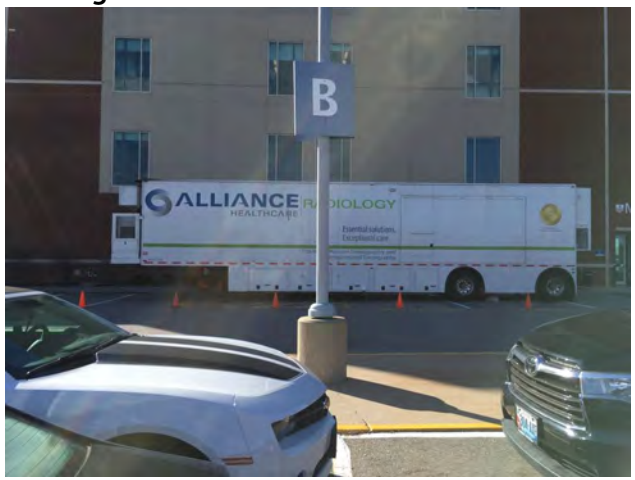
EMHS

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:** | 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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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:** | 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:** | |

| | |
|---|---|
| **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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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:** | 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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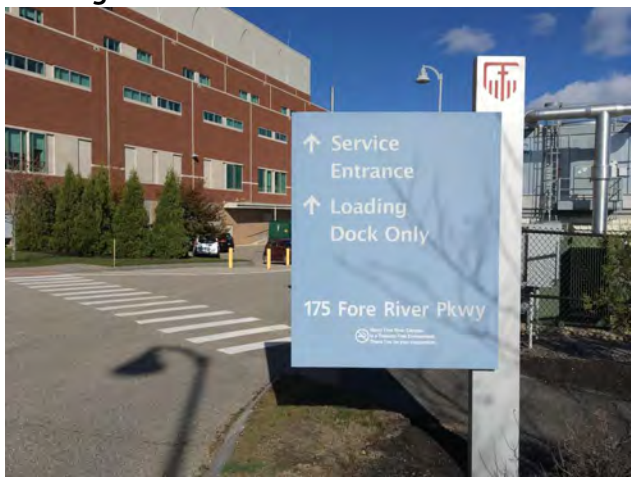
EMHS

Site Number: 000048

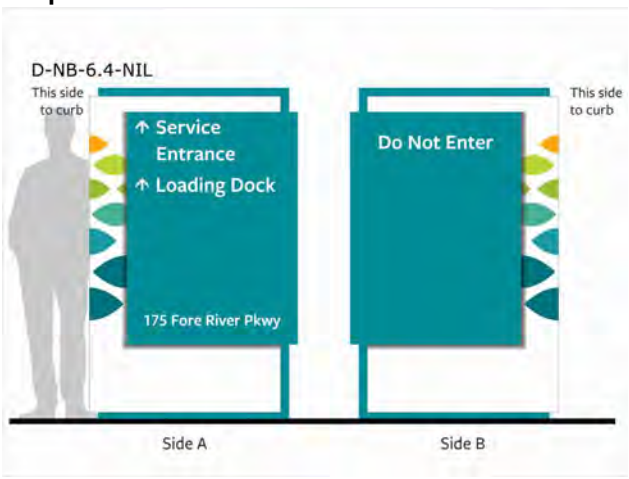
Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

## Existing Photo




## Proposed Photo




## Existing

| | |
|---|---|
| **Sign Number:** | 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

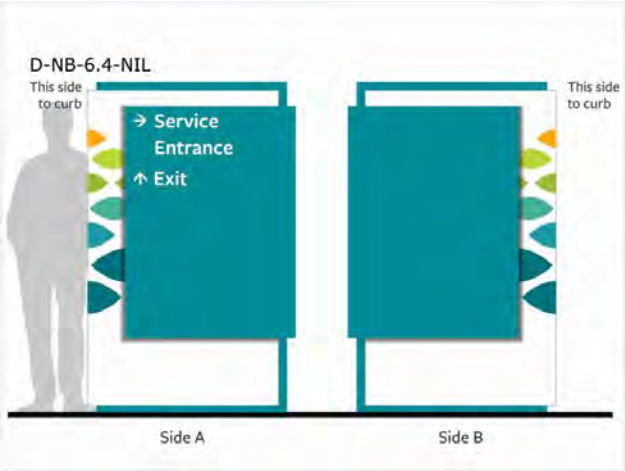
Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

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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monigle

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

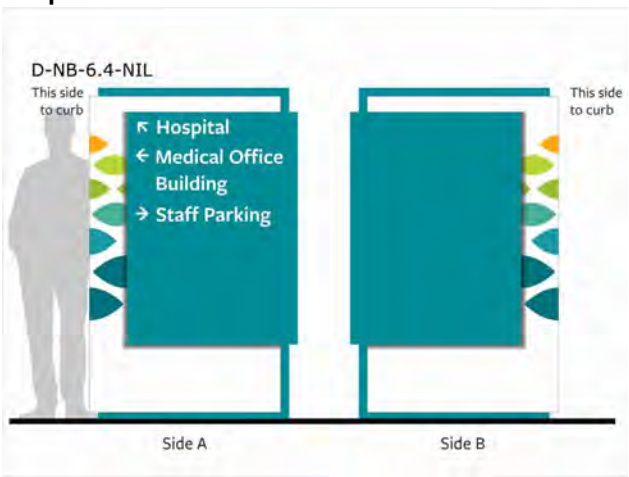
Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

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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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:** | 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




## 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




## 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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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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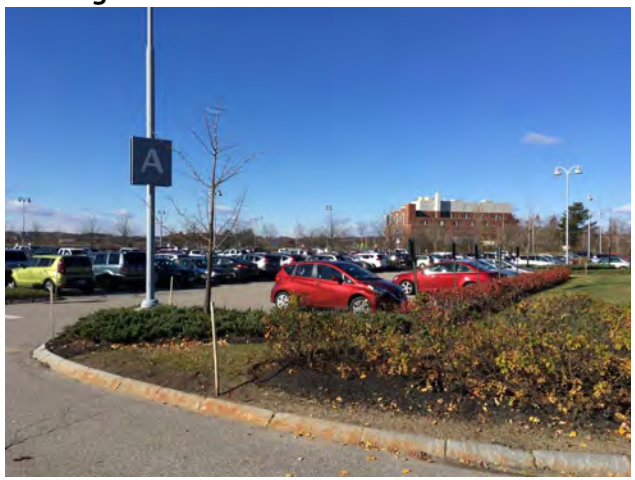
EMHS

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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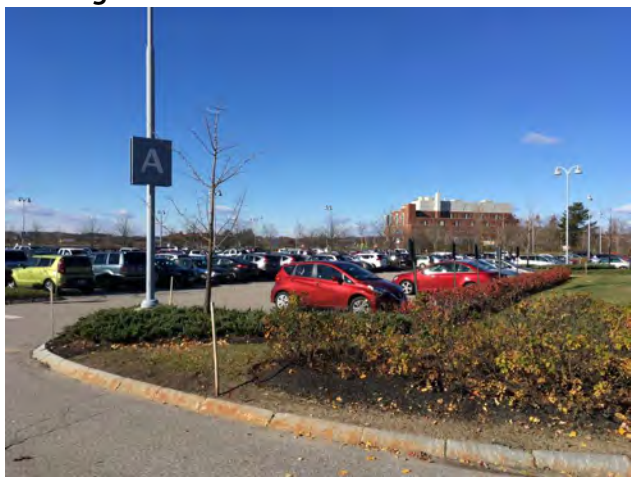
EMHS

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




## 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

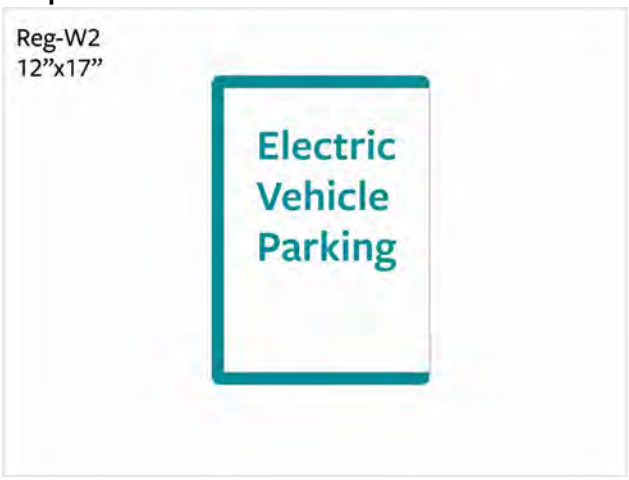
Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

## Existing Photo




## Proposed Photo




## 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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EMHS

Site Number: 000048

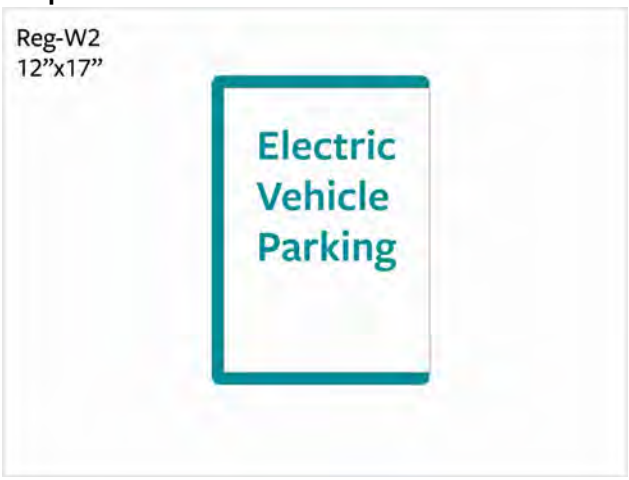
Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

## Existing Photo




## Proposed Photo




## Existing

| | |
|---|---|
| **Sign Number:** | 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

Site Number: 000048

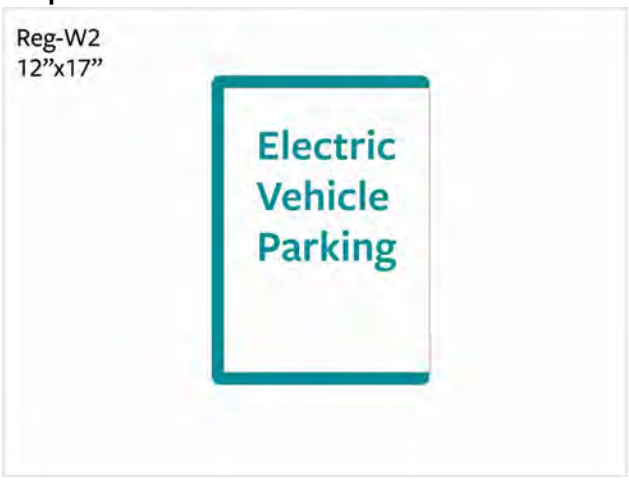
Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

## Existing Photo




## Proposed Photo




## Existing

| | |
|---|---|
| **Sign Number:** | 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

Site Number: 000048

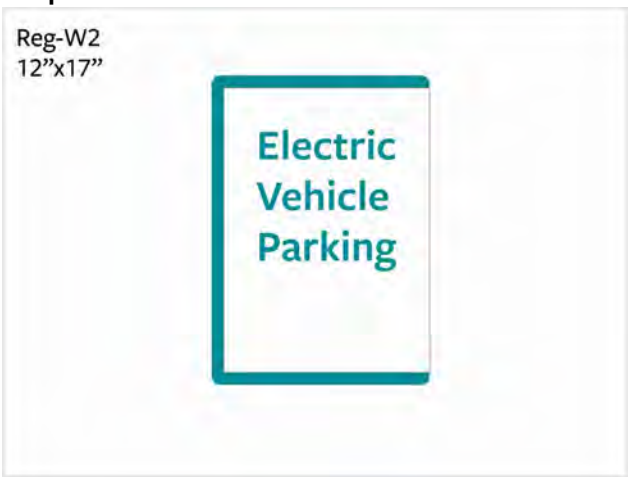
Site Name: Fore River Hospital
Address: 175 Fore River Parkway
City/State: ,

Recommendation Completed: 2018-06-13
Approved: 2018-07-10
Date Print: 11/14/2019

## Existing Photo




## Proposed Photo




## Existing

| | |
|---|---|
| **Sign Number:** | 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

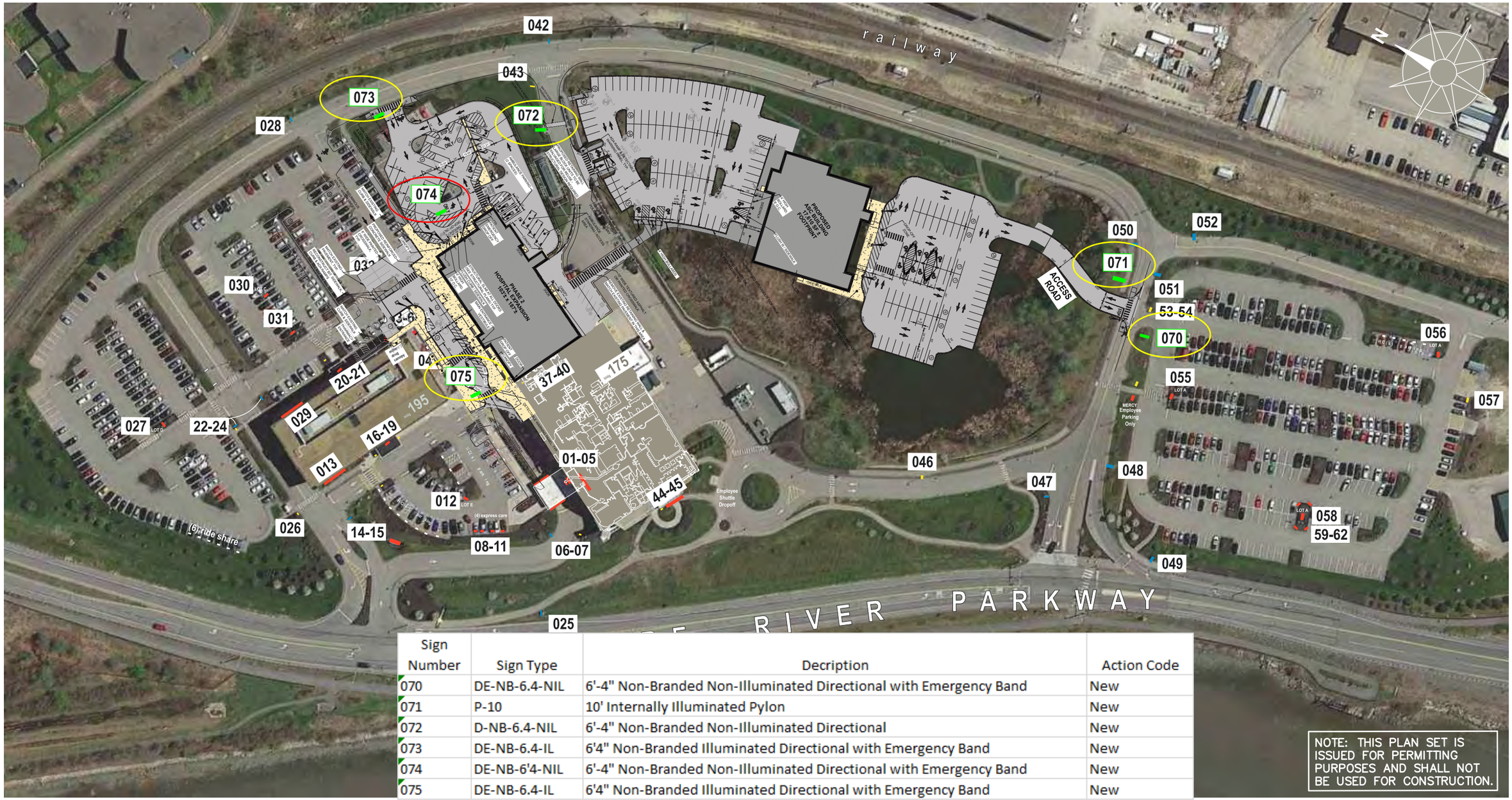
| | |
|---|---|
| **Sign Number:** | 062 |
| **Sign Type:** | REG-W2 |
| **Description:** | Small Wall Mounted Regulatory Sign |
| **Action:** | Remove and Replace |
| **Message A:** | |
| **Message B:** | |
| **Comments:** | Reuse pole. Pole appears to be in good condition |
| **Restoration Notes:** | 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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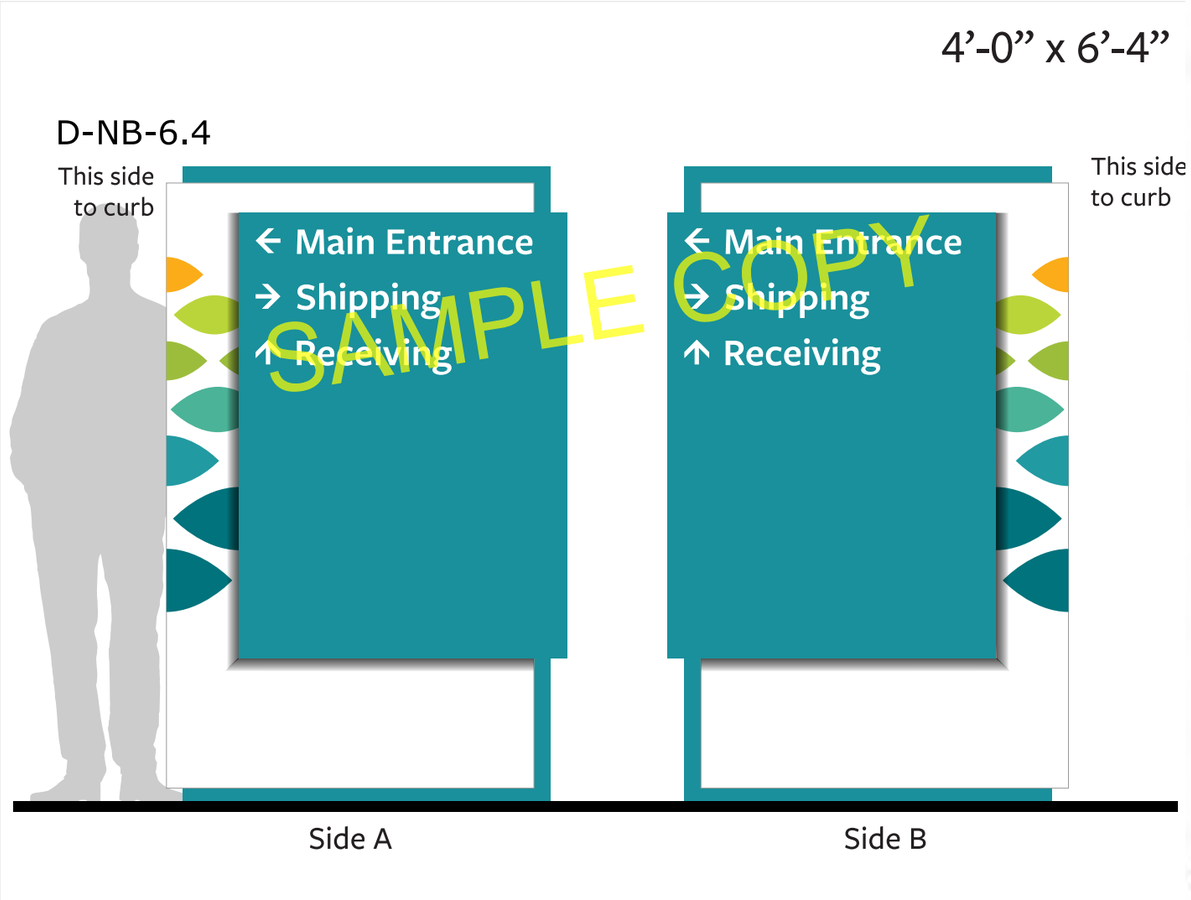
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# Current and Future State Proposed Sign Locations




| 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 |

Future State Proposed Sign Design



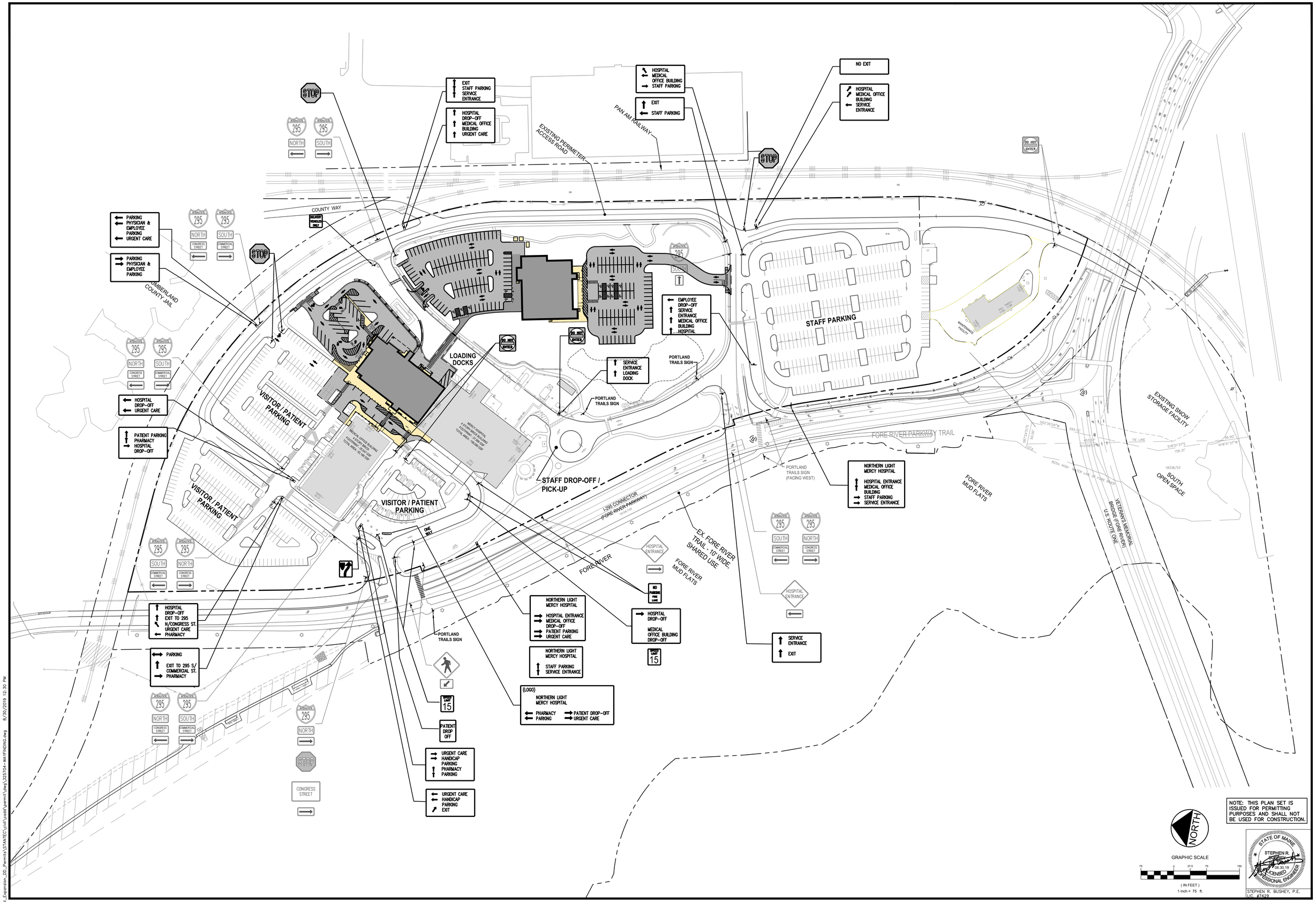

Signs 070-073




Signs 074-075



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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 | | | |

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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207.772.2515

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

# Memorandum
# Planning and Urban Development Department
# Planning Division

| | |
|---|---|
| To: | Sean Dundon, Chair and Members of the Portland Planning Board |
| From: | Christian Roadman, Planner |
| Date: | November 21, 2019 |
| Re: | 58 Fore Street Mixed-Use Development |
| Project #: | PL-000924-2019 |
| CBLs: | 018 A001; 018 A002; 018 A003 |
| Meeting: | November 26, 2019 |



Site context of proposed development at 58 Fore Street. The project site is outlined in teal.

## 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. 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:

- 16,100 sf. (12 units) residential
- 110,700 sf. office

- 49,500 sf. retail / service / restaurant
- 17,900 sf. event space
- 248,300 sf. (722 spaces) dedicated to parking

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.

Given the scale of the proposed development, the November 26 workshop is intended as an introduction to the project for the Planning Board. Staff and peer reviewers have not completed an exhaustive review of the proposed development. Staff anticipate that the proposed development will require several Planning Board workshops before advancing to a public hearing. The Planning Department mailed 234 notices about the November 26 workshop, to property owners within 500 feet of the project site and the Department's interested parties list. Advertisements for the meeting ran in the Press Herald on November 15 and November 16.

This report will highlight aspects of the development about which review will be particularly focused, as well as initial staff impressions and concerns regarding the proposed development. These areas of focus include:

- site and building design
- pedestrian / bicycle / public access and accessibility
- impervious surfaces
- lighting impacts
- height overlay and view corridor restrictions
- transportation demand management
- civil engineering

**Applicant:** Portland Foreside Development Co.
**Consultants:** Woodard & Curran (engineer); Bruner / Cott Architects, Perkins + Will (architect);

## 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 |
| ***Review*** | **Applicable Standards** |
| Site Plan | Section 14-526 |
| Subdivision | Section 14-497 |
| Conditional Use (parking) | Section 14-68 |
| Inclusionary Zoning | Section 14-474, Section 14-487 |
| Site Location of Development | Technical Manual Section 14 |




Rendering of proposed development at 58 Fore Street (image: applicant)

## III. PROJECT DATA

| | |
|---|---|
| Existing Zoning | EWPZ; B6 |
| Existing Use: | Industrial / manufacturing / warehouse |
| Proposed Use | Mixed-use development (office, residential, retail, event, parking) |
| Bedroom Mix | Efficiency: three<br>1 Bedroom : four<br>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 | 33 | +33 |

## IV. PUBLIC COMMENT AND NEIGHBORHOOD MEETING

The Planning Department received one public comments (**attachment PC1**) regarding this project, about a 50 foot wide public easement required of the project. The applicant team plans to hold a neighborhood meeting on November 25 2019, a day before the Planning Board workshop.

## V. RIGHT, TITLE, & INTEREST

The applicant provided several deeds (**attachment F**) as evidence of right, title, and interest.

## VI. ZONING ANALYSIS




Zoning context of proposed development at 58 Fore Street. The project site is outlined in lavender.

The project falls primarily within the B-6 eastern waterfront mixed zone. Office, restaurant, retail, and residential uses are all permitted in the zone. Temporary events are permitted with restrictions; "meeting and exhibition facilities" are a conditional use. (Staff will follow up with the Zoning Department to better determine the appropriate definition in this instance.) Parking is a conditional use in the zone.

The B-6 Eastern Waterfront mixed use zone is subject to a building height overlay and view corridor restrictions. Building height will be determined in part using calculations of average grade on the site. These have not yet been provided by the applicant, but will be crucial in determining whether or not the proposed development is in conformance with zoning standards. At the moment, staff suspect some proposed new buildings may not meet height restrictions, but await further information from the applicant to confirm this.

A portion of the development site falls within the Eastern Waterfront Port Zone (EWPZ). Staff will continue zoning review to ensure conformance with applicable standards in relevant zones.

It is worth noting that the applicant intends to provide parking for all phases of project development during the first phase. This results in a parking provision much higher than is currently required (722 spaces, primarily via a 652 space parking garage). The applicant calculates the parking demand of the first phase as 159 parking spaces (**attachment T**).

Staff review of required parking spaces and bicycle parking spaces is not complete at this time.

As designed, the project triggers inclusionary zoning requirements. At this time, staff believe the applicant intends to pay a fee-in-lieu instead of providing the required income-restricted housing units. The applicant is in communication with the City's housing programs manager regarding this issue.

## 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. Additional review will be conducted by staff in the Department of Public Works.

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 City's third-party civil engineering reviewer requires additional information and clarification of the applicant, as detailed in their review memo (**attachment 3**).

2. Sufficient Water Available (Section 14-497 (a) 2 and 3)
   The applicant will be required to submit an ability to serve letter from the Portland Water District.

3. Will Not Cause Unreasonable Traffic Congestion (Section 14-497 (a) 5)
   The City's third-party traffic engineering reviewer noted the following as part of their preliminary review (**attachment 2**):

   "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."

   "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."

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 applicant provided an application for wastewater capacity confirmation (**attachment N**). Confirmation of such by the Department of Public Works will be required.

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 will be reviewed further by staff.

6. Comprehensive Plan (Section 14-497 (a) 9)
   The applicant indicates (**attachment L**) 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 I**) as evidence of technical capacity to complete the project. A letter from Ackman-Ziff Real Estate Capital Advisors (**attachment I**) 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 City's third-party civil engineering reviewer is ongoing. Please see 1, above.

9. Is or is not in a flood-prone area (Section 14-497 (a) 13)
   As the proposed project is located in a flood-prone area, the applicant is expected to submit a flood hazard development permit for this project, which will be reviewed by the Zoning Department.

10. All potential wetlands are identified (Section 14-497 (a) 14)
    NA

11. Any river, stream or brook within or abutting the proposed subdivision are identified Section 14-497 (a) 15)
    NA

## B. 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 and Access and Circulation; Access and Circulation; Public Transit Access; Parking; Transportation Demand Management

As noted above, the City's third-party transportation engineering reviewer continues to review the

project and requests additional information of the applicant (**attachment 2**).

The City's transportation programs manager is also reviewing the project (**attachment 4**). He provided several comments regarding the current proposal, including:

- Additional information on proposed bike racks (and better distribution of them) is needed
- The transitions from the 58 Fore Street property to the Eastern Promenade Trail feature wide swaths of asphalt. The character of these spaces and transitions should be reviewed.
- The TDM plan "is generally vague and weak on the types of actual programs / incentives that will be offered and in its commitments."

The Department of Public Works senior engineer also offered relevant comments (**attachment 1**) pertaining to the applicant's proposed shared-use driveway, and seeking additional information / detail regarding delineation and periods of heavy use. They also offered specific directives regarding widening the Fore Street sidewalk along the property line to at least 8 feet wide, and exploring the feasibility of providing accessible access from the site via Fore Street.

## b) Environmental Quality Standards

Preservation of Significant Natural Features; Landscaping and Landscape Preservation; Water Quality, Storm Water Management and Erosion Control

The landscape plans provided (**attachment P22**) must be reviewed by the City's arborist.

Because the proposed project includes twelve units, it must provide twelve street trees. The project also must account for an appropriate number of street trees for commercial development, per the City's Technical Manual. Staff will calculate a required number of street trees. If the landscape plan does not provide sufficient street trees, the applicant map pay into the City's street tree fund for additional required trees at a rate of $400 per tree.

The Department of Public Works senior engineer also noted (**attachment 1**) the following:

"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."

## c) Public Infrastructure and Community Safety Standards

As noted above, confirmation of ability to serve from the Portland Water District and adequate wastewater capacity from the Department of Public Works must be provided by the applicant.

The proposed development must still be reviewed by the Fire Department.

## d) Site Design Standards

Lighting

The applicant provided cut sheets for lights and a photometric plan (**attachment J**). The applicant also requests a waiver from the maximum light spillage standard of the City's Technical Manual.

Many of the proposed lights do not seem to conform to the requirement that they be full-cutoff. Additionally, while the lighting plan requires further review, staff is concerned that architectural / projector / luminaire lighting may not conform to the spirit and directives of the City's technical manual. Additional applicant attention to lighting, especially in regard to light pollution, is necessary.

Zoning Related Design Standards

The City's urban designer provided a memo regarding this project (**attachment 5**), which the applicant team should review in full.



Rendering of proposed phase 1 development at 58 Fore Street (image: applicant)

## VIII. NEXT STEPS

Staff seek Planning Board feedback on the current iteration of the proposal. Staff and third party reviews will continue. The applicant should respond to / address the review comments provided. Several additional workshops are anticipated for this project.

## XIII. ATTACHMENTS

### PLANNING BOARD REPORT ATTACHMENTS

1. DPW Engineer Review 11-20-2019
2. Third-Party Traffic Engineer Review 11-21-2019
3. Third-Party Civil Engineer Review 11-20-2019
4. Transportation Programs Manager Review 11-21-2019
5. Urban Designer Review Memo 11-21-2019

### PUBLIC COMMENT

PC1. 11-21-2019

### APPLICANT'S SUBMITTALS

A. Application Cover & Table of Contents
B. Application Checklist
C. Application Fees
D. Project Summary
E. Waiver Requests
F. Evidence of Right, Title, & Interest
G. Easements & Other Burdens
H. Evidence of State & or Federal Approvals
I. Evidence of Financial & Technical Capacity
J. Consistency with Portland Design Standards
K. Zoning Assessment
L. Consistency with City Comprehensive Plan
M. Boundary Survey
N. Availability & Adequacy of Public Utilities
O. Portland Fire Department Site Design Checklist
P. Site Location of Development Report
Q. Citizen Self Service Summary Letter
R. Stormwater Management Report
S. Phase 1 Transportation Demand Management Plan
T. Phase 1 Traffic Analysis

### PLANS

P1. Civil Cover Sheet
P2. Civil General Notes & Legend
P3. Boundary Survey
P4. Existing Conditions Plans
P5. Demolition Plans
P6. Site Plans
P7. Grading & Drainage Plans
P8. Utility Plans
P9. Pipe & Structure Tables
P10. Subdivision Plat
P11. Civil Details
P12. Elevations
P13. Block 1 Building 1A Floor Plans

P14. Block 1 Building 12 Floor Plans
P15. Block 2 Buildings 2 & 3 Floor Plans
P16. Block 2 Buildings 6A & 6B Floor Plans
P17. Block 2 Embankment Floor Plans
P18. Block 4 Building 4A Floor Plans
P19. Block 4 Townhouse Floor Plans
P20. Renderings
P21. Construction Management
P22. Landscape Plans & Details

Portland Maine Yes. Google's good here.

Christian Roadman <croadman@portlandmaine.gov>

# 58 Fore - initial comments

**Mike Tremblay** <mtremblay@portlandmaine.gov> Wed, Nov 20, 2019 at 3:50 PM
To: Christian Roadman <croadman@portlandmaine.gov>

Christian,

Here are my initial comments on the 58 Fore development. I may have more as the design process progresses.

- 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.

- 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.

- 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.

- 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.

- A graphic showing the proposed phasing of the overall site, and an intuitive naming convention, would be very useful for discussion purposes ahead of public meetings.

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Portland Maine Yes. Google's good here.

Christian Roadman <croadman@portlandmaine.gov>

# 58 Fore Street - Initial Traffic Overview Comments

**Tom Errico** <thomas.errico@tylin.com> Thu, Nov 21, 2019 at 9:20 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 traffic comments represent an initial review of application materials and detailed comments will be provided in the future.

- 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.

- 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.

- 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.

- 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.

If you have any questions, please contact me.

Best regards,

Thomas A. Errico, PE
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WRIGHT-PIERCE
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.

Portland Maine Yes. Google's good here.

Christian Roadman <croadman@portlandmaine.gov>

# PL924-2019: 58 Fore Street

**Bruce Hyman** <bhyman@portlandmaine.gov> Thu, Nov 21, 2019 at 10:51 AM
To: Christian Roadman <croadman@portlandmaine.gov>
Cc: James Rather <jrather@portlandmaine.gov>, Tom Errico <thomas.errico@tylin.com>, Michael Tremblay <mtremblay@portlandmaine.gov>, Jeremiah Bartlett <jbartlett@portlandmaine.gov>

Good afternoon, Christian,

Here are my preliminary comments on the 58 Fore Street submittal - more may be forthcoming.

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.

C-100 Site Plan

- Bike Racks. 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).
- 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.

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.

Please don't hesitate to contact me if you, the Board or the applicant have any questions.

Bruce
--
Bruce Hyman
Transportation Program Manager

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*Yes! Transportation's Good Here ....*

# Planning and Urban Development Department
# Planning Division

**Subject:** B6 Design Review for Phase I – 58 Fore Street

**Written by:** Caitlin Cameron, Urban Designer

**Date:** Wednesday, November 20, 2019

**Design Review Criteria:**
For the first workshop, staff would like to call to the attention of the Planning Board members the applicable design standards to be applied during this Site Plan review. Staff outlines the priorities and areas most critical to meeting the Design Manual objective of development that supports the Eastern Waterfront as an urban neighborhood with emphasis on density, mixed-uses, and pedestrian-friendliness.

The Board members are encouraged to become familiar with the project with these criteria in mind. Staff welcome Board questions and comments guiding staff where to direct attention as the review process continues in more detail.

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. The public edges and easement area of the project require some more review and scrutiny especially to evaluate how this complex fits into the overall neighborhood in character but also visual and physical connections.

**2. Proposed Design Parameters:**
The following design parameters were developed from the *Design Guidelines for the Eastern Waterfront*, to guide future Site Plan applications and should be taken into consideration in order to meet the design criteria at a Site Plan level of detail:

**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.

**Sidewalks**: Public sidewalk design shall be coordinated with City staff to ensure a cohesive and attractive public realm.

- 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.

**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 recognize that the site is anomalous in its location, topography, former uses, and past development pattern compared with its surrounding context. The site mediates between the residential Munjoy Hill neighborhood defined by single family, two-family, and triple decker residential buildings, a small, pedestrian-scale street grid, and a "cinque terre" approach (meaning the development pattern follows the topography with Congress Street as the high point "spine" and Fore Street as the low point); the waterfront which currently includes a mix of transportation, industrial, and tourism uses and building typologies; and to the east, the context is the steep slope of the Eastern Promenade and public open space of Fort Allen Park and the Eastern Promenade Trail.
  The street grid and building pattern of Munjoy Hill terminates at Fore Street and the dramatic slope and change in topography of the MDP site physically sets the rest of the site apart from that Munjoy Hill context. In this case, the proposed building type, massing, and scale on Fore Street is designed to relate to the residential fabric of Munjoy Hill. From the Commercial Street approach at the western side of the site, where Fore Street has sloped down to a lower elevation, the proposed building scale is also low, typically 3 to 4 stories, to relate to the historic Portland Company architecture on-site as well as an acknowledgement of the commercial

waterfront building scale and orientation that exists along the waterfront (though that building context is not directly adjacent to the site).

- Additional information/views are needed to understand how these new buildings relate to the adjacent residential and commercial blocks.
- 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.
- From the renderings, staff can assess how the new architectural relates to the historic buildings within the proposal area. The internal relationship to context is thoughtful and balanced allowing the new buildings to be distinct but subtle as a backdrop to the historic character. 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.
- 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.

**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.

- In preliminary review, 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.

- 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?

- 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?
- Staff supports public, accessible viewing opportunities and a realistic approach to the pedestrian environment that provides scale and comfort, opportunities for sun and shade.
- 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.

**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.
- 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.

**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 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 benches/seating opportunities should be designed to orient to circulation and viewing in both sun and shade conditions.

**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. Staff are concerned about the functional/back-of-house components of buildings facing towards this well-used trail.
- 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.
- 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?
- Staff request more information about the elevations and views of the buildings from the trail.

Att. A

# PORTLAND FORESIDE DEVELOPMENT – PHASE 1

# LEVEL III SITE PLAN

58 Fore Street
Portland, ME

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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**<br>• Cover Letter with detailed project description |
| Yes ☑ NA ☐ | **Completed Checklist – Level I: Site Alteration**<br>(this document) |
| Yes ☑ NA ☐ | **Right, Title and Interest**<br>• Deeds, leases, or purchase and sales agreements |
| Yes ☑ NA ☐ | **Evidence of State or Federal Approvals**<br>• Permits or letters of non-jurisdiction, if applicable |
| Yes ☑ NA ☐ | **Zoning Assessment**<br>• Table listing required and proposed uses and dimensional standards<br>Zoning Assessment Table |
| Yes ☑ NA ☐ | **Existing and/or Proposed Easements or Covenants, applicable.**<br>• Evidence of existing easements and any proposed easements |
| Yes ☑ NA ☐ | **Waiver Requests**<br>• Written request for waiver describing request and reason<br>Waiver Table |
| Yes ☑ NA ☐ | **Financial Capability**<br>• Letter or evidence from a financial institution or third party verifying financial capacity to undertake project |
| Yes ☑ NA ☐ | **Technical Capability**<br>• 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)**<br>• Provisions for pedestrian, bicycle, vehicle, and loading circulation and incremental volume of traffic impacts<br>• Traffic Impact Study (Technical Manual, Section 1) if applicable |
| ☑ | ☐ | **Access and Circulation (14-526 (a) 2 a)**<br>• Access and internal circulation, addressing ADA access<br>• Access and egress impacts on traffic flows<br>• Description and use of drive-up features, if applicable |
| ☑ | ☐ | **Loading and Servicing (14-526 (a) 2 b)**<br>• Loading and servicing needs, route and travel way geometrics for deliveries<br>• Turning templates for delivery vehicles, if applicable |
| ☑ | ☐ | **Sidewalks (14-526 (a) 2 c)**<br>• Sidewalks and condition along street frontages and internal walkways<br>• 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**<br>• Existing available transit services<br>• 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)**<br>• Expected parking demand, proposed parking supply, ADA parking, and applicable Zoning Requirements<br>• 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)**<br>• Address bicycle parking requirements and identify locations on-site<br>• Construction details for bike racks (Technical Manual, Section 1) |
| ☑ | ☐ | **Snow Storage (14-526 (a) 4 d)**<br>• Management plan for snow removal and locate snow storage areas on plan |
| ☑ | ☐ | **Traffic Demand Management (TDM) (14-526 (a) 5), if applicable**<br>• Develop TDM with Trip Reduction Targets and Strategies |

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

| PUBLIC INFRASTRUCTURE AND SAFETY | |
|---|---|
| Yes ☑ NA ☐ | **Consistency with City Master Plans (14-526 (c) 1)**<br>• Identify consistency with master plans<br>• 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))**<br>• Address Crime Prevention through Environmental Design (CPTED) (Technical Manual, Section 3)<br>• Emergency vehicle access<br>• Address consistency with public safety standards (Technical Manual, Section 3)<br>• 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)**<br>• Electrical services, including providing underground services<br>• Identify existing and proposed connections for public utilities and required public utility upgrades<br>• Sewer line connections are required, if there is a main within 200 feet<br>• Proposed solid waste management facilities on-site and management for the site<br>• 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)**<br>• Wind and ventilation impacts on adjoining structures and/or adjacent public spaces. Wind study, if applicable<br>• Bulk, location or height impacts on adjoining structures<br>• Identify and locate HVAC equipment and venting away from public spaces and residential properties<br>• Identify screening and manufacturing specifications for noise, if applicable |
| Yes ☑ NA ☐ | **Shadows (14-526 (d) 2), if applicable**<br>• Shadow analysis of impacts on publicly accessible open space (Technical Manual, Section 11) |
| Yes ☑ NA ☐ | **Snow and Ice Loading (14-526 (d) 3)**<br>• 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**<br>• Protection of designated view corridors (Portland Design Manual, Appen. 1) |

| | |
|---|---|
| Yes ☑ NA ☐ | **Historic Resources (14-526 (d) 5), if applicable**<br>• Identify developments within Historic Districts or affecting Designated Landmarks<br>• Certificate of Appropriateness or other evidence<br>• Identify Developments within 100 feet of Historic Districts or affecting Designated Landmarks. Advisory HP review may be required<br>• Address preservation and documentation of Archaeological Resources |
| Yes ☑ NA ☐ | **Exterior Lighting (14-526 (d) 6)**<br>• Cut sheets of on-site light fixtures and any architectural or specialty lights (Technical Manual, Section 12)<br>• Engineered details for any lights proposed in street right-of-way (Technical Manual, Section 10) |
| Yes ☑ NA ☐ | **Noise and Vibration (14-526 (d) 7)**<br>• 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**<br>• 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<br>• Proposed commercial and directional signage on site |
| Yes ☑ NA ☐ | **Zone Related Design Standards (14-526 (d) 5)**<br>• Address Historic Preservation Design Review, if applicable<br>• Address any applicable design review standards by zone<br>• Address submission requirements from Design Manual, page 1, addressing neighborhood context<br>• Description of exterior materials, color, finish, and samples |
| **Construction Management Plan** | |
| Yes ☑ NA ☐ | **Construction Management Plan**<br>• 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.

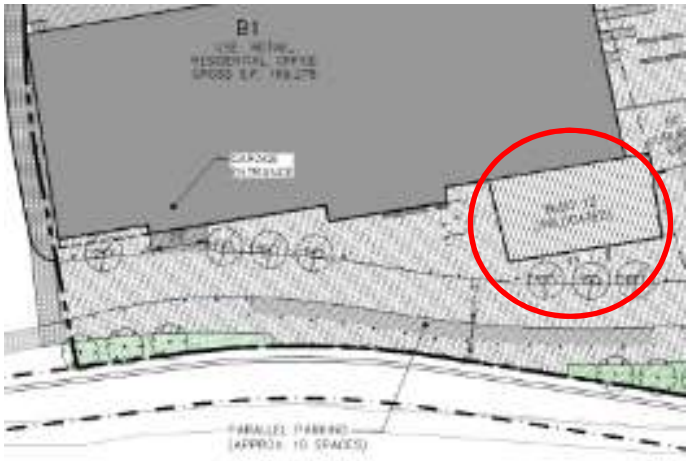



**Figure 3-2: Former Building 12 Location Per Master Development Plan**

## 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

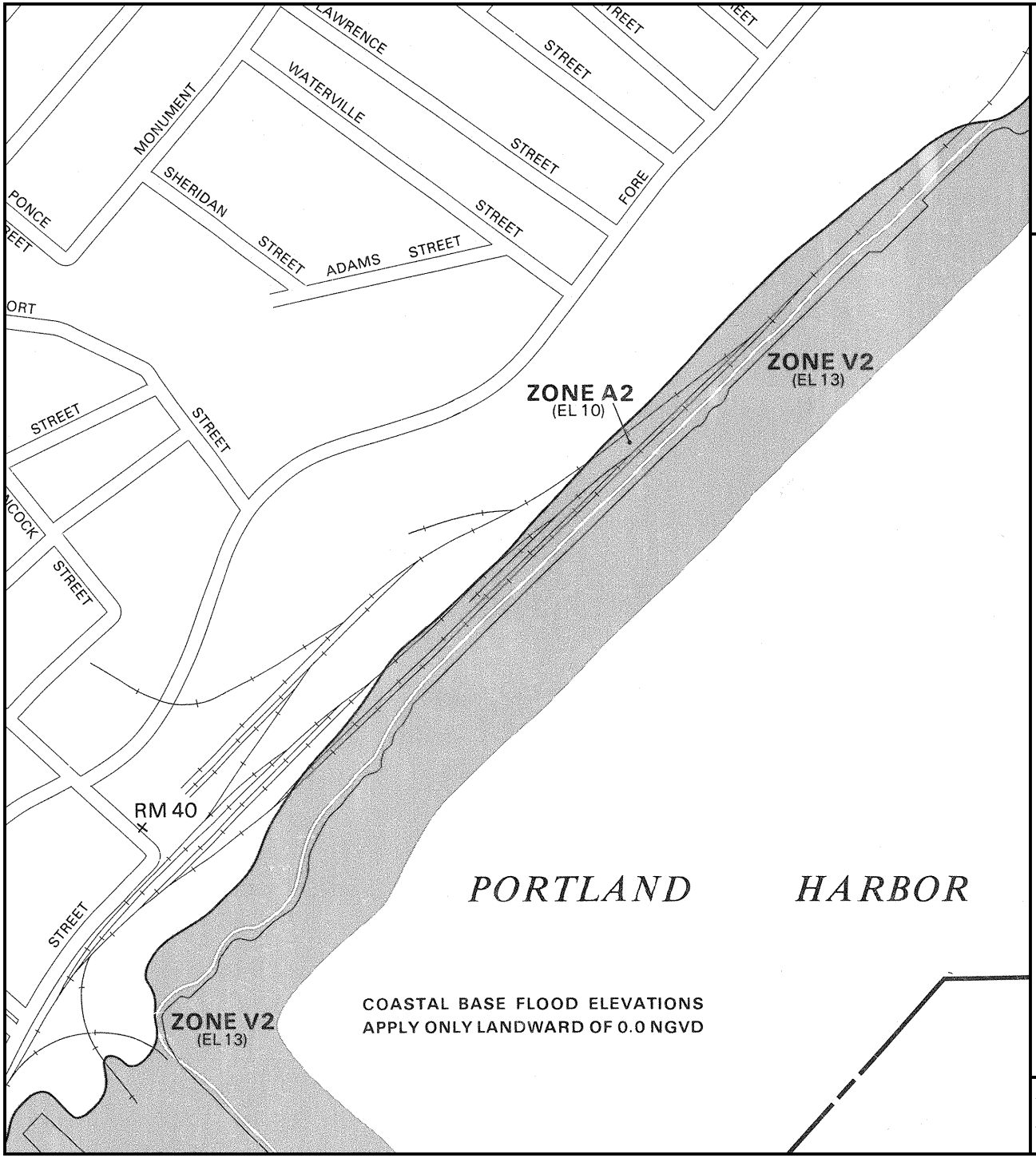
F10SE

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

# 4. WAIVER REQUESTS

At this time, we are requesting only one waiver related to the light trespass standard. 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.

## 4.1 Attachments

- City of Portland Waiver Table

| Standard to be Waived:<br>Cite Ordinance or Technical Manual Standard | Cite Standard Language:<br>Cite specific language of applicable Ordinance or Technical Manual Standard | Waiver Being Sought:<br>Describe waiver being sought. Ex. – We are requesting a two-way parking lot drive aisle width of 20' feet. | Justification for Waiver:<br>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:<br>- Max illumination at property line shall not exceed 0.1 foot candles.<br>- 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. |
| | | | |
| | | | |

# 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<br>ATTN: CITY MANAGER<br>389 Congress Street<br>Portland, ME 04101 |
| With a copy to: | The Office of the Corporation Counsel at the same address. |
| **FOR CPB2**: | CPB2 LLC<br>c/o CPB2 Management LLC<br>P.O. Box 7987<br>Portland, Maine 04112 |
| With a copy to: | Bernstein, Shur, Sawyer & Nelson, P.A.<br>Attention: Mary E. Costigan, Esq.<br>100 Middle Street, West Tower<br>Portland, Maine 04101 |
| **FOR DOT**: | STATE OF MAINE DEPARTMENT OF TRANSPORTATION<br>Attention: Toni Kemmerle, Esq.<br>16 State House Station<br>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. Cranton
WITNESS

By: [signature]
Name: CASEY PRENTICE
Its: MANAGER

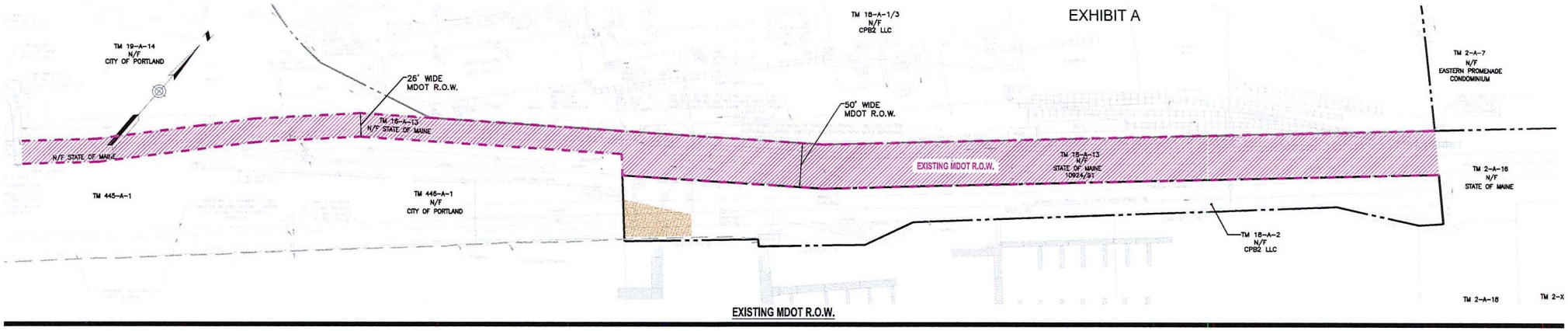
**MAINE DEPARTMENT OF TRANSPORTATION**

Melissa Pushard
WITNESS

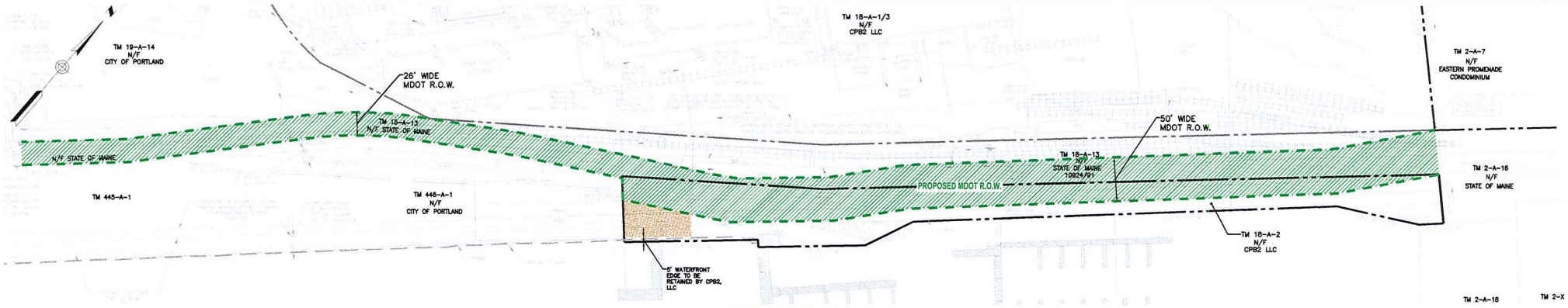
By: [signature]
David Bernhardt
Its Commissioner

Approved as to Form:
MB
Corporation Counsel's Office

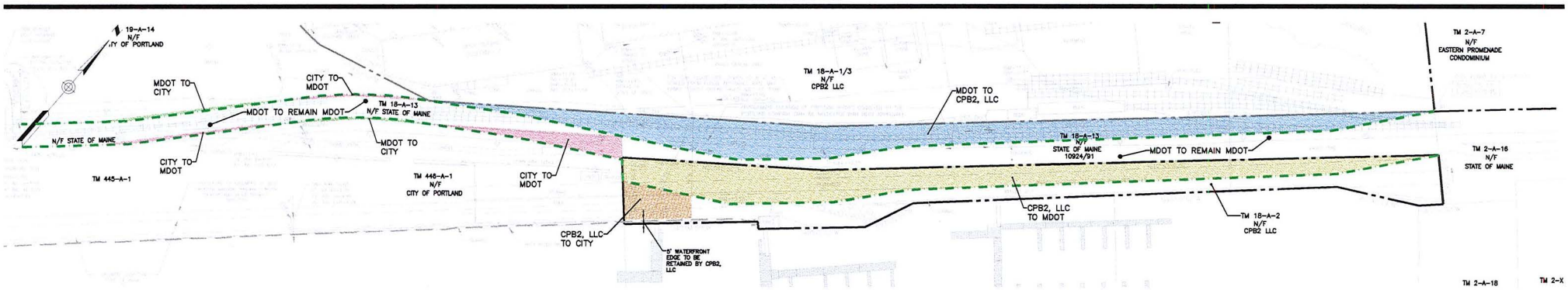
EXHIBIT A




EXISTING MDOT R.O.W.




PROPOSED MDOT R.O.W.




Scale: 1" = 50'
12/1/2016

CPB2 LLC
EASTERN WATERFRONT DEVELOPMENT PORTLAND, MAINE

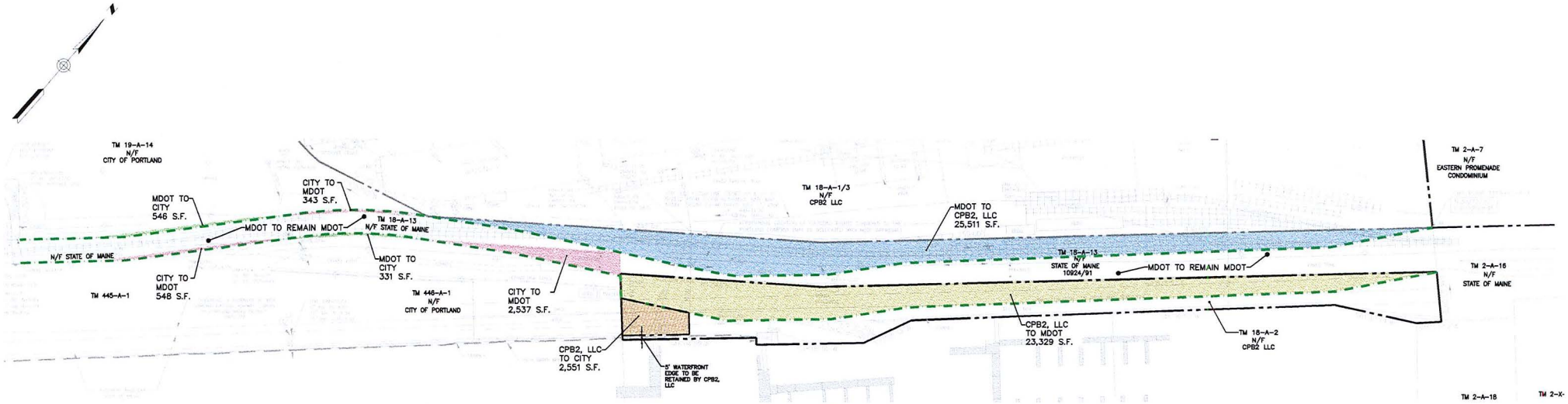
50' 0 50' 100'
BAR SCALE
1" = 50'
CHECK GRAPHIC SCALE BEFORE USING

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

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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<br>(207) 624-3042 |
| LICENSEE: | CPB2 1 LLC<br>(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:

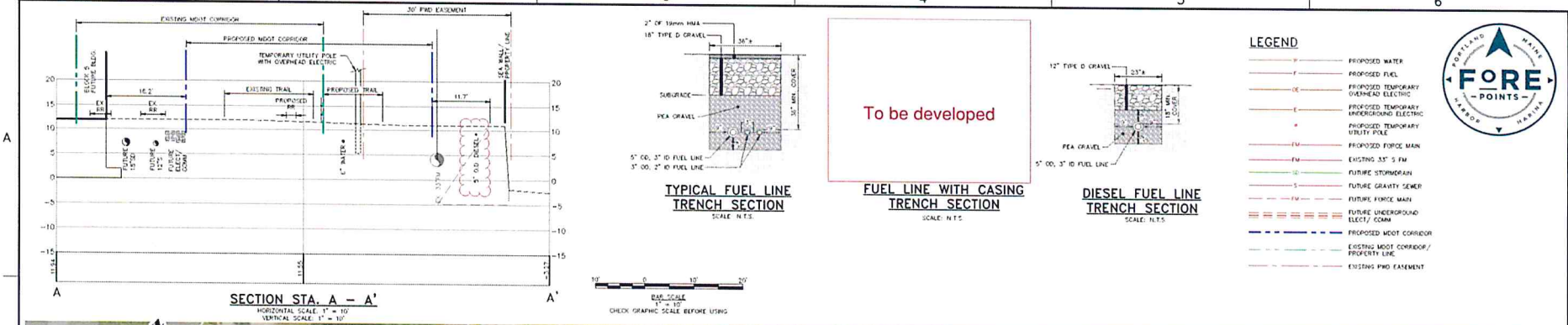
CPB2 1 LLC

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.



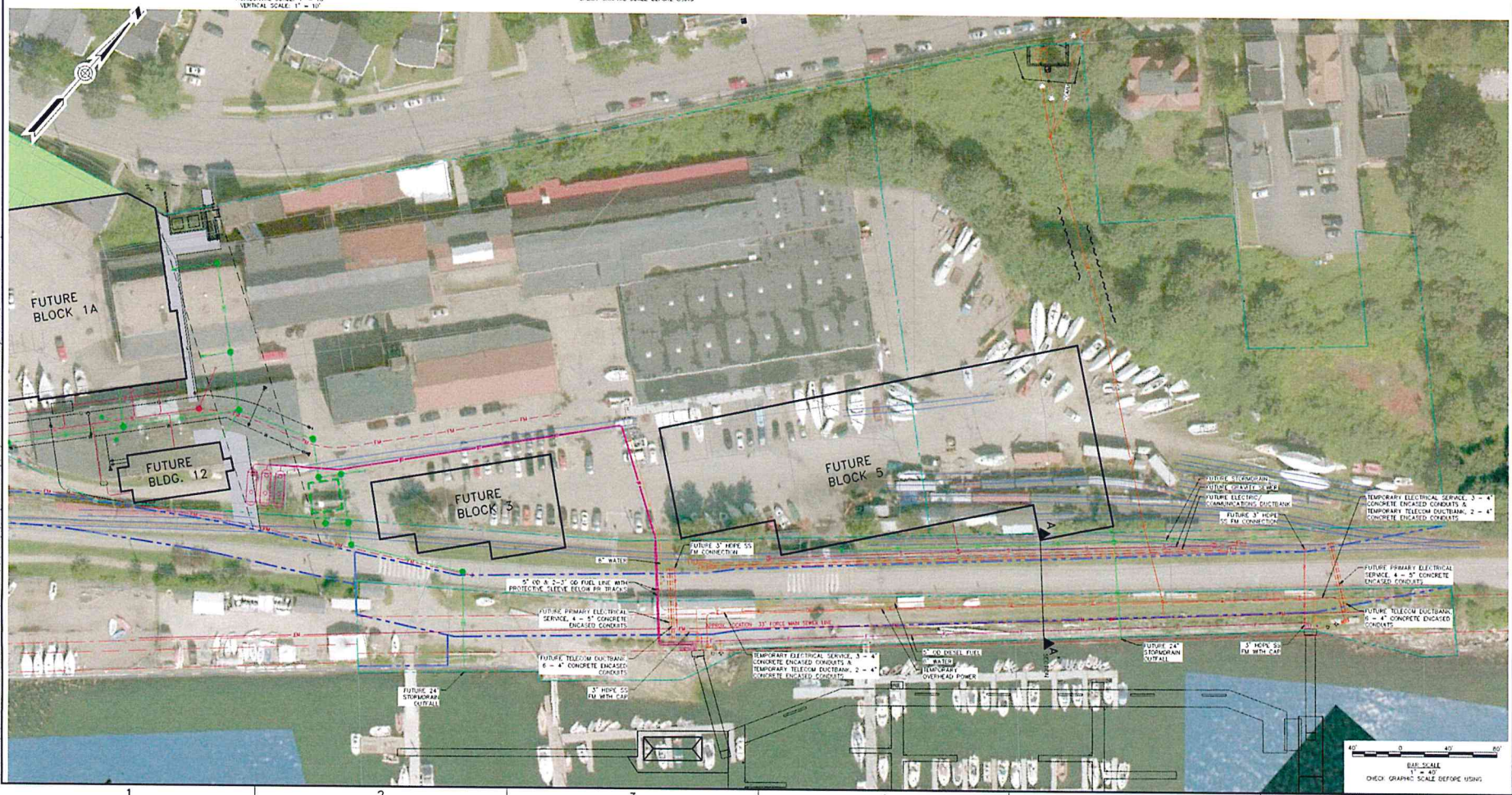

DIESEL FUEL LINE TRENCH SECTION

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.

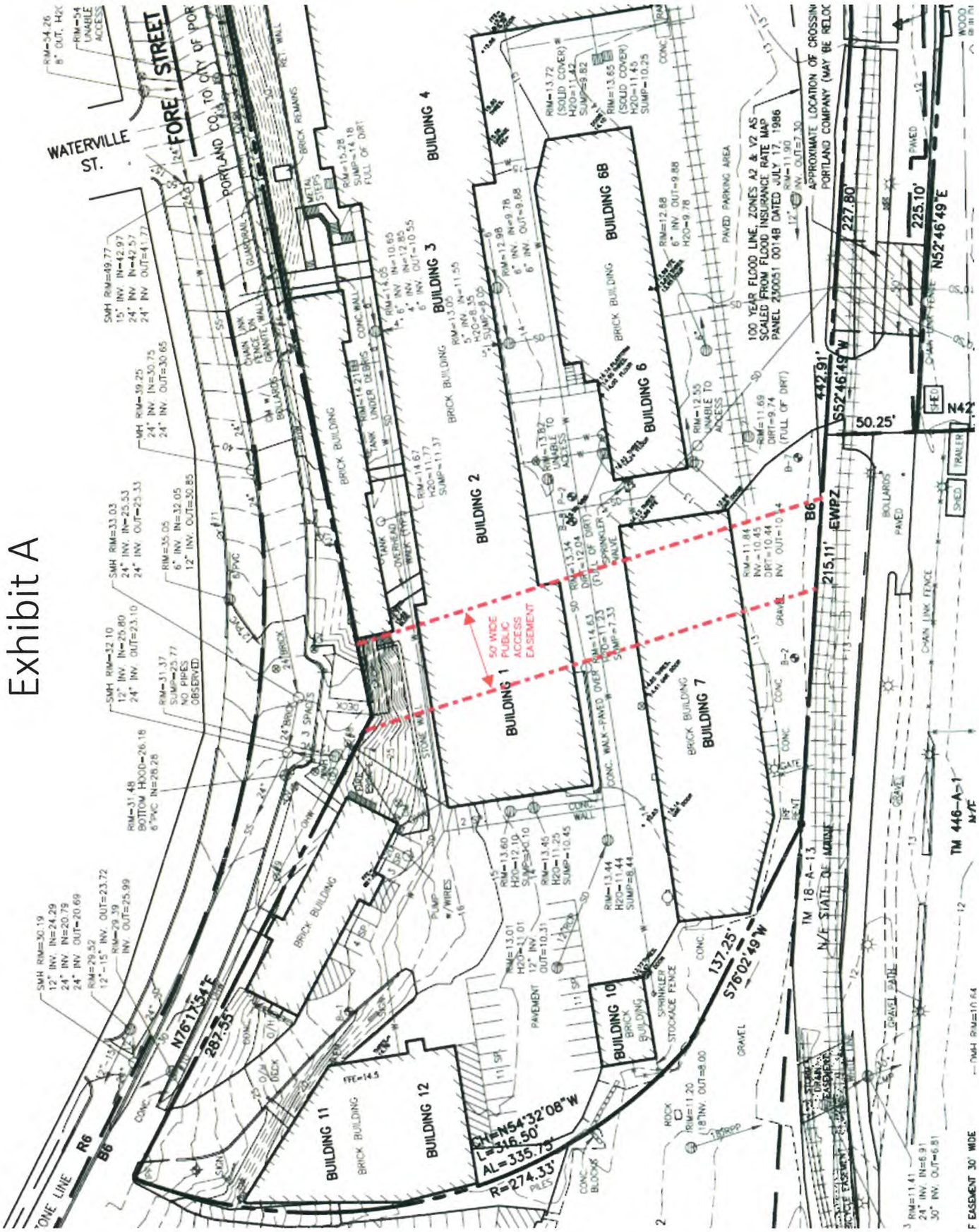
Before me,

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.

# 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

# 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*<br>No critical habitat has been designated for this species.<br>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.<br><br>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,<br>(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<br>3000K<br>1000 lm delivered<br>50,000 hrs<br>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.<br><br>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<br>3000K<br>500 lm/LF delivered<br>50,000 hrs<br>80+ CRI | 8 W/LF | 0-10V to 5% Integral Dimmable Driver | Block 4<br>Interior Wall Slots | Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs.<br><br>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<br>3000K<br>500 lm/LF delivered<br>50,000 hrs<br>80+ CRI | 3 W/LF | 0-10V to 5% Integral Dimmable Driver | Block 4<br>Interior Stair | Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs.<br><br>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<br>3000K<br>3385 lm delivered<br>50,000 hrs<br>80+ CRI | 24 W | 0-10V to 10% Integral Dimmable Driver | Vehicular Pathways | To be used with Type YG7 pole.<br><br>Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs.<br><br>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<br><br>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.<br><br>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.<br><br>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.<br><br>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.<br><br>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.<br><br>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<br><br>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 |
|---|---|---|---|---|---|---|---|---|
| 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<br>LBM-277-30K-NS-LSLH-(Finish)-DIM-CRC-UL-(Cable Length)<br>Tenon Mounting: PM4-1<br>Wide Snoot: LBMSNW-(Finish)-BK-MOD CROSS BAFFLE | Integral LED<br>3000K<br>1,552 lm<br>120,000 hrs<br>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.<br><br>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<br>LBM-277-30K-WFL-(Finish)-CRC-DIM-UL-(Cable Length)<br>Tenon Mounting: PM4-1<br>Wide Snoot: LBMSNW-(Finish)-BK-MOD CROSS BAFFLE | Integral LED<br>3000K<br>1,370 lm<br>120,000 hrs<br>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.<br><br>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<br>77 208-3000K-(Finish) | Integral LED<br>3000K<br>1,742 lm<br>120,000 hrs<br>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.<br><br>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<br>Fixture: LOG ASHRAE-277 (Voltage TBC)-48-3000K-10x10-SAM-(Finish)-DIM-ETE-CRC<br>Radial Louver: LOGRD-48-BK (Finish TBC)-CRC | Integral LED<br>3000K<br>TBD lm<br>120,000 hrs<br>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.<br><br>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<br>catenary cable: Tivoli TBD | Integral LED<br>3000K<br>TBD lm<br>120,000 hrs<br>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.<br><br>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<br>SQUR-MRO55-B-LED-80-500-30-UNV-4FT-D1-1-(Mounting)-(Finish) | Integral LED<br>3000K<br>500lm/LF delivered<br>50,000 hrs<br>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.<br><br>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 |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| 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<br>Fixture: LOG ASHRAE-277 (Voltage TBC)-48-3000K-30x30-SAM-(Finish)-DIM-ETE-CRC<br>Radial Louver: LOGRD-48-BK (Finish TBC)-CRC | Integral LED<br>3000K<br>3000 lm<br>50,000 hrs<br>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.<br><br>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<br>Fixture: LOG ASHRAE-277 (Voltage TBC)-12-3000K-30x30-SAM-(Finish)-DIM-ETE-CRC<br>Radial Louver: LOGRD-48-BK (Finish TBC)-CRC | Integral LED<br>3000K<br>3000 lm<br>50,000 hrs<br>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.<br><br>EE to confirm dimming compatibility with specified lighting control system. |
| YS2 | | *Not Used*<br>*(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<br>LBL-277-30K-NF-LSLV-(Finish)-DIM-CRC-(Cable Length)-YK<br>TN4 Tenon Adapter<br>Wide Snoot: LBLSNW-(Finish)-BK-MOD CROSS BAFFLE AND 9" DEEP SNOOT | Integral LED<br>3000K<br>1500 lm<br>50,000 hrs<br>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<br><br>Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs.<br><br>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<br>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<br><br>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<br>Fixture: RB-90-SWS265-2.230-(Finish)<br>Extrusion: AS1 Surface with horizontal mounting clips<br>Frosted Lens<br>Remote Dimmable Driver: 0-10V Dimmable 96W Driver | Integral LED<br>3000K<br>100 lm/LF<br>50,000 hrs<br>80+ CRI | 2.2 W/LF | 0-10V to 10% Integral Dimmable driver | Block 1<br>Vertical Indirect Coves along North Entries | Mounting detail to be coordinated with Architects<br><br>Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs.<br><br>Contractor to locate remote dimmable drivers at dry, accessible, and well ventilated locations.<br><br>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<br>Lumenlinear TBD-LULS-30K-20-120-MS-(Length)-(Finish) | Integral LED<br>3000K<br>150 lm/LF<br>50,000 hrs<br>80+ CRI | 1.85 W/LF | 0-10V to 10% Remote Dimmable driver | Stair | Mounting detail to be coordinated with Architects<br><br>Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs.<br><br>Contractor to locate remote dimmable drivers at dry, accessible, and well ventilated locations.<br><br>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<br>Configuration TBC with Landscape Architects | Integral LED<br>3000K<br>TBD lm/LF<br>50,000 hrs<br>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.<br><br>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.<br><br>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.<br><br>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.<br><br>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.<br><br>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.<br><br>EE to confirm dimming compatibility with specified lighting control system. |
| YW1 | | *Not Used*<br>*(Column Downlight)* | | | | | | |
| YW2 | | *Not Used*<br>*(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<br>OW2480-L30K-L-3000K-MVOLT0-FT-(Finish)-DS | Integral LED<br>3000K<br>650 lm<br>delivered<br>50,000 hrs<br>80+ CRI | 14 W | 0-10V to 10% Integral Dimmable driver | Block 1A entries | Final mounting elevations to be confirmed with Architects.<br><br>Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs.<br><br>EE to confirm dimming compatibility with specified lighting control system. |
| YW4 | | *Not Used*<br>*(Building 12 Wall Mounted Signage Light)* | | | | | | |
| YW5 | Updated 7/9/2019 | Exterior rated uplight with narrow spot distribution | Erco Kona XS<br>34832.023-3000K-(Finish) | Integral LED<br>3000K<br>520 lm<br>delivered<br>50,000 hrs<br>80+ CRI | 8 W | 0-10V to 10% Integral Dimmable driver | East/South/West Facades | Final mounting elevations to be confirmed with Architects.<br><br>Contractor to coordinate quantities, mounting locations, and mounting details with Landscape Arch. dwgs.<br><br>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<br>LBL-277-30K-NF-LSLH-(Finish)-DIM-CRC-UL-(Cable Length)<br><br>Wide Snoot: LBLSNW-(Finish)-BK-MOD CROSS BAFFLE | Integral LED<br>3000K<br>1500 lm<br>50,000 hrs<br>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.<br><br>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<br>LBL-277-30K-F-LSLH-(Finish)-DIM-CRC-UL-(Cable Length)<br><br>Wide Snoot: LBLSNW-(Finish)-BK-MOD CROSS BAFFLE | Integral LED<br>3000K<br>TBD lm<br>50,000 hrs<br>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.<br><br>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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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

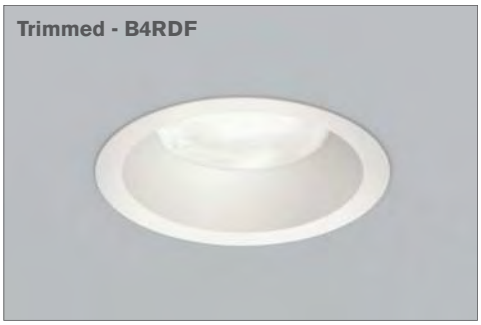


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ARCHITECTURAL LIGHTING DESIGN
84 SHERMAN ST, CAMBRIDGE, MA 02140
617.354.4502 LAMPARTNERS.COM

# BeveLED® 2.2 Basic
# 4.5″ Round Downlight - B4RD-G1

R1
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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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Revised 10/02/2019

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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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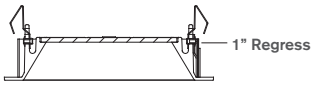
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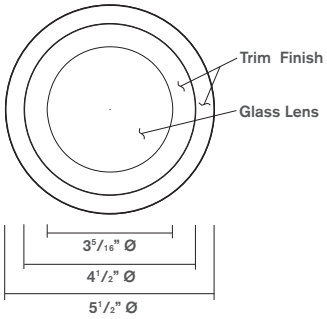
# BeveLED® 2.2 Basic
# 4.5" Round Downlight - B4RD-G1

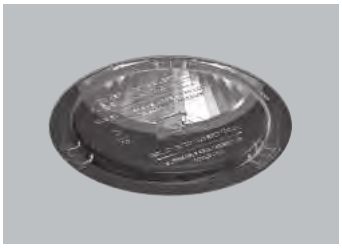
## Trimmed - B4RDF-G1

### TRIM DETAILS

Trimmed - B4RDF



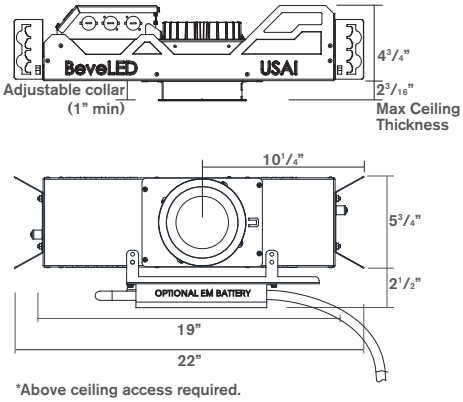



Clear acrylic overspray protector provided standard with every housing to keep out dust and contaminants during construction. Allows for use as work light.

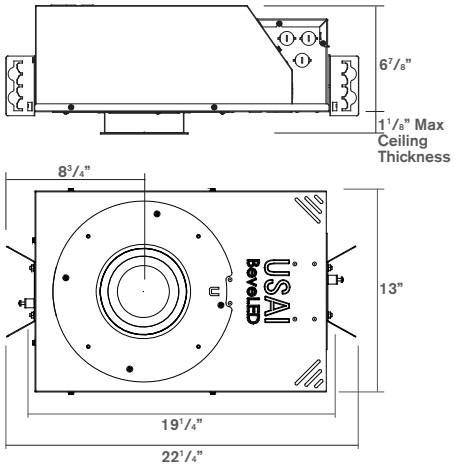
### HOUSING OPTIONS

**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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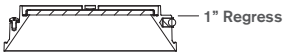
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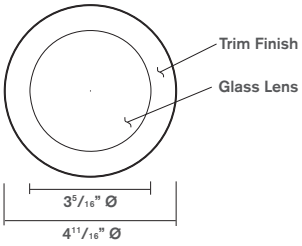
# BeveLED® 2.2 Basic
# 4.5" Round Downlight - B4RD-G1

## Trimless - B4RDL-G1

### TRIM DETAILS

**Trimless - B4RDL**



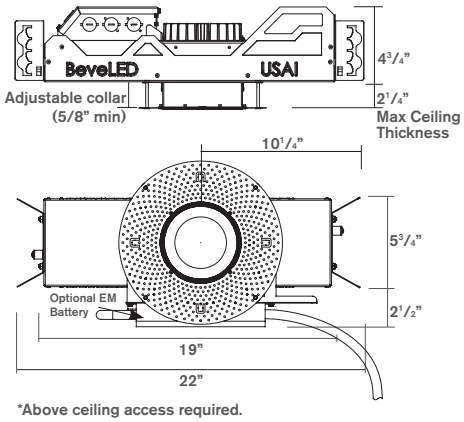






Clear acrylic overspray protector provided standard with every housing to keep out dust and contaminants during construction. Allows for use as work light.

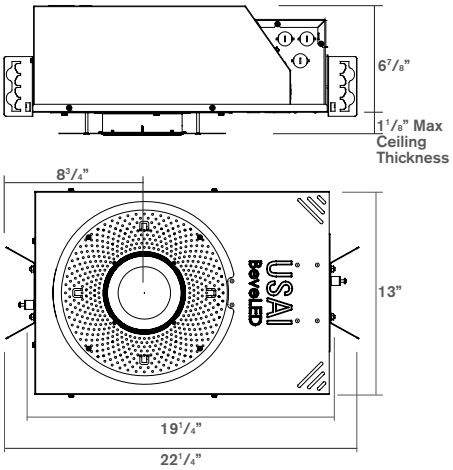
### HOUSING OPTIONS

**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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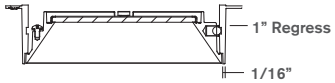
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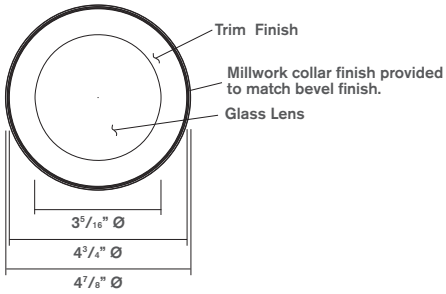
# BeveLED® 2.2 Basic
# 4.5" Round Downlight - B4RD-G1

## Millwork - B4RDM-G1

### TRIM DETAILS

**Millwork - B4RDM**



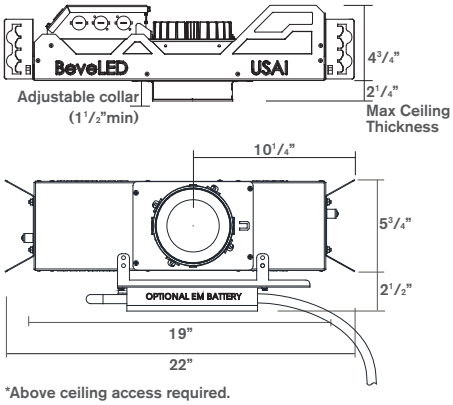






Clear acrylic overspray protector provided standard with every housing to keep out dust and contaminants during construction. Allows for use as work light.

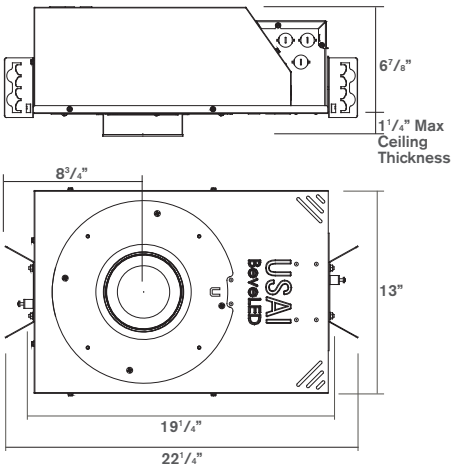
### HOUSING OPTIONS

**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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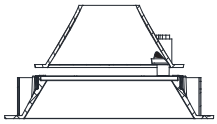
# BeveLED® 2.2 Basic
# 4.5" Round Downlight - B4RD-G1

## BEVELED BASIC SPECIFICATIONS

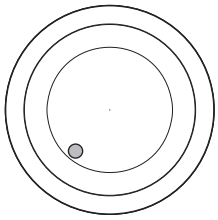
### FIELD REPLACEABLE LED LIGHT ENGINE
is serviceable through the aperture without tools or with a Philips screwdriver. All USAI Lighting light engines feature industry-leading color consistency.

### 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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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.
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).

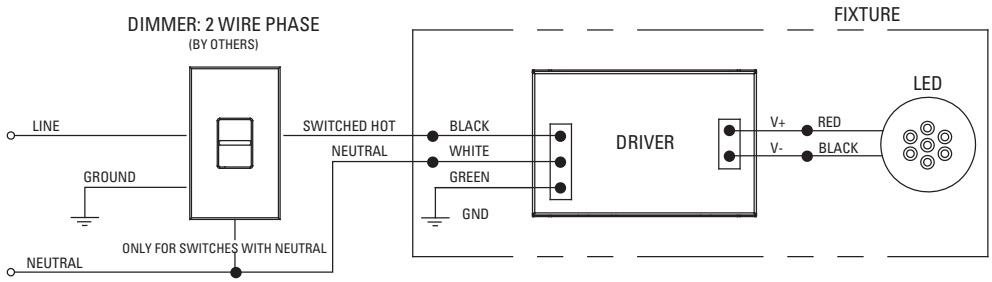
## D3 / DIML3 LED: Lutron Hi-Lume A-Series 2 Wire Fwd Phase (with neutral) / LED Dimming Driver Wiring (Dims down to 1%) 120V

**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

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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.

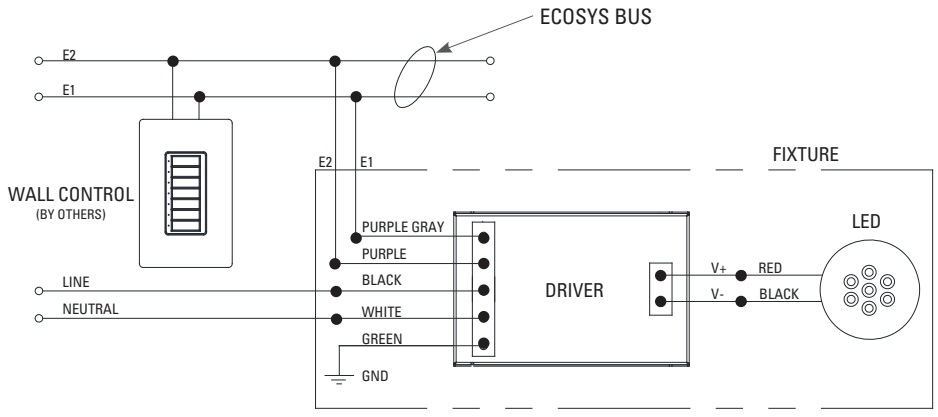
### D4H / DIML4H LED: Lutron H Series EcoSystem LED Driver with Fade to Black (dims down to 1%)

**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

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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

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).

## 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%

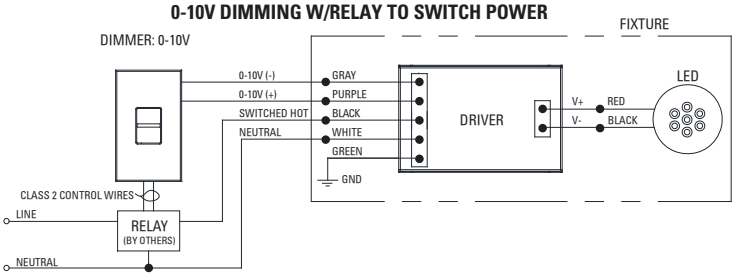
**D6B / DIML6B and D6F / DIML6F Dimmer Compatibility Chart**

| 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% | |

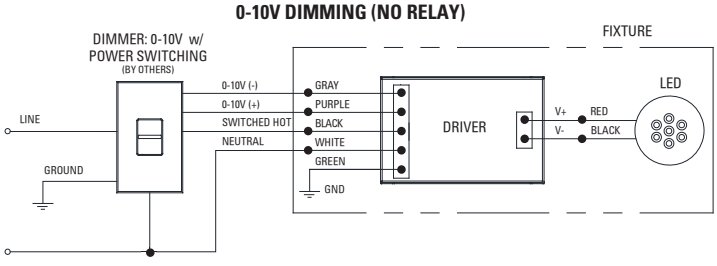
## DIMMING DRIVER WIRING SCHEMES:

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.

**D6 / DIML6**
**0-10V DIMMING W/RELAY TO SWITCH POWER**




**D6 / DIML6**
**0-10V DIMMING (NO RELAY)**





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# DIMMING DRIVER COMPAT
# SELECTION GUIDE
# D7 / DIML7 and D7E

## 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.

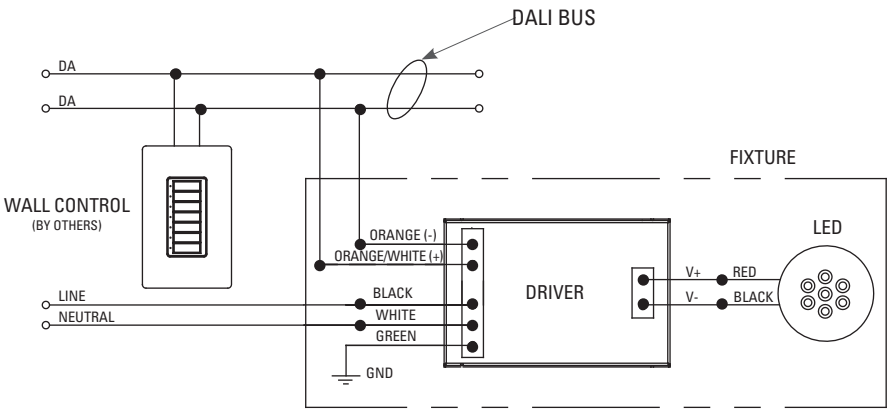
### IMPORTANT SAFETY INSTRUCTIONS - SAVE THESE INSTRUCTIONS

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).

### 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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# DIMMING DRIVER COMPAT
# SELECTION GUIDE
# D18

## 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

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## D18 Dimming Driver Wiring

D18 are programmed dimming drivers.
D18 Moons DMX control dims from 100% to 1%

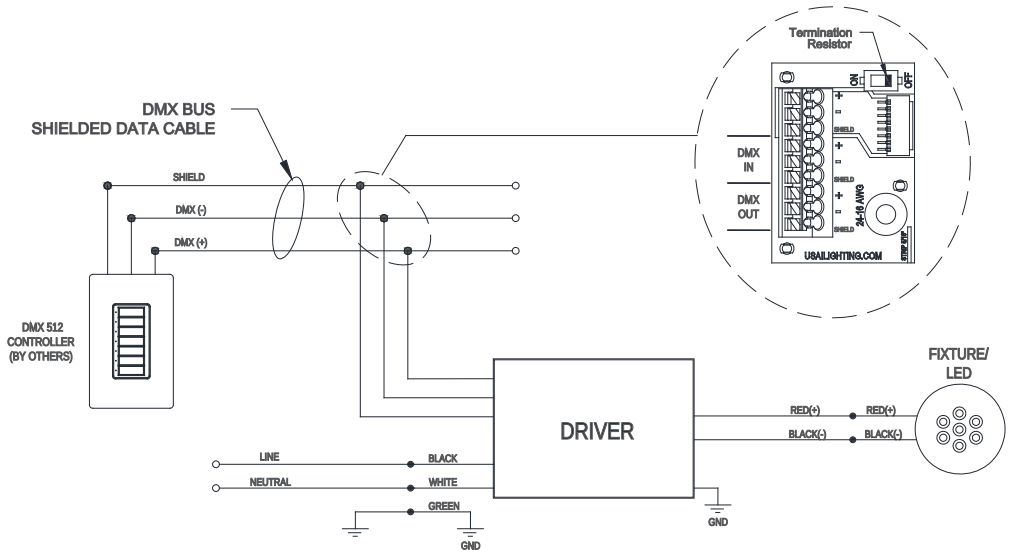
DMX BUS -
SHIELDED DATA CABLE

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**






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# DIMMING DRIVER COMPATI
# SELECTION GUIDE
# D19 / DIML19

## DIMMING DRIVER WIRING SCHEMES:

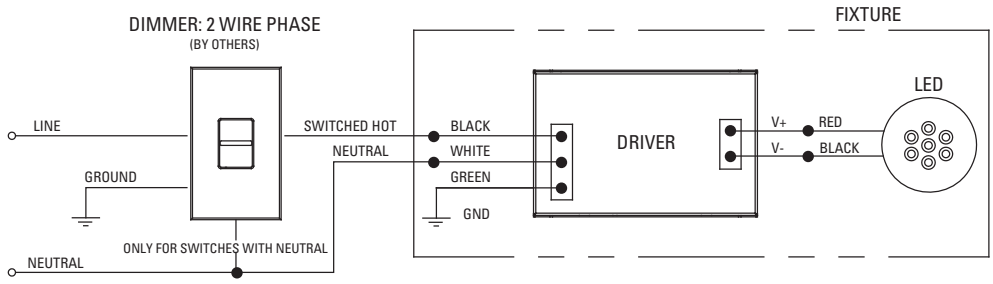
NOTES:
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**D19 / DIML19 LED: Hatch XTC series or equivalent - Forward and Reverse Phase Dimming Driver. Dims down to 1% contingent upon dimmer specification and load. 120V only.**

### 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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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<br>**D**=Deep Canopy | **N**=None<br>**P**=Phase<br>**V**=0-10V<br>**Z**=Other | **D**=Damp<br>**W**=Wet | **07**=700 lm<br>**10**=950 lm<br>**13**=1300 lm<br>**20**=2000 lm<br>**30**=3000 lm<br>**40**=4000 lm | **83**=83<br>**98**=98* | **27**=2700K<br>**30**=3000K<br>**35**=3500K<br>**40**=4000K | **11**=11° **<br>**25**=25°<br>**41**=41°<br>**51**=51°<br>**83**=83° ** | **XX**<br>(see chart on page 4)<br>**ZZ**=Custom | |

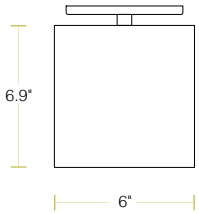
* 98 CRI not available in 4000 lm

** Not available with wet location

Example Part Number: **C4SM-RND-20832741-S3**

**C**ORE **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

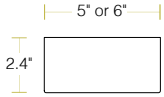
## DIMENSIONS







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

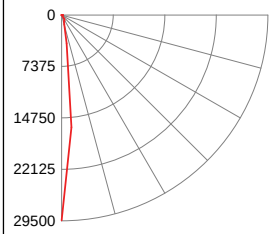
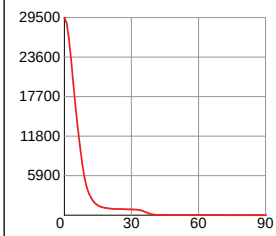
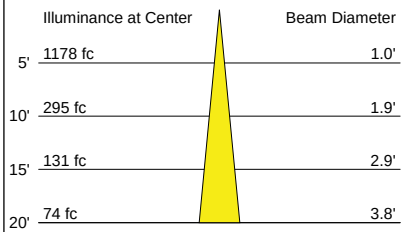
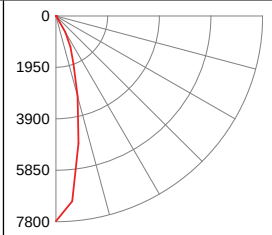
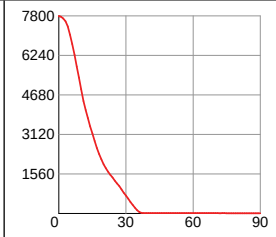
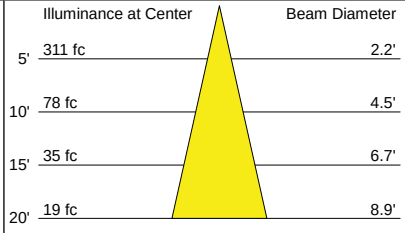
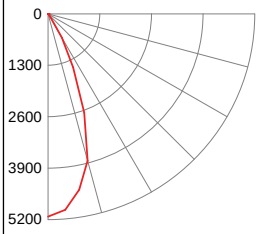
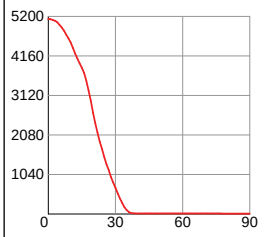
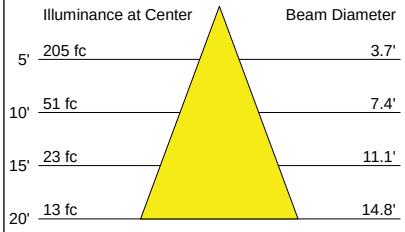
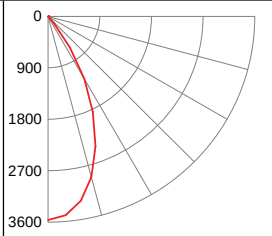
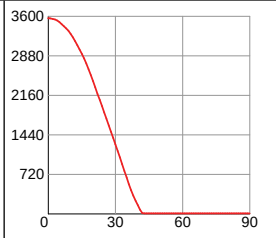
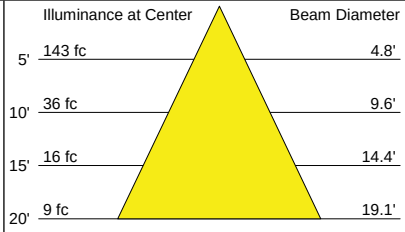
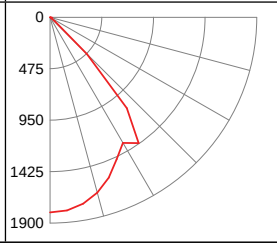
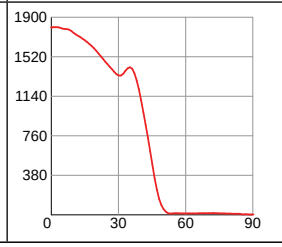
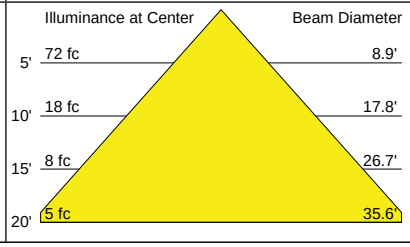
| | |
|---|---|
| Standard LED Drivers* (included in base price) | Order Code **V** = 0-10V dimming to 10% |
| | Order Code **P** = Phase dimming to 10% Compatible with both forward and reverse phase dimmers |
| Optional LED Drivers* | eldoLED 0-10V, DALI, or DMX dimming to 0% |
| | Lutron Hi-lume™ A-series, 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<br>Beam Angle = 11°<br>Field Angle = 23°<br>LOR = 89.1 %<br>Beam = full width @ 50%<br>Field = full width @ 90% |
| 25° | **25** |  |  |  | CBCP = 7,785 cd<br>Beam Angle = 25°<br>Field Angle = 59°<br>LOR = 87.5 %<br>Beam = full width @ 50%<br>Field = full width @ 90% |
| 41° | **41** |  |  |  | CBCP = 5,127 cd<br>Beam Angle = 41°<br>Field Angle = 62°<br>LOR = 82.4 %<br>Beam = full width @ 50%<br>Field = full width @ 90% |
| 51° | **51** |  |  |  | CBCP = 3,564 cd<br>Beam Angle = 51°<br>Field Angle = 76°<br>LOR = 83.0 %<br>Beam = full width @ 50%<br>Field = full width @ 90% |
| 83° | **83** |  |  |  | CBCP = 1,802 cd<br>Beam Angle = 83°<br>Field Angle = 96°<br>LOR = 84.8 %<br>Beam = full width @ 50%<br>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
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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

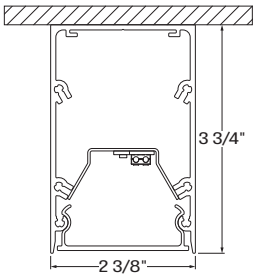
| VIA2S | HLO | | LED | | |
|---|---|---|---|---|---|
| **LUMINAIRE ID** | **OPTICS** | **LENS POSITION** | **LIGHT SOURCE** | **CRI** | **LUMEN PACKAGES** |
| **VIA2S** - via 2" surface | **HLO** - High-Efficiency Lambertian Optic | **FH** - Flush<br>**0.5D** - 0.5" drop<br>**1.0D** - 1.0" drop | **LED** - high performance LED | **80** - 80CRI<br>**90** - 90CRI | **350** - min. low output 350lm/ft<br>**500** - medium output 500lm/ft<br>**750** - max. high output 750lm/ft<br>**####** - other required lm/ft |

| COLOR TEMP. | LUMINAIRE LENGTH | VOLTAGE | DRIVER | ELECTRICAL |
|---|---|---|---|---|
| **27** - 2700K<br>**30** - 3000K<br>**35** - 3500K<br>**40** - 4000K | Standard sections - 2', 3', 4', 5', 8' & 12'<br>For all other specify length<br>**#FT** - nominal length in feet<br>**#IN** - length in inches<br>Continuous Run - for luminaires over 12'<br>Minimum Individual section 2' | **120** - 120V<br>**277** - 277V<br>**UNV** - 120V-277V<br>**347** - 347V (not available with Lutron) | **D1** - 1% dimming 0-10V<br>**DA** - Dali<br>**LTEA2W** - Lutron 1% - 2 wire FF 120V<br>**LDE1** - Lutron Hi-lume 1% Eco<br>**LDE5** - Lutron 5% EcoSystem | **1** - 1 circuit<br>**+#EB** - emergency battery (min 6' fixture, except Lutron)<br>**+#EM** - emergency light circuit<br>**+#NL** - night light circuit<br>**+GTD###** - generator transfer device, 120V or 277V |

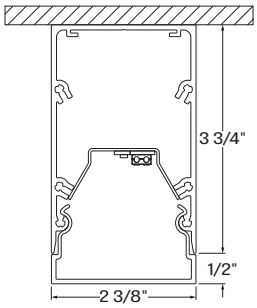
| MOUNTING | FINISH | CONTROLS | OPTIONS |
|---|---|---|---|
| **GRD** - grid ceiling<br>**DRC**- drywall ceiling | **W** - matte white<br>**AL** - aluminum<br>**B** - matte black<br>**CF#** - custom finish specify RAL# | <u>STANDALONE CONTROLS</u><br>**OMS** - Onboard Occupancy<br>**ODS** - Onboard Daylight<br>**OCS** - Onboard Occupancy & Daylight<br><u>CONNECTED CONTROLS</u><br>**CCS()** - **LU**-Lutron, **EN**-Enlighted, **OS**-Osram, **CR**-Crestron.<br>To specify see information on page 3 | **FU** - fuse<br>**ITR** - integrated track (consult factory)<br>**CU** - custom |

See page 2 for ordering code detailed information

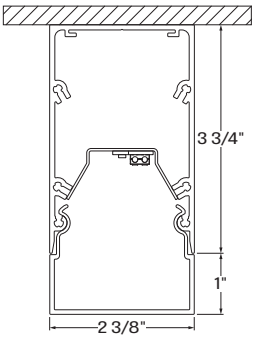
## CROSS SECTION




**VIA2S** - HLO-FH




**VIA2S** - HLO-0.5D




**VIA2S** - HLO-1.0D



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C ETL US LISTED Intertek

# VIA 2 LED

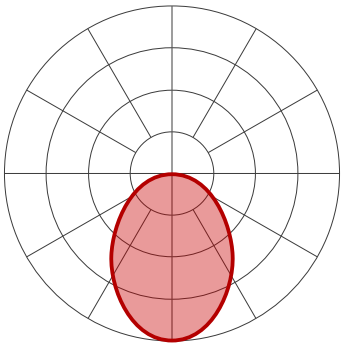
SURFACE

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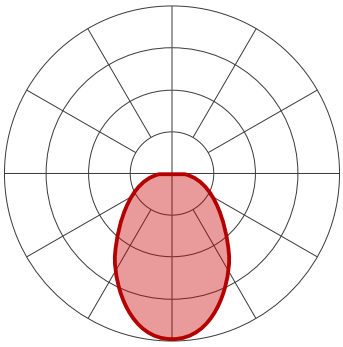
Lam Partners ARCHITECTURAL LIGHTING DESIGN

## PHOTOMETRICS

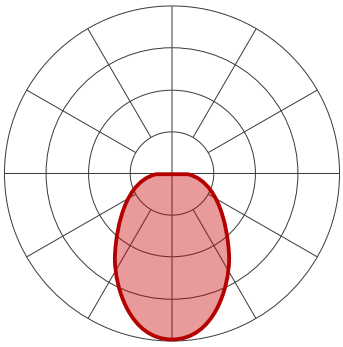
Please follow the multiplier tables to ensure correct lumen value. Lensing, CCT and CRI, will change the lumen output.



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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Intertek

# VIA 2 LED

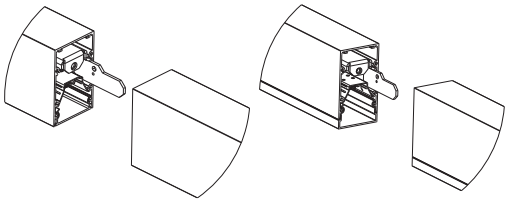
SURFACE

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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

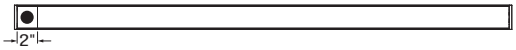
**Interior** - 95%, reflective matte powder coated white paint
**Exterior** - matte white, matte black or aluminum powder coating.
Custom finishes are also available.

## 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

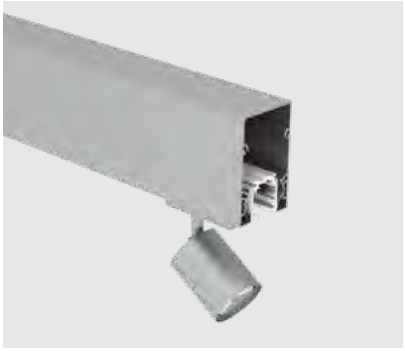
SURFACE

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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.

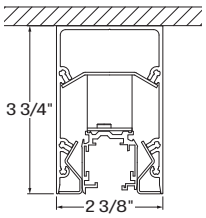
**Please contact our controls department at controls@lumenwerx.com for further assistance.**

## 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.

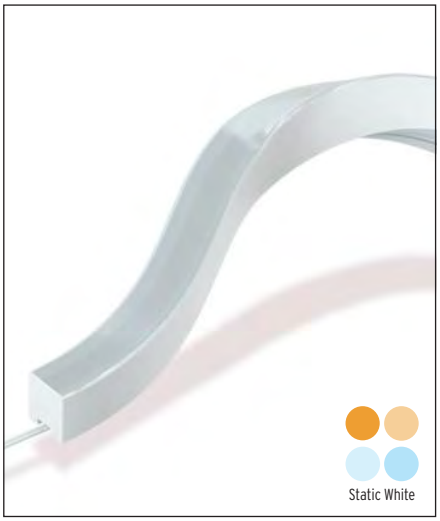

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# VENUS TC 3D IP67 Static White

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

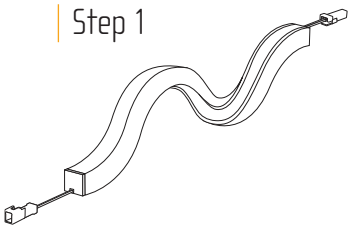
Select Models Only

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 |

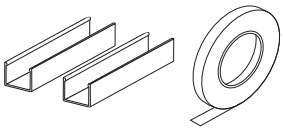
## Ordering Process

### Step 1



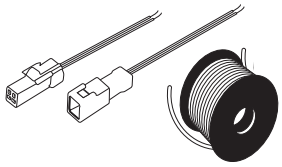
Fixture (Page 1)

### Step 2



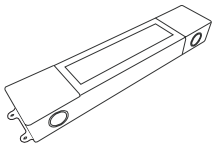
Mounting Accessories (Page 4)

### 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.

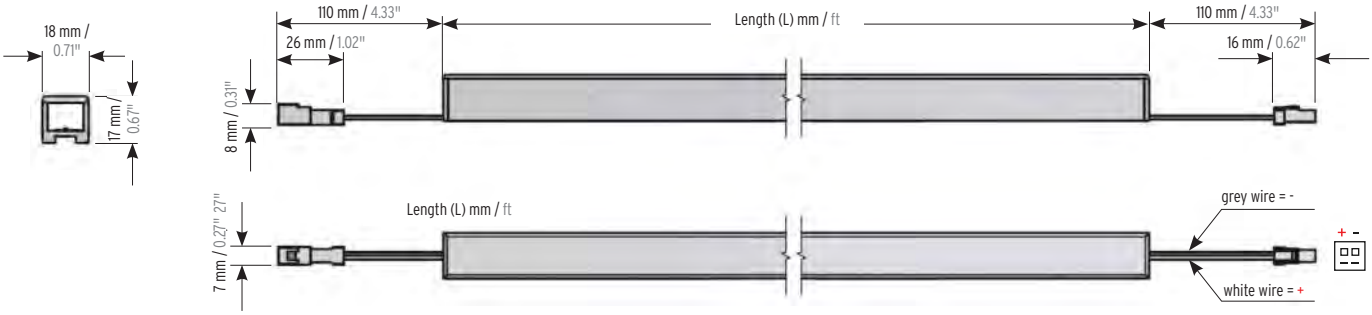
| | | | | Low Output | | Mid Output | | High Output | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Color temperature[A] | Lumen/ft | W/ft[B] | Lumen/ft | W/ft[B] | Lumen/ft | W/ft[B] |
| Static White | | W822 | 2,200 K | 90 | 1.8 | 160 | 3 | 240 | 4.6 |
| | | W927 | 2,700 K | 100 | 1.8 | 170 | 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 |

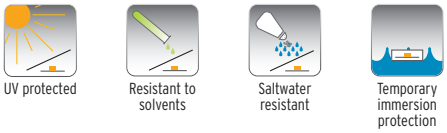
[A] CCT tolerances occur in IP67 products due to the encapsulation of the fixture.

[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.

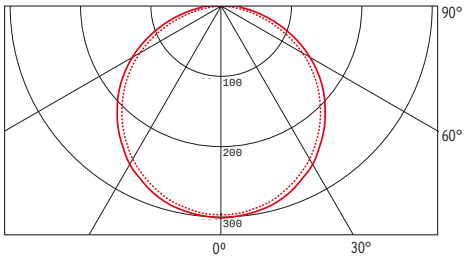
| | Low Output | Mid Output | High Output |
|---|---|---|---|
| Power (W/ft)[B] | 1.8 | 3 | 4.6 |
| Efficacy (lm / W)[B] @ W850 | 68 | 71 | 73 |
| CRI / R9 @ 3000 K | 95 / 65 | 95 / 65 | 95 / 65 |
| $R_f$ / $R_g$ @ 3000 K | 95 / 100 | 95 / 100 | 95 / 100 |
| Max fixture length (ft / m) | 6.3 / 2 | 6.3 / 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

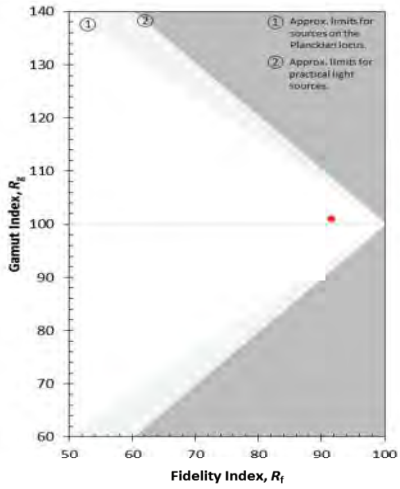
| Photometric Code | CCT | $R_a$ / CRI | R9 | TM-30-15 / $R_f$ | TM-30-15 / $R_g$ |
|---|---|---|---|---|---|
| W940 | 4000 K | 91 | 77 | 91 | 101 |

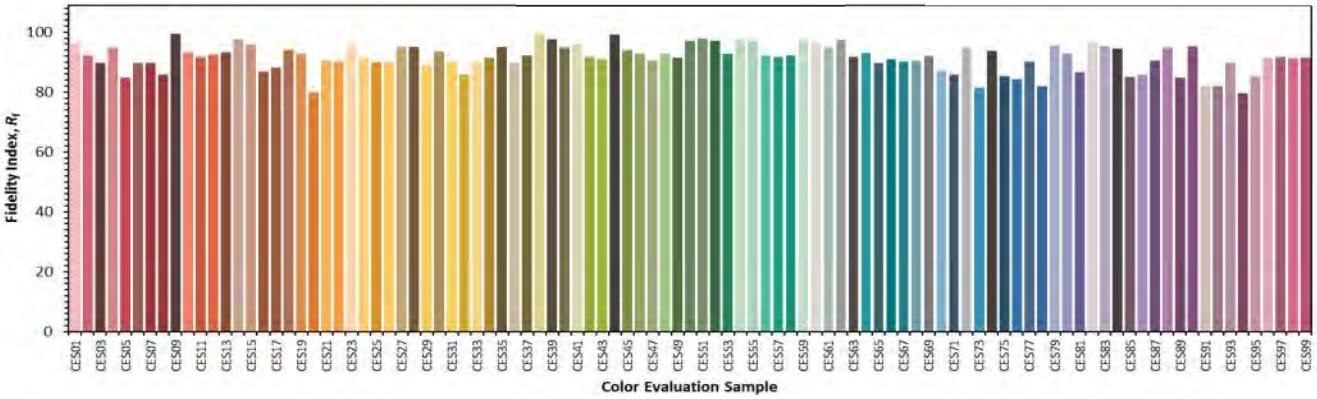
Color Vector Graphic




Color Distortion Graphic



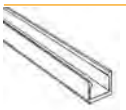
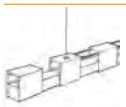



## LENGTH CHART - Venus TC 3D IP67

| 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"<br>6' 6" x 7/8" x 6/8"<br>13' x'7/8" x 6/8" | 13000277<br>10000552<br>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"<br>6' 6" x 7/8" x 1"<br>13' x 7/8" x 1" | 13000278<br>10000553<br>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<br>16' 3/8" cable length | 13000273<br>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"<br>13' x 1-1/2" x 1-3/4" | 10000559<br>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<br>Static White | 2 x 22 Awg, 8 in<br>2 x 22 Awg, 6.5 ft | 15000141<br>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<br>Static White | 2 x 22 Awg, 4 in<br>2 x 22 Awg, 6.5 ft | 15000143<br>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<br>• Universal Input Voltage 120V - 277V<br>• IP65 - For Both Indoor and Outdoor Use<br>• No Minimum Load Requirement<br>• 24V Constant Voltage Output, Class 2<br>• Available in three wattages 30W, 60W and 96W<br>• Max. Dimensions: 12-1/8" x 2-3/8" x 1-3/8" | 30 W SPEC SHEET<br>60 W SPEC SHEET<br>96 W SPEC SHEET<br>INSTALLATION INSTRUCTIONS |
| LED LINEAR™ 0-10V Dimmable Drivers |  | • UL 8750 Listed Enclosure - With Built-In Junction Boxes<br>• 0-10V Dimmable - Flicker Free Down to 1%<br>• Universal Input Voltage 120V - 277V<br>• IP65 - For Both Indoor and Outdoor Use<br>• 24V Constant Voltage Output, Class 2, Class P<br>• Available in three wattages 30W, 60W and 96W<br>• Max. Dimensions: 12-1/8" x 2-3/8" x 1-3/8" | 30 W SPEC SHEET<br>60 W SPEC SHEET<br>96 W SPEC SHEET<br>INSTALLATION INSTRUCTIONS |
| LED LINEAR™ ELV/Triac Dimmable Drivers |  | • UL 8750 Listed Class 2 Enclosure<br>• 24V constant voltage output<br>• Compact size yet high efficiency and performance in dry and damp environments (IP67)<br>• Multiple Inputs: 120V or 277V<br>• Fully dimmable: ELV Dimmers - Reverse or Adaptive Phase Control, Trailing Edge<br>• Available in two wattages 48W and 96W<br>• Multiple Circuits are available up to 4 units (up to 384W) | 48 W SPEC SHEET<br>96 W SPEC SHEET<br>INSTALLATION INSTRUCTIONS |
| MEAN WELL PWM Dimmable Drivers |  | • Universal AC input / Full range (up to 305VAC)<br>• Constant voltage PWM style output<br>• Built-in 3 in 1 dimming function (0~10Vdc or PWM signal or resistance)<br>• Dimming range : 0~100%<br>• Class 2 power unit<br>• Suitable for dry / damp / wet locations<br>• UL Recognized component, 5 years warranty | 40 W SPEC SHEET<br>60 W SPEC SHEET<br>90 W SPEC SHEET<br>INSTALLATION INSTRUCTIONS |
| LUTRON Dimmable Drivers |  | • UL Listed Enclosure<br>• Dimming Range: 100% to 1% and 0.1% (Premiere)<br>• LED lighting turns on to any dimmed level without flashing to full brightness<br>• Operating Voltage: 120V~ to 277V~ at 50/60 Hz<br>• Rated lifetime of 50,000 hours at 40°C (104°F) ambient temperature and maximum loading<br>• For rated warranty, ambient temperature not to exceed 40°C (104°F)<br>• Open-circuit protected output | HI-LUME SPEC SHEET<br>HI-LUME PREMIERE SPEC SHEET<br>INSTALLATION INSTRUCTIONS |
| eldoLED DALI/DMX Dimmable Drivers |  | • Available in linear or rectangular format<br>• 100W, DMX/DALI interface<br>• 4 control channels<br>• 24V constant voltage, 4 x 24V outputs<br>• Metal or plastic case options | 100 W SPEC SHEET<br>INSTALLATION INSTRUCTIONS |

## Controllers

| Item | | Specifications | Downloads |
|---|---|---|---|
| eldoLED Controllers | <br> | **180/D** DMX Controller for RGB and Tunable White Applications<br>**210/D** Dali Contoller for Static White, RGB and Tunable White Aplications<br>**211/D-LG** 0-10V Logarithmic Dimming Controller<br>**211/D-LN** 0-10V Linear Dimming Controller<br>**212/D** DMX Controller for Static White and Static Color Applications<br>**DimWheel** DMX Wall Controller for RGB and Tunable White Applications | 180/D SPEC SHEET<br>210/D SPEC SHEET<br>211/D-LG SPEC SHEET<br>211/D-LN SPEC SHEET<br>212/D SPEC SHEET<br>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.

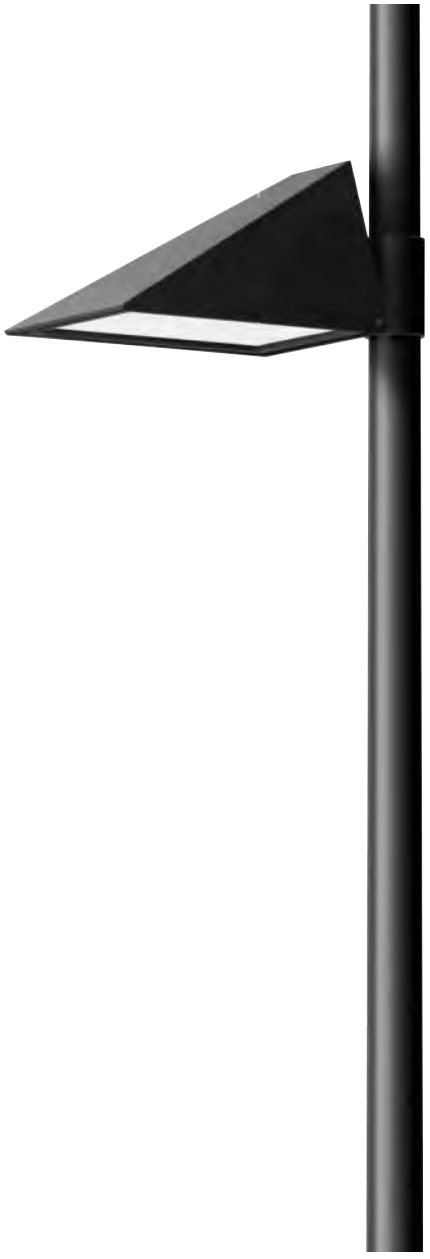
**Finish:** All BEGA standard finishes are polyester powder coat with minimum 3 mil thickness. These luminaires are available in four standard BEGA colors: Black (BLK); White (WHT); Bronze (BRZ); Silver (SLV). To specify, add appropriate suffix to catalog number. Custom colors supplied on special order.

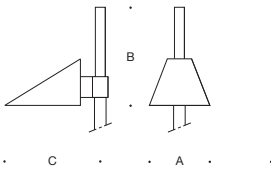
**UL** listed for US and Canadian Standards, suitable for wet locations. Protection class: IP66.

**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

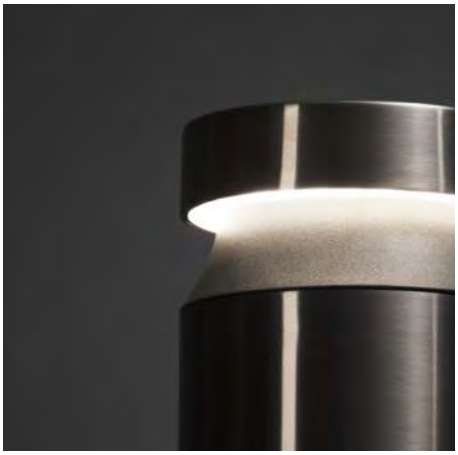
Lam Partners ARCHITECTURAL LIGHTING DESIGN

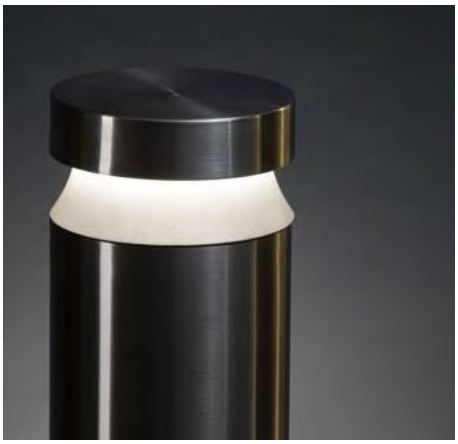
# HELIO™ BOLLARD

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

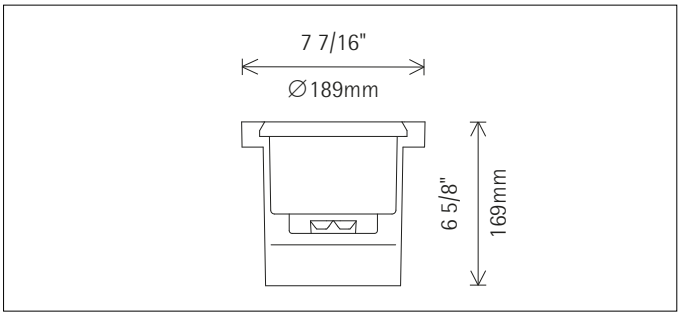
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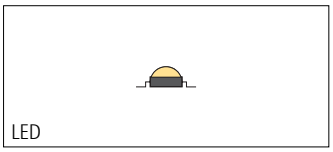
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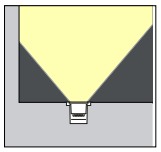
YG3

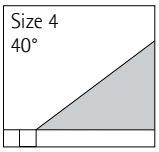
Lam Partners ARCHITECTURAL LIGHTING DESIGN





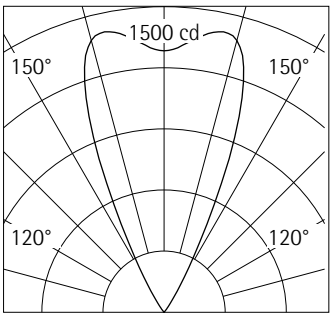






**35069.023**
LED 12W 1260lm 3000K warm white
0-10V dimmable
Version 9
Flush mounting detail
Spherolit lens, wide flood

**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<br>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

© 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**

| | |
|---|---|
| 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



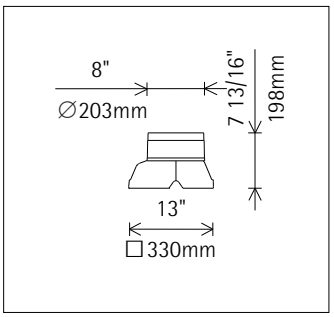
## Accessories



**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

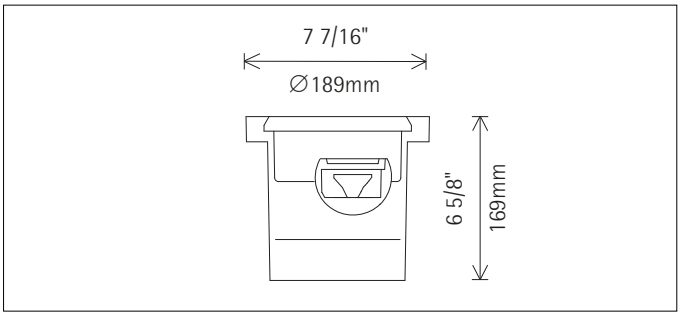
# Tesis In-ground luminaire

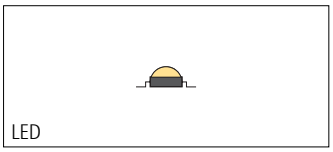
## Directional luminaire

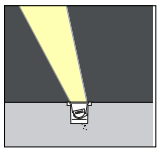
YG3A

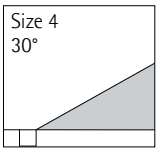
Lam Partners ARCHITECTURAL LIGHTING DESIGN





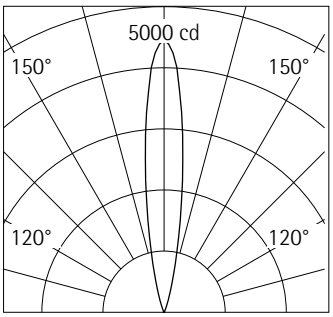






**35077.023**
LED 6W 630lm 3000K warm white
0-10V dimmable
Version 9
Flush mounting detail
Spherolit lens, spot

**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<br>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**

| | |
|---|---|
| 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



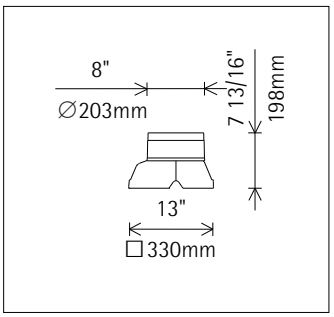
## Accessories



**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



YG7

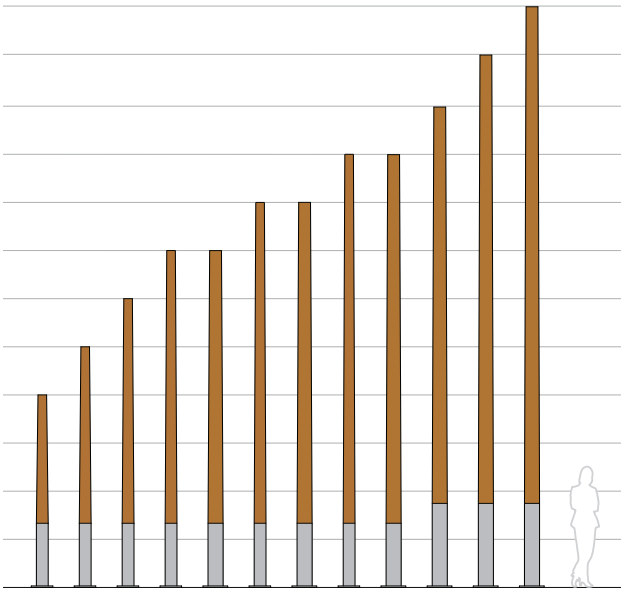
Lam Partners ARCHITECTURAL LIGHTING DESIGN

# 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.

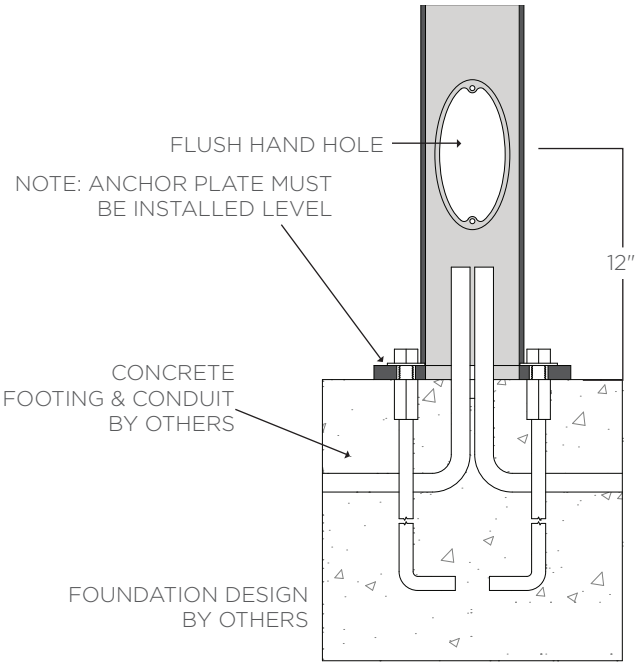
**FIXTURE MOUNTING**: Fixtures mount either by 2 3/8", 2 7/8", 3 1/2", or 4" diameter by 4" tall tenon or drill mount for arm brackets. Consult factory for other tenon sizes. Luminaires shall be provided by others.

**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.

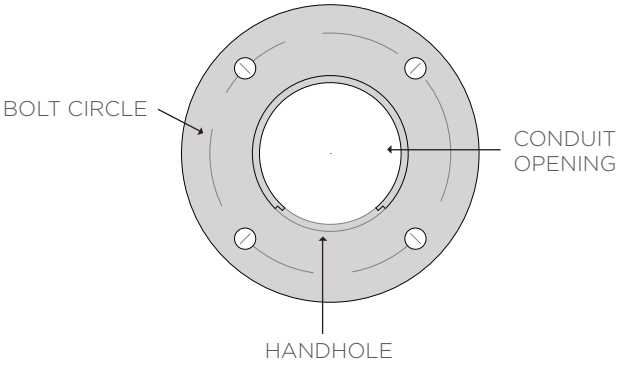
**FINISHES AND MATERIALS**: Woods are finished with a low VOC waterborne matte exterior finish containing UV and mildew inhibitors. All aluminum parts are polyester powder coat painted.

**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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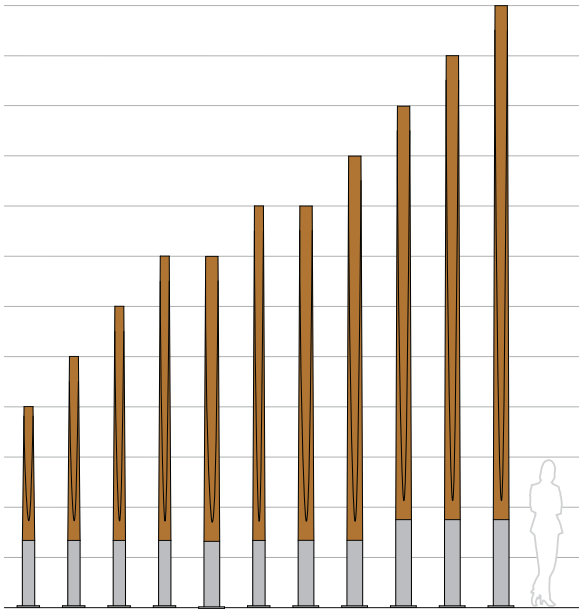
YG7

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.

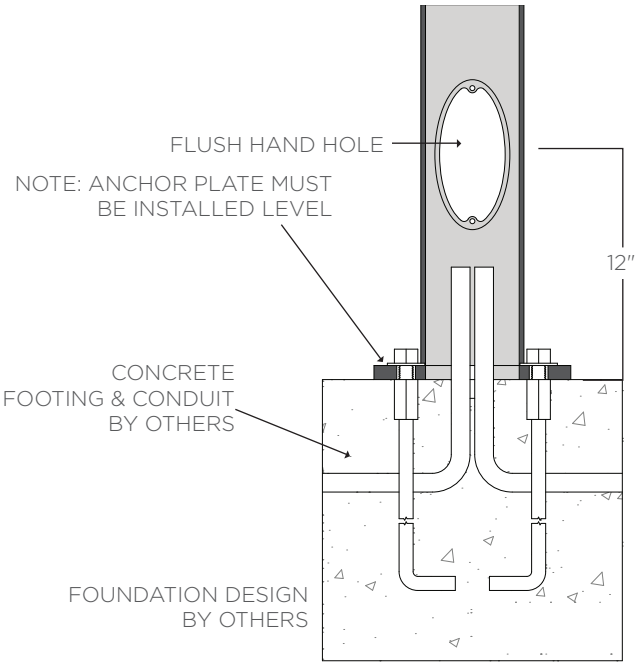
**FIXTURE MOUNTING**: Fixtures mount either by 2 3/8", 2 7/8", 3 1/2", or 4" diameter by 4" tall tenon or drill mount for arm brackets. Consult factory for other tenon sizes. Luminaires shall be provided by others.

**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.

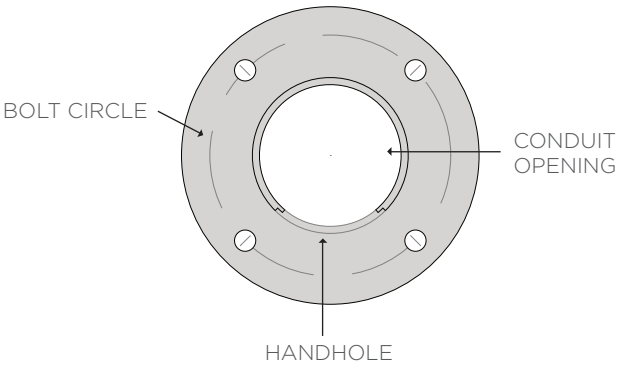
**FINISHES AND MATERIALS**: Woods are finished with a low VOC waterborne matte exterior finish containing UV and mildew inhibitors. All aluminum parts are polyester powder coat painted.

**HARDWARE**: Fasteners are stainless steel. Anchor bolt kits are hot dip galvanized.


© 2017 STRUCTURA INC.




| | 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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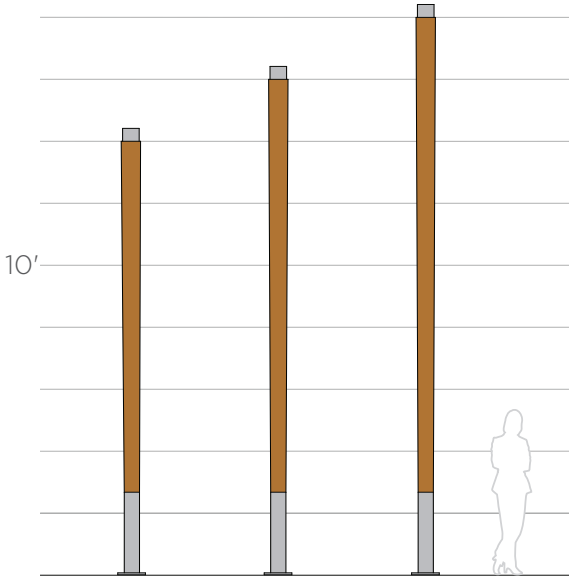
YG7

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.

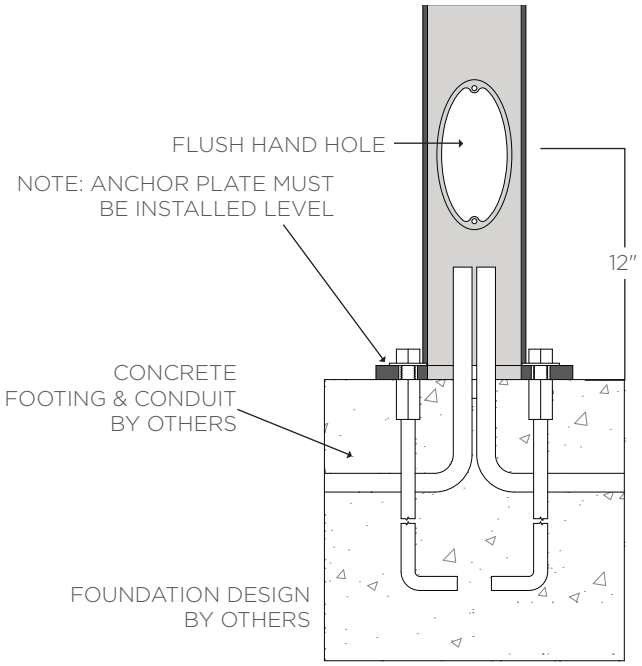
**FIXTURE MOUNTING**: Fixtures mount by tenon adapters. Consult factory for tenon sizes per project luminaire requirements. Luminaires shall be provided by others.

**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.

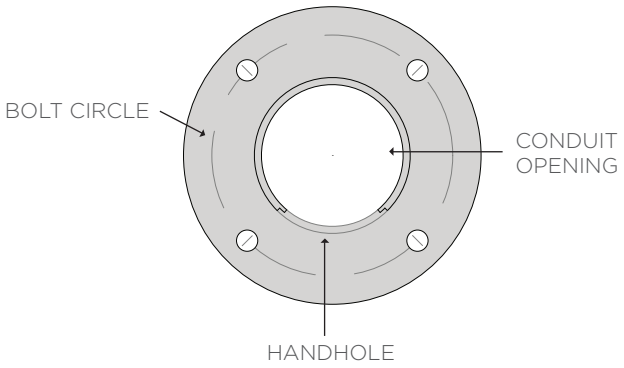
**FINISHES AND MATERIALS**: Woods are finished with a low VOC waterborne matte exterior finish containing UV and mildew inhibitors. All aluminum parts are polyester powder coat painted.

**HARDWARE**: Fasteners are stainless steel. Anchor bolt kits are hot dip galvanized.


© 2017 STRUCTURA INC.




| | 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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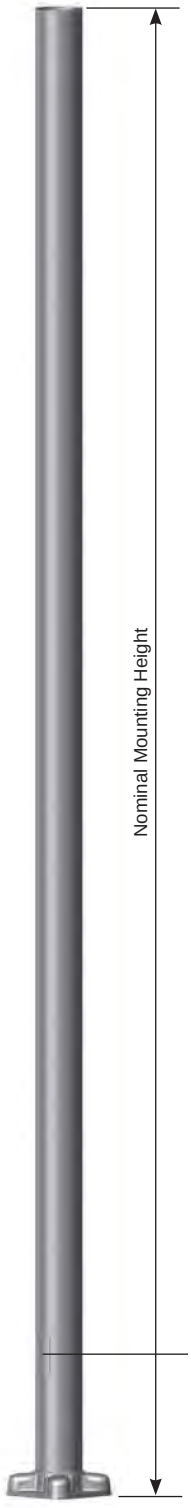
valmont STRUCTURES

# 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

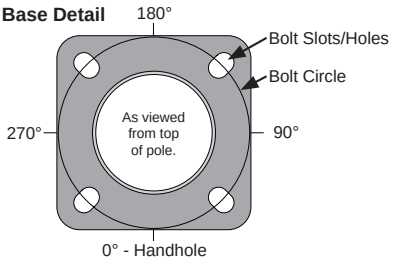
Lam Partners ARCHITECTURAL LIGHTING DESIGN

| | |
|---|---|
| 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<br>080045454S4<br>080045456S4<br>100040404S4<br>100045454S4<br>100045456S4<br>100050504S4<br>120040404S4<br>120045454S4<br>120045456S4<br>120050504S4<br>120050505S4<br>120050506S4<br>140040404S4<br>140045454S4<br>140045456S4<br>140050504S4<br>140050505S4<br>140050506S4 | **Drill Mounting**<br>D1 = 1 Luminaire<br>D2 = 2 @ 180°<br>D3 = 3 @ 120°<br>D4 = 4 @ 90°<br>D5 = 2 @ 90°<br>D6 = 3 @ 90°<br>**Tenon Mounting**<br>P2 = 2.38" OD x 4.00"<br>P3 = 3.50" OD x 6.00"<br>P4 = 4.00" OD x 6.00"<br>P5 = 2.88" OD x 4.00"<br>P7 = 2.38" OD x 5.00"<br>PQ = 2.38" OD x 12.00"<br>PD = 3.00" OD x 3.00"<br>-- = Plain Top<br>P9 = Other Tenon (Contact Factory) | **Polyester Powder**<br>DWH = White<br>DSS = Sandstone<br>HTG = Hunter Green<br>DNA = Natural Aluminum<br>DCG = Charcoal Gray<br>DMB = Medium Bronze<br>DNB = New Dark Bronze<br>DDB = Dark Bronze<br>DBL = Black<br>DSB = Steel Blue<br>DTG = Dark Green<br>DBR = Red<br>SC = Special Color (Contact Factory) | **Anodized**<br>204 = Clear Natural<br>311 = Light Bronze*<br>312 = Medium Bronze*<br>313 = Dark Bronze*<br>335 = Black*<br>*Duranodic Anodize<br>**Brushed**<br>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

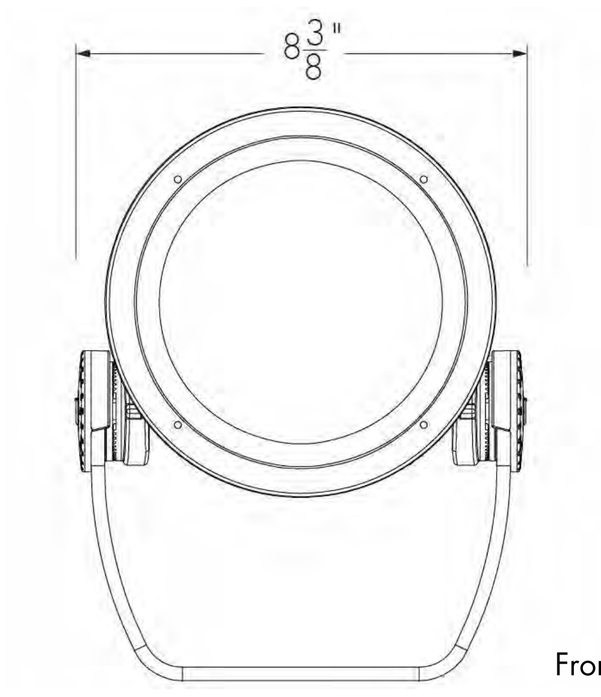
**Medium**

WHITE AND STATIC COLOURS

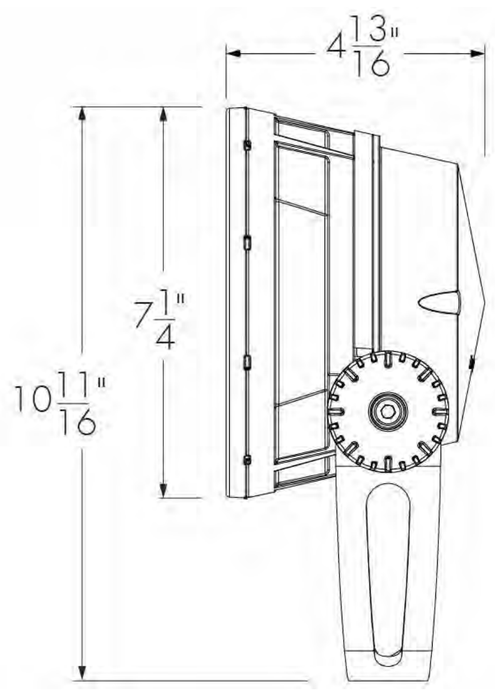
**Project Name** _____ **Qty** _____

**Type** _____ **Catalog / Part Number** _____






Front view



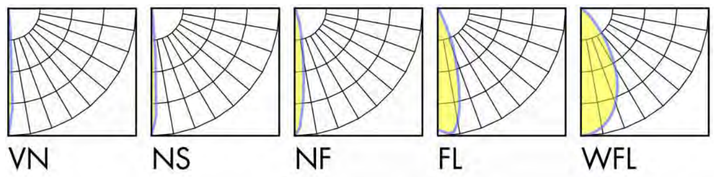

Side view

## 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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# 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

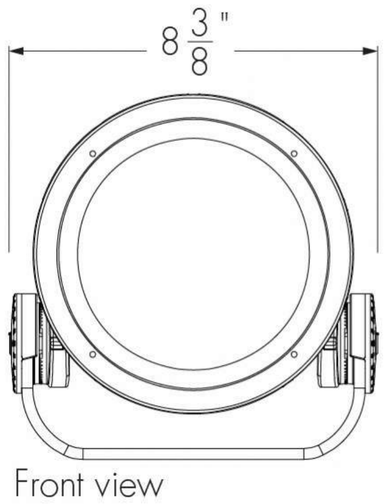
# lumenbeam

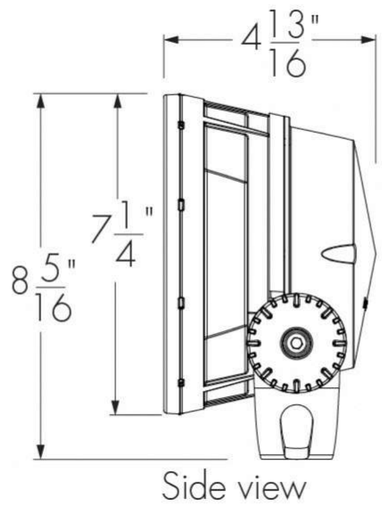
**Medium**

WHITE AND STATIC COLOURS

## Mounting options

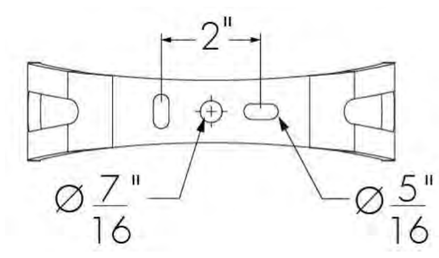
### SY - Short yoke



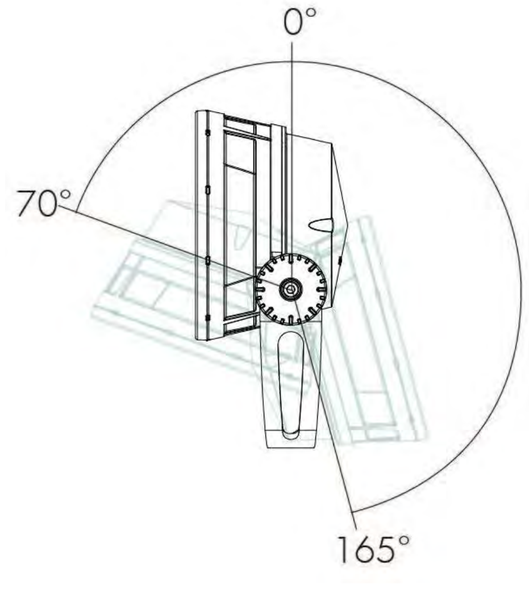




## Mounting details

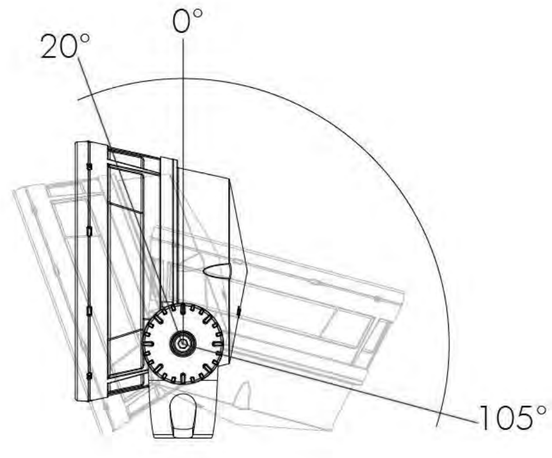
### Mounting hole pattern - standard and short yoke




### 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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# Specification Sheet

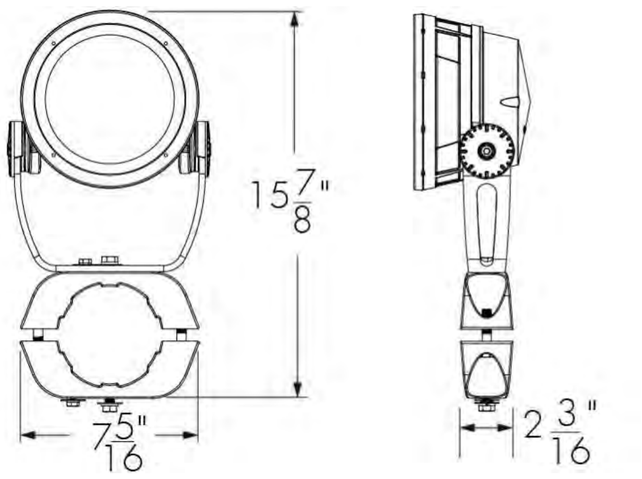
# lumenbeam

**Medium**

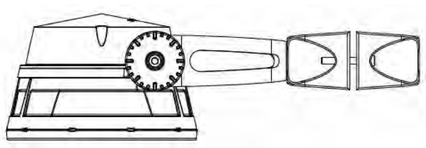
WHITE AND STATIC COLOURS

## Mounting accessories (order separately)

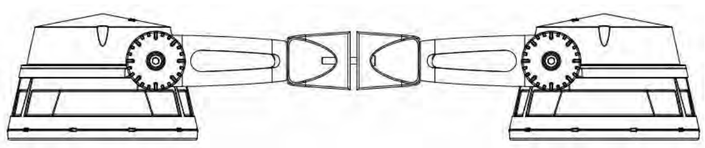
### Round pole mounting accessory




PM4 model shown.
Consult factory for square pole section.



**PM4-1, PM4.5-1, PM5-1 -** Round pole mounting accessory - single fixture

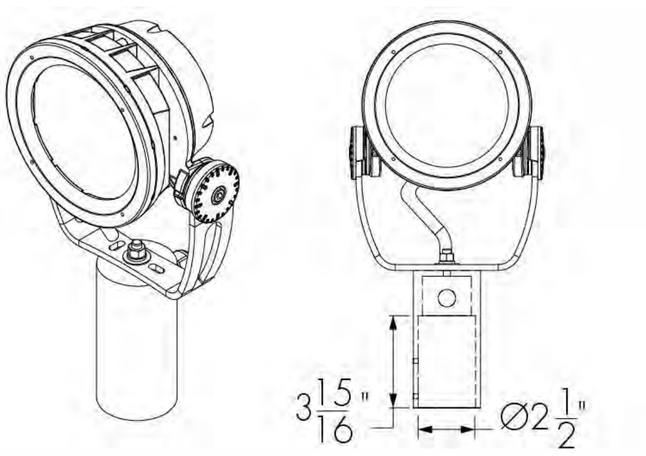


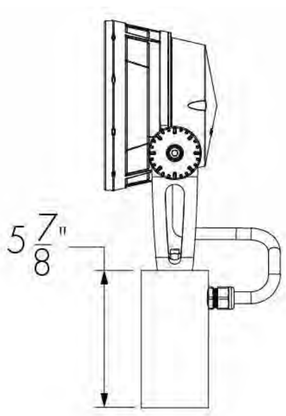
**PM4-2, PM4.5-2, PM5-2 -** Round pole mounting accessory - twin fixures
*One bracket assembly is supplied per 2 fixtures unless otherwise specified.

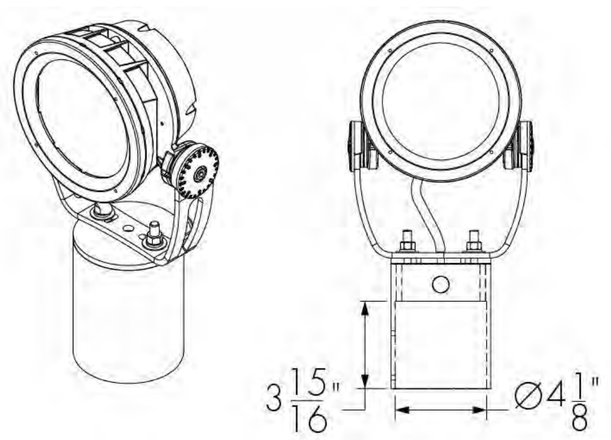
| | PM4 | PM4.5 | PM5 |
|---|---|---|---|
| **For pole Ø** | 4" ± 1/16" | 4.5" ± 1/16" | 5" ± 1/16" |

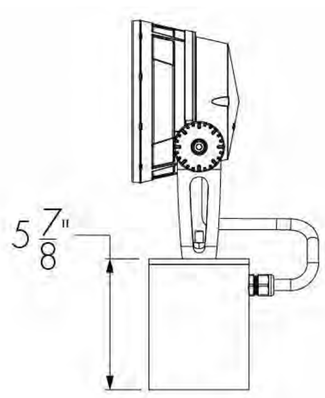
Consult factory for other pole diameters.

### Tenon adapter



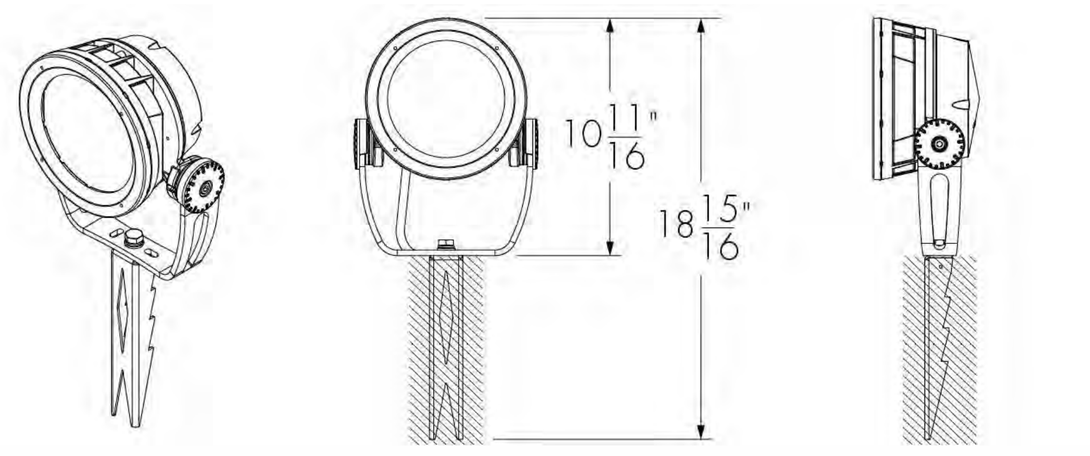




**TN2 -** Tenon adapter to fit on 2 3/8 in O.D. tenon

**TN4 -** Tenon adpater to fit on 4 in O.D. tenon

### SK - Stake mounting






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# Specification Sheet

# lumenbeam

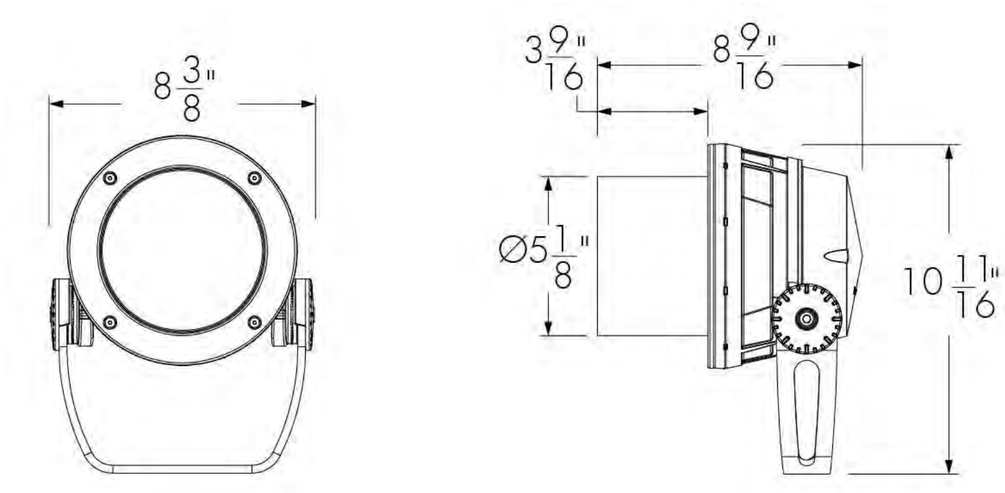
**Medium**

WHITE AND STATIC COLOURS

## Optical accessories (order separately)

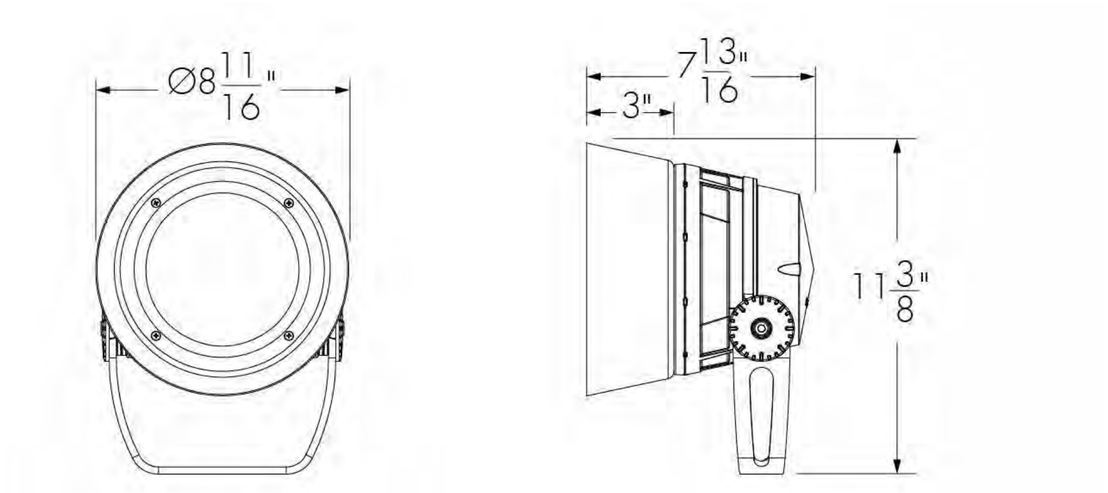
Installed optical accessories will affect the maximum pivot limits for each mounting option, consult factory for details.

### SN - Snoot



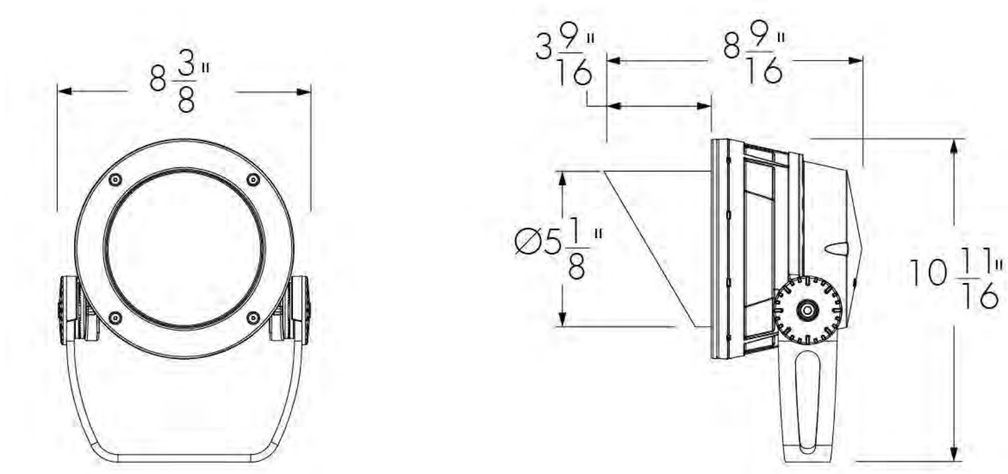

LBMSN-FINISH-BK
Interior surface painted black. Please specify desired exterior FINISH from list of available finishes.

### SNW - Snoot wide



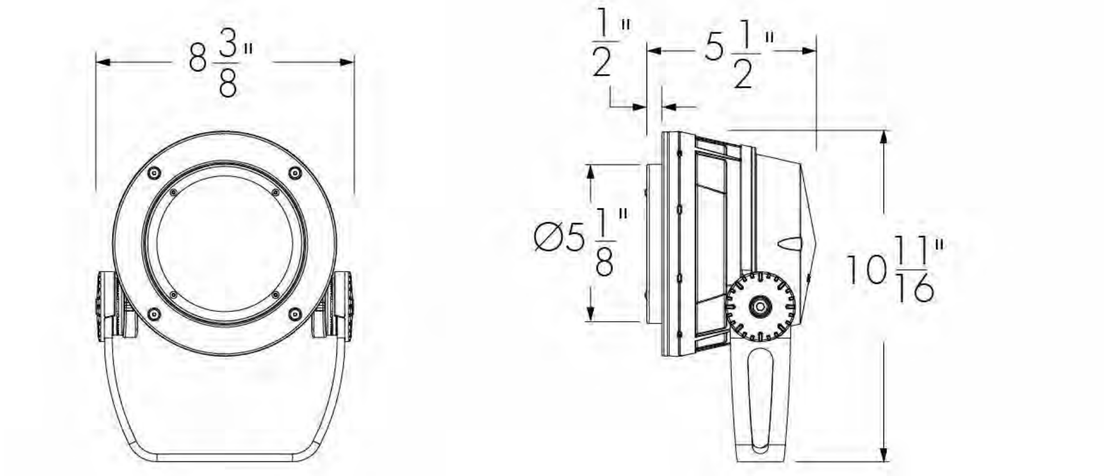

LBMSNW-FINISH-BK
Interior surface painted black. Please specify desired exterior FINISH from list of available finishes.

### VS - Visor



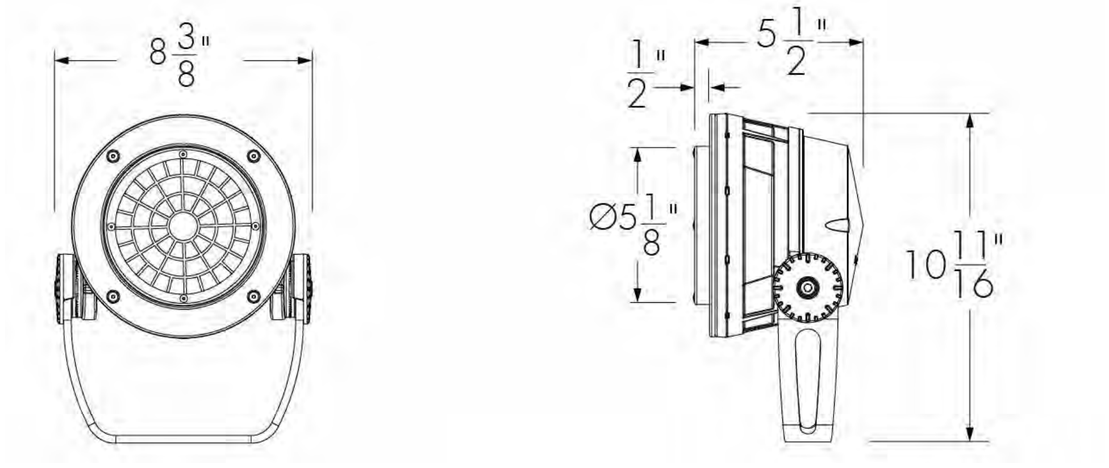

LBMVS-FINISH-BK
Interior surface painted black. Please specify desired exterior FINISH from list of available finishes.

### 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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**Medium**

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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**Medium**

WHITE AND STATIC COLOURS

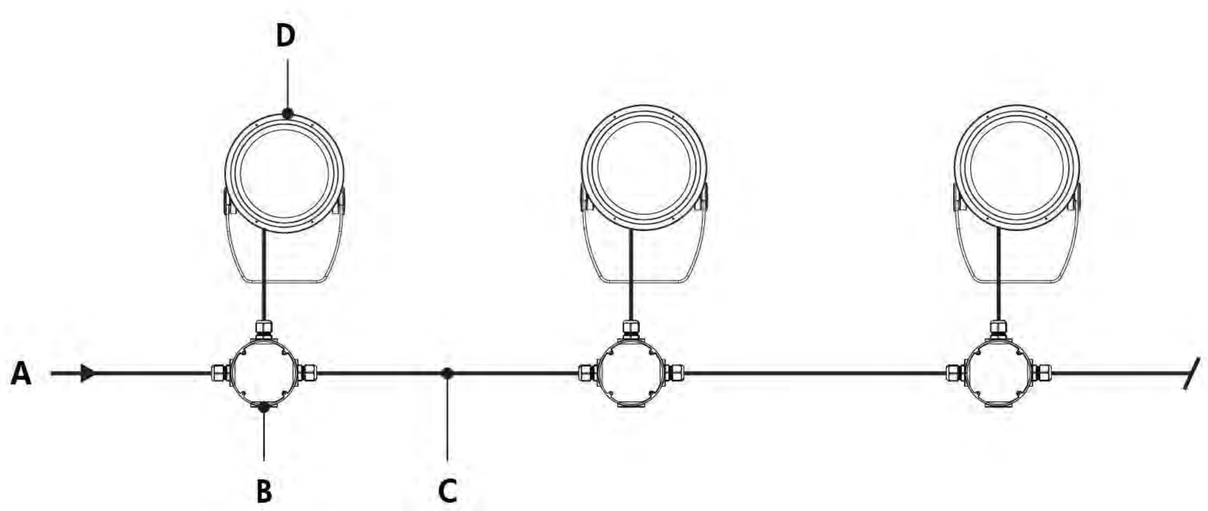
## Typical wiring diagrams

### Wiring colour code

| CE<br>Colour Code | USE |
|---|---|
| Yellow/Green<br>Brown<br>Blue<br>Black<br>Grey | Ground<br>Live 100-277V<br>Neutral<br>1-10V / Data +<br>1-10V / Data - |

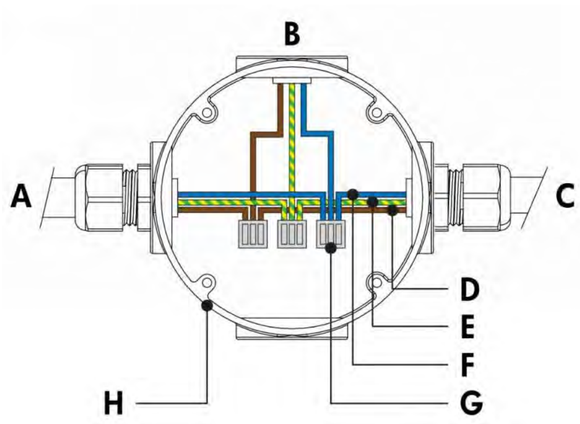
| CE Class II<br>Colour Code | USE |
|---|---|
| Brown<br>Blue<br>Black 1<br>Black 2<br>Grey | Live 100-277V<br>Neutral<br>Signal common (DMX/RDM only)<br>1-10V / Data +<br>1-10V / Data - |

### On/Off control (NO)



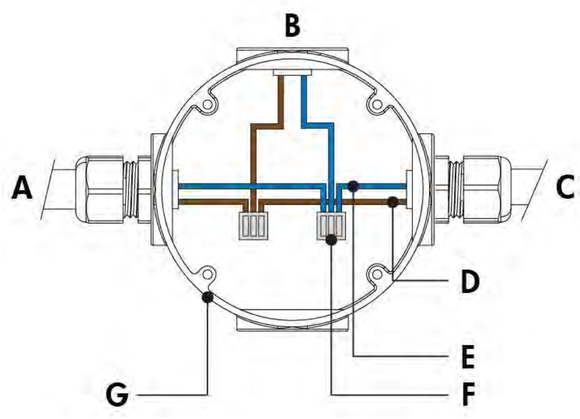

**A -** Power input (100-277V)
**B -** Junction box (by others)
**C -** Power wiring (by others)
**D -** Lumenbeam Medium

### 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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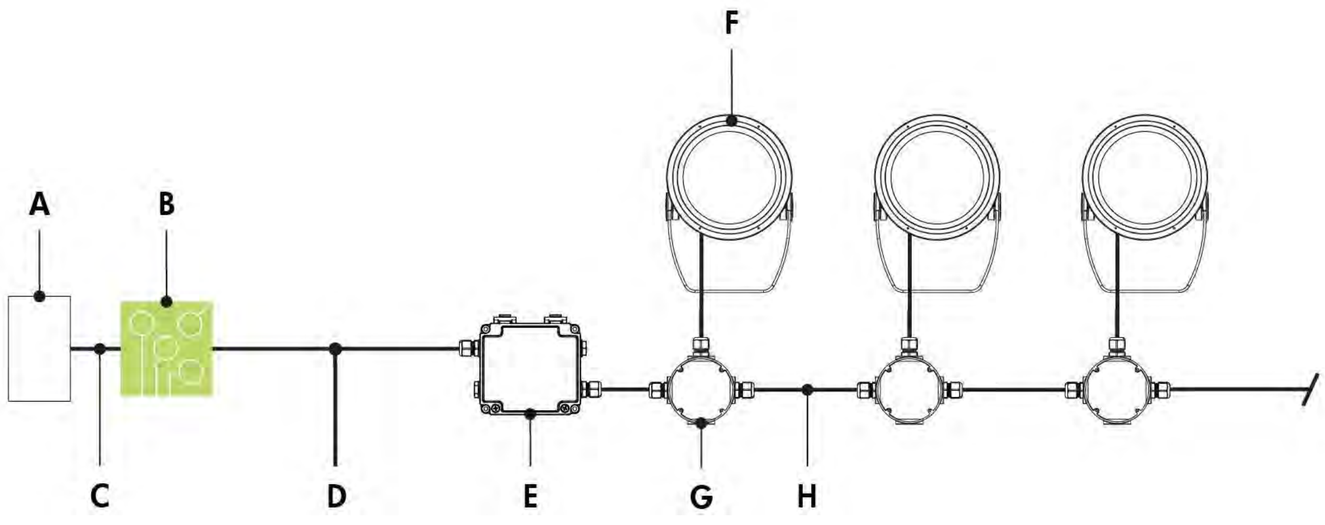
# Specification Sheet

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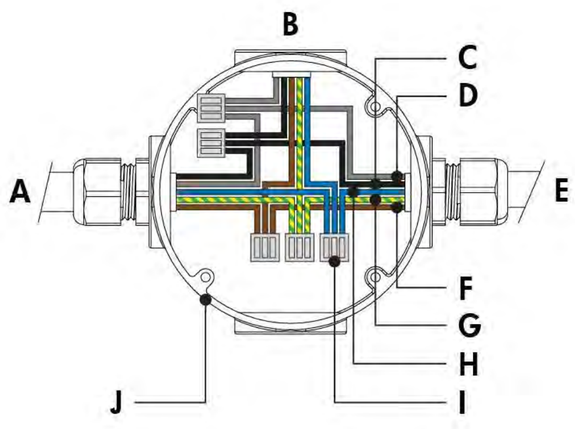
WHITE AND STATIC COLOURS

**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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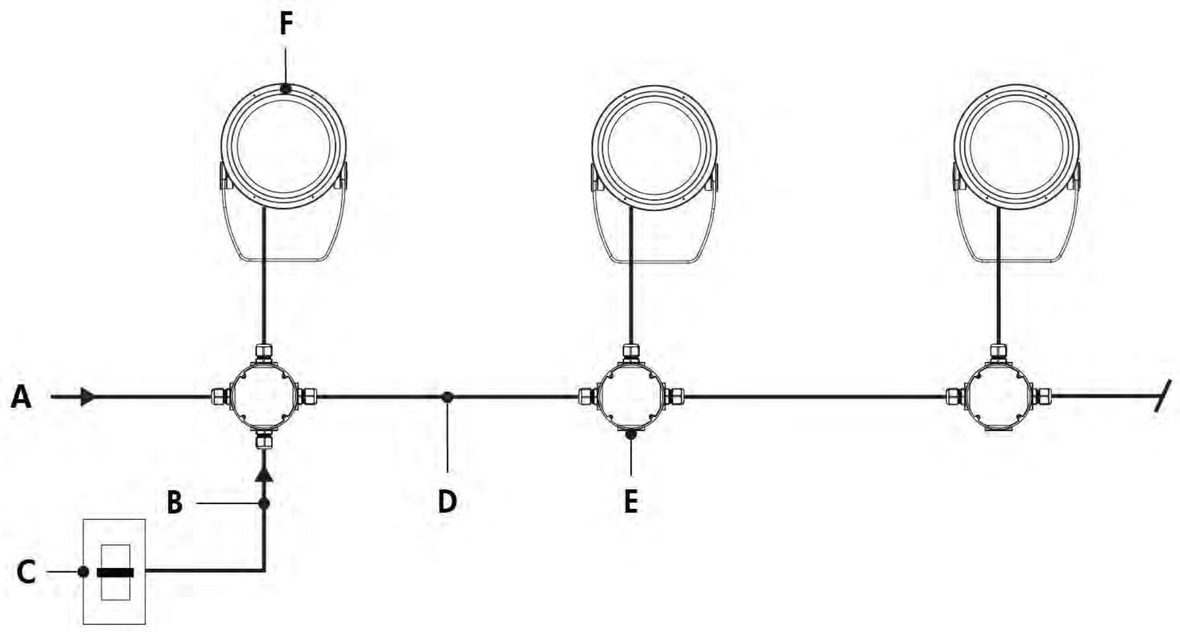
# Specification Sheet

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**Medium**

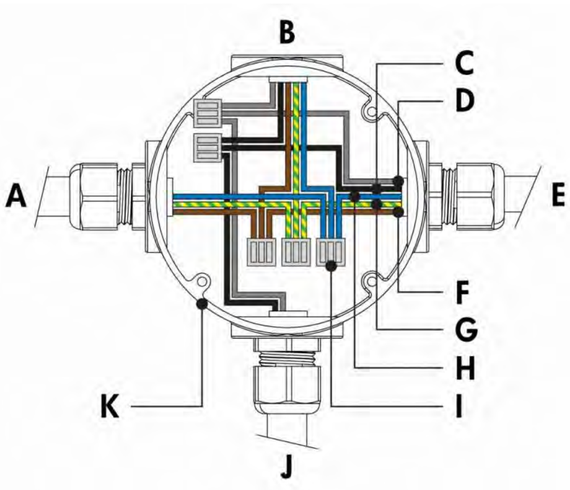
WHITE AND STATIC COLOURS

## 1-10V dimming (DIM)



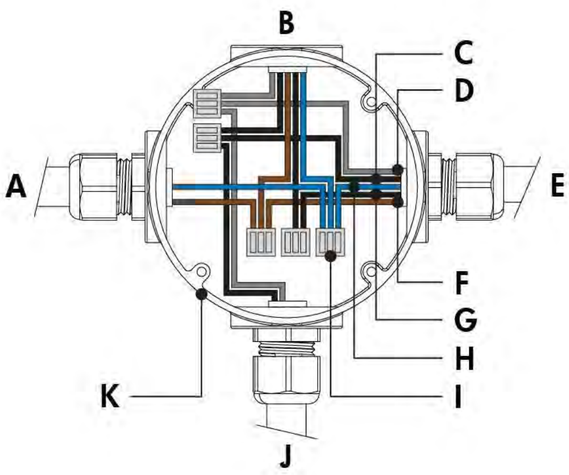

**A -** Power input (100-277V)
**B -** Data wiring (by others)
**C -** Third party dimmer
**D -** Power and data wiring (by others)
**E -** Junction box (by others)
**F -** Lumenbeam Medium

## 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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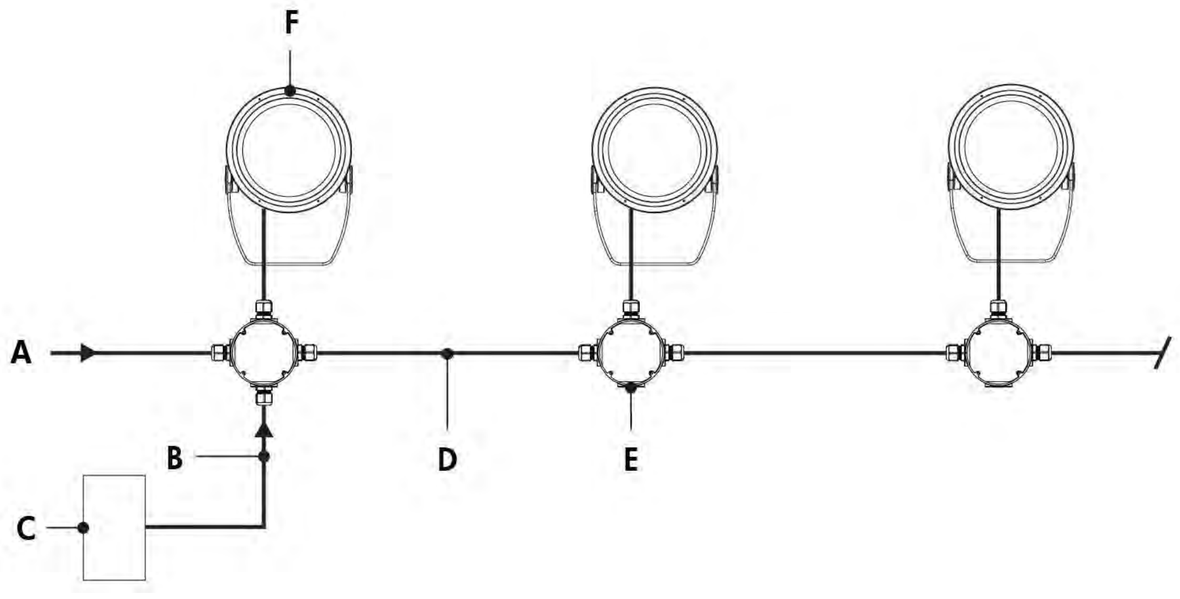
# Specification Sheet

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**Medium**

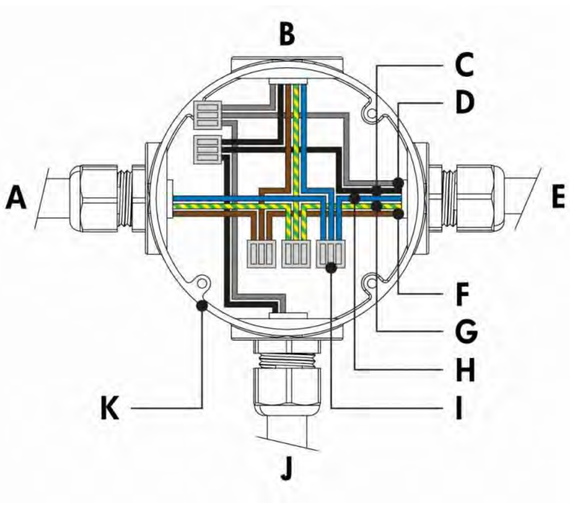
WHITE AND STATIC COLOURS

### DALI dimming (DALI)



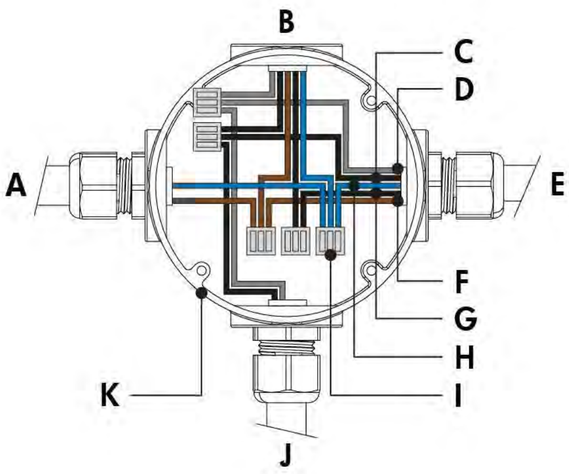

**A -** Power input (100-277V)
**B -** Data wiring (by others)
**C -** Third party DALI controller
**D -** Power and data wiring (by others)
**E -** Junction box (by others)
**F -** Lumenbeam Medium

### 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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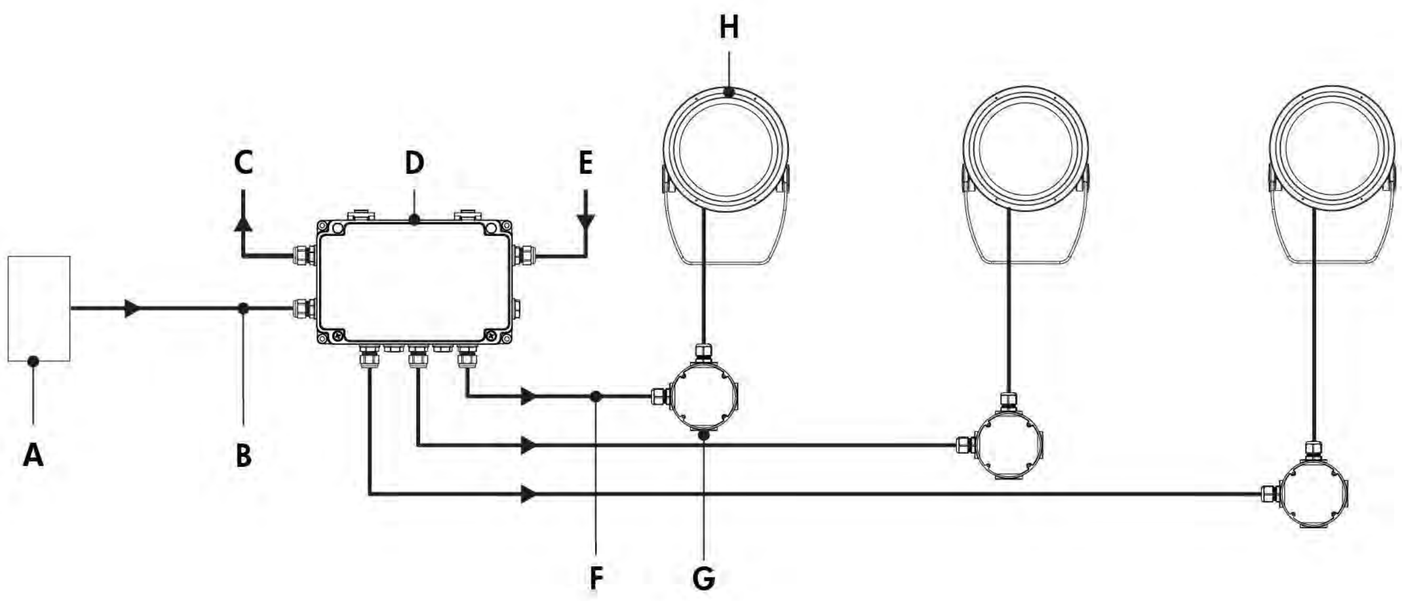
# Specification Sheet

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**Medium**

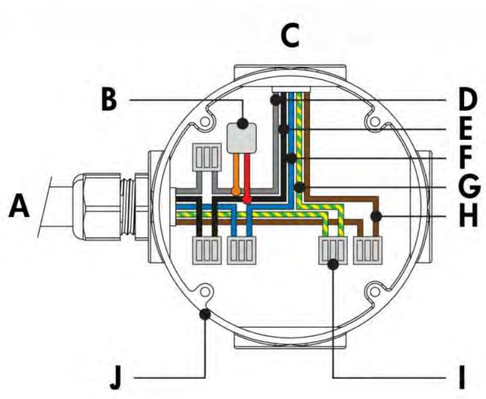
WHITE AND STATIC COLOURS

### Star Layout (DMX/RDM)



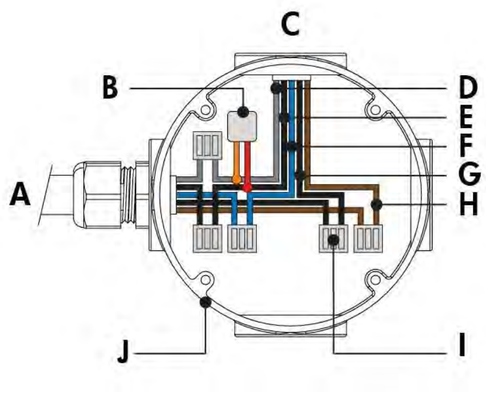

**A -** Third party DMX/RDM controller
**B -** Data input (Belden 9841 or equivalent, by others)
**C -** Data output to next CBX (optional, not isolated/not boosted)
**D -** CBX-ST
**E -** Power input (100-277V)
**F -** Power and data output to fixture (wiring by others)
**G -** Junction box (by others)
**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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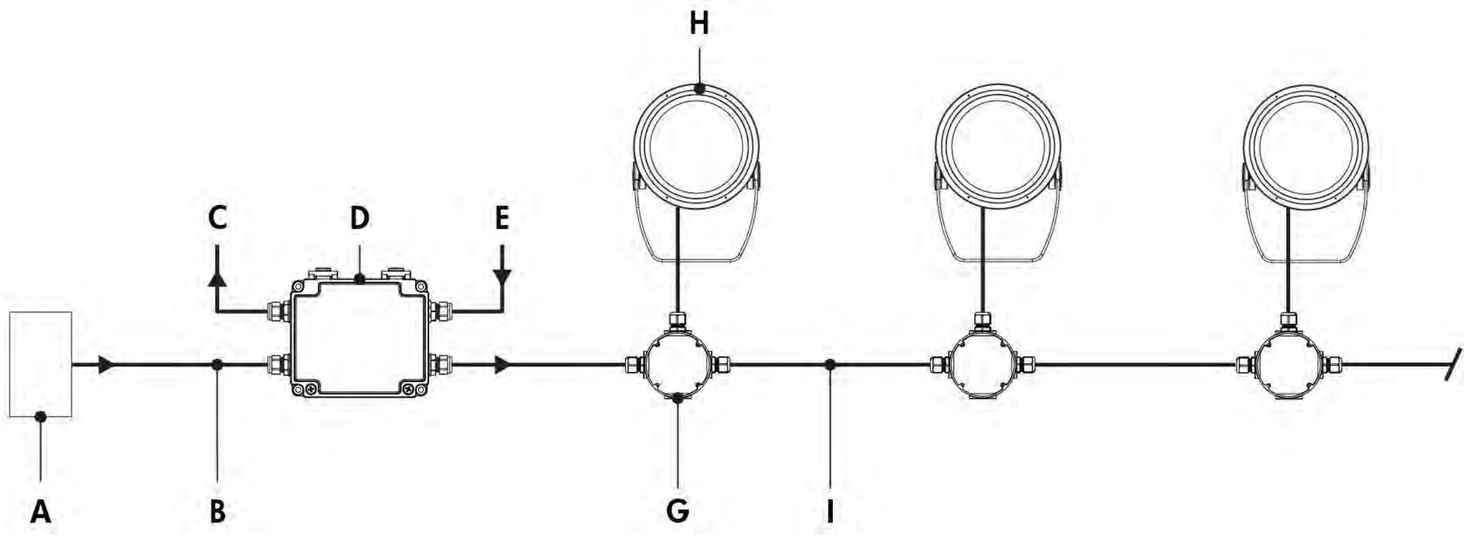
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**Medium**

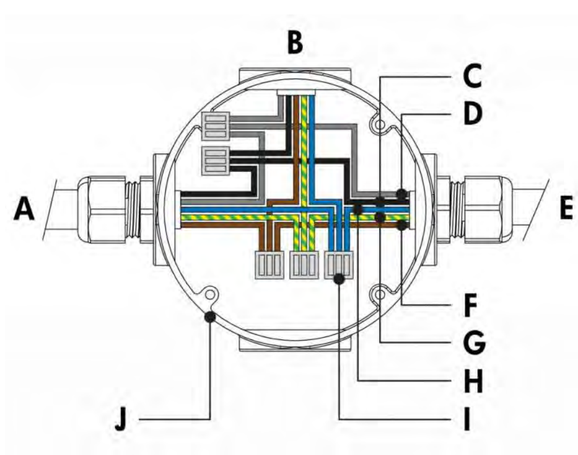
WHITE AND STATIC COLOURS

## Daisy Chain Layout (DMX/RDM)



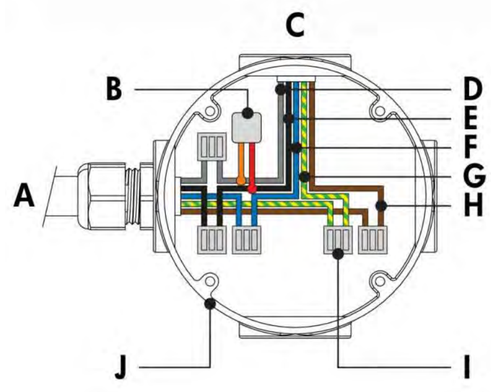

**A -** Third party DMX/RDM controller
**B -** Data input (Belden 9841 or equivalent, by others)
**C -** Data output to next CBX (optional, not isolated/not boosted)
**D -** CBX-DS
**E -** Power input (100-277V)
**F -** Power and data output to fixture (wiring by others)
**G -** Junction box (by others)
**H -** Lumenbeam Medium
**I -** Power and data wiring (by others)

## Daisy Chain Layout (DMX/RDM) - wiring detail (first or middle of run) - CE



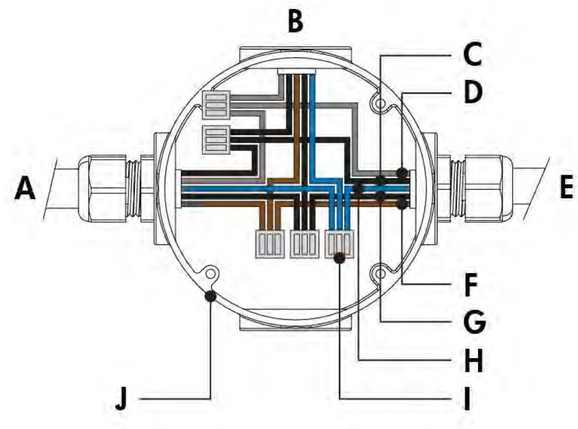

**A -** From CBX or previous fixture
**B -** To fixture
**C -** Data +
**D -** Data -
**E -** To next/from previous fixture
**F -** Live
**G -** Ground
**H -** Neutral
**I -** Terminal connector (by others)
**J -** Junction box (by others)

## 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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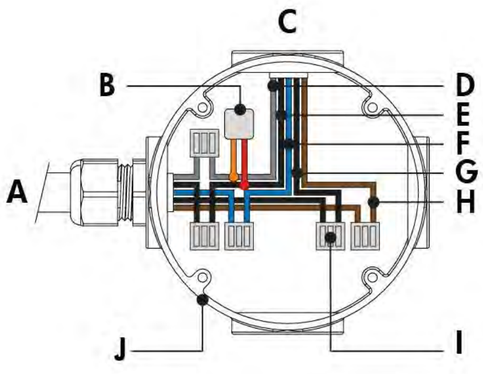
# Specification Sheet

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**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

## lumenbeam

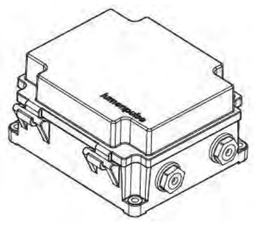
**Medium**

WHITE AND STATIC COLOURS

## Accessories (order separately)

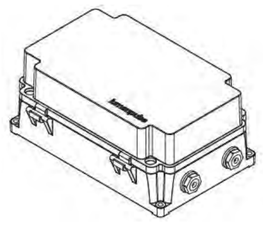
## Control Boxes

### 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.

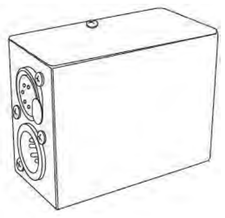
### LCU-Lumencue



Lumencue is a USB / mini SD DMX 512 controller.

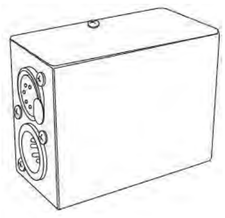
## Diagnostic and Addressing Tools

### 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.

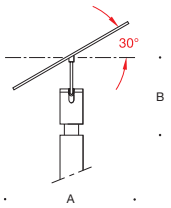
**Finish:** All BEGA standard finishes are polyester powder coat with minimum 3 mil thickness. Available in four standard BEGA colors: Black (BLK); White (WHT); Bronze (BRZ); Silver (SLV). To specify, add appropriate suffix to catalog number. Custom colors supplied on special order.

**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

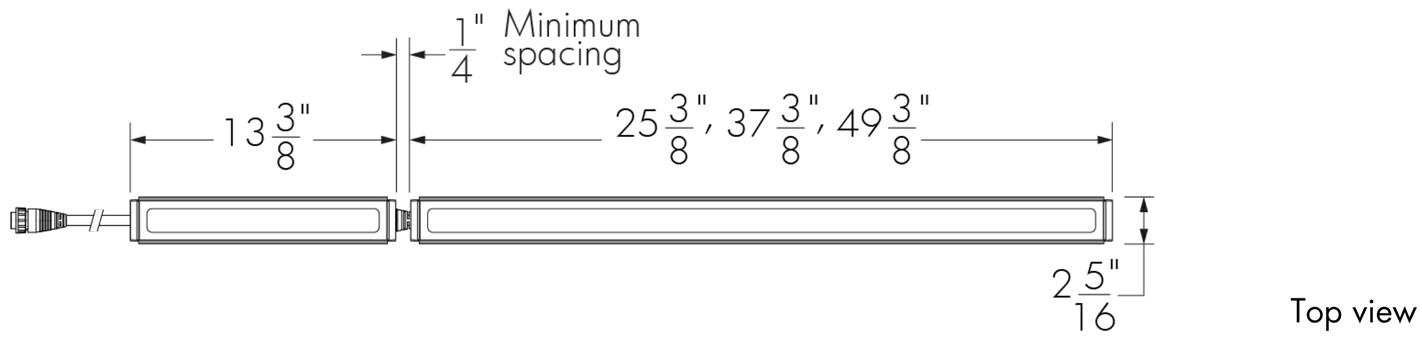
LOG

WHITE AND STATIC COLORS

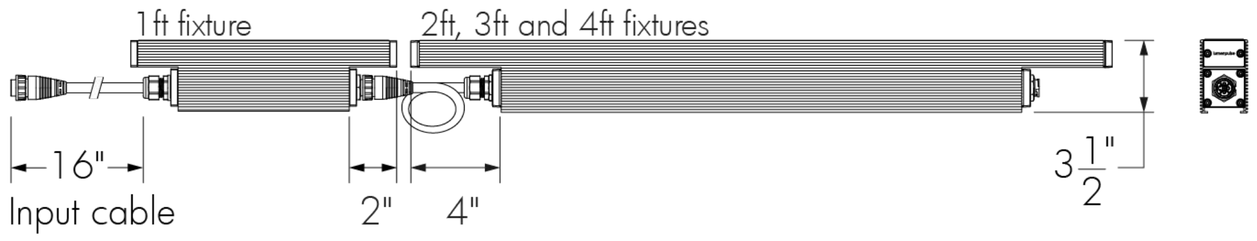
**Project Name** _____ **Qty** _____

**Type** _____ **Catalog / Part Number** _____






Top view




End-to-end (ETE) option shown

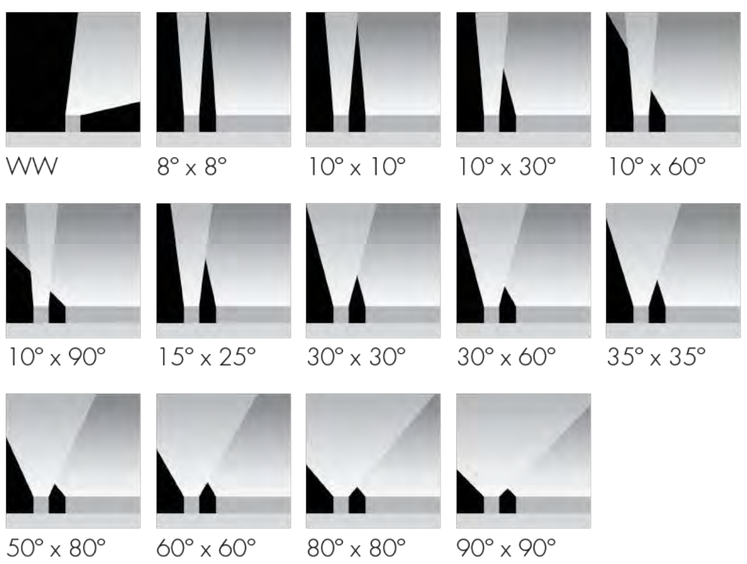
Front and side views

## 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)

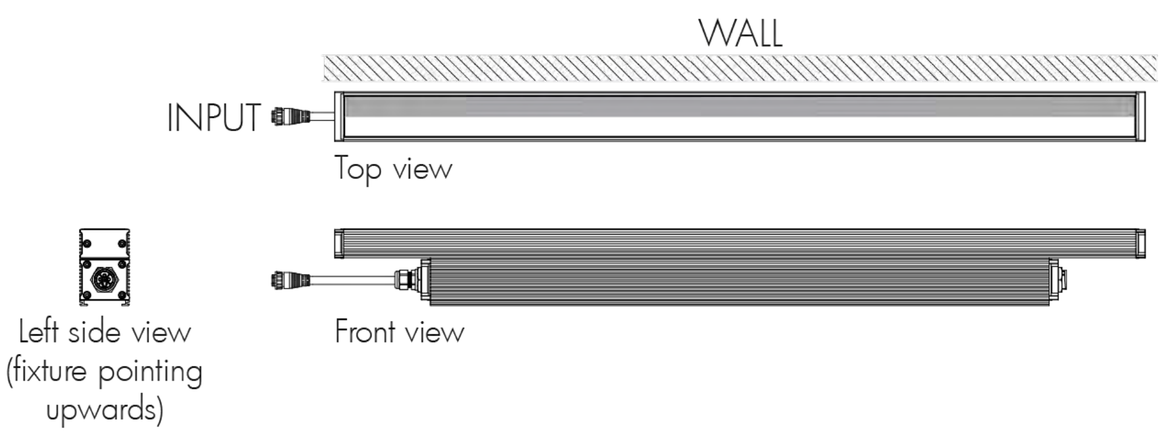
| | |
|---|---|
| **Optical Accessories** | Lumenfacade Radial Louver |
| **Cables** | Leader cable (standard), Jumper cable (standard), Leader cable (ETE), Jumper cable (ETE) |
| **Control Boxes** | DMX/RDM enabled (daisy chain or star configuration), Ethernet enabled (daisy chain or star configuration), Lumentalk Data Bridge |
| **Control Systems** | Lumentone™ 2, Pharos® kit |
| **Diagnostic and Addressing Tools** | LumenID, LumentalkID |



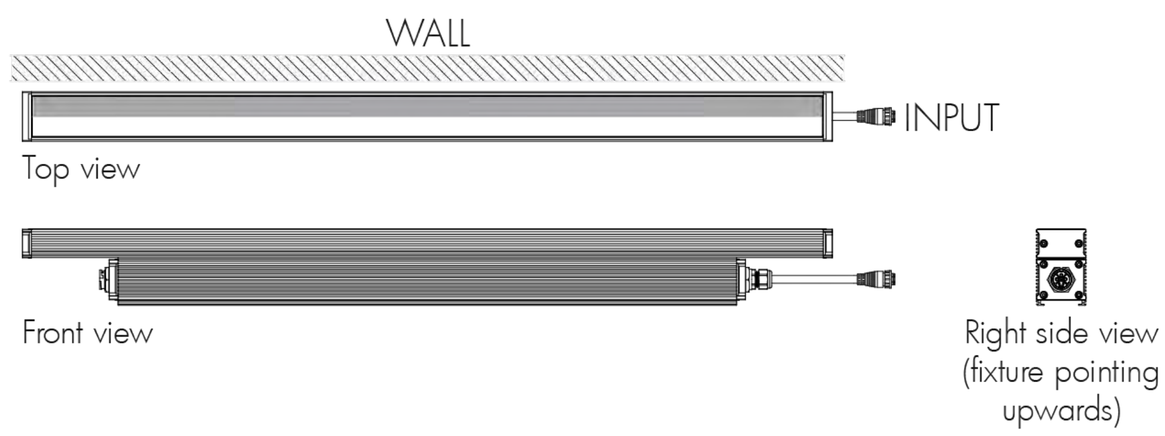
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## Asymmetric wallwash optic details

### WWLF - Asymmetric wallwash optic, left feed




### WWRF - Asymmetric wallwash optic, right feed

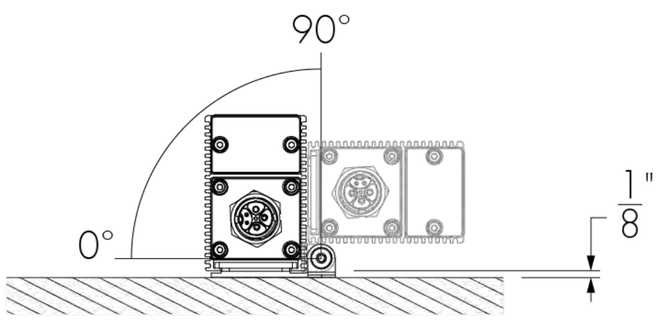



- Always position frosted side toward the wall.
- Fixture's feeding side is based on uplight installations. Feeding sides are reversed when fixture is used in a downlight application.
- Recommended setback from wall is 1/10 of the wall height. Example: 2 ft setback for a 20 ft wall.

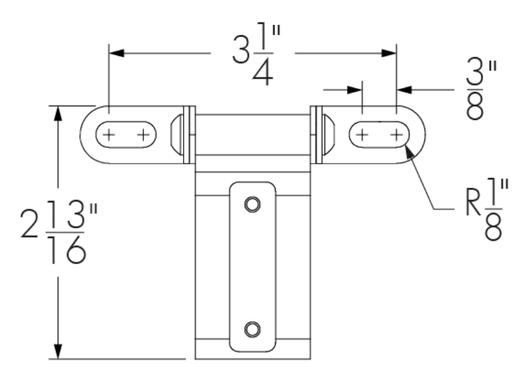
## Mounting options

### Surface Mount

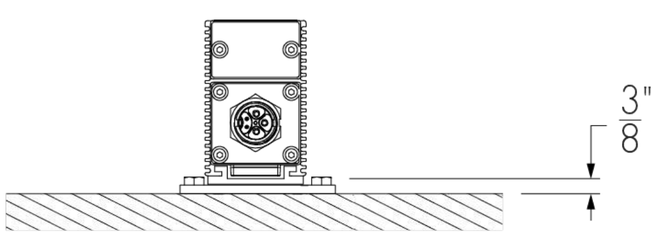
### SAM - Slim Adjustable Mounting



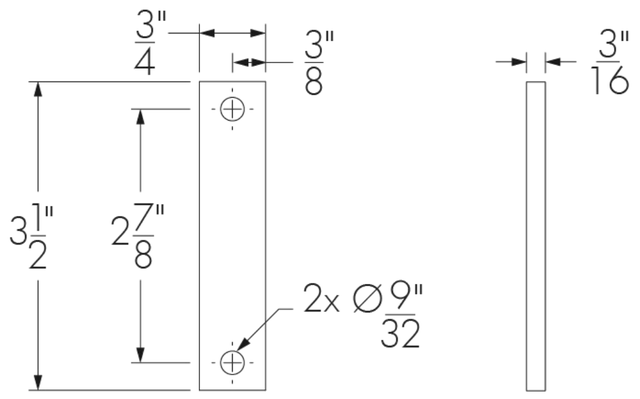

### SAM - Mounting hole pattern




### UMP - Fixed Mounting




### UMP - Mounting hole pattern

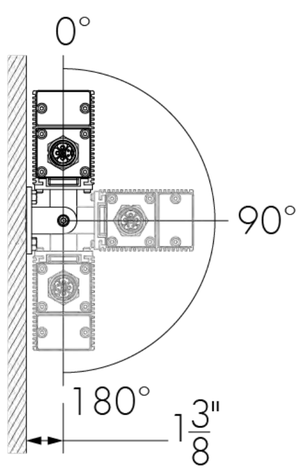




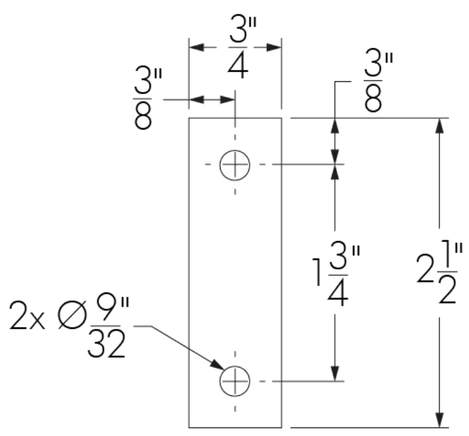

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## Wall Mount

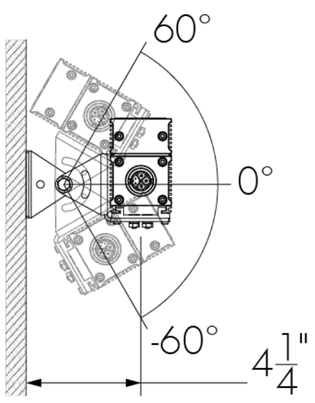
### UMAS - Universal Adjustable Mounting



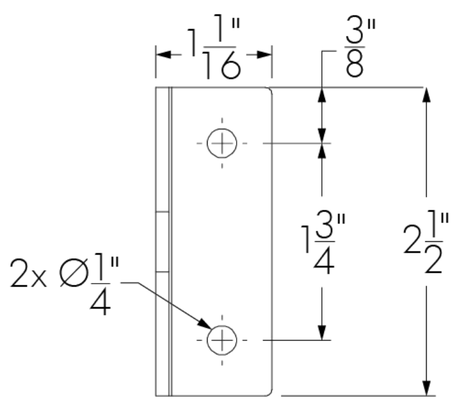

### UMAS - Mounting hole pattern



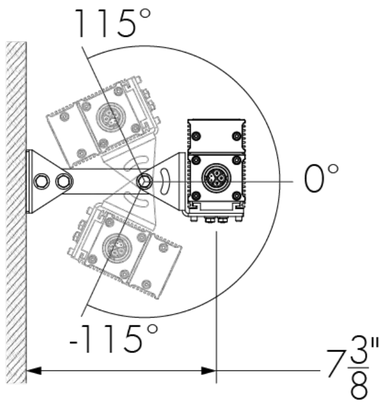

### WAM2 - Adjustable Wall Mounting 2 in



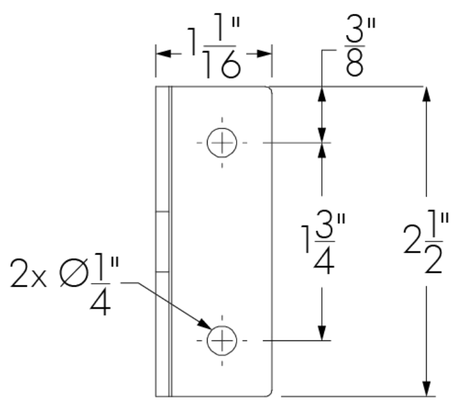

### WAM2 - Mounting hole pattern



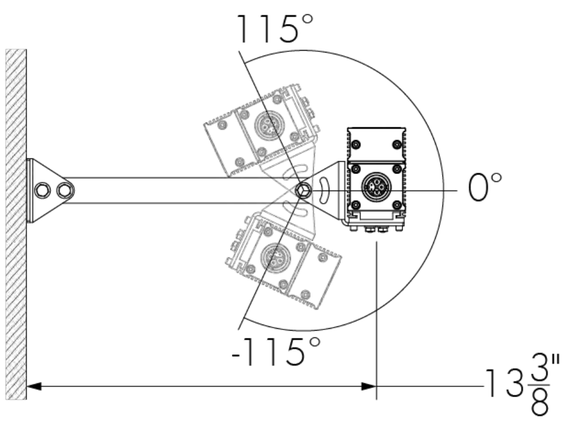

### WAM6 - Adjustable Extended Arm Mounting 6 in



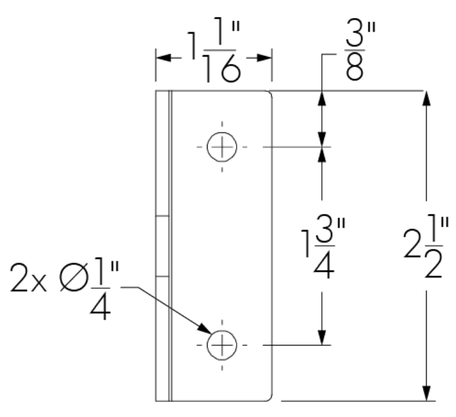

### WAM6 - Mounting hole pattern



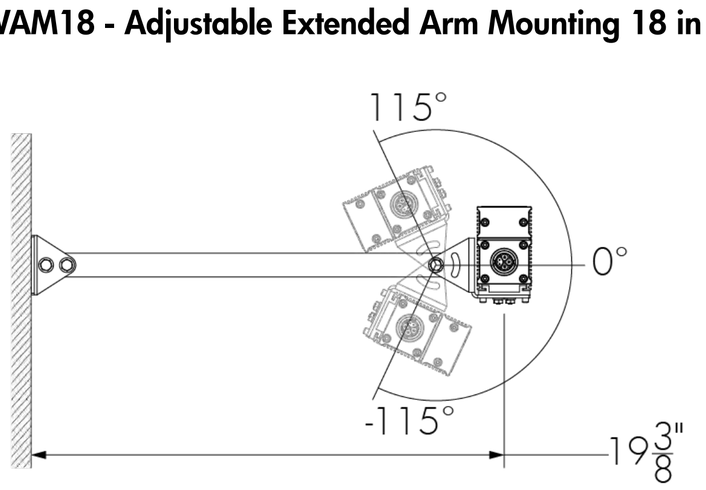

### WAM12 - Adjustable Extended Arm Mounting 12 in



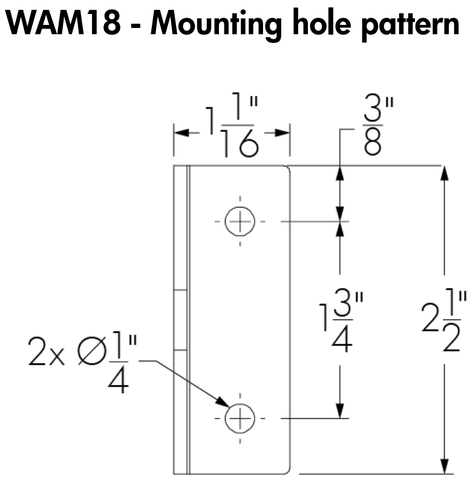

### WAM12 - Mounting hole pattern




### WAM18 - Adjustable Extended Arm Mounting 18 in



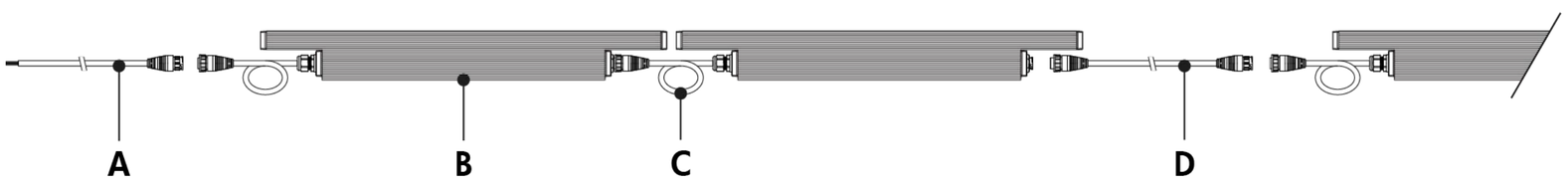

### WAM18 - Mounting hole pattern






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## End-to-end configuration option (ETE)

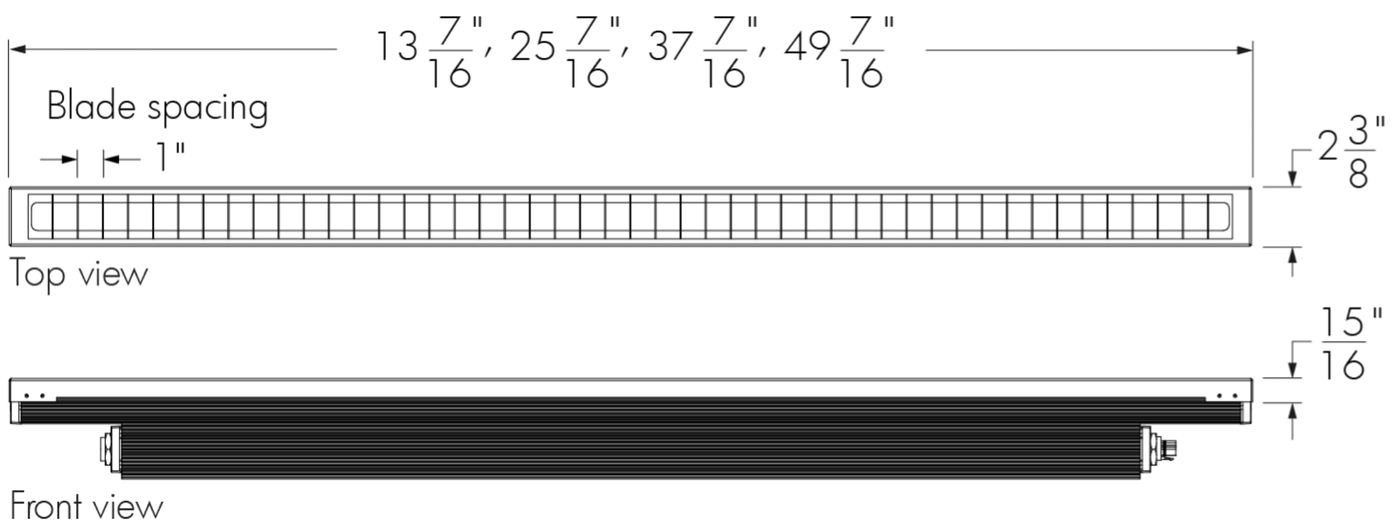


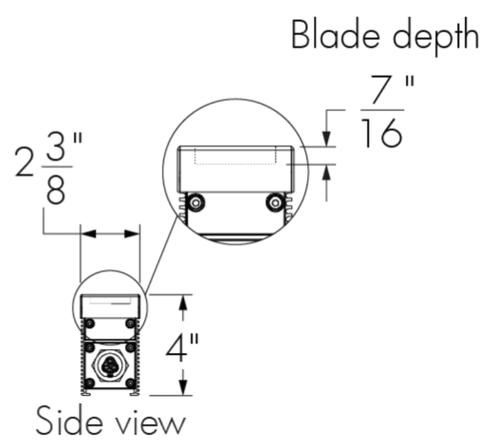

**A -** ETE leader cable (order separately)
**B -** Lumenfacade with ETE option
**C -** ETE 16 in black input cable
**D -** ETE jumper cable (order separately)

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**

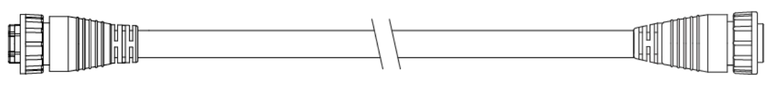


End-to-end (ETE) option
LOGLC-**CERTIFICATION**-ETE-**LENGTH-CABLE COLOR**

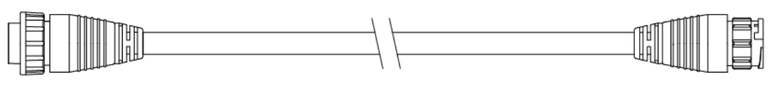
Please specify:
**CERTIFICATION**: UL or CE; **LENGTH**: 10 ft, 25 ft, 50 ft, 100 ft, 150 ft or 200 ft; **CABLE COLOR**: black or white (connectors are black as standard; ETE fixture input cables are black as standard)

- 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)

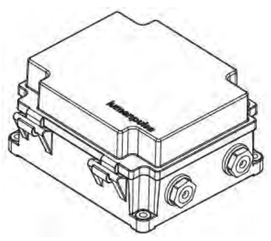
- Suitable for dimming/data and non-dimming applications.
- Consult Lumenfacade jumper cable specification sheet for details.

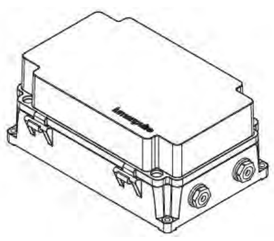


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## Control boxes (order separately)

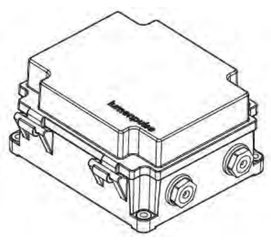
### CBX-DMX/RDM - DMX/RDM enabled (daisy chain or star configuration)

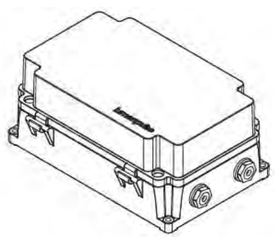




DMX/RDM control box. Up to six power and data outputs to fixtures or fixture runs. Consult CBX specification sheet and installation instructions for details. Lumenterminators provided with CBX (2x for daisy chain configuration, 6x for star configuration), consult factory to order spares.

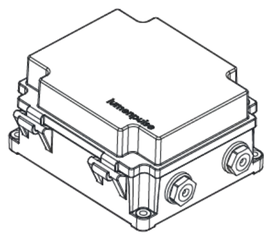
### CBX-ENET - Ethernet enabled (daisy chain or star configuration)





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.

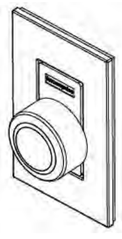
### LDB - Lumentalk Data Bridge



Lumentalk Data Bridge, 0-10V or DMX output. Consult LDB specification sheet for details.

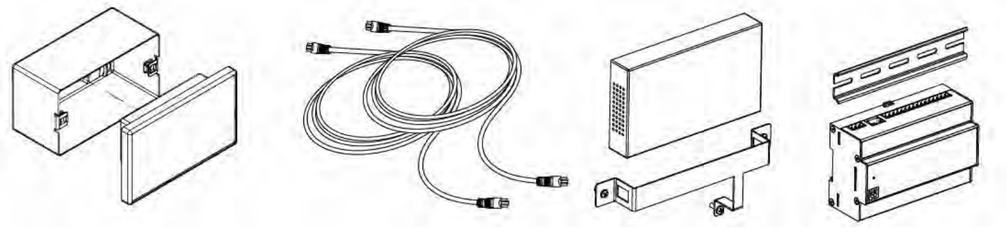
## Control systems (order separately)

### 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.

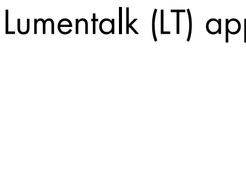
## Diagnostic and addressing tools (order separately)

### 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



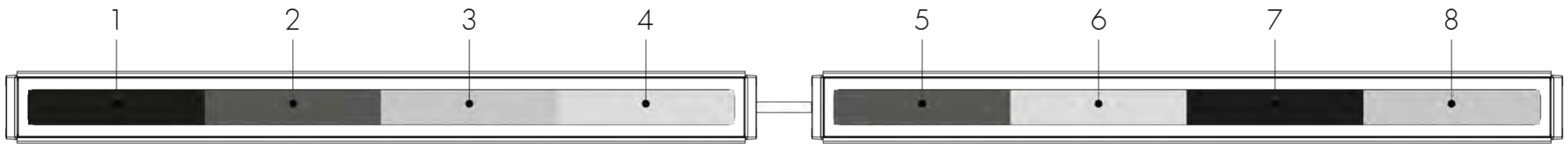
LumentalkID is a diagnostic and addressing tool. It must be specified for all Lumentalk (LT) applications. Consult LID-LT specification sheet for details.



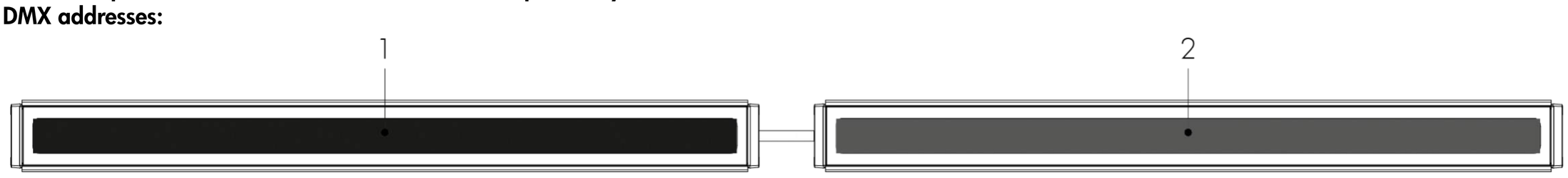
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## Resolution details

**Resolution per foot: each 12 in section is addressed independently**
**DMX addresses:**




**Resolution per fixture: each fixture is addressed independently**
**DMX addresses:**



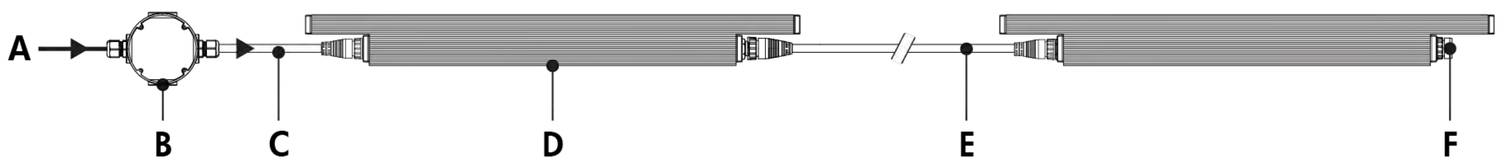

- 48 in fixtures shown.
- Applicable for DMX/RDM control option only. Fixture resolution can be configured on-site within the LumenID V3 software. A DMX/RDM enabled CBX is required.

## Typical wiring diagrams

**Wiring color code**

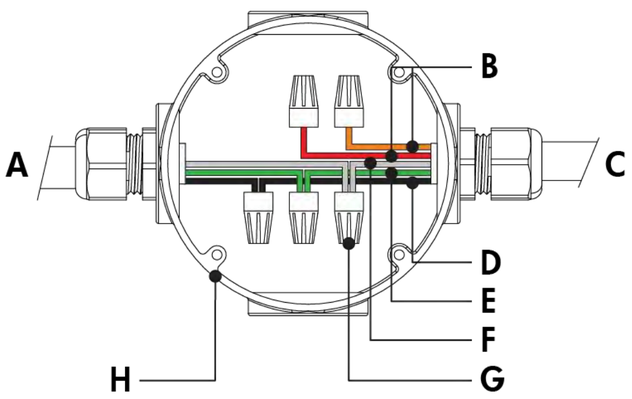
| UL Color Code | USE |
|---|---|
| Green | Ground |
| Black | Line |
| White | Line/Neutral |
| Red or Purple | 0-10V / Data + |
| Orange | 0-10V / Data - |

**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**



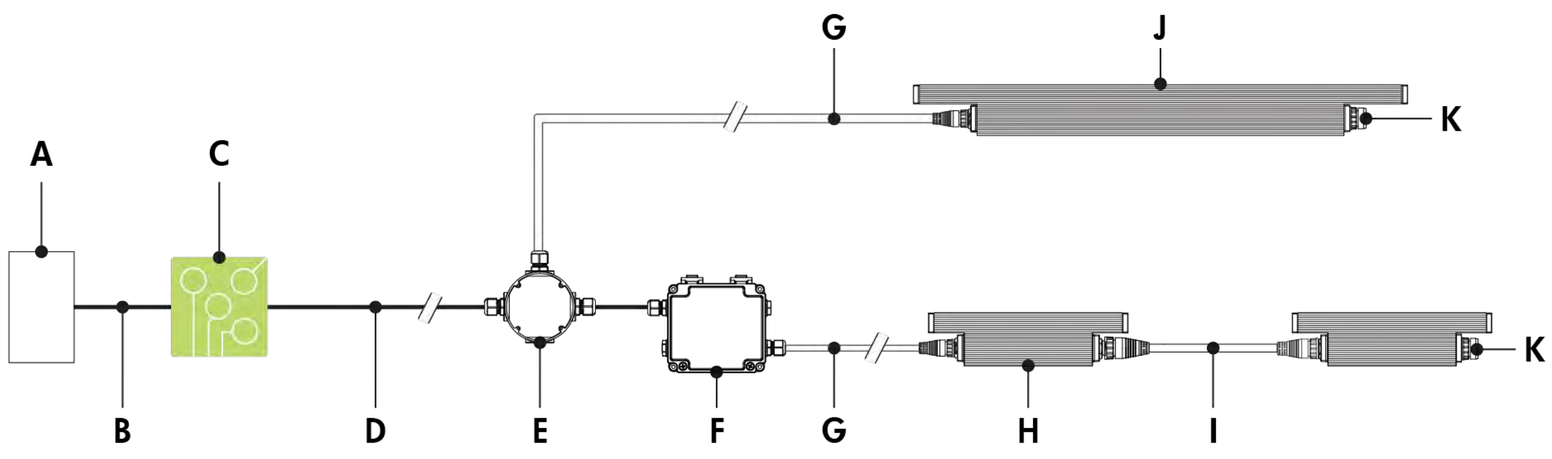

**A -** Power input
**B -** Not required
**C -** To fixture
**D -** Line
**E -** Ground
**F -** Line/Neutral
**G -** Wire-nuts (by others)
**H -** Junction box (by others)

- 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.



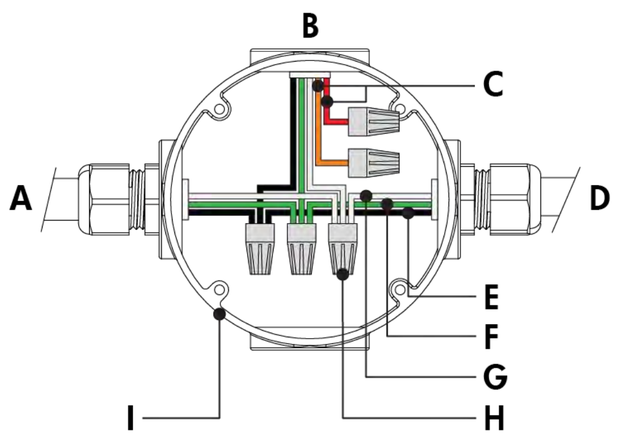
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## Lumentalk (LT)




**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.

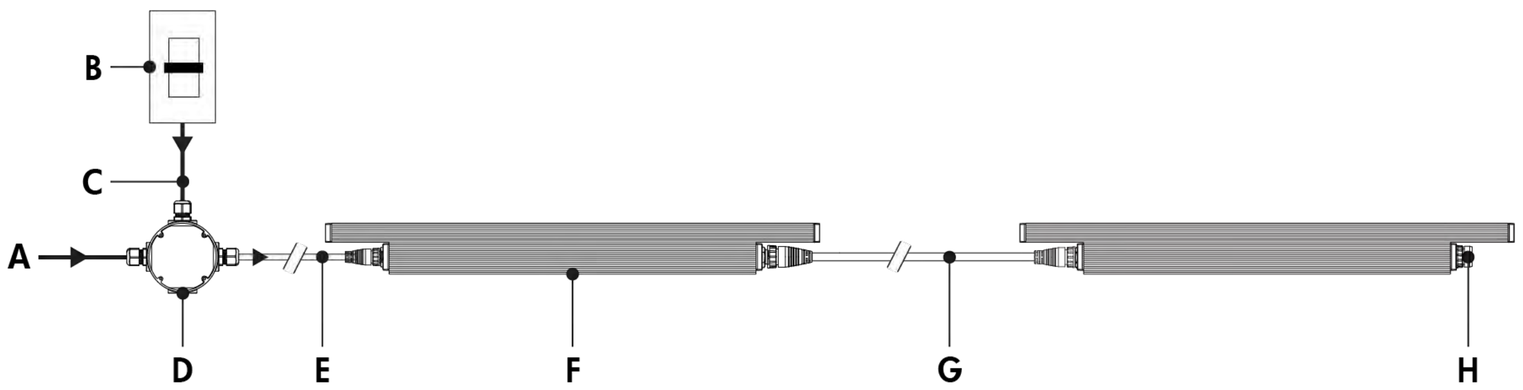
- For applications with all fixtures controlled as 1 zone: fixtures and Lumentalk Data Bridge must be specified as DIM. Maximum of 10 fixtures per LDB-DIM, consult factory for applications that require additional capabilities.
- For applications with fixtures controlled individually: fixtures and Lumentalk 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.



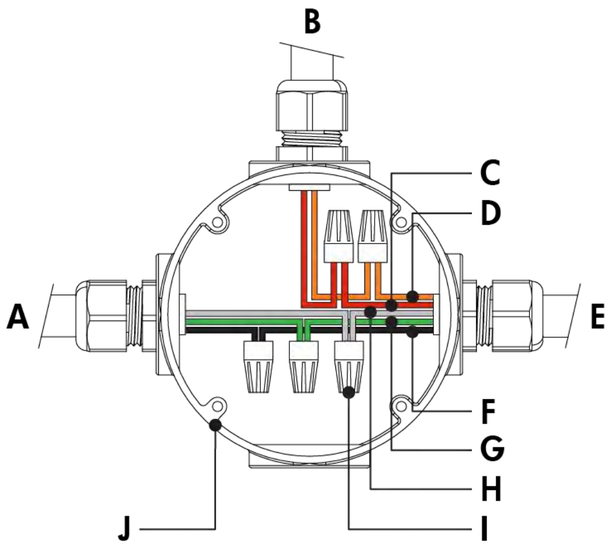
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## 0-10V dimming (DIM)




**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)

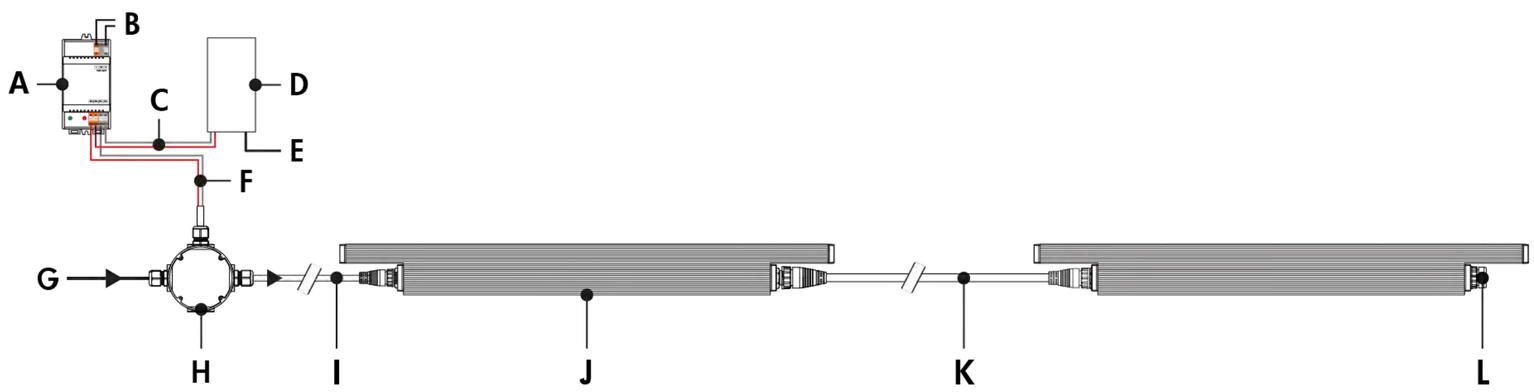
- Consult factory for specific applications and maximum fixture count/cable length recommendations.
- 0-10V mA ratings: passive dimmer (Current Sink): 3 mA per fixture, active dimmer (Current Source): 0.5 mA per fixture.
- 10% minimum dimming value.
- ASHRAE version (not available for 12 in fixture lengths): 5 W/ft; Regular Output version: 8.5 W/ft; High Output version: 15.25 W/ft.

lumenpulse™

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info@lumenpulse.com **www.lumenpulse.com** **www.lumenpulse.com/products/1046/lumenfacade**

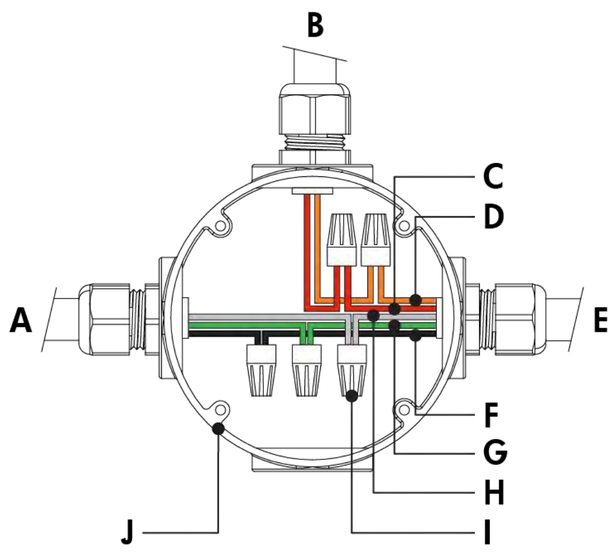
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## DALI dimming (DALI)




**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



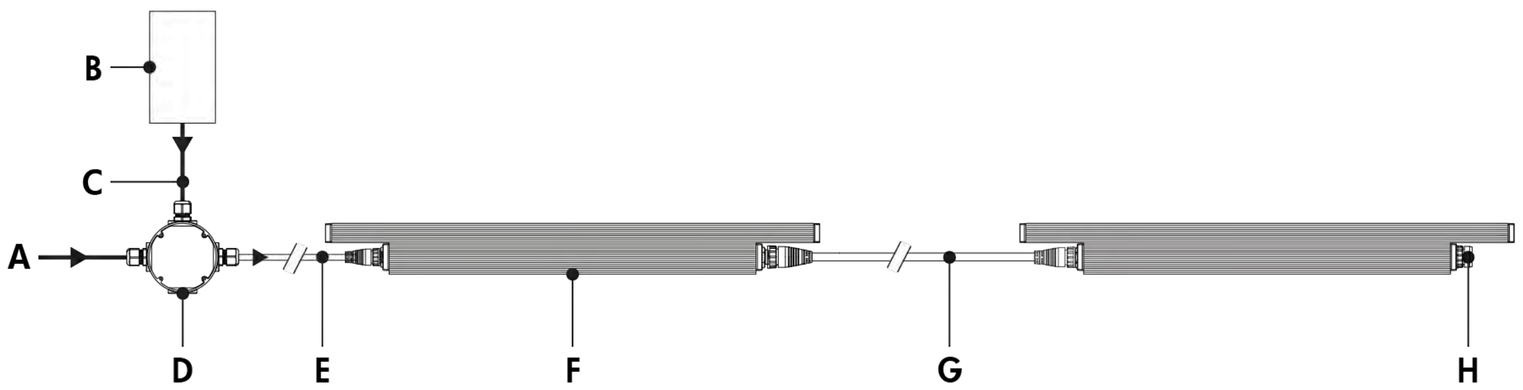

**A -** Power input
**B -** From DALI controller (by others)
**C -** Data +
**D -** Data -
**E -** To fixture
**F -** Line
**G -** Ground
**H -** Neutral
**I -** Wire-nuts (by others)
**J -** Junction box (by others)

- 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.



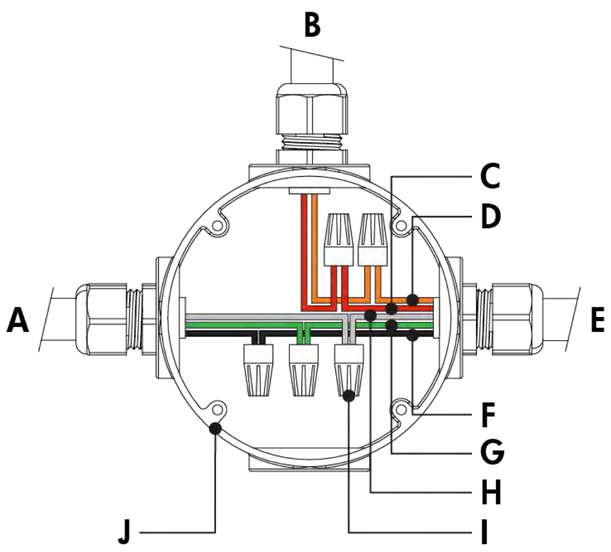
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### Lutron® EcoSystem® Enabled dimming (ES)




**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



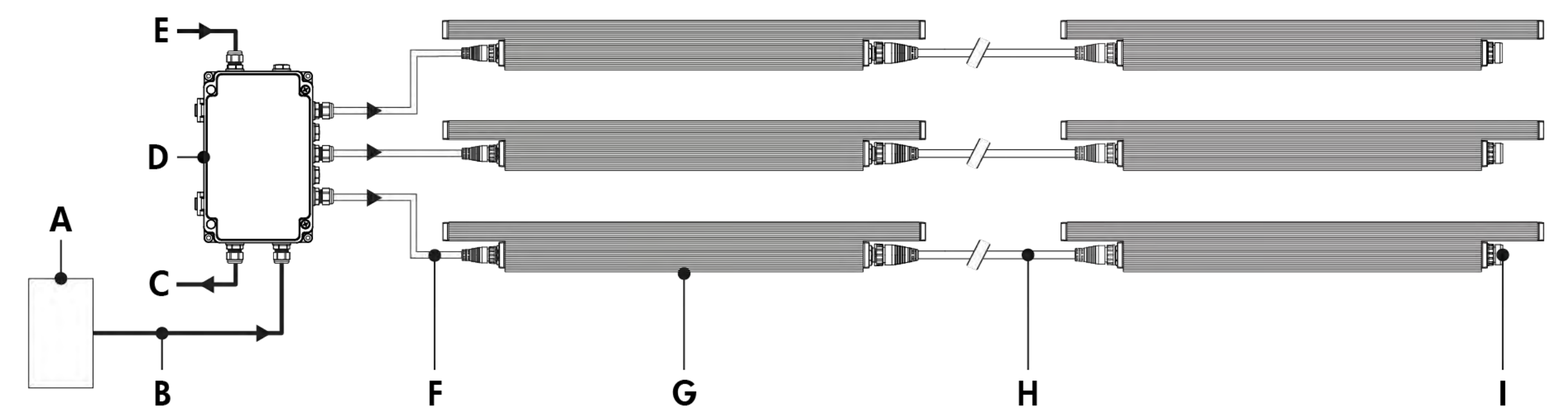

**A -** Power input
**B -** From Lutron® EcoSystem® controller (by others)
**C -** Data +
**D -** Data -
**E -** To fixture
**F -** Line
**G -** Ground
**H -** Neutral
**I -** Wire-nuts (by others)
**J -** Junction box (by others)

- 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.



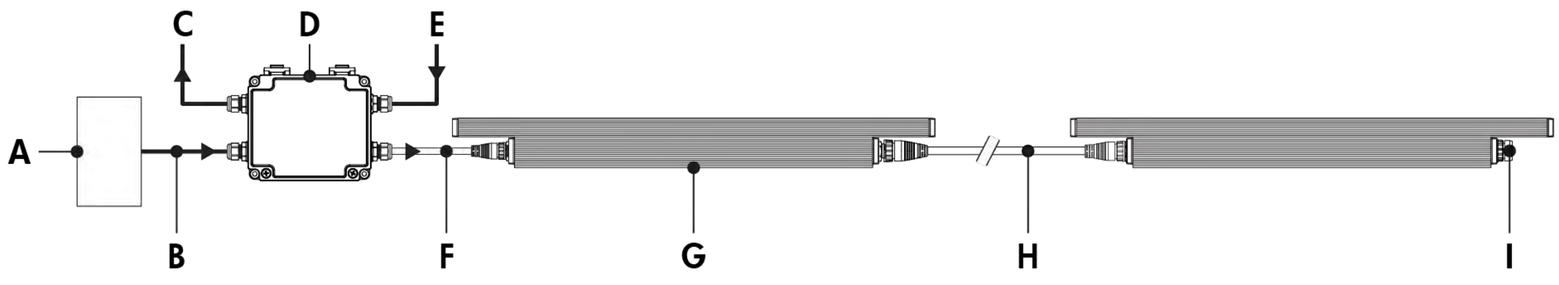
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### Star Layout (DMX/RDM)




**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.

lumenpulse™

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).

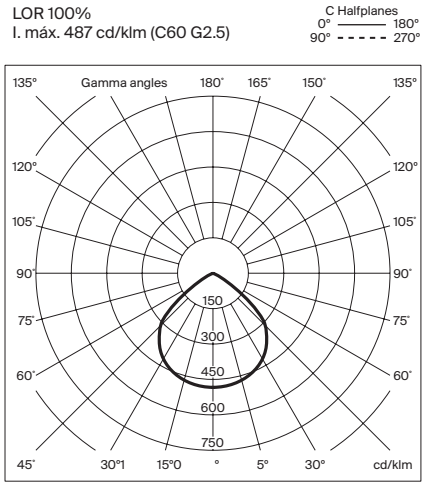
**Approximate weight (unpacked):**
3,3 Kg / 7.2 lb

**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

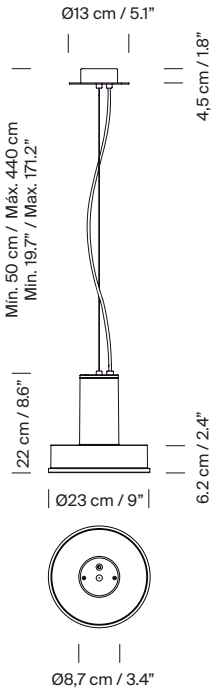
**Regulations:**
CE
UNE-EN 60598
UNE-EN 55015
UNE-EN 60529
UNE-EN 62031
UNE-EN 61000-3-2
UNE-EN 61347-2-13

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

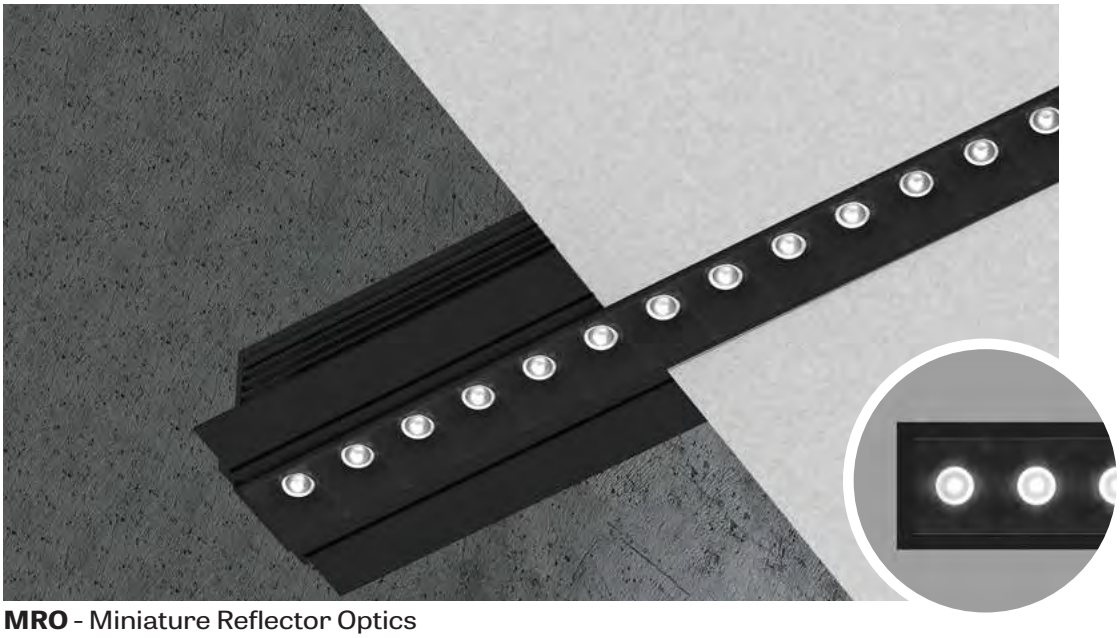
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ARCHITECTURAL LIGHTING DESIGN

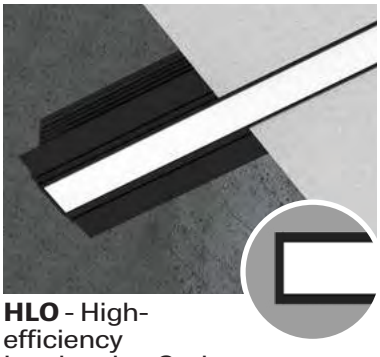
## DESCRIPTION

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.

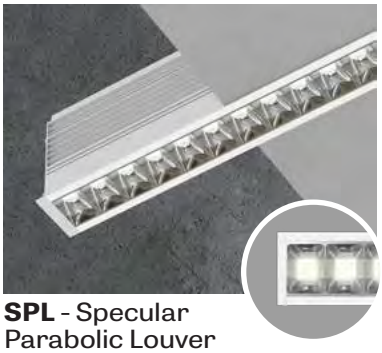
**See separate spec sheets for Combinations and Patterns.**



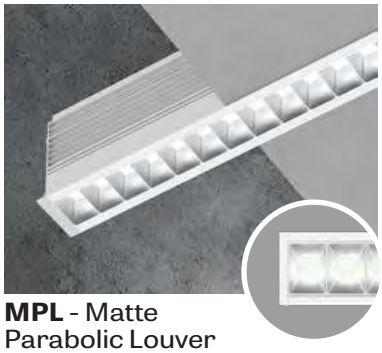
**MRO** - Miniature Reflector Optics



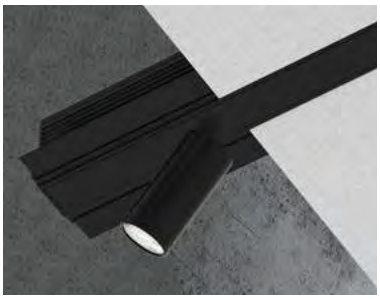
**HLO** - High-efficiency Lambertian Optic



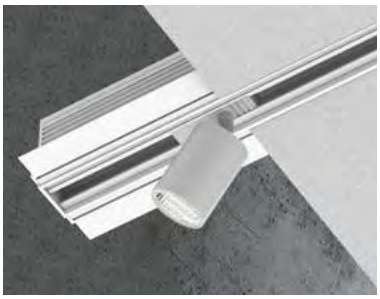
**SPL** - Specular Parabolic Louver



**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<br>**MRO35** - 35 degree Miniature Reflector Optics<br>**MRO55** - 55 degree Miniature Reflector Optics<br>**SPL** - Specular Parabolic Louver<br>**MPL** - Matte Parabolic Louver<br>**HLO** - High-efficiency Lambertian Optic<br>**+BLA** - Blank | **W** - White<br>**B** - Black<br>**NA** - Not applicable | **LED** - High performance LED | **80** - 80CRI<br>**90** - 90CRI | **350** - min. eco low output 350lm/ft<br>**500** - low output 500lm/ft<br>**750** - medium output 750lm/ft<br>**1000** - max. high output 1000lm/ft<br>**####** - other required lm/ft |

| COLOR TEMP. | VOLTAGE | LUMINAIRE LENGTH | DRIVER | ELECTRICAL | MOUNTING |
|---|---|---|---|---|---|
| **30** - 3000k<br>**35** - 3500k<br>**40** - 4000k | **120** - 120V<br>**277** - 277V<br>**UNV** - 120V-277V | Standard sections - 2', 3', 4', 5' 6', 7', 8' & 12'<br>For all other specify length<br>**#FT** - nominal length in feet<br>Continuous Run - for luminaires over 12'<br>Minimum Individual section 2' | **D1** - 1% dimming 0-10V<br>**DA** - Dali<br>**LTEA2W** - Lutron 1% - 2 wires 120V<br>**L3DA3W** - Lutron 1% - 3 wires<br>**L3DAE** - Lutron 1% EcoSystem<br>**LDE1** - Lutron 1% Eco Dim to Off<br>**LDE5** - Lutron 5% EcoSystem | **1** - 1 circuit<br>**+#EB** - Emergency battery (min 4' fixture, except Lutron)<br>**+#EM** - Emergency light circuit<br>**+#NL** - Night light circuit<br>**+GTD###** - Generator transfer device, 120V or 277V | **DMF** - Drywall mud flange<br>**DTR** - Drywall trim<br>**TG9** - Tegular 9/16"<br>**TG15** - Tegular 15/16"<br>**TB9** - T-bar 9/16"<br>**TB15** - T-bar 15/16"<br>**ST** - Screw slot T-bar |

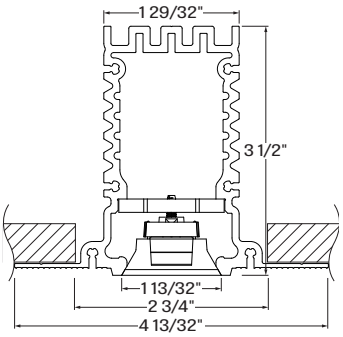
| FINISH |
|---|
| **W** - Matte white<br>**B** - Matte black<br>**CF#** - Custom finish specify RAL# |

| ADJUSTABLE ACCENT MODULE | AAM CRI | AAM LUMEN PACK. | AAM COLOR TEMP. | AAM FINISH |
|---|---|---|---|---|
| **#AAM21** - AAM 21°<br>**#AAM30** - AAM 30°<br>**#AAM36** - AAM 36°<br>**+ HCL** - Honey comb louver<br>Minimum individual section 4'<br>5% dimminig 0-10V | **80** - 80CRI<br>**90** - 90CRI | **350** - 350lm<br>**600** - 600lm | **30** - 3000k<br>**35** - 3500k<br>**40** - 4000k | **W** - Matte white<br>**B** - Matte black |

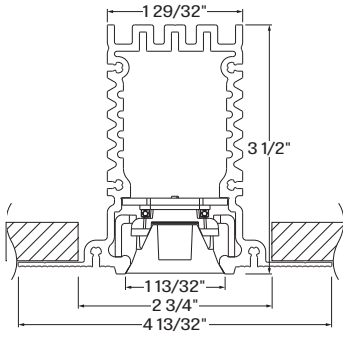
| OPTIONS |
|---|
| **FU** - Fuse<br>**ITR** - Integrated Track<br>**FWC** - Flexible whip cable (6' std)<br>**CU** - custom |

See page 3 for ordering code detailed information

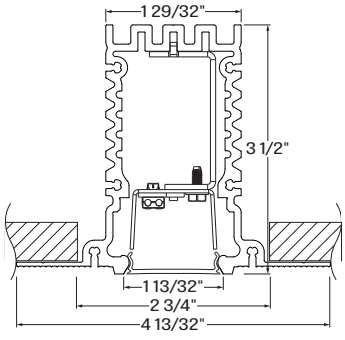
## CROSS SECTION




**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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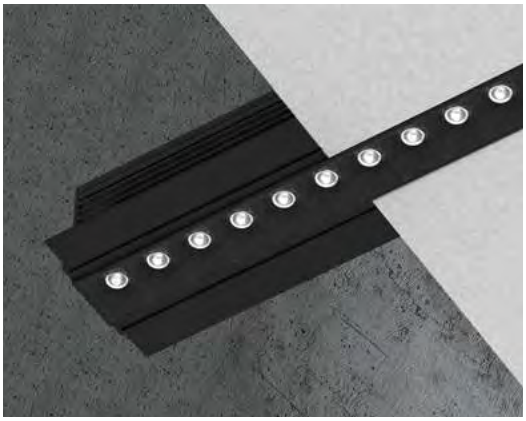
## OPTICS

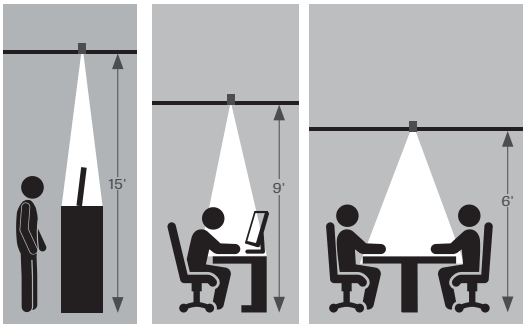
**MINIATURE REFLECTOR OPTICS (MRO)** locates individual, precisely molded TIR elements over each LED emitter, and further shield the source with precise parabolic reflectors. The controlled beam is remarkably comfortable – especially in a small LED luminaire.

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.

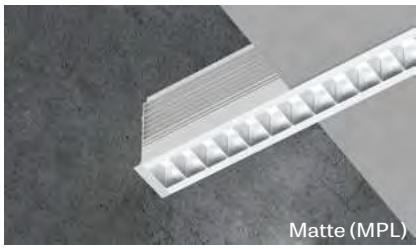


Luminaire brightness is controlled by the flux-to-shielding area ratio. For visual comfort, avoid high lumen output unless Squero is installed in a high ceiling application. Spacing criteria: 1.2 (longitudinal) x 1.1 (lateral).

**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.

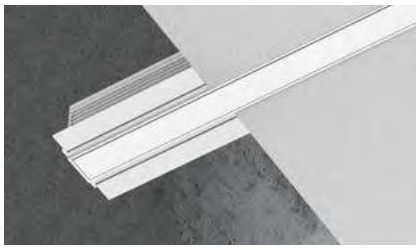



The parabolic contour of the blades and side reflectors direct light into a comfortable downlight distribution with a spacing criterion of 1.1, while minimizing shadows from the LED array above each cell.




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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## 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**

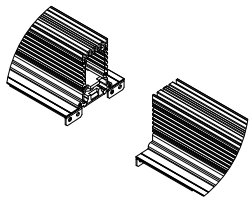
| LED output | Color Temp | Watts | Nominal Delivered Lumens | Efficacy LPW |
|---|---|---|---|---|
| eco low output | 4000K | 12 | 1400 | 116 |
| low output | 4000K | 17.5 | 2000 | 113 |
| medium output | 4000K | 27.5 | 3000 | 109 |
| high output | 4000K | 38 | 4000 | 105 |

**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.

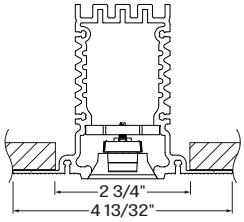


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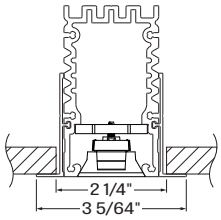
## MOUNTING OPTIONS

Recess mount into exposed or concealed T-Bar or Tegular grid ceiling

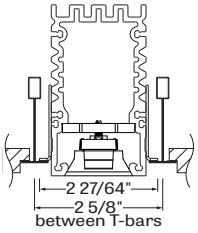
Mounting for drywall ceilings are available with visible trim, mud flange, trim or trimless



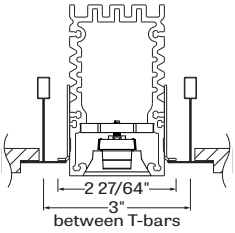

**DMF** - drywall mud flange



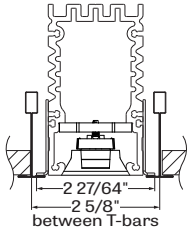

**DTR** - drywall trim



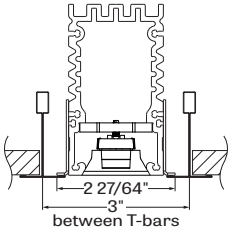

**TG9** - tegular 9/16"



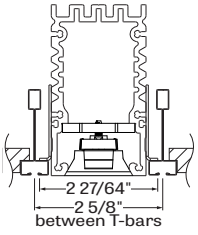

**TG15** - tegular 15/16"




**TB9** - t-bar 9/16"




**TB15** - t-bar 15/16"



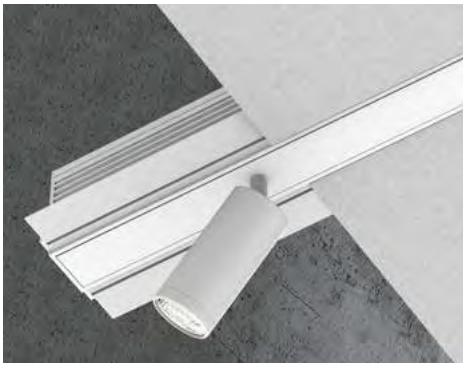

**ST** - screw slot t-bar

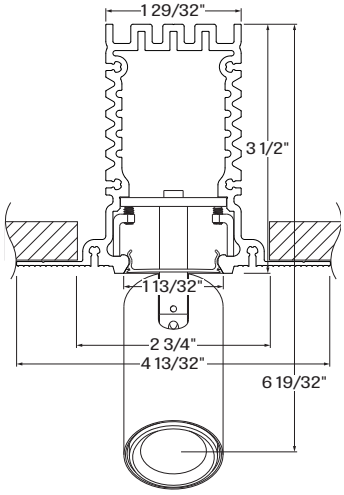
## FINISH

**Interior** - 95%, reflective matte powder coated white paint

**Exterior** - powder coating.

## AJUSTABLE LED ACCENT MODULE (AAM)

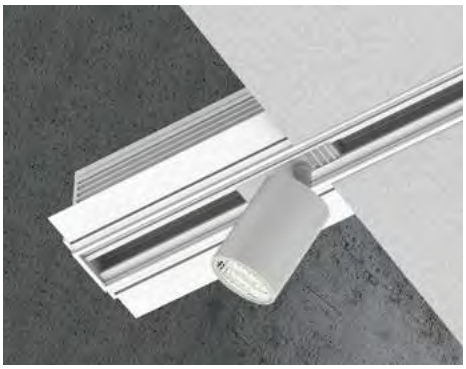


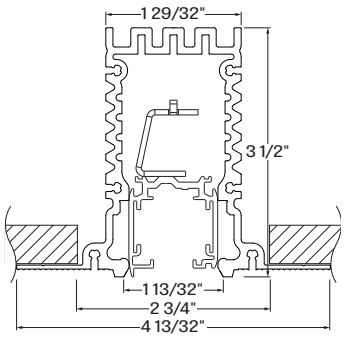



The Adjustable Accent Module (AAM) features a Ø 1.6" x 3.2" cylinder that rotates 360° and tilts 90°. The LED light source is coupled with TIR optics to provide beam angles of 21°, 30°, and 36° while producing up to 600 lumens. LED light source CCT options are 3000K, 3500K, or 4000K, available in either 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.

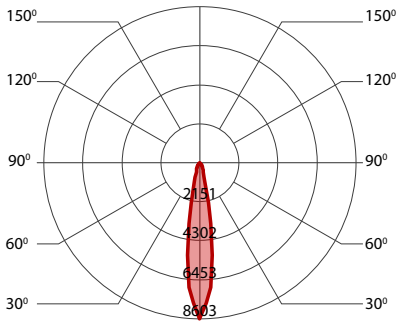
## WARRANTY

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

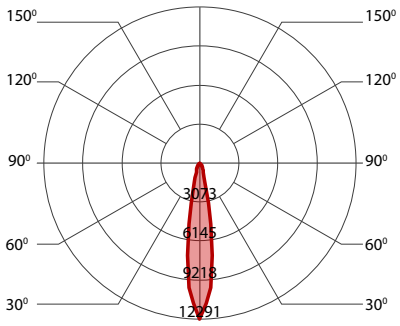
### 350 LUMEN AT 80CRI - ECO LOW OUTPUT




**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 |

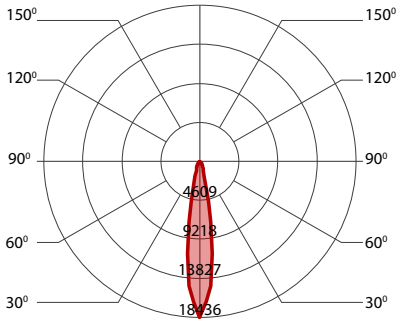
### 500 LUMEN AT 80CRI - LOW OUTPUT




**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 |

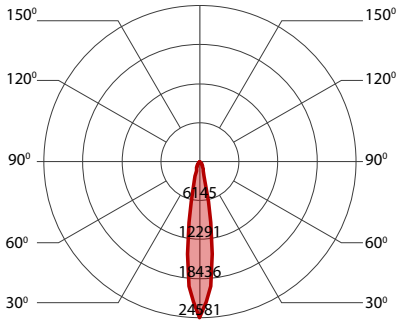
### 750 LUMEN AT 80CRI - MEDIUM OUTPUT




**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'**

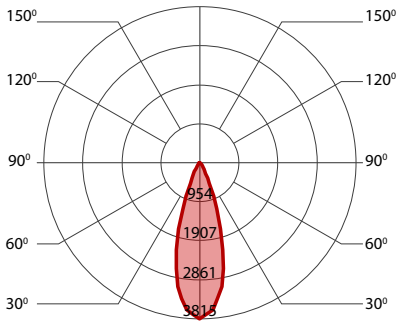
| LED output | Color Temp | Watts | Nominal Delivered Lumens | Efficacy LPW |
|---|---|---|---|---|
| high output | 3000K | 52.5 | 4000 | 76 |
| high output | 3500K | 50 | 4000 | 80 |
| high output | 4000K | 46 | 4000 | 87 |



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## PERFORMANCE WITH MINIATURE REFLECTOR OPTICS (MRO) 35 DEGREES

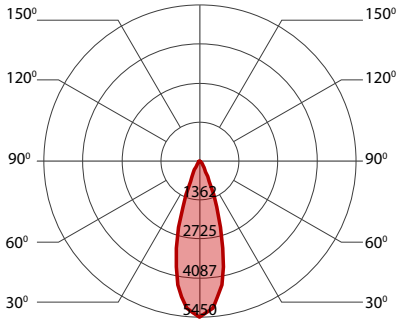
### 350 LUMEN AT 80CRI - ECO LOW OUTPUT




**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 |

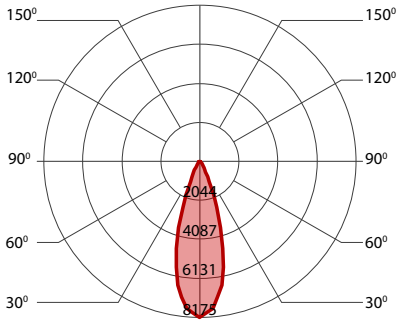
### 500 LUMEN AT 80CRI - LOW OUTPUT




**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 |

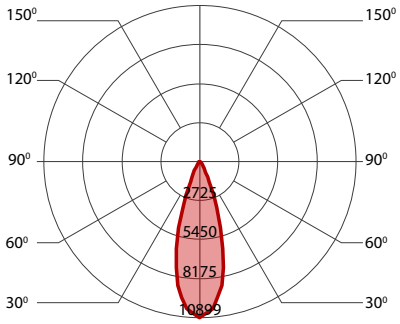
### 750 LUMEN AT 80CRI - MEDIUM OUTPUT




**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



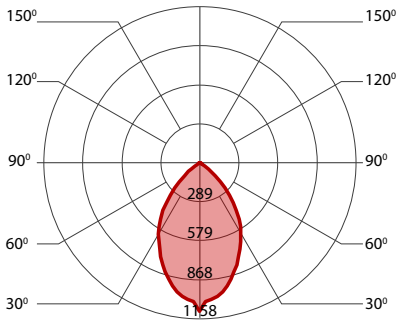

**PERFORMANCE PER 4'**

| 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

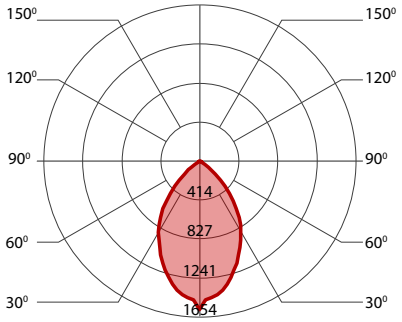
### 350 LUMEN AT 80CRI - ECO LOW OUTPUT




**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 |

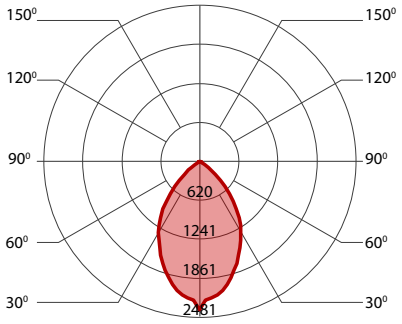
### 500 LUMEN AT 80CRI - LOW OUTPUT




**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 |

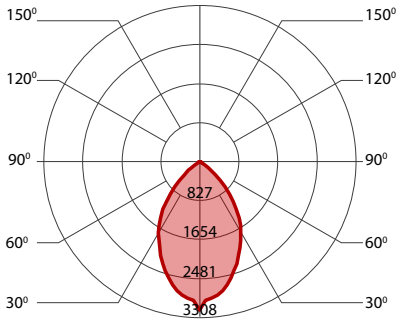
### 750 LUMEN AT 80CRI - MEDIUM OUTPUT




**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'**

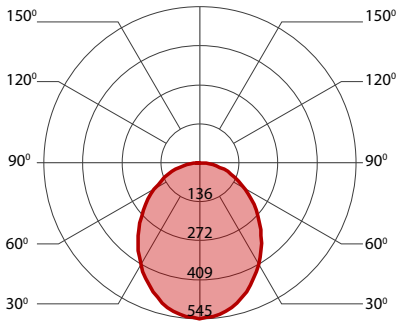
| LED output | Color Temp | Watts | Nominal Delivered Lumens | Efficacy LPW |
|---|---|---|---|---|
| high output | 3000K | 50.5 | 4000 | 79 |
| high output | 3500K | 47.5 | 4000 | 84 |
| high output | 4000K | 44 | 4000 | 91 |



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## PERFORMANCE WITH HIGH-EFFICIENCY LAMBERTIAN OPTIC (HLO)

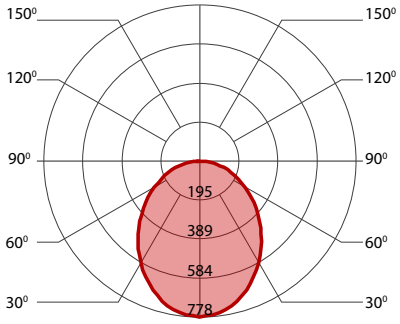
### 350 LUMEN AT 80CRI - ECO LOW OUTPUT




**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 |

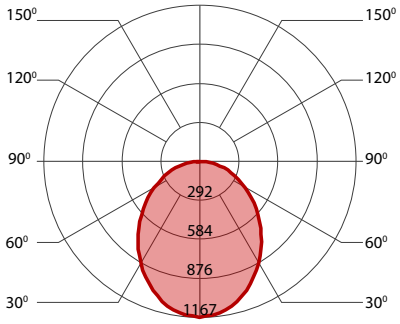
### 500 LUMEN AT 80CRI - LOW OUTPUT




**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 |

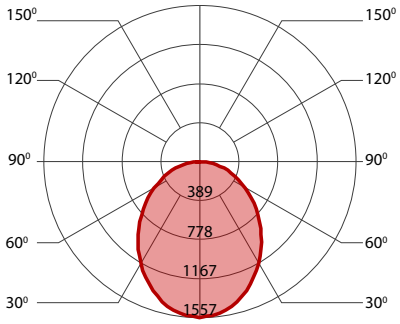
### 750 LUMEN AT 80CRI - MEDIUM OUTPUT




**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'**

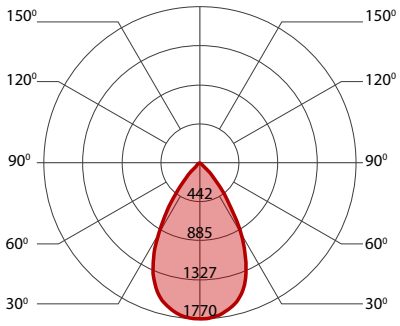
| LED output | Color Temp | Watts | Nominal Delivered Lumens | Efficacy LPW |
|---|---|---|---|---|
| high output | 3000K | 39 | 4000 | 102 |
| high output | 3500K | 38.5 | 4000 | 104 |
| high output | 4000K | 37 | 4000 | 108 |



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## PERFORMANCE WITH SPECULAR PARABOLIC LOUVER (SPL)

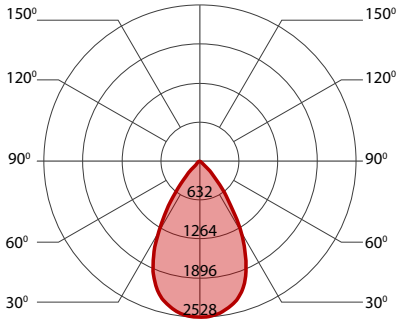
### 350 LUMEN AT 80CRI - ECO LOW OUTPUT




**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 |

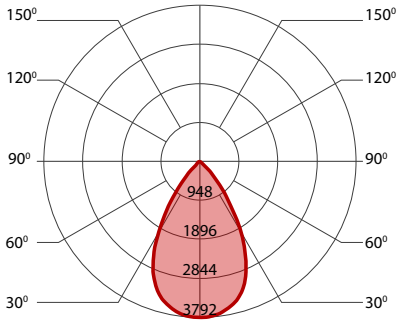
### 500 LUMEN AT 80CRI - LOW OUTPUT




**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 |

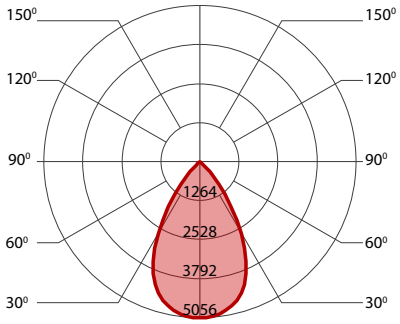
### 750 LUMEN AT 80CRI - MEDIUM OUTPUT




**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'**

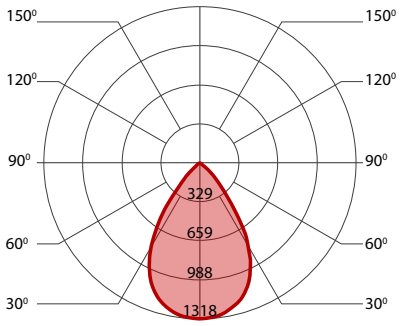
| LED output | Color Temp | Watts | Nominal Delivered Lumens | Efficacy LPW |
|---|---|---|---|---|
| high output | 3000K | 38.5 | 4000 | 104 |
| high output | 3500K | 38.5 | 4000 | 104 |
| high output | 4000K | 38 | 4000 | 105 |



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## PERFORMANCE WITH MATTE PARABOLIC LOUVER (MPL)

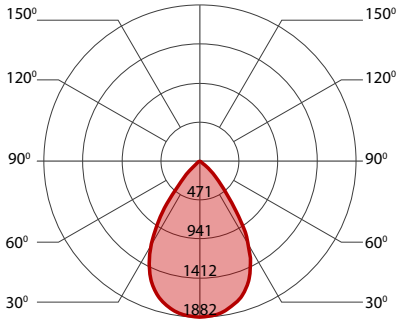
### 350 LUMEN AT 80CRI - ECO LOW OUTPUT




**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 |

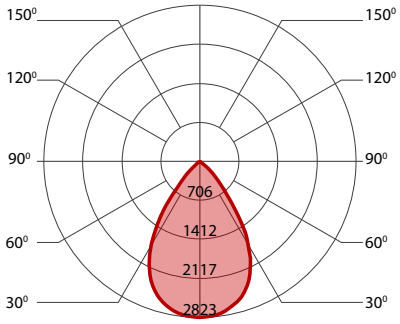
### 500 LUMEN AT 80CRI - LOW OUTPUT




**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 |

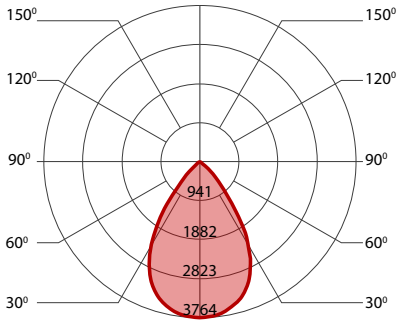
### 750 LUMEN AT 80CRI - MEDIUM OUTPUT




**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

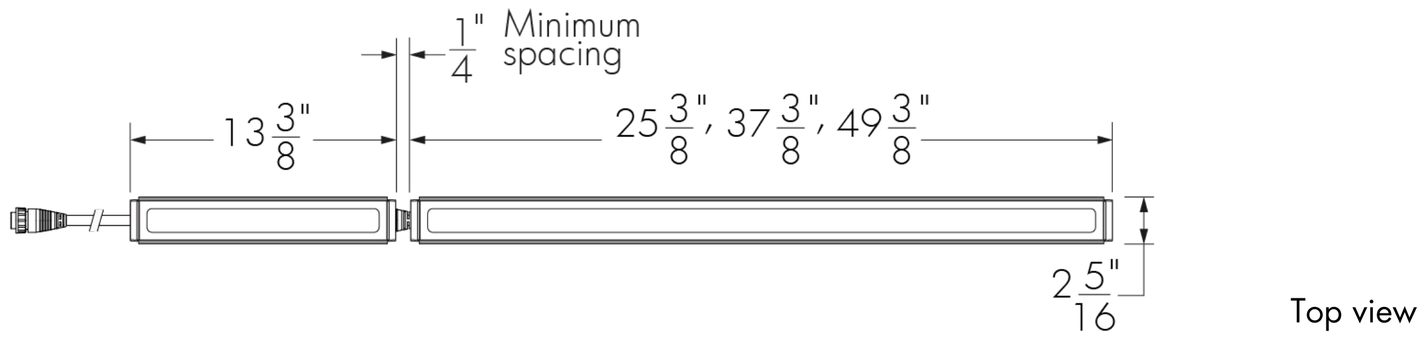
LOG

WHITE AND STATIC COLORS

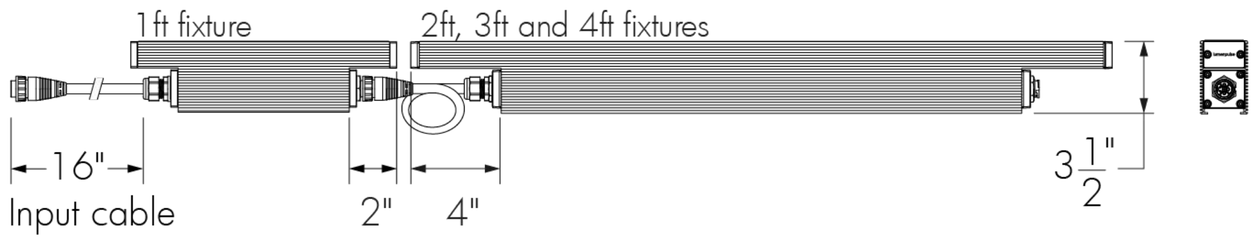
**Project Name** _____ **Qty** _____

**Type** _____ **Catalog / Part Number** _____






Top view




End-to-end (ETE) option shown

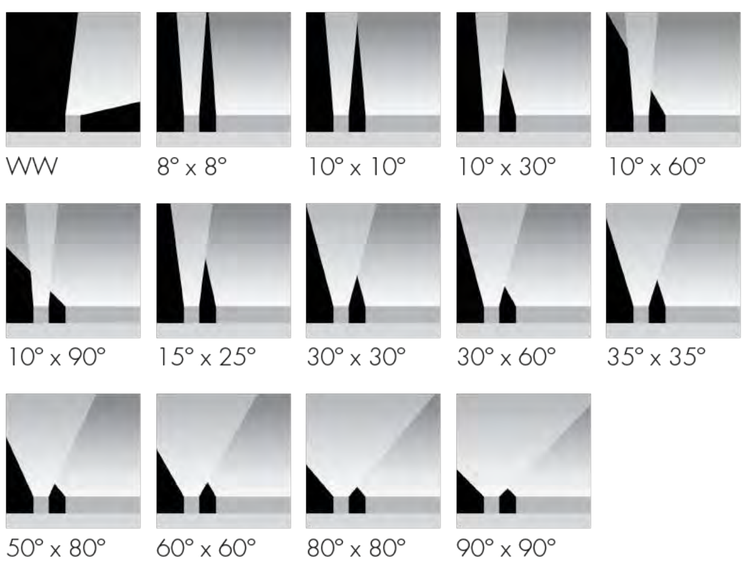
Front and side views

## 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 |


lumenpulse™

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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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## Accessories (order separately)

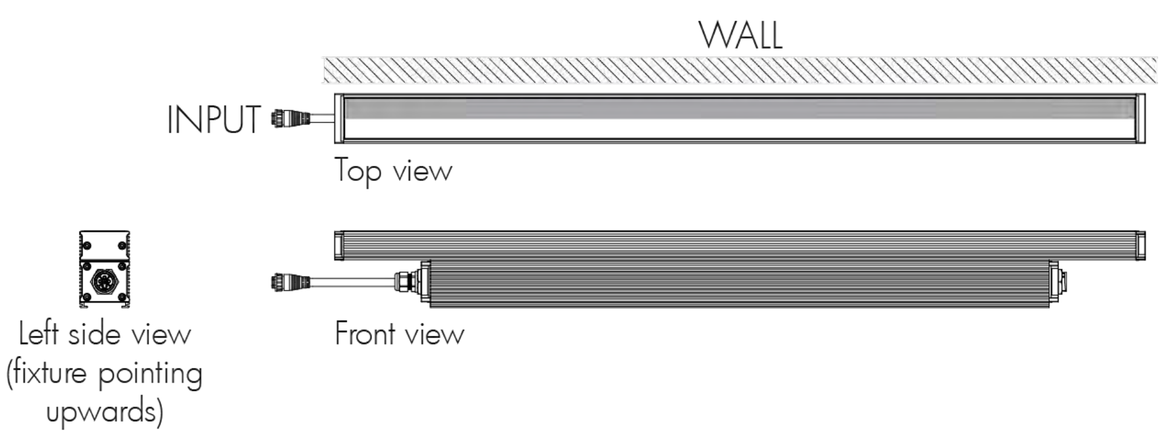
| | |
|---|---|
| **Optical Accessories** | Lumenfacade Radial Louver |
| **Cables** | Leader cable (standard), Jumper cable (standard), Leader cable (ETE), Jumper cable (ETE) |
| **Control Boxes** | DMX/RDM enabled (daisy chain or star configuration), Ethernet enabled (daisy chain or star configuration), Lumentalk Data Bridge |
| **Control Systems** | Lumentone™ 2, Pharos® kit |
| **Diagnostic and Addressing Tools** | LumenID, LumentalkID |



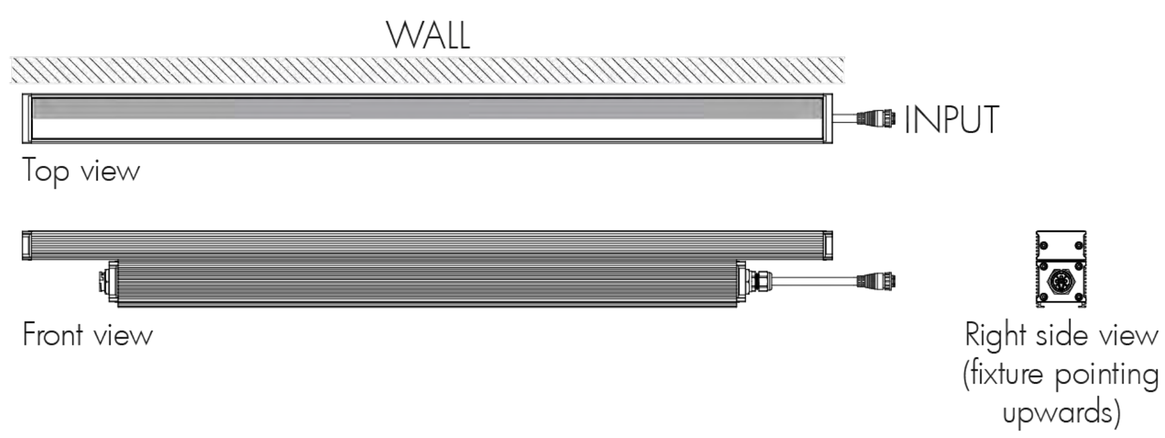
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## Asymmetric wallwash optic details

### WWLF - Asymmetric wallwash optic, left feed




### WWRF - Asymmetric wallwash optic, right feed

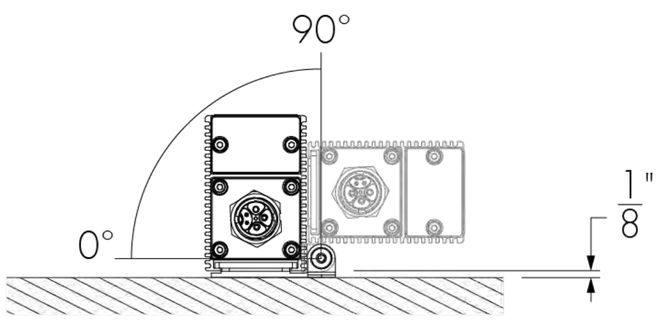



- Always position frosted side toward the wall.
- Fixture's feeding side is based on uplight installations. Feeding sides are reversed when fixture is used in a downlight application.
- Recommended setback from wall is 1/10 of the wall height. Example: 2 ft setback for a 20 ft wall.

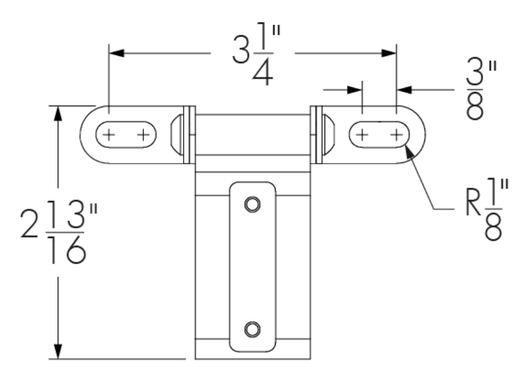
## Mounting options

### Surface Mount

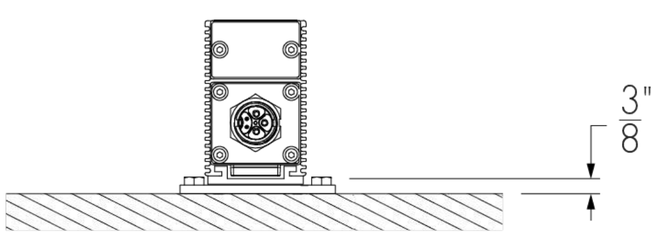
### SAM - Slim Adjustable Mounting



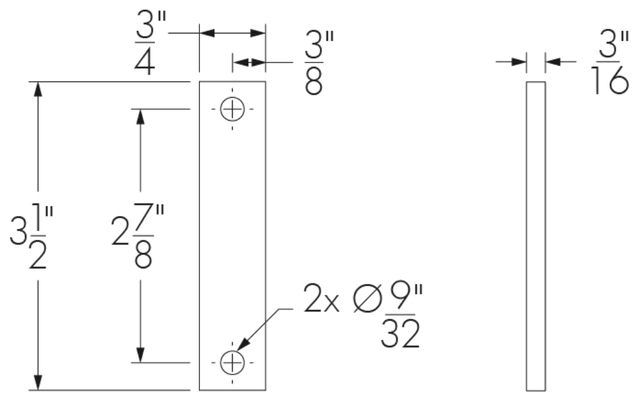

### SAM - Mounting hole pattern




### UMP - Fixed Mounting




### UMP - Mounting hole pattern

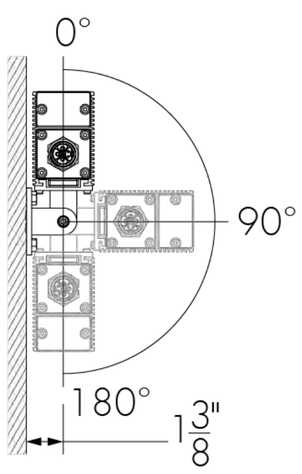




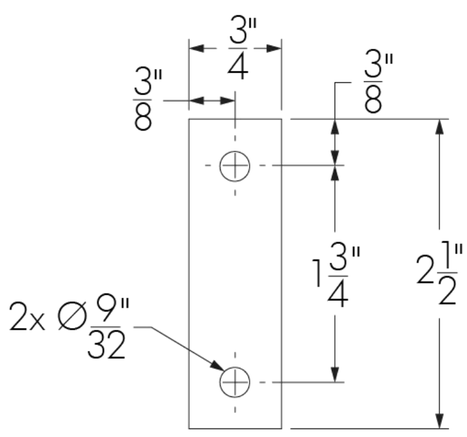

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## Wall Mount

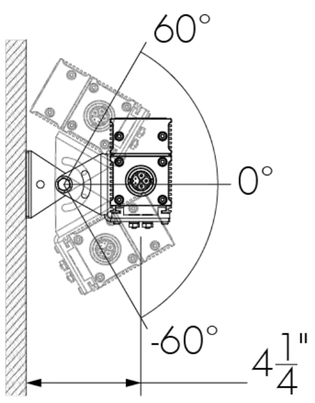
### UMAS - Universal Adjustable Mounting



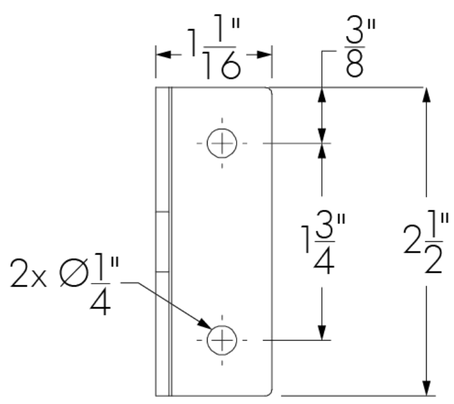

### UMAS - Mounting hole pattern



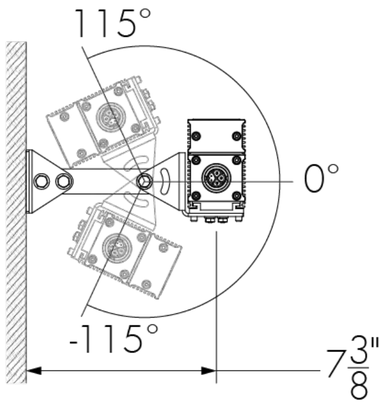

### WAM2 - Adjustable Wall Mounting 2 in



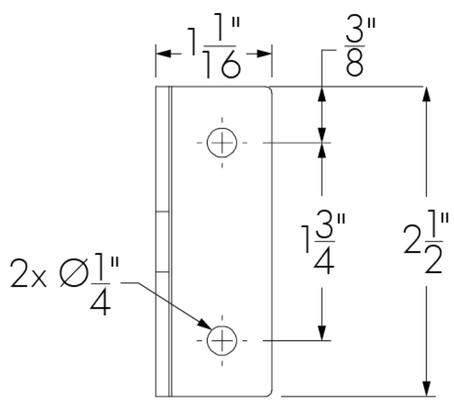

### WAM2 - Mounting hole pattern



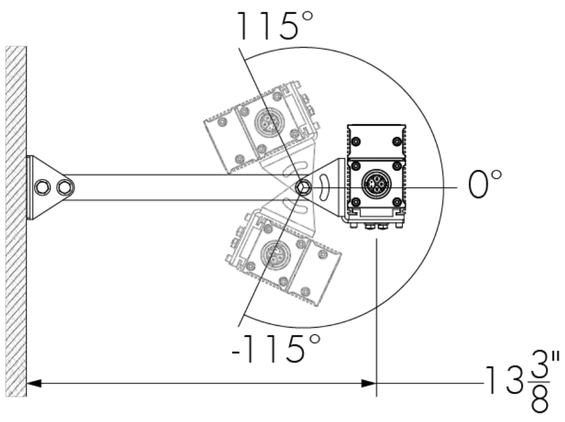

### WAM6 - Adjustable Extended Arm Mounting 6 in



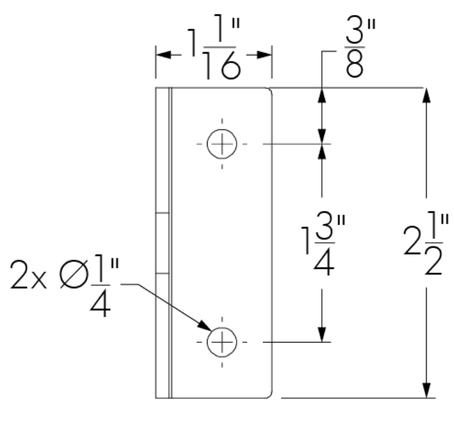

### WAM6 - Mounting hole pattern



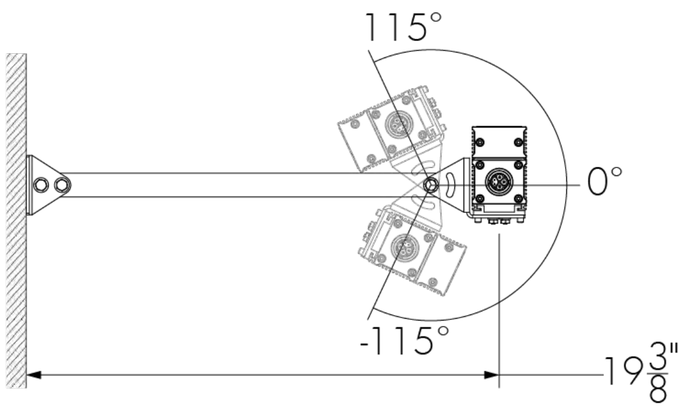

### WAM12 - Adjustable Extended Arm Mounting 12 in



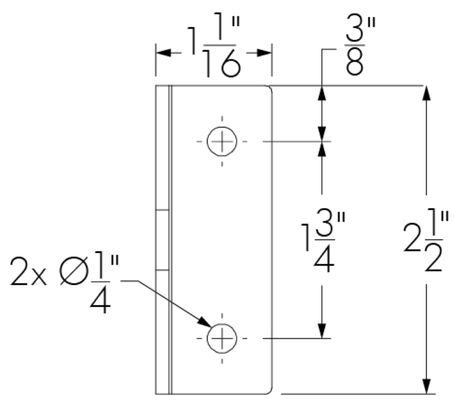

### WAM12 - Mounting hole pattern




### WAM18 - Adjustable Extended Arm Mounting 18 in



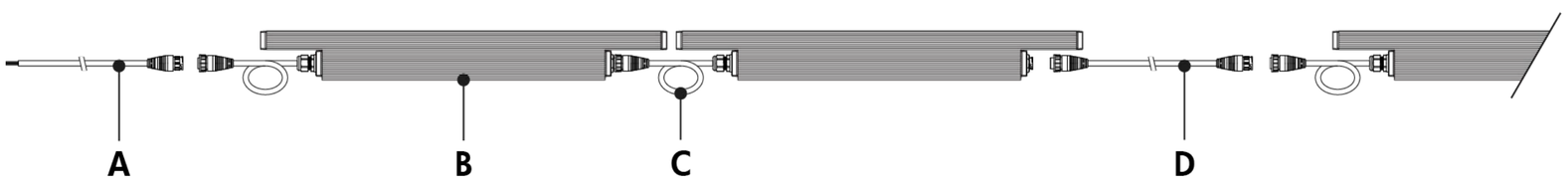

### WAM18 - Mounting hole pattern






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## End-to-end configuration option (ETE)

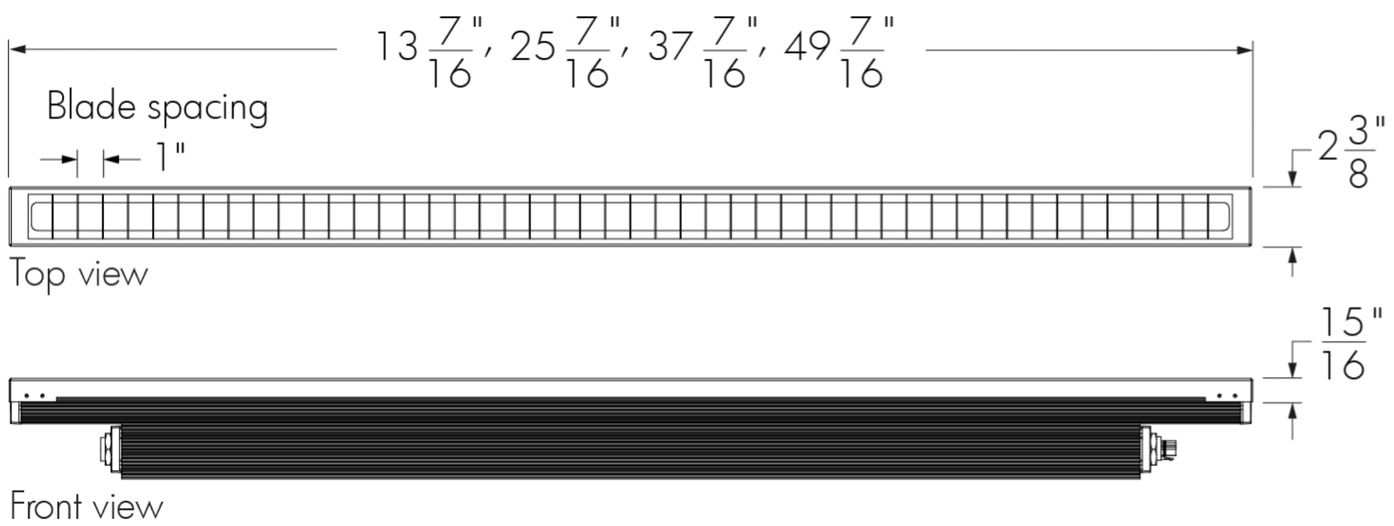


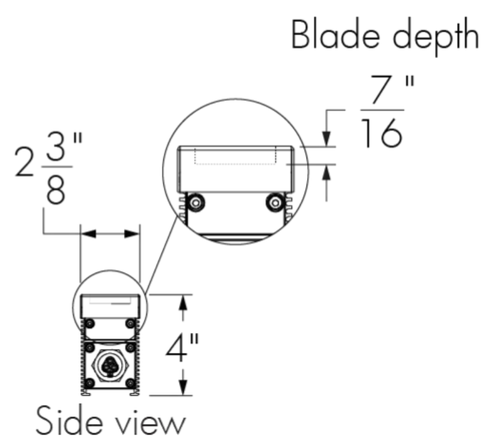

**A -** ETE leader cable (order separately)
**B -** Lumenfacade with ETE option
**C -** ETE 16 in black input cable
**D -** ETE jumper cable (order separately)

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**

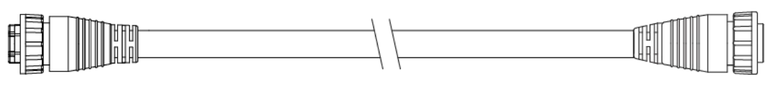


End-to-end (ETE) option
LOGLC-**CERTIFICATION**-ETE-**LENGTH-CABLE COLOR**

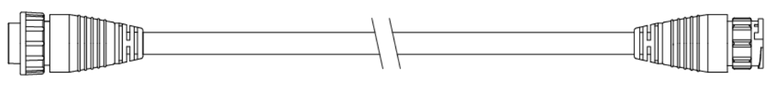
Please specify:
**CERTIFICATION**: UL or CE; **LENGTH**: 10 ft, 25 ft, 50 ft, 100 ft, 150 ft or 200 ft; **CABLE COLOR**: black or white (connectors are black as standard; ETE fixture input cables are black as standard)

- 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)

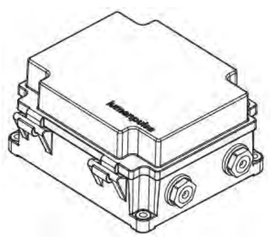
- Suitable for dimming/data and non-dimming applications.
- Consult Lumenfacade jumper cable specification sheet for details.

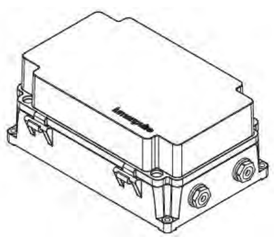


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## Control boxes (order separately)

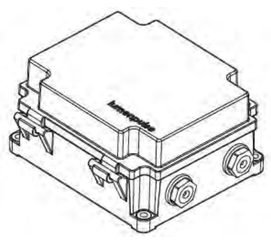
### CBX-DMX/RDM - DMX/RDM enabled (daisy chain or star configuration)

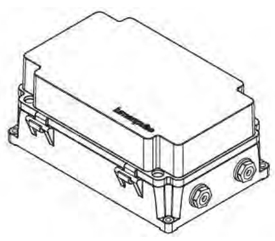




DMX/RDM control box. Up to six power and data outputs to fixtures or fixture runs. Consult CBX specification sheet and installation instructions for details. Lumenterminators provided with CBX (2x for daisy chain configuration, 6x for star configuration), consult factory to order spares.

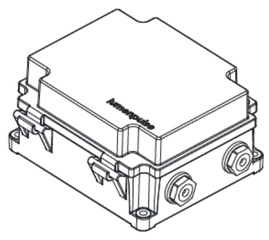
### CBX-ENET - Ethernet enabled (daisy chain or star configuration)





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.

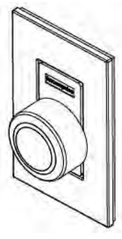
### LDB - Lumentalk Data Bridge



Lumentalk Data Bridge, 0-10V or DMX output. Consult LDB specification sheet for details.

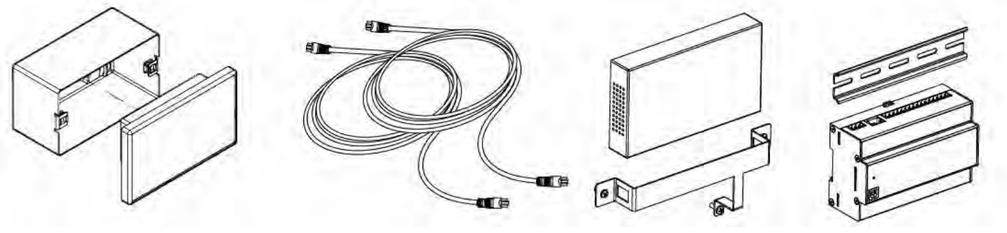
## Control systems (order separately)

### 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.

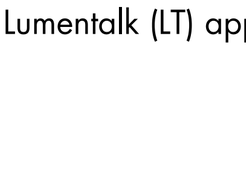
## Diagnostic and addressing tools (order separately)

### 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



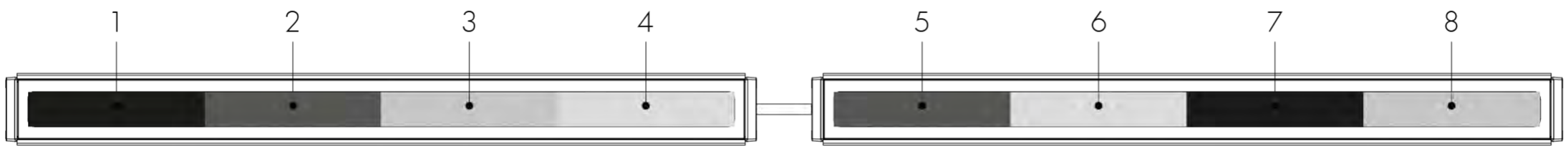
LumentalkID is a diagnostic and addressing tool. It must be specified for all Lumentalk (LT) applications. Consult LID-LT specification sheet for details.



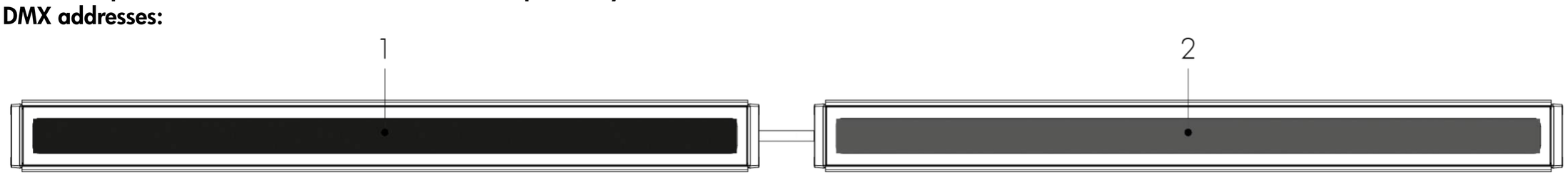
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## Resolution details

**Resolution per foot: each 12 in section is addressed independently**
**DMX addresses:**




**Resolution per fixture: each fixture is addressed independently**
**DMX addresses:**



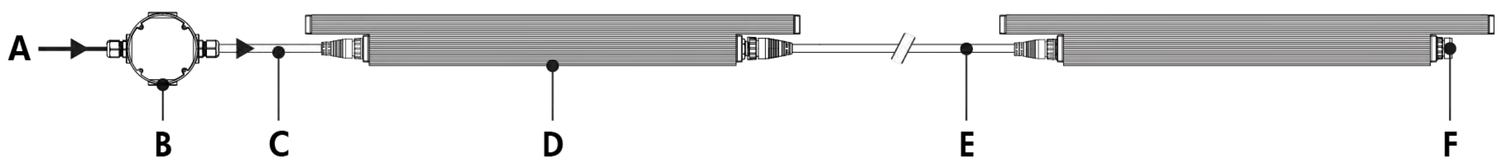

- 48 in fixtures shown.
- Applicable for DMX/RDM control option only. Fixture resolution can be configured on-site within the LumenID V3 software. A DMX/RDM enabled CBX is required.

## Typical wiring diagrams

**Wiring color code**

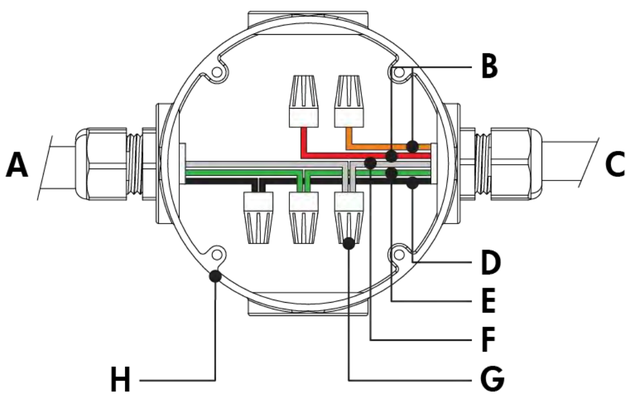
| UL Color Code | USE |
|---|---|
| Green | Ground |
| Black | Line |
| White | Line/Neutral |
| Red or Purple | 0-10V / Data + |
| Orange | 0-10V / Data - |

**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**



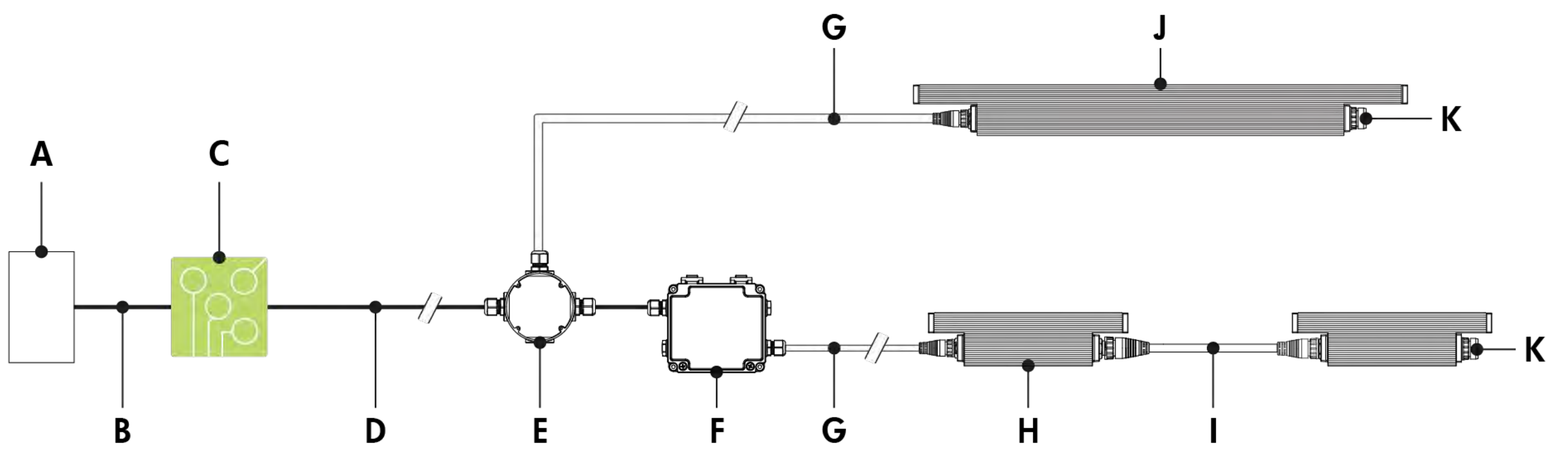

**A -** Power input
**B -** Not required
**C -** To fixture
**D -** Line
**E -** Ground
**F -** Line/Neutral
**G -** Wire-nuts (by others)
**H -** Junction box (by others)

- 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.



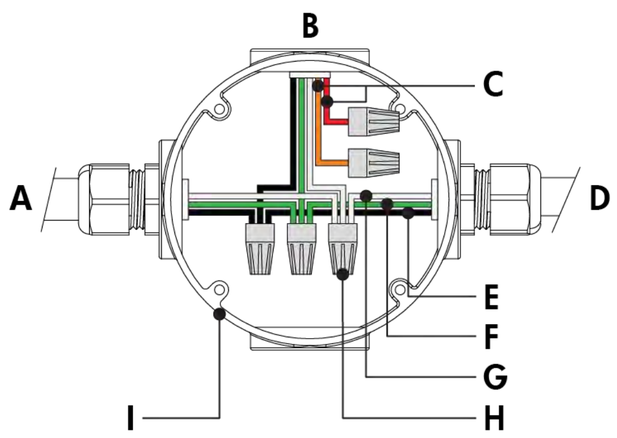
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## Lumentalk (LT)




**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.

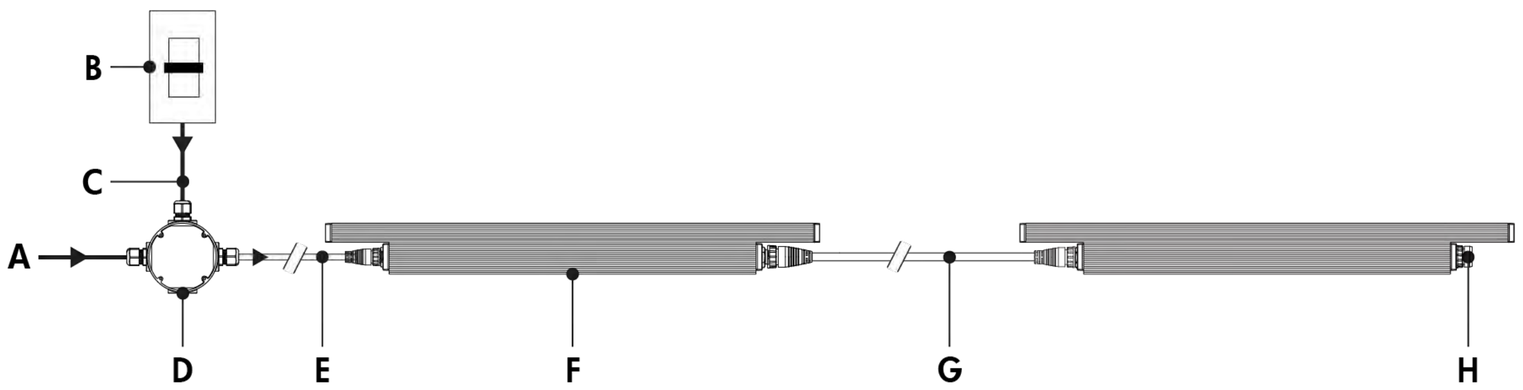
- For applications with all fixtures controlled as 1 zone: fixtures and Lumentalk Data Bridge must be specified as DIM. Maximum of 10 fixtures per LDB-DIM, consult factory for applications that require additional capabilities.
- For applications with fixtures controlled individually: fixtures and Lumentalk 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.



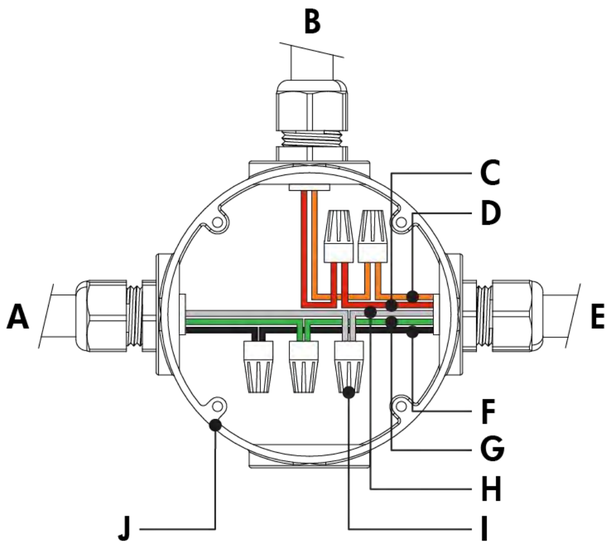
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## 0-10V dimming (DIM)




**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)

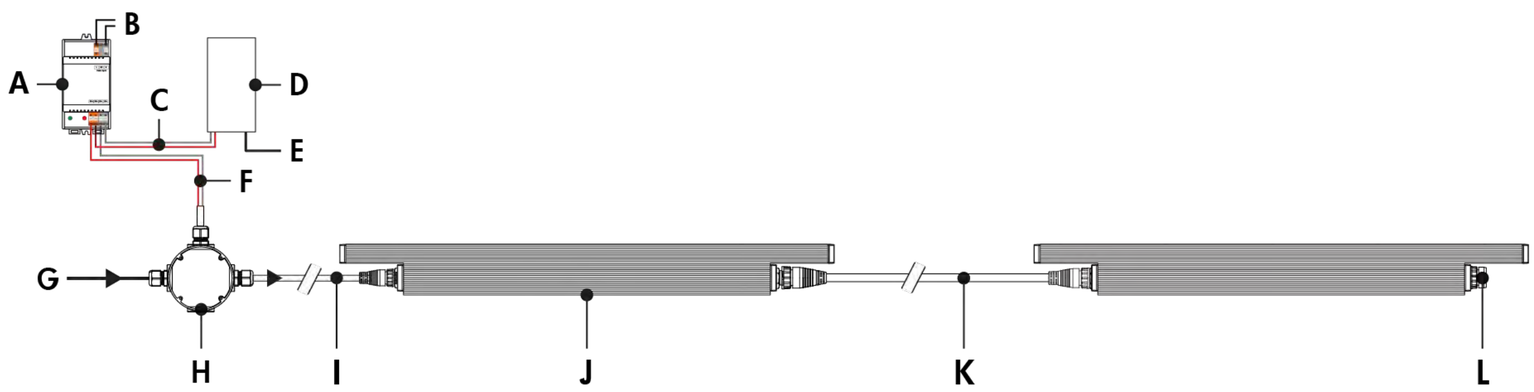
- Consult factory for specific applications and maximum fixture count/cable length recommendations.
- 0-10V mA ratings: passive dimmer (Current Sink): 3 mA per fixture, active dimmer (Current Source): 0.5 mA per fixture.
- 10% minimum dimming value.
- ASHRAE version (not available for 12 in fixture lengths): 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**

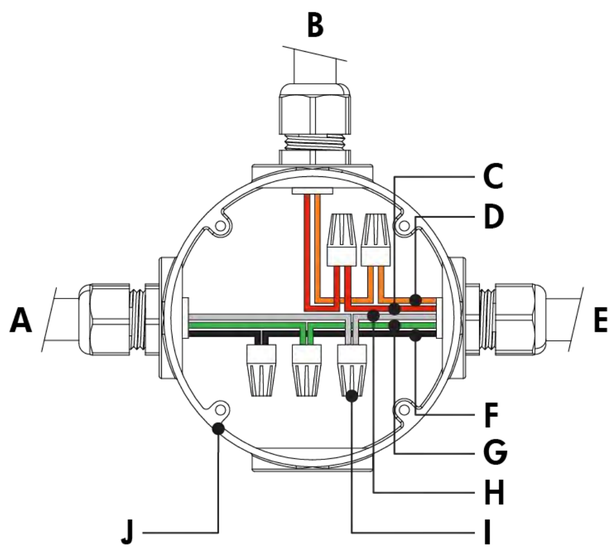
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## DALI dimming (DALI)




**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



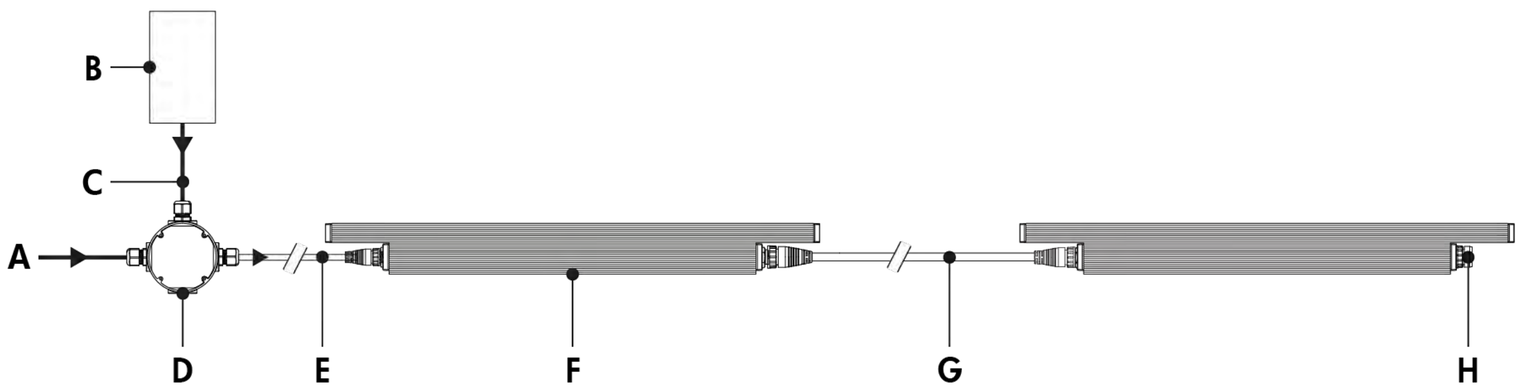

**A -** Power input
**B -** From DALI controller (by others)
**C -** Data +
**D -** Data -
**E -** To fixture
**F -** Line
**G -** Ground
**H -** Neutral
**I -** Wire-nuts (by others)
**J -** Junction box (by others)

- 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.



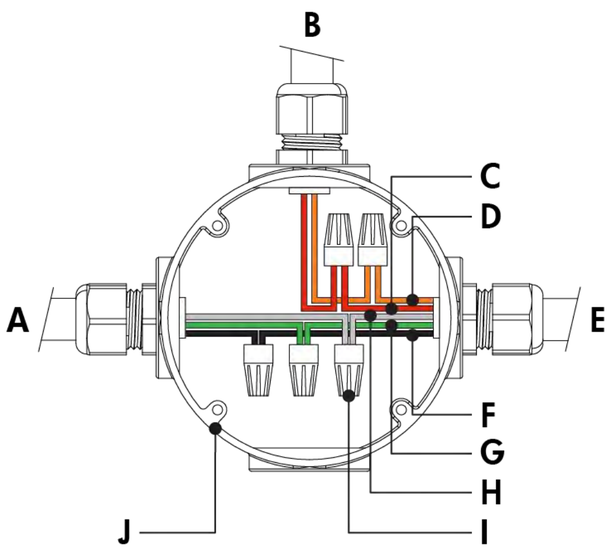
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### Lutron® EcoSystem® Enabled dimming (ES)




**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



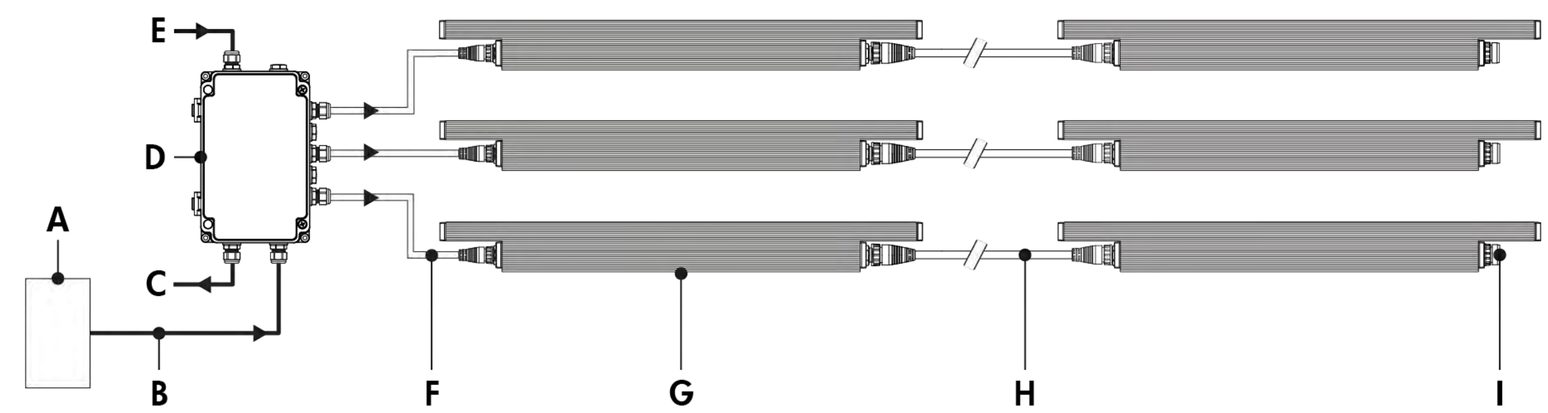

**A -** Power input
**B -** From Lutron® EcoSystem® controller (by others)
**C -** Data +
**D -** Data -
**E -** To fixture
**F -** Line
**G -** Ground
**H -** Neutral
**I -** Wire-nuts (by others)
**J -** Junction box (by others)

- 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.



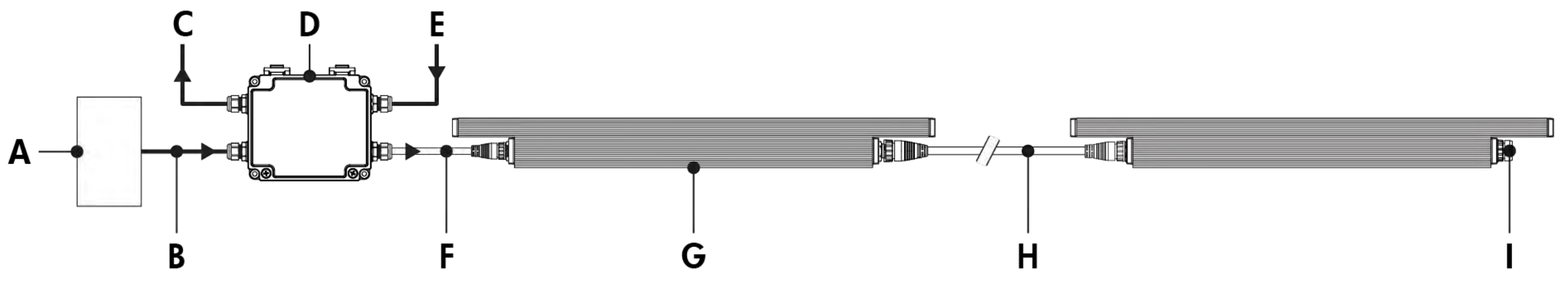
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### Star Layout (DMX/RDM)




**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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## 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

# lumenbeam

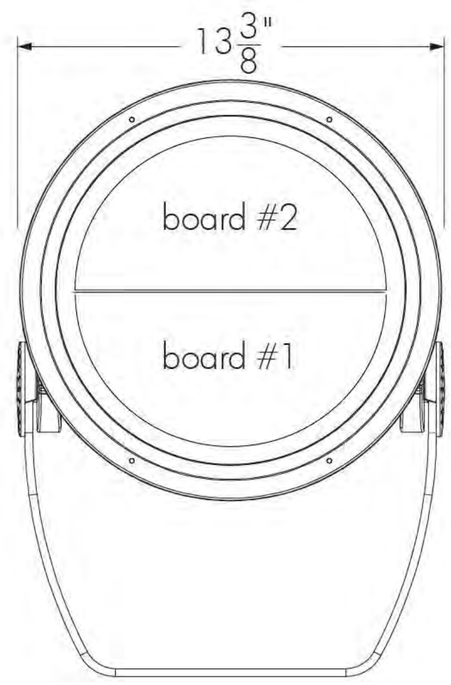
**Grande**

WHITE AND STATIC COLOURS

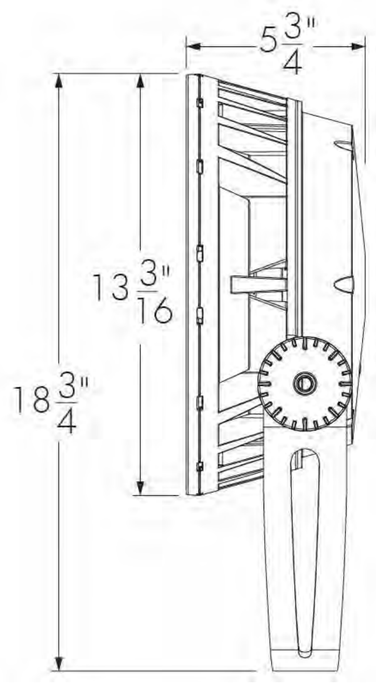
**Project Name** _____ **Qty** _____

**Type** _____ **Catalog / Part Number** _____






Front view



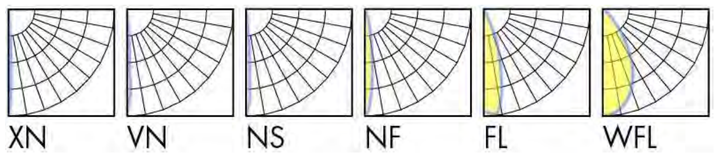

Side view

## 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

# lumenbeam

**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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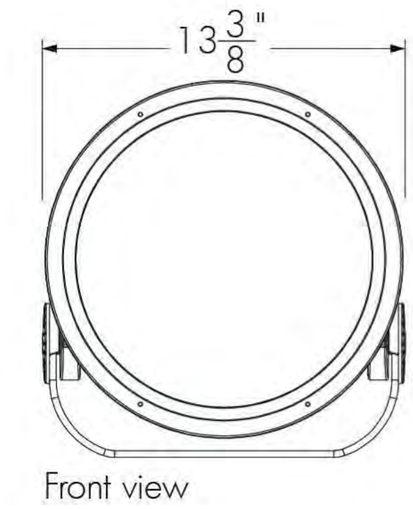
# lumenbeam

**Grande**

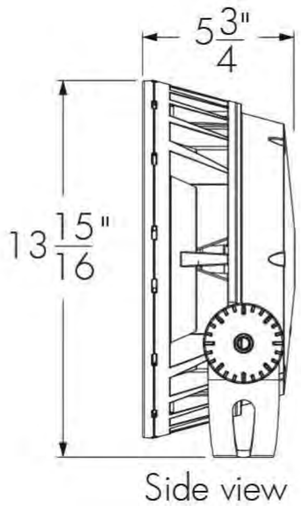
WHITE AND STATIC COLOURS

## Mounting options

### SY - Short yoke



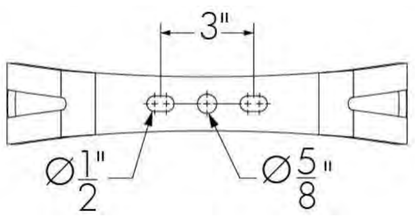

Front view



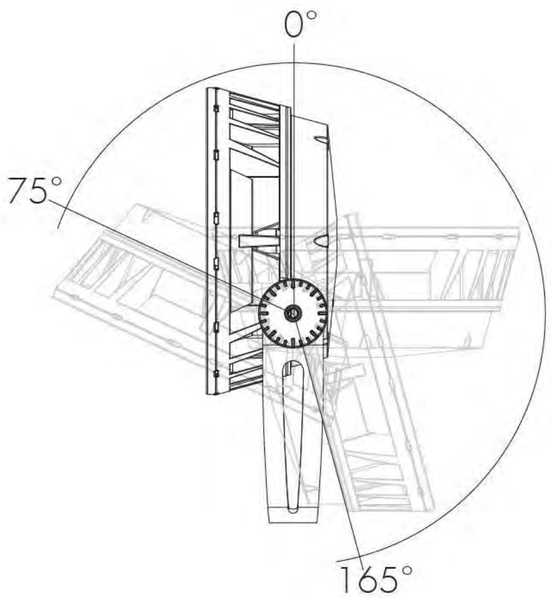

Side view

## Mounting details

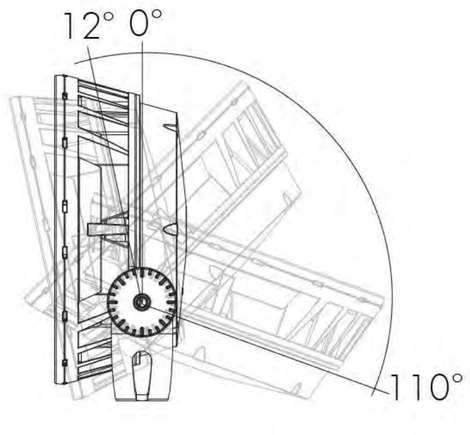
### Mounting hole pattern - standard and short yoke




### 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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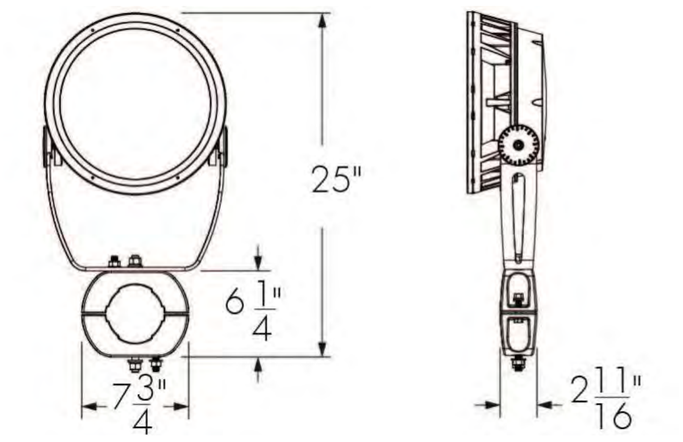
## lumenbeam

**Grande**

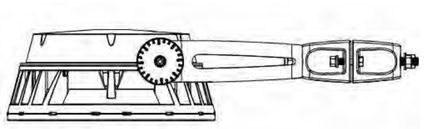
WHITE AND STATIC COLOURS

## Mounting accessories (order separately)

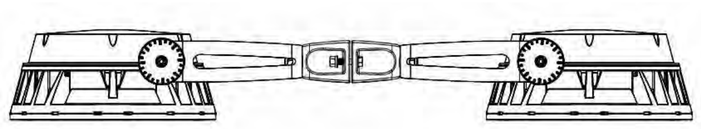
### Round pole mounting accessory




PM4 model shown.
Consult factory for square pole section.



**PM4-1, PM4.5-1, PM5-1 -** Round pole mounting accessory - single fixture

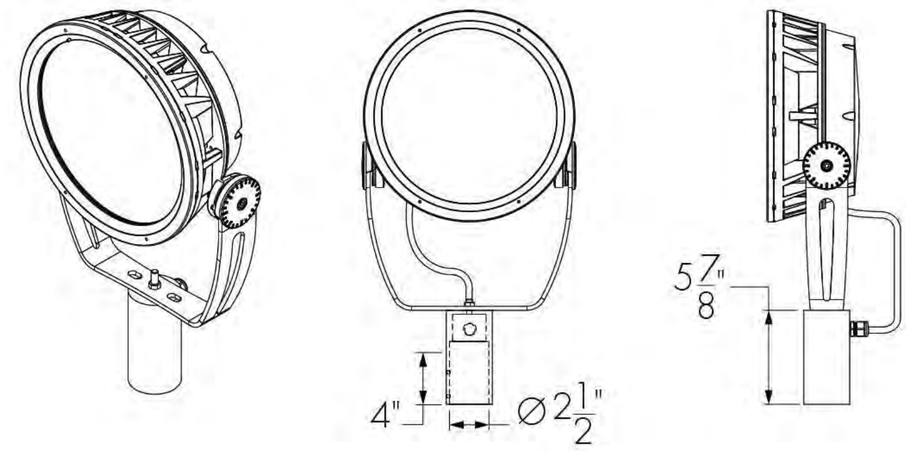


**PM4-5, PM4.5-2, PM5-2 -** Round pole mounting accessory - twin fixtures
*One bracket assembly is supplied per 2 fixtures unless otherwise specified.

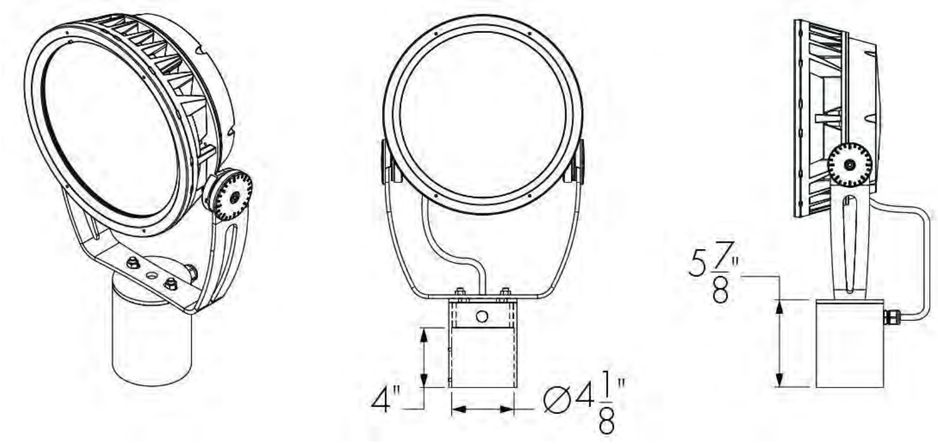
| | PM4 | PM4.5 | PM5 |
|---|---|---|---|
| **For pole Ø** | 4" ± 1/16 | 4.5" ± 1/16 | 5" ± 1/16 |

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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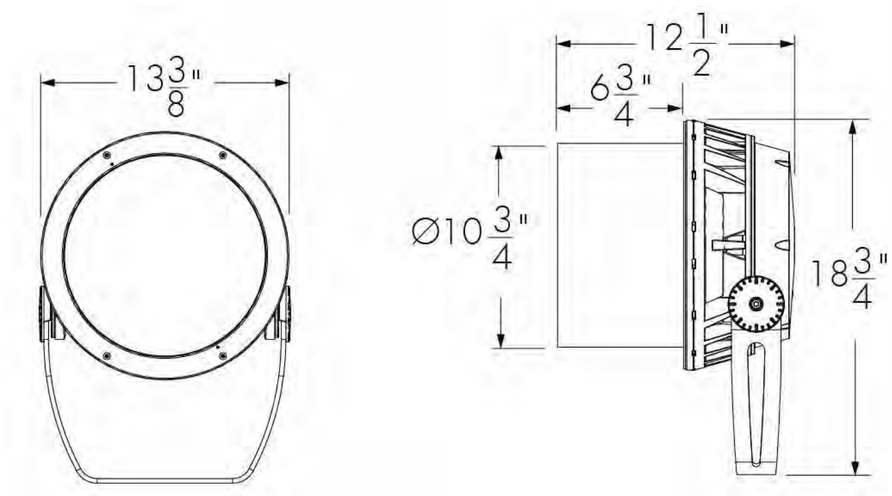
**Grande**

WHITE AND STATIC COLOURS

## Optical accessories (order separately)

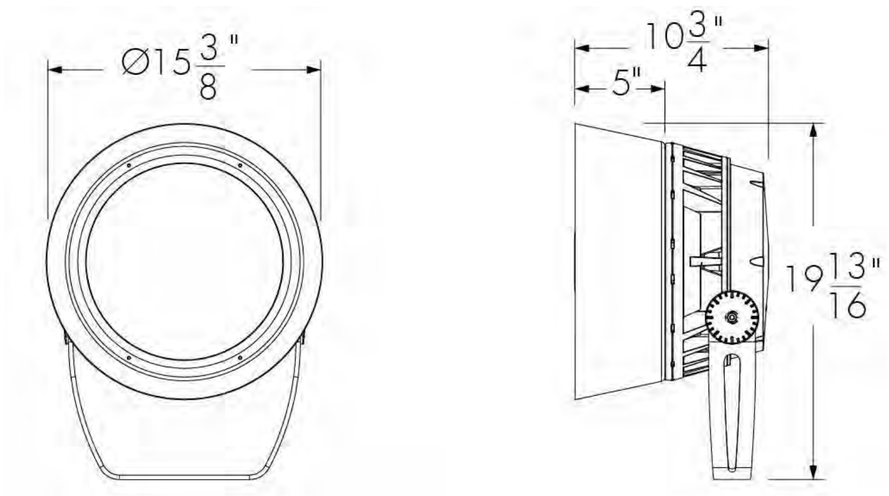
Installed optical accessories will affect the maximum pivot limits for each mounting option, consult factory for details.

### SN - Snoot



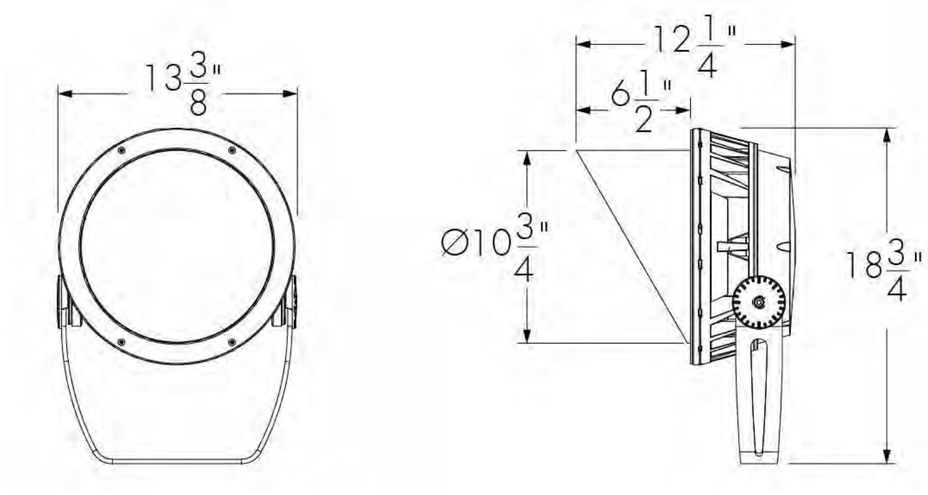

LBGSN-FINISH-BK
Interior surface painted black. Please specify desired exterior FINISH from list of available finishes.

### SNW - Snoot wide



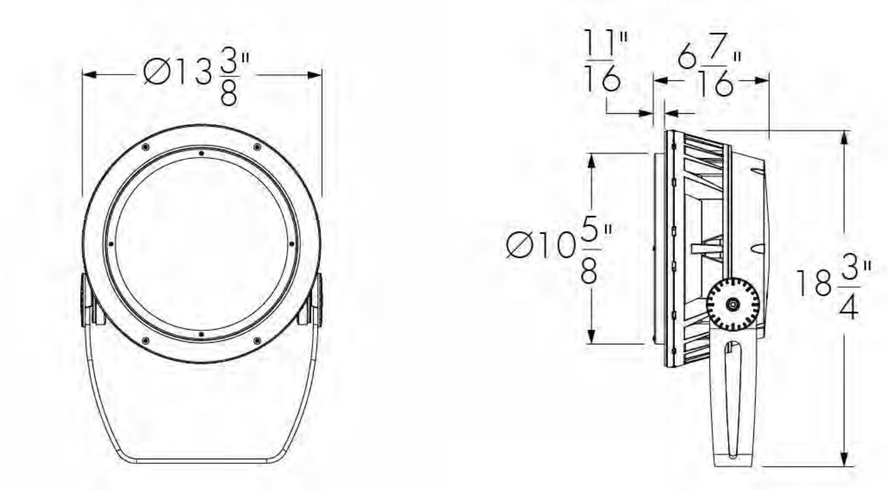

LBGSNW-FINISH-BK
Interior surface painted black. Please specify desired exterior FINISH from list of available finishes.

### VS - Visor



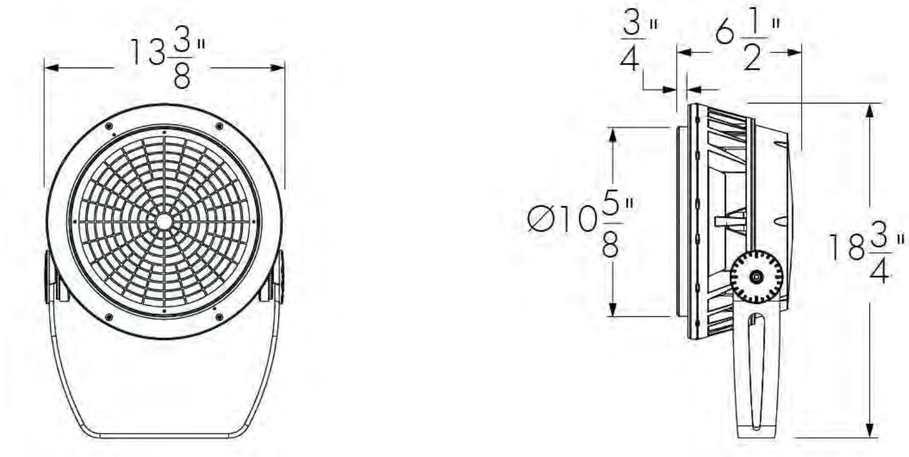

LBGVS-FINISH-BK
Interior surface painted black. Please specify desired exterior FINISH from list of available finishes.

### 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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# Specification Sheet

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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

## lumenbeam

**Grande**

WHITE AND STATIC COLOURS

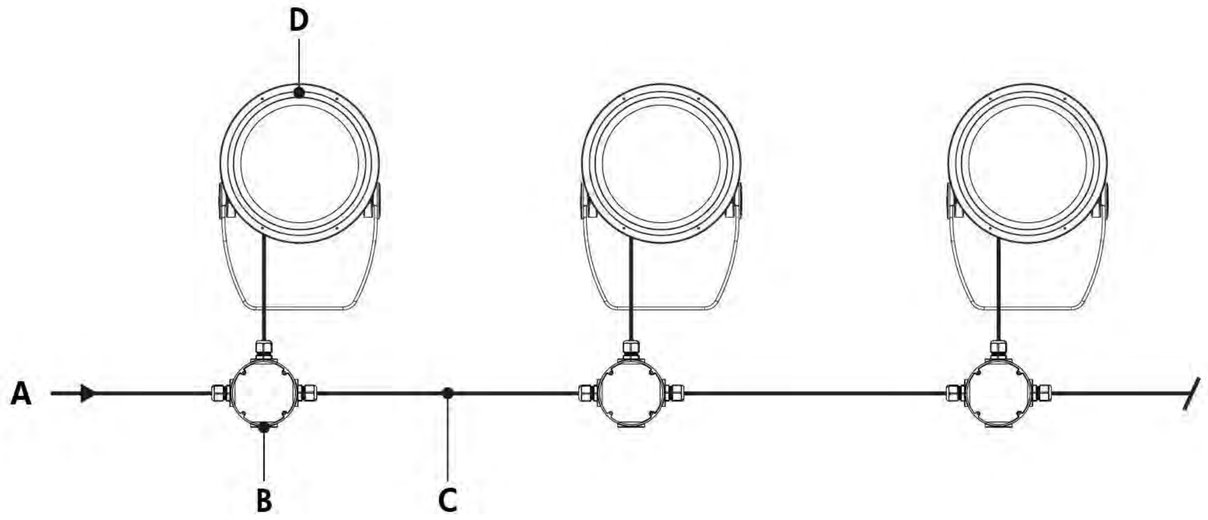
## Typical wiring diagrams

### Wiring colour code

| CE<br>Colour Code | USE |
|---|---|
| Yellow/Green<br>Brown<br>Blue<br>Black<br>Grey | Ground<br>Live 100-277V<br>Neutral<br>1-10V / Data +<br>1-10V / Data - |

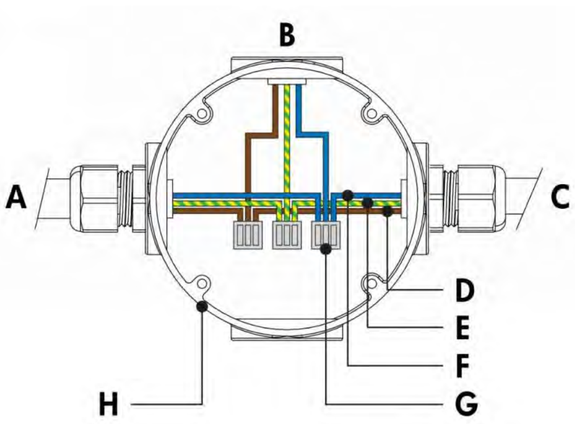
| CE Class II<br>Colour Code | USE |
|---|---|
| Brown<br>Blue<br>Black 1<br>Black 2<br>Grey | Live 100-277V<br>Neutral<br>Signal common (DMX/RDM only)<br>1-10V / Data +<br>1-10V / Data - |

### On/Off control (NO)



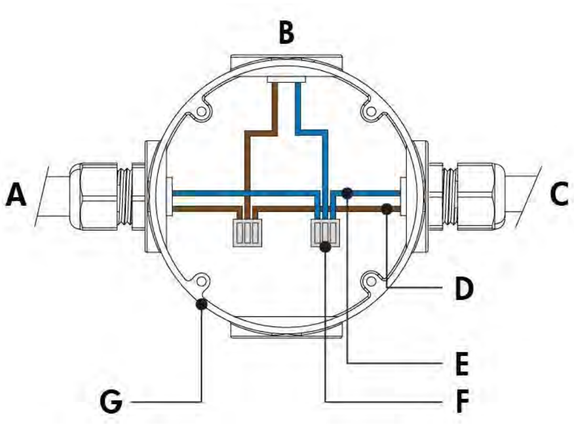

**A -** Power input (100-277V)
**B -** Junction box (by others)
**C -** Power wiring (by others)
**D -** Lumenbeam Grande

### 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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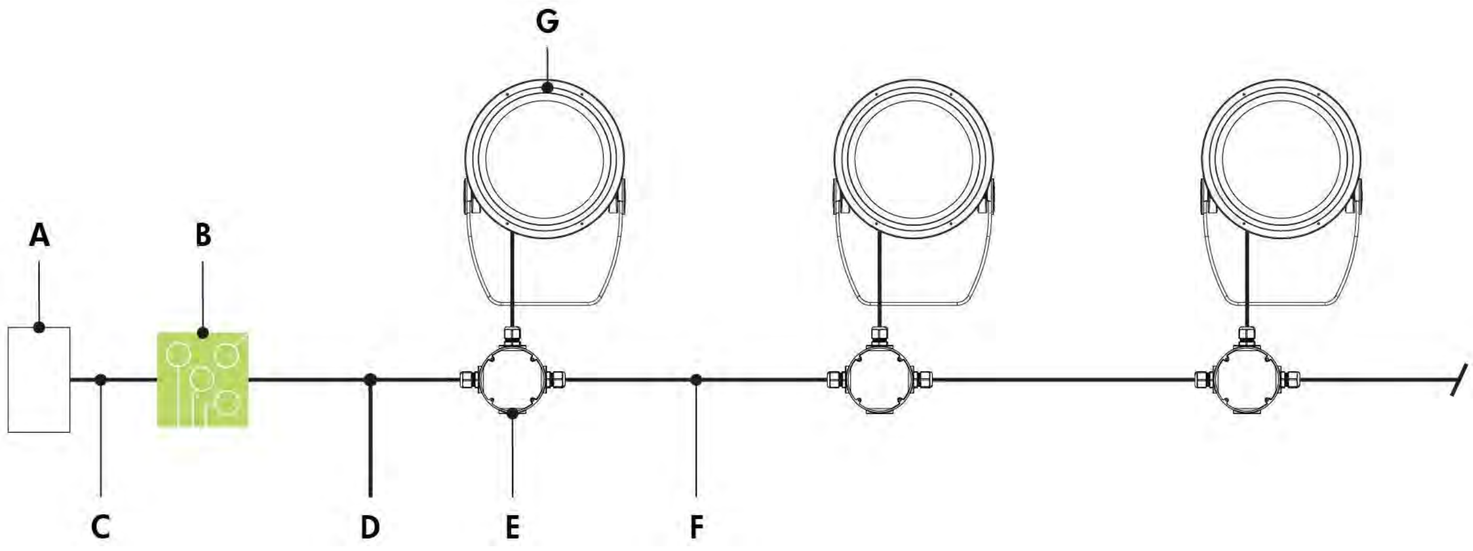
# Specification Sheet

## lumenbeam

**Grande**

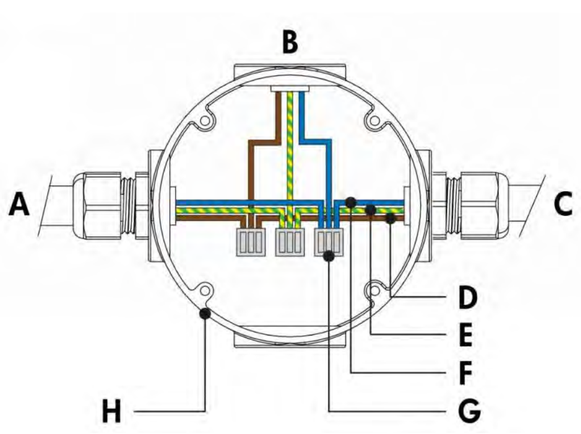
WHITE AND STATIC COLOURS

### 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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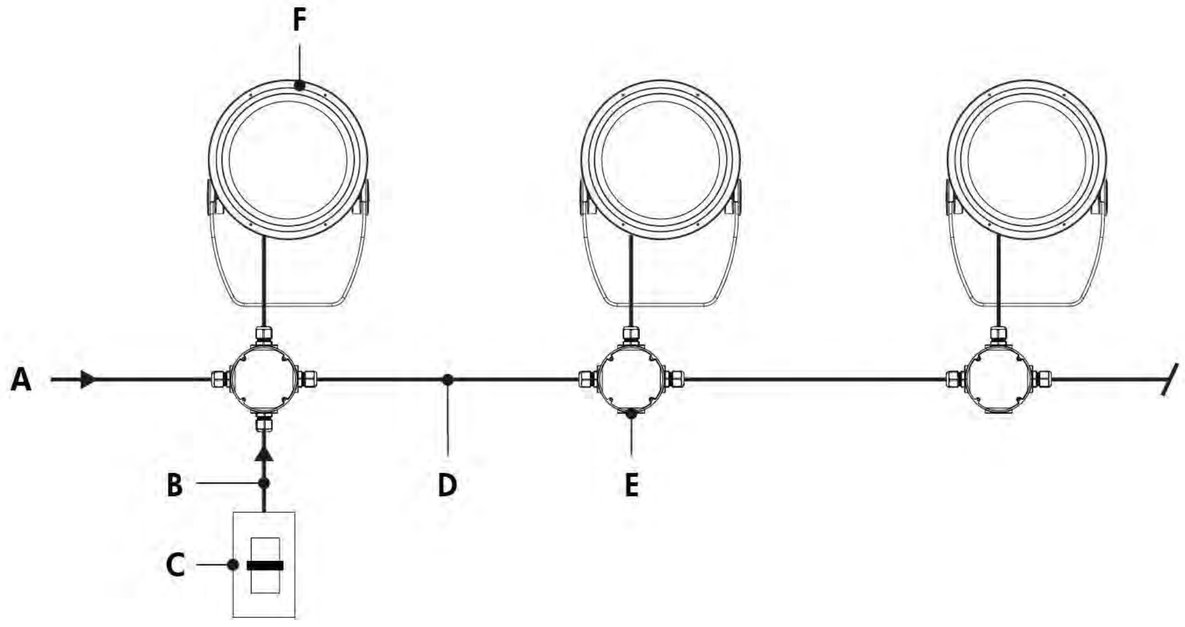
# Specification Sheet

# lumenbeam

**Grande**

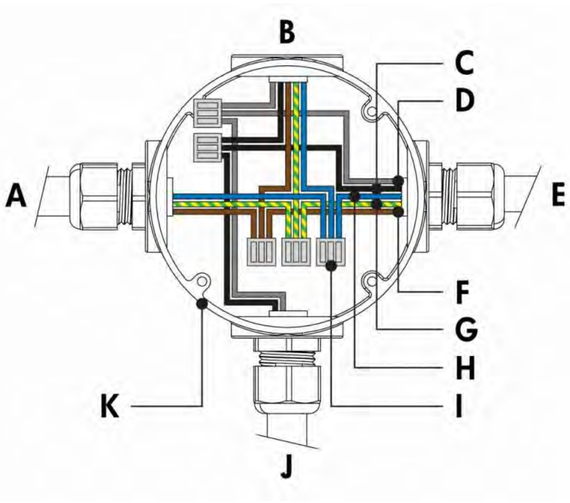
WHITE AND STATIC COLOURS

### 1-10V dimming (DIM)



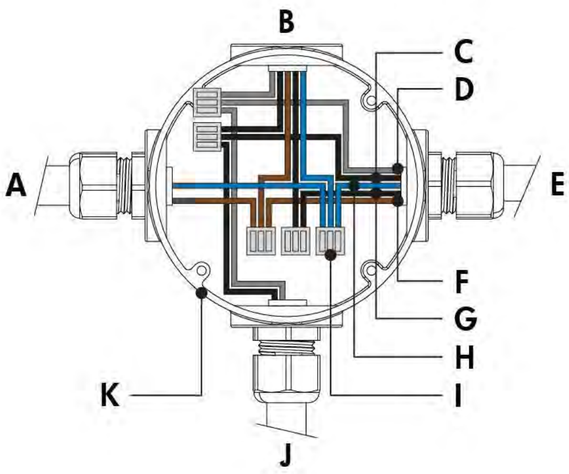

**A -** Power input (100-277V)
**B -** Data wiring (by others)
**C -** Third party dimmer
**D -** Power and data wiring (by others)
**E -** Junction box (by others)
**F -** Lumenbeam Grande

### 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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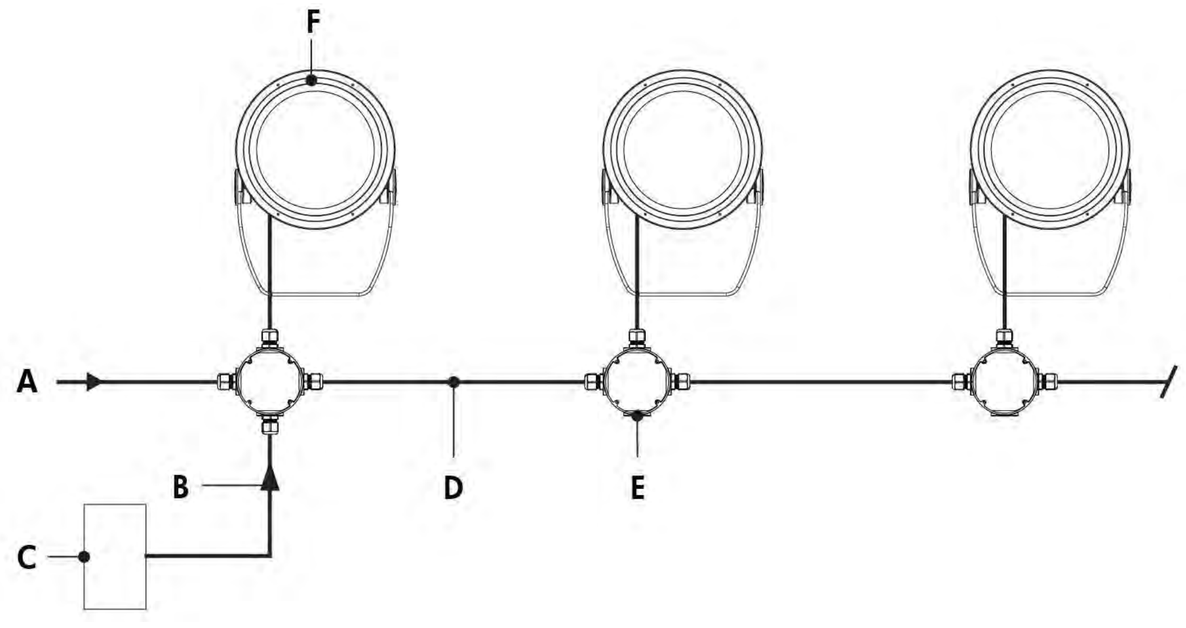
# Specification Sheet

# lumenbeam

**Grande**

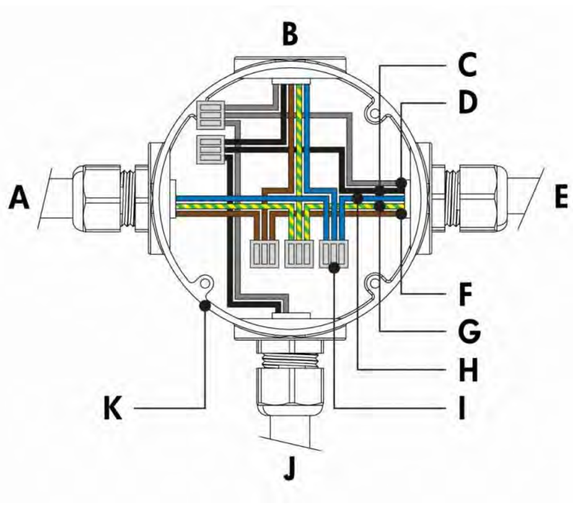
WHITE AND STATIC COLOURS

### DALI dimming (DALI)



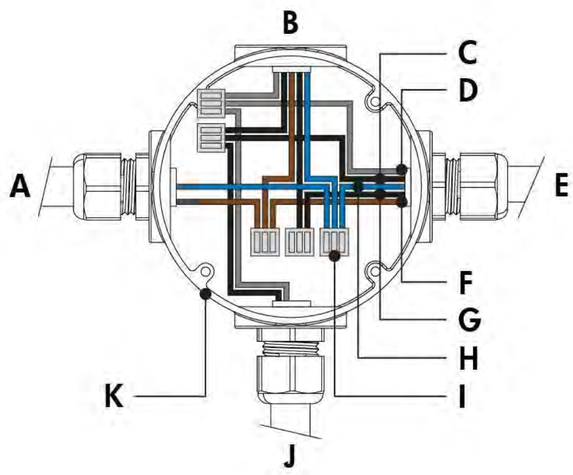

**A -** Power input (100-277V)
**B -** Data wiring (by others)
**C -** Third party DALI controller
**D -** Power and data wiring (by others)
**E -** Junction box (by others)
**F -** Lumenbeam Grande

### 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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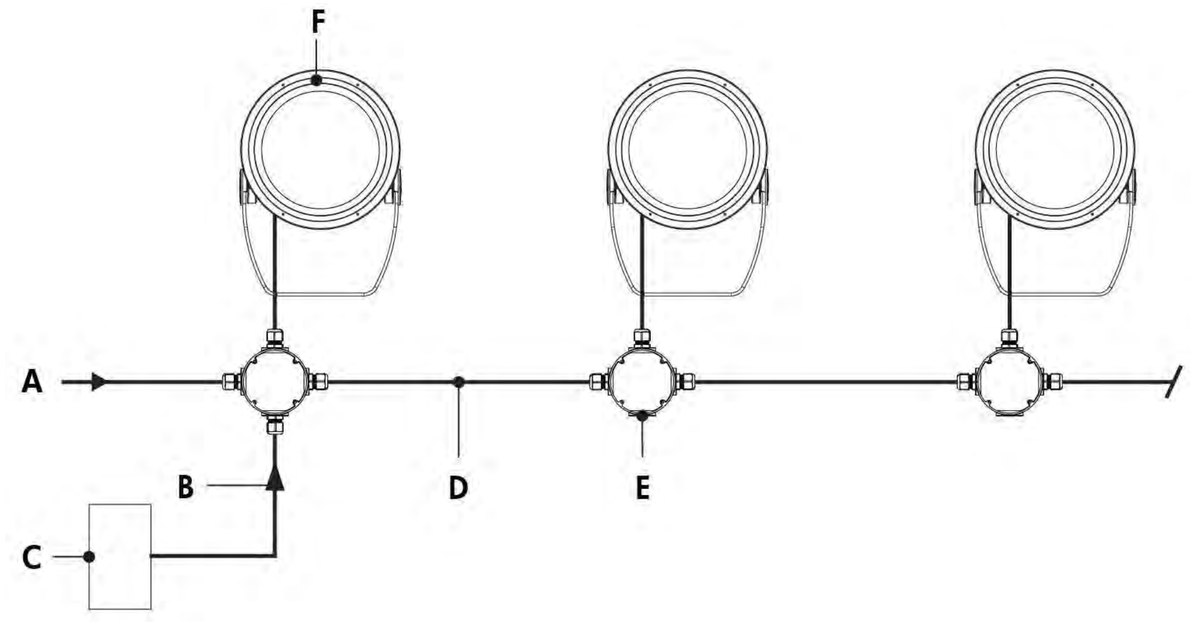
# Specification Sheet

# lumenbeam

**Grande**

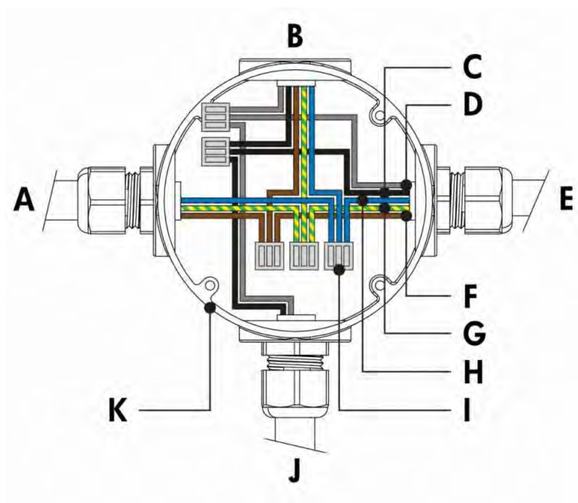
WHITE AND STATIC COLOURS

### 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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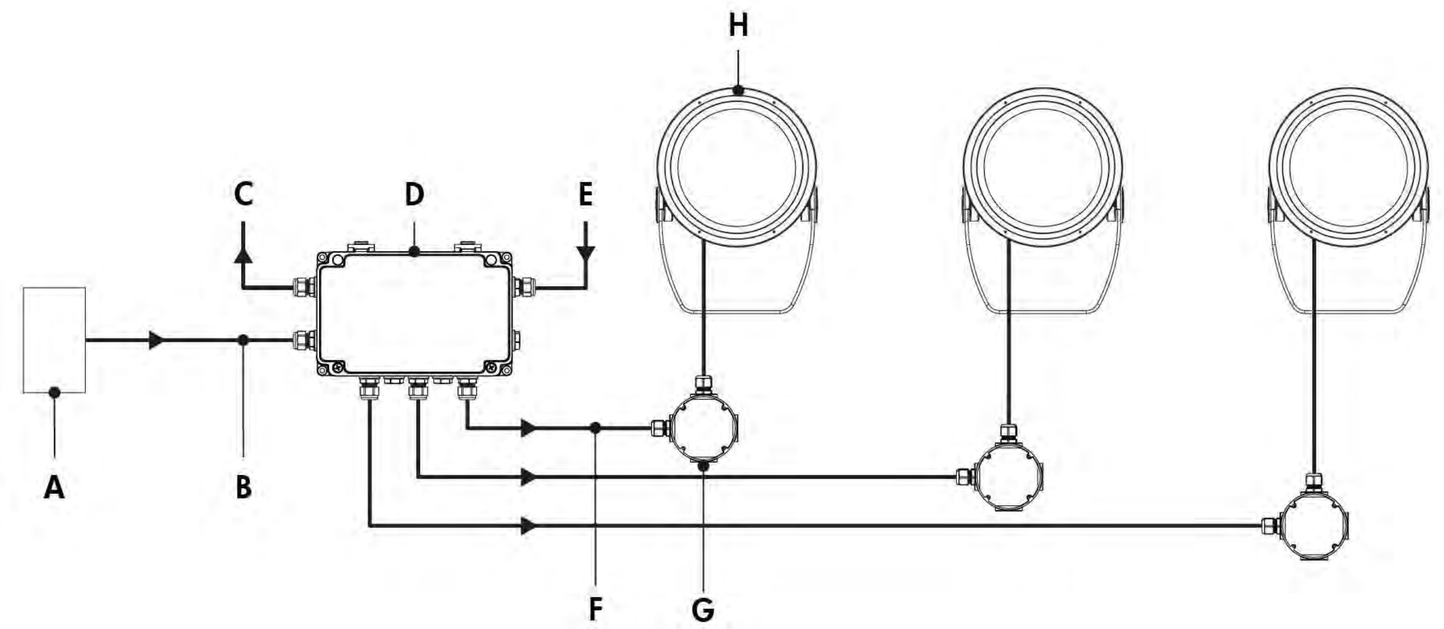
# Specification Sheet

# lumenbeam

**Grande**

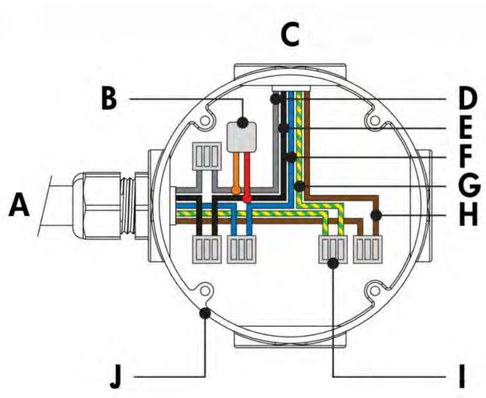
WHITE AND STATIC COLOURS

### Star Layout (DMX/RDM)



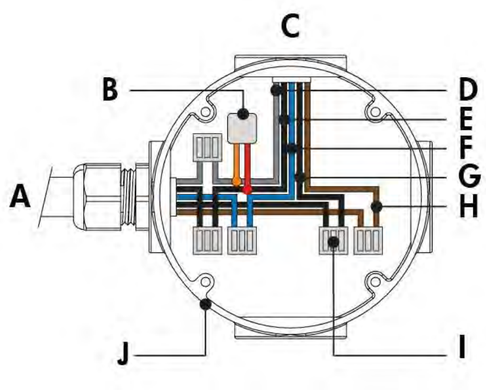

**A -** Third party DMX/RDM controller
**B -** Data input (Belden 9841 or equivalent, by others)
**C -** Data output to next CBX (optional, not isolated/not boosted)
**D -** CBX-ST
**E -** Power input (100-277V)
**F -** Power and data output to fixture (wiring by others)
**G -** Junction box (by others)
**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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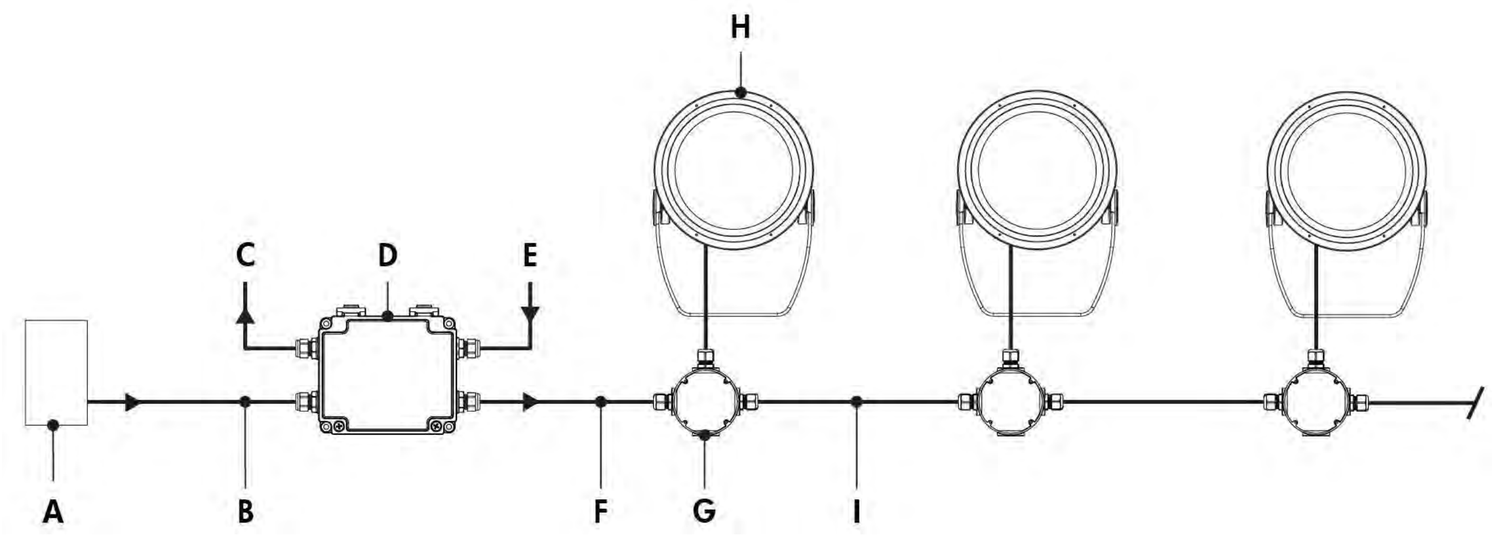
# Specification Sheet

# lumenbeam

**Grande**

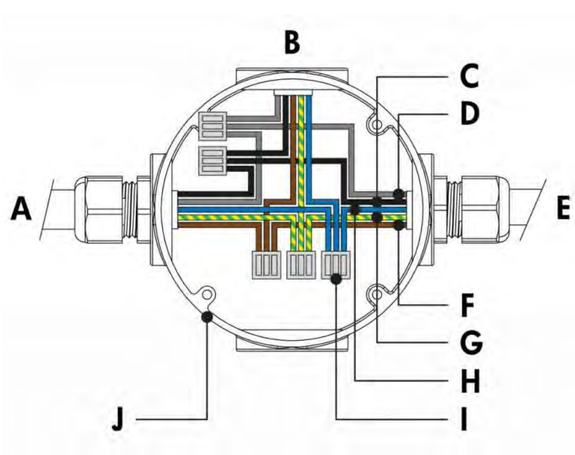
WHITE AND STATIC COLOURS

### Daisy Chain Layout (DMX/RDM)



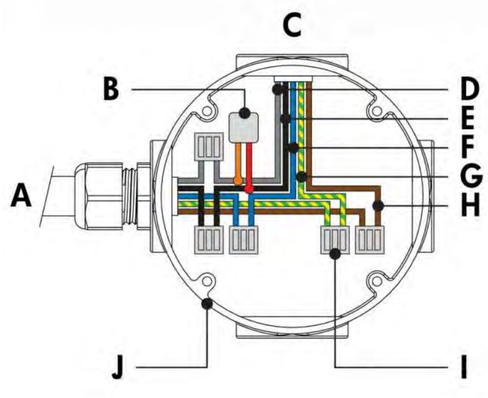

**A -** Third party DMX/RDM controller
**B -** Data input (Belden 9841 or equivalent, by others)
**C -** Data output to next CBX (optional, not isolated/not boosted)
**D -** CBX-DS
**E -** Power input (100-277V)
**F -** Power and data output to fixture (wiring by others)
**G -** Junction box (by others)
**H -** Lumenbeam Grande
**I -** Power and data wiring (by others)

### Daisy Chain Layout (DMX/RDM) - wiring detail (first or middle of run) - CE



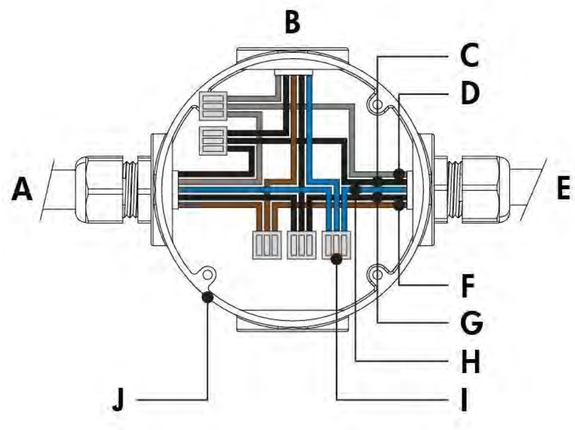

**A -** From CBX or previous fixture
**B -** To fixture
**C -** Data +
**D -** Data -
**E -** To next/from previous fixture
**F -** Live
**G -** Ground
**H -** Neutral
**I -** Terminal connector (by others)
**J -** Junction box (by others)

### 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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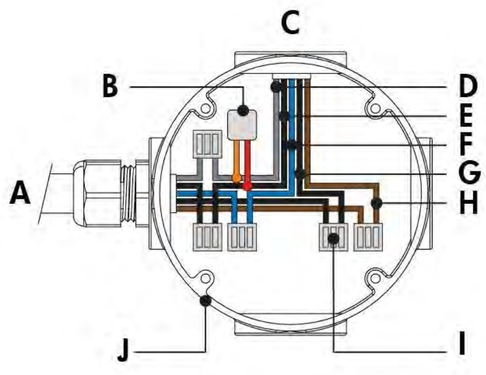
# Specification Sheet

## 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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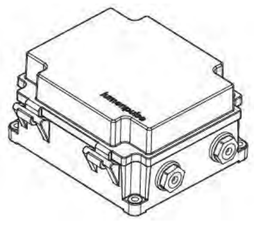
**Grande**

WHITE AND STATIC COLOURS

## Accessories (order separately)

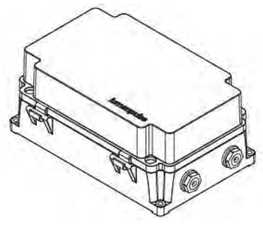
## Control Boxes

### 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.

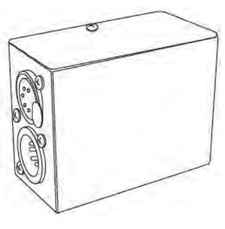
### LCU-Lumencue



Lumencue is a USB / mini SD DMX 512 controller.

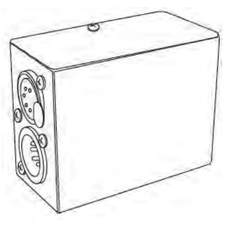
## Diagnostic and Addressing Tools

### 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

# lumenbeam

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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) |

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# Specification Sheet

# lumenbeam

**Grande**

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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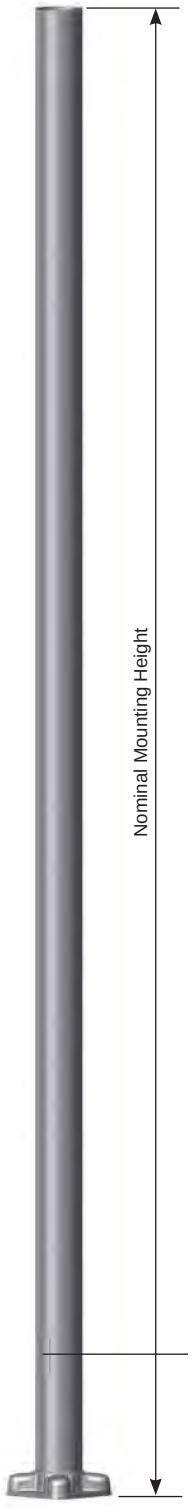
valmont STRUCTURES

# 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

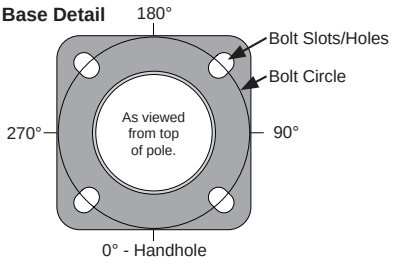
Lam Partners ARCHITECTURAL LIGHTING DESIGN

| | |
|---|---|
| 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<br>080045454S4<br>080045456S4<br>100040404S4<br>100045454S4<br>100045456S4<br>100050504S4<br>120040404S4<br>120045454S4<br>120045456S4<br>120050504S4<br>120050505S4<br>120050506S4<br>140040404S4<br>140045454S4<br>140045456S4<br>140050504S4<br>140050505S4<br>140050506S4 | **Drill Mounting**<br>D1 = 1 Luminaire<br>D2 = 2 @ 180°<br>D3 = 3 @ 120°<br>D4 = 4 @ 90°<br>D5 = 2 @ 90°<br>D6 = 3 @ 90°<br>**Tenon Mounting**<br>P2 = 2.38" OD x 4.00"<br>P3 = 3.50" OD x 6.00"<br>P4 = 4.00" OD x 6.00"<br>P5 = 2.88" OD x 4.00"<br>P7 = 2.38" OD x 5.00"<br>PQ = 2.38" OD x 12.00"<br>PD = 3.00" OD x 3.00"<br>-- = Plain Top<br>P9 = Other Tenon (Contact Factory) | **Polyester Powder**<br>DWH = White<br>DSS = Sandstone<br>HTG = Hunter Green<br>DNA = Natural Aluminum<br>DCG = Charcoal Gray<br>DMB = Medium Bronze<br>DNB = New Dark Bronze<br>DDB = Dark Bronze<br>DBL = Black<br>DSB = Steel Blue<br>DTG = Dark Green<br>DBR = Red<br>SC = Special Color (Contact Factory) | **Anodized**<br>204 = Clear Natural<br>311 = Light Bronze*<br>312 = Medium Bronze*<br>313 = Dark Bronze*<br>335 = Black*<br>*Duranodic Anodize<br>**Brushed**<br>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.

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Notes

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## STATIC WHITE SERIES 2 RIBBONLYTE 2.2

**GEN**LED 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

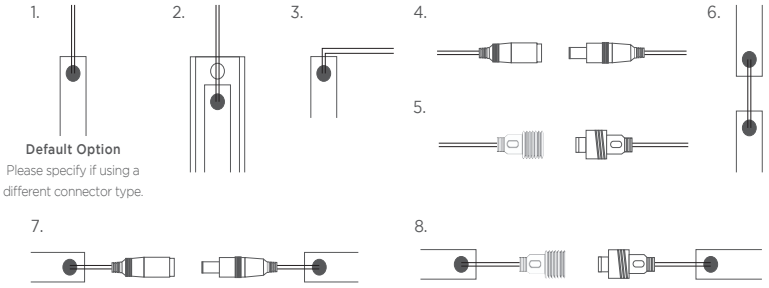
Residential
Retail

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.

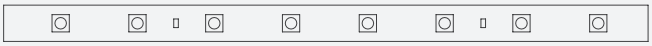
**1** - End Feed Hard Wire Connection
**2** - Back Feed Hard Wire Through Channel
**3** - Side Feed Hard Wire Connection
**4** - IP20 Connector Input
**5** - IP67 Connector Input
**6** - Soldered Daisy-Chain
**7** - Daisy Chain with IP20 Connectors
**8** - Daisy Chain with IP67 Connectors

## 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)<br>**Max Length*** 42 ft (12.8 m)<br>**Height** 0.06 in (1.45 mm) |
| IP65 |  CUTTABLE EVERY: 3.94 in (100 mm) |  | **Width** 0.31 in (8 mm)<br>**Max Length*** 32.8 ft (10 m)<br>**Height** 0.1 in (2.5 mm) |
| IP68 |  CUTTABLE EVERY: 3.94 in (100 mm) |  | **Width** 0.44 in (11.18 mm)<br>**Max Length*** 32.8 ft (10 m)<br>**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.

**GEN**LED 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

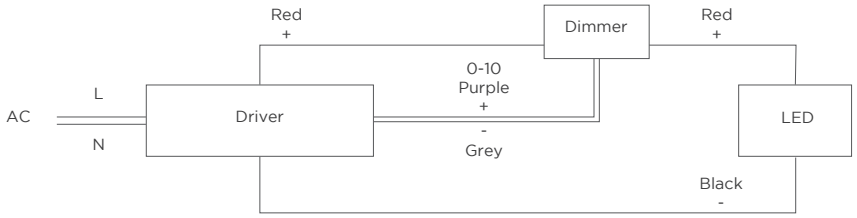
### DISCLAIMER

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.

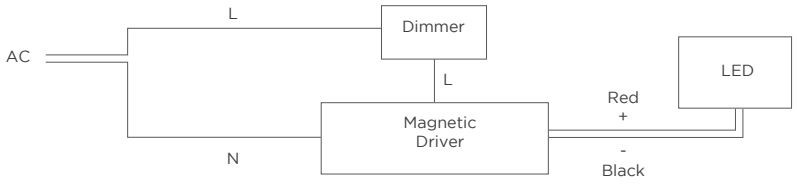
Our IP68 product is not intended to be submerged in pools and fountains and does not carry UL676 certification to do so.

## WIRING DIAGRAMS

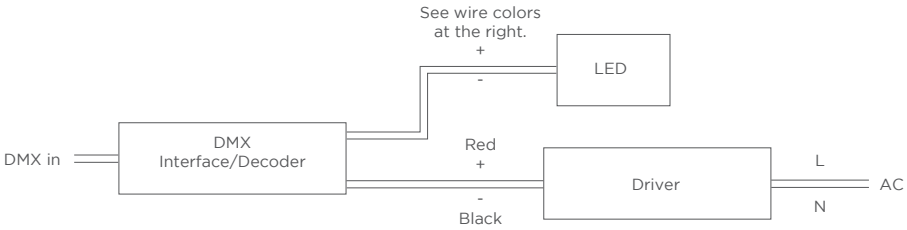
### 0-10V




### 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) | | |

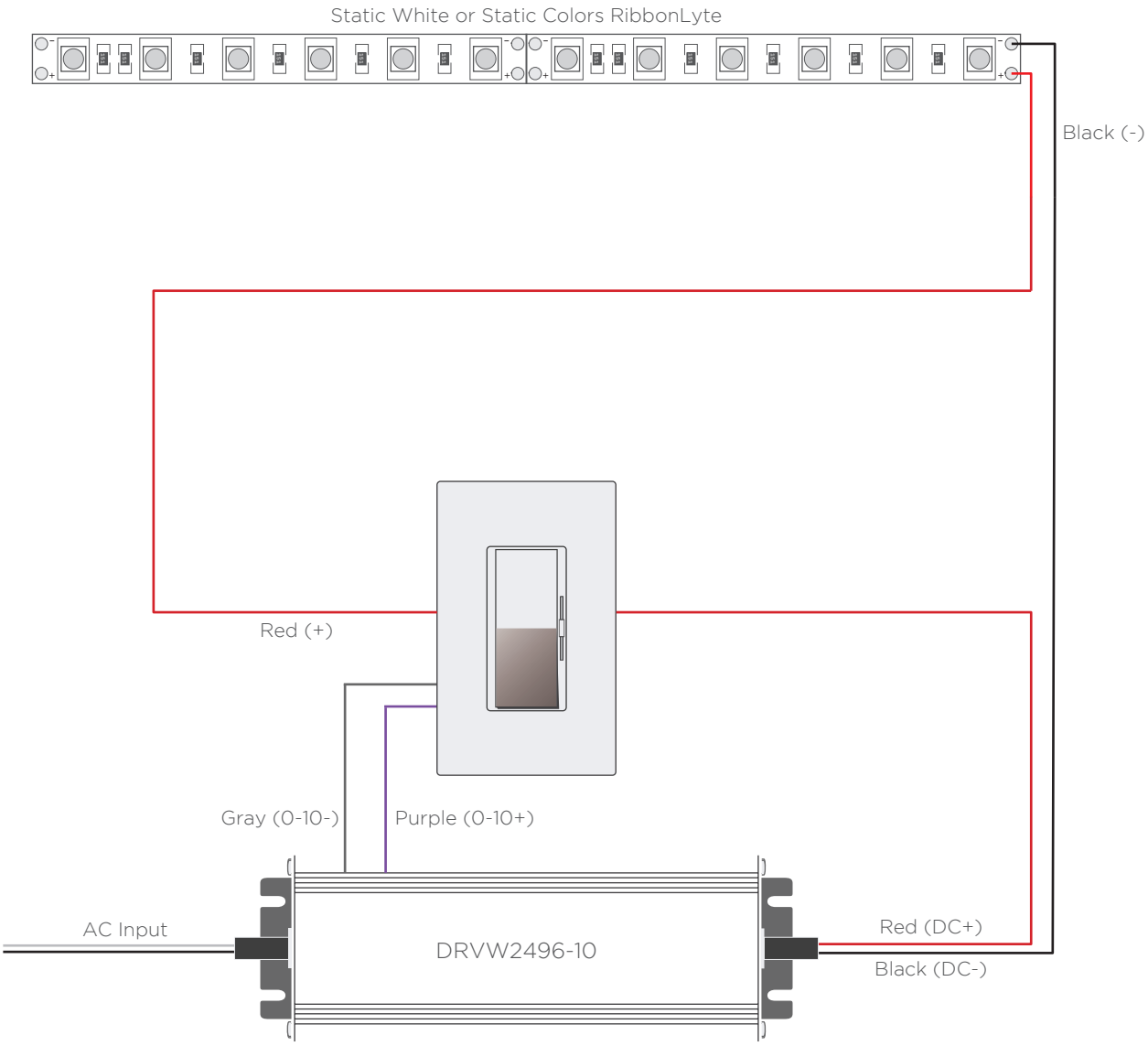
## ORDERING GUIDE

| 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

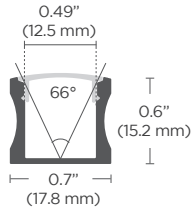
**Optional Accessories:**
1. Tiltable Stand (Part No.: TILTSTAND)

### AVAILABLE COLORS AND COLOR TEMPERATURES

2400K 2700K 3000K 3500K 4000K 6000K Red Amber Green Blue

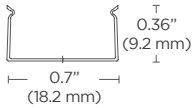
## SPECIFICATIONS

### Series 2 AS2 Channel

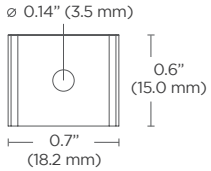



### Mounting Clip (Included Accessory)

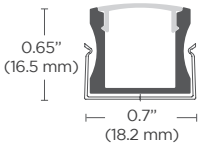
**Side View**




**Top View**



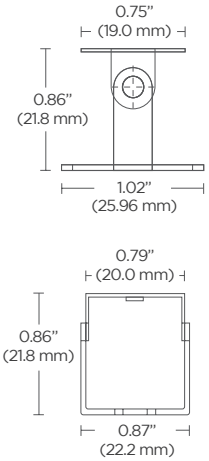

**Assembled View**




* Each section of channel includes 3 mounting clips.

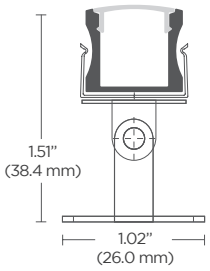
### Tiltable Stand (Optional Accessory)

**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)

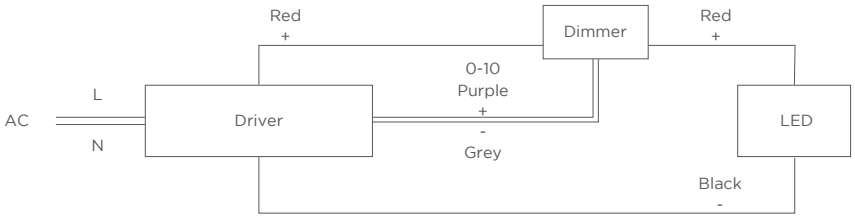
· Compatible with 0-10 V Dimming Module
· Slide adjusts brightness and On/Off control
· 30 mA max control current
· Available in White finish

### DRIVER AND RIBBONLYTE AT FULL LOAD

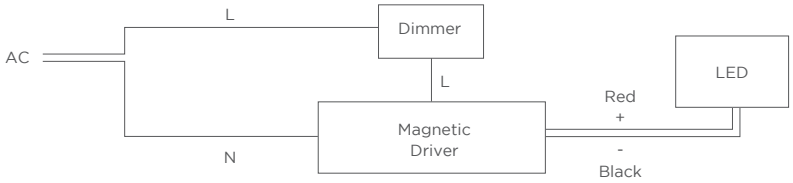
| Wattages | 40 | | 60 | | 96 + 100 | | 150 | | 200 | | 240 | | 300 | | 320 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wire Gauge | Feet | Meters | Feet | Meters | Feet | Meters | Feet | Meters | Feet | Meters | Feet | Meters | Feet | Meters | Feet | Meters |
| 24 AWG | 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

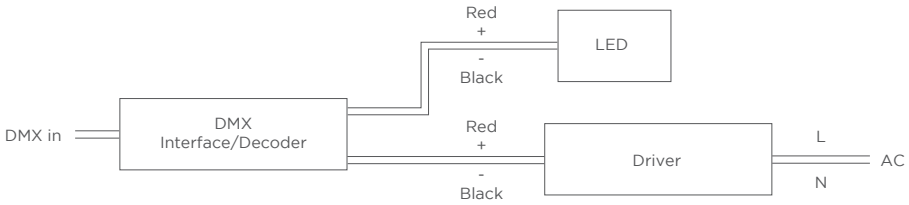
### 0-10V




### MAGNETIC + ELV



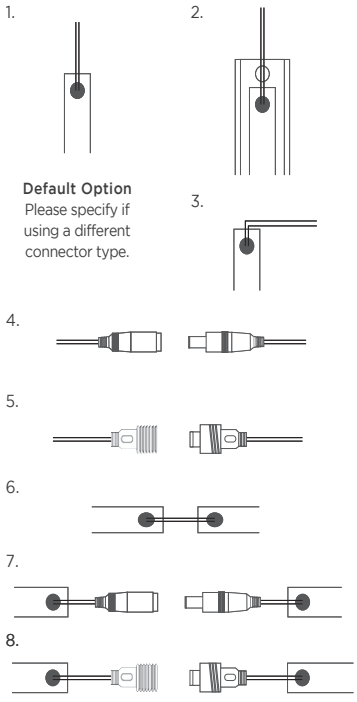

### DMX




### WIRE COLORS PER RIBBONLYTE COLOR

**STATIC WHITE + STATIC COLOR**
Red Wire (+) Positive
Black Wire (-) Negative

### CONNECTION OPTIONS



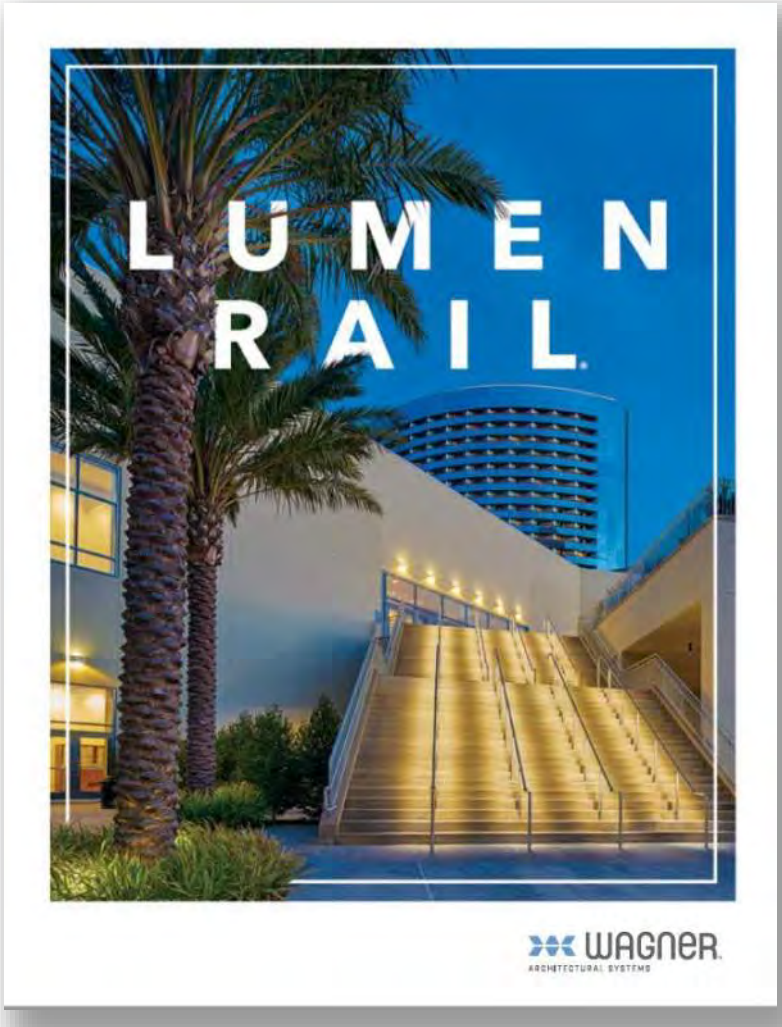

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Lam Partners
ARCHITECTURAL LIGHTING DESIGN

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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# DESIGN SPECIFICATIONS
## LUMENRAIL LUMINAIRES

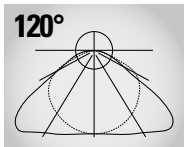
| | | | | |
|---|---|---|---|---|
| ETL LISTED | CLASS 2 REQUIRED | 5 YEARS | 24VDC | 80+ |
| | DRIVER | WARRANTY | INPUT VOLTAGE | CRI |

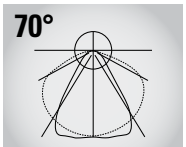
| | | | | |
|---|---|---|---|---|
| **LUMENRAIL®** AVAILABLE CONTROL & SAFETY OPTIONS | - 0-10V (PWM) STD<br>- DALI<br>- DMX | - REMOTE 100W STD DIMMING<br>- REMOTE MADE IN USA 100W DIMMING<br>- INTEGRATED POST 100W DIMMING | - SURGE PROTECTION<br>- FUSING | NOT ALL OPTIONS ARE COMPATABLE. PLEASE VERIFY COMBINATIONS WITH YOUR LOCAL REPRESENTATIVE |
| | DIMMING PROTOCOLS | DRIVER OPTIONS | PROTECTION OPTIONS | OPTION COMPATABILITY |

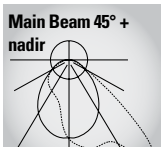
## LUMINIARE **PART NUMBER BUILDER**



| LULS | | | | | | |
|---|---|---|---|---|---|---|
| FIXTURE TYPE | COLOR TEMP | FIXTURE WATTAGE | BEAM ANGLE | LENS / OPTIC | LENGTH NOMINAL - ASSEMBLED | |
| **LULS** - Lumenlinear™ | **27K** - 2700° K<br>**30K** - 3000° K<br>**35K** - 3500° K<br>**40K** - 4000° K<br>**50K** - 5000° K | **20** - 1.85 W/FT<br>**40** - 3.57 W/FT<br>**60** - 5.45 W/FT | **70** - 70° Spread<br>*Main Beam @ 45° above nadir*<br>OR<br>**70** - 70° Spread<br>**120** - 120° Spread | **TA** - Transparent Asymmetric<br>**MA** - Matte Asymmetric<br>**TS** - Transparent Symmetric<br>**MS** - Matte Symmetric | **6** - 7.64″<br>**12** - 13.51″<br>**18** - 19.39″<br>**24** - 25.33″<br>**30** - 31.23″<br>**36** - 37.14″<br>**42** - 43.07″ | **48** - 48.95″<br>**54** - 54.89″<br>**60** - 60.83″<br>**66** - 67.20″<br>**72** - 73.20″<br>**78** - 79.20″<br>**84** - 85.20″ |



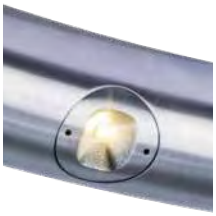






| LULR | | | | | |
|---|---|---|---|---|---|
| FIXTURE TYPE | RAIL SIZE | COLOR TEMP | OPTIC | DRIVE CURRENT | |
| **LULR** - Lumenpod® 28 | **50** - 1.50" (38mm) Dia .120" Wall Tube<br>**66** - 1.66" (42mm) Dia Schedule 40 Pipe<br>**90** - 1.90" (48mm) Dia Schedule 40 Pipe | **27K** - 2700° K<br>**30K** - 3000° K<br>**40K** - 4000° K<br>**50K** - 5000° K<br>**BLU** - Blue<br>**GRN** - Green<br>**RED** - Red<br>**AMB** - Amber | **A** - ASYMMETRIC | **5** - 500 mA<br>**3** - 350 mA<br>**1.7 W @** 350 mA<br>2.4 W @ 500 mA<br>FIXTURE WATTAGE | |





| LULR | | | | | |
|---|---|---|---|---|---|
| FIXTURE TYPE | RAIL SIZE | COLOR TEMP | OPTIC | DRIVE CURRENT | |
| **LULR** - Lumenpod® 28 | **50** - 1.50" (38mm) Dia .120" Wall Tube<br>**66** - 1.66" (42mm) Dia Schedule 40 Pipe<br>**90** - 1.90" (48mm) Dia Schedule 40 Pipe | **27K** - 2700° K<br>**30K** - 3000° K<br>**40K** - 4000° K<br>**50K** - 5000° K<br>**BLU** - Blue<br>**GRN** - Green<br>**RED** - Red<br>**AMB** - Amber | **S** - SYMMETRIC | **5** - 500 mA<br>**3** - 350 mA<br>**1.7 W @** 350 mA<br>2.4 W @ 500 mA<br>FIXTURE WATTAGE | |



*Specifications may change without prior notice, verify data at time of order, all rights reserved*

# DESIGN SPECIFICATIONS
# LUMENRAIL LUMINAIRES

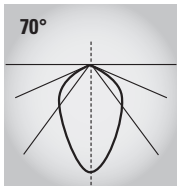
| | | | | |
|---|---|---|---|---|
| ETL LISTED | CLASS 2 REQUIRED | 5 YEARS | 24VDC | 80+ |
| | DRIVER | WARRANTY | INPUT VOLTAGE | CRI |

| | | | | |
|---|---|---|---|---|
| **LUMENRAIL®** AVAILABLE CONTROL & SAFETY OPTIONS | 0-10V (PWM), DALI, DMX | REMOTE 100W STD DIMMING<br>REMOTE MADE IN USA 100W DIMMING<br>INTEGRATED POST 100W DIMMING | SURGE PROTECTION<br>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<br>* Indicates Stock Options | **27K** - 2700° K<br>*30K - 3000° K<br>*40K - 4000° K<br>**50K** - 5000° K<br>**BLU** - Blue<br>**GRN** - Green<br>**RED** - Red<br>**AMB** - Amber | **16** - 16° beam<br>**23** - 23° beam<br>**46** - 46° beam<br>*70 - 70° beam<br>**94** - 94° beam | *5 - 500 mA<br>*3 - 350 mA<br>*Extended life 100,000HR version requires 350 mA* |



*Symmetric Orientation*



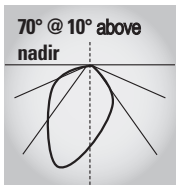
*Asymmetric Orientation*

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<br>2.4 W @ 500 mA |



| LULF | | | | |
|---|---|---|---|---|
| FIXTURE TYPE | COLOR TEMP | OPTIC | DRIVE CURRENT | BANTAM |
| **LULF-XT -** Bantam™<br>* Indicates Stock Options | **27K** - 2700° K<br>*30K - 3000° K<br>*40K - 4000° K<br>**50K** - 5000° K<br>**BLU** - Blue<br>**GRN** - Green<br>**RED** - Red<br>**AMB** - Amber | **16** - 16° beam<br>**23** - 23° beam<br>**46** - 46° beam<br>*70 - 70° beam<br>**94** - 94° beam | *5 - 500 mA<br>*3 - 350 mA<br>*Extended life 100,000HR version requires 350 mA* | **XTR** - Machined 316 SS, post mount housing<br>**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<br>2.4 W @ 500 mA |

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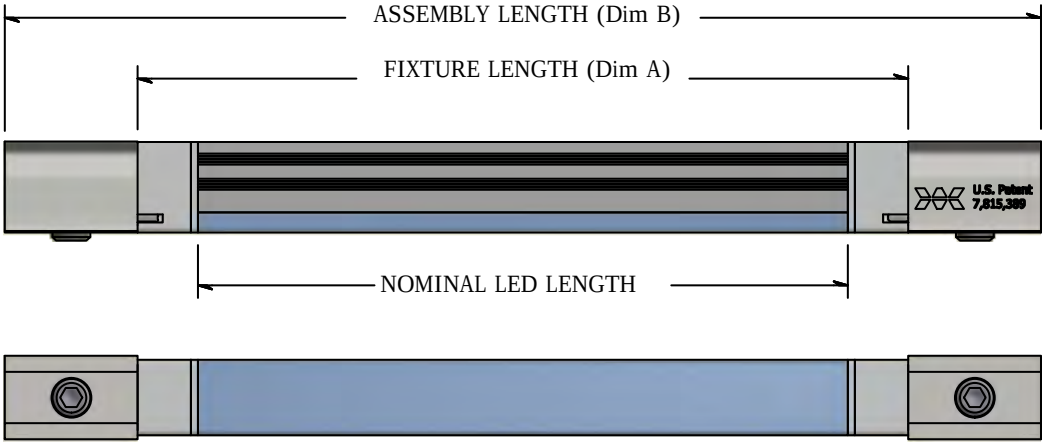
# DESIGN SPECIFICATIONS
## LUMENLINEAR





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.

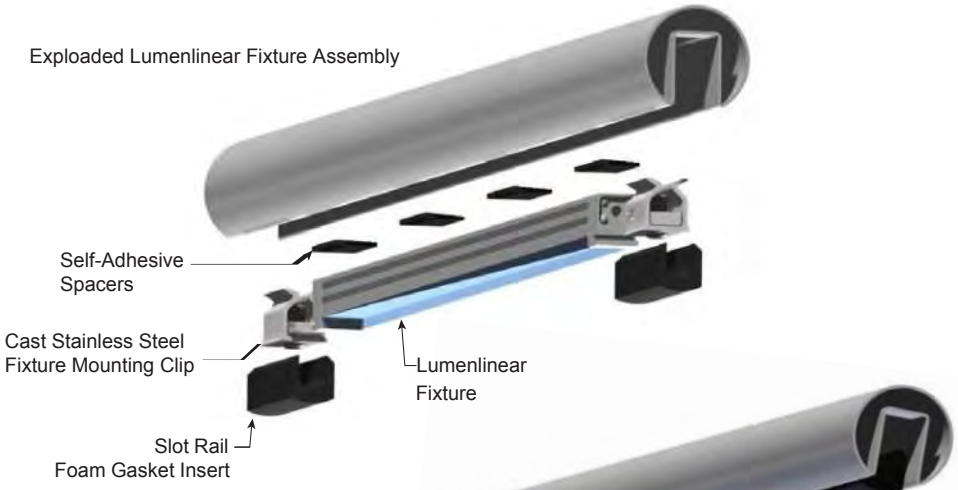


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# DESIGN SPECIFICATIONS
# LUMENLINEAR



## 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

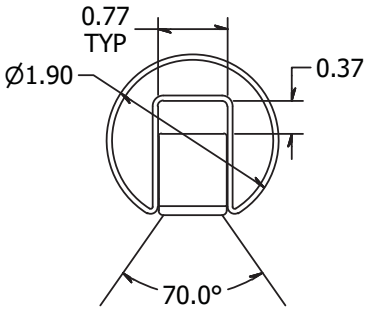
| LUMENLINEAR: QUANTITY, DISTANCE & CONDUCTOR SPECIFICATION EXAMPLE | | | | | |
|---|---|---|---|---|---|
| WIRE GUAGE | 18 AWG | 16 AWG | 14 AWG | 12 AWG | 10AWG |
| REMOTE DISTANCE TO LAST FIXTURE | 18' | 29' | 46' | 71' | 120' |

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.

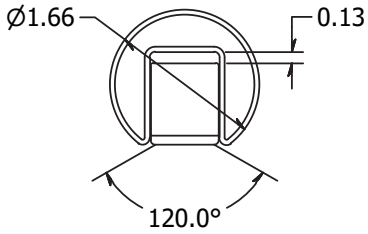
| LUMENLINEAR - LUMENS/FT SPECIFICATIONS USING 120° OUTPUT: | | | | | | |
|---|---|---|---|---|---|---|
| | 2W/FT | | 4W/FT | | 6W/FT | |
| LENS SPECIFICATION | MATTE | TRANSPARENT | MATTE | TRANSPARENT | MATTE | TRANSPARENT |
| CCT 3000° K | 131 lm | 147 lm | 235 lm | 268 lm | 336 lm | 383 lm |
| CCT 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.

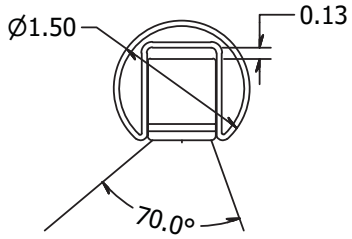
## Cap-Rail Dimensions



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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# DESIGN SPECIFICATIONS

## LUMENPOD 28





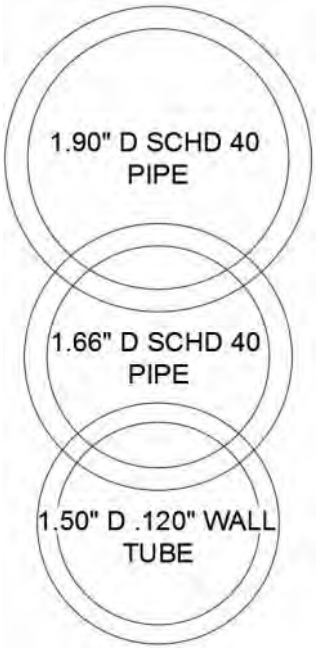
The evolution of the handrail point source from Wagner Architectural Systems has performance that leverages the latest LED technology and manufacturing techniques. This USA engineered and manufactured luminaire is designed for pathway, stair and ramp illumination. Both the asymmetric and symmetric versions 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.

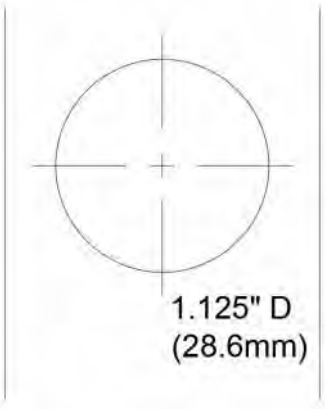
SCAN QR CODE or visit our web site for additional technical information, product specification sheets, downloads, instructions, and system configuration guides. **wagnerarchitectural.com**



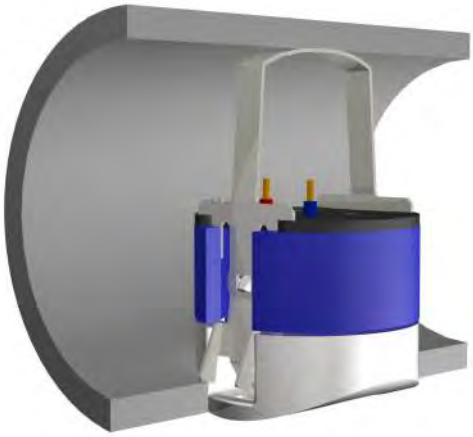

Lumenpod 28 has a patent pending design that features a simple push in installation and is provided with our specifically designed de-installation tool when service might be required.

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



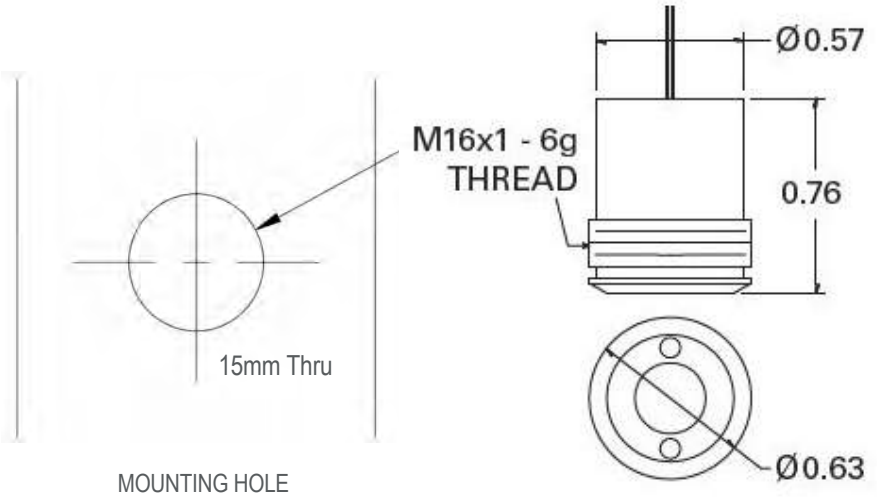


The next generation point source from Wagner Architectural Systems has performance that far exceeds the expectations of its discreet 5/8" diameter. The mechanically threaded luminaire is designed for pathway illumination with mounting options for hand rail, guardrail, decks, and shelter or entry structures. 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

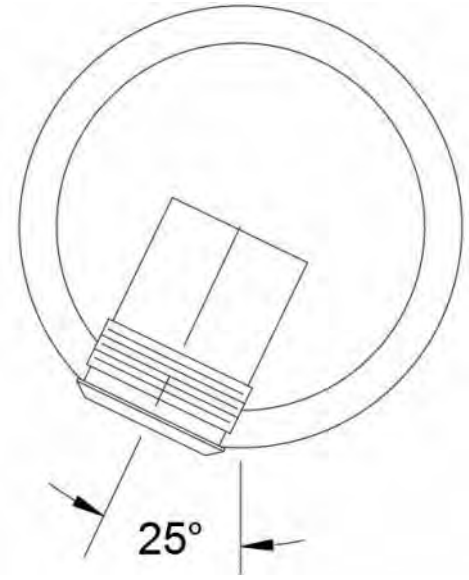
Wagner Architectural will drill and tap our material specifically for your project or you can use the following in the field for retrofit applications:
M15 Cutter - annular cutters are recommended for stainless steel applications
M16 Tap - Fastenal Part Number: 3157793

| 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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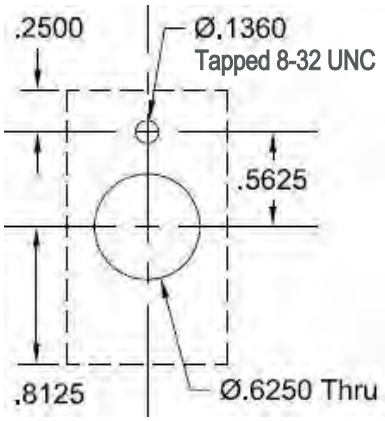
# DESIGN SPECIFICATIONS
## BANTAM



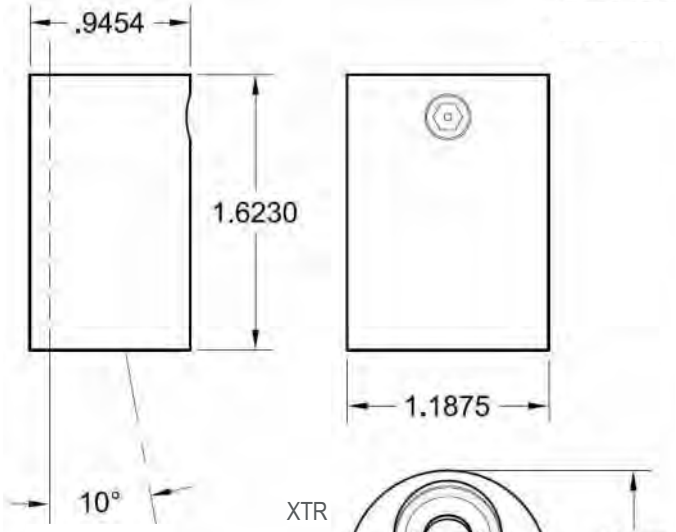


This post mount luminaire is designed for wall grazing and pathway illumination with mounting options for railings, walls, decks, and entry structures. Superior harsh environment protection and vandal resistance are combined with a simple field or factory prepared installation using included 316 stainless steel hardware. The Bantam provides an inconspicious architectural solution for new or retrofit applications and egress compliance opportunities.

SCAN QR CODE or visit our web site for additional technical information, product specification sheets, downloads, instructions, and system configuration guides. **wagnerarchitectural.com**




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' |

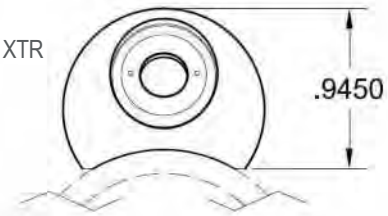
SUITABLE VALUES FOR 100W, 24VDC @ 500mA DRIVE CURRENT, A 20 FOOT REMOTE DISTANCE:

- 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.

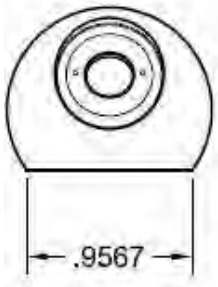
Verify all distance caculations with overall design of system. Conductor supply and guage specification by others.

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

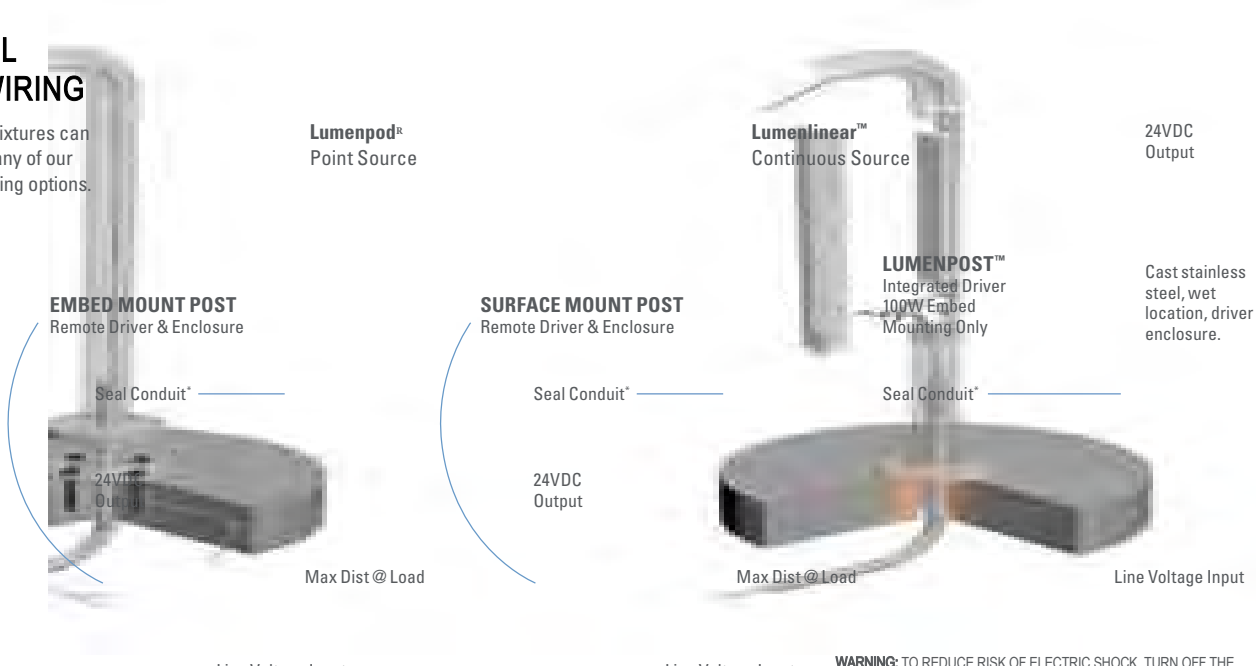
4X NEMA ENCLOSURES:
- Molded Polycarbonate
- Painted Steel
- Stainless Steel

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.

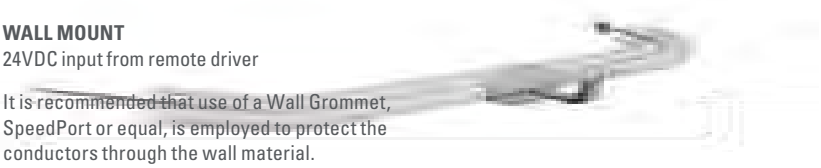
*Seal conduit with RTV or silicone, prior to rail installation, to prevent moisture intrusion.

| 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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LUSY GUIDE R1

# 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



$

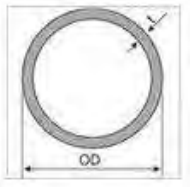
ROTARY BEND CORNER
Continuous pipe from rail to post, mechanically bent for smooth transition.



$$$

WELDED MITER CORNER
Machined angled segments fused with a blended seam weld.

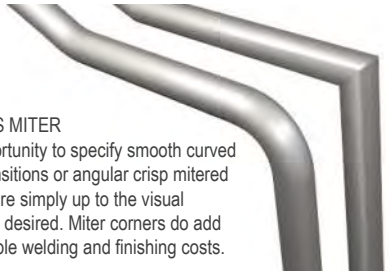
### MATERIAL




| | | |
|---|---|---|
| **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



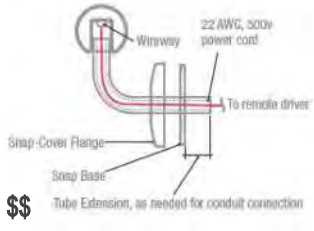
**SBK $**

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.

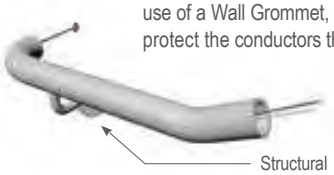



**WBK $$**

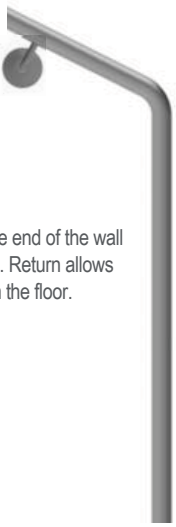
WIREWAY WALL BRACKET
Heavy wall tube stainless steel arm, welded flange with snap cover, mechanical or weld saddle for structural simplicity.

**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.



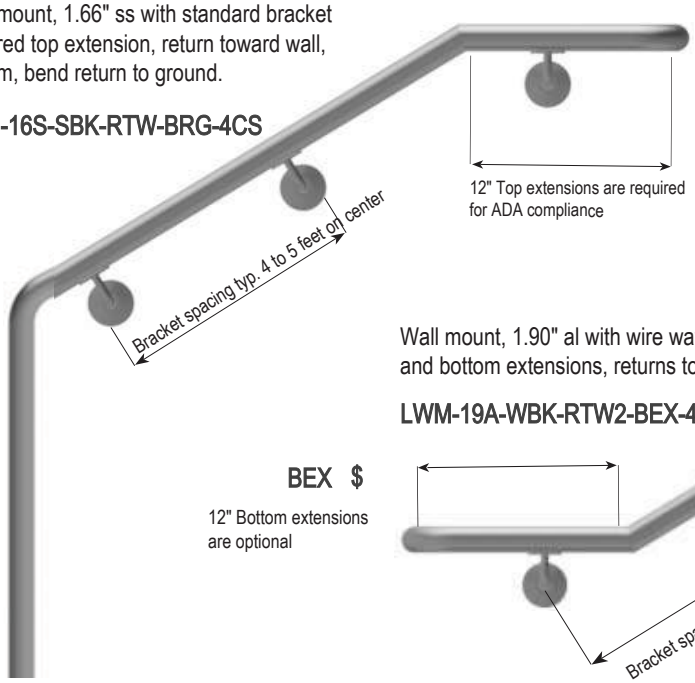
**BRG $**

**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**

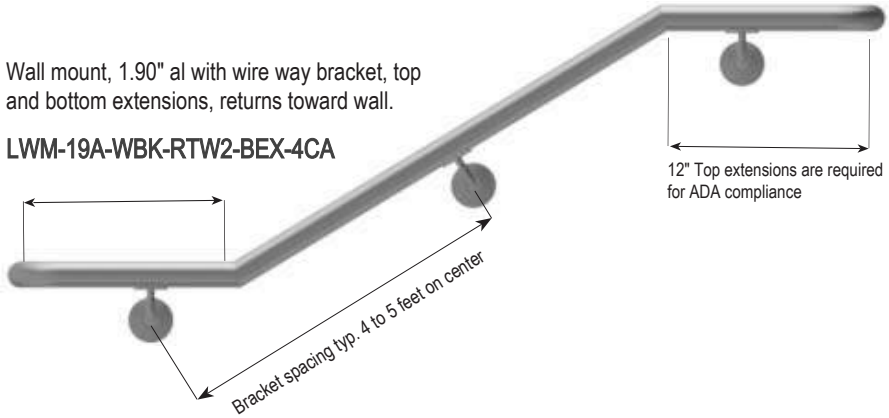



Wall mount, 1.90" al with wire way bracket, top and bottom extensions, returns toward wall.

**LWM-19A-WBK-RTW2-BEX-4CA**

**BEX $**

12" Bottom extensions are optional



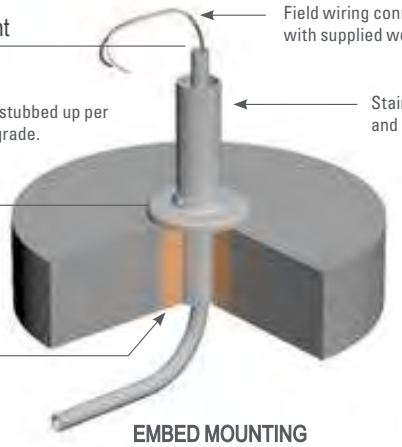

WAGNER ARCHITECTURAL SYSTEMS
888.243.6914 // SYSTEMS@MAILWAGNER.COM
10600 West Brown Deer Road // Milwaukee, WI 53224, USA

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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.

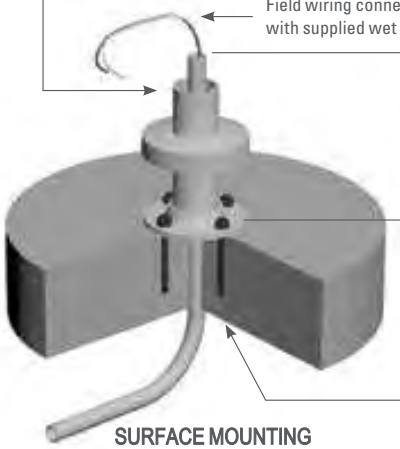
½" electrical conduit (max) stubbed up per code requirements, above grade.

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



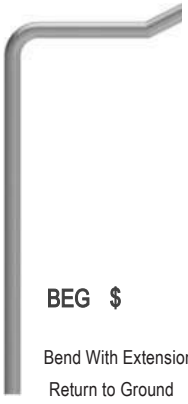
**BRG $**
Bend Return to Ground



**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



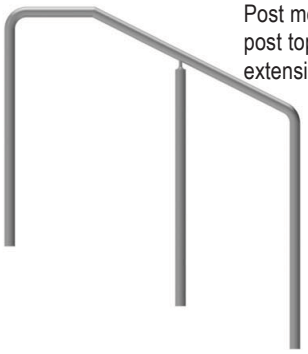
**MLR $$$**
Mitered Loop Return to Post



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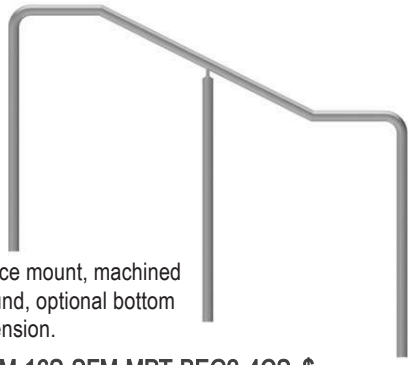
# DESIGN SPECIFICATIONS
## LUMENRAIL





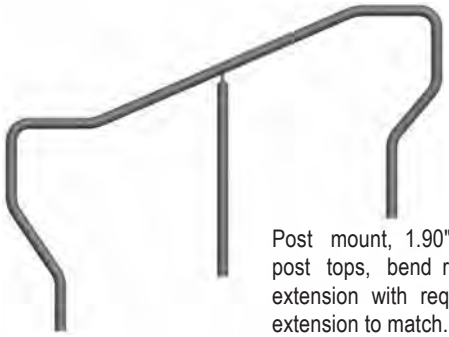
Post mount, 1.90" ss with embed mount, machined post tops, bend returns to ground with required top extension.

**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.

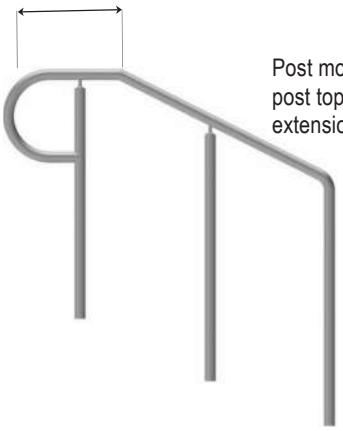
**LPM-16S-SFM-MPT-BEG2-4CS $**



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.

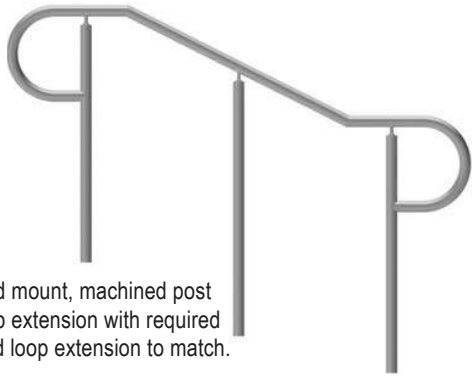
**LPM-19A-EMB-MPT-SEG2-4CA $$**

12" Top extensions are required for ADA compliance



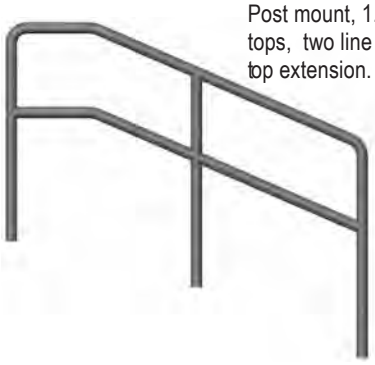
Post mount, 1.66" ss with surface mount, machined post tops, bend return to ground with required top extension, round loop extension specified.

**LPM-16S-SFM-MPT-RLR-4LS $$**



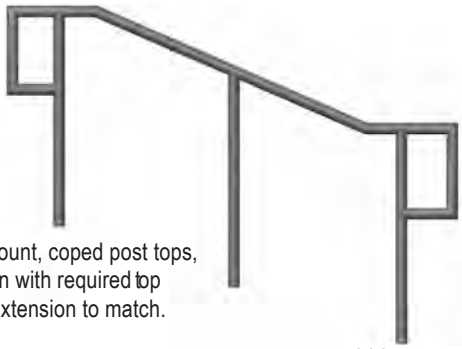
Post mount, 1.90" ss with embed mount, machined post tops, optional bottom round loop extension with required top extension, specified as round loop extension to match.

**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:**
Due to fabrication processes, color variation will be visible through anodized finishes.


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# DESIGN SPECIFICATIONS
# LUMENRAIL™



YS6
Lam Partners
ARCHITECTURAL LIGHTING DESIGN

## 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**<br>**15S -** 1.50" X 0.120" wall, 316 stainless<br>**16S -** 1.66" schedule 40, 316 stainless<br>**19S -** 1.90" schedule 40, 316 stainless<br>**Aluminum**<br>**16A -** 1.66" schedule 40,6063 Aluminum (Wall Mount Only)<br>**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.<br>**WBK** - Wire-way wall bracket, heavy wall tube stainless steel arm, welded flange with snap cover, mechanical or weld saddle for structural simplicity.<br>**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<br>**RTW -** Return bend toward the wall at the end of the hand rail assembly.<br>**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.<br>**BRG -** Bottom return to ground, optional return bend at the end of the wall mount hand rail assembly.<br>**BEX** - 12" Bottom extensions are optional | **Stainless Steel**<br>**4CS** -Satin Brushed, #4 Circumferential<br>**4LS** -Satin Brushed, #4 Longitudinal<br>**7PS** -Polished #7 Mirror-like<br>**Aluminum**<br>**4CA** -Satin Brushed, #4 Anodized Clear<br>**4BA** -Satin Brushed, #4 Anodized Bronze<br>**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**<br>**15S -** 1.50" X 0.120" wall, 316 stainless (Embed Only)<br>**16S -** 1.66" schedule 40, 316 stainless<br>**19S -** 1.90" schedule 40, 316 stainless<br>**Aluminum**<br>**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.<br>**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.<br>**CPT -** Coped post continuously seam welded to rail for a uniform presence. | 12" Top extensions are required for ADA compliance<br>**BRG -** Bend return to ground.<br>**SEG -** 7 Bend return to ground.<br>**RLR -** Round loop return to post.<br>**SLR -** Square loop return to post.<br>**MLR -** Mitered loop return to post.<br>**BEG -** Bend extension (bottom)return to ground. | **Stainless Steel**<br>**4CS** -Satin Brushed, #4 Circumferential<br>**4LS** -Satin Brushed, #4 Longitudinal<br>**7PS** -Polished #7 Mirror-like<br>**Aluminum**<br>**4CA** -Satin Brushed, #4 Anodized Clear<br>**4BA** -Satin Brushed, #4 Anodized Bronze<br>**PLEASE NOTE:** Due to fabrication processes, color variation will be visible through anodized finishes. |

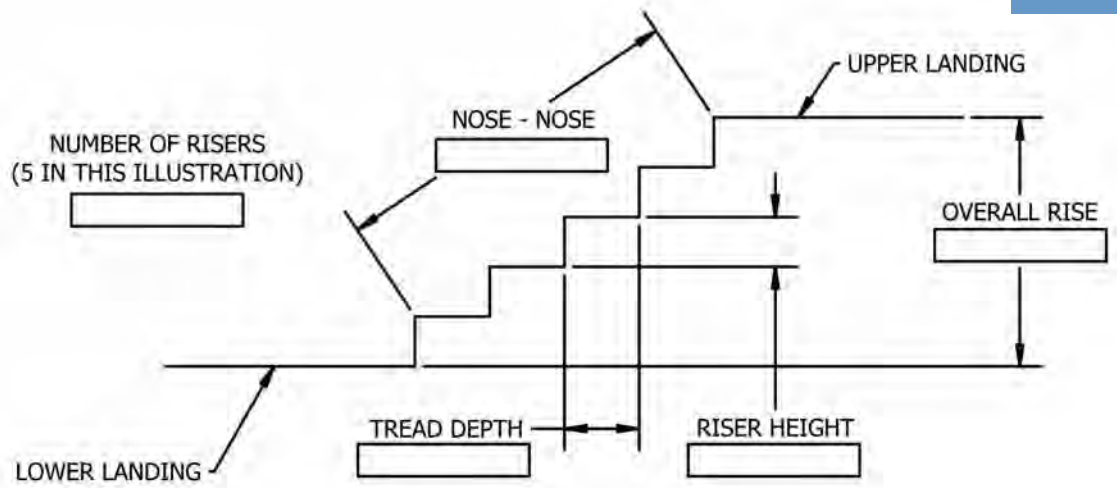


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LUSY GUIDE R1

# STAIR AND RAMP MEASURING SHEET
## LUMENRAIL

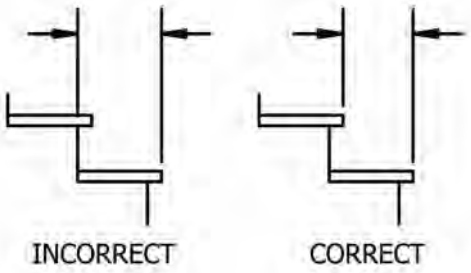


* It is recommended that a professional hand rail installer be involved in planning and installation of custom fabricated handrails.

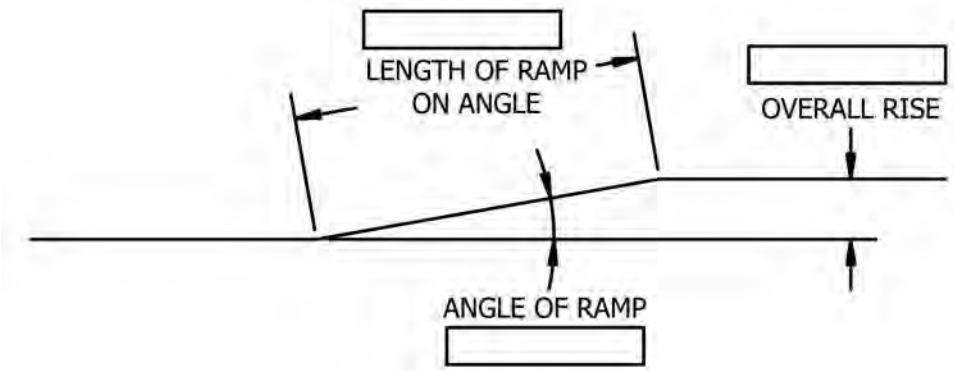



### STAIR INFORMATION

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

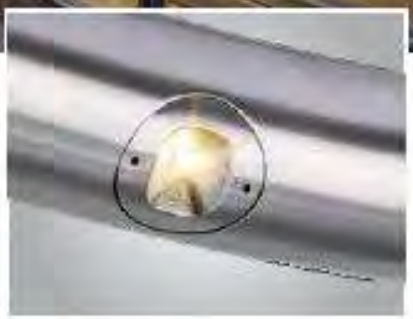
1) Make a complete sketch of the ramp.
2) Measure the length of ramp on angle and overall rise of ramp. These are the most critical dimensions for Wagner.
3) Measure angle of ramp if possible. Any additional measurments are helpful


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YS6
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ARCHITECTURAL LIGHTING DESIGN

# LUMENRAIL. LIGHTS YOUR WAY

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**SAN DIEGO MARINA**
**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.

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NEW *Featuring Tegan's Exclusive "Powerspan Cable"*

YS7

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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.

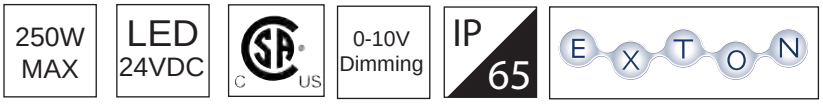
**Envelopes:** “G” (Globe) Glass Envelope Frosted, “G” (Globe) Glass Envelope Silver Bowl, “G” (Globe) Glass Envelope Copper Bowl.

**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.

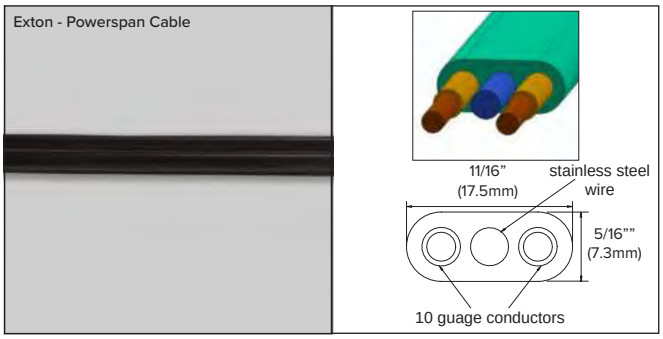
**Labels:** ETL Listed; Tested to UL 2108 Low Voltage Lighting Systems. In a continuing effort to offer the best product possible we reserve the right to change, without notice, specifications or materials. Technical specification sheets that appear on teganlighting.com are the most recent version and 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

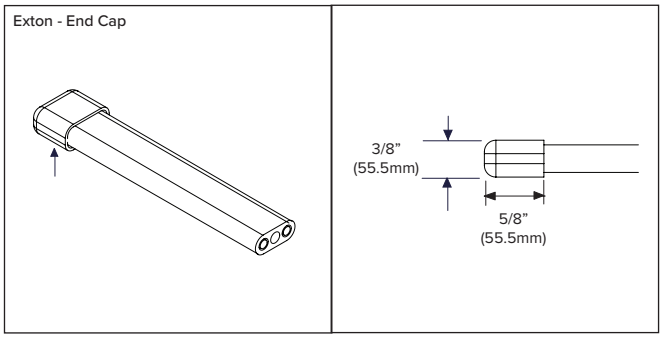


## Exton - Powerspan Cable




Exton - Powerspan Cable - Black (EX-C-BLK)

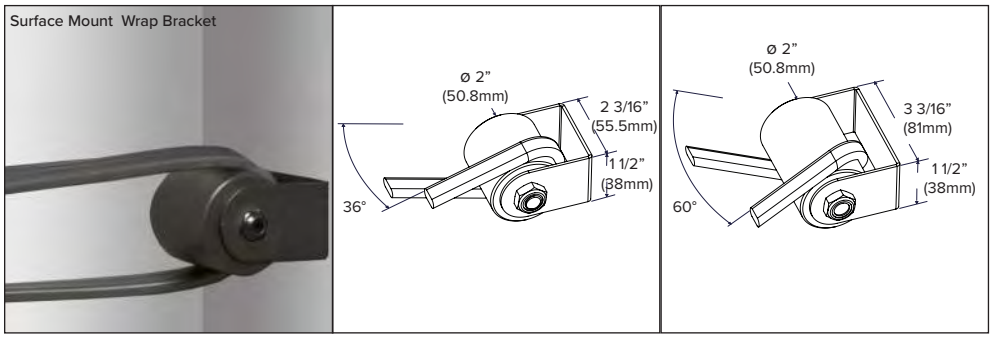
Exton Self-Sealing Powerspan Cable is IP-65 for interior/exterior applications. Order in 1’ (30.5cm) increments. Exton Powerspan Cable contains two #10 AWG stranded copper conductors alongside a central strand of steel support cable. Field cuttable. 24VDC at 250W Max. per run. Polarity does not matter. Available in Black finish (only). Refer to Installation Instructions Sheet and Exton Application Guide for details.




Exton End Cap - Black Finish (EX-EC-BLK)

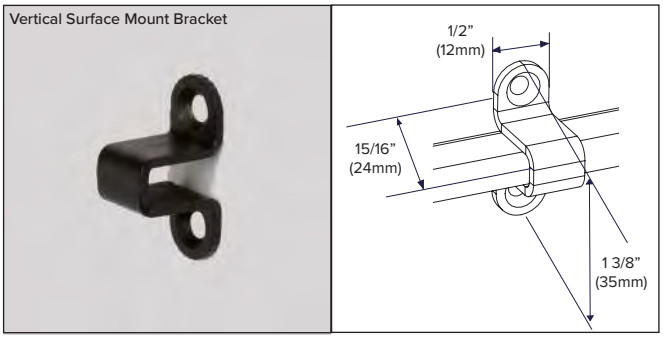
Exton End Cap is for interior/exterior applications. One (1) required per run. Available in Black finish (only). Refer to Installation Instructions Sheet and Exton Application Guide for details.

## Exton - Cable - Mounting Brackets



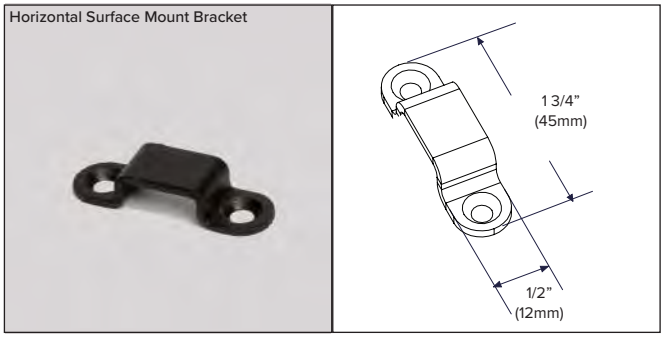

Surface Mount 2” Wrap Bracket, Black (EX-SWB-2-BLK)
Surface Mount 3” Wrap Bracket, Black (EX-SWB-3-BLK)

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).



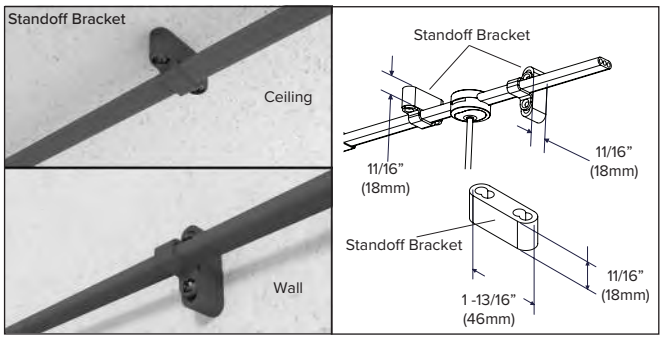

Horizontal Surface Mount Bracket, Black (EX-HSMB-BLK)

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

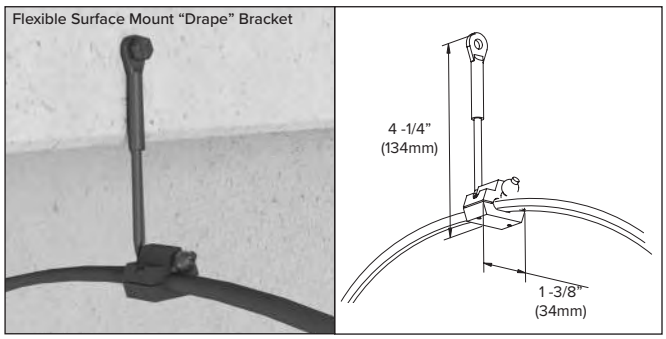


## Exton - Cable - Mounting Brackets



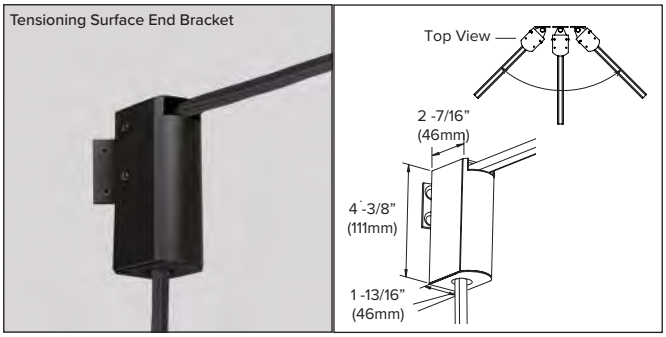

Standoff Bracket, Black (EX-SOBR-BLK)

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.



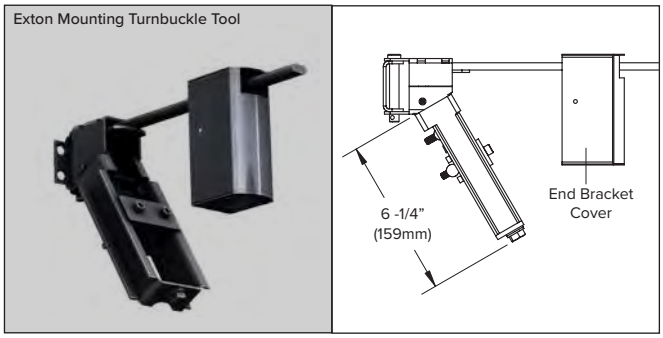

Flexible Surface Mount “Drape” Bracket, Black (EX-FSDB-BLK)

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).



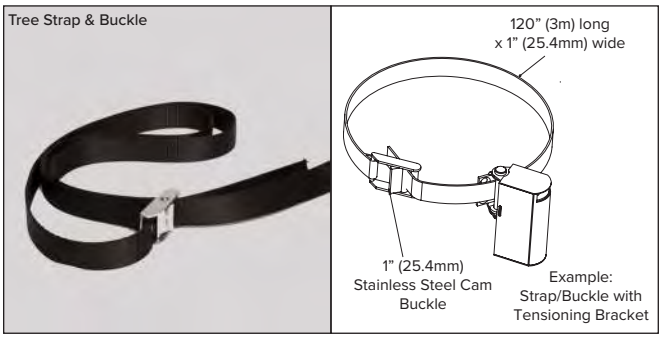

Tensioning Surface End Bracket, Black (EX-TSEB-BLK)

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.



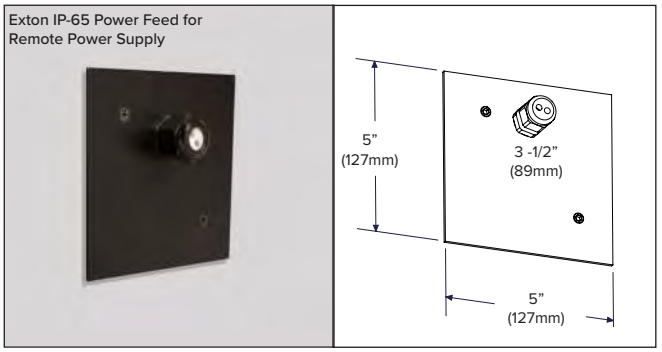

Tree Strap & Buckle (EX-10-TSB)

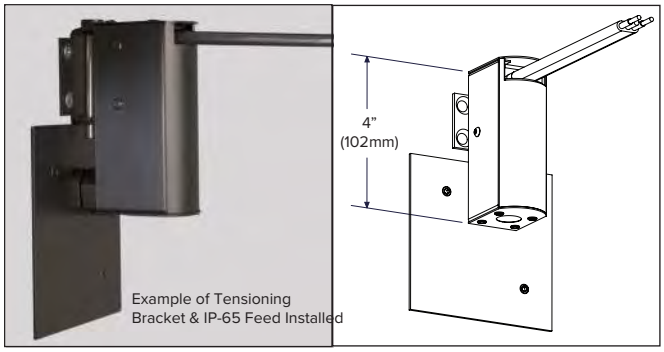
Tree Strap & Buckle Bracket for Exton Powerspan Cable mounting to a tree. 1500 lb. test, UV-resistant, water-resistant. Field-cuttable. 10’ (3m) Strap length; contact factory for alternative strap lengths over 10’ in 1’ increments. Strap available in Black (BLK) finish (only). Galvanized Stainless Steel 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



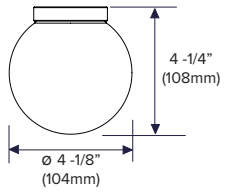

Exton IP-65 Power Feed for Remote Power Supply (EX-PF-BLK)

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.

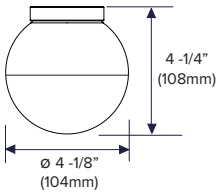
# Exton Powerspan Cable System



## Exton - Glass Envelope - Globe “G” Type



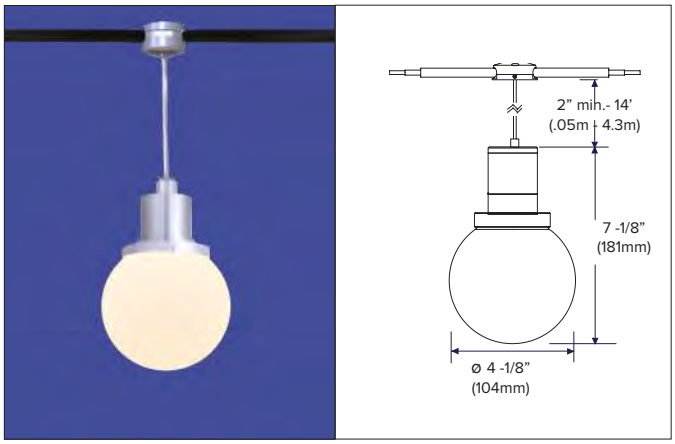

“G” Glass Envelope, Frosted
Hand Blown, Globe (G) Shape, Frosted Glass Envelope for Kore-EX5.




“G” Glass Envelope, Silver/Copper Bowl
Hand Blown, Globe (G) Shape,Glass Silver/Copper Bowl for Kore-EX5.

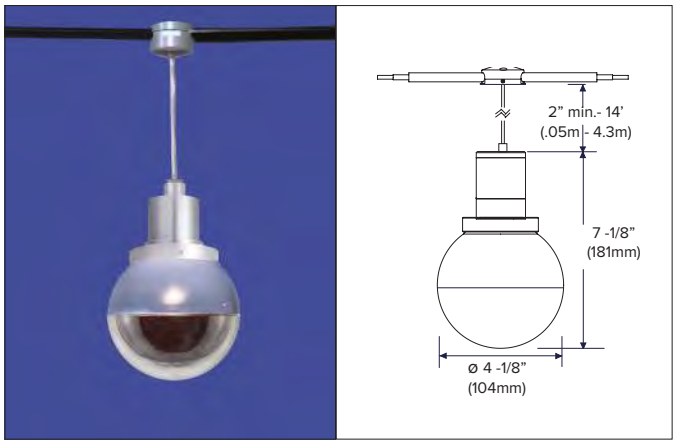
1. Contact Factory for a alternative color options. Refer to page 1 for minimum units.

## Exton - Cable - Kore-EX5 24VDC Pendant with “G” Glass Envelope - Combinations



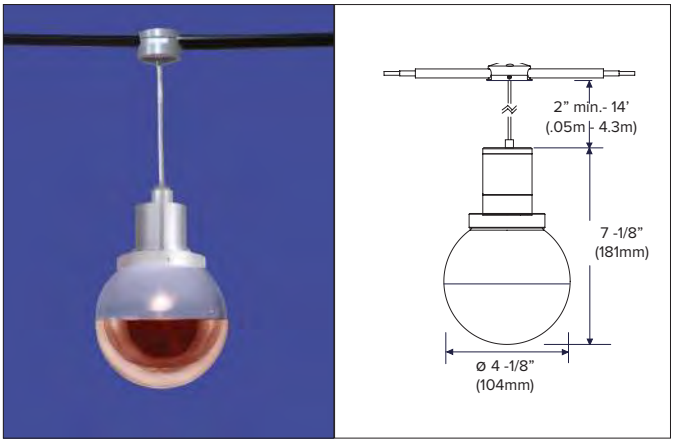

Kore-EX5 LED Pendant, Cable Mount, G Envelope Frosted
Aluminum or Black finish.

(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)

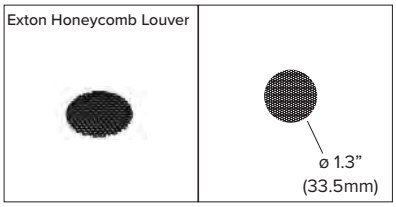
1. Order Power Supplies separately. Refer to Exton Power Supply IP20 Specsheet, IP24 Specsheet or IP66 Specsheet for options.
2. Order Accessories on p. 2 separately.
3. Power Cord is factory cut (X) to 1” increments between **2” min. to 14’ max. length standard** (specified Cord length, not overall length). Specify desired length, not field cuttable. Contact factory for longer lengths

# Exton Powerspan Cable System



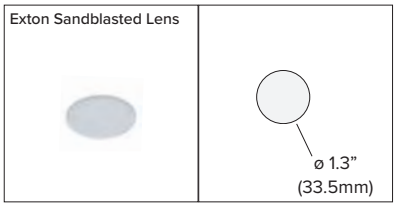
## Exton - Kore-EX5 LED - Accessories

Exton Honeycomb Louver



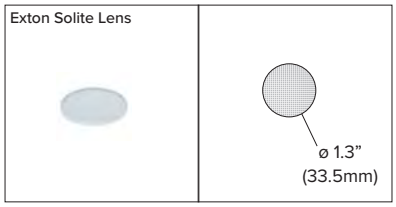

**Exton Honeycomb Louver, Black (EX5-HCL-BLK)**
1/8” Hexcell black metal. Controls spill illumination and glare.

Exton Sandblasted Lens



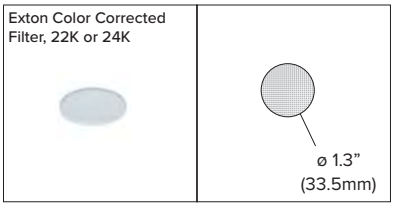

**Exton Sandblasted Lens (EX5-SBL)**
Creates an uniform beam pattern that is useful for wall washing. Tempered glass.

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.



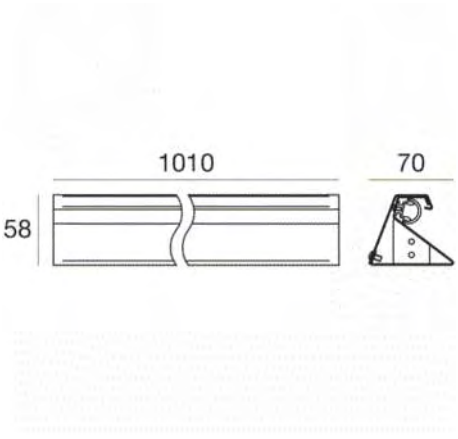
# Dirigo_M1

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.

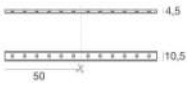
and can be floor-mounted.

Compliant with the EN 60598-1 standard and its specific provisions.

# Dirigo_M1

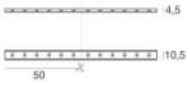
Lines | Modular Master
**64591**

## Components




silicone_c - LED Strip | stripLED 72 W 24 V

**Code**
62403

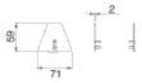



silicone_c - LED Strip | stripLED 72 W 24 V

**Code**
62403N

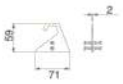
# Dirigo_M1

Dirigo_M1 | Lines | Accessories
**64591**




Closing cap

**Code**
64592




Closing cap

**Code**
64593

YS10

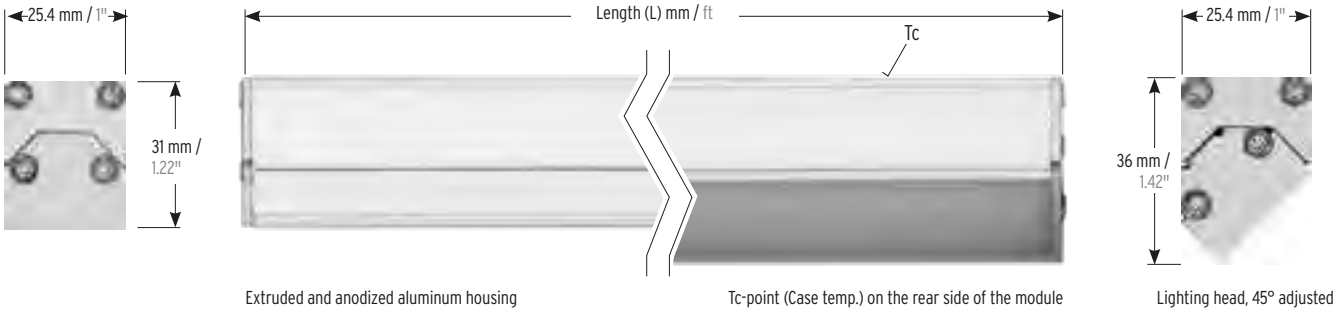
Lam Partners

# 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

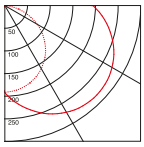
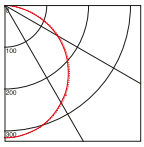
Temporary immersion protection

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

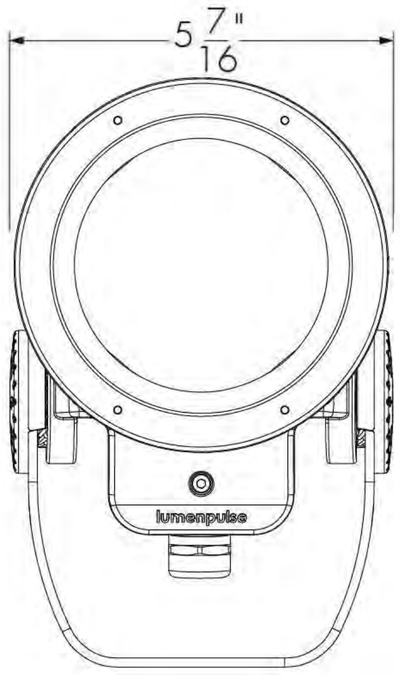
**Small**

WHITE AND STATIC COLORS

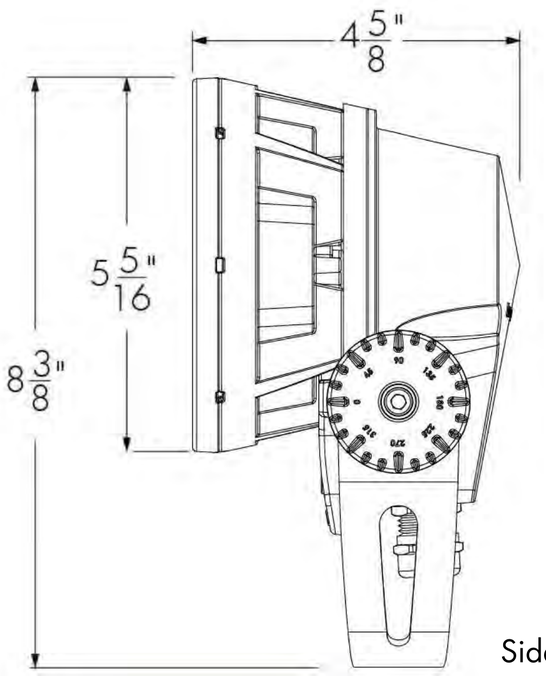
**Project Name** _____ **Qty** _____

**Type** _____ **Catalog / Part Number** _____






Front view



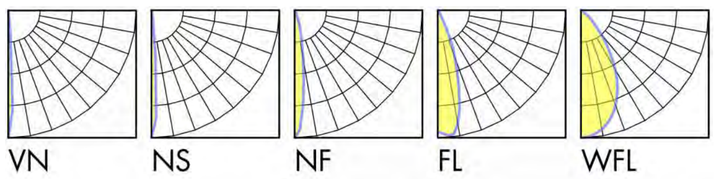

Side view

## 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™

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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

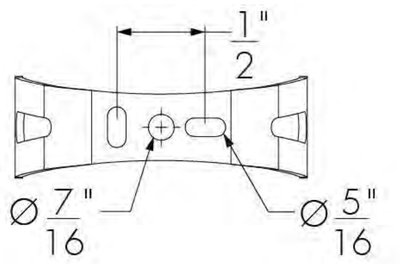
# lumenbeam

**Small**

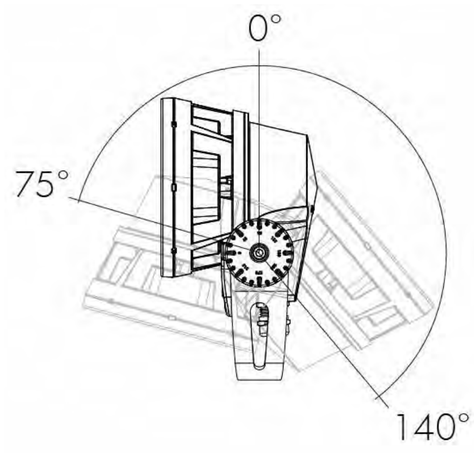
WHITE AND STATIC COLORS

## Mounting details

### Mounting hole pattern - standard yoke

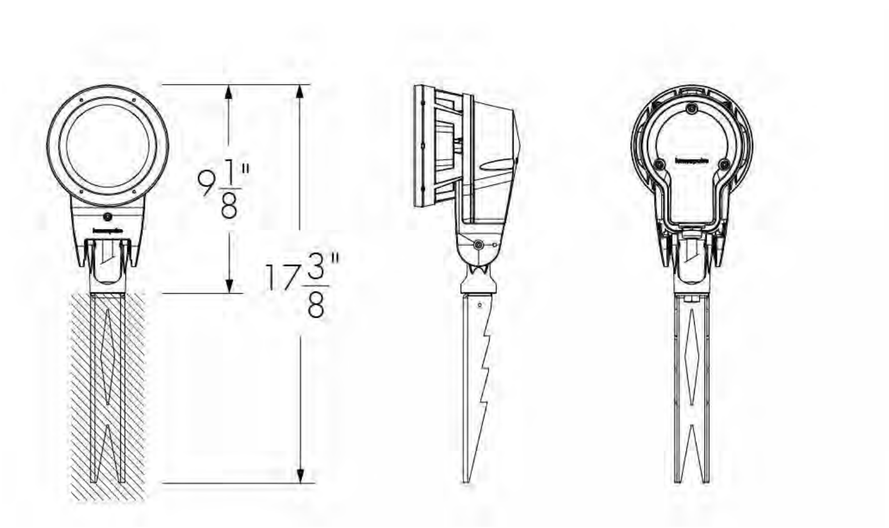


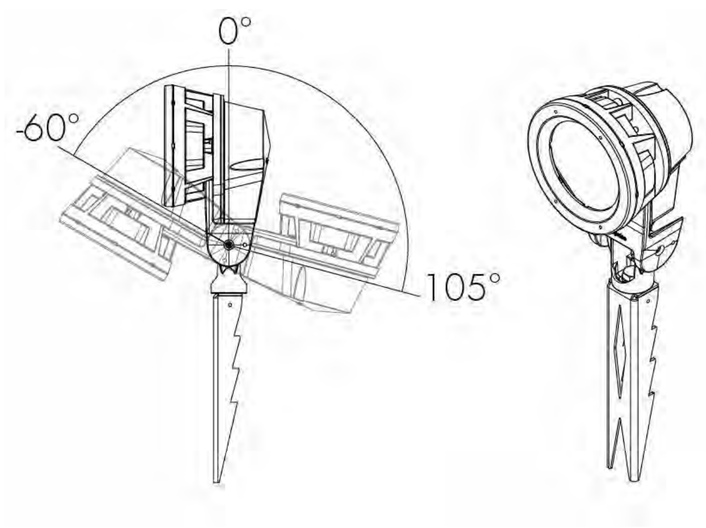

### Adjustable pivot limits




## Mounting options

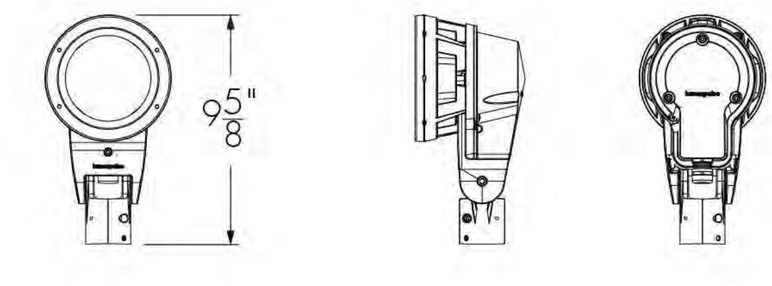
### SK - Stake mounting



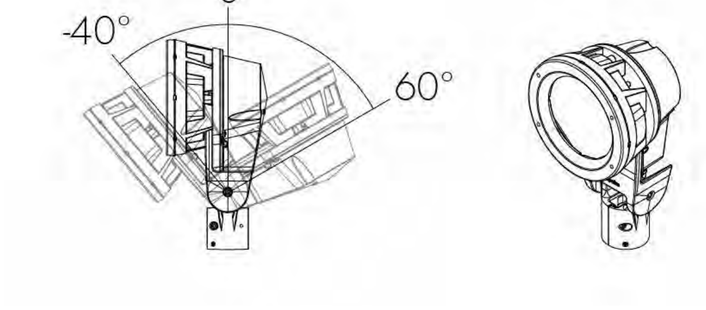




Adjustable pivot limits

### KN - Knuckle mounting

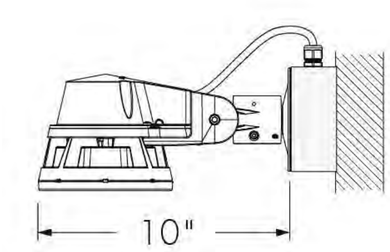



Suitable for 1/2 in, 3/4 in, and 1 in pipe diameter

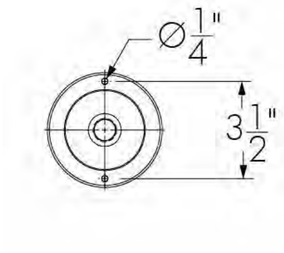



Adjustable pivot limits

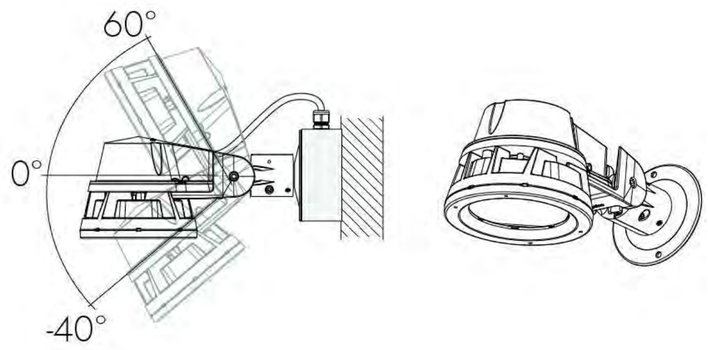
### CN - Canopy cover




Suitable for standard round junction boxes, surface mounted




Mounting hole pattern




Adjustable pivot limits

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# Specification Sheet

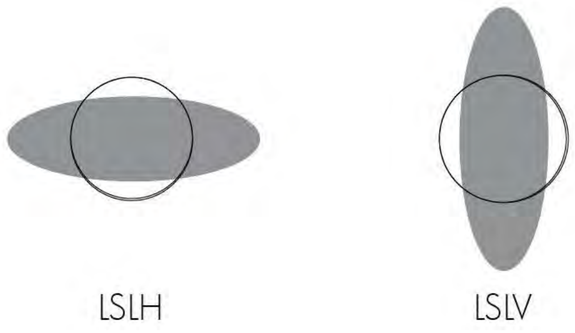
# lumenbeam

**Small**

WHITE AND STATIC COLORS

## Optical options

**LSLH - Linear spread lens horizontal distribution**
**LSLV - Linear spread lens vertical distribution**

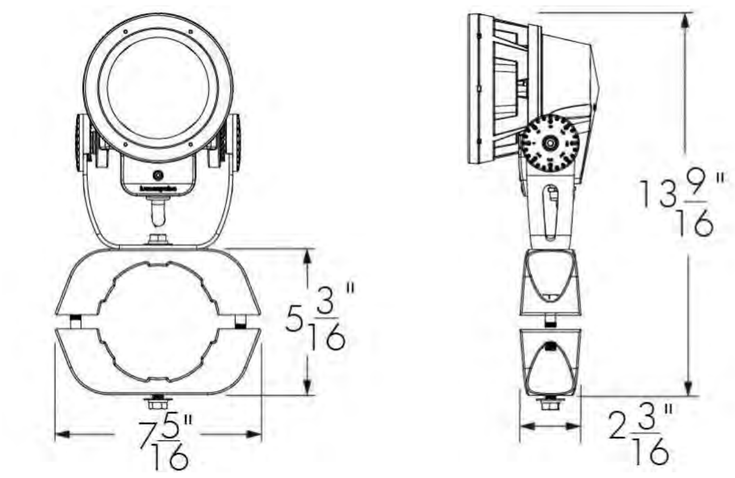



| | Beam angle with LSLH/LSLV |
|---|---|
| **VN** | 8° x 60° |
| **NS** | 9° x 60° |
| **NF** | 18° x 65° |
| **FL** | 32° x 72° |

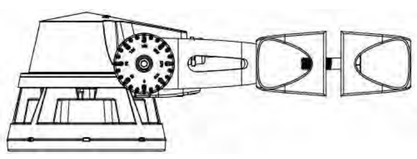
Factory installed, not adjustable on site. Not available for WFL optic.
See 'Optical Accessories' section for field adjustable spread lens (LSLA).

## Mounting accessories (order separately)

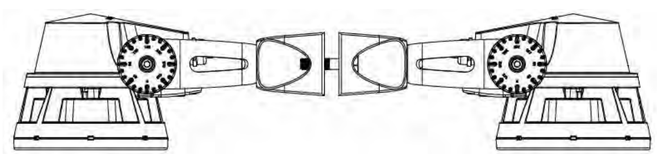
**Round pole mounting accessory**




PM4 model shown.
Consult factory for square pole section.



**PM4-1, PM4.5-1, PM5-1 -** Round pole mounting accessory - single fixture

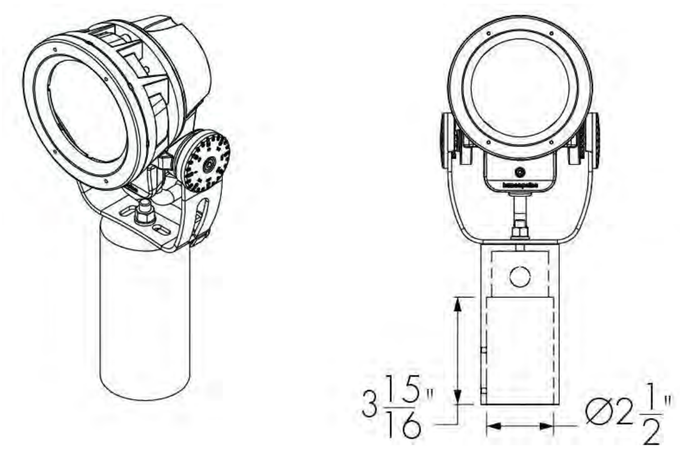


**PM4-2, PM4.5-2, PM5-2 -** Round pole mounting accessory - twin fixures
*One bracket assembly is supplied per 2 fixtures unless otherwise specified.

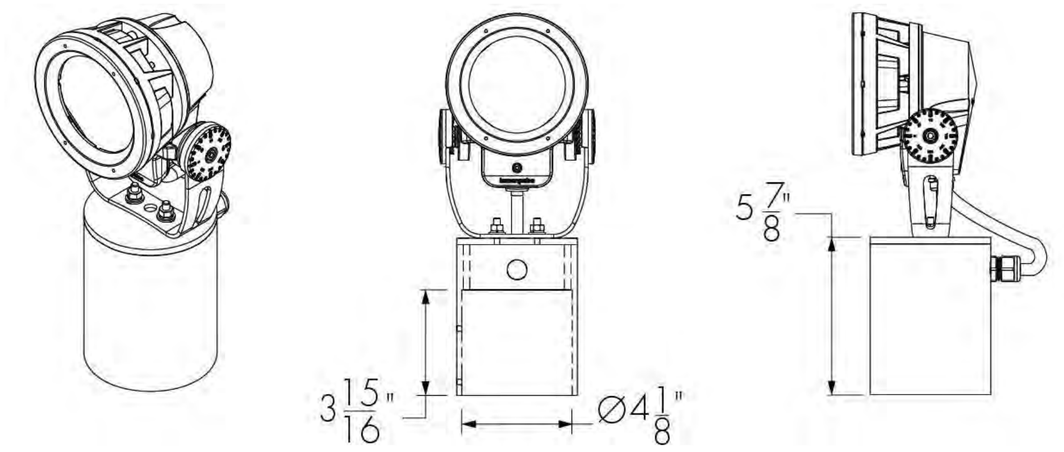
| | PM4 | PM4.5 | PM5 |
|---|---|---|---|
| **For pole Ø** | 4" ± 1/16" | 4.5" ± 1/16" | 5" ± 1/16" |

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

# lumenbeam

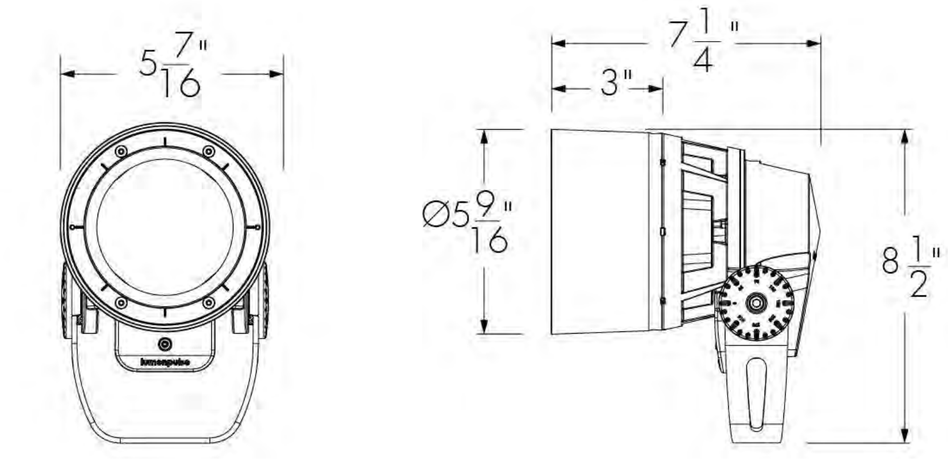
**Small**

WHITE AND STATIC COLORS

## Optical accessories (order separately)

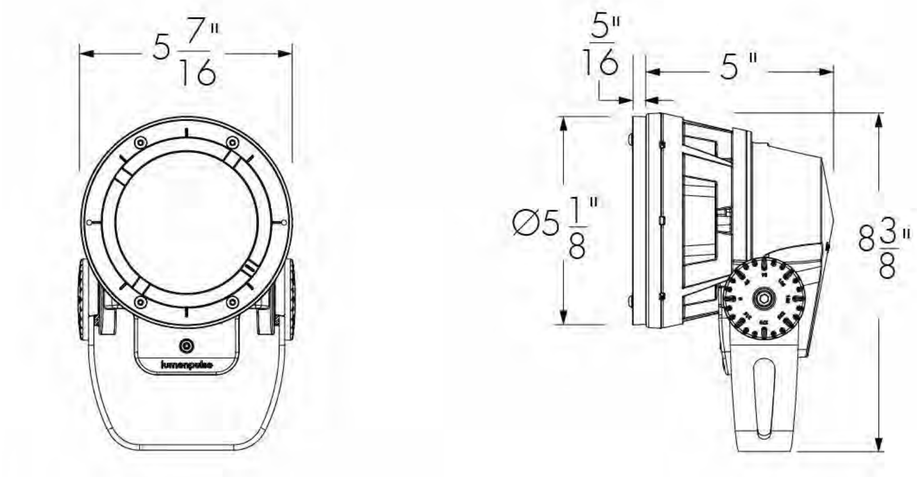
Installed optical accessories will affect the maximum pivot limits for each mounting option, consult factory for details.

**SN - Snoot**




LBSSN-FINISH-BK
Interior surface painted black. Please specify desired exterior FINISH from list of available finishes.

**LSLA - Linear spread lens adjustable**



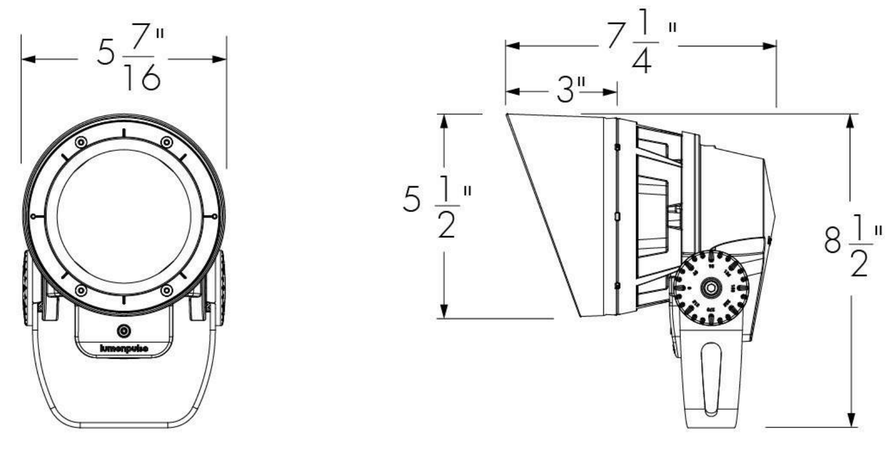

LBSLSLA-FINISH
Please specify desired exterior FINISH from list of available finishes.

**Accessory combinations**

| + | Snoot | Visor |
|---|---|---|
| **Linear spread lens adjustable** | YES | YES |
| **Wire guard** | YES | YES |

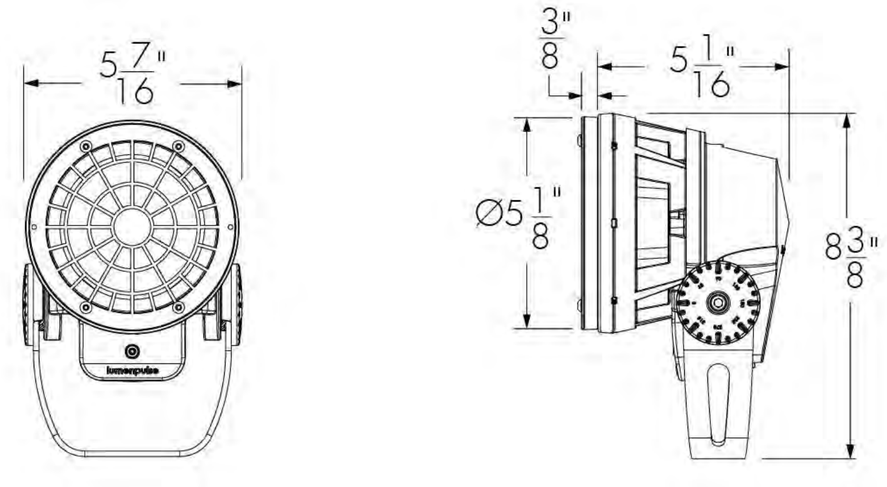
Accessory combinations must be ordered together on a single line.
Ex: A snoot + wire guard combination order code is LBSSNWG-BK-BK.

**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

# lumenbeam

**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

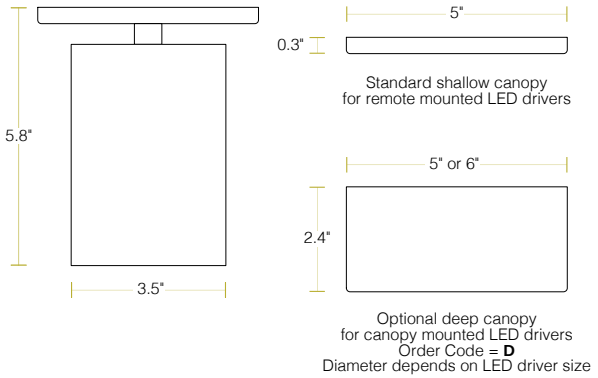
| Model | Driver Location | Dimming | Mounting Location | Output | CRI * | C.C.T. | Reflector | Shell Color | Options |
|---|---|---|---|---|---|---|---|---|---|
| C2SM - | | | | - | | | | - | - |
| | **R**=Remote | **N**=None | **D**=Damp | **07**=700 lm | **83**=83 | **27**=2700K | **20**=20° | **XX** | |
| | **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**
**C**ORE **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<br>R9 ≥ 90<br>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

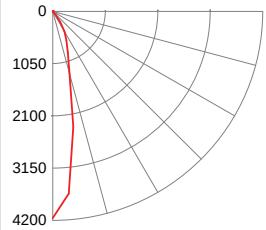
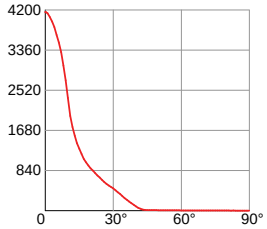
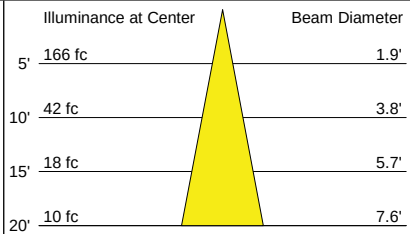
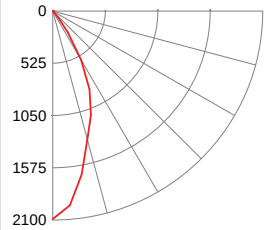
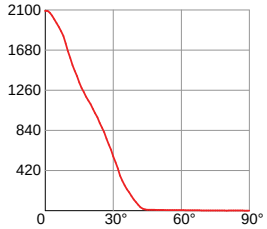
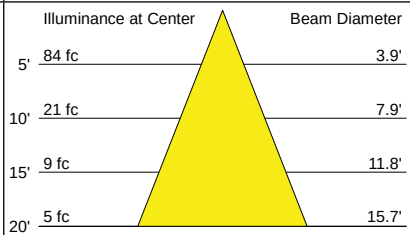
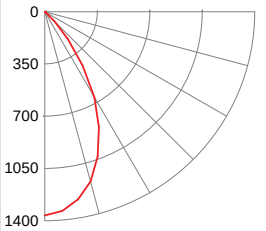
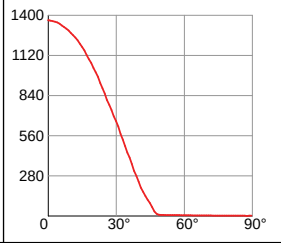
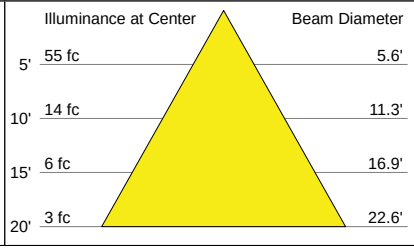
| | |
|---|---|
| Standard LED Drivers* (included in base price) | Order Code **V** = 0-10V dimming to 10% |
| | Order Code **P** = Phase dimming to 10%<br>Compatible with both forward and reverse phase dimmers |
| Optional LED Drivers* | eldoLED 0-10V, DALI, or DMX dimming to 0% |
| | Lutron Hi-lume™ 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<br>Beam Angle = 21°<br>Field Angle = 63°<br><br>LOR = 89.4%<br><br>Beam = full width @ 50%<br>Field = full width @ 90% |
| 40° | **40** |  |  |  | CBCP = 1607 cd/klm<br>Beam Angle = 43°<br>Field Angle = 73°<br><br>LOR = 88.7%<br><br>Beam = full width @ 50%<br>Field = full width @ 90% |
| 60° | **60** |  |  |  | CBCP = 1050 cd/klm<br>Beam Angle = 59°<br>Field Angle = 86°<br><br>LOR = 85.2%<br><br>Beam = full width @ 50%<br>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.

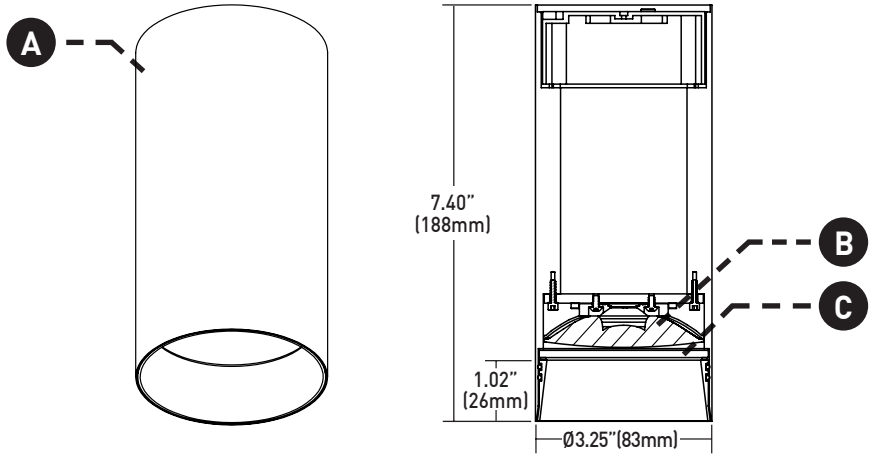
**F CY2/3-SMK-4/0-(finish) ***
Surface mount kit includes mounting plate and 5" concealer plate that installs between fixture and standard 4" 4/0 j-box for existing applications where standard j-box cutout is to be concealed.

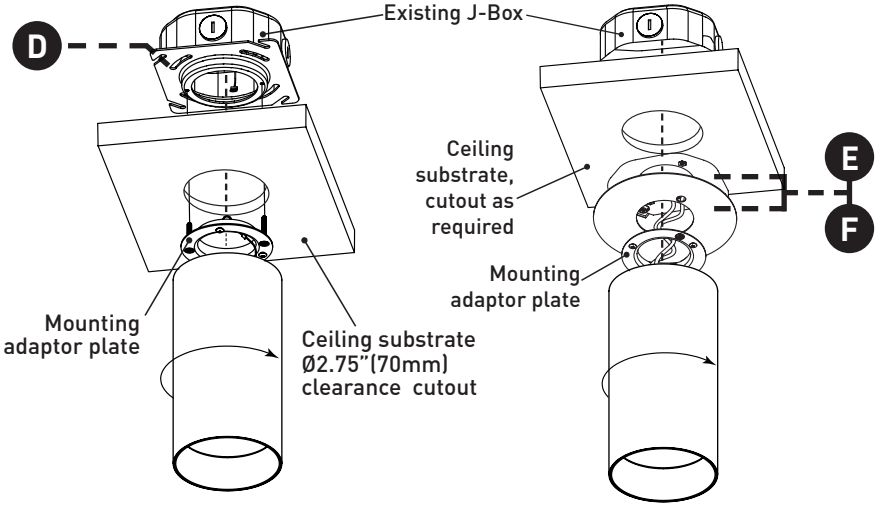
**G CY3-CMJB-2I-1T-(finish)-3/4**
Ceiling mount junction box perfectly matches the cylinder profile for a continuous, integrated look where exposed ceiling mount junction box and conduit applications apply. For use with 3/4" EMT conduit only. Features two conduit entrances on either side and 1 conduit 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.

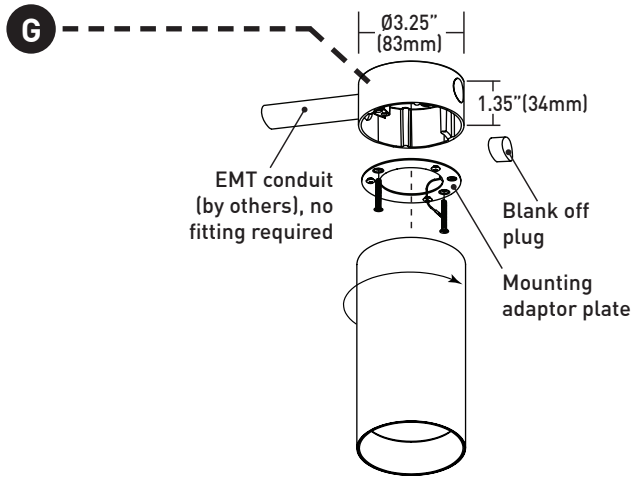
## MOUNTING NOTES

* CY2/3-JBMP and CY2/3-SMK-3/0 & 4/0 not recommended for use with pancake style j-box.

## DIMENSIONS / DRAWINGS



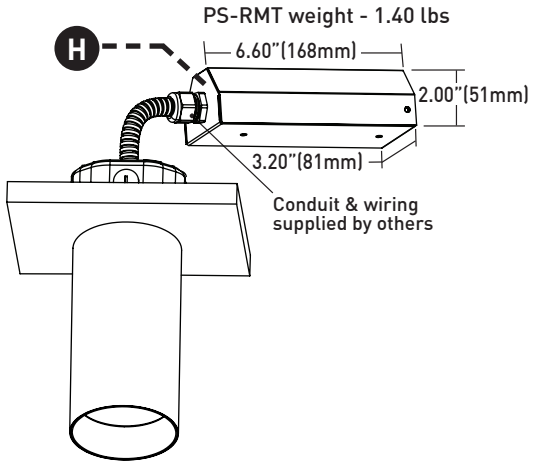



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## REMOTE POWER SUPPLY

**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-<br>DCSCCL-253P- | 1-8 |
| Nova T CL 250W dimmer | NTCL-250- | 1-10 |

LUTRON
2016 OEM ADVANTAGE ACCOUNT



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YW3
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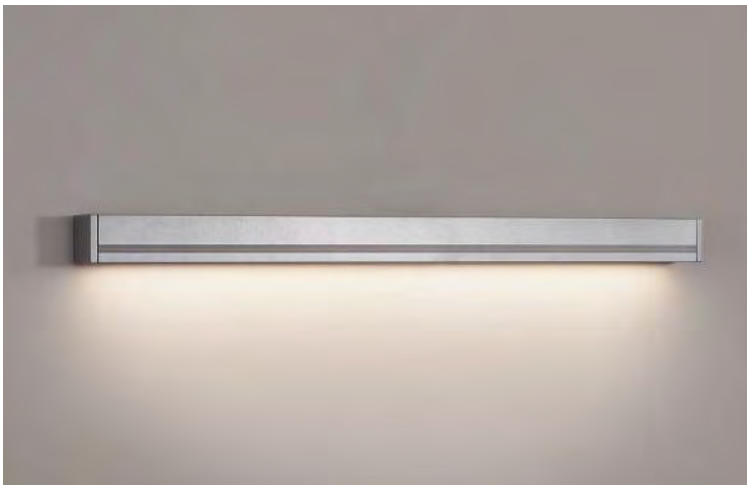
# OW2480 – PASSAGE™
## Mullion Mount with Remote Power Supply

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 |



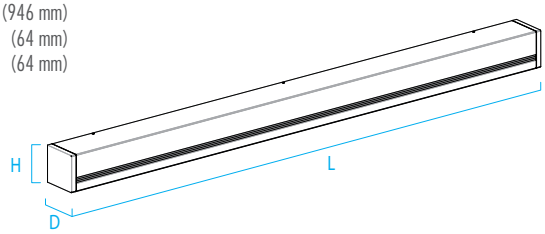
Passage is a sleek outdoor fixture for mounting horizontally over doorways, on facades, along paths of egress and window mullions.

### DIMENSIONS

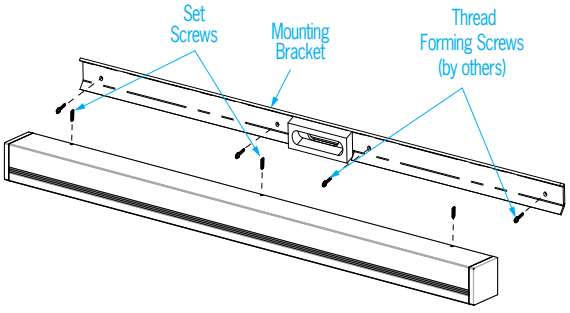
Depth is measured from wall to front of fixture

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

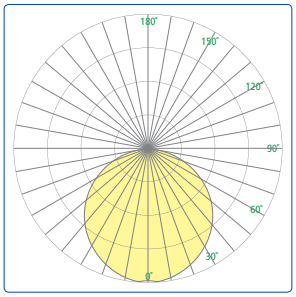
**DS** Dual circuit switching (includes 2 drivers).
Lumen output and wattage is split in half for each circuit

IP65 Rated · LED · ADA Compliant · ETL Listed · 5 Year Warranty

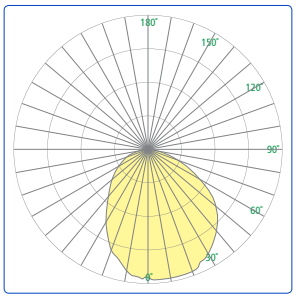
# OW2480 – PASSAGE
## Mullion Mount with Remote Power Supply

VISA LIGHTING

### Photometrics




LUM (Luminous Lens)

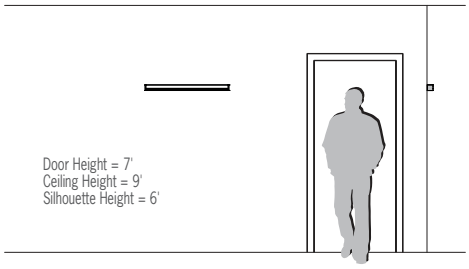



FT (Forward Throw Optic)

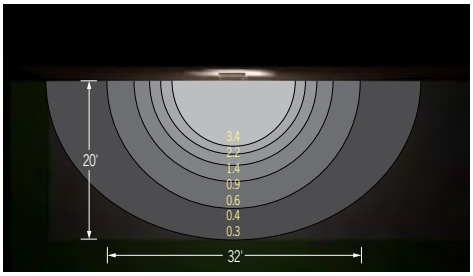
### Technical Information

- 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

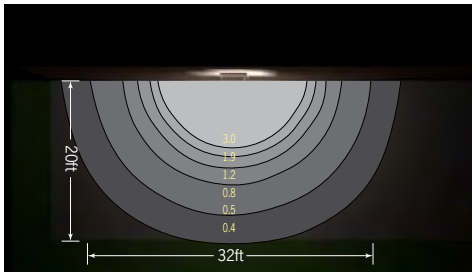



### Path of Egress – Luminous Lens




OW2482 –H Downlight, Mounted at 10′ AFF, .70 light loss factor used

### Path of Egress – Forward Throw

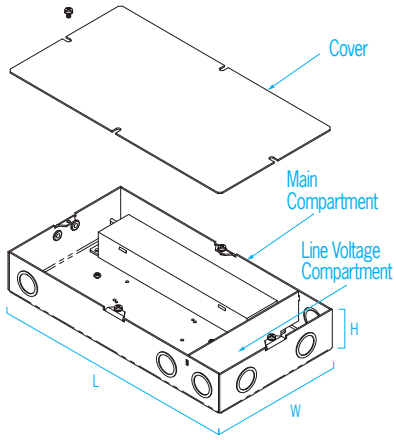



OW2482 –H Downlight, Mounted at 10′ AFF, .70 light loss factor used

### 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)



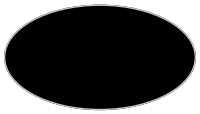
**TW9016**
Traffic White (RAL9016)



**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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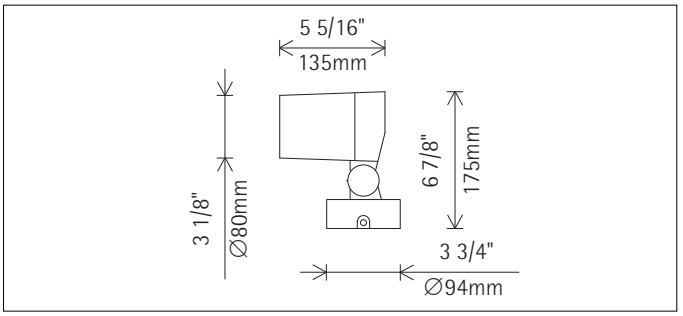
ERCO

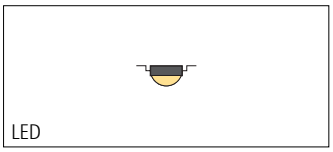
# Kona XS Projector

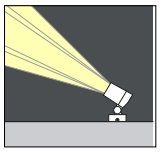
YW5

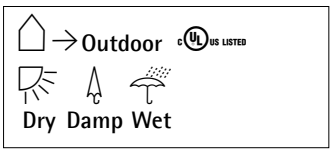
Lam Partners
ARCHITECTURAL LIGHTING DESIGN

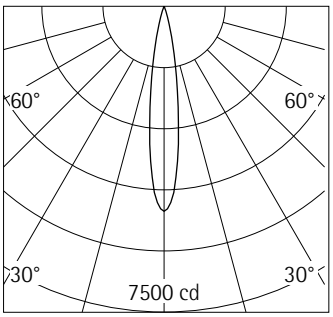







| h(ft) | E(fc) | D |
|---|---|---|
| | | 16° |
| 6 | 140 | 1'8" |
| 12 | 35 | 3'4" |
| 18 | 16 | 5'1" |
| 24 | 9 | 6'9" |
| 30 | 6 | 8'5" |

**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<br>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

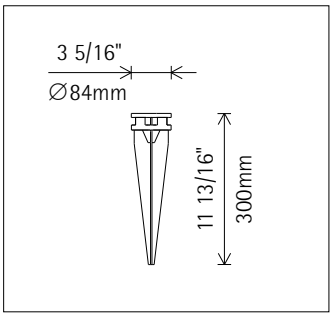
# Kona XS Projector



## Accessories

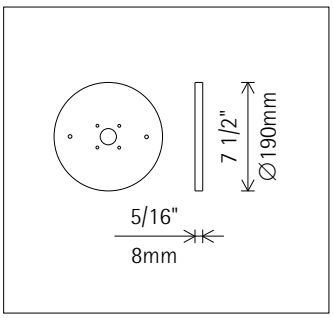


**33973.000**
Ground spike
Metal, hot-dip galvanised.
Cable entry.
Weight 1.06lbs / 0.48kg






**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

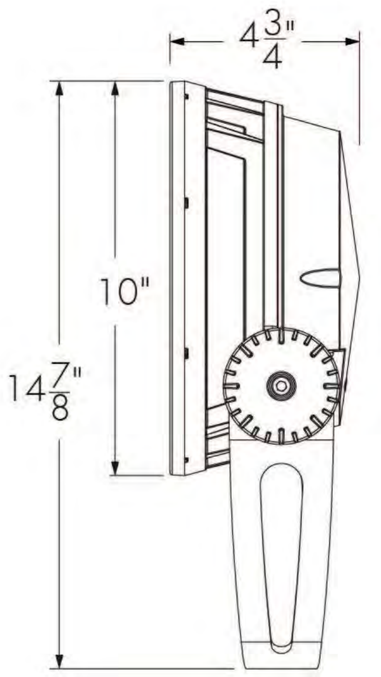
**Project Name** _____ **Qty** _____

**Type** _____ **Catalog / Part Number** _____






Front view



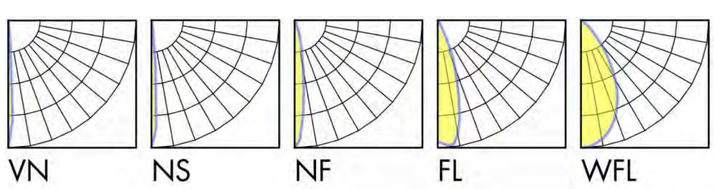

Side view

## 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

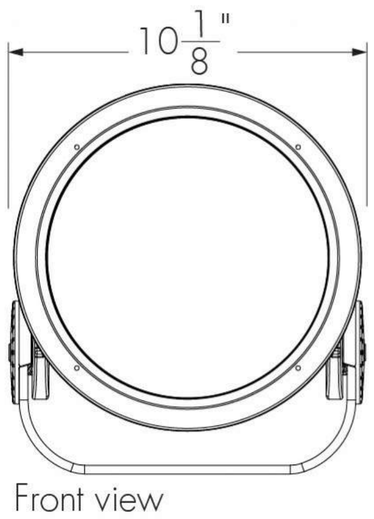
# lumenbeam

**Large**

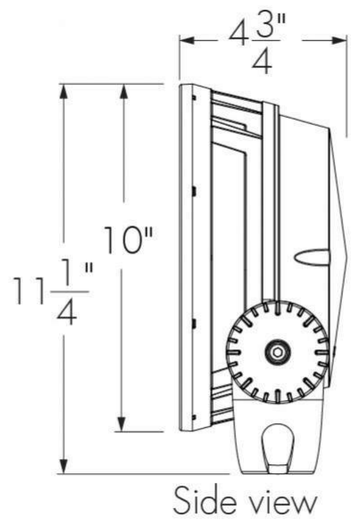
WHITE AND STATIC COLOURS

## Mounting options

### SY - Short yoke



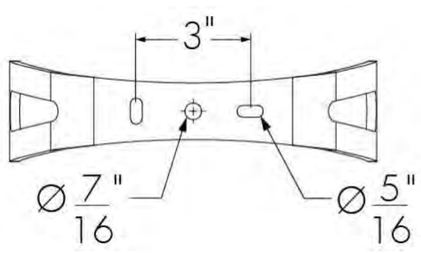

Front view



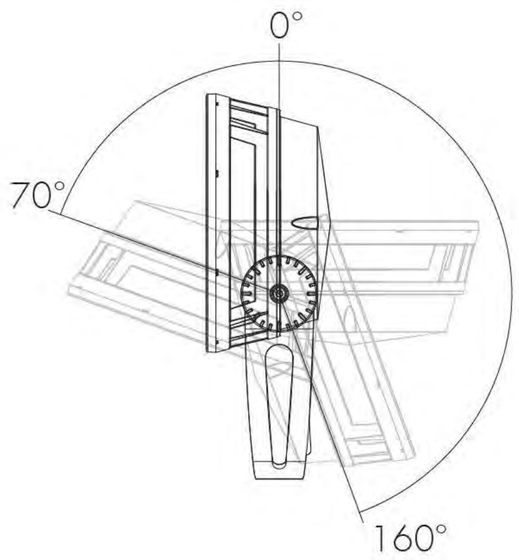

Side view

## Mounting details

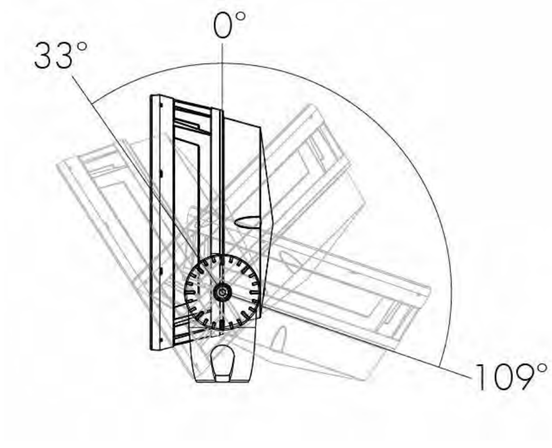
### Mounting hole pattern - standard and short yoke




### Adjustable pivot limits



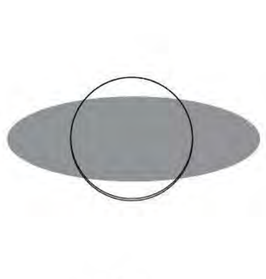

Standard yoke




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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# Specification Sheet

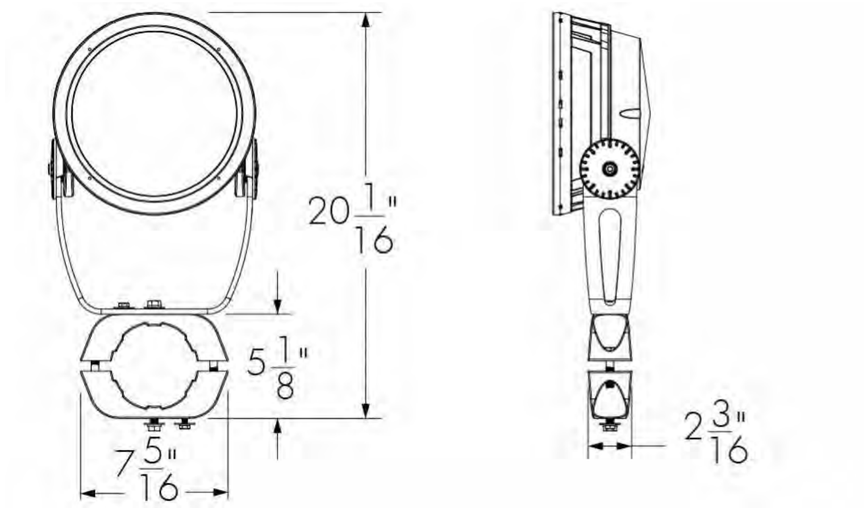
# lumenbeam

**Large**

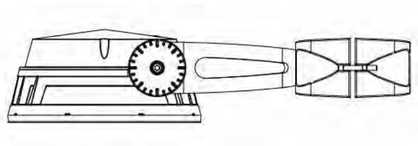
WHITE AND STATIC COLOURS

## Mounting accessories (order separately)

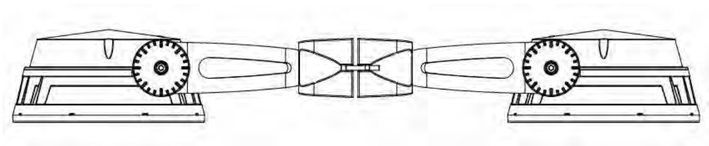
### Round pole mounting accessory




PM4 model shown.
Consult factory for square pole section.



**PM4-1, PM4.5-1, PM5-1 -** Round pole mounting accessory - single fixture

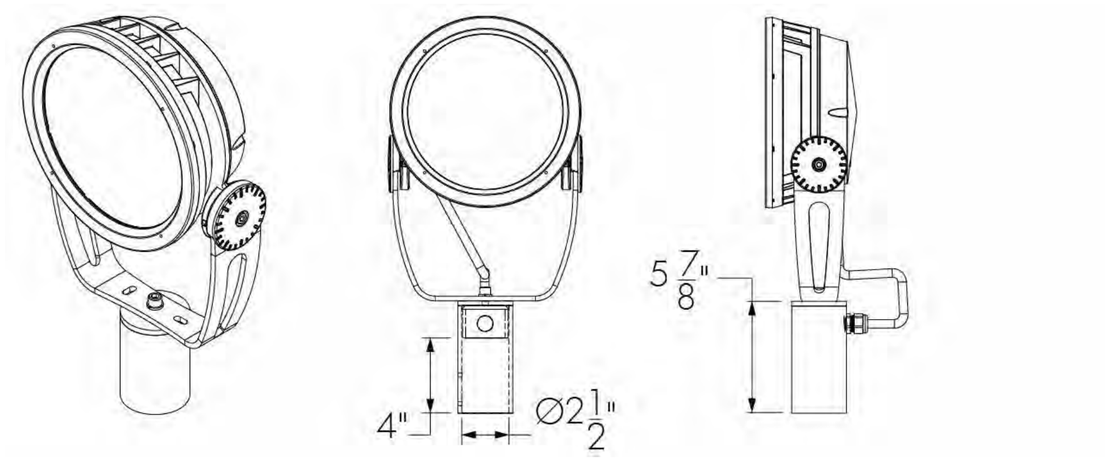


**PM4-2, PM4.5-2, PM5-2 -** Round pole mounting accessory - twin fixures
*One bracket assembly is supplied per 2 fixtures unless otherwise specified.

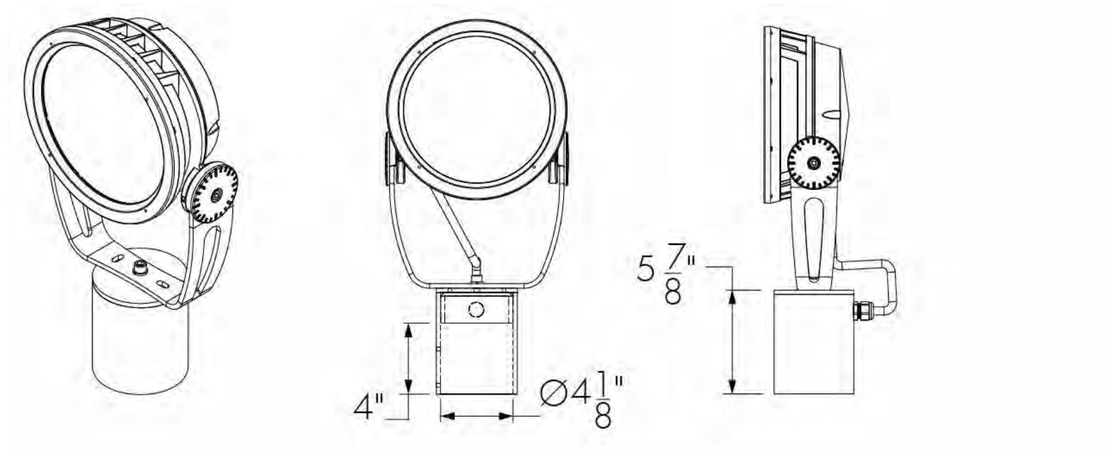
| | PM4 | PM4.5 | PM5 |
|---|---|---|---|
| **For pole Ø** | 4" ± 1/16" | 4.5" ± 1/16" | 5" ± 1/16" |

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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# Specification Sheet

# lumenbeam

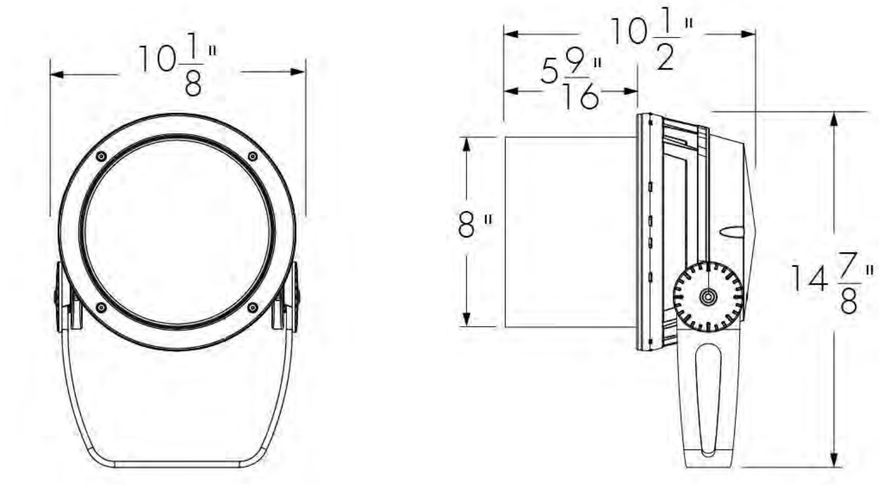
**Large**

WHITE AND STATIC COLOURS

## Optical accessories (order separately)

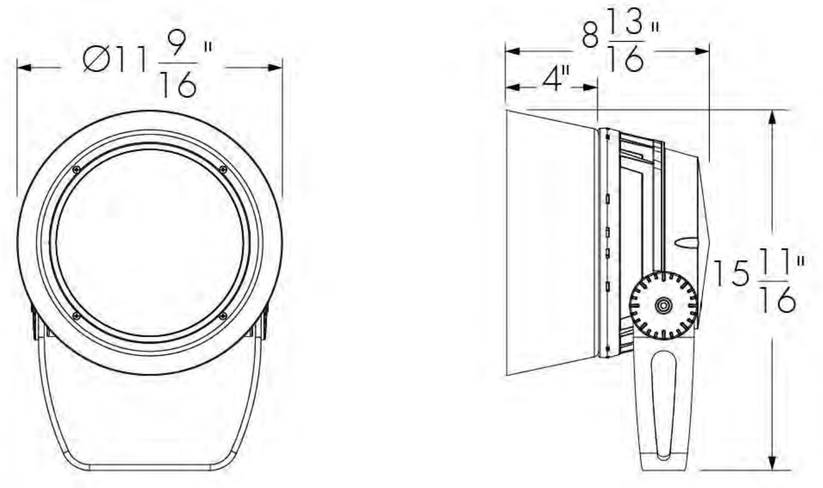
Installed optical accessories will affect the maximum pivot limits for each mounting option, consult factory for details.

### SN - Snoot



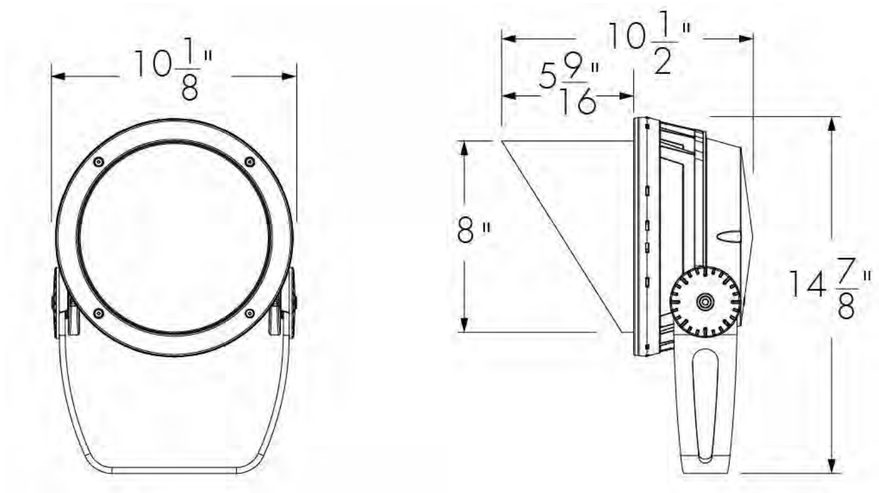

LBLSN-FINISH-BK
Interior surface painted black. Please specify desired exterior FINISH from list of available finishes.

### SNW - Snoot wide



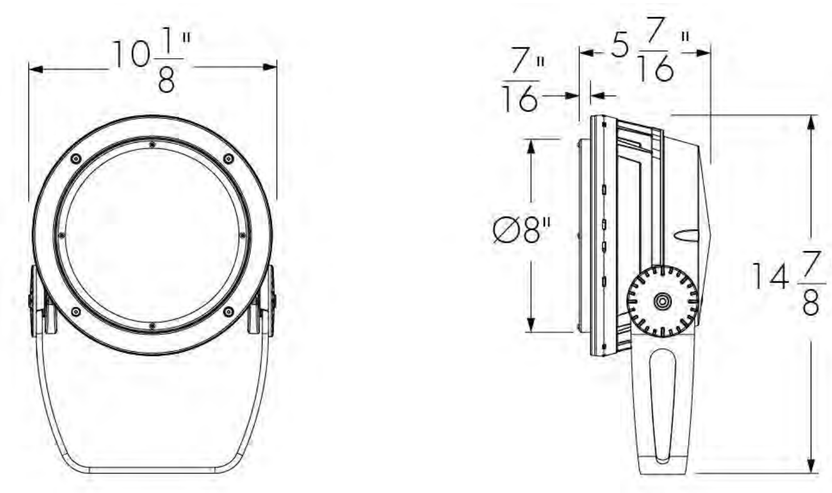

LBLSNW-FINISH-BK
Interior surface painted black. Please specify desired exterior FINISH from list of available finishes.

### VS - Visor



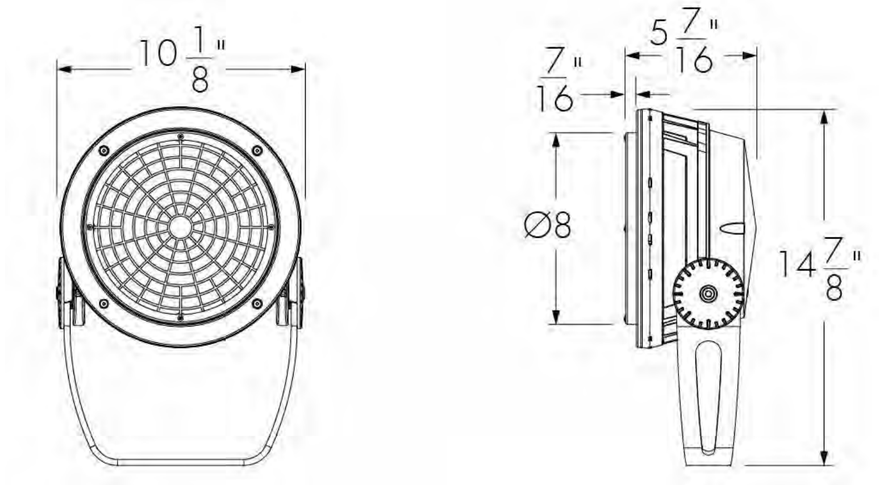

LBLVS-FINISH-BK
Interior surface painted black. Please specify desired exterior FINISH from list of available finishes.

### 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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# Specification Sheet

# lumenbeam

**Large**

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

# lumenbeam

**Large**

WHITE AND STATIC COLOURS

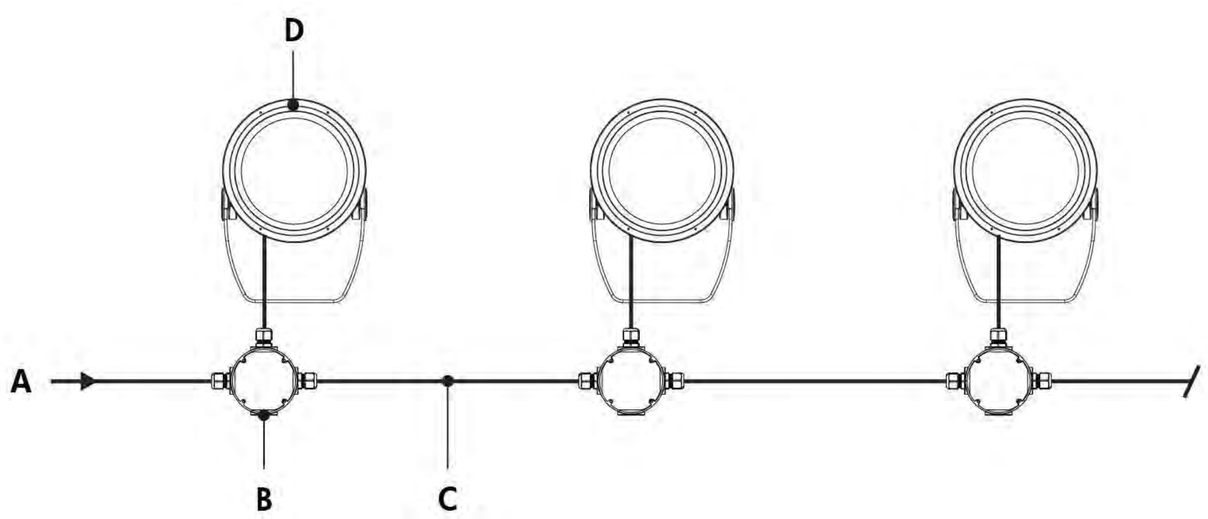
## Typical wiring diagrams

### Wiring colour code

| CE<br>Colour Code | USE |
|---|---|
| Yellow/Green<br>Brown<br>Blue<br>Black<br>Grey | Ground<br>Live 100-277V<br>Neutral<br>1-10V / Data +<br>1-10V / Data - |

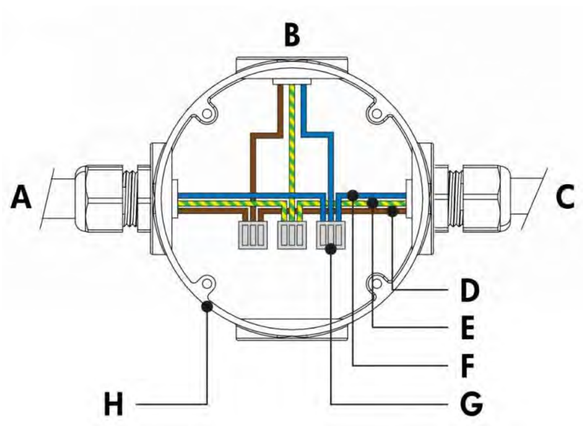
| CE Class II<br>Colour Code | USE |
|---|---|
| Brown<br>Blue<br>Black 1<br>Black 2<br>Grey | Live 100-277V<br>Neutral<br>Signal common (DMX/RDM only)<br>1-10V / Data +<br>1-10V / Data - |

### On/Off control (NO)



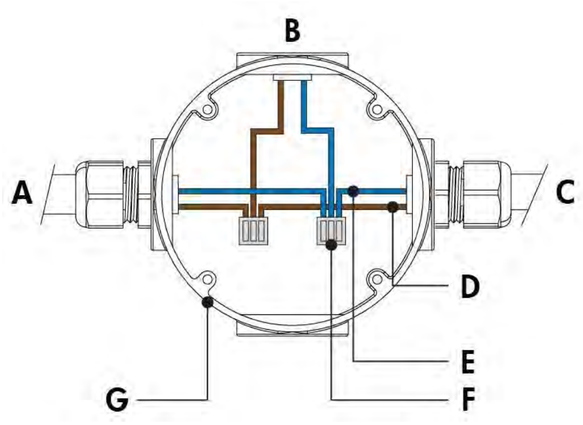

**A -** Power input (100-277V)
**B -** Junction box (by others)
**C -** Power wiring (by others)
**D -** Lumenbeam Large

### 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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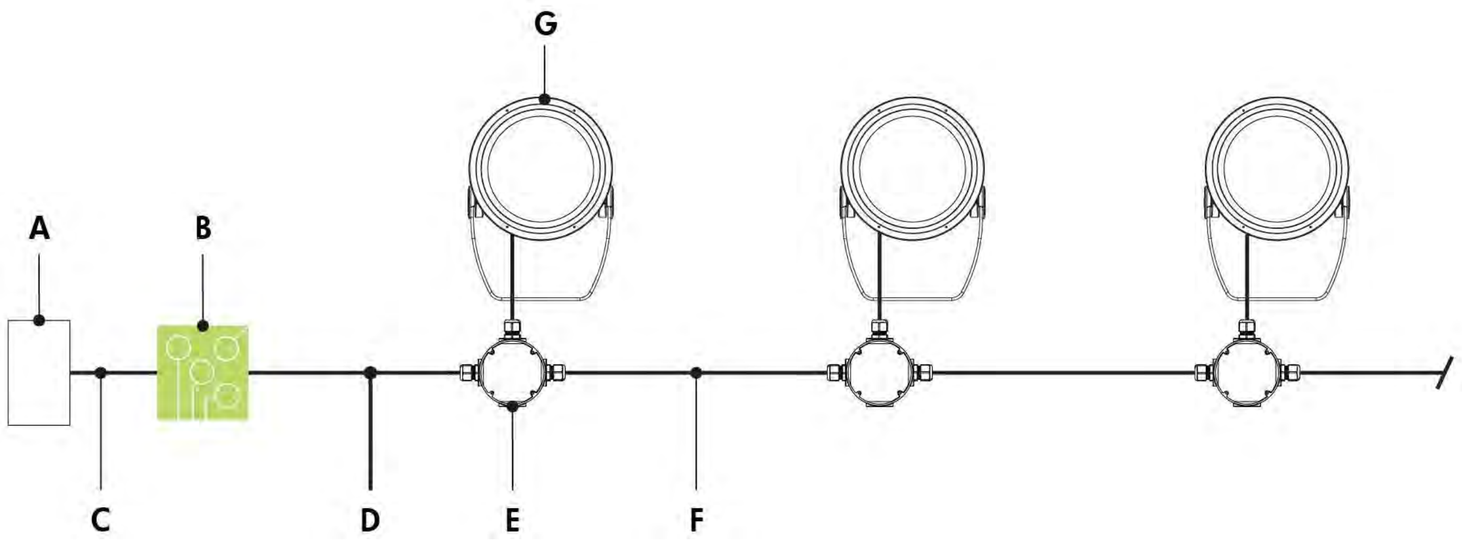
# Specification Sheet

# lumenbeam

**Large**

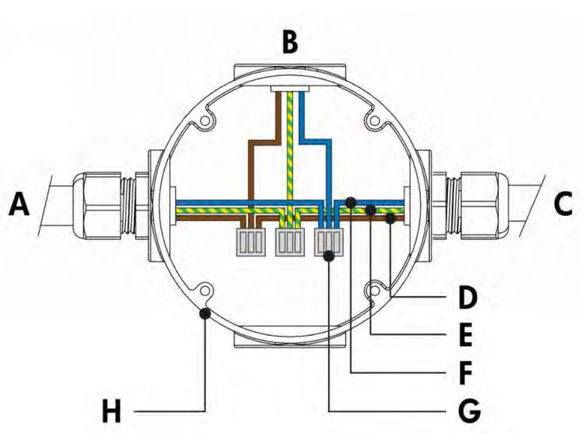
WHITE AND STATIC COLOURS

**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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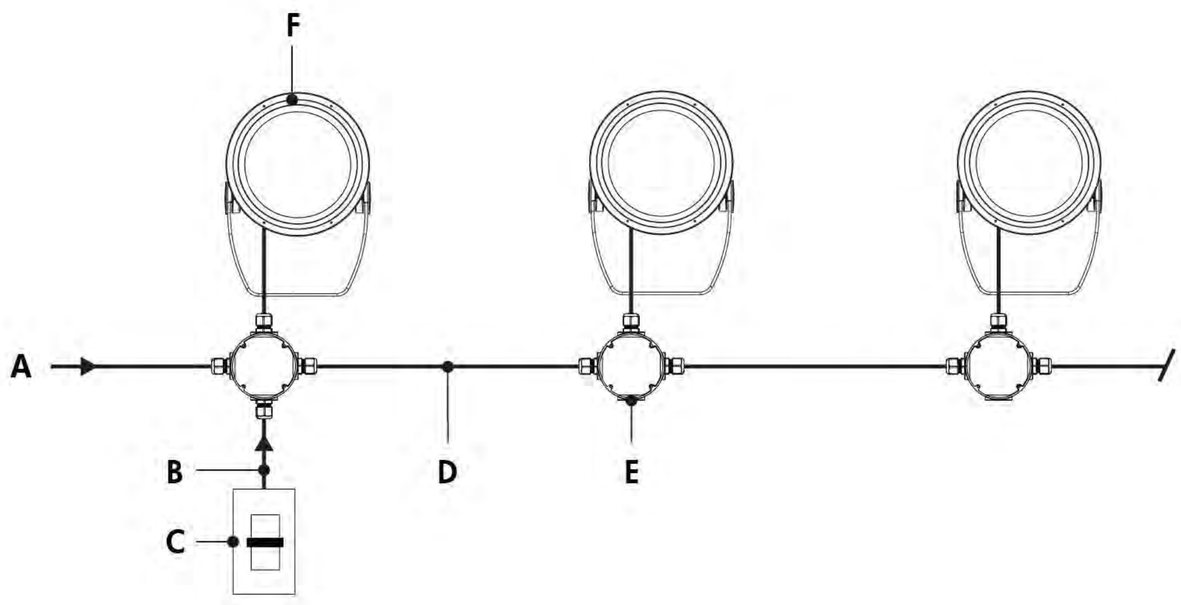
# Specification Sheet

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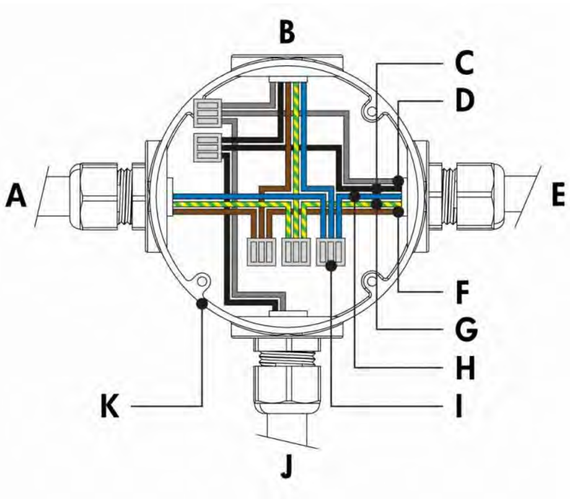
WHITE AND STATIC COLOURS

### 1-10V dimming (DIM)



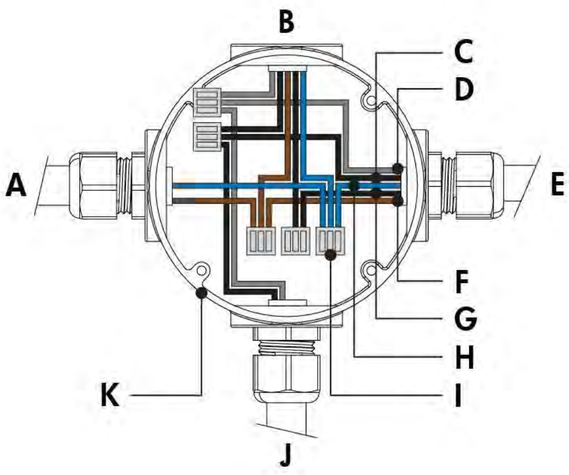

**A -** Power input (100-277V)
**B -** Data wiring (by others)
**C -** Third party dimmer
**D -** Power and data wiring (by others)
**E -** Junction box (by others)
**F -** Lumenbeam Large

### 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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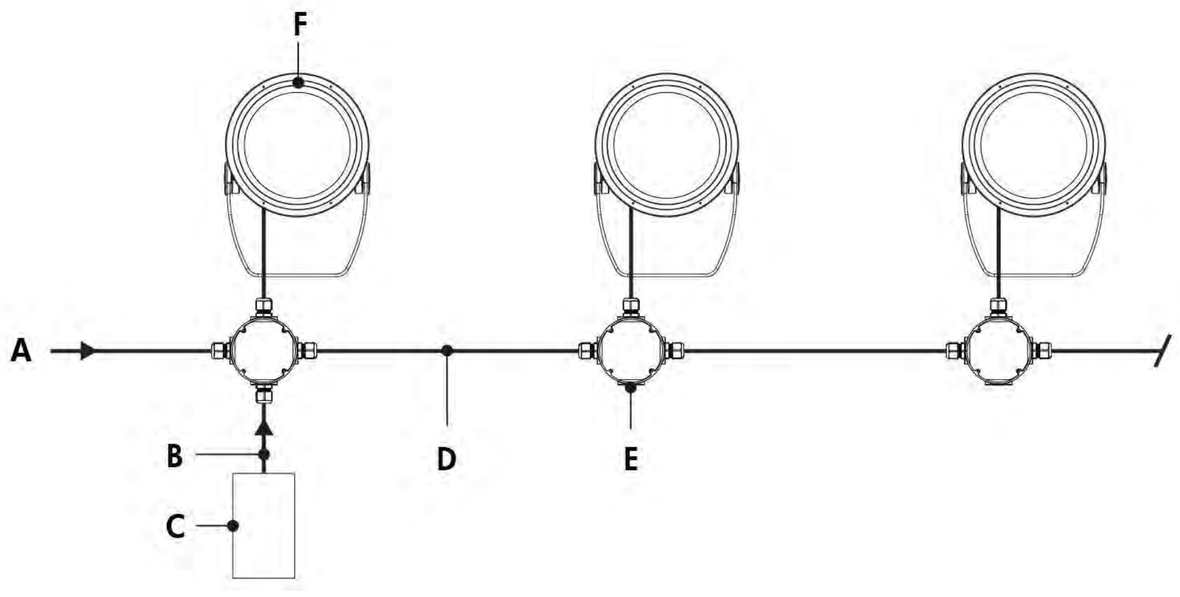
# Specification Sheet

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**Large**

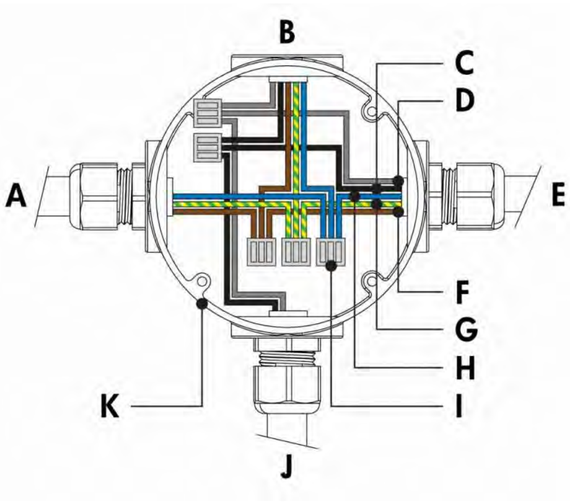
WHITE AND STATIC COLOURS

## DALI dimming (DALI)



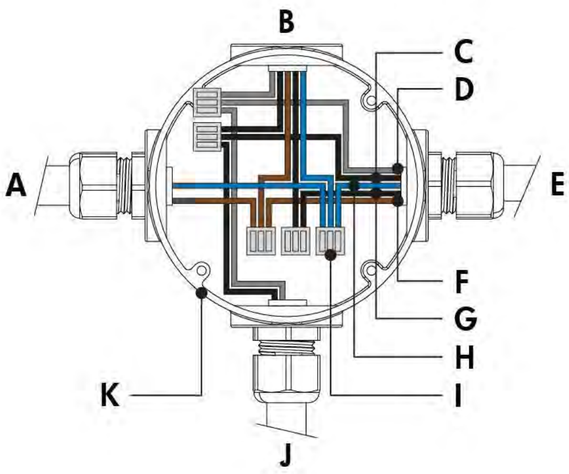

**A -** Power input (100-277V)
**B -** Data wiring (by others)
**C -** Third party DALI controller
**D -** Power and data wiring (by others)
**E -** Junction box (by others)
**F -** Lumenbeam Large

## 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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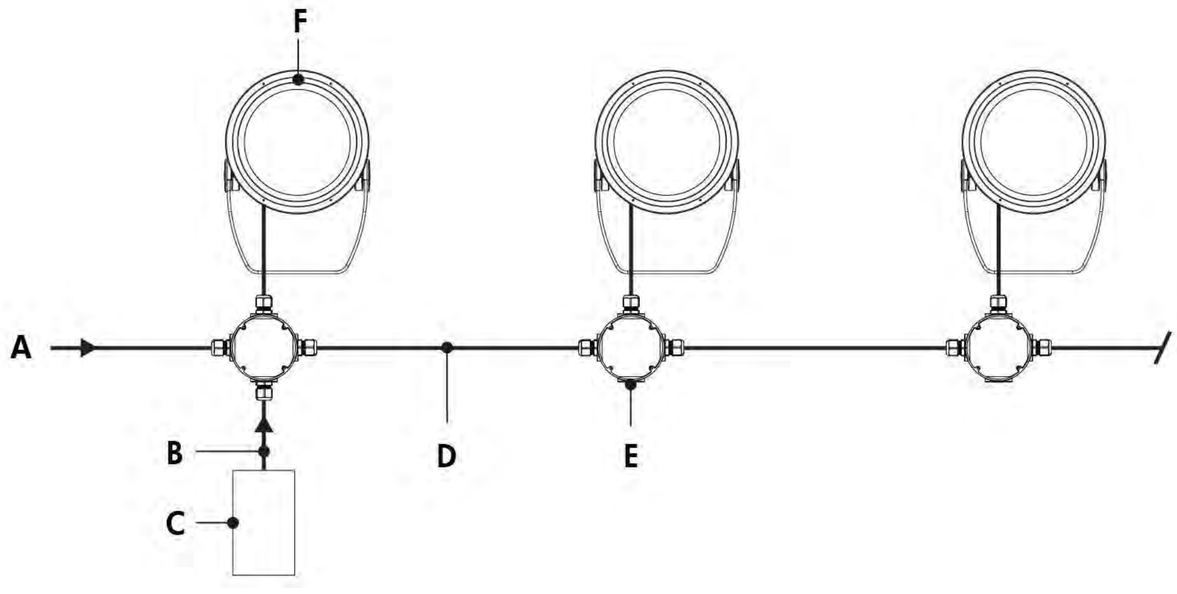
# Specification Sheet

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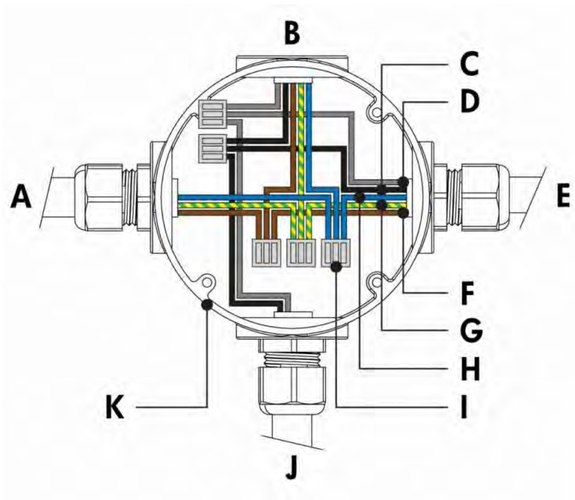
WHITE AND STATIC COLOURS

### 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 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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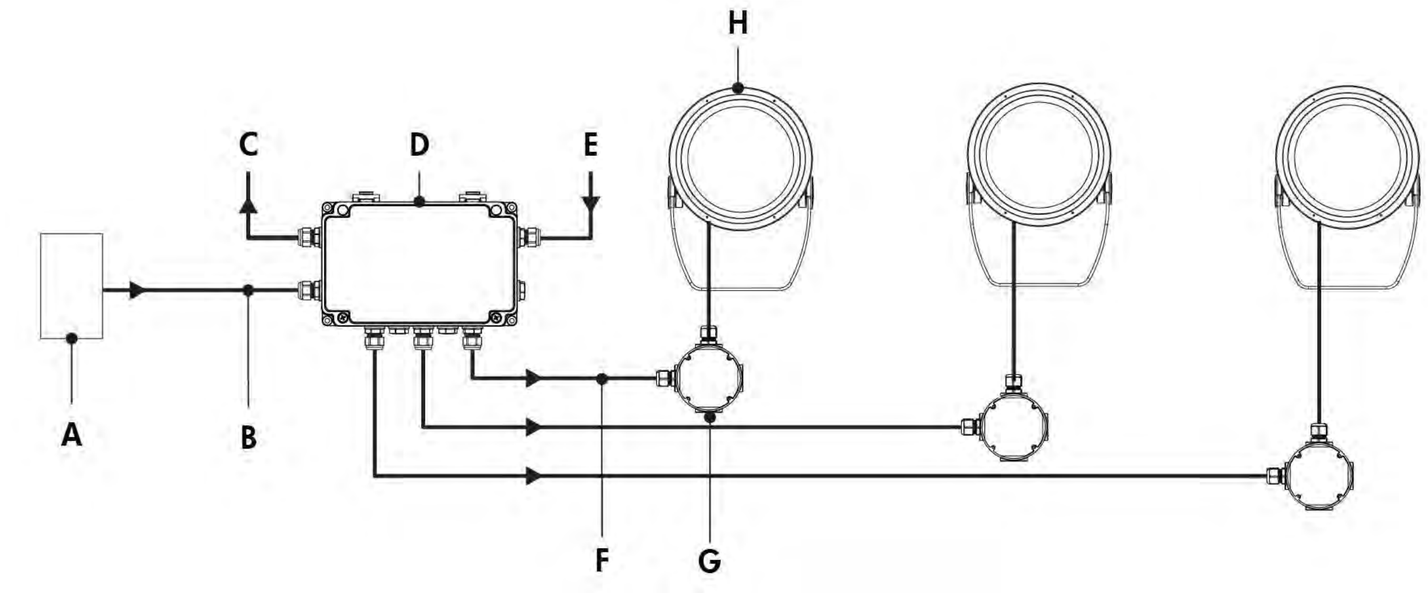
# Specification Sheet

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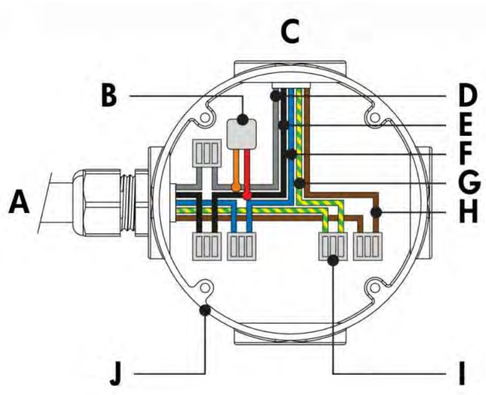
WHITE AND STATIC COLOURS

### Star Layout (DMX/RDM)



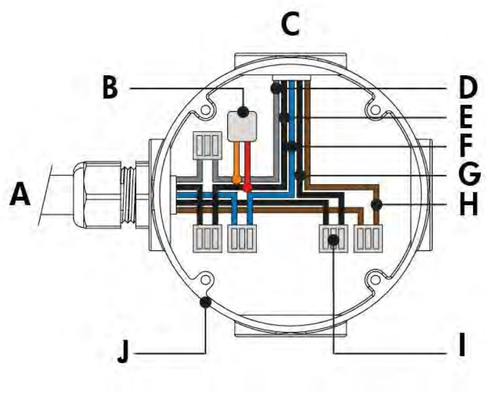

**A -** Third party DMX/RDM controller
**B -** Data input (Belden 9841 or equivalent, by others)
**C -** Data output to next CBX (optional, not isolated/not boosted)
**D -** CBX-ST
**E -** Power input (100-277V)
**F -** Power and data output to fixture (wiring by others)
**G -** Junction box (by others)
**H -** Lumenbeam 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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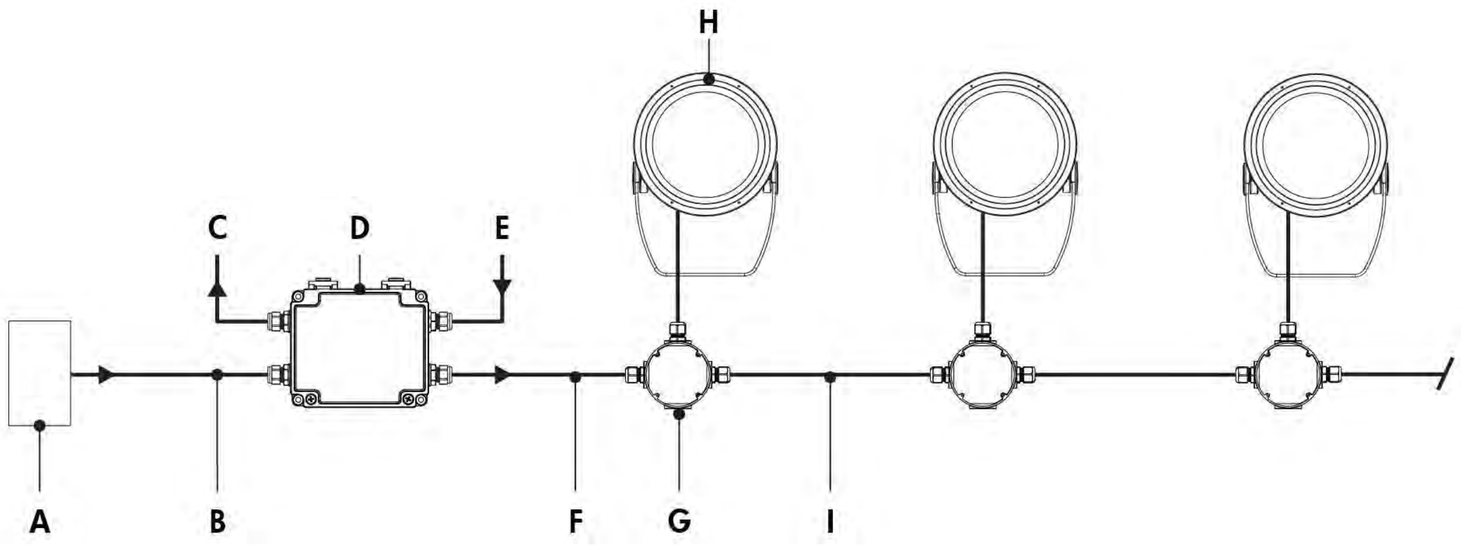
# Specification Sheet

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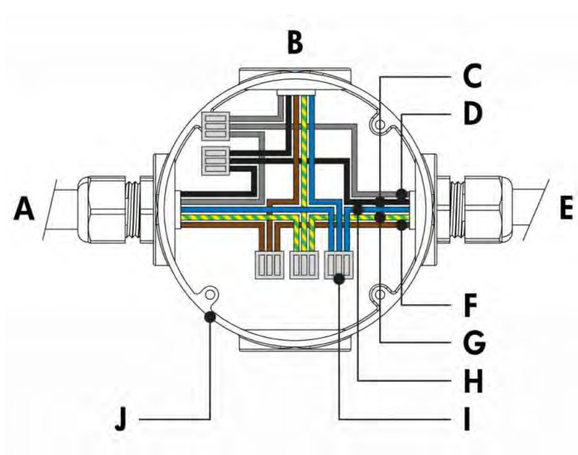
WHITE AND STATIC COLOURS

## Daisy Chain Layout (DMX/RDM)



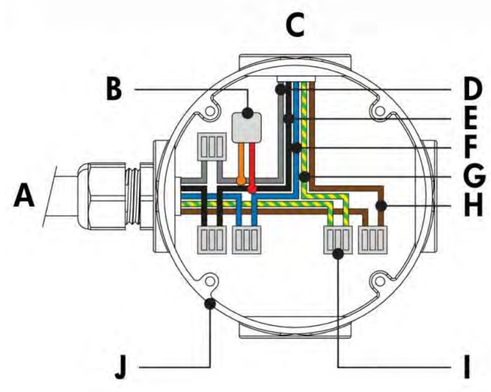

**A -** Third party DMX/RDM controller
**B -** Data input (Belden 9841 or equivalent, by others)
**C -** Data output to next CBX (optional, not isolated/not boosted)
**D -** CBX-DS
**E -** Power input (100-277V)
**F -** Power and data output to fixture (wiring by others)
**G -** Junction box (by others)
**H -** Lumenbeam Large
**I -** Power and data wiring (by others)

## Daisy Chain Layout (DMX/RDM) - wiring detail (first or middle of run) - CE



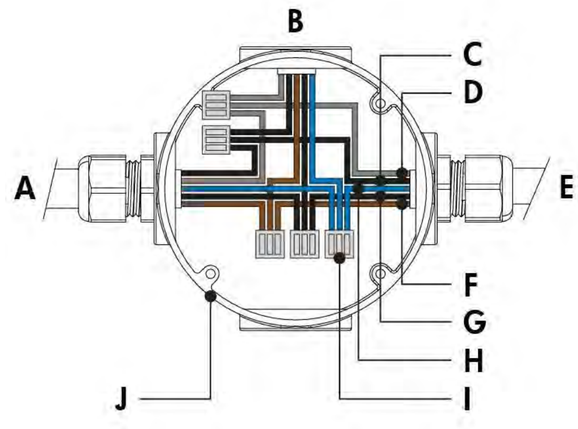

**A -** From CBX or previous fixture
**B -** To fixture
**C -** Data +
**D -** Data -
**E -** To next/from previous fixture
**F -** Live
**G -** Ground
**H -** Neutral
**I -** Terminal connector (by others)
**J -** Junction box (by others)

## 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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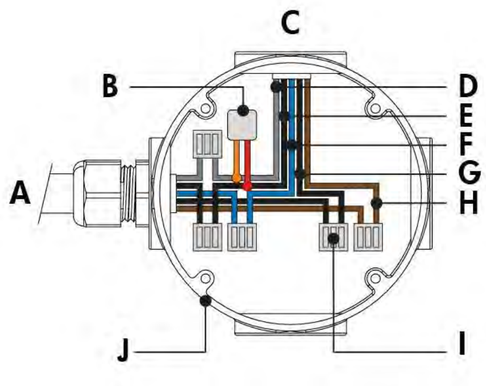
# Specification Sheet

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**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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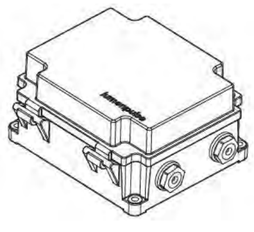
**Large**

WHITE AND STATIC COLOURS

## Accessories (order separately)

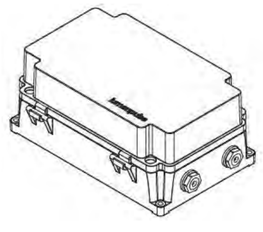
## Control Boxes

### 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.

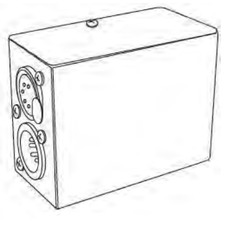
### LCU-Lumencue



Lumencue is a USB / mini SD DMX 512 controller.

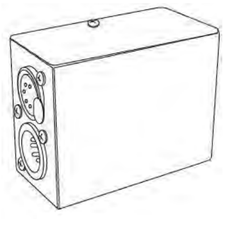
## Diagnostic and Addressing Tools

### 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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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

## lumenbeam

**Large**

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

# lumenbeam

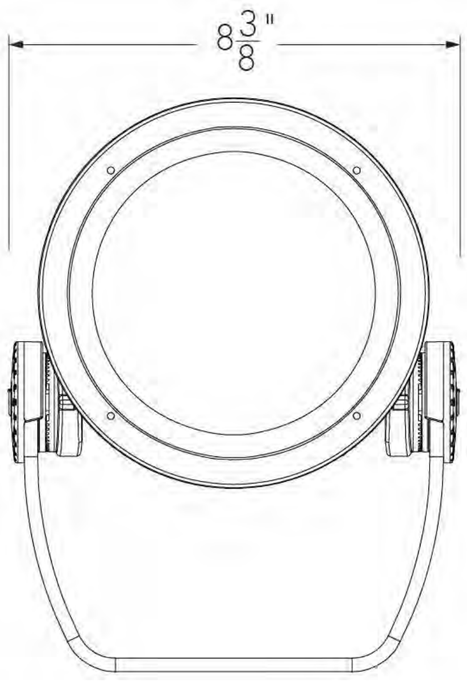
**Medium**

WHITE AND STATIC COLORS

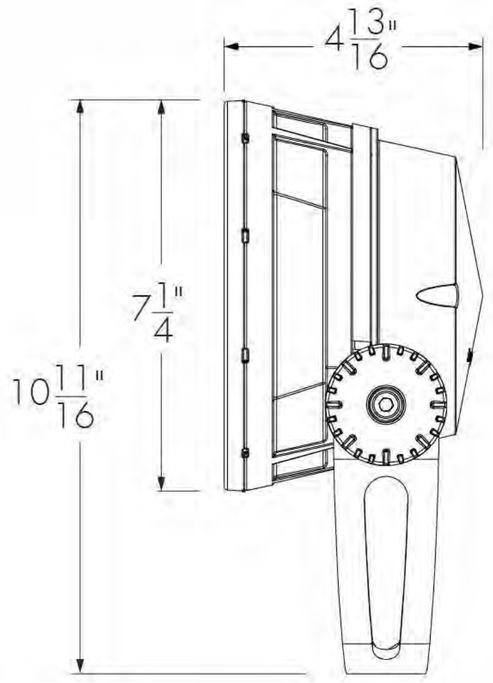
**Project Name** _____ **Qty** _____

**Type** _____ **Catalog / Part Number** _____






Front view



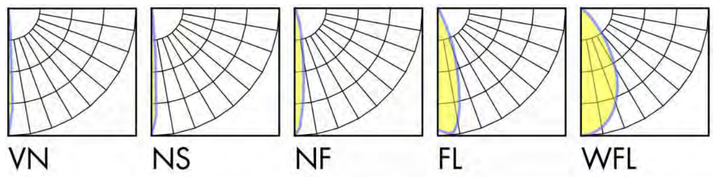

Side view

## 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

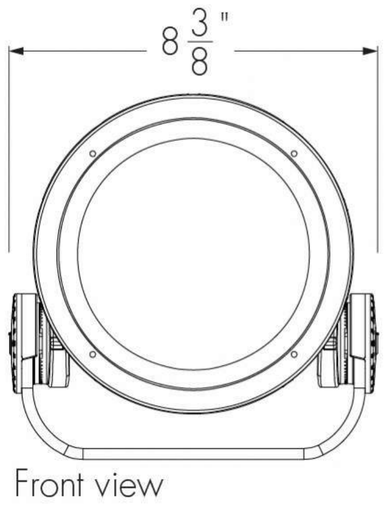
# lumenbeam

**Medium**

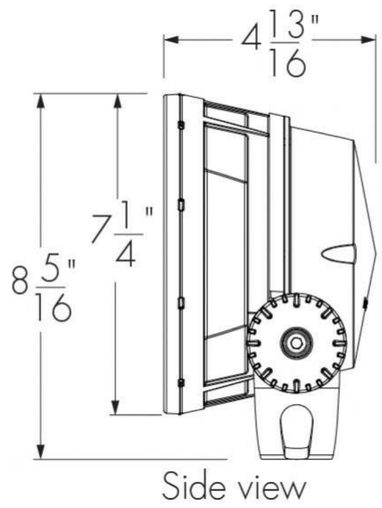
WHITE AND STATIC COLORS

## Mounting options

### SY - Short yoke



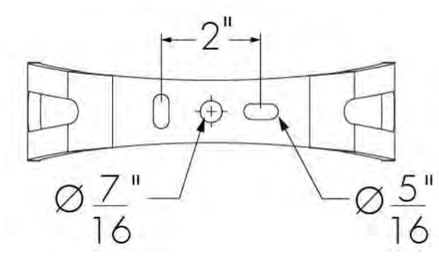

Front view



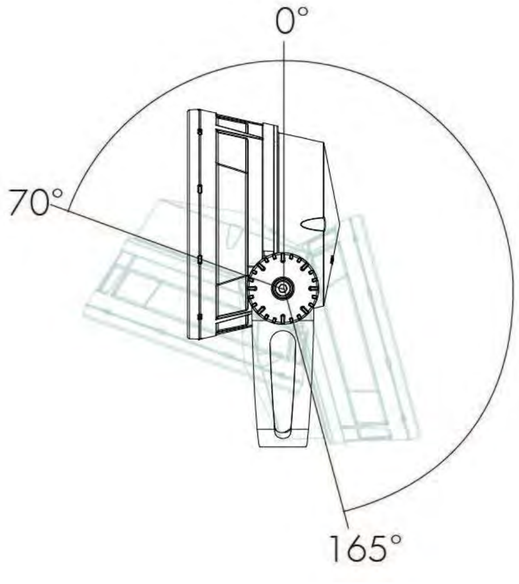

Side view

## Mounting details

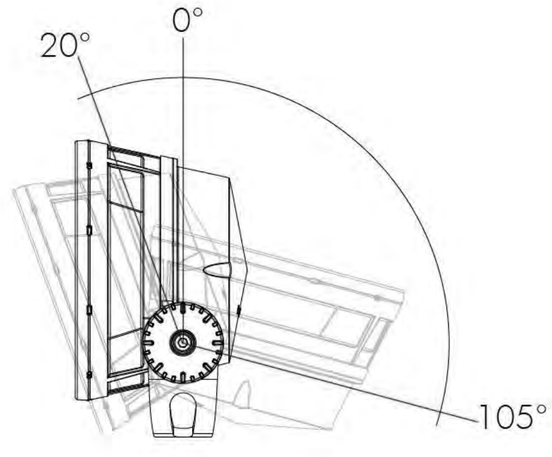
### Mounting hole pattern - standard and short yoke




### 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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# Specification Sheet

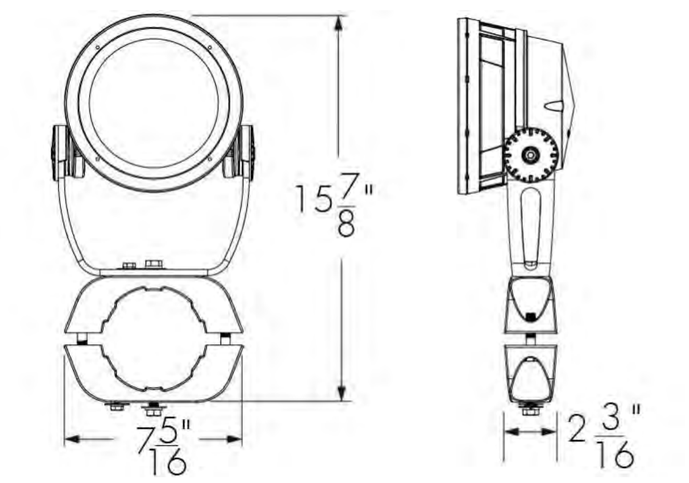
# lumenbeam

**Medium**

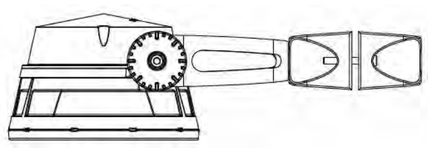
WHITE AND STATIC COLORS

## Mounting accessories (order separately)

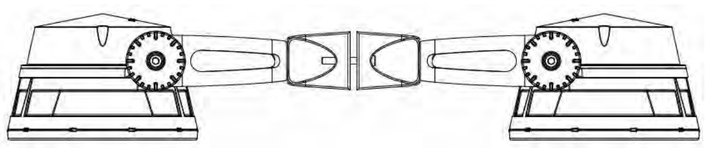
### Round pole mounting accessory




PM4 model shown.
Consult factory for square pole section.



**PM4-1, PM4.5-1, PM5-1 -** Round pole mounting accessory - single fixture

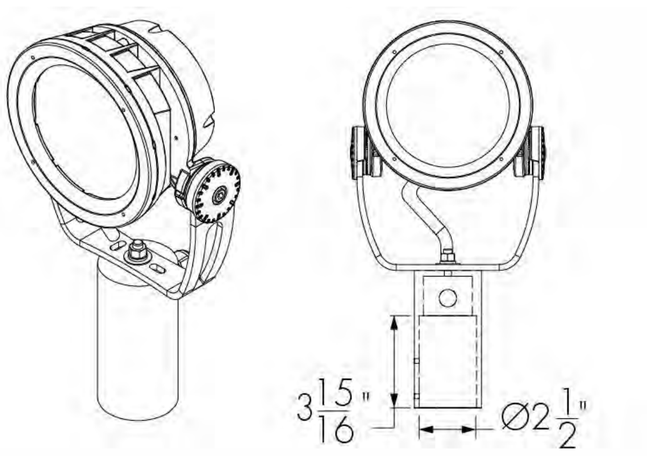


**PM4-2, PM4.5-2, PM5-2 -** Round pole mounting accessory - twin fixures
*One bracket assembly is supplied per 2 fixtures unless otherwise specified.

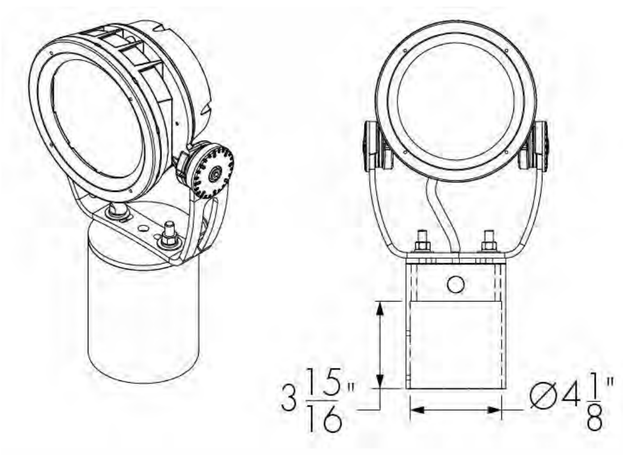
| | PM4 | PM4.5 | PM5 |
|---|---|---|---|
| **For pole Ø** | 4" ± 1/16" | 4.5" ± 1/16" | 5" ± 1/16" |

Consult factory for other pole diameters.

### Tenon adapter

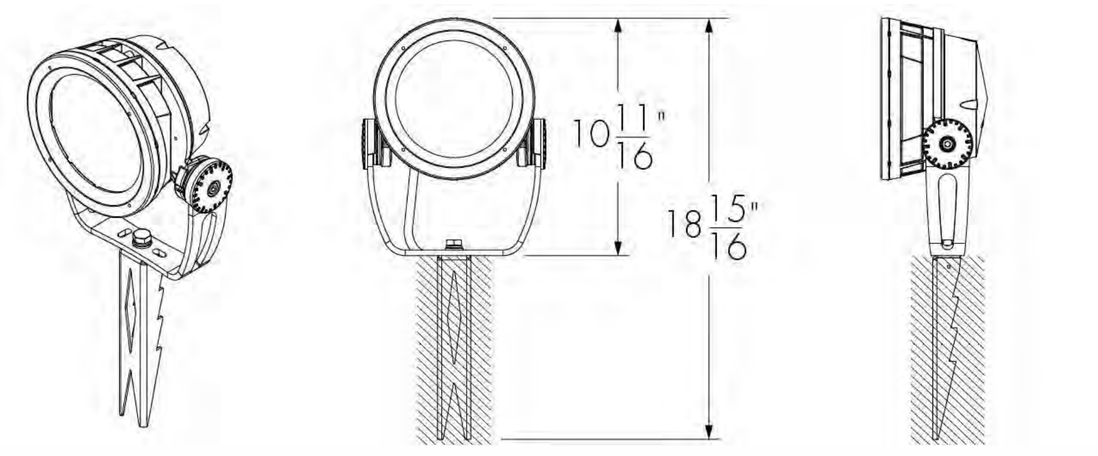



**TN2 -** Tenon adapter to fit on 2 3/8 in O.D. tenon




**TN4 -** Tenon adpater to fit on 4 in O.D. tenon

### SK - Stake mounting




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# Specification Sheet

# lumenbeam

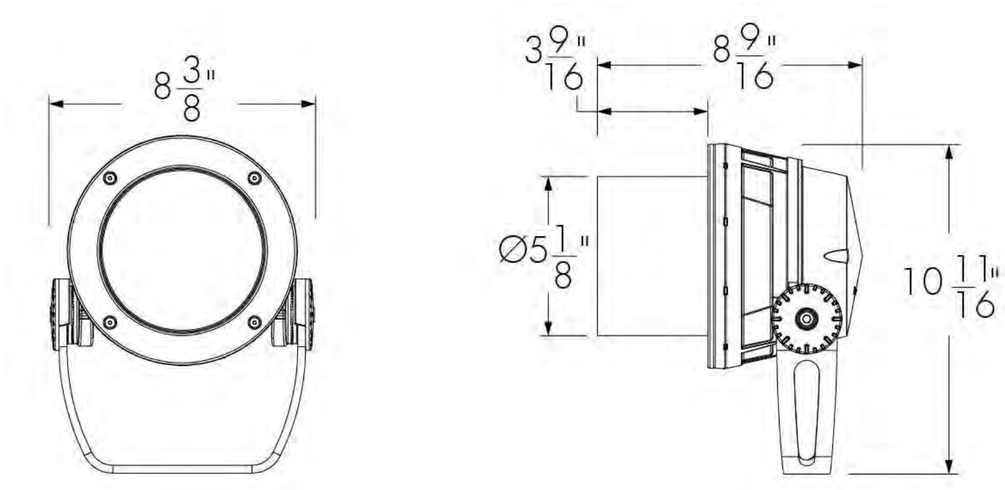
**Medium**

WHITE AND STATIC COLORS

## Optical accessories (order separately)

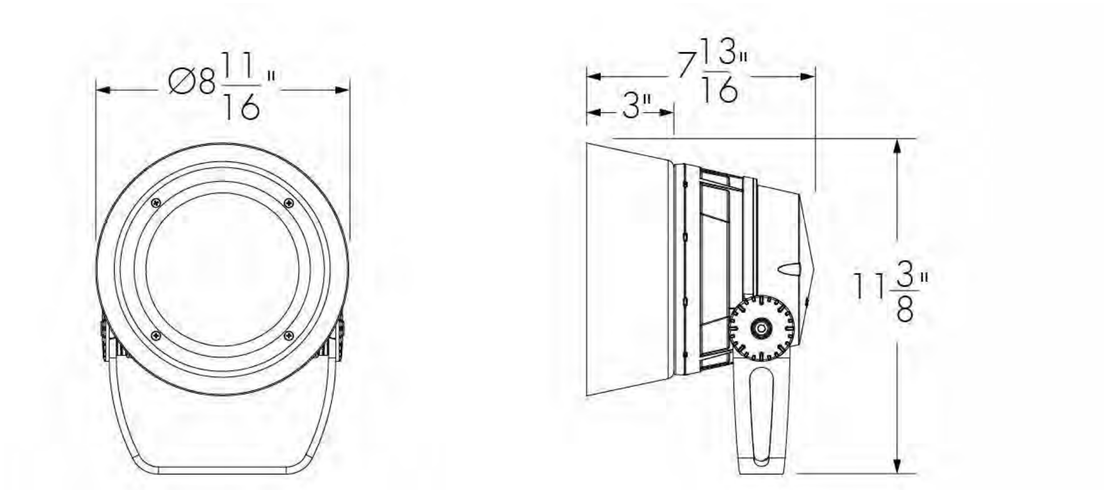
Installed optical accessories will affect the maximum pivot limits for each mounting option, consult factory for details.

### SN - Snoot



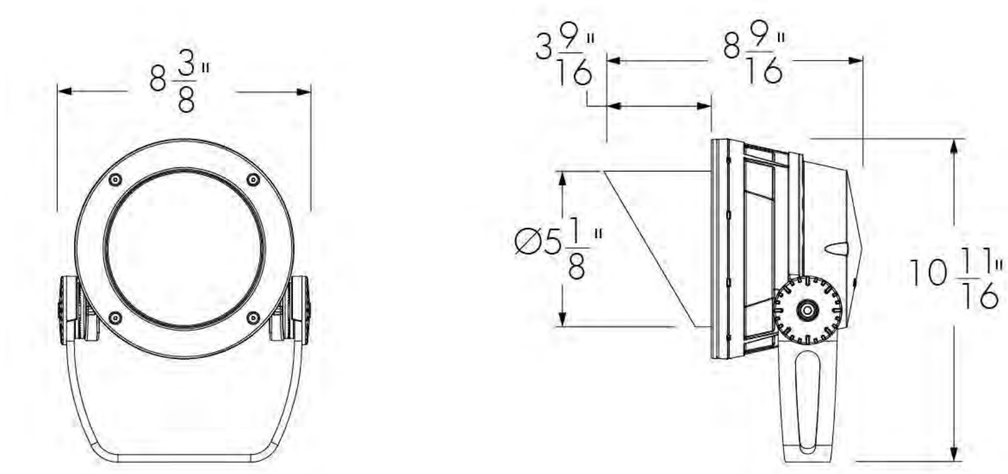

LBMSN-FINISH-BK
Interior surface painted black. Please specify desired exterior FINISH from list of available finishes.

### SNW - Snoot wide



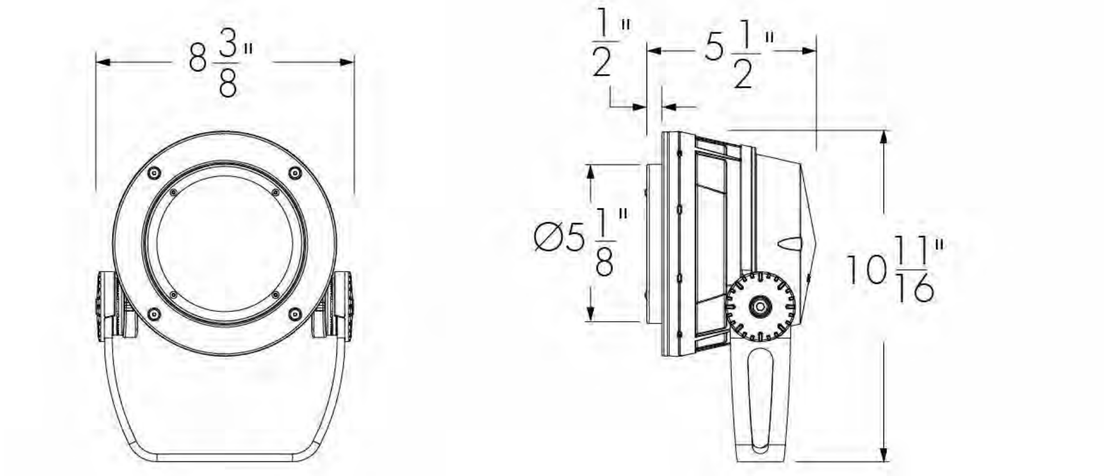

LBMSNW-FINISH-BK
Interior surface painted black. Please specify desired exterior FINISH from list of available finishes.

### VS - Visor



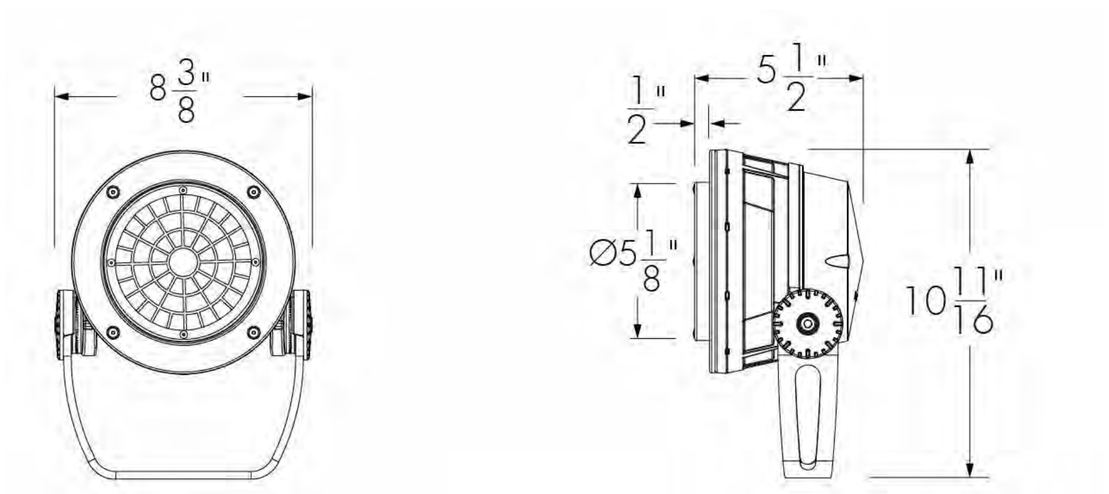

LBMVS-FINISH-BK
Interior surface painted black. Please specify desired exterior FINISH from list of available finishes.

### 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

# lumenbeam

**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

# lumenbeam

**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.

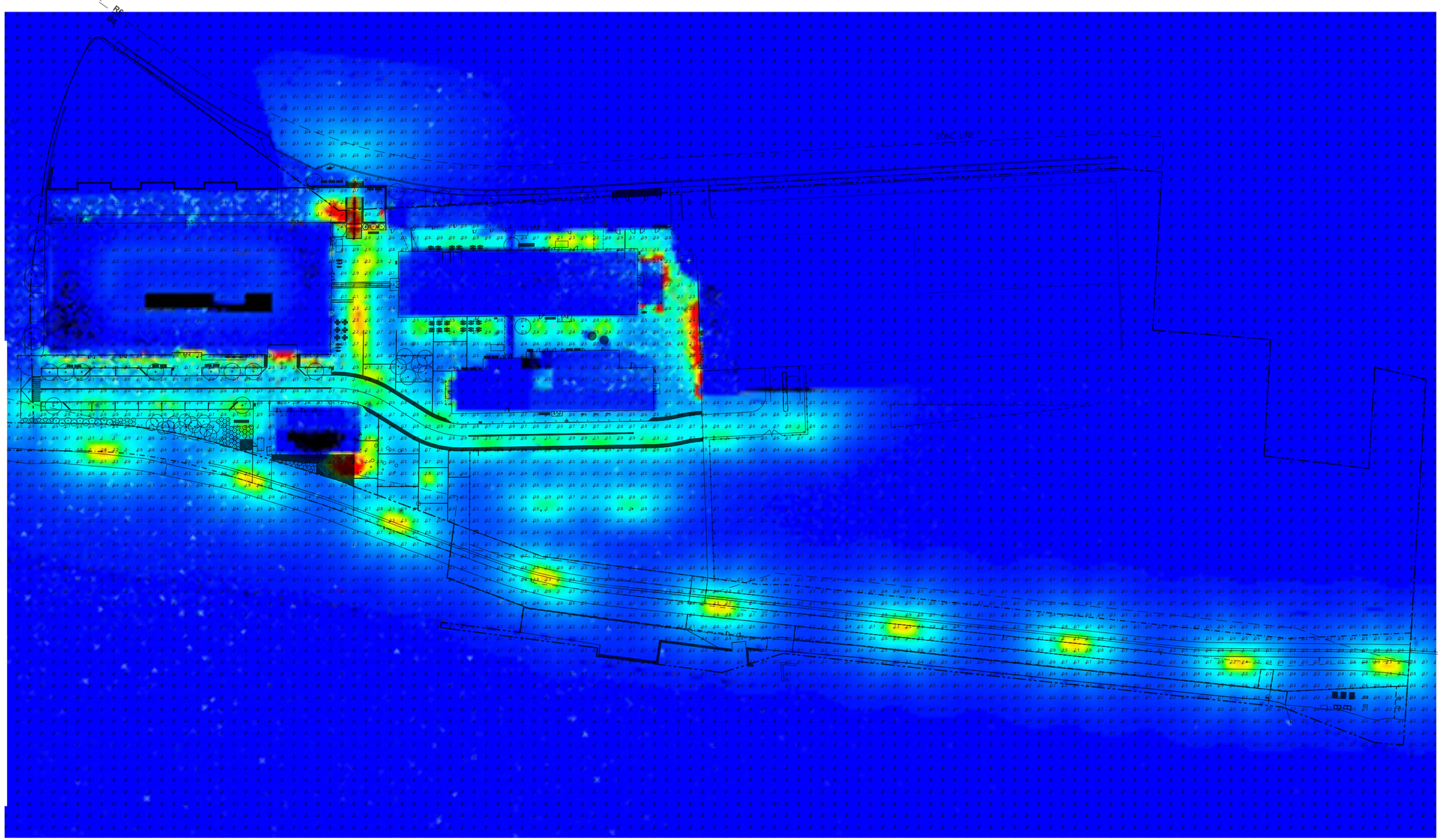
[7] 3 ft cable length is standard unless otherwise specified.

[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

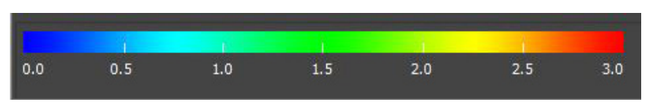
illuminance (FC)

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 (Blocks 1/2/3/4)
November 8, 2019

illuminance (FC)

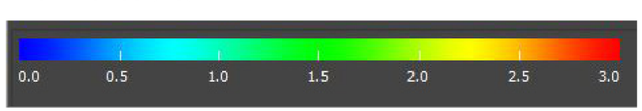


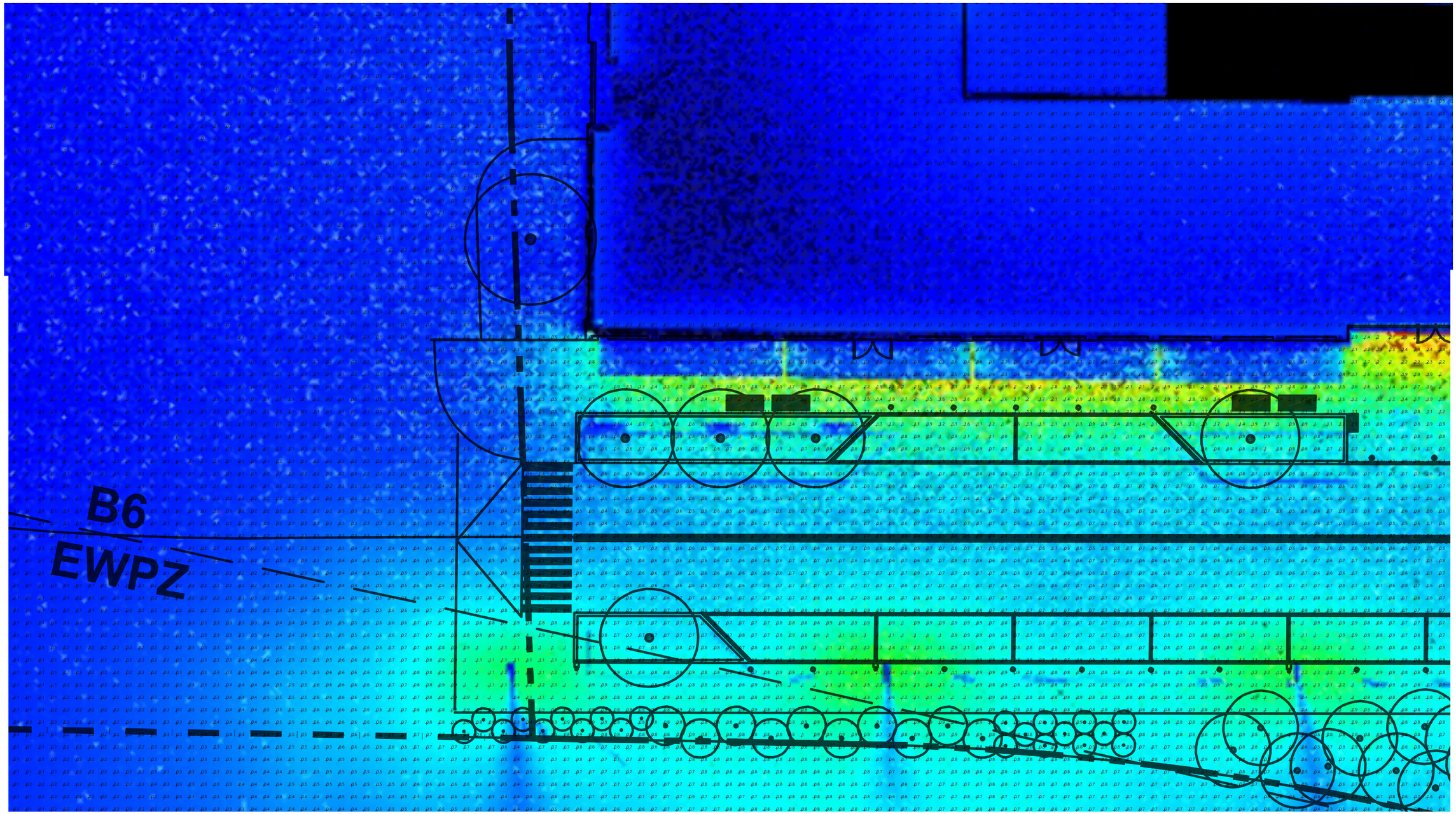

Lam Partners
ARCHITECTURAL LIGHTING DESIGN

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






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Lam Partners
ARCHITECTURAL LIGHTING DESIGN

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.***

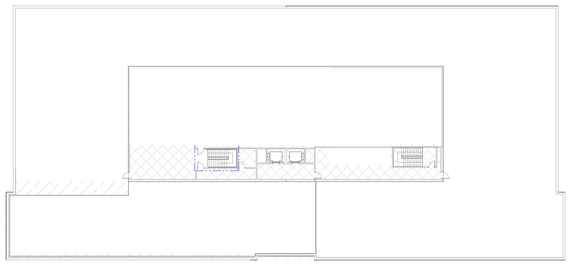
***Note: Please submit detailed calculations showing the derivation of your design flows, either in the space provided, or attached, as a separate sheet.***

# 15. PORTLAND FIRE DEPARTMENT SITE REVIEW CHECKLIST

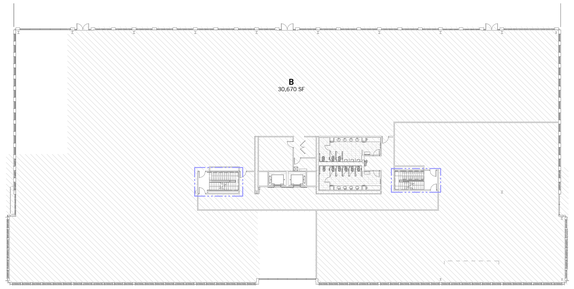
The items in the Portland Fire Department Site Review Checklist are addressed as follows:

- 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:

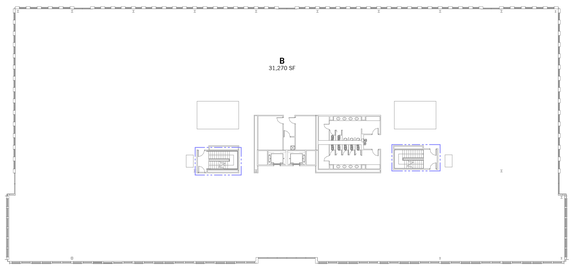
- The buildings will be compliant with requirements of NFPA 101: Uniform Fire Code. Automatic sprinkler systems and fire alarms will be provided as required by Use and Occupancy types. Code summaries are provided on the architectural plans.



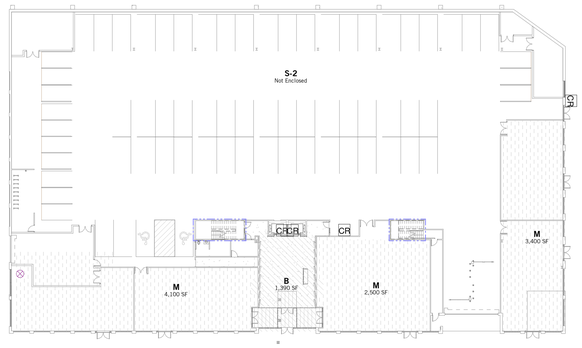
5 PENTHOUSE / ROOF CODE PLAN
1" = 30'-0"



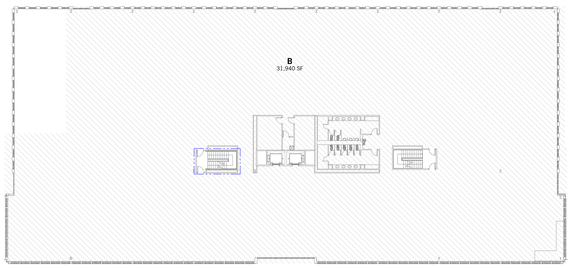

2 LEVEL 2 CODE PLAN
1" = 30'-0"




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 |


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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**

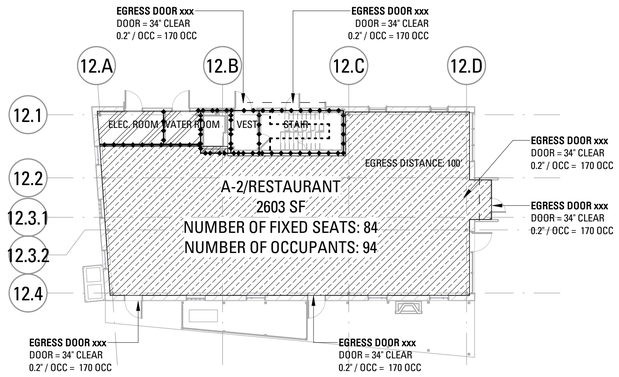
**CODE COMPLIANCE DIAGRAMS**

**SHEET NUMBER**

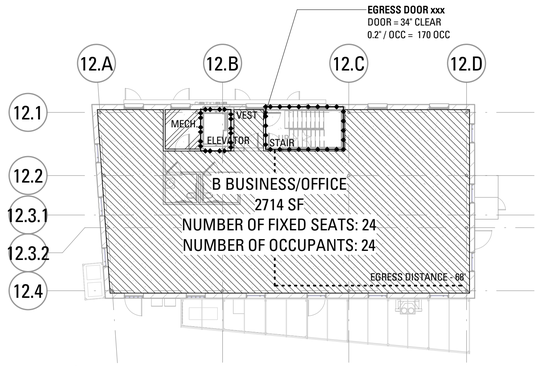
**G10-01**

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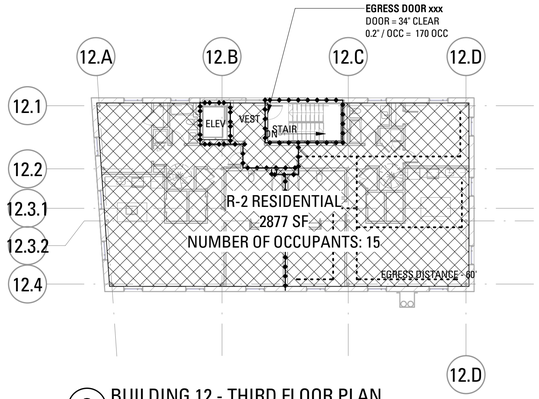
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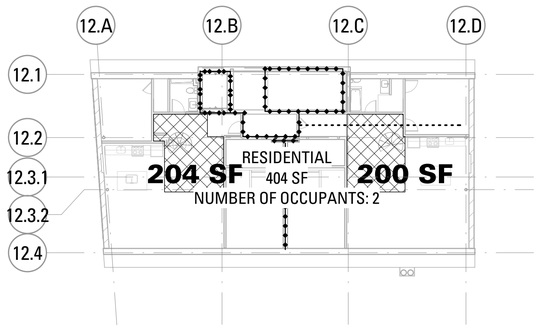

1 BUILDING 12 - GROUND FLOOR PLAN
SCALE: 1/16" = 1'-0"




2 BUILDING 12 - SECOND FLOOR PLAN
SCALE: 1/16" = 1'-0"



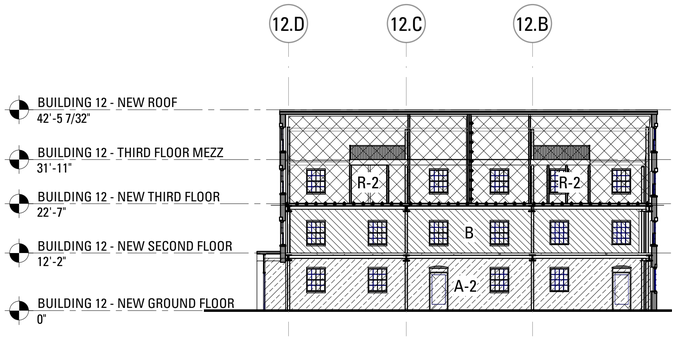

3 BUILDING 12 - THIRD FLOOR PLAN
SCALE: 1/16" = 1'-0"




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 |
|---|---|---|
| | | |

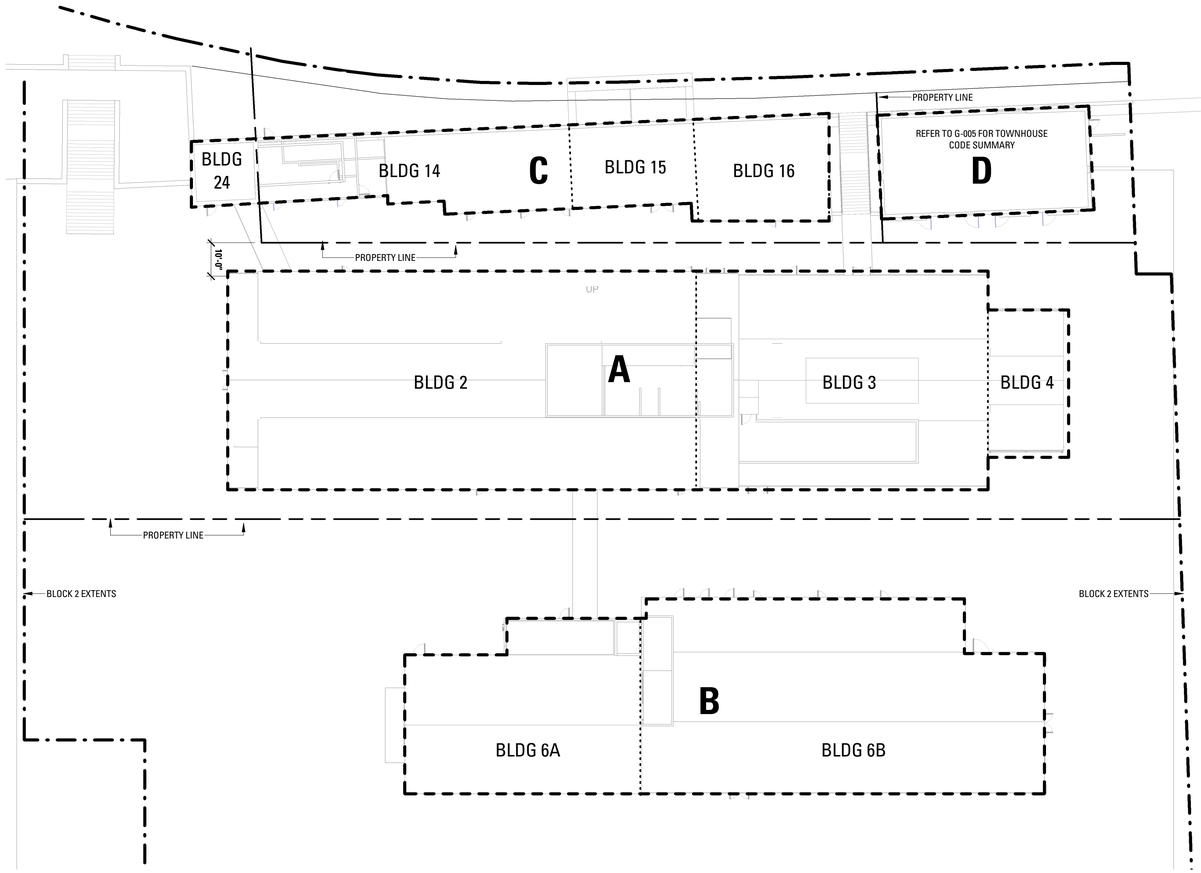
PORTLAND FORESIDE - BUILDING 12

| | |
|---|---|
| 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<br>BLOCK 2 DEVELOPMENT |
| AUTHORITY HAVING JURISDICTION: | PERMITTING & INSPECTIONS DEPARTMENT, CITY OF PORTLAND<br>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).<br>MUEBC – MAINE UNIFORM EXISTING BUILDING CODE, AN AMENDED VERSION OF THE 2015 INTERNATIONAL EXISTING BUILDING CODE.<br>PORTLAND MUNICIPAL CODE CHAPTER 6 |
| FIRE | PORTLAND MUNICIPAL CODE CHAPTER 10<br>NFPA 1, UNIFORM FIRE CODE, 2006 EDITION AS ADOPTED BY THE RULES OF THE STATE FIRE MARSHAL<br>NFPA 1, UNIFORM FIRE CODE, 2015 EDITION AS ADOPTED BY THE MUBC<br>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<br>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:**

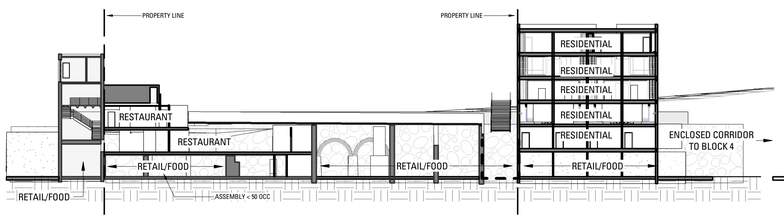
| | |
|---|---|
| SHAFTS | 1 HOUR |
| ELEVATOR MACHINE/ CONTROLS | 2 HOUR |
| NON-SPRINKLERED ELECTRICAL ROOM | 2 HOUR |
| EMERGENCY GENERATOR ROOM | 2 HOUR |
| EMERGENCY ELECTRICAL ROOM | 2 HOUR |
| DRY TYPE TRANSFORMER ROOM > 35,000 V | 3 HOUR |
| DRY TYPE TRANSFORMER ROOM > 112.5 KVA | 1 HOUR |
| 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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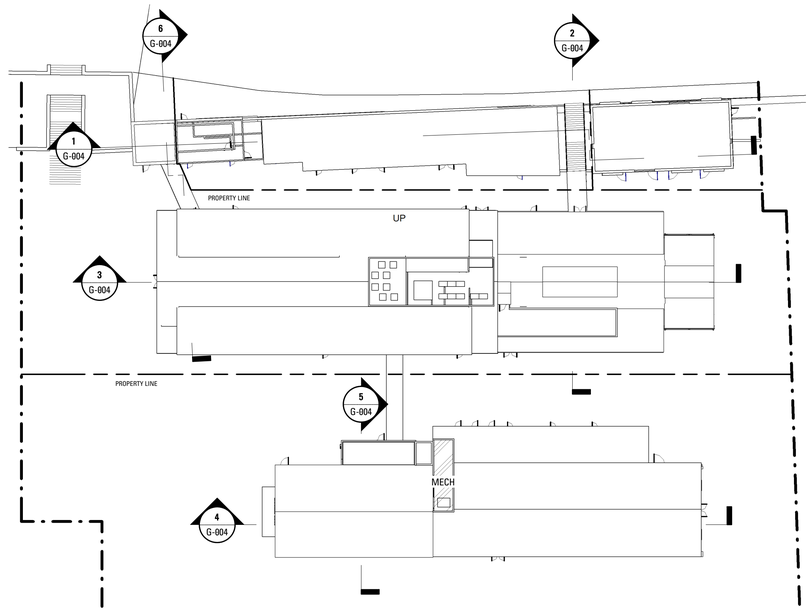
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PORTLAND FORESIDE BLOCK 2

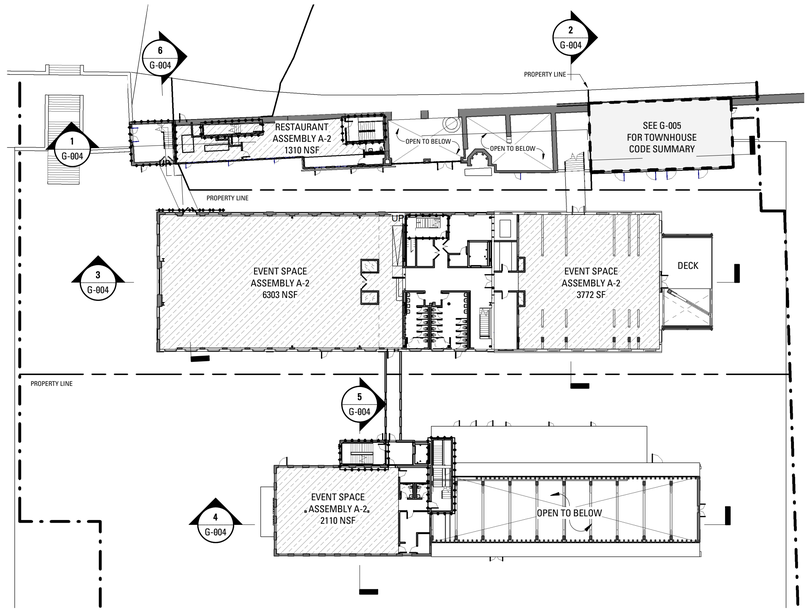
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| Date | OCTOBER 25, 2019 |
| Scale | As indicated |
| Project Number | |
| Drawn By | Author |

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

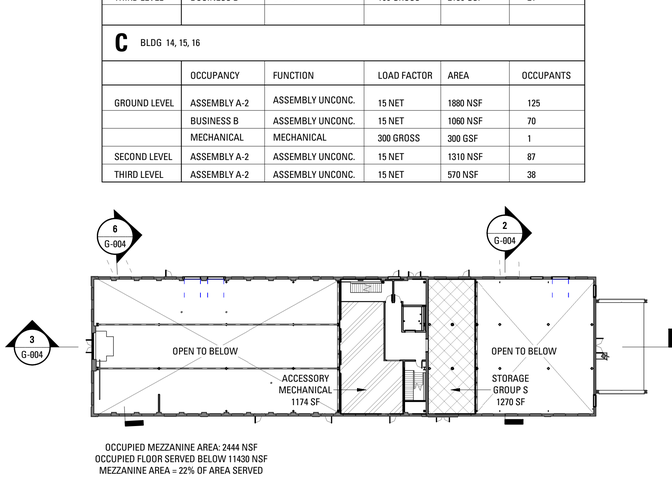
| | USE GROUP | FUNCTION | LOAD FACTOR | AREA | OCCUPANTS |
|---|---|---|---|---|---|
| GROUND LEVEL | ASSEMBLY A-2 | ASSEMBLY UNCONC. | 15 NET | 11430 NSF | 762 |
| | BUSINESS B (ASSEMBLY <50) | ASSEMBLY CONC. | 7 NET | 300 NSF | 42 |
| SECOND LEVEL | ASSEMBLY A-2 | ASSEMBLY UNCONC. | 15 NET | 10075 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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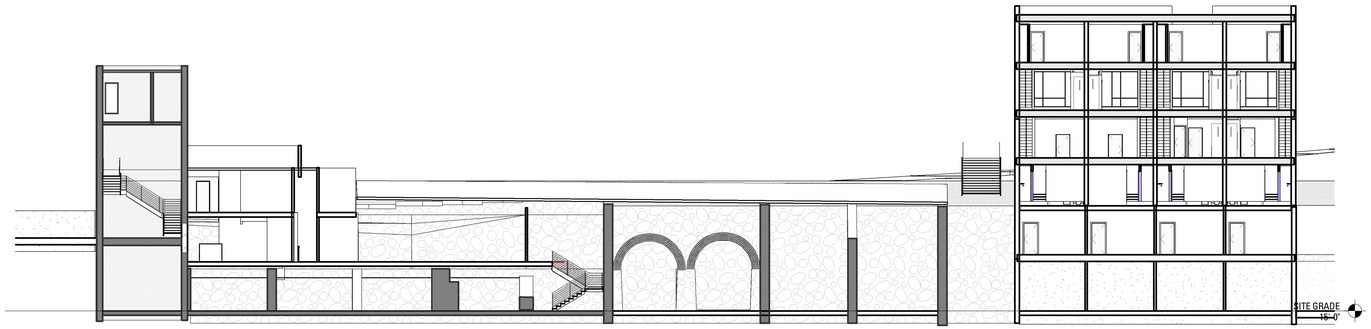
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PORTLAND FORESIDE BLOCK 2

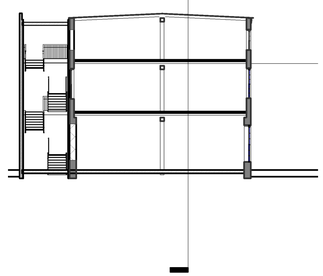
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|---|---|
| Date | OCTOBER 25, 2019 |
| Scale | As indicated |
| Project Number | |
| Drawn By | Author |

CODE PLANS - BLOCK 2

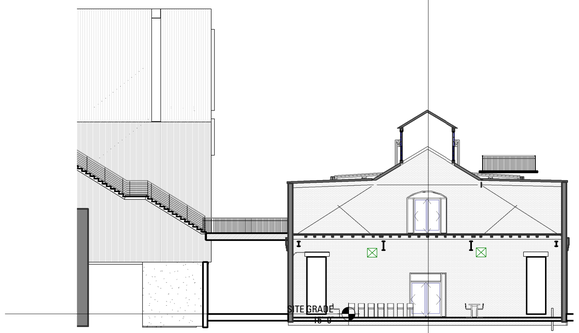
# G-003



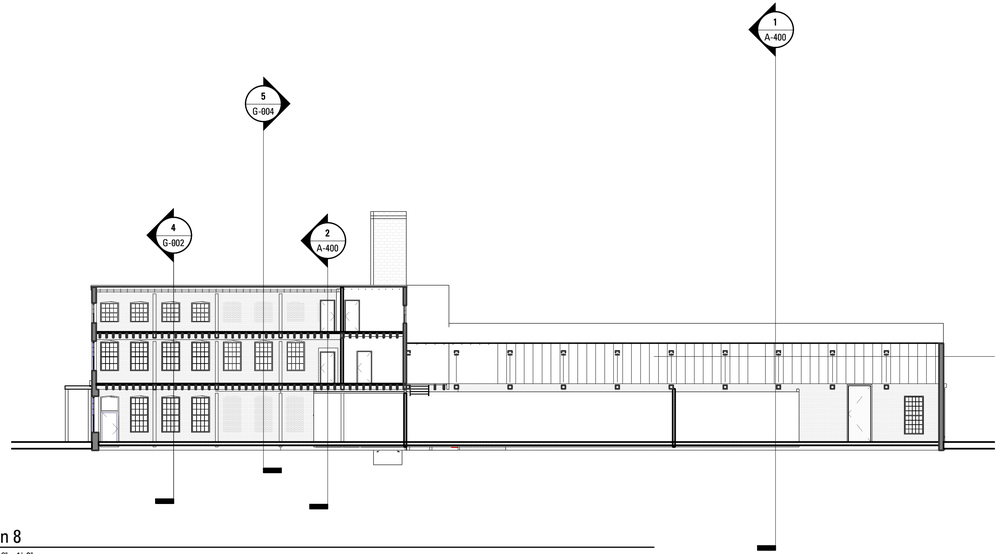

1 C - LONGITUDINAL CODE SECTION
SCALE: 1/16" = 1'-0"



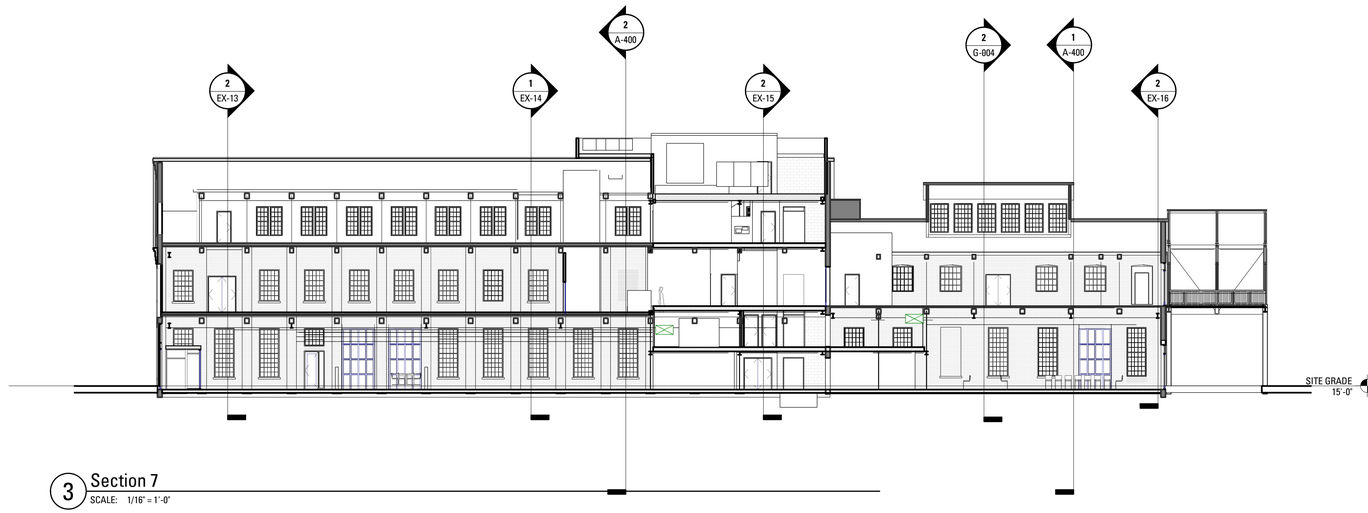
5 Section 9
SCALE: 1/16" = 1'-0"




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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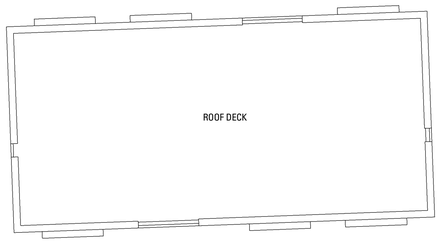
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PORTLAND FORESIDE BLOCK 2

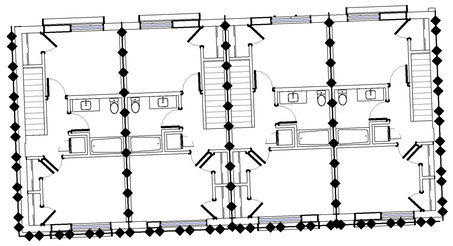
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| Date | OCTOBER 25, 2019 |
| Scale | 1/16" = 1'-0" |
| Project Number | |
| Drawn By | Author |

BLOCK 2 CODE SECTIONS

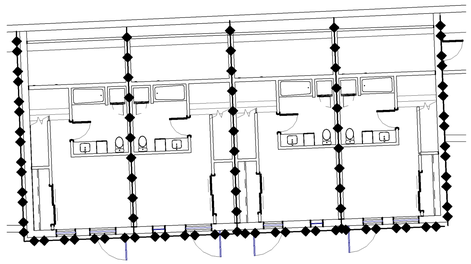
# G-004



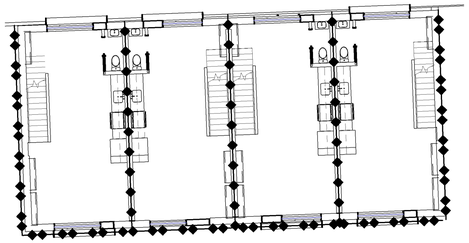

7 ROOF LEVEL
SCALE: 3/32" = 1'-0"



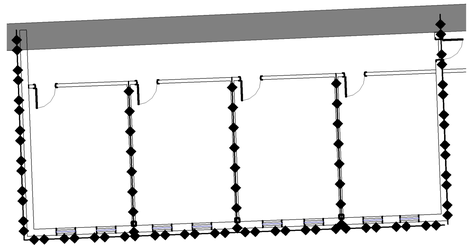
6 THIRD LEVEL
SCALE: 3/32" = 1'-0"



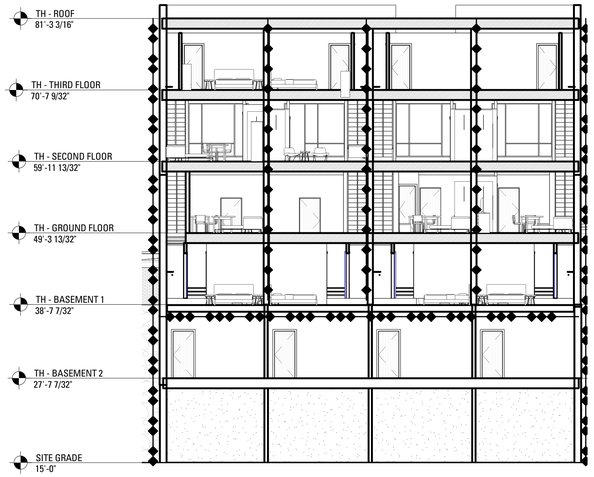
3 BASEMENT 1 LEVEL
SCALE: 3/32" = 1'-0"



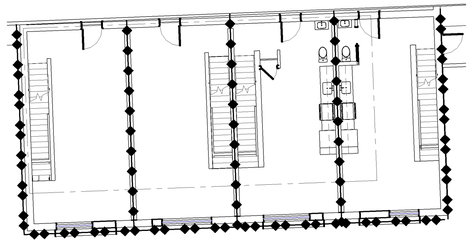
5 SECOND LEVEL
SCALE: 3/32" = 1'-0"



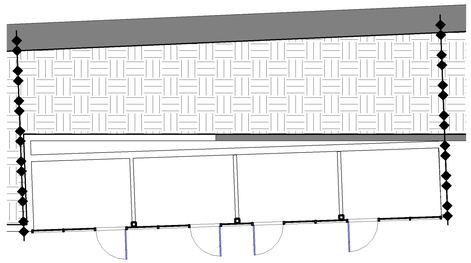
2 BASEMENT 2 LEVEL
SCALE: 3/32" = 1'-0"




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<br>BLOCK 2 DEVELOPMENT |
| AUTHORITY HAVING JURISDICTION: | PERMITTING & INSPECTIONS DEPARTMENT, CITY OF PORTLAND<br>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).<br>MUEBC – MAINE UNIFORM EXISTING BUILDING CODE, AN AMENDED VERSION OF THE 2015 INTERNATIONAL EXISTING BUILDING CODE.<br>PORTLAND MUNICIPAL CODE CHAPTER 6 |
| FIRE | PORTLAND MUNICIPAL CODE CHAPTER 10<br>NFPA 1, UNIFORM FIRE CODE, 2006 EDITION AS ADOPTED BY THE RULES OF THE STATE FIRE MARSHAL<br>NFPA 1, UNIFORM FIRE CODE, 2015 EDITION AS ADOPTED BY THE MUBC<br>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<br>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)<br>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).

Bruner/Cott
ARCHITECTS
225 Friend St., Suite 701
Boston, MA 02114
617.492.8400
www.brunercott.com

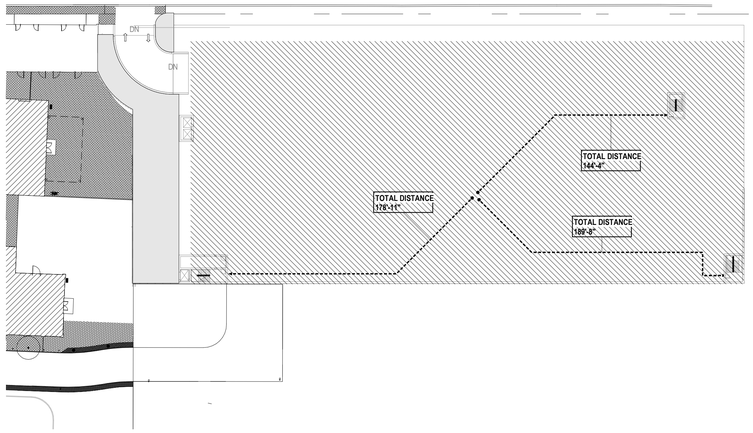
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PORTLAND FORESIDE BLOCK 2

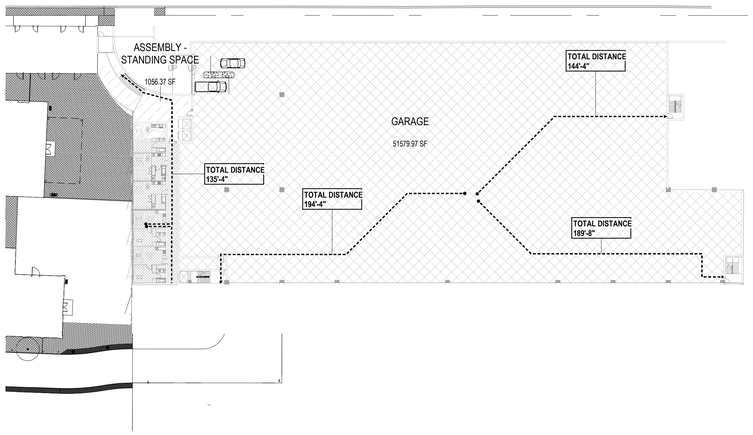
| | |
|---|---|
| Date | OCTOBER 25, 2019 |
| Scale | 3/32" = 1'-0" |
| Project Number | |
| Drawn By | Author |

CODE PLANS - TOWNHOUSES

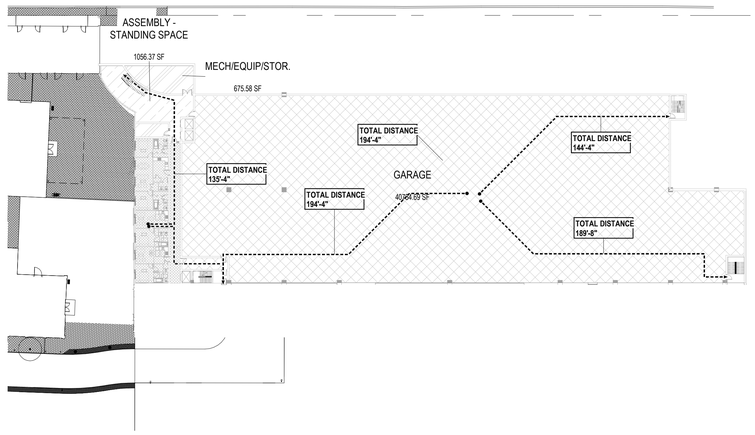
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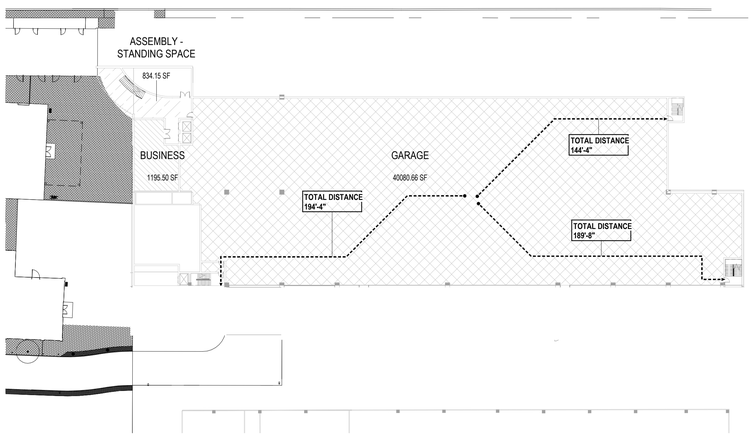

5 ROOF - ELEV. 59'-0": PHASE ONE
1" = 40'-0"



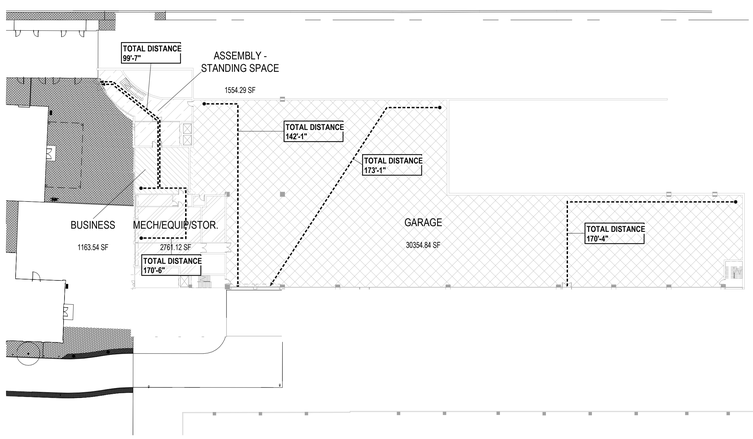

4 LEVEL 04 - PHASE I
1" = 40'-0"




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** |
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| 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


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f 207.879.1822

MEP ENGINEER
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t 617.494.1464

**OWNER'S CONSULTANTS**

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LANDSCAPE ARCHITECT
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f 207.865.1455

GENERAL CONSTRACTOR
Consigli
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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

Att. P

# 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.

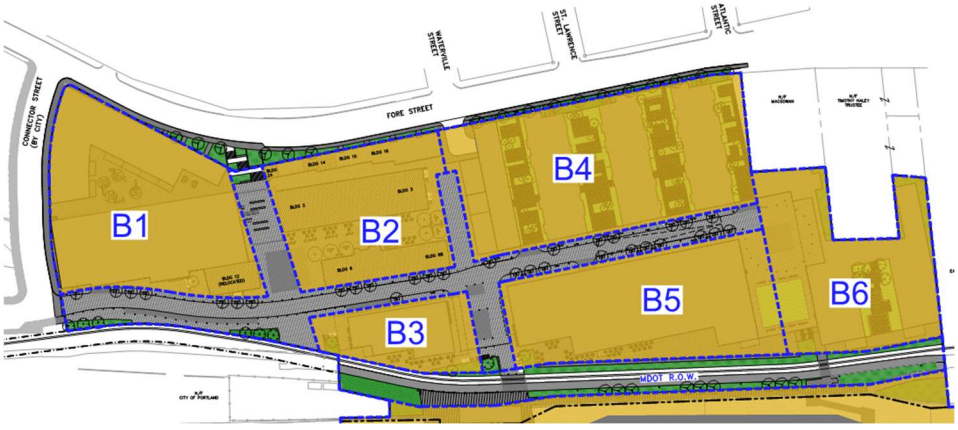
In accordance with Title 38, Chapter 3, Subchapter 1, Article 6 of the Maine Statutes, it is our understanding that demolition of buildings is considered exempt from Site Law. It is also our understanding that the MaineDEP has determined that the City of Portland has delegated review authority over this 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<br>ATTN: CITY MANAGER<br>389 Congress Street<br>Portland, ME 04101 |
| With a copy to: | The Office of the Corporation Counsel at the same address. |
| **FOR CPB2**: | CPB2 LLC<br>c/o CPB2 Management LLC<br>P.O. Box 7987<br>Portland, Maine 04112 |
| With a copy to: | Bernstein, Shur, Sawyer & Nelson, P.A.<br>Attention: Mary E. Costigan, Esq.<br>100 Middle Street, West Tower<br>Portland, Maine 04101 |
| **FOR DOT**: | STATE OF MAINE DEPARTMENT OF TRANSPORTATION<br>Attention: Toni Kemmerle, Esq.<br>16 State House Station<br>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. Cranton
WITNESS

By: [signature]
Name: CASEY PRENTICE
Its: MANAGER

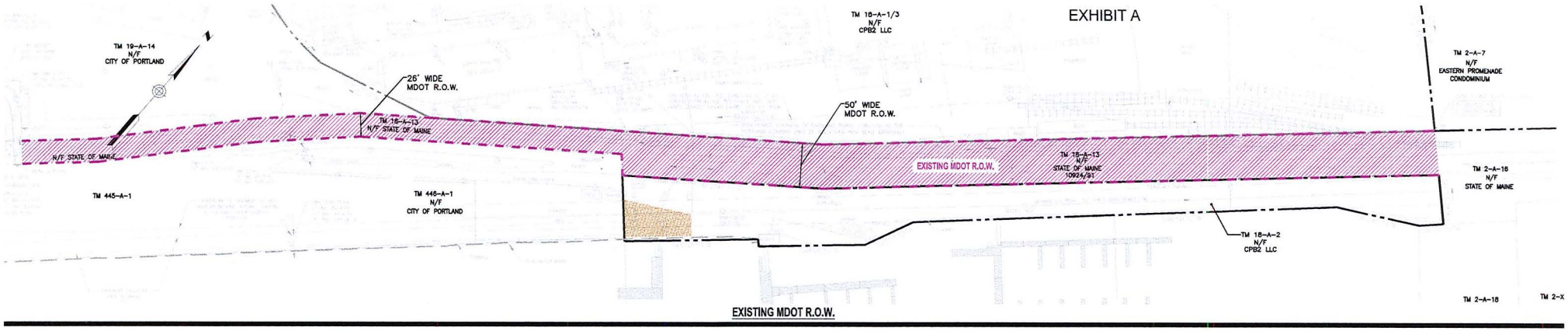
**MAINE DEPARTMENT OF TRANSPORTATION**

Melissa Pushard
WITNESS

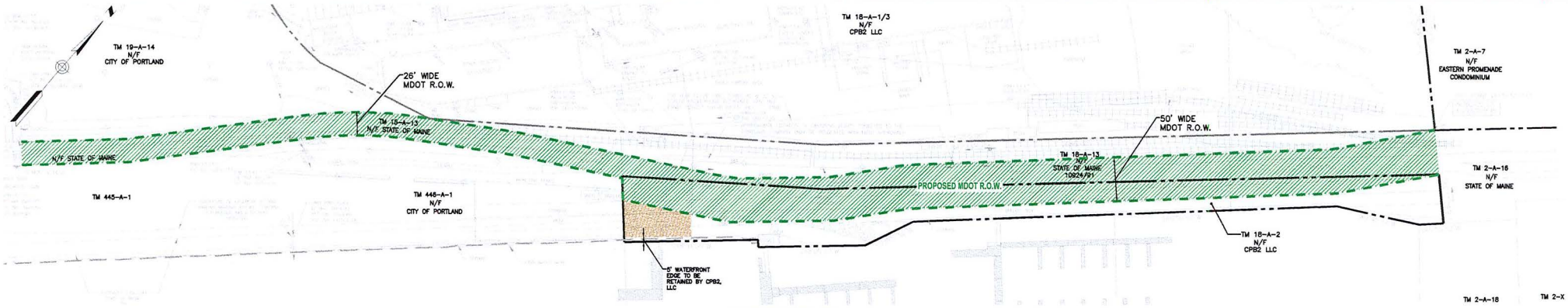
By: [signature]
David Bernhardt
Its Commissioner

Approved as to Form:
MB
Corporation Counsel's Office

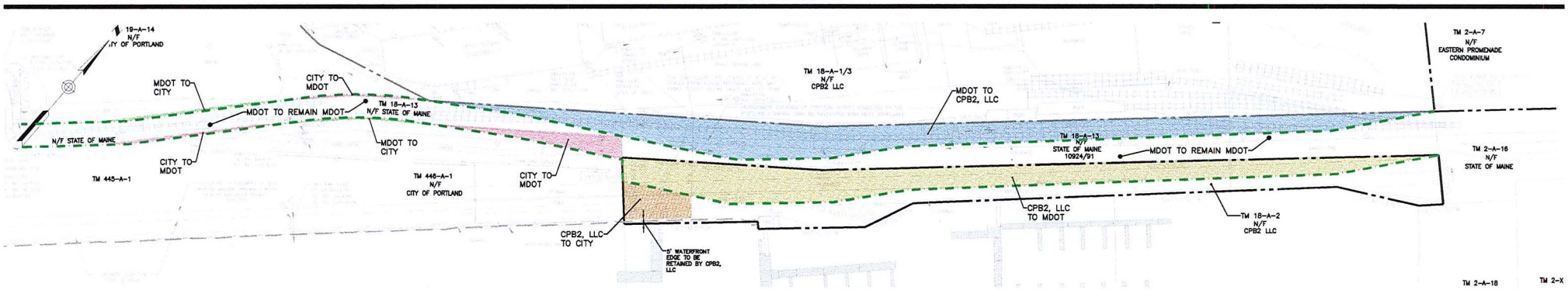
EXHIBIT A




EXISTING MDOT R.O.W.




PROPOSED MDOT R.O.W.




Scale: 1" = 50'
12/1/2016

CPB2 LLC
EASTERN WATERFRONT DEVELOPMENT PORTLAND, MAINE

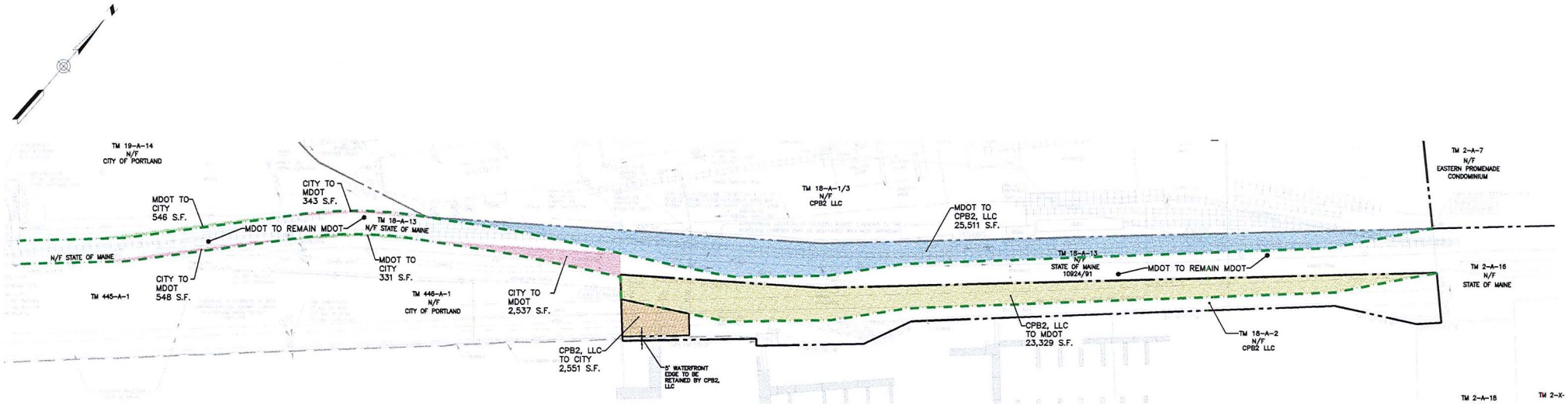
50' 0 50' 100'
BAR SCALE
1" = 50'
CHECK GRAPHIC SCALE BEFORE USING

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

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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<br>(207) 624-3042 |
| LICENSEE: | CPB2 1 LLC<br>(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:

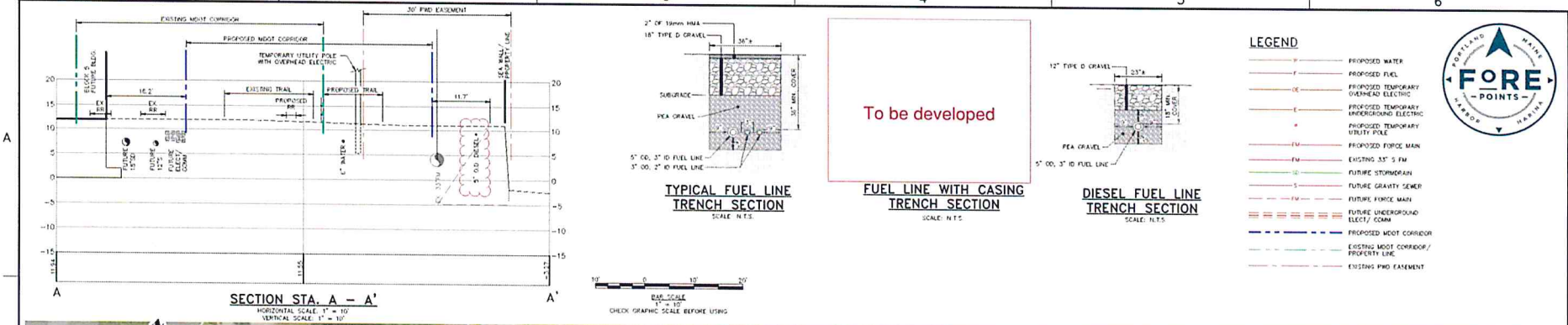
CPB2 1 LLC

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.



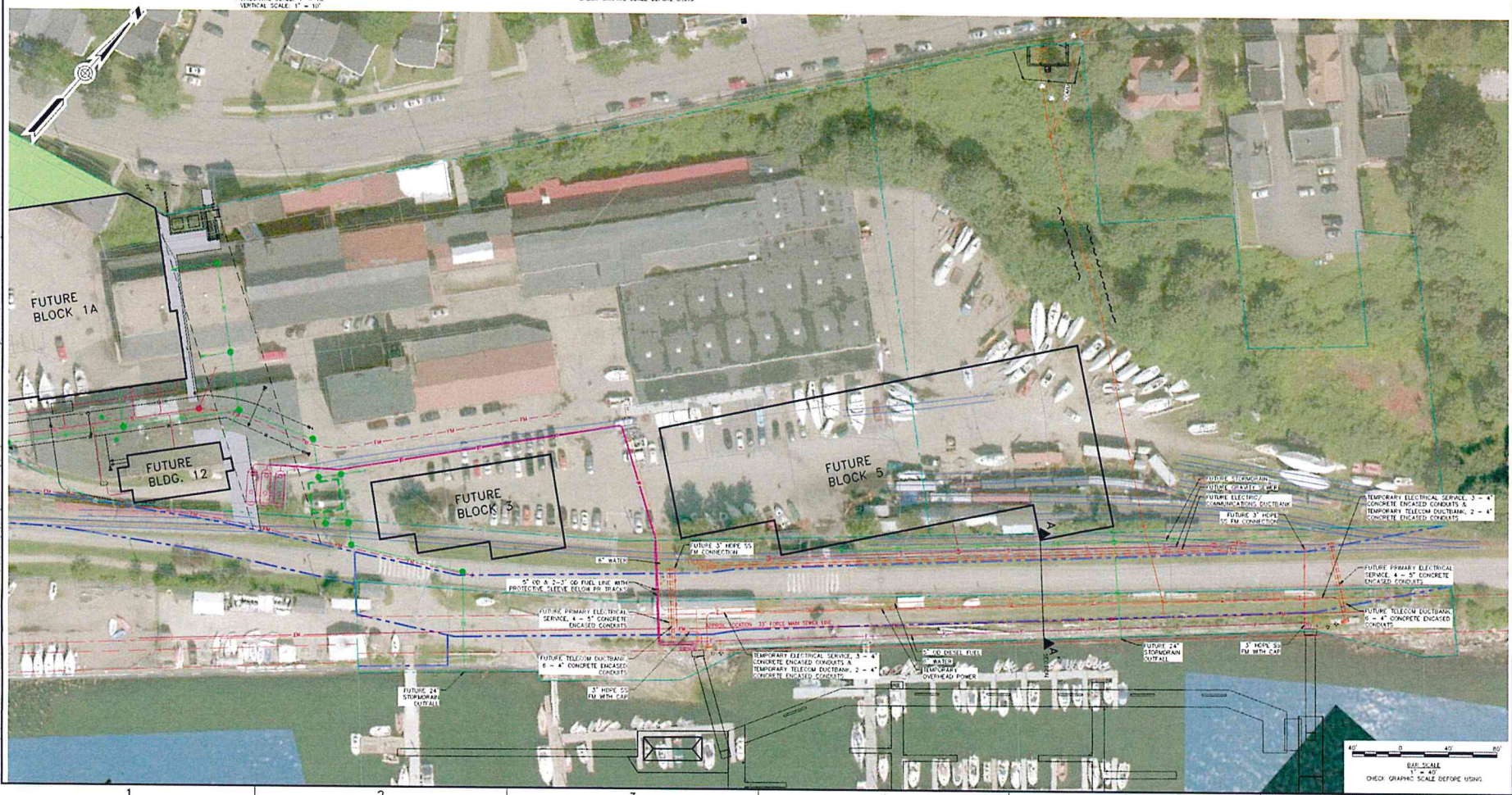

DIESEL FUEL LINE TRENCH SECTION

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.

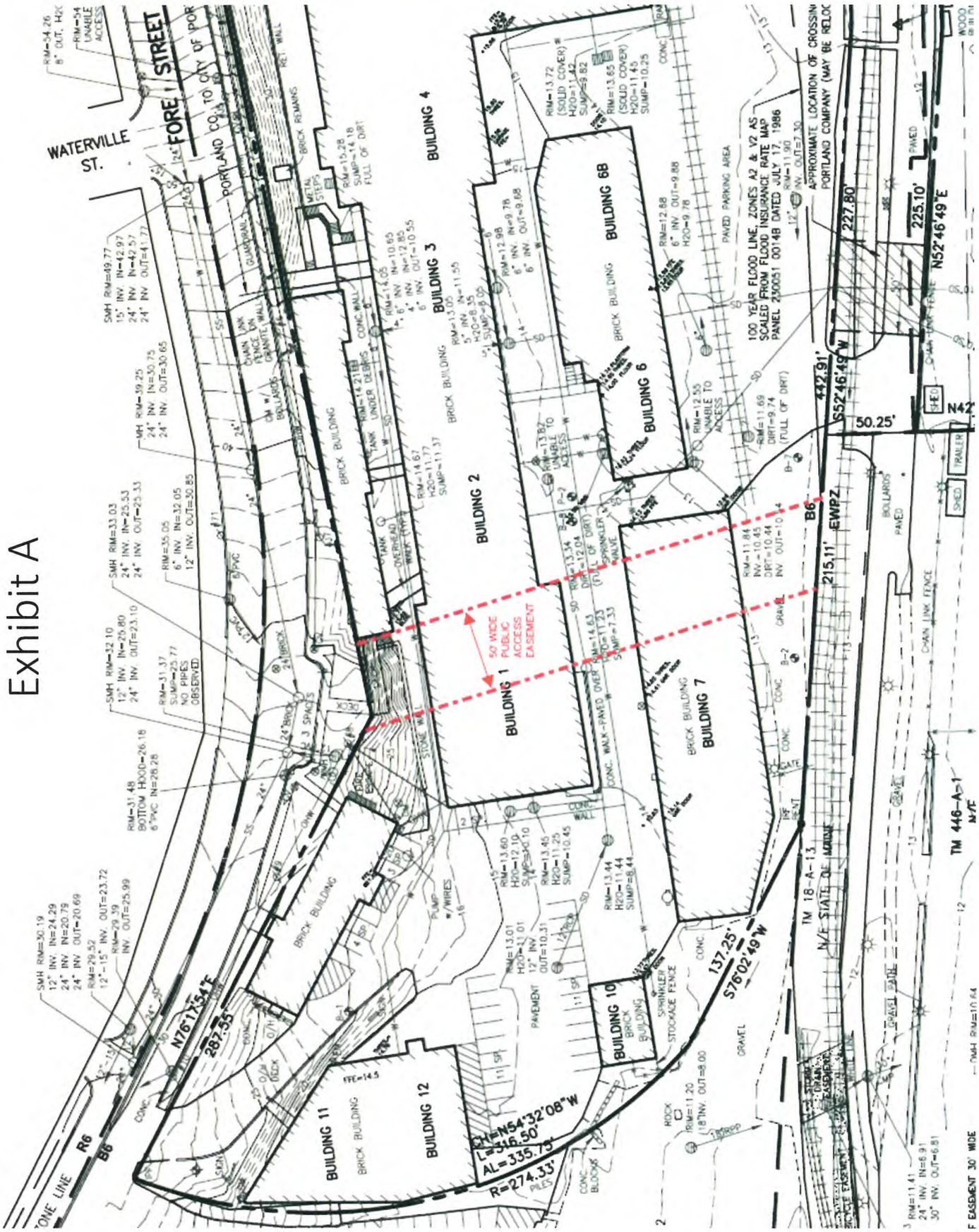
Before me,

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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Back to previous screen | New Search

**Click on a link to obtain additional information.**

| | | |
|---|---|---|
| List of Filings | View list of filings | |
| **Obtain additional information:** | | |
| Additional Addresses | Plain Copy | Certified copy |
| Certificate of Existence (more info) | Short Form without amendments ($30.00) | Long Form with amendments ($30.00) |

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You will need Adobe Acrobat version 3.0 or higher in order to view PDF files.
If you encounter problems, visit the troubleshooting page.

Get Acrobat Reader

If you encounter technical difficulties while using these services, please contact the Webmaster. If you are unable to find the information you need through the resources provided on this web site, please contact the Bureau's Reporting and Information Section at 207-624-7752 or e-mail or visit our Feedback page.

© Department of the Secretary of State

# 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*<br>No critical habitat has been designated for this species.<br>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

alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

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HlB—Hinckley loamy sand, 3 to 8 percent slopes.....10
HlD—Hinckley loamy sand, 15 to 25 percent slopes.....11
W—Water.....12
**References**.....13

# 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

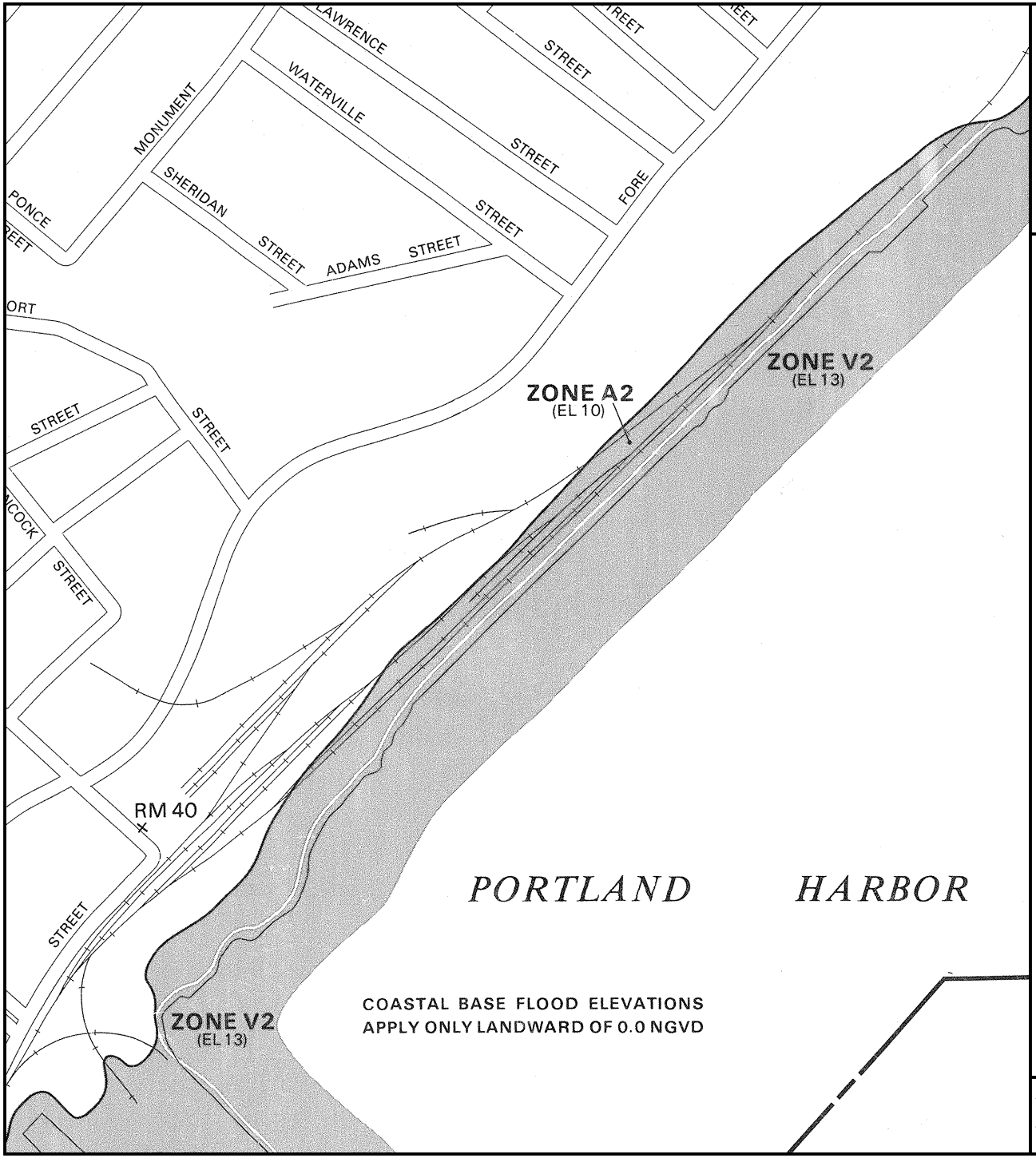
The proposed development is not anticipated to produce any hazardous waste. Environmental assessments of the Site have been conducted and the Owner is a participant in the Maine Department of Environmental Protection Voluntary Response Action Program (VRAP). A soil management plan will be developed for 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

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COMMITMENT & INTEGRITY DRIVE RESULTS

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Att. Q

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.

# 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).

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Richmond, Virginia, 23234
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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:**_____

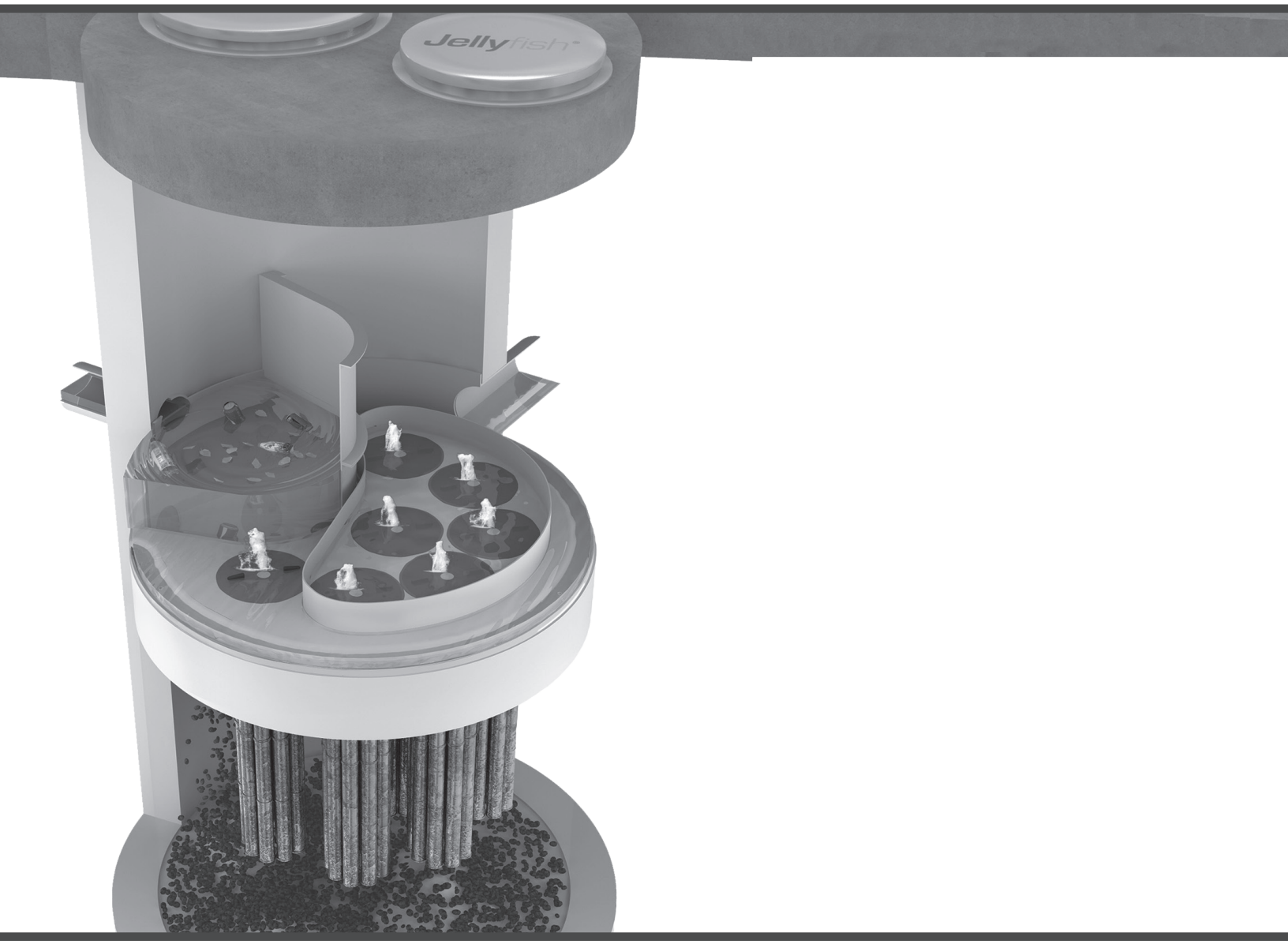
**Phone Number:**_____

| Date | Location | Depth to Bottom | Depth to Sediment | Sediment Depth | Observations/Notes | Initials |
|---|---|---|---|---|---|---|
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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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# 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.

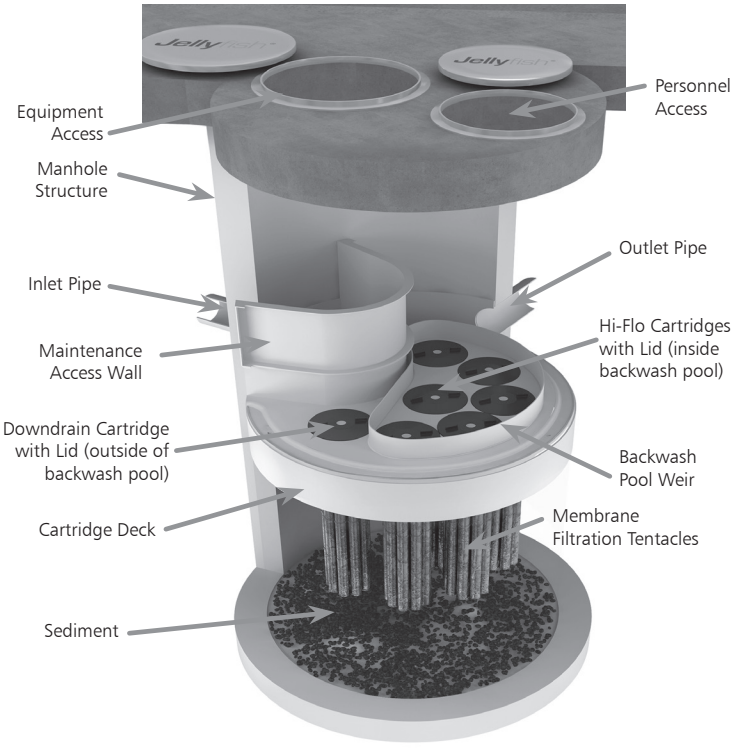
Maintenance frequencies and requirements are site specific and vary depending on pollutant loading. Additional maintenance activities may be required in the event of non-storm event runoff, such as base-flow or seasonal flow, an upstream chemical spill or due to excessive sediment loading from site erosion 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:

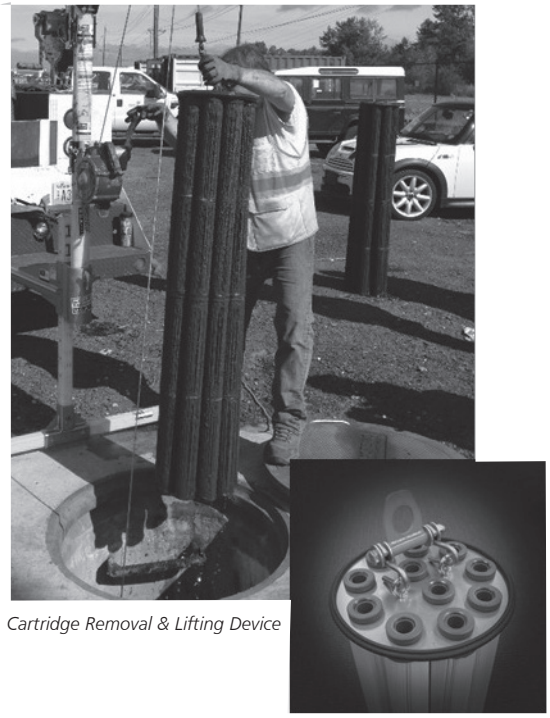
1. Provide traffic control measures as necessary.
2. Open all covers and hatches. Use ventilation equipment as required, according to confined space entry procedures. *Caution: Dropping objects onto the cartridge deck may cause damage*.
3. Perform Inspection Procedure prior to maintenance activity.
4. 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.

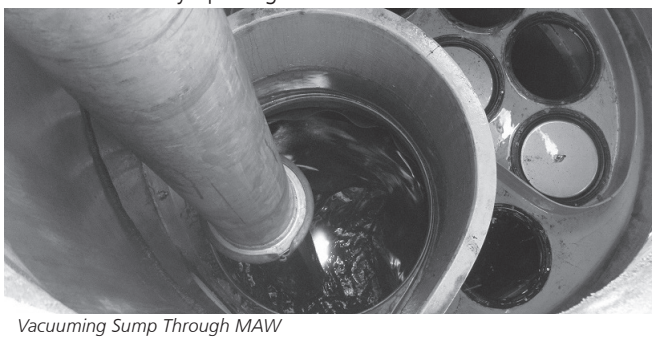
### 5.3 Sediment and Flotables Extraction

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

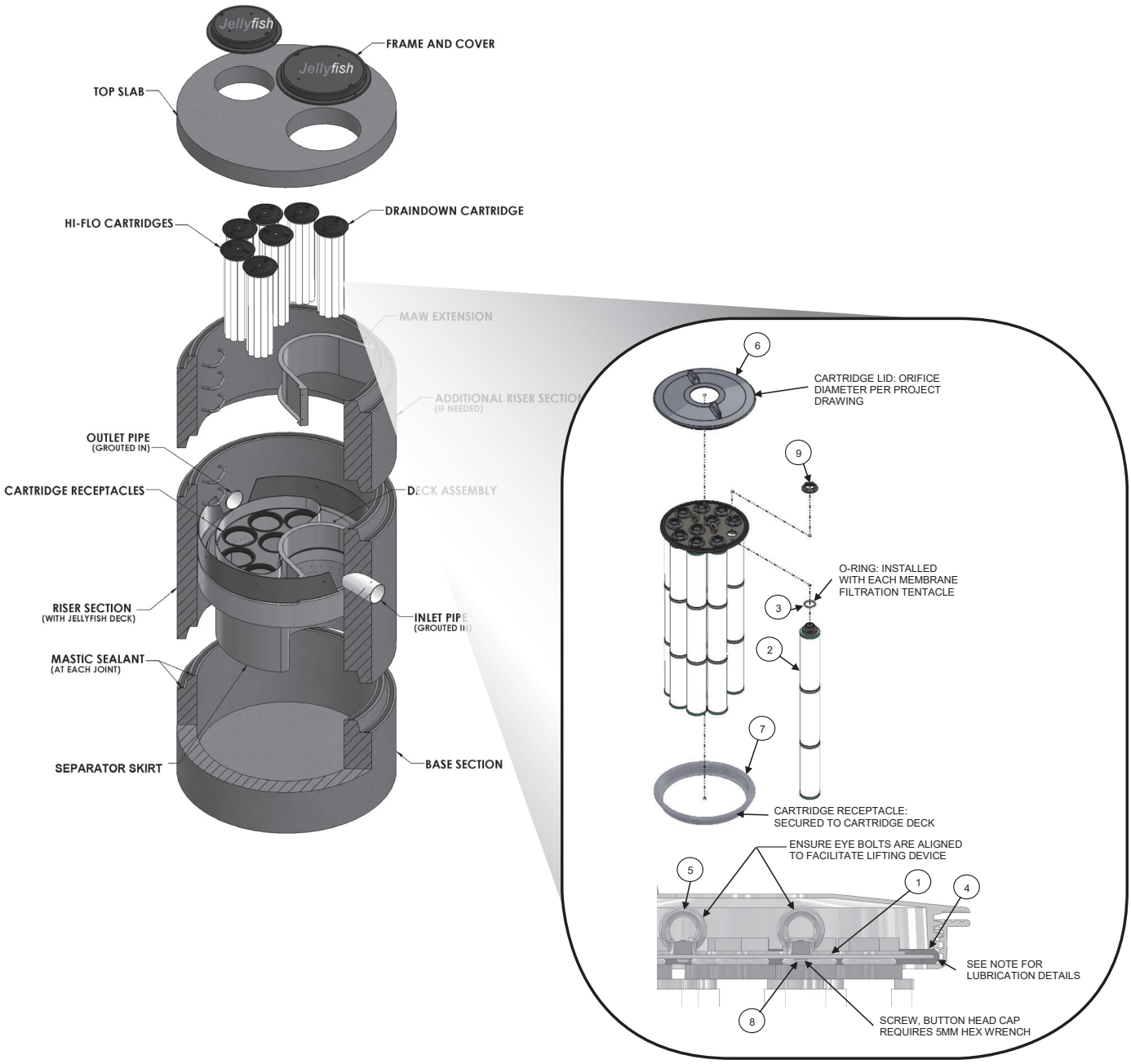



TABLE 1: BOM

| 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: | | | | | | |




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**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.*

Contech Engineered Solutions LLC
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Scarborough, ME 04074
Phone: (207) 885-6191
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.

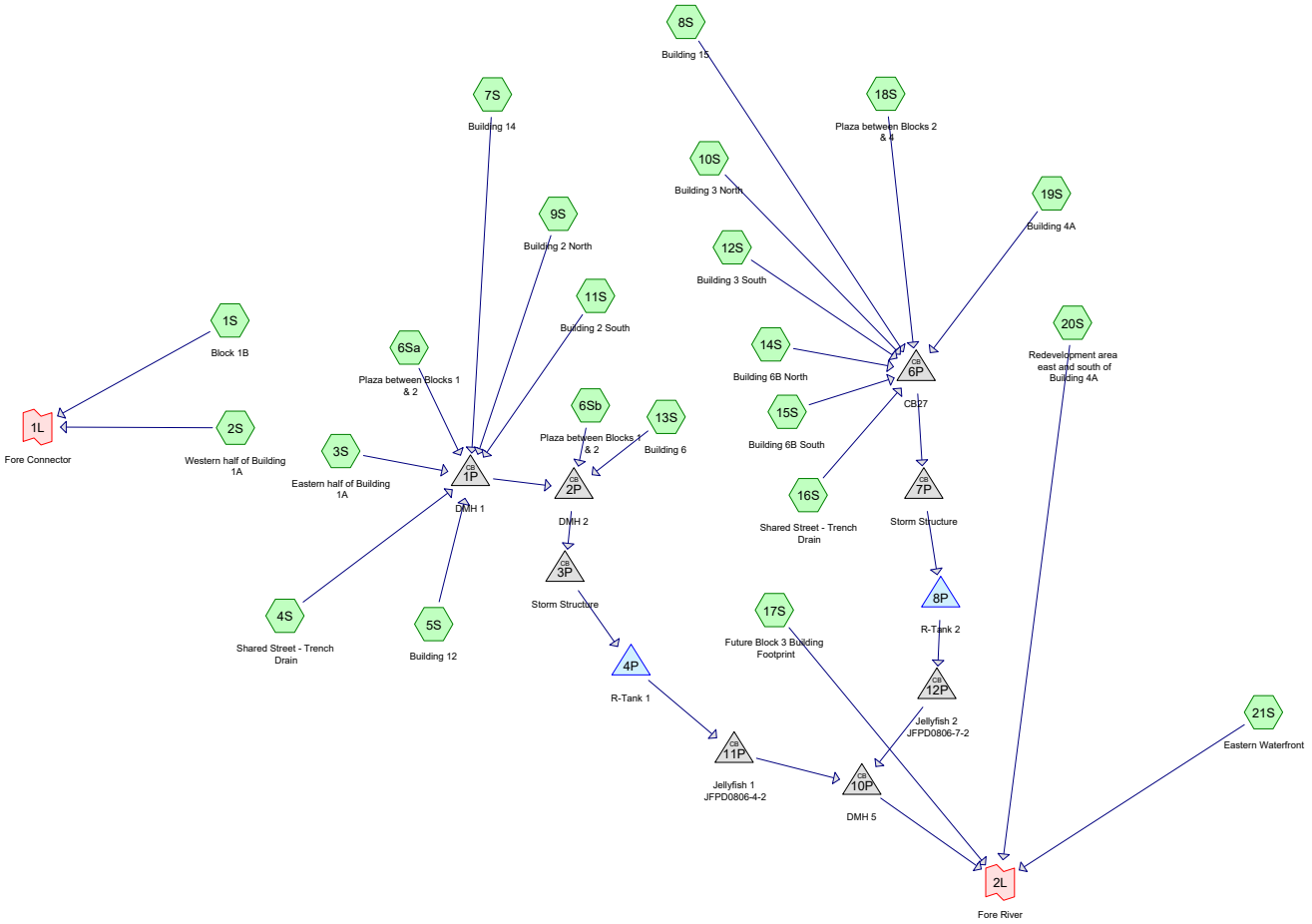
Filter 2 – Jellyfish filter vault:
The engineer of record reports a Qwq of 1.63 cfs outlet flow from an upstream detention system. In order to adequately treat the runoff from this area, Contech recommends a Jellyfish filter Peak Diversion vault model JFPD0806-9-2 with 9 HF cartridges and 2 DD cartridges.

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

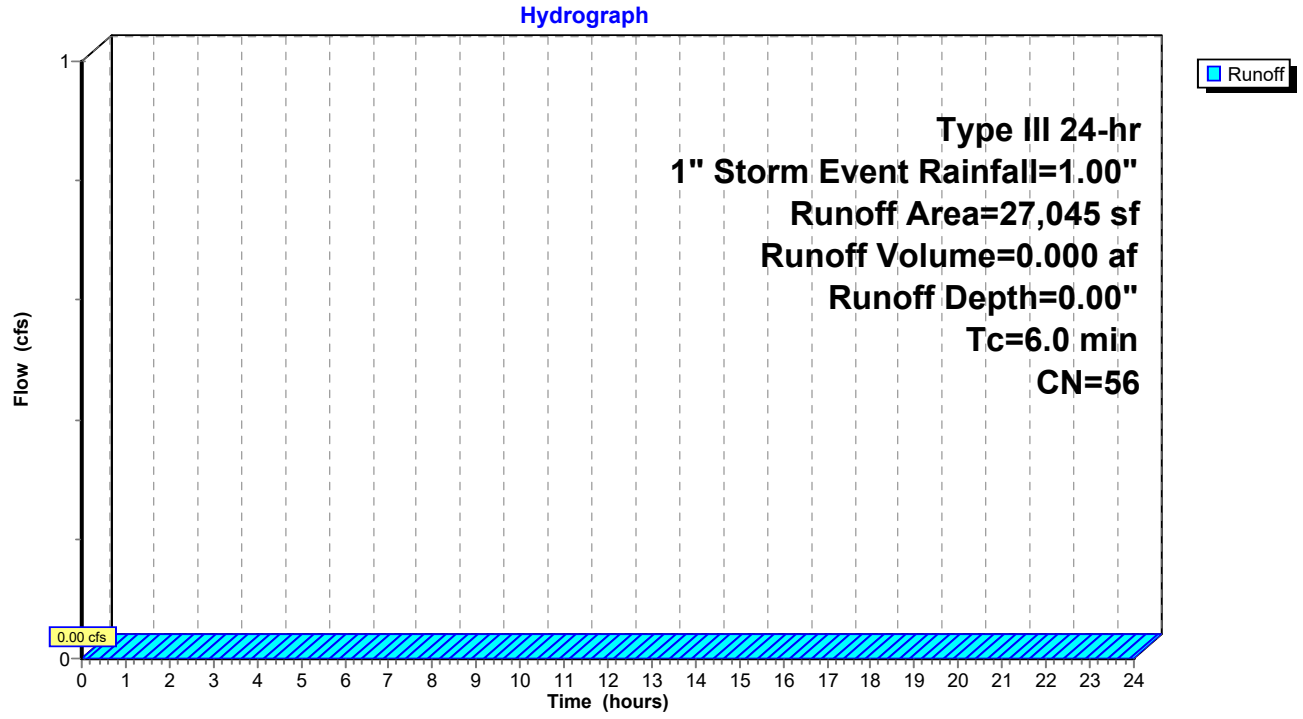
Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Depth= 0.00"

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

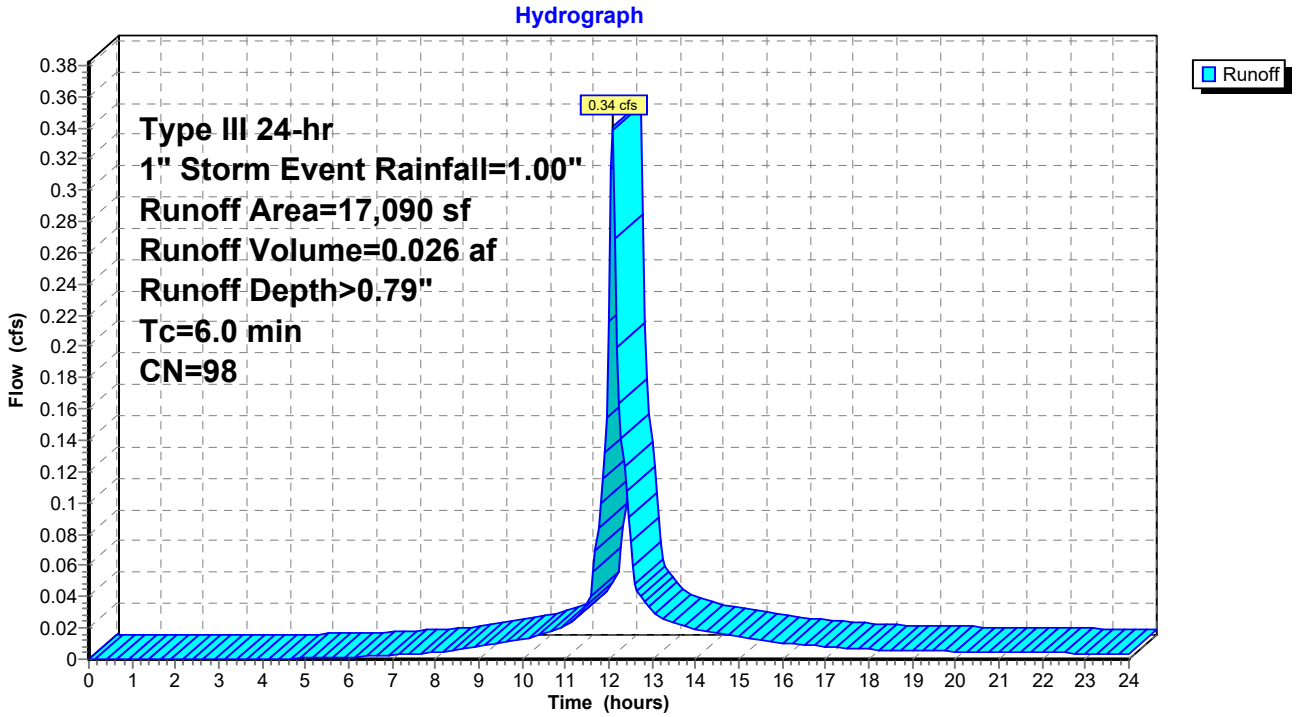
Runoff = 0.34 cfs @ 12.09 hrs, Volume= 0.026 af, Depth> 0.79"

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

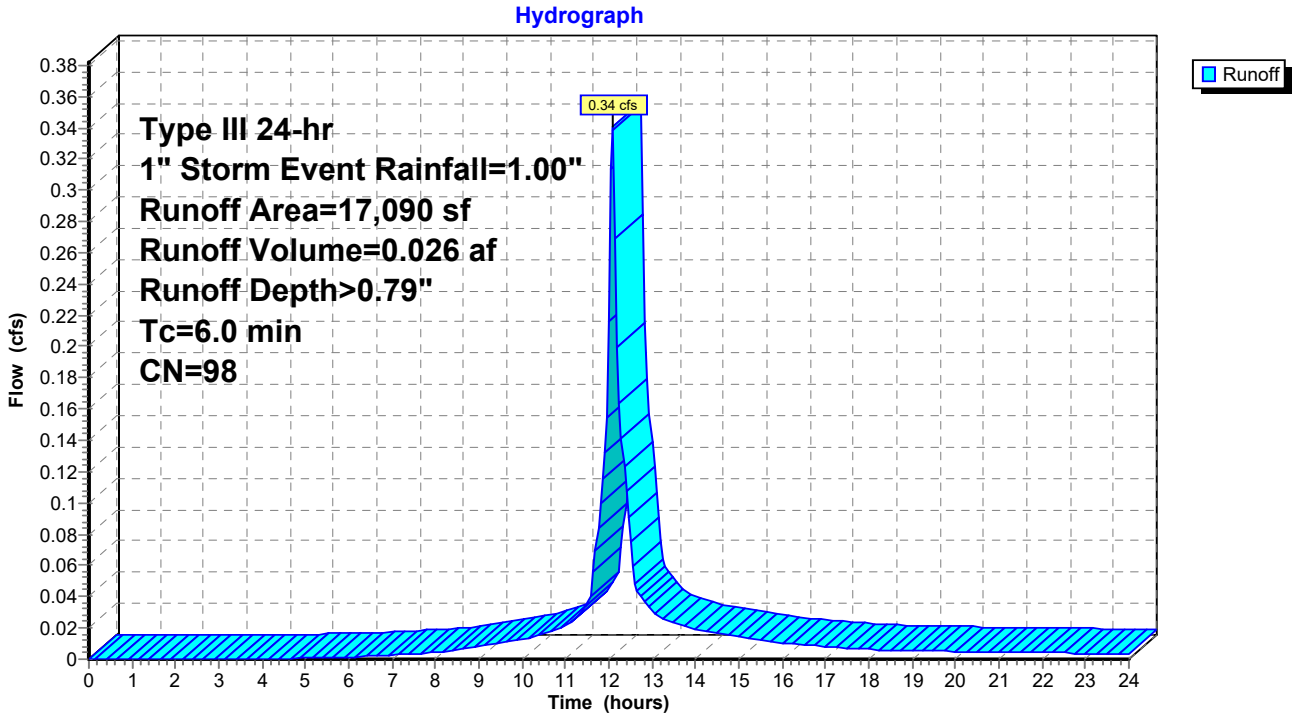
Runoff = 0.34 cfs @ 12.09 hrs, Volume= 0.026 af, Depth> 0.79"

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

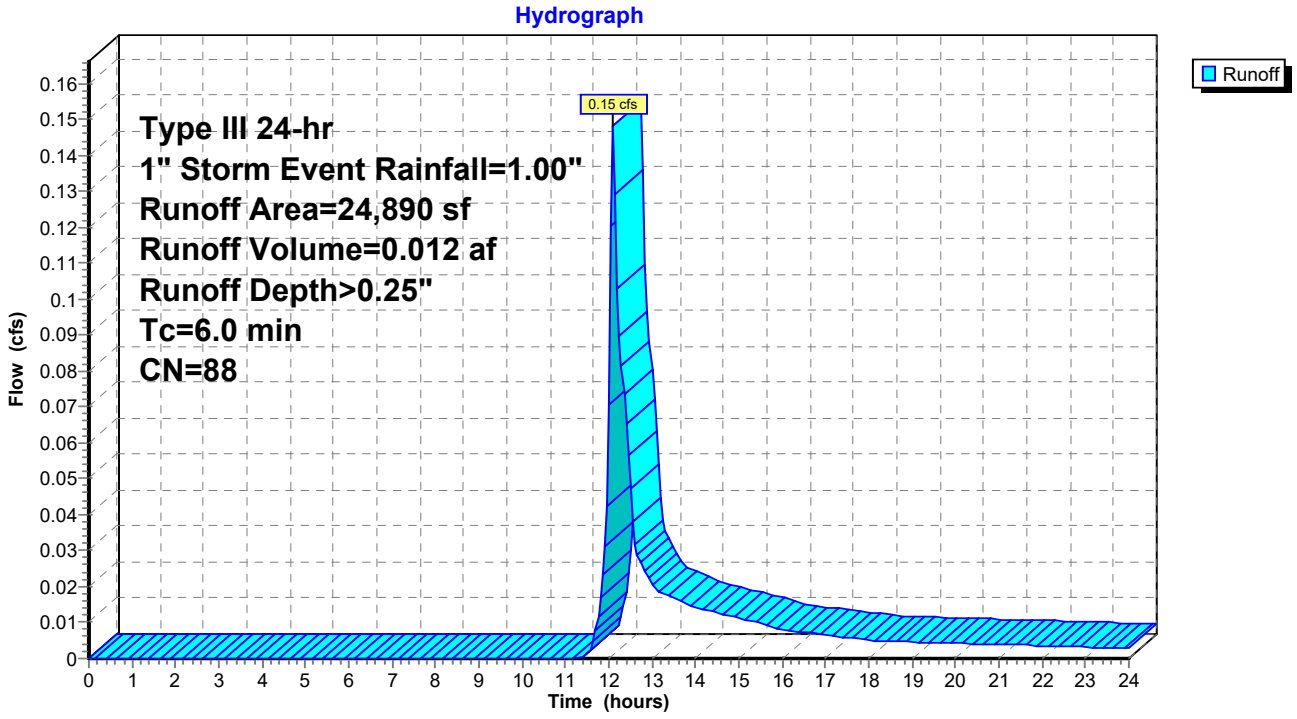
Runoff = 0.15 cfs @ 12.10 hrs, Volume= 0.012 af, Depth> 0.25"

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

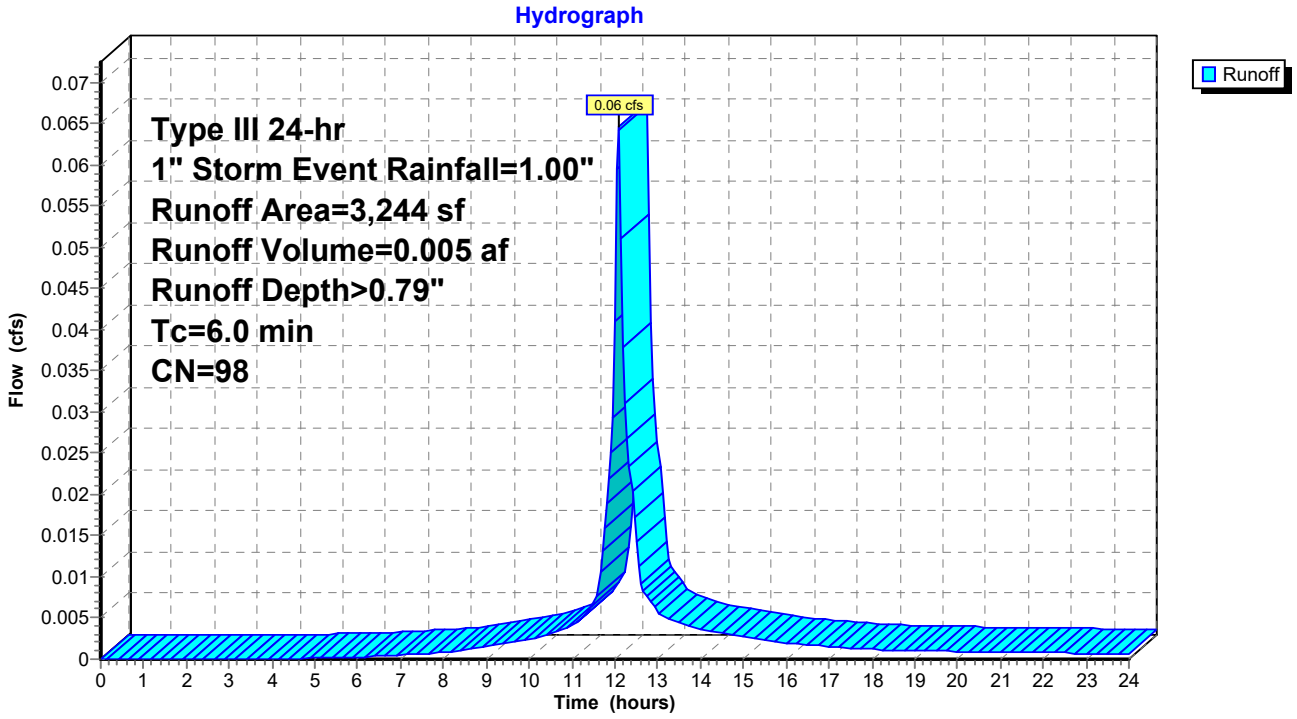
Runoff = 0.06 cfs @ 12.09 hrs, Volume= 0.005 af, Depth> 0.79"

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

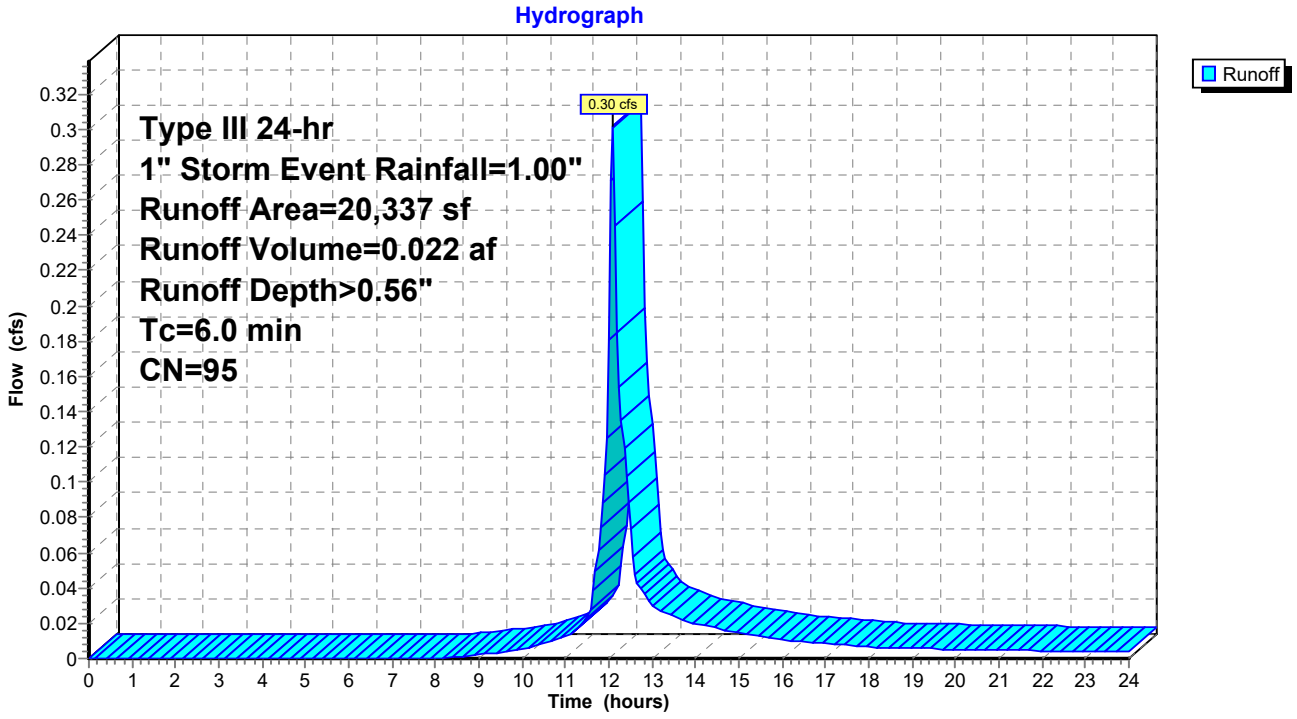
Runoff = 0.30 cfs @ 12.09 hrs, Volume= 0.022 af, Depth> 0.56"

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

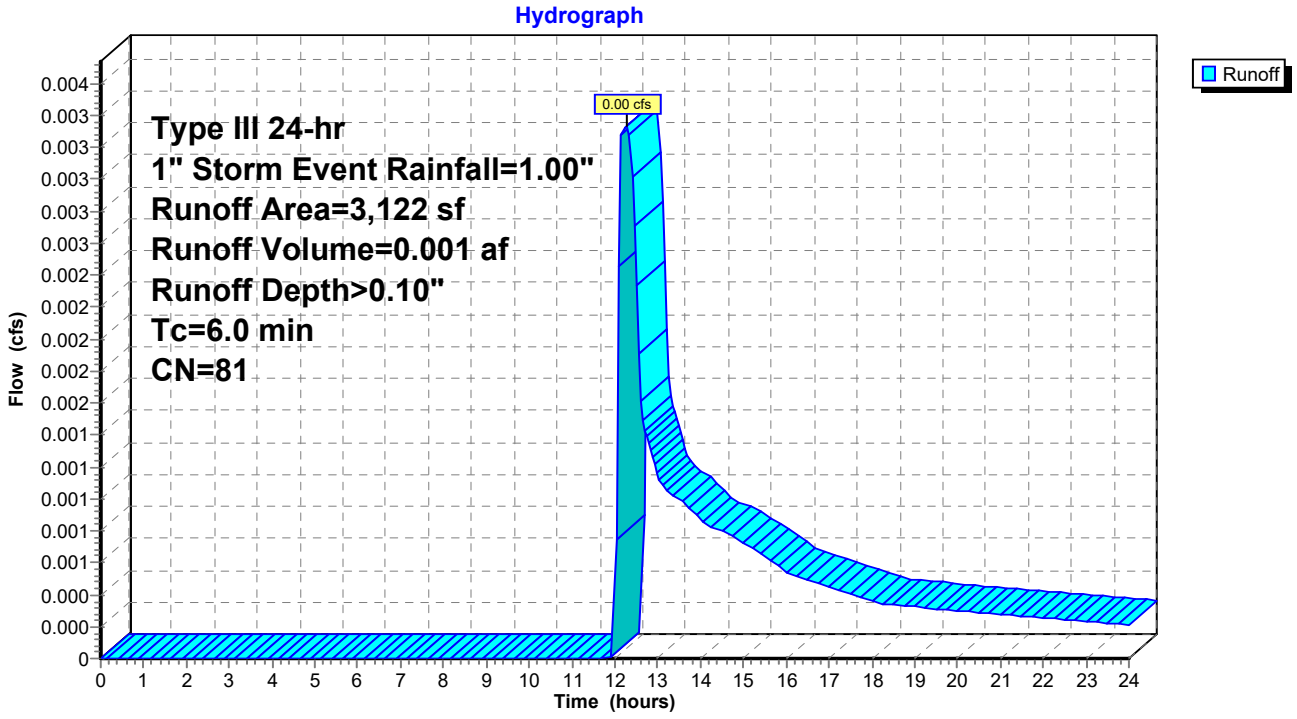
Runoff = 0.00 cfs @ 12.27 hrs, Volume= 0.001 af, Depth> 0.10"

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

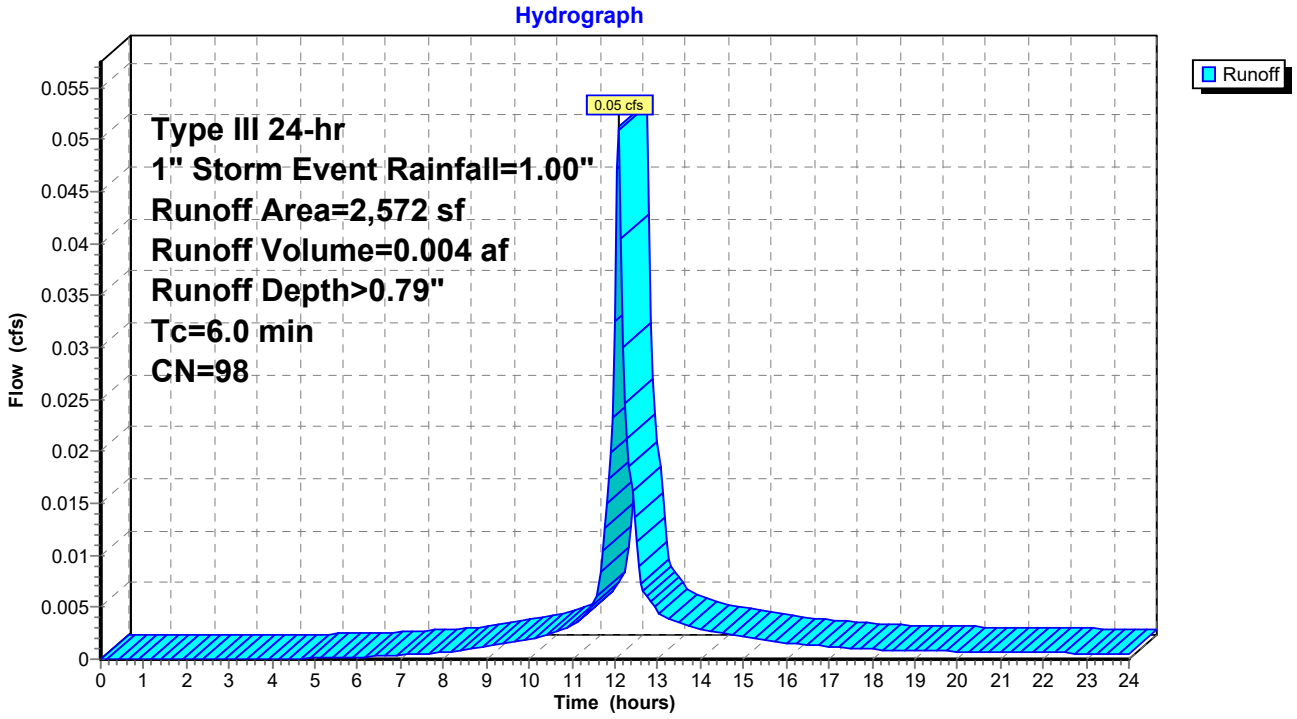
Runoff = 0.05 cfs @ 12.09 hrs, Volume= 0.004 af, Depth> 0.79"

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

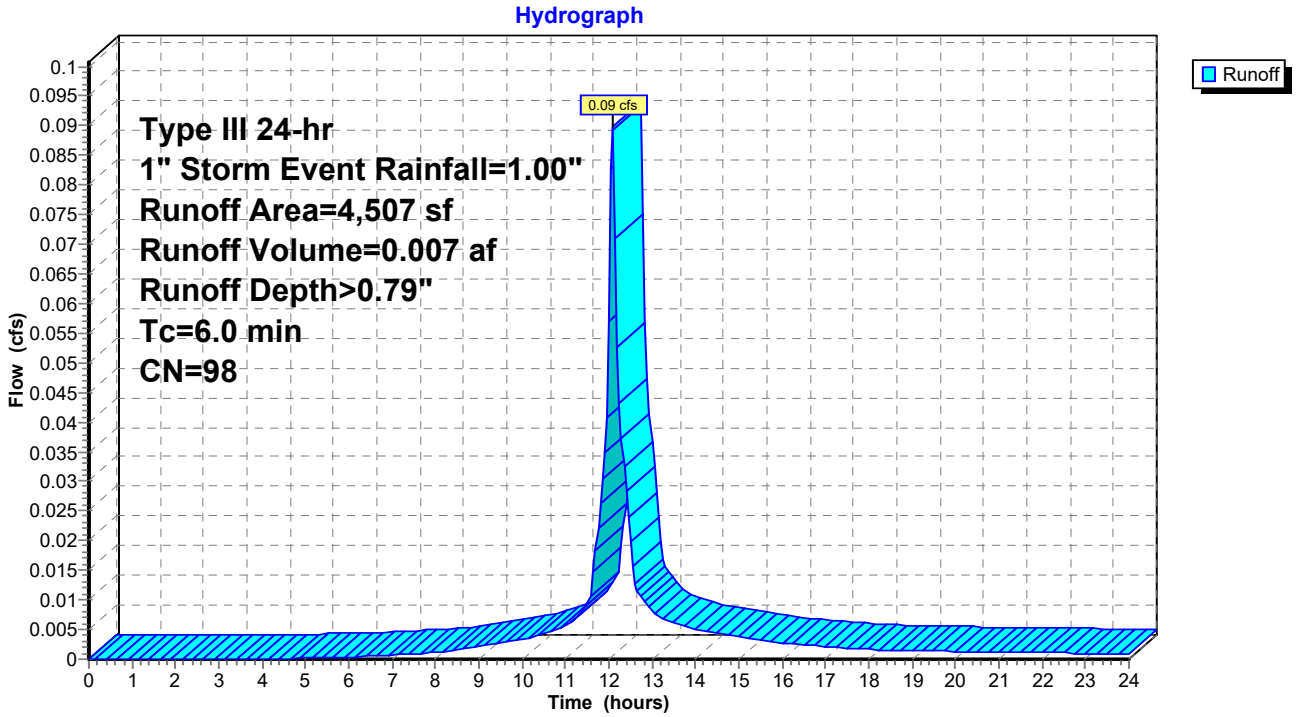
Runoff = 0.09 cfs @ 12.09 hrs, Volume= 0.007 af, Depth> 0.79"

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

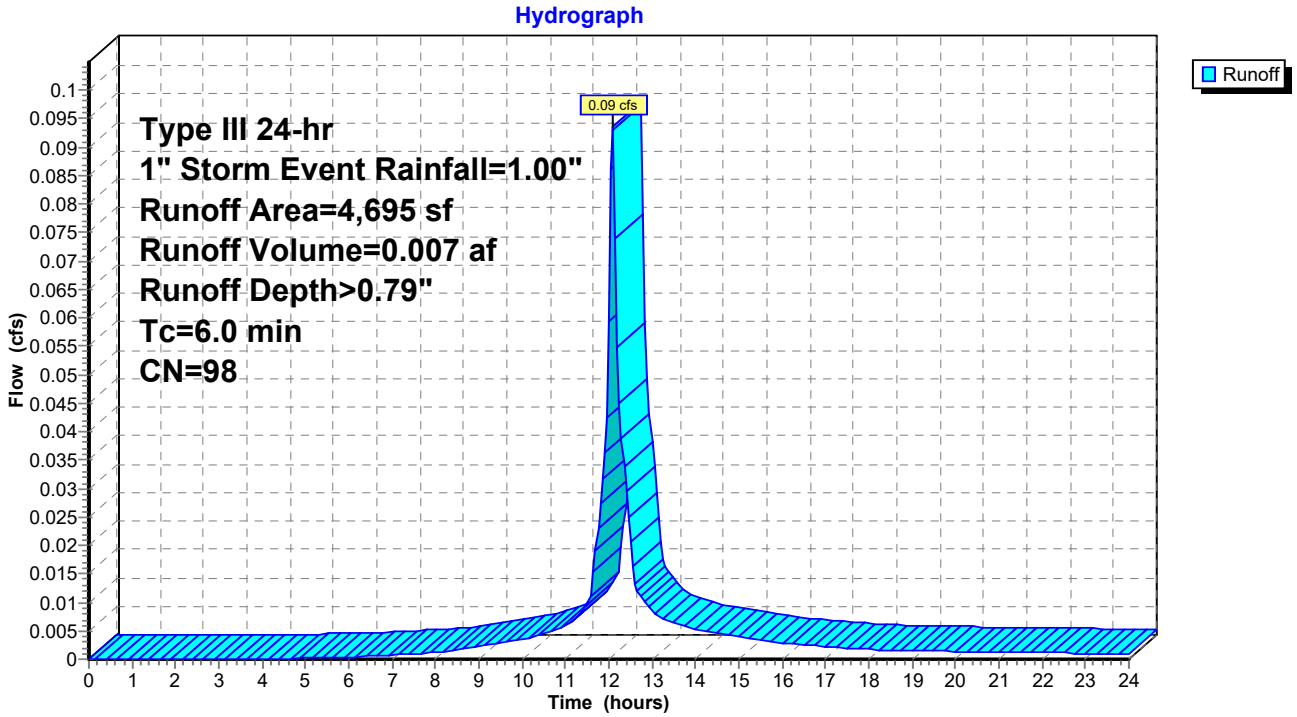
Runoff = 0.09 cfs @ 12.09 hrs, Volume= 0.007 af, Depth> 0.79"

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

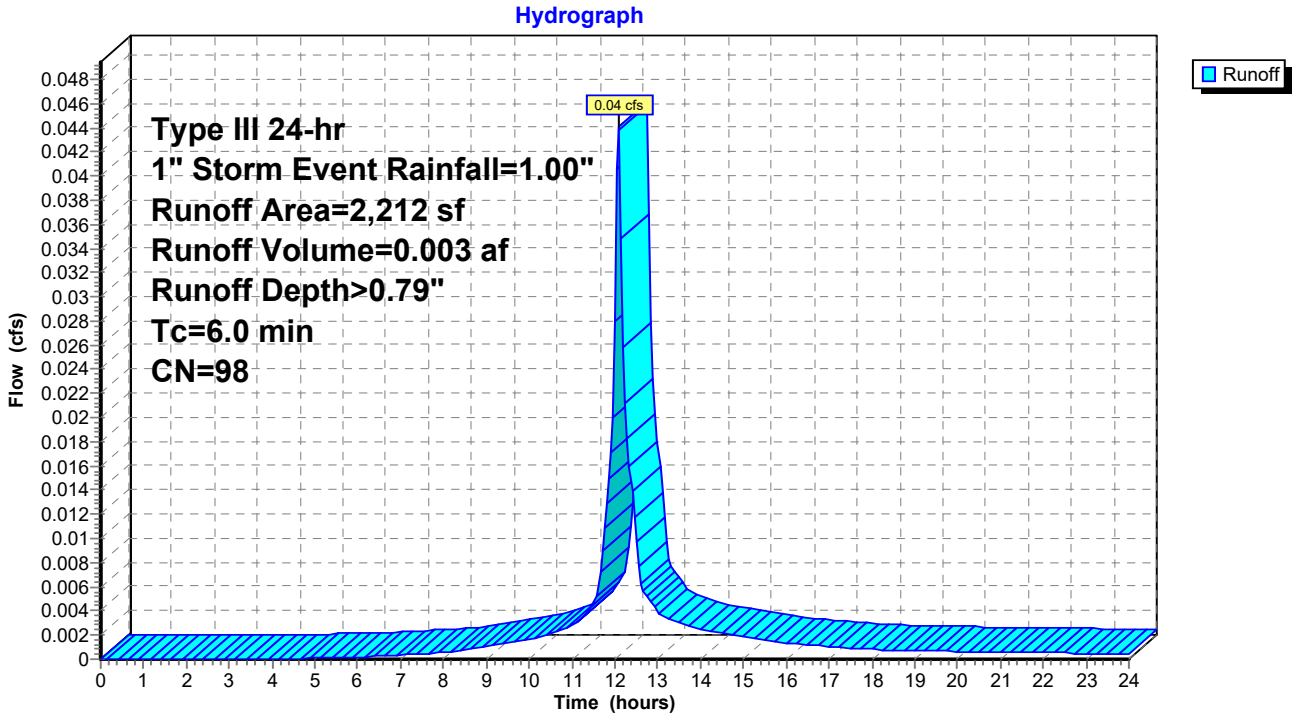
Runoff = 0.04 cfs @ 12.09 hrs, Volume= 0.003 af, Depth> 0.79"

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

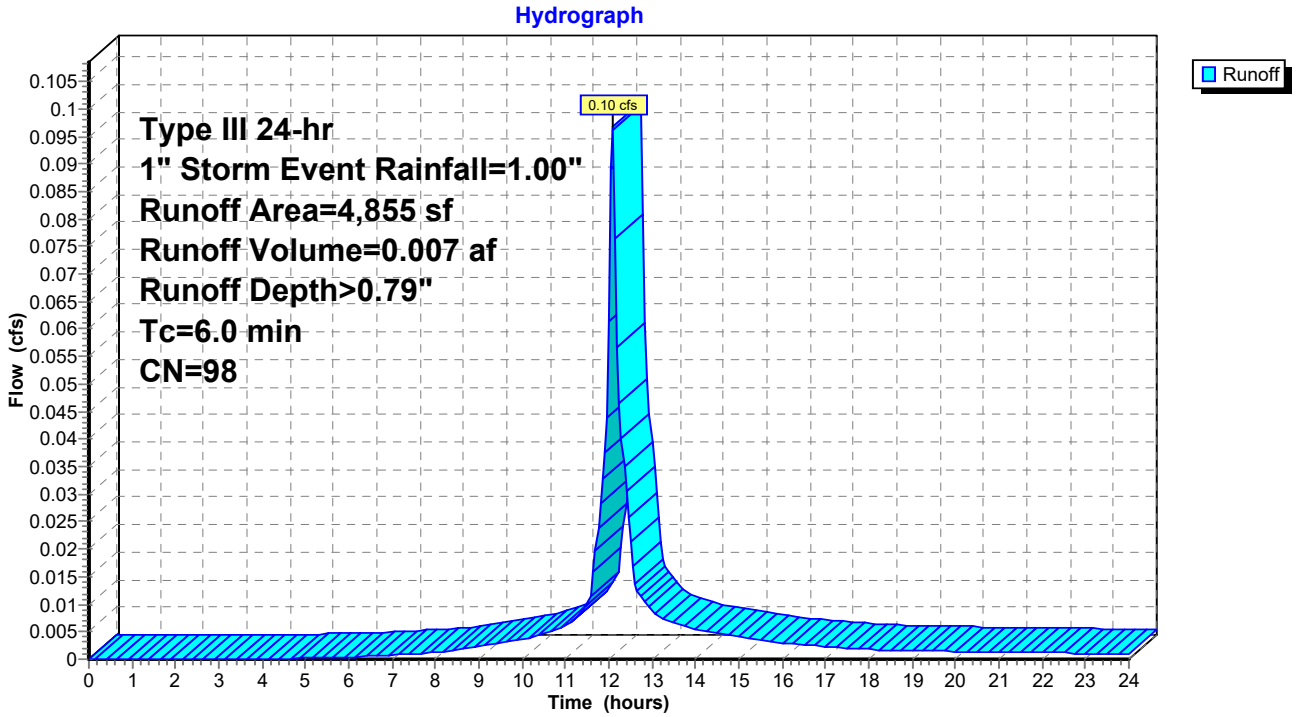
Runoff = 0.10 cfs @ 12.09 hrs, Volume= 0.007 af, Depth> 0.79"

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

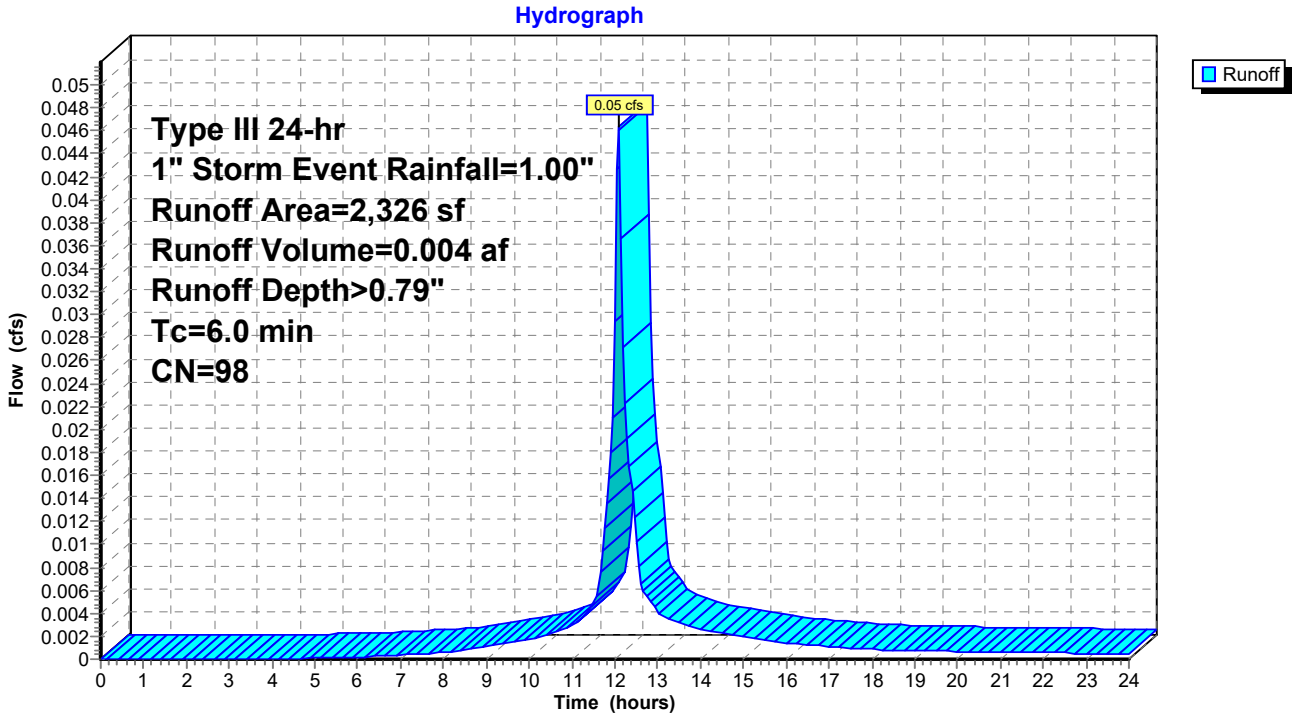
Runoff = 0.05 cfs @ 12.09 hrs, Volume= 0.004 af, Depth> 0.79"

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

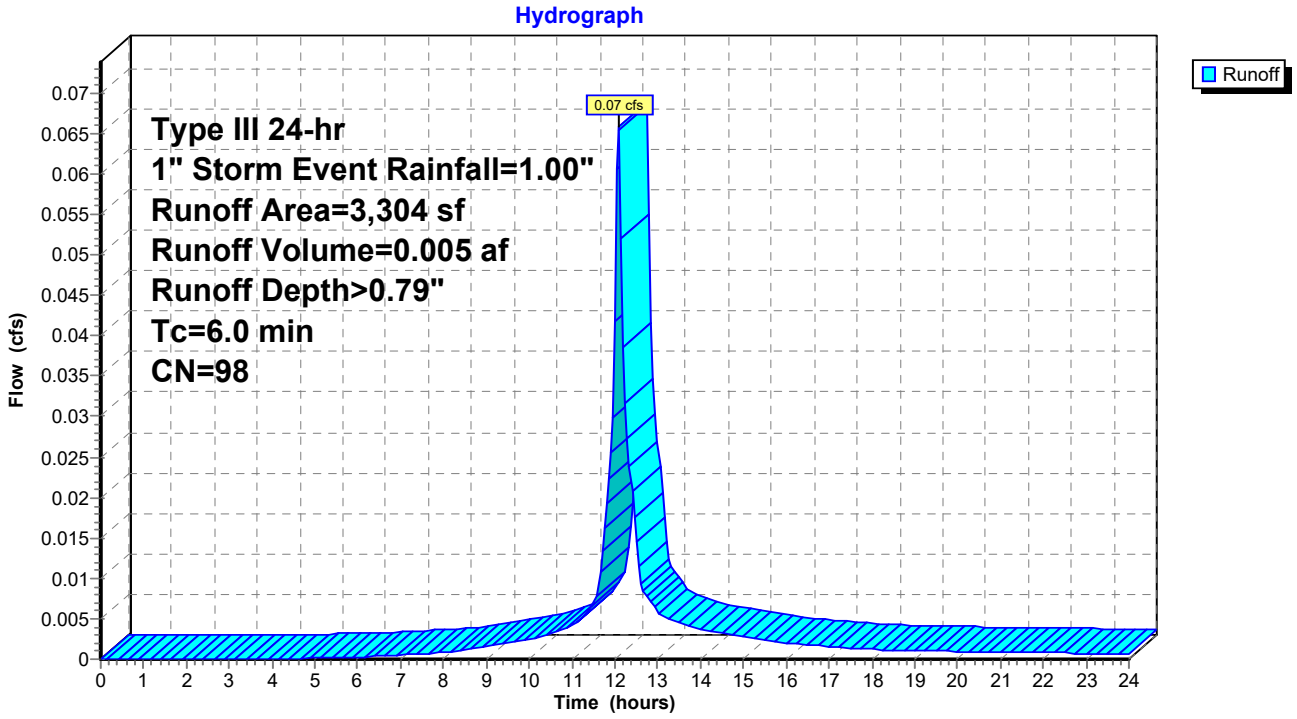
Runoff = 0.07 cfs @ 12.09 hrs, Volume= 0.005 af, Depth> 0.79"

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

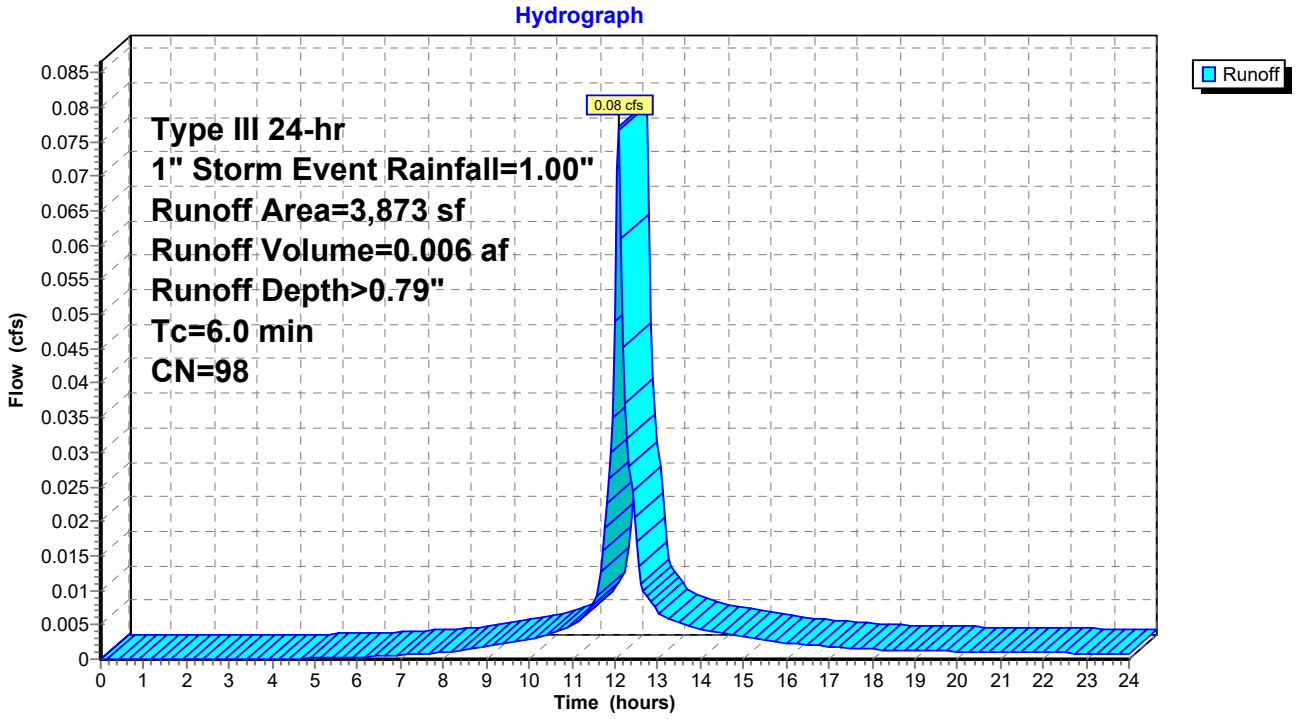
Runoff = 0.08 cfs @ 12.09 hrs, Volume= 0.006 af, Depth> 0.79"

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

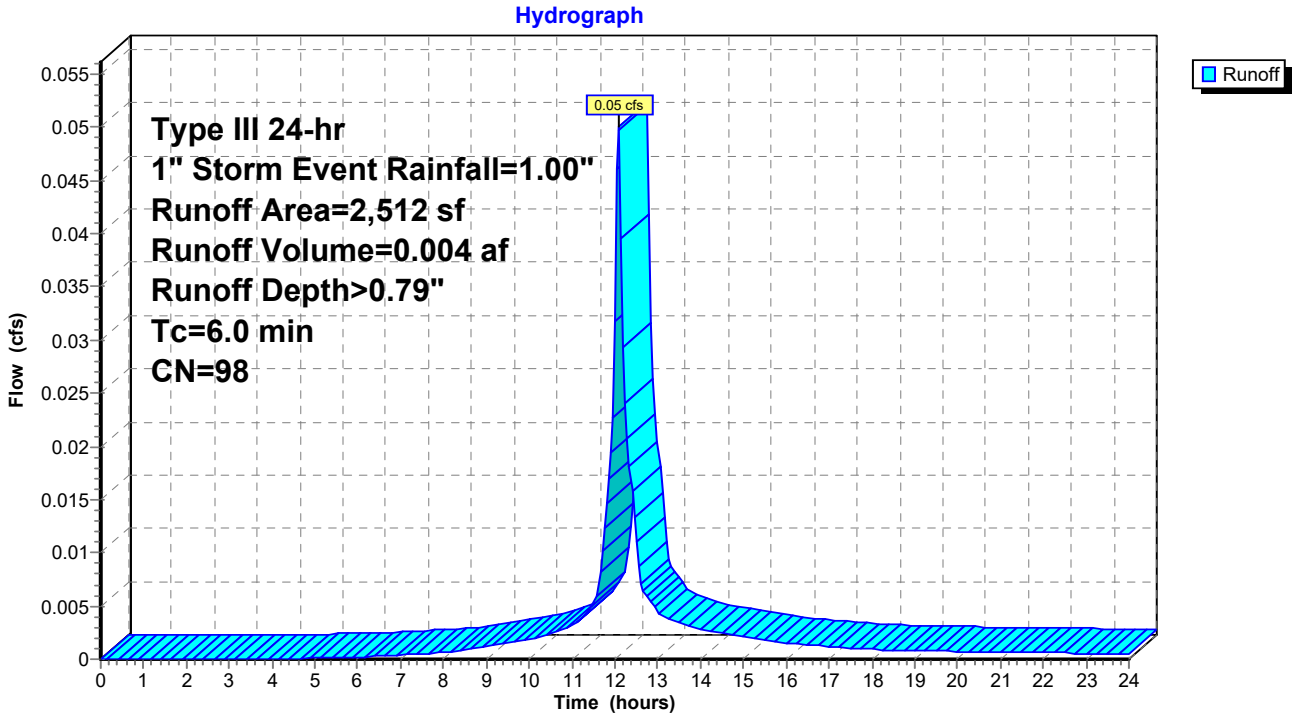
Runoff = 0.05 cfs @ 12.09 hrs, Volume= 0.004 af, Depth> 0.79"

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

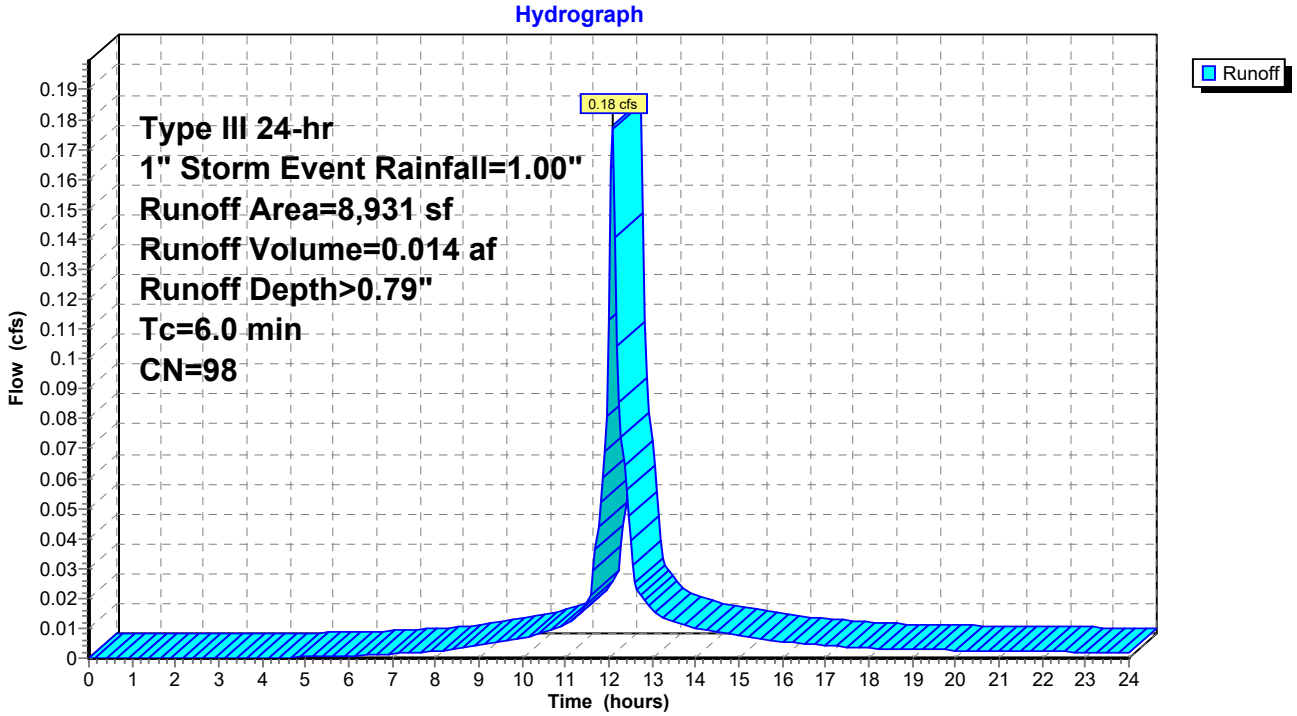
Runoff = 0.18 cfs @ 12.09 hrs, Volume= 0.014 af, Depth> 0.79"

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

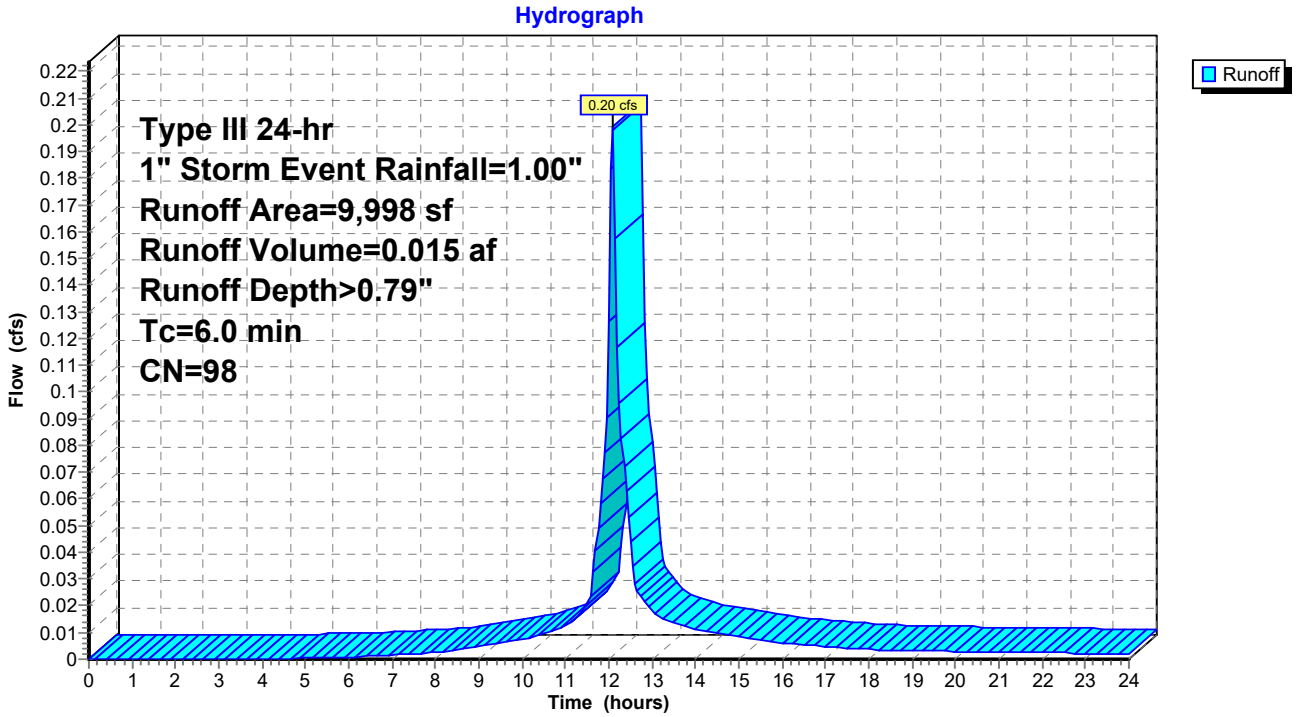
Runoff = 0.20 cfs @ 12.09 hrs, Volume= 0.015 af, Depth> 0.79"

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

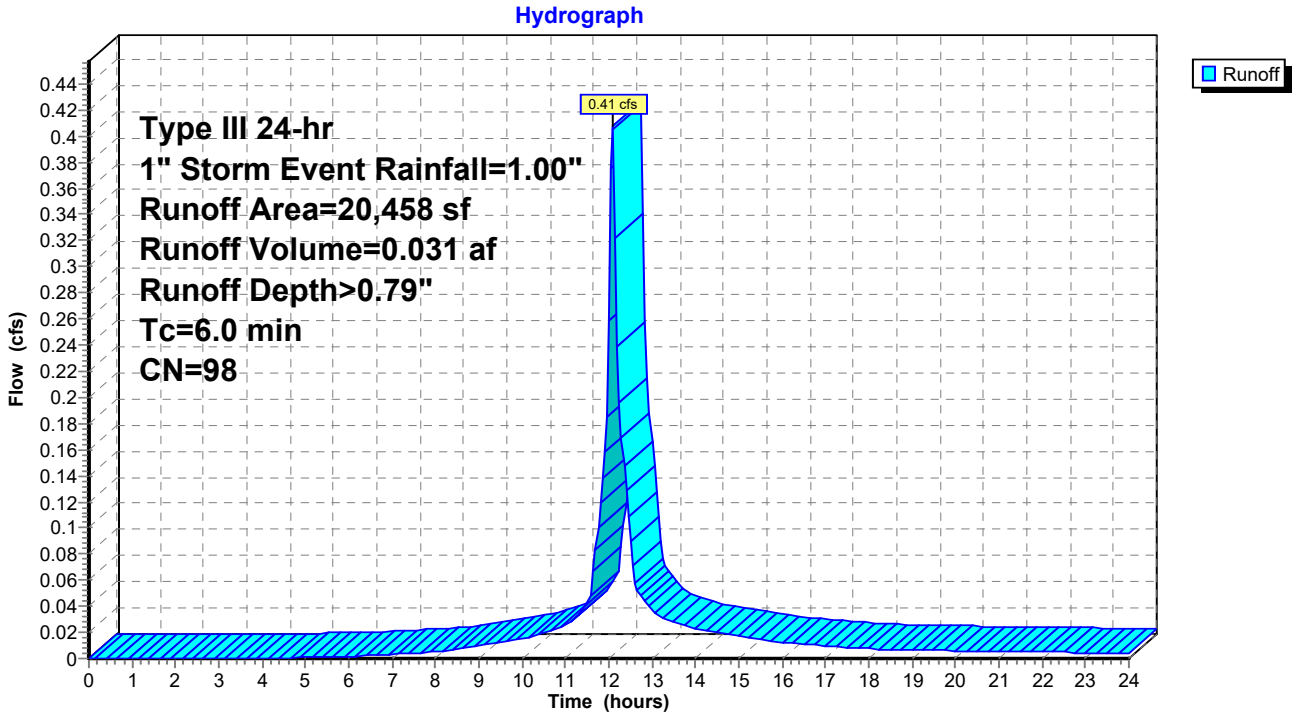
Runoff = 0.41 cfs @ 12.09 hrs, Volume= 0.031 af, Depth> 0.79"

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

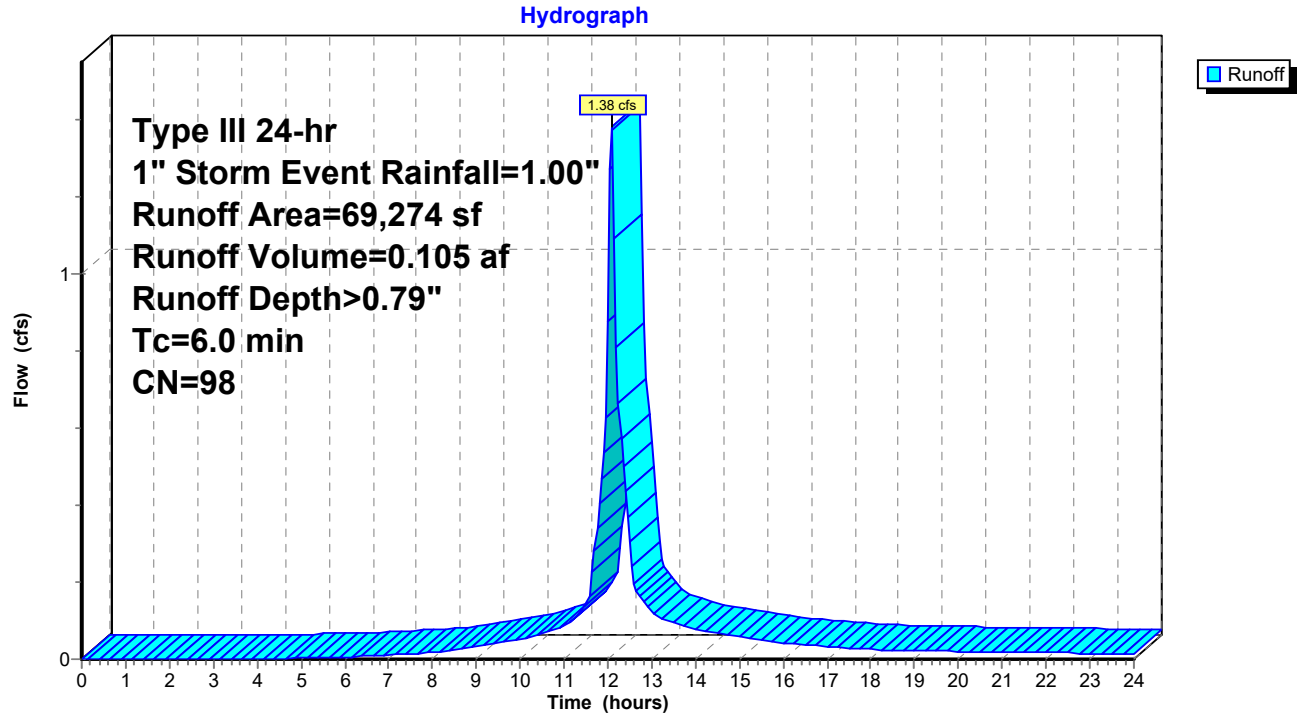
Runoff = 1.38 cfs @ 12.09 hrs, Volume= 0.105 af, Depth> 0.79"

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

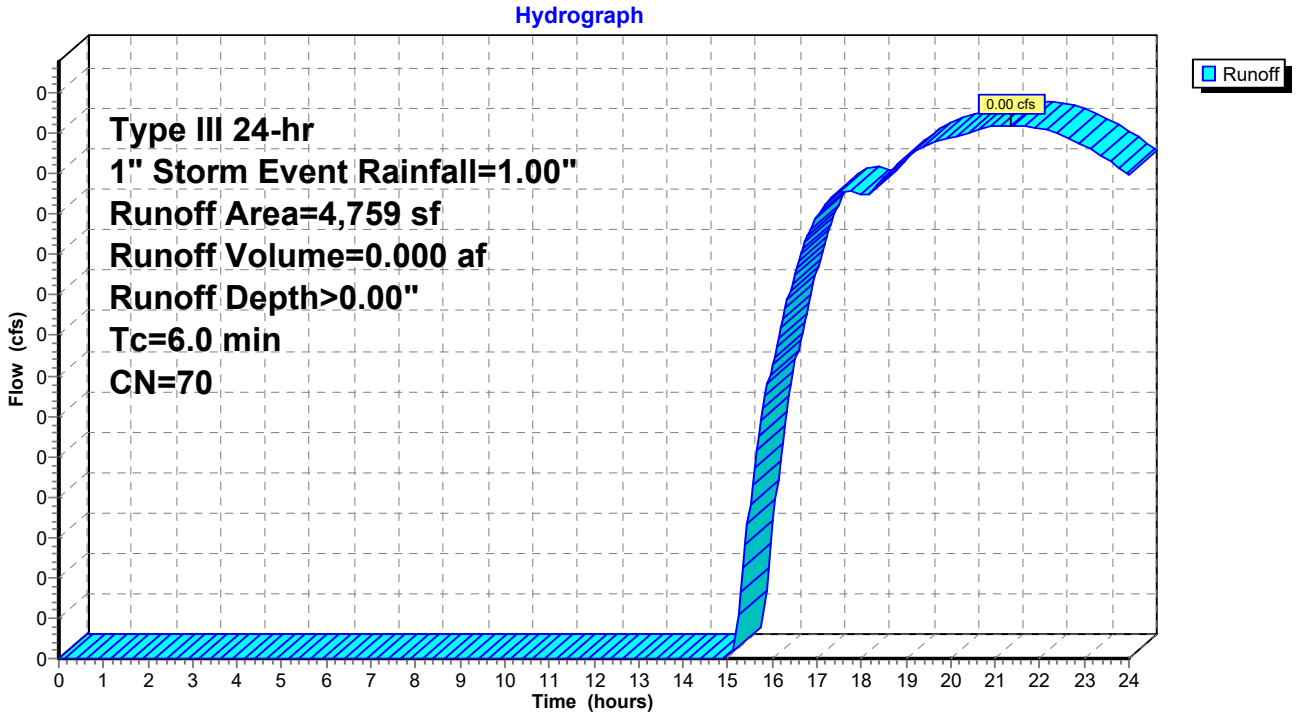
Runoff = 0.00 cfs @ 21.36 hrs, Volume= 0.000 af, Depth> 0.00"

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

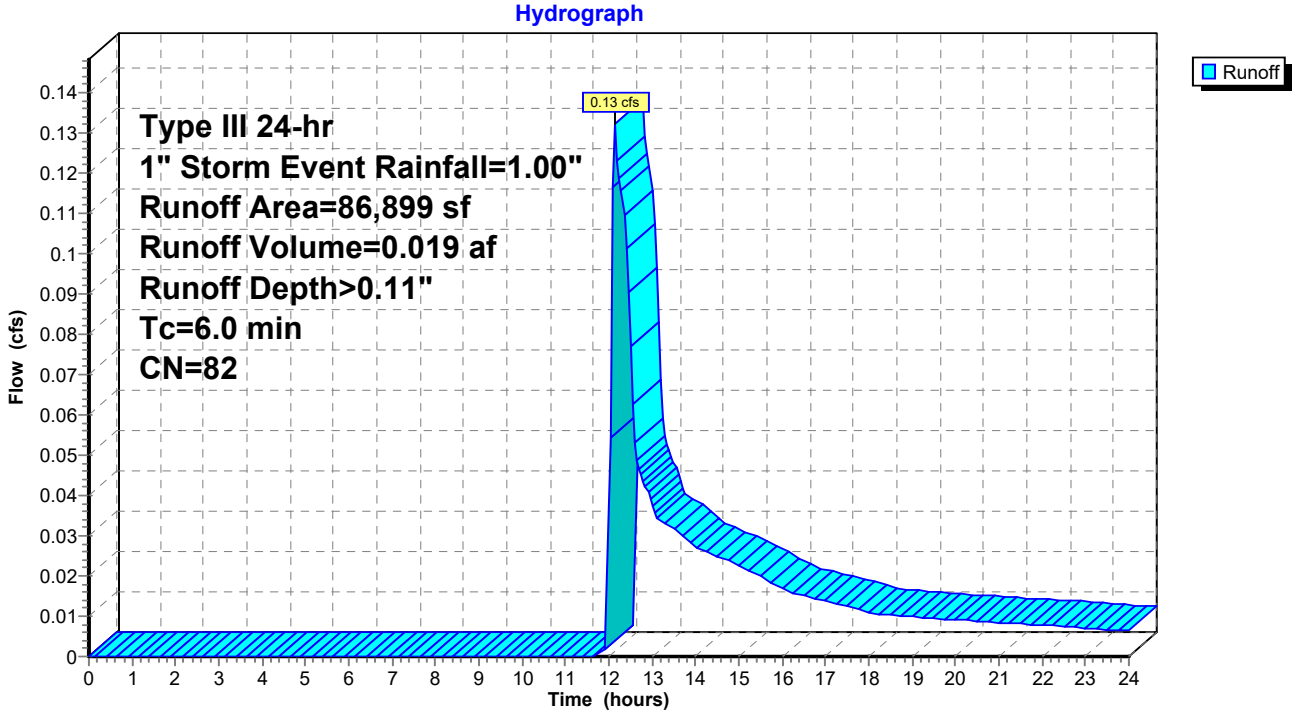
Runoff = 0.13 cfs @ 12.16 hrs, Volume= 0.019 af, Depth> 0.11"

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

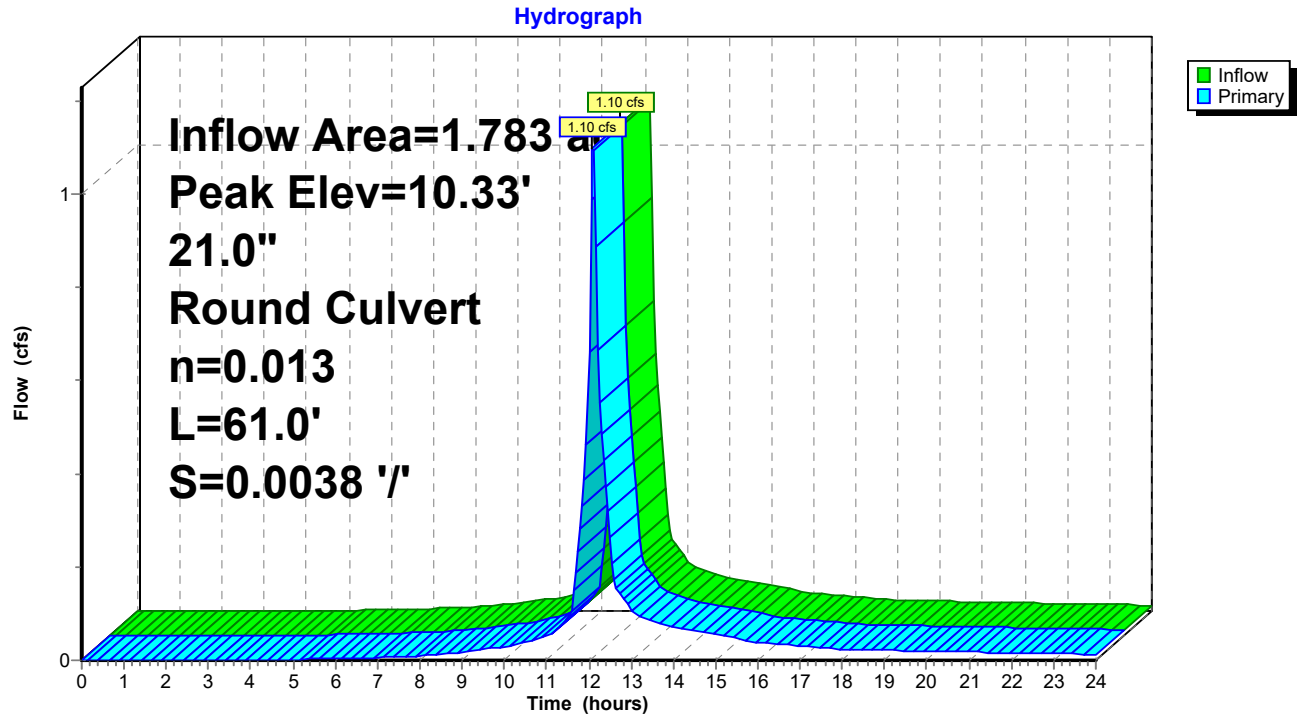
Inflow Area = 1.783 ac, 93.06% Impervious, Inflow Depth > 0.56" for 1" Storm Event event
Inflow = 1.10 cfs @ 12.09 hrs, Volume= 0.083 af
Outflow = 1.10 cfs @ 12.09 hrs, Volume= 0.083 af, Atten= 0%, Lag= 0.0 min
Primary = 1.10 cfs @ 12.09 hrs, Volume= 0.083 af

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**<br>L= 61.0' CPP, projecting, no headwall, Ke= 0.900<br>Inlet / Outlet Invert= 9.77' / 9.54' S= 0.0038 '/' Cc= 0.900<br>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

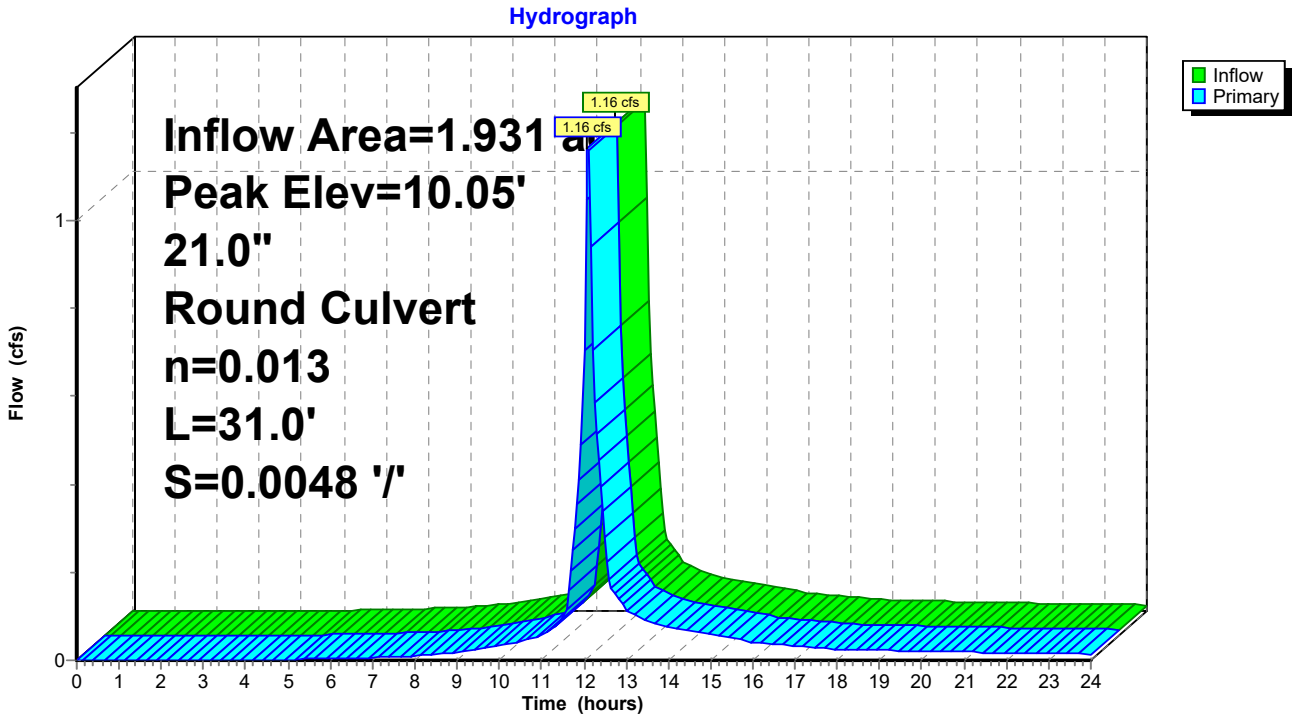
Inflow Area = 1.931 ac, 92.54% Impervious, Inflow Depth > 0.55" for 1" Storm Event event
Inflow = 1.16 cfs @ 12.09 hrs, Volume= 0.089 af
Outflow = 1.16 cfs @ 12.09 hrs, Volume= 0.089 af, Atten= 0%, Lag= 0.0 min
Primary = 1.16 cfs @ 12.09 hrs, Volume= 0.089 af

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**<br>L= 31.0' CPP, square edge headwall, Ke= 0.500<br>Inlet / Outlet Invert= 9.50' / 9.35' S= 0.0048 '/' Cc= 0.900<br>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

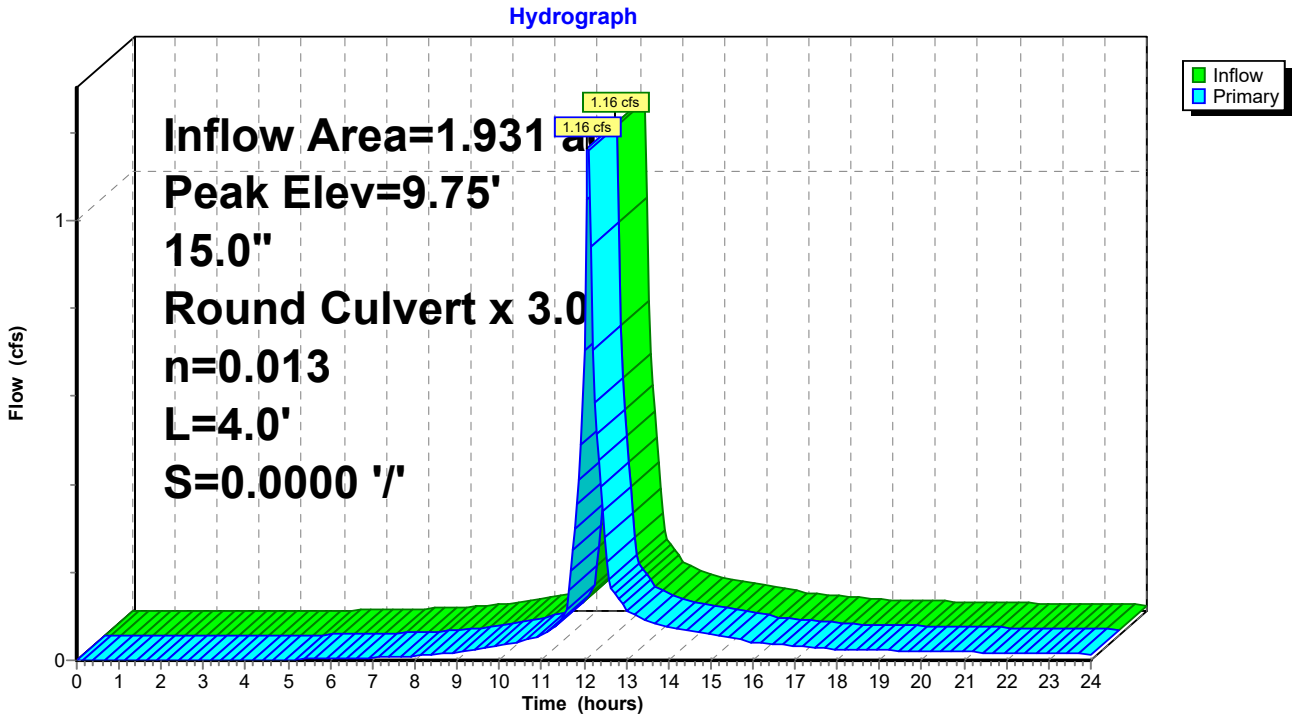
Inflow Area = 1.931 ac, 92.54% Impervious, Inflow Depth > 0.55" for 1" Storm Event event
Inflow = 1.16 cfs @ 12.09 hrs, Volume= 0.089 af
Outflow = 1.16 cfs @ 12.09 hrs, Volume= 0.089 af, Atten= 0%, Lag= 0.0 min
Primary = 1.16 cfs @ 12.09 hrs, Volume= 0.089 af

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**<br>L= 4.0' CPP, projecting, no headwall, Ke= 0.900<br>Inlet / Outlet Invert= 9.35' / 9.35' S= 0.0000 '/' Cc= 0.900<br>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)<br>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<br>2,806 cf Overall x 95.0% Voids |
| | | 4,143 cf | Total Available Storage |

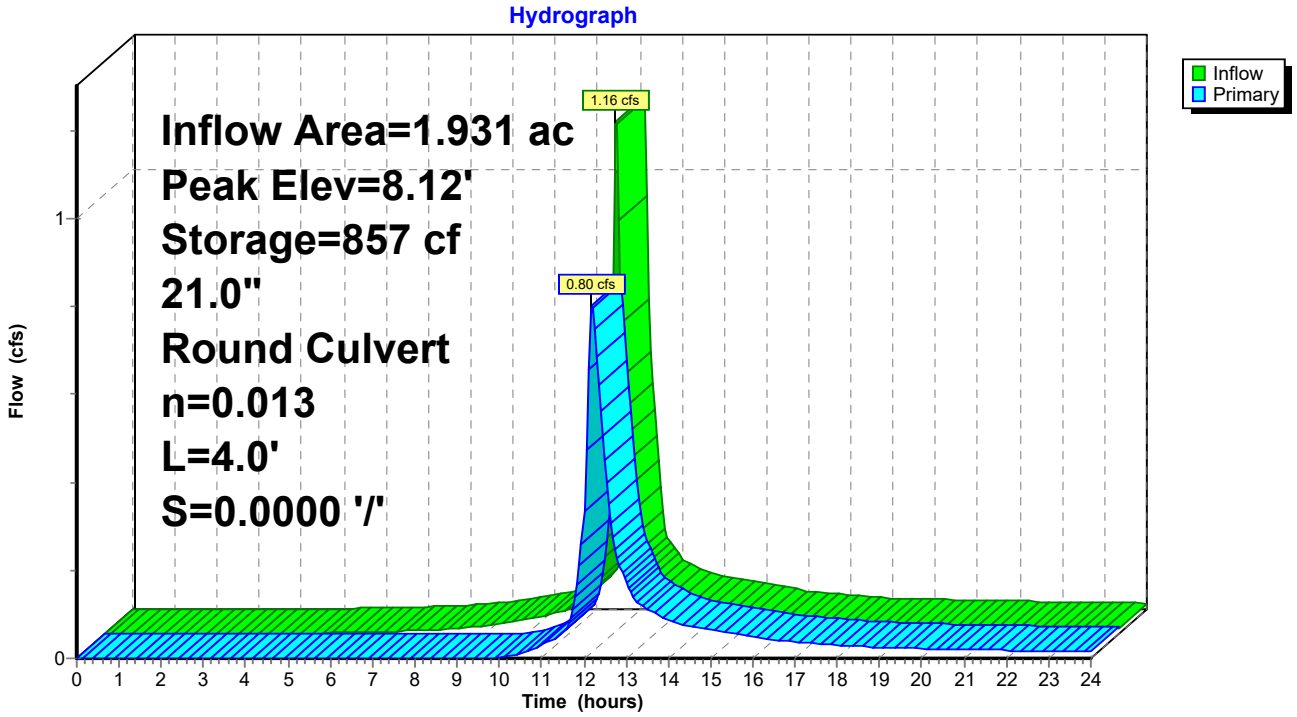
| Elevation (feet) | Surf.Area (sq-ft) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) |
|---|---|---|---|
| 7.35 | 1,597 | 0 | 0 |
| 11.42 | 1,597 | 6,500 | 6,500 |

| 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**<br>L= 4.0' CMP, projecting, no headwall, Ke= 0.900<br>Inlet / Outlet Invert= 7.60' / 7.60' S= 0.0000 '/' Cc= 0.900<br>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

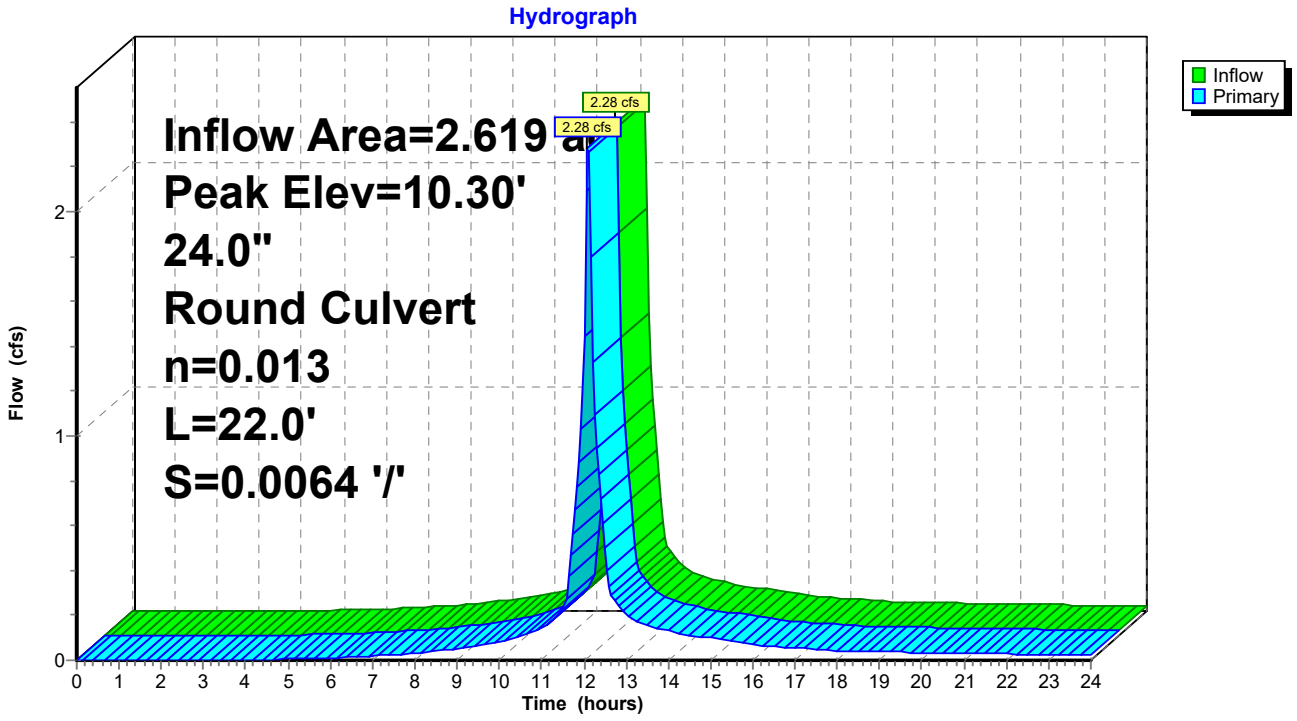
Inflow Area = 2.619 ac, 99.91% Impervious, Inflow Depth > 0.79" for 1" Storm Event event
Inflow = 2.28 cfs @ 12.09 hrs, Volume= 0.173 af
Outflow = 2.28 cfs @ 12.09 hrs, Volume= 0.173 af, Atten= 0%, Lag= 0.0 min
Primary = 2.28 cfs @ 12.09 hrs, Volume= 0.173 af

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**<br>L= 22.0' CPP, projecting, no headwall, Ke= 0.900<br>Inlet / Outlet Invert= 9.53' / 9.39' S= 0.0064 '/' Cc= 0.900<br>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

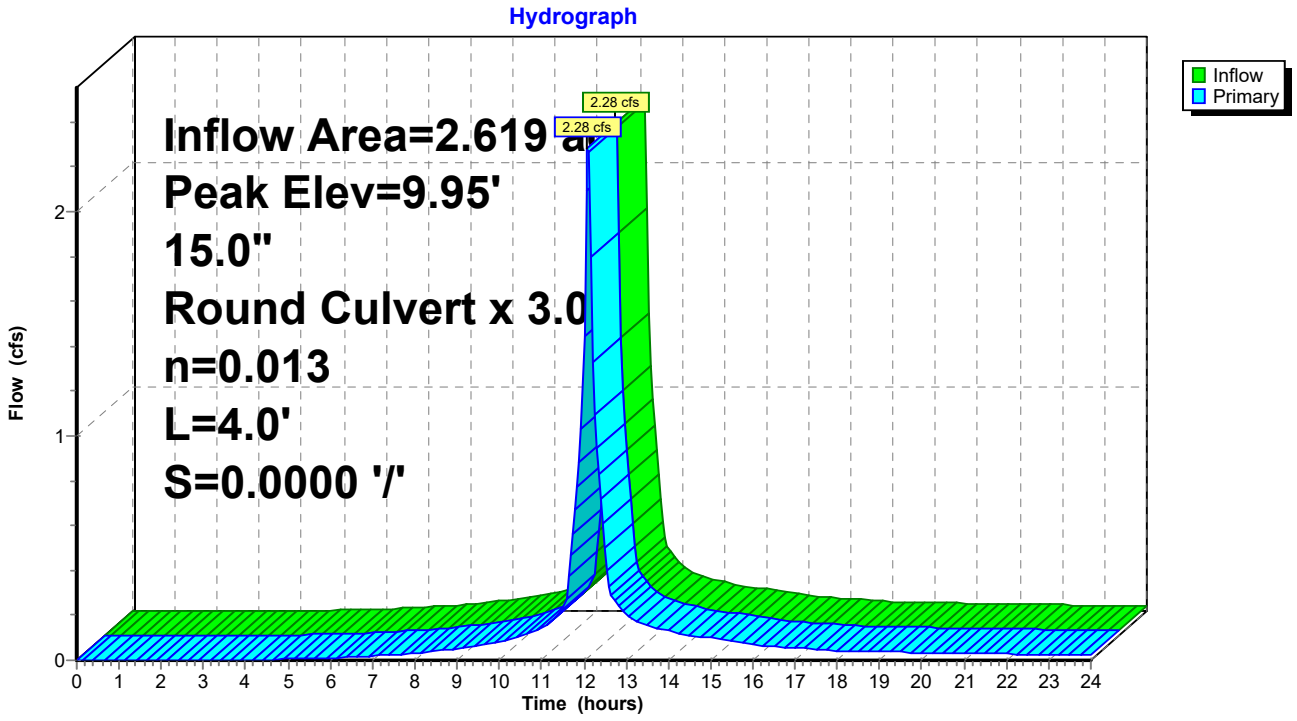
Inflow Area = 2.619 ac, 99.91% Impervious, Inflow Depth > 0.79" for 1" Storm Event event
Inflow = 2.28 cfs @ 12.09 hrs, Volume= 0.173 af
Outflow = 2.28 cfs @ 12.09 hrs, Volume= 0.173 af, Atten= 0%, Lag= 0.0 min
Primary = 2.28 cfs @ 12.09 hrs, Volume= 0.173 af

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**<br>L= 4.0' CPP, projecting, no headwall, Ke= 0.900<br>Inlet / Outlet Invert= 9.39' / 9.39' S= 0.0000 '/' Cc= 0.900<br>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)<br>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<br>5,813 cf Overall x 95.0% Voids |
| | | 8,290 cf | Total Available Storage |

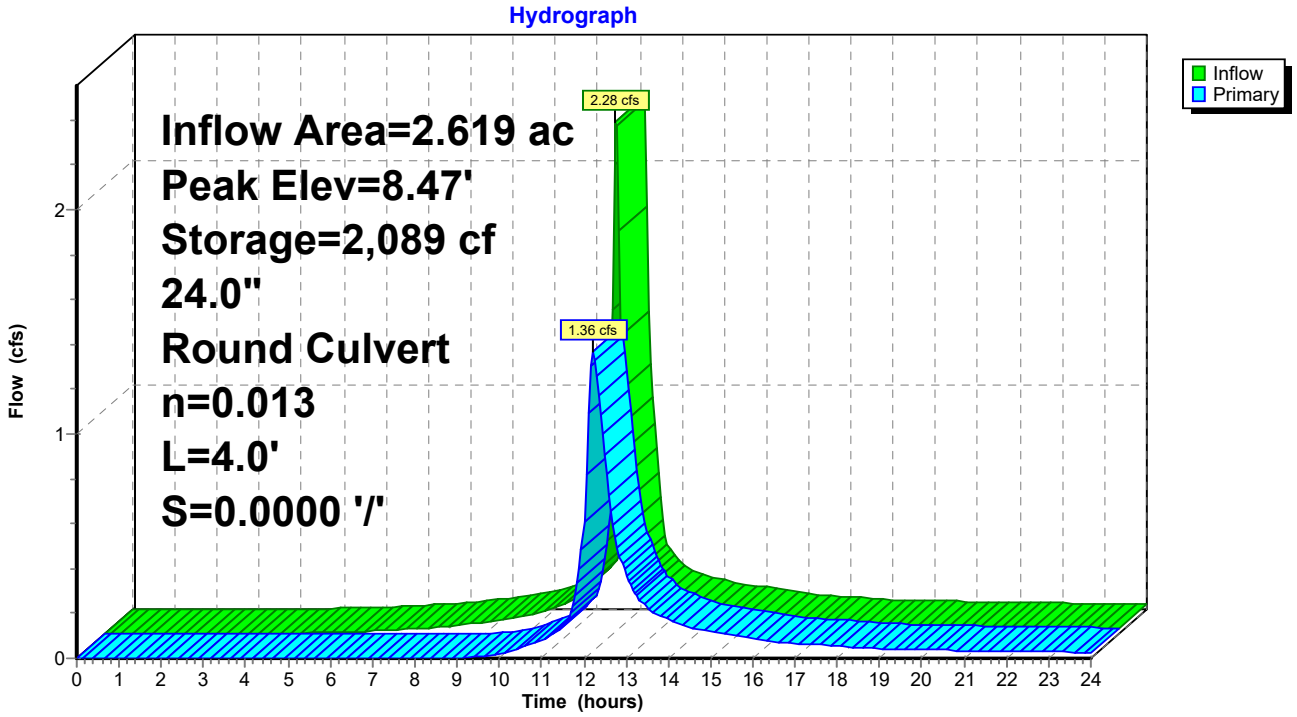
| Elevation (feet) | Surf.Area (sq-ft) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) |
|---|---|---|---|
| 7.57 | 3,128 | 0 | 0 |
| 11.64 | 3,128 | 12,731 | 12,731 |

| 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**<br>L= 4.0' CMP, projecting, no headwall, Ke= 0.900<br>Inlet / Outlet Invert= 7.82' / 7.82' S= 0.0000 '/' Cc= 0.900<br>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

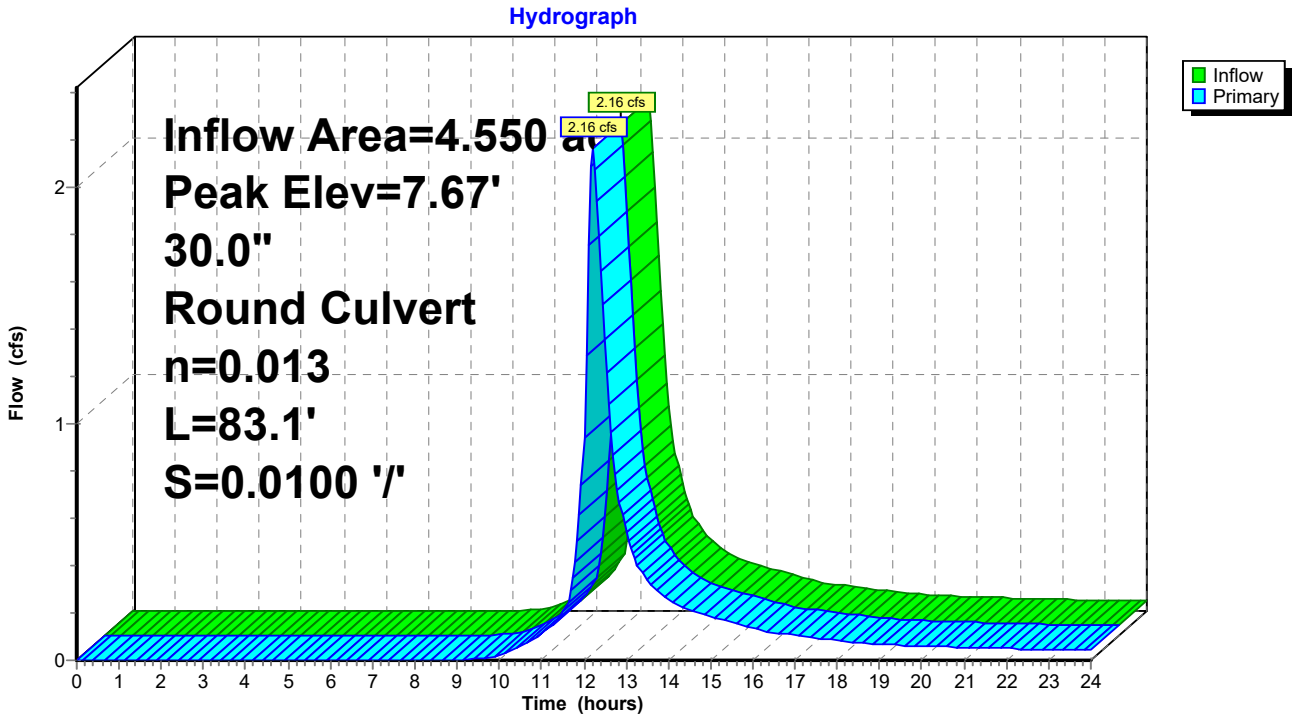
Inflow Area = 4.550 ac, 96.78% Impervious, Inflow Depth > 0.64" for 1" Storm Event event
Inflow = 2.16 cfs @ 12.20 hrs, Volume= 0.242 af
Outflow = 2.16 cfs @ 12.20 hrs, Volume= 0.242 af, Atten= 0%, Lag= 0.0 min
Primary = 2.16 cfs @ 12.20 hrs, Volume= 0.242 af

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**<br>L= 83.1' CPP, projecting, no headwall, Ke= 0.900<br>Inlet / Outlet Invert= 7.03' / 6.20' S= 0.0100 '/' Cc= 0.900<br>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

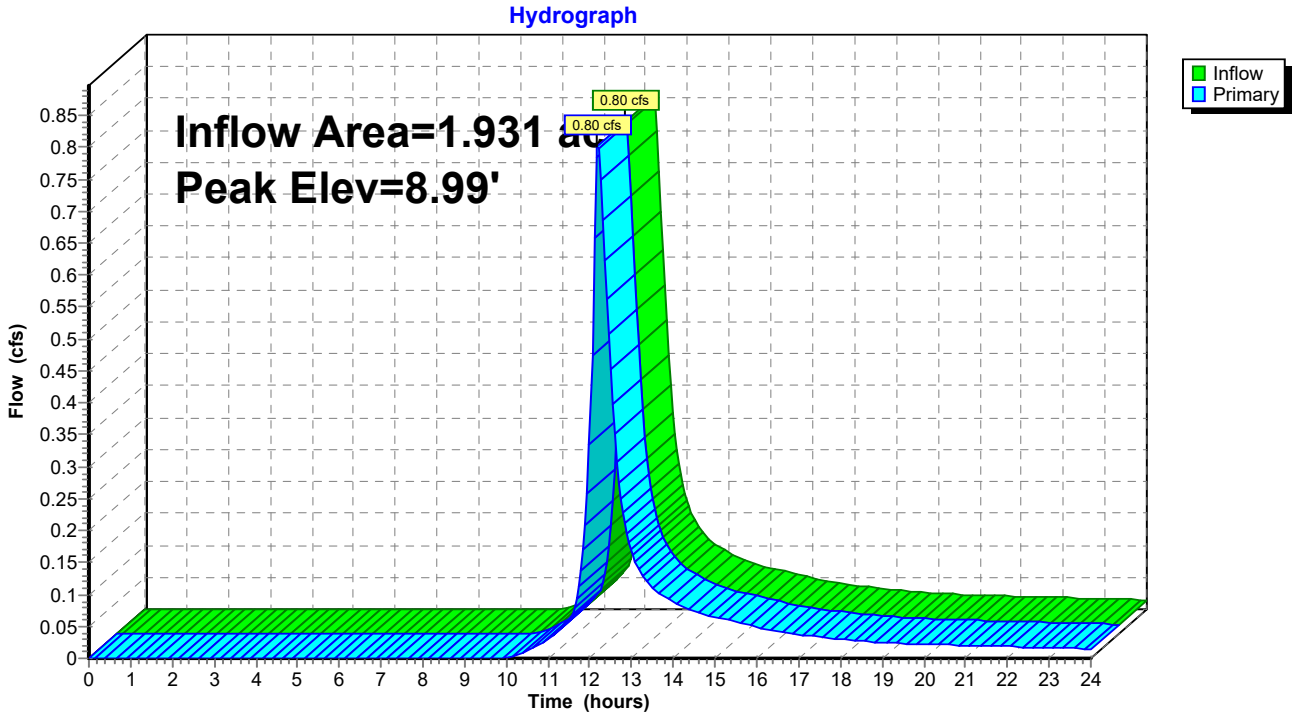
Inflow Area = 1.931 ac, 92.54% Impervious, Inflow Depth > 0.51" for 1" Storm Event event
Inflow = 0.80 cfs @ 12.19 hrs, Volume= 0.083 af
Outflow = 0.80 cfs @ 12.19 hrs, Volume= 0.083 af, Atten= 0%, Lag= 0.0 min
Primary = 0.80 cfs @ 12.19 hrs, Volume= 0.083 af

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**<br>L= 90.0' CPP, projecting, no headwall, Ke= 0.900<br>Inlet / Outlet Invert= 7.60' / 7.13' S= 0.0052 '/' Cc= 0.900<br>n= 0.013 Corrugated PE, smooth interior, Flow Area= 2.41 sf |
| #2 | Device 1 | 7.60' | **JF Filter-1 CSV File**<br>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<br>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**<br>Head (feet) 0.20 0.40 0.60 0.80 1.00<br>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

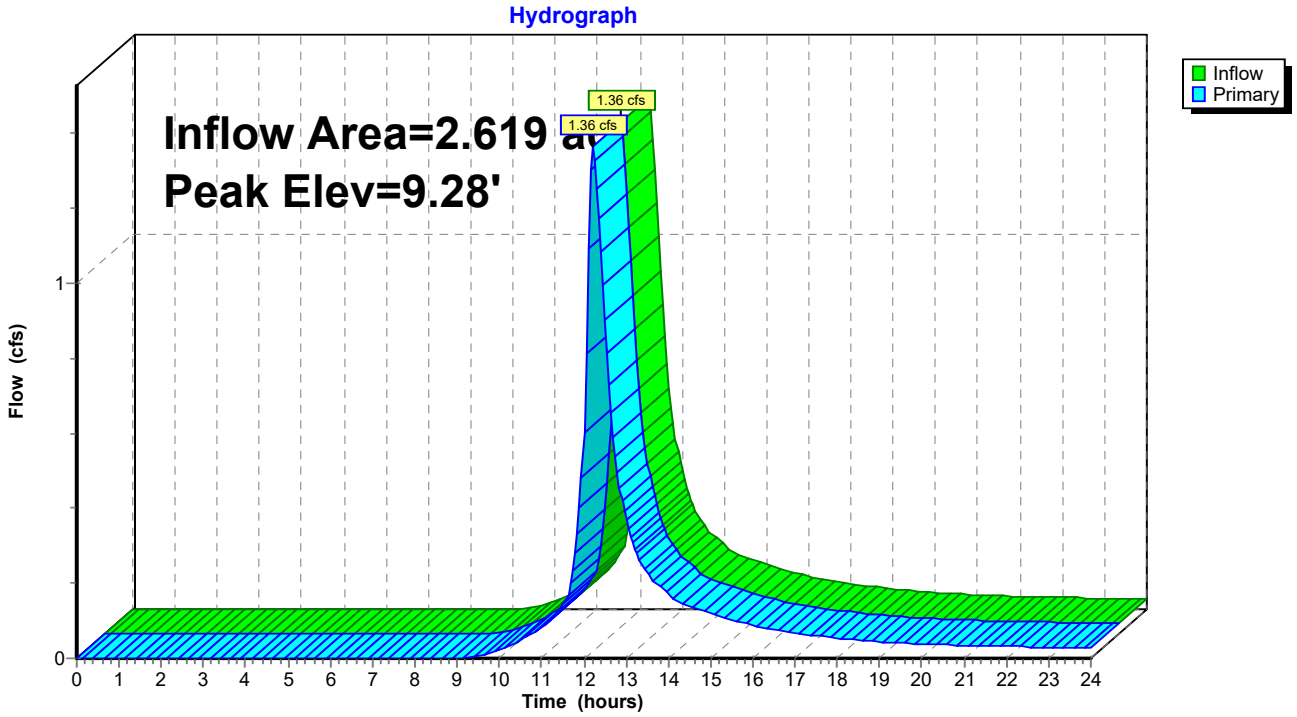
Inflow Area = 2.619 ac, 99.91% Impervious, Inflow Depth > 0.73" for 1" Storm Event event
Inflow = 1.36 cfs @ 12.21 hrs, Volume= 0.159 af
Outflow = 1.36 cfs @ 12.21 hrs, Volume= 0.159 af, Atten= 0%, Lag= 0.0 min
Primary = 1.36 cfs @ 12.21 hrs, Volume= 0.159 af

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**<br>L= 114.0' CPP, projecting, no headwall, Ke= 0.900<br>Inlet / Outlet Invert= 7.82' / 7.13' S= 0.0061 '/' Cc= 0.900<br>n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf |
| #2 | Device 1 | 7.82' | **JF Filter-2 CSV File**<br>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<br>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**<br>Head (feet) 0.20 0.40 0.60 0.80 1.00<br>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

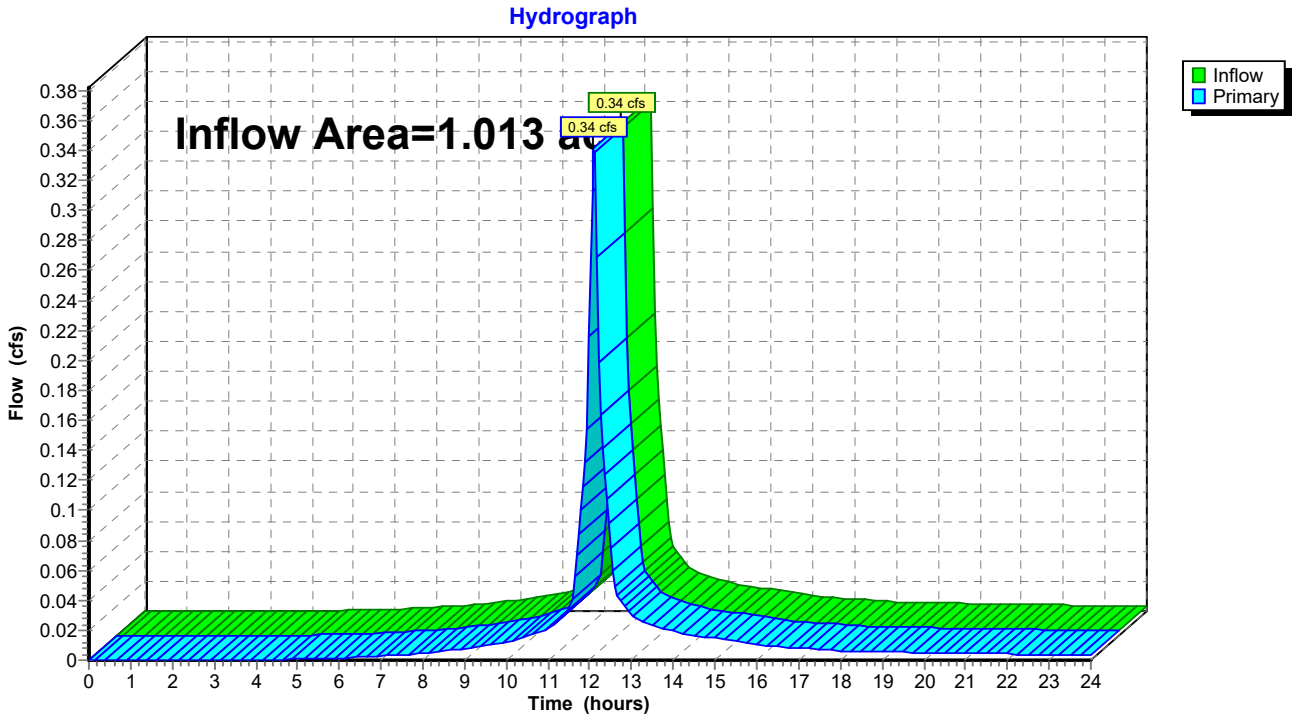


## Summary for Link 1L: Fore Connector

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

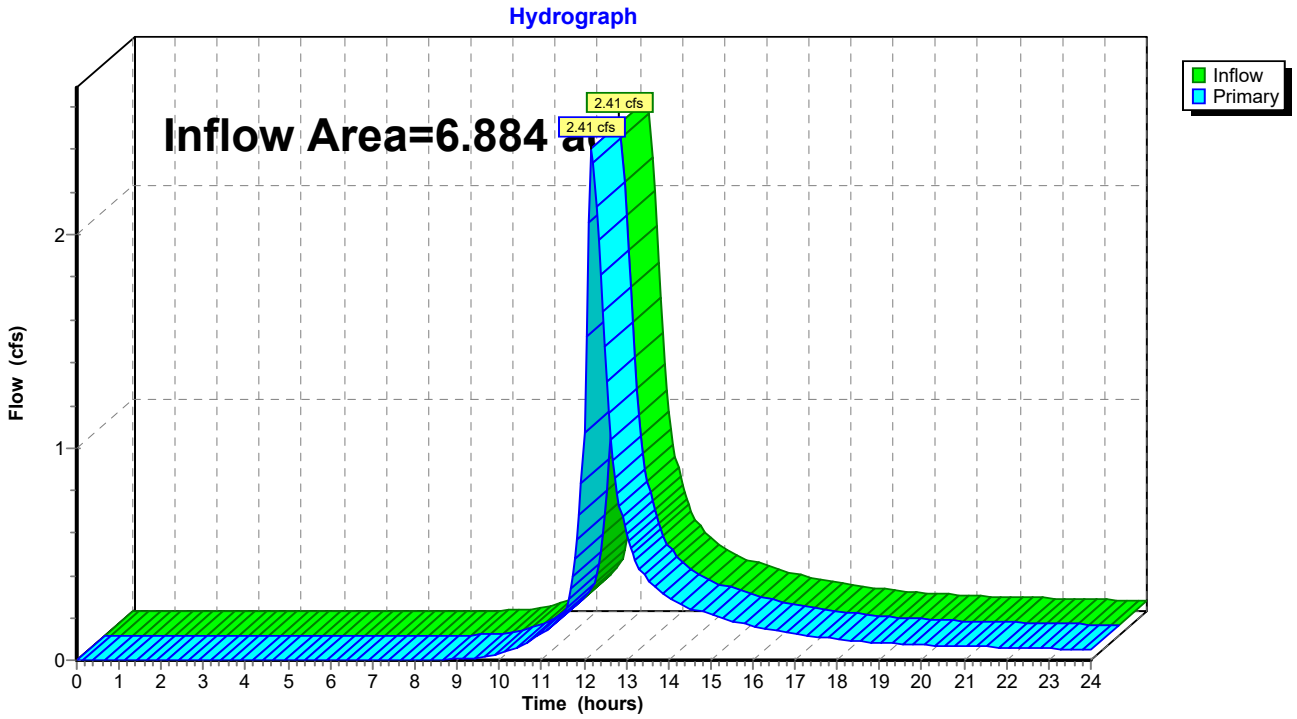


## Summary for Link 2L: Fore River

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

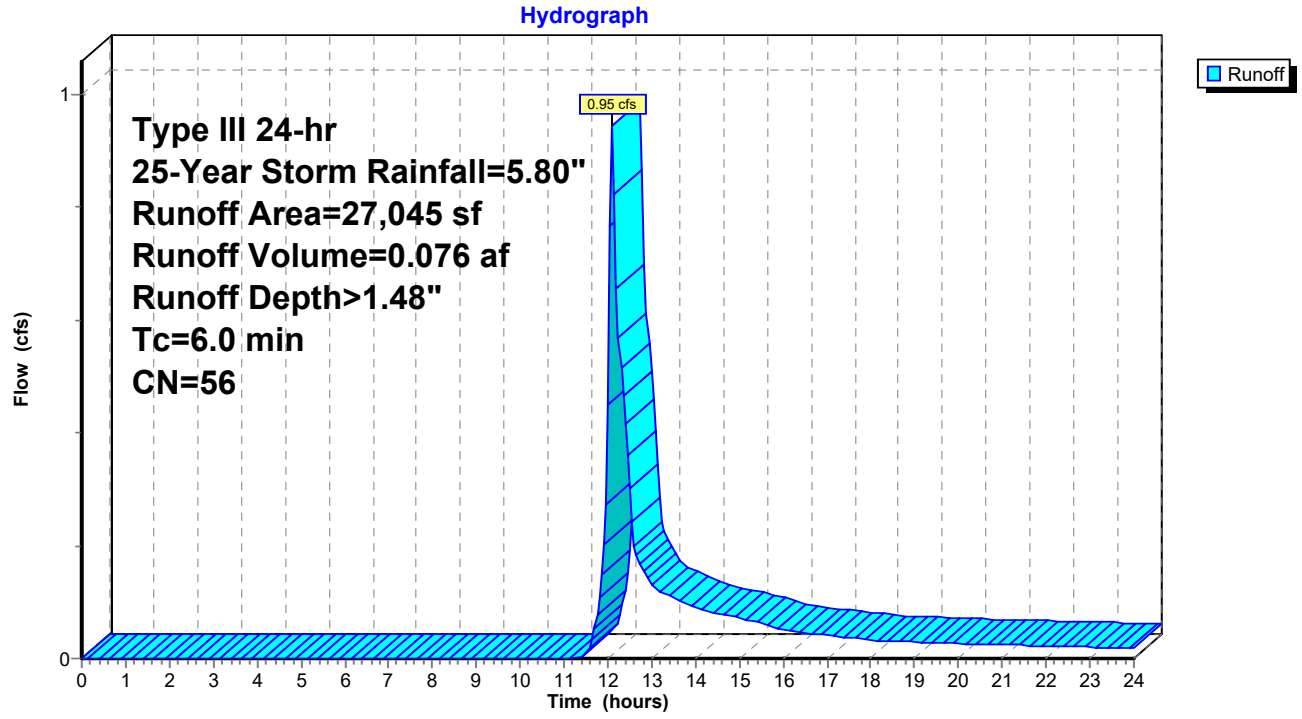
Runoff = 0.95 cfs @ 12.10 hrs, Volume= 0.076 af, Depth> 1.48"

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

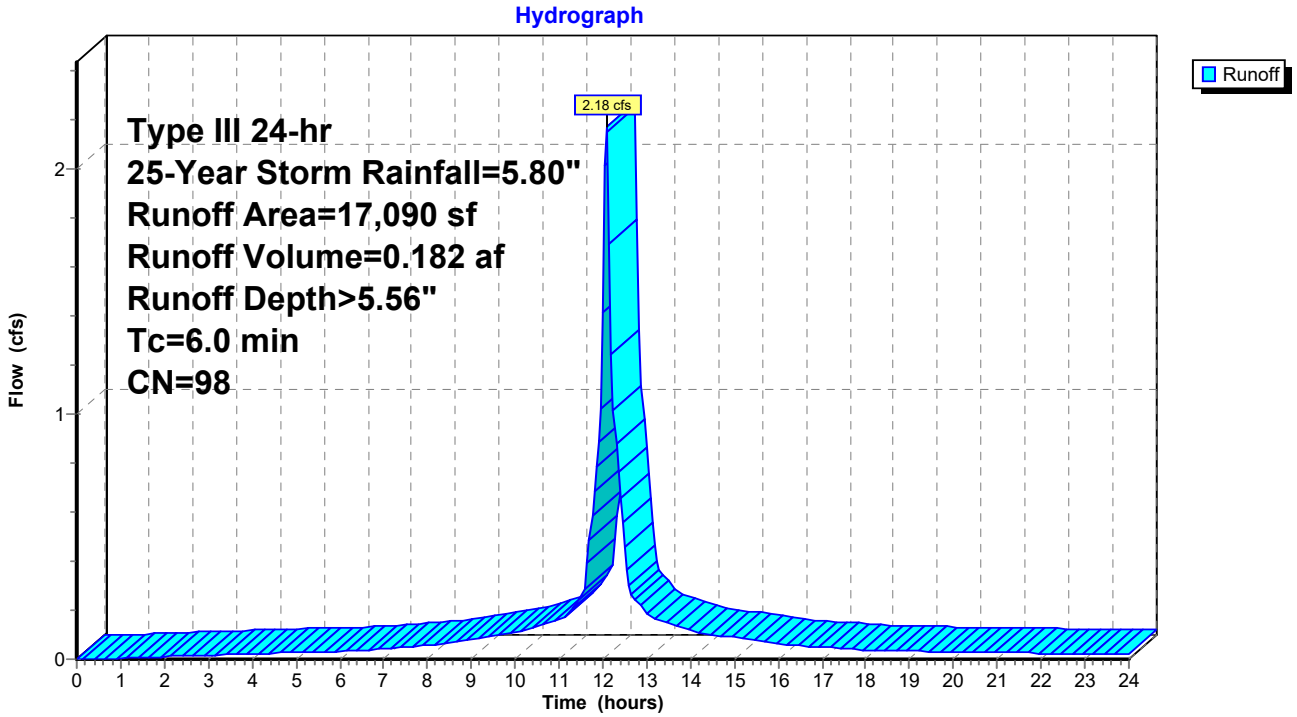
Runoff = 2.18 cfs @ 12.09 hrs, Volume= 0.182 af, Depth> 5.56"

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

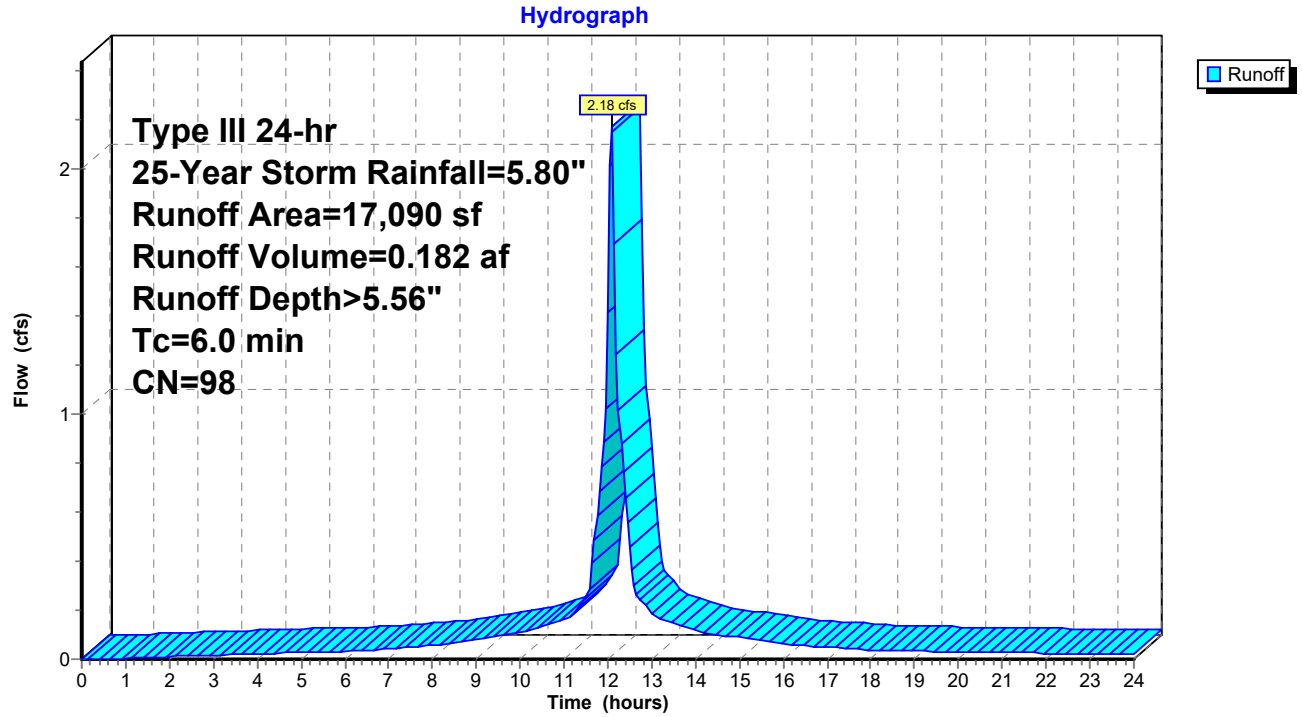
Runoff = 2.18 cfs @ 12.09 hrs, Volume= 0.182 af, Depth> 5.56"

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

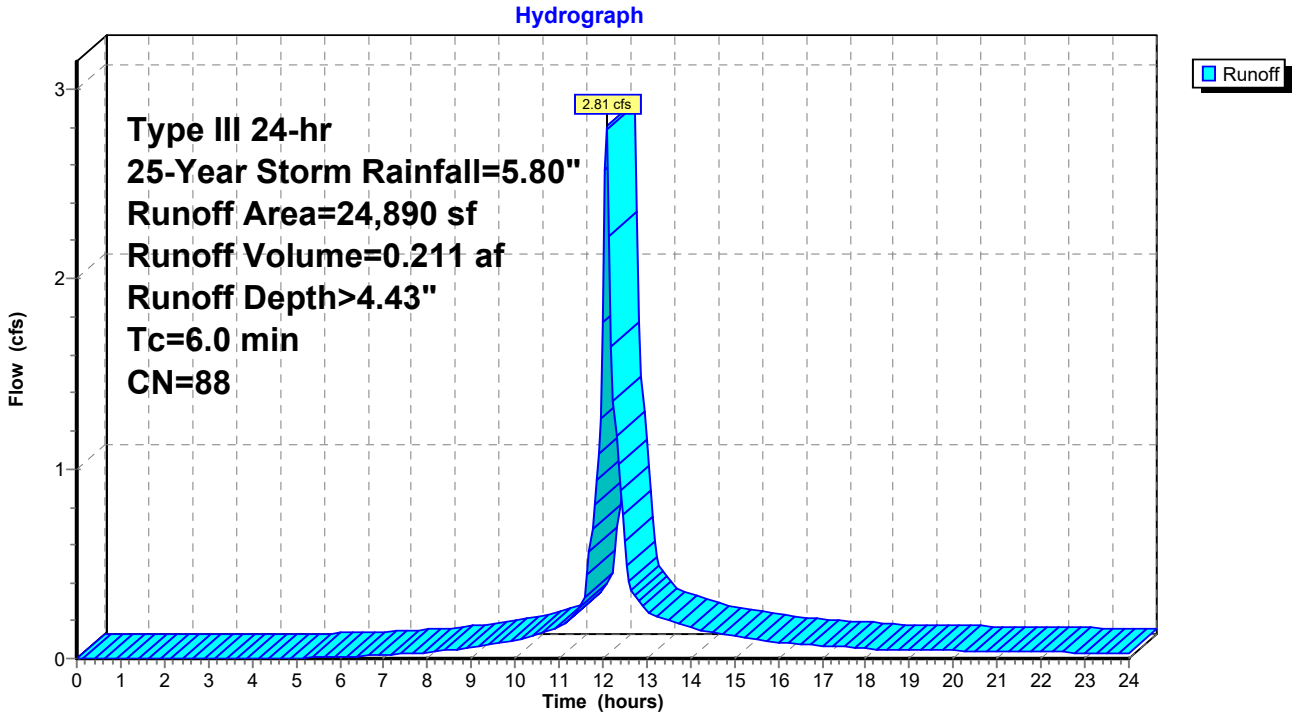
Runoff = 2.81 cfs @ 12.09 hrs, Volume= 0.211 af, Depth> 4.43"

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

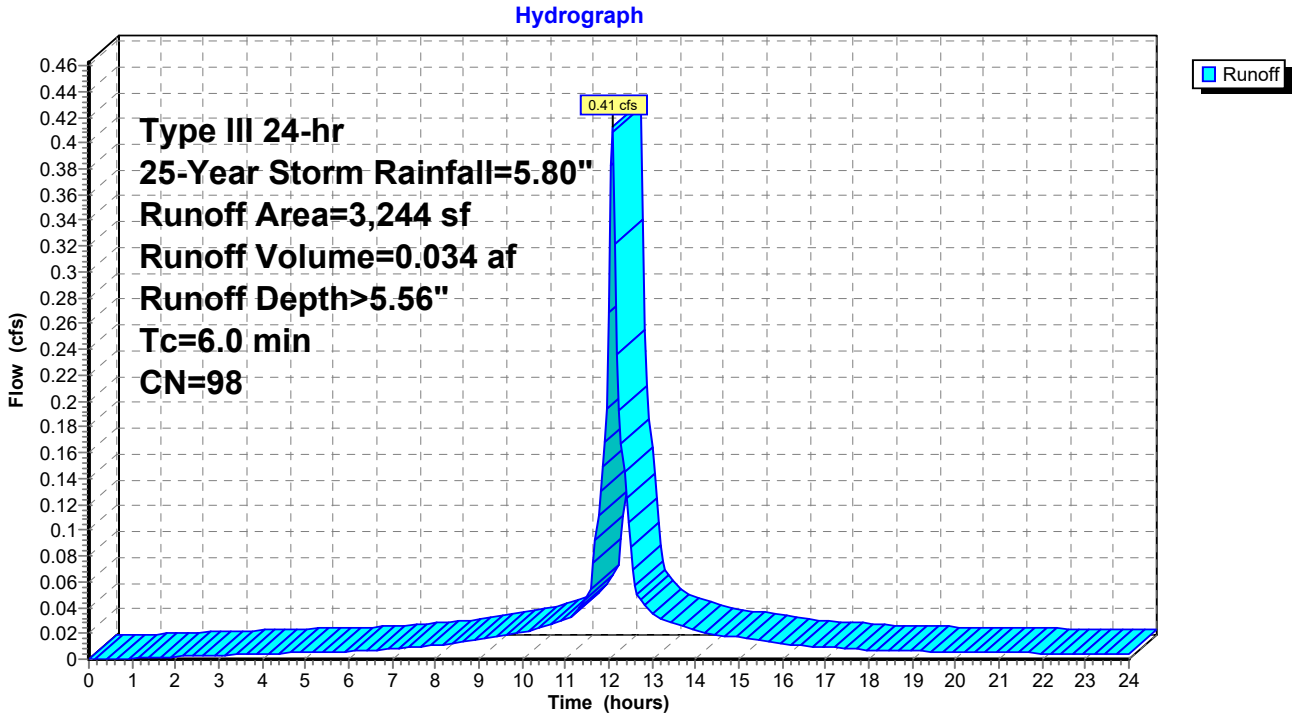
Runoff = 0.41 cfs @ 12.09 hrs, Volume= 0.034 af, Depth> 5.56"

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

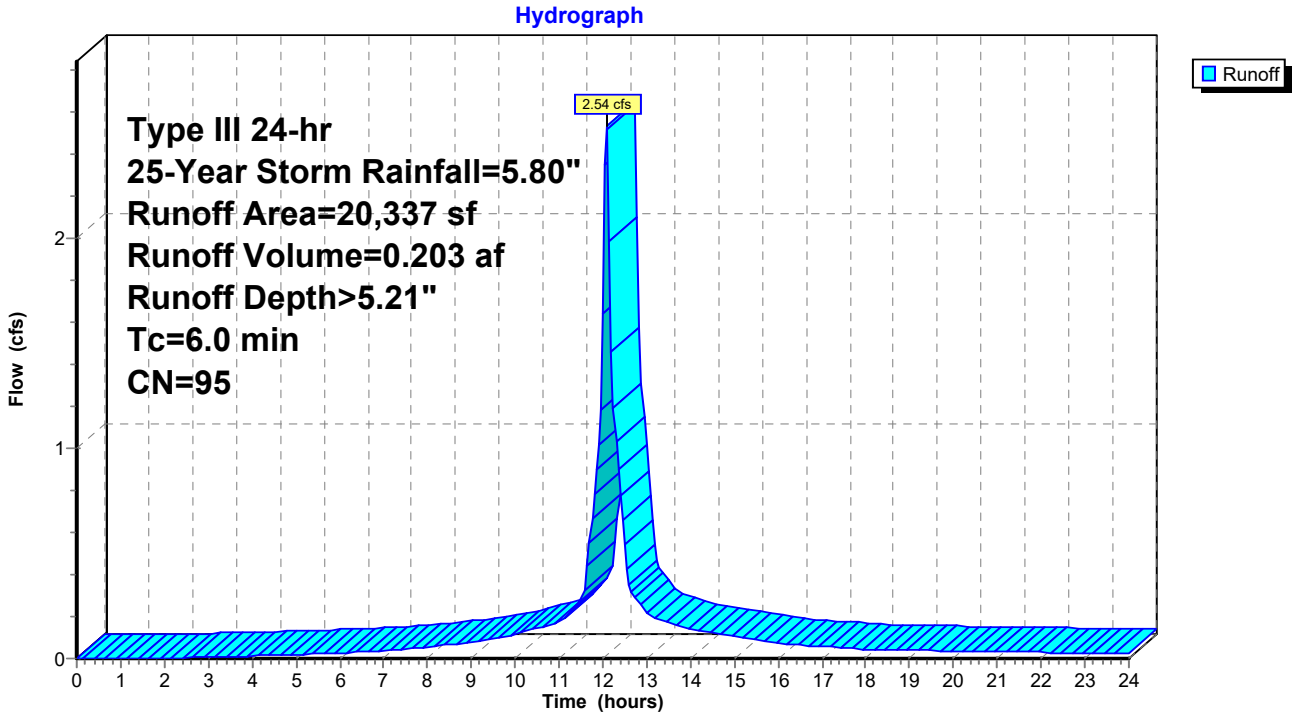
Runoff = 2.54 cfs @ 12.09 hrs, Volume= 0.203 af, Depth> 5.21"

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

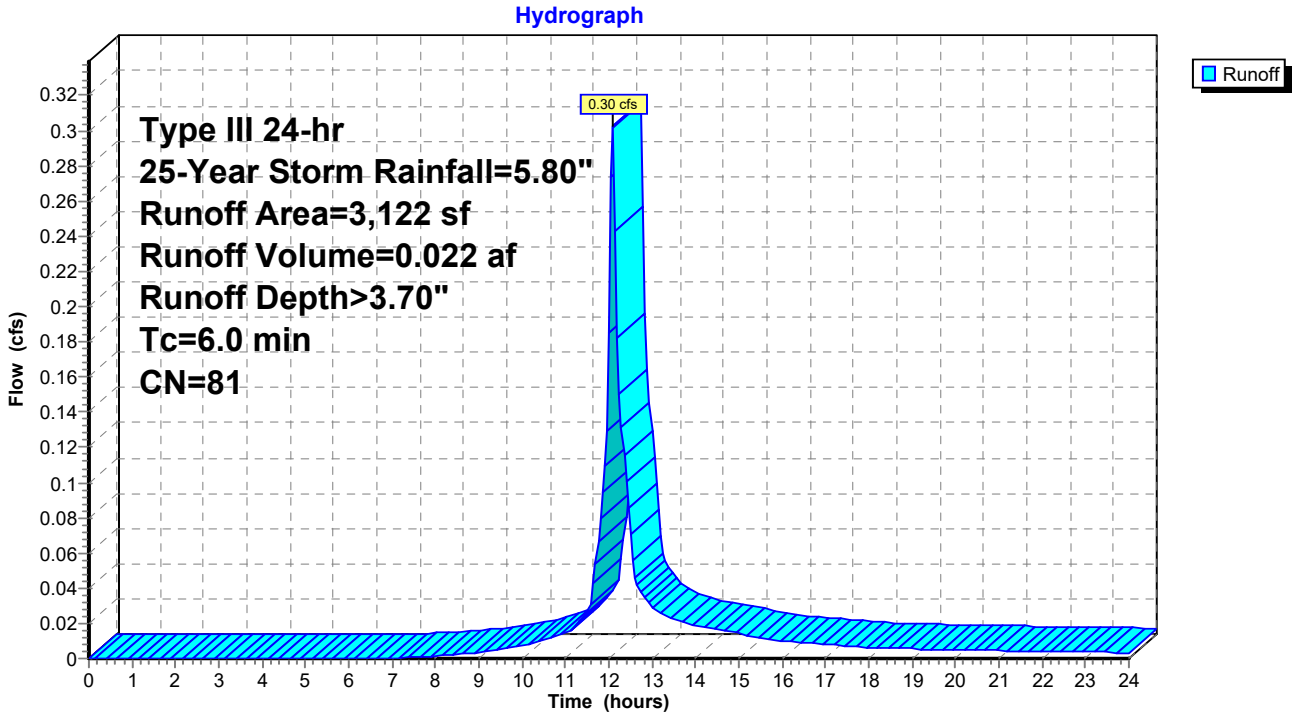
Runoff = 0.30 cfs @ 12.09 hrs, Volume= 0.022 af, Depth> 3.70"

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

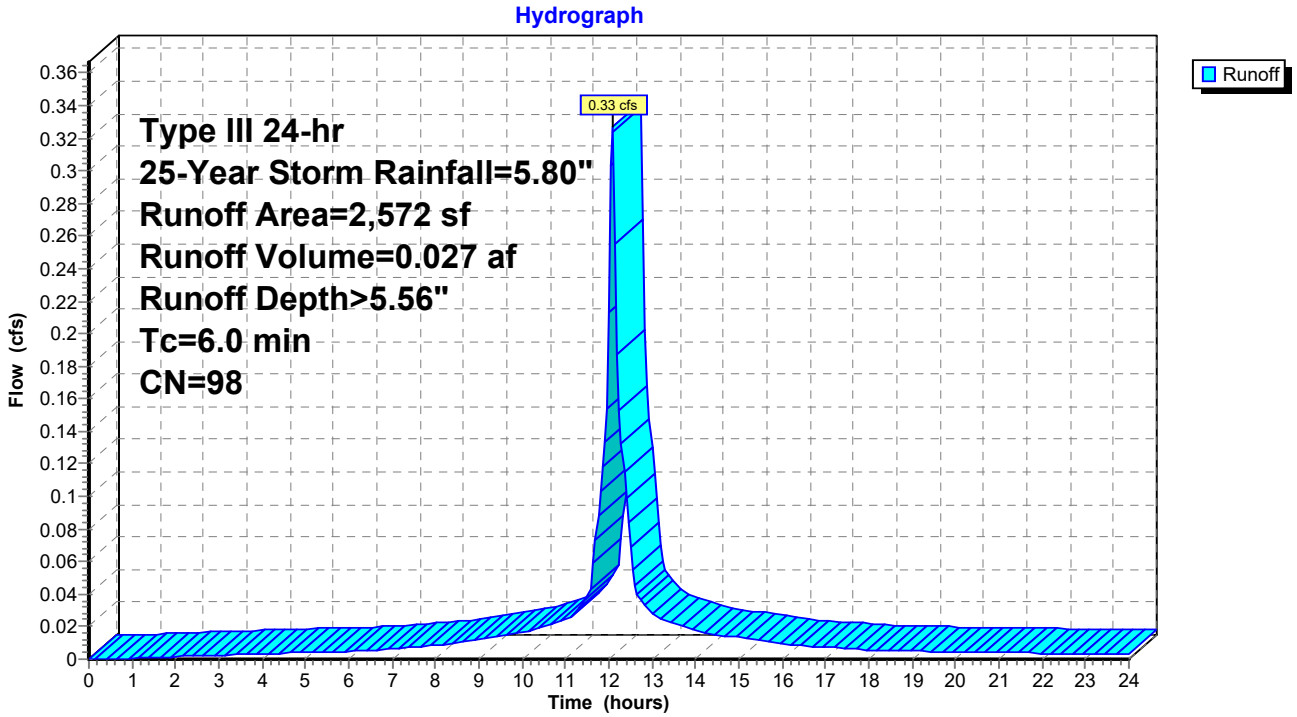
Runoff = 0.33 cfs @ 12.09 hrs, Volume= 0.027 af, Depth> 5.56"

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

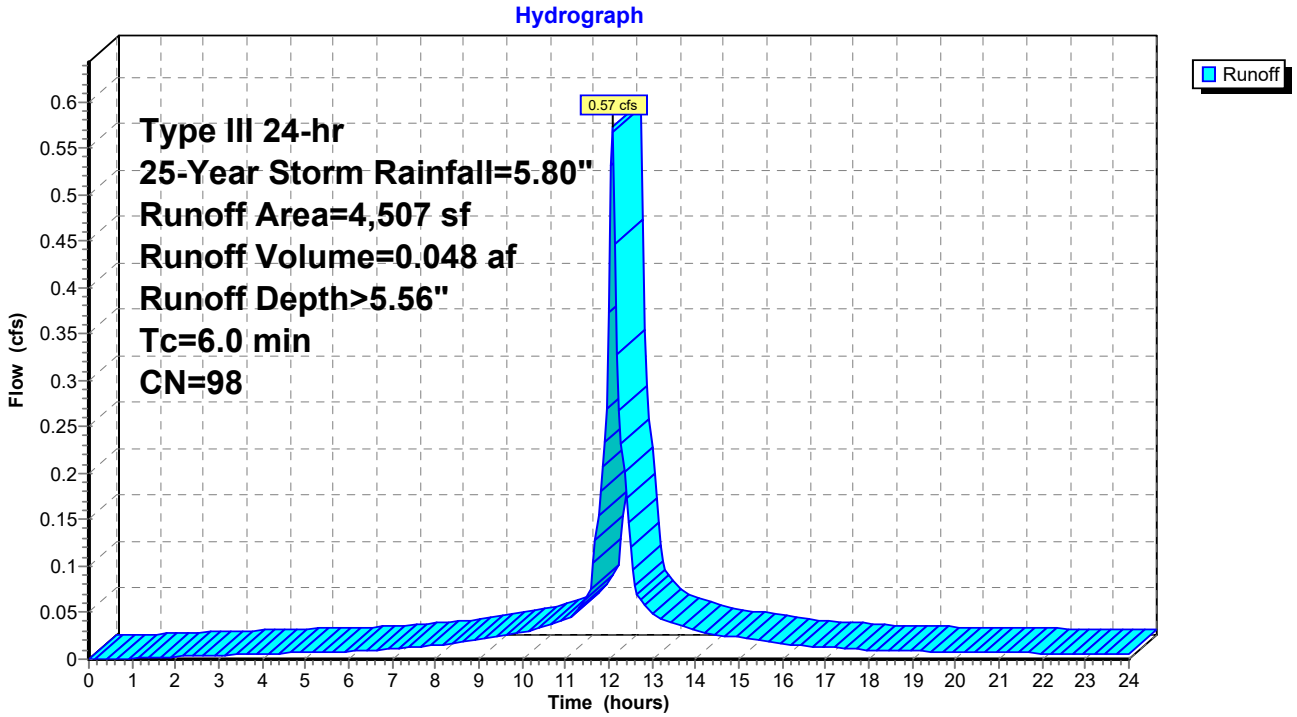
Runoff = 0.57 cfs @ 12.09 hrs, Volume= 0.048 af, Depth> 5.56"

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

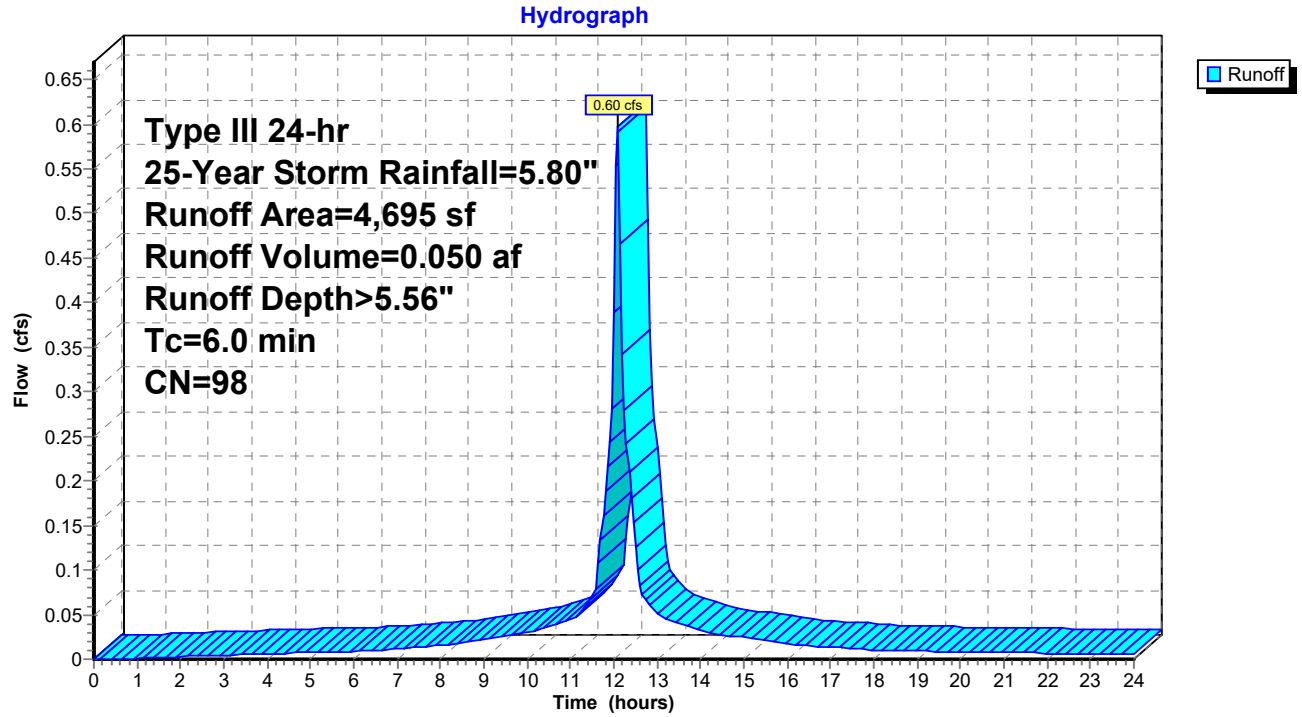
Runoff = 0.60 cfs @ 12.09 hrs, Volume= 0.050 af, Depth> 5.56"

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

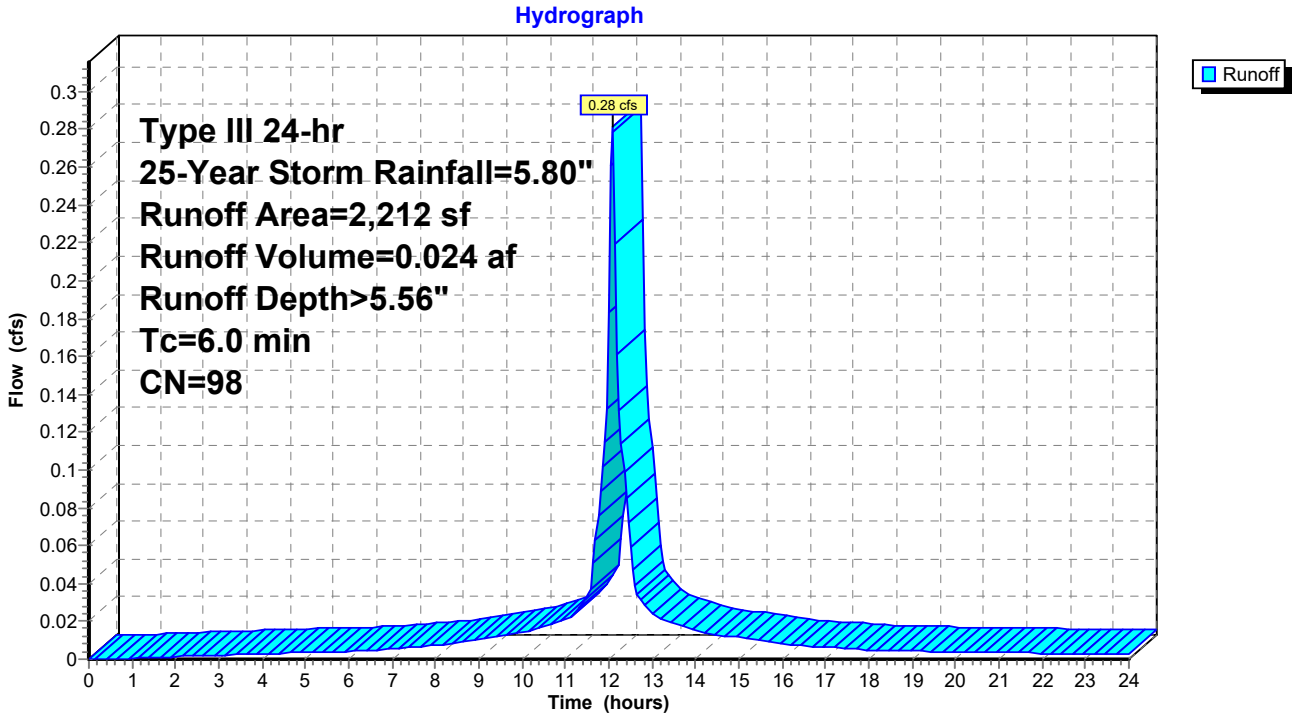
Runoff = 0.28 cfs @ 12.09 hrs, Volume= 0.024 af, Depth> 5.56"

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

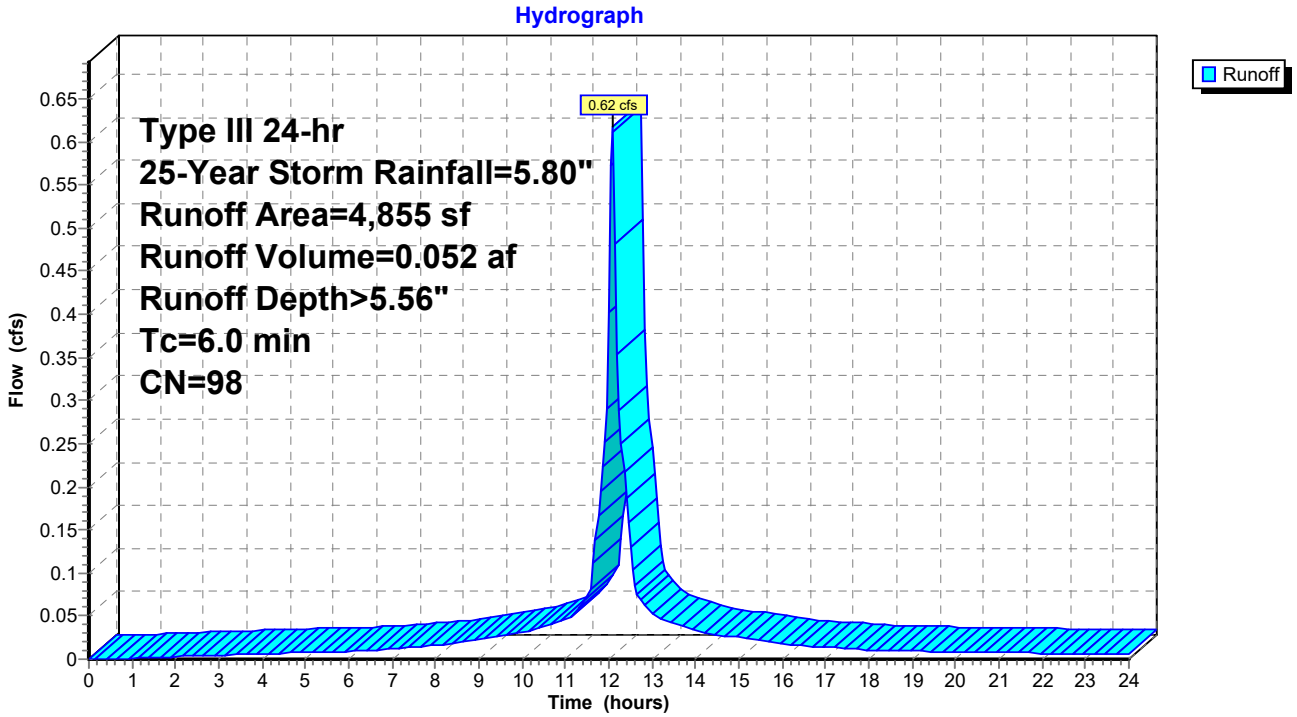
Runoff = 0.62 cfs @ 12.09 hrs, Volume= 0.052 af, Depth> 5.56"

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

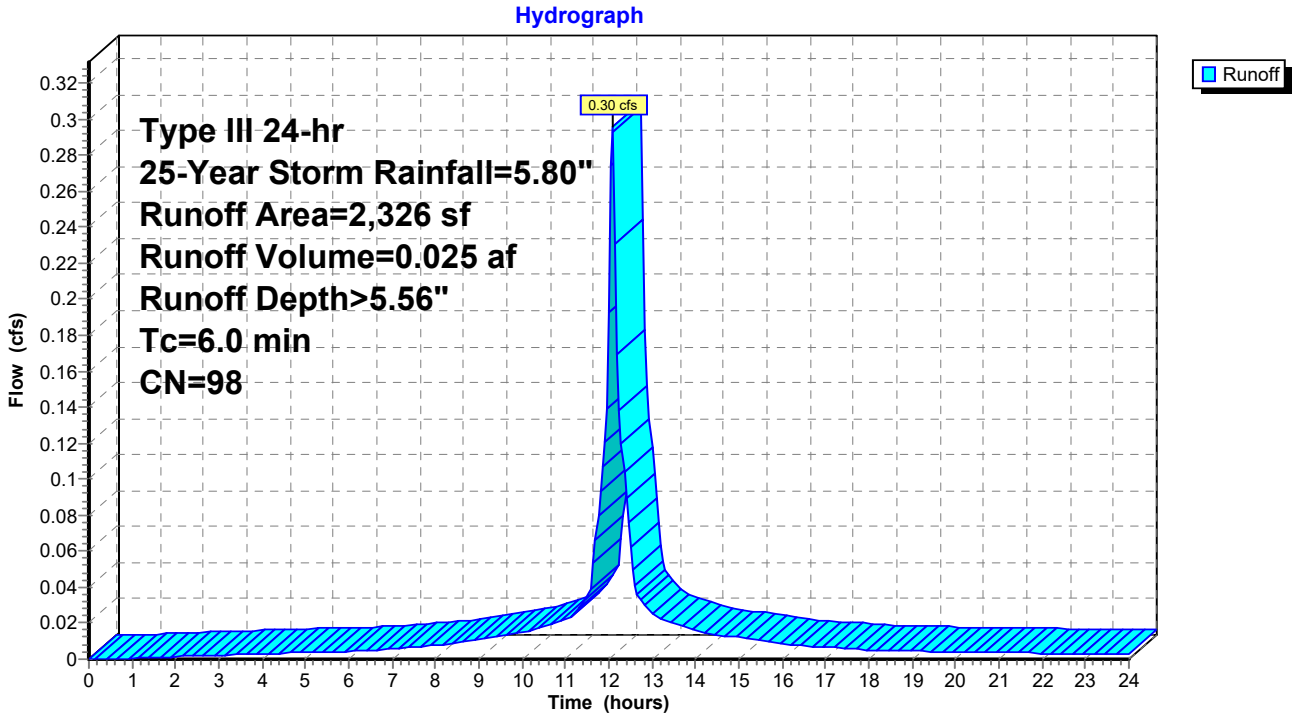
Runoff = 0.30 cfs @ 12.09 hrs, Volume= 0.025 af, Depth> 5.56"

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

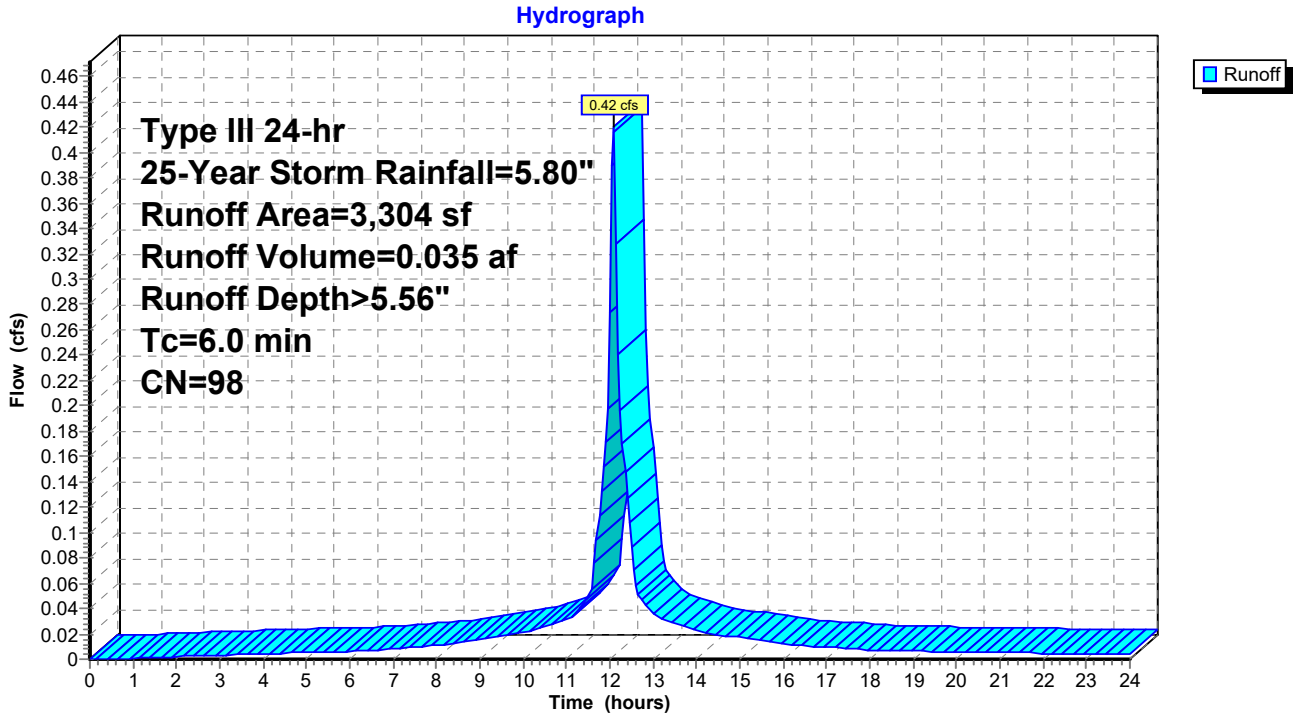
Runoff = 0.42 cfs @ 12.09 hrs, Volume= 0.035 af, Depth> 5.56"

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

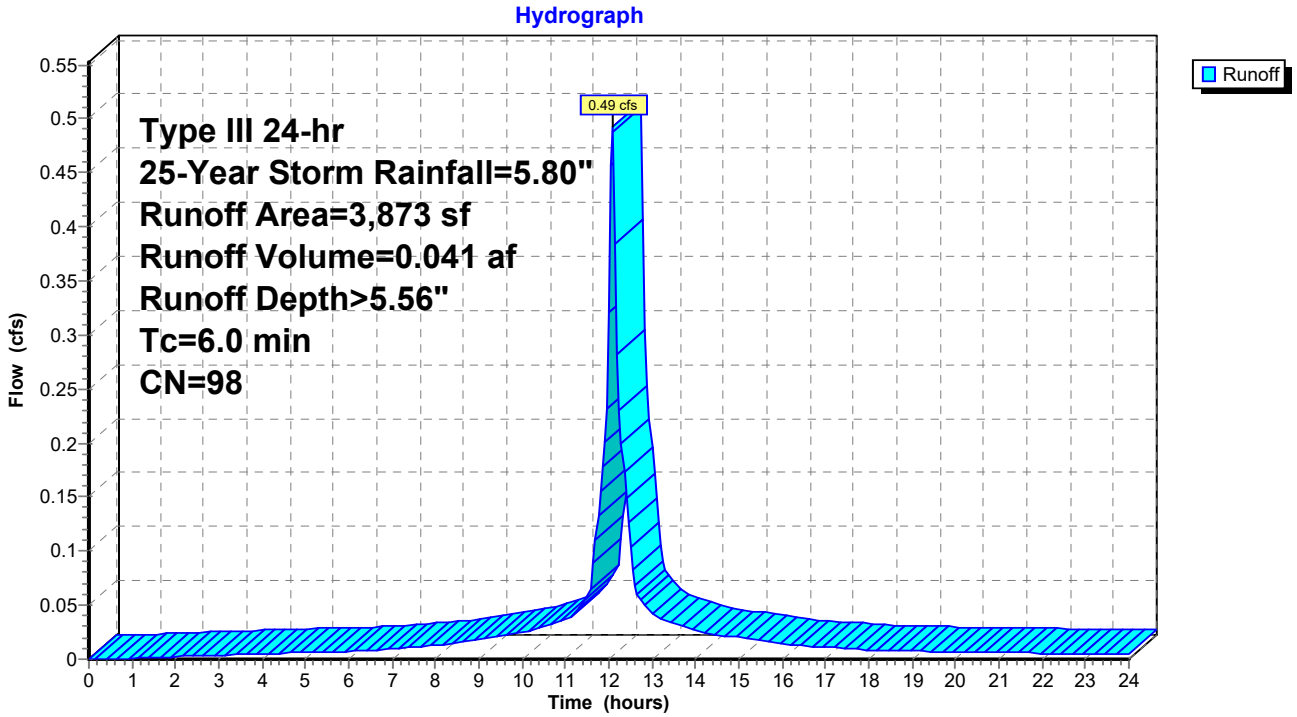
Runoff = 0.49 cfs @ 12.09 hrs, Volume= 0.041 af, Depth> 5.56"

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

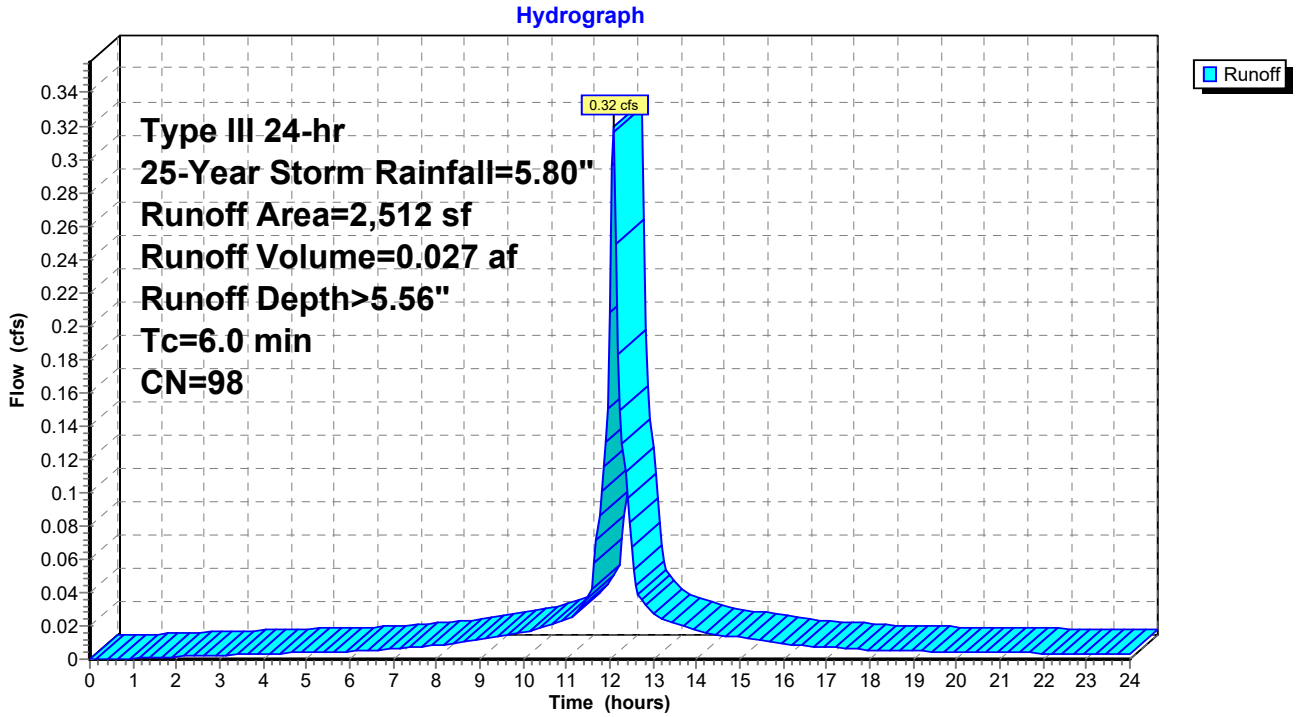
Runoff = 0.32 cfs @ 12.09 hrs, Volume= 0.027 af, Depth> 5.56"

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

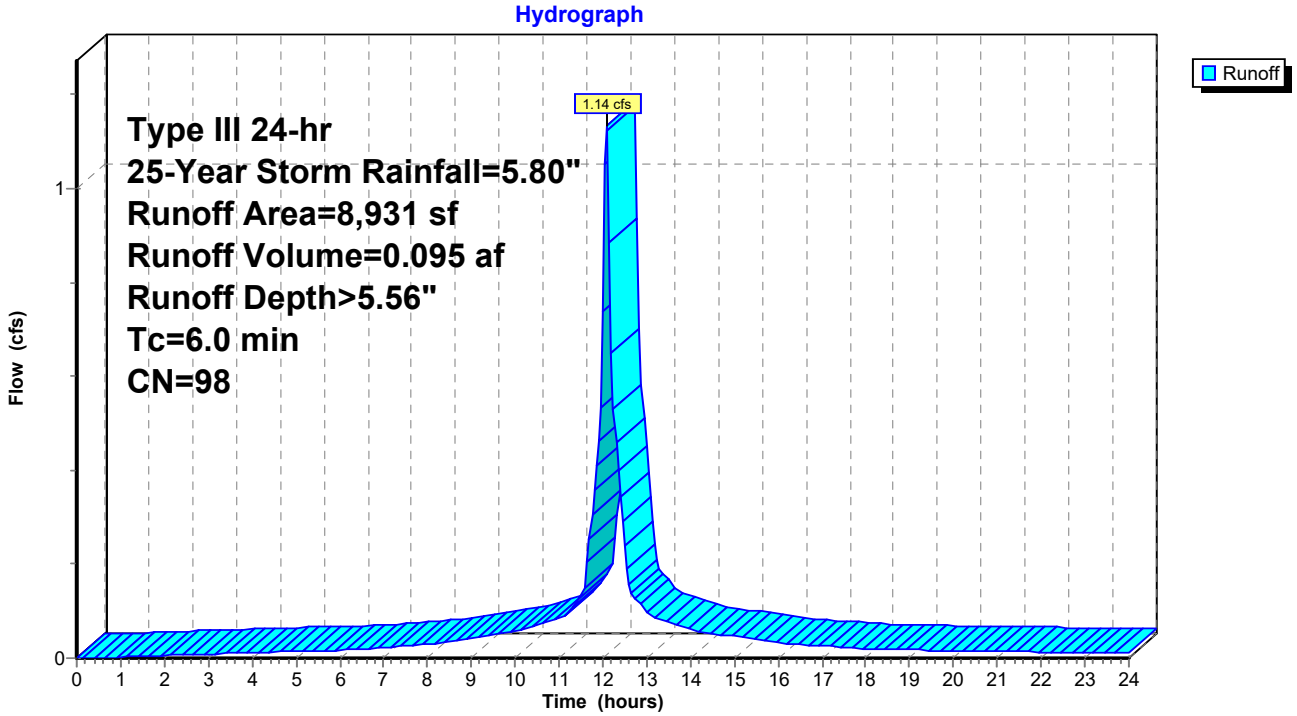
Runoff = 1.14 cfs @ 12.09 hrs, Volume= 0.095 af, Depth> 5.56"

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

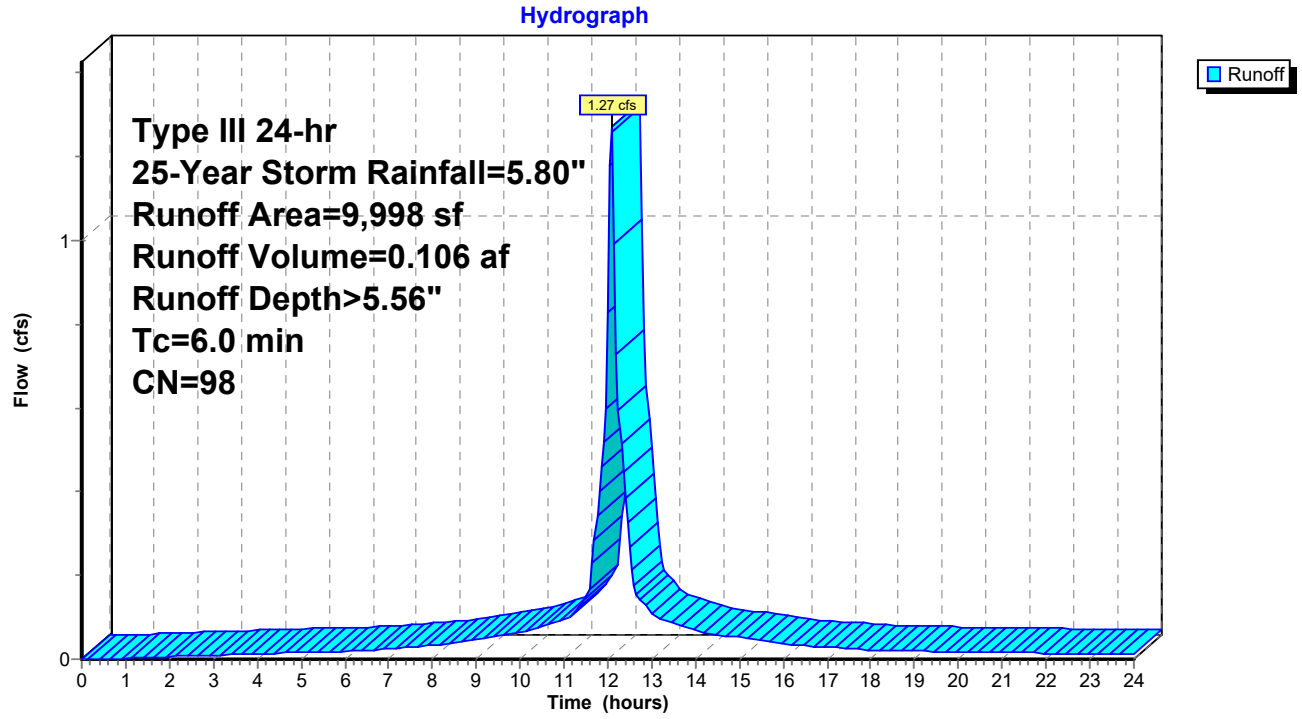
Runoff = 1.27 cfs @ 12.09 hrs, Volume= 0.106 af, Depth> 5.56"

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

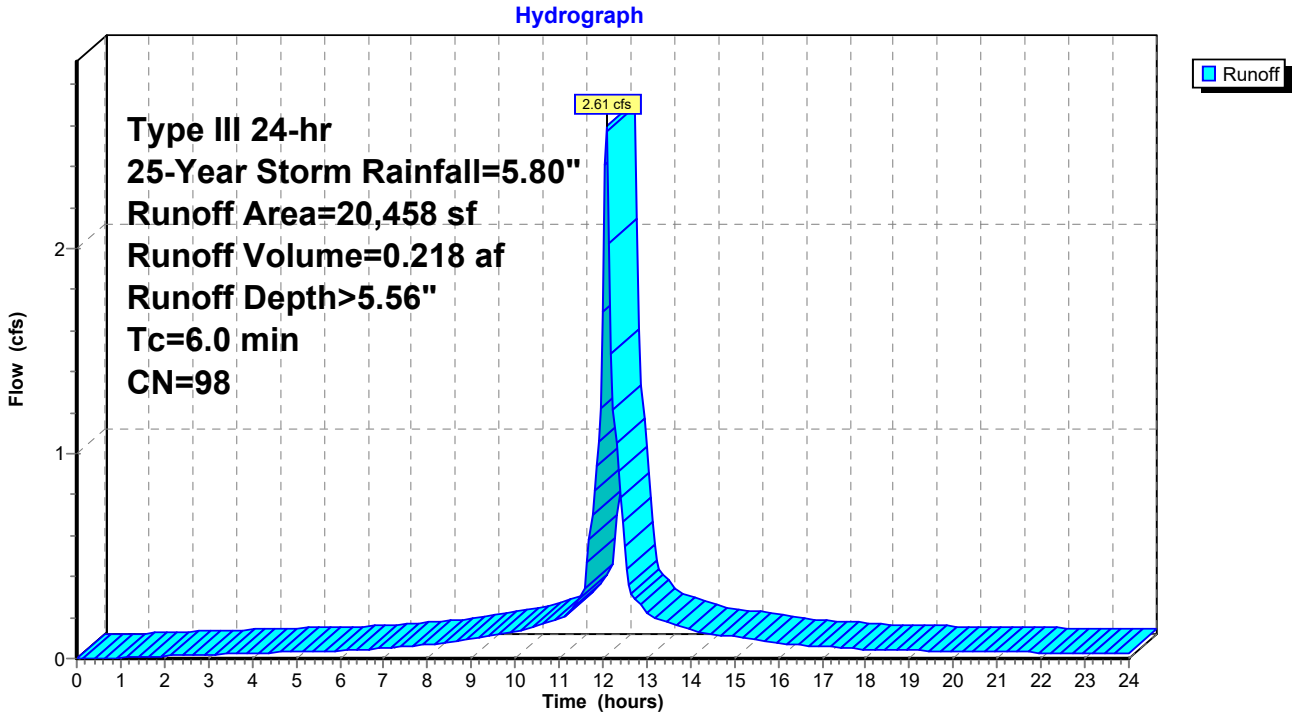
Runoff = 2.61 cfs @ 12.09 hrs, Volume= 0.218 af, Depth> 5.56"

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

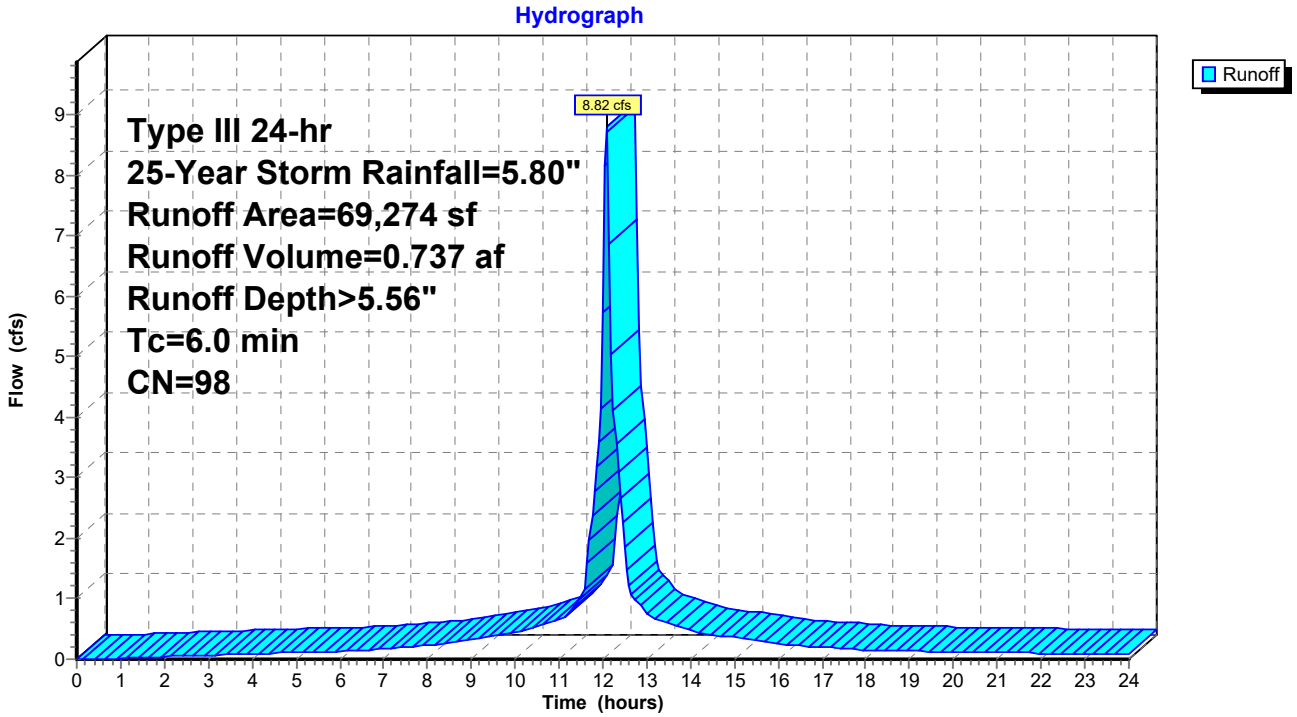
Runoff = 8.82 cfs @ 12.09 hrs, Volume= 0.737 af, Depth> 5.56"

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

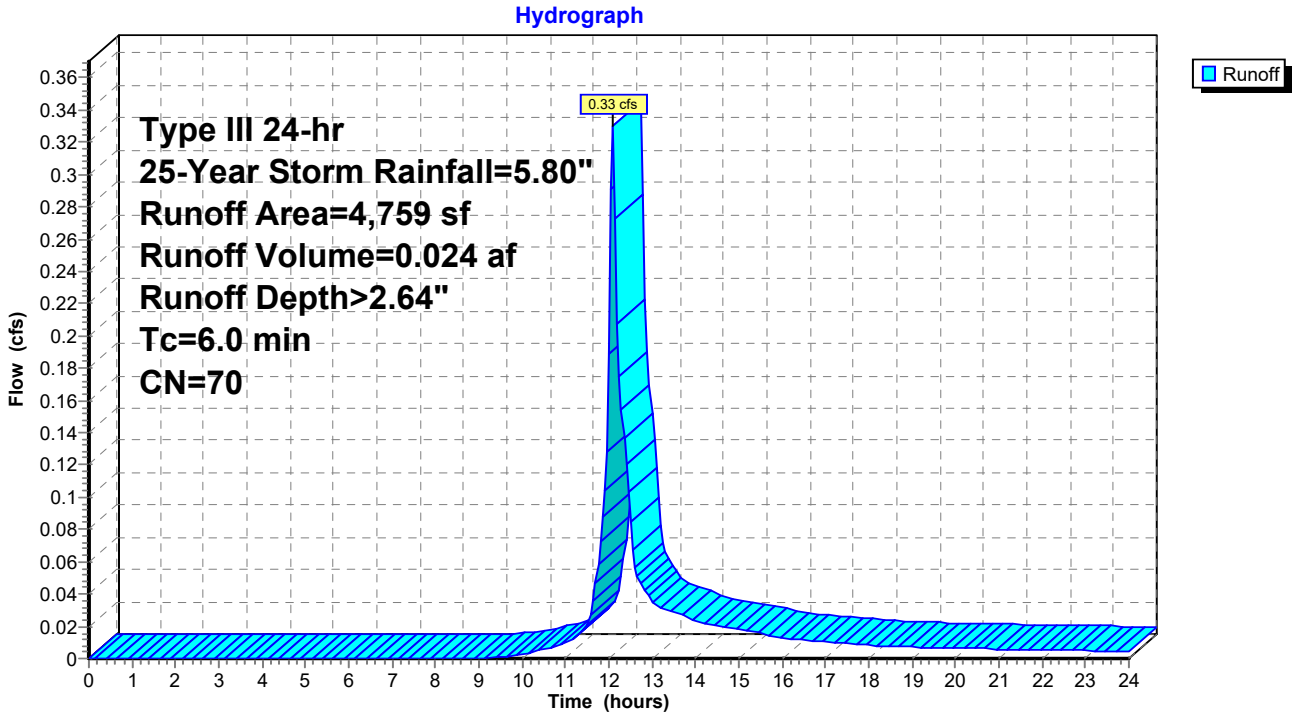
Runoff = 0.33 cfs @ 12.10 hrs, Volume= 0.024 af, Depth> 2.64"

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

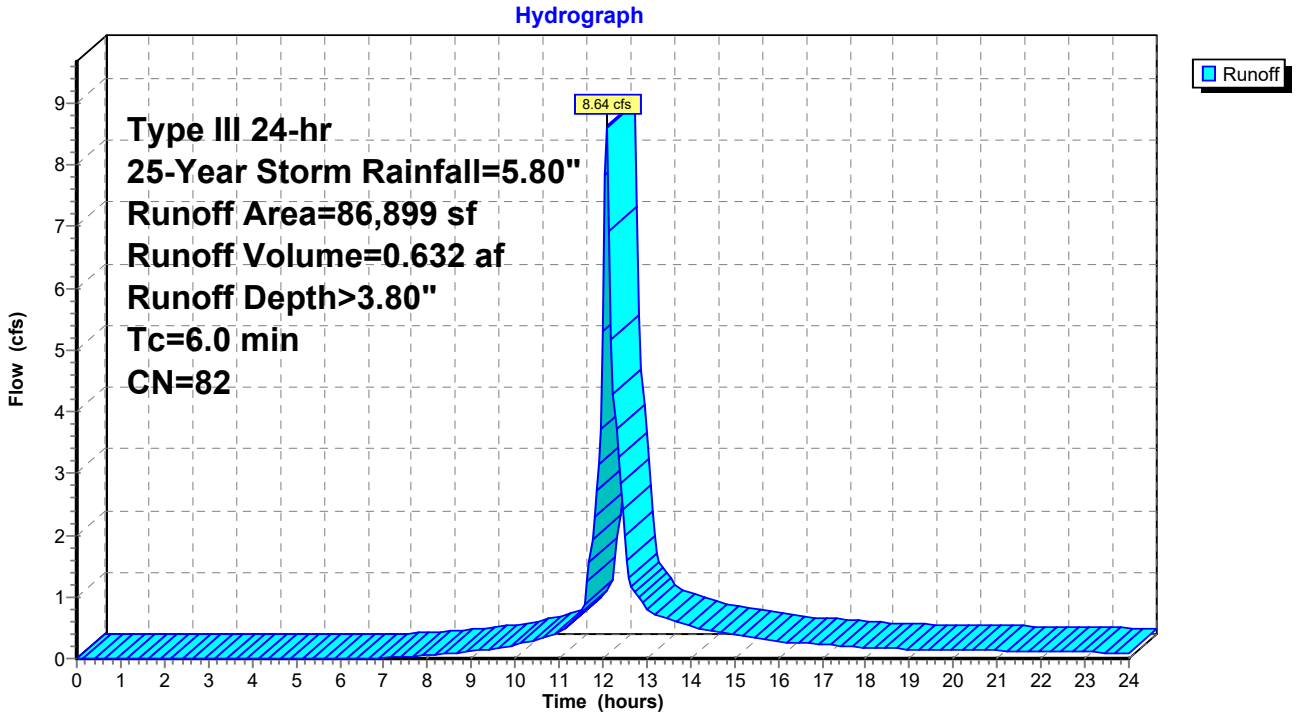
Runoff = 8.64 cfs @ 12.09 hrs, Volume= 0.632 af, Depth> 3.80"

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

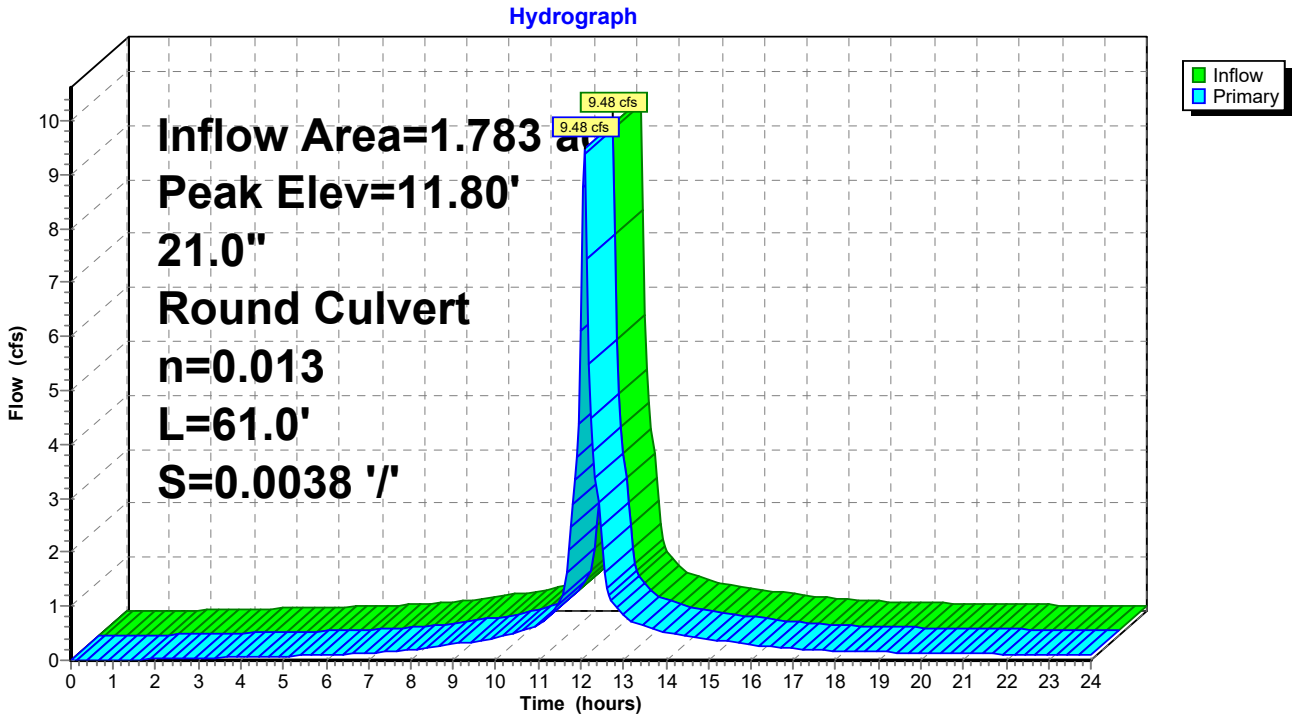
Inflow Area = 1.783 ac, 93.06% Impervious, Inflow Depth > 5.11" for 25-Year Storm event
Inflow = 9.48 cfs @ 12.09 hrs, Volume= 0.759 af
Outflow = 9.48 cfs @ 12.09 hrs, Volume= 0.759 af, Atten= 0%, Lag= 0.0 min
Primary = 9.48 cfs @ 12.09 hrs, Volume= 0.759 af

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**<br>L= 61.0' CPP, projecting, no headwall, Ke= 0.900<br>Inlet / Outlet Invert= 9.77' / 9.54' S= 0.0038 '/' Cc= 0.900<br>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

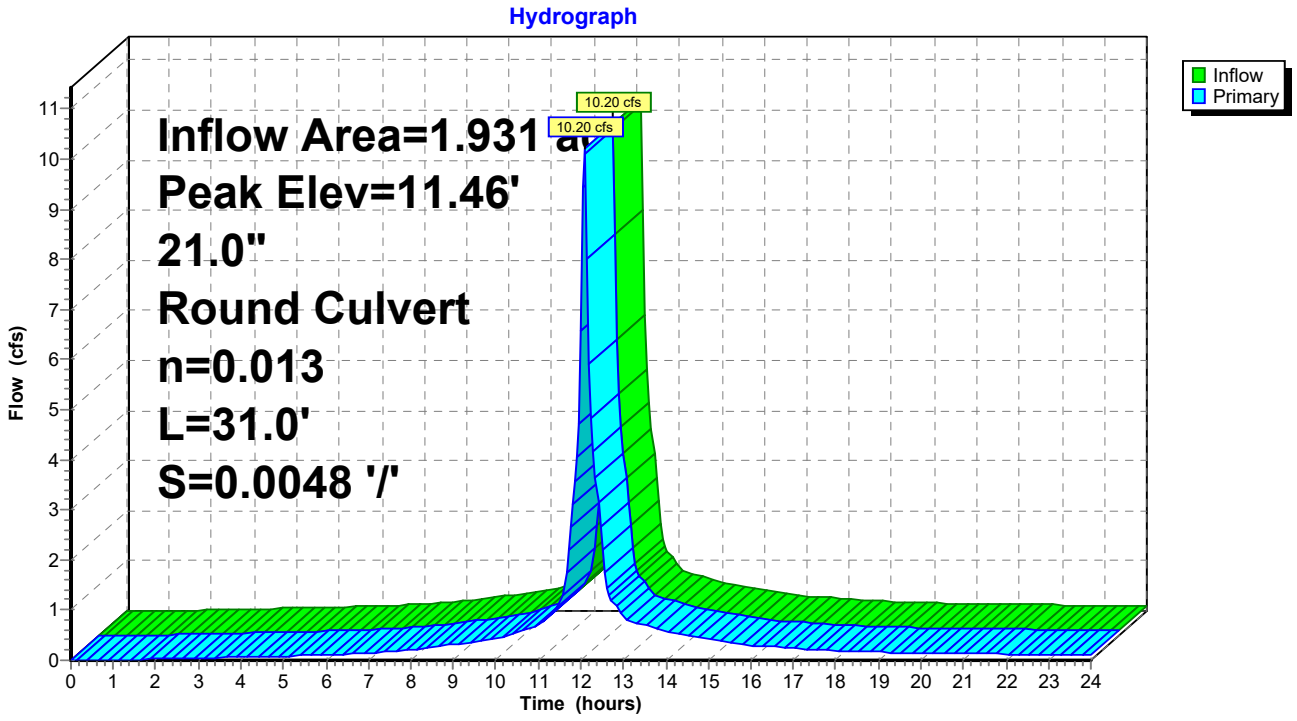
Inflow Area = 1.931 ac, 92.54% Impervious, Inflow Depth > 5.07" for 25-Year Storm event
Inflow = 10.20 cfs @ 12.09 hrs, Volume= 0.816 af
Outflow = 10.20 cfs @ 12.09 hrs, Volume= 0.816 af, Atten= 0%, Lag= 0.0 min
Primary = 10.20 cfs @ 12.09 hrs, Volume= 0.816 af

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**<br>L= 31.0' CPP, square edge headwall, Ke= 0.500<br>Inlet / Outlet Invert= 9.50' / 9.35' S= 0.0048 '/' Cc= 0.900<br>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

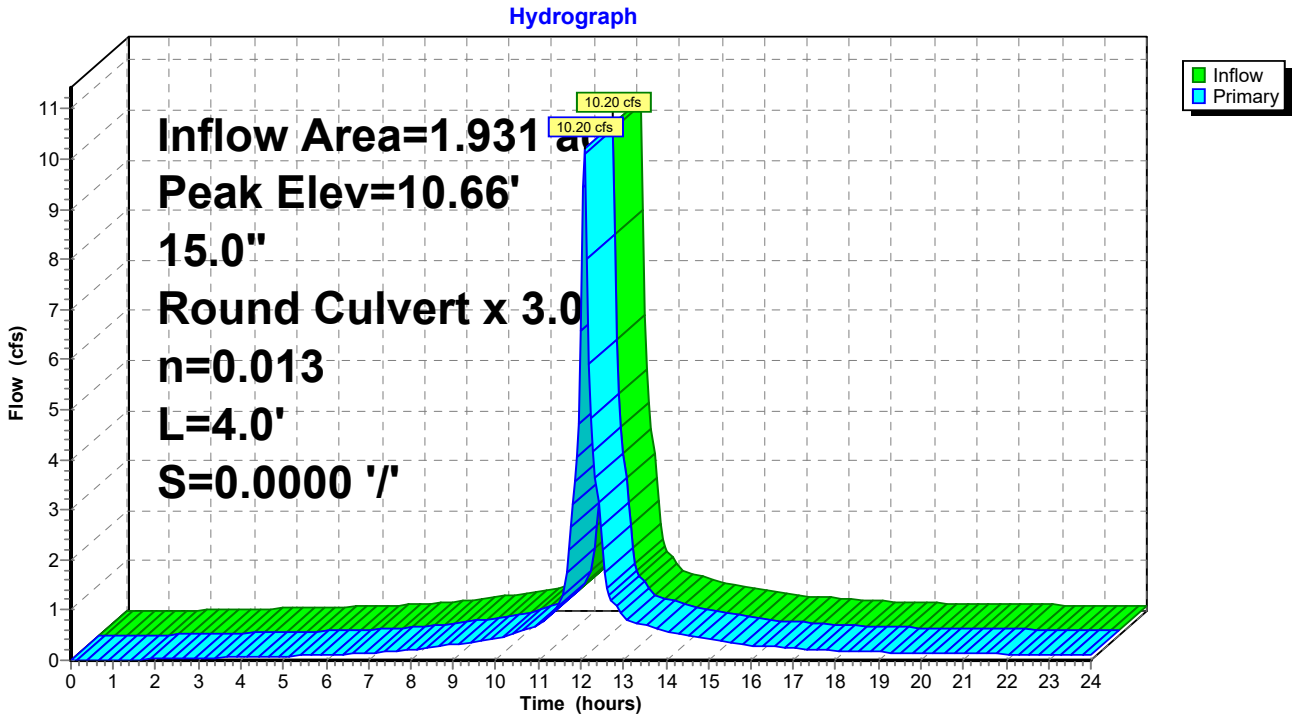
Inflow Area = 1.931 ac, 92.54% Impervious, Inflow Depth > 5.07" for 25-Year Storm event
Inflow = 10.20 cfs @ 12.09 hrs, Volume= 0.816 af
Outflow = 10.20 cfs @ 12.09 hrs, Volume= 0.816 af, Atten= 0%, Lag= 0.0 min
Primary = 10.20 cfs @ 12.09 hrs, Volume= 0.816 af

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**<br>L= 4.0' CPP, projecting, no headwall, Ke= 0.900<br>Inlet / Outlet Invert= 9.35' / 9.35' S= 0.0000 '/' Cc= 0.900<br>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)<br>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<br>2,806 cf Overall x 95.0% Voids |
| | | 4,143 cf | Total Available Storage |

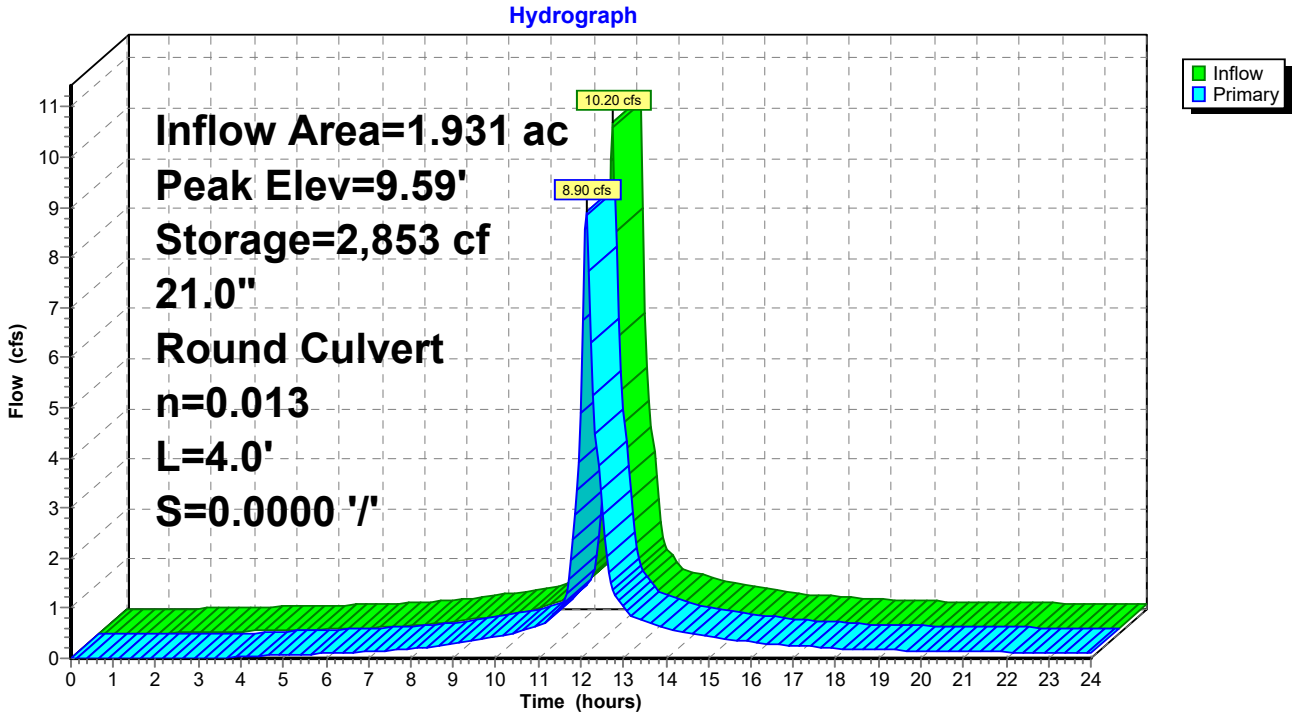
| Elevation (feet) | Surf.Area (sq-ft) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) |
|---|---|---|---|
| 7.35 | 1,597 | 0 | 0 |
| 11.42 | 1,597 | 6,500 | 6,500 |

| 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**<br>L= 4.0' CMP, projecting, no headwall, Ke= 0.900<br>Inlet / Outlet Invert= 7.60' / 7.60' S= 0.0000 '/' Cc= 0.900<br>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

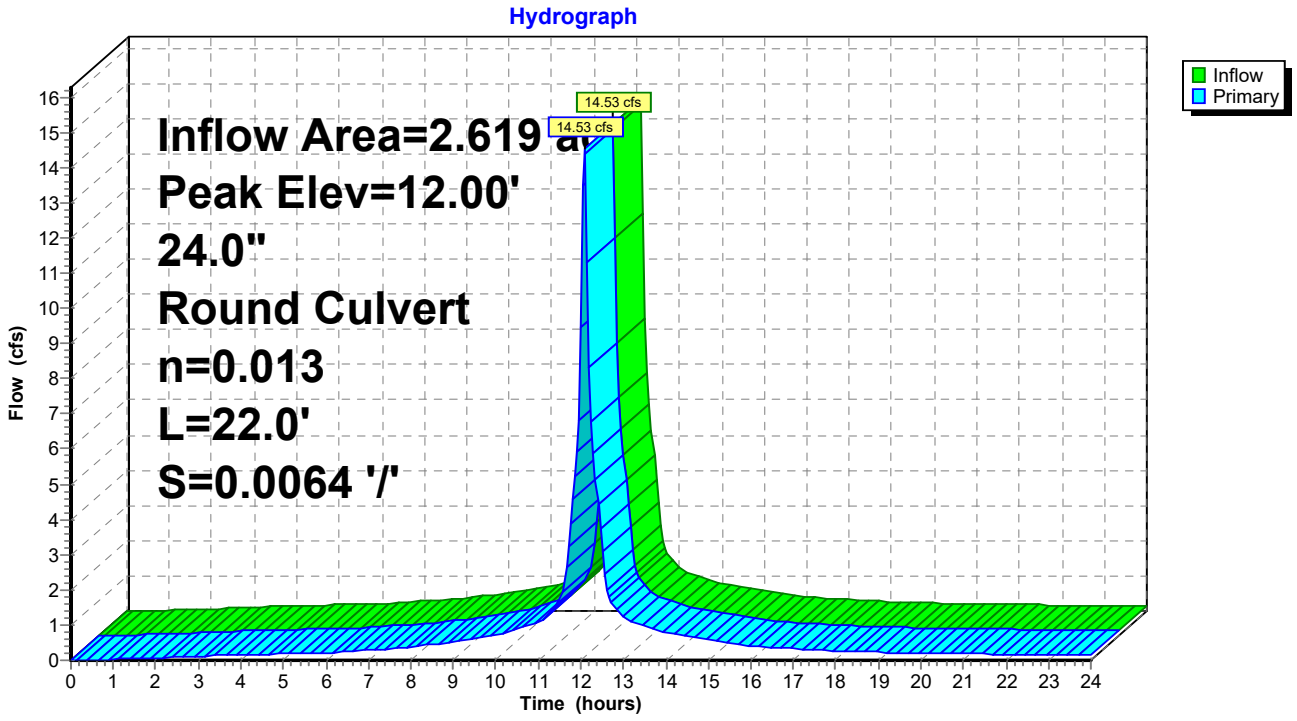
Inflow Area = 2.619 ac, 99.91% Impervious, Inflow Depth > 5.56" for 25-Year Storm event
Inflow = 14.53 cfs @ 12.09 hrs, Volume= 1.213 af
Outflow = 14.53 cfs @ 12.09 hrs, Volume= 1.213 af, Atten= 0%, Lag= 0.0 min
Primary = 14.53 cfs @ 12.09 hrs, Volume= 1.213 af

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**<br>L= 22.0' CPP, projecting, no headwall, Ke= 0.900<br>Inlet / Outlet Invert= 9.53' / 9.39' S= 0.0064 '/' Cc= 0.900<br>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

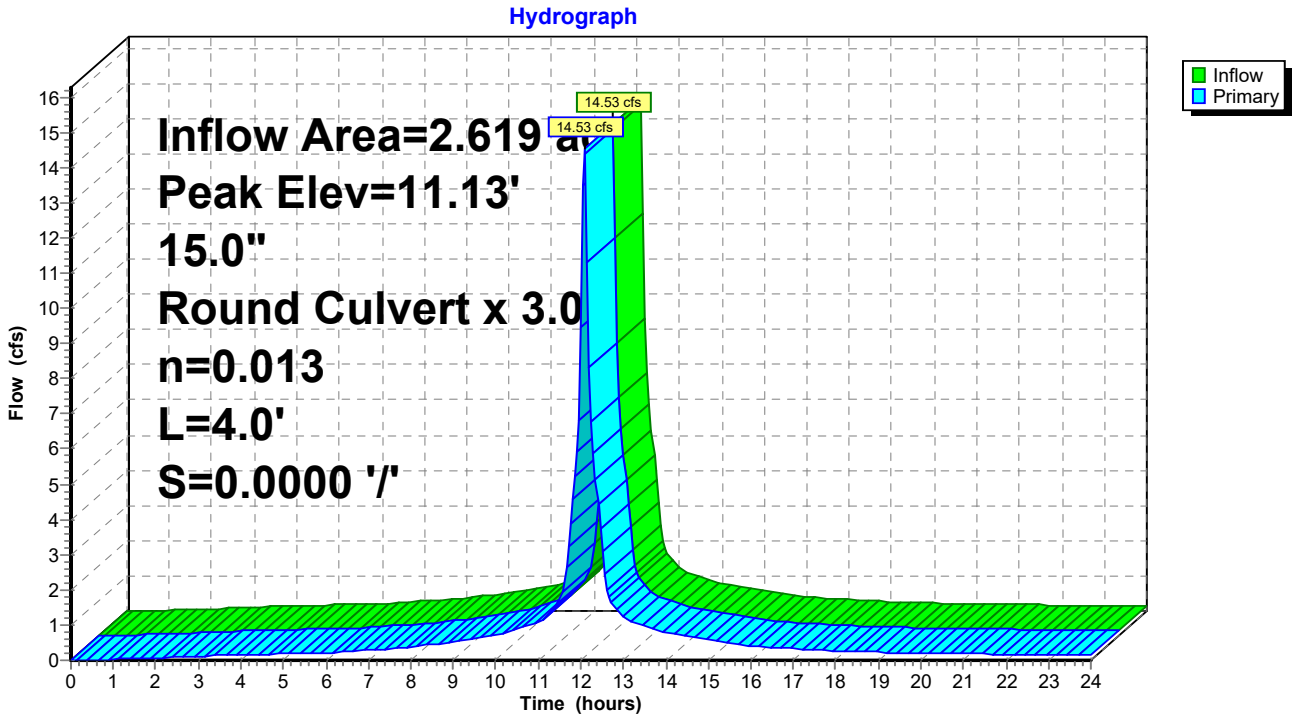
Inflow Area = 2.619 ac, 99.91% Impervious, Inflow Depth > 5.56" for 25-Year Storm event
Inflow = 14.53 cfs @ 12.09 hrs, Volume= 1.213 af
Outflow = 14.53 cfs @ 12.09 hrs, Volume= 1.213 af, Atten= 0%, Lag= 0.0 min
Primary = 14.53 cfs @ 12.09 hrs, Volume= 1.213 af

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**<br>L= 4.0' CPP, projecting, no headwall, Ke= 0.900<br>Inlet / Outlet Invert= 9.39' / 9.39' S= 0.0000 '/' Cc= 0.900<br>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)<br>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<br>5,813 cf Overall x 95.0% Voids |
| | | 8,290 cf | Total Available Storage |

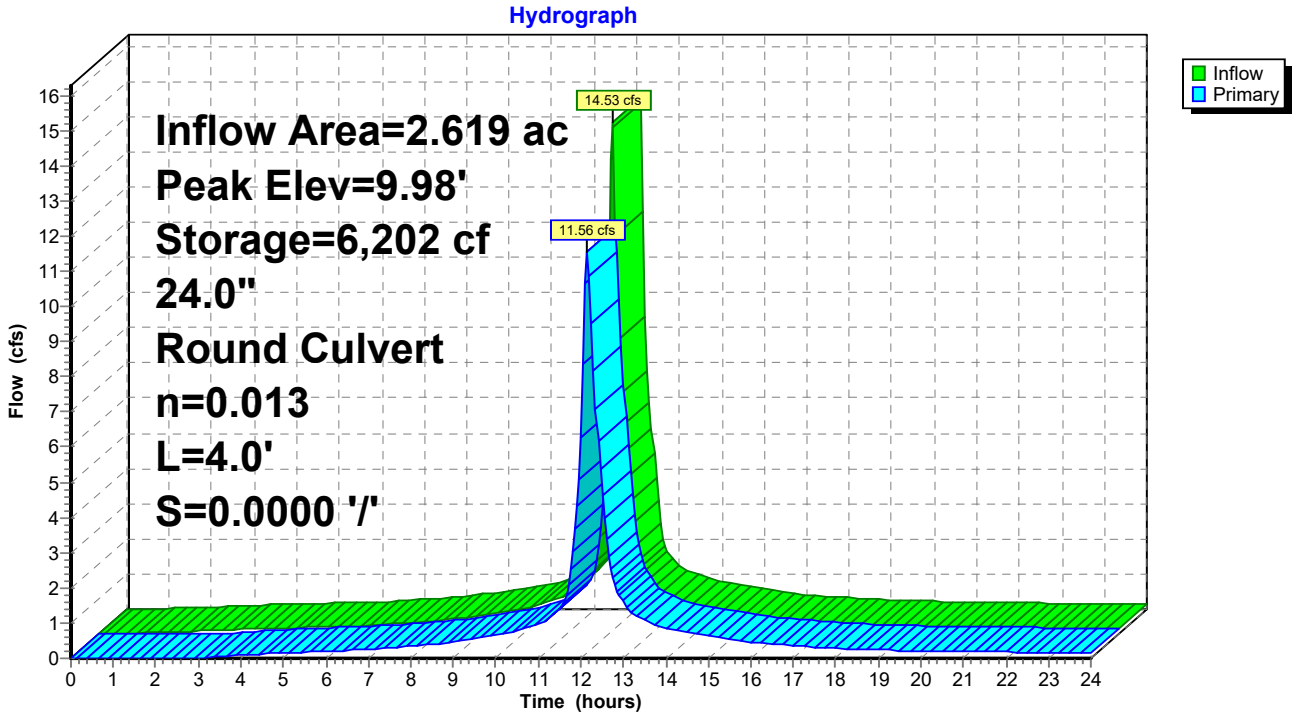
| Elevation (feet) | Surf.Area (sq-ft) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) |
|---|---|---|---|
| 7.57 | 3,128 | 0 | 0 |
| 11.64 | 3,128 | 12,731 | 12,731 |

| 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**<br>L= 4.0' CMP, projecting, no headwall, Ke= 0.900<br>Inlet / Outlet Invert= 7.82' / 7.82' S= 0.0000 '/' Cc= 0.900<br>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

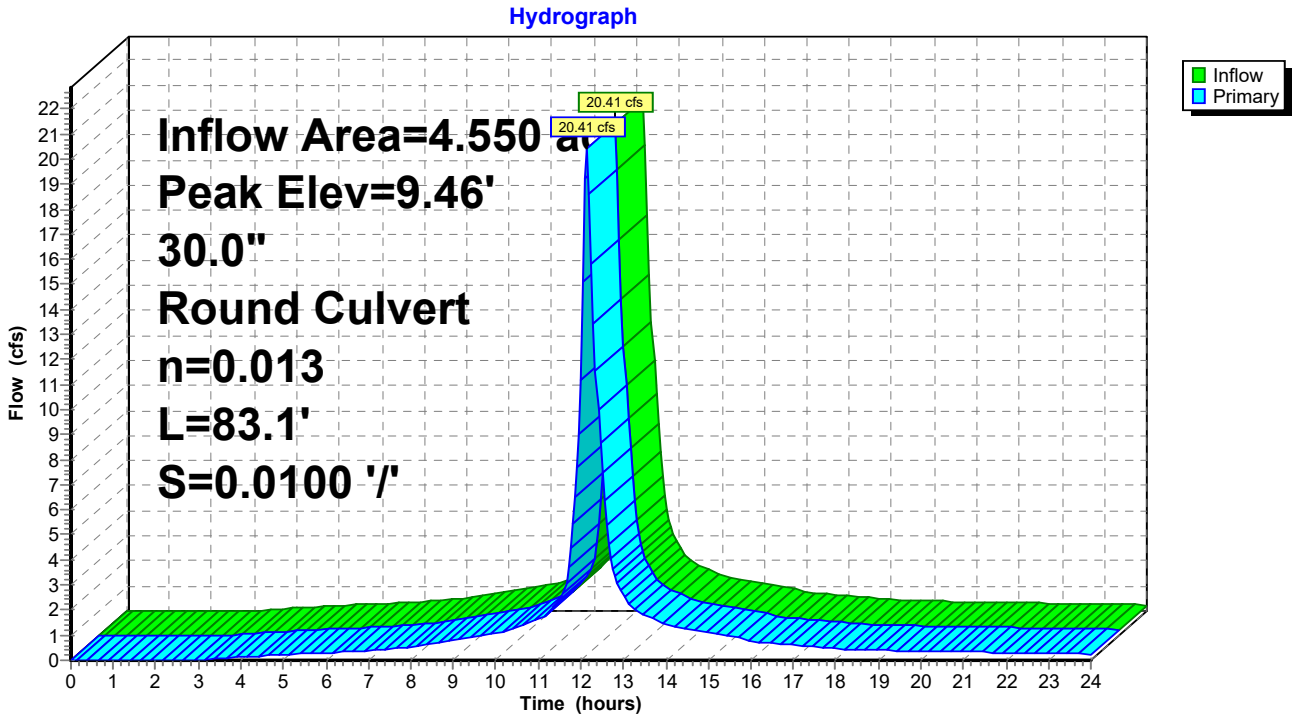
Inflow Area = 4.550 ac, 96.78% Impervious, Inflow Depth > 5.27" for 25-Year Storm event
Inflow = 20.41 cfs @ 12.14 hrs, Volume= 2.000 af
Outflow = 20.41 cfs @ 12.14 hrs, Volume= 2.000 af, Atten= 0%, Lag= 0.0 min
Primary = 20.41 cfs @ 12.14 hrs, Volume= 2.000 af

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**<br>L= 83.1' CPP, projecting, no headwall, Ke= 0.900<br>Inlet / Outlet Invert= 7.03' / 6.20' S= 0.0100 '/' Cc= 0.900<br>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

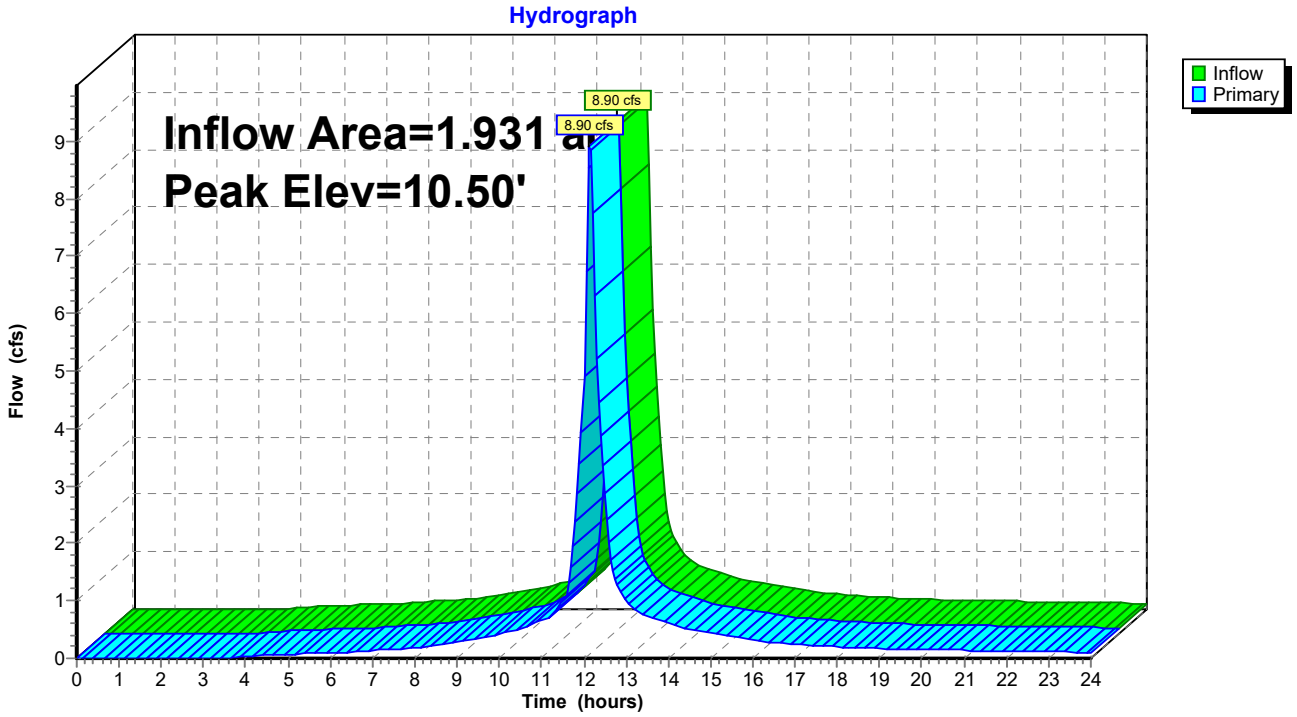
Inflow Area = 1.931 ac, 92.54% Impervious, Inflow Depth > 5.01" for 25-Year Storm event
Inflow = 8.90 cfs @ 12.14 hrs, Volume= 0.807 af
Outflow = 8.90 cfs @ 12.14 hrs, Volume= 0.807 af, Atten= 0%, Lag= 0.0 min
Primary = 8.90 cfs @ 12.14 hrs, Volume= 0.807 af

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**<br>L= 90.0' CPP, projecting, no headwall, Ke= 0.900<br>Inlet / Outlet Invert= 7.60' / 7.13' S= 0.0052 '/' Cc= 0.900<br>n= 0.013 Corrugated PE, smooth interior, Flow Area= 2.41 sf |
| #2 | Device 1 | 7.60' | **JF Filter-1 CSV File**<br>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<br>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**<br>Head (feet) 0.20 0.40 0.60 0.80 1.00<br>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

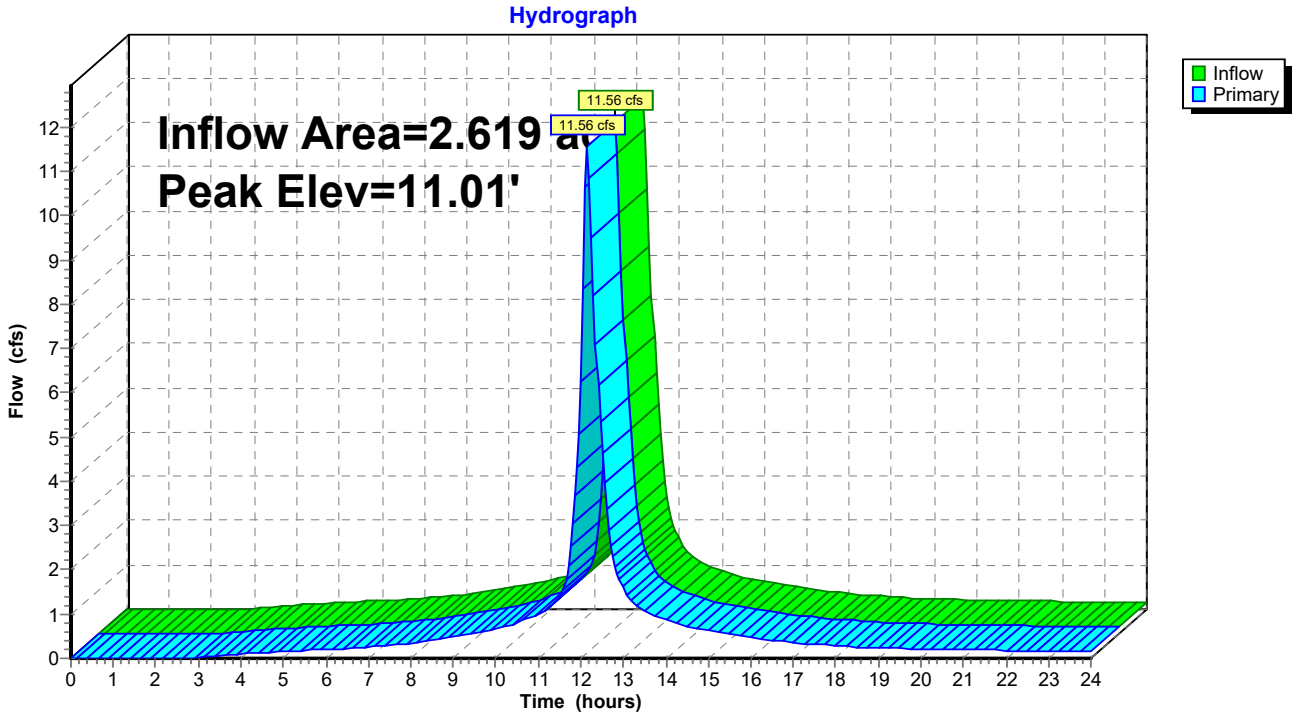
Inflow Area = 2.619 ac, 99.91% Impervious, Inflow Depth > 5.47" for 25-Year Storm event
Inflow = 11.56 cfs @ 12.15 hrs, Volume= 1.193 af
Outflow = 11.56 cfs @ 12.15 hrs, Volume= 1.193 af, Atten= 0%, Lag= 0.0 min
Primary = 11.56 cfs @ 12.15 hrs, Volume= 1.193 af

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**<br>L= 114.0' CPP, projecting, no headwall, Ke= 0.900<br>Inlet / Outlet Invert= 7.82' / 7.13' S= 0.0061 '/' Cc= 0.900<br>n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf |
| #2 | Device 1 | 7.82' | **JF Filter-2 CSV File**<br>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<br>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**<br>Head (feet) 0.20 0.40 0.60 0.80 1.00<br>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

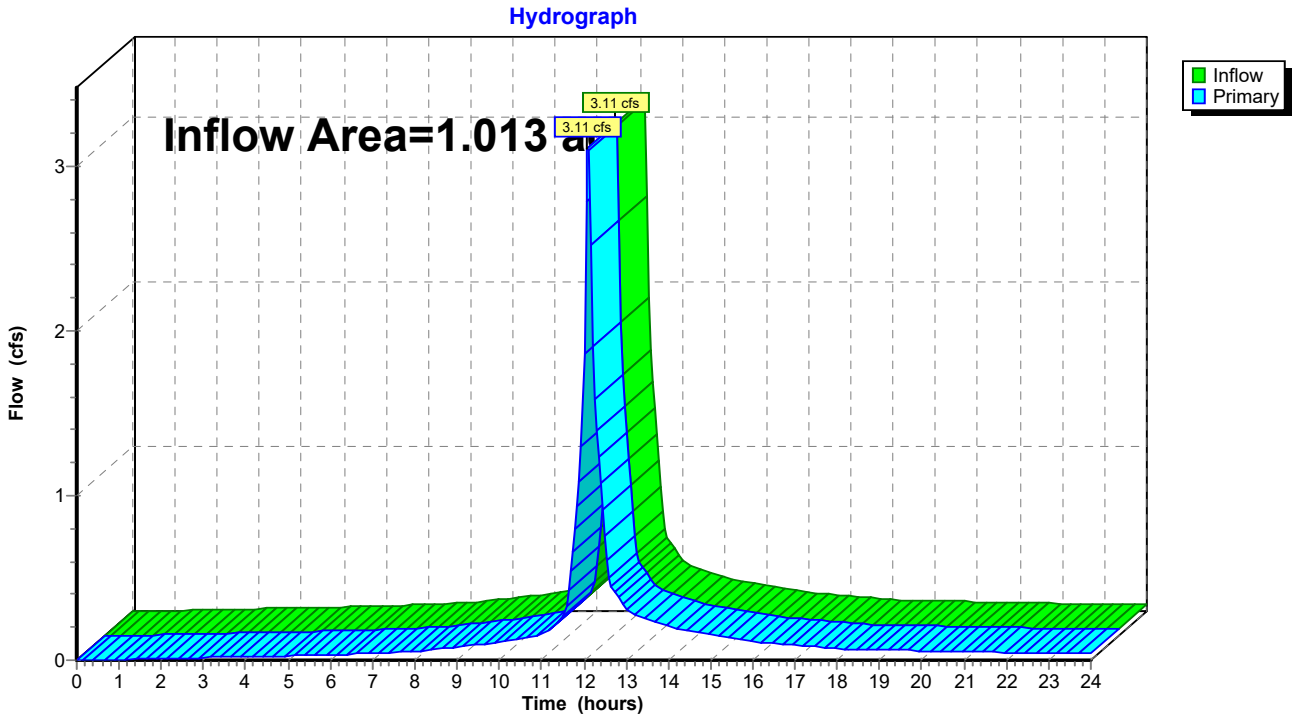


## Summary for Link 1L: Fore Connector

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

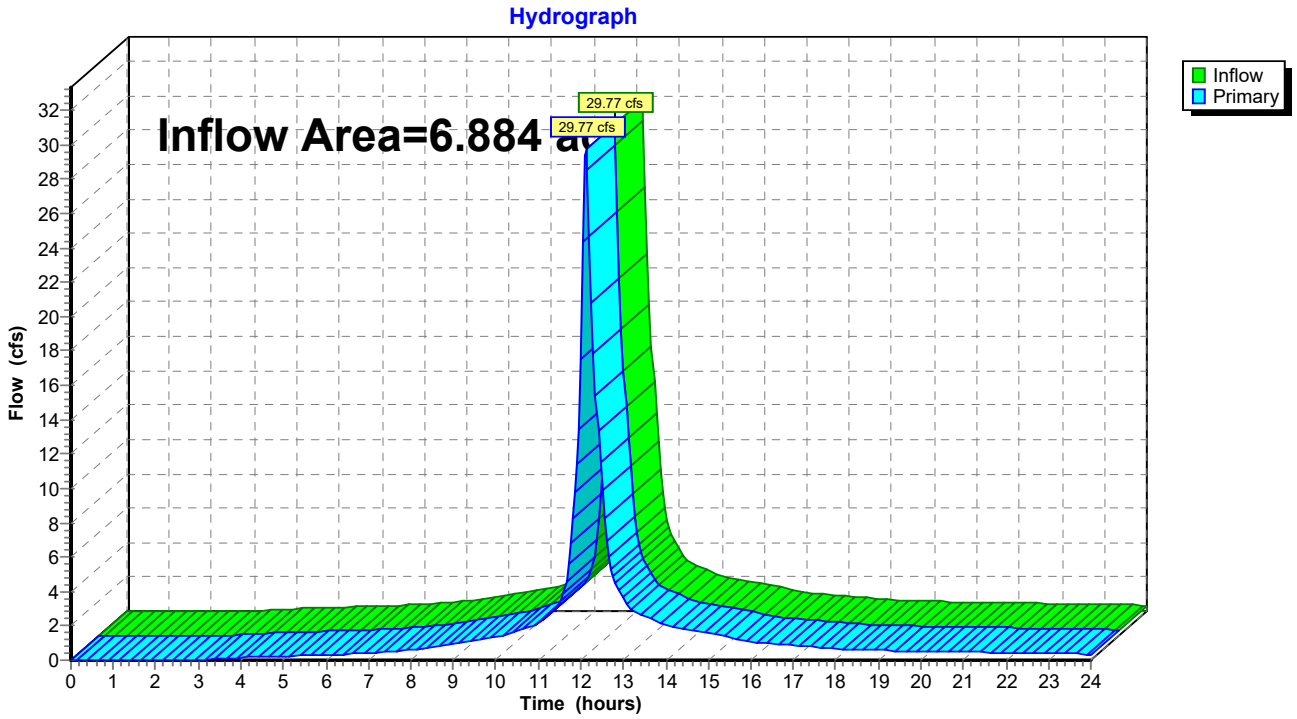


## Summary for Link 2L: Fore River

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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| | 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


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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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| | 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
# Portland Foreside
# Portland, Maine
### 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 additional phases undergo Site Plan Approval.

The Master Development Plan includes seven Blocks to be developed on the site. Site Plan permitting may be done 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**

| Block | Project | Permit | Date |
|---|---|---|---|
| B7 | Marina | Level II Site Plan | Permit Issued January 2019 |
| Phase 1 | Block 1A, 2, 4 and Building 12 | Level III Site Plan | Permit Application November 2019 (current application) |

## Transportation Context

Portland Foreside is multi-phased development that began with the construction of a marina and will consist of a mix of phases that include retail (including restaurants), office, and residential space. The development is located within walking distance of several bus stops. The closest stops are approximately a 3-5 minute walk away and are located on METRO Route 1, Congress Street. A bus stop for METRO Route 8 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.

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, which connects to a 70 mile pedestrian and bicycle trail network, runs through the site.

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 was 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 Comprehensive Plan. The office users on the site and on the abutting office sites will visit the new markets, vendors, and restaurants. Many of the new residents on the site will work in the nearby offices both on and off of the site within an easy walking distance or bike ride from their home. The market will be a destination to 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.

When companies look to move their offices to Portland's waterfront, their number one reason is focused on recruiting young professionals who they find are overwhelmingly attracted to the Company's urban setting. The majority of these individuals choose to live in a nearby, convenient urban setting, close to work and close to shops, restaurants and other amenities.

The adjacent Eastern Promenade Trail provides a primary point of connection to 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 abutting Eastern Promenade Trail and its associated Portland Trails network will serve as a strong conduit for promoting bicycle commuting opportunities for workers on the site, in addition to promoting biking and walking to the market and retail establishments on the site.

The market serves as a mixed-use destination on its own. Serving various prepared and packaged foods, the market is much more than a single stop for visitors. We anticipate that visitors can buy meats and produce, specialty goods, prepared foods 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.

## TDM Coordinator

The development 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
- Monitoring bike rack usage and making recommendations as needed to accommodate demand
- Encouraging greater use of bicycling and walking
- Overseeing ongoing monitoring and updating of this TDM plan
- Creating and overseeing a committee representing each of the tenants in the development who will assist in TDM planning and assessment
- Administering and reviewing TDM surveys
- Filing annual TDM reports with the City

The TDM Coordinator will be the primary point of contact for the tenants regarding TDM. The Coordinator will help tenants develop strategies and incentives for employees and customers where applicable.

## 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, an additional reduction of 5% is targeted for both trip generation and parking demand. 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.

## 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 appear 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 other areas 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. The closest sheltered public transit facility is the Ocean Gateway. To increase METRO use, the development will discuss with METRO the potential for an additional bus stop at one of the site accesses.

*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 could encourage walking to and from the site. Additionally, the Eastern Promenade Trail runs through the site, which could draw pedestrian and bicycle traffic to the site. It is a pedestrian and bicycle trail that connects to a 70-mile trail network. The TDM Coordinator will work to promote this trail and the on-site bicycle racks to increase the number of bicyclists. It is recommended that bicycle spaces be provided in key locations around the site and monitored by the TDM Coordinator, who will identify if additional bicycle spaces are warranted. If a strong bicycle use is identified, shower and locker facilities on-site to encourage further bicycle use will be considered in future development. With substantial bicycle facilities, the development can also consider a bicycle share program to encourage visitors or residents who do not own bicycles to use them as an alternative mode of transportation.

*Shared Mobility*

As mentioned above, if bicycle facilities are widely used by employees and visitors, a bikeshare program will be considered for the site. In addition to shared bicycles, a carshare program will also be considered. Maine is one of 20 states served by UhaulCarShare 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. The development will consider the use of additional vehicles with a car rental agency on or near the site for visitors to use on an as-needed basis, especially when later phases are developed. 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. Information will be provided to office workers and restaurant employees. Following the first survey, additions to the shared vehicles may be made if employees or visitors desire their use in significant numbers. A Car Share program may be an attractive option for local residents who are employed by one of the various tenants in the development.

*Flexible Work Options*

To reduce the number of employee trips to work during peak hours, employers may 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.

## Incentives

Incentives may 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*

Employers may provide incentives for their employees to encourage them to use alternative modes of transportation. These incentives could include a "parking cash out" where employees receive monetary payments in lieu of provided parking, free or reduced public transit passes, preferred parking for car pool, or periodic prize drawings for employees using alternative modes of transportation.

*Visitor Incentives*

Visitor incentives would need to be coordinated by the TDM Coordinator and retail owner. The incentives could include participation in the METRO Bus and Buy program where the visitors pay the fare to get to the site, but get a free ride home with a purchase. Visitor incentives could also include coupons or discounts for using alternatives modes of transportation.

**Information**

The TDM Coordinator will 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 provides 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.

## 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 may 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 concerns with the mode 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. The TDM Coordinator may seek to partner with the

public sector and use public funding to increase the effectiveness of these surveys and obtain the information contained in them.

*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, or retail center (car/carpool/biking/ walking/bus)
- Preferences or concerns with mode 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 could be accessed with a link online or a QR code on receipts or fliers posted on the site that could 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 could elicit consistent and engaged participation in these surveys.

*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 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.

GORRILL PALMER

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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 95$^{th}$ percentile queue of approximately 40 feet and a PM 95$^{th}$ 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

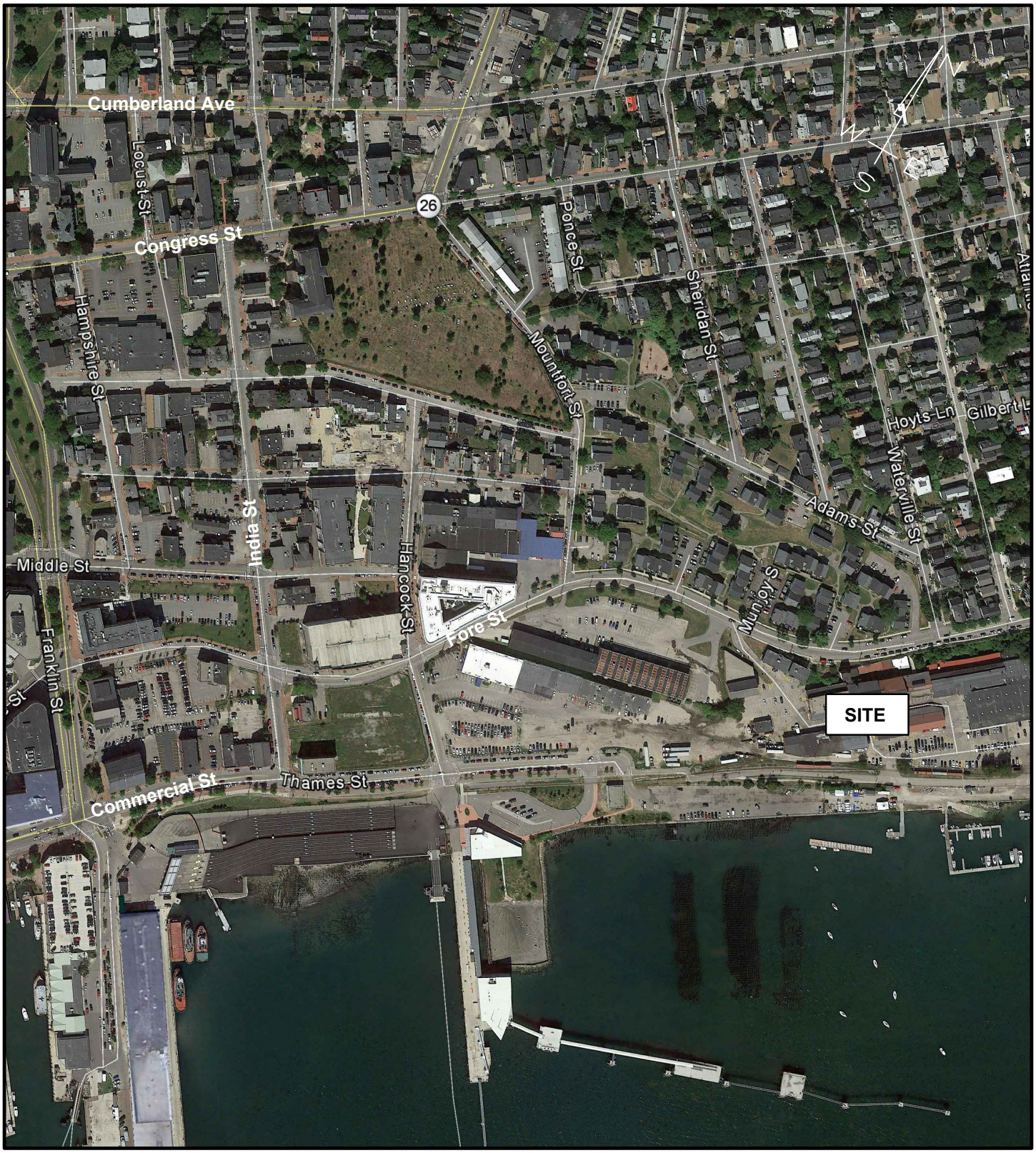
| | Block 1A | | | | | Block 4 | | | | | Building 12 | | | | | | | Block 2 | | | | | | | Shared Spaces | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Block 1A | | Block 1A | | Total for Block 1A | Block 1A | | Block 4 | | 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



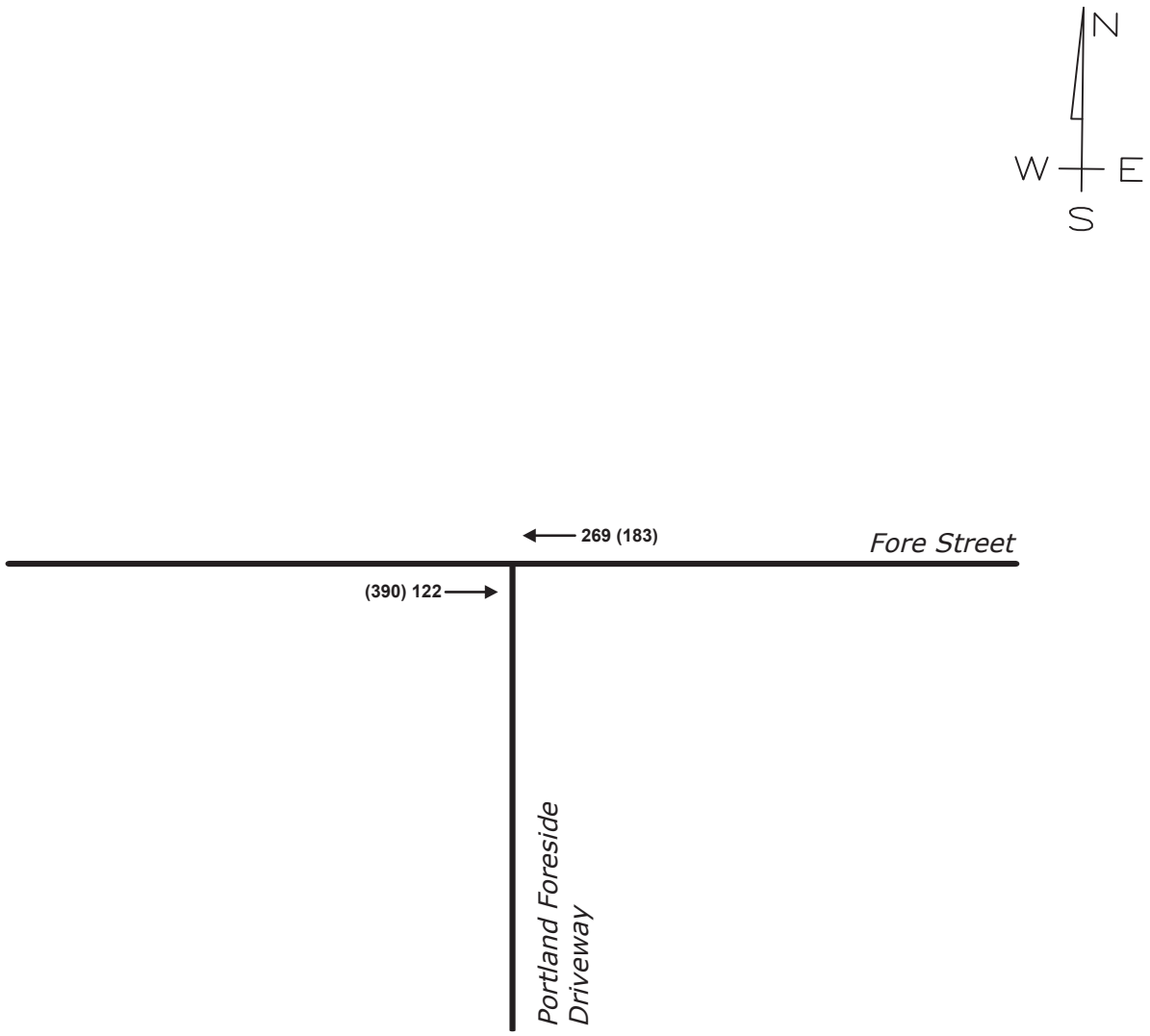

**PORTLAND FORESIDE**
**PORTLAND, MAINE**

| | | | |
|---|---|---|---|
| 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**

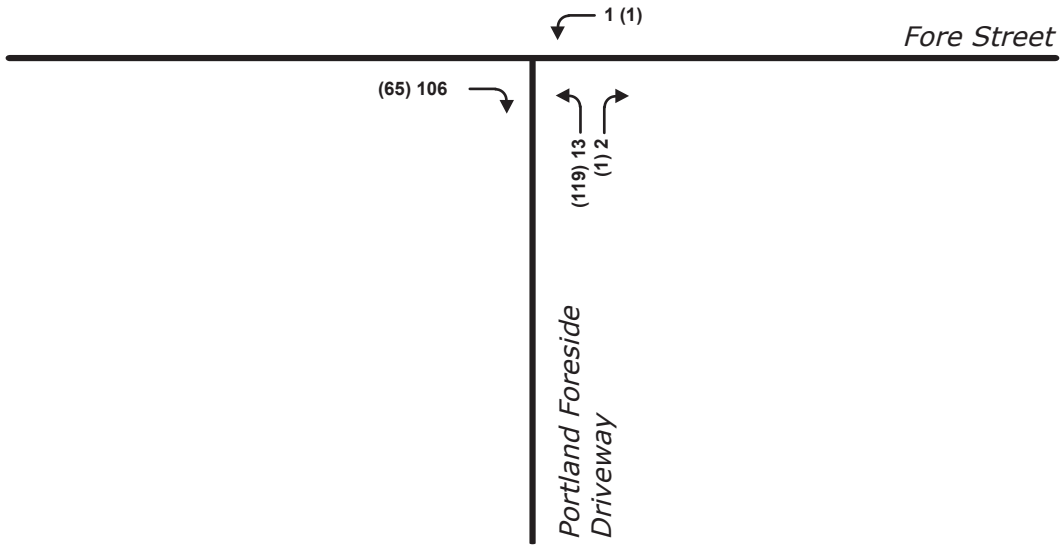
## PORTLAND FORESIDE
## PORTLAND, MAINE

| | | | |
|---|---|---|---|
| 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**

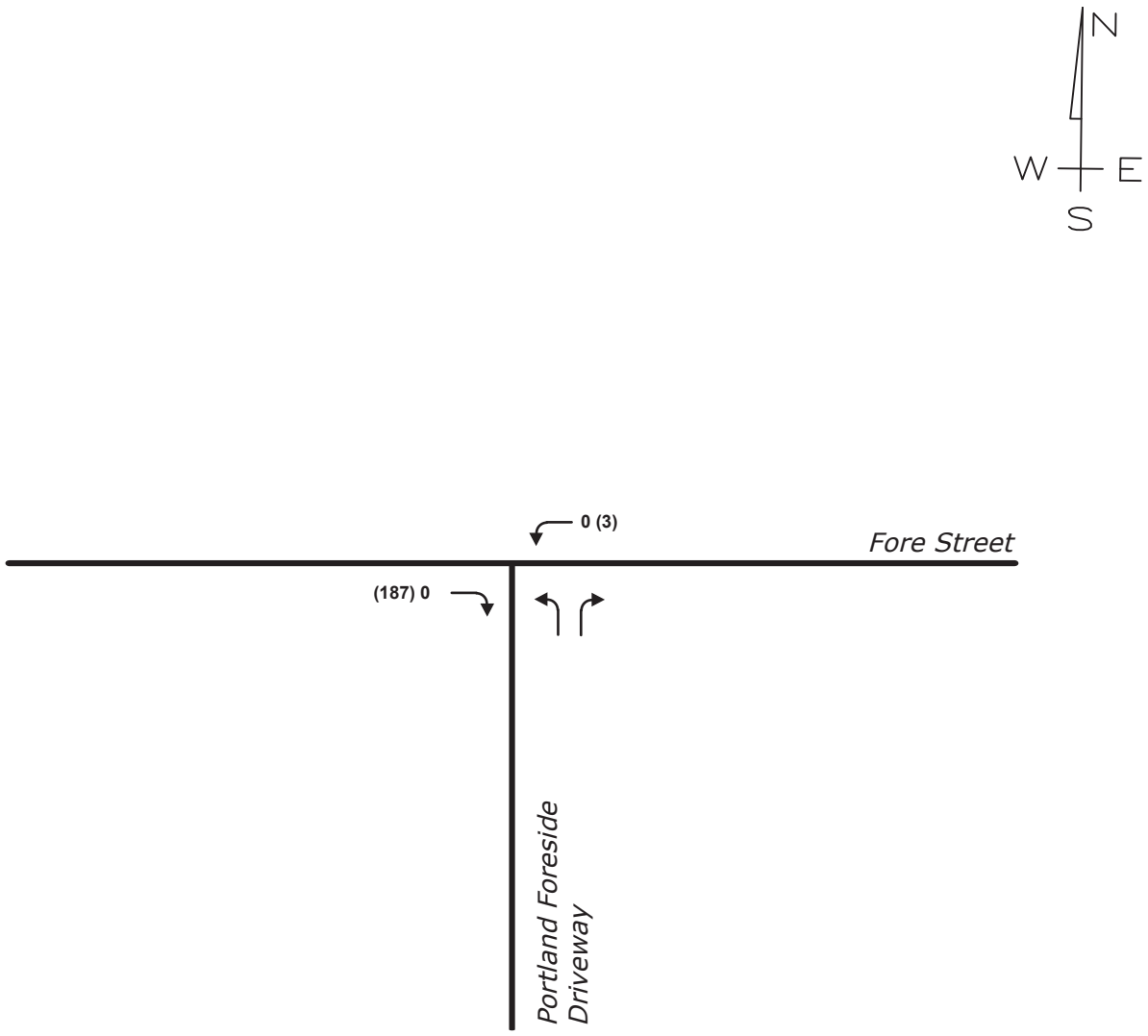
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# Event Space Trip Assignment

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**

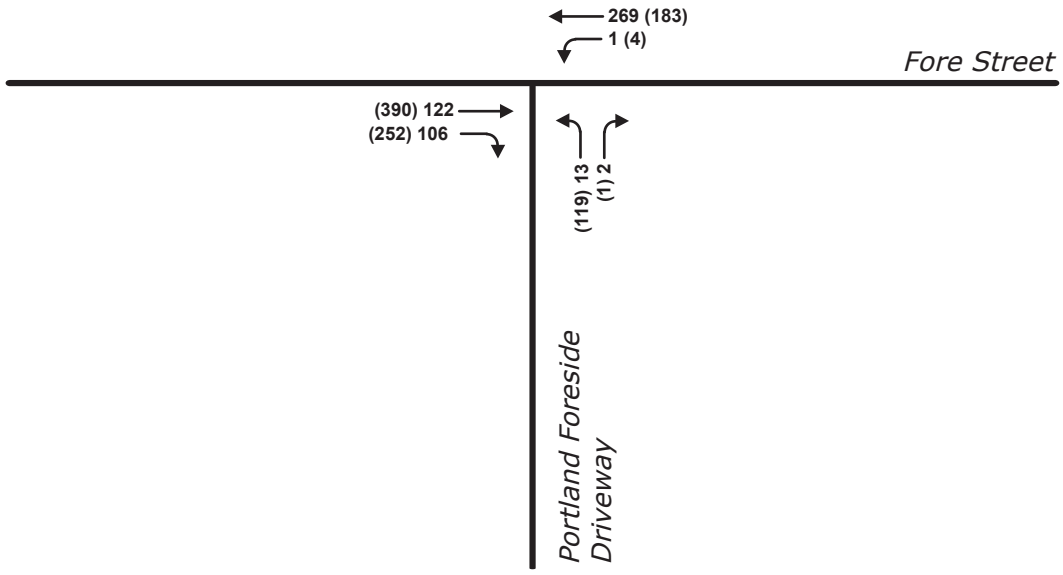
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# Postdevelopment DHV

Figure No. 4




**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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## 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

# 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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BARBARA A. VESTAL
KRISTINA DOUGHERTY

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*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.

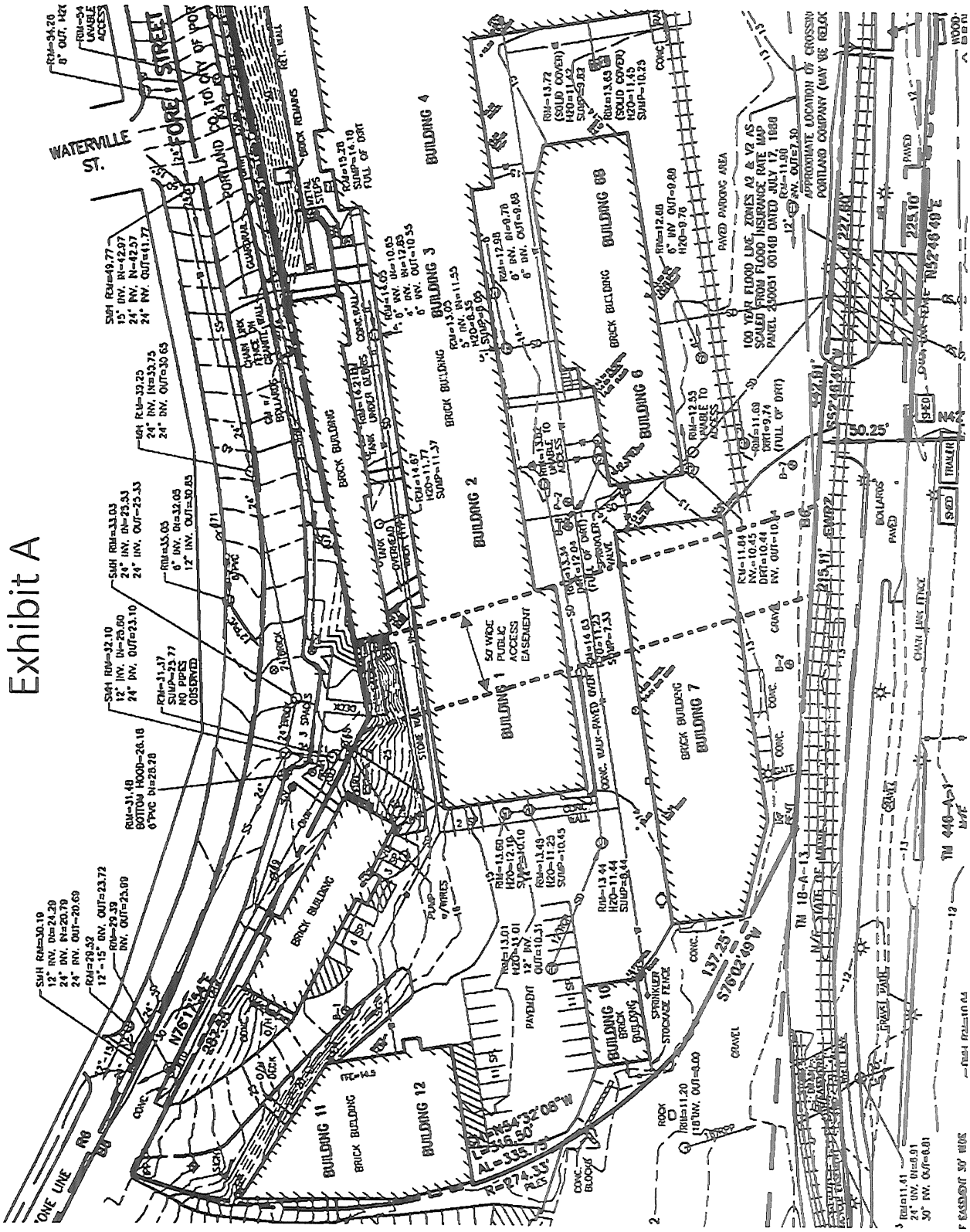
Before me,

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

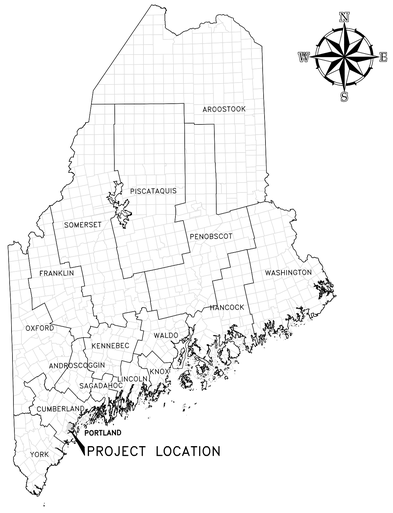
# PORTLAND FORESIDE DEVELOPMENT COMPANY

## 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

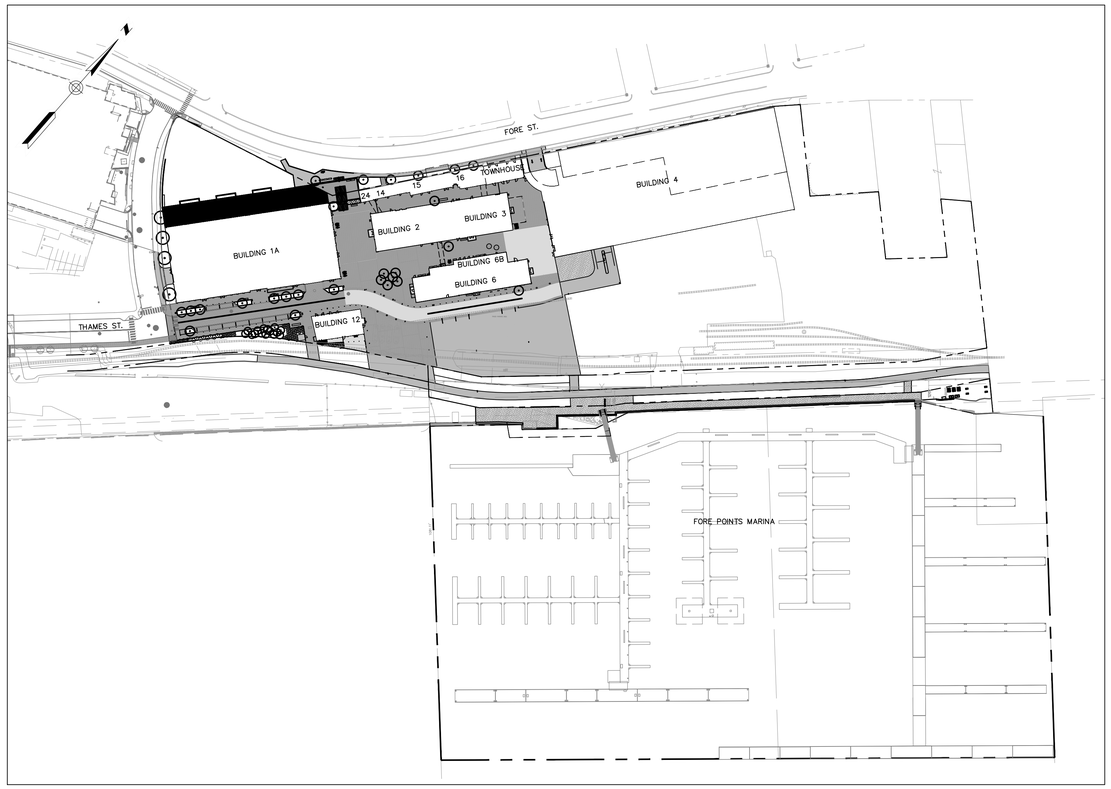
| EXISTING | | PROPOSED |
|---|---|---|
| | CONTOUR (1' INTERVAL) | |
| | CONTOUR (INDEX) | |
| S | SANITARY SEWER | S |
| FM | FORCEMAIN | FM |
| SD | STORM DRAIN | SD |
| UD | UNDERDRAIN | UD |
| W | WATER LINE | W |
| E | UNDERGROUND ELECTRIC | E |
| COMM | UNDERGROUND TELECOMMUNICATIONS | COMM |
| 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'

NOT FOR CONSTRUCTION


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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

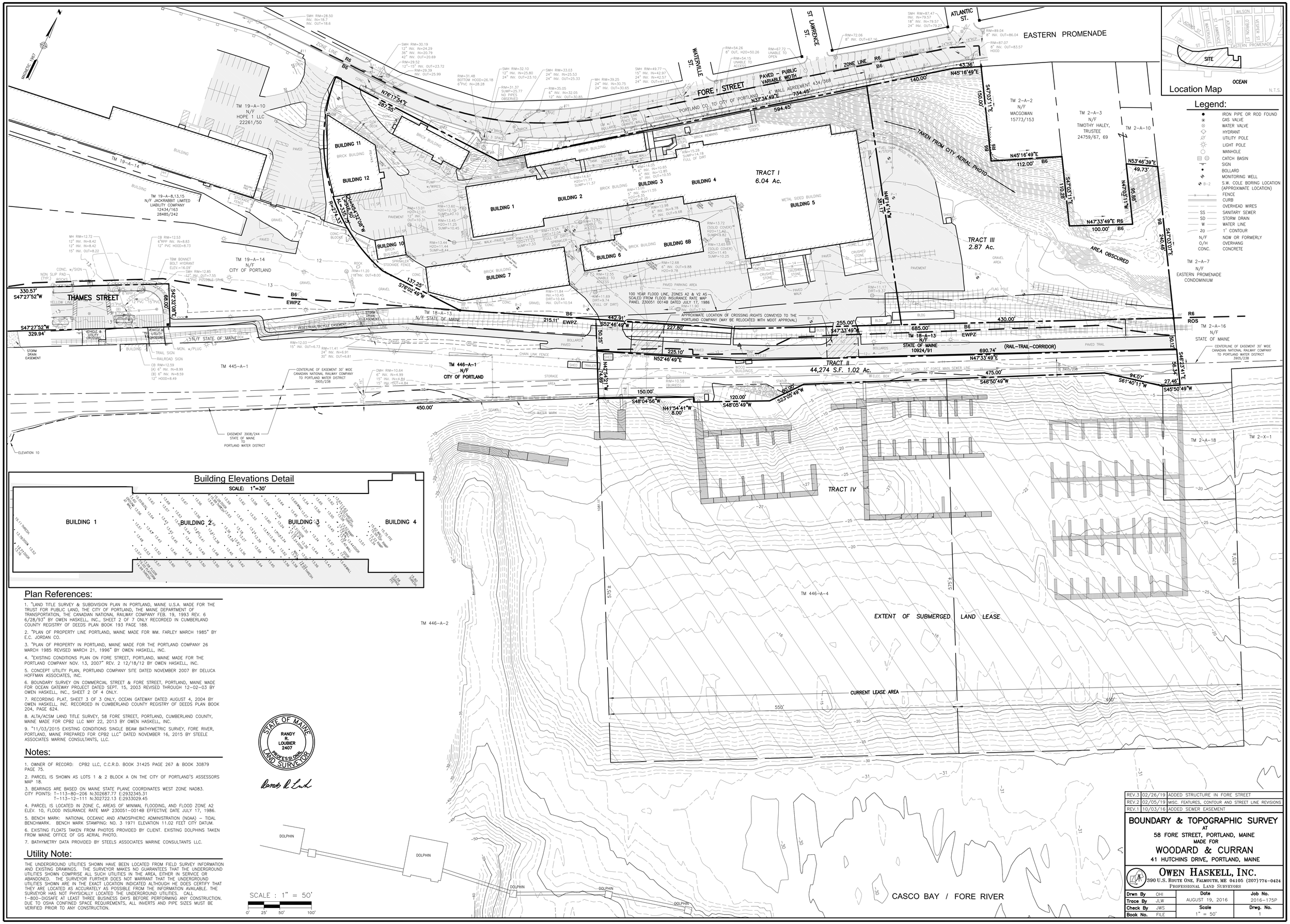
PORTLAND FORESIDE DEVELOPMENT CO.
PORTLAND, ME 04102

PHASE 1 SITE PLAN SUBMISSION

JOB NO.: 0227007
DATE: NOVEMBER 2019
SCALE: AS NOTED
SHEET: 1 OF 17

G-001


\\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







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'
CHECK GRAPHIC SCALE BEFORE USING

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STATE OF MAINE
LAUREN JANET SMETT
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

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No. 12284
REGISTERED PROFESSIONAL ENGINEER

Lauren Smett

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|---|---|---|
| | 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

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## 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

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LAUREN JANET SMETT
No. 12284
REGISTERED PROFESSIONAL ENGINEER

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| 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

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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


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| 1 | 07/07 PMB 1:36.51.4pm | |

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|---|---|---|---|
| | | 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

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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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No. 12284
REGISTERED PROFESSIONAL ENGINEER

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| | 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

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FORE CONNECTOR

FORE STREET

WATERVILLE STREET

TOWNHOUSES

MATCHLINE – SEE SHEET C–103

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. 14
FF ELEV. 15.00

BLDG. 15
FF ELEV. 15.00

BLDG. 16
FF ELEV. 15.00

BLDG. 24
FF ELEV. 15.00

THAMES STREET EXTENSION

250' SHORELAND ZONE

R6
B6

CONNECT TO EXISTING 15" STUB, INV. 20.00

RIPRAP WITH UNDERDRAIN AT BASE OF SLOPE

RETAINING WALL TO BE DESIGNED BY OTHERS

PROVIDE BACKFLOW PREVENTER IN ROOF DRAIN

12" ROOF DRAIN, REFER TO ARCHITECTURAL PLANS

CONNECT TO EXISTING 15" STUB, INV. 5.17

PROVIDE CLEANOUT AT END OF TRENCH DRAIN

TRENCH DRAIN, SEE DETAILS

PIPE SD1 BELOW TRENCH DRAIN

TRENCH DRAIN AT BASE OF EACH SET OF STEPS (TYP.) (SEE LANDSCAPE PLAN)

INSERTA–TEE CONNECTION

INSERTA–WYE CONNECTION AT EACH TRENCH DRAIN (TYP. OF 4)

PROTECT EXISTING UNDERGROUND FUEL TANKS & FUEL LINES

RELOCATE EXISTING CATCH BASIN, COORDINATE WITH CITY ON FINAL LOCATION

RELOCATION OF MNGRR; COORDINATE FINAL GRADES OF RAIL CORRIDOR WITH MNGRR

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

SUBSURFACE R–TANK

JELLYFISH 1

JELLYFISH 2

MOOT PROPERTY

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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No. 12284
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| REV | DESCRIPTION | DATE |
|---|---|---|
| | 227007 PHASE 1 SITE PLAN | |

| REV | DESCRIPTION | DATE |
|---|---|---|
| DESIGNED BY: LJS | DRAWN BY: BDM | CHECKED BY: DLC |

GRADING & DRAINAGE PLAN - 1

PORTLAND FORESIDE DEVELOPMENT CO.
PORTLAND, ME 04102

PHASE 1 SITE PLAN SUBMISSION

MATCHLINE – SEE SHEET C–103

| | |
|---|---|
| JOB NO.: | 0227007 |
| DATE: | NOVEMBER 2019 |
| SCALE: | 1"=20' |
| SHEET: | 8 OF 17 |

C-102

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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
MACCOWAN
15773/153

TM 2–A–3
N/F
TIMOTHY HALEY,
TRUSTEE
24759/67, 69

TM 2–A–10

R6
B6

ZONE LINE

75' SHORELAND ZONE

250' SHORELAND ZONE

EWPZ

PROPERTY

PROPERTY

APPROX. LOCATION 33" FORCE MAIN SEWER LINE

EXISTING MARINA

DMH 6

PIPE SD61

PIPE SD62

JELLYFISH 2

PIPE SD56

PIPE SD57

CB34

CB27

PIPE SD65

PIPE SD66

N47°33'52"E 100.00'

S47°33'52"W 255.00'

S46°50'52"W 120.00'

N45°16'52"E 112.00'

N53°45'52"E 49.73'

S46°50'52"W 27.46'

N47°33'52"E 430.00'

S46°50'52"W 665.00'

N47°33'52"E 440.00'

N46°50'52"E 114.96'

S46°50'52"W 27.46'

BAR SCALE
1" = 20'
CHECK GRAPHIC SCALE BEFORE USING

20' 0 20' 40'

NOT FOR CONSTRUCTION

REFER TO SHEET C–106 FOR PIPE & STRUCTURE SCHEDULES


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LAUREN JANET SMETT
No. 12284
REGISTERED PROFESSIONAL ENGINEER

Lauren Smett
12/19/19

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|---|---|---|
| 1 | 227007 PHASE 1 SITE PLAN | 12/19/19 |

| REV | DESCRIPTION | DATE |
|---|---|---|
| | DESIGNED BY: LJS DRAWN BY: BDM CHECKED BY: DLC | |

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

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42x30 SHEET
1:1

FORE CONNECTOR

FORE STREET

THAMES STREET EXTENSION

MATCHLINE – SEE SHEET C-105

MATCHLINE – SEE SHEET C-105

BUILDING 1A

BUILDING 2

BUILDING 3

BUILDING 6

BUILDING 6B

BUILDING 12

BLDG. 24

BLDG. 14

BLDG. 15

BLDG. 16

TOWNHOUSES

12" DI WATER MAIN

REFER TO MEP PLANS FOR UNDERGROUND TRANSFORMERS & ASSOCIATED ELECTRICAL UTILITIES

WATER METER

12" DI WATER

WATER RPZ & BACKFLOW PREVENTER INSTALLED IN BUILDING 1A, REFER TO BUILDING MEP PLANS

GAS METER

6" GREASE WASTE

EXTERNAL GREASE TRAP

6" SANITARY SEWER

4" DOMESTIC & 8" FIRE PROTECTION

(3)-6" CONCRETE ENCASED COMMUNICATION CONDUITS

(3)-6" CONCRETE ENCASED ELECTRICAL CONDUITS

(10) 6" POWER & (8) 4" TELECOMMUNICATIONS DUCT BANK (CONCRETE ENCASED)

OIL WATER SEPARATOR

6" WATER SERVICE W/ VALVE & HYDRANT

6" PLASTIC COATED STEEL GAS SERVICE, TYP.

CONNECT TO EXISTING STUB

2" DOMESTIC & 6" FIRE PROTECTION

4" SANITARY SEWER

4" GREASE WASTE EXTERNAL GREASE TRAP

CONDUITS FOR ELECTRICAL & COMMUNICATIONS, REFER TO MEP PLANS

EXISTING SUBSURFACE MARINA FUEL TANKS

4" DOMESTIC & 8" FIRE PROTECTION

4" DOMESTIC & 8" FIRE PROTECTION

6" GREASE WASTE

EXTERNAL GREASE TRAP

6" SANITARY SEWER

6" WATER SERVICE W/ VALVE & HYDRANT

(6) 6" POWER & (6) 4" TELECOMMUNICATIONS DUCT BANK (CONCRETE ENCASED)

4" HDPE SEWER FORCE MAIN

6" PLASTIC COATED STEEL GAS SERVICE, TYP.

12" DI WATER SERVICE, TYP.

CONNECT TO EXISTING MARINA FIRE SERVICE

SANITARY SEWER PUMP STATION

SMH 1

SMH 2

SMH 3

SMH 4

SMH 5

SMH 6

SMH 7

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

PIPE S26

PIPE S27

PIPE S28

PIPE S29

PIPE S30

PIPE S31

PIPE S32

PIPE S33

PIPE S34

PIPE S35

PIPE S36

PIPE S37

PIPE S38

PIPE S39

250' SHORELAND ZONE

ZONE LINE R6 B6

B6 EWPZ

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 | 07/07 PMS 1.08.1 Site Plan | |
| 2 | CHECKED BY: DLC | |

| REV | DESCRIPTION | DATE |
|---|---|---|
| 1 | DESIGNED BY: LJS | |
| 2 | DRAWN BY: BDM | |

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


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FORE STREET

MATCHLINE - SEE SHEET C-104

BUILDING 4

CONNECT TO EXISTING WATER MAIN IN FORE STREET

WATER METER

12" DI WATER SERVICE

6" PLASTIC COATED STEEL GAS SERVICE, TYP. GAS METER

WATER RPZ & BACKFLOW PREVENTER INSTALLED IN BUILDING 4, REFER TO BUILDING MEP PLANS

R6
B6

ZONE LINE

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

N47°46'40"E
49.73'

N47°33'52"E
100.00'

S47°33'52"W
112.00'

S47°33'52"W
100.00'

S47°33'52"W
255.00'

685.00'

430.00'

N47°33'52"E
665.26'

S47°33'52"W
120.00'

S48°05'42"W

S45°50'52"W

S61°40'14"W

N47°33'52"E
449.48'

12" DI WATER SERVICE

6" SANITARY SEWER

OIL WATER SEPARATOR

PIPE S12

PIPE S10

PIPE S6

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

6" PLASTIC COATED STEEL GAS SERVICE, TYP.

PROVIDE 3" DOMESTIC MARINA WATER MAIN CONNECTION

PROVIDE 6" FIRE MARINA WATER MAIN CONNECTION

COORDINATE DEMOLITION OF OVERHEAD ELECTRICAL WITH BUILDING 4 CONSTRUCTION

250' SHORELAND ZONE

75' SHORELAND ZONE

EWPZ

MDOT PROPERTY

APPROX. LOCATION 33" FORCE MAIN SEWER LINE

EXISTING MARINA

TRANSF.

CMH

EMH

HH

NOT FOR CONSTRUCTION

BAR SCALE
1" = 20'
CHECK GRAPHIC SCALE BEFORE USING

20' 0 20' 40'

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 | 07/07 PMB, 10E TI Site | |
| | CHECKED BY: DJC | |

| REV | DESCRIPTION | DATE |
|---|---|---|
| | DESIGNED BY: LJS | |
| | DRAWN BY: PDM | |

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

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 - 2:05pm

| STRUCTURE TABLE | | | | |
|---|---|---|---|---|
| NAME | DIA. | RIM | INV IN/SIZE/FROM | INV OUT/SIZE/TO |
| CB1 | 4' | 31.25 | 23.00/6"UD/<br>25.00/10"SD/CB35<br>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<br>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<br>10.35/8"SD/CB31 | 10.30/8"SD/CB28 |
| CB7 | 4' | 14.74 | | 10.45/8"SD/CB6 |
| CB7 | 4' | 14.33 | | 10.50/10"SD/DMH3 |
| 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<br>9.92/8"SD/CB9<br>9.92/8"SD/ | 9.82/15"SD/CB11 |
| CB11 | 4' | 14.53 | 9.75/15"SD/CB10<br>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<br>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<br>10.43/8"SD/ | 10.38/8"SD/CB23 |
| CB23 | 4' | 14.78 | 10.23/8"SD/CB22<br>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<br>10.05/8"SD/ | 10.00/12"SD/CB26 |
| CB26 | 4' | 14.46 | 9.88/12"SD/CB25<br>9.88/8"SD/<br>9.88/8"SD/CB28 | 9.83/15"SD/DMH 1 |
| CB27 | 5' | 14.40 | 9.63/8"SD/<br>9.63/24"SD/CB34<br>9.63/10"SD/<br>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<br>10.38/8"SD/ | 10.33/10"SD/DMH 7 |
| CB34 | 4' | 14.47 | 9.82/24"SD/<br>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/<br>9.77/12"SD/<br>9.77/8"SD/<br>9.77/8"SD/CB4<br>9.77/15"SD/CB26 | 9.77/21"SD/DMH 2 |
| DMH 2 | 6' | 14.48 | 9.53/21"SD/DMH 1<br>9.60/8"SD/CB29<br>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<br>9.35/15"SD/RTANK INLET2<br>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<br>7.14/24"SD/JELLYFISH 2 | 7.04/30"SD/ |
| DMH 6 | 8'x6' | 13.44 | 9.39/24"SD/CB27<br>9.39/15"SD/RTANK INLET6<br>9.39/15"SD/RTANK INLET5 | 9.39/15"SD/RTANK INLET4 |
| DMH 7 | 4' | 14.96 | 10.28/10"SD/CB33<br>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 | 7.00/4"FM/SMH 1 |
| SMH 1 | 4' | 14.69 | 9.99/8"S/SMH 3<br>10.00/4"FM/PS | 9.89/8"S/SMH 2 |
| SMH 2 | 4' | 14.69 | 9.12/8"S/SMH 1<br>9.12/8"S/ | 9.02/8"S/ |
| SMH 3 | 4' | 14.75 | 10.33/8"S/<br>10.33/8"S/SMH 7 | 10.23/8"S/SMH 1 |
| SMH 4 | 4' | 14.94 | 8.06/8"S/SMH 5<br>8.00/8"S/<br>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 | 6' | 0.0027 |

| 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 | 13' | 0.0046 |
| 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 | 30" 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 | 41' | 0.2000 |
| PIPE SD73 | 10" SD | 7' | 0.0028 |

41 Hutchins Drive
Portland, Maine 04102
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STATE OF MAINE
LAUREN JANE SMETT
No. 12284
REGISTERED PROFESSIONAL ENGINEER

| REV | DESCRIPTION | DATE |
|---|---|---|
| | 07/07 PWB 1.1/8 11 Sets | |

CHECKED BY: DLC

| REV | DESCRIPTION | DATE |
|---|---|---|
| | | |

DRAWN BY: BDM

DESIGNED BY: LJS

PIPE & STRUCTURE TABLES

PORTLAND FORESIDE
DEVELOPMENT CO.
PORTLAND, ME 04102

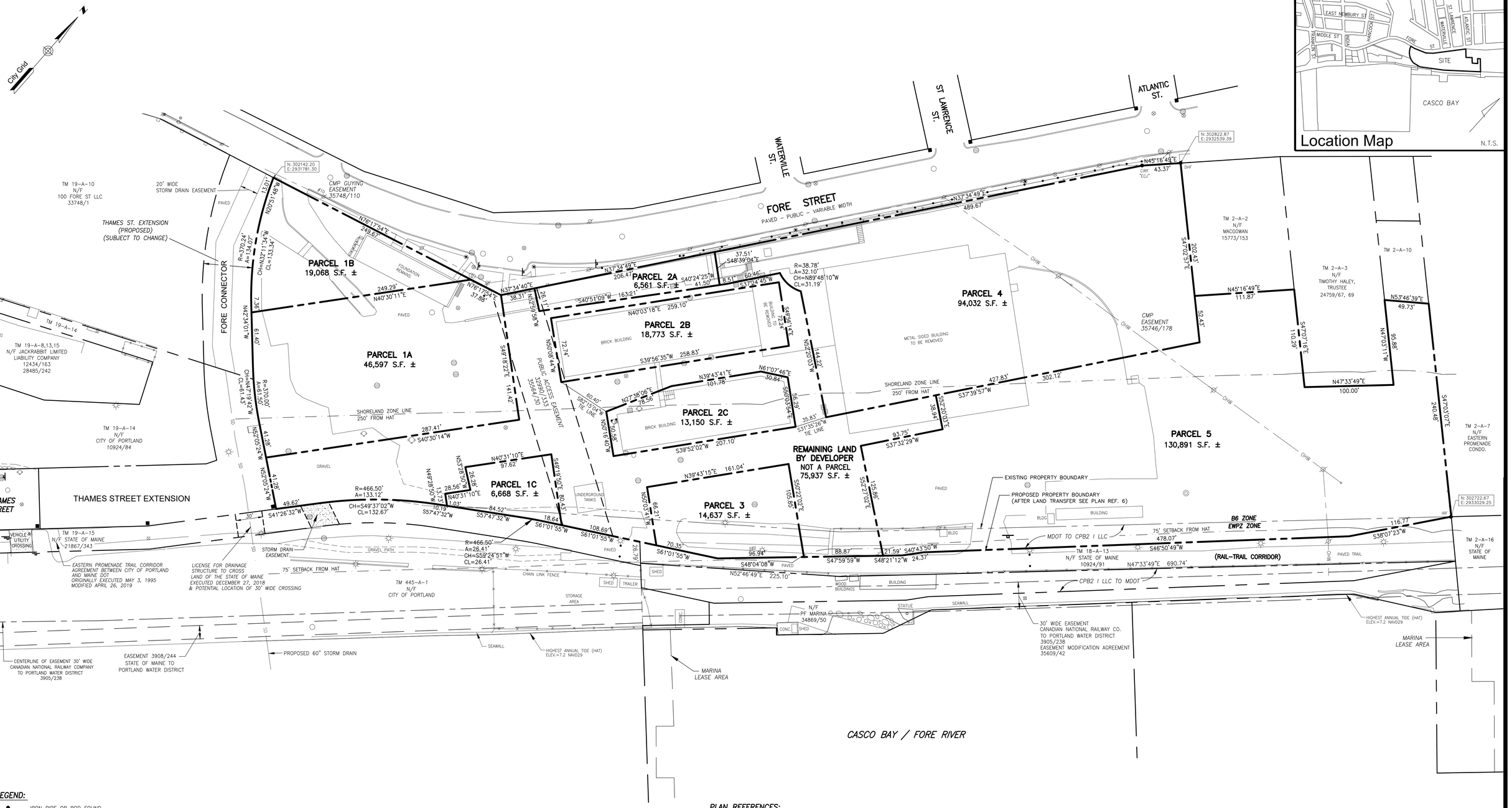
PHASE 1 SITE PLAN SUBMISSION

JOB NO.: 0227007
DATE: NOVEMBER 2019
SCALE: N.T.S.
SHEET: 12 OF 17

C-106

NOT FOR CONSTRUCTION

\\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 - 2:05pm




**LEGEND:**

- 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.

**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.

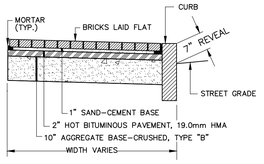
DATE

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

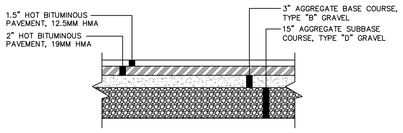

| | | | |
|---|---|---|---|
| DRAWN BY: RRL / JLW | DATE: NOV. 4, 2019 | JOB NO. 2019-013 P | |
| CHECKED BY: RRL | SCALE: 1" = 50' | DRWG. NO. SP-B | |




SECTION

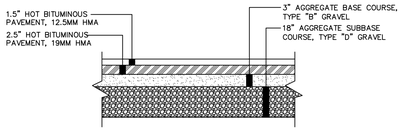
## BRICK SIDEWALK DETAIL

N.T.S.



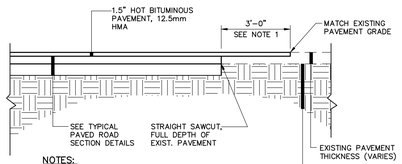

## THAMES ST. PAVED ROAD & SITE PAVEMENT SECTION

N.T.S.




## FORE ST. PAVED ROAD SECTION

N.T.S.

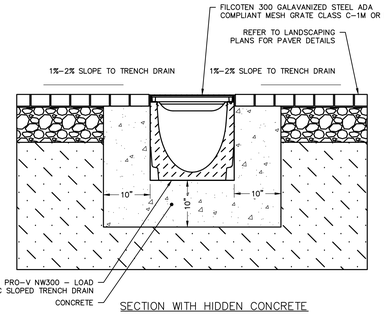



NOTES:

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.

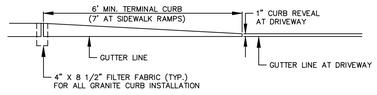
CHANNEL SHALL WITHSTAND LOADING TO PROPER LOAD CLASS AS OUTLINED BY EN 1433. GRATE TYPE SHALL BE APPROPRIATE TO MEET THE SYSTEM LOAD CLASS SPECIFIED AND INTENDED APPLICATION. GRATES SHALL BE SECURED USING 4-POINT BOLTING LOCKING SYSTEM. CHANNEL AND GRATE SHALL BE CERTIFIED TO MEET THE SPECIFIED EN 1433 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.

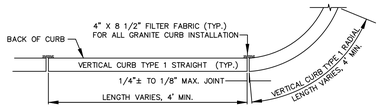
A HEATING CABLE MAY BE INSTALLED ON THE EXTERIOR OF THE TRENCH DRAIN OR WITHIN THE CONCRETE ENCASEMENT TO PREVENT ICE BUILD-UP.

## TRENCH DRAIN DETAIL

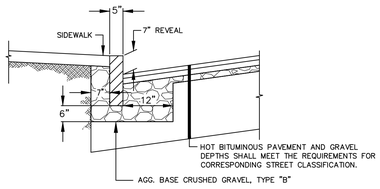
N.T.S.




TERMINAL CURB PROFILE



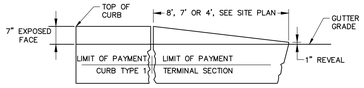

VERTICAL GRANITE CURB PLAN VIEW




VERTICAL GRANITE CURB CROSS SECTION

## VERTICAL GRANITE CURB

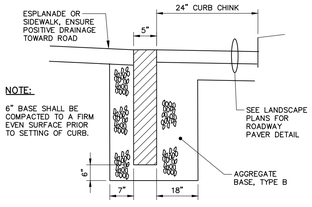
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TERMINAL SECTION TYPE "1"

## TERMINAL CURB SECTION

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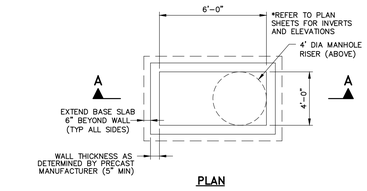



SECTION

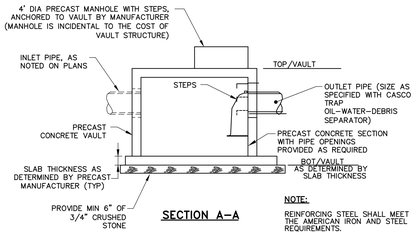
## TYPICAL FLUSH CURB INSTALLATION

N.T.S.

NOTE: AGGREGATE TYPES PER MDOT SECTION 304.02




PLAN

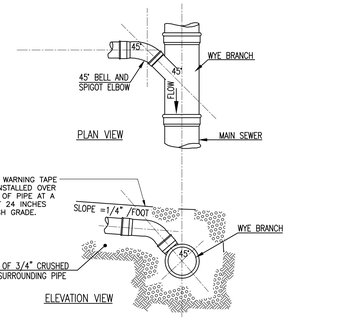



SECTION A-A

NOTE:
REINFORCING STEEL SHALL MEET THE AMERICAN IRON AND STEEL REQUIREMENTS.

## PRECAST 8'X6' CONCRETE VAULT

N.T.S.



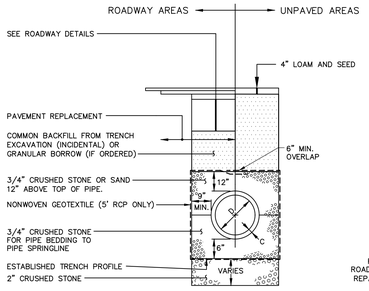

PLAN VIEW




ELEVATION VIEW

## TYPICAL SEWER LATERAL WYE CONNECTION DETAILS

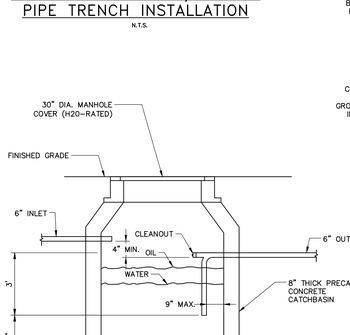
N.T.S.




NOTES:
DEPTH OF BITUMINOUS PAVEMENT AND AGGREGATE COURSES SHALL BE DETERMINED BY STREET CLASSIFICATION. SEE OTHER DETAILS.

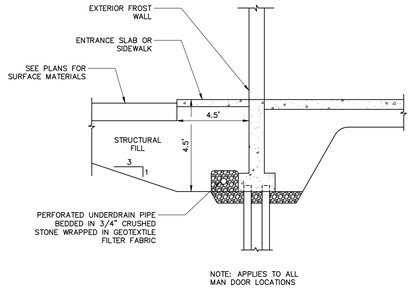
## TYPICAL STORMDRAIN/ SEWER PIPE TRENCH INSTALLATION

N.T.S.




## OIL WATER SEPARATOR

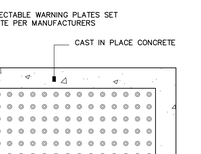
N.T.S.




NOTE: APPLIES TO ALL MAN DOOR LOCATIONS

## FROST PROTECTION AT DOORWAY ENTRANCES

N.T.S.



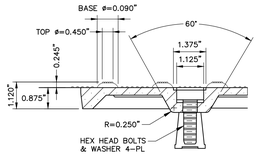

SECTION VIEW

## SIDEWALK RAMP DETECTABLE WARNING

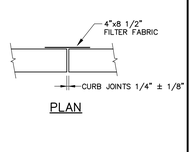
N.T.S.

NOTES:

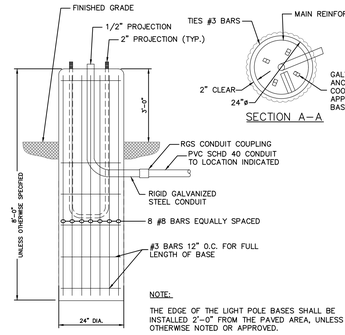
1. ALL DETECTABLE WARNING PLATES SHALL BE UNCOATED CAST IRON. FOLLOW MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION.
2. CAST IN PLACE CONCRETE SHALL MEET SPECIFICATIONS FOR MAINE D.O.T. CLASS A STRUCTURAL CONCRETE, MINIMUM COMPRESSIVE STRENGTH 4,000 PSI. THE EXPOSED CONCRETE BORDER SHALL RECEIVE A UNIFORM 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

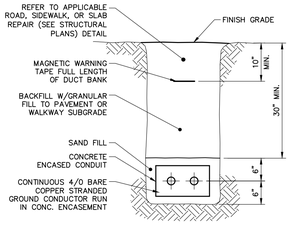



SECTION A-A

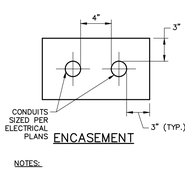
NOTE:
THE EDGE OF THE LIGHT POLE BASES SHALL BE INSTALLED 2'-0" FROM THE PAVED AREA, UNLESS OTHERWISE NOTED OR APPROVED.

## LIGHT POLE BASE DETAIL

N.T.S.




TRENCH



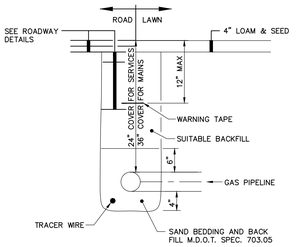

ENCASEMENT

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.

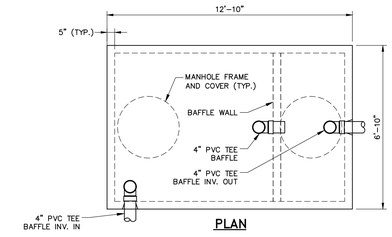
## BURIED ELECTRICAL CONDUIT DETAIL

N.T.S.




## NATURAL GAS PIPE

N.T.S.



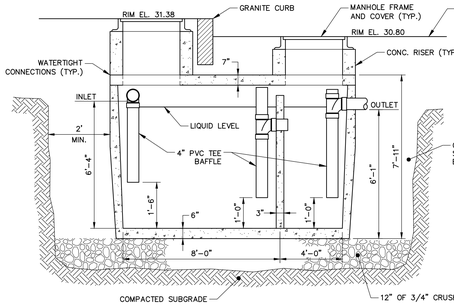

PLAN

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

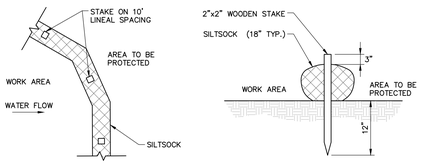
CIVIL DETAILS - 1

JOB NO.: 0227007
DATE: NOVEMBER 2019
SCALE: AS NOTED
SHEET: 13 OF 17

C-200

NOT FOR CONSTRUCTION


\\woodardcurran.net\shared\Projects\0227007.07 PFDC - 58 Fore Block 1\wip\Drawings\Phase 1 - Site Plan Submission\0227007 Phase 1 Details.dwg, Nov 08, 2019 - 2:06pm




PLAN VIEW



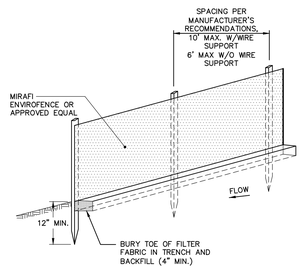

SECTION

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:

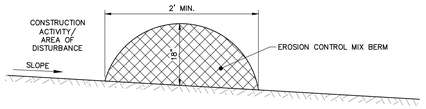
- INSTALL FABRIC ON UPHILL SIDE OF SUPPORT POSTS
- INSTALL SILT FENCE ACROSS SLOPES
- SILT FENCE SHALL NOT BE USED IN DRAINAGE WAYS

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.

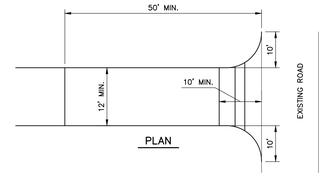



NOTES:

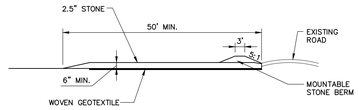
1. EROSION CONTROL MIX CAN BE MANUFACTURED ON OR OFF THE PROJECT SITE. IT MUST CONSIST PRIMARILY OF ORGANIC MATERIAL AND MAY INCLUDE: SHREDDED BARK, STUMP GRINDINGS, COMPOSTED BARK, OR ACCEPTABLE MANUFACTURED PRODUCTS. WOOD AND BARK CHIPS, GROUND CONSTRUCTION DEBRIS OR REPROCESSED WOOD PRODUCTS WILL 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:

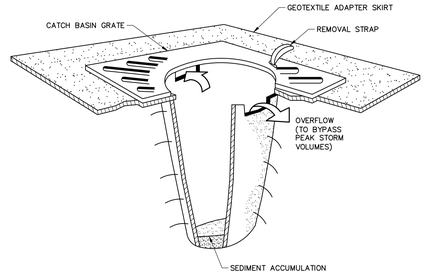
- CONSTRUCTION ENTRANCES MAY BE RELOCATED AS CONSTRUCTION PROGRESSES.
- WHEEL WASH PITS MAY ALSO BE USED, IF APPROVED.

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 95% 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 ___ 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 ___ 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. |

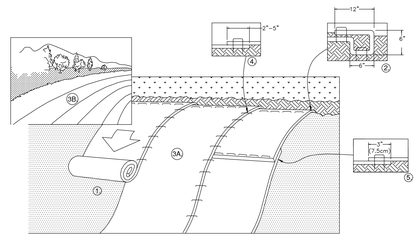
## Permanent Erosion Control:

| 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.


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STATE OF MAINE — LAUREN SMETT — No. 12284 — REGISTERED PROFESSIONAL ENGINEER

| REV | DESCRIPTION | DATE |
|---|---|---|
| 1 | 07/07 PAVE, TURN Fire | 7/13/20 |

DESIGNED BY: LJS | DRAWN BY: BDM | CHECKED BY: DLC

CIVIL DETAILS - 2

PORTLAND FORESIDE DEVELOPMENT CO. PORTLAND, ME 04102

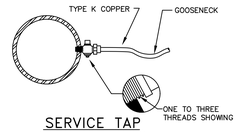
PHASE 1 SITE PLAN SUBMISSION

JOB NO.: 0227007
DATE: NOVEMBER 2019
SCALE: AS NOTED
SHEET: 14 OF 17

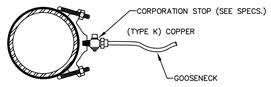
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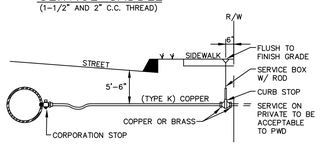

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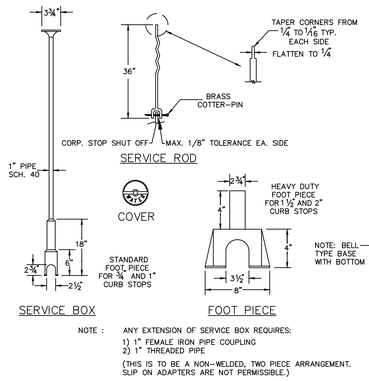

SERVICE TAP
(3/4" AND 1" C.C. THREAD)



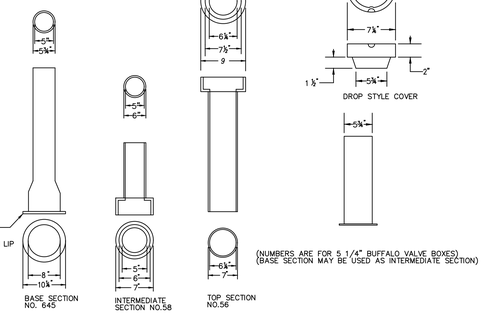

SERVICE SADDLE
(1-1/2" AND 2" C.C. THREAD)




TYPICAL SERVICE CONNECTION
N.T.S.

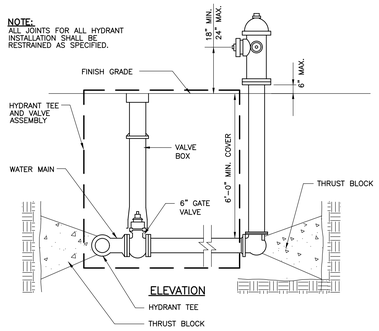



NOTE : ANY EXTENSION OF SERVICE BOX REQUIRES:
1) 1" FEMALE IRON PIPE COUPLING
2) 1" THREADED PIPE
(THIS IS TO BE A NON-WELDED, TWO PIECE ARRANGEMENT. SLIP ON ADAPTERS ARE NOT PERMISSIBLE.)

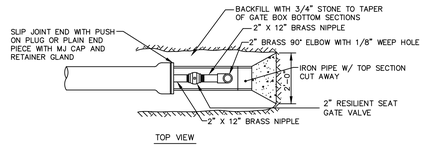



(NUMBERS ARE FOR 5 1/4" BUFFALO VALVE BOXES)
(BASE SECTION MAY BE USED AS INTERMEDIATE SECTION)

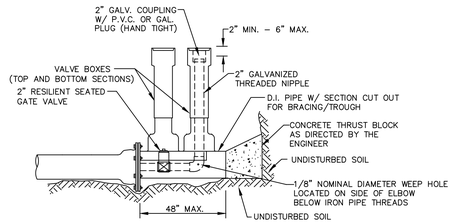
VALVE BOX & COVER
N.T.S.



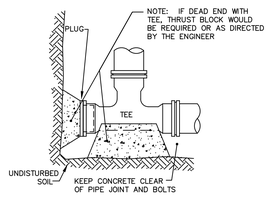

TYPICAL HYDRANT ASSEMBLY DETAIL
N.T.S.



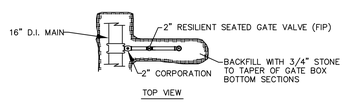

TOP VIEW

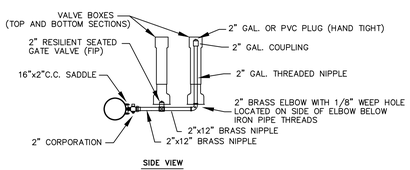



STANDARD 2" BLOW OFF
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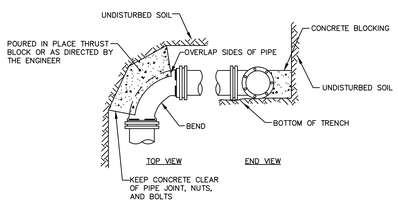



STANDARD TEE BLOCKING
N.T.S.




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

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PORTLAND, ME 04102

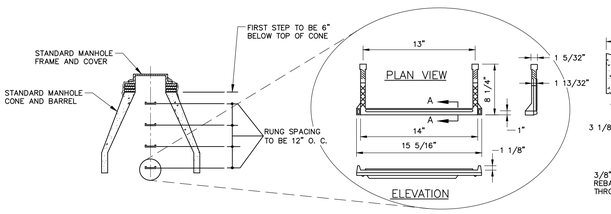
PHASE 1 SITE PLAN SUBMISSION

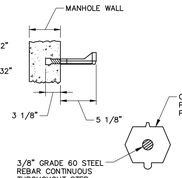
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DATE: NOVEMBER 2019
SCALE: AS NOTED
SHEET: 15 OF 17

C-202

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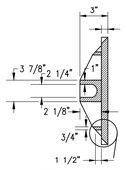
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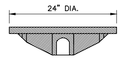


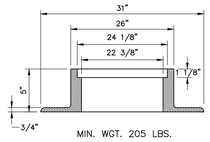



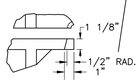

## PLASTIC MANHOLE STEPS

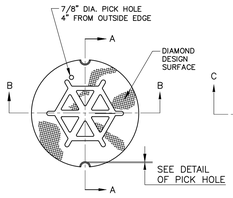
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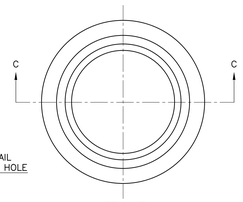



NOTE:

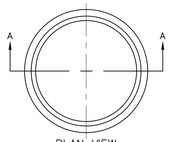
FOR ALL CROSS COUNTRY MANHOLES (LAWN AREAS), USE PAM REXUS MANHOLE COVERS BY CERTAINTEED.

## TYPE "A" CAST IRON MANHOLE COVER AND FRAME

N.T.S.

## GENERAL NOTES FOR MANHOLES AND CATCH BASINS

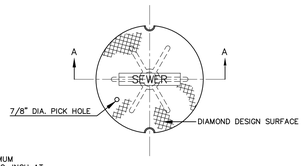
1. ALL CONCRETE SHALL BE CLASS "A" AND HAVE A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 4000 LBS. PER SQ. INCH AT THE END OF 28 DAYS, UNLESS OTHERWISE NOTED.
2. PRECAST REINFORCED CONE BARREL MANUFACTURED PER ASTM SPEC. C-478.
3. ALL MANHOLES SHALL HAVE A BITUMINOUS WATERPROOFING APPLIED TO THE EXTERIOR 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.

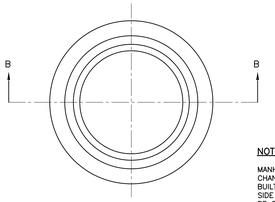


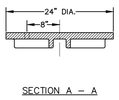

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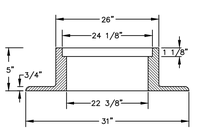
ALL MANHOLE COVERS SHALL BE SOLID AND SHALL HAVE ONE 7/8" DIAMETER DRILLED PICK HOLE, LOCATED 8" FROM THE CENTER OF THE COVER.

ALL SANITARY MANHOLE COVERS SHALL HAVE "SEWER" CAST INTO THE COVER. ALL STORMWATER/DRAIN MANHOLE COVERS SHALL HAVE "DRAIN" CAST INTO THE COVER.



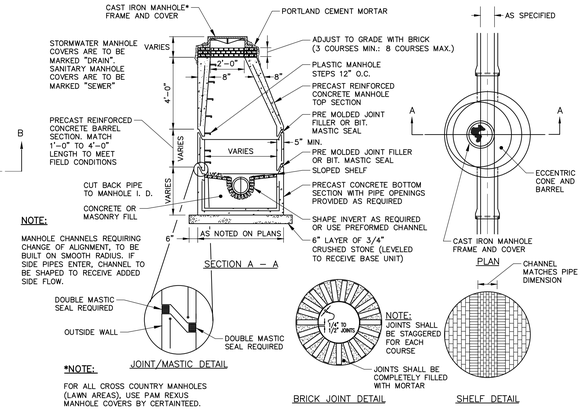



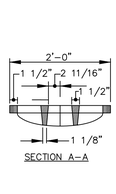

## CAST IRON MANHOLE COVER AND FRAME

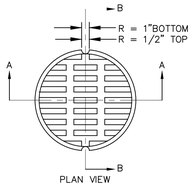
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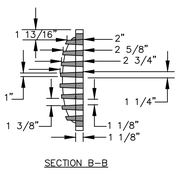


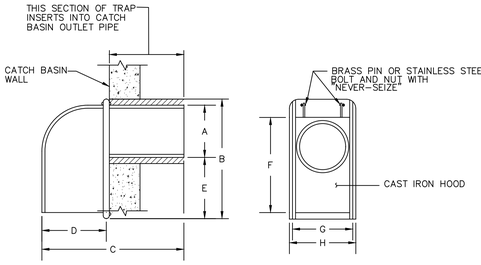

## PRECAST CONCRETE MANHOLE

N.T.S.



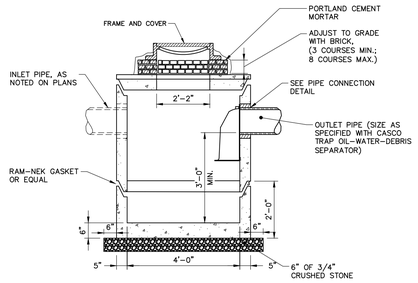




| SIZE | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| 6 in. | 5 1/2" | 13 3/8" | 13 3/4" | 5 3/8" | 5 7/8" | 11 5/8" | 6 1/2" | 7 1/4" |
| 8 in. | 7 1/2" | 15" | 15 3/8" | 5 1/2" | 5 3/8" | 13 3/4" | 8 3/4" | 9 3/8" |
| 10 in. | 9 1/2" | 16" | 16 1/4" | 6" | 4 1/2" | 14 1/8" | 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.

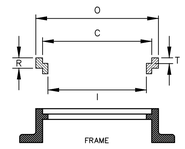
## CASCO TRAP

N.T.S.




## PRECAST CONCRETE CATCH BASIN

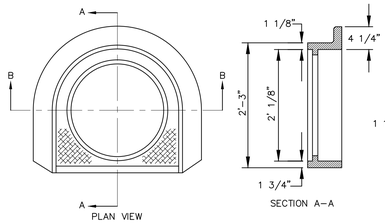
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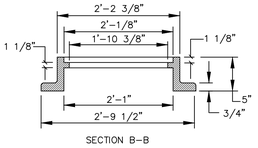



| SIZE | C | R | T | O | I | Wt. |
|---|---|---|---|---|---|---|
| R241 1/2 | 24 | 1 1/2 | 1 1/8 | 26 1/4 | 22 1/2 | 60 |
| R242 | 24 | 2 | 1 1/8 | 26 1/4 | 22 1/2 | 80 |
| R242 1/2 | 24 | 2 1/2 | 1 1/8 | 26 1/4 | 22 | 100 |
| R243 | 24 | 3 | 1 1/8 | 26 1/4 | 22 | 120 |

## MANHOLE RISER RING

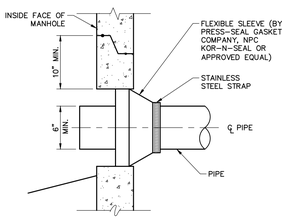
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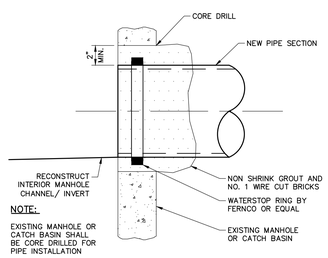

## CATCH BASIN FRAME & GRATE

N.T.S.



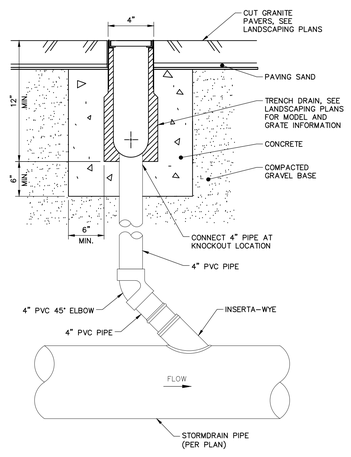

## NEW PIPE TO NEW STRUCTURE CONNECTION DETAIL

N.T.S.




## NEW PIPE TO EXISTING STRUCTURE

N.T.S.




## TRENCH DRAIN DETAIL

N.T.S.


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COMMITMENT & INTEGRITY DRIVE RESULTS



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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

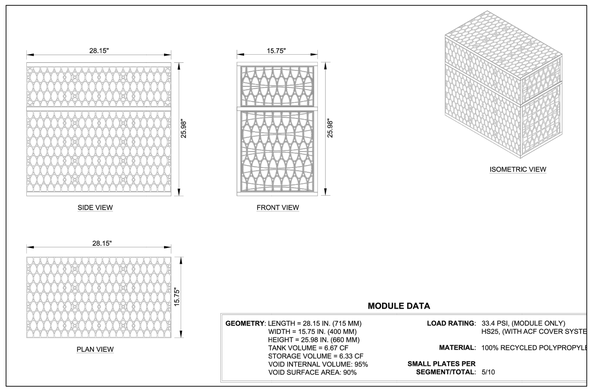
PHASE 1 SITE PLAN SUBMISSION

JOB NO.: 022700?
DATE: NOVEMBER 2019
SCALE: AS NOTED
SHEET: 16 OF 17

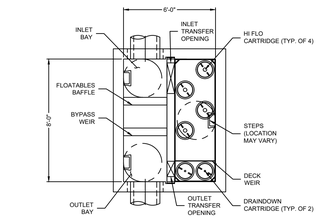
C-203

NOT FOR CONSTRUCTION

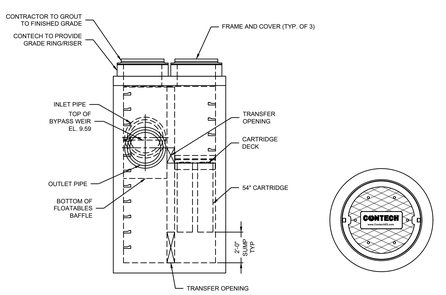

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## 1.5 UNIT HIGH R-TANKHD MODULE DETAIL
N.T.S.




**PLAN VIEW**
(TOP SLAB NOT SHOWN FOR CLARITY)




**ELEVATION VIEW**

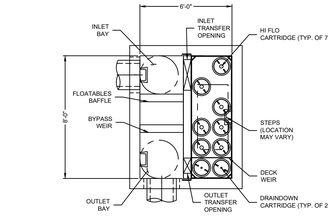



**FRAME AND COVER**
(DIAMETER VARIES)
N.T.S.

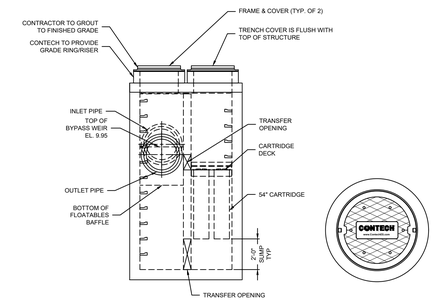
GENERAL NOTES:
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS REPRESENTATIVE. www.ContechES.com
3. JELLYFISH WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL 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 2' - 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.



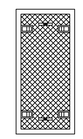

**PLAN VIEW**
(TOP SLAB NOT SHOWN FOR CLARITY)




**ELEVATION VIEW**




**FRAME AND COVER**
(DIAMETER VARIES)
N.T.S.



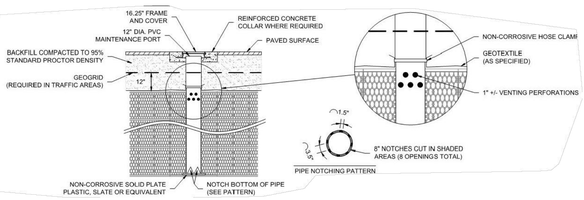
**24" TRENCH COVER**
(LENGTH VARIES)
N.T.S.

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 2' - 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
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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.

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-TANKHD MAY BE USED IN TRAFFIC APPLICATIONS.
4. SEE TRAFFIC LOADING DETAIL FOR MINIMUM & MAXIMUM COVER REQUIREMENTS.




## R-TANKHD TYPICAL MAINTENANCE PORT
N.T.S.

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STATE OF MAINE
LAUREN MARIE SMETT
No. 12284
REGISTERED PROFESSIONAL ENGINEER

| REV | DESCRIPTION | DATE |
|---|---|---|
| | 07/07 PMB 1 TO 1.5 Fig | |

DESIGNED BY: LJS | DRAWN BY: BDM | CHECKED BY: DLC

CIVIL DETAILS - 5

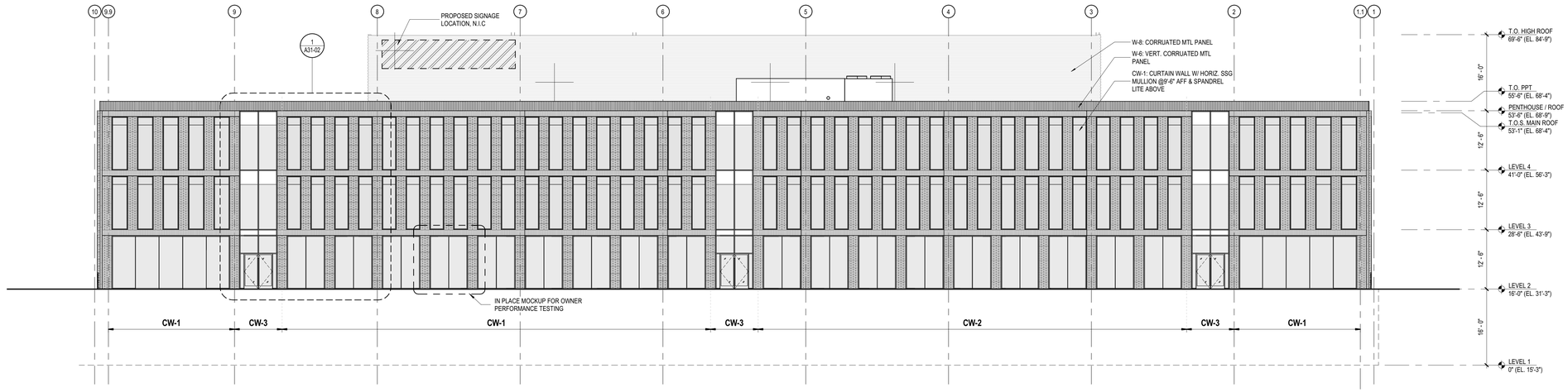
PORTLAND FORESIDE DEVELOPMENT CO.
PORTLAND, ME 04102

PHASE 1 SITE PLAN SUBMISSION

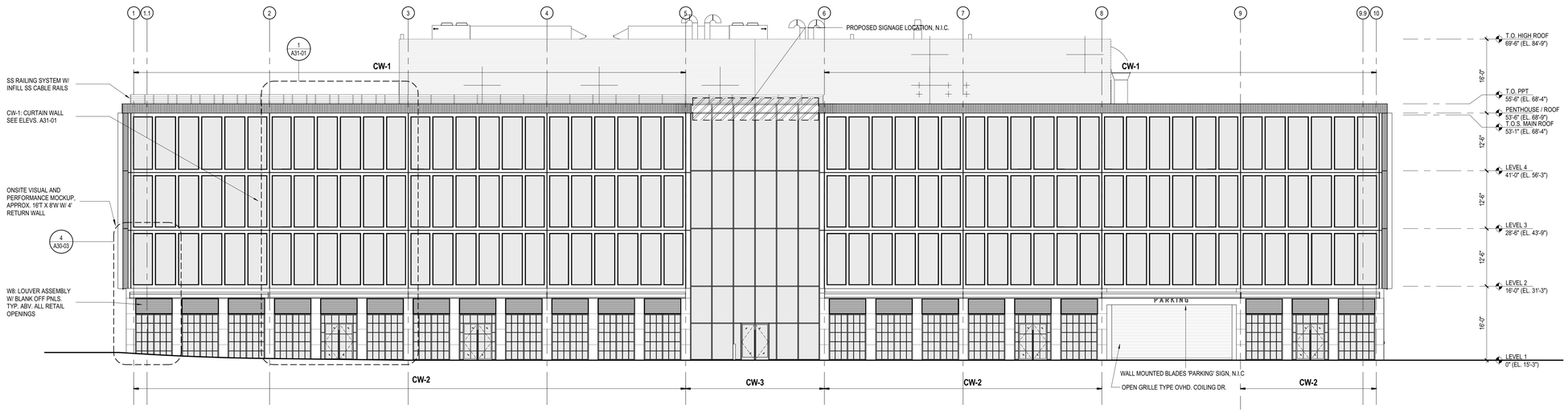
JOB NO.: 022700?
DATE: NOVEMBER 2019
SCALE: AS NOTED
SHEET: 17 OF 17

C-204

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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: KANEER 'CLEAR WALL', 4 SIDED TOGGLE SYSTEM.
SOLARBAN 60 GLAZING, 1" IGU


**Perkins&Will**

225 Franklin Street, Suite 1100
Boston, MA 02110
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CIVIL ENGINEER
**Woodard & Curran**
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t 207.774.2112

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
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**

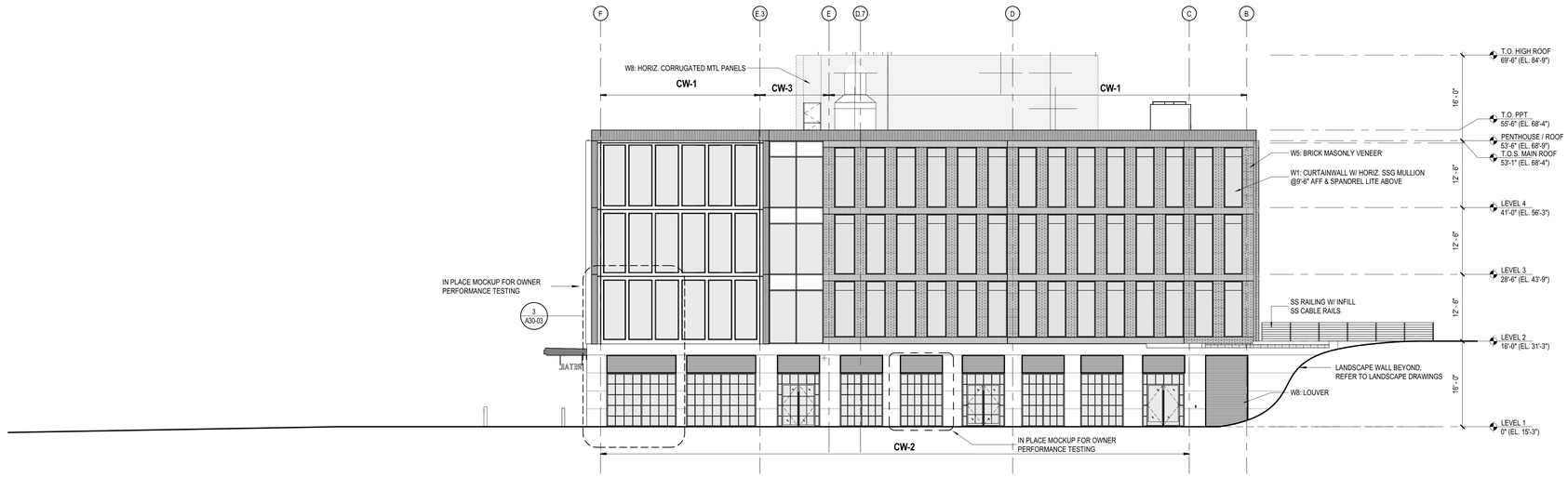
**BUILDING ELEVATIONS**

**SHEET NUMBER**

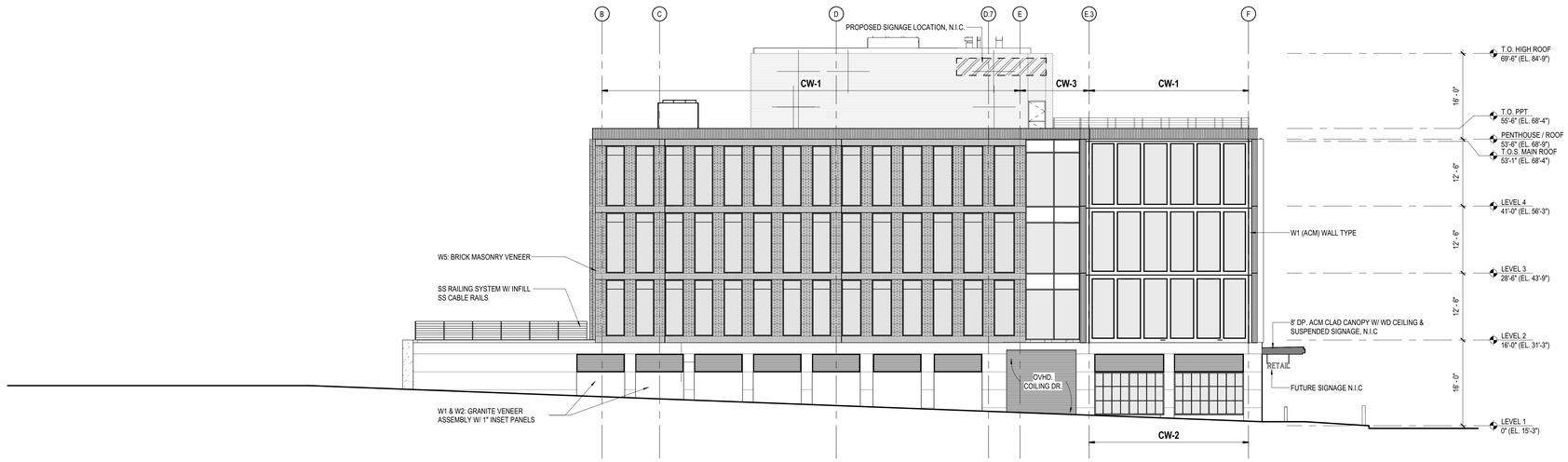
**A20-01**

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7/26/2019 6:14:18 PM C:\Users\Slamp\akouli\eA\Documents\58 Fore St_Building 1A_v2019_Slamp\akouli\eA.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/ PROJJECTED, 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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STRUCTURAL + MEP ENGINEER
**Rist-Frost-Shumway Engineering**
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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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2 BUILDING 12 - NORTHWEST ELEVATION
SCALE: 1/4" = 1'-0"

Bruner/Cott
ARCHITECTS
225 Friend St., Suite 701
Boston, MA 02114
617.492.8400
www.brunercott.com

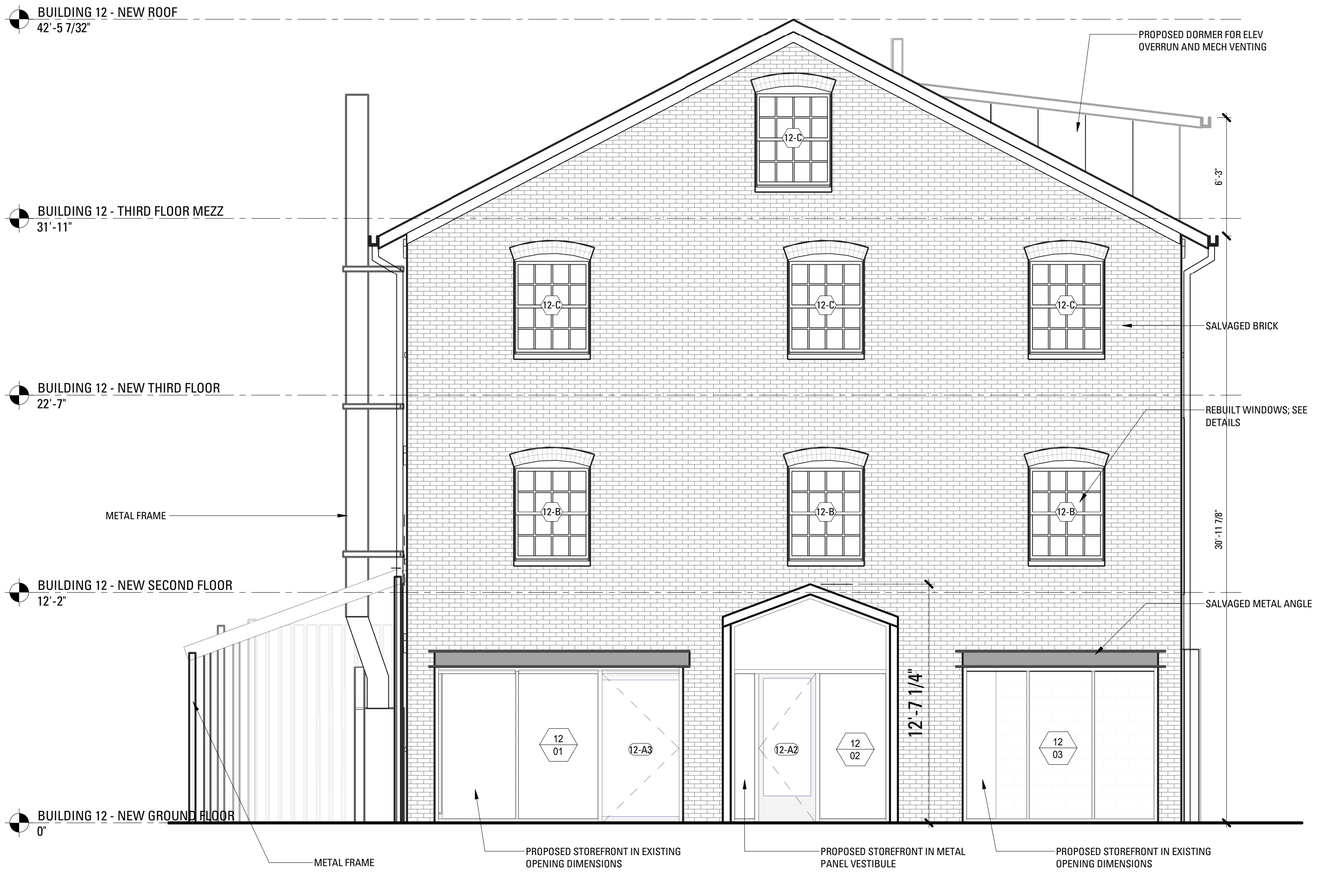
| Rev. | Date | Remarks |
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PORTLAND FORESIDE - BUILDING 12

| | |
|---|---|
| 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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617.492.8400
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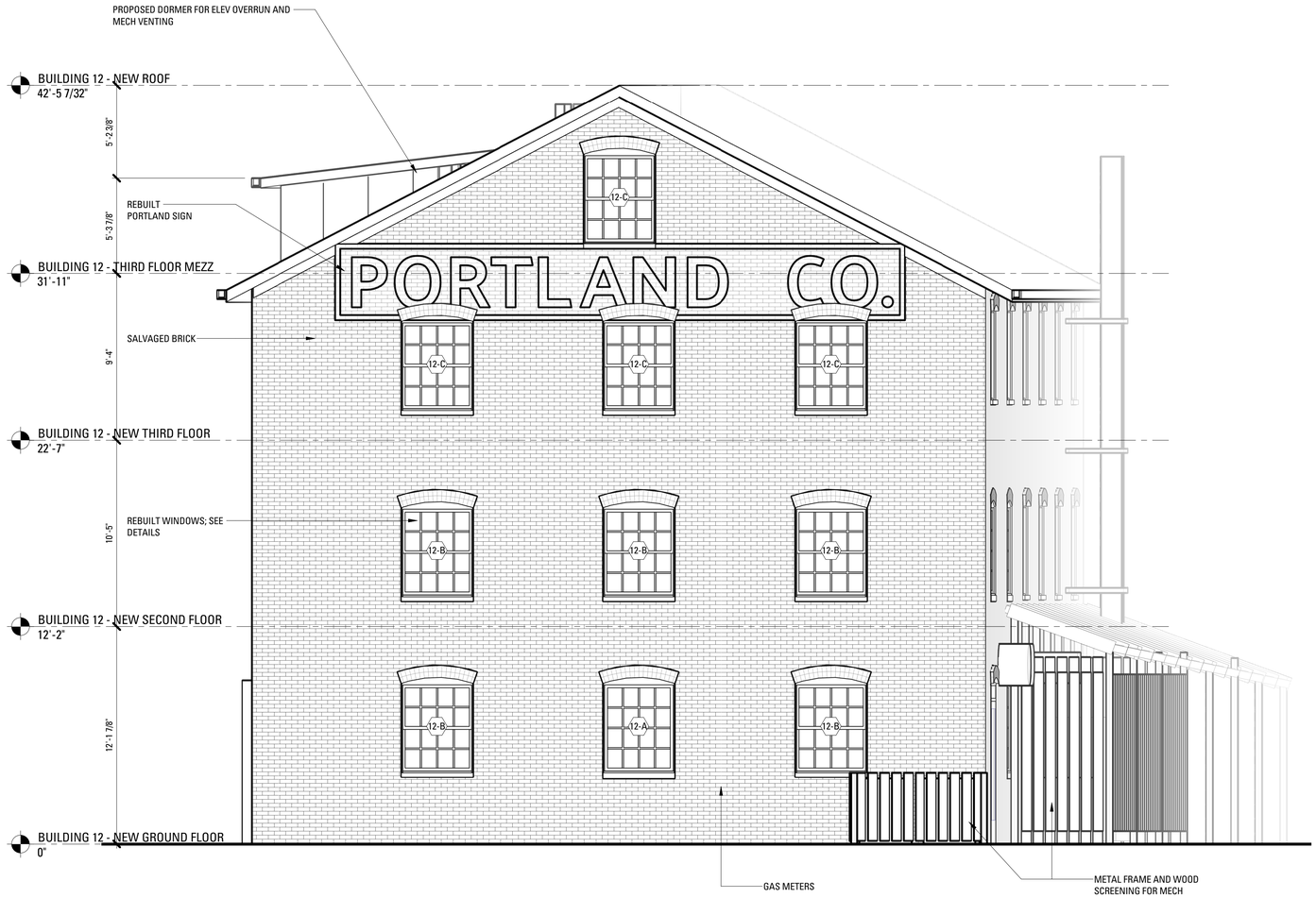
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PORTLAND FORESIDE - BUILDING 12

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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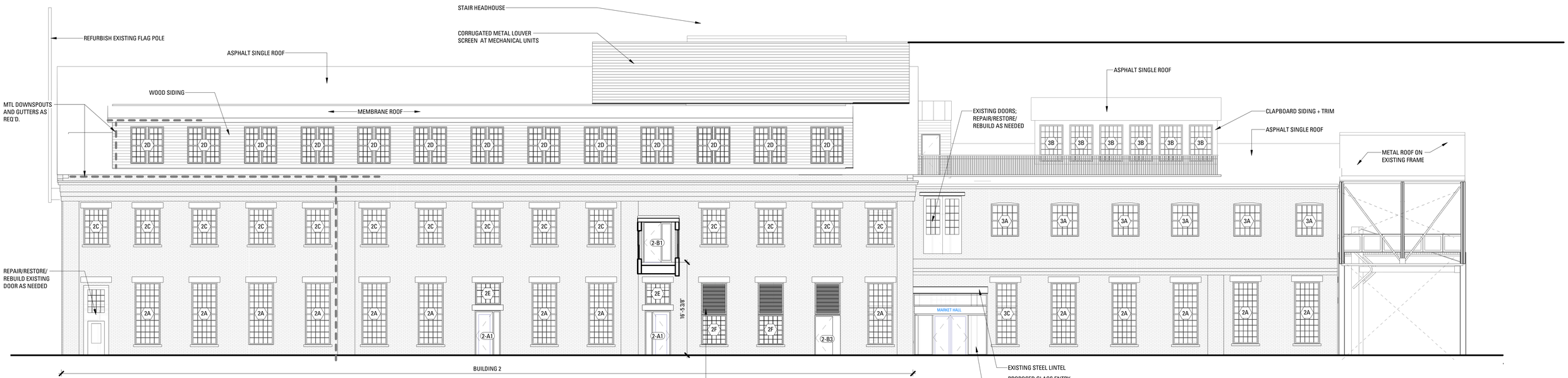
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PORTLAND FORESIDE - BUILDING 12

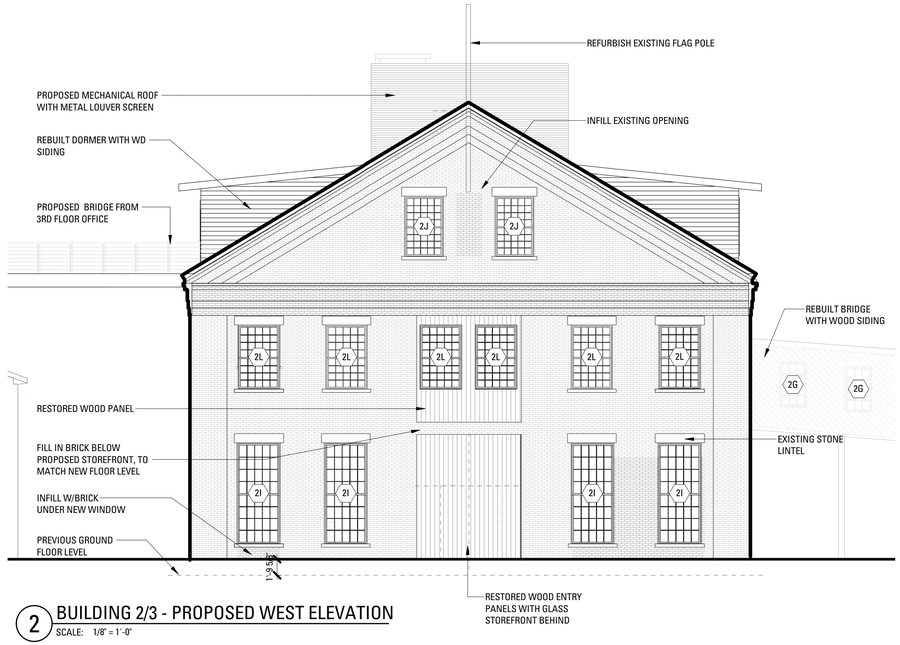
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|---|---|
| Date | OCTOBER 25, 2019 |
| Scale | 1/4" = 1'-0" |
| Project Number | 19.007 |
| Drawn By | Author |

EXTERIOR ELEVATION

A-304




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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PORTLAND FORESIDE BLOCK 2

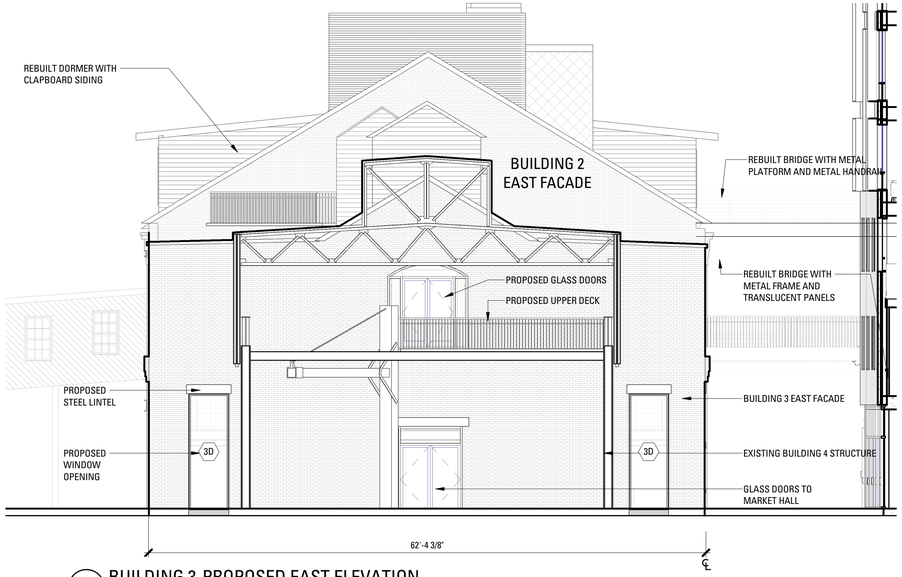
| | |
|---|---|
| Date | OCTOBER 25, 2019 |
| Scale | 1/8" = 1'-0" |
| Project Number | |
| Drawn By | Author |

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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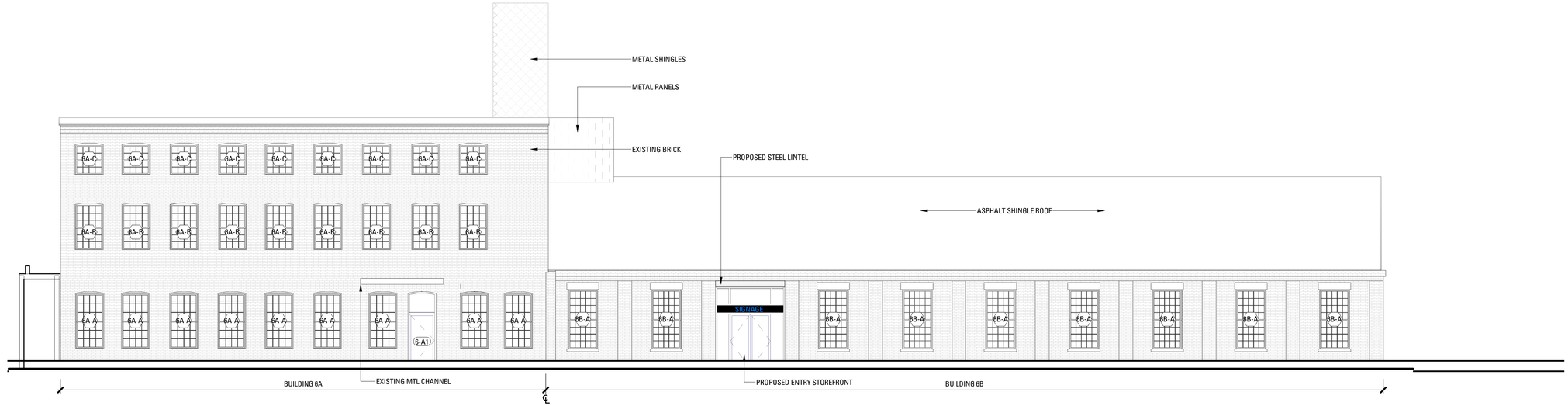
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PORTLAND FORESIDE BLOCK 2

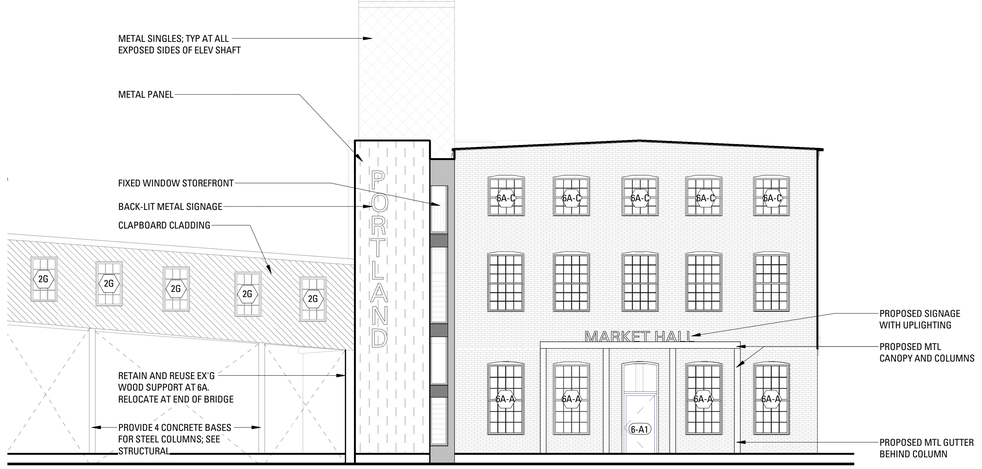
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|---|---|
| Date | OCTOBER 25, 2019 |
| Scale | 1/8" = 1'-0" |
| Project Number | |
| Drawn By | Author |

BUILDING 2/3- PROPOSED FACADE

# A-301P




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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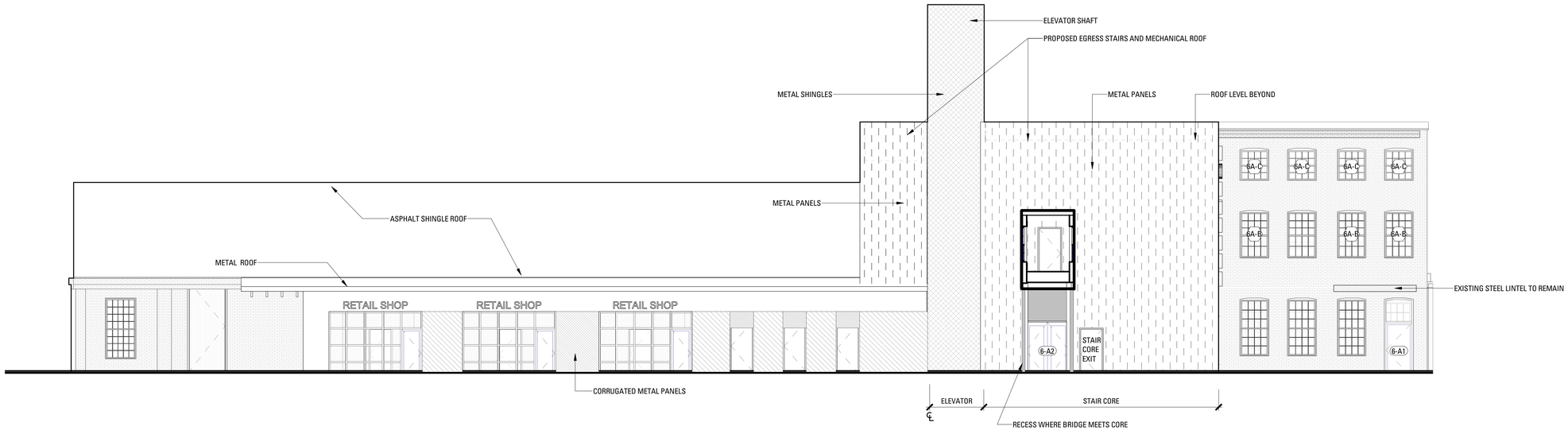
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PORTLAND FORESIDE BLOCK 2

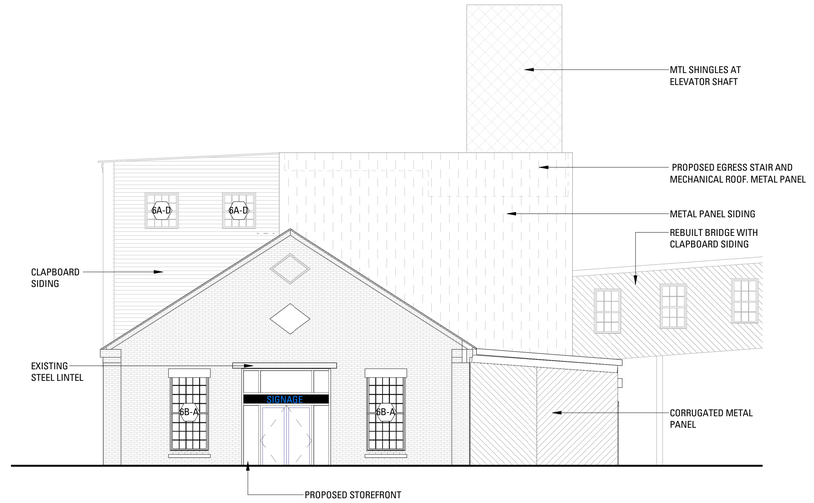
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|---|---|
| Date | OCTOBER 25, 2019 |
| Scale | 1/8" = 1'-0" |
| Project Number | |
| Drawn By | Author |

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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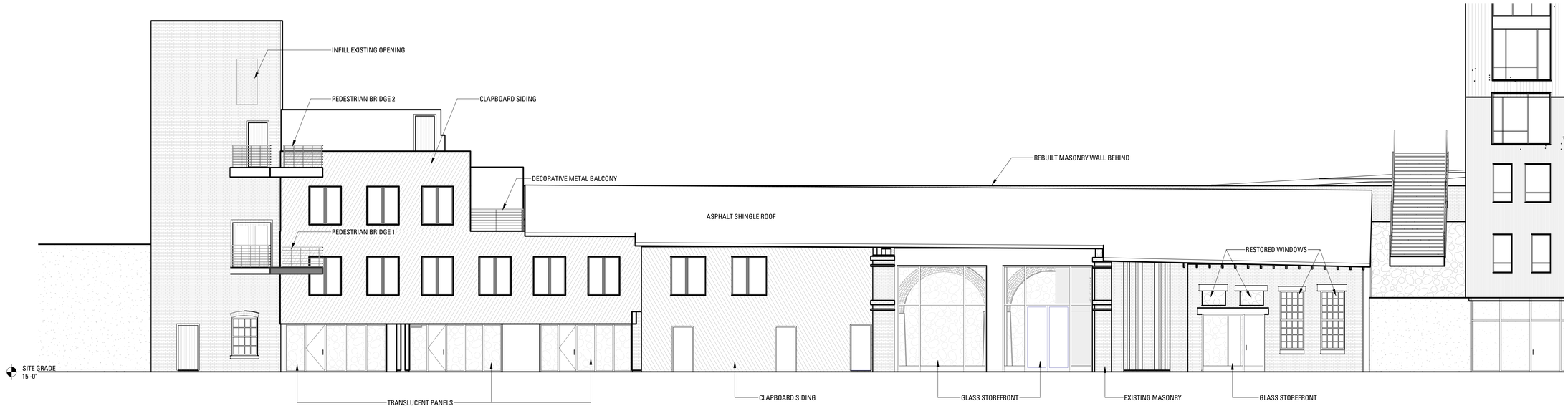
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PORTLAND FORESIDE BLOCK 2

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|---|---|
| Date | OCTOBER 25, 2019 |
| Scale | 1/8" = 1'-0" |
| Project Number | |
| Drawn By | Author |

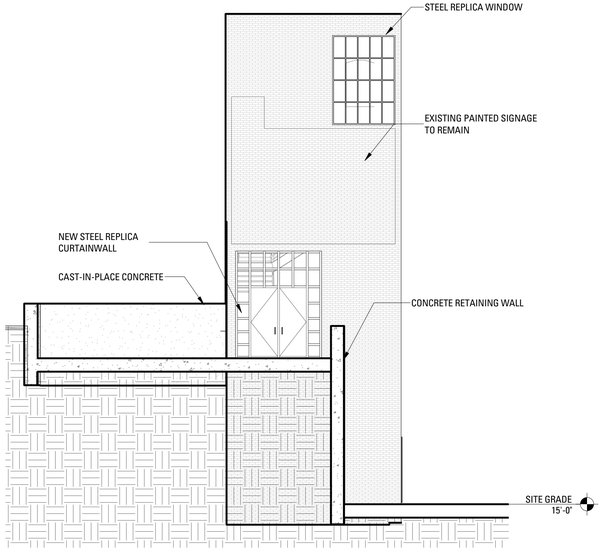
BUILDING 6A/6B- PROPOSED FACADE

# A-313P



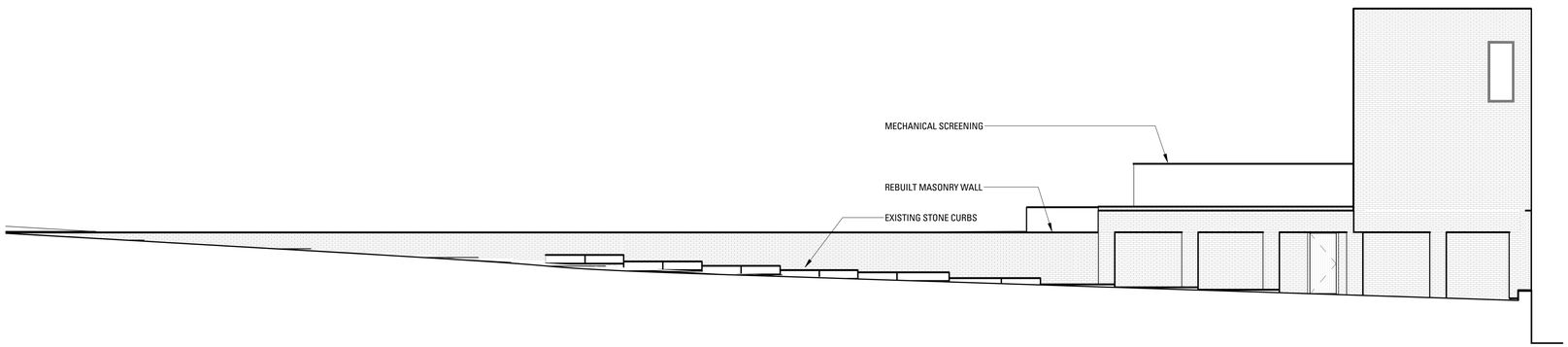

1 EMBANKMENT - PROPOSED SOUTH ELEVATION - NARROW ALLEY

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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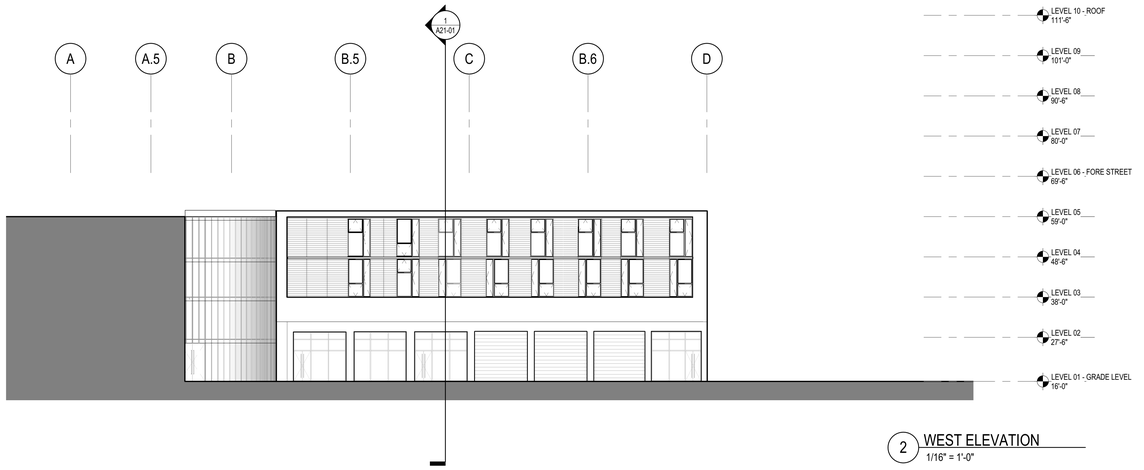
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PORTLAND FORESIDE BLOCK 2

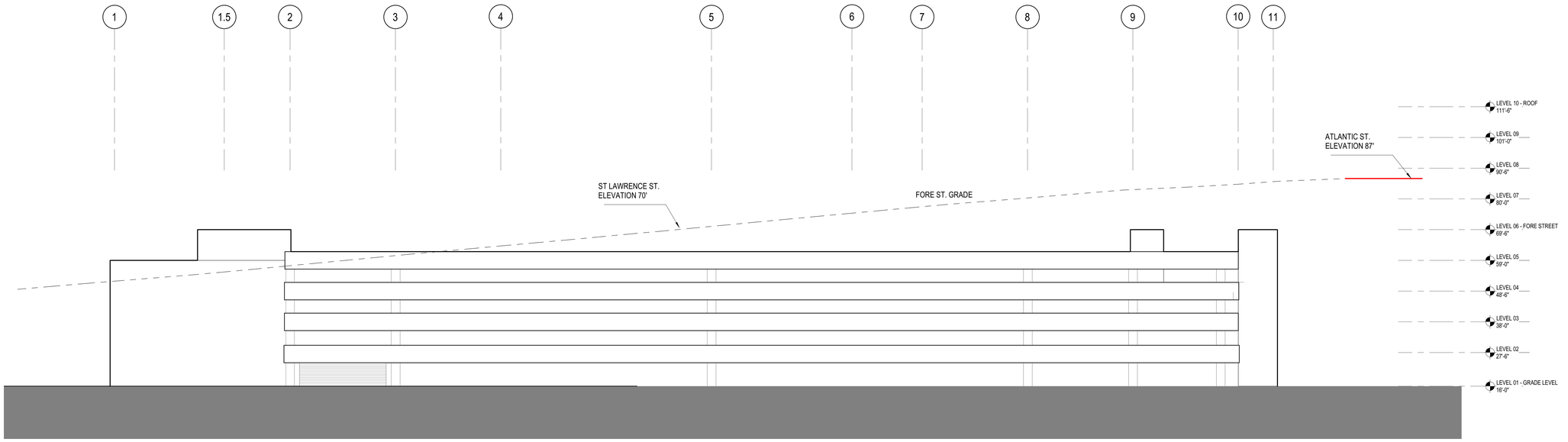
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|---|---|
| Date | OCTOBER 25, 2019 |
| Scale | 1/8" = 1'-0" |
| Project Number | |
| Drawn By | Author |

EMBANKMENT - PROPOSED ELEVATIONS

# A-331P




2 WEST ELEVATION
1/16" = 1'-0"




1 SOUTH ELEVATION
1/16" = 1'-0"

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t 207.774.2112

LANDSCAPE ARCHITECT
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t 207.865.1080
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 11/08/2019**

| | |
|---|---|
| **Job Number** | 157031.001 |
| **Drawn** | Author |
| **Checked** | Checker |
| **Approved** | Approver |

TITLE

**EXTERIOR ELEVATIONS - PHASE I**

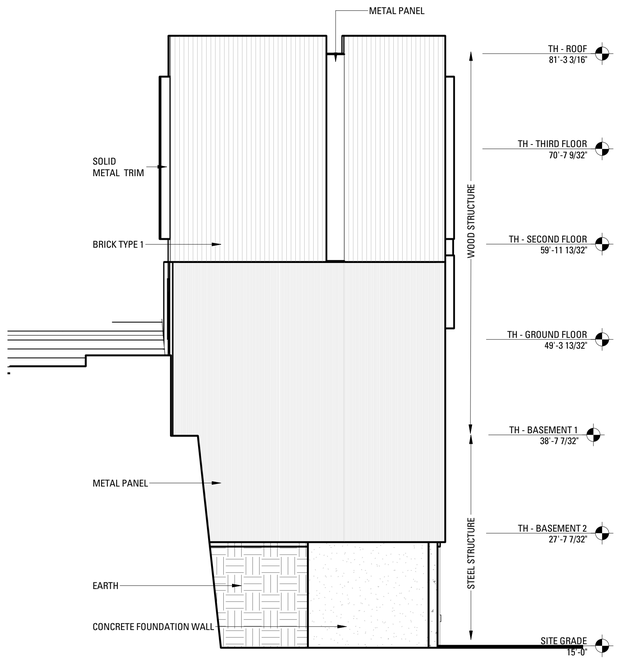
SHEET NUMBER

**A20-01**

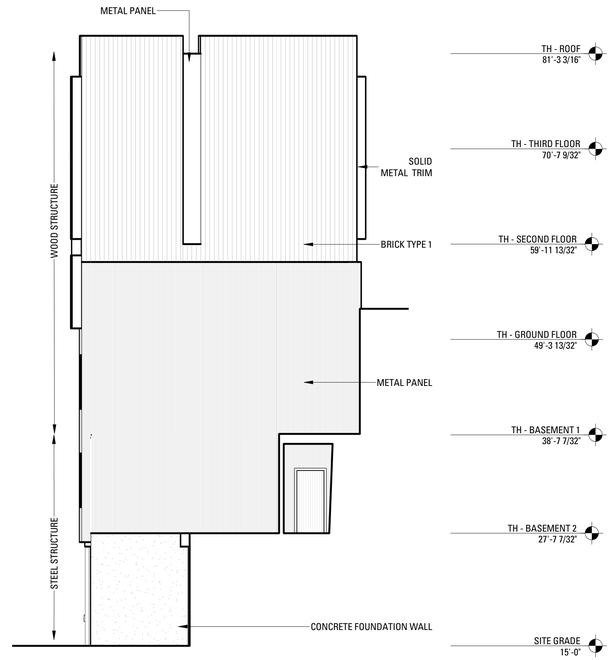
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1 TOWNHOUSE SOUTH ELEVATION
SCALE: 1/8" = 1'-0"




4 TOWNHOUSE WEST ELEVATION
SCALE: 1/8" = 1'-0"




3 TOWNHOUSE EAST ELEVATION
SCALE: 1/8" = 1'-0"




2 TOWNHOUSE NORTH ELEVATION
SCALE: 1/8" = 1'-0"

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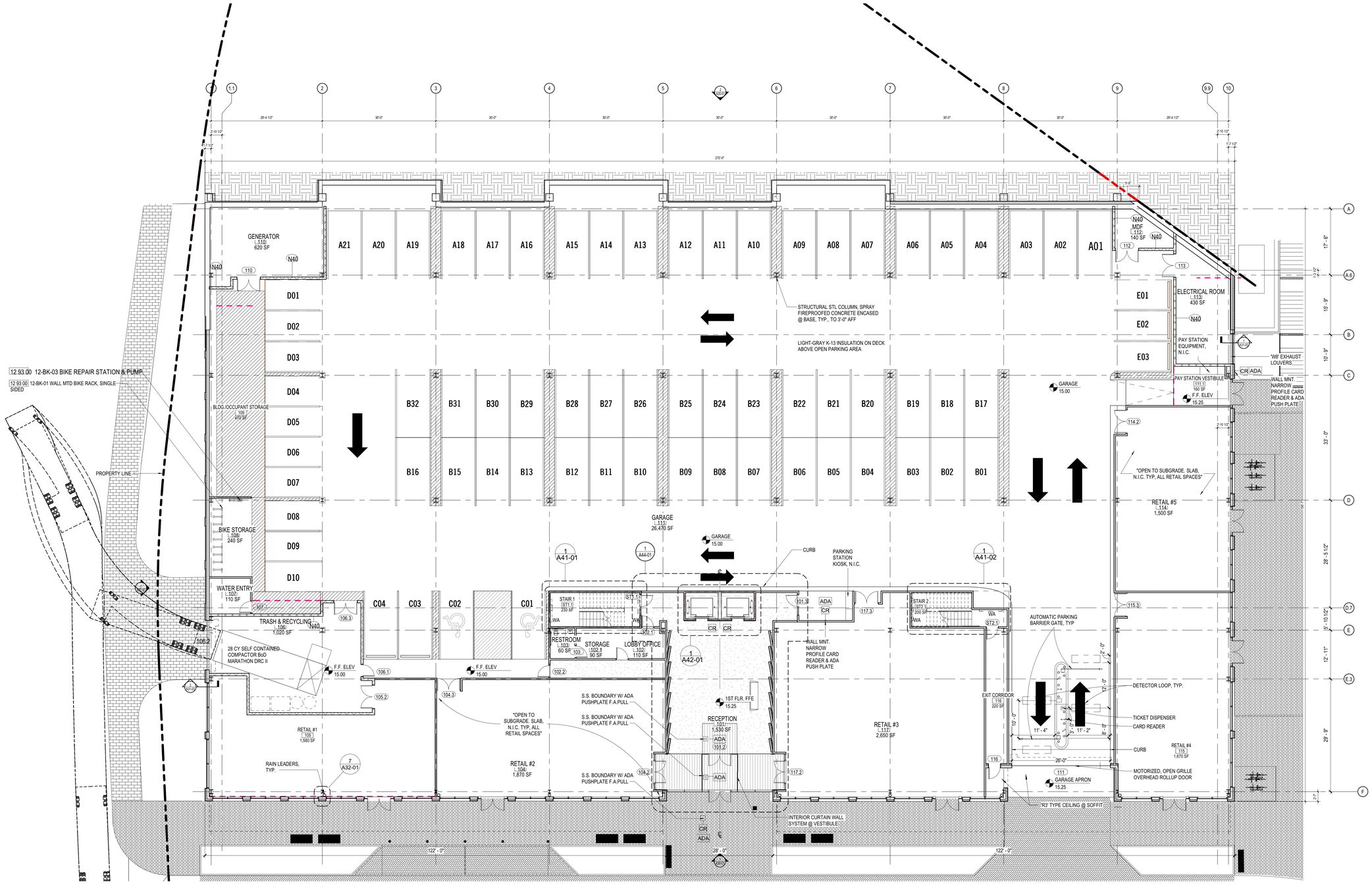
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PORTLAND FORESIDE BLOCK 2

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|---|---|
| Date | OCTOBER 25, 2019 |
| Scale | 1/8" = 1'-0" |
| Project Number | |
| Drawn By | Author |

TOWNHOUSE - PROPOSED FACADE

# A-321P




# 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 |
|---|---|---|
| ELEVATOR | 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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STRUCTURAL + MEP ENGINEER
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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**

| MARK | ISSUE | DATE |
|---|---|---|

**DESIGN DEVELOPMENT**
JULY 26, 2019

| | |
|---|---|
| **Job Number** | 157087.000 |
| **Drawn** | Author |
| **Checked** | Checker |
| **Approved** | Approver |

**TITLE**

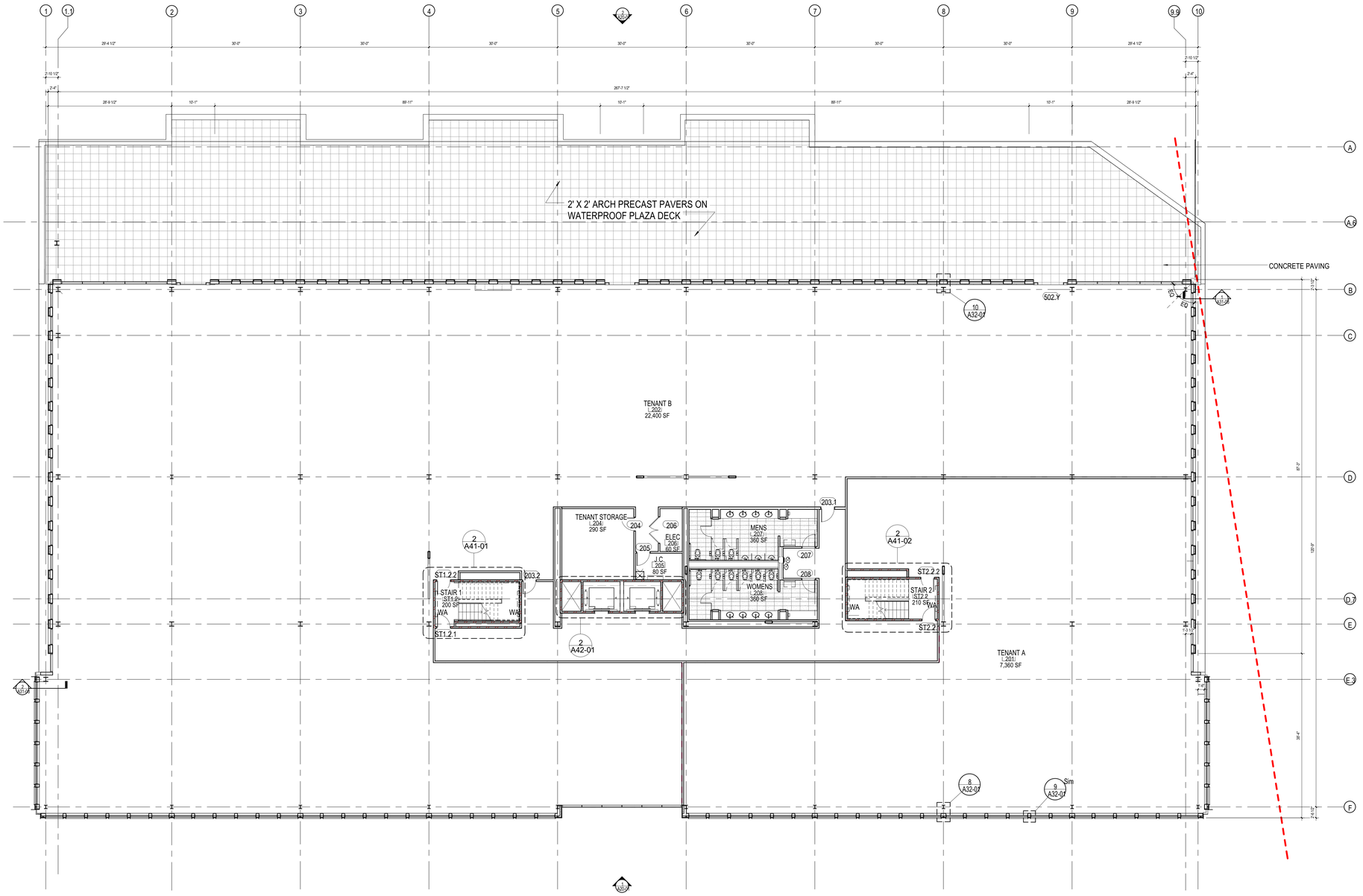
**LEVEL 1 PLAN**

**SHEET NUMBER**

**A10-01**

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## 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:

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   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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OWNER'S CONSULTANT

LANDSCAPE ARCHITECT
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**PROJECT**

**BUILDING 1A**
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FORESIDE
254 COMMERCIAL ST
SUITE 118
PORTLAND, ME 04101

**KEYPLAN**

**NOT FOR CONSTRUCTION**

**ISSUE CHART**

| MARK | ISSUE | DATE |
|---|---|---|

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JULY 26, 2019

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|---|---|
| **Job Number** | 157087.000 |
| **Drawn** | Author |
| **Checked** | Checker |
| **Approved** | Approver |

**TITLE**

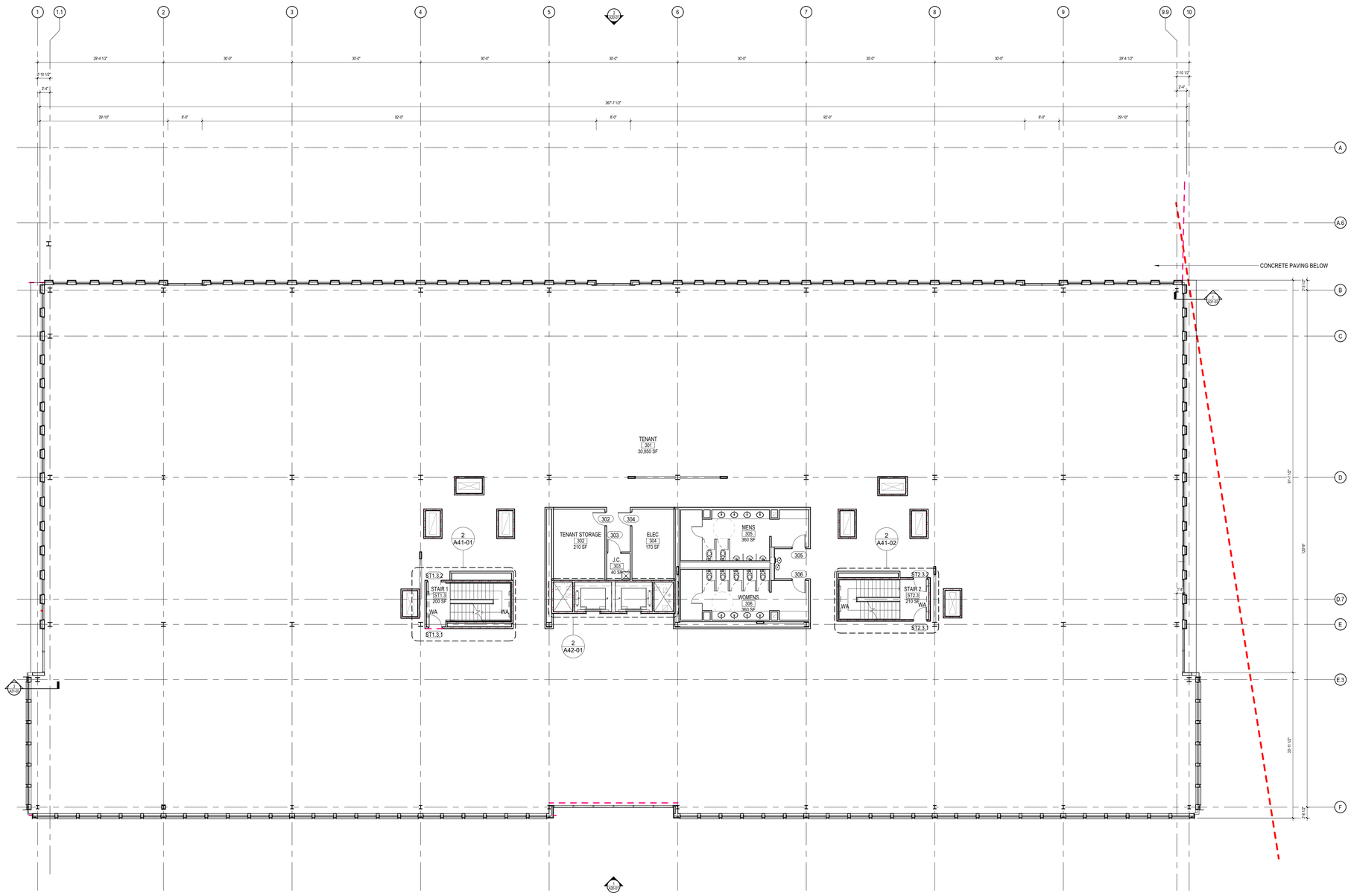
**LEVEL 2 PLAN**

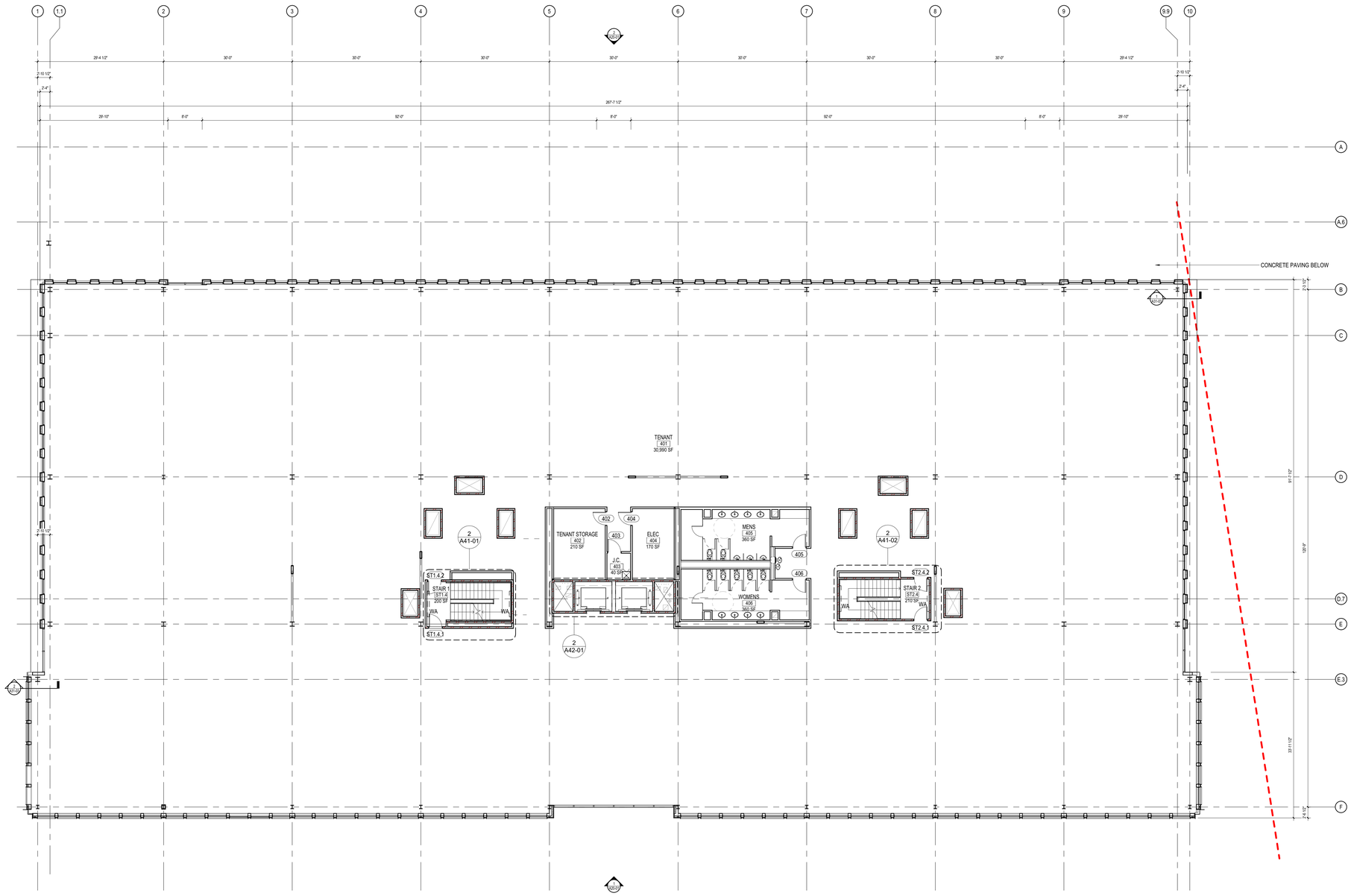
**SHEET NUMBER**

**A10-02**

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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
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ELEC
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170 SF
J.C.
305
40 SF
MENS
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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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**PROJECT**

**BUILDING 1A**
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FORESIDE
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PORTLAND, ME 04101

**KEYPLAN**

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**ISSUE CHART**

| MARK | ISSUE | DATE |
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**DESIGN DEVELOPMENT**
JULY 26, 2019

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| **Job Number** | 157087.000 |
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| **Checked** | Checker |
| **Approved** | Approver |

**TITLE**

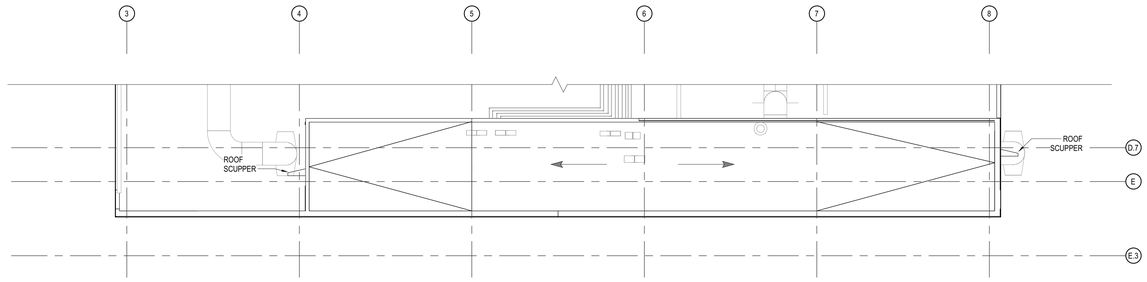
**LEVEL 4 PLAN**

**SHEET NUMBER**

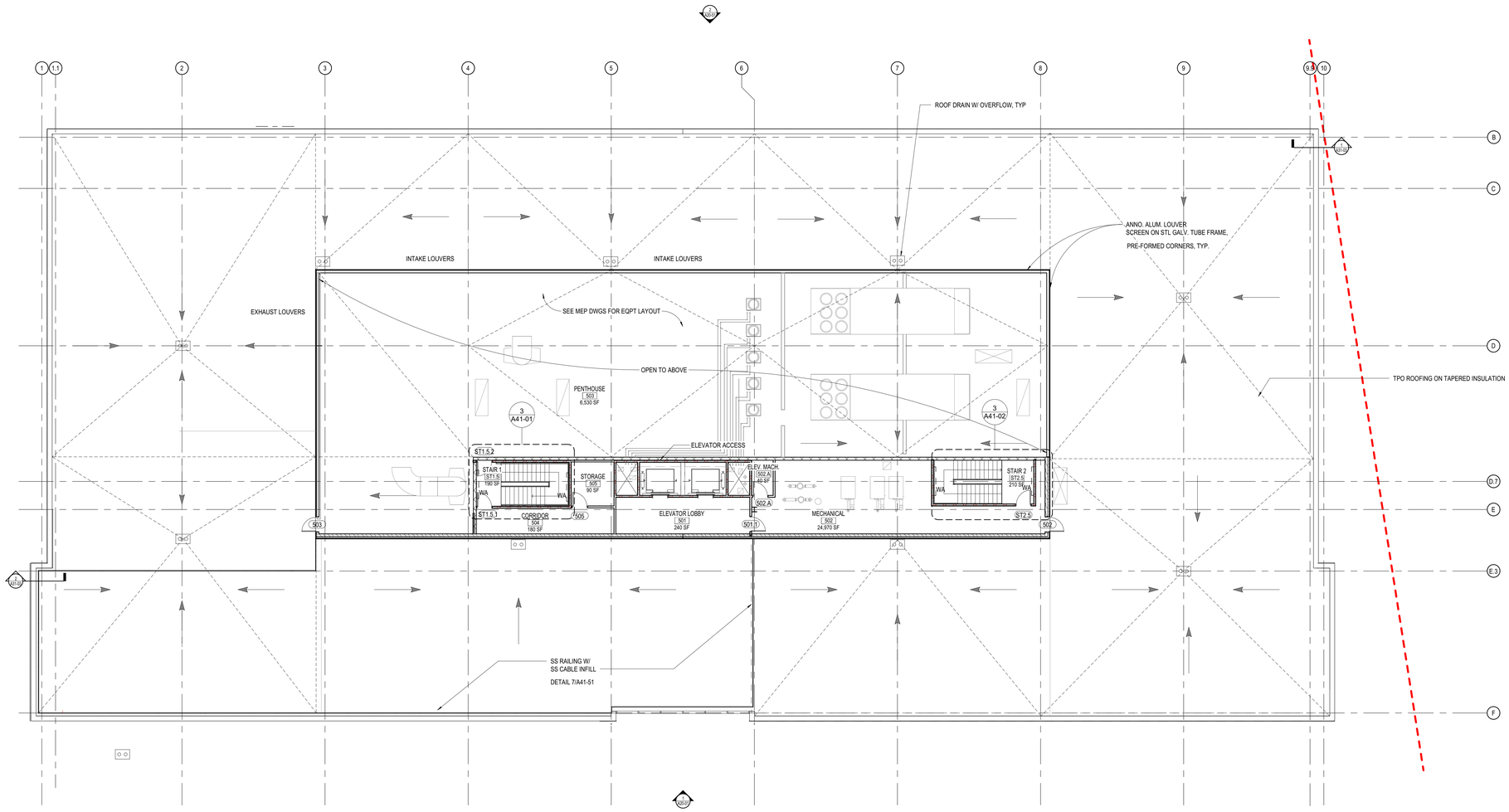
**A10-04**

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## 2 HIGH ROOF PLAN
3/32" = 1'-0"




## 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 PENTHOUSE & ROOF PLAN
3/32" = 1'-0"


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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**

| MARK | ISSUE | DATE |
|---|---|---|

**DESIGN DEVELOPMENT**
JULY 26, 2019

| | |
|---|---|
| **Job Number** | 157087.000 |
| **Drawn** | Author |
| **Checked** | Checker |
| **Approved** | Approver |

**TITLE**

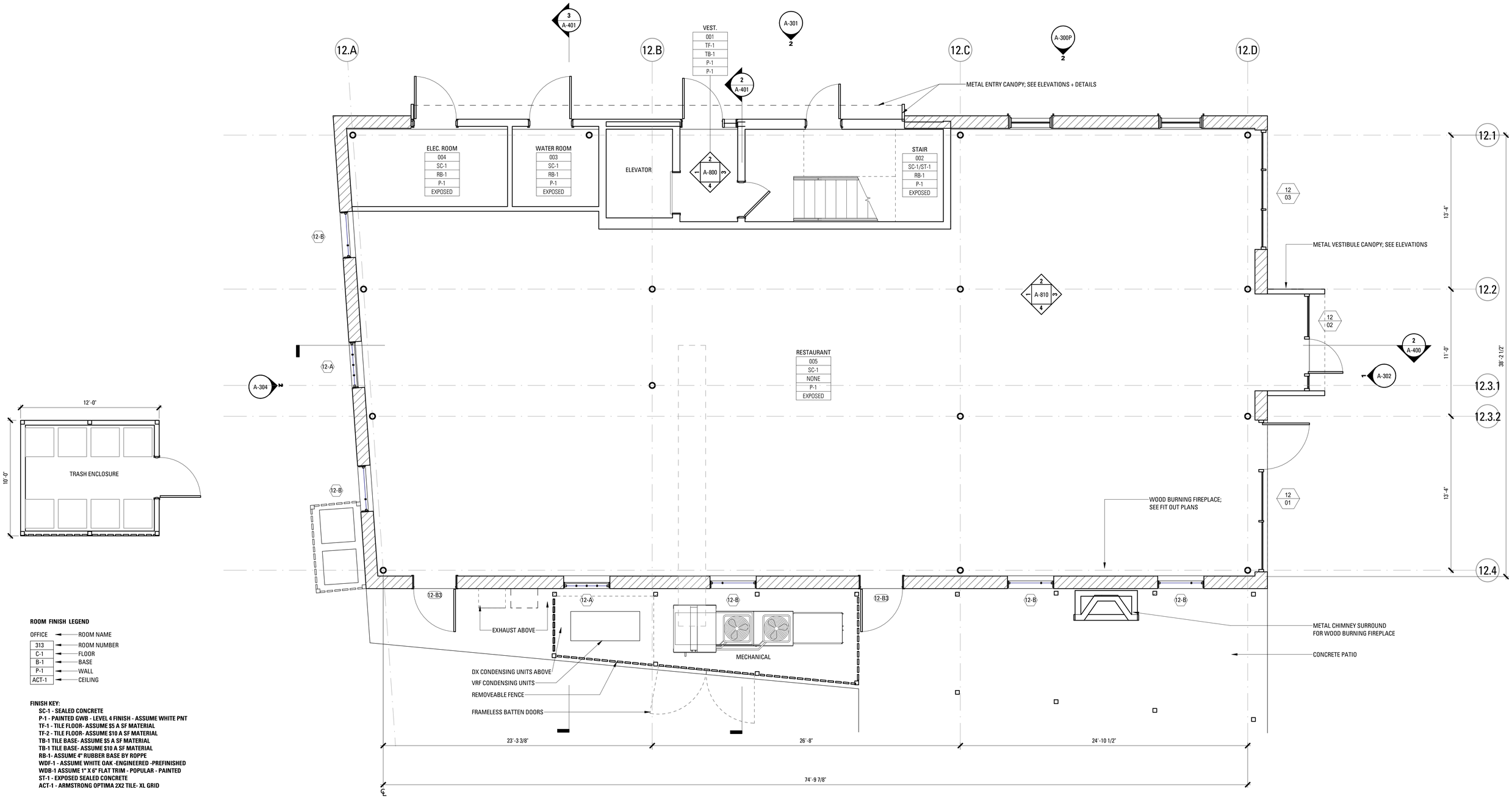
**PENTHOUSE & HIGH ROOF PLAN**

**SHEET NUMBER**

**A10-05**

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**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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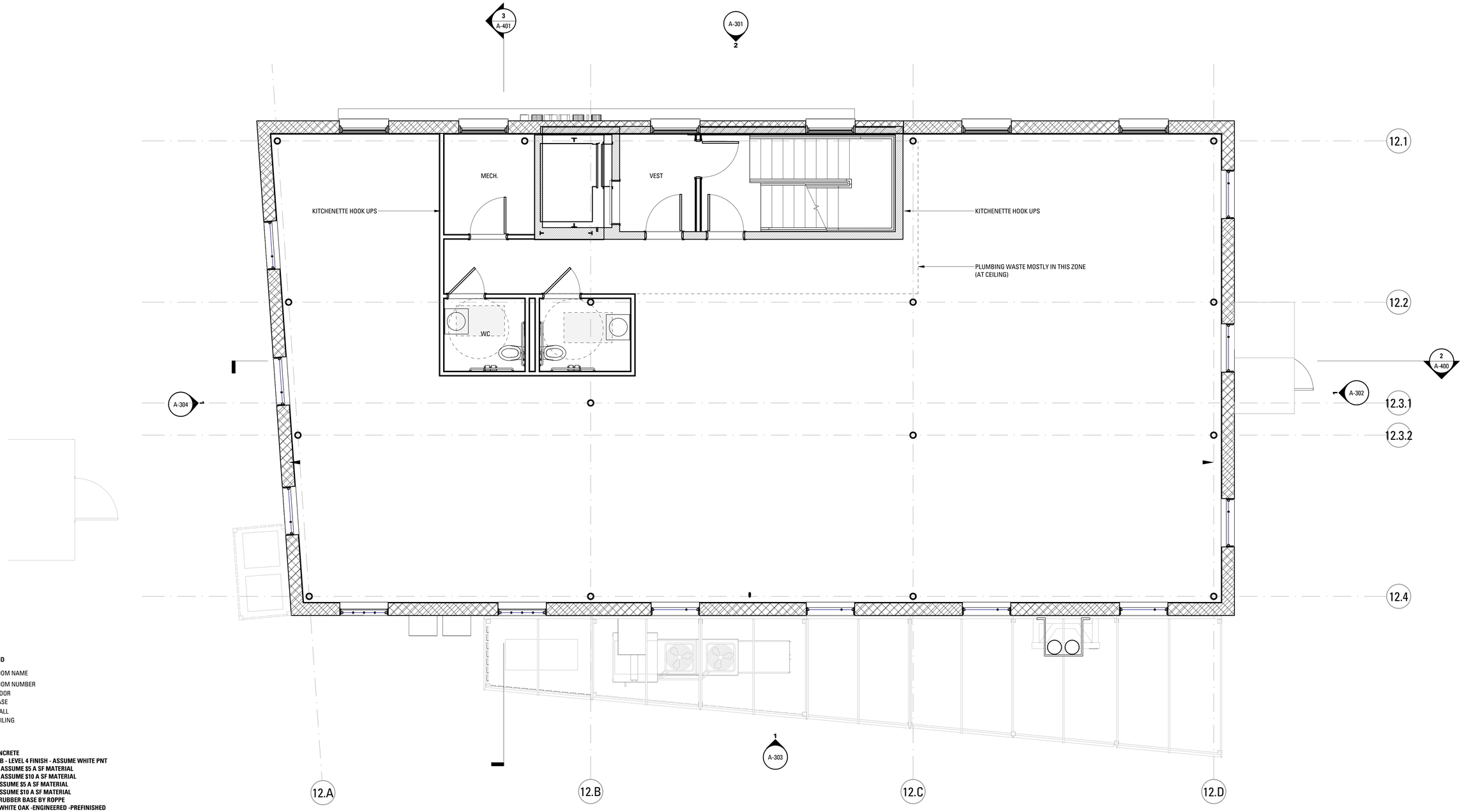

| Rev. | Date | Remarks |
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PORTLAND FORESIDE - BUILDING 12

| | |
|---|---|
| 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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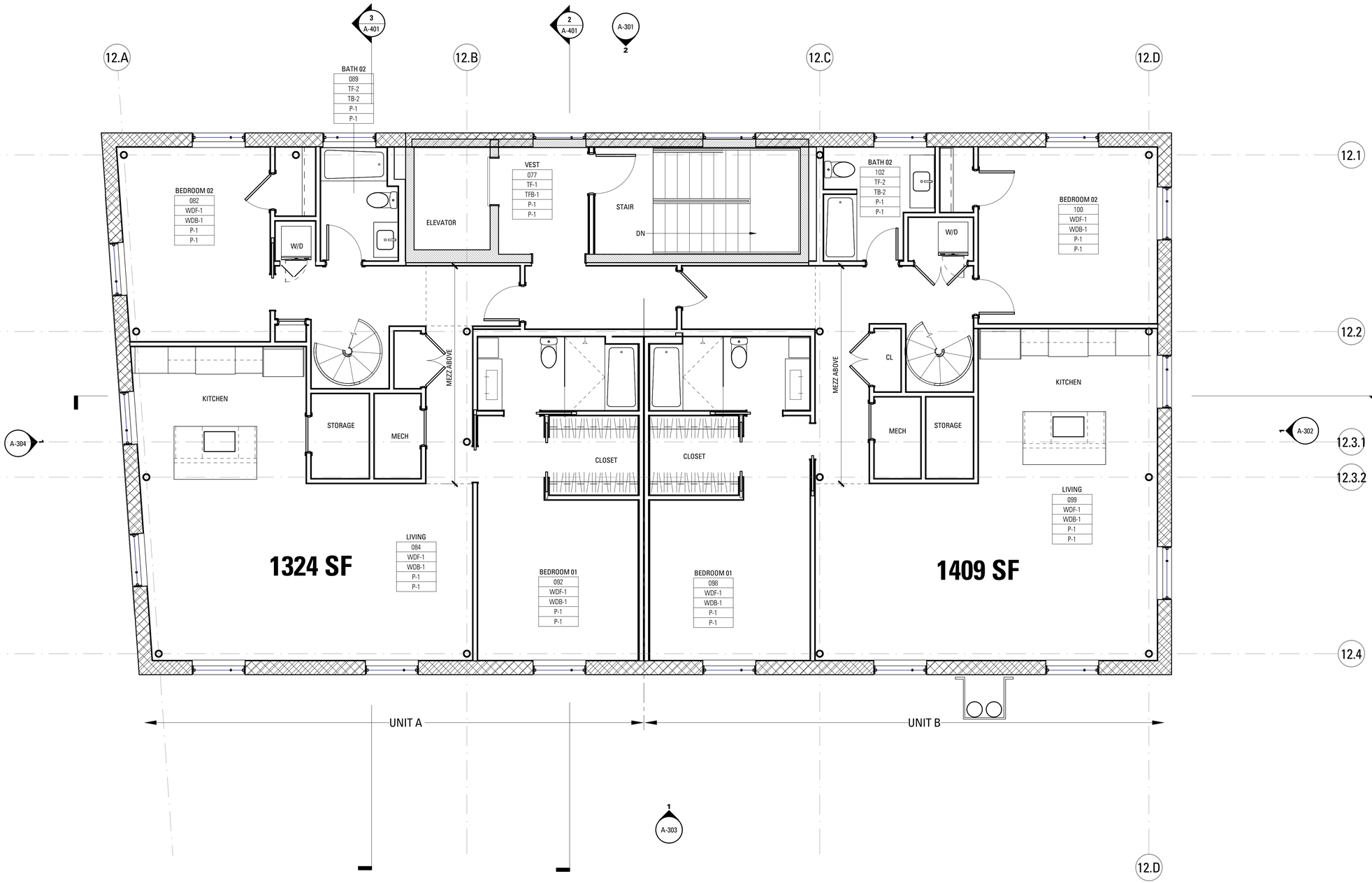

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PORTLAND FORESIDE - BUILDING 12

| | |
|---|---|
| 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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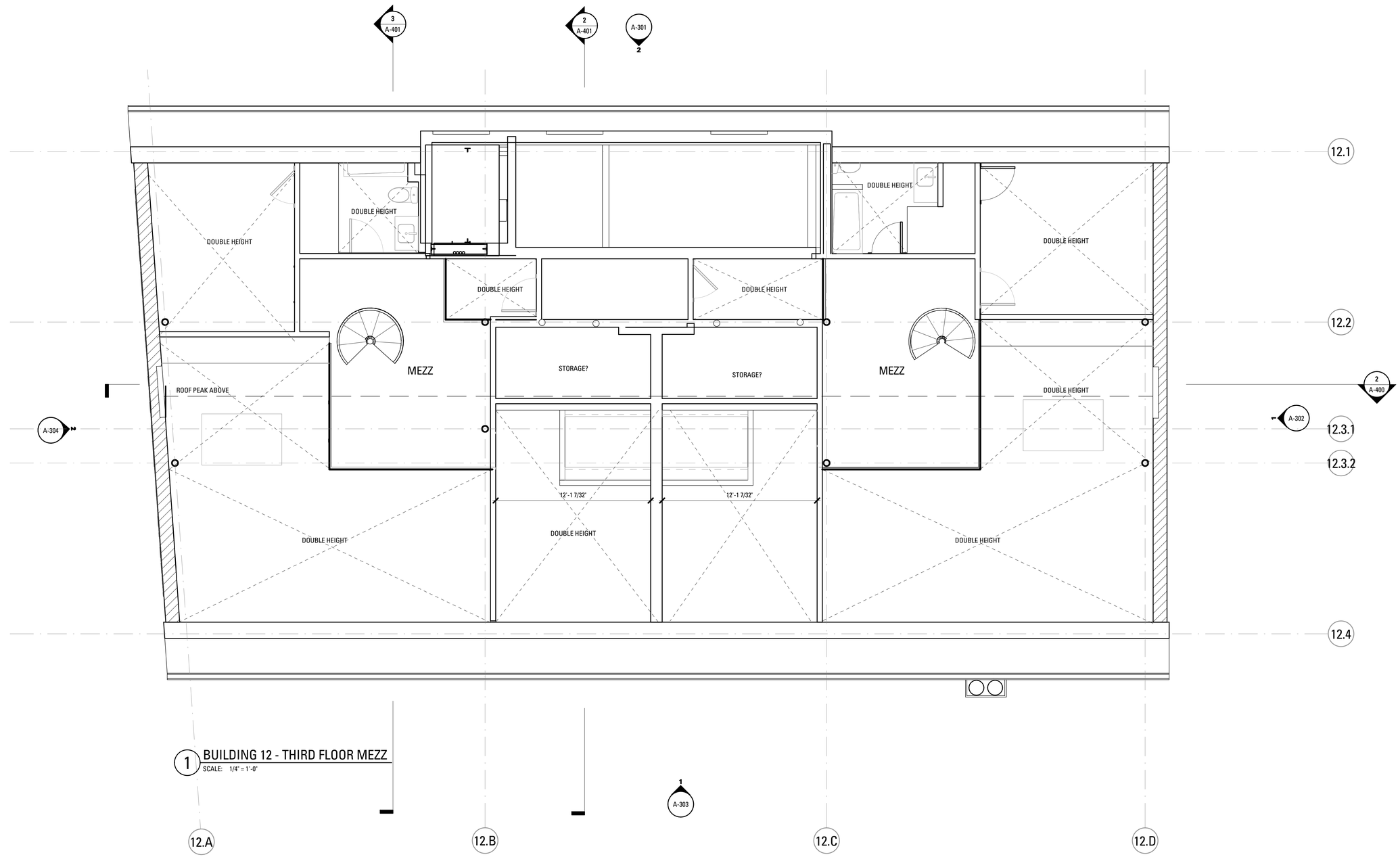

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PORTLAND FORESIDE - BUILDING 12

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|---|---|
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| 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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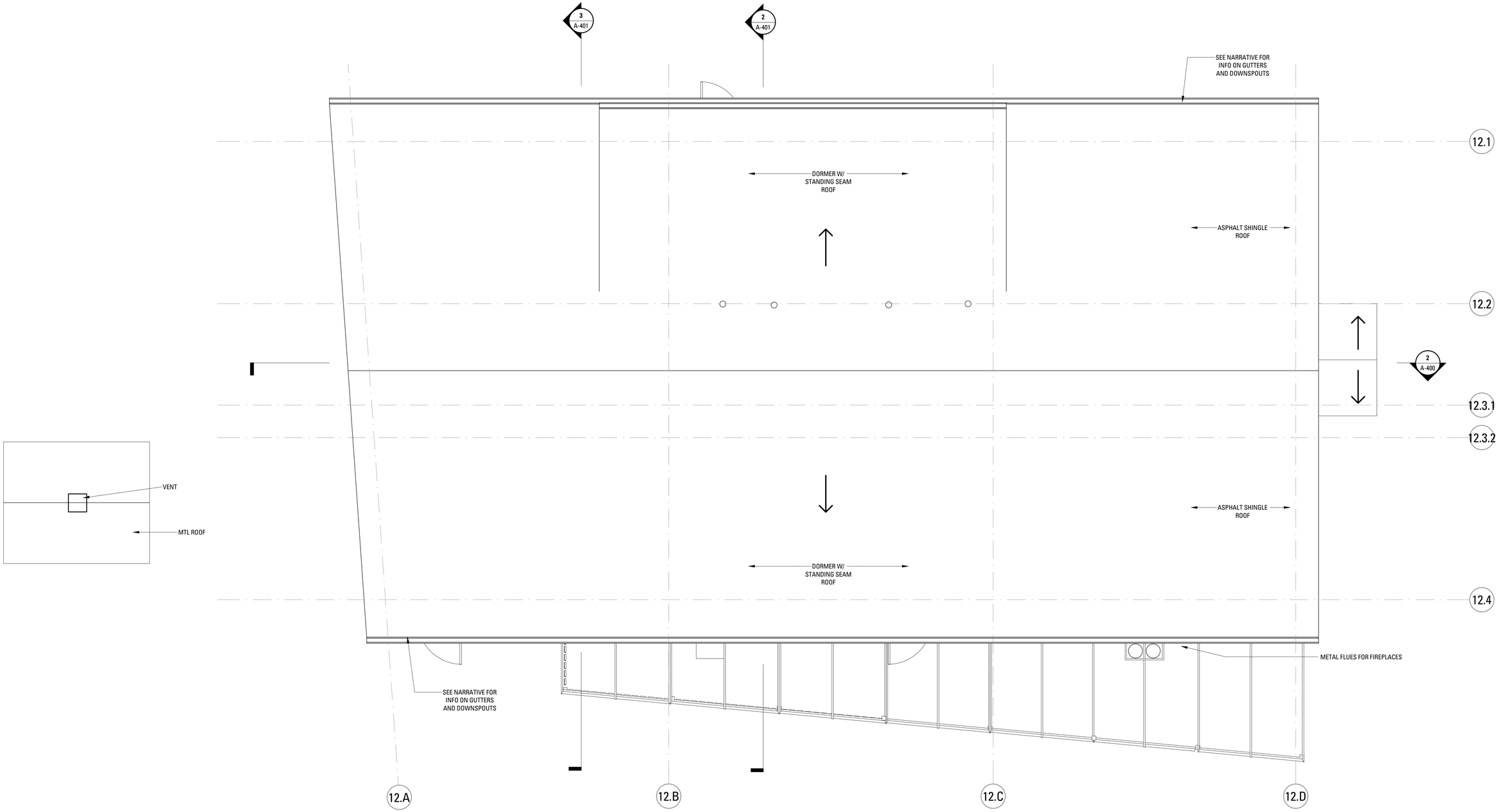

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PORTLAND FORESIDE - BUILDING 12

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| Date | OCTOBER 25, 2019 |
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BUILDING 12- 3RD FLOOR MEZZ

A-104




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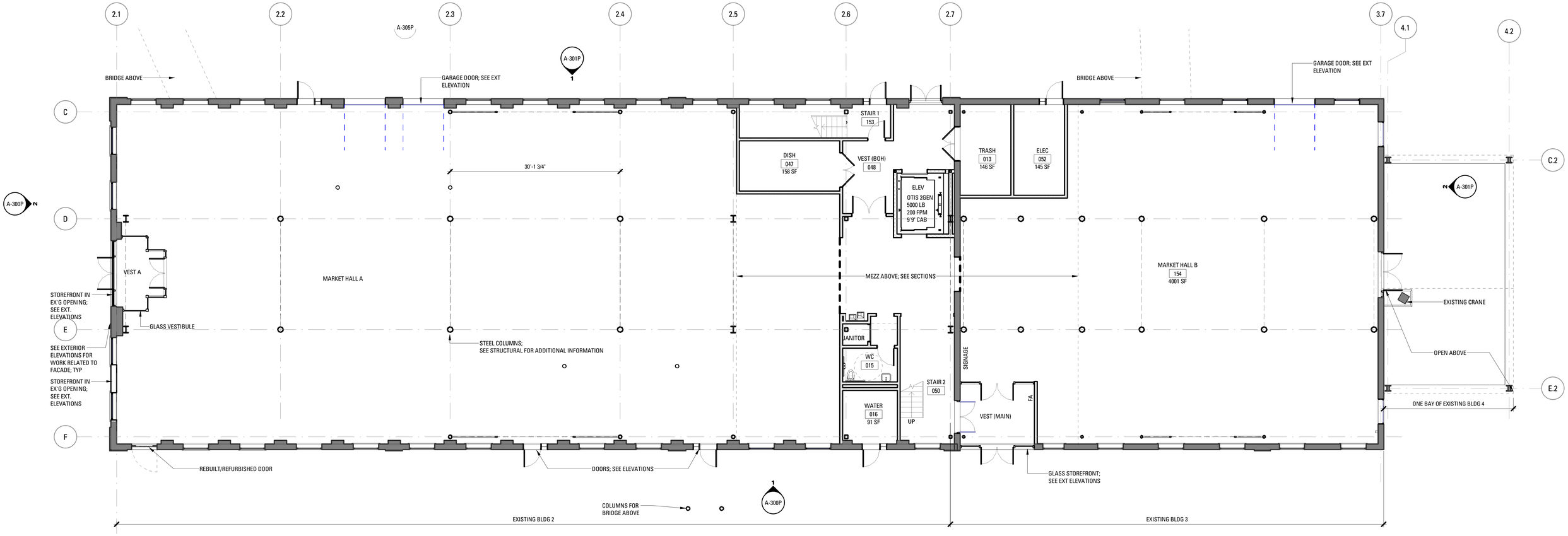
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PORTLAND FORESIDE - BUILDING 12

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| Project Number | 19.007 |
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BUILDING 12- ROOF PLAN

A-105




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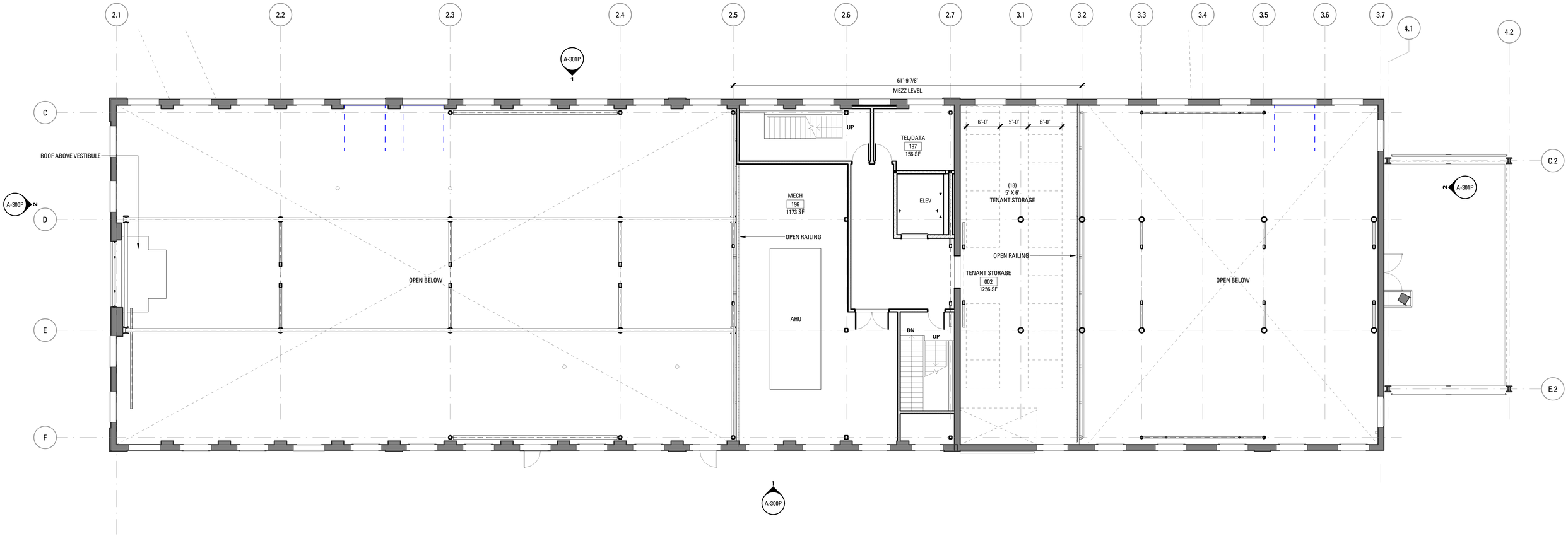
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PORTLAND FORESIDE BLOCK 2

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BUILDING 2/3- PROPOSED GROUND FLOOR PLAN

# A-101P




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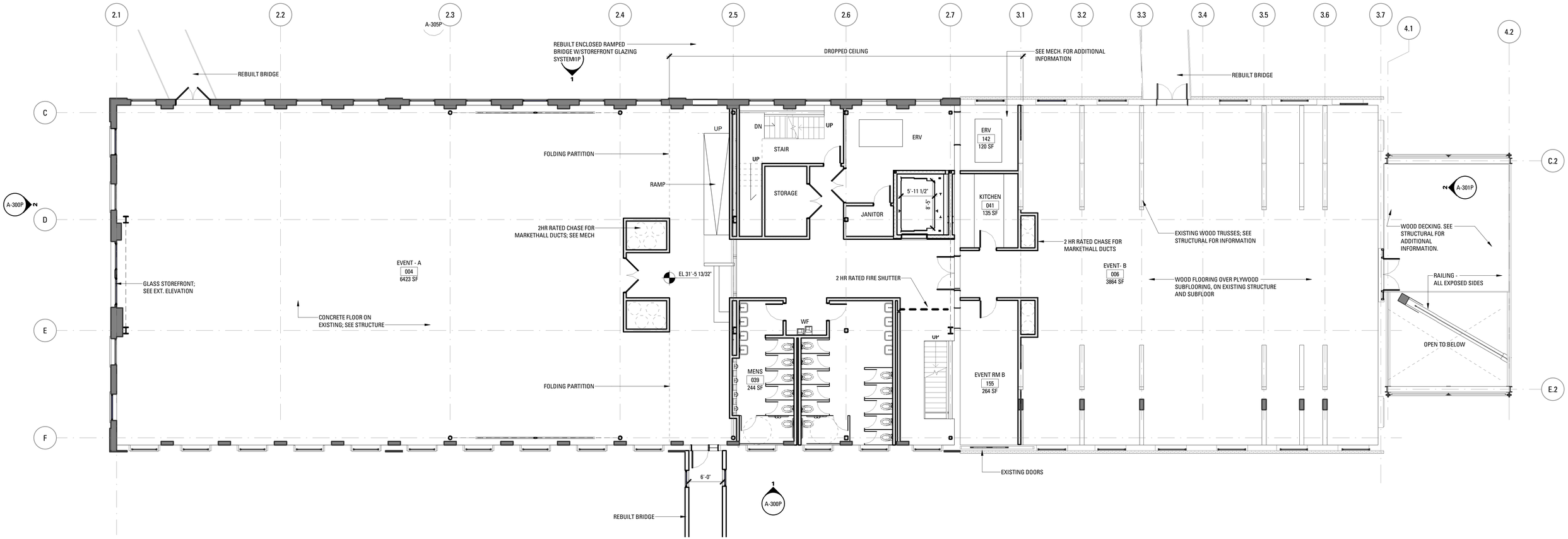
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PORTLAND FORESIDE BLOCK 2

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BUILDING 2/3 - PROPOSED MEZZ LEVEL

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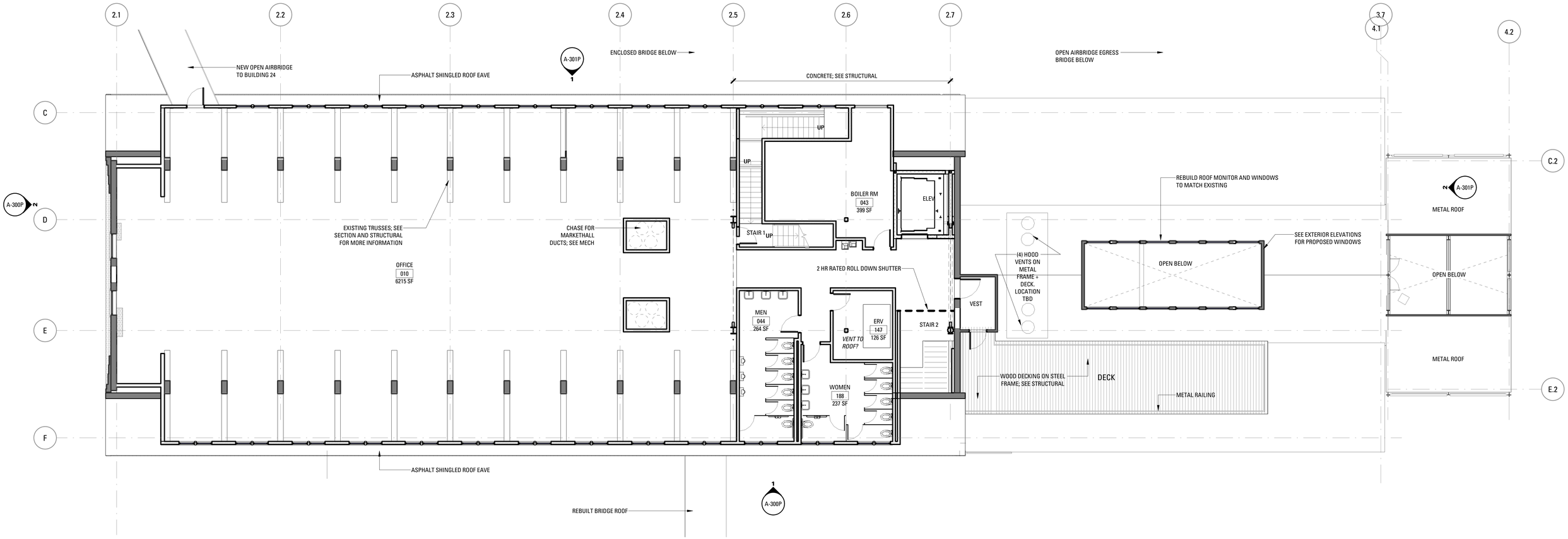
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BUILDING 2/3 - PROPOSED SECOND FLOOR

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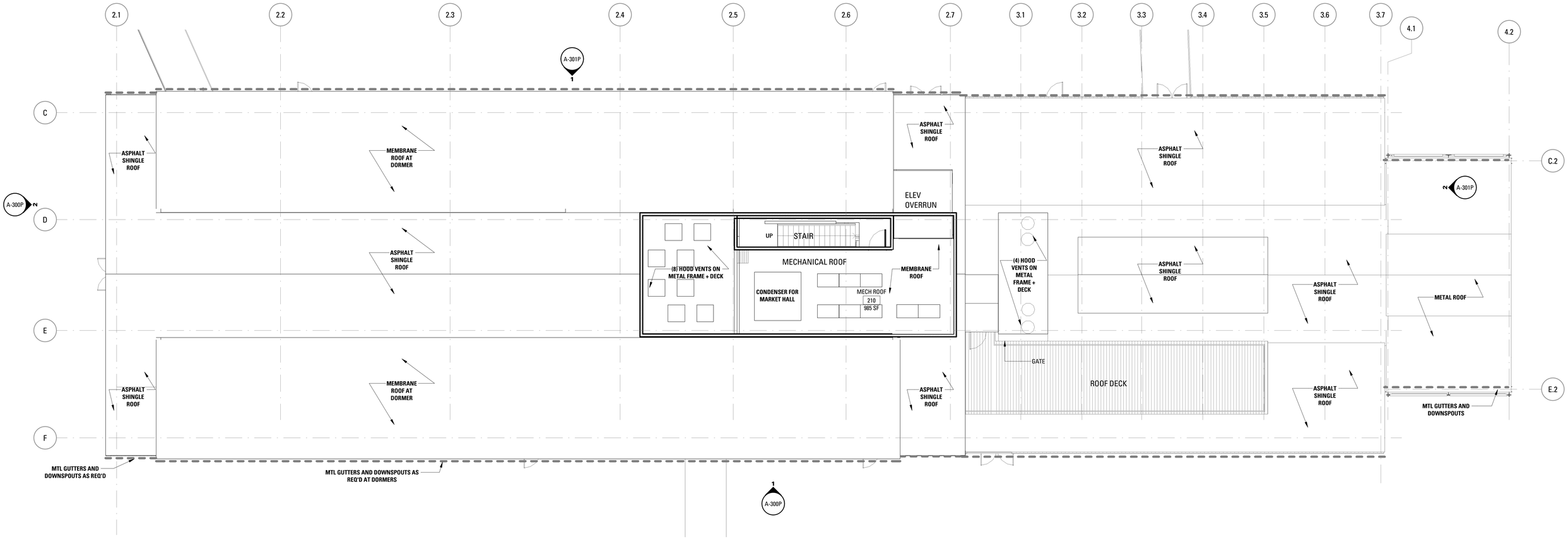
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BUILDING 2/3 - PROPOSED THIRD FLOOR PLAN

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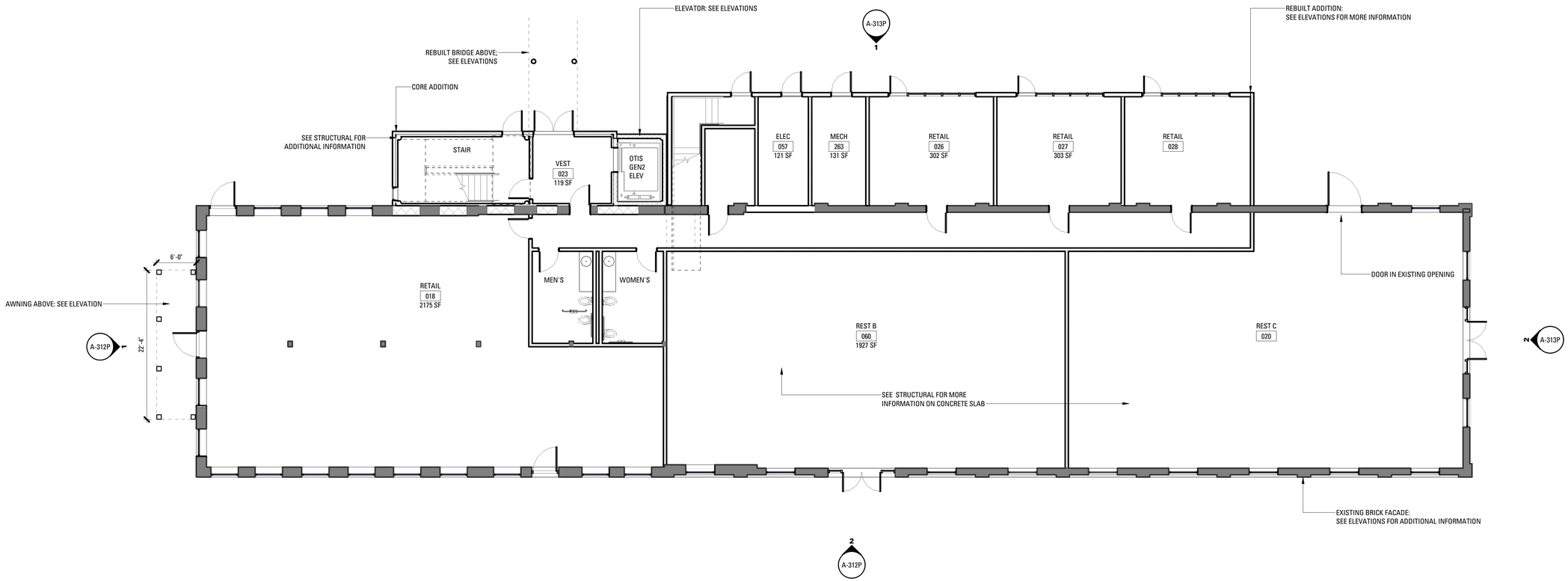
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BUILDING 2/3 ROOF PLAN

# A-105P





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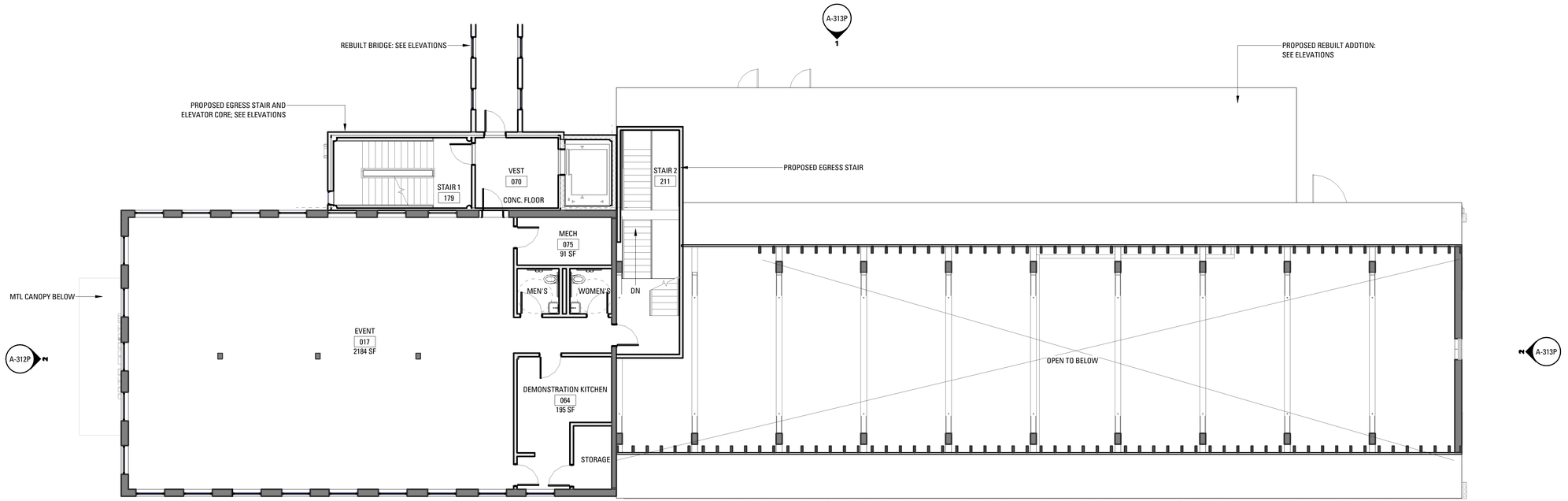

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PORTLAND FORESIDE BLOCK 2

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BUILDING 6A/6B - PROPOSED GROUND FLOOR

# A-110P




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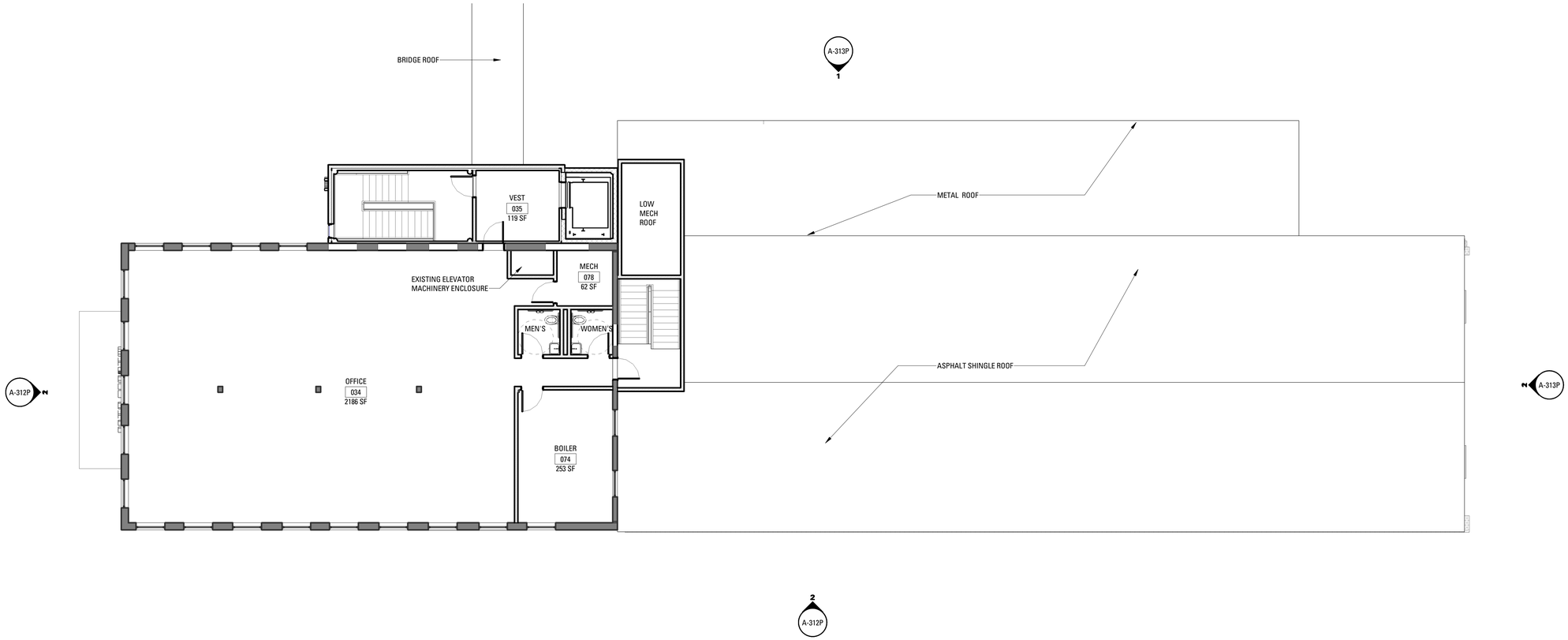
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PORTLAND FORESIDE BLOCK 2

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BUILDING 6A/6B - PROPOSED SECOND FLOOR

# A-111P




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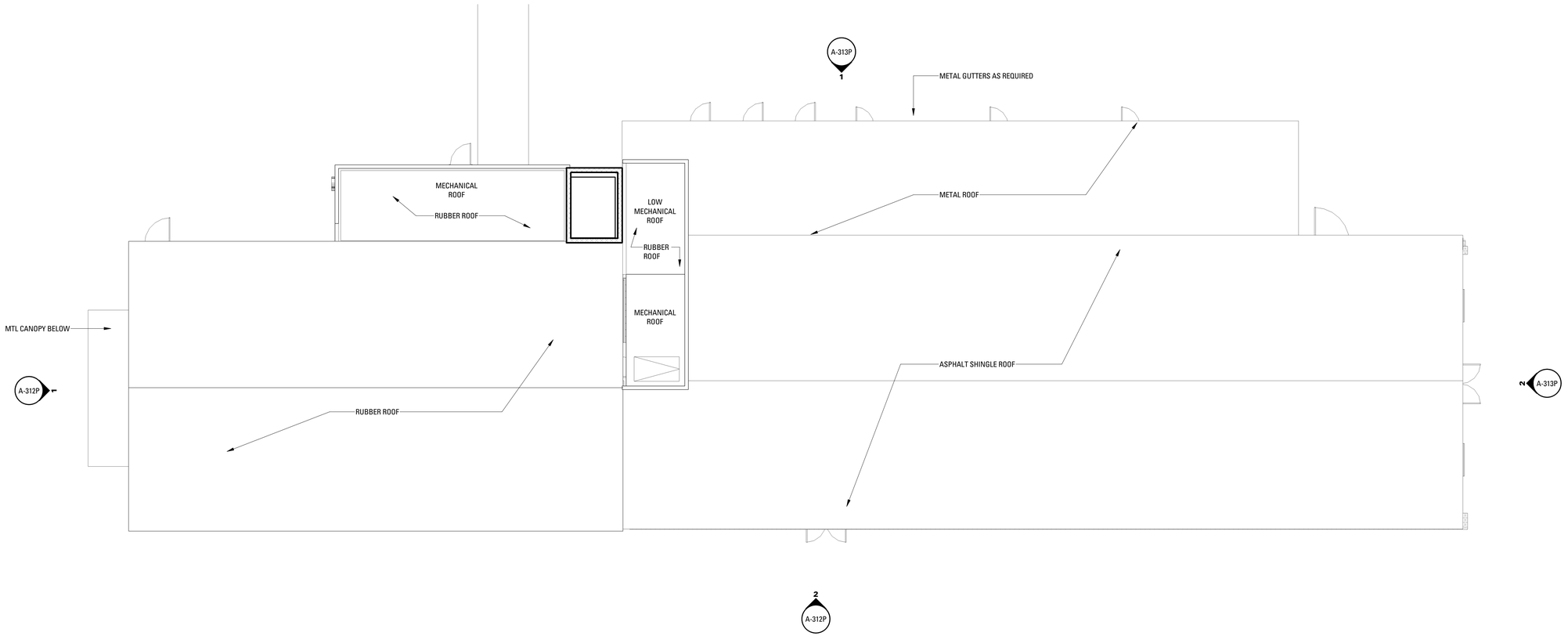
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PORTLAND FORESIDE BLOCK 2

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| Project Number | |
| Drawn By | Author |

BUILDING 6A/6B - PROPOSED THIRD FLOOR

# A-112P




1 BUILDING 6A/6B - PROPOSED ROOF PLAN
SCALE: 1/8" = 1'-0"

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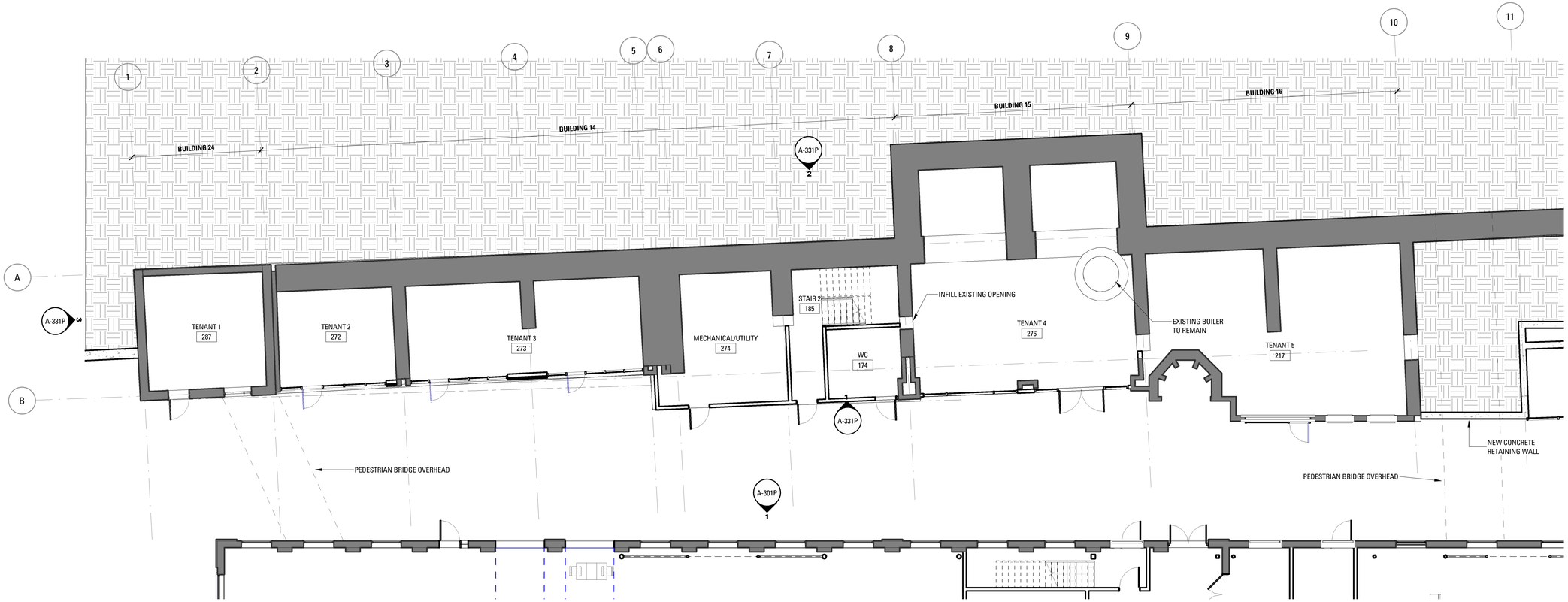
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BUILDING 6A/6B - PROPOSED ROOF PLAN

# A-113P




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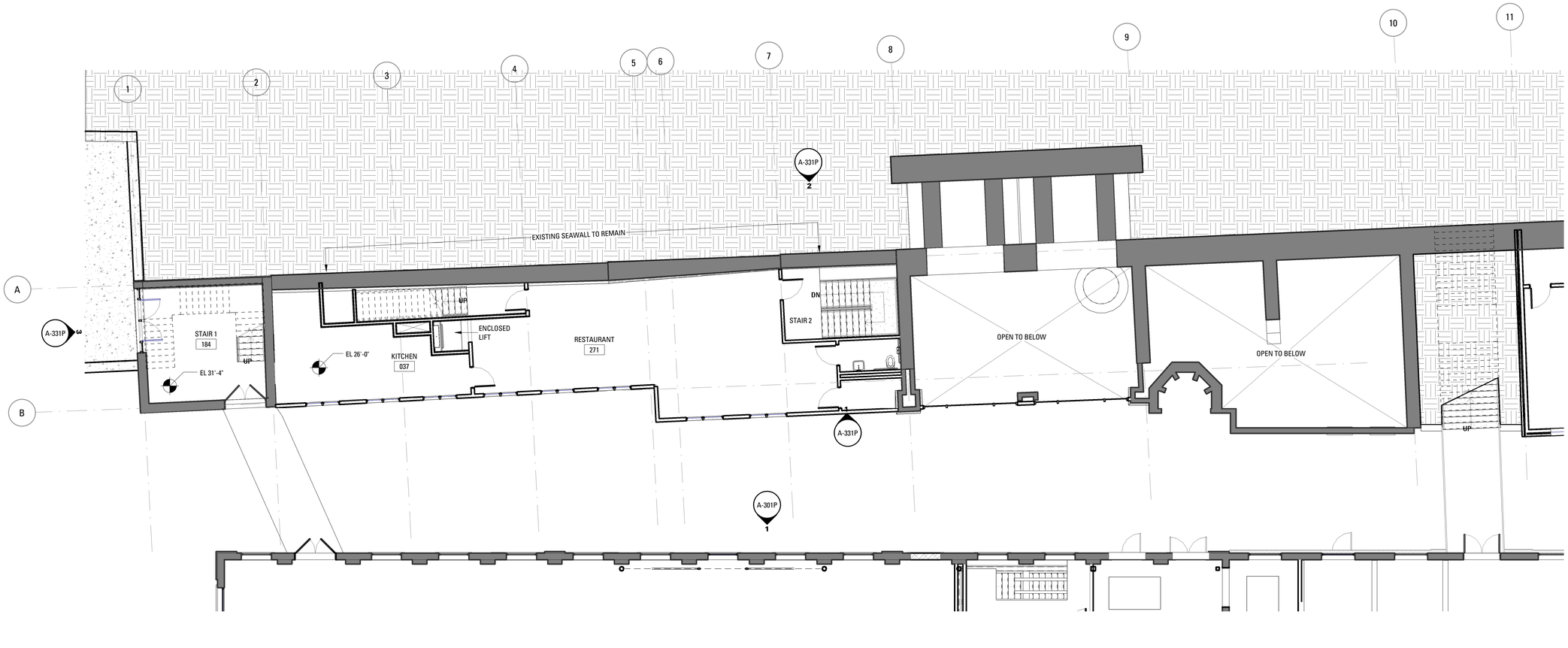
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PORTLAND FORESIDE BLOCK 2

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EMBANKMENT - PROPOSED GROUND FLOOR

# A-131P




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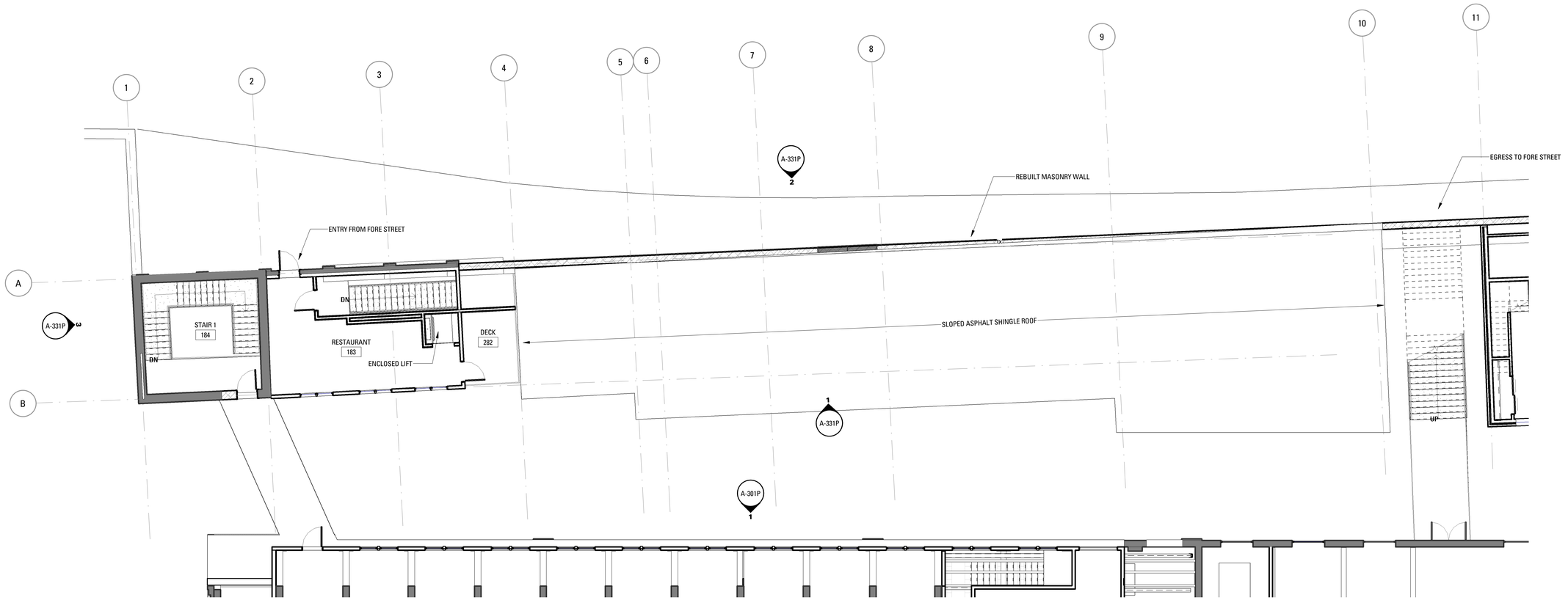
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PORTLAND FORESIDE BLOCK 2

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| Project Number | |
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EMBANKMENT - PROPOSED SECOND FLOOR

# A-132P




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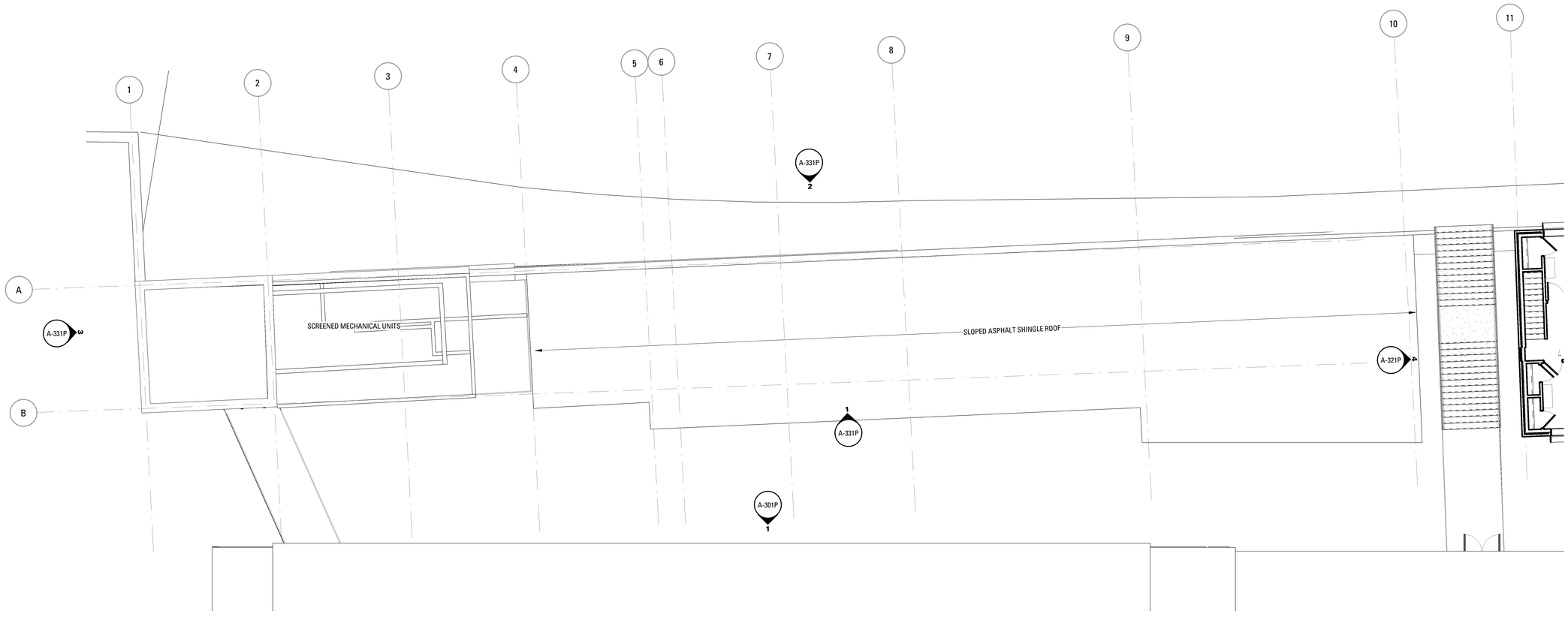
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PORTLAND FORESIDE BLOCK 2

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EMBANKMENT - PROPOSED THIRD FLOOR

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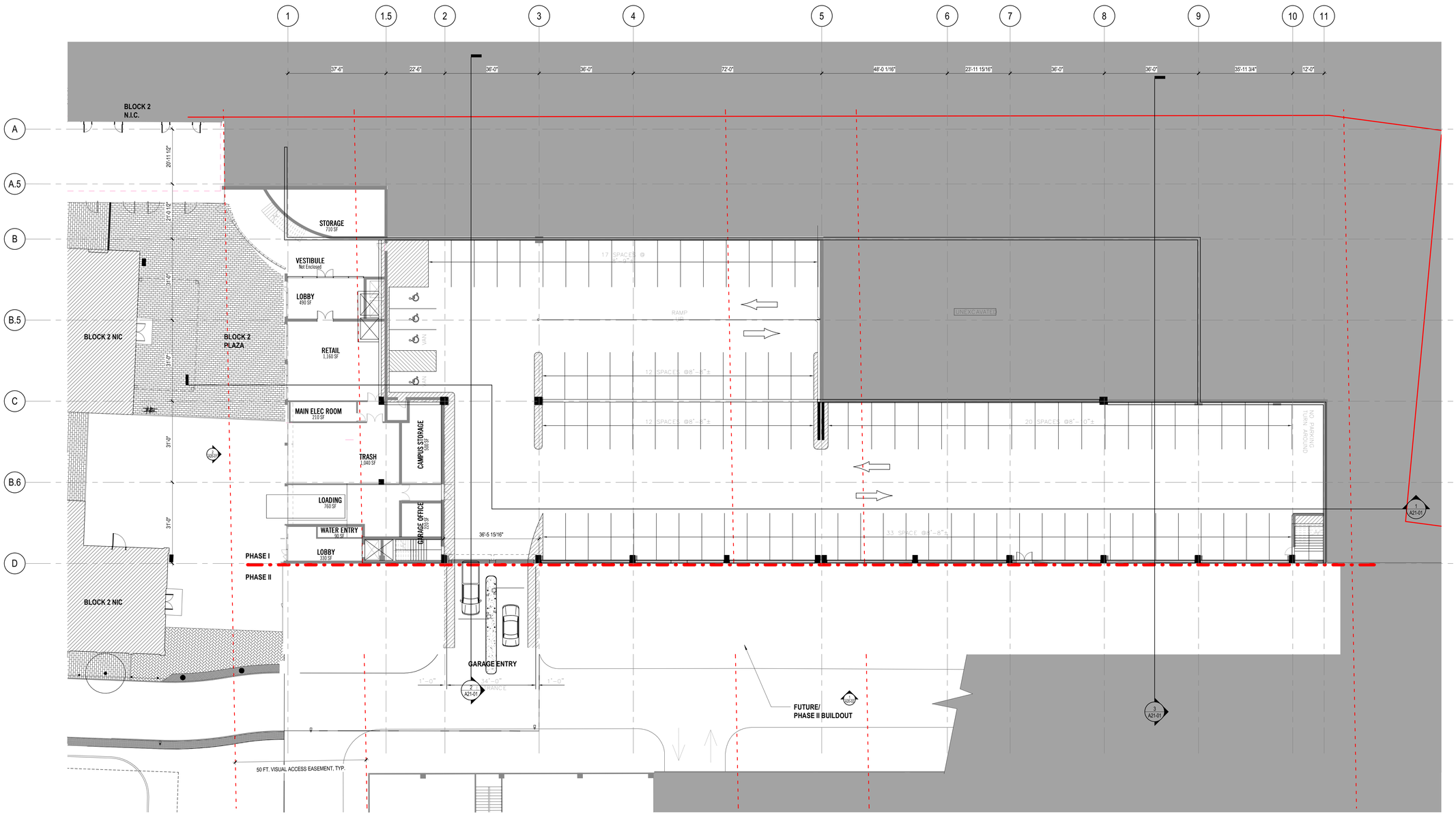
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EMBANKMENT - PROPOSED ROOF

# A-134P




1 LEVEL 01 - ELEV. 16'-0": PHASE TWO
1/16" = 1'-0"


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t 207.879.1838 f207.879.1822

GENERAL CONSTRACTOR
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t 207.879.1838


**PROJECT**

**BLOCK FOUR**

**PORTLAND FORESIDE DEVELOPMENT COMPANY**

254 COMMERCIAL ST SUITE 118
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**

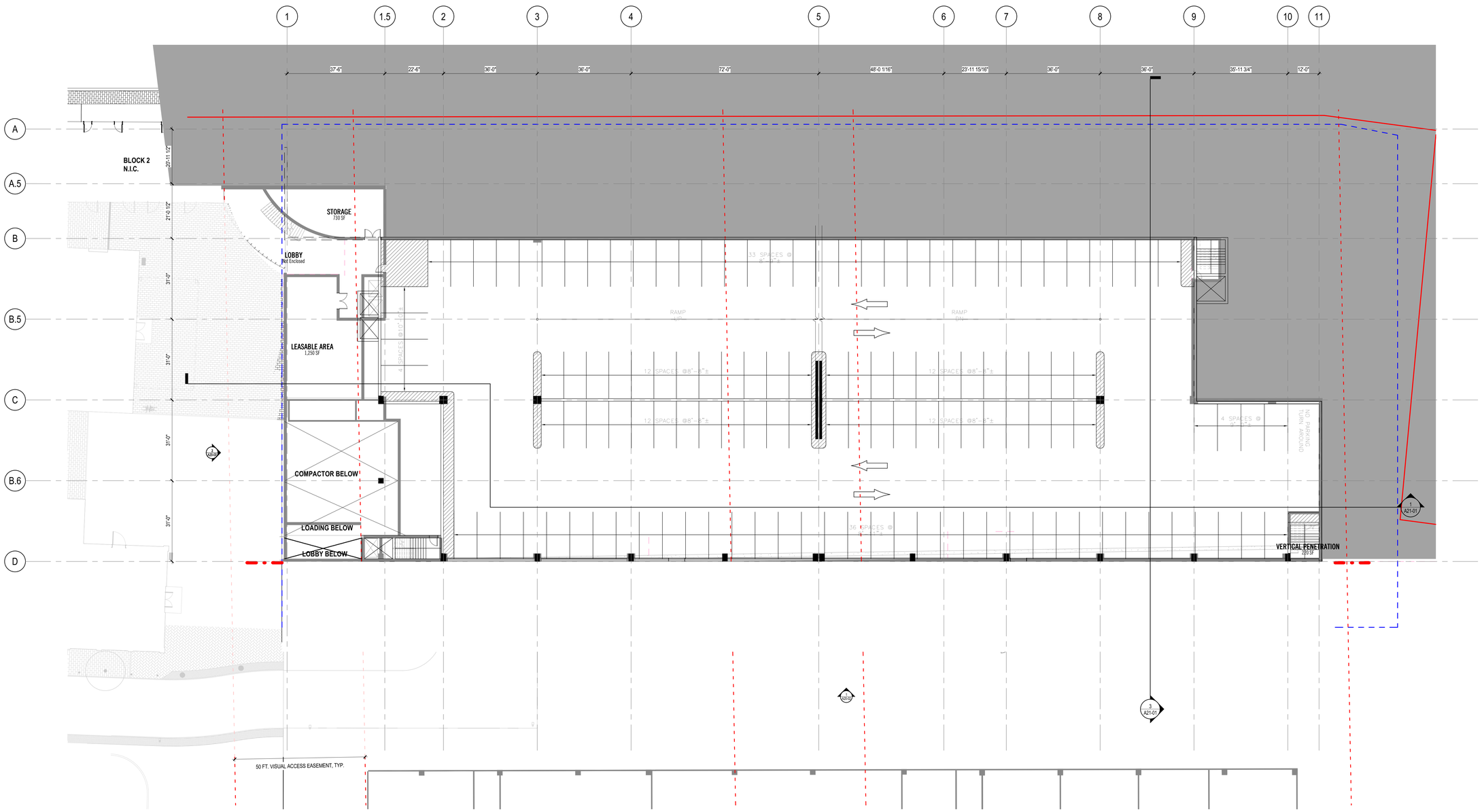
**LEVEL 01 PLAN**
**ELEV. 16'-0"**

**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**

FORESIDE
PORTLAND, MAINE

**PORTLAND FORESIDE DEVELOPMENT COMPANY**

254 COMMERCIAL ST SUITE 118
PORTLAND, ME 04101

KEYPLAN

ISSUE CHART

| MARK | ISSUE | DATE |
|---|---|---|

**SCHEMATIC DESIGN**
**11/08/2019**

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| **Job Number** | 157031.001 |
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| **Checked** | Checker |
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TITLE

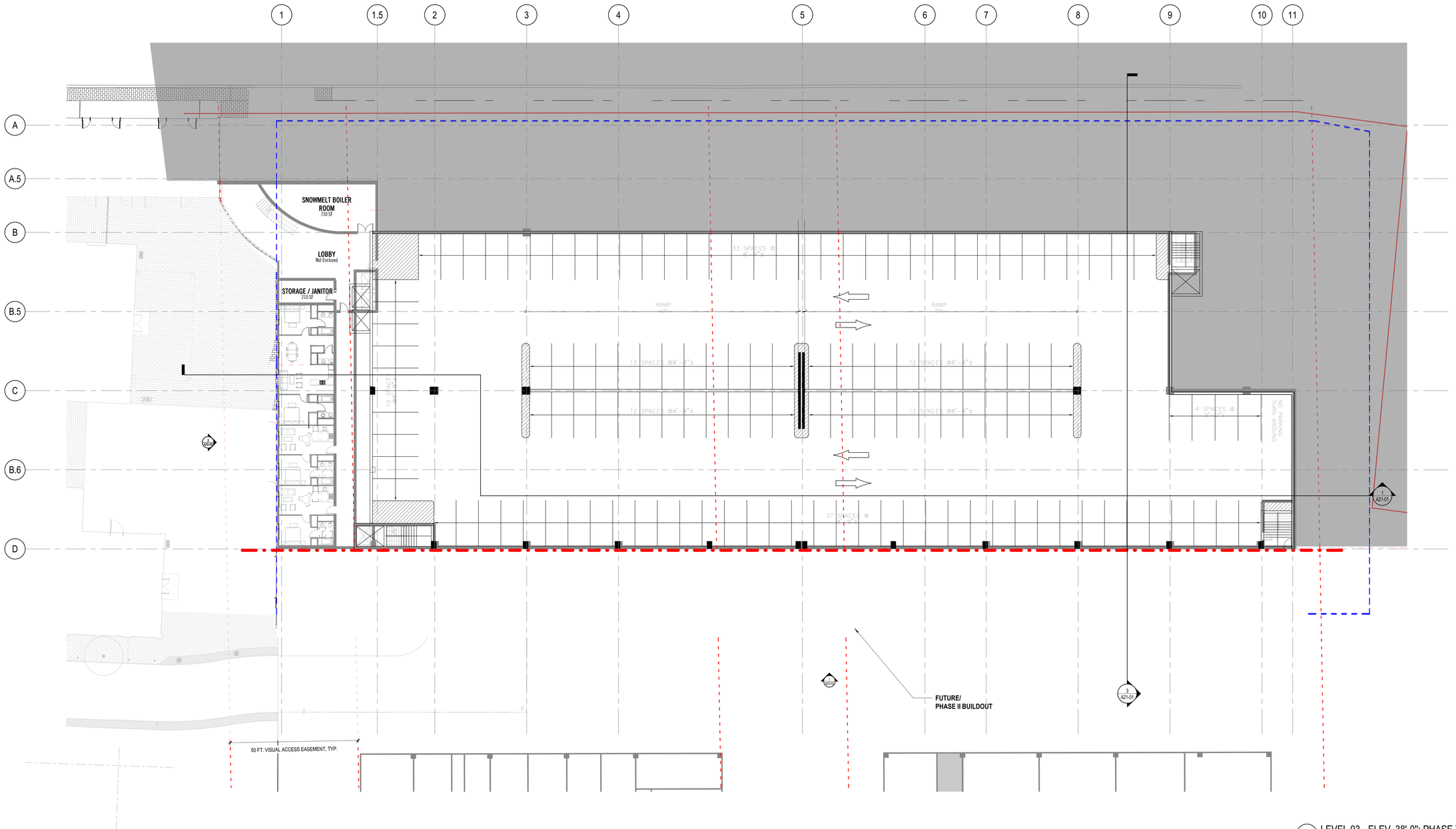
**LEVEL 02 PLAN ELEV. 27'-6"**

SHEET NUMBER

**A10-02**

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1 LEVEL 03 - ELEV. 38'-0": PHASE TWO
1/16" = 1'-0"


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**PROJECT**

**BLOCK FOUR**

FORESIDE
PORTLAND, MAINE

**PORTLAND FORESIDE DEVELOPMENT COMPANY**

254 COMMERCIAL ST SUITE 118
PORTLAND, ME 04101

**KEYPLAN**

**ISSUE CHART**

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**SCHEMATIC DESIGN**
**11/08/2019**

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| **Job Number** | 157031.001 |
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**TITLE**

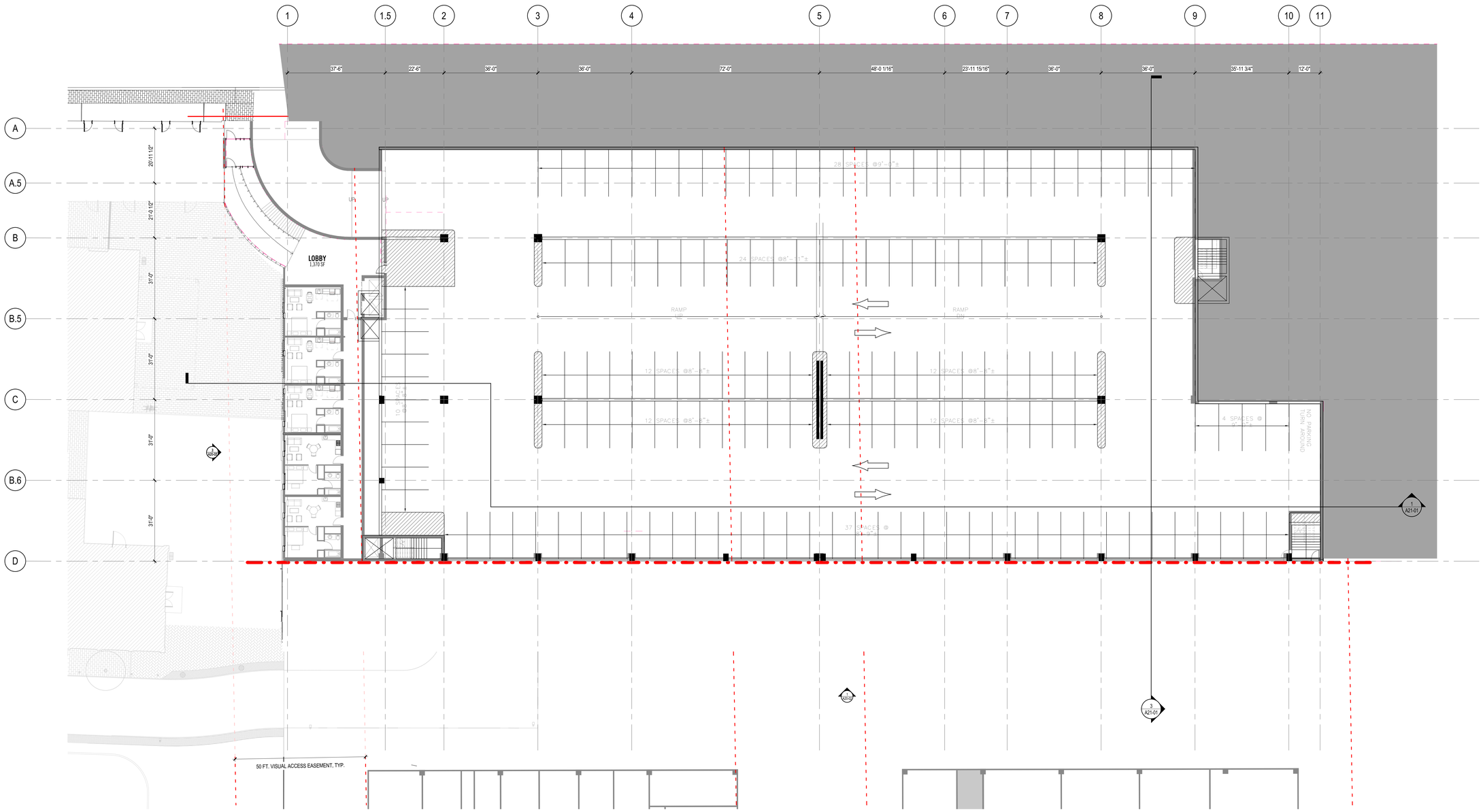
**LEVEL 03 PLAN ELEV.38'-0"**

**SHEET NUMBER**

**A10-03**

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1 LEVEL 04 - ELEV. 48'-6": PHASE TWO
1/16" = 1'-0"


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**PROJECT**

**BLOCK FOUR**

FORESIDE
PORTLAND, MAINE

**PORTLAND FORESIDE DEVELOPMENT COMPANY**

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**KEYPLAN**

**ISSUE CHART**

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| **Job Number** | 157031.001 |
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| **Checked** | Checker |
| **Approved** | Approver |

**TITLE**

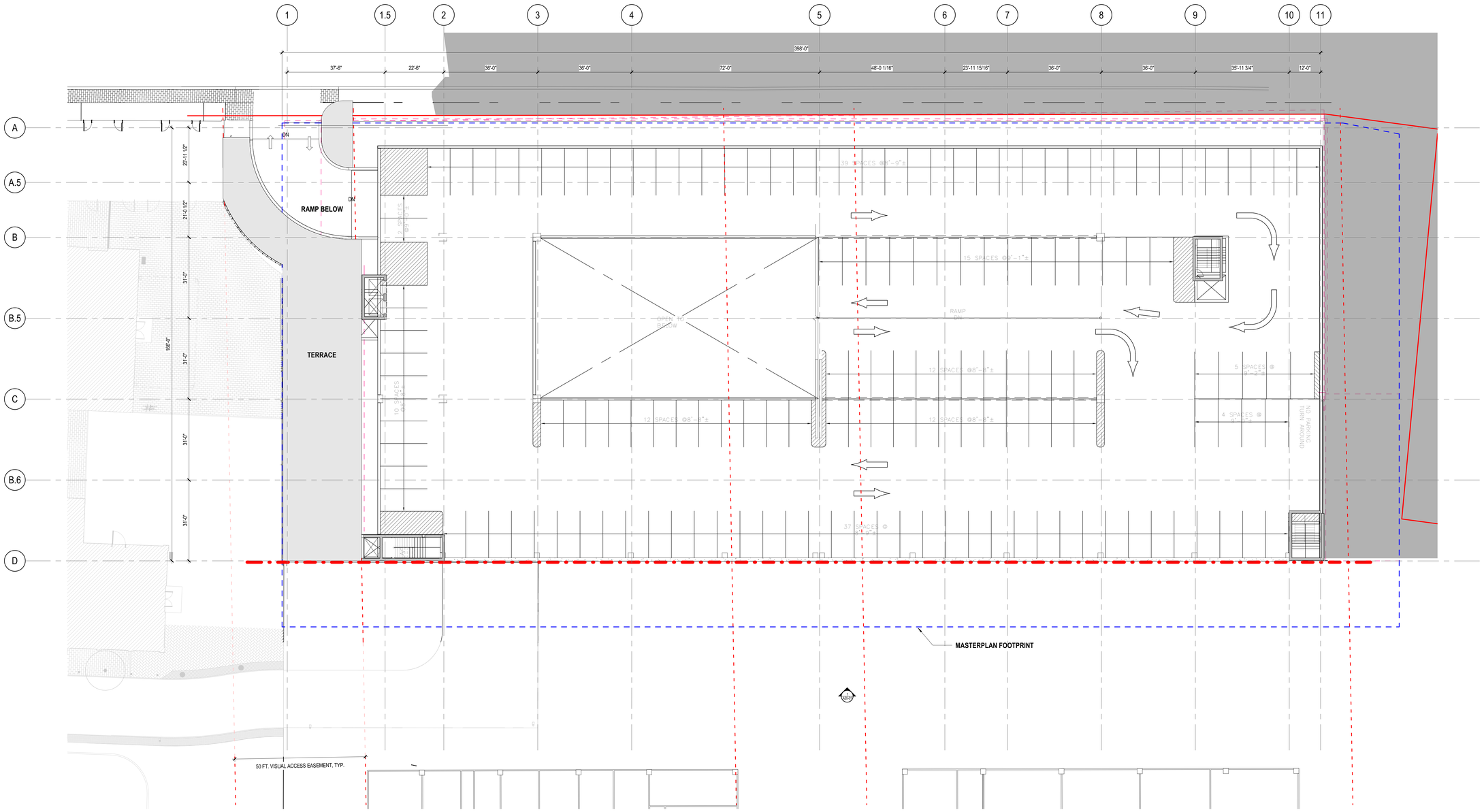
**LEVEL 04 PLAN ELEV. 48'-6"**

**SHEET NUMBER**

**A10-04**

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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 |
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**SCHEMATIC DESIGN**
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| **Job Number** | 157031.001 |
| **Drawn** | Author |
| **Checked** | Checker |
| **Approved** | Approver |

**TITLE**

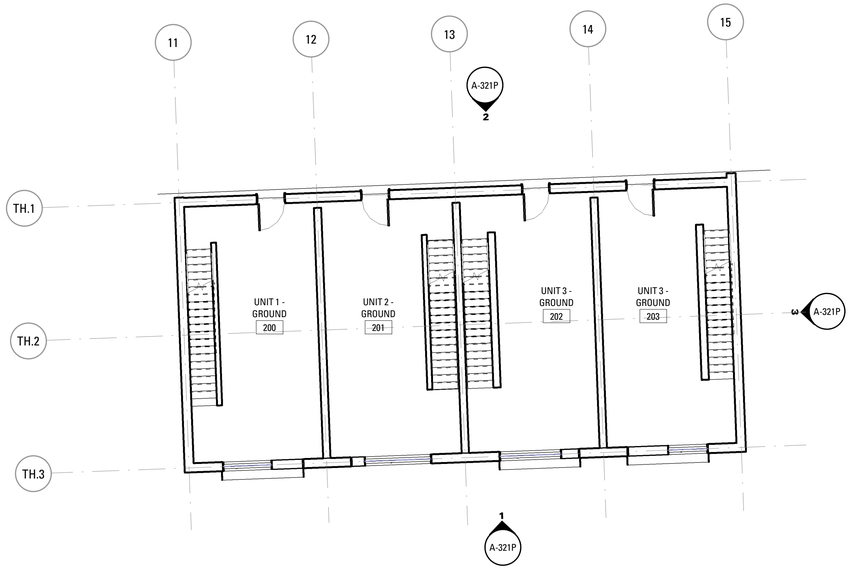
**ROOF PLAN ELEV. 59'-0"**

**SHEET NUMBER**

**A10-05**

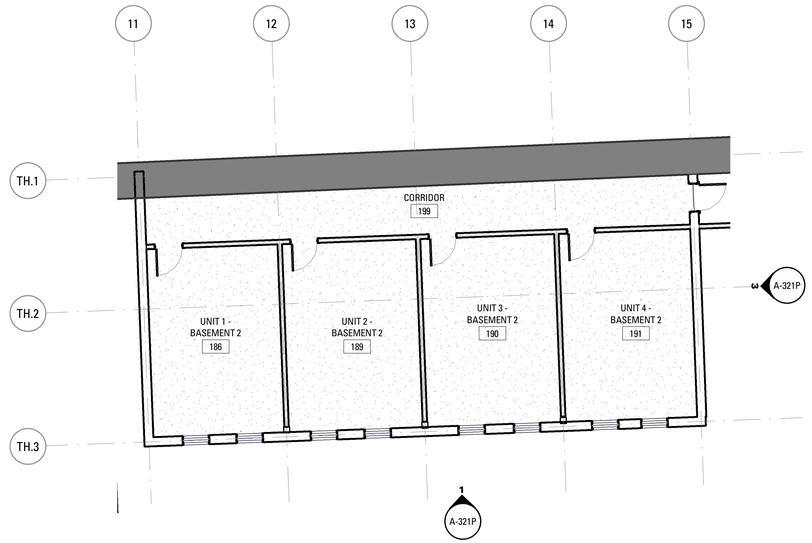
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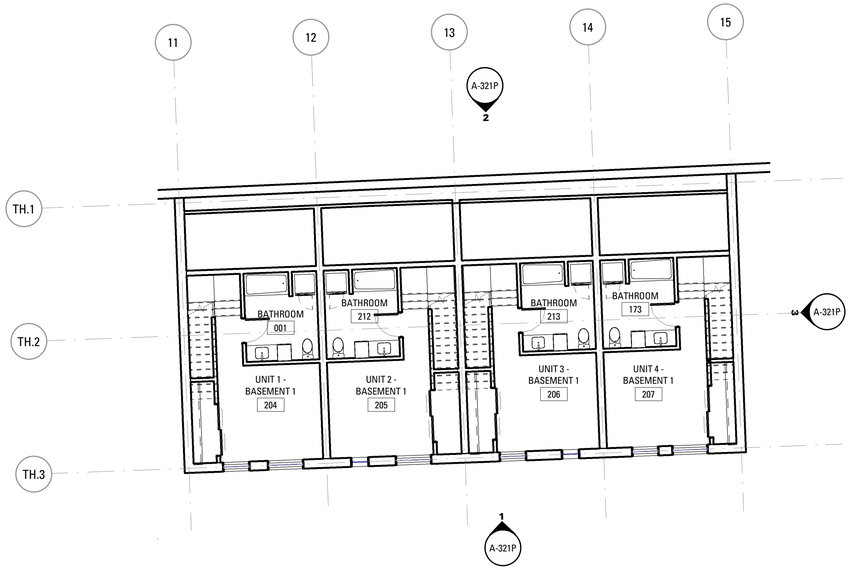

## 4 TOWNHOUSE - GROUND FLOOR

SCALE: 1/8" = 1'-0"



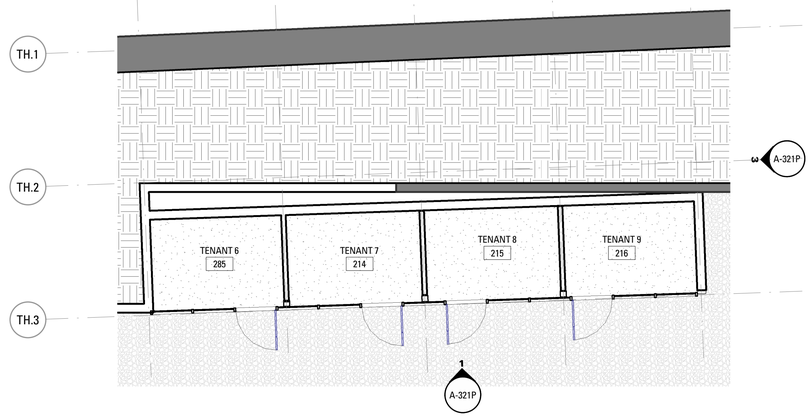

## 2 TOWNHOUSE- BASEMENT 2

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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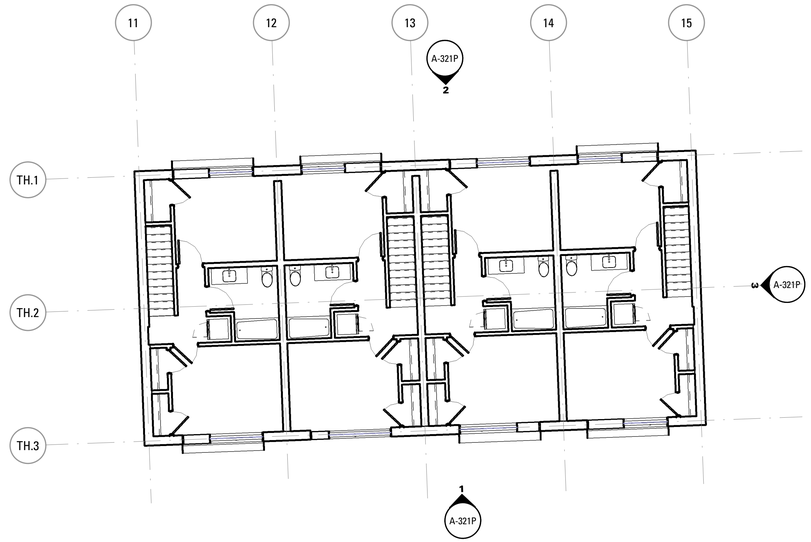
| Rev. | Date | Remarks |
|---|---|---|
| | | |

PORTLAND FORESIDE BLOCK 2

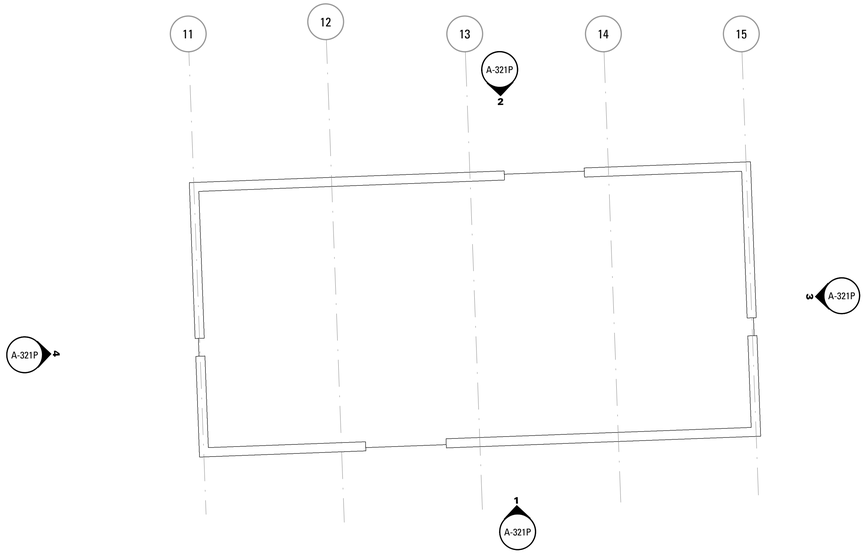
| | |
|---|---|
| Date | OCTOBER 25, 2019 |
| Scale | 1/8" = 1'-0" |
| Project Number | |
| Drawn By | Author |

TOWNHOUSE - FLOOR PLANS - SITE GRADE, BASEMENT 2, BASEMENT 1, GROUND FLOOR

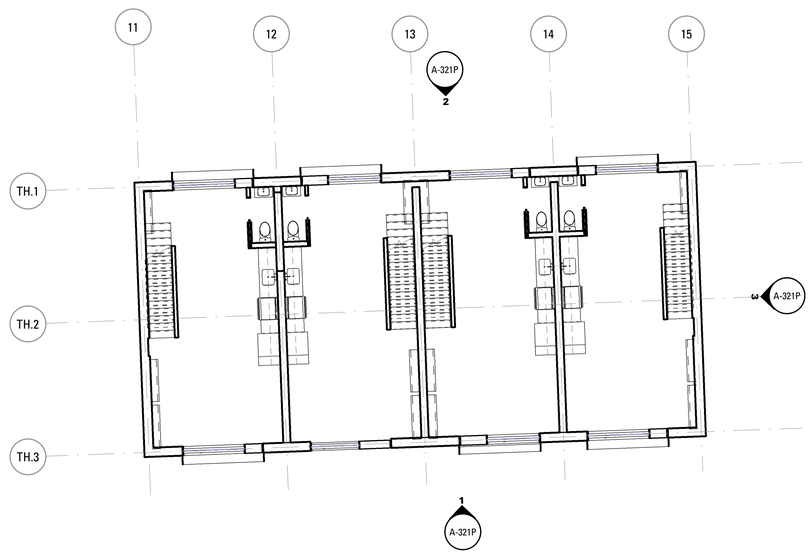
# A-121P




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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| | | |

PORTLAND FORESIDE BLOCK 2

| | |
|---|---|
| Date | OCTOBER 25, 2019 |
| Scale | 1/8" = 1'-0" |
| Project Number | |
| Drawn By | Author |

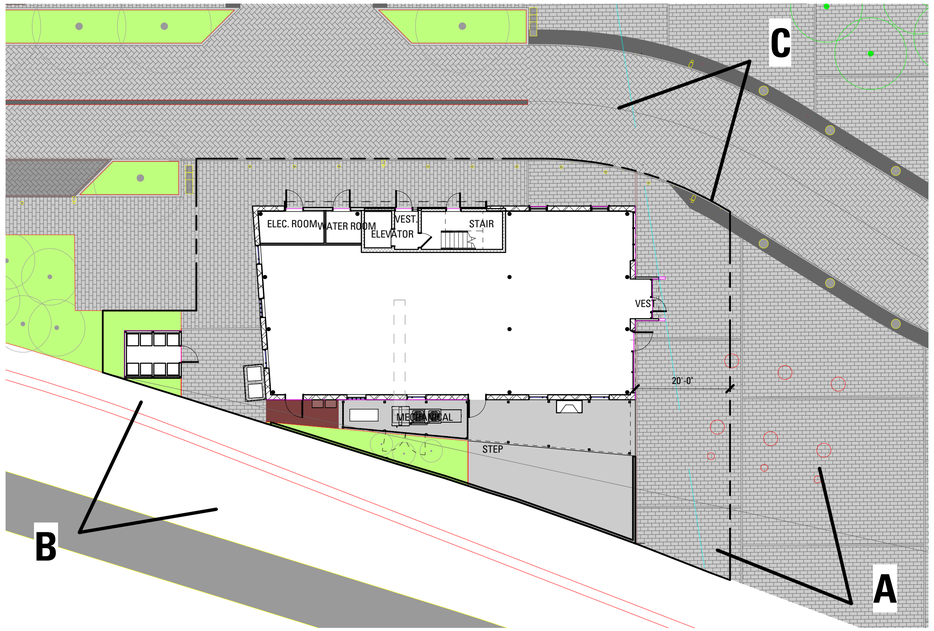
TOWNHOUSE - FLOOR PLANS - SECOND, THIRD, ROOF

# A-122P













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# 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)



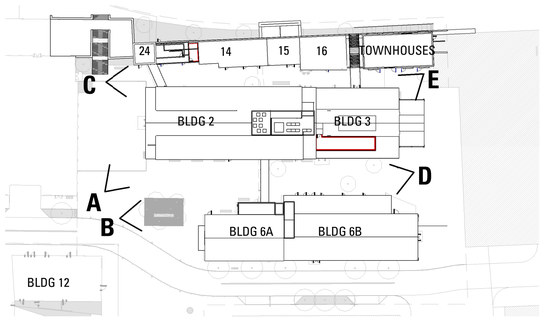
C - 24 + ALLEY BUILDINGS (LEFT/CENTER) AND 2/3 MARKETHALL (RIGHT)



D - BUILDING 6B (LEFT) AND 3/2 MARKETHALL (RIGHT)



E - BUILDING 4 AND 3/2 MARKETHALL




KEY PLAN

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| | | |

PORTLAND FORESIDE BLOCK 2

| | |
|---|---|
| Date | OCTOBER 25, 2019 |
| Scale | 1/64" = 1'-0" |
| Project Number | |
| Drawn By | Author |

RENDERINGS

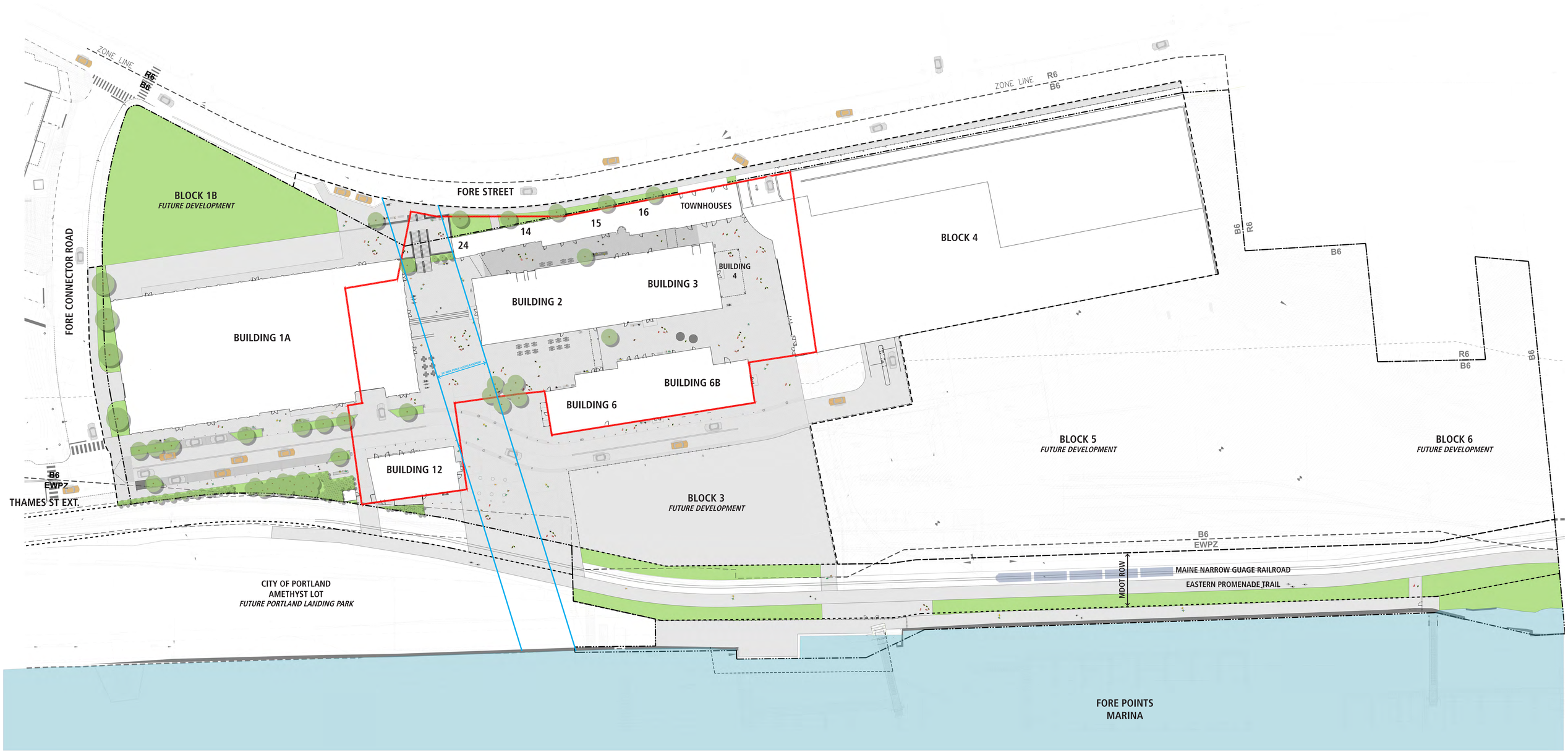
# G-000P

# PORTLAND HISTORIC PRESERVATION BOARD

## DECEMBER 4, 2019

## Portland Foreside Development Company **Block 2**

# CURRENT SITE PLAN




**Portland Foreside Development**
Portland, Maine

mbla | inc

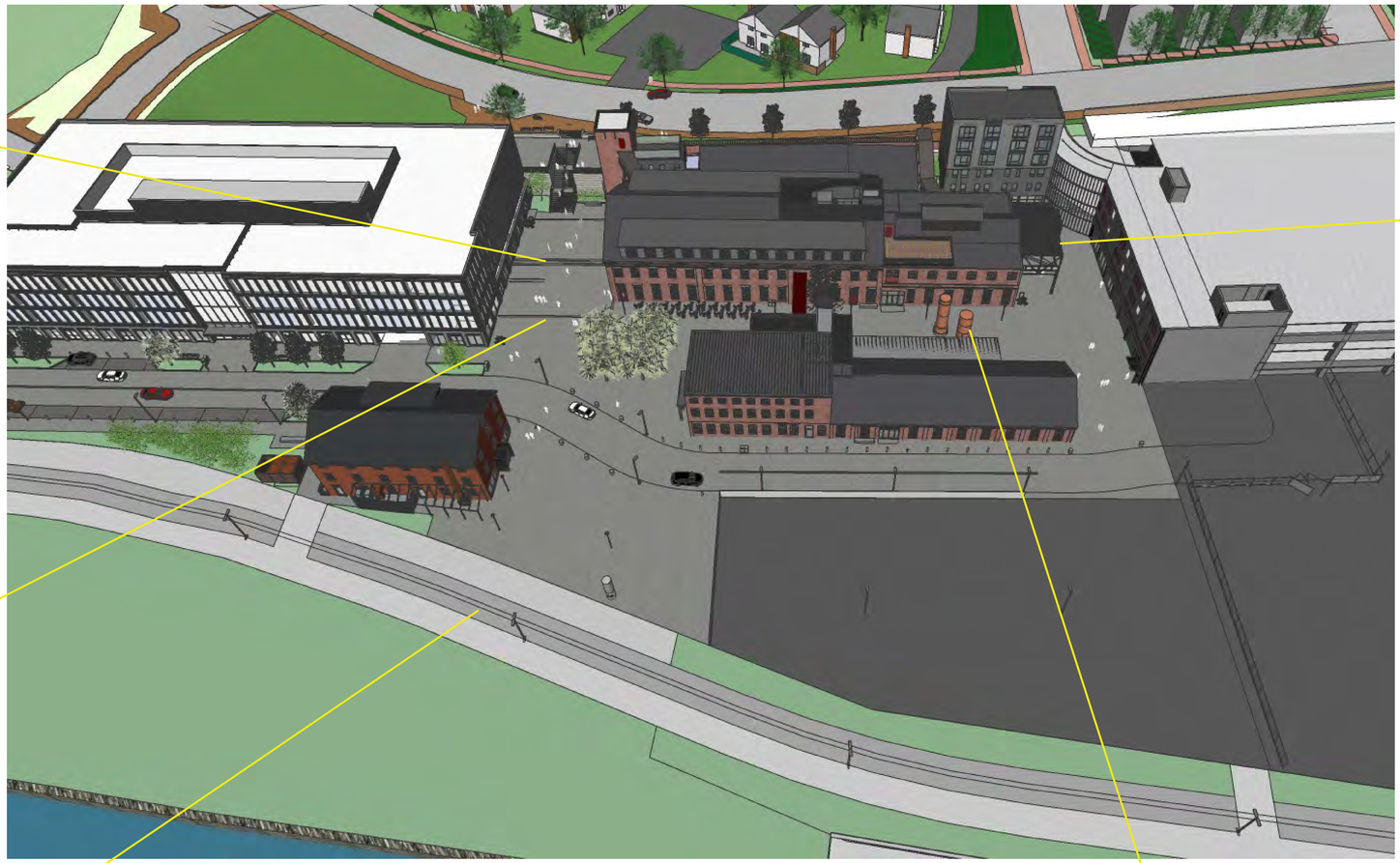
# PORTLAND COMPANY HISTORIC SITE ELEMENTS - THE STORY OF THE PORTLAND COMPANY

## MEMORY OF NARROW GUAGE AND STANDARD TRACKS
representative tracks inlay in pavers



## MEMORY OF BUILDING 1
brick inlay in pavers, actual width of walls





## MEMORY OF BUILDING 4
steel framing







## RAILWAY CONNECTION
continued operation of the Maine Narrow Guage Railroad

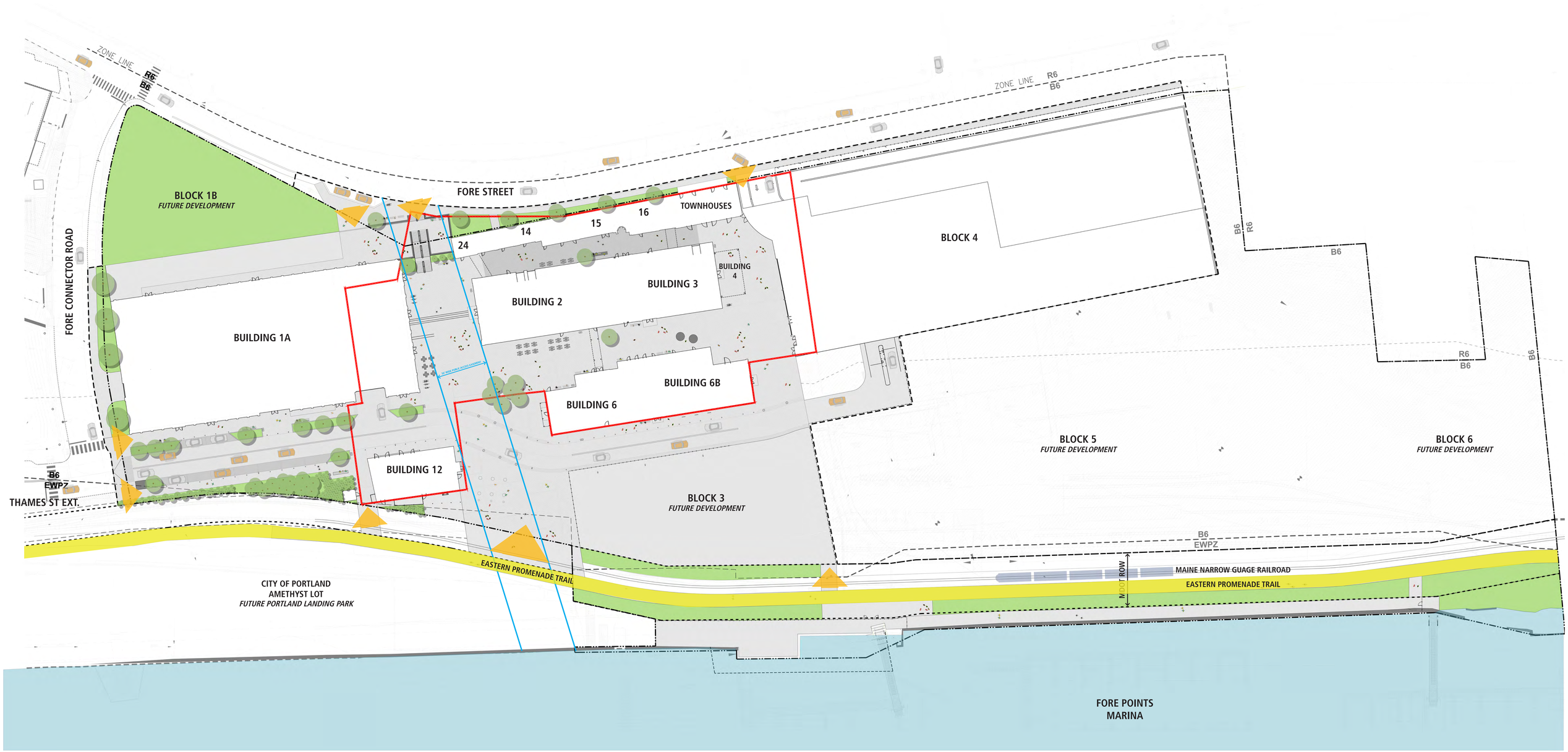
## HISTORIC ARTIFACTS WATER TANK AND BOILERS
one to remain in existing location, two to be relocated





**Portland Foreside Development**
Portland, Maine

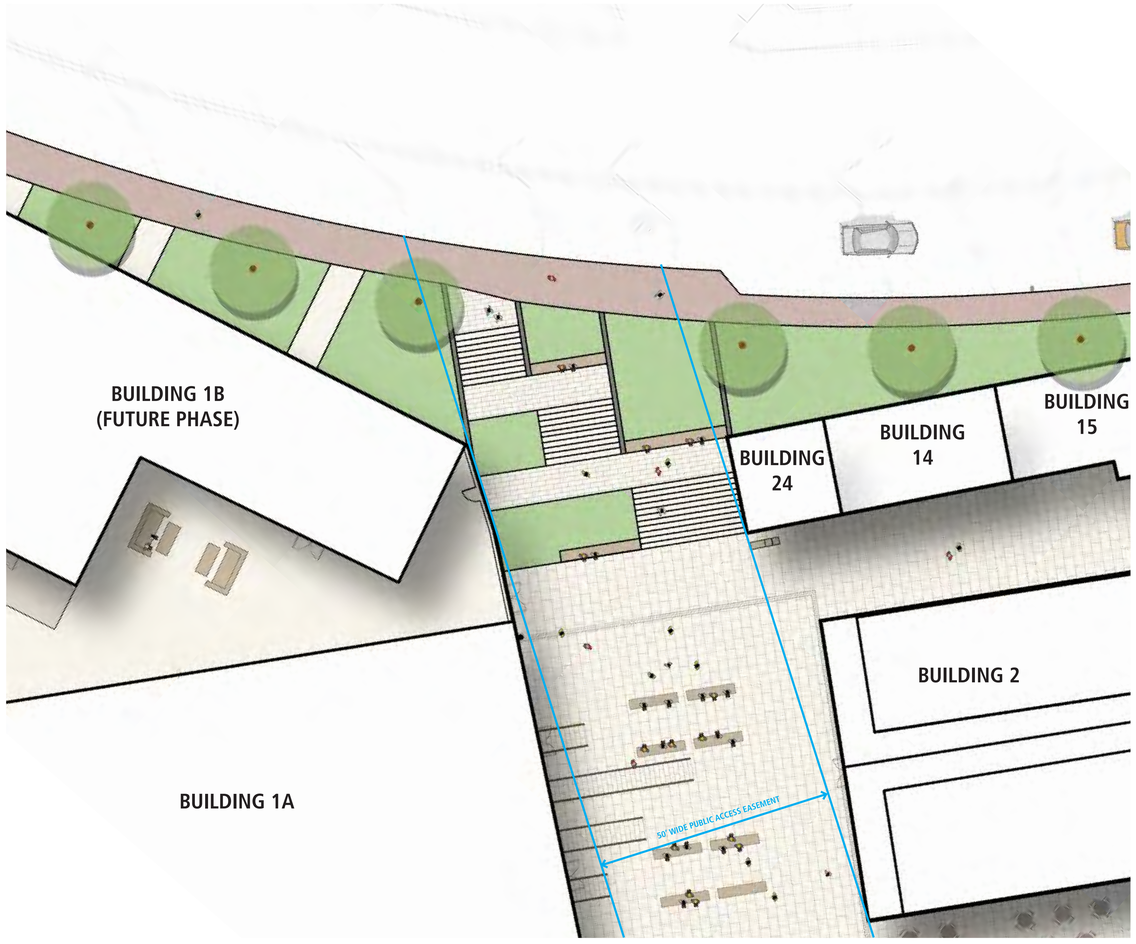
# PEDESTRIAN SITE ACCESS




**Portland Foreside Development**
Portland, Maine

mbla | inc

# STAIR DESIGN




MASTER DEVELOPMENT PLAN, 2016




CURRENT DESIGN, 2019







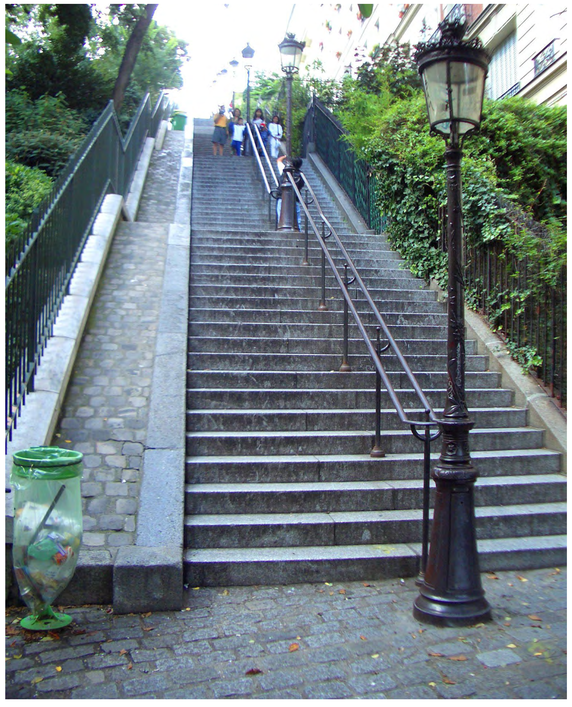
**Portland Foreside Development**
Portland, Maine

# STAIR PRECEDENT



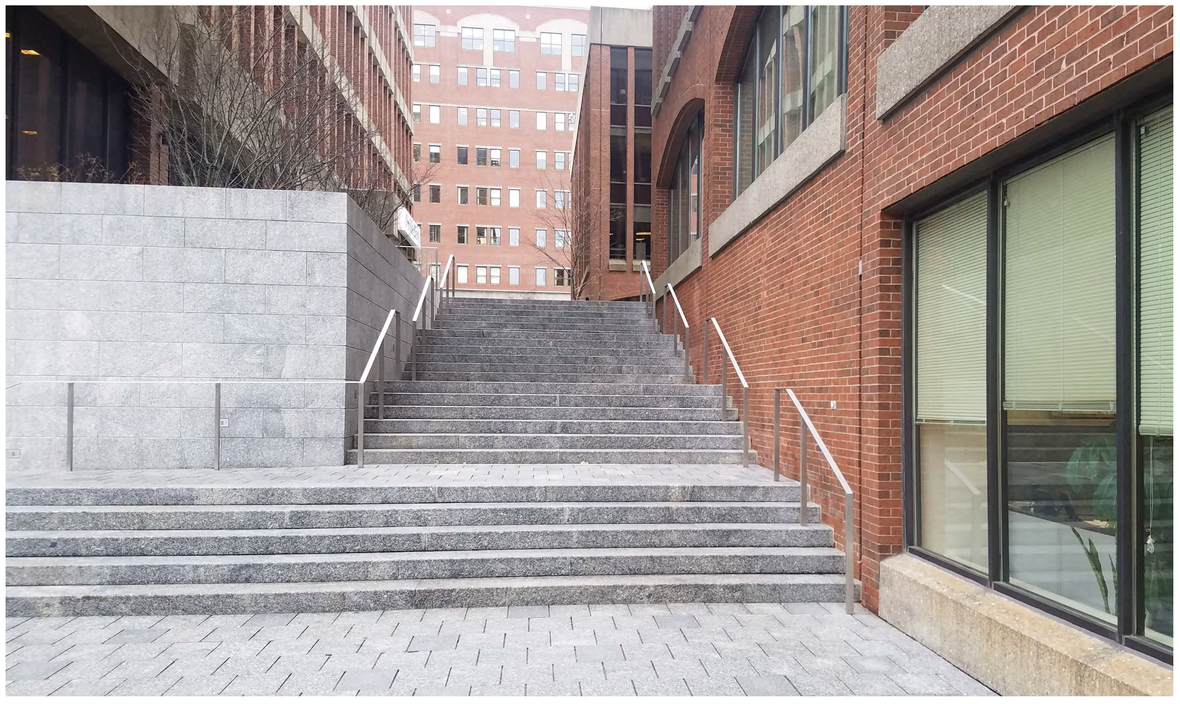
**SPANISH STEPS**
ROME, ITALY
16’ WIDE (SIDES)







**RUE DU MONT CENIS STAIRS**
MONTMARTE, PARIS, FRANCE
10’ WIDE



**CANAL PLAZA STAIR**
PORTLAND, MAINE
14’ WIDE

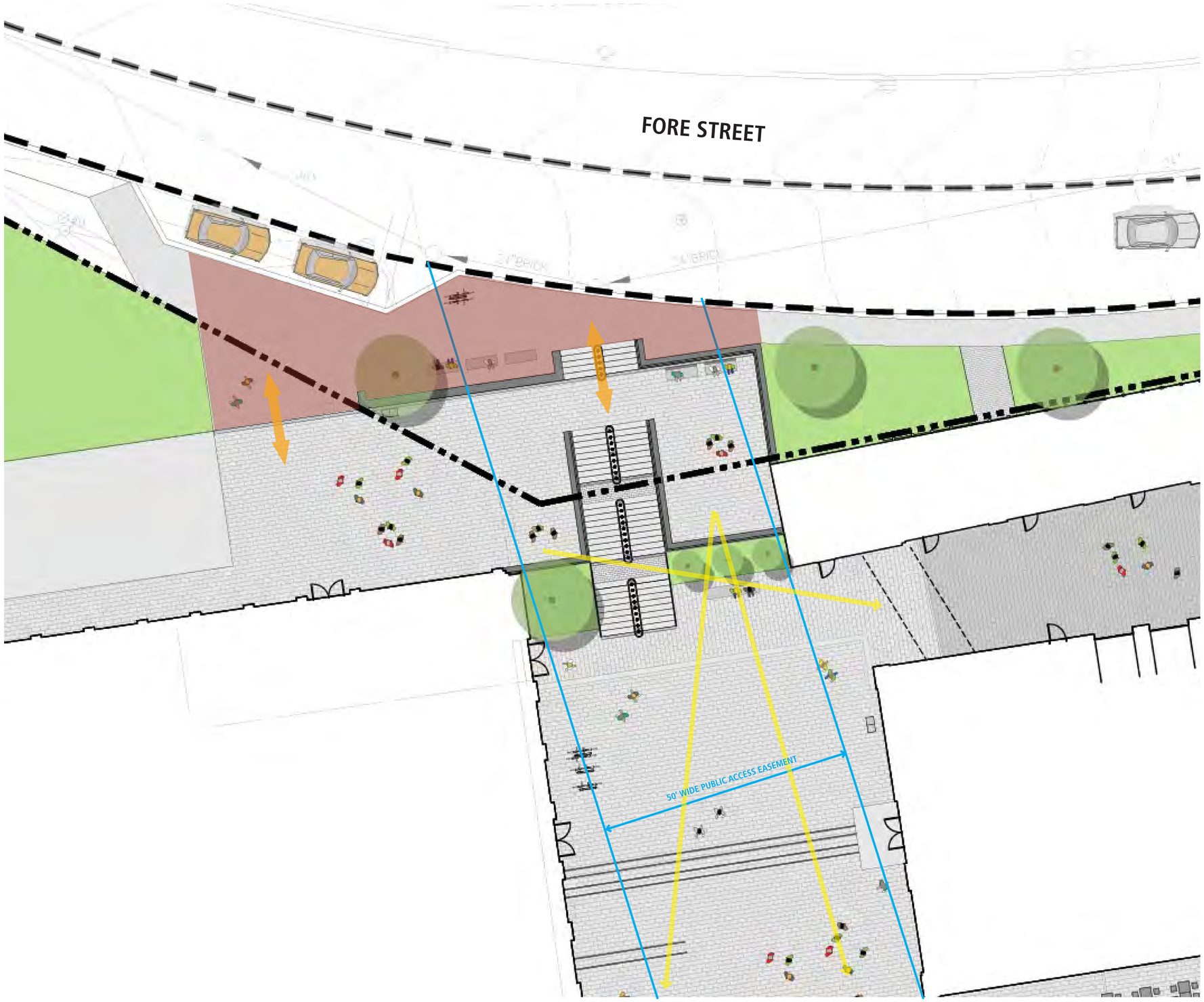
# STAIR MATERIAL






**Portland Foreside Development**
Portland, Maine

# FORE STREET PLAZA




**Portland Foreside Development**
Portland, Maine

# VIEW COMING DOWN FORE STREET



**Portland Foreside Development**
Portland, Maine

# VIEW LOOKING UP FORE STREET




**Portland Foreside Development**
Portland, Maine

# VIEW OF FORE STREET PLAZA




**Portland Foreside Development**
Portland, Maine



# VIEW FROM BUILDING 2 PLAZA




**Portland Foreside Development**
Portland, Maine

# VIEW FROM BUILDING 12 PLAZA




**Portland Foreside Development**
Portland, Maine

## **ARCHITECTURAL DESIGN:** BUILDING 1 & RETAIL FRONTAGE









1. BUILDING WILL BE LARGE BY PORTLAND STANDARDS, USE MULTIPLE FACADE MATERIALS TO PROVIDE SCALE WHILE MAINTAINING A COHESIVE DESIGN IDEA.

**2. DIFFERENTIATION OF GROUND FLOOR IS IMPORTANT, DISTINCT EXPRESSION FROM FLOORS ABOVE WITH MATERIALITY AND POTENTIALLY CANOPY TO CREATE A HORIZONTAL .**

**3. OPENING GROUND FLOOR SPACES TO THE OUTSIDE WITH LARGE DOORS TO ENGAGE RETAIL ACTIVITY.**

4. INTEGRATION OF OFFICE TENANT SIGNAGE IS IMPORTANT IN CREATING A SINGULAR, SYNTHETIC ARCHITECTURE.

**5. APPRECIATE THE FACTORY WINDOW AESTHETIC, MOST APPROPRIATE AT SCALE OF PEDESTRIAN VISITOR.**

6. CONSIDER BUILDING IMAGE FROM THE WATER, WILL BE IMPORTANT FOR TENANT PRESENCE AND IMAGE.

7. ROOF IS VERY VISIBLE, CONSIDER OCCUPIABLE ROOF, TRELLIS, AND/OR SOLAR, RELOCATING SERVICES, MECHANICAL TO GARAGE WHERE POSSIBLE.

8. WOOD ELEMENTS ARE APPEALING FOR AESTHETICS & SUSTAINABILITY, CHARACTER TO BE REFINED RATHER THAN RUSTIC.

9. TALL, VERTICAL EXPRESSION OF UPPER FLOOR WINDOWS CONSISTENT WITH PORTLAND FABRIC

## **ARCHITECTURAL DESIGN:** BUILDING 1 & RETAIL FRONTAGE










## **ARCHITECTURAL DESIGN:** BUILDING 4 & RETAIL FRONTAGE










# **ARCHITECTURAL DESIGN:** BUILDING 1 & ARTICULATION






PORTLAND EXAMPLES:

**1. BUILDING WILL BE LARGE BY PORTLAND STANDARDS, USE MULTIPLE FACADE MATERIALS TO PROVIDE SCALE WHILE MAINTAINING A COHESIVE DESIGN IDEA.**

2. DIFFERENTIATION OF GROUND FLOOR IS IMPORTANT, DISTINCT EXPRESSION FROM FLOORS ABOVE WITH MATERIALITY AND POTENTIALLY CANOPY TO CREATE A HORIZONTAL .

3. OPENING GROUND FLOOR SPACES TO THE OUTSIDE WITH LARGE DOORS TO ENGAGE RETAIL ACTIVITY.

4. INTEGRATION OF OFFICE TENANT SIGNAGE IS IMPORTANT IN CREATING A SINGULAR, SYNTHETIC ARCHITECTURE.

5. APPRECIATE THE FACTORY WINDOW AESTHETIC, MOST APPROPRIATE AT SCALE OF PEDESTRIAN VISITOR.

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8. WOOD ELEMENTS ARE APPEALING FOR AESTHETICS & SUSTAINABILITY, CHARACTER TO BE REFINED RATHER THAN RUSTIC.

**9. TALL, VERTICAL EXPRESSION OF UPPER FLOOR WINDOWS CONSISTENT WITH PORTLAND FABRIC**

# **ARCHITECTURAL DESIGN:** BUILDING 1 & ARTICULATION






PORTLAND EXAMPLES:



## **ARCHITECTURAL DESIGN:** BUILDING 4 & ARTICULATION











CAMPUS ENTRANCE LOOKING EAST




BUILDING ONE SOUTHEAST CORNER



EXISTING CONTEXT: LOOKING TOWARD BUILDING ONE




BUILDING FOUR STAIR ENTRANCE




NORTH VIEW TOWARD BLOCK TWO AND BLOCK FOUR




BUILDING 12, FACING SOUTH



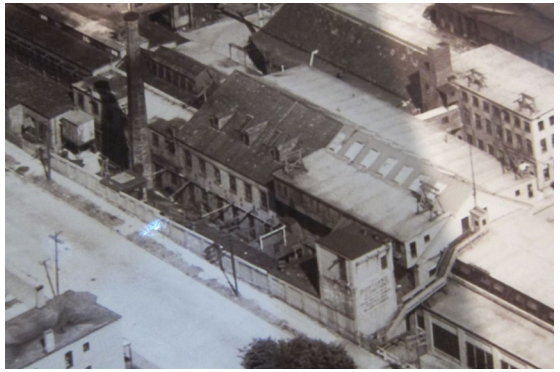

BUILDING 6 AND WIDE ALLEY



BUILDING 2 AND NARROW ALLEY

# Interpretive Elements

## Physical Elements- visual & direct contact



1. Retain with public access: Buildings 2, 3, 6A, 6B, 24, 16
2. Restore Building 2 original west elevation
3. Retain portions of Buildings 15 and 4 with vaults and wooden jib crane
4. Direct attention to Seawall and buttress walls at Embankment buildings
5. Reconstruct bridge between Buildings 2 and 6A
6. Reconstruct Building 12, Pattern Storehouse
7. Restore/reconstruct Fore Street paneled brick wall
8. Salvage and display two boilers and a cast iron tank to convey scale of Portland Company products
9. Reuse salvaged cast iron columns at Building 6A entrance

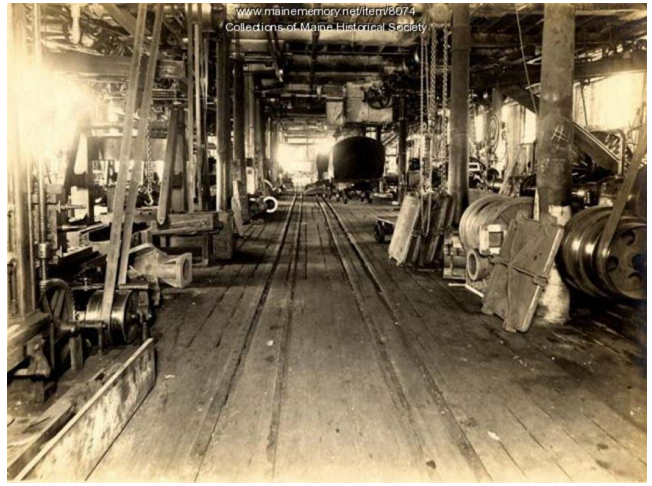


# Interpretive Elements

## Portland Company Story Elements

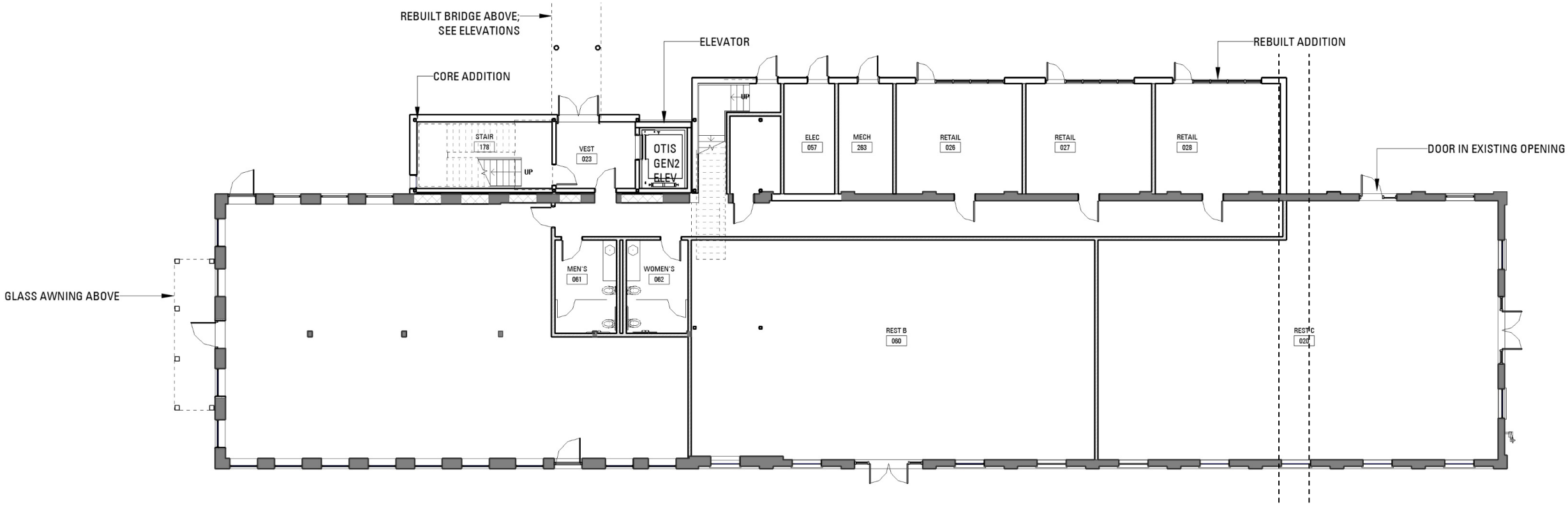
1. Scale of site operations and railways through Old Port
   - Very large aerial photos on glazed entrances
   - Website connect to Morrow-Spitzer history of Portland Company
2. Scale of fabricated products: trains, marine equipment, boilers, elevators
   - Prominent locations for boilers and tank
   - Large photos of objects in their fabrication spaces
3. Factory workers and industrial workspaces
   - Large photos in spaces where they were taken (Building 2)
4. Ghost presence of Building 1, Erecting Shed
   - Pavement inserts to locate footprint
   - Pavement inserts for narrow gauge and standard rails at central door to Building 2





# Building 6 Ground Floor Plan

The proposed addition will leave exposed one door and one window. The addition would need to be pulled back further to expose another window with adequate space.



# Building 6 Elevation

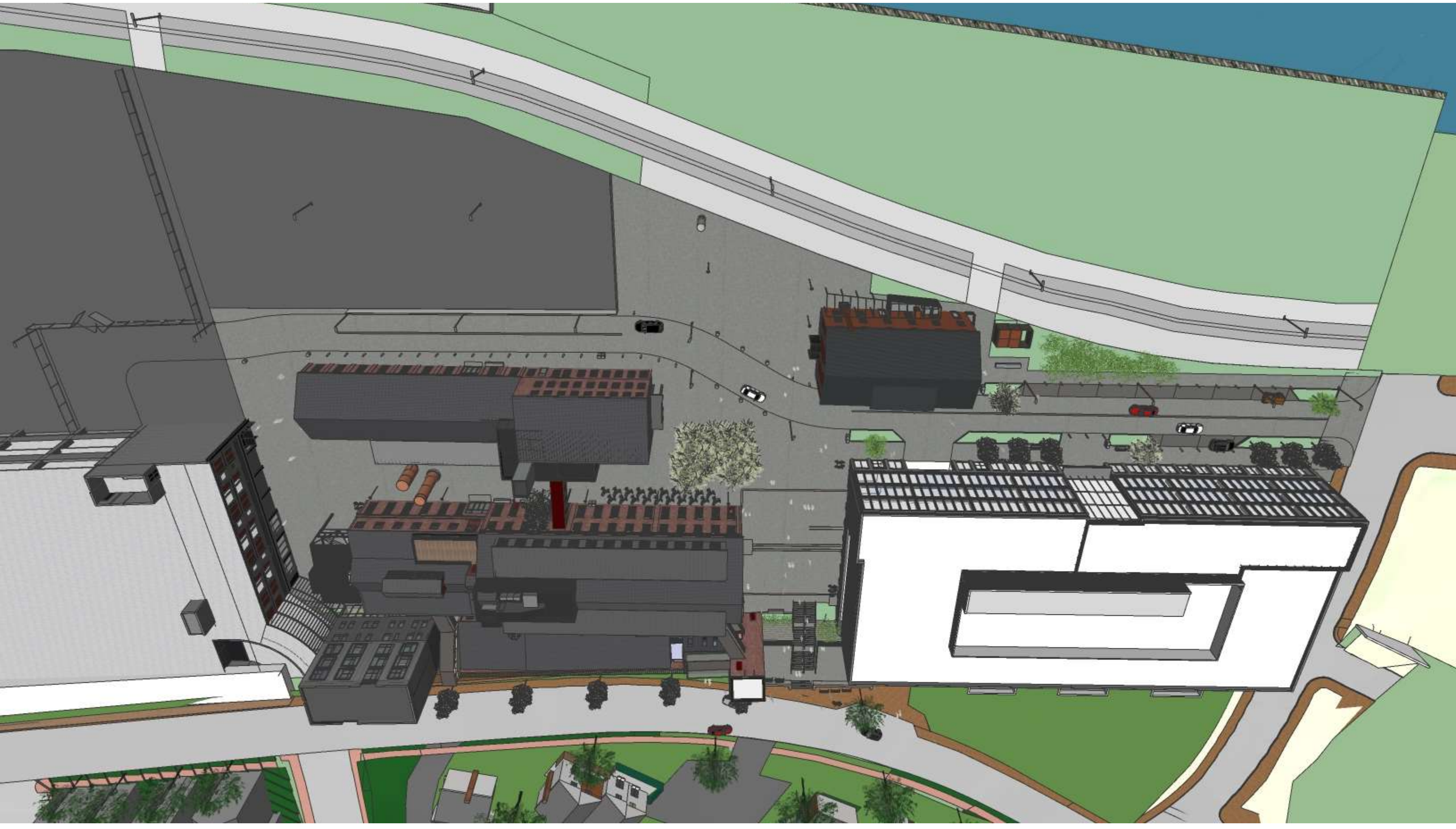



THE
PORTLAND
COMPANY
MARINE COMPLEX




PORTLAND
COMPANY


BIK 04



# 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

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# 58 Fore Street Phase 1 Summary
# Construction Management Plan

Prepared For: Portland Department of Planning & Urban Development Department

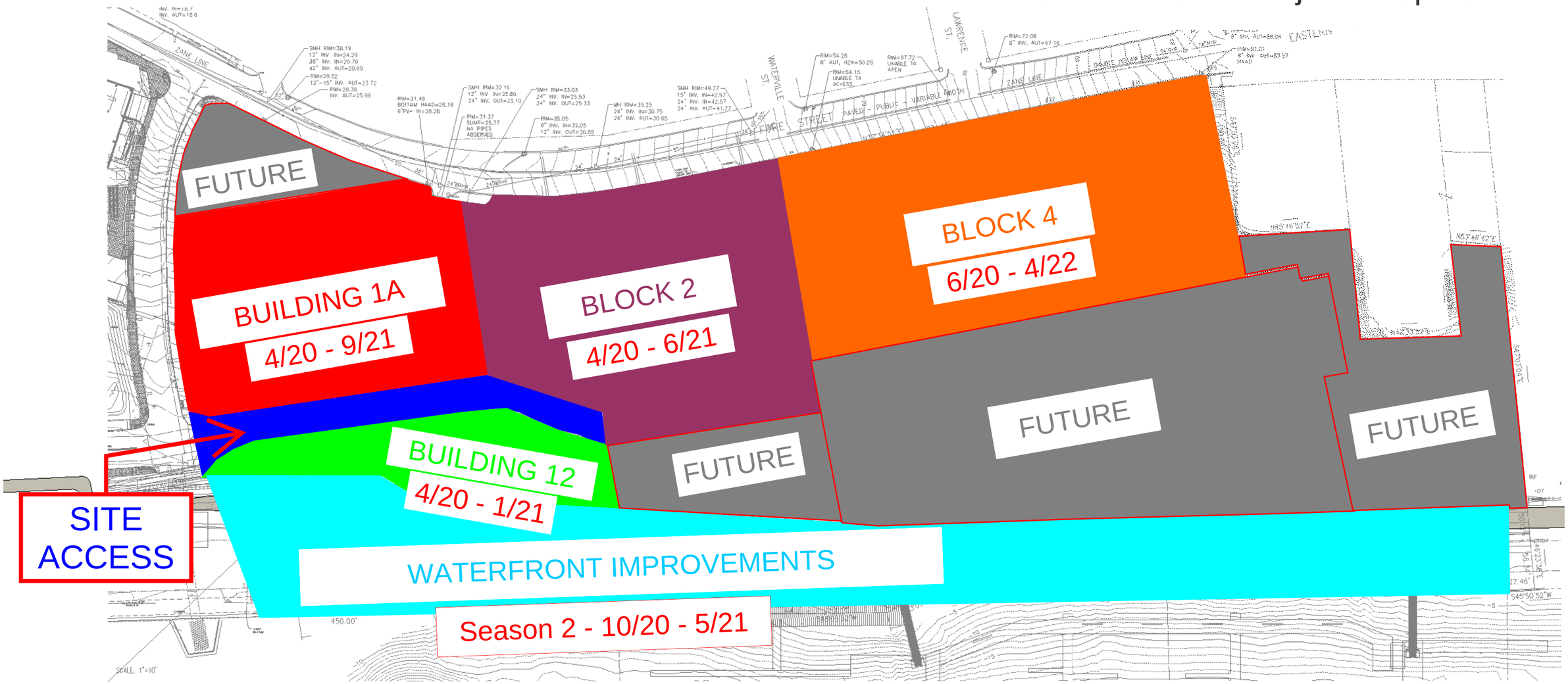
Project Proponent: Portland Foreside Development Company LLC

Construction Manager: Consigli Construction Company Inc

# Portland Foreside

Master Planning | April 2020 - April 2022

## Phase 1 - Overall Project Scope & Timing




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November 6, 2019

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# 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

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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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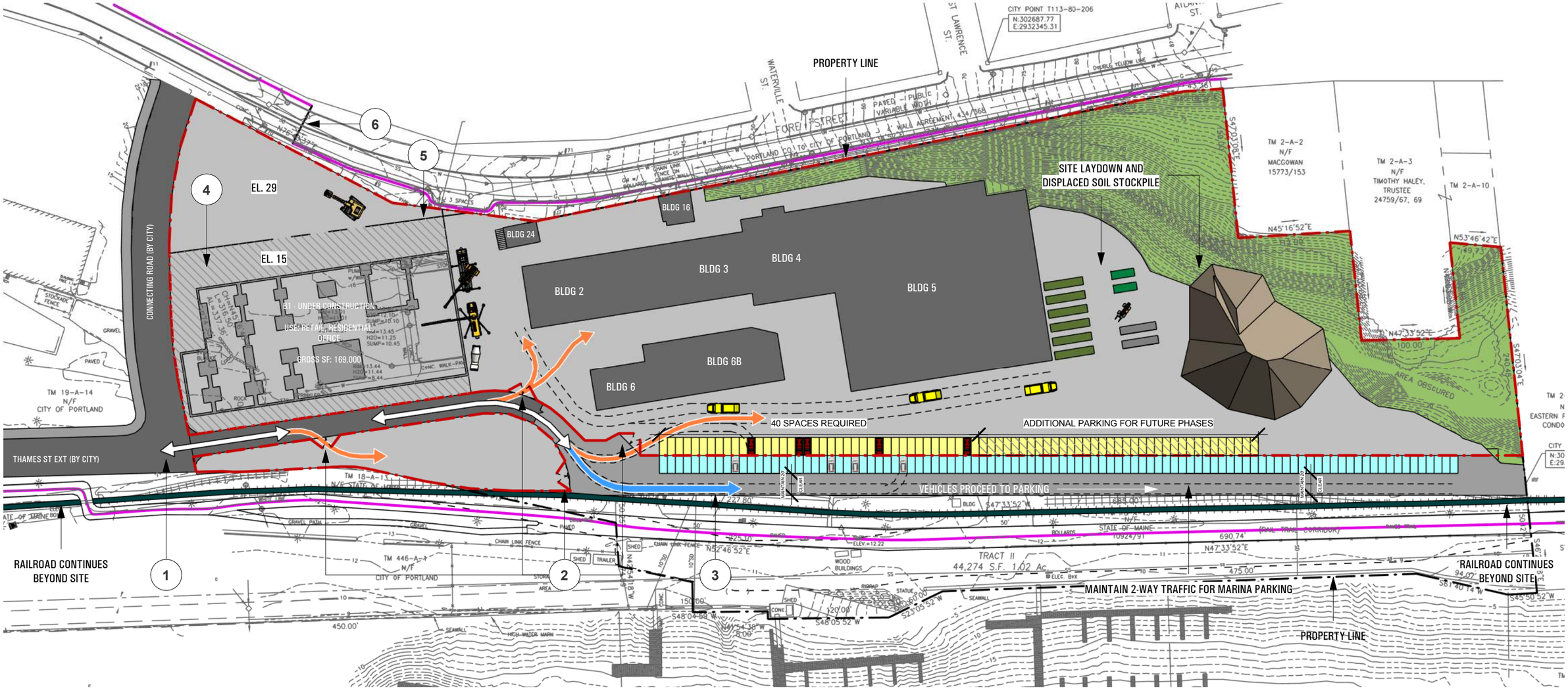
*Est. 1905*

# 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



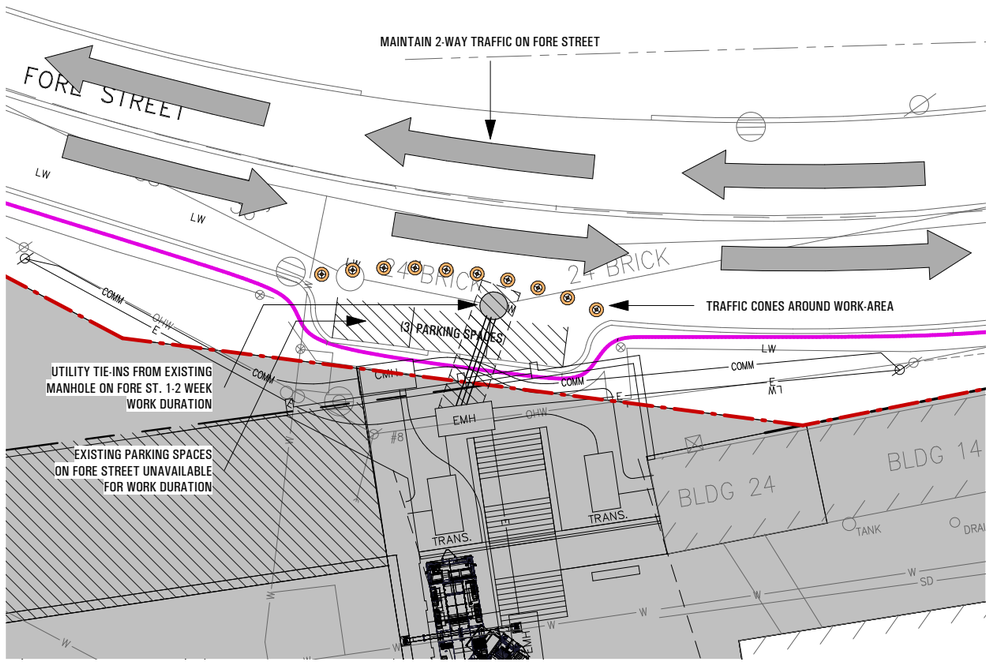
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# 58 FORE ST - BLOCK 1A

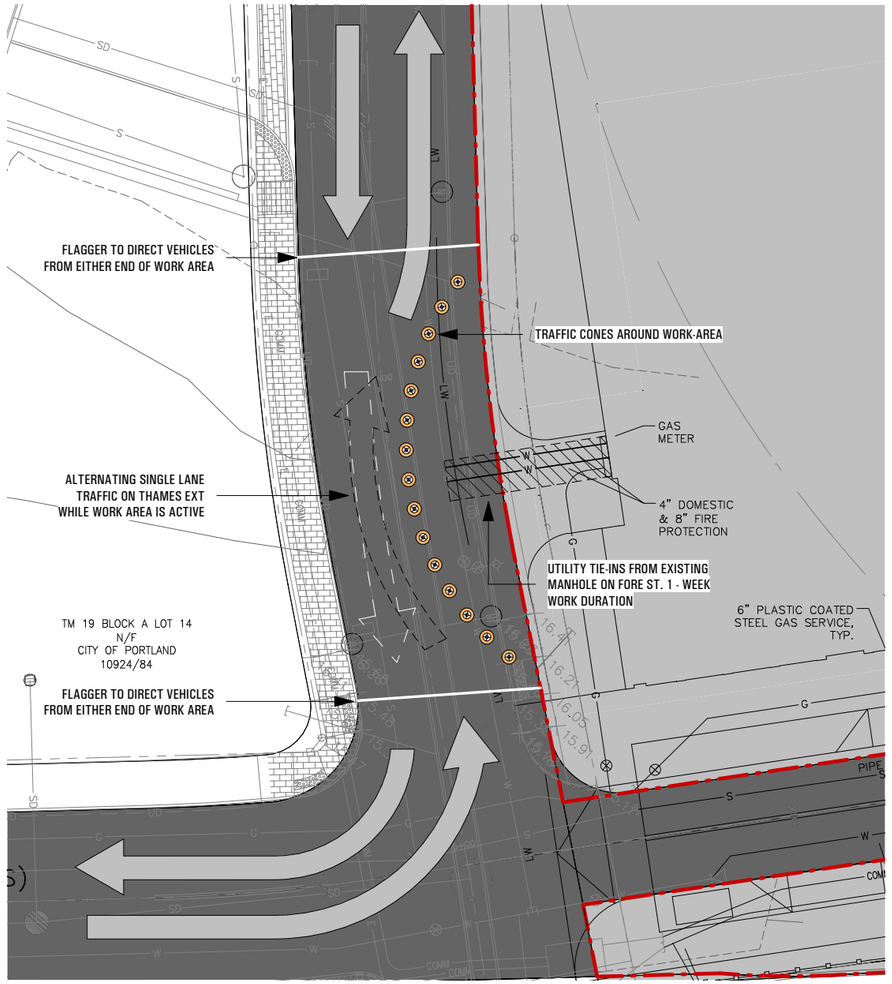
## CONSTRUCTION MANAGEMENT PLAN

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"



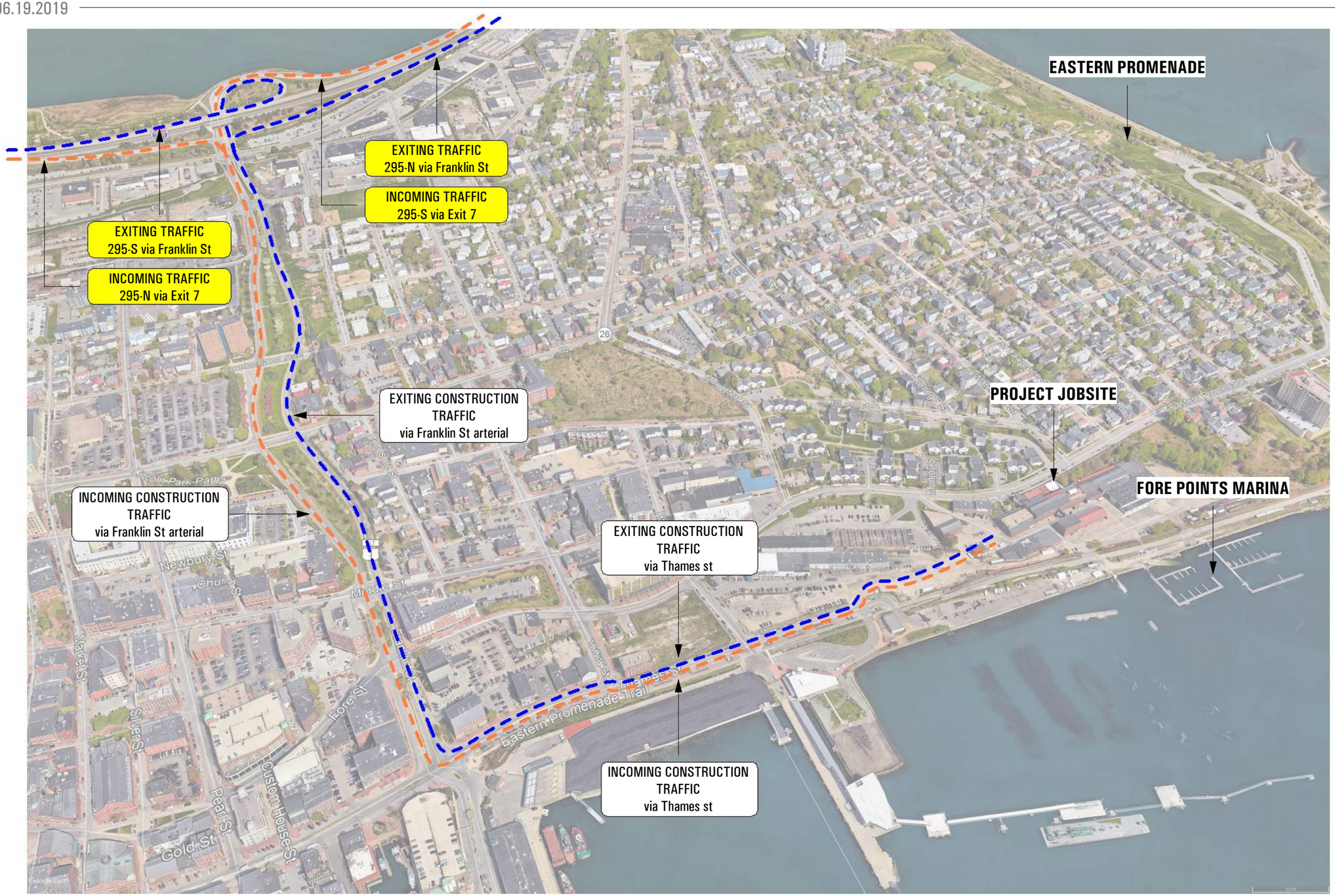
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# 58 FORE ST - BLOCK 1A

## 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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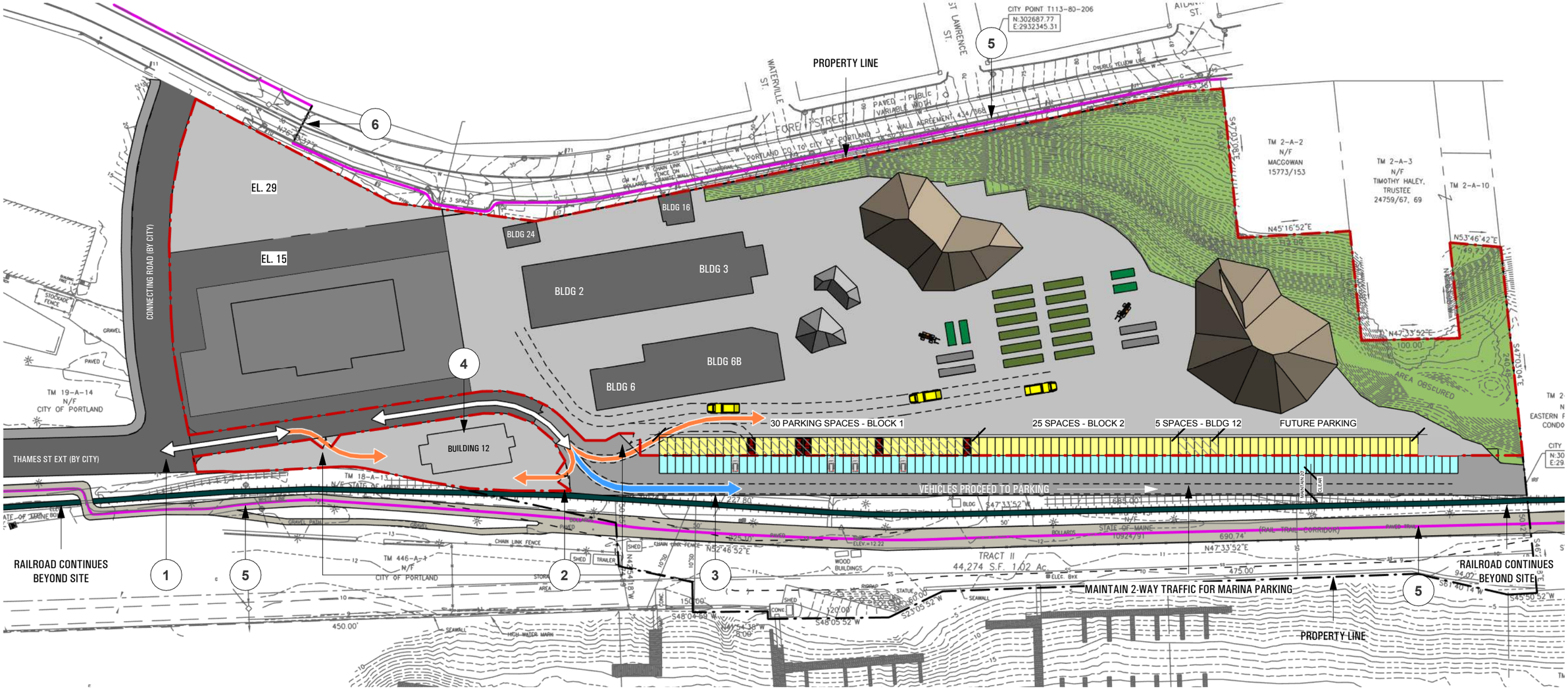
*Est. 1905*

# 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



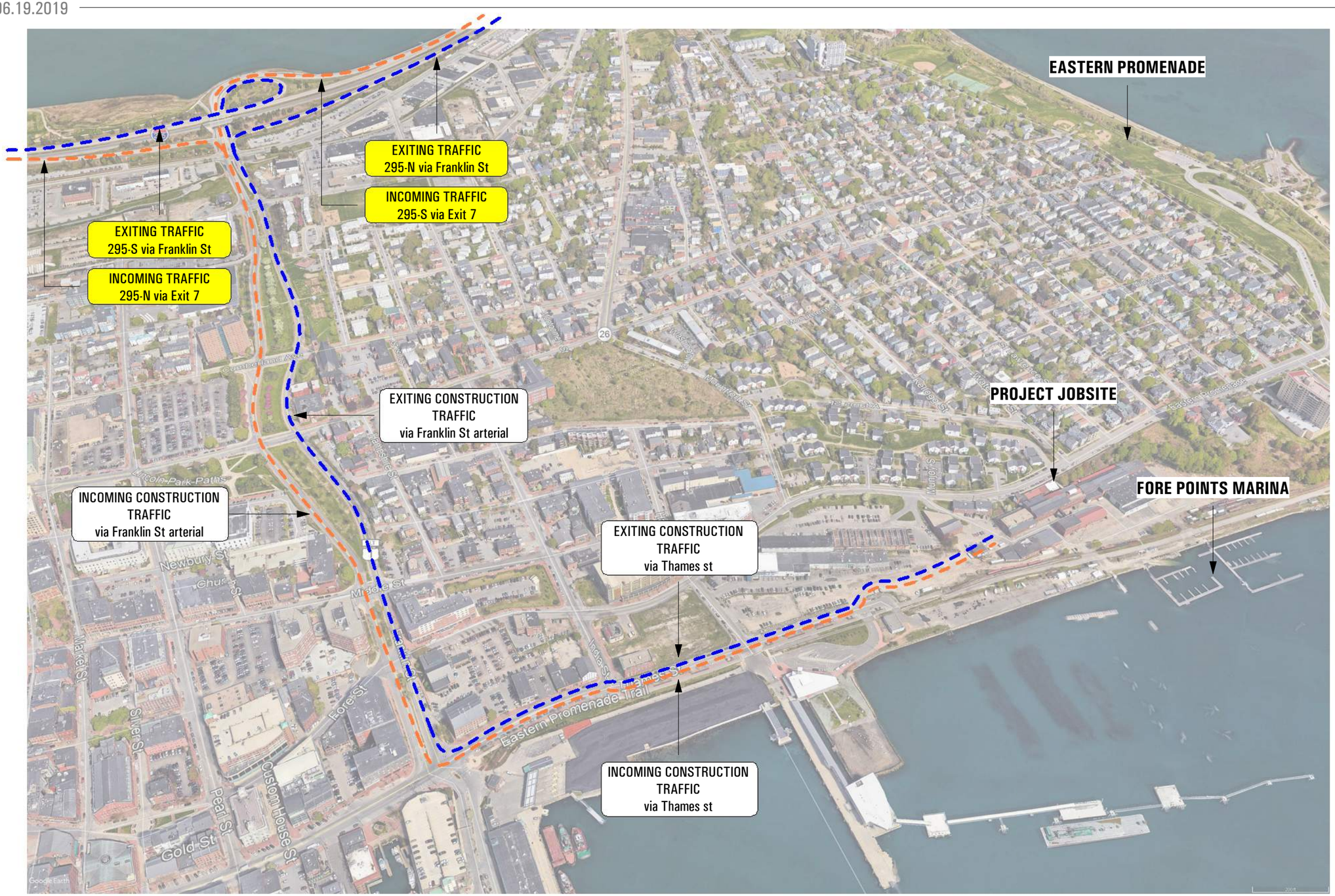
CONSIGLI Est. 1905

# 58 FORE ST - BUILDING 12

## CONSTRUCTION MANAGEMENT PLAN

Traffic Control Plan

06.19.2019






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November 6, 2019

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# 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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# 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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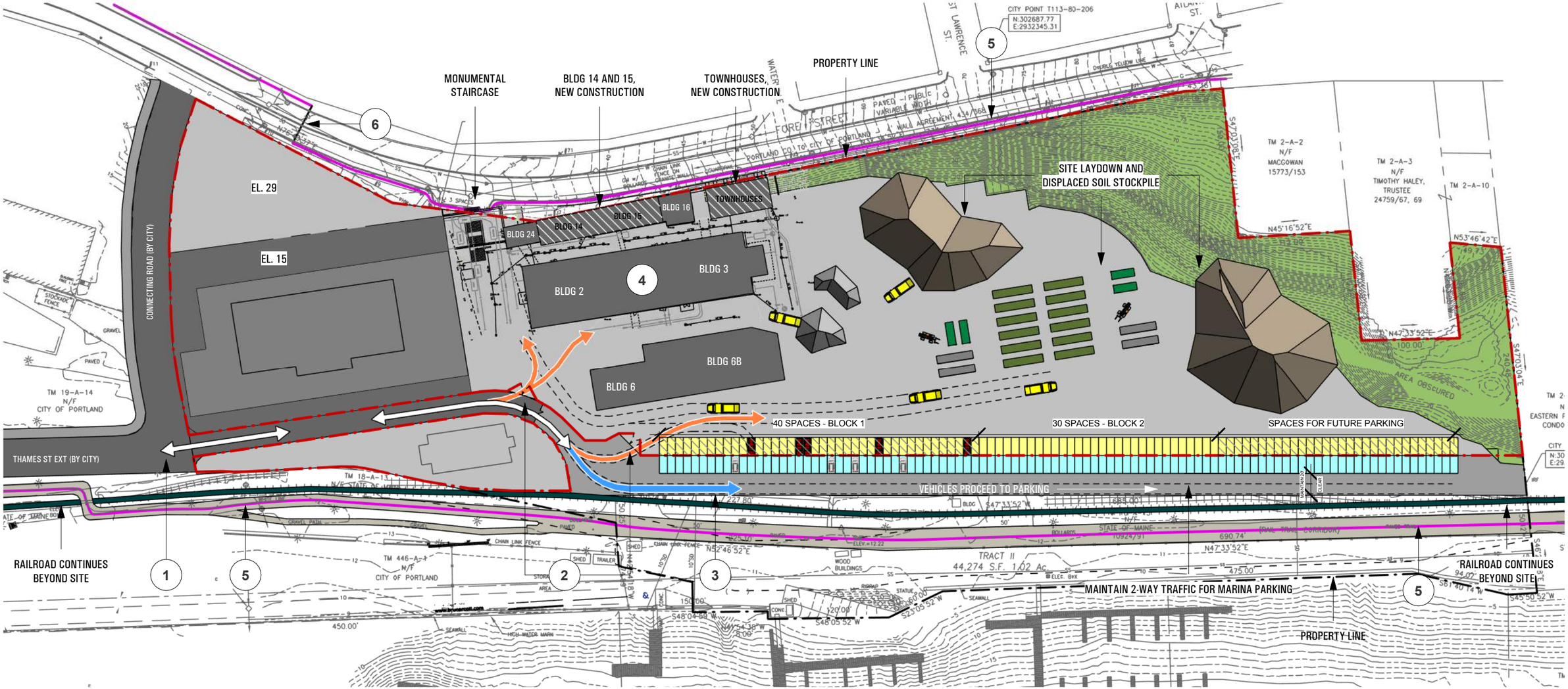
*Est. 1905*

# 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

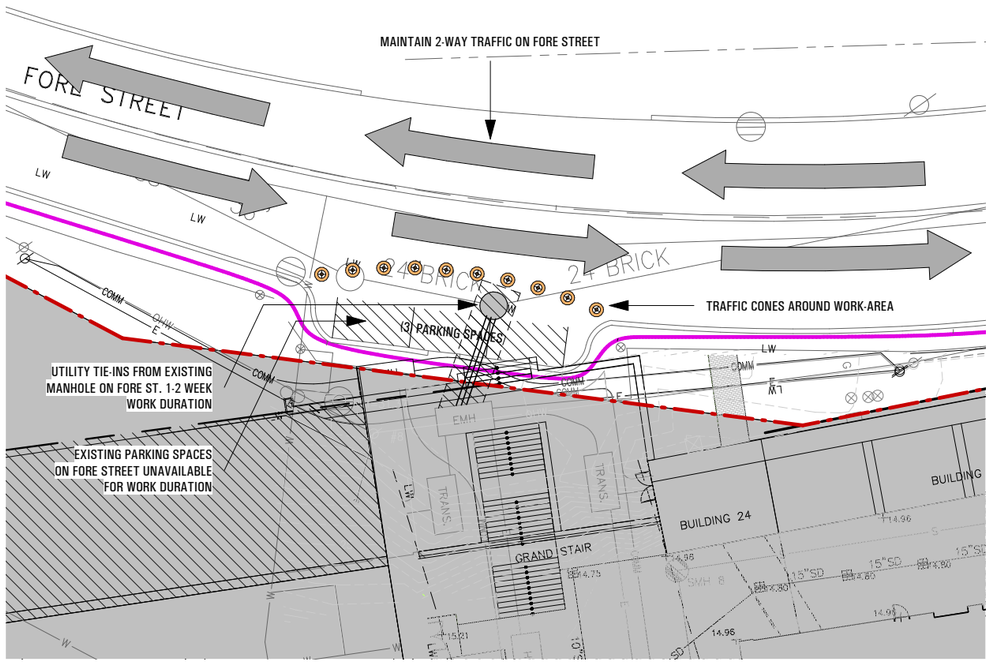
SHARED TRAFFIC

CONSTRUCTION FENCING

PEDESTRIAN ACCESS



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1 Utility Work on Fore St.
1/32" = 1'-0"



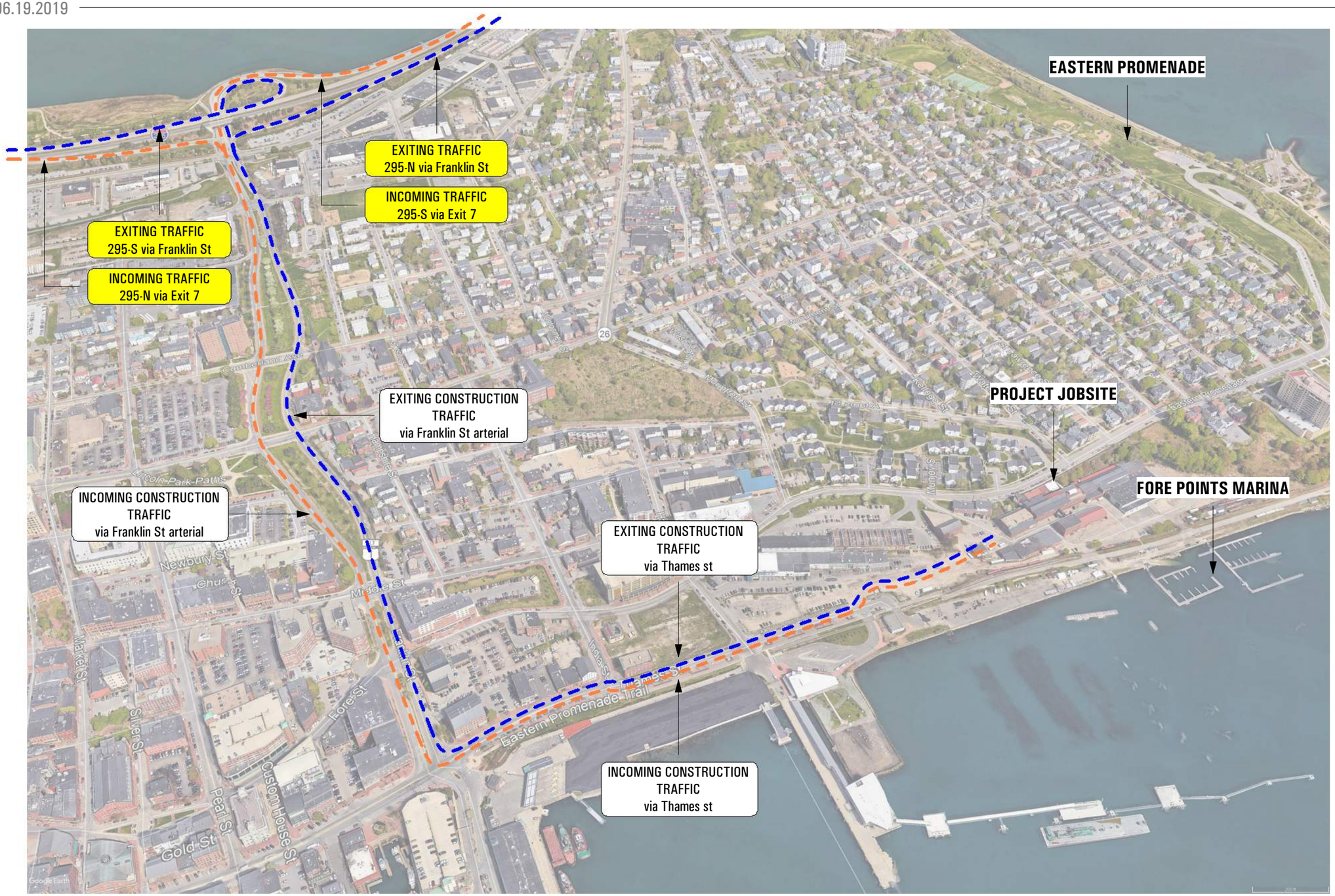
CONSIGLI Est. 1905

# 58 FORE ST -

## CONSTRUCTION MANAGEMENT PLAN

Traffic Control Plan

06.19.2019






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November 6, 2019

CONSIGLI
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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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    b. Construction Traffic Routing 12




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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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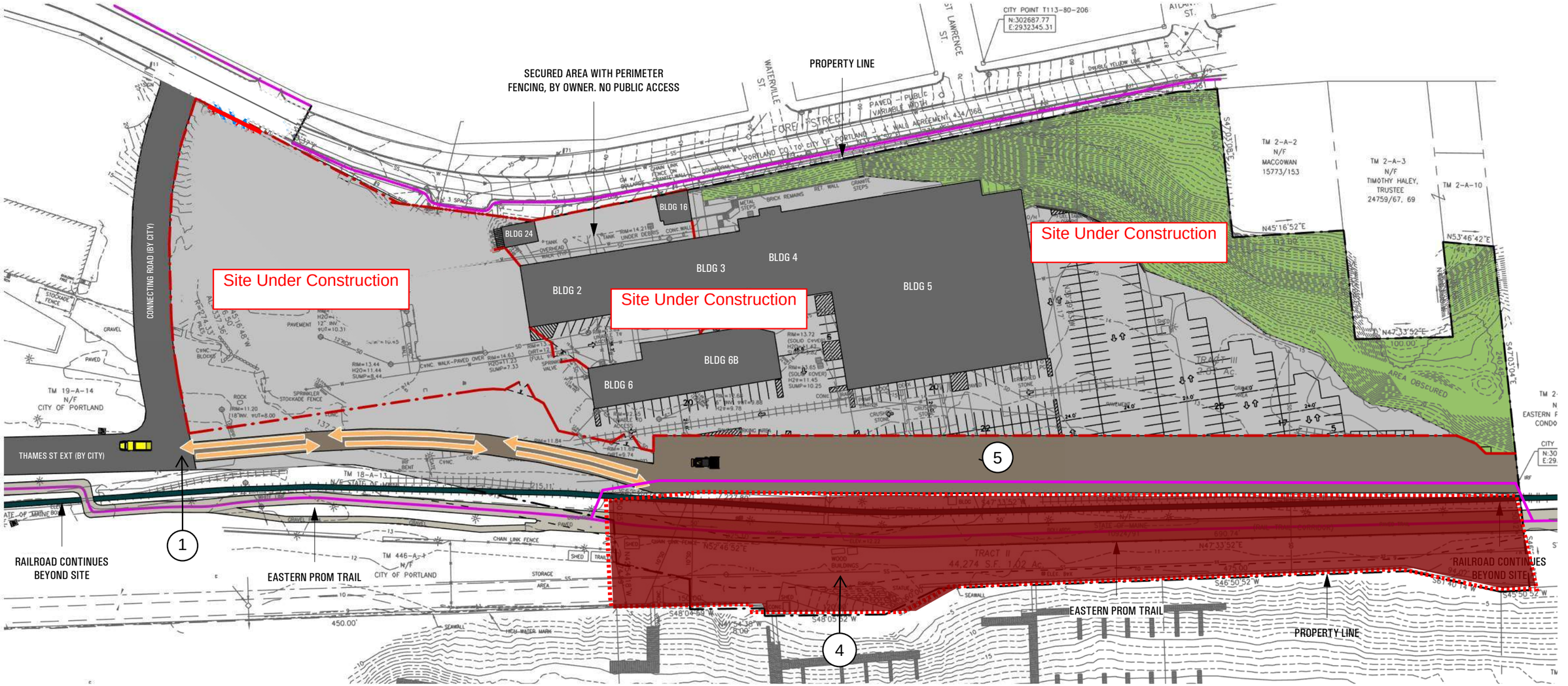
# Traffic Management Diagrams

# 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

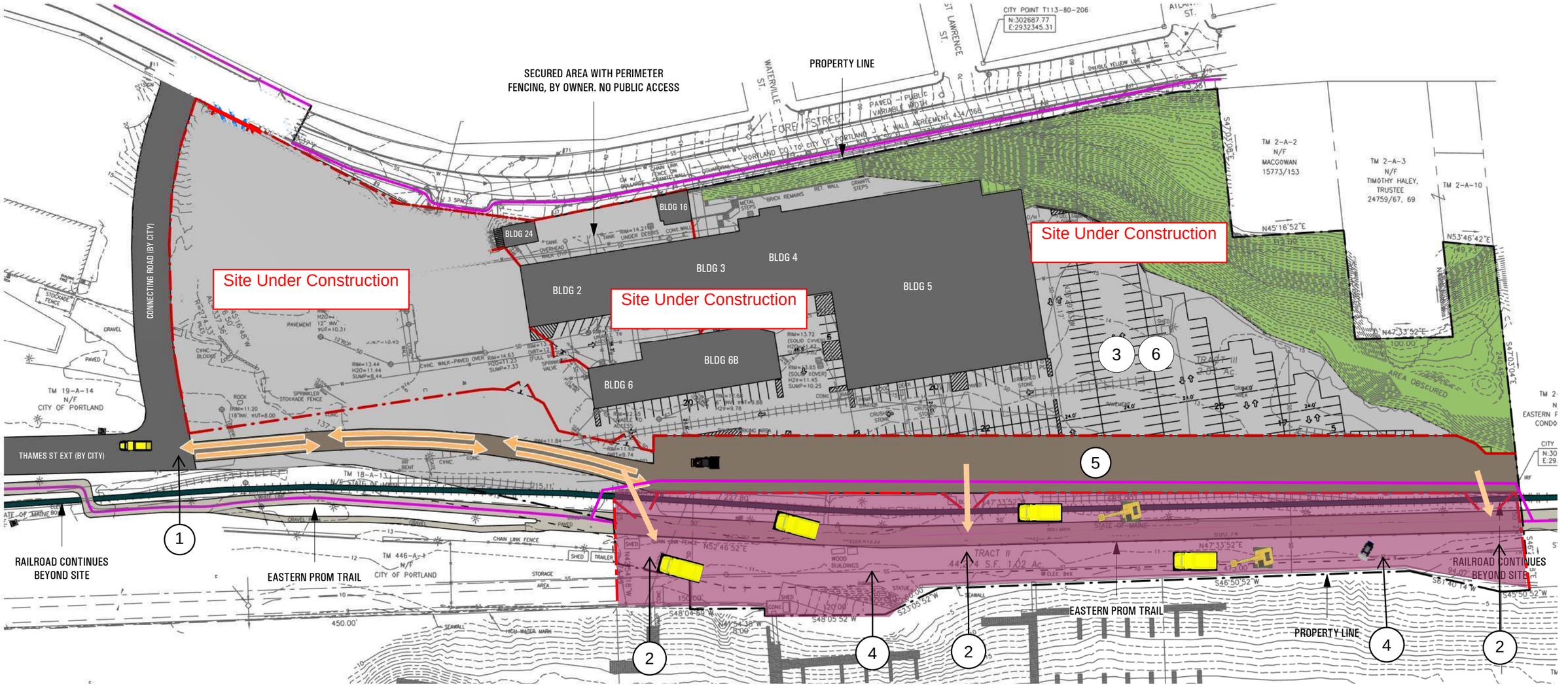
CONSIGLI Est. 1905

# 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

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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.

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## 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.

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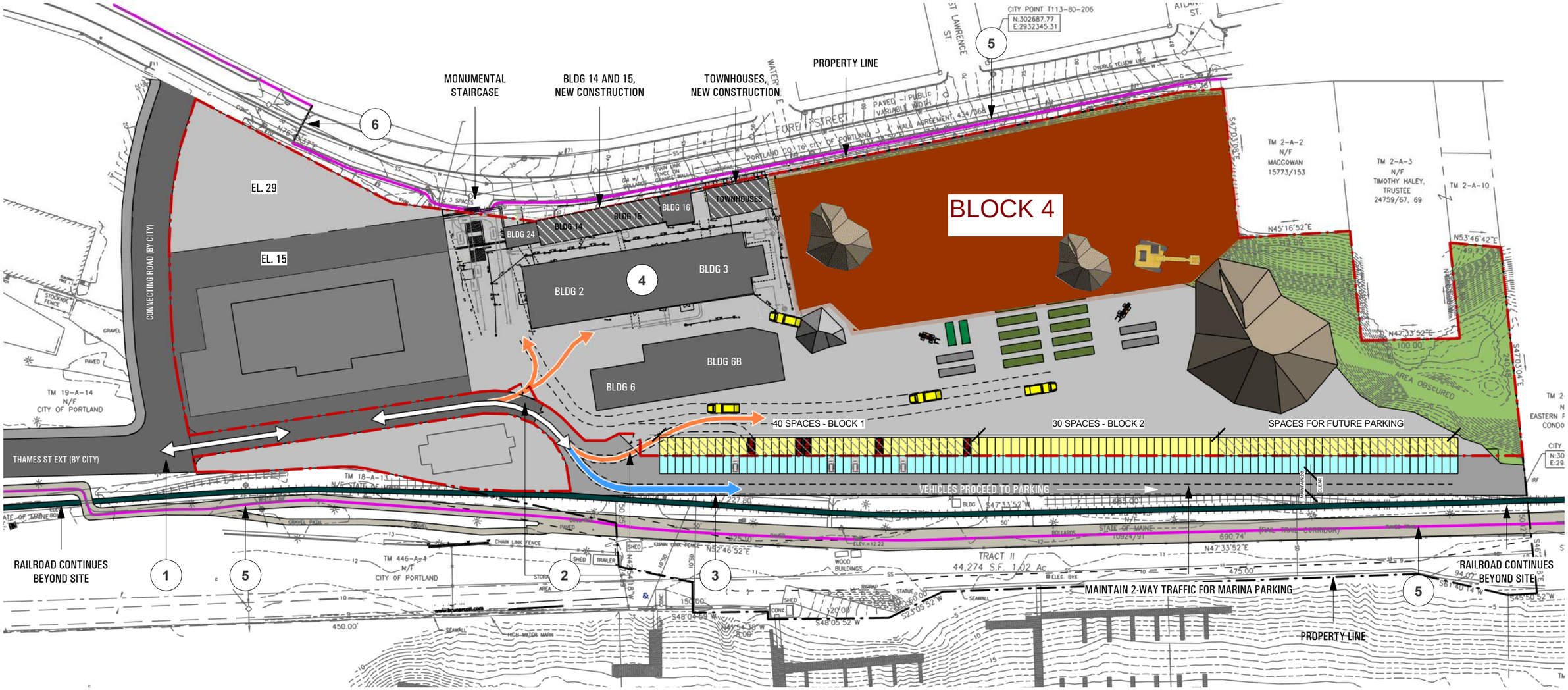
*Est. 1905*

# 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



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*Est. 1905*

# End of Construction Management Plan

42x30 SHEET
1:1

R6
B6

ASPHALT PAVING, SEE CIVIL DWGS

FORE CONNECTOR

CONNECT TO EXISTING SIDEWALK

L.O.W.

PLANTING AREA

1 L1.20 STAIR LAYOUT & MATERIALS PLAN

BUILDING 1A ROOF. SEE ARCH DRAWINGS FOR TEMPORARY ROOFTOP FINISH

8 LD1.0 STEEL EDGING PINNED TO CONCRETE

6 LD1.0 LIGHT DUTY STONE PAVING OVER CONCRETE SLAB

CONNECT TO EXISTING SIDEWALK

BUILDING 1A

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.

L.O.W.

27'-1"

48'-4"

44'

31'

22'

62'-1"

32'-11"

28'

ALIGN

(2) DROP-OFF PARKING SPACES
(7) PARKING SPACES

22' TYP.

20'

STONE INLAY CROSSWALK

CL

B6
EWPZ

4 LD1.0 EDGE, PAVING TO PLANTING, TYP.

EXISTING TRAIL

CONNECT TO EXISTING TRAIL

RELOCATED NARROW GAUGE RAIL

EASTERN PROMENADE TRAIL

5 LD1.0 GRANITE CURB AT PLANTING, TYP.

2 LD2.0 LITTER/RECYCLING RECEPTACLE, TYP.

3 LD2.0 METAL BIKE RACK

TRAIN TRACK INLAY

2 LD1.0 HEAVY-DUTY STONE PAVING

5 LD2.0 MONOLITHIC GRANITE BENCH

HYDRANT, SEE CIVIL

TRASH

BUILDING 12

2 LD1.0 HEAVY DUTY STONE PAVING

ELEVATED TERRACE

FUEL TANK VENT PIPES RELOCATED AND ENCLOSED IN PERFORATED METAL ILLUMINATED SIGN, APPROXIMATE LOCATION SHOWN

5 LD2.0 MONOLITHIC GRANITE BENCH, TYP.

BUILDING 1 MEMORY PAVING INLAY

3 LD2.0 METAL BIKE RACK

RECLAIMED GRANITE SLAB

POLE LIGHT, TYP. SEE L5.00

6 LD2.0 STONE BOLLARD

ASPHALT PAVEMENT, SEE CIVIL

2 LD2.0 LITTER/RECYC. RECEPTACLE, TYP.

1 LD2.0 BENCH TYPE A, TYP.

5 LD2.0 MONOLITHIC GRANITE BENCH

7 LD1.0 BRICK SIDEWALK

1 LD1.0 LIGHT DUTY STONE PAVING

PARKING GARAGE ACCESS, SEE ARCH.

FENCE 3

FORE STREET

FENCE 5

BUILDING 24

BUILDING 14

BUILDING 15

BUILDING 16

TOWNHOUSES

BLOCK 4

BUILDINGS 2 & 3

RECLAIMED GRANITE SLAB

RELOCATED HISTORIC WATER TANK AND BOILER

3 LD2.0 BIKE RACKS

BUILDING 6

BUILDING 6B

2 LD1.0 HEAVY-DUTY STONE PAVING

2 LD2.0 LITTER/RECYC. RECEPTACLE, TYP.

HYDRANT

FENCE 1

2 LD1.0 HEAVY DUTY STONE PAVING

4 LD2.0 METAL BOLLARD, NON-ILLUMINATED, TYP.

POLE LIGHT, TYP. SEE L5.00

ASPHALT PAVEMENT

FENCE 1

NEW SEAWALL, BY OTHERS

15'

MATCHLINE – SEE SHEET L1.10

MATCHLINE – SEE SHEET L1.10

S48°08'59"W

450.00'

20' 0 20' 40'
BAR SCALE
1" = 20'
CHECK PRINT TO SET PROPER VIEW

NOT FOR CONSTRUCTION

PLANSDLV_CAD\Plotsets\19101 SITE PLAN\08 FORE STREET DPS-12.00 LAYOUT MATERIALS PLAN.dwg, Nov 08, 2019 - 4:40pm


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| 1 | 08 DEC 2019 PC-1 SUBMISSION | |

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SITE LAYOUT & MATERIALS 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

L1.00

## SITE FURNISHINGS SCHEDULE

| SYM. | | QTY. | NAME | COMPANY | SIZE | NOTES |
|---|---|---|---|---|---|---|
| **FENCING** | | | | | | |
| -- | | 491 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** | | | | | | |
| -- | | 10 | SELECT RECYCLING SYSTEM | LANDSCAPE FORMS | | DOUBLE UNIT (TRASH, RECYCLE) |
| **BIKE RACKS** | | | | | | |
| -- | | 12 | LOTLIMIT, MMCITE.COM | -- | | GALVANIZED METAL FINISH |
| **BENCHES** | | | | | | |
| -- | | 7 | RECLAIMED MONOLITHIC GRANITE BENCH | -- | 2' X 6' | |
| -- | | 5 | RECLAIMED MONOLITHIC GRANITE BENCH | -- | 2' X 10' | |
| -- | | 1 | RECLAIMED MONOLITHIC GRANITE BENCH | -- | 2.5' X 14' | |
| -- | | 1 | RECLAIMED MONOLITHIC GRANITE BENCH | -- | 3' X 15' | |
| -- | | 8 | BACKED BENCH | LANDSCAPE FORMS | 28" X 70" | FGP BENCH BACKED |
| -- | | 3 | BACKLESS BENCH | LANDSCAPE FORMS | 23" X 70" | FGP BENCH BACKLESS |

ZONE LINE R6 B6
MATCHLINE – SEE SHEET L1.00
PARKING GARAGE ACCESS SEE ARCH.
FENCE 3
BLOCK 4 PARKING GARAGE
BLOCK 4
B6 R6
B6
R6 B6
L.O.W.
GARAGE ENTRANCE/EXIT
ASPHALT PAVEMENT (SEE CIVIL DWGS.)
FENCE 4
FENCE 4
SEE CIVIL DWGS FOR TRACK CROSSING DETAIL
FENCE 1 GATES
SEE CIVIL DWGS. FOR MNGRR DETAILS
ASPHALT PAVEMENT (SEE CIVIL DWGS.)
FENCE 1
3 LD1.0 STONEDUST
8 LD1.0 STEEL EDGING
3 LD1.0 STONEDUST
FENCE 2
B6 EWPZ
FENCE 1
NEW SEAWALL, BY OTHERS
MATCHLINE – SEE SHEET L1.00
RELOCATED NARROW GAUGE RAIL
RELOCATED EASTERN PROMENADE PATH
PLANTING AREA
BOAT CREW RECREATION AREA
(2)YOT Heads YG7(poles)
MDOT R.O.W. 50'-0"
APPROX LOCATION
UTES
-20' 0 20' 40'
BAR SCALE
1" = 20'
CHECK GRAPHIC SCALE BEFORE USING
NOT FOR CONSTRUCTION

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| 1 | 08.30.19 PER CITY REVIEW | |

DESIGNED BY:
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

JOB NO.: 0227007
DATE: NOVEMBER 8, 2019
SCALE: 1"=20'
SHEET: OF

L1.10

P:\PDC\1 CAD\Worksheets\19101 SITE PLAN\08 FORE STREET SPS=2.00 LAYOUT MATERIALS PLAN.dwg, Nov 08, 2019 - 4:28pm

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LANDSCAPE ARCHITECT
Michael Boucher
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| | CHECKED BY: DLC | |

| REV | DESCRIPTION | DATE |
|---|---|---|
| | DRAWN BY: BDM | |
| | DESIGNED BY: BDM | |

VEHICLE DROP OFF

FORE STREET

36"

24"BRICK

24"BRICK

PLASTIC

GV

W

35

CH EXISTING SIDEWALK

GRANITE CURB TO MATCH EXISTING

3 LD1.1 BIKE RACK

1 LD3.1 STONE STAIRS

7 LD1.0 BRICK PAVING

6 LD4.0 TREE RING IN STONE PAVEMENT

1 LD1.1 BENCH A, TYP.

L3.0 1

FLUSH

MATCH EXISTING SIDEWALK

EDGE OF BUILDING BELOW

4" WIDE TRENCH DRAIN

2 LD1.1 LITTER/ RECYCLING RECEPATCLE

EDGE OF BUILDING BELOW

6 LD1.0 STONE VENEER RETAINING WALL

6 LD1.0 STONE PAVING

8 LD1.0 STEEL RESTRAINT EDGING

TEMPORARY CONDITION T.B.D.

ELECTRICAL TRANSFORMER BELOW IN VAULT

EDGE OF BUILDING BELOW

1 LD1.1 BENCH B, TYP.

2 LD3.1 CUSTOM STAINLESS STEEL GUARDRAIL

3–4 LD3.1 CUSTOM STAINLESS STEEL HANDRAIL

2 LD3.1 CUSTOM STAINLESS STEEL GUARDRAIL

5–7 LD3.1 RECYCLED CURB VENEER WALL ELEVATION DETAIL

1 LD3.1 STONE STAIRS

SEE STAIR GRADING PLAN L2.2

PLANTING AREA

BLDG. 24

FLUSH

FLUSH

FLUSH

ALIGN

ALIGN

PLANTING AREA

L3.0 2

BUILDING 1A

2 LD3.1 CUSTOM STAINLESS STEEL GUARDRAIL

4 LD1.0 EDGE – PAVING TO PLANTING TYP.

TRANSFORMER VAULT

5 LD2.0 MONOLITHIC GRANITE BENCH

4 LD1.0 EDGE – PAVING TO PLANTING TYP.

L3.0 1

PLANTING AREA

SITE PLAN

PORTLAND FORESIDE
DEVELOPMENT CO.
PORTLAND, ME 04102

BUILDING 1A, BUILDING 12 &
SHARED STREET & BLOCK 2

JOB NO.: 0227007
DATE: NOVEMBER 8, 2019
SCALE: 1/4"=1'-0"
SHEET: OF

L1.20

NOT FOR CONSTRUCTION

P:\PTDC\1_CAD\Plotsheets\19101 SITE PLAN\58 FORE STREET SPS-L2.00 LAYOUT MATERIALS PLAN.dwg, Nov 08, 2019 - 4:38pm

42x30 SHEET
1:1

R6
B6

FORE CONNECTOR

FORE STREET

MATCHLINE – SEE SHEET L4.10

5 LD4.0 PAVEMENT SUPPORT

CT 1

CS 1

LAWN

BUILDING 24

BUILDING 14

BUILDING 15

BUILDING 16

TOWNHOUSES

BLOCK 4

BG 1

5 LD4.0 PAVEMENT SUPPORT APPROX. EXTENTS

6 LD4.0 TREE RING TYP. ALL TREES IN PAVEMENT

BUILDINGS 2 & 3

BUILDING 6

BUILDING 6B

QR 6

NOTE: PLANT SCHEDULE CAN BE FOUND ON SHEET L4.10

BUILDING 1A

2 LD4.0 STREET TREE PLANTING

LT 4

RA 78

LS 1 RA 30

AR 3 RA 68

QP 1 RA 33

GT 1 RA 20

RA 54

QP 1 RA 32

BUILDING 12

B6
EWPZ

MP 10

CA 11

CA 10

FT 1625

RT 31

CA 19

CA 11 IV 3

GRAVEL PATH

GRAVEL

CHAIN LINK FENCE

SHED

TRAILER

STORAGE AREA

SALT TOLERANT GRASS SEED MIX

SALT TOLERANT GRASS SEED MIX

MATCHLINE – SEE SHEET L4.10

8"PVC

GUARDRAIL

450.00'

NOT FOR CONSTRUCTION

20' 0 20' 40'

BAR SCALE

CHECK GRAPHIC SCALE BEFORE USING

P:\PTDCLV_CAD\Plotsheets\101 SITE PLAN\05 FORE STREET-L4.00 PLANTING PLAN.dwg, Nov 08, 2019 - 4:20pm


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t. 207.865.1080
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| REV | DESCRIPTION | DATE |
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| 1 | 08 SPEC-L4.00 PLANS | |

| REV | DESCRIPTION | DATE |
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| | | |

DESIGNED BY:
DRAWN BY:
CHECKED BY:

SITE PLANTING 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

L4.00

## PLANT LIST

| SYM | QTY. | BOTANICAL NAME | COMMON NAME | SIZE | ROOT | SPACING | COMMENTS |
|---|---|---|---|---|---|---|---|
| TREES – DECIDUOUS | | | | | | | |
| AR | 6 | 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 | 2 | 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 | 51 | CLETHRA ALNIFOLIA | SWEET PEPPERBUSH | 3 GAL | | | |
| | 1625 SF | FESTUCA RUBRA | CREEPING RED FESCUE | SEED | | | 3–4 LBS/1000 SF |
| | 315 | RHUS AROMATICA 'GRO–LOW' | GRO–LOW FRAGRANT SUMAC | 2 GAL | | 30" O.C. | |
| | 220 | DENNSTAEDTIA PUNCTILOBULA | HAY–SCENTED FERN | 1 GAL | | | |
| IV | 6 | ILEX VERTICILLATA | WINTERBERRY | 3 GAL | | | |
| MP | 22 | MYRICA PENSYLVANICA | NORTHERN BAYBERRY | 3 GAL | | | |
| | 24,460 SF | | LAWN | SOD | | | |
| | 13,752 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 |

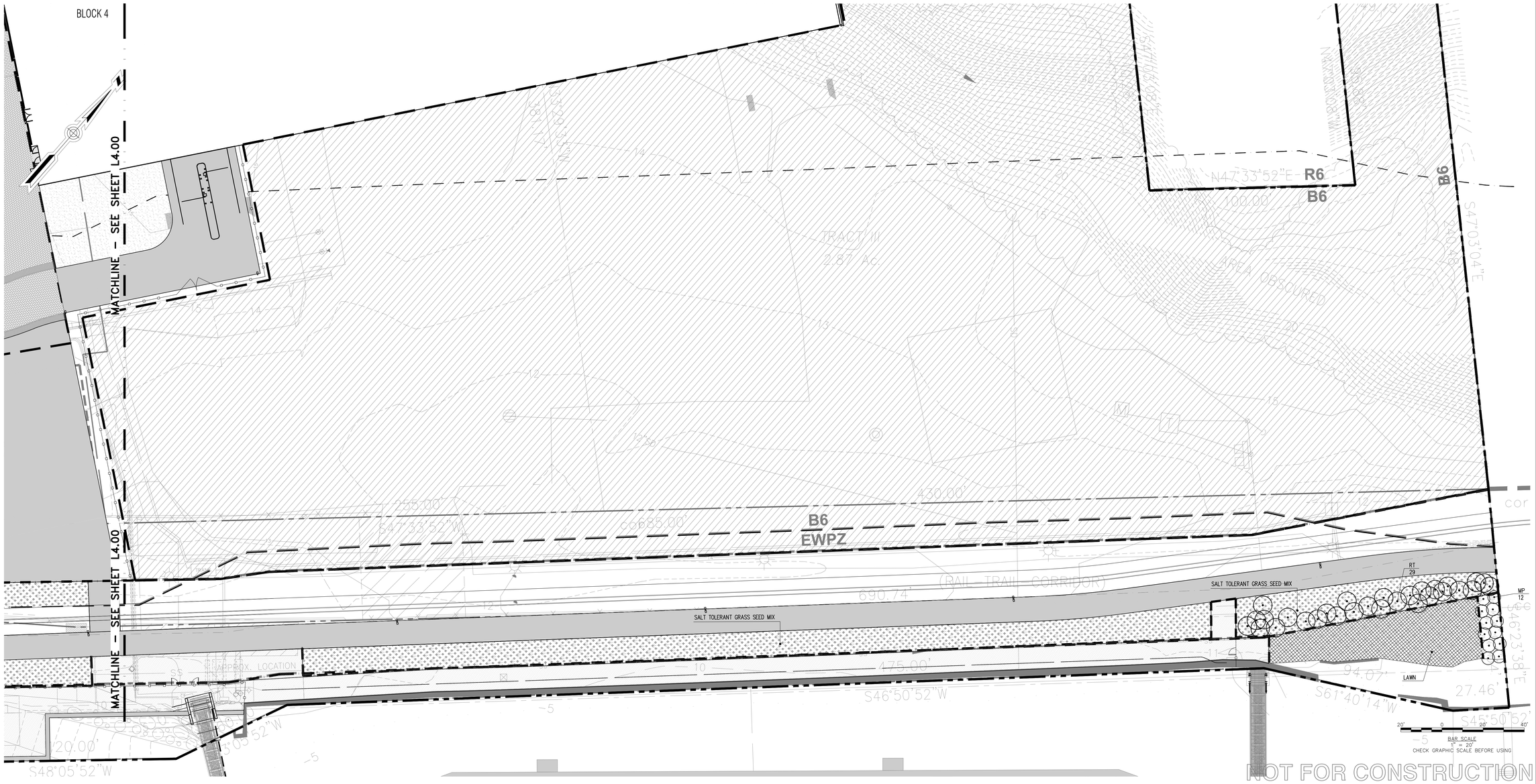
## PLANTING NOTES:

1. SEE SHEET LD2.0 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 PLANTING AREAS 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).

## IRRIGATION NOTES:

IRRIGATION CONSULTANT TO PROVIDE SKETCH OF AN AUTOMATED, WEATHER–BASED IRRIGATION SYSTEM FOR LANDSCAPE ARCHITECT APPROVAL. THE SYSTEM SHOULD INCLUDE THE FOLLOWING:

1. IRRIGATION TIMING AND DURATION DETERMINED BY MOISTURE SENSORS BASED ON TDR TECHNOLOGY.
2. MOISTURE SENSORS SHALL BE PLACED IN DIFFERENT SOIL TYPES (SAND–BASED STRUCTURAL SOIL AND PLANTING BED).
3. THERE SHALL BE AT LEAST THREE ZONES CONTROLLED BY SENSORS (TREE BALLS IN PAVING, SAND–BASED STRUCTURAL SOIL BACKFILL AND PLANTING BED SOIL).
4. IRRIGATION APPLIED TO TREES BY TREE STAKES FITTED WITH DRIP EMITTERS
5. IRRIGATION UNDER PAVING APPLIED BY DRIP LINES IN PERFORATED, CORREGATED ADS–TYPE PIPING EMBEDDED IN THE CRUSHED STONE LAYER.
6. BACK FLOW PREVENTERS SHALL BE USED ON ALL PIPING ON SLOPES SUBJECT TO BACK FLOW.
7. PROVIDE AS–BUILT DRAWINGS AND INSTRUCTION MANUALS TO OWNER.
8. PROVIDE OPERATIONAL TRAINING AND TROUBLE SHOOTING SERVICES FOR ONE YEAR POST CONSTRUCTION.
9. IRRIGATION SYSTEM TO BE INSTALLED THROUGHOUT ALL NEWLY PLANTED AREAS. AFTER THE PLANT ESTABLISHMENT PERIOD, ALL AREAS NOT LABELED AS "PERMANENT IRRIGATION" ON THE PLANT SCHEDULE TO BE ABANDONED.




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| | | | 19 OCT 2019 L4.00 PLAN |

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SITE PLANTING 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

L4.10

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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

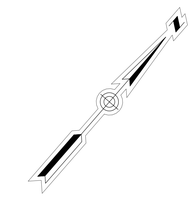
BAR SCALE
1" = 20'
0 20' 40'

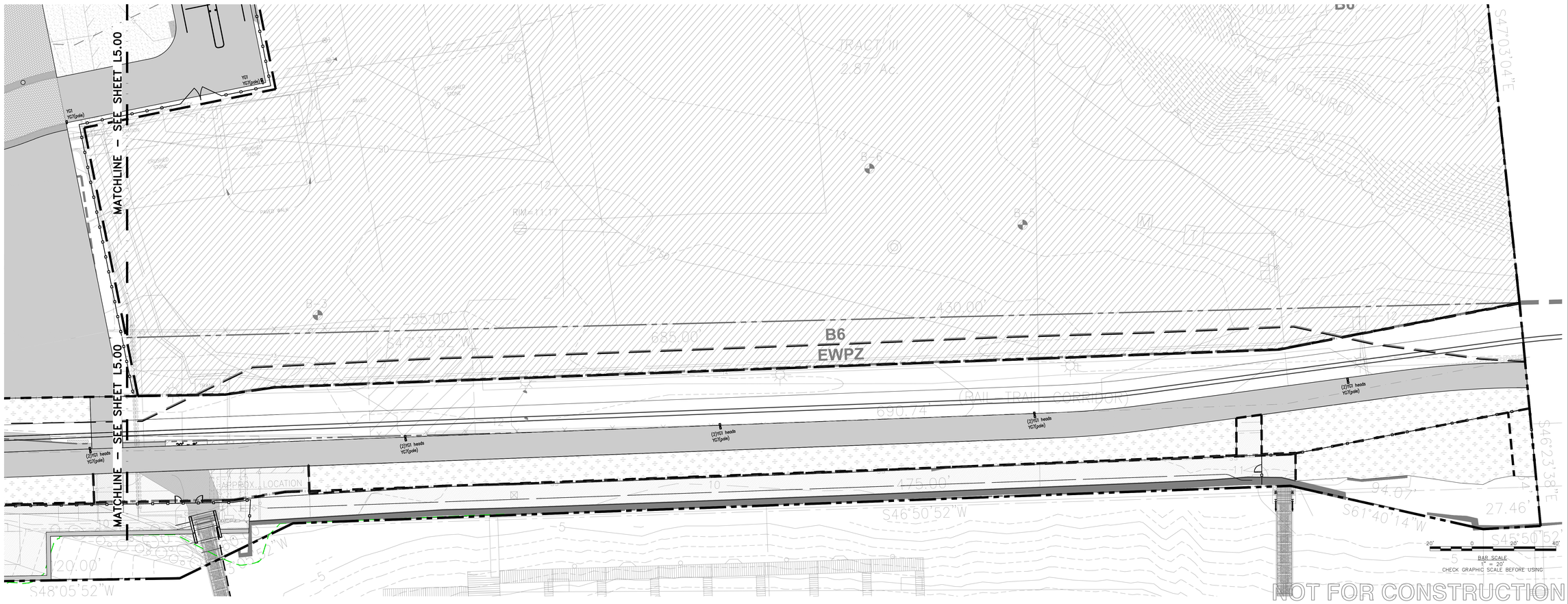
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42x30 SHEET
1:1

## 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<br>Helio Bollard-3000K-MOD Painted "Galvanized Steel" finish |
| YG3 | -- | Forms+Surfaces Helio Bollard 41" height<br>Helio Bollard-3000K-MOD Painted "Galvanized Steel" finish |
| YG3A | -- | Erco Tesis spot distribution 35077.023-(3000K)-(Finish) |
| YG6 | --<br>-- | Forms+Surfaces Helio Bollard 41" height<br>Helio Bollard-MOD Security-MOD Painted "Galvanized Steel" finish TBD |
| YG7 | -- | Structura BOL round straight solid wood pole<br>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)<br>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)<br>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-<br>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-<br>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-<br>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<br>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<br>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)<br>Wide Snoot: LBLSNW-(Finish)-BK-MOD CROSS BAFFLE |
| YW8 | -- | Lumenpulse Lumenbeam Medium LBL-277-30K-F-LSLH-(Finish)-DIM-CRC-UL-(Cable Length)<br>Wide Snoot: LBLSNW-(Finish)-BK-MOD CROSS BAFFLE |






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SITE LIGHTING PLAN

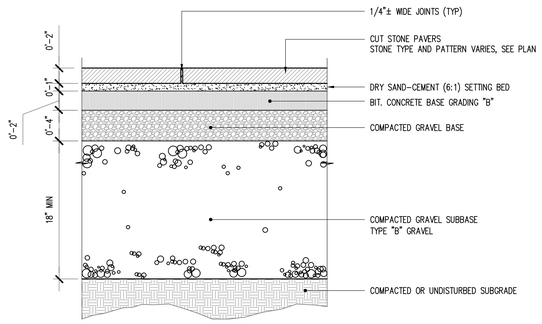
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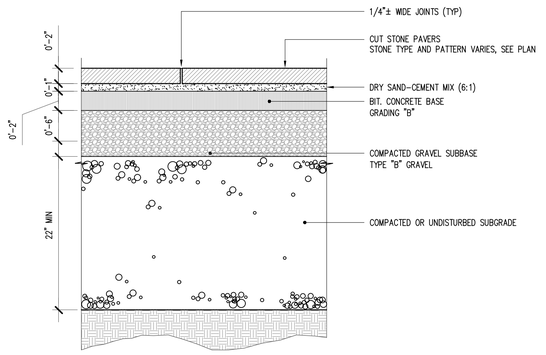
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DATE: NOVEMBER 8, 2019
SCALE: 1"=20'
SHEET: OF

L5.10

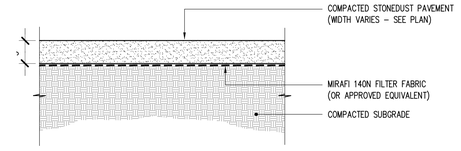
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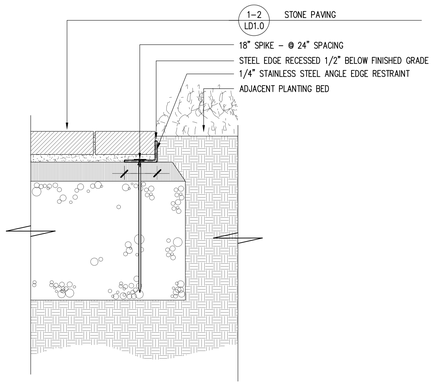

1 LIGHT DUTY STONE PAVING - TO BE COORDINATED
1 1/2" = 1'-0"



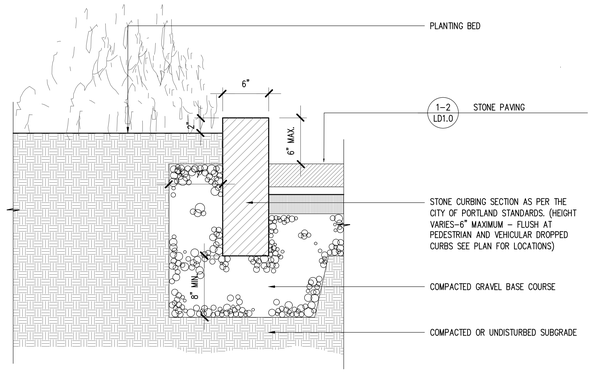

2 HEAVY-DUTY STONE PAVING - TO BE COORDINATED
1 1/2" = 1'-0"



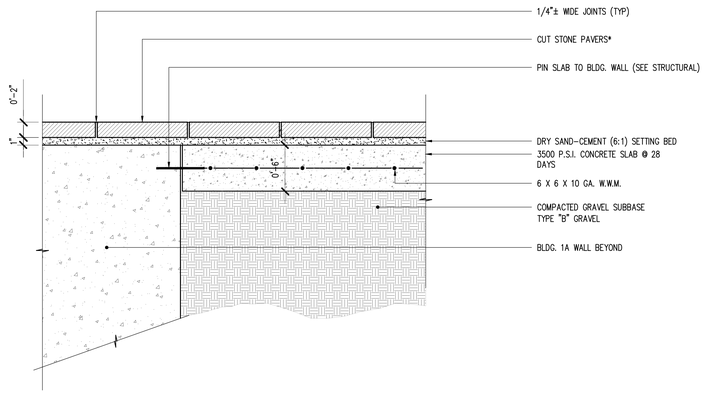

3 STONEDUST - TO BE CONFIRMED
1 1/2" = 1'-0"



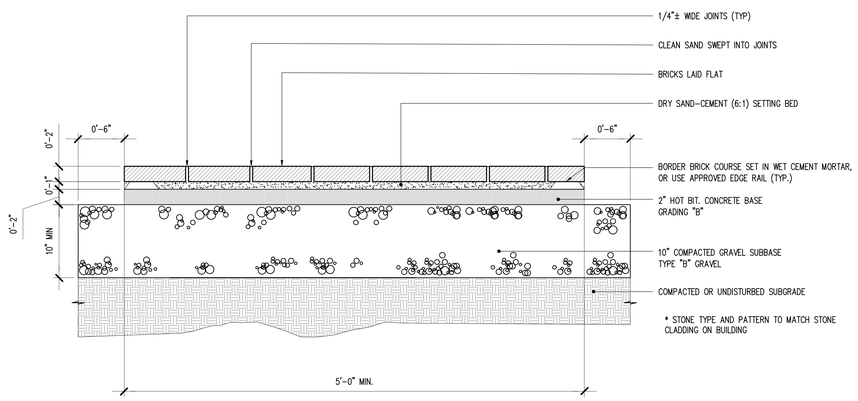

4 EDGE - PAVING TO PLANTING
1 1/2" = 1'-0"



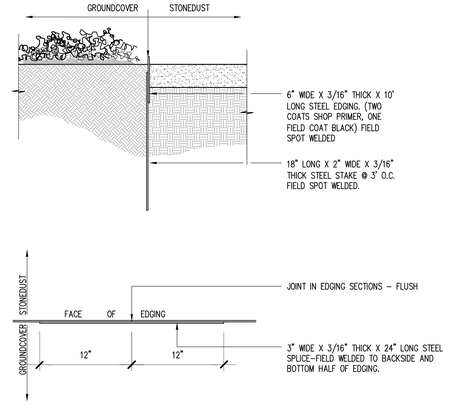

5 GRANITE CURB-PLANTING
1 1/2" = 1'-0"




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 |

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DESIGNED BY:

SITE DETAILS

PORTLAND FORESIDE
DEVELOPMENT CO.
PORTLAND, ME 04102

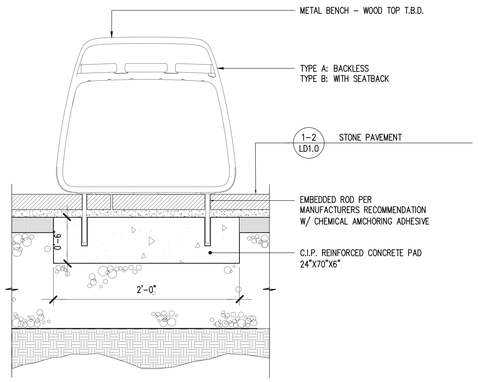
PHASE 1 SITE PLAN SUBMISSION

JOB NO.: 0227007
DATE: NOVEMBER 8, 2019
SCALE: AS NOTED
SHEET: OF

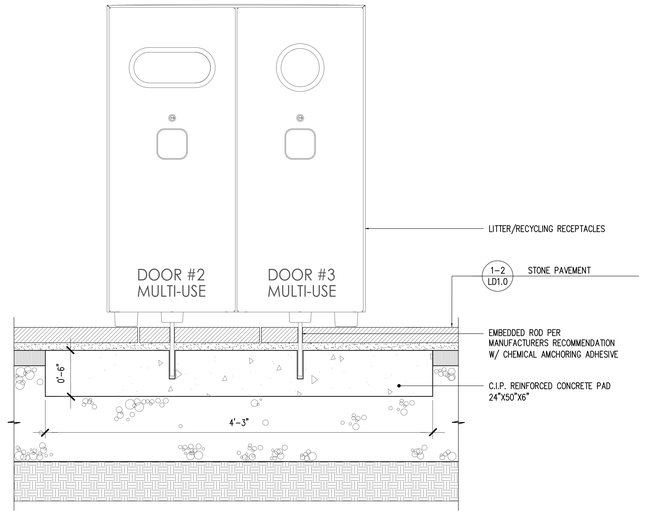
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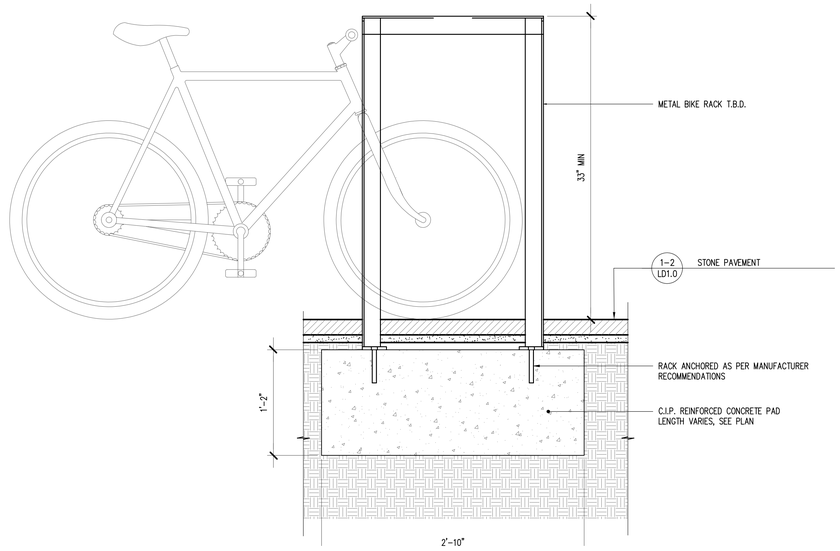
42x30 SHEET
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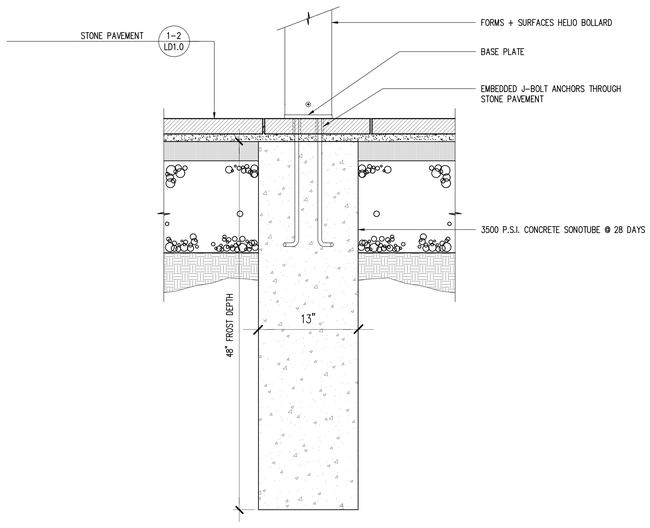

## 1 BENCH ATTACHMENT
1 1/2" = 1'-0"



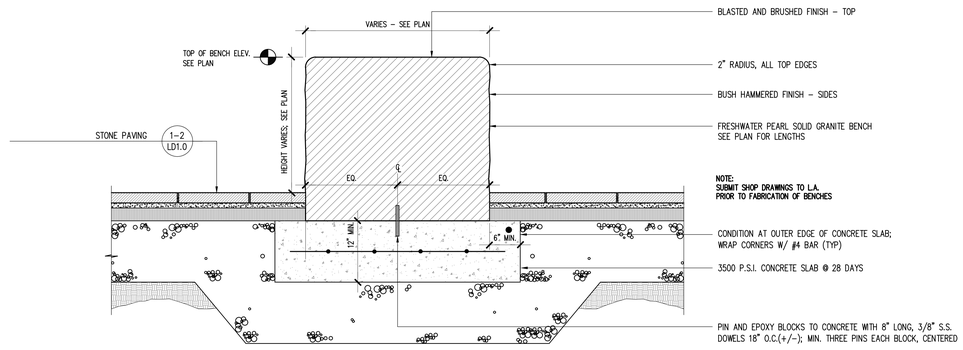

## 2 LITTER/RECYCLING RECEPTACLE ATTACHMENT
1 1/2" = 1'-0"



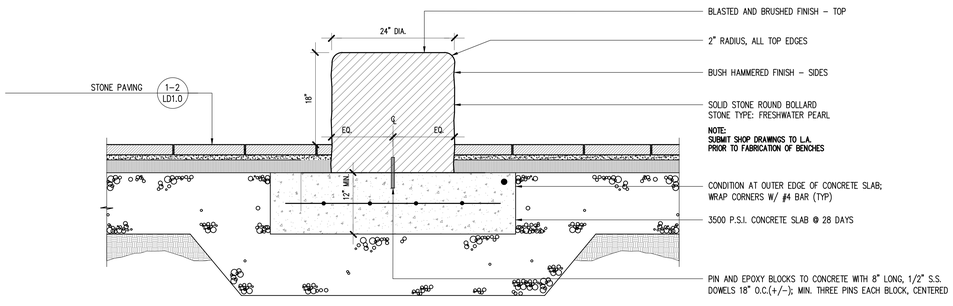

## 3 BIKE RACK
1 1/2" = 1'-0"




## 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 | |

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SITE FURNISHING DETAILS

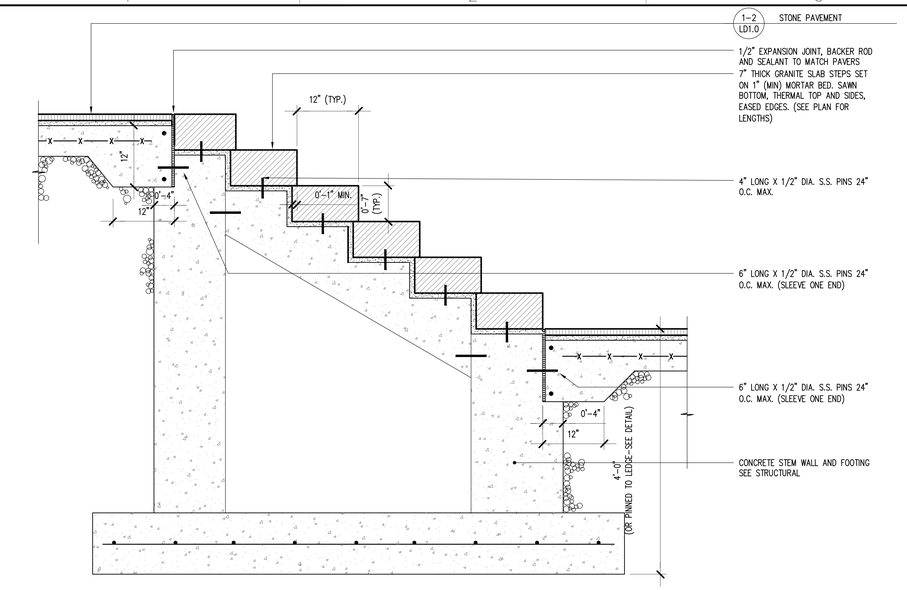
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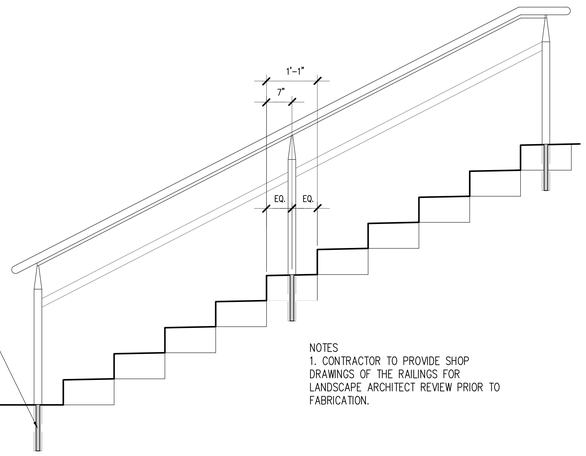
JOB NO.: 0227007
DATE: NOVEMBER 8, 2019
SCALE: AS NOTED
SHEET: 4 OF

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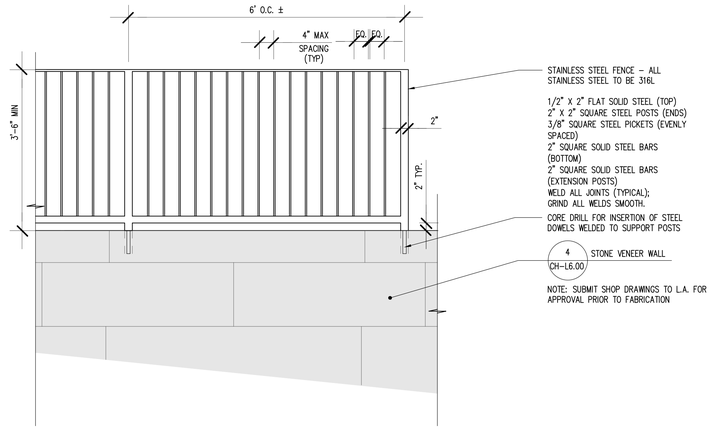



1 STONE STAIRS
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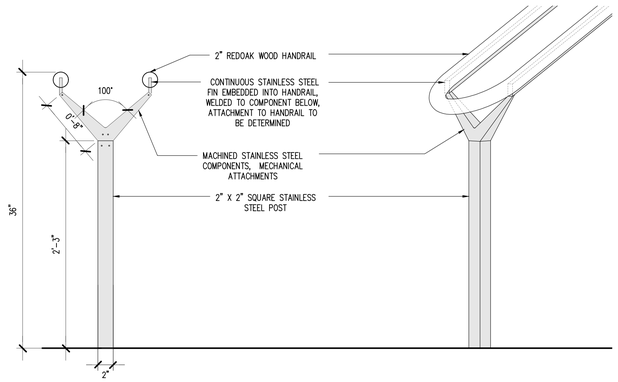



NOTES
1. CONTRACTOR TO PROVIDE SHOP DRAWINGS OF THE RAILINGS FOR LANDSCAPE ARCHITECT REVIEW PRIOR TO FABRICATION.

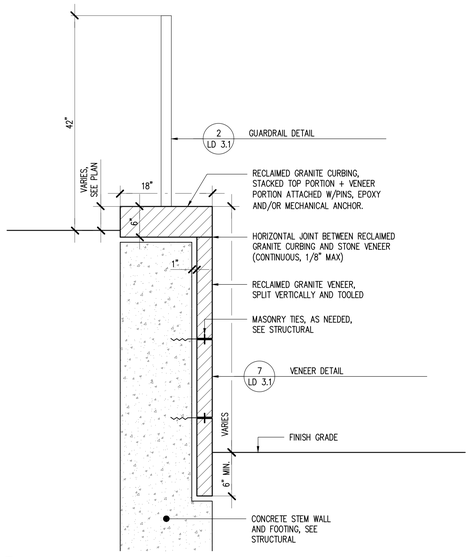
3 CUSTOM STAINLESS STEEL HANDRAIL ELEVATION
3/4"=1'-0"



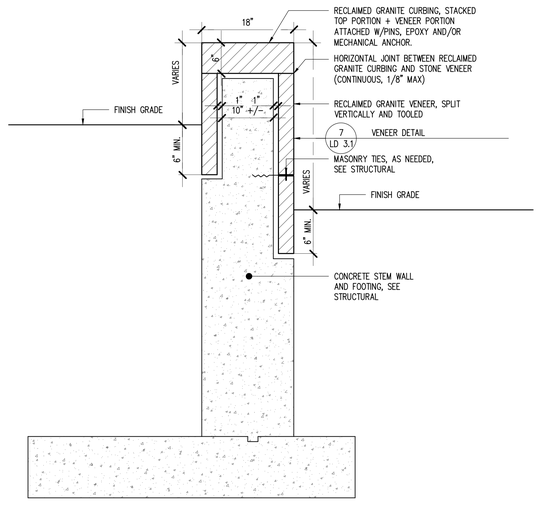

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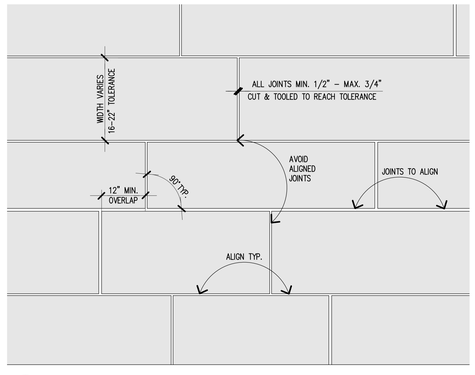

4 CUSTOM STAINLESS STEEL HANDRAIL DETAIL
1 1/2"=1'-0"




5 RECYCLED GRANITE CURB VENEER RETAINING WALL
1"=1'-0"




6 RECYCLED GRANITE CURB VENEER WALL - FREESTANDING
1"=1'-0"




7 RECYCLED GRANITE CURB VENEER WALL ELEVATION DETAIL
3/4"=1'-0"

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| 1 | 08.30.19 SITE PLAN SUBMISSION | |

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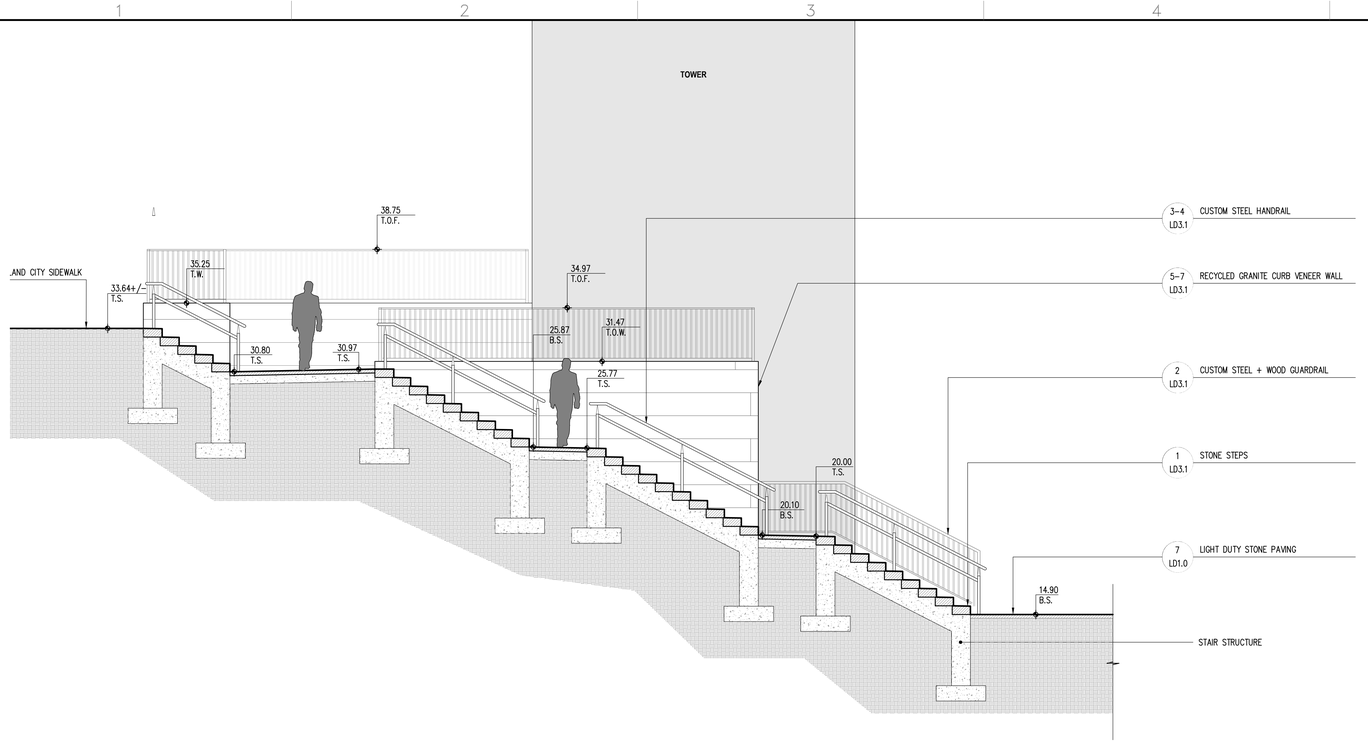
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STAIR DETAILS PLAN

JOB NO.: 0227007
DATE: NOVEMBER 8, 2019
SCALE: AS NOTED
SHEET: 4 OF

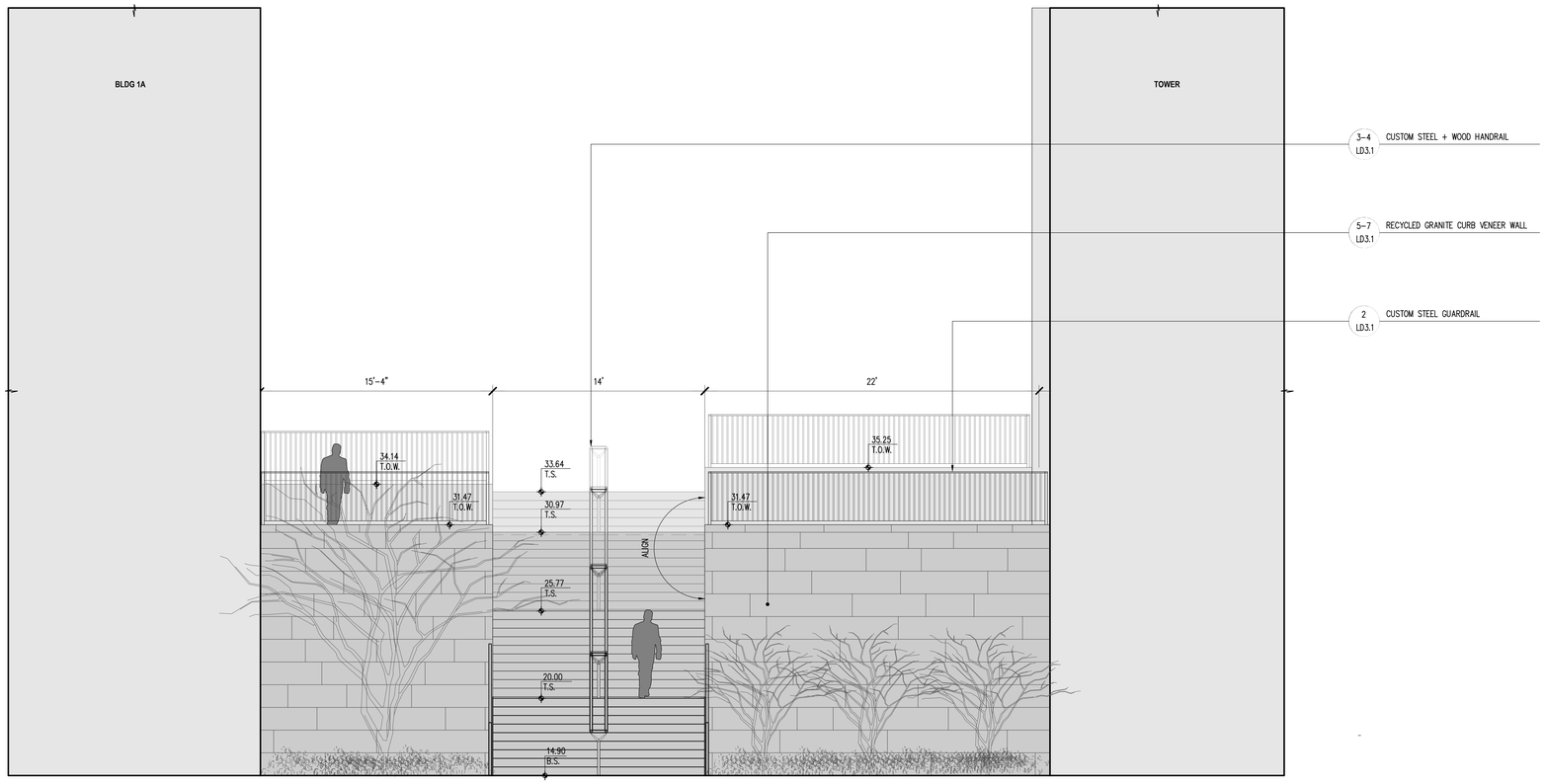
LD3.0

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1 NORTH STAIR ELEVATION

1/4" = 1'-0"




2 WEST STAIR ELEVATION

1/4" = 1'-0"

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|---|---|---|
| 1 | 90% SUBMITTAL | 10.15.19 |

| REV | DESCRIPTION | DATE |
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STAIR ELEVATIONS

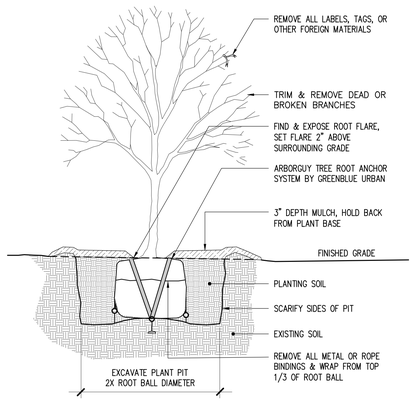
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JOB NO.: 0227007
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SCALE: AS NOTED
SHEET: OF

LD3.1

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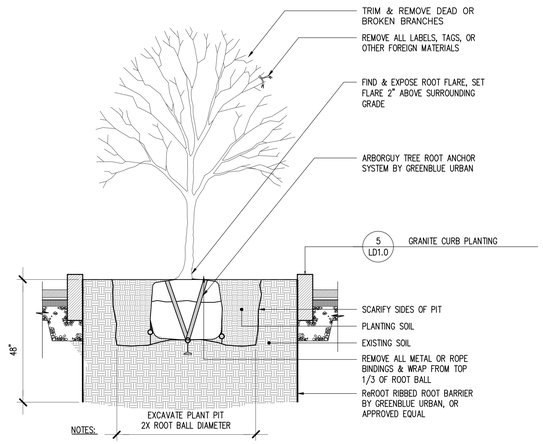



NOTES:

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"

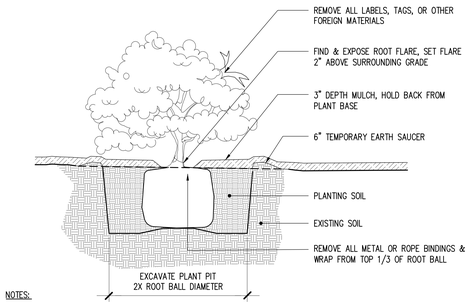



NOTES:

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"

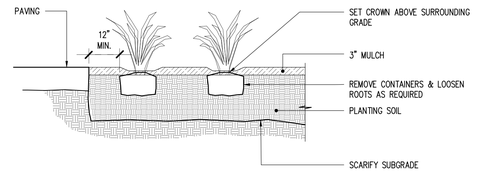



NOTES:

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.

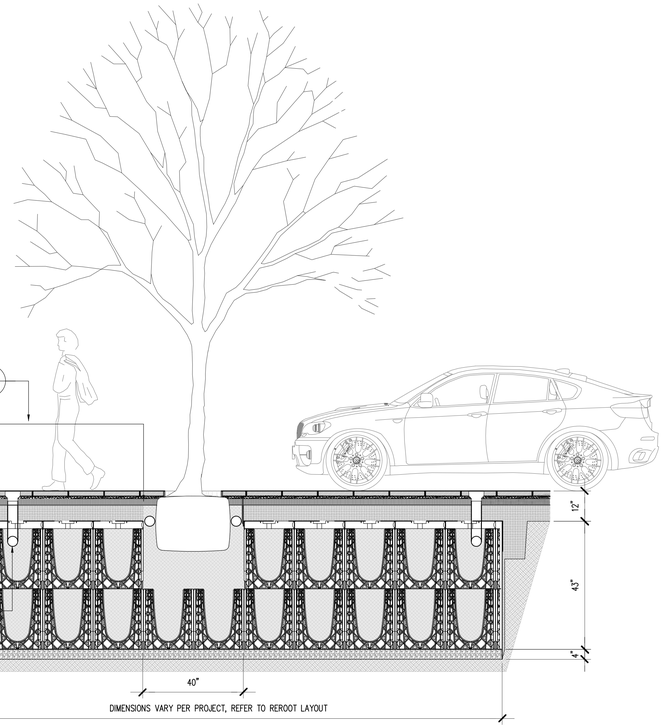
## 3 SHRUB PLANTING DETAIL

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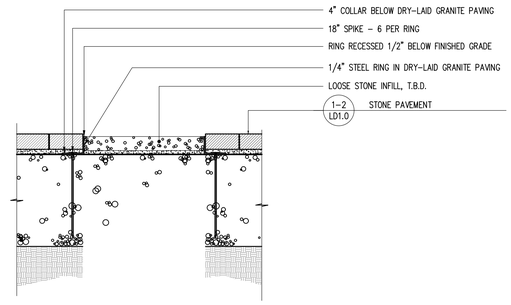

## 4 GROUNDCOVER PLANTING DETAIL

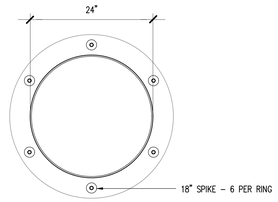
1/2" = 1'-0"

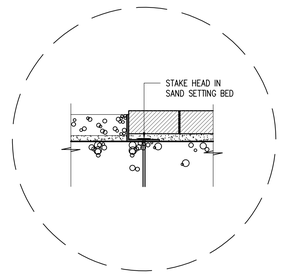



## 5 ROOTSPACE PLANTING SYSTEM

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 |
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SITE PLANTING DETAILS

PORTLAND FORESIDE DEVELOPMENT CO.
PORTLAND, ME 04102

PHASE 1 SITE PLAN SUBMISSION

JOB NO.: 0227007
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SCALE: AS NOTED
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# PLANNING BOARD REPORT
# PORTLAND, MAINE

Zoning Map Amendment
109 Harvard Street
ZN-000716-2019
Wescott and Payson LLC, Applicant

| | |
|---|---|
| Submitted to: Portland Planning Board:<br>Public Hearing Date: November 26, 2019 | Prepared by: Shukria Wiar, Planner<br>Date: November 21, 2019 |

## I. INTRODUCTION

Wescott and Payson LLC seeks a map amendment to rezone an undeveloped tract at 109 Harvard Street from R-3 Residential to R-5 Residential. The proposed Zoning Map Amendment would facilitate a future project contemplated by the applicant that would include the construction of approximately twenty (20) duplex structures for a total of forty (40) residential units on an undeveloped portion of Harvard Street. The subject property was originally part of the Yale Street development (Applications #2002-0121 and #2002-0215, approved January 14, 2003) and was excluded from that proposal due to the presence of onsite wetlands and other issues. A Planning Board workshop for this application was held on September 10, 2019.



*Figure 1: Boundaries of the Proposed Zone*

**Applicant and Property Owner:** Wescott and Payson LLC
**Consultant:** Peter Biegel, Land Design Solutions

## II. PROJECT DATA

| | |
|---|---|
| Existing Zoning | R-3 Residential |
| Proposed Zoning | R-5 Residential |
| Existing Use | Vacant Lots |
| Proposed Use | 20 Duplexes for a total of 40 residential units |
| Parcel Size | ±3.4 acres (149,726 SF) |

## III. BACKGROUND & EXISTING CONDITIONS

The subject property consists of 26 former lots as set forth on the original plan of University Park, which was approved and recorded as a subdivision in 1937. The lots are contiguous and all have frontage on Harvard Street which was dedicated to the City of Portland at the time of the recording of University Park in 1937. In 2003, the

Planning Board approved a thirty (30) unit planned residential unit development (PRUD) and 10 (ten) lot subdivision on Yale Street. The proposed tract of land on Harvard Street was excluded due to wetlands on site.

The parcel under the applicant's control is 3.4 acres in size, is approximately 107 feet deep, and has approximately 1,450 feet of frontage on Harvard Street. At present, the property is wooded with areas of wetlands at the eastern end. The adjacent properties fronting on Woodlawn Avenue are zoned R-5, as are other streets to the south and west.

At the September 10th workshop, the Planning Board requested that further analysis be provided on surrounding uses and densities in the general vicinity of the proposed rezoning area; a summary of these findings can be found below:

- Analysis of density in the vicinity of the proposed rezoning area:

  Staff Comment: Staff research and analyzed the density of two-families, three families, and PRUD developments in the vicinity of the proposed rezoning area. These properties are in the R-3 and R-5 zones: the PRUDs are in the R-3 zone, except for one development on Allen Street, whereas the two and three family units are in the R-5 zone. Chart 1 below shows the two and three family units and Figure 2, submitted by the applicant, illustrates the single-family homes (red dot), and two and three family homes (yellow dots), which are all in the R-5 zones. Chart 2, which corresponds to Figure 3 map, illustrates the PRUD developments.

Chart 1: Two and Three Family Units in the Surrounding Neighborhoods

| Address | SF of Lot | # of Units | SF per Unit |
|---|---|---|---|
| 75 Allen Ave | 6,029 | 2 | 3,015 |
| | | | |
| 23 Cambridge St | 6,570 | 2 | 3,285 |
| 9 Cambridge St | 6,121 | 2 | 3,061 |
| | | | |
| 180 Woodlawn Ave | 12,302 | 2 | 6,151 |
| 175 Woodlawn Ave | 9,105 | 2 | 4,553 |
| 179 Woodlawn Ave | 5,470 | 2 | 2,735 |
| 121 Woodlawn Ave | 6,476 | 2 | 3,238 |
| 109 Woodlawn Ave | 7,390 | 2 | 3,695 |
| 101 Woodlawn Ave | 7,385 | 2 | 3,693 |
| 92 Woodlawn Ave | 14,813 | 2 | 7,407 |
| 71 Woodlawn Ave | 6,000 | 2 | 3,000 |
| 64 Woodlawn Ave | 8,787 | 2 | 4,394 |
| 21 Woodlawn Ave | 9,428 | 3 | 3,143 |
| 8 Woodlawn Ave | 6,033 | 2 | 3,017 |
| | | | |
| 75 University Street | 10,380 | 3 | 3,460 |
| 71 University Street | 10,806 | 3 | 3,602 |
| 67 University Street | 9,005 | 3 | 3,002 |
| 61 University Street | 9,005 | 3 | 3,002 |
| 72 University Street | 7,432 | 2 | 3,716 |
| 26 University St | 8,600 | 2 | 4,300 |
| Totals | 300,337 | 45 | 65,252 |




*Figure 2: Map of Single, Two and Three Family Developments*

| Chart 2: PRUDS in the Surrounding Neighborhoods | | | | | | |
|---|---|---|---|---|---|---|
| | Address | Square Footage | Acre | # of Units | SF per Unit | Zone |
| 1 | 88 Yale St | 279,655 | 6.42 | 30 | 9,232 | R-3 |
| 2 | 240 Harvard St | 339,430 | 7.79 | 84 | 4,041 | R-3 |
| 3 | 145 Allen Ave | 831,193 | 19.1 | 201 | 4,135 | R-5 |
| 4 | 42 Harvard Common | 74,085 | 1.70 | 16 | 4,630 | R-3 |
| 5 | Kimberly Ct, Nicholas Ct, Feeney Way, Majors Ct | 369,388 | 8.48 | 33 | 11,194 | R-3 (7 buildings)<br>R-5 (2 buildings) |
| | **Total** | **1,893,751** | **43.49** | **349** | **33,232** | -- |
| 6 | 109 Harvard St | 149,726 | 3.4 | 40 | 3,743 | R-3 to R-5 |

* Square footage is acquired from approved projects on file at the Planning Division whenever possible, otherwise derived from GIS parcel data.

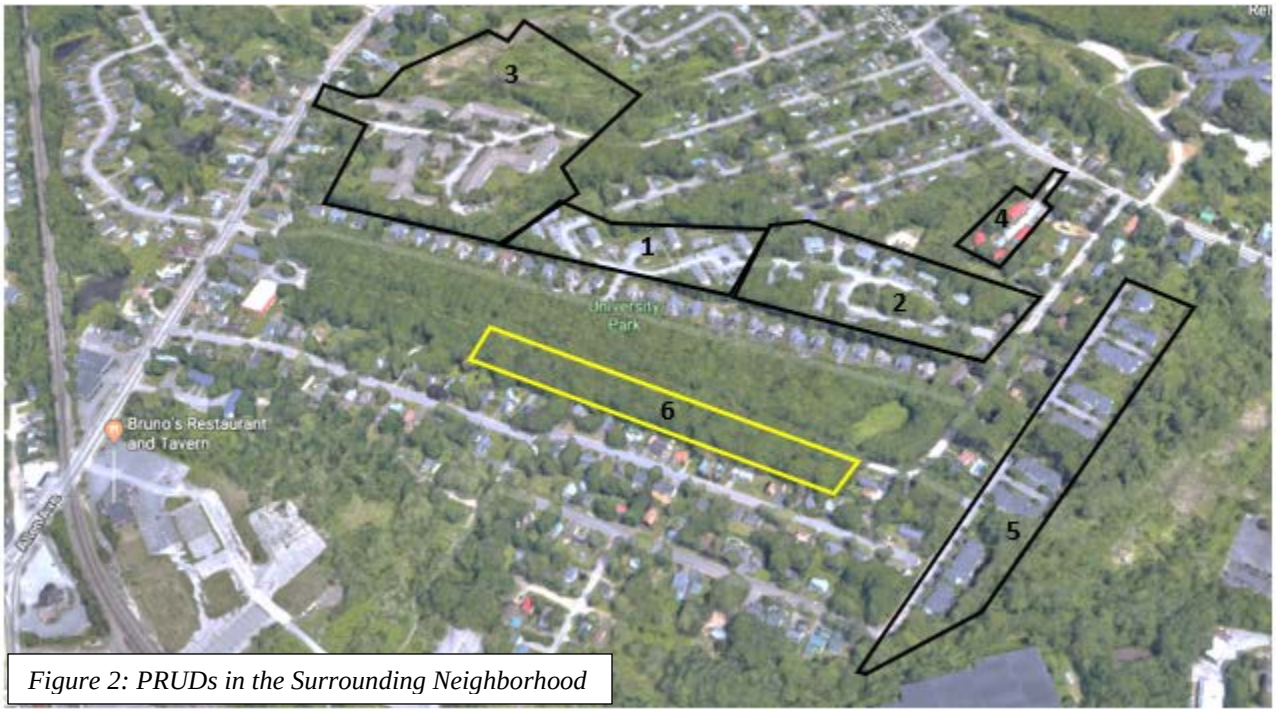



*Figure 2: PRUDs in the Surrounding Neighborhood*

- **The Planning Board requested more information on the 1988 rezoning from R-5 Residential to R-3 Residential.**

Staff Comments: According to a memo dated July 22, 1988 from the Associate Corporation Counsel, portions of the R-5 zoning near University Park were rezoned to R-3 by the City Council; please see Attachment 4.

- **Multiplex developments are permitted in the R-5 zone. The Planning Board requested additional clarity on the definition of this use.**

Staff Comment: Multiplex development, while undefined within §14-47, *Definitions* within the Land Use Code, is described elsewhere within the Code as "three or more horizontally or vertically attached dwelling units or a series of such attached dwelling units..." This description seems to imply that the structure is either supposed to be an attached layout or a townhouse-style layout. During ReCode, staff will add a definition of Multiplex development to §14-47.

## IV. PROPOSED DEVELOPMENT

While the proposed action for consideration by the Planning Board at this time is a Zoning Map Amendment, the applicant has provided a conceptual site plan for the future project that the rezoning to R-5 would facilitate. The applicant's objective with the project would be to orient residential units so that they face University Park and maintain the street character of the surrounding area. The two-story duplex structures would have a front porch and multiple gable roof design to add architectural interest to the Harvard Street façade. The design would also include a rear deck and one car garage, all elements typical of a residential neighborhood. Each duplex would measure approximately 22-feet -wide by 40-feet-deep including a 12 foot by 20-foot garage giving each unit approximately 1,500 of living space and would have two driveways that serves the duplex. A street tree planting is proposed along Harvard Street.

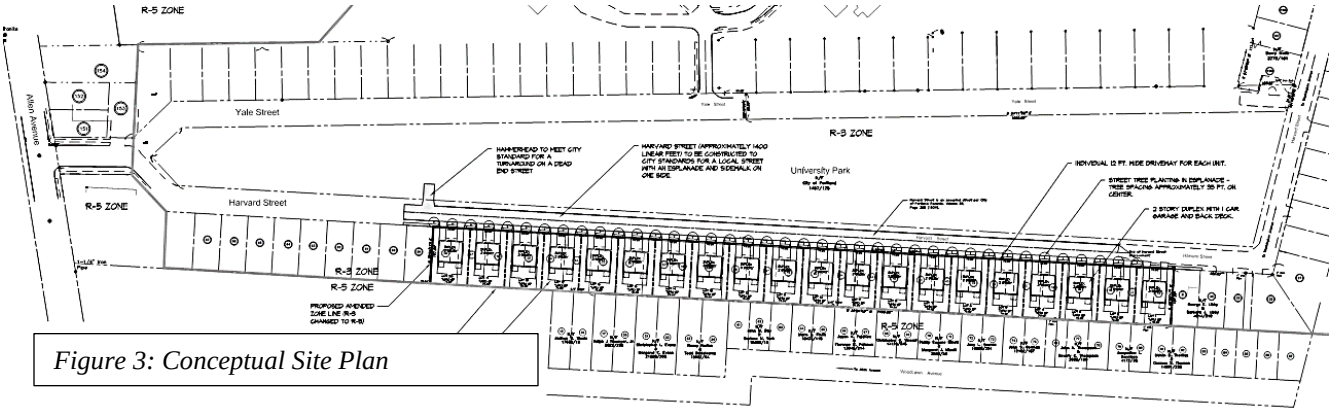



*Figure 3: Conceptual Site Plan*

Harvard Street is partially constructed and accepted by the City, with approximately 1,400 feet of the section adjacent to the property comprising a 50-foot-wide unimproved right-of-way. As a component of a future project, the applicant would be required to construct the street to City standards, which would include reconstructing the storm drain for the existing part of Harvard Street to Washington Avenue, new sidewalk and curbing, and new street lighting. The new storm drains would be extended as part of the improvement to Harvard Street adjacent to the subject property. In addition, City standards would require that Harvard Street link through to Yale Street at Allen Avenue.

Staff provided a cursory review of the project as a planned residential unit development (PRUD) in order to understand the implications of a future project within the rezoning area, and consideration of this proposal found that it could not meet the PRUD zoning requirements because the required parking spaces were proposed to be within the frontage setback. To meet the PRUD standards, grouped parking areas would have had to be inserted between the clusters of townhouses and set back into the site, with wider spacing of the driveways and more parking spaces. These and other site development specifics would receive further attention within a future Level III Site Plan Review.

## V. ANALYSIS OF PROPOSED DEVELOPMENT

The applicant has submitted sketch plans that include a vicinity plan and concept plan for a potential future project (Attachments Plan 1 and Plan 2). The applicant would need to submit a separate Site Plan and Subdivision application for any specific proposal if the rezoning is approved. A future project would also be subject to the Inclusionary Zoning Ordinance, which requires a minimum of 10% of the project to be restricted to qualifying workforce households and that the number of bedrooms required under Section 14-487(e)3 be at least 10% of the total number of bedrooms made available as part of the project.

Each of the lots are 70 feet wide, with a 20-foot front yard setback, 12-foot side yard setbacks, and rear yards about 40 feet in length. New buildings would maintain the street orientation and the indicative design is configured with garages set back from the front façade. As proposed, the typical building layout would meet the

R-5 zone requirements; but as these are conceptual plans only, any additional findings by staff at the site plan and subdivision review stage. Below are several issues that have been flagged for additional attention as part of the site plan and subdivision review.

*Transportation and Traffic*
The proposal will need to provide for connectivity between Harvard Street and Yale Street, include a hammerhead for the dead end of Harvard Street, and break up the block length to be less than 800 feet as per the Ordinance 14-498(g). Tom Errico, Consultant Traffic Engineer, has reviewed the proposed development for traffic and transportation impacts; the following are his comments:

> *I have reviewed the application materials for the above noted project as it relates to the traffic implication of the Zoning Map Amendment. It is my understanding that current zoning permits 20 single-family residential houses, while the Amendment would allow up to 40 residential duplex units. According to information from the Institute of Transportation Engineers (ITE), 40 residential duplex units will generate an additional 14 AM peak hour trips and an additional 20 PM peak hour trips as compared to a 20 single-family unit development. In general, this is not a significant increase in traffic loading to the area roadway system. A Traffic Movement Permit would not be required for either scenario. I would note that a traffic impact study would be required (for either scenario) that would assess the projects impact to the area street system and would include a safety evaluation and a cut-through traffic/neighborhood traffic management evaluation with possible mitigation improvements to be implemented by the Applicant.*

These and other detailed requirements, such as providing buffers to the wetlands, may necessitate adjustments to the concept site and building layouts at the Site Plan Review stage.

*Wetlands*
During the 2003 consideration of the Yale Street development, the status of wetlands on this site was a major issue. The wetland areas will need to be delineated as part of the site plan and subdivision review. A temporary culvert was placed by the City near the end of the improved part of Harvard Street to reduce the icing in that area and this may have affected the wetland and it may be smaller in area now. Jeff Tarling, City Arborist, though discussions with the Parks Division, indicates that these wetlands constitute a vernal pool and will need to be preserved and assessed during spring conditions.

At the present time, the status of the wetlands is not clear; this would require further attention at the Site Plan Review stage; this is not a material consideration in relation to the question of rezoning. A Tier 1 Permit from the MDEP would be required to fill wetlands if they amount to more than 4,300 cumulative square feet in area; if the wetlands are assessed to be a vernal pool, then they will need to be preserved and protected. Mike Tremblay, Senior Engineer with DPW and Lauren Swett, Civil Engineer/Third Party Reviewer with Woodard and Curran, have reviewed the conceptual site plans of the proposed development and offers the following comments in regard to stormwater on site:

> *Mike Tremblay, P.E., Senior Engineer*
> *DPW would be most concerned about the removal of an untold number of trees and the addition of additional impervious area, both of which will significantly reduce the amount of stormwater that can be infiltrated in the area.*
>
> *Lauren Swett, P.E., Civil Engineer/Third Party Reviewer*
> *I agree with Mike on the stormwater piece. As I mentioned, the scale on the drawing is incorrect. I think it works out to be 1" = 80'. I was checking that to see what area thresholds they meet for stormwater permitting. If I've done my math correct, they are at about 5 acres of development right now with the lots and the road, and if they have to connect the road further that will add another 0.5 acres+/-. This will require at a minimum a Stormwater Permit (City's delegated review). I don't think they'll hit the 3 acres of impervious threshold, but if they did, that would kick them into SLOD. They may be close. They will have*

*to meet Basic, General, and Flooding standards. There is no area called out for stormwater management, so they'll have to account for that in their design. I'm also not sure of the topography out there, but with such tiny, tight lots right up to an existing row of lots we'll be looking carefully to make sure their design doesn't impact their neighbors on Woodlawn.*

*They will have to be careful where they send their stormwater. They are not directly in an urban impaired stream, but they are right in the middle between Fall Brook, Dole Brook, and Capisic Brook. If they are going to connect to a system that discharges directly to any of the three watersheds, they'll need to meet the urban impaired stream standards.*

*Portland Trails and Land Bank Commission*

University Park Trail is an identified part of the Portland Trails system and a key link within that system. At present, the trail is an informal pathway that runs along the unimproved right of way for Harvard Street and loops through University Park. Discussions with Portland Trails have taken place and they wish to be consulted further regarding enhancement of the trail and/or the creation of a more formal trail through University Park. The City and Portland Trails will want to ensure any rerouting and enhancement is fully consistent with other objectives.

The subject property is also not on the priority parcels list of land on the Land Bank Commission's Plan. It is a private property and can be developed according to the permitted uses in the zone.

## VI. PUBLIC COMMENT

Notices were sent to one hundred and eighty-six (186) residents and the interested citizen list. The notice also appeared in the Portland Press Herald on November 15 and November 16, 2019, as well as being posted on the City's web page. The applicant has held a neighborhood meeting on July 12, 2019.

There have been a number of public comments that have been submitted to the Planning Division regarding this project: please see Attachments PC1 to PC73. A telephone call was received from Karen Hart of Yale Street who expressed general opposition to the project for the reason that there will be loss of green space and increased traffic burden on streets abutting nearby residences due to the potential addition of forty (40) new residential units. As part of this application, a required neighborhood meeting was held on June 26, 2019. Fifty-five (55) people attended the meeting to voice their concern for the rezone of the property. The neighborhood meeting packet and minutes are included in the Applicant's Submittals E1-E4.

## VII. POLICY CONSIDERATIONS

The current zoning is shown in the map extract below. R-3 zones are shaded yellow and R-5 zones are shaded orange, with the rezoning area delineated with a red outline:

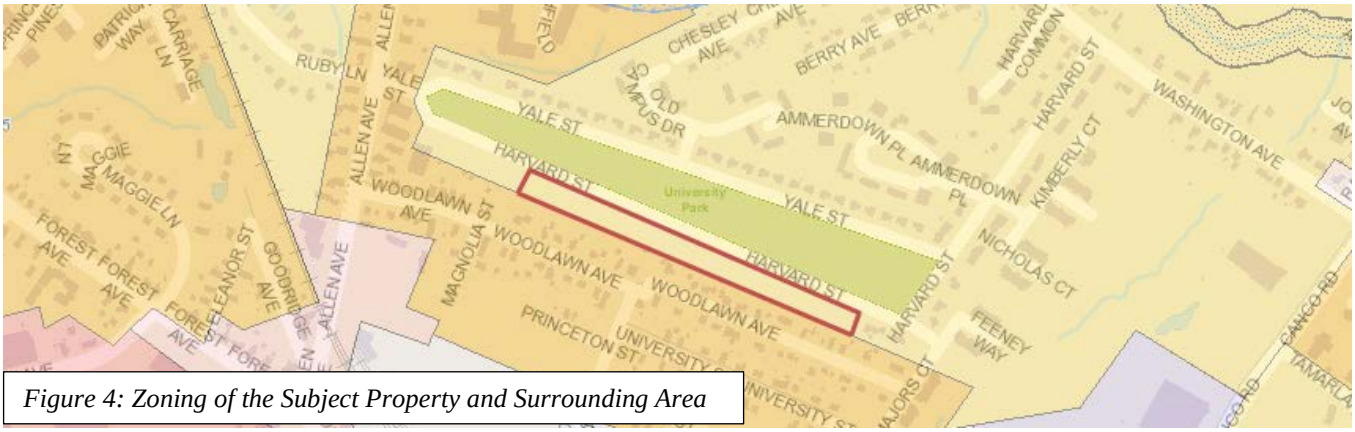



*Figure 4: Zoning of the Subject Property and Surrounding Area*

The following chart compares the current R-3 zone and the proposed R-5 zone; the chart shows the purpose statements, permitted uses, and dimensional requirements of each zone. The subject property is currently zoned

R-3, which allows a similar range of uses as the R-5 zone but does not allow duplex or multiplex development. Generally, the R-5 has more flexible dimensional requirements than the R-3 zone including minimum lot size and setback. The intent of the rezoning is to provide a zoning envelope fora medium density residential development, which can be accomplished with the R-5 zone. Future development facilitated by this rezoning would provide more housing and is intended to blend in well with the surrounding neighborhood. The green spaces along University Park will be a buffer between new development and the existing neighborhood on Yale Street.

| Chart 3: Use Comparison between R-3 and R-5 Zones | | |
|---|---|---|
| Dimension | R-3 Zone | R-5 Zone |
| Purpose Statements | To provide for medium-density residential development characterized by single-family homes on individual lots and also to provide for planned residential unit developments on substantially sized parcels. Such development shall respond to the physical qualities of a site and complement the scale, character and style of the surrounding neighborhood. | To provide appropriate areas of the city for medium-density residential development characterized by single-family and low-intensity multifamily dwellings on individual lots; to ensure the stability of established medium-density neighborhoods by controlling residential conversions; and to provide for planned residential unit development on substantially sized parcels. Such PRUD development shall respond to the physical qualities of a site and complement the scale, character and style of the surrounding neighborhood. |
| Permitted Uses | **Residential:** Single family; PRUD; Handicapped family unit; Single-family, multiple-component manufactured housing; Single-family single-component manufactured housing;<br>**Other:** Parks; Accessory uses; Home occupation; Municipal uses; Wind energy systems | **Residential:** Single and two family; Multiplex development; PRUD; Handicapped family unit; Single-family, multiple-component manufactured housing;<br>**Other:** Parks; Accessory uses; Home occupation; Municipal uses; Special needs independent living units; Wind energy systems |
| Conditional Uses | **Residential:** Sheltered Care group homes; adding one accessory dwelling unit;<br>**Institutional:** Schools; Long term and extended care facilities; intermediate care facilities; places of assembly; hospital;<br>**Other:** off-street parking; utility substations; day care or home babysitting services; temporary wind anemometer towers; wind energy systems. | **Residential:** Sheltered Care group homes;<br>**Institutional:** Schools; places of assembly; hospital; Colleges, university, trade school;<br>**Other:** off-street parking; utility substations; day care or home babysitting services; temporary wind anemometer towers; wind energy systems. |

| Chart 4: Dimensional Comparison between R-3 and R-5 Zones | | | |
|---|---|---|---|
| | R-3 Zone | R-5 Zone | PROPOSED |
| Minimum lot size | 6,500 SF | Residential: 6,000 SF | ±7,490 feet |
| Street Frontage | 50 feet | 50 feet | 70 feet |
| Front Yard (Min) | 25 feet | 20 feet | 20 feet |
| Rear Yard | 25 feet | 20 feet | 20 feet |
| Side Yard | 14 feet for 2-story building | 14 feet for 2-story building | 12 feet for 2-story |
| Structure Height | 35 feet | 35 feet | 35 feet |
| Lot Coverage-Max | 35 % | 40% | 40% |
| Parking | No off-street parking in min front yard setback; Two parking spaces for each dwelling unit. | Two parking spaces for each dwelling unit. | Two parking spaces for each dwelling unit. |

While the applicant seeks to develop this parcel as duplex units, if the proposed R-5 zoning is adopted by City Council, the applicant or a potential purchaser of the property would be able to develop it in other ways that meet

the requirements summarized in the table above. As shown in the chart above, R-5 does allow multiplex development but only at twice the land area per unit of a duplex. Therefore, the duplex or PRUD dwelling would represent the highest density development typology, and that is shown in the indicative proposal. Both R-3 and R-5 zones will allow PRUD development (with different standards for each zone) but the linear nature of this site and its frontage on a public street makes it less suitable for a PRUD development. The PRUD form of development includes the provision of open space; in this location the proximity of University Park across the road may already meet that need.

## VIII. 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 R-3 Residential Zone is:

> *To provide appropriate areas of the city for medium-density residential development characterized by single-family and low-intensity multifamily dwellings on individual lots; to ensure the stability of established medium-density neighborhoods by controlling residential conversions; and to provide for planned residential unit development on substantially sized parcels. Such PRUD development shall respond to the physical qualities of a site and complement the scale, character and style of the surrounding neighborhood.*

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.

*9. Adopt Affordable Housing*

- Pursue new opportunities for increased energy efficiency, increased densities, mixed incomes, and greater connectivity to surrounding neighborhoods.

## IX. CONSIDERATION OF EXTENDED REZONING AREA

At the September 10th workshop, the Planning Board determined that other adjacent areas may be appropriate candidates for inclusion with a larger rezoning area that includes other properties in addition to those under the control of the applicant. The properties that would be included in the extended area are as follows:

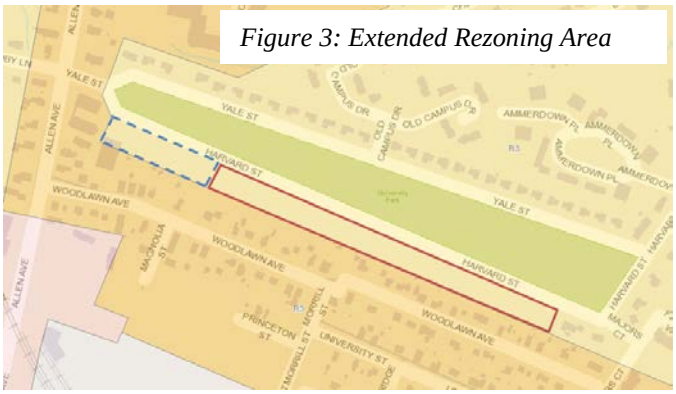


*Figure 3: Extended Rezoning Area*

- ***109 Harvard Street (eastern end – red solid line in Figure 3 above):***
  Parcel subject of developers original Zoning Map Amendment application and for which there is the indicative proposal for 20 duplex homes on 20 lots for a total of 40 residential units, as described in this report. Owned by Westcott & Payson II, LLC.

- ***Nos. 25-63 Harvard Street (western end – blue dashed line in Figure 3 above):***
  Owned by four different owners:
  1. Northern New England Conference Association of Seventh Day Adventists (25-55)
  2. Shirley E.Tevanian Trustee (57-63)

Wescott and Payson LLC requested a rezoning for their site only, and will be presenting the extent of the R-5 map amendment that they are seeking at the hearing. The Board may consider reducing the area of the R-5 if the Board deems appropriate.

## X. REQUISITE COUNCIL ACTION & STAFF RECOMMENDATION

Any proposed rezoning, regardless of whether it is recommended by the Planning Board, must be approved by the City Council in order to take effect. Staff recommends that the Planning Board consider a positive recommendation to City Council for adoption of the map amendment for the extended rezoning area, as presented.

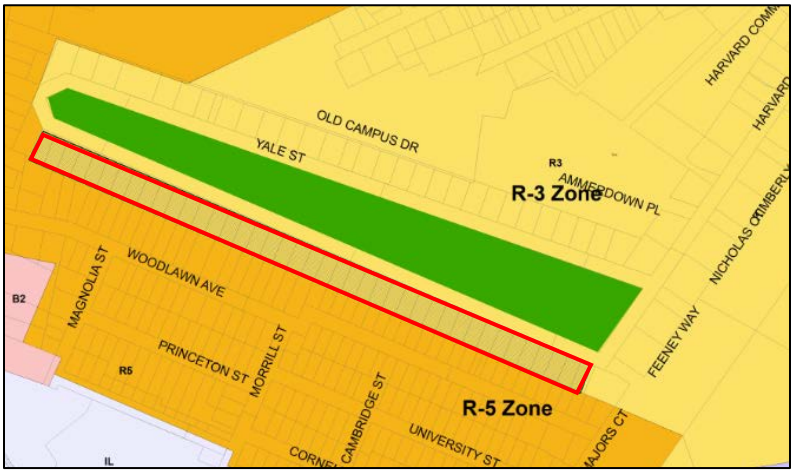
## XI. PROPOSED MOTIONS FOR MAP AMENDMENT

On the basis of plans and materials submitted by the applicant, the City of Portland Land Use Code, Portland's Comprehensive Plan, public comment, the information provided in public hearing on November 26, 2019 for the application ZN-000716-2019 (109 Harvard Street), and/or other findings as follows:

Option 1 (Extended Rezoning Area):

The Planning Board finds that the proposed rezoning to the R-5 Residential zone for the properties located at 25-55, 57-63, and 109 Harvard Street. as shown on the map below **[is or is not]** consistent with the Comprehensive Plan for the City of Portland; and

Therefore, the Planning Board **[recommends or does not recommend]** to the City Council adoption of the zoning map amendment for 25-55, 57-63, and 109 Harvard Street from Residential R-3 to Residential R-5 for the area shown on the map below.

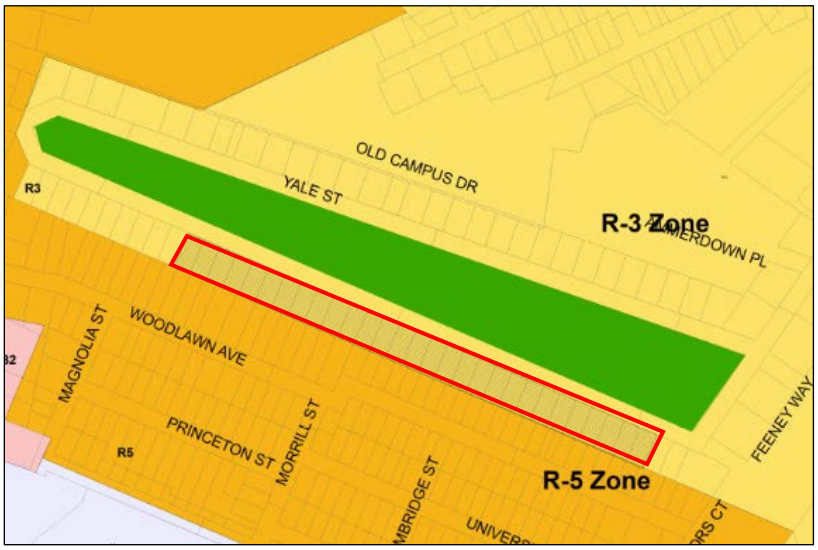



**OR**

Option 2 (Applicant-controlled parcel):

The Planning Board finds that the proposed rezoning to the R-5 Residential zone for the property located at 109 Harvard Street [is or is not] consistent with the Comprehensive Plan for the City of Portland; and

Therefore, the Planning Board [recommends or does not recommend] to the City Council adoption of the zoning map amendment for 109 Harvard Street from R-3 Residential to the R-5 Residential for the area shown on the map below.




## XII. ATTACHMENTS

### PLANNING BOARD MEMO ATTACHMENTS

1. Consulting Traffic Engineer Review 08.30.2019 (Email from Tom Errico)
2. DPW Senior Engineer 08.30.2019 (Email from Mike Tremblay)
3. Consulting Civil Engineer 08.30.2019 (Email from Lauren Swett)
4. City Council Zoning Map Amendment (1988)

### PUBLIC COMMENTS

PC1 Jennifer Fischer 7-8-19
PC2 Tim Fulwider 7-10-19

PC3 Porter X 7-11-19
PC4 Laura Stevens 7-11-19
PC5 Nathan Miller 7-12-19
PC6 Christopher Vermillon 7-12-19
PC7 Kathleen Vance 7-13-19
PC8 George Libby 7-16-19
PC9 George Libby 7-17-19
PC10 Karen Hart 7-26-19
PC11 Olivia Barberi 8-5-19
PC12 Linda McLoon 9-3-19
PC13 Stephanie Brown 9-3-19
PC14 Cherie Phillips 9-5-19
PC15 Hope Gauer 9-5-19
PC16 Heidi Will 9-5-19
PC17 Lisa Brislin 9-5-19
PC18 Eleanor Mann 9-5-19
PC19 John Hughes 9-5-19
PC20 Helen Meehan Selleck 9-5-19
PC21 Neill Gemmel 9-5-19
PC22 Briana Thims 9-5-19
PC23 George Libby 9-5-19
PC24 Andrea Polonetsky 9-5-19
PC25 Phyllis Leeke 9-5-19
PC26 James and Beth Guy 9-5-19
PC27 Kellie Caron 9-5-19
PC28 Mia Blanche 9-5-19
PC29 Carrie Dickinson 9-5-19
PC30 Hala Ismail 9-5-19
PC31 Deborah Napier 9-5-19
PC32 Shannon Wong 9-5-19
PC33 Myke Johnson 9-5-19
PC34 Don and Miki Murray 9-6-19
PC35 Olga Higuera 9-6-19
PC36 David Bruenjes 9-6-19
PC37 Melissa Fraser 9-6-19
PC38 Alicia Greenwald 9-6-19
PC39 Jessica Antonez 9-6-19
PC40 Elizabeth Davidson 9-6-19
PC41 Margaret Handlin 9-6-19
PC42 Mary Teresa Beyer 9-6-19
PC43 Nicole Robitaile 9-6-19
PC44 Debbie Appleton 9-6-19
PC45 Height Shingleton 9-6-19
PC46 Ryan Stitham 9-6-19
PC47 Stephen Gray 9-6-19
PC48 Frank Martinez 9-6-19
PC49 Jane Weinstein 9-6-19
PC50 Save University Park 9-7-19
PC51 David Spector 9-7-19
PC52 Shane Walsh 9-7-19

PC53 Kathryn Andrews 9-7-19
PC54 Andrea Gaines 9-8-19
PC55 Carin Seadler 9-8-19
PC56 Genevieve Levin 9-9-19
PC57 Save University Park 9-9-19
PC58 Camryn Hansen 9-9-19
PC59 James Matias 9-9-19
PC60 George Libby 9-9-19
PC61 Emily Percival 9-9-19
PC62 William Bailey 9-9-19
PC63 John Bowker 9-9-19
PC64 Craig Plourde 9-10-19
PC65 Nan Solomons 9-10-19
PC66 Petition 9-10-19
PC67 Craig Plourde 9-10-19
PC68 Anna Eaves 9-11-19
PC69 Save University Park 9-13-19
PC70 Jennifer Fischer 11-20-19
PC71 George Libby 9-5-19
PC72 George Libby 9-17-19
PC73 George Libby 9-13-19

## APPLICANT'S SUBMITTALS

A. Cover Letter Project Narrative
B. Zoning Map Amendment Application
C. Right, Title, and Interest
D. Analysis of Consistency with the Comprehensive Plan
E. Neighborhood Meeting Packet
   E1. Neighborhood Meeting Certification
   E2. Neighborhood Meeting Invitation
   E3. Neighborhood Meeting Attendance Sheet
   E4. Neighborhood Meeting Minutes
F. 2006 Neighborhood Exhibit

## PLANS

Plan 1 Proposed Map Amendment
Plan 2 Site Plan
Plan 3 Vicinity Map

Att. 1

Portland Maine Yes. Google's good here.

**Shukria Wiar <shukriaw@portlandmaine.gov>**

# Harvard Street - Map Amendment - Traffic Comments

**Tom Errico** <thomas.errico@tylin.com> Thu, Sep 5, 2019 at 8:52 AM
To: Shukria Wiar <SHUKRIAW@portlandmaine.gov>
Cc: Michael Tremblay <mtremblay@portlandmaine.gov>, Bruce Hyman <bhyman@portlandmaine.gov>, Jeremiah Bartlett <JBartlett@portlandmaine.gov>

Hi Shukria - I have reviewed the application materials for the above noted project as it relates to the traffic implication of the Zoning Map Amendment. It is my understanding that current zoning permits 20 single-family residential houses, while the Amendment would allow up to 40 residential duplex units. According to information from the Institute of Transportation Engineers (ITE), 40 residential duplex units will generate an additional 14 AM peak hour trips and an additional 20 PM peak hour trips as compared to a 20 single-family unit development. In general, this is not a significant increase in traffic loading to the area roadway system. A Traffic Movement Permit would not be required for either scenario. I would note that a traffic impact study would be required (for either scenario) that would assess the projects impact to the area street system and would include a safety evaluation and a cut-through traffic/neighborhood traffic management evaluation with possible mitigation improvements to be implemented by the Applicant.

If you have any questions, please contact me.

Best regards,

Thomas A. Errico, PE
Senior Associate
Traffic Engineering Director
[T.Y. Lin International]
12 Northbrook Drive
Falmouth, ME 04105
+1.207.781.4721 main
+1.207.347.4354 direct
+1.207.400.0719 mobile
thomas.errico@tylin.com<mailto:thomas.errico@tylin.com>
Visit us online at www.tylin.com<http://www.tylin.com>
Twitter<https://twitter.com/TYLI_Group> | Facebook<https://www.facebook.com/pages/TY-Lin-International/334954505367> | LinkedIn<http://www.linkedin.com/company/27343> | Instagram<https://www.instagram.com/tylininternational/>

T·Y·LIN INTERNATIONAL **image001.gif**
2K

Att. 2

Portland Maine | Yes. Google's good here.

**Shukria Wiar <shukriaw@portlandmaine.gov>**

# 109 Harvard Street Zone Change

**Mike Tremblay** <mtremblay@portlandmaine.gov> Fri, Aug 30, 2019 at 9:19 AM
To: Shukria Wiar <shukriaw@portlandmaine.gov>
Cc: Bruce Hyman <bhyman@portlandmaine.gov>, Jeff Tarling <jst@portlandmaine.gov>, Lauren Swett <lswett@woodardcurran.com>, Thomas Errico <thomas.errico@tylin.com>

Shukria,

DPW would be most concerned about the removal of an untold number of trees and addition of additional impervious area, both of which will significantly reduce the amount of stormwater that can be infiltrated in the area.

[Quoted text hidden]

--

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

Att. 3

Portland Maine | Yes. Google's good here.

**Shukria Wiar <shukriaw@portlandmaine.gov>**

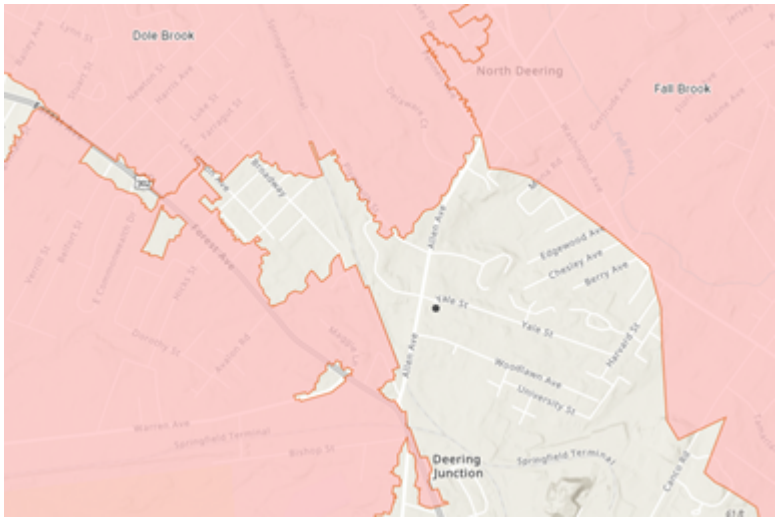
# 109 Harvard Street Zone Change

**Lauren Swett** <lswett@woodardcurran.com> Fri, Aug 30, 2019 at 11:38 AM
To: Mike Tremblay <mtremblay@portlandmaine.gov>, Shukria Wiar <shukriaw@portlandmaine.gov>
Cc: Bruce Hyman <bhyman@portlandmaine.gov>, Jeff Tarling <jst@portlandmaine.gov>, Thomas Errico <thomas.errico@tylin.com>

Hi Shukria,

I agree with Mike on the stormwater piece. As I mentioned, the scale on the drawing is incorrect. I think it works out to be 1"=80'. I was checking that to see what area thresholds they meet for stormwater permitting. If I've done my math correct, they are at about 5 acres of development right now with the lots and the road, and if they have to connect the road further that will add another 0.5 acres+/-. This will require at a minimum a Stormwater Permit (City's delegated review). I don't think they'll hit the 3 acres of impervious threshold, but if they did, that would kick them into SLOD. They may be close. They will have to meet Basic, General, and Flooding standards. There is no area called out for stormwater management, so they'll have to account for that in their design. I'm also not sure of the topography out there, but with such tiny, tight lots right up to an existing row of lots we'll be looking carefully to make sure their design doesn't impact their neighbors on Woodlawn.

They will have to be careful where they send their stormwater. They are not directly in an urban impaired stream, but they are right in the middle between Fall Brook, Dole Brook, and Capisic Brook. If they are going to connect to a system that discharges directly to any of the three watersheds, they'll need to meet the urban impaired stream standards.



Thanks,

Lauren

[Quoted text hidden]

Mike Tremblay, P.E.

[Quoted text hidden]
[Quoted text hidden]



Notice: Under Maine law, documents - including e-mails - in the possession of public officials or city employees about government business may be classified as public records. There are very few exceptions. As a result, please be advised that what is written in an e-mail could be released to the public and/or the media if requested.

**CITY COUNCIL REPORT # 35-06**

# ZONING AMENDMENT

## R-3 to R-5
## VICINITY 25 to 189 HARVARD STREET

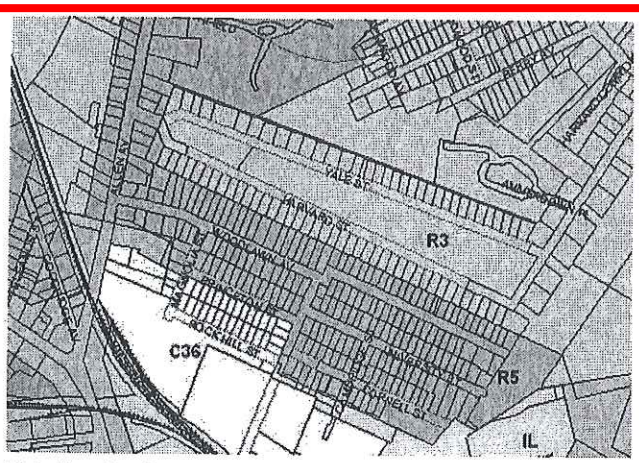
## WESTCOTT & PAYSON II, APPLICANT

Submitted to:
Portland City Council

June 19th, 2006 First Reading
July 17th, 2006 Second Reading

Prepared by:
Jean Fraser, Planner

The current zoning is shown in the Map Extract below. Some of the R-3 zoning near University Park was previously R-5 and was rezoned to R-3 in 1988, as shown in Attachment H.




Existing Zoning

Although the applicant has indicated that if the proposed R-5 zoning is adopted by City Council they will develop the Parcel 1 as duplex units along the lines indicated, the applicant or a purchaser of the property would be able to develop in other ways that meet the requirements summarized in the table below. It is not known what other development (if any) would be proposed by other property owners within the wider boundary of the proposed R-5 zoning. They would need to meet the lot size and other dimensional requirements of the R-5 zoning Ordinance.

## SUMMARY TABLE COMPARING R-3 WITH R-5 ZONING

(for detail please refer to the Ordinance wording Divisions 4, 6 and 20)

| Standard | R-3 single family | R-3 PRUD | R-5 single family | R-5 Duplex | R-5 Multiplex | R-5 PRUD |
|---|---|---|---|---|---|---|
| **Lot Size** | 6500 sq ft | 3 acres continuous | 6000 sq ft | 6000 sq ft | 9000 sq ft | 2 acres contiguous |
| **Land Area per DwellingUnit (Density)** | 6500 sq ft | 6500 sq ft | N/A | 3000 sq ft | 6000 sq ft (4500 sq ft if 250 sq ft st. frontage) | 3000 sq ft |
| **Dwelling unit floor area** | N/A | N/A | N/A | N/A | 600 sq ft | N/A |
| **Max. No of units/bldg** | N/A | 6 (2 if Prud is less than 2 acres) | N/A | N/A | 6 | 12 |
| **Street Frontage** | 50 feet | | 50 feet | 50 feet | 50 feet | None (all one lot) |
| **Front Yard** | 25 feet | 25 ft from external property lines if buildings 100 feet long or less | 20 feet | 20 feet | 20 feet | 25 ft from external property lines if buildings 100 feet long or less |
| **Rear Yard** | 25 feet | | 20 feet | 20 feet | 20 feet | |
| **Side Yards (assume 2 storys)** | 14 feet | | 12 feet | 12 feet | 12 feet | |
| **Lot Coverage** | 35 % | 35% | 40% | 40% | 40% | 40% |
| **Minimum lot width** | 65 feet | N/A | 60 feet | 60 feet | 90 feet | N/A |
| **Structure Height** | 35 feet | 35 feet | 35 feet | 35 feet | 35 feet | 35 feet |
| **Open Space Ratio** | N/A | 300 sq ft per dwelling unit | N/A | N/A | N/A | 300 sq ft per dwelling unit |
| **Off-Street Parking** | 2 spaces per dwelling unit | 2 spaces per dwelling unit, plus 1 additional space per 6 units or fraction thereof | 2 spaces per dwelling unit | 2 spaces per dwelling unit | 2 spaces per dwelling unit, plus 1 additional space per 6 units or fraction thereof | 2 spaces per dwelling unit, plus 1 additional space per 6 units or fraction thereof |

# ZONE CHANGE: 13
# HARVARD AND YALE ST. AREA
# FROM R-5 TO R-3

Attachment H
(2 pages)



RE
Zone Change
R-5 to R-3 1988

CITY OF PORTLAND
MEMORANDUM

TO: Distribution List Below

FROM: Natalie L. Burns, Associate Corporation Counsel

DATE: July 22, 1988

RE: RESIDENTIAL ZONING AMENDMENTS

Please find attached copies of the residential zoning and related site plan and subdivision amendments passed by the City Council on July 19th. These amendments were passed as an emergency and were made retroactive to the date of expiration of the moratorium, making them applicable to all applications received on or after July 19, 1988.

Also attached are copies of the map revisions approved by the Council. Numbers 9 and 12 have been tabled for further consideration. Questions about the map changes should be addressed to Rick Knowland or Alex Jaegerman.

NLB/baj

Distribution List:

Joseph Gray, Director of Planning and Urban Development
Sam Hoffses, Chief Inspection Division
Warren Turner, Zoning Enforcement Officer
Building Inspections (3)
Alexander Jaegerman, Chief Planner
Rick Knowland, Senior Planner
Phil Meyer, Urban Designer
Maureen O'Meara, Planner
David Klenk, Planner
Planning (5)
David Lourie, Corporation Counsel
Charles Lane, Associate Corporation Counsel
Elizabeth Boynton, Associate Corporation Counsel
Kathryn Sheehan, Associate Corporation Counsel

Land Design Solutions
Land Planning, Site Planning and Landscape Architecture

June 11, 2019

Ms. Barbara Barhydt
Portland Planning Department
Planning Division
389 Congress Street
Portland, ME 04101

**RE: Harvard Street (lots 435A015 to 438C040) –**
**Application for Map Amendment from R-3 to R-5**

Dear Barbara,

On behalf of Wescott & Payson II, LLC (Michael Payson) Land Design Solutions is submitting the attached application for a Map Amendment for land located on an undeveloped portion of Harvard Street. The land, 28 lots total is owned by Wescott & Payson II, LLC and currently zoned R-3. My client is requesting that the property be changed to an R-5 zone.

**Property Description:**
The property being proposed for the Map Amendment consists of lots 32 through 58 as shown on the original Plan of Lots at University Park, which was approved and recorded as a subdivision in 1937. The lots are contiguous and all have frontage on Harvard Street which was dedicated to the City of Portland at the time of the recording of University Park in 1937. The total area of the parcel is approximately 3.4 acres. The parcel is approximately 107'+/- feet deep, with approximately 1450'+/- of frontage on Harvard Street. The parcel is currently undeveloped and primarily wooded with a mixed growth of hardwoods and evergreens.

**Harvard Street:**
Harvard Street has been partially constructed and accepted by the City. The street currently dead ends in front of lot number 34 at the easterly end of our property. The remaining portion consists of a 50 ft. wide, unimproved right-of-way that extends to the intersection with Yale Street near Allen Avenue. Our proposed plan is to construct approximately 1,400 feet of street to the City of Portland's local street standard with a turnaround at the end point.

**Zoning Analysis:**
The property is currently zoned R-3. This area was originally zoned R-5 the same as the adjacent lots and then for reasons which are unclear was rezoned to R-3 in 1988. The ordinance describes the purpose of this zone as "to provide for medium density residential development characterized by single-family homes on individual lots and also to provide for planned residential unit developments on substantially sized parcels". The ordinance describes the proposed zone which is the R-5 Zone as "To provide appropriate

areas of the city for medium-density residential development characterized by single-family and low-intensity multifamily dwellings on individual lots". The proposed map amendment changing the property from an R-3 to an R-5 zone would allow Wescott & Payson II, LLC to construct approximately 20 duplex structures (40 units) based on a lot width requirement of 65 ft. for the R-5 zone. Each proposed lot would be approximately 70 feet wide by 107 feet deep. Each lot will have a total area of approximately 7,490 s.f. which exceeds the R-5 minimum requirement of 6,000 s.f. The proposed lots would meet the required front, rear and side setbacks as well as building height and lot coverage.

**Zoning Comparison Table:**

| **Description** | **R-3 Zone** | **R-5 Zone** | **Proposed Lots** |
|---|---|---|---|
| **Single Family** | allowed | allowed | NA |
| **Duplex** | not allowed | allowed | Duplex |
| **Lot Width** | 65 ft. | 60 ft. | 70 ft |
| **Min. Street Frontage** | 50 ft. | 50 ft. | 70 ft. |
| **Min. Front Yard** | 25 ft. | 20 ft. | 20 ft. min. |
| **Min. Rear Yard** | 25 ft. | 20 ft. | 20 ft. min. |
| **Min. Side Setback** | | | |
| **1 story** | 8 ft. | 8 ft. | |
| **1.5 story** | 8 ft. | 8 ft. | |
| **2 story** | 14 ft. | 12 ft. | 12 ft. min. |
| **2.5 story** | 16 ft. | 14 ft. | |
| **Max. Lot Coverage** | 35% | 40% | 40% min. |
| **Max. Structure Height** | 35 ft. | 35 ft. | 35 ft. max. |
| **Min. Lot Size** | 6,500 s.f. | 6,000 s.f. | 7,490 +/-s.f. |

The existing Woodlawn Ave R-5 neighborhood abuts the rear of our parcel and consists of a mix of dwelling units with a combination of both duplexes and single family homes, and one multi-family. Harvard Street and University Park abut the parcel in the front so the built environment that the Wescott & Payson II parcel is most closely tied to, and was originally zoned with is the abutting R-5 zone. We believe extending the R-5 Zone line to include the Wescott & Payson II lots as proposed and as previously zoned would be in keeping with the surrounding neighborhood, the original zoning intent and would allow much needed additional housing units while facilitating lower price points making them affordable to a broad range or residents.

**Building Design (Duplex):**

We are proposing attractive 2 story duplex structures with a front porch and multiple gable roof design to add architectural interest to the Harvard Street façade. The design also includes a rear deck and one car garage all elements typical of a residential neighborhood. A street tree planting is proposed along Harvard Street with attractive landscaping around the units. Each duplex would measure approximately 22 ft. wide by 40 ft. deep including a 12' by 20 ft. garage giving each unit approximately 1,500 of living space. All duplexes will front on Harvard Street meeting the required front, rear and side

setbacks. Each duplex will have their own 12 foot wide driveway with ample room to park a vehicle.

We met with City Planning Staff in February to discuss the Map Amendment and believe based on that conversation that this proposal is consistent with the City's comprehensive plan and housing initiatives. One of the development challenges for Harvard Street is the fact that University Park takes up one side of the street leaving the other developable side to bear the entire cost of the street construction. With cost estimates of $1,000 per foot for street and infrastructure the economics for development are difficult which is why the added density (duplexes) provided by the R-5 Zone is so critical.

We have enclosed the following information as part of our application.

Attachments:

1. Analysis of Consistency with the Comprehensive Plan
2. Map Amendment Checklist
3. Right, Title and Interest (property deeds)

Plans:

1. Vicinity Map
2. Proposed Map Amendment (Portland Zoning Map)
3. Site Plan

Please do not hesitate to contact me with any questions or comments concerning the submitted plans and documentation, or should additional information be needed.

Sincerely,

Peter B. Biegel

Peter B. Biegel, RLA, LEED AP
Maine Licensed Landscape Architect
Land Design Solutions

# CITY OF PORTLAND
## Planning & Urban Development Department

| | |
|---|---|
| MAP AMENDMENT<br>SUBMISSION CHECKLIST<br>Please submit each document as a separate PDF file<br>Please confirm by electronically checking the boxes to the left | |
| GENERAL APPLICATION DOCUMENTS | |
| ☑ | **Project Description**<br>• Cover Letter with detailed project description |
| ☑ | **Consistency with Comprehensive Plan**<br>• 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**<br>**(this document)** |
| ☑ | **Right, Title and Interest**<br>• 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)**<br>Provide a site plan of the property showing existing and proposed improvements, including such features as buildings, parking, driveways, walkways, landscape and property boundaries. |

Doc#: 123188 Bk:20508 Pg: 234

Att. C

Lots 32 through 52

# CORRECTIVE WARRANTY DEED

**THOMAS REALTY ASSOCIATES**, with a mailing address of 15830 Dawson Ridge Road, Tampa, Florida 33647 for consideration paid, grants to **WESCOTT & PAYSON II, LLC,** formerly Wescott & Payson II, a Maine general partnership, with a mailing address of 240 Harvard Street, Portland, Maine 04103, **with Warranty Covenants,** that certain lot or parcel of land situated in the City of Portland, County of Cumberland, State of Maine, described as follows:

**SEE ATTACHED EXHIBIT A**

Meaning and intending to correct a Warranty Deed given from Thomas Realty Associates to Wescott & Payson II and recorded in the Cumberland County Registry of Deeds in Book 17365, Page 293. This deed is to correct that portion of the premises described as Parcel 3 situated on Harvard Street in the City of Portland, County of Cumberland and State of Maine and being Lots Numbered 32-52, as shown on "Plan of Lots at University Park, Portland, Maine", recorded in the Cumberland County Registry of Deeds on October 6, 1937 in Plan Book 24, Page 26. Parcel 3 is a portion of the premises conveyed to Thomas Realty Associates from Thomas G. Fiorica and Jennie F. Fiorica by deed dated August 17, 1984 and recorded in the Cumberland County Registry of Deeds in Book 6538, Page 51. Also reference is made to these same premises conveyed to Thomas G. Fiorica and Jennie F. Fiorica from Campus Realty Co. by deed dated September 5, 1979 and recorded in the Cumberland County Registry of Deeds in Book 4488, Page 189.

The prior description referenced the incorrect tax map and lot numbers.

Witness our hands and seal this 21 day of October, 2003.

Signed, Sealed and Delivered
in the presence of

Sharon Martens

Deanne L Sullivan

THOMAS REALTY ASSOCIATES

By: _____
James Fiorica
Its: Limited Partner

State of Florida
County of Palm Beach October 21, 2003

Then personally appeared the above named James Fiorica, in his capacity as Limited Partner for Thomas Realty Associates and acknowledged the foregoing instrument to be his free act and deed and the free act and deed of Thomas Realty Associates.

Dianne L. Sullivan
Commission #DD248652
Expires: Sep 26, 2007
Bonded Thru
Atlantic Bonding Co., Inc.

Dianne L. Sullivan
Notary Public/Attorney at Law

Dianne L. Sullivan
printed name of notary or attorney

## EXHIBIT A

Certain lots or parcels of land situated on Harvard Street in the City of Portland, County of Cumberland State of Maine and being Lots Numbered 32-52, as shown on "Plan of Lots at University Park, Portland, Maine", recorded in the Cumberland County Registry of Deeds on October 6, 1937, in Plan Book 24, Page 26.

Being a portion of the premises conveyed to Thomas G. Fiorica, et al by the Campus Realty Co. by deed dated September 5, 1979 and recorded in the Cumberland County Registry of Deeds in Book 4488, Page 189.

Meaning and intending to convey property of Thomas Realty Associates, described in the Cumberland County Registry of Deeds in Book 6538, Page 49 and Book 6538, Page 51.

Also being a portion of the property described in deeds to Thomas G. Fiorica and Jennie Fiorica recorded in the Cumberland County Registry of Deeds in Book 10710, Page 141 and Book 10710, Page 147. Said property was conveyed by James V. Fiorica, Personal Representative of the Estate of Thomas G. Fiorica and James V. Fiorica, Personal Representative for the Estate of Jennie Fiorica to Thomas Realty Associates by deed recorded in the Cumberland County Registry of Deeds in Book 17365, Page 287 and in Book 17365, Page 288.

Received
Recorded Register of Deeds
Nov 04,2003 12:54:06P
Cumberland County
John B. O Brien

Doc#: 2331 Bk:35414 Pg: 243

Lots 53 & 54

(SPACE ABOVE RESERVED FOR RECORDING INFORMATION)

# WARRANTY DEED

DLN: 1001940048558

Nancy Krekorian Thurber, of Falmouth, County of Cumberland and State of Maine and Pamela Krekorian Burnell, of Portland, County of Cumberland and State of Maine, for consideration paid, grants to Wescott & Payson, II, LLC, a Maine limited liability company with a principal place of business in Falmouth, County of Cumberland and State of Maine and a mailing address of 50 Thornhurst Road, Falmouth, Maine 04105, the land located in the City of Portland, County of Cumberland and State of Maine, described as follows:

Certain lots or parcels of land situated in the City of Portland, County of Cumberland and State of Maine, and being Lots Numbered 53 and 54 shown on Plan of Stevens Terrace Subdivision, drawn by Charles W. Fenn, C.E., and recorded in Cumberland County Registry of Deeds in Plan Book 11, Page 49.

This conveyance is made subject to all utility easements which serve the premises, zoning and building restrictions, other rights, easements, covenants, conditions and restrictions of record affecting the premises, and real estate taxes assessed but not yet due, which Grantee by acceptance hereof assumes and agrees to pay.

Meaning and intending to describe the same premises described in those two certain deeds to the herein Grantors, both dated December 24, 2013 and recorded in the Cumberland County Registry of Deeds in Book 31252, Pages 76 and 77.

MAINE REAL ESTATE TAX PAID

Doc#: 2331 Bk:35414 Pg: 244

Received
Recorded Register of Deeds
Jan 17,2019 09:22:19A
Cumberland County
Nancy A. Lane

WITNESS my hand this 15 day of January, 2019.

Witness

Nancy Krekorian Thurber

STATE OF MAINE
COUNTY OF CUMBERLAND

January 15, 2019

Personally appeared the above named Nancy Krekorian Thurber and acknowledged the foregoing instrument to be her free act and deed.

SEAL

Before me,

Notary Public/~~Attorney-at-Law~~

KATHLEEN L. GRIFFITH
Notary Public, Maine
My Commission Expires November 26, 2020

WITNESS my hand this 15th day of January, 2019.

Witness

Pamela Krekorian Burnell

STATE OF MAINE
COUNTY OF CUMBERLAND

January 15, 2019

Personally appeared the above named Pamela Krekorian Burnell and acknowledged the foregoing instrument to be her free act and deed.

SEAL

Before me,

Notary Public/~~Attorney-at-Law~~

**After recording return to:**

KATHLEEN L. GRIFFITH
Notary Public, Maine
My Commission Expires November 26, 2020

Lambert Coffin
attorneys at law

Paul S. Bulger
pbulger@lambertcoffin.com

January 3, 2006

Michael H. Payson
50 Thornhurst Road
Falmouth, ME 04105

RE: Estate of Esther O. Jenson / Wescott & Payson II, LLC
Our File No. 5208-2

Dear Mike:

Enclosed are the original three deeds for and relating to the acquisition of Lots 55, 56, 57, and 58 Stevens Terrace, Cumberland County Registry of Deeds Plan Book 11, Page 49.

These documents were recorded in Book 23521, Page 173, 175 and 176, respectively. Please store these documents with your other materials for the Crosby and Hayde transaction recently closed.

I will process the title policy and forward that to you shortly.

Very truly yours,

Paul S. Bulger
PSB/swc
Enclosures

Doc#: 93197 Bk:23521 Pg: 175

Lots 55 through 58

**WARRANTY DEED**

**MARILYN C. CROSBY and CAROL E. HAYDE**, with a mailing address of 60 Narragansett Street, Gorham, Maine 04038, for consideration paid, grant to **WESCOTT & PAYSON II, LLC**, with a mailing address of c/o 31 Old Campus Drive, Portland, Maine 04103, a certain lot or parcel of land bounded and described as follows:

A certain lot or parcel of land located on Harvard Street in the City of Portland, County of Cumberland and State of Maine, and being lots numbered 55, 56, 57 and 58 on Plan of Stevens Terrace recorded in Cumberland County Registry of Deeds in Plan Book 11, Page 49; also shown on City of Portland Assessors Plan number 435-A-15 to 18; containing nineteen thousand nine hundred sixty (19,960) square feet of land, more or less.

Said premises were owned by Sine J. Kerr at her decease on June 9, 1941 and were devised by her to Ole Jensen. See Cumberland Probate Docket No. 33139. Said Ole Jensen died May 11, 1947 and devised said premises to Alfrida E. Jensen. See Cumberland Probate Docket No. 40333. Said Alfrida E. Jensen died February 22, 1948 and devised said premises to Robert E. Jensen, Charles Russell Jensen and Theodore C. Jensen, the late husband of Esther O. Jensen. See Cumberland Probate Docket No. 41268.

IN WITNESS WHEREOF, the said Marilyn C. Crosby and Carol E. Hayde have caused this instrument to be signed on the 28th day of November, 2005.

Marilyn C. Crosby

Marilyn C. Crosby

Carol E. Hayde

STATE OF MAINE
COUNTY OF CUMBERLAND

November 28th, 2005

Personally appeared the above-named Marilyn C. Crosby and acknowledged the foregoing instrument to be her free act and deed.

Before me,

Notary Public/Attorney-at-Law
Print Name:

# WARRANTY DEED

**MARILYN C. CROSBY and CAROL E. HAYDE**, with a mailing address of 60 Narragansett Street, Gorham, Maine 04038, for consideration paid, grant to **WESCOTT & PAYSON II, LLC**, with a mailing address of c/o 31 Old Campus Drive, Portland, Maine 04103, a certain lot or parcel of land bounded and described as follows:

A certain lot or parcel of land located on Harvard Street in the City of Portland, County of Cumberland and State of Maine, and being lots numbered 55, 56, 57 and 58 on Plan of Stevens Terrace recorded in Cumberland County Registry of Deeds in Plan Book 11, Page 49; also shown on City of Portland Assessors Plan number 435-A-15 to 18; containing nineteen thousand nine hundred sixty (19,960) square feet of land, more or less.

Said premises were owned by Sine J. Kerr at her decease on June 9, 1941 and were devised by her to Ole Jensen. See Cumberland Probate Docket No. 33139. Said Ole Jensen died May 11, 1947 and devised said premises to Alfrida E. Jensen. See Cumberland Probate Docket No. 40333. Said Alfrida E. Jensen died February 22, 1948 and devised said premises to Robert E. Jensen, Charles Russell Jensen and Theodore C. Jensen, the late husband of Esther O. Jensen. See Cumberland Probate Docket No. 41268.

IN WITNESS WHEREOF, the said Marilyn C. Crosby and Carol E. Hayde have caused this instrument to be signed on the 25th day of November, 2005.

Marilyn C. Crosby

Carol E. Hayde

STATE OF MAINE
COUNTY OF CUMBERLAND

November 25, 2005

Personally appeared the above-named Marilyn C. Crosby and acknowledged the foregoing instrument to be her free act and deed

Before me,

Notary Public/Attorney at Law
Print Name

STATE OF TENNESSEE
COUNTY OF HAMILTON

November 25th, 2005

Personally appeared the above-named Carol E. Hayde and acknowledged the foregoing instrument to be her free act and deed.

Before me,

Notary Public/Attorney-at-Law
Print Name: LERON G. RICHARDS
6/21/08

Received
Recorded Register of Deeds
Dec 21,2005 02:20:54P
Cumberland County
John B OBrien

Land Design Solutions
Land Planning, Site Planning and Landscape Architecture

**Attachment #1**
**Consistency with Comprehensive Plan Analysis**

We have reviewed the 2017 City Council approved Comprehensive Plan "Portland's Plan 2030" and believe that our Map Amendment request to rezone the lots in question from R-3 to R-5 is consistent with the Plan. Specifically with the Policies and Goals outlined in the section titled "A Livable City (Policy Guide: Housing)".

The opening paragraph of this section states *"While Portland has welcomed much needed housing construction in recent years, both the lack of sufficient housing supply and the affordability of that housing for a healthy socio-economic cross section of the population remain urgent challenges*". The introduction goes on to say that the City Council's Housing Committee engaged in a "robust" public process to identify housing issues and develop creative solutions, and identified two main themes; housing insecurity and lack of sufficient and suitable housing supply. The last paragraph in this section's introduction states that "*The City will continue to examine and approve substantive policy changes to accommodate those seeking the benefits of City life, and recognize that the City's vitality rests on the availability of diverse, secure housing options for existing residents, new arrivals, and all stages of life*". The City is working hard to increase the supply of housing for its existing residents and for those who would like to move to Portland. We believe our proposed Map Amendment which will allow approximately 40 additional units of reasonably priced housing on the market is in line with this housing policy.

The second section of the Policy Guide" Housing is titled "Recent & Ongoing Initiatives" which states that "*Over the past several years, the City has amended its zoning ordinance to allow greater residential density in various zones, expand the applicability of an existing 25% density bonus, increase allowable heights etc*." all to allow more residential development. We believe the expansion of the R-5 zone abutting the lots in question to encompass them is in line with this Policy Guide statement.

The last page of this section lists the State of Maine Goal which is "*To encourage and promote affordable decent, housing opportunities for all Maine citizens"* and the City of Portland's Goals, three of which we believe relate directly to our proposed Map Amendment. These three goals are; *"Increase preserve, and modify the overall supply of housing city-wide to meet the needs, preferences and financial capabilities of all Portland Residents"* and *"Encourage quality, sustainable design in new housing".* We believe that the proposed Map Amendment which would relocate the R-5 zone line from the lots abutting the rear of the lots owned by Wescott & Payson II to encompass their 28 lots, which would allow the construction of Harvard Street and it's infrastructure, and approximately 20 duplexes (40 units) of new energy efficient housing, constructed using modern construction materials is very much in line with the City's goals.

P.O. Box 316, 1 Faraday Drive, Cumberland, ME 04021
Tel: (207) 939-1717 Email: pbiegel@landdesignsolutions.com

The closing paragraph of HOUSING Appendix states that *"This plan supports the concept that those who work in Portland should be able to live here as well, and that, over the next decade, the city should aspire to accommodate 75% of the current daytime population, or approximately 72,000 people. Assuming an average household size of 2.08, this translates into a total of 2,557 new housing units over the next 10 years".* We believe a Map Amendment which provides for the construction of 1,450 linear feet of city street and utilities, and approximately 40 well built, energy efficient dwelling units is in line with this plan.

The entire Policy Guide on Housing is about the addition of more housing units. We are proposing a Map Amendment which will allow duplexes to be constructed on these lots making it economically feasible to construct Harvard Street and its associated infrastructure. Without the ability to increase the density from single family to duplexes it is not economically feasible for us to construct Harvard Street and develop these existing lots with much needed housing.

P.O. Box 316, 1 Faraday Drive, Cumberland, ME 04021
Tel: (207) 939-1717 Email: pbiegel@landdesignsolutions.com

# Neighborhood Meeting Certification

I, Michael Payson, hereby certify that a neighborhood meeting was held on July 12, 2019 at 31 Old Campus Drive in Portland, Maine at 6:00pm for the proposed project at 109 Harvard Street.

I also certify that on June 26, 2019 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 or within 1000 feet of a subdivision within an industrial zone or industrial zone change.
2. Residents on the "Interested parties" list.

Signed,

Michael Payson

Wescott & Payson II

July 15, 2019

# Neighborhood Meeting Invitation

**Wescott & Payson II**
**c/o Apex Management**
**31 Old Campus Drive**
**Portland, ME 04103**
**(207) 797-4380**

**June 26, 2019**

Dear Neighbor:

Please join us for a neighborhood meeting to discuss our plans for a map amendment to expand the R5 zone to include the land at 109 Harvard Street, including lots identified on the tax maps as 435-A015 to 438-C040, which is currently in the R3 zone.

Meeting Location: Apex Management Office Building, 31 Old Campus Drive, Portland, ME
Meeting Date: Friday July 12, 2019
Meeting Time: 6:00pm

(The City code requires that property owners within 500 feet of the proposed map amendment 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, please call 207-797-4380

Wescott & Payson, II
06/26/2019

Note:
Under Section 14-32(C) and 14-524(a)d 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 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 bab@portlandmaine.gov

Att. E3

Neighborhood Meeting Sign-in Sheet
July 12, 2019
31 Old Camps Dr., Portland

| Members of Public in Attendance | Email |
|---|---|
| Jesse Brassell | mickeuss@gmail.com |
| Glenn Holland | Pastor Glenn@theHollands.faith |
| Eleanor Mann | |
| Stephen Labbe | SteveLab59@maine.rr.com |
| David Spector | david01@nsrusa.org |
| Shannon O'Connor | shannon.oconnor@maine.edu |
| Jennifer Fischer | jenfischer01@gmail.com |
| Norman Jarson | njarson22@gmail.com |
| John Day | jmday@maine.rr.com |
| Darlene Day | darlall09@yahoo.com |
| Karen Hart | Khart1@maine.rr.com |
| Robyn Bailey | |
| Bill Bailey | wmb2419@yahoo.com |
| Laura Stevens | |
| Rachel Fleharty | |
| Susan Baxter | baxtersusan@msn.com |
| Jonah Breem | |

Minutes of

Public in attendance

Aug 6

BOB KROLL
270 HARVARD ST
PORTLAND, ME 04103
207 200-0045

Urfan Nadirov
86 Yale St. Portland, 04103

Stephen & Elizabeth Gray
36 Majors Court, Portland

Kristina MacCormick
38 Majors Ct Portland

Caitlin & Will Hopkins
256 Harvard St. Portland, ME

John Gorman
143 Woodlawn Ave

JIM HOWARD
134 WOODLAWN AVE

Michael LeComte
1115 Washington Ave

Sharron + Geoff Green
166 Yale ST
Portland, ME

Andy & Hester Mishkin
440 YALE St.
Portland, ME 04103

Jaime Parker
Portland Trails
jaime@trails.org

Jane Gallant
605 Stevens Ave
Portland 04103

Matt Dechaine
50 University
Portland 04103

Sean Elsworth & Lee Reeve
261 Harvard St.
Portland ME 04103

Vilma Adame
Yale St.
04103

Ralph + Susan Neumyer rneumyer@yahoo.com

DAVID R. BUCHANAN 201 HARVARD ST

Richard + Shawn Henry 33 Nicholas CT. Portland 04103

Sue + Glenn Kroll 33 Kimberly CT Ptld. - SCKROLL@me.com

Kevin + Jennifer Bardwell 137 Woodlawn Ave kevin@bwellhealth.com
Jennifer long 73@yahoo.com

Holly Mitchell 154 Yale St hmitchell@kw.com

MARY + BRENDAN McVEIGH 30 YALE ST bmcveigh@maine.rr.com
Tim Fulwider + Sara Brooke 117 Woodlawn Ave t.mfulwider@gmail.com
Nicholas Wall 116 Woodlawn Ave Nicholaswall2012@gmail.com
Olivia Barberi 116 Woodlawn Ave olivianb7@gmail.com
Alex Wall 116 woodlawn ave alexdanielwall@gmail.com
George LIBBY 185 HARVARD ST georgeL@lauramarrprinting.com
Beth Payson 185 Harvard St. beth@lauramarrprinting.com

Joseph Laukinaitis
Kristen Blais Kblais14@yahoo.com
Brooke Griffin (122 Woodlawn Av.)

meghan gillin 15 CORNELL ST corliesgrady@gmail.com
Todd Dadaleores 92 Woodlawn Ave. Portland, Maine 04103
Nancy Norton 92 Woodlawn Av Portland 04103

Laura Labbe teran78@hotmail.com

Elizabeth Rose save.university.park.trail@gmail
Ryan C. NORFLEET " "
Kathy Kroll KBKroll@me.com
Bob Kroll BobKroll@earthlink.net
TODD HENRY HAYESHENRY@GMAIL.COM

Developer and Consultant Team in Attendance:
Mike Payson (developer) mpayson4@gmail.com
Peter Biegel (site plans) pbiegele landdesignsolutions.com

# Harvard Street Map Amendment

## Neighborhood Meeting Minutes

## July 12, 2019

Meeting was called to order at 5:59pm

Mike Payson, representing the developer, introduced himself and Peter Biegel from Land Design Solutions.

Mr. Payson acknowledged the larger number of attendees than expected and standing room only, and told attendees he and Mr. Biegel would remain as long as needed to allow everybody, especially those standing in back, to review the exhibits and ask any questions.

Peter Biegel of Land Design Solutions presented a short overview of the project, referring to his exhibits showing the development area and concept elevations for duplex townhomes. He explained that the developer's land was not part of University Park, but an existing approved subdivision, and that the park was protected and would not be developed.

Residents asked whether homes would be rented or sold. Mr. Payson indicated the developer planned to sell, not rent, the new homes. Residents commented/questioned whether people would pay $350k sales price for condos in that area

Resident asked about vernal pool on Harvard Street. Mr. Biegel indicated that would be addressed in planning board review

Resident asked about finances and why R5. Mr. Payson explained homes would only be on one side of street unlike most developments, city street would likely cost over $1000 per foot, and the R5 density would make those economics work

Resident pointed out similar request was rejected by council in 2006 and asked why developer expected it would be approved now. Mr. Payson explained that in 2006 the planning board unanimously recommended in favor of the zone change, he did not know why the council rejected the planning board's recommendation, but hoped the new council would see the benefits of the project

Resident asked if developer would create a website to provide all the information and improve transparency. Another resident indicated the city has a website to do that, and offered to show the resident how to use it. Mr. Payson indicated he would not create a separate website for that purpose, but would assist in providing information if needed if the residents wanted to create a website

Residents asked whether they would receive notices of future meetings. Other residents and Peter Biegel explained the postcards would be sent per the planning process, and if people were not on the abutter list they should contact the city to be placed on the interested party list.

Residents asked if the developer would sell or give the land to the owners or Portland Trails instead of developing. Mr. Payson stated he would entertain proposals but that was not currently being considered

Residents expressed concerns about parking, removing dead trees, keeping healthy trees, blasting, buffering, and location of the turnaround on park property. Broad discussion ensued on these topics among residents. Peter Biegel and other residents explained these issues would be addressed in the planning and site plan review process, and all these things would have to be approved by the planning board

A resident asked about green building. Mr. Payson explained many energy efficiency features are part of the basic building and many are required by codes. Extra green features would be included at the option of buyers.

A resident asked if the developer had considered an alternate development plan with a different road design. Mr. Payson and Mr. Beigel explained that due to shape of the land, it would be difficult to configure the road differently and do a PRUD-style development.

Residents engaged in a broad discussion encouraging each other to get involved and suggesting ways to do so.

A resident asked about the proposed timing. Mr. Payson and Mr. Biegel explained there are a number of processes including the map amendment, site plan review, and affordable housing review that would take many months. Further, that it was unlikely the project could receive approvals before 6-9 months, and with bidding

and infrastructure it could be as long as 2 years before homes were built and sold – but the timing depends on the City process.

A resident asked about water and sewer capacity. Another resident stated that would not be a problem. Mr. Biegel explained it would be addressed as part of the site plan review process.

A resident asked for updated city email address since the one on the city's proposed for had retired. Another resident said the updated address was on the post cards.

A pastor of a local church in attendance offered space for future neighborhood meetings.

Mr. Payson adjourned the meeting at 7:04pm, and told attendees that he and Mr. Biegel would remain to answer any questions

Michael Payson 7/15/19

Attachment F





Planners
Landscape
Architects

LUC

Land Use Consultants, Inc.

888 RIVERSIDE STREET
PORTLAND, MAINE 04103

Voice (207) 878 - 3313
Fax (207) 878 - 3301
Email mail@landuseconsultants.com


HARVARD STREET
PORTLAND, MAINE 04103

PREPARED FOR:
WESCOTT & PAYSON II
31 OLD CAMPUS DRIVE
PORTLAND, MAINE 04103

| Revision | Date |
|---|---|
| | |

Designed PLC
Drawn DG
Checked DAK
Scale 1" = 100'
Date 02-28-06

NEIGHBORHOOD MAP

Job No. 4080.1

Exhibit 2.1

Google Groups

# Proposed Harvard Street Development

**Jennifer fischer** <jenfischer01@gmail.com> Jul 8, 2019 6:56 AM
Posted in group: **Planning Board**

Planning Board- City of Portland

Re: Proposed Zoning change and development by Wescott &Payson

Plan # ZN-000716-2019

We are residents on Kimberly Court and are considered an “interested party” to the proposal to rezone and develop Harvard Street. We are quite opposed to this effort and want to make our concerns known. If the Planning Board lends it approval to this then it would be done with full awareness of the issues. We urge you to consider the interests of existing residents, in this proposed zoning change, over additional income for the developers.

The Comprehensive Housing Plan aims to provide affordable housing. But it also cites a commitment to regulate growth, respect the integrity, quality and character of existing neighborhoods.

As a matter of history- this same rezoning request and proposal was put before the City Council in 2006 and soundly defeated. The issues raised then are still the same now- only exacerbated due to the subsequent development of Yale Street. Documents that were put before the City Council, in 2006, are available if you need to review them.

While we are supportive of the Planning Boards goals to provide affordable housing in the City of Portland: we ask that the Board take a good look at the number of apartment buildings, duplexes and multi-family homes within a 1 mile radius of this area. The number of apartments and developments are many and at least two are targeted to lower income families. All within a mile of this area. Point being made here is that this area of N Deering has made an ample contribution toward the goal of affordable housing already. This area has had to adjust to the **33** apartment units of Yale Court, the **33** units of the Radcliffe Glen condominiums and the **84** apartments of the Woodwinds. All these empty out into either Yale or Harvard. Streets that cannot support additional traffic. Again, this neighborhood has done its share and that needs to be considered in balancing any decisions for the future.

As a point of fact Wescott & Payson were aware that the land, in question, was zoned R3 when they completed their purchase. This is not a zoning change requested to reinstate its original designation.

Although Woodlawn may be zoned R5; the **vast majority** of dwellings are single family. Thus putting up 20 duplexes- as proposed- would not be in keeping with the overall look and feel of the neighborhood.

A change in zoning from R3 to R5 has rarely been granted. It was noted, in 2006, that the only approval for such request was for a single lot on Seeley Street which was already adjacent to an R5 zone. And again this specific request was denied in 2006.

Our overwhelming concern is with the **safety issues** of rezoning and development. The safety issues are multiple and significant:

- Harvard Street has no sidewalks. The proposal would have the additional traffic all emptying out onto Harvard. This is an older street and the absence of sidewalks is already a hazard as many residents of the apartments, on Harvard Street and Yale, walk down Harvard to the bus stop on Washington Ave. Any additional traffic would create more of a hazard.
- The school bus stops are currently on Harvard and a second one at the intersection of Yale and Allen. Presently the school bus that picks up on Harvard must drive to the end of Harvard and execute a three point turn to reverse direction: right where this proposed development would funnel **all their traffic**. The swell of traffic at that spot on Harvard will create greater dangers to the children at this bus stop and create more difficulties for the driver to execute the turnaround. The school bus stop on Allen and Yale is a bit precarious as the waiting area is already too small for the number of children to safely wait to board the bus. As a result there are multiple cars, vans and SUVs parked along the end of Yale filled with the children awaiting the bus. It is already very difficult to approach that

intersection safely during the morning hours due to both the parked cars ( many illegally parked) and the crowd of energetic children. Lets not add more traffic and children to that area!

- There are only two means of egress from Harvard. Yale and Harvard itself. The intersection of Harvard and Washington is already quite hazardous. During peak hours it is nearly impossible and quite dangerous to execute a left onto Washington. Even executing a right turn may require quite a long wait. There is a city bus stop right at that intersection and frequently a lot of pedestrian activity which creates safety issues as well especially in the absence of sidewalks and the absence of a traffic light. Clearly that intersection cannot handle the increased traffic from 20 duplexes.
- The intersection of Yale and Allen is also quite busy and nearly impossible to safely execute a left turn most times of the day. There is no traffic light there. That intersection cannot handle the additional traffic from 20 duplexes.
- The development of Yale street has already exacerbated the traffic issues. The proposal shows Harvard remaining a dead end street- thus any vehicle must enter or exit via Harvard to Yale or Harvard to Washington. There is a concern about emergency vehicle access on such a long dead end street such as that being proposed.
- Snow removal is a real concern. The proposed units do not leave room for adequate snow removal. This is already a problem on Yale street causing many – including school children- to walk on the roadways to avoid the large snow banks. There just simply is not enough open space to put the snow.

We trust that the Planning Board will inquire about plans for water drainage. Currently the land in question has a lot of standing water and the piping etc. on Harvard St is quite old and has not yet been replaced/upgraded by the City.

There is a proposed turnaround at the dead end of Harvard. Isn't that land held by the City? Are they proposing that the City sell them this land? Why can't the turnaround be built on the land already owned by Wescott & Payson?

Lastly, I would encourage the Planning Board to look at the City maps and see all the existing multi family /apartments already erected near this area. The population density is at its max. Any further development, as proposed, or rezoning to R5 will **devalue our property significantly**. This area will quickly become less appealing to residents due to the above mentioned safety concerns and negative impact to the neighborhood. Indeed Wescott & Payson are doing nothing to improve the neighborhood and will only devalue the properties of existing residents. Something the Planning Board should think long and hard about.

Thank you for your time and attention to this issue.

Sincerely

Jennifer Fischer Norman Janson

Google Groups

# Fwd: University Park rezoning

**Tim Fulwider** <timfulwider@gmail.com> Jul 10, 2019 5:30 PM
Posted in group: **Planning and Urban Development**

---------- Forwarded message ---------
From: **Tim Fulwider** <timfulwider@gmail.com>
Date: Wed, Jul 10, 2019, 5:28 PM
Subject: University Park rezoning
To: <bab@portlandmaine.gov>

To whom it may concern:

I strongly oppose the proposal to rezone the land at 109 Harvard Street, otherwise known as University Park. I recently purchased my first home in the neighborhood adjacent to University Park partly because of the green space in the area. I immediately began using the park regularly and I hope to walk through those woods for many years to come. I often see many other people using the trail to exercise, walk their dog or just enjoy nature.

Please do not rezone the land at 109 Harvard Street. The land, in it's present state, is too important to the community to be altered in any way.

Sincerely,

Tim Fulwider
117 Woodlawn Ave

Google Groups

# Fwd: University Park re-zoning

**Jeff Levine** <jlevine@portlandmaine.gov> Jul 12, 2019 8:29 AM
Posted in group: **Planning and Urban Development**

For the file for the Harvard Ave rezoning.

Jeff Levine, AICP
Director
Planning & Urban Development Department
389 Congress Street 4th Floor
Portland, Maine 04101
Phone (207)874-8720
Fax (207)756-8258
http://www.portlandmaine.gov/planning
@portlandplan

---------- Forwarded message ---------
From: **Porter X** <cmporter74@hotmail.com>
Date: Thu, Jul 11, 2019 at 4:25 PM
Subject: University Park re-zoning
To: jlevine@portlandmaine.gov <jlevine@portlandmaine.gov>

Dear Mr. Levine,
As a resident who lives next to University Park, I am opposed to Apex Management's proposal to re-zone the park to allow construction.
Please lend your voice in opposition to this. The loss of a park in our city would be detrimental to our way of life.
Thank you,
Christopher Porter
Yale Street, Portland

Google Groups

# Harvard Street development

**laurastevens@gwi.net** <laurastevens@gwi.net> Jul 11, 2019 9:17 PM

Posted in group: **Planning Board**

Recently, it's come to my attention, via a letter distributed from a developer and a postcard from the city, that a green space attached to University Park is being threatened. Currently, the space is zoned R-3 for single-family homes. This zoning matches the character of the surrounding area on Harvard St and Yale St. However, the developer wants to change the zoning to R-5 to allow the construction of duplexes, increasing the density of the housing in the area. This proposal has a number of negative effects.

First, while I understand that the city is motivated to increase the housing options in the city, as a resident living on Yale St, I want to maintain the character of my neighborhood. Yale St and the already developed part of Harvard St are all single-family residences. In order to maintain the property values for these single-family residences, which are already impacted by surrounding townhomes, apartments, and condominiums, keeping the zoning R-3 on Harvard St would be advantageous.

Second, instead of developing the entire length of Harvard St, connecting it at the west end to Allen Ave, the developer plans on creating a cul-de-sac. The result would increase the traffic in our residential neighborhood, as the residents of the new duplexes would be forced to use Yale St to access Allen Ave and the existing part of Harvard St to access Washington Ave. Traffic on these streets is already high and at high speed. Despite the "Not a Through Street" signs, many people use our streets as a cut-through. In fact, during the recent construction on Washington Ave, Harvard St and Yale St were used by the construction company as a detour, exposing our neighborhood as a cut-through to untold numbers of new drivers.

Third, as it is currently undeveloped and is adjacent to University Park, this area is used by many as a green space. This green space is highly valued and appreciated. This space is vital for the quality of recreational life, our ecosystem, and the general aesthetic. The Harvard Street Path is utilized not only by residents, but by many others, including families, athletes, dog owners, cyclists, and Portland Trails enthusiasts.

I respectably request that you work to deny this zoning change. Ideally, the developer would see the value of keeping the space green and will not develop the lots. Perhaps, the area might even be donated to Portland Trails. If not, please ensure the area is kept a single-family residence neighborhood and please require the street to be completed the entire way through to Allen Ave, as to not negatively affect traffic in the neighborhood.

Please join me in opposition to this dense development. Thank you for helping to maintain the quality of life in my neighborhood.

Laura Stevens

144 Yale St

Google Groups

# Citizen Comments on 109 Harvard St. - New Development Review Project-Plan Number ZN-000716-2019

**Nathan Miller** <nmilleruw@msn.com> Jul 12, 2019 12:37 PM
Posted in group: **Planning Board**

To whom it may concern,

I am writing to offer my support for the proposed zoning changes that would allow the development of duplex housing units at the proposed 109 Harvard St project. I find it particularly odd that this development would have been previously allowed, but that the zoning was changed from R-3 to R-5 in the 1980's. When you look at many of the surrounding residential buildings on adjacent streets you see many multifamily buildings that would not be allowed to be constructed under the current zoning. It seems to me that multi-family housing is VERY MUCH in line with the character of the neighborhood.

While I understand that the neighbors on Woodlawn Ave have enjoyed having a de-facto extension of University Park while these lots have sat undeveloped, I find their concerns about removal of greenspace in the area to be unfounded. University Park will still exist, there is easy access to the preserve behind Casco Bay High School and the walking/biking trail that runs parallel to the railroad tracks from Morrills Corner to Riverside Industrial Parkway, the Old City Landfill area is relatively close, and there are numerous "pocket" green areas tucked into surrounding developed areas.

I would appreciate the city considering further expansion of multifamily zoning in this area, though I realize that's not within the scope of what's being requested as part of this project. Morrills Corner should be considered a key area for up-zoning and encouraging density as we strive for providing more housing units in general and particularly affordable and non-luxury units.

Thank you for your consideration,

Nathan Miller
79 Fessenden St
Portland

Google Groups

# comments on proposed rezoning at 109 Harvard St

**Christopher Vermilion** <chris@verm.me> Jul 12, 2019 2:55 PM
Posted in group: **Planning Board**

Hi,

I'm writing in support of proposed zoning changes to allow multi-family housing next to University Park (per today's PPH article https://www.pressherald.com/?p=3108477).

Portland desperately needs more housing, and this land is *already* zoned for housing, just not multi-family. I don't think it makes sense to block affordable housing so that neighbors can have a de facto park across the street rather than merely the actual University Park a block away.

Morrill's Corner seems ripe for transit improvements and densification; this seems like exactly the kind of development that makes sense nearby.

Cheers,

Christopher Vermilion
88 Lane Ave
Portland, ME 04103

Google Groups

# Zoning Change In Vicinity of 109 Harvard Street

**Maplewood Dance Center** <themaple@maine.rr.com> Jul 13, 2019 2:56 PM
Posted in group: **Planning Board**

To All Planning Board Members & Department Members:

RE: Wescott & Payson II, LLC  Zoning Map Application for Vicinity of 109 Harvard Street

I wanted to call your attention to a Neighborhood meeting that was held by Wescott & Payson II, LLC on Friday, July 12, 2019.
The facility where the meeting was held, Apex Management Office 31 Old Campus Drive, was not large enough to accommodate everyone that wanted to attend.
As a result, MANY were forced to stand outside the facility and others, like myself, left in frustration.  There also was insufficient parking at that location.

I hereby request that you NOT ALLOW this to count as one of the developer's required Neighborhood Meetings.
I also request that all future neighborhood meetings be held in a public facility that can accommodate ALL interested parties and allow for sufficient parking.

Respectfully yours,

Kathleen Vance
Joan A. Vance

Google Groups

## FW: Harvard Street re-zone

**george@lauramarrprinting.com** <george@lauramarrprinting.com> Jul 17, 2019 8:10 AM
Posted in group: **Planning Board**

**From:** george@lauramarrprinting.com <george@lauramarrprinting.com>
**Sent:** Tuesday, July 16, 2019 8:27 AM
**To:** 'planningboard@portlandmaine.gov' <planningboard@portlandmaine.gov>
**Cc:** 'shukriaw@portlandmaine.gov' <shukriaw@portlandmaine.gov>
**Subject:** Harvard Street re-zone

Hello, I have lived at 185 Harvard Street for the last 44 years and abut the new proposal for 40 families and possible 80 cars packed into 1450 feet of frontage. And only one way out to create, well you know how much of a mess that would create. Next to me is about 200 feet of vernal pool and it should be acknowledged wet area. I am against this proposal as are all my neighbors. This is a beautiful green area that should be used by all Portlanders and has been for years. Please do not let them change the zoning to allow twice as many homes. Thank you

George Libby

185 Harvard Street

Google Groups

## 109 Harvard St Zone Change

**khart@leblancyoung.com** <khart@leblancyoung.com> Jul 26, 2019 10:59 AM
Posted in group: **Planning Board**

Dear Planning Board Member:

My name is Karen Hart and I live on Yale St in Portland. I am writing to urge you to vote against Wescott Payson II LLC's Harvard Street zone change request.

I know there are many concerns in the neighborhood about the loss of green space and the potential damage to the existing homes due to all of the blasting that will need to be done to build in the area. Those are both legitimate concerns as green space in our neighborhood is precious and regularly used by the community and long term damage from blasting is not always apparent at the time of the building.

I am also very concerned about the traffic and the impact this potential development will have on our residential area. Harvard and Yale Streets have both become cut through streets for people wishing to avoid the lights at Washington Avenue and Allen Avenue. In fact, the problem has grown to the point where I routinely see delivery trucks and 18-wheelers cutting through. If you change the zone from R-3 to R-5, they plan to build 20 duplexes at the end of Harvard St and sell them as condos and leave it as a dead end. This will add to the traffic on both Yale and Harvard by a possible 80 plus cars to an already saturated area. If they were to leave them as single family homes that could be cut in half. Although this is not ideal, it may be manageable.

I realize housing in Portland is important but to what end? Development should be thoughtful and should be mindful to keep residential neighborhoods just that - residential neighborhoods. A zone change on Harvard Street will change my neighborhood drastically (and not in a good way). Changes like this will be causing families with children and those that want the existing quality of life we now have in our neighborhood (with quiet streets and access to green space) to consider moving to other towns. We want children to be able to safely play outside without the potential of being hurt by a speeding car, delivery trucks, or 18-wheeler barreling down a once-quiet residential. And, yes, we already have speed bumps - they have done little to nothing to slow things down.

Again, I ask that you turn down the zone change request.

Thank you

Karen Hart

150 Yale St

Portland, ME

207-797-4026

Karen M. Hart, CPA, MST

LeBlanc & Young

P.O. Box 7950

Portland, ME 04112-7950

Phone:  (207) 772-2800

Fax:  (207) 772-2822

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Google Groups

# Rezoning for proposed neighborhood development

**Olivia Barberi** <olivianb7@gmail.com> Aug 5, 2019 10:29 AM
Posted in group: **Planning Board**

Dear Portland Planning Board members,

I am concerned about the proposed rezoning for the housing development adjacent to University Park in Portland. As a new resident to Portland, living in a neighborhood near to this park, I am saddened by this threat to the city's limited green space as I frequently use and see other see walkers, runners, and biking commuters enjoying this park. If this area was developed, it would significantly change the way that this park is currently utilized by community members. Importantly, the destruction of the tree cover bordering this public pathway would entirely alter the feeling of green space that it currently provides. As an environmental scientist, I have studied and seen firsthand the ecological benefits of woodland patches within cities and urge you to consider the biological and community value green space has to Portland.

Additionally, as a resident of this neighborhood, I am concerned about this development as my neighbors here have seen a lot of development in the past years and they express that this is forced, unnecessary, and extrusive growth. We are especially concerned about the threat of blasting and associated impacts it may have on our homes and foundations. Please consider the negative impacts of creating a new dead-end road in this area, which would not only add additional traffic to the surrounding roads but also create a proposed turn around in the park space. I attended the neighborhood meeting held by the developer and want to report a clear uneasiness felt by my neighbors that is associated with the developer's reasoning for the rezoning. We do not believe that the construction of duplexes, housing that would double the number of people, is an appropriate fit for this space.

Thank you for your time.

Sincerely,
Olivia Barberi
Woodlawn Ave, Portland, ME

Google Groups

# Zoning change application by Westcott & Payson II at 109 Harvard Street

**Linda McLoon** <lsmcloon@gmail.com> Sep 3, 2019 12:00 AM
Posted in group: **Planning Board**

28 Kimberly Court
Portland, Maine 04103
September 3, 2019

Planning Board
City of Portland, Maine

Dear members of the Portland Planning Board:

The application for a change in zoning at 109 Harvard Street by Westcott & Payson II, LLC should be denied for the following reasons:

1. There are no sidewalks on Harvard Street, and many people who live in the area walk to the bus stop close to the entrance to Harvard Street. A large increase in traffic on Harvard street would make it dangerous for walkers going to the bus stop or walking for other reasons;
2. At certain times of the day, there currently is a long line of cars waiting to exit Harvard Street onto busy Washington Avenue or to exit York Street onto busy Allen Avenue. This problem would only be exacerbated by a large number of new residents, making these intersections dangerous and unsafe;
3. University Park, the narrow strip of parkland that is enjoyed by many residents, would be under extreme pressure from the large influx of duplexes going up beside it if the zoning were to change;
4. A vernal pool exists adjacent to the lots in question, which would be adversely affected by the developers' building plan;
5. Any blasting due to ledge in the area would likely have negative impact on nearby homes;
6. Residents fear that once a zone change is approved, the current property owners could conceivably split from their announced plan to build duplexes and instead put up apartment buildings;
7. The presence of a number of nearby multi-family units, which include Northfield, Yale Court, The Woodwinds, and Radcliffe Glen condominiums, already makes this area one of the most densely populated areas in the city, and Portland needs to strike some balance to consider the concerns of single-family homeowners;
8. The projected sale price the developers are considering for the proposed duplexes does not qualify them as low-cost housing;
9. The approval of this zone change would be inconsistent with the city's Comprehensive Housing Plan, which stresses the need to protect neighborhood stability while ensuring the integrity and economic value of Portland's neighborhoods. The city shouldn't attempt to increase available housing at the expense of our neighborhood.

I hope you will carefully consider the above points before coming to a decision on the zoning change application.

Sincerely yours,
Linda McLoon
28 Kimberly Court, Portland, ME 04103

Google Groups

# RE: PL-000716-2019 – Opposing the development of University Park and Harvard Trail, Portland, ME

**Stephanie Brown** <heysteph6320@yahoo.com> Sep 3, 2019 2:57 PM
Posted in group: **Planning Board**

Dear Ladies and Gentlemen of the Planning Board:
I am writing regarding the project for consideration set forth to the City of Portland Maine Planning Board by Wescott & Payson II, LLC. The applicant, Wescott & Payson II, LLC., proposes a map amendment from R-3 to R-5 along an undeveloped portion of Harvard Street. I highly oppose the development of this green space in the Northeast Deering community.

This community is flanked by some of the busiest streets in Portland; Washington Avenue, Allen Avenue and Forest Avenue. This development would greatly reduce the green space in this area, compromising the immense value and benefits that mature urban trees offer our cities. Here are some main reasons why we need to keep trees in our urban environments:

Air Quality -- Planting trees remains one of the most cost-effective ways of drawing carbon dioxide from the atmosphere.

Visual Appeal – few things can compare with the aesthetic impact that trees offer the urban setting.

Health and well-being -- Trees have also been proven to have a positive impact on skin cancer, asthma, hypertension, and other stress related illness by filtering out polluted air, reducing smog formation, providing shade from solar radiation, and providing an attractive, calming setting for recreation.

Trees also form an effective sound absorbing barrier to help reduce unwanted urban noise pollution.

The biodiversity of trees in providing natural habitats for birds, squirrels, and other fauna are considered to some as incalculable.

Cost Savings – According to the United States Forest Service, for every $1 spent on trees, a return of $2.70 in benefits is received.

Managing Stormwater – For every 5% of tree cover in a community, stormwater runoff is reduced by 2%.

Property Values --Independent studies have shown a consistent 5-15% increase in property values on tree lined streets, proving that trees increase commercial and residential real estate values.

Another reason for opposing this multi-unit housing development is the traffic congestion in the area. As I mentioned previously in my letter, busy streets flank this community. The traffic is so completely backed-up from Morrill's Corner, down Allen Avenue and Forest Avenue, that I cannot make a left-hand turn onto Allen Avenue to get to work in the mornings.

Please do not approve this map amendment and recommend it to the City Council. There are so many people in the community and beyond that enjoy that green space each and every day, hikers, runners, bikers alike.

Stephanie Brown
32 University Street
Portland, ME 04103

## PL-000716-2019

**Cherie Phillips** <cherie.mkp@gmail.com> Sep 5, 2019 8:52 AM
Posted in group: **Planning Board**

Dear Planning Board,

I strongly oppose the housing development proposed for the Northeast Deering community that effects University Park and Harvard Street Trail. This development would greatly reduce the green space in this area, compromising the immense value and benefits that mature urban trees offer our cities.

Cherie Phillips
Portland, ME

Google Groups

## Northeast Deering Community

**Hope Gauer** <hgauerr@gmail.com> Sep 5, 2019 9:00 AM
Posted in group: **Planning Board**

**I strongly oppose the housing development proposed for the Northeast Deering community that effects University Park and Harvard Street Trail. This development would greatly reduce the green space in this area, compromising the immense value and benefits that mature urban trees offer our cities.**

Hope Gauer

Sent from Mail for Windows 10

Google Groups

## PL-000716-2019

**Heidi Will** <hwill64@gmail.com>
Sep 5, 2019 9:00 AM
Posted in group: **Planning Board**

**Dear Portland Leaders,**

**I strongly oppose the housing development proposed for the Northeast Deering community that effects University Park and Harvard Street Trail. This development would greatly reduce the green space in this area, compromising the immense value and benefits that mature urban trees offer our cities.**

**Sincerely,**

**Heidi Will**

Google Groups

## PL-000716-2019

**Brislin, Lisa** <Lisa.Brislin@ampf.com> Sep 5, 2019 9:35 AM
Posted in group: **Planning Board**

Dear Concerned,

I am writing you to let you know that I strongly oppose the housing development proposed for the Northeast Deering community that effects University Park and Harvard Street Trail. This development would greatly reduce the green space in this area, compromising the immense value and benefits that mature urban trees offer our cities.

Thank you!

Lisa

P.S. When you have the right financial advisor, life can be brilliant. If there is anyone you care about who might benefit from a second opinion, I would be happy to help.



**Lisa Brislin, AAMS®**
Associate Financial Advisor
with the practice of John Hughes, CFP®, ChFC®, Private Wealth Advisor
A private wealth advisory practice of Ameriprise Financial Services, Inc.

.....

Ameriprise Financial Services, Inc.
5 Ward Street
Scarborough, ME 04074

O: 207.883.4434 x 106 | F: 207.883.3440

Support staff contact information is available on my website

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## Sept. 10 Workshop: Harvard Street R3 to R5 Map Amendment

**E M** <emann@maine.rr.com> Sep 5, 2019 10:31 AM
Posted in group: **Planning Board**

To: City of Portland Planning Board
Fr: Eleanor Mann
33 Woodlawn Avenue
RE: Harvard Street R3 to R5 Map Amendment

I am writing to express my strong opposition to this rezoning.

Mr. Payson acquired the lots in question individually, over time, at prices that reflected their inaccessibility. He bought them with the full knowledge of what could and could not be built on them.

At the developer's required neighborhood meeting on 7/12/19, a neighbor pointed out that a similar request for a zone change from R3 to R5 for the land in question had been voted down by City Council in 2005. Mr Payson confirmed this.

There was no compelling reason for a zone change then, and there is no compelling reason for a zone change now. Development of these lots would mean the loss of the Harvard Street Path, which has served as an important green space for the abutting neighborhoods. University Park, right next to the proposed development, would be compromised. Doubling density on the lots in question would increase the impact on the abutting park and serve no purpose other than to increase the developer's profits.

Before the recession of 2008, there was a demand for more housing in Portland. For many years after the recession of 2008, houses and condos languished on the market. This rapid development/slowed development cycle has been repeated more than once in Portland and will, inevitably, repeat itself again.

In our current phase of rapid development, residents of Portland need to be able to rely on the enforcement of zoning regulations. Zoning has no significance if it can be changed at will upon the request of a developer. Please recommend that the developer's request for a change from R3 to R5 be denied.

Google Groups

# Housing Development opposition PL-000716-2019

**Hughes, John X** <john.x.hughes@ampf.com> Sep 5, 2019 12:48 PM
Posted in group: **Planning Board**

Thank you for your consideration.

**I strongly oppose the housing development proposed for the Northeast Deering community that effects University Park and Harvard Street Trail. This development would greatly reduce the green space in this area, compromising the immense value and benefits that mature urban trees offer our cities.**

Best Regards,



P.S. Using our Confident Retirement® approach, I collaborate with my clients to help them plan for a brilliant future. Please share the *3-Minute Confident Retirement®* check with anyone you care about who has retirement questions.

**John Hughes, CFP®, ChFC®, RICP®**
Private Wealth Advisor

An Ameriprise Private Wealth Advisory Practice
.....

Ameriprise Financial Services, Inc.
5 Ward Street
Scarborough, ME 04074

O: 207.883.4434 | F: 207.883.3440

Support staff contact information is available on my website

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Google Groups

## PL-000716-2019

**Helen Meehan-Selleck** <helenmeehan@hotmail.com> Sep 5, 2019 1:11 PM
Posted in group: **Planning Board**

I live on University St and wish to to voice my opposition to this multi unit duplex development proposed for Northeast Derring community. This development will affect University Park and Harvard St trails (part of the Portland Trail system) and greatly impact the green space available in this city. Aside from the recreation value the amount of traffic it will create for the area would greatly impact not only the neighborhood but the flow of traffic to Allen Ave and Washington Ave. Presently it is almost impossible to get out of these side streets without this mega development. I certainly hope the planning board gives these issues lots of consideration. Thank You for allowing me to voice my objection.

Helen Meehan-Selleck
45 University St
Portland Me 04103

Google Groups

## PL-000716-2019

**Neill Gemmel** <ngemmel@gmail.com> Sep 5, 2019 1:48 PM

Posted in group: **Planning Board**

Please consider this

"I strongly oppose the housing development proposed for the Northeast Deering community that effects University Park and Harvard Street Trail. This development would greatly reduce the green space in this area, compromising the immense value and benefits that mature urban trees offer our neighborhood."

Google Groups

## PL-000716-2019

**briana** <bri04074@yahoo.com> Sep 5, 2019 1:53 PM
Posted in group: **Planning Board**

My name is Briana and I am a neighbor of the University Park. I live on university street. I strongly oppose the housing development proposed for the Northeast Deering community that effects University Park and Harvard Street Trail. This development would greatly reduce the green space in this area, compromising the immense value and benefits that mature urban trees offer our cities.

For further questions please don't hesitate to call or email me in reply. This is a topic I hold a strong opinion on, this is our neighborhood too.

Briana Thims
207-776-4958
bri04074@yahoo.com

Sent from Yahoo Mail on Android

Google Groups

## HARVARD STREET

**george@lauramarrprinting.com** <george@lauramarrprinting.com> Sep 5, 2019 2:08 PM
Posted in group: **Planning Board**

Harvard Street, 1100 feet of frontage on a dead end street. 44 duplex units, possibly 88 vehicles, one way in and one way out. Come on planning board this makes no sense. I live at 185 Harvard which abuts this proposal and it will ruin the green space and the neighborhood. It will create way too much traffic. Do what is right please.

George Libby

185 Harvard Street

Google Groups

# Proposed housing development

**Andrea Polonetsky** <andreapolonetsky@gmail.com> Sep 5, 2019 2:15 PM
Posted in group: **Planning Board**

Hi!
I just bought a house in Portland and have been enjoying the city's green spaces with my husband and four young children! We heard about a proposed housing development in the Northeast Deering community that would affect the University Park and Harvard Street Trail. I am writing to express my concern about allowing this and other green spaces to be developed. Once they're gone they're gone, forever. Please keep this a space for the community to share for generations to come. Not to mention all of the wildlife that would be displaced.

Thank you for your thoughtful consideration!

Andrea Polonetsky
69 Montrose Ave, Portland

Sent from my iPhone

Google Groups

# Don't compromise our trails and woods. PL-000716-2019

**Phyllis Leeke** <phyllisleeke@gmail.com> Sep 5, 2019 2:51 PM
Posted in group: **Planning Board**

"I strongly oppose the housing development proposed for the Northeast Deering community that effects University Park and Harvard Street Trail. This development would greatly reduce the green space in this area, compromising the immense value and benefits that mature urban trees offer our cities."
SUBJECT LINE: PL-000716-2019

Google Groups

## PL 000716-201 9

**Beth Guy** <jguy1@maine.rr.com> Sep 5, 2019 4:58 PM
Posted in group: **Planning Board**

To members of the Planning Board:

We strongly the housing development proposed for the Northeast Deering community because it affects the University Park and Harvard Street Trails. This development would greatly reduce the green space in this area and would diminish the "clean air" benefits that trees provide for our Forest City. Further, the destruction of the trails would take away recreational and exercise
opportunities within the city. Please oppose this project on these grounds.

Thank you.

James and Beth Guy
15 Martin Rd.
Portland ME 04013

Google Groups

## Feedback- PL-000716-2019

**K Caron** <stilleight@yahoo.com> Sep 5, 2019 5:11 PM
Posted in group: **Planning Board**

I strongly oppose the housing development proposed for the Northeast Deering community that effects University Park and Harvard Street Trail. This development would greatly reduce the green space in this area, compromising the immense value and benefits that mature urban trees offer our cities.

It is incredibly important for my kids to be able to walk home from school via interspersed Portland Trails. Green spaces are why I pay the crazy Portland taxes.

Thanks- Kellie Caron
89 Dorset Street

Google Groups

# Re: Open space in Portland

**MiaBlanche1@maine.rr.com** <MiaBlanche1@maine.rr.com> Sep 5, 2019 5:30 PM
Posted in group: **Planning Board**

I believe that the developer who wants to build on this property deserves to do so. If the community is against it maybe they should purchase it.

---

From: "Nextdoor North Central Deering"
To: miablanche1@maine.rr.com
Cc:
Sent: Thursday September 5 2019 4:17:09PM
Subject: Re: Open space in Portland

M D C

## 3 more replies to "Open space in Portland"

View all replies

M **Mike Cempa**, North Portland

Is there a site plan? I'd like to know more. I'm torn between the need for green space and the need for affordable housing.

Thank Private message

D **DAVID SELLECK**, North Back Cove

Matt Dechaine University Park Rd will still be there but the development will back up to it. They need a zoning change to do this complex. I have concerns about open space but bigger concerns on how you route all this traffic out of a neighborhood that... See more

Thank Private message

View 1 more reply

Turn off notifications for this post

This message is intended for miablanche1@maine.rr.com. Unsubscribe here. Nextdoor, 875 Stevenson Street, Suite 700, San Francisco, CA 94103

Google Groups

## PL-000716-2019

**Carrie Dickinson** <carrie423pg@gmail.com> Sep 5, 2019 6:34 PM
Posted in group: **Planning Board**

"I strongly oppose the housing development proposed for the Northeast Deering community that effects University Park and Harvard Street Trail. This development would greatly reduce the green space in this area, compromising the immense value and benefits that mature urban trees offer our cities."

Google Groups

## PL-000716-2019

**Hala Ismail** <ihala66@gmail.com> Sep 5, 2019 6:39 PM
Posted in group: **Planning Board**

I strongly oppose the housing development proposed for the Northeast Deering community that effects University Park and Harvard Street Trail. This development would greatly reduce the green space in this area, compromising the immense value and benefits that mature urban trees offer our cities.

Sent from my iPhone

Google Groups

**Deborah** <deborahnapi@gmail.com> Sep 5, 2019 7:11 PM
Posted in group: **Planning Board**

Attention: Planning Board, City of Portland

I wanted to state that I am opposed to the housing development proposed for the Northeast Deering community that effects University Park and Harvard Street Trail. This development would greatly reduce the green space in this area, compromising the immense value and benefits that mature urban trees offer our cities. I do understand the limited available housing in the Portland area, but we also need to preserve our green space, parks and trails. I mean, look at all the beautiful farm land that is being totally destroyed by the new housing development on Stroudwater St. The is enough, enough? PLEASE!

Deborah Napier
111 Cobb Ave.
Portland, ME. 04102

Google Groups

## PL-000716-2019

**Shannon Wong** <shannonmwong@hotmail.com> Sep 5, 2019 8:17 PM
Posted in group: **Planning Board**

To Whom it May Concern,

I strongly oppose the housing development proposed for the Northeast Deering community that effects University Park and Harvard Street Trail. This development would greatly reduce the green space in this area, compromising the immense value and benefits that mature urban trees offer our cities.

Sincerely,
Shannon Wong

Google Groups

## PL-000716-2019

**Myke Johnson** <mykejohnson@maine.rr.com> Sep 5, 2019 9:19 PM
Posted in group: **Planning Board**

Dear members of the planning board:
I oppose the housing development proposed for the Northeast Deering community that effects University Park and Harvard Street Trail. This development would greatly reduce the green space in this area, compromising the immense value and benefits that mature urban trees offer our cities. During this time of dealing with climate catastrophe, we should be preserving trees, and in fact, adding to the green space in our Forest City.
From what I have been able to learn, this development will also not add affordable housing to our city.

Sincerely,
Myke Johnson
67 Birchwood Drive, Portland, 04102

Google Groups

# Housing Development in University Woods Park

**Donald Murray** <donmurr825@gmail.com> Sep 6, 2019 7:51 AM
Posted in group: **Planning Board**

Dear Board Members,

We strongly object to the proposed residential development incursion into our neighborhood park. We value the small but important green space, University Park, we have nearby in North Deering. Please reject the land use proposal before you that would destroy our park.

Thank you for your consideration of our need.

Sincerely,

Don and Miki Murray

Don & Miki Murray
30 Majors Ct.
Portland, ME 04103
H: 207-899-4195

Google Groups

## University Park

**Olga Higuera** <olhiguera@yahoo.com> Sep 6, 2019 8:25 AM
Posted in group: **Planning Board**

We need all the green space oxygen cleaning possible.
Olga
32 Nicholas Ct

Sent from my iPhone

Google Groups

## PL-000716-2019

**David Bruenjes** <davidmbruenjes@gmail.com> Sep 6, 2019 8:27 AM
Posted in group: **Planning Board**

Hi, I'm writing to say that I strongly oppose the housing development proposed for the Northeast Deering community that effects University Park and Harvard Street Trail. This development would greatly reduce the green space in this area, compromising the immense value and benefits that mature urban trees offer our cities. I value the Portland Trails system immensely.

Regards, David Bruenjes

Google Groups

## PL-000716-2019

**Fraser, Melissa** <Melissa.Fraser@ampf.com> Sep 6, 2019 8:51 AM
Posted in group: **Planning Board**

Hello,

I strongly oppose the housing development proposed for the Northeast Deering community that effects University Park and Harvard Street Trail. This development would greatly reduce the green space in this area, compromising the immense value and benefits that mature urban trees offer our cities.

Thank you,

Melissa

P.S. When you have the right financial advisor, life can be brilliant. If there is anyone you care about who might benefit from a second opinion, we would be happy to help.



**Melissa Fraser**
Administrative Assistant

An Ameriprise Private Wealth Advisory Practice

.....

Ameriprise Financial Services, Inc.
5 Ward Street
Scarborough, ME 04074

O: 207.883.4434 x 105 | F: 207.883.3440

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## SUBJECT LINE: PL-000716-2019

**Alicia Greenwald** <lishgre3@maine.rr.com> Sep 6, 2019 11:05 AM
Posted in group: **Planning Board**

"I strongly oppose the housing development proposed for the Northeast Deering community that effects University Park and Harvard Street Trail. This development would greatly reduce the green space in this area, compromising the immense value and benefits that mature urban trees offer our cities."

Alicia "Lish" Greenwald www.Facebook.com/thatssewlish/
Handmade unique items made with L❤VE

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## PL-000716-2019

**Jessica Antonez** <jessicaantonez@gmail.com> Sep 6, 2019 11:36 AM
Posted in group: **Planning Board**

I strongly oppose the housing development proposed for the Northeast Deering community that effects University Park and Harvard Street Trail. This development would greatly reduce the green space in this area, compromising the immense value and benefits that mature urban trees offer our cities.

Thanks,
Jessica Antonez

Google Groups

## PL-000716-2019

**Elizabeth Davidson** <davidson.elizabeth.a@gmail.com> Sep 6, 2019 12:55 PM
Posted in group: **Planning Board**

To whom it may concern:

I strongly oppose the housing development proposed for the Northeast Deering community that effects University Park and Harvard Street Trail. This development would greatly reduce the green space in this area, compromising the immense value and benefits that mature urban trees offer our cities.

Please, please do not compromise Portland's natural beauty by irreversibly destroying this portion of our city.

Elizabeth Davidson
126 Summit St.
Portland

Google Groups

## PL-000716-2019

**MH** <mhandlin@maine.rr.com> Sep 6, 2019 1:05 PM
Posted in group: **Planning Board**

M
As a 26 year tax payer and passionate trail walker and biker, I am against the proposed housing development that affects University Park and Harvard Street Trail. This project threatens to reduce the green space in this area, compromising the psychological benefits of nature and destroying mature urban trees that improve air quality in our city.

Margaret Handlin
Mackworth St Resident

Google Groups

## PL-000716-2019

**MaryTeresa Beyer** <beyermaryteresa@gmail.com> Sep 6, 2019 1:58 PM
Posted in group: **Planning Board**

I strongly oppose the housing development proposed for the Northeast Deering community that effects University Park and Harvard Street Trail. This development would greatly reduce the green space in this area, compromising the immense value and benefits that mature urban trees offer our cities.
Mary Teresa

Google Groups

## PL-000716-2019

**Nicole Robitaille** <nicolecrobitaille@gmail.com> Sep 6, 2019 2:15 PM
Posted in group: **Planning Board**

Hi there,

I am writing to speak out against the proposed housing development in North Deering, near University Park and Harvard St Trail. I live very close on Ruby Lane and walk my dog in this area. This is already a densely packed area of North Deering with difficult traffic backing up from Morrills corner. Moreover, changing the zoning to build duplex's would significantly change the character of the neighborhood. I hope you consider my opinion during this vote.

Best,
Nicole Castonguay
86 Ruby Ln, Portland, ME 04103

Google Groups

## PL-000716-2019

**Dibbie Appleton** <dib@maine.rr.com> Sep 6, 2019 3:09 PM
Posted in group: **Planning Board**

PLEASE DO NOT give a green light to to the
development plan for Northeast Deering. We need our green spaces, we don't need another development! Please don't grant the zoning change.

Isabelle S. Appleton
98 Hersey Street
04103

Google Groups

## PL-000716-2019

**Heidi Shingleton** <heidi.shingleton@gmail.com> Sep 6, 2019 3:20 PM
Posted in group: **Planning Board**

Hello,

I'm writing to document my opposition to the proposed housing development for the Northeast Deering community - University Park & Harvard Street. This development would reduce green space, and access for those of us who walk and enjoy the little escapes to nature despite living in a city.

Green space should be your priority.

Thank You,
Heidi Shingleton

Google Groups

## PL-000716-2019

**Ryan Stitham** <ryanstitham@me.com> Sep 6, 2019 3:24 PM
Posted in group: **Planning Board**

For the love of, well, Portland... I strongly urge all who read or hear this to do whatever they can within reason to oppose the housing development in the Northeast Deering that would sacrifice two of our beloved trails and reduce the city's green space. We should think tremendously long and hard before giving these up... They're a lot more precious and far harder to replace or relocate than the next housing development.

Best,
Ryan Stitham

Sent from my iPhone

Google Groups

# Proposed Harvard Street Zoning change

**Stephen W. Gray** <steve.gray@cornell.edu> Sep 6, 2019 3:49 PM
Posted in group: **Planning Board**

Dear Board Member,

Please do not grant the proposed zoning change. Our neighborhood has a mix of single family and duplex homes. A change in zoning to allow all duplexes, closely packed together would be a major change in character.

Furthermore, 40 family units will mean close to 80 commuting vehicles zooming up and down Harvard street in the morning and at dinner time. There will be backups at the ends of Harvard and Yale at intersections that have trouble handling present traffic safely. Parents picking up school children in poorly parked cars already create some hazard for their own kids. This large new addition will make them even less safe.

While we would miss the green space this land provides, development as zoned would be much more in keeping with the neighborhood.

Thank you,
Stephen and Elizabeth Gray

Google Groups

# Building in University Park & Harvard street. I oppose this development to be built , it will disrupt many trails & destroy the green we are trying to maintain. Please consider this thought & understand what will happen

**Frank Martinez** <venom1947@yahoo.com> Sep 6, 2019 4:55 PM
Posted in group: **Planning Board**

Sent from my iPhone

Google Groups

## PL-000716-2019

**Jane Weinstein** <janewnst@gmail.com> Sep 6, 2019 5:55 PM
Posted in group: **Planning Board**

Please consider keeping University Park and Harvard Street Trail and the enjoyable green spaces that they are.
Once we lose them they're gone. I'd rather see development in Westbrook than increase the density and high cost of
housing in Portland.

Once a green space is developed, there's no turning back.

Jane Weinstein
109 Colonial Rd.
Portland, ME 04102

Google Groups

## University Park Planning Board Meeting

**Save University Park** <save.university.park.trail@gmail.com> Sep 7, 2019 8:57 AM
Posted in group: **Planning Board**




# Planning Board To Hear From Wescott & Payson regarding Harvard Street

## -WE MUST FIGHT REZONING TO PREVENT DUPLEXES VS SINGLE FAMILY HOMES-

### BE HEARD!

Join us September 10th at 7:30 pm in Council Chambers, 2nd Floor, City Hall.

This item is first on the agenda, please be sure to get there early!

There is power in numbers! We need help in voicing any of the many arguments to be made. Some of which you may not have even considered. If you are willing to express concerns such as:

- **Congestive and Dangerous Traffic**
- **Previous Negligent and Irresponsible Property Management**
- **Green Space Conservation**
- **Pricing of $3750k + two bedroom condos signal the beginning of the end of a diverse, working population that can afford to live in this burgeoning neighborhood**
- **Blasting impact to surrounding homes**
- **The fact that this application was rejected 13 years ago and the same issues exist today!**

**IMPORTANT NOTICE FROM CITY OF PORTLAND PLANNING DIVISION**

**IN THE VICINITY OF 109 HARVARD STREET**

To Residents and Property Owners: The Portland Planning Board will hold an evening workshop to consider a plan by Wescott & Payson II, LLC to consider a map amendment from R-3 to R-5 along an undeveloped portion of Harvard Street for lots 32 through 58 shown as part of the original subdivision plan for Univeristy Park. The area proposed consists of 38 contiguous lots with approximately 3.4 acres and approximately 1,450 ft. of frontage on Harvard Street. The map amendment is subjet to review and recommendation from the Planning Board to the City Council.The workshop is an opportunity for the applicant to present a plan to the Planning Board in an informal session which is open to the public. Public comments will be taken at this meeting. Written comments should be submitted to planningboard@portlandmaine.gov. Please refer to the document, Guide to Public Participation in the Planning Board Process, for revised procedures for public comment which can be found at http://www.portlandmaine.gov/551/Development-Review.

The EVENING WORKSHOP will be held:

**Tuesday, September 10, 2019, Council Chambers, 2nd Floor, City Hall**
**7:30 p.m. start time (this item is the 1st item on the agenda)**

A project and plan summary is available for viewing on the Citizen Self Service Portal (http://css.portlandmaine.gov), by referencing Plan Number PL-000716-2019. Memos and reports are posted on https://www.portlandmaine.gov/129/Agendas-Minutes by the end of business day on the Friday before the Planning Board meeting. If you have any questions regarding the proposal, please contact Shukria Wiar, Planner, by phone at 207-756-8083 or e-mail at shukriaw@portlandmaine.gov.

Changing the zoning from R-3 to R-5 makes it possible for this developer to decimate 28 contiguous lots with approximately 3.4 acres of green space. This

cannot and should not be tolerated!
The zoning change would allow the developer to build large duplex's instead of single family homes.  Come to the meeting to share your opinions!

## Find Out More

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You can update your preferences or unsubscribe from this list.

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# Written comments on the proposed development near 109 Harvard St

**David Spector - NSR/USA** <david@nsrusa.org> Sep 7, 2019 9:59 AM
Posted in group: **Planning Board**

Dear Portland Planning Commission,

Others have ably addressed the economic and developmental factors that argue against granting the zoning change that would permit this new development that will reserve only one duplex condominium unit out of 10 or more for low income housing.

I would like to address a very different and perhaps more important issue: the destruction of precious green space, including the lovely existing unpaved and scenic Harvard Path trail (the thinner Sebago to the Sea Trail near it would survive, although it will be tightly surrounded by city streets). Note that Harvard Path, in the middle of the current greater University Park wild area, is easily accessible by disabled citizens from parking lots at both ends.

While I appreciate the concerns for economic justice, construction noise, new traffic, and probable blasting damage that many have raised, the destruction of one of the last wild areas in the Portland area may actually be the primary reason to protect our greater contiguous University Park from development.

This development proposal is not just an economic injustice: it ruins the value of our existing greater park area to our citizens now and forever by cutting its size in half and creating a new wide street that will destroy the character of the existing wild area by enclosing it within two city streets instead of just one.

Portland needs its wild areas for the future enjoyment of its citizens. It needs the beautiful paths and this small haven for a large variety of plants and animals that otherwise find it difficult to survive in an urban landscape.

It may be obvious, but it is true that once such an area is destroyed, it can never return. We need to remain committed to life (human, animal, and plant life) while this and future demands for destruction are launched by those who value money and income over the survival of the necessary isolated tiny wild areas within our city. The future is at stake here.

The plants, the animals, and this green solitude may very well all disappear soon if the developers have their way. Please help the citizens of Portland enjoy this wonderful park today and into the future.

David Spector
University Park neighbor since 2011

Google Groups

## Stop taking away from the Portland Trails!

**shana walsh** <shanadandrea@yahoo.com> Sep 7, 2019 3:37 PM
Posted in group: **Planning Board**

The developer that wants to add housing by taking away from the Harvard st area of the Portland trail system should not be granted the permit. We have so few areas in the city of Portland to enjoy open green space. By adding more housing in that area you will only congest the streets which are already congested in that area. I understand that there is not enough housing in the city of Portland however by taking up the open green spaces is not the answer. There are many areas that you have allowed hotels to go up, instead if it had been housing perhaps you'd not have the issue you do. As a tax payer in the city I want my Portland trails. Let me have something for the large amount of taxes I have paid.
Sincerely, Shana D'Andrea
Sent from my iPhone

Google Groups

## University Park plan

**kathryn.andrews3@gmail.com** <kathryn.andrews3@gmail.com> Sep 7, 2019 4:15 PM
Posted in group: **Planning Board**

To the planning Board Committee:

I strongly oppose the housing development proposed for the Northeast Deering community that effects University Park and Harvard Street Trail. This development would greatly reduce the green space in this area, compromising the immense value and benefits that mature urban trees offer our cities.

In general, it is good practice for cities to build ‘up’ instead of sprawling out into the hinterlands. Portland has an opportunity to lead by example, and it starts with our planning board.

Sincerely,

Kathryn Brouillette
34 Chamberlain Ave

Google Groups

# PL-000716-2019 – what ignoring climate change looks like in Portland!

**andrea@andreagaines.com** <andrea@andreagaines.com> Sep 8, 2019 4:58 PM

Posted in group: **Planning Board**

To the Portland city Council ... have you not seen the devastation in the Bahamas?????? Are you unaware of what we are doing to the planet????????

I strongly oppose the housing development proposed for the Northeast Deering community that effects University Park and Harvard Street Trail. This development would greatly reduce the green space in this area, compromising the immense value and benefits that mature urban trees offer our cities.

This is what ignoring climate change looks like in Portland.

Open your eyes and vote this project down!

Google Groups

## PL-000716-2019

**Carin Seadler** <itsbetterinmaine@gmail.com> Sep 8, 2019 6:25 PM
Posted in group: **Planning Board**

"I strongly oppose the housing development proposed for the Northeast Deering community that effects University Park and Harvard Street Trail. This development would greatly reduce the green space in this area, compromising the immense value and benefits that mature urban trees offer our cities."

Carin Seadler
Sent from my iPhone

Google Groups

## PL-000716-2019

**Genevieve Levin** <remarkableblackbird@gmail.com> Sep 9, 2019 7:59 AM
Posted in group: **Planning Board**

Good morning,
I'm writing to say that I strongly oppose the housing development proposed for the Northeast Deering community. It's effects on University Park and Harvard Street Trail would be a shame for a number of reasons. This development would greatly reduce the green space in this area, compromising the immense value and benefits that mature urban trees offer our cities. As well as cause more unwanted change to our small city.
Thank you
Genevieve levin

www.remarkableblackbird.com

Google Groups

## Planning Board Meeting Tomorrow

**University** <save.university.park.trail@gmail.com>
Sep 9, 2019 9:59 AM
Posted in group: **Planning Board**

View this email in your browser




# Planning Board Meets Tomorrow

Tomorrow is the Planning Board meeting to hear the proposed rezoning of Harvard Street to allow duplexes be built as opposed to single family homes. There are MANY arguments and issues the developers will be creating that go beyond saving our green spaces such as:

- In a working class neighborhood, developing duplexes starting at $375k for a two bedroom is anything but creating affordable housing.
- The amount of traffic it would create in an already congested area.
- Sidewalks are not included in the plan, creating safety issues.
- There will be blasting on ledge creating damage to existing homes and structures (The same developers ignored damage complaints earlier).
- Concerns of draining issues on Yale St. creating flooding.
- Of course, decimation of Portland's green spaces.
- And many more...

The campaign started by Sue Rose and written about in The Portland Press Herald has picked up steam. By last count, over 350 have signed our online petition to stop the rezoning of this area. It is zoned for single family homes for many reasons, some listed above. The Planning Board validated these concerns rejecting proposed rezoning in 2006. **The reasons for voting it down again haven't changed**, in fact, they have grown even more pertinent with time. Developers greed is no reason to compromise now.

Spread the word, share the petition, **come to The Planning Board meeting tomorrow at 7:30 at City Hall**, it is the first issue on the agenda so come early. Speak! **Let your voice be heard!** It is only through opposition in numbers that we can fight this. If, for some reason, you are not able to attend, feel free to email us your concerns so someone can voice them.

To keep up to date, like our FB page.

Here is the meeting details as sent by the city:

**IMPORTANT NOTICE FROM CITY OF PORTLAND PLANNING DIVISION**

**IN THE VICINITY OF 109 HARVARD STREET**

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The EVENING WORKSHOP will be held:

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save university park
42 Woodlawn Ave
Portland, ME 04103-3512

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# PL-000716-2019 - oppose

**Camryn Hansen** <camrynhansen@gmail.com> Sep 9, 2019 10:37 AM
Posted in group: **Planning Board**

Hi Planning Board,

This is a note to say that I strongly oppose the housing development proposed for the Northeast Deering community that effects University Park and Harvard Street Trail. This development would greatly reduce the green space in this area, compromising the immense value and benefits that mature urban trees offer our city. Please do not approve this development.

Sincerely,
Camryn Hansen

--
Camryn Hansen
207.409.6336

Google Groups

## PL-000716-2019

**James Matias** <jmatia1@yahoo.com> Sep 9, 2019 10:40 AM
Posted in group: **Planning Board**

Dear committee,

"I strongly oppose the housing development proposed for the Northeast Deering community that effects University Park and Harvard Street Trail. This development would greatly reduce the green space in this area, compromising the immense value and benefits that mature urban trees offer our cities."

A second recommendation, if going forward with this development, would to use it single family homes.

James Matias
39 Graystone Lane
Portland, Me.

Google Groups

**george@lauramarrprinting.com** <george@lauramarrprinting.com> Sep 9, 2019 10:23 AM
Posted in group: **Planning and Urban Development**

Good morning, George Libby 185 Harvard Street. I abut the Harvard Street property in planning. I have lived there since 1977 and there has always been a vernal pool next to me. It has not been the same this year as in past years. I thought it was quite odd as we could always hear peepers but not this year. It should be tested as a man that walks his dog in that area told me Saturday that he saw two men dumping something last March out of 5 gallon buckets in the pool. I'm guessing bleach? Also there is so much ledge there that blasting is going to be another problem. Not to mention possibly 88 cars with one way in and out. Do what is right for the city please. I am hoping that the planning board members have gone on a field trip to see what could happen to a beautiful part of Portland. Thank You

Google Groups

## PL-000716-2019

**Emily Percival** <missemilyps@gmail.com> Sep 9, 2019 11:30 AM
Posted in group: **Planning Board**

I strongly oppose the housing development proposed for the Northeast Deering community that effects University Park and Harvard Street Trail. This development would greatly reduce the green space in this area, compromising the immense value and benefits that mature urban trees offer our cities.

--
Emily Percival
epercival.com
@epercivaljewelry
*"Somewhere, something incredible is waiting to be known." - Carl Sagan*

Google Groups

# University park/Harvard st development

**William Bailey** <wmb2419@yahoo.com> Sep 9, 2019 1:27 PM

Posted in group: **Planning Board**

Members of the city planning board,
I am writing to express my opposition to the proposed development of Harvard st.
I live at 140 Yale st and the volume of cut through traffic on Yale/Harvard streets is at a dangerous level already.
I feel due to the increased traffic that would inevitably be added to an already extremely high volume this project is bad for our neighborhood. We also value our green space and would hate to lose any of it.

Thank you,
Sincerely William Bailey

Sent from my iPhone

Google Groups

# Comment on University Park Rezoning Proposal

**vanadium@crossingmidnight.net** <vanadium@crossingmidnight.net> Sep 9, 2019 2:06 PM
Posted in group: **Planning Board**

Dear Sir or Madam:

My wife and I will be unable to attend the Planning Board meeting on September 10th so I'm writing to you now to express my concerns about the proposed rezoning of the area near Harvard Street and University Park by Wescott and Payson LLC.

While we recognize the tight housing market in Portland, this change seems extremely short-sighted and driven entirely by profit rather than any considered use of the local area. With their Yale Avenue project Wescott and Payson has already displayed a tendency toward the cookie-cutter, but attempting to rezone a well-established single-family neighborhood so they can build an unbroken line of charmless townhouses in the middle of what was previously green space shows a general disdain for the neighborhood, the homes of the people who abut their proposed clear-cutting, and the city of Portland in general. There was no shortage of angry complaints about their previous construction and their response to issues with their existing properties and now they're proposing to rezone the same neighborhood with no consideration toward the character of the area, the increased traffic from 60-80 cars from a dead-end street, and the irrevocable changes to a green space that connects to the Portland Trail system. Meanwhile, the proposed price per half-unit of well over $300,000 will do nothing for the affordable housing problem in the city.

Portland is growing and change is inevitable. However, the value of this city is in the character of its neighborhoods and the quality of life provided by our public spaces. Allowing a hasty rezoning just to optimize a developer's profits (During their initial meeting Wescott and Payson admitted the proposed change to duplexes was entirely based on maximizing their return on an otherwise impractical land purchase.) diminishes that value without any short- or long-term benefit to the neighborhood or Portland as a whole. As a member of the community, I am asking you to please deny this rezoning request.

Sincerely,
John Bowker and Megan Goodwin
45 Woodlawn Ave
Portland, ME 04103
jcb@crossingmidnight.net

Google Groups

# Proposed Zoning Change along Harvard Street

**Craig Plourde** <cplourde22@gmail.com> Sep 10, 2019 10:12 AM
Posted in group: **Planning Board**

Good morning

My name is Craig Plourde, my wife and I are residents of Plymouth Street in Portland. This morning I was walking our dog along a normal route through the Harvard Park where I noticed a sign posted referencing the meeting that will take place tonight at 7:30 PM in regards to proposed zoning change that will allow Apex to develop housing. While I understand Portland's need for housing, my wife and I are against the proposed Zoning change and development of Harvard Park.

We utilize the trail through Harvard Park during every season. Every time I walk through the trail I am thankful that Portland has these trails as they provide easy access to nature. I believe this provides great value to the community and overall personal well-being. Being able to walk a wooded section of trails provides a brief escape from our busy lives and I look forward to walking through this area with our soon to be child. I know that there are many local users of this space as I frequently cross paths with other people with and without dogs walking along the trail.

My wife and I ask that the Planning Board considers a long-term view of Portland that includes these ares of nature for the City residents to enjoy as they provide much value as they are to the people that utilize them.

Given the last minute notice about the meeting I will be unable to make it to tonight's discussion but will be monitoring the outcome.

Thank you for your time and service to Portland.

Craig Plourde

Google Groups

## PL-000716-2019

**Nan Solomons** <nan.solomons@gmail.com> Sep 10, 2019 12:31 PM
Posted in group: **Planning Board**

"I strongly oppose the housing development proposed for the Northeast Deering community that effects University Park and Harvard Street Trail. This development would greatly reduce the green space in this area, compromising the immense value and benefits that mature urban trees offer our cities." Furthermore, one of Portland's attractions is its green space where walking trails traverse the city. This is not a development that will be parsimonious with the existing green space.

Please vote no.

Sincerely,

Nan M. Solomons, PhD
400 Woodford St, Portland, ME 04103

Please see information below. Wescott & Payson ll llc is proposing a zoning change to accommodate their desire to build large duplexes. They argue that the duplexes will compliment the duplexes that abut the Harvard lots on Woodlawn Avenue. Please see the discrepancy between their proposed duplexes land to lot ratio vs the existing duplexes on Woodlawn Avenue.

Wescott & Payson ll llc proposed building design per Land Design Solutions: 06.11.19

Lot 7490 +/- s.f.
Duplex 3000 s.f. "living space"
2.4 land to building ratio

VS

Woodlawn Avenue Duplexes:

64 Woodlawn Avenue
Lot 8786 s.f.
Duplex 1820 s.f.
4.82 land to building ratio

92 Woodlawn Avenue (2 unit)
Lot 13939 s.f.
Building 2294 s.f.
6.07 land to building ration

Non Abutting Woodlawn Avenue Duplexes:

175 Woodlawn Avenue
Lot 9104 s.f.
Duplex 1802 s.f.
5.05 land to building ration

71 Woodlawn Avenue
Lot 5998 s.f.
Duplex 1872 s.f.
3.02 land to building ratio

Wescott & Payson ll llc proposed zoning change if passed will result in a lot expansion and buildings that are NOT reflective of the bordering neighborhoods.

change.org

Recipient: Mayor Ethan Strimling, Gov. Janet Mills, Counsilor Justin Costa, Rep. Michael Brennan

Letter: Greetings,

Save University Park

# Comments

| Name | Location | Date | Comment |
|---|---|---|---|
| Jennifer Long | Portland, ME | 2019-07-09 | "I live in this neighborhood and cherish this green space. With this proposal, I have concerns about traffic patterns, neighborhood safety, property values, and wildlife displacement - just to name a few." |
| Rachel Flehinger | Portland, ME | 2019-07-09 | "Green spaces in Portland are getting rarer and rarer" |
| Kristen Blais | Portland, ME | 2019-07-09 | "I live in this neighborhood and am quite concerned on the detrimental effects this development will likely have on this community. Green spaces are rare in Portland, what an asset University Park is to our family friendly neighborhood." |
| Sheila Cook | Portland, ME | 2019-07-10 | "We need to save our already limited green space!" |
| Olivia Barberi | Portland, US | 2019-07-10 | "This forested area adjacent to University Park is important to Portland's park system. If this area was developed, it would significantly take away from the current use of this park by neighborhood and community walkers and biking commuters. This space is extremely valuable as part of Portland's green space, which is limited within the city and appreciated by many." |
| Stephanie Wall | Sanford, ME | 2019-07-10 | "We need parks in Portland" |
| Sophie Friedman | Boston, US | 2019-07-10 | "Green space is essential to Portland!!" |
| Martin Aguilar | Berwyn, PA | 2019-07-10 | "I love this park, please keep it for the green space of Portland." |
| Kate McLaughlin | Portland, ME | 2019-07-11 | "For the health of our city we need to protect our remaining green spaces." |
| Gretchen Ebbesson-Keegan | Camden, ME | 2019-07-11 | "This would be a disservice to the citizens." |
| Alice Hornstein | US | 2019-07-11 | "No Development ! I have serious concerns on what a development will do to the safety and preservation of my home. I live in this neighborhood and utilize the park . We must honor and protect our parks . No development !" |
| Andrew Millard | Orono, ME | 2019-07-11 | "Green spaces are important to society" |
| Henk Griffin | Amsterdam, NH, The Netherlands, Netherlands | 2019-07-12 | "I am from Portland and my family has lived there for centuries." |
| Joe Presser | Portland, ME | 2019-07-12 | "As a resident of the surrounding area, there are so many problems with demolishing this beautiful, forested area. It provides peace and solace in an area so close to a busy road and the hustle and bustle of the city of Portland. University Park has terrific walking paths for dogs and Mainers to walk, run and breath easy. As a Mainer, I am proud to be part of the most forested state in the country, don’t ruin that accolade by demolishing this park and others like it." |

| Name | Location | Date | Comment |
|---|---|---|---|
| Kyle Holmquist | Saco, ME | 2019-07-12 | "Portland needs more green spaces. Please don’t develop University Park! (Signed by a Saco resident, but Portland home owner and property tax payer)" |
| James Bickford | Portland, ME | 2019-07-13 | "Portland needs to keep its green spaces!" |
| Rev. Charles Grindle | Portland, ME | 2019-07-13 | "We need to keep all the green space we have, and endeavor to obtain more!" |
| Jason Beatty | Portland, ME | 2019-07-13 | "I recently bought a home directly across from this park. I would be absolutely heartbroken if a major reason for moving here was taken away. Please protect our green spaces." |
| Joshua Malia | Portland, ME | 2019-07-13 | "I grew up and current live in the North Deering neighbor and have watched our wooded areas diminish due to overdevelopment. This takes away from the quality of life for everyone in that lives in the neighborhood with a majority of whom are dog owners and active people who want open spaces." |
| William Keene | Portland, ME | 2019-07-13 | "Wtf" |
| Monet Macomber | Portland, ME | 2019-07-13 | "Save our green spaces! This is not affordable housing. It’s quick, cheap townhomes that will never be able to resell for the price purchased. Stop letting developers run our city!" |
| Linda McLoon | US | 2019-09-03 | "A zone change in this area would have negative impact on University Park." |
| Patirck Harrigan | Cornish, ME | 2019-09-06 | "We need open spaces" |
| Paul Drinan | Portland, ME | 2019-09-08 | "We should be placing a much higher value on natural habitat, especially areas like this that provide immersive connectivity." |
| Artemis McG | Massachusetts | 2019-09-09 | "I moved here from up North a few years back and haven't seen as much wildlife as I do now living near the park. Not only is it green space for the community but it's also a thriving ecosystem and home to several species of Flora and fauna. We're already losing thousands of acres of forests worldwide. Could we please keep our little slice of heaven in a congested city?" |
| Artemis McG | Massachusetts | 2019-09-09 | "I moved here from up North a few years back and haven't seen as much wildlife as I do now living near the park. Not only is it green space for the community but it's also a thriving ecosystem and home to several species of Flora and fauna. We're already losing thousands of acres of forests worldwide. Could we please keep our little slice of heaven in a congested city?" |
| David Spector | Portland, ME | 2019-09-09 | "Green spaces are precious. The existing Greater University Park will be ruined if this development moves forward, removing homes from many birds and mammals and destroying native bushes and trees. Worst, it will eliminate this handicapped-accessible and quiet little area of nature from our citizens forever." |
| Amanda Painter | Portland, ME | 2019-09-09 | "We're not The Forest City without our green spaces..." |

change.org

Recipient: Mayor Ethan Strimling, Gov. Janet Mills, Counsilor Justin Costa, Rep. Michael Brennan

Letter: Greetings,

Save University Park

# Signatures

| Name | Location | Date |
|---|---|---|
| Elizabeth Rose | Portland, ME | 2019-07-09 |
| Jennifer Long | Portland, ME | 2019-07-09 |
| Chris Wheaton | Portland, US | 2019-07-09 |
| Kevin Bardwell | Portland, US | 2019-07-09 |
| sara shelley | Cortlandt, NY | 2019-07-09 |
| Olivia Barberi | Portland, US | 2019-07-09 |
| Christopher Rowley | Scarborough, US | 2019-07-09 |
| JON INWOOD | Brooklyn, NY | 2019-07-09 |
| Carissa Maurin | Lynbrook, NY | 2019-07-09 |
| Aubrey Jane | West Bronx, NY | 2019-07-09 |
| Megan Paradis | Old Town, US | 2019-07-09 |
| Amanda Fall | Orono, US | 2019-07-09 |
| Emily Peck | Scarborough, US | 2019-07-09 |
| Elijah Ramirez | Biddeford, US | 2019-07-09 |
| Carrie Gleason | Littleton, CO | 2019-07-09 |
| Nancy Norton | Portland, US | 2019-07-09 |
| Rachel Flehinger | Portland, ME | 2019-07-09 |
| Stephen Kohnle | Darien, CT | 2019-07-09 |
| joseph laurinaitis | Portland, US | 2019-07-09 |
| Asa S | Orono, ME | 2019-07-09 |

| Name | Location | Date |
|---|---|---|
| Kristen Blais | Portland, ME | 2019-07-09 |
| Gail Wills | Marshfield, US | 2019-07-09 |
| melissa englehardt | Glenolden, PA | 2019-07-09 |
| Michele Condon | Plaistow, US | 2019-07-09 |
| Jacqueline Soper | Scarborough, US | 2019-07-09 |
| Matthew Curtis | Portland, US | 2019-07-09 |
| Samara Kupferberg | Portland, ME | 2019-07-09 |
| Chester Richardson | Portland, US | 2019-07-09 |
| Katie Godin | Portland, US | 2019-07-09 |
| Stacey Collins | Cumberland Foreside, US | 2019-07-09 |
| Jennifer Rand | Manchester, US | 2019-07-10 |
| Daniel Vaughn | Westbrook, US | 2019-07-10 |
| Sheila Cook | Portland, ME | 2019-07-10 |
| Alyssa Wade | Saco, US | 2019-07-10 |
| John Rogers | Portland, US | 2019-07-10 |
| Corrie Young | Scarborough, US | 2019-07-10 |
| Eliot Hull | Portland, US | 2019-07-10 |
| Amy Houran | Portland, US | 2019-07-10 |
| Sarah Wilmot | Concord, MA | 2019-07-10 |
| Brandon McCrum | US | 2019-07-10 |
| Craig Lakin | Portland, US | 2019-07-10 |
| Nicholas Wall | Portland, US | 2019-07-10 |

| Name | Location | Date |
|---|---|---|
| Cress OBrien | Auburn, MA | 2019-07-10 |
| Tallyn Brown | Westbrook, US | 2019-07-10 |
| Emily Varno | Portland, US | 2019-07-10 |
| Thomqs Begin | Portlamd, US | 2019-07-10 |
| Zachariah Stearn | Windham, US | 2019-07-10 |
| Brien McNamara | New Haven, US | 2019-07-10 |
| Stefan Dutka | Portland, US | 2019-07-10 |
| Amitej Toor | Clovis, US | 2019-07-10 |
| D. Clarke | Bronx, US | 2019-07-10 |
| Corvae Johnson | Denver, US | 2019-07-10 |
| Marie Lamarre | Jenison, US | 2019-07-10 |
| Todd Dadaleares | South Portland, US | 2019-07-10 |
| JOHNATHON FULLER | South Portland, US | 2019-07-10 |
| Todd Gingras | Auburn, US | 2019-07-10 |
| Zachary True | Falmouth, US | 2019-07-10 |
| M L Katze | Cape Elizabeth, US | 2019-07-10 |
| gigi high | Portland, US | 2019-07-10 |
| Kyah Morrissette | Standish, US | 2019-07-10 |
| Dayna White | Aurora, US | 2019-07-10 |
| Marissa Arrigoni | Boston, US | 2019-07-10 |
| Sophie Kaplan | New York, US | 2019-07-10 |
| Kathleen Vance | Portland, US | 2019-07-10 |

| Name | Location | Date |
|---|---|---|
| Mylo Brann | Amherst, MA | 2019-07-10 |
| Nathaniel Smith | Orrs Island, US | 2019-07-10 |
| Brett Loffredo | Portland, US | 2019-07-10 |
| Molly Chapman | Waltham, US | 2019-07-10 |
| Stephanie Wall | Sanford, ME | 2019-07-10 |
| Rosanne Griffin | Portland, US | 2019-07-10 |
| Susan Baxter | Portland, US | 2019-07-10 |
| Sophie Friedman | Boston, US | 2019-07-10 |
| Caitlin Hopkins | Portland, US | 2019-07-10 |
| Timothy Fulwider | Portland, US | 2019-07-10 |
| Daniel O’Connell | Portland, US | 2019-07-10 |
| Umberto Sperana | Portland, US | 2019-07-10 |
| Aaron Kubiak | Portland, US | 2019-07-10 |
| Martin Aguilar | Berwyn, PA | 2019-07-10 |
| Vonda Higgins | Portland, US | 2019-07-10 |
| Jacob Fenon-Hulett | Portland, ME | 2019-07-10 |
| Laura Stevens | Portland, US | 2019-07-10 |
| Chrisry Carmody | Poland, US | 2019-07-10 |
| Savannah Fields | South Portland, ME | 2019-07-10 |
| Connor Norton | Amesbury, US | 2019-07-11 |
| Alma Simmons | Augusta, US | 2019-07-11 |
| Jodelle Austin | Rochester, US | 2019-07-11 |

| Name | Location | Date |
|---|---|---|
| Hannah Lakin | Portland, US | 2019-07-11 |
| Barbara Richards | Pittsburgh, US | 2019-07-11 |
| Jennifer Stanbro | Portland, US | 2019-07-11 |
| Erin Wheaton | Portland, US | 2019-07-11 |
| zuqQBrtunLV9vfanM3cTXdeadffpSbuRd/LexRaLoE8s Vallely | Portland, US | 2019-07-11 |
| Wayne Porter | Portland, US | 2019-07-11 |
| Amanda Carlson | Westbrook, US | 2019-07-11 |
| Lilley Mickens | Reynoldsburg, US | 2019-07-11 |
| Jarrett Crawford | Muskogee, US | 2019-07-11 |
| Caroline Ginsberg | Portland, US | 2019-07-11 |
| Shalini Gupta | Sunnyvale, US | 2019-07-11 |
| Tamarik Williams | Denver, US | 2019-07-11 |
| Dylan Suriel | Farmingdale, US | 2019-07-11 |
| Wang Wang | Beverly Hills, US | 2019-07-11 |
| Marcos Meirelles | Roselle Park, US | 2019-07-11 |
| taylor sitkowski | Dallas, US | 2019-07-11 |
| Weston White | Kennewick, US | 2019-07-11 |
| Karen Gadbois | Brooklyn, NY | 2019-07-11 |
| Helen Stanbro | Portland, US | 2019-07-11 |
| Meredith Pesce | Portland, US | 2019-07-11 |
| Kaylee Moore | Bay city, US | 2019-07-11 |

| Name | Location | Date |
|---|---|---|
| Emily Berger | Northport, US | 2019-07-11 |
| Warren Thomas | Portland, US | 2019-07-11 |
| James Taylor | Portland, ME | 2019-07-11 |
| Amy Hayes | Portland, US | 2019-07-11 |
| Gilbert Plourde | Bowdoin, US | 2019-07-11 |
| Lesley Jones | Portland, US | 2019-07-11 |
| Maya V | Brooklyn, US | 2019-07-11 |
| gissell hernandez | temple, US | 2019-07-11 |
| Parker Bramlett | Toccoa, US | 2019-07-11 |
| Nick Pilatos | Belmar, US | 2019-07-11 |
| ASAP Rocky | Hammond, US | 2019-07-11 |
| Nathan Ortiz | Orange, US | 2019-07-11 |
| Pearsr Varner | San Diego, US | 2019-07-11 |
| Taylor Maypole | Jacksonville, US | 2019-07-11 |
| Ava Tripodi | Plainsboro, US | 2019-07-11 |
| Kate McLaughlin | Portland, ME | 2019-07-11 |
| Charlene Poulin | Portland, US | 2019-07-11 |
| Norman Barberi | Winterport, US | 2019-07-11 |
| John Tompkins | Portland, US | 2019-07-11 |
| Benjamin Brennan | Orono, ME | 2019-07-11 |
| Patrick Higgins | Portland, US | 2019-07-11 |
| Daniel Totten | Cambridge, MA | 2019-07-11 |

| Name | Location | Date |
|---|---|---|
| MaryAnn Butts | Portland, ME | 2019-07-11 |
| Jacqueline Rogers | Portland, US | 2019-07-11 |
| Jeremy Norton | Portland, US | 2019-07-11 |
| Jason NORTON | Brunswick, US | 2019-07-11 |
| Alice Hornstein | Portland, US | 2019-07-11 |
| Gretchen Ebbesson-Keegan | Camden, ME | 2019-07-11 |
| Maggie Moore | Topsham, US | 2019-07-11 |
| Tim Meehan | Portland, US | 2019-07-11 |
| Kayla Theriault | Portland, US | 2019-07-11 |
| patricia theriault | portland, ME | 2019-07-11 |
| Megan Tumavicus | Portland, US | 2019-07-11 |
| Sara Brooke | Portland, US | 2019-07-11 |
| Cindy Pagel | Portland, US | 2019-07-11 |
| Katie Seagers | Wayne, US | 2019-07-11 |
| Andrew Millard | Orono, ME | 2019-07-11 |
| Case Colina | Ponte Vedra Beach, US | 2019-07-11 |
| Lisa Timmons | Dayton, US | 2019-07-11 |
| quan Summers | Greensboro, US | 2019-07-11 |
| Katie Brooke | Portland, US | 2019-07-11 |
| Taylor Wicks | Portland, US | 2019-07-11 |
| Crystal Dunn | West Gardiner, US | 2019-07-11 |
| Mary McVeigh | Portland, US | 2019-07-11 |

| Name | Location | Date |
|---|---|---|
| Lori Powell | Portland, US | 2019-07-11 |
| Christopher Porter | Portland, US | 2019-07-11 |
| Gianna Dudley | Westbrook, ME | 2019-07-11 |
| Patricia Wescott | Brunswick, ME | 2019-07-11 |
| Luis Rivera | San Fernando, US | 2019-07-11 |
| Collisa Johnson | HOUSTON, US | 2019-07-11 |
| J Handy | Portland, US | 2019-07-11 |
| Quentin L | Frankfort, US | 2019-07-12 |
| Elijah Sales | Villa Rica, US | 2019-07-12 |
| Jacob Hastings | Cleveland, US | 2019-07-12 |
| Doug Woods | Pollock Pines, US | 2019-07-12 |
| Henk Griffin | Amsterdam, NH, The Netherlands, Netherlands | 2019-07-12 |
| Nathan Williams | Tuscaloosa, US | 2019-07-12 |
| Ray Richard | Rochester, US | 2019-07-12 |
| Curt Hartwell | Ramona, US | 2019-07-12 |
| Donna Desnoyers | Attleboro, US | 2019-07-12 |
| Joe Presser | Portland, US | 2019-07-12 |
| Mary Ma | Clarksburg, US | 2019-07-12 |
| Hedi Houissa | Charlotte, US | 2019-07-12 |
| Dumebi Ejikeme | Mcdonough, US | 2019-07-12 |
| Kyle Fetters | Portland, US | 2019-07-12 |

| Name | Location | Date |
|---|---|---|
| Mike Sandora | South Portland, US | 2019-07-12 |
| Krystal Talbot | Freeport, US | 2019-07-12 |
| Evalin Stearns | Portland, US | 2019-07-12 |
| John Blais | Turner, ME | 2019-07-12 |
| Joshua Parmenter | Portly, US | 2019-07-12 |
| Chelsea DiMillo | Portland, US | 2019-07-12 |
| Rachel Casey | South Portland, US | 2019-07-12 |
| Hannah Gathman | Portland, US | 2019-07-12 |
| Ann Danforth | Portland, US | 2019-07-12 |
| Justine Laurinaitis | Paris, ME | 2019-07-12 |
| Jacqui Carpenter | Salt lake city, US | 2019-07-12 |
| Ansley Hargrove | Monticello, US | 2019-07-12 |
| Lee Reeve | Portland, US | 2019-07-12 |
| David Laurinaitis | Rumford, US | 2019-07-12 |
| doug mccown | Portland, US | 2019-07-12 |
| Margaret Griffeth | Portland, US | 2019-07-12 |
| Camron Chea | Portland, US | 2019-07-12 |
| Isaiah Bickford | Portland, US | 2019-07-12 |
| Emin Karimov | Portland, US | 2019-07-12 |
| matthew keene | Portland, US | 2019-07-12 |
| barbara keene | Portland, US | 2019-07-12 |
| Eric Wright | Portland, US | 2019-07-12 |

| Name | Location | Date |
|---|---|---|
| Michael LeComte | Portland, US | 2019-07-12 |
| E Scot Fuller-Beatty | Portland, US | 2019-07-12 |
| Allyssia Keeling | Fort Bragg, US | 2019-07-12 |
| Lindsay Torrey | South Portland, US | 2019-07-12 |
| Charlotte Guptill | Puerto Vallarta, Mexico | 2019-07-12 |
| Benjamin Rafuse | West Columbia, SC | 2019-07-12 |
| Tommy Light | Jacksonville, US | 2019-07-12 |
| Kyle Holmquist | Saco, ME | 2019-07-12 |
| Steve Katsurinis | Wellfleet, US | 2019-07-12 |
| Blaise Goodman | Litchfield, US | 2019-07-12 |
| Joe Beatty | Mchenry, US | 2019-07-12 |
| Jason Fuller-Beatty | Portland, US | 2019-07-12 |
| Sam Cunningham | Portland, US | 2019-07-12 |
| James Bickford | Portland, ME | 2019-07-13 |
| Eric Flynn | Portland, US | 2019-07-13 |
| Sara Sissel | Portland, US | 2019-07-13 |
| Rev. Charles Grindle | Portland, ME | 2019-07-13 |
| Wynn Salisch | New York, NY | 2019-07-13 |
| Ed Dulian | Caledonia, US | 2019-07-13 |
| Jessica Wilkinson | Portland, US | 2019-07-13 |
| Kayly Mailhot | Biddeford, US | 2019-07-13 |
| Sarah Kwantz-Drewal | Topsham, ME | 2019-07-13 |

| Name | Location | Date |
|---|---|---|
| Joshua Malia | Portland, ME | 2019-07-13 |
| Deb Beatty | Rockford, US | 2019-07-13 |
| Maria Duffy | Portland, US | 2019-07-13 |
| Eleanor Mann | Portland, US | 2019-07-13 |
| Laura Scheidegger | Spencerport, US | 2019-07-13 |
| Daniel Boutilier | Portland, ME | 2019-07-13 |
| Ben Cross | Winthrop, US | 2019-07-13 |
| Danielle Mudge | Los Angeles, US | 2019-07-13 |
| William Keene | Portland, ME | 2019-07-13 |
| Christopher Hanson | Richmond, ME | 2019-07-13 |
| Daniel Brideau | Portland, ME | 2019-07-13 |
| jennifer fischer | Portland, US | 2019-07-13 |
| Monet Macomber | Portland, US | 2019-07-13 |
| Eri Abraham | Portland, US | 2019-07-13 |
| Lysander Mitsouras | Saint Cloud, US | 2019-07-13 |
| Craig Bowley | New York, US | 2019-07-13 |
| Carly Goodman | Boone, US | 2019-07-13 |
| Samantha Mills | Bronx, US | 2019-07-13 |
| Abby Sorenson | Trenton, US | 2019-07-13 |
| Mera Syal | Fuquay Varina, NC | 2019-07-13 |
| Peter Allen | Gorham, US | 2019-07-13 |
| David Mace | Augusta, ME | 2019-07-13 |

| Name | Location | Date |
|---|---|---|
| Erin Hutton | Portland, US | 2019-07-13 |
| Marilu Madrigal | Coral Gables, US | 2019-07-13 |
| Kylee Liberty | Falmouth, US | 2019-07-13 |
| Urfan Nadirov | Portland, US | 2019-07-14 |
| Ryan Gaudreau | Rochester, US | 2019-07-14 |
| Kalee Galloway | Thomasville, US | 2019-07-14 |
| Philip Shemanski | Los Altos, US | 2019-07-14 |
| Danielle Murphy | Brunswick, US | 2019-07-14 |
| Chris Johnson | Raleigh, US | 2019-07-14 |
| Donna O'Brien | Manchester, US | 2019-07-14 |
| Shina Novel | Charlotte, US | 2019-07-14 |
| Mark Pickett | Athens, US | 2019-07-14 |
| Sarvjeet Kaur | Fremont, US | 2019-07-14 |
| Stephanie Ramirez | Houston, US | 2019-07-14 |
| Aireona Gonzalez | Houston, US | 2019-07-14 |
| Maram Al-Hussein | Lynnwood, US | 2019-07-14 |
| Cory Nitta | Los Angeles, US | 2019-07-14 |
| Melany Navarrete | Houston, US | 2019-07-14 |
| Susan Bragdon | Portland, US | 2019-07-14 |
| Zechariah Smith | Crestview, US | 2019-07-15 |
| maria gritsch | la, CA | 2019-07-15 |
| john peacock | rockford, IL | 2019-07-15 |

| Name | Location | Date |
|---|---|---|
| Nate Hinchey | Portland, US | 2019-07-15 |
| Colin Reid | Portland, US | 2019-07-15 |
| Thomas Tutor | Portland, US | 2019-07-15 |
| Utkarsh Nath | Fremont, US | 2019-07-16 |
| Karla Tapps | Compton, US | 2019-07-16 |
| Jennifer Monroy | Los Angeles, US | 2019-07-16 |
| Kendra Denton | Los Angeles, US | 2019-07-16 |
| Christal Neal | Los Angeles, US | 2019-07-16 |
| Sarah Carpenter | Springfield, MO | 2019-07-16 |
| Luz Flores | los angeles, US | 2019-07-18 |
| KimMarie Johnson-Roussell | Los Angeles, US | 2019-07-18 |
| Adam Kaluba | Cincinnati, US | 2019-07-18 |
| Francesca Houran | Portland, US | 2019-07-19 |
| Janice Watson | Los Angeles, US | 2019-07-21 |
| Dana Earls | Portland, US | 2019-07-22 |
| Stephanie Brown | Portland, US | 2019-07-26 |
| Helen Meehan-Selleck | Portland, US | 2019-07-26 |
| David Selleck | Portland, US | 2019-07-26 |
| Miki Episcopo | Portland, US | 2019-07-26 |
| cindy baratta | Brandon, US | 2019-07-26 |
| Sean Toomey | US | 2019-07-26 |
| Ryan Brown | Windham, US | 2019-07-26 |

| Name | Location | Date |
|---|---|---|
| David Thibault | Gray, US | 2019-07-26 |
| Douglas Campbell | Cape Elizabeth, US | 2019-07-26 |
| Lori Sitois | Portland, US | 2019-07-26 |
| Kim Johnson | Portland, US | 2019-07-30 |
| Cherie Phillips | Portland, US | 2019-07-30 |
| Lauren Rodrigue | Portland, US | 2019-08-04 |
| Leslie Koelsch | San Francisco, US | 2019-08-05 |
| Stephen Nestel | San Rafael, US | 2019-08-05 |
| Erica Mccool | Los Angeles, US | 2019-08-07 |
| Michelle Jimenez | Los Angeles, US | 2019-08-07 |
| Brisa Sanchez | Long Bea, US | 2019-08-07 |
| Olga Mazariegos | Oklahoma City, US | 2019-08-07 |
| Alegra vite | wailuku, US | 2019-08-07 |
| Kasandra Becerra | Los Angeles, US | 2019-08-07 |
| Aaron Beckett | Los Angeles, US | 2019-08-07 |
| Erin Cain Jackson | Granite City, US | 2019-08-09 |
| Monilade Walker | Los Angeles, US | 2019-08-09 |
| Linda McLoon | US | 2019-09-03 |
| Michael Russell | Westbrook, US | 2019-09-05 |
| John Day | Portland, ME | 2019-09-05 |
| Ari Appel | Dallas, US | 2019-09-05 |
| Avery Hawk | Waxhaw, US | 2019-09-05 |

| Name | Location | Date |
|---|---|---|
| Glenn Holland | Falmouth, ME | 2019-09-05 |
| Desiree Gollihugh | Ironton, US | 2019-09-06 |
| Christine Retzer | Buffalo, US | 2019-09-06 |
| Oliver Fissure | Virginia Beach, US | 2019-09-06 |
| David Miles | Rockwood, US | 2019-09-06 |
| Sophia R | Debary, US | 2019-09-06 |
| Morgan Harding | Sacramento, US | 2019-09-06 |
| Patirck Harrigan | Cornish, ME | 2019-09-06 |
| Melina Schuler | Portland, ME | 2019-09-06 |
| Dan Beale | Portland, ME | 2019-09-06 |
| Ruth Kirkwood | Portland, ME | 2019-09-07 |
| Jessica Fields | Auburn, ME | 2019-09-07 |
| David Fields | Auburn, ME | 2019-09-08 |
| Holly Mitchell | Portland, ME | 2019-09-08 |
| Dearbhaile Obrien | Portland, ME | 2019-09-08 |
| Paul Drinan | Portland, ME | 2019-09-08 |
| Terri DeCoster | New Gloucester, ME | 2019-09-08 |
| Adam Turner | Augusta, ME | 2019-09-08 |
| Alfred Carbone | Watertown, MA | 2019-09-08 |
| Annette Elowitch | Portland, ME | 2019-09-08 |
| Skyler Kirker | Fort Wayne, US | 2019-09-08 |
| Alesia Norling | Edgecomb, ME | 2019-09-08 |

| Name | Location | Date |
|---|---|---|
| Ella Weerackody | New York, US | 2019-09-08 |
| Jamie Darley | Fitzgerald, US | 2019-09-08 |
| Kimberly Grubka | St. Joseph, MI | 2019-09-08 |
| Kelly Masters | Portland, ME | 2019-09-08 |
| Laura Vickery | Saco, ME | 2019-09-08 |
| Candace Karu | Portland, ME | 2019-09-08 |
| Carla Lafortune | Saco, ME | 2019-09-08 |
| Lori Carver | Kenduskeag, ME | 2019-09-08 |
| Jennifer MacLeod | Portland, ME | 2019-09-08 |
| Aprill Newmsn | Portland, ME | 2019-09-08 |
| Rose G | Portland, ME | 2019-09-09 |
| Jake Stone | Central Square, NY | 2019-09-09 |
| isaac g | Portland, ME | 2019-09-09 |
| Rachel Sales | Winslow, ME | 2019-09-09 |
| Jessica McKinney | Portland, ME | 2019-09-09 |
| Devin Green | Portland, ME | 2019-09-09 |
| Eleanor Falby | Portland, ME | 2019-09-09 |
| Sarah Lawrie | Portland, ME | 2019-09-09 |
| Leticia Plate | Portland, US | 2019-09-09 |
| David Spector | Portland, ME | 2019-09-09 |
| Janell Lewis | Portland, ME | 2019-09-09 |
| Eliza Fowler | Secaucus, NJ | 2019-09-09 |

| Name | Location | Date |
|---|---|---|
| Uther Dadaleares | Portland, ME | 2019-09-09 |
| Shannon O'Connor | Portland, ME | 2019-09-09 |
| Emily-Anne Garland | Portland, ME | 2019-09-09 |
| Crystal Troiano | Phoenix, AZ | 2019-09-09 |
| Michael Vickery | Portland, ME | 2019-09-09 |
| Amanda Painter | Portland, ME | 2019-09-09 |
| Marc Pomerleau | Portland, ME | 2019-09-09 |
| Susan J Lane | Portland, ME | 2019-09-09 |
| Jason Huckaby | Portland, ME | 2019-09-09 |
| Lauren Amick | New York, US | 2019-09-09 |
| Jennifer Waterman | Mauston, WI | 2019-09-09 |
| Tyler McGinley | Falmouth, ME | 2019-09-10 |
| Christina Bechstein | Rochester, NY | 2019-09-10 |
| Katherine Kroll | Portland, ME | 2019-09-10 |
| Ana Courtney | Portland, ME | 2019-09-10 |
| Charles Smith | Portland, ME | 2019-09-10 |
| Inesmari Carrasquillo | san juan, US | 2019-09-10 |
| Michael Dunnigan | Portland, ME | 2019-09-10 |
| Shawn GEORGE | Portsmouth, NH | 2019-09-10 |
| Jane Schaller | Arundel, ME | 2019-09-10 |
| Nichole Crandall | Falmouth, ME | 2019-09-10 |
| Julie Salois | Scarborough, ME | 2019-09-10 |

| Name | Location | Date |
|---|---|---|
| Athena Davis | Portland, ME | 2019-09-10 |
| Todd Norton | Dandridge, TN | 2019-09-10 |
| Sena Phin | Portland, ME | 2019-09-10 |
| Rachel Robinov | Cliff island, ME | 2019-09-10 |
| Aleksandar Karadzic | Portland, ME | 2019-09-10 |
| Elizabeth Bruso | Grand Blanc, US | 2019-09-10 |
| bennett wettengel | Cincinnati, US | 2019-09-10 |
| Alex Festekjian | Gaithersburg, US | 2019-09-10 |
| Danielle Hansen | silver spring, MD | 2019-09-10 |
| Spencer Watral | Steamboat Springs, US | 2019-09-10 |
| Dusan Dukic | Portland, ME | 2019-09-10 |

Google Groups

# Proposed Zoning Change along Harvard Street

**Craig Plourde** <cplourde22@gmail.com> Sep 10, 2019 10:12 AM
Posted in group: **Planning Board**

Good morning

My name is Craig Plourde, my wife and I are residents of Plymouth Street in Portland. This morning I was walking our dog along a normal route through the Harvard Park where I noticed a sign posted referencing the meeting that will take place tonight at 7:30 PM in regards to proposed zoning change that will allow Apex to develop housing. While I understand Portland's need for housing, my wife and I are against the proposed Zoning change and development of Harvard Park.

We utilize the trail through Harvard Park during every season. Every time I walk through the trail I am thankful that Portland has these trails as they provide easy access to nature. I believe this provides great value to the community and overall personal well-being. Being able to walk a wooded section of trails provides a brief escape from our busy lives and I look forward to walking through this area with our soon to be child. I know that there are many local users of this space as I frequently cross paths with other people with and without dogs walking along the trail.

My wife and I ask that the Planning Board considers a long-term view of Portland that includes these ares of nature for the City residents to enjoy as they provide much value as they are to the people that utilize them.

Given the last minute notice about the meeting I will be unable to make it to tonight's discussion but will be monitoring the outcome.

Thank you for your time and service to Portland.

Craig Plourde

Google Groups

## PL-000716-2019

**Anna Eaves** <anna33@ksu.edu> Sep 11, 2019 3:17 PM
Posted in group: **Planning Board**

I strongly oppose the the housing development proposed for the Northeast Deering community that effects University Park and Harvard Street Trail. This development would greatly reduce the green space in this area, compromising the immense value and benefits that mature urban trees offer our cities.

I live in Tamerlane very near to this area and highly value the trails and wooded areas in our neighborhood. Please don't interrupt the green space that is so vital to the animals that live here and so valued by the people inhabiting the area.

Thank you for your time,
Anna Eaves

Get Outlook for iOS

Google Groups

## Planning Board Workshop Review

**University** <save.university.park.trail@gmail.com>
Sep 13, 2019 7:45 AM
Posted in group: **Planning Board**

View this email in your browser




# Planning Board Workshop Review

Tuesday evening the Planning Board workshop was packed!
Thank you to everyone who came and to those who spoke their opposition to the rezoning request.

**To watch the Planning Board Workshop visit the** Town Hall Streams
Rezoning Proposal starts at 4:06

Our city council representative, Justin Costa, reached out to several neighbors following the Planning Board meeting.
From Justin Costa:

Thanks for all your emails regarding the proposal and please accept my apologies as I know I've been delayed in responding to some of them.

A few general things I want to put out there:

First, as your district Councilor I just want to be clear that I haven't seen anything that would lead me to support the rezoning request. I've represented the area on the Council and on the School Board for more than a decade, and I'm pretty familiar with the area and the surrounding neighborhoods. I understand the concerns that are being raised and I think I agree with most everything that I've heard from those living nearby.

Second, I'm also the Council appointee to the Land Bank Commission, so I'm also familiar with that piece of things. The Land Bank Commission really only has this item on its agenda this evening so that commission members are aware that there's a proposal that is near a land bank property. The Commission has no jurisdiction in this matter because the proposal does not actually deal with the park itself. The meeting is still open to the public and everyone is more than welcome to attend, but there's no decision that will ever be made by the Commission.

Third, I just want to emphasize that any change in zoning is ultimately a matter for the City Council. The Planning Board will make a recommendation but only the Council can change zoning. The proposal is in front of the Planning Board now because anyone has the right to request a zoning change, but the fact that the Planning Board hears the proposal doesn't reflect anything more than due process for anyone seeking a zoning change on any parcel of land that they own. The final decision resides with the Council, regardless of any recommendation from the Planning Board.

I hope this helps. Please feel free to share this email with others in the neighborhood and to let me know about any additional concerns you have.

Sincerely,
Justin

There are over **450** signatures on our online petition to stop the rezoning of Harvard Path!  It is zoned R3 for single family homes for many reasons and this is how it should remain. The Planning Board validated these concerns rejecting proposed rezoning in 2006. **The reasons for voting it down again haven't changed**, in fact, they have grown even more pertinent with time.  Developers greed is no reason to compromise now.

Stay up to date by following our Facebook page

Have a great weekend!

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This email was sent to planningboard@portlandmaine.gov
*why did I get this?* unsubscribe from this list update subscription preferences
save university park · 42 Woodlawn Ave · Portland, ME 04103-3512 · USA



Google Groups

# Proposed Harvard Street Development

**Jennifer fischer** <jenfischer01@gmail.com> Nov 20, 2019 5:20 AM

Posted in group: **Planning Board**

Attached are our written comments with respect to the re-zoning and further development of Harvard as proposed by Wescott & Payson.

We are available for questions and would encourage you to take a drive and actually look at the streets and area involved. Hopefully your brief tour would appreciate the resulting loss of a green belt area.

jennifer fischer and norman janson

July 7, 2019

Planning Board- City of Portland

Re: Proposed Zoning change and development by Wescott &Payson

Plan # ZN-000716-2019

We are residents on Kimberly Court and are considered an “interested party” to the proposal to rezone and develop Harvard Street. We are quite opposed to this effort and want to make our concerns known. If the Planning Board lends it approval to this then it would be done with full awareness of the issues. We urge you to consider the interests of existing residents, in this proposed zoning change, over additional income for the developers.

The Comprehensive Housing Plan aims to provide affordable housing. But it also cites a commitment to regulate growth, respect the integrity, quality and character of existing neighborhoods.

**As a matter of history- this same rezoning request and proposal was put before the City Council in 2006 and soundly defeated.** The issues raised then are still the same now- only exacerbated due to the subsequent development of Yale Street. Documents that were put before the City Council, in 2006, are available if you need to review them.

While we are supportive of the Planning Boards goals to provide affordable housing in the City of Portland: we ask that the Board take a good look at the number of apartment buildings, duplexes and multi-family homes within a 1 mile radius of this area. The number of apartments and developments are many and at least two are targeted to lower income families. All within a mile of this area. Point being made here is that this area of N Deering has made an ample contribution toward the goal of affordable housing already. This area has had to adjust to the **33** apartment units of Yale Court, the **33** units of the Radcliffe Glen condominiums and the **84** apartments of the Woodwinds. All these empty out into either Yale or Harvard. Streets that cannot support additional traffic. Again, this neighborhood has done its share and that needs to be considered in balancing any decisions for the future.

As a point of fact Wescott & Payson were aware that the land, in question, was zoned R3 when they completed their purchase. This is not a zoning change requested to reinstate its original designation.

Although Woodlawn may be zoned R5; the **vast majority** of dwellings are single family. Thus putting up 20 duplexes- as proposed- would not be in keeping with the overall look and feel of the neighborhood.

A change in zoning from R3 to R5 has rarely been granted. It was noted, in 2006, that the only approval for such request was for a single lot on Seeley Street which was already adjacent to an R5 zone. And again this specific request was denied in 2006.

Our overwhelming concern is with the **safety issues** of rezoning and development. The safety issues are multiple and significant:

- Harvard Street has no sidewalks. The proposal would have the additional traffic all emptying out onto Harvard. This is an older street and the absence of sidewalks is already a hazard as many residents of the apartments, on Harvard Street and Yale, walk down Harvard to the bus stop on Washington Ave. Any additional traffic would create more of a hazard.
- The school bus stops are currently on Harvard and a second one at the intersection of Yale and Allen. Presently the school bus that picks up on Harvard must drive to the end of Harvard and execute a three point turn to reverse direction: right where this proposed development would funnel **all their traffic**. The swell of traffic at that spot on Harvard will create greater dangers to the children at this bus stop and create more difficulties for the driver to execute the turnaround. The school bus stop on Allen and Yale is a bit precarious as the waiting area is already too small for the number of children to safely wait to board the bus. As a result there are multiple cars, vans and SUVs parked along the end of Yale filled with the children awaiting the bus. It is already very difficult to approach that intersection safely during the morning hours due to both the parked cars ( many illegally parked) and the crowd of energetic children. Lets not add more traffic and children to that area!
- There are only two means of egress from Harvard. Yale and Harvard itself. The intersection of Harvard and Washington is already quite hazardous. During peak hours it is nearly impossible and quite dangerous to execute a left onto Washington. Even executing a right turn may require quite a long wait. There is a city bus stop right at that intersection and frequently a lot of pedestrian activity which creates safety issues as well especially in the absence of sidewalks and the absence of a traffic light. Clearly that intersection cannot handle the increased traffic from 20 duplexes.
- The intersection of Yale and Allen is also quite busy and nearly impossible to safely execute a left turn most times of the day. There is no traffic light there. That intersection cannot handle the additional traffic from 20 duplexes.
- The development of Yale street has already exacerbated the traffic issues. The proposal shows Harvard remaining a dead end street- thus any vehicle must enter or exit via Harvard to Yale or Harvard to Washington. There is a concern

about emergency vehicle access on such a long dead end street such as that being proposed.

- Snow removal is a real concern. The proposed units do not leave room for adequate snow removal. This is already a problem on Yale street causing many – including school children- to walk on the roadways to avoid the large snow banks. There just simply is not enough open space to put the snow.

We trust that the Planning Board will inquire about plans for water drainage. Currently the land in question has a lot of standing water and the piping etc. on Harvard St is quite old and has not yet been replaced/upgraded by the City.

There is a proposed turnaround at the dead end of Harvard. Isn't that land held by the City? Are they proposing that the City sell them this land? Why can't the turnaround be built on the land already owned by Wescott & Payson?

Lastly, I would encourage the Planning Board to look at the City maps and see all the existing multi family /apartments already erected near this area. The population density is at its max. Any further development, as proposed, or rezoning to R5 will **devalue our property significantly**. This area will quickly become less appealing to residents due to the above mentioned safety concerns and negative impact to the neighborhood. Indeed Wescott & Payson are doing nothing to improve the neighborhood and will only devalue the properties of existing residents. Something the Planning Board should think long and hard about.

Thank you for your time and attention to this issue.

Sincerely

Jennifer Fischer Norman Janson

Google Groups

# FW: HARVARD STREET

**george@lauramarrprinting.com** <george@lauramarrprinting.com> Nov 20, 2019 1:26 PM
Posted in group: **Planning Board**

**From:** george@lauramarrprinting.com <george@lauramarrprinting.com>
**Sent:** Thursday, September 05, 2019 2:09 PM
**To:** 'planningboard@portlandmaine.gov' <planningboard@portlandmaine.gov>
**Subject:** HARVARD STREET

Harvard Street, 1100 feet of frontage on a dead end street. 44 duplex units, possibly 88 vehicles, one way in and one way out. Come on planning board this makes no sense. I live at 185 Harvard which abuts this proposal and it will ruin the green space and the neighborhood. It will create way too much traffic. Do what is right please.

George Libby

185 Harvard Street

Google Groups

# FW: HARVARD STREET RE ZONE

**george@lauramarrprinting.com** <george@lauramarrprinting.com> Nov 20, 2019 1:29 PM
Posted in group: **Planning Board**

**From:** george@lauramarrprinting.com <george@lauramarrprinting.com>
**Sent:** Tuesday, September 17, 2019 2:54 PM
**To:** 'save.university.park.trail@gmail.com' <save.university.park.trail@gmail.com>
**Subject:** FW: HARVARD STREET RE ZONE

**To:** george@lauramarrprinting.com
**Subject:** Re: HARVARD STREET RE ZONE

On Fri, Sep 13, 2019 at 12:50 PM <george@lauramarrprinting.com> wrote:

> Hello, my name is George Libby, life long resident of Portland. I have resided at 185 Harvard Street for 42 years. You get to vote soon on the rezoning of Harvard Street. I am against the rezone as well as some 400 residents who have signed a petition from the area. The property was purchased as single family lots and now of course the owners want to build 20 duplexes, 40 families, up to 80 cars plus visitors on a 1400 foot path. One way in and one way out on a dead end street. This makes no sense unless you are the builder. I am against this and hopefully you are too. If you are not familiar with the area you should drive down Harvard to the end, take a right, my house is the last house and only one around the corner, park in front of my house and walk down the path and envision 20 duplexes on the left side of the path as the right side is city land and not buildable. I hope you do what is right for the city and the residents who live in the area and turn down the rezone as it was 13 years ago unanimously by the city counsellors. Thank you
>
> George Libby
>
> 185 Harvard Street

--

-Spencer Thibodeau City Councilor, District 2 207-650-2147 Sent from Gmail Mobile

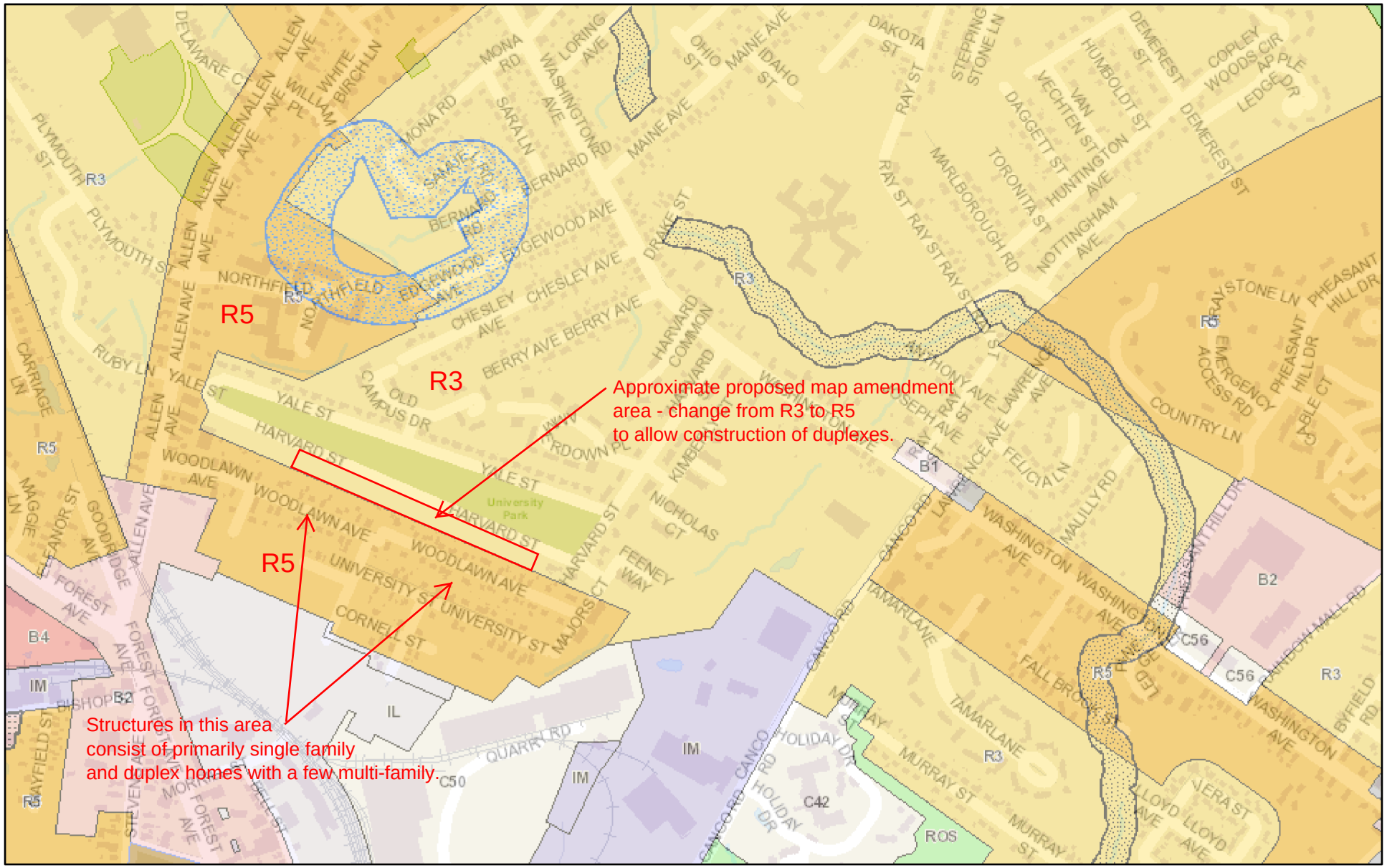
Notice: Under Maine law, documents - including e-mails - in the possession of public officials or city employees about government

business may be classified as public records. There are very few exceptions. As a result, please be advised that what is written in an e-mail could be released to the public and/or the media if requested.

On Fri, Sep 13, 2019 at 12:50 PM <george@lauramarrprinting.com> wrote:

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>
> George Libby
>
> 185 Harvard Street

# Context Zoning Map




3/28/2019, 8:24:05 AM

1:8,577

0 0.05 0.1 0.2 mi

0 0.1 0.2 0.4 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 |

LEGEND:

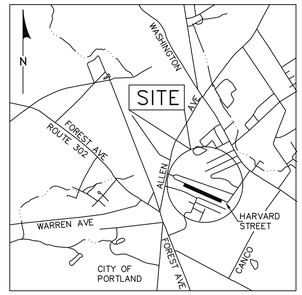
| EXISTING | | PROPOSED |
|---|---|---|
| | PROPERTY BOUNDARY | |
| | ORIGINAL LOT LINE | |
| | RIGHT OF WAY | |
| | BUILDING SETBACK | |
| | ZONE LINE | |
| (60) | ORIGINAL LOT # | |
| | DUPLEX | |

PROJECT SUMMARY:
PARCEL SIZE = 3.4± ACRES (149,726 S.F.)
PROPOSED ZONE CHANGE FROM R-3 TO R-5
PROPOSED USE- DUPLEX (20 DUPLEXES PROPOSED)
PROPOSED CONSTRUCTION OF 1,400± LINEAR FOOT SECTION OF HARVARD STREET WITH ASSOCIATED UTILITIES

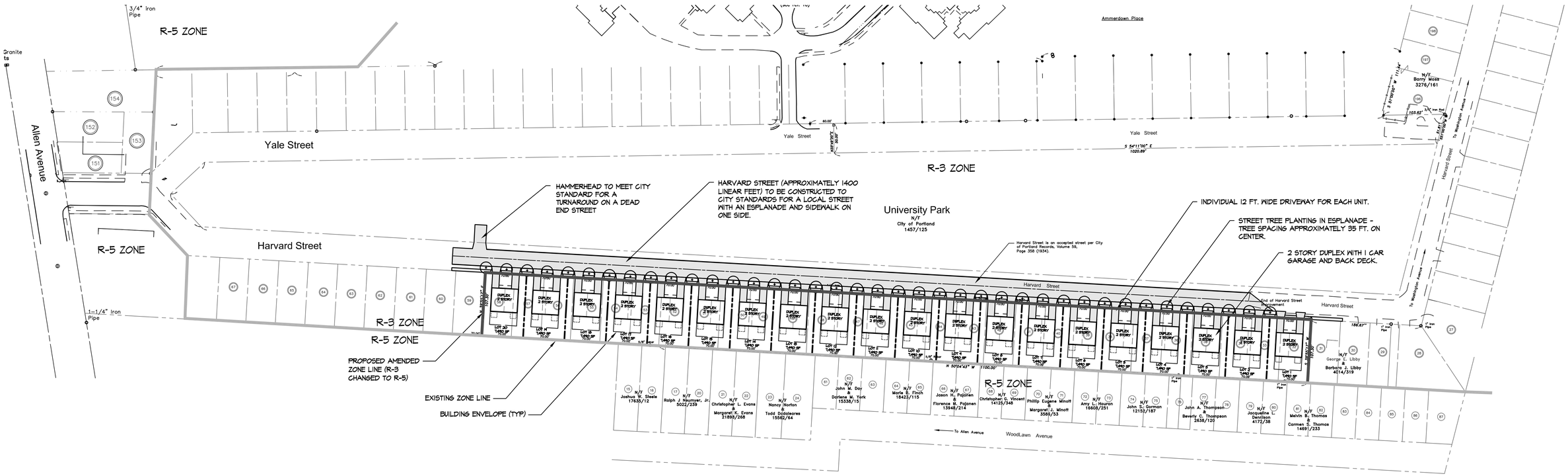
NOTES:
1. THE BASE INFORMATION SHOWN ON THIS PLAN IS A COMPILATION OF SURVEYS BY OTHERS AND FIELD DATA IT IS NOT A BOUNDARY SURVEY AND SHOULD NOT BE USED AS SUCH.

*Zoning Comparison Table:*

| *Description* | *R-3 Zone* | *R-5 Zone* | *R-5 Proposed* |
|---|---|---|---|
| *Single Family* | *allowed* | *allowed* | *NA* |
| *Duplex* | *not allowed* | *allowed* | *Duplex Allowed* |
| *Lot Width* | *65 ft.* | *60 ft.* | *70 ft.* |
| *Min. Street Frontage* | *50 ft.* | *50 ft.Min.* | *70 ft.* |
| *Front Yard* | *25 ft.* | *20 ft.Min.* | *20 ft.* |
| *Rear Yard* | *25 ft.* | *20 ft.Min.* | *20 ft.* |
| *Side Setback* | | | |
| *1 story* | *8 ft.* | *8 ft.* | *NA* |
| *1.5 story* | *8 ft.* | *8 ft.* | *NA* |
| *2 story* | *14 ft.* | *12 ft.* | *12 ft.* |
| *2.5 story1* | *6 ft.* | *14 ft.* | *NA* |
| *Max. Lot Coverage* | *35%* | *40%* | *27%±* |
| *Max. Structure Height* | *35 ft.* | *35 ft.* | *35 ft. max.* |
| *Min. Lot Size* | *6,500 s.f.* | *6,000 s.f.* | *7,490 s.f.* |




LOCUS
SCALE: 1"=2000'±




GRAPHIC SCALE
100 0 50 100 200 400
( IN FEET )
1 inch = 100 ft.

| REV. | DATE | STATUS | DEPT. BY | CHKD. | APPD. |
|---|---|---|---|---|---|
| A | 6/11/19 | ISSUED TO THE CITY OF PORTLAND FOR MAP AMENDMENT | PBB | PBB | PBB |

LICENSED LANDSCAPE ARCHITECT
PETER B. BIEGEL
No. 2624
STATE OF MAINE
6/11/19


LAND DESIGN SOLUTIONS
LAND PLANNING, SITE PLANNING & LANDSCAPE ARCHITECTURE
P.O. Box 316, 1 Faraday Drive, Cumberland, ME 04021 tel:(207) 939-1717


OWNER & APPLICANT:
WESCOTT & PAYSON II
31 OLD CAMPUS DRIVE, PORTLAND, MAINE 04103

DESIGN: DEPT.
DRAWN: PBB
CHKD: PBB
DATE: JUNE 2019
SCALE: 1"=100'

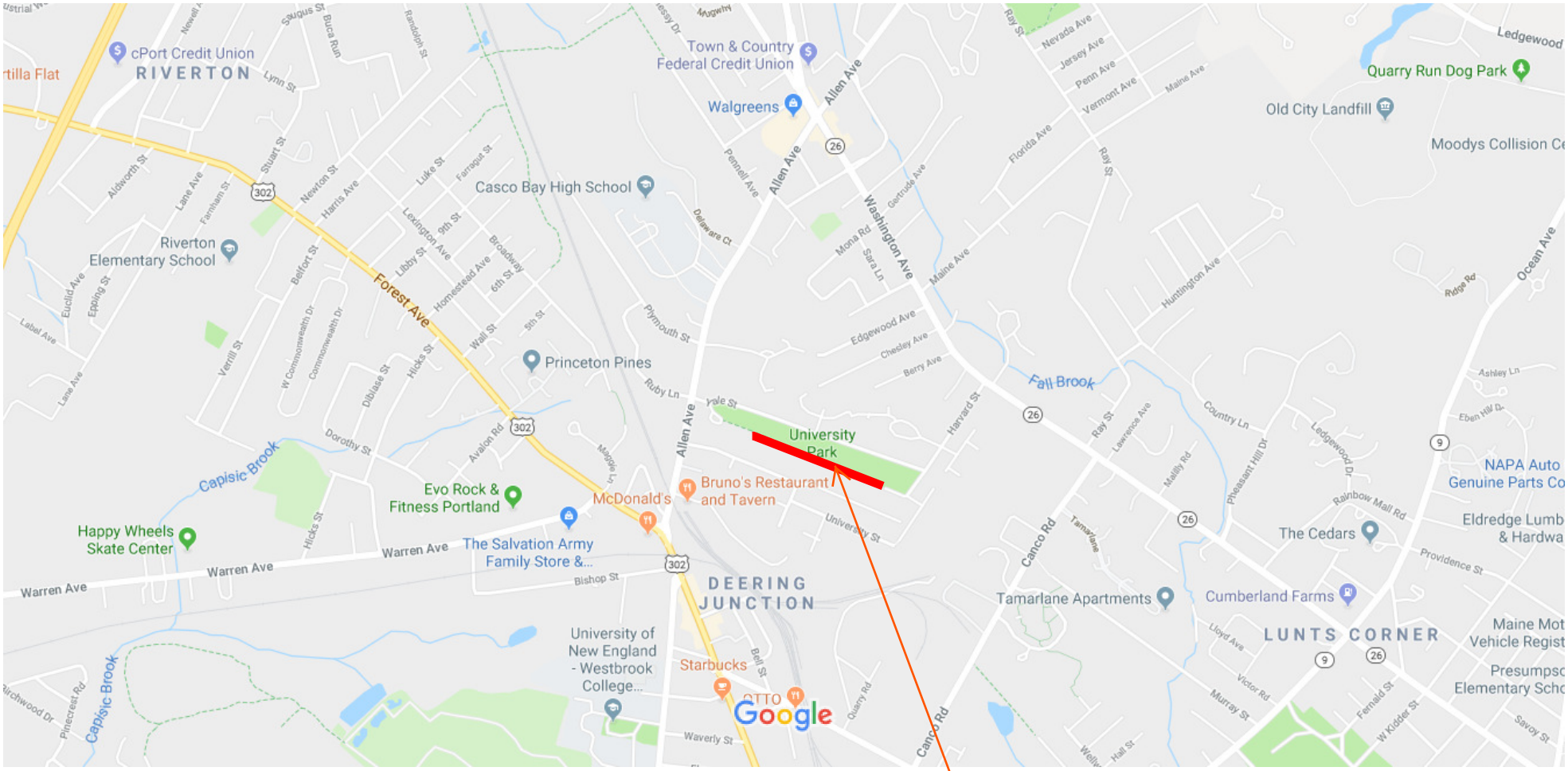
**PROPOSED MAP AMENDMENT**
LOTS 32 TO 58 HARVARD STREET, PORTLAND, MAINE

**CONCEPTUAL SITE PLAN**

PROJ. NO. 19-112
DWG. NO. –
REV. A

Google Maps Harvard Street Map Amendment

# Vicinity Map




Proposed Map Amendment Area