

CITY OF PORTLAND, MAINE

PLANNING BOARD



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

AGENDA PORTLAND PLANNING BOARD MEETING

The Planning Board will hold a remote meeting on Tuesday, June 22, 2021, 4:30 p.m. This meeting will take place using Zoom.

Please note that the placement of this item on the agenda is subject to change – please check the Agenda & Minutes Center prior to the meeting for the item start time.

Virtual meetings are allowed using emergency legislation approved by LD 2167; 1 M.R.S. §403-A, that authorizes cities and towns to conduct meetings online.

Allow your computer to install the free Zoom app to get the best meeting experience.

For public comment, you will need to use the "raise your hand" feature. To raise your hand via the telephone, please hit *9. You will be asked to un-mute by the moderator when it is time for public comment.

ZOOM MEETING INSTRUCTIONS:

You are invited to a Zoom webinar.

When: Jun 22, 2021 04:30 PM Eastern Time (US and Canada)

Topic: Planning Board Workshop and Public Hearing 06-22-2021

Please click the link below to join the webinar:

<https://us02web.zoom.us/j/85953335246>

Or One tap mobile :

US: +13126266799,,85953335246# or +19292056099,,85953335246#

Or Telephone:

Dial(for higher quality, dial a number based on your current location):

US: +1 312 626 6799 or +1 929 205 6099 or +1 301 715 8592 or +1 346 248 7799 or +1 669 900 6833
or +1 253 215 8782

Webinar ID: 859 5333 5246

International numbers available: <https://us02web.zoom.us/j/85953335246>

For more information on how to use Zoom, please go to: <https://www.portlandmaine.gov/remotePUD>

Public comments will be taken for each item on the agenda and written comments should be submitted to planningboard@portlandmaine.gov

WORKSHOP - 4:30 PM

- i. Level III Site Plan and Subdivision; 148 (144) State Street; NewHeight Redfern, LLC., Applicant. (estimated time 4:30 – 5:30 p.m.) The Planning Board will hold a remote workshop to consider a 195,942 square foot mixed use redevelopment project at 148 (144) State Street. The redevelopment would renovate the existing Mercy Hospital and Morrison House buildings to include a total of 175 dwelling units, along with medical clinic, self-storage, and commercial uses. The subject property is 2.34 acres in size and is zoned B-3 Downtown Business Zone.
- ii. Major Site Plan; 387 Deering Avenue; Sawyer Island Development, LLC., Applicant. (estimated time 5:30 – 6:30 p.m.) The Planning Board will hold a remote workshop to consider a plan for an eight-unit, 18,336 square foot residential development along with associated site improvements at 387 Deering Avenue. The subject property is 38,309 square feet in size and is zoned R-5 Residential.

PUBLIC HEARING - 6:30 PM

1. ROLL CALL AND DECLARATION OF QUORUM

2. COMMUNICATION AND REPORTS

3. REPORT OF ATTENDANCE AT THE MEETING HELD ON JUNE 8, 2021

Afternoon Workshop

Design Manual: Dunfey, Mazer, Silk, and Stanley present; Chann, Dundon, and Smith absent.

Evening Hearing

99 Winter Street/160 State Street: Dunfey, Mazer, Silk, and Stanley present; Chann, Dundon, and Smith absent.

165 Lambert Street: Dunfey, Mazer, Silk, and Stanley present; Chann, Dundon, and Smith absent.

4. REPORTS OF DECISIONS AT THE MEETING HELD ON JUNE 8, 2021

- i. Zoning Map Amendment; 99 Winter Street and 160 State Street; Thanos, LLC., Applicant. Stanley moved and Dunfey seconded a motion to find the map amendment from R-6 Residential to B-3 Downtown Business consistent with the Comprehensive Plan for the City of Portland and recommended its adoption to the City Council. Vote 4-0, Chann, Dundon, and Smith absent. Stanley moved and Dunfey seconded a motion to find the Downtown Height Overlay Map amendment consistent with the Comprehensive Plan for the City of Portland and recommended its adoption to the City Council. Vote 4-0, Chann, Dundon, and Smith absent.

- ii. Zoning Map and Text Amendment; 165 Lambert Street; Maine Cooperative Development Partners, Applicant. Stanley moved and Dunfey seconded a motion to find the text amendment to allow vertical or horizontal unit configurations for Planned Residential Unit Developments permitted in any zone consistent with the Comprehensive Plan for the City of Portland and recommended its adoption to the City Council. Vote 4-0, Chann, Dundon, and Smith absent. Stanley moved and Dunfey seconded a motion to find the text amendment to common open space requirements for Planned Residential Unit Developments consistent with the Comprehensive Plan for the City of Portland and recommended its adoption to the City Council. Vote 4-0, Chann, Dundon, and Smith absent. Stanley moved and Dunfey seconded a motion to find the text amendment to the Neighborhood Center definition to allow food service consistent with the Comprehensive Plan for the City of Portland and recommended its adoption to the City Council. Vote 4-0, Chann, Dundon, and Smith absent. Stanley moved and Silk seconded a motion to find the map amendment from R-2 Residential to R-3 Residential consistent with the Comprehensive Plan for the City of Portland and recommended its adoption to the City Council. Vote 4-0, Chann, Dundon, and Smith absent.

5. NEW BUSINESS

- i. Subdivision; 178 Middle Street; Cow Plaza 4, LLC. and Fresnel, LLC., Applicants. (estimated time 6:30 p.m.) The Planning Board will hold a remote public hearing to consider the subdivision of 178 Middle Street into three parcels. The land to be subdivided is 20,913 square feet in size, is zoned B-3 Downtown Business, and is within the Old Port Historic District. No development is proposed in connection with this application.

Memorandum

Planning and Urban Development Department

To: Brandon Mazer, Chair and Members of the Planning Board
 From: Caitlin Cameron, Urban Designer
 Date: June 18, 2021
 Re: Level III Site Plan, Subdivision, IZ Conditional Use – 144 State Street, City of Portland
 Project #: PL-001259-2020
 CBL: 045 0006001, 045 0007001
 Meeting Date: June 22, 2021

I. INTRODUCTION

NewHeight Redfern LLC seeks Level III Site Plan, Subdivision, and Inclusionary Zoning Conditional Use approval for the properties at 148, 120 State Street (currently the Mercy Hospital site) located within the B-3 zone in order to facilitate the adaptive reuse of the Mercy Hospital building and the Morrison House as phase 1 of the overall redevelopment of the Mercy Hospital campus. The proposed program includes 170 residential units, 70 on-site parking spaces (15 to be leased to the Winter Street properties), a medical clinic, a fitness facility, commercial/retail space, office space, a self-storage facility, and tenant amenities.

Applicant: NewHeight Redfern, LLC
 (represented by Jonathan Culley & Erin Cooperrider)
Agent and Civil Engineer: Acorn Engineering
 (Will Savage)
Architect: Ryan Senatore Architecture, LLC
 (Ryan Senatore)
Landscape Architect: Aceto Landscape
 Architects (Nick Aceto)

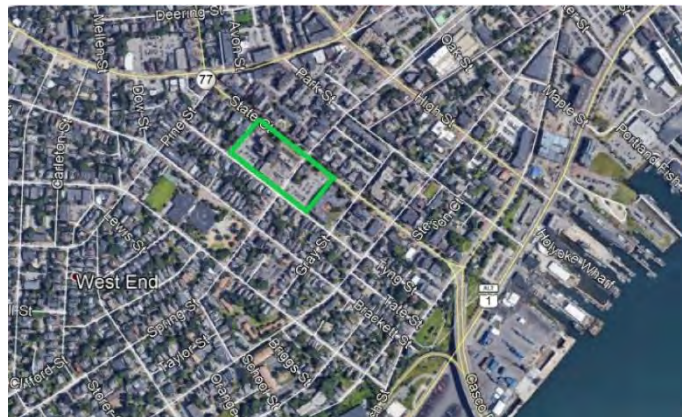


Figure 1: Vicinity Map (applicant's property outlined)

The B-3 Downtown Business zone allows a mix of permitted uses such as residential, office, grocery, medical clinic, restaurant, and retail. The adaptive reuse of the existing Mercy hospital building will include a range of commercial uses, higher density residential uses, and a shared parking/woonerf area. The two properties currently include the Mercy Hospital facility, with components that include an emergency room, surface parking areas, and the Morrison House with administrative offices for the hospital.

This second workshop was noticed to 296 neighbors and interested parties, and the public notice appeared in the *Portland Press-Herald* on June 11th and 12th 2021. The applicant held a Neighborhood Meeting on November 5, 2020, with notes included ([Attachment U](#)). As of the writing of this report staff have received two public comments regarding the site plan application ([Attachments PC1-2](#)).

The first workshop was held on November 17th, 2020 and included discussion of both the required zoning amendments and the site plan. There was an acknowledgement that the adaptive reuse of this site would

reduce traffic in the area and that providing commercial/retail spaces would allow access to goods and services within the neighborhood rather than generating traffic. There was support of the multi-modal accommodations – and questions related to how the METRO stop would be impacted.

Public comment focused on the zone amendments but also included whether mixed-uses and retail space are appropriate in this residential location, impacts on future historic reuses, parking and traffic impacts, including location of curb cuts, was mentioned as a concern by several residents.

II. PROJECT DATA

Current Zoning:

B-3 Downtown Business Zone

Proposed Uses:

Residential (mix of market rate, low- and moderate-income affordable); general office; medical clinic; health club; professional services; restaurant; retail; grocery; self storage

Required reviews and requested waivers:

Applicant's Proposal	Applicable Standards
New construction over 10,000 sf	Sec 14-526 Level III Site Plan Review
Subdivision (170 dwelling units)	Sec 14-497 Subdivision Review
Multi-family Residential >10 units	Sec 14-487 Inclusionary Zoning Conditional Use
Parking Requirement Reduction (32%)	Ch 14 Div. 20 Off-street Parking/B-3 Zone
Congress Street Historic District	Certificate of Appropriateness (for approval by HPB)
Waivers	Citation
Parking drive aisle width – 22 feet	City of Portland Technical Manual 1.7.2.3 Driveway Design
Landscape Preservation – removal of 6 trees (0% preserved)	City of Portland Technical Manual 4.3 Preservation of Existing Vegetation
Parking Lot Landscaping – no curbs	City of Portland Technical Manual 4.5.5 Parking Areas

I. PROJECT DATA

SUBJECT	DATA
Total area of the site	75,463 sq ft
Total Disturbed Area	57,216 sq ft
Existing Zoning	B-3
Existing Use	Hospital, surface parking, office
Proposed Use	Residential, Commercial/Retail, co-working, health clinic, self-storage, surface parking
Impervious Surface Area	
--Existing	95,396 sq ft
--Proposed	93,073 sq ft
--Net Change	-2,323 sq ft
Building Footprint (2 buildings)	
--Existing	52,280 sq ft (two buildings)
--Proposed	32,053 sq ft
	-20,227 sq ft

--Net Change	
Building Floor Area	
--Existing	232,594 sq ft (two buildings)
--Proposed	160,612 sq ft
-Net Change	-71,982 sq ft
Proposed Bedroom Mix	170 total (two buildings)
-Efficiencies	37
-One-bedroom	131
-Two-bedroom	2
-Three-bedroom	0
Parking Spaces	55 (on-site)
Bicycle parking Spaces	54 (0 existing)

III. BACKGROUND AND EXISTING CONDITIONS



Figure 2: Existing Conditions (applicant)

a. Current Land Uses and Zoning

The proposed project is comprised of two parcels, Chart 45, Block C, Lot 7 (120 State Street) and Chart 45, Block C, Lot 6 (148 State Street), encompassed by State, Spring, and Winter streets. The site is currently comprised of the existing 1943 Mercy Hospital complex which includes multiple building additions throughout the years, surface parking, and a loading dock area. Mercy has operated a hospital on the subject site for approximately seven decades and is proposed to continue operations on site through 2022. The Morrison House, which fronts onto State Street, hosts hospital administrative offices. A large area of surface parking to accommodate the existing uses occupies these blocks, interrupting the historic fabric.

In addition to the applicant's property, the immediate vicinity includes State Street and the variety of building types it contains – a wide, historic street with wide sidewalks and established street trees. The buildings range from historic mansions converted to uses including a funeral home, Portland Club, offices, and retail. Two historic landmark church complexes with garden spaces are across the street and include community centers, day care, and places of assembly. The context becomes residential with a variety of scales and eras

of buildings after the church properties. Spring Street has an intact historic fabric as does the southwest side of Winter Street. The character of Spring and Winter streets is predominantly small-scale residential, with some exceptions. Most of these properties are protected by historic districts (see section below).

b. Historic Resources

The area under review is within the West End Historic District and is adjacent to the Congress Street Historic District. In addition, many of the properties within the area are designated historic landmarks or contributing structures (see figure below). When alterations, additions, or new construction are contemplated, the Historic Preservation Board has review authority.

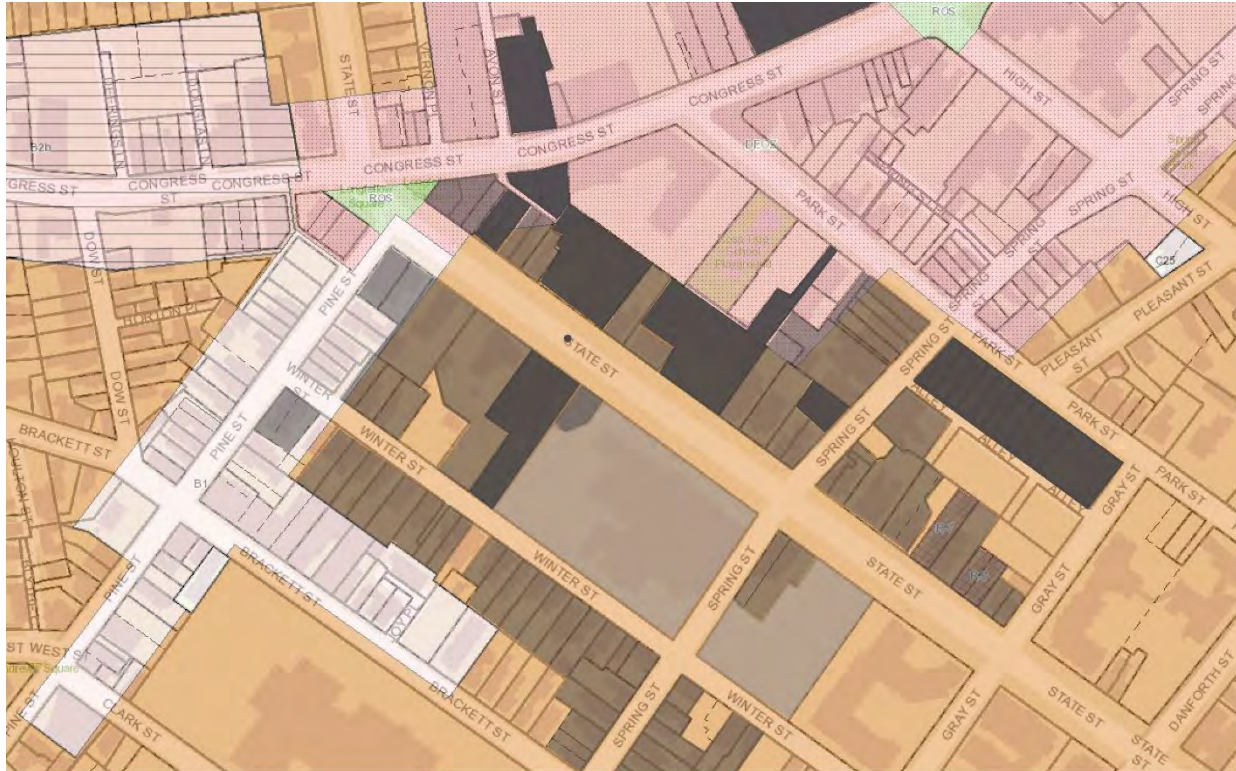


Figure 3: Historic Resources (Landmarks - dark grey, Contributing - light grey)

IV. STAFF REVIEW

A. RIGHT, TITLE, AND INTEREST

The applicant submitted a deed transferring two parcels from Mercy Hospital to NewHeight Redfern LLC ([Attachment C](#)). Two new parcels will be created on Winter Street for the Community Housing of Maine (CHOM) residential buildings – these boundaries are indicated on the site plan but are not yet subdivided.

The applicant will need to provide evidence of easements or permissions to make site plan improvements across property lines.

Reciprocal access easements across property lines will also be required.

B. ZONING ASSESSMENT

General Assessment: The proposal is located in the B-3 zone.

The purpose statement for the B-3 zone includes the following language relevant to the proposal:

- (2) Enhance and promote the orderly expansion of retail and service businesses downtown, satisfying the related needs of the city's resident, working and visitor populations;*
- (3) Encourage increased housing opportunity downtown for a diverse residential population;*
- (4) Enhance the pedestrian environment through the encouragement of intensive mixed-use activities, through the enhancement and maintenance of public and private open space, and through the enlivenment and increased attractiveness of the street environment;*

The zoning dimensional requirements are permissive in the B-3 zone – in most cases the requirements are intended to create dense, taller buildings that fill the site and maintain a street wall line. In both cases, the buildings are existing to remain with legally non-conforming front yard setbacks. In the case of the hospital building, the building footprint will be reduced with the removal of the emergency room portion.

C. SUBDIVISION REVIEW STANDARDS

(14-497(a). Review Criteria)

The proposed development was reviewed by staff for conformance with the relevant review standards of the City of Portland's subdivision ordinance. Staff comments are below and in *Attachments 1-5*.

1. A Will Not Result in Undue Water or Air Pollution

The project is not anticipated to result in undue air or water pollution.

2 & 3. Sufficient Water Availability and Will Not Cause Unreasonable Burden on Existing Water Supply

The applicant is awaiting evidence of capacity from the Portland Water District ([Attachment P](#)).

4. Will not cause unreasonable soil erosion or reduction in the capacity of the land to hold water so that a dangerous or unhealthy condition may result

No unreasonable soil erosion or reduction in the capacity of the land to hold water is anticipated given the infill/adaptive reuse site. Site Plan ([Plan P4](#)) and Erosion & Sedimentation Control Plan ([Plan K](#)) provide information about stabilizing the site during and after construction.

5. Will not cause unreasonable highway or public road congestion or unsafe conditions with respect to use of the highway or public roads existing or proposed

The applicant provided a traffic and parking assessment and Transportation Demand Management (TDM) Plan (Attachments S, T) in which they propose future trip reductions. Tom Errico, the City's consulting traffic engineer, had the following comments regarding traffic impacts (Attachment 2):

- o A trip generation estimate was conducted for proposed and prior uses at the site. The estimate was generally based on Institute of Transportation Engineers (ITE) data and notes the project will generate 67 AM peak hour trips and 59 PM peak hours trips. Mercy Hospital was estimated to generate 206 AM peak hour trips and 235 PM peak hour trips. ***Given the reduced trip generation, this project would not be expected to have an impact on the public street system. A traffic study is not suggested.***
- o The Traffic Assessment did identify ***two High Crash Locations*** in the vicinity of the project. The State Street/Pine Street intersection (crashes related to pedestrian crossings) and State Street between Spring Street and Gray Street (crashes involved parked vehicles and lane change maneuvers). I continue to review these safety locations and will provide direction in the future.

State Street is scheduled to be paved in 2022. Utility work and any necessary curb work should be completed in 2021 to avoid moratorium repairs.

6. Will provide for adequate sanitary waste and storm water disposal and will not cause an unreasonable burden on municipal services if they are utilized

Existing sewer lines are proposed to service the buildings. The applicant is awaiting a wastewater capacity letter from Department of Public Works (Attachment P). A grease trap is required for any restaurant use. Existing catch basins and stormwater sewer lines will be removed.

Based on the creation of impervious surface and development activity that can contribute to erosion/sedimentation impacts, the project is required to comply with the Maine DEP Chapter 500 and Section 5 of the Technical Manual for stormwater management – basic, general, flooding, and redevelopment standards apply.

7. Will not cause an unreasonable burden on the ability of the City to dispose of solid waste and sewage if municipal services are to be utilized

The existing building waste management includes a trash room in the basement with two trash compactors and a dumpster in the loading dock area. The proposal is to relocate one of the compactors to a different location within the loading dock area. The other trash compactor and dumpster will be removed.

8. Will not have an undue adverse effect on the scenic or natural beauty of the area, aesthetics, historic sites, significant wildlife habitat identified by the Department of Inland Fisheries and Wildlife or by the City, rare and irreplaceable natural areas, or any public rights for physical or visual access to the shoreline

This proposal is not deemed to have an adverse impact on the scenic beauty of the area. The project is within the West End historic district and includes a Historic Preservation Board review.

9. Is in conformance with the Comprehensive Plan, Portland's Plan 2030

The project is in keeping with the stated goals around affordability, equity, authenticity (preserving the historic building), and furthers the policy of creating complete neighborhoods. The project takes advantage of a central, downtown location near transit and walkable services. See Section VI. Comprehensive Plan Analysis.

10. The subdivider has adequate financial and technical capacity

As noted above, the applicant has provided evidence of financial and technical capacity (Attachment G,H).

11. Wetland/Water Body Impacts

Project is not located within a watershed of any pond or lake or within 250 feet of any wetland, great pond or river.

12. Will not, alone or in conjunction with existing activities, adversely affect the quality or quantity of groundwater

There are no anticipated impacts to groundwater supplies.

13. Flood-Prone Area

Per the FEMA flood maps, the site is not located in a flood zone.

14. Stormwater Management

Based on the amount of impervious surface, it is staff's determination that the project is required to comply with the Maine DEP Chapter 500 and Section 5 of the Technical Manual for stormwater management. This requires compliance with the Basic, General, and Flooding Standards. The Applicant has provided a detailed Erosion and Sedimentation Control plan to meet the Basic Standards. The project will require a Stormwater Maintenance Agreement, which will be recorded along with the subdivision plat post-approval.

15. O Shore Frontage

The parcel does not have shore frontage. No river, stream or brook within or abutting the proposed subdivision.

D. SITE PLAN REVIEW STANDARDS

(14-526 Site Plan Standards)

Impact on surrounding street systems - There are two curb cuts for the project – one on State Street and one on Spring Street – with an emergency vehicle access on Winter Street. The proposal keeps one curb cut on State Street for entry/exit to the Morrison House surface parking areas. Overall, traffic impacts are reduced from the current use. Staff and the applicant propose to keep the on-street parking as existing with metered parking appropriate for high turn-over uses and the ability for residents to park overnight.

Access, Circulation – Two curb cuts are to remain for the site, located on State and Spring streets, respectively. An additional emergency access alley is provided from the parking woonerf to Winter Street which crosses the property line and will service emergency vehicles exiting the site. Staff reviewed this design which does not include a curb cut but instead mountable curb and a “no parking” area in front of the alley. **Staff requested the material be revised to reflect the pedestrian pavers**

rather than vehicular pavers to provide visual cues discouraging vehicles from using the alley to access/exit the site.

Staff raised concerns about the parking layout and design. The parking areas appear to conflict with access/egress to the building entrances and emergency discharge areas. The design relies on flush grates for the landscape islands as access points from the parking to the plaza/ building. However, staff do not support this unprotected condition for the landscape islands. Equipment such as bollards, lighting, and EV charging equipment do not appear to be shown in the final, correct location on the site plan. Circulation through the woonerf and plaza spaces are constricted for pedestrians. Staff recommend that the applicant make the following plan revisions to address this:

- Revise Site/Landscape plans to show correct placement of bollards and lighting
- Revise landscape islands to include protection for trees per Technical Manual
- Show adequate areas for pedestrian circulation from parking areas to building entrances/egress discharge

Loading and Servicing – Staff request more information regarding loading – the applicant proposes to use the existing loading dock area for many services, including resident parking, loading, self-storage parking, and solid waste disposal. Signage should be provided to make clear the time limits for parking areas. Parking management will need to be developed for this area given the constraints. Turning templates were provided for review. DPW Senior Engineer Mike Tremblay had the following comments (Attachment 1):

- o *Turning templates should be provided for the loading dock. The loading area appears to be crowded, and maneuvers appear to be difficult.*
- o *21 of the Applicant's proposed parking spaces are proposed to be heavily shared between the self-storage use, the loading use, and residential parking. Residents would only be able to park in these spaces from 6am-6pm. To me this is overly restrictive and, while some residents may use them from time to time, most will not be out by 6am every single day and will supplement with street parking. For this reason I recommended that these spaces not be included in calculations of the residential supply.*

Curb and sidewalks - The applicant should clarify the accessible routes for both buildings. The Mercy Hospital building proposes many entrances but the historic nature of the building and the grade change create barriers to accessibility.

The current site plan shows a portion of Winter Street and Spring Street being reconstructed as part of this project. Senior Engineer, Mike Tremblay has the following comments regarding the sidewalks (Attachment 1):

- o *All sidewalks along the project frontage should be reconstructed to be ADA-compliant and to meet the City's technical and material standards. The sidewalks along State Street are in poor condition. The site driveway on State Street is not the City standard brick material in the apron and pedestrian walkway, and is also in poor condition. On Spring Street, sidewalks are in poor condition, with large gaps between bricks, erosion around a tipdown area, etc. The ramps at the corner of State/Spring were completed recently and should not need to be replaced, but we will verify this.*

- *The curb ramp at the corner of Spring/Winter streets are the wrong material, is in poor condition, and lacks a detectable warning panel. This ramp should be replaced in coordination with sidewalk work.*
- *Sidewalks on Winter Street will be required to be reconstructed as part of the 73 and 91 Winter Street projects. The site plan calls for new granite curb at an existing curb cut, and a mountable curb at locations along Winter Street. The sidewalk reconstruction work should be coordinated with this curb work along Winter Street.*

Public Transit Access - No transit shelter is required; a bus stop and mid-block crosswalk are being provided on Spring Street. The project is within a quarter mile of several existing METRO bus stops (Routes 1, 9A, 9B, 21). City and METRO staff reviewed the design and find it meets the City of Portland Technical Manual requirements as well as METRO requirements.

Vehicular Parking -The applicant has provided a Transportation Demand Management (TDM) plan, traffic analysis, and parking analysis (Attachment S, T). The parking assessment shows the demand to be sixty-eight (68) spaces between the two buildings.

Per Division 20 Off-Street Parking, required parking is calculated as follows:

- 170 residential spaces (1 per 1 residential unit)
- 8 spaces for the medical clinic (1 space/500 sf)
- 35 spaces for self-storage (business over 3,000 sf 1 space/1,000 sf)
- 7 spaces for office/co-work space (1/400 sf).
- The commercial/retail spaces are under 2,000 sf, and thus can potentially waive out of parking requirements; however, if these spaces become restaurant or office uses, additional parking requirements will apply.
- The total required parking is 220 spaces for both buildings.

However, in the B-3 zone, a change of use exempts provision of off-street parking:

Division 19 Off-street parking & loading: TABLE 19-B: CATEGORICAL EXCEPTIONS TO OFF-STREET PARKING MINIMUMS

- **Zone-Based Vehicular Exceptions - B-3 No off-street parking required for changes of use.**

Technically, both existing buildings include a change of use where no additional parking is required to be provided.

Although the proposed projects are not required to provide parking, the applicant proposes two surface parking areas totaling 70 parking spaces. Fifteen (15) of these spaces will be leased to the CHOM properties leaving fifty-five (55) for 120 and 148 State Street uses.

The assessed peak demand of 68 spaces exceeds the proposed parking of 55 spaces. Staff agree with the findings of the traffic/parking assessment. Tom Errico, traffic consultant, had the following comments (Attachment 2):

- *70 parking spaces will be provided on-site with 15 spaces being allocated to CHOM, leaving 55 parking spaces for Mercy. Based upon their analysis, there will be a peak demand for 68 parking spaces and thus will be 13 parking spaces short.*
- *Mercy's average unadjusted parking demand is 103 parking spaces*
- *Mercy peak hour demand is 68 parking spaces*

Consideration should be given to the fact that the site currently includes 59 parking spaces which is being increased to 70 spaces for the overall block development.

The project's parking is provided on-site with 70 surface parking spaces - a combination of 49 standard-sized spaces and 21 tandem spaces. Staff require a parking management plan in the case of tandem spaces and highly encourage tandem spaces to be used by tenants within the same building for coordination purposes.

- o *The loading/parking area, called out on the site plan to be managed by a TDM coordinator, appears to be shared between self-storage users, solid waste, and overnight residential parking. While the traffic and parking analysis document suggests spaces will be seamlessly shared between uses, the site plan indicates that residential uses will only be able to park from 6pm-6am. While we are in favor of encouraging shared parking between uses, DPW believes that these spaces (as a whole, or at the very least in large part) should not be included in the site's residential parking analysis. The parking spaces are too sparsely available for residents to use. A 6pm-6am time period may be suitable for visitor parking, but residents that use these spaces will almost certainly be significantly restricted based on these time limits, to the point where street parking will be more convenient.*

Bike Parking – The applicant will include 54 bicycle parking spaces throughout the site with a combination of outdoor bike hitches and interior storage areas.

Snow Storage – Not indicated on the plans – **applicant should provide information on method and location.**

Transportation Demand Management – A TDM plan is included in the submission; the current hospital use has a higher trip generation than the proposed future uses. In preliminary review, Mike Tremblay made these comments (Attachment 1):

- o *TDM coordinators typically are not charged with managing parking areas on an hour-by-hour basis. The TDM Coordinator has additional responsibilities as outlined in the TDM document. If management of this area is required, it is recommended that the TDM coordinator not be responsible for the day-to-day/hourly management of this area.*
- o *... several interventions would not appear to result in reduced transportation demand. TDM strategies should generally not take "credit" for improvements required by ADA or by the City's technical standards such as sidewalk and ramp improvements. The focus should be on action items that will reduce the number of trips to and from the site, and reduce the site's parking demand.*
- o *The TDM document references that 4 electric vehicle charging stations will be provided. This is positive. DPW encourages the Applicant to make as many spaces as feasible "solar-ready", installing the necessary conduit throughout the parking areas so that charging stations may be added in the future without unnecessary additional cost.*

The TDM plan was revised to separate the strategies described for Morrison House and the Mercy building. Final review and comments will be provided for the public hearing. Bruce Hyman, Transportation Program Manager, had these initial comments regarding the TDM (Attachment 5):

- *The applicant has satisfactorily incorporated changes requested by staff. These changes include modifying the TDM targets and monitoring plan to reflect the full occupancy of Phase I of the overall project, independent of the subsequent phase.*
- *The TDM plan contains a strong menu of TDM strategies, good trip and parking reduction goals and a good multimodal mode share goal for the project.*

Preservation of significant natural features – The proposed project is the redevelopment of a currently developed parcel. Not applicable

Landscape Preservation – Existing landscape not proposed to be preserved. Applicant is requesting a waiver from the requirement to preserve 30% of existing landscape.

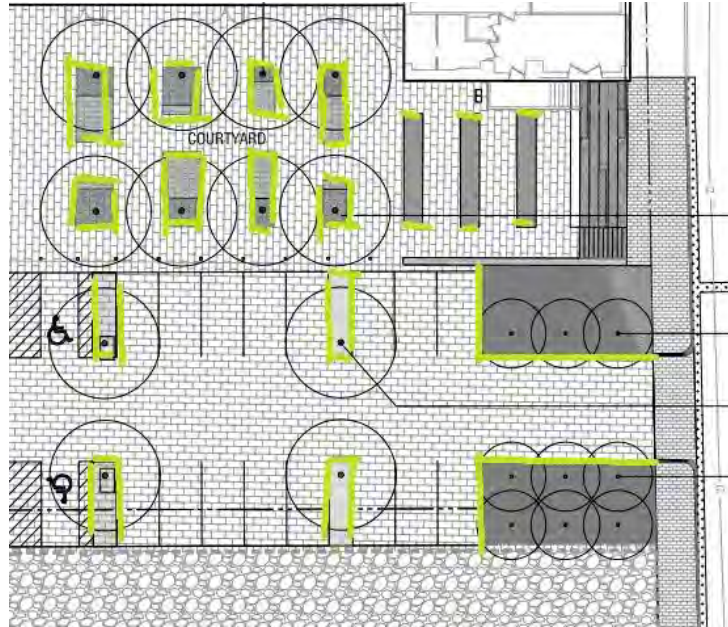
Site Landscaping and Buffers – The plan shows a woonerf¹/surface parking area in the middle of the block along with a courtyard area leading to the rear building entrance from Spring Street. Landscaping is also provided as a buffer between the sidewalk and surface parking areas. The street tree contribution will be significant given the limited ability to provide trees/landscape on this dense, urban infill site.

Surface parking areas are properly buffered from the street with landscape areas. **The landscape/tree islands do not include curbs – a requirement of the Technical Manual to protect the trees from vehicles as well as salt damage. Staff are not supportive of this deviation from the Technical Manual requirement.**

Jeff Tarling, City Arborist, has the following comment (Attachment 4):

- o *We would want to ensure that the future tree planting as shown, is protected by raised curbing knowing the negative effect of Winter deicing salts on trees and vegetation. Without protection from salt the trees would unlikely survive...*

¹ Woonerf: Is a term for common space created to be shared by pedestrians, bicyclists, and low speed motor vehicles.



Street Trees – The site includes six (6) existing street trees – two of which are heritage trees to be removed. The City Arborist noted that the utilities within Spring Street are in conflict with the ability to provide additional street trees. The calculations for the street tree fund contribution are as follows:

- Twenty (20) trees are provided within 20' of the public way.
- 120 State – eight (8) residential units require 8 trees, 2 existing to remain = 6 trees
- 6 trees x \$400 = \$2,400 contribution

- 148 State – one hundred sixty-two (162) residential units require 162 trees, 0 existing to remain
- 162 required – 20 proposed = 142 trees x \$400 = \$56,800 contribution
- **Two heritage trees lost = applicant should provide caliper of existing trees to assess fee-in-lieu value.**

Water Quality, Stormwater Management and Erosion Control - Lauren Swett, P.E., civil engineering peer reviewer, had the following comments (Attachment 4):

- o *The project is required to comply with the Maine DEP Chapter 500 and City of Portland Section 5 of the Technical Manual for stormwater management. This includes Basic, General, and Flooding Standards, as well as the Redevelopment Standards for a project like this.*
- o *They will also need to provide a stormwater maintenance agreement for the proposed modular wetland stormwater treatment system.*

Consistency with City Master Plans – See section VI.

Public Safety and Fire Prevention – The Crime Prevention through Environmental Design (CPTED) standards in the site plan ordinance address the principles of natural surveillance, access control and territorial reinforcement so that the design of developments enhance the security of public and private spaces and reduce the potential for crime.

The final submission will be evaluated for the lighting and safety. The spaces between the buildings, woonerf, parking areas will need to be designed with nighttime safety in mind while balancing the light levels appropriate for the residential uses.

Public Utilities - The applicant has yet to provide the letter from the Water District and Department of Public Works showing capacity to serve.

Massing, Ventilation and Wind Impact - The project is not adjacent to any public park or open space. The height of the structure is comparable to surrounding buildings. The proposed buildings are northeast of the existing residential fabric meaning the shadow impact will be minimal on the small-scale abutters for the majority of the day.

Shadow – Not applicable

Snow and Ice Loading – Not applicable

View Corridors – The project is not impacted by the view protection corridors

Historic Resources – The project is within the West End historic district and subject to Historic Preservation Review for the design review.

Exterior Lighting – The photometrics plan shows lighting levels to meet City requirements. Building and site lighting must comply with Section 12 of the City of Portland Technical Manual in terms of full-cut off, and lumens, and color temperature (Attachment N). The application should provide cut sheets for all proposed lighting.

Noise and Vibration – The final submissions should clarify where the HVAC will be located and how it will be screened from the public ROW even if the exact specifications are submitted later.

Signage and Wayfinding - Not applicable - to be reviewed with future sign permit applications.

Design Standards – Not applicable – Both buildings are existing to remain with minimal exterior changes. The properties are contributing buildings within the West End Historic District and as such, the design review will be conducted by Historic Preservation according to historic design manual standards. The Historic Preservation Board's public hearing is scheduled for June 23 to review the building windows, roofscape, addition and site plan improvements.

V. INCLUSIONARY ZONING CONDITIONAL USE

The applicant is required by Division 30, Section 14-487 to provide seventeen (17) workforce housing units (on-site or off-site) or pay the fee-in-lieu. Given the project's pending proceeding status, the Inclusionary Zoning requirements in effect prior to the referendum-initiated code amendments that went into effect in late 2020 govern the requirements for this project. The applicant has proposed to provide 17 workforce rental units composed of 4 efficiency and 13 one-bedroom units to meet the requirements. The Housing Program Manager makes further comment in (Attachment 6):

Based on the aforementioned information, the developer would comply with Division 30, section 14-487 by either:

- 1) providing 17 workforce units with 4 studio units and 13 one-bedroom units; or*
- 2) providing a fee-in-lieu of \$1,878,313 (17 x \$110,489).*

VI. COMPREHENSIVE PLAN ANALYSIS

a. Portland's Plan 2030

Goals and policies of both the state and the city, as described in the strategic plans that comprise the Portland Comprehensive Plan, relevant to the proposed map amendment have been included below.

The reuse of the Mercy buildings align with these vision statements and goals through the ability for adaptive reuse of existing and historic structures in an urban infill neighborhood, provide the opportunity for a complete neighborhood by allowing a mixture of uses within a dense, residential neighborhood and increasing the services provided within a walking and transit radius. The historic, walkable character of the neighborhood is maintained with the existing historic protections and the reuse of existing historic structures.

Vision Statements

- Equity: We will be a state and national leader in achieving a more equitable city.
- 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.
- Sustainable: Portland will grow in order to sustain our community, infrastructure, and economy.
- Sustainable: Growth should respect and seek to preserve our spectacular natural resources.
- Authentic: The uniqueness and integrity of our neighborhoods will be maintained and enhanced.

Environment

- Adopt sustainable land use and transportation policies that support connectivity, walkable neighborhoods, and multi-modal transportation.
 - Continue to develop land use policies which support complete neighborhoods.
 - Encourage landowners and developers to incorporate sustainable design, materials, and practices in rehabilitation of historic resources and in new construction.

An Enduring City – Historic Preservation

- 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.
 - Encourage investments in historic structures
 - Foster partnerships
 - Balance multiple objectives

A Livable City: Housing

- Increase, preserve, and modify the overall supply of housing city-wide to meet the needs, preferences and financial capabilities of all Portland residents.
- 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.
 - Remove housing barriers
 - Leverage underused properties
 - Support age-friendly housing options
 - Adapt affordable housing

An Accessible City – Transportation

- Promote multi-modal accessibility, enabling residents and visitors of all ages and abilities to participate fully in the social and economic life of the community.

Future Land Use

- Complete Neighborhoods
- Reinforce the Center

VII. PUBLIC COMMENT

As of the writing of this memo, two comments were submitted to Planning staff since the first workshop in November (Attachments PC1-2). It should be noted that the zoning map amendments were approved and adopted by the City Council on 2/22/21 (Order 164-20/21). A neighborhood meeting for the Site Plan application was held on November 5th, 2021 ([Attachment U](#)) with 15 attendees. Generally, there is support for redevelopment of the Mercy campus and optimism for the potential strengthening of the residential neighborhood rather than surface parking and hospital uses. Comments and concerns focused on:

- Traffic and parking impacts on the residential street system – especially curb cut locations and traffic access locations to the redevelopment site and impacts on Winter Street, impacts on nearby school zone
- Parking supply on-site vs. off-site and impacts on surrounding street system
- Lack of family housing, amenities, and consideration for social equity
- Impact of new uses and built character in relation to the existing residential character

VIII. NEXT STEPS

Outstanding items to be addressed include:

- Parking requirement
- Parking Design
 - Accessible and circulation routes
 - Tree protection/viability
 - Lighting – levels, full cutoff, cut sheets
 - Signage for use restrictions
 - Snow storage plan/location
- Parking management plan
- Alley design – material selection, safety
- Provide utility ability to serve letters prior to public hearing

ATTACHMENTS

Attachments to Memorandum

1. Department of Public Works
2. Traffic
3. Landscape
4. Civil/Stormwater
5. TDM
6. IZ Conditional Use

Public Comment

PC1 Ginger Raspiller 11.17.20

PC2 George Rheault 2.23.21

Applicant's Submittal

- A. Cover Letter
- B. Application
- C. Right, Title, & Interest
- D. Zoning Assessment
- E. Easements
- F. Waivers
- G. Financial Capacity
- H. Technical Capacity
- I. Conformance with Land Use Ordinance
- J. Stormwater Management Plan
- K. Erosion & Sediment Control Report
- L. Fire Department Letter
- M. Wastewater Application
- N. Lighting
- O. Architectural Design Narrative
- P. Utilities
- Q. Construction Management Plan
- R. Solid Waste Disposal
- S. Traffic Parking Analysis, Parking Management
- T. Transportation Demand Management Plan
- U. Neighborhood Meeting Materials

Plans

- P1. Cover Sheet
- P2. General Notes
- P3. Boundary & Topographic Survey
- P4. Site Plan
- P5. Site Plan – Interim
- P6. Site Plan – Limits of Construction
- P7. Utility Plan
- P8. Grading Plan
- P9. Site Details – 1
- P10. Site Details – 2

- P11. Utility Details – 1
- P12. Utility Details – 2
- P13. Utility Details - 3
- P14. Drainage Details
- P15. Erosion Sediment Control Notes
- P16. Erosion Sediment Control Details
- P17. Landscape Materials Plan
- P18. Landscape Planting Plan
- P19. Landscape Site Details
- P20. Landscape Details
- P21. Landscape Planting Details
- P22. Landscape Site Furnishings – 1
- P23. Landscape Site Furnishings – 2
- P24. Landscape Site Furnishings – 3
- P25. Architectural Drawings
- P26. Photometrics Plan
- P27. Subdivision Plat



Caitlin Cameron <ccameron@portlandmaine.gov>

148 State Street

Mike Tremblay <mtremblay@portlandmaine.gov>

Tue, Nov 10, 2020 at 1:42 PM

To: Caitlin Cameron <ccameron@portlandmaine.gov>

Cc: Tom Errico <thomas.errico@tylin.com>

Caitlin,

Here are my initial comments on 148 State Street:

- All sidewalks along the project frontage should be reconstructed to be ADA-compliant and to meet the City's technical and material standards. The sidewalks along State Street are in poor condition. The site driveway on State Street is not the City standard brick material in the apron and pedestrian walkway, and is also in poor condition. On Spring Street, sidewalks are in poor condition, with large gaps between bricks, erosion around a tipdown area, etc. The ramps at the corner of State/Spring were completed recently and should not need to be replaced, but we will verify this.
- The curb ramp at the corner of Spring/Winter streets are the wrong material, is in poor condition, and lacks a detectable warning panel. This ramp should be replaced in coordination with sidewalk work.
- Sidewalks on Winter Street will be required to be reconstructed as part of the 73 and 91 Winter Street projects. The site plan calls for new granite curb at an existing curb cut, and a mountable curb at locations along Winter Street. The sidewalk reconstruction work should be coordinated with this curb work along Winter Street.
- The Applicant should provide a summary of on-street parking spaces before and after construction, organized by street, including any additional parking, parking to be removed, or parking restriction change.
- Turning templates should be provided for the loading dock. The loading area appears to be crowded, and maneuvers appear to be difficult.
- The loading/parking area, called out on the site plan to be managed by a TDM coordinator, appears to be shared between self-storage users, solid waste, and overnight residential parking. While the traffic and parking analysis document suggests spaces will be seamlessly shared between uses, the site plan indicates that residential uses will only be able to park from 6pm-6am. While we are in favor of encouraging shared parking between uses, DPW believes that these spaces (as a whole, or at the very least in large part) should not be included in the site's residential parking analysis. The parking spaces are too sparsely available for residents to use. A 6pm-6am time period may be suitable for visitor parking, but residents that use these spaces will almost certainly be significantly restricted based on these time limits, to the point where street parking will be more convenient. Additionally, the tandem spaces in this area, if leased to separate units, would create an additional inconvenience, even if managed. If these spaces are wholly removed from the residential parking supply, as recommended by DPW, the supply is reduced to 47 spaces, 12 fewer than the 59 spaces calculated.
- TDM coordinators typically are not charged with managing parking areas on an hour-by-hour basis. The TDM Coordinator has additional responsibilities as outlined in the TDM document. If management of this area is required, it is recommended that the TDM coordinator not be responsible for the day-to-day/hourly management of this area.
- DPW will expand comment on the TDM document at a later date. In general, the strategies identified are positive; however, several interventions would not appear to result in reduced transportation demand. TDM strategies should generally not take "credit" for improvements required by ADA or by the City's technical standards such as sidewalk and ramp improvements. The focus should be on action items that will reduce the number of trips to and from the site, and reduce the site's parking demand.
- The TDM document references that 4 electric vehicle charging stations will be provided. This is positive. DPW encourages the Applicant to make as many spaces as feasible "solar-ready", installing the necessary conduit throughout the parking areas so that charging stations may be added in the future without unnecessary additional cost.
- State Street is scheduled to be paved in 2022. Utility work, and any necessary curb work, should be completed in 2021.

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





Caitlin Cameron <ccameron@portlandmaine.gov>

144 State Street - Initial Traffic and Parking Comments

Tom Errico <thomas.errico@tylin.com>

Wed, Nov 11, 2020 at 10:59 AM

To: "Cameron, Caitlin" <ccameron@portlandmaine.gov>

Cc: Mike Tremblay <mtremblay@portlandmaine.gov>, Bruce Hyman <bhyman@portlandmaine.gov>, Jeremiah Bartlett <JBartlett@portlandmaine.gov>

Hi Caitlin – I have reviewed the Parking and Traffic Assessments prepared by Bill Bray, PE and offer the following initial comments.

- A trip generation estimate was conducted for proposed and prior uses at the site. The estimate was generally based on Institute of Transportation Engineers (ITE) data and notes the project will generate 67 AM peak hour trips and 59 PM peak hours trips. Mercy Hospital was estimated to generate 206 AM peak hour trips and 235 PM peak hour trips. Given the reduced trip generation, this project would not be expected to have an impact on the public street system. A traffic study is not suggested.
- The Traffic Assessment did identify two High Crash Locations in the vicinity of the project. The State Street/Pine Street intersection (crashes related to pedestrian crossings) and State Street between Spring Street and Gray Street (crashes involved parked vehicles and lane change maneuvers). I continue to review these safety locations and will provide direction in the future.
- A Parking Assessment has been performed and estimates a need for 59 parking spaces. The estimate is generally based on Institute of Transportation (ITE) data, shared parking reductions, and hourly parking variations. While the adjustments applied seem reasonable, I continue to review the analysis and thus approval is pending.

If you have any questions, please contact me.

Best regards,

Thomas A. Errico, PE
Senior Associate
Traffic Engineering Director
TYLIN 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
Visit us online at www.tylin.com
Twitter | Facebook | LinkedIn | Instagram

144 State Street - Parking Analysis

Tom Errico <thomas.errico@tylin.com>

Fri, Jun 4, 2021 at 7:52 AM

To: "Cameron, Caitlin" <ccameron@portlandmaine.gov>

Cc: Michael Tremblay <mtremblay@portlandmaine.gov>, "John Peverada (JBP@portlandmaine.gov)" <jbp@portlandmaine.gov>

Hi Caitlin – I reviewed the revised parking analysis and below is a summary. It is my understanding that 70 parking spaces will be provided on-site with 15 spaces being allocated to CHOM, leaving 55 parking spaces for Mercy. Based upon their analysis, there will be a peak demand for 68 parking spaces and thus will be 13 parking spaces short. I will not be able to attend the meeting on Tuesday but please let me know if you have any questions prior to the meeting.

Thanks

Mercy's average unadjusted parking demand is 103 parking spaces

CHOM's average unadjusted parking demand is 39 parking spaces

Combined adjusted peak hour parking demand is 102 parking spaces

Mercy peak hour demand is 68 parking spaces

CHOM's peak hour demand is 34 parking spaces

Thomas A. Errico, PE
Senior Associate
Traffic Engineering Director
TYLININTERNATIONAL
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
Visit us online at www.tylin.com
Twitter | Facebook | LinkedIn | Instagram

144 State Street comments for PB

Jeff Tarling <jst@portlandmaine.gov>

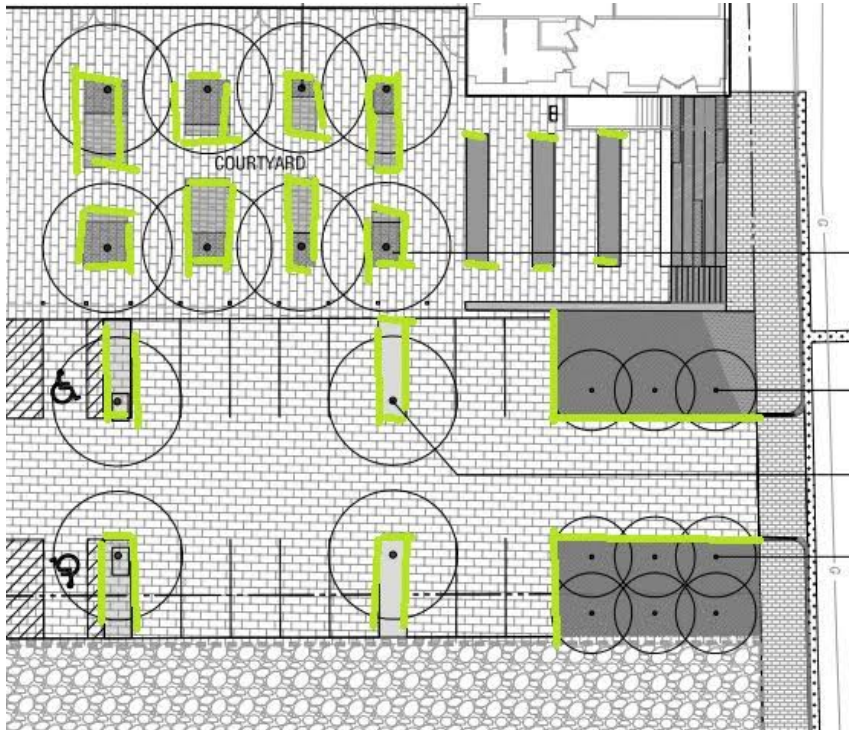
Tue, Nov 10, 2020 at 3:21 PM

To: Caitlin Cameron <ccameron@portlandmaine.gov>

Hi Caitlin -

The proposed tree plan for the [144 State Street](#) project looks good. They have selected trees from our Recommended tree list and spaced them accordingly in their landscape plan. The only tree / landscape issues for this project include:

a) Parking trees & landscape - couldn't tell from the plan, we would want to ensure that the future tree planting as shown, is protected by raised curbing knowing the negative effect of Winter deicing salts on trees and vegetation. Without protection from salt the trees would unlikely survive...



b) Winter Street - future project site, this space should be temporary improved as with other projects that have futuristic project concept plans. Something to consider if the time line is greater than next year. The Winter Street neighbors have long endured looking at the back side of the Mercy Hospital site in regards to parking, dumpsters, and pavement - this area is bleak considering it is next to an historic residential neighborhood. The existing galvanized chain link is dated and ugly, a better fence type is a minimal suggestion.

Jeff

Jeff Tarling
City Arborist - City of Portland Maine
Parks, Recreation & Facilities Department
Forestry & Horticulture
212 Canco Road - Suite A
Portland, ME. 04103
(207) 808-5400
jst@portlandmaine.gov

On Tue, Nov 10, 2020 at 12:20 PM Caitlin Cameron <ccameron@portlandmaine.gov> wrote:

[Quoted text hidden]



Caitlin Cameron <ccameron@portlandmaine.gov>

144 State Street

Lauren Swett <lswett@woodardcurran.com>

Thu, Nov 12, 2020 at 10:00 AM

To: Caitlin Cameron <ccameron@portlandmaine.gov>

Hi Caitlin,

I have the following preliminary comments for [144 State Street](#).

- The project is required to comply with the Maine DEP Chapter 500 and City of Portland Section 5 of the Technical Manual for stormwater management. This includes Basic, General, and Flooding Standards, as well as the Redevelopment Standards for a project like this.
 - The project has included a detailed erosion and sedimentation control plan to address the Basic Standards. One catch basin is proposed on the 91 Winter Street site, connecting drainage from that site to the overall system. That lot is to remain gravel, to be developed in the future, and I would suggest that an erosion and sedimentation control measure be left in place either in or around the basin to ensure that there is no long-term erosion from the gravel site.
 - The project is providing stormwater treatment to address the redevelopment standard. The Stormwater report also notes that 0.1 acres of new impervious surface is being proposed on the site, which would also trigger the General and Flooding Standards. The report notes that stormwater management will be provided using a proprietary modular wetland system. Additional information on this system, including sizing calculations showing how the system will provide treatment for this site should be provided. I believe that in this case, channel protection volume would be required, so the Applicant should show how this is being provided. A bypass of the system should also be provided.
- A 12" stormdrain connection is proposed in Spring Street. A connection of this size must be provided via a manhole.
- The Applicant has requested utility ability to serve confirmations. Confirmation should be provided when received.
- The extent and timing of impact on Winter Street should be clarified. The Site Plan shows gravel surface for the 73 and 91 Winter Street lots, with only minor curb changes on Winter Street. An interim site plan has been provided that shows loam and seed on the 73 and 91 Winter Street lots, as well as reconstruction of sidewalk to brick on Winter Street. And a third site plan for limits of construction appears to show the existing sidewalk remaining, however street trees and curb ramps have only been shown on this plan. The utility plan shows electrical infrastructure within the Winter Street sidewalk. Please clarify the timing and extent of impact in this area.

If there are any questions, let me know.

Thanks,

Lauren

All Woodard & Curran consulting employees are currently working from home. I do not have regular access to mail or other deliveries made to the office. You can still reach me via email or at my direct or cell phone numbers.

Lauren Swett, P.E.*

Technical Manager

Woodard & Curran

[41 Hutchins Drive](#)[Portland, Maine 04102](#)

Phone: (207)558-3763 (direct)

(207)219-3591 (cell)

144 State (Mercy) - PL_001259-2020

Lauren Swett <lswett@woodardcurran.com>
To: Caitlin Cameron <ccameron@portlandmaine.gov>

Thu, Jun 17, 2021 at 10:22 AM

Hi Caitlin,

The Applicant has responded to my comments adequately. They have revised their site layout and are now reducing impervious surface on the site.

They are still waiting for their confirmation of utility ability to serve. They will also need to provide a stormwater maintenance agreement for the proposed modular wetland stormwater treatment system. I believe both of these items are typically conditions of approval.

Please let me know if there are any further questions.

Thanks,

Lauren

[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.



Caitlin Cameron <ccameron@portlandmaine.gov>

PL1259-2020: 144 State Street, Mercy Hospital Redevelopment TDM Plan

1 message

Bruce Hyman <bhyman@portlandmaine.gov>

Thu, Nov 12, 2020 at 12:37 PM

To: Caitlin Cameron <ccameron@portlandmaine.gov>

Cc: Mike Tremblay <mtremblay@portlandmaine.gov>, Tom Errico <thomas.errico@tylin.com>, James Rather <jrather@portlandmaine.gov>

Good afternoon, Caitlin,

I have done a first round review of the TDM Plan (dated October 15, 2020) for the proposed redevelopment of the Mercy Hospital site, [144 State Street](#), and have had the opportunity to briefly discuss the plan with the applicant's consultant, Cushman Transportation Consulting.

The following are my preliminary comments that will be refined as the application moves through the review process:

- The TDM Plan is well thought out and provides strong parking reduction (10%), trip reduction (10%) and multimodal trip (65%) targets to be achieved 3 years after the site is fully occupied (expected to be 2023). Final numbers for the targets should be updated based on final trip generation and parking requirements at project approval.
- The Plan contains a good overview of the transportation context of the project site that contributes to the opportunity for strong multimodal trip-making by the site's residents and tenants. The site design generally supports these goals.
- The Plan contains a robust menu of TDM strategies including financial incentives to use multimodal options including bus transit subsidies (for all residents/tenants) and an annual Transportation Network Co. (Uber, Lyft, etc.) incentive (CHOM).

The project before the Board is currently only for Phase I of the full site build-out. The targets and monitoring/reporting as stated are for 'full occupancy'. Staff recommend that interim targets be prepared and monitoring/reporting begin following completion of Phase I, a substantial part of the full build-out.

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**

144 State (Mercy)

Victoria Volent <vvolent@portlandmaine.gov>

Thu, Jun 17, 2021 at 12:31 PM

To: Caitlin Cameron <ccameron@portlandmaine.gov>

Hi Caitlin,

NewHeight Redfern LLC proposes the creation of a total of 170 units located at 148 and 120 State Street. The project would include 37 studio units, 131 one-bedroom units, and 2 two-bedroom units (or 172 bedrooms).

This project triggers Inclusionary Zoning as it would create ten or more new dwelling units through new construction.

Please note, 148 and 120 State Street is entitled to consideration under Division 30 regulations in effect as of the review conducted by the Planning Board during their November 17, 2020 Workshop meeting.

Based on the aforementioned information, the developer would comply with Division 30, section 148-487 by either:

- 1) providing 17 workforce units with 4 studio units and 13 one-bedroom units; or
- 2) providing a fee-in-lieu of \$1,878,313 (17 x \$110,489).

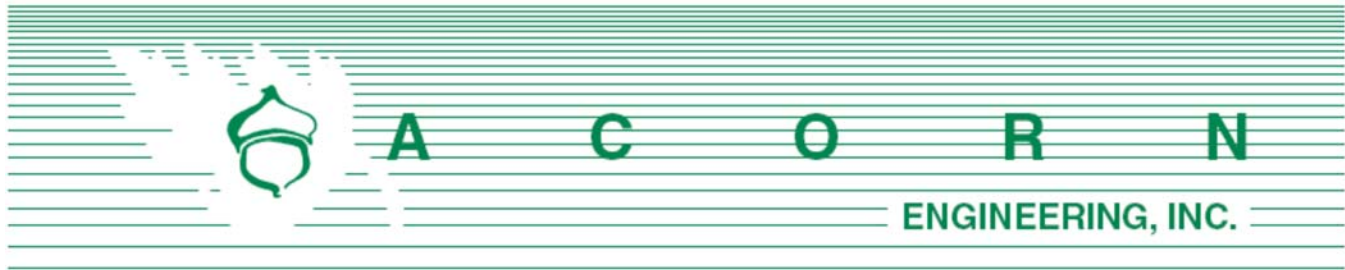
The applicant has chosen to provide 17 workforce rental units composed of 4 efficiency and 13 one-bedroom units.

Thank you,

Victoria

Victoria Volent
Housing Program Manager
Housing and Community Development
Phone: 207-482-5028
www.portlandmaine.gov

[Quoted text hidden]



Planning and Urban Development Department
 Planning Division
 City of Portland, Maine
 389 Congress Street, 4th Floor
 Portland, ME 04101

September 15, 2020

Subject: Level III Site Plan/Subdivision Application – 120 and 148 State Street
 Mercy Hospital Redevelopment

To Caitlin Cameron,

On behalf of NewHeight Redfern, LLC we are pleased to submit the accompanying package of materials related to the proposed redevelopment of the existing Mercy Hospital at 120 and 148 State Street.

The proposed project site is comprised of two parcels, Chart 45, Block C, Lot 7 (120 State Street) and Chart 45, Block C, Lot 6 (148 State Street), encompassed by State, Spring, and Winter Streets. The Owners recently submitted a map and text amendment application to change the zoning district from R6 Residential Zone to the B3 Downtown Business Zoning District with height limitations along Winter St. The site is currently comprised of the existing Mercy Hospital complex which includes multiple additions throughout the years, surface parking, and a loading dock area. The project includes the subdivision of the Chart 45, Block C, Lot 7 into three parcels to facilitate redevelopment of the existing hospital building and two future affordable housing projects. Adaptive reuse of the historic hospital building will create 167 new residential units and the Morrison House will create 8 new residential units with associated common areas, office, and fitness room, as well as self-storage, commercial/retail space, and a medical clinic. The applicant is also working with Community Housing of Maine (CHOM), a Portland-based, non-profit affordable housing developer to transfer the two proposed outparcels along Winter St. The two CHOM projects will be permitted separately.

Portions of the existing Mercy building will be removed to make way for a shared woonerf. The woonerf, although unique, is not new Portland or the development team. The European urban planning technique creates a multi-modal courtyard with a level shared walking and driving space. Combined with extensive landscaping and playful design it will create an inviting community space.

We are pleased to submit an application which will increase the available housing stock consistent with the City's Comprehensive Plan, provide onsite Workforce Housing, implement stormwater treatment, improve the Winter Street streetscape, sidewalk reconstruction, street tree plantings and provide community space in the West End.

NewHeight Redfern LLC and the design team look forward to your review of this exciting project.

Sincerely,



William H. Savage, P.E.
Project Manager
Acorn Engineering, Inc.

Documents:

- Section A: Cover Letter
- Section B: Level III Final Site Plan Application & Checklist
- Section C: Right, Title, Interest (Deed)
- Section D: Zoning Assessment
- Section E: Easements
- Section F: Waivers
- Section G: Financial Capacity
- Section H: Technical Capacity
- Section I: Conformity with Land Use Ordinance
- Section J: Stormwater Management Report
- Section K: Erosion & Sedimentation Control Report
- Section L: Fire Department Letter
- Section M: Wastewater Capacity Letter
- Section N: Lighting
- Section O: Architectural Design Narrative
- Section P: Utilities
- Section Q: Construction Management Plan
- Section R: Solid Waste
- Section S: Traffic and Parking Analysis
- Section T: Traffic Demand Management

Drawings:

- Civil Site Plan Set
- Landscaping Plan Set
- Architectural Plan Set



CITY OF PORTLAND
Planning & Urban Development Department

LEVEL II and LEVEL III SITE PLAN GENERAL DOCUMENT AND DRAWINGS CHECKLIST		
* Please upload each document <u>and</u> drawing as a separate PDF file * Please upload all drawings in a <u>24 x 36 sheet size</u> * Please confirm each item by electronically checking the boxes to the left for each document/drawing * Please fill out and upload separately the <u>zoning assessment table</u> and <u>waiver table</u> (At the time of application submission, please contact the Department of Public Works regarding E-911 addressing of your project)		
GENERAL APPLICATION DOCUMENTS		
Yes	NA	Project Description
☒	☐	Cover Letter with detailed project description
Yes	NA	Completed Checklist – Level II and Level III Site Plan (this document)
☒	☐	
Yes	NA	Right, Title and Interest
☒	☐	Deeds, leases, or purchase and sales agreements
Yes	NA	Evidence of State or Federal Approvals
☐	☒	Permits or letters of non-jurisdiction, if applicable
Yes	NA	Zoning Assessment
☒	☐	Table listing required and proposed uses and dimensional standards Zoning Assessment Table
Yes	NA	Existing and/or Proposed Easements or Covenants, applicable.
☒	☐	Evidence of existing easements and any proposed easements
Yes	NA	Waiver Requests
☒	☐	Written request for waiver describing request and reason Waiver Table
Yes	NA	Financial Capability
☒	☐	Letter or evidence from a financial institution or third party verifying financial capacity to undertake project
Yes	NA	Technical Capability
☒	☐	Evidence of technical capability of applicant and consultants – resumes and/or examples of past projects

LEVEL II AND LEVEL III SITE PLAN STANDARDS AND SUBMISSION CHECKLIST

- * Please provide assessment of compliance with standards and include supplemental documentation, as applicable
- * Please upload each document as a separate PDF file

TRANSPORTATION

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

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

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

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

**LEVEL II AND LEVEL III SITE PLAN
DRAWINGS CHECKLIST**

* Please upload the following drawings with the listed details as separate pdfs

(ALL drawings must be uploaded in a 24 x 36 sheet size)

RECENT BOUNDARY SURVEY (stamped by Maine Licensed Surveyor)

- ☒ Must be in compliance with Technical Manual, Section 13

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

Existing Conditions

- ☒ Approximate location of structures on abutting property
- ☒ Topography
- ☐ Locate water courses
- ☐ Delineate wetlands
- ☒ Zone lines

Proposed Site Plan

- ☒ Ground floor area, and grade elevations for all buildings

Access, Circulation, and Parking

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

Site Considerations

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

UTILITY PLAN including:

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

GRADING AND DRAINAGE PLAN including:

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

EROSION CONTROL

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

LANDSCAPE PLAN including:

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

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

Right, Title, or Interest

The Quitclaim Deed with Covenant is attached to this section providing the applicant with Right, Title and Interest in the property.

DLN: 1002040088241

QUITCLAIM DEED WITH COVENANT

DLN# _____

MERCY HOSPITAL, a.k.a. NORTHERN LIGHT MERCY HOSPITAL, a Maine non-profit corporation with a principal place of business in Portland, Cumberland County, Maine, for consideration paid, grants to **NEWHEIGHT REDFERN LLC**, a Maine limited liability company with a principal place of business in Portland, Cumberland County, with a mailing address of 167 Newbury Street, Suite 503, Portland, ME 04101, Maine, with quitclaim covenant, the land in **Portland**, Cumberland County, Maine, described as follows:

PARCEL 1 (102 STATE STREET): A certain lot or parcel of land, with the buildings thereon, lying on the southerly side of Spring Street in said Portland described as follows

Beginning at a point of intersection of the northeasterly sideline of Winter Street with the southeasterly sideline of Spring Street;

Thence N48°34'00"E along the southeasterly sideline of said Spring Street 125.93 feet to the southerly line of land now or formerly of Town Houses at Eaton Shaw Block Condominiums (Cumberland County Registry of Deeds ("CCRD") Book 27136, Page 174);

Thence the following courses and distances along said Town Houses at Eaton Shaw Block Condominiums:

S38°02'31"E 65.99 feet;

N49°42'19"E 82.20 feet;

S40°38' 15"E 15.59 feet;

N49°21'45"E 63.93 feet to the southwesterly sideline of State Street;

Thence S40°10'00"E along the southwesterly sideline of said State Street 125.89 feet to land now or formerly of State Street Housing Preservation Corporation (CCRD Book 21735, Page 205);

Thence S49°51'30"W along the northerly line of said State Street Housing Preservation Corporation 269.62 feet to the northeasterly sideline of Winter Street;

Thence N40°11'30"W along the northeasterly sideline of Winter Street 203.81

MAINE REAL ESTATE TAX PAID

feet to the point of beginning.

THE ABOVE DESCRIBED PARCEL 1 IS SUBJECT TO the following recorded in CCRD:

1. Rights and easements as set forth in an instrument from Mercy Hospital to Central Maine Power Company and New England Telephone and Telegraph Company dated August 22, 1966, CCRD Book 2978, Page 31.
2. Rights and easements set forth in an instrument from Mercy Hospital to Central Maine Power Company and New England Telephone and Telegraph Company dated March 6, 1968, CCRD Book 3046, Page 716.
3. Easement Deed from Mercy Hospital to Central Maine Power Company dated November 21, 1977, CCRD Book 4171, Page 66.
4. Terms and conditions set forth in a deed from the City of Portland to Mercy Hospital dated December 18, 1980, CCRD Book 4925, Page 317 and noted as: "The Mercy Hospital, its successors and assigns, will not discriminate on the basis of race, color, creed, sex, or national origin in the sale, lease or rental, or in the use or occupancy of the property described herein or any improvements erected or to be erected thereon, or any part thereof. Said covenant is to run with the land in perpetuity."
5. The following matters shown on a plan entitled "ALTA/ACSM Land Title Survey, 102, 120 (AKA 144) & 148 State Street, Portland, Cumberland County, Maine made for Mercy Hospital and Eastern Maine Healthcare Systems," dated February 27, 2013, revised September 20, 2013, prepared by Owen Haskell, Inc.:
 - a. Pavement and curbing encroach .5 feet +/- onto northerly abutter;
 - b. Overhead wires crossing premises from Winter and Spring Streets; and
 - c. Note 3 regarding location of utilities.

PARCEL 2 (120 STATE STREET, A/K/A 144 STATE STREET, AND 148 STATE STREET): A certain lot or parcel of land, with the buildings thereon, lying on the southwesterly side of State Street in said Portland described as follows:

Beginning at a point of intersection of the southwesterly sideline of State Street with the northwesterly sideline of Spring Street;

Thence S48° 56' 10" W along the northwesterly sideline of said Spring Street 270.49 feet to the northeasterly sideline of Winter Street;

Thence N 40° 09' 30" W along the northeasterly sideline of said Winter Street 400.49 feet to land now or formerly of the Portland Club;

Thence N 50° 12' 30" E along land of said Portland Club 272.95 feet to the southwesterly sideline of said State Street;

Thence S 39° 47' 50" E along the southwesterly sideline of said State Street 394.48 feet to the point of beginning

THE ABOVE DESCRIBED PARCEL 2 IS SUBJECT TO the following recorded in CCRD:

1. Rights and easements from Mercy Hospital to Central Maine Power Company and New England Telephone and Telegraph Company as set forth in an instrument dated March 6, 1968, CCRD Book 3046, Page 716.

2. Terms and conditions set forth in a deed from the Portland Renewal Authority to Mercy Hospital dated June 4, 1975, CCRD Book 3692, Page 343, as affected by a Certificate of Completion by the Portland Renewal Authority dated March 22, 1982, CCRD Book 4934, Page 96 and noted as: "FIFTH: The Grantee agrees for itself and any successor in interest not to discriminate upon the basis of race, creed, color, or national origin in the sale, lease, or rental or in the use or occupancy of the property hereby conveyed or any part thereof or of any Improvements erected or to be erected thereon or any part thereof."

3. Easement Deed from Mercy Hospital to Central Maine Power Company dated November 21, 1977, CCRD Book 4171, Page 66.

4. Easement and Memorandum of Agreement by and between Mercy Hospital and Time Warner Cable of Maine dated November 18, 1998, CCRD Book 15936, Page 165.

5. Easement Deed from Mercy Hospital to Central Maine Power Company and Verizon New England, Inc. dated May 24, 2001, CCRD Book 16391, Page 232.

6. Easement from Mercy Hospital to Central Maine Power Company and Northern New England Telephone Operations, LLC dated September 4, 2010, CCRD Book 28512, Page 45.

7. The following matters shown on a plan entitled "ALTA/ACSM Land Title Survey, 102, 120 (AKA 144) & 148 State Street, Portland, Cumberland County, Maine made for Mercy Hospital and Eastern Maine Healthcare Systems," dated February 27, 2013, revised September 20, 2013, prepared by Owen Haskell, Inc.:

- a. Pavement and parking encroach 3 feet +/- onto northerly boundary;
- b. Overhang 3 feet +/- into Spring Street;
- c. Overhead wires cross onto premises from Spring and Winter Streets;
- d. Granite wall encroaches into right of way of State Street; and
- e. Note 3 regarding location of utilities.

For Grantor's source of title, reference may be had to the deeds recited in Exhibit A attached hereto.

EXHIBIT A

For Grantor's source of title to the above-described premises, reference may be had to the following deeds recorded in the Cumberland County Registry of Deeds:

PARCEL 1 (102 STATE STREET):

- a. Deed from Basil Ballides and Katherine Ballides dated February 14, 1957, recorded in Book 2337, Page 148.
- b. Deed from Freda M. Morrill dated November 10, 1961, recorded in Book 2642, Page 436.
- c. Deed from Aman Maria dated December 12, 1961, recorded in Book 2649, Page 180.
- d. Deed from George H. Hinckley, Guardian of Arthena Wiggin, dated February 1, 1962, recorded in Book 2657, Page 71.
- e. Deed from Fernando P. Giobbi and Margaret O. Giobbi dated April 23, 1962, recorded in Book 2669, Page 105.
- f. Deed from Thomas J. Donahue, Charles R. O'Connell, Jr. and Edith M. O'Connell dated November 10, 1964, recorded in Book 2863, Page 456.
- g. Deed from Sigmund S. Dyro and Mary A. Dyro dated July 30, 1965, recorded in Book 2911, Page 334,
- h. Deed from Marie V. Hetu dated September 30, 1965, recorded in Book 2924, Page 259.
- i. Deed from James A. Desmond, Conservator of Bertha Smite, dated November 3, 1965, recorded in Book 2932, Page 500.
- j. Deed from Mary G. Smith, also known as Mary Morgan Smith, dated March 27, 1970, recorded in Book 3121, Page 446.
- k. Deed from Theodore R. Brownlee dated October 31, 1970, recorded in Book 3149, Page 363.
- l. Deed from the City of Portland dated December 18, 1980, recorded in Book 4925, Page 317.

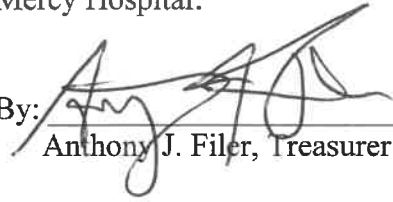
PARCEL 2 (120 STATE STREET, A/K/A 144 STATE STREET, AND 148 STATE STREET):

- a. Deed from Alice A. Oxnard dated June 9, 1948, recorded in Book 1914, Page 495.

- b. Deed from Harriet E. Frates dated October 8, 1948, recorded in Book 1930, Page 450.
- c. Deed from St. Joseph's Convent and Hospital dated January 30, 1950, recorded in Book 1989, Page 3.
- d. Deed from Guy A. Shaw dated October 1, 1952, recorded in Book 2103, Page 238.
- e. Deed from Earle W. Watson and Maybelle C. Watson dated November 30, 1953, recorded in Book 2156, Page 232.
- f. Deed from Raymond L. Baillargeon and Cora M. Baillargeon dated September 5, 1963, recorded in Book 2773, Page 347.
- g. Deed from James B. McKenney and Beatrice M. McKenney dated May 2, 1964, recorded in Book 2821, Page 441.
- h. Deed from John Malconian dated July 1, 1964, recorded in Book 2833, Page 323.
- i. Deed from Samuel Levey and Helen G. Levine dated November 5, 1965, recorded in Book 2932, Page 498.
- j. Deed from Irene L. Fisher dated August 1, 1964, recorded in Book 2942, Page 39.
- k. Indenture with Portland Renewal Authority dated June 4, 1975, recorded in Book 3692, Page 343.
- l. Deed from Robert M. Morrison dated December 2, 1975, recorded in Book 3779, Page 204.

IN WITNESS WHEREOF, Mercy Hospital, has caused the foregoing instrument to be signed in its corporate name and sealed by its undersigned officer, duly authorized, this 25th day of February, 2020.

Mercy Hospital:

By: 
Anthony J. Filer, Treasurer

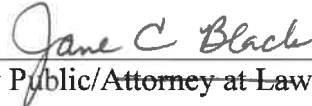
GFE

STATE OF MAINE

Penobscot County

February 25, 2020

Personally appeared before me the above named Anthony J. Filer, Treasurer of Mercy Hospital, and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of said non-profit corporation.


Notary Public/Attorney at Law


Print or type name as signed

Jane C. Black
Notary Public, State of Maine
My Commission Expires September 13, 2023

SEAL

Received
Recorded Register of Deeds
Feb 27, 2020 01:07:06P
Cumberland County
Nancy A. Lane

Portland, Maine



Yes. Life's good here.

Planning & Urban Development Department

ZONING ANALYSIS Relevant Zone(s) B3

All Projects:

	Required	Proposed
Lot Size	None	2.48 acres
Area Per Dwelling Unit	None	0.014
Minimum Street Frontage	15'	400' / 270' / 394'
Front Yard Minimum	N/A	N/A
Front Yard Maximum	5'	21' / 5' / 4.5'
Rear Yard	None	10.5' min
Yard Right	None	1.99' min
Yard Left	None	5.35' min.
Side Street Setback	N/A	N/A
Step Back	30' @ 45' Winter	30' @ 45' Winter
Maximum Lot Coverage	100%	92.2%
Minimum Lot Coverage	N/A	N/A
Maximum Height	85' /45'*	86' (existing)
Open Space	N/A	7.8%
Maximum Impervious Area	100%	92.2%
Pavement Setback	N/A	N/A
Floor Area Ratio	N/A	N/A
Off Street Parking Spaces	TBD	51
Loading Bays	None	2
Other 1		
Other 2		
Other 3		

Summary of Written Easements

Existing Easements

- The following agreements are listed within the deed recorded at the Cumberland County Registry of Deeds:
 - o Easement and Memorandum of Agreement and Mercy Hospital and Time Warner of Maine dated November 18, 1998 and recorded in Book 5936, Pages 65-67.
 - o Easement Deed by Mercy Hospital and Central Maine Power Company dated November 21, 1977 and recorded in Book 4171, Page 66.
 - o Easement Deed by Mercy Hospital and Central Maine Power Company dated September 4, 2010 and recorded in Book 28512, Page 45.
 - o Easement Deed by Mercy Hospital and Central Maine Power Company dated March 6, 1968 and recorded in Book 3046, Page 716.
 - o Easement Deed by Mercy Hospital and Central Maine Power Company dated August 22, 1966 and recorded in Book 2978, Page 31.
 - o Easement Deed by Mercy Hospital and Central Maine Power Company dated May 24, 2001 and recorded in Book 639, Page 232.

Proposed Easements

- The following agreement ~~are~~is proposed as part of the project:
 - o Easement Deed by NewHeight Redfern, LLC and Central Maine Power Company for access and maintenance of proposed electric transformer and/or subsurface utility vault and associated electric utility conduits.



0000490

BK 15936PG 165

EASEMENT AND MEMORANDUM OF AGREEMENT

THE STATE OF MAINE

KNOW ALL MEN BY THESE PRESENTS:

COUNTY OF CUMBERLAND

THAT **Mercy Hospital**, a Maine corporation (herein called the "Grantor"), acting herein by and through its duly authorized general manager, in consideration of, and pursuant to, that certain Standard Form of Service and Easement Agreement dated November 18, 1998 (the "Agreement") by and between Grantor, and **Time Warner Cable of Maine** (herein called the "Grantee") and in consideration of One and no/100 Dollars and other good and valuable consideration, which consideration is hereby confessed and acknowledged by the Grantor, has GRANTED, BARGAINED, SOLD AND CONVEYED, and does hereby GRANT, BARGAIN, SELL AND CONVEY, unto the Grantee, its successors and assigns, an easement and right-of-way in, on, over, under, through and across all that certain parcel of land described on Exhibit A hereto and all the improvements now or hereafter situated (said real property, improvements, easements and appurtenances being herein collectively called the "Premises"), and every part and portion thereof (including, without limitation, all improvements and fixtures included therein), for the purposes of (i) providing cable television services to the Premises; and (ii) owning, installing, operating, upgrading, maintaining, relocating, removing and replacing the "Services Delivery System" (which is all wires, cables, poles, conduits, pipes, antennas, signal converters, signal decoders, facilities and equipment on the Premises from time to time which are necessary or desirable, in the opinion of the Grantee, to make Services available to the Premises (said purposes being hereinafter collectively called the "Easement Purposes")).

This Easement and Memorandum of Agreement is executed and delivered by Grantor and Grantee for the purpose of evidencing of record and giving notice of the existence of the Agreement, to which reference is made and the same is incorporated herein as fully and for all purposes as if set forth in this Easement and Memorandum of Agreement in full. If any conflict shall exist between this Easement and Memorandum of Agreement and the Agreement, the latter shall control.

TO HAVE AND TO HOLD said easement and right to serve, together with all the rights and appurtenances thereunto in anywise belonging, unto the Grantee, its successors and assigns, for the duration of the term, including any extensions and renewals, stated in the Agreement; and the Grantor does hereby bind itself, its successors and legal representatives, to warrant and forever defend, all and singular, said easement and right to serve herein granted, unto the Grantee, its successors and assigns, against the claims of all persons whomsoever lawfully claiming or to claim the same, or any part thereof, subject to the matters set forth herein.

BK 15936PG 166

EXECUTED on this 18 day of Nov 1998.

Mercy Hospital
a Maine corporation
By: [Signature]
Name: Thomas Gruber
Title: Vice President, Clinical Services

THE STATE OF MAINE

COUNTY OF CUMBERLAND

This instrument was acknowledged before me on the 18 day of Nov 1998, by Thomas Gruber, Vice President, Clinical Services of Mercy Hospital, a Maine corporation, on behalf of said Mercy Hospital.

My Commission Expires:

12/6/2002

(SEAL)

[Signature]
Notary Public in and for
the State of Maine
GEORGIA E. JONES
NOTARY PUBLIC, MAINE
MY COMMISSION EXPIRES
DECEMBER 6, 2002

(Printed Name of Notary)

BK 15936 PG 167

EXHIBIT A

**LEGAL DESCRIPTION OF PREMISES
COVERED BY EASEMENT AND MEMORANDUM OF AGREEMENT**

**MERCY HOSPITAL
144 State Street
Portland, ME 04101**

Legal Description of Premises attached.

**RECEIVED
RECORDED REGISTRY OF DEEDS**

2001 JAN -3 AM 8: 33

CUMBERLAND COUNTY

John B O'Brien

Mercy Hospital, a corporation organized and existing by law and having an office in the City

of Portland, Cumberland County, Maine,
~~(being a corporation)~~ for consideration paid, grant to CENTRAL MAINE POWER COMPANY, a Maine corporation having its principal office at Edison Drive, Augusta, Maine 04336, the right and easement to erect, bury, maintain, repair, rebuild, operate and patrol electric transmission and distribution wires and/or cables, consisting of suitable and sufficient poles with wires strung upon and extending between the same and/or underground cables buried under the surface, together with all necessary fixtures and appurtenances, over, across and/or under the surface of my land in the ~~Town~~/City of Portland, Cumberland County, Maine, the location of said poles and/or underground cables to be as follows:

for area lighting in Mercy Hospital Parking Lot #1 on land of this Grantor lying on the northeasterly side of Winter Street, specifically, poles #8.1, 8.2, 8.3, 8.4, 8.13 and 8.15 as shown on plan of Blue Rock Industries, Westbrook, Maine titled Mercy Hospital Parking Lot Reconstruction, Lot #1, scale 1" = 10', dated 6/8/77 by G.M.H.. This plan on file at Central Maine Power Company Engineering Office, 162 Canco Road, Portland, Maine.

This location crosses a portion of the premises conveyed to the Grantor(s) by deed of _____, dated _____, 19____, recorded in the _____ County Registry of Deeds, Book _____, Page _____.

Together with the right to cut down, keep trimmed and control such trees, branches and underbrush as the Grantee believes may interfere with the operation and maintenance of its wires and/or cables; the right to restrict the construction of buildings or structures within _____ feet of its wires and/or cables; the right to keep the surface of the ground above said underground cables and other electrical equipment free from structures and growth which, in the judgment of the Grantee, would interfere with or endanger the proper operation or maintenance of said underground cables; and the right to enter upon the Grantor's premises for any and all of the foregoing purposes.

Mercy Hospital has caused this instrument to be sealed with its corporate seal and ~~signed~~ signed in its corporate name by Howard R. Buckley, its Executive ~~(and its sole officer)~~ Director, hereunto duly authorized

~~WITNESSES~~ _____ this 21st day of NOVEMBER, 19 77.

Signed, Sealed and Delivered
 in the presence of

Margaret M. Haley

MERCY HOSPITAL

By: *Howard R. Buckley*

Its Executive Director

STATE OF MAINE

Cumberland ss.

Nov. 21

1977

Personally appeared the above-named Howard R. Buckley
 and acknowledged this instrument to be his free act and deed, ~~in his own right~~ in his said capacity and the free act and deed of said corporation, before me,

MY COMMISSION EXPIRES
 MARCH 14, 1980

Margaret M. Haley
 Notary Public
 Justice of the Peace

STATE OF MAINE

CUMBERLAND, ss.

REGISTRY OF DEEDS

Received at 8 H 30 M A M on FEB 3 1978 and recorded in
 Book 4171 Page 66 Attest

Edward D. Brewster Register

Easement

WO# 300436353

Form 1199, Rev. 07/08

Mercy Hospital, a Maine corporation with a mailing address of 144 State St, Portland, ME, 04101 (Grantor(s)), for consideration given, grants to CENTRAL MAINE POWER COMPANY, a Maine Corporation with an office at 83 Edison Drive, Augusta, Maine 04336, and Northern New England Telephone Operations, LLC, a limited liability company organized under the laws of the State of Delaware, and having its principal place of business at 521 East Moorehead Street, Suite 250, Charlotte, NC 28202, and their respective successors and assigns (collectively Grantees), with warranty covenants, the right and easement to erect, bury, maintain, rebuild, respace, patrol, operate, and remove and do all other actions involving electric and communication distribution equipment and facilities, consisting of poles, wires and cables, anchors, guywires or pushbraces, together with all necessary fixtures and appurtenances over, across and under a portion of the surface of the land of the Grantor(s) in the City/Town of Portland, Cumberland County, Maine. The said equipment and facilities are attached to a line commencing at Pole/Pad Pole 11, Winter Street, Portland and extending to include Pole(s)/Pad(s) Poles 11.1 & 11.2, Winter Street. This easement affects land conveyed to the Grantor(s) in a deed from Robert M. Morrison, dated December 04, 1975, and recorded in the Cumberland County Registry of Deeds in Book 3779 Page 204. This easement is an easement in gross and is not for the sole purpose of serving the Grantor(s) or Grantor's land. The rights granted herein include the right to cut down and trim trees and other vegetation and to use formulations registered with the Environmental Protection Agency or its successor to eliminate vegetation, and modify the growth of trees, which vegetation or growth, in the judgment of Grantees, may interfere with the operation and maintenance of its equipment or facilities; and the right to restrict the construction of buildings, structures and improvements within 15 feet of its equipment and facilities; and the right to keep the surface of ground above its underground cables and other electrical equipment free from structures, improvements and growth which, in the judgment of the Grantees, may interfere with the proper operation or maintenance of said underground cables; and the right to enter upon the land of the Grantor(s) for any and all of the foregoing purposes.

WITNESS the hand(s) and seal(s) of Grantor(s) duly authorized representatives on 9/4, 10.

Signed, Sealed and Delivered in the presence of:

Mercy Hospital

Eileen Skinner
Eileen Skinner, President & CEO

State Of Maine

County Of Cumberland

The above-named Eileen F. Skinner, personally appeared before me this 4th day of September, 2010 and acknowledged the foregoing instrument to be her free act and deed in her said capacity and the free act and deed of said Mercy Hospital.

Robbin R. Poulin
Notary Public/Attorney

Printed Name:

ROBIN R. POULIN
Notary Public, Maine

My Commission Expires My Commission Expires December 3, 2011

SEAL

Received
Recorded Register of Deeds
Feb 09, 2011 08:33:57A
Cumberland County
Pamela E. Lovley

KNOW ALL MEN BY THESE PRESENTS, that MERCY HOSPITAL, a corporation organized and existing by law and having an office in the City

of Portland, in the County of Cumberland

and State of Maine in consideration of One Dollar and other valuable consideration (the sum being less than one hundred dollars) paid by CENTRAL MAINE POWER COMPANY, a Maine corporation and NEW ENGLAND TELEPHONE AND TELEGRAPH COMPANY, a New York corporation, the receipt whereof is hereby acknowledged, does hereby give, grant, bargain, sell and convey unto the said Central Maine Power Company and New England Telephone and Telegraph Company, their successors and assigns, the right and easement to construct, erect, rebuild, operate, maintain and remove electric distribution and communication lines for the transmission of electricity and intelligence; together with the necessary poles, wires, cables, cross-arms, braces, anchors, guys and other electrical equipment and appurtenances connected therewith, over, along and across premises owned by the Grantor(s) in the City/Town of Portland, County of Cumberland and State of Maine, along the route as now staked out, extending in a southeasterly direction from pole 27 Spring Street to pole 27.1

Also the right to cut down and keep trimmed and/or spray or treat with a chemical preparation of the Grantee's selection such trees, branches and underbrush as in the judgment of the Grantee, interfere with or endanger the proper operation and maintenance of the lines constructed along the above described location, together with the right to enter upon the Grantor's premises for any and all of the foregoing purposes.

It is understood and agreed that the rights and easements hereby conveyed are to be jointly owned by Central Maine Power Company and New England Telephone and Telegraph Company, their successors and assigns. If either Central Maine Power Company or New England Telephone and Telegraph Company, or the successors or assigns of either, shall relinquish or abandon the rights and easements hereby conveyed, the same shall become the sole property of the remaining company.

TO HAVE AND TO HOLD the above granted rights and easements to the said Central Maine Power Company and New England Telephone and Telegraph Company, their successors or assigns, to their own use and behoof forever.

IN WITNESS WHEREOF, the said Mercy Hospital has caused this instrument to be sealed with its corporate seal and signed in its corporate name by Donald F. Plunkett, its Executive Director, hereunto duly authorized,

and Merle R. Mahany wife (husband) of the said Donald F. Plunkett joining in this instrument as grantor(s) and relinquishing and conveying all (-----) rights by descent and all other rights in the above described rights and easements have hereunto set their hands and seals this March day of 1968.

SIGNED, SEALED AND DELIVERED
IN THE PRESENCE OF

Merle R. Mahany

MERCY HOSPITAL

By Donald F. Plunkett
Its Executive Director

STATE OF MAINE
County of Cumberland

Personally appeared the above named Donald F. Plunkett and acknowledged the foregoing instrument to be his free act and deed, March 10 in his said capacity and the free act and deed of said corporation, before me, Merle R. Mahany Justice of the Peace for said County.

41-1

STATE OF MAINE

CUMBERLAND, ss.

REGISTRY OF DEEDS

Received at 2 H 30 M P M on JUL 1 1968 and recorded in Book 3046 Page 716 Attest

Seward P. H. Jones

Register

4508

2-66
1.500

13801

31

KNOW ALL MEN BY THESE PRESENTS, that MERCY HOSPITAL, a corporation organized and existing by law and having an office in the City

of Portland, in the County of Cumberland

and State of Maine in consideration of One Dollar and other valuable consideration (the sum being less than one hundred dollars) paid by CENTRAL MAINE POWER COMPANY, a Maine corporation and NEW ENGLAND TELEPHONE AND TELEGRAPH COMPANY, a New York corporation, the receipt whereof is hereby acknowledged, does hereby give, grant, bargain, sell and convey unto the said Central Maine Power Company and New England Telephone and Telegraph Company, their successors and assigns, the right and easement to construct, erect, rebuild, operate, maintain and remove electric distribution and communication lines for the transmission of electricity and intelligence; together with the necessary poles, wires, cables, cross-arms, braces, anchors, guys and other electrical equipment and appurtenances connected therewith, over, along and across premises owned by the Grantor(s) in the City/Town of Portland

County of Cumberland and State of Maine, along the route as now staked out, extending in a northeasterly direction from Winter Street to pole 8.1, thence northerly to pole 8.2; another line extending northeasterly from Winter Street to pole 9.1, thence northwesterly to pole 9.2; another line extending westerly from Spring Street to pole 26.1; another line extending southwesterly from State Street to pole 8.1; also another line extending southwesterly from State Street to pole 9.1, thence southerly to pole 9.2, thence southeasterly to pole 9.4.

Also the right to cut down and keep trimmed and/or spray or treat with a chemical preparation of the Grantees' selection such trees, branches and underbrush as in the judgment of the Grantees, interfere with or endanger the proper operation and maintenance of the lines constructed along the above described location, together with the right to enter upon the Grantor's premises for any and all of the foregoing purposes.

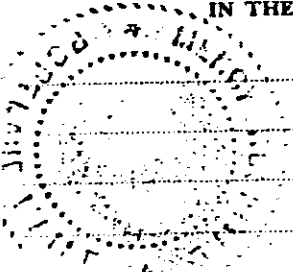
It is understood and agreed that the rights and easements hereby conveyed are to be jointly owned by Central Maine Power Company and New England Telephone and Telegraph Company, their successors and assigns. If either Central Maine Power Company or New England Telephone and Telegraph Company, or the successors or assigns of either, shall relinquish or abandon the rights and easements hereby conveyed, the same shall become the sole property of the remaining company. This easement may be terminated on ninety (90) days written notice.

TO HAVE AND TO HOLD the above granted rights and easements to the said Central Maine Power Company and New England Telephone and Telegraph Company, their successors or assigns, to their own use and behoof forever.

IN WITNESS WHEREOF, the said Mercy Hospital has caused this instrument to be sealed with its corporate seal and signed in its corporate name by Donald F. Plunkett, its Executive Director, hereunto duly authorized,

and ~~wife (husband) of the said~~
joining in this easement as grantor(s) and relinquishing and conveying all () rights by descent and all other rights in the above described rights and easements have hereunto set their hands and seals this
22nd day of August, 1966.

SIGNED, SEALED AND DELIVERED
IN THE PRESENCE OF



MERCY HOSPITAL

By Donald F. Plunkett
Its Executive Director

P.K. 11.285

STATE OF MAINE,
County of Cumberland

Personally appeared the above named Donald F. Plunkett
and acknowledged the foregoing instrument to be his free act and deed, before me, in his said capacity and the free act and deed of said corporation, before me,

Aug 22 1966
Paul R. Mahoney
Justice of the Peace
Holmes, Maine

STATE OF MAINE

CUMBERLAND, ss.

REGISTRY OF DEEDS

Received at 9 H - M. 4. M on OCT 26 1966 and recorded in
Book 2978 Page 31

ATTEST

Edward R. H. Jr.

Register

0039564

Corporation Easement Deed

BK 1639 | PG 232

Underground Line Easement

MERCY HOSPITAL, a MAINE corporation with a mailing address of 144 State Street, Portland, ME, 04101 ('Grantor(s)'), for consideration given, grants to CENTRAL MAINE POWER COMPANY, a Maine Corporation with an office at 83 Edison Drive, Augusta, Maine 04336, and VERIZON NEW ENGLAND, INC. A New York corporation with a mailing address of 125 High Street, Boston, Massachusetts, 02110, and their respective successors and assigns (collectively 'Grantees'), with warranty covenants, the right and easement to erect, bury, maintain, rebuild, respace, patrol, operate, and remove and do all other actions involving electric and communication distribution equipment and facilities, consisting of wires, cables, together with all necessary fixtures and appurtenances under the surface of the land of the Grantor(s) in the City/Town of Portland, Cumberland County, Maine. The said equipment and facilities are attached to a line commencing at Pole(s)/Pad(s) 28, Winter Street, Portland and extending to include Pole(s)/Pad(s) 28.1 to serve Grantor(s) and others. This easement affects land or rights conveyed to the Grantor(s) in a deed from Portland Renewal Authority, dated August 22, 1966, and recorded in the Cumberland County Registry of Deeds in Book 2978 Page 31. The rights granted herein include the right to keep the surface of ground above its underground cables and other electrical equipment free from structures, improvements and growth which, in the judgment of the Grantees, may interfere with the proper operation or maintenance of said underground cables; and the right to enter upon the land of the Grantor(s) for any and all of the foregoing purposes.

WITNESS the hand(s) and seal(s) of Grantor(s) duly authorized representatives on May 24, 2001.

Signed, Sealed and Delivered in the presence of:

Witness(es)

Linda Lockart
Printed: LINDA LOCKART

MERCY HOSPITAL

Jeffrey Thomas
Jeffrey Thomas
Manager
Jeffrey Thomas

State of Maine

County of Cumberland

The above-named Jeffrey Thomas, personally appeared before me this 24 day of MAY, 2001 and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of said MERCY HOSPITAL.

WR# 0004101841 Acct# 441-1670410-001
WO# 041-09695

Beryl C McGrath
Notary Public/Attorney
Printed Name: Beryl C. McGrath
My Commission Expires: 9-23-2006

RECEIVED
RECORDED REGISTRY OF DEEDS
2001 JUN -8 AM 9: 23
CUMBERLAND COUNTY
John B O'Brien

BERYL C. McGRATH
Notary Public, Maine
My Commission Expires September 23, 2006

SEAL

Request for Waivers

The following waivers are being requested for the proposed project located at 120 State Street.

1. ***Parking drive aisle width*** – Per the City of Portland Technical Manual, Standard Parking Spaces Figure 1-27, the required drive aisle width for 90-degree parking spaces is 24 feet. The project is requesting a waiver to allow for a reduction to a 22-foot drive aisle.
2. ***Landscape Preservation*** – There are six (6) existing trees on the lot along the Winter Street sidewalk / ROW that are in poor condition. We are requesting removal of these trees and a waiver for the 30% preservation of existing trees for the construction of the future buildings along Winter Street. The project is proposing to install new street trees spaced approx. 30 feet on center within the Winter Street sidewalk / ROW where there are currently none to provide replacement for the landscaping to be removed. Additional landscaping is also proposed within the project and along the State Street frontage. Please refer to the Landscaping Plan for additional information.
3. ***Parking Lot Landscaping*** – The project parking area is proposed as a “woonerf” or living street, which incorporates trees, shrubs and plantings within the area. The proposed condition of the woonerf is to provide a flush surface across the area to provide accessible routes and promote pedestrian flow through the space. As such, no curbing is proposed, however the “landscaped islands” provide separation from the parking stalls and incorporates stormwater collection leading to a proprietary modular wetland water quality treatment system.



Financial Capacity

A letter from the Applicant's bank confirming financial capacity is attached to this section.





Christine Grimando, Director
Planning and Urban Development Department
City of Portland
389 Congress Street
Portland, ME 04101

August 24, 2020

Dear Ms. Grimando:

I am writing this letter on behalf of NewHeight Redfern LLC in reference to the site development plan for the Mercy Hospital building.

Machias Savings Bank (MSB) provided the lending for the for the group's purchase of the entire Mercy Campus this past winter. Although NewHeight Redfern LLC is a newly formed entity, MSB has had previous lending experience with the principals of this entity on other large commercial construction projects. They have proven to be a highly qualified, effective, and professional development team.

MSB is aware of their current site application and would be pleased to entertain financing requests from the group for that project as well as other future projects on this site.

If you have any questions and or concerns, please do not hesitate to contact me at 207-561-3937.

Sincerely,

A handwritten signature in cursive script that reads 'Francine Cram/mtr'.

Francine V. Cram
Senior Vice President
Business Banking Team Leader

Technical Capacity

NewHeight Redfern, LLC is a collaboration between the principals of two Portland-based development firms, Chip Newell and Erin Cooperrider of NewHeight Group, and Jonathan Culley of Redfern Properties.

Most recently, NewHeight Group has developed two high-end condominium projects in Portland, 118 on Munjoy and Luminato, and has a third, Verdante at Lincoln Park, under construction. NHG brought materials from Europe and adapted design ideas from Washington, D.C. to raise the bar for new construction condominiums in Portland. The most recent project, Luminato Condominium, sold out six months prior to construction completion and was honored in 2017 with a Maine Real Estate & Development Association Notable Project award.

Redfern Properties develops, owns, and operates a portfolio of properties that includes the highest quality rental apartments in Portland. Redfern Properties is committed to developing innovative residential properties, and focuses on infill and other “smart-growth” development in creating unique residences and commercial spaces, while making neighborhoods and communities more vibrant and sustainable.

Ryan Senatore Architecture has designed several important multifamily residential projects in Southern and Central Maine, including the nine-story, 139-unit, concrete and steel framed high-rise apartment building known as the Hiawatha (for Redfern Properties). RSA’s residential clients include private developers as well as public housing authorities, and completed projects include both new construction and adaptive reuse of existing historic structures.

Acorn Engineering specializes in providing urban redevelopment, civil/site design, environmental services, municipal consulting and construction administration. Together, Acorn Engineering, Inc. and Ryan Senatore Architecture have successfully designed and permitted more than 20 level II/III projects in Portland during the past 5 years, including four for Redfern Properties: Munjoy Heights, East Bayside Lofts, The Hiawatha, and 70 Anderson.

ALA is a process-driven, landscape architecture and urban design firm committed to thoughtful, creative intervention at the intersection of environment, economics, art, and culture. ALA has worked on a number of important projects throughout Maine and the U.S. Locally, ALA has been the prime design consultant for the redevelopment of the 500-acre Scarborough Downs property in addition to numerous public and private development projects across Maine. ALA’s clients include private developers, housing authorities, and municipalities.

Conformity with Land Use Ordinance

The following outline is made in accordance with the City of Portland Code of Ordinances, Chapter 14 Land Use, Article V Section 14-526 as well as the City of Portland Technical Manual, Chapter 14 Standards for Local Site Location of Development Review.

OVERVIEW

The proposed redevelopment of the existing Mercy Hospital complex has been designed to conform to City standards where possible as well as improve upon existing non-conformities. This project conforms with the majority of the applicable standards of Portland's Land Use Ordinance Section 14-526 as demonstrated in the following narrative.

(a) Transportation Standards

1. Impact on Surrounding Street Systems:

The site is located at the corner of Spring and State Streets. State Street is classified as a minor arterial with an average annual daily traffic volume of approximately 15,550 vehicles per day. Spring Street is classified as a local road with an average annual daily traffic volume of approximately 4,820 vehicles per day (Maine DOT 2017). The project design provides 68 on-site parking spaces. Residents are expected to also use other modes of travel (i.e. walking, bicycle, transit, etc) other than automobiles. As a result, a very insignificant increase in motorized traffic is expected on either State and/or Spring Street.

2. Access and Circulation:

a. Site Access and Circulation:

This project conforms with the majority of design standards of Section 14-526 as demonstrated in the following narrative.

- (i) The development will provide safe access and internal circulation for both pedestrians and vehicles as seen on the Site Plan.
- (ii) The proposed entrances have been located to provide ample site distance from oncoming traffic on Spring Street.
- (iii) The site does not feature drive up services.

b. Loading and Servicing:

- (i) It is anticipated that deliveries will temporarily load from either the existing loading dock area off State Street or within the proposed parking area off Spring Street.

c. Sidewalks:

- (i) A brick sidewalk exists along both State Street, Spring Street, and Winter Street and will be rebuilt to City standards as part of the project if disturbed.
- (ii) The existing sidewalk not disturbed as part of the project is not in need of rebuilding.



- (iii) The main entrances to the building will be from the proposed parking area. Pedestrian access to the site will be provided by sidewalks and within parking areas. Please refer to the Site Plan, Sheet C-10, for more information.

3. Public Transit Access:

- a. Existing Metro Bus Stop on Spring Street is located directly across the street from the project site. As a result, no transit facility is required for the project.
- b. Not applicable. See a above.
- c. Not applicable. See a above.

4. Parking:

a. Location and Required Number of Vehicle Parking Spaces:

- (i) See attached Section S: Traffic and Parking Analysis. Traffic Demand Management strategies will be provided under separate cover.
- (ii) Traffic Demand Management strategies will be provided under separate cover.
- (iii) The amount of parking does not exceed the minimum requirement by more than 10%.
- (iv) The parking space dimensions are in conformance with the Technical Standards. The parking aisle dimensions are not in conformance with the Technical Standards. See attached Section F: Request for Waivers for additional information (reduction from 24' to 22').
- (v) The driveway and parking areas proposed are to be constructed with pavers, bituminous pavement & brick.

b. Location and Required Number of Bicycle Parking Spaces:

- (i) The site will be served by two bicycle hitches within the courtyard near the new building entrance and additional bicycle storage within the building for a minimum total of 54 bicycle parking spaces.

c. Motorcycles and Scooter Parking:

- (i) There are no areas designated for motorcycles or scooters at this time; however, adequate room exists for the storage of these motor vehicles.

d. Snow Storage:

- (i) The Owner will have snow removed from the site when necessary.
- (ii) The Owner will have snow removed from the site when necessary to provide minimum parking requirements an pedestrian circulation.

5. Transportation Demand Management (TDM):

- a. Traffic Demand Management strategies will be provided under separate cover.



- b. Traffic Demand Management strategies will be provided under separate cover.
- c. The TDM shall comply with the City of Portland TDM standards as described in Section 1 of the Technical Manual.

(b) Environmental Quality Standards

1. Preservation of Significant Natural Features:
 - a. Not applicable.
 - b. Not applicable.
2. Landscaping and Landscape Preservation:
 - a. Landscape Preservation.
 - (i) The few existing trees and vegetation on site are of low value or dead. The project proposes to install new street trees, trees within the proposed parking area and various plantings along the proposed buildings and within the internal parking area. Please refer to the Landscaping Plan for specific information.
 - (ii) See attached Section F: Request for Waivers.
 - (iii) It is not anticipated that the project will necessitate any tree protection.
 - (iv) See attached Section F: Request for Waivers.
 - (v) Not applicable.
 - b. Site Landscaping.
 - (i) Landscaped Buffers:
 - a. The existing loading and servicing areas, exterior dumpsters, storage areas are screened from public sidewalks, streets and adjacent properties by the existing building and retaining walls. The proposed pad mounted transformer will be screen by a combination of fencing and/or landscaping.
 - b. The project includes a total of approximately 1,006 lf of frontage improvements along Winter, Spring and State Streets All development subject to required zoning setbacks shall include a minimum of six (6) shrubs per forty-five (45) linear feet of all frontages as measured along the property line, which equates to 134 shrubs. Please refer to the Landscaping Plan for additional information.
 - c. Not applicable.
 - d. Not applicable.
 - (ii) Parking Lot Landscaping:
 - a. Per Section 4.6 of the Portland Maine Technical Manual, two trees are required (or one (1) tree and three (3) shrubs) per five (5) parking spaces. The project proposes 51 space, which require 20 trees to be installed in the parking area. The project proposes to install



21 trees and additional shrubs and trees planted along the parking and courtyard areas.

- b. There is no proposed area with greater than 40 parking spaces without interrupted pavement.
- c. The project parking area is proposed as a “woonerf” or living street, which incorporates trees, shrubs and plantings within the area. The proposed condition of the woonerf is to provide a flush surface across the area to provide accessible routes and promote pedestrian flow through the space. As such, no curbing is proposed, however the “landscaped islands” provide separation from the parking stalls and incorporates stormwater collection leading to a proprietary modular wetland water quality treatment system.
- d. Not applicable.
- e. See attached Section F: Request for Waivers.

(iii) Street Trees:

- a. Street trees are to be provided every 30 to 45 feet along the Winter Street frontage. A total of approximately 400 ft of frontage improvements along Winter Street are included within this project, which equates to a minimum of nine street trees. The project proposes twelve street trees. The Spring Street frontage currently has no existing street trees, with new street trees proposed at the entrance to the parking area. The landscaped area along State Street in front of the existing building proposes to add and improve the existing landscaping features. Please refer to the Landscaping Plan for additional information.
- b. Not applicable.

3. Water Quality, Stormwater Management and Erosion Control:

- a. Stormwater:
 - (i) The site drainage will not be directed to flow or pond onto adjacent lots. The drainage patterns will be altered to intercept the roof runoff as well as the parking area runoff, with the addition of stormwater management practices to treat and attenuate the flows.
 - (ii) Any stormwater that flows onto adjacent lots will not exceed the pre-development flows.
 - (iii) The runoff from the site into the City property will not increase from the pre-development condition.
 - (iv) Not applicable.
- b. A site-specific Stormwater Management Plan has been developed for the project to show compliance with Section 5 of the Technical Manual, including the basic standards of MEDEP Chapter 500. Please refer to sections J and K, the Stormwater Management and Erosion & Sedimentation Control Plans, respectively, for more information.
- c. The project is not located in a watershed of an urban impaired stream as listed by the MEDEP.
- d. Not applicable.



- e. The development is not anticipated to pose a contamination risk to groundwater during or after construction. The project will be serviced by a public wastewater system.
- f. The development will provide for adequate and sanitary disposal of sewage in accordance with Section 2 of the Technical Manual.

(c) Public Infrastructure and Community Safety Standards

1. Consistency with City Master Plans:
 - a. The project has been designed to be consistent with the City's Zoning Ordinance and off-site infrastructure.
 - b. Not applicable.
2. Public Safety and Fire Prevention:
 - a. The site has been designed to promote safe and inviting public access.
 - b. Adequate emergency access has been provided within the parking area, emergency access lane off Winter Street, and along Winter Street, Spring Street and State Street.
 - c. One existing hydrant is located in front of the building on State Street, two existing hydrants are located on Spring Street and one existing hydrant is located on Winter Street, approximately 44 feet from the southwest property corner.
3. Availability and Adequate Capacity of Public Utilities:
 - a. Ability to Serve letters have been sent to the respective utility companies to determine adequate capacity for the project. Responses will be submitted upon receipt.
 - b. The electrical service will be wired underground through coordination with CMP, including relocating portions of the existing Winter Street overhead power lines to go underground along the Winter Street parcel frontage.
 - c. The new sewer and stormwater infrastructure will meet the provisions of the Technical Manual.
 - d. The project will be served by connection to the public sewer system within Winter Street, Spring Street (existing connection) and State Street (existing connection).
 - e. The sanitary sewer collection system meets all applicable sections of the Technical Manual. The stormwater management system is designed to meet the standards of Chapter 500.
 - f. Temporary storage and timely removals of all trash and recyclable materials will be provided.

(d) Site Design Standards

1. Massing, Ventilation and Wind Impact:
 - a. See attached Section O: Architectural Design Narrative



- b. See attached Section O: Architectural Design Narrative
- c. See attached Section O: Architectural Design Narrative
- 2. Shadows:
 - a. See attached Section O: Architectural Design Narrative
- 3. Snow and Ice Loading:
 - a. The structures will not distribute snow and ice onto adjacent properties.
- 4. View Corridors:
 - a. See attached Section O: Architectural Design Narrative
- 5. Historic Resources:
 - a. The development is located in the West End historic district and therefore will conform to the standards set in Appendix 8 of the Portland Maine Design Manual. The building has yet to go through the historic preservation approval process.
 - b. The development is located within the West End Historic District. Development will be compatible with the character-defining elements of the district in the immediate vicinity.
 - c. There are no known archaeological resources on the site.
- 6. Exterior Lighting:
 - a. Site Lighting.
 - (i) Exterior lighting will be designed to meet the requirements of Section 12 of the Technical Manual. A photometric plan will be provided under separation cover.
 - (ii) Any lighting that may adversely impact the abutting residential properties will feature house-side shielding.
 - b. Architectural and Specialty Lighting.
 - (i) Any architectural or specialty lighting shall be designed to any specific details or attributes only and shall meet the standards of Section 12 of the Technical Manual. Final architectural or specialty light will be submitted under separate cover.
 - (ii) Up-lighting for landscape features and public art shall be designed by a lighting professional and shall be scaled and placed to minimize the visibility and installed in accordance with the standards contained in Section 12 of the Technical Manual. A photometric plan will be provided under separation cover.
 - c. Street Lighting.
 - (i) Streetlighting will conform to specific lighting district requirements, as specified in Section 10 of the Technical Manual. As there are existing street lights on the opposite side of the street, no additional street lights are proposed at this time.



7. Noise and Vibration:

- a. The HVAC system will meet the applicable state and federal emissions requirements and will be enclosed within a roof “penthouse.” See Architectural Plans for additional information.

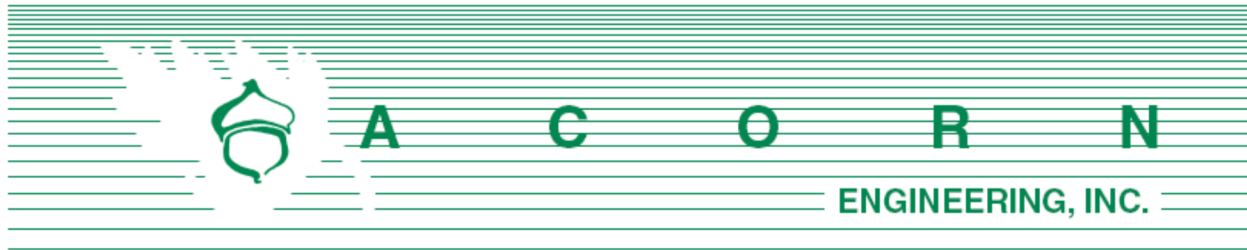
8. Signage and Wayfinding:

- 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 located in the West End Historic District.
 - (ii) See Section S Architectural Design Narrative
 - (iii) All street and wayfinding signage shall meet the requirements of the Manual on Uniform Traffic Devices (MUTCD) and Division 22 of the City Code.

9. Zoning Related Design Standards:

- a. The project has been designed to meet the standards set forth in the B3 zone and West End Historic District. Please refer to the Site Plan for more information on the Space & Bulk Standards





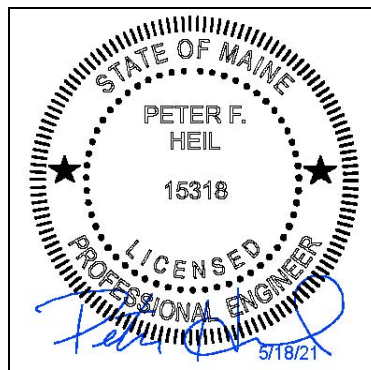
STORMWATER MANAGEMENT **REPORT**

Prepared For:

**NewHeight Redfern, LLC
217 Commercial Street, Suite 205
Portland, ME 04101**

Prepared By:

**Acorn Engineering, Inc.
PO Box 3372
Portland, Maine 04104**



**December 2020
Revised May 2021**

INTRODUCTION

Acorn Engineering, Inc. has been retained by NewHeight Redfern, LLC to provide civil engineering services for the proposed work located at 120 and 148 State Street, Portland, ME 04101. The site is currently comprised of the existing Mercy Hospital complex, including the Morrison House, with surface parking, landscaping, and a loading dock area. The project proposes to redevelop the existing lot into a mixed-use development, consisting of redevelopment of the existing hospital building and Morrison House and proposes two (2) new residential buildings with exterior parking. The two (2) new residential buildings will be submitted under a separate Site Plan application. The existing hospital building will be redeveloped to include 167 residential units, and the Morrison House to include 8 residential units, with associated common areas, office, and fitness area, as well as self-storage, commercial/retail space, and a medical clinic.

A stormwater analysis was prepared to demonstrate that the project will meet the following requirements of the City of Portland (the City):

- City of Portland Land Use Ordinance Chapter 14, Article V. Site Plan Section 14-523. Required Approvals and Applicability (F) Level III Site Plan Review.
- City of Portland Technical Manual – Section 5 – Portland Stormwater Management Standards and Maine DEP Chapter 500 Stormwater Management.

The property consists of approximately 2.48 acres of land in Portland's West End neighborhood. The site is currently comprised of approximately 2.19 impervious area. The proposed project will decrease the impervious area by approximately 2,323 sf (0.053 acres) and includes redevelopment of non-roof impervious area greater than 5,000 sf.

EXISTING CONDITIONS

The proposed project site is located on 120 and 148 State Street, bounded by State Street, Spring Street and Winter Street. A Boundary & Topographic Survey has been prepared by Owen Haskell, Inc., dated August 4, 2020.

The existing property is covered by approximately 93% impervious surfaces including the existing Mercy Hospital, Morrison House, pavement, and concrete. The existing site has relatively flat slopes, with an approximate 13 foot retaining wall from the parking lot along Winter Street to the loading dock area off State Street.

The project team is not aware of the presence of any existing significant natural features located on the site. Given the urban setting and existing impervious surfaces, a field inventory of significant natural features was not undertaken. The project is not located within a watershed classified as an Urban Impaired Stream.



PROPOSED DEVELOPMENT

The project proposes to redevelop the existing hospital building and Morrison House with future residential buildings along Winter Street with a parking lot and courtyard area in the internal area of the site. Pedestrian access to the site shall be provided off all three adjacent streets. The development will be served by Portland Water District, Department of Public Works (sewer/storm), Unitil (natural gas), CMP (electric), Charter (cable), and Fairpoint (telephone).

The proposed project will decrease the impervious area by approximately 2,323 sf (0.053 acres) and includes redevelopment of non-roof impervious area greater than 5,000 sf, which triggers the City's water quality requirement. Water quality treatment will be provided by collecting the runoff through a new storm drain system which leads to a proprietary modular wetland system prior to discharging into the combined sewer within Spring Street. The project has been designed to meet Chapter 500 General Standards.

BASIC STANDARDS – EROSION & SEDIMENT CONTROL

The development shall provide erosion and sediment control, inspection and maintenance, and housekeeping standards as specified in the attached Exhibit K: Erosion and Sediment Control Report and that the grading and construction activity will not impede or otherwise alter drainageways so as to have an unreasonable adverse impact on an adjacent downslope parcel.

GENERAL STANDARDS - WATER QUALITY

The development shall provide water quality treatment in accordance with the DEP Chapter 500 General Standards for no less than 50% of the redeveloped impervious area. Water quality treatment will be provided through the use of proprietary modular wetland system, which is an approved system per Appendix B of the Maine Stormwater BMP Manual. Filtration BMPs have been shown to be very effective at removing a wide range of pollutants from stormwater runoff.

The treatment of the impervious & disturbed areas are as follows:

Table 1 – Impervious Area Treatment Table				
Existing Impervious Area (SF)	Total Proposed Impervious Area (SF)	Redeveloped Impervious Area (SF)	Proposed Impervious Area with Treatment (SF)	Overall New Imp. Area Treated
95,396	93,073	42,427	28,862	68.0%

As shown above, the project anticipates meeting and exceeding the required treatment for 50% of the redeveloped impervious surfaces as ample stormwater treatment is being provided.



SOILS

Onsite soil information includes the following:

- Soil Conservation Service Medium Intensity Soil Survey for Cumberland County

The area within and surrounding the project includes soils types listed in the table below.

Table 2 – Hydrologic Soil Group	
Soils Type	HSG
Hinkley Loamy Sand, 3-8% slopes	A

The HSG for the soils, listed above, show soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained sands, with a high rate of water transmission. Implementation of the proposed Erosion & Sedimentation Measures by the contractor will be of the utmost importance to provide proper stabilization of the site.

Conclusion

The proposed development was designed to meet the requirements implemented by the MDEP under the Stormwater Management Statute (38 M.R.S.A. § 420-D) as well as the City of Portland Technical Manual – Section 5 – Portland Stormwater Management Standards. The proposed project as designed is not anticipated to cause flooding or erosion problems within the subject site, abutters' sites, nor within the right-of-way.

Attachments

Attachment A: Soils Map

Attachment B: Redevelopment Exhibit



Hydrologic Soil Group—Cumberland County and Part of Oxford County, Maine



**Natural Resources
Conservation Service**

Web Soil Survey
National Cooperative Soil Survey
Page 73

8/26/2020
Page 1 of 4

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

Soil Rating Polygons

 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Lines

 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Points

 A
 A/D
 B
 B/D

 C
 C/D
 D
 Not rated or not available

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.

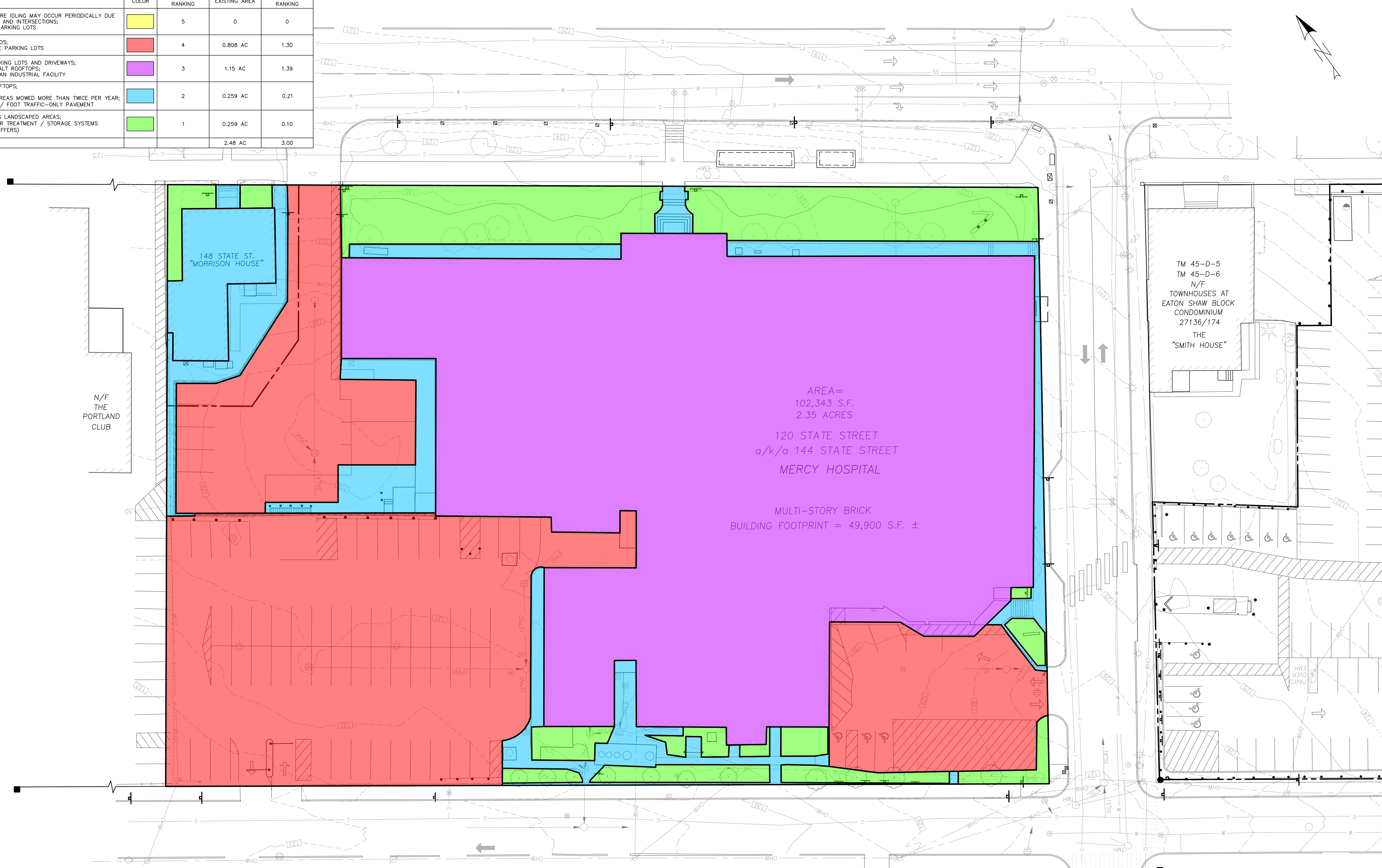
Soil Survey Area: Cumberland County and Part of Oxford County, Maine
 Survey Area Data: Version 17, Jun 5, 2020

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.

LAND USE AND POLLUTANT SUMMARY TABLE				
LAND USE	COLOR	POLLUTANT RANKING	EXISTING AREA	WEIGHTED AVE. RANKING
ROADS WHERE IDLING MAY OCCUR PERIODICALLY DUE TO TRAFFIC AND INTERSECTIONS; HIGH USE PARKING LOTS	 	5	0	0
OTHER ROADS; MEDIUM USE PARKING LOTS	 	4	0.808 AC	1.30
OTHER PARKING LOTS AND DRIVEWAYS; FLAT ASPHALT ROOFTOPS; ROOFS ON AN INDUSTRIAL FACILITY	 	3	1.15 AC	1.39
OTHER ROOFTOPS; BIKEWAYS; GRASSED AREAS MOWED MORE THAN TWICE PER YEAR; WALKWAYS / FOOT TRAFFIC-ONLY PAVEMENT	 	2	0.259 AC	0.21
NON-GRASS LANDSCAPED AREAS; STORMWATER TREATMENT / STORAGE SYSTEMS (EXCEPT BUFFERS)	 	1	0.259 AC	0.10
TOTAL			2.48 AC	3.00



ISSUED FOR
CHOM CITY REVIEW

BY
DATE
PFI
12/4/20

PRE-CONSTRUCTION REDEVELOPMENT EXHIBIT

PROJECT NAME/
ADDRESS:
MERCY HOSPITAL REDEVELOPMENT

CLIENT/OWNER OF RECORD:
NEWHEIGHT REDFERN, LLC
217 COMMERCIAL STREET, SUITE 205, PORTLAND ME 04101

ACORN ENGINEERING, INC.
PO BOX 3372, PORTLAND MAINE 04101
(207) 775-2655

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY ALTERATIONS, AUTHORIZED WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

FILE: 1140_CIVIL
JN: 1140
SCALE: AS NOTED
DESIGNED BY: PFI
DRAWN BY: KRB
CHECKED BY: WHS

STATE OF MAINE
PETER F. HEIL
No. 15318
LICENSED
12/4/20

DRAWING NO.
EXHIBIT

Page 75

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
HIB	Hinckley loamy sand, 3 to 8 percent slopes	A	8.5	100.0%
Totals for Area of Interest			8.5	100.0%

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

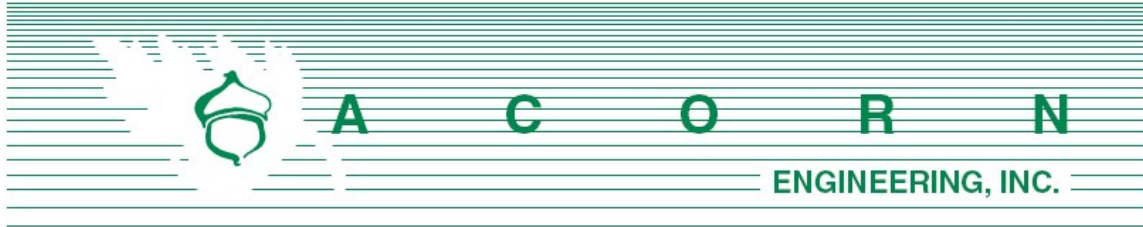
Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified



EROSION & SEDIMENTATION **CONTROL REPORT**

Prepared For:

NewHeight Redfern, LLC
217 Commercial Street, Suite 205
Portland, ME 04101

Prepared By:

Acorn Engineering, Inc.
P.O. Box 3372
Portland, Maine 04104



September 2020



A C O R N Engineering, Inc. • www.acorn-engineering.com
207-775-2655 • PO Box 3372 • Portland • Maine • 04104

1.0 INTRODUCTION

Acorn Engineering, Inc. has been retained by NewHeight Redfern, LLC to provide civil engineering services for the proposed work located at 120 and 148 State Street, Portland, ME 04101. The site is currently comprised of the existing Mercy Hospital complex, including the Morrison House, with surface parking, landscaping, and a loading dock area. The project proposes to redevelop the existing lot into a mixed-use development, consisting of redevelopment of the existing hospital and Morrison House buildings and proposes two (2) new residential buildings with exterior parking. The two (2) new residential buildings will be submitted under a separate Site Plan application. The existing hospital building will be redeveloped to include 167 residential units and the Morrison House to include 8 residential units, with associated common areas, office, and fitness area, as well as self-storage, commercial/retail space, and a medical clinic.

The following Erosion and Sedimentation Control Report was developed in accordance with the Maine DEP Chapter 500 Stormwater Management Appendix A and B (1) and the City of Portland Code of Ordinance, Chapter 14, Article V, Section 14-526, as well as the City of Portland Technical Manual. This narrative also meets the standards required in the 2016 Maine DEP's Erosion & Sediment Control BMP's Manual.

2.0 EXISTING CONDITIONS

The proposed project includes a boundary and topographic survey that has been prepared by Owen Haskell, Inc. dated August 4, 2020.

2.1 Existing Soils

Per the attached USDA NRCS Web Soil Survey, the site is mapped with Hinckley loamy sand, 3-8% slopes with a Hydrologic Soil Group A.

2.2 Existing Erosion Problems

The existing site surface is largely impervious and does not show signs of erosion within the property.

2.3 Critical Areas

There were no critical areas identified.

2.4 Protected Natural Resource

There are no known protected natural resources on site.



2.5 Previous Construction Activity (5 years)

Acorn Engineering, Inc. is not aware of any construction related activities or timber harvesting within the project limits within the past 5 years.

2.6 Timber Harvesting

Acorn Engineering, Inc. is not aware of any significant timber harvesting within the past five years.

3.0 EROSION CONTROL MEASURES AND SITE STABILIZATION

As part of the project, the following temporary and permanent erosion and sedimentation control devices shall be implemented. Devices shall be installed as described in this report or within the plan set. See the Maine Erosion and Sediment Control Handbook for Construction: Best Management Practices for further reference.

3.1 Temporary Erosion Control Measures

The following temporary erosion and sedimentation control measures are planned for the project's construction period:

- 3.1.1 Construction activities will be performed in a manner to prevent impact to trees and shrubs within and adjacent to the property that are to remain.
- 3.1.2 Siltation fence, erosion control berm, and/or filter socks shall be installed down gradient of any disturbed areas to trap runoff borne sediments until permanent stabilization is achieved. The sediment barrier shall be installed per the details provided in the plan set and inspected before and immediately after each rainfall and at least daily during prolonged rainfall. Repairs shall be made if there are any signs of erosion or sedimentation below the fence line or berm. If there are signs of undercutting at the center or the edges or impounding of large volumes of water behind the fence or berm, the barrier shall be replaced with a stone check dam.
- 3.1.3 Hay mulch including hydro seeding is intended to provide cover for denuded or seeded areas until revegetation is established. Mulch placed between April 15th and November 1st on slopes of less than 15 percent shall be covered by fabric netting and anchored with staples in accordance with the manufacturer's recommendation. Mulch placed between November 1st and April 15th on slopes equal to or steeper than 8 percent and equal to or flatter than 2:1 shall use mats or fabric netting and anchored with staples in accordance with the manufacturer's recommendation.



- 3.1.4 Winter Street and Spring Street shall be swept to control mud and dust as necessary.
- 3.1.5 If a silt fence is used, silt fence stake spacing shall not exceed 6 feet unless the fence is supported with 14-gauge wire in which case the maximum spacing shall not exceed 10 feet. The silt fence shall be “toed” into the ground.
- 3.1.6 Temporary loam, seed, and mulching shall be used in areas where no other erosion control measure is used, including in any areas where there has been site disturbance, but unworked areas > 7 days. Application rates for seeding are provided at the end of this report.
- 3.1.7 Stockpiles shall be stabilized within 7 days of formation unless a scheduled rain event occurs prior to the 7-day window, in which case the stockpile shall be stabilized prior to the rain event. Methods of stabilization shall be mulch, erosion control mix, or erosion control blankets/mats. Silt fence or a wood waste compost filter berm shall be placed downhill of any soil stockpile location.
- 3.1.8 For disturbance between November 1 and April 15, please refer to winter stabilization plan in this report and the Maine Erosion and Sediment Control BMP manual for further information.

3.2 Permanent Erosion Control Measures

The following permanent erosion control measures are intended for post disturbance areas of the project.

- 3.2.1 All disturbed areas during construction, not subject to other proposed conditions, shall receive a minimum 4” of loam, limed, fertilized, seeded, and mulched. Erosion control blankets or mats shall be placed over the mulch in areas noted in paragraph 3.1 of this report.
- 3.2.2 Refer to the Maine Erosion and Sediment Control BMP manual for additional information.

4.0 EROSION AND SEDIMENTATION CONTROL PLAN

The Erosion and Sedimentation Control Plan is included within the plan set.

5.0 DETAILS AND SPECIFICATIONS

Erosion Control Details and Specification are included in the plan set.



6.0 STABILIZATION PLAN FOR WINTER CONSTRUCTION

Winter Construction consists of earthwork disturbance between the dates of November 1 and 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 shall be protected with overwinter stabilization. Any area not stabilized with pavement, vegetation, mulching, erosion control mix, erosion control mats, riprap or gravel base on a road shall be considered open.

The contractor shall limit the work area to areas that work will occur in during the subsequent 15 days and so that it can be mulched one day prior to a snow event. The contractor shall stabilize work areas prior to opening additional work areas to minimize areas without erosion control measures.

The following measures shall be implemented during winter construction periods:

6.1 Sediment Barriers

During frozen conditions, sediment barriers may consist of erosion control mix berms or any other recognized sediment barriers as frozen soil prevents the proper installation of hay bales or silt fences.

6.2 Mulching

All areas shall be considered to be denuded until seeded and mulched. Hay and straw mulch shall be applied at a rate of 150 lb. per 1,000 square feet or 3 tons/acre (twice the normal accepted rate of 75-lbs./1,000 s.f. or 1.5 tons/acre) and shall be properly anchored. Erosion control mix must be applied with a minimum 4-inch thickness. Mulch shall not be spread on top of snow. The snow shall be removed down to a one-inch depth or less prior to application. After each day of final grading, the area shall be properly stabilized with anchored hay or straw or erosion control matting. An area shall be considered to have been stabilized when exposed surfaces have been either mulched or adequately anchored so that ground surface is not visible through the mulch. Between the dates of November 1 and April 15, all mulch shall be anchored by either mulch netting, tracking or wood cellulose fiber. The cover will be considered sufficient when the ground surface is not visible through the mulch. After November 1st, mulch and anchoring of all exposed soil shall occur at the end of each final grading workday.

6.3 Soil Stockpiling

Stockpiles of soil or subsoil shall be mulched for over winter protection with hay or straw at twice the normal rate or with a four-inch layer of erosion control mix. This shall be done within 24 hours of stocking and re-established prior to any rainfall or snowfall.



6.4 Seeding

Between the dates of October 15th and April 1st, loam or seed shall not be required. During periods of above freezing temperatures finished areas shall be fine graded and either protected with mulch or temporarily seeded and mulched until such time as the final treatment can be applied. If the date is after November 1st and if the exposed area has not been loamed, final grading with a uniform surface, then the area may be dormant seeded at a rate of 3 times higher than specified for permanent seed and then mulched.

Dormant seeding may be placed prior to the placement of mulch or erosion control blankets. If dormant seeding is used for the site, all disturbed areas shall receive 4" of loam and seed at an application rate of 5 lbs/1,000 s.f. All areas seeded during the winter shall be inspected in the spring for adequate catch. All areas insufficiently vegetated (less than 75% catch) shall be revegetated by replacing loam, seed and mulch. If dormant seeding is not used for the site, all disturbed areas shall be revegetated in the spring.

6.5 Over winter stabilization of disturbed soils

By September 15th, all disturbed soils on areas having a slope less than 15% shall be seeded and mulched. If the disturbed areas are not stabilized by this date, then one of the following actions shall be taken to stabilize the soil for late fall and winter:

- Stabilize the soil with temporary vegetation – By October 1st, seed the disturbed soil with winter rye at a seeding rate of 3lbs per 1,000 s.f., lightly mulch the seeded soil with hay or straw at 75 lbs per 1,000 s.f., and anchor the mulch with plastic netting. Monitor growth of the rye over the next 30 days. If the rye fails to grow at least three inches or fails to cover at least 75% of the disturbed soil before November 1st, then mulch the area for over-winter protection.
- Stabilize the soil with sod – Stabilize the disturbed soil with properly installed sod by October 1st. Proper installation includes pinning the sod onto the soil with wire pins, rolling the sod to guarantee contact between the sod and underlying soil, and watering the sod to promote root growth into the disturbed soil.
- Stabilize the soil with mulch – By November 15th, mulch the disturbed soil by spreading hay or straw at a rate of at least 150 lbs per 1,000 s.f. on the area so that no soil is visible through the mulch. Immediately after applying the mulch, anchor the mulch with plastic netting to prevent wind from moving the mulch off the disturbed soil.



6.6 Over winter stabilization of disturbed slopes

All stone-covered slopes shall be constructed and stabilized by November 15th. All slopes to be vegetated shall be seeded and mulched by September 1st. A slope is considered a grade greater than 15%. If a slope to be vegetated is not stabilized by September 1st, then one of the following actions shall be taken to stabilize the slope for late fall and winter:

- Stabilize the soil with temporary vegetation and erosion control mats – By October 1st the disturbed slope shall be seeded with winter rye at a seeding rate of 3 lbs per 1,000 s.f. and then install erosion control mats or anchored mulch over the seeding. If the rye fails to grow at least three inches or fails to cover at least 75% of the slope by November 1st, then the contractor shall cover the slope with a layer of erosion control mix or with stone riprap.
- Stabilize the soil with sod – The disturbed slope shall be stabilized with properly installed sod by October 1st. Proper installation includes the contractor pinning the sod onto the slope with wire pins, rolling the sod to guarantee contact between the sod and underlying soil, and watering the sod to promote root growth into the disturbed soil. The contractor shall not use late-season sod installation to stabilize slopes having a grade greater than 3H:1V or having groundwater seeps on the slope face.
- Stabilize the soil with erosion control mix – Erosion control mix shall be properly installed by November 15th. The contractor shall not use erosion control mix to stabilize slopes having grades greater than 2H:1V or having groundwater seeps on the slope face.
- Stabilize the soil with stone riprap – Place a layer of stone riprap on the slope by November 15th. A registered professional engineer shall be hired to determine the stone size needed for stability on the slope and to design a filter layer for underneath the riprap.



7.0 INSPECTION AND MAINTENANCE

The Contractor has a responsibility for complying with the Erosion and Sedimentation Report/Plan, including control of fugitive dust. The Contractor shall be responsible for any monetary penalties resulting from failure to comply with these standards. Contractor to inspect after a rainfall event, and at least monthly and shall use the City's ESC inspection form.

8.0 IMPLEMENTATION SCHEDULE

The following implementation sequence is intended to maximize the effectiveness of the above described erosion control measures. Contractors should avoid overexposing disturbed areas and limit the amount of stabilization area.

1. Install perimeter silt fence or erosion control berm and construction entrance.
2. Install all other erosion control devices as necessary throughout the remainder of this schedule.
3. Pave any areas that were disturbed during construction.
4. Loam, lime, fertilize, seed and mulch disturbed areas and complete all landscaping.
5. Once the site is stabilized and 90% catch of vegetation has been obtained, remove all temporary erosion control measures.
6. Touch up areas without a vigorous catch of grass with loam and seed.
7. Execute proper maintenance of all temporary and permanent erosion control measures throughout the project.

The above implementation sequence should be generally followed by the site contractor. However, the contractor may construct several items simultaneously. The contractor shall submit to the owner a schedule of the completion of the work. If the contractor is to commence the construction of more than one item above, they shall limit the amount of exposed area to those areas in which work is expected to be undertaken during the following 30 days.

The contractor shall revegetate disturbed areas as rapidly as possible. All areas shall be permanently stabilized within seven (7) days of final grading or before a storm event. The contractor shall incorporate planned inlets and drainage systems as early as possible into the construction phase.



9.0 CONCLUSION

The above erosion control narrative is intended to minimize the development impact by implementing temporary and permanent erosion control measures. The contractor shall also refer to the Maine Erosion and Sediment Control BMP manual for additional information.

10.0 ATTACHMENTS

- Temporary Seeding Plan
- Permanent Seeding Plan
- Housekeeping Plan



TEMPORARY SEEDING PLAN

Site Preparation

The seeded areas shall be feasibly graded out to provide the use of equipment for seedbed preparation, seeding, mulch application, and mulch anchoring. If necessary, the site may require additional temporary erosion control measures outlined in the Erosion Control report.

Seedbed Preparation

Fertilizer shall be applied to the site at a rate of 13.8 pounds per 1,000 square feet. The composition of the fertilizer shall be 10-10-10 (N-P₂O₅-K₂O) or equivalent.

Limestone shall be applied to the site at a rate of 138 pounds per 1,000 square feet.

Seeding

The composition and amount of temporary seed applied to a site shall be determined by the following table:

Seed	Pounds / 1,000 S.F.	Recommended Seeding Dates
Winter Rye	2.57	Aug-15 to Oct-1
Oats	1.84	Apr-1 to Jul-1 Aug-15 to Sep-15
Annual Ryegrass	0.92	Apr-1 to Jul-1
Sudangrass	0.92	May-15 to Aug-15
Perennial	0.92	Aug-15 to Sep-15

Mulching

Mulch shall be applied at a rate of 70 lbs – 90 lbs per 1,000 square feet. The mulch shall be installed at a minimum depth of 4 inches. The seeded area shall be mulched immediately after seed is applied. Mulching during the winter season shall be double the normal amount.

Conclusion

Please refer to the Maine Erosion and Sediment Control BMP manual for additional information pertaining to temporary seeding and mulching.



PERMANENT SEEDING PLAN

Site Preparation

The seeded areas shall be feasibly graded out to provide the use of equipment for seedbed preparation, seeding, mulch application, and mulch anchoring. If necessary, the site may require additional temporary erosion control measures outlined in the Erosion Control report.

Seedbed Preparation

Fertilizer shall be applied to the site at a rate of 13.8 pounds per 1,000 square feet. The composition of the fertilizer shall be 10-10-10 (N-P₂O₅-K₂O) or equivalent.

Limestone shall be applied to the site at a rate of 138 pounds per 1,000 square feet.

Seeding

The composition and amount of permanent seed applied to a site shall be determined by the following table:

Seed	Pounds / 1,000 S.F.
Kentucky Bluegrass	0.46
Creeping Red Fescue	0.46
Perennial Ryegrass	0.11
Total	1.03

Mulching

Mulch shall be applied at a rate of 70 lbs – 90 lbs per 1,000 square feet. The mulch shall be installed at a minimum depth of 4 inches. The seeded area shall be mulched immediately after seed is applied. Mulching during the winter season shall be double the normal amount.

Recommendations

Permanent seeding is recommended to be completed in the spring. Later summer seeding is allowed if completed prior to September 1st. If seeding cannot be accomplished during the periods recommended for permanent seeding, then the contractor shall perform temporary seeding per the temporary seeding plan.

Conclusion

Please refer to the Maine Erosion and Sediment Control BMP manual for additional information pertaining to permanent seeding and mulching.



HOUSEKEEPING PLAN

The following housekeeping plan has is developed in accordance with Maine DEP Chapter 500 Stormwater Management standards. For additional information, reference Appendix C of Chapter 500.

1. **Spill prevention.** Controls must be used to prevent pollutants from construction and waste materials stored on site to enter stormwater, which includes storage practices to minimize exposure of the materials to stormwater. The site contractor or operator must develop, and implement as necessary, appropriate spill prevention, containment, and response planning measures.

NOTE: Any spill or release of toxic or hazardous substances must be reported to the Department. For oil spills, call 1-800-482-0777 which is available 24 hours a day. For spills of toxic or hazardous material, call 1-800-452-4664 which is available 24 hours a day. For more information, visit the Department's website at: <http://www.maine.gov/dep/spills/emergspillresp/>

2. **Groundwater protection.** During construction, liquid petroleum products and other hazardous materials with the potential to contaminate groundwater may not be stored or handled in areas of the site draining to an infiltration area. An "infiltration area" is any area of the site that by design or as a result of soils, topography and other relevant factors accumulates runoff that infiltrates into the soil. Dikes, berms, sumps, and other forms of 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. Any project proposing infiltration of stormwater must provide adequate pre-treatment of stormwater prior to discharge of stormwater to the infiltration area, or provide for treatment within the infiltration area, in order to prevent the accumulation of fines, reduction in infiltration rate, and consequent flooding and destabilization.

See Chapter 500 Appendix D for license by rule standards for infiltration of stormwater.

NOTE: Lack of appropriate pollutant removal best management practices (BMPs) may result in violations of the groundwater quality standard established by 38 M.R.S.A. §465-C(1).

3. **Fugitive sediment and dust.** Actions must be taken to ensure that activities do not result in noticeable erosion of soils or fugitive dust emissions during or after construction. Oil may not be used for dust control, but other water additives may be considered as needed. A stabilized construction entrance (SCE) should be included to minimize tracking of mud and sediment. If off-site tracking occurs, public roads should be swept immediately and no less than once a week and prior to significant storm events. Operations during dry months, that experience fugitive dust problems, should wet down unpaved access roads once a week or more frequently as needed with a water additive to suppress fugitive sediment and dust.



NOTE: Dewatering a stream without a permit from the Department may violate state water quality standards and the *Natural Resources Protection Act*.

4. **Debris and other materials.** Minimize the exposure of construction debris, building and landscaping materials, trash, fertilizers, pesticides, herbicides, detergents, sanitary waste and other materials to precipitation and stormwater runoff. These materials must be prevented from becoming a pollutant source.

NOTE: To prevent these materials from becoming a source of pollutants, construction and post-construction activities related to a project may be required to comply with applicable provision of rules related to solid, universal, and hazardous waste, including, but not limited to, the Maine solid waste and hazardous waste management rules; Maine hazardous waste management rules; Maine oil conveyance and storage rules; and Maine pesticide requirements.

5. **Excavation de-watering.** Excavation de-watering is the removal of water from trenches, foundations, ponds, and other areas within the construction area that retain water after excavation. In most cases the collected water is heavily silted and hinders correct and safe construction practices. The collected water removed from the ponded area, either through gravity or pumping, must be spread through natural wooded buffers or removed to areas that are specifically designed to collect the maximum amount of sediment possible, like a sedimentation basin. Avoid allowing the water to flow over disturbed areas of the site. Equivalent measures may be taken if approved by the Department.

NOTE: Dewatering controls are discussed in the “Maine Erosion and Sediment Control BMPs, Maine Department of Environmental Protection.”

6. **Authorized Non-stormwater discharges.** Identify and prevent contamination by non-stormwater discharges. Where allowed non-stormwater discharges exist, they must be identified and steps should be taken to ensure the implementation of appropriate pollution prevention measures for the non-stormwater component(s) of the discharge. Authorized non-stormwater discharges are:

- (a) Discharges from firefighting activity;
- (b) Fire hydrant flushings;
- (c) Vehicle washwater if detergents are not used and washing is limited to the exterior of vehicles (engine, undercarriage and transmission washing is prohibited);
- (d) Dust control runoff in accordance with permit conditions and Section 3, above;
- (e) Routine external building washdown, not including surface paint removal, that does not involve detergents;



- (f) Pavement washwater (where spills/leaks of toxic or hazardous materials have not occurred, unless all spilled material had been removed) if detergents are not used;
- (g) Uncontaminated air conditioning or compressor condensate;
- (h) Uncontaminated groundwater or spring water;
- (i) Foundation or footer drain-water where flows are not contaminated;
- (j) Uncontaminated excavation dewatering (see requirements in Section 5, above);
- (k) Potable water sources including waterline flushings; and
- (l) Landscape irrigation.

7. Unauthorized non-stormwater discharges. The Department's approval under Chapter 500 does not authorize a discharge that is mixed with a source of non-stormwater, other than those discharges in compliance with Section 6, above. Specifically, the Department's approval does not authorize discharges of the following:

- (a) Wastewater from the washout or cleanout of concrete, stucco, paint, form release oils, curing compounds or other construction materials;
- (b) Fuels, oils or other pollutants used in vehicle and equipment operation and maintenance;
- (c) Soaps, solvents, or detergents used in vehicle and equipment washing; and
- (d) Toxic or hazardous substances from a spill or other release.

(8) Additional requirements. Additional requirements may be applied on a site-specific basis.



Hydrologic Soil Group—Cumberland County and Part of Oxford County, Maine



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

Soil Rating Polygons

 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Lines

 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Points

 A
 A/D
 B
 B/D

 C
 C/D
 D
 Not rated or not available

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 17, Jun 5, 2020

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.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
HIB	Hinckley loamy sand, 3 to 8 percent slopes	A	8.5	100.0%
Totals for Area of Interest			8.5	100.0%

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

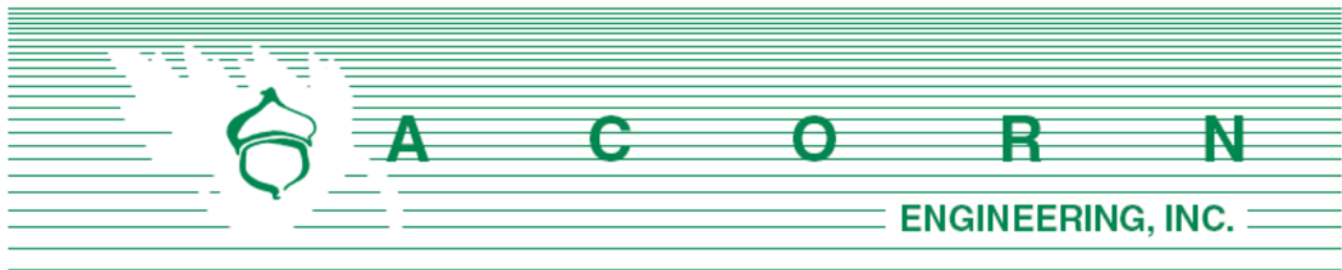
If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher



Chief Robert Thompson
 City of Portland Fire Department
 380 Congress St.
 Portland, ME 04101

September 10, 2020

Subject: 120 and 148 State Street – Mercy Hospital Redevelopment
 Fire Department Checklist

On behalf of NewHeight Redfern, LLC, the design team is pleased to respond to the Portland Fire Department Site Review Checklist.

1. Name, address, telephone number of Applicant:

NewHeight Redfern, LLC
 erin@newheightgroup.com
 (207) 720-0181

2. Name address, telephone number of Architect:

Ryan Senatore Architecture
 Ryan Senatore
 ryan@senatorearchitecture.com
 (207) 650-6414

3. Proposed uses of any structures [NFPA and IBC classification]

Please refer to attached code review

4. Square footage of all structures

The existing parking lot, landscaping & brick patio area are to be removed to facilitate the proposed structure with the following floor areas:

Mercy Building		
Basement	29,007	sf
Ground Floor	29,313	sf
1 st Floor	27,935	sf
2 nd Floor	23,885	sf
3 rd -5 th Floors	22,300	sf
6 th Floor	12,579	sf
Total	189,619	sf

Morrison House		
1 st Floor	2,407	sf
2 nd Floor	2,434	sf
3 rd Floor	1,482	sf
Total	6,323	sf

5. Elevation of all structures

Based upon the average grade plane defined by the IBC, the existing building height is 86 feet. For additional information, please refer to the building elevations provided by the Architect.

6. Proposed fire protection of all structures

The building shall have NFPA 13 fire protection system (wet) and standpipes in the stairwells to comply with NFPA 14 and Local Authority.

7. Hydrant locations

One existing hydrant is located in front of the building on State Street, two existing hydrants are located on Spring Street and one existing hydrant is located on Winter Street, approximately 44 feet from the southwest property corner. Once received, hydrant flow data from the Portland Water District may be made available to the Fire Department upon request.

8. Water main size and location

There are existing mains located on Winter Street, Spring Street, and State Street. The redeveloped Mercy Hospital building proposes to continue to utilize the existing services currently servicing the building. No new services to the existing building are proposed at this time. The two (2) new residential buildings (Buildings A-1 and A-2) along Winter Street are proposing to tap two different 6" fire water service lines and two different 2" domestic water service lines for a total of four different connections off of the existing main on Winter Street.

9. Access to all structures [min. 2 sides]

Access to the proposed structure is provided directly on the northeast along State Street, southeast along Spring Street and southwest within the proposed parking area.

10. The Architect has provided code summaries (attached).

NFPA 1 – Chapter 18 Fire Department Access and Water Supply

18.2 Fire Department Access:

The portion of the parcel to be developed has frontage along both State Street, Spring Street and Winter Street, with the following public street widths available:

- State Street (Northeast): 99 feet
- Spring Street (Southeast): 50 feet
- Winter Street (Southwest): 40 feet

Per NFPA 1 – Chapter 18.2.3.3.1, there will be public street access within 50 feet of at least one exterior door. Per NFPA 1 – Chapter 18.2.3.2.2.1, all first story floors shall be located not more than 450 feet from a Fire Department access road.



City of Portland Technical Manual – Section 3 Public Safety

3.4.1 Every dead-end roadway more than one hundred fifty (150') feet in length shall provide a turnaround at the closed end. Turnarounds shall be designed to facilitate future street connectivity and shall always be designed to the right (refer to Figure I-5).

Response: Not applicable, the proposed parking area will have two-way access off Spring Street, with an emergency access lane accessed from Winter Street. The fire access lane shall have a minimum clear width of 16 ft without obstructions. The fire access lane has been designed to allow a ladder truck to circulate from Winter St into the interior parking drive aisle and vice versa. The curb along Winter St will be an angled mountable curb as used elsewhere throughout the City.

3.4.2 Where possible, developments shall provide access for Fire Department vehicles to at least two sides of all structures. Access may be from streets, access roads, emergency access lanes, or parking areas.

Response: As outlined in #9 above, the parcel's geometry allows for at least two sides of access along public streets (State Street and Spring Street), as well as access to the other two side of the building within the parking and loading dock areas. In addition, the building has an existing a sprinkler system.

3.4.3 Building setbacks, where required by zoning, shall be adequate to allow for emergency vehicle access and related emergency response activities and shall be evaluated based on the following factors:

- *Building Height.*
- *Building Occupancy.*
- *Construction Type.*
- *Impediments to the Structures.*
- *Safety Features Provided.*

Response: The proposed development provides for safe and efficient access along the public street for emergency vehicles.

3.4.4. Fire Dept. access roads shall extend to within 50' of an exterior door providing access to the interior of the structure.

Response: The existing buildings have exterior doors within 50' of a Fire Department access route, along both State Street and Spring Street. Access is also provided from the parking lot and loading dock areas.

3.4.5. Site access shall provide a minimum of nine (9) feet clearance height to accommodate ambulance access.

Response: There are no proposed overhead obstructions between the street and proposed building, meeting the required 9-foot clearance height minimum.

3.4.6. Elevators shall be sized to accommodate an 80 x 24-inch stretcher.

Response: See Section O: Architectural Design Narrative



3.4.7. All structures are required to display the assigned street number. Numbers shall be clearly visible from the public right of way.

Response: The applicant will work with the City's Public Works Division to assign street addresses and numbering to meet City Standards.

Thank you for your review. Please let me know if you have any additional questions or comments.

Sincerely,



William H. Savage, P.E.
Principal
Acorn Engineering, Inc.



Code Review

8/28/2020

Mixed Use Apartment Building - Mercy Hospital Renovation, Portland, Maine

IBC 2015

NFPA 101 2018

7 floors above grade

502.1

Sprinklers

NFPA 13

NFPA 13

Fire Alarm

Monitored Fire Alarm Required (include alarm device on deck)

Monitored Fire Alarm Required

Smoke and CO Detectors

Smoke and CO detectors required

Smoke and CO detectors required

Occupant Load

T 1004.1.1

7.3.1.2

Basement = 25,879 Storage (500 gsf/oc) = 52

Basement = 25,879 Storage (500 gsf/oc) = 52

Basement Circulation = 3251 Storage (500 gsf/oc) = 7

Basement Circulation = 3251 Storage (500 gsf/oc) = 7

Ground Floor = 15,330 Storage (500 gsf/oc) = 31

Ground Floor = 15,330 Storage (500 gsf/oc) = 31

Ground Floor = 3,849 Clinic (100 gsf/oc) = 39

Ground Floor = 3,849 Clinic (100 gsf/oc) = 39

Ground Floor Circulation = 3396 Storage (200 gsf/oc) = 17

Ground Floor Circulation = 3396 Storage (200 gsf/oc) = 17

Ground Floor = 6,738 Residential (200 gsf/oc) = 34

Ground Floor = 6,738 Residential (200 gsf/oc) = 34

Floor 1 = 22,861 Residential (200 gsf/oc) = 115

Floor 1 = 22,861 Residential (200 gsf/oc) = 115

Floor 1 = 5,074 Commercial (50 gsf/oc) = 102

Floor 1 = 5,074 Commercial (50 gsf/oc) = 102

Floor 2 = 23,885 Residential (200 gsf/oc) = 120

Floor 2 = 23,885 Residential (200 gsf/oc) = 120

Floor 3 = 22,300 Residential (200 gsf/oc) = 112

Floor 3 = 22,300 Residential (200 gsf/oc) = 112

Floor 4 = 22,300 Residential (200 gsf/oc) = 112

Floor 4 = 22,300 Residential (200 gsf/oc) = 112

Floor 5 = 22,300 Residential (200 gsf/oc) = 112

Floor 5 = 22,300 Residential (200 gsf/oc) = 112

Floor 6 = 12,579 Residential (200 gsf/oc) = 63

Floor 6 = 12,579 Residential (200 gsf/oc) = 63

Floor 6 = 1,653 Residential (roof deck 15 gsf/oc) = 111

Floor 6 = 1,653 Residential (roof deck 15 gsf/oc) = 111

Total Building Occupant Load = 1,027**Total Building Occupant Load = 1,027**

Use Group(s)

310.1

Apartments (R2)

30.1

Apartment Building

Assembly

Assembly Under 300 Occupants

M - Retail

Mercantile C (under 3,000 sf)

			306.1	S1 - Storage (moderate hazard)	42.1	Storage - Ordinary Hazard
Constr. Type		T 503		1B - non-combustible protected		II (222) non-combustible protected
Building Height		T 504.3		Sprinkler NFPA13 = 180' max.		
	403.1			Building is NOT a High-Rise as the highest occupied floor is NOT		
				More than 75' above the lowest level of Fire Department Access		
Number of Stories		T 504.4		R2 = 12Stories with sprinkler above podium		
				A2 = 12 Stories with sprinkler		
				M = 12 Stories with sprinkler		
				S1 = 12 Stories with sprinkler		
Building Area		T 506.2		Sprinkler 13 = Unlimited sf max per floor all uses		
Building Elements 1B		T 601		2 hr Structural Frame	30.1.6	Apartments -No Minimum Construction requirements
		T 602		2 hr Bearing Walls Exterior (sep. dist >= 10')	42.1.6	Storage - No Min requirements
		T 602		2 hr Bearing Walls Exterior (sep. dist <10')	37.1.6	Storage - No Min requirements
		T 601		2 hr Bearing Walls Interior	12.1.6	Assembly permitted for any occ. load over 5 stories
		T 601		0 hr Non-Bearing Walls Interior		
		T 602		1 hr Non-Bearing Walls Exterior (sep. dist >= 10')		
		T 602		1 hr Non-Bearing Walls Exterior (sep. dist <10')		
		705.5		Exterior Wall with >10' sep. needs rating only from inside		
		T 601		2 hr Floor Construction		
		T 601		1 hr Roof Construction		
Separations						
				A2 and R2 sprinkled = 1hr	T6.1.14.4.1	Assembly and Apartments with Sprinkler = 1 hr
				S1 and R2 sprinkled = 1 hr		Mercantile and Apartments with Sprinkler = 1hr
				A2 and S1 sprinkled = 0 hr		Assembly and Mercantile with Sprinkler = 1 hr
				A2 and M sprinkled = 1 hr		Mercantile and Storage Ordinary with Sprinkler = 1hr
				M and S2 sprinkled = 1 hr		
		708		2 hr Mechanical Shaft > 4 stories		

			1022.1	2 hr Stair Shaft > 4 stories		
			709.1	1 hr Between Dwelling Units (revised below)	30.3.7.2	1/2 hr vertical and horizontal sep. between dwellings
			1018.1	1/2 hr Corridor	30.2.4.4.7	1 hr corridor
			508.2.5	1 hr Boiler Room	T 31.3.2.1.1	0 hr Boiler Room w/sprinklers
			508.2.5	1 hr Trash Room	T 31.3.2.1.1	0 hr Trash Room w/sprinklers
			508.2.5	1 hr Storage Room	T 31.3.2.1.1	1 hr Storage Room w/sprinklers
			508.2.5	1 hr Laundry Room	T 31.3.2.1.1	0 hr Laundry Room w/sprinklers
			715.4	90 minute Stairwell Doors (2hr shaft)		
			715.4	20 minute Apartment Entry Doors (1/2 hr corridor wall)	30.3.6.2.1	20 minute Apartment Entry Doors
Distances and Exits						
			1006.2.1	M uses, sprinkled, under 49 occupants and less than 75' travel		
				Distance to exit, can have a single means of egress		
			1017.2	250' Travel Distance to exits with Sprinklers	30.2.6.2.3	200' Travel distance from apt. door to exit
			1006.2.1	125' Common Path of Travel for R use (75' for M and A)	30.2.5.3.2	50' Common Path of Travel
			1020.4	50' Dead End (20' in A use)	30.2.5.4	50' Dead End
					30.2.6.1.2	125' Travel Distance within Dwelling to Corridor
			403.6.2	Elevator as Means of Egress - required as building is over 4 stories		
				Generator required as Elevator is a MOE		
			3006.2	NOT required as building is not a High-rise and is sprinkled		
Unprotected Openings			T 705.8	15% when exterior wall sep. dist. is 3'>5'		
			T 705.8	25% when exterior wall sep. dist. is 5'>10'		
			T 705.8	45% when exterior wall sep. dist. is 10'>15'		
			T 705.8	75% when exterior wall sep. dist. is 15'>20'		
			T 705.8	Unlimited when exterior wall sep. dist. is 25'>30'		
			T 705.8	Unlimited when exterior wall sep. dist. is >30'		

Parapets		705.11 (ex 6)	Parapets are NOT required when the wall is allowed 25% or more		
			Unprotected openings		
Egress Windows		1030.1	NOT Required at the building has two means of egress		
Elevator Lobbies		3006.2	NOT required as building is not a High-rise and is sprinkled		
Elevator as a MOE			Required and needs back up generator as building is over 4 stories		
Egress Stairs		1009.1	Occ. Load >50 = 44" min width		
		1003.3	Handrails can protrude into stair 4.5" max	7.2.2.2.1.2	Handrails can protrude into stair 4.5" max
		1005.2	Door Swings may not reduce egress width by > 1/2		
		1009.2	80" min headroom	7.2.2.2.1.1(a)	6'-8" min. headroom
		1009.3	7" max. riser	7.2.2.2.1.1(a)	8" max. riser
		1009.3	11" min Tread depth	7.2.2.2.1.1(a)	9" min. tread
		1009.6	12' max. total rise between floors or landings	7.2.2.2.1.1(a)	12' max. height between landings
Ramps		1010.2	1:12 (8%) Max slope	7.2.5.2(a)	1:8 max. slope
		1010.6	60" long landings at top and bottom		
		1010.6	2% max slope of landings	7.2.5.2(a)	1:48 max. cross slope
		1010.8	>6" rise must have handrails on both sides of ramp		
Egress Corridors		1018.2	44" min. when Occ. > 50		
		1018.2	24" min. at service corridors to mechanical equipment		
Sound		1207.2	STC > 50 at walls and floors/ceilings		
		1207.3	IIC > 50 at walls and floors/ceilings		
Energy IECC 2009		T 402.1.1	0.35 Fenestration U-Factor		
Zone 6			R-49 Ceiling		
Residential			R-20 or 13+5c Framed wall		
			R-30 Floor		
			R-19 or 15c Basement wall		
			R-10 to 4ft Slab		

Accessibility			IBC 2015 Chapter 11 - 2% of units to be ANSI TYPE-A, rest are TYPE-B			
			Fair Housing Act Applies			
			Maine Human Rights Act Applies			
			ADAAG applies to Public Spaces			
Plumbing		Retail	Suites under 39 occupants have single unisex bathroom			
			TBD Based on final retail tenant layouts			

CITY OF PORTLAND WASTEWATER CAPACITY APPLICATION

Portland Dept. of Public Works -
Water Resources
212 Canco Road
Portland, Maine 04103



Bradley Roland, P.E.
Water Resources Division
Department of Public Works
212 Canco Road
Portland, ME 04103

Date: _____

1. Please, Submit Utility, Site, and Locus Plans.

Site Address: 120 and 148 State Street

Chart Block Lot Number: 45/C/7 and 45/C/6

Proposed Use: Mixed-Use - residential, commercial, commercial, medical clinic

Previous Use: Hospital

Existing Sanitary Flows: 18,169 GPD

Existing Process Flows: 0 GPD

Description and location of City sewer that is to receive the proposed building sewer lateral.

State Street (24" RCP combined), Spring Street (18" Brick combined),

and Winter Street (12" Brick combined)

Site Category | Commercial (see part 4 below) ☒
Industrial (complete part 5 below) ☐
Governmental ☐
Residential ☒
Other (specify) ☒

Clearly, indicate the proposed connections, on the submitted plans.

2. Please, Submit Contact Information.

City Planner's Name: TBD Phone: 207-874-8719

Owner/Developer Name: NewHeight Redfern, LLC

Owner/Developer Address: 217 Commercial Street, Suite 205, Portland, ME 04101

Phone: 207-720-0181 Fax: _____ E-mail: erin@newheightgroup.com

Engineering Consultant Name: Acorn Engineering

Engineering Consultant Address: 65 Hanover Street, Portland, ME 04010

Phone: 207-775-2655 Fax: _____ E-mail: pheil@acorn-engineering.com

Note: Consultants and Developers should allow +/- 15 days, for capacity status, prior to Planning Board Review.

3. Please, Submit Domestic Wastewater Design Flow Calculations.

Estimated Domestic Wastewater Flow Generated: Net +21,538 gpd (39,707 proposed - 18,169 exist) GPD

Peaking Factor/ Peak Times: Diurnal

Specify the source of design guidelines: (i.e. "Handbook of Subsurface Wastewater Disposal in Maine,"
"Plumbers and Pipe Fitters Calculation Manual," Portland Water District Records, Other (specify)

Handbook of Subsurface Wastewater Disposal in Maine

Note: Please submit calculations showing the derivation of your design flows, either on the following page, in the space provided, or attached, as a separate sheet.

4. Please, Submit External Grease Interceptor Calculations.

Total Drainage Fixture Unit (DFU) Values: N/A
Size of External Grease Interceptor: _____
Retention Time: _____
Peaking Factor/ Peak Times: _____

Note: In determining your restaurant process water flows, and the size of your external grease interceptor, please use The Uniform Plumbing Code. Note: In determining the retention time, sixty (60) minutes is the minimum retention time. Note: Please submit detailed calculations showing the derivation of your restaurant process water design flows, and please submit detailed calculations showing the derivation of the size of your external grease interceptor, either in the space provided below, or attached, as a separate sheet.

5. Please, Submit Industrial Process Wastewater Flow Calculations

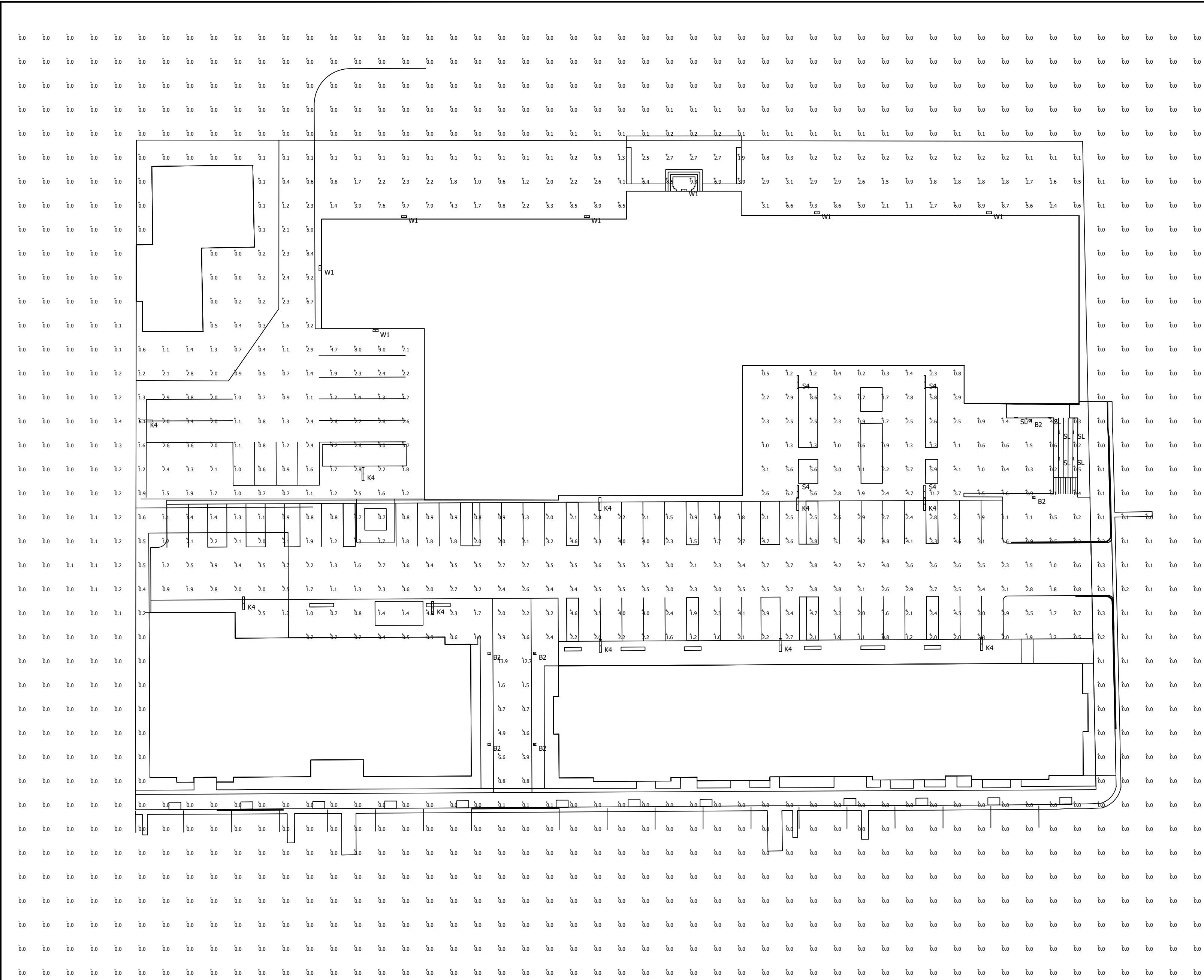
Estimated Industrial Process Wastewater Flows Generated: N/A GPD
Do you currently hold Federal or State discharge permits? Yes _____ No _____
Is the process wastewater termed categorical under CFR 40? Yes _____ No _____
OSHA Standard Industrial Code (SIC): _____
(<http://www.osha.gov/oshstats/sicser.html>)
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.

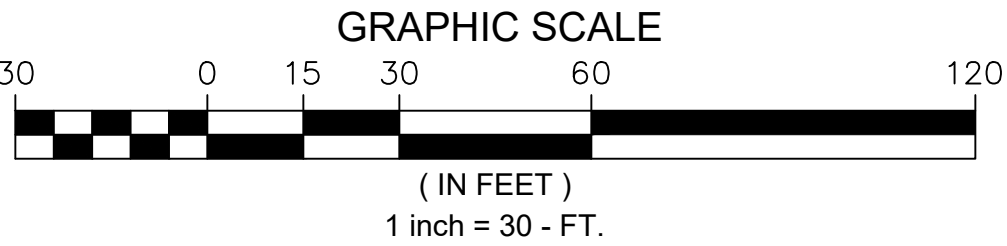
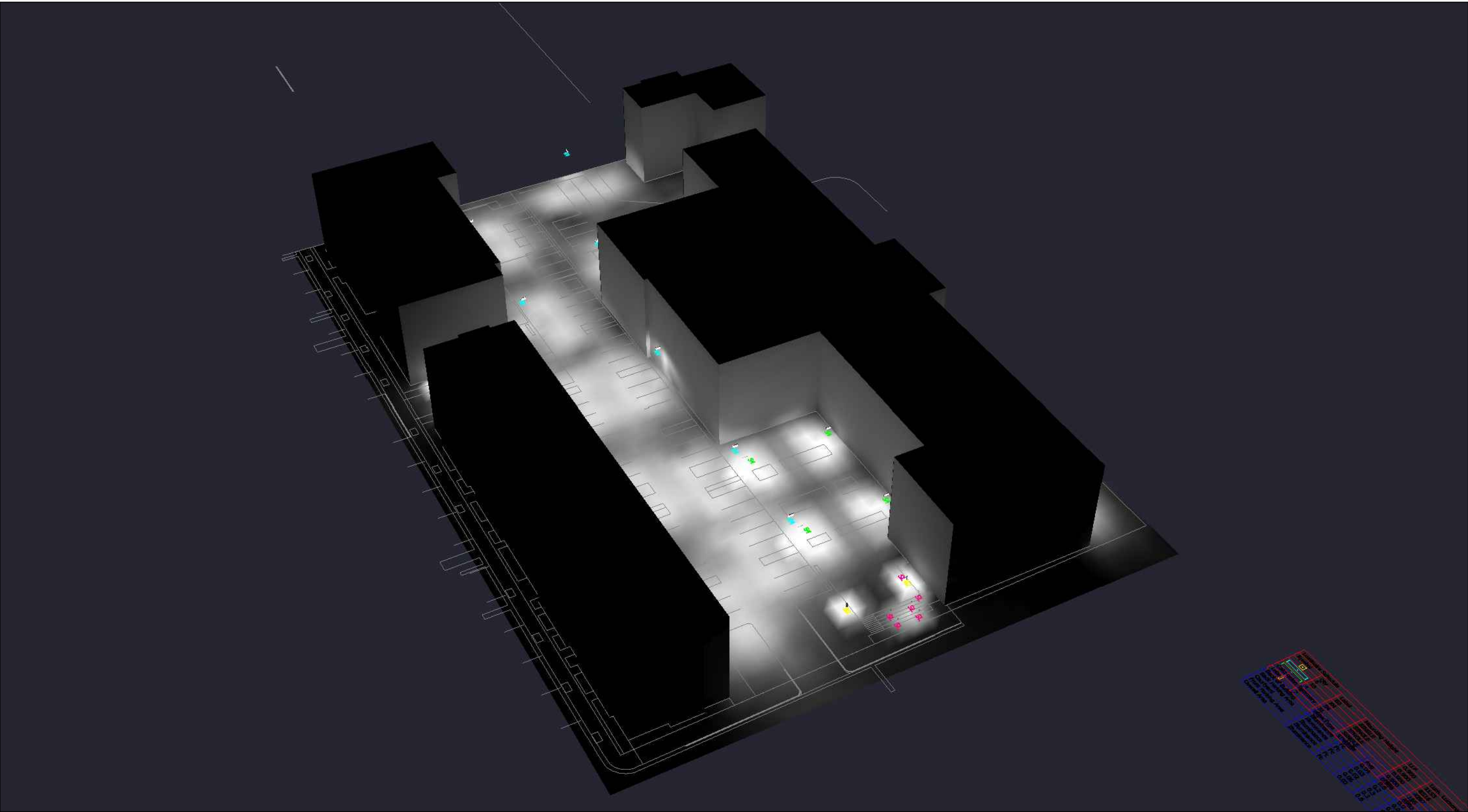
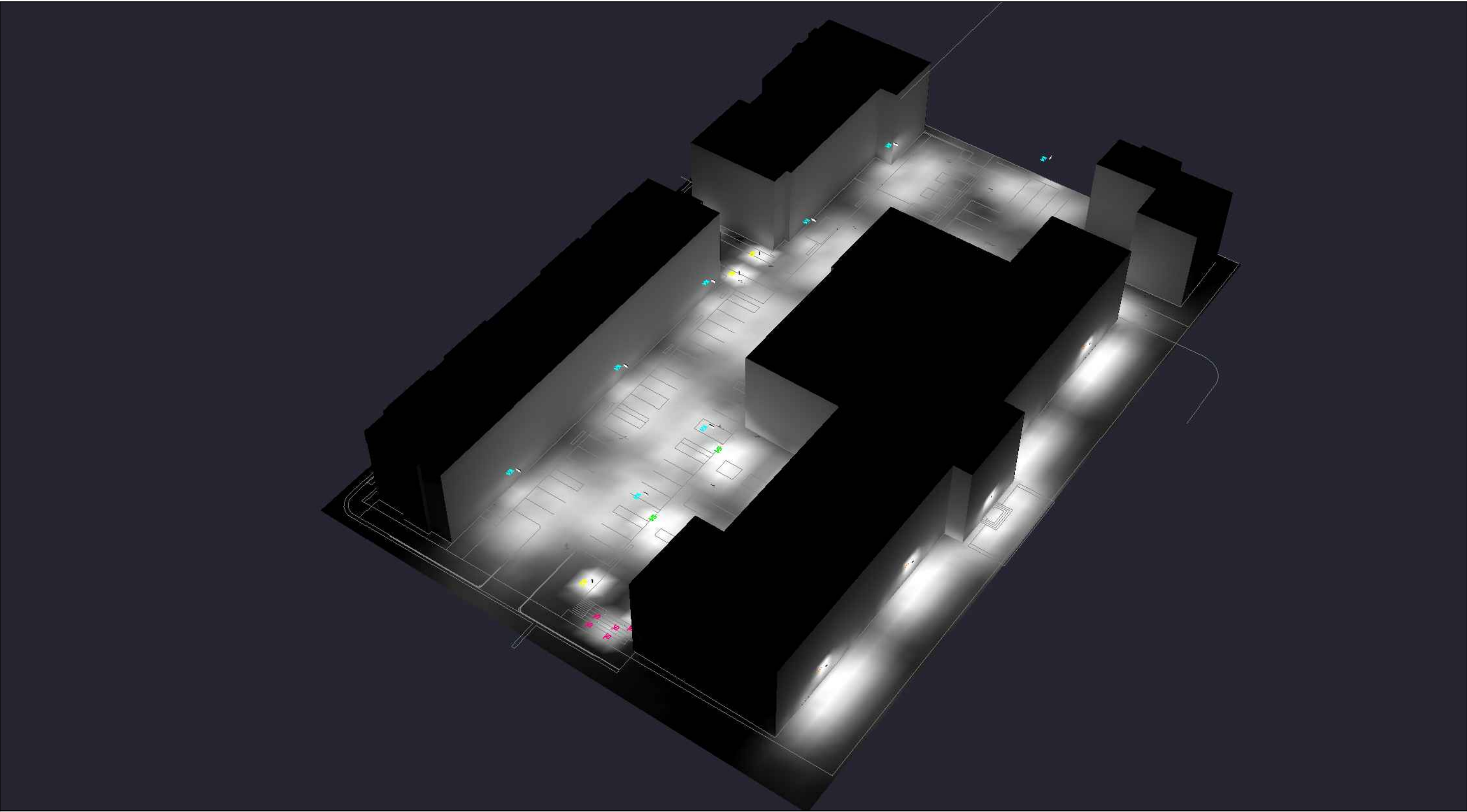
Lighting

Please find attached the photometric plan and cut sheets.



Luminaire Schedule							
Symbol	Qty	Label	Mounting Height	LLF	Lum. Lumens	Lum. Watts	Description
	6	B2	2' - 6" AFG	0.900	2153	30	KB6-Y3-2030
	10	K4	20' - 0" AFG	0.900	8516	90	K5X-T4-MO-9030
	4	S4	10' - 0" AFG	0.900	4297	45	K4X-T4-MO-5030
	6	SL	0' - 9" AFG	0.900	195	10.4	EL807_9L4K_KIT
	7	W1	12' - 0" AFG	0.900	6782	55	WDM-D-48L-55-3K7-2-UNV-WH

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Back of Building	Illuminance	Fc	2.74	9.7	0.1	27.40	97.00
Back Parking Area	Illuminance	Fc	2.46	9.2	0.1	24.60	92.00
Courtyard	Illuminance	Fc	2.91	11.7	0.2	14.55	58.50
Front Parking Area	Illuminance	Fc	2.57	5.1	0.6	4.28	8.50
Overall Area	Illuminance	Fc	0.73	13.9	0.0	N.A.	N.A.



1. THIS LIGHTING DESIGN IS BASED ON LIMITED INFORMATION SUPPLIED BY OTHERS TO HUBBELL LIGHTING. SITE DETAILS PROVIDED HEREON ARE REPRODUCED ONLY AS A VISUALIZATION AID. FIELD DEVIATIONS MAY SIGNIFICANTLY AFFECT PREDICTED PERFORMANCE. PRIOR TO INSTALLATION, CRITICAL SITE INFORMATION (POLE LOCATIONS, ORIENTATION, MOUNTING HEIGHT, ETC.) SHOULD BE COORDINATED WITH THE CONTRACTOR AND/OR SPECIFIER RESPONSIBLE FOR THE PROJECT.

2. LUMINAIRE DATA IS TESTED TO INDUSTRY STANDARDS UNDER LABORATORY CONDITIONS. OPERATING VOLTAGE AND NORMAL MANUFACTURING TOLERANCES OF LAMP, BALLAST, AND LUMINAIRE MAY AFFECT FIELD RESULTS.

3. CONFORMANCE TO FACILITY CODE AND OTHER LOCAL REQUIREMENTS IS THE RESPONSIBILITY OF THE OWNER AND/OR THE OWNER'S REPRESENTATIVE.

TITLE:

MERCY
PORTLAND, ME
SITE PHOTOMETRIC PLAN

REVISED FROM DRAWING NUMBER(S):

R1: 09/21/20
R2: 09/28/20

Hubbell Lighting, Inc.
701 MILLENNIUM BLVD.
GREENVILLE, SC 29607

DN BY:
DHK

REV BY:
DHK

QUOTE:
N/A

DATE:
09/18/20

DATE:
09/21/20

CHK BY:
N/A

SCALE:
AS NOTED

DRAWING / DESIGN NO.:
2026981R2

Page 108



Date: Sep 30, 2020

Swaney Lighting
PO Box 1597
Scarborough ME 04070
Phone: (207) 883-7100
Fax: (207) 885-9606

Job Name
MERCY SITE DESIGN/BUILD
SLA20-46553
ME

Bid Date
Sep 29, 2020

Submittal Date
Sep 30, 2020



Transmittal

Swaney Lighting

PO Box 1597

Scarborough ME 04070

Phone: (207) 883-7100

From: Therese "TC" Freeman X-103

Project **MERCY SITE DESIGN/BUILD**

Quote# SLA20-46553

Location ME

Contact:

ATTACHED WE ARE SENDING YOU 1 COPY OF THE FOLLOWING ITEM:

- | | | |
|-----------------------------------|--|--------|
| ☐ Drawings | ☐ Specifications | Other: |
| ☐ Prints | ☐ Information | |
| ☐ Plans | ☒ Submittals | |

THESE ARE TRANSMITTED FOR:

- | | | |
|--|---|---------------------------------|
| ☐ Prior Approval | ☐ Resubmittal for Approval | ☐ Record |
| ☒ Approval | ☐ Corrections | Bids due on: |
| ☐ Approval as Submitted | ☐ Your Use | Other: |
| ☐ Approval as Noted | ☐ Review and Comment | |

Type	MFG	Part
B2	Architectural Area Lighting	KB6-Y3-2030-**-STND_MNT-BOLTS AHEAD-WIRED120-277V
	Item Note: SPECIFY FINISH	
K4	Architectural Area Lighting	K51-T4-MO-9030-WIRED120-277V- PS520-188-**-
	Item Note: SPECIFY FINISH	
S4	Architectural Area Lighting	K41-T4-MO-5030-WIRED120-277V- PS410-125-**-
	Item Note: SPECIFY FINISH	
SL	KIM	EL807/9L4KUV/**
	Item Note: SPECIFY FINISH	
W1	KIM	WDM/D/48L-55/3K7/2/UNV/**
	Item Note: SPECIFY FINISH	


Kick™ – KB6 Bollard

TYPE

FEATURES

- Sensor and wireless operation
- Field rotatable optics and housing
- Customizable side panels
- 120-277, 347 and 480VAC input
- IDA Dark Sky Approved with clear lenses and 3000K
- True IES distributions
- 3000K, 4000K, 5000K CCT
- Uniformly diffused lens
- 20kV/10kA surge protection
- Integral thermal protection
- IP66



3000K and warmer CCTs only

DIMENSIONS

MODEL	KB6
OVERALL HEIGHT	42" / 1067mm
OVERALL LENGTH	6" / 152mm
OVERALL WIDTH	6" / 152mm
WINDOW HEIGHT	19.9" / 51cm
WINDOW WIDTH	4" / 10cm
WEIGHT	30 lbs./13.6kg

* Housing and optical distribution are independently field rotate-able in 90° increments. Default factory orientations shown above.



FRONT



LEFT



BACK



RIGHT

DISTRIBUTION OUTPUT*

Street Side

House Side

SHIELDING SIDE

A

B

C

D

ORDERING INFORMATION

1	2	3	4	5	6	7
Model	Distribution	Shielding	Light Engine	Controls	Voltage	Fixture Finish

1. MODEL
KB6 6" Square x 42 OAH bollard
2. DISTRIBUTION

Y2 IES Type II, clear lens
Y3 IES Type III, clear lens
 Y4 IES Type IV, clear lens
 Y5 IES Type V, clear lens
 YD Symmetric distribution, diffused lens

3. SHIELDING

Optional, may choose from 1 to 3 sides closed from options A, B, C, D or you may choose HSS option.

A Short side closed
 B Side 90° counterclockwise from short side closed
 C Side 180° counterclockwise from short side closed
 D Side 270° counterclockwise from short side closed
 HSS House side shield²

4. LIGHT ENGINE

2050 5000K CCT, 29 watts

2040 4000K CCT, 29 watts

2030 3000K CCT, 29 watts

1050 5000K CCT, 14 watts

1040 4000K CCT, 14 watts

1030 3000K CCT, 14 watts

560nm monochromatic amber and or custom lumen package available by request. ¹

5. CONTROL

May choose one

SC-MW Motion Sensor

WIR wiScape Connectivity

BPC Button Type Photocell

6. VOLTAGE
120-277VAC input or may choose one.

347 347VAC input

480 480VAC input

7. FIXTURE FINISH**Specify Std. finish**

AGN Antique Green
 BL Black
 BLT Matte Black
 CRT Corten
 DB Dark Bronze
 DGN Dark Green
 GT Graphite
 LG Light Grey
 MAL Matte Aluminum
 MDB Bronze Metallic
 MG Medium Grey
 TT Titanium
 WH Arctic White
 WDB Weathered Bronze
 VBU Verde Blue

Premium Color

SHK Shamrock
 SPP Salt and Pepper
 SFM Seafoam
 WCP Weathered Copper
 RAL RAL 4 digit Color
 CUSTOM Custom Color

¹ Contact factory² House side shield assembles to optical lens and is independent of outer housing.

ARCHITECTURAL AREA LIGHTING
 17760 Rowland Street | City of Industry | CA 91748
 P 626.968.5666 | F 626.369.2695 | www.aal.net
 Copyright © 2016 November 1, 2017 11:21 AM

JOB

TYPE

NOTES

| 1 |



Job Name:
MERCY SITE DESIGN/BUILD

Catalog Number:
KB6-Y3-2030-**-STND_MNT-BOLTS
AHEAD-WIRED120-277V
Notes: SPECIFY FINISH

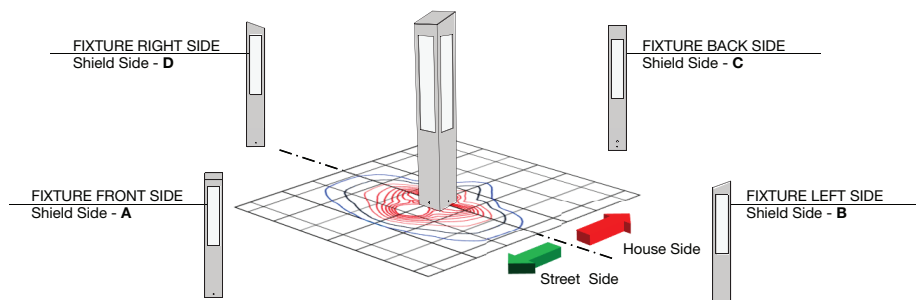
Type:

B2

SLA20-46553

Kick™ – KB6 Bollard

TYPE

**LUMINAIRE PERFORMANCE**

Configuration				Distribution	Optional Shielding		Ordering Code														
Watts	Output	Closed Sides	IES Type		Shielding	Equivalent*	Bright White (5000K)				Neutral White (4000K)				Warm White (3000K)						
							Delivered Lumens	Efficacy (Lm/W)	BUG Rating		Delivered Lumens	Efficacy (Lm/W)	BUG Rating		Delivered Lumens	Efficacy (Lm/W)	BUG Rating				
									B	U			G	B			U	G	B	U	G
							2050				2040				2030						
30	Asymmetric	(none)	Type II	Y2	(none)	-	2451	82	1	0	2	2302	77	1	0	1	2289	76	1	0	1
			TYPE III	Y3	(none)	-	2305	77	1	0	1	2165	72	1	0	1	2153	72	1	0	1
			TYPE IV	Y4	(none)	-	2257	75	1	0	2	2120	71	1	0	2	2108	70	1	0	2
			Type II	Y2	C	HSS	2271	76	1	0	2	2221	74	1	0	1	2199	73	1	0	2
		1 Side	TYPE III	Y3	C	HSS	2107	70	1	0	1	2066	69	1	0	1	2041	68	1	0	1
			TYPE IV	Y4	C	HSS	2107	70	1	0	2	2061	69	1	0	2	2041	68	1	0	2
			-	Y5	C	A / B / D	1699	57	1	0	1	1662	55	1	0	1	1645	55	1	0	1
				YD	C	A / B / D	679	23	0	3	1	685	23	0	3	1	634	21	0	3	1
		2 Sides (adjacent)	-	Y5	BC	AB / CD / AD	1175	39	1	0	1	1149	38	1	0	1	1138	38	1	0	1
			-	YD	BC	AB / CD / AD	457	15	0	3	1	461	15	0	3	1	427	14	0	3	1
		3 Sides (adjacent)	-	Y5	BCD	ABC / ABD / ACD	581	19	0	0	1	568	19	0	0	1	581	19	0	0	1
			-	YD	BCD	ABC / ABD / ACD	111	4	0	0	1	112	4	0	0	1	104	3	0	0	1
	Symmetric	(none)	TYPE V	Y5	(none)	-	2163	72	2	0	1	2188	73	2	0	1	1978	66	2	0	1
				YD	(none)	-	927	31	0	3	1	935	31	0	3	1	866	29	0	3	4
		2 Sides (op-posing)	-	Y5	AC	BD	1110	37	1	0	1	1085	36	1	0	1	1075	36	1	0	1
				YD	AC	BD	456	15.2	0	3	1	460	15	0	3	1	426	14	0	3	1
							1050				1040				1030						
15	Asymmetric	(none)	Type II	Y2	(none)	-	1323	95	1	0	1	1294	92	1	0	1	1281	92	1	0	1
			TYPE III	Y3	(none)	-	1233	88	1	0	1	1204	86	1	0	1	1192	85	1	0	1
			TYPE IV	Y4	(none)	-	1222	87	0	0	1	1195	85	0	0	1	1183	85	0	0	1
			Type II	Y2	C	HSS	1226	88	1	0	1	1199	86	1	0	1	1187	85	1	0	1
		1 Side	TYPE III	Y3	C	HSS	1128	81	0	0	1	1103	79	0	0	1	1092	78	0	0	1
			TYPE IV	Y4	C	HSS	1141	82	0	0	1	1116	80	0	0	1	1105	79	0	0	1
			-	Y5	C	A / B / D	926	66	1	0	1	906	65	1	0	1	897	64	1	0	1
				YD	C	A / B / D	373	27	0	3	1	373	27	0	3	1	350	25	0	3	1
		2 Sides (adjacent)	-	Y5	BC	AB / CD / AD	640	46	0	0	1	626	45	0	0	1	620	44	0	0	1
			-	YD	BC	AB / CD / AD	251	18	0	3	1	251	18	0	3	1	236	17	0	3	1
		3 Sides (adjacent)	-	Y5	BCD	ABC / ABD / ACD	317	23	0	0	1	310	22	0	0	1	307	22	0	0	1
			-	YD	BCD	ABC / ABD / ACD	61	4	0	0	1	61	4	0	0	1	57	4	0	0	1
	Symmetric	(none)	TYPE V	Y5	(none)	-	1179	84	1	0	1	1189	85	1	0	1	1098	78	1	0	1
				YD	(none)	-	509	36	0	3	1	509	36	0	3	1	478	34	0	3	1
		2 Sides (op-posing)	-	Y5	AC	BD	612	44	1	0	1	599	43	1	0	1	593	42	1	0	1
				YD	AC	BD	248	18	0	3	1	248	18	0	3	1	233	17	0	3	1

* - Values are representative of the Distribution + Shielding Ordering Code combination, IES file may need to be rotated to match an equivalent shielding configuration.

ELECTRICAL CHARACTERISTICS

Ordering Code	LED Current (mA)	System Wattage (W)	Input				Min. Power Factor	Max THD (%)	Dimming Range (V)	Source/Sink Current (mA)	Inrush Current Peak				
			Amps AC								HZ	(A)		T@50% (μs)	
												120	277	120	277
10XX	350mA	15	0.12	0.05	0.04	0.03	50/60	0.9	20	0-10	1	15	N/A		
20XX	700mA	30	0.25	0.11	0.09	0.06	50/60	0.9	20	0-10	1	21	49	160	



ARCHITECTURAL AREA LIGHTING
17760 Rowland Street | City of Industry | CA 91748
P 626.968.5666 | F 626.369.2695 | www.aal.net
Copyright © 2016 November 1, 2017 11:21 AM

JOB _____
TYPE _____
NOTES _____

I 2 I



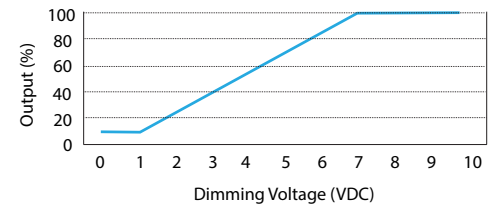
Kick™ – KB6 Bollard

TYPE

TM-21 LIFETIME CALCULATION

Ambient Environment °C	Projected Lumen Maintenance (Khrs)					Reported L70
	25	50	60	75	100	
25	98%	95%	94%	93%	90%	70Khrs.
40	96%	95%	94%	93%	90%	

DIMMING CURVE



Note: Fixture does not dim to off, fixture dims to 10% minimum output.

ISOLINE TEMPLATES 5' grid spacing.

Equivalent (rotated) configurations are shown in italics.

Shielding	Asymmetric Distribution					Symmetric Distribution	
	Type II	Type III	Type IV	Type V	Diffused Lens	Type V	Diffused Lens
(none)							
1 Side C or HSS							
2 Sides adjacent CD, AB, BC or AD							
2 Sides opposing AC or BD							
3 Sides BCC, ABC, or ACD							

- 0.5 FC
- 1 FC
- 2 FC
- 3 FC
- 4 FC
- 5 FC
- 6 FC
- 7 FC
- 8 FC



ARCHITECTURAL AREA LIGHTING
 17760 Rowland Street | City of Industry | CA 91748
 P 626.968.5666 | F 626.369.2695 | www.aal.net
 Copyright © 2016 November 1, 2017 11:21 AM

JOB _____
 TYPE _____
 NOTES _____

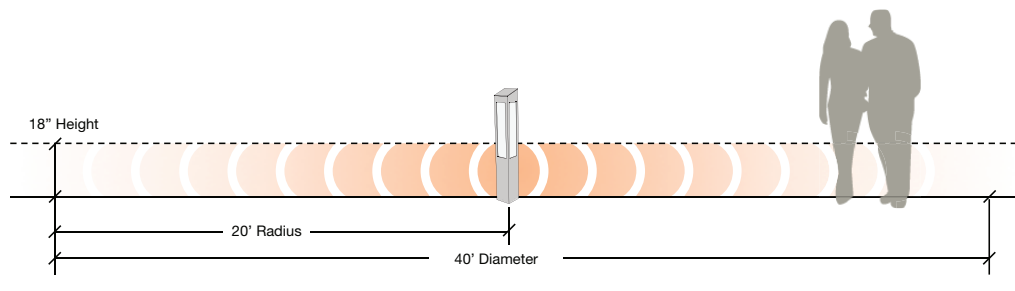


Kick™ – KB6 Bollard

TYPE

SENSOR COVERAGE

Motion Sensor uses microwave sensing technology that reacts to physical changes in within the coverage area. Careful consideration must be given to objects or activity that may trigger the sensor unintentionally.

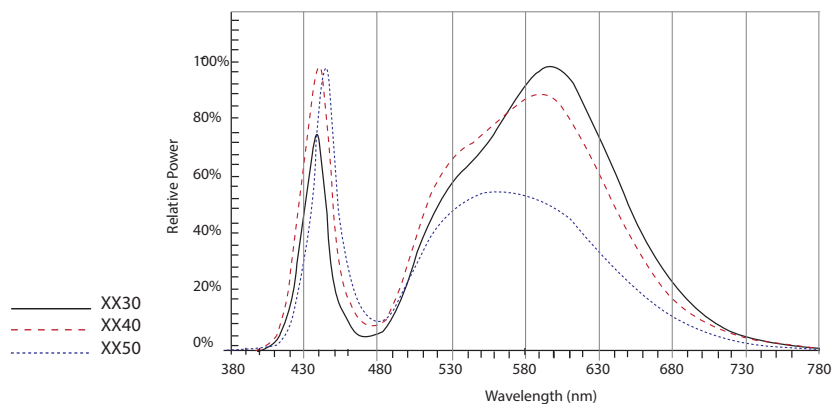


COLOR CHARACTERISTICS

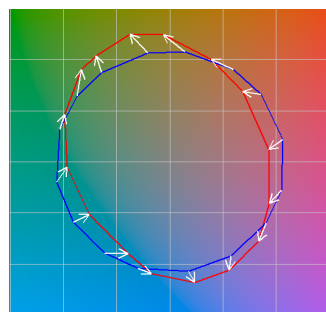
Value	Ordering Code		
	XX30	XX40	XX50
Rf	69	69	71
Rg	99	99	98
CCT(K)	3122	3852	5020
Duv	0.001	0.0004	0.0005
CIE Ra	74	73	74

Note: TM-30 reported at the discrete LED level, not fixture level.

SPECTRAL POWER DISTRIBUTION COMPARISON

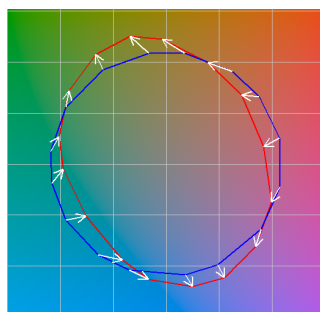


COLOR VECTOR GRAPHIC



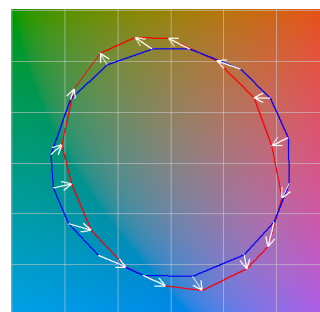
— Reference Illuminant — Test Source — Series1 — Series2
 — Series3 — Series4 — Series5 — Series6
 — Series7 — Series8 — Series9 — Series10

XX30



— Reference Illuminant — Test Source — Series1 — Series2
 — Series3 — Series4 — Series5 — Series6
 — Series7 — Series8 — Series9 — Series10

XX40



— Reference Illuminant — Test Source — Series1 — Series2
 — Series3 — Series4 — Series5 — Series6
 — Series7 — Series8 — Series9 — Series10

XX50



ARCHITECTURAL AREA LIGHTING
 17760 Rowland Street | City of Industry | CA 91748
 P 626.968.5666 | F 626.369.2695 | www.aal.net
 Copyright © 2016 November 1, 2017 11:21 AM

JOB _____
 TYPE _____
 NOTES _____

| 4 |



Kick™ – KB6 Bollard

TYPE

SPECIFICATIONS

HOUSING

- Housing shroud shall be extruded 6061-T6 aluminum alloy with a welded top cap that shall be free of any visible weld or grind marks
- Luminaire housing shall be free of any visible heat fins, hardware or fasteners.
- Bracketry shall be aluminum and hardware shall be stainless steel.
- Housing shall be independently field rotate-able of the optical distribution.
- Default factory orientations of shielding location relative to the optical system shall be:
 - A - Street Side
 - C - House Side

OPTICAL ARRAY

- LEDs shall be mounted to a metal printed circuit board assembly (MCPCB).
- Optical lenses shall be clear injection molded PMMA acrylic.
- House side shield shall be field installable on any face of the housing.
- Light engine and optical distributions shall be field rotat-able.

ELECTRICAL

- Luminaires shall have integral surge protection that shall be U.L. recognized and have a surge current rating of 10,000 Amps using the industry standard 8/20uSec wave and surge rating of 372J.
- Drivers shall be U.L. recognized.
- Drivers shall not be compatible with current sourcing dimmers, consult factory for current list of known compatible dimming systems. Approved dimmers include Lutron Diva AVTV, Lutron Nova NFTV and NTFTV.
- Luminaire shall be capable of operating at 100% power in a 40° ambient environment. Both driver and optical array shall have integral thermal protection that shall dim the luminaire upon detection of fixture temperatures in excess of 85°C.
- Luminaires not configured with an optional control system shall be provided with 0-10 purple and gray dimming leads.

- Sensor enabled fixture settings shall come to full brightness upon detecting motion and go to 50% output after 5 minutes of detecting no motion.
- Motion Sensor shall use microwave sensing technology that reacts to physical changes in within the coverage area. Careful consideration must be given to objects or activity that may trigger the sensor unintentionally.

MOUNTING AND INSTALLATION

- Anchor bolts and anchor bolt template shall be included.

SERVICING

- Service access to the driver assembly shall require a 3/16" hex driver (information provided by engineering) to loosen (4) stainless steel set screws to allow the housing to be removed for access to the gear compartment. Gear compartment shall require a Phillips driver (information provided by engineering) to open service panel.
- Driver assembly shall be mounted to a prewired internal tray with quick disconnects for removal.

FINISH

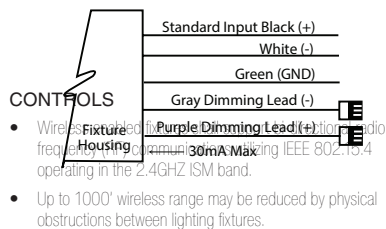
- Luminaire finish shall consist of a five stage pretreatment regimen with a polymer primer sealer, oven dry off, and top coated with a thermoset super TGIC polyester powder coat finish.
- Luminaire finish shall meet the AAMA 605.2 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance.

CERTIFICATION

- Luminaire shall be listed with UL for outdoor, wet location use, UL1598, UL 8750 and Canadian CSA Std. C22.2 no.250.
- IDA approved, 3000K and warmer CCTs only.

WARRANTY / TERMS AND CONDITIONS OF SALE

Download:

<http://www.hubbellighting.com/resources/warranty/>

 ARCHITECTURAL AREA LIGHTING
 17760 Rowland Street | City of Industry | CA 91748
 P 626.968.5666 | F 626.369.2695 | www.aal.net
 Copyright © 2016 November 1, 2017 11:21 AM

 JOB _____
 TYPE _____
 NOTES _____

| 5 |

Submitted by Swaney Lighting		Catalog Number:	Type:
	Job Name: MERCY SITE DESIGN/BUILD	KB6-Y3-2030-**-STND_MNT-BOLTS AHEAD-WIRED120-277V Notes: SPECIFY FINISH	B2 SLA20-46553

This page intentionally left blank for printing purposes

Kick™ – K5 Medium Scale

TYPE

FEATURES

- Integral Motion Sensor
- wiScape enabled
- IDA approved
- 20kV/10kA surge protection
- ANSI C136.41 receptacle
- IES Type II, III and IV distributions
- 3000K, 4000K, 5000K CCT
- Integral thermal protection
- 0-10V dimming ready
- IP66 optical system
- 120-277, 347 and 480VAC input
- Staggered twin mounting
- ANSI C136.31-2010 4G Rated



3000K and warmer CCTs only
MO-XX30 configurations only

See Certification Specifications

ORDERING CODE

1	2	3	4	5	6	7	8	9	10
Model	Optics	Optical Finish	Light Engine	Controls	Fuse	Voltage	Mounting	Mounting Options	Fixture Finish

1. MODEL

5" wide luminaire

- K51 Single fixture**
- K52 Two fixtures 180° apart
- K53 Three fixtures 90° apart
- K54 Four fixtures 90° apart

2. OPTICS

Distribution Type, see "Luminaire Performance" on page 3

T2 IES Type II

T3 IES Type III

T4 IES Type IV

3. OPTICAL FINISH

Standard white or may choose one. See

'Luminaire Performance' on page 3 for detail.

MO Optics in Matte Black finish^{OS}

FO Optics in fixture finish

4. LIGHT ENGINE

See 'Luminaire Performance' on page 3 for detail, 70 CRI

18050 18,000 nominal lumens, 5000K CCT, 174 watts

18040 18,000 nominal lumens, 4000K CCT, 174 watts

18030 18,000 nominal lumens, 3000K CCT, 174 watts

12050 12,000 nominal lumens, 5000K CCT, 122 watts

12040 12,000 nominal lumens, 4000K CCT, 122 watts

12030 12,000 nominal lumens, 3000K CCT, 122 watts

9050 9,000 nominal lumens, 5000K CCT, 87 watts

9040 9,000 nominal lumens, 4000K CCT, 87 watts

9030 9,000 nominal lumens, 3000K CCT, 87 watts

560nm monochromatic amber and or custom lumen package available by request. ¹

5. CONTROL

May choose one

MCPCR 7-Position Receptacle

WIR wiScape connectivity

WIRSC wiScape + motion sensor

SCP Motion sensor + Photocell ⁴

SWP SiteSync Pre-commissioned ⁵

SWPM SiteSync Pre-commissioned + Motion Sensor⁶

SCPREMOTE Handheld commissioning tool ⁴

SWUSB SiteSync loaded on USB flash drive (Windows[®] operating system only) ⁶

SWTAB SiteSync Windows[®] based Tablet ⁶

SWBRG SiteSync Wireless Bridge Node ⁶

SW7PR SiteSync 7 Pin on fixture module On/Off/Dim, Daylight Sensor 120-480VAC

6. FUSE

May choose one

SF 120, 277, 347 Volt input

DF 208, 240, 480 Volt input

7. VOLTAGE

120-277VAC input standard or may choose one

347 347VAC input

480 480VAC input

8. MOUNTING

Integral Aluminum Pole

PS510-188 10' luminaire height

PS512-188 12' luminaire height

PS514-188 14' luminaire height

PS516-188 16' luminaire height

PS518-188 18' luminaire height

PS520-188 20' luminaire height

Integral Steel Pole

PS525-250 25' luminaire height

PS530-250 30' luminaire height

Tenon Mount

TA23 Slips over a 2 3/8" / 60mm
Ø x 4" / 102mm tall tenon

Side Mount

SMK Mounts to the side of a square pole,
K51 only

Wall Mount

WMK K51 only

9. MOUNTING OPTIONS

Twin mount at staggered heights

Mounting holes for a fixture at 180°, K51...PS5... only, may choose one

TS8 8' from bottom

TS10 10' from bottom

TS12 12' from bottom

TS14 14' from bottom

TS16 16' from bottom

TS18 18' from bottom

Pole Accessories

May choose one

GFI GFCI receptacle, 24" from top of pole

RBC Duplex receptacle box with clear cover,
wiring device(s) not included

10. FIXTURE FINISH

Specify Std. finish

AGN Antique Green

BL Black

BLT Matte Black

CRT Corten

DB Dark Bronze

DGN Dark Green

GT Graphite

LG Light Grey

MAL Matte Aluminum

MDB Bronze Metallic

MG Medium Grey

TT Titanium

WH Arctic White

WDB Weathered Bronze

VBU Verde Blue

Premium Color

SHK Shamrock

SPP Salt and Pepper

SFM Seafoam

WCP Weathered Copper

RAL RAL 4 digit Color

CUSTOM Custom Color

¹ Contact factory

⁴ Handheld commissioning tool is required to separately configure or adjust any number of SCP sensors

⁵ Specify group and zone at time of order. See www.hubbellighting.com/sitesync for more details. Order at least one SiteSync interface accessory SWUSB or SWTAB. Each option contains SiteSync License, GUI, and Bridge Node.

⁶ When ordering with SiteSync, one of the following interface options must be chosen and ordered separately. Each option contains the SiteSync License, GUI and Bridge Node.



ARCHITECTURAL AREA LIGHTING
17760 Rowland Street | City of Industry | CA 91748
P 626.968.5666 | F 626.369.2695 | www.aal.net
Copyright © 2014 September 4, 2020 11:48 AM

JOB _____
TYPE _____
NOTES _____



Job Name:
MERCY SITE DESIGN/BUILD

Catalog Number:
K51-T4-MO-9030-WIRED120-277V-
PS520-188-**

Notes: SPECIFY FINISH

Type:

K4

SLA20-46553

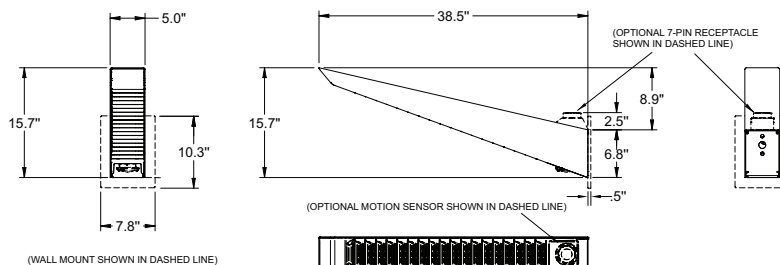
Kick™ – K5 Medium Scale

TYPE

Side Mounted Luminaire

Mounts to the side of 5"/127mm square pole.

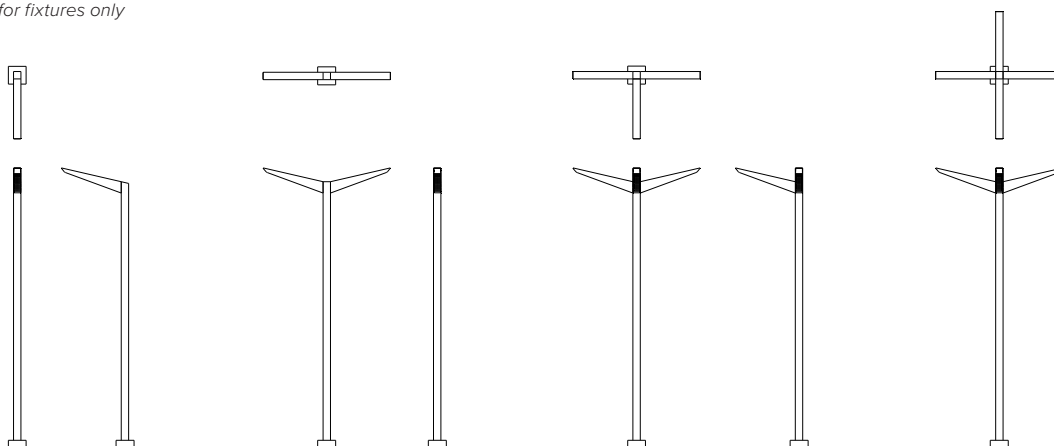
MODEL	K51-...-SMK
OVERALL HEIGHT	15.7" / 399mm
OVERALL LENGTH	38.6" / 980mm
OVERALL WIDTH	5" / 127mm
WEIGHT	20 lbs.
EPA	1.4



Integral Pole Luminaire

See page 6 for height and mounting detail

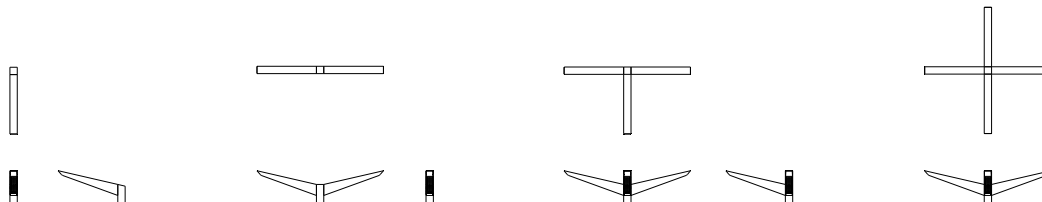
* Weight and EPA for fixtures only



MODEL	K51-...-PS5XX-188	K52-...-PS5XX-188	K53-...-PS5XX-188	K54-...-PS5XX-188
OVERALL LENGTH	43.5" / 1106mm	15.5" / 390mm	49" / 1238mm	82" / 2083mm
OVERALL WIDTH	15.5" / 390mm	82" / 2083mm	82" / 2083mm	82" / 2083mm
WEIGHT	20 lbs.	40 lbs.	60 lbs.	80 lbs.
EPA*	1.4	2.7	3.1	3.1

Tenon Mount Luminaire

Slips over a 2 3/8"/60mm diameter by 4"/102mm tall tenon



MODEL	K51-...-TA23	K52-...-TA23	K53-...-TA23	K54-...-TA23
OVERALL HEIGHT	19" / 483mm	19" / 483mm	19" / 483mm	19" / 483mm
OVERALL LENGTH	43.5" / 1106mm	5" / 127mm	43.5" / 1106mm	82" / 2083mm
OVERALL WIDTH	5" / 127mm	82" / 2083mm	82" / 2083mm	82" / 2083mm
WEIGHT	25 lbs.	40 lbs.	55 lbs.	70 lbs.
EPA	1.8	3.2	3.5	3.5



ARCHITECTURAL AREA LIGHTING
17760 Rowland Street | City of Industry | CA 91748
P 626.968.5666 | F 626.369.2695 | www.aal.net
Copyright © 2014 September 4, 2020 11:48 AM

JOB _____
TYPE _____
NOTES _____

| 2 |

Kick™ – K5 Medium Scale

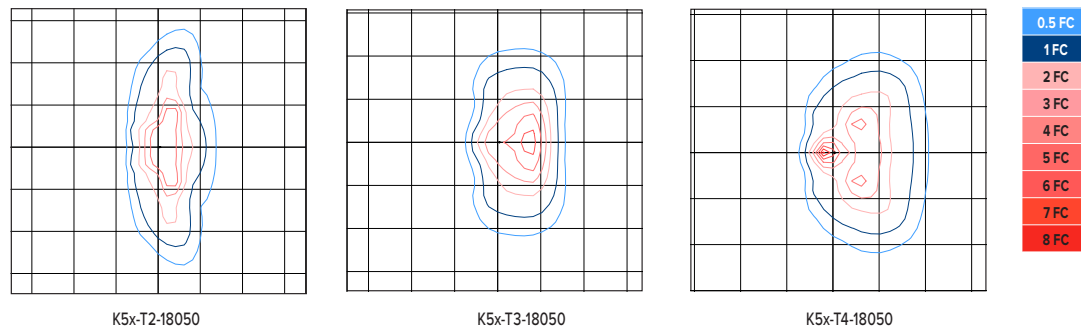
TYPE

LUMINAIRE PERFORMANCE

Configuration				Ordering Code														Average System Watts	
Light Engine	Optical Finish	Distribution	Ordering Code	Bright White (5000K)					Neutral White (4000K)					Warm White (3000K)					
				Delivered Lumens	Efficacy (Lm/W)	B	U	G	Delivered Lumens	Efficacy (Lm/W)	B	U	G	Delivered Lumens	Efficacy (Lm/W)	B	U		G
				18050					18040					18030					174
18000 series	Standard White	Type 2	T2	17910	103	3	3	3	17532	101	3	3	3	17006	98	3	3	3	
		Type 3	T3	17721	102	3	3	3	17347	100	3	3	3	16826	97	3	3	3	
		Type 4	T4	18763	108	3	3	2	18080	104	3	3	2	17537	101	3	3	2	
		Fixture Matched	Type 2	T2-FO	14593	84	3	3	3	14286	82	3	3	3	13856	80	3	3	
	Type 3		T3-FO	14497	84	2	3	2	14191	82	2	3	2	13765	79	2	3	2	
	Type 4		T4-FO	15794	91	3	3	2	15460	89	2	3	2	14996	86	2	3	2	
	Matte Black		Type 2	T2-MO	15315	88	3	0	2	14787	85	3	0	2	14343	83	3	0	
		Type 3	T3-MO	15153	87	2	0	2	14631	84	2	0	2	14192	82	2	0	2	
		Type 4	T4-MO	15794	91	3	0	2	15249	88	3	0	2	14791	85	3	0	2	
						12050					12040					12030			
12000 series	Standard White	Type 2	T2	13369	109	3	3	3	13087	107	3	3	3	12694	104	3	3	3	
		Type 3	T3	13228	108	2	3	2	12949	106	2	3	2	12560	103	2	3	2	
		Type 4	T4	13787	112	3	3	2	13496	110	2	3	2	13091	107	2	3	2	
		Fixture Matched	Type 2	T2-FO	10893	90	3	3	3	10664	88	3	3	3	10344	85	3	3	3
	Type 3		T3-FO	10821	89	2	3	2	10593	87	2	3	2	10275	84	2	3	2	
	Type 4		T4-FO	11789	97	3	3	2	11541	95	2	3	2	11194	92	2	3	2	
	Matte Black		Type 2	T2-MO	10893	90	3	0	2	10664	88	3	0	2	10343	85	3	0	2
		Type 3	T3-MO	10821	89	2	0	2	10593	87	2	0	2	10275	84	2	0	2	
		Type 4	T4-MO	11789	97	2	0	2	11541	95	2	0	2	11194	92	2	0	2	
						9050					9040					9030			
9000 series	Standard White	Type 2	T2	10103	117	2	3	2	9895	114	2	3	2	9692	111	2	3	2	
		Type 3	T3	9920	115	2	2	2	9715	112	2	2	2	9462	109	2	2	2	
		Type 4	T4	10437	119	2	3	2	10223	117	2	3	2	9957	114	2	3	2	
		Fixture Matched	Type 2	T2-FO	8171	94	2	3	2	8003	92	2	3	2	7794	90	2	3	2
	Type 3		T3-FO	8118	94	2	2	2	7951	92	2	2	2	7744	89	2	2	2	
	Type 4		T4-FO	8927	103	2	3	2	8744	100	2	3	2	8516	98	2	3	2	
	Matte Black		Type 2	T2-MO	8171	94	2	0	1	8003	92	2	0	1	7794	90	2	0	1
		Type 3	T3-MO	8118	94	1	0	1	7951	92	1	0	1	7744	89	1	0	1	
		Type 4	T4-MO	8927	103	2	0	2	8744	101	2	0	2	8516	98	2	0	2	

-MO.ies files should be used for -FO configurations in application layouts.

ISOLINE TEMPLATES 30' Mounting Height



ELECTRICAL CHARACTERISTICS

Ordering Code	LED Current (mA)	System Wattage (W)	Input				Min. Power Factor	Max THD (%)	Dimming Range (V)	Source/Sink Current (mA)	Inrush Current Peak											
			Amps AC								HZ	(A)				T@50% (μs)						
												120	277	347	480	120	277	347	480			
180XX	1000	173	1.4	0.6	0.5	0.4	50/60	>0.9	20	0-10	1	44	131	48	127	190		400	140			
120XX	700	122	1.0	0.4	0.4	0.3																
90XX	500	87	0.7	0.3	0.3	0.2																

ARCHITECTURAL AREA LIGHTING
 17760 Rowland Street | City of Industry | CA 91748
 P 626.968.5666 | F 626.369.2695 | www.aal.net
 Copyright © 2014 September 4, 2020 11:48 AM

JOB _____
 TYPE _____
 NOTES _____

| 3 |

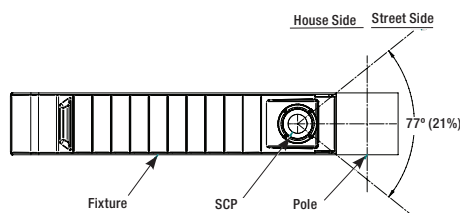


Kick™ – K5 Medium Scale

TYPE

SENSOR DETECTION RANGE

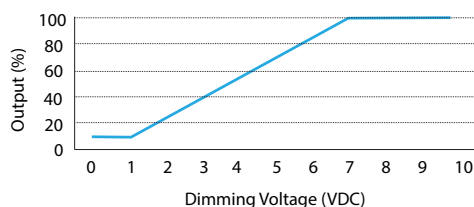
		SENSOR MOUNTING HEIGHT							RATIO
		8'	10'	12'	14'	16'	18'	20'	
COVERAGE DIAMETER	SCP	20'	25'	30'	35'	40'	45'	50'	1:2.5
	WIRSC	16'	20'	24'	28'	32'	36'	40'	1:2



TM-21 LIFETIME CALCULATION

Ambient Environment °C	Projected Lumen Maintenance (Khrs)					Reported L70
	25	50	60 (TM-21)	75	100	
25	98%	97%	96%	95%	94%	>60Khrs.
40	97%	96%	95%	94%	93%	

DIMMING CURVE



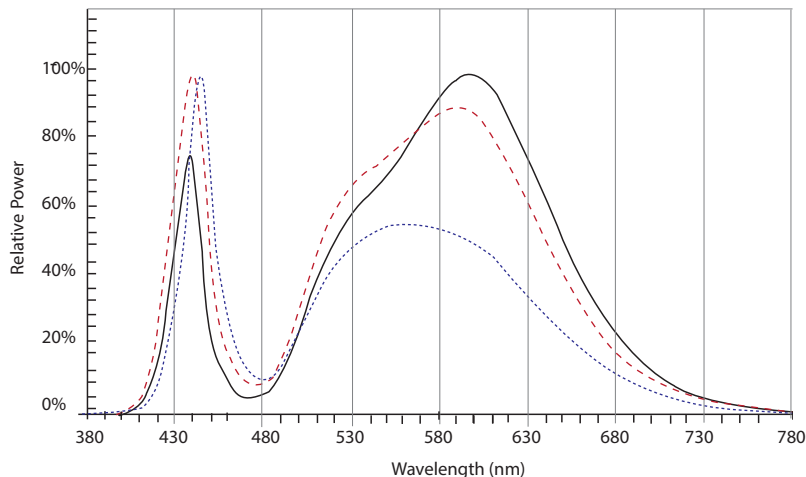
Note: Fixture does not dim to off, fixture dims to 10% minimum output.

COLOR CHARACTERISTICS

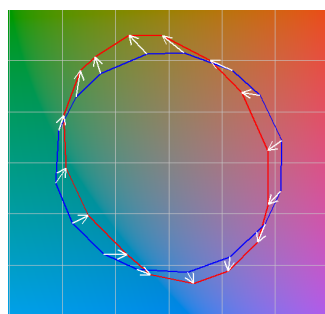
Value	Ordering Code		
	XX30	XX40	XX50
Rf	69	69	71
Rg	99	99	98
CCT(K)	3122	3852	5020
Duv	0.001	0.0004	0.0005
CIE Ra	74	73	74

Note: TM-30 reported at the discrete LED level, not fixture level.

SPECTRAL POWER DISTRIBUTION COMPARISON

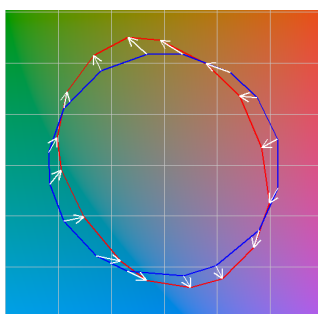


COLOR VECTOR GRAPHIC



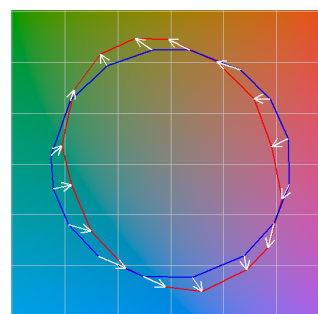
— Reference Illuminant — Test Source — Series1 — Series2
 — Series3 — Series4 — Series5 — Series6
 — Series7 — Series8 — Series9 — Series10

XX30



— Reference Illuminant — Test Source — Series1 — Series2
 — Series3 — Series4 — Series5 — Series6
 — Series7 — Series8 — Series9 — Series10

XX40



— Reference Illuminant — Test Source — Series1 — Series2
 — Series3 — Series4 — Series5 — Series6
 — Series7 — Series8 — Series9 — Series10

XX50



ARCHITECTURAL AREA LIGHTING
 17760 Rowland Street | City of Industry | CA 91748
 P 626.968.5666 | F 626.369.2695 | www.aal.net
 Copyright © 2014 September 4, 2020 11:48 AM

JOB

TYPE

NOTES

| 4 |

Submitted by Swaney Lighting	Job Name: MERCY SITE DESIGN/BUILD	Catalog Number: K51-T4-MO-9030-WIRED120-277V-PS520-188-** Notes: SPECIFY FINISH	Type: K4 SLA20-46553
------------------------------	--	--	--

Kick™ – K5 Medium Scale

TYPE

SPECIFICATIONS

HOUSING

- Housing shroud shall be of fabricated 5052-H32 aluminum alloy with a rear mounting interface that shall be of fabricated 304 stainless steel.
- Housing mounting interface shall have a stamped silicone gasket.
- Luminaire housing shall be free of any visible heat fins, hardware or fasteners.
- Bracketry and hardware shall be stainless steel.

OPTICAL ARRAY

- LEDs shall be mounted to a metal printed circuit board assembly (MCPCB) with a uniform conformal coating over the panel surface and electrical features.
- Optical lenses shall be clear injection molded PMMA acrylic.
- Each MCPCB and optic shall be sealed to an extruded 6063-T6 aluminum alloy heat spreader and sealed with a continuous one piece injection molded silicone rubber gasket. IP66.
- Patent Pending design of optical array shall independently shield each LED optic across the length of the aperture.
- Optical surfaces shall be painted white unless the optional fixture finish (FO) or matte black finish (MO) is selected.
- Optional matte black finish optics (MO) are required to meet UO classification with zero percent uplight.
- Optional fixture finish optical surfaces (FO) shall not exceed BUG ratings of the standard white finish and shall be greater than or equal to the delivered lumens of the optional matte black optical surface finish (MO).

ELECTRICAL

- Drivers shall be in direct contact with the aluminum housing across the entire surface area of the widest face for maximum thermal transfer.
- Luminaires shall have integral surge protection that shall be U.L. recognized and have a surge current rating of 10,000 Amps using the industry standard 8/20uSec wave and surge rating of 372J. Surge protection device shall be wired in series.
- Drivers shall be U.L. recognized.
- Drivers shall not be compatible with current sourcing dimmers, consult factory for current list of known compatible dimming systems approved dimmers include Lutron Diva AVTV, Lutron Nova NFTV and NTFTV.
- Luminaire shall be capable of operating at

100% brightness in a 40°C environment. Both driver and optical array shall have integral thermal protection that will dim the luminaire upon detection of temperatures in excess of 85°C.

- Luminaires not configured with a control system or ANSI C136 receptacle option shall be provided with 0-10 purple and gray dimming leads.



CONTROLS

- Wireless enabled fixtures shall support bi-directional radio frequency (RF) communications utilizing IEEE 802.15.4 operating in the 2.4GHZ ISM band.
- Up to 1000' wireless range may be reduced by physical obstructions between lighting fixtures.
- Motion Sensor shall use passive infrared (PIR) sensing technology that reacts to changes in infrared energy (moving body heat) within the coverage area. Careful consideration must be given to obstructions that may block the sensor's line of sight.
- Factory default settings for SCP option shall be:
 - High mode: 10V
 - Low mode: 1V
 - Ramp-up rate: disabled
 - Fade-down rate: disabled
 - Photocell: Off
 - Sensitivity: Full
 - Time Delay: Fade to low: 5 minutes
 - Time Delay: Fade to off: 1 hour

MOUNTING AND INSTALLATION

- Integral pole mount luminaires shall require assembly of fixture(s) to the pole, mounting hardware, anchor bolts and anchor bolt template shall be included. *See page 6 for additional considerations specific to the integral pole.*
- Tenon mount luminaires shall require assembly of fixture(s) to the tenon adapter, mounting hardware shall be included. Tenon adapter shall be secured to the tenon with eight 5/16-18 stainless steel set screws.
- Side mount luminaires shall be supplied

with hardware compatible with AAL mountings.

- Twin mounted staggered height fixtures shall be configured separately.

SERVICING

- Service access to the optical array and driver assembly shall be via a tool-less internal latch and have an audible click.
- Optical array shall be able to hang freely in an open service position for inspection of internal wire connections. Once in service position, the optical array shall be able to be removed for service by lifting the assembly up off the rear hinge and disconnecting the wiring plugs.
- Driver assembly shall be mounted to a prewired internal tray with quick disconnects for removal.

FINISH

- Luminaire finish shall consist of a five stage pretreatment regimen with a polymer primer sealer, oven dry off, and top coated with a thermoset super TGIC polyester powder coat finish.
- Luminaire finish shall meet the AAMA 605.2 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance.

CERTIFICATION

- Luminaire shall be listed with UL for outdoor, wet location use, UL1598, UL 8750 and Canadian CSA Std. C22.2 no.250.
- ANSI C136.31-2010 4G Vibration tested and compliant.
- IEC 66262 Mechanical Impact Code IK10
- IDA approved, 3000K and warmer CCTs only.
- This product qualifies as a "designated country construction material" per FAR 52.225-11 Buy American-Construction Materials under Trade Agreements effective 6/06/2020. [See Buy American Solutions.](#)

WARRANTY / TERMS AND CONDITIONS OF SALE

Download:
<http://www.hubbelling.com/resources/warranty/>



ARCHITECTURAL AREA LIGHTING
 17760 Rowland Street | City of Industry | CA 91748
 P 626.968.5666 | F 626.369.2695 | www.aal.net
 Copyright © 2014 September 4, 2020 11:48 AM

JOB _____
 TYPE _____
 NOTES _____

| 5 |



Kick™ – K5 Medium Scale

TYPE

SPECIFICATIONS

Integral Pole

MODEL	HEIGHT		SHAFT		WT	MAXIMUM ALLOWABLE EPA (MPH)									
	OVERALL	POLE	SECTION	MATERIAL		85	90	100	105	110	120	130	140	145	150
K5X-PS510-188	10'9" / 3.28m	10'	5"SQ x .188"	ALUMINUM	61	25	25	23	20.5	18.5	15	12.3	10.1	9.1	8.3
K5X-PS512-188	12'9"/3.89m	12'	5"SQ x .188"	ALUMINUM	69	25	22.5	17.8	15.7	14	11	8.7	6.9	6.1	5.4
K5X-PS514-188	14'9"/4.50m	14'	5"SQ x .188"	ALUMINUM	78	20.6	17.9	13.7	11.9	10.4	7.9	6	4.4	3.7	3.1
K5X-PS516-188	16'9"/5.10m	16'	5"SQ x .188"	ALUMINUM	86	16.5	14.1	10.4	8.9	7.6	5.4	3.7	2.3	1.7	1.1
K5X-PS518-188	18'9"/5.71m	18'	5"SQ x .188"	ALUMINUM	95	12.9	10.9	7.6	6.3	5.1	3.2	1.7	0.5	-	-
K5X-PS520-188	20'9"/6.32m	20'	5"SQ x .188"	ALUMINUM	103	9.8	8.1	5.2	4	3	1.3	-	-	-	-
K5X-PS525-250	25'9"/7.85m	25'	5"SQ x .25"	STEEL	427	25	25	19.4	17.1	15.1	11.7	9	6.9	6	5.1
K5X-PS530-250	30'9"/9.38m	30'	5"SQ x .25"	STEEL	507	20.1	17.3	12.7	10.9	9.3	6.6	4.5	2.8	2.1	1.4

CONSTRUCTION

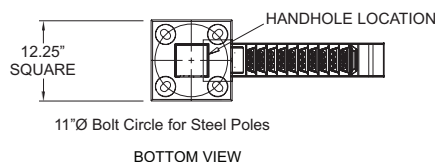
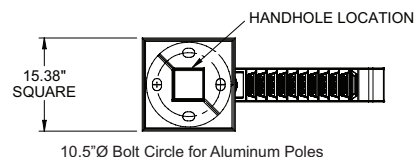
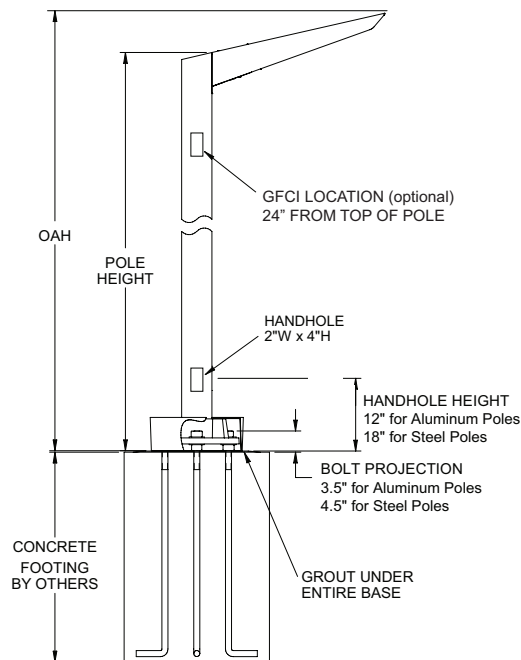
- Aluminum pole bases shall be cast aluminum #356 alloy and be heat treated to a T-6 condition.
- Aluminum pole shafts shall be extruded aluminum 6061 alloy and heat treated to a T-6 condition.
- Aluminum poles shall have a one-piece base cover included standard.
- Steel poles shall be one-piece straight steel with square cross section, flat sides and minimum 0.238" radius on all corners; Minimum yield of 46,000 psi (ASTM-A500, Grade B); Longitudinal weld seam to appear flush with shaft side wall; Steel base plate with axial bolt circle slots welded flush to pole shaft having minimum yield of 36,000 psi (ASTM A36).
- Steel poles shall have a two-piece square aluminum base cover included standard.
- All poles shall be supplied with removable top cap.
- All poles shall have a hand hole with mounting provisions for grounding lug located behind a gasket lined cover.
- Anchor bolts shall be 1" x 36" x 4" hot dip galvanized steel, with two galvanized washers and two galvanized nuts per bolt.
- Bolt circle template shall be provided.

WARNINGS

- Caution must be exercised in the selection of a design wind speed when the pole is to be installed in a special wind region (as indicated by the wind map) or in an area where wind speed is unpredictable.
- AAL recommends consulting a local engineer when the pole is to be installed in an area that may be subject to vibration, oscillations, and other fatigue effects which are not covered by the AAL warranty.
- The use of banners or other appendages can severely affect the loading of a pole. No banner or other appendage may be attached to an AAL pole unless approved by AAL.
- If the products are to be used on an existing foundation or on other structures, the customer assumes all responsibility for the structural integrity of the existing foundation, anchorage or structures and all the consequences arising there from.

CAUTION

- Poles should never be erected without the luminaire installed. Warranty is voided if the pole is erected without the luminaire.



ARCHITECTURAL AREA LIGHTING
 17760 Rowland Street | City of Industry | CA 91748
 P 626.968.5666 | F 626.369.2695 | www.aal.net
 Copyright © 2014 September 4, 2020 11:48 AM

JOB _____
 TYPE _____
 NOTES _____

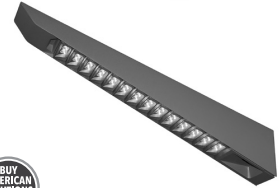
| 6 |

Kick™ – K4 Small Scale

TYPE

FEATURES

- Integral Motion Sensor
- wiScape enabled
- IDA approved
- 20kV/10kA surge protection
- ANSI C136.41 receptacle
- IES Type II, III and IV distributions
- 3000K, 4000K, 5000K CCT
- Integral thermal protection
- 0-10V dimming ready
- IP66 optical system
- 120-277, 347 and 480VAC input
- Staggered twin mounting
- ANSI C136.31-2010 4G Rated



3000K and warmer CCTs only
See QPLMO-XX30 configurations only

See Certification Specifications

ORDERING CODE

1	2	3	4	5	6	7	8	9	10
Model	Optics	Optical Finish	Light Engine	Controls	Fuse	Voltage	Mounting	Mounting Options	Fixture Finish

1. MODEL

4" wide luminaire

- K41 Single fixture
- K42 Two fixtures 180° apart
- K43 Three fixtures 90° apart
- K44 Four fixtures 90° apart

2. OPTICS

Distribution Type, see "Luminaire Performance" on page 3

- T2 IES Type II
- T3 IES Type III
- T4 IES Type IV

3. OPTICAL FINISH

Standard white or may choose one. See 'Luminaire Performance' on page 3 for detail.

- MO Optics in Matte Black finish
- FO Optics in fixture finish

4. LIGHT ENGINE

Lumen package, see 'Luminaire Performance' on page 3 for detail

- 7050 5000K CCT, CRI 70, 64 watts
- 7040 4000K CCT, CRI 70, 64 watts
- 7030 3000K CCT, CRI 70, 64 watts
- 5050 5000K CCT, CRI 70, 46 watts
- 5040 4000K CCT, CRI 70, 46 watts
- 5030 3000K CCT, CRI 70, 46 watts

560nm monochromatic amber and or custom lumen package available by request. ¹

5. CONTROL

May choose one

- MCPCR 7-Position Receptacle
- WIR wiScape connectivity
- WIRSC wiScape + motion sensor
- SCP Motion sensor + Photocell ⁴
- SWP SiteSync Pre-commissioned ⁵
- SWPM SiteSync Pre-commissioned + Motion Sensor ⁶

- SCPREMOTE Handheld commissioning tool ⁴
- SWUSB SiteSync loaded on USB flash drive (Windows® operating system only) ⁶
- SWTAB SiteSync Windows® based Tablet ⁶
- SWBRG SiteSync Wireless Bridge Node ⁶
- SW7PR SiteSync 7 Pin on fixture module On/Off/Dim, Daylight Sensor 120-480VAC

6. FUSE

(may choose one)

- SF 120, 277, 347 Volt input
- DF 208, 240, 480 Volt input

7. VOLTAGE

120-277VAC input standard or may choose one

- 347 347VAC input
- 480 480VAC input

8. MOUNTING

Integral Pole

- PS410-125 10' luminaire height.
- PS412-125 12' luminaire height.
- PS414-125 14' luminaire height.
- PS416-125 16' luminaire height.
- PS418-125 18' luminaire height.
- PS420-125 20' luminaire height.

Tenon Mount

- TA23 Slips over a 2 3/8" / 60mm Ø x 4" / 102mm tall tenon

Side Mount

- SMK Mounts to the side of a square pole, K41 only

Wall Mount

- WMK K41 only

9. MOUNTING OPTIONS

Twin mount at staggered heights

Mounting holes for a fixture at 180°, K41...PS4... only, may choose one

- TS8 8' from bottom
- TS10 10' from bottom
- TS12 12' from bottom
- TS14 14' from bottom
- TS16 16' from bottom
- TS18 18' from bottom

Pole Accessories

May choose one

- GFI GFCL receptacle, 24" from top of pole
- RBC Duplex receptacle box with clear cover, wiring device(s) not included

10. FIXTURE FINISH

Specify Std. finish

- AGN Antique Green
- BL Black
- BLT Matte Black
- CRT Corten
- DB Dark Bronze
- DGN Dark Green
- GT Graphite
- LG Light Grey
- MAL Matte Aluminum
- MDB Bronze Metallic
- MG Medium Grey
- TT Titanium
- WH Arctic White
- WDB Weathered Bronze
- VBU Verde Blue

Premium Color

- SHK Shamrock
- SPP Salt and Pepper
- SFM Seafoam
- WCP Weathered Copper
- RAL RAL 4 digit Color
- CUSTOM Custom Color

¹ Contact factory

⁴ Handheld commissioning tool is required to separately configure or adjust any number of SCP sensors

⁵ Specify group and zone at time of order. See www.hubbellighting.com/sitesync for more details. Order at least one SiteSync interface accessory SWUSB or SWTAB. Each option contains SiteSync License, GUI, and Bridge Node.

⁶ When ordering with SiteSync, one of the following interface options must be chosen and ordered separately. Each option contains the SiteSync License, GUI and Bridge Node.



ARCHITECTURAL AREA LIGHTING
17760 Rowland Street | City of Industry | CA 91748
P 626.968.5666 | F 626.369.2695 | www.aal.net
Copyright © 2014 September 15, 2020 4:03 PM

JOB	
TYPE	
NOTES	



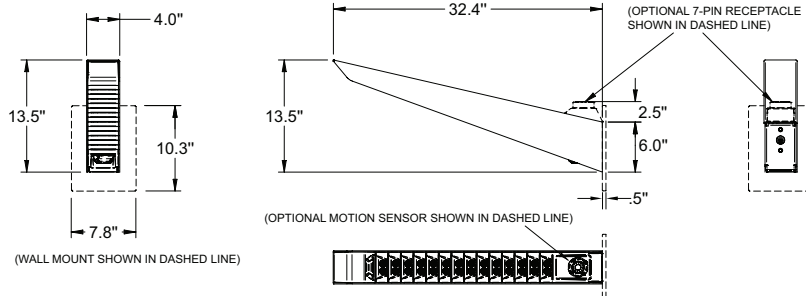
Kick™ – K4 Small Scale

TYPE

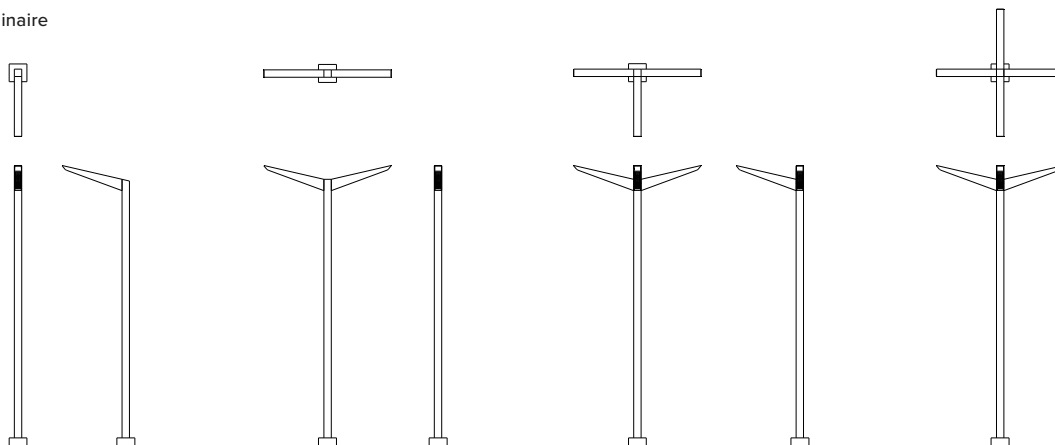
Side Mounted Luminaire

Mounts to the side of 4"/102mm square pole.

MODEL	K41-...-SMK
OVERALL HEIGHT	13.5" / 343mm
OVERALL LENGTH	32.4" / 823mm
OVERALL WIDTH	4" / 102mm
WEIGHT	15 lbs.
EPA	1.03



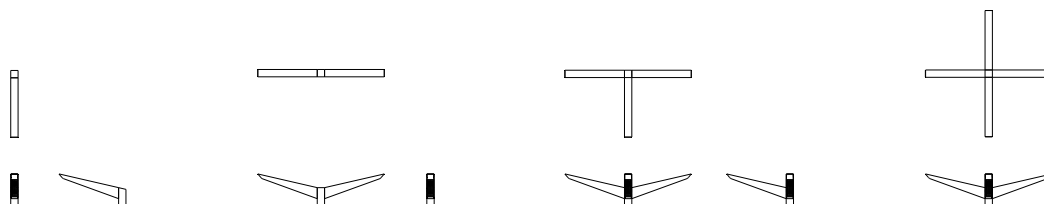
Integral Pole Luminaire

See page 6
for height and
mounting detail* Weight and
EPA for fixtures
only

MODEL	K41-...-PS4XX-125	K42-...-PS4XX-125	K43-...-PS4XX-125	K44-...-PS4XX-125
Overall Length	36.4" / 925mm	10" / 254mm	36.4" / 925mm	68.9" / 1750mm
Overall Width	10" / 254mm	68.9" / 1750mm	68.9" / 1750mm	68.9" / 1750mm
WEIGHT	15 lbs.	30 lbs.	45 lbs.	60 lbs.
EPA*	1.03	2.06	2.61	2.61

Tenon Mount Luminaire

Slips over a 2 3/8"/60mm diameter by 4"/102mm tall tenon



MODEL	K41-...-TA23	K42-...-TA23	K43-...-TA23	K44-...-TA23
Overall Height	17.5" / 445mm	17.5" / 445mm	17.5" / 445mm	17.5" / 445mm
Overall Length	36.4" / 925mm	10" / 254mm	36.4" / 925mm	68.9" / 1750mm
Overall Width	4" / 102mm	68.9" / 1750mm	68.9" / 1750mm	68.9" / 1750mm
WEIGHT	18.5 lbs.	33.5 lbs.	48.5 lbs.	63.5 lbs.
EPA*	1.33	2.42	2.61	2.61


 ARCHITECTURAL AREA LIGHTING
 17760 Rowland Street | City of Industry | CA 91748
 P 626.968.5666 | F 626.369.2695 | www.aal.net
 Copyright © 2014 September 15, 2020 4:03 PM

 JOB _____
 TYPE _____
 NOTES _____

| 2 |

Kick™ – K4 Small Scale

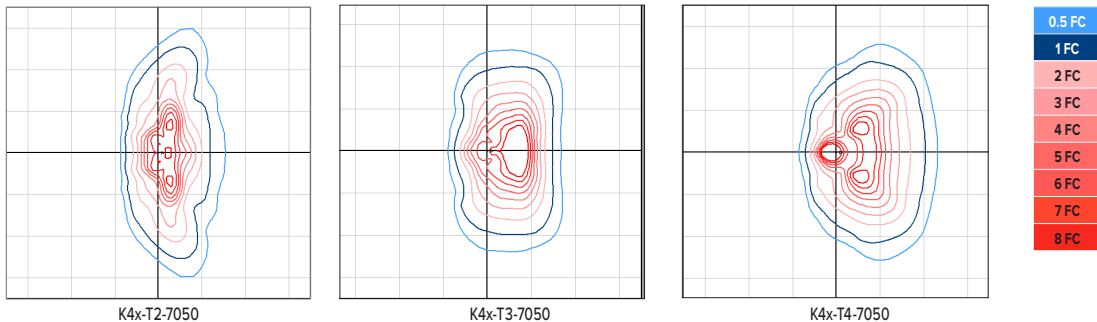
TYPE

LUMINAIRE PERFORMANCE

Configuration				Ordering Code														Average System Watts	
Light Engine	Optical Finish	Distribution	Ordering Code	Bright White (5000K)					Neutral White (4000K)					Warm White (3000K)					
				Delivered Lumens	Efficacy (Lm/W)	BUG Rating			Delivered Lumens	Efficacy (Lm/W)	BUG Rating			Delivered Lumens	Efficacy (Lm/W)	BUG Rating			
						B	U	G			B	U	G			B	U		G
				7050					7040					7030					
7000 series	Standard White	Type 2	T2	6932	108	2	2	2	6775	106	2	2	2	6536	102	2	2	2	64
		Type 3	T3	6952	108	1	2	1	6795	106	1	2	1	6554	102	1	2	1	
		Type 4	T4	7691	120	2	2	2	7516	117	2	2	2	7250	113	2	2	1	
	Fixture Matched	Type 2	T2-FO	5614	87	2	2	2	5486	85	2	2	2	5292	83	2	2	2	
		Type 3	T3-FO	5788	84	1	2	1	5646	82	1	2	1	5456	79	1	2	1	
		Type 4	T4-FO	6131	96	2	2	2	5992	94	2	2	2	5780	90	2	2	1	
	Matte Black	Type 2	T2-MO	5602	88	2	0	1	5475	86	2	0	1	5281	83	1	0	1	
		Type 3	T3-MO	5773	90	1	0	1	5656	88	1	0	1	5442	85	1	0	1	
		Type 4	T4-MO	6117	96	2	0	1	5979	93	2	0	1	5767	90	2	0	1	
5000 series	Standard White	Type 2	T2	5239	113	1	2	1	5234	114	2	2	1	4999	108	1	2	1	46
		Type 3	T3	5130	111	1	2	1	5125	112	1	2	1	4895	106	1	2	1	
		Type 4	T4	5456	118	1	2	1	5451	118	1	2	1	5207	113	1	2	1	
	Fixture Matched	Type 2	T2-FO	4003	87	1	2	1	4010	87	2	2	1	3820	83	1	2	1	
		Type 3	T3-FO	4048	88	1	2	1	4044	88	1	2	1	3863	84	1	2	1	
		Type 4	T4-FO	4503	98	1	2	1	4524	98	1	2	1	4297	93	1	2	1	
	Matte Black	Type 2	T2-MO	4003	87	1	0	1	4000	87	1	0	1	3820	83	1	0	1	
		Type 3	T3-MO	4048	88	1	0	1	4045	88	1	0	1	3863	84	1	0	1	
		Type 4	T4-MO	4503	98	1	0	1	4499	98	1	0	1	4297	93	1	0	1	

-MO.ies files should be used for -FO configurations in application layouts.

ISOLINE TEMPLATES 14' Mounting Height

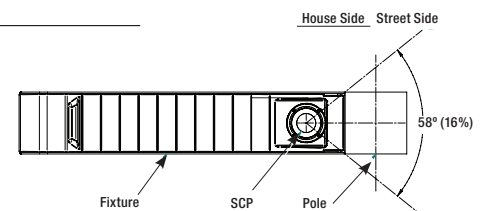


ELECTRICAL CHARACTERISTICS

Ordering Code	LED Current (mA)	System Wattage (W)	Input				Min. Power Factor	Max THD (%)	Dimming Range (V)	Source/ Sink Current (mA)	Inrush Current Peak								
			Amps AC								Hz	(A)				T@50% (µs)			
			120	277	347	480						120	277	347	480	120	277	347	480
70XX	700	64	0.5	0.23	0.2	0.13	50/60	>0.9	20	0-10	1	15	32	41	63	50	155		
50XX	500	46	0.4	0.17	0.1	0.10													

SENSOR DETECTION RANGE

		SENSOR MOUNTING HEIGHT							RATIO
		8'	10'	12'	14'	16'	18'	20'	
COVERAGE	SCP	20'	25'	30'	35'	40'	45'	50'	1:2.5
DIAMETER	WIRSC	16'	20'	24'	28'	32'	36'	40'	1:2



ARCHITECTURAL AREA LIGHTING
 17760 Rowland Street | City of Industry | CA 91748
 P 626.968.5666 | F 626.369.2695 | www.aal.net
 Copyright © 2014 September 15, 2020 4:03 PM

JOB _____
 TYPE _____
 NOTES _____



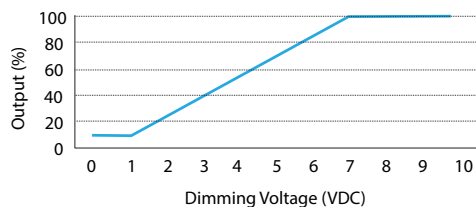
Kick™ – K4 Small Scale

TYPE

TM-21 LIFETIME CALCULATION

Ambient Environment °C	Projected Lumen Maintenance (Khrs)					Reported L70
	25	50	60 (TM-21)	75	100	
25	98%	95%	94%	92%	90%	>60Khrs.
40	98%	96%	95%	93%	91%	

DIMMING CURVE



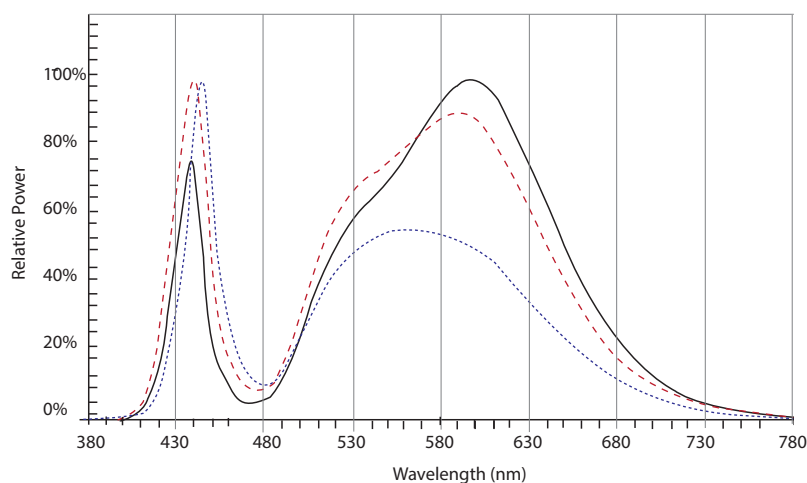
Note: Fixture does not dim to off, fixture dims to 10% minimum output.

COLOR CHARACTERISTICS

Value	Ordering Code		
	XX30	XX40	XX50
Rf	69	69	71
Rg	99	99	98
CCT(K)	3122	3852	5020
Duv	0.001	0.0004	0.0005
CIE Ra	74	73	74

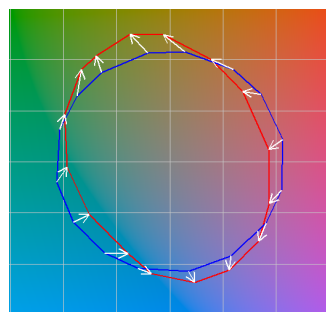
Note: TM-30 reported at the discrete LED level, not fixture level.

SPECTRAL POWER DISTRIBUTION COMPARISON



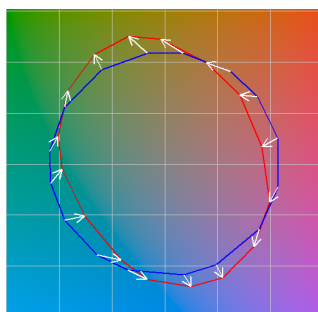
— XX30
 - - XX40
 . . XX50

COLOR VECTOR GRAPHIC



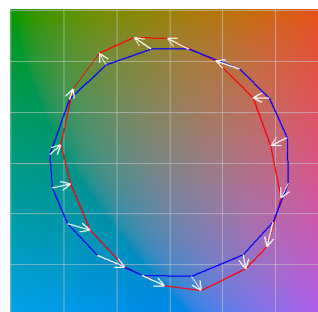
— Reference Illuminant — Test Source — Series1 — Series2
 — Series3 — Series4 — Series5 — Series6
 — Series7 — Series8 — Series9 — Series10

XX30



— Reference Illuminant — Test Source — Series1 — Series2
 — Series3 — Series4 — Series5 — Series6
 — Series7 — Series8 — Series9 — Series10

XX40



— Reference Illuminant — Test Source — Series1 — Series2
 — Series3 — Series4 — Series5 — Series6
 — Series7 — Series8 — Series9 — Series10

XX50



ARCHITECTURAL AREA LIGHTING
 17760 Rowland Street | City of Industry | CA 91748
 P 626.968.5666 | F 626.369.2695 | www.aal.net
 Copyright © 2014 September 15, 2020 4:03 PM

JOB
 TYPE
 NOTES

| 4 |

Submitted by Swaney Lighting	Job Name: MERCY SITE DESIGN/BUILD	Catalog Number: K41-T4-MO-5030-WIRED120-277V-PS410-125-**- Notes: SPECIFY FINISH	Type: S4 SLA20-46553
------------------------------	--	---	--

Kick™ – K4 Small Scale

TYPE

SPECIFICATIONS

HOUSING

- Housing shroud shall be of fabricated 5052-H32 aluminum alloy with a rear mounting interface that shall be of fabricated 304 stainless steel.
- Housing mounting interface shall have a stamped silicone gasket.
- Luminaire housing shall be free of any visible heat fins, hardware or fasteners.
- Bracketry and hardware shall be stainless steel.

OPTICAL ARRAY

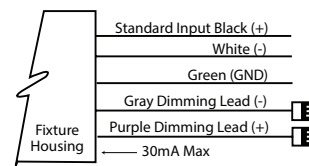
- LEDs shall be mounted to a metal printed circuit board assembly (MCPCB) with a uniform conformal coating over the panel surface and electrical features.
- Optical lenses shall be clear injection molded PMMA acrylic.
- Each MCPCB and optic shall be sealed to an extruded 6063-T6 aluminum alloy heat spreader and sealed with a continuous one piece injection molded silicone rubber gasket. IP66.
- Patent Pending design of optical array shall independently shield each LED optic across the length of the aperture.
- Optical surfaces shall be painted white unless the optional fixture finish (FO) or matte black finish (MO) is selected.
- Optional matte black finish optics (MO) are required to meet UO classification with zero percent uplight.
- Optional fixture finish optical surfaces (FO) shall not exceed BUG ratings of the standard white finish and shall be greater than or equal to the delivered lumens of the optional matte black optical surface finish (MO).

ELECTRICAL

- Drivers shall be in direct contact with the aluminum housing across the entire surface area of the widest face for maximum thermal transfer.
- Luminaires shall have integral surge protection that shall be U.L. recognized and have a surge current rating of 10,000 Amps using the industry standard 8/20uSec wave and surge rating of 372J. Surge protection device shall be wired in series.
- Drivers shall be U.L. recognized.
- Drivers shall not be compatible with current sourcing dimmers, consult factory for current list of known compatible dimming systems approved dimmers include Lutron Diva AVTV, Lutron Nova NDTV and NTFTV.
- Luminaire shall be capable of operating at

100% brightness in a 40°C environment. Both driver and optical array shall have integral thermal protection that will dim the luminaire upon detection of temperatures in excess of 85°C.

- Luminaires not configured with a control system or ANSI C136 receptacle option shall be provided with 0-10 purple and gray dimming leads.



CONTROLS

- Wireless enabled fixtures shall support bi-directional radio frequency (RF) communications utilizing IEEE 802.15.4 operating in the 2.4GHz ISM band.
- Up to 1000' wireless range may be reduced by physical obstructions between lighting fixtures.
- Motion Sensor shall use passive infrared (PIR) sensing technology that reacts to changes in infrared energy (moving body heat) within the coverage area. Careful consideration must be given to obstructions that may block the sensor's line of sight.
- Factory default settings for SCP option shall be:
 - High mode: 10V
 - Low mode: 1V
 - Ramp-up rate: disabled
 - Fade-down rate: disabled
 - Photocell: Off
 - Sensitivity: Full
 - Time Delay: Fade to low: 5 minutes
 - Time Delay: Fade to off: 1 hour

MOUNTING AND INSTALLATION

- Integral pole mount luminaires shall require assembly of fixture(s) to the pole, mounting hardware, anchor bolts and anchor bolt template shall be included. See page 6 for additional considerations specific to the integral pole.
- Tenon mount luminaires shall require assembly of fixture(s) to the tenon adapter, mounting hardware shall be included. Tenon adapter shall be secured to the tenon with eight 5/16-18 stainless steel set screws.
- Side mount luminaires shall be supplied

with hardware compatible with AAL mountings.

- Twin mounted staggered height fixtures shall be configured separately.

SERVICING

- Service access to the optical array and driver assembly shall be via a tool-less internal latch and have an audible click.
- Optical array shall be able to hang freely in an open service position for inspection of internal wire connections. Once in service position, the optical array shall be able to be removed for service by lifting the assembly up off the rear hinge and disconnecting the wiring plugs.
- Driver assembly shall be mounted to a prewired internal tray with quick disconnects for removal.

FINISH

- Luminaire finish shall consist of a five stage pretreatment regimen with a polymer primer sealer, oven dry off, and top coated with a thermoset super TGIC polyester powder coat finish.
- Luminaire finish shall meet the AAMA 605.2 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance.

CERTIFICATION

- Luminaire shall be listed with UL for outdoor, wet location use, UL1598, UL 8750 and Canadian CSA Std. C22.2 no.250.
- ANSI C136.31-2010 4G Vibration tested and compliant.
- IEC 66262 Mechanical Impact Code IK10
- IDA approved, 3000K and warmer CCTs only.
- This product qualifies as a "designated country construction material" per FAR 52.225-11 Buy American-Construction Materials under Trade Agreements effective 6/06/2020. [See Buy American Solutions.](#)

Warranty / Terms and Conditions of Sale
 Download:
<http://www.hubbelling.com/resources/warranty/>



ARCHITECTURAL AREA LIGHTING
 17760 Rowland Street | City of Industry | CA 91748
 P 626.968.5666 | F 626.369.2695 | www.aal.net
 Copyright © 2014 September 15, 2020 4:03 PM

JOB _____
 TYPE _____
 NOTES _____

| 5 |



Kick™ – K4 Small Scale

TYPE

SPECIFICATIONS

Integral Pole

MODEL	HEIGHT		SHAFT		MAXIMUM ALLOWABLE EPA (MPH)								
	OVERALL	POLE	SECTION	WT	85	90	100	110	120	130	140	150	
K4X-PS410-125	10' 7.5" / 3.24m	10'	4" SQ x .125"	28 lbs	15.4	13.5	10.4	8.1	6.4	5.0	4.0	3.1	
K4X-PS412-125	12' 7.5" / 3.85m	12'	4" SQ x .125"	32 lbs	11.8	10.2	7.6	5.7	4.3	3.2	2.3	1.6	
K4X-PS414-125	14' 7.5" / 4.46m	14'	4" SQ x .125"	37 lbs	9.1	7.7	5.5	3.9	2.6	1.7	0.95	0.33	
K4X-PS416-125	16' 7.5" / 5.07m	16'	4" SQ x .125"	42 lbs	6.9	5.7	3.8	2.3	1.3	0.46	-	-	
K4X-PS418-125	18' 7.5" / 5.68m	18'	4" SQ x .125"	48 lbs	4.9	3.9	2.2	0.95	0.01	-	-	-	
K4X-PS420-125	20' 7.5" / 6.29m	20'	4" SQ x .125"	53 lbs	3.2	2.2	0.75	-	-	-	-	-	

* - Consult factory for thicker shaft profiles and or custom heights not shown above.

CONSTRUCTION

- Base shall be cast aluminum #356 alloy and be heat treated to a T-6 condition.
- Shaft shall be extruded aluminum 6061 alloy and heat treated to a T-6 condition.
- Anchor bolts shall be hot dip galvanized steel. Eight galvanized hex nuts and flat washers, and a bolt circle template shall be provided. Anchor bolt for poles are 3/4" x 24" x 3".

WARNINGS

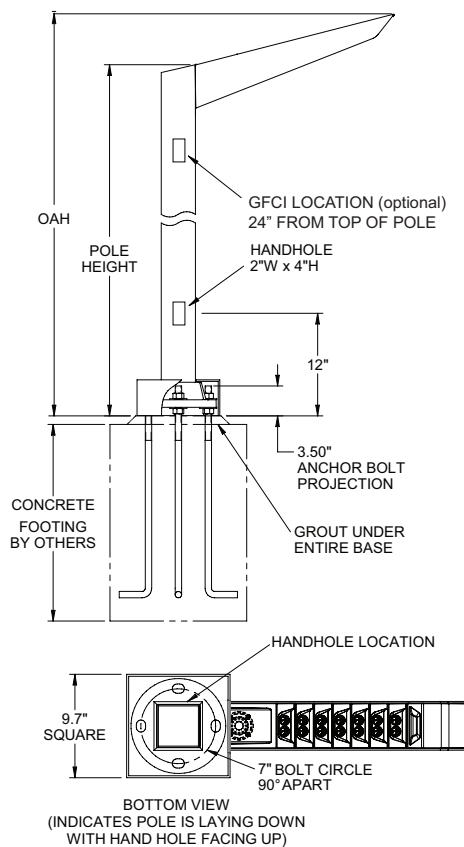
- Caution must be exercised in the selection of a design wind speed when the pole is to be installed in a special wind region (as indicated by the wind map) or in an area where wind speed is unpredictable.
- AAL recommends consulting a local engineer when the pole is to be installed in an area that may be subject to vibration, oscillations, and other fatigue effects which are not covered by the AAL warranty.
- The use of banners or other appendages can severely affect the loading of a pole. No banner or other appendage may be attached to an AAL pole unless approved by AAL.
- If the products are to be used on an existing foundation or on other structures, the customer assumes all responsibility for the structural integrity of the existing foundation, anchorage or structures and all the consequences arising there from.

CAUTION

- Poles should never be erected without the luminaire installed. Warranty is voided if the pole is erected without the luminaire.

Warranty / Terms and Conditions of Sale

Download:

<http://www.hubbelling.com/resources/warranty/>


**KIM LIGHTING****Wall, Step, Path Light EL807**

120 / 277 Volt Die-Cast Aluminum LED

revision 5/21/14 • kl_el807_spec.pdf

Type:**Job:****Fixture Catalog number:**
 _____ / _____
 Fixture Mode Finish
Approvals:**Date:****Page: 1 of 1****Specifications**

Housing: Die-cast low copper alloy (<0.6% Cu) aluminum with clear anodized finish. Two 1/2" NPT in sides. Housing mounts into concrete, brick, or masonry (non-combustible materials). Internal splice area provided behind lamp plate.

Lens Frame: Die-cast aluminum, with silicone gasket, attaches to housing with two captive 10-32 stainless steel, hex socket cap screws.

Lens: Tempered prismatic glass with silicone gasket, concealed above lens frame opening.

Finish: On lens frame only, Super TGIC thermoset polyester powder coat paint, 2.5 mil nominal thickness, applied over a titanated zirconium conversion coating; 2500 hour salt spray test endurance rating. Standard colors are Black (**BL**), Dark Bronze (**DB**), and Verde Green (**GR**).

Optical System: A total of 3 or 9 LED emitters are configured together as a module. Available in 3000K, 4200K, 5100K and 580nm (amber).

Driver: Universal Voltage from 120 to 277V with a ±10% tolerance. -40° F. starting temperature. All drivers are Underwriters Laboratories recognized.

ORDERING INFORMATION

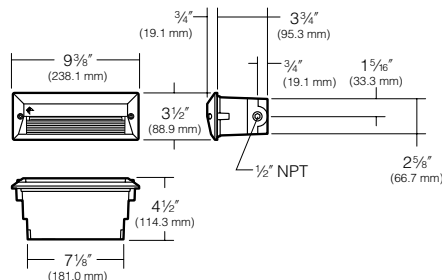
Fixture	Source
☐ EL807 / 3L2KUV ¹	3.6W, 3 LED's, 580nm
☐ EL807 / 3L3KUV ¹	3.6W, 3 LED's, 3000K
☐ EL807 / 3L4KUV ¹	3.6W, 3 LED's, 4200K
☐ EL807 / 3L5KUV ¹	3.6W, 3 LED's, 5100K

Fixture	Source
☐ EL807 / 9L2KUV ¹	10.8W, 9 LED's, 580nm
☐ EL807 / 9L3KUV ¹	10.8W, 9 LED's, 3000K
☒ EL807 / 9L4KUV ¹	10.8W, 9 LED's, 4200K
☐ EL807 / 9L5KUV ¹	10.8W, 9 LED's, 5100K

¹ Universal Voltage from 120 to 277V with a ±10% tolerance.
 For 3.6W, Max Amps. are .030 for 120V, .020 for 208V, .015 for 240V, .013 for 277V. For 10.8W, Max Amps. are .090 for 120V, .050 for 208V, .045 for 240V, .040 for 277V..

Specify Std. finish

- ☐ **BL** - Black
☐ **DB** - Dark Bronze
☐ **GR** - Verde Green


 Hubbell
 Lighting, Inc.
**Listings and Ratings**

UL cUL 1598 ¹	IP66 Rated	25C Ambient
--------------------------	------------	-------------

¹Suitable for wet locations

KIM LIGHTING RESERVES THE RIGHT TO CHANGE SPECIFICATIONS WITHOUT NOTICE.

Submitted by Swaney Lighting		Catalog Number:	Type:
	Job Name: MERCY SITE DESIGN/BUILD	EL807/9L4KUV/** Notes: SPECIFY FINISH	SL SLA20-46553

This page intentionally left blank for printing purposes


KIM LIGHTING
WDM
Wall Director® Medium kl_wdm_spec.pdf

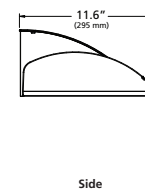
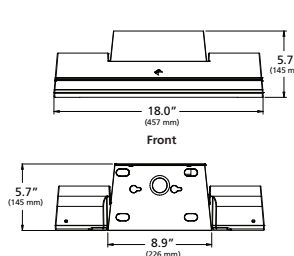
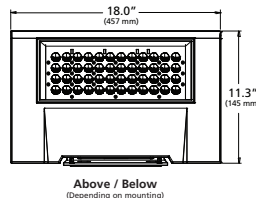
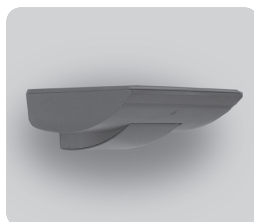
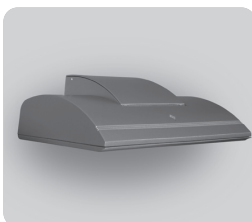
JOB _____ TYPE _____

NOTES _____ APPROVALS _____

FEATURES

- -5° to +10° tilt adjustment
- High performance optics deliver up to 15,000 lumens
- up or down mountable without modification
- Diffused lens option
- Programmable occupancy sensor (dimming)
- NX and SiteSync wireless controls
- 130+ lumens per watt

Certifications

SPECIFICATIONS


Weight: 35 lbs

ORDERING CODE

Fixture	Mounting	Source	Wattage	Light Engine	Distribution	Voltage
WDM Wall Director Medium	D Down U ¹ Up	48L 48 LEDs	55 55 Watts 65 65 Watts 85 85 Watts 105 105 Watts 130 130 Watts	3K7 3000K/70CRI 3K8 3000K/80CRI 4K7 4000K/70CRI 4K8 4000K/80CRI 5K7 5000K/70CRI	1 Type I 2 Type II 3 Type III 4W Type IV Wide 4F Type IV Forward WG ² Wall Graze SP Spot/Column FTD ² Forward Throw Diffuse WTD ² Wide Throw Diffuse	UNV 120-277V 347 347V 480 480V
Fixture Finish	Control Options	Options	Accessories			
BL Black DB Dark Bronze LG Light Gray GT Graphite PS Platinum Silver TT Titanium WH White CC Custom Color [†] Specify Std. finish	PC Button Photocell SCP-8F Programmable Occ. Sensor (<9' height) SCP-20F Programmable Occ. Sensor (<9' - 20' height) SWP ³ SiteSync Wireless Pre-Commission SWPM ³ SiteSync Wireless w/ Occupancy Sensor Pre-Commission NXSPW14F ⁴ NX Wireless, PIR Occupancy Sensor, Dimming Daylight Harvesting, 14' NXSP14F ⁴ NX PIR Occupancy Sensor, Dimming Daylight Harvesting, 14' NXWE ⁴ NX Wireless Enabled	EM ³ Internal Emergency Battery Backup SF Single Fuse & Fuse holder DF Double Fuse & Fuse holder 2DR Dual Drivers 2PF Dual Power Feeds	SCPREMOTE SCP configuration tool SWUSB SiteSync Software on USB SWTAB SiteSync Windows® Tablet SWBRG SiteSync Software Bridge Node			

Microsoft, Encarta, MSN, and Windows are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.

NX DISTRIBUTED™
 INTELLIGENCE

Kim Lighting reserves the right to change specifications without notice.

 © 2020 KIM LIGHTING | 17760 Rowland Street | City of Industry | CA 91748
 P 626.968.5666 | F 626.369.2695 | www.kimlighting.com | Rev. Jan. 30, 2020


| 1 |

Submitted by Swaney Lighting		Catalog Number: WDM/D/48L-55/3K7/2/UNV/** Notes: SPECIFY FINISH	Type: W1 SLA20-46553
	Job Name: MERCY SITE DESIGN/BUILD		



WDM
Wall Director® Medium kl_wdm_spec.pdf

LUMINAIRE PERFORMANCE

LED #	Nominal Lumen Package	Nominal Wattage	Lens Options	Distribution	3000K					4000K					5000K				
					Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
						B	U	G			B	U	G			B	U	G	
48L	6,000	54	Clear Lens	1	7162	1	0	1	132	7342	1	0	1	135	7426	1	0	1	137
				2	6782	1	0	1	125	6953	1	0	1	128	7032	1	0	1	130
				3	6896	1	0	2	127	7070	1	0	2	130	7151	1	0	2	132
				4F	6766	1	0	2	125	6937	1	0	2	128	7016	1	0	2	129
				4W	6580	1	0	2	121	6746	1	0	2	124	6823	1	0	2	126
				SP	7594	4	0	1	140	7785	4	0	1	143	7874	4	0	1	145
			Diffuse Lens	WG	6842	3	0	1	126	7015	3	0	1	129	7095	3	0	1	131
				FTD	5950	2	0	1	110	6100	2	0	1	112	6170	2	0	1	114
				WTD	6439	2	0	1	119	6601	2	0	1	122	6677	2	0	1	123
	8,000	68	Clear Lens	1	8775	1	0	1	129	8996	1	0	1	132	9099	1	0	1	134
				2	8309	1	0	2	122	8518	1	0	2	125	8616	1	0	2	127
				3	8450	1	0	2	124	8662	1	0	2	127	8761	1	0	2	129
				4F	8290	1	0	2	122	8499	1	0	2	125	8596	1	0	2	126
				4W	8062	1	0	2	119	8265	1	0	2	122	8360	1	0	2	123
				SP	9304	4	0	1	137	9538	4	0	1	140	9647	4	0	1	142
			Diffuse Lens	WG	8384	3	0	1	123	8594	3	0	1	126	8693	3	0	1	128
				FTD	7290	2	0	2	107	7474	2	0	2	110	7559	2	0	2	111
				WTD	7890	2	0	1	116	8088	2	0	1	119	8181	2	0	1	120
	10,000	88	Clear Lens	1	11194	1	0	1	127	11476	1	0	1	130	11607	1	0	1	132
				2	10601	2	0	2	120	10867	2	0	2	123	10991	2	0	2	125
				3	10779	1	0	2	122	11050	1	0	2	126	11177	1	0	2	127
				4F	10576	1	0	2	120	10842	1	0	2	123	10966	1	0	2	125
				4W	10285	2	0	2	117	10544	2	0	2	120	10665	2	0	2	121
				SP	11870	5	0	1	135	12168	5	0	1	138	12308	5	0	1	140
			Diffuse Lens	WG	10695	3	0	1	122	10964	3	0	1	125	11090	3	0	1	126
				FTD	9300	2	0	2	106	9534	2	0	2	108	9643	2	0	2	110
				WTD	10065	2	0	2	114	10318	2	0	2	117	10436	2	0	2	119
	12,000	104	Clear Lens	1	12808	1	0	1	124	13130	1	0	1	127	13280	1	0	1	128
				2	12128	2	0	2	117	12433	2	0	2	120	12575	2	0	2	121
				3	12333	1	0	2	119	12643	2	0	2	122	12787	2	0	2	123
				4F	12100	2	0	2	117	12405	2	0	2	120	12547	2	0	2	121
				4W	11768	2	0	2	113	12064	2	0	2	116	12201	2	0	2	118
				SP	13580	5	0	1	131	13922	5	0	1	134	14081	5	0	1	136
			Diffuse Lens	WG	12236	3	0	1	118	12544	3	0	1	121	12687	3	0	1	122
				FTD	10641	2	0	2	103	10908	2	0	2	105	11033	3	0	2	106
				WTD	11515	2	0	2	111	11805	2	0	2	114	11940	2	0	2	115
	14,000	131	Clear Lens	1	15227	2	0	1	117	15610	2	0	1	120	15789	2	0	1	121
				2	14419	2	0	2	110	14782	2	0	2	113	14951	2	0	2	114
				3	14662	2	0	3	112	15031	2	0	3	115	15203	2	0	3	116
				4F	14386	2	0	2	110	14748	2	0	3	113	14917	2	0	3	114
				4W	13991	2	0	2	107	14343	2	0	2	110	14506	2	0	3	111
				SP	16146	5	0	1	124	16552	5	0	1	127	16741	5	0	1	128
			Diffuse Lens	WG	14548	4	0	1	111	14914	4	0	1	114	15084	4	0	1	116
				FTD	12651	3	0	2	97	12969	3	0	2	99	13117	3	0	2	100
				WTD	13691	3	0	2	105	14035	3	0	2	107	14196	3	0	2	109

Kim Lighting reserves the right to change specifications without notice.

© 2020 KIM LIGHTING | 17760 Rowland Street | City of Industry | CA 91748
P 626.968.5666 | F 626.369.2695 | www.kimlighting.com | Rev. Jan. 30, 2020



| 2 |



WDM
Wall Director® Medium kl_wdm_spec.pdf

LUMINAIRE PERFORMANCE

Electrical Characteristics											Dimming					
System Watts	Current	Line Voltage		Amps AC						Min. Power Factor	Max THD (%)	Dimming Range	Source current out		Absolute voltage	
		VAC	Hz	120	208	240	277	347	480				Min	Max	Min	Max
54	350mA	120-480	50/60	0.45	0.26	0.23	0.19	0.16	0.11	>0.9	20	10% to 100%	0mA	1mA	0V	10V
68	425mA			0.53	0.31	0.27	0.23	0.18	0.13							
88	550mA			0.70	0.40	0.35	0.30	0.24	0.18							
104	650mA			0.84	0.49	0.42	0.36	0.29	0.21							
131	800mA			1.09	0.63	0.55	0.47	0.38	0.27							

TM-21 LIFETIME CALCULATION

Projected Lumen Maintenance (25°C / 77°F)						
HOURS	0	25,000	36,000	50,000	100,000	Reported L70
Projected Lumen Maintenance	100%	97%	96%	94%	88%	> 60,000 hrs

Kim Lighting reserves the right to change specifications without notice.



SPECIFICATIONS

Housing

- Optical housing is a one-piece, die-cast low copper (<0.6%) aluminum alloy with integral heat sink. The housing rotates against mounting arm housing to provide -5° to 10° of adjustment with degree markers cast into the housing. At 0° adjustment, lens is totally concealed from view above horizontal with fixture mounted in the downward position.
- Mounting arm housing is one-piece die-cast, low copper (<0.6%) aluminum alloy with provisions for tilt mechanism. Mounting arm fastens to the mounting plate with keyhole slots freeing both hands for securing and wiring. One stainless steel socket-head screw on the tilt mechanism frees the optical housing to rotate for aiming. Tightening the screws locks the housing and lens frame together with sealing provided by a silicone gasket. For visual aiming, adjustment may be accomplished with the fixture on.
- Lens Frame is a one-piece, die-cast low copper (<0.6%) aluminum alloy with integral cooling fins to dissipate driver thermal.
- Luminaire housing shall be free of any visible heat fins, hardware or fasteners.
- Bracketry and hardware shall be stainless steel.

Optical Array

- LEDs shall be mounted to a metal printed circuit board assembly (MCPCB).
- Optical lenses shall be clear injection molded PMMA acrylic.
- Secondary lens is impact resistant 1/8" tempered glass with anti-reflective coating.

Electronic Module

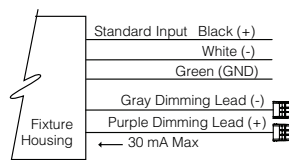
- Drivers shall be in direct contact with the die-cast aluminum lens frame across the entire surface area of the widest face for maximum thermal transfer.
- "Thermal Shield", secondary side, thermistor provides protection for the sustainable life of LED module and electronic components.
- Drivers shall have greater than a 0.9 power factor, less than 20% harmonic distortion, and be suitable for operation in -40°C to 40°C ambient environments
- luminaires shall have integral surge protection that shall be U.L. recognized and have a surge current rating of 10,000 Amps using the industry standard 8/20uSec wave and surge rating of

372J. Surge protection device shall be wired in series.

- Drivers shall be U.L. recognized.
- Drivers shall not be compatible with current sourcing dimmers, consult factory for current list of known compatible dimming systems approved dimmers include Lutron Diva AVTV, Lutron Nova NFTV and NTFTV.

Dimming

- 10% to 100% dimming by the use of standard 0-10V interface driver.
- The thermal shield works in conjunction with the control system to assure that overheating will not harm the LEDs.
- The wiring harness is connected with the use of the Purple lead as the positive (+) and the Grey lead as the negative (-) to an available control signal (by others).



Specifications

- Luminaire shall be capable of operating at 100% brightness in a 40°C environment. Both driver and optical array shall have integral thermal protection that will dim the luminaire upon detection of temperatures in excess of 85°C.
- luminaires not configured with a control system shall be provided with 0-10 purple and gray dimming leads.

Controls

- Optional universal voltage (120-277V) button photocontrol for dusk to dawn energy savings. Photocontrol is factory installed inside the housing with a fully gasketed sensor on the side wall. For multiple fixture mountings, one fixture is supplied with a photocell to operate the others.
- Occupancy Sensor shall be programmable and use passive infrared (PIR) sensing technology that reacts to changes in infrared energy (moving body heat) within the coverage area. Careful consideration must be given to obstructions that may block the sensor's line of sight.
- Factory default settings for SCP option shall be:
- High mode: 10V - Low mode: 1V - Ramp-up

rate: disabled - Fade-down rate: disabled - Photocell: Off - Sensitivity: Full - Time Delay: Fade to low: 5 minutes - Time Delay: Fade to off: 1 hour

- The SCP enables any wall mounted luminaire, in excess of 30 watts, to meet California Title 24 requirements with integral 10KA surge protection for added reliability and serviceability. For more detail: http://www.aal.net/products/sensor_control_programmable
- SiteSync™ wireless control system for reduction in energy and maintenance cost while optimizing light quality 24/7. See ordering information or visit www.hubbellighting.com/products/sitesync for more details.
- Hubbell Control Solutions' NX Distributed Intelligence™ lighting control platform utilizes a Distributed Network Architecture (DNA) that connects intelligent devices including luminaires, controllers, panels, occupancy sensors, photocells, wall switches and dimmers, creating a system with an unmatched level of reliability, scalability and simplicity

Options

- Integral battery backup provides emergency path of egress lighting for the required 90 minutes for 0°C ambient environments or -20°C with thermal jacket.

Fusing:

SF for 120, 277 and 347 Line Volts
DF for 208, 240 and 480 Line Volts

High temperature fuse holders factory installed inside the fixture housing. Fuse is included.

Mounting and Installation

- JUNCTION BOX (By Others): Standard with steel, quick-mount junction box plate that mounts directly to 4" J-Box
- Mounting plate is stainless steel and features a one-piece EPDM gasket on back side of plate to firmly seal fixture to wall surface, forbidding entry of moisture and particulates.

Servicing

- Housing shall be able to hang freely in an open service position for inspection of primary wire connections. Once in service position, the housing shall be able to be removed for service by sliding the assembly to the left (for down mounting) or to the right (for up mounting) and disconnecting the wiring plugs.

Kim Lighting reserves the right to change specifications without notice.

Submitted by Swaney Lighting		Catalog Number:	Type:
	Job Name: MERCY SITE DESIGN/BUILD	WDM/D/48L-55/3K7/2/UNV/** Notes: SPECIFY FINISH	W1 SLA20-46553



WDM
Wall Director® Medium kl_wdm_spec.pdf

SPECIFICATIONS

- Driver assembly shall be mounted to a prewired internal tray with quick disconnects for removal. Fusing SF for 120, 277, and 347 line volts DF for 208, 240, and 480 line volts high temperature fuse holders factory installed inside the fixture housing. Fuse is included.

Finish:

- Luminaire finish shall consist of a five stage pretreatment regimen with a polymer primer sealer, oven dry off, and top coated with a thermoset super TGIC polyester powder coat finish.
- Luminaire finish shall meet the AAMA 605.2 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance.
- Standard colors include (BL) Black, (DB) Dark Bronze, (GT) Graphite, (LG) Light Gray, (PS) Platinum Silver, (TT) Titanium, (WH) White, and (CC) Custom Color (Include RAL#).

Certifications and Listings

- UL1598, UL 8750 and Canadian CSA Std. C22.2 no.250.
- IDA approved, down light only, 3000K and warmer CCTs only.
- 1.5G rated
- IP66 Certified
- IK08 Certified

CAUTION:

- Fixtures must be grounded in accordance with national, state and/or local electrical codes, Failure to do so may result in serious personal injury.

WARRANTY:

- For full warranty see <http://www.hubbellighting.com/resources/warranty>

Kim Lighting reserves the right to change specifications without notice.

© 2020 KIM LIGHTING | 17760 Rowland Street | City of Industry | CA 91748
P 626.968.5666 | F 626.369.2695 | www.kimlighting.com | Rev. Jan. 30, 2020



| 5 |

Submitted by Swaney Lighting		Catalog Number: WDM/D/48L-55/3K7/2/UNV/**	Type: W1
	Job Name: MERCY SITE DESIGN/BUILD	Notes: SPECIFY FINISH	SLA20-46553

This page intentionally left blank for printing purposes

October 13, 2020

Caitlin Cameron
Urban Designer
City of Portland Maine
389 Congress Street
Portland, Maine 04101

Re: Mercy Hospital Renovation - Design Narrative

The proposed renovation of Mercy Hospital and the adjacent Morrison House is a mixed use project that will add 175 residential apartments to the City of Portland. Eighteen of those units will be affordable housing units located within the main Hospital building. The project also includes an outpatient clinic for Mercy as well as commercial tenant spaces and a self storage facility.

The project is located within the West End Historic District and the project will be renovated in accordance with the National Park Service's Historic Preservation Standards and Guidelines.

The modifications to the existing structure include removal of most of the 1980's addition that faces the Winter Street and Spring Street. The projects exterior scope of work includes replacement of existing windows, rebuilding the exterior walls where the addition will be removed and a new constriction addition to the building.

The addition is a new entry to the apartment uses that faces the new Woonerf on the Southwest elevation of the building. The addition is a contemporary design that differentiates itself from the historic building but is inspired by design elements that exist on the historic structure. The addition has a crisp and clean design with glass and metal siding, with a base of precast concrete to recall the cast stone detailing of the historic building. The roof of the addition has a thin in profile with overhang and clad in metal to relate to the existing entry canopy on Spring Street. We have also created surrounds of the new entries utilizing cast stone in contemporary geometry but are inspired by the cast stone surround language at the historic entries. The glass facades have a rhythm of vertical joints that reflect the historic masonry opening rhythm that existing

207-747-5159

senatorearchitecture.com

ryan@senatorearchitecture.com

500 Congress Street, Suite 2
Portland, Maine 04101

in their place as well as the historic windows that are above them beyond.

We look forward to discussing the project at the upcoming Planning Board workshop.

Sincerely,



Ryan Senatore, AIA LEED AP

Principal

207-747-5159

senatorearchitecture.com

ryan@senatorearchitecture.com

500 Congress Street, Suite 2
Portland, Maine 04101

Utilities

The proposed project will include installation of multiple utility services to the new building.

Water:

Existing domestic and fire suppression water services are anticipated to be continued to be utilized for the redevelopment of the hospital building and Morrison House. MEP to coordinate which existing fire suppression and domestic water services will continue to be utilized. Any unused services will need to be retired per PWD standards. The project proposes to tap two different 6" fire water service lines and two different 2" domestic water service lines for a total of four different connections off of the existing main on Winter Street to serve the future residential buildings along Winter Street.

Sewer:

Existing sanitary sewer services are anticipated to be continued to be utilized for the redevelopment of the hospital building and Morrison House. No additional sewer service upgrades to the existing building are proposed at this time. Two 6-inch sanitary sewer services are proposed, one for each of the future residential buildings along Winter Street. The new sewer services will connect into a combined sewer main within Winter Street.

Stormwater:

There are currently catch basins and stormwater sewer lines on site that are to be removed. The proposed measures to handle runoff include roof drain connections, catch basins, new stormwater sewer lines and a modular wetland system proprietary water quality treatment unit. These systems will connect to a combined sewer main within Spring Street. Please see the Stormwater Management Report for more information.

UGE/T/C:

The existing building on site is currently serviced by underground electric. An additional service is proposed to be routed from the existing electric service in Winter Street. The plans show both an above ground transformer and a potential subsurface electrical vault. Final configuration dependent on final MEP design.

Gas:

The existing gas service lines to the existing buildings are anticipated to be continued to be utilized for the redevelopment. The proposed two new residential buildings will have new gas services installed via a tap off the existing main in Winter Street as seen on the Utility Plan, Sheet C-20.

Ability to serve letters were sent out to the respective utility companies on August 28, 2020 in accordance with the City of Portland Code of Ordinances Chapter 14 Land Use, Section 14-527(g)(7). Responses from the utility companies will be forwarded upon receipt.



Construction Management Plan

Project Address: 120 and 148 State Street

Project Description:

Acorn Engineering, Inc. has been retained by NewHeight Redfern, LLC. to provide civil engineering services for the proposed redevelopment of 120 and 148 State Street. The proposed project site is comprised of a two parcels, Chart 45, Block C, Lot 7 (120 State Street) and Chart 45, Block C, Lot 6 (148 State Street), encompassed by State, Spring, and Winter Streets. The site is currently comprised of the existing Mercy Hospital complex, including the Morrison House, with surface parking, landscaping, and a loading dock area. The project proposes to redevelop the existing lot into a mixed-use development, consisting of redevelopment of the existing hospital building and proposes two (2) new residential buildings with exterior parking. The two (2) new residential buildings will be submitted under a separate Site Plan application. The existing hospital building will be redeveloped to include 167 residential units within the redeveloped hospital building and 8 residential units within the Morrison House with associated common areas, office, and fitness area, as well as self-storage, commercial/retail space, and a medical clinic.

Project Team Summary:

Owner:	NewHeight Redfern, LLC
Owner's Representative:	NewHeight Redfern, LLC
General Contractor (GC):	TBD
Civil Engineer:	Acorn Engineering, Inc.
Structural Engineer:	TBD
Architect:	Ryan Senatore Architecture

The Owner, GC and all subcontractors will work with the City of Portland and adjacent landowners to minimize any project impacts.

The GC will remain responsible for enforcement of all compliance with 1) all contract plans and specifications in their scope of work and 2) all site working conditions and safety requirements, day and night, for both persons and property, in each case for the duration of their work. These include OSHA, NIOSH, U.S. EPA, local ordinance and any other applicable governmental regulations. Both the Owner/GC and any subcontractors will remain responsible for safeguarding the general public.

The GC shall review all permits and conditions associated with the project. Refer to the Civil/Site Plan Set, Sheet C-03 Construction Management Plan for visual representation of measures to be taken during construction.

The following outline has been developed in accordance with the City of Portland Construction Management Plan General Template and shall be referenced by the GC during construction.



A. Construction Management Principles

The control of noise, vibrations, ground movement, truck traffic, and other construction related factors will be of utmost importance. Care shall be taken to minimize these effects in the best interest of neighbors and the general public. GC to ensure that work hours conform to the City of Portland's Ordinance.

B. Development Review of Construction Management Plan

Logistics and safety program shall be submitted at or prior to the preconstruction meeting by the GC with all pertinent information required by the Maine Department of Transportation's Traffic Control Plan Standard Specification 652.3.3.

C. Performance Guarantees, Inspection Fees, Preconstruction Meeting, and Permits

Guarantees and fees will be paid at the time of the respective application. All necessary permits will be obtained prior to work and compliance with Sections 14-530 and 14-532 is required.

1. Street Opening and Street Occupancy Permits:

Required permits regarding street opening and occupancy will be obtained from the Department of Public Works. The requests shall conform to the approved Construction Management Plan.

2. Blasting:

Although not anticipated, if blasting occurs, it shall conform with all measures of Article VIII. In Chapter 14 of the City Code and Section 3.7 in the City's Technical Manual.

3. Building Code:

Employ the best practices, as applicable, of Chapter 33 Safeguards During Construction, from the 2009 International Building Code.

D. Construction Administration and Communication

The Contractor will work closely with adjacent abutters, businesses, and all parties informed, as far in advance as possible, of scheduled work, particularly work anticipated to cause significant noise, vibrations, or dust. Communication in order to comply with all agreements, ordinances, and special permits will be of the utmost importance. Contractor contact information shall be posted on a sign on the construction fence along the Federal Street frontage. Additional signage necessary for communication shall be provided but will be temporary and removed upon completion of the project. The contract information for the project personnel is:

Erin Cooperrider
NewHeight Redfern, LLC
(207) 720-0181



A C O R N Engineering, Inc. • www.acorn-engineering.com
207-775-2655 • PO Box 3372 • Portland • Maine • 04104

GC and Subcontractor information will be posted along the State Street, Spring Street & Winter Street frontages once contracted.

E. Construction Schedule

The GC shall submit a construction timeline at or prior to the preconstruction meeting. Construction may occur during the daytime hours as defined in Section 17-18. Construction Activities for Building permit and City Code Section 25-129, Noise, dust and debris. Between September 1 and May 31, the following year, no person shall engage in construction activities generating noise exceeding 50 decibels, between the hours of 7 pm and 7 am of the following day within 500 feet of any buildings. From June 1 to August 31, construction activity may continue until 8 pm. No construction activity shall begin before 8 am on a Saturday, Sunday, or legal holiday. Extended hours or night work may be requested for special circumstances and street utility work if needed. These requests will be subject to approval by the Public Works Authority.

Due to the limited space within the project parcel, deliveries will need to be stored in an alternate location or deliveries must be small enough to fit within the property. Deliveries will be scheduled between 7 am and 5 pm.

The estimated timeframe of the proposed project is outlined below:

<u>Project Start Date:</u>	Fall 2021
<u>Project End Date:</u>	Fall 2023

A more detailed work schedule shall be provided by the GC at or before the pre-construction meeting with the City.

F. Security

1. The Construction Management Plan, Sheet C-03, depicts all proposed fencing and other barriers, with the intent of separating pedestrian and vehicle circulation from the construction site. Construction entrances per detail shall be installed.
2. Structures undergoing construction, alteration, or demolition operations, including those in underground locations, shall comply with NFPA 1 Chapter 16. *Safeguarding Construction, Alteration, and Demolition Operations*.
3. Fire Safety Program: Prior to construction, an overall construction and demolition fire safety program shall be developed. Essential items to be emphasized include the following:
 - o Good Housekeeping
 - o On-site security
 - o Installation of new fire protection systems as construction progresses
 - o Preservation of existing systems during demolition
 - o Organization and training of an on-site fire brigade
 - o Development of a pre-fire plan with the local fire department
 - o Rapid communication
 - o Consideration of special hazards resulting from previous occupancies



- o Protection of existing structures and equipment from exposure fires resulting from construction, alteration, and demolition operations.
- 4. Blasting, if required, shall conform with all measures of Article VIII. Regulation of Explosives in the Land Use Code and Section 3.7 Standards for Blasting and Regulation of Explosives in Portland's Technical Manual.
- 5. Temporary security lighting shall be shown on the Construction Management Plan, and all fixtures shall be full cutoffs.

G. Construction Permitting and Traffic Control Plans

1. Construction Activity in Public Streets

Construction activity in the public right-of-way shall be compliant with Chapter 25 Article VII of the City Code. At no time will it be permissible for construction activity including delivery vehicle to close or block streets or affect public safety access without prior notice and approval of the Department of Public Works.

2. Sewer and Stormwater

Sewer and stormwater system connections are controlled by Chapters 24 and 32 of the City Code of Ordinance. Required permits for new connections and/or abandonment of existing connections are available through the Street Opening Clerk at the Department of Public Works. Rules and Regulations for these utility systems are available through the City Engineer's office of the Department of Public Works and in Section II of the Technical Manual. This will apply to the new connections within Winter & Spring Streets.

3. Traffic Control Plans

Construction activity that impacts the existing public street system must be controlled to protect the safety of the construction workers and all modes of the traveling public. The contractor shall submit a satisfactory "Maintenance of Traffic" (MOT) plan prior to any street opening permit approval. This document shall contain all pertinent information from the Maine Department of Transportation's Traffic Control Plan Standard Specification 652.3.3.

The MOT will address the work required for utility connections in Federal Street. Traffic will be channelized utilizing drums and cones. Proper signage will be installed prior to the through work zone. Alternating traffic will be controlled with flaggers. Trenches will be patched with pavement daily.

The MOT plan shall provide for the safe passage of the public through or along the construction work zone. It may be permissible to close a portion of Winter and Spring Streets during utility connections and/or detour a mode of traffic when absolutely necessary for safety. All requests shall be subject to City approval. MOT plans shall employ the appropriate techniques and devices as called for in the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD). In addition:



- Construction speed signing may be used as needed to slow traffic.
- Traffic Control signs shall not be placed where they would create any obstructions to bicycles or pedestrians.
- Flaggers will be utilized when necessary.

All existing modes of travel in the work zone area shall be accommodated if impacted by the activity. The safe passage of pedestrians, bicyclists, transit providers, and motorists are of equal importance when planning and laying out the work zone; no pre-existing travel mode may be eliminated without the express approval of the Department of Public Works. The MOT should also address on-street parking impacts, including deliveries and parking for adjoining businesses and property owners, analysis of roadway capacity or diversion capacity if street closure or change to roadway capacity is required, and coordination with other on-going or future construction or utility projects in the vicinity.

- Traffic control for bicycle and pedestrian facilities or routes through work zones shall be maintained until the bicycle and pedestrian facilities or routes are ready for safe operation. Traffic control will not be removed to allow auto travel at the expense of bicycle and pedestrians.
- Barrier systems utilized to separate the construction activity from the public street and /or sidewalk shall not inhibit sight distances, particularly for visibility of pedestrians and bicyclists.
- ADA compliance in all capacities shall be maintained.

Use of public parking spaces or the blockage of any portion of sidewalk for the purpose of construction activity shall require an occupancy permit and appropriate fee as assessed by the Department of Public Works.

H. Site Management and Controls

1. Regular trash and debris shall be managed appropriately and removal of such shall comply with all local, state, and federal regulations.
2. Street cleaning and sweeping shall be followed as outlined in the erosion and sedimentation control notes and report. Damage to the street shall be avoided and shall be the responsibility of the contractor.
3. Dust shall be controlled and shall comply with Section 25-129 and the erosion and sedimentation control notes, plan, and details.
4. Noise shall be controlled and shall comply with Section 17-18 and Section 25-129.
5. Rodent Control shall be provided, if applicable, by a professional exterminator and shall be consistent with Chapter 22 of the City Code.
6. Snow and Ice Removal shall be provided. Pursuant to Section 25-173, the Contractor shall ensure a safe means of travel within the work zone by the following steps:
 - a. Snow/ice removal or commence automatically from 1" or greater of snow or ice
 - b. Remove snow as needed within the work zone, including parking spaces.
Driveways and site lines shall not be blocked by piles of snow.



- c. Clear all walks and ramps within the work zone
- d. Sand or salt as needed
- e. Clear all basin or drainage to help snow melt
- f. The above steps shall be carried out Sunday-Saturday including holidays.

I. Erosion & Sedimentation Control

1. The Contractor shall install all erosion and sedimentation controls as depicted on the approved Construction Management Plan, C-03, and the approved erosion and sedimentation control report, prior to the pre-construction meeting for inspection by the City. The Contractor shall regularly inspect the control measures, no less than weekly and after storm events (0.5" or more in 24 hours). Additionally, temporary or permanent stormwater management systems shall be inspected and maintained to ensure working order. The Contractor shall document all inspection activities and corrective actions and be prepared to provide these documents for inspection by the City, Maine Department of Environmental Protection (MDEP) or the U.S. Environmental Protection Agency (EPA) upon request.
2. Due to the existing, sparse landscaping on site, no protection during construction will be necessary.
3. Stored materials shall be identified and avoid being located under/near trees.

J. Construction Staging Area

1. The Contractor shall submit a plan with locations depicted for material staging areas, on-site temporary construction trailers, on-site truck delivery holding areas, on-site truck washing stations, masonry mixing stations, the general location of the construction security fence and the general location of temporary construction dumpsters. This plan shall be submitted at or prior to the pre-construction meeting. Any open storage areas shall be shown on the plan.
2. Delivery Truck Holding Areas On-Site: The majority of materials delivered to the site will be scheduled such that they are able to be off-loaded immediately. On days when the construction activities require multiple truck deliveries, these deliveries will be carefully scheduled so that there is always adequate on-site area for the holding of trucks until they can be unloaded. Upon arrival to site, all vehicles will be brought within the fence line and will make every attempt to avoid queuing on public streets. If, for any reason, on-site holding of trucks is not feasible, an off-site location must be designated and shown on the submitted plan referenced above in J.1.
3. All deliveries for materials shall comply with the City's noise requirements.

K. Parking During Construction

1. Adequate parking for construction workers shall be provided along Federal Street or arrangements for off-street parking at an off-site location shall be provided.
2. Truck Routes: Trucks will access the site via State Street, Spring Street and Winter Street.



L. Special Measures as Necessary

The abutting buildings will be subject to a pre and post construction survey to monitor any effects from construction. The surveys shall consist of photographs of the foundation as viewed from outside and inside if granted permission.



Solid Waste Disposal

Solid waste disposal is currently located within the interior of the building's basement, with two existing trash compactors and dumpster within the loading dock area. One (1) of the existing trash compactors will be relocated along the existing retaining wall within the loading dock area that will continue to be utilized. The other trash compactor and dumpster will be removed. See architectural drawings and Sheet C-10, Site Plan for additional information.



April 12, 2021

Planning & Urban Development Dept.
Att: Caitlin Cameron
Urban Designer
389 Congress St, Ste. 400
Portland, Maine 04101

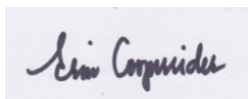
Re: 148 State Street Site Plan Application

Dear Caitlin,

Shared use parking is an important Traffic Demand Management (TDM) strategy that will be employed by NewHeight Redfern LLC on the redeveloped parcel now occupied by Mercy Hospital. The parking management plan will maximize use of the tandem parking spaces near the loading dock located adjacent to the building. On-site, full-time management will schedule trash pick-ups and deliveries between the hours of 6 a.m. and 6 p.m. The self-storage component of the property will use the tandem spaces for drop off and pick up generally between the hours of 6 a.m. and 6 p.m. also, scheduled around trash pick ups, and other regularly scheduled daytime activities. Residential tenants will have use of the spaces between 6 p.m. and 6 a.m.

The Traffic Demand Management Coordinator for the campus will assign use of the tandem parking spaces with the intent to pair residential tenants who drive to off-peninsula locations and leave early in the morning with these spaces, coordinating with the tenants to stagger arrival and departure times to ensure efficient circulation in this area. Unbundled parking, leased separately from the units, is also an important TDM strategy and a part of the plan for the property. Successful management of these and all parking spaces that are a part of the property is in the best interest of the neighborhood and the property owner and an important part of this urban residential development.

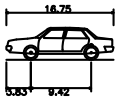
Sincerely,



Erin Cooperrider
Manager, NewHeight Redfern

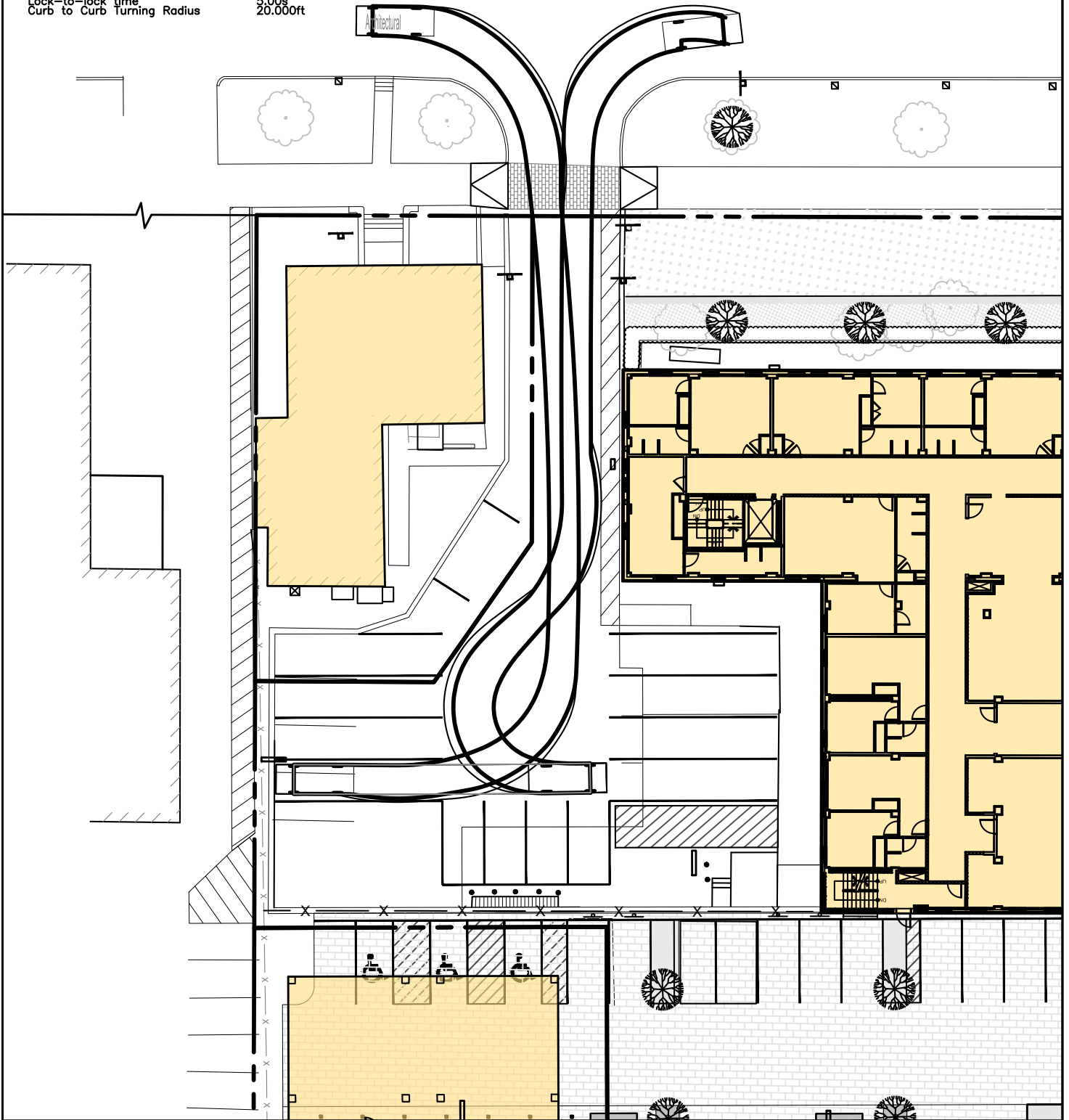


Jonathan Culley
Manager, NewHeight Redfern



Architectural
Overall Length
Overall Width
Overall Body Height
Min Body Ground Clearance
Track Width
Lock-to-lock time
Curb to Curb Turning Radius

16.750ft
6.300ft
5.003ft
0.939ft
6.300ft
5.00s
20.000ft



THIS PLAN SHALL NOT BE MODIFIED
WITHOUT WRITTEN PERMISSION FROM
ACORN ENGINEERING, INC. ANY
ALTERATIONS, AUTHORIZED OR
OTHERWISE, SHALL BE AT THE USER'S
SOLE RISK AND WITHOUT LIABILITY TO
ACORN ENGINEERING, INC.

DRAWING NO.
EXHIBIT

FILE: 1140.1_CIVIL
DATE: 10/21/20
JN: 1140.1
SCALE: 1" = 50'
DESIGN BY: PFH
DRAWN BY: KRB
CHECKED BY: WHS



DRAWING NAME:

AUTOTURN EXHIBIT 1

PROJECT NAME:

102 STATE STREET REDEVELOPMENT

CLIENT:

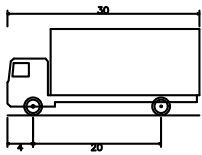
NEWHEIGHT REDFERN, LLC
PORTLAND, MAINE

ISSUED FOR

COMMENT
RESPONSE

BY DATE

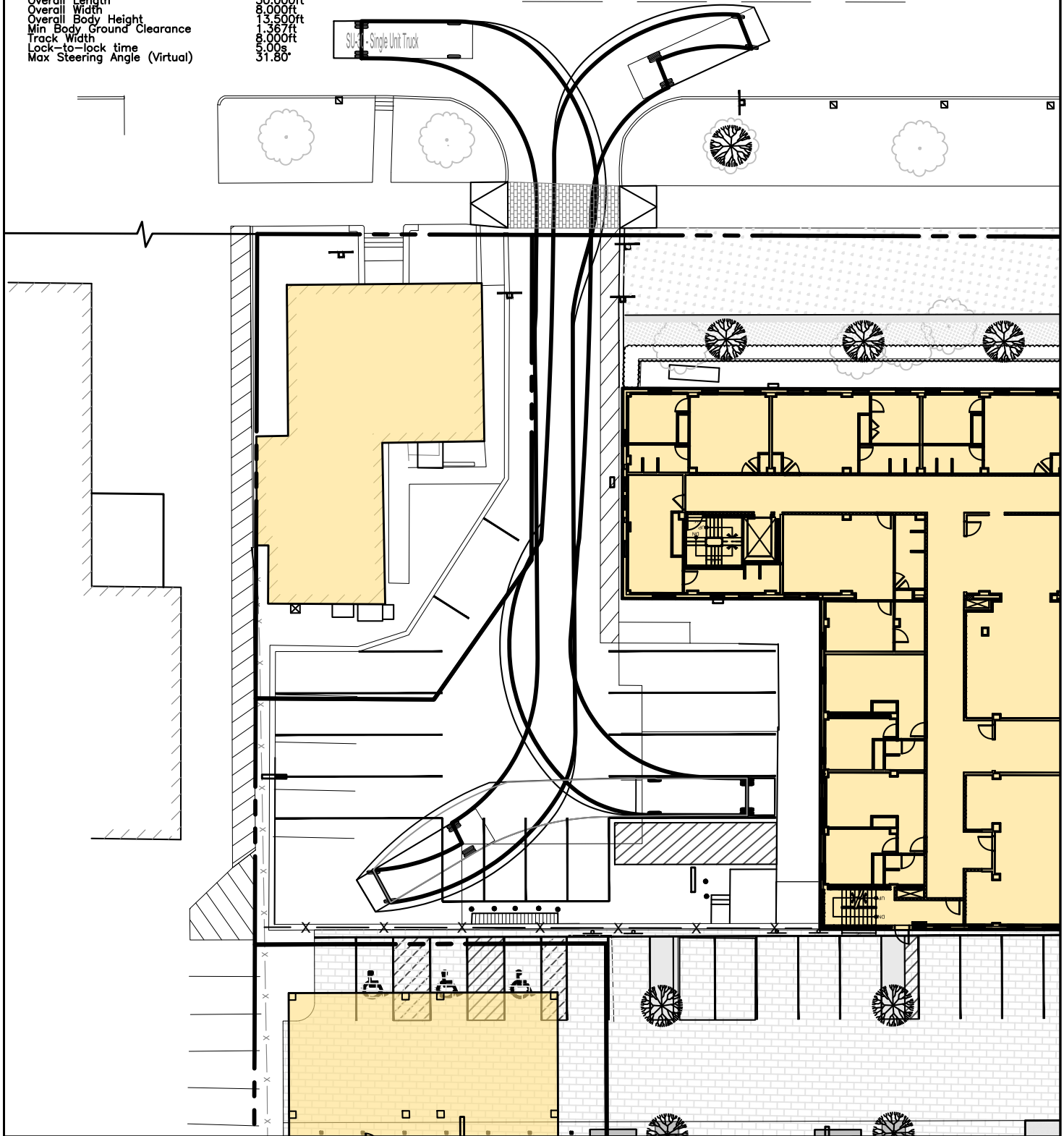
PFH
1/20/21



SU-30 - Single Unit Truck
 Overall Length 30.000ft
 Overall Width 8.000ft
 Overall Body Height 13.500ft
 Min. Body Ground Clearance 1.357ft
 Track Width 8.000ft
 Lock-to-lock time 5.00s
 Max Steering Angle (Virtual) 31.80°

30.000ft
 8.000ft
 13.500ft
 1.357ft
 8.000ft
 5.00s
 31.80°

SU-30 - Single Unit Truck



THIS PLAN SHALL NOT BE MODIFIED
 WITHOUT WRITTEN PERMISSION FROM
 ACORN ENGINEERING, INC. ANY
 ALTERATIONS, AUTHORIZED OR
 OTHERWISE, SHALL BE AT THE USER'S
 SOLE RISK AND WITHOUT LIABILITY TO
 ACORN ENGINEERING, INC.

FILE: 1140.1_CIVIL
 DATE: 10/21/20
 JN: 1140.1
 SCALE: 1" = 50'
 DESIGN BY: PFH
 DRAWN BY: KRB
 CHECKED BY: WHS



DRAWING NAME:

AUTOTURN EXHIBIT 2

PROJECT NAME:

102 STATE STREET REDEVELOPMENT

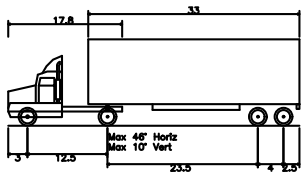
CLIENT:

NEWHEIGHT REDFERN, LLC
 PORTLAND, MAINE

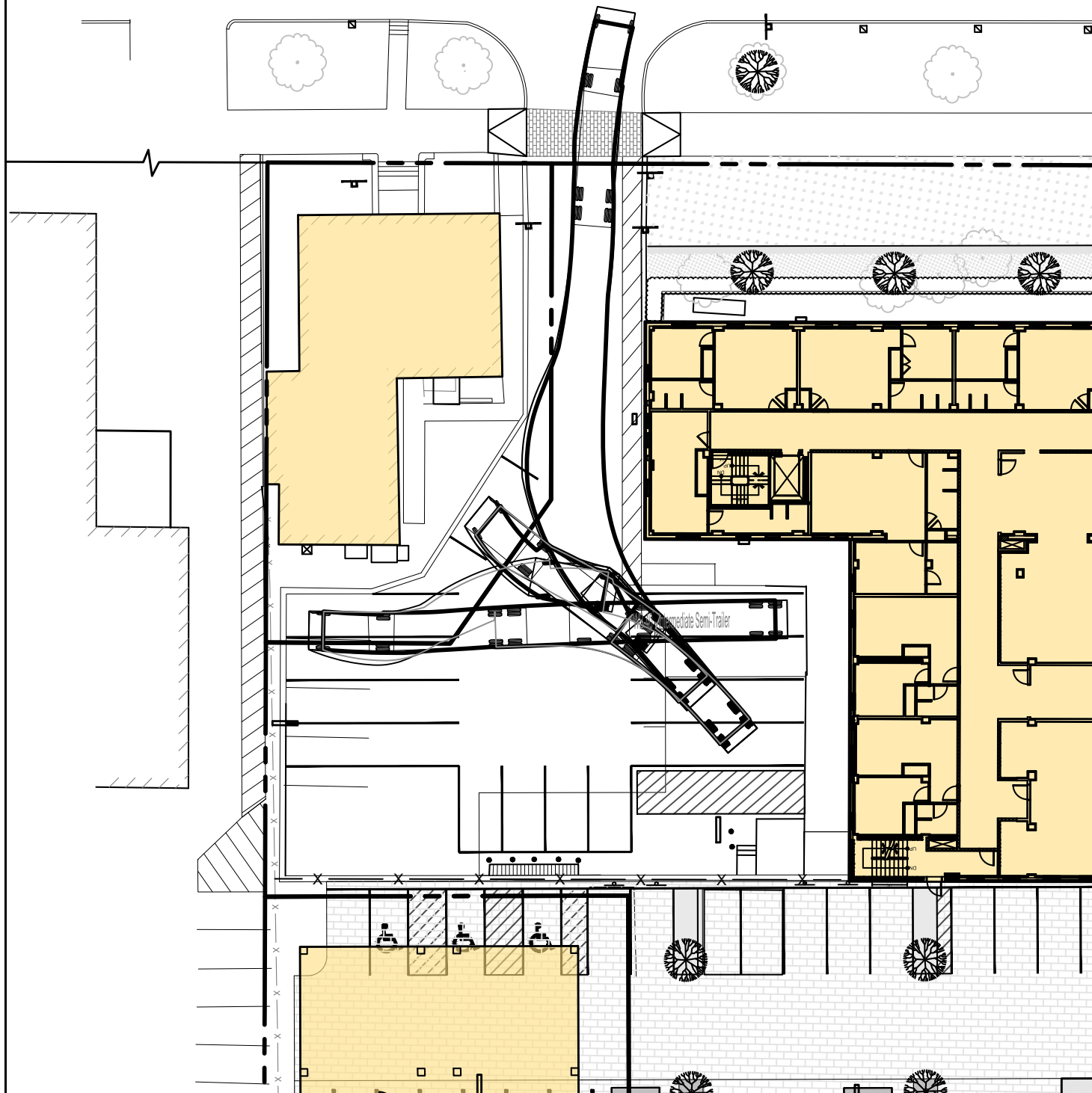
ISSUED FOR
 COMMENT
 RESPONSE

BY
 DATE
 PFH
 1/20/21

DRAWING NO.
 EXHIBIT



WB-40 - Intermediate Semi-Trailer
 Overall Length 45.499ft
 Overall Width 8.000ft
 Overall Body Height 13.500ft
 Min. Body Ground Clearance 1.334ft
 Track Width 8.000ft
 Lock-to-lock time 4.00s
 Max Steering Angle (Virtual) 20.30°



THIS PLAN SHALL NOT BE MODIFIED
 WITHOUT WRITTEN PERMISSION FROM
 ACORN ENGINEERING, INC. ANY
 ALTERATIONS, AUTHORIZED OR
 OTHERWISE, SHALL BE AT THE USER'S
 SOLE RISK AND WITHOUT LIABILITY TO
 ACORN ENGINEERING, INC.

DRAWING NO.
EXHIBIT

FILE: 1140.1_CIVIL
 DATE: 10/21/20
 JN: 1140.1
 SCALE: 1" = 50'
 DESIGN BY: PFH
 DRAWN BY: KRB
 CHECKED BY: WHS



DRAWING NAME:

AUTOTURN EXHIBIT 4

PROJECT NAME:

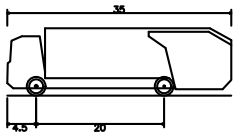
102 STATE STREET REDEVELOPMENT

CLIENT:

NEWHEIGHT REDFERN, LLC
 PORTLAND, MAINE

ISSUED FOR
 COMMENT
 RESPONSE

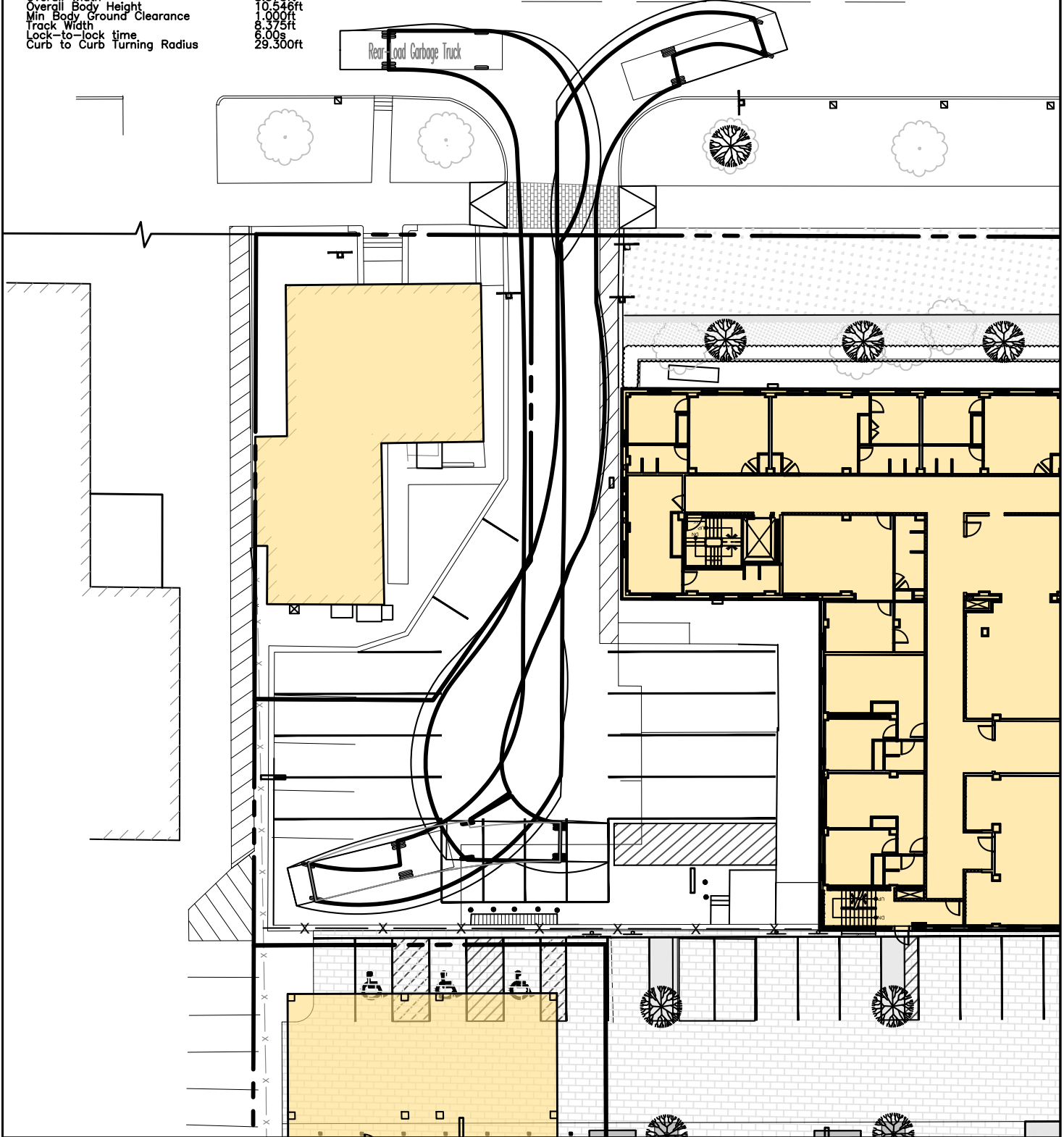
BY
 DATE
 PFH
 1/20/21



Rear-Load Garbage Truck
 Overall Length 35
 Overall Width 8.5
 Overall Body Height 10.546
 Min Body Ground Clearance 8.375
 Track Width 6.00
 Lock-to-lock time 29.300ft
 Curb to Curb Turning Radius

35.000ft
 8.375ft
 10.546ft
 8.375ft
 6.00ft
 29.300ft

Rear-Load Garbage Truck



THIS PLAN SHALL NOT BE MODIFIED
 WITHOUT WRITTEN PERMISSION FROM
 ACORN ENGINEERING, INC. ANY
 ALTERATIONS, AUTHORIZED OR
 OTHERWISE, SHALL BE AT THE USER'S
 SOLE RISK AND WITHOUT LIABILITY TO
 ACORN ENGINEERING, INC.

FILE: 1140.1_CIVIL
 DATE: 10/21/20
 JN: 1140.1
 SCALE: 1" = 50'
 DESIGN BY: PFH
 DRAWN BY: KRB
 CHECKED BY: WHS



DRAWING NAME:

AUTOTURN EXHIBIT 5

PROJECT NAME:

102 STATE STREET REDEVELOPMENT

CLIENT:

NEWHEIGHT REDFERN, LLC
 PORTLAND, MAINE

ISSUED FOR
 COMMENT
 RESPONSE

BY
 DATE
 PFH
 1/20/21

DRAWING NO.
 EXHIBIT



Traffic Solutions
William J. Bray, P.E.
17 Mountview Drive
Gorham, ME 04038
(207) 400-6890
trafficsolutions@maine.rr.com

May 14, 2021

Parking Assessment

Proposed

“Mercy Hospital Redevelopment”

INTRODUCTION

NEWHEIGHT REDFERN, LLC are proposing redevelopment of the existing Mercy Hospital building creating a total of 162 residential apartment units and eight additional residential units in the adjoining Morrison building for a total of 170 residential units. The proposed mixed-use redevelopment project also provides; a self-storage facility, commercial/retail space, and a medical clinic.

The proposed 170 residential housing units include 153 market rate units and 17 affordable workforce units. Thirty-seven (37) of the proposed units are studios, 131 units are one-bedroom, and the remaining 2 units are two-bedroom.

The proposed redevelopment project provides a total of 70 parking spaces within the Mercy Hospital campus with 49 of the spaces designated as full-size (9’x18’) spaces and the remaining 21 spaces are “tandem” or time-restricted spaces.

This document provides a determination of the “average” peak parking demand for the proposed Mercy Hospital Redevelopment project, appropriately applying both national parking trends and local parking data. The analytical determination of “average” peak parking demand for a mixed-use development must also account for the time-of-day distribution of the actual parking demand. For example, the peak parking demand requirements of one proposed use could occur at 7:00 p.m.; whereas the peak parking demand of a second building use may occur at 1:00 p.m. The net result is that the parking demand of multiple land-uses may be able to use the same parking space at different times of the day; thereby, reducing the actual peak parking demand of the site. Further, the analytical process followed in forecasting the peak parking demand of the proposed Mercy site also accounts for internally captured trips; oftentimes referred to as “shared-use” trips. It is reasonable to expect a resident in one of the proposed housing units purchasing coffee in the proposed neighborhood café and/or perhaps groceries in the proposed convenience store. As a result, unless these internal trips are accounted for the projection of trips and, ultimately parking demand requirements of the proposed project, are overstated.

PARKING DEMAND

National parking demand data presented in the 5th Edition of the Institute of Transportation Engineers (ITE) “**PARKING GENERATION**” publication is typically the instrument used in estimating the actual parking demand of a development site. The 5th edition, which was published in January 2019, represents the most current copy of the noted ITE document. The ITE manual provides “*average*” peak parking demand rates for more than 100 land-use categories including: residential, lodging, recreational, institutional, medical, retail, office, services, etc. Occasionally, proposed development uses are more locally specific and/or are not presently accounted for in the national parking publication. In those instances, average peak parking demand is typically determined based upon local studies conducted at similar development uses. Parking rates are provided for a weekday condition.

The “*average*” peak parking demand requirements of the proposed Mercy Hospital Redevelopment mixed-use project is estimated based upon the following projected site uses:

Mercy Hospital Redevelopment Mixed-Use Project

Market Rate Residential Apartment Units

- (33) studio units
- (118) one-bedroom units
- (2) two-bedroom units

Affordable Workforce Units

- (4) studio units
- (13) one-bedroom units

Self-Storage Facility – 35,398sf

Medical Clinic – 3,077sf

Commercial Retail Units ⁽¹⁾

- Neighborhood cafe – 2,086sf
- Hardware/Paint Store – 1,080sf
- Co-working Office Space – 2,074sf
- Hair Salon – 855sf

NOTE: ⁽¹⁾ The identified commercial retail uses applied in determining the peak parking demand requirements of the proposed project are speculative at this time. The actual tenant for each or all of the four proposed commercial spaces could potentially be different than the uses presented above. Individual parking assessments will be provided for each tenant in support of their respective City issued occupancy permit; defining their peak parking demand requirements and parking supply options.

Parking Demand Requirement Procedures

The peak parking demand requirements of the proposed market rate apartment units is based upon Land-Use #221- Multi-Family Housing (Mid-Rise) presented in the noted ITE “**PARKING GENERATION**” publication. This land-use category is generally used for buildings between three and 10 floors in height. A peak parking rate of 0.48 spaces per bedroom was applied in calculating the peaking demand requirements of the proposed market rate units.

Similarly, the peak parking demand requirements of the proposed affordable workforce apartment units is based upon Land-Use #223 - Affordable Housing – Income Limits in the national parking document. The parking rate used in determining the peak parking demand of the 17 workforce apartment units for a weekday is 0.30 spaces per bedroom.

Peak parking demand for the proposed self-storage facility was determined based upon Land-Use #151 - Mini-Warehouse in the 5th edition of the parking publication. The parking rate applied is 0.10 spaces per 1,000sf of total buildings(s) area.

The peak parking demand for the proposed medical clinic facility is based upon Land-Use #630 - Clinic in the noted publication. The parking demand rate applied is 3.89 spaces per 1,000sf of building area.

Parking demand for the proposed neighborhood café is based upon a traffic study conducted at an existing neighborhood coffee/café located on Munjoy Hill at Congress and Atlantic Streets. The results of the field survey, as presented below in Table A, demonstrates the majority of the customers (approximately 92%) of the total recorded trips are pedestrian trips generated within the local neighborhood. It is expected that any customer arriving via automobile to the proposed neighborhood café will park on-street and, as a result, off-street parking is not required. To conservatively project the parking demand of the proposed coffee shop a total of three parking spaces are provided.

Table A
Trip Generation Summary
Neighborhood Coffee Shop
(Congress Street @ Atlantic Street)

<u>Survey Time</u>	<u>Entering Trips</u>		<u>Exiting Trips</u>		<u>Total Trips</u>	
	<u>Pedestrian Trips</u>	<u>Vehicle Trips</u>	<u>Pedestrian Trips</u>	<u>Vehicle Trips</u>	<u>Pedestrian Trips</u>	<u>Vehicle Trips</u>
8:00 to 8:15 AM	7	1	7	1	14	2
8:15 to 8:30 AM	5	2	3	2	8	4
8:30 to 8:45 AM	9	2	7	2	16	4
8:45 to 9:00 AM	12	3	8	2	20	5
9:00 to 9:15 AM	8	1	10	2	18	3
9:15 to 9:30 AM	4	1	6	1	10	2
Total Trips	45	10	41	10	86	20

Parking demand for the hardware/paint store is based upon Land-Use #816 Hardware/Paint Store. The parking rate applied is 0.54 spaces per 1,000sf GFA.

Parking demand for the Co-Working Office Space is based upon Land-Use #710 - General Office Building. The parking demand rate applied is 1.63 spaces per 1,000sf GFA.

A total of one (1) parking space is allocated to the proposed hair salon shop, which assumes the majority of the customer base will walk and/or share a ride to the proposed local hair salon shop.

Table 1, as follows, presents the “average” peak parking demand requirement for the proposed Mercy Hospital project for a typical weekday:

Table 1
“Peak” Parking Demand Summary
For
“Mercy Hospital Development”
(Weekday Condition)

Proposed Use	Unit Size	Land-Use Code	Peak Parking Demand Rate	Parking Space Requirements
Market Rate Apartments	155 bedrooms	LUC 221	0.48 spaces/bedroom	74 spaces
Affordable Workforce Apartments	17 bedrooms	LUC 223	0.30 spaces/bedroom	5 spaces
Medical Clinic	3,077 sf	LUC 630	3.89 spaces/1,000 GFA	12 spaces
Self-storage Facility	35,398sf	LUC 151	0.10 spaces/1,000 GFA	4 spaces
Neighborhood Café	2,086sf	n/a	Parking is provided for 3 employees	3 spaces
Hardware/Paint Store	1,080sf	LUC 816	0.54 spaces/1000 GFA	1 space
Co Working Office Space	2,074sf	LUC 710	1.63 spaces/1,000 GFA	3 spaces
Hair Salon	855sf	n/a	Parking is provided for owner only	1 space
			TOTAL Spaces	103 spaces

The “average” unadjusted peak parking demand of the combined Mercy Hospital project is estimated at **103** spaces for a typical weekday condition.

Parking Demand Adjustments: Due to the diversity of proposed uses within the proposed Mercy Hospital project site, an adjustment is applied to refine the actual parking demand of the proposed development. The adjustment accounts for multi-purpose trips that occur between one or more tenant spaces within the development site; often referred to as “*shared or internally captured*” trips. These trips must be accounted for or the projection of peak parking demand overstates the actual peak parking demand of a specific development site. The National Cooperative Highway Research Program’s (NCHRP) 684 Internal Trip Capture Estimation Tool was utilized in calculating the number of shared or captured trips generated by the proposed sites. Separate analyses were conducted for both the weekday morning and evening peak hour time periods and the trip rates calculated for each time period (11% AM Peak Hour and 16% PM Peak Hour) were then averaged to provide a conservative estimate of 13% percent. Copies of the NCHRP worksheets for both the weekday AM and PM peak hours are attached for reference.

Tables 2, below, summarizes the adjusted “average” peak parking demand for the proposed site for a typical weekday condition:

Table 2
Adjusted Parking Demand Summary
For
“Mercy Hospital Development Site”
(Weekday Condition)

Proposed Use	Peak Parking Demand (Spaces)	Shared Trip Adjustment ⁽¹⁾	Adjusted Parking Demand
Market Rate Apartments	74 spaces	-10	64 spaces
Affordable Workforce Apartments	5 spaces	-1	4 spaces
Medical Clinic	12 spaces	-2	10 spaces
Self-storage Facility	4 spaces	-1	3 spaces
Neighborhood Café	3 spaces	0	3 spaces
Hardware/Paint Store	1 space	0	1 space
Co-Working Office Space	3 spaces	0	3 spaces
Hair Salon	1 space	0	1 space
TOTAL	103 spaces	-14 spaces	89 spaces

NOTE: ⁽¹⁾ Percentage of “shared trips” is based upon an average of values determined through the NCHRP 684 tool for the weekday AM and PM peak hours.

Hourly Parking Demand: The noted ITE “**PARKING GENERATION**” publication provides further guidance in estimating the actual parking demand of a mixed-use or multi-use project. They state the following: *“the hourly variation in parking demand for the individual land uses can result in conditions where the parking demand for one land use is high while the demand for a different land use is low. In this situation, parking demand for both land uses may be able to use the same parking space at different times of the day. The end result can be a reduction in overall peak parking demand.”*

The ITE “**PARKING GENERATION**” manual provides time-of-day percent peak parking demand values for each land-use category for completing this determination. The actual percent values applied in completing these calculations are presented in Table 3, as follows:

Table 3
Hourly Peak Parking Demand (percent value) Summary
For
“Mercy Hospital Development Site”
(Weekday Condition)

<u>Time of Day</u>	<u>Market Rate Apartments</u>	<u>Affordable Workforce Apartments</u>	<u>Medical Clinic</u>	<u>Self- storage Facility</u>	<u>Café ⁽¹⁾</u>	<u>Hardware/Paint Store</u>	<u>Co-Working Office Space</u>	<u>Hair Salon ⁽²⁾</u>
7:00 AM	71	71	0	0	100	9	13	0
8:00 AM	61	61	63	14	100	55	48	0
9:00 AM	55	55	93	71	100	73	88	100
10:00 AM	54	54	96	50	100	100	100	100
11:00 AM	53	53	100	79	100	64	100	100
12:00 PM	50	50	80	57	100	95	85	100
1:00 PM	49	49	75	64	100	68	84	100
2:00 PM	49	49	90	64	100	91	93	100
3:00 PM	50	50	89	79	100	50	94	100
4:00 PM	58	58	74	71	100	45	85	100
5:00 PM	64	64	41	100	100	36	56	100
6:00 PM	67	67	15	14	0	5	20	0
7:00 PM	70	70	0	0	0	0	11	0
8:00 PM	76	76	0	0	0	0	0	0
9:00 PM	83	83	0	0	0	0	0	0
10:00 PM	90	90	0	0	0	0	0	0
11:00 PM	93	93	0	0	0	0	0	0
12:00-4:00 AM	100	100	0	0	0	0	0	0
5:00 AM	94	94	0	0	0	0	0	0
6:00 AM	83	83	0	0	0	0	0	0

NOTES:

- (1) A total of three parking spaces are allocated to the proposed café for employees during the noted time period only. Both determinations are based upon the consultant’s projections.
- (2) One parking space is provided to the owner of the proposed hair salon; it is assumed that the majority of customers will either walk or share a trip with another driver.

Finally, Table 4 estimates the “average” adjusted hourly peak parking demand requirements of the proposed project based upon the procedures described in the ITE “**PARKING GENERATION**” publication.

Table 4
Hourly Peak Parking Demand Summary
For
“Mercy Hospital Development”
(Weekday Condition)

Adjusted Peak Parking Demand	Market Rate Apartments	Affordable Workforce Apartments	Medical Clinic	Self- Storage Facility	Café	Hardware/Paint Store	Co- Working Office Space	Hair Salon	Total
	64 spaces	4 spaces	10 spaces	3 spaces	3 spaces	1 space	3 spaces	1 space	89 spaces
Time of Day									
7:00 AM	45 spaces	3 spaces	0	0	3 spaces	0	1 space	0	52 spaces
8:00 AM	39 spaces	2 spaces	6 spaces	1 space	3 spaces	1 space	1 space	0	53 spaces
9:00 AM	35 spaces	2 spaces	9 spaces	2 spaces	3 spaces	1 space	3 spaces	1 space	56 spaces
10:00 AM	35 spaces	2 spaces	10 spaces	2 spaces	3 spaces	1 space	3 spaces	1 space	57 spaces
11:00 AM	34 spaces	2 spaces	10 spaces	2 spaces	3 spaces	1 space	3 spaces	1 space	56 spaces
12:00 PM	32 spaces	2 spaces	8 spaces	2 spaces	3 spaces	1 space	3 spaces	1 space	52 spaces
1:00 PM	31 spaces	2 spaces	8 spaces	2 spaces	3 spaces	1 space	3 spaces	1 space	51 spaces
2:00 PM	31 spaces	2 spaces	9 spaces	2 spaces	3 spaces	1 space	3 spaces	1 space	52 spaces
3:00 PM	32 spaces	2 spaces	9 spaces	2 spaces	3 spaces	1 space	3 spaces	1 space	53 spaces
4:00 PM	37 spaces	2 spaces	7 spaces	2 spaces	3 spaces	1 space	3 spaces	1 space	56 spaces
5:00 PM	41 spaces	3 spaces	4 spaces	3 spaces	3 spaces	1 space	2 spaces	1 space	58 spaces
6:00 PM	41 spaces	3 spaces	2 spaces	1 space	0	0	1 space	0	48 spaces
7:00 PM	45 spaces	3 spaces	0	0	0	0	0	0	48 spaces
8:00 PM	49 spaces	3 spaces	0	0	0	0	0	0	52 spaces
9:00 PM	53 spaces	3 spaces	0	0	0	0	0	0	56 spaces
10:00 PM	58 spaces	4 spaces	0	0	0	0	0	0	62 spaces
11:00 PM	60 spaces	4 spaces	0	0	0	0	0	0	64 spaces
12:00 to 4:00 AM	64 spaces	4 spaces	0	0	0	0	0	0	68 spaces
5:00 AM	60 spaces	4 spaces	0	0	0	0	0	0	64 spaces
6:00 AM	53 spaces	3 spaces	0	0	0	0	0	0	56 spaces

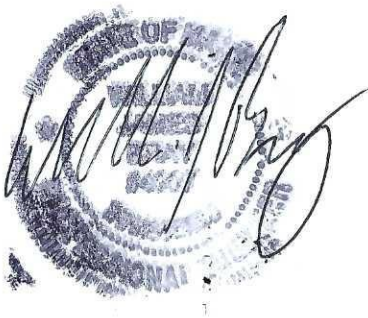
Accordingly, the average adjusted peak hourly parking demand of the site for a typical weekday occurs mid-morning between 12:00 a.m. and 4:00 a.m. with a peak parking demand of **68 spaces**.

PARKING SUPPLY

Per the City’s Land Use Code, Section 14-332.1: “*Zone specific off-street parking exceptions and modifications, (e), B-3 Zone: No off-street parking is required for changes of use.*” The project proposes a change of use for both the existing Mercy hospital building and the Morrison House; and as such, the Applicant requests an exemption in meeting the off-street parking demand requirements of the combined Mercy Hospital Redevelopment mixed-use project. The present site design; however, with construction of 70 on-site parking spaces satisfies the calculated peak parking demand requirements of the proposed project.

SUMMARY

- The proposed Mercy Hospital Redevelopment mixed-use project is projected to generate an “average” peak parking demand of approximately **103** spaces on a typical weekday. The estimate of peak parking demand was developed based upon national parking demand rates presented in the 5th edition of the Institute of Transportation’s “**PARKING GENERATION**” publication and parking data collected locally within the City of Portland.
- The determination of “average” peak parking demand for the proposed project includes an adjustment for “shared-use” trips, which accounts for the occurrence of multi-purpose trips between one or more tenant spaces. The noted parking adjustments reduce the “average” peak parking demand of the site to **89** weekday spaces.
- The final step in forecasting the “average” peak parking demand requirements of the proposed Mercy Hospital Redevelopment mixed-use site considers the “shared parking space” benefits of a mixed-use or multi-use project. The previously referenced “**PARKING GENERATION**” publication provides the following guidance: “*the hourly variation in parking demand for the individual land uses can result in conditions where the parking demand for one land use is high while the demand for a different land use is low. In this situation, parking demand for both land uses may be able to use the same parking space at different times of the day. The end result can be a reduction in overall peak parking demand.*” The parking manual provides time-of-day percent of peak parking demand values for each land-use category; whereby, the actual hourly parking demand of the project site can be calculated. The results of this final process show the “average” peak parking demand of the Mercy Hospital project occurs between 12:00 a.m. and 4:00 a.m. during a typical weekday. The peak hourly parking demand at this noted time, accounting for shared use of the available on-site parking spaces, is estimated at **68** spaces.
- The Applicant meets the peak parking demand requirements of the Mercy Hospital redevelopment project with construction of the proposed **70** on-site parking spaces; however, it is requested the project not be required to provide any off-street parking, per Section 14-332.1, (e) “*for a change of use within the B-3 zone.*”



NCHRP 684 Internal Trip Capture Estimation Tool					
Project Name:	Mercy Hospital Re-Development			Organization:	Traffic Solutions
Project Location:	Portland, ME			Performed By:	MMI
Scenario Description:	AM Peak Hour			Date:	11/5/2020
Analysis Year:	2020			Checked By:	
Analysis Period:	AM 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	712, 630	4,636	SF	16	13	3
Retail	814	1,635	SF	5	3	2
Restaurant	936 (*local)	1,059	SF	16	8	8
Cinema/Entertainment				0		
Residential	221	175	DU	35	4	31
Hotel				0		
All Other Land Uses ²	918, 151	41,857	SF	6	4	2
Total				78	32	46

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		1	1	0	0	0
Retail	1		0	0	0	0
Restaurant	2	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	2	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	78	32	46
Internal Capture Percentage	18%	22%	15%
External Vehicle-Trips ³	64	25	39
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	23%	67%
Retail	33%	50%
Restaurant	38%	25%
Cinema/Entertainment	N/A	N/A
Residential	0%	6%
Hotel	N/A	N/A

¹Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

²Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

³Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A.

⁴Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Project Name:	Mercy Hospital Re-Development
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	13	13	1.00	3	3
Retail	1.00	3	3	1.00	2	2
Restaurant	1.00	8	8	1.00	8	8
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	4	4	1.00	31	31
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		1	2	0	0	0
Retail	1		0	0	0	0
Restaurant	2	1		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	1	0	6	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		1	2	0	0	0
Retail	1		4	0	0	0
Restaurant	2	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	1	2	0		0
Hotel	0	0	0	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	3	10	13	10	0	0
Retail	1	2	3	2	0	0
Restaurant	3	5	8	5	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	4	4	4	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	4	4	4	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	2	1	3	1	0	0
Retail	1	1	2	1	0	0
Restaurant	2	6	8	6	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	2	29	31	29	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	2	2	2	0	0

¹Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

²Person-Trips

³Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

NCHRP 684 Internal Trip Capture Estimation Tool					
Project Name:	Mercy Hospital Re-Development			Organization:	Traffic Solutions
Project Location:	Portland, ME			Performed By:	MMI
Scenario Description:	PM Peak Hour			Date:	8/31/2020
Analysis Year:	2020			Checked By:	
Analysis Period:	PM 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	712, 630	4,636	SF	15	5	10
Retail	814	1,635	SF	11	6	5
Restaurant	936 (*local)	1,059	SF	0		
Cinema/Entertainment				0		
Residential	221	175	DU	32	23	9
Hotel				0		
All Other Land Uses ²	918, 151	41,857	SF	9	3	6
Total				67	37	30

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		0	0	0	0	0
Retail	0		0	0	1	0
Restaurant	0	0		0	0	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	67	37	30
Internal Capture Percentage	6%	5%	7%
External Vehicle-Trips ³	63	35	28
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	0%	0%
Retail	17%	20%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	4%	11%
Hotel	N/A	N/A

¹Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

²Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

³Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P.

⁴Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Project Name:	Mercy Hospital Re-Development
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	5	5	1.00	10	10
Retail	1.00	6	6	1.00	5	5
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	23	23	1.00	9	9
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		2	0	0	0	0
Retail	0		1	0	1	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	4	2	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		0	0	0	1	0
Retail	2		0	0	11	0
Restaurant	2	3		0	4	0
Cinema/Entertainment	0	0	0		1	0
Residential	3	1	0	0		0
Hotel	0	0	0	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	0	5	5	5	0	0
Retail	1	5	6	5	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	1	22	23	22	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	3	3	3	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	0	10	10	10	0	0
Retail	1	4	5	4	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	1	8	9	8	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	6	6	6	0	0

¹Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

²Person-Trips

³Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.



Traffic Solutions
William J. Bray, P.E.
17 Mountview Drive
Gorham, ME 04038
(207) 400-6890
trafficsolutions@maine.rr.com

April 16, 2021

Traffic Assessment

For Proposed

“Mercy Hospital Redevelopment”

Portland, Maine



INTRODUCTION

NEWHEIGHT REDFERN, LLC are proposing redevelopment of the existing 242,000 square foot Mercy Hospital creating a total of 162 residential apartment units and eight (8) additional residential units in the adjoining Morrison building for a total of 170 residential units. The proposed mixed-use redevelopment project also provides; a self-storage facility, commercial/retail space, and a medical clinic.

The proposed redevelopment project provides a total of 70 parking spaces within the Mercy Hospital campus with 49 of the spaces designated as full-size (9'x18') spaces and the remaining 21 spaces are “tandem” or time restricted spaces.

Primary access to the Mercy Hospital site is provided with construction of a 22-foot-wide driveway entrance intersecting Spring Street just north of the Winter Street intersection. The proposed redevelopment project also retains the existing State Street driveway entrance as a secondary means of ingress/egress to the project site. A 16-foot-wide emergency access lane is also proposed off Winter Street connecting to the internal parking area.

Traffic projections are developed for the existing Mercy Hospital facility and the proposed multi-use redevelopment project applying a combination of both national trip generation data published in the 10th edition of the Institute of Transportation Engineers “**TRIP GENERATION**” publication and local traffic surveys conducted on the Portland peninsular. For analysis purposes, traffic projections for the proposed multi-use Mercy Hospital Redevelopment project are based upon the following site details:

Mercy Hospital Redevelopment Mixed-Use Site

- 153 Market Rate Residential Apartment Units
- 17 Affordable Workforce Residential Apartment Units
- Self-Storage Facility – 35,398sf
- Medical Clinic – 3,077sf
- Unit #1: Commercial Space – Café (2,086sf)

- Unit #2: Commercial Space – Hardware/Paint Store (1,080sf)
- Unit #3: Commercial Space – Hair Salon (855sf)
- Unit #4: Commercial Space – Co-Working Space (2,047sf)

Existing road safety conditions in the immediate area of the project site are also reviewed based upon MaineDOT's highway safety reports for the time period of 2017 through 2019.

SITE TRAFFIC GENERATION

Peak hour trip forecasts for the Mercy Hospital Redevelopment project are prepared applying trip rate information detailed in the 10th edition of the noted ITE “**TRIP GENERATION**” publication and traffic data gathered at a local City of Portland establishment. The following specific site uses are defined as follows:

- 153 Market Rate Residential Apartment Units
- 17 Affordable Workforce Residential Apartment Units
- Self-Storage Facility – 35,398sf
- Medical Clinic – 3,077sf
- Commercial Retail Development ⁽¹⁾
 - Unit #1: Commercial Space – café (2,086sf)
 - Unit #2: Commercial Space – Hardware/Paint Store (1,080sf)
 - Unit #3: Commercial Space – Hair Salon (855sf)
 - Unit #4: Commercial Space – Co-Working Space (2,047sf)

NOTE: ⁽¹⁾ The identified commercial retail uses are speculative at this time. Separate peak hour trip assignments will be developed individually for each pad site upon application for a City construction permit.

The following procedures were applied:

1. **Site Trip Generation – Self-Storage Facility (35,398sf):** Trip generation is based upon tables presented in the 10th edition of the Institute of Transportation's Engineers “**TRIP GENERATION**” manual. The following trip rates were applied in that effort:

Land-Use #151: Mini-Warehouse

Weekday AM Peak Hour (Street)	= 0.10 trips/1,000sf GFA
Weekday PM Peak Hour (Street)	= 0.17 trips/1,000sf GFA
Weekday AM Peak Hour (Generator)	= 0.20 trips/1,000sf GFA
Weekday PM Peak Hour (Generator)	= 0.20 trips/1,000sf GFA

Table 1, below provides a summary of the trip generation for the proposed self-storage facility:

Table 1
Peak Hour Trip Generation Summary
(Self-Storage Facility)

<u>Peak Hour Time Period</u>	<u>Peak Hour Trip Generation</u>
AM Peak Hour (Street)	4
PM Peak Hour (Street)	6
AM Peak Hour (Generator)	7
PM Peak Hour (Generator)	7

2. **Site Trip Generation – Proposed Market Rate and Affordable Workforce Residential Apartments (170 Units):** Trip generation is based upon tables presented in the 10th edition of the Institute of Transportation’s Engineers “**TRIP GENERATION**” manual. The following trip rates were applied in that effort:

Land-Use #221: Multi-family Housing (Mid-Rise)

Weekday AM Peak Hour (Street)	= 0.20 trips/unit
Weekday PM Peak Hour (Street)	= 0.18 trips/unit
Weekday AM Peak Hour (Generator)	= 0.15 trips/unit
Weekday PM Peak Hour (Generator)	= 0.18 trips/unit

Table 2, below provides a summary of the trip generation for the proposed 170 market rate and affordable workforce residential apartments units:

Table 2
Peak Hour Trip Generation Summary
(170 Residential Apartments)

<u>Peak Hour Time Period</u>	<u>Peak Hour Trip Generation</u>
AM Peak Hour (Street)	34 trips
PM Peak Hour (Street)	31 trips
AM Peak Hour (Generator)	26 trips
PM Peak Hour (Generator)	31 trips

3. **Site Trip Generation – Medical Clinic (3,077sf):** Trip generation is based upon tables presented in the 10th edition of the Institute of Transportation’s Engineers “**TRIP GENERATION**” manual. The following trip rates were applied in that effort:

Land-Use #630: Clinic

Weekday AM Peak Hour (Street)	= 3.69 trips/1,000sf GFA
Weekday PM Peak Hour (Street)	= 3.28 trips/1,000sf GFA
Weekday AM Peak Hour (Generator)	= 5.22 trips/1,000sf GFA
Weekday PM Peak Hour (Generator)	= 4.64 trips/1,000sf GFA

Table 3, below provides a summary of the trip generation for the proposed medical clinic:

Table 3
Peak Hour Trip Generation Summary
(Medical Clinic)

<u>Peak Hour Time Period</u>	<u>Peak Hour Trip Generation</u>
AM Peak Hour (Street)	11
PM Peak Hour (Street)	10
AM Peak Hour (Generator)	16
PM Peak Hour (Generator)	14

4. **Site Trip Generation – General Office Building (2,047sf):** Trip generation is based upon tables presented in the 10th edition of the Institute of Transportation’s Engineers “**TRIP GENERATION**” manual. The following trip rates were applied in that effort:

Land-Use #710: General Office Building

Weekday AM Peak Hour (Street)	= 0.83 trips/1,000sf GFA
Weekday PM Peak Hour (Street)	= 0.87 trips/1,000sf GFA
Weekday AM Peak Hour (Generator)	= 0.91 trips/1,000sf GFA
Weekday PM Peak Hour (Generator)	= 0.87 trips/1,000sf GFA

Table 4, below provides a summary of the trip generation for the proposed professional office space:

Table 4
Peak Hour Trip Generation Summary
(General Office Building)

<u>Peak Hour Time Period</u>	<u>Peak Hour Trip Generation</u>
AM Peak Hour (Street)	2
PM Peak Hour (Street)	2
AM Peak Hour (Generator)	2
PM Peak Hour (Generator)	2

5. **Site Trip Generation – Hardware/Paint Store (1,080sf):** Trip generation is based upon tables presented in the 10th edition of the Institute of Transportation’s Engineers “**TRIP GENERATION**” manual. The following trip rates were applied in that effort:

Land-Use #816: Hardware/Paint Store

Weekday AM Peak Hour (Street)	= 1.08 trips/1,000sf GFA
Weekday PM Peak Hour (Street)	= 2.68 trips/1,000sf GFA
Weekday AM Peak Hour (Generator)	= 1.36 trips/1,000sf GFA
Weekday PM Peak Hour (Generator)	= 1.13 trips/1,000sf GFA

Table 5, below provides a summary of the trip generation for the proposed hardware/paint store:

Table 5
Peak Hour Trip Generation Summary
(Hardware/Paint Store)

<u>Peak Hour Time Period</u>	<u>Peak Hour Trip Generation</u>
AM Peak Hour (Street)	1
PM Peak Hour (Street)	3
AM Peak Hour (Generator)	2
PM Peak Hour (Generator)	1

6. **Site Trip Generation – Hair Salon (855sf):** Trip generation is based upon tables presented in the 10th edition of the Institute of Transportation’s Engineers “**TRIP GENERATION**” manual. The following trip rates were applied in that effort:

Land-Use #918: Hair Salon ⁽¹⁾

Weekday AM Peak Hour (Street)	= 1.21 trips/1,000sf GFA
Weekday PM Peak Hour (Street)	= 1.45 trips/1,000sf GFA
Weekday AM Peak Hour (Generator)	= 1.21 trips/1,000sf GFA
Weekday PM Peak Hour (Generator)	= 1.94 trips/1,000sf GFA

NOTE: ⁽¹⁾ Trip rate information published for LUC #918 is based upon a single field survey.

Table 6, below provides a summary of the trip generation for the proposed hair salon:

Table 6
Peak Hour Trip Generation Summary
(Hair Salon)

<u>Peak Hour Time Period</u>	<u>Peak Hour Trip Generation</u>
AM Peak Hour (Street)	1
PM Peak Hour (Street)	1
AM Peak Hour (Generator)	1
PM Peak Hour (Generator)	2

7. **Site Trip Generation – Proposed Neighborhood Café (2,086sf):** Site trip generation is developed based upon a local traffic study conducted at an existing neighborhood coffee & café shop located at the intersection of Diamond and Fox Streets. Tables A and B provide a summary of the results of the noted traffic survey; respectively, for the AM and PM peak hours:

Table A
Trip Generation Summary – AM Study Hours
Neighborhood Coffee Shop
(Diamond Street @ Fox Street)

<u>Survey Time</u>	<u>Total Trips</u>	
	<u>Entering Trips</u>	<u>Exiting Trips</u>
7:00 to 7:15 AM	6	7
7:15 to 7:30 AM	7	8
7:30 to 7:45 AM	12	5
7:45 to 8:00 AM	6	5
8:00 to 8:15 AM	6	8
8:15 to 8:30 AM	19	9
8:30 to 8:45 AM	21	10
8:45 to 9:00 AM	15	8
Peak Hour Total Volume	61	35

Table B
Trip Generation Summary – PM Study Hours
Neighborhood Coffee Shop
(Diamond Street @ Fox Street)

<u>Survey Time</u>	<u>Total Trips</u>	
	<u>Entering Trips</u>	<u>Exiting Trips</u>
3:00 to 3:15 PM	10	11
3:15 to 3:30 PM	8	7
3:30 to 3:45 PM	8	8
3:45 to 4:00 PM	6	9
4:00 to 4:15 PM	5	10
4:15 to 4:30 PM	2	2
4:30 to 4:45 PM	7	5
4:45 to 5:00 PM	11	13
5:00 to 5:15 PM	8	12
5:15 to 5:30 PM	5	6
5:30 to 5:45 PM	2	2
5:45 to 6:00 PM	4	3
Peak Hour Total Volume	31	36

NOTE: The existing neighborhood coffee & café shop located on Diamond Street near Fox Street generates a total of 96 vehicle trips during the AM peak hour and 67 trips in the evening peak hour. A total of 62 seats were counted at the existing Diamond Street site. The morning peak hour occurs between 8:00 and 9:00 a.m. with a total volume of 96 trips recorded. A total of 67 trips were recorded in the evening peak hour, which occurs between 4:30 and 5:30 p.m. [The recorded number of peak hour trips generated in each peak hour time period is divided by the total number of seats resulting in a predicted trip rate per seat of 1.55 trips/seat in the morning peak hour and 1.08 trips/seat in the evening peak hour.]

Trip generation for the proposed coffee & café shop is based upon a total of 35 seats. Accordingly, the proposed coffee & café shop can be expected to generate a total of 54 trips in the morning peak hour and 38 trips in the evening peak hour of the street. Trip projections for both peak hour time periods of the generator are estimated assuming a similar trip volume as the trip projections for the peak hours of the street.

Table 7
Peak Hour Trip Generation Summary
Neighborhood Coffee & Café Shop

<u>Peak Hour Time Period</u>	<u>Peak Hour Trip Generation</u>
AM Peak Hour (Street)	54 trips
PM Peak Hour (Street)	38 trips
AM Peak Hour (Generator)	54 trips (1)
PM Peak Hour (Generator)	38 trips (1)

NOTES: ⁽¹⁾ Trip estimates, as noted, are based upon street peak hour trip projections.

Mercy Hospital Redevelopment – Total Trip Generation: The proposed Mercy Hospital Redevelopment Project is projected to generate approximately 107 vehicle trips in the AM peak hour of the street, an additional 91 trips during the evening peak hour of the street and similar trip volumes of 108 and 95 vehicles, respectively, in the morning and evening peak hours of the site.

SITE TRIP ADJUSTMENT

A finite number of residents, employees of the proposed commercial spaces and/or customers of those same spaces, are classified as internal or shared trips; trips that do not leave the confines of the proposed Mercy

Hospital Redevelopment site. These multi-purpose trips, if not accounted for, overestimate the actual vehicular traffic impacts of the combined project site (*For example, an apartment resident purchasing their morning coffee at the proposed neighborhood coffee shop doing so by simply walking from their apartment to the proposed coffee shop.*). Numerous other likely internal trip patterns will be generated by the proposed site and their impact must be accounted for.

The National Cooperative Highway Research Program's (NCHRP) 684 Internal Trip Capture Estimation Tool provides a process for estimating the number of shared or captured trips generated by a development project. Copies of the spreadsheets used in the analysis are attached as an appendix to the report. The summarized internal capture rates, as determined from the NCHRP 684 Worksheet Section 5-A, provide the following internal capture rates (percentages) applicable to the Mercy Hospital Redevelopment site uses:

<u>Trip Capture Percent</u>	<u>Total</u>	<u>Entering Trips</u>	<u>Exiting Trips</u>
AM Peak Hour	11%	11%	11%
PM Peak Hour	15%	15%	16%

Traffic Solutions, to conservatively forecast the number of internally captured or shared trips generated by the proposed Mercy Hospital Redevelopment project, has applied a 13% captured trip rate; which, is the average of the estimated percentage calculated for the AM and PM peak hours.

Based upon the described methodology presented above, a total of fourteen (14) internal captured or shared trips are generated in the AM peak hour and a slightly lower volume of twelve (12) trips are generated in the evening peak hour of the street.

Accounting for these shared use trips; which do not travel to or from the public street system, the Mercy Hospital site is expected to generate 93 trips in the morning peak hour and 79 trips in the evening peak hour of the street that travel to/from the public street system.

EXISTING MERCY HOSPITAL TRIP GENERATION

Existing Mercy Hospital Site Trip Generation: Peak hour trip generation for the existing 242,000 square foot hospital is estimated based upon trip rates presented in the 10th edition of the Institute of Transportation Engineers (ITE) "TRIP GENERATION" publication. The following trip rates were used in that effort:

Land-Use Code #610 – Hospital

<i>AM Peak Hour of Street</i>	<i>= 0.89 trips/1,000sf GFA</i>
<i>PM Peak Hour of Street</i>	<i>= 0.97 trips/1,000sf GFA</i>
<i>AM Peak Hour of Generator</i>	<i>= 0.85 trips/1,000sf GFA</i>
<i>PM Peak Hour of Generator</i>	<i>= 0.97 trips/1,000sf GFA</i>

The existing Mercy Hospital campus, at full capacity; based upon the national published trip rates, generates approximately 215 trips in the weekday morning of the street and 235 trips in the weekday evening peak hour of the street; 206 trips in the weekday AM peak hour of the site and 235 trips during the same weekday PM peak hour of the site.

EXISTING SAFETY CONDITIONS

The Maine Department of Transportation's (MaineDOT) Accident Records Section provided the latest three-year (2017 through 2019) crash data for the following street segments located adjacent to the Mercy Hospital campus: State Street between Pine and Gray Streets; Winter Street between Pine and Gray Streets; Spring Street

between State and Brackett Streets and Gray Street between State and Brackett Streets, combined a total distance of 0.75 miles.

Their report is presented as follows:

2017 -2019 Traffic Accident Summary

<u>Location</u>	<u>Total Crashes</u>	<u>Critical Rate Factor</u>
1. State Street @ Pine Street	9	1.66
2. State Street @ Spring Street	6	0.28
3. State Street @ Gray Street	6	1.27
4. Brackett Street @ Gray Street	2	1.46
5. Brackett Street @ Winter Street	4	22.71
6. Brackett Street @ Spring Street	2	0.66
7. Spring Street @ Winter Street	2	0.75
8. State Street btw. Pine Street and Spring Street	6	0.69
9. State Street btw. Spring Street and Gray Street	8	1.48
10. Gray Street btw. State Street and Winter Street	3	10.98
11. Gray Street btw. Winter Street and Brackett Street	1	59.05
12. Spring Street btw. State Street and Winter Street	2	0.48
13. Spring Street btw. Winter Street and Brackett Street	5	1.66
14. Winter Street btw. Gray Street and Spring Street	1	2.48
15. Winter Street btw. Spring Street and Pine Street	2	0.80

The MaineDOT considers any roadway intersection or segment a high crash location if both of the following criteria are met:

- **8 or more accidents**
- **A Critical Rate Factor greater than 1.00**

As highlighted in red, the State Street/Pine Street intersection meets both MaineDOT's criteria as a high crash location with a reported total of nine vehicle crashes and a corresponding critical rate factor of 1.66. Additionally, the street section of State Street located between Spring Street and Gray Street meets both criteria as a high crash location with a total of eight reported crashes and a critical rate factor of 1.48.

MaineDOT's Safety Bureau prepared vehicle collision diagrams for both identified locations that illustratively present the details of each reported vehicle crash. A copy of MaineDOT's reports is attached for reference.

A summary of the accident reconstruction details is provided, as follows, for both locations:

Location #1: State Street @ Pine Street Five (5) of the nine reported crashes occurring within the intersection involved a pedestrian being struck while crossing the State Street approach of the intersection. Push-button activated rapid rectangular flashing beacons are present at the intersection aiding pedestrians crossing the State Street approach. The remaining four crashes reported at the intersection included: "following too close", "hit and run" and "failure to yield" crashes.

Location #9: State Street between Spring Street and Gray Street MaineDOT's crash diagram does not identify a specific crash pattern occurring within the very short section of State Street. There was a

total of two (2) “*OUT*” crashes; three (3) “*failure to keep in lane*” crashes; two (2) “*improper turn*” accidents and a single “*slippery road conditions*” crash.

SUMMARY

1. The existing Mercy Hospital Campus, based upon national trip data, generates between 206 and 235 vehicle trips during each peak hour of a typical weekday. The lower volume of trips is expected in the morning hours of the day and the higher volume is found in the early evening hours.
2. The proposed Mercy Hospital Redevelopment project, which includes 170 residential apartments, a medical clinic, self-storage facility and four commercial/retail development pads is predicted to generate a total of 107 trips in the morning peak hour of the street and 91 trips in the evening peak hour of the street.
3. A finite number of residents, employees of the proposed commercial spaces and/or customers of those same spaces, located in the proposed Mercy Hospital Redevelopment site, are classified as internal captured or shared trips; trips that do not leave the confines of the proposed development property. These multi-purpose trips, if not accounted for, overestimate the actual vehicular traffic impacts of the combined project site (*For example, an apartment resident purchasing their morning coffee at the proposed neighborhood coffee shop doing so by simply walking from their apartment to the proposed coffee shop.*). The National Cooperative Highway Research Program’s (NCHRP) 684 Internal Trip Capture Estimation Tool predicts trip capture rates between 11 and 15% will likely occur within the combined development sites. An average of the predicted capture rates was applied, which shows a result of approximately twelve to fourteen fewer peak hour trips will impact the street system.
4. The proposed Mercy Hospital Redevelopment projects, after deducting the internal capture trip estimates, is expected to generate approximately 93 AM and 79 PM vehicle trips that impact the local transportation system. These trip forecasts represent a net reduction of more than 100 peak hour trips when compared to the present peak hour trip generation of Mercy Hospital.
5. The Maine Department of Transportation’s (MaineDOT) Accident Records Section provided the latest three-year (2017 through 2019) crash data for the following street segments adjacent to the Mercy Hospital campus: State Street between Pine and Gray Streets; Winter Street between Pine and Gray Streets; Spring Street between State and Brackett Streets and Gray Street between State and Brackett Streets - combined a total distance of 0.75 miles. Their safety report identified the section of State Street between Spring and Gray Streets as a high crash location, with a total of eight reported vehicle crashes and a corresponding critical rate factor of 1.48. A detailed vehicle collision diagram prepared by the MaineDOT Safety office shows the reported vehicle crashes occur somewhat randomly within the very short road segment. Four different crash types were identified that included: two (2) “*OUT*” crashes; three (3) “*failure to keep in lane*” crashes; two (2) “*improper turn*” accidents and a single “*slippery road condition*” crash. The second-high crash location highlighted by MaineDOT was the intersection of State Street and Pine Street, where a total of nine crashes were reported with a critical rate factor 1.66. The MaineDOT collision diagram for this location clearly shows a crash pattern at the intersection. Five (5) of the nine total crashes involved a motor vehicle striking a pedestrian crossing in the State Street crosswalk. Traffic Solutions conducted an inspection of the intersection and found that the “*rapid rectangular flashing beacon*” system that assists pedestrians in crossing the State Street approach is not working correctly. The flashing beacon on the northside of State Street has been disconnected and when the pedestrian push button is activated the flashing beacon on this side of the intersection is blank. It is recommended that the inoperative beacon be repaired as soon as practical.

NCHRP 684 Internal Trip Capture Estimation Tool					
Project Name:	Mercy Hospital Mixed Use Dev			Organization:	SLR
Project Location:	Portland, Maine			Performed By:	Jason Ready, PE, PTOE, PTP
Scenario Description:	Scenario 1			Date:	4/8/2021
Analysis Year:				Checked By:	
Analysis Period:	AM 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	2,047	SF	2	2	0
Retail	816	1,080	SF	1	1	0
Restaurant	Local Data	35	Seats	54	34	20
Cinema/Entertainment				0		
Residential	221	170	DU	34	4	30
Hotel				0		
All Other Land Uses ²	151, 630, 918			16	12	4
Total				107	53	54

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		0	0	0	0	0
Retail	0		0	0	0	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	6	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	107	53	54
Internal Capture Percentage	11%	11%	11%
External Vehicle-Trips ³	95	47	48
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	0%	N/A
Retail	0%	N/A
Restaurant	18%	0%
Cinema/Entertainment	N/A	N/A
Residential	0%	20%
Hotel	N/A	N/A

¹ Land Use Codes (LUCs) from <i>Trip Generation Manual</i> , published by the Institute of Transportation Engineers.
² Total estimate for all other land uses at mixed-use development site is 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 A&M Transportation Institute

Project Name:	Mercy Hospital Mixed Use Dev
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	2	2	1.00	0	0
Retail	1.00	1	1	1.00	0	0
Restaurant	1.00	34	34	1.00	20	20
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	4	4	1.00	30	30
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		0	0	0	0	0
Retail	0		0	0	0	0
Restaurant	6	3		0	1	1
Cinema/Entertainment	0	0	0		0	0
Residential	1	0	6	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		0	8	0	0	0
Retail	0		17	0	0	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	7	0		0
Hotel	0	0	2	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	0	2	2	2	0	0
Retail	0	1	1	1	0	0
Restaurant	6	28	34	28	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	4	4	4	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	12	12	12	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	0	0	0	0	0	0
Retail	0	0	0	0	0	0
Restaurant	0	20	20	20	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	6	24	30	24	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	4	4	4	0	0

¹Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

²Person-Trips

³Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

NCHRP 684 Internal Trip Capture Estimation Tool					
Project Name:	Mercy Hospital Mixed Use Dev			Organization:	SLR
Project Location:	Portland, Maine			Performed By:	Jason Ready, PE, PTOE, PTP
Scenario Description:	Scenario 1			Date:	4/8/2021
Analysis Year:				Checked By:	
Analysis Period:	PM 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	2,047	SF	2	0	2
Retail	816	1,080	SF	3	1	2
Restaurant	Local Data	35	Seats	38	18	20
Cinema/Entertainment				0		
Residential	221	170	DU	31	22	9
Hotel				0		
All Other Land Uses ²	151, 630, 918			17	6	11
Total				91	47	44

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		0	0	0	0	0
Retail	0		1	0	0	0
Restaurant	0	0		0	4	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	2	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	91	47	44
Internal Capture Percentage	15%	15%	16%
External Vehicle-Trips ³	77	40	37
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	N/A	0%
Retail	0%	50%
Restaurant	17%	20%
Cinema/Entertainment	N/A	N/A
Residential	18%	22%
Hotel	N/A	N/A

¹Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

²Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

³Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P.

⁴Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute

Project Name:	Mercy Hospital Mixed Use Dev
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	0	0	1.00	2	2
Retail	1.00	1	1	1.00	2	2
Restaurant	1.00	18	18	1.00	20	20
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	22	22	1.00	9	9
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		0	0	0	0	0
Retail	0		1	0	1	0
Restaurant	1	8		2	4	1
Cinema/Entertainment	0	0	0		0	0
Residential	0	4	2	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		0	0	0	1	0
Retail	0		5	0	10	0
Restaurant	0	1		0	4	0
Cinema/Entertainment	0	0	1		1	0
Residential	0	0	3	0		0
Hotel	0	0	1	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	0	0	0	0	0	0
Retail	0	1	1	1	0	0
Restaurant	3	15	18	15	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	4	18	22	18	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	6	6	6	0	0

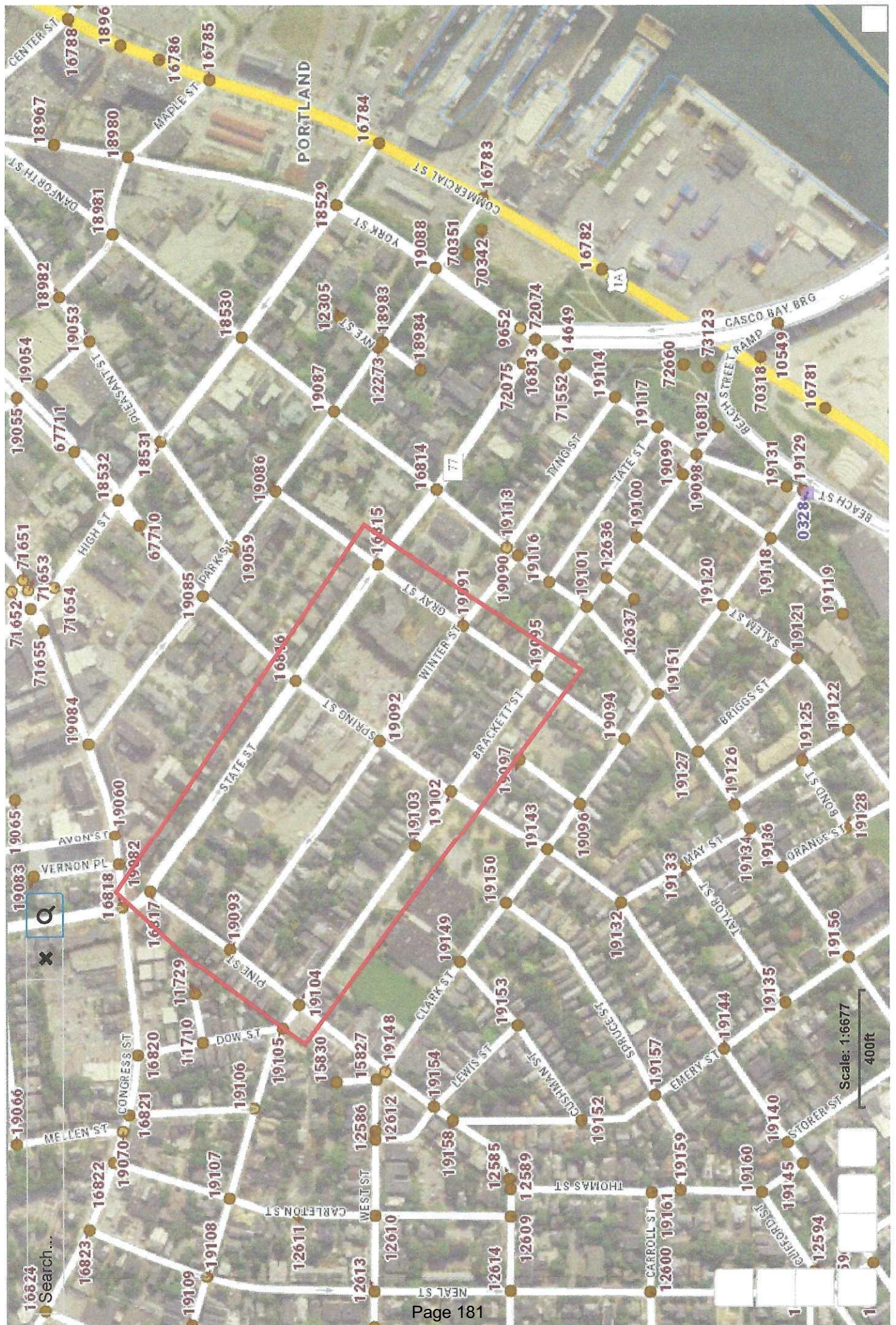
Table 9-P (O): Internal and External Trips Summary (Exiting Trips)						
Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	0	2	2	2	0	0
Retail	1	1	2	1	0	0
Restaurant	4	16	20	16	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	2	7	9	7	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	11	11	11	0	0

¹Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

²Person-Trips

³Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.



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: State St (nodes 16817-16815), Gray St (nodes 19095-16815), Spring St (nodes 19102-16816), and Winter St (nodes 19091-19093)

REPORT PARAMETERS

Year 2017, Start Month 1 through Year 2019 End Month: 12

Route: 0077X	Start Node: 16817 End Node: 16815	Start Offset: 0 End Offset: 0	☐ Exclude First Node ☐ Exclude Last Node
Route: 0560331	Start Node: 19095 End Node: 16815	Start Offset: 0 End Offset: 0	☐ Exclude First Node ☒ Exclude Last Node
Route: 0560672	Start Node: 19102 End Node: 16816	Start Offset: 0 End Offset: 0	☐ Exclude First Node ☒ Exclude Last Node
Route: 0560803	Start Node: 19091 End Node: 19092	Start Offset: 0 End Offset: 0	☒ Exclude First Node ☒ Exclude Last Node
Route: 0560803	Start Node: 19092 End Node: 19093	Start Offset: 0 End Offset: 0	☒ Exclude First Node ☒ Exclude Last Node

Crash Summary I

Nodes

Node	Route - MP	Node Description	U/R	Total Crashes	K	A	B	C	PD	Injury Crashes	Percent Annual M Injury Ent-Veh	Crash Rate	Critical Rate	CRF
16817	0077X - 0.32	Int of PINE ST STATE ST	2	9	0	0	0	2	7	22.2	4.460	0.67	0.40	1.66
												Statewide Crash Rate:	0.16	
16816	0077X - 0.48	Int of SPRING ST, STATE ST	9	6	0	0	1	1	4	33.3	5.528	0.36	1.27	0.00
												Statewide Crash Rate:	0.75	
16815	0077X - 0.57	Int of GRAY ST STATE ST	2	6	0	0	2	0	4	33.3	3.729	0.54	0.42	1.27
												Statewide Crash Rate:	0.16	
19095	0560331 - 0.07	Int of BRACKETT ST GRAY ST	2	2	0	0	0	1	1	50.0	0.729	0.91	0.63	1.46
												Statewide Crash Rate:	0.16	
19091	0560331 - 0.13	Int of GRAY ST WINTER ST	2	4	0	0	0	1	3	25.0	0.120	11.10	0.49	22.71
												Statewide Crash Rate:	0.16	
19102	0560672 - 0.49	Int of BRACKETT ST SPRING ST	2	2	0	0	0	0	2	0.0	2.036	0.33	0.50	0.00
												Statewide Crash Rate:	0.16	
19092	0560672 - 0.54	Int of SPRING ST WINTER ST	2	2	0	0	0	0	2	0.0	1.754	0.38	0.51	0.00
												Statewide Crash Rate:	0.16	
Study Years: 3.00				31	0	0	0	3	5	23	25.8	18.356	0.56	1.06
NODE TOTALS:														

Crash Summary I

Sections

Start Node	End Node	Element	Offset Begin - End	Route - MP	Section Length	U/R	Total Crashes	K	A	B	C	PD	Injury	Percent	Annual HMVM	Crash Rate	Critical Rate	CRF
16816	16817	3130489 Int of SPRING ST, STATE ST	0 - 0.16	0077X - 0.32 ST RTE 77	0.16	2	6	0	0	0	0	6	0	0.0	0.00599	334.11	478.41	0.00
16815	16816	192499 Int of GRAY ST, STATE ST	0 - 0.09	0077X - 0.48 ST RTE 77	0.09	2	8	0	1	0	1	6	25.0	25.0	0.00322	828.08	558.28	1.48
19091	19095	194803 Int of GRAY ST, WINTER ST	0 - 0.06	0560331 - 0.07 RD INV 05 60331	0.06	2	1	0	0	0	0	1	0.0	0.0	0.00003	11798.99	199.82	59.05
16815	19091	5080298 Int of GRAY ST, STATE ST	0 - 0.07	0560331 - 0.13 RD INV 05 60331	0.07	2	3	0	0	0	0	1	0.0	0.0	0.00006	16797.83	1530.55	10.98
19092	19102	194805 Int of SPRING ST, WINTER ST	0 - 0.05	0560672 - 0.49 RD INV 05 60672	0.05	2	5	0	0	0	0	5	0.0	0.0	0.00079	2118.40	1278.67	1.66
16816	19092	192504 Int of SPRING ST, STATE ST	0 - 0.07	0560672 - 0.54 RD INV 05 60672	0.07	2	2	0	0	0	0	2	0.0	0.0	0.00123	541.34	1138.90	0.00
19091	19092	194802 Int of GRAY ST, WINTER ST	0 - 0.09	0560803 - 0.06 RD INV 05 60803	0.09	2	1	0	0	0	0	0	0.0	0.0	0.00008	4227.97	1702.89	2.48
19092	19093	5080269 Int of SPRING ST, WINTER ST	0 - 0.16	0560803 - 0.15 RD INV 05 60803	0.16	2	2	0	0	0	0	2	0.0	0.0	0.00061	1091.35	1363.00	0.00
Study Years: 3.00					Section Totals:	0.75	28	0	1	0	1	23	7.1	7.1	0.01200	777.65	472.79	1.64
Grand Totals:					Grand Totals:	0.75	59	0	1	3	6	46	16.9	16.9	0.01200	1638.61	623.27	2.63

H. C. L. CRASH COLLISION DIAGRAM DATA PACKAGE

COUNTY: CUMBERLAND

TOWN: PORTLAND

LOW NODE: 16815 HIGH NODE: 16816

REGION: 1

U/R: URBAN

DESCRIPTION: State St from Gray St to Spring St

RTE # / RD #: 0077X

DATE DRAWN: 6/19/2020 DRAWN BY: BOB K

STUDY FROM: 1/1/2017

STUDY TO: 12/31/2019

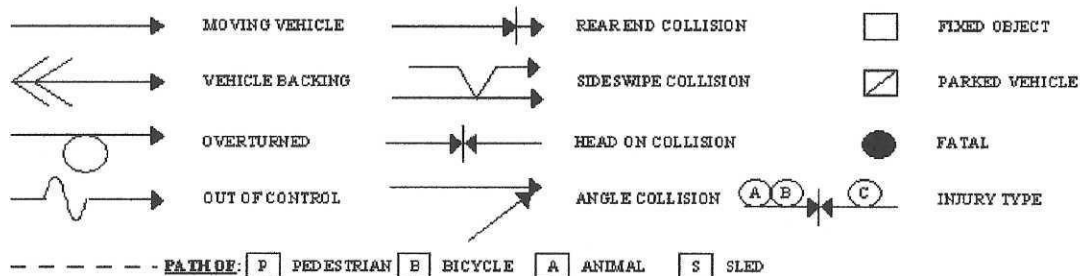
CRASH RATE: 828.08

CRF: 1.48

% INJURY: 25

TOTAL CRASHES: 8

LEGEND



PAVEMENT: D - DRY, I - ICY, W - WET, S - SNOW

WEATHER: C - CLEAR, F - FOG, R - RAIN, SL - SLEET, S - SNOW, CL - CLOUDY

TIME: A - AM, P - PM

Prepared by Office of Safety

RFK3 6-19-20

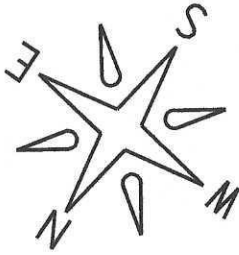
Portland

Link: I6815-I6816

Element: I92499

Study Period: 2017-2019

of Crashes: 8 / CRF: 1.48



I6816

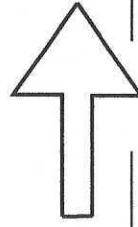
I6815

3302 11-9-18 5:36P D/C OJUL
30774 10-24-18 10:58A W/C
Fail To Keep In Lane

69180 10-26-19 12:37P D/C Fail To Keep In Lane

30774 10-24-18 10:58A W/C
Fail To Keep In Lane

9109 3-19-18 12:31A D/C Fail To Keep In Lane



ONE WAY

State Street (Route 77)

29497 10-15-18 7:07P W/R OJUL Hit & Run

2497 1-20-17 12:50P SL/C Road Conditions

19547 7-1-17 10:40A D/C Improper Turn

1085 1-7-18 3:46P SL/C Improper Turn

Bus Stop

Driveway

Driveway
=100

H. C. L. CRASH COLLISION DIAGRAM DATA PACKAGE

COUNTY: CUMBERLAND

TOWN: PORTLAND

LOW NODE: 16817 HIGH NODE: 0000

REGION: 1

U/R: URBAN

DESCRIPTION: Int of Pine St and State St

RTE # / RD #: 0077X

DATE DRAWN: 6/1/2020

DRAWN BY: BOB K

STUDY FROM: 1/1/2017

STUDY TO: 12/31/2019

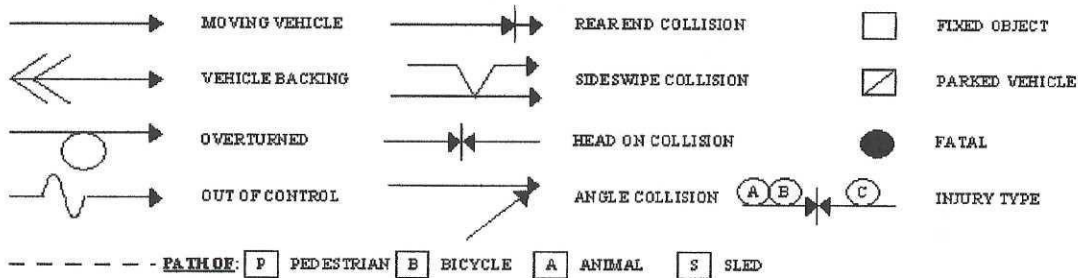
CRASH RATE: 0.67

CRF: 1.66

% INJURY: 22.2

TOTAL CRASHES: 9

LEGEND

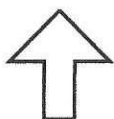


PAVEMENT: D - DRY, I - ICY, W - WET, S - SNOW

WEATHER: C - CLEAR, F - FOG, R - RAIN, SL - SLEET, S - SNOW, CL - CLOUDY

TIME: A - AM, P - PM

ONE WAY



63283 8-22-19 6:00P D/C Fail to keep in lane

11013 4-5-18 6:59P D/C Follow Too Close [P]

6627 2-21-17 8:40A D/C Follow Too Close [P]

15348 5-21-17 4:00P D/C Follow Too Close

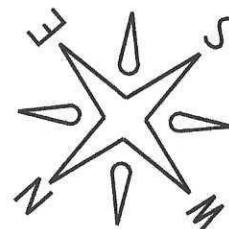
31073 10-18-17 5:05P D/C Fail To Yield [P]

13185 11-25-19 12:50P D/C Follow too close [P]

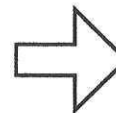
22397 7-28-17 12:48P D/C Fail To Yield

25790 8-24-17 9:00A D/C Follow Too Close

228 1-3-17 12:55P W/CL Hit & Run



ONE WAY



Pine St

State St
Rt 77

Portland

Node: 16817

Study Period: 2017-2019

of Crashes: 9 / CRF: 1.66

Prepared by Office of Safety
RFK3 6-1-20

April 12, 2021

Planning & Urban Development Dept.
Att: Caitlin Cameron
Urban Designer
389 Congress St, Ste. 400
Portland, Maine 04101

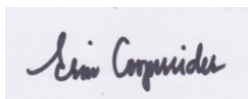
Re: 148 State Street Site Plan Application

Dear Caitlin,

Shared use parking is an important Traffic Demand Management (TDM) strategy that will be employed by NewHeight Redfern LLC on the redeveloped parcel now occupied by Mercy Hospital. The parking management plan will maximize use of the tandem parking spaces near the loading dock located adjacent to the building. On-site, full-time management will schedule trash pick-ups and deliveries between the hours of 6 a.m. and 6 p.m. The self-storage component of the property will use the tandem spaces for drop off and pick up generally between the hours of 6 a.m. and 6 p.m. also, scheduled around trash pick ups, and other regularly scheduled daytime activities. Residential tenants will have use of the spaces between 6 p.m. and 6 a.m.

The Traffic Demand Management Coordinator for the campus will assign use of the tandem parking spaces with the intent to pair residential tenants who drive to off-peninsula locations and leave early in the morning with these spaces, coordinating with the tenants to stagger arrival and departure times to ensure efficient circulation in this area. Unbundled parking, leased separately from the units, is also an important TDM strategy and a part of the plan for the property. Successful management of these and all parking spaces that are a part of the property is in the best interest of the neighborhood and the property owner and an important part of this urban residential development.

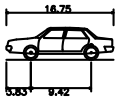
Sincerely,



Erin Cooperrider
Manager, NewHeight Redfern

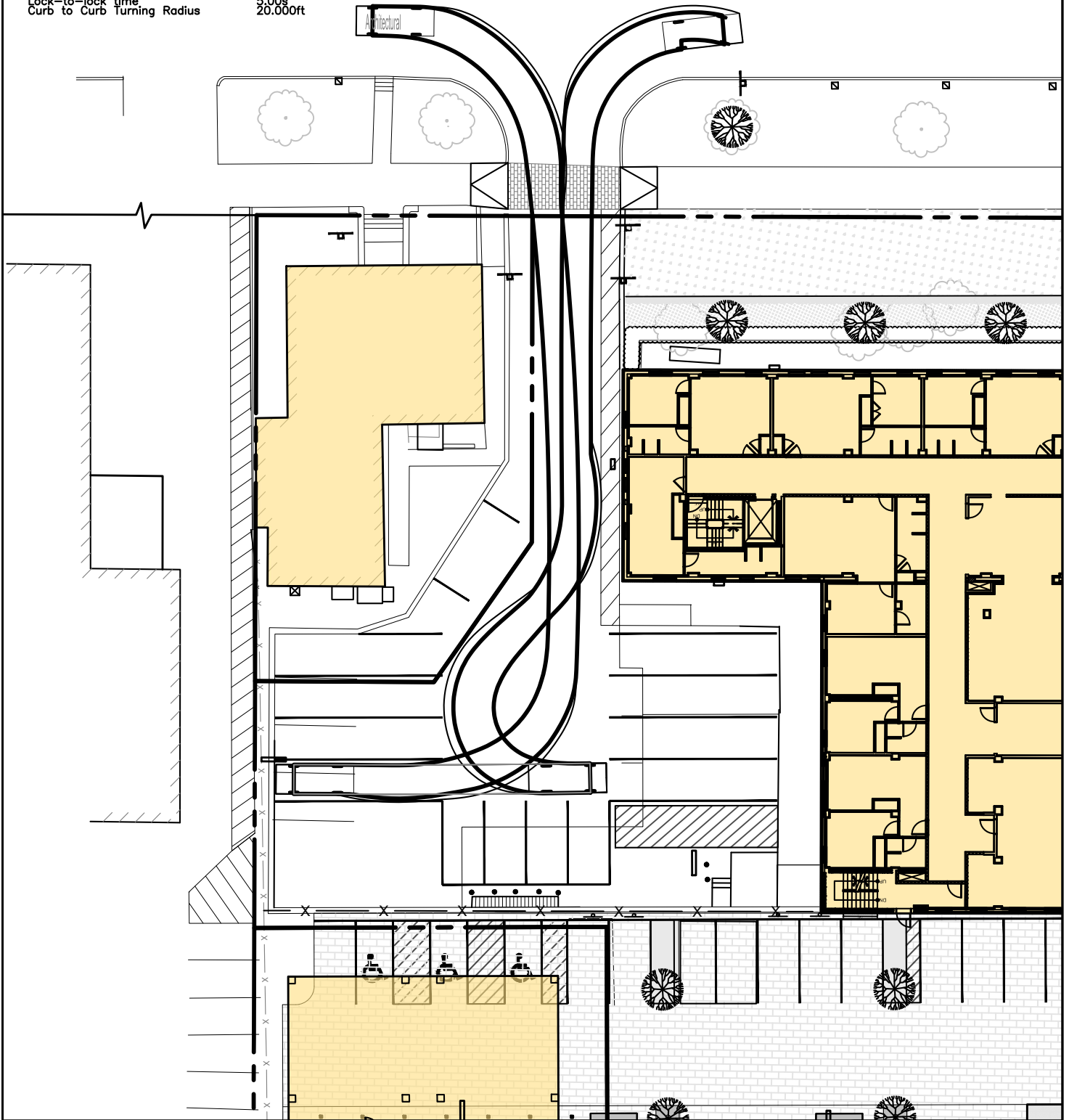


Jonathan Culley
Manager, NewHeight Redfern



Architectural
Overall Length
Overall Width
Overall Body Height
Min Body Ground Clearance
Track Width
Lock-to-lock time
Curb to Curb Turning Radius

16.750ft
6.300ft
5.003ft
0.939ft
6.300ft
5.00s
20.000ft



THIS PLAN SHALL NOT BE MODIFIED
WITHOUT WRITTEN PERMISSION FROM
ACORN ENGINEERING, INC. ANY
ALTERATIONS, AUTHORIZED OR
OTHERWISE, SHALL BE AT THE USER'S
SOLE RISK AND WITHOUT LIABILITY TO
ACORN ENGINEERING, INC.

DRAWING NO.
EXHIBIT

FILE: 1140.1_CIVIL
DATE: 10/21/20
JN: 1140.1
SCALE: 1" = 50'
DESIGN BY: PFH
DRAWN BY: KRB
CHECKED BY: WHS



DRAWING NAME:

AUTOTURN EXHIBIT 1

PROJECT NAME:

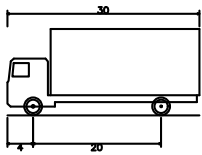
102 STATE STREET REDEVELOPMENT

CLIENT:

NEWHEIGHT REDFERN, LLC
PORTLAND, MAINE

ISSUED FOR
COMMENT
RESPONSE

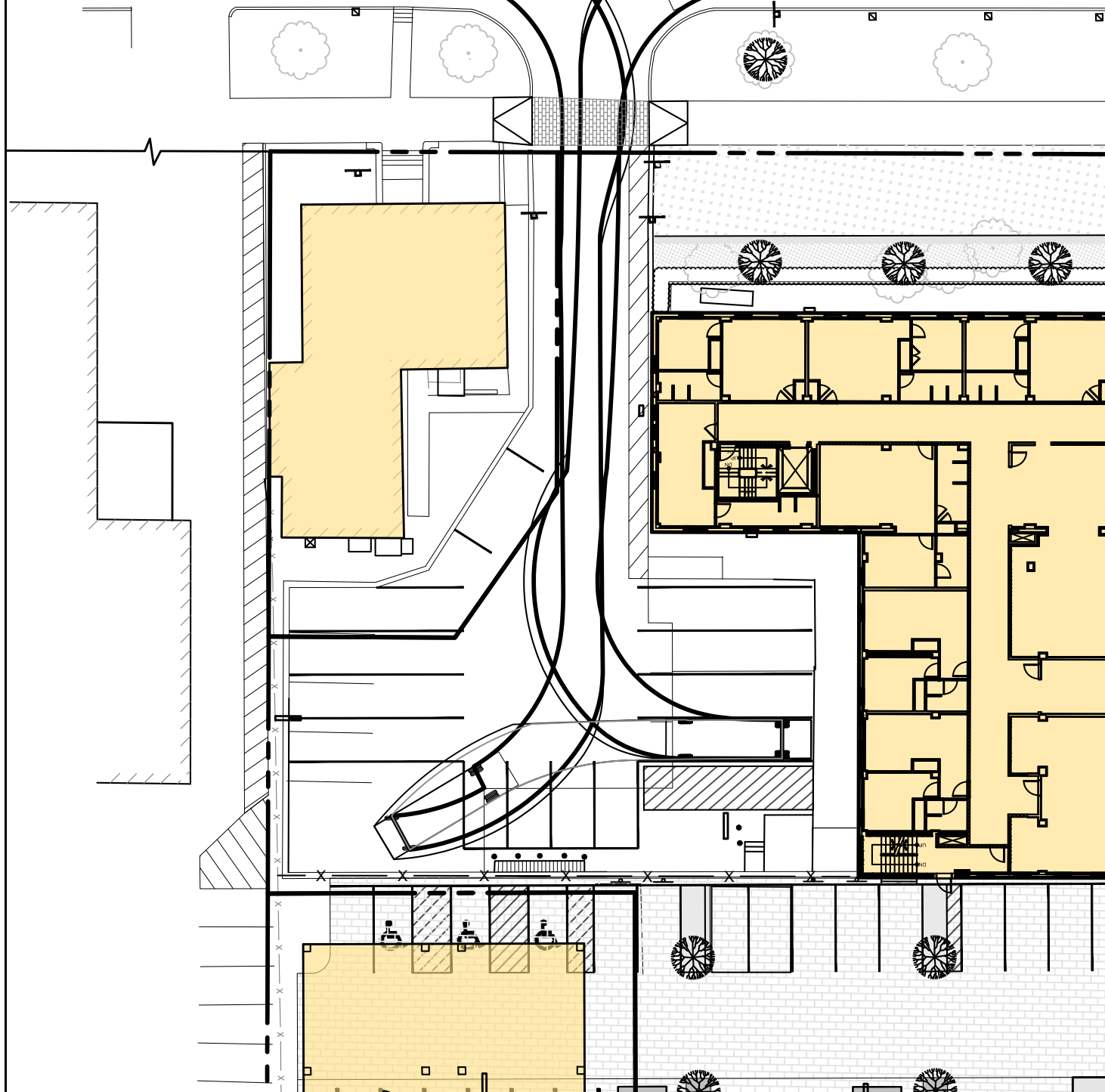
BY
DATE
PFH
1/20/21



SU-30 - Single Unit Truck
 Overall Length 30.000ft
 Overall Width 8.000ft
 Overall Body Height 13.500ft
 Min. Body Ground Clearance 1.357ft
 Track Width 8.000ft
 Lock-to-lock time 5.00s
 Max Steering Angle (Virtual) 31.80°

30.000ft
 8.000ft
 13.500ft
 1.357ft
 8.000ft
 5.00s
 31.80°

SU-30 - Single Unit Truck



THIS PLAN SHALL NOT BE MODIFIED
 WITHOUT WRITTEN PERMISSION FROM
 ACORN ENGINEERING, INC. ANY
 ALTERATIONS, AUTHORIZED OR
 OTHERWISE, SHALL BE AT THE USER'S
 SOLE RISK AND WITHOUT LIABILITY TO
 ACORN ENGINEERING, INC.

DRAWING NO.
EXHIBIT

FILE: 1140.1_CIVIL
 DATE: 10/21/20
 JN: 1140.1
 SCALE: 1" = 50'
 DESIGN BY: PFH
 DRAWN BY: KRB
 CHECKED BY: WHS



DRAWING NAME:

AUTOTURN EXHIBIT 2

PROJECT NAME:

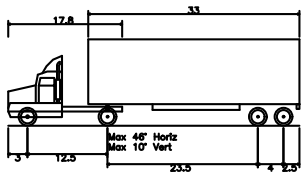
102 STATE STREET REDEVELOPMENT

CLIENT:

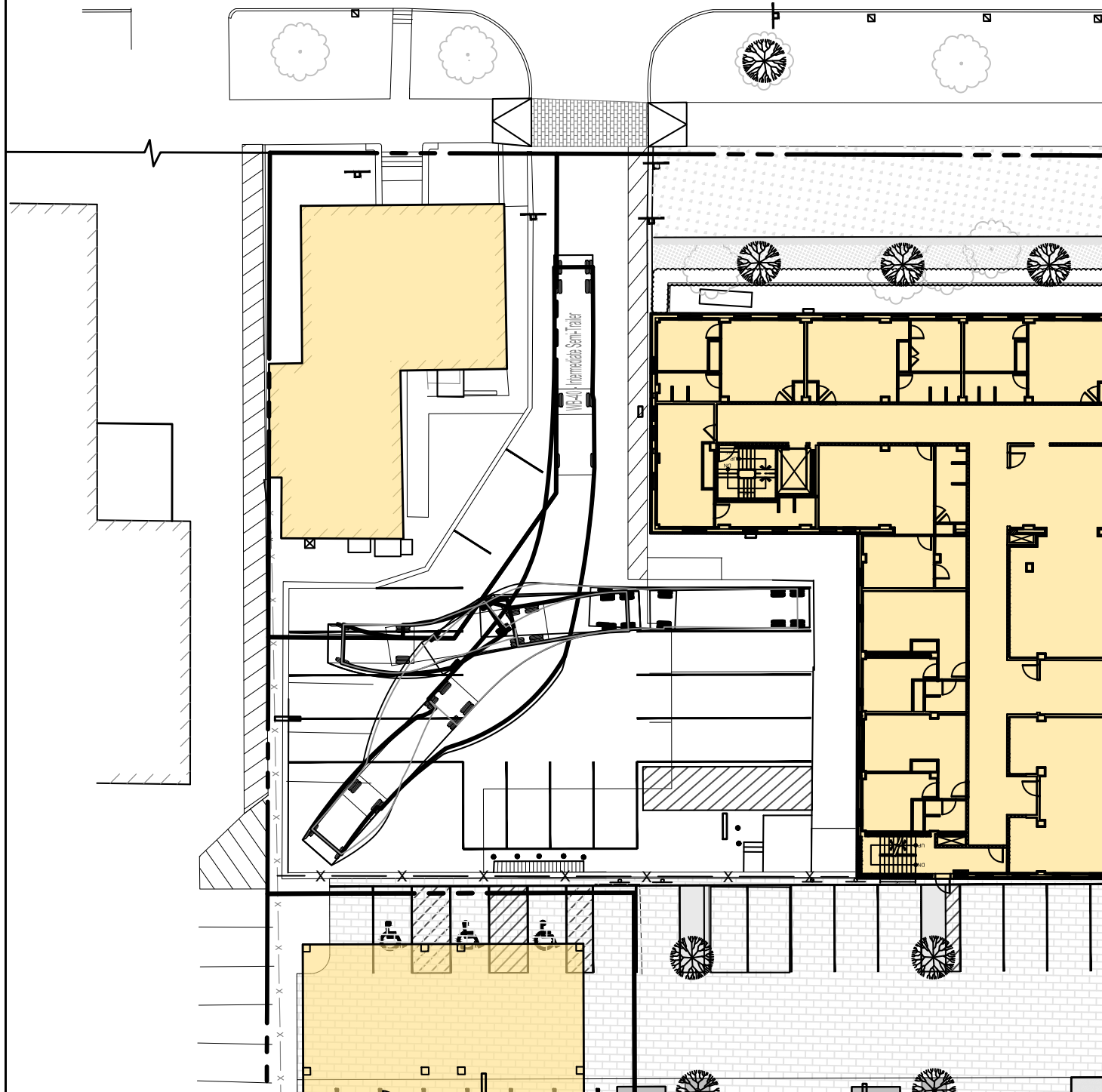
NEWHEIGHT REDFERN, LLC
 PORTLAND, MAINE

ISSUED FOR
 COMMENT
 RESPONSE

BY
 DATE
 PFH
 1/20/21



WB-40 - Intermediate Semi-Trailer
 Overall Length 45.499ft
 Overall Width 8.000ft
 Overall Body Height 13.500ft
 Min. Body Ground Clearance 1.334ft
 Track Width 8.000ft
 Lock-to-lock time 4.00s
 Max Steering Angle (Virtual) 20.30°



THIS PLAN SHALL NOT BE MODIFIED
 WITHOUT WRITTEN PERMISSION FROM
 ACORN ENGINEERING, INC. ANY
 ALTERATIONS, AUTHORIZED OR
 OTHERWISE, SHALL BE AT THE USER'S
 SOLE RISK AND WITHOUT LIABILITY TO
 ACORN ENGINEERING, INC.

DRAWING NO.
EXHIBIT

FILE: 1140.1_CIVIL
 DATE: 10/21/20
 JN: 1140.1
 SCALE: 1" = 50'
 DESIGN BY: PFH
 DRAWN BY: KRB
 CHECKED BY: WHS



DRAWING NAME:

AUTOTURN EXHIBIT 3

PROJECT NAME:

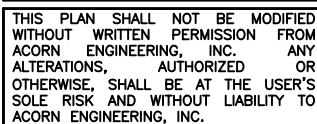
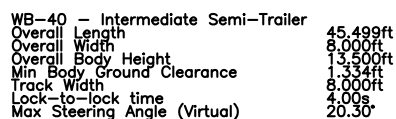
102 STATE STREET REDEVELOPMENT

CLIENT:

NEWHEIGHT REDFERN, LLC
 PORTLAND, MAINE

ISSUED FOR
 COMMENT
 RESPONSE

BY
 DATE
 PFH
 1/20/21



FILE:	1140.1_CIVIL
DATE:	10/21/20
JN:	1140.1
SCALE:	1" = 50'
DESIGN BY:	PFH
DRAWN BY:	KRB
CHECKED BY:	WHS



DRAWING NAME:

AUTOTURN EXHIBIT 4

PROJECT NAME:

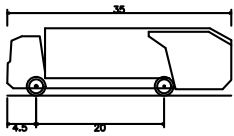
102 STATE STREET REDEVELOPMENT

CLIENT:

NEWHEIGHT REDFERN, LLC
PORTLAND, MAINE

ISSUED FOR
COMMENT RESPONSE

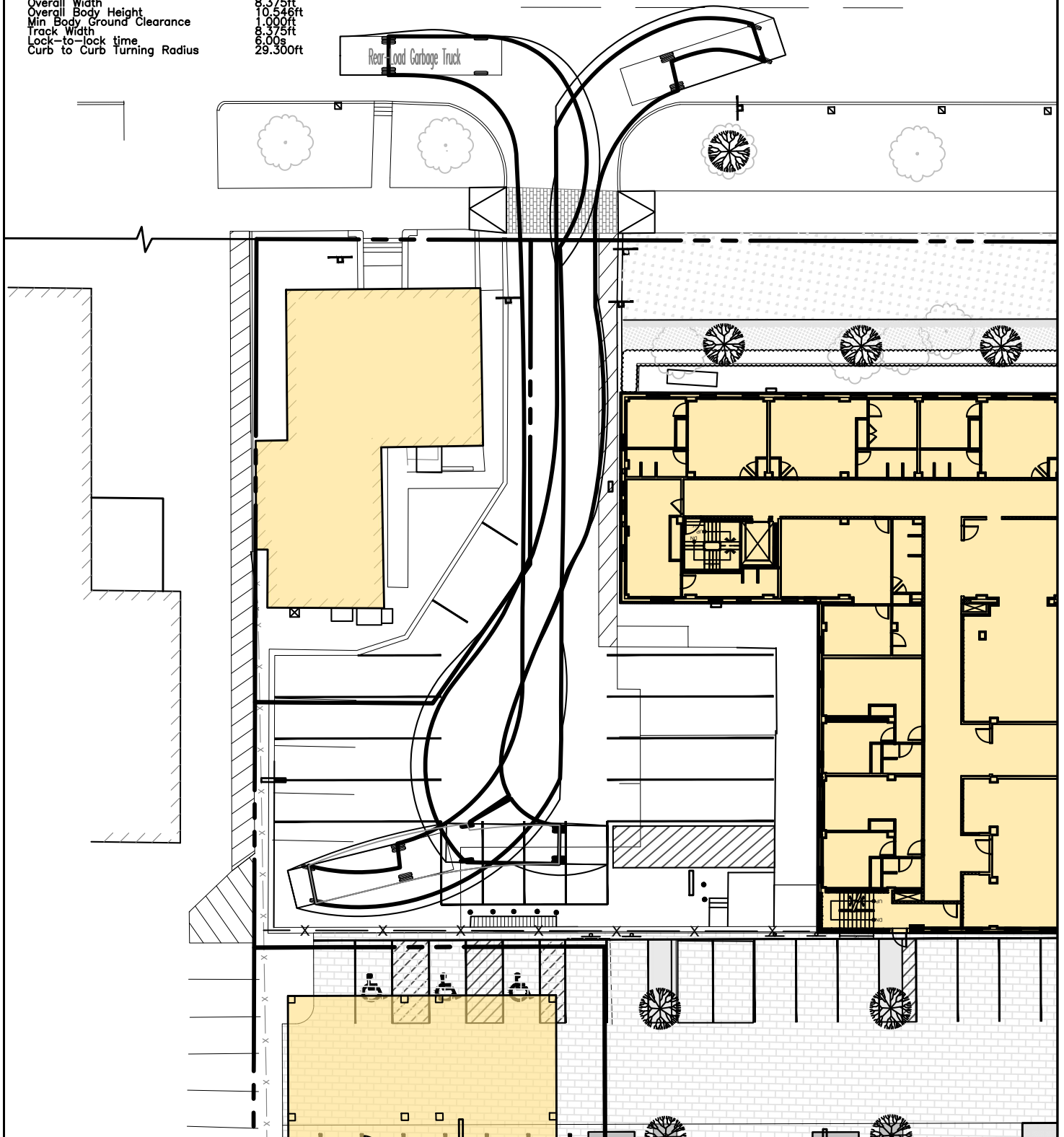
BY
DATE
PFH
1/20/21



Rear-Load Garbage Truck
 Overall Length 35.000ft
 Overall Width 8.375ft
 Overall Body Height 10.546ft
 Min Body Ground Clearance 1.000ft
 Track Width 8.375ft
 Lock-to-lock time 6.00s
 Curb to Curb Turning Radius 29.300ft

35.000ft
 8.375ft
 10.546ft
 1.000ft
 8.375ft
 6.00s
 29.300ft

Rear-Load Garbage Truck



THIS PLAN SHALL NOT BE MODIFIED
 WITHOUT WRITTEN PERMISSION FROM
 ACORN ENGINEERING, INC. ANY
 ALTERATIONS, AUTHORIZED OR
 OTHERWISE, SHALL BE AT THE USER'S
 SOLE RISK AND WITHOUT LIABILITY TO
 ACORN ENGINEERING, INC.

DRAWING NO.
EXHIBIT

FILE: 1140.1_CIVIL
 DATE: 10/21/20
 JN: 1140.1
 SCALE: 1" = 50'
 DESIGN BY: PFH
 DRAWN BY: KRB
 CHECKED BY: WHS



DRAWING NAME:

AUTOTURN EXHIBIT 5

PROJECT NAME:

102 STATE STREET REDEVELOPMENT

CLIENT:

NEWHEIGHT REDFERN, LLC
 PORTLAND, MAINE

ISSUED FOR
 COMMENT
 RESPONSE

BY
 DATE
 PFH
 1/20/21

Mercy Hospital & Morrison House Transportation Demand Management Plan

May 18, 2021

Summary

Cushman Transportation Consulting, LLC provides this Transportation Demand Management (TDM) Plan for NewHeight Redfern, LLC's Mercy Hospital & Morrison House Redevelopment, encompassing most of the southern half of the block bordered by State and Spring Streets in Portland's West End. Specifically, this is the mixed-use conversion of the main Mercy Hospital building at 120 State Street for residential and commercial/retail uses and creation of additional housing at the adjoining Morrison House at 148 State Street.

Site Uses Overview

- *Residential* - 170 total proposed dwelling units (95,667 total sf), housing approximately 221 total residents at 120 State Street (the main Mercy building – 162 units) and 148 State Street (Morrison House – 8 units); 146 market rate and 16 deed-restricted workforce housing apartments. These consist of 37 studios, 124 one-bedroom and 1 two-bedroom units. In the main building these units are on the ground through sixth floors and additional residential uses include indoor and outdoor common areas, co-working space, and gym.
- *Health clinic* - 3,077 sf on ground floor
- *Commercial/retail* - 4 spaces on 1st floor: 6068 total sf. Proposed uses are: cafe (2086 sf), hardware store (1080 sf), co-working space (2047 sf), and hair salon (855 sf).
- *Self-Storage facility* - 35398 sf on basement and ground floors
- *Parking*: 70 surface parking spaces

TDM Plan & Targets

This project is another key opportunity for urban infill and redevelopment on the Portland Peninsula, new housing for local workers and families, and alternate transportation and reverse commuting options for residents. *Of significant note, the new uses at 120 and 148 State Street will result in a net reduction of more than 100 vehicle trips to and from the site, compared with the existing hospital uses.* The site's TDM Plan works further to reduce parking demand, encourage multimodal trips to and from the site and benefit the local transportation system. This includes marketing the housing to Peninsula employees; providing leases exclusive of parking; offering on-site amenities; and supporting transportation alternatives such as walking, bicycling and using public transportation.

The plan sets the following TDM targets for 3 years after the Mercy Hospital & Morrison House Redevelopment is fully occupied at 120 and 148 State Street. These targets will be reassessed after the first full year of occupancy of all tenant spaces:

- 10% reduction in peak hour vehicle trips and 10% reduction in peak parking demand for the site
- 65% resident and employee work commute multimodal rate

COVID-19 NOTE: Site occupancy is forecast for 2023 and with this year's public vaccination campaign for the COVID-19 virus, transportation alternatives that have been less viable during the pandemic - such as transit and carpooling - are anticipated to make significant recoveries by that time. COVID-related parking demand increases, to enable drive alone options, are also expected to decline. In addition, TDM efforts will likely be supported by a long-term overall increase in telework and walkable access to the largest number of jobs in the state.

Interim Site TDM Coordinator:

Emily McConnell
NewHeight Redfern
emily@newheightgroup.com
(207) 323-2333

TDM Table of Contents

A. Property Description & Transportation Context	2
B. Mercy Hospital Redevelopment TDM Coordination	16
C. Trip Generation & Parking Demand Projections & Targets	17
D. Trip and Parking Reduction Strategies	20
E. Plan for Monitoring, Data Collection and Reporting	23



A. Property Description & Transportation Context

The Mercy Hospital Redevelopment is a 2.48-acre parcel, recently and appropriately redesignated as a B-3 site, encompassing most of the southern half of the block bordered by State, Spring and Winter Streets in the larger R6 zone of Portland's West End Neighborhood. After 80 years of community service as the original Mercy Hospital in Portland, the mixed-use location will continue to offer a medical clinic open to the general public, while also providing robust residential housing and small retail amenities.

The new B3 designation of the site fits in well with the uses identified by the City and adopted in the recent ReCode effort:

- B-3 & B-3b** To maintain and enhance the role of the downtown as the business and commercial center of the region; to enhance and promote the orderly expansion of retail and service businesses downtown, satisfying the related needs of the city's resident, working, and visitor populations; to encourage increased housing opportunity downtown for a diverse residential population; to enhance the pedestrian environment through the encouragement of intensive mixed-use activities, through the enhancement and maintenance of public and private open space, and through the enlivenment and increased attractiveness of the street environment; to encourage excellence in urban design; to preserve and capitalize on the unique character and historic fabric of the downtown through the encouragement of reuse of significant existing structures; to provide opportunity for an enhanced presence and integration of the arts and cultural activities; to reinforce the role of the downtown as a meeting place for community residents and visitors alike from all walks of life and all socio-economic groups; to provide adequate parking and transportation facilities which promote accessibility, enhance and encourage development opportunity, and enhance and protect the pedestrian environment; In the Pedestrian Activities District (PAD) Overlay Zone, to create continuity of pedestrian-oriented uses along streets where such uses predominate and along streets which, over time, will establish and maintain a strong retail and pedestrian-oriented use pattern; and to provide for the relocation of residents who are displaced by development.

5-6 | CITY OF PORTLAND LAND USE CODE

The site redevelopment of the Spring Street frontage will improve the human scale of the pedestrian environment through a more active building facade, entrance, signage, lighting, trees and landscaping. The location has a Compact Neighborhood Score of 9.3 out of 10. This scoring is based on a natural logarithm of household density, provided through the Housing + Transportation Affordability Index using U.S. Census data.





**Main Building at
120 State Street
(State Street side)**

Residential Housing at Mercy & Morrison House

Infill development of any kind contributes to single-occupancy automobile trip reduction. That much more in the case of in-town housing, which is the primary use proposed for the Mercy Hospital & Morrison House Redevelopment. As noted in the Summary above, the new uses at both buildings will result in a net reduction of more than 100 vehicle trips to and from the site, compared with the trip rate for the existing hospital uses at full capacity.

Behavioral research illuminates one of the reasons for this further. When people move from one residence to another, this provides a key opportunity and critical juncture at which to help them understand their transportation choices and the benefits of alternate transportation. Individuals are more receptive to this information as their daily living and commute patterns have changed with relocation (Kirkman, 2019; Thøgersen, 2012; Verplanken, Walker, Davis & Jurasek, 2008; Bamberg, 2006; Fujii, Gärling & Kitamura, 2001).

In addition, new residential sites like the Mercy redevelopment provide real opportunity to help meet the City's goals for population growth. In *Portland's Plan 2030* (2017 Comprehensive Plan), analysis showed the number of people both living and working in the city decreased between 2002 and 2014. According

...One of the more interesting studies found in reviewing the literature was a 2003 German social science experiment conducted by three researchers (Bamberg, Rolle and Weber) where an individualized marketing intervention was used at a time of what they called a "changed decision" context, meaning immediately after relocation. The research found that if, when in a new situation, people received personally relevant and persuasive information, they were more likely to use it for making new behavioral decisions.

Portland Oregon SmartTrips Welcome Program, Tools of Change Landmark Case Study, 2012



to the *City of Portland Parking Study for the Eastern Waterfront & Downtown* (2017), just 12% of people live and also work in the study area – which is immediately adjacent to the Mercy Hospital & Morrison House Redevelopment. The Comprehensive Plan “supports the principle that all who work in Portland should have the option of living in Portland.” The City set a 10-year population goal of 75% of the municipality’s approximate daytime population of 96,000.

One hundred seventy (170) total residential units are proposed for the site. These include:

- *120 State Street (the main Mercy building – 162 units)*: 145 market rate and 17 deed-restricted workforce housing apartments. These consist of 37 studios, 124 one-bedroom and 1 two-bedroom units. These units will be on the ground through sixth floors.
- *148 State Street (Morrison House – 8 units)*: These consist of 7 one-bedroom and 1 two-bedroom market rate units.

As members of the development team, Newheight Redfern will retain ownership and management of 120 and 148 State Street and the parking areas.

Significant on-site and near-site amenities provide residents with a full-service living environment. People in residential settings often perceive they are dependent upon driving alone because of the number of errands and activities they must carry out in different locations. The Mercy Redevelopment will reduce this dependence through building facilities and proximity to services close to the site.

On-site features that encourage alternate transportation and discourage drive alone vehicle trips include:

- indoor bicycle, stroller, carseat, handcart storage area
- package delivery and storage location
- hardwired infrastructure for broadband and wireless internet
- communal gathering spaces, including those that can be used to do telework
- outdoor courtyard
- fitness room and rooftop deck at 120 State Street





Commercial and Small Retail Uses on Site

Mercy Hospital will continue to lease and manage a clinic with twelve employees, open to the public at 120 State Street. This will provide residents with highly accessible general healthcare services.

In addition, the main building will house a self-storage business on the basement and ground floors, with portions devoted to the housing uses on site.

NewHeight Redfern is also creating four small retail spaces at 120 State Street with easy access from the courtyard area for the public and all site residents. Intended leases for these individual spaces are:

- neighborhood cafe
- hardware store
- co-working space
- hair salon

Health care and self-storage visits and hardware store runs are often taken by personal vehicle, so these site amenities will reduce drive alone trips as well.

Parking

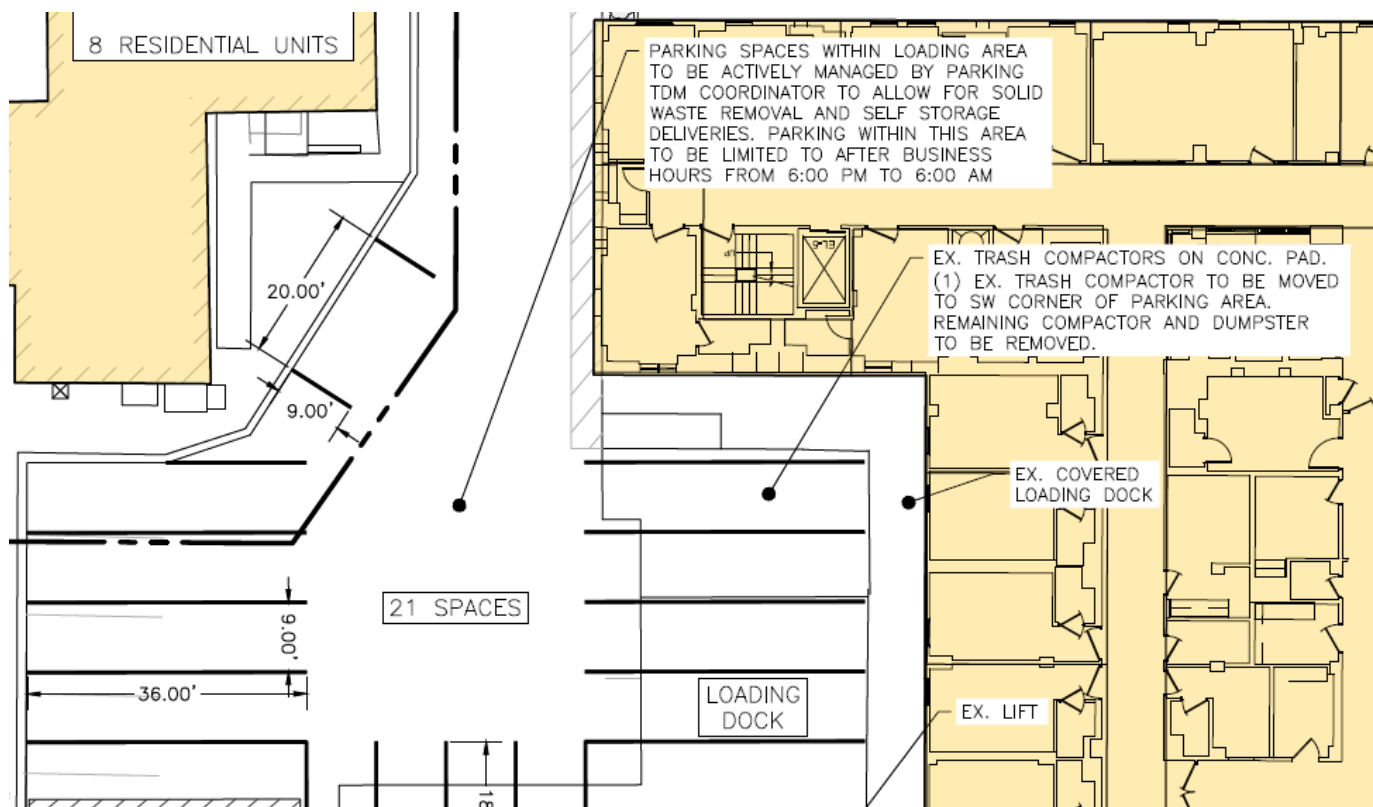
Based on the City of Portland's recently amended Land Use Code, Article 19, Table 19-B: Categorical Exceptions To Off-Street Parking Minimums, "No off-street parking shall be required within ¼ mile of fixed route transit service. New uses or changes of use of more than 10,000 SF taking advantage of this exception shall be required to provide a Transportation Demand Management Plan if they use this provision in lieu of parking requirements."



Per the site development agreement, the project proposes to build and maintain 70 surface parking spaces, centrally located and with access off of Spring Street. In strong support of site TDM efforts, residential and retail leases at the Mercy Hospital & Morrison House Redevelopment will be exclusive of parking. Parking that is unsubsidized, rented at competitive market rates, and unbundled from tenant leases is of tremendous benefit and a linchpin strategy to discourage drive alone trips and encourage the use of alternate transportation.

Parking that is shared-use also expands its efficiency and is another important TDM strategy. Thus, the site intends maximize its parking resources by sharing 21 of the spaces between daytime and evening uses; e.g., for daytime solid waste removal, self-storage deliveries, and use by clinic employees - and with residential tenants accessing them for overnight use. Parking within this area will specifically leased to residents for after business hours, from 6:00pm to 6:00am.

Parking will be managed by NewHeight Redfern's TDM Coordinator, who will actively valet these tandem-use spaces on site and all spaces within the loading dock area. The company will also explore the possible longer-term management of the Mercy Hospital & Morrison House Redevelopment's parking through Unified Parking Partners (UPP); UPP could likely expand this parking resource's most strategic and effective use.





Occupant Demographics

The development team anticipates the Mercy Hospital & Morrison House Redevelopment will attract an economically and age-diverse group of tenants interested in a highly-walkable, low-car-use lifestyle. This will include singles, couples, and families - with an expected average of 1.3 persons per unit for the market and workforce housing portions of the site. Residents are likely to range from Generation Z and Millennial tenants (young professionals and students under age 40) to mid-career professionals, empty-nesters; and individuals who are retired. As stated in *Portland's Plan*, "Millennials (20-29) and Gen Xers (30-39) comprise the largest share of Portland's population, while Baby Boomers (50-69) are the fastest growing age group."

Working tenants will include people working on the Peninsula, to avoid the traffic congestion coming into the City. Downtown Portland is the largest employment center in the state and the Mercy redevelopment has an excellent Job Access Score of 9.4 out of 10. This is based on employment location and the variety of employment types, similarly provided through the Housing + Transportation Affordability Index (H+T Index) utilizing census data.

For residents who are students, post-secondary education opportunities such as the Maine College of Art, the University of Southern Maine, Portland Adult Education, and Southern Maine Community College are readily accessible from the site on foot, by bicycle and via public transportation.



From an equity standpoint, the site also has an enviable H+T Index rate of 34%; that is, housing (18%) and transportation (16%) costs combined are 34% of household income. Housing by itself is considered affordable if it totals 30% or less of income. Housing and Transportation Affordability (HTA) is considered to be combined housing and transportation costs equaling 45% or less of income. For comparison, the average Cumberland County household spends 52% of income on housing and transportation and the average Maine household spends 58% - both of which are well over what is considered within one's means.

Often lower transportation costs at sites like the Mercy Hospital & Morrison House Redevelopment are because people don't need to own as many (or any) private vehicles; that is, vehicle ownership rates are lower for people who live in urban centers. Tables 9 and 10 below from the census data analysis in the 2017 Downtown parking study, show that workers who live in the Downtown and Eastern Waterfront study area (as stated above, directly adjacent to the site) and commute to all jobs – including anywhere in the region:

- Own far fewer vehicles: 0.7 per household - vs. 1.34 in the city and 1.79 in the region;
- Drive alone considerably less: 40.6% in the study area - vs. 67.4% in the city and 78.3% in the region;
- Use alternate modes of transportation and/or telecommute significantly more: 59.4% in the study area vs. 32.8% in the city and 21.9% in the region.

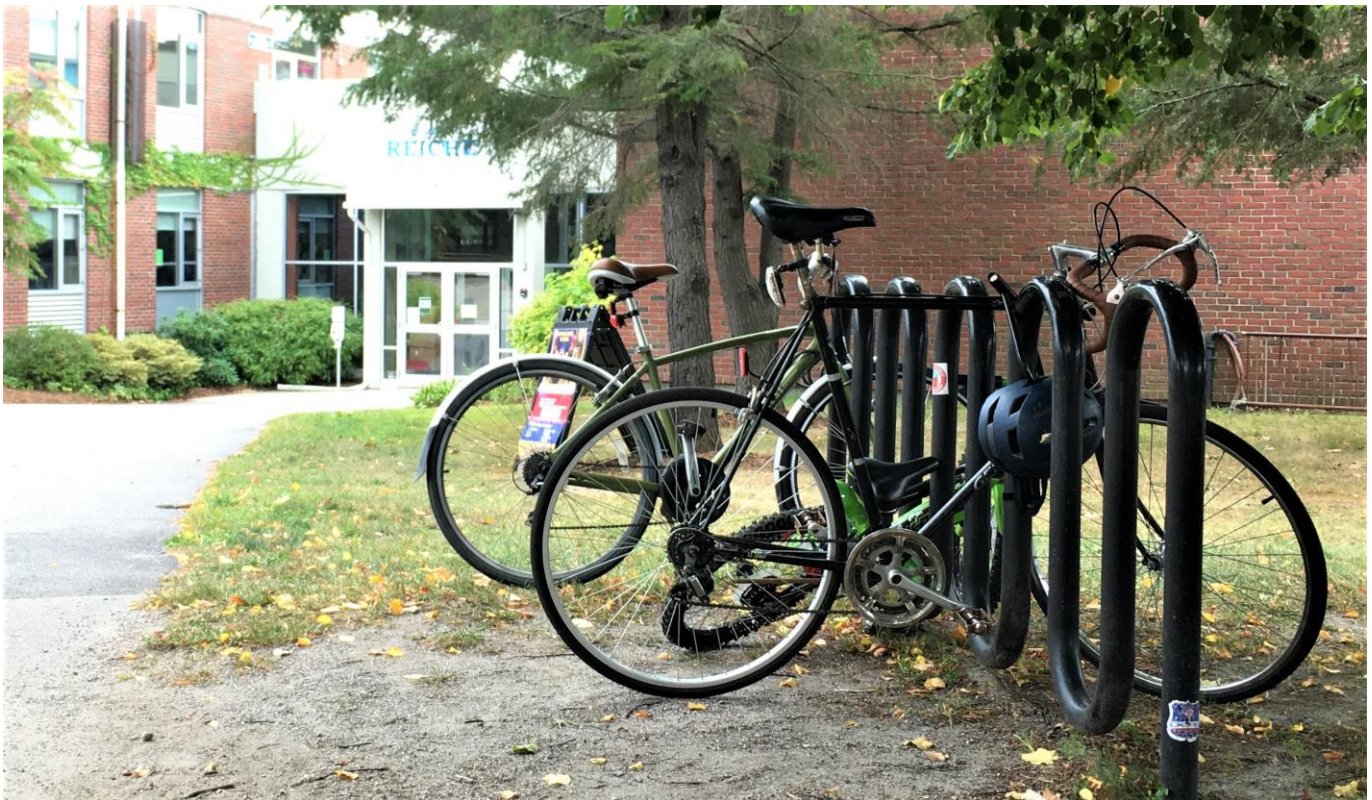
Table 9: Commute Mode Share Trends by Home Origin

	Commuter Home Origin	Drive Alone	Carpool	Transit	Bicycle	Walked	Work from Home & Other
2015	Portland-South Portland-Biddeford MSA	78.3%	9.3%	1.1%	0.6%	3.9%	7.0%
	City of Portland	67.4%	8.6%	3.1%	1.6%	12.2%	7.3%
	On the Peninsula	49.2%	6.9%	4.7%	2.8%	28.6%	7.9%
	Within the Study Area	40.6%	10.2%	3.5%	0%	42.5%	3.2%

Table 10: Auto Ownership 2000-2015

	Home Location	Vehicles	Occupied Households	Veh/HH
2015	Total U.S.	205,767,452	116,926,305	1.76
	Portland-South Portland-Biddeford MSA	383,798	214,667	1.79
	City of Portland	40,495	30,119	1.34
	On the Peninsula	11,611	11,917	0.97
	Within the Study Area	1,206	1,729	0.70





Similarly, *Portland's Plan* found:

[T]he percentage of people who drive alone to work on the peninsula is as low as 36%, while the percentage of people who walk to work is in the 30% - 40% range, the percentage of people who bike to work is in the 4% - 9% range, and the percentage of people who take public transportation to work is in the 7% - 13% range. Off the peninsula, these figures shift dramatically to reflect a higher reliance on single-occupancy vehicles for commuting purposes.

Per U.S. Census data, Generation Z and Millennials have been shown to prefer urban environments; they also tend to be more comfortable using modes other than the single-occupancy automobile for transportation. These multimodal habits were heavily influenced by the Great Recession and driving by these generations increased slowly as the economy improved. (It has been impacted once again by the COVID-19 pandemic – which has negatively affected bus and carpool rates; although it is positively impacting the number of people who walk and bicycle.) Overall, from a behavior change perspective, these age groups' familiarity with different ways of getting around will greatly facilitate these tenants' and site employees' participation in the Mercy Hospital & Morrison House Redevelopment TDM program.

Regarding senior resident demographics and vehicle travel, the percentage of the population that drives plateaus for the general public through the ages of 30-55 - and then starts declining after the age of 55 for women and after age 60 for men. Similarly, vehicle miles and person miles traveled per capita both fall precipitously starting at the age of 55. Car ownership has had a slight rebound since the Great Recession. However, between 2015 and 2016, the one increase in car-free living (above the margin of error) was among householders age 65 or older who rent. (Source: American Community Survey of the U.S. Census).

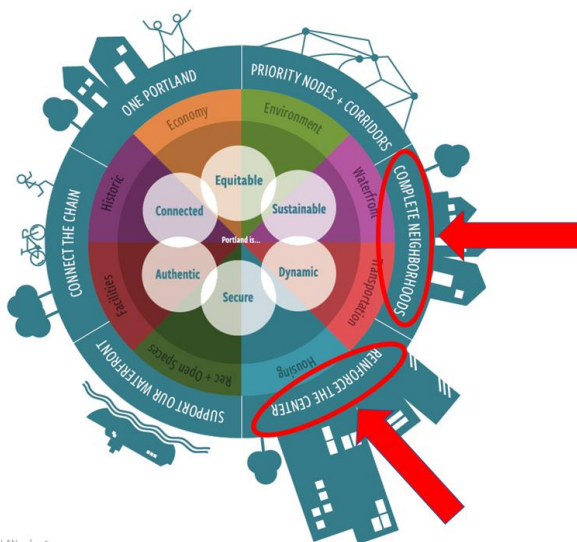


For site residents working off the Peninsula, who may commute by single occupancy vehicle, there is also a reverse commute phenomenon. This change in the directionality of trips creates a more balanced inbound-outbound flow of vehicular traffic during the morning and evening peak travel hours.

Larger Transportation Setting

The Mercy Hospital & Morrison House Redevelopment and its TDM initiatives bring to fruition of number of the mixed-use, Peninsula neighborhood, housing, urban form, and transportation demand management goals of several recent and historically important Portland and regional studies and plans. Included among them are:

- *A Time of Change: Portland Transportation Plan* (1993)
- *Green Spaces Blue Edges* (2001)
- *Housing, Sustaining Portland's Future* (2002)
- *Portland Peninsula Transit Study* (2008)
- *Sustainable Portland* (2009)
- *City of Portland Parking Study for the Eastern Waterfront & Downtown* (2017)
- *Comprehensive Plan, Portland's Plan 2030* (2017)
- *Portland – South Portland Smart Corridor Plan* (2018)
- *Cultural Plan Update* (2018)
- *Transit Tomorrow Plan* (2021)



For example, redevelopment of this site in the center of Portland addresses the land use diversity, housing, and downtown-strengthening outlined in *Portland's Plan* (2017) – described further as Complete Neighborhoods and Reinforce the Center.

The Mercy Hospital & Morrison House Redevelopment's TDM efforts align well with additional observations from the Downtown parking study - for instance, regarding reducing the need for parking on the Peninsula:



LOCAL GOALS

WE WILL:

Increase, preserve, and modify the overall supply of housing city-wide to meet the needs, preferences and financial capabilities of all Portland residents.

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.

Collaborate with surrounding communities on regional housing solutions.

Encourage quality, sustainable design in new housing development.

Portland's Plan 2030 (2017 Comprehensive Plan)

If future residential development in the study area were to attract a higher percentage of residents who also work in the study area, and do not use their vehicle to commute to work, this would raise the internal capture rate for office parking demand. An internally captured office trip does not need an additional office parking space because the resident employee leaves their vehicle at home. In this way, a single parking space would serve either a residential purpose or an office purpose depending on the time of day. It would help lower parking demand to promote or incentivize the occupancy of new residential development with employees (of any kind) who also work in the study area.



Bicycle & Pedestrian Access

From a pedestrian and bicycling perspective, the Mercy Hospital & Morrison House Redevelopment is very friendly, located within the strong sidewalk network and lower-speed street grid of the Peninsula. In addition, the property is just two blocks from the Pedestrian Activities District Overlay Zone, the Portland Downtown and Arts Districts, the Downtown Entertainment Overlay Zone and the Congress Street Historic District.

From the perspective of residents with any mobility concerns, sidewalks on nearby Pine, Brackett, Spring, Clark and Danforth - and all streets to the east of State Street, throughout Downtown - are maintained year-round by the City and the Portland Downtown district, including the removal of snow and ice during the winter months.

The Mercy redevelopment also sits in close proximity to the following bicycle and pedestrian facilities:

- Casco Bay Bridge bicycle lanes and separated pedestrian facility that permits shared use with bicycles
- Protected bicycle lanes on Park Avenue
- Deering and Forest Avenue bike lanes
- Fore River Parkway Trail
- Several proposed West End sections of the Neighborhood Byway network.



These are all pivotal links in Portland's alternate transportation system.





Moreover, the site is just three blocks from Gorham Bike & Ski, which offers bicycle rentals and provides maintenance services for bicycle commuters.

Residential tenants at the Mercy redevelopment who work anywhere on the Peninsula will be within comfortable walking distance of their home. The reverse is also the case for 1st Floor clinic and retail employees - and any site visitors - who live on the West End, Parkside, Bayside, Downtown or East End. Those residents whose employers are located within a five-mile commute distance can also easily bike to work, especially as bicycle networks in Portland, South Portland, Westbrook and Falmouth continue to improve.

Significant near-site amenities and recreational facilities also provide people with a full-service living and working environment. These abound within easy walking distance of the Mercy Hospital & Morrison House Redevelopment for residential tenants, retail employees and site visitors. They include:

- Neighborhood markets such as Rosemont and Fresh Approach; the Portland Farmer's Market; and home product suppliers such as Reny's department store
- Services such as the U.S. Post Office at 622 Congress, Walgreen's Pharmacy, Enterprise Car Rental, and the Portland Public Library



Mercy Hospital & Morrison House TDM Plan



- Recreational spaces and gardens such as the Reiche Elementary School playground, basketball court and field; the Reiche Community Center Pool; Congress Square Park; McIntyre Park; Clark Street Community Garden; Harbor View Memorial Park; Deering Oaks Park; Western Cemetery; and Western Promenade Park
- Food and entertainment venues, such as many neighborhood and Congress Street restaurants and cafes, the State Theatre, programming at Congress Square Park, and the Portland Museum of Art

These nearby offerings also provide an attractive dual-purpose trip for the project's retail employees and Mercy redevelopment visitors who do end up driving to the site. For example, walking to run errands at neighboring businesses or meeting up with family and friends for after-hours events nearby. In addition, these internally captured trips represent no net new trip generation or parking demand beyond the original trip to the site.





Public Transportation Access

In terms of transit service, the Mercy Hospital & Morrison House Redevelopment is well-located for site residents, employees and visitors:

- Two blocks from Congress Street METRO stops, with access to the primary Peninsula Route 1 and the important off-Peninsula bidirectional Route 9A and 9B. In addition, these two routes are timed to provide service every 15 minutes along the Congress Street corridor from the West End to the East End.
- One block from the METRO Route 8 with service to various Peninsula destinations
- Three blocks to access the South Portland Bus Service Routes 21, 24A and 24B
- 7-minute walk to the METRO Breez with service to Yarmouth, Freeport and Brunswick and the ZOOM Turnpike Express bus to Saco and Biddeford
- 9-minute walk to METRO Route 5 traveling the Outer Congress corridor to the Portland Jetport
- 11-minute walk to METRO Routes 2 and 4 serving the Forest and Brighton Avenue corridors
- 12-minute walk to Monument Square and the METRO Pulse at Elm Street with access to all of the rest of Greater Portland's public transportation options:
 - METRO Route 7 to Falmouth
 - METRO Husky Line express bus to Westbrook and Gorham
 - RTP Lakes Region Explorer with Route 302 service to Westbrook, Windham, Raymond, Casco, Naples and Bridgton
 - Shuttlebus Intercity bus to the Maine Mall, Scarborough, Old Orchard Beach and Saco

A number of the above stop locations include benches and/or bus shelters. At the METRO Pulse, services include ticket sales, a staffed indoor waiting room, restroom, and outdoor seating. METRO, South Portland Bus and Casco Bay Ferry Lines all provide real-time arrival information for riders, through the Southern Maine Transit Tracker website and smartphone apps such as Google Maps, Transit and Moovit. In addition, the Lakes Region Explorer and Biddeford Saco Old Orchard Beach Transit also provide live-time bus data through the organizations' websites. All local and express buses are equipped with bicycle racks with space for 2-3 bikes. In addition, the ZOOM bus and most METRO buses and offer Wi-Fi access; some provide in-seat USB ports.



In October 2020, METRO, South Portland Bus Service and Biddeford Saco Old Orchard Beach Transit launched the highly desirable DiriGO TouchPass electronic fare system. This enables riders and sites like the Mercy redevelopment to pay only for transit trips taken, versus paying for multi-ride or monthly passes that may or may not be used fully. In addition, the system caps fares so that riders never pay more than a certain amount each day and each month; once they hit the cap, they ride free for the rest of that time period. For COVID-19 purposes, because the TouchPass is available via either a smartphone application or smart card, it is also a contactless and safe way to pay one's fare.



In addition, METRO's Peninsula Loop Reboot project (still in process as part of the larger *Transit Together* regional planning effort) is likely to provide more frequent and better aligned transit service in the area. This could enable increased ridership of Peninsula residents and employees to and from the Mercy Hospital & Morrison House Redevelopment.



Shared Mobility Access

In terms of shared mobility, the use of transportation network companies (TNCs) such as Uber and Lyft has grown substantially in recent years. A TNC trip does not reduce traffic congestion, unless users are carpooling; however, it does reduce parking demand.



With the end of UhaulCarshare service in Portland in February 2020, NewHeight Redfern, LLC will be exploring other carshare possibilities for the Mercy Hospital & Morrison House Redevelopment. If an option is found feasible, the site's TDM program will offer a discount for resident carshare vehicle use for the first year of residency.

Over the past several years, the City was exploring various bikeshare possibilities for Portland. If and when the system is launched, the developer will provide monthly bikeshare memberships for tenants.



B. Mercy Hospital & Morrison House TDM Coordination

NewHeight Redfern is committed to reducing drive-alone resident, retail employee and visitor automobile trips, improving multi-modal safety, and easing traffic congestion and area parking demand near the Mercy Redevelopment through its TDM efforts.

The development team has a history of in-fill housing development projects. They have encouraged residents' mobility and financial wellness through initiatives such as offering rent reductions for tenants who are car-free and separating housing leases and sales from parking space rental or purchase, providing bus pass subsidies, constructing on-site bicycle/stroller/handcart rooms and fitness centers, and offering multi-use and small vehicle parking (e.g., for scooters). The team also has experience with TDM plan implementation at other locations in Portland. They see this site's TDM program as part of their larger sustainability, quality-of-life, and smart growth missions.

NewHeight Redfern has designated Emily McConnell as the interim TDM Coordinator for 120 and 148 State Street until the development determines the site's property management company. She is charged with coordinating the TDM plan implementation and monitoring and making any needed changes. Her contact information is: Emily McConnell, NewHeight Redfern, 217 Commercial Street, Suite 205, Portland, ME 04101, emily@newheightgroup.com, (207) 323-2333.

Highly successful TDM programs share three vital characteristics – they are:

1. Dynamic - piloting strategies, assessing impacts, and modifying tactics as needed;
2. Rigorously supported and monitored by local governing bodies, in this case, the City of Portland;
3. Managed by committed and enthusiastic staff who are responsible for overseeing, promoting and sustaining the program.



The eventual property manager for the Mercy Redevelopment will be the long-term TDM Coordinator. Acknowledging that roles and responsibilities change over time in any position, NewHeight Redfern and its future site property manager will use the first year of TDM implementation to enumerate the TDM Coordinator's responsibilities in detail for any other staff to uphold the responsibility of the position.

Day-to-day operations and monitoring of the TDM plan will be conducted in-house by the TDM Coordinator long-term and NewHeight Redfern will retain the services of a TDM consultant to review initiatives, problem-solve and develop new strategies if and when necessary.

C. Trip Generation & Parking Demand Projections & Targets

NewHeight Redfern has hired Cushman Transportation Consulting, LLC (CTC) to assist with its transportation demand management process. CTC specializes in TDM efforts locally and connects with TDM research and programs across North America – including aspects of setting and managing TDM targets. This all informs the following trip reduction, parking reduction and multimodal goals.

The development team has also hired Traffic Solutions to produce trip generation and parking demand projections to assess the potential impact of the Mercy Hospital & Morrison House Redevelopment. The firm has utilized recent local parking and traffic study data, as well as the latest data from the Institute for Transportation Engineers (ITE) *Trip Generation Manual* (10th Edition) and the ITE *Parking Generation Manual* (5th Edition). The traffic and parking assessments each include distinctions for the multimodal context of the site.

A complication for setting ambitious targets for this particular site is the existing high multimodal rate of individuals who currently live in the West End and downtown. That is, when a multimodal rate is already extraordinary, mode change is much more incremental and moderate than if the rate has significant room for growth.

The Mercy Redevelopment TDM Coordinator is responsible for:

- Ensuring strategic parking management and monitoring parking usage
- Coordinating tenant TDM policies and incentives
- Connecting tenants with nearby transportation resources
- Encouraging greater use of preferred modes – walking, bicycling, carpooling, taking bus or rail transit, and telecommuting-through transportation kiosk and site-wide promotion
- Overseeing/conducting surveying of tenants
- Filing annual reports and updating the plan with the City
- Exploration of additional TDM strategies, as needed

Projections & Targets

This TDM Plan sets the following targets:

- **Trip & parking reduction target:** a 10% reduction in 120 & 148 State Street resident and tenant employee vehicle trips and parking demand within 3 years after full occupancy - resulting from TDM program; i.e., 11 weekday morning peak trips, 10 weekday evening peak trips, 7 spaces
- **Multi-modal target:** 65% of 120 & 148 State Street resident and tenant employee trips will be via transit, carpooling, by bicycle, on foot or telecommuting within 3 years after full occupancy
- Will reassess targets after the first full year occupancy of 120 & 148 State Street





Projected Trip Generation & Parking Demand

As stated earlier, the full build-out at the Mercy Hospital & Morrison House Redevelopment will result in a net reduction of more than 100 vehicle trips to and from the site, compared with the trip rate for the existing hospital uses at full capacity.

Also mentioned previously, based on City Land Use Code Article 19, Table 19-B: Categorical Exceptions To Off-Street Parking Minimums, "No off-street parking shall be required within ¼ mile of fixed route transit service. New uses or changes of use of more than 10,000 SF taking advantage of this exception shall be required to provide a Transportation Demand Management Plan if they use this provision in lieu of parking requirements."

According to the traffic analysis, the Mercy Hospital & Morrison House Redevelopment at 120 and 148 State Street can be expected to generate 107 vehicle trips in the morning peak hour and 91 vehicle trips during the evening peak hour of a typical weekday.

Per the parking demand projection analysis for 120 and 148 State Street, the average peak weekday demand for parking at the site is expected to be 68 spaces.



Trip Reduction Target

Given the multimodal accessibility of the site, the high existing rate of alternate transportation use by those living in the area, and the transportation demographics of expected tenants, the Mercy Redevelopment's TDM efforts should enable a further 10% reduction in drive alone vehicle trips by the end of 3 years of full occupancy at 120 and 148 State Street. That is, 11 weekday morning peak trips and 10 weekday evening peak trips. The TDM Coordinator plans to revisit this reduction target after the first year of 100% occupancy of the two buildings.

Parking Reduction Target

With 70 parking spaces planned for the Mercy Redevelopment, the site's parking needs will be met. However, with potential future expansion of adjacent housing for the Winter Street Affordable Housing Project, NewHeight Redfern's TDM program will work with the Winter Street TDM Plan to further reduce the parking demand. With the lower vehicle ownership rate of urban dwellers, the strong strategy of unsubsidized parking, and the implementation of TDM incentives, it is anticipated that an achievable parking demand reduction is 10% by the end of 3 years of full occupancy, i.e., 7 spaces. The parking demand target will also be revisited after 120 and 148 State Street are fully occupied for the first year.

Multimodal Target

The Mercy Hospital & Morrison House Redevelopment is setting an initial target of 65% of all residential and retail/commercial/clinic employee work commute trips to and from the site being multimodal, by 3 years after full occupancy of 120 and 148 State Street. This includes transit, carpooling or vanpooling, bicycle, pedestrian and telecommute trips or some combination of these modes.

As mentioned on the previous page, it is a complex target to set because of the current high multimodal rate already existing in the area. The target is also different from the trip and parking reduction ones above, because it includes the diverse commuting habits of the site's residential and employee populations. That is – with the range of potential tenants and tenant occupations (including students and semi-retirees), as well as nontraditional retail and clinic work shifts - a number of these trips are likely to be outside of the morning and evening peak periods. NewHeight Redfern plans to closely monitor existing trends to attain a reasonable mode-shift goal over time.

It is most useful for the site's TDM efforts to address the specific needs of transit users, carpoolers, bicyclists, walkers and telecommuters and set an overarching multimodal trip target – versus targets for each mode. From other TDM experiments across North America, it is clear that individuals' use of various alternate modes shift over time as different residents come and go and/or their needs change. For example, a tenant who uses transit might move to another location or an employee who walks might switch primarily to bicycling. In another instance, a tenant who was able to drive may lose the ability to do so and switch to using transit or carpooling for errands.





D. Trip and Parking Reduction Strategies

In the table on the following page, NewHeight Redfern proposes a number of best-practice and sensible parking and trip reduction strategies for the site's TDM Plan. These are based on the development team's understanding of the transportation context, likely residents, and the usefulness of various TDM efforts. For example, unsubsidized and unbundled parking will produce the strongest results for decreasing single-occupancy vehicle trips to and from the site.

In addition, the team acknowledges the various needs of different multimodal commuters. For instance, tenants who use transit, walk or bicycle are more able to do so if they have on-site, secure storage for larger commuting gear like strollers, bicycle trailers and shopping handcarts. Moreover, even if current drive-alone residents and retail commuters have to pay for parking, likely this will need to be combined with tangible financial incentives like transit pass subsidies. These are vital to encourage people to experiment with other ways of getting around.

Another critical component for the success of the Mercy Redevelopment TDM Plan is a carefully thought-out marketing plan that engages tenants from when they first move in regarding preferred modes of transportation, and provides easily accessible information and subsidies. As shared by Portland, Oregon's SmartTrips Welcome program, a residential move is a unique and powerful opportunity for mode experimentation and change. This marketing also builds the site's TDM culture and the sense of multimodal travel as the social norm. As the site is developed and under construction, the team will design a promotion strategy to encourage walking, bicycling, telework and teleservices, carpooling and the use of public transit.

...When a person changes residence, everything changes: the way to the store, the way to work, even the steps to the fridge.

This time of change offers a unique opportunity to create new neural pathways or reinforce old ones that haven't been used for a while and make these stronger than habitual pathways.

Andrew Pelsma, SmartTrips Program Specialist, Portland, Oregon

...To us, this represents a significant number of people with an immediate gap in knowledge about their local travel options.

Linda Ginenthal, SmartTrips Program Manager



Finally, the region recently reexamined the need for a Transportation Management Association (TMA) to benefit sites like the Mercy redevelopment - and this is now a recommendation in the Portland Area Comprehensive Transportation System's *Transit Tomorrow Plan*. TMAs are public-private entities that assist sites with TDM implementation, outreach and monitoring; advocate for improved transit and act as brokers for services such as shuttles. NewHeight Redfern plans to support the development of a local TMA and have the Mercy Hospital & Morrison House Redevelopment participate as a member.

Infrastructure	
Reduced Parking/Shared Parking	<i>Shared-use parking:</i> On-site parking will be shared and serve a dual use for overnight parking for residents and daytime deliveries and parking for Mercy and retail employees, as leased. Tandem parking actively managed by site TDM Coordinator. Residential overnight parking works well with day-use visitor/employee parking locations such as these.
	<i>Reduced parking:</i> Mercy Redevelopment is limiting parking supply by providing fewer spaces than required by the City's zoning ordinance.
Pedestrian & Bicycle Access	<i>Sidewalks:</i> reconstruction of street sidewalk segment abutting development on Spring Streets
	<i>ADA-accessible pedestrian amenities:</i> barrier-free ramp improvements
	<i>Crosswalks:</i> striping improvements for crosswalks at Winter and Spring Streets
	<i>Lighting:</i> street/building lighting improvements to improve sidewalk illumination
	<i>Outdoor, within-site bicycle parking:</i> 16 spaces using custom bike racks
	<i>Indoor, secure bicycle/stroller/handcart parking at 120 State</i> for bicycles, electric bikes, cargo bikes or trailers, handcarts and strollers
	<i>Electric bicycle charging:</i> To provide charging station/outlets for resident electric bikes in storage room
	<i>Bicycle repair station:</i> To provide bike repair stand in storage room
Shared Mobility	<i>Showers & lockers:</i> To provide 1 shower and clothing lockers within clinic space
	<i>Carseat storage space:</i> To facilitate child carseat storage, for those commuting by carpool, there will be an open storage space for carseats in the indoor, secure bicycle parking room.
	<i>Carshare possibilities:</i> With the end of Uhaul Carshare service in Portland in February 2020, site owner will explore other carshare possibilities for Mercy Redevelopment.
	<i>Handcarts:</i> for all initial tenant leases, provide one collapsible shopping/utility cart. Alternately, provide one collapsible shopping/utility cart with property management branding for every 15 dwelling units, available for checkout on hourly basis (e.g., pen and paper sign up system, online, etc.)
Electric Vehicle Charging Station	Will provide 4 electric vehicle charging stations
On-Site Amenities	<i>Co-working/community space:</i> work area and meeting space for tenants' use to encourage community-building and telecommuting
	<i>Broadband access:</i> hardwired infrastructure for broadband and WiFi
	<i>Gym:</i> Provide on-site gym to reduce vehicle trips and improve resident physical fitness for active transportation
	<i>Health Clinic:</i> general health services available to the public
Delivery Supportive Amenities	To provide temporary storage for packages and other deliveries to facilitate delivery services



Incentives

Transit Subsidies	<i>Transit passes:</i> Transit subsidy for residents and Mercy employees to use transit
	<i>Transit pass reduced payments, fare capping and processing:</i> Explore new DiriGo TouchPass system to simplify management of transit subsidy for individual resident trips (launched in October 2020 by METRO, City of South Portland Bus Service and Biddeford Saco Old Orchard Beach Transit)
Shared Mobility Subsidies	<i>Carshare:</i> Discount for resident vehicle use of any on-site or near-site carshare available, for first year of residency
	<i>Bikeshare:</i> Monthly bikeshare memberships for residents when/if bikeshare starts in Portland

Information

Education for Travel Choice	<i>Webpage:</i> To maintain active web page on property management website for residents. Page to include same information as orientation packet below. Mercy Hospital on the Fore can also link to this page.
	<i>TDM orientation packets:</i> New residents and clinic/retail/commercial employees will be provided with orientation packets regarding the site's TDM program and access to site by various travel modes. Includes: (1) Map of area, showing major streets, nearby landmarks, walk/bike times, closest bus stops and walk times, recommended walk/bike routes, etc. (2) Transit service frequency, fares, first and last runs, and schedules if possible, phone numbers and web addresses for transit service providers and taxi companies. (3) How to reach the site from major transportation terminals (bus and train stations, airport, ferry terminal, etc.) (4) Access arrangements for people with disabilities; (5) Availability of bicycle facilities, including secure bike parking; (6) Encouraging residents to become members of GO MAINE and access rewards system, carpool matching and Emergency Ride Home Benefit; (7) automobile parking availability and price; (8) Any future carshare or bikeshare info; (9) Information regarding building TDM program and contacting the TDM Coordinator.
	<i>New Resident & Employee TDM Engagement & Acknowledgement:</i> TDM Coordinator will engage with each new resident to share about the TDM program as part of the building's sustainability initiatives. All new tenants and clinic employees will be provided with the site's TDM program overview goals. They will be asked to sign an acknowledgement of the goals of the project and a commitment to participate in the annual resident and employee commute surveys.
	<i>Ongoing TDM program education:</i> 1 or more times per year, TDM Coordinator will email all residents (new and existing, including subletters) and clinic employees the same information as is in the TDM orientation packets.
	<i>Transportation fairs/tabling:</i> Explore hosting morning or late afternoon tabling event in lobby 2-3 times per year, to engage residents in conversation about their transportation choices as they head out or come home. Consider offering light refreshments.
	<i>Experiment with walking tour of multi-modal options:</i> Offer a hands-on walking tour of all the transportation options near the property. For example, a visit to the METRO Pulse on Elm Street, including how to ride the bus and practice putting a bicycle on the bus.



Education for Travel Choice (cont'd)	<i>Experiment with offering on-site bicycle safety class: As residents show interest, host a bicycle safety/information class or bicycle repair event</i>
	<i>TDM surveying: The required resident, employee and visitor TDM surveys and reporting to City will also serve as education tool</i>
Promotion of Alternate Modes	<i>Co-promotion with City and downtown agencies: Work with Portland Downtown and City of Portland's Drive Less, Do More marketing campaign to promote alternatives with residents</i>



E. Plan for Monitoring, Data Collection and Reporting

Recognizing that the implementation of a TDM Plan is a dynamic process, the Mercy Hospital & Morrison House TDM Coordinator will work with the City to monitor the effectiveness of the site's TDM Plan components at 120 and 148 State Street - and to assess whether the site is achieving the trip and parking reduction and multimodal targets listed above. NewHeight Redfern will work with tenants to evaluate on-site parking use and incentives for preferred modes and make improvements. Another important piece will be to determine the flexibility of tenants, employees and site visitors to utilize various travel modes.

Tenant Surveys

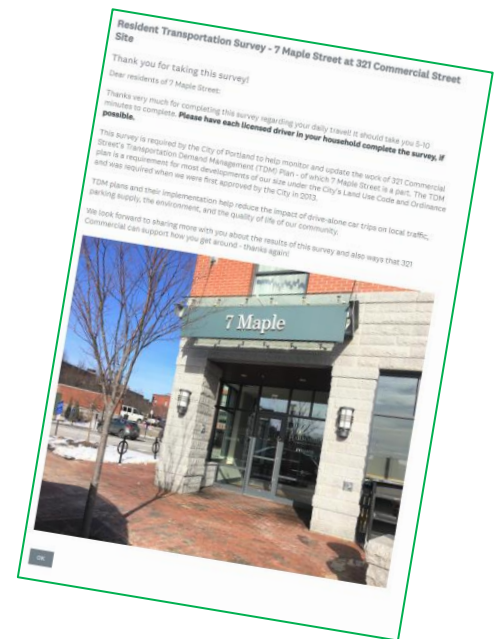
The TDM Coordinator will conduct annual resident and retail tenant surveys for 120 and 148 State Street that provide quantitative data (e.g., trip, parking and mode split) and qualitative data (e.g., perception of alternate transportation, area parking and the site's TDM programming). The site will carry out these surveys once annually for the first three years of full occupancy and then every two years thereafter, with at least 50% tenant participation.

The survey will be developed in consultation with the city's TDM manager and conform to overall city TDM modeling and planning. Survey questions will include:

- Number of people in household
- Resident mode of travel to and from work and/or for other trips away from the site – plus frequency of use of those modes
- Retail employee mode of travel to work
- If parking personal vehicle(s), where parked



- Whether the resident or employee drives during morning or afternoon peak periods
- Use of/participation in:
 - On-site bicycle parking/stroller/hand cart storage
 - Any use of site TDM incentives (such as transit passes) or other benefits or programming
 - GO MAINE membership and program participation
 - Any future use of off-site carshare and/or Portland bikeshare
- TDM marketing effectiveness
- Preferences, barriers or concerns with modes of travel and likelihood of changing travel behavior given specific incentives or disincentives
- Rating knowledge of walking, bicycling and using the bus in the community
- Space to add suggestions and comments



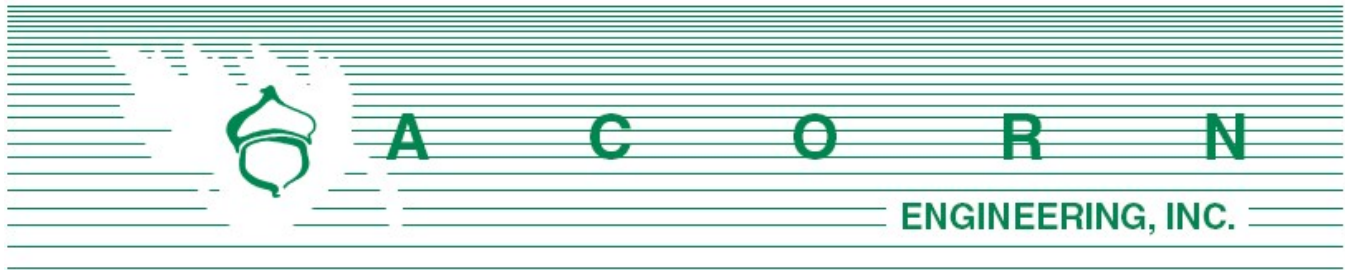
Note: the use of these survey tools will also assist the Mercy redevelopment with its TDM education efforts. That is, the questions themselves help people think differently about their transportation behavior. The surveys will also provide a reminder of the site's TDM incentives, the TDM online/on-site information center and the TDM Coordinator as a resource for more information about options.

Annual Report

The TDM Coordinator will then produce an annual TDM Report to meet the City's monitoring requirements. The report will include:

- a. the above survey data and percent of units occupied;
- b. how the data directly relates to the plan's reduction targets;
- c. details of that year's TDM operations – including management, strategies, marketing, number of contact points with residents, and any new infrastructure development;
- d. lessons learned and any changes in the TDM plan during the year;
- e. plans for the following year.





Planning Division
City of Portland, Maine
389 Congress Street, 4th Floor
Portland, ME 04101

November 9, 2020

Subject: 120 and 148 State Street Neighborhood Meeting

I, Peter Heil, hereby certify that a neighborhood meeting was held on November 5, 2020 remote via Zoom at 5:30 pm.

I also certify that on October 22, 2020, invitations were mailed to the following:

1. All addresses on the mailing list provided by the Planning Division which includes property owners within 500 feet of the proposed development.
2. Residents on the “interested parties” list.

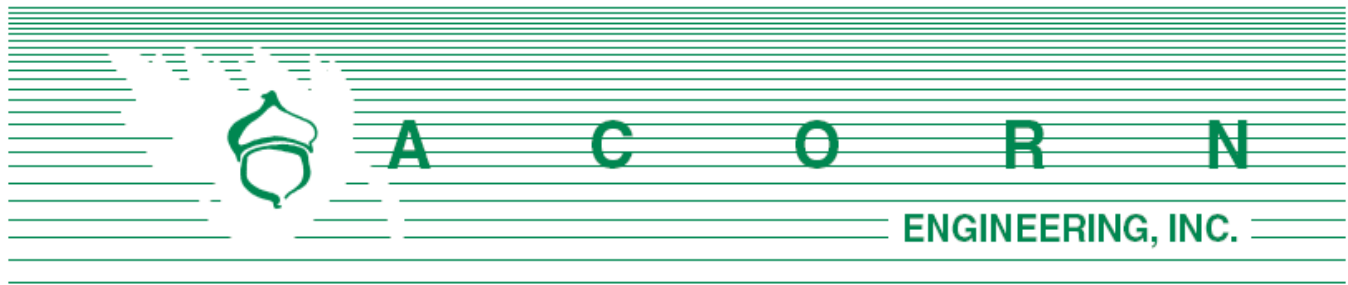
Sincerely,

A handwritten signature in blue ink, appearing to read 'Peter Heil', is shown.

Peter Heil, P.E.
Project Manager
Acorn Engineering, Inc.

Included with this certification are:

1. Copy of the invitation sent
2. Sign-in sheet
3. Meeting minutes



October 22, 2020

Dear Neighbor:

On behalf of NewHeight Redfern LLC, we are pleased to invite you to a virtual neighborhood meeting to discuss a proposed Level III Site Plan/Subdivision Application related to the property located at 120 & 144 State Street (Chart 45, Block C, Lots 6 & 7). The project proposes to redevelop the existing lot into a mixed-use development consisting of 175 residential units, including 18 onsite Workforce Housing Units as required by the City's Inclusionary Zoning Ordinance. The project also proposes commercial/retail space, a medical clinic and self-storage.

Meeting Location:

This meeting will **be held remotely via Zoom** according to state and local requirements around social distancing and will be available for public viewing and participation. **Please email admin@acorn-engineering.com to request a link or phone number to join the meeting.** You may also call the office line (listed below) to request this information.

Meeting Date/Time: Thursday, November 5, 2020 at 5:30 p.m.

The City code requires that property owners within 500 feet of the proposed development and residents on an "interested parties list" be invited to participate in a neighborhood meeting. Both the sign-in sheet and recorded meeting minutes will be submitted to the Planning Board. If you have any questions, please do not hesitate to call the office at (207) 775-2655. We look forward to seeing you at the meeting.

Sincerely,

William H. Savage, P.E. - Acorn Engineering, Inc.

Sign In Sheet

11/5/2020

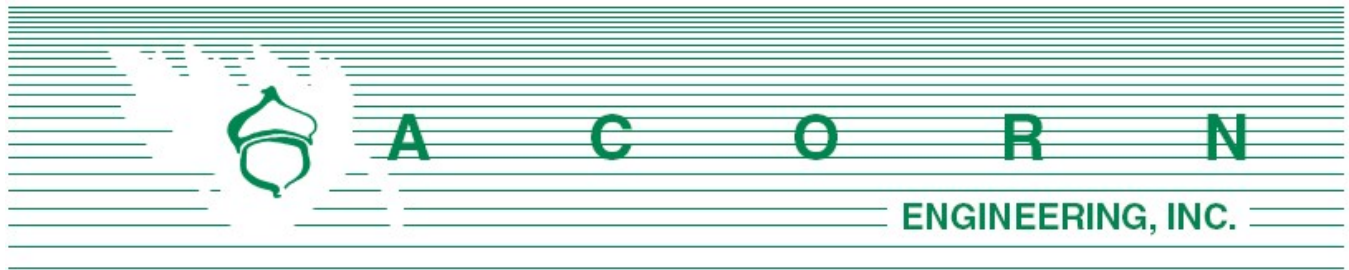
120 & 148 State Street Portland, ME 04101

Members of the Public in Attendance:

NAME	E-MAIL
1. Anne Pringle	oldmayor@maine.rr.come
2. Liz & Lin Parsons	ecparsons33@hotmail.com
3. Ian Jacob	iancasperjacob@gmail.com
4. Ginger Raspiller	mainelyearth@aol.com
5. Chip Martin	dennyjrdaddy@yahoo.com
6. Peter Plumb	pplumb@pmlaw.com
7. David Houde	davidhoude3030@gmail.com
8. Linda Atherton	l.atherton@twc.com
9. David Marsden	marsdenadventures@gmail.com
10. Joanne Abrams	joannewabrams@gmail.com
11. Jennifer Defilipp	Jend@townendre.com
12. Ken Swanberg	swanberg@cheverus.org
13. Camy Barrantes	barrantescamy@gmail.com
14. George Rheault	George.rheault@gmail.com
15. Suzanne Hunt	Shuntdoherty@gwi.net

Developer and Consultant Team in Attendance:

NAME	E-MAIL
1. Will Savage	wsavage@acorn-engineering.com
2. Peter Heil	pheil@acorn-engineering.com
3. Ryan Senatore	ryan@senatorearchitecture.com
4. Nick Aceto	na@acetola.com
5. Erin Cooperrider	erin@newheightgroup.com
6. Jonathan Culley	jonathan@redfernproperties.com



**120 and 148 State Street
Level III Site Plan Submission**

Neighborhood Meeting Minutes

November 5, 2020 / 5:30 pm

Remote meeting via Zoom

Project Team Attendees:

Will Savage (WS): Civil Engineer/Presenter (Acorn Engineering)

Peter Heil (PH): Civil Engineer/Note Taker (Acorn Engineering)

Ryan Senatore (RS): Architect/Presenter (RSA)

Nick Aceto (NA): Landscape Architect/Presenter (ALA)

Erin Cooperrider (EC): Owner/Applicant (NewHeight Redfern LLC)

Jonathan Culley (JC): Owner/Applicant (NewHeight Redfern LLC)

Meeting started at approximately 5:30 pm.

Presentation:

Erin Cooperrider:

- Introduction of project and project team
- Meeting about site plan review
- This meeting is part of the planning board approval process, a sign in sheet is available for everyone which will become public record along with the meeting minutes.

Will Savage:

- Professional Engineer and Project Manager
- Overview of site in relation to neighborhood
- Overview of Mercy site development only, does not include CHOM parcels

- Proposal includes subdivision of parcel for future affordable house projects, which will be permitted separately
- Residential uses only along Winter Street
- Proposal includes 167 residential units within the existing Hospital building and 8 residential units in Morrison house, for a total of 175 residential units
- Additional uses, commercial, self-storage, retail, medical clinic, shared spaces
- Currently R6 district, map/text pending for B3 with height limitations along Winter Street
- Two parcels, totaling 2.48 acres, bounded by Winter Street, Spring Street and State Street
- Located in the West End neighborhood – various uses residential, commercial and restaurants
- 47 parking spaces within woonerf – shared use space, pedestrian and vehicular use
- Eliminating curb cut on Winter Street, provide emergency access from Winter Street
- The change in use will result in a net reduction in overall traffic counts
- Parking overview – traffic engineer prepared parking and traffic analysis which includes 83 spaces required. The project is proposing 68 spaces on site.
 - o Difference to potentially be made up with future off-site lease
 - o Parking in woonerf and loading dock area.

Ryan Senatore:

- Project architect
- Overview of building uses:
 - o Residential upper floors
 - o Clinic on ground level
 - o Self-storage spaces
 - o Commercial spaces
- Remove existing portions of building
- New entry addition – new façade
 - o Materials description
 - o Main entry from woonerf
 - o Additional commercial spaces
- Upper levels restored, modern windows for addition
- Bring building back to historic condition per guidelines
- Overview of elevations
- Overview of floor plans and layout and different uses
- Overview of demo and existing conditions and how the proposed conditions will change.

Nick Aceto:

- Landscape architect
- Description of woonerf
 - o Shared / living street
- Images of example woonerfs



- Inspiration imagery of materials proposed within the project
 - o Corten steel
 - o Wood elements
- Images of planting material character
- Overview of site changes
 - o Existing hospital complex, entrances, parking
 - o Proposed engaged public spaces, landscaping, shared space, materials
- Renderings showing courtyard / patio area / woonerf integration
 - o Landscaping, site features, planters, tables, chairs
- Rendering of state street façade improvements.

Will Savage:

- Next steps – planning board workshop to occur 11/17/20
- Likely 2 workshops and public hearing
- Development presentation concluded and public comment process will start
- All are encouraged to attend the planning board hearing anticipated in November.

Comments, Questions & Answers:

Please note that the following questions and answers were not recorded verbatim and aim to represent and summarize the actual questions, answers, and discussion that took place at the meeting.

Anne Pringle: is Corten steel that rusty steel?

- **Ryan/Nick:** weathered steel product.
- **Ann:** I really don't like the notion of Corten steel - it's been a real problem at the Museum with the "Seven" sculpture.

Peter Plumb: I don't get the parking; project propose 83 spaces for your 175 units. That is not feasible. And what about all the CHOMS residences?

- **Will:** parking analysis submitted by Bill Bray, traffic engineer using ITE standards, looking at unit mix, parking ratio, proposed uses, determines parking count, shared use ratio to appropriately size parking.
- **Jonathan:** climate activist also asking for less parking, trying to provide reasonable balance and potential impact to the neighborhood.
- **Erin:** affordable housing has low parking demands, as shown in other affordable housing projects within the City.

Ginger Raspiller: I would like to ask a question about parking spaces and location of spaces on the site.

- **Jonathan:** in talks to acquire long term lease to increase the number of spaces beyond what is currently planned on site.



- **Will:** majority of spaces within woonerf, remainder in lower loading dock area, design incorporate circulation and lessen impacts to winter street. Includes emergency access off winter.

Chip martin: What are the trees proposed to be between the project and the Portland Club property line between Winter Street and State Street.

- **Nick:** planting plan does not currently include trees, but can look at additional vegetation and landscape elements, but limited space available.
- **Will:** It is very limited in space overall.

Ian Jacob: My question is regarding the space between 148 State and the hospital. Why is this not on the level as the woonerf and thus connect to State Street? The storage access would be achieved by an elevator. It would create a higher use of that space and connectivity in the neighborhood and to the campus.

- **Jonathan:** existing grades and bringing grades up would be a huge challenge and expensive and would be burying existing levels below grade.
- **Erin:** that existing area also hides and provides shielding for parking, loading docks, and dumpsters.

Anne Pringle: I really do not like the notion of Corten steel - it's been a real problem at the Museum with the "Seven" sculpture, rust/bleed onto pavement.

- **Ryan:** Looking at detailing to make sure it does not deteriorate.
- **Nick:** There is detail that shows an airgap between the steel and the paver so leeching will go below the paver.

Denny Barrantes: How has this parking count worked for other projects in the city? How is parking demand determined? *Follow up chat:* Erin already answered my questions about the parking demand and experience. Thank you.

- **Will:** traffic engineers have developed the parking analysis based upon existing use of parking lots within city and ITE studies.

Ian Jacob: Sunken storage access area -I hear all your points and understand the sight restrictions. It would be useful to explore further though.

- **Erin:** can follow up offline to have a detailed conversation about why.

Elizabeth Parsons: Will you be able to install trees in the woonerf that resemble those in the drawings in size?

- **Jonathan:** trees will not be installed as shown in renderings but will grow over years.

George Rheault: Asking about design of loading dock, potentially have level parking over top and structured parking below.

- **Jonathan:** more parking raises cost of housing but trying to build workforce housing: 80-120% median income price range and a balance.
- **Erin:** historic structure requires preservation approval in addition to cost.

Peter Plumb: Will project be required to meet new referendums.



- **Jonathan:** Accessing implications, it will be subject to rent control, CHOM also trying to evaluate, but do not see it affecting project as currently proposed.
- **Erin:** Impacts on affordable housing and cost caps will have effects on lending, still determining how everything will shakeout.

Ian Jacob: likes site programming, additions, renderings. Existing use campus has inflected scars on neighborhood, neglected loading dock area. Suggesting covered deck and pedestrian connectively through site.

- **Jonathan:** We can review, will you provide sketch?
- **Ian:** Yes.

Ginger Raspiller: I agree the loading dock area could be a great area for additional parking. The entire project at the Mercy parcel has 270 units + retail + medical clinic and the plan is proposing 83 parking spaces. That will not be sufficient parking. It will put pressure on a neighborhood that has insufficient resident parking. We live in the neighborhood and have issues with illegal parking in our lot throughout the day. Address parking on site vs leased space off site. Considerations to plantings within urban environment, what type of trees will be proposed to survive?

- **Jonathan:** acknowledges comment and will be working with traffic engineer on parking.
- **Nick:** tree pit to help protection of snow, 3" caliper – pretty substantial size, make sure the species are appropriate for the space.
- **Will:** overhead power will go underground, reduce impacts to the existing topping of trees, relocate transformers on state street to allow for additional street trees along state.

Ginger Raspiller Parking for the project should be on-site not leased in the area. There are no guarantees with leased parking for the long term. I also don't like the proposed material for the panels. It doesn't feel like it fits in the historic neighborhood.

- **Jonathan:** 5-year lease term as required by city.

George Rheault: historic aspect of site, any info from Mercy from spring / winter historic conditions? Trees can mature quickly as long as their looked after and have a plan.

- **Erin:** working with historian on what type of windows and façade.
- **Ryan:** also, original construction drawings to utilize.

Anne Pringle: Corten Steel does rust and bleed on the pavement, I know the museums had trouble maintaining the sculpture that had Corten 'Seven' Steel. I would investigate other materials. Thank you.

- **Jonathan:** Thank you.

Peter Plumb: I have lived on Park Street since 1969 and seen the changes on Mercy over the years. We are delighted that something good will happen. We are dealing with most families with multiple cars; therefore, we are concerned about parking demands.

- **Jonathan/Erin:** Thank you.

Ian Jacob: There is currently no on-street parking in front of Mercy along Spring Street, consider working with city to add/reclaim on street parking within Spring Street as well as the right turn



lane on State into Spring. Now the Mercy hospital use has changed, some emergency vehicle access space can be reclaimed for parking.

- **Erin/Jonathan/Will:** good point, thank you.

Ginger Raspiller: Most of the people in our building are two working people and have made compromises to go to one car. Value of units: 80-120% area median income, what does that mean? Approx. unit cost.

- **Jonathan:** adjusted based surrounding area and size. Median income approximately \$55K-\$90K, rents will be approx. \$1,200-\$1,800/month. 10% deed restricted affordable housing. CHOM 50-60% area median income, financed by low income tax credits.

Ginger Raspiller: Will the materials be available to the public?

- **Jonathan:** Yes, we will submit the minutes of this meeting and they will become part of the public record.

Closing Comments

Jonathan Culley:

- Meeting Minutes will available on planning board website / attached to memo as part of the public record
- Planning Board Workshop on 11/17/20 around 4:30, not sure when project will be on the agenda yet.
- Available for private / 1 on 1 discussion
- Thanks everyone for joining and the discussion

Meeting concluded at approximately 6:45 pm.

The abovementioned material was as interpreted and recorded from handwritten notes. Please note and relay any discrepancies or disputed information in the recorded minutes to the below address so that they can be reviewed, revised, and resubmitted, as necessary.

Recorded by,



Peter F. Heil, PE

Project Manager

Acorn Engineering, Inc.

pheil@acorn-engineering.com



Proposed parking for Mercy Hospital development is inadequate

Ginger Raspiller <mainelyearth@aol.com>

Nov 17, 2020 3:42 PM

Posted in group: **Planning Board**

Members of the Planning Board:

We continue to object to the current proposal for the Mercy Hospital site redevelopment due to a lack of adequate parking. The parking plan needs to address the parking needs for all the buildings: Mercy Hospital, Morrison House, Senior Affordable Housing and Affordable Housing.

The most recent design presented at the neighborhood site plan review held on November 5, 2020 includes just **68 spaces for 270 living units + retail + medical clinic**.

Mercy Hospital building: 167 units

Morrison House: 8 units

Senior affordable housing: 55 units

Affordable housing: 40 units

Total: 270 units 1 parking space for every 4 units before you even consider the retail and clinic.

Retail customers and employees need a place to park.

Medical clinic customers and the clinic's 12 employees also need a place to park.

As a 20-year resident of this neighborhood, I can assure you that we already have parking problems. Yesterday, I saw 3 cars ticketed and one car booted on Park Street. In our parking lot just across State Street (owned jointly by the Park Row Association and Spring Street Rowhouse Association), we battle illegal parkers all the time. Residents with reserved spaces come home late at night and find no available spaces. Illegal parkers ignore our signs and we are tired of towing. Perhaps private lots should be allowed to boot illegal parkers?

If you don't provide adequate parking, our wonderful residential Portland neighborhood will end up like Boston or New York where residents "stake out" their spaces and people fight over parking spaces.

Leasing off-site parking for 5 years is not a solution. It allows the project to be built and the residents are left - 5 years later when the lease expires - with parking problems.

There is adequate space to provide more parking on-site. The design can be revised to add more parking in the loading bay area of the site.

Ginger Raspiller

Ken Swanberg

150 Spring Street #5

From: **George Rheault** <george.rheault@gmail.com>

Date: Tue, Feb 23, 2021 at 9:49 AM

Subject: Public Comment 52 Hanover Street - Planning Equity - Mercy Hospital versus Tom Watson's Bayside Project

To: <planningboard@portlandmaine.gov>, Christine Grimando <cdg@portlandmaine.gov>, Kevin Kraft <kkraft@portlandmaine.gov>, James Rather <jrather@portlandmaine.gov>, James Dealaman <jdealaman@portlandmaine.gov>, jmy <jmy@portlandmaine.gov>, Caitlin Cameron <ccameron@portlandmaine.gov>
Cc: Kate Snyder <ksnyder@portlandmaine.gov>, April Fournier <afournier@portlandmaine.gov>, Nicholas Mavodones <nmm@portlandmaine.gov>, Pious Ali <pali@portlandmaine.gov>, Mark Dion <mdion@portlandmaine.gov>, Andrew Zarro <Azarro@portlandmaine.gov>, Tae Chong <tchong@portlandmaine.gov>, Spencer Thibodeau <sthibodeau@portlandmaine.gov>, Councilor Belinda Ray <bsr@portlandmaine.gov>

The City of Portland has a lot to answer for with respect to the radically different approaches it has taken in recent large-scale land-use matters.

I wish to submit the attached 2018 article for the Planning Board's review and absorption.

The article makes clear that when Jon Jennings's planning minions want to engage "early and often" with a neighborhood on a big project, they know how to do it.

The massive outstanding question is why NONE of this same approach was applied to the West Bayside neighborhood with respect to Tom Watson's proposed superblock apartment building planned for 52 Hanover Street. Mayor Snyder and Councilor Ray certainly know the answer to that question, but they do not plan to divulge any answers any time soon - absent public pressure.

This stark contrast is even more powerful with the spot zoning indulgences getting handed out for the Mercy Hospital site at last evening's City Council meeting.

Sadly we heard not a single peep from the "social justice" wing of the Council last evening about the equity shortcomings of the Mercy Hospital project (one block from a soon-to-be renovated elementary school in a high-opportunity area yet largely devoid of family housing opportunities).

Chilled into cowardly silence by the affluent elite consensus surrounding the sad NIMBY and developer compromises that are allowing the Mercy Hospital redevelopment to proceed, Ali, Fournier, Chong and Zarro showed their true commitment last evening to fair housing and the empty slogans of the "Equitable" bubble that remains inexplicably at the very top of our otherwise deeply reactionary Comprehensive Plan's "vision statement."

NB: It is also worth mentioning that Zarro spent another part of last evening tripping over himself to rationalize why he will soon restrict land-use further in Portland to protect affluent property-owners on Munjoy Hill, but was too shy and cowardly to ask why more was not being done to ensure equity on the Mercy Hospital parcels or why the intensive years-long "neighborhood outreach" there does not apply uniformly to all city land-use matters like the Riverton Homeless Services Shelter or the sale and redevelopment of the Bayside public works parcels.

NEWHEIGHT REDFERN, LLC
PORTLAND, MAINE 04101

CALL BEFORE YOU DIG
1-888-DIG-SAFE
1-888-344-7233

PERMIT LEVEL
NOT ISSUED FOR
CONSTRUCTION

[illegible]

1. THE CONTRACTOR SHALL CALL THE FIELD LOCATION FOR UTILITIES, OTHERWISE IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF UNDERGROUND UTILITIES AND LOCATE ANY POTENTIAL CONFLICTS WITH THE APPROVED PLANS PRIOR TO CONSTRUCTION.
2. THE CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF ALL EROSION CONTROL MEASURES SHOWN ON THE PLAN. IF DEEMED NECESSARY BY THE OWNER OR OWNER'S REPRESENTATIVE (IF APPLICABLE), ADDITIONAL EROSION CONTROL MEASURES SHALL BE INSTALLED AT NO ADDITIONAL COST TO THE OWNER.
3. THE CONTRACTOR SHALL PREPARE THEIR OWN MATERIAL SCHEDULE BASED ON THE PLANS AND FIELD VERIFICATION BY THE CONTRACTOR. ALL MATERIAL SCHEDULES SHOWN WITHIN THE PLAN SET ARE FOR GENERAL INFORMATION ONLY.
4. ALL CONSTRUCTION METHODS, TESTING AND MATERIALS SHALL CONFORM TO THE MAINE DEPARTMENT OF TRANSPORTATION SPECIFICATIONS, THE CITY OF PORTLAND AND SERVING UTILITY REQUIREMENTS, IF ANY. IN CASES WHERE THESE CONFLICT THE MOST STRINGENT SPECIFICATION SHALL APPLY AT NO ADDITIONAL COST TO THE OWNER.
5. THE SITE CONTRACTOR SHALL MAINTAIN A SET OF PAPER AND CAD DRAWINGS WHICH SHALL RECORD THE ACTUAL LOCATION, DIMENSIONS, ELEVATIONS, MATERIALS OF THEIR WORK, INDICATING THEREON ALL VARIATIONS FROM THE CONTRACT DRAWINGS. THE CONTRACTOR SHALL PROVIDE THE OWNER WITH ONE COMPLETE SET OF REPRODUCIBLE RECORD DRAWINGS, IN .DWG FORMAT AND PAPER, STAMPED "AS-BUILT". IF AUTOCAD CAPABILITY IS NOT AVAILABLE, EXCLUDE FROM BID IN WRITING.
6. THE CONTRACTOR WILL REMAIN SOLELY AND COMPLETELY RESPONSIBLE FOR ENFORCEMENT OF AND COMPLIANCE WITH 1) ALL CONTRACT PLANS AND SPECIFICATIONS, 2) APPLICABLE INTERNATIONAL BUILDING CODE REQUIREMENTS, AND 3) ALL SITE WORKING CONDITIONS AND SAFETY REQUIREMENTS, DAY AND NIGHT, FOR BOTH PERSONS AND PROPERTY, IN EACH CASE BOTH BY THE CONTRACTOR AND ITS SUBCONTRACTORS. THESE INCLUDE ALL OSHA, NIOSH, U.S. EPA AND ANY OTHER APPLICABLE GOVERNMENTAL REGULATIONS.
7. EXISTING CONDITIONS, BOUNDARY SURVEY, AND TOPOGRAPHY FROM THE PLAN TITLED BOUNDARY & TOPOGRAPHIC SURVEY BY OWEN HASKELL, INC FOR NEWHEIGHT REDFERN, LLC, DATED 8/4/2020.
8. SUBSURFACE DATA HAVE BEEN OBTAINED BY CES, INC. AND SHALL BE INCLUDED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL ALSO REVIEW THE REPORT PRIOR TO SUBMITTING A BID.
9. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ACCESS TO THE SITE AT ALL TIMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY MARKINGS, SIGNAGE AND INCIDENTALS TO MAINTAIN A SAFE VEHICLE AND PEDESTRIAN ACCESS THROUGH THE LIFE OF THE PROJECT. THE CONTRACTOR SHALL NOTIFY THE PORTLAND PUBLIC SAFETY DIVISION ROUTINELY REGARDING TEMPORARY IMPACTS OR CHANGES TO SITE ACCESS CONDITIONS.
10. CONSTRUCTION MANAGEMENT PLAN NARRATIVE PREPARED BY ACORN ENGINEERING, INC. SHALL BE REFERRED TO FOR ANTICIPATED PROJECT SCHEDULE AND CLOSURES. TRAFFIC CONTROL SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
11. CONTRACTOR TO DETERMINE SOIL CLASSIFICATION INDEPENDENTLY FOR TRENCH, SHORING, AND OTHER SIMILAR CONSTRUCTION MEANS AND METHODS APPLICATIONS.
12. NO HOLES, TRENCHES, OR STRUCTURES SHALL BE LEFT OPEN OR UNATTENDED OVERNIGHT IN ANY AREA ACCESSIBLE TO THE PUBLIC OR WITHIN THE PUBLIC RIGHT-OF-WAY.
13. THE CONTRACTOR SHALL CONDUCT A PRE-CONSTRUCTION SURVEY OF INTERIOR SUBGRADE AND ABOVE GRADE ACCESSIBLE WALLS, CEILINGS, FLOORS, ROOF AND VISIBLE EXTERIOR AS VIEWED FROM THE GRADE LEVEL. THIS SHALL BE COMPLETED AT A MINIMUM FOR STRUCTURES IMMEDIATELY ABUTTING THE SITE. A COPY OF THE SURVEY SHOULD BE PROVIDED TO THE OWNER. DOCUMENT WITH PICTURES AT A MINIMUM.
14. THE CONTRACTOR SHALL PROVIDE A GPS MODEL OF THE PROPERTY TO PROVIDE TO ACORN ENGINEERING.
15. THE CONTRACTOR SHALL SURVEY ROCK SURFACE PRIOR TO EXCAVATION AND DEVELOP VOLUME CALCULATIONS TO SHARE WITH THE ENGINEER, ACORN ENGINEERING INC. (ACORN), IF ANY.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PRESERVATION OF ALL TREES AND SHRUBS ON THE PROJECT WHICH ARE NOT TO BE REMOVED.
17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY TRENCH PAVEMENT THAT HAS EXPERIENCED EXCESSIVE SETTLEMENT, CRACKING, OR OPENING OF JOINTS. REPAIRS MAY INCLUDE OVERLAY. REMOVAL OF WORK MAY BE NECESSARY AFTER THE FINAL ACCEPTANCE OF WORK OR PRIOR TO THE END OF THE WARRANTY PERIOD. THIS WORK SHALL BE DONE AT THE CONTRACTOR'S EXPENSE.

CIVIL SITE NOTES:

1. THE CONTRACTOR SHALL SUBMIT IN WRITING ANY REQUESTS TO ACORN TO MODIFY THE CONTRACT DOCUMENTS.
2. ALL SHOP, ERECTION, AND CONSTRUCTION DRAWINGS SHALL BE CHECKED AND STAMPED BY THE CONTRACTOR PRIOR TO SUBMISSION FOR ACORN'S REVIEW. ANY UNCHECKED OR NON-STAMPED SUBMITTALS WILL BE RETURNED WITHOUT REVIEW.
3. CONTRACTOR SHALL THOROUGHLY INSPECT AND SURVEY EXISTING STRUCTURES AND SITE TO VERIFY CONDITIONS THAT AFFECT THE WORK SHOWN ON THE DRAWINGS. CONTRACTOR TO NOTIFY ACORN OF ANY DISCREPANCIES PRIOR TO PROCEEDING.
4. DETAILS SHOWN APPLY TO ALL SIMILAR CONDITIONS UNLESS OTHERWISE INDICATED.
5. ALTHOUGH ALL DUE DILIGENCE HAS BEEN APPLIED TO MAKE THE DRAWINGS AS COMPLETE AS POSSIBLE, NOT ALL DETAILS ARE ILLUSTRATED, NOR IS EVERY EXCEPTION CONDITION ADDRESSED WITHIN THE CONTRACT DOCUMENTS.
6. ALL PROPRIETARY CONNECTIONS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
7. THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF ALL WORK, INCLUDING DIMENSION AND LAYOUT VERIFICATION, MATERIALS COORDINATION, SHOP DRAWING REVIEW, AND THE WORK OF ANY SUBCONTRACTORS.
8. UNLESS OTHERWISE SPECIFICALLY INDICATED, THE DRAWINGS DO NOT DESCRIBE OR DIRECT MEANS OR METHODS OF CONSTRUCTION.
9. THE CONTRACTOR, IN THE PROPER SEQUENCE, SHALL PERFORM OR SUPERVISE ALL WORK NECESSARY TO ACHIEVE THE FINAL COMPLETED STRUCTURE, AND TO PROTECT THE STRUCTURE, WORKMEN, AND OTHERS DURING THE CONSTRUCTION. SUCH WORK SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING FOR CONSTRUCTION EQUIPMENT, SHORING FOR EXCAVATION, FORMWORK, SCAFFOLDING, SAFETY DEVICES AND PROGRAMS OF ALL KINDS, SUPPORT AND BRACING FOR CRANES AND OTHER ERECTION EQUIPMENT.
10. DO NOT BACKFILL AGAINST RETAINING WALLS UNTIL SUPPORTING SLABS AND FLOOR FRAMING ARE IN PLACE AND SECURELY ANCHORED, UNLESS ADEQUATE BRACING IS PROVIDED. PRIOR TO BACKFILL, PROVIDE CURING OF CONCRETE FOR 28 DAYS OR AS DIRECTED BY MATERIALS TESTING ENGINEER.
11. TEMPORARY BRACING SHALL REMAIN IN PLACE UNTIL ALL FLOORS, WALLS, ROOFS AND OTHER SUPPORTING ELEMENTS ARE IN PLACE, IF APPLICABLE.
12. ALL PAVEMENT JOINTS SHALL BE SAWCUT AND APPLIED WITH TACK COAT PRIOR TO PAVING TO PROVIDE A DURABLE AND UNIFORM JOINT.
13. ACORN BEARS NO RESPONSIBILITY FOR THE ABOVE ITEMS, AND SITE OBSERVATION VISITS DO NOT IN ANY WAY INCLUDE INSPECTION OF THEM.
14. EXCAVATIONS ACCOMPLISHED AS PART OF THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH SUBPART P OF 29 CRF PART 1926.650-.652 (CONSTRUCTION STANDARD FOR EXCAVATIONS).
15. ALL TRENCH PAVEMENT REPAIR SHALL BE COMPLETED WITH THE USE OF A STREET PAYER WITH A SCREED WIDTH CAPABLE OF SPANNING THE FULL WIDTH OF THE TRENCH UNLESS OTHERWISE AUTHORIZED BY THE ENGINEER.

1. ALL SITE SOILS-RELATED WORK AND FOOTING EXCAVATIONS PRIOR TO PLACING FORMS SHALL BE REVIEWED BY THE PROJECT GEOTECHNICAL ENGINEER.
2. ALL SITE DRAINAGE-RELATED WORK SHALL BE REVIEWED BY ACORN ENGINEERING.
3. NORMAL REVIEWS BY LOCAL BUILDING DEPARTMENT. NOTIFY 48 HOURS PRIOR TO REQUIRED REVIEW.

1. MONUMENTS DELINEATING PROPERTY LINES OR RIGHT OF WAYS SHALL NOT BE DISTURBED DURING CONSTRUCTION OPERATIONS. IN THE CASE A MONUMENT IS DISTURBED, AT THE CONTRACTOR'S EXPENSE, THE MONUMENT SHALL BE RESET TO ITS ORIGINAL LOCATION AND ELEVATION BY A REGISTERED LAND SURVEYOR.
2. ALL DIMENSIONS ON THE FOLLOWING SHEETS TAKE PRECEDENT OVER SCALED DIMENSIONS. EACH DRAWING WITH A BAR SCALE MEANS THAT THE DRAWING/DETAIL HAS BEEN SCALED AS ACCURATELY AS POSSIBLE, AND THE BAR SCALE IS FOR GENERAL REFERENCE ONLY. IF NO BAR SCALE IS PRESENT, THEN THERE IS NO SCALE TO THAT DRAWING/DETAIL. AT NO TIME SHOULD DRAWINGS BE SCALED FROM. ANY DISCREPANCIES BETWEEN DRAWINGS, DETAILS, SPECIFICATIONS AND THE FIELD CONDITION SHALL BE IMMEDIATELY REPORTED TO ACORN FOR FURTHER DIRECTIONS BEFORE ANY ADDITIONAL WORK PROCEEDS.
3. SIGNAGE, STRIPING, AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
4. ALL TRAFFIC CONTROL SIGNS INDICATED ON THE SITE LAYOUT PLAN ARE TO MEET ALL REQUIREMENTS & CONDITIONS OF THE CITY OF PORTLAND, MAINE DEPARTMENT OF TRANSPORTATION AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
5. THE CONTRACTOR SHALL OBTAIN THE SERVICES OF A LICENSED PROFESSIONAL LAND SURVEYOR TO PROVIDE A MINIMUM OF TWO TEMPORARY BENCHMARKS WITHIN THE SITE AND TO LOCATE PROPOSED STRUCTURE CORNERS.
6. CONTRACTOR TO ENSURE THAT ACCESS, INCLUDING BUT NOT LIMITED TO WALKWAYS, DRIVEWAYS, AND MAILBOXES ADJACENT TO THE PROJECT REMAIN FUNCTIONAL AND AVAILABLE FOR USE AT ALL TIMES.

1. THIS PROJECT IS SUBJECT TO THE TERMS AND CONDITIONS OF SITE PLAN – LEVEL III AND SUBDIVISION PERMIT FROM THE CITY OF PORTLAND.
2. THE CONTRACTOR SHALL REVIEW THE ABOVE REFERENCED PERMITS PRIOR TO SUBMITTING A BID FOR THIS PROJECT, AND INCLUDE COSTS AS NECESSARY TO COMPLY WITH THE CONDITIONS OF THESE PERMITS.
3. ALL WORK WITHIN THE PUBLIC RIGHT-OF-WAY REQUIRES A STREET OPENING PERMIT FROM THE CITY OF PORTLAND. ADDITIONALLY, COORDINATE WITH THE DEPARTMENT OF PUBLIC WORKS.

1. TOPSOIL STRIPPED FROM THIS SITE THAT IS SUITABLE FOR REUSE AS LOAM (MEETS THE REQUIREMENTS WITHIN SECTION 0115 OF THE MDTOT STANDARD SPECIFICATIONS, MOST RECENT VERSION AND IS FREE OF TRACEABLE AMOUNTS OF CONTAMINANTS) SHALL BE STOCKPILED WITHIN THE PROPOSED LIMIT OF WORK AREA. THE CONTRACTOR SHALL NOT ASSUME THAT ANY STRIPPED TOPSOIL WILL BE ACCEPTABLE FOR REUSE WITH THEIR ESTIMATE.
2. THE CONTRACTOR SHALL ANTICIPATE THAT GROUNDWATER WILL BE ENCOUNTERED DURING CONSTRUCTION AND SHALL INCLUDE SUFFICIENT COSTS WITHIN THEIR BID TO PROVIDE DEWATERING AS NECESSARY; NO SEPARATE PAYMENT SHALL BE MADE TO THE CONTRACTOR FOR DEWATERING. DEWATERING SHALL INCLUDE TREATMENT OF SILT THROUGH THE USE OF A DIRTBAG BY ACF ENVIRONMENTAL OR APPROVED EQUIVALENT. FLOWS FROM DEWATERING ACTIVITIES SHALL NOT BE DISCHARGED INTO SANITARY SEWERS. **SEE BORING LOGS FOR ADDITIONAL INFORMATION.**
3. THE OWNER SHALL BE RESPONSIBLE FOR OBTAINING ANY EASEMENT OR TEMPORARY CONSTRUCTION RIGHTS AS NECESSARY BY PRIVATE ADJACENT LAND OWNERS. THE CONTRACTOR SHALL NOT DISTURB ANY SOIL BEYOND THE PROPERTY LINE WITHOUT NOTIFYING AND OBTAINING SUCH EASEMENT OR TEMPORARY CONSTRUCTION RIGHT FROM THE ADJACENT LAND OWNERS. PRIOR TO THE CONTRACTOR PRICING THE WORK, THEY SHALL PROVIDE ACORN WITH PROOF OF SUCH EASEMENT OR TEMPORARY RIGHTS. SHOULD EASEMENTS OR TEMPORARY RIGHTS NOT BE AVAILABLE, THE CONTRACTOR SHALL INCLUDE COST FOR BRACING AND SHORING AS NECESSARY.
4. THE CONTRACTOR SHALL PROVIDE A FINISH PAVEMENT SURFACE FREE OF LOW SPOTS AND PONDING AREAS. THE MINIMUM SLOPE SHALL MEET OR EXCEED 0.5% IN ALL CASES. ALL SLOPES SHALL BE AWAY FROM BUILDINGS AND TOP OF PAVEMENT SHALL BE AT OR BELOW EXISTING FINISH FLOOR ELEVATIONS.
5. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST **GEOTECHNICAL REPORT PREPARED BY THE PROJECT GEOTECHNICAL ENGINEER.**
6. NO ADDITIONAL PAYMENT FOR UNSUITABLE MATERIALS.
7. ALL STORM DRAIN PIPE SHALL BE SMOOTH BORE INTERIOR PROVIDING A MANNINGS ROUGHNESS COEFFICIENT OF $N=0.012$ OR LESS.
8. ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE.
9. NATIVE SOILS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LIMIT THE DISTURBANCE TO SUBGRADE SOILS. SHOULD THE SUBGRADE BECOME YIELDING OR DIFFICULT TO WORK, CONTACT ACORN. THE DISTURBED AREAS SHALL BE EXCAVATED AND BACKFILLED WITH COMPACTED SELECT FILL OR CRUSHED STONE AT NO ADDITIONAL EXPENSE TO THE OWNER.
10. ALL SUBGRADE PREPARATION IS SUBJECT TO THE RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL ENGINEER, IF APPLICABLE.

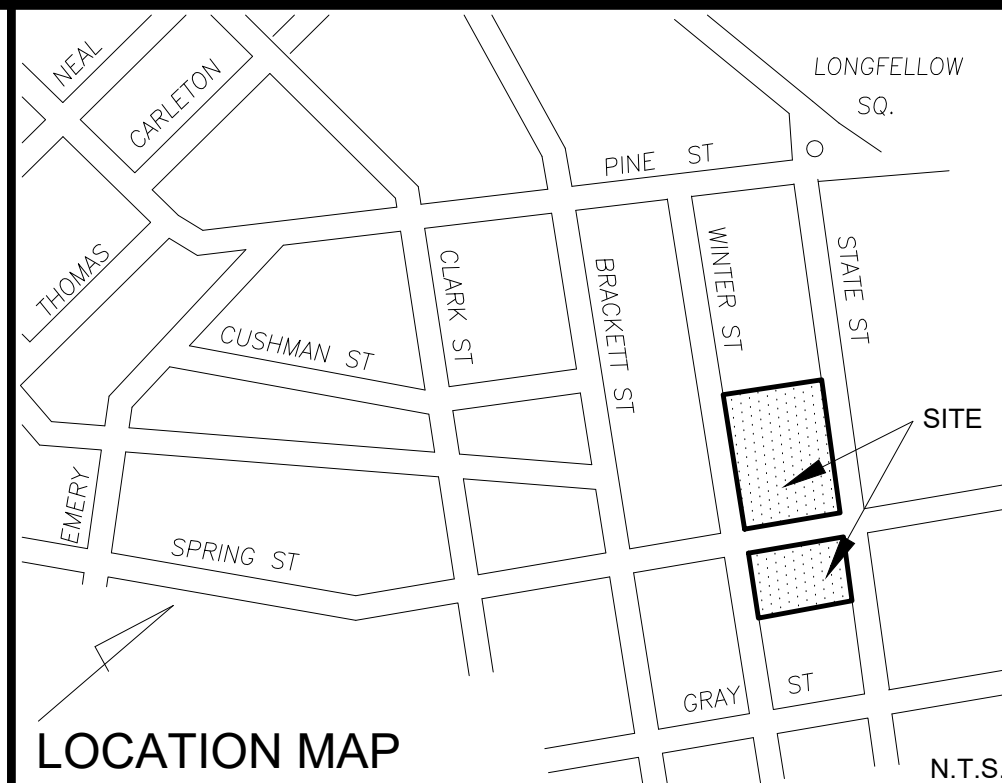
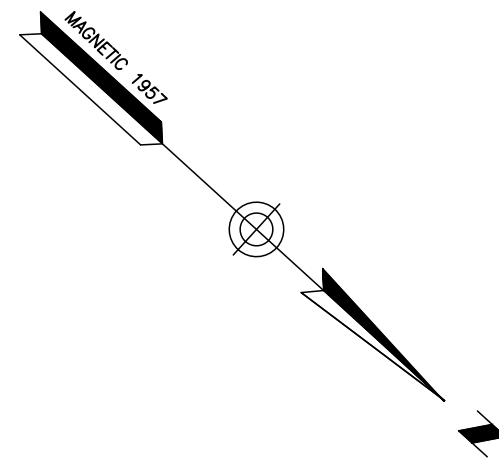
1. DISTURBED AREAS ARE DEFINED AS THOSE SURFACES WHERE EXISTING VEGETATION OR STRUCTURES HAVE BEEN REMOVED, EXPOSING NATIVE SOIL TO THE ELEMENTS.
2. ALL ROUTINE WORK ACTIVITIES SHALL BE CONDUCTED IN SUCH A WAY TO LIMIT THE AMOUNT OF DISTURBED AREA AT ONE TIME TO THE EXTENT PRACTICABLE.
3. PRIOR TO THE START OF ANY CLEARING/LAND DISTURBING ACTIVITIES, THE CONTRACTOR SHALL INSTALL APPLICABLE EROSION CONTROL DEVICES SUCH AS PERIMETER SILT FENCE, AND OTHER APPLICABLE MEASURES. IN THE EVENT THE CONTRACTOR IS NOT SURE A EROSION CONTROL MEASURE SHOULD BE IMPLEMENTED, THE CONTRACTOR SHALL CONTACT THE ENGINEER OF RECORD TO CONFIRM IMPLEMENTATION OF ANY EROSION CONTROL DEVICES.
4. ALL GROUND AREAS GRADED FOR CONSTRUCTION SHALL BE GRADED, LOAMED, SEEDED AND MULCH SHALL BE APPLIED AS SOON AS POSSIBLE WITHIN 7 DAYS FOLLOWING THE COMPLETION OF ANY SOIL DISTURBANCE, AND PRIOR TO ANY STORM EVENT.
5. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED TO THE SATISFACTION OF THE CITY. THE CONTRACTOR SHALL REFERENCE THE APPROVED EROSION AND SEDIMENTATION CONTROL REPORT FOR TEMPORARY AND PERMANENT EROSION AND SEDIMENTATION CONTROL DEVICES IN ADDITION TO THE PLAN SET. THE CONTRACTOR SHALL ALSO REFER TO THE MAINE D.E.P.'S CURRENT MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR ADDITIONAL INFORMATION.
6. PRIOR TO PAVING, THE CONTRACTOR SHALL REMOVE ALL SEDIMENT FROM STORM DRAINS, CATCH BASINS, AND

7. REFER TO THE EROSION CONTROL DETAILS & NOTES FOR ADDITIONAL INFORMATION

24. ALL ADJUSTMENTS TO FINISHED GRADE ARE TO BE COMPLETED BY THE CONTRACTOR. THE CONTRACTOR SHALL CONFIRM STRUCTURES THAT REQUIRE ADJUSTMENT WITH THE ENGINEER OR OWNERS REPRESENTATIVE PRIOR TO ADJUSTING FRAMES.

4. CONTRACTOR TO REFER TO PHASE 1 ENVIRONMENTAL SITE ASSESSMENT BY CES, INC.

[illegible]



LEGEND	
●	IRON PIPE OR ROD FOUND
●	MONUMENT FOUND
○	GAS VALVE
○	UTILITY POLE
○	MANHOLE
⊗	EM/GM ELECTRIC/GAS METER
⊗	SIGN
⊗	CATCH BASIN
⊗	HYDRANT
⊗	WATER VALVE OR SHUTOFF
⊗	LIGHT POLE
⊗	DECIDUOUS TREE
⊗	CONIFEROUS TREE
—X—X—	GUARDRAIL
—	FENCE
—	CURB
—OHW—	OVERHEAD WIRES
—E—	UNDERGROUND POWER
—W—	WATER LINE
—G—	GAS LINE
—T—	TELEPHONE
—SD—	STORM DRAIN
—SS—	SANITARY SEWER
—100—	1' CONTOUR
—IPF/IRF—	IRON PIPE OR ROD FOUND
—N/F—	NOW OR FORMERLY
000/000	DEED BOOK / PAGE
L/S	LANDSCAPED AREA
CONC.	CONCRETE

- PLAN REFERENCES**
- "PLAN OF PROPERTY IN PORTLAND, MAINE MADE FOR MERCY HOSPITAL DATED 3 FEB. 1982 REVISED THROUGH 15 MARCH 1982" BY H.I. & E.C. JORDAN, SURVEYORS.
 - "PLAN OF PROPERTY IN PORTLAND, MAINE MADE FOR MERCY HOSPITAL DATED JUNE 17, 1981 REVISED OCT. 2, 1981" BY H.I. & E.C. JORDAN, SURVEYORS.
 - "STANDARD BOUNDARY & TOPOGRAPHIC SURVEY ON STATE STREET, PORTLAND, MAINE MADE FOR MERCY HOSPITAL DATED NOVEMBER 30, 1999 REV. 2 OCT. 04, 2012" BY OWEN HASKELL, INC.
 - "ALTA/ACSM LAND TITLE SURVEY, 102, 120 (AKA 144) & 148 STATE STREET, PORTLAND, CUMBERLAND COUNTY, MAINE MADE FOR MERCY HOSPITAL AND EASTERN MAINE HEALTHCARE SYSTEMS" FEBRUARY 27, 2013 LAST REVISION DATE: SEPT. 20, 2013 BY OWEN HASKELL, INC.

- GENERAL NOTES**
- PREMISES IS SHOWN AS TM 45-C-6 & 7 AND TM 45-D-1 ON THE CITY OF PORTLAND ASSESSORS MAPS.
 - BEARINGS ARE BASED ON MAGNETIC 1957. COORDINATES ARE BASED ON CITY DATUM UTILIZING THE MONUMENTS SHOWN.
 - THE LOCATIONS OF ALL UTILITIES SHOWN ON THE SURVEY ARE FROM VISIBLE SURFACE EVIDENCE ONLY.
 - ELEVATIONS ARE BASED ON CITY DATUM AS PER MONUMENT T104-45-11 AT CORNER OF CLARK AND SPRING STREETS, ELEVATION = 127.91 FEET.

OWNER OF RECORD
NEWHEIGHT REDFERM LLC
CUMBERLAND COUNTY REGISTRY OF DEEDS BOOK 36459, PAGE 218

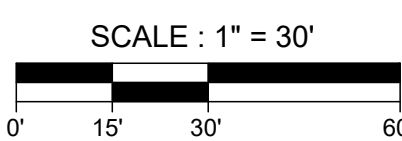
CERTIFICATE
OWEN HASKELL, INC. HEREBY CERTIFIES THAT THIS PLAN IS BASED ON, AND THE RESULT OF, AN ON THE GROUND FIELD SURVEY AND THAT TO THE BEST OF OUR KNOWLEDGE, INFORMATION AND BELIEF, IT CONFORMS TO THE BOARD OF LICENSURE FOR PROFESSIONAL LAND SURVEYORS CURRENT STANDARDS OF PRACTICE.

Randy R. Loubier
RANDY R. LOUBIER, PLS #2407
8/4/2020
DATE

STATE OF MAINE
PROFESSIONAL LAND SURVEYOR
RANDY R. LOUBIER
2407

Boundary & Topographic Survey
At
102 & 120 State Street, Portland, Maine
Made for
NewHeight Redferm, LLC
c/o Jonathan Culley
167 Newbury Street, #503 Portland, Maine

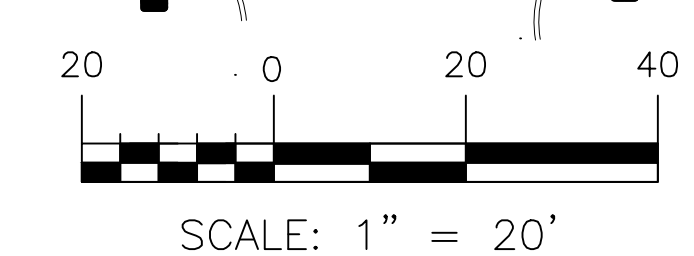
OWEN HASKELL, INC.
PROFESSIONAL LAND SURVEYORS
390 US ROUTE 1, UNIT 10, FALMOUTH, ME 04105 TEL. 207-774-0424
DRAWN BY: RS / JLW DATE: AUGUST 4, 2020 JOB NO. 2020-161 P
CHECKED BY: RRL SCALE: 1" = 30' DRWG. NO. 1



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 SURVEY 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.

1. IF CONSTRUCTION FOR THE SEPARATE WINTER STREET BUILDING LOTS HAS NOT COMMENCED BY SEPTEMBER 15, 2023, IMPROVEMENTS AS DEPICTED ON THIS PLAN SHALL BE IMPLEMENTED TO ENSURE PROPER SITE STABILIZATION, EMERGENCY ACCESS, PEDESTRIAN ACCESS, AND PARKING.

PARKING SUMMARY	
	# PARKING SPACES
EXISTING	59
STANDARD (9'X18')	59
COMPACT (9'X16')	4
ADA (8'X18')	7
NEW ON STREET (SPRING ST)	6
TOTAL PROPOSED SPACES	76

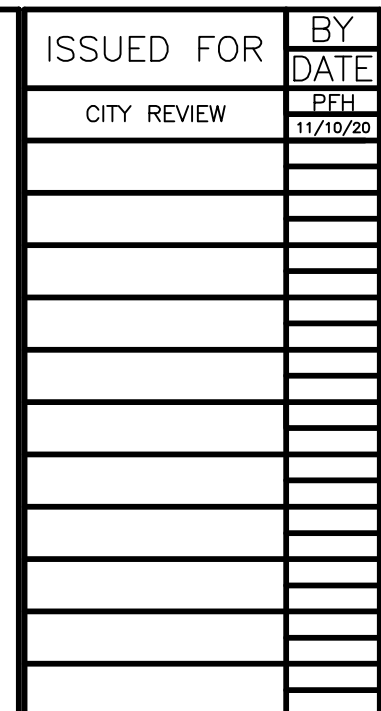


PERMIT LEVEL
NOT ISSUED FOR
CONSTRUCTION

A circular professional engineer seal for the State of Maine. The outer ring contains the text "STATE OF MAINE" at the top and "LICENSED PROFESSIONAL ENGINEER" at the bottom, separated by two stars. The center of the seal contains the name "PETER F. HEIL" and the license number "15318". The seal is stamped over a document with a grid background.

DRAWING NO.
C-10

1. IF CONSTRUCTION FOR THE SEPARATE WINTER STREET BUILDING LOTS HAS NOT COMMENCED BY SEPTEMBER 15, 2023, IMPROVEMENTS AS DEPICTED ON THIS PLAN SHALL BE IMPLEMENTED TO ENSURE PROPER SITE STABILIZATION, EMERGENCY ACCESS PEDESTRIAN ACCESS, AND PARKING.



DRAWING NAME:
PROJECT NAME/
ADDRESS:

○

AC

FILE: 1:

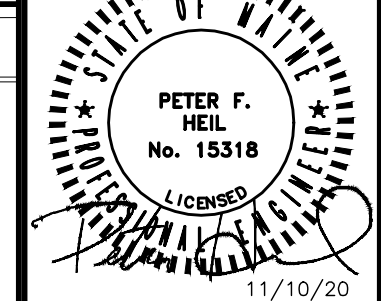
JN:

SCALE: A

DESIGNED BY:

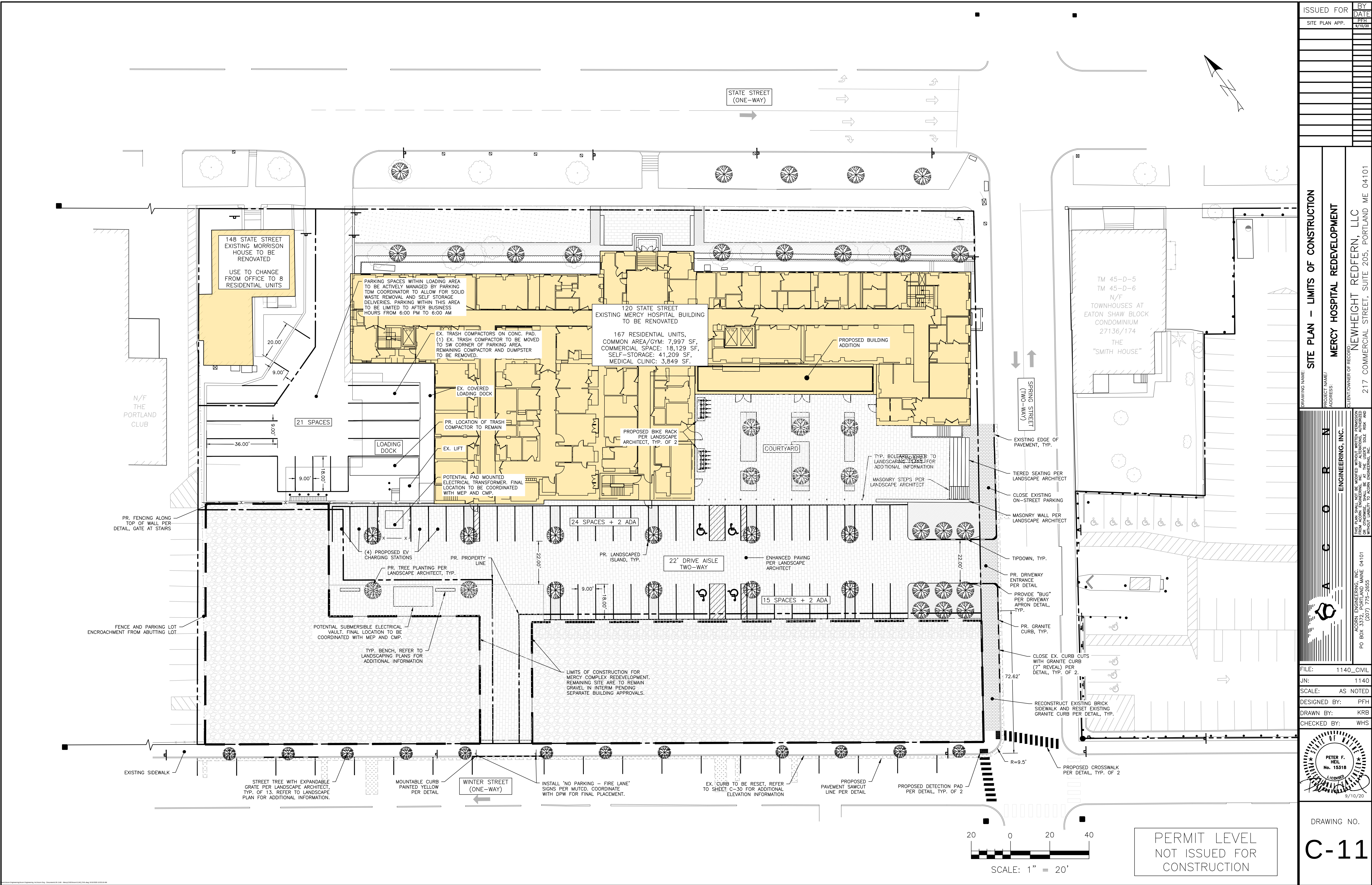
DRAWN BY:

CHECKED BY:



DRAWING

C-2



ISSUED FOR	BY
SITE PLAN APP.	PFT
	9/10/20

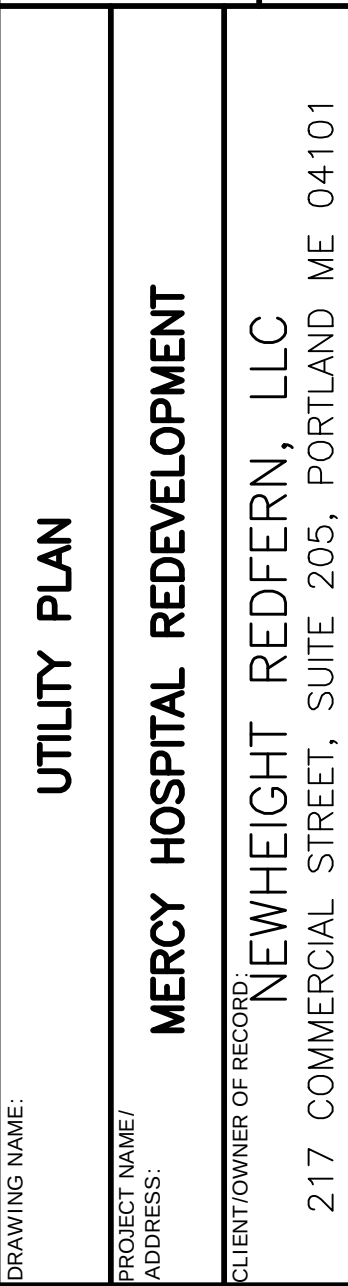
DRAWING NAME	PROJECT NAME/ ADDRESS	CLIENT/OWNER OF RECORD
SITE PLAN - LIMITS OF CONSTRUCTION	MERCY HOSPITAL REDEVELOPMENT	NEWHEIGHT REDFERN, LLC
		217 COMMERCIAL STREET, SUITE 205, PORTLAND ME 04101

FILE:	JN:	SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
1140_CIVIL	1140	AS NOTED	PFT	KRB	WHS

ACORN ENGINEERING, INC.	PETER F. HEIL
PO BOX 3372, PORTLAND MAINE 04101	No. 15318
(207) 775-2655	LICENSED
	9/10/20

DRAWING NO.
C-11

- LOCATION OF PROPOSED CONNECTIONS ARE APPROXIMATE. CONTRACTOR TO CONTACT ENGINEER IF FIELD INFORMATION VARIATION FROM INFORMATION ON PLANS.
- CONTRACTOR TO BE CAUTIONED THAT CERTAIN LOCATIONS AND/OR ELEVATIONS OF EXISTING UTILITIES HAVE BEEN PROVIDED THROUGH UTILITY COORDINATION OR OTHER OBSERVATIONS. INFORMATION IS NOT TO BE RELIED UPON AS EXACT OR CORRECT. CONTRACTOR TO VERIFY ALL EXISTING UTILITIES WITH UTILITY COMPANY AND DIG SAFE NO LESS THAN 72 HOURS PRIOR TO ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF ALL UTILITIES. CONTRACTOR TO BE RESPONSIBLE FOR HAVING THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS INDICATED IN THE CONTRACT DOCUMENTS. CONTRACTOR TO NOTIFY ENGINEER OF ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS, INCLUDING UTILITY INFORMATION, PRIOR TO ANY CHANGES.
- FOR ALL UTILITIES, AROUND ENGINEERING DESIGN LIMITS END AT EXTERIOR WALL OF BUILDING. METERING OF UTILITIES TO BE COMPLETED BY CITY OF PORTLAND.
- CONTRACTOR TO COORDINATE WITH ARCHITECT ON FINAL UTILITY CONNECTIONS WITHIN THE BUILDING.
- SEWER UTILITIES:** CONTRACTOR TO COORDINATE WITH ARCHITECT FOR FINAL SERVICE CONNECTION. SEWER UTILITIES TO BE INSTALLED IN ACCORDANCE WITH THE CITY OF PORTLAND TECHNICAL STANDARDS. VALVE FOR BACKFLOW PREVENTION SHALL BE INSTALLED WITHIN THE PROPERTY LINES FOR EACH SEWER. SEWER CONNECTIONS TO CONTRACT ENGINEER IF INVERT FIELD CONDITIONS VARY FROM DESIGN.
- 5.1. EXISTING SEWER & STORM INFRASTRUCTURE QUANTITY OBTAINED FROM PORTLAND STORM & SEWER SHOP FILES, DATED 06/15/2017.
- WATER UTILITIES:** FINAL PIPE SIZING PROVIDED BY M.E.P. ENGINEER AND FIRE PROTECTION DESIGNER. INTERNAL METERING, BACKFLOW PREVENTION, AND PRESSURE REDUCERS TO BE PROVIDED BY CONTRACTOR WITHIN THE TRANSFORMER SIZE. THIS WILL DETERMINE THE FINAL WATER METERING OPTIONS. METER MAY BE SMALLER THAN PROPOSED WATER MAIN. WATER METERING, PRESSURE REDUCER AND BACKFLOW PREVENTION TO BE PROVIDED BY CONTRACTOR WITHIN THE TRANSFORMER SIZE. CONTRACTOR TO FOLLOW METERING GUIDELINES OF THE PORTLAND WATER DISTRICT AND CITY OF PORTLAND.
- GAS UTILITIES:** PROJECT GAS LOAD, GAS UTILITY DESIGN, AND GAS UTILITY SERVICE CONNECTIONS TO BE DEFINED BY M.E.P. AND IN ACCORDANCE WITH UNIFIT.
- ELECTRIC UTILITIES:** ELECTRIC DESIGN TO BE FINALIZED BY M.E.P. ENGINEER. ELECTRICAL LOAD TO BE DETERMINED BY M.E.P. ENGINEER. CLOUTIER LONGMIRE WILL BE THE TRANSFORMER SIZE. IF NECESSARY DEFINED BY M.E.P. M.P. TO FINALIZE SERVICE CONNECTION TO BUILDING. ALL ELECTRIC CONNECTION SHALL COMPLY WITH CEC CODEBOOK OR STANDARD REQUIREMENTS. MOST RECENT EDITION SHALL BE SUBJECT TO FINAL APPROVAL FROM CMP.
- 5.1. SECONDARY ELECTRICAL SERVICES SERVING THE MERCY HOSPITAL BUILDING, MORRISON HOUSE, CHOW SENIOR & CHOW FAMILY BUILDING, AND CHOW SENIOR CENTER SHALL BE REPRESENTATION. FINAL DESIGN PER BENNETT ENGINEERING. CONTRACTOR TO COORDINATE WITH CMP & CMP ON ELECTRICAL REDUCTION REQUIRED.
- CABLE AND TELEPHONE PULLBOXES AND PEDESTAL LOCATIONS TO BE DETERMINED BY CHARTER COMMUNICATIONS AND FAIRPOINT PRIOR TO CONSTRUCTION. CONTRACTOR TO COORDINATE INSTALLATION OF UNDERGROUND UTILITIES WITH ALL UTILITY COMPANIES INVOLVED.
- PER THE CITY'S OF PORTLAND DEED OF PUBLIC WORKS, STATE STREET IS SCHEDULED TO BE PAVED IN 2022. UTILITY WORK, INCLUDING THE INSTALLATION OF UNDERGROUND UTILITIES, MUST BE COMPLETED IN 2021. WORK WITHIN STATE STREET SHOULD

[illegible]

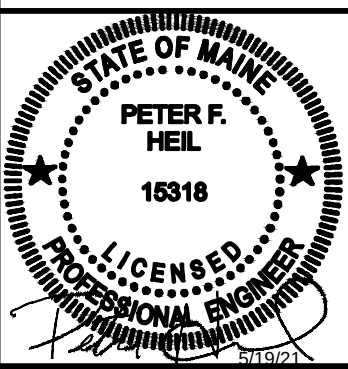

A C O R N

ACORN ENGINEERING, INC.
 PO BOX 35100 • DALLAS, TEXAS 75235
 (214) 775-2635

THESE ACORN ENGINEERING, INC. MODIFIED WITHOUT WRITTEN PERMISSION
 ARE NOT TO BE USED FOR ANY OTHER PROJECTS. THE USER'S SOLE RISK AND
 RESPONSIBILITY TO OBTAIN NECESSARY INSURANCE AND OTHER PROTECTIVE
 MEASURES.

ENGINEERING, INC.

FILE:	1140_CIVIL
JN:	1140
SCALE:	AS NOTED
DESIGNED BY:	PFH
DRAWN BY:	KRB
CHECKED BY:	WHS

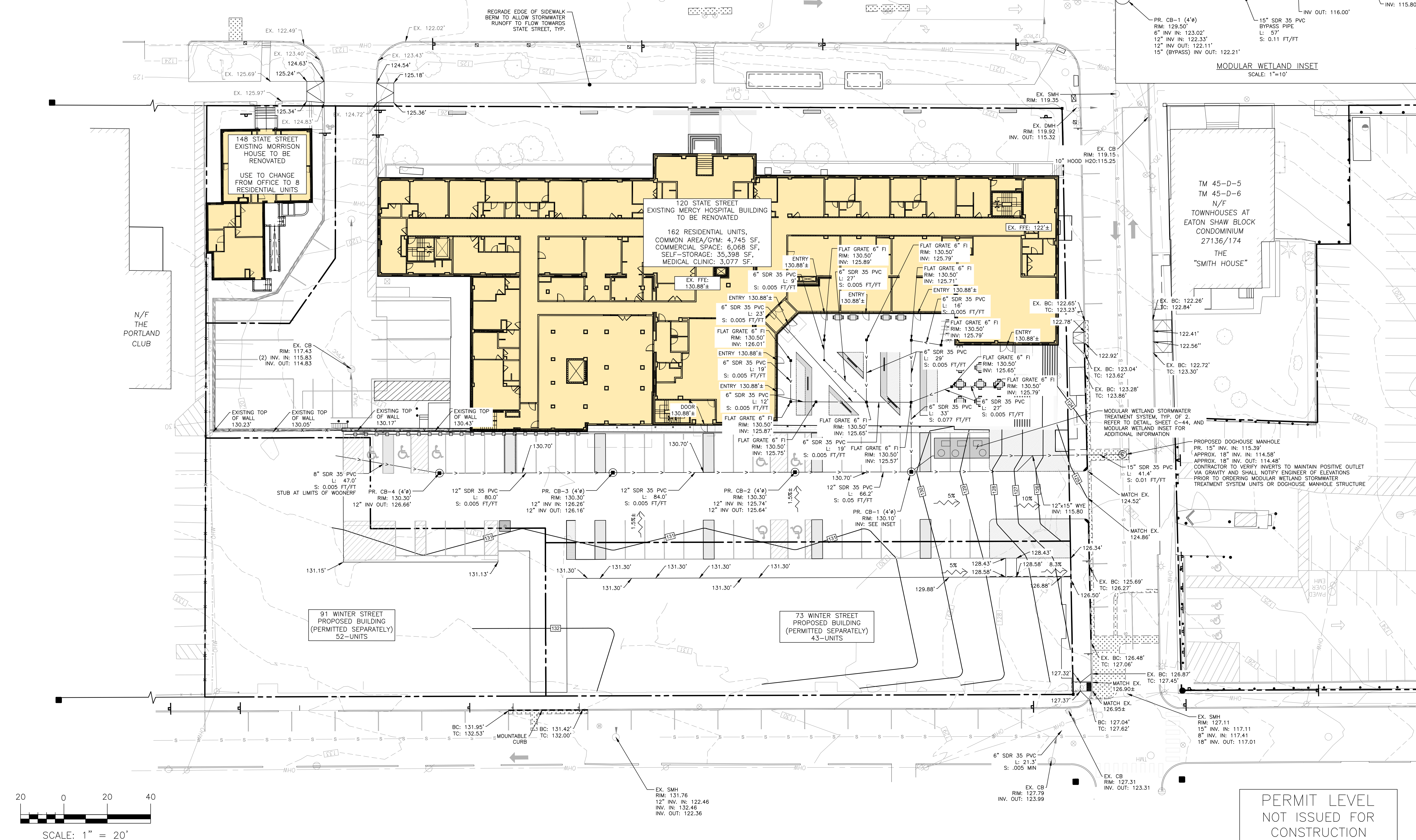


DRAWING NO.

C-20

GENERAL NOTES:

1. ALL WORK WITHIN THE CITY STREET RIGHT OF WAY SHALL MEET CITY OF PORTLAND TECHNICAL MANUAL STANDARDS.
2. DESIGN OF TEMPORARY SOIL RESTRAINT MEASURES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR IF NECESSARY FOR CONSTRUCTION.
3. CONTRACTOR SHALL ENSURE THAT UNDERDRAINS ARE CONSTRUCTED WITH POSITIVE OUTLET TO PROPOSED CONNECTIONS.
4. CATCH BASIN INLET PROTECTION TO BE INSTALLED WITHIN ANY STRUCTURES DOWNGRADIENT OF ACTIVE CONSTRUCTION.
5. SEDIMENTATION BARRIERS ARE TO BE INSTALLED DOWNGRADIENT OF ALL ACTIVE CONSTRUCTION WORK PER DETAIL. BARRIERS TO NOT EXTEND PAST PROPERTY LINES; BARRIERS SHOWN OFFSET FROM PROPERTY LINES ON PLANS FOR VISUAL PURPOSES ONLY.
6. RESET SIDEWALK AS NEEDED TO MAINTAIN SMOOTH WALKING SURFACE PER CITY OF PORTLAND TECHNICAL MANUAL STANDARDS.



SCALE: 1" = 20'

PERMIT LEVEL
NOT ISSUED FOR
CONSTRUCTION

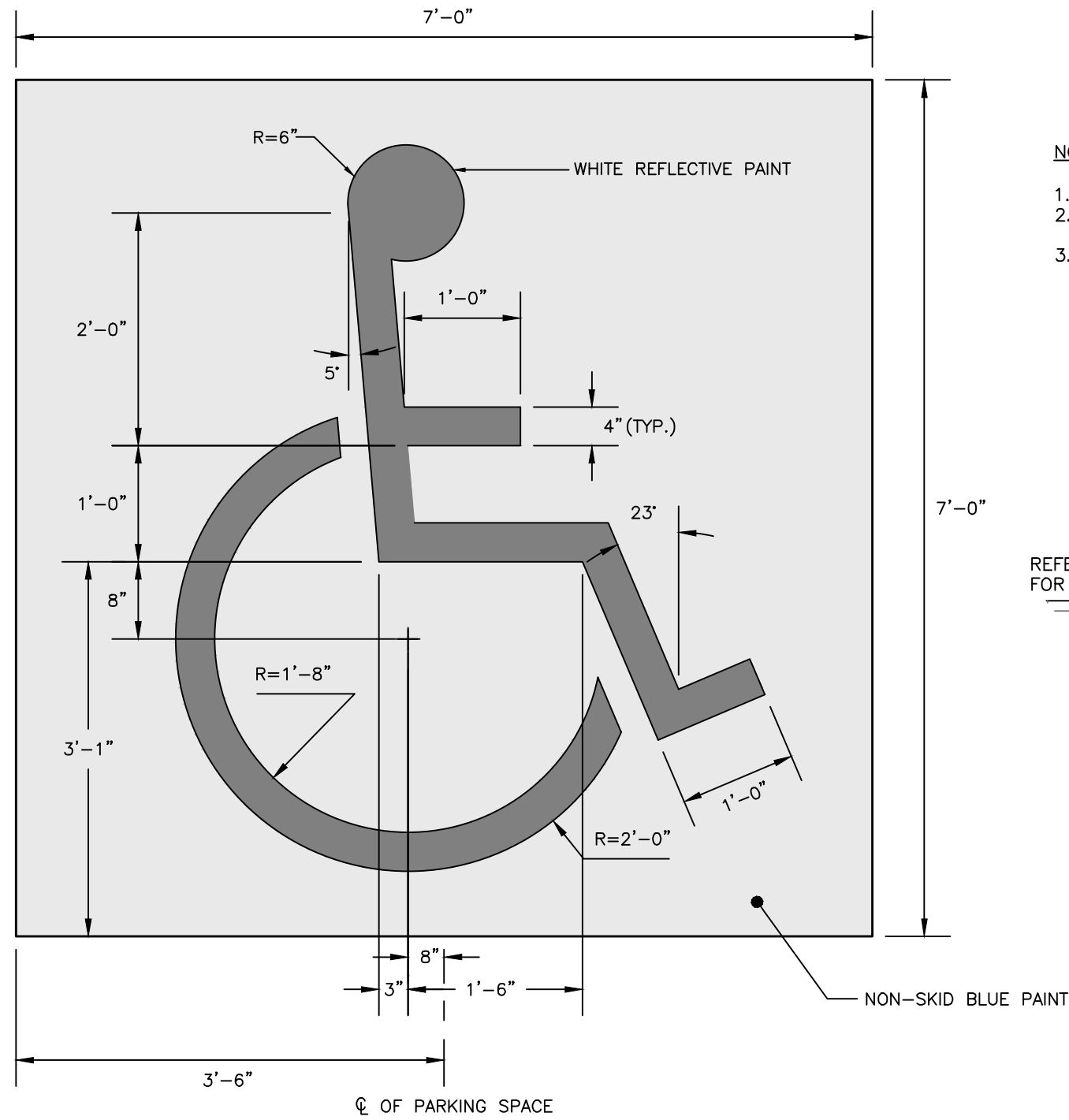
ISSUED FOR	BY
SITE PLAN APP.	DATE
CITY REVIEW	PFH
CHOM CITY REVIEW	11/18/26
COMMENT RESPONSE	12/4/26
	PFH
	8/19/21

GRADING PLAN	PROJECT NAME/ ADDRESS:	CLIENT/OWNER OF RECORD:
	MERCY HOSPITAL REDEVELOPMENT	NEWHEIGHT REDFERN, LLC
		217 COMMERCIAL STREET, SUITE 205, PORTLAND ME 04101

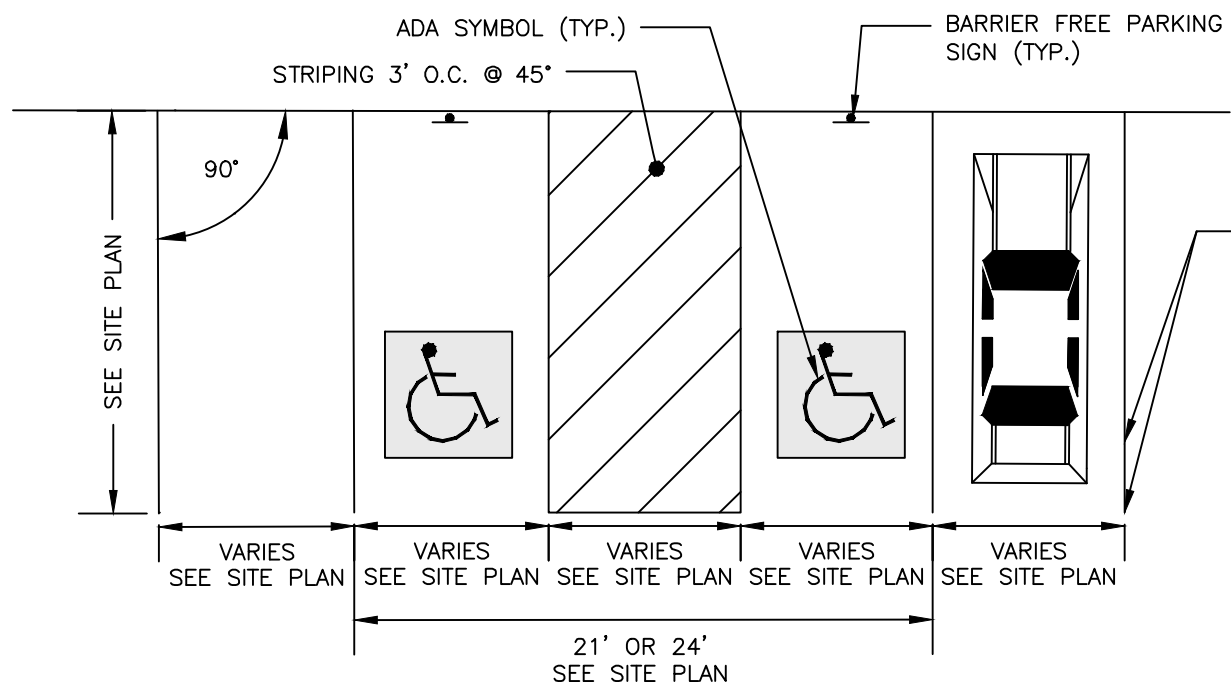
FILE:	1140_CIVIL
JN:	1140
SCALE:	AS NOTED
DESIGNED BY:	PFH
DRAWN BY:	KRB
CHECKED BY:	WHS

STATE OF MAINE
PETER F. HEIL
16318
LICENSED PROFESSIONAL ENGINEER

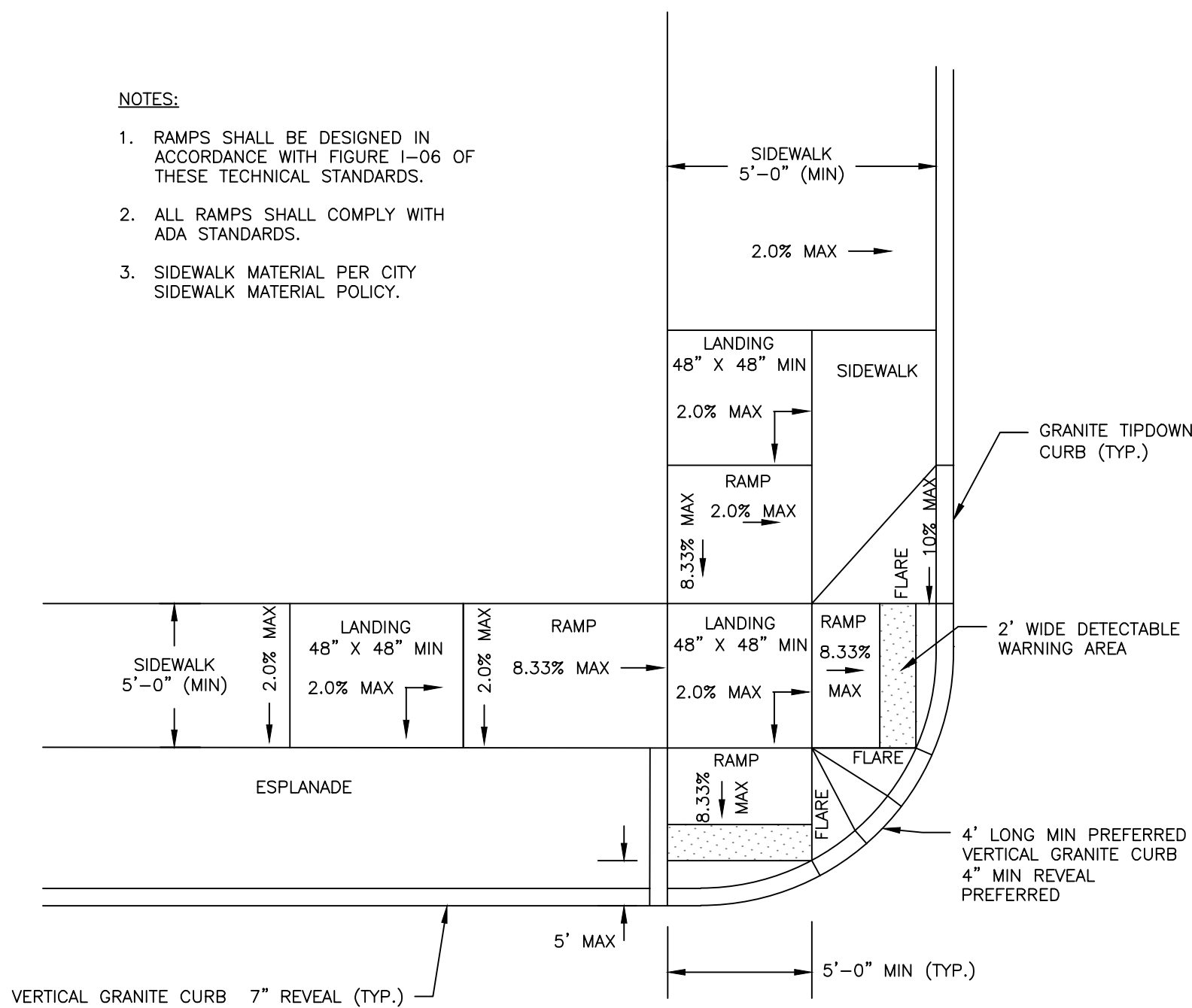
DRAWING NO. C-30



INTERNATIONAL BARRIER FREE SYMBOL
NOT TO SCALE



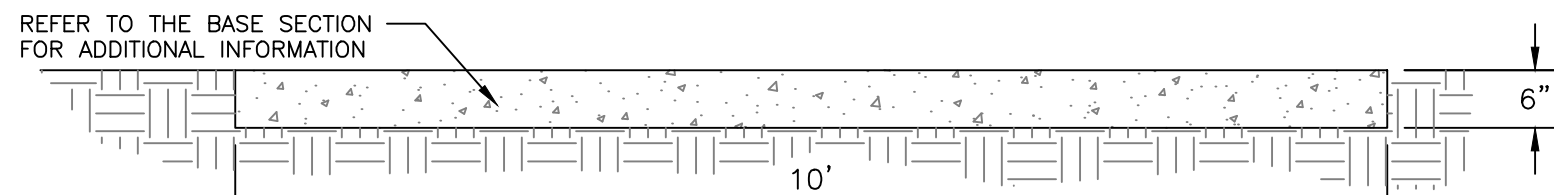
PARKING SPACE DIMENSIONS
NOT TO SCALE



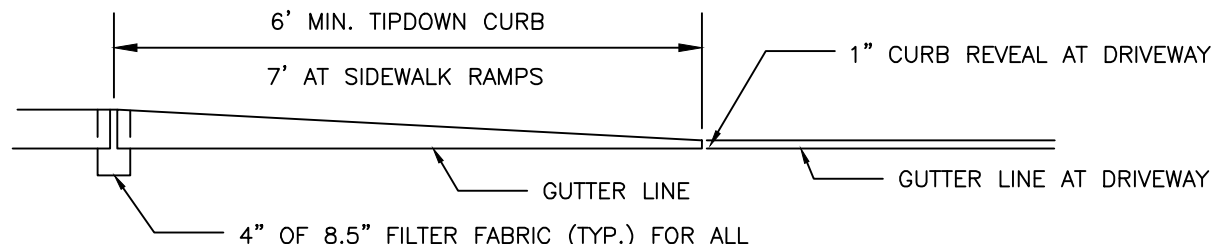
COMBINED PERPENDICULAR RAMP LAYOUT AT INTERSECTION
NOT TO SCALE

NOTES:

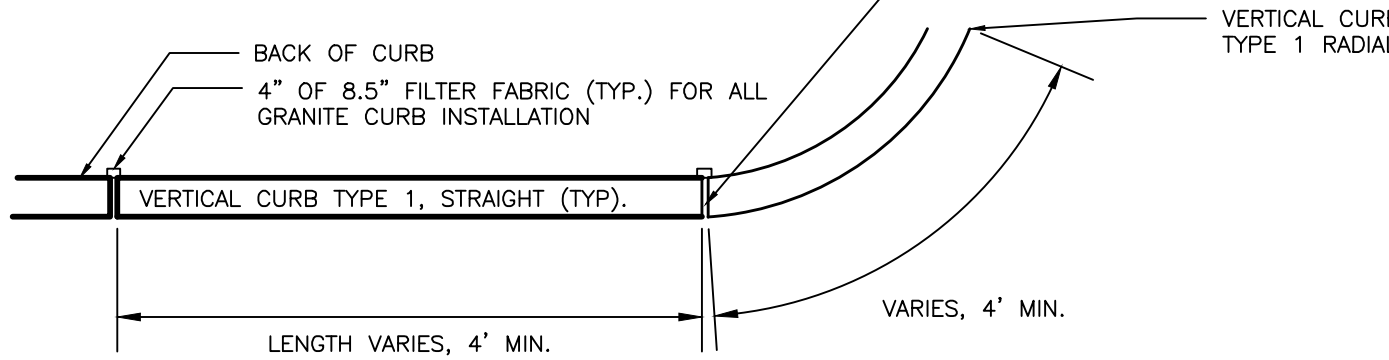
1. THE CONCRETE PAD SHALL BE 10'X3.25'X6" IN SIZE.
2. COMPACT SUBGRADE TO 95% MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D-1557.
3. FINISH WITH A STIFF, COARSE, FIBER BROOM.



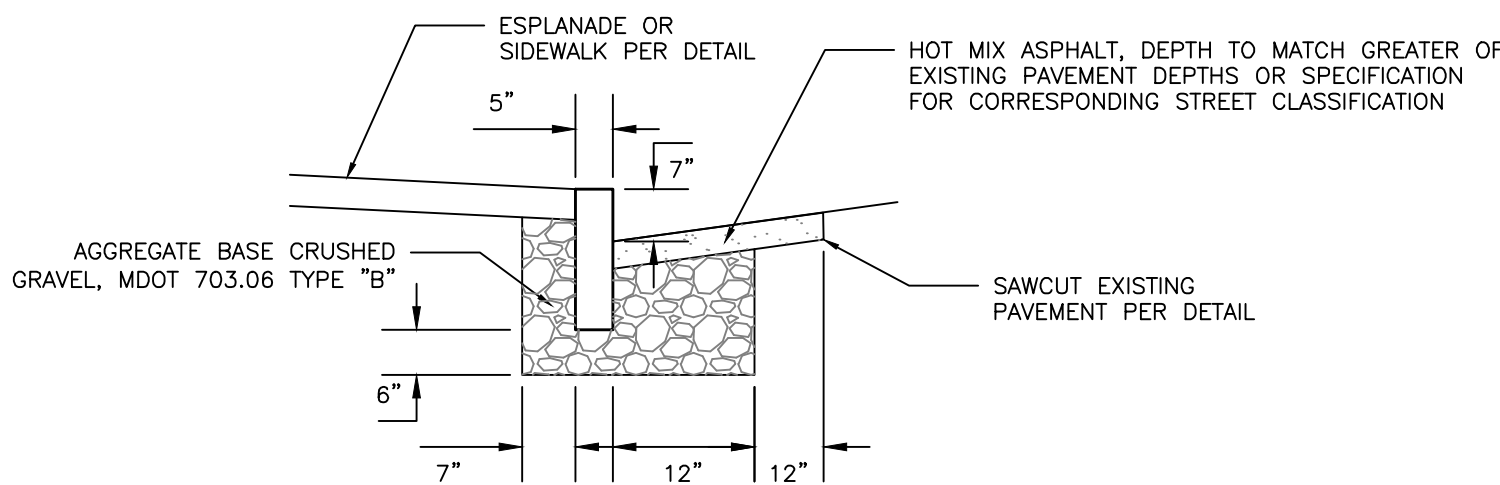
CONCRETE PAD DETAIL
NOT TO SCALE



CURB TIPDOWN PROFILE

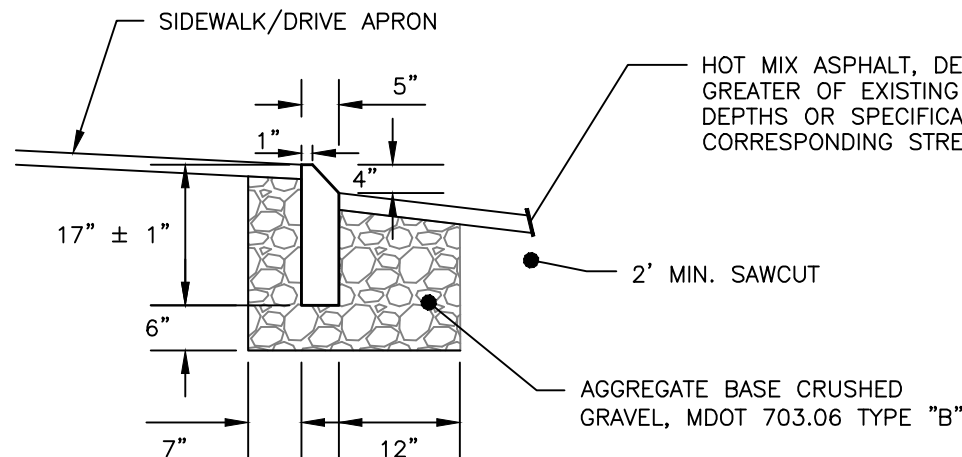


VERTICAL GRANITE CURB PLAN VIEW



VERTICAL GRANITE CURB CROSS SECTION

VERTICAL GRANITE CURB AND TIPDOWN INSTALLATION
NOT TO SCALE



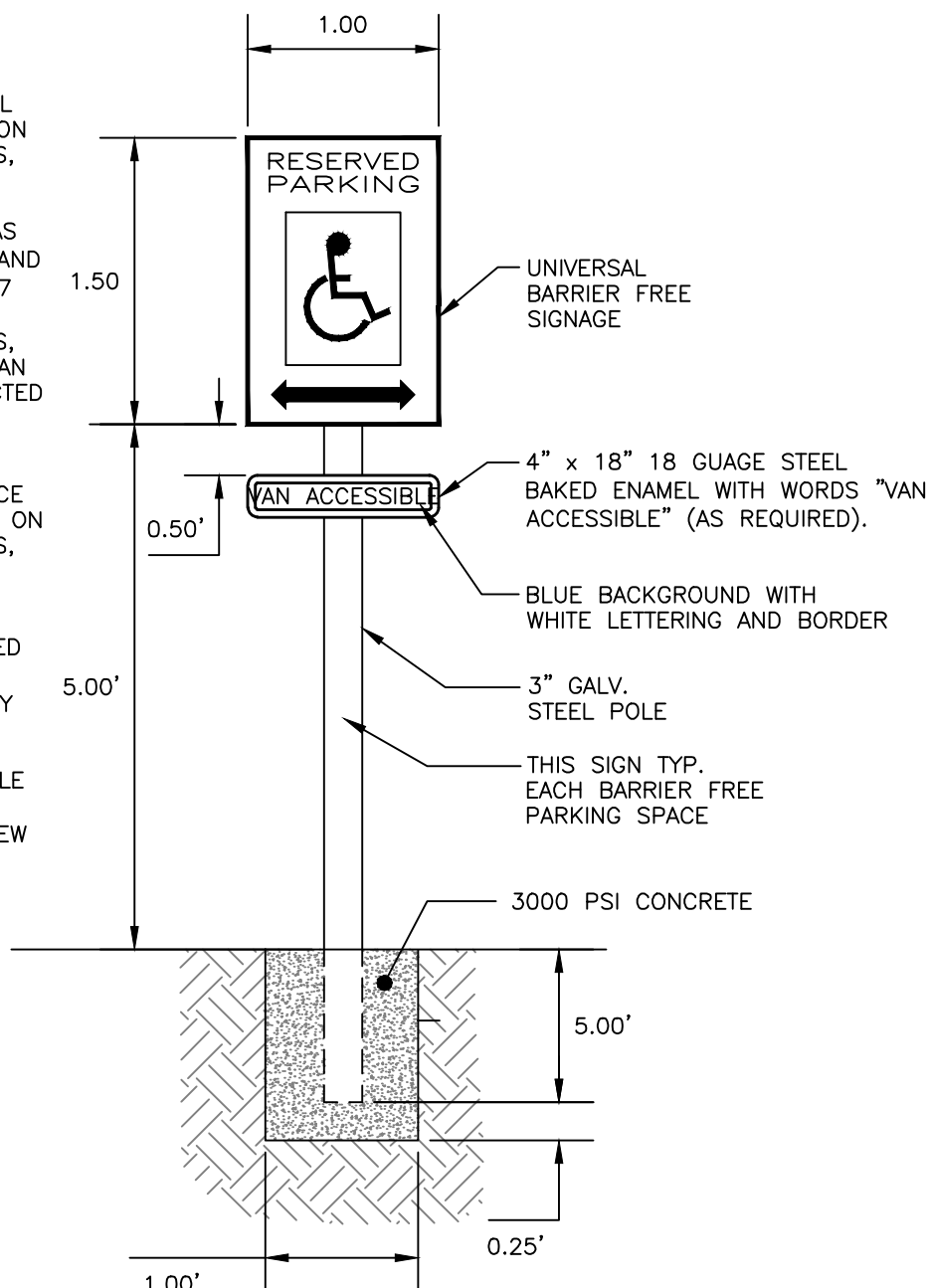
NOTES:

1. INSTALL PER MANUFACTURER'S SPEC'S.
2. PROVIDE CUSTOM TRANSITION CURB THAT TIPS DOWN 3" IN BETWEEN MOUNTABLE AND VERTICAL CURBS.

MOUNTABLE BEVELED GRANITE CURB
NOT TO SCALE

NOTES:

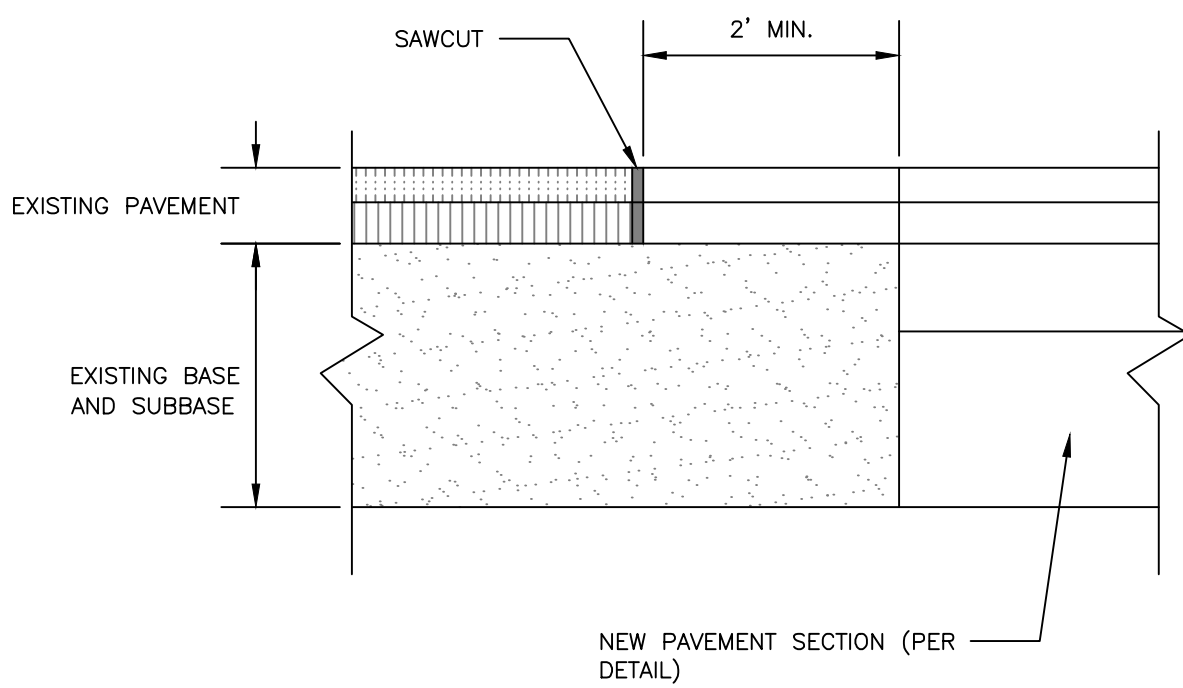
1. ALL ASPECTS OF RESERVED PARKING SIGN CONSTRUCTION SHALL BE IN ACCORDANCE WITH MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 OR MOST RECENT EDITION.
2. SIGN SHALL BE CONSTRUCTED AS SIGN R7-8 UNDER THE "PARKING AND STANDING SIGNS AND PLAQUES" (R7 SERIES) WITHIN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 OR MOST RECENT EDITION. VAN ACCESSIBILITY SHALL BE CONSTRUCTED AS SIGN R7-8a OR R7-8b.
3. SIGN POST CONSTRUCTION AND MOUNTING SHALL BE IN ACCORDANCE WITH CHAPTER 2A OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 OR MOST RECENT EDITION.
4. SIGN SHALL BE INSTALLED ON BUILDING. SIGNS SHOULD BE PLACED AT SUCH A HEIGHT (AT LEAST 60 INCHES ABOVE SURFACE) THAT THEY DO NOT GET OBSCURED BY ANY PARKED VEHICLES OR OTHER OBSTRUCTIONS AND MUST BE VISIBLE FROM THE DRIVER'S SEAT OF THE VEHICLE AND LOCATED RIGHT IN VIEW OF PARKING.



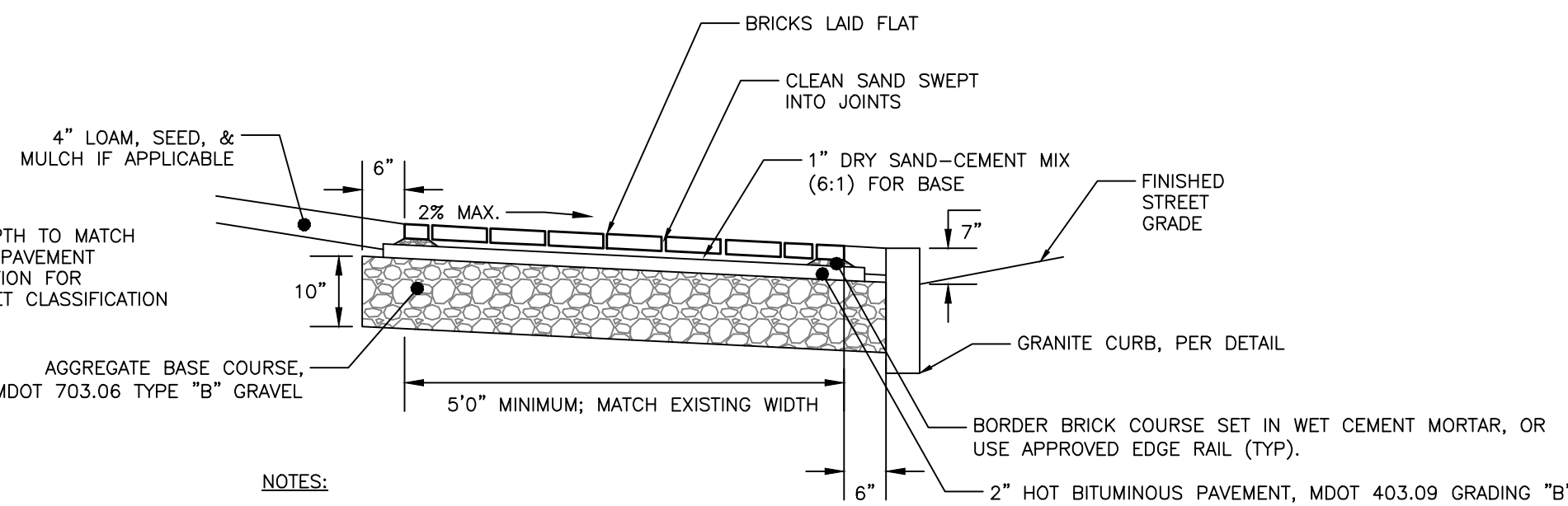
BARRIER FREE PARKING SIGN
NOT TO SCALE

NOTES:

1. SAWCUT EXISTING PAVEMENT AND REMOVE 2" STRIP OF EXISTING PAVEMENT. APPLY BITUMINOUS TACK COAT PRIOR TO PLACEMENT OF NEW BITUMINOUS PAVEMENT.
2. THE NEW PAVEMENT SECTION SHALL MEET THE CITY OF PORTLAND ARTERIAL BITUMINOUS PAVEMENT SECTION DETAIL AT A MINIMUM OR THE EXISTING PAVEMENT AND AGGREGATE BASE AND SUBBASE DEPTH WHICHEVER IS GREATER.



PAVEMENT SAWCUT DETAIL
NOT TO SCALE



NOTES:

1. BRICKS TO BE USED:

NEW CONSTRUCTION:
4"X8" PINE HALL PATHWAY PAVER BRICK; MFG. BY PINE HALL BRICK CO., MADISON, NORTH CAROLINA. LACHANCE ITEM #193623; PINE HALL PATHWAY PAVER BRICK.

2. INSTALL BRICK FLUSH UP TO BUILDING, PAVEMENT, STAIRS, CONCRETE SURFACES, CURB OR LANDSCAPED AREAS.

BRICK SIDEWALK WITH BITUMINOUS BASE DETAIL
NOT TO SCALE

PERMIT LEVEL
NOT ISSUED FOR
CONSTRUCTION

ISSUED FOR	BY
DATE	DATE
PPH	PPH
8/10/20	8/10/20
SITE PLAN APP.	PPH
CHOM CITY REVIEW	PPH
12/4/20	PPH
COMMENT RESPONSE	PPH
1/30/21	PPH
COMMENT RESPONSE	PPH
5/19/21	PPH

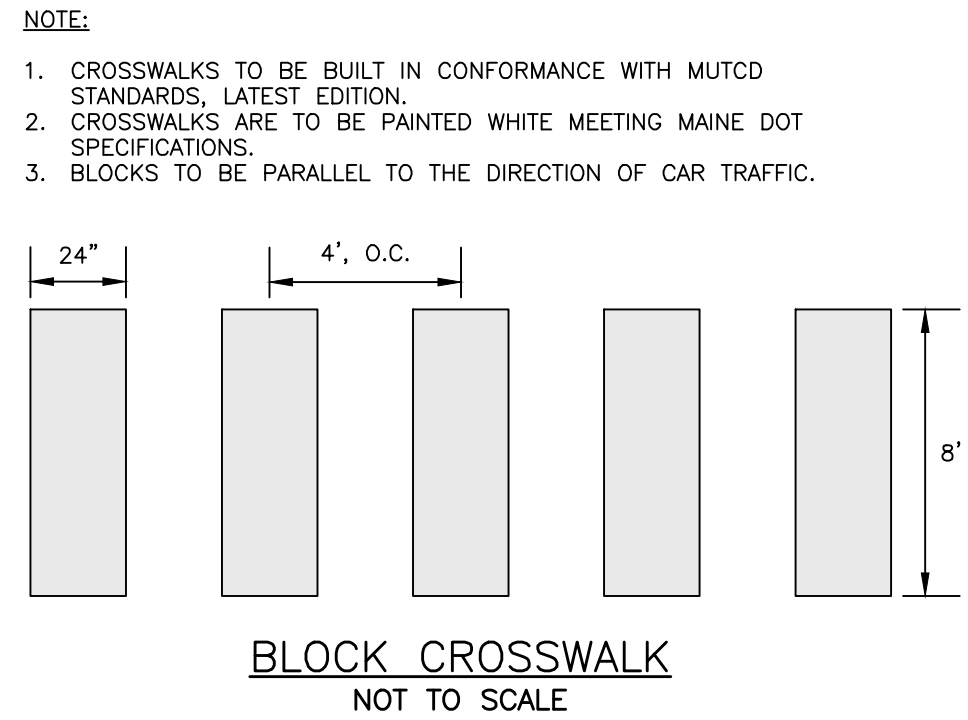
DRAWING NAME:	SITE DETAILS - 1
PROJECT NAME/ ADDRESS:	MERCY HOSPITAL REDEVELOPMENT
CLIENT/OWNER OF RECORD:	NEWHEIGHT REDFERN, LLC
217 COMMERCIAL STREET, SUITE 205, PORTLAND ME 04101	

ACORN ENGINEERING, INC.	ENGINEERING, INC.
ACORN ENGINEERING, INC.	ENGINEERING, INC.
PO BOX 3372, PORTLAND MAINE 04101	
(207) 775-2655	

FILE:	1140_CIVIL
JN:	1140
SCALE:	AS NOTED
DESIGNED BY:	PPH
DRAWN BY:	KRB
CHECKED BY:	WHS

STATE OF MAINE	PETER F. HEIL
16318	
LICENSED PROFESSIONAL ENGINEER	

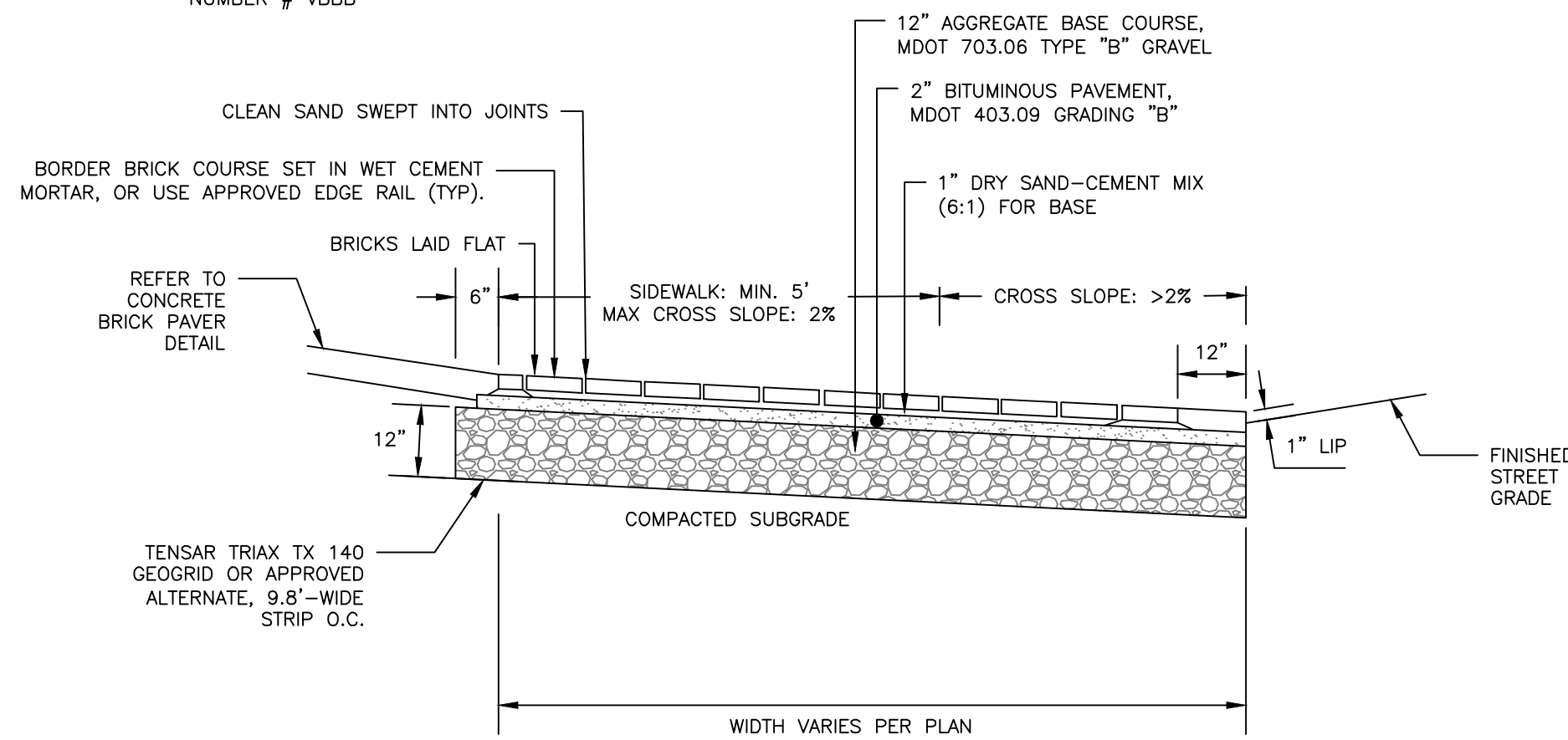
DRAWING NO.	C-40
-------------	------



GRADATION REQUIREMENTS FOR JOINT SAND		
SIEVE SIZE	NATURAL SAND PERCENT PASSING	MANUFACTURED SAND PERCENT PASSING
NO. 4 (4.75mm)	100	100
NO. 8 (2.36mm)	95–100	95–100
NO. 16 (1.18mm)	70–100	70–100
NO. 30 (0.60mm)	40–75	40–75
NO. 50 (0.30mm)	10–30	20–40
NO. 100 (0.15mm)	2–15	10–25
NO. 200 (0.075)	0–1	0–10

THICKNESS OF LAYERS	
STANDARD	LAYERS
2-3/4"	CONCRETE PAVR (DEPTH TBD BASED UPON MANUFACTURER)
1"	DRY SAND-CEMENT MIX (6:1)
2"	BITUMINOUS MDOT 403.09 GRADING "B"
3"	AGGREGATE BASE GRAVEL MDOT 703.06 TYPE B
15"	AGGREGATE SUBBASE GRAVEL MDOT 703.06 TYPE D

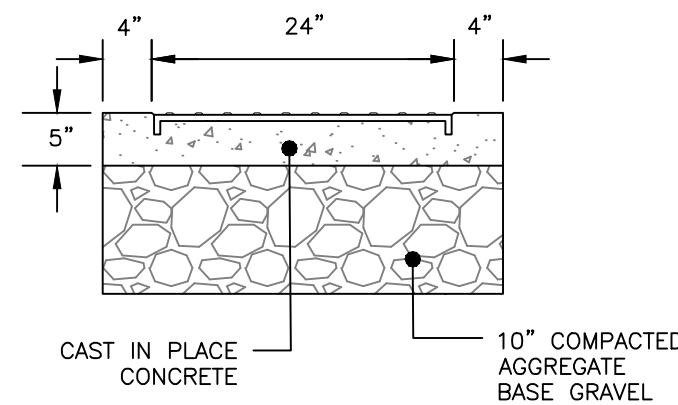
REPAIR/MAINTENANCE TO EXISTING BRICK SIDEWALKS:
VERMONT PAVER; SUPPLIED BY GAGNE AND SONS.
SPECIFICATION NUMBER: "VERMONT BACKER BRICK", ITEM
NUMBER # VBBB



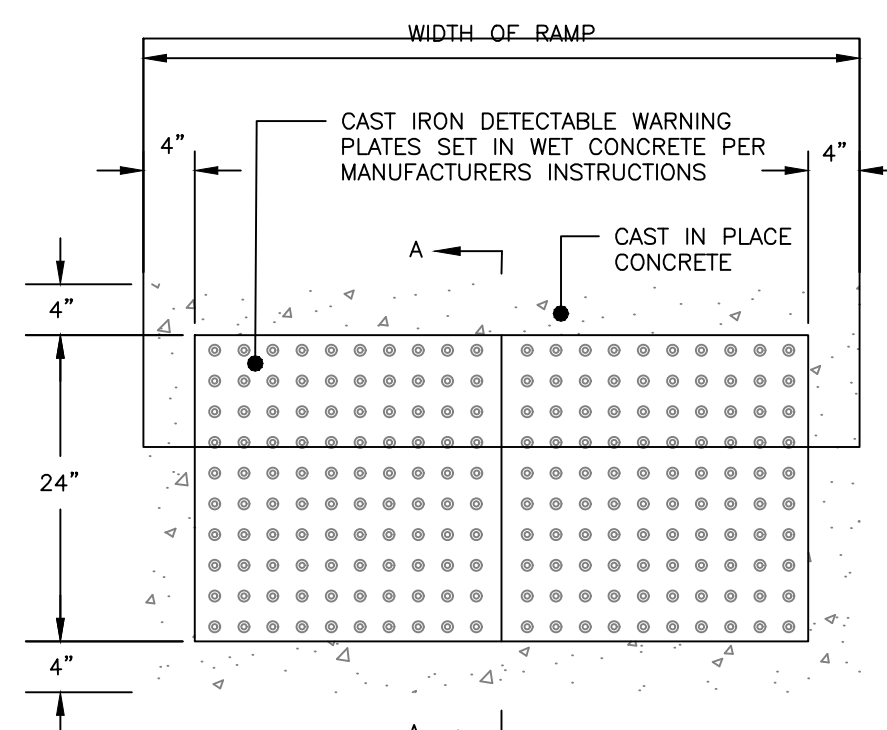
BRICK DRIVEWAY APRON WITH BITUMINOUS BASE DETAIL

NOT TO SCALE

1. ALL DETECTABLE WARNING PLATES SHALL BE UNCOATED CAST IRON. FOLLOW MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION.
2. CAST IN PLACE CONCRETE SHALL MEET SPECIFICATIONS FOR MDOT CLASS A STRUCTURAL CONCRETE, MINIMUM COMPRESSIVE STRENGTH 4,000 PSI. THE EXPOSED CONCRETE BORDER SHALL RECEIVE A UNIFORM BROOM FINISH PERPENDICULAR TO THE FLOW OF PEDESTRIAN TRAFFIC.
3. TRUNCATED DOWNS SHALL BE ALIGNED IN ROWS, PARALLEL AND PERPENDICULAR TO THE PREDOMINANT DIRECTION OF TRAVEL. TRUNCATED DOME BRICKS AND GRANITE PAVERS ARE NOT ALLOWED.
4. SIZE: THE DETECTABLE WARNING PLATES SHALL EXTEND 24 INCHES MINIMUM IN THE DIRECTION OF TRAVEL AND THE FULL WIDTH OF THE CURB RAMP, LANDING, OR BLENDED TRANSITION TO THE STREET.
5. ORIENTATION: THE DETECTABLE WARNING PANEL SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE IS 6 INCHES MINIMUM AND 18 INCHES MAXIMUM FROM THE CURB LINE. THE PANEL SHALL BE ORIENTED TO THE DIRECTION OF TRAVEL AS IDENTIFIED BY THE POINT OF EGRESS.

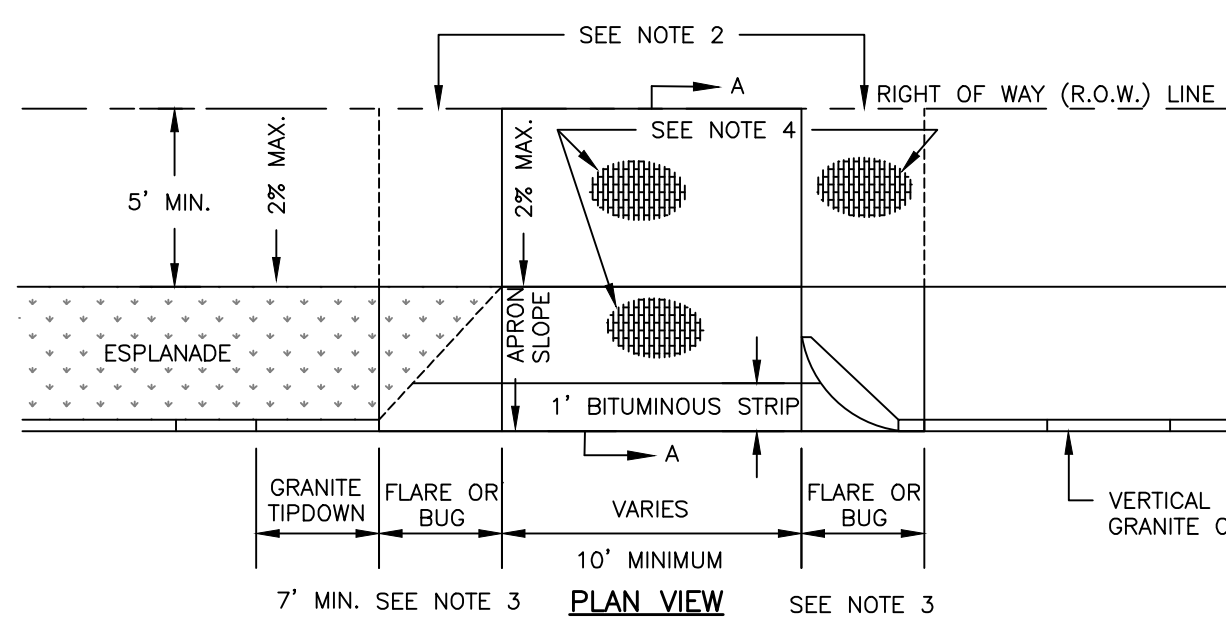


SECTION A-A



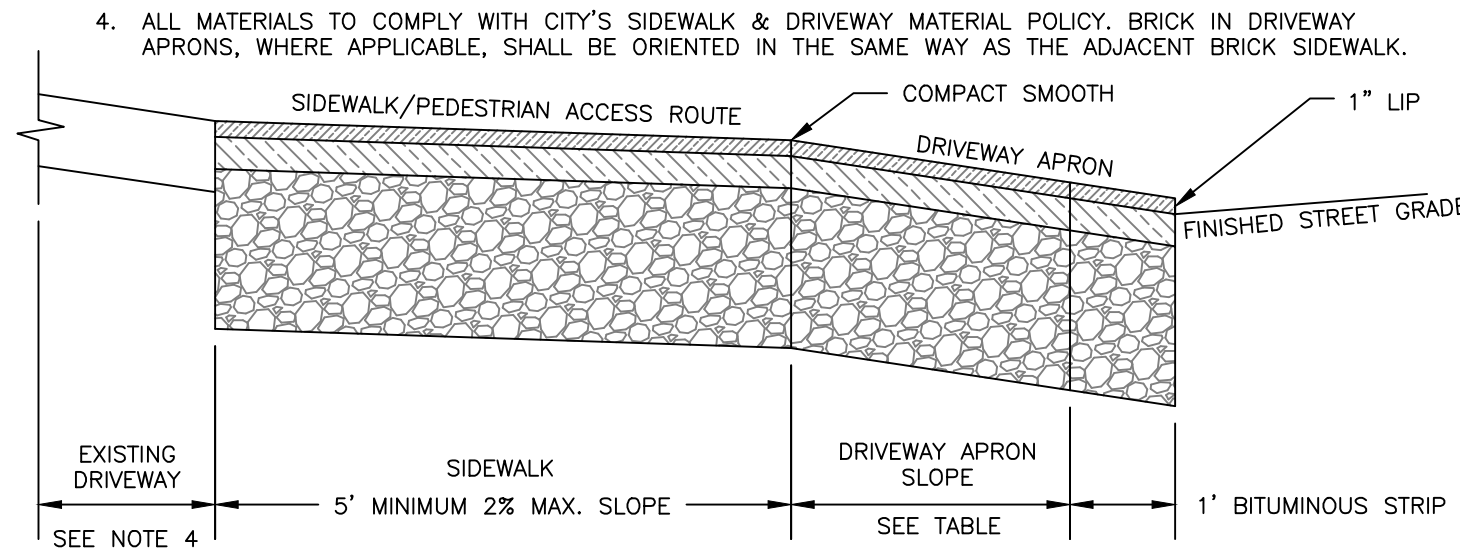
PLAN VIEW

SIDEWALK RAMP DETECTABLE WARNING PANEL
NOT TO SCALE



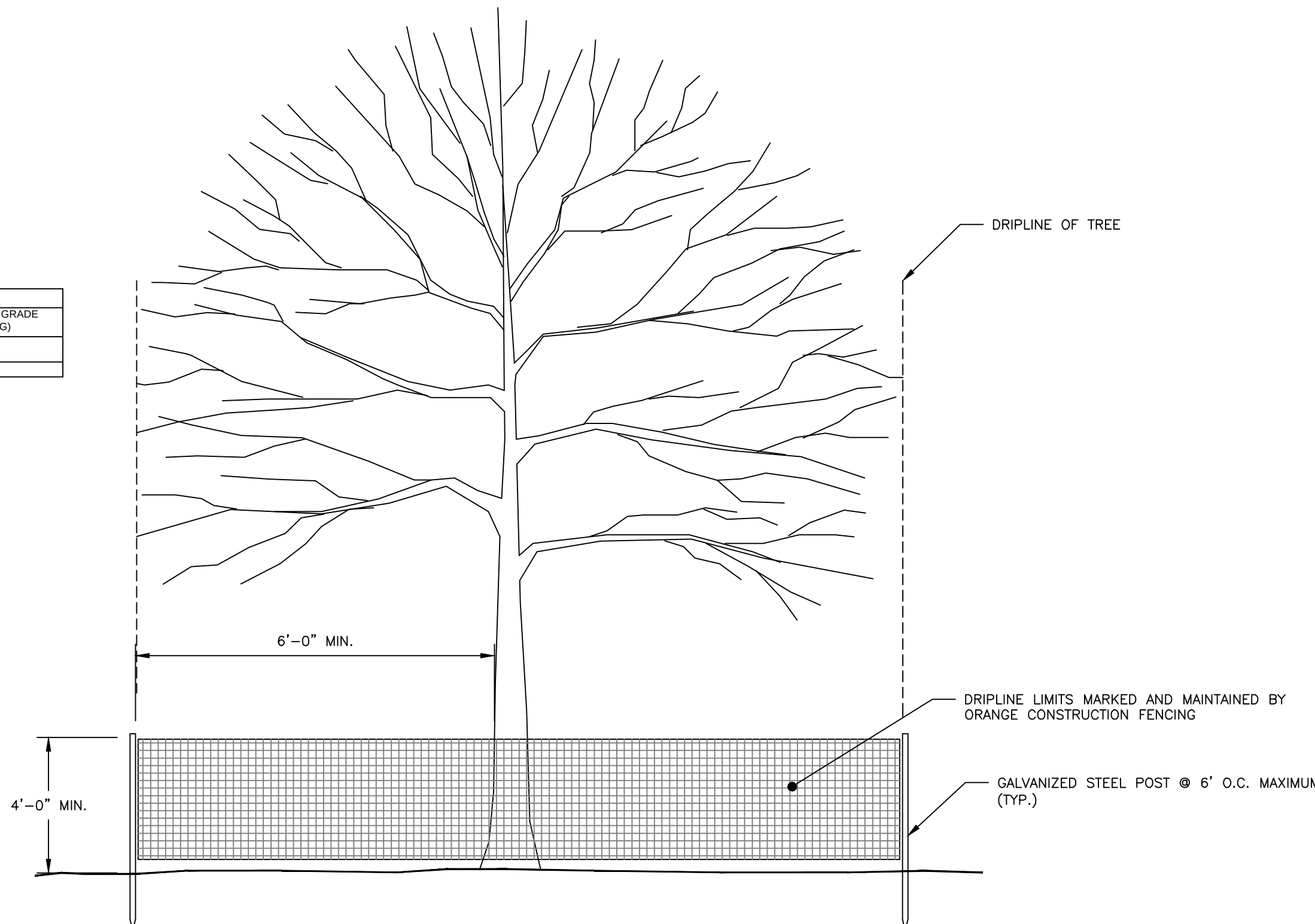
APRON SLOPE TABLE	
LAND USE	MAXIMUM RECOMMENDED GRADE CHANGE AT STREET (G)
RESIDENTIAL WITH <9 PARKING SPACES	14%
ALL OTHER DRIVEWAYS	10%

1. MATCH EXISTING GRADE AT R.O.W. LINE, WHERE REQUIRED TO MEET A.D.A. AND DRIVEWAY APRON SLOPE REQUIREMENTS, A CONSTRUCTION EASEMENT MAY BE REQUIRED.
2. IF MATCHING THE EXISTING GRADE AT ROW CAUSES APRON SLOPE TO EXCEED RECOMMENDED %, SIDEWALK TRANSITION AREAS MAY BE ADDED, BUT SHALL NOT EXCEED 8.33%.
3. TWO-FOOT RADII CORNER GRANITE PICE ("BUGS") ARE REQUIRED AT LOW-VOLUME DRIVEWAYS UNLESS OTHERWISE DIRECTED BY DPW. AT OTHER DRIVEWAYS, STANDARD FLARE/TIPDOWN TREATMENTS SHALL BE USED.



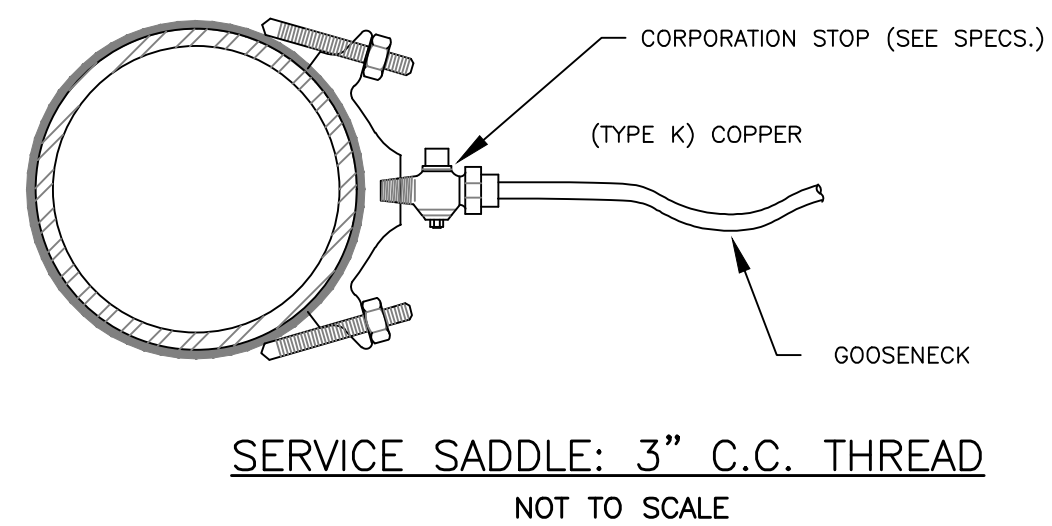
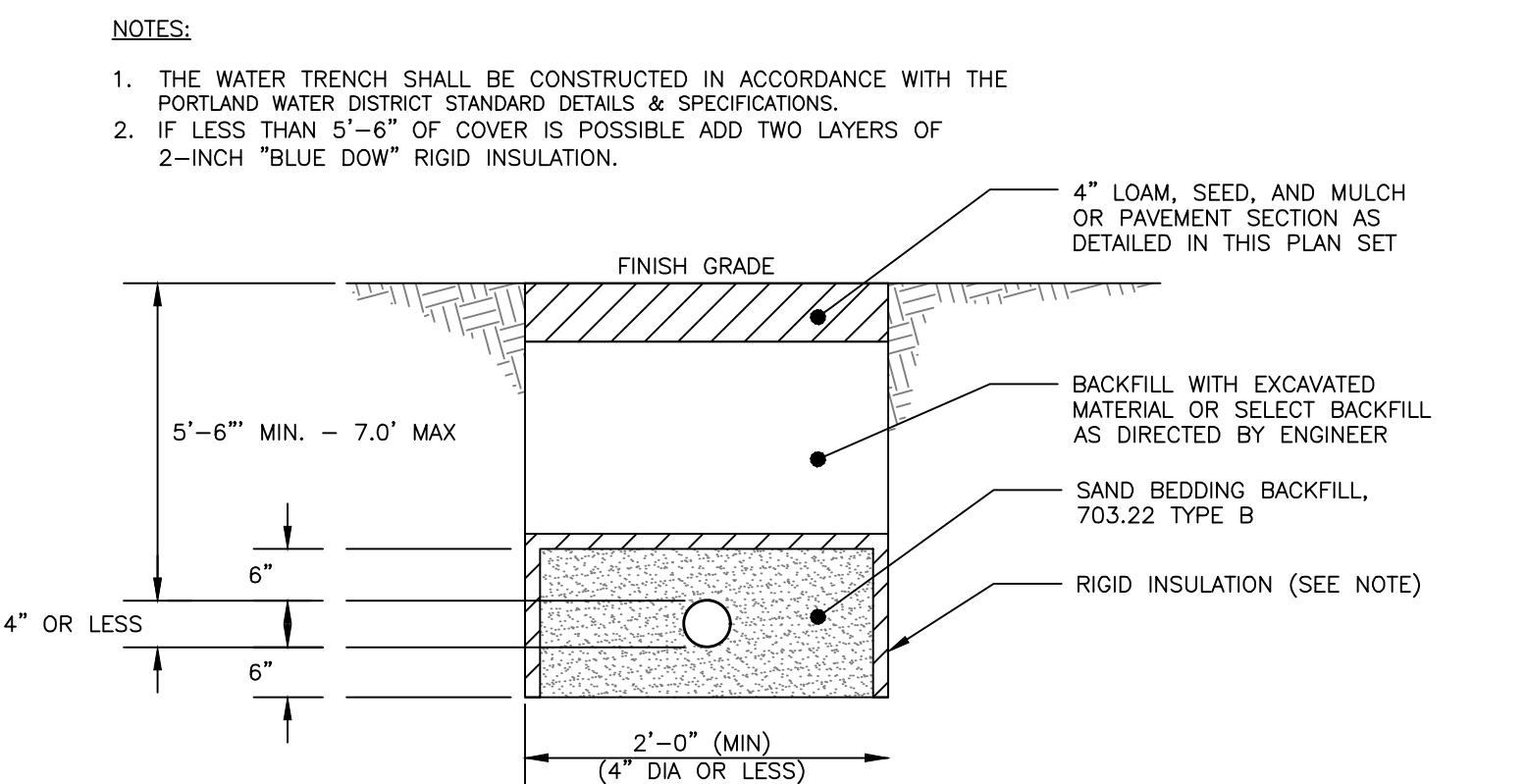
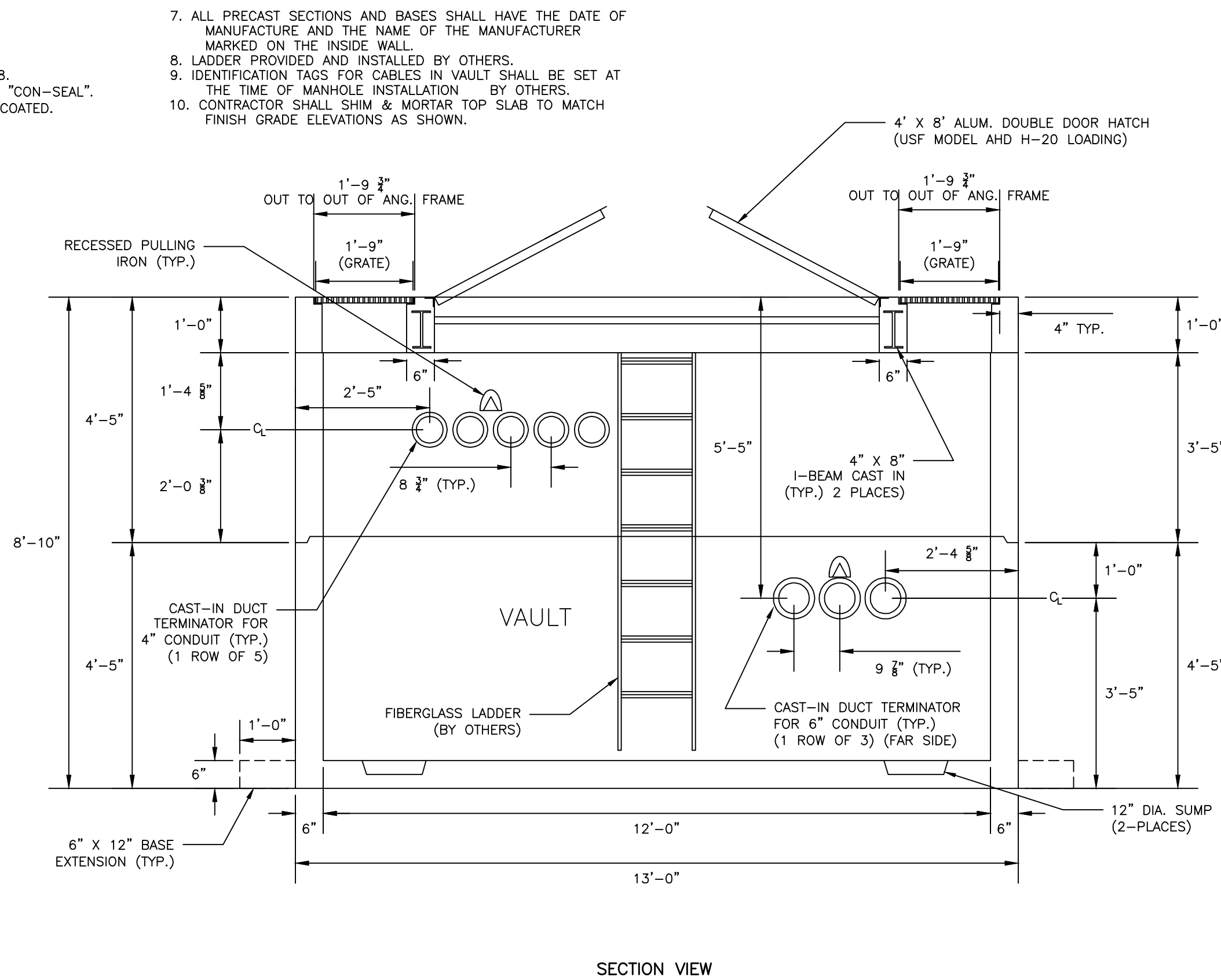
SECTION A-A

DRIVEWAY APRON
NOT TO SCALE

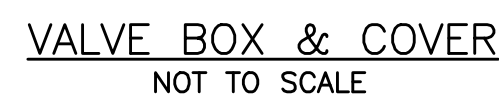
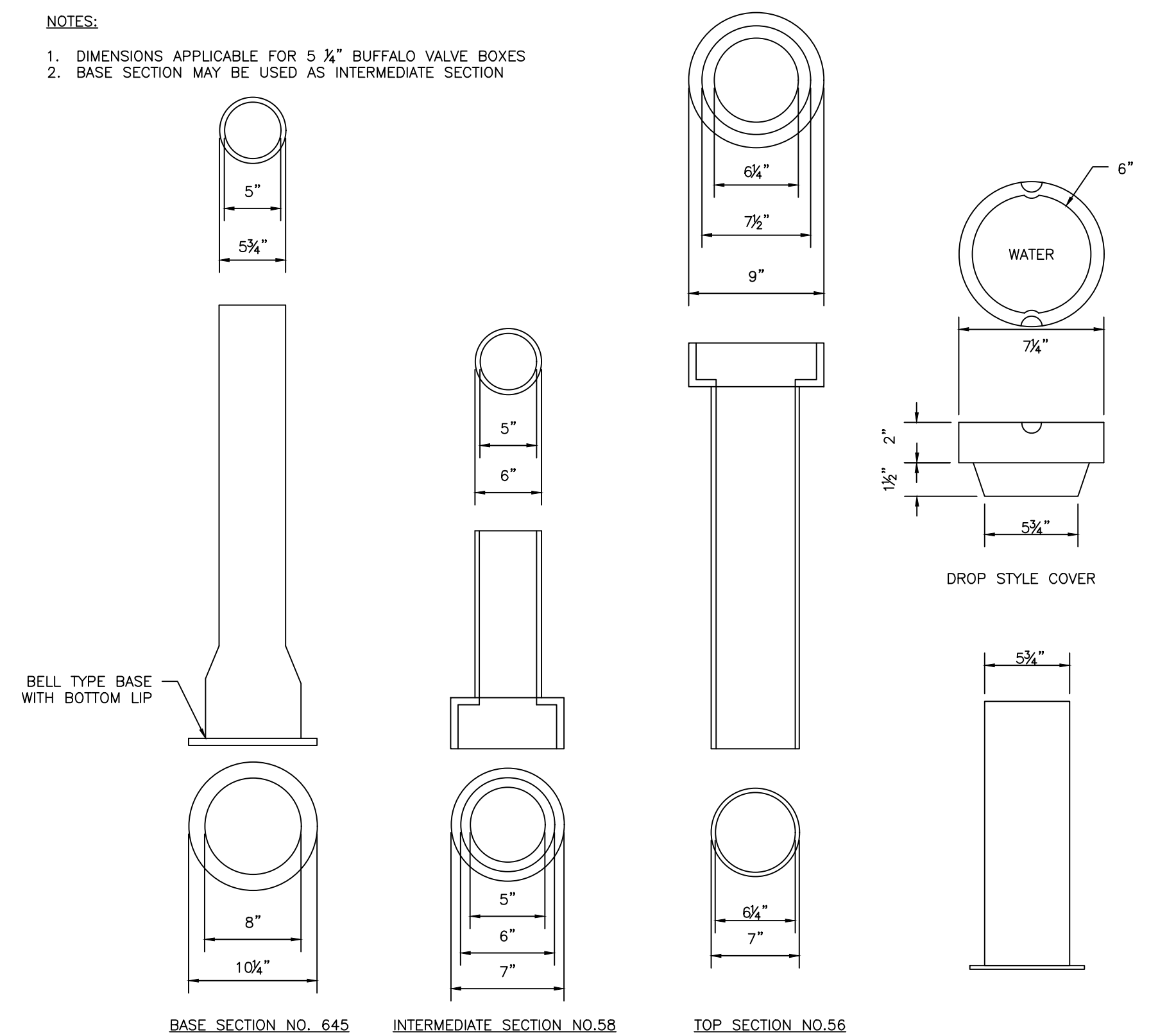


1. TREE PROTECTION FENCING SHALL BE INSTALLED PRIOR TO ANY CONSTRUCTION ACTIVITY.
2. INSTALL PROTECTIVE FENCING TO LIMIT OF DRIPLINE ON TREE OR A MINIMUM OF 6' FROM TRUNK WHEN NECESSARY, WITH PRIOR PERMISSION OF LANDSCAPE ARCHITECT.
3. DO NOT STORE CONSTRUCTION EQUIPMENT, MATERIALS, TOOLS, ETC. WITHIN PROTECTIVE FENCING.
4. MAINTAIN FENCING IN A NEAT AND ORDERLY FASHION THROUGHOUT CONSTRUCTION PERIOD.

TREE PROTECTION DETAIL
NOT TO SCALE



	6" PIPE			8" PIPE			12" PIPE		
H	D	L	D	L	D	L	D	L	
12"	1'-6-1/2"	0'-10-1/2"	1'-7-1/2"	0'-9-1/2"	1'-11-1/2"	0'-5-1/2"	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'-6-7/8"			
14"	1'-8-1/2"	1'-1-5/8"	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'-2-3/4"	0'-9-1/8"			
16"	1'-10-1/2"	1'-3-1/8"	1'-11-1/2"	1'-2-1/8"	2'-3-1/2"	0'-1-1/8"			
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'-7-7/8"	2'-2-1/2"	1'-7-3/8"	2'-6-1/2"	1'-2-7/8"			
20"	2'-2-1/2"	1'-9-1/16"	2'-3-1/8"	1'-8-13/16"	2'-6-5/8"	1'-4-1/4"			
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'-5-1/8"	1'-11-5/8"	2'-9-1/2"	1'-7-5/8"			
23"	2'-5-1/2"	2'-1-1/8"	2'-6-1/8"	2'-0-1/2"	2'-10-1/2"	1'-8-1/2"			
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'-7-3/8"	2'-10-1/2"	2'-6-11/8"	3'-2-1/2"	2'-2-1/8"			
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"	2'-12-1/8"	3'-2-1/2"	2'-11-1/8"	3'-6-1/2"	2'-7-1/8"			
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'-6-7/8"	3'-6-1/2"	3'-5-7/8"	3'-10-1/2"	3'-1-7/8"			
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'-11-1/8"	3'-9-1/2"	3'-10-1/4"	4'-1-1/2"	3'-6-1/4"			
39"	3'-9-1/2"	4'-0-1-1/8"	3'-10-1/2"	3'-11-1/8"	4'-2-1/2"	3'-7-1/8"			
40"	3'-10-1/2"	4'-2-1/16"	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'-4-1/8"	4'-1-1/2"	4'-3-1/8"	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'-0-1/8"			
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'-11-1/16"	4'-5-1/2"	4'-9-1/16"	4'-9-1/2"	4'-5-1/16"			
47"	4'-5-1/2"	4'-15-1/16"	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"	5'-0-1/2"	5'-3-1/16"	5'-1-1/2"	5'-3-1/16"	5'-1-1/2"	5'-0-1/16"			
51"	5'-1-1/2"	5'-5-5/8"	5'-2-1/2"	5'-4-5/8"	5'-2-1/2"	5'-0-5/8"			
52"	5'-2-1/2"	5'-7-1/16"	5'-3-1/2"	5'-6-1/16"	5'-3-1/2"	5'-2-1/16"			
53"	5'-4-1/2"	5'-8-7/16"	5'-0-1/2"	5'-7-7/16"	5'-4-1/2"	5'-3-7/16"			
54"	5'-6-1/2"	5'-10-1/8"	5'-1-1/2"	5'-9-1/8"	5'-5-1/2"	5'-4-1/8"			
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"			



PERMIT LEVEL
NOT ISSUED FOR
CONSTRUCTION

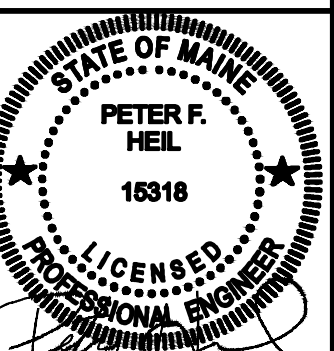
[illegible]

UTILITY DETAILS - 1

PROJECT NAME/ ADDRESS:	MERCY HOSPITAL REDEVELOPMENT
CLIENT/OWNER OF RECORD:	NEWHEIGHT REDFERN, LLC
	217 COMMERCIAL STREET, SUITE 205, PORTLAND ME 04101


A C C O R N
 —————
 ENGINEERING, INC.

FILE:	1140_CIVIL
IN:	1140
SCALE:	AS NOTED
DESIGNED BY:	PFH
DRAWN BY:	KRB
CHECKED BY:	WHS

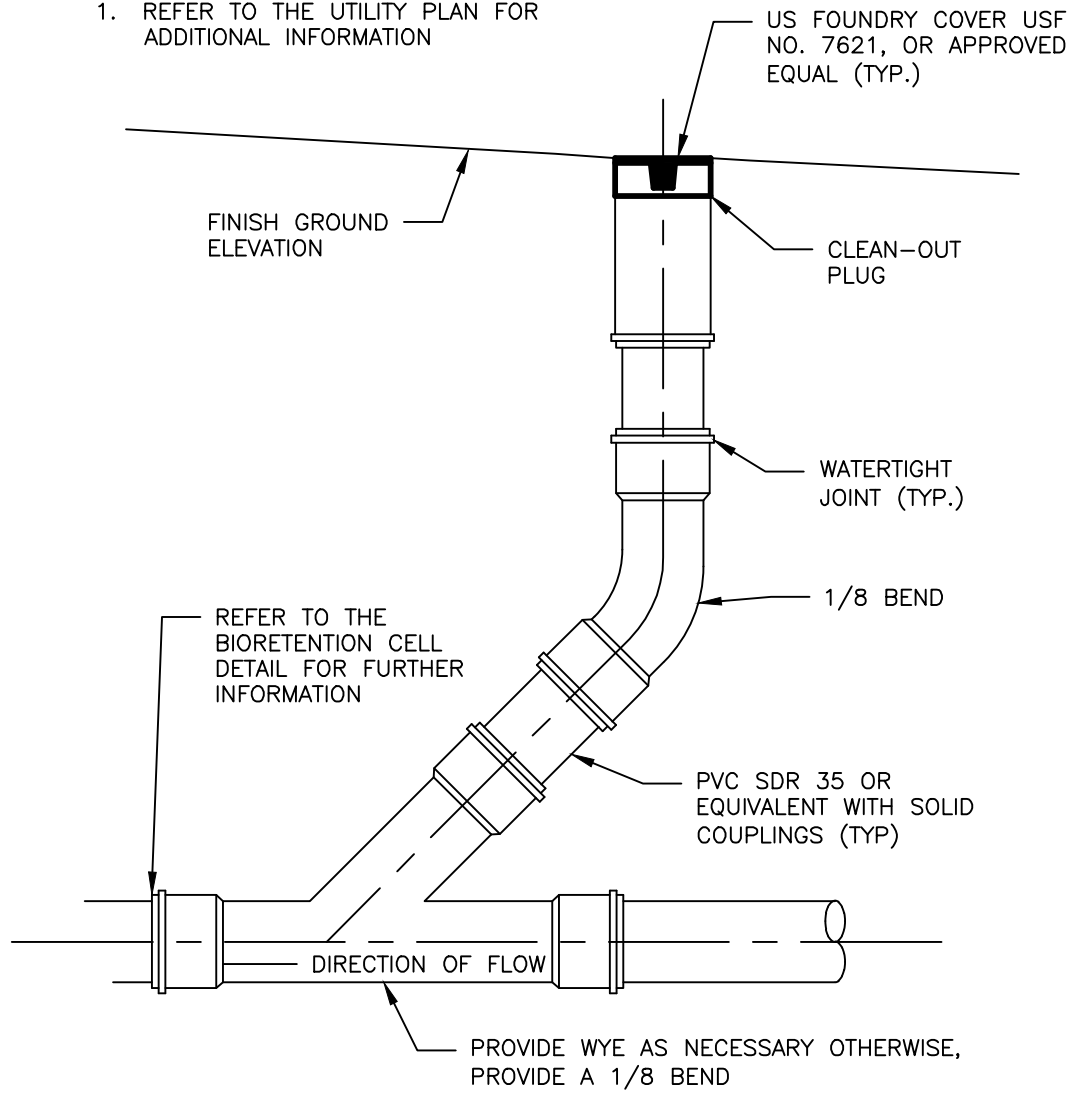


DRAWING NO.

C-42

NOTES:

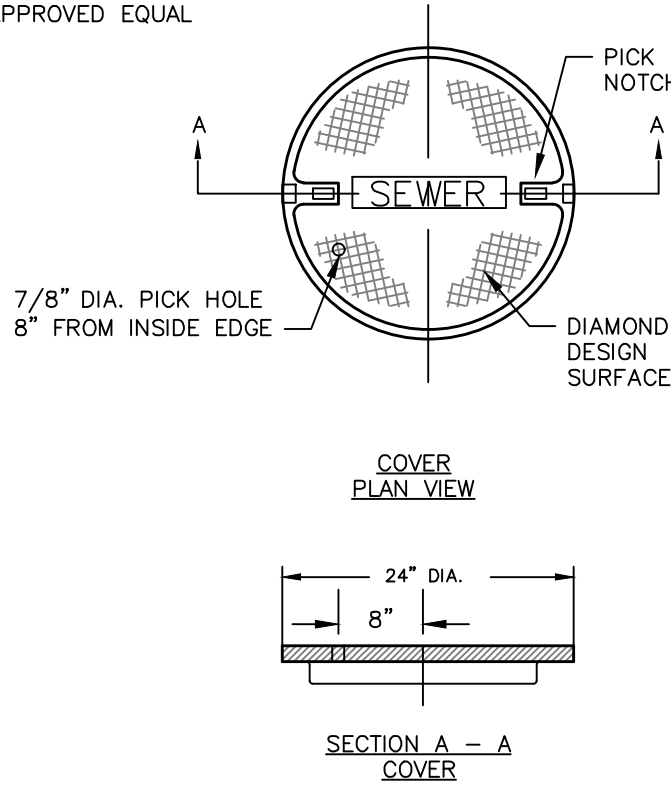
1. REFER TO THE UTILITY PLAN FOR ADDITIONAL INFORMATION



CLEANOUT DETAIL
NOT TO SCALE

NOTES:

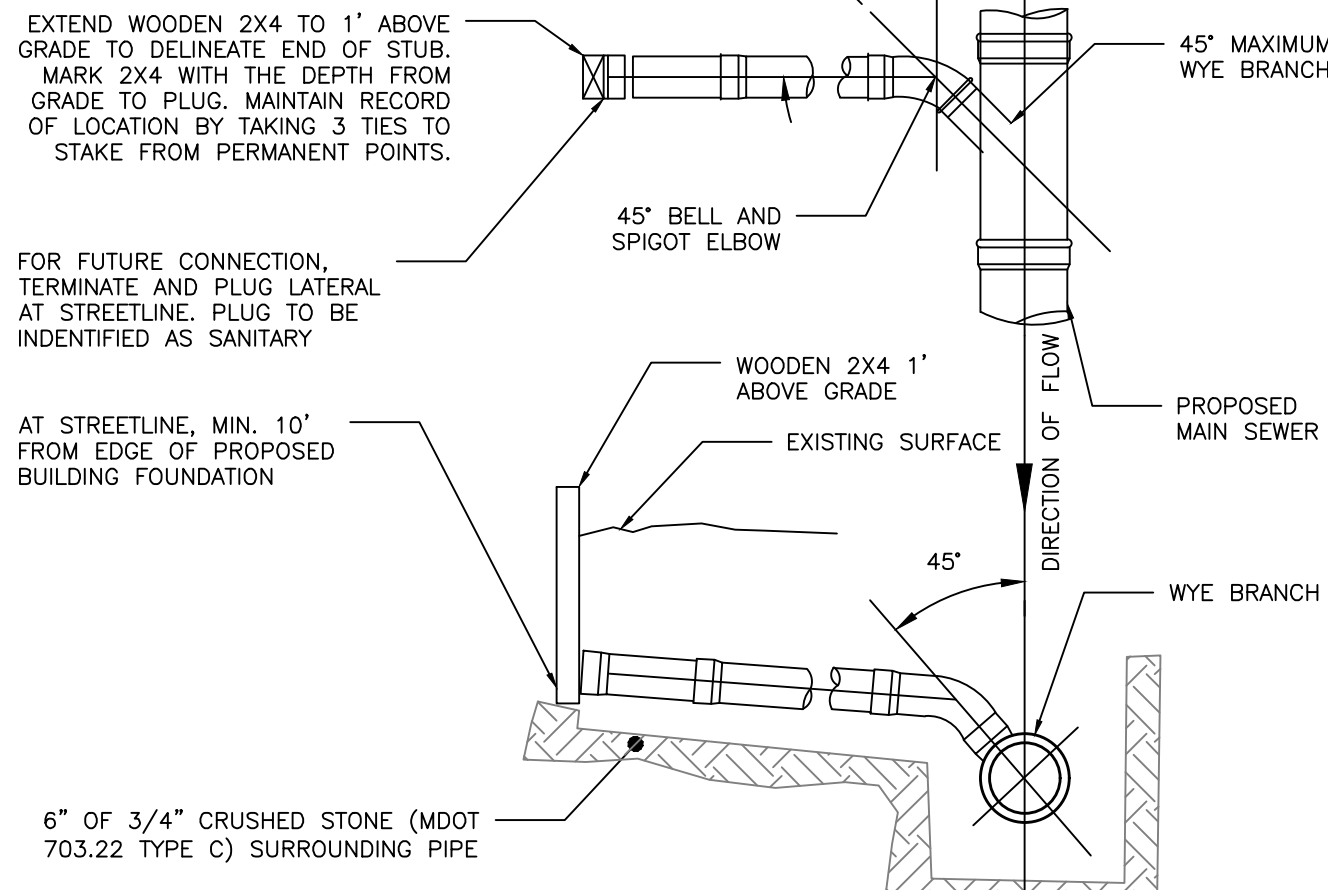
1. ALL MANHOLE COVERS SHALL BE SOLID AND SHALL HAVE ONE 7/8" DIAMETER DRILLED PICK HOLE, LOCATED 8" FROM THE CENTER OF THE COVER.
2. ALL SANITARY AND STORMWATER/DRAIN MANHOLE COVERS SHALL BE 24" x 5".
3. ALL SANITARY MANHOLE COVERS AND SHALL HAVE "SEWER" CAST INTO THE COVER.
4. ALL STORMWATER/DRAIN MANHOLE COVERS SHALL HAVE "DRAIN" CAST INTO THE COVER.
5. APPROVED MANHOLE FRAMES:
 - 5.1. EAST JORDAN = 1690Z
 - 5.2. NEENAH = R-1496
 - 5.3. OR APPROVED EQUAL
6. APPROVED MANHOLE COVERS
 - 6.1. EAST JORDAN = 2160A
 - 6.2. NEENAH = R-1496
 - 6.3. OR APPROVED EQUAL



CAST IRON MANHOLE COVER AND FRAME
NOT TO SCALE

NOTES:

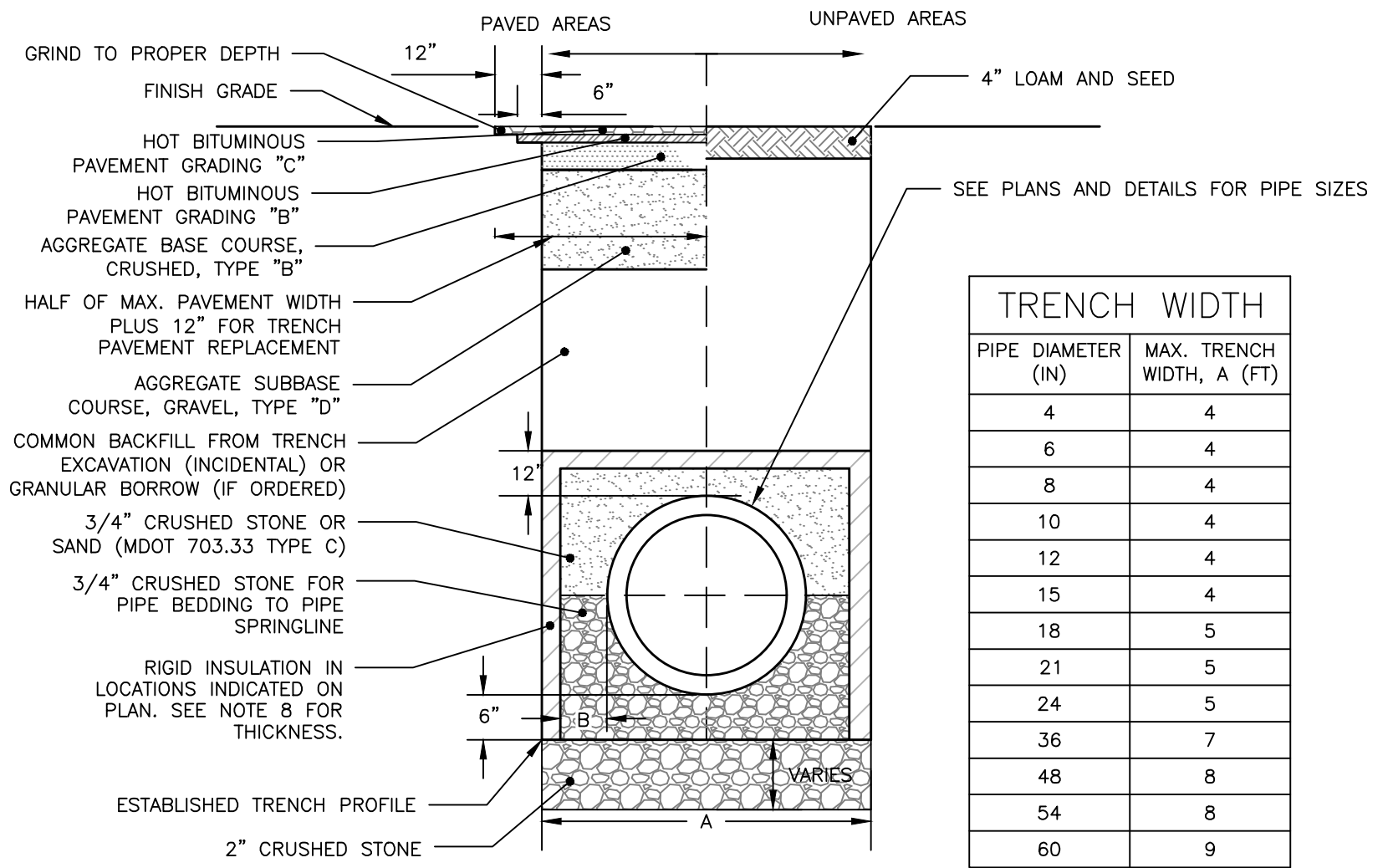
1. LOCATION WITH WARNING TAPE SHALL BE INSTALLED OVER CENTERLINE OF PIPE AT A MAXIMUM OF 24 INCHES BELOW FINISH GRADE.
2. SITE CONTRACTOR TO COORDINATE CONNECTION OF SEWER LATERAL TO STRUCTURE PLUMBING WITH ARCHITECTURAL CONTRACTOR.
3. CONNECTION OF PROPOSED SEWER LATERAL TO STRUCTURE PLUMBING SHOULD INCORPORATE USE OF SIMILAR PIPE MATERIALS. IN THE CASE OF DISSIMILAR PIPES BEING USED, A FERNCO FLEXIBLE COUPLING SHALL BE USED.



SEWER TEE/WYE CONNECTION DETAIL
NOT TO SCALE

DESIGN NOTES:

1. ANY ALTERNATE TRENCHING METHODS SHALL BE APPROVED IN ADVANCE BY THE CITY.
2. ALL CONSTRUCTION METHODS SHALL CONFORM TO THE CITY OF PORTLAND TECHNICAL STANDARDS FIGURE II-2.
3. BRACING & SHEETING OR OTHER TRENCH PROTECTION TO BE PROVIDED TO MEET APPLICABLE STATE AND O.S.H.A. SAFETY STANDARDS. ALL SUCH TRENCH PROTECTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
4. WHERE APPLICABLE, PERFORATIONS IN STORM DRAIN (PERF. SD) SHALL BE ORIENTED UP.
5. ALL STORM DRAINS SHALL BE PVC SDR 35 MIN PS-46 RATING OR IN ACCORDANCE WITH CITY OF PORTLAND TECHNICAL MANUAL, SECTION 2 - SANITARY SEWER AND STORM DRAIN - PART 2.5.2
6. IN PAVED AREAS, DEPTHS OF GRAVEL AND HOT MIX ASPHALT PAVEMENT SHALL MATCH THE GREATER OF EXISTING CONDITIONS OR THE REQUIREMENTS FOR THE CORRESPONDING STREET CLASSIFICATION.
7. THIS DETAIL SHALL BE APPLIED ONLY TO PIPE TRENCHES WITHIN OF THE CITY OF PORTLAND R.O.W.
8. STORM DRAIN COVER BETWEEN 2' AND 3' SHALL INCLUDE 4" OF RIGID INSULATION, COVER BETWEEN 3' AND 4' SHALL INCLUDE 2" RIGID INSULATION, OTHER UTILITIES: ADD 2" OF RIGID INSULATION FOR EACH FOOT ABOVE MINIMUM DEPTH.
9. DEPTH OF BITUMINOUS PAVEMENT AND AGGREGATE COURSES SHALL BE DETERMINED BY STREET CLASSIFICATION.
10. DIMENSION B SHALL BE SUFFICIENT TO ALLOW CRUSHED STONE BEDDING TO BE PLACED AND COMPACTED UNDER THE HAUNCHES OF THE PIPE; BUT IN ALL CASES DIMENSION B SHALL BE AT LEAST 9".
11. DIMENSION A IS THE MAXIMUM WIDTH ALLOWED FOR CALCULATING PAY QUANTITIES UNDER GRANULAR BORROW, CRUSHED STONE, STRUCTURAL EARTH EXCAVATION, AND STRUCTURAL ROCK EXCAVATION. DIMENSION A SHALL BE BASED ON PIPE DIAMETER D, AS SET FORTH IN THE TABLE BELOW.

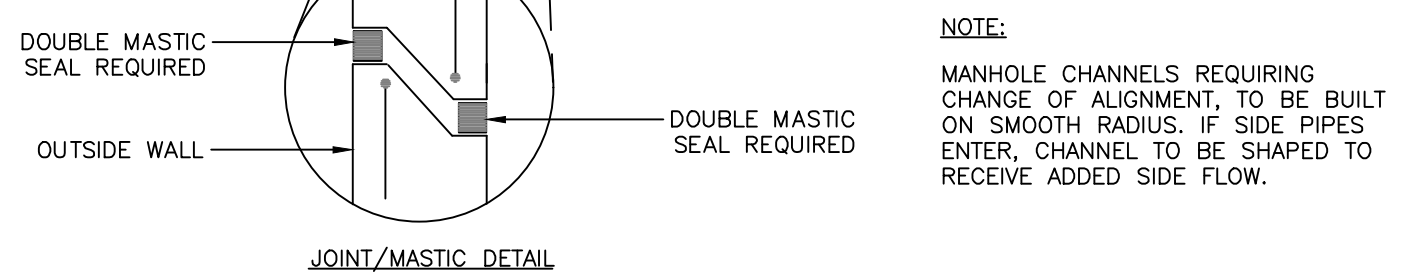
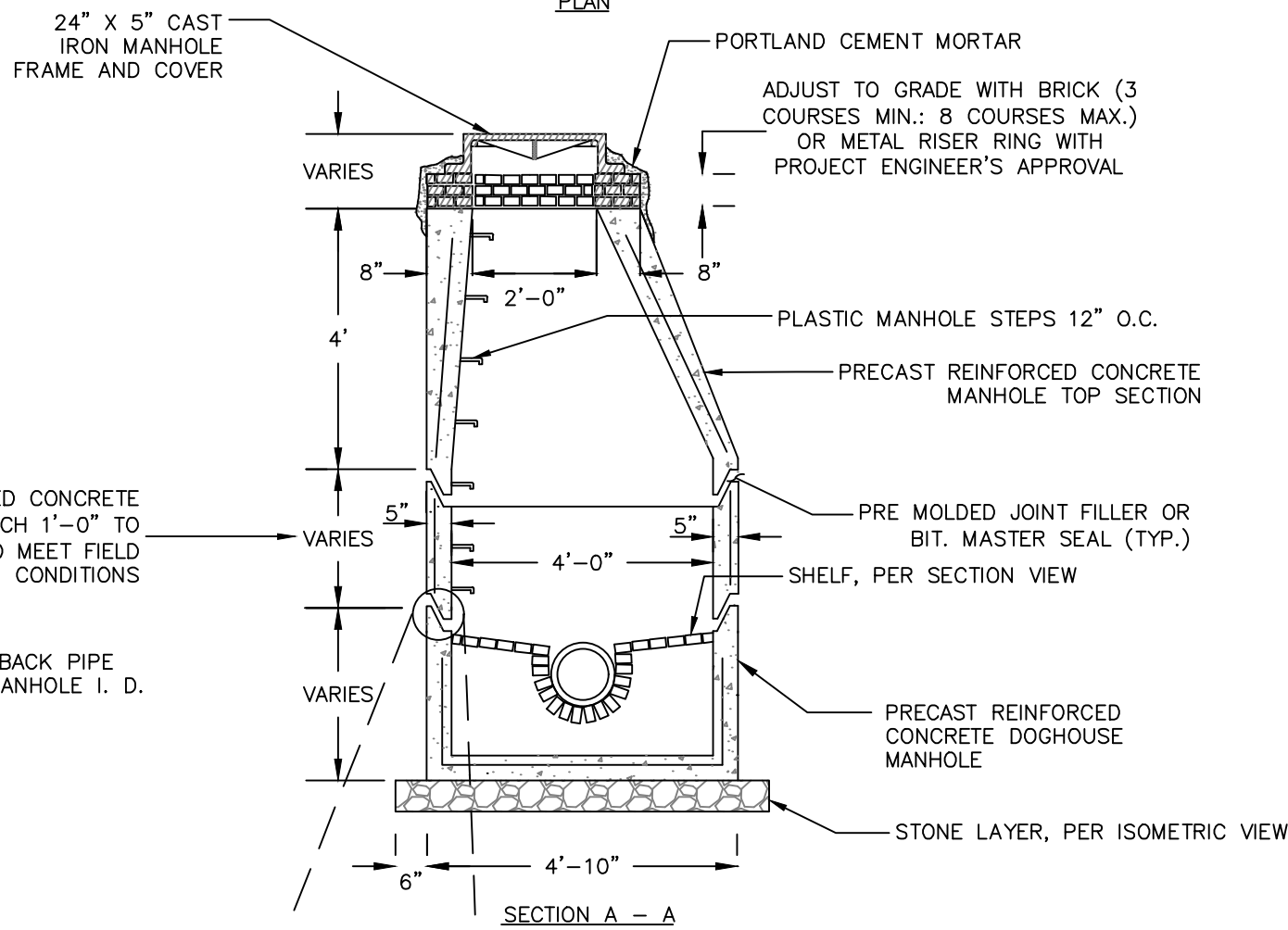
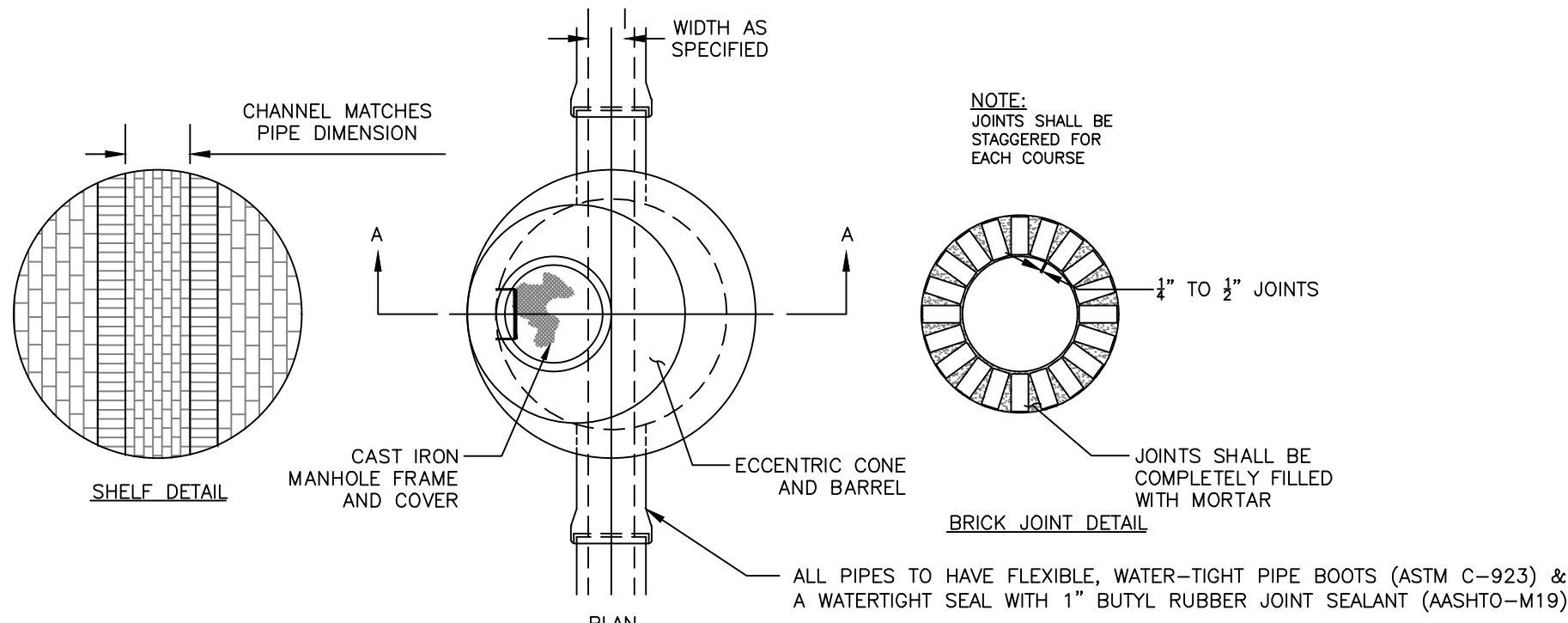


PIPE DIAMETER (IN)	MAX. TRENCH WIDTH, A (FT)
4	4
6	4
8	4
10	4
12	4
15	4
18	5
21	5
24	5
36	7
48	8
54	8
60	9

CITY OF PORTLAND TYPICAL PIPE TRENCH DETAIL WITHIN RIGHT-OF-WAY
NOT TO SCALE

1. ALL CONCRETE SHALL HAVE A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 4000 lbs. PER SQ. INCH AT THE END OF 28 DAYS, UNLESS OTHERWISE NOTED.
2. MANHOLES MAY BE CONSTRUCTED OF PRECAST REINFORCED CONCRETE, OR CAST IN PLACE.
3. PRECAST REINFORCED CONE BARREL MANUFACTURED PER ASTM SPEC. C-478.
4. ALL STORM AND SEWER MANHOLE COVERS SHALL BE SOLD AND SHALL HAVE ONE " DIAMETER DRILLED PICK HOLE & LOCATED 8" FROM THE CENTER OF THE COVER.
5. ALL SANITARY MANHOLE COVERS SHALL HAVE "SEWER" CAST INTO THE COVER. ALL STORMWATER/DRAIN MANHOLE COVERS SHALL HAVE "DRAIN" CAST INTO THE COVER.
6. ALL MANHOLE RISERS SHALL BE ETHERIDGE 24" OR APPROVAL EQUAL.
7. SEWER BRICK SHALL CONFORM TO ASTM SPEC. DESIGNATE ON C-32-63, GRADE MA AND SA.
8. ALL SANITARY MANHOLES SHALL HAVE A WATERPROOFING COATING APPLIED TO THE EXTERIOR SURFACE.
9. CATCH BASIN FRAMES FOR TYPE A4 CATCH BASIN CURB INLETS SHALL BE ETHERIDGE DR5A OR APPROVED EQUAL.
10. CASTINGS SHALL CONFORM TO ASTM DESIGNATION A48-CLASS 35.
11. EXISTING MANHOLES, CATCH BASINS, FRAMES, AND COVERS SHALL BE SALVAGED BY THE CONTRACTOR, AND SHALL REMAIN THE PROPERTY OF THE CITY OF PORTLAND.
12. ALL CATCH BASIN OUTLETS SHALL BE INSTALLED WITH A CASCO TRAP PER DETAIL.

GENERAL NOTES FOR MANHOLES AND CATCH BASINS

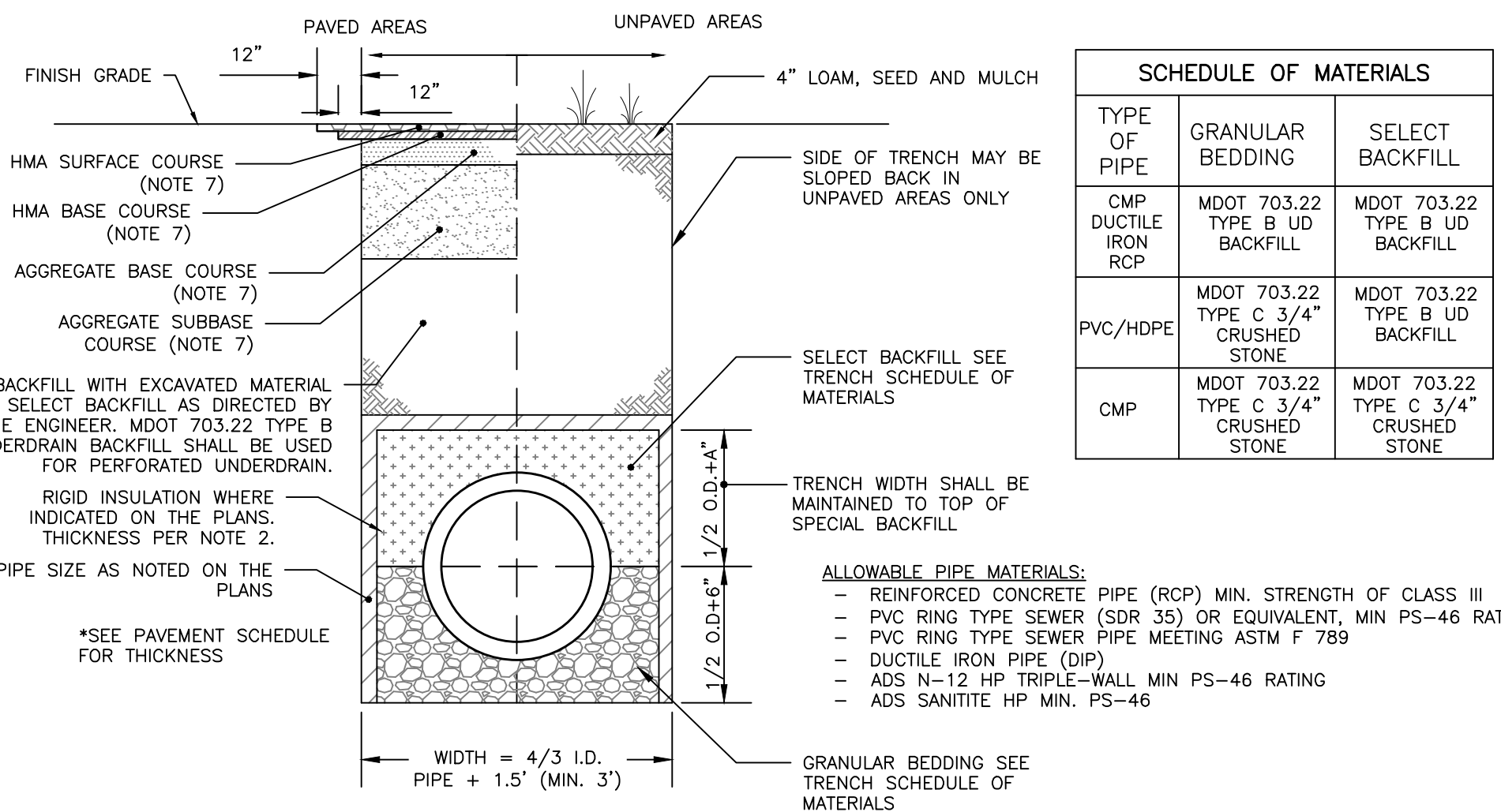


- NOTES:
1. UNLESS OTHERWISE SPECIFIED, CONCRETE SHALL BE 4000 PSI @28 DAYS.
 2. RECONSTRUCT INTERIOR MANHOLE INVERT AS NECESSARY TO ACCOMMODATE NEW PIPE.
 3. THIS DETAIL IS INTENDED TO PROVIDE ADDITIONAL INFORMATION TO THE CONTRACTOR IN REGARDS TO THE CONNECTION OF THE DOGHOUSE MANHOLE BASE TO THE EXISTING SANITARY SEWER SYSTEM.
 4. MANHOLES MAY BE CONSTRUCTED OF PRECAST REINFORCED CONCRETE, OR CAST IN PLACE.
 5. PRECAST REINFORCED CONE BARREL MANUFACTURED PER ASTM SPEC. C-478.
 6. ALL MANHOLE RISERS SHALL BE ETHERIDGE 24" OR APPROVAL EQUAL.
 7. ALL SANITARY MANHOLES SHALL HAVE A WATERPROOFING COATING APPLIED TO THE EXTERIOR SURFACE.
 8. CASTINGS SHALL CONFORM TO ASTM DESIGNATION A48-CLASS 35.

PRECAST CONCRETE MANHOLE - CITY OF PORTLAND
NOT TO SCALE

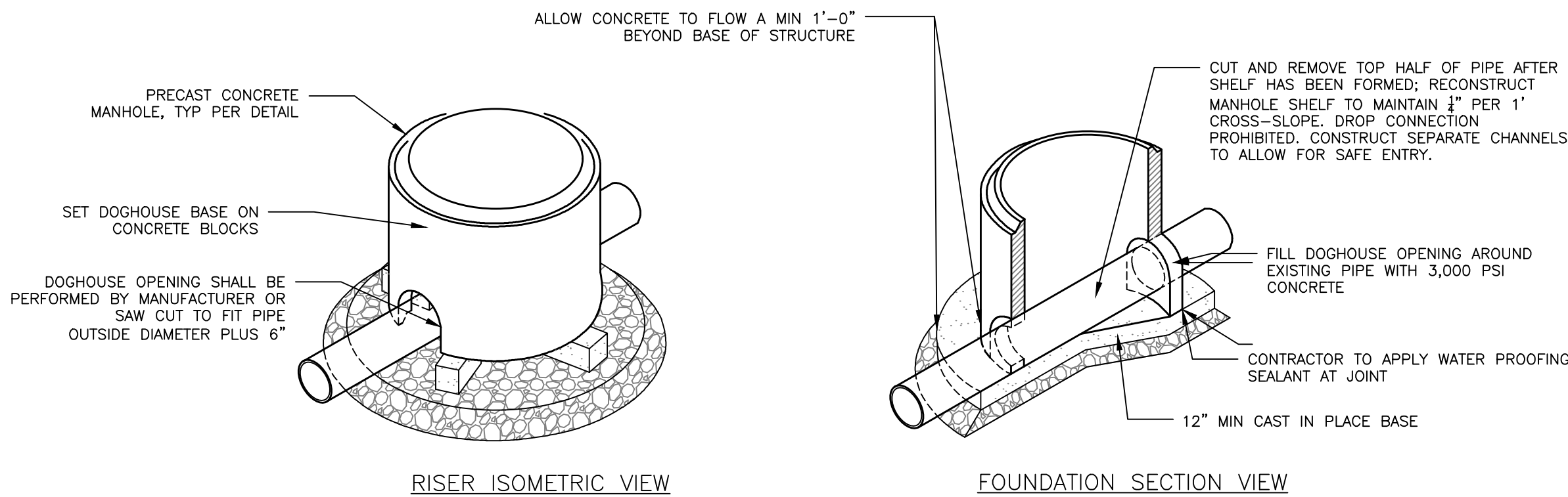
NOTES:

1. BRACING AND SHEETING OR OTHER TRENCH PROTECTION TO BE PROVIDED TO MEET APPLICABLE STATE AND O.S.H.A. SAFETY STANDARDS. ALL SUCH TRENCH PROTECTION TO BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. STORM DRAIN COVER BETWEEN 2' AND 3' SHALL INCLUDE 4" OF RIGID INSULATION, COVER BETWEEN 3' AND 4' SHALL INCLUDE 2" RIGID INSULATION. OTHER UTILITIES: ADD 2" OF RIGID INSULATION FOR EACH FOOT ABOVE MINIMUM DEPTH.
3. INSTALL WARNING TAPE DIRECTLY ABOVE UTILITIES AT THE TOP OF SUBGRADE.
4. MINIMUM COVER
 - 4.1. 2'-0" - STORM DRAIN
 - 4.2. 5'-0" - SEWER
5. NO TREES SHALL BE PLANTED WITHIN 5' OF A SEWER PIPE OR SERVICE.
6. THIS DETAIL SHALL BE APPLIED ONLY TO DRAINAGE PIPE TRENCHES OUTSIDE OF THE CITY OF PORTLAND ROW.
7. THICKNESS AS NOTED BY SURFACE DETAILS.
8. ALL PROPOSED TREES PLANTED WITHIN 10' OF A STORM OR SEWER PIPE SHALL BE PLANTED AT A DEPTH NO GREATER THAN 3' DEEP. PERMEABLE LANDSCAPE FABRIC SHALL CREATE A ROOT BARRIER AROUND THE PIPES. CONTRACTOR SHALL COORDINATE WITH THE LANDSCAPE DRAWINGS.

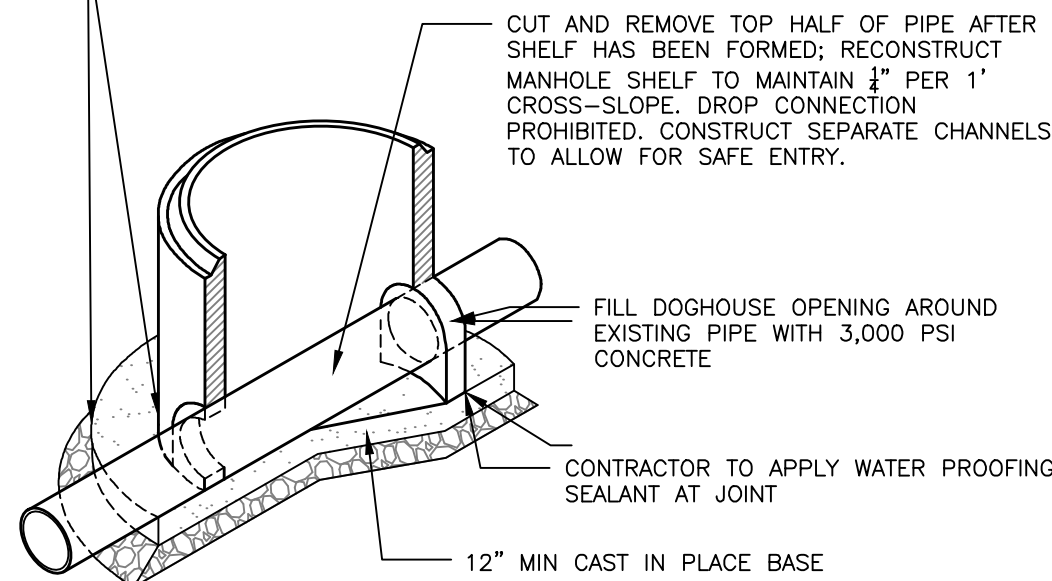


SCHEDULE OF MATERIALS		
TYPE OF PIPE	GRANULAR BEDDING	SELECT BACKFILL
CMP DUCTILE IRON RCP	MDOT 703.22 TYPE B UD BACKFILL	MDOT 703.22 TYPE B UD BACKFILL
PVC/HDPE	MDOT 703.22 TYPE C 3/4" CRUSHED STONE	MDOT 703.22 TYPE B UD BACKFILL
CMP	MDOT 703.22 TYPE C 3/4" CRUSHED STONE	MDOT 703.22 TYPE C 3/4" CRUSHED STONE

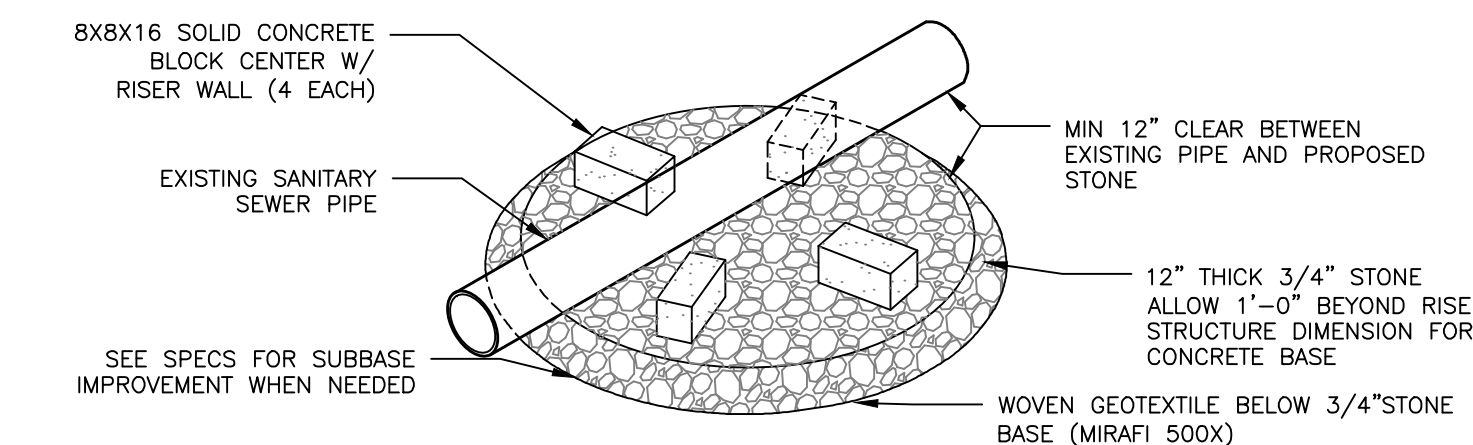
STORM DRAIN AND SEWER TYPICAL TRENCH SECTION WITHIN PROPERTY
NOT TO SCALE



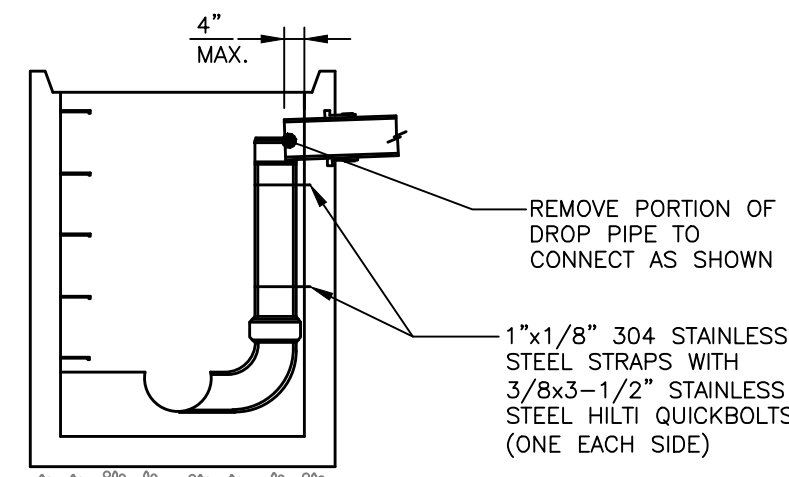
RISER ISOMETRIC VIEW



FOUNDATION SECTION VIEW



BASE ISOMETRIC VIEW



DROP SECTION VIEW

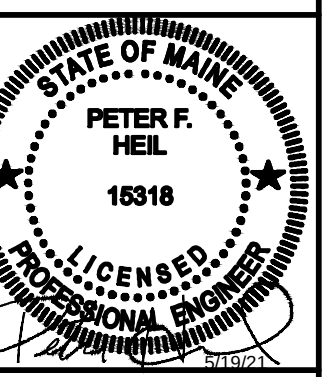
PRECAST DROP DOGHOUSE DETAIL
NOT TO SCALE

ISSUED FOR	BY
DATE	DATE
8/15/26	8/15/26
SITE PLAN APP.	PPH
CHOM CITY REVIEW	PPH
12/4/26	12/4/26
COMMENT RESPONSE	PPH
1/30/27	1/30/27
COMMENT RESPONSE	PPH
2/17/27	2/17/27

UTILITY DETAILS - 2	MERCY HOSPITAL REDEVELOPMENT
PROJECT NAME/ ADDRESS:	NEWHEIGHT REDFERN, LLC
CLIENT/OWNER OF RECORD:	217 COMMERCIAL STREET, SUITE 205, PORTLAND ME 04101

ENGINEERING, INC.	ACORN ENGINEERING, INC.
REGISTERED PROFESSIONAL ENGINEER	REGISTERED PROFESSIONAL ENGINEER
15318	15318
PO BOX 3372, PORTLAND MAINE 04101	PO BOX 3372, PORTLAND MAINE 04101
(207) 775-2655	(207) 775-2655

FILE:	1140_CIVIL
JN:	1140
SCALE:	AS NOTED
DESIGNED BY:	PPH
DRAWN BY:	KRB
CHECKED BY:	WHS

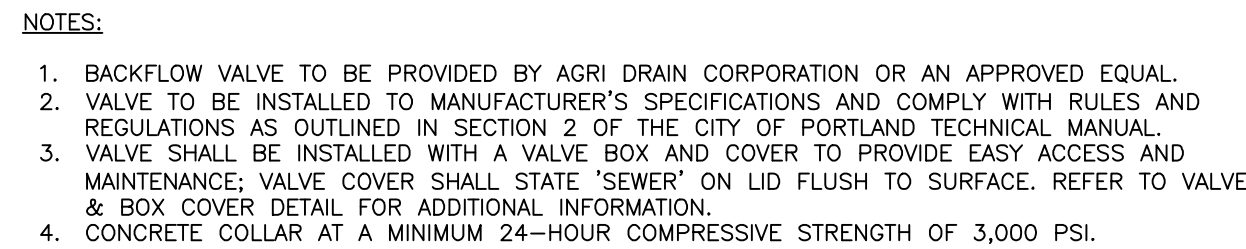


DRAWING NO.

C-43

PERMIT LEVEL
NOT ISSUED FOR
CONSTRUCTION

C-44



NOTES:

1. INSTALL CATCH BASIN HOODS IN ALL CATCH BASINS WITH A 12" OR 15" OUTLET PIPE.
2. PREFERRED STYLE DESIGNED TO ELIMINATE CEMENTING OF THE TRAP.
3. REFER TO MANUFACTURER'S RECOMMENDATIONS FOR INSTALLATION REQUIREMENTS



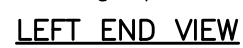
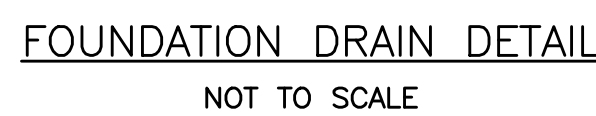
INSTALLATION NOTES:

1. CONTRACTOR TO PROVIDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS REQUIRED TO OBTAIN AND INSTALL THE SYSTEM AND APPURTENANCES IN ACCORDANCE WITH THIS DRAWING AND THE MANUFACTURER'S SPECIFICATIONS, UNLESS OTHERWISE STATED IN MANUFACTURER'S CONTRACT.
2. UNIT MUST BE INSTALLED ON LEVEL BASE. MANUFACTURER RECOMMENDS A MINIMUM 6" LEVEL ROCK BASE UNLESS SPECIFIED BY THE PROJECT ENGINEER. CONTRACTOR IS RESPONSIBLE TO VERIFY PROJECT ENGINEER'S RECOMMENDED BASE SPECIFICATIONS.
3. CONTRACTOR TO SUPPLY AND INSTALL ALL EXTERNAL CONNECTING PIPES ALL PIPES MUST BE FLUSH WITH INSIDE SURFACE OF CONCRETE. (PIPES CANNOT INTRUDE BEYOND FLUSH). INVERT OF OUTFLOW PIPE MUST BE AT LEAST 18" ABOVE DISCHARGE CHAMBER FLOOR. ALL PIPES SHALL BE SEALED WATER TIGHT PER MANUFACTURER'S STANDARD CONNECTION DETAIL.
4. CONTRACTOR RESPONSIBLE FOR INSTALLATION OF ALL PIPES, RISERS, MANHOLES, AND HATCHES. CONTRACTOR TO GROUT ALL MANHOLES AND HATCHES TO MATCH FINISHED SURFACE UNLESS SPECIFIED OTHERWISE.
5. CONTRACTOR RESPONSIBLE FOR CONTACTING BIO CLEAN FOR ACTIVATION OF UNIT. MANUFACTURER'S WARRANTY IS VOID WITHOUT PROPER ACTIVATION BY A BIO CLEAN REPRESENTATIVE.

1. PRODUCT MODEL MWS-L-8-24-12'-11"-V-UG
MANUFACTURER BY BIO CLEAN ENVIRONMENTAL SERVICES, INC.
2. MANUFACTURER TO PROVIDE ALL MATERIALS UNLESS
OTHERWISE NOTED.
3. ALL DIMENSIONS, ELEVATIONS, SPECIFICATIONS AND CAPACITIES
ARE SUBJECT TO CHANGE. FOR PROJECT SPECIFIC DRAWINGS
DETAILING EXACT DIMENSIONS, WEIGHTS AND ACCESSORIES
PLEASE CONTACT BIO CLEAN.

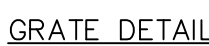
NOTES:

1. REFER TO THE BUILDING ARCHITECTS PLANS FOR THE BUILDING FOUNDATION, BACKFILL, ROOF DRAIN, SIDEWALK AND OTHER DETAILS.
2. PERFORATIONS IN UNDERDRAIN PIPE SHALL BE ORIENTED DOWN.
3. DRAIN TO BE INSTALLED AT A MIN. 1/2" SLOPE TO ROOF RUNOFF. WIDTH SHALL BE A MIN. 12" BEYOND THE PROJECTION OF THE ROOF EAVE.
4. FOUNDATION WALL FOOTINGS SHALL BE CONSTRUCTED TO A MIN. DEPTH OF 4 FT BELOW FINISH GRADE. REFER TO STRUCTURAL ENGINEER'S PLANS FOR ADDITIONAL INFORMATION AND MIN. REQUIREMENTS.
5. F FOUNDATION DRAIN DAYLIGHTS, INSTALL DRAINAGE SOLVENTS ANIMAL GUARD 4" EXTERNAL PVC OR CORRUGATED PLASTIC PIPE, OR INDUSTRY APPROVED EQ.



NOTES:

1. APPROVED CATCH BASIN FRAMES:
 - 1.1. EAST JORDAN = 7375Z
 - 1.2. NEENAH = R-3248
 - 1.3. OR APPROVED EQUAL
2. APPROVED CATCH BASIN GRATES
 - 2.1. EAST JORDAN = 2440M
 - 2.2. NEENAH = R-3248
 - 2.3. OR APPROVED EQUAL
3. PROVIDE 24" SQUARE GRATE FOR CATCH BASINS ADJACENT TO CURB



1. ALL CONCRETE SHALL HAVE A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 4000 lbs. PER SQ. INCH AT THE END OF 28 DAYS, UNLESS OTHERWISE NOTED.
2. MANHOLES MAY BE CONSTRUCTED OF PRECAST REINFORCED CONCRETE, OR CAST IN PLACE.
3. PRECAST REINFORCED CONE BARREL MANUFACTURED PER ASTM SPEC. C-478.
4. ALL STORM AND SEWER MANHOLE COVERS SHALL BE SOLD AND SHALL HAVE ONE 7/8" DIAMETER DRILLED PICK HOLE LOCATED 8" FROM THE CENTER OF THE COVER.
5. ALL SANITARY MANHOLE COVERS SHALL HAVE "SEWER" CAST INTO THE COVER. ALL STORMWATER/DRAIN MANHOLE COVERS SHALL HAVE "DRAIN" CAST INTO THE COVER.
6. ALL MANHOLE RISERS SHALL BE ETHERIDGE 24" OR APPROVAL EQUAL.
7. SEWER BRICK SHALL CONFORM TO ASTM SPEC. DESIGNATE ON C-32-63, GRADE MA AND SA.
8. ALL SANITARY MANHOLES SHALL HAVE A WATERPROOFING COATING APPLIED TO THE EXTERIOR SURFACE.
9. CATCH BASIN FRAMES FOR TYPE A4 CATCH BASIN CURB INLETS SHALL BE ETHERIDGE DR5A OR APPROVED EQUAL.
10. CASTINGS SHALL CONFORM TO ASTM DESIGNATION A48-CLASS 35.
11. EXISTING MANHOLES, CATCH BASINS, FRAMES, AND COVERS SHALL BE SALVAGED BY THE CONTRACTOR, AND SHALL REMAIN THE PROPERTY OF THE CITY OF PORTLAND.
12. ALL CATCH BASIN OUTLETS SHALL BE INSTALLED WITH A CASCO TRAP PER DETAIL.

CATCH BASIN GRATE SHALL BE EITHER ITEM # 2440M AS MANUFACTURED BY EAST JORDAN CO., OR ITEM # 32480002 AS MANUFACTURED BY NEEHAH FOUNDRY, SUBMITTAL REQUIRED.

PORTLAND CEMENT MORTAR (TYPE 2 CEMENT)

ECCENTRIC CONE

BARREL SECTION

4'-0"

BASE SECTION

3'-0" MIN.

AT CURB, CATCH BASIN FRAME SHALL BE 73752 AS MANUFACTURED BY EAST JORDAN CO. OR ITEM # 32480001 AS MANUFACTURED BY NEEHAH FOUNDRY; OTHERWISE, CATCH BASIN FRAME SHALL MEET FRAME STANDARDS FOR MANHOLE DETAIL. SUBMITTAL REQUIRED.

ADJUST TO GRADE WITH BRICK WITH A MIN. OF 3 COURSES AND A MAX. OF 8 COURSES (ASTM SPEC. DESIGNATE ON C-32-63, GRADE MA AND SA).

DESIGN NOTES:

1. ALL CONCRETE TO HAVE A MIN. OF 4,000 PSI COMPRESSIVE STRENGTH AT (28 DAYS).
2. DESIGN LOAD FOR H-20 WHEEL LOAD.
3. CATCH BASIN TO CONFORM TO ASTM-C478 SPECIFICATIONS.
4. REINFORCE TO 0.15 IN. SQ./LF. JOINTS SEALED WITH RAM-NEK GASKET OR EQUAL.
5. POLYPROPYLENE STEPS 12" O.C.
6. EXTERIOR WATERPROOFING.
7. CASCO TRAPS SHALL BE PROVIDED ON ALL PIPES 15" OR LESS.
8. ALL CATCH BASINS AND MANHOLES SHALL MEET THE APPLICABLE CITY OF PORTLAND - SECTION 2 SANITARY AND STORM DRAIN DESIGN STANDARDS. STEPS SHALL BE OFFSET AT NO MORE THAN 12" ON CENTER, STARTING FROM THE TOP OF THE MANHOLE FRAME AND SHALL BE FORGED ALUMINUM OR COPOLYMER POLYPROPYLENE STEPS.
9. ALL PIPES TO HAVE A WATERTIGHT SEAL.

12" THICK 3/4" CRUSHED STONE BASE

COMPACTED SUBGRADE

[illegible]

OWNER OF RECORD: NEWHEIGHT REDFERN, LLC

217 COMMERCIAL STREET, SUITE 205, PORTLAND ME 04101

DRAWING NAME:

PROJECT NAME/

ADDRESS:

CONCLUSIONS

CLIENT/OWNER OF

217 CC



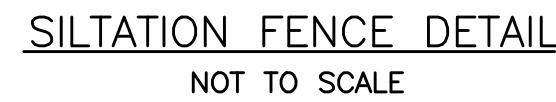
A C O R N
ENGINEERING, INC.

ACORN ENGINEERING, INC.
PO BOX 3372, PORTLAND MAINE 04101
(207) 775-2655

DRAWING NO.

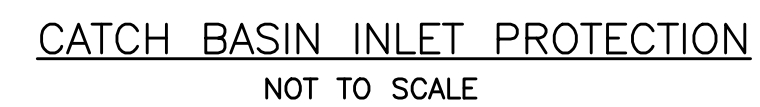
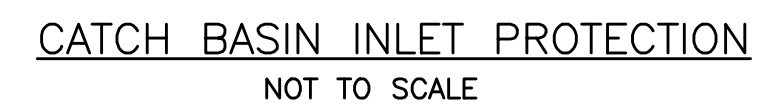
PERMIT LEVEL
NOT ISSUED FOR
CONSTRUCTION

C-45



-

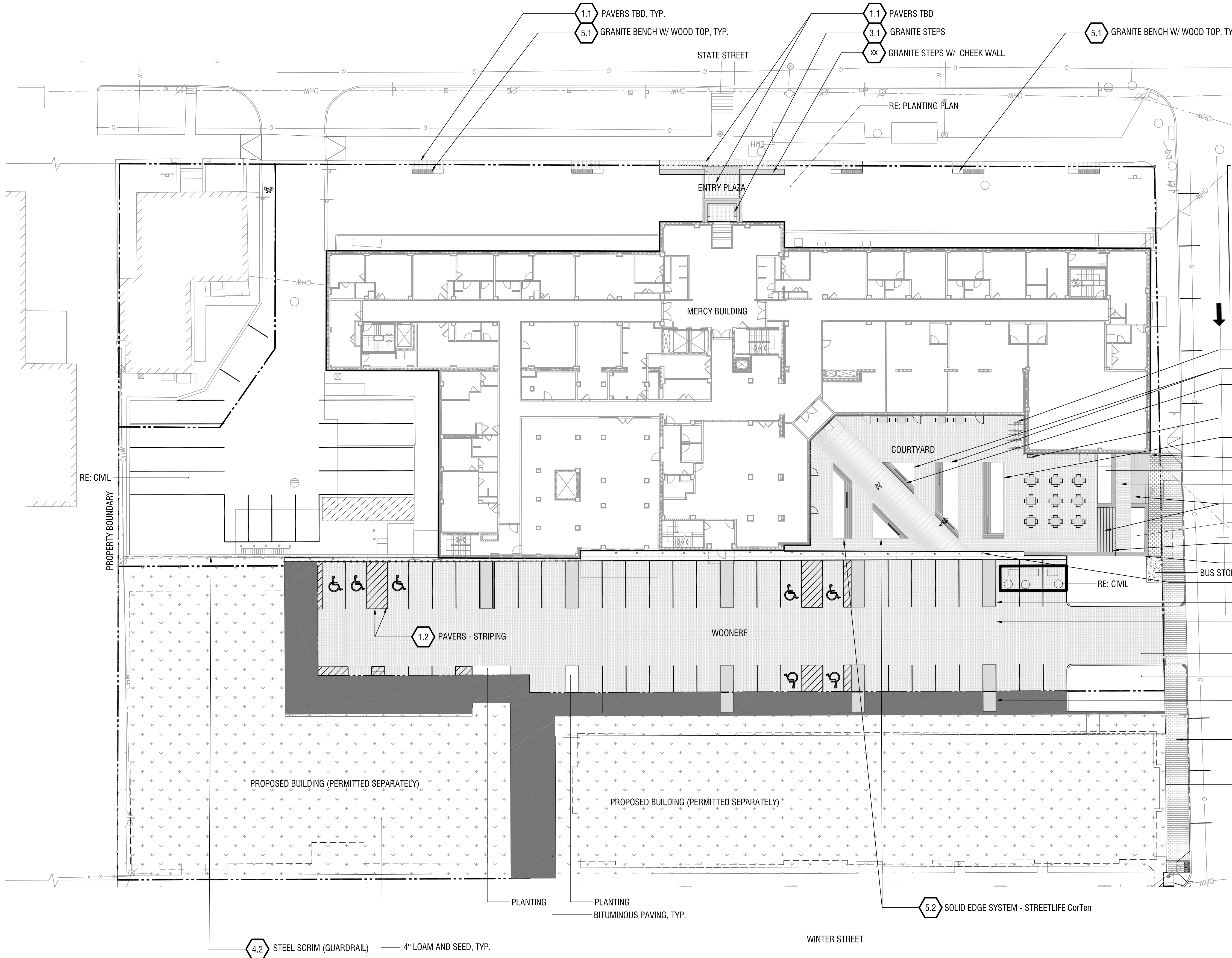
-
- The technical drawings illustrate the erosion control system in two views:
- FRONT VIEW:** Shows a cross-section of the system. It features a base layer of "FILL BARRIERS WITH EROSION CONTROL MIX" and an "OPTIONAL PONDING AREA AT LOW SPOT" on top. The spacing between the barriers is indicated as "3' MIN.".
 - SIDE VIEW:** Shows the system from the side. It includes a "MESH OR GEOSYNTHETIC FABRIC TUBE" on the left, a "PONDING HEIGHT" of "8'-16'" in the center, and a sloped section on the right with a "100' MAX. SLOPE LENGTH". The total width of the system is "6'", and the base layer is "APPROX. 12'" thick. A flow arrow indicates the direction of water movement.



PERMIT LEVEL
NOT ISSUED FOR
CONSTRUCTION

DRAWING NO.

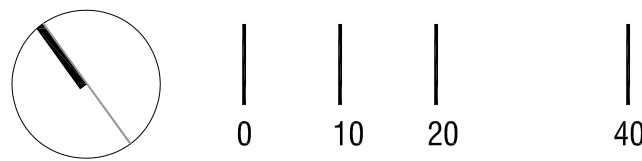
C-47



SITE KEYNOTES:					
		DETAIL / SHEET			DETAIL / SHEET
1.0	PAVEMENTS, RAMPS, CURBS		6.0	RAILINGS, BARRIERS, FENCING	
	1.1 PAVERS - TBD	1/L4-00		6.1 HANDRAIL	1/L4-01
	1.2 PAVERS - STRIPING PARKING	1/L4-00	7.0	SITE LIGHTING	
				BY OTHERS	
2.0	JOINTING		8.0	DRAINAGE	
	XX NOT USED AT THIS TIME	XXX-XX		XX NOT USED AT THIS TIME	XXX-XX
3.0	STEPS		9.0	PLANTING AND LANDSCAPE	
	3.1 GRANITE STEPS	2/L4-01		9.1 DECIDUOUS TREE PLANTING	1/L4-02
4.0	SITE WALLS/ EMBANKMENTS			9.2 MULTI-STEM TREE PLANTING	2/L4-02
	4.1 MASONRY WALL - FINISH TBD	3/L4-00		9.3 SHRUB PLANTING	3/L4-02
	4.2 STEEL SCRIM	2/L4-00		9.4 PERENNIAL PLANTING	4/L4-02
5.0	SITE FURNITURE			9.5 STEEL EDGING	5/L4-02
	5.1 GRANITE BENCH WOOD TOP	1/L4-03	10.0	MISCELLANEOUS ELEMENTS	
	5.2 SOLID EDGE SYSTEM - STREETLIFE	2/L4-03		10.1 BIKE RACK - STREETLIFE CorTen	1/L4-04
				10.2 TREE GRILLE - STREETLIFE CUSTOM 5' X 18'	2/L4-04
				10.3 TREE GRILLE - STREETLIFE 5' x 5'	2/L4-04
				10.4 TREE GRATE - NENNAH MODEL R-8810	3/L4-04
				10.5 WASTE DISPOSAL CONTAINERS	1/L4-05
				10.6 BOLLARD - STREETLIFE OPEN BOLLARD	1/L4-05

- 10.1 BIKE RACK - STREETLIFE CorTen
- 5.2 SOLID EDGE SYSTEM - STREETLIFE CorTen
- WOOD BENCH TOP, TYP.
- 10.5 WASTE DISPOSAL CONTAINERS
- 5.2 SOLID EDGE SYSTEM - STREETLIFE CorTen
- 6.1 HANDRAIL
- 1.1 PAVERS - TBD
- 3.1 GRANITE STEPS
- PLANTING
- 6.1 HANDRAIL
- 4.1 MASONRY WALL
- 10.6 BOLLARD - STREETLIFE OPEN
- 10.2 TREE GRILLE - STREETLIFE CUSTOM 5' X 18'
- 1.1 PAVERS - TBD
- RE: CIVIL GRADING
- PLANTING
- 10.2 TREE GRILLE - STREETLIFE CUSTOM 5' X 18'
- 1.2 PORTLAND BRICK PAVING, TYP.

LIMITS OF CONSTRUCTION FOR MERCY
COMPLEX REDEVELOPMENT. REMAINING
SITE ARE TO REMAIN GRAVEL IN INTERIM
PENDING SEPARATE BUILDING
APPROVALS.



SEAL

PROJECT TITLE

MERCY
144 STATE STREET
PORTLAND, ME

PREPARED FOR

REVISIONS	DATE
LEVEL III SITE PLAN	11.09.2020
PRELIMINARY PRICING	02.12.2021
LEVEL III SITE PLAN	05.25.2021

ISSUE DATE

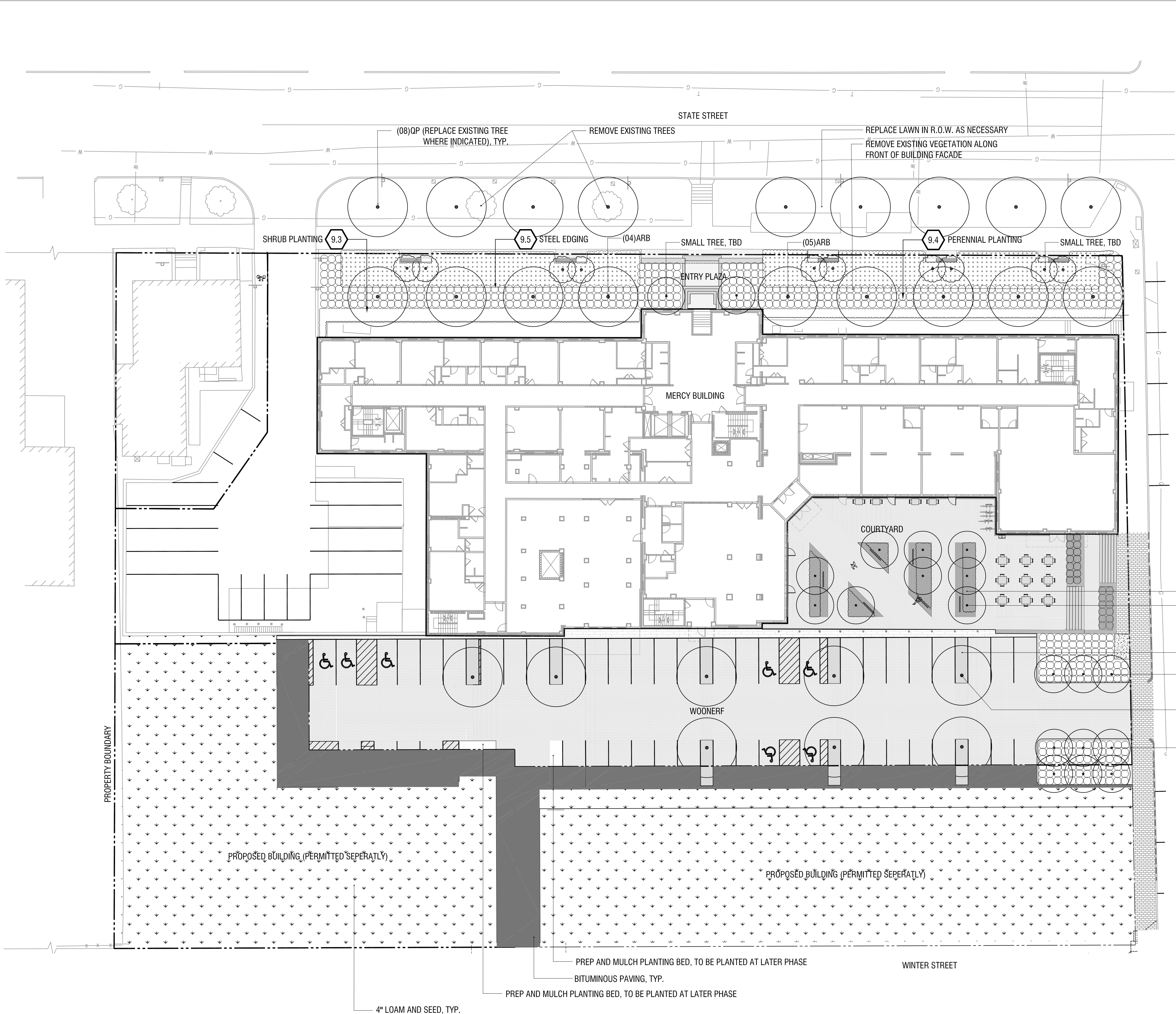
LEVEL III SITE PLAN
SEPTEMBER 10, 2020

SHEET TITLE

MATERIALS PLAN

SHEET INFORMATION

L 2-00

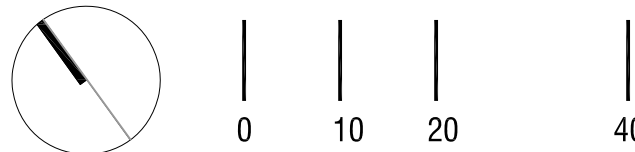


SITE KEYNOTES:			
1.0	PAVEMENTS, RAMPS, CURBS	DETAIL / SHEET	6.0 RAILINGS, BARRIERS, FENCING
	1.1 PAVERS - TBD	1/L4-00	6.1 HANDRAIL
	1.2 PAVERS - STRIPING PARKING	1/L4-00	1/L4-01
2.0	JOINTING		7.0 SITE LIGHTING
	XX NOT USED AT THIS TIME	XXX-XX	BY OTHERS
3.0	STEPS		8.0 DRAINAGE
	3.1 GRANITE STEPS	2/L4-01	XX NOT USED AT THIS TIME
4.0	SITE WALLS/ EMBANKMENTS		9.0 PLANTING AND LANDSCAPE
	4.1 MASONRY WALL - FINISH TBD	3/L4-00	9.1 DECIDUOUS TREE PLANTING
	4.2 STEEL SCRIM	2/L4-00	9.2 MULTI-STEM TREE PLANTING
5.0	SITE FURNITURE		9.3 SHRUB PLANTING
	5.1 GRANITE BENCH WOOD TOP	1/L4-03	9.4 PERENNIAL PLANTING
	5.2 SOLID EDGE SYSTEM - STREETLIFE	2/L4-03	9.5 STEEL EDGING
			10.0 MISCELLANEOUS ELEMENTS
			10.1 BIKE RACK - STREETLIFE CoTn
			10.2 TREE GRILLE - STREETLIFE CUSTOM 5' X 18'
			10.3 TREE GRATE - NENNAH MODEL R-8810
			10.4 WASTE DISPOSAL CONTAINERS
			10.5 BOLLARD - STREETLIFE OPEN BOLLARD
			1/L4-05

PLANTING LEGEND						
SYMBOL	ABBR.	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	SPACING
TREES-DECIDUOUS						
●	GT	GLEDITSIA TRIACANTHOS 'SKYCOLE'	SKYLINE HONEYLOCUST	17	3" CAL.	PER PLAN
●	ARB	ACER RUBRUM 'BONHALL'	BONHALL RED MAPLE	9	3" CAL.	PER PLAN
●	QPP	QUERCUS PALUSTRIS 'PRINGREEN'	GREEN PILLAR OAK	9	3" CAL.	PER PLAN
●	QP	QUERCUS PALUSTRIS	PIN OAK	9	3" CAL.	PER PLAN
GRASSES / PERENNIALS						
■	TBD		TBD	TBD	#2	2' O.C.
LOW SHRUBS						
○○○	TBD		TBD	TBD	#5	2' O.C.
HEDGE						
▬	LIGUSTRUM		PRIVET	TBD	#5	2' O.C.
BULBS						
●	ALUM		PURPLE SENSATION	TBD	BULB	
LAWN (SOD)						
■						
LAWN (SEED)						
■						

- RAISED PLANTERS (09)GT
- TREE GRILLE, TYP. (03)QPP
- (12)GT
- (06)QPP

NOT ISSUED FOR CONSTRUCTION



SEAL

PROJECT TITLE

MERCY
144 STATE STREET
PORTLAND, ME

PREPARED FOR

REVISIONS	DATE
LEVEL III SITE PLAN	11.09.2020
PRELIMINARY PRICING	02.12.2021
LEVEL III SITE PLAN	05.25.2021

ISSUE DATE

LEVEL III SITE PLAN
SEPTEMBER 10, 2020

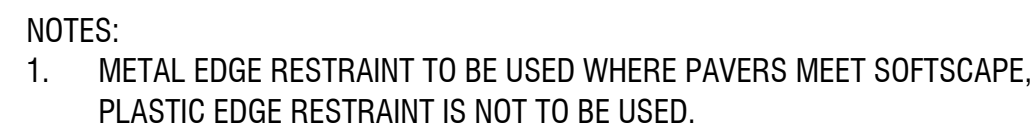
SHEET TITLE

PLANTING PLAN

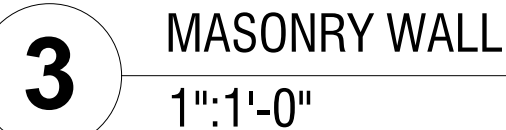
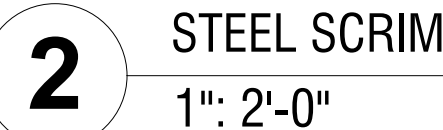
SHEET INFORMATION

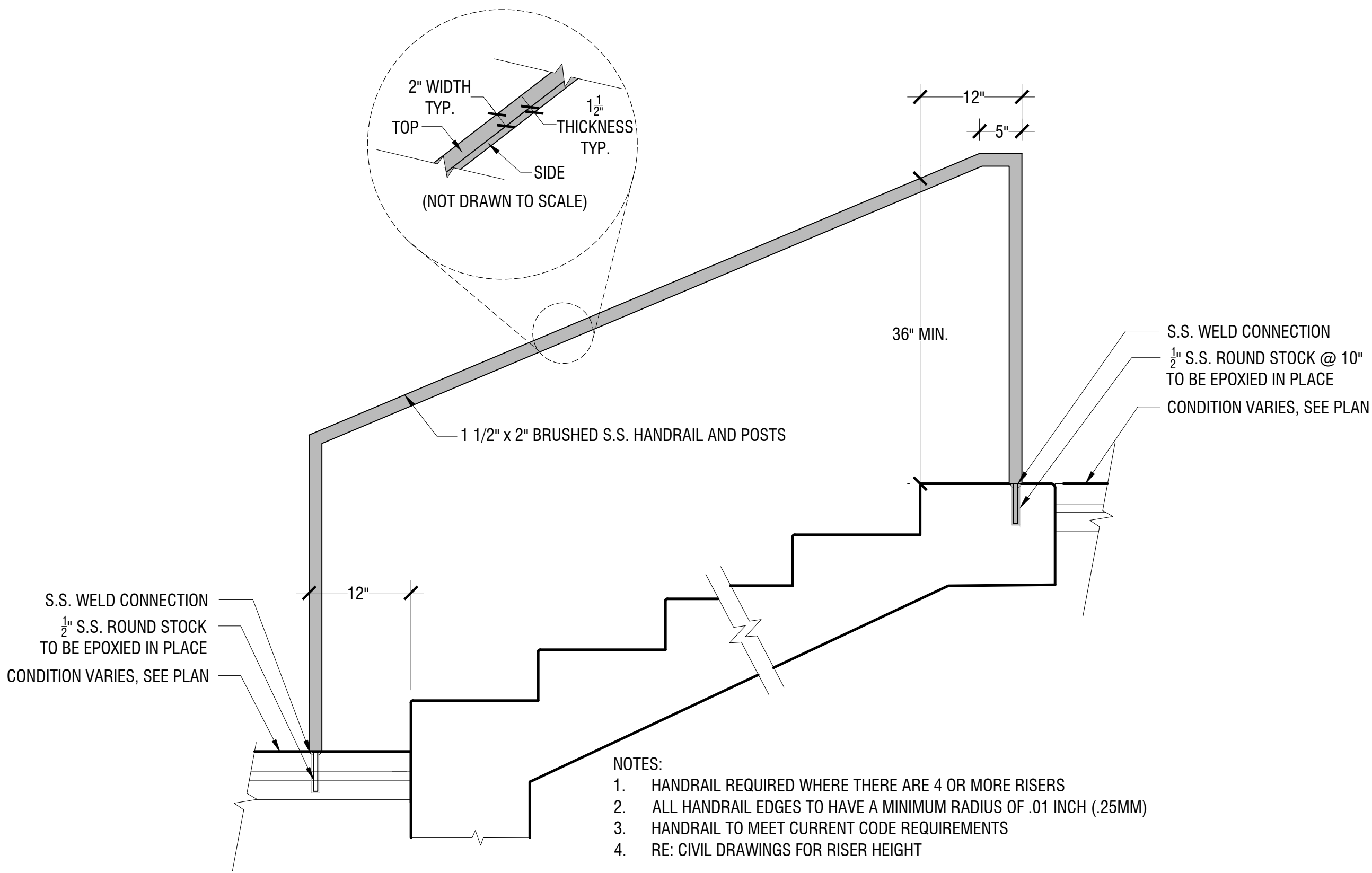
L 3-00

1.0	PAVEMENTS, RAMPS, CURBS		DETAIL / SHEET	6.0	RAILINGS, BARRIERS, FENCING		DETAIL / SHEET
	1.1	PAVERS - TBD	1/L4-00		6.1	HANDRAIL	1/L4-01
	1.2	PAVERS - STRIPING PARKING	1/L4-00				
2.0	JOINTING			7.0	SITE LIGHTING		
	X.X	NOT USED AT THIS TIME	X/XX-XX		BY OTHERS		
3.0	STEPS			8.0	DRAINAGE		
	3.1	GRANITE STEPS	2/L4-01		X.X	NOT USED AT THIS TIME	X/XX-XX
4.0	SITE WALLS/ EMBANKMENTS			9.0	PLANTING AND LANDSCAPE		
	4.1	MASONRY WALL - FINISH TBD	3/L4-00		9.1	DECIDUOUS TREE PLANTING	1/L4-02
	4.2	STEEL SCRIM	2/L4-00		9.2	MULTI-STEM TREE PLANTING	2/L4-02
5.0	SITE FURNITURE				9.3	SHRUB PLANTING	3/L4-02
	5.1	GRANITE BENCH WOOD TOP	1/L4-03		9.4	PERENNIAL PLANTING	4/L4-02
	5.2	SOLID EDGE SYSTEM - STREETLIFE	2/L4-03		9.5	STEEL EDGING	5/L4-02
10.0				MISCELLANEOUS ELEMENTS			
				10.1	BIKE RACK - STREETLIFE CorTen	1/L4-04	
				10.2	TREE GRILLE - STREETLIFE CUSTOM 5' X 18'	2/L4-04	
				10.3	TREE GRILLE - STREETLIFE 5' X 9'	2/L4-04	
				10.4	TREE GRATE - NEWHAM MODEL P-8810	3/L4-04	
				10.5	WASTE DISPOSAL CONTAINERS	1/L4-05	
				10.6	BOLLARD - STREETLIFE OPEN BOLLARD	1/L4-05	



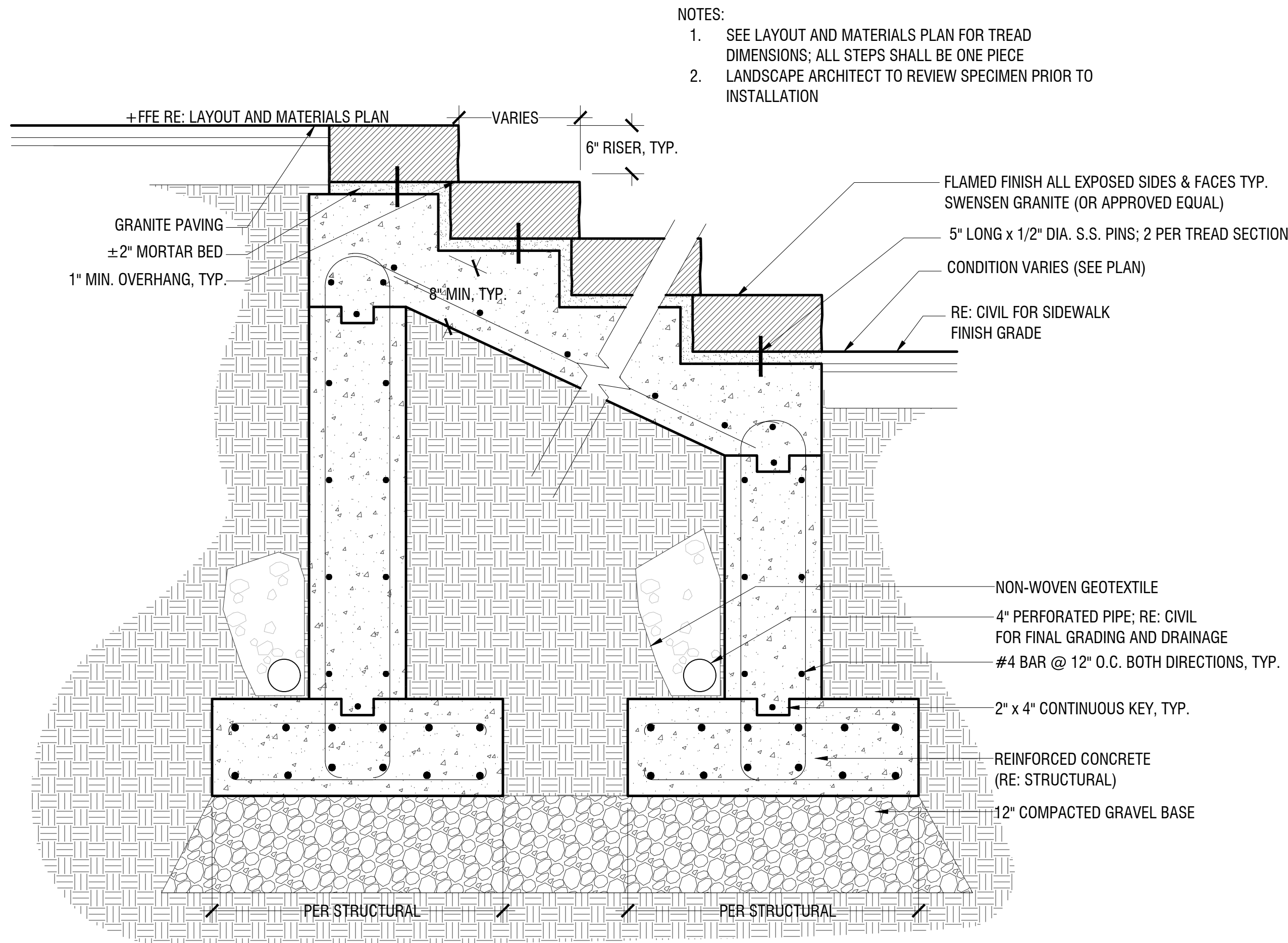
1.1





1 HANDRAIL
1":1'-0"

6.1



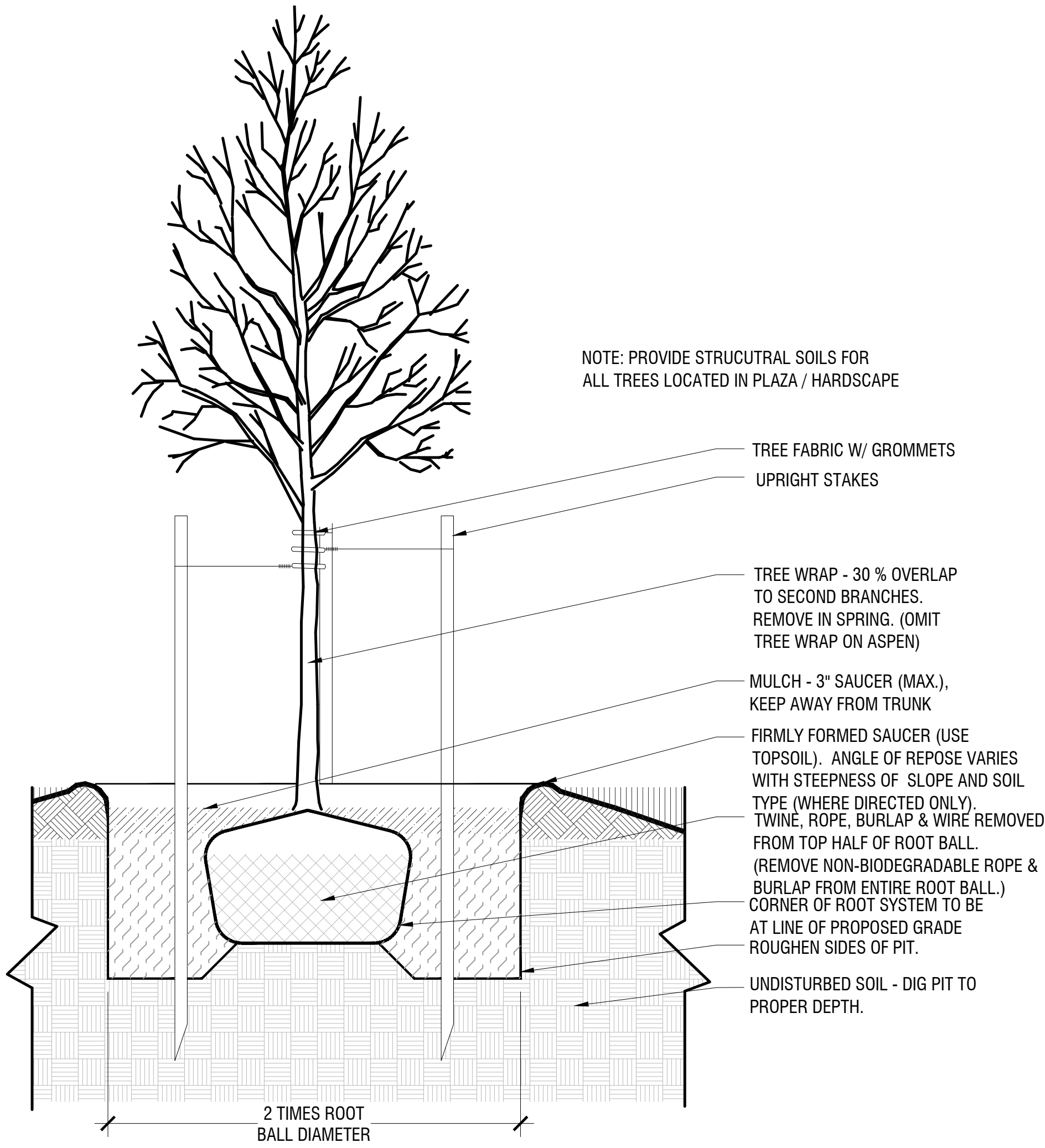
2 GRANITE STEPS
1":1'-0"

3.1

SITE KEYNOTES:					
1.0	PAVEMENTS, RAMPS, CURBS	DETAIL / SHEET	6.0	RAILINGS, BARRIERS, FENCING	DETAIL / SHEET
1.1	PAVERS - TBD	1/L4-00	6.1	HANDRAIL	1/L4-01
1.2	PAVERS - STRIPING PARKING	1/L4-00	7.0	SITE LIGHTING	
2.0	JOINTING		7.0	BY OTHERS	
X.X	NOT USED AT THIS TIME	X/XX-XX	8.0	DRAINAGE	
3.0	STEPS		X.X	NOT USED AT THIS TIME	X/XX-XX
3.1	GRANITE STEPS	2/L4-01	9.0	PLANTING AND LANDSCAPE	
4.0	SITE WALLS/ EMBANKMENTS		9.1	DECIDUOUS TREE PLANTING	1/L4-02
4.1	MASONRY WALL - FINISH TBD	3/L4-00	9.2	MULTI-STEM TREE PLANTING	2/L4-02
4.2	STEEL SCRIM	2/L4-00	9.3	SHRUB PLANTING	3/L4-02
5.0	SITE FURNITURE		9.4	PERENNIAL PLANTING	4/L4-02
5.1	GRANITE BENCH WOOD TOP	1/L4-03	9.5	STEEL EDGING	5/L4-02
5.2	SOLID EDGE SYSTEM - STREETLIFE	2/L4-03	10.0	MISCELLANEOUS ELEMENTS	
			10.1	BIKE RACK - STREETLIFE Co/Ten	1/L4-04
			10.2	TREE GRILLE - STREETLIFE CUSTOM 5' X 18"	2/L4-04
			10.3	TREE GRILLE - STREETLIFE 5' X 5'	2/L4-04
			10.4	TREE GRATE - NENNAH MODEL R-8810	3/L4-04
			10.5	WASTE DISPOSAL CONTAINERS	1/L4-05
			10.6	BOLLARD - STREETLIFE OPEN BOLLARD	1/L4-05

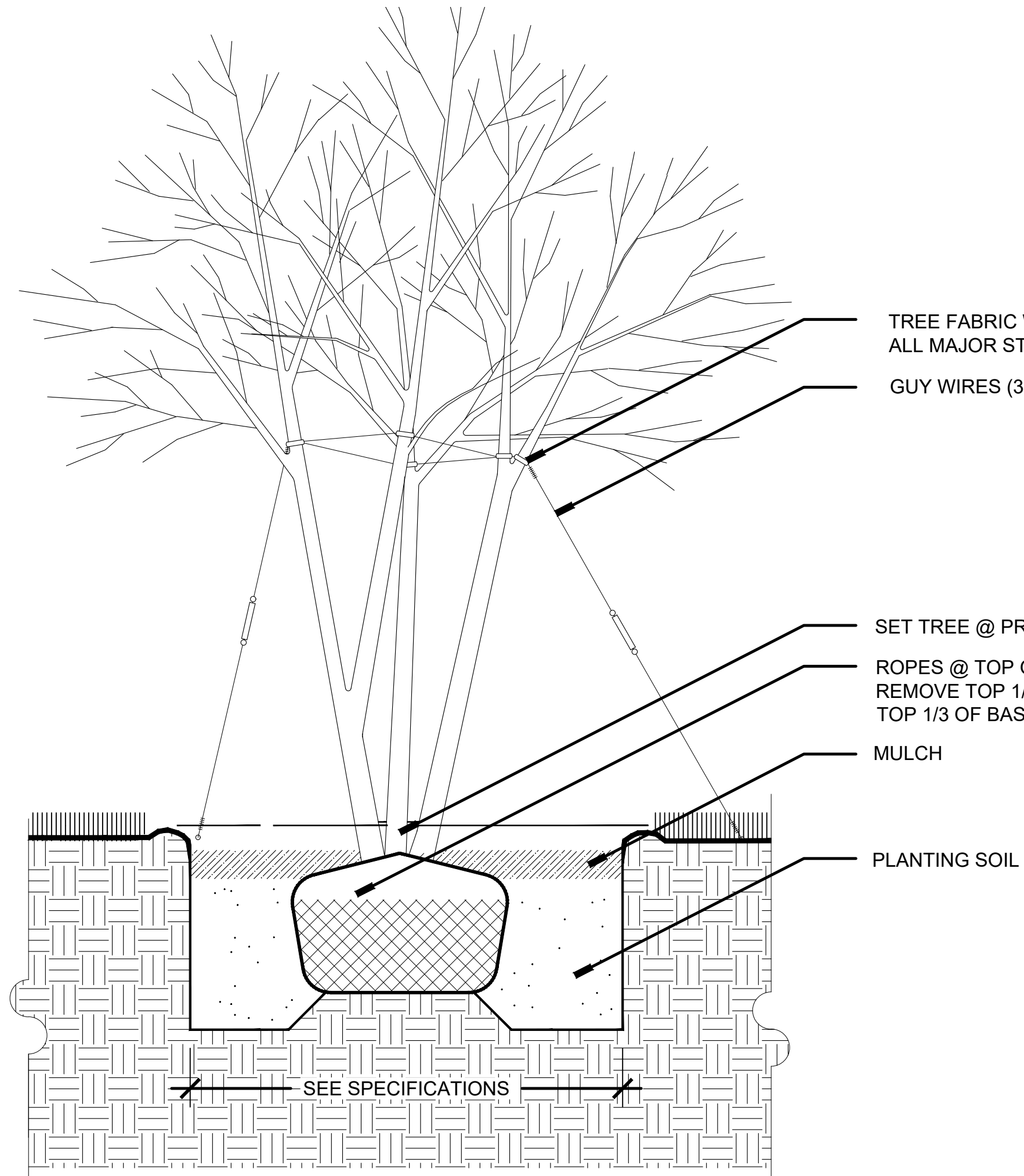
SITE KEYNOTES:

1.0	PAVEMENTS, RAMPS, CURBS	DETAIL / SHEET	6.0	RAILINGS, BARRIERS, FENCING	DETAIL / SHEET
1.1	PAVERS - TBD	1/L4-00	6.1	HANDRAIL	1/L4-01
1.2	PAVERS - STRIPING PARKING	1/L4-00	7.0	SITE LIGHTING	
2.0	JOINTING		7.1	BY OTHERS	
X.X	NOT USED AT THIS TIME	X/XX-XX	8.0	DRAINAGE	
3.0	STEPS		X.X	NOT USED AT THIS TIME	X/XX-XX
3.1	GRANITE STEPS	2/L4-01	9.0	PLANTING AND LANDSCAPE	
4.0	SITE WALLS/ EMBANKMENTS		9.1	DECIDUOUS TREE PLANTING	1/L4-02
4.1	MASONRY WALL - FINISH TBD	3/L4-00	9.2	MULTI-STEM TREE PLANTING	2/L4-02
4.2	STEEL SCRIM	2/L4-00	9.3	SHRUB PLANTING	3/L4-02
5.0	SITE FURNITURE		9.4	PERENNIAL PLANTING	4/L4-02
5.1	GRANITE BENCH WOOD TOP	1/L4-03	9.5	STEEL EDGING	5/L4-02
5.2	SOLID EDGE SYSTEM - STREETLIFE	2/L4-03	10.0	MISCELLANEOUS ELEMENTS	
			10.1	BIKE RACK - STREETLIFE CorTen	1/L4-04
			10.2	TREE GRILLE - STREETLIFE CUSTOM 5' X 18'	2/L4-04
			10.3	TREE GRILLE - STREETLIFE 5' x 5'	2/L4-04
			10.4	TREE GRATE - NENNAH MODEL R-8810	3/L4-04
			10.5	WASTE DISPOSAL CONTAINERS	1/L4-05
			10.6	BOLLARD - STREETLIFE OPEN BOLLARD	1/L4-05



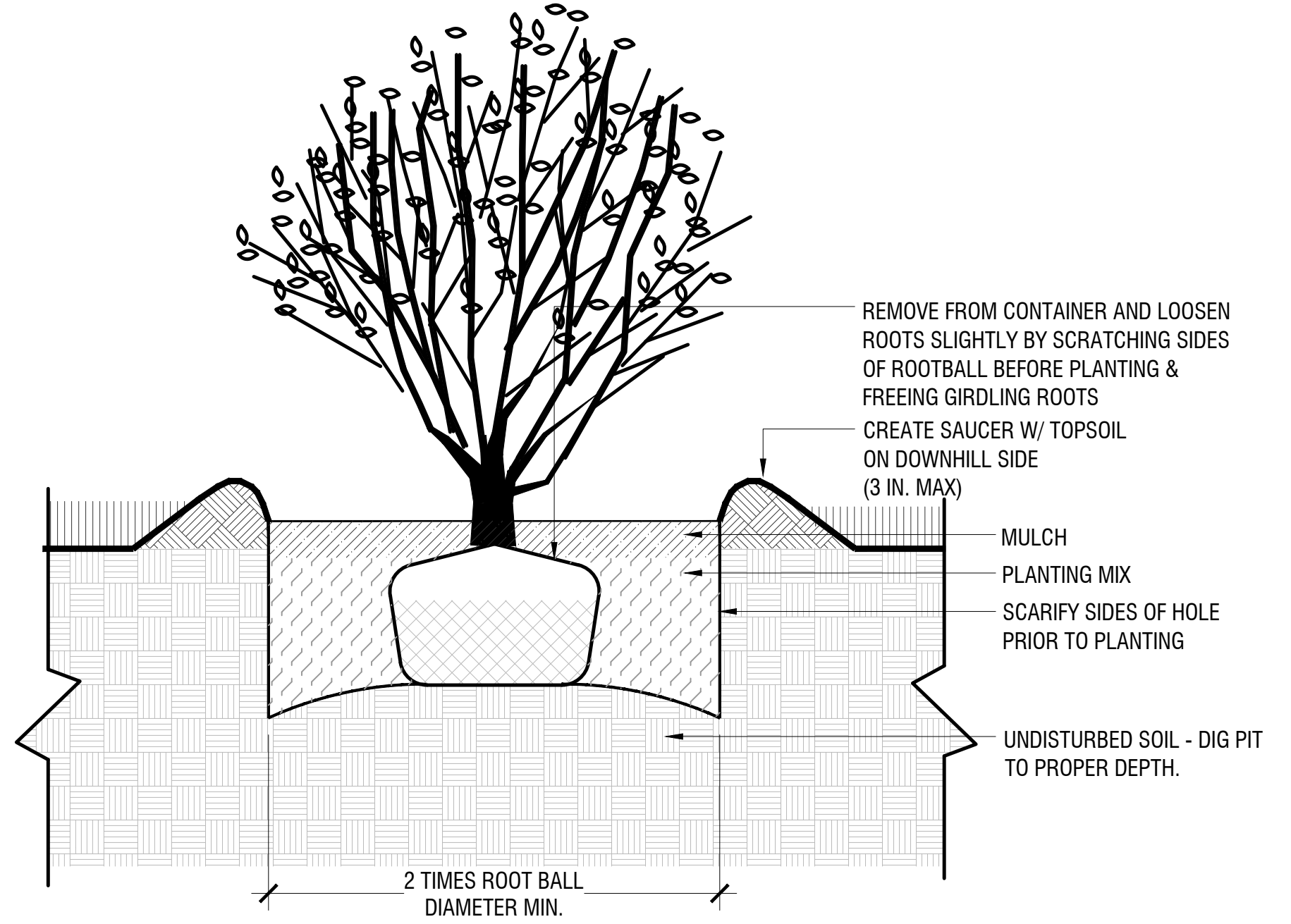
1 DECIDUOUS TREE PLANTING
1":1'-0"

9.1



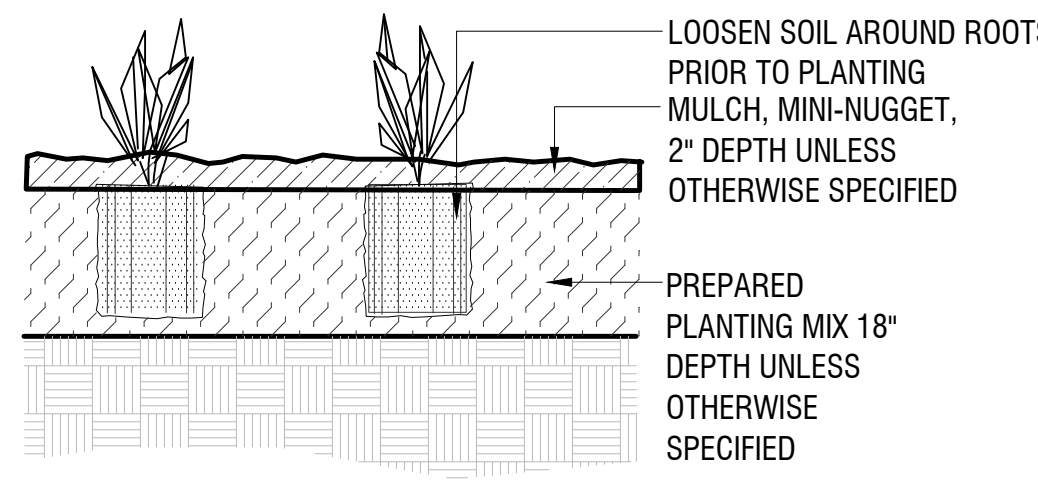
2 MULTI-STEM TREE PLANTING
1":1'-0"

9.2



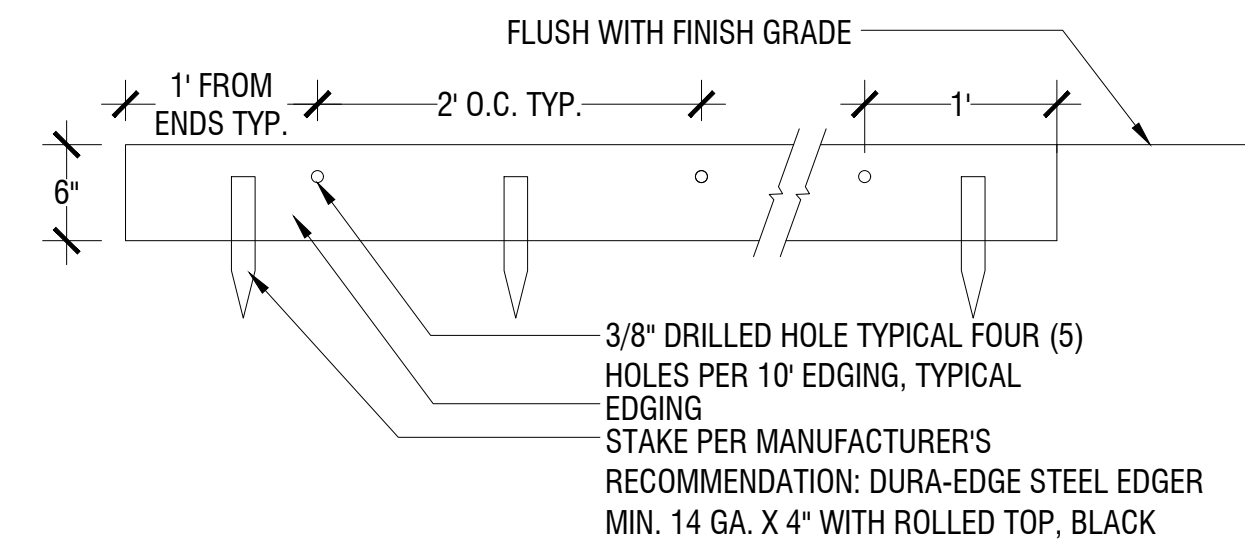
3 SHRUB PLANTING
1":1'-0"

9.3



4 PERENNIAL PLANTING
1":1'-0"

9.4



5 STEEL EDGING
1":1'-0"

9.5

SEAL

PROJECT TITLE

MERCY
144 STATE STREET
PORTLAND, ME

PREPARED FOR

REVISIONS	DATE
LEVEL III SITE PLAN	11.09.2020
LEVEL III SITE PLAN	05.25.2021

ISSUE DATE

LEVEL III SITE PLAN
SEPTEMBER 10, 2020

SHEET TITLE

PLANTING DETAILS

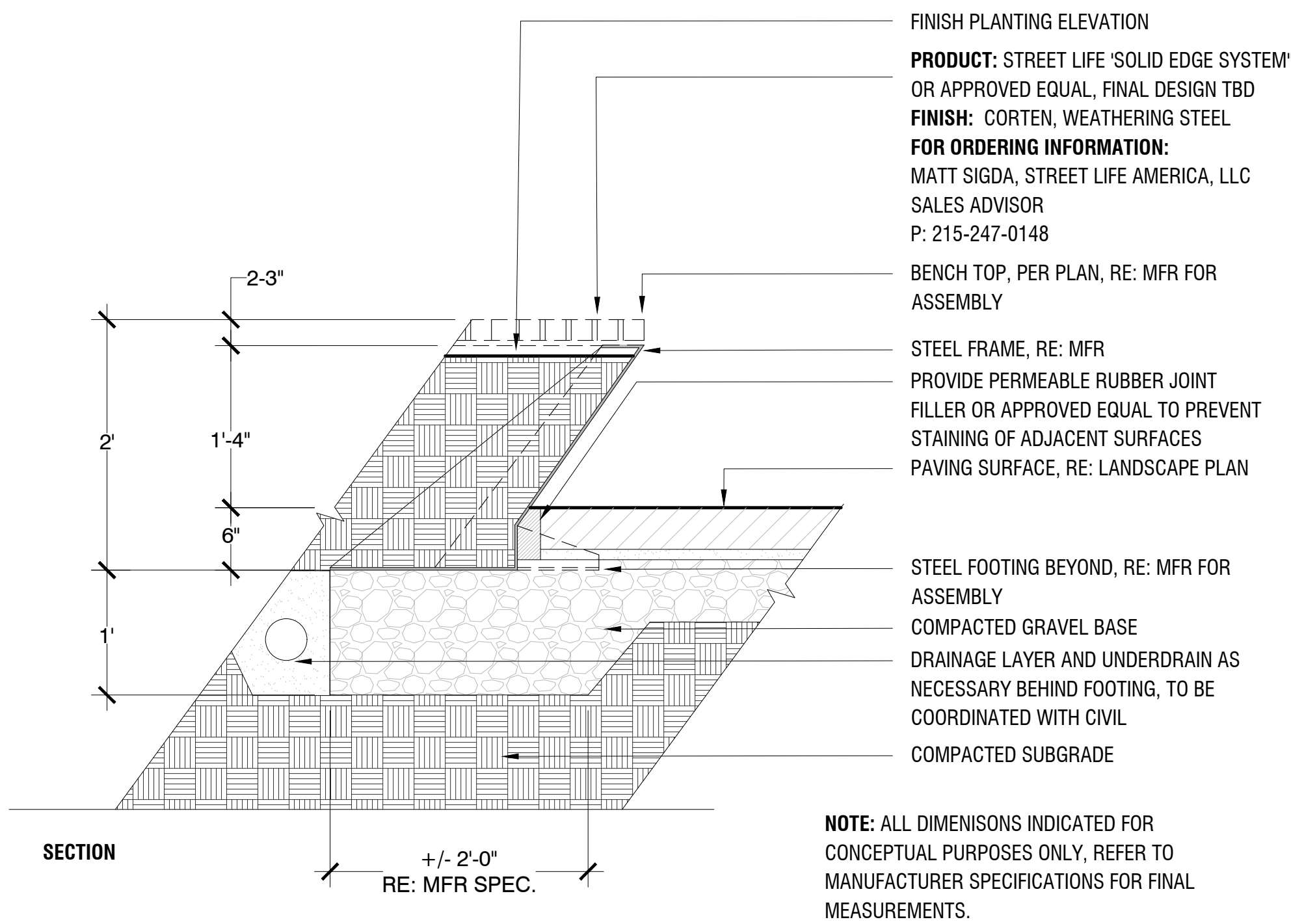
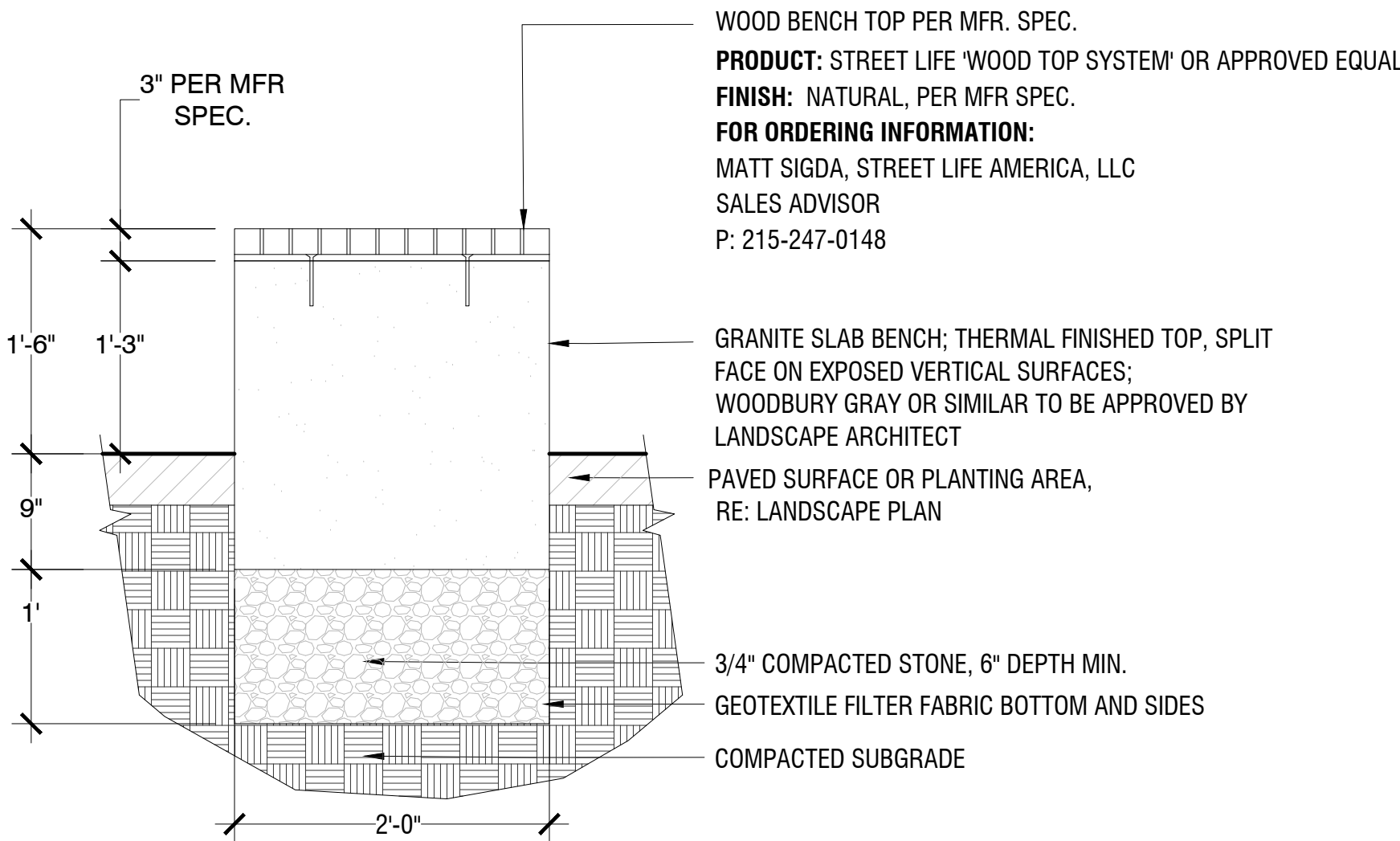
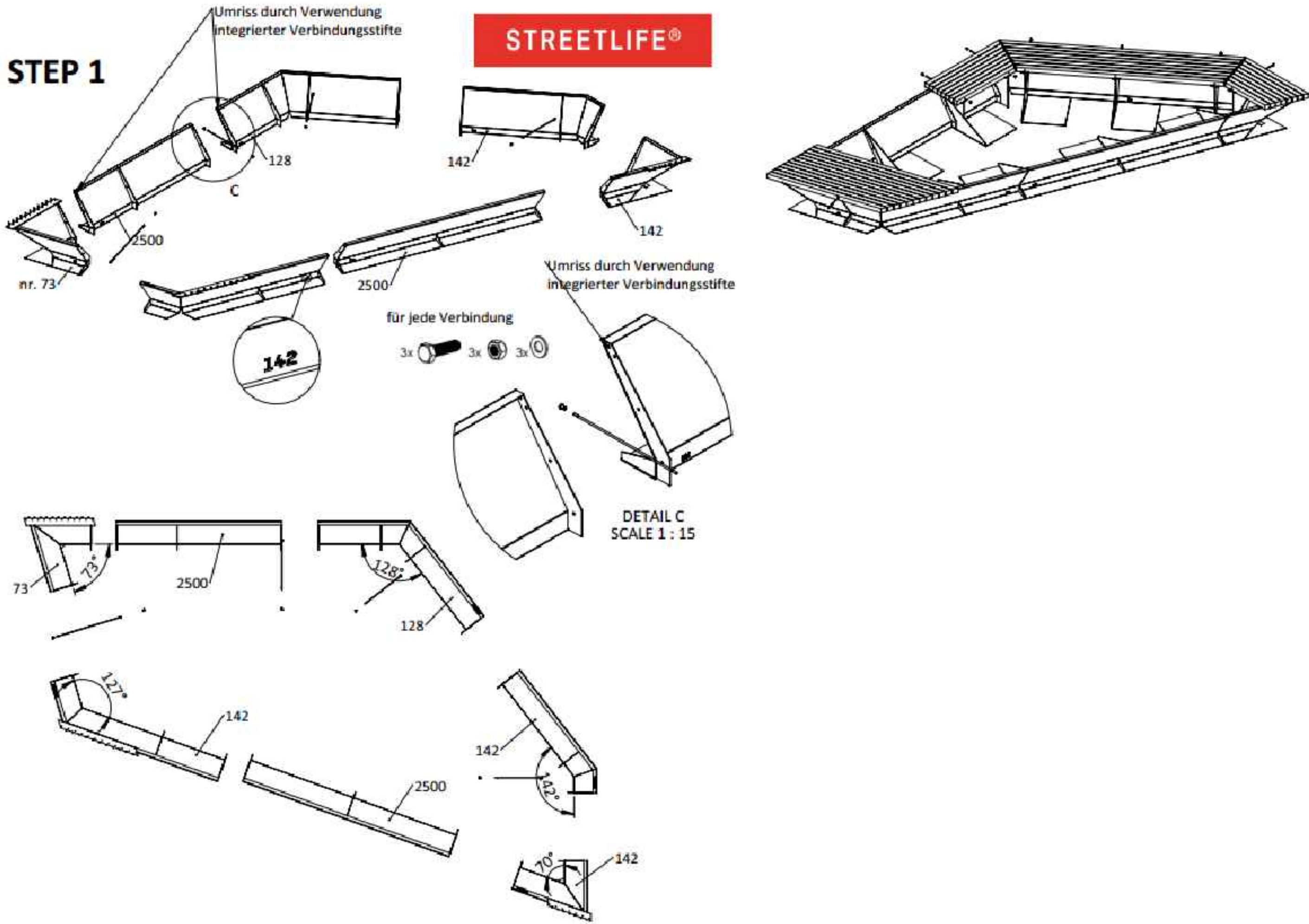
SHEET INFORMATION

L 4-02

PERMIT LEVEL
NOT ISSUED FOR
CONSTRUCTION

SITE KEYNOTES:

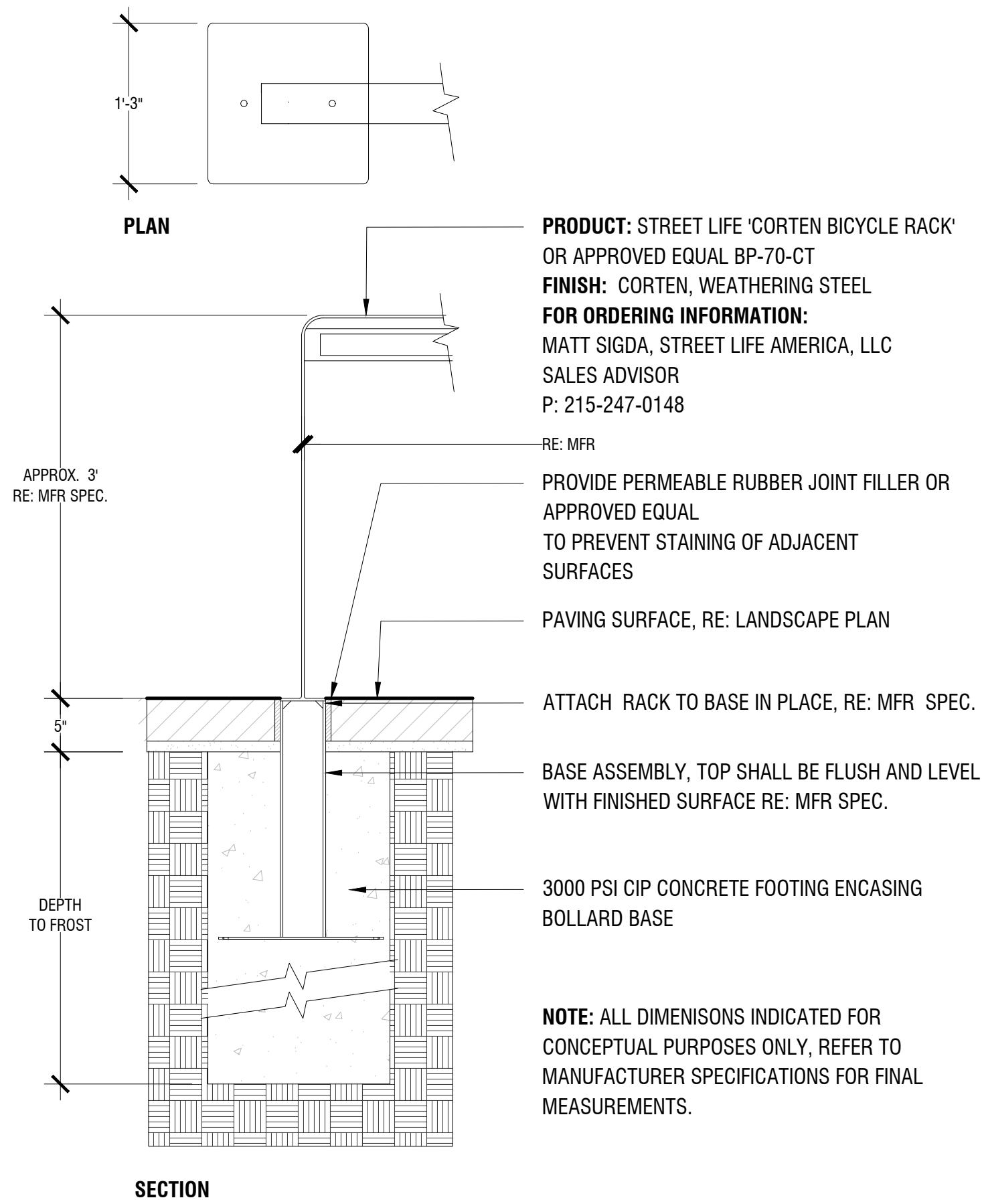
1.0	PAVEMENTS, RAMPS, CURBS	DETAIL / SHEET	6.0	RAILINGS, BARRIERS, FENCING	DETAIL / SHEET
1.1	PAVERS - TBD	1/L4-00	6.1	HANDRAIL	1/L4-01
1.2	PAVERS - STRIPING PARKING	1/L4-00			
			7.0	SITE LIGHTING	
				BY OTHERS	
2.0	JOINTING		8.0	DRAINAGE	
X.X	NOT USED AT THIS TIME	X/XX-XX	X.X	NOT USED AT THIS TIME	X/XX-XX
3.0	STEPS		9.0	PLANTING AND LANDSCAPE	
3.1	GRANITE STEPS	2/L4-01	9.1	DECIDUOUS TREE PLANTING	1/L4-02
			9.2	MULTI-STEM TREE PLANTING	2/L4-02
4.0	SITE WALLS/ EMBANKMENTS		9.3	SHRUB PLANTING	3/L4-02
4.1	MASONRY WALL - FINISH TBD	3/L4-00	9.4	PERENNIAL PLANTING	4/L4-02
4.2	STEEL SCRIM	2/L4-00	9.5	STEEL EDGING	5/L4-02
5.0	SITE FURNITURE		10.0	MISCELLANEOUS ELEMENTS	
5.1	GRANITE BENCH WOOD TOP	1/L4-03	10.1	BIKE RACK - STREETLIFE CorTen	1/L4-04
5.2	SOLID EDGE SYSTEM - STREETLIFE	2/L4-03	10.2	TREE GRILLE - STREETLIFE CUSTOM 5' X 18'	2/L4-04
			10.3	TREE GRILLE - STREETLIFE 5' x 5'	2/L4-04
			10.4	TREE GRATE - NENNAH MODEL R-8810	3/L4-04
			10.5	WASTE DISPOSAL CONTAINERS	1/L4-05
			10.6	BOLLARD - STREETLIFE OPEN BOLLARD	1/L4-05



REVISIONS	DATE
LEVEL III SITE PLAN	11.09.2020
LEVEL III SITE PLAN	05.25.2021

SITE KEYNOTES:

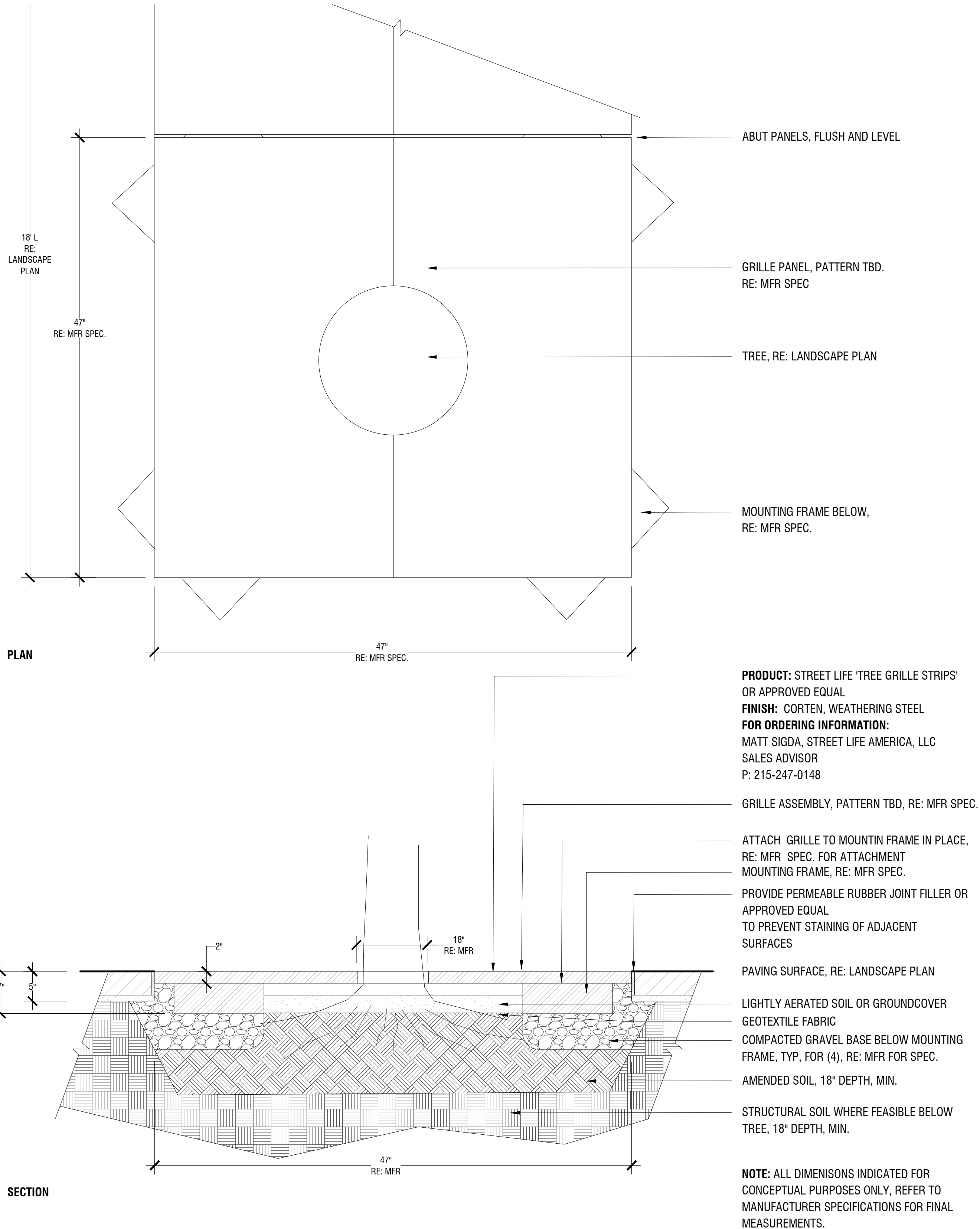
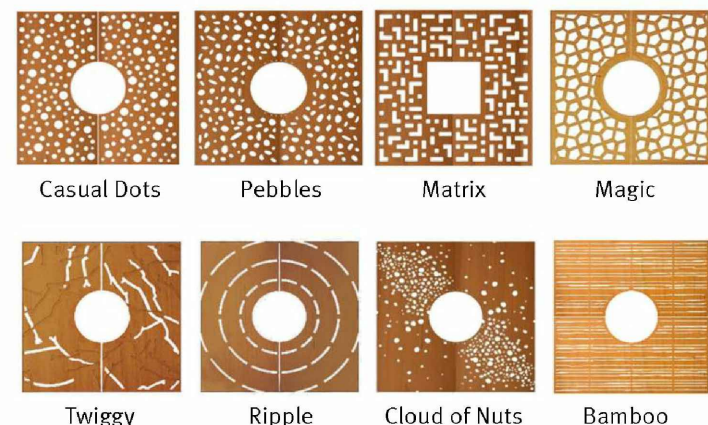
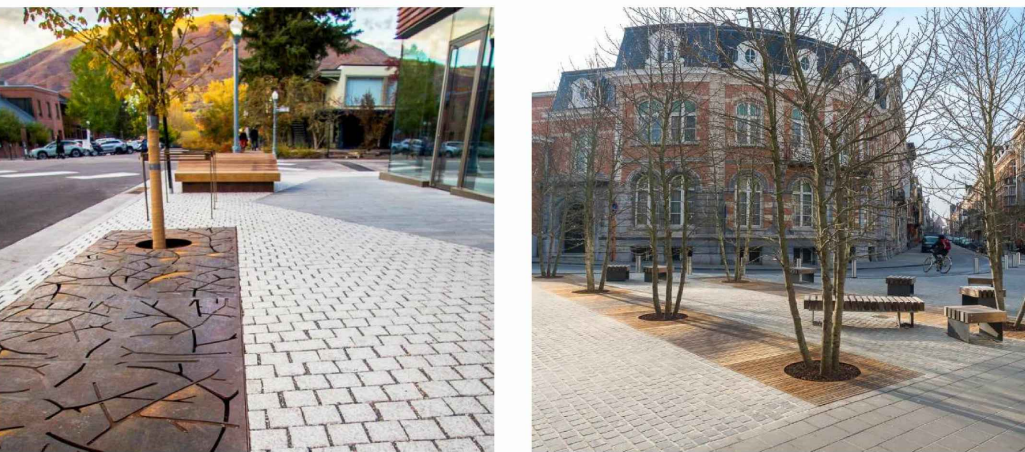
1.0	PAVEMENTS, RAMPS, CURBS	DETAIL / SHEET	6.0	RAILINGS, BARRIERS, FENCING	DETAIL / SHEET
1.1	PAVERS - TBD	1/L4-00	6.1	HANDRAIL	1/L4-01
1.2	PAVERS - STRIPING PARKING	1/L4-00			
2.0	JOINTING		7.0	SITE LIGHTING	
X.X	NOT USED AT THIS TIME	X/XX-XX		BY OTHERS	
3.0	STEPS		8.0	DRAINAGE	
3.1	GRANITE STEPS	2/L4-01	X.X	NOT USED AT THIS TIME	X/XX-XX
4.0	SITE WALLS/ EMBANKMENTS		9.0	PLANTING AND LANDSCAPE	
4.1	MASONRY WALL - FINISH TBD	3/L4-00	9.1	DECIDUOUS TREE PLANTING	1/L4-02
4.2	STEEL SCRIM	2/L4-00	9.2	MULTI-STEM TREE PLANTING	2/L4-02
			9.3	SHRUB PLANTING	3/L4-02
			9.4	PERENNIAL PLANTING	4/L4-02
			9.5	STEEL EDGING	5/L4-02
5.0	SITE FURNITURE		10.0	MISCELLANEOUS ELEMENTS	
5.1	GRANITE BENCH WOOD TOP	1/L4-03	10.1	BIKE RACK - STREETLIFE CorTen	1/L4-04
5.2	SOLID EDGE SYSTEM - STREETLIFE	2/L4-03	10.2	TREE GRILLE - STREETLIFE CUSTOM 5' X 18"	2/L4-04
			10.3	TREE GRILLE - STREETLIFE 5' x 5'	2/L4-04
			10.4	TREE GRATE - NENNAH MODEL R-8810	3/L4-04
			10.5	WASTE DISPOSAL CONTAINERS	1/L4-05
			10.6	BOLLARD - STREETLIFE OPEN BOLLARD	1/L4-05



1 BIKE RACK
N.T.S.

10.1

2 TREE GRILLE
N.T.S.



10.2 10.3

SEAL

PROJECT TITLE

MERCY
144 STATE STREET
PORTLAND, ME

PREPARED FOR

REVISIONS	DATE
LEVEL III SITE PLAN	11.09.2020
LEVEL III SITE PLAN	05.25.2021

ISSUE DATE

LEVEL III SITE PLAN
SEPTEMBER 10, 2020

SHEET TITLE

SITE FURNISHINGS

SHEET INFORMATION

L 4-04

SITE KEYNOTES:

1.0	PAVEMENTS, RAMPS, CURBS	DETAIL / SHEET	6.0	RAILINGS, BARRIERS, FENCING	DETAIL / SHEET
1.1	PAVERS - TBD	1/L4-00	6.1	HANDRAIL	1/L4-01
1.2	PAVERS - STRIPING PARKING	1/L4-00			
			7.0	SITE LIGHTING	
				BY OTHERS	
2.0	JOINTING		8.0	DRAINAGE	
X.X	NOT USED AT THIS TIME	X/XX-XX	X.X	NOT USED AT THIS TIME	X/XX-XX
3.0	STEPS		9.0	PLANTING AND LANDSCAPE	
3.1	GRANITE STEPS	2/L4-01	9.1	DECIDUOUS TREE PLANTING	1/L4-02
			9.2	MULTI-STEM TREE PLANTING	2/L4-02
4.0	SITE WALLS/ EMBANKMENTS		9.3	SHRUB PLANTING	3/L4-02
4.1	MASONRY WALL - FINISH TBD	3/L4-00	9.4	PERENNIAL PLANTING	4/L4-02
4.2	STEEL SCRIM	2/L4-00	9.5	STEEL EDGING	5/L4-02
5.0	SITE FURNITURE		10.0	MISCELLANEOUS ELEMENTS	
5.1	GRANITE BENCH WOOD TOP	1/L4-03	10.1	BIKE RACK - STREETLIFE CorTen	1/L4-04
5.2	SOLID EDGE SYSTEM - STREETLIFE	2/L4-03	10.2	TREE GRILLE - STREETLIFE CUSTOM 5' X 18'	2/L4-04
			10.3	TREE GRILLE - STREETLIFE 5' x 5'	2/L4-04
			10.4	TREE GRATE - NENNAH MODEL R-8810	3/L4-04
			10.5	WASTE DISPOSAL CONTAINERS	1/L4-05
			10.6	BOLLARD - STREETLIFE OPEN BOLLARD	1/L4-05

STREETLIFE®

Product Sheet

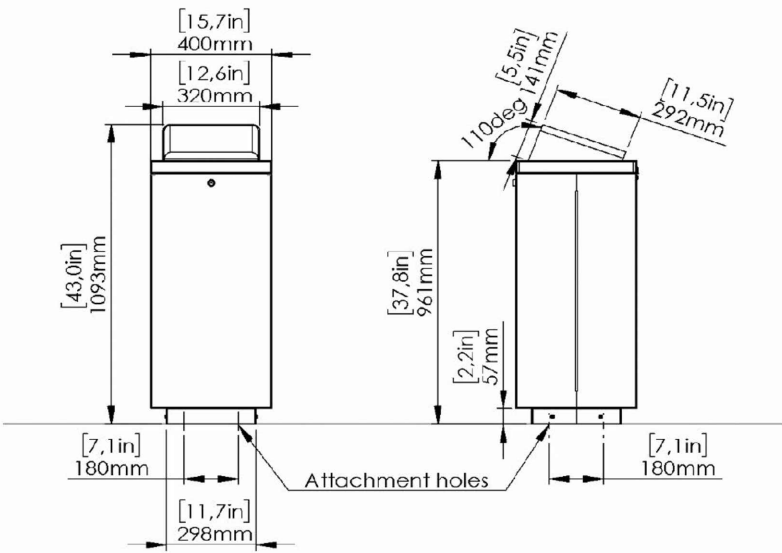
Box Bins Extra Slim

Waste disposal container in powder coated steel

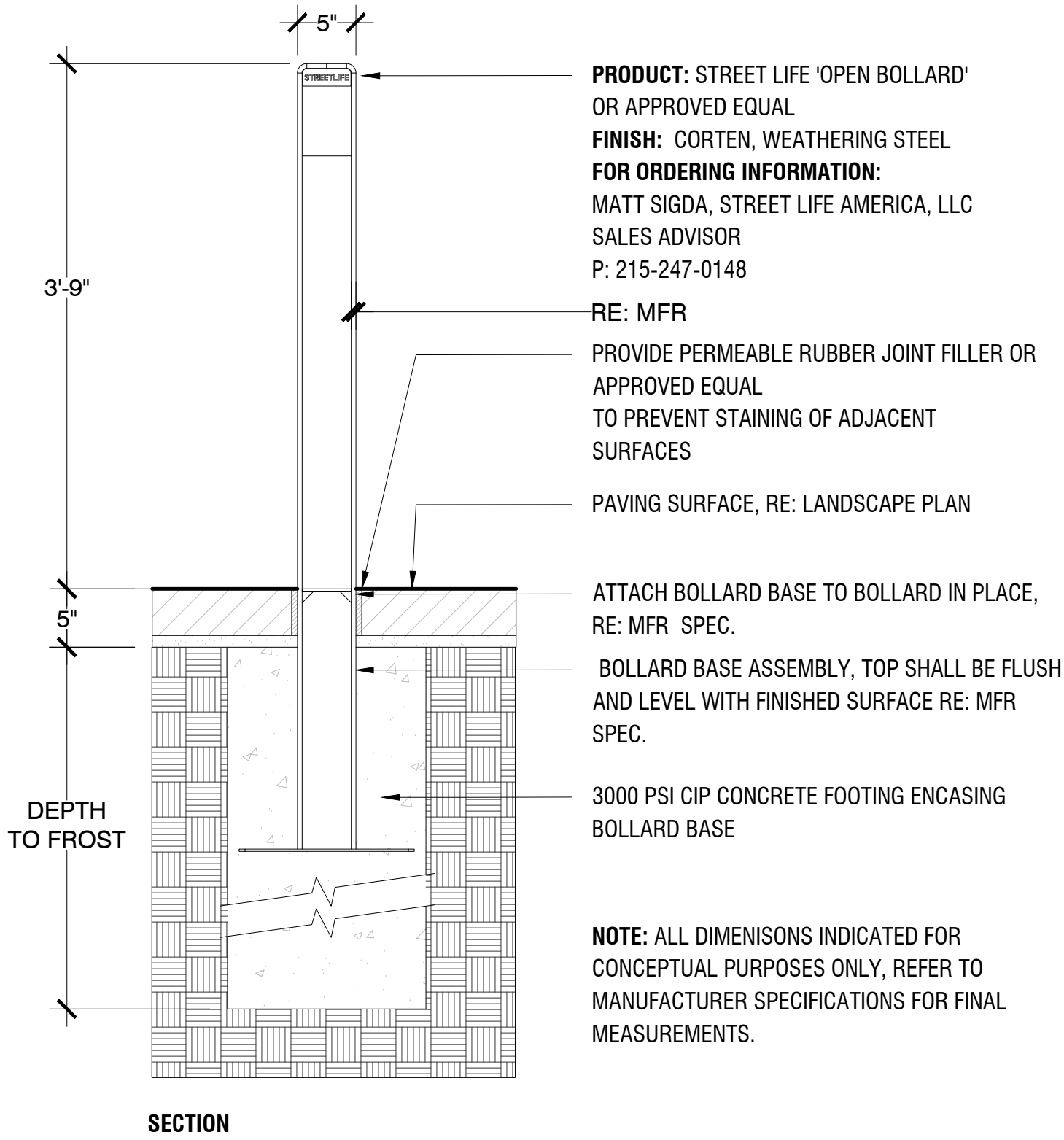
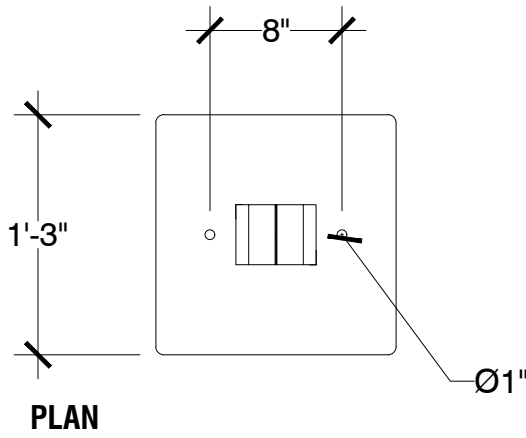


Product Code	BB-S40-PC / BB-S40-CD-PC
Dimensions	ca.40×40×97 cm 16×16×38 inches (l×w×h) Volume ca. 120 liter 3,5 cu.ft
Weight	41 kg / 90 lbs
Material	Walls: laser cut weathering steel finished in a double powder coating Lid: stainless steel or weathering steel incl. lock
Optional	Steel walls with Casual Dots pattern (-CD in product code) Lid with Casual Dots Pattern Raincover with opening in stainless steel or weathering steel
Delivery	Fully assembled
Cleaning & Maintenance	Powder coated steel: maintenance free, cleaning with clear water and brush or high pressure water cleaner
Rendering	

Installation
The product can be surface mounted with 4 bolts from the inside to pavement on a concrete foundation block



*Metric units are leading
Design: Streetlife
Protected by int. Modeldepos & Patents



PRODUCT: STREET LIFE 'OPEN BOLLARD'
OR APPROVED EQUAL
FINISH: CORTEN, WEATHERING STEEL
FOR ORDERING INFORMATION:
MATT SIGDA, STREET LIFE AMERICA, LLC
SALES ADVISOR
P: 215-247-0148

RE: MFR
PROVIDE PERMEABLE RUBBER JOINT FILLER OR
APPROVED EQUAL
TO PREVENT STAINING OF ADJACENT
SURFACES

PAVING SURFACE, RE: LANDSCAPE PLAN

ATTACH BOLLARD BASE TO BOLLARD IN PLACE,
RE: MFR SPEC.

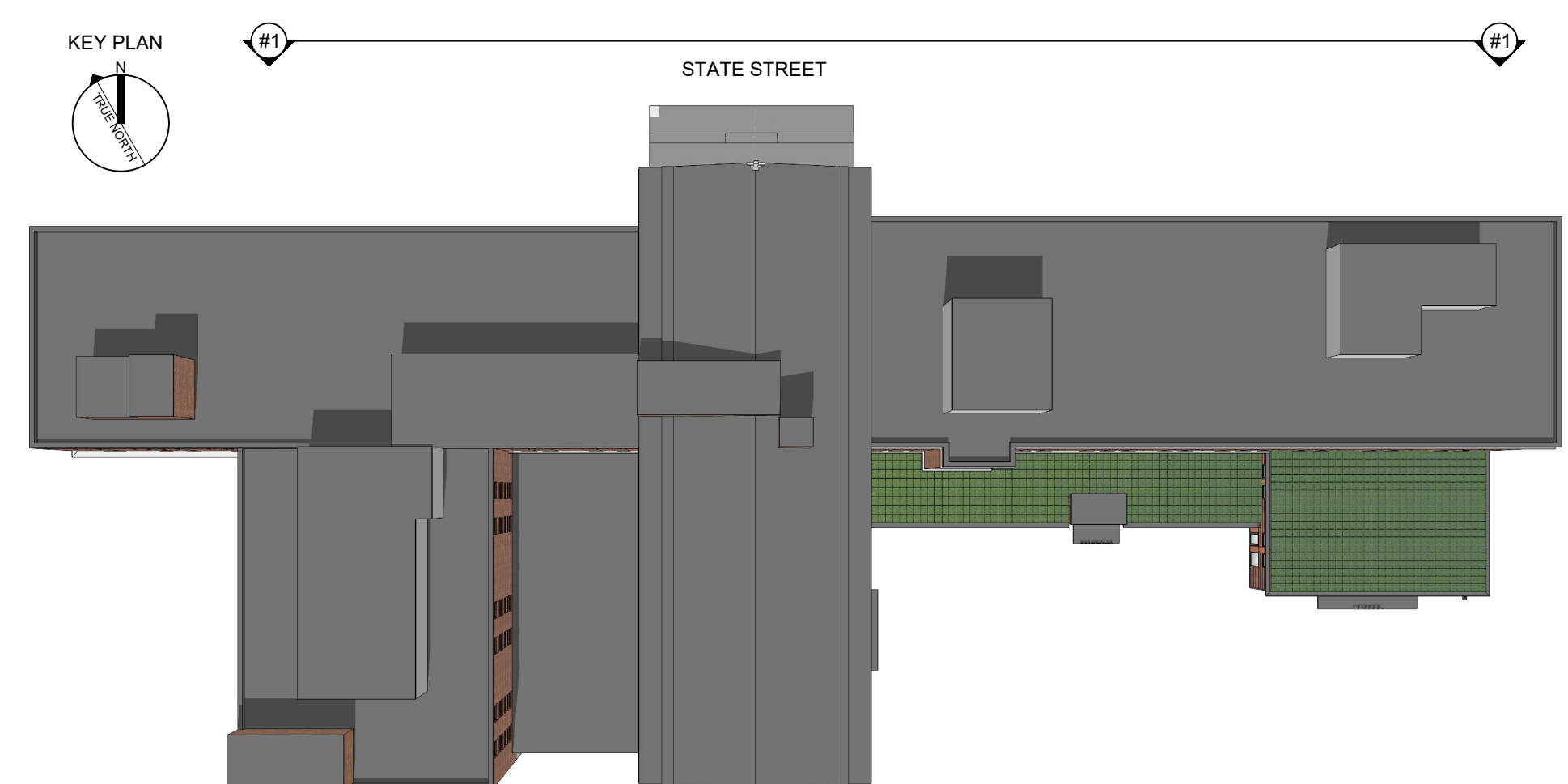
BOLLARD BASE ASSEMBLY, TOP SHALL BE FLUSH
AND LEVEL WITH FINISHED SURFACE RE: MFR
SPEC.

3000 PSI CIP CONCRETE FOOTING ENCASING
BOLLARD BASE

NOTE: ALL DIMENISONS INDICATED FOR
CONCEPTUAL PURPOSES ONLY, REFER TO
MANUFACTURER SPECIFICATIONS FOR FINAL
MEASUREMENTS.



1 NORTH ELEVATION (STATE STREET)
1/8" = 1'-0"



RESIDENCES AT MERCY HOSPITAL
STATE STREET
PORTLAND, MAINE

RSA
RYAN SENATORE
ARCHITECTURE
90 CONGRESS STREET #2
PORTLAND, MAINE 04101
207-767-5599
senatore@rsaarchitecture.com

CONSULTANTS:

REVISIONS:

PROGRESS PRINT ONLY
Not for Construction
10-09-2020

DATE:

PROJECT No. 2051

DRAWN BY: RRT, RJS, JPF

CHECKED BY: RJS

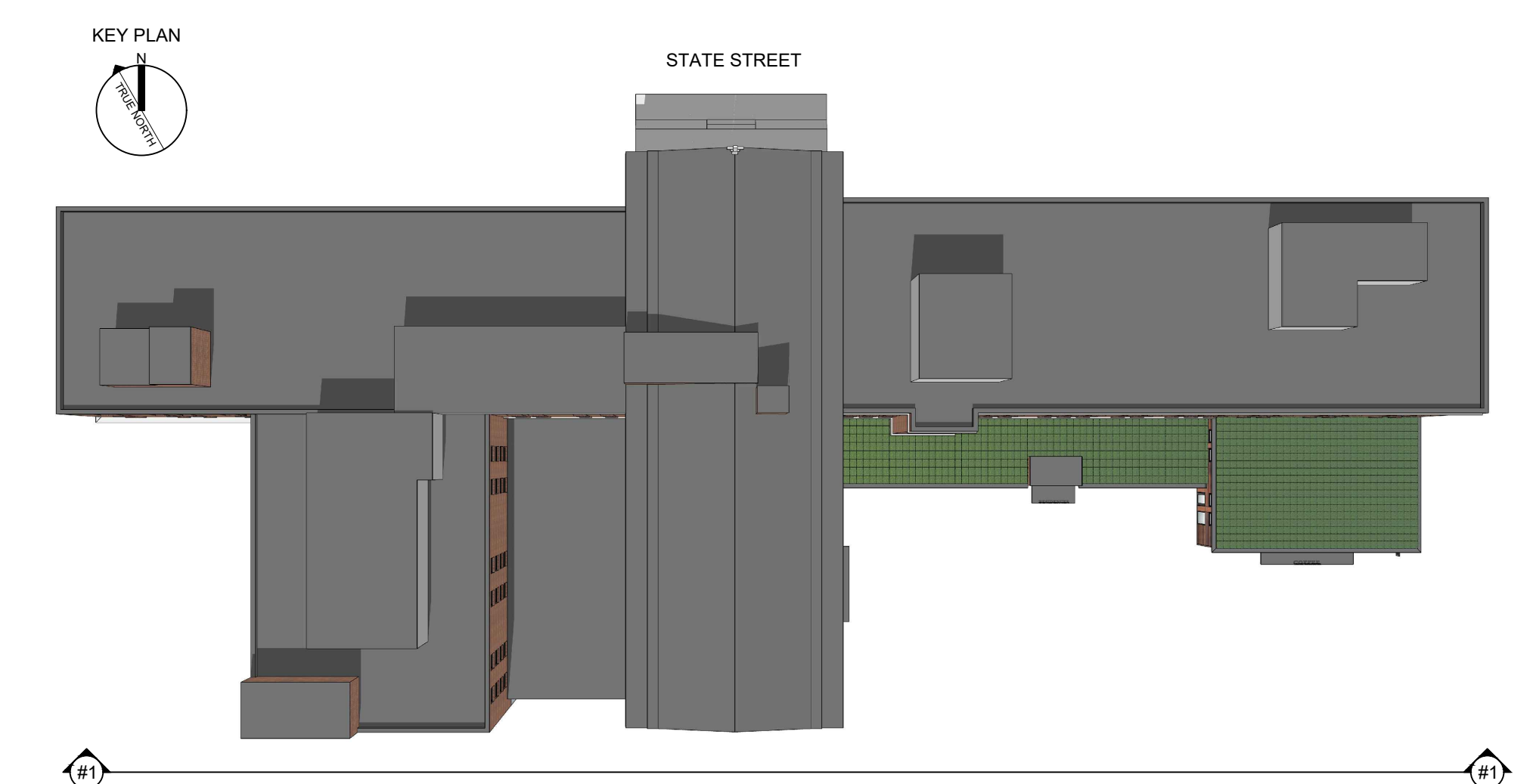
SCALE: AS NOTED

SHEET TITLE:

NORTH
ELEVATION



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



RESIDENCES AT MERCY HOSPITAL
STATE STREET
PORTLAND, MAINE

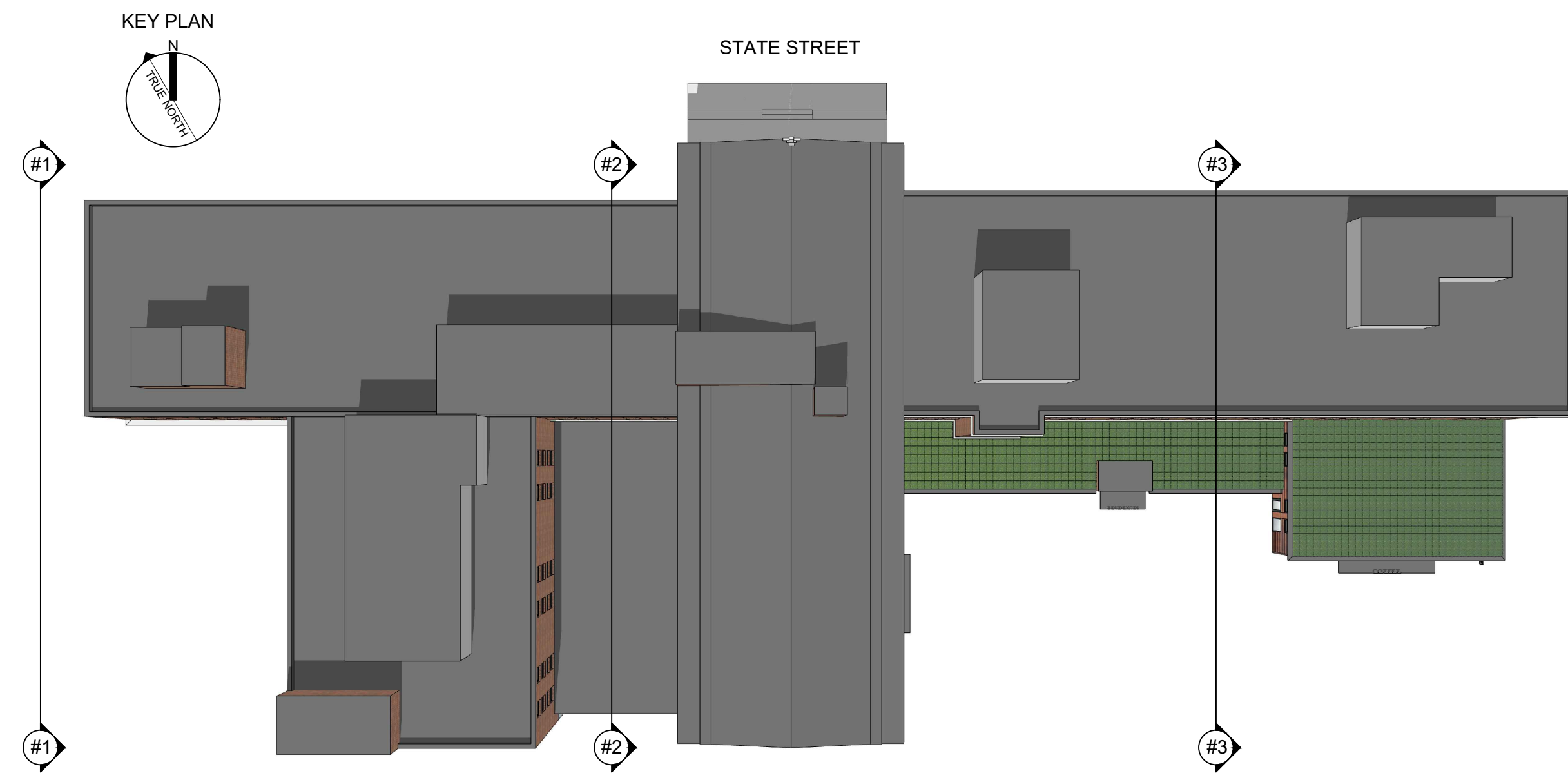
RSA
RYAN SENATORE
ARCHITECTURE
90 CONGRESS STREET #2
PORTLAND, MAINE 04101
207.747.5259
senatore@rsaarchitecture.com

CONSULTANTS:

REVISIONS:

PROGRESS PRINT ONLY
Not for Construction
10.09.2020

DATE:
PROJECT No: 2051
DRAWN BY: RRT, RJS, JPF
CHECKED BY: RJS
SCALE: AS NOTED
SHEET TITLE:
SOUTH ELEVATION



RESIDENCES AT MERCY HOSPITAL
STATE STREET
PORTLAND, MAINE

RSA
RYAN SENATORE
ARCHITECTURE
90 CONGRESS STREET #2
PORTLAND, MAINE 04101
207.747.5259
senatore@rsaarchitecture.com

CONSULTANTS:

REVISIONS:

PROGRESS PRINT ONLY
Not for Construction
10.09.2020

DATE:

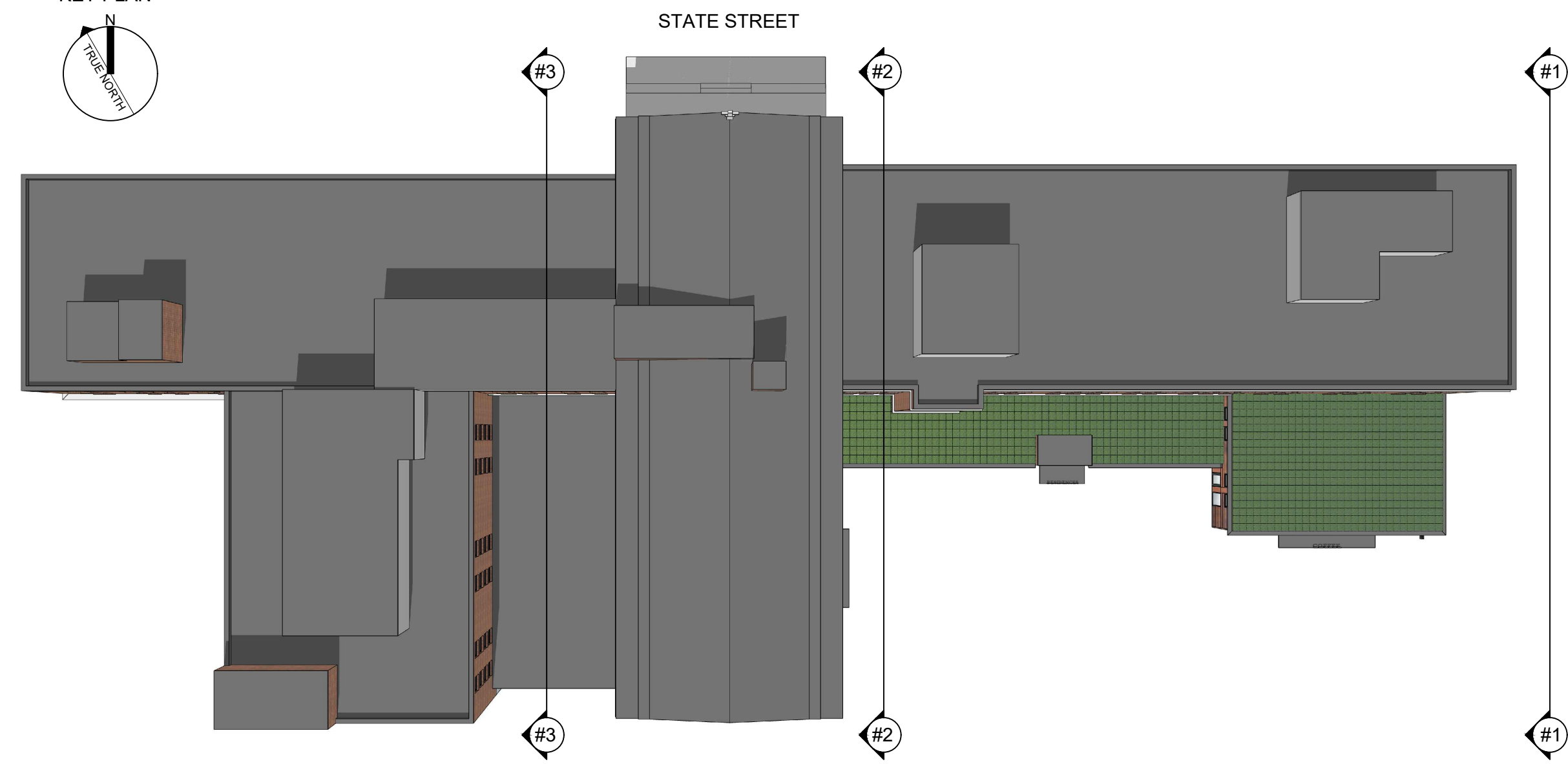
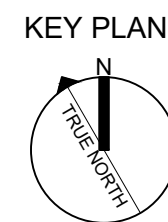
PROJECT No: 2051

DRAWN BY: RRT, RJS, JPF

CHECKED BY: RJS

SCALE: AS NOTED

SHEET TITLE:
WEST ELEVATIONS



1 EAST ELEVATION
1/8" = 1'-0"



3 EAST ELEVATION
1/8" = 1'-0"



2 EAST ELEVATION
1/8" = 1'-0"



1 PERSPECTIVE VIEW 1
RJS

© 2020 RYAN SENATORE
ARCHITECTURE

RESIDENCES AT MERCY HOSPITAL
STATE STREET
PORTLAND, MAINE

RSA
RYAN SENATORE
ARCHITECTURE
90 CONGRESS STREET #2
PORTLAND, MAINE 04101
207.747.5199
senatore@rsaarchitecture.com

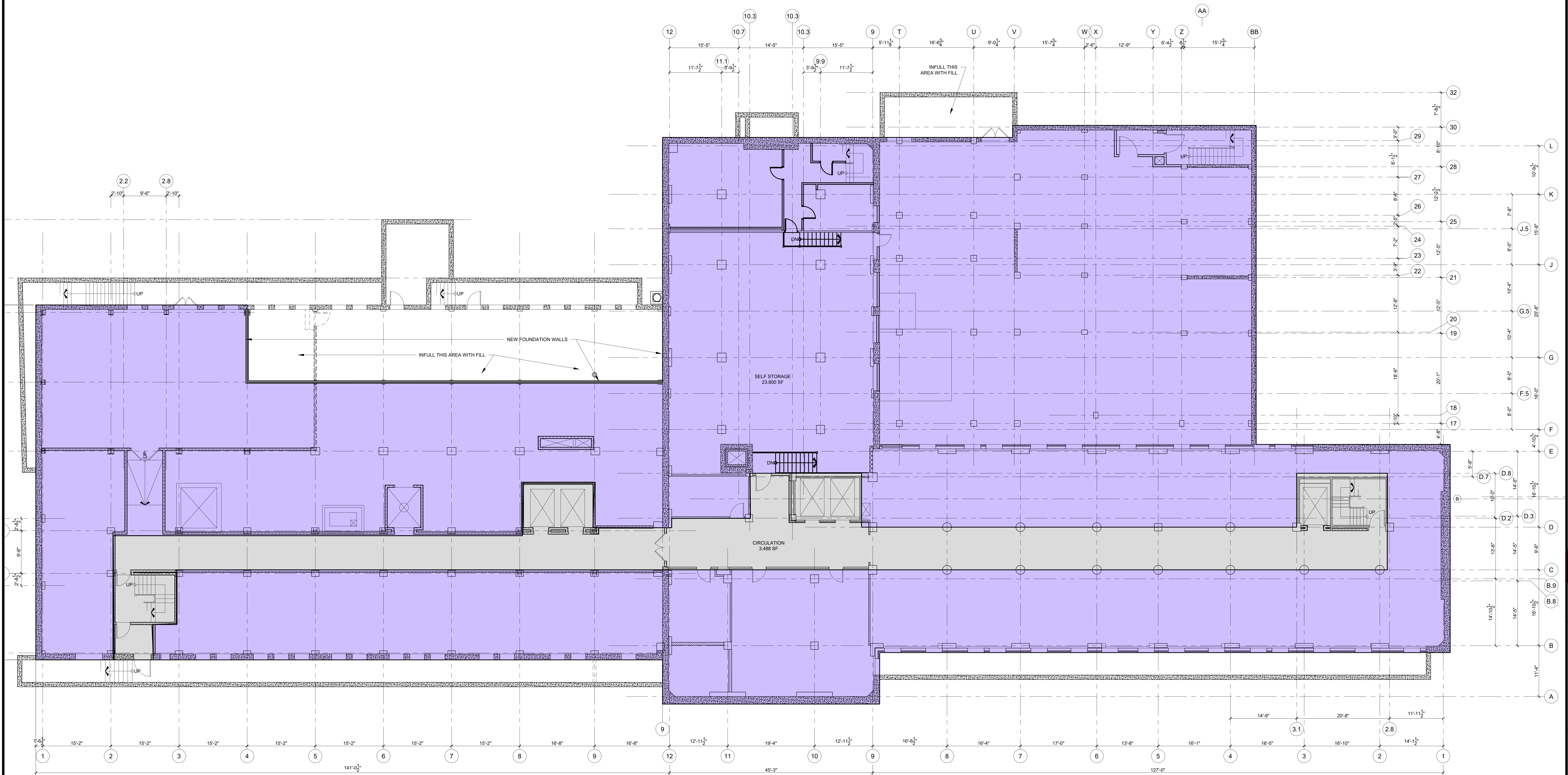
CONSULTANTS:

REVISIONS:
*PROGRESS PRINT ONLY
Not for Construction
10.09.2020*

DATE:
PROJECT No: 2051
DRAWN BY: RRT, RJS, JPF
CHECKED BY: RJS
SCALE: AS NOTED
SHEET TITLE:
PERSPECTIVE 1



1 PERSPECTIVE VIEW



1 BASEMENT FLOOR PLAN
1/8" = 1'-0"

RESIDENCES AT MERCY HOSPITAL
STATE STREET
PORTLAND, MAINE

RSA
RYAN SENATORE
ARCHITECTURE
80 CONGRESS STREET #2
PORTLAND, MAINE 04101
207.747.5199
senatore@rsaarchitecture.com

CONSULTANTS:

REVISIONS:

PROGRESS PRINT ONLY
Not for Construction
09.23.2020

DATE:

PROJECT No. 2051

DRAWN BY: RRT, RJS, JPF

CHECKED BY: RJS

SCALE: AS NOTED

SHEET TITLE:

BASEMENT

FLOOR PLAN

A-1-0B



1 GROUND FLOOR PLAN
1/8" = 1'-0"

RESIDENCES AT MERCY HOSPITAL
STATE STREET
PORTLAND, MAINE

RSA
RYAN SENATORE
ARCHITECTURE
90 CONGRESS STREET #2
PORTLAND, MAINE 04101
207.637.6369
senatorearchitect.com

CONSULTANTS:

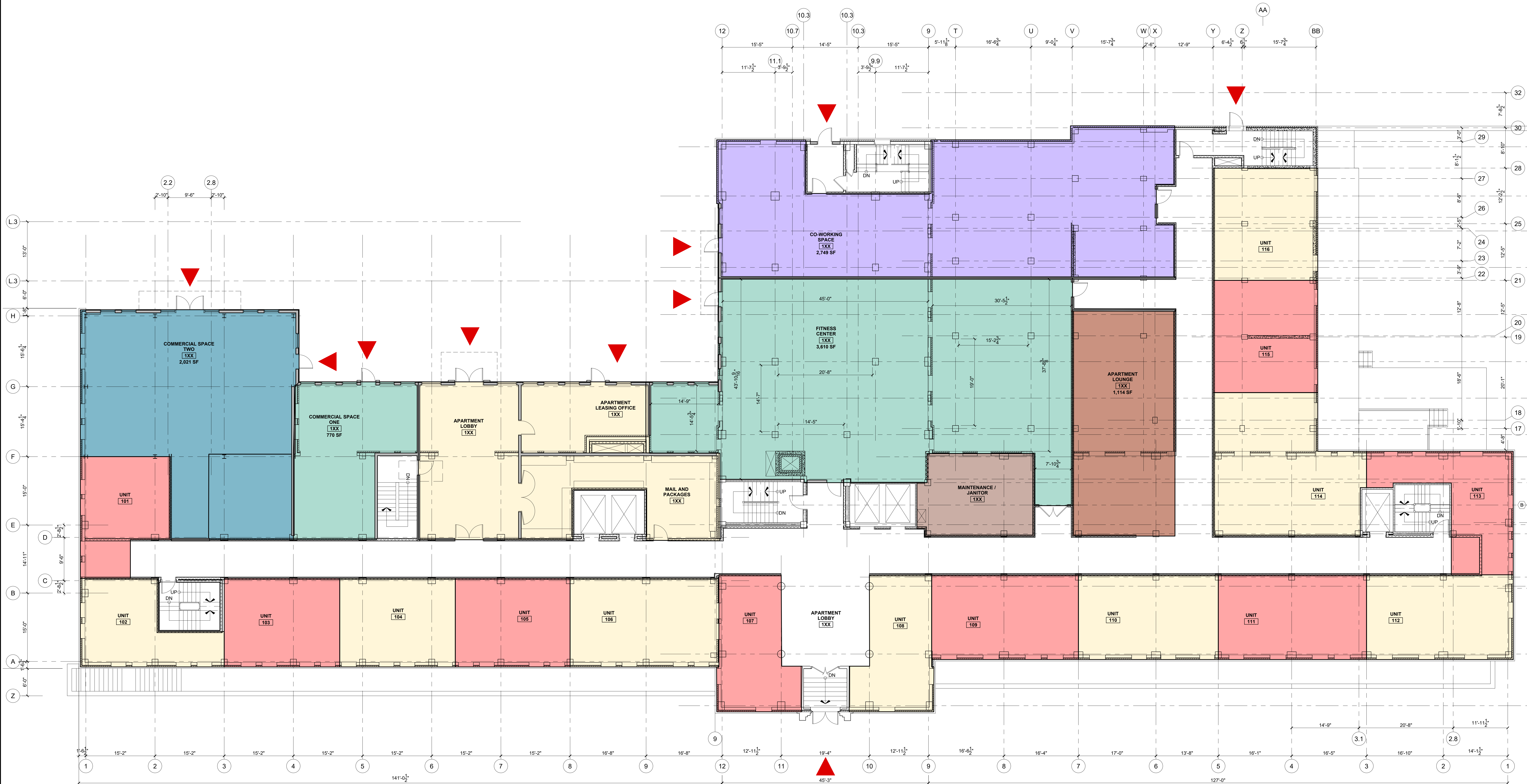
REVISIONS:

PROGRESS PRINT ONLY
Not for Construction
09.23.2020

DATE:
PROJECT No: 2051
DRAWN BY: RRT, RJS, JPF
CHECKED BY: RJS
SCALE: AS NOTED
SHEET TITLE:
GROUND FLOOR
PLAN

A1-0

UNIT TABULATION			
	STUDIOS	ONE BEDROOM	TWO BEDROOM
BASEMENT			
GROUND FLOOR	0	8	1
FIRST FLOOR	6	11	
SECOND FLOOR	6	26	
THIRD FLOOR	6	24	
FOURTH FLOOR	6	24	
FIFTH FLOOR	6	24	
SIXTH FLOOR	5	13	
TOTALS	35	130	1
TOTAL UNITS			166



1 FIRST FLOOR PLAN
1/8" = 1'-0"

RESIDENCES AT MERCY HOSPITAL
STATE STREET
PORTLAND, MAINE

RSA
RYAN SENATORE
ARCHITECTURE
90 CONGRESS STREET #2
PORTLAND, MAINE 04101
207-767-5589
senatore@rsaarchitecture.com

CONSULTANTS:

REVISIONS:
PROGRESS PRINT ONLY
Not for Construction
09-23-2020

DATE:
PROJECT No: 2051
DRAWN BY: RRT, RJS, JPF
CHECKED BY: RJS
SCALE: AS NOTED
SHEET TITLE:
FIRST FLOOR
PLAN

A1-1



1 SECOND FLOOR PLAN
1/8" = 1'-0"

RESIDENCES AT MERCY HOSPITAL
STATE STREET
PORTLAND, MAINE

RSA
RYAN SENATORE
ARCHITECTURE
90 CONGRESS STREET #2
PORTLAND, MAINE 04101
207.747.5199
senatore@rsaarchitecture.com

CONSULTANTS:

REVISIONS:

PROGRESS PRINT ONLY
Not for Construction
09.23.2020

DATE:

PROJECT No: 2051

DRAWN BY: RRT, RJS, JPF

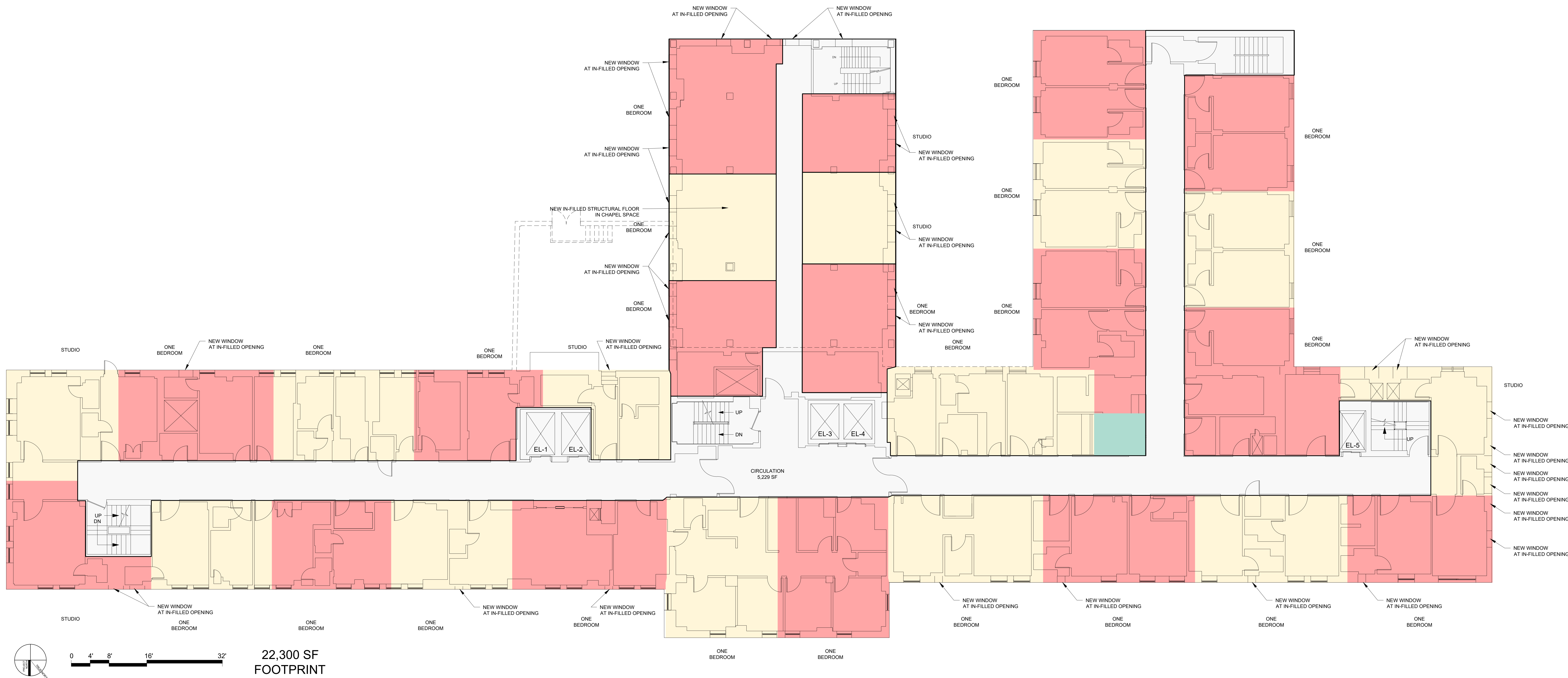
CHECKED BY: RJS

SCALE: AS NOTED

SHEET TITLE:

SECOND FLOOR
PLAN

A1-2









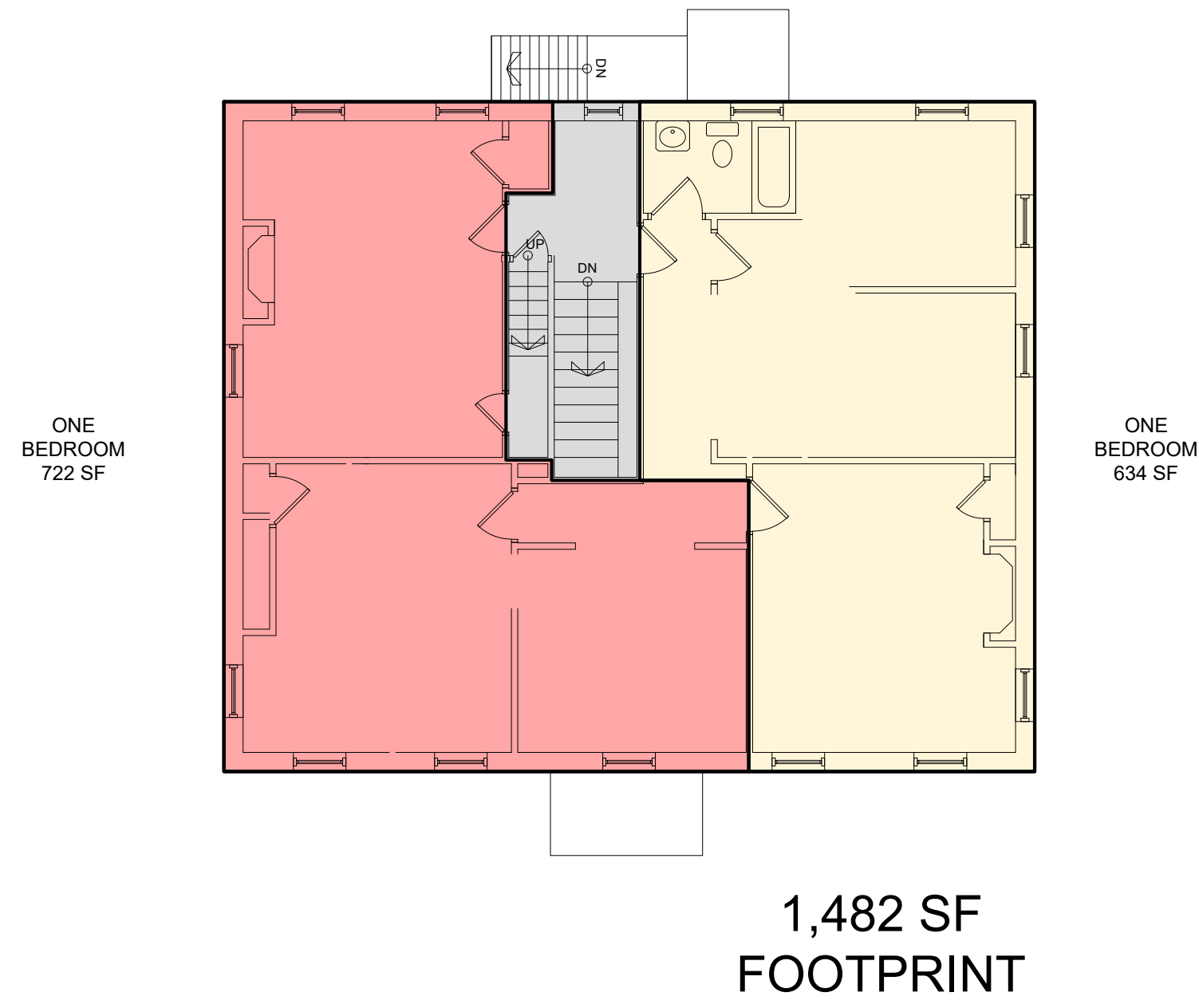




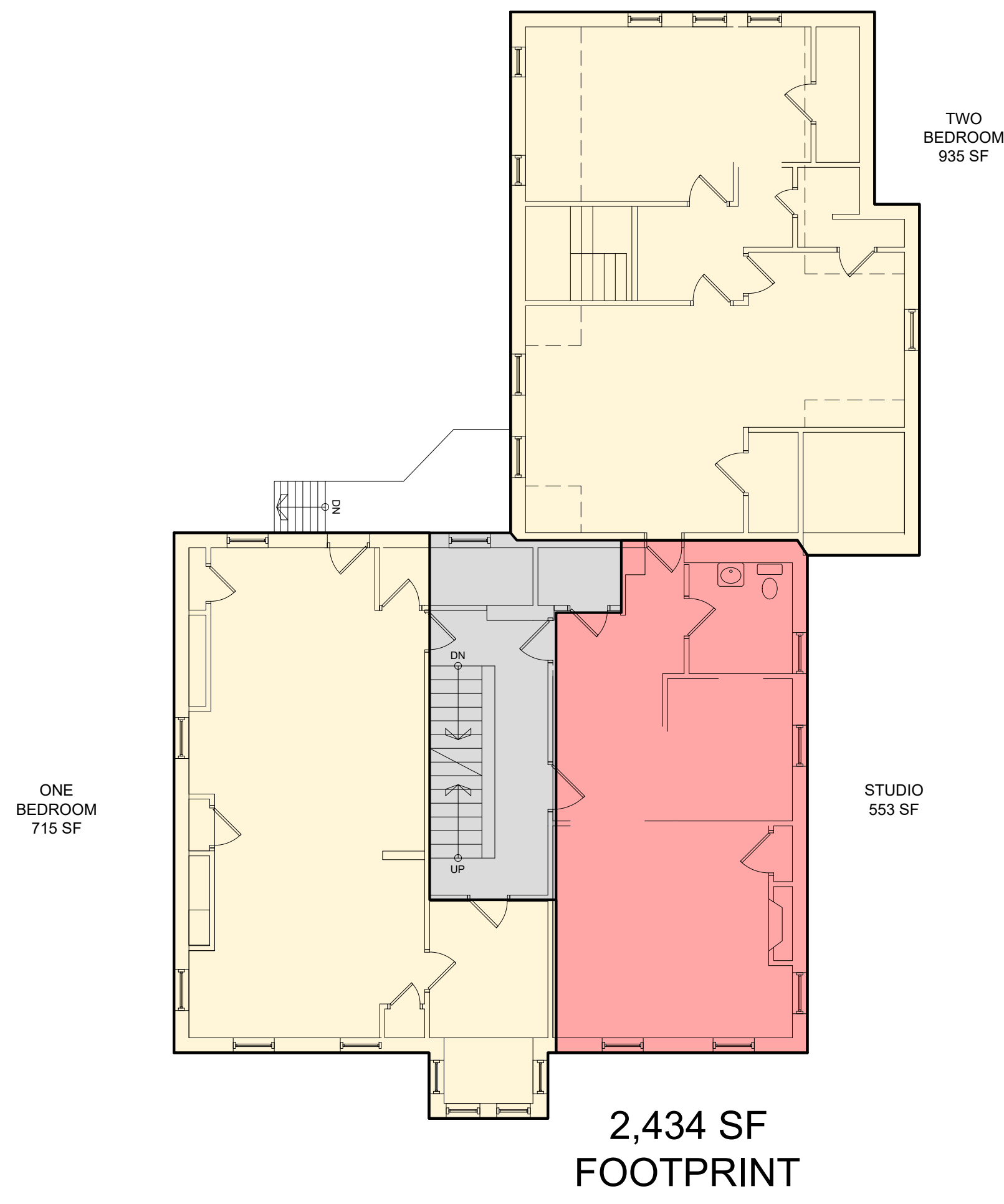




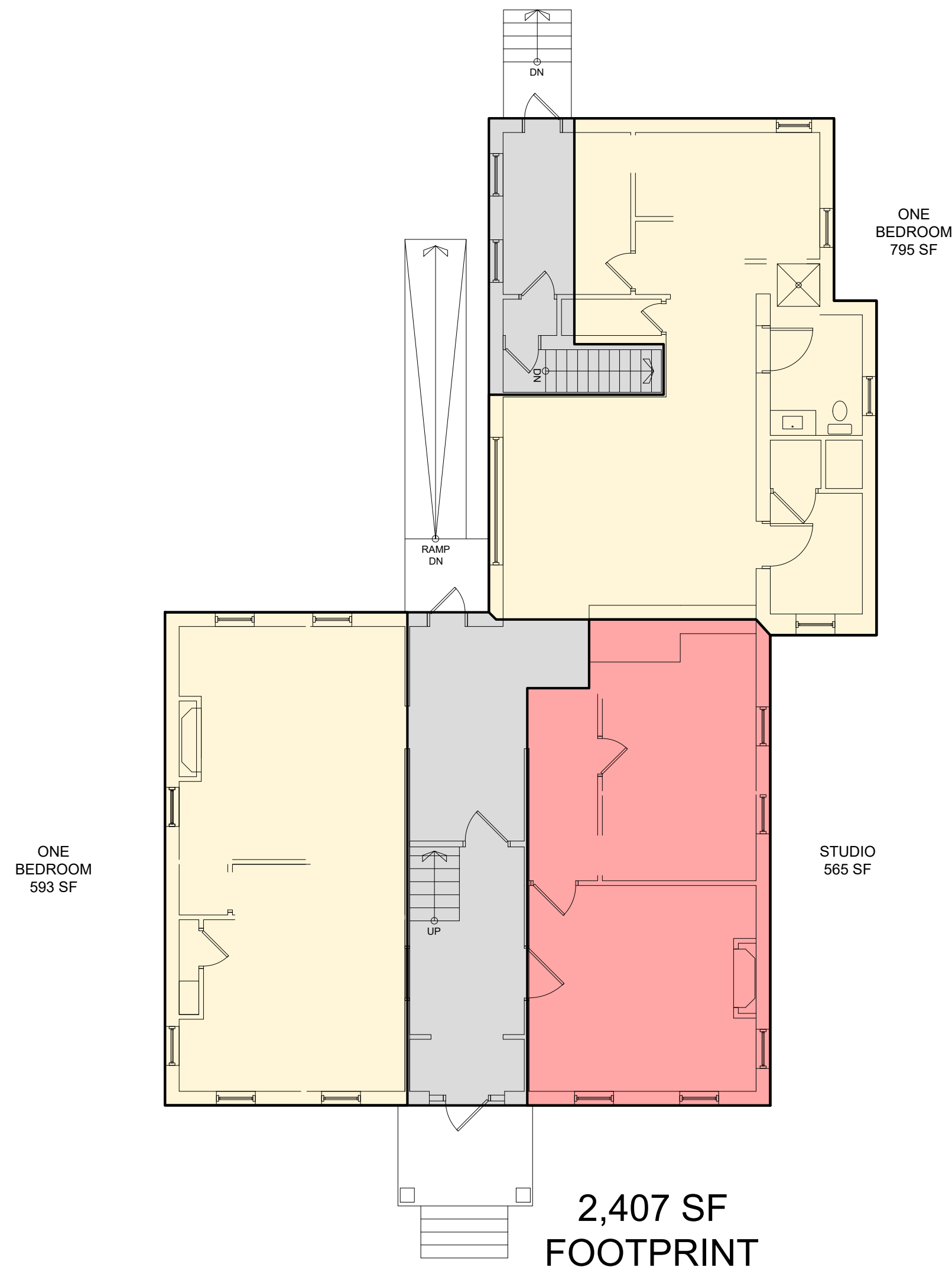




3 THIRD FLOOR PLAN
1/8" = 1'-0"



2 SECOND FLOOR PLAN
1/8" = 1'-0"



1 FIRST FLOOR PLAN
1/8" = 1'-0"

RESIDENCES AT MERCY HOSPITAL
STATE STREET
PORTLAND, MAINE

RSA
RYAN SENATORE
ARCHITECTURE
60 CONGRESS STREET #2
PORTLAND, MAINE 04101
207.767.0199
senatorearch@me.com

CONSULTANTS:

REVISIONS:

PROGRESS PRINT ONLY
Not for Construction
09.23.2020

DATE:

PROJECT No: 1961

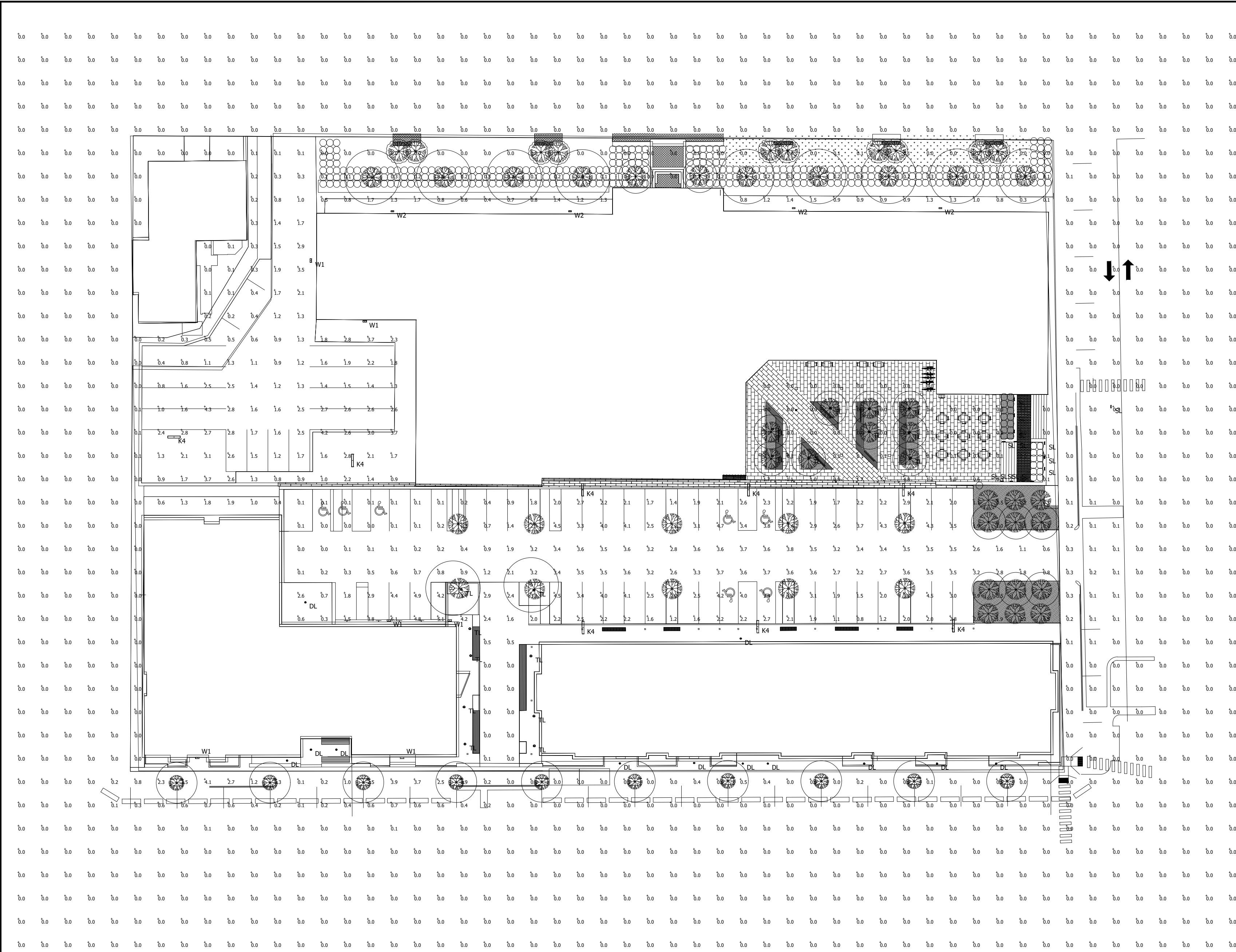
DRAWN BY: RRT, RJS, JPF

CHECKED BY: RJS

SCALE: AS NOTED

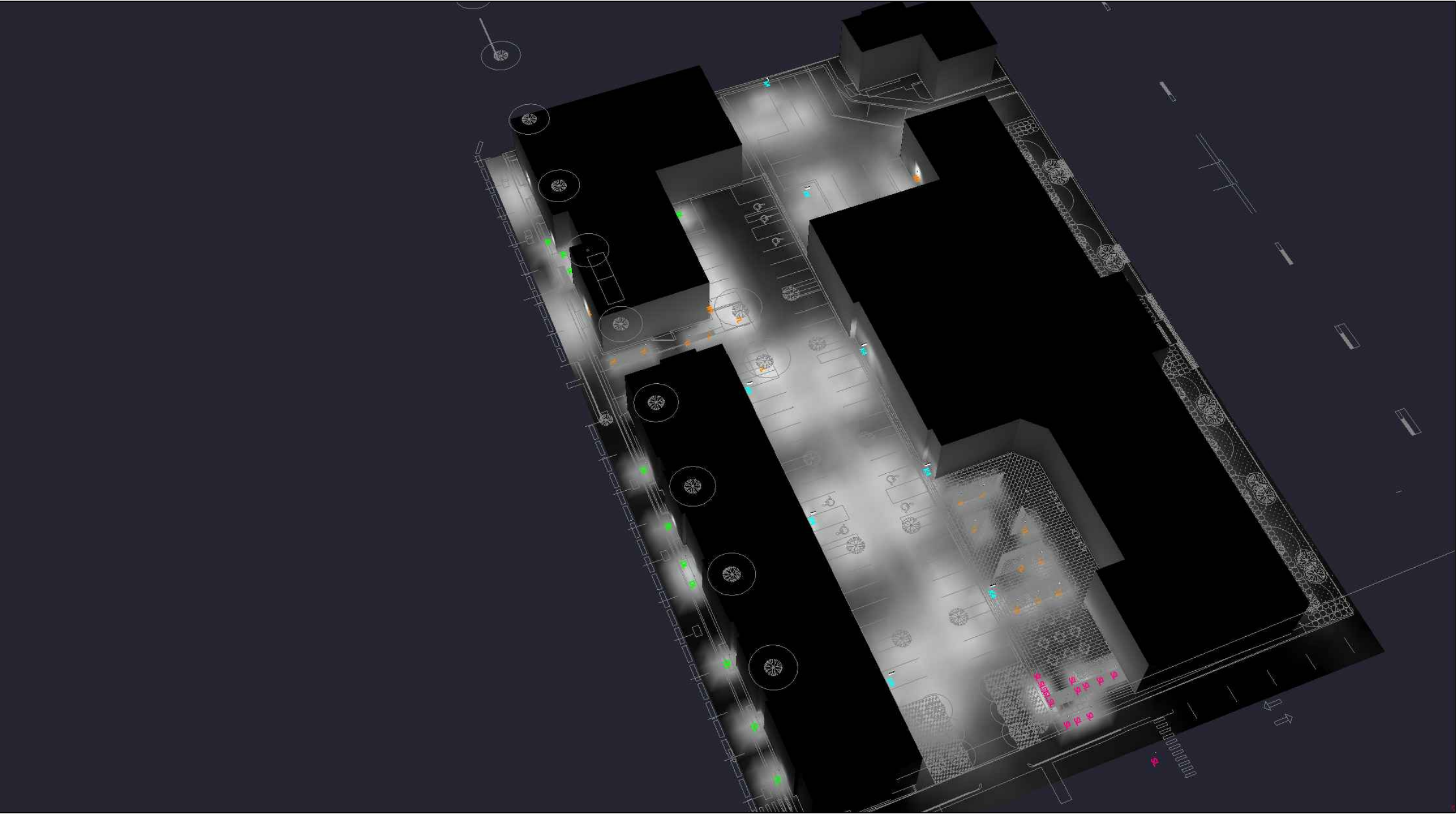
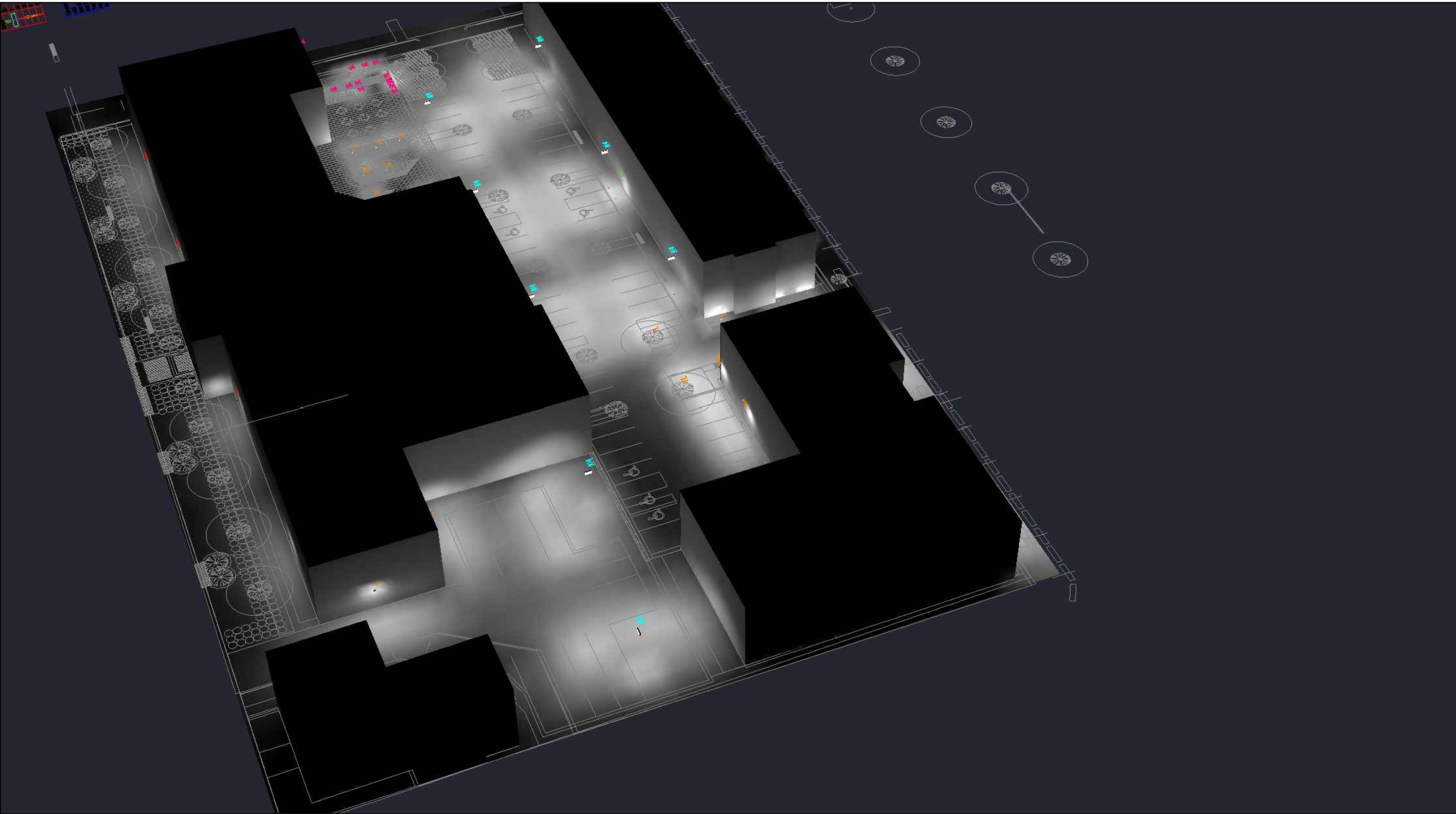
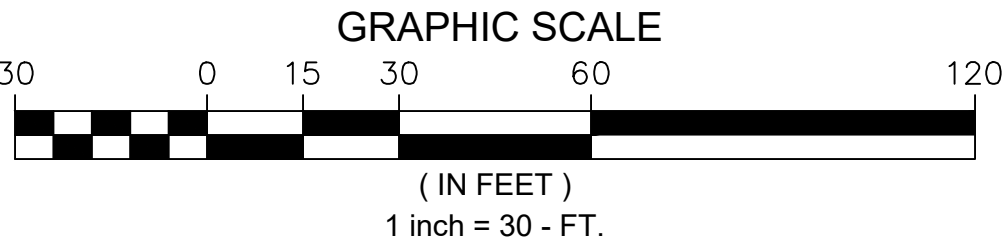
SHEET TITLE:
MORRISON
HOUSE FLOOR
PLANS

M1-0



Luminaire Schedule							
Symbol	Qty	Label	Mounting Height	LLF	Lum. Lumens	Lum. Watts	Description
	12	DL	8' - 0" AFG	0.900	664	8	LTR-4RD-H-SL06L-DM1_LTR-4RD-T-SL35K8WDS
	8	K4	20' - 0" AFG	0.900	8516	90	K5X-T4-MO-9030
	18	TL	N/A	0.900	664	8	EL807-9L4K-KIT
	14	SL	0' - 9" AFG	0.900	812	10.7	EL807_9L4K_KIT
	6	W1	12' - 0" AFG	0.900	3340	30	WDS-D-24L-30-3K7-3
	4	W2	12' - 0" AFG	0.900	1272	17	LNC-7LU-3K-2

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Back of Building	Illuminance	Fc	0.36	1.7	0.0	N.A.	N.A.
Back Parking Area	Illuminance	Fc	1.73	4.3	0.1	17.30	43.00
Courtyard	Illuminance	Fc	0.31	4.8	0.0	N.A.	N.A.
Front Parking Area	Illuminance	Fc	2.02	4.7	0.0	N.A.	N.A.
Overall Area	Illuminance	Fc	0.42	6.1	0.0	N.A.	N.A.



1. THIS LIGHTING DESIGN IS BASED ON LIMITED INFORMATION SUPPLIED BY OTHERS TO HUBBELL LIGHTING. SITE DETAILS PROVIDED HEREON ARE REPRODUCED ONLY AS A VISUALIZATION AID. FIELD DEVIATIONS MAY SIGNIFICANTLY AFFECT PREDICTED PERFORMANCE. PRIOR TO INSTALLATION, CRITICAL SITE INFORMATION (POLE LOCATIONS, ORIENTATION, MOUNTING HEIGHT, ETC.) SHOULD BE COORDINATED WITH THE CONTRACTOR AND/OR SPECIFIER RESPONSIBLE FOR THE PROJECT.

2. LUMINAIRE DATA IS TESTED TO INDUSTRY STANDARDS UNDER LABORATORY CONDITIONS. OPERATING VOLTAGE AND NORMAL MANUFACTURING TOLERANCES OF LAMP, BALLAST, AND LUMINAIRE MAY AFFECT FIELD RESULTS.

3. CONFORMANCE TO FACILITY CODE AND OTHER LOCAL REQUIREMENTS IS THE RESPONSIBILITY OF THE OWNER AND/OR THE OWNER'S REPRESENTATIVE.

TITLE:

MERCY
PORTLAND, ME
SITE PHOTOMETRIC PLAN

REVISED FROM DRAWING NUMBER(S)	
R1: 09/21/20	R5: 05/27/21
R2: 09/28/20	
R3: 11/24/20	
R4: 11/30/20	

Hubbell Lighting, Inc.
701 MILLENNIUM BLVD.
GREENVILLE, SC 29607

DN BY: DHK	DATE: 09/18/20	CHK BY: N/A
REV BY: DHK	DATE: 05/07/21	SCALE: AS NOTED
QUOTE: N/A	DRAWING / DESIGN NO: 2026981R5	

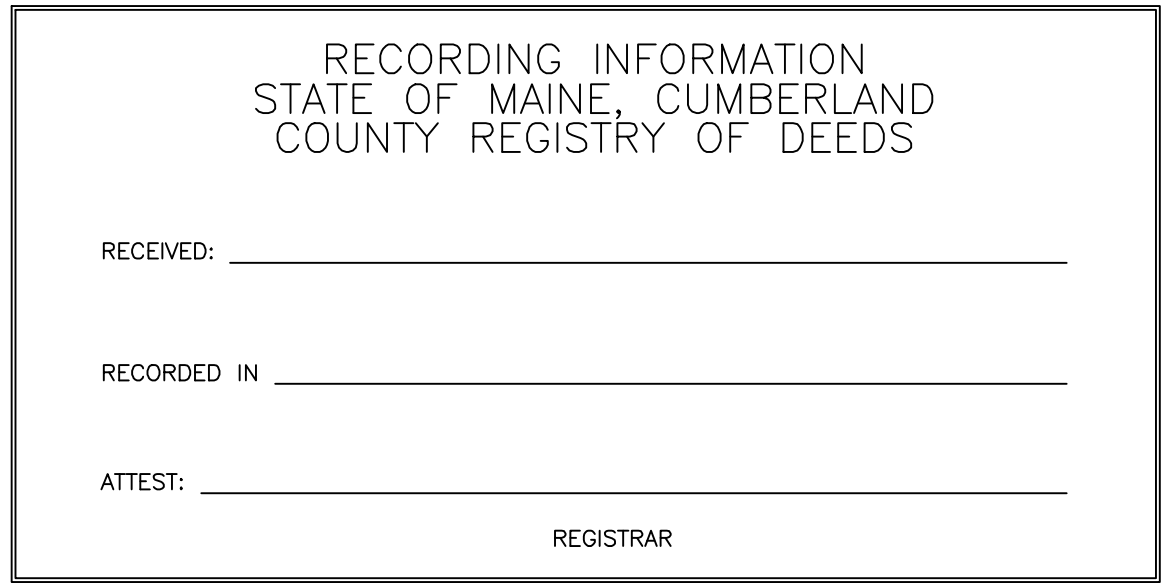
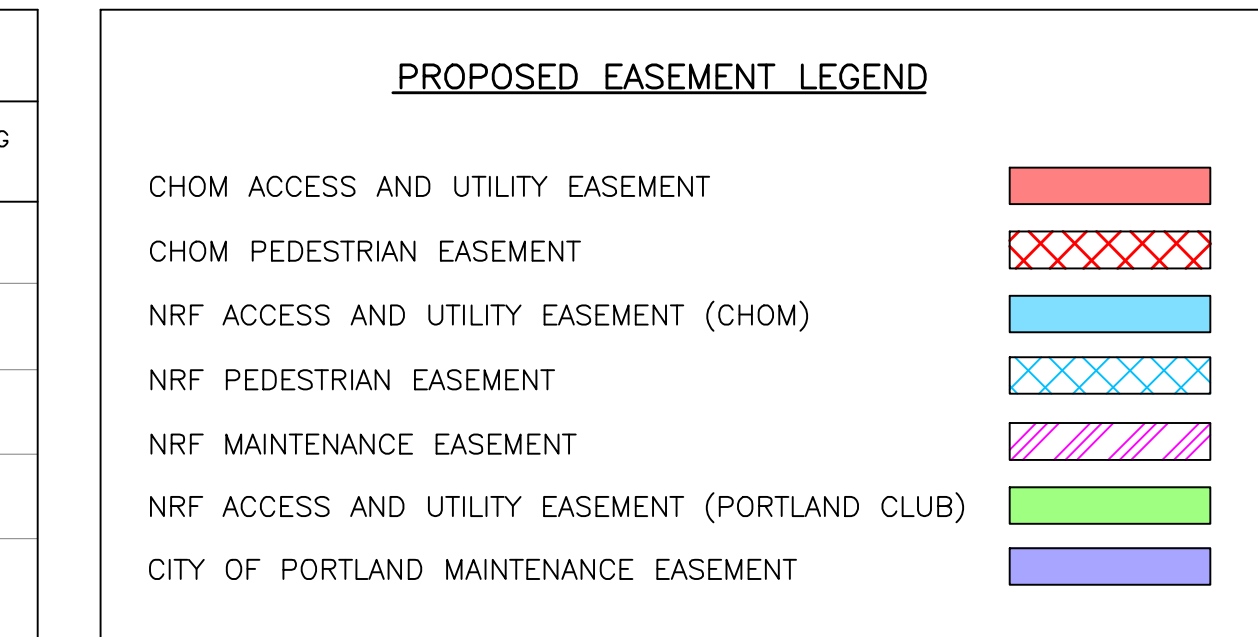
1. FOR INFORMATION REGARDING PROPOSED GROUND LEVEL LAYOUT, REFER TO SITE PLAN, SHEET C-10, MOST RECENT VERSION.
2. FOR INFORMATION REGARDING PROPOSED UTILITIES, REFER TO THE UTILITY PLAN, SHEET C-20, MOST RECENT VERSION.
3. FOR INFORMATION REGARDING PROPOSED GRADING AND STORMWATER, REFER TO THE GRADING PLAN, SHEET C-30, MOST RECENT VERSION.
4. TOTAL SITE AREA FOR 120 STATE STREET INCLUDES 2.35 ACRES (102,343 S.F.). TOTAL SITE AREA FOR 148 STATE STREET INCLUDES 0.13 ACRES (5,651 S.F.).
5. PROPOSED SITE AREAS FOR 120 STATE STREET, 148 STATE STREET, 73 WINTER STREET, AND 91 WINTER STREET ARE 1.60 ACRES (69,812 S.F.), 0.13 ACRES (5,651 S.F.), 0.35 ACRES (17,167 S.F.), AND 0.35 ACRES (15,364 S.F.), RESPECTIVELY.
6. R.O.W. WIDTHS FOR STATE STREET, SPRING STREET, AND WINTER STREET ARE 99', 50', AND 40' WIDE, RESPECTIVELY, PER BOUNDARY SURVEY COMPLETED BY OWEN HASKELL, INC. DATED AUGUST 2020.
7. SITE BOUNDARIES PER BOUNDARY SURVEY & TOPOGRAPHICAL MAP WITH EXISTING CONDITIONS PROVIDED BY OWEN HASKELL, INC. ON A PLAN ENTITLED BOUNDARY & TOPOGRAPHIC SURVEY AT 102 & 120 STATE STREET, PORTLAND, MAINE MADE FOR NEWHEIGHT REDFERN, LLC C/O ERIN COOPERRIDER 167 NEWBURY STREET, #503 PORTLAND, MAINE DATED AUGUST 2020.
8. AS OF 5/19/2020, THE SITE IS BOUNDED BY THE B-3 ZONE ON ALL SIDES PER CITY REZONE APPROVAL.
9. LOCUS PARCELS ARE SHOWN ON THE CITY OF PORTLAND ASSESSOR'S MAP 45, BLOCK C, PARCELS 6 (148 STATE ST) AND 7 (120 STATE ST).
10. LOCUS PARCELS DO NOT FALL IN A SPECIAL FLOOD HAZARD AREA PER FEMA FLOOD INSURANCE RATE MAP COMMUNITY-PANEL NUMBER 2300510013B, INDEX DATED 7/17/1986.
11. THIS SHEET IS THE SUBDIVISION PLAT FOR THE CREATION OF UP TO TWO HUNDRED AND SEVENTY-THREE (265) DWELLING UNITS ON THE EXISTING SUBSIST PROPERTY.
12. THE OWNER SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND MANAGEMENT OF DRIVEWAYS, SIDEWALKS, STORMWATER DEVICES, SITE LIGHTING, TRASH REMOVAL, RETAINING WALLS, AND SNOW REMOVAL.
13. THE OWNER SHALL BE RESPONSIBLE FOR COMPLYING WITH THE CONDITIONS OF CHAPTER 32 STORMWATER INCLUDING ARTICLE III, AT A MINIMUM. IN ADDITION, THE OWNER SHALL BE RESPONSIBLE FOR COMPLYING WITH THE CONDITIONS OF THE SUBMITTED STORMWATER MANAGEMENT PLAN AND THE APPROVED PLANS, AND MEET CITY STANDARDS AND STATE GUIDELINES.
14. THE PROPOSED DEVELOPMENT MUST COMPLY TO THE FOLLOWING AS APPROVED BY THE CITY:
 - 14.1. POST-CONSTRUCTION STORMWATER MANAGEMENT AGREEMENT: BOOK: _____ PAGE: _____

1. PREMISES IS SHOWN AS TM 45-C-6 (148 STATE ST) & 7 (120 STATE ST) ON THE CITY OF PORTLAND ASSESSORS MAPS.
2. BEARINGS ARE BASED ON MAGNETIC 1957. COORDINATES ARE BASED ON CITY DATUM UTILIZING THE MONUMENTS SHOWN.
3. THE LOCATIONS OF ALL UTILITIES SHOWN ON THE SURVEY ARE FROM VISIBLE SURFACE EVIDENCE ONLY.
4. ELEVATIONS ARE BASED ON CITY DATUM AS PER MONUMENT T104-45-11 AT CORNER OF CLARK AND SPRING STREETS, ELEVATION = 127.91 FEET.
5. PLAN REFERENCE NOTES:
 - 5.1. "PLAN OF PROPERTY IN PORTLAND, MAINE MADE FOR MERCY HOSPITAL DATED 3 FEB. 1982 REVISED THROUGH 15 MARCH 1982" BY H.I. & E.C. JORDAN, SURVEYORS.
 - 5.2. "PLAN OF PROPERTY IN PORTLAND, MAINE MADE FOR MERCY HOSPITAL DATED JUNE 17, 1981 REVISED OCT. 2, 1981" BY H.I. & E.C. JORDAN, SURVEYORS.
 - 5.3. STANDARD BOUNDARY & TOPOGRAPHIC SURVEY ON STATE STREET, PORTLAND, MAINE MADE FOR MERCY HOSPITAL DATED NOVEMBER 30, 1959 REV. 2 OCT. 04, 2012" BY OWEN HASKELL, INC.
 - 5.4. "ALTA/ACSM LAND TITLE SURVEY, 102, 120 (AKA 144) & 148 STATE STREET, PORTLAND, CUMBERLAND COUNTY, MAINE MADE FOR MERCY HOSPITAL AND EASTERN MAINE HEALTHCARE SYSTEMS: FEBRUARY 27, 2013 LAST REVISION DATE: SEPT. 20, 2013 BY OWEN HASKELL, INC.
6. 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 SURVEY HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. CALL 1-888-DIGSAFE AT LEAST THREE BUSINESS DAYS BEFORE PERFORMING ANY CONSTRUCTION. DUE TO OSHA CONFIRMED SPACE REQUIREMENTS, ALL INVERTS AND PIPE SIZES MUST BE VERIFIED PRIOR TO ANY CONSTRUCTION.

1. EASEMENT TO CENTRAL MAINE POWER COMPANY RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS BOOK 16391, PAGE 232
2. EASEMENT TO CENTRAL MAINE POWER COMPANY RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS BOOK 28512, PAGE 45.

1. ACCESS AND UTILITY EASEMENT FROM NEWHEIGHT REDFERN, LLC TO COMMUNITY HOUSING OF MAINE AS RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS:
BOOK: _____ PAGE: _____
2. PEDESTRIAN EASEMENT FROM NEWHEIGHT REDFERN, LLC TO COMMUNITY HOUSING OF MAINE AS RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS:
BOOK: _____ PAGE: _____
3. ACCESS AND UTILITY EASEMENT FROM COMMUNITY HOUSING OF MAINE TO NEWHEIGHT REDFERN, LLC AS RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS:
BOOK: _____ PAGE: _____
4. PEDESTRIAN EASEMENT FROM COMMUNITY HOUSING OF MAINE TO NEWHEIGHT REDFERN, LLC AS RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS:
BOOK: _____ PAGE: _____
5. MAINTENANCE EASEMENT FROM COMMUNITY HOUSING OF MAINE TO NEWHEIGHT REDFERN, LLC AS RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS:
BOOK: _____ PAGE: _____
6. ACCESS AND UTILITY EASEMENT FROM THE PORTLAND CLUB TO NEWHEIGHT REDFERN, LLC AS RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS:
BOOK: _____ PAGE: _____
7. MAINTENANCE EASEMENT FROM COMMUNITY HOUSING OF MAINE TO THE CITY OF PORTLAND AS RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS:
BOOK: _____ PAGE: _____

TBD



SPACE AND BULK STANDARDS					
ZONE: B-3	REQUIRED	PROPOSED LOT A	PROPOSED LOT A-1	PROPOSED LOT A-2	148 STATE STREET (MORRISON HOUSE)
MINIMUM LOT AREA	NONE	69,812 SF	15,364 SF	17,167 SF	5,651 SF
MIN LOT FRONTAGE	15'	335'	151'	237'	59'
MIN LOT WIDTH	NONE	242'	76'	242'	59'
MAX HEIGHT	85' *	86'	53' *	45'	40'
STRUCTURE SETBACKS					
FRONT (MAX)	5'	21' (EXIST.)	6.00'	6.00'	11' (EXIST.)
SIDE (MIN)	NONE	1.99'	5.35'	2.54'	0' (EXIST.)
REAR (MIN)	NONE	56.96'	10.50'	10.50'	20' (EXIST.)
MAX IMPERVIOUS COVERAGE	100%	86%	94%	92%	89%
OFF STREET PARKING		SEE PARKING SUMMARY TABLE			
NET RESIDENTIAL DENSITY		167	58	41	8

* 45' MAX HEIGHT WITHIN 30' OF WINTER STREET RIGHT OF WAY. PROPOSED MAX HEIGHT OF BUILDING IN LOT A-1 IS 42' WITHIN 30' OF WINTER ST R.O.W.

PERMIT LEVEL
NOT ISSUED FOR
CONSTRUCTION

[illegible]

Memorandum

Planning and Urban Development Department



To: Chair Mazer & Members of the Planning Board
From: Jimmy Dealaman, Planner
Date: June 18, 2021
Re: Deering Avenue Residences
Project ID: PL-001495-2021
Meeting Date: June 22, 2021
CBL: 118 A003, 5, 7, 9, 11, 13, 15

I. INTRODUCTION

Sawyer Island Development, LLC has submitted a Major Site Plan application for a new development at 387 Deering Avenue that would include constructing two 9,168 square foot multiplex buildings, each consisting of four (4) residential rental units. Together, the two buildings would comprise approximately 18,336 square feet containing a total of eight (8) units. The proposal also consists of eight (8) outdoor parking spaces and eight (8) garage parking spaces for a total of 16 spaces.

The site (Figure 1) is made up of seven (7) parcels with a combined lot area of 38,309 square feet and is located in the R-5 Residential Zone in the Oakdale neighborhood.



Figure 1: Development Site at 387 Deering Avenue

At this time, staff are seeking to introduce the Planning Board to the proposal, provide an overview of the applicable Land Use Code standards, and obtain feedback to assist staff during their review.

Owner/Applicant: Sawyer Island Development, LLC
Engineer: William Walsh, Walsh Engineering Associates, Inc.
Architect: Winton Scott Architects
Surveyor: Michael Hartman, Jones Associates Inc.

II. REQUIRED REVIEWS

<i>Applicant's Proposal</i>	<i>Applicable Standards</i>
Multi-family development of 3 or more units; New Structure with Floor Area > 10, 000 SF	Major Site Plan (Section 14.6)
Design Review	R-5 Small Residential Lot/Multiplex Development Standards (Appendix 6 of Design Manual)

WAIVER REQUESTS

<i>Waivers</i>	<i>Citation</i>
Driveway Separation (less than the required 125' spacing from adjacent driveway)	<i>Technical Manual, Section 1.7.2.7 Location and spacing of driveways</i>
Wetland Preservation (to fill 7,223 square feet of wetland to accommodate development)	<i>Land Use Code Sec. 14.6.2.A.1.e</i>
Parking Lot Layout (less than required 9' minimum aisle width)	<i>Technical Manual, Section 1.14 Parking Lot and Parking Space Design (Width Illustrated in Detail Titled I-27)</i>

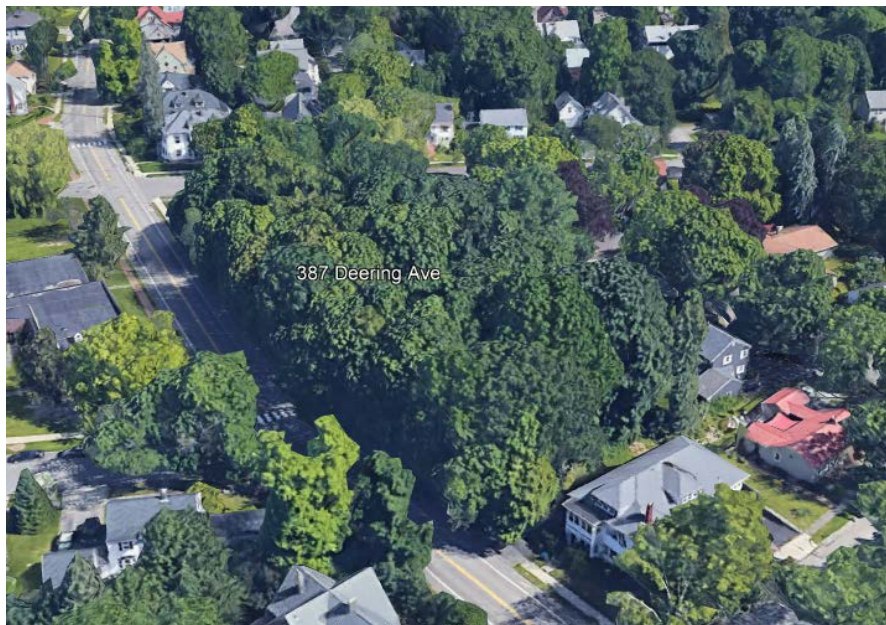


Figure 2: Aerial View of Development Site Existing Conditions – Source: Google Earth

III. PROJECT DATA

<i>Subject</i>	<i>Data</i>
Total area of the site	38,309 sf
Total Disturbed Area	38,309 sf
Existing Zoning	R-5 Residential
Existing Use	Vacant
Proposed Use	Residential Multiplex

	<i>Existing</i>	<i>Proposed</i>	<i>Net Change</i>
Impervious Surface Area	-	15,043 sf	+15,043 sf
Building Floor Area	-	18,336 sf	+18,336 sf
Parking Spaces	-	16 spaces	16 spaces
Bicycle Parking Spaces	-	4 spaces	4 spaces

IV. EXISTING CONDITIONS

The vacant/undeveloped lots comprising the development site are located on Deering Avenue, a commercial collector street, and situated on a block bounded by Noyes Street and Longfellow Street. The site is primarily surrounded by residential properties to the north, east, and south. Immediately to the west (across the street) is 400 Deering Ave, a Jewish Temple which has an access drive on Wadsworth Street. Commercial uses are concentrated roughly a 0.25 mile to south at Woodfords Corner, which was identified as a priority node in the city's comprehensive plan. Longfellow Park, a 0.35 acre city-owned pocket park and Portland Community Squash, a non-profit community center, are located approximately one block to the east and southeast, respectively.

The block of Deering Avenue where the development site is located has no on-street parking on either side of the street, and fronts an existing sidewalk and bicycle lane on each sides of the street. The two-way bicycle lane connects a section of the City's bicycle network from Bramhall Square on Congress Street to Woodfords Corner on Forest Avenue. The front of the site also contains a crosswalk which connects the east side of Deering Avenue to Wadsworth Street.

The northern portion of the site (comprising two parcels) that make up 387 Deering Avenue are delineated as a freshwater, forested wetland area. The site also has varying topographic and subsurface conditions (i.e. steep slopes and shallow ledge) which make up the site. The site contains a number of invasive Norway Maple trees. The site is situated in the R-5 Residential zone which is primarily bordered by the R-3 to the west, B-2b to the east and B-1 and R-3 to the south.



Figure 3: Existing Conditions (Image from Front of Property) Source: Google

V. PROPOSED DEVELOPMENT

The applicant is proposing construction of two separate multiplex buildings, each containing four (4) 2-bedroom units for a total of eight units. Each building will include four (4) garage parking spaces as well as four (4) outdoor vehicle parking spaces for a total of 16 parking spaces, as well as a bicycle rack available at each building entrance for a total of 4 bicycle spaces. Both buildings will be accessible via Deering Avenue, accessed by a 20-foot driveway leading to each respective parking area.

Additional site work includes reconstructing the existing asphalt sidewalk with a new concrete sidewalk as well as providing an internal stone dust walking pathway - connecting the two buildings - for users of the site. The site work also includes re-naturalizing the lot by planting 36 trees and 299 shrubs as well as a mix of perennials, grasses and ferns.. Between the two buildings, the applicant intends to provide a recreational lawn area which features a paved terrace in the vicinity of the exposed ledge at the upper elevation of the site.

To manage stormwater flows two (2) new grassed soil filters are proposed. In addition, the applicant proposes to connect to City infrastructure via an underdrain.

Lighting is proposed at the building entrance as well as pole lighting in parking areas.

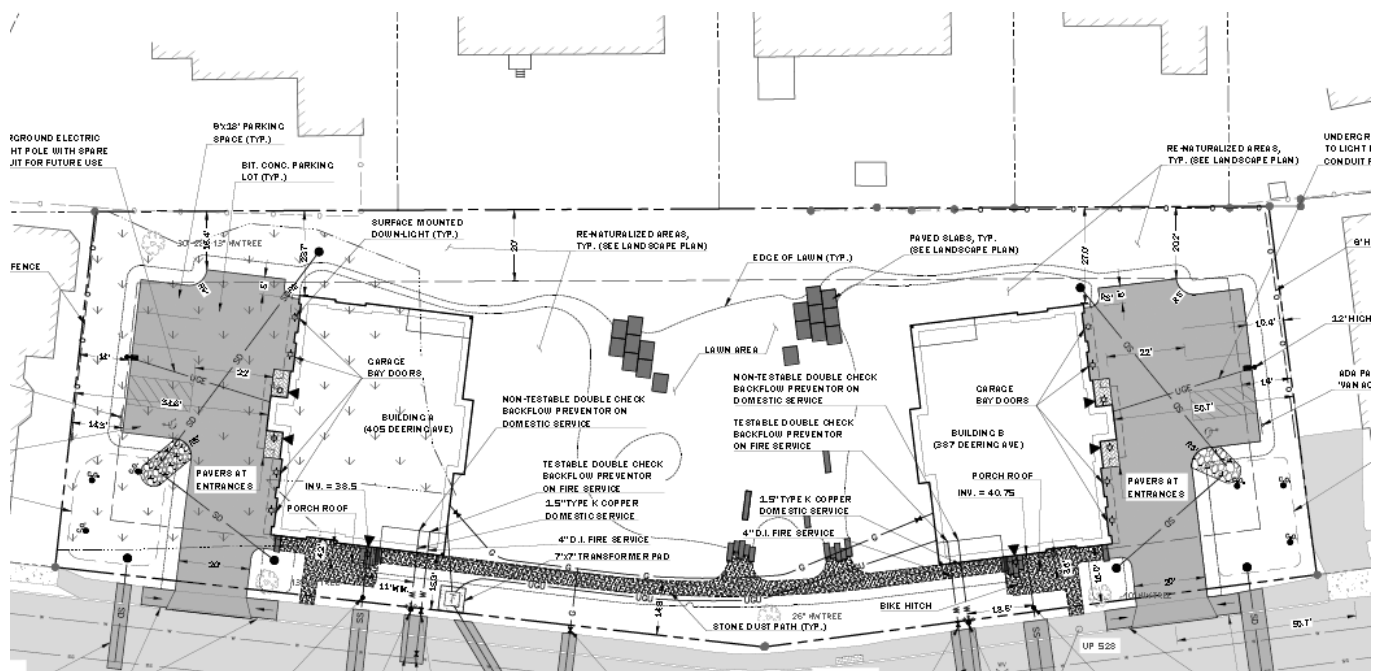


Figure 4: Current Site Plan

IV. RIGHT, TITLE AND INTEREST AND FINANCIAL/TECHNICAL CAPACITY

The owner of the property is Sawyer Island Development, LLC. The applicant has provided a copy of quitclaim deed, recorded at the Cumberland County Registry of Deeds (Book 36396 Page 324), which demonstrates their right, title and interest in the property.

The applicant has submitted a Statement of Financial Capacity letter from their financial institution, as demonstration of their financial capacity (Attachment J). The applicant's representative, Walsh Engineering, has also submitted a statement speaking to their background in consulting services, resumes and relevant experience to complete the proposed development (Attachment K).

V. ZONING ANALYSIS

A. DIMENSIONAL AND USE REQUIREMENTS

The subject parcel is located in the R-5 Residential zone. Per Article 6 of the City's Land Use Code, the proposed use of residential multiplex is permitted in the R-5 zone.

The following table is provided to show the dimensional requirements of the R-5 zone (Land Use Code Sec. 7.3) which are met by this proposal.

	<i>Required</i>	<i>Proposed</i>
Minimum Lot Area	9,000 sq.ft.	38,309 sq. ft.
Minimum Lot Area Per Multiplex Unit	4,500 sq.ft.	4,789 sq.ft.
Minimum Street Frontage	50 ft.	356 feet
Minimum Front Setback	14.8 feet (average depth of yards)	15.3 feet
Minimum Rear Setback	20 feet	23.7 feet
Minimum Side Setback (left)	14 feet	54.6 feet
Minimum Side Setback (right)	14 feet	50.7 feet
Maximum Lot Coverage	40%	17.6%
Minimum Lot Width (multiplex)	90 feet	341 feet
Maximum Structure Height	35 feet	29.4 feet

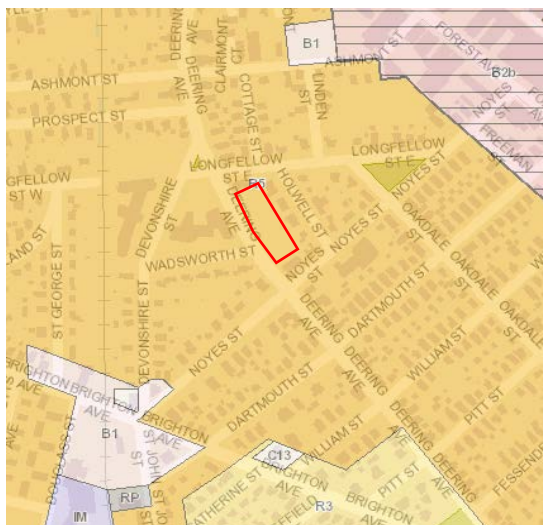


Figure 5: Existing Zoning Map

VI. CONSTRUCTION MANAGEMENT PLAN

Staff continue to review the applicant's construction management plan (Plan 35) and recently provided the applicant comments (Attachment 1) requesting that they include several additional details and provide a construction management plan narrative. Staff will review a revised construction management plan and associated documents for compliance prior to a future public hearing date.

VII. DEVELOPMENT REVIEW

A. SITE PLAN STANDARDS (Section 14.6)

1. Transportation Standards (Section 14.6.1)

A. Impact on Surrounding Street Systems, Access and Circulation:

Each multiplex building is accessed via its own two-way driveway and parking lot due to topographic and subsurface conditions of the site (i.e. steep slopes and shallow ledge), and each driveway is separated by approximately 250 feet. The applicant has indicated that the project would generate approximately 80 trips per day collectively and does not expect the project to have an adverse effect on traffic conditions.

Overall staff finds the expected increase in traffic volume to be modest and do not believe the proposed project will substantial increase traffic congestion or create or aggravate any significant hazard to safety on the surrounding street network. The City's consulting traffic engineer finds that the project would not have a significant impact on safety and mobility on streets in the vicinity of the project. Recent comments forwarded by staff ask that the applicant resubmit turning templates to show adequate space for movement and provide templates sized for larger vehicles, and also to provide site distance measurements from the proposed driveways so staff can confirm the proposal meets City standards. (Attachment 1 & 2).

Deering Avenue has a speed limit of 30 mph, therefore the site must provide a minimum driveway separation of 125 feet, according to the Section 1 of the City's Technical Manual. Driveway spacing generally intended to minimize the number of driveways in close proximity, which can potentially become a safety issue as it introduces more potential conflict points for traffic along the roadway, and less clear intentions of drivers turning into/out of driveways. Further, driveways can introduce ADA access challenges which can be exacerbated if driveways are close together, and also are an inefficient use of space. The proposed driveway located towards the south of the site is separated from the adjacent driveway at 377 Deering Avenue, a residential two-family home, by approximately 50.7 feet, therefore the applicant has requested a waiver to Section 1.7.2.7 of the City's Technical Manual to allow for driveway spacing to exceed the minimum distance by 74.3 feet. The applicant has stated that there is no practical alternative to the driveway location (*"Due to a quick rise in elevation from the road at the center of the site, access points are proposed*

at each end of the site where grades are lower”) and also stating that there is relatively low traffic volume at this driveway and is not anticipated to cause safety issues.

Staff are generally supportive of the waiver request to exceed the minimum driveway separation distance provided the applicant provides evidence that the site distance measurements from proposed driveways meet City standards. Staff find that the driveway at the south of the lot and the adjacent driveway have a low number of parking spaces, and a low volume of movements per hour is low is expected. Additionally, staff comments are requiring the applicant to provide an ADA compliant route through the driveway apron. This documentation will require staff review prior to a future public hearing date. At this time, staff request feedback from the Planning Board regarding consideration of the waiver request.

In response to staff comments, the applicant has provided turning templates to show the movement of vehicles exiting the parking areas. Staff have recently reviewed the turning templates and provided the applicant with additional comments (Attachment 1 & 2). Public Works staff find the multiple turning movements onsite are very tight and appear to conflict with the adjacent building. Staff have recommended the applicant make both parking areas wider and recommend widening the drive aisle to the standard 24 feet to ensure all spaces are functional. Additionally, staff have requested that the turning templates incorporate movement shown using a van from the van-accessible ADA space. Staff will continue to work with the applicant prior to a future public hearing date to ensure site circulation standards are met.

Additionally, the applicant has provided internal walkways between the two proposed buildings as well as an accessible route from the parking area to the building entrance. Staff finds these to be sufficient measures of providing access and circulation.

B. Sidewalks

The site is currently fronted by an existing asphalt sidewalk and curb. Per the City’s Technical Manual, the project is located in the concrete sidewalk district and subject to providing a concrete sidewalk. The applicant has submitted plans to reconstruct the sidewalk as concrete along with new curbing to comply with this standard.

Public Works staff have recently reviewed the updated plan set and provided the applicant with additional comments to ensure the grading of sidewalks and ramp landings will meet ADA standards. Additional staff comments provided to the applicant seek to confirm that driveway/sidewalk width and slope meet ADA and City standards.

C. Public Transit Access

All residential development consisting of 20 or more dwelling units shall provide a transit shelter adjacent to or within the public right-of-way along its frontage. The project does not provide 20 or more dwelling units and therefore is not subject to the requirement to provide a transit shelter.

D. Parking

Article 19 of the City’s Land Use Code requires any new multi-family development to provide one parking space per dwelling unit. The proposal is required to provide a minimum of eight (8) parking spaces. The proposal provides 16 parking spaces; therefore, the minimum parking requirement is met. However, according to Section 14.6.1.D. of the Land Use Code, any parking that exceeds the minimum parking requirements by 10 percent must demonstrate through a parking study that the amount of parking is appropriate for the proposed use of the site. Recent staff comments have brought this to the attention of the applicant and requested a parking study be submitted to justify the need for extra parking. Based on the recommendation of the City’s Parking Director as well as there being no on-street parking on this section of Deering Avenue, Planning staff are supportive of the applicant providing additional parking onsite. The City’s Parking Director reports that parking supply is a common challenge of residents in populated neighborhoods, as well as difficulties in finding on-street parking in the evening, especially when street maintenance regulations are in effect (Attachment 4). Staff are seeking Planning Board feedback about the applicant’s decision to provide additional parking beyond code requirements.

Based on the number of dwelling units, the project is required to provide three (3) bicycle parking spaces. The applicant has proposed two (2) bicycle racks for a total of four (4) bicycle parking spaces to meet the requirement. The applicant has also indicated that additional storage for bicycle parking will be available within the garage area.

The applicant has indicated that snow storage will occur in the vicinity around the parking area. The City's consulting stormwater engineer has commented that the proposed privacy fence provides sufficient barrier to prevent snow storage from encroaching on neighboring properties (Attachment 3).

Due to the configuration of the proposed parking lots to include more than five (5) spaces, the development is required under Section 14.6.1(D)(4) of the Land Use Code and Section 1.17 of the City's Technical Manual to provide EV charging for 20 percent of parking spaces. Therefore, the applicant is required to provide three (3) EV charging stations (16 parking spaces x .2 = 3.2 EV charging stations required.) To meet this requirement, the applicant has proposed providing an EV charging station in each garage unit (8 total) as well as providing a spare conduit to the edge of each parking lot for future installation of exterior charging stations.

Staff review of the parking space layout identified that the parking space design, specifically the width of garage doors, is under the minimum aisle width requirement referenced in Section 1.14 of the City's Technical Manual which indicates a nine (9) foot minimum aisle. Public Works staff will continue to review the parking lot design and its ability to provide sufficient turning movement. Until then staff does not yet have a recommendation for the Planning Board whether a waiver for aisle width can be supported.

E. Transportation Demand Management (TDM)

Pursuant to Land Use Code Section 14.6.1(E), the proposed development does not meet the threshold to trigger the design and implementation of a TDM plan.

2. Environmental Quality Standards (Section 14.6.2)

A. Preservation of Significant Natural Features

The applicant has indicated that no endangered or threatened plants have been identified onsite, however the northern portion of the site is located within a forested freshwater wetland area, and the applicant has requested a waiver of Section 14.6.2.A.1.e of the Land Use Code in order to fill wetlands in order to accommodate the development proposal. There is approximately 7,223 square feet of wetland impact (Plan 20). The applicant has stated:

"Due many factors such as access from the street, access to building from parking lot, required number of buildings, and depth to ledge on the middle of the site, avoiding wetland impact is not practical. See zoning analysis section 14.6.2.A for more detailed information."

The applicant has also submitted a Wetland Report completed by Albert Frick Associates, Inc. (Attachment L), which found the wetland area does not contain sufficient enough water to be considered a vernal pool and determined that a Tier 1 NRPA review with the Maine DEP and a Category 2 review with the Army Corps of Engineers (ACOE) was required. The applicant has submitted the identified NRPA permit for wetland impact which found that the site constraints made wetland impacts unavoidable and the *"applicant has minimized wetland impact to the greatest extent practicable by proposing 2H:1V sides slopes within the wetland fill areas"* (Attachment E).

Land Use Code Section 14.6.2.A.3 contains specific waiver criteria for permitting impacts to wetland area, which states: *"Where complete preservation of significant natural features substantially compromises development of the site as otherwise permitted by zoning, the review authority may reduce the requirement to accommodate development provided that the applicant demonstrates compliance with applicable state and federal regulations and implements preservation measures to the extent practicable."*

Staff review finds that the application has provided sufficient evidence, as indicated above, to support a waiver (Per Land Use Code Sec. 14.6.2.A.3.) given that complete preservation of significant natural features substantially

compromises development of the site, the plan has implemented preservation measures to the extent practicable, and the applicant will be subject to demonstrating compliance with applicable state and federal regulations. Staff are seeking the Board's feedback on whether the justification provided for the filling of the wetland area is sufficient for granting a waiver to wetland preservation standard.

B. Landscape Preservation

The applicant has indicated that the existing site is primarily forested with invasive Norway Maple trees which are proposed to be removed. The proposal calls for preserving/protecting four (4) existing non-invasive trees out of nine (9) present within the required setback areas of the site, which exceeds the minimum preservation requirement of 30 percent (with 44 percent saved).

C. Site Landscaping and buffers

The proposed development is required to plant a minimum of eight trees for a multifamily development with eight units. The applicant proposes planting over 30 trees, with 14 trees proposed along the frontage to meet the street tree requirement.

The proposed development is required to provide six (6) plantings per 30 linear feet of all frontages. The site has a frontage of 356 feet and thus subject to providing 71 shrubs. The proposal includes planting 299 shrubs to meet the requirement.

The applicant proposes to buffer the entire perimeter of the site with a combination of landscaping and fencing. A six foot privacy fence is proposed in front of the parking area to buffer the development from adjacent properties. The site is not required to locate trash onsite and therefore no additional screening buffer for loading and servicing area was necessary.

The proposed residential development provides a vegetated buffer along the front of the property. The City Arborist has reviewed the submitted landscape and planting plan and has no concerns with the project as proposed.

D. Water Quality, Stormwater Management and Erosion Control

The applicant has proposed managing stormwater by incorporating two grassed under drained soil filters at each corner of the lot adjacent to Deering Avenue. The applicant also intends to connect the stormwater system to City infrastructure.

In addition to the stormwater management standards outlined in the Land Use Code, the applicant is required to comply with Maine DEP Chapter 500 and Technical Manual Section 5 standards. The applicant has submitted a stormwater management plan and report as part of their application materials which was reviewed by the City's consulting stormwater engineer, and comments have been provided to the applicant (Attachment 3). The applicant has responded to review comments and the City's consulting civil engineer finds that the current stormwater management plan sufficiently addresses all review comments and meets the General and Flooding Standards as required. The applicant has provided additional information, including section views of their soil filters, to help show proximity to neighboring properties, and has also factored in adjacent topography into the stormwater calculations for the site.

Additionally, the Public Works Department has requested that the project's stormwater connections be made to the separated stormdrain systems in the vicinity on Longfellow Street and/or Noyes Street. Public Works staff do not support tying stormwater flows to the street catch basins and connecting the site's stormwater system to the City's combined sewer system. A primary reason stated is due to the City's costs associated with mitigating combined sewer overflows and capacity issues at the treatment plant, as well as managing the impacts of polluted stormwater runoff, which is also driving up both the rates of sewer and stormwater. As an infrastructure improvement that may be eligible for an impact fee credit, staff have asked the developer if there is interest in requesting a modification to the impact fees if the developer works with Public Works to incorporate this feedback. At this time the developer has expressed interest in pursuing the opportunity for a credit. At the time of drafting this report Planning staff have

requested and are awaiting additional utility information from Water Resources regarding the location of a storm drain on Longfellow Street in order to share with the applicant for integration into their plans. Staff have also provided the applicant with impact fee reduction documentation which staff for completion along with updated plans, details, cost estimates for review by Planning and Water Resources staff. Once review of the materials has concluded, the impact fee modification will be brought to the Planning Board for consideration.

3. Public Infrastructure and Community Safety Standards (Section 14.6.3)

A. Consistency with City Master Plans

The proposal is consistent with the housing policy goals listed in Portland's Plan 2030 to *"increase, preserve, and modify the overall supply of housing city-wide to meet the needs, preferences, and financial capabilities of all Portland residents,"* and to *"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."*

The applicant proposes to grow the city's housing supply by leveraging underused property. Additionally, the site's location to a nearby park as well as creating a recreational lawn helps strengthen connections between housing and open spaces in the area in a walkable location, easily accessible to many nearby services.

B. Public Safety & Fire Prevention

Planning staff met with a life safety reviewer from the City's Permitting and Inspections Department on June 9th and reviewed the public safety and fire prevention standards of the project, and as an outcome had no substantial findings. Life safety staff were satisfied that the site would have adequate access for emergency vehicles along Deering Avenue, and was within close proximity to a fire hydrant. Life safety staff have no additional feedback or concerns with the project provided the project will undergo a building life safety review during the permit review phase of the project.

C. Availability and Adequate Capacity of Public Utilities

The applicant has submitted a Wastewater Capacity Application with the City's Water Resources Division which is currently under review. Planning staff will need to receive the project's wastewater authorization in order to confirm there is adequate City infrastructure to accommodate the needs of the development.

The applicant has submitted an Ability to Serve Determination letter from the Portland Water District demonstrating sufficient water being available for the project.

The development has proposed underground electrical service.

The Water Resources review of the proposed utility connections is still ongoing, Planning staff await confirmation that the utility design complies with the standards of the Technical Manual.

4. Site Design Standards (Section 14.6.4)

A. Massing, Ventilation and Wind Impact / Noise and Vibration

The applicant has reported that the size and location of the buildings are not anticipated to cause adverse effects of value or health and safety problems related to venting of wind climate onsite, at the street, or at adjacent properties.

The applicant also reports that HVAC venting will not be directed towards public spaces or adjacent properties.

Staff have no concerns regarding the potential impacts in any of the above areas. The HVAC cut sheets provided by the applicant show sound levels between 49.0-53.0 dB(a) which is considered minimal levels. HVAC equipment would be located on the rooftop and setback approximately 70 feet from adjacent properties.

B. Shadows

The applicant reports that shadows from the site will not reach significant public resources or open space. The site is roughly two blocks west from the nearest public open space and the proposed buildings are three-stories in height, similar to the surrounding built context. Staff have no further comments or concerns of shadow impacts.

C. Snow and Ice Loading

The applicant reports that buildings will have flat roof drain systems and therefore no snow or ice will fall onto adjacent properties. Staff have no further comments or concerns regarding snow and ice loading.

D. View Corridors

Not applicable. The project is not located within a view corridor.

E. Historic Resources

Not applicable. The project is not located near a historic district or landmark.

F. Exterior Lighting:

The project proposes to light the parking areas by installing 12 foot mounted lighting at each lot. Additional under-canopy down-lights will be installed at doorways and garage entrances. The internal pathway connecting the sites is proposed to be lit using bollard lighting. The applicant has indicated that all fixtures are LED and full cutoff.

The applicant has submitted a photometric plan and associated catalog cut sheets of all lighting fixtures. Staff have reviewed these materials and find the package of materials meets all site lighting requirements contained in Section 11 of the City's Technical Manual, with the exception of about six (6) locations along the site's frontage (within the internal path and at the driveway entrance) that are under the required minimum illumination level (0.2 foot candles). Staff will continue to work with the applicant to bring the proposal in compliance with these standards, however given the presence of street lighting proximate to the driveway entrance, staff would be open to supporting a waiver for site lighting in some of these areas.

Regarding the project's compliance with street lighting requirements, the site is located on Deering Avenue which is considered a commercial collector street and therefore subject to street lighting standards (Technical Manual Sec 10.2.1) which requires a maximum spacing of 130 feet for street lighting. The applicant is currently in the process of coordinating with CMP to install an additional cobrahead street light on an existing utility pole (UP53) across the street. The applicant has included the city's lighting detail (X-2C) in their plan set which as proposed will comply with the applicable street lighting standards.

G. Signage and Wayfinding:

Not applicable. No signage is proposed.

H. Design Standards:

The current building design proposes two (2) three-story multiplex buildings at either end of the site. Each building includes garage space on the ground floor level, entry canopy over the front entrance, covered porches, and a majority of fenestration on the residential second and third floors (Figure 6 & 7). The applicant has provided that each building entrance is at grade to provide accessibility to residents and is connected to the public sidewalk by an offset walkway and landscaping due to grading, and to articulate the connection to the public realm. Both buildings are also connected via a stone dust path onsite providing an internal path fronting the recreational lawn between the two buildings. The proposal includes regrading and landscaping between the space between the buildings and sidewalk. The current design utilizes two shades of flush horizontal siding, an elevator shaft and entry clad in fiber cement panels, and vertical plank metal siding. The applicant has provided elevations (Plan 5-9), site sections (Plan 10), and renderings and perspective views for reference (Plan 11-14, Attachment S).



Figure 6: 3-D Rendering of (North) Multiplex Building

Staff reviewed the development proposal against the R-5 Small Residential Lot/Multiplex Development Design Standards (Appendix 6 of the Design Manual) and provided the applicant with a preliminary round of design comments (Attachment 5). The applicant has recently responded to comments (Attachment T) and provided updated materials (Attachment T, Plan 5-14). Staff have reviewed the most recent submission and have attached additional design review comments for the board and applicant to reference (Attachment 6). In short, the recent design review prepared for this workshop included a number of unresolved standards with staff comments that include but are not limited to the following areas:

- Ground floor façade and entrance are not residential in character
- The paths to front entrances are not direct from sidewalk to door
- Entrance facing street are not primary entrances
- The roof slope is not parallel to street and form is flat, not peaked
- The rooftop mechanical units are not screened or integrated with the architectural form

At this time, staff request feedback from the Planning Board on the use of a flat roof, rooftop mechanicals, and relationship to the street/entrance design.

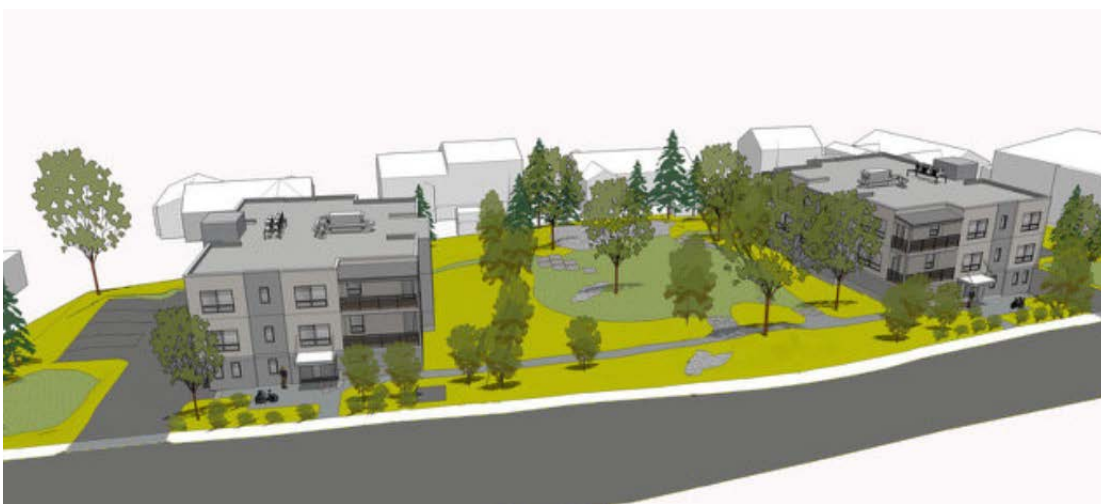


Figure 7: Perspective Rendering Depicting Aerial View of Site

VI. PUBLIC COMMENT

A notice of this Workshop was sent to one hundred twenty-six (126) property owners within 500 feet and interested citizens, and appeared in the June 11th and 12th, 2021 editions of the *Portland Press-Herald*. A remote Neighborhood Meeting was held on May 20, 2021 at 5:30 pm attended by approximately twenty-five (25) people (Attachment U).

At the time of writing this memo, the Planning Department has received two (2) public comments (PC 1-2).

Public feedback at the neighborhood meeting and written comments submitted include support for new housing being created. Other comments included concerns about the modern looking aesthetics of the building and relationship to the neighborhood, lighting, traffic/safety, loss of natural rain absorption in soil, and measures to improve public safety in the recreational lawn area at night.

VIII. NEXT STEPS

At this time, staff are requesting the Board's feedback on the aforementioned topics related to:

- Waivers
- Design
- Impact fee modification
- Provision of parking spaces greater than 10% in excess of Land Use Code requirements.

The final submission will need to:

1. Provide additional information or revisions as recommended by the Planning Board
2. Continue to address any other staff comments

VIII. ATTACHMENTS

PLANNING BOARD REPORT ATTACHMENTS

1. Department of Public Works Comments (email dated 6.17.2021)
2. Consulting Traffic Engineer Comments (email dated 6.18.2021)
3. Consulting Civil Engineer Comments (email dated 6.17.2021)
4. Parking Director Comments (email dated 6.14.2021)
5. Preliminary Design Review Comments (dated 5.7.2021)
6. Updated Design Review Comments (dated 6.16.2021)

APPLICANT'S SUBMITTAL

- A. Project Description
- B. Letter of Agent Authorization
- C. Major Site Plan Checklist
- D. Right Title Interest
- E. Evidence of State and Federal Permits
- F. Zoning Assessment
- G. Site Plan Standards Narrative
- H. Summary of Easements
- I. Waiver Table
- J. Financial Capacity
- K. Technical Capacity
- L. Wetland Report
- M. Stormwater Management Report (rev. 6.10.2021)
- N. Ability to Serve Letters
- O. Wastewater Capacity Application
- P. Site Lighting Specifications

- Q. HVAC Specifications
- R. Architectural Code Summary
- S. Design Comments Response (dated 6.11.2021)
- T. Response to City Comments (dated 6.11.2021)
- U. Neighborhood Meeting Certification and Materials

PLANS

- Plan 1. First Floor Plan
- Plan 2. Second Floor Plan
- Plan 3. Third Floor Plan
- Plan 4. Roof Plan
- Plan 5. Building Elevations
- Plan 6. Building Elevations
- Plan 7. Building Elevations
- Plan 8. Building Elevations
- Plan 9. Street Elevation
- Plan 10. Site Sections
- Plan 11. 3D Views
- Plan 12. 3D Views
- Plan 13. 3D Views
- Plan 14. 3D Views
- Plan 15. Code Summary
- Plan 16. Plat Plan
- Plan 17. Existing Conditions Plan
- Plan 18. Site Layout and Utility Plan
- Plan 19. Grading and Drainage Plan
- Plan 20. Erosion Control and Wetland Impact Plan
- Plan 21. Grading Details
- Plan 22. Details 1
- Plan 23. Details 2
- Plan 24. Details 3
- Plan 25. Details 4
- Plan 26. Details 5
- Plan 27. Pre Development Drainage Plan
- Plan 28. Post Development Drainage Plan
- Plan 29. Electrical 1st Floor
- Plan 30. Photometric Plan
- Plan 31. Landscape Plan
- Plan 32. Planting Plan
- Plan 33. Boundary Survey
- Plan 34. Vehicle Turning Plans
- Plan 35. Construction Management Plan

PUBLIC COMMENT

- PC1. Alyson Maloy 5-6-2021
- PC2. Harty Norris 5-21-2021



Jimmy Dealaman <jdealaman@portlandmaine.gov>

387 Deering - DPW Comments

Mike Tremblay <mtremblay@portlandmaine.gov> Thu, Jun 17, 2021 at 2:20 PM
To: Jimmy Dealaman <jdealaman@portlandmaine.gov>

Jimmy,

Here are my comments on 387 Deering:

- Multiple turning movements are very tight, and at least one appears to conflict with the adjacent building. It appears that both parking areas could be made wider. We recommend widening the drive aisle to the standard 24 feet to ensure that all spaces are functional.
- Turning movements into the van-accessible ADA spaces should be shown using a van.
- The sidewalk width should be called out on the plans. Additionally, sidewalk and ramp slopes should be called out on plans (spot grades are OK but slope callouts can be beneficial to reinforcing ADA standards) Sidewalks and ramp landings should be designed to 1.5% cross-slope; no cross-slopes greater than 2.0% will be accepted and will require reconstruction.
- The spot grades at the driveways appear to suggest the driveways are flush with the street, which is not what is being depicted. Please clarify.
- The driveway aprons cut into the 5-foot sidewalk width, likely reducing the sidewalk width to 3 feet or less through the driveways. The minimum width of the pedestrian path through a driveway is 4 feet. If the above comment regarding sidewalk width is applied, this may solve this issue; however, unless the sidewalk is widened or shifted away from the curb, as previously requested, the driveway design as proposed (which is preferred by DPW in general) will not work. DPW suggests the sidewalk be widened, at least in the vicinity of the driveways, in order for the proposed driveway to work with ADA and City standards.
- The diagonal underground utility trench and the gas trench will need to be repaired together (Section 4.04 (J) of the [Rules and Regs for Excavation Activity](#))

CM Plan

- Stabilized construction entrances should be shown to prevent tracking of dirt and debris into the roadway
- Pedestrian detours should be in place only when needed for sidewalk construction and utility connections. Detours should be enforced using MUTCD-compliant signage.
- The submitted CM plan document appears to be the template without any site-specific information filled in. The applicant should fill in the template, where applicable, and resubmit.

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





Jimmy Dealaman <jdealaman@portlandmaine.gov>

387 Deering Avenue - Traffic Review Comments

Tom Errico <thomas.errico@tylin.com>

Fri, Jun 18, 2021 at 7:10 AM

To: James Dealaman <jdealaman@portlandmaine.gov>

Cc: Michael Tremblay <mtremblay@portlandmaine.gov>

Hi Jimmy – I have reviewed the project details and offer the following comments.

- The project scale would not be expected to generate a significant amount of traffic and thus would not have a significant impact on safety and mobility on streets in the vicinity of the project.
- The applicant should provide sight distance measurements from the proposed driveways and confirm it meets City standards.

If you have any questions, please contact me.

Best regards,

Thomas A. Errico, PE

Senior Associate

Traffic Engineering Director

TYLIN 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

Visit us online at www.tylin.com

Twitter | Facebook | LinkedIn | Instagram



Jimmy Dealaman <jdealaman@portlandmaine.gov>

Peer Review Comments - 387 Deering Ave

Lauren Swett <lszett@woodardcurran.com>

Thu, Jun 17, 2021 at 10:07 AM

To: Jimmy Dealaman <jdealaman@portlandmaine.gov>

Hi Jimmy,

I have reviewed the Applicant's response to comments, and they have generally addressed my comments adequately. They have modified the stormwater management plan to address my comments, and are still meeting the General and Flooding Standards as is required. They've added a plan sheet with section views of their soil filters, which are great to show proximity to the neighboring properties for construction, and that addresses my concerns on that.

You note below a question on snow storage. The areas they are proposing for snow storage are bounded by privacy fence, so there should be no encroachment on the neighbors.

They have also provided for the connection to the separated stormdrain in Noyes Street, noting that they though the system at Longfellow is still combined. Following the workshop, I think it's worth a further discussion with DPW to make sure they've provided the applicant with all of the current information, but they have made changes based on the information they've received so far.

The only thing I'll note is that I don't see an updated landscaping plan. I had a few comments that they've addressed in narrative (i.e. removing trees in the soil filters), but following workshop and any further design discussions they should provide an updated plan.

If you need anything else, please let me know.

Thanks,

Lauren

[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.



Jimmy Dealaman <jdealaman@portlandmaine.gov>

387 Deering Ave.

John Peverada <jbp@portlandmaine.gov>

Mon, Jun 14, 2021 at 4:55 PM

To: Jimmy Dealaman <jdealaman@portlandmaine.gov>

Cc: tom errico <thomas.errico@tylin.com>, Mike Tremblay
<mtremblay@portlandmaine.gov>

Jimmy,

It is my understanding that the developers of this property are proposing 2 parking spaces per dwelling unit, which I fully support.

Most landlords that I talk to say that most of their tenants have 2 or more cars, in many cases two families are sharing one apartment, or teenagers have cars, and others have overnight guest.

Without adequate parking, residents are more apt to be towed for street sweeping or snow bans, and landlords have a harder time retaining

tenants, even though they followed the requirements outlined in the ordinances. The congestion and turnover in Parkside is a good example.

A common complaint from residents in populated neighborhoods is they have a difficult time finding a on street parking spot in their neighborhoods in the evening, especially when street maintenance regulations are in effect.

Thanks
John

Planning and Urban Development Department Planning Division



Subject: R-5 Design Review – 387 Deering Avenue

Written by: Caitlin Cameron, Urban Designer

Date of Review: Wednesday, May 5, 2021

The two multiplex proposals at 387 Deering Avenue were reviewed against the *R-5 Small Residential Lot/Multiplex Development Design Standards* (Appendix 6 of the Design Manual).

Reviewers: Caitlin Cameron, Urban Designer, Andrew Tufts, Planner, and Jimmy Dealaman, Planner, Department of Planning & Urban Development.

MULTIPLEX AND SMALL RESIDENTIAL LOT DEVELOPMENT LOCATED IN THE R-5 ZONE

(1) **STANDARDS.** Multiplexes and small residential lot development in the R-5 zone shall be designed to be architecturally compatible with the residential buildings in the surrounding neighborhood, as demonstrated by compliance with the R-5 Small Residential Lot Development and Multiplex Design Standards contained in Appendix 6 of this manual.

Design Review Comments (*red text denotes standards that are not met*):

1 Context – Met

- Form and massing of the new construction are generally compatible with the residential context.
- Stacked porches relate to patterns found within the neighborhood
- **Ground floor is flat, blank, not residential in character, lacking detail, fenestration, or approachability. Has a commercial, detached character – too many materials, entrance at grade, lack of fenestration or articulation.**

2 Public Realm - Not Met

- Buildings are placed with narrow façade to the street to minimize scale impact
- Buildings have similar front yard setback to the neighboring residential buildings – continuity of placement.
- **Buildings lack clear hierarchy to the façades/massing to clearly delineate front and entrances.**
- **Treatment of front yard and entrances are not direct from the sidewalk the door, lack residential character, ground floor entrances are at grade – typical residential relationship to the street is set back, elevated ground floor, landscape area adjacent to building to create a transition from sidewalk to the private realm.**

3 Massing – Met

- Though these buildings have a larger footprint than the existing residential fabric, the placement, orientation, and height are compatible with the existing block.

- The scale and proportion of the front façade would better relate to the residential context if the stacked porches were differentiated rather than continuing the primary roof line across the whole width of the building. This approach emphasizes the building width, visually creating a bigger scale without massing variation.

4 Orientation – Met

- The principal façades are front-facing with entrances, stacked porches face street
- The entrances facing the street do not appear to be the primary entrances
- Roof slope is not parallel to street – flat roof

5 Articulation – Met

- Front façade includes visual interest with stacked porches, massing variation, change in materials, covered entry
- Project includes: covered porches, covered entry
- At least 25% of front façade is fenestrated.
- The windows have a vertical proportion, regular pattern

6 Garages – Met

- Garage doors are side facing

7 Roofs - Not Met

- Roof form is not peaked - The predominant roof form for multi-family buildings in this residential neighborhood is hipped roof with dormers.
- Clear main roof form
- Differentiate the roof of the stacked porches (look at surrounding examples) rather than carry the primary roof line across which exacerbates the perception of the overall building width.
- Roof plans indicate rooftop mechanical units – these need to be represented in the renderings to understand how they are integrated with the architectural form.

8 Materials – Not Met

- Metal siding that gives the appearance similar to clapboard is acceptable – finish should not be shiny or reflective.
- Siding that gives the appearance of natural, untreated wood is not considered to be consistent with the character of the neighborhood where siding is painted or stained with a solid finish.
- Corrugated metal profile not considered to be consistent (industrial character) with the character of the residential neighborhood
- Too many materials/finishes – visual cohesion within individual buildings and with neighborhood context not met. Predominant character of the surrounding residential neighborhood is a simple material palette.

9 Sound – Met

10 Light and Air – Met

- All units have windows, adequate light and air

Planning and Urban Development Department Planning Division



Subject: R-5 Design Review – 387 Deering Avenue

Written by: Caitlin Cameron, Urban Designer

Date of Review: Wednesday, June 16, 2021

The two multiplex proposals at 387 Deering Avenue were reviewed against the *R-5 Small Residential Lot/Multiplex Development Design Standards* (Appendix 6 of the Design Manual).

Reviewers: Caitlin Cameron, Urban Designer, Andrew Tufts, Planner, and Jimmy Dealaman, Planner, Department of Planning & Urban Development.

MULTIPLEX AND SMALL RESIDENTIAL LOT DEVELOPMENT LOCATED IN THE R-5 ZONE

(1) **STANDARDS.** Multiplexes and small residential lot development in the R-5 zone shall be designed to be architecturally compatible with the residential buildings in the surrounding neighborhood, as demonstrated by compliance with the R-5 Small Residential Lot Development and Multiplex Design Standards contained in Appendix 6 of this manual.

Design Review Comments (*red text denotes standards that are not met*):

1 Context – Met

- Form and massing of the new construction are generally compatible with the residential context.
- Stacked porches relate to patterns found within the neighborhood
- **Ground floor is flat, blank, not residential in character, lacking detail, or approachability. Has a commercial, detached character – entrance at grade, lack of private residential character.**

2 Public Realm - Not Met

- Buildings are placed with narrow façade to the street to minimize scale impact
- Buildings have similar front yard setback to the neighboring residential buildings – continuity of placement.
- **Treatment of front yard and entrances are not direct from the sidewalk the door, lack residential character, ground floor entrances are at grade – typical residential relationship to the street is set back, elevated ground floor, landscape area adjacent to building to create a transition from sidewalk to the private realm.**

3 Massing – Met

- Though these buildings have a larger footprint than the existing residential fabric, the placement, orientation, and height are compatible with the existing block.

- The scale and proportion of the front façade relate to the residential context with stacked porches differentiated from the primary roof line mitigating the width/scale of the buildings.

4 Orientation – Not Met

- The principal façades are front-facing with entrances, stacked porches face street
- The entrances facing the street are not the primary entrances
- Roof slope is not parallel to street – flat roof

5 Articulation – Met

- Front façade includes visual interest with stacked porches, massing variation, change in materials, covered entry
- Project includes: covered porches, covered entry
- At least 25% of front façade is fenestrated.
- The windows have a vertical proportion, regular pattern

6 Garages – Met

- Garage doors are side facing

7 Roofs - Not Met

- Roof form is not peaked - The predominant roof form for multi-family buildings in this residential neighborhood is hipped roof with dormers. There are some examples of multi-family buildings with flat roofs, but is not the predominant form. PB please advise.
- Clear main roof form
- Roof of the stacked porches is differentiated
- Rooftop mechanical units are set away from street/building edges but not screened or integrated with the architectural form.

8 Materials – Met

- Metal siding that gives the appearance similar to clapboard is acceptable – finish should not be shiny or reflective.
- Predominant character of the surrounding residential neighborhood is a simple material palette. The material palette was revised to use two material types which are placed according to massing/use changes in the building.

9 Sound – Met

10 Light and Air – Met

- All units have windows, adequate light and air

February 24, 2021

Ms. Christine Grimando
City of Portland, Planning
389 Congress Street
Portland, Maine 04101

**RE: Major Site plan Application
Deering Avenue Residences
387 & 405 Deering Ave.
Portland, Maine 04103**

Dear Christine,

On behalf of Sawyer Island Development, LLC (Applicant), Walsh Engineering Associates, Inc. (WEA) is pleased to submit the attached plans and supporting information for the Deering Avenue Residences project, which consists of the construction of two multiplex buildings, each with four 2-bedroom units for a total of 8 units. This project includes the development of lots specified on Map 118, Block A, Lots 3, 5, 7, 9, 11, 13, and 15, which have a combined lot area of 38,309 square feet (0.88 acres). The lot is currently undeveloped with invasive Norway maple trees covering the majority of the area. Due to zoning standards limiting multiplexes to a maximum of six units each, two buildings will be constructed. Each building has a footprint of 3,373 square feet. The nature of the topography and subsurface conditions of the site and in keeping with the massing of the neighborhood, the two separate buildings will be constructed on either end of the entirety of the parcels with separated entrances and parking. The portion of the site between the buildings will be utilized as a recreation area for residents.

Two parking spaces will be provided for each new unit, including one garage space and one exterior space outside the garage for a total of 16 parking spaces provided. Bicycle parking for each unit will be provided inside the garages and in a bike rack in front of each building. The project will be connected to the public water and sewer systems. Electric and communications will be installed underground to the new buildings from Deering Avenue. The project will utilize the City's curbside recycling and trash pickup. Stormwater will be managed with two grassed underdrained soil filters at each corner of the lot adjacent to Deering Avenue. Outlets from the stormwater BMPs will tie into the existing combined sewer and stormwater systems in Deering Ave.

Thank you for considering this project and we look forward to discussing it with City staff and the Planning Board.

Respectfully,



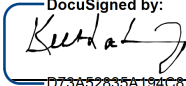
Silas W. Canavan, PE
Walsh Engineering Associates, Inc.

Sawyer Island Development, LLC
P.O. Box 15149
Portland, ME 04112
(207) 838-9326

To Whom It May Concern:

By this letter, the undersigned authorizes Walsh Engineering Associates, Inc. to act as the agent for the undersigned in the preparation and submission of all Federal, State, and Local permit applications and relevant documents and correspondence for all necessary permits for the construction of a residential development on the property identified as 383 Deering Avenue in Portland, Maine, to attend meetings and site visits; to appear before all boards, commissions, and committees, and to provide such other services as are necessary and appropriate in furtherance of the aforementioned project.

Sincerely,

DocuSigned by:

D73A52835A194C8...
Signature

Keith M. Canning, President

1/28/2021

Date

CITY OF PORTLAND
Planning & Urban Development Department

MAJOR SITE PLAN
GENERAL DOCUMENT AND DRAWINGS CHECKLIST

Please submit each document as a separate PDF file.

Please confirm by electronically checking the boxes in the left-hand column.

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

**At the time of application submission, please contact the Department of Public Works regarding E-911
addressing for your project.**

GENERAL APPLICATION DOCUMENTS

☒	NA	Project Description Cover letter with detailed project description
☒	NA	Completed Checklist (this document)
☒	NA	Evidence of Right, Title, and Interest Deeds, leases, or purchase and sales agreements
☒	NA	Evidence of State or Federal Approvals Permits or letters of non-jurisdiction, if applicable
☒	NA	Zoning Assessment (see Zoning Assessment Table) Summary of compliance with use and dimensional standards of the land use code
☒	NA	Site Plan Standards Assessment (see Section 14.6 of the land use code) Summary of project compliance with site plan standards of the land use code
☒	NA	Summary of Existing and/or Proposed Easements or Covenants, applicable. Evidence of existing easements and any proposed easements, covenants, public or private rights-of-way
☒	NA	Waiver Requests (see Waiver Table) Written request for waiver describing request and compliance with applicable waiver standards
☒	NA	Financial Capability Letter or evidence from a financial institution or third party verifying financial capacity to undertake project
☒	NA	Technical Capability Evidence of technical capability of applicant and consultants – resumes and/or examples of past projects

MAJOR 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	Impact on Surrounding Street Systems (14-14.6.1(A)) Describe incremental volume of traffic impacts and mitigation measures. If needed
☒ Yes	NA	Access and Circulation (14-14.6.1(B)) Identify and describe the following: - Site access and internal circulation, including ADA access - Drive-up features, if applicable - Loading and servicing needs, routes, and geometry, providing turning templates for delivery vehicles, if applicable - Sidewalks and condition along street frontages and internal walkways - Engineered details for ADA ramps and public sidewalks, meeting sidewalk material policy and construction requirements (Technical Manual, Section 1)
Yes	☒ NA	Public Transit (14-14.6.1(C)), if applicable Identify and describe the following: Existing available transit service and proposed transit improvements, including design details, such as easement, pad base, and shelter
☒ Yes	NA	Off-Street Parking (14-14.6.1(D)), if applicable Identify and describe the following: - Proposed vehicular and bicycle parking supply (including ADA-compliant parking) in relation to applicable parking requirements in Article 19 of the land use code - Curb cut separation and parking layout (Technical Manual, Section 1) - Construction details for bicycle racks - Management plan for snow storage and removal
Yes	☒ NA	Transportation Demand Management (TDM) (14-14.6.1(E)), if applicable Provide TDM plan drafted in accordance with Technical Manual Section 1 requirements

ENVIRONMENTAL		
Yes	NA	Preservation of Significant Natural Features (14-14.6.2(A)), if applicable Identify and describe the following: • High and moderate value waterfowl and wading habitat • Aquifers (for Casco Bay Islands) • Waterbodies (including wetlands, watercourses, significant vernal pools and floodplains) • Proposed preservation areas and protection measures • Documentation from environmental compliance consultants and determinations from applicable state and federal agencies
Yes	NA	Landscape Preservation (14-14.6.2(B)) Identify and describe the following: • Measures to preserve trees, including within required zoning setbacks (Technical Manual, Section 4) • Measures to protect existing vegetation during construction
Yes	NA	Site Landscaping and Buffers (14-14.6.2(C)) Identify and describe the following: • Overall landscaping approach and consistency with standards • The use of screening and buffering of service areas and between non-residential and residential uses • Existing Heritage or Feature Trees on site and measures to preserve • Compliance with street tree requirements
Yes	NA	Water Quality, Stormwater Management, and Erosion Control (14-14.6.2(D)) Identify and describe the following: • Erosion and sedimentation control plan and measures • Evidence of compliance with Urban Impaired Stream Standards pursuant to DEP Chapter 500 stormwater law, as applicable • Subsurface sanitary sewage disposal and groundwater protection measures

PUBLIC INFRASTRUCTURE AND COMMUNITY SAFETY		
Yes	NA	Consistency with City Master Plans (14-14.6.3(A)) Describe proposed easements, rights and improvements to connect or continue off-premises public infrastructure, as applicable
Yes	NA	Public Safety and Fire Prevention (14-14.6.3(B)) Identify and describe the following: - Compliance with Crime Prevention through Environmental Design (CPTED) requirements (Technical Manual, Section 3) - Emergency vehicle access - Consistency with public safety standards (Technical Manual, Section 3)
Yes	NA	Availability and Adequacy of Public Utilities (14-14.6.3(C)) (Technical Manual, Sections 2 & 9) Identify and describe the following: - Electrical services, including providing underground services - Existing and proposed connections for public utilities and required public utility upgrades - Sewer line connections
SITE DESIGN		
Yes	NA	Massing, Ventilations and Wind Impact (14-14.6.4(A)) Identify and describe the following: - Wind and ventilation impacts on adjoining structures and/or adjacent public spaces, including wind study, if applicable - Bulk, location, or height impacts on adjoining structures
Yes	NA	Shadows (14-14.6.4(B)), if applicable Provide shadow analysis of impacts on publicly accessible open space (Technical Manual, Section 11)
Yes	NA	Snow and Ice Loading (14-14.6.4(C)) Describe building design measures to prevent snow and ice from loading or falling onto adjacent properties or public ways
Yes	NA	View Corridors (14-14.6.4(D)), if applicable Describe any protection of designated view corridors (Portland Design Manual, Appendix. 1)
Yes	NA	Historic Resources (14-14.6.4(E)), if applicable Identify and describe the following: - The site's status as a designated landmark, within a historic district or historic landscape district, or within 100 feet of any designated landmark, historic district, or historic landscape district - Compliance with standards for preservation and documentation of archaeological resources

Yes	NA	Exterior Lighting (14-14.6.4(F)) Describe how the proposed site lighting will adhere to photometrics requirements as it relates to light trespass and full cutoff fixture design, pursuant to Technical Manual Section 12
Yes	NA	Noise and Vibration (14-14.6.4(G)) Provide data on noise levels for HVAC and other mechanical equipment, such as design specifications, to demonstrate consistency with state and federal noise emissions requirements as well as City code
Yes	NA	Signage and Wayfinding (14-14.6.4(H)), if applicable - Provide signage plan showing the location, dimensions, height and setback of all existing and proposed signs - Provide drawings of all commercial and directional signage on site
Yes	NA	Zone-Related Design Standards (14-14.6.4(I)) Address any applicable design review standards by zone, including compliance with Design Manual

MAJOR SITE PLAN DRAWINGS CHECKLIST

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

All drawings must be submitted in a 24 x 36 sheet size.

BOUNDARY SURVEY (stamped by a Maine Licensed Surveyor and drawn as per Technical Manual Sec. 13)

SITE PLAN(S) (stamped by a Maine Licensed Professional Engineer) including:

All sheets – Include a title block with project title and the following information:

- Project street address
- Name and address of property owner & applicant
- Licensed design professional, incl firm that produced plans
- North arrow
- Date of preparation and revision history block
- Tax parcel (chart, block, and lot) number

Existing Conditions Plan with the following:

- Existing structures, with distance from primary building façade(s) to the property line
- Approximate location of structures on abutting properties
- All streets and intersections adjacent to the site
- Existing driveways, pedestrian ways, and bicycle infrastructure, including dimensions and materials
- Existing public transit infrastructure
- Existing vehicle & bicycle parking areas
- Existing utilities on site and within adjacent rights-of-way
- Existing grades (two-foot contours preferred)
- Location of water courses, wetlands, and vegetation, or other significant natural features
- Existing soil conditions and location of test pits and borings
- Zoning boundary lines, including overlays
- Location of all existing easements and rights-of-way

Proposed Site Plan with the following:

- Proposed structures, including distance from primary building façade(s) to property lines
- Ground floor area, and finished floor elevations for all buildings
- Any proposed geometric modifications to streets and intersections adjacent to site
- Location, dimensions and materials of all 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, including turning templates
- Proposed transit infrastructure with dimensions/ engineering specifications
- Location of vehicle and bicycle parking with dimensions and engineering specifications
- Location of all snow storage areas
- Exterior lighting (please see Technical Manual Sec. 12 for photometrics requirements)
- Location of fire hydrants

• Location of solid waste management receptacles • Location of all proposed HVAC and mechanical equipment, including proposed screening, where applicable • Location of proposed easements and rights-of-way, including dimensions • Please utilize color-coding and/or hatches and shading to delineate changes between the pre and post development condition as needed
UTILITY PLAN including:
• Proposed electrical infrastructure • Location, sizing and directional flows of all proposed sewer and stormwater infrastructure • Location and dimensions of off-premises public or publicly accessible infrastructure adjacent to site • Electric utility infrastructure
GRADING AND DRAINAGE PLAN including:
• Proposed grades • Proposed stormwater management measures meeting Technical Manual (Section 5) standards • Any proposed alteration of a watercourse or wetlands • Any groundwater protection measures • Proposed buffers and preservation measures for wetlands or significant natural features
LANDSCAPE PLAN including:
• Existing vegetation to be preserved and preservation measures • Proposed landscaping, screening, and street trees, including caliper widths for trees • Planting schedule, including street trees
ARCHITECTURAL PLANS AND RENDERINGS including:
• Exterior building elevations, color renderings, illustrations of all sides • Axonometric and street-level views for structures greater than three stories in height • Provide context drawings, if applicable (Design Manual, page 1) • Floor plans
CONSTRUCTION MANAGEMENT PLAN including:
• Specifics on traffic control, sidewalk sheds, and pedestrian rerouting • Include a drawing and written narrative
OTHER
• Details and cross-sections, as necessary

DLN: 1002040086350

QUITCLAIM DEED
(Maine Statutory Short Form)

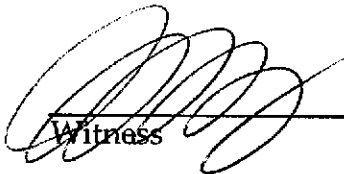
MAINE REAL ESTATE TAX-Paid

KNOW ALL PERSONS BY THESE PRESENTS that **Temple Beth-El**, a corporation organized and existing under the laws of the State of Maine, located in Portland, County of Cumberland, State of Maine, for consideration paid, grants to **Sawyer Island Development, LLC**, a Maine Limited Liability Company, having a mailing address of 100 Silver Street, Portland, ME 04101, with QUITCLAIM COVENANT, the land with any buildings thereon, situated at 383 Deering Avenue, Portland, County of Cumberland and State of Maine, described as follows:

See Attached Exhibit A

Meaning and intending to convey the same premises conveyed to Temple Beth-EL by virtue of deeds from Beatrice M. Noyes and Canal National Bank, as Trustees under the Will of Edward D. Noyes, Jr. dated August 31, 1964 and recorded in the Cumberland County Registry of Deeds in Book 2850, Page 242, and from Beatrice M. Noyes dated August 31, 1964 and recorded in said Registry of Deeds in Book 2850, Page 250.

Witness my hand and seal this 3rd day of February, 2020.



Witness

Temple Beth-El



By Josh Filler, its Treasurer

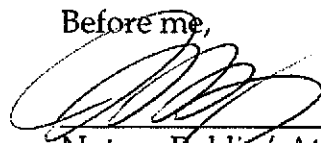
STATE OF MAINE
COUNTY OF CUMBERLAND

February 3, 2020

Then personally appeared before me the above-named Josh Filler and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of said Corporation.

Matthew J. McDonald
Maine Attorney at Law

Before me,



Notary Public/ Attorney at Law



Printed Name

My Comm. Exp:
Maine attorney at law

EXHIBIT A

A certain lot or parcel of land situated easterly of Deering Avenue, in the City of Portland, County of Cumberland and State of Maine, bounded and described as follows:

Beginning on the easterly side of said Deering Avenue at the northwesterly corner of land now or formerly of the heirs of Anna C. Davis, said point of beginning eighty (80) feet northerly of the northerly side line of Noyes Street as measured along the easterly side of Deering Avenue; thence North by the easterly side of Deering Avenue three hundred fifty-seven and two hundredths (357.02) feet, more or less, to land now or formerly of Carl Miller, et al; thence easterly by said Miller land a distance of one hundred and one tenth (100.1) feet, more or less, to land now or formerly of Ruth H. Finn; thence southerly by land of said Finn, land now or formerly of Jack Levine, land now or formerly of Molly Seigel, land now or formerly of Lewis Finberg and land now or formerly of Harry S. Modes three hundred twenty-nine and forty-one hundredths (329.41) feet, more or less, to said land now or formerly of the heirs of Anna C. Davis; thence westerly one hundred (100) feet, more or less, by land of said Davis heirs to the point of beginning,

Being a portion of the property shown on a plan of part of the Deering Estate made by E. C. Jordan & Co., July 1921 and revised in September of 1930 and being lots 118-A-3-5-7-9-11-13-15 situated easterly of Deering Avenue as shown on the City of Portland tax assessment plans for 1963; said parcel contains 38,553 square feet, more or less, and being a part of Lot 10 as shown on a Plan of a portion of the Deering Estate, dated January 1880 and recorded in Cumberland County Registry of Deeds, Plan Book 4, Page 25.

Evidence of State and Federal Permits

Deering Avenue Residences

387 & 405 Deering Avenue

February 24, 2021

The following state and federal permits are required for this project.

- Maine DEP Tier I Natural Resource Protection Act (NRPA) permit for wetland impact
- ACOE General Permit for wetland impact

The Maine DEP NRPA was submitted to the Maine DEP and the ACOE and a copy has been provided to the City.



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

DEPARTMENT ORDER

IN THE MATTER OF

SAWYER ISLAND DEVELOPMENT, LLC) NATURAL RESOURCES PROTECTION ACT
Portland, Cumberland County) FRESHWATER WETLAND ALTERATION
RESIDENTIAL BUILDINGS) WATER QUALITY CERTIFICATION
L-29139-TB-A-N (approval)) FINDINGS OF FACT AND ORDER

Project Description: The applicant proposes to alter 7,223 square feet of forested freshwater wetlands to construct two, four-unit residential buildings with associated site improvements including driveways, parking areas, utilities, and stormwater management, as shown on a set of plans, the first of which is titled “Existing Conditions & Removals Plan,” prepared by Walsh Engineering Associates, Inc. and dated February 24, 2021. Building locations and associated development were designed around site constraints including ledge, topography and local zoning. The requirements for the proposed projects stormwater management system and site constraints made wetland impacts unavoidable. The applicants have avoided and minimized wetland impacts to the greatest extent practicable by proposing 2H:1V side slopes within the wetland fill areas. According to the Department’s Geographic Information System (GIS), there are no mapped essential or significant wildlife habitats associated with the project site. The proposed project is located off Deering Avenue in the City of Portland.

Permit for:	☒ Tier 1
DEP Decision:	☒ Approved ☐ Denied (see attached letter)
CORPS Action:	☒ The Corps has been notified of your application. The following are subject to Federal screening: (1) projects with previously authorized or unauthorized work, in combination with a Tier 1 permit for a single and complete project, which total more than 15,000 square feet of altered area; (2) projects with multiple state permits and/or state exemptions which apply to a single and complete project that total more than 15,000 square feet of altered area; and (3) projects that may impact a vernal pool, as determined by the State of Maine or the Corps. If your activity is listed above, <i>Corps approval is required for your project</i> . For information regarding the status of your application contact the Corps’ Maine Project Office at (207) 623-8367.

Standard Conditions:

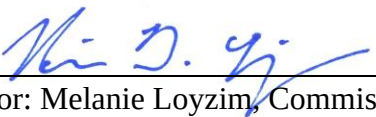
- 1) If construction or operation of the activity is not begun within four (4) years from the date signed, this permit shall lapse and the applicant shall reapply to the Department for a new permit. This permit is transferable only with prior approval from the Department. If the activity is associated with a larger project, starting any aspect of that project constitutes start of construction.
- 2) The project shall be completed according to the plans in the application. Any change in the project plans must be reviewed and approved by the Department.
- 3) Properly installed erosion control measures shall be installed prior to beginning the project, and all disturbed soil should be stabilized immediately upon project completion.

- 4) A copy of this approval will be sent to the City of Portland. Department approval of your activity does not supersede or substitute the need for any necessary local approvals.

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 24TH DAY OF MARCH, 2021.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: 
For: Melanie Loyzim, Commissioner

PLEASE NOTE THE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES.

LL/L29139AN/ATS#87260

FILED
March 25, 2021
State of Maine
Board of Environmental Protection



Natural Resources Protection Act (NRPA) Standard Conditions

THE FOLLOWING STANDARD CONDITIONS SHALL APPLY TO ALL PERMITS GRANTED UNDER THE NATURAL RESOURCES PROTECTION ACT, 38 M.R.S. § 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.

Revised September 2016

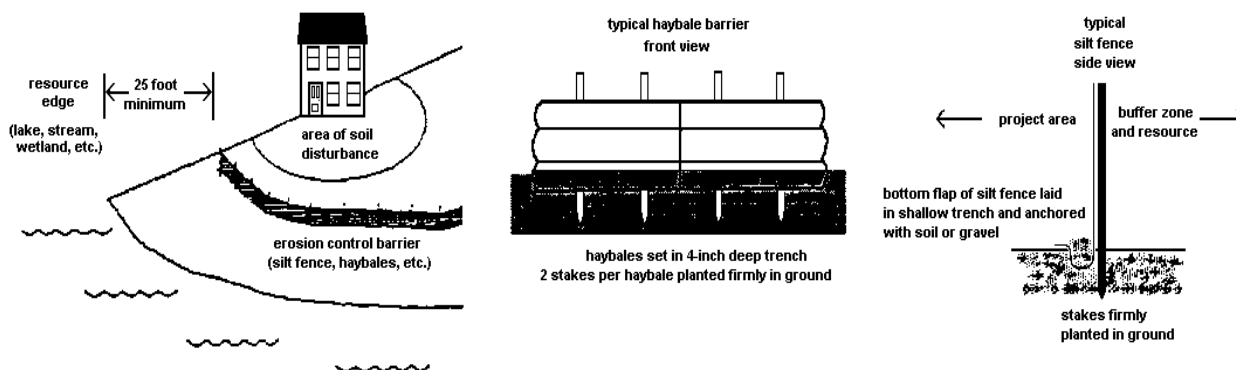


STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
 17 STATE HOUSE STATION, AUGUSTA, MAINE 04333

Erosion Control for Homeowners

Before Construction

1. If you have hired a contractor, make sure you discuss your permit with them. Talk about what measures they plan to take to control erosion. Everybody involved should understand what the resource is, and where it is located. Most people can identify the edge of a lake or river. However, the edges of wetlands are often not so obvious. Your contractor may be the person actually pushing dirt around, but you are both responsible for complying with the permit.
2. Call around to find where erosion control materials are available. Chances are your contractor has these materials already on hand. You probably will need silt fence, hay bales, wooden stakes, grass seed (or conservation mix), and perhaps filter fabric. Places to check for these items include farm & feed supply stores, garden & lawn suppliers, and landscaping companies. It is not always easy to find hay or straw during late winter and early spring. It also may be more expensive during those times of year. Plan ahead – buy a supply early and keep it under a tarp.
3. Before any soil is disturbed, make sure an erosion control barrier has been installed. The barrier can be either a silt fence, a row of staked hay bales, or both. Use the drawings below as a guide for correct installation and placement. The barrier should be placed as close as possible to the soil-disturbance activity.
4. If a contractor is installing the erosion control barrier, double check it as a precaution. Erosion control barriers should be installed “on the contour,” meaning at the same level or elevation across the land slope, whenever possible. This keeps stormwater from flowing to the lowest point along the barrier where it can build up and overflow or destroy the barrier.



During Construction

1. Use lots of hay or straw mulch on disturbed soil. The idea behind mulch is to prevent rain from striking the soil directly. It is the force of raindrops hitting the bare ground that makes the soil begin to move downslope with the runoff water, and cause erosion. More than 90% of erosion is prevented by keeping the soil covered.
2. Inspect your erosion control barriers frequently. This is especially important after a rainfall. If there is muddy water leaving the project site, then your erosion controls are not working as intended. You or your contractor then need to figure out what can be done to prevent more soil from getting past the barrier.
3. Keep your erosion control barrier up and maintained until you get a good and healthy growth of grass and the area is permanently stabilized.

After Construction

1. After your project is finished, seed the area. Note that all ground covers are not equal. For example, a mix of creeping red fescue and Kentucky bluegrass is a good choice for lawns and other high-maintenance areas. But this same seed mix is a poor selection for stabilizing a road shoulder or a cut bank that you don't intend to mow. Your contractor may have experience with different seed mixes, or you might contact a seed supplier for advice.
2. Do not spread grass seed after September 15. There is the likelihood that germinating seedlings could be killed by a frost before they have a chance to become established. Instead, mulch the area with a thick layer of hay or straw. In the spring, rake off the mulch and then seed the area. Don't forget to mulch again to hold in moisture and prevent the seed from washing away or being eaten by birds or other animals.
3. Keep your erosion control barrier up and maintained until you get a good and healthy growth of grass and the area is permanently stabilized.

Why Control Erosion?**To Protect Water Quality**

When soil erodes into protected resources such as streams, rivers, wetlands, and lakes, it has many bad effects. Eroding soil particles carry phosphorus to the water. An excess of phosphorus can lead to explosions of algae growth in lakes and ponds called blooms. The water will look green and can have green slime in it. If you are near a lake or pond, this is not pleasant for swimming, and when the soil settles out on the bottom, it smothers fish eggs and small animals eaten by fish. There many other effects as well, which are all bad.

To Protect the Soil

It has taken thousands of years for our soil to develop. Its usefulness is evident all around us, from sustaining forests and growing our garden vegetables, to even treating our septic wastewater! We cannot afford to waste this valuable resource.

To Save Money (\$\$)

Replacing topsoil or gravel washed off your property can be expensive. You end up paying twice because State and local governments wind up spending your tax dollars to dig out ditches and storm drains that have become choked with sediment from soil erosion.



DEP INFORMATION SHEET

Appealing a Department Licensing Decision

Dated: November 2018

Contact: (207) 287-2452

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) an administrative process before the Board of Environmental Protection (Board); or (2) 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. § 3451(4)) or a general permit for an offshore wind energy demonstration project (38 M.R.S. § 480-HH(1)) or a general permit for a tidal energy demonstration project (38 M.R.S. § 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. §§ 341-D(4) & 346; the *Maine Administrative Procedure Act*, 5 M.R.S. § 11001; and the DEP's *Rules Concerning the Processing of Applications and Other Administrative Matters* ("Chapter 2"), 06-096 C.M.R. ch. 2.

DEADLINE 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 more than 30 calendar days after the date on which the Commissioner's decision was filed with the Board will be dismissed unless notice of the Commissioner's license decision was required to be given to the person filing an appeal (appellant) and the notice was not given as required.

HOW TO SUBMIT AN APPEAL TO THE BOARD

Signed original appeal documents must be sent to: Chair, Board of Environmental Protection, 17 State House Station, Augusta, ME 04333-0017. An appeal may be submitted by fax or e-mail if it contains a scanned original signature. It is recommended that a faxed or e-mailed appeal be followed by the submittal of mailed original paper documents. The complete appeal, including any attachments, must be received at DEP's offices in Augusta on or before 5:00 PM on the due date; materials received after 5:00 pm are not considered received until the following day. The risk of material not being received in a timely manner is on the sender, regardless of the method used. The appellant must also send a copy of the appeal documents to the Commissioner of the DEP; the applicant (if the appellant is not the applicant in the license proceeding at issue); and if a hearing was held on the application, any intervenor in that hearing process. All of the information listed in the next section of this information sheet must be submitted at the time the appeal is filed.

INFORMATION APPEAL PAPERWORK MUST CONTAIN

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

1. *Aggrieved Status.* The appeal must explain how the appellant has standing to maintain an appeal. This requires an explanation of how the appellant 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.* The appeal must identify the specific findings of fact, conclusions regarding compliance with the law, license conditions, or other aspects of the written license decision or of the license review process that the appellant objects to or believes to be in error.
3. *The basis of the objections or challenge.* For the objections identified in Item #2, the appeal must state why the appellant believes that the license decision is incorrect and should be modified or reversed. If possible, the appeal should cite specific evidence in the record or specific licensing requirements that the appellant believes were not properly considered or fully addressed.
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 matters specifically raised in the written notice of appeal.
6. *Request for hearing.* If the appellant wishes the Board to hold a public hearing on the appeal, a request for public hearing must be filed as part of the notice of appeal, and must include an offer of proof in accordance with Chapter 2. The Board will hear the arguments in favor of and in opposition to a hearing on the appeal and the presentations on the merits of an appeal at a regularly scheduled meeting. If the Board decides to hold a public hearing on an appeal, that hearing will then be scheduled for a later date.
7. *New or additional evidence to be offered.* If an appellant wants to provide evidence not previously provided to DEP staff during the DEP's review of the application, the request and the proposed evidence must be submitted with the appeal. The Board may allow new or additional evidence, referred to as supplemental evidence, to be considered in an appeal only under very limited circumstances. The proposed evidence must be relevant and material, and (a) the person seeking to add information to the record must show due diligence in bringing the evidence to the DEP's attention at the earliest possible time in the licensing process; or (b) the evidence itself must be newly discovered and therefore unable to have been presented earlier in the process. Specific requirements for supplemental evidence are found in Chapter 2 § 24.

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, and is made easily accessible by the DEP. Upon request, the DEP will make application materials available during normal working hours, provide space to review the file, and provide an 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 general questions regarding the appeal process.
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. Unless a stay of the decision is requested and granted, 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, and will provide 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, any materials submitted in response to the appeal, and relevant excerpts from the DEP's application review file will be sent to Board members with a recommended decision from DEP staff. The appellant, the license holder if different from the appellant, and any interested persons are notified in advance of the date set for Board consideration of an appeal or request for public hearing. The appellant and the license holder will have an opportunity to address the Board at the Board meeting. 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, the 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. § 346(1); 06-096 C.M.R. ch. 2; 5 M.R.S. § 11001; and 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. 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. § 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.

ZONING ANALYSIS Relevant Zone(s) R5 Residential

All Projects:

	Required	Proposed
Lot Size	9,000 SF	38,309 SF
Area Per Dwelling Unit	4,500 SF	4,789 SF
Minimum Street Frontage	50 FT	356 FT
Front Yard Minimum	14.8 FT	15.3 FT
Front Yard Maximum	N/A	N/A
Rear Yard	20 FT	23.7 FT
Yard Right	14 FT	50.7 FT
Yard Left	14 FT	54.6 FT
Side Street Setback	N/A	N/A
Step Back	N/A	N/A
Maximum Lot Coverage	40%	17.6%
Minimum Lot Coverage	N/A	N/A
Maximum Height	35 FT	29.4 FT
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	8	16
Loading Bays	N/A	N/A
Other 1	N/A	N/A
Other 2	N/A	N/A
Other 3	N/A	N/A

Planned Residential Unit Developments (PRUD) Requirements

	Required	Proposed
Minimum Lot Size	N/A	N/A
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	N/A	N/A	N/A
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):			



Zoning Analysis

Deering Avenue Residences

387 & 405 Deering Avenue

February 22, 2021

Site Plan Standards (14.6)

Major Site Plans are subject to the review criteria outlined in Section 14.6 of the City of Portland Land Use Ordinance. Each of these review standards is discussed below:

14.6.1 Transportation Standards

A. Impact on surrounding street systems

The project consists of the construction of two multiplex buildings each with four 2-bedroom units. Each building will have its own driveway and parking lot due to topographic and subsurface conditions (i.e. steep slopes and shallow ledge). Therefore, the project will only generate approximately 80 trips per day, which is split between the two driveways on either end of the site. Each driveway will be accessed from Deering Avenue in locations that provide safe entry and egress. The project is not anticipated to have an adverse effect on existing traffic conditions.

B. Access and circulation

Access to each driveway will be from Deering Avenue. Due to a quick rise in elevation from the road at the center of the site, access points are proposed at each end of the site where grades are lower. A waiver is being requested from Technical Manual 1.7.2.7 because the Building B driveway is less than 100 feet away from the abutting driveway. Given the relatively low traffic volume at this driveway, it is not anticipated to cause safety issues and there is no practical alternative to the driveway location.

Safe internal walkways are provided between the two proposed buildings and from each building to the parking lots and existing sidewalk on Deering Ave.

Loading and service vehicles can access each parking lot and can turn around using the empty parking spaces or the ADA parking aisle if all parking spaces are full. The project does not require a dumpster, so trash pickup is not required.

An existing asphalt sidewalk in good condition exists along the entire Deering Avenue frontage. Less than 35% of the sidewalk will be disturbed for the installation of the driveways and utilities. Disturbed portions of the curb and sidewalk will be repaired to match the existing sidewalk conditions



Representative image of existing sidewalk (9/11/2019)

C. Public transit access

The project results in less than 20 dwelling units so additional public transit facilities are not required.

D. Parking

Offstreet parking is provided in garages and asphalt paved parking lots for each buildings. Each unit will have one garage parking space and one exterior parking space for a total of 8 exterior parking spaces and 8 interior parking spaces.

One bicycle rack will be provided in front of each building for a total of four spaces. Additional bicycle storage is available in each unit's interior garage and storage area.

Snow storage area is provided on the back and side of each parking lot.

Electric vehicle charging can be provided in each garage unit. Spare conduit will also be provided to the parking lot in case there is future need for exterior EV charging stations.

Designated motorcycle parking is not provided, but two-wheeled vehicles can utilize the parking spaces that are provided above the required parking spaces.

E. Transportation Demand Management (TDM)

- a. This project does not require a TDM Plan.

14.6.2 Environmental Quality Standards

A. Preservation of significant natural features

No Endangered or Threatened plants have been identified onsite. Trees on the site primarily consists of invasive Norway Maple trees. Four existing non-invasive trees will be protected and kept on the edges of the property.

No threatened or endangered animal species habitats have been identified onsite, except for the Northern Long Eared Bat, which is considered to be everywhere in Maine where there are trees over 3" in diameter.

The project is not located within high or moderate value waterfowl and wading bird habitat.

The project is not located within an aquifer on a Casco Bay Island.

A forested wetland is located on the south end of the property. 7,223 square feet of wetland impact is proposed in this area and is unavoidable for the following reasons:

1. Shallow ledge

Ledge is very shallow at the center of the site and falls off quickly at the ends of the site. Therefore, buildings need to be practically positioned so they are not partially on and partially off ledge to minimize differential settlement and/or excessive ledge removal. This condition pushes the buildings to the ends of the site where ledge is deeper.

2. Topography

The site climbs in grade quickly at the center of the site, where it is up to 9' higher than the elevation of Deering Avenue. The center of the site is also where the shallowest ledge is located. Therefore, driveway access from Deering Avenue needs to be provided at the far ends of the site where existing grade onsite is closer to the road elevation. These locations provide reasonable separation from bedrock for installation of parking lots and stormwater systems without the need for excessive ledge removal that would be required at the center of the site.

3. Number of Buildings

Zoning only allows for up to six units in a multiplex building in the R-5 zone. Therefore, two buildings need to be constructed to provide eight dwelling units. Each end of the site are the practical locations of the buildings for the reasons described above.

4. Building Massing

The buildings have been sized and located to have little impact on the surrounding neighborhood. Positioning the buildings on the lower portion of the site keeps the overall building height in line with the surrounding properties. If the buildings were placed more towards the center of the site they would be driven much higher than the surrounding buildings due to existing grades and shallow depth to ledge. Therefore, the proposed building positions maintain the general mass and bulk of the existing neighborhood.

5. Stormwater Management

- a. Stormwater runoff from the developed portion of the site must be managed according to City regulations. Therefore, the wetland area in the low portion of the site must be utilized to capture, treat, and detain runoff from the developed portion of the northerly side of the site.

Given the information above, a waiver is requested from Ordinance section 14.6.2.A.1.e. for necessary wetland impact.

The site is not located adjacent to preservation areas or habitat blocks.

B. *Landscape preservation*

The existing site is primarily forested with invasive Norway Maple trees which are proposed to be removed. Four existing non-invasive trees will remain. A significant replanting and renaturalization effort is proposed to revegetate a large portion of the property.

Four of nine non-invasive trees greater than or equal to 10" DBH within the zoning setbacks will be saved (44%), which exceeds the minimum of 30%. Therefore, no replacement trees are required.

C. *Site landscaping and buffers*

Twelve plantings are required for site frontage landscaping. Over 30 trees and nearly 300 shrubs are proposed to be planted onsite.

The entire perimeter of the site will be buffered with landscaping and fencing.

Eight exterior parking spaces are proposed, which would require four trees. Significantly more trees and shrubs are proposed.

The ordinance requires 8 street trees for a multifamily development with 8 units. 14 Trees are proposed along the edge of Deering Avenue.

D. *Water quality, stormwater management, and erosion control*

The site has been designed to manage stormwater in accordance with the City of Portland and Maine DEP Chapter 500 standards. A stormwater management plan is included with this submission.

14.6.3 Public Infrastructure and Community Safety Standards

A. *Consistency with City master plans*

The residential project meets the current zoning standards of the residential zone and is consistent with the City's goal of providing additional housing throughout the City.

No offsite easements are required.

B. *Public safety and fire prevention*

Parking lots, walkways and the internal recreation area will be highly visible from the buildings, providing natural surveillance. Parking lots and building entrances will be illuminated per City standards. The perimeter buffering of the site promotes a separation of public and private spaces.

Building A is located 133 feet away from the existing fire hydrant at the corner of Deering Ave and Longfellow Street. Building B is located 201 Feet away from the existing fire hydrant at the corner of Deering Ave and Noyes Street. The proposed buildings will be sprinkled.

Fire Department vehicles can access two sides of each buildings from the parking lots and from Deering Ave. Building street addresses will be provided on each building.

Any blasting activities shall meet the standards of The City of Portland Technical Manual Section 3.7.

C. Public utilities

Ability to serve letters for the project have been provided from the Portland Water District and Unitil. A wastewater capacity application has been included with this submission. Electric and communication services will be underground from a utility pole on the opposite side of Deering Ave.

Sewer and stormwater services have been designed in accordance with City standards.

The 8-unit residential project will utilize City curbside trash and recycling services. Each unit has room in their respective garages and/or storage units inside the building for storage of trash and recycling between pickup days.

14.6.4 Site design standards

A. Massing, ventilation, and wind impact

The size and location of the buildings are not anticipated to cause adverse effects of value or health and safety problems related to venting or wind climate onsite, at the street, or at adjacent properties.

HVAC venting will not be directed towards public spaces or adjacent residential properties.

B. Shadow

Shadows from the site will not reach significant public resources or open space.

C. Snow and ice loading

The buildings will have flat roofs with roof drain systems. Therefore, no snow or ice will fall onto adjacent properties.

D. View corridors

The project is not located within a view corridor.

E. Historic resources

This site is not located in or near an historic district or landmark.

F. Exterior lighting

One 12' high pole mounted light will be installed in each parking lot. Multiple under-canopy down-lights will be installed at each man door and garage door. All light fixtures are LED and full cutoff. A photometric plan and lighting cut sheets are provided with this application.

G. Noise and vibration

All HVAC equipment will be roof mounted and will not cause significant noise or vibrations. No generators are proposed.

H. Signage and wayfinding

No signage is proposed.

I. Design standards

The project is subject to the R-5 design guidelines. See the Architectural Code Summary for description of how the buildings meet the R-5 design guidelines.

Summary of Easements or Covenants

Deering Avenue Residences

387 & 405 Deering Avenue

February 24, 2021

There are no existing easements or covenants on the property.

There are no proposed easements or covenants on the property.

Standard to be Waived: Cite Ordinance or Technical Manual Standard	Cite Standard Language: Cite specific language of applicable Ordinance or Technical Manual Standard	Waiver Being Sought: Describe waiver being sought. Ex. – We are requesting a two-way parking lot drive aisle width of 20' feet.	Justification for Waiver: Address specific waiver criteria, if applicable, and document reasons for the waiver request.
Technical Manual 1.7.2.7 Location and spacing of driveways.	Driveway spacing shall be 125' from adjacent driveways.	The Applicant is requesting a waiver for the Building B driveway location to be 50.7 feet from abutter's driveway.	Due to a quick rise in elevation from the road at the center of the site, access points are proposed at each end of the site where grades are lower. Given the relatively low traffic volume at this driveway, it is not anticipated to cause safety issues and there is no practical
Land Use Ordinance 14.6.2.A.1.e. Preserve Wetlands	14.6.2 Environmental quality standards A. Preservation of significant natural features 1. All development shall preserve and protect significant natural features by incorporating them into site design	The Applicant is requesting a waiver to fill 7,223 square feet of wetland.	Due many factors such as access from the street, access to building from parking lot, required number of buildings, and depth to ledge on the middle of the site, avoiding wetland impact is not practical. See zoning analysis section 14.6.2.A for more detailed

February 15, 2021

Sawyers Island Development
100 Silver St.
Portland, ME 04101

RE: Construction Financing – 383 Deering Avenue, Portland, ME

To Whom It May Concern:

Please be advised that Sawyer Island Development, LLC has the financial capacity to construct an 8 unit apartment complex located at 383 Deering Avenue, Portland.

Should you have any questions please feel free to contact me directly at (617) 897-8981 or my E-mail: peter.alberding@raymondjames.com.

Sincerely,



Peter Alberding
Senior Vice President – Investments
Branch Manager
Raymond James and Associates
225 Franklin Street
Suite 1800
Boston, MA 02110

Peter Alberding
peter.alberding@raymondjames.com
617-897-8981

Firm Qualifications

Walsh Engineering Associates Inc. (WEA) is a professional consulting engineering firm based in Westbrook, Maine. WEA offers civil engineering, environmental permitting, site planning, project feasibility analysis, landscape design, project management, and construction administration services. The firm was founded in 2009 by William R. Walsh, PE, who has been practicing engineering in New England for over 30 years. Grounded in technical strength, WEA provides expertise in all facets of site work development and construction.

In January 2018, Pinkham and Greer Civil Engineers merged with WEA. Tom Greer, the principal of P&G has joined WEA continuing to manage his client base. Tom brings to Walsh a depth of knowledge and over 35 years' experience as the principal of his company to WEA. Tom's experience in permitting and design for school districts, architects, private developers and industrial clients broadens WEA's capacity and technical knowledge.

The principal and staff have extensive experience in design, permitting (local, state and federal) and construction administration of a wide variety of projects throughout New England. We are licensed professional engineers, LEED Accredited Professionals and accomplished designers committed to the design of sustainable projects.

Walsh Engineering Associates Inc. approaches each project with the utmost concern and attention to detail that each client deserves. WEA prides itself in providing complete consulting services that will be designed, permitted and, most importantly, constructed. By following projects through construction, WEA provides continuity to projects that will serve the clients' best interests. We pride ourselves in being timely and responsive as well as practical in our designs.

The firm's primary services relate to the following types of projects:

- Master Planning
- Institutional Planning and Design
- Commercial Development
- Shoreline Stabilization
- Local, State, and Federal Permitting
- Roadway Design
- Columbarium Planning and Design
- Feasibility Studies
- Construction Management
- Residential Development
- Stormwater Management
- Environmental Permitting
- Utility Planning and Design
- Cemetery Design

William R. Walsh III, PE, LEED AP

Professional Experience

Walsh Engineering Associates Inc., Westbrook, Maine: Bill founded Walsh Engineering Associates, Inc. in 2009 to provide civil engineering, site planning and project management services throughout New England. As a Professional Engineer and a LEED Accredited Professional, Bill brings a broad knowledge and perspective to each project. Recent projects include:

- Saco River Water Treatment Facility – Biddeford, Maine
- Gerald Senior Residence – Fairfield, Maine
- Sugarloaf Mountain Watershed Analysis – Carrabassett Valley, Maine
- River Walk Subdivision – Maine
- Affordable Housing, Peaks Island, Maine
- The Homes at Old Marsh – Wells, Maine
- O. M. Whipple Columbarium – Lowell, Massachusetts

Mohr & Seredin Landscape Architects, Inc., Portland, Maine: Bill joined Mohr & Seredin in 1998 as a Project Manager and became a Principal in 2003. Bill was responsible for the project management, site design and construction administration of projects. Bill was involved with the planning, permitting, construction document preparation, bidding and construction administration of several large-scale projects, including:

- Cotter Union Expansion, Colby College – Waterville, Maine
- Maine Veterans' Memorial Cemetery – Augusta, Maine
- Coastal School for Girls – Freeport, Maine
- Cocoons Day School – Kennebunk, Maine

Land Use Consultants, Portland, Maine: Bill was a Project Manager/Engineer for 11-years at LUC, a multi-disciplinary firm of engineers, surveyors and land planners.

Education

University of Connecticut – Storrs, Connecticut B.S. Engineering, 1986

Registration

Professional Engineer, Maine #8204, 1995
Professional Engineer, Massachusetts #50176, 2012
Professional Engineer, New Hampshire #14352, 2014
LEED Accredited Professional, 2004

Professional Associations and Board Affiliations

American Society of Civil Engineers	Friends of Cocoons, Board Member
USBGC – U.S. Green Building Council	Kennebunk Free Library, Former Trustee

Silas W. Canavan, PE, CFM

Professional Experience

Walsh Engineering Associates Inc. - Westbrook, Maine: Silas joined Walsh Engineering Associates, Inc. in 2012. As the current Director of Civil Engineering, Silas oversees the project teams and is intimately involved with all aspects of projects including project management, development of site plans, drainage studies, stormwater analysis, permitting, construction document preparation, and construction oversight. Representative projects include:

- Saco River Water Treatment Facility – Biddeford, Maine
- UNE Biddeford Campus Expansion – Biddeford, Maine
- U-Haul Facility Development – Bangor, Maine
- U-Haul Facility Expansion – Saco, Maine
- Salvation Army Adult Rehabilitation Center Expansion – Portland, Maine
- Zero-Sort Recycling Facility – Lewiston, Maine
- Hotel Redevelopment Project – Portland, Maine

Credere Associates, LLC - Westbrook, Maine: Silas joined Credere Associates in 2010 as a Civil/Environmental Engineer. Silas was responsible for the project management, site design and construction administration of projects as well as performing Phase I and Phase II environmental site assessments. Silas was involved with the site investigations, planning, permitting, construction document preparation, bidding and construction administration of several projects, including:

- Nashua Boiler House Demolition – Nashua, New Hampshire
- Aerofab Parking Lot – Sanford, Maine
- Thompson's Point Redevelopment – Portland, Maine
- Callahan Mine Superfund Site Remediation – Brooksville, Maine
- Bath Iron Works Demolition of Shipways – Bath, Maine

SYTDesign Consultants - Cumberland, Maine: Silas was a Design Engineer for 4-years with the multi-disciplinary firm of engineers, surveyors, and landscape architects. Silas was involved with the planning, permitting, construction document preparation, and construction inspection for several projects. Significant projects included:

- University of New England Campus Expansion – Biddeford, Maine
- University of New England Access Road – Portland, Maine
- Dionne Commons Senior Living Facility – Brunswick, Maine
- Multiple C.N. Brown Convenience Stores – Maine and New Hampshire

Education

University of Vermont - Burlington, Vermont B.S. Civil Engineering 2005

Registration

Professional Engineer, Maine #12639, 2011
40 Hour OSHA HAZWOPER Training, 2010

Professional Associations

American Society of Civil Engineers

Norman G. Chamberlain II, PE

Professional Experience

Walsh Engineering Associates Inc., Portland, Maine: Norm has over 30 years of experience in civil engineering design and construction working for firms in Maine, New Jersey and Michigan. He joined WEA in 2015 as a Project Manager on many types of civil engineering, subdivision and site development projects. His experience includes: site plan design; subdivision design; storm water quantity and quality control designs; sewer and other utilities; DEP and ACOE permit applications; phosphorous analysis; and construction management. Recent projects include:

- Saco River Water Treatment Facility – Biddeford, Maine
- Maine Coast Waldorf School – Freeport, Maine
- Oxford County Courthouse – South Paris, Maine
- Maine Coast Waldorf School – Freeport, Maine
- Friends School Addition – Cumberland, Maine
- Oxford Transfer Station – Oxford, Massachusetts
- Auburn Transfer Station – Auburn, Massachusetts
- Poland Spring Bottling Corp – Poland, Maine
- Southern Maine Veterans Cemetery Expansion – Springvale, Maine
- Northern Maine Veterans' Cemetery – Caribou, Maine

Taylor Engineering Associates, Auburn, Maine: Prior to joining Walsh Engineering Associates, Norm was with Taylor Engineering Associates for 23 years as a Project Manager and, later, as a principal. Norm was responsible for the project management of many site design, subdivision, road design and bridge projects. Norm was involved with the planning, permitting, construction document preparation, bidding and construction administration of several large-scale projects, including:

- Poland Spring Bottling Corp – Poland, Maine
- Kittyhawk Business Park – Auburn, Maine
- Brookdale Village Mobile Home Park – Poland, Maine
- Birch Drive – Poland, Maine
- Ricker Road – Poland, Maine
- Bridgton Hospital – Bridgton, Maine
- Rumford Hospital – Rumford, Maine
- Central Maine Heart and Vascular Institute – Lewiston, Maine

Prior to returning to Maine in 1991, Norm was a Project Manager/Engineer and Field Engineer for several engineering and construction firms in Michigan and New Jersey.

Education

University of Maine – Orono, Maine B.S. Engineering, 1980

Registration

Professional Engineer, Maine #7144, 1991


Albert Frick Associates, Inc
Environmental Consultants

380B Main Street Gorham, Maine 04038
 (207) 839-5563 FAX (207) 839-5564
www.albertfrick.com info@albertfrick.com

Brady Frick, President, SE
 Albert Frick, CSS, SE
 Christopher Coppi CWS, SE
 Bryan Jordan, SE
 Matthew Logan, SE
 Sarah Frick, Office Manager

April 16, 2020

Todd Valentine
 RAS LLC
 14 Town Landing Road
 Falmouth, ME 04105

Re: Wetlands Report (REVISED) for Deering Ave, Portland- Map 118, Lots 24-30).

Dear Todd:

Wetlands:

On January 30, 2020, Albert Frick Associates, Inc. (AFA) completed a wetland delineation at the above-mentioned properties. The wetland delineation was performed on seven (7) consecutive lots located off Deering Ave. The delineation revealed the presence of freshwater, forested wetlands traversing lots 24, 25 and 26. The wetland boundary was flagged in blue and labeled alphanumerically and GPS-located by AFA using a Trimble Geo 7x hand-held unit. The attached Wetland Delineation Plan illustrates the extent of Forested Wetland within the properties investigated.

On April 16, 2020, I returned to the site to document if a low area in the wetland exhibited flooding conditions for vernal pool purposes. Vernal pools require at least 6" of standing water to support vernal pool breeding amphibians during the breeding portion of their life cycle. This area on 4/16/20 exhibited water stained leaves and only a couple inches of water during the inspection. As a result, this area does not contain standing water sufficient enough to support amphibians for their breeding life cycle, and therefore, does not meet the statutory definition of a vernal pool per the Natural Resources Protection Act. As such, neither the Army Corps nor the Maine DEP vernal pool rules apply to the property wetland described above.

As discussed with you on site on April 16th, 2020, wetland impacts on the property qualify for the Tier 1 NRPA review by DEP and a Category (CAT) 2 review with the Corps. Permits with those agencies are necessary prior to any disturbance in the forested wetland. For regulations regarding natural resources at the local level, contact the City Planning/Zoning Dept.

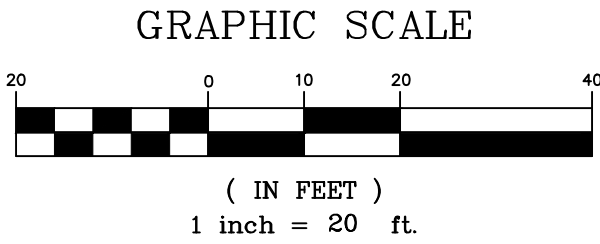
If you have any questions or further matters for discussion, please feel free to contact me by phone (839-5563) or by email at chris@albertfrick.com.

Respectfully,

Chris Coppi CWS, LSE
 Wetland Scientist
 Licensed Site Evaluator, #403



MAP COMPILED FROM:
*TOWN OF PORTLAND TAX MAP
*AERIAL PHOTOGRAPH FROM THE MAINE OFFICE OF GIS
*2' TOPOGRAPHIC CONTOURS FROM THE MAINE OFFICE OF GIS
*ON SITE LOCATIONS UTILIZING TRIMBLE GEO7X HANDHELD UNIT



DATE:	REVISIONS:

WETLAND DELINEATION PLAN
PREPARED FOR
TODD VALENTINE
DEERING AVENUE
(MAP 118, LOTS 24-30)
PORTLAND, MAINE



Albert Frick Associates, Inc.
Environmental Consultants
Gorham, Maine

Drawn By: B.J.	Checked By: C.C.
Date: 1/30/2020	Scale: 1" = 20'

STORMWATER MANAGEMENT REPORT
Deering Avenue Residences
387 & 405 Deering Avenue, Portland, Maine
Revised June 4, 2021

Introduction:

Walsh Engineering Associates, Inc. (WEA) has been retained by Sawyer Island Development, LLC (Applicant) to assist in the design and permitting of two 4-unit multi-family residential buildings located on Deering Avenue in Portland, Maine. Due to site topography, each building will be serviced separately from one another and have their own driveway & parking onsite.

This Stormwater Management Report assesses both pre-development and post-development peak runoff rates and stormwater treatment methods that will be used to manage stormwater runoff from the developed site. The analysis provided herein was completed in accordance with the Maine DEP Chapter 500 Basic, General, and Flooding standards as the City of Portland standards reference.

Methodology:

HydroCAD version 10.00-22 developed by HydroCAD Software Solutions LLC of Chocurua, NH was used to model the hydrology and hydraulics of the site. The flows calculated by HydroCAD were used to design the stormwater management systems.

Peak flow rates off the various sub catchments for the 2, 10, and 25-year, 24-hour, Type-III distribution storm events were calculated for existing and developed conditions (3.1, 4.6, and 5.8 inches, respectively).

Precipitation values used in the model were taken from the manual: Stormwater Management for Maine: Best Management Practices, published by the Maine Department of Environmental Protection, March 2016. The rainfall value used was for SE Cumberland County, Maine.

Times of concentration methods include TR-55 sheet flow and shallow concentrated flow. Runoff curve numbers were selected from Tables 2-2a and 2-2c of the SCS TR-55 manual, which are included in the HydroCAD software. Watershed subcatchments are as delineated on Drawing D1.0 for “existing conditions” and D2.0 for “developed conditions” both drawings are located in Appendix G. Modeling assumptions made for each sub catchment, culvert, and Best Management Practice (BMP) with the site in its existing and developed conditions are summarized in the HydroCAD reports attached as Appendix A and B.

Pre-Development Conditions:

The site of the proposed development is a 38,309 square foot (0.88 acre) lot situated between Longfellow Street to the northwest and Noyes Street to the southeast. The parcel currently is in undeveloped condition with trees covering most of the property with areas of exposed bedrock. There is one wetland on site in the northwestern section as shown in the plan set.

The topography of the site is high in the middle, sloping, as high as 25% grade, down to either end of the property. The site soil consists of Deerfield and Walpole soils which are Hydraulic Soil Group (HSG) A and A/D, respectively. Hydrologic soil groups were taken from the medium intensity Web Soil Survey

website on June 23, 2020. The hydrologic soil group boundaries are shown on drawings D1.0 – Pre-Development Drainage Plan and D2.0 – Post-Development Drainage Plan, both drawings are found in Appendix G.

Runoff from the site was analyzed at four Analysis Points (AP) where the site discharges water off the property. AP1 is located off the northeastern side. AP2 is located southeast corner of the property. AP3 is located on the southwest corner of the property on Deering Avenue. AP4 is off of the northwest corner of the property, also on Deering Avenue. The site currently drains to a combined sewer and stormwater system in Deering Avenue.

Pre-development HydroCAD calculations can be found in Appendix A. Pre-development peak flow rates at each of the analysis points are summarized in Table 1, below, for the 2, 10, and 25-year storm events.

Post-Development Conditions:

The project will include two 4-unit multi-family residential dwellings, each with a driveway and parking area. Part of the space between the two buildings will be developed into a recreational lawn area for the residents of the units with grassed and stone dust paths to access the recreation area. The remaining area will be renaturalized with meadow seed mix, shrubs, and trees.

Stormwater runoff from the majority of the developed area will be directed to two grassed underdrained soil filters. The treated stormwater runoff will slowly outlet into the combined sewer and stormwater systems within Deering Avenue. Separate connections will be made for sewer and stormwater to provide for an easy disconnection of stormwater systems from the sewer system if sewer and stormwater are separated in this portion of Deering Avenue in the future.

Post-development stormwater runoff from the site and tributary area has been analyzed by routing stormwater flows from the various developed sub catchments through proposed conveyance and treatment measures. Post-Development Drainage Plan, D2.0 can be found in the plan set and post-development HydroCAD calculations are included as Appendix A. Post-development peak flow rates at each of the analysis points are summarized in Table 1, below, for the 2, 10, and 25-year storm events and are controlled so that peak flows are no larger than pre-development conditions.

Flooding:

The property is not located within a flood hazard zone as shown on the City of Portland Flood Insurance Rate Map (FIRM), Community-Panel Number 230051 0013 B, effective July 17, 1986. A Firmette of a portion of that panel is included in Appendix D.

Stormwater Quantity:

The City of Portland stormwater standards require that peak flow rates discharging from the site do not increase from pre-development conditions for the 2, 10, and 25-year storm events. Stormwater runoff was first minimized by using a low-impact-design (LID) techniques of minimizing impervious areas and renaturalizing much of the disturbed portion of the site with low maintenance vegetation and ground cover such as meadow seed mix, shrubs, and trees. Meadow areas will be mowed no more than twice per year. Shrub and tree areas will be mulched and allowed to form a natural forest duff ground-cover. These LID practices will reduce compaction of the soil, disconnect impervious areas throughout the site, promote sheet flow, promote natural infiltration of stormwater throughout the site, and reduce the necessary stormwater

treatment and detention at the site. Additional stormwater detention is provided by the two grassed underdrained soil filters proposed at the site. The soil filters are located on either end of the lot on the Deering Avenue side of the site to provide treatment and control for stormwater quantity at analysis points AP3 and AP4 during the 2, 10, and 25-year storm events. Each soil filter will have an outlet control structure to slowly release runoff into the combined sewer and stormwater systems in Deering Avenue. The underdrained soil filters were sized per Maine DEP Chapter 500 BMP Manual for treatment and then resized and analyzed through an iterative process using HydroCAD in order to provide additional attenuation of post-development peak flow rates to remain at or below pre-development peak flow rates at each analysis point for the 2, 10, and 25-year storm events.

Table 1. Pre- and Post-Development Peak Runoff Rates (cfs)			
Storm Frequency (yr)	2	10	25
AP1			
Pre-Development	0.0	0.2	0.4
Post-Development	0.0	0.2	0.3
AP2			
Pre-Development	0.0	0.0	0.0
Post-Development	0.0	0.0	0.0
AP3			
Pre-Development	0.2	0.3	0.4
Post-Development	0.2	0.3	0.4
AP4			
Pre-Development	0.4	0.5	0.7
Post-Development	0.4	0.5	0.7

As shown in Table 1, the peak runoff rates at analysis points AP1, AP2, AP3, and AP4 under the post-development conditions will remain at the peak pre-development runoff rates for the 2, 10, and 25-year storm events. Based on this analysis, we do not anticipate any impact on downgradient drainage systems due to the proposed development and meet the criteria set forth by the City of Portland.

Stormwater Quality:

Several Best Management Practices (BMPs) will be employed to manage stormwater quantity and quality associated with the proposed development. The BMPs are designed to meet the stormwater management objectives of effective pollutant removal, cooling of stormwater runoff, prevention of erosive flow velocities, and flood prevention. These measures, incorporated into the site development, will attenuate stormwater runoff rates to below pre-development rates and will provide water quality per Maine DEP requirements. The stormwater management system will provide for stormwater treatment of 95% of the proposed impervious area and 89% of the proposed developed area associated with the project.

- LID methodology of minimizing and disconnecting impervious areas to the extent practical.
- LID methodology of renaturalizing much of the disturbed areas to reduce compaction of the soil, disconnect impervious areas throughout the site, promote sheet flow, promote natural infiltration of stormwater throughout the site, and reduce the necessary stormwater treatment and detention at the site.

- Grassed Underdrain Soil Filters. Two (2) grassed underdrained soil filters (Ponds SF1 and SF2) will be constructed to manage stormwater quantity and quality associated with the proposed development. The BMPs have been designed in accordance with the Maine DEP Chapter 500 rules and Volume III of the Maine BMP Manual to meet the stormwater management objectives of effective pollutant removal, cooling of stormwater runoff, prevention of erosive flow velocities, and flood prevention. These measures incorporated into the site development will provide water quality enhancement per the Maine DEP regulations and the City of Portland ordinance.

Erosion Control:

BMPs such as a stabilized construction entrance, silt fence and/or filter berms of erosion control mix, riprap pipe outlet protection, temporary catch basin inlet protection, and erosion control blanket, mulch, and temporary seeding will be used to prevent erosion and downstream migration of sediment during construction. Permanent erosion control measures include asphalt pavement, permanent seeding, turf reinforcement matting, and pipe outlet protection. The locations of temporary and permanent erosion control measures are shown on Drawing C3.1. Detailed Erosion and sedimentation control notes and details can be found on Drawings C4.0 and C4.1.

Inspection and Maintenance of Stormwater Management Facilities:

Sawyer Island Development, LLC will be responsible for maintaining the stormwater facilities at the site. An Inspection and Maintenance Plan is provided in Appendix E.

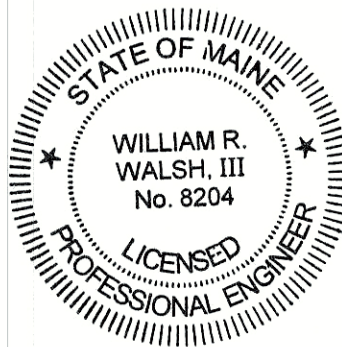
Conclusions:

The stormwater management for this project includes several BMPs and LID practices to control both the quantity and quality of stormwater runoff. The HydroCAD calculations indicate that the peak runoff rates at the analysis points under post-development conditions will be equal to or less than the peak pre-development runoff rates for the 2, 10, and 25-year storm events. The proposed stormwater management BMPs are designed to meet the City of Portland standards for quantity and quality. It is our opinion that the proposed stormwater management plan will meet the requirements for the City of Portland regulations.

Respectfully,



William R. Walsh, III, PE
Walsh Engineering Associates, Inc.



Post-Development

Prepared by Walsh Engineering Associates, Inc.
HydroCAD® 10.00-22 s/n 02135 © 2018 HydroCAD Software Solutions LLC

Type III 24-hr 25-Year Rainfall=5.80"

Printed 6/4/2021

Summary for Pond SF1: SOIL FILTER

Inflow Area = 17,008 sf, 38.75% Impervious, Inflow Depth = 2.12" for 25-Year event
Inflow = 0.80 cfs @ 12.16 hrs, Volume= 3,007 cf
Outflow = 0.30 cfs @ 12.53 hrs, Volume= 1,820 cf, Atten= 62%, Lag= 22.3 min
Primary = 0.30 cfs @ 12.53 hrs, Volume= 1,820 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 40.76' @ 12.53 hrs Surf.Area= 1,523 sf Storage= 1,241 cf
Flood Elev= 40.80' Surf.Area= 1,532 sf Storage= 1,276 cf

Plug-Flow detention time= 209.6 min calculated for 1,820 cf (61% of inflow)
Center-of-Mass det. time= 92.4 min (951.0 - 858.6)

Volume	Invert	Avail.Storage	Storage Description
#1	39.50'	1,176 cf	Basin AGS (Irregular) Listed below (Recalc)
#2	38.00'	284 cf	Filter Media (Prismatic) Listed below (Recalc)
			948 cf Overall x 30.0% Voids
			1,461 cf Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
39.50	632	95.0	0	0	632
40.00	731	101.0	340	340	738
41.00	945	114.0	836	1,176	985

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
38.00	632	0	0
39.50	632	948	948

Device	Routing	Invert	Outlet Devices
#1	Primary	37.00'	4.0" Round Culvert L= 27.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 37.00' / 36.50' S= 0.0185 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.09 sf
#2	Device 1	40.70'	24.0" Horiz. Overflow C= 0.600 Limited to weir flow at low heads
#3	Device 1	37.00'	0.6" Vert. Orifice/Grate X 0.00 C= 0.600

Primary OutFlow Max=0.30 cfs @ 12.53 hrs HW=40.76' TW=0.00' (Dynamic Tailwater)

1=Culvert (Passes 0.30 cfs of 0.72 cfs potential flow)
2=Overflow (Weir Controls 0.30 cfs @ 0.80 fps)
3=Orifice/Grate (Controls 0.00 cfs)

UD BLOCKED

Post-Development

Prepared by Walsh Engineering Associates, Inc.
HydroCAD® 10.00-22 s/n 02135 © 2018 HydroCAD Software Solutions LLC

Type III 24-hr 25-Year Rainfall=5.80"

Printed 6/4/2021

Summary for Pond SF2: SOIL FILTER

Inflow Area = 13,666 sf, 51.15% Impervious, Inflow Depth = 2.38" for 25-Year event
Inflow = 0.80 cfs @ 12.12 hrs, Volume= 2,711 cf
Outflow = 0.27 cfs @ 12.50 hrs, Volume= 1,571 cf, Atten= 67%, Lag= 23.0 min
Primary = 0.27 cfs @ 12.50 hrs, Volume= 1,571 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 2

Peak Elev= 44.06' @ 12.50 hrs Surf.Area= 1,648 sf Storage= 1,191 cf

Flood Elev= 44.50' Surf.Area= 1,683 sf Storage= 1,616 cf

Plug-Flow detention time= 216.5 min calculated for 1,571 cf (58% of inflow)

Center-of-Mass det. time= 99.0 min (947.9 - 848.8)

Volume	Invert	Avail.Storage	Storage Description
#1	43.00'	2,308 cf	Basin AGS (Irregular) Listed below (Recalc)
#2	41.50'	320 cf	Filter Media (Prismatic) Listed below (Recalc)
			1,067 cf Overall x 30.0% Voids
		2,628 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
43.00	711	104.0	0	0	711
44.00	933	117.0	819	819	965
45.50	1,053	124.0	1,489	2,308	1,190

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
41.50	711	0	0
43.00	711	1,067	1,067

Device	Routing	Invert	Outlet Devices
#1	Primary	40.50'	4.0" Round Culvert L= 124.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 40.50' / 37.20' S= 0.0266 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.09 sf
#2	Device 1	44.00'	24.0" Horiz. Overflow C= 0.600 Limited to weir flow at low heads
#3	Device 1	40.50'	0.6" Vert. Orifice/Grate X 0.00 C= 0.600

Primary OutFlow Max=0.27 cfs @ 12.50 hrs HW=44.06' TW=0.00' (Dynamic Tailwater)

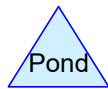
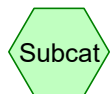
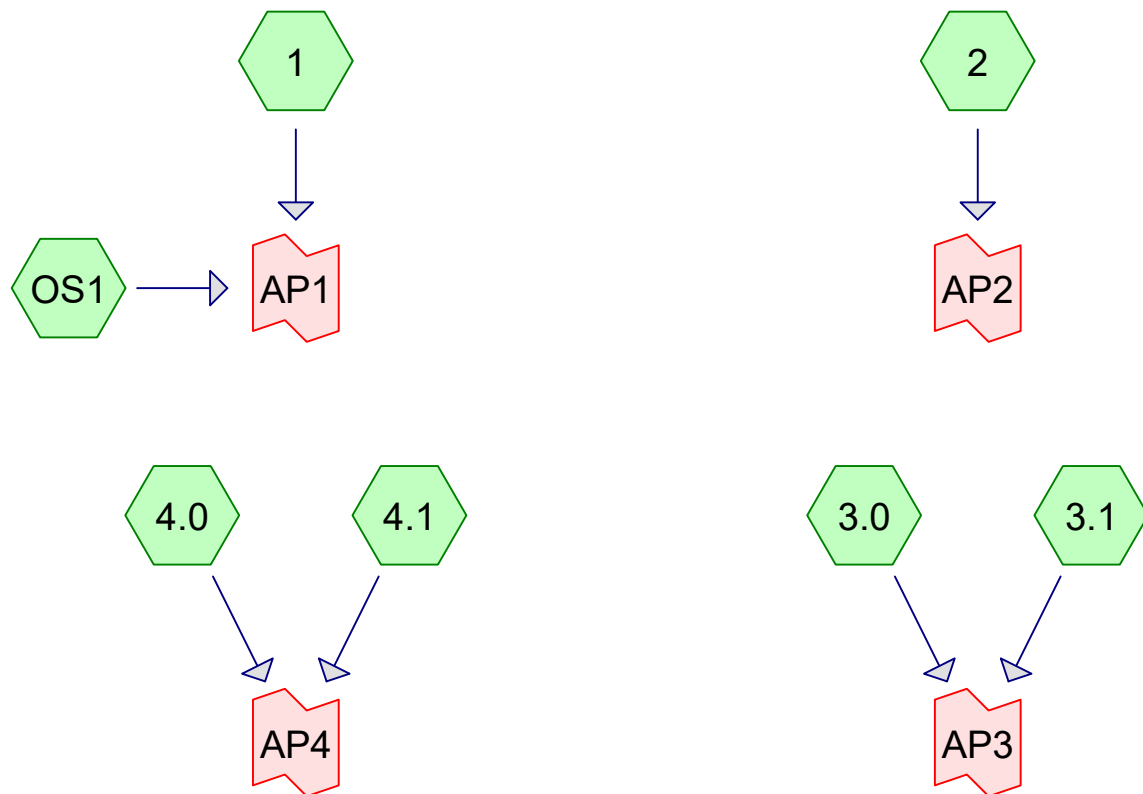
1=Culvert (Passes 0.27 cfs of 0.53 cfs potential flow)

2=Overflow (Weir Controls 0.27 cfs @ 0.77 fps)

3=Orifice/Grate (Controls 0.00 cfs)

UD BLOCKED

PRE DEVELOPMENT HYDROCAD



Routing Diagram for Pre-Development

Prepared by Walsh Engineering Associates, Inc., Printed 6/4/2021
HydroCAD® 10.00-22 s/n 02135 © 2018 HydroCAD Software Solutions LLC

Pre-Development

Type III 24-hr 25-Year Rainfall=5.80"

Prepared by Walsh Engineering Associates, Inc.

Printed 6/4/2021

HydroCAD® 10.00-22 s/n 02135 © 2018 HydroCAD Software Solutions LLC

Page 2

Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 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 1:	Runoff Area=17,776 sf 0.00% Impervious Runoff Depth=1.12" Flow Length=205' Tc=19.8 min CN=51 Runoff=0.28 cfs 1,652 cf
Subcatchment 2:	Runoff Area=9,262 sf 0.00% Impervious Runoff Depth=0.11" Flow Length=120' Tc=9.1 min CN=32 Runoff=0.00 cfs 81 cf
Subcatchment 3.0:	Runoff Area=2,642 sf 100.00% Impervious Runoff Depth=5.56" Tc=5.0 min CN=98 Runoff=0.35 cfs 1,225 cf
Subcatchment 3.1:	Runoff Area=8,468 sf 1.16% Impervious Runoff Depth=0.11" Flow Length=160' Tc=10.8 min CN=32 Runoff=0.00 cfs 74 cf
Subcatchment 4.0:	Runoff Area=5,056 sf 100.00% Impervious Runoff Depth=5.56" Tc=5.0 min CN=98 Runoff=0.66 cfs 2,343 cf
Subcatchment 4.1:	Runoff Area=4,332 sf 0.00% Impervious Runoff Depth=0.05" Tc=5.0 min CN=30 Runoff=0.00 cfs 19 cf
Subcatchment OS1:	Runoff Area=3,980 sf 37.44% Impervious Runoff Depth=1.87" Tc=5.0 min CN=61 Runoff=0.19 cfs 621 cf
Link AP1:	Inflow=0.37 cfs 2,273 cf Primary=0.37 cfs 2,273 cf
Link AP2:	Inflow=0.00 cfs 81 cf Primary=0.00 cfs 81 cf
Link AP3:	Inflow=0.35 cfs 1,299 cf Primary=0.35 cfs 1,299 cf
Link AP4:	Inflow=0.66 cfs 2,362 cf Primary=0.66 cfs 2,362 cf
Total Runoff Area = 51,516 sf Runoff Volume = 6,016 cf Average Runoff Depth = 1.40" 81.97% Pervious = 42,230 sf 18.03% Impervious = 9,286 sf	

Pre-Development

Prepared by Walsh Engineering Associates, Inc.
 HydroCAD® 10.00-22 s/n 02135 © 2018 HydroCAD Software Solutions LLC

Type III 24-hr 25-Year Rainfall=5.80"

Printed 6/4/2021

Page 3

Summary for Subcatchment 1:

Runoff = 0.28 cfs @ 12.34 hrs, Volume= 1,652 cf, Depth= 1.12"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 Type III 24-hr 25-Year Rainfall=5.80"

Area (sf)	CN	Description
2,416	39	>75% Grass cover, Good, HSG A
7,875	30	Woods, Good, HSG A
7,485	77	Woods, Good, HSG D
17,776	51	Weighted Average
17,776	51	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.1	80	0.1130	0.15		Sheet Flow, A-B
					Woods: Light underbrush n= 0.400 P2= 3.10"
8.7	50	0.0500	0.10		Sheet Flow, B-C
					Woods: Light underbrush n= 0.400 P2= 3.10"
2.0	75	0.0150	0.61		Shallow Concentrated Flow, C-D
					Woodland Kv= 5.0 fps
19.8	205	Total			

Summary for Subcatchment 2:

Runoff = 0.00 cfs @ 15.10 hrs, Volume= 81 cf, Depth= 0.11"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 Type III 24-hr 25-Year Rainfall=5.80"

Area (sf)	CN	Description
2,406	39	>75% Grass cover, Good, HSG A
6,856	30	Woods, Good, HSG A
9,262	32	Weighted Average
9,262	32	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.1	50	0.0600	0.10		Sheet Flow, A-B
					Woods: Light underbrush n= 0.400 P2= 3.10"
1.0	70	0.0570	1.19		Shallow Concentrated Flow, BC
					Woodland Kv= 5.0 fps
9.1	120	Total			

Pre-Development

Prepared by Walsh Engineering Associates, Inc.
 HydroCAD® 10.00-22 s/n 02135 © 2018 HydroCAD Software Solutions LLC

Type III 24-hr 25-Year Rainfall=5.80"

Printed 6/4/2021

Page 4

Summary for Subcatchment 3.0:

Runoff = 0.35 cfs @ 12.07 hrs, Volume= 1,225 cf, Depth= 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 Type III 24-hr 25-Year Rainfall=5.80"

Area (sf)	CN	Description
* 2,642	98	Impervious
2,642	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment 3.1:

Runoff = 0.00 cfs @ 15.12 hrs, Volume= 74 cf, Depth= 0.11"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 Type III 24-hr 25-Year Rainfall=5.80"

Area (sf)	CN	Description
852	39	>75% Grass cover, Good, HSG A
7,518	30	Woods, Good, HSG A
98	98	Paved parking, HSG A
8,468	32	Weighted Average
8,370	31	98.84% Pervious Area
98	98	1.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.3	60	0.0600	0.11		Sheet Flow, A-B
					Woods: Light underbrush n= 0.400 P2= 3.10"
1.1	70	0.0430	1.04		Shallow Concentrated Flow, BC
					Woodland Kv= 5.0 fps
0.4	30	0.0330	1.27		Shallow Concentrated Flow, CD
					Short Grass Pasture Kv= 7.0 fps
10.8	160	Total			

Summary for Subcatchment 4.0:

Runoff = 0.66 cfs @ 12.07 hrs, Volume= 2,343 cf, Depth= 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 Type III 24-hr 25-Year Rainfall=5.80"

Pre-Development

Type III 24-hr 25-Year Rainfall=5.80"

Prepared by Walsh Engineering Associates, Inc.

Printed 6/4/2021

HydroCAD® 10.00-22 s/n 02135 © 2018 HydroCAD Software Solutions LLC

Page 5

Area (sf)	CN	Description
* 5,056	98	Impervious
5,056	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment 4.1:

Runoff = 0.00 cfs @ 16.76 hrs, Volume= 19 cf, Depth= 0.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.80"

Area (sf)	CN	Description
4,332	30	Woods, Good, HSG A
4,332	30	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment OS1:

Runoff = 0.19 cfs @ 12.09 hrs, Volume= 621 cf, Depth= 1.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.80"

Area (sf)	CN	Description
2,490	39	>75% Grass cover, Good, HSG A
1,490	98	Roofs, HSG A
3,980	61	Weighted Average
2,490	39	62.56% Pervious Area
1,490	98	37.44% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Link AP1:

Inflow Area = 21,756 sf, 6.85% Impervious, Inflow Depth = 1.25" for 25-Year event

Inflow = 0.37 cfs @ 12.31 hrs, Volume= 2,273 cf

Primary = 0.37 cfs @ 12.31 hrs, Volume= 2,273 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Pre-Development

Prepared by Walsh Engineering Associates, Inc.
HydroCAD® 10.00-22 s/n 02135 © 2018 HydroCAD Software Solutions LLC

Type III 24-hr 25-Year Rainfall=5.80"

Printed 6/4/2021

Page 6

Summary for Link AP2:

Inflow Area = 9,262 sf, 0.00% Impervious, Inflow Depth = 0.11" for 25-Year event
Inflow = 0.00 cfs @ 15.10 hrs, Volume= 81 cf
Primary = 0.00 cfs @ 15.10 hrs, Volume= 81 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Summary for Link AP3:

Inflow Area = 11,110 sf, 24.66% Impervious, Inflow Depth = 1.40" for 25-Year event
Inflow = 0.35 cfs @ 12.07 hrs, Volume= 1,299 cf
Primary = 0.35 cfs @ 12.07 hrs, Volume= 1,299 cf, Atten= 0%, Lag= 0.0 min

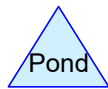
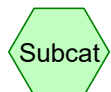
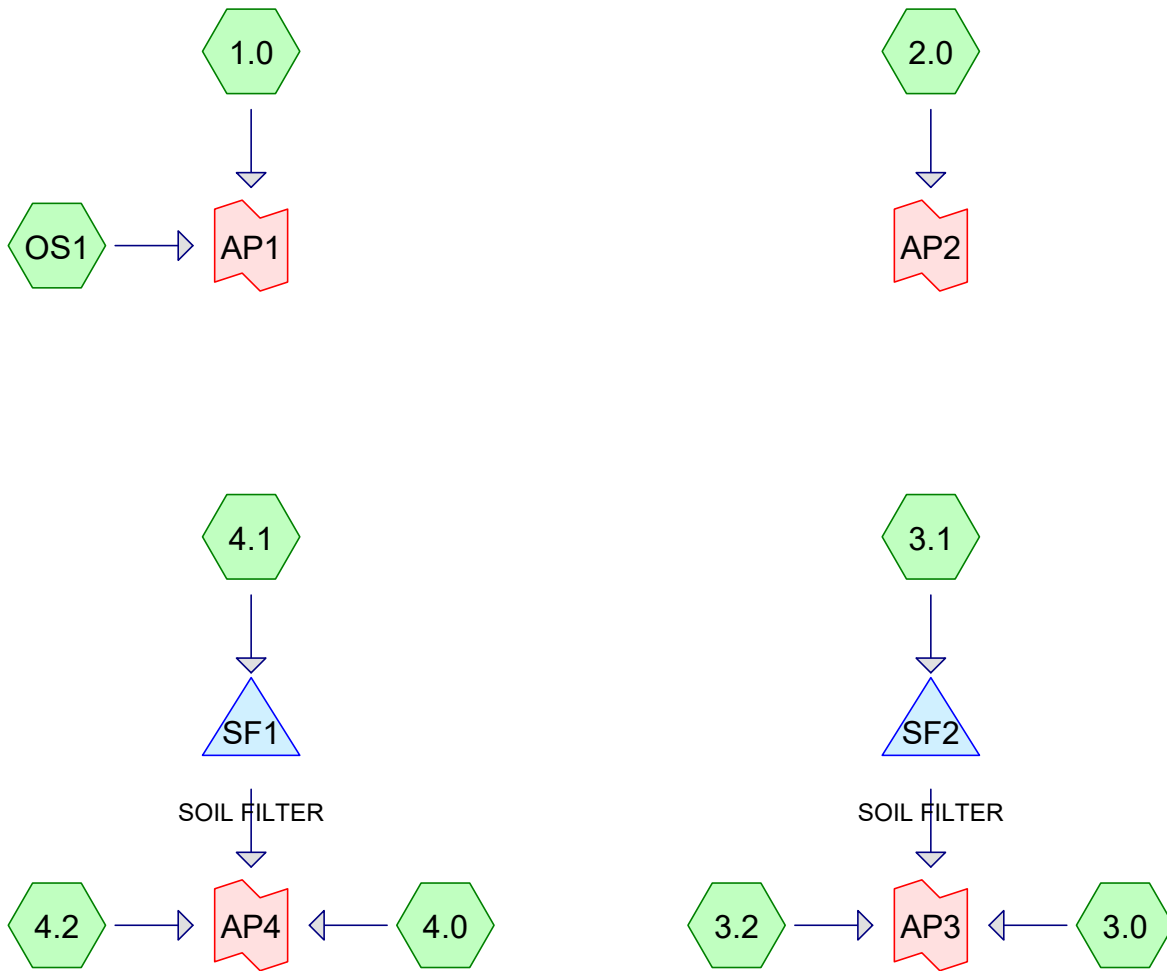
Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Summary for Link AP4:

Inflow Area = 9,388 sf, 53.86% Impervious, Inflow Depth = 3.02" for 25-Year event
Inflow = 0.66 cfs @ 12.07 hrs, Volume= 2,362 cf
Primary = 0.66 cfs @ 12.07 hrs, Volume= 2,362 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

POST DEVELOPMENT HYDROCAD



Routing Diagram for Post-Development

Prepared by Walsh Engineering Associates, Inc., Printed 6/4/2021
 HydroCAD® 10.00-22 s/n 02135 © 2018 HydroCAD Software Solutions LLC

Post-Development

Type III 24-hr 2-Year Rainfall=3.10"

Prepared by Walsh Engineering Associates, Inc.

Printed 6/4/2021

HydroCAD® 10.00-22 s/n 02135 © 2018 HydroCAD Software Solutions LLC

Page 2

Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points x 2
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1.0:	Runoff Area=1,843 sf 0.00% Impervious Runoff Depth=0.64" Flow Length=70' Slope=0.0300 '/' Tc=13.9 min CN=67 Runoff=0.02 cfs 98 cf
Subcatchment 2.0:	Runoff Area=3,450 sf 10.03% Impervious Runoff Depth=0.00" Flow Length=35' Slope=0.0600 '/' Tc=6.1 min CN=38 Runoff=0.00 cfs 0 cf
Subcatchment 3.0:	Runoff Area=2,642 sf 100.00% Impervious Runoff Depth=2.87" Tc=5.0 min CN=98 Runoff=0.18 cfs 631 cf
Subcatchment 3.1:	Runoff Area=13,666 sf 51.15% Impervious Runoff Depth=0.64" Flow Length=177' Tc=7.8 min CN=67 Runoff=0.17 cfs 724 cf
Subcatchment 3.2:	Runoff Area=1,341 sf 15.44% Impervious Runoff Depth=0.17" Tc=5.0 min CN=53 Runoff=0.00 cfs 19 cf
Subcatchment 4.0:	Runoff Area=5,056 sf 100.00% Impervious Runoff Depth=2.87" Tc=5.0 min CN=98 Runoff=0.35 cfs 1,208 cf
Subcatchment 4.1:	Runoff Area=17,008 sf 38.75% Impervious Runoff Depth=0.51" Flow Length=235' Tc=10.4 min CN=64 Runoff=0.14 cfs 727 cf
Subcatchment 4.2:	Runoff Area=2,530 sf 10.59% Impervious Runoff Depth=0.00" Tc=5.0 min CN=41 Runoff=0.00 cfs 1 cf
Subcatchment OS1:	Runoff Area=3,980 sf 37.44% Impervious Runoff Depth=0.40" Tc=5.0 min CN=61 Runoff=0.03 cfs 134 cf
Pond SF1: SOIL FILTER	Peak Elev=39.53' Storage=300 cf Inflow=0.14 cfs 727 cf Outflow=0.01 cfs 728 cf
Pond SF2: SOIL FILTER	Peak Elev=42.98' Storage=315 cf Inflow=0.17 cfs 724 cf Outflow=0.01 cfs 724 cf
Link AP1:	Inflow=0.04 cfs 232 cf Primary=0.04 cfs 232 cf
Link AP2:	Inflow=0.00 cfs 0 cf Primary=0.00 cfs 0 cf
Link AP3:	Inflow=0.19 cfs 1,375 cf Primary=0.19 cfs 1,375 cf
Link AP4:	Inflow=0.36 cfs 1,937 cf Primary=0.36 cfs 1,937 cf

Total Runoff Area = 51,516 sf Runoff Volume = 3,542 cf Average Runoff Depth = 0.83"
54.21% Pervious = 27,927 sf 45.79% Impervious = 23,589 sf

Post-Development

Prepared by Walsh Engineering Associates, Inc.
 HydroCAD® 10.00-22 s/n 02135 © 2018 HydroCAD Software Solutions LLC

Type III 24-hr 2-Year Rainfall=3.10"

Printed 6/4/2021

Page 3

Summary for Subcatchment 1.0:

Runoff = 0.02 cfs @ 12.23 hrs, Volume= 98 cf, Depth= 0.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 Type III 24-hr 2-Year Rainfall=3.10"

Area (sf)	CN	Description
1,100	73	Brush, Good, HSG D
343	30	Brush, Good, HSG A
400	80	>75% Grass cover, Good, HSG D
1,843	67	Weighted Average
1,843	67	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.9	70	0.0300	0.08		Sheet Flow, A-B Woods: Light underbrush n= 0.400 P2= 3.10"

Summary for Subcatchment 2.0:

Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0 cf, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 Type III 24-hr 2-Year Rainfall=3.10"

Area (sf)	CN	Description
2,834	30	Brush, Good, HSG A
* 346	98	Ledge
270	39	>75% Grass cover, Good, HSG A
3,450	38	Weighted Average
3,104	31	89.97% Pervious Area
346	98	10.03% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.1	35	0.0600	0.10		Sheet Flow, A-B Woods: Light underbrush n= 0.400 P2= 3.10"

Summary for Subcatchment 3.0:

Runoff = 0.18 cfs @ 12.07 hrs, Volume= 631 cf, Depth= 2.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 Type III 24-hr 2-Year Rainfall=3.10"

Post-Development

Type III 24-hr 2-Year Rainfall=3.10"

Prepared by Walsh Engineering Associates, Inc.

Printed 6/4/2021

HydroCAD® 10.00-22 s/n 02135 © 2018 HydroCAD Software Solutions LLC

Page 4

	Area (sf)	CN	Description
*	2,642	98	Roadway
	2,642	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, Tc Override

Summary for Subcatchment 3.1:

Runoff = 0.17 cfs @ 12.14 hrs, Volume= 724 cf, Depth= 0.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.10"

	Area (sf)	CN	Description
*	6,107	98	ROOF AND PAVED PARKING
	2,779	39	>75% Grass cover, Good, HSG A
	3,897	30	Brush, Good, HSG A
*	883	98	Walkways
	13,666	67	Weighted Average
	6,676	34	48.85% Pervious Area
	6,990	98	51.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.9	40	0.0120	0.11		Sheet Flow, A-B Grass: Short n= 0.150 P2= 3.10"
1.4	70	0.0150	0.86		Shallow Concentrated Flow, B-C Short Grass Pasture Kv= 7.0 fps
0.5	67	0.0050	2.45	0.85	Pipe Channel, C-D 8.0" Round Area= 0.3 sf Perim= 2.1' r= 0.17' n= 0.013 Corrugated PE, smooth interior
7.8	177	Total			

Summary for Subcatchment 3.2:

Runoff = 0.00 cfs @ 12.39 hrs, Volume= 19 cf, Depth= 0.17"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.10"

	Area (sf)	CN	Description
	367	39	>75% Grass cover, Good, HSG A
*	207	98	ROAD/DRIVEWAY
	532	30	Brush, Good, HSG A
*	235	89	Stonedust Walkway
	1,341	53	Weighted Average
	1,134	45	84.56% Pervious Area
	207	98	15.44% Impervious Area

Post-Development

Type III 24-hr 2-Year Rainfall=3.10"

Prepared by Walsh Engineering Associates, Inc.

Printed 6/4/2021

HydroCAD® 10.00-22 s/n 02135 © 2018 HydroCAD Software Solutions LLC

Page 5

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment 4.0:

Runoff = 0.35 cfs @ 12.07 hrs, Volume= 1,208 cf, Depth= 2.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.10"

Area (sf)	CN	Description
* 5,056	98	Roadway
5,056	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, Tc Override

Summary for Subcatchment 4.1:

Runoff = 0.14 cfs @ 12.19 hrs, Volume= 727 cf, Depth= 0.51"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.10"

Area (sf)	CN	Description
* 1,968	39	Grass, HSG A
311	80	>75% Grass cover, Good, HSG D
6,125	30	Brush, Good, HSG A
1,370	73	Brush, Good, HSG D
* 319	98	Granite & Ledge
* 644	89	StoneDust Path
* 6,144	98	Pavement, Roof
* 127	98	
17,008	64	Weighted Average
10,418	42	61.25% Pervious Area
6,590	98	38.75% Impervious Area

Post-Development

Type III 24-hr 2-Year Rainfall=3.10"

Prepared by Walsh Engineering Associates, Inc.

Printed 6/4/2021

HydroCAD® 10.00-22 s/n 02135 © 2018 HydroCAD Software Solutions LLC

Page 6

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.5	50	0.0100	0.11		Sheet Flow, A-B Grass: Short n= 0.150 P2= 3.10"
1.6	20	0.2000	0.21		Sheet Flow, B-C Grass: Dense n= 0.240 P2= 3.10"
0.8	90	0.0150	1.84		Shallow Concentrated Flow, C-D Grassed Waterway Kv= 15.0 fps
0.5	75	0.0050	2.45	0.85	Pipe Channel, D-E 8.0" Round Area= 0.3 sf Perim= 2.1' r= 0.17' n= 0.013 Corrugated PE, smooth interior
10.4	235	Total			

Summary for Subcatchment 4.2:

Runoff = 0.00 cfs @ 23.74 hrs, Volume= 1 cf, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.10"

Area (sf)	CN	Description
401	39	>75% Grass cover, Good, HSG A
1,752	30	Brush, Good, HSG A
* 109	89	Stonedust Walkway
* 81	98	Ledge and Granite
* 187	98	Pavement
2,530	41	Weighted Average
2,262	34	89.41% Pervious Area
268	98	10.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment OS1:

Runoff = 0.03 cfs @ 12.12 hrs, Volume= 134 cf, Depth= 0.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.10"

Area (sf)	CN	Description
2,490	39	>75% Grass cover, Good, HSG A
1,490	98	Roofs, HSG A
3,980	61	Weighted Average
2,490	39	62.56% Pervious Area
1,490	98	37.44% Impervious Area

Post-Development

Type III 24-hr 2-Year Rainfall=3.10"

Prepared by Walsh Engineering Associates, Inc.

Printed 6/4/2021

HydroCAD® 10.00-22 s/n 02135 © 2018 HydroCAD Software Solutions LLC

Page 7

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Pond SF1: SOIL FILTER

Inflow Area = 17,008 sf, 38.75% Impervious, Inflow Depth = 0.51" for 2-Year event
 Inflow = 0.14 cfs @ 12.19 hrs, Volume= 727 cf
 Outflow = 0.01 cfs @ 15.69 hrs, Volume= 728 cf, Atten= 89%, Lag= 210.1 min
 Primary = 0.01 cfs @ 15.69 hrs, Volume= 728 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 2
 Peak Elev= 39.53' @ 15.69 hrs Surf.Area= 1,269 sf Storage= 300 cf
 Flood Elev= 40.80' Surf.Area= 1,532 sf Storage= 1,276 cf

Plug-Flow detention time= 242.7 min calculated for 727 cf (100% of inflow)
 Center-of-Mass det. time= 242.8 min (1,150.2 - 907.3)

Volume	Invert	Avail.Storage	Storage Description
#1	39.50'	1,176 cf	Basin AGS (Irregular) Listed below (Recalc)
#2	38.00'	284 cf	Filter Media (Prismatic) Listed below (Recalc)
			948 cf Overall x 30.0% Voids
		1,461 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
39.50	632	95.0	0	0	632
40.00	731	101.0	340	340	738
41.00	945	114.0	836	1,176	985

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
38.00	632	0	0
39.50	632	948	948

Device	Routing	Invert	Outlet Devices
#1	Primary	37.00'	4.0" Round Culvert L= 27.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 37.00' / 36.50' S= 0.0185 ' / Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.09 sf
#2	Device 1	40.70'	24.0" Horiz. Overflow C= 0.600 Limited to weir flow at low heads
#3	Device 1	37.00'	0.6" Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=0.01 cfs @ 15.69 hrs HW=39.53' TW=0.00' (Dynamic Tailwater)

- 1=Culvert (Passes 0.01 cfs of 0.60 cfs potential flow)
- 2=Overflow (Controls 0.00 cfs)
- 3=Orifice/Grate (Orifice Controls 0.01 cfs @ 7.61 fps)

Post-Development

Type III 24-hr 2-Year Rainfall=3.10"

Prepared by Walsh Engineering Associates, Inc.

Printed 6/4/2021

HydroCAD® 10.00-22 s/n 02135 © 2018 HydroCAD Software Solutions LLC

Page 8

Summary for Pond SF2: SOIL FILTER

Inflow Area = 13,666 sf, 51.15% Impervious, Inflow Depth = 0.64" for 2-Year event
Inflow = 0.17 cfs @ 12.14 hrs, Volume= 724 cf
Outflow = 0.01 cfs @ 15.45 hrs, Volume= 724 cf, Atten= 92%, Lag= 198.5 min
Primary = 0.01 cfs @ 15.45 hrs, Volume= 724 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 2

Peak Elev= 42.98' @ 15.45 hrs Surf.Area= 711 sf Storage= 315 cf

Flood Elev= 44.50' Surf.Area= 1,683 sf Storage= 1,616 cf

Plug-Flow detention time= 256.1 min calculated for 723 cf (100% of inflow)

Center-of-Mass det. time= 256.3 min (1,147.8 - 891.6)

Volume	Invert	Avail.Storage	Storage Description
#1	43.00'	2,308 cf	Basin AGS (Irregular) Listed below (Recalc)
#2	41.50'	320 cf	Filter Media (Prismatic) Listed below (Recalc)
			1,067 cf Overall x 30.0% Voids
		2,628 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
43.00	711	104.0	0	0	711
44.00	933	117.0	819	819	965
45.50	1,053	124.0	1,489	2,308	1,190

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
41.50	711	0	0
43.00	711	1,067	1,067

Device	Routing	Invert	Outlet Devices
#1	Primary	40.50'	4.0" Round Culvert L= 124.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 40.50' / 37.20' S= 0.0266 ' / S= 0.0266 ' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.09 sf
#2	Device 1	44.00'	24.0" Horiz. Overflow C= 0.600 Limited to weir flow at low heads
#3	Device 1	40.50'	0.6" Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=0.01 cfs @ 15.45 hrs HW=42.98' TW=0.00' (Dynamic Tailwater)

1=Culvert (Passes 0.01 cfs of 0.48 cfs potential flow)
2=Overflow (Controls 0.00 cfs)
3=Orifice/Grate (Orifice Controls 0.01 cfs @ 7.54 fps)

Summary for Link AP1:

Inflow Area = 5,823 sf, 25.59% Impervious, Inflow Depth = 0.48" for 2-Year event
Inflow = 0.04 cfs @ 12.17 hrs, Volume= 232 cf
Primary = 0.04 cfs @ 12.17 hrs, Volume= 232 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Post-Development

Type III 24-hr 2-Year Rainfall=3.10"

Prepared by Walsh Engineering Associates, Inc.

Printed 6/4/2021

HydroCAD® 10.00-22 s/n 02135 © 2018 HydroCAD Software Solutions LLC

Page 9

Summary for Link AP2:

Inflow Area = 3,450 sf, 10.03% Impervious, Inflow Depth = 0.00" for 2-Year event
Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Summary for Link AP3:

Inflow Area = 17,649 sf, 55.75% Impervious, Inflow Depth = 0.93" for 2-Year event
Inflow = 0.19 cfs @ 12.07 hrs, Volume= 1,375 cf
Primary = 0.19 cfs @ 12.07 hrs, Volume= 1,375 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Summary for Link AP4:

Inflow Area = 24,594 sf, 48.44% Impervious, Inflow Depth = 0.94" for 2-Year event
Inflow = 0.36 cfs @ 12.07 hrs, Volume= 1,937 cf
Primary = 0.36 cfs @ 12.07 hrs, Volume= 1,937 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Post-Development

Prepared by Walsh Engineering Associates, Inc.
HydroCAD® 10.00-22 s/n 02135 © 2018 HydroCAD Software Solutions LLC

Type III 24-hr 10-Year Rainfall=4.60"

Printed 6/4/2021

Page 10

Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points x 2
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1.0: Runoff Area=1,843 sf 0.00% Impervious Runoff Depth=1.53"
Flow Length=70' Slope=0.0300 '/' Tc=13.9 min CN=67 Runoff=0.06 cfs 235 cf

Subcatchment 2.0: Runoff Area=3,450 sf 10.03% Impervious Runoff Depth=0.10"
Flow Length=35' Slope=0.0600 '/' Tc=6.1 min CN=38 Runoff=0.00 cfs 29 cf

Subcatchment 3.0: Runoff Area=2,642 sf 100.00% Impervious Runoff Depth=4.36"
Tc=5.0 min CN=98 Runoff=0.27 cfs 961 cf

Subcatchment 3.1: Runoff Area=13,666 sf 51.15% Impervious Runoff Depth=1.53"
Flow Length=177' Tc=7.8 min CN=67 Runoff=0.50 cfs 1,743 cf

Subcatchment 3.2: Runoff Area=1,341 sf 15.44% Impervious Runoff Depth=0.68"
Tc=5.0 min CN=53 Runoff=0.02 cfs 76 cf

Subcatchment 4.0: Runoff Area=5,056 sf 100.00% Impervious Runoff Depth=4.36"
Tc=5.0 min CN=98 Runoff=0.53 cfs 1,839 cf

Subcatchment 4.1: Runoff Area=17,008 sf 38.75% Impervious Runoff Depth=1.33"
Flow Length=235' Tc=10.4 min CN=64 Runoff=0.48 cfs 1,881 cf

Subcatchment 4.2: Runoff Area=2,530 sf 10.59% Impervious Runoff Depth=0.18"
Tc=5.0 min CN=41 Runoff=0.00 cfs 39 cf

Subcatchment OS1: Runoff Area=3,980 sf 37.44% Impervious Runoff Depth=1.14"
Tc=5.0 min CN=61 Runoff=0.11 cfs 377 cf

Pond SF1: SOIL FILTER Peak Elev=40.70' Storage=1,185 cf Inflow=0.48 cfs 1,881 cf
Outflow=0.02 cfs 1,881 cf

Pond SF2: SOIL FILTER Peak Elev=43.94' Storage=1,087 cf Inflow=0.50 cfs 1,743 cf
Outflow=0.02 cfs 1,743 cf

Link AP1: Inflow=0.15 cfs 612 cf
Primary=0.15 cfs 612 cf

Link AP2: Inflow=0.00 cfs 29 cf
Primary=0.00 cfs 29 cf

Link AP3: Inflow=0.30 cfs 2,780 cf
Primary=0.30 cfs 2,780 cf

Link AP4: Inflow=0.54 cfs 3,758 cf
Primary=0.54 cfs 3,758 cf

Total Runoff Area = 51,516 sf Runoff Volume = 7,179 cf Average Runoff Depth = 1.67"
54.21% Pervious = 27,927 sf 45.79% Impervious = 23,589 sf

Post-Development

Prepared by Walsh Engineering Associates, Inc.
 HydroCAD® 10.00-22 s/n 02135 © 2018 HydroCAD Software Solutions LLC

Type III 24-hr 10-Year Rainfall=4.60"

Printed 6/4/2021

Page 11

Summary for Subcatchment 1.0:

Runoff = 0.06 cfs @ 12.21 hrs, Volume= 235 cf, Depth= 1.53"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-Year Rainfall=4.60"

Area (sf)	CN	Description
1,100	73	Brush, Good, HSG D
343	30	Brush, Good, HSG A
400	80	>75% Grass cover, Good, HSG D
1,843	67	Weighted Average
1,843	67	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.9	70	0.0300	0.08		Sheet Flow, A-B Woods: Light underbrush n= 0.400 P2= 3.10"

Summary for Subcatchment 2.0:

Runoff = 0.00 cfs @ 14.83 hrs, Volume= 29 cf, Depth= 0.10"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-Year Rainfall=4.60"

Area (sf)	CN	Description
2,834	30	Brush, Good, HSG A
* 346	98	Ledge
270	39	>75% Grass cover, Good, HSG A
3,450	38	Weighted Average
3,104	31	89.97% Pervious Area
346	98	10.03% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.1	35	0.0600	0.10		Sheet Flow, A-B Woods: Light underbrush n= 0.400 P2= 3.10"

Summary for Subcatchment 3.0:

Runoff = 0.27 cfs @ 12.07 hrs, Volume= 961 cf, Depth= 4.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-Year Rainfall=4.60"

Post-Development

Type III 24-hr 10-Year Rainfall=4.60"

Prepared by Walsh Engineering Associates, Inc.

Printed 6/4/2021

HydroCAD® 10.00-22 s/n 02135 © 2018 HydroCAD Software Solutions LLC

Page 12

	Area (sf)	CN	Description
*	2,642	98	Roadway
	2,642	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, Tc Override

Summary for Subcatchment 3.1:

Runoff = 0.50 cfs @ 12.12 hrs, Volume= 1,743 cf, Depth= 1.53"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

	Area (sf)	CN	Description
*	6,107	98	ROOF AND PAVED PARKING
	2,779	39	>75% Grass cover, Good, HSG A
	3,897	30	Brush, Good, HSG A
*	883	98	Walkways
	13,666	67	Weighted Average
	6,676	34	48.85% Pervious Area
	6,990	98	51.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.9	40	0.0120	0.11		Sheet Flow, A-B Grass: Short n= 0.150 P2= 3.10"
1.4	70	0.0150	0.86		Shallow Concentrated Flow, B-C Short Grass Pasture Kv= 7.0 fps
0.5	67	0.0050	2.45	0.85	Pipe Channel, C-D 8.0" Round Area= 0.3 sf Perim= 2.1' r= 0.17' n= 0.013 Corrugated PE, smooth interior
7.8	177	Total			

Summary for Subcatchment 3.2:

Runoff = 0.02 cfs @ 12.11 hrs, Volume= 76 cf, Depth= 0.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

	Area (sf)	CN	Description
	367	39	>75% Grass cover, Good, HSG A
*	207	98	ROAD/DRIVEWAY
	532	30	Brush, Good, HSG A
*	235	89	Stonedust Walkway
	1,341	53	Weighted Average
	1,134	45	84.56% Pervious Area
	207	98	15.44% Impervious Area

Post-Development

Type III 24-hr 10-Year Rainfall=4.60"

Prepared by Walsh Engineering Associates, Inc.

Printed 6/4/2021

HydroCAD® 10.00-22 s/n 02135 © 2018 HydroCAD Software Solutions LLC

Page 13

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment 4.0:

Runoff = 0.53 cfs @ 12.07 hrs, Volume= 1,839 cf, Depth= 4.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (sf)	CN	Description
* 5,056	98	Roadway
5,056	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, Tc Override

Summary for Subcatchment 4.1:

Runoff = 0.48 cfs @ 12.16 hrs, Volume= 1,881 cf, Depth= 1.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (sf)	CN	Description
* 1,968	39	Grass, HSG A
311	80	>75% Grass cover, Good, HSG D
6,125	30	Brush, Good, HSG A
1,370	73	Brush, Good, HSG D
* 319	98	Granite & Ledge
* 644	89	StoneDust Path
* 6,144	98	Pavement, Roof
* 127	98	
17,008	64	Weighted Average
10,418	42	61.25% Pervious Area
6,590	98	38.75% Impervious Area

Post-Development

Type III 24-hr 10-Year Rainfall=4.60"

Prepared by Walsh Engineering Associates, Inc.

Printed 6/4/2021

HydroCAD® 10.00-22 s/n 02135 © 2018 HydroCAD Software Solutions LLC

Page 14

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.5	50	0.0100	0.11		Sheet Flow, A-B Grass: Short n= 0.150 P2= 3.10"
1.6	20	0.2000	0.21		Sheet Flow, B-C Grass: Dense n= 0.240 P2= 3.10"
0.8	90	0.0150	1.84		Shallow Concentrated Flow, C-D Grassed Waterway Kv= 15.0 fps
0.5	75	0.0050	2.45	0.85	Pipe Channel, D-E 8.0" Round Area= 0.3 sf Perim= 2.1' r= 0.17' n= 0.013 Corrugated PE, smooth interior
10.4	235	Total			

Summary for Subcatchment 4.2:

Runoff = 0.00 cfs @ 12.46 hrs, Volume= 39 cf, Depth= 0.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (sf)	CN	Description
401	39	>75% Grass cover, Good, HSG A
1,752	30	Brush, Good, HSG A
* 109	89	Stonedust Walkway
* 81	98	Ledge and Granite
* 187	98	Pavement
2,530	41	Weighted Average
2,262	34	89.41% Pervious Area
268	98	10.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment OS1:

Runoff = 0.11 cfs @ 12.09 hrs, Volume= 377 cf, Depth= 1.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.60"

Area (sf)	CN	Description
2,490	39	>75% Grass cover, Good, HSG A
1,490	98	Roofs, HSG A
3,980	61	Weighted Average
2,490	39	62.56% Pervious Area
1,490	98	37.44% Impervious Area

Post-Development

Type III 24-hr 10-Year Rainfall=4.60"

Prepared by Walsh Engineering Associates, Inc.

Printed 6/4/2021

HydroCAD® 10.00-22 s/n 02135 © 2018 HydroCAD Software Solutions LLC

Page 15

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Pond SF1: SOIL FILTER

Inflow Area = 17,008 sf, 38.75% Impervious, Inflow Depth = 1.33" for 10-Year event
 Inflow = 0.48 cfs @ 12.16 hrs, Volume= 1,881 cf
 Outflow = 0.02 cfs @ 17.95 hrs, Volume= 1,881 cf, Atten= 96%, Lag= 347.4 min
 Primary = 0.02 cfs @ 17.95 hrs, Volume= 1,881 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 2
 Peak Elev= 40.70' @ 17.95 hrs Surf.Area= 1,509 sf Storage= 1,185 cf
 Flood Elev= 40.80' Surf.Area= 1,532 sf Storage= 1,276 cf

Plug-Flow detention time= 731.9 min calculated for 1,879 cf (100% of inflow)
 Center-of-Mass det. time= 732.4 min (1,605.7 - 873.3)

Volume	Invert	Avail.Storage	Storage Description
#1	39.50'	1,176 cf	Basin AGS (Irregular) Listed below (Recalc)
#2	38.00'	284 cf	Filter Media (Prismatic) Listed below (Recalc)
			948 cf Overall x 30.0% Voids
		1,461 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
39.50	632	95.0	0	0	632
40.00	731	101.0	340	340	738
41.00	945	114.0	836	1,176	985

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
38.00	632	0	0
39.50	632	948	948

Device	Routing	Invert	Outlet Devices
#1	Primary	37.00'	4.0" Round Culvert L= 27.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 37.00' / 36.50' S= 0.0185 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.09 sf
#2	Device 1	40.70'	24.0" Horiz. Overflow C= 0.600 Limited to weir flow at low heads
#3	Device 1	37.00'	0.6" Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=0.02 cfs @ 17.95 hrs HW=40.70' TW=0.00' (Dynamic Tailwater)

- 1=Culvert (Passes 0.02 cfs of 0.72 cfs potential flow)
- 2=Overflow (Controls 0.00 cfs)
- 3=Orifice/Grate (Orifice Controls 0.02 cfs @ 9.23 fps)

Post-Development

Type III 24-hr 10-Year Rainfall=4.60"

Prepared by Walsh Engineering Associates, Inc.

Printed 6/4/2021

HydroCAD® 10.00-22 s/n 02135 © 2018 HydroCAD Software Solutions LLC

Page 16

Summary for Pond SF2: SOIL FILTER

Inflow Area = 13,666 sf, 51.15% Impervious, Inflow Depth = 1.53" for 10-Year event
 Inflow = 0.50 cfs @ 12.12 hrs, Volume= 1,743 cf
 Outflow = 0.02 cfs @ 17.54 hrs, Volume= 1,743 cf, Atten= 96%, Lag= 325.3 min
 Primary = 0.02 cfs @ 17.54 hrs, Volume= 1,743 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 2

Peak Elev= 43.94' @ 17.54 hrs Surf.Area= 1,631 sf Storage= 1,087 cf

Flood Elev= 44.50' Surf.Area= 1,683 sf Storage= 1,616 cf

Plug-Flow detention time= 690.5 min calculated for 1,741 cf (100% of inflow)

Center-of-Mass det. time= 691.1 min (1,553.3 - 862.2)

Volume	Invert	Avail.Storage	Storage Description
#1	43.00'	2,308 cf	Basin AGS (Irregular) Listed below (Recalc)
#2	41.50'	320 cf	Filter Media (Prismatic) Listed below (Recalc)
			1,067 cf Overall x 30.0% Voids
		2,628 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
43.00	711	104.0	0	0	711
44.00	933	117.0	819	819	965
45.50	1,053	124.0	1,489	2,308	1,190

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
41.50	711	0	0
43.00	711	1,067	1,067

Device	Routing	Invert	Outlet Devices
#1	Primary	40.50'	4.0" Round Culvert L= 124.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 40.50' / 37.20' S= 0.0266 ' / S= 0.0266 ' / Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.09 sf
#2	Device 1	44.00'	24.0" Horiz. Overflow C= 0.600 Limited to weir flow at low heads
#3	Device 1	40.50'	0.6" Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=0.02 cfs @ 17.54 hrs HW=43.94' TW=0.00' (Dynamic Tailwater)

1=Culvert (Passes 0.02 cfs of 0.52 cfs potential flow)
 2=Overflow (Controls 0.00 cfs)
 3=Orifice/Grate (Orifice Controls 0.02 cfs @ 8.90 fps)

Summary for Link AP1:

Inflow Area = 5,823 sf, 25.59% Impervious, Inflow Depth = 1.26" for 10-Year event
 Inflow = 0.15 cfs @ 12.11 hrs, Volume= 612 cf
 Primary = 0.15 cfs @ 12.11 hrs, Volume= 612 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Post-Development

Prepared by Walsh Engineering Associates, Inc.
HydroCAD® 10.00-22 s/n 02135 © 2018 HydroCAD Software Solutions LLC

Type III 24-hr 10-Year Rainfall=4.60"

Printed 6/4/2021

Page 17

Summary for Link AP2:

Inflow Area = 3,450 sf, 10.03% Impervious, Inflow Depth = 0.10" for 10-Year event
Inflow = 0.00 cfs @ 14.83 hrs, Volume= 29 cf
Primary = 0.00 cfs @ 14.83 hrs, Volume= 29 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Summary for Link AP3:

Inflow Area = 17,649 sf, 55.75% Impervious, Inflow Depth = 1.89" for 10-Year event
Inflow = 0.30 cfs @ 12.07 hrs, Volume= 2,780 cf
Primary = 0.30 cfs @ 12.07 hrs, Volume= 2,780 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Summary for Link AP4:

Inflow Area = 24,594 sf, 48.44% Impervious, Inflow Depth = 1.83" for 10-Year event
Inflow = 0.54 cfs @ 12.07 hrs, Volume= 3,758 cf
Primary = 0.54 cfs @ 12.07 hrs, Volume= 3,758 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Post-Development

Type III 24-hr 25-Year Rainfall=5.80"

Prepared by Walsh Engineering Associates, Inc.

Printed 6/4/2021

HydroCAD® 10.00-22 s/n 02135 © 2018 HydroCAD Software Solutions LLC

Page 18

Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points x 2
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1.0: Runoff Area=1,843 sf 0.00% Impervious Runoff Depth=2.38"
Flow Length=70' Slope=0.0300 '/' Tc=13.9 min CN=67 Runoff=0.09 cfs 366 cf

Subcatchment 2.0: Runoff Area=3,450 sf 10.03% Impervious Runoff Depth=0.34"
Flow Length=35' Slope=0.0600 '/' Tc=6.1 min CN=38 Runoff=0.01 cfs 98 cf

Subcatchment 3.0: Runoff Area=2,642 sf 100.00% Impervious Runoff Depth=5.56"
Tc=5.0 min CN=98 Runoff=0.35 cfs 1,225 cf

Subcatchment 3.1: Runoff Area=13,666 sf 51.15% Impervious Runoff Depth=2.38"
Flow Length=177' Tc=7.8 min CN=67 Runoff=0.80 cfs 2,711 cf

Subcatchment 3.2: Runoff Area=1,341 sf 15.44% Impervious Runoff Depth=1.26"
Tc=5.0 min CN=53 Runoff=0.04 cfs 141 cf

Subcatchment 4.0: Runoff Area=5,056 sf 100.00% Impervious Runoff Depth=5.56"
Tc=5.0 min CN=98 Runoff=0.66 cfs 2,343 cf

Subcatchment 4.1: Runoff Area=17,008 sf 38.75% Impervious Runoff Depth=2.12"
Flow Length=235' Tc=10.4 min CN=64 Runoff=0.80 cfs 3,007 cf

Subcatchment 4.2: Runoff Area=2,530 sf 10.59% Impervious Runoff Depth=0.49"
Tc=5.0 min CN=41 Runoff=0.01 cfs 104 cf

Subcatchment OS1: Runoff Area=3,980 sf 37.44% Impervious Runoff Depth=1.87"
Tc=5.0 min CN=61 Runoff=0.19 cfs 621 cf

Pond SF1: SOIL FILTER Peak Elev=40.75' Storage=1,231 cf Inflow=0.80 cfs 3,007 cf
Outflow=0.25 cfs 3,008 cf

Pond SF2: SOIL FILTER Peak Elev=44.04' Storage=1,178 cf Inflow=0.80 cfs 2,711 cf
Outflow=0.19 cfs 2,711 cf

Link AP1: Inflow=0.26 cfs 987 cf
Primary=0.26 cfs 987 cf

Link AP2: Inflow=0.01 cfs 98 cf
Primary=0.01 cfs 98 cf

Link AP3: Inflow=0.40 cfs 4,076 cf
Primary=0.40 cfs 4,076 cf

Link AP4: Inflow=0.68 cfs 5,455 cf
Primary=0.68 cfs 5,455 cf

Total Runoff Area = 51,516 sf Runoff Volume = 10,615 cf Average Runoff Depth = 2.47"
54.21% Pervious = 27,927 sf 45.79% Impervious = 23,589 sf

Post-Development

Type III 24-hr 25-Year Rainfall=5.80"

Prepared by Walsh Engineering Associates, Inc.

Printed 6/4/2021

HydroCAD® 10.00-22 s/n 02135 © 2018 HydroCAD Software Solutions LLC

Page 19

Summary for Subcatchment 1.0:

Runoff = 0.09 cfs @ 12.20 hrs, Volume= 366 cf, Depth= 2.38"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.80"

Area (sf)	CN	Description
1,100	73	Brush, Good, HSG D
343	30	Brush, Good, HSG A
400	80	>75% Grass cover, Good, HSG D
1,843	67	Weighted Average
1,843	67	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.9	70	0.0300	0.08		Sheet Flow, A-B Woods: Light underbrush n= 0.400 P2= 3.10"

Summary for Subcatchment 2.0:

Runoff = 0.01 cfs @ 12.39 hrs, Volume= 98 cf, Depth= 0.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.80"

Area (sf)	CN	Description
2,834	30	Brush, Good, HSG A
* 346	98	Ledge
270	39	>75% Grass cover, Good, HSG A
3,450	38	Weighted Average
3,104	31	89.97% Pervious Area
346	98	10.03% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.1	35	0.0600	0.10		Sheet Flow, A-B Woods: Light underbrush n= 0.400 P2= 3.10"

Summary for Subcatchment 3.0:

Runoff = 0.35 cfs @ 12.07 hrs, Volume= 1,225 cf, Depth= 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.80"

Post-Development

Type III 24-hr 25-Year Rainfall=5.80"

Prepared by Walsh Engineering Associates, Inc.

Printed 6/4/2021

HydroCAD® 10.00-22 s/n 02135 © 2018 HydroCAD Software Solutions LLC

Page 20

	Area (sf)	CN	Description
*	2,642	98	Roadway
	2,642	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, Tc Override

Summary for Subcatchment 3.1:

Runoff = 0.80 cfs @ 12.12 hrs, Volume= 2,711 cf, Depth= 2.38"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.80"

	Area (sf)	CN	Description
*	6,107	98	ROOF AND PAVED PARKING
	2,779	39	>75% Grass cover, Good, HSG A
	3,897	30	Brush, Good, HSG A
*	883	98	Walkways
	13,666	67	Weighted Average
	6,676	34	48.85% Pervious Area
	6,990	98	51.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.9	40	0.0120	0.11		Sheet Flow, A-B Grass: Short n= 0.150 P2= 3.10"
1.4	70	0.0150	0.86		Shallow Concentrated Flow, B-C Short Grass Pasture Kv= 7.0 fps
0.5	67	0.0050	2.45	0.85	Pipe Channel, C-D 8.0" Round Area= 0.3 sf Perim= 2.1' r= 0.17' n= 0.013 Corrugated PE, smooth interior
7.8	177	Total			

Summary for Subcatchment 3.2:

Runoff = 0.04 cfs @ 12.10 hrs, Volume= 141 cf, Depth= 1.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.80"

	Area (sf)	CN	Description
	367	39	>75% Grass cover, Good, HSG A
*	207	98	ROAD/DRIVEWAY
	532	30	Brush, Good, HSG A
*	235	89	Stonedust Walkway
	1,341	53	Weighted Average
	1,134	45	84.56% Pervious Area
	207	98	15.44% Impervious Area

Post-Development

Type III 24-hr 25-Year Rainfall=5.80"

Prepared by Walsh Engineering Associates, Inc.

Printed 6/4/2021

HydroCAD® 10.00-22 s/n 02135 © 2018 HydroCAD Software Solutions LLC

Page 21

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment 4.0:

Runoff = 0.66 cfs @ 12.07 hrs, Volume= 2,343 cf, Depth= 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.80"

Area (sf)	CN	Description
* 5,056	98	Roadway
5,056	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, Tc Override

Summary for Subcatchment 4.1:

Runoff = 0.80 cfs @ 12.16 hrs, Volume= 3,007 cf, Depth= 2.12"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.80"

Area (sf)	CN	Description
* 1,968	39	Grass, HSG A
311	80	>75% Grass cover, Good, HSG D
6,125	30	Brush, Good, HSG A
1,370	73	Brush, Good, HSG D
* 319	98	Granite & Ledge
* 644	89	StoneDust Path
* 6,144	98	Pavement, Roof
* 127	98	
17,008	64	Weighted Average
10,418	42	61.25% Pervious Area
6,590	98	38.75% Impervious Area

Post-Development

Type III 24-hr 25-Year Rainfall=5.80"

Prepared by Walsh Engineering Associates, Inc.

Printed 6/4/2021

HydroCAD® 10.00-22 s/n 02135 © 2018 HydroCAD Software Solutions LLC

Page 22

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.5	50	0.0100	0.11		Sheet Flow, A-B Grass: Short n= 0.150 P2= 3.10"
1.6	20	0.2000	0.21		Sheet Flow, B-C Grass: Dense n= 0.240 P2= 3.10"
0.8	90	0.0150	1.84		Shallow Concentrated Flow, C-D Grassed Waterway Kv= 15.0 fps
0.5	75	0.0050	2.45	0.85	Pipe Channel, D-E 8.0" Round Area= 0.3 sf Perim= 2.1' r= 0.17' n= 0.013 Corrugated PE, smooth interior
10.4	235	Total			

Summary for Subcatchment 4.2:

Runoff = 0.01 cfs @ 12.30 hrs, Volume= 104 cf, Depth= 0.49"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.80"

Area (sf)	CN	Description
401	39	>75% Grass cover, Good, HSG A
1,752	30	Brush, Good, HSG A
* 109	89	Stonedust Walkway
* 81	98	Ledge and Granite
* 187	98	Pavement
2,530	41	Weighted Average
2,262	34	89.41% Pervious Area
268	98	10.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment OS1:

Runoff = 0.19 cfs @ 12.09 hrs, Volume= 621 cf, Depth= 1.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.80"

Area (sf)	CN	Description
2,490	39	>75% Grass cover, Good, HSG A
1,490	98	Roofs, HSG A
3,980	61	Weighted Average
2,490	39	62.56% Pervious Area
1,490	98	37.44% Impervious Area

Post-Development

Type III 24-hr 25-Year Rainfall=5.80"

Prepared by Walsh Engineering Associates, Inc.

Printed 6/4/2021

HydroCAD® 10.00-22 s/n 02135 © 2018 HydroCAD Software Solutions LLC

Page 23

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Pond SF1: SOIL FILTER

Inflow Area = 17,008 sf, 38.75% Impervious, Inflow Depth = 2.12" for 25-Year event
 Inflow = 0.80 cfs @ 12.16 hrs, Volume= 3,007 cf
 Outflow = 0.25 cfs @ 12.60 hrs, Volume= 3,008 cf, Atten= 69%, Lag= 26.4 min
 Primary = 0.25 cfs @ 12.60 hrs, Volume= 3,008 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 2
 Peak Elev= 40.75' @ 12.60 hrs Surf.Area= 1,521 sf Storage= 1,231 cf
 Flood Elev= 40.80' Surf.Area= 1,532 sf Storage= 1,276 cf

Plug-Flow detention time= 512.7 min calculated for 3,005 cf (100% of inflow)
 Center-of-Mass det. time= 513.5 min (1,372.2 - 858.6)

Volume	Invert	Avail.Storage	Storage Description
#1	39.50'	1,176 cf	Basin AGS (Irregular) Listed below (Recalc)
#2	38.00'	284 cf	Filter Media (Prismatic) Listed below (Recalc)
			948 cf Overall x 30.0% Voids
		1,461 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
39.50	632	95.0	0	0	632
40.00	731	101.0	340	340	738
41.00	945	114.0	836	1,176	985

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
38.00	632	0	0
39.50	632	948	948

Device	Routing	Invert	Outlet Devices
#1	Primary	37.00'	4.0" Round Culvert L= 27.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 37.00' / 36.50' S= 0.0185 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.09 sf
#2	Device 1	40.70'	24.0" Horiz. Overflow C= 0.600 Limited to weir flow at low heads
#3	Device 1	37.00'	0.6" Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=0.24 cfs @ 12.60 hrs HW=40.75' TW=0.00' (Dynamic Tailwater)

- 1=Culvert (Passes 0.24 cfs of 0.72 cfs potential flow)
- 2=Overflow (Weir Controls 0.23 cfs @ 0.73 fps)
- 3=Orifice/Grate (Orifice Controls 0.02 cfs @ 9.29 fps)

Post-Development

Type III 24-hr 25-Year Rainfall=5.80"

Prepared by Walsh Engineering Associates, Inc.

Printed 6/4/2021

HydroCAD® 10.00-22 s/n 02135 © 2018 HydroCAD Software Solutions LLC

Page 24

Summary for Pond SF2: SOIL FILTER

Inflow Area = 13,666 sf, 51.15% Impervious, Inflow Depth = 2.38" for 25-Year event
Inflow = 0.80 cfs @ 12.12 hrs, Volume= 2,711 cf
Outflow = 0.19 cfs @ 12.58 hrs, Volume= 2,711 cf, Atten= 77%, Lag= 27.7 min
Primary = 0.19 cfs @ 12.58 hrs, Volume= 2,711 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 2

Peak Elev= 44.04' @ 12.58 hrs Surf.Area= 1,647 sf Storage= 1,178 cf

Flood Elev= 44.50' Surf.Area= 1,683 sf Storage= 1,616 cf

Plug-Flow detention time= 532.2 min calculated for 2,708 cf (100% of inflow)

Center-of-Mass det. time= 533.0 min (1,381.8 - 848.8)

Volume	Invert	Avail.Storage	Storage Description
#1	43.00'	2,308 cf	Basin AGS (Irregular) Listed below (Recalc)
#2	41.50'	320 cf	Filter Media (Prismatic) Listed below (Recalc)
			1,067 cf Overall x 30.0% Voids
		2,628 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
43.00	711	104.0	0	0	711
44.00	933	117.0	819	819	965
45.50	1,053	124.0	1,489	2,308	1,190

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
41.50	711	0	0
43.00	711	1,067	1,067

Device	Routing	Invert	Outlet Devices
#1	Primary	40.50'	4.0" Round Culvert L= 124.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 40.50' / 37.20' S= 0.0266 ' / S= 0.0266 ' / Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.09 sf
#2	Device 1	44.00'	24.0" Horiz. Overflow C= 0.600 Limited to weir flow at low heads
#3	Device 1	40.50'	0.6" Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=0.18 cfs @ 12.58 hrs HW=44.04' TW=0.00' (Dynamic Tailwater)

1=Culvert (Passes 0.18 cfs of 0.53 cfs potential flow)
2=Overflow (Weir Controls 0.17 cfs @ 0.66 fps)
3=Orifice/Grate (Orifice Controls 0.02 cfs @ 9.03 fps)

Summary for Link AP1:

Inflow Area = 5,823 sf, 25.59% Impervious, Inflow Depth = 2.03" for 25-Year event
Inflow = 0.26 cfs @ 12.10 hrs, Volume= 987 cf
Primary = 0.26 cfs @ 12.10 hrs, Volume= 987 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Post-Development

Prepared by Walsh Engineering Associates, Inc.
HydroCAD® 10.00-22 s/n 02135 © 2018 HydroCAD Software Solutions LLC

Type III 24-hr 25-Year Rainfall=5.80"

Printed 6/4/2021

Page 25

Summary for Link AP2:

Inflow Area = 3,450 sf, 10.03% Impervious, Inflow Depth = 0.34" for 25-Year event
Inflow = 0.01 cfs @ 12.39 hrs, Volume= 98 cf
Primary = 0.01 cfs @ 12.39 hrs, Volume= 98 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Summary for Link AP3:

Inflow Area = 17,649 sf, 55.75% Impervious, Inflow Depth = 2.77" for 25-Year event
Inflow = 0.40 cfs @ 12.07 hrs, Volume= 4,076 cf
Primary = 0.40 cfs @ 12.07 hrs, Volume= 4,076 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Summary for Link AP4:

Inflow Area = 24,594 sf, 48.44% Impervious, Inflow Depth = 2.66" for 25-Year event
Inflow = 0.68 cfs @ 12.07 hrs, Volume= 5,455 cf
Primary = 0.68 cfs @ 12.07 hrs, Volume= 5,455 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Tc FLOW LINE DATA:

SUBCATCHMENT 1				
SEGMENT	TIME (MIN.)	LENGTH	SLOPE	FLOW TYPE
A-B	9.1	80'	0.113	SHEET FLOW
B-C	8.7	50'	0.050	SHEET FLOW
C-D	2.0	75'	0.015	SHALLOW CONCENTRATED FLOW

SUBCATCHMENT 2				
SEGMENT	TIME (MIN.)	LENGTH	SLOPE	FLOW TYPE
A-B	8.1	50'	0.060	SHEET FLOW
B-C	1.0	70'	0.057	SHALLOW CONCENTRATED FLOW

SUBCATCHMENT 3.0				
SEGMENT	TIME (MIN.)	LENGTH	SLOPE	FLOW TYPE
A-B	5.0	N/A	N/A	DIRECT ENTRY

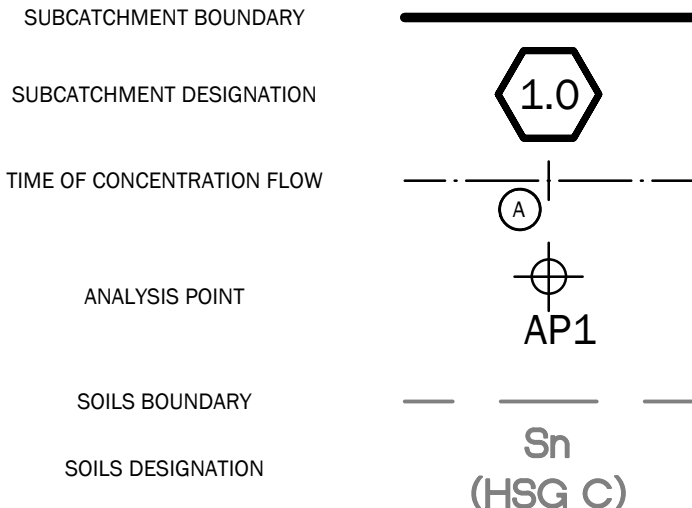
SUBCATCHMENT 3.1				
SEGMENT	TIME (MIN.)	LENGTH	SLOPE	FLOW TYPE
A-B	9.3	60'	0.060	SHEET FLOW
B-C	1.1	70'	0.043	SHALLOW CONCENTRATED FLOW
C-D	0.4	30'	0.033	SHALLOW CONCENTRATED FLOW

SUBCATCHMENT 4.0				
SEGMENT	TIME (MIN.)	LENGTH	SLOPE	FLOW TYPE
A-B	5.0	N/A	N/A	DIRECT ENTRY

SUBCATCHMENT 4.1				
SEGMENT	TIME (MIN.)	LENGTH	SLOPE	FLOW TYPE
A-B	5.0	N/A	N/A	DIRECT ENTRY

SUBCATCHMENT OS1				
SEGMENT	TIME (MIN.)	LENGTH	SLOPE	FLOW TYPE
A-B	5.0	N/A	N/A	DIRECT ENTRY

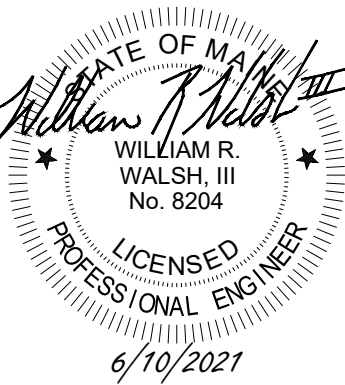
DRAINAGE



WALSH
ENGINEERING ASSOCIATES, INC.

One Karen Dr., Suite 2A | Westbrook, Maine 04092
ph: 207.553.9898 | www.walsh-eng.com

Copyright © 2021



Deering Avenue Residences

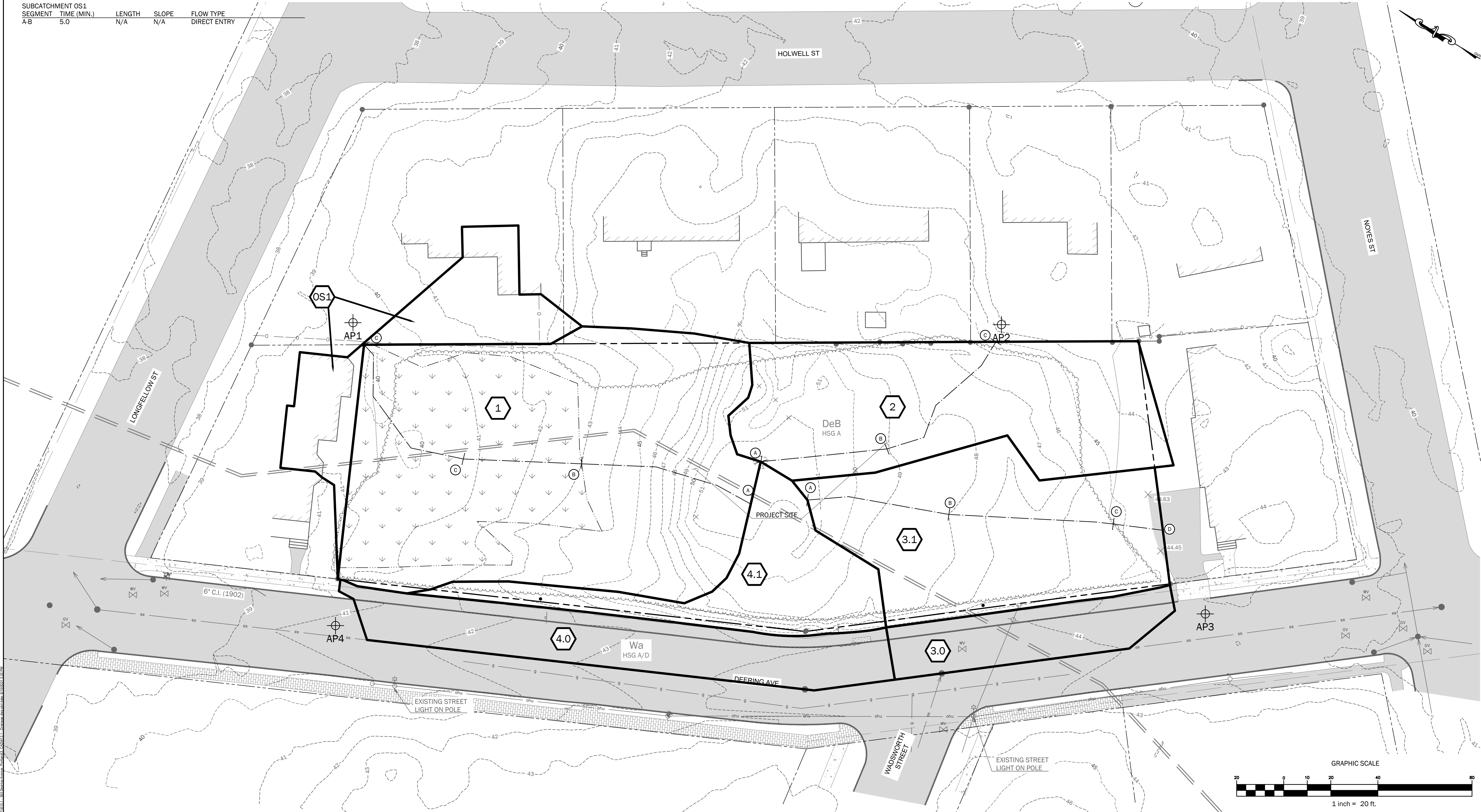
387 & 405 Deering Avenue
Portland, Maine 04103
BK 36396, PG 323; CBL: 118 A 003001

SAWYER ISLAND DEVELOPMENT, LLC.

100 SILVER STREET
PORTLAND, MAINE 04101

Rev.	Date	Description	Drawn	Check
1	01/10/2021	REVISED PER STAFF COMMENTS	DEPT.	NGC
Sheet Title:				
Pre-Development Drainage Plan				
Job No.: 613.1		Sheet No.:		
Date: FEBRUARY 2021		Scale: AS NOTED		
Drawn: MTL		Checked: SWC		
		D1.0		

ISSUED FOR PERMITTING - NOT FOR CONSTRUCTION



Tc FLOW LINE DATA:

SUBCATCHMENT 1.0				
SEGMENT	TIME (MIN.)	LENGTH	SLOPE	FLOW TYPE
A-B	13.9	70'	0.030	SHEET FLOW

SUBCATCHMENT 2.0				
SEGMENT	TIME (MIN.)	LENGTH	SLOPE	FLOW TYPE
A-B	6.1	35'	0.060	SHEET FLOW

SUBCATCHMENT 3.0				
SEGMENT	TIME (MIN.)	LENGTH	SLOPE	FLOW TYPE
A-B	5.0	N/A	N/A	DIRECT ENTRY

SUBCATCHMENT 3.1				
SEGMENT	TIME (MIN.)	LENGTH	SLOPE	FLOW TYPE
A-B	5.9	40'	0.012	SHEET FLOW
B-C	1.4	70'	0.015	SHALLOW CONCENTRATED FLOW
C-D	0.5	65'	0.005	PIPE FLOW

SUBCATCHMENT 3.2				
SEGMENT	TIME (MIN.)	LENGTH	SLOPE	FLOW TYPE
A-B	5.0	N/A	N/A	DIRECT ENTRY

SUBCATCHMENT 4.0				
SEGMENT	TIME (MIN.)	LENGTH	SLOPE	FLOW TYPE
A-B	5.0	N/A	N/A	DIRECT ENTRY

SUBCATCHMENT 4.1				
SEGMENT	TIME (MIN.)	LENGTH	SLOPE	FLOW TYPE
A-B	7.5	50'	0.010	SHEET FLOW
B-C	1.6	20'	0.200	SHALLOW CONCENTRATED FLOW
C-D	0.8	90'	0.015	SHALLOW CONCENTRATED FLOW
C-D	0.5	75'	0.005	PIPE FLOW

SUBCATCHMENT 4.2				
SEGMENT	TIME (MIN.)	LENGTH	SLOPE	FLOW TYPE
A-B	5.0	N/A	N/A	DIRECT ENTRY

SUBCATCHMENT OS1				
SEGMENT	TIME (MIN.)	LENGTH	SLOPE	FLOW TYPE
A-B	5.0	N/A	N/A	DIRECT ENTRY

DRAINAGE

SUBCATCHMENT BOUNDARY

SUBCATCHMENT DESIGNATION

TIME OF CONCENTRATION FLOW

ANALYSIS POINT

SOILS BOUNDARY

SOILS DESIGNATION

1.0

A

AP1

Sn

(HSG C)

WALSH

ENGINEERING ASSOCIATES, INC.

One Karen Dr., Suite 2A | Westbrook, Maine 04092

ph: 207.553.9898 | www.walsh-eng.com

Copyright © 2021

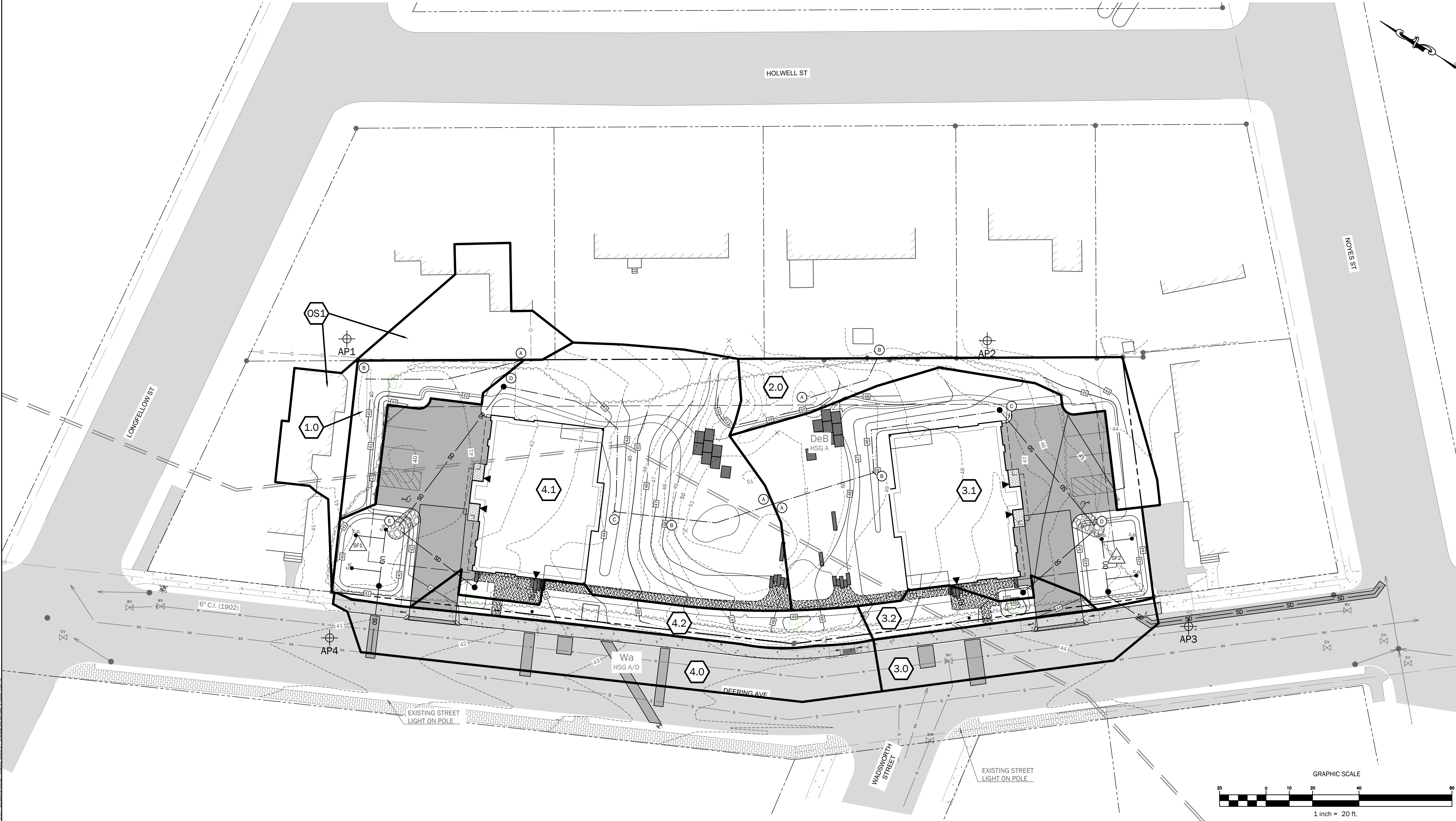
STATE OF MAINE

WILLIAM R. WALSH, III

No. 8204

LICENSED PROFESSIONAL ENGINEER

6/10/2021



Deering Avenue Residences

387 & 405 Deering Avenue
Portland, Maine 04103
BK 36396, PG 323; CBL: 118 A 003001

SAWYER ISLAND DEVELOPMENT, LLC.

100 SILVER STREET
PORTLAND, MAINE 04101

Rev.	Date	Description	Drawn	Check
1	01/30/2021	REVISED PER STAFF COMMENTS	DEPT.	NGC

Sheet Title:

Post-Development Drainage Plan

Job No.:	613.1	Sheet No.:	
Date:	FEBRUARY 2021	Scale:	AS NOTED
Drawn:	MTL	Checked:	SWC

D2.0



January 21, 2021

Silas Canavan, PE, CFM
Walsh Engineering Associates, Inc.
One Karen Drive, Suite 2A
Westbrook, ME 04092

Re: 383 Deering Avenue, PO
Ability to Serve with PWD Water

Dear Mr. Canavan:

The Portland Water District has received your request for an Ability to Serve Determination for the noted site submitted on January 15, 2021. Based on the information provided per plans dated January 20, 2021, we can confirm that the District will be able to serve the proposed project as further described in this letter. **Please note that this letter constitutes approval of the water system as currently designed and is valid for eighteen (18) months after the date of issue. Any changes affecting the approved water system will require further review and approval by PWD.**

Conditions of Service

The following conditions of service apply:

- Two new 1.5-inch domestic services with a 1-inch meter may be installed from the water main in Deering Avenue. The services should enter through the properties frontage on Deering Avenue at least 10-feet from any side property lines. An approved backflow prevention device must be installed on each service line directly after the meter prior to service activation. Please note that only one meter and one bill will be associated to each domestic service line. This one master meter would be located in a common space that all tenants could gain access to if necessary.
- Two new 4-inch fire services may be installed from the water main in Deering Avenue. The services should enter through the properties frontage on Deering Avenue at least 10-feet from any side property lines.
- The Portland Water District does not have record of any other existing infrastructure in public roads and recommends a survey and test pitting be performed by the development team prior to construction. Any conflicts that arise during construction are at the risk of the developer and may result in job shutdown until new plans are submitted by the developer and reviewed and approved by PWD.

Prior to construction, the owner or contractor will need to complete a Service Application and pay all necessary fees for each proposed service. When the project is ready for construction, an Application for each service can be requested by contacting the MEANS Group at MEANS@pwd.org or 207-774-5961 ext. 3199. Once a completed Application has been submitted with payment, please allow seven (7) days for processing.



Existing Site Service

According to District records, the project site does not currently have existing water service.

Water System Characteristics

According to District records, there is a 6-inch diameter cast iron water main in Deering Avenue and a public fire hydrant located approximately 225 feet from the site. The most recent static pressure reading was 102 psi on January 13, 2021.

Public Fire Protection

The installation of new public hydrants to be accepted into the District water system will most likely not be required. It is your responsibility to contact the Portland Fire Department to ensure that this project is adequately served by existing and/or proposed hydrants.

Domestic Water Needs

The data noted above indicates there should be adequate pressure and volume of water to serve the domestic water needs of your proposed project. Based on the high water pressure in this area, we recommend that you consider the installation of pressure reducing devices that comply with state plumbing codes.

Private Fire Protection Water Needs

You have indicated that this project will require water service to provide private fire protection to the site. Please note that the District does not guarantee any quantity of water or pressure through a fire protection service. Please share these results with your sprinkler system designer so that they can design the fire protection system to best fit the noted conditions. If the data is out of date or insufficient for their needs, please contact MEANS to request a hydrant flow test and we will work with you to get more complete data.

Should you disagree with this determination, you may request a review by the District's Internal Review Team. Your request for review must be in writing and state the reason for your disagreement with the determination. The request must be sent to MEANS@PWD.org or mailed to 225 Douglass Street, Portland Maine, 04104 c/o MEANS. The Internal Review Team will undertake review as requested within 2 weeks of receipt of a request for review.

If the District can be of further assistance in this matter, please let us know.

Sincerely,
Portland Water District

A handwritten signature in black ink, appearing to read 'Robert A. Bartels', written in a cursive style.

Robert A. Bartels, P.E.
Senior Project Engineer



January 29th, 2021

Silas Canavan
383 Deering Ave
Portland, ME 04103

Re: Natural gas service to new construction properties at 383 Deering Ave in Portland, ME

Dear Silas,

Thank you for your interest in using natural gas for the above referenced project.

This letter is to confirm that natural gas can be made available from our distribution system to serve your proposed project. Any improvements to the existing distribution system necessary to provide this service, as well as the design of the gas system in the project itself, will be established as the overall design and scope of your project progresses.

As the project progresses please contact me so that I can update the information for this project. If you have any further questions or need any additional information, please contact me. I can be reached directly at (207) 541-2578 or at velezc@unitil.com.

Sincerely,

Chasity

Senior Business Development Associate
376 Riverside Industrial Parkway
Portland, ME 04103
T & F 207-541-2578

ME GAS CUSTOMER ENERGY SOLUTIONS

376 Riverside Industrial Parkway
Portland, ME 04103

T 207-541-2508 www.unitil.com

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: February 23, 2021

1. Please, Submit Utility, Site, and Locus Plans.

Site Address: 387 & 405 Deering Ave

Chart Block Lot Number: 118 A3, 5, 7, 9, 11, 13, 15

Proposed Use: Multi-Family Residential

Previous Use: Vacant Land

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.

Each building will have a single connection to the sewer main in Deering Ave.

Site Category | Commercial (see part 4 below)
Industrial (complete part 5 below)
Governmental
Residential
Other (specify)

☐
☐
☐
☒
☐

Clearly, indicate the proposed connections, on the submitted plans.

2. Please, Submit Contact Information.

City Planner's Name: TBD

Phone: 207-874-8608

Owner/Developer Name: Sawyer Island Development, LLC, c/o Todd Valentine

Owner/Developer Address: 100 Silver Street, Portland, ME 04101

Phone: 207-310-8573

Fax: E-mail: tvalentine@realassetservices.com

Engineering Consultant Name: Walsh Engineering Associates, Inc. (Silas Canavan, PE)

Engineering Consultant Address: One Karen Drive, Suite 2A, Westbrook, ME 04092

Phone: 207-553-9898

Fax: 207-692-2273 E-mail: silas@walsh-eng.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: 1,440 (see below) GPD

Peaking Factor/ Peak Times: 3 / am and pm peaks - standard 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)

Building A: Four 2-bedroom units = 8 bedrooms x 90 GPD/bedroom = 720 GPD
Building B: Four 2-bedroom units = 8 bedrooms x 90 GPD/bedroom = 720 GPD
Total = 1,440 GPD

Note: Please submit calculations showing the derivation of your design flows, either on the following page, in the space provided, or attached, as a separate sheet.

4. Please, Submit External Grease Interceptor Calculations.

Total Drainage Fixture Unit (DFU) Values:	n/a
Size of External Grease Interceptor:	
Retention Time:	
Peaking Factor/ Peak Times:	

Note: In determining your restaurant process water flows, and the size of your external grease interceptor, please use The Uniform Plumbing Code. Note: In determining the retention time, sixty (60) minutes is the minimum retention time. Note: Please submit detailed calculations showing the derivation of your restaurant process water design flows, and please submit detailed calculations showing the derivation of the size of your external grease interceptor, either in the space provided below, or attached, as a separate sheet.

5. Please, Submit Industrial Process Wastewater Flow Calculations

Estimated Industrial Process Wastewater Flows Generated:	<u>n/a</u>	<u>GPD</u>
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/osshstats/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.

RSS-B SERIES POLES

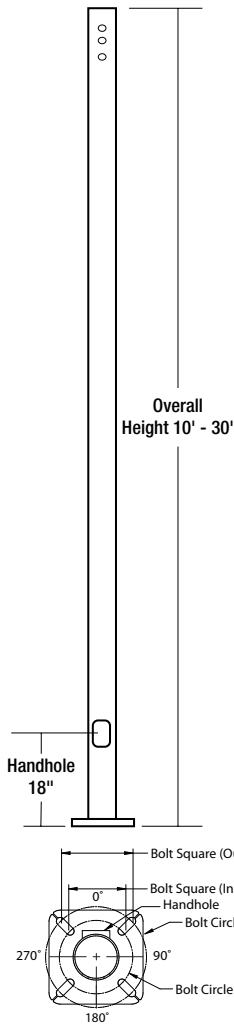
ROUND STRAIGHT STEEL

Cat.#

Job

Type

Approvals


BEACON
design . performance . technology


APPLICATIONS

- Lighting installations for side and top mounting of luminaires with effective projected area (EPA) not exceeding maximum allowable loading of the specified pole in its installed geographic location

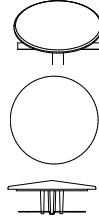
CONSTRUCTION

- SHAFT:** One-piece straight steel with round cross section, Minimum yield of 46,000 psi (ASTM-A500, Grade C); Longitudinal weld seam to appear flush in shaft wall; Steel base plate with axial bolt circle slots welded flush to pole shaft having minimum yield of 36,000 psi (ASTM A36)
- BASE COVER:** Two-piece square aluminum base cover included standard
- POLE CAP:** Pole shaft supplied with removable cover when applicable; Tenon and post-top configurations also available
- HAND HOLE:** Rectangular 3x5 steel hand hole frame (2.38" x 4.38" opening); Mounting provisions for grounding lug located behind gasketed cover
- ANCHOR BOLTS:** Four galvanized anchor bolts provided per pole with minimum yield of 55,000 psi (ASTM F1554). Galvanized hardware with two washers and two nuts per bolt for leveling

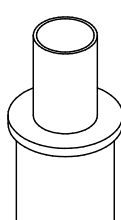
FINISH

- Durable thermoset polyester powder coat paint finish with nominal 3.0 mil thickness
- Powder paint prime applied over "white metal" steel substrate cleaned via mechanical shot blast method
- Decorative finish coat available in multiple standard colors; Custom colors available; RAL number preferable;

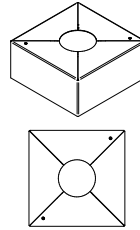
POLE CAP



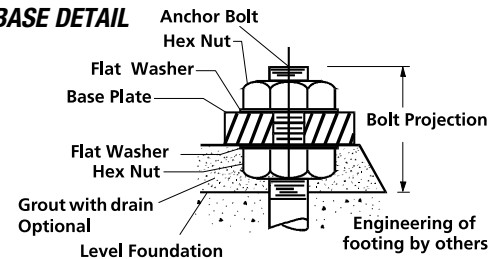
TENON



BASE COVER



BASE DETAIL



ORDERING INFORMATION

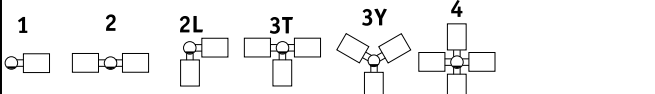
ORDERING EXAMPLE:

RSS - B - 25 - 40 - A/B/C - 2L - B2 - BLT - UL

Reference page 2 for available configurations

SERIES	HEIGHT	SHAFT	THICKNESS	MOUNTING	FINISH	OPTIONS
RSS-B Round Straight Steel Pole Beacon	Reference page 2 Ordering matrix	Reference page 2 Ordering matrix	Reference page 2 Ordering matrix	1 Single arm mount 2 Two fixtures at 180° 2L Two fixtures at 90° 3T Three fixtures at 90° 3Y Three fixtures at 120° 4 Four fixtures at 90° TA Tenon (2.375" OD) TB Tenon (2.875" OD) TC Tenon (3.5" OD) OT No drilling (includes pole cap)	BLT Black Matte Textured BLS Black Gloss Smooth DBT Dark Bronze Matte Textured DBS Dark Bronze Gloss Smooth GTT Graphite Matte Textured LGS Light Grey Gloss Smooth PSS Platinum Silver Smooth WHT White Matte Textured WHS White Gloss Smooth VGT Verde Green Textured Color Option CC Custom Color	GFI¹ 20 Amp GFI Receptacle and Cover EHH¹ Extra Handhole C05¹ .5" Coupling C07¹ .75" Coupling C20¹ 2" Coupling MPB¹ Mid-pole Luminaire Bracket VM2 2nd mode vibration damper LAB Less Anchor Bolts UL UL Certified RBC Round Base Cover

MOUNTING ORIENTATION


¹ Specify option location using logic found on page 2 (**Option Orientation**)

ACCESSORIES- Order Separately

Catalog Number	Description
VM2SXX	2nd mode vibration damper

DRILL PATTERN

- B1** Cruiser, "AM" arm
B3 2 bolt (2-1/2" spacing), Viper "A" arm
S2 2 bolt (3-1/2" spacing), Viper "AD" arm



Beacon Products • 701 Millennium Blvd, Greenville, SC 29607 • Phone: 864-678-1000

Due to our continued efforts to improve our products, product specifications are subject to change without notice.

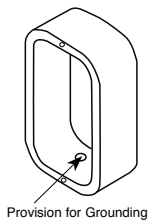
© 2020 BEACON PRODUCTS, All Rights Reserved • For more information visit our website at www.beaconproducts.com • Printed in USA
HUBBELL
Lighting

ORDERING INFORMATION Cont.

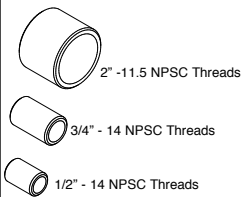
Catalog Number	Height		Nominal Shaft Dimensions	Wall Thickness	Bolt Circle (suggested)	Bolt Circle (range)	Bolt Square (range)	Base Plate Square	Base Plate Thickness	Anchor bolt size	Bolt Projection	Pole weight
	Feet	Meters										
RSS-B-10-40-A	10	3.0	4" round	0.125"	9"	7.5" - 10"	5.30" - 7.07"	9"	0.75	3/4" x 30" x 3"	3.5	52
RSS-B-12-40-A	12	3.7	4" round	0.125"	9"	7.5" - 10"	5.30" - 7.07"	9"	0.75	3/4" x 30" x 3"	3.5	62
RSS-B-14-40-A	14	4.3	4" round	0.125"	9"	7.5" - 10"	5.30" - 7.07"	9"	0.75	3/4" x 30" x 3"	3.5	72
RSS-B-16-40-A	16	4.9	4" round	0.125"	9"	7.5" - 10"	5.30" - 7.07"	9"	0.75	3/4" x 30" x 3"	3.5	83
RSS-B-18-40-A	18	5.5	4" round	0.125"	9"	7.5" - 10"	5.30" - 7.07"	9"	0.75	3/4" x 30" x 3"	3.5	93
RSS-B-20-40-A	20	6.1	4" round	0.125"	9"	7.5" - 10"	5.30" - 7.07"	9"	0.75	3/4" x 30" x 3"	3.5	103
RSS-B-10-40-B	10	3.0	4" round	0.188"	9"	7.5" - 10"	5.30" - 7.07"	9"	0.75	3/4" x 30" x 3"	3.5	77
RSS-B-12-40-B	12	3.7	4" round	0.188"	9"	7.5" - 10"	5.30" - 7.07"	9"	0.75	3/4" x 30" x 3"	3.5	92
RSS-B-14-40-B	14	4.3	4" round	0.188"	9"	7.5" - 10"	5.30" - 7.07"	9"	0.75	3/4" x 30" x 3"	3.5	107
RSS-B-16-40-B	16	4.9	4" round	0.188"	9"	7.5" - 10"	5.30" - 7.07"	9"	0.75	3/4" x 30" x 3"	3.5	122
RSS-B-18-40-B	18	5.5	4" round	0.188"	9"	7.5" - 10"	5.30" - 7.07"	9"	0.75	3/4" x 30" x 3"	3.5	138
RSS-B-20-40-B	20	6.1	4" round	0.188"	9"	7.5" - 10"	5.30" - 7.07"	9"	0.75	3/4" x 30" x 3"	3.5	153
RSS-B-10-50-B	10	3.0	5" round	0.188"	11"	8.0" - 11"	5.66" - 7.78"	10.25	1.0	1" x 36" x 4"	4.5	97
RSS-B-12-50-B	12	3.7	5" round	0.188"	11"	8.0" - 11"	5.66" - 7.78"	10.25	1.0	1" x 36" x 4"	4.5	116
RSS-B-14-50-B	14	4.3	5" round	0.188"	11"	8.0" - 11"	5.66" - 7.78"	10.25	1.0	1" x 36" x 4"	4.5	135
RSS-B-16-50-B	16	4.9	5" round	0.188"	11"	8.0" - 11"	5.66" - 7.78"	10.25	1.0	1" x 36" x 4"	4.5	155
RSS-B-18-50-B	18	5.5	5" round	0.188"	11"	8.0" - 11"	5.66" - 7.78"	10.25	1.0	1" x 36" x 4"	4.5	174
RSS-B-20-50-B	20	6.1	5" round	0.188"	11"	8.0" - 11"	5.66" - 7.78"	10.25	1.0	1" x 36" x 4"	4.5	193
RSS-B-25-50-B	25	7.6	5" round	0.188"	11"	8.0" - 11"	5.66" - 7.78"	10.25	1.0	1" x 36" x 4"	4.5	242
RSS-B-20-60-C	20	6.1	6" round	0.250"	11"	9.0" - 11"	6.36" - 7.78"	10.25	1.0	1" x 36" x 4"	4.5	307
RSS-B-25-60-C	25	7.6	6" round	0.250"	11"	9.0" - 11"	6.36" - 7.78"	10.25	1.0	1" x 36" x 4"	4.5	384
RSS-B-30-60-C	30	9.1	6" round	0.250"	11"	9.0" - 11"	6.36" - 7.78"	10.25	1.0	1" x 36" x 4"	4.5	461

NOTE: Factory supplied template must be used when setting anchor bolts. Beacon Products will deny any claim for incorrect anchorage placement resulting from failure to use factory supplied template and anchor bolts.

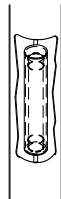
EHH - EXTRA HANDHOLE



C05 - C07 - C20 - COUPLING



VM2 - VIBRATION DAMPER 2ND MODE



Factory installed, internal damper designed to alter pole resonance to reduce movement and material fatigue caused by 2nd mode vibration.

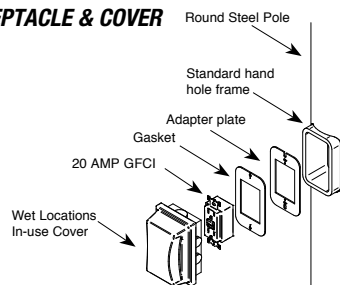
VM2SXX - VIBRATION DAMPER 2ND MODE



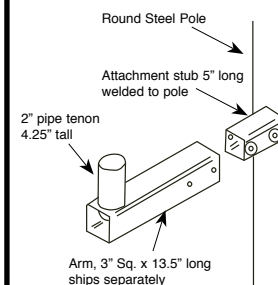
VM2S08 - 8'
VM2S12 - 12'
VM2S16 - 16'
VM2S20 - 20'
VM2S24 - 24'

Field installed, internal damper designed to alter pole resonance to reduce movement and material fatigue caused by 2nd mode vibration.

GFI - 20 AMP GFCI RECEPTACLE & COVER

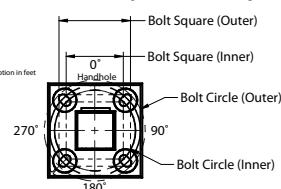


MPB - MID POLE BRACKET



OPTION ORIENTATION

Follow the logic below when ordering location specific options. For each option, include its orientation (in degrees) and its height (in feet). Example: Option C07 should be ordered as: **RSS-B-20-40-A-TA-DB-C05-0-15** (.5" coupling on the handhole/arm side of pole, 15 feet up from the pole base) 1' spacing required between option. Consult factory for other configurations.



For more information about pole vibration and vibration dampers, please consult http://cdn.beaconproducts.com/content/products/literature/files/Pole_Wind_Induced_Flyer_HL010022.pdf
Due to our continued efforts to improve our products, product specifications are subject to change without notice.

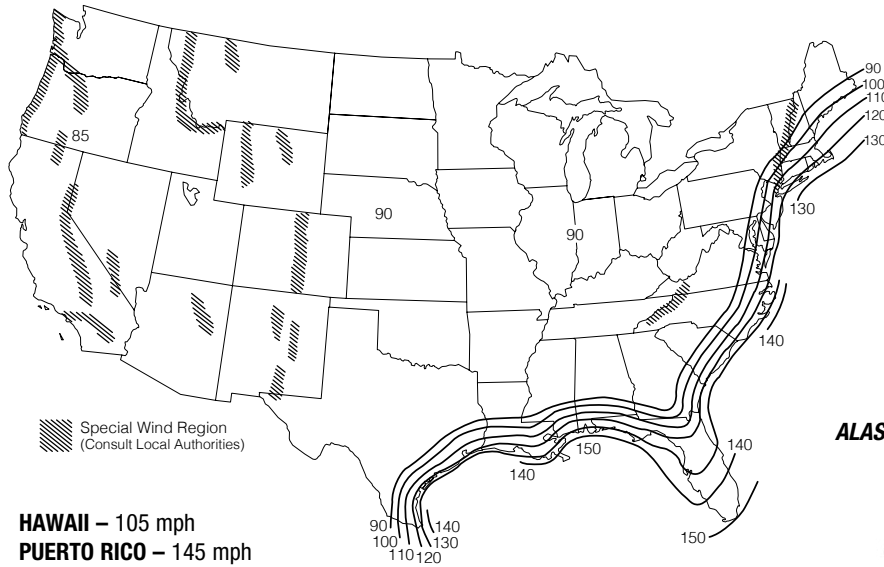


Beacon Products • 701 Millennium Blvd, Greenville, SC 29607 • Phone: 864-678-1000

Due to our continued efforts to improve our products, product specifications are subject to change without notice.

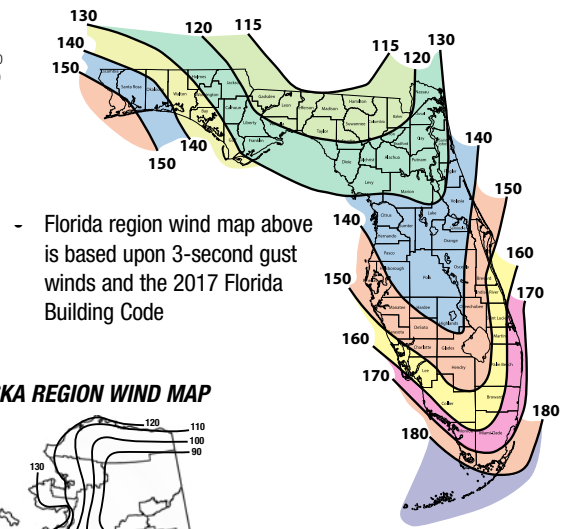
© 2020 BEACON PRODUCTS, All Rights Reserved • For more information visit www.beaconproducts.com



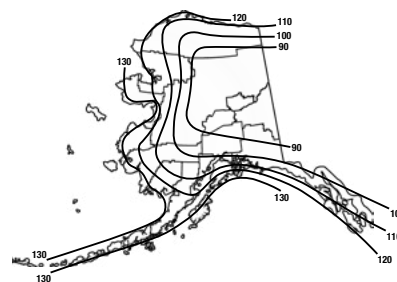


*PRINTED WITH PERMISSION FROM ASCE

ASCE 7-05 wind map EPA Load Rating - 3 second gust wind speeds							
Catalog Number	85	90	100	110	120	105	145
RSS-B-10-40-A	21.0	18.7	15.0	12.2	10.1	13.5	6.8
RSS-B-12-40-A	16.8	14.8	11.8	9.5	7.7	10.5	5.1
RSS-B-14-40-A	13.6	12.0	9.4	7.4	5.9	8.3	3.9
RSS-B-16-40-A	11.1	9.7	7.5	5.8	4.5	6.6	2.9
RSS-B-18-40-A	9.0	7.8	5.8	4.4	3.3	5.1	2
RSS-B-20-40-A	7.2	6.2	4.5	3.1	2.2	3.8	1.2
RSS-B-10-40-B	25.0	25.0	22.4	18.4	15.3	20.2	10.4
RSS-B-12-40-B	25.0	22.3	17.9	14.5	12.0	16.1	8.1
RSS-B-14-40-B	20.6	18.3	14.6	11.7	9.6	13	6.4
RSS-B-16-40-B	17.2	15.2	12.0	9.5	7.7	10.7	5.1
RSS-B-18-40-B	14.3	12.6	9.8	7.6	6.1	8.6	3.9
RSS-B-20-40-B	11.8	10.3	7.9	6.0	4.7	6.9	2.9
RSS-B-10-50-B	25.0	25.0	25.0	25.0	25.0	25.0	17.7
RSS-B-12-50-B	25.0	25.0	25.0	24.8	20.8	25.0	14.3
RSS-B-14-50-B	25.0	25.0	24.7	20.5	17.2	22.4	11.7
RSS-B-16-50-B	25.0	25.0	20.7	17.1	14.3	18.8	9.7
RSS-B-18-50-B	24.5	21.6	17.3	14.3	11.9	15.7	8.0
RSS-B-20-50-B	20.6	18.1	14.4	11.8	9.8	13.0	6.5
RSS-B-25-50-B	13.6	11.7	9.1	7.3	6.0	8.1	3.8
RSS-B-20-60-C	25.0	25.0	25.0	25.0	21.5	25.0	14.8
RSS-B-25-60-C	25.0	25.0	21.9	18.0	15.0	19.8	10.1
RSS-B-30-60-C	21.8	19.4	15.6	12.7	10.6	14.1	6.9



ALASKA REGION WIND MAP



Florida Building Code 2017 EPA Load Rating - 3 second gust wind speeds								
Catalog Number	115	120	130	140	150	160	170	180
RSS-B-10-40-A	25.0	23.5	20.0	17.0	14.5	12.5	11.0	10.0
RSS-B-12-40-A	21.0	19.0	16.0	13.5	11.5	9.5	9.0	8.0
RSS-B-14-40-A	17.5	15.7	13.0	10.8	9.0	7.5	7.0	6.5
RSS-B-16-40-A	14.2	13.0	10.5	8.5	7.0	5.8	5.0	4.5
RSS-B-18-40-A	11.6	10.4	8.2	6.8	5.4	4.4	4.0	3.6
RSS-B-20-40-A	9.5	8.4	6.5	5.2	4.0	3.0	2.8	2.5
RSS-B-10-40-B	25.0	25.0	25.0	22.0	19.0	16.5	15.2	13.4
RSS-B-12-40-B	25.0	25.0	20.8	17.6	15.1	13.0	12.0	10.6
RSS-B-14-40-B	22.5	20.4	17.2	14.4	12.2	10.4	10.0	8.8
RSS-B-16-40-B	18.9	17.0	14.1	11.7	9.8	8.2	7.5	7.0
RSS-B-18-40-B	15.6	14.1	11.5	9.4	7.7	6.4	6.0	5.7
RSS-B-20-40-B	13.0	11.6	9.3	7.5	6.0	4.8	4.0	3.5
RSS-B-10-50-B	25.0	25.0	25.0	25.0	25.0	23.6	20.8	18.4
RSS-B-12-50-B	25.0	25.0	25.0	25.0	22.2	19.3	16.8	14.8
RSS-B-14-50-B	25.0	25.0	23.9	21.5	18.4	15.9	13.8	12.1
RSS-B-16-50-B	25.0	23.8	19.6	18.0	15.4	13.2	11.4	9.9
RSS-B-18-50-B	21.8	19.6	16.1	15.1	12.8	10.8	9.3	8.0
RSS-B-20-50-B	18.2	16.4	14.1	12.7	10.7	9.0	7.7	6.5
RSS-B-25-50-B	11.7	10.2	9.4	8.4	6.8	5.6	4.5	3.7
RSS-B-20-60-C	25.0	25.0	25.0	22.1	18.8	16.1	13.9	12.0
RSS-B-25-60-C	24.7	22.4	18.4	15.3	12.8	10.8	9.1	7.6
RSS-B-30-60-C	18.2	16.3	13.2	10.7	8.7	7.0	5.7	4.5

NOTES

Wind-speed Website disclaimer:

Hubbell Lighting has no connection to the linked website and makes no representations as to its accuracy. While the information presented on this third-party website provides a useful starting point for analyzing wind conditions, Hubbell Lighting has not verified any of the information on this third party website and assumes no responsibility or liability for its accuracy. The material presented in the windspeed website should not be used or relied upon for any specific application without competent examination and verification of its accuracy, suitability and applicability by engineers or other licensed professionals. Hubbell Lighting Inc. does not intend that the use of this information replace the sound judgment of such competent professionals, having experience and knowledge in the field of practice, nor to substitute for the standard of care required of such professionals in interpreting and applying the results of the windspeed report provided by this website. Users of the information from this third party website assume all liability arising from such use. Use of the output of these referenced websites do not imply approval by the governing building code bodies responsible for building code approval and interpretation for the building site described by latitude/longitude location in the windspeed report. <http://windspeed.atcouncil.org>

- Allowable EPA, to determine max pole loading weight, multiply allowable EPA by 30 lbs.
- The tables for allowable pole EPA are based on the ASCE 7-05 Wind Map or the Florida Region Wind Map for the 2010 Florida Building Code. The Wind Maps are intended only as a general guide and cannot be used in conjunction with other maps. Always consult local authorities to determine maximum wind velocities, gusting and unique wind conditions for each specific application
- Allowable pole EPA for jobsite wind conditions must be equal to or greater than the total EPA for fixtures, arms, and accessories to be assembled to the pole. Responsibility lies with the specifier for correct pole selection. Installation of poles without luminaires or attachment of any unauthorized accessories to poles is discouraged and shall void the manufacturer's warranty
- Wind speeds and listed EPAs are for ground mounted installations. Poles mounted on structures (such as bridges and buildings) must consider vibration and coefficient of height factors beyond this general guide; Consult local and federal standards
- Wind Induced Vibration brought on by steady, unidirectional winds and other unpredictable aerodynamic forces are not included in wind velocity ratings. Consult Hubbell Lighting's Pole Vibration Application Guide for environmental risk factors and design considerations. http://cdn.beaconproducts.com/content/products/literature/literature_files/Pole_Wind_Induced_Flyer_HL010022.pdf
- Extreme Wind Events like, Hurricanes, Typhoons, Cyclones, or Tornadoes may expose poles to flying debris, wind shear or other detrimental effects not included in wind velocity ratings

Due to our continued efforts to improve our products, product specifications are subject to change without notice.

Everlume

Ceiling or wall Mounted • Wet Location Listed **PROGRESS LED**



Description:

Edgelit technology creates a large glare-free and evenly illuminated surface for a variety of applications for both residential and commercial settings. Offering a low-profile design, LED Flush Mount is available in five sizes: 5", 7", 11", 14" and 18", in a White finish. The integrated driver does not recess into junction box, allowing for easy installation into 4" octagonal, 4" round PVC and 4-1/2" ceiling pan junction boxes. Wet location listed and offers a 50,000-hour LED life.

Specifications:

- Diffused polycarbonate lens
- 5" diameter Everlume Edgelit surface mount with LED technology 3000K, 90 CRI, 800 lumens (delivered)
- Simple installation to steel mounting plate
- Light weight non-conductive polycarbonate luminaire construction
- Polycarbonate diffuser and acrylic light guide controls glare and provides an evenly illuminated surface
- Integrated DC LED power supply capable of flicker-free dimming to 10% brightness with many Triac/Forward Phase and ELV/Reverse Phase dimmers
- Can be installed to 4" octagonal j-box, 4x1/2" round shallow j-box and 4" round PVC j-box
- Can be mounted on ceiling or wall
- Suitable for use **in IC or Non-IC applications**
- Meets California Title 24 JA8-2019 and is Energy Star listed
- Suitable for use in clothes closets when installed in accordance with the NEC 410.16 spacing requirements.
- Maximum 27 luminaires on a circuit (without dimmer).
- 50,000 hour rated lifetime
- Dimmable to 10% brightness (See Dimming Notes)
- Mounting backplate for outlet box included
- 6 in of wire supplied

Performance:

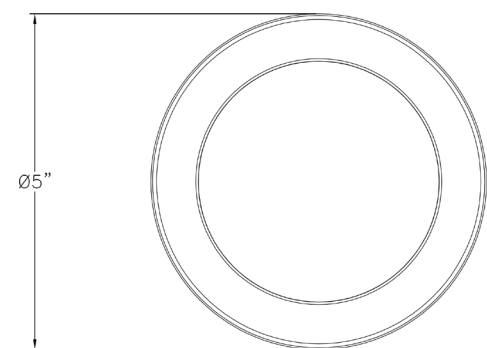
Number of Modules	1
Input Power	12 W
Input Voltage	120 V
Input Frequency	60 Hz
Lumens/LPW (Delivered)	800/69 (LM-79)
CCT	3000 K
CRI	90 CRI
Life (hours)	50000 (L70/TM-21)
EMI/RFI	FCC Title 47, Part 15, Class B
Min. Start Temp	-30 °C
Max. Operating Temp	30 °C
Warranty	5 year warranty
Labels	cCSAus Wet Location Listed
	ENERGY STAR® qualified
	Meets California Title 24 JA8-2019

P810024-030-30



Dimensions:

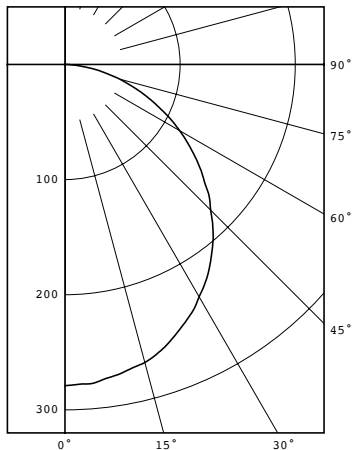
Diameter: 5 in
Height: 1-1/8 in



Photometrics:

ELECTRICAL DATA	P810024-030-30
Input Voltage	120 V
Input Frequency	60 Hz
THD	<20%
EMI/RFI	FCC Title 47, Part 15, Class B
Operating Temperature	-30 °C to 30 °C
Dimming	Yes*
Over-voltage, over-current, short-circuit protected	
*See Dimming Notes for more information	

P810024-030-30
LED Light Engine: 3000 K 90 CRI
System Wattage: 11.5
Fixture delivered lumens: 800
Fixture Efficacy: 69
Spacing Criteria: 1.24



CANDELA DISTRIBUTION		
DEG	CANDELA	LUMENS
0	279	
5	278	26
15	268	75
25	247	114
35	218	136
45	179	139
55	137	122
65	92	91
75	49	52
85	11	13
90	0	

ZONAL LUMEN SUMMARY		
ZONE	LUMENS	%FIXT
0-30	216	28.0
0-40	352	45.8
0-60	613	79.7
0-90	769	100.0
90-180	0	0.0
0-180	769	100.0

Test 19.01734 Test Date 10/01/19

Dimming Notes:

P810024-030-30 is designed to be compatible with many Triac/Forward Phase or ELV/Reverse Phase controls.

The following is a partial list of known compatible dimmer controls.

P810024-030-30**Dimming Controls:**

Eaton AAL06

IDevices IDEV009

Leviton IPI06-1LZ

Leviton 6672

Leviton 6674

Lutron NTEVL-300

Lutron DVELV-300P

Lutron DVCL-253P

Lutron AYCL-153P

Lutron SCL-153P

Lutron TGCL-153-PH-WH

Lutron MACL-153M

Dimming capabilities will vary depending on the dimmer control, load, and circuit installation.

Always refer to dimmer manufacturer instructions or a controls specialist for specific requirements.

Dimmer control brand names where identified above are trade names or registered trademarks of each respective company.

VIPER S

SMALL VIPER LUMINAIRE

FEATURES

- Small size companion to Viper Large
- Wide choice of different LED wattage configurations
- Nine optical distributions
- Designed to replace HID lighting up to 400W MH or HPS
- Suitable for wet locations



*3000K and warmer CCTs only

CONTROL TECHNOLOGY



SPECIFICATIONS

CONSTRUCTION

- Manufactured with die cast aluminum
- Coated with a polyester finish that meets ASTM B117 corrosion test requirements and ASTM D522 cracking and loss of adhesion test requirements
- IFS polyester powder-coat electrostatically applied and thermocured. IFS finish consists of a five stage pretreatment regimen with a polymer primer sealer and top coated with a thermoset super TGIC polyester powder coat finish
- The finish meets the AAMA 2604 performance specification which includes passing a 3,000-hour salt spray test for corrosion resistance and resists cracking or loss of adhesion per ASTM D522 and resists surface impacts of up to 160 inch-pounds
- External hardware is corrosion resistant

OPTICS

- Cartridge is held together with internal brass standoffs soldered to the board so that it can be field replaced as a one-piece optical system
- One-piece silicone gasket ensures a weatherproof seal around each individual optic
- One-piece optical cartridge system consisting of an LED engine, optics, gasket and stainless steel bezel

INSTALLATION

- Mounting options for horizontal arm, vertical tenon or traditional arm mounting available. Mounting hardware included

ELECTRICAL

- Luminaire accepts 100V through 277V, 347V or 480V input 50 Hz to 60 Hz (UNV)
- Power factor is $\geq .90$ at full load
- Dimming drivers are standard, but must contact factory to request wiring leads for purpose of external dimming controls
- Component-to-component wiring within the luminaire may carry no more than 80% of rated load and is certified by UL for use at 600VAC at 90°C or higher
- Plug disconnects are certified by UL for use at 600 VAC, 13A or higher. 13A rating applies to primary (AC) side only
- Fixture electrical compartment contains all LED driver components and a push-button terminal block for AC power connections
- Optional 7-pin ANSI C136.41-2013 Twist-Lock® photo control receptacle available. Compatible with ANSI C136.41 external wireless control devices
- Ambient operating temperature -40°C to 25°C
- Surge protection: 20kA
- Lifeshield™ Circuit ([see Electrical Data](#))

CONTROLS

- Available with an optional passive infrared (PIR) motion sensor capable of detecting motion 360° around the luminaire. When no motion is detected for the specified time, the motion response system reduces the wattage to factory preset level, reducing the light level accordingly. When motion is detected by the PIR sensor, the luminaire returns to full wattage and full light output. Please contact Beacon Products if

OPTICS STRIKE



RELATED PRODUCTS

[Viper Large](#)

project requirements vary from standard configuration

- Available with [Energent](#) for optional set dimming, timed dimming with simple delay, or timed dimming based on time of night
- In addition, Viper can be specified with [SiteSync™ wireless control system](#) for reduction in energy and maintenance costs while optimizing light quality 24/7

CERTIFICATIONS

- DLC® (DesignLights Consortium) Qualified. Please refer to the DLC website for specific product qualifications at www.designlights.org
- Certified to UL 1598 and UL 8750
- 3G rated for ANSI C136.31 high vibration applications with MAF mounting
- IDA approved
- This product is approved by the Florida Fish and Wildlife Conservation Commission. [Separate spec available online](#)

WARRANTY

- 5 year warranty
- See [HLI Commercial and Industrial Outdoor Lighting Warranty](#) for additional information

KEY DATA	
Lumen Range	5400–16,216
Wattage Range	27–136
Efficacy Range (LPW)	100–124
Reported Life (Hours)	L70>377,000
Input Current Range (Amps)	0.1–1.1

VIPER S

SMALL VIPER LUMINAIRE

ORDERING GUIDE

Example: VPS-24L-55-4K7-4W-UNV-A-DB-TL-GENI-04-BC

CATALOG #

VPS					
Series	LED Engine	CCT/CRI ⁷	Distribution	Rotation	Voltage
VPS Viper Small	24L-27 27W, LED array 24L-55 55W, LED array 36L-65 65W, LED array 36L-80 80W, LED array 48L-110 110W, LED array 60L-136 136W, LED array	3K7 3000K, 70 CRI 4K7 4000K, 70 CRI 5K7 5000K, 70 CRI	FR Type 1/Front Row 2 Type 2 3 Type 3 4 Type 4 4W Type 4 Wide 5QM Type 5QM 5R Type 5R (rectangular) 5W Type 5W (round wide) TC Tennis Court	Blank No rotation L Optic rotation left ⁵ R Optic rotation right ⁵	UNV 120-277V 347 347V 480 480V

Mounting	Color	Control Options	Options
A Rectangular Arm (formerly RA) for square or round pole MAF Mast Arm Fitter (formerly SF2) for 2 3/8" OD horizontal arm K Knuckle (formerly PK2) limit to 30° tilt or 2 3/8" OD horizontal arm or vertical tenon WB Wall Bracket AD Universal Arm for square pole AD3 Adapter for 2.4"-4.1" round pole AD4 Adapter for 4.2"-5.3" round pole AD5 Adapter for 5.5"-5.9" round pole AD6 Adapter for 6.0"-6.5" round pole	BL Black Textured DB Dark Bronze Textured GYS Light Gray Smooth PS Platinum Silver Smooth WH White Textured CC Custom Color	7PR 7-Pin Receptacle only (shorting cap, photo control, or wireless control provided by others) 7PR-SC 7-Pin Receptacle w/Shorting Cap 7PR-TL 7-Pin Receptacle w/Twist-Lock® photo control SCP/_F Programmable Occupancy Sensor w/ daylight control ^{1,2,6} GENI-XX ENERGENI ³ SWP SiteSync Pre-Commission ^{1,4} SWPM_F SiteSync Pre-Commission w/ Sensor ^{1,2,4}	F Fusing BSP Bird Spikes BC Backshield (available for FR, 2, 3, 4, 4W Optics)

House Side Shield Accessories

- ☐ **HSS/VP-S/90-FB/XXX** 90° shield front or back
- ☐ **HSS/VP-S/90-LR/XXX** 90° shield left or right
- ☐ **HSS/VP-S/270-FB/XXX** 270° shield front or back
- ☐ **HSS/VP-S/270-LR/XXX** 270° shield left or right
- ☐ **HSS/VP-S/360/XXX** Full shield

Replace XXX with notation for desired finish color. Refer to page 8 for shield images.

Mounting Accessories

- ☐ **VPL-AD-RPA3** 2.4"-4.1" Round Pole Adapter for AD arm
- ☐ **VPL-AD-RPA4** 4.2"-5.3" Round Pole Adapter for AD arm
- ☐ **VPL-AD-RPA5** 5.5"-5.9" Round Pole Adapter for AD arm
- ☐ **VPL-AD-RPA6** 6.0"-6.5" Round Pole Adapter for AD arm

Notes:

- Not available with other wireless control or sensor options
- Specify mounting height; 8 = 8' or less, 40 = 9' to 40'
- Specify routine setting code (example GENI-04). See [ENERGENI brochure](#) and [instructions](#) for setting table and options. Not available with sensor or SiteSync options
- Specify group and zone at time of order. See www.hubbellighting.com/sitesync for further details. Order at least one SiteSync interface accessory SWUSB or SWTAB. Each option contains SiteSync License, GUI, and Bridge Node
- Only available with FR, 2, 3, 4, 4W and 5R distributions
- Order at least one SCP-REMOTE per project location to program and control the occupancy sensor

Accessories and Services (Ordered Separately)

- ☐ **SCP-REMOTE** Remote Control for SCP/_F option. Order at least one per project to program and control the occupancy sensor
- ☐ **SWUSB*** SiteSync interface software loaded on USB flash drive for use with owner supplied PC (Windows based only). Includes SiteSync license, software and USB radio bridge node
- ☐ **SWTAB*** Windows tablet and SiteSync interface software. Includes tablet with preloaded software, SiteSync license and USB radio bridge node
- ☐ **SWBRG** SiteSync USB radio bridge node only. Order if a replacement is required or if an extra bridge node is requested
- ☐ **SW7PR+** SiteSync 7-Pin on fixture module On/Off/Dim, Daylight Sensor 120-480VAC

* When ordering SiteSync at least one of these two interface options must be ordered per project.
+ Available as a SiteSync retrofit solution for fixtures with an existing 7-pin receptacle.

Hubbell Control Solutions — Accessories (Sold Separately)

NX Distributed Intelligence™

- ☐ **NXOFM-1R1D-UNV** On-fixture Module (7-pin), On / Off / Dim, Daylight Sensor with HubbNET Radio and Bluetooth® Radio, 120-480VAC

wiSCAPE® Lighting Control

- ☐ **WIR-RME-L** On-fixture Module (7-pin or 5-pin), On / Off / Dim, Daylight Sensor with wiSCAPE Radio, 110-480VAC

For additional information related to these accessories please visit www.hubbellcontrolsolutions.com. Options provided for use with integrated sensor, please view specification sheet ordering information table for details.

VIPER S

SMALL VIPER LUMINAIRE

CONTROLS

SiteSync — Precommissioned Ordering Information:

When ordering a fixture with the SiteSync lighting control option, additional information will be required to complete the order. The SiteSync Commissioning Form or alternate schedule information must be completed. This form includes Project location, Group information, and Operating schedules. For more detailed information please visit [the SiteSync family page on our website](#) or contact Hubbell Lighting tech support at 800-888-8006.



SiteSync fixtures with Motion control (SWPM) require the mounting height of the fixture for selection of the lens.

Examples: VP-L/80L-235/4K7/3/UNV/A/DB/SWP/
VP-L/80L-235/4K7/3/UNV/A/DB/SWPM-40F/

SiteSync only
SiteSync with Motion Control

SiteSync 7-Pin Module:

- SiteSync features in a new form
- Available as an accessory for new construction or retrofit applications (with existing 7-Pin receptacle)
- Does not interface with occupancy sensors



SW7PR

NX Distributed Intelligence™ Lighting Controls:

Supports both indoor and outdoor applications in a variety of deployment options: wired, wireless and hybrid. Integrates with and enables a wide array of luminaires including those with SpectraSync Color Tuning Technology.



NX Integrated Controls Reference								
NX Option	Sensor	Networkable	Scheduling	Occupancy	Daylight Harvesting	0-10V Dimming	On/off Control	Bluetooth® App Programming
NX Networked – Wireless								
NXOFM-1R1D-UNV	SCLNX	Yes	Yes	Yes	Yes	Yes	Yes	Yes, Bluetooth App

wiSCAPE™:

Supports remote management, monitoring and metering of outdoor wireless lighting applications such as smart campuses, smart cities, parking lots, parking lots and roadways.



wiSCAPE Reference								
wiSCAPE Option	Sensor	Networkable	Scheduling	Occupancy	Daylight Harvesting	0-10V Dimming	On/off Control	Bluetooth® App Programming
Networked – Wireless								
WIR-RME-L	WIR-RME-L	Yes	Yes	No	Yes	Yes	Yes	wiSCAPE Gateway

VIPER S

SMALL VIPER LUMINAIRE

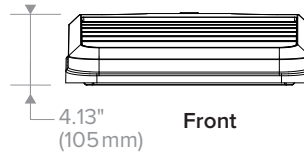
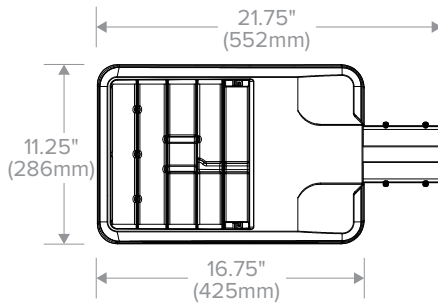
DELIVERED LUMENS

# of LEDs	DRIVE CURRENT (mA)	SYSTEM WATTS	DISTRIBUTION TYPE	5K (5000K nominal, 70 CRI)					4K (4000K nominal, 70 CRI)					3K (3000K nominal, 70 CRI)				
				LUMENS	LPW	B	U	G	LUMENS	LPW	B	U	G	LUMENS	LPW	B	U	G
24	700 mA	55W	FR	6357	118	1	0	1	6486	120	1	0	1	5804	107	1	0	1
			2	6132	114	1	0	1	6257	116	1	0	2	5599	104	1	0	1
			3	6015	111	1	0	2	6137	114	1	0	2	5492	102	1	0	2
			4	5921	110	1	0	2	6034	112	1	0	2	5400	100	1	0	2
			4W	5793	108	1	0	2	5909	110	1	0	2	5272	98	1	0	2
			5QM	6022	112	2	0	1	6145	114	2	0	1	5499	102	2	0	1
			5R	6063	112	3	0	3	6187	115	3	0	3	5536	103	3	0	3
			5W	5908	109	3	0	1	6028	112	3	0	1	5908	102	3	0	1
			TC	6183	113	1	0	1	6309	118	1	0	1	5645	105	1	0	1
36	560 mA	65W	FR	7864	121	1	0	1	8041	124	1	0	1	7189	111	1	0	1
			2	7586	117	1	0	2	7757	119	1	0	2	6934	107	1	0	2
			3	7441	114	1	0	2	7609	117	1	0	2	6802	105	1	0	2
			4	7317	110	1	0	2	7482	112	1	0	2	6688	100	1	0	2
			4W	8690	108	1	0	2	8864	110	1	0	2	7908	98	1	0	2
			5QM	7450	115	3	0	1	7618	117	3	0	1	6810	105	3	0	1
			5R	7501	115	3	0	3	7670	118	3	0	3	6857	105	3	0	3
			5W	7309	112	3	0	2	7473	115	3	0	2	6681	103	3	0	1
			TC	7864	121	1	0	1	8041	124	1	0	1	7189	111	1	0	1
36	700 mA	80W	FR	9535	118	1	0	1	9730	120	1	0	1	8706	107	1	0	1
			2	9197	114	1	0	2	9385	116	1	0	2	8398	104	1	0	2
			3	9022	111	1	0	2	9206	114	1	0	2	8238	102	1	0	2
			4	8871	110	1	0	2	9052	112	1	0	2	8100	100	1	0	2
			4W	11587	108	1	0	3	11819	110	1	0	3	10544	98	1	0	3
			5QM	9033	112	3	0	1	9217	114	3	0	1	8248	102	3	0	1
			5R	9095	112	3	0	3	9280	115	3	0	3	8304	103	3	0	3
			5W	8861	109	3	0	2	9043	112	3	0	2	8092	100	3	0	2
			TC	9275	115	1	0	1	9464	118	1	0	1	8468	105	1	0	1
48	700 mA	110W	FR	12713	118	1	0	1	12973	120	2	0	1	11608	107	1	0	1
			2	12263	114	2	0	2	12513	116	2	0	2	11197	104	2	0	2
			3	12029	111	2	0	2	12175	114	2	0	2	10984	102	1	0	2
			4	11828	110	1	0	3	12069	112	1	0	3	10800	100	1	0	2
			4W	14484	108	2	0	4	14774	111	2	0	4	13180	98	2	0	3
			5QM	12044	112	3	0	2	12290	114	3	0	2	10997	102	3	0	1
			5R	12126	112	3	0	3	12374	115	3	0	3	11072	103	3	0	3
			5W	12126	109	4	0	2	12057	112	4	0	2	10789	100	4	0	2
			TC	12366	115	1	0	2	12619	118	1	0	2	11290	105	1	0	2
60	700 mA	136W	FR	15891	117	2	0	2	16216	120	2	0	2	14511	107	2	0	1
			2	15329	113	2	0	2	15642	116	2	0	2	13997	103	2	0	2
			3	15037	111	2	0	3	15344	113	2	0	3	13730	101	2	0	3
			4	14784	109	1	0	3	15086	111	1	0	3	13500	100	1	0	3
			4W	14802	109	2	0	3	15104	112	2	0	3	13515	100	2	0	3
			5QM	15055	111	3	0	2	15362	114	3	0	2	13747	102	3	0	2
			5R	15158	112	4	0	4	15469	114	4	0	4	13841	102	4	0	4
			5W	14781	109	4	0	2	15083	111	4	0	2	13495	100	4	0	2
			TC	15458	115	1	0	2	15834	118	1	0	2	14113	105	1	0	2

VIPER S

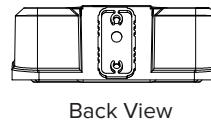
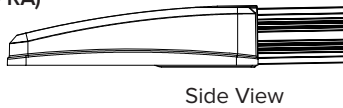
SMALL VIPER LUMINAIRE

DIMENSIONS

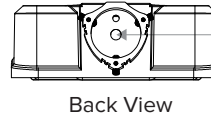
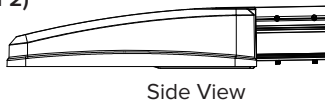


Weight	15.0 lbs (6.8 kg)
EPA	.67 ft ²

A Arm (formerly RA)

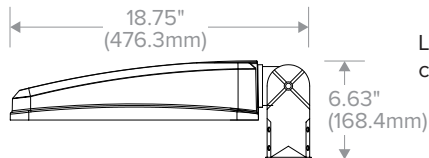


MAF (formerly SF2)



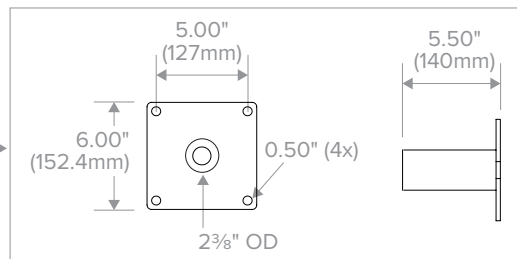
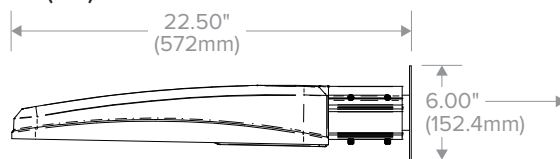
Accepts 2 3/8" OD tenon, min 5" long.

2 3/8" Adjustable Knuckle (K) (formerly PK2)

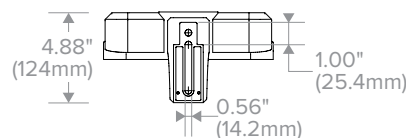
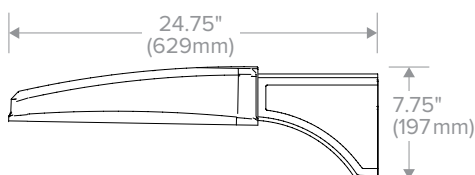


Limit to 30° tilt. Sensor, photocell and wireless controls should not be tilted above horizontal.

Wall Bracket (WB)



AD Decorative Arm



See [page 9](#) for mounting details.

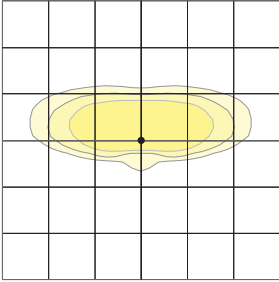
VIPER S

SMALL VIPER LUMINAIRE

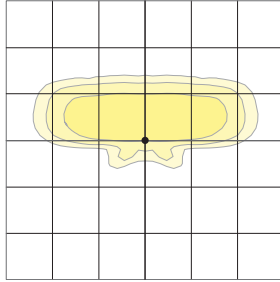
PHOTOMETRY

The following diagrams represent the general distribution options offered for this product. For detailed information on specific product configurations, see [website photometric test reports](#).

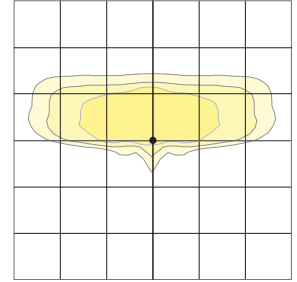
Type FR – Front Row/Auto Optic



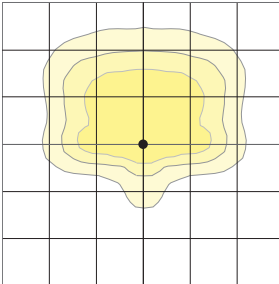
Type 2



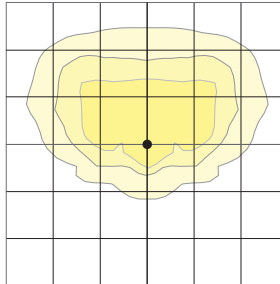
Type 3



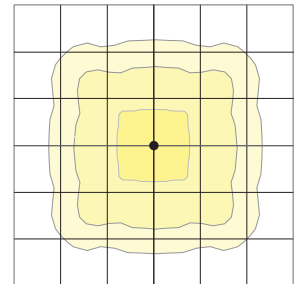
Type 4



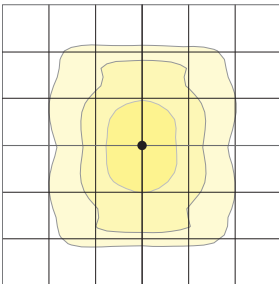
Type 4 Wide



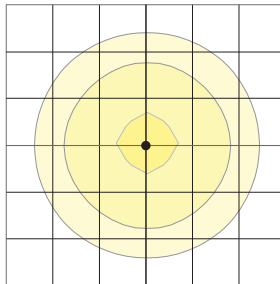
Type 5QM



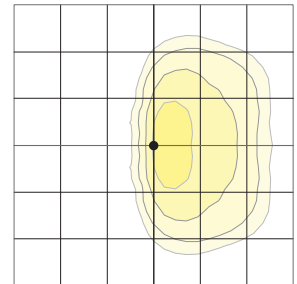
Type 5R (rectangular)



Type 5W (round wide)



Type TC



VIPER S

SMALL VIPER LUMINAIRE

ELECTRICAL DATA

# OF LEDS	NUMBER OF DRIVERS	DRIVE CURRENT (mA)	INPUT VOLTAGE (V)	SYSTEM POWER (w)	CURRENT (Amps)
24	1	700 mA	120	55	0.5
			277		0.2
			347		0.2
			480		0.1
36	1	525 mA	120	65	0.65
			277		0.28
			347		0.22
			480		0.16
		700 mA	120	80	0.7
			277		0.3
			347		0.2
			480		0.2
48	1	700 mA	120	110	0.9
			277		0.4
			347		0.3
			480		0.2
60	1	700 mA	120	136	1.1
			277		0.5
			347		0.4
			480		0.3

PROJECTED LUMEN MAINTENANCE						
Ambient Temp.	0	25,000	50,000	TM-21-11 60,000 ¹	100,000	Calculated L70 (HOURS)
25°C / 77°C	1	0.97	0.95	0.95	0.92	>377,000

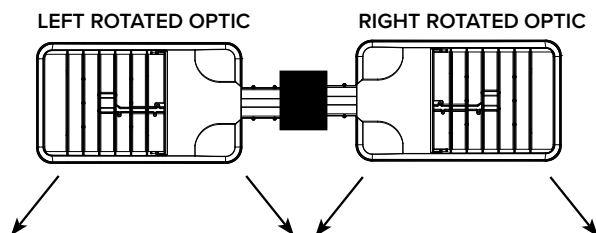
1 Projected per IESNA TM-21-11.
Data references the extrapolated performance projections for the 60 LED base model in a 25°C ambient, based on 10,000 hours of LED testing per IESNA LM-80-08.

LIFESHIELD™ CIRCUIT

Protects luminaire from excessive temperature. The device activates at a specific, factory-preset temperature and progressively reduces power over a finite temperature range. Operation is smooth and undetectable to the eye. Thermal circuit is designed to “fail on”, allowing the luminaire to revert to full power in the event of an interruption of its power supply or faulty wiring connection to the drivers. The device can co-exist with other 0–10V control devices (occupancy sensors, external dimmers, etc.)

ADDITIONAL INFORMATION

ROTATION OPTIONS



VIPER S

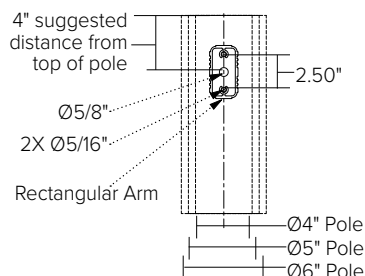
SMALL VIPER LUMINAIRE

ADDITIONAL INFORMATION (CONTINUED)

DRILL PATTERN

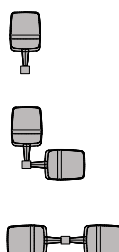
RECTANGULAR ARM (A)

Compatible with Pole drill pattern B3

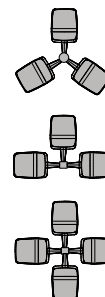


EPA

Config.	EPA
1	.67
2 @ 90°	1.06
2 @ 180°	1.34



Config.	EPA
3 @ 120°	1.68
3 @ 90°	1.73
4 @ 90°	2.12



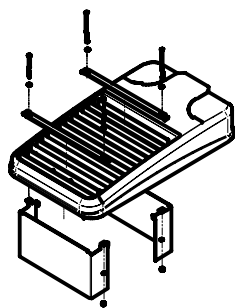
TENON TOP POLE BRACKET ACCESSORIES (ORDER SEPARATELY)

(2 3/8" OD tenon)

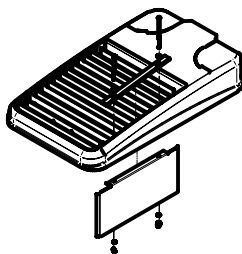
TENON TOP POLE BRACKET ACCESSORIES (Order Separately)

- ☐ SETAVP-XX Square tenon adapter (4 at 90°) for A - Rectangular Arm mounting option only
- ☐ RETAVP-XX Round tenon adapter (4 at 90°) for A - Rectangular Arm mounting option only
- ☐ SETA2XX Square tenon adapter (4 at 90°) for AD - Universal Arm mounting option only
- ☐ RETA2XX Round tenon adapter (4 at 90°) for AD3 - Universal Arm mounting option only
- ☐ TRETA2XX Hexagonal tenon adapter (3 at 120°) for AD - Universal Arm mounting option only

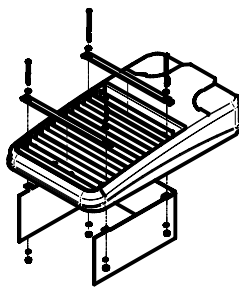
HOUSE SIDE SHIELD FIELD INSTALL ACCESSORIES



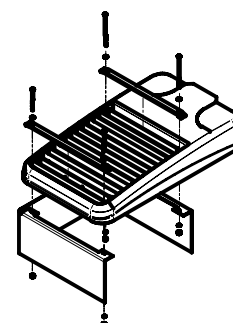
HSS/VP-S/90-FB/XXX
90° shield front or back
(2 shields shown)



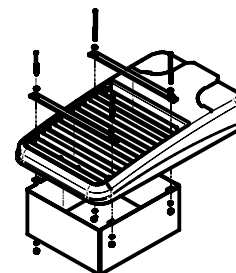
HSS/VP-S/90-LR/XXX
90° shield left or right
(1 shield shown in left orientation)



HSS/VP-S/270-FB/XXX
270° shield front or back
(1 shield shown in back orientation)



HSS/VP-S/270-LR/XXX
270° shield left or right
(1 shield shown in right orientation)



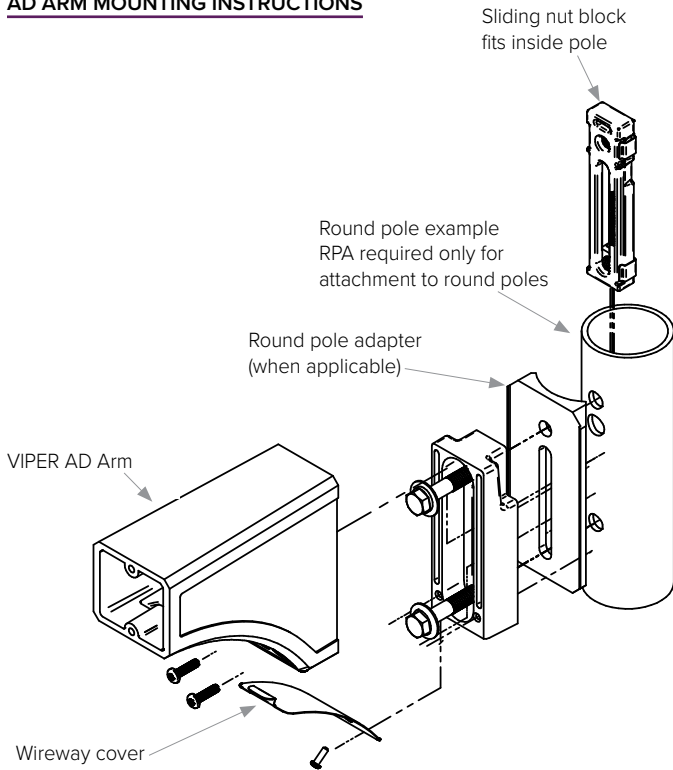
HSS/VP-S/360/XXX
Full shield
(1 shield shown)

VIPER S

SMALL VIPER LUMINAIRE

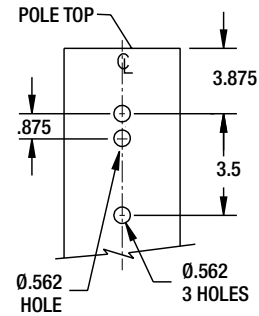
ADDITIONAL INFORMATION (CONTINUED)

AD ARM MOUNTING INSTRUCTIONS



DECORATIVE ARM (AD)

Compatible with pole drill pattern S2



FEATURES

- Traditional or Performance Optics
- Bluetooth® enabled RGBW accent
- Integral NEMA 3R Enclosure
- Dual receptacle power panel
- PA System capability
- IP65 optical system



NU configurations in 3000K and warmer CCTs only

CONTROL TECHNOLOGY



SPECIFICATIONS

CONSTRUCTION

HOUSING:

- Castings shall be low copper aluminum alloy die-cast.
- Gaskets shall be molded silicone to prevent harmful ingress to the lamp and driver compartments.
- Optical system shall be IP66 rated.

SHAFT:

- Aluminum shaft(s) shall be .125" thick extruded aluminum 6061 alloy.
- Concrete shaft(s) shall conform to current specifications for "Portland Cement" ASTM C150, Type I or II. Aggregates shall meet current requirements of "Specifications for Concrete Aggregates," ASTM C33. Water shall be clean and free from deleterious amounts of silt, oil, acids, alkalis or organic materials. Wire for reinforcement shall conform to ASTM A185. Steel for lugs and plates shall conform to ASTM A36, or A283 grade D.
- Concrete shaft(s) shall be medium sand-blasted with anti-graffiti sealer and material color shall be integral to the concrete mix.
- Concrete shaft(s) shall be cured to allow for completion of the hydration process, and result in a 28 day compressive strength of not less than 4,500 psi.
- Concrete shaft(s) shall be cast from fiberglass molds used to insure uniform parts. Mold parting lines may be slightly visible in finished parts.

OPTICS

- LEDs mount to a metal printed circuit board assembly (MCPCB).
- Optical lenses are clear injection molded PMMA acrylic.
- U0 configurations have an optically clear flat tempered glass lens, all other configurations have either an optically clear or high transmission diffused acrylic lens.
- Installation
- Aluminum shaft configurations shall have four 3/8" x 10" x 2" zinc plated L-hook anchor bolts shall be installed with an included template. Nuts and washers shall be provided to level and secure the mounting plate to the anchor bolts.
- Aluminum shaft configurations shall have a mounting plate shall be able to be rotated 20° in either direction during installation for aiming adjustment.
- Concrete shaft configurations shall have four steel mounting tabs for installation on four 1/2" x 10" + 2" zinc electroplated L-hook anchor bolts. Each anchor bolt is supplied with two nuts, two washers, and a rigid pressed board template.
- Concrete shaft configurations shall be palletized with adequate hold-downs to prevent load movement in transit.
- Fixtures must be grounded in accordance with national, state and/or local electrical codes. Failure to do so may result in serious personal injury.

Pavilion™



RELATED PRODUCTS

[Pavilion Square](#)

ELECTRICAL

- Universal voltage, 120 through 277V with a ±10% tolerance. Driver is Underwriters Laboratories approved.
- High voltage configurations, 208-277, 347/480. Driver is Underwriters Laboratories approved.
- "Thermal Shield", secondary side, thermistor provides protection for the sustainable life of LED module and electronic components.
- Drivers are greater than a 0.9 power factor, less than 20% harmonic distortion, and be suitable for operation in -40°C to 40°C ambient environments.
- Luminaire is capable of operating at 100% brightness in a 40°C environment. Both driver and optical array have integral thermal protection that will dim the luminaire upon detection of temperatures in excess of 85°C.

(Specifications continued on page 3)

KEY DATA	
Lumen Range	397–2350
Wattage Range	14–22
Efficacy Range (LPW)	29–108
Reported Life (Hours)	L70/60,000

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

ORDERING GUIDE

Example: PA7R-FT-NU-1-12L-010-5K7-24A-BLS-SWP-UNV-EM

CATALOG #

HOUSING

PA7R									
Model	Top	Optics	Distribution	Light Engine					
PA7R	Pavilion 7" Ø Round	FT Flat Top CT ¹ Crowned Top	NU No Up-light CH Clear Horizontal Lens CL ² Clear Vertical Lens DL ^{2,3} Diffuse Vertical Lens LV Louvers GC Grille with clear vertical lens GD ³ Grille with diffuse vertical lens	1 Type I 2 Type II 3 Type III 3HS Type III + House side shield 4 Type IV 5 Type V	12L-010-5K7 14W (1000 nominal lm), 5000K, 70 CRI 12L-010-4K7 14W (1000 nominal lm), 4000K, 70 CRI 12L-010-3K7 14W (1000 nominal lm), 3000K, 70 CRI 12L-010-AMB 14W, Amber 595 nm Peak 12L-020-5K7 22W (2000 nominal lm), 5000K, 70 CRI 12L-020-4K7 22W (2000 nominal lm), 4000K, 70 CRI 12L-020-3K7 22W (2000 nominal lm), 3000K, 70 CRI 12L-020-AMB ¹¹ 22W, Amber 595 nm Peak				

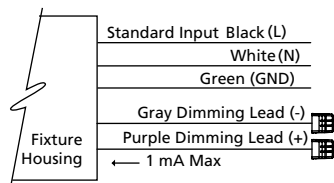
Body	Fixture Finish	Control Options	Voltage	Options
24A 24" OAH, Aluminum	BLS Black Gloss Smooth	SWP ^{1,5} SiteSync pre-commission	UNV 120-277V	EM ⁸ Battery Backup
42A 42" OAH, Aluminum	BLT Black Matte Textured	MW ⁶ Motion sensing (50% dim, 100% output upon detection)	120 ⁷ 120V	LR ⁹ Luminous Accent
42BR-C 42" OAH, Brown Concrete	DBS Dark Bronze Gloss Smooth	SiteSync Accessories [†]	277 ⁷ 208-277V	SF ¹⁰ Single Fuse
42CH-C 42" OAH, Charcoal Concrete	DBT Dark Bronze Matte Textured	SWUSB SiteSync Software on USB	347 ⁷ 347V	DF ¹⁰ Double Fuse
42NG-C 42" OAH, Natural Gray Concrete	GTT Graphite Matte Textured	SWTAB SiteSync Windows® Tablet	480 ⁷ 480V	
42WH-C 42" OAH, White Concrete	LGS Light Grey Gloss Smooth	SWBRG SiteSync Wireless Bridge Node		
42A-ROP ⁴ 42" OAH, Aluminum + Dual Receptacle Outlet Panel and Cover	LGT Light Grey Matte Textured	[†] PRECOMMISSIONED SITESYNC ORDERING INFORMATION: When ordering a fixture with the SiteSync lighting control option, additional information will be required to complete the order. The SiteSync Commissioning Form or alternate schedule information must be completed. This form includes Project location, Group information, and Operating schedules. For more detailed information please visit www.HubbellLighting.com/products/sitesync or contact Hubbell Lighting tech support at (800) 345-4928. Examples: PA7R/FT/NU3/12L-020-3K7/42A/TT/SWP/UNV/LR		
42A-ROP-L ⁴ 42" OAH, Aluminum + Dual Receptacle Outlet Panel and Locking Cover	PSS Platinum Silver Gloss Smooth			
42A-2GEB 42" OAH, Aluminum + Integral Recessed 2 Gang Electrical Box	VGT Verde Green Matte Textured			
42A-SG3 42" OAH, Aluminum + Speaker Grille Enclosure for 3" Ø speaker	WHS White Gloss Smooth			
	WHT White Matte Textured			
	Color Option			
	CC ¹² Custom Color			

- 1 Adds .6 / 15mm to OAH (over all height).
- 2 CL and DL configurations shall be IK04
- 3 Only Available with 1 Type I or 5 Type V distributions only.
- 4 For GFCI/USB limited voltage to 120VAC only.
- 5 Specify group and zone at time of order. See www.hubbelllighting.com/sitesync for more details. Order at least one SiteSync interface accessory SWUSB or SWTAB. Each option contains SiteSync License, GUI, and Bridge Node.
- 6 24"Ø typical coverage area, not Available with CH.
- 7 Dedicated input voltage, required for MW Motions sensing.
- 8 -20°C min starting temperature, 90+ minute run time, output equivalent to 12L-010-#K7
- 9 Adds +5 watts and 1" / 254mm to overall height.
- 10 SF for 120, 277 and 347 input voltage, DF for 208, 240 and 480 input voltage.
- 11 Wild life friendly
- 12 Consult factory for custom color, marine and corrosive finish options

SPECIFICATIONS CONT'D

CONTROLS

- Standard fixtures dimming range shall be from 10% to 100% and be compatible with 0-10V, user-defined, control devices.



- Optional motion sensor shall be capable of detecting motion 360° around the bollard. When no motion is detected for the specified time, the sensor wattage to factory preset level, reducing the light level accordingly. When motion is detected by the sensor, the bollard shall return to full wattage and full light output. Please contact KIM Lighting if project requirements vary from standard configuration.

WIRELESS CONTROLS

BLUETOOTH®:

- The Integral module shall enable the adjustment of the Luminous Accent to dim or change color to the desired setting when paired with Hubbell Lighting RGBW Remote App via cellular/tablet device.
- The integral module shall be compatible with Bluetooth Low Energy (BLE) or Bluetooth® Smart mobile devices operating on iOS or Android Gingerbread operating systems or newer.
- Mobile App, dimming range from 0% to 100% through the use of HUBBELL LIGHTING RGBW app (available on IOS and Android).
- Color selection and adjustment.
- Camera function for color matching.
- Intensity slider for dimming/ramping up.
- Save and rename up to 10 presets.
- Group and rename fixtures.
- Fixture is password protected, refer to instructions to set unique password

DMX:

- 6 wires: Red (DMX+), Brown (DMX-), Yellow (DMX Ground), Black (Line Voltage), White (common), and Green (Ground)
- Single DMX universe with six slots/addresses of virtual control which are pre-programmed at the factory:
- DMX slot/address 1 = red
- DMX slot/address 2 = green
- DMX slot/address 3 = blue
- DMX slot/address 4 = white
- Fully DMX RDM compatible.
- Mobile App specification in additional information section

SITESYNC™

- SiteSync™ wireless control system for reduction in energy and maintenance cost while optimizing light quality 24/7. See ordering information or visit www.hubbelllighting.com/products/sitesync for more details.

OPTIONAL BACKUP BATTERY

- Integral battery backup provides emergency path of egress lighting for the required 90 minutes for 0°C ambient environments or -20°C with thermal jacket.

CAUTION:

- Fixtures must be grounded in accordance with national, state and/or local electrical codes. Failure to do so may result in serious personal injury.

CERTIFICATIONS AND LISTINGS

- Listed to UL1598 and CSA C22.2#250.0-24 for wet locations and 40°C ambient temperatures
- IP65 optical system
- IEC 66262 Mechanical Impact Code IK10
- IDA approved, 3000K and warmer CCTs only.
- RoHS compliant

WARRANTY

- 5 year warranty
- See HLI Standard Warranty for additional information.

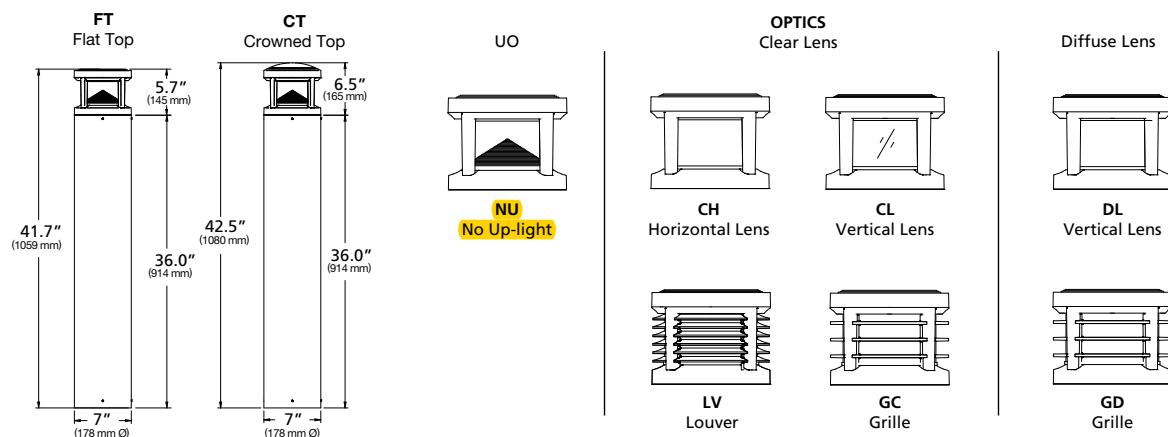
*PRECOMMISSIONED SITESYNC ORDERING INFORMATION: When ordering a fixture with the SiteSync lighting control option, additional information will be required to complete the order. The SiteSync Commissioning Form or alternate schedule information must be completed. This form includes Project location, Group information, and Operating schedules. For more detailed information please visit www.hubbelllighting.com/products/sitesync or contact Hubbell Lighting tech support at (800) 345-4928

Examples:
PA7R/FT/NU3/12L-020-3K7/42A/TT/SWP/UNV/LR



The Bluetooth® word mark and logos are registered trademarks owned by Bluetooth® SIG, Inc. and any use of such marks by Kim Lighting is under license. Other trademarks and trade names are those of their respective owners. Apple, the Apple logo, iPad, iPhone, and iPod Touch are trademarks of Apple Inc., registered in the U.S. and other countries. App Store is a service mark of Apple Inc. Google Play is a trademark of Google Inc.

DIMENSIONS



DELIVERED LUMENS

Drive Current	LEDs #	Nominal Watts	Nominal Lumens	Lens Options	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
						Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
							B	U	G			B	U	G			B	U	G	
550mA	12L	22	2,000	"NU U0 Optics"	1	1044	0	0	0	48	1136	0	0	0	52	1164	0	0	0	54
					2	1199	0	0	0	55	1305	0	0	0	60	1336	0	0	0	62
					3	1128	0	0	1	52	1228	0	0	1	57	1257	0	0	1	58
					3HS	953	0	0	0	44	1037	0	0	0	48	1062	0	0	1	49
					4	1362	0	0	0	63	1482	0	0	1	68	1518	0	0	1	70
					5	1265	1	0	0	58	1377	1	0	0	63	1410	1	0	0	65
				"CH Clear Horizontal Lens"	1	1778	0	3	1	82	1935	0	3	1	89	1981	0	3	1	91
					2	1711	1	3	1	79	1862	1	3	1	86	1906	1	3	1	88
					3	1643	1	3	1	76	1788	1	3	1	82	1831	1	3	1	84
					3HS	1443	0	3	1	66	1570	0	3	1	72	1608	0	3	1	74
					4	1731	0	3	1	80	1884	0	3	1	87	1929	0	3	1	89
					5	1841	1	3	1	85	2003	1	3	1	92	2051	1	3	1	95
				"CL Clear Vertical Lens"	1	1852	0	4	1	85	2016	1	4	1	93	2064	1	4	1	95
					2	1984	1	3	1	91	2159	1	3	1	99	2211	1	3	1	102
					3	2062	1	3	1	95	2244	1	3	1	103	2298	1	3	1	106
					3HS	1665	0	3	1	77	1811	0	3	1	83	1855	0	3	1	85
					4	2055	0	3	1	95	2236	1	3	1	103	2290	1	3	1	106
					5	2109	1	3	1	97	2295	1	3	1	106	2350	1	3	1	108

DELIVERED LUMENS (CONTINUED)

Drive Current	LEDs #	Nominal Watts	Nominal Lumens	Lens Options	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
						Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
							B	U	G			B	U	G			B	U	G	
550mA	12L	22	2,000	"DL Diffused Vertical Lens"	1	1639	1	3	2	76	1783	1	3	2	82	1826	1	3	2	84
					5	1721	1	3	2	79	1873	1	3	2	86	1918	1	3	2	88
				"LV External Louvers"	1	746	0	3	1	34	811	1	3	1	37	831	1	3	1	38
					2	814	1	3	1	37	885	1	3	1	41	907	1	3	1	42
					3	838	1	3	1	39	912	1	3	1	42	934	1	3	1	43
					3HS	605	0	3	1	28	658	0	3	1	30	674	0	3	1	31
					4	879	0	3	1	41	956	1	3	1	44	979	1	3	1	45
					5	888	1	3	1	41	966	1	3	1	45	989	1	3	1	46
				"GC Grill with Clear Lens"	1	1038	0	3	1	48	1130	0	3	1	52	1157	0	3	1	53
					2	1021	0	3	1	47	1111	1	3	1	51	1138	1	3	1	52
					3	1024	0	3	1	47	1114	1	3	1	51	1141	1	3	1	53
					3HS	854	0	3	1	39	930	0	3	1	43	952	0	3	1	44
					4	1109	0	3	1	51	1207	0	3	1	56	1236	0	3	1	57
					5	1037	1	3	1	48	1128	1	3	1	52	1155	1	3	1	53
				"GD Grill with Diffused Lens"	1	1036	0	3	1	48	1127	1	3	2	52	1154	1	3	2	53
					5	953	1	3	1	44	1037	1	3	1	48	1062	1	3	1	49

DELIVERED LUMENS (CONTINUED)

Drive Current	LEDs #	Nominal Watts	Nominal Lumens	Lens Options	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
						Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
							B	U	G			B	U	G			B	U	G	
350mA	12L	14	1,000	"NU U0 Optics"	1	749	0	0	0	54	815	0	0	0	59	835	0	0	0	60
					2	860	0	0	0	62	936	0	0	0	67	958	0	0	0	69
					3	809	0	0	0	58	881	0	0	0	63	902	0	0	0	65
					3HS	684	0	0	0	49	744	0	0	0	53	762	0	0	0	55
					4	977	0	0	0	70	1063	0	0	0	76	1089	0	0	0	78
					5	908	1	0	0	65	988	1	0	0	71	1011	1	0	0	73
				"CH Clear Horizontal Lens"	1	1184	0	3	1	85	1288	0	3	1	92	1319	0	3	1	95
					2	1139	0	3	1	82	1239	0	3	1	89	1269	0	3	1	91
					3	1094	0	3	1	79	1190	0	3	1	85	1219	0	3	1	87
					3HS	960	0	3	1	69	1045	0	3	1	75	1070	0	3	1	77
					4	1152	0	3	1	83	1254	0	3	1	90	1284	0	3	1	92
					5	1225	1	3	1	88	1333	1	3	1	96	1365	1	3	1	98
				"CL Clear Vertical Lens"	1	1146	0	3	1	82	1247	0	3	1	90	1277	0	3	1	92
					2	1228	0	3	1	88	1336	1	3	1	96	1368	1	3	1	98
					3	1276	0	3	1	92	1389	1	3	1	100	1422	1	3	1	102
					3HS	1030	0	3	1	74	1121	0	3	1	80	1148	0	3	1	82
					4	1272	0	3	1	91	1384	0	3	1	99	1417	0	3	1	102
					5	1305	1	3	1	94	1420	1	3	1	102	1454	1	3	1	104
				"DL Diffused Vertical Lens"	1	1086	0	3	1	78	1182	0	3	1	85	1210	0	3	1	87
					5	1141	1	3	1	82	1241	1	3	1	89	1271	1	3	1	91

DELIVERED LUMENS (CONTINUED)

Drive Current	LEDs #	Nominal Watts	Nominal Lumens	Lens Options	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
						Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
							B	U	G			B	U	G			B	U	G	
350mA	12L	14	1,000	"LV External Louvers"	1	489	0	3	1	35	533	0	3	1	38	545	0	3	1	39
					2	534	0	3	1	38	581	0	3	1	42	595	0	3	1	43
					3	550	0	3	1	40	599	0	3	1	43	613	0	3	1	44
					3HS	397	0	3	1	29	432	0	3	1	31	442	0	3	1	32
					4	577	0	3	1	41	628	0	3	1	45	643	0	3	1	46
					5	583	1	3	1	42	634	1	3	1	46	649	1	3	1	47
				"GC Grill with Clear Lens"	1	843	0	3	1	61	917	0	3	1	66	939	0	3	1	67
					2	829	0	3	1	60	903	0	3	1	65	924	0	3	1	66
					3	831	0	3	1	60	905	0	3	1	65	926	0	3	1	67
					3HS	694	0	3	1	50	755	0	3	1	54	773	0	3	1	56
					4	901	0	3	1	65	980	0	3	1	70	1004	0	3	1	72
					5	842	1	3	1	60	916	1	3	1	66	938	1	3	1	67
				"GD Grill with Diffused Lens"	1	728	0	3	1	52	792	0	3	1	57	811	0	3	1	58
					5	782	1	3	1	56	851	1	3	1	61	872	1	3	1	63

PHOTOMETRY

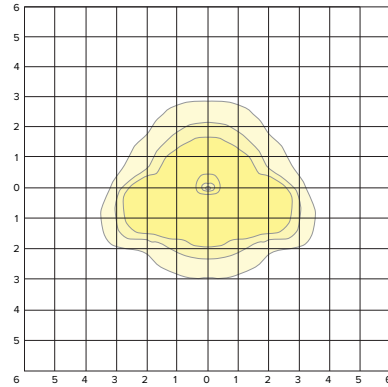
PA7R-CH1-12L-020-4K7

LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	1935
Watts	22
Efficacy	88.0
IES Type	II
BUG Rating	B0-U3-G1
Mounting Height	3.5 ft
Grid Scale	3.5 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	1132	81.8%
Downward House Side	251	18.1%
Downward Total	1384	71%
Upward Street Side	348	63%
Upward House Side	205	37%
Upward Total	553	29%
Total Flux	1937	100%

ISOFOOT CANDLE PLOT


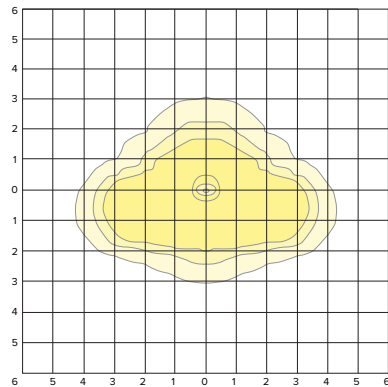
PA7R-CH2-12L-020-4K7

LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	1862
Watts	22
Efficacy	85.0
IES Type	II
BUG Rating	B1-U3-G1
Mounting Height	3.5 ft
Grid Scale	3.5 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	1176	78.7%
Downward House Side	319	21.3%
Downward Total	1494	80%
Upward Street Side	220	60%
Upward House Side	149	40%
Upward Total	369	20%
Total Flux	1863	100%

ISOFOOT CANDLE PLOT


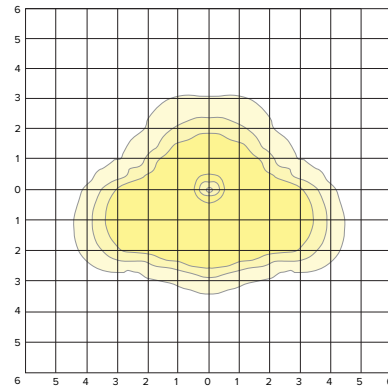
PA7R-CH3-12L-020-4K7

LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	1788
Watts	21.76
Efficacy	82.0
IES Type	III
BUG Rating	B1-U3-G1
Mounting Height	3.5 ft
Grid Scale	3.5 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	1184	80.3%
Downward House Side	290	19.7%
Downward Total	1474	82%
Upward Street Side	185	59%
Upward House Side	130	41%
Upward Total	315	18%
Total Flux	1789	100%

ISOFOOT CANDLE PLOT


PA7R

BOLLARD

PHOTOMETRY

PA7R-CH3HS-12L-020-4K7

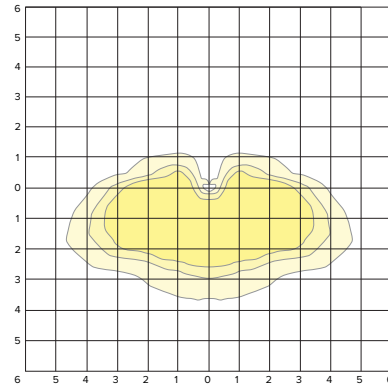
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	1570
Watts	21.64
Efficacy	73.0
IES Type	III
BUG Rating	B0-U3-G1
Mounting Height	3.5 ft
Grid Scale	3.5 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	1187	92.0%
Downward House Side	103	8.0%
Downward Total	1290	82%
Upward Street Side	230	82%
Upward House Side	51	18%
Upward Total	282	18%
Total Flux	1571	100%

ISOFOOT CANDLE PLOT



PA7R-CH4-12L-020-4K7

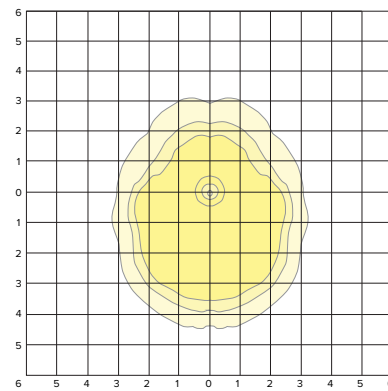
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	1884
Watts	21.73
Efficacy	87.0
IES Type	IV
BUG Rating	B0-U3-G1
Mounting Height	3.5 ft
Grid Scale	3.5 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	1316	84.0%
Downward House Side	250	16.0%
Downward Total	1566	83%
Upward Street Side	184	58%
Upward House Side	136	42%
Upward Total	319	17%
Total Flux	1885	100%

ISOFOOT CANDLE PLOT



PA7R-CH5-12L-020-4K7

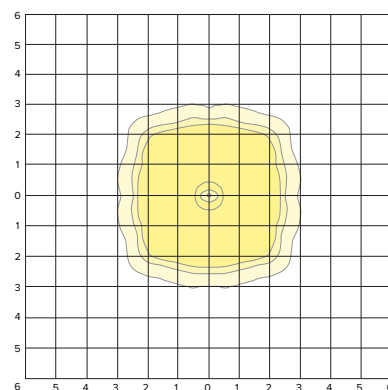
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	2003
Watts	21.73
Efficacy	92.0
IES Type	VS
BUG Rating	B1-U3-G1
Mounting Height	3.5 ft
Grid Scale	3.5 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	825	50.0%
Downward House Side	825	50.0%
Downward Total	1650	82%
Upward Street Side	177	50%
Upward House Side	177	50%
Upward Total	354	18%
Total Flux	2004	100%

ISOFOOT CANDLE PLOT



PA7R

BOLLARD

PHOTOMETRY

PA7R-CL1-12L-020-4K7

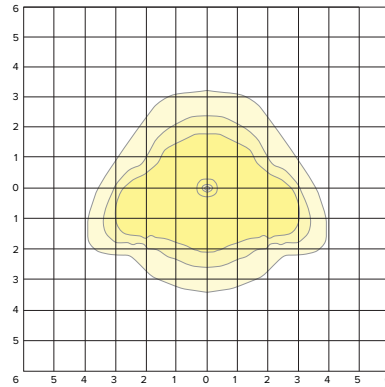
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	2016
Watts	21.7
Efficacy	93.0
IES Type	II
BUG Rating	B1-U4-G1
Mounting Height	3.5 ft
Grid Scale	3.5 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	1078	77.5%
Downward House Side	312	22.5%
Downward Total	1390	69%
Upward Street Side	373	59%
Upward House Side	254	41%
Upward Total	627	31%
Total Flux	2017	100%

ISOFOOT CANDLE PLOT



PA7R-CL2-12L-020-4K7

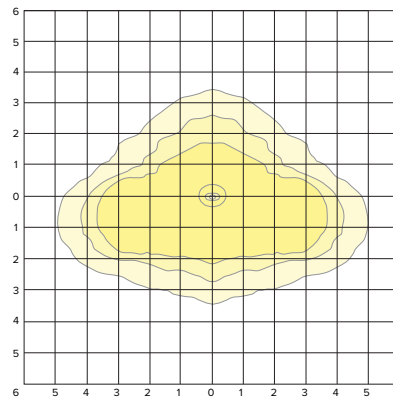
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	2159
Watts	21.69
Efficacy	100.0
IES Type	II
BUG Rating	B1-U3-G1
Mounting Height	3.5 ft
Grid Scale	3.5 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	1325	77.5%
Downward House Side	384	22.5%
Downward Total	1709	79%
Upward Street Side	258	57%
Upward House Side	193	43%
Upward Total	451	21%
Total Flux	2160	100%

ISOFOOT CANDLE PLOT



PA7R-CL3-12L-020-4K7

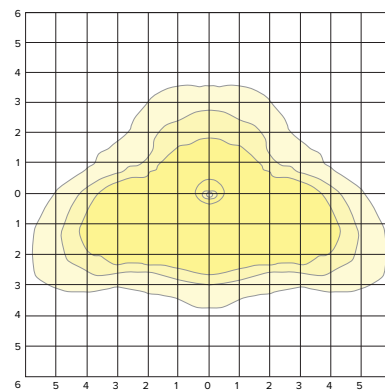
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	2244
Watts	21.72
Efficacy	103.0
IES Type	III
BUG Rating	B1-U3-G1
Mounting Height	3.5 ft
Grid Scale	3.5 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	1472	80.0%
Downward House Side	367	20.0%
Downward Total	1839	82%
Upward Street Side	231	57%
Upward House Side	175	43%
Upward Total	406	18%
Total Flux	2245	100%

ISOFOOT CANDLE PLOT



PA7R

BOLLARD

PHOTOMETRY

PA7R-CL3HS-12L-020-4K7

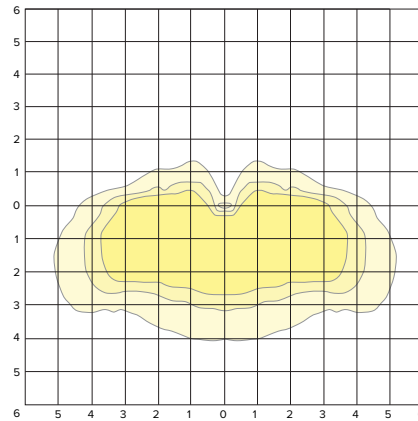
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	1811
Watts	21.7
Efficacy	83.0
IES Type	III
BUG Rating	B0-U3-G1
Mounting Height	3.5 ft
Grid Scale	3.5 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	1361	92.0%
Downward House Side	118	8.0%
Downward Total	1479	82%
Upward Street Side	277	83%
Upward House Side	56	17%
Upward Total	334	18%
Total Flux	1812	100%

ISOFOOT CANDLE PLOT



PA7R-CL4-12L-020-4K7

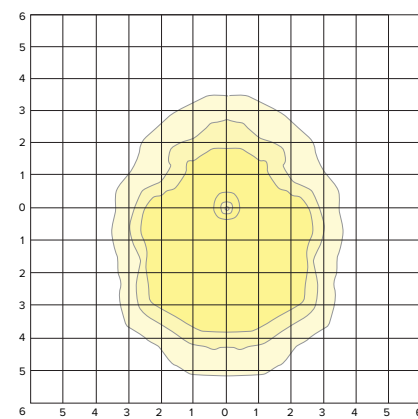
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	2236
Watts	21.71
Efficacy	103.0
IES Type	IV
BUG Rating	B1-U3-G1
Mounting Height	3.5 ft
Grid Scale	3.5 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	1552	84.9%
Downward House Side	275	15.0%
Downward Total	1827	82%
Upward Street Side	230	56%
Upward House Side	180	44%
Upward Total	410	18%
Total Flux	2237	100%

ISOFOOT CANDLE PLOT



PA7R-CL5-12L-020-4K7

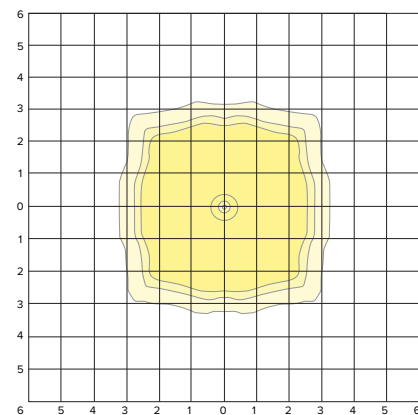
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	2296
Watts	21.75
Efficacy	106.0
IES Type	VS
BUG Rating	B1-U3-G1
Mounting Height	3.5 ft
Grid Scale	3.5 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	937	50.0%
Downward House Side	937	50.0%
Downward Total	1874	82%
Upward Street Side	211	50%
Upward House Side	211	50%
Upward Total	422	18%
Total Flux	2296	100%

ISOFOOT CANDLE PLOT



PA7R

BOLLARD

PHOTOMETRY

PA7R-DL1-12L-020-4K7

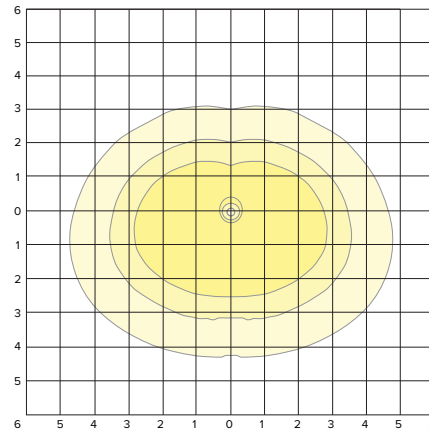
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	1783
Watts	21.74
Efficacy	82.0
IES Type	IV
BUG Rating	B1-U3-G2
Mounting Height	3.5 ft
Grid Scale	3.5 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	746	66.2%
Downward House Side	381	33.8%
Downward Total	1127	63%
Upward Street Side	408	62%
Upward House Side	248	38%
Upward Total	657	37%
Total Flux	1784	100%

ISOFOOT CANDLE PLOT



PA7R-DL5-12L-020-4K7

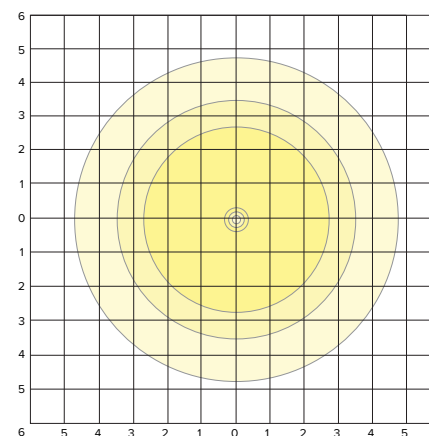
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	1873
Watts	21.75
Efficacy	86.0
IES Type	VS
BUG Rating	B1-U3-G2
Mounting Height	3.5 ft
Grid Scale	3.5 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	656	50.0%
Downward House Side	656	50.0%
Downward Total	1313	70%
Upward Street Side	281	50%
Upward House Side	281	50%
Upward Total	561	30%
Total Flux	1874	100%

ISOFOOT CANDLE PLOT



PA7R-GC1-12L-020-4K7

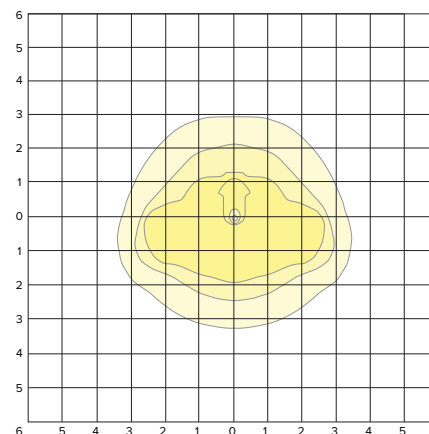
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	1130
Watts	21.73
Efficacy	52.0
IES Type	II
BUG Rating	B0-U3-G1
Mounting Height	3.5 ft
Grid Scale	3.5 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	434	67.6%
Downward House Side	208	32.4%
Downward Total	642	57%
Upward Street Side	298	61%
Upward House Side	191	39%
Upward Total	489	43%
Total Flux	1131	100%

ISOFOOT CANDLE PLOT



PA7R

BOLLARD

PHOTOMETRY

PA7R-GC2-12L-020-4K7

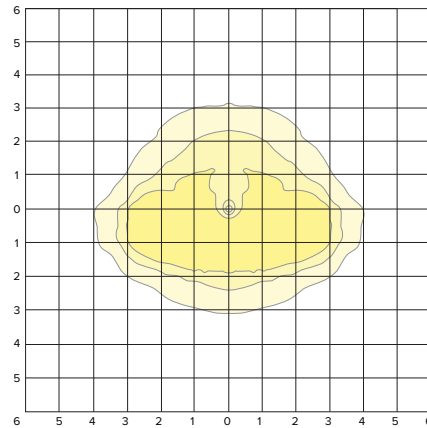
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	1111
Watts	21.59
Efficacy	51.0
IES Type	II
BUG Rating	B1-U3-G1
Mounting Height	3.5 ft
Grid Scale	3.5 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	488	68.3%
Downward House Side	227	31.7%
Downward Total	715	64%
Upward Street Side	238	60%
Upward House Side	159	40%
Upward Total	397	36%
Total Flux	1112	100%

ISOFOOT CANDLE PLOT



PA7R-GC3-12L-020-4K7

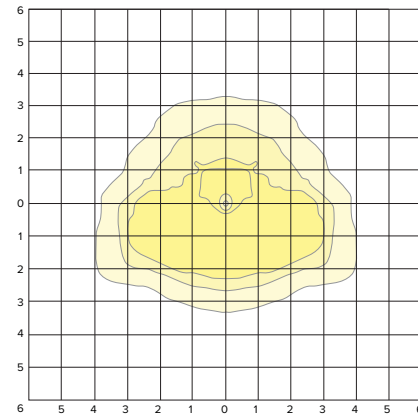
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	1114
Watts	21.7
Efficacy	51.0
IES Type	II
BUG Rating	B1-U3-G1
Mounting Height	3.5 ft
Grid Scale	3.5 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	513	69.8%
Downward House Side	221	30.1%
Downward Total	735	66%
Upward Street Side	234	62%
Upward House Side	146	38%
Upward Total	380	34%
Total Flux	1114	100%

ISOFOOT CANDLE PLOT



PA7R-GC3HS-12L-020-4K7

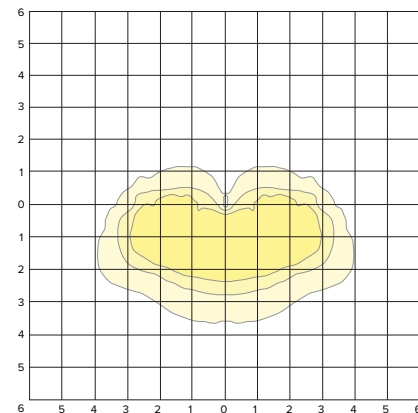
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	930
Watts	21.59
Efficacy	43.0
IES Type	III
BUG Rating	B0-U3-G1
Mounting Height	3.5 ft
Grid Scale	3.5 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	533	87.1%
Downward House Side	79	12.8%
Downward Total	612	66%
Upward Street Side	265	83%
Upward House Side	54	17%
Upward Total	319	34%
Total Flux	931	100%

ISOFOOT CANDLE PLOT



PHOTOMETRY

PA7R-GC4-12L-020-4K7

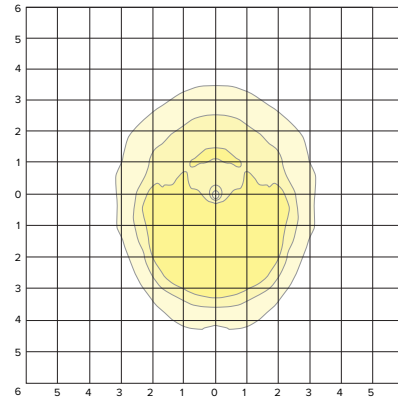
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	1207
Watts	21.59
Efficacy	56.0
IES Type	IV
BUG Rating	B0-U3-G1
Mounting Height	3.5 ft
Grid Scale	3.5 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	591	74.2%
Downward House Side	205	25.8%
Downward Total	796	66%
Upward Street Side	267	65%
Upward House Side	146	35%
Upward Total	412	34%
Total Flux	1208	100%

ISOFOOT CANDLE PLOT



PA7R-GC5-12L-020-4K7

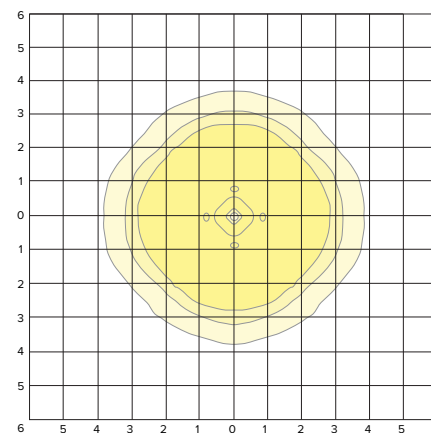
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	1128
Watts	21.59
Efficacy	52.0
IES Type	VS
BUG Rating	B1-U3-G1
Mounting Height	3.5 ft
Grid Scale	3.5 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	382	50.0%
Downward House Side	382	50.0%
Downward Total	764	68%
Upward Street Side	183	50%
Upward House Side	183	50%
Upward Total	365	32%
Total Flux	1129	100%

ISOFOOT CANDLE PLOT



PA7R-GD1-12L-020-4K7

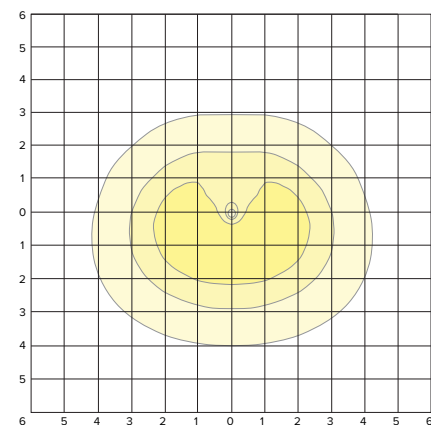
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	1127
Watts	21.71
Efficacy	51.9
IES Type	IV
BUG Rating	B1-U3-G2
Mounting Height	3.5 ft
Grid Scale	3.5 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	407	62.8%
Downward House Side	241	37.2%
Downward Total	648	57%
Upward Street Side	287	60%
Upward House Side	193	40%
Upward Total	479	43%
Total Flux	1127	100%

ISOFOOT CANDLE PLOT



PHOTOMETRY

PA7R-GD5-12L-020-4K7

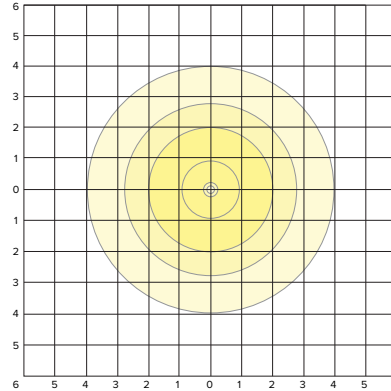
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	1037
Watts	21.6
Efficacy	48.0
IES Type	VS
BUG Rating	B1-U3-G1
Mounting Height	3.5 ft
Grid Scale	3.5 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	309	50.0%
Downward House Side	309	50.0%
Downward Total	618	60%
Upward Street Side	210	50%
Upward House Side	210	50%
Upward Total	420	40%
Total Flux	1038	100%

ISOFOOT CANDLE PLOT



PA7R-LV1-12L-020-4K7

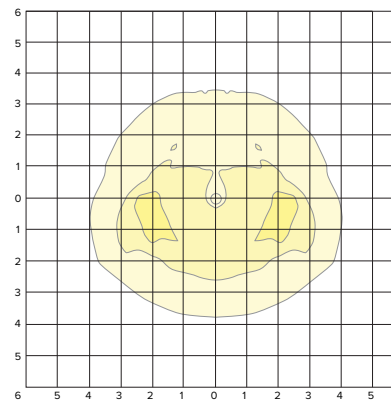
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	811
Watts	21.73
Efficacy	37.0
IES Type	II
BUG Rating	B1-U3-G1
Mounting Height	3.5 ft
Grid Scale	3.5 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	303	57.7%
Downward House Side	222	42.2%
Downward Total	526	65%
Upward Street Side	160	56%
Upward House Side	126	44%
Upward Total	286	35%
Total Flux	812	100%

ISOFOOT CANDLE PLOT



PA7R-LV2-12L-020-4K7

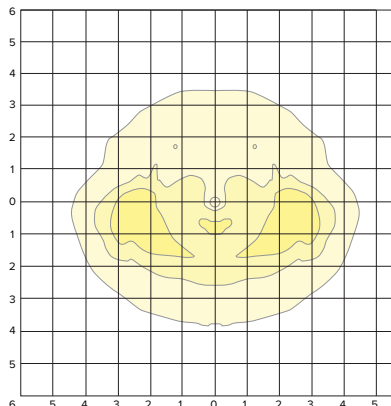
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	885
Watts	21.68
Efficacy	41.0
IES Type	II
BUG Rating	B1-U3-G1
Mounting Height	3.5 ft
Grid Scale	3.5 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	378	61.9%
Downward House Side	233	38.1%
Downward Total	611	69%
Upward Street Side	158	58%
Upward House Side	116	42%
Upward Total	274	31%
Total Flux	885	100%

ISOFOOT CANDLE PLOT



PA7R

BOLLARD

PHOTOMETRY

PA7R-LV3-12L-020-4K7

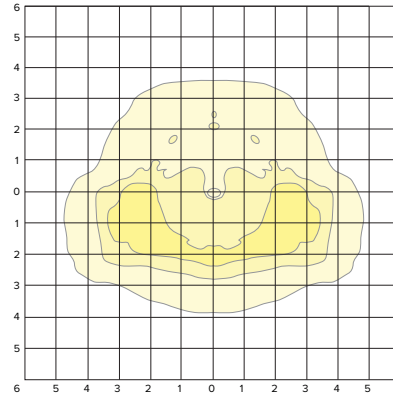
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	912
Watts	21.69
Efficacy	42.0
IES Type	III
BUG Rating	B1-U3-G1
Mounting Height	3.5 ft
Grid Scale	3.5 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	414	63.7%
Downward House Side	233	35.8%
Downward Total	650	71%
Upward Street Side	154	59%
Upward House Side	109	41%
Upward Total	263	29%
Total Flux	913	100%

ISOFOOT CANDLE PLOT



PA7R-LV3HS-12L-020-4K7

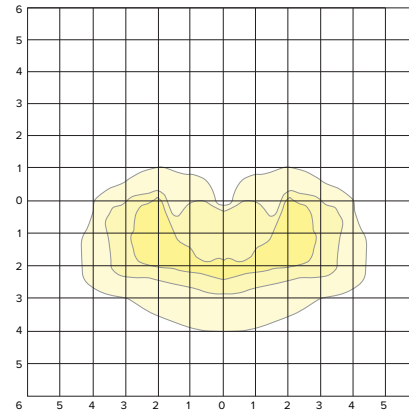
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	658
Watts	21.69
Efficacy	30.0
IES Type	III
BUG Rating	B0-U3-G1
Mounting Height	3.5 ft
Grid Scale	3.5 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	383	82.5%
Downward House Side	81	17.5%
Downward Total	464	71%
Upward Street Side	155	80%
Upward House Side	39	20%
Upward Total	194	29%
Total Flux	658	100%

ISOFOOT CANDLE PLOT



PA7R-LV4-12L-020-4K7

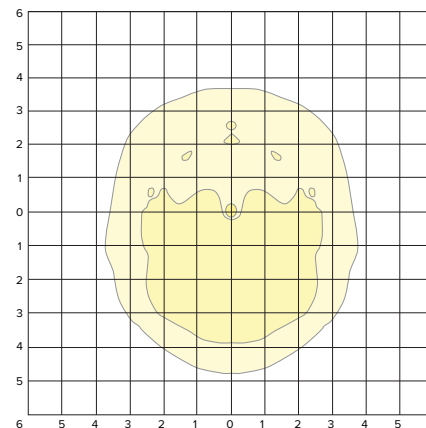
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	956
Watts	21.69
Efficacy	44.0
IES Type	IV
BUG Rating	B1-U3-G1
Mounting Height	3.5 ft
Grid Scale	3.5 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	454	67.5%
Downward House Side	219	32.5%
Downward Total	673	70%
Upward Street Side	176	62%
Upward House Side	107	38%
Upward Total	283	30%
Total Flux	956	100%

ISOFOOT CANDLE PLOT



PA7R

BOLLARD

PHOTOMETRY

PA7R-LV5-12L-020-4K7

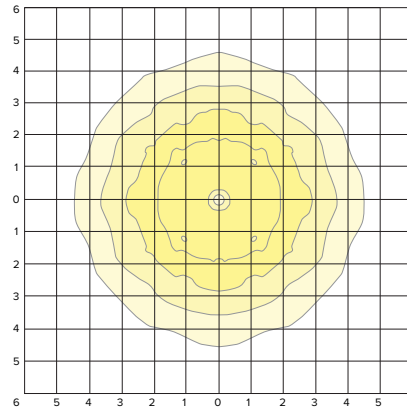
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	966
Watts	21.7
Efficacy	45.0
IES Type	VS
BUG Rating	B1-U3-G1
Mounting Height	3.5 ft
Grid Scale	3.5 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	354	50.0%
Downward House Side	354	50.0%
Downward Total	708	73%
Upward Street Side	129	50%
Upward House Side	129	50%
Upward Total	259	27%
Total Flux	967	100%

ISOFOOT CANDLE PLOT



PA7R-NU1-12L-020-4K7

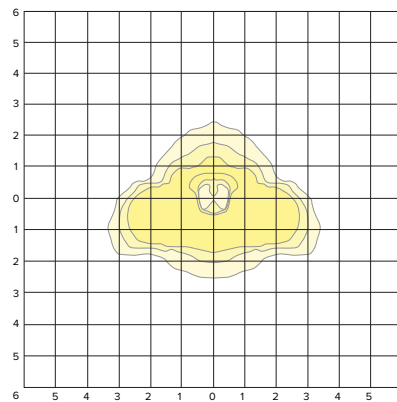
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	1136
Watts	21.75
Efficacy	52.0
IES Type	I
BUG Rating	B0-U0-G0
Mounting Height	3.5 ft
Grid Scale	3.5 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	986	86.7%
Downward House Side	151	13.3%
Downward Total	1137	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	1137	100%

ISOFOOT CANDLE PLOT



PA7R-NU2-12L-020-4K7

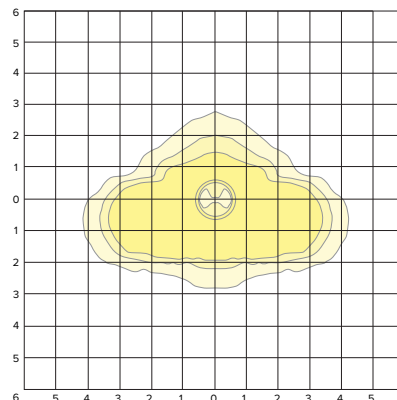
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	1305
Watts	21.74
Efficacy	60.0
IES Type	II
BUG Rating	B0-U0-G0
Mounting Height	3.5 ft
Grid Scale	3.5 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	1073	82.2%
Downward House Side	233	17.8%
Downward Total	1306	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	1306	100%

ISOFOOT CANDLE PLOT



PA7R

BOLLARD

PHOTOMETRY

PA7R-NU3-12L-020-4K7

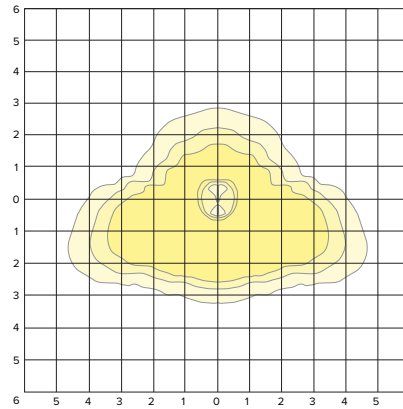
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	1228
Watts	21.76
Efficacy	56.0
IES Type	III
BUG Rating	B0-U0-G1
Mounting Height	3.5 ft
Grid Scale	3.5 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	1035	84.3%
Downward House Side	194	15.8%
Downward Total	1228	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	1228	100%

ISOFOOT CANDLE PLOT



PA7R-NU3HS-12L-020-4K7

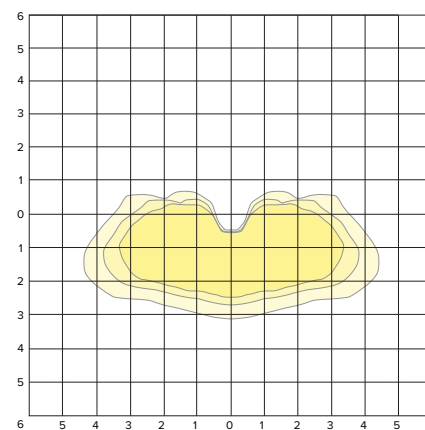
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	1037
Watts	21.74
Efficacy	48.0
IES Type	III
BUG Rating	B0-U0-G0
Mounting Height	3.5 ft
Grid Scale	3.5 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	987	95.1%
Downward House Side	51	4.9%
Downward Total	1038	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	1038	100%

ISOFOOT CANDLE PLOT



PA7R-NU4-12L-020-4K7

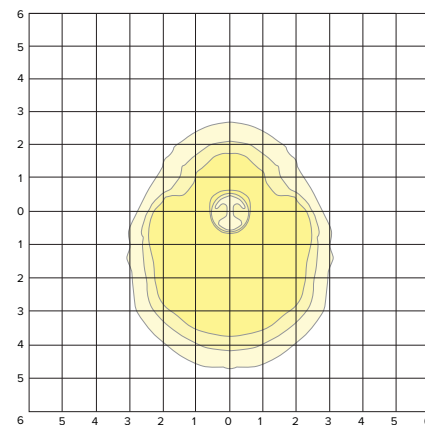
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	1482
Watts	21.67
Efficacy	68.0
IES Type	IV
BUG Rating	B0-U0-G1
Mounting Height	3.5 ft
Grid Scale	3.5 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	1318	88.9%
Downward House Side	164	11.1%
Downward Total	1483	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	1483	100%

ISOFOOT CANDLE PLOT



PA7R

BOLLARD

PHOTOMETRY(CONTINUED)

PA7R-NU5-12L-020-4K7

LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	1377
Watts	21.68
Efficacy	63.0
IES Type	VS
BUG Rating	B1-U0-G0
Mounting Height	3.5 ft
Grid Scale	3.5 ft

ZONAL LUMEN SUMMARY

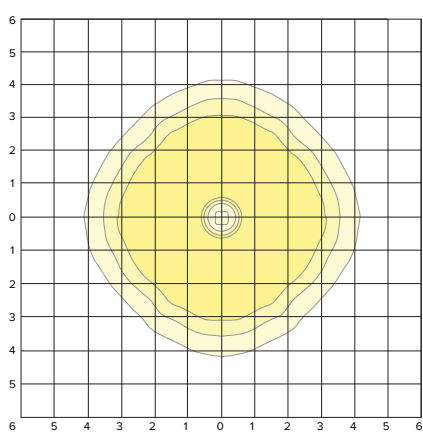
Zone	Lumens	% Luminaire
Downward Street Side	689	50.0%
Downward House Side	689	50.0%
Downward Total	1377	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	1377	100%

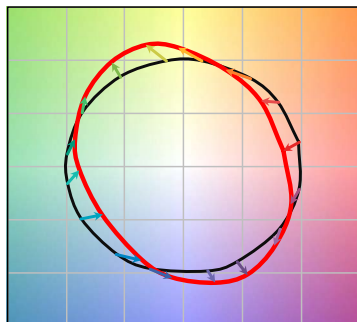
DATE: | LOCATION:

TYPE: | PROJECT:

CATALOG #:

ISOFOOT CANDLE PLOT

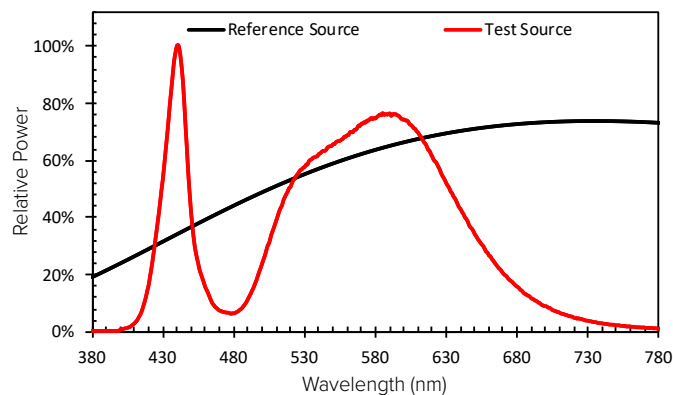


TM-30 DATA
COLOR VECTOR GRAPHIC


— Reference Illuminant — Test Source

TEST SOURCE

R _f	68
R _a	99
CCT(K)	3947
D _{uv}	0.0004
x	0.3831
y	0.3793
CIE R _a	72

SPECTRAL POWER DISTRIBUTION COMPARISON

ELECTRICAL DATA

Electrical												Dimming					
# LED	System Watts	Drive Current	Line Voltage		Amps AC						Min. Power Factor	Max THD (%)	Dimming Range	Source current out of 0-10V		Absolute voltage range on 0-10V (+)	
			VAC	Hz	120	208	240	277	347	480				Min	Max	Min	Max
12	22	550mA	120-480	50/60	0.18	0.11	0.09	0.08	0.06	0.05	>0.9	20	10% to 100%	0mA	1mA	0V	10V
	14	350mA			0.12	0.07	0.06	0.05	0.04	0.03				0mA	1mA	0V	10V

TM-21 Lifetime Calculation - Projected Lumen Maintenance (25°C / 77°C) & (40°C / 104°C)

Hours	0	25,000	36,000	50,000	100,000	Reported L70
Projected Lumen Maintenance	100%	98%	97%	95%	90%	60khrs

CRI Lumen Multiplier

CCT	70 CRI	80 CRI	90 CRI
3000K	1	0.9119	0.7033
4000K	1	0.8941	0.734
5000K	1	0.879	0.7712

Amber Multiplier

CCT	Multiplier
5000K	1
AM	0.1727

2700K Multiplier

CCT	Multiplier
5000K	1
2700K	0.897

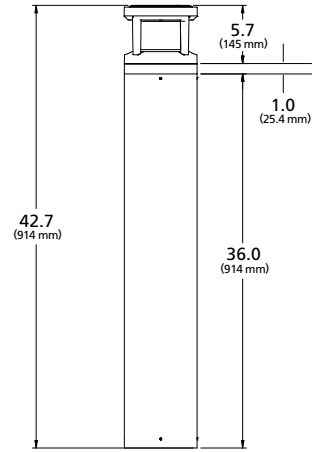
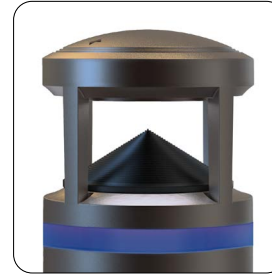
ADDITIONAL INFORMATION

LUMINOUS ACCENT:

- The Luminous Accent option adds an additional 1" / 25.4mm to the overall fixture height and may be controlled via wired DMX RDM or Bluetooth® wireless. The Luminous Accent shall be IK08.

HUBBELL LIGHTING RGBW REMOTE APP

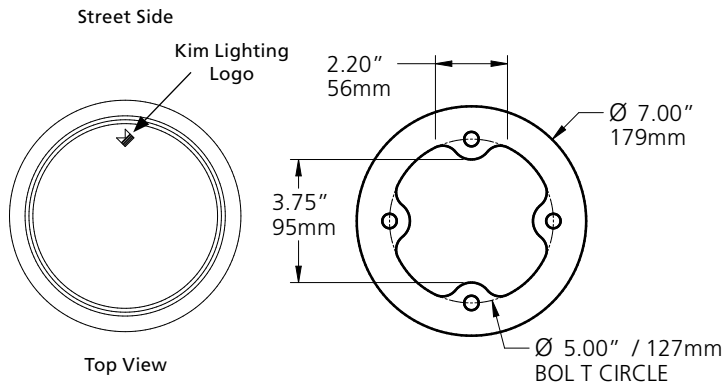
- The Hubbell Lighting RGBW Remote application may be downloaded free of charge from the Apple App Store or Google Play.
- Color selection and adjustment.
- Camera function for color matching.
- Intensity slider for dimming/ramping up.
- Save and rename up to 10 presets.
- Group and rename fixtures.
- Fixture is password protected, refer to instructions to set unique password.



MOUNTING

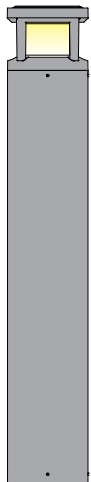
ALUMINUM BODY

- Once attached to base mounting plate, fixture may be rotated 20° in either direction and secured with set screws at base of the bollard body. KIM Lighting logo indicates 'street side' output.

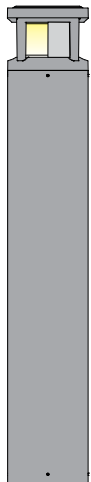


SHIELDING

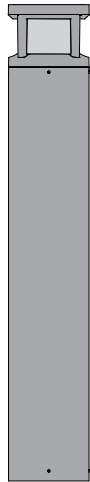
- HS configurations feature factory installed 180° shield(s) that may also be installed in the field for any Optic configuration.



HSFront View



HS Side View

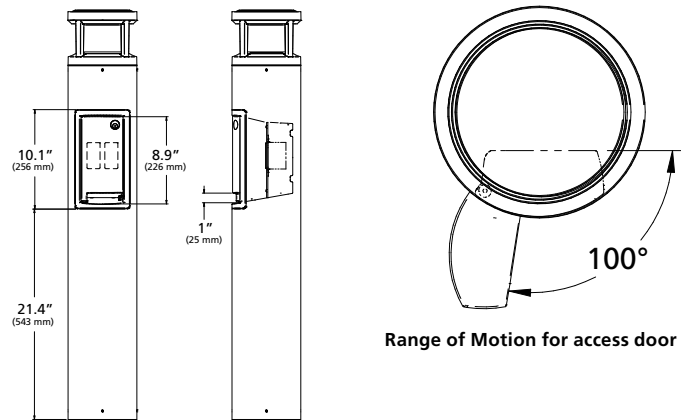


HS Back View

ADDITIONAL INFORMATION (CONTINUED)

RECEPTACLE OUTLET PANEL

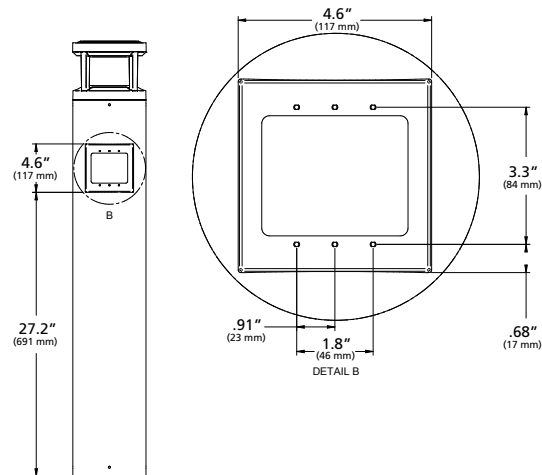
- The Receptacle outlet panel shall be NEMA 3R rated for wet location(s) while in use and shall be compatible with any single receptacle outlet device with standard mounting holes. Door shall be self-closing. Tamper resistant lock must be specified at time of order. Devices and device wiring by others.



HUBBELL WIRING DEVICES USB DEVICES: <http://ecatalog.hubbell-wiring.com/productinformation/viewcatalog.aspx?Dest=hubbell-wiring.com/press/catalog/A.pdf&Page=18>

INTEGRAL ELECTRICAL BOX

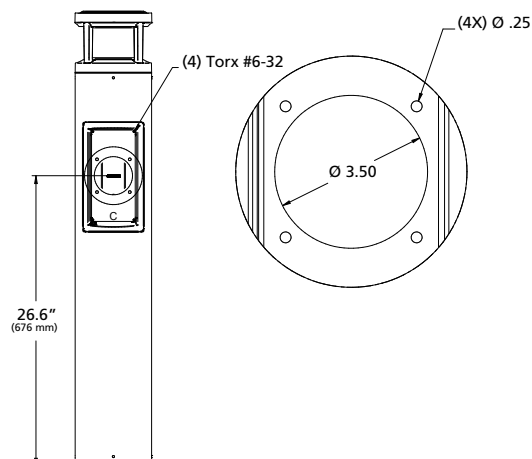
- The integral 2 Gang electrical box shall be # deep and have standard mounting holes for installing either a single receptacle outlet device or a pair of single receptacle outlet device. Devices, device wiring, device hardware and bezel by others.



HUBBELL WIRING DEVICES GFCI DEVICES: <http://ecatalog.hubbell-wiring.com/productinformation/viewcatalog.aspx?Dest=hubbell-wiring.com/press/catalog/K.pdf>

SPEAKER GRILLE ENCLOSURE

- The speaker grille enclosure shall accommodate a 3"Ø marine grade speaker rated for outdoor use. Grille shall be secured with (4) Torx # screws for accessibility. Mounting provisions as shown. Speaker, mounting hardware and wiring by others.



CITYMULTI®

3-TON PUMY-P36NKMU3(-BS)

Job Name: **Deering Ave**

One per apartment and one

System Reference: **VRF Systems**

for common areas

Date:



UNIT OPTION

- ☐ Standard Model.....PUMY-P36NKMU3
☒ Seacoast (BS) Model.....PUMY-P36NKMU3-BS

ACCESSORIES

- ☒ Optional Defrost Heater.....PAC-SJ20BH-E
☒ Drain Pan.....PAC-SH97DP-E
☒ Front Wind Baffle (One Piece)*.....WB-PA3
☐ Air Deflector Vertical.....ADV-1
☐ Air Outlet Guide (One Piece)*.....PAC-SH96SG-E
☐ Header Kit.....for details see Pipe Accessories Submittal
☐ Joint Kit.....for details see Pipe Accessories Submittal

*PUMY requires two outlet guides and two wind baffles for installation

Specifications			System
Unit Type			PUMY-P36NKMU3(-BS)
Cooling Capacity (Nominal)		BTU/H	36,000
Heating Capacity (Nominal)		BTU/H	42,000
Guaranteed Operating Range	Cooling ^{1,2}	°F [°C]	5.0~115.0 [-15.0~46.0]
	Heating	°F [°C]	-13~59 [-25.0~15.0]
External Dimensions (H x W x D)		In. [mm]	52-11/16 x 41-11/32 x 13+1 [1,338 x 1050 x 330+25]
Net Weight		Lbs. [kg]	271 [123]
External Finish			Galvanized sheets (+power coating for -BS type) <MUNSELL 3Y 7.8/1.1>
Electrical Power Requirements	Voltage, Phase, Hertz, Power Tolerance		208/230V, 1-phase, 60 Hz,
Minimum Circuit Ampacity		A	29.0
Maximum Overcurrent Protection		A	44
Recommended Fuse Size		A	30
SCCR		kA	5
Refrigerant Piping Diameter	Liquid (High Pressure)	In. [mm]	3/8 [9.52] Flare
	Gas (Low Pressure)	In. [mm]	5/8 [15.88] Flare
Indoor Unit Connectable	Total Capacity		50.0~130.0% of outdoor unit capacity
	Model/Quantity		P04~P36/1.0~11.0
Sound Pressure Levels		dB(A)	49.0~53.0
		Cooling	28.0% to 100.0 %
Compressor Operating Range		Heating	18.0% to 100.0%
Compressor	Type x Quantity		INVERTER-driven Scroll Hermetic x 1
Compressor Motor Output		kW	2.8
Refrigerant	Type x Original Charge		R410A x 10 lbs + 9 oz [4.8 kg]
	High Pressure Protection		High pressure sensor, High pressure switch 601 psi (4.15 MPa)
Protection Devices	Inverter Circuit (Comp./Fan)		Over-heat protection, Over-current protection
	Compressor		Discharge thermo protection, Over-current protection
Lubricant			FV50S (2.3 liters)
AHRI Ratings (Ducted/Non-ducted)	EER		12.6/15.0
	SEER		18.3/22.3
	COP		3.7/4.0
	HSPF		11.2/12.0

NOTES:

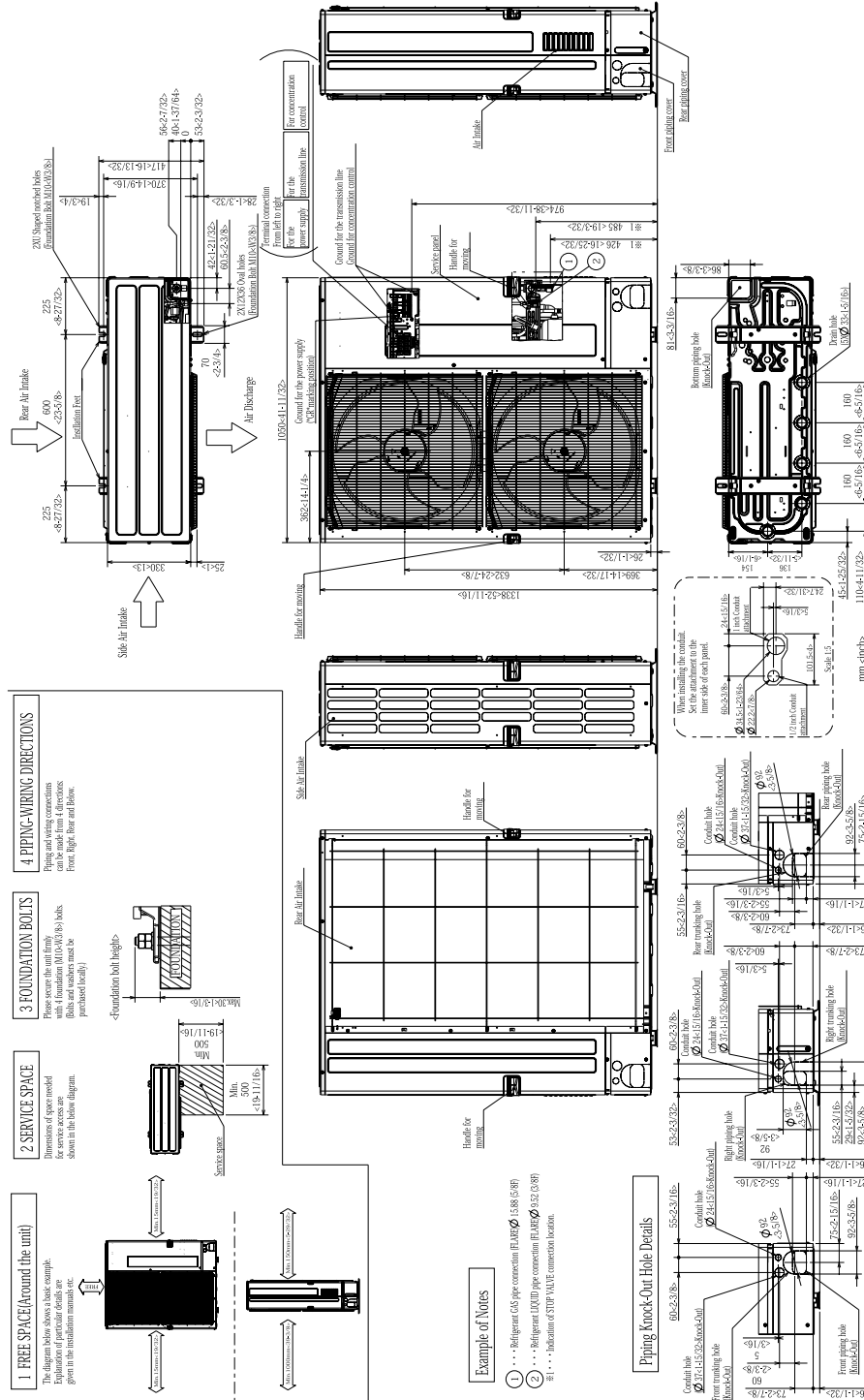
Cooling | Indoor: 81 ° F (27 ° C) DB / 66 ° F (19 ° C) WB; Outdoor: 95 ° F (35 ° C) DB

Heating | Indoor: 68° F (20° C) DB, Outdoor 45° F (7° C) DB / 43° F (6° C) WB

¹When using Wind Baffles [WB-PA3], the minimum operating range is 5° F. Without Wind Baffles, the minimum operating range is 23° F²When connecting PKFY-P06NBMU/P08NHMU, PFFY-P06/08/12NEMU or PFFY-P06/08/12NRMU indoor units, the minimum operating range is 50° F

OUTDOOR UNIT: PUMY-P36NKMU3(-BS) – DIMENSIONS

Unit: mm(in)

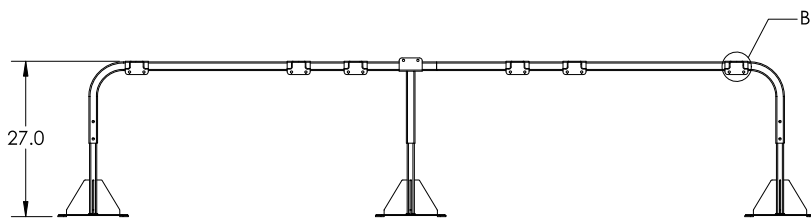
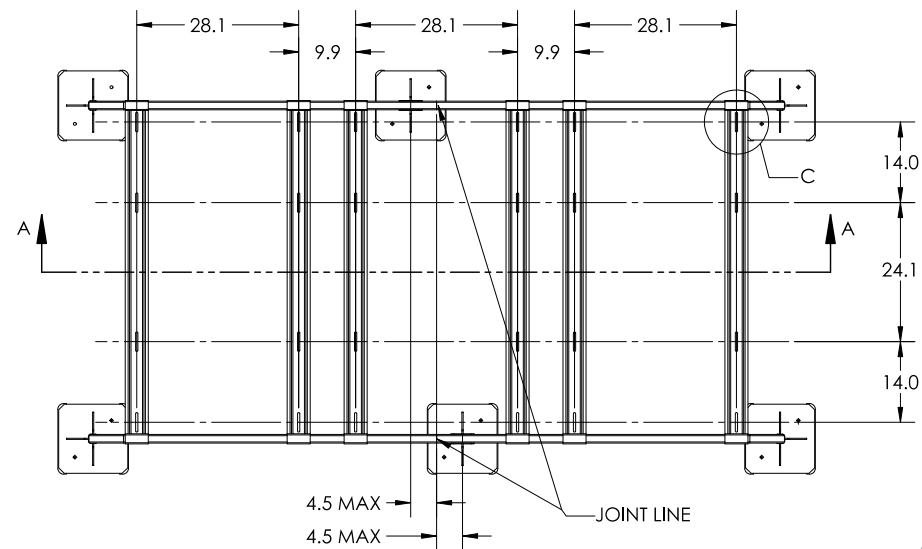


NOTES:
SEACOAST PROTECTION
 Anti-corrosion Protection: A coating treatment is applied to condenser coil for protection from air contaminants.
 Standard: Salt Spray Test Method - no unusual rust development to 480 hours.
 Sea Coast (BS): Salt Spray Test Method (JRA 9002) - no unusual rust development to 960 hours.

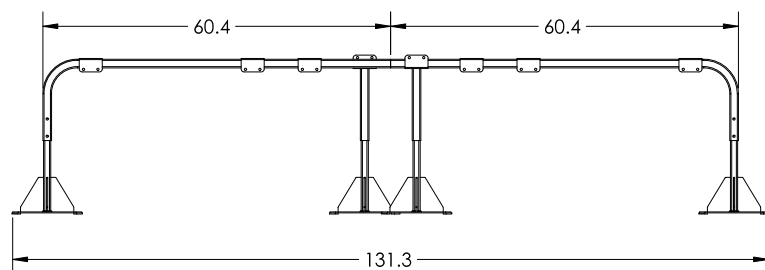
1340 Satellite Boulevard Suwanee, GA 30024
 Toll Free: 800-433-4822 www.mehvac.com

FORM# PUMY-P36NKMU3(-BS) - 202008

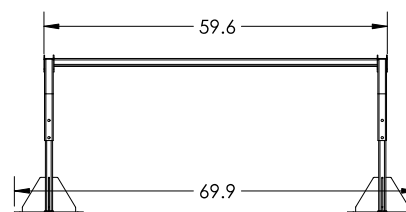
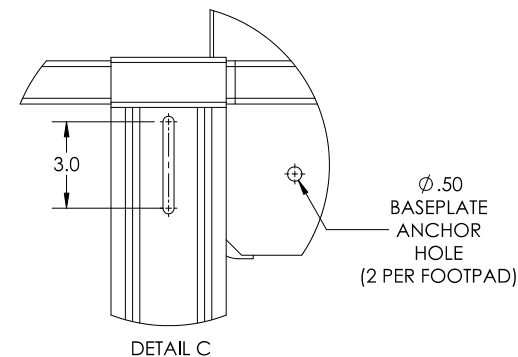
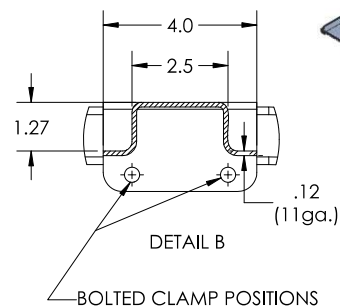
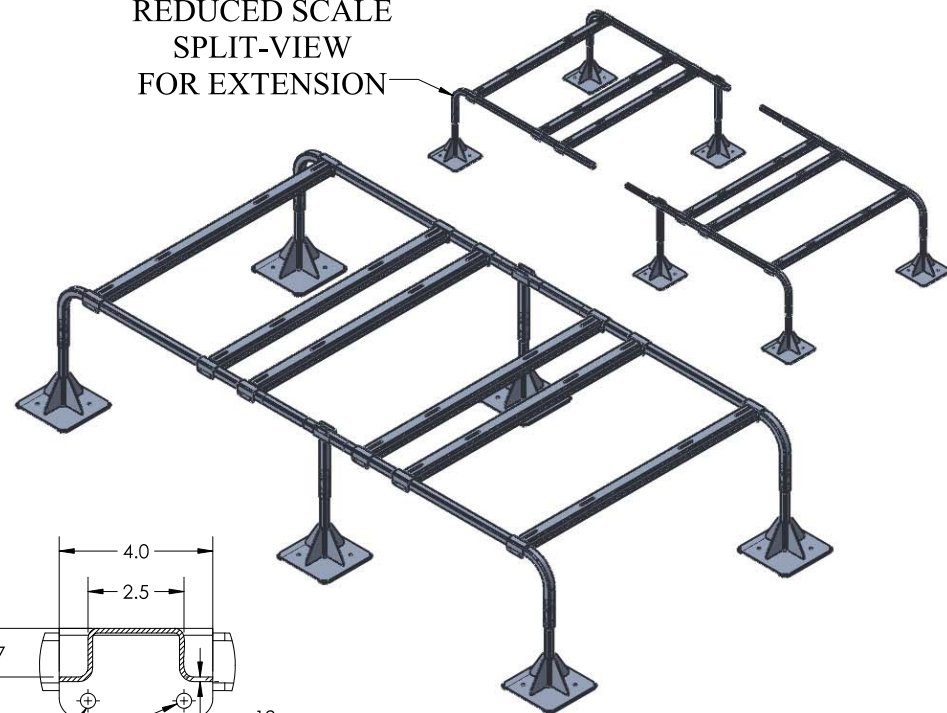




SECTION A-A

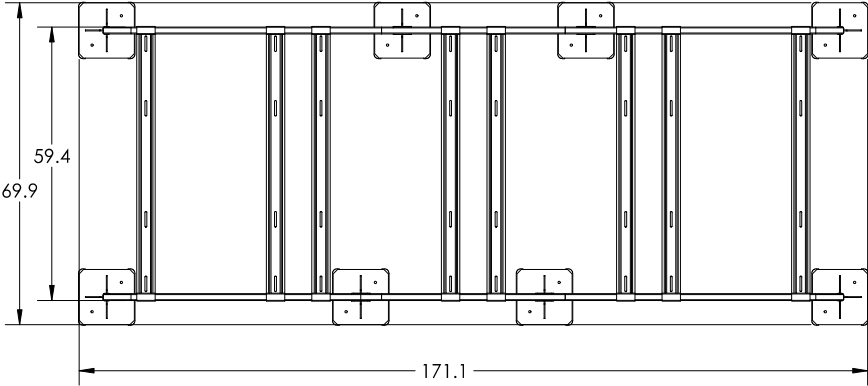


REDUCED SCALE
SPLIT-VIEW
FOR EXTENSION



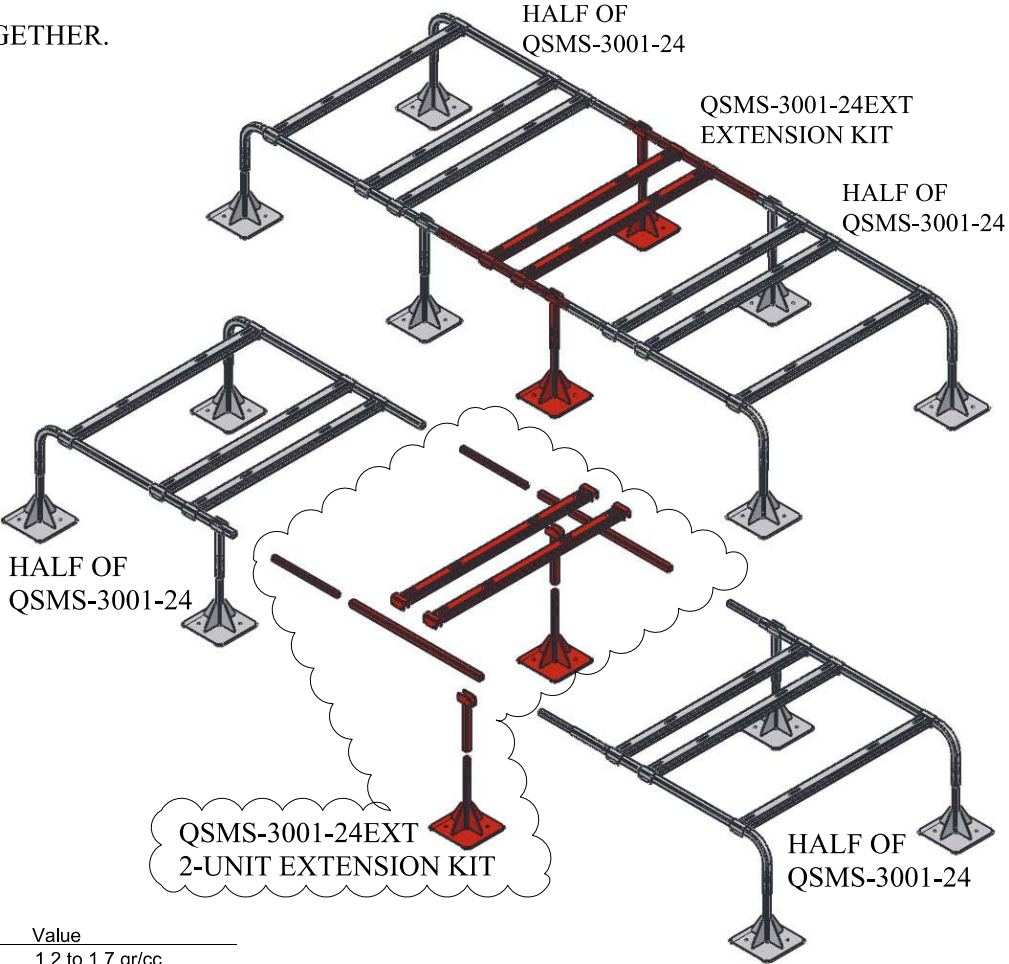
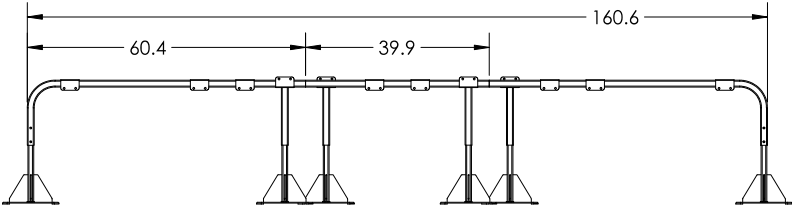
QSMS-3001-24

THESE VIEWS SHOW QSMS-3001-24 AND QSMS-3001-24EXT TOGETHER.



EACH EXTENSION KIT ADDS 40" TO THE OVERALL LENGTH.

ALL WIDTH DIMENSIONS ARE UNCHANGED.



Mat'l Spec. For All QuickSling Tubing Components

ASTM A500	Grade-C	HSS	UNS	K02705
Minimum Strength Requirements				
Tensile	Yield (shaped)	elongation		
MPa (ksi)	MPa (ksi)	%		
425 (62)	345 (50)	21		

QuickSling Stands all use 7000 series TGIC polyester powder coatings designed to produce film coatings in the range of 70 +/-10 microns.

Powder Coat Properties	Test Method	Value
Specific Gravity	ASTM D5965	1.2 to 1.7 gr/cc
Gloss (60deg)	ASTM D523	Visual Glossy/Matt
Impact	ASTM D2794	Min. 50 inch/lb.
Flexibility	ASTM D522	180deg, 1/4" mandrel
Pencil Hardness	ASTM D 3363	2H
Cross Hatch Adhesion	ISO 2409	100%, GT-0
Salt Spray	ASTM D 117	1000 + Hours
Humidity Resistance	ASTM D 2247	1000 + Hours
UV	ASTM G154	1000 Hours
Weathering		2 yrs South Florida

QSMS-3001-24EXT
USED TO EXTEND STAND
IN MULTIPLES OF 2 SUPPORTED
UNITS PER EXTENSION

FV Preconditioner Series

FV-600

FV-1000

FV-2000

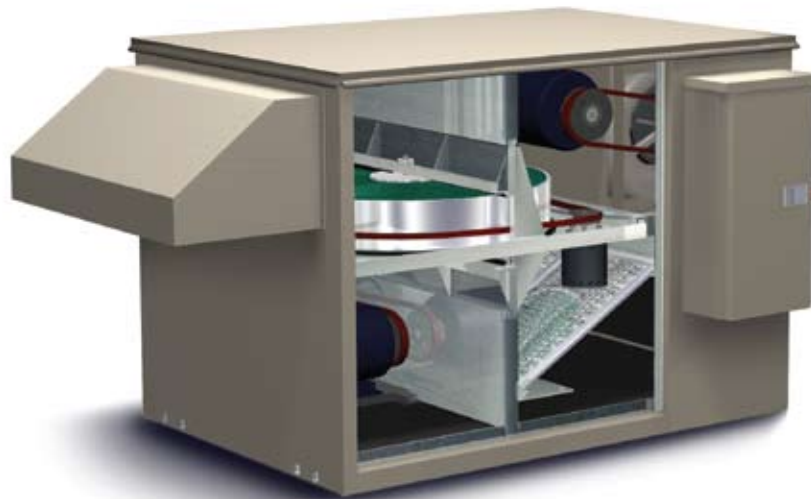
FV-3000

FV-4000

FV-5000

FV-7500

FV-9000



Technical Guide

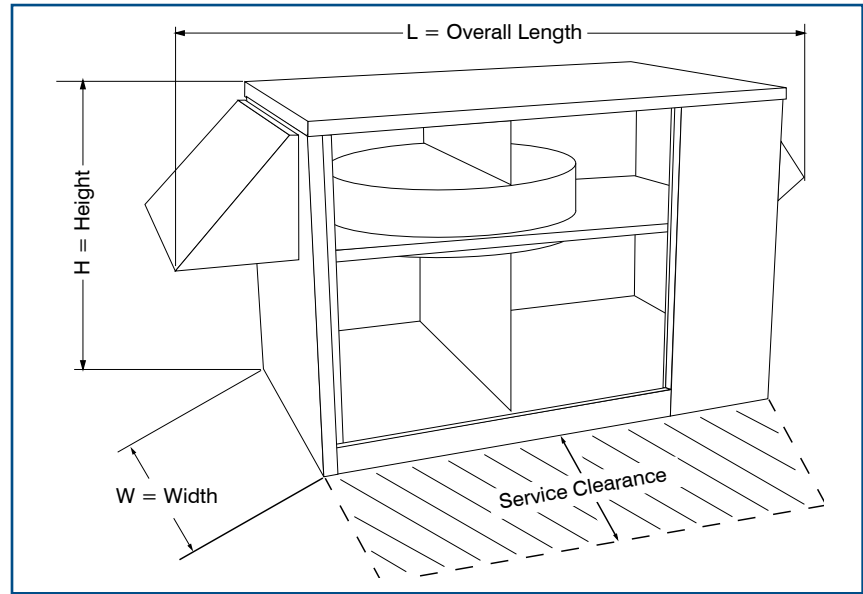
Figure 6. Overall unit dimensions.

Model	L	H	W
FV-600	69.5	31.0	29.0
FV-1000	69.5	31.0	29.0
FV-2000	80.6	32.4	37.0
FV-3000	96.0	47.7	45.0
FV-4000	126.5	51.5	54.0
FV-5000	126.5	51.5	54.0
FV-7500	143.0	58.6	64.6
FV-9000	143.0	58.6	64.6

Service clearance is equal to the width of the unit.

500 lbs + curb

Overall Dimensions



Benefits Provided

Economical Compliance with ASHRAE Standard 62

To achieve acceptable indoor air quality, ASHRAE Standard 62 recommends a three-to-four-fold increase in the amount of outdoor air provided to most facilities. In addition, ASHRAE recommends that this increased outdoor air quantity be introduced continuously while spaces are occupied. By recovering up to 80 percent of the total energy normally exhausted from facilities, FV preconditioning allows conventional HVAC systems to effectively handle this increase in outdoor air load without increasing the size of the heating/cooling capacity while decreasing energy consumption.

Reduced Equipment First Cost

Without the addition of effective energy recovery, the capacity of HVAC systems must be increased significantly to handle the greater outdoor air loads associated with higher ventilation rates. Increasing equipment size often requires the addition of reheat and sophisticated control sequences to control humidity as well as temperature. The FV preconditioner often reduces project first cost by allowing smaller HVAC units and duct systems to be used, without the need for reheat or complex controls.

Curb Mounting

The FV series is generally installed on a curb (unless mounted indoors). The curb ships separately for preinstallation to simplify rigging. The dimensions of the curbs required for the FV units are listed below.

The FV-H and the FV-V have the same curb dimensions. The curb for an FV unit can be provided by SEMCO or purchased from a curb manufacturer provided it is designed to support the weight of the FV unit specified in this manual and conforms to the dimensions listed in the table below.

Figure 11. Curb dimensions.

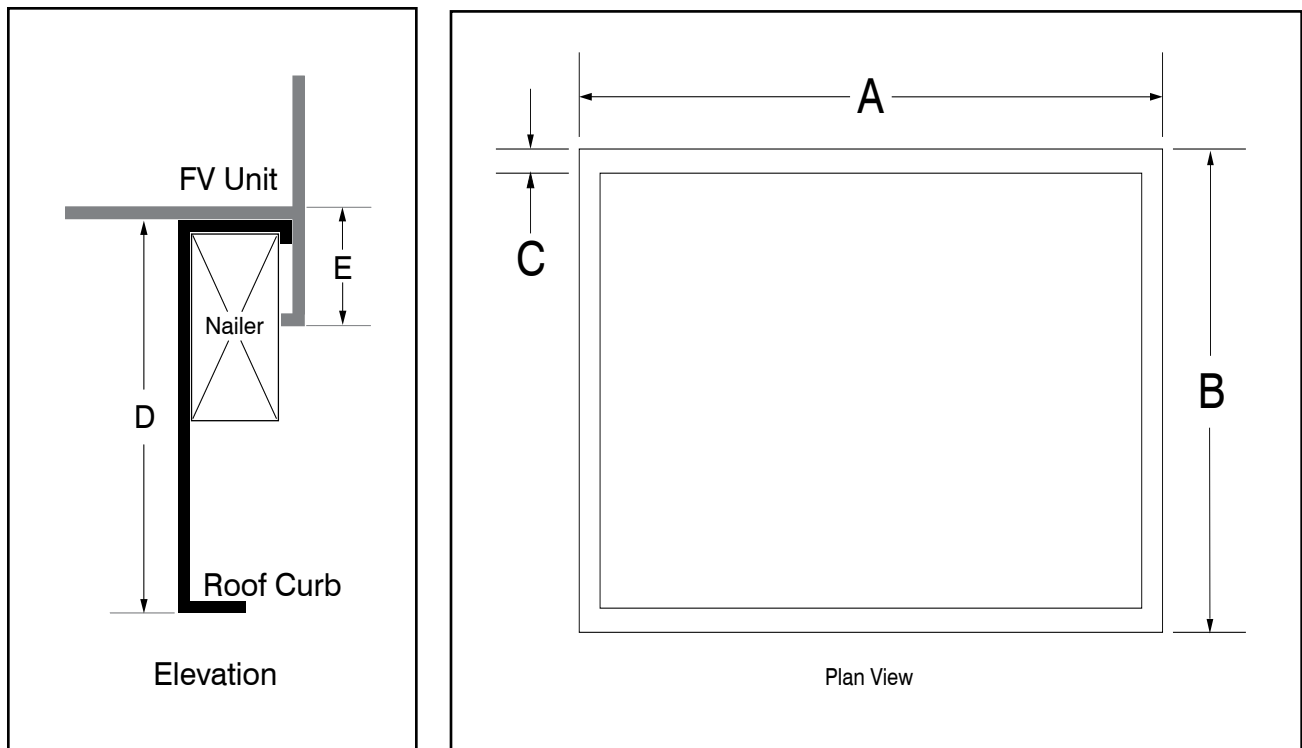


Table 5. Curb dimensions.

Model	A	B	C	D	E
FV-600	40.1	25.0	1.7	14.0	3.0
FV-1000	40.1	25.0	1.7	14.0	3.0
FV-2000	47.4	33.0	1.7	14.0	2.0
FV-3000	60.6	41.0	1.7	14.0	3.0
FV-4000	74.6	49.9	1.7	14.0	3.0
FV-5000	74.6	49.9	1.7	14.0	3.0
FV-7500	91.0	60.3	1.7	14.0	3.0
FV-9000	91.0	60.3	1.7	14.0	3.0

All dimensions in inches.



Residences at 387 & 405 Deering Avenue, Portland

ZONING SUMMARY:

Zone:	R-5 Residential Zone
Chart/Lot#:	Map 118; Lots A003, A005, A007, A009, A011, A013, A015
Site Area:	38,309 s.f. / .88 Acres
Use:	Multiplex (Allowable use in zone)
Use Standards:	6.4.12
	A. No habitable space in a dwelling unit shall be below grade, Except basements that are a part of and below above ground units. B. In the R-5 Zone, the maximum number of units in a multiplex building shall be 6. C. No dwelling unit shall have less than 600 square feet of floor area, exclusive of common hallways and storage in basement or attic.

Dimensional Standards:

Minimum Lot Area:	9,000 S.F.
Lot Area per Multiplex Unit:	4,500 S.F. $(38,309 \div 4,500 = 8.513 = 8 \text{ Units})$
Street Frontage:	50' Min. (Site has 356' +/- Street Frontage)
Lot Width:	90' Min.
Front Setback:	25' or average of adjacent front yards
Rear Setback:	20'
Side Setback:	14' (2.5 Stories)
Structure height:	35 ft.
Max. Lot Coverage:	40% $(3,390 \text{ s.f.} \times 2 = 6,780. \quad 38,309 \div 6,780 = 5.65\%)$

Off Street Parking:	Multi-unit Residential:	1 space/dwelling unit.
	Location:	Parking is prohibited in front yard.
	Fencing:	Where parking for 6 or more vehicles is required or provided and the spaces are located within a required setback, a fence not less than 48" high shall be provided and maintained between the off-street parking and the property line involved. (Does not apply?)

R-5 Small Residential Lot Development Standards (City of Portland Design Manual):

Design Narrative:

The development site at 383 Deering Avenue is actually a conglomeration of seven small house lots that never got developed likely due in part to the large mound of ledge at the center of the site. Together, these parcels create a large buildable lot that is atypical to the surrounding context.

The scale and style of buildings directly adjacent to the site varies as illustrated below:



The Levy Day School is directly across Deering Avenue from the project site.



Two and a half story residence abutting the site at the corner of Deering Ave & Longfellow Street



Two and a half story residence abutting the site at the corner of Deering Ave & Noyes Street

To the rear of the site, single story ranch and split level houses front on Holwell Street



The R5 Design Guidelines :

1. Context: *Residential development shall include design elements that reinforce the context and existing character of the neighborhood and enhance streetscape.*

The existing site, having sat undeveloped for so long, is thick with trees and undergrowth that gives one an uneasy feeling associated with an abandoned or uncared for property that seems more dangerous than enjoyable to experience while walking by.

The proposed development seeks to selectively remove trees and undergrowth and introduce new landscape elements along with exposed rock outcroppings to create a more appealing green space facing the street at the center of the site. Two 4 unit buildings will be located to the north and south flanking the center green space with a front yard setback to the street that matches the adjacent properties to the north and south. The intent is to transform the property into a combination of landscaped spaces and buildings with residential character in keeping with the general context of the neighborhood.

2. Public Realm: *The public realm of open space, sidewalks and streets shall be reinforced through appropriately scaled entries, porches, fenestration, architectural details and landscaping. The transition space between street and the primary building entrance shall include features such as porches, stoops, covered entries, landscaping or other measures to delineate the space.*

The street face of each buildings includes a primary entrance, covered decks, and fenestration relating to the main interior living space. The existing sidewalk along Deering Street will be improved and new driveways and walkways leading from the street to the buildings will help to connect the property to the street.

The space between the sidewalk and the buildings will be landscaped and regraded to create a smoother transition between the sidewalk edge and the front yard edge which currently has areas of abrupt grade change that crowd the sidewalk.

3. Massing: *The building's massing (as defined by its size, scale, and form) shall be consistent with existing residential buildings in a 2 block radius.*

The majority of the immediate context around the site is made up of single family homes with gabled roofs ranging from one to two and a half stories with the exception of the Levy Day School across Deering Avenue. However, larger scaled, flat-roofed multiplex buildings do exist within a two block radius and as these buildings are more analogous to our project in terms of typology, we believe the massing of the proposed buildings are in keeping with neighborhood patterns for massing and height for multiplex structures.

Examples of multiplex buildings in the area of the project site:



5 milk street • portland, maine 04101 • t. 207.774.4811 • wintonscott.com

4. Orientation: Principal facades, primary entrances, porches and bays shall orient to the street not to interior blocks or parking lots. The primary entrance shall either face the street or be located on the side with a covered porch (min. 6' wide) that extends to the front of the building. The slope of the roof shall either be parallel or perpendicular to the street.

Each of the two proposed buildings presents a primary facade parallel to the street with an articulated central entrance with roof canopy, covered porches, and fenestration relating to primary living space within the units.

5. Articulation: Facades shall be articulated with architectural details that create visual interest consistent with the context of the neighborhood. The primary facade and all facades visible from public ways shall include at least two of the following architectural details: gables or dormers, balconies, bay windows, recessed entries, or stoops.

The overall form of the buildings are articulated into discreet elements emphasized by material changes and changes in window patterns to help break down the overall form into smaller scaled elements. The primary facades include covered porches, covered entries, and an articulated trim band defining a base level upon which the upper two living unit floors sit.

6. Garages: Attached and detached garages shall be oriented to the side or oriented to the street as long as the garage is set back from the primary facade by a minimum of four feet. In such case, the total width of the garage door(s) shall be less than 40% of the overall building width (however, the garage door shall not be required to be reduced to less than 9' wide.

Parking is being provided for this project as a combination of outdoor and indoor parking. Each building includes garage space for 4 cars that are incorporated into the overall form of the building. Garage doors do not face the street.

7. Roofs: Roofs shall be peaked, unless evidence can be shown for an alternative roof form that is predominant on existing residential buildings in a two block radius. Buildings shall have a main roof form, and subsidiary roofs (except for porch roofs) shall follow the pitch and form of the main roof. Rooflines shall have a cornice treatment.

As discussed in item 3 - Context of the design standards, flat roofs are proposed for this development to help minimize the overall building height and in keeping with similar scaled multiplex buildings within a two block radius of the site that also have flat roofs. A cornice line trim element is proposed along roof edges and roof heights are varied between the central building form which is lower and the two flanking forms that are higher in an attempt to further breakdown building mass into smaller elements.

8. Materials: Building materials shall be consistent with the context and overall character of the neighborhood. Facade materials shall provide visual cohesion. Chimneys shall be brick, finished metal, stone or boxed in.

The building uses a variety of metal siding profiles and finishes as described on the attached building elevations. The upper floors are mostly clad with a vertically oriented 4" plank profiled siding with a factory finish mimicking natural finished wood. A dark gray corrugated style metal siding is used in specific locations to help break the building down into smaller forms.

The first floor level is clad in a horizontally oriented 4" plank profiled metal siding of a contrasting color which helps to define a base for the building and mitigate its vertical scale.

The elevator shaft which is an articulated form on the side of each building will be clad with natural finish fiber reinforced cement panels w/ concealed fasteners and open joints that intends to evoke the visual character of a masonry chimney.

9. Sound: Provide visual and acoustical privacy between units.

10. Light and air: Maximize natural light and ventilation within units.



Residences at 387 & 405 Deering Avenue, Portland

Response to Design Review Comments received from Planning staff on 5/21/21

5/27/21

Design Team Response:

The design review comments provided by city planning staff focus on the R-5 Small Residential Lot / Multiplex Development Design Standards from Appendix 6 of the Design Manual. Review comments for each of the ten design standards followed by the design team response are listed below:

1. Context - **MET**

- ✓ *Form & Massing of the new construction are generally compatible with the residential context.*
- ✓ *Stacked porches relate to patterns found within the neighborhood.*
- X *Ground floor is flat, blank, not residential in character, lacking detail, fenestration, or approachability. Has a commercial detached character - Too many materials, entrance at grade, lack of fenestration or articulation.*

Response:

In response to staff comments and to comments received during the neighborhood meeting, the exterior material palette has been revised and reduced in variation. The revised design utilizes two shades of factory painted (flat finish), horizontal siding with a visual character similar to wood clapboards except the siding is flush instead of lapped like clapboards. The elevator shaft remains clad in fiber cement panels. Corrugated profile siding, vertical wood look siding, and colored siding applied to the back wall of porches have been eliminated.

In responding to comments about the ground floor, it is important to consider the topography of the property with the large mound of ledge and significant grade differential to the street at the center of the site. These constraints favor a design solution that locates driveways at the north and south ends of the site where grade differentials to the street are manageable in terms of having acceptable driveway slopes. The driveway grade then dictates the first floor elevation for each building because the Fair Housing Act requires accessible parking with an accessible path of travel from the parking area to the at grade building entrances.

To minimize the amount of parking at the edges of the site in close proximity to abutting properties, half of the parking provided is located in garages at the ground level of each building. This approach makes for a more compact use of site area allowing the buildings to be located in a way that minimizes ledge removal and provides more area for developed green space at the center of the site as well as required storm water management areas and snow storage.

These unique site factors result in a ground floor level that has one side relating to driveway grade and containing garage space, and the other side that is 4'+/- below the rising grade at the center of the site that is not optimal for living space and better used as service space - hence the lack of windows.

In response to staff comments, we have added more ground level fenestration to the street facing facade including an additional sidelight panel at the street facing entrance. Proposed landscaping and connecting walk from the entrance to the sidewalk will enhance the approachability of the building.



Revised exterior material palette

2. Public Realm - *NOT MET*

- ✓ *Buildings are placed with narrow facade to the street to minimize scale impact.*
- ✓ *Buildings have similar front yard setback to the neighboring residential buildings-continuity of placement.*
- X *Buildings lack clear hierarchy to the facades/massing to clearly delineate front & entrances.*
- X *Treatment of front yard and entrances are not direct from the sidewalk to the door, lack residential character, ground floor entrances are at grade-typical residential relationship to the street is set back, elevated ground floor, landscape area adjacent to building to create a transition from sidewalk to private realm.*

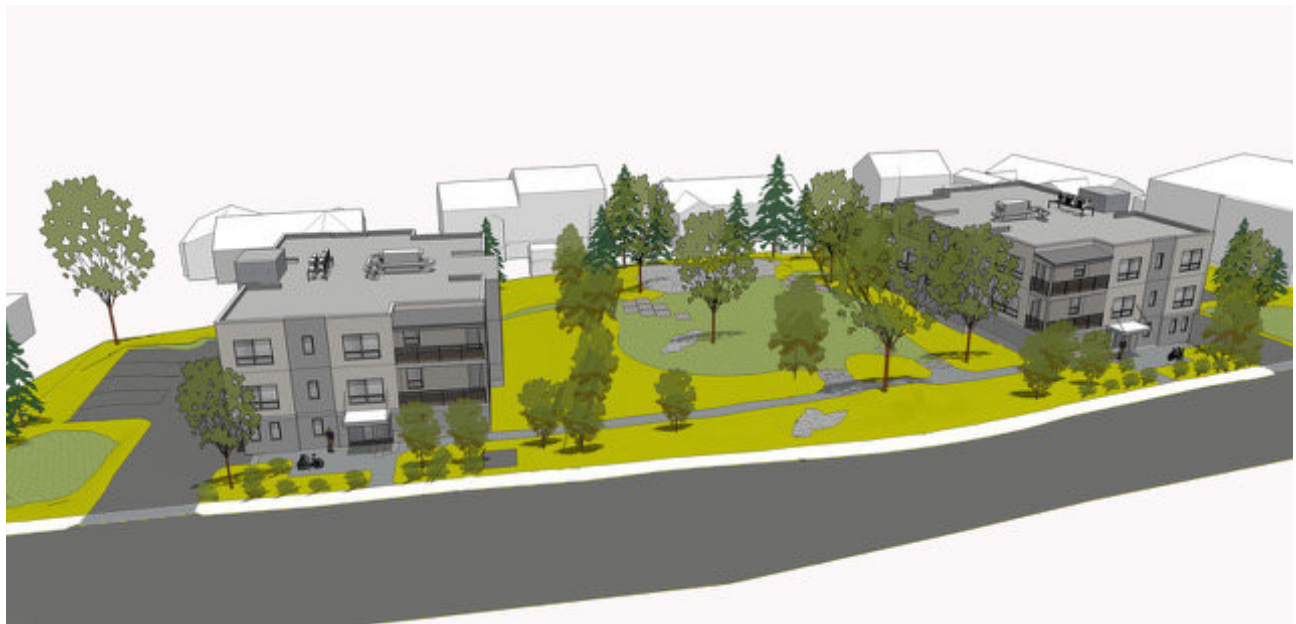
Response:

It is our contention that the proposed revisions to the exterior materials palette coupled with the added fenestration at the street facing facade provides further primary emphasis to the street facade that already is differentiated from the side facades due to inclusion of the covered porches and entry canopy. The street facing entry has also been modified to be recessed into the building.

The entrance is connected to the sidewalk by an offset walkway and landscaped to articulate the connection. See attached new rendered views for more clarity over original submission materials.

It is true that the ground floor building entrances are at grade as opposed to raised up as is typical of the residential architecture in the area. However, privately owned single family residences are not subject to accessibility requirements and older multi-unit buildings were not subject to accessibility requirements when they were built.

The Fair Housing Act states that any housing project consisting of four or more units must have at least one accessible entrance and it also states that there should be accessible entrances from parking areas and from public streets and sidewalks. To meet these requirements, at grade entrances are necessary.



3. Massing - MET



Though these buildings have a larger footprint than the existing residential fabric, the placement, orientation, and height are compatible to the existing block.

- *The scale and proportion of the front facade would better relate to the residential context if the stacked porches were differentiated rather than continuing the primary roof line across the whole width of the building. This approach emphasizes the building width, visually creating a bigger scale without massing variation.*

Response:

In response to staff comments, the design has been revised to articulate the porch roof separately from the main roof to help break down the massing and scale of the street facade.



Revised Porch Roof

4. Orientation - MET

- ✓ *The principal facades are front facing with entrances, stacked porches face the street.*
- X *The entrances facing the street do not appear to be primary.*
- X *Roof Slope is not parallel to street - flat roof*

Response:

It is likely as is the case with most residential buildings that have a formal front entry facing the street and a side entrance relating to the driveway, that people arriving by car will typically favor the entry closest to the driveway whereas the front door is likely to be used by those arriving from the sidewalk. So from a functional perspective, it is likely that the side entrance will be used more by residents coming and going by car. From an exterior visual perspective, we have attempted to emphasize the street facing entry with a free standing roof canopy and a walkway connecting to the sidewalk with landscaping to help mark the entry point. The side entry facing the garage is set back into the building facade and adjacent to the projecting elevator shaft which helps to obscure it and de-emphasize it from the street.

Regarding the roof form, the standards do state that pitched roofs are required unless evidence can be shown for an alternative roof form that is predominant on existing residential buildings in a two block radius. It is true that the vast majority of residential buildings in the area do have pitched

roofs. However, most of these are smaller single family or duplex units with some larger houses having likely been converted from single family to multi-unit buildings. R5 zoning allows for multiplex buildings up to 6 units in size and if one looks at that specific typology in the neighborhood there are multiple examples of flat roofed structures. This is likely due to the fact that these are larger buildings where a pitched roof adds significant height to the building due to the larger footprint.



Examples of flat-roofed multiplex residential buildings in the area of the site.



Examples of flat-roofed multiplex residential buildings in the area of the site.

In addition to these examples of flat roofed multiplex buildings in the neighborhood, the Levy Day School is directly across the street from the site and while not a residential use, it is a flat roofed structure having a significant visual impact on this section of the Deering Ave streetscape.



5. Articulation - **MET**

- ✓ *Front facade includes visual interest with stacked porches, massing variation, change in materials, covered entry.*
- ✓ *Project includes: covered porches, covered entry.*
- ✓ *At least 25% of front facade is fenestrated.*
- ✓ *Windows have a vertical proportion, regular pattern.*

6. Garages - **MET**

- ✓ *Garage doors are side facing.*

7. Roofs - **NOT MET**

- X *The roof form is not peaked - The predominant roof forms for multi-unit buildings in this neighborhood is hipped roofs with dormers.*
- ✓ *Clear main roof form.*
- Differentiate the roof of the stacked porches (look at surrounding examples) rather than carry the primary roof line across which exacerbates the perception of the overall building width.
- X *Roof plans indicate roof top mechanical units - these need to be presented in the renderings to understand how they are integrated with the architectural form.*

Response:

Regarding the comment that the roof is not peaked, please refer to the response under Standard #4: Orientation. In addition, I wrote to planning staff in an email 11/23/20 indicating that early design studies were looking at both pitched and flat roofs but we were struggling with the added height and volume of a pitched roof for a three story building with a footprint larger than a typical house in the area. The feedback received was in line with the points made herein about roof form precedents for multiplex buildings indicating that a case could be made for flat roofs being in keeping with similar sized buildings in the vicinity of the site.

Regarding the comment about the porch roof, the roof line has been revised so that the porch roof is separated and lower than the main roof to help breakdown the scale of the front facade.

Regarding the comment about roof top equipment, the equipment has been added to the renderings so their visual impact can be evaluated.



Rendering showing rooftop equipment & articulated porch roofs.

8. Materials - *NOT MET*

- Metal siding that gives the appearance similar to clapboard is acceptable -finish should not be shiny or reflective.
- X Siding that gives the appearance of natural, untreated wood is not considered to be consistent with the character of the neighborhood where siding is painted or stained with a solid finish.*
- X Corrugated metal profile not considered to be consistent (industrial character) with the character of the residential neighborhood.*
- X Too many materials/finishes - visual cohesion within individual buildings and with neighborhood context not met. Predominant character of the surrounding residential neighborhood is a simple material palette.*

Response:

See response to standard #1 - Context. The siding palette has been revised in response to staff comments and comments received from the neighborhood meeting. The number of material types has been reduced to two- a horizontal flush metal siding in 2 colors and fiber reinforced cement panel cladding for the elevator shaft. Finishes will be "flat" (not shiny). Corrugated metal siding and vertical wood look siding has been eliminated.

9. Sound - *MET*

10. Light & Air - *MET*



All units have windows, adequate light and air.

June 11, 2021

Mr. James Dealaman
City of Portland, Planning Division
389 Congress Street 4th Floor
Portland, ME 04101

**RE: Response to Staff Review Comments
Deering Avenue Residences
387 & 405 Deering Avenue
Portland, Maine**

Dear Jimmy,

We have reviewed the staff review comments that we received May 28, 2021 and offer the following responses along with updated plans and documentation for the upcoming Planning Board workshop. Responses to our comments are provided in italics below.

General

For staff's understanding, (if yet known) does the applicant plan to offer these residential units into condos or rental units?

At this time, the applicant intends to provide the units as rental apartments.

Street Lighting

Deering Avenue is considered a commercial collector street therefore subject to street lighting standards (Technical Manual Sec 10.2.1) which requires a maximum spacing of 130 feet for street lighting. The current street lighting conditions show approximately 240 feet distance between existing cobrahead fixtures. To comply with this standard Staff recommend the applicant contact CMP to request adding/attaching a new lighting fixture to the existing [pole across the street](#) which currently has no fixture (otherwise new cobrahead metal poles will be necessary.) The new cobrahead should be selected based on whatever is already installed there which appears to be type X-2C found in Section 10 of the City's Technical Manual (See detail attached).

We are currently in the process of coordinating the installation of an additional street light on utility pole UP53 with CMP as suggested above.

Please show existing street utility poles on plan as well as noting how the project will add street lighting (as well as including detail in plan set).

Existing and proposed street utility poles and lights are shown on C2.0. A detail has been added to the plan set.

Site Lighting

Color Temperature - Pole lighting exceeds allowable color temperature of 3000k CCT with 4000. Please choose model that doesn't exceed maximum level of 3000K CCT or applicant will need to request a waiver. In general, staff are not supportive of waiving the 3000k CCT maximum, so please check if a different model or new fixture can be considered.

The light fixtures have been revised accordingly.

Surface Parking Lighting Levels – The surface parking maximum footcandle of 4.0 fc is exceeded as shown on the photometrics plan with 4.3 fc. Please consider using a fixture that has less intense levels to comply with the maximum illumination level standard. If a dimming feature is available staff are supportive of a waiver. If applicant cannot resolve exceeding the maximum, please submit a waiver request for consideration. If a waiver is requested, if the fixture has a dimming feature available, this would help serve as some basis for staff to potentially support a waiver for exceeded levels.

The fixtures have been revised to reduce the maximum footcandles to within allowable limits.

Illumination Levels – The site path running between buildings which is accessible to users of the site is (as shown on the photometric plan submitted by the applicant) shows areas under minimal foot candle levels (0.2 fc). If lighting is not provided for within these areas, a waiver to the illumination level standard may need to be requested, or lighting should be provided at these locations. In general, staff find this pathway section will be quite dark with street lighting on the opposite side of the street, and recommend that lighting be added to improve the public safety design of the site. Please refer to Section 12.3.7 of the [City's Technical manual](#) for more information re pedestrian walkway lighting.

Additional lighting has been added to the walkway.

Transportation

Crosswalk - Staff have received public comment expressing interest for a crosswalk in the vicinity (at Longfellow). While this location is some distance away from the site, Public Works staff have no issue if the applicant wants to propose a cross walk at Longfellow. A crosswalk would require at least one new ramp to be built.

A crosswalk at this location is not proposed as it does not appear to be a requirement and it would add significant cost to the project. There is an existing crosswalk and ramp in front of the subject property that will be rebuilt to current ADA standards for use by all pedestrians.

Driveway Configuration – While staff don't have concerns with the driveway configuration on the whole, staff request the applicant provide turning templates showing vehicle movements in/out of site due to the some backing up of vehicles may end up being necessary due to narrowness of lot. In general backing in will likely be acceptable but no backing out of the site should occur. [Note: Please ensure the template is based on the maximum size of vehicle that would be accessing the site.]

Turning templates have been provided (see sheet T1.0). The garage spaces are intended for smaller size vehicles, but standard passenger cars can maneuver in and out of the garage spaces. The exterior parking spaces can easily accommodate full-size passenger vehicles.

Sidewalk/curbing - The project is required to replace the entire sidewalk in concrete. The current sidewalk is bituminous; the sidewalk material policy calls for concrete sidewalks and aprons. The sidewalk should be reconstructed along the existing alignment on either wide of the site, with an esplanade. The driveway apron should be built according to the attached detail.

At the pre-application meeting, the DPW representative indicated that the sidewalk would only have to be reconstructed if it was in poor condition or if more than 50% of the sidewalk would be rebuilt as part of the project. Only 35% of the sidewalk needs to be rebuilt for utilities and driveways; however, upon recent inspection of the existing sidewalk, there are additional portions that are in poor shape and should be replaced. While the total sidewalk length needing reconstruction would likely still be less than 50% of the entire length, the applicant is now proposing to reconstruct the entire sidewalk along the frontage of the property with concrete.

However, constructing an esplanade along the frontage of this site is not practical for a number of reasons, as follows:

- The existing grade of the site rises quickly immediately adjacent to the existing sidewalk. Installing an esplanade would require significant earthwork and would reduce the area available for maintaining landscape buffering along the front of the property.*
- The three existing, non-invasive, mature trees along the frontage of the site that are intended to be saved will have to be removed in order to install an esplanade.*
- Ledge would likely be encountered during excavation for the sidewalk and would require ledge removal in order to construct a new sidewalk with an esplanade, which would add significant cost to the project.*
- The esplanade would preclude ADA access from the Deering Avenue entrance to Building B.*

A waiver from the esplanade construction will be requested if necessary. Please advise.

Accessibility – There needs to be [accessible routes](#) to the front door from the sidewalk and from the ADA parking spaces if the site itself is accessible.

The current design does provide accessible routes to the building from both the parking lot and from the sidewalk. An additional plan (C3.2) is provided indicating the slopes along the accessible routes for clarification.

Accessibility 2 – Staff are curious if an accessible path to the paved terrace is possible or was considered?

The walkway grading between the two buildings has been revised to provide accessible grades.

Construction Management Plan – Planning and Public Works staff are still reviewing this and will forward any feedback at a later point.

Understood.

Waivers – Public Works is not opposed to a waiver for the driveway separation standard. This standard is due in part to facilitate on-street parking, which doesn't exist on this section of Deering, and to prevent a situation where there are so many driveways that it's confusing as to where vehicles may be entering/exiting. Even under the proposed conditions, there would only be 3 driveways along this block of Deering between Noyes and Longfellow.

Agreed.

Electric Vehicle Infrastructure

Per Section 14.1.17. of City Code, *"New structured and surface parking lots of five or more spaces shall include energized electrical outlets or installed chargers capable of providing Level 2 EV charging or higher to 20% of parking spaces (rounded down to the nearest whole number). Remaining spaces must be served by sufficient conduit, wiring, and electrical service to allow for future installation of electric vehicle supply equipment."* Therefore the project is subject to providing 3 EV charging stations (16 spaces x .2 = 3.2) Please show the project includes energized electrical outlets or install chargers capable of providing Level 2 charging (or higher) to (3) three parking spaces/locations.

As discussed in the Site Plan Standards Narrative, EV charging stations will be provided in each garage unit (8 total) and a spare conduit is provided to the edge of each parking lot for future installation of exterior charging stations.

Stormwater

The stormwater figures appear to only account for the subject property, and property flow is not accounted for flow on property from outside the lot. Please show grades of adjacent properties.

Offsite topography has been added to the plan. Stormwater runoff from the site generally flows radially outward from the high point in the center of the site. The small portion of runoff from the abutting properties briefly flowing onto the northly corner of the subject property has been added to the model.

Do other properties have drainage flows that would flow on to this site? Please clearly indicate what is currently draining on the site. (Note: Some field investigation may be needed to see what actually discharges to the wetland and that the calculations are accommodating the existing surface flow in that area.)

The small portion of runoff from the abutting properties briefly flowing onto the northly corner of the subject property has been added to the model and the changes are negligible. An updated stormwater model is included with this submission.

-Please also find the City's consulting stormwater engineer's comments below:

- The project is required to comply with Maine DEP Chapter 500 and City of Portland Technical Manual Section 5 Stormwater Management requirements.
 - Basic – Erosion and sedimentation control and good housekeeping measures have been specified in accordance with the Basic Standards.
 - General – Two underdrained soil filters are provided to meet the stormwater quality treatment requirements of the General Standards. Please address the following comments:

- The two underdrained soil filters are located at the property line on either end of the site. The Applicant should ensure that construction of the systems will not undermine existing conditions on the adjacent properties, and that guard rail or some other form of protection isn't necessary adjacent to the graded slopes - the site's privacy fence is shown ending just before these stormwater systems.

Sections are provided on C3.2 showing that there is adequate space to construct the soil filters and ponded water will not cross the property line even if the underdrain is clogged. We do not believe guard rails are necessary.

- The systems should also be modeled in the 25-year storm without infiltration to ensure that the outlet control structures and 4" outlet pipes allow for adequate drainage in a large storm event without flooding onto the adjacent properties in the event that the system's surface is not infiltrating.

The 25-year storm has been modeled without infiltration showing that the system does not flood in this condition.

- The table provided for the soil filters on sheet C4.4 includes some values that do not match the stormwater management plan.

The table has been corrected.

- Flooding – Post-development stormwater flows have been maintained at the same rate as pre-development flows, meeting the Flooding Standards. Please address the following comments:
 - The underdrained soil filter design assumes a relatively low infiltration rate for the soil filter media within the system, and does not include any additional flow attenuation in the outlet control structure. This is generally a lower infiltration rate than we typically see accounted for when modeling an underdrained soil filter, and seems to be driving the compliance with the Flooding standard. Additional documentation of typical flow rates should be provided to verify that the system will operate as modeled.

The model has been revised to control the infiltrating outflow from the soil filter with an orifice instead of a low infiltration rate. A detail for the orifice design is also included in the revised plans.

- A stormwater maintenance agreement will be required for the two soil filters.

Understood.

- DPW Water Resources has requested that the site's stormwater connections be made to the separated stormdrain systems on Longfellow Street and/or Noyes Street. While connections may not be made into the existing catch basins at the intersections at these systems, they could be made to the catch basin laterals or the stormdrain mains. The

stormwater pipes exiting the site's systems are 4", and could be connected without the addition of any structures.

We had previously requested utility information in this area from the city and received what was available. Based on information that we have, there appears to be a separated stormwater system at the Noyes Street intersection. Therefore, we have revised the outlet from soil filter SF2 to tie into the separated stormwater system. However, it appears that at the Longfellow Street intersection, there is still a combined sewer and stormwater system. Therefore, it does not appear to be necessary to tie into the drainage system at the Longfellow intersection. If the city has additional information regarding a separated system at this location, we would be happy to review it and determine if it is feasible to connect to it.

- The sidewalk material type should be clarified. The project is located in a concrete sidewalk district. Repairs are shown in the existing bituminous sidewalk for utility crossings and driveway entrances, but typically this would be required to be replaced with concrete to match the district. A bituminous sidewalk detail is provided on sheet C4.1, but is incorrectly labeled as reinforced concrete sidewalk.

The sidewalk is now proposed to be replaced with concrete as discussed above. The details have been revised accordingly.

- The planting plan should be corresponded with the site utility and stormwater management plans. Trees are shown within the underdrained soil filters which are typically only planted with grass. It also appears that plants are proposed where the transformer is shown. There are also a number of other utility service installation that should be checked to ensure there are no significant trees proposed over top of the piping.

The trees have been removed from the soil filters. We are still proposing small shrubs and flowering plants that can withstand periodic inundation of stormwater, as discussed with the Landscape Architect. The proposed plants will improve the aesthetics of the area and will also provide more absorption of stormwater than just grass.

Ongoing Note: Planning Staff are currently looking into whether connecting the site's stormwater to separated stormdrain systems would be eligible for an impact fee credit. Staff will provide more information to confirm if this work is eligible.

Understood. We look forward to hearing if there is an opportunity for a credit.

Life Safety

Life Safety staff are still in the process of conducting a review of the materials provided and will report any findings/feedback relevant to this site plan application. Planning staff expect to share this feedback with the applicant next week.

Understood.

Neighborhood Meeting Documentation

As a reminder, please provide the City required documentation (previously forwarded to applicant) of the neighborhood meeting that was conducted. Please also ensure that a notice of public meeting sign (specifications previously forwarded to applicant) is posted 10 days prior to any future public meeting with the Planning Board.

The neighborhood meeting certification documents have been provided under a separate cover.

We trust we have provided satisfactory responses and additional information to staff comments above. We look forward to discussing the project with the Planning Board at the workshop of June 22, 2021.

Respectfully,

A handwritten signature in cursive script, appearing to read "William R. Walsh, III".

William R. Walsh, III, PE

Walsh Engineering Associates, Inc.

cc. Todd Valentine, Real Asset Services

June 1, 2021

Jimmy Dealaman
City of Portland Planner
389 Congress Street
Portland, Maine 04101

**RE: Neighborhood Meeting Certification
Major Site Plan Application
387 Deering Avenue
Portland, Maine**

Dear Jimmy,

I, Silas Canavan, PE of Walsh Engineering Associates, Inc. (Agent), hereby certify that a neighborhood meeting was held via Zoom on May 20, 2021 at 5:30 PM for the proposed project located at 387 & 405 Deering Avenue, Portland, Maine.

I also certify that on May 5, 2021, notices were mailed to the following:

1. All addresses on the mailing list provided by the Planning Division, which includes property owners within 500 feet of the proposed development.
2. Residents on the “interested parties” list provided by the Planning Division.

Respectfully



Silas Canavan, PE (Agent)
Walsh Engineering Associates, Inc.

cc. Todd Valentine, Real Asset Services

Enc. Copy of Notice Sent
Attendee List (via zoom)
Meeting Minutes



Neighborhood Meeting Invitation

May 5, 2021

Dear Neighbor:

Please join us for a neighborhood meeting to discuss the plans for the construction of two 4-unit residential buildings (8 units total) located at 387 Deering Avenue, Portland, Maine.

This meeting will be held remotely via Zoom. You can join the meeting at the scheduled time with the information below. If possible, please enter your full name and provide an email address when signing into Zoom for this meeting. If you do not have access to a computer or prefer not to use Zoom, you can join the meeting by dialing in with a telephone using the dial-in phone number provided below and entering the meeting ID and meeting password as prompted.

Meeting Date: Thursday, May 20, 2021

Meeting Time: 5:30 pm

Meeting Location: Remote meeting via Zoom

Meeting ID: **897 9766 6233**

Meeting Password: **560289**

Meeting Link: <https://us02web.zoom.us/j/89797666233?pwd=cXd5YkVBbVNWd3diNlRRbnBJOHNwUT09>

Meeting Dial-In Phone Number: **1-312-626-6799** (follow prompts to enter meeting ID and password)

The purpose of this meeting is to introduce the project to our neighbors as part of the City permitting process. Minutes from the meeting and a list of attendees will be submitted to the City.

If you have any questions, please call Silas Canavan, P.E., Walsh Engineering Associates, Inc. at 207-553-9898 or email him at silas@walsh-eng.com.

Should you wish to offer additional comments on this proposed development, you may contact the Planning Division at 207-874-8721 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: planning@portlandmaine.gov.

Respectfully,

A handwritten signature in black ink that reads "Silas Canavan".

Silas Canavan, PE
Walsh Engineering Associates, Inc.

Neighborhood Meeting (via Zoom) Attendee List
Deering Avenue Residences
387 & 405 Deering Avenue
May 20, 2021

Name (Original Name)	User Email	Join Time	Leave Time	Duration (Minutes)	Guest
Silas Canavan	silas@walsh-eng.com	5/20/2021 17:23	5/20/2021 18:45	83	No
david maynes STUDIO	admin@davidmaynesstudio.com	5/20/2021 17:23	5/20/2021 17:23	1	Yes
Todd Valentine	tvalentine@realassetservices.com	5/20/2021 17:23	5/20/2021 17:23	1	Yes
david maynes STUDIO	admin@davidmaynesstudio.com	5/20/2021 17:23	5/20/2021 18:45	82	Yes
Jacqueline Gaunder	jacky.gaunder@gmail.com	5/20/2021 17:23	5/20/2021 17:29	7	Yes
Todd Valentine	tvalentine@realassetservices.com	5/20/2021 17:23	5/20/2021 18:45	82	Yes
WSA	ppleqi@wintonscott.com	5/20/2021 17:23	5/20/2021 17:24	1	Yes
Victoria Kinney		5/20/2021 17:23	5/20/2021 17:30	7	Yes
WSA	ppleqi@wintonscott.com	5/20/2021 17:24	5/20/2021 18:45	82	Yes
Alyson Maloy	amaloy@pcbnpsych.com	5/20/2021 17:25	5/20/2021 17:28	3	Yes
Susan Fine	jfine@maine.rr.com	5/20/2021 17:27	5/20/2021 17:30	3	Yes
carolschiller		5/20/2021 17:27	5/20/2021 17:29	3	Yes
Mario Chanes	mchanes@c1secure.com	5/20/2021 17:28	5/20/2021 17:29	2	Yes
Nina		5/20/2021 17:28	5/20/2021 17:29	2	Yes
Katherine Orne		5/20/2021 17:29	5/20/2021 17:29	1	Yes
Cristina Levy	clevy@sawyerislandconsulting.com	5/20/2021 17:29	5/20/2021 17:29	1	Yes
Jacqueline Gaunder	jacky.gaunder@gmail.com	5/20/2021 17:29	5/20/2021 17:31	2	Yes
Carol Schiller (carolschiller)		5/20/2021 17:29	5/20/2021 18:45	76	Yes
Nina		5/20/2021 17:29	5/20/2021 18:45	76	Yes
Mario Chanes	mchanes@c1secure.com	5/20/2021 17:29	5/20/2021 18:45	76	Yes
Katherine Orne		5/20/2021 17:29	5/20/2021 18:11	42	Yes
Cristina Levy	clevy@sawyerislandconsulting.com	5/20/2021 17:29	5/20/2021 18:32	63	Yes
Susan Fine	jfine@maine.rr.com	5/20/2021 17:30	5/20/2021 17:57	28	Yes
Victoria Kinney (Victoria Kinney)		5/20/2021 17:30	5/20/2021 18:45	76	Yes
Joes 2018 "tablet"		5/20/2021 17:30	5/20/2021 17:30	1	Yes
Joes 2018 "tablet"		5/20/2021 17:30	5/20/2021 18:45	76	Yes
Alyson Maloy	amaloy@pcbnpsych.com	5/20/2021 17:30	5/20/2021 17:30	1	Yes
Zac Wogan	zwogan@sawyerislandconsulting.com	5/20/2021 17:30	5/20/2021 17:30	1	Yes
Jacqueline Gaunder	jacky.gaunder@gmail.com	5/20/2021 17:30	5/20/2021 17:30	1	Yes
jkessler		5/20/2021 17:30	5/20/2021 17:30	1	Yes
Alyson Maloy	amaloy@pcbnpsych.com	5/20/2021 17:30	5/20/2021 18:45	75	Yes
Zac Wogan	zwogan@sawyerislandconsulting.com	5/20/2021 17:30	5/20/2021 18:45	75	Yes
Jacqueline Gaunder	jacky.gaunder@gmail.com	5/20/2021 17:30	5/20/2021 18:45	75	Yes
jkessler		5/20/2021 17:30	5/20/2021 18:45	75	Yes
12078384405		5/20/2021 17:31	5/20/2021 18:02	31	Yes
kcanning		5/20/2021 17:32	5/20/2021 17:32	1	Yes
Lucas Malone		5/20/2021 17:32	5/20/2021 17:32	1	Yes
kcanning		5/20/2021 17:32	5/20/2021 18:14	42	Yes
Lucas Malone		5/20/2021 17:32	5/20/2021 18:45	73	Yes
nancy montgomery		5/20/2021 17:33	5/20/2021 17:34	1	Yes
nancy montgomery		5/20/2021 17:34	5/20/2021 18:45	72	Yes
maddy		5/20/2021 17:37	5/20/2021 17:40	4	Yes
Madeleine Agnew (maddy)		5/20/2021 17:40	5/20/2021 18:45	65	Yes
Tandava Jeffrey	tkjeffrey@gmail.com	5/20/2021 17:41	5/20/2021 17:41	1	Yes
Tandava Jeffrey	tkjeffrey@gmail.com	5/20/2021 17:41	5/20/2021 18:44	63	Yes
Sofia Canning	scanning@sawyerislandconsulting.com	5/20/2021 17:56	5/20/2021 17:58	2	Yes
Sofia Canning	scanning@sawyerislandconsulting.com	5/20/2021 17:58	5/20/2021 18:02	5	Yes
Susan Fine	jfine@maine.rr.com	5/20/2021 17:58	5/20/2021 17:58	1	Yes
Susan Fine	jfine@maine.rr.com	5/20/2021 17:58	5/20/2021 18:10	12	Yes
Sofia Canning	scanning@sawyerislandconsulting.com	5/20/2021 18:02	5/20/2021 18:43	42	Yes
kcanning		5/20/2021 18:15	5/20/2021 18:45	31	Yes
Cristina Levy	clevy@sawyerislandconsulting.com	5/20/2021 18:33	5/20/2021 18:45	13	Yes

**387 AND 405 DEERING AVENUE, PORTLAND, MAINE
NEIGHBORHOOD MEETING (VIA ZOOM)
MEETING MINUTES
THURSDAY, MAY 20, 2021 – 5:30 P.M. to 6:45 P.M.**

1. CALL TO ORDER

On Thursday, May 20, 2021, at approximately 5:30 p.m., Silas Canavan, PE from Walsh Engineering Associates, Inc., called to order the Neighborhood Meeting for 387 and 405 Deering Avenue, Portland. Present were Todd Valentine representing the applicant, Steve Weatherhead as architect and David Maynes as the landscape architect.

Also present at tonight's meeting are public members via Zoom.

2. DISCUSS PROJECT DETAILS – Silas Canavan, Project Engineer

Todd Valentine – The land was purchased about a year ago. Todd's role is to interface with people, consultants, the client and the public. The Neighborhood meeting is the first step toward approval. Todd is available at any time during permitting or developing. All emails sent to Silas will be forwarded to Todd.

Silas Canavan – The site is 387 and 405 Deering Avenue. There are 2 separate addresses because they are 2 separate lots on the City tax maps. This project will treat the land as one parcel. The project is located between Noyes and Longfellow Streets across from the Wadsworth Street intersection. It is surrounded by houses on the back and front. The parcels are entirely undeveloped at this time. The middle of the property is a high point which quickly drops off around it.

An 8-unit residential development is being proposed. It will be in total 8 condos or apartments split into 2 buildings. Each building will be 3 stories high with a garage on the first floor and 2 floors of living space above. Each unit will have a garage space as well as a dedicated parking space.

There will be common space in the middle which will be lawn area with a stone dust path connecting both buildings. The areas outside will be re-naturalized instead of manicured lawn. The positioning of the buildings is based on several factors. 2 smaller buildings are more in scale with the existing neighborhood. The buildings will be built outside of center for practicality. This also lowers the buildings on the site to conform to the existing neighborhood scale.

There are two stormwater filters. They will be about 2 feet deep and will fill up when it rains. Rainwater will be collected and within 24 hours will completely disappear. In dry periods, these areas will essentially be a grassed depression. They will not hold water all the time, only shortly after it rains. The stormwater from these will be directed into the storm drain system that already exists in Deering Ave.

Around the border of the property there will be privacy fencing to wrap the sides and ends and buffer the neighbors. It will also assist in blocking headlights from the residents. There is an existing fence along a portion of the back of the property and tying into that fence is proposed.

From a utility standpoint, all utilities will be connected underground. There won't be any overhead utilities making it a clean looking site.

Having 8 units is not anticipated to generate any significant traffic. Splitting the driveways also reduces congestion at the site entrances. Generally, a development of this size would create less than 10 peak hour trips. Traffic should not be an issue. There will be parking lot lighting on the edge of the parking lots. They will be pole mounted lights with shielded backs so that light won't trespass off the property.

Steve Weatherhead – The buildings are simple and match one another. There is an entry point with a lobby off the driveway. The design standard will be met having the front doors facing the street and the garage doors not facing the street. All units will have identical layouts. Each unit is a 2-bedroom with living/dining and small outdoor decks – one facing the street and the other units facing the back of the site.

There is a palate of materials being used to break up the forms so that they read as a front form, middle and back form so that the overall composition feels like a kit of different parts. The materials will be used to visually break up the forms to keep the property in scale with the neighborhood.

Mostly metal siding with a natural wood look will be used. There will be a light gray and highlight color on the decks which will be different with the two buildings. The City has a height standard of 35' above average grade as the maximum height. The buildings will be below the height limit and the elevator shaft will be higher than the buildings, but still below maximum height.

David Maynes – The center of the site will be a common area to support the residences. The majority of the site will be re-naturalized, but the middle will be a recreational lawn area and support a diverse composite of both passive and active recreation with a few terrace spaces.

Currently the property lacks canopy diversity and includes mostly invasive tree species. There is no understory or shrub canopy and not enough light to promote an herbaceous canopy; grasses, perennials, seasonal species.

One of the goals is to increase the plant diversity in both canopy height and species. New plantings will be native to Maine and create seasonal interest. The planting will seek to create screening where desired, design space and create edges. The dominate feature will be a meadow with perennials and little clusters of shrubs which will increase habitat for urban dwellers in and around the neighborhood.

The lot is a significant genesis site for many of the invasive species in the neighborhood. The property is almost entirely Norway Maple which is a weed tree very successful at outcompeting

native trees. There are many deciduous trees that are well established that will be preserved if possible.

3. PUBLIC Q&A

Randall Woods – resident of 438 Deering Avenue asked -Is there going to be any blasting to remove rock from the site to prepare it for the development? Any other form of rock removal? Also curious, what will the price range of the units be?

Silas – Anticipates some rock removal by hydraulic hammer and excavator. Hope to avoid blasting, but if necessary, will go through the state and local requirements to perform blasting safely.

If blasting does become necessary, abutters near the site would be contacted by a survey company. Homes would be checked before and after blasting as a standard requirement.

Todd – Construction costs over the last year have been unpredictable so a sale or rental price has not yet been established. After the financial aspects are worked through a price will be set.

Randall – Will the developer be the owner of the building and all the residents be renters?

Todd – Yes.

Lucas Malone – resident at 381 Deering Ave – neighbor on Noyes and Deering. Looking for specificity about materials to be used on the exterior. There are a few trees right next to home that are not invasive species and rather pretty. One has a hawk nest in it and the other appears to be a chestnut tree. Have you categorized those?

Todd – Our goal is to keep the buildings lower maintenance and maintain a high-quality work.

Steve – The building elevations show siding pieces/examples. Keeping the roof flat will allow to keep the building smaller and more modern. There are 3 different metal siding choices of different profile and color to create textural differences. The panels will simulate natural wood to give the buildings warmth while still being low maintenance.

The wood would simulate vertical wood 3 ¾ -4” vertical to look like flush vertical boards. The highlight colors that are just in the back wall of the decks will be a lighter color and horizontal. The dark grey areas are corrugated to break up the forms. The 3 ¾ -4” dimension is relevant because it is similar to clapboard which has @ a 4” exposure.

The elevator shaft, which feels like a chimney, will be a fiber reinforced cement panel that will have a natural looking, stone like exterior.

Lucas – Still finds the aesthetic of the building unattractive and feels it is better suited for building by a highway. He would prefer if it wasn’t baby blue.

Steve – Agrees to look at other colors, there are other options available.

Lucas – My second question pertaining to the trees is unanswered.

Silas – Unfortunately, I don't think we will be able to save any trees in that area. Due to the site grading and to provide the parking and buffering that is necessary, those trees likely cannot be saved.

Lucas – Concerned about removing a chestnut tree. Believes it is a rare plant.

David – Would like to confirm if it is an American chestnut tree because it would be unfortunate to have to remove it. More than likely it is a Chinese chestnut tree and unfortunately the Chinese chestnut tree brought the blight that has killed the American chestnut trees.

Lucas – Concerned about site lighting along his property line and concerning what would actually filter into his lot and bedrooms in his building which is a 2 unit and will face the new buildings. Proposes vegetative screening.

Steve – Would have to relook at the area of concern. Zero foot candles required at the property line. There should be no light spillage into your lot, but you will see into our lot and see light on the lot where it's been a dark lot.

Silas – There will also be a shield on the light to prevent the light from spilling onto other property. Lower-level lighting can be challenging to light a parking area properly and could increase the maintenance. The City has minimum lighting requirements we must meet so we are balancing both needs.

Alyson Malloy – resident at 22 Hallowell Street – Praises the re-naturalization plans and believes it will be a good addition to the neighborhood. She is concerned it will be a little too industrial for the area. There are very few modern buildings in the Portland area because no one wants to look at it. She would suggest to redesign the building style/materials. Believes the buildings to be quite dark and industrial and will stand out. How long will the construction take?

Todd – 6 – 8 months depending on the time of year.

Allison – What are the times? Monday through Saturday? 7am – 7pm?

Todd – It would be Monday through Friday. No weekends. Typically 7am-5pm, 7am-4pm. Weekend work would be reserved for indoor trades once the buildings are build and would be avoided to preserve cost.

Allison – Will there be a dumpster for each of the buildings?

Todd – These units are allowed to use the City pick up and they would have the City style trash cans to be kept in the garage.

Allison – Questions the property line and would like to put up a fence. How should she do that?

Todd – If you would like to put up a fence and need assistance with identifying the property line, we could assist you with that.

Jacqueline Gaunder – resident at 8 Hallowell Street – Allison asked most of the questions about the timing of construction. She has a sensitive job where she is currently stuck at home performing. When will the project begin?

Todd – The project is subject to approvals and the City pipeline is currently quite full.

Silas – Staff review, Planning Board workshop – public is welcome to attend, but likely public cannot speak, then a Public Hearing with the Planning Board.

Jacqueline – How high will the fence be?

Silas – Right now we are proposing a 6-foot-high privacy fence. If people are direct abutters and would like to have consistent fencing, contact me and we can coordinate discussions with how to move forward with the fence.

Madeleine Agnew – resident on Devonshire - 2 unit – She is impressed with the level of thought and that Portland has a lack of housing stock so she is excited to see it go forward.

Mario Chains – resident at 46 Noyes Street – I agree with Allison. It looks like it will be great. Main concern is traffic and safety. This area already has a lot of traffic incidents. I myself was in an accident right around the corner with his infant 3 years ago. What safety measures will be taken into consideration in regards to traffic impact?

Silas – The level of traffic that this project will generate wouldn't trigger much extra in the way of traffic analysis based on the City ordinance requirements. If the City does determine there could be a potential issue there they could ask for traffic study. That typically wouldn't happen on a project of this size. Separating the driveways allows the property to function like it is two separate lots.

Todd – The way the site is organized with nose in parking, it allows the exiting cars to be going nose out instead of backing out onto the street and that should help as well.

Joe Malone – resident at 381 Deering – Asks Todd directly who the owner is and why aren't they on the call?

Todd – Keith Canning is the owner.

Keith Canning – Appreciates participation.

Joe – This does have a little bit of an urban feel. He doesn't like so many different exterior finishes being used. It feels downtown and commercial. Suggests some natural materials would be beneficial for the project. Are these units going to be rentals?

Keith – Yes, that is the plan.

Joe – Most other questions have been addressed. Suggests parking to be more inside instead of outdoors, but understands it won't work. Suggests higher/nicer fencing. Your driveway will be very close to Luke's. Is there a way to band in the driveway. That corner is tricky. Praises the team again.

Carol Schiller – resident at 7 Longfellow Street – for 30 years – Very excited that this land is being developed. It hasn't been maintained or taken care of and believes people are using it poorly. There have been property break ins. Suggests that there be less industrial look and more natural looking. Suggests an emerald cedar bush to soften the neighbors looking in as well as any light. The center area that will be landscaped, she is concerned about this area at night. She believes there should be lighting here. There is traffic of people who do drugs in this area. She's found drug paraphernalia. She is concerned that there should be lighting and fence in that area in a bit which could prevent vagrant activity. Concerned about needing crosswalks and more warning that there are traffic obstacles ahead.

Safety concerns – this small section as it has been with the lot being empty and the school across the way. Eyes on the street should do quite a bit to make this safer.

Carol – Worried about the area being natural. She thinks it needs to be maintained and look like a beautiful garden using the exposed rock. Concerned it will look like a jungle.

Nancy Montgomery – resident at 447 Deering Ave – We have concerns about more traffic. We have seen in the last 30 years probably a dozen accidents on Deering Ave. Anything you can do to minimize that is appreciated. The neighborhood does already have some modern buildings and she is happy to see the aversion to invasive species. Keeping some natural form of the rocks is interesting and she looks forward to seeing how it turns out.

Nina – resident at 129 Noyes Street - Will you notify the abutters of the timeline once everything has been approved?

Todd – Absolutely.

Silas – Believes abutters are also notified once a building permit is submitted.

At this point, there were no other questions or comments from the public.

4. CLOSING

Silas Canavan called to close the meeting at approximately 6:45 pm and directed further questions to be addressed through various contact methods given.

Alyson Maloy <alysonmaloy@gmail.com>

May 6, 2021, 5:15:27 PM (5 days ago)



to planningboard@portlandmaine.gov

Hi there,

I am resident of Holwell St and the land of the development abuts my backyard.

I have reviewed the proposal and welcome the new neighbors. I could not be sure from the proposal whether these will be rentals or condos. I appreciate the effort that has gone into the design, especially the landscaping, and our neighborhood will welcome our new neighbors.

My one concern is how ugly the buildings are. They do fit in with the neighborhood at all and I think they will be an eye sore. An easy example is that lone "modern" house on Baxter Boulevard; anyone who has ever driven along Baxter Boulevard knows which house I'm talking about because it is an eyesore in that neighborhood. In another community it could look beautiful.

There is something important about a neighborhood's visual cohesiveness. Everywhere in Portland you can see those isolated "modern" houses that detract from their neighborhoods rather than add to them. I hope this situation is one in which the planning board can help shape the beauty of Portland rather than let another one of these ugly buildings pop up in an otherwise beautiful residential neighborhood. I've researched this problem a bit and I do see that there is precedent for such verdicts.

Thanks for listening!

Alyson

HARTY NORRIS <hartynorris@gmail.com>

May 21, 2021, 11:56:28 AM (3 days ago)



to planning@portlandmaine.gov

I was unable to connect vis zoom meeting and have some concerns on the project which is planned a 2 large 4 unit apartment buildings and associated paved parking areas. This project result in a loss of natural rain absorption in the soil due to clay in the soil and obvious ledge issues.

My property at 83 Noyes Street is the lowest property on the block and has seen standing water issues in our backyard.

The water runoff needs to be designed to bring the rainwater to the city's storm water drain system and not allow runoff to travel to neighboring properties.

Thank you for your consideration of our concerns.

Harty W. Norris (hartynorris@gmail.com)
83 Noyes Street
Portland, Me. 04103

WALSH ENGINEERING ASSOCIATES
1 Kren Drive, Suite 2A
Westbrook, ME 04092
207.553.9898
www.walsh-eng.com

DAVID MAYNES STUDIO LANDSCAPE ARCHITECTS
26 Storer Street
Kennebunk, ME 04043
207.351.6789
www.davidmaynesstudio.com

STRUCTURAL INTEGRITY CONSULTING ENGINEERS
46 Forest Avenue
Portland, ME 04101
207.774.4614
www.structuralinteg.com

MECHANICAL SYSTEMS ENGINEERS
Royal River Center, Unit 10
10 Forest Falls Drive
Yarmouth, ME 04096
207.846.1441

SWIFT CURRENT ENGINEERING SERVICES
Royal River Center, Unit 8B
10 Forest Falls Drive
Yarmouth, ME 04096
207.847.9280

**RESIDENCES AT
387 & 405
DEERING
AVENUE**

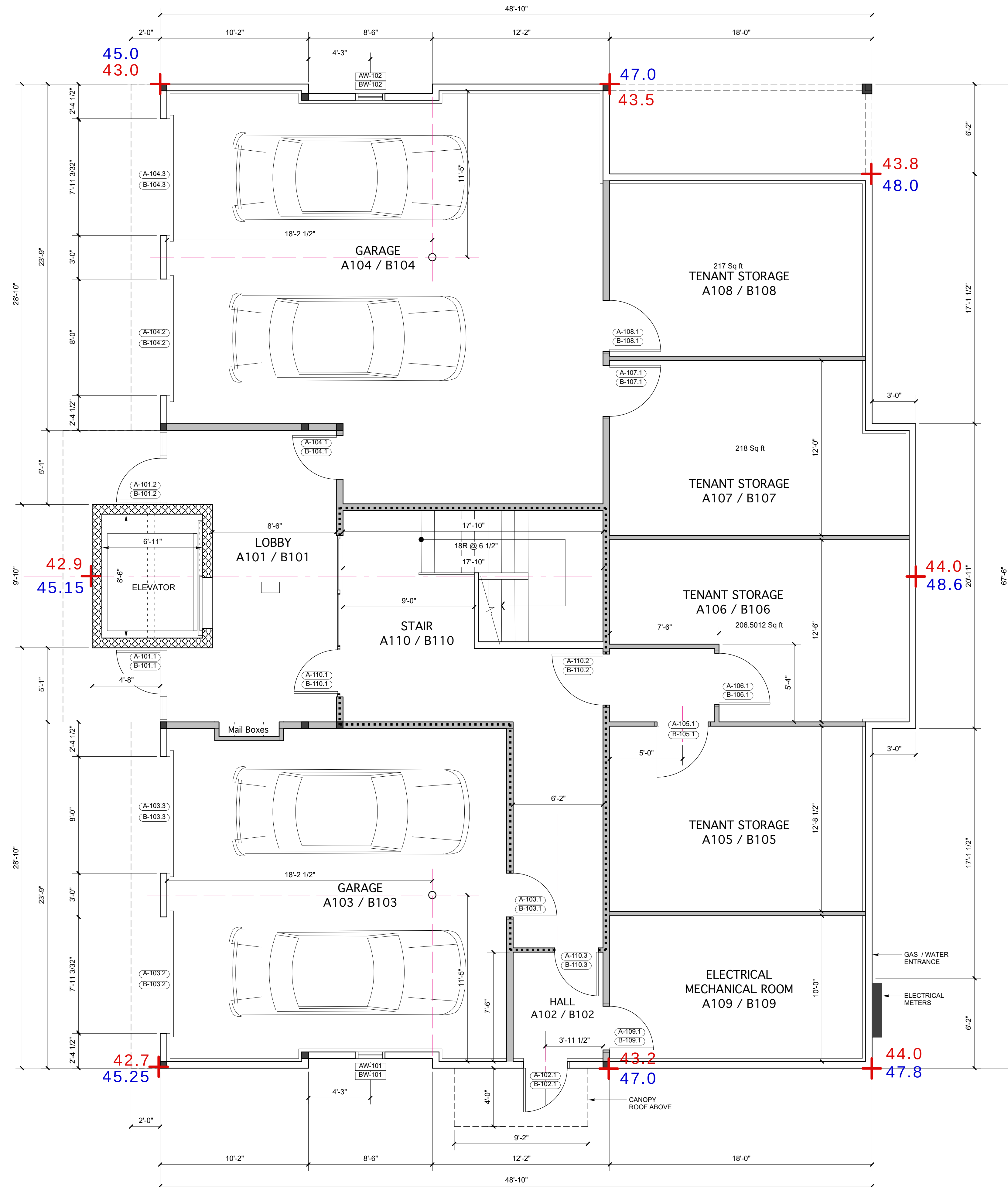
Portland, Maine

Drawing Title: Scale: 1/4"=1'-0"

**FIRST FLOOR PLAN
BUILDING A
BUILDING B MIRROR**

A1.1

Date: 1.15.21
Phase: DESIGN DEV.

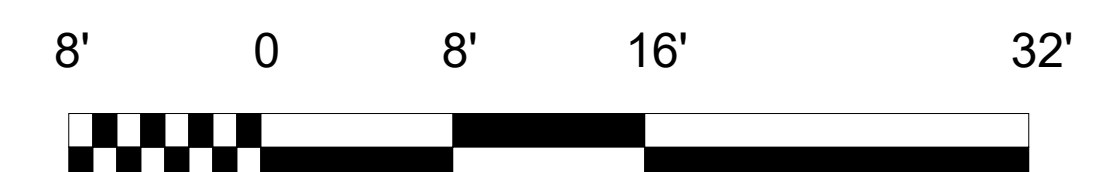


FIN.Flr
BLDG 'A'
= EL. 43.0

FIN.Flr
BLDG 'A'
= EL. 45.25

$(43 + 43.5 + 43.8 + 44 + 44 + 43.2 + 42.7 + 42.9) / 8 = 43.875$
AVERAGE GRADE FOR BUILDING 'A'

$(45 + 47 + 48 + 48.6 + 47.8 + 47 + 45.25 + 45.15) / 8 = 46.725$
AVERAGE GRADE FOR BUILDING 'B'





Winton Scott
Architects

5 milk street, portland, maine 04101
• 207.774.4811 • wintonscott.com

**WALSH ENGINEERING
ASSOCIATES**

1 Kren Drive, Suite 2A
Westbrook, ME 04092
207.553.9898
www.walsh-eng.com

**DAVID MAYNES STUDIO
LANDSCAPE ARCHITECTS**

26 Storer Street
Kennebunk, ME 04043
207.351.6789
www.davidmaynesstudio.com

**STRUCTURAL INTEGRITY
CONSULTING ENGINEERS**

46 Forest Avenue
Portland, ME 04101
207.774.4614
www.structuralinteg.com

**MECHANICAL SYSTEMS
ENGINEERS**

Royal River Center, Unit 10
10 Forest Falls Drive
Yarmouth, ME 04096
207.846.1441

**SWIFT CURRENT
ENGINEERING SERVICES**

Royal River Center, Unit 8B
10 Forest Falls Drive
Yarmouth, ME 04096
207.847.9280

**RESIDENCES AT
387 & 405
DEERING
AVENUE**

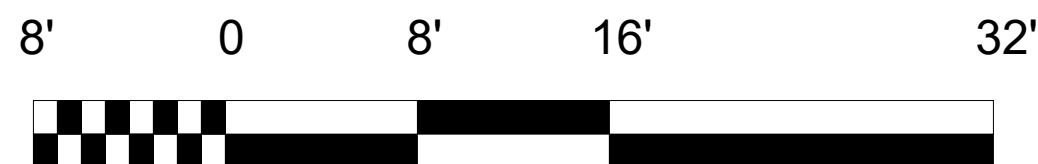
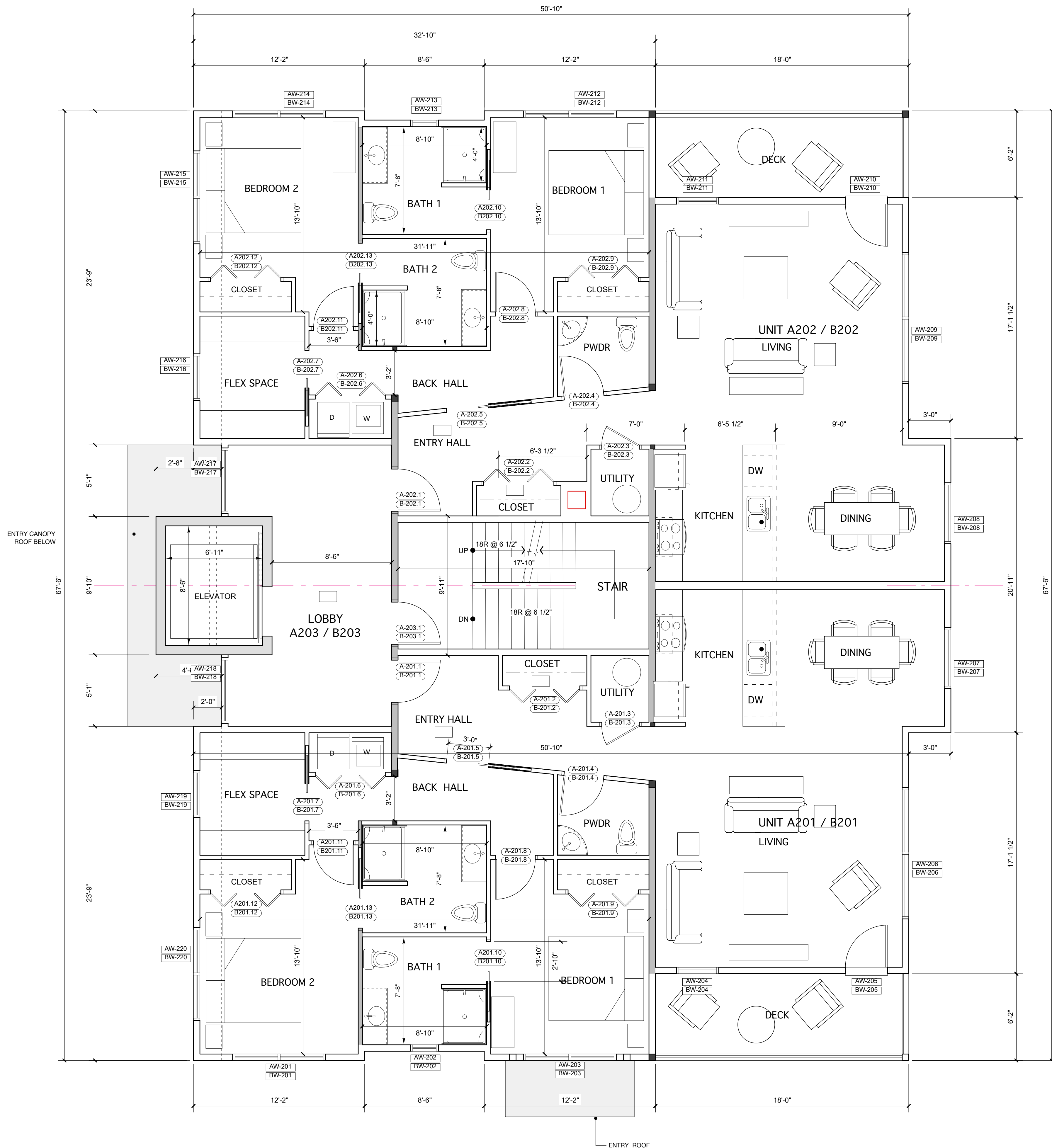
Portland, Maine

Drawing Title: Scale: 1/4"=1'-0"

SECOND FLOOR PLAN
BUILDING A
BUILDING B MIRROR

A1.2

Date: 1.15.21
Phase: DESIGN DEV.





Winton Scott
Architects

5 milk street, portland, maine 04101
207.774.4811 • wintonscott.com

**WALSH ENGINEERING
ASSOCIATES**

1 Kren Drive, Suite 2A
Westbrook, ME 04092
207.553.9898
www.walsh-eng.com

**DAVID MAYNES STUDIO
LANDSCAPE ARCHITECTS**

26 Storer Street
Kennebunk, ME 04043
207.351.6789
www.davidmaynesstudio.com

**STRUCTURAL INTEGRITY
CONSULTING ENGINEERS**

46 Forest Avenue
Portland, ME 04101
207.774.4614
www.structuralinteg.com

**MECHANICAL SYSTEMS
ENGINEERS**

Royal River Center, Unit 10
10 Forest Falls Drive
Yarmouth, ME 04096
207.846.1441

**SWIFT CURRENT
ENGINEERING SERVICES**

Royal River Center, Unit 8B
10 Forest Falls Drive
Yarmouth, ME 04096
207.847.9280

**RESIDENCES AT
387 & 405
DEERING
AVENUE**

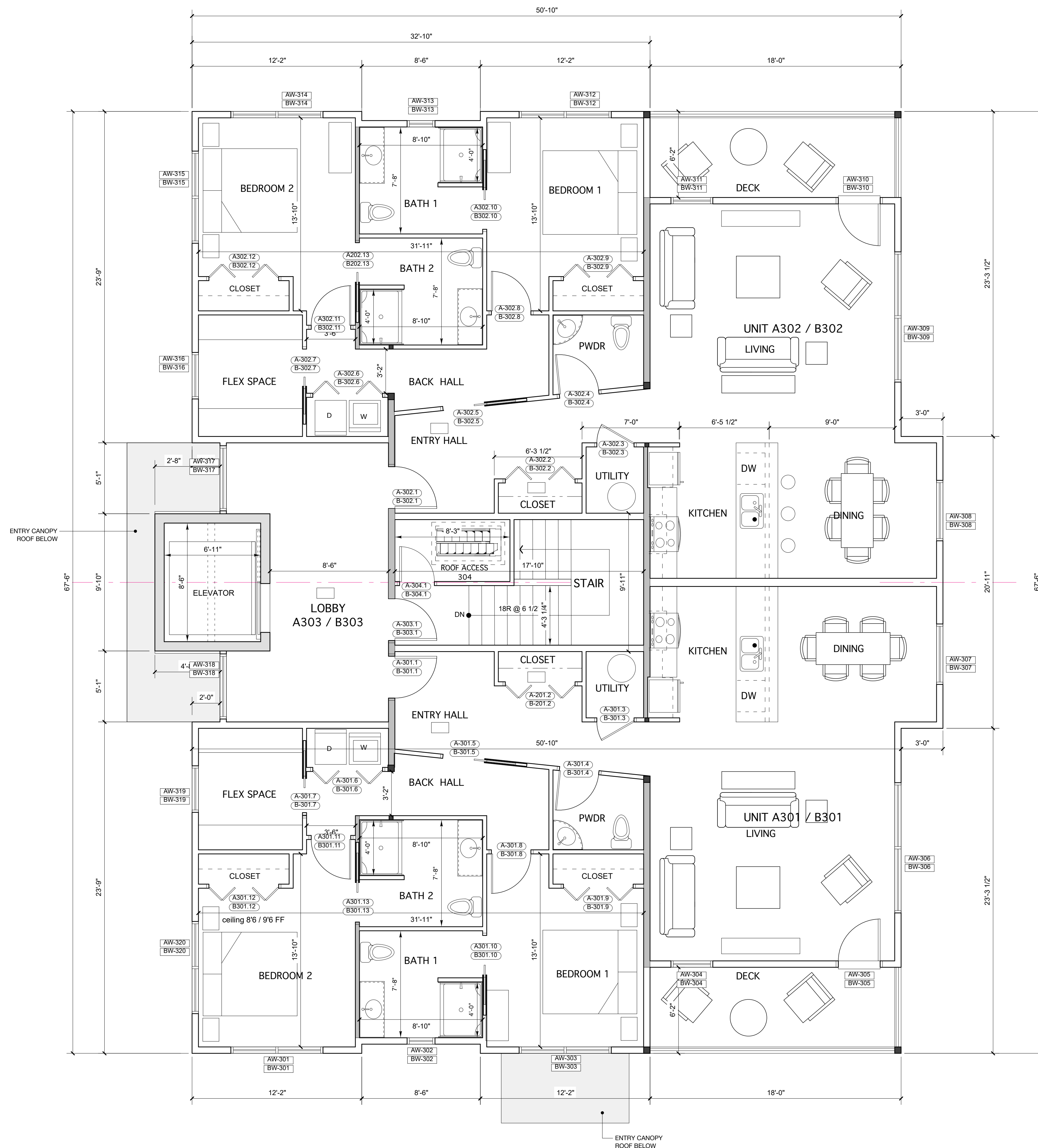
Portland, Maine

Drawing Title: Scale: 1/4"=1'-0"

THIRD FLOOR PLAN
BUILDING A
BUILDING B MIRROR

A1.3

Date: 1.51.21
Phase: DESIGN DEV.





Winton Scott
Architects

5 milk street, portland, maine 04101
• 207.774.4611 • wintonscott.com

**WALSH ENGINEERING
ASSOCIATES**

1 Kren Drive, Suite 2A
Westbrook, ME 04092
207.553.9898
www.walsh-eng.com

**DAVID MAYNES STUDIO
LANDSCAPE ARCHITECTS**

26 Storer Street
Kennebunk, ME 04043
207.351.6789
www.davidmaynesstudio.com

**STRUCTURAL INTEGRITY
CONSULTING ENGINEERS**

46 Forest Avenue
Portland, ME 04101
207.774.4614
www.structuralinteg.com

**MECHANICAL SYSTEMS
ENGINEERS**

Royal River Center, Unit 10
10 Forest Falls Drive
Yarmouth, ME 04096
207.846.1441

**SWIFT CURRENT
ENGINEERING SERVICES**

Royal River Center, Unit 8B
10 Forest Falls Drive
Yarmouth, ME 04096
207.847.9280

**RESIDENCES AT
387 & 405
DEERING
AVENUE**

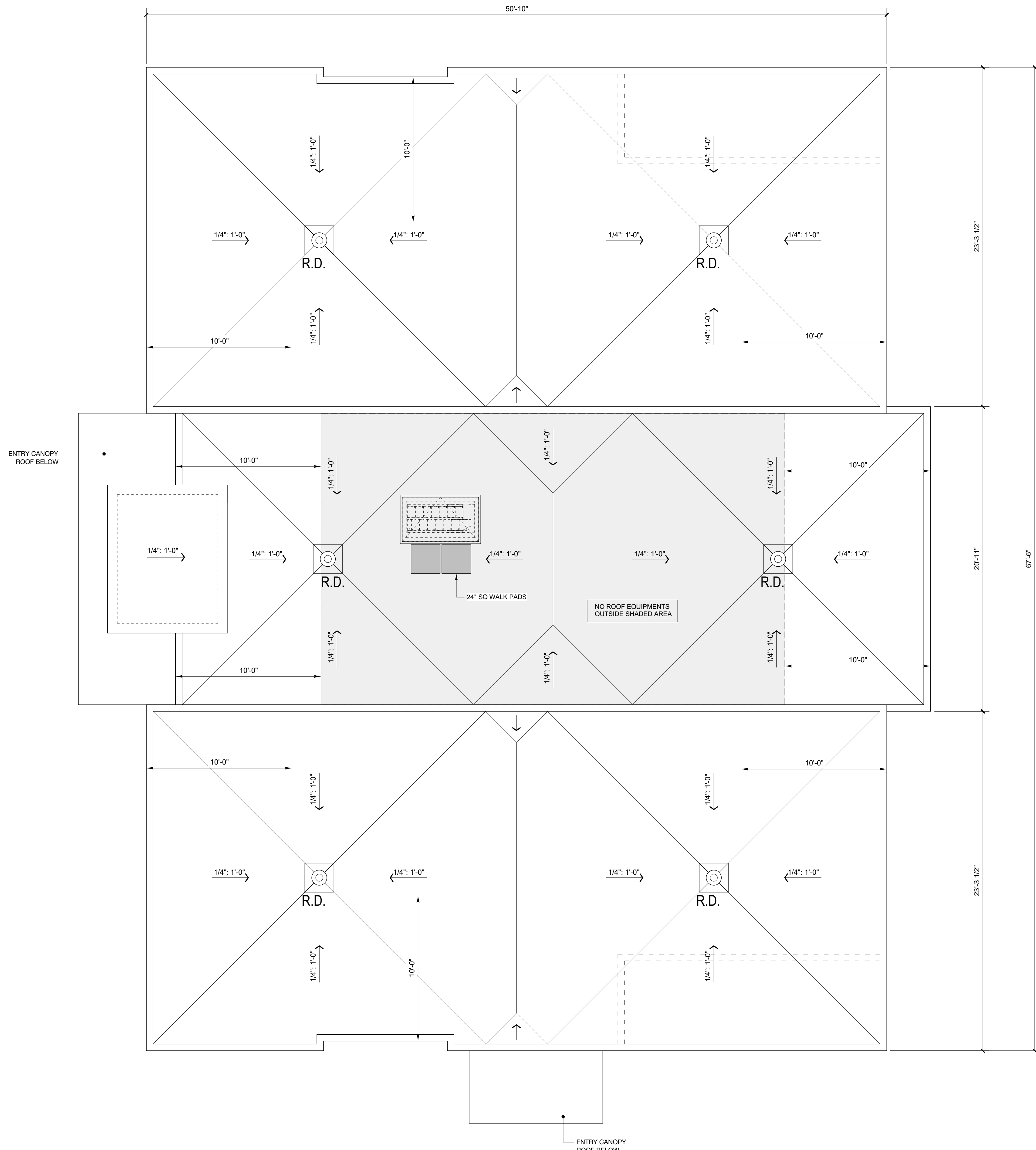
Portland, Maine

Drawing Title: Scale: 1/4"=1'-0"

ROOF PLAN
BUILDING A
BUILDING B MIRROR

A1.4

Date: 1.15.21
Phase: DESIGN DEV.



WALSH ENGINEERING ASSOCIATES
1 Kren Drive, Suite 2A
Westbrook, ME 04092
207.553.9898
www.walsh-eng.com

DAVID MAYNES STUDIO LANDSCAPE ARCHITECTS
26 Storer Street
Kennebunk, ME 04043
207.351.6789
www.davidmaynesstudio.com

STRUCTURAL INTEGRITY CONSULTING ENGINEERS
46 Forest Avenue
Portland, ME 04101
207.774.4614
www.structuralinteg.com

MECHANICAL SYSTEMS ENGINEERS
Royal River Center, Unit 10
10 Forest Falls Drive
Yarmouth, ME 04096
207.846.1441

SWIFT CURRENT ENGINEERING SERVICES
Royal River Center, Unit 8B
10 Forest Falls Drive
Yarmouth, ME 04096
207.847.9280

**RESIDENCES AT
387 & 405
DEERING
AVENUE**

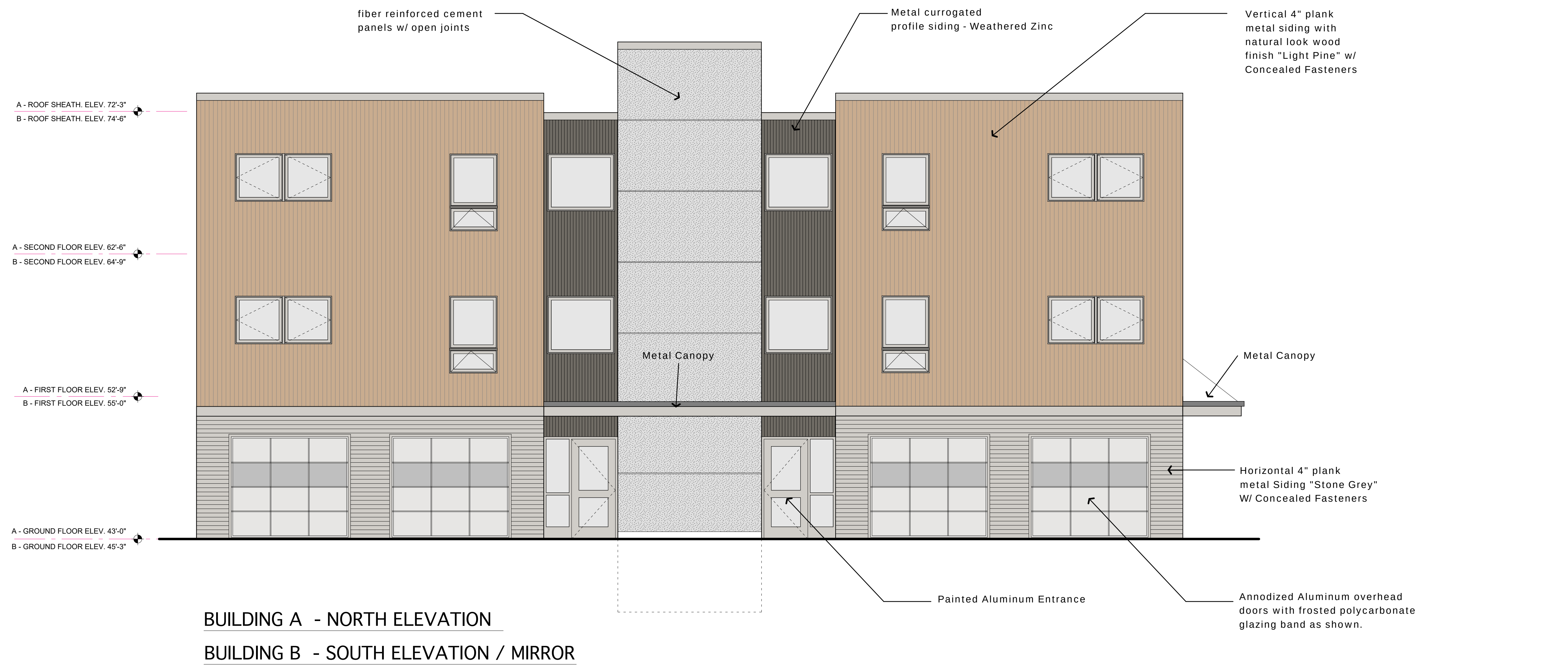
Portland, Maine

Drawing Title: Scale: 1/4"=1'-0"

BUILDING ELEVATIONS

A2.2

Date: 1.15.21
Phase: DESIGN DEV.





Winton Scott
Architects

5 milk street, portland, maine 04101
207.774.4811 • wintonscott.com

WALSH ENGINEERING
ASSOCIATES

1 Kren Drive, Suite 2A
Westbrook, ME 04092
207.553.9898
www.walsh-eng.com

DAVID MAYNES STUDIO
LANDSCAPE ARCHITECTS

26 Storer Street
Kennebunk, ME 04043
207.351.6789
www.davidmaynesstudio.com

STRUCTURAL INTEGRITY
CONSULTING ENGINEERS

46 Forest Avenue
Portland, ME 04101
207.774.4614
www.structuralinteg.com

MECHANICAL SYSTEMS
ENGINEERS

Royal River Center, Unit 10
10 Forest Falls Drive
Yarmouth, ME 04096
207.846.1441

SWIFT CURRENT
ENGINEERING SERVICES

Royal River Center, Unit 8B
10 Forest Falls Drive
Yarmouth, ME 04096
207.847.9280

RESIDENCES AT
387 & 405
DEERING
AVENUE

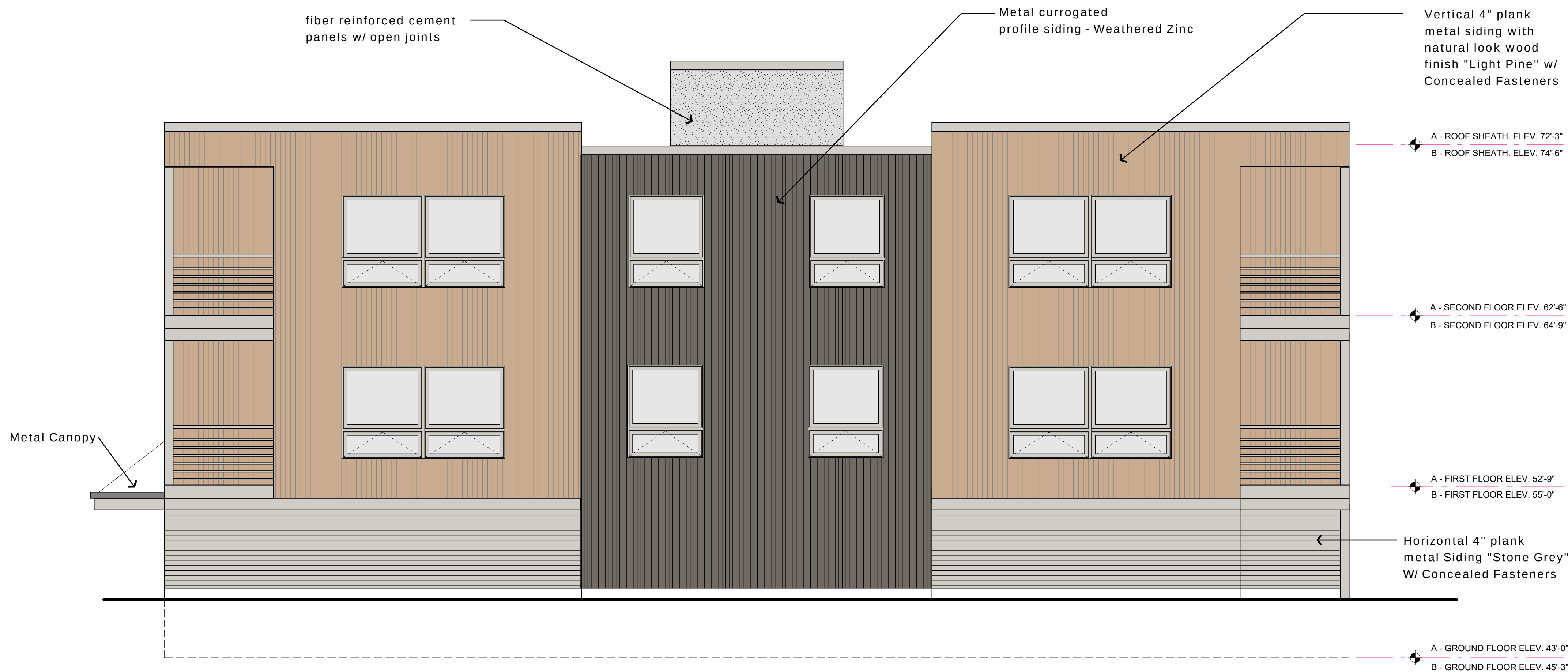
Portland, Maine

Drawing Title: Scale: 1/4" = 1'-0"

BUILDING ELEVATIONS

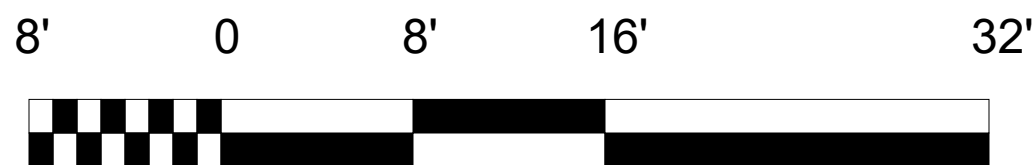
A2.3

Date: 1.15.21
Phase: DESIGN DEV.



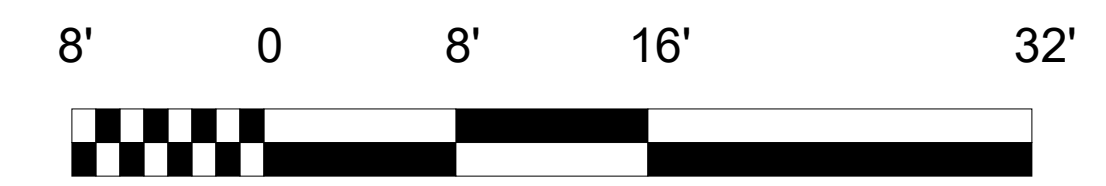
BUILDING A - SOUTH ELEVATION

BUILDING B - NORTH ELEVATION / MIRROR





BUILDING A - EAST ELEVATION
BUILDING B - EAST ELEVATION / MIRROR



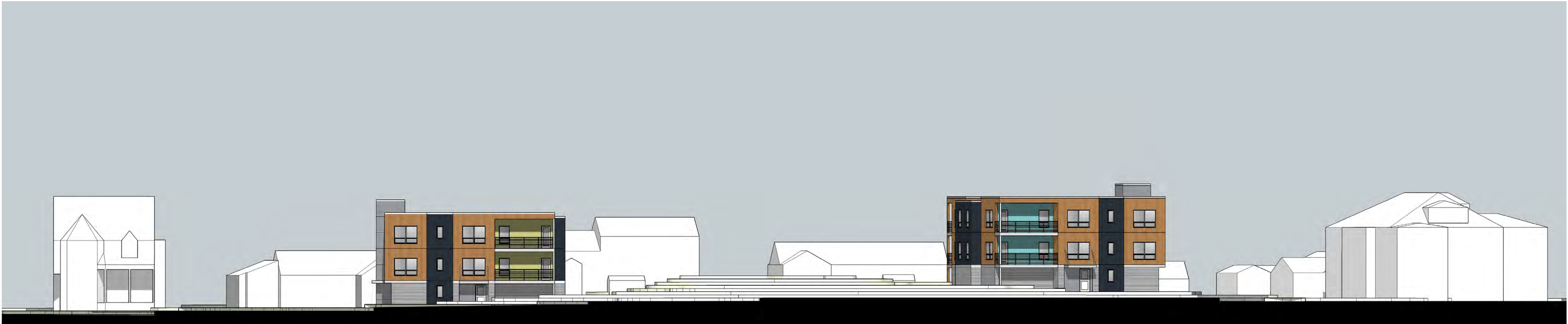
**RESIDENCES AT
387 & 405
DEERING
AVENUE**
Portland, Maine

Drawing Title: Scale: 1/4" = 1'-0"

BUILDING ELEVATIONS

A2.4

Date: 1.15.21
Phase: DESIGN DEV.



DEERING AVENUE STREET ELEVATION



ELEVATION VIEW BEHIND HOUSES FRONTING HOLWELL STREET

**RESIDENCES AT
387 & 405
DEERING
AVENUE**

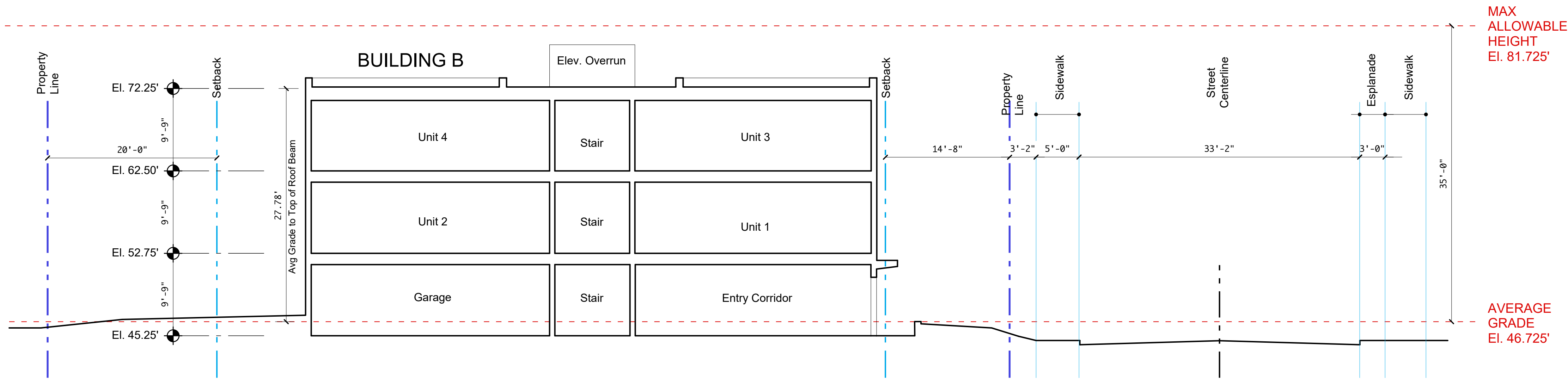
Portland, Maine

Drawing Title: Scale: N.T.S.

STREET ELEVATION

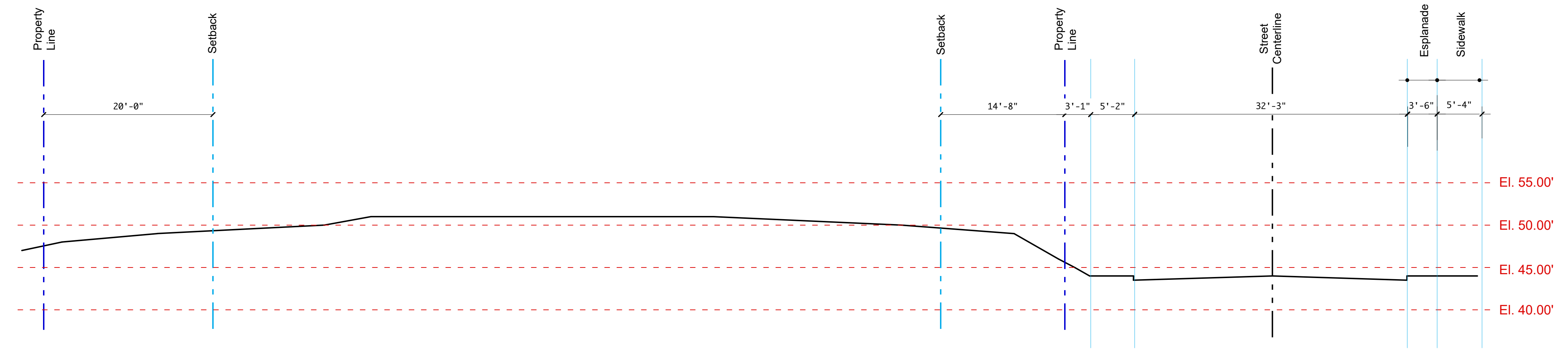
A2.5

Date: 1.15.21
Phase: DESIGN DEV.



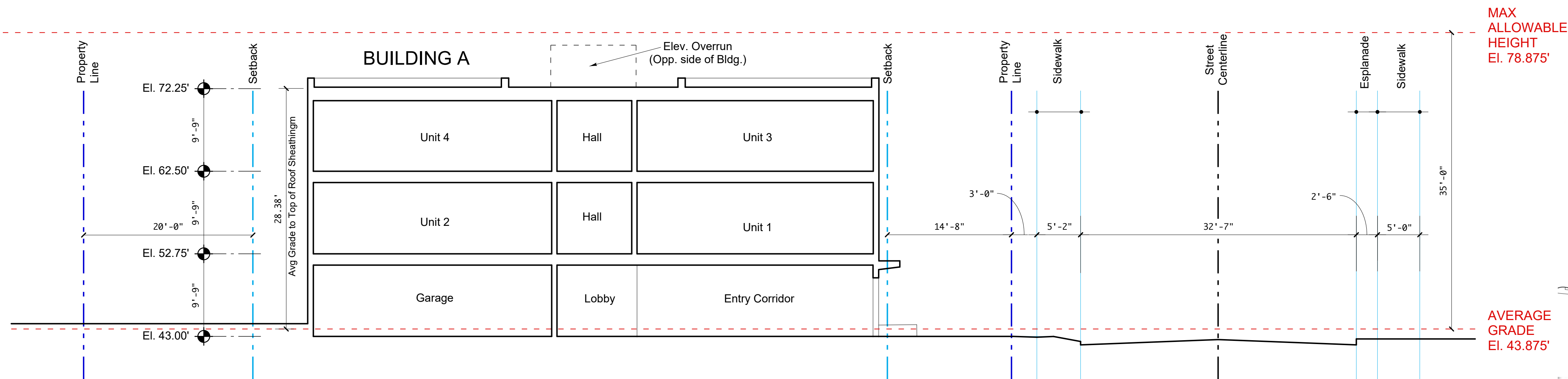
SITE SECTION 3

1/8" = 1'-0"



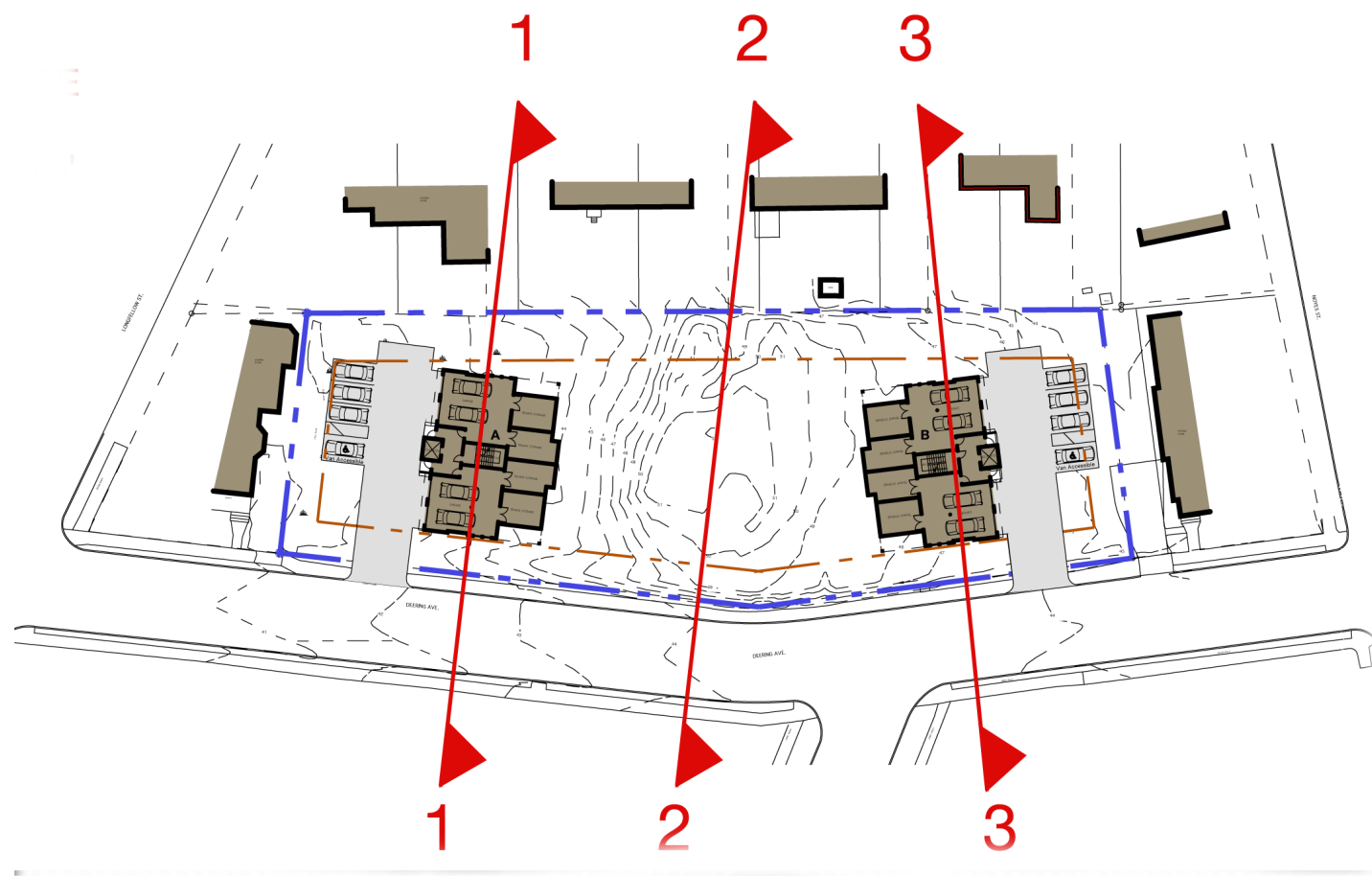
SITE SECTION 2

1/8" = 1'-0"



SITE SECTION 1

1/8" = 1'-0"



**RESIDENCES AT
387 & 405
DEERING
AVENUE**

Portland, Maine

Drawing Title: Scale: 1/8"=1'-0"

SITE SECTIONS

A3.1

Date: 1.15.21
Phase: DESIGN DEV.



BIRDSEYE VIEW AT DEERING AVENUE



Winton Scott
Architects

5 milk street, portland, maine 04101
• 207.774.4811 • wintonscott.com

WALSH ENGINEERING ASSOCIATES
1 Kren Drive, Suite 2A
Westbrook, ME 04092
207.553.9898
www.walsh-eng.com

DAVID MAYNES STUDIO LANDSCAPE ARCHITECTS
26 Storer Street
Kennebunk, ME 04043
207.351.6789
www.davidmaynesstudio.com

STRUCTURAL INTEGRITY CONSULTING ENGINEERS
46 Forest Avenue
Portland, ME 04101
207.774.4614
www.structuralinteg.com

MECHANICAL SYSTEMS ENGINEERS
Royal River Center, Unit 10
10 Forest Falls Drive
Yarmouth, ME 04096
207.846.1441

SWIFT CURRENT ENGINEERING SERVICES
Royal River Center, Unit 8B
10 Forest Falls Drive
Yarmouth, ME 04096
207.847.9280

**RESIDENCES AT
387 & 405
DEERING
AVENUE**

Portland, Maine

Drawing Title: Scale: N.T.S.

3D VIEWS

A4.1

Date: 1.15.21
Phase: DESIGN DEV.



BIRDSEYE VIEW AT DEERING AVENUE

WALSH ENGINEERING ASSOCIATES
1 Kren Drive, Suite 2A
Westbrook, ME 04092
207.553.9898
www.walsh-eng.com

DAVID MAYNES STUDIO LANDSCAPE ARCHITECTS
26 Storer Street
Kennebunk, ME 04043
207.351.6789
www.davidmaynesstudio.com

STRUCTURAL INTEGRITY CONSULTING ENGINEERS
46 Forest Avenue
Portland, ME 04101
207.774.4614
www.structuralinteg.com

MECHANICAL SYSTEMS ENGINEERS
Royal River Center, Unit 10
10 Forest Falls Drive
Yarmouth, ME 04096
207.846.1441

SWIFT CURRENT ENGINEERING SERVICES
Royal River Center, Unit 8B
10 Forest Falls Drive
Yarmouth, ME 04096
207.847.9280

**RESIDENCES AT
387 & 405
DEERING
AVENUE**

Portland, Maine

Drawing Title: Scale: N.T.S.

3D VIEWS

A4.2

Date: 1.15.21
Phase: DESIGN DEV.



DEERING AVENUE VIEW



Winton Scott
Architects

5 milk street, portland, maine 04101
207.774.4811 • wintonscott.com

WALSH ENGINEERING ASSOCIATES
1 Kren Drive, Suite 2A
Westbrook, ME 04092
207.553.9898
www.walsh-eng.com

DAVID MAYNES STUDIO LANDSCAPE ARCHITECTS
26 Storer Street
Kennebunk, ME 04043
207.351.6789
www.davidmaynesstudio.com

STRUCTURAL INTEGRITY CONSULTING ENGINEERS
46 Forest Avenue
Portland, ME 04101
207.774.4614
www.structuralinteg.com

MECHANICAL SYSTEMS ENGINEERS
Royal River Center, Unit 10
10 Forest Falls Drive
Yarmouth, ME 04096
207.846.1441

SWIFT CURRENT ENGINEERING SERVICES
Royal River Center, Unit 8B
10 Forest Falls Drive
Yarmouth, ME 04096
207.847.9280

**RESIDENCES AT
387 & 405
DEERING
AVENUE**

Portland, Maine

Drawing Title: Scale: N.T.S.

3D VIEWS

A4.3

Date: 1.15.21
Phase: DESIGN DEV.



DEERING AVENUE VIEW



Winton Scott
Architects

5 milk street, portland, maine 04101
• 207.774.4811 • wintonscott.com

WALSH ENGINEERING ASSOCIATES
1 Kren Drive, Suite 2A
Westbrook, ME 04092
207.553.9898
www.walsh-eng.com

DAVID MAYNES STUDIO LANDSCAPE ARCHITECTS
26 Storer Street
Kennebunk, ME 04043
207.351.6789
www.davidmaynesstudio.com

STRUCTURAL INTEGRITY CONSULTING ENGINEERS
46 Forest Avenue
Portland, ME 04101
207.774.4614
www.structuralinteg.com

MECHANICAL SYSTEMS ENGINEERS
Royal River Center, Unit 10
10 Forest Falls Drive
Yarmouth, ME 04096
207.846.1441

SWIFT CURRENT ENGINEERING SERVICES
Royal River Center, Unit 8B
10 Forest Falls Drive
Yarmouth, ME 04096
207.847.9280

**RESIDENCES AT
387 & 405
DEERING
AVENUE**

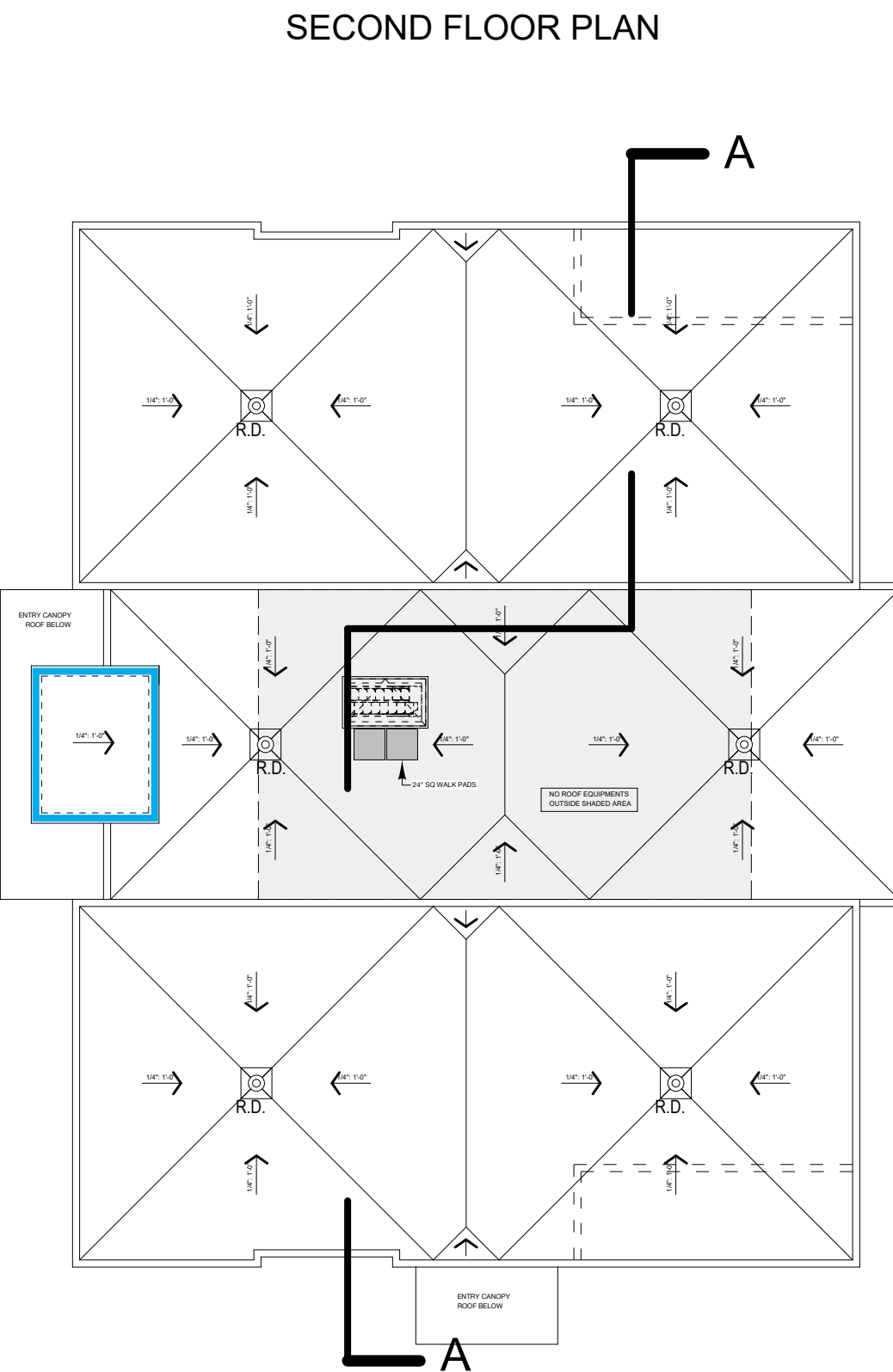
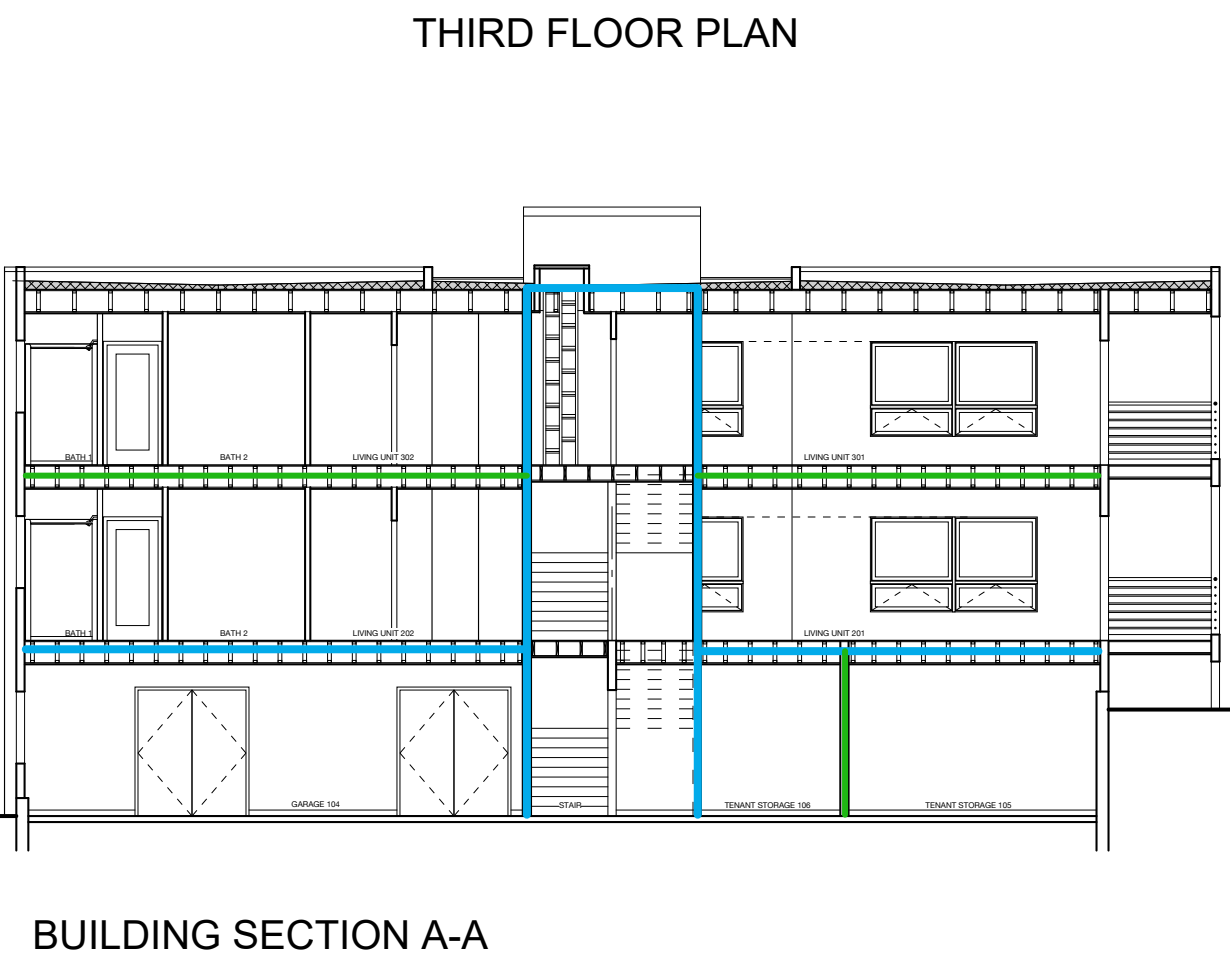
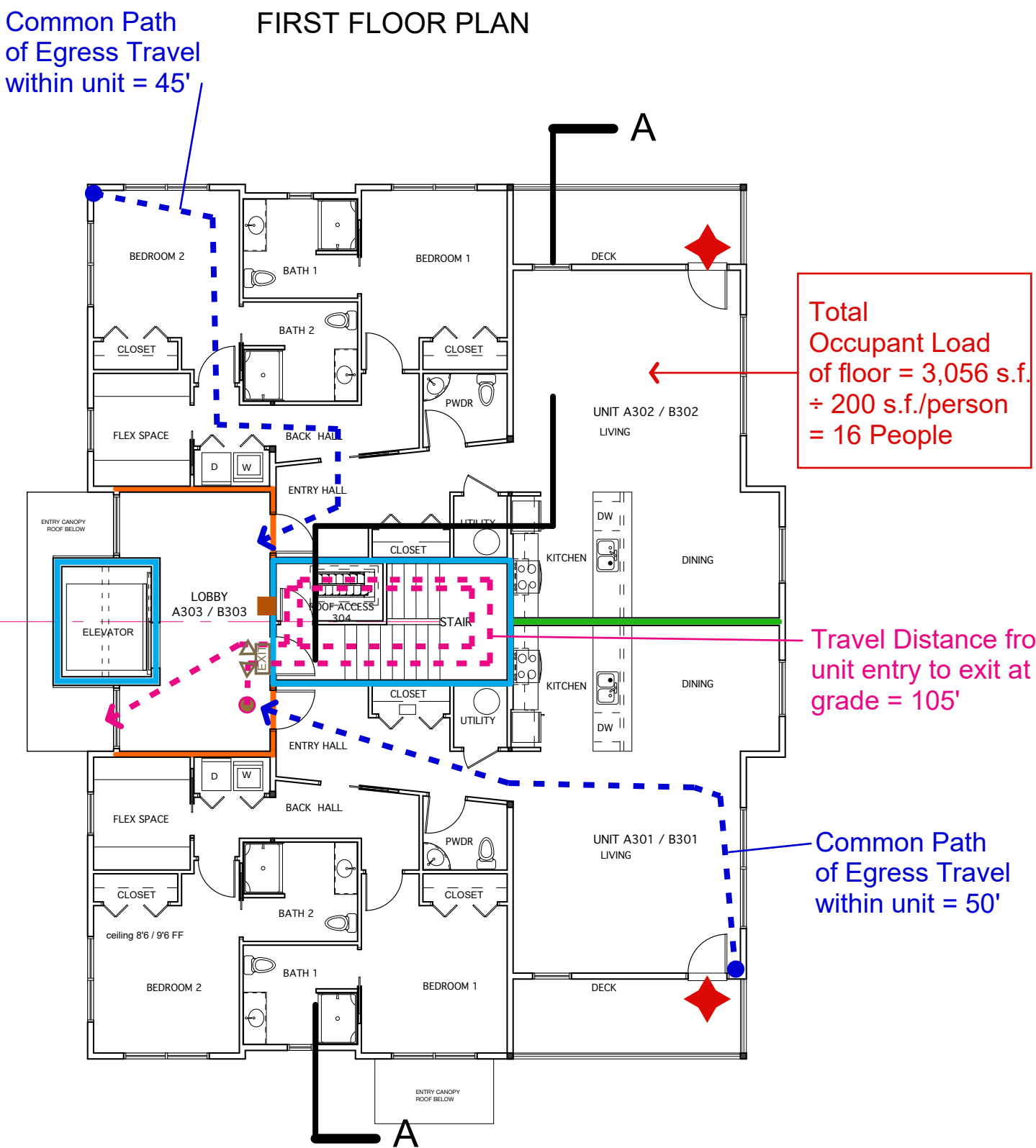
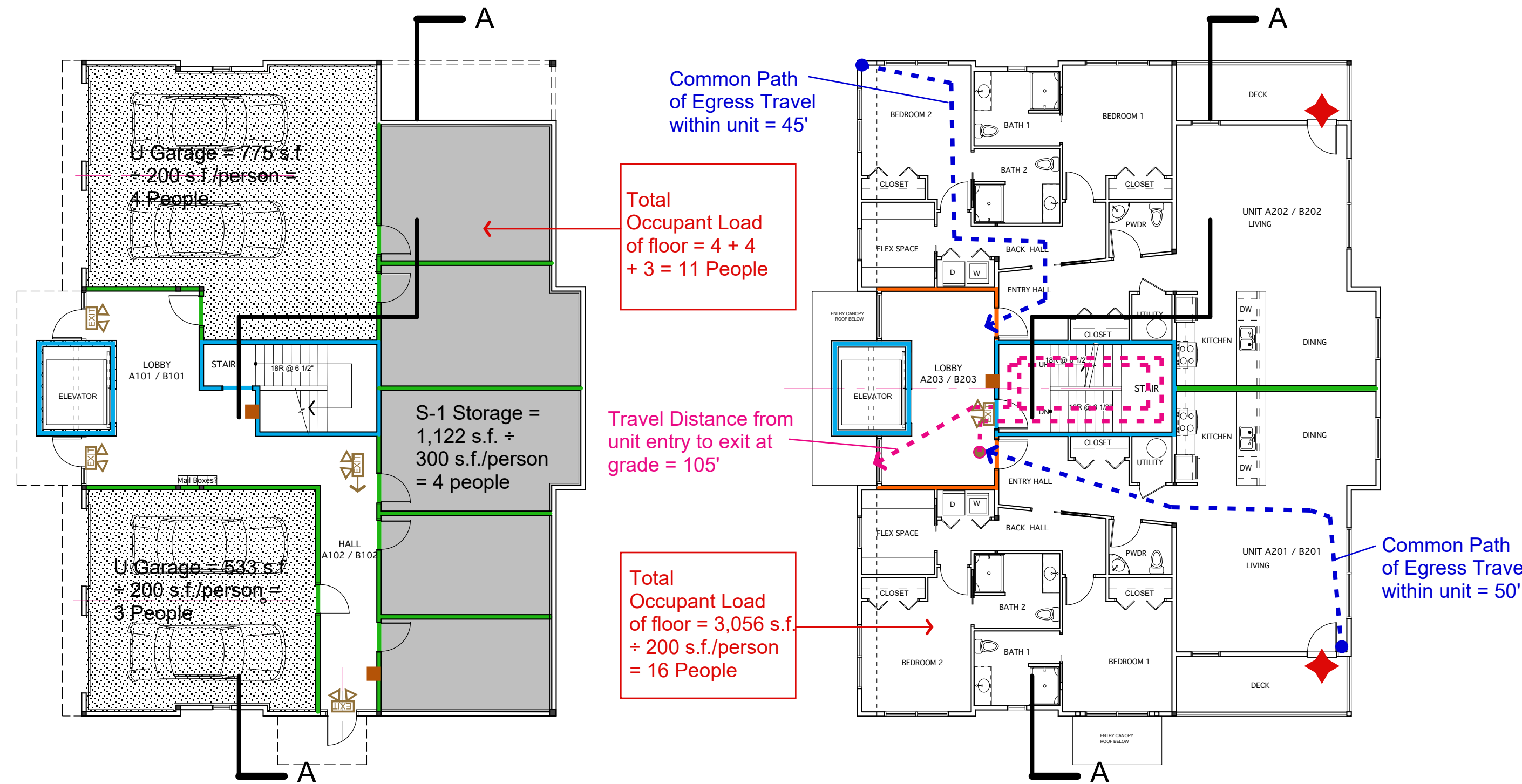
Portland, Maine

Drawing Title: Scale: N.T.S.

3D VIEWS

A4.4

Date: 1.15.21
Phase: DESIGN DEV.



LEGEND	
	2 HR. RATED PARTITION/FLOOR/CLG ASSEMBLY
	1 HR. RATED PARTITION/FLOOR/CLG ASSEMBLY
	30 MIN RATED PARTITION
	FIRE EXTINGUISHER LOCATION (REQUIRED EVERY 75' & AT EXITS)
	E.L. EMERGENCY EXIT LIGHT
	LIT EXIT SIGN/EMERGENCY LIGHT COMBO UNIT
	LIT EXIT SIGN
	EMERGENCY ESCAPE & RESCUE OPENING

2015 IBC CODE SUMMARY

General Building Description:	Two mirror-image, wood framed, 3-story buildings each with ground level storage and garages and 2 residential units at each of the two floors above.	
Building Square Footage: & Unit Counts	First Floor: 3,056 S.F. Second Floor: 3,056 S.F. Third Floor: 3,056 S.F. Total: 9,168 sq. ft. (Ea. Building)	Stor./Utility Use 2 Res. Units 2 Res. Units 4 Units
Construction Type:	Type VB: Wood frame construction.	
Occupancy Classification:	R-2 -Residential Apartments U- Utility (Private Garages) S1 - Moderate Hazard Storage Use	
Occupancy Separations:	Building will be classified as a Separated Mixed Use Occupancy in accordance with 508.4. Per Table 508.4, the following use separations apply: -Residential/Utility- 2 Hour Separation -Residential/Storage(S1) - 2 Hour Separation -Utility/ Storage (S1) - 2 Hour Separation The above separations are allowed to be reduced to 1 hour if the building is protected throughout by an automatic, supervised NFPA13 sprinkler system but not a NFPA 13R system. Therefore, a 2 hour separation will be provided between the first and second floors allowing the first floor to be protected with a NFPA 13 system and the residential floors above protected with an NFPA 13R system Per section 420.2, demising partitions separating dwelling units are required to be constructed as 1 hour rated fire partitions. Per section 420.3, floor/ceiling assemblies separating dwelling units shall be constructed as 1 hour rated horizontal assemblies in accordance with section 711.	
Height & Area Requirements:	Per Table 504.3, Type 5B construction, 60' max. building height (If protected with automatic sprinkler system-NFPA 13 or 13R for Residential Use) for Use Groups S1, U, and R2. Per Table 504.4, Type 5B construction, Allowable number of stories above grade for each use (If protected with automatic sprinkler system-NFPA 13 or 13R for Residential Use) are as follows: R2 - 3 stories S1 - 2 stories U - 2 Stories Per Table 506.2, Allowable building area per floor (If protected with automatic sprinkler system -NFPA 13 or NFPA13R for Residential Use) are as follows: R2- 7,000 s.f. S1- 36,000 s.f. U - 22,000 s.f.	
Sprinkler System:	Per Section 420.5, Building will be equipped with an approved, automatic, supervised sprinkler system per NFPA 13 at the first floor and NFPA 13R for the residential floors above. a 2 hour use group separation will be provided between the first floor and the upper floors.	
Fire Alarm System:	Per section 907.2.9.1, a manual fire alarm system that activates the occupant notification system in accordance with	

2018 NFPA 101 LIFE SAFETY CODE SUMMARY

General Building Description:	Two mirror-image, wood framed, 3-story buildings each with ground level storage and garages and 2 residential units at each of the two floors above.	
Building Square Footage: & Unit Counts	First Floor: 3,056 S.F. Second Floor: 3,056 S.F. Third Floor: 3,056 S.F. Total: 9,168 sq. ft. (Ea. Building)	Stor./Utility Use 2 Res. Units 2 Res. Units 4 Units
Construction Type:	Type 5(000): Wood frame construction. Per Table A.8.2.1.2, no rating is required for building elements.	
Occupancy Classification:	R-Residential Apartments S- Storage	
Occupancy Separations:	Building will be classified as a separated occupancy in accordance with Section 6.1.14.2.3. Per Table 6.1.14.4.1(b), a 2 hour separation is required between Residential and Storage uses. The above separations are allowed to be reduced to 1 hour if the building is protected throughout by an automatic, supervised NFPA13 sprinkler system but not a NFPA 13R system. Therefore, a 2 hour separation will be provided between the first and second floors allowing the first floor Storage Uses to be protected with a NFPA 13 system and the residential floors above protected with an NFPA 13R system. Per 30.3.5.1, the Building will be equipped with an approved, automatic, supervised sprinkler system in accordance with 9.7.1.1 (1)NFPA13 System for first floor (storage Occupancy) and (2) NFPA 13R system w/ quick response heads for the upper residential use floors. Per section 30.3.4.1.1, a fire alarm system is only required in apartment buildings four or more stories in height OR with more than 11 dwelling units. However, IBC requires a fire alarm system for buildings where dwelling units are located 3 or more stories above grade so a fire alarm system is required. Per Sections 30.3.4.2.3 & 42.8.3.4.2, buildings protected by a supervised automatic sprinkler system, alarm shall be initiated upon operation of the automatic sprinkler system. Per section 30.3.4.5, smoke alarms shall be installed per 9.6.2.10 in every sleeping area and outside every sleeping area in vicinity of bedrooms as well as at all levels of the dwelling unit.	
Sprinkler System:	Per 30.3.5.1, the Building will be equipped with an approved, automatic, supervised sprinkler system in accordance with 9.7.1.1 (1)NFPA13 System for first floor (storage Occupancy) and (2) NFPA 13R system w/ quick response heads for the upper residential use floors.	
Fire Alarm System:	Per section 30.3.4.1.1, a fire alarm system is only required in apartment buildings four or more stories in height OR with more than 11 dwelling units. However, IBC requires a fire alarm system for buildings where dwelling units are located 3 or more stories above grade so a fire alarm system is required. Per Sections 30.3.4.2.3 & 42.8.3.4.2, buildings protected by a supervised automatic sprinkler system, alarm shall be initiated upon operation of the automatic sprinkler system.	
Smoke Alarms:	Per section 30.3.4.5, smoke alarms shall be installed per 9.6.2.10 in every sleeping area and outside every sleeping area in vicinity of bedrooms as well as at all levels of the dwelling unit.	
Travel Distance Limits:	Common Path Limit: 50'/100' if sprinklered (Per 30.2.5.3.2 & Table 42.2.5)	

Smoke Alarms:	Per section 907.2.9.2, single and multi-station smoke alarms shall be installed in accordance with section 907.2.11
Fire Protection:	Per Table 601 for Type VB construction, interior and exterior bearing walls, floor construction (& secondary members) and roof construction (& secondary members) do not require a rating. Per section 1023.2, interior exit stairs and elevator shafts shall be enclosed with fire barriers and horizontal assemblies having a fire resistance rating of not less than 1 hour for buildings less than four stories in height. However, to maintain the continuity of the 2 hour separation between the first floor uses and the upper residential floors, the exit stair and elevator shaft enclosures will be 2 hour rated.
Travel Distance Limits:	Common Path Limit: 125' (Table 1006.3.2(1)) Dead-end Corridor: 50' if sprinkled (Per 1020.4)
Occupancy Load:	Per Table 1004.1.2, the occupant load is calculated based on 200 gross sq. ft. per person for residential use. Each floor is 3,056 s.f. resulting in an occupant load of 16 per floor at the upper floors. The first floor S1 use is calculated at 300 gross sq. ft. per person for an occupant load of 4 and the Utility garage space is calculated at 200 sq. ft. per person for an occupant load of 7. Total O.L. for the floor = 11.
Means of Egress:	Per Section 1006.2.1(Exception), In R2 occupancies, one means of egress is permitted within and from individual dwelling units with a maximum occupant load of 20 where the dwelling unit is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2 and common path of egress travel does not exceed 125'. Per Section 1006.3.2 -1. A single exit or access to a single exit shall be permitted from any story or occupied roof where the number of dwelling units, and common path of egress travel distance does not exceed the values in Table 1006.3.2(1) Per Table 1006.3.2(1), the first, second, or third stories above grade in an R2 occupancy with no more than 4 units per floor and max common path of egress travel distance of 125' can be served by one exit in R2 occupancies. Per footnote (a) the building must be sprinkled and have emergency escape and rescue openings in accordance with Section 1030. Exit Enclosure requirement: 1 hour rated fire barriers in accordance with Section 707 Door openings in exit enclosure walls shall be protected with 60 Min. rated UL Labeled fire door/frames with closers (Table 716.5). Maximum riser height: 7", tread depth: 11" Minimum stair width: 36" when serving an occupant load less than 50 (Section 1011.2, exception 1). Per Section 1011.11, stairways shall have handrails on both sides that comply with section 1014.
Corridors:	Per Table 1020.1, corridors in residential uses with an occupant load greater than 10 at each floor, shall be enclosed with 30 minute fire partitions built per section 708. Corridor Doors require a 20 Minute rating and shall be equipped with self closing device.

Occupancy Loads:	Dead-end Corridor: 50'/100' if sprinklered (Per 30.2.5.4.2 & Table 42.2.5) Travel Distance: 200' / 400' if sprinklered (Per 30.2.6.3.2 & Table 42.2.6) Per Table 7.3.1.2, allowable area per person for apartments is 200 gross s.f. Floor area = 3,056 s.f. /200 s.f. per person = Occupant Load; 16 people per floor at the upper residential floors. Per Table 7.3.1.2, allowable area per person for Storage Use in other than Storage or Mercantile occupancies is 500 gross s.f. First Floor area = 3,056 s.f. /500 s.f. per person = Occupant Load; 7 people per floor.
Means of Egress:	Per Section 7.2.2.2.1.2, where serving an occupant load of less than 50 people, the minimum clear stair width is 36" Per 30.2.2.1.2 . In buildings protected throughout by an automatic supervised sprinkler system, exit enclosures shall have a minimum 1 hour fire resistance rating. However, to maintain continuity of the 2 hour occupancy separation between the first and second floors, exit enclosures and elevator shaft enclosures will be 2 hour rated. Per section 30.3.2.1.1, Hazardous area protection is required at a boiler room or mechanical room containing heat generating equipment. Such space shall be separated from the rest of the building by a 1 hour rated separation and protected with an automatic sprinkler system per NFPA 13. Per 30.2.4.32, a single exit shall be permitted in buildings where the total number of stories does not exceed four, provided the following conditions are met: (1) the building is protected by a supervised automatic sprinkler system. (2) The exit stairway does not serve more than one half of a story below the level of exit discharge. (3) Travel distance from unit door to exit does not exceed 35'. (4)The exit stairway is protected with a minimum 1 hour rated enclosure. (5) All openings in the exit enclosure are protected with self closing doors with min. 1 hour rating (6) All corridors serving as access to exits have min. 30 min. fire resistance rating. (7) Horizontal & vertical separation having a min. 1 hour fire rating provided between dwelling units Per 30.2.6.2, Max travel distance within unit to a corridor door shall not exceed 125' if the building is sprinkled.
Interior Finishes Classifications:	Per Table A.10.2.2, Finishes in exit stairs in apartment buildings shall carry a Class A classification. Finishes within the dwelling unit shall carry a classification of Class A, B, or C.
Corridors:	Per 30.3.6.1.2, in apartment buildings protected by an automatic sprinkler system, corridor walls shall have a 30 min. fire resistance rating. Per 30.3.6.2.1, doors that open onto exit corridors shall have not less than a 20 minute fire protection rating in accordance with section 8.3.



Winton Scott Architects

5 milk street, portland, maine 04101
207.774.4811 • wintonscott.com

WALSH ENGINEERING ASSOCIATES

1 Kren Drive, Suite 2A
Westbrook, ME 04092
207.553.9898
www.walsh-eng.com

DAVID MAYNES STUDIO LANDSCAPE ARCHITECTS

26 Storer Street
Kennebunk, ME 04043
207.351.6789
www.davidmaynesstudio.com

STRUCTURAL INTEGRITY CONSULTING ENGINEERS

46 Forest Avenue
Portland, ME 04101
207.774.4614
www.structuralinteg.com

MECHANICAL SYSTEMS ENGINEERS

Royal River Center, Unit 10
10 Forest Falls Drive
Yarmouth, ME 04096
207.846.1441

SWIFT CURRENT ENGINEERING SERVICES

Royal River Center, Unit 8B
10 Forest Falls Drive
Yarmouth, ME 04096
207.847.9280

RESIDENCES AT
387 & 405
DEERING
AVENUE

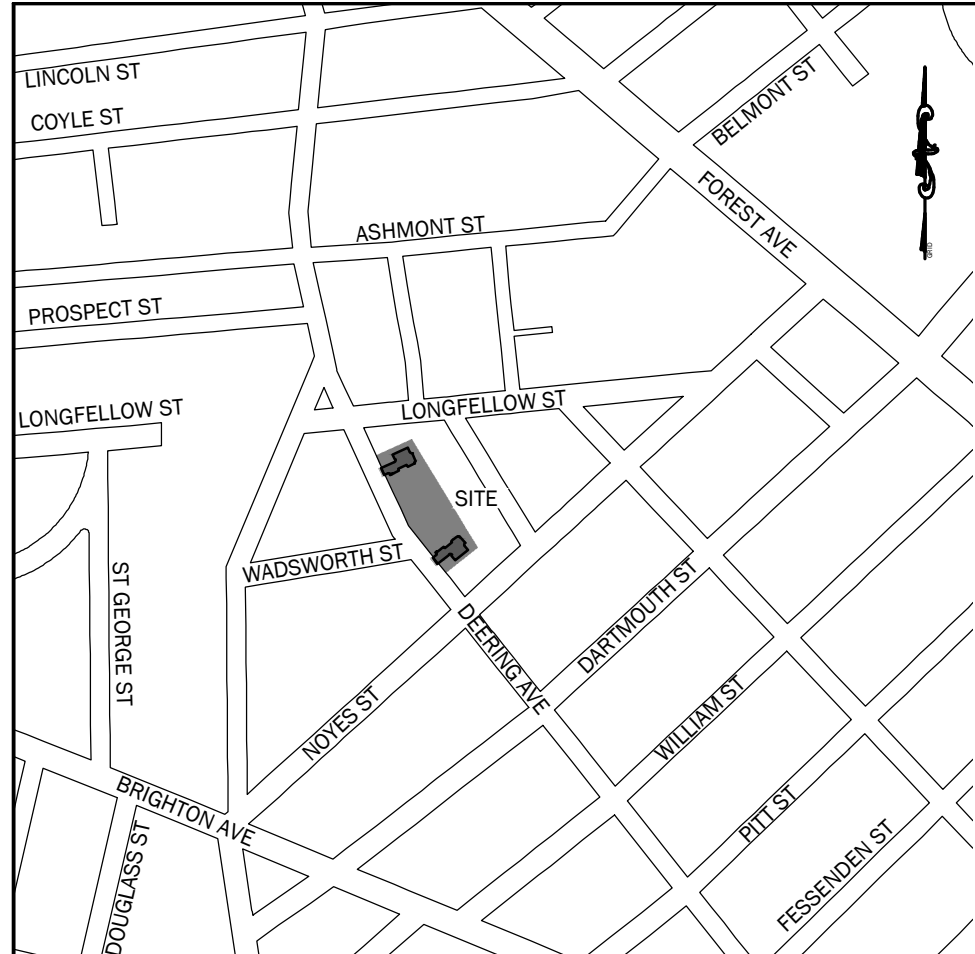
Portland, Maine

Drawing Title: Scale: 1/8"

CODE SUMMARY

A5.1

Date: 1.15.21
Phase: DESIGN DEV.



LOCATION PLAN

SCALE: 1" = 500'

- LANDSCAPING SHALL MEET THE "ARBORICULTURAL SPECIFICATIONS AND STANDARDS OF PRACTICE AND LANDSCAPE GUIDELINES" OF THE CITY OF PORTLAND TECHNICAL AND DESIGN STANDARDS AND GUIDELINES.
- 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.
- ALL POWERLINE UTILITIES SHALL BE UNDERGROUND, UNLESS OTHERWISE NOTED.
- SIDEWALKS AND CURBING SHALL BE DESIGNED AND BUILT WITH TIPDOWN RAMPS AT ALL STREET CORNERS, CROSSWALKS AND DRIVEWAYS IN CONFORMANCE WITH THE CITY OF PORTLAND TECHNICAL AND DESIGN STANDARDS AND GUIDELINES.
- ALL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MAINE EROSION AND SEDIMENT CONTROL BMPs PUBLISHED BY THE BUREAU OF LAND AND QUALITY, MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, OCTOBER 2016, OR AS CURRENTLY REVISED.
- ALL EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY SITE EXCAVATION OR REGRADING.
- ALL DISTURBED AREAS ON THE SITE NOT COVERED BY BUILDINGS OR PAVED AREAS SHALL BE STABILIZED WITH LOAM AND SEED OR OTHER METHODS AS REQUIRED BY BEST MANAGEMENT PRACTICES (SEE ABOVE).
- PRIOR TO CONSTRUCTION, A PRECONSTRUCTION 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 REPRESENTATIVE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ARRANGE A MUTUALLY AGREEABLE TIME FOR THE PRECONSTRUCTION MEETING.
- EXISTING VEGETATION SHALL BE CONSERVED IN AREAS SHOWN ON THIS SITE. FENCING OR OTHER PROTECTIVE BARRIERS SHALL BE ERRECTED OUTSIDE THE DRIP-LINE OF INDIVIDUAL, GROUPINGS OF TREES DESIGNATED FOR PRESERVATION PRIOR TO THE ONSET OF CONSTRUCTION. REGRADING SHALL NOT TAKE PLACE WITHIN THE DRIP-LINE OF TREES DESIGNATED FOR PRESERVATION. NO STORAGE OR CONSTRUCTION MATERIALS SHALL BE PERMITTED WITHIN THE DRIP-LINE OF TREES TO BE PRESERVED.
- SUBDIVISION AT THE TIME OF APPROVAL IS DEFINED AS "SUBDIVISION SHALL MEAN THE DIVISION OF A LOT, TRACT OR PARCEL OF LAND INTO THREE (3) OR MORE LOTS, INCLUDING LOTS OF FORTY (40) ACRES OR MORE, WITHIN ANY FIVE-YEAR PERIOD WHETHER ACCOMPLISHED BY SALE, LEASE, DEVELOPMENT, BUILDINGS OR OTHERWISE AND AS FURTHER DEFINED IN 30-A M.R.S.A. SECTION 4401. THE TERM SUBDIVISION SHALL ALSO INCLUDE THE DIVISION OF A NEW STRUCTURE OR STRUCTURES ON A TRACT OR PARCEL OF LAND INTO THREE (3) OR MORE DWELLING UNITS WITHIN A FIVE-YEAR PERIOD AND THE DIVISION OF AN EXISTING STRUCTURE OR STRUCTURES PREVIOUSLY USED FOR COMMERCIAL OR INDUSTRIAL USE INTO THREE (3) OR MORE DWELLING UNITS WITHIN A FIVE-YEAR PERIOD. THE AREA INCLUDED IN THE EXPANSION OF AN EXISTING STRUCTURE IS DEEMED TO BE A NEW STRUCTURE FOR THE PURPOSE OF THIS PARAGRAPH. A DWELLING UNIT SHALL INCLUDE ANY PART OF A STRUCTURE WHICH, THROUGH SALE OR LEASE, IS INTENDED FOR HUMAN HABITATION, INCLUDING SINGLE-FAMILY AND MULTIFAMILY HOUSING, CONDOMINIUMS, TIME-SHARE UNITS AND APARTMENTS."

PARKING INFORMATION

EXISTING VEHICLE SPACES:	0
REQUIRED VEHICLE SPACES: RESIDENTIAL UNITS: 1 PER UNIT X 8 UNITS:	8
VEHICLE SPACES PROVIDED: 8 SURFACE SPACES, 8 GARAGE SPACES (16 TOTAL)	
BICYCLE SPACES REQUIRED: 2 BICYCLE SPACES PER 5 DWELLING UNITS @ 8:	3.2
PROVIDED: TWO AT EACH BUILDING	4

ZONING INFORMATION:

- | | |
|--------------------------------|---|
| 1. CLASSIFICATION: | R5 - RESIDENTIAL ZONE |
| 2. PERMITTED USES: | MULTIPLY |
| 3. MINIMUM LOT SIZE: | 9,000 S.F. PER MULTIPLEX
38,309 SF FOR 2 MULTIPLEXES (19,154 SF PER MULTIPLEX) |
| 4. LOT AREA PER DWELLING UNIT | 4,500 SF
8 UNITS ALLOWED, 8 PROPOSED |
| 5. LOT WIDTH MINIMUM | 90 FEET
PROPOSED = 334.7 |
| 6. MINIMUM STREET FRONTAGE: | 50 FEET
356 FEET |
| 7. FRONT YARD SETBACK MINIMUM: | 20 FEET OR AVERAGE OF ADJACENT BUILDINGS (14.8')
PROVIDED:
PROP. BLDGS: 15.3' & 16.0' |
| 8. REAR YARD SETBACK MINIMUM: | 20 FEET
PROVIDED:
PROP. BLDGS: 23.7' AND 27.0' |
| 9. SIDE YARD SETBACK MINIMUM: | 14 FEET (>2.5 STORIES)
PROVIDED:
PROP. BLDGS: 54.6' & 50.7' |
| 10. HEIGHT MAXIMUM: | 35 FEET
BUILDING A: AVG GRADE = 43.25, HEIGHT = 29.00'
BUILDING B: AVG GRADE = 45.75, HEIGHT = 28.75' |
| 11. MAXIMUM LOT COVERAGE: | 40% OF LOT AREA
PROVIDED:
PROP. BLDGS: 17.6% |

ZONING STANDARDS FROM CITY OF PORTLAND
LAND USE ORDINANCE, REVISED DEC. 1, 2020.

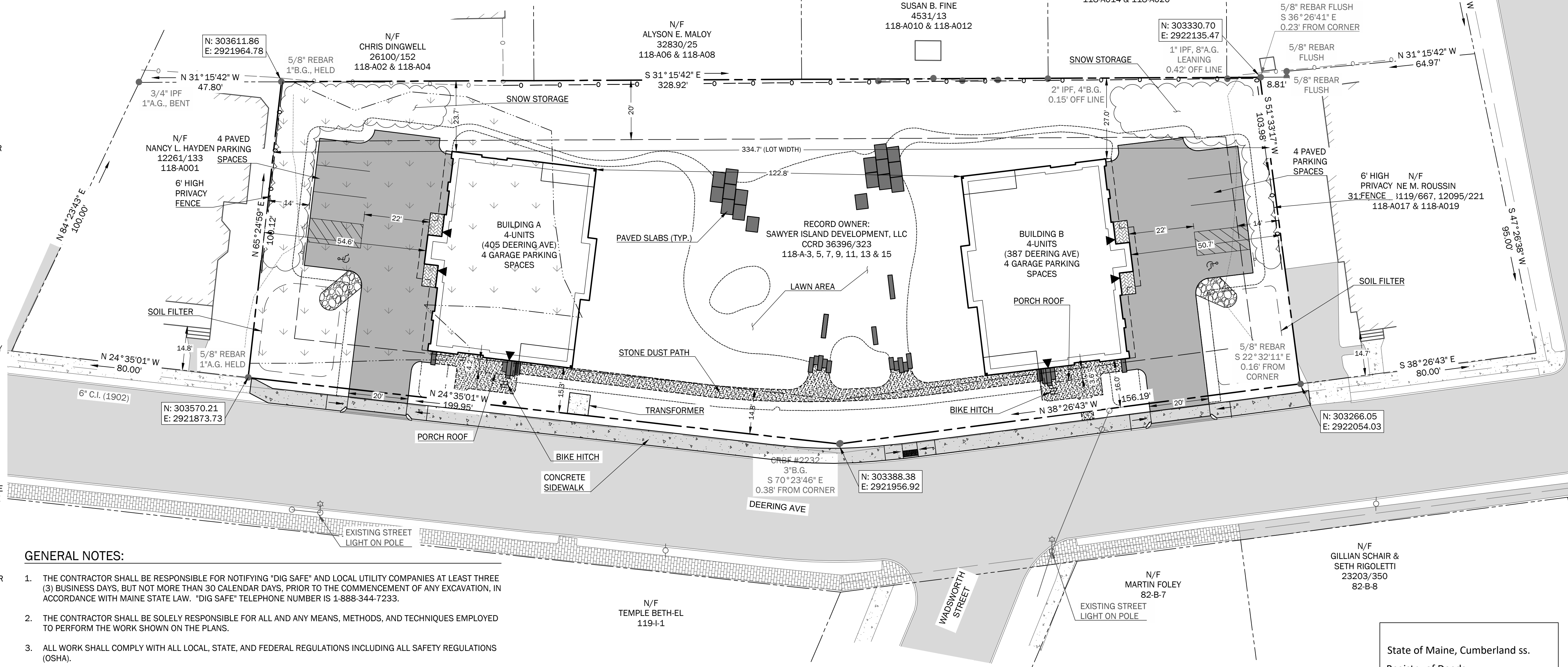
SURVEY GENERAL NOTES

- RECORD OWNER OF THE PROPERTY IS SAWYER ISLAND DEVELOPMENT, LLC HAVING A MAILING ADDRESS OF 100 SILVER STREET, PORTLAND, MAINE 04101.
- THE SUBJECT PROPERTY IS LOCATED WITHIN THE R-5 RESIDENTIAL ZONE.
- TOPOGRAPHIC INFORMATION OBTAINED BY GROUND SURVEY CONDUCTED MAY 2020, BY JONES ASSOCIATES, INC.
- ELEVATIONS SHOWN ON THIS PLAN ARE ON THE CITY OF PORTLAND VERTICAL DATUM (NGVD29) BASED ON CITY BENCHMARK AT THE SOUTHERLY CORNER OF DARTMOUTH STREET AND OAKDALE STREET. L.B. 240/132 ELEVATION:39.36.
- PLAN COORDINATES DERIVED BY SURVEY GRADE GPS PROJECTED TO MAINE STATE GRID, NAD 1983, WEST ZONE.
- UNDERGROUND UTILITIES WERE OBTAINED FROM SURFACE OBSERVATIONS AND TAKEN FROM PLANS BY SEVERAL SOURCES. SEE SURVEY PLAN REFERENCES.

WAIVERS:

THE FOLLOWING WAIVERS HAVE BEEN REQUESTED FOR THE PROJECT:

- 14.6.1.B.1.a: ACCESS AND CIRCULATION - DRIVEWAY SPACING (TECHNICAL MANUAL 1.7.2.7) BUILDING B DRIVEWAY IS LESS THAN 100' FROM ABUTTING DRIVEWAY.
- 14.6.2.A.1.e.: PRESERVE WETLANDS PROJECT REQUIRES 7,223 SF OF WETLAND IMPACT.



GENERAL NOTES:

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING "DIG SAFE" AND LOCAL UTILITY COMPANIES AT LEAST THREE (3) BUSINESS DAYS, BUT NOT MORE THAN 30 CALENDAR DAYS, PRIOR TO THE COMMENCEMENT OF ANY EXCAVATION, IN ACCORDANCE WITH MAINE STATE LAW. "DIG SAFE" TELEPHONE NUMBER IS 1-888-344-7233.
- THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL AND ANY MEANS, METHODS, AND TECHNIQUES EMPLOYED TO PERFORM THE WORK SHOWN ON THE PLANS.
- ALL WORK SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS INCLUDING ALL SAFETY REGULATIONS (OSHA).
- ALL WORK SHALL BE IN CONFORMANCE ALL UTILITY COMPANIES STANDARDS.
- THE CONTRACTOR SHALL SECURE ALL NECESSARY PERMITS FOR THE WORK SHOWN ON THESE PLANS PRIOR TO CONSTRUCTION.
- ALL PAVEMENT/CONCRETE CUTS SHALL BE SAW CUT TO RESULT IN CLEAN EDGES. A TACK COAT SHALL BE APPLIED ALONG THE PAVEMENT CUT EDGES AND THE NEW PAVEMENT BUTTED TO IT, UNLESS OTHERWISE DIRECTED BY THE OWNER OR OWNER'S REPRESENTATIVE.
- ALL WORK SHALL COMPLY WITH THE CITY OF PORTLAND STREET OPENING PERMIT REQUIREMENTS.
- ALL WORK SHALL COMPLY WITH THE CITY OF PORTLAND TECHNICAL MANUAL.
- ALL EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY SITE EXCAVATION OR REGRADING. REFER TO THE WRITTEN EROSION CONTROL PLAN AND DRAWINGS FOR FURTHER EROSION CONTROL GUIDELINES.
- CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS SHOWN ON THE DRAWINGS. IF ANY DISCREPANCIES ARE FOUND, THE OWNER OR OWNER'S REPRESENTATIVE SHALL BE NOTIFIED IMMEDIATELY.
- ANY BLASTING ACTIVITIES SHALL MEET THE STANDARDS OF THE CITY OF PORTLAND TECHNICAL MANUAL SECTION 3.7.

PARCEL INFORMATION:

- | | |
|--------------------------|--|
| 1. OWNER OF RECORD: | SAWYER ISLAND DEVELOPMENT, LLC
100 SILVER STREET
PORTLAND, MAINE 04101
CCRD BOOK 36396, PAGE 323 |
| 2. STREET ADDRESS: | 387 & 405 DEERING AVENUE, PORTLAND, MAINE |
| 3. PARCEL: | CITY OF PORTLAND TAX MAP 118, BLOCK A, LOTS 3, 5, 7, 9, 11, 13 & 15 |
| 4. TOTAL AREA OF PARCEL: | 38,309 SF |
| 5. CURRENT ZONE: | R-5 RESIDENTIAL |
| SITE BENCHMARK: | PORTLAND VERTICAL DATUM (NGVD29) BASED ON CITY BENCHMARK AT THE SOUTHERLY CORNER OF DARTMOUTH STREET AND OAKDALE STREET. L.B. 240/132 ELEVATION:39.36. |

LOT COVERAGE:

LOT SIZE: 38,309 SF
PROPOSED BUILDING FOOTPRINTS : 6,744 SF
PROPOSED LOT COVERAGE: 17.6%

SNOW STORAGE:

- SNOW IS TO BE STORED WITHIN THE SNOW STORAGE AREAS.
- SNOW MAY BE PHYSICALLY REMOVED AND TRANSPORTED OFFSITE IF NECESSARY.
- SNOW TRANSPORTED OFFSITE SHALL BE BROUGHT TO A MAINE DEP APPROVED "SNOW DUMP" OR MEET THE EXEMPTION REQUIREMENTS SPECIFIED WITHIN CHAPTER 573 WHEN THE ABOVE REQUIREMENTS CANNOT BE MET DUE TO AN ABUNDANCE OF SNOW.
- THE SNOW CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO VEGETATION, LANDSCAPING, CURBING, LIGHTING, FENCING ETC. RESULTING FROM THEIR ACTIVITIES.
- THE SNOW CONTRACTOR SHALL USE SALT OR CHLORIDE SUBSTITUTE TO DEICE THE DRIVEWAY.
- THE OWNER IS RESPONSIBLE FOR SNOW REMOVAL BEING UNDERTAKEN IN A TIMELY FASHION.

SOLID WASTE

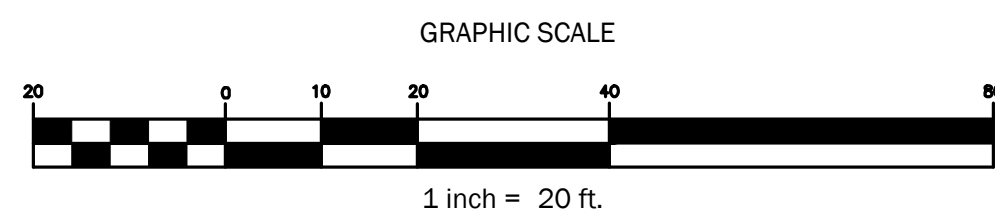
THE PROJECT WILL UTILIZE CITY CURBSIDE TRASH AND RECYCLING SERVICES.

LEGEND

EXISTING	PROPOSED
PROPERTY LINE	PROPERTY LINE
RIGHT-OF-WAY LINE	RIGHT-OF-WAY LINE
ABUTTERS PROPERTY LINE	ABUTTERS PROPERTY LINE
PROPERTY SETBACK	PROPERTY SETBACK
IRON ROD OR PIN FOUND	IRON ROD OR PIN FOUND
WETLANDS	WETLANDS
BOLLARD LIGHT	BOLLARD LIGHT
UTILITY POLE	UTILITY POLE
HYDRANT	HYDRANT
BUILDING	BUILDING
BITUMINOUS PAVEMENT	BITUMINOUS PAVEMENT
CONCRETE	CONCRETE
BRICK	BRICK
GRANITE CURB	GRANITE CURB
CONCRETE PAVERS	CONCRETE PAVERS
TREELINE	TREELINE

THE PLANNING BOARD ACKNOWLEDGES AND AGREES THAT THE PROPERTY AND IMPROVEMENTS AS DEPICTED ON THIS PLAN ARE IN CONFORMANCE WITH THE MUNICIPAL ZONING REGULATIONS OF THE CITY OF PORTLAND.

APPROVED BY: _____ DATE: _____



Deering Avenue Residences

387 & 405 Deering Avenue
Portland, Maine 04103
BK 36396, PG 323; CBL: 118-A 003001

SAWYER ISLAND DEVELOPMENT, LLC.

PREPARED FOR:

100 SILVER STREET
PORTLAND, MAINE 04101

State of Maine, Cumberland ss.
Registry of Deeds
Received _____, 20____
at ____h____m____M, and recorded in
Plan Book _____, Page _____
Attest: _____
Register

Rev.	Date	Description	Drawn	Check
1	01/05/2021	REVISED PER STAFF COMMENTS	DEPT.	NGC

Sheet Title:

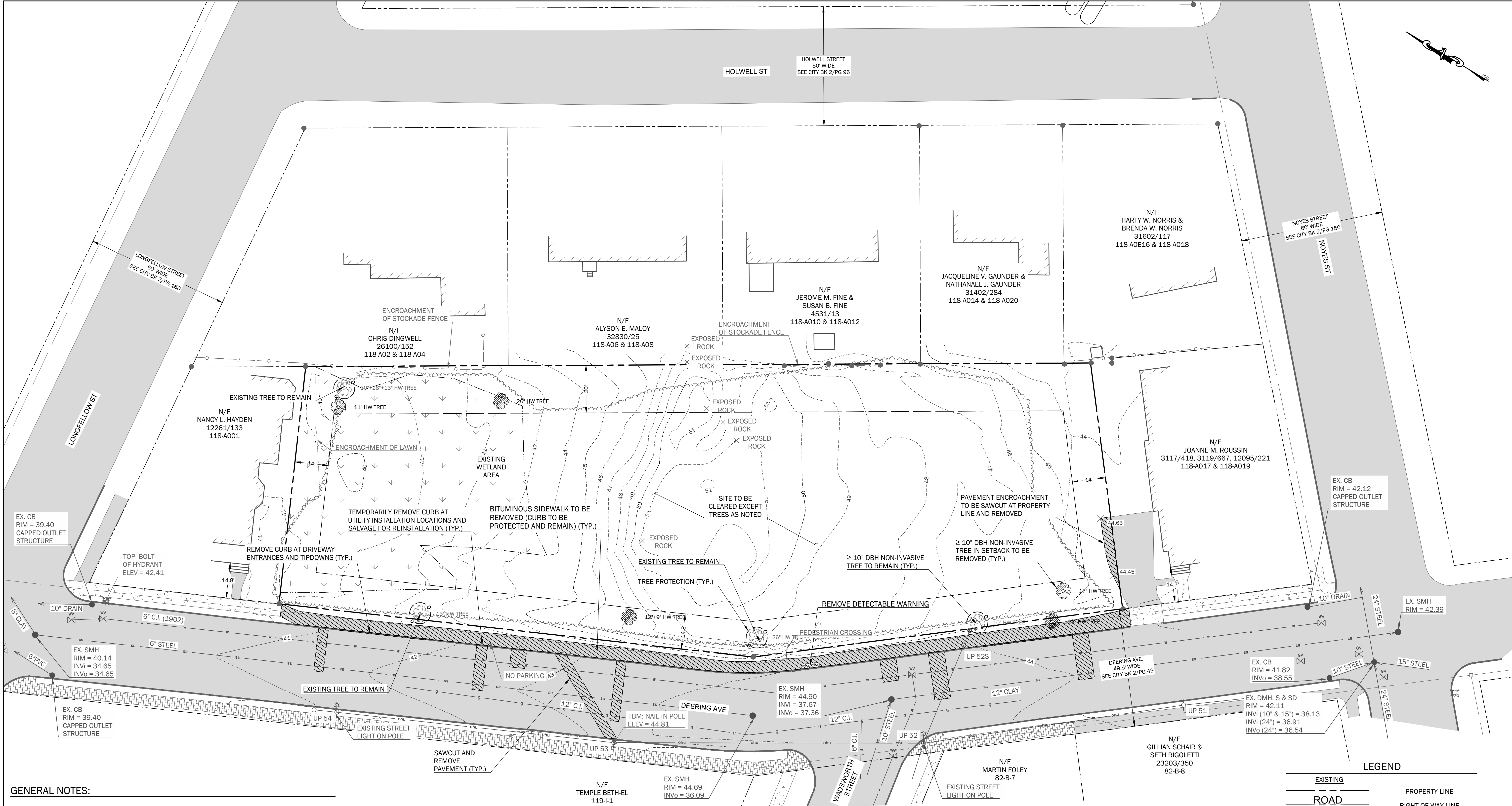
SUBDIVISION RECORDING PLAT

Job No.: 613.1
Date: Feb. 24, 2021
Scale: AS NOTED
Drawn: MTL
Checked: SWC

Sheet No.:

C0.1

ISSUED FOR PERMITTING - NOT FOR CONSTRUCTION



GENERAL NOTES:

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING "DIG SAFE" AND LOCAL UTILITY COMPANIES AT LEAST THREE (3) BUSINESS DAYS, BUT NOT MORE THAN 30 CALENDAR DAYS, PRIOR TO THE COMMENCEMENT OF ANY EXCAVATION, IN ACCORDANCE WITH MAINE STATE LAW. "DIG SAFE" TELEPHONE NUMBER IS 1-888-344-7233.
- THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL AND ANY MEANS, METHODS, AND TECHNIQUES EMPLOYED TO PERFORM THE WORK SHOWN ON THE PLANS.
- ALL WORK SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS INCLUDING ALL SAFETY REGULATIONS (OSHA).
- ALL WORK SHALL BE IN CONFORMANCE ALL UTILITY COMPANIES STANDARDS.
- THE CONTRACTOR SHALL SECURE ALL NECESSARY PERMITS FOR THE WORK SHOWN ON THESE PLANS PRIOR TO CONSTRUCTION.
- ALL PAVEMENT/CONCRETE CUTS SHALL BE SAW CUT TO RESULT IN CLEAN EDGES. A TACK COAT SHALL BE APPLIED ALONG THE PAVEMENT CUT EDGES AND THE NEW PAVEMENT BUTTED TO IT, UNLESS OTHERWISE DIRECTED BY THE OWNER OR OWNER'S REPRESENTATIVE.
- ALL WORK SHALL COMPLY WITH THE CITY OF PORTLAND STREET OPENING PERMIT REQUIREMENTS.
- ALL WORK SHALL COMPLY WITH THE CITY OF PORTLAND TECHNICAL MANUAL.
- ALL EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY SITE EXCAVATION OR REGRADING. REFER TO THE WRITTEN EROSION CONTROL PLAN AND DRAWINGS FOR FURTHER EROSION CONTROL GUIDELINES.
- CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS SHOWN ON THE DRAWINGS. IF ANY DISCREPANCIES ARE FOUND, THE OWNER OR OWNER'S REPRESENTATIVE SHALL BE NOTIFIED IMMEDIATELY.
- ANY BLASTING ACTIVITIES SHALL MEET THE STANDARDS OF THE CITY OF PORTLAND TECHNICAL MANUAL SECTION 3.7.

PARCEL INFORMATION:

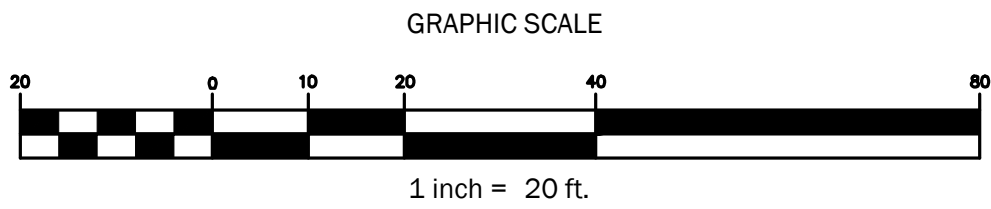
- OWNER OF RECORD: SAWYER ISLAND DEVELOPMENT, LLC
100 SILVER STREET
PORTLAND, MAINE 04103
CCRD BOOK 36396, PAGE 323
- STREET ADDRESS: 387 & 405 DEERING AVENUE
- PARCEL: CITY OF PORTLAND TAX MAP 118, BLOCK A, LOTS 3, 5, 7, 9, 11, 13 & 15
- TOTAL AREA OF PARCEL: 38,309 SF
- CURRENT ZONE: R-5, RESIDENTIAL
- SITE BENCHMARK: PORTLAND VERTICAL DATUM (NGVD29) BASED ON CITY BENCHMARK AT THE SOUTHERLY CORNER OF DARTMOUTH STREET AND OAKDALE STREET. L.B. 240/132 ELEVATION:39.36.

PLAN REFERENCES:

- TOPOGRAPHIC AND PROPERTY BOUNDARY INFORMATION TAKEN FROM A COMPILATION OF THE FOLLOWING:
 - A PLAN TITLED "PLAN OF LAND FOR 383 DEERING AVE", PREPARED BY JONES ASSOCIATES, INC. OF 280 POLAND SPRING ROAD, AUBURN MAINE 04210, DATED MAY 14, 2020.
 - FIELD OBSERVATIONS BY WALSH ENGINEERING ASSOCIATES, INC. ON JANUARY 11, 2020.

TREE CUTTING NOTES:

- MAJORITY OF MATURE TREES ONSITE ARE INVASIVE NORWAY MAPLES. ALL INVASIVE TREES WILL BE REMOVED.
- INDIVIDUAL TREES SHOWN ON PLAN ARE NON-INVASIVE TREES WITHIN THE ZONING SETBACKS THAT ARE GREATER THAN OR EQUAL TO 10" DBH. THERE ARE A TOTAL OF 9 TREES. FIVE OF THESE TREES WILL BE REMOVED AND 4 (44%) WILL BE KEPT.

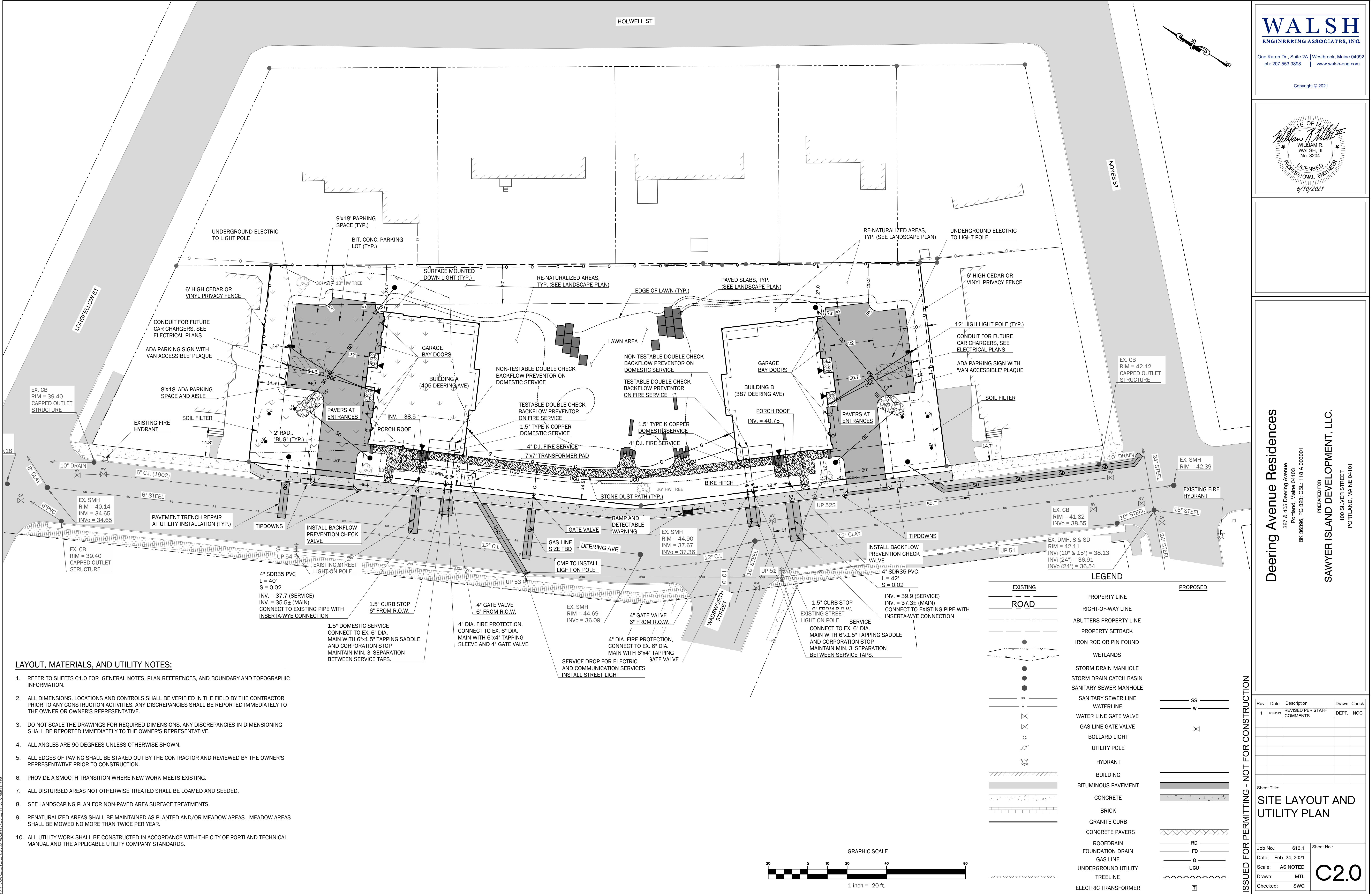


EXISTING		LEGEND	
ROAD		PROPERTY LINE	
		RIGHT-OF-WAY LINE	
		ABUTTERS PROPERTY LINE	
		PROPERTY SETBACK	
		IRON ROD OR PIN FOUND	
		WETLANDS	
		STORM DRAIN MANHOLE	
		STORM DRAIN CATCH BASIN	
		SANITARY SEWER MANHOLE	
		SANITARY SEWER LINE	
		WATERLINE	
		WATER LINE GATE VALVE	
		GAS LINE GATE VALVE	
		BOLLARD LIGHT	
		UTILITY POLE	
		HYDRANT	
		BUILDING	
		BITUMINOUS PAVEMENT	
		CONCRETE	
		BRICK	
		GRANITE CURB	
		TREE, REMOVAL	



Deering Avenue Residences
387 & 405 Deering Avenue
Portland, Maine 04103
BK 36396, PG 323; CBL: 118 A 003001
PREPARED FOR:
SAWYER ISLAND DEVELOPMENT, LLC.
100 SILVER STREET
PORTLAND, MAINE 04101

ISSUED FOR PERMITTING - NOT FOR CONSTRUCTION		EXISTING CONDITIONS & REMOVALS PLAN	
Rev.	Date	Description	Drawn
1	01/05/2021	REVISED PER STAFF COMMENTS	NGC
Sheet Title:		C1.0	
Job No.:	613.1	Sheet No.:	
Date:	Feb. 24, 2021	Scale:	AS NOTED
Drawn:	MTL	Checked:	SWC



WALSH

ENGINEERING ASSOCIATES, INC.

One Karen Dr., Suite 2A | Westbrook, Maine 04092

ph: 207.553.9898 | www.walsh-eng.com

Copyright © 2021

STATE OF MAINE

William R. Walsh, III

WALSH, III

No. 8204

LICENSED PROFESSIONAL ENGINEER

6/10/2021

Deering Avenue Residences

387 & 405 Deering Avenue
Portland, Maine 04103
BK 36396, PG 323; CBL: 118 A 003001

PREPARED FOR:
SAWYER ISLAND DEVELOPMENT, LLC.
100 SILVER STREET
PORTLAND, MAINE 04101

ISSUED FOR PERMITTING - NOT FOR CONSTRUCTION

Rev.	Date	Description	Drawn	Check
1	01/30/2021	REVISED PER STAFF COMMENTS	DEPT.	NGC

Sheet Title:
SITE LAYOUT AND UTILITY PLAN

Job No.: 613.1

Date: Feb. 24, 2021

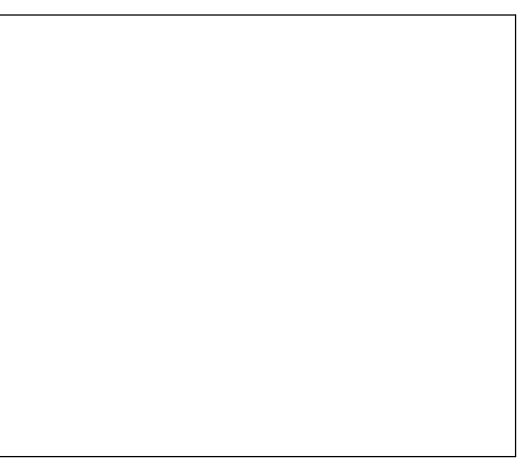
Scale: AS NOTED

Drawn: MTL

Checked: SWC

Sheet No.:
C2.0

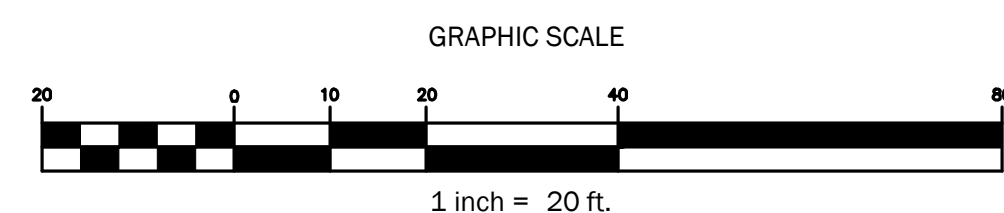
Page 481



100 SILVER STREET
PORTLAND, MAINE 04101



1. REFER TO SHEET C1.0 FOR GENERAL NOTES AND PLAN REFERENCES.
2. THE CONTRACTOR SHALL INSTALL ALL EROSION AND SEDIMENTATION CONTROL MEASURES PRIOR TO CONSTRUCTION. ALL EROSION CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH THE DRAWINGS, SPECIFICATIONS.
3. THE CONTRACTOR SHALL COMPLY WITH THE MAINE EROSION AND SEDIMENT CONTROL BMPs MANUAL AS PUBLISHED BY THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION'S BUREAU OF LAND AND WATER QUALITY, MARCH 2003 OR LATEST EDITION.
4. ALL EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY SITE EXCAVATION OR REGRADING. ALL DISTURBED AREAS ON SITE NOT COVERED BY BUILDINGS OR PAVED AREAS SHALL BE STABILIZED WITH LOAM AND SEED, OR BY OTHER METHODS AS REQUIRED BY THE WRITTEN EROSION CONTROL PLAN.
5. DISTURBED AREAS SHALL BE LIMITED TO ONLY THOSE AREAS UNDER ACTIVE CONSTRUCTION. FOR DISTURBED AREAS THAT ARE NOT UNDER ACTIVE CONSTRUCTION AND THAT CAN NOT YET UNDERGO FINAL GRADING, INSTALL TEMPORARY SEEDING AND MULCHING (REFER TO WRITTEN EROSION CONTROL PLAN).
6. PERMANENT SEEDING OR STABILIZATION SHALL BE CARRIED OUT IMMEDIATELY AFTER FINAL GRADING IS COMPLETED, OR TEMPORARY MEASURES SHALL BE APPLIED SUCH AS MULCHING OR SEEDING UNTIL PERMANENT STABILIZATION MEASURES ARE IN PLACE.
7. TOPSOIL SHALL BE STOCKPILED IN AREAS AWAY FROM PROTECTED NATURAL RESOURCES AND IN AREAS WHICH HAVE A MINIMAL POTENTIAL FOR EROSION; REFER TO OWNER FOR LOCATION OF MATERIAL STOCKPILE.
8. ALL EROSION CONTROL MEASURES SHALL BE ROUTINELY INSPECTED AND REPAIRED IN ACCORDANCE WITH THE WRITTEN EROSION CONTROL PLAN FOR THE DURATION OF THE PROJECT UNTIL ALL AREAS ARE STABILIZED. REMOVE ACCUMULATED SILT AND SEDIMENT AS NEEDED AND MAINTAIN SILT FENCE IN GOOD, OPERABLE CONDITION.



ISSUED FOR PERMITTING - NOT FOR CONSTRUCTION

Rev.	Date	Description	Drawn	Check
1	6/10/2021	REVISED PER STAFF COMMENTS	DEPT.	NGC
Sheet Title:				
Erosion Control and Wetland Impact Plan				
Job No.: 613.1			Sheet No.:	
Date: Feb. 24, 2021			C3.1	
Scale: AS NOTED				
Drawn: MTL				
Checked: SWC				

INTRODUCTION

REFERENCE IS MADE TO THE GRADING AND DRAINAGE PLANS WITHIN THE PLAN SET, SHOWING THE LOCATIONS AND TYPES OF PROPOSED MEASURES TO BE IMPLEMENTED.

THE FOLLOWING IS A LIST OF GENERAL EROSION CONTROL PRACTICES THAT WILL BE USED TO PREVENT EROSION AND SEDIMENTATION BEFORE, DURING AND AFTER THE CONSTRUCTION OF THIS PROJECT. IN ADDITION, SPECIAL CARE SHALL BE USED AT ALL TIMES TO: LIMIT DISTURBANCE AND, HENCE, EROSION

- SILT FENCE AND/OR EROSION CONTROL MIX SEDIMENT BARRIERS

CATCH BASIN PROTECTION

CONSTRUCTION PHASE

1. EROSION AND SEDIMENTATION CONTROL BMPs SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF EARTHWORK ACTIVITIES.
2. ONLY THOSE AREAS UNDER ACTIVE CONSTRUCTION WILL BE CLEARED AND LEFT IN AN UNTREATED OR UNVEGETATED CONDITION, AN AREA NO LARGER THAN WHAT CAN BE MULCHED IN ONE DAY MAY BE OPEN AT ONCE. ONCE CONSTRUCTION OF AN AREA IS COMPLETE, FINAL GRADING, LOAMING AND SEEDING SHALL OCCUR IMMEDIATELY (REFER TO "POST CONSTRUCTION REVEGETATION" SECTION). IF DURING FINAL GRADING, LOAMING AND SEEDING CAN NOT OCCUR IMMEDIATELY, IT SHALL BE DONE PRIOR TO ANY STORM EVENT AND WITHIN 15 DAYS OF COMPLETING CONSTRUCTION IN THE AREA. IF FINAL GRADING, LOAMING AND SEEDING CANNOT OCCUR WITHIN 7 DAYS, OR IF THE AREA IS NOT UNDER ACTIVE CONSTRUCTION FOR A PERIOD LONGER THAN 7 DAYS, SEE ITEM NO. 4 BELOW.
3. PRIOR TO THE START OF CONSTRUCTION IN A SPECIFIC AREA, SILT FENCING SHALL BE INSTALLED ON DOWNGRADIENT PORTIONS OF THE SITE AS LOCATED ON THE PLANS TO PROTECT AGAINST ANY CONSTRUCTION RELATED EROSION.
4. TOPSOIL WILL BE STOCKPILED WHEN NECESSARY IN AREAS WHICH HAVE MINIMUM POTENTIAL FOR EROSION AND WILL BE KEPT AS FAR AS POSSIBLE FROM EXISTING DRAINAGE AREAS AND WETLANDS. ALL STOCKPILES EXPECTED TO REMAIN LONGER THAN 7 DAYS SHALL BE:
 - A. TREATED WITH ANCHORED MULCH (WITHIN 5 DAYS OF THE LAST DEPOSIT OF STOCKPILED SOIL).
 - B. SEEDDED WITH CONSERVATION MIX AND MULCHED IMMEDIATELY.
 - C. STOCKPILES SHALL BE EITHER PLACED UPHILL OF AN EXISTING SEDIMENT BARRIER ON THE SITE OR ENCLOSED BY A HAY BALE OR SILT FENCE BARRIER THE FIRST DAY THAT STOCKPILING COMMENCES.
5. ALL DISTURBED AREAS EXPECTED TO REMAIN LONGER THAN 7 DAYS SHALL BE:
 - A. TREATED WITH STRAW AT A RATE OF 70-90 LBS. PER 1000 SQUARE FEET FROM 4/16 TO 10/1, OR AT A RATE OF 150-200 LBS. PER 1000 SQUARE FEET FROM 10/1 TO 4/15.
 - B. SEEDDED WITH CONSERVATION MIX OF PERENNIAL RYE GRASS (1.0 LBS/1000 SQ.FT.) AND MULCHED IMMEDIATELY. FROM 10/1 TO 4/15, FOLLOW THE SEEDING RATES AS OUTLINED BELOW IN SUB-SECTION 4. OF THE "POST CONSTRUCTION REVEGETATION" SECTION.
 - C. MONITORED EVERY TWO WEEKS UNTIL SEEDING CAN OCCUR AND REMULCHED AS NEEDED TO PROTECT SLOPES.
6. ALL GRADING WILL BE HELD TO A MAXIMUM 3:1 SLOPE WHERE PRACTICAL. GREATER SLOPES MAY BE USED WHERE THE BANKS ARE PROTECTED WITH SOFT ARMOUR MATTING, EROSION CONTROL MATTING, OR RIPRAP. ALL SLOPES WILL BE STABILIZED WITH PERMANENT SEEDING IMMEDIATELY AFTER FINAL GRADING IS COMPLETE. IT IS UNDERSTOOD THAT IMMEDIATELY MEANS WITHIN 5 DAYS OF THE COMPLETION OF WORK. SEE POST-CONSTRUCTION REVEGETATION FOR SEEDING SPECIFICATION).
7. APPLICATION RATE MUST BE 2 BALES (70-90 LBS.) PER 1,000 SQUARE FEET OR 1.5 TO 2 TONS (90-100 BALES) PER ACRE TO COVER 75 TO 90% OF THE GROUND SURFACE. DRIVE OVER WITH TRACKED CONSTRUCTION EQUIPMENT ON GRADES OF 5% AND LESS.
8. CONSTRUCTION TRAFFIC WILL BE DIRECTED OVER THE EXISTING SITE ENTRANCE. THE ROAD SHALL BE SWEEPED AND VACUUMED DAILY SHOULD SEDIMENT BE TRACKED ONTO IT.
9. ALL AREAS DRAINING TO A STORMWATER FILTER OR BMP SHALL BE STABILIZED PRIOR TO CONSTRUCTION OF FILTER MEDIA TO PREVENT SEDIMENT FROM CLOGGING MEDIA.

POST CONSTRUCTION REVEGETATION

1. A MINIMUM OF 6" OF LOAM WILL BE SPREAD OVER DISTURBED AREAS AND GRADED TO A UNIFORM DEPTH AND NATURAL APPEARANCE.
2. LAWN AREAS: "PARK MIX" GRASS SEED BY ALLEN, STERLING & LOTHROP (FALMOUTH, MAINE), OR APPROVED EQUAL.
3. MULCH SHALL BE HAY OR STRAW MULCHES THAT ARE DRY AND FREE FROM UNDESIRABLE SEEDS AND COARSE MATERIALS.
 - A. APPLICATION RATE MUST BE 2 BALES (70-90 LBS.) PER 1,000 SQUARE FEET OR 1.5 TO 2 TONS (90-100 BALES) PER ACRE TO COVER 75 TO 90% OF THE GROUND SURFACE.
 - B. DRIVE OVER WITH TRACKED CONSTRUCTION EQUIPMENT ON GRADES OF 5% AND LESS.
 - C. BLANKET WITH TACKED PHOTODEGRADABLE/BIODEGRADABLE NETTING ON GRADES GREATER THAN 5%.
4. HYDRO-MULCH SHALL CONSIST OF A MIXTURE OF ASPHALT, WOOD FIBRE OR PAPER FIBRE AND WATER, WHICH IS SPRAYED OVER A SEEDED AREA. HYDRO-MULCH SHALL NOT BE USED BETWEEN 10/1 AND 4/15.
5. CONSTRUCTION SHALL BE PLANNED TO ELIMINATE THE NEED FOR SEEDING BETWEEN OCTOBER 1ST AND APRIL 15TH. SHOULD SEEDING BE NECESSARY BETWEEN THESE DATES, THE FOLLOWING PROCEDURE SHALL BE FOLLOWED:

- A. ONLY UNFROZEN LOAM SHALL BE USED.
- B. LOAMING, SEEDING AND MULCHING WILL NOT BE DONE OVER SNOW OR ICE COVER. IF SNOW EXISTS, IT MUST BE REMOVED PRIOR TO PLACEMENT OF SEED.
- C. WHERE PERMANENT SEEDING IS NECESSARY, ANNUAL WINTER RYE (2.12 LBS/1000 S.F.) SHALL BE SOWN INSTEAD OF THE PREVIOUSLY NOTED SEEDING RATE.
- D. WHERE TEMPORARY SEEDING IS REQUIRED, ANNUAL WINTER RYE (2.5 LBS/1000 S.F.) SHALL BE SOWN INSTEAD OF THE PREVIOUSLY NOTED SEEDING RATE.
- E. FERTILIZING, SEEDING AND MULCHING SHALL BE DONE ON LOAM THE DAY THE LOAM IS SPREAD.
- F. HAY MULCH SHALL BE SECURED WITH PHOTODEGRADABLE/BIODEGRADABLE NETTING. TRACKING BY MACHINERY ALONE WILL NOT SUFFICE. WINTER MULCHING RATES SHALL BE DOUBLE AS SPECIFIED ABOVE IN SUBSECTION 3.A OF THE "POST CONSTRUCTION REVEGETATION" SECTION, SHOULD BE APPLIED DURING THIS PERIOD.
- G. FOLLOWING FINAL SEEDING, THE SITE WILL BE INSPECTED WITHIN 10 DAYS OF 30% COVER HAS BEEN ESTABLISHED. RESEEDING WILL BE CARRIED OUT BY THE CONTRACTOR WITHIN 10 DAYS OF NOTIFICATION BY THE DESIGN PROFESSIONAL THAT THE EXISTING CATCH IS INADEQUATE.

MONITORING SCHEDULE

1. SILT FENCE SHALL BE INSPECTED AND REPAIRED. SEDIMENT TRAPPED BEHIND THESE BARRIERS SHALL BE EXCAVATED WHEN IT REACHES A DEPTH OF 6" AND REDISTRIBUTED TO AREAS UNDERGOING FINAL GRADING.
2. CONSTRUCTION EROSION SHALL BE VISUALLY INSPECTED AND REPAIRED AS NEEDED. ANY AREAS SUBJECT TO RUTTING SHALL BE STABILIZED IMMEDIATELY. IF ANY VOIDS IN THE CONSTRUCTION EROSION BECOME DEEPER THAN 1/4" WITH MUD, MORE STABILIZING SHALL BE ADDED AS NEEDED. THE PUBLIC ROADWAY SHALL BE SWEPT AND VACUUMED SHOULD MUDD BE DEPOSITED/TRACKED ONTO THEM.

STANDARDS FOR STABILIZING SITES FOR THE WINTER

THE FOLLOWING STANDARDS AND METHODOLOGIES SHALL BE USED FOR STABILIZING THE SITE DURING THE WINTER CONSTRUCTION PERIOD:

1. STANDARD FOR THE TIMELY STABILIZATION OF DISTURBED SLOPES (ANY AREA HAVING A GRADE GREATER THAN 25%): THE CONTRACTOR WILL SEED AND MULCH ALL SLOPES TO BE VEGETATED BY SEPTEMBER 15TH. IF THE CONTRACTOR FAILS TO STABILIZE ANY SLOPE TO BE VEGETATED BY SEPTEMBER 15TH, THEN THE CONTRACTOR WILL TAKE ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE SLOPE FOR LATE FALL AND WINTER:
 - A. STABILIZE THE SLOPE WITH TEMPORARY VEGETATION AND EROSION CONTROL MATS: BY OCTOBER 1ST THE CONTRACTOR WILL SEED DISTURBED SLOPES WITH WINTER RYE AT A RATE OF 5 POUNDS PER 1000 SQUARE FEET AND THEN INSTALL EROSION CONTROL MATS OR ANCHORED MULCH OVER THE SEEDING AT TWICE THE RATE AS SPECIFIED ABOVE IN SUBSECTION 3.4 OF THE "POST CONSTRUCTION REVEGETATION" SECTION. THE CONTRACTOR WILL MONITOR GROWTH OF THE RYE OVER THE NEXT 30 DAYS.
 - B. STABILIZE THE SLOPE WITH WOOD-WASTE COMPOST: THE CONTRACTOR WILL PLACE A SIX-INCH LAYER OF WOOD-WASTE COMPOST ON THE SLOPE BY NOVEMBER 15TH. THE CONTRACTOR WILL NOT USE WOOD-WASTE COMPOST TO STABILIZE SLOPES HAVING GRADES GREATER THAN 50% (2H:1V) OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE.

2. STANDARD FOR THE TIMELY STABILIZATION OF DISTURBED SOILS - BY SEPTEMBER 15TH THE CONTRACTOR WILL SEED AND MULCH ALL DISTURBED SOILS ON THE SITE. IF THE CONTRACTOR FAILS TO STABILIZE THESE SOILS BY THIS DATE, THEN THE CONTRACTOR WILL TAKE ON OF THE FOLLOWING ACTIONS TO STABILIZE THE SOIL FOR LATE FALL AND WINTER.

- A. STABILIZE THE SOIL WITH TEMPORARY VEGETATION: BY OCTOBER 1ST THE CONTRACTOR WILL 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 3 POUNDS PER 1000 SQUARE FEET. THE CONTRACTOR WILL MONITOR THE GROWTH OF THE RYE OVER THE NEXT 30 DAYS. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR FAILS TO COVER AT LEAST 75% OF THE DISTURBED SOIL BEFORE NOVEMBER 1, THEN THE CONTRACTOR WILL MULCH THE AREA FOR OVER-WINTER PROTECTION AS DESCRIBED IN ITEM III OF THIS STANDARD.
- B. STABILIZE THE SOIL WITH SOO: THE CONTRACTOR WILL STABILIZE THE DISTURBED SOIL WITH PROPERLY INSTALLED SOO BY OCTOBER 1ST. PROPER INSTALLATION INCLUDES THE CONTRACTOR PINNING THE SOO ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOO TO GUARANTEE CONTACT BETWEEN THE SOO AND UNDERLYING SOIL, AND WATERING THE SOO TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL.
- C. STABILIZE THE SOIL WITH MULCH: BY NOVEMBER 15TH THE CONTRACTOR WILL 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. IMMEDIATELY AFTER APPLYING THE MULCH, THE CONTRACTOR WILL ANCHOR THE MULCH WITH NETTING OR OTHER METHOD TO PREVENT WIND FROM MOVING THE MULCH OFF THE DISTURBED SOIL.

EROSION CONTROL REMOVAL

1. **SILT FENCE:** SILT FENCE SHALL BE DISPOSED OF LEGALLY AND PROPERLY OFF-SITE. ALL SEDIMENT TRAPPED BEHIND THESE CONTROLS SHALL BE DISTRIBUTED TO AN AREA UNDERGOING FINAL GRADING OR REMOVED AND RELOCATED OFF-SITE.
2. **STABILIZED CONSTRUCTION ENTRANCE:** THE STABILIZED CONSTRUCTION ENTRANCE SHALL BE REMOVED ONCE THE COMPACTED ROADWAY BASE IS IN PLACE. STONE AND SEDIMENT FROM THE CONSTRUCTION ENTRANCE SHALL BE REDISTRIBUTED TO AN AREA UNDERGOING GRADING OR REMOVED AND RELOCATED OFF-SITE.
3. **MISCELLANEOUS:** ONCE ALL THE TRAPPED SEDIMENTS HAVE BEEN REMOVED FROM THE TEMPORARY SEDIMENTATION DEVICES THE TRAPPED AREAS MUST BE REGRADDED IN AN AESTHETIC MANNER TO CONFORM TO THE SURROUNDING TOPOGRAPHY. ONCE GRADED THESE DISTURBED AREAS MUST BE LOADED (IF NECESSARY), FERTILIZED, SEEDED AND MULCHED IN ACCORDANCE WITH THE RATES PREVIOUSLY STATED.

THE ABOVE EROSION CONTROLS MUST BE REMOVED WITHIN 30 DAYS OF FINAL STABILIZATION OF THE SITE. CONFORMANCE WITH THIS PLAN AND FOLLOWING THESE PRACTICES WILL RESULT IN A PROJECT THAT COMPLIES WITH THE STATE REGULATIONS AND THE STANDARDS OF THE NATURAL RESOURCES PROTECTION ACT, AND WILL PROTECT WATER QUALITY IN AREAS DOWNSTREAM FROM THE PROJECT.

MAINE CONSTRUCTION GENERAL PERMIT REQUIRED

SUBMISSION OF A MAINE CONSTRUCTION GENERAL PERMIT (MCGP) IS REQUIRED PRIOR TO COMMENCEMENT OF ANY EXCAVATION ACTIVITIES.

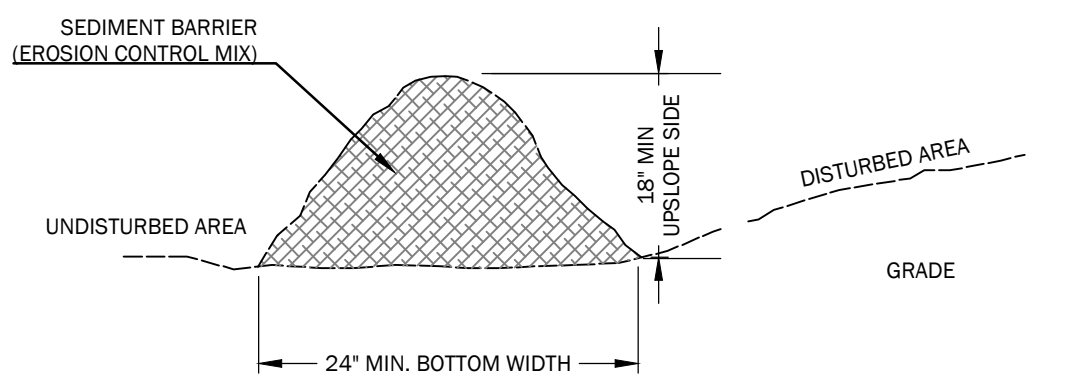
INSPECTION AND MAINTENANCE (APPENDIX B)

1. **INSPECTION AND MAINTENANCE REQUIREMENTS:** INSPECT DISTURBED AND IMPERVIOUS AREAS, EROSION AND STORMWATER CONTROL MEASURES, AREAS USED FOR STORAGE THAT ARE EXPOSED TO PRECIPITATION, AND LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE. INSPECT AND RECORD THE FOLLOWING INFORMATION: THE DATE OF INSPECTION, THE NAME(S) OF THE PERSON(S) WHO MADE THE INSPECTION, THE TYPE OF INSPECTION, THE TYPE OF WEATHER, THE AMOUNT OF RAINFALL IN A 24-HOUR PERIOD) AND PRIOR TO COMPLETION OF PERMANENT STABILIZATION MEASURES. A PERSON WITH KNOWLEDGE OF EROSION AND STORMWATER CONTROL, INCLUDING THE STANDARDS IN THE MCGAP AND ANY DEPARTMENTAL STANDARDS, SHALL BE PRESENT AT THE TIME OF INSPECTION. INSPECTIONS SHOULD BE CONDUCTED AFTER EACH MAJOR RAINFALL EVENT. IF BEST MANAGEMENT PRACTICES (BMP'S) NEED TO BE MODIFIED OR IF ADDITIONAL BMP'S ARE NECESSARY, IMPLEMENTATION MUST BE STARTED BY THE END OF THE NEXT WORKING DAY AND COMPLETED WITHIN 7 CALENDAR DAYS AND PRIOR TO ANY STORM EVENT FOLLOWING. ALL MEASURES THAT ARE NOT MAINTAINED OR NOT MAINTAINED TO THE STANDARD SPECIFIED (75% AREA PERMANENTLY STABILIZED, 100% EROSION CONTROL MEASURES MAINTAINED) SHALL BE DOCUMENTED IN THE INSPECTION LOG. DOCUMENTATION OF CORRECTION ACTIONS SHALL BE MAINTAINED WITH THE INSPECTION FORMS.
2. **INSPECTION LOG (REPORT):** A LOG (REPORT) MUST BE KEPT SUMMARIZING THE SCOPE OF THE INSPECTION, NAME(S) AND QUALIFICATIONS OF THE PERSONNEL MAKING THE INSPECTION, THE DATE(S) OF THE INSPECTION, AND MAJOR OBSERVATIONS RELATING TO OPERATION OF EROSION AND SEDIMENTATION CONTROLS AND POLLUTION PREVENTION MEASURES. MAJOR OBSERVATIONS MUST INCLUDE BMP'S THAT NEED MAINTENANCE, BMP'S THAT FAILED TO OPERATE AS DESIGNED OR PROVED INADEQUATE FOR A PARTICULAR EROSION AND LOCATION, AND LOCATION(S) WHERE EROSION OCCURRED. THE LOG SHOULD ALSO INCLUDE THE DATE OF INSPECTION, REPLACEMENT, AND LOCATION NEEDING ADDITIONAL BMP'S. NOTE IN THE INSPECTION LOG THE CORRECT ACTION TAKEN AND WHEN IT WAS TAKEN. THE LOG MUST BE MADE ACCESSIBLE TO THE DEPARTMENT STAFF AND A COPY MUST BE PROVIDED UPON REQUEST. THE DEPARTMENT SHALL RETAIN A COPY OF THE LOG FOR A PERIOD OF AT LEAST THREE YEARS FROM THE COMPLETION OF THE PERMANENT STABILIZATION.

HOUSEKEEPING (APPENDIX C)

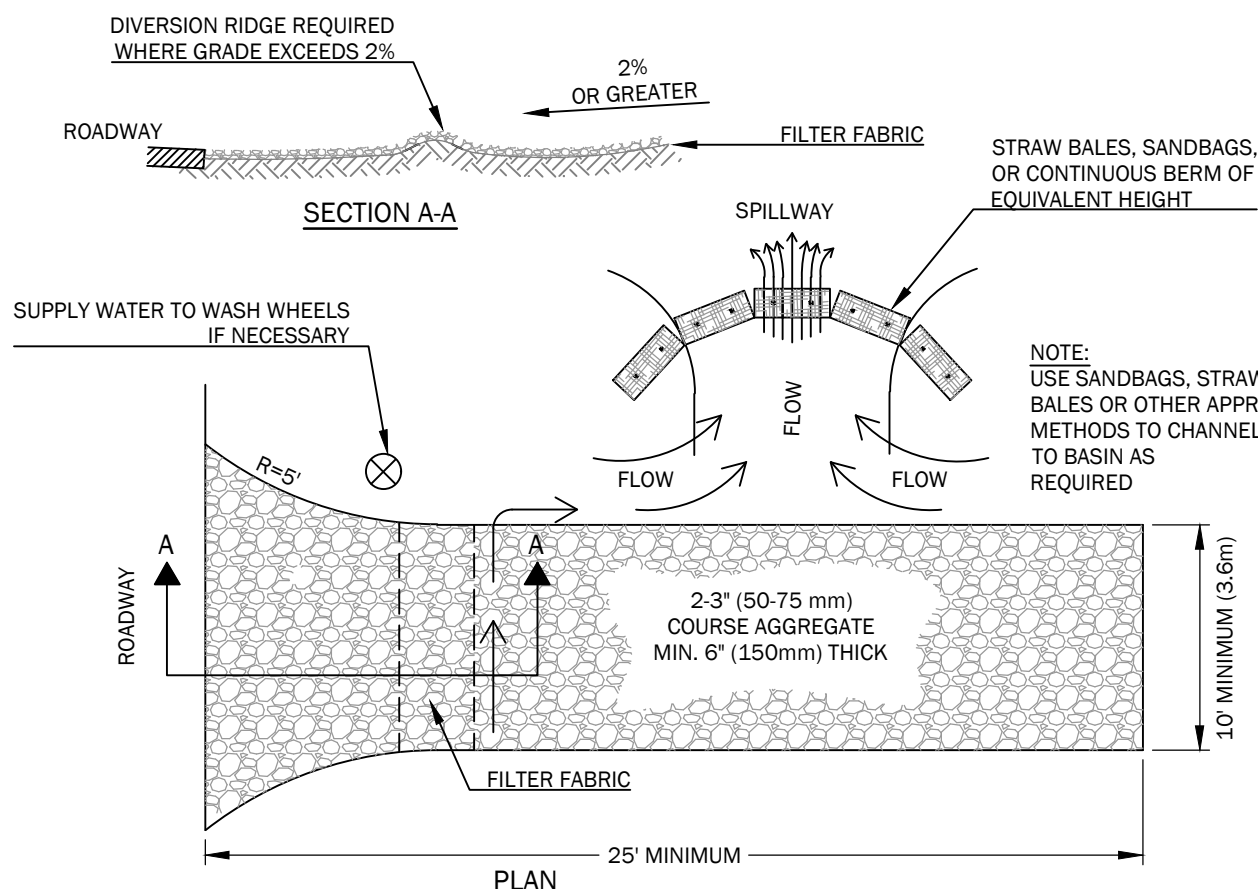
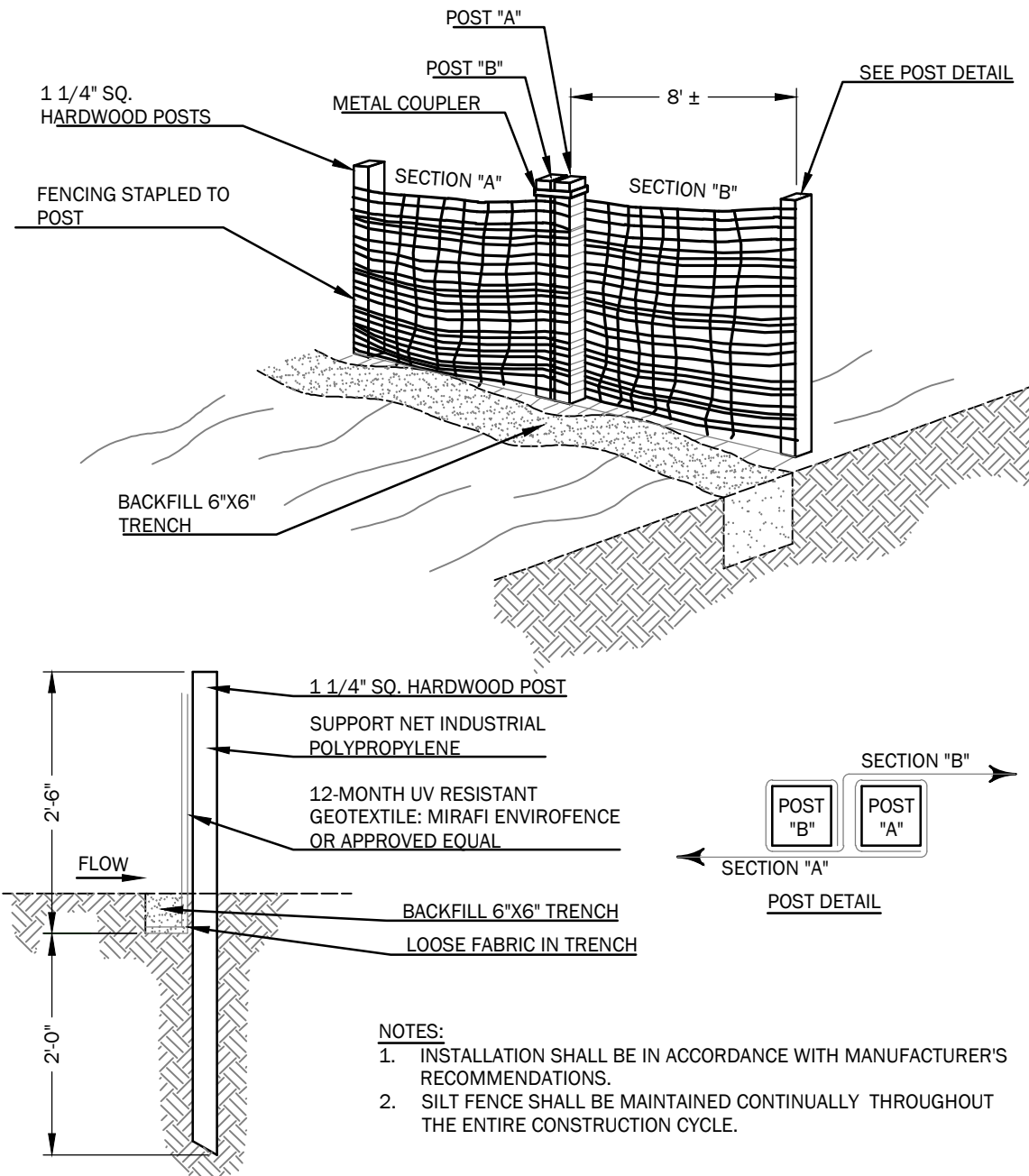
1. **SPILL PREVENTION:** CONTROLS MUST BE USED TO PREVENT POLLUTANTS FROM CONSTRUCTION AND WASTE MATERIALS STORED ON SITE TO ENTER STORMWATER, WHICH INCLUDES STORAGE PRACTICES TO MINIMIZE EXPOSURE OF THE MATERIALS TO STORMWATER. THE SITE CONTRACTOR OR OPERATOR MUST DEVELOP, AND IMPLEMENT AS NECESSARY, APPROPRIATE SPILL PREVENTION, CONTAINMENT, AND RESPONSE PLANNING MEASURES.

NOTE: ANY SPILL OR RELEASE OF TOXIC OR HAZARDOUS SUBSTANCES MUST BE REPORTED TO THE DEPARTMENT. FOR OIL SPILLS, CALL 1-800-482-0777 WHICH IS AVAILABLE 24 HOURS A DAY. FOR SPILLS OF TOXIC OR HAZARDOUS MATERIAL, CALL 1-800-452-4664 WHICH IS AVAILABLE 24 HOURS A DAY. FOR MORE INFORMATION, VISIT THE DEPARTMENT'S WEBSITE AT: [HTTP://WWW.MAINE.GOV/DEP/SPILLS/EMERGSPILLRESP/](http://www.maine.gov/dep/spills/emergspillresp/)

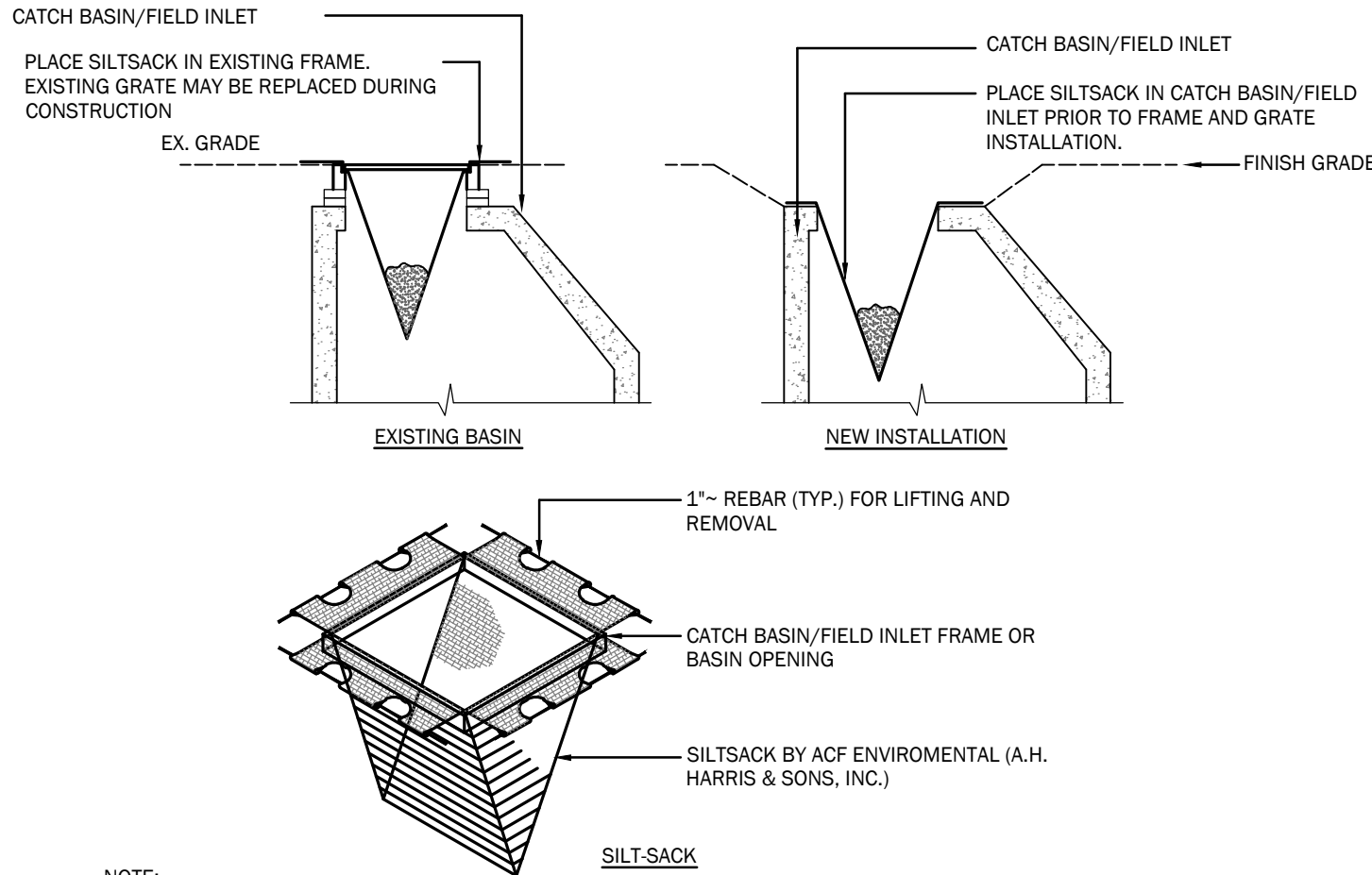


NOTES

1. THE EROSION CONTROL MIX SHALL CONTAIN A WELL GRADED MIXTURE OF PARTICLE SIZES AND MAY CONTAIN ROCKS LESS THAN 4" DIAMETER. EROSION CONTROL MIX MUST BE FREE OF REFUSE, PHYSICAL CONTAMINANTS, AND MATERIAL TOXIC TO PLANT GROWTH.
2. MATERIAL SHALL MEET THE FOLLOWING REQUIREMENTS
 - A. THE ORGANIC CONTENT SHALL BE BETWEEN 80 AND 100% DRY WEIGHT BASIS
 - B. PARTICLE SIZE BY WEIGHT SHALL BE 100% PASSING A 6" SCREEN AND A MAXIMUM OF 85% PASSING A 0.75" SCREEN
 - C. THE ORGANIC PORTION NEEDS TO BE FIBROUS AND ELONGATED
 - D. LARGE PORTIONS OF SILTS, CLAYS, OR FINE SANDS ARE NOT ACCEPTABLE IN THE MIX
 - E. SOLUBLE SALTS CONTENT SHALL BE <4.0 MMHOS/CM
 - F. THE pH SHOULD FALL BETWEEN 5.0 AND 8.0
3. PLACE BARRIER ALONG A RELATIVELY FLAT SURFACE. CUT TALL GRASSES OR WOODY VEGETATION TO AVOID CREATING VOIDS AND BRIDGES WHERE FINES CAN WASH UNDER THE BARRIER THROUGH GRASS BLADES AND BRANCHES.
4. PLACEMENT OF BARRIER SHOULD BE:
 - AT TOE OF THE SLOPE.
 - FROZEN GROUND, BEDROCK OR ROOTED FORESTED AREAS.
 - THE EDGE OF GRAVEL AND AREAS UNDER CONSTRUCTION.
5. BARRIER SHALL NOT BE USED ADJACENT TO WETLANDS
6. REMOVE SEDIMENT DEPOSITS WHEN THEY REACH APPROXIMATELY ONE HALF THE HEIGHT OF THE BARRIER.
7. WHEN BARRIER IS DECOMPOSED, CLOGGED WITH SEDIMENT, ERODED OR INEFFECTIVE, IT MUST BE REPLACED OR REPAIRED. THE BARRIER SHOULD BE RESHAPED AS NECESSARY.
8. IF ECM BERMS ARE USED AS A SILT BARRIER, THEY ARE PROHIBITED AT THE BASE OF A SLOPE STEEPER THAN 8% OR WHERE THERE IS FLOWING WATER WITHOUT THE SUPPORT OF ADDITIONAL MEASURES, SUCH AS A SILT FENCE.



- NOTES:**
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT.
 2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
 3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS OUT TO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.



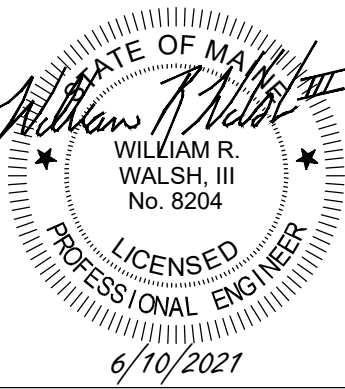
- NOTE:
1. INSTALLATION PER MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.
 2. EMPTY AND REMOVE SEDIMENT FROM SILTSACK WHEN RESTRAINT CORD IS NO LONGER VISIBLE. CLEAN, RINSE AND REPLACE AS NEEDED.
 3. CONTRACTOR SHALL INSPECT CATCH BASIN PROTECTION AFTER EACH MAJOR STORM EVENT AND CLEAN SILT AS NEEDED.
 4. SILT SACKS TO BE INSTALLED IN ALL CATCH BASINS DURING CONSTRUCTION WHILE GROUND IS NOT PERMANENTLY STABILIZED.

C40 NOT TO SCALE

NOT TO SCALE

NOT TO SCALE

NOT TO SCALE



Deering Avenue Residences

Portland, Maine 04103
BK 36396, PG 323; CBL: 118 A 003001

SAWYER ISLAND DEVELOPMENT, LLC.

PREPARED FOR:

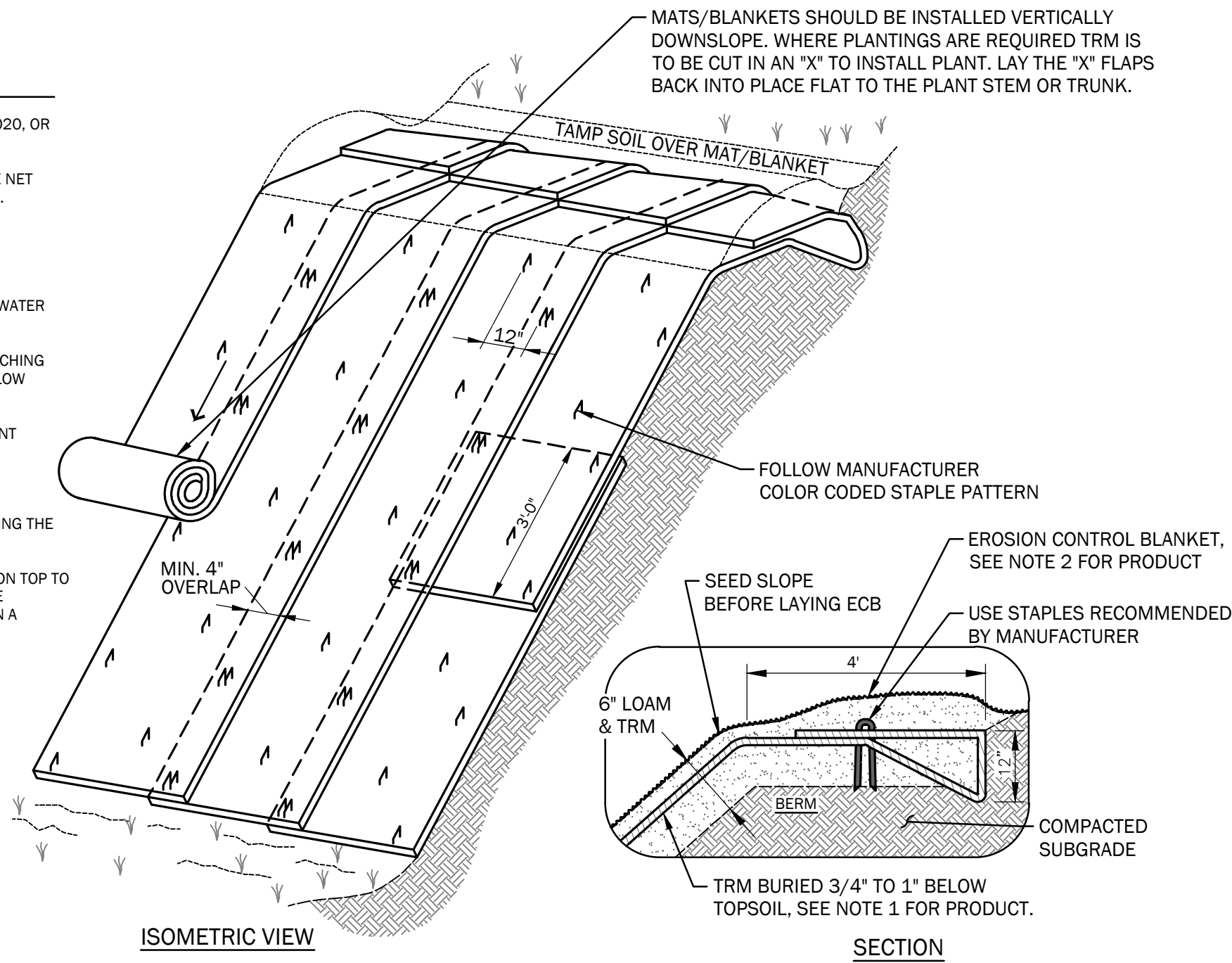
100 SILVER STREET
PORTLAND, MAINE 04101

ISSUED FOR PERMITTING - NOT FOR CONSTRUCTION

Rev.	Date	Description	Drawn	Check
1	6/10/2021	REVISED PER STAFF COMMENTS	DEPT:	NGC
Sheet Title: DETAILS				
Job No.: 613.1 Date: Feb. 24, 2021 Scale: AS NOTED Drawn: MTL Checked: SWC			Sheet No.: C4.0	

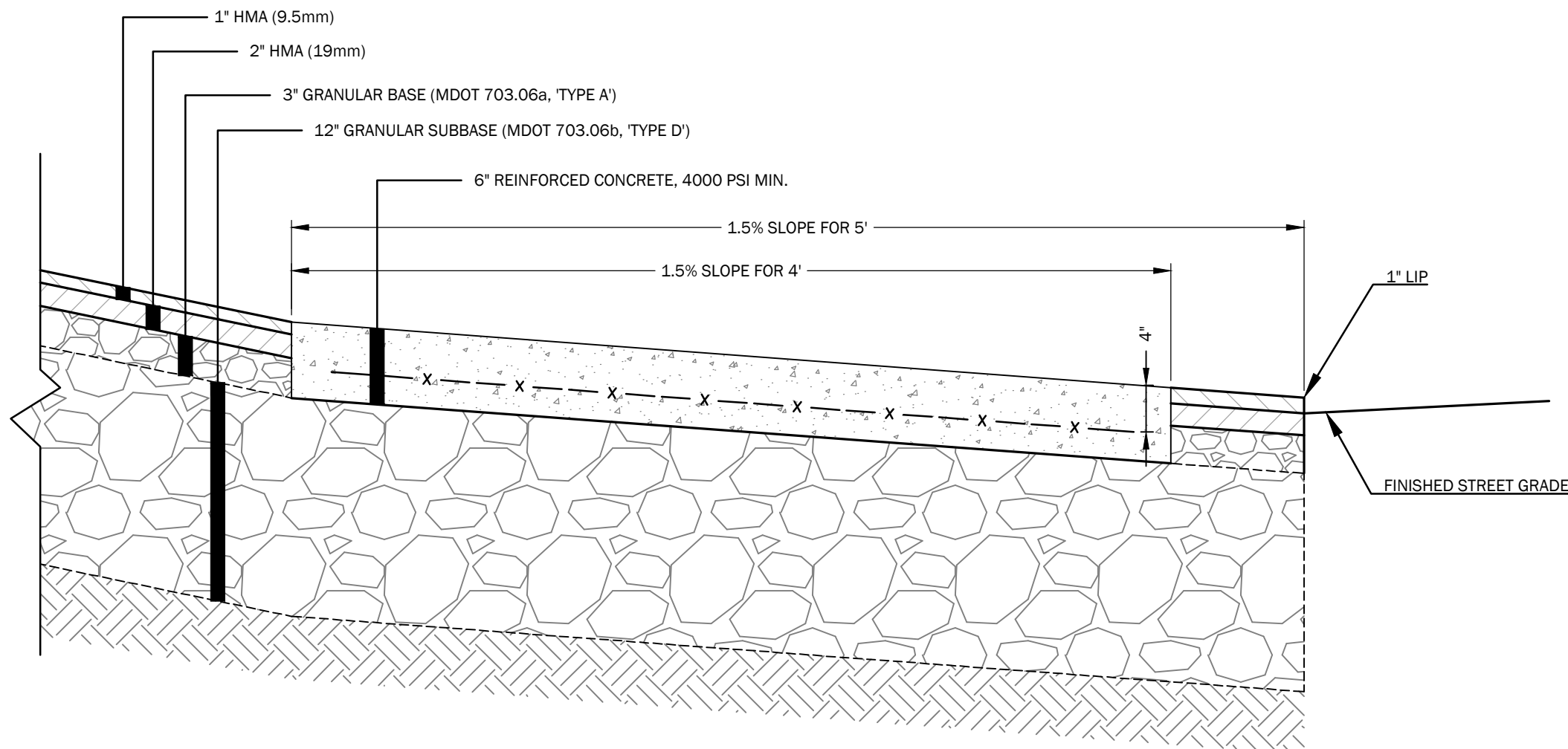
INSTALLATION INSTRUCTIONS:

- TURF REINFORCEMENT MAT (TRM) MATERIAL SHALL BE ENKAMAT 7020, OR APPROVED EQUAL.
- EROSION CONTROL BLANKET (ECB) SHALL BE BIONET S75BN SINGLE NET STRAW BLANKET BY NORTH AMERICAN GREEN OR APPROVED EQUAL.
- FOR TRM INSTALLATION ONLY:
 - APPLY 4" OF LOAM ONTO THE GROUND SURFACE.
 - OVER TOP THE 4" OF LOAM, UNROLL MAT IN THE DIRECTION OF WATER FLOW.
- MAT SHOULD LIE FLAT. DO NOT STRETCH MAT OVER GROUND. STRETCHING MAY CAUSE MAT TO BRIDGE DEPRESSIONS IN THE SURFACE AND ALLOW EROSION UNDERNEATH.
- BURY TRANSVERSE TERMINAL ENDS OF MAT TO SECURE AND PREVENT EROSION FLOW UNDERNEATH.
- SECURE MAT SNUGLY INTO ALL TRANSVERSE CHECK SLOTS.
- BACKFILL AND COMPACT TRENCHES AND CHECK SLOTS AFTER STAKING THE MAT IN BOTTOM OF TRENCH.
- OVERLAP ROLL ENDS BY THREE (3) FEET (MIN.) WITH UPSLOPE MAT ON TOP TO PREVENT UPLIFT OF MAT END BY WATER FLOW. IF INSTALLING IN THE DIRECTION OF A CONCENTRATED WATER FLOW, START NEW ROLLS IN A TRANSVERSE DITCH.
- OVERLAP ADJACENT EDGES OF MAT BY 4 INCHES (MIN.) AND STAKE.
- USE WOOD STAKES OR STAPLES FOR PINNING MAT TO THE GROUND SURFACE, PER MANUFACTURER'S RECOMMENDATIONS.
- IN ALL TRANSVERSE TERMINAL TRENCHES AND CHECK SLOTS, STAKE EACH MAT AT ITS CENTER AND OVERLAP EDGES BEFORE BACKFILLING AND COMPACTING.
- STAKE OVERLAPS LONGITUDINALLY AT 3 TO 5 FOOT INTERVALS.
- WORK ADDITIONAL LOAM INTO THE MAT AND COVER THE MAT SURFACE WITH 3/4" TO 1" OF LOAM, THEN SEED AND COVER WITH ECB.



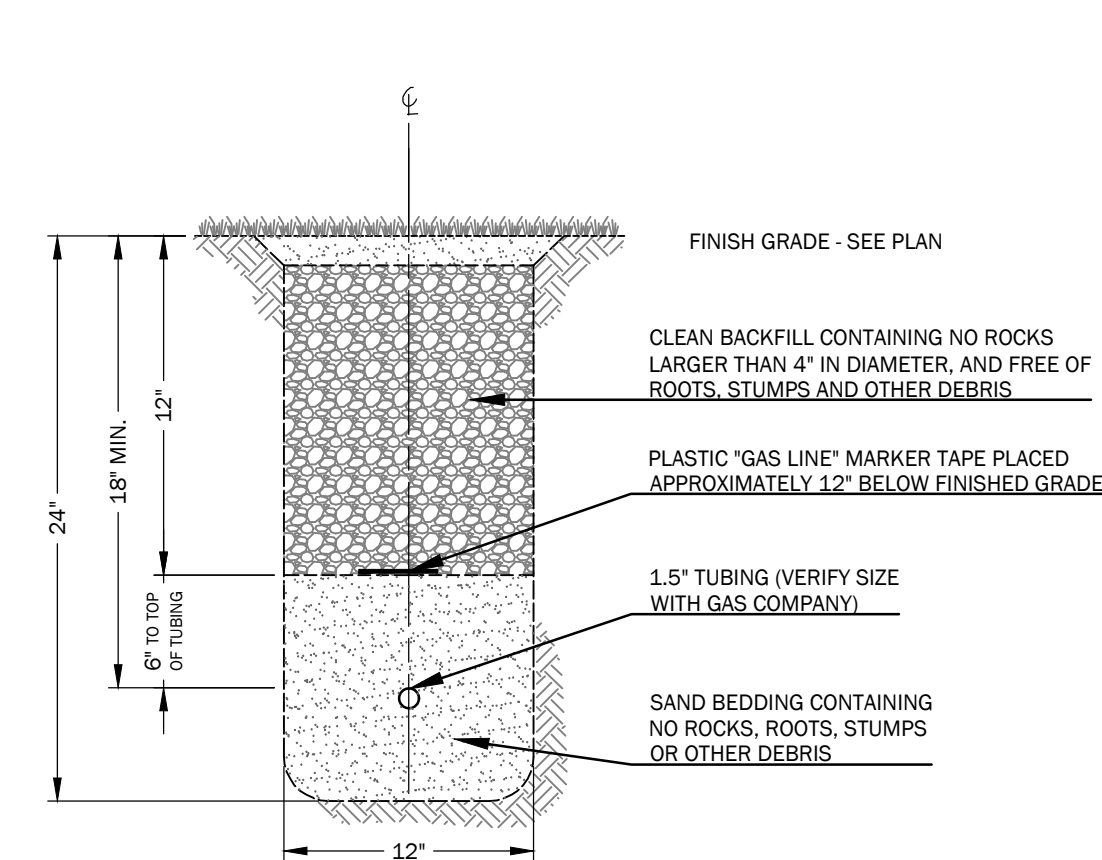
STRAW MATTING (ECB) and TURF REINFORCEMENT MAT (TRM) for SLOPE EROSION CONTROL

1
C4.1
NOT TO SCALE



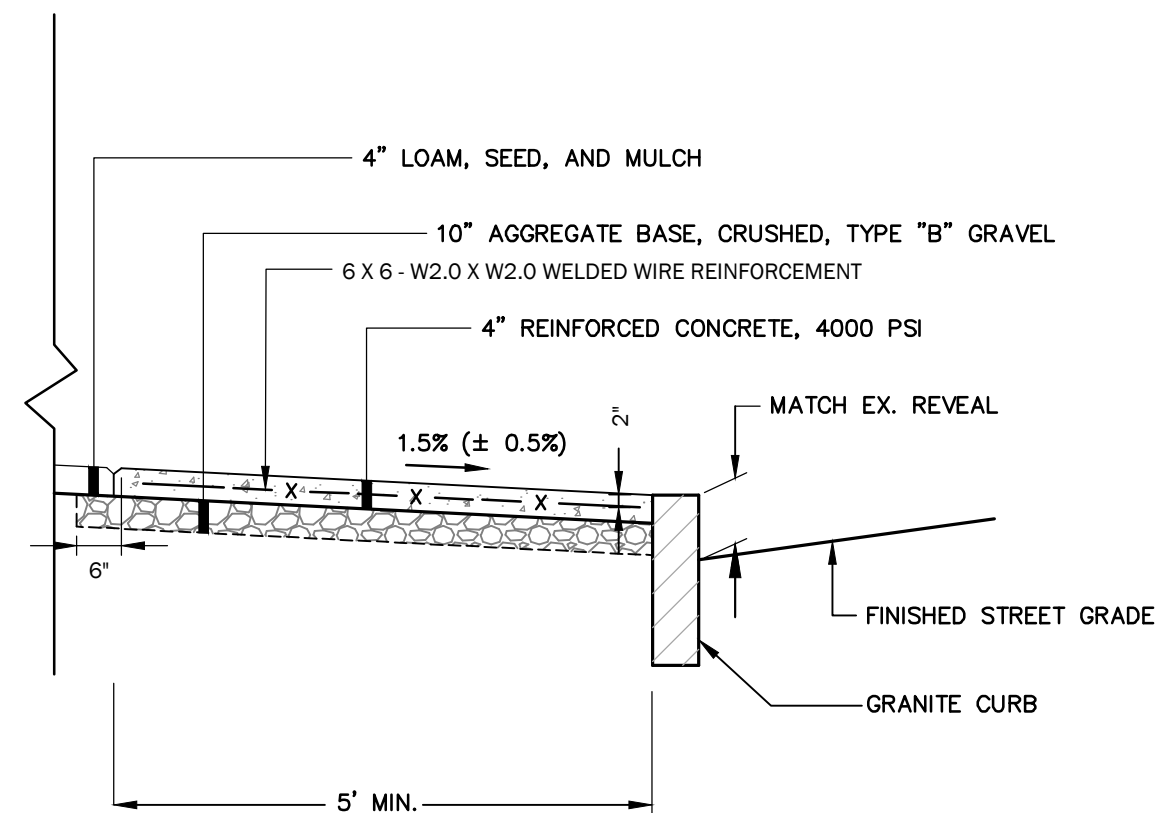
5
C4.1
NOT TO SCALE

REINFORCED CONCRETE DRIVEWAY APRON DETAIL



8
C4.1
NOT TO SCALE

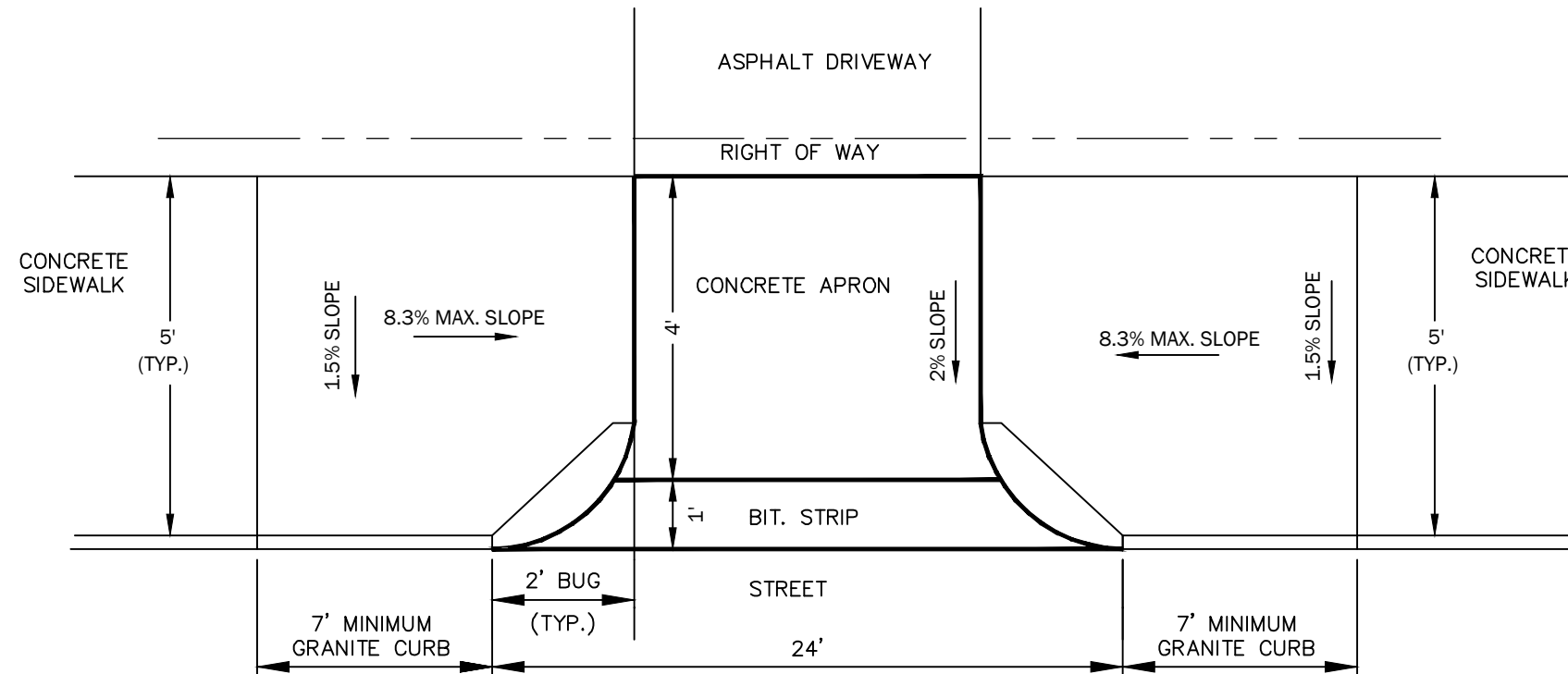
GAS LINE TRENCH SECTION



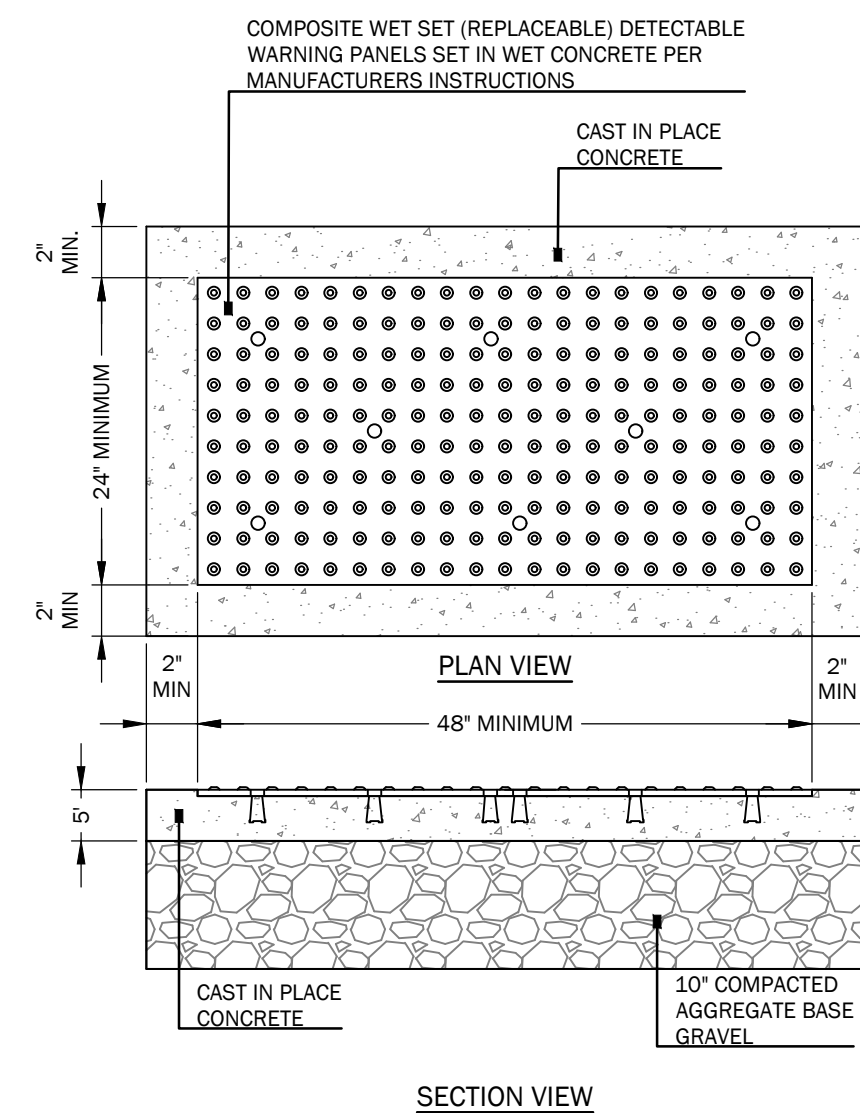
9
C4.1
NOT TO SCALE

REINFORCED CONCRETE SIDEWALK

DRIVEWAY APRON LAYOUT



NOT TO SCALE

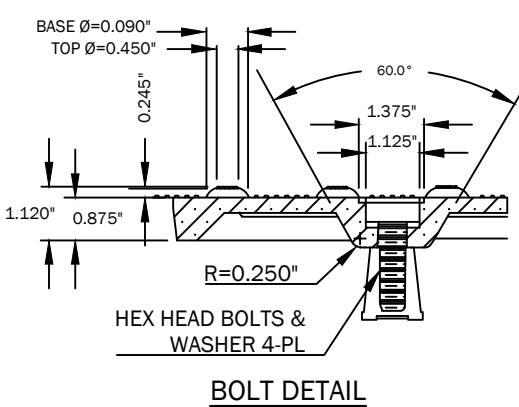


10
C4.1
NOT TO SCALE

DETECTABLE WARNING DETAIL

NOTES:

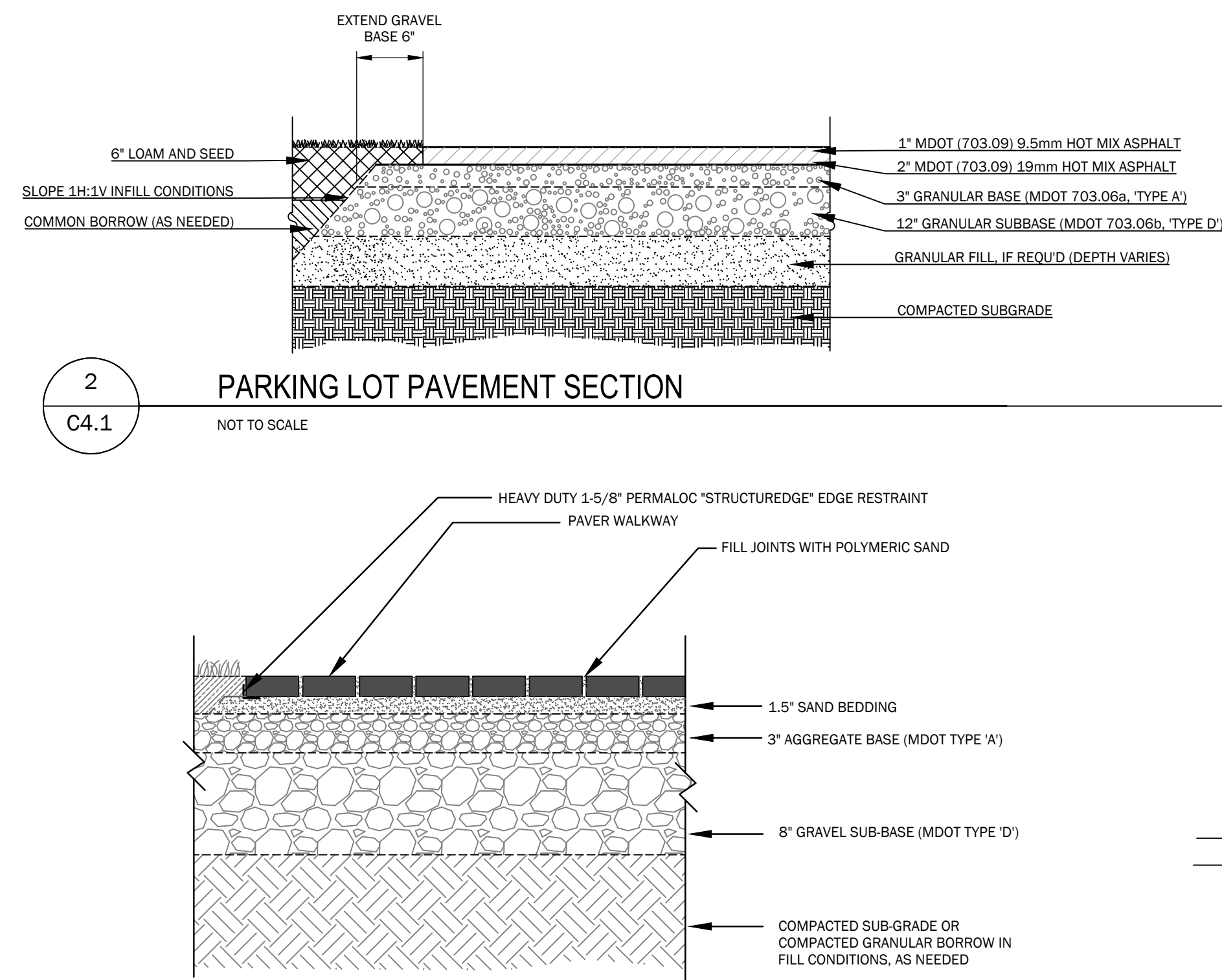
- COMPOSITE WET SET (REPLACEABLE) DETECTABLE WARNING PANELS SET IN WET CONCRETE PER MANUFACTURER'S INSTRUCTIONS.
- CAST IN PLACE CONCRETE SHALL MEET SPECIFICATIONS FOR MAINE D.O.T. CLASS A STRUCTURAL CONCRETE, MINIMUM COMPRESSIVE STRENGTH 4,000 PSI. THE CONCRETE SHALL BE SEALED PRIOR TO SETTING PANELS. THE EXPOSED CONCRETE BORDER SHALL RECEIVE A GROOVED EDGE BETWEEN THE PANEL AND CONCRETE, ALONG WITH A UNIFORM BROOM FINISH PERPENDICULAR TO THE FLOW OF PEDESTRIAN TRAFFIC.
- 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.
- FOR ALL DETECTABLE WARNING PANELS (EXCEPT AS SPECIFIED IN FIGURE I-7A AND TECHNICAL MANUAL SECTION 1.8.4.), FEDERAL YELLOW COLORED (#33538) PANELS SHALL BE USED. FOLLOW MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION.
- SIZE: THE DETECTABLE WARNING PANEL(S) SHALL EXTEND 24 INCHES MINIMUM IN THE DIRECTION OF TRAVEL AND THE FULL WIDTH OF THE CURB RAMP, LANDING, OR BLENDED TRANSITION TO THE STREET.
- ORIENTATION: THE DETECTABLE WARNING PANEL SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE IS 2 INCHES MINIMUM AND 4 INCHES MAXIMUM FROM THE BACK OF THE CURB LINE. THE PANEL SHALL BE ORIENTED TO THE DIRECTION OF TRAVEL AS IDENTIFIED BY THE POINT OF EGRESS.



CITY OF PORTLAND: SIDEWALK RAMP DETECTABLE WARNING PANEL NOT IN OR ADJACENT TO HISTORIC DISTRICT

PARKING LOT PAVEMENT SECTION

2
C4.1
NOT TO SCALE

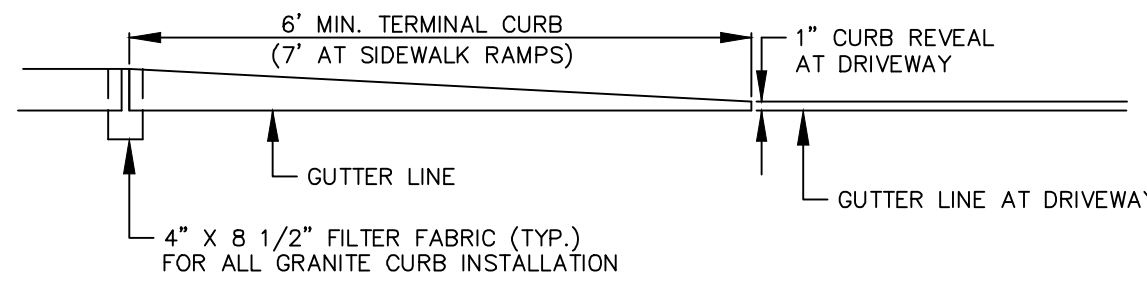
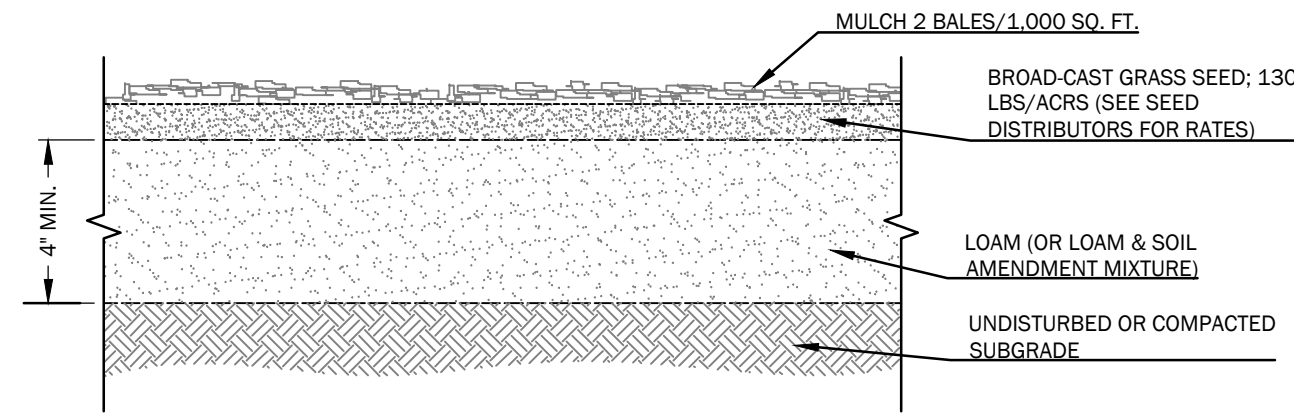


4
C4.1
NOT TO SCALE

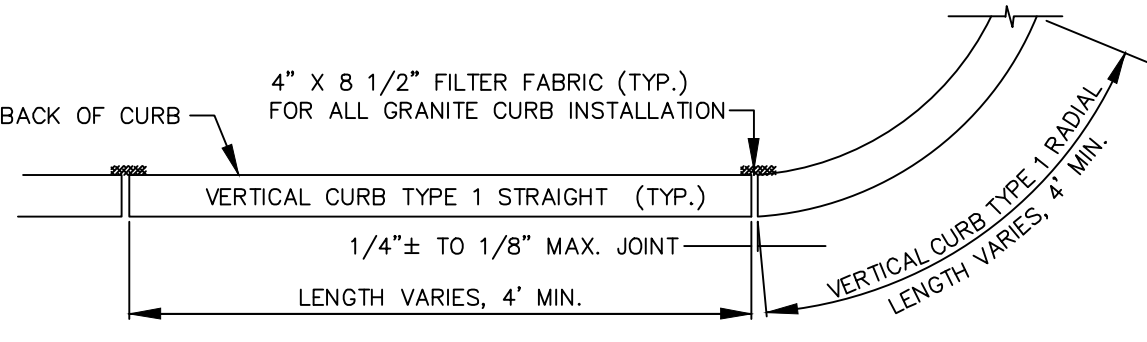
STONE PAVER DETAIL

3
C4.1
NOT TO SCALE

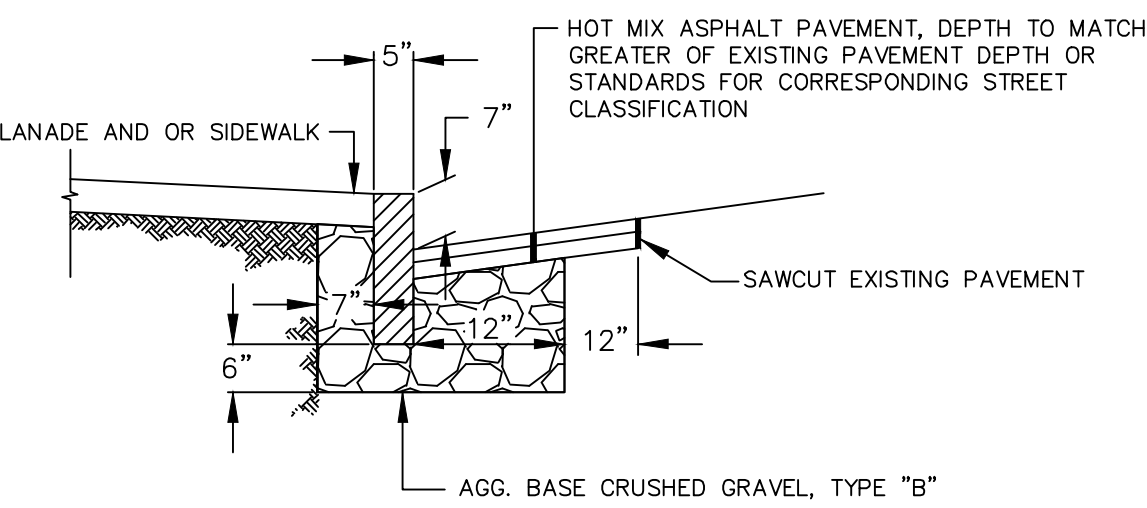
LOAM AND SEED DETAIL



TERMINAL CURB PROFILE



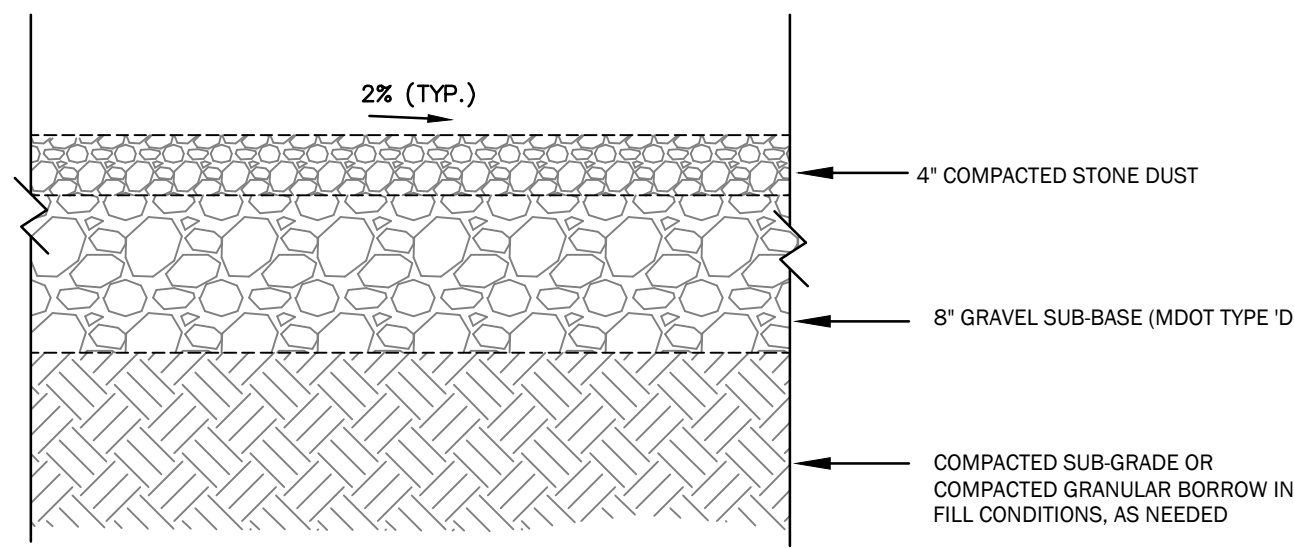
VERTICAL GRANITE CURB PLAN VIEW



VERTICAL GRANITE CURB CROSS SECTION

VERTICAL GRANITE CURB INSTALLATION IN EXISTING STREETS

NOT TO SCALE



11
C4.1
NOT TO SCALE

STONE DUST PATH DETAIL

WALSH
ENGINEERING ASSOCIATES, INC.
One Karen Dr., Suite 2A | Westbrook, Maine 04092
ph: 207.553.9898 | www.walsh-eng.com

Copyright © 2021



Deering Avenue Residences

387 & 405 Deering Avenue
Portland, Maine 04103
BX 36396, PG 323; CBL: 118-A 003001

SAWYER ISLAND DEVELOPMENT, LLC.

100 SILVER STREET
PORTLAND, MAINE 04101

PREPARED FOR:

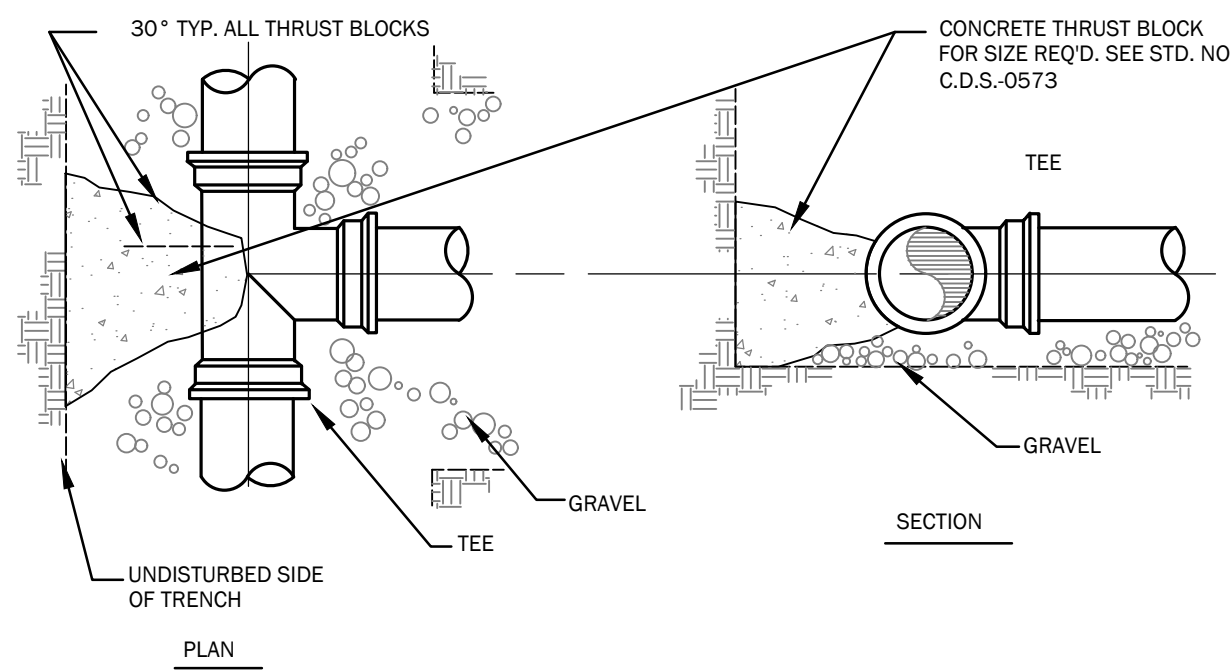
ISSUED FOR PERMITTING - NOT FOR CONSTRUCTION

Rev.	Date	Description	Drawn	Check
1	01/10/2021	REVISED PER STAFF COMMENTS	DEPT.	NGC

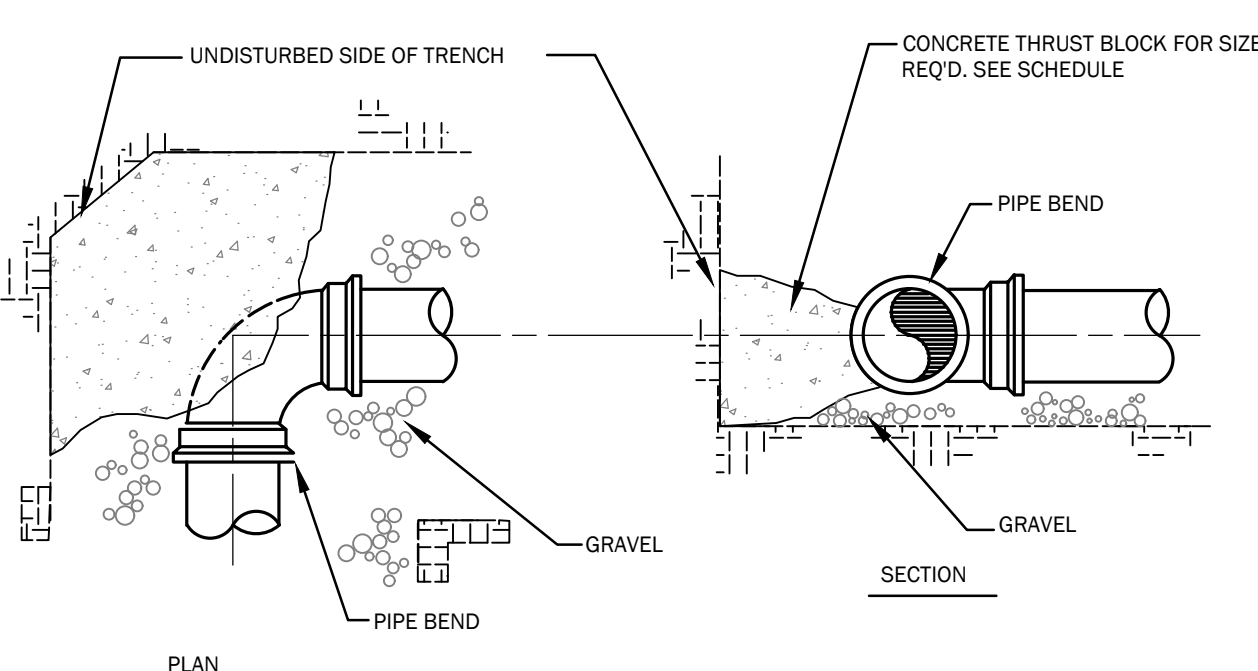
Sheet Title:

DETAILS

Job No.:	613.1	Sheet No.:	C4.1
Date:	Feb. 24, 2021	Scale:	AS NOTED
Drawn:	MTL	Checked:	SWC



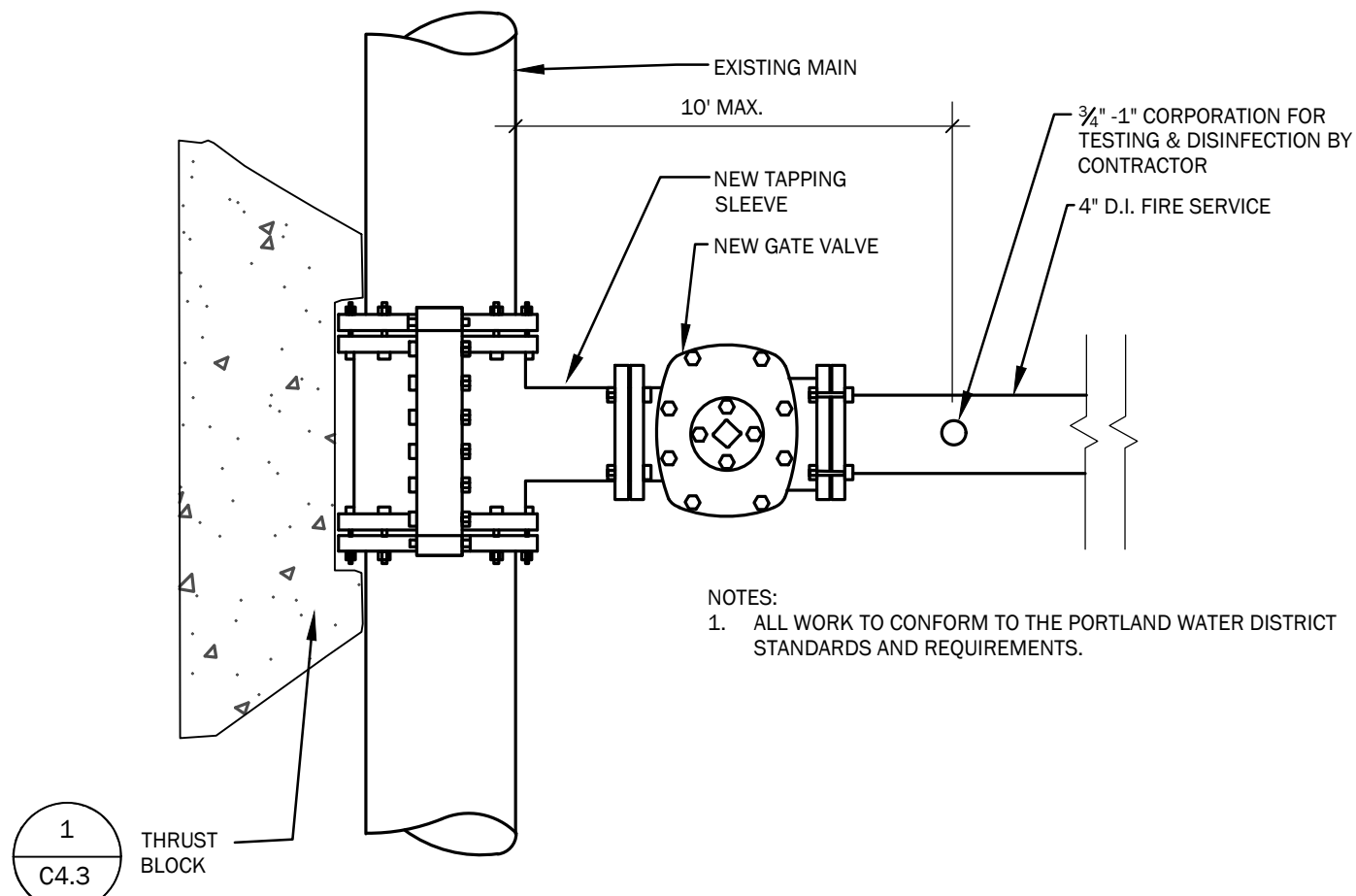
THRUST BLOCK PLACEMENT AT TEE(S)



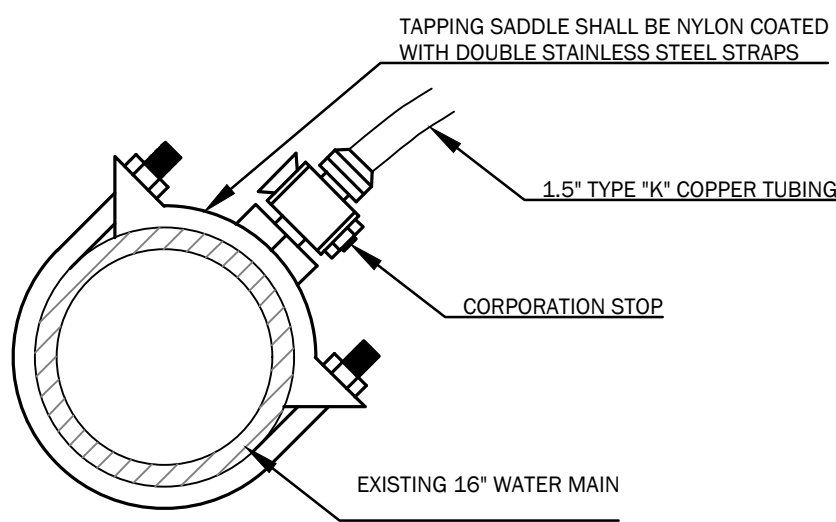
THRUST BLOCK PLACEMENT AT BEND(S)

SIZE REQUIREMENTS FOR CONCRETE THRUST BLOCKS					
BEARING ON UNDISTURBED SOIL (SQUARE FT.)					
FITTINGS	90° BENDS	45° BENDS	TEES & PLUGS	HYDRANTS	
PIPE SIZE	4"	2.0	1.0	1.0	N/A
	6"	3.0	2.0	2.0	6.0
	8"	5.0	3.0	4.0	N/A

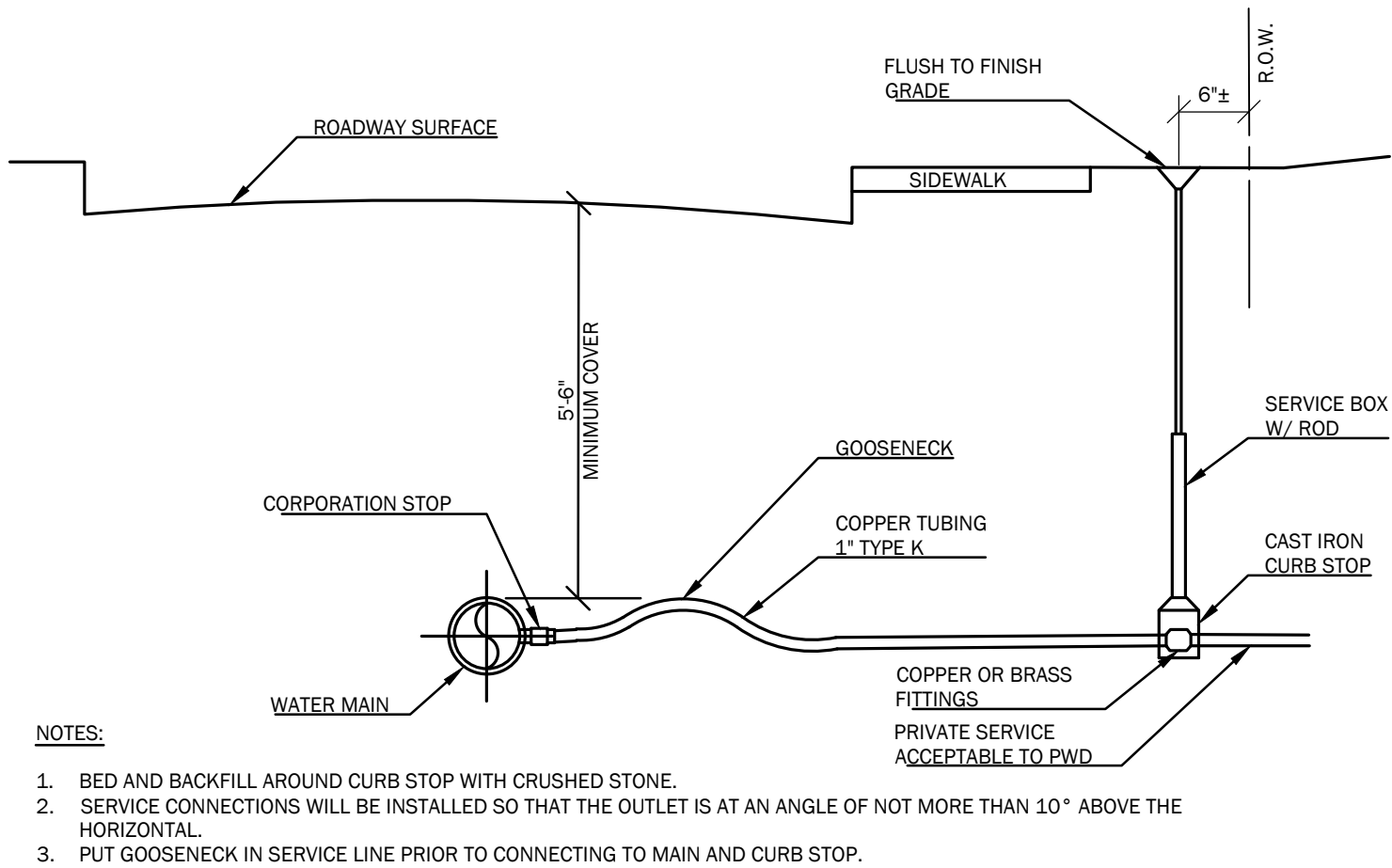
THRUST BLOCK SCHEDULE



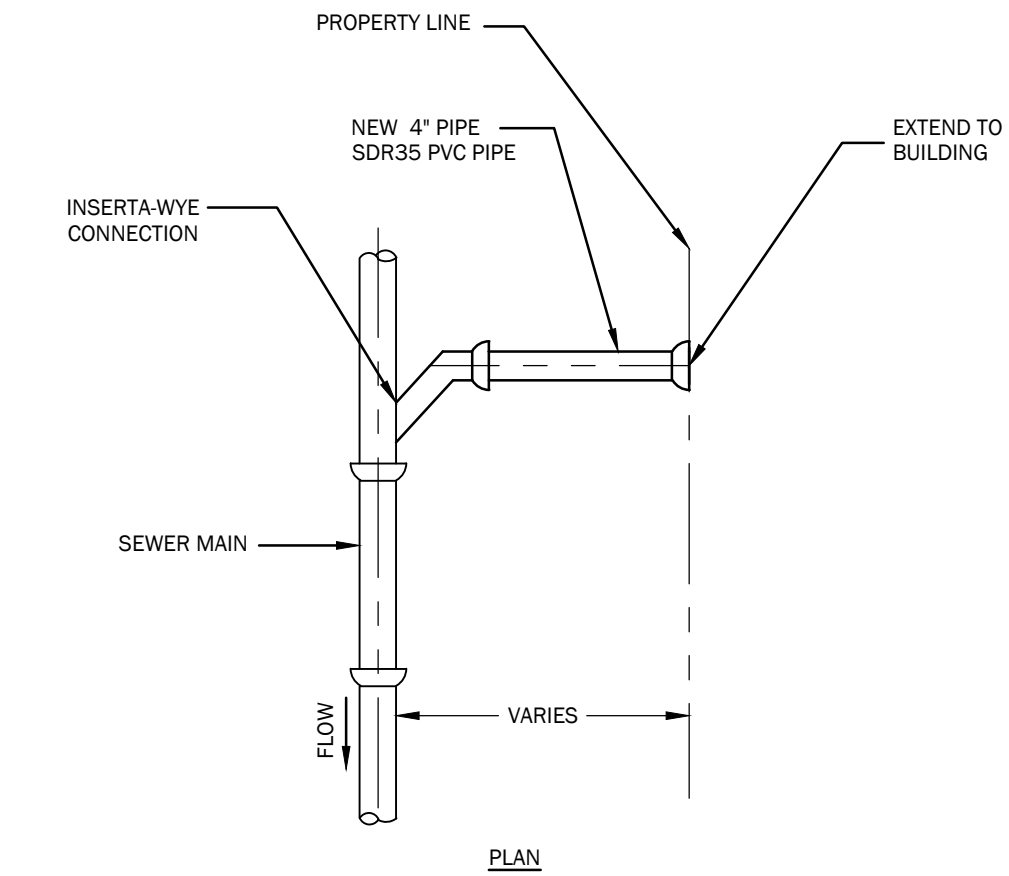
STANDARD TAPPING SLEEVE DETAIL



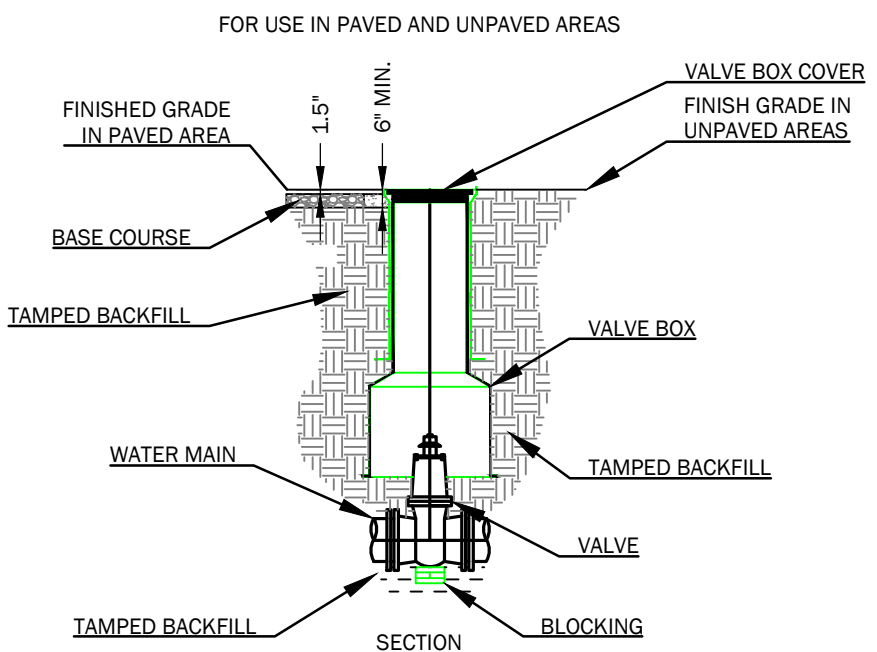
STANDARD CORPORATION STOP DETAIL



TYPICAL SERVICE CONNECTION DETAIL

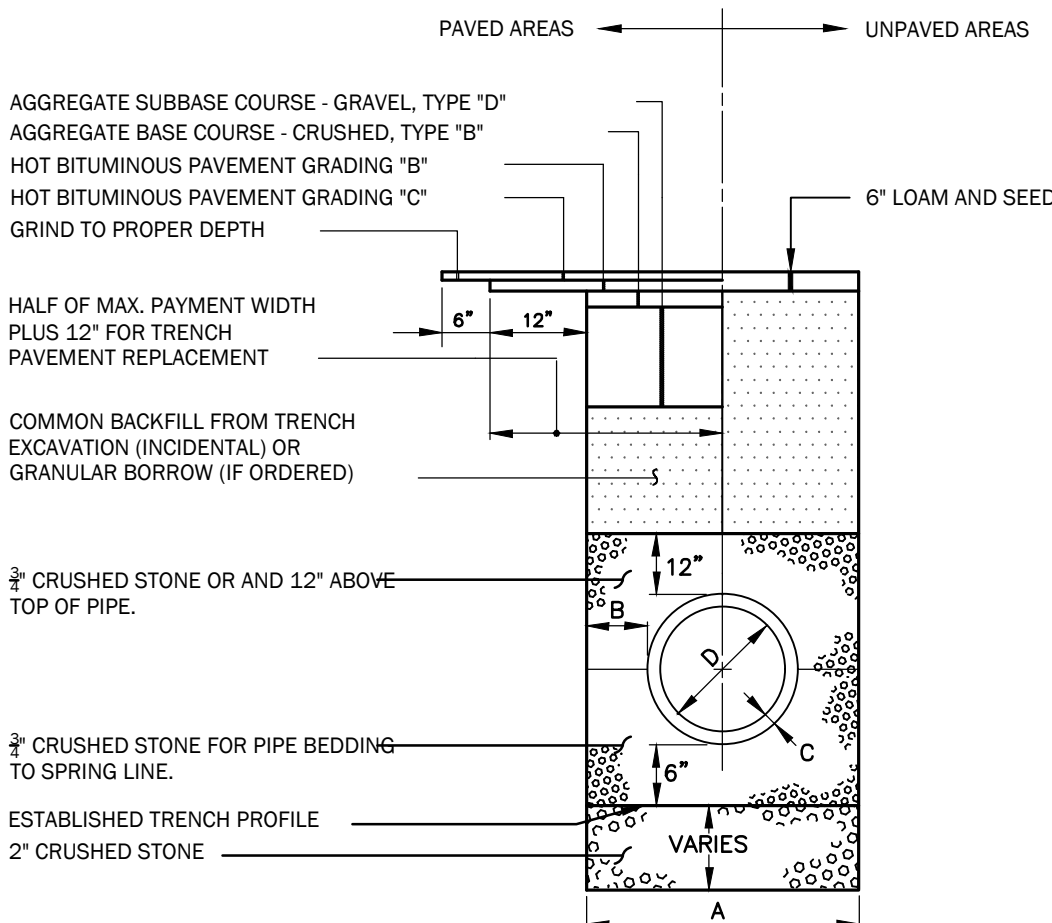


SEWER AND STORM CONNECTION DETAIL



VALVE AND VALVE BOX INSTALLATION DETAIL

NOTES:
DEPTH OF BITUMINOUS PAVEMENT AND AGGREGATE COURSES SHALL BE DETERMINED BY STREET CLASSIFICATION.
ANY ALTERNATE TRENCHING OR PAYMENT METHODS SHALL BE APPROVED IN ADVANCE BY THE CITY OF PORTLAND, DEPARTMENT OF PUBLIC SERVICES.



TYPICAL PIPE TRENCH & ROAD REPAIR DETAIL

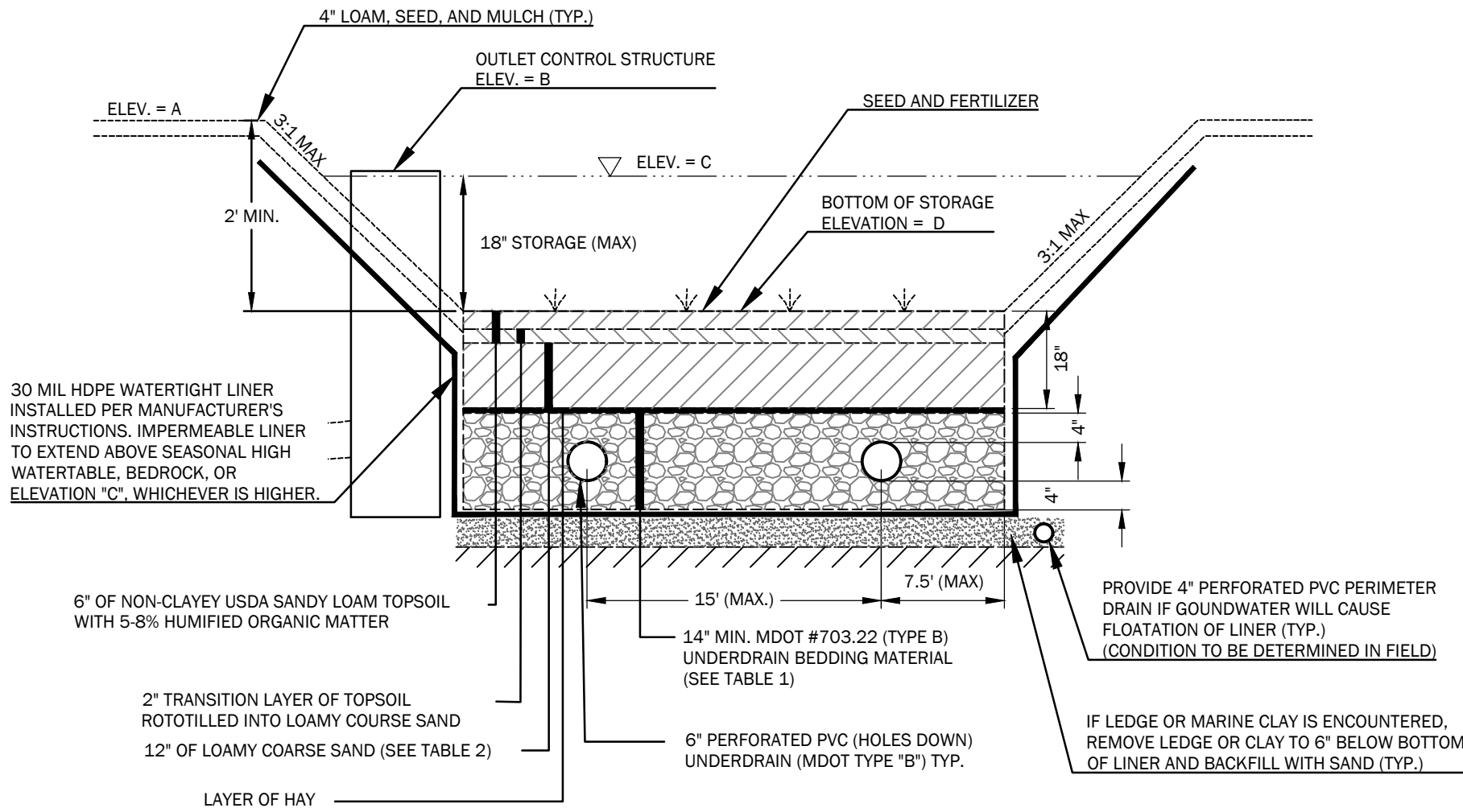
NOTES:
1. ALTERNATIVE CONSTRUCTION METHODS OR PAYMENT METHODS SHALL BE APPROVED IN ADVANCE BY THE CITY.
2. IN PAVED AREAS, DEPTHS OF GRAVEL AND HOT MIX ASPHALT PAVEMENT SHALL MATCH THE GREATER OF EXISTING CONDITIONS OR THE REQUIREMENTS FOR THE CORRESPONDING STREET CLASSIFICATION.
3. DIMENSION B SHALL BE SUFFICIENT TO ALLOW CRUSHED STONE BEDDING TO BE PLACED AND COMPACTED UNDER THE HAUNCHES OF THE PIPE; BUT IN ALL CASES
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	6.0	
24	6.0	
27	6.0	
30	6.0	
36	7.0	
42	7.0	
48	7.0	

TYPICAL PIPE INSTALLATION - NOTES

Rev.	Date	Description	Drawn	Check
1	6/10/2021	REVISED PER STAFF COMMENTS	DEPT.	NGC

Sheet Title:		DETAILS	
Job No.:	613.1	Sheet No.:	
Date:	Feb. 24, 2021	Scale:	AS NOTED
Drawn:	MTL	Checked:	SWC

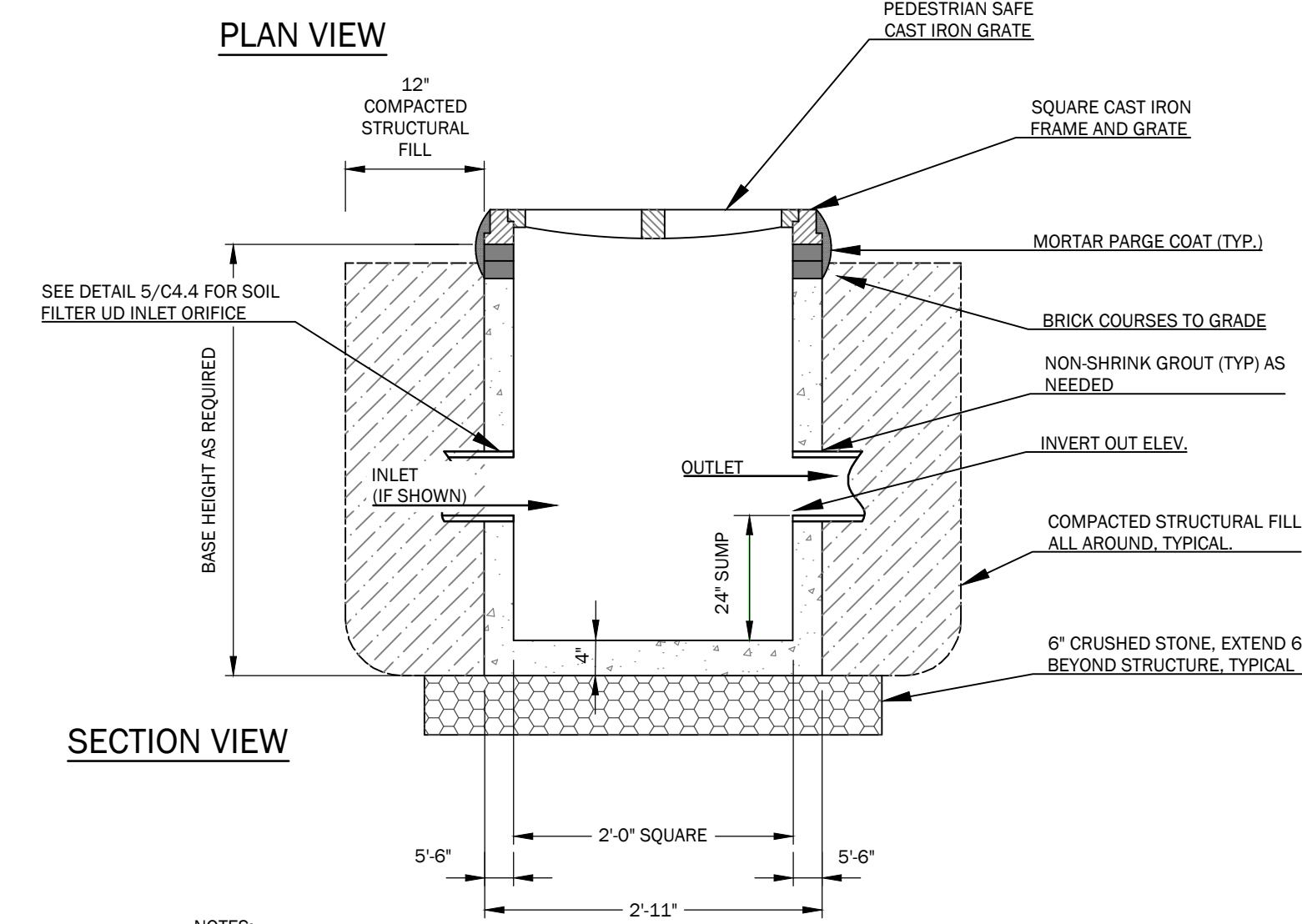


Grassed Underdrain Soil Filter Notes:

- 1. THE SOIL BED SHALL BE 18" IN DEPTH AND CONSIST OF THE FOLLOWING:
 - 6" OF NON-CLAYEY USDA SANDY LOAM TOPSOIL WITH 5-8% HUMIFIED ORGANIC MATTER
 - 12" OF LOAMY COARSE SAND
- 2. BOTTOM 2" OF SANDY LOAM TOPSOIL SHALL BE ROTOTILLED INTO TOP SURFACE OF LOAMY COARSE SAND TO CREATE TRANSITION ZONE.
- 3. THE SOIL BED MATERIAL SHALL BE LIGHTLY COMPACTED USING WATER BY FLOODING IN 6-INCH TO 9-INCH LIFTS. IF HEAVY COMPACTION OCCURS, ROTOTILL AGAIN PRIOR TO SEEDING OR SODDING.
- 4. A 1" LAYER OF HAY SHALL BE PLACED BETWEEN THE BOTTOM OF THE SOIL BED AND THE TOP OF THE UNDERDRAIN MATERIAL.
- 5. THE FILTER SHOULD BE SEEDED WITH THE FOLLOWING SEED MIXTURE:
 - CREEPING RED FESCUE: 20LBS/ACRE
 - TALL FESCUE: 20LBS/ACRE
 - BIRDSFOOT TREFOIL: 8LBS/ACRE
 - TOTAL: 48LBS/ACRE
- 6. REFER TO GRADING PLANS FOR UNDERDRAIN LAYOUT.
- 7. THE MAXIMUM DISTANCE BETWEEN UNDERDRAIN PIPES SHALL BE 15 FEET.
- 8. GRASSED UNDERDRAINED SOIL FILTER MEDIA SHALL NOT BE INSTALLED UNTIL THE TRIBUTARY AREA HAS BEEN PERMANENTLY STABILIZED.
- 9. NO VEHICLES ARE ALLOWED TO DRIVE ON ANY UNDERDRAINED SOIL FILTER AFTER SOIL FILTER MEDIA HAS BEEN INSTALLED.

1 GRASSED UNDERDRAIN SOIL FILTER TYPICAL CROSS SECTION

C4.4 NOT TO SCALE

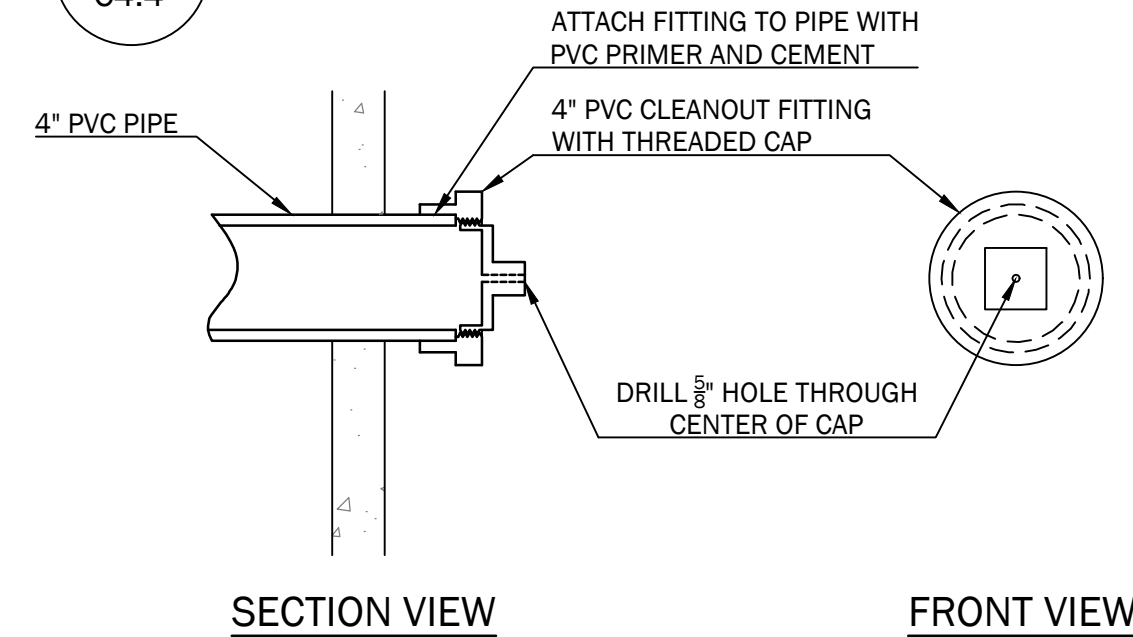


NOTES:

- 1. CONCRETE 5000 PSI AFTER 28 DAYS.
- 2. REINFORCING: 1 LAYER 4x4 / 4x4 WWM.

2 PRECAST CONCRETE FIELD INLET AND OCS DETAIL

C4.4 NOT TO SCALE



5 SOIL FILTER UD OUTLET ORIFICE DETAIL (FOR OCS'S)

C4.4 NOT TO SCALE

GRASSED UNDERDRAINED SOIL FILTER SCHEDULE											
GRASSED UNDERDRAINED SOIL FILTER FILTER #	CREST ELEV.	SPILLWAY / OCS RIM ELEV.	TOP OF WATER ELEV.	BOTTOM OF STORAGE ELEV.	UNDERDRAIN INVERT	UNDERDRAIN OUTLET INVERT	FILTER AREA (SQ. FT.)	FILTER VOLUME (CU. FT)	PEAK WATER ELEVATION		
	A	B	C	D					2-YEAR STORM	10-YEAR STORM	25-YEAR STORM
SF1	41.0	40.7	40.8	39.5	37.17	37.0	632	1,276	40.0	40.8	40.9
SF2	44.5	44.0	44.8	43.0	40.67	40.5	711	1,139	42.9	43.7	44.0

CONSTRUCTION OVERSIGHT

THE APPLICANT WILL RETAIN THE SERVICES OF A PROFESSIONAL ENGINEER TO INSPECT THE CONSTRUCTION AND STABILIZATION FOR 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 DEPARTMENT 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 EERY MINERAL SOIL AND SOIL MEDIA SPECIFIED IN THE PLANS AND USED ON SITE.

CONSTRUCTION SEQUENCE: THE SOIL FILTER MEDIA AND VEGETATION MUST NOT BE INSTALLED UNTIL THE AREA THAT DRAINS TO THE FILTER AS BEEN PERMANENTLY STABILIZED WITH PAVEMENT OR OTHER STRUCTURE, 90% VEGETATION COVER, OR OTHER PERMANENT STABILIZATION UNLESS RUNOFF FROM THE CONTRIBUTING DRAINAGE AREA IS DIVERTED AROUND THE FILTER UNTIL STABILIZATION IS COMPLETED.

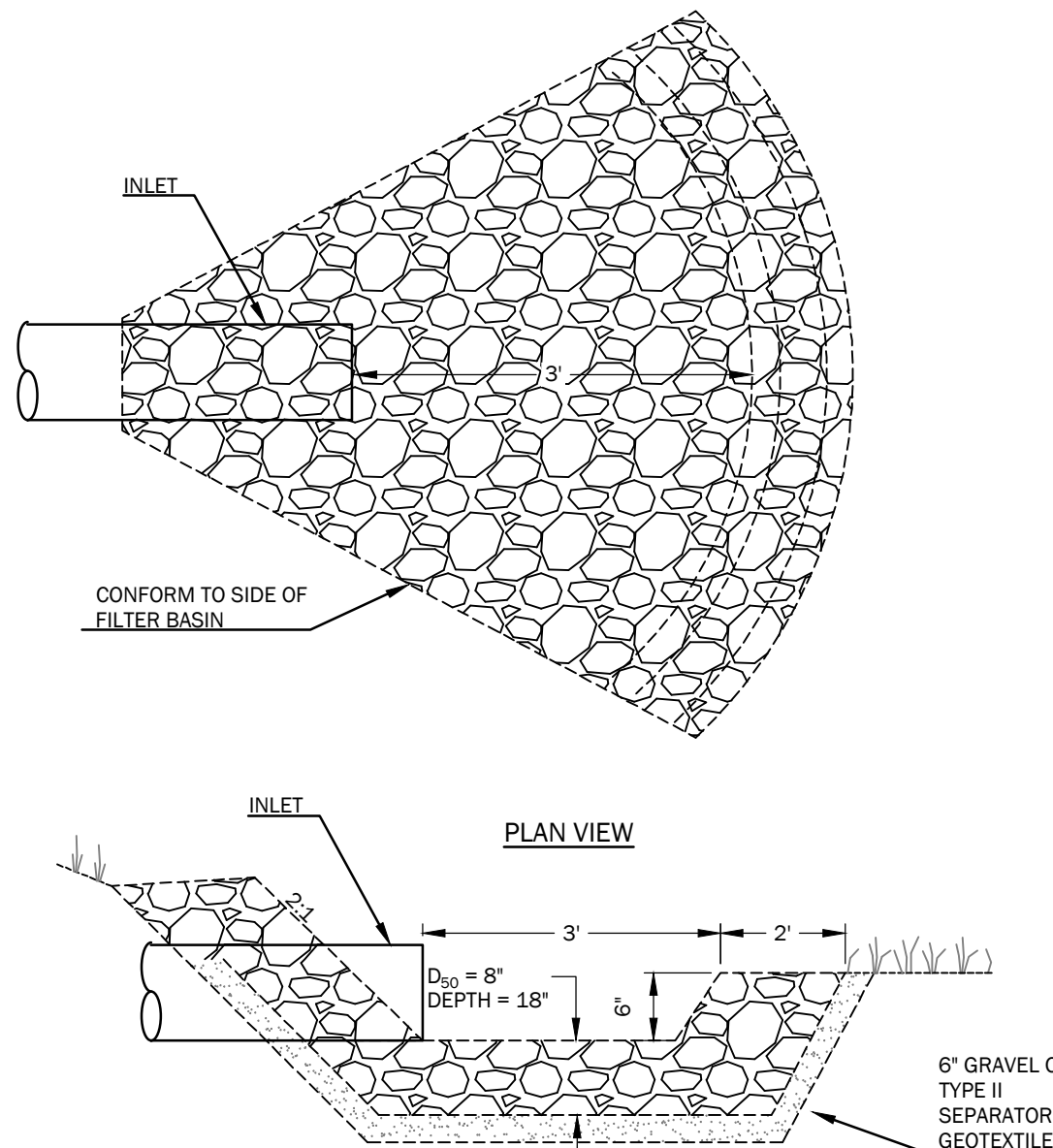
COMPACTION OF SOIL FILTER: FILTER SOIL MEDIA AND UNDERDRAIN BEDDING MATERIAL MUST BE INSTALLED IN 6 TO 9 INCH LIFTS AND FLOODED WITH WATER. THE BED SHOULD BE INSTALLED IN AT LEAST 2 LIFTS OF 9 INCHES TO PREVENT POCKETS OF LOOSE MEDIA.

CONSTRUCTION INSPECTIONS: AT A MINIMUM, THE PROFESSIONAL ENGINEER'S INSPECTION WILL OCCUR:

- AFTER THE THE FILTER HAS BEEN CONSTRUCTED TO SUBGRADE.
- AFTER INSTALLATION OF THE FILTER LINER.
- AFTER INSTALLATION OF THE UNDERDRAIN PIPES HAVE BEEN INSTALLED BUT NOT BACKFILLED.
- AFTER THE DRAINAGE LAYER IS CONSTRUCTED AND PRIOR TO INSTALLATION OF THE SOIL FILTER MEDIA.
- AFTER THE SOIL FILTER MEDIA HAS BEEN INSTALLED, SEEDED AND MULCHED.
- AFTER ONE YEAR TO INSPECT VEGETATION AND MAKE CORRECTIONS.
- ALL THE MATERIAL USED FOR THE CONSTRUCTION OF THE FILTER BASIN MUST BE CONFIRMED AS SUITABLE BY THE DESIGN ENGINEER. TESTING MUST BE DONE BY A CERTIFIED LABORATORY TO SHOW THAT THEY ARE PASSING DEP SPECIFICATIONS.

TESTING AND SUBMITTALS: THE CONTRACTOR SHALL IDENTIFY THE LOCATION OF THE SOURCE OF EACH COMPONENT OF THE FILTER MEDIA. ALL RESULTS OF FIELD AND LABORATORY TESTING SHALL BE SUBMITTED TO THE PROJECT ENGINEER FOR CONFIRMATION. THE CONTRACTOR SHALL:

- SUBMIT SAMPLES OF EACH TYPE OF MATERIAL TO BE BLENDED FOR THE MIXED FILTER MEDIA AND SAMPLES OF THE UNDERDRAIN BEDDING MATERIAL. SAMPLES MUST BE A COMPOSITE OF THREE DIFFERENT LOCATIONS (GRABS) FROM THE STOCKPILE OR PIT FACE. SAMPLE SIZE REQUIRED WILL BE DETERMINED BY THE TESTING LABORATORY.
- PERFORM A SIEVE ANALYSIS CONFORMING TO ASTM C136 (STANDARD TEST METHOD FOR SIEVE ANALYSIS OF FINE AND COARSE AGGREGATES: 1996A) ON EACH TYPE OF THE SAMPLE MATERIAL.
- PERFORM A PERMEABILITY TEST ON THE SOIL FILTER MEDIA MIXTURE CONFORMING TO ASTM D2434 WITH THE MIXTURE COMPACTED TO 90-92% OF MAXIMUM DRY DENSITY BASED ON ASTM D698.



NOTES:

- 1. UNDERLAY RIPRAP WITH 6" OF GRAVEL OR TYPE II SEPARATOR GEOTEXTILE FABRIC.

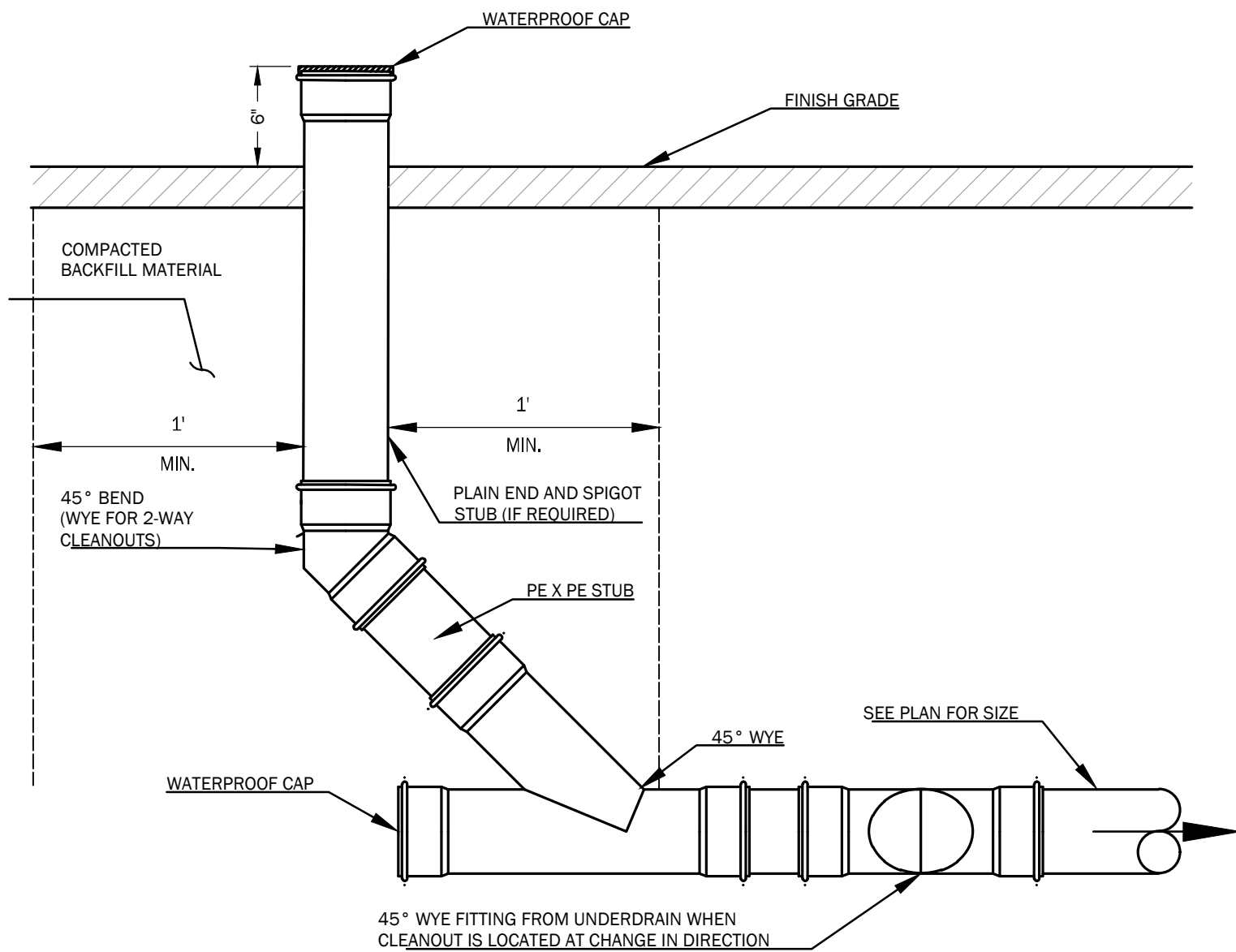
3 RIPRAP INLET FOREBAY

C4.4 NOT TO SCALE

TABLE 1 MDOT SPECIFICATIONS FOR UNDERDRAINS (MDOT #703.22)	
SIEVE SIZE	% BY WEIGHT
UNDERDRAIN TYPE B	
1"	90-100
1/2"	75-100
#4	50-100
#20	15-80
#50	0-15
#200	0-5

TABLE 2 MDEP LOAMY COARSE SAND GRADATION	
SIEVE SIZE	% BY WEIGHT
#10	85-100
#20	70-100
#60	15-40
#200	8-15
#200 CLAY SIZE	<2%

TABLE 3 SPECIFICATIONS FOR SANDY LOAM TO FINE SANDY LOAM	
SIEVE SIZE	% BY WEIGHT
#4	75-95
#10	60-90
#40	35-85
#200	20-70
#200 CLAY	<2.0



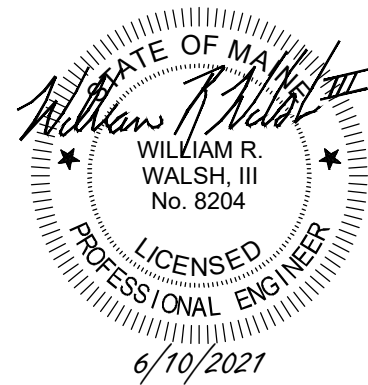
4 SOIL FILTER UNDERDRAIN CLEANOUT

C4.4 NOT TO SCALE

WALSH
ENGINEERING ASSOCIATES, INC.

One Karen Dr., Suite 2A | Westbrook, Maine 04092
ph: 207.553.9898 | www.walsh-eng.com

Copyright © 2021



Deering Avenue Residences

387 & 405 Deering Avenue
Portland, Maine 04103
BK 36396, PG 323; CBL: 118 A 003001

SAWYER ISLAND DEVELOPMENT, LLC.

100 SILVER STREET
PORTLAND, MAINE 04101

PREPARED FOR:

ISSUED FOR PERMITTING - NOT FOR CONSTRUCTION

Rev.	Date	Description	Drawn	Check
1	6/10/2021	REVISED PER STAFF COMMENTS	DEPT.	NGC

Sheet Title:

DETAILS

Job No.:	613.1	Sheet No.:	
Date:	Feb. 24, 2021	Scale:	AS NOTED
Drawn:	MTL	Checked:	SWC

C4.4

Tc FLOW LINE DATA:

SUBCATCHMENT 1				
SEGMENT	TIME (MIN.)	LENGTH	SLOPE	FLOW TYPE
A-B	9.1	80'	0.113	SHEET FLOW
B-C	8.7	50'	0.050	SHEET FLOW
C-D	2.0	75'	0.015	SHALLOW CONCENTRATED FLOW

SUBCATCHMENT 2				
SEGMENT	TIME (MIN.)	LENGTH	SLOPE	FLOW TYPE
A-B	8.1	50'	0.060	SHEET FLOW
B-C	1.0	70'	0.057	SHALLOW CONCENTRATED FLOW

SUBCATCHMENT 3.0				
SEGMENT	TIME (MIN.)	LENGTH	SLOPE	FLOW TYPE
A-B	5.0	N/A	N/A	DIRECT ENTRY

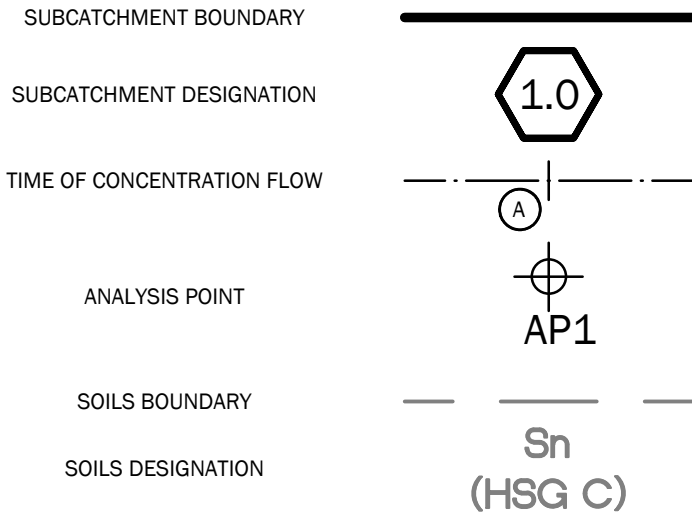
SUBCATCHMENT 3.1				
SEGMENT	TIME (MIN.)	LENGTH	SLOPE	FLOW TYPE
A-B	9.3	60'	0.060	SHEET FLOW
B-C	1.1	70'	0.043	SHALLOW CONCENTRATED FLOW
C-D	0.4	30'	0.033	SHALLOW CONCENTRATED FLOW

SUBCATCHMENT 4.0				
SEGMENT	TIME (MIN.)	LENGTH	SLOPE	FLOW TYPE
A-B	5.0	N/A	N/A	DIRECT ENTRY

SUBCATCHMENT 4.1				
SEGMENT	TIME (MIN.)	LENGTH	SLOPE	FLOW TYPE
A-B	5.0	N/A	N/A	DIRECT ENTRY

SUBCATCHMENT OS1				
SEGMENT	TIME (MIN.)	LENGTH	SLOPE	FLOW TYPE
A-B	5.0	N/A	N/A	DIRECT ENTRY

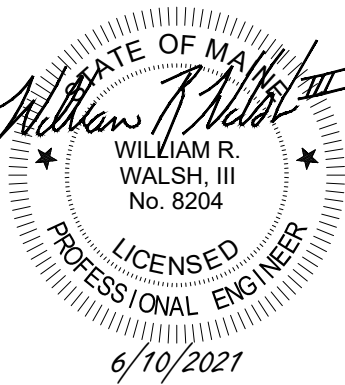
DRAINAGE



WALSH
ENGINEERING ASSOCIATES, INC.

One Karen Dr., Suite 2A | Westbrook, Maine 04092
ph: 207.553.9898 | www.walsh-eng.com

Copyright © 2021



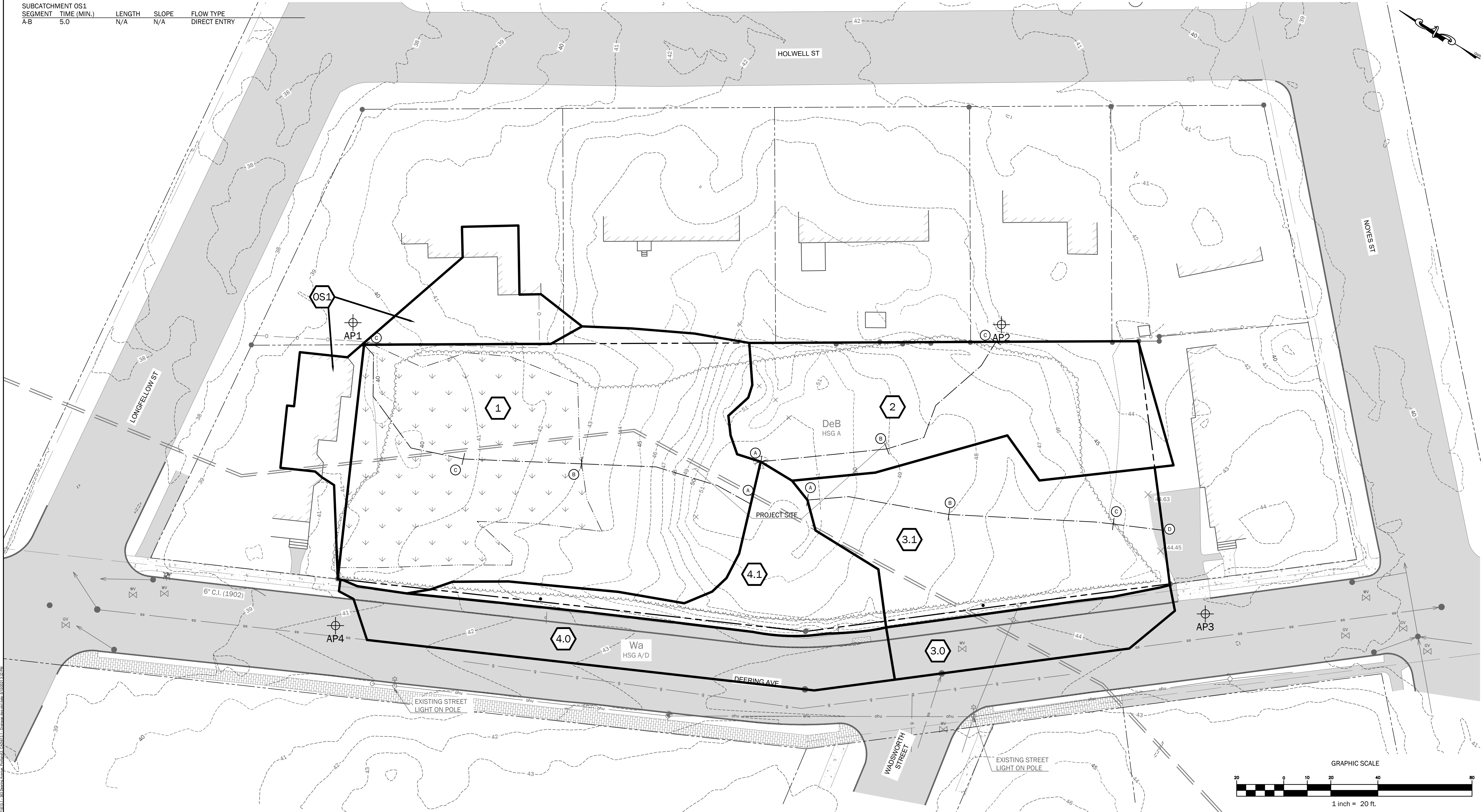
Deering Avenue Residences

387 & 405 Deering Avenue
Portland, Maine 04103
BK 36396, PG 323; CBL: 118 A 003001

SAWYER ISLAND DEVELOPMENT, LLC.

100 SILVER STREET
PORTLAND, MAINE 04101

Rev.	Date	Description	Drawn	Check
1	01/10/2021	REVISED PER STAFF COMMENTS	DEPT.	NGC
Sheet Title:				
Pre-Development Drainage Plan				
Job No.: 613.1			Sheet No.:	
Date: FEBRUARY 2021			D1.0	
Scale: AS NOTED				
Drawn: MTL				
Checked: SWC				



ISSUED FOR PERMITTING - NOT FOR CONSTRUCTION

Tc FLOW LINE DATA:

SUBCATCHMENT 1.0				
SEGMENT	TIME (MIN.)	LENGTH	SLOPE	FLOW TYPE
A-B	13.9	70'	0.030	SHEET FLOW

SUBCATCHMENT 2.0				
SEGMENT	TIME (MIN.)	LENGTH	SLOPE	FLOW TYPE
A-B	6.1	35'	0.060	SHEET FLOW

SUBCATCHMENT 3.0				
SEGMENT	TIME (MIN.)	LENGTH	SLOPE	FLOW TYPE
A-B	5.0	N/A	N/A	DIRECT ENTRY

SUBCATCHMENT 3.1				
SEGMENT	TIME (MIN.)	LENGTH	SLOPE	FLOW TYPE
A-B	5.9	40'	0.012	SHEET FLOW
B-C	1.4	70'	0.015	SHALLOW CONCENTRATED FLOW
C-D	0.5	65'	0.005	PIPE FLOW

SUBCATCHMENT 3.2				
SEGMENT	TIME (MIN.)	LENGTH	SLOPE	FLOW TYPE
A-B	5.0	N/A	N/A	DIRECT ENTRY

SUBCATCHMENT 4.0				
SEGMENT	TIME (MIN.)	LENGTH	SLOPE	FLOW TYPE
A-B	5.0	N/A	N/A	DIRECT ENTRY

SUBCATCHMENT 4.1				
SEGMENT	TIME (MIN.)	LENGTH	SLOPE	FLOW TYPE
A-B	7.5	50'	0.010	SHEET FLOW
B-C	1.6	20'	0.200	SHALLOW CONCENTRATED FLOW
C-D	0.8	90'	0.015	SHALLOW CONCENTRATED FLOW
C-D	0.5	75'	0.005	PIPE FLOW

SUBCATCHMENT 4.2				
SEGMENT	TIME (MIN.)	LENGTH	SLOPE	FLOW TYPE
A-B	5.0	N/A	N/A	DIRECT ENTRY

SUBCATCHMENT OS1				
SEGMENT	TIME (MIN.)	LENGTH	SLOPE	FLOW TYPE
A-B	5.0	N/A	N/A	DIRECT ENTRY

DRAINAGE

SUBCATCHMENT BOUNDARY

SUBCATCHMENT DESIGNATION

TIME OF CONCENTRATION FLOW

ANALYSIS POINT

SOILS BOUNDARY

SOILS DESIGNATION

1.0

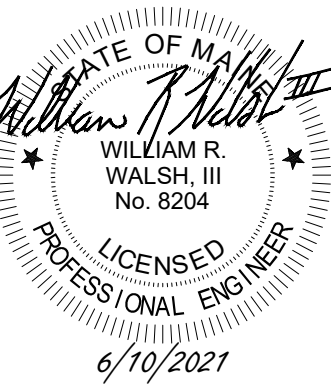
AP1

Sn
(HSG C)

WALSH
ENGINEERING ASSOCIATES, INC.

One Karen Dr., Suite 2A | Westbrook, Maine 04092
ph: 207.553.9898 | www.walsh-eng.com

Copyright © 2021



Deering Avenue Residences

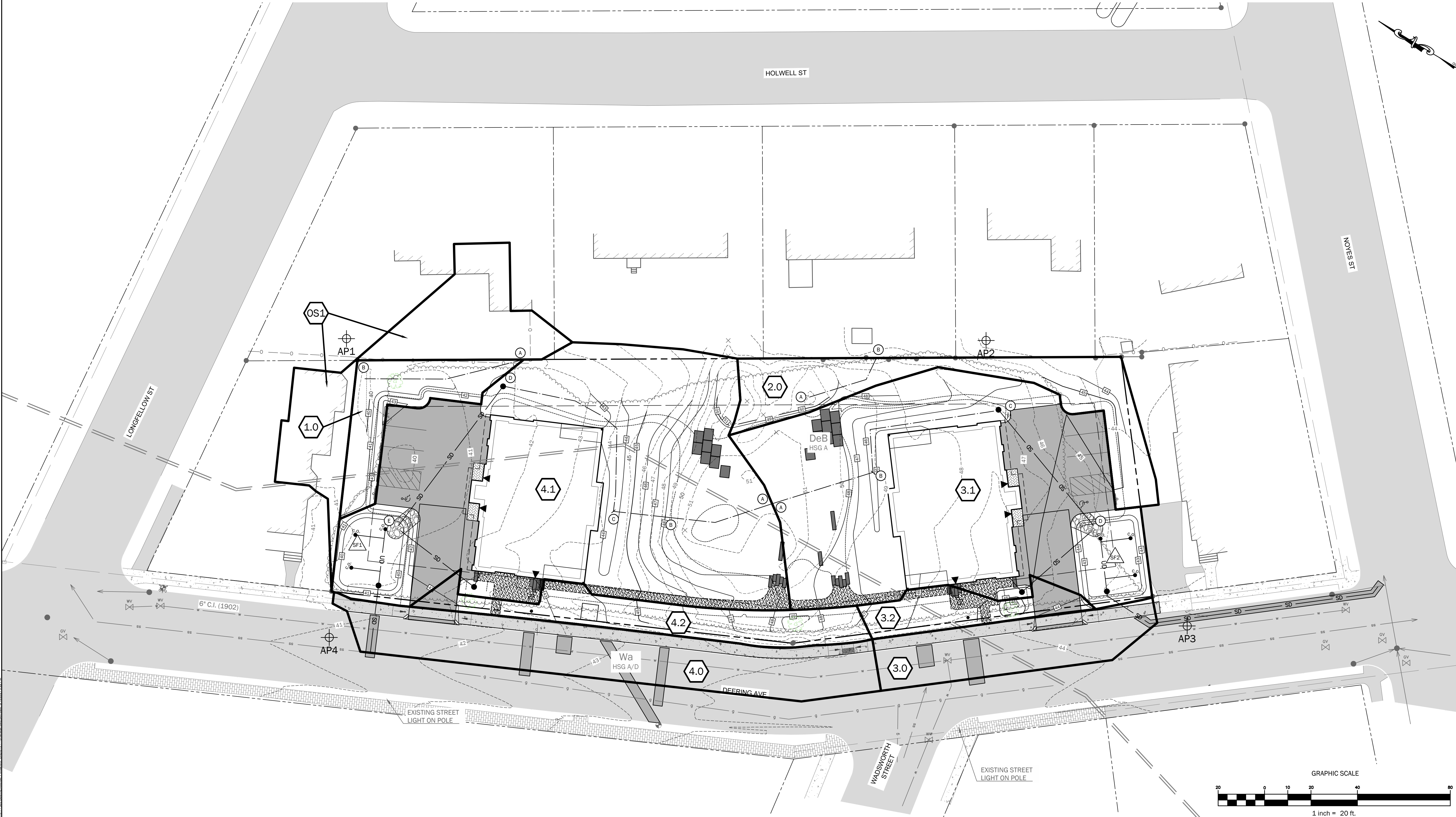
387 & 405 Deering Avenue
Portland, Maine 04103
BK 36396, PG 323; CBL: 118 A 003001

SAWYER ISLAND DEVELOPMENT, LLC.

100 SILVER STREET
PORTLAND, MAINE 04101

Rev.	Date	Description	Drawn	Check
1	01/10/2021	REVISED PER STAFF COMMENTS	DEPT.	NGC
Sheet Title:				
Post-Development Drainage Plan				
Job No.: 613.1		Sheet No.:		
Date: FEBRUARY 2021		Scale: AS NOTED		
Drawn: MTL		Checked: SWC		
		D2.0		

ISSUED FOR PERMITTING - NOT FOR CONSTRUCTION



NOTES:

1. SEE E0.0 FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES.

KEYED NOTES:

- 1

MOUNT 6" ABOVE COUNTERTOP. COORDINATE WITH BACKPLASH.
- 2

MOUNT 42" AFF.
- 3

RANGE HOOD.
- 4

RANGE. WIRING: 3#8AWG & #10GND.
- 5

REFRIGERATOR.
- 6

DISHWASHER.
- 7

NETWORK BOX.
- 8

DRYER. WIRING: 2#10AWG & #10GND.
- 9

WASHER.
- 10

REMOVE PLUG AND HARDWIRE TO TOGGLE SWITCH.
- 11

GARAGE DOOR OPENER.
- 12

ELEVATOR SUMP PUMP CONTROLLER.
- 13

WATER HEATER. WIRING: 2#10AWG & #10GND.
- 14

INDOOR UNIT INCLUDING HEAT. WIRING: 2#10AWG & #10GND.
- 15

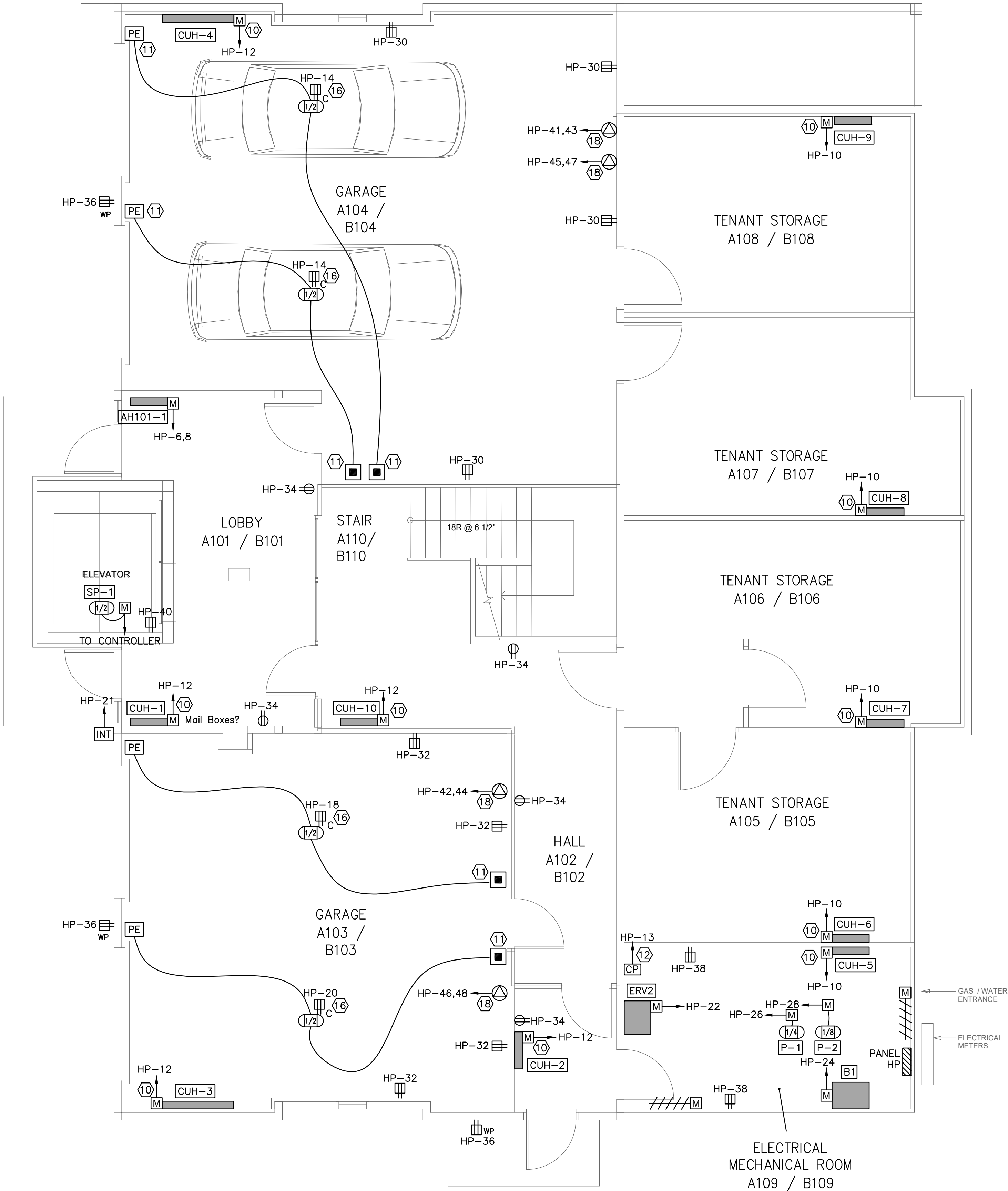
DISPOSAL: FURNISH TOGGLE UNDER SINK.
- 16

GARAGE DOOR OPENER FURNISH CEILING MTD RECEPTACLE AND WIRE OPERATOR SWITCH AND AUXILIARIES. AS MANUFACTURED BY OVERHEAD DOOR. DESTINY 1200 OR EQUAL.
- 17

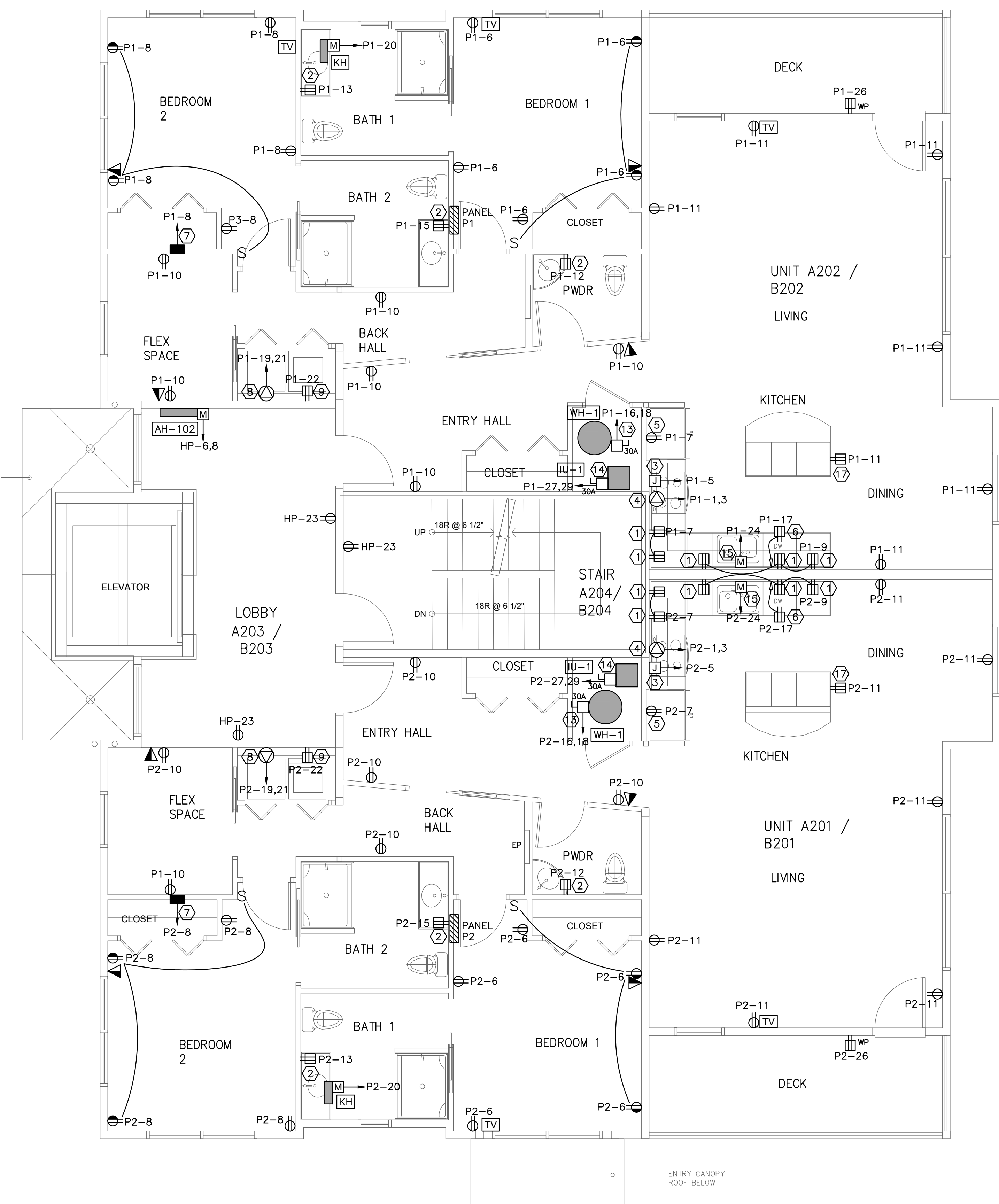
ISLAND RECEPTACLE. COORDINATE MOUNTING WITH CASEWORK.

- 10

EV CHARGING STATION. MOUNT NEMA 14-30 RECEPTACLE 48" AFF. FURNISH LCS-20P, PLUG-IN, 16A, LEVEL 2 EVSE, 240V WITH 25' CABLE AS MANUFACTURED BY CLIPPER CREEK OR EQUAL.



1 ELECTRICAL POWER & SYSTEMS PLAN – GROUND
SCALE: 1/4" = 1'



2 ELECTRICAL POWER & SYSTEMS PLAN – 1ST FLR
SCALE: 1/4" = 1'

EXTERIOR LIGHTING SCHEDULE					
TYPE	DESCRIPTION	MANUFACTURER	LAMPS	MOUNTING	NOTES
AA	12' SMALL LED POLE LIGHT. TYPE 4 DISTRIBUTION WITH BACK SHIELD. TEXTURED BLACK FINISH. 120V	BEACON LIGHTING	28W LED 3000K 2799 LUMENS	12' POLE	MODEL #: VP-S-24L-27-3K7-4-BC
AA POLE	12' - 4" ROUND STRAIGHT STEEL POLE. TEXTURED BLACK FINISH. 120V	BEACON LIGHTING	N/A	12' POLE	MODEL #: RSSB-12-40-A-1-B3-BLT-UL
BB	5" SURFACE MOUNTED DOWNLIGHT. WET LOCATION. DIMMABLE. 120V	PROGRESS LIGHTING	11.8W LED 3000K 769 LUMENS	CANOPY SURFACE	MODEL #: P810024-030-30
CC	42" BOLLARD FULL CUT OFF WITH HOUSE SIDE SHIELD. 120V	KIM LIGHTING	14W LED 3000K 684 LUMENS	42" BOLLARD	MODEL #: PA7R-NU3HS-12L-010-3K7

NOTES:
1. SEE E0.0 FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES.



5 milk street, portland, maine 04101 • 207.774.4811 • wintonscott.com

WALSH ENGINEERING ASSOCIATES
1 Kren Drive, Suite 2A
Westbrook, ME 04092
207.553.9898
www.walsh-eng.com

DAVID MAYNES STUDIO LANDSCAPE ARCHITECTS
26 Storer Street
Kennebunk, ME 04043
207.351.6789
www.davidmaynesstudio.com

STRUCTURAL INTEGRITY CONSULTING ENGINEERS
46 Forest Avenue
Portland, ME 04101
207.774.4614
www.structuralinteg.com

MECHANICAL SYSTEMS ENGINEERS
Royal River Center, Unit 10
10 Forest Falls Drive
Yarmouth, ME 04096
207.846.1441

SWIFTCURRENT ENGINEERING SERVICES
Royal River Center, Unit 4B
10 Forest Falls Drive
Yarmouth, ME 04096
207.847.9280

RESIDENCES AT 383 DEERING AVENUE

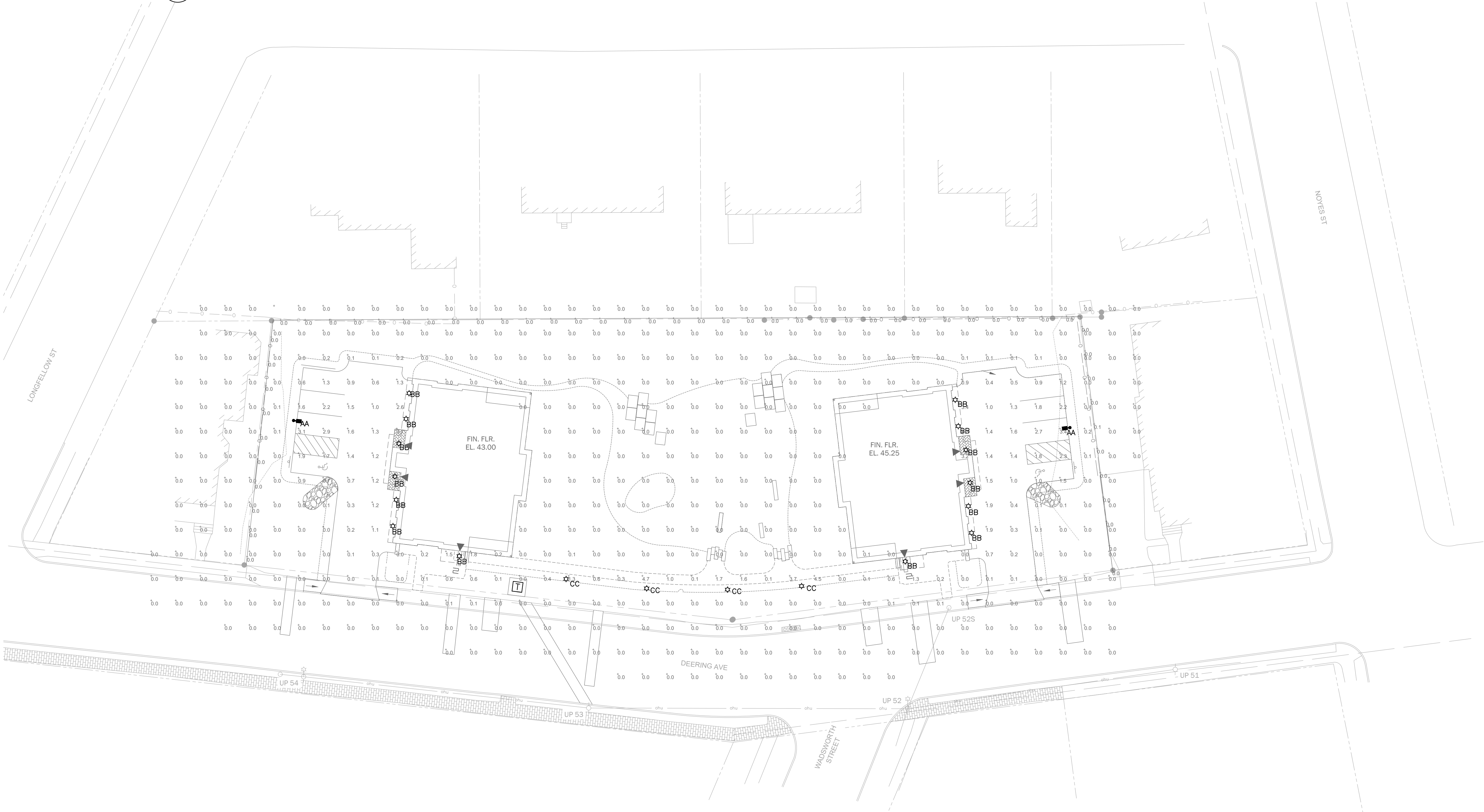
Portland, Maine

Drawing Title: Scale: AS NOTED
PHOTOMETRIC PLAN

ES2.0

Date: 4.15.21
Phase: BID/CONSTR. CD

2 EXTERIOR LIGHTING SCHEDULE
SCALE: NOT TO SCALE



1 ELECTRICAL SITE PLAN
SCALE: 1" = 20'



The proposed landscape seeks to achieve multiple goals: 1. Reveal and celebrate existing ledge conditions to enhance place quality and the contextual vernacular of the Maine landscape. 2. Introduce a mixed vegetation canopy and diversified site ecology utilizing a succession framework 3. Maintain and enhance the neighborhood urban fabric choreography with new appropriately scaled residential development and green space. 4. Provide tenants open space opportunities for both passive and active recreation. 5. Minimize stormwater runoff and promote infiltration through engineered solutions and augmented vegetation diversity and canopy heights. 6. Reduce invasive seed genesis and distribution through removal and mitigation of existing invasive species - primarily *Acer plantanoides* (Norway Maple).



DATE: 2021-02-23

PROPOSED VEGETATION



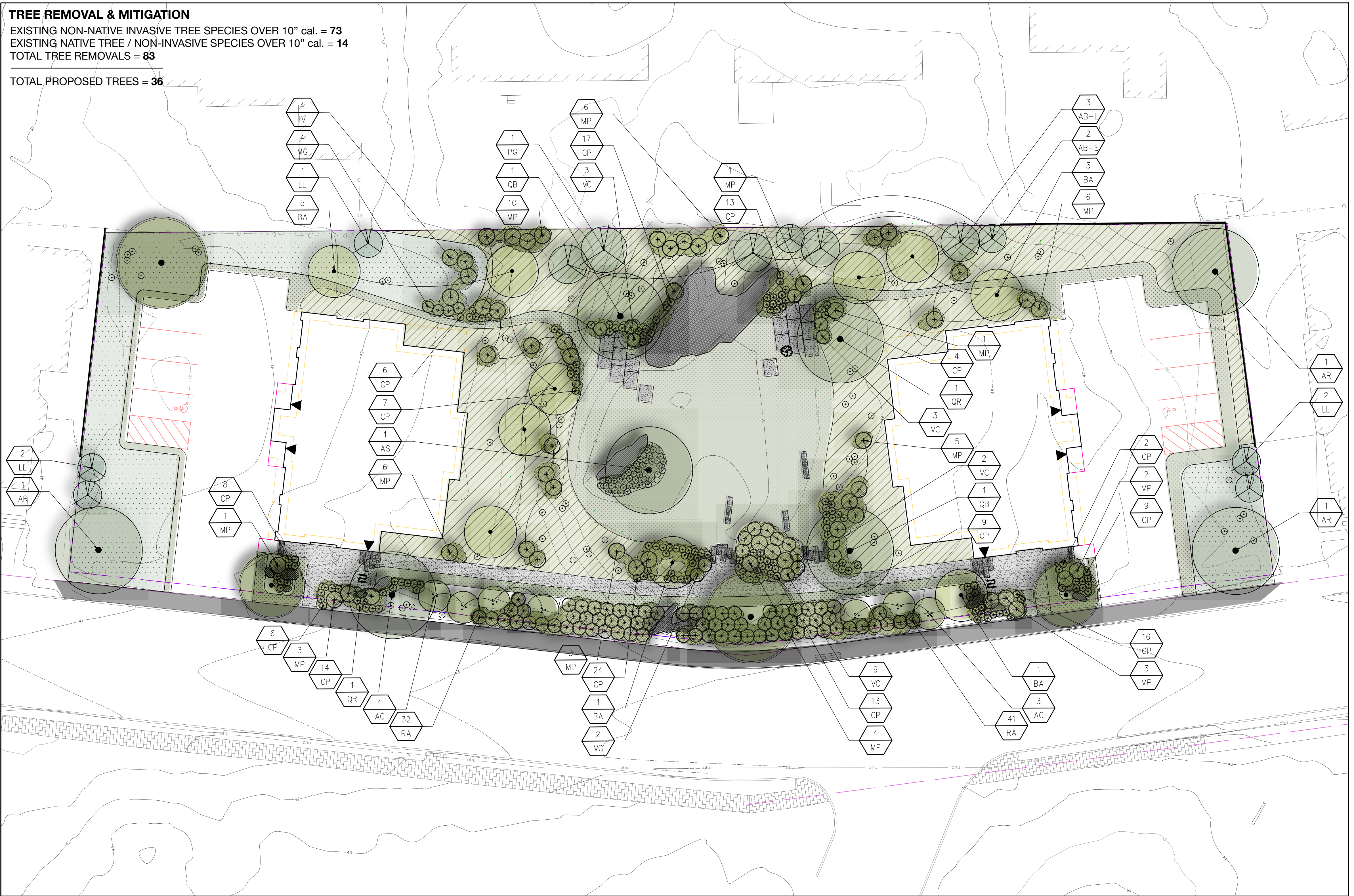
LEGEND

- LEDGE OUTCROPPING
- UPLAND MEADOW GRASS / RENATURALIZATION MIX
- WETLAND / RIPARIAN SEED MIX
- LAWN - FESCUE SEED MIX
- SHRUB AND/OR HERBACEOUS PLANTING
- LG & MED DECIDUOUS TREE
- MULTI-STEM DECIDUOUS TREE
- CONIFEROUS TREE
- EXISTING TREE TO REMAIN

PLANT SCHEDULE - 383 DEERING AVENUE

David Maynes Studio
Portland, ME
2-Jan-21
NOTE: All proposed Perennials, Grasses, & Ferns shall be placed in field by designer

TYPE	QUANTITY	REV	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER
Trees						
	2	AR	Acer rubrum	Red Maple	2.5-3"	BAB
	1	AS	Acer saccharum	Sugar Maple	2.5-3"	BAB
	7	AC	Amelanchier canadensis	Shadbowl Serviceberry	8-10" multistem	BAB
	10	BA	Betula alleghaniensis	Yellow Birch	2-2.5"	BAB
	2	QB	Quercus bicolor	Swamp White Oak	2.5-3"	BAB
	3	QR	Quercus rubra	Red Oak	2.5-3"	BAB
	4	AB-L	Abies balsamea	Balsam Fir	10-12"	BAB
	2	AB-S	Abies balsamea	Balsam Fir	8-10"	BAB
	5	LL	Larix laricina	Eastern Larch	8-10"	BAB
	TOTAL TREES					
	98					
Shrubs & Woody Vines						
	4	MG	Myrica gale	Sweetgale	#1	CONT
	148	CP	Comptonia perigrina	Sweetfern	#1	CONT
	31	MP-L	Myrica pensylvanica - large	Northern Bayberry	4-5"	BB
	20	MP-S	Myrica pensylvanica - small	Northern Bayberry	24-36"	CONT
	73	RA	Rhus aromatica 'Cora-Lee'	Gro-Low Fragrant Sumac	#3	CONT
	19	VC	Vaccinium corymbosum	Highbush Blueberry	3-4"	BB
	3	IV	Ilex verticillata	Winterberry	4-5"	BB
	1	IV	Ilex verticillata	Winterberry Male (pollinator)	4-5"	CONT
	TOTAL SHRUBS					
	299					
Perennials, Grasses, & Fern						
	7	CG	Chelone glabra	Turtlehead	#1	CONT
	148	LC	Lobelia cardinalis	Cardinal Flower	#1	CONT
	60	DC	Deschampsia caespitosa 'Goldstar'	Goldstar Tufted Hairgrass	#1	CONT
	15	RF	Rudbeckia fulgida	Black-Eyed Susan	#1	CONT
	20	AT	Asclepias tuberosa	Butterflyweed	#1	CONT
	11	EA	Eupatorium angustifolium	Fireweed	#1	CONT
	24	SP	Sporobolus heterophyllus	Prairie Dropseed	#1	CONT
	15	SH	Stachys officinalis 'Hummelo'	Betony 'Hummelo'	#1	CONT
	10	OC	Osmunda cinnamomea	Cinnamon Fern	#1	CONT
	5	EM	Eupatorium maculatum	Joe-Pye Weed	#1	CONT
	TOTAL HERBACEOUS					
	175					
Seed Mix Specification: UPLAND MEADOW GRASS / RENATURALIZATION MIX - New England Roadside Matrix Upland Mix						
	GRASSES	Elymus virginicus	Virginia Wild Rye			
		Festuca rubra	Red Fescue			
		Schizanthus scoparium	Little Bluestem			
		Andropogon gerardi	Big Bluestem			
		Sorghastrum nutans	Indiangrass			
		Panicum virgatum	Switchgrass			
		Juncus tenuis	Pink Rush			
	PERENNIALS	Chamaecrista fasciculata	Partridge Pea			
		Asclepias tuberosa	Butterfly Milkweed			
		Desmodium paniculatum	Panicle Leaf Trefol			
		Pennisetum digitale	Beard Tongue			
		Rudbeckia hirta	Black-Eyed Susan			
		Eupatorium fistulosum	Hollow-Stem Joe-Pye Weed			
Seed Mix Specification: WETLAND / RIPARIAN MIX - New England Roadside Matrix Wet Meadow Mix						
	GRASSES	Elymus virginicus	Virginia Wild Rye			
		Elymus riparius	Riverbank Wild Rye			
		Festuca rubra	Red Fescue			
		Panicum virgatum	Switchgrass			
		Carex lasiocarpa	Blunt Brown Sedge			
		Carex lasiocarpa	Lund Sedge			
		Scirpus atrovirens	Green Bulrush			
	PERENNIALS	Iris versicolor	Blue Flag Iris			
		Asclepias incarnata	Swamp Milkweed			
		Aster novae-angliae	New England Aster			
		Eupatorium perfoliatum	Boneset			
		Eupatorium maculatum	Spotted Joe-Pye Weed			
		Aster umbellatus	Flat Topped / Umbrella Aster			
	SHRUBS	Viburnum dentatum	Arrowwood Viburnum			
		Sambucus canadensis	Elderberry			
Seed Mix Specification: TURF AREAS - BLACK BEAUTY ULTRA - Fescue Mix						



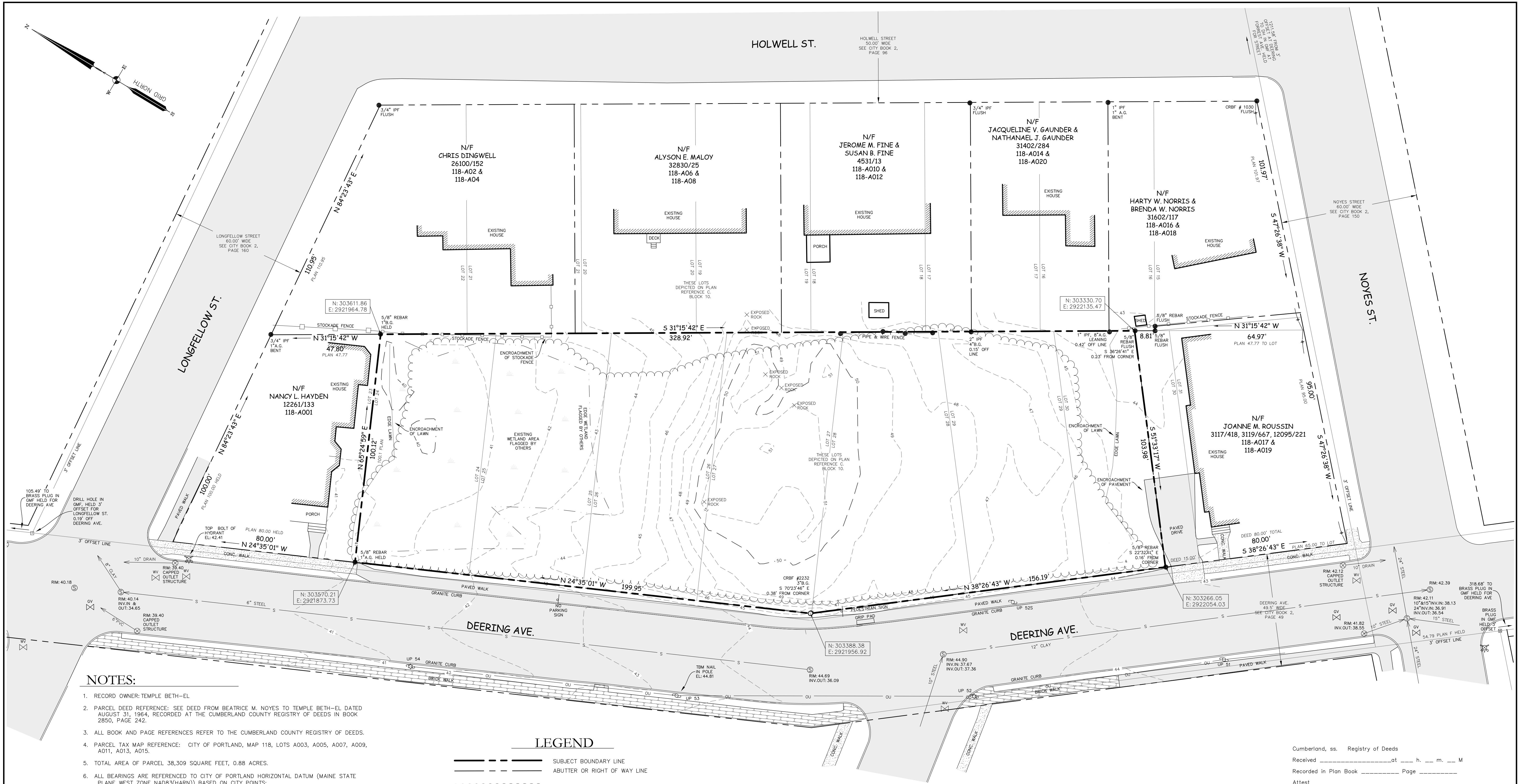
davidmaynes STUDIO

26 Storer St. Kennebunk, ME 04043 p. 207.561.6789

Scale:	1"=16'	Checked By:	DM	Drawn By:	DM	Design By:	DM	Date:	12/2021	No.	CITY REVIEW	Issued For:																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
--------	--------	-------------	----	-----------	----	------------	----	-------	---------	-----	--------------------	-------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

PLANTING PLAN

387 & 405 DEERING AVENUE
PORTLAND, ME.



NOTES:

- RECORD OWNER: TEMPLE BETH-EL.
- PARCEL DEED REFERENCE: SEE DEED FROM BEATRICE M. NOYES TO TEMPLE BETH-EL DATED AUGUST 31, 1964, RECORDED AT THE CUMBERLAND COUNTY REGISTRY OF DEEDS IN BOOK 2850, PAGE 242.
- ALL BOOK AND PAGE REFERENCES REFER TO THE CUMBERLAND COUNTY REGISTRY OF DEEDS.
- PARCEL TAX MAP REFERENCE: CITY OF PORTLAND, MAP 118, LOTS A003, A005, A007, A009, A011, A013, A015.
- TOTAL AREA OF PARCEL 38,309 SQUARE FEET, 0.88 ACRES.
- ALL BEARINGS ARE REFERENCED TO CITY OF PORTLAND HORIZONTAL DATUM (MAINE STATE PLANE WEST ZONE NAD83(HARN)) BASED ON CITY POINTS:
T125-54-2095 N303126.59 E2922105.38
T125-54-2093 N303281.91 E2922738.85
- ELEVATIONS SHOWN ARE TIED THE CITY OF PORTLAND VERTICAL DATUM (NGVD29) BASED ON CITY BENCHMARK AT THE SOUTHERLY CORNER OF DARTMOUTH STREET AND OAKDALE STREET. L.B. 240/132 ELEVATION: 39.36.
- THIS PARCEL DOES NOT FALL WITHIN THE 100-YEAR FLOOD ZONE AS DEPICTED ON FEMA FLOOD MAP #230051-0013-B.
- THIS PARCEL IS IN CITY OF PORTLAND ZONE R-5 RESIDENTIAL ZONE.
- THE LOCATION, SIZE, AND DEPTH OF UNDERGROUND UTILITY LINES, TANKS, AND/OR STRUCTURES NOT DETERMINED BY THIS SURVEY.
- PLAN REFERENCES:
A.) CITY OF PORTLAND DEPARTMENT OF PUBLIC WORKS, HOLWELL STREET, DATED NOVEMBER 17, 1930, ON FILE AT THE CITY ARCHIVES.
B.) CITY OF PORTLAND DEPARTMENT OF PUBLIC WORKS, LONGFELLOW STREET BETWEEN NOYES ST. & DEERING AVE., DATED AUGUST 28, 1922, ON FILE AT THE CITY ARCHIVES.
C.) PLAN OF PART OF THE DEERING ESTATE MADE BY E.C. JORDAN & COMPANY CIVIL ENGINEERS, JULY 21, 1921, COPIED FROM A PLAN MADE IN FEBRUARY 1892, RECORDED IN PLAN BOOK 186, PAGE 90.
D.) CITY OF PORTLAND DEPARTMENT OF PUBLIC WORKS, NOYES ST. FOREST AVE. - BRIGHTEN AVE., ON FILE AT THE CITY ARCHIVES.
E.) CITY OF PORTLAND DEPARTMENT OF PUBLIC WORKS, TWENTY FOURTH SECTION STATE AID HIGHWAY, DEERING STREET, ON FILE AT THE CITY ARCHIVES.
F.) "BLUE SHEETS" FOR DEERING AVE., LONGFELLOW STREET, AND NOYES STREET BETWEEN THE DATES OF 12-1-31 AND 2-10-38 ON FILE AT THE CITY ARCHIVES.
G.) STANDARD BOUNDARY SURVEY AT 83 NOYES STREET, PORTLAND, MAINE FOR PAUL P. OULLETTE, BY OWEN HASKELL, INC., DATED SEPTEMBER 27, 1993.
H.) PLAN OF PROPERTY, DEERING AVENUE, PORTLAND, MAINE MADE FOR DAN WHITE, BY CULLENBERG LAND SURVEYING, DATED SEPTEMBER 30, 2019.

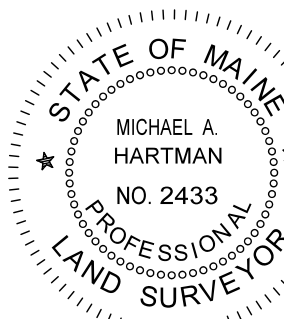
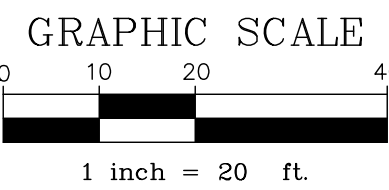
LEGEND

- SUBJECT BOUNDARY LINE
- ABUTTER OR RIGHT OF WAY LINE
- TREELINE
- WETLANDS
- OVERHEAD UTILITIES
- STORMDRAIN
- SEWER LINE
- NOW OR FORMERLY
- DEED BOOK PAGE REFERENCE
- TAX MAP AND LOT NUMBER
- GRANITE MONUMENT FOUND
- IRON PIPE/ROD/REBAR FOUND
- DRILL HOLE FOUND
- 5/8" REBAR W/ CAP SET
- UTILITY POLE
- SEWER MANHOLE
- DRAIN MANHOLE
- CATCH BASINS
- WATER SHUTOFF
- WATER VALVE
- GAS VALVE

CERTIFICATION:

I HEREBY CERTIFY THAT THIS BOUNDARY SURVEY CONFORMS TO THE STATE OF MAINE BOARD OF LICENSURE FOR PROFESSIONAL LAND SURVEYORS, STANDARDS OF PRACTICE (CHAPTER 90, SECTIONS 1 & 2).

Michael A. Hartman
MICHAEL A. HARTMAN, P.L.S. #2433
FOR JONES ASSOCIATES INC.



Cumberland, ss. Registry of Deeds
Received _____ at _____ h. ____ m. ____ M.
Recorded in Plan Book _____ Page _____
Attest _____
Registrar

REVISIONS	NO.	DATE	DESCRIPTION	BY

PLAN OF LAND OF
383 DEERING AVE.
PORTLAND, MAINE

PREPARED BY:

JONES ASSOCIATES INC.
Foresters, Surveyors And
Environmental Consultants

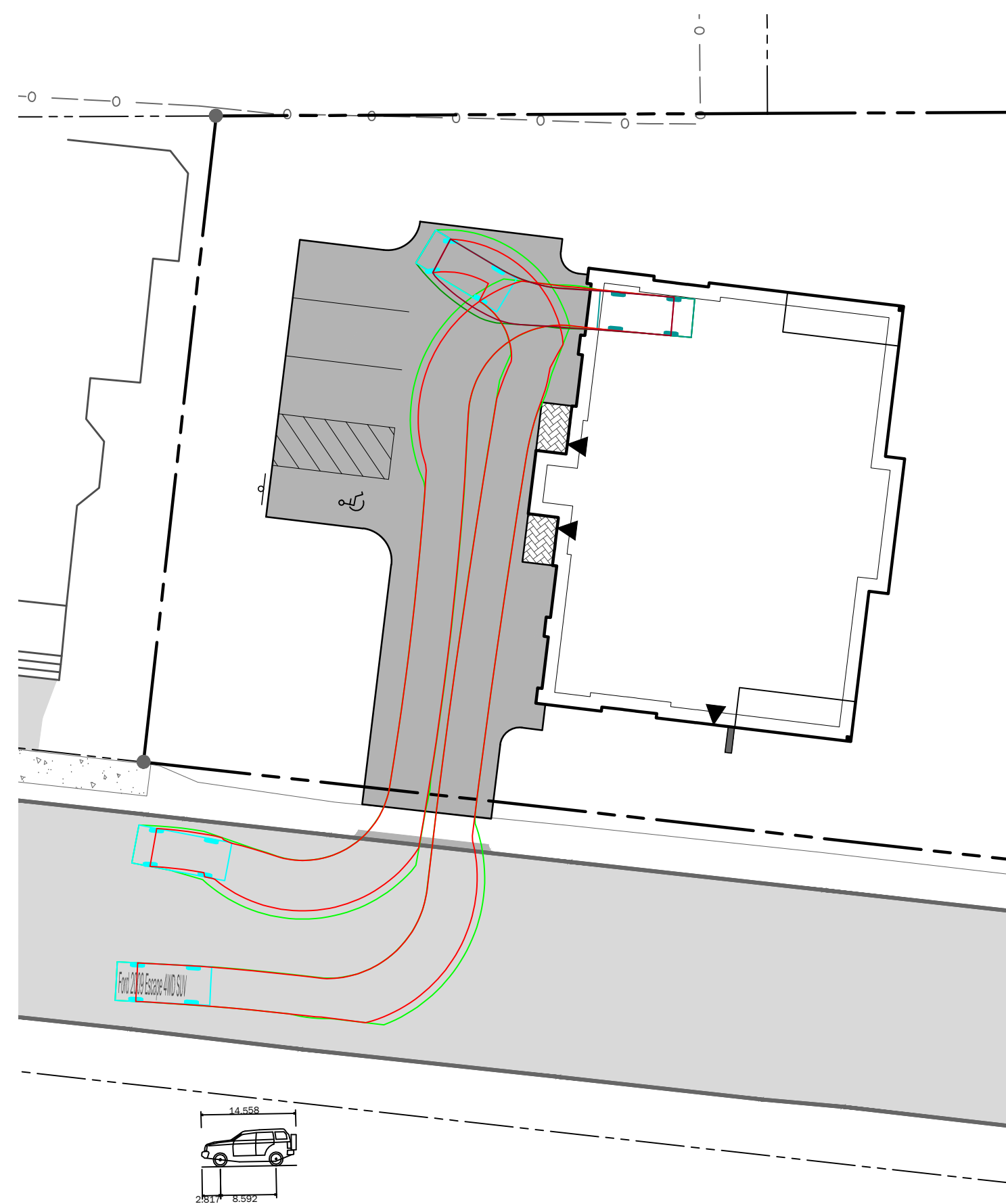
280 POLAND SPRING ROAD, AUBURN, MAINE 04210
(207) 241-0235

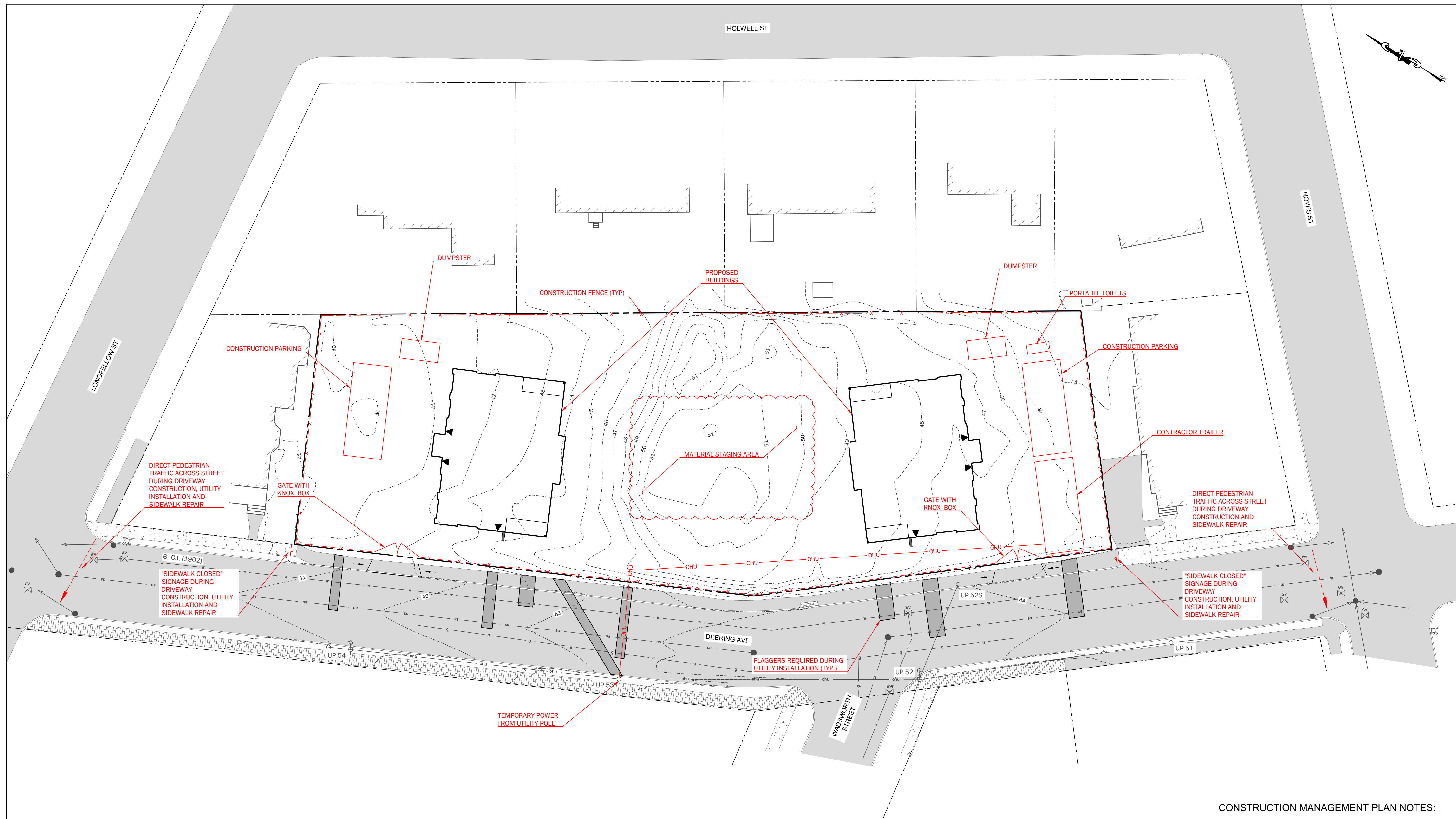
RECORD OWNER:
TEMPLE BETH-EL
400 DEERING AVE.
PORTLAND, MAINE

PLAN DATE:
05-14-2020

SCALE: 1"=20'

PROJ. #:20-037





Construction Management Plan
Deering Avenue Residences
387 & 405 Deering Avenue
Portland, Maine

Construction Management Plans shall depict the overall planning, coordination, and control of a construction site, including phases as applicable, from beginning to completion. The City's goal for a construction management plan is to support a safe construction site and protect the public safety, accessibility (including preserving accessible pedestrian, bicycle, and vehicular modes of transport throughout the city), and welfare during construction. In addition, the construction management plan shall minimize construction impacts in their duration and magnitude to the surrounding area and develop an effective communication process for resolving concerns and conflicts.

The Construction Management Plan will be submitted as part of the Site Plan Review and it shall address the construction logistics for a project. The Construction Management Plan shall include the following submissions:

- 1) a construction management site plan;
- 2) a construction schedule (time frame); and
- 3) a written narrative addressing the categories below.

A. Construction Management Principles

The following narrative provides an overview of the construction management principles that Sawyer Island Development, LLC (Applicant) has identified to minimize impacts from the construction, such as noise, vibrations, ground movement, truck traffic, and other construction related factors to the surrounding building and communities.

B. Development Review of Construction Management Plan

The Applicant shall submit a construction management plan that provides a comprehensive logistics and safety program for the construction project, which will be reviewed and approved as part of the site plan review process. Minimizing impacts to areas surrounding the building/construction site will be primary considerations in the process.

The Planning Authority and the Department of Public Works have the right to seek revisions to an approved Construction Management Plan or require a condition of approval that states an applicant shall coordinate a project's construction schedule with the timing of nearby construction activity, in order to avoid cumulative impacts on a neighborhood. Such a condition may involve a delay in commencement of construction, if necessary.

The following details define the intended approach to the successful management of the project construction and the construction management plan will address the general conditions contained below.

C. Performance Guarantees, Inspection Fees, Preconstruction Meeting, and Permits

Prior to scheduling a preconstruction meeting and the issuance of any city required permits, the Applicant shall meet all of the requirements contained in Section 14-530.

Development review fees and post approval requirements and 14-532. General requirements and enforcement of Portland's Land Use Code.

Other permits, as applicable, include

1. **Street Opening and Street Occupancy Permits:** Construction activity in the public right-of-ways are controlled by Chapter 25 and sewer and stormwater system connections are controlled by Chapters 24 and 32 of the Land Use Code. All required permits shall be obtained through the Department of Public Works and the requests shall conform with the approved construction management plan.
2. **Blasting:** Blasting, if required, shall conform with all measures of Article VIII. Regulation of Explosives in the Land Use Code and Section 3.7 Standards for Blasting and Regulation of Explosives in Portland's Technical Manual.
3. **Building Code:** Employ the best practices, as applicable, of Chapter 33 Safeguards During Construction, from the 2009 International Building Code.

D. Construction Administration and Communication

The Applicant will work diligently to implement a communication strategy as outlined below. The communication strategy is intended to ensure that all construction operations are performed in accordance with all agreements, ordinances and special permits applicable to this project. The Construction Manager will work closely with adjacent abutters, businesses, nearby construction sites, and all parties informed, as far in advance as possible, of scheduled work, particularly work anticipated to cause significant noise, vibrations, or dust. The final construction management plan shall provide for the following:

1. Contact Person and contact information for the [to be supplied at the Pre-Construction Meeting] and who is available 24 hours
2. Construction Signage posted on the site with Contact Information for Contractor
3. Describe any additional communication strategies
4. All construction site signage is temporary and shall be removed at project completion.

E. Construction Schedule

1. The contractor shall submit a schedule or time line for the construction project, including any Phasing.
2. Hours of Construction. Construction may occur during the daytime hours as defined in Section 17-18. Construction Activities for Building permit (Attachment 1) and Section 25-129. Noise, dust and debris (Attachment 2).
3. Extended Hours or Night Work: Pursuant to Section 17-18, this section not apply to emergency utility work or "Situations where the public works authority or the office of building inspections determines that the construction activity is of a unique character which cannot reasonably be completed or performed during the permitted hours and which is not of a recurring nature, provided that prior to engaging in such activity the contractor or his representatives gives notice of the time and scope of such proposed activity, the notice to be given in a manner approved by the public works authority."
4. Material Deliveries: Schedule and designated location for delivery of materials and boxed goods.

F. Security & Public Safety

1. The Construction Management Plan will depict all proposed fencing or other barriers and access gates (with Knox locking devices) with the intent of separating pedestrian and vehicle circulation from the construction site.

2. Structures undergoing construction, alteration, or demolition operations, including those in underground locations, shall comply with NFPA 1 Chapter 16. *Safeguarding Construction, Alteration, and Demolition Operations*.
3. Fire Safety Program. An overall construction of demolition fire safety program shall be developed. Essential items to be emphasized include the following:
 - Good Housekeeping
 - On-site security
 - Installation of new fire protection systems as construction progresses
 - Preservation of existing systems during demolition
 - Organization and training of an on-site fire brigade
 - Development of a pre-fire plan with the local fire department
 - Rapid communication
 - Consideration of special hazards resulting from previous occupancies
 - Protection of existing structures and equipment from exposure fires resulting from construction, alteration, and demolition operations
4. Blasting, if required, shall conform with all measures of Article VIII. Regulation of Explosives in the Land Use Code and Section 3.7 Standards for Blasting and Regulation of Explosives in Portland's Technical Manual.
5. Any proposed temporary security lighting shall be shown on CMP and all fixtures shall be full cutoffs.

G. Construction Permitting and Traffic Control Plans

1. Construction Activity in Public Streets: Construction activity in the public right-of-way is controlled by Chapter 25 Article VII of the City Code of Ordinances. Required licenses and permits, restrictions on activity, and fees & area are outlined in that Chapter. Rules and Regulations for Excavation Activity are available through the Street Opening Clerk at the Department of Public Works. At no time can construction activity including delivery vehicles close or block streets or affect public safety access without prior notice and approval of the Department of Public Works.
2. Sewer and Stormwater: Sewer and stormwater water system connections are controlled by Chapters 24 and 32 of the City Code of Ordinance. Required permits for new connections and/or abandonment of existing connections are available through the Street Opening Clerk at the Department of Public Works. Rules and Regulations for these utility systems are available through the City Engineer's office of the Department of Public Works and in Section II of the Technical Manual.
3. Traffic Control Plans: Construction activity that impacts the existing public street system must be controlled to protect the safety of the construction workers and all modes of the traveling public. Projects are required to submit a satisfactory 'maintenance of traffic' (MOT) plan prior to any site plan, subdivision, or street opening permit approval. MOT plans may be required for projects that have impacts on local streets.

Maintenance of Traffic (MOT) plans shall provide for the safe passage of the public through or along the construction work zone. On a case-by-case basis, applicants may

be allowed to close a street and/or detour a mode of traffic when absolutely necessary for safety. MOT plans shall employ the appropriate techniques and devices as called for in the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD). In addition:

- Construction speed signing may be used as needed to slow traffic
- Traffic Control signs shall not be placed where they are an obstruction to bicycles or pedestrians.
- In some situations, flaggers may be required.
- Police details may be required at lighted intersections and may be requested by the City's transportation engineer or his designee.

All existing modes of travel in work zone area shall be accommodated if impacted by the activity. The safe passage of pedestrians, bicyclists, transit providers, and motorists are of equal importance when planning out the work zone; no pre-existing travel mode may be eliminated without the express approval of the Department of Public Works. The MOT should also address on-street parking impacts, including deliveries and parking for adjoining businesses and property owners, analysis of roadway capacity or diversion capacity if street closure or change to roadway capacity is required, and coordination with other on-going or future construction or utility projects in the vicinity.

- Traffic control of bicycle and pedestrian facilities or routes through work zones shall be maintained until the bicycle and pedestrian facilities or routes are ready for safe operation. Traffic control will not be removed to allow auto travel at the expense of bicycle and pedestrians.
- Barrier systems utilized to separate the construction activity from the public street and /or sidewalk shall not inhibit sight distances, particularly for visibility of pedestrians and bicyclists.
- ADA compliance shall be maintained.

Use of public parking spaces or the blockage of any portion of sidewalk for the purpose of construction activity shall require an occupancy permit and appropriate fee as assessed by the Department of Public Works.

H. Site Management and Controls

The final Construction Management Plan will address maintaining the site in a safe condition and will include the following:

1. Regular trash and debris removal
2. Street cleaning and damage controls
3. Dust controls- The construction shall comply with Portland's requirements under Section 25-129 on Noise, dust and debris (Attachment 2).
4. Noise: The construction shall comply with Portland's requirements under Section 17-18 of the City Code (Attachment 1) and Section 25-129 on Noise, dust and debris (Attachment 2).
5. Rodent Control will be provided, if applicable, by a professional exterminator and consistent with Chapter 22 of the City Code.

6. Snow Removal: Pursuant to Section 25-173 Contractors to ensure a safe means of travel within the work zone.
 - 1) Snow/ice removal or commence automatically from (1" of snow and up) or Ice
 - 2) Remove snow as needed within the work zone, including parking spaces & not to block any driveways or sight lines with the piles of snow.
 - 3) Clear all walks & ramps with the work zone
 - 4) Sand or Salt as needed
 - 5) Clear all basin or drainage to help snow melt
 - 6) This would include Monday-Friday Sat/Sunday/Holidays

I. Erosion Control and Preservation of Trees

1. The Applicant shall install all erosion and sedimentation controls as depicted on the approved erosion and sedimentation control plan prior to the pre-construction meeting for inspection by the City. The contractor shall regularly inspect the control measures, no less than weekly and after significant storm events, and maintain any installed temporary or permanent stormwater management systems in working order. The contractor shall document all inspection activities and corrective actions and be prepared to provide these documents for inspection by the City, Maine Department of Environmental Protection or the U.S. Environmental Protection Agency upon request.
2. The [contractor] shall maintain all tree and landscaping preservation measures as depicted on the landscaping plan (Exhibit) within the area of construction.
3. The storage of materials shall be identified and avoid being located under/near trees.

J. Construction Staging Area

1. The Construction Management Plan shall depict location of the material staging areas, the location on onsite temporary construction trailers, the location on onsite truck delivery holding areas, the location onsite truck washing stations, masonry mixing stations, the general location of the construction security fence and the general location of temporary construction dumpsters. An open storage areas shall be shown on the plan.
2. Delivery Truck Holding Areas On-Site: The delivery holding area shall be shown on the plan and shall not be blocked during construction. On days when the construction activities require multiple truck deliveries, these deliveries will be carefully scheduled so that there is always adequate on-site area for the holding of the trucks until they can be unloaded. Once at the site all vehicles well be brought within the fence line and will make every attempt to avoid queueing on public streets.
3. Delivery Truck Holding Areas Off-Site: In the event that adequate on-site area for holding of trucks is not available, an off-site marshalling area will be utilized for trucking. The designated off-site location will be identified in the construction management plan.

K. Parking During Construction

1. Construction Parking: Adequate parking for construction workers shall be provided on site or arrangements for off-street parking at an off-site location shall be provided. The parking arrangements shall be included in the construction management plan.

2. **Parking:** Where existing facilities are remaining in operation during construction, the construction management plan shall identify how the parking for employees and others shall be managed.
3. **Truck Routes and Volumes:** The Construction Management Plan shall address the designated truck routes and expected truck volumes.

L. Dewatering Plans

A basic dewatering plan for any construction work is required. The plan must cover construction sites where groundwater is not expected but the impact of rainwater may require dewatering. The plan must include operating procedures, equipment to be used, including filters, erosion and sediment control measures, or other methods of removing sediment from approved discharges.

For construction work that will require frequent dewatering of groundwater from site, a dewatering plan must be prepared and approved by the Department of Public Works.

Groundwater and/or soil testing may be required to determine course of action if treatment is necessary. Approval for all discharges to City infrastructure is required.

The proposed plan must address the following:

- Project duration, discharge location, storage equipment on-site, dewatering schematic, and emergency contact.
- General requirements include trained staff on-site for all approved discharges and required site log for documentation of all discharges.
- Storage and/or treatment process should include proper settling time and maintain proper use of filtering medium as required.
- Contingency/maintenance plan for all dewatering equipment devices and filtration mediums.

Any water that is removed from an excavation must be pumped from a perforated device buried in crush stone prior discharge and/or prior to storage and treatment. There will be no discharge allowed during precipitation events.

M. Special Measures as Necessary

For construction work that will take place over a long period (e.g. 12 months or more), involve major demolition/ deep excavation/ piling and/or special construction techniques, or are located near sensitive uses (e.g. medical care facilities, schools), the Construction Management Plan should provide details and demonstrate that all appropriate special measures have been taken to avoid, minimize, or possibly compensate for potential impacts. This may include taking baseline measurements before construction, such as arranging to photograph the foundations of nearby properties upon consent of the owners, in order to assess any future impacts of vibration, noise, etc.

Attachment 1

Building Permit Activities: Site grading and utility installation, foundation and building construction.

Work is to start May 1st and continue for 9 months. Hours of operation will be 7:00am to dusk Monday through Saturday; in accordance with Sec. 17-18. Construction activities, below.

(a) Within the R-zones, from September 1st to May 31st, no person shall engage in construction activities generating noise exceeding fifty (50)decibels, between the hours of 7:00 p.m. and 7:00 a.m., of the following day within five hundred (500)feet of any building used for residential, hospital or nursing home purposes. From June 1st to August 31st construction activity may continue until 8:00 p.m. Any other language notwithstanding, no construction activity shall begin before 8:00 a.m. on a Saturday, Sunday or legal holiday.

(b) Construction activities shall include, but not be limited to, the following:

- (1) The use or operation of power or heavy equipment in connection with road, street, or bridge construction, reconstruction or repair;*
- (2) The use or operation of power or heavy equipment in connection with the installation or repair of utility lines, pipes, wires or cables;*
- (3) The use or operation of power or heavy equipment in connection with the construction of buildings, including specifically excavation for foundations or landscaping work of any kind;*
- (4) The renovation, repair, remodeling or demolition of the exterior or foundation of any building or structure.*

(c) This section shall not apply in the following situations:

- (1) Emergency repair work on any utility line, pipe, wire or cable required to restore normal utility service;*
- (2) Situations where the public works authority or the office of building inspections determines that the construction activity is of a unique character which cannot reasonably be completed or performed during the permitted hours and which is not of a recurring nature, provided that prior to engaging in such activity the contractor or his representatives gives notice of the time and scope of such proposed activity, the notice to be given in a manner approved by the public works authority.*

Attachment 2

Noise, Dust and Debris: The project will limit fencing the yard area. No barbed wire will be along sidewalks and limit hours of operation to 7:00am to dusk, in accordance Section 25-129 Noise, dust and debris, See below.

Each permittee shall conduct and carry out excavation work in such manner as to avoid unnecessary inconvenience and annoyance to the general public and occupants of neighboring property. To the fullest extent practicable, the permittee shall take appropriate measures to reduce noise, dust and unsightly debris in the performance of the excavation work. Excavation work, including the use of any tool, appliance, or equipment, shall be performed between the hours of 7:00 a.m. and 10:00 p.m. only, exclusive of emergency work. Time waiver requests may be submitted to the public works authority for work outside of this time period and will be subject to neighborhood concerns. Excavation work shall not occur on Sundays, holidays or on major holiday weekends, unless expressly authorized by the public works authority or as a result of emergency need.



PLANNING BOARD REPORT PORTLAND, MAINE

178 Middle Street

Subdivision

PL-001542-2021

Cow Plaza 4 LLC, Fresnel LLC, and 4 Canal Plaza, Applicants

Submitted to: Portland Planning Board
Public Hearing Date: June 22, 2021

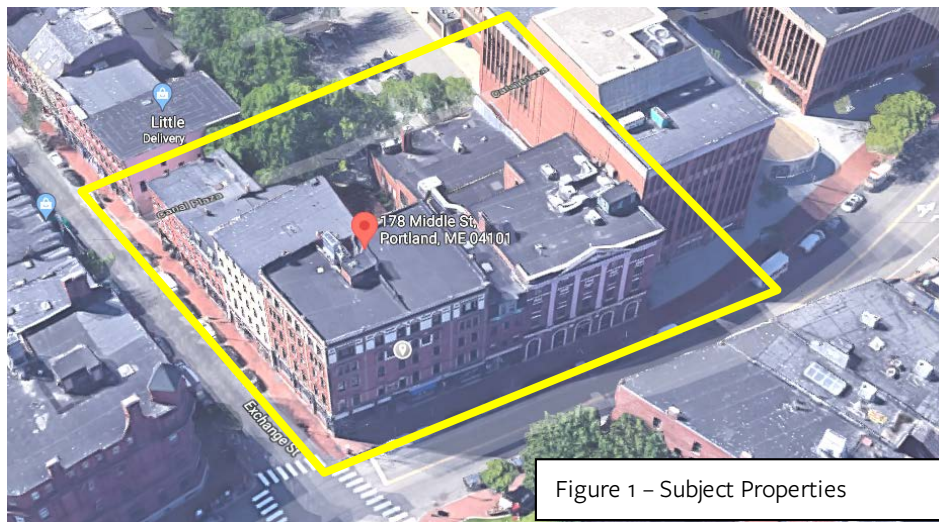
Prepared by: Shukria Wiar, Planner
Date: June 18, 2021

I. INTRODUCTION

Cow Plaza 4 LLC and Fresnel LLC, owners and applicants, are proposing to subdivide two parcels at the corner of Middle and Exchange streets into three lots via the creation of one new, 1,284 square foot lot to be located at 184 Middle Street. When the subject properties were last sold, they were purchased as two parcels by the current owners – Fresnel LLC bought 178 Middle Street (the corner building with Starbucks) and Cow Plaza 4 purchased the rest of the lot. The assemblage, which currently includes these two lots, will be divided into three lots, consisting of the following:

- 178 Middle Street (existing lot) - the Byrd Building at the corner of Middle and Exchange streets
- 4 Canal Plaza (existing lot) - includes the Canal Bank building
- 184 Middle Street (new lot) - post-subdivision, this 1,284 square foot lot will include an existing 4,910 square foot building and a small portion of the 4 Canal Plaza property to incorporate rear egress.

Pursuant to Land Use Code Sec. 15.4, the applicants are seeking Planning Board approval for the proposed subdivision. Reciprocal easements are in place between the three buildings to address shared utilities, ingress and egress, and services.



The proposed subdivision divides existing structures; given the administrative nature of the changes in ownership, a number of the subdivision standards are not applicable under these circumstances. As no new development is contemplated in this proposal, the application was scheduled for a Planning Board hearing without an initial workshop.

One hundred and ninety-two (192) notices were sent to residents within 500 feet and the

interested party list. A notice also appeared in the June 11th and June 12th, 2021 editions of the *Portland Press Herald*.

Applicant: Cow Plaza 4 LLC and Fresnel LLC, the owners of property located at 178-182 Middle Street, 184-186 Middle Street, and 188 Middle Street.

Consultants: Mary Costigan, Bernstein Shur

II. PROJECT DATA

Existing Zoning	B-3 Downtown Business
-----------------	-----------------------

Historic District	Old Port Historic District		
Existing Use	Mixed-Use Commercial		
Existing number of lots:	Two		
Proposed number of lots:	Three		
Parcel Size	4 Canal Plaza	184 Middle Street	178 Middle Street
	15,072 SF (0.35 AC)	1,284 SF (0.03 AC)	4,557 SF (0.10 AC)

III. EXISTING CONDITIONS

The proposed subdivision parcels are located within the heart of Portland's walkable downtown and comprise an aggregate area of 20,912 square feet. The parcels are located in the B-3 Downtown Business zone. B-3 is a high-density commercial, residential, and mixed-use zone mapped throughout the City's downtown. The site is also located within the Pedestrian Activities Map (PAD) Encouragement area. Historically, the two original parcels were owned by Middle Street Holdings, who sold both parcels to the current owners, Cow Plaza 4, LLC and Fresnel LLC. Cow Plaza 4 LLC owns 184 Middle Street and 4 Canal Plaza. Fresnel LLC owns 178 Middle Street.

178 Middle Street consists of a 4,557 square foot lot that is currently occupied by a turn-of-the-century brick and stone mixed-use building, called the Byrd Block, characteristic of the Old Port. The ground floor on the Middle Street façade features large storefront windows, large plate glass display windows, and two corner entrances that form the corner of Middle and Exchange streets. The upper floors are punctuated by a typical office or residential window pattern.

184 Middle Street consists of a 1,284 square foot lot that is occupied by a building, bracketed between 178 Middle Street and 4 Canal Plaza, that was constructed in the Second Empire Style. The building has a three-bay facade with a central entrance at the storefront level. The first floor features a cast iron storefront with large glass windows along the main entrance. The second and third floor includes windows that have decorative brownstone lintels, topped with a Mansard roof.

The former Canal Bank Building at 4 Canal Plaza, which sits on a 15,072 square foot lot, was constructed in 1930, with an exterior clad in brick with marble and wood trim. Designed in the Colonial Revival style, the building is noteworthy for its formal, symmetrical facade. The upper facade of the building features four three-story pilasters, creating a series of distinct bays.

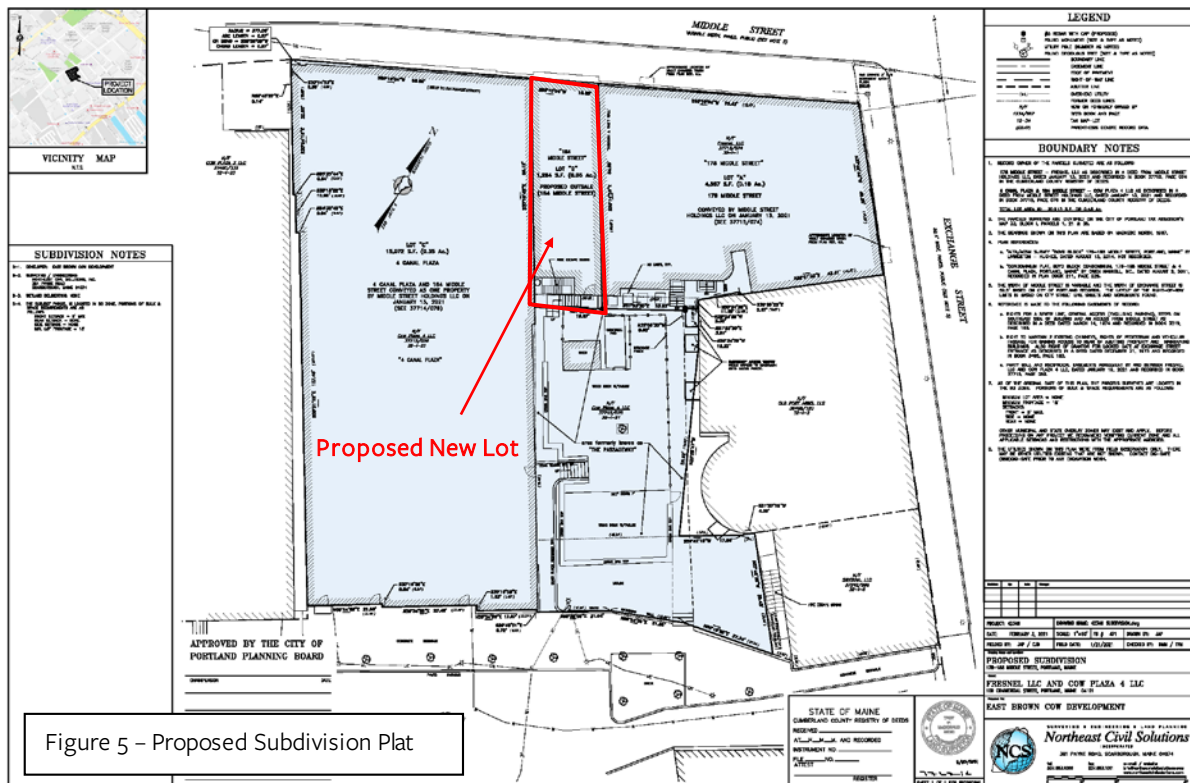
IV. PROPOSED SUBDIVISION

The applicant proposes to subdivide two existing parcels to create a new, 1,284 square foot parcel, yielding a total of three parcels. In the years prior to the proposed subdivision action, 178-188 Middle Street was comprised of three tax parcels: 32-1-1 (178), 32-1-21(184-188) and 32-1-38 (rear parcel). The ownership of the property has passed through multiple parties over time and was most recently owned by Middle Street Holdings LLC as one whole parcel. Middle Street Holdings sold the property on January 13, 2021, as two separate parcels: 178 Middle Street, which was purchased by Fresnel LLC (along with a small portion of the rear parcel) and the remainder, was purchased by 4 Canal Plaza. 4



Figure 2 – Existing Buildings on Sites

Canal Plaza seeks to further divide that lot into two additional parcels, as shown in the figures below (new parcel outlined in blue):



V. PUBLIC COMMENT

The Planning and Urban Development Department sent 192 notices advertising this public hearing to property owners within 500 feet of the site and the interested citizen list. A legal advertisement ran in the *Portland Press Herald* on June 11th and

June 12th, 2021 as well as being posted on the City's web page. The Planning Department has received no public comments.

The applicant did not hold a neighborhood meeting since the subdivision is for three units only; proposed developments that have five or greater units or lots are required to hold a neighborhood meeting.

VII. RIGHT, TITLE AND INTEREST AND FINANCIAL/TECHNICAL CAPACITY

- a. The owners of the property are Cow Plaza 4 LLC and Fresnel LLC. The applicants have provided copies of a quitclaim deed, recorded at the Cumberland County Registry of Deeds (Book 37832 Page 235 and Book 34832 Page 239), which demonstrates their right, title and interest in the property.
- b. As the proposed action represents a subdivision of developed lots with no new development contemplated, a determination of financial capacity is not required.

VI. ZONING ASSESSMENT

The proposed subdivision is located in the B-3 Downtown Business Zone and includes two street frontages. The relevant dimensional standards including minimum lot size, maximum lot coverage, setbacks, and frontage requirements set forth within the B-3 Zone of the Land Use Code are being met.

	Required	Existing Condition (no development proposed)		
		4 Canal Plaza	184 Middle St	178 Middle St
Lot Size (minimum)	none	15,072 SF	1,284 SF	4,557 SF
Street Frontage (minimum)	15'	68.66'	19.68'	75.43'
Build-to Line	5'	Met on all streets		
Lot Width (minimum)	0'	68.66'	19.68'	75.43'
Blank Wall (maximum)	30'	No blank walls		
Height (min)	35'	4 stories	4 stories	5 stories
Height (max)	190'	N/A; existing buildings are below height limit		
Rear Setback	-	-	-	-
Side Setback	-	-	-	-
Side Setback	-	-	-	-

VIII. DEVELOPMENT REVIEW

A. SUBDIVISION PLAN AND RECORDING PLAT REQUIREMENTS (Section 15-3.8 to 15-3.11)

There are three vault chambers in the right-of-way along the frontage of these buildings: one in Middle Street, which is closed with concrete blocks and masonry, one 3' x 3' chamber in Exchange Street, which is open, and an additional chamber in the sidewalk in front of 4 Canal Plaza that was not identified on the plan. The applicant has expressed that they do not wish to keep the chambers in Middle and Exchange Streets and would like to close them. Chapter 25 of the City Code requires that the applicants file a formal notice of abandonment, which will be a condition of approval:

Sec. 25-123. Abandonment of structure. (a) Whenever the use of a substructure is abandoned, except the abandonment of service lines designed to serve single properties, the person or utility owning, using, controlling, or having an interest therein, shall within thirty (30) days after such abandonment, file with the city a statement in writing giving in detail the location of the substructure so abandoned. If such abandoned substructure is in the way, or subsequently becomes in the way, of an installation of the city or any other public body, the owner of such substructure, after having been contacted by the excavator, shall establish if the substructure is abandoned and make the first cut or tap before allowing the substructure to be removed by the excavator.

The applicants desire to keep the additional chamber in the sidewalk in front of 4 Canal Plaza, as the 20' x 35' chamber is in good condition and also contains a number of utilities. As this chamber was not identified on the

subdivision plat, it will need to be added to the drawing. The applicants will be required to enter into a license agreement with the City to accomplish this. The requirement to obtain this license has been included as a condition of approval for this application. The final plat will also need to be revised to reflect any waivers and conditions of approval that relate to the subdivision plan.

B. SUBDIVISION (Section 15.4)

The proposed subdivision has been reviewed by staff for conformance with the relevant review standards of Portland's Subdivision Ordinance and applicable regulations. Staff comments are provided below.

1. Will Not Result in Undue Water and Air Pollution (Section 15-4.1 A, and Will Not Result in Undue Soil Erosion (Section 15-4.1 A)

The subject properties are developed sites and no new development is proposed; thus, there are no anticipated impacts to water, air and soil, therefore this standard is not applicable.

2. Sufficient Water Available (Section 15—4.1 B and C)

The site is currently served by public water and there are no anticipated impacts to the water utility, therefore this standard is not applicable.

3. Will Not Cause Unreasonable Traffic Congestion (Section 15—4.1 E)

The project is not expected to generate significant traffic volumes or have a major impact on existing or proposed public roads, as the existing, as-built condition will remain post-subdivision.

4. Will Provide for Adequate Sanitary Sewer and Stormwater Disposal (Section 15-4.1 F), and Will Not Cause an Unreasonable Burden on Municipal Solid Waste and Sewage (Section 15-4.1 G)

The site is served by public water and there are no anticipated impacts to the sanitary sewer and stormwater disposal as the existing condition will not change post-subdivision therefore this standard is not applicable.

5. Scenic Beauty, Natural, Historic, Habitat and other Resources (Section 15-4.1 H)

This standard does not apply, as the existing, as-built condition will remain post-subdivision.

6. Comprehensive Plan (Section 15-4.1 I)

The proposed subdivision is consistent with *Portland's Plan*. The subdivision is in accordance with the stated goals around authenticity (preserving the historic building), and further supports goals around stabilizing and enhancing historic areas and ensuring quality investment in existing structures. In addition, any future redevelopment and investment into these properties will further support the City's desire of creating complete neighborhoods and reinforcing the center as the subject properties are located within a central, downtown location near transit and walkable services.

7. Financial Capability (Section 15-4.1 J)

As the proposed action is a subdivision of previously developed lots with no new development proposed on the sites, a financial capability letter is not required.

8. Wetland and Groundwater Impacts, Flood-Prone Area (Section 15-4.1 K to P)

As the proposed action is a subdivision of previously developed lots with no new development proposed, this standard does not apply.

IX. STAFF RECOMMENDATION

Subject to the proposed motions and conditions of approval listed below, Planning staff recommend that the Planning Board approve the proposed subdivision with a condition of approval that relate to a required City license for the vault.

X. PROPOSED MOTIONS

On the basis of the application, plans, reports and other information submitted by the applicant, findings and

recommendations contained in the Planning Board Report for application PL-001542-2021 relevant to the subdivision standards and other regulations, and the testimony presented at the Planning Board hearing:

A. SUBDIVISION:

That the Planning Board finds that the plan [is or is not] in conformance with the subdivision standards of the Land Use Code, subject to the following conditions of approval:

Prior to the Issuance of a Certificate of Occupancy:

1. The vault chambers in the City's right-of-way on Middle and Exchange streets shall be filled, sealed, and abandoned to the satisfaction of the Department of Public Works. The applicant shall file a formal notice of abandonment per the requirements of Chapter 25. The final subdivision plat shall show reflect this.
2. The vault chamber in the City's right-of-way at 4 Canal Plaza shall be shown on the final subdivision plat, and the applicants shall enter into a license agreement to be reviewed and approved by the Planning Authority and Corporation Counsel.

PLANNING BOARD (REPORT ATTACHMENTS)

1. DPW- Bill Scott comments 05.10.2021

APPLICANT'S SUBMITTAL

- A. Cover Letter
- B. Cow Plaza Deed
- C. Fresnel Deed
- D. Party Wall and Reciprocal Easements Agreement
- E. Subdivision Checklist 178-188 Middle Street
- F. Zoning and Subdivision Assessment

PLANS

- Plan 1 Subdivision Plat



Shukria Wiar <shukriaw@portlandmaine.gov>

178 Middle Street Subdivision

William Scott <wgs@portlandmaine.gov>

Wed, May 19, 2021 at 1:33 PM

To: Jon Giles <jgiles@portlandmaine.gov>, Jen Thompson <jlt@portlandmaine.gov>

Cc: Shukria Wiar <shukriaw@portlandmaine.gov>

Jen and Jon,

I did not notice that any of the attached documents are related to any proposed easements with or from the City. Sounds like they aren't planning any changes to the exterior of the building per the cover letter.

Shukria,

Here are my plan review questions and comments:

1. Do they need to indicate the number of floors and number of units?
2. Should they label the sidewalk materials?
3. Do they use the sidewalk vault chambers? Do they intend to? Are they abandoned or active?
4. They need to label State Plane Coordinates on at least two of the lot corners.
5. They should show 6 more proposed rebars (or drill holes) to mark lot corners in and around the passageway area (see attachment).
6. They should label building corner offsets to the street lines of Middle St and Exchange St (at least two per street).

Please let me know if you have any questions. Feel free to share my comments with them if you want to.

Thank you.

[Quoted text hidden]

**Markup Plan_WGS 051921.pdf**

1223K



**Bernstein, Shur,
Sawyer & Nelson, P.A.**
100 Middle Street
PO Box 9729
Portland, ME 04104-5029

T (207) 774 - 1200
F (207) 774 - 1127

Mary E. Costigan
(207) 228-7147 direct
mcostigan@bernsteinshur.com

March 30, 2021

James Rather
Development Review Coordinator
City of Portland
389 Congress St.
Portland, ME 04101

RE: 178-188 Middle Street - Application for Subdivision Approval

Dear James:

Enclosed please find an application for Subdivision Approval proposed by my clients Cow Plaza 4 LLC and Fresnel LLC, the owners of property located at 178-182 Middle Street, 184-186 Middle Street, and 4 Canal Plaza/188 Middle Street. Enclosed with the application checklist is a copy of the property deeds; a zoning assessment; a subdivision standards assessment; a stamped subdivision plan; and a Party Wall and Reciprocal Easement Agreement. Because the proposed subdivision divides existing structures, we have not provided any information on financial or technical capability as they do not appear to be necessary or applicable under these circumstances.

Historically, 178-188 Middle Street was comprised of three tax parcels: 32-I-1 (178), 32-I-21(184-188) and 32-I-38 (rear parcel). The ownership of the property has taken many forms and was most recently owned by Middle Street Holdings LLC as one parcel. On January 13, 2021, Middle Street Holdings sold the property as two separate parcels. Fresnel purchased 178 Middle Street, including a small portion of the rear parcel. The remainder was purchased by 4 Canal Plaza, who plans to further divide that lot into two parcels. Because the division of the property into three lots will not follow historic parcel boundaries, we are seeking approval for the proposed division.

The proposed subdivision will retain the boundaries of #178 as created by the January 13th conveyance. The remainder will be divided as follows: 184 Middle Street, which contains a 4,910 square foot building, will be one parcel consisting of the building and a small portion of the rear lot to incorporate rear egress. The remainder of the rear lot and the 4 Canal Plaza building will make up the third lot. Reciprocal

March 30, 2021

Page 2

easements have been put in place between the three buildings to address the shared utilities, ingress and egress, and services.

Please let me know if you have any questions or need any more information.

Sincerely,

A handwritten signature in blue ink, appearing to read "Mary E. Costigan", with a stylized flourish at the end.

Mary E. Costigan

Cc: Tim Soley
Jacob Soley

CORRECTIVE DEED
QUITCLAIM DEED WITH COVENANT

THAT **MIDDLE STREET HOLDINGS LLC**, a Delaware limited liability company, with a principal place of business and mailing address of 475 Greenwich Street, Suite #7N, New York, NY 10013 (the "Grantor"),

For Consideration Paid, GRANTS with QUITCLAIM COVENANT to:

COW PLAZA 4 LLC, a Maine limited liability company, with a principal place of business in the City of Portland, County of Cumberland and State of Maine, with a mailing address of 100 Commercial Street, Portland, ME 04101 (the "Grantee"),

A certain lot or parcel of land with the buildings and improvements thereon, situated in the City of **Portland**, County of **Cumberland** and State of Maine, bounded and described in Exhibit A annexed hereto and made a part hereof.

Grantee by acceptance of this deed is hereby responsible to pay real estate taxes for the period of January 1, 2021, and thereafter.

IN WITNESS WHEREOF, the said **MIDDLE STREET HOLDINGS LLC** has caused this instrument to be signed and sealed by **Fabian Friedland**, its **Manager**, thereunto duly authorized, this 19th day of January, 2021, and effective as of

MIDDLE STREET HOLDINGS LLC

By: Fabian Friedland, its Manager

STATE OF NEW YORK

Kings (county) SS.

Date: January 19, 2021

Then personally appeared the above-named Fabian Friedland, Manager of MIDDLE STREET HOLDINGS LLC, 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 limited liability company. Before me,

Nicholas Prunty
 Notary Public

Printed Name: Nicholas Prunty

My Commission Expires: 11/03/22

NICHOLAS PRUNTY
 Notary Public, State of New York
 Reg. No. 01PR6314309
 Qualified in Kings County
 Commission Expires 11/03/2022

***The purpose of this corrective deed is to corrective and clarify the effective date of the Deed recorded in Book 37715, Page 76. The deed is deemed to be effective**

EXHIBIT A

A certain lot or parcel of land situated in the City of Portland, County of Cumberland and State of Maine more particularly bounded and described as follows:

Beginning at the intersection of the southerly sideline of Middle Street with the westerly sideline of Exchange Street; thence S 37° 45' 44" E along the westerly sideline of Exchange Street 49.85 feet to the centerline of the party wall and property now or formerly of Old Port Arms as described in Deed recorded in Book 4890, Page 343; thence on the following courses and distances along land of Old Port Arms:

S 52° 51' 33" W 42.35 feet;

N 39° 55' 22" W 0.67 feet;

S 50° 04' 38" W 11.68 feet;

S 29° 24' 59" E 12.52 feet;

S 23° 28' 47" E 55.92 feet;

N 59° 42' 19" E 17.86 feet;

N 51° 27' 19" E 4.00 feet to land now or formerly of Virginia S. Fitzgibbons and Lee F. Street Trustees as described in Deed recorded in Book 26232, Page 250;

Thence S 37° 49' 26" E along land of said Virginia S. Fitzgibbons and Lee F. Street Trustees 35.45 feet to land now or formerly of Cow Plaza 1, LLC as described in the deed recorded in Book 27480, Page 310;

Thence on the following courses and distances along land of Cow Plaza 1, LLC:

S 80° 16' 52" W 27.34 feet;

S 69° 54' 09" W 21.60 feet;

S 59° 38' 09" W 21.04 feet;

N 29° 45' 51" W 0.72 feet to the face of the brick building now or formerly of Buckstar LLC as described in the Deed recorded in Book 15885, Page 284;

Thence on the following courses and distances continuing along land of said Cow Plaza 1, LLC and the face of said brick building:

S 59° 34' 59" W 17.27 feet;

N 30° 16' 58" W 1.63 feet;

S 59° 34' 59" W 27.46 feet;

N 30° 16' 58" W 0.84 feet;

S 59° 34' 59" W 21.66 feet to the face of a concrete wall and land now or formerly of Cow Plaza 3, LLC as described in the Deed recorded in Book 27480, Page 335;

Thence on the following courses and distances along land of said Cow Plaza 3, LLC and the face of a concrete wall:

N 30° 31' 12" W 107.47 feet;

S 64° 35' 45" W 0.94 feet;

N 30° 15' 22" W 10.98 feet;
 S 65° 25' 44" W 0.64 feet;
 N 30° 04' 16" W 32.05 feet;
 S 59° 45' 07" W 0.14 feet;
 N 30° 14' 53" W 6.86 feet to the southerly sideline of Middle Street;

Thence northeasterly along the southerly sideline of Middle Street along a non-tangent curve to the right having a radius of 377.00 feet an arc length of 0.87 feet to a point, said point being .87 feet from, on a course of, N 59° 22' 04" E from the last-named point on the southerly sideline of Middle Street;

Thence N 65° 10' 04" E along the southerly sideline of Middle Street 163.77 feet to the westerly sideline of Exchange Street and the point of beginning.

The above-described parcel is shown on a plan made for prior Owner Buckstar LLC dated August 2, 2011 by Owen Haskell, Inc. and recorded in the Cumberland County Registry of Deeds in Plan Book 211, Page 226.

Together with easements benefitting the insured premises as set forth in a deed from Canal National Bank to Marsha L. Higgins dated March 14, 1974 and recorded in said Registry of Deeds in Book 3519, Page 165.

The above-described premises are shown on the ALTA/ACSM Survey entitled "Boyd Block" 176-188 Middle Street and 180-184 Middle Street, Portland, Maine, made for Fabian Friedland dated August 13, 2014, prepared by Livingston-Hughes Surveyors.

EXCEPTING from the above-described property, a certain lot, or parcel of land, located on the southeasterly side of Middle Street and the southwesterly side of Exchange Street, in the City of Portland, County of Cumberland, State of Maine, being conveyed to Fresnel LLC by deed of even or near date to be recorded herewith, said parcel being bound and described as follows:

Beginning at the intersection of the southeasterly side of Middle Street and the southwesterly side of Exchange Street;

THENCE: S 65°10'04" W, along said Middle Street, 75.43', to the northerly corner of "184 Middle Street", as shown on plan entitled "Legal Description Sketch, 178 Middle Street, Portland, Maine", by Northeast Civil Solutions, Inc., dated January 6, 2021, NCS Project No. 42346;

THENCE: S 30°14'53" E, through a party wall, 64.99', to a point;

THENCE: N 61°53'30" E, 23.93', to a point;

THENCE: N 28°06'30" W, 0.80', to a point;

THENCE: N 61°53'30" E, 3.91', to the southwesterly line of land now or formerly (N/F) Old Port Arms, as described in Book 4890, Page 343;

THENCE: N 29°24'59" W, along said Old Port Arms, 2.30', to a point;

THENCE: N 50°04'38" E, along said Old Port Arms, 11.68', to a point;

THENCE: S 39°55'22" E, along said Old Port Arms, 0.67', to a point;

THENCE: N 52°51'33" E, along said Old Port Arms, 42.41', to the southwesterly line of said Exchange Street;

THENCE: N 37°45'44" W, along said Exchange Street, 49.85', to the POINT of BEGINNING.

The above-described parcel contains 4,556 square feet, more or less.

The bearings for the above-described parcel are based on Magnetic North, 1967.

For grantor's source of title, reference is made to deeds to Middle Street Holdings LLC from Buckstar LLC, dated August 13, 2014, recorded in the Cumberland County Registry of Deeds in Book 31707, Page 84, and as further set forth in Confirmatory Deed recorded in Book 31724, Page 277.

The premises herein are subject to a Party Wall and Reciprocal Easements Agreement of even or near date to be recorded herewith.

CORRECTIVE DEED
QUITCLAIM DEED WITH COVENANT

THAT **MIDDLE STREET HOLDINGS LLC**, a Delaware limited liability company, with a principal place of business and mailing address of 475 Greenwich Street, Suite #7N, New York, NY 10013 (the "Grantor"),

For Consideration Paid, GRANTS with QUITCLAIM COVENANT to:

FRESNEL LLC, a Maine limited liability company, with a principal place of business in the City of Portland, County of Cumberland and State of Maine, with a mailing address of 100 Commercial Street, Portland, ME 04101 (the "Grantee"),

A certain lot or parcel of land with the buildings and improvements thereon, situated in the City of **Portland**, County of **Cumberland** and State of Maine, bounded and described in Exhibit A annexed hereto and made a part hereof.

Grantee by acceptance of this deed is hereby responsible to pay real estate taxes for the period of January 1, 2021, and thereafter.

IN WITNESS WHEREOF, the said **MIDDLE STREET HOLDINGS LLC** has caused this instrument to be signed and sealed by **Fabian Friedland**, its Manager, thereunto duly authorized, this 19th day of January, 2021.

↑ and effective as of

MIDDLE STREET HOLDINGS LLC

By: Fabian Friedland, its Manager

STATE OF NEW YORK

Kings (county) SS.

Date: January 13, 2021

Then personally appeared the above-named Fabian Friedland, Manager of MIDDLE STREET HOLDINGS LLC, 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 limited liability company. Before me,

Nicholas Prunty
Notary Public

Printed Name: Nicholas Prunty

My Commission Expires: 11/3/22

NICHOLAS PRUNTY
Notary Public, State of New York
Reg. No. 01PR6314309
Qualified In Kings County
Commission Expires 11/03/2022

***The purpose of this corrective deed is to corrective and clarify the effective date of the Deed recorded in Book 37715, Page 74. The deed is deemed to be effective as of January 19, 2021.**

EXHIBIT A

A certain lot, or parcel of land, located on the southeasterly side of Middle Street and the southwesterly side of Exchange Street, in the City of Portland, County of Cumberland, State of Maine, being bound and described as follows:

Beginning at the intersection of the southeasterly side of Middle Street and the southwesterly side of Exchange Street;

THENCE: S 65°10'04" W, along said Middle Street, 75.43', to the northerly corner of "184 Middle Street", as shown on plan entitled "Legal Description Sketch, 178 Middle Street, Portland, Maine", by Northeast Civil Solutions, Inc., dated January 6, 2021, NCS Project No. 42346;

THENCE: S 30°14'53" E, through a party wall, 64.99', to a point;

THENCE: N 61°53'30" E, 23.93', to a point;

THENCE: N 28°06'30" W, 0.80', to a point;

THENCE: N 61°53'30" E, 3.91', to the southwesterly line of land now or formerly (N/F) Old Port Arms, as described in Book 4890, Page 343;

THENCE: N 29°24'59" W, along said Old Port Arms, 2.30', to a point;

THENCE: N 50°04'38" E, along said Old Port Arms, 11.68', to a point;

THENCE: S 39°55'22" E, along said Old Port Arms, 0.67', to a point;

THENCE: N 52°51'33" E, along said Old Port Arms, 42.41', to the southwesterly line of said Exchange Street;

THENCE: N 37°45'44" W, along said Exchange Street, 49.85', to the POINT of BEGINNING.

The above-described parcel contains 4,556 square feet, more or less.

The bearings for the above-described parcel are based on Magnetic North, 1967.

Together with easements benefitting the insured premises as set forth in a deed from Canal National Bank to Marsha L. Higgins dated March 14, 1974 and recorded in said Registry of Deeds in Book 3519, Page 165.

Being a portion of the property conveyed in a deed to Middle Street Holdings LLC from Buckstar LLC, dated August 13, 2014, recorded in the Cumberland County Registry of Deeds in Book 31707, Page 84, and as further set forth in Confirmatory Deed recorded in Book 31724, Page 277.

The premises herein are subject to a Party Wall and Reciprocal Easements Agreement of even or near date to be recorded herewith.

**PARTY WALL
AND
RECIPROCAL EASEMENTS AGREEMENT**

THIS PARTY WALL AND RECIPROCAL EASEMENTS AGREEMENT (this “Agreement”) dated as of January 19, 2021, is made by and between **FRESNEL LLC**, a Maine limited company (“Fresnel”), and **COW PLAZA 4 LLC**, a Maine limited liability company (“CP4”). Fresnel and CP4 are each also referred to herein as an “Owner” and jointly as the “Owners.”

R E C I T A L S:

WHEREAS, on or about the date hereof, Middle Street Holdings LLC, a Delaware limited liability company has conveyed to Fresnel certain real property together with the building situated thereon located at 178 Middle Street, Portland, Maine, as more fully described in that certain deed dated January 19, 2021 to be recorded at the Cumberland County Registry of Deeds herewith (“Parcel 1”); and

WHEREAS, the building located on Parcel 1 is hereinafter referred to as the “Parcel 1 Building”; and

WHEREAS, on or about the date hereof, Middle Street Holdings LLC, a Delaware limited liability company has conveyed to CP4 certain real property together with the buildings situated thereon located at 184-188 Middle Street/4 Canal Plaza, Portland, Maine, as more fully described in that certain deed dated January 19, 2021 to be recorded at said Registry of Deeds herewith (“Parcel 2”); and

WHEREAS, the buildings located on Parcel 2 are hereinafter referred to as the “Parcel 2 Buildings”; and

WHEREAS, the Parcel 1 Building and the Parcel 2 Buildings are adjoining and share a common wall, and for the purposes of protecting the value and desirability of both Parcels, the Owners wish to establish a party wall agreement; and

WHEREAS, the Parcel 1 Building utilizes certain areas within the Parcel 2 Buildings for ingress and egress, utilities, life safety systems, and other building systems, and the Parcel 2 Buildings utilize certain areas within the Parcel 1 Building for ingress and egress, utilities, life safety systems, and other building systems, and for the purposes of protecting the value and

desirability of both Parcels, the Owners wish to establish certain reciprocal easement rights within Parcel 1 and Parcel 2 to accommodate the aforesaid uses of such areas.

NOW THEREFORE, in consideration of the mutual promises and agreements set forth herein, and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Fresnel with respect to Parcel 1, and CP4, with respect to Parcel 2, each hereby declares that its respective Parcel shall be held and conveyed subject to, and with the benefit of, the following easements, covenants and conditions, and the same shall run with the land in perpetuity and be binding on all parties having any right, title or interest in each such Parcel or any part thereof, and shall inure to the benefit of each Owner thereof and its respective successors and assigns.

ARTICLE I

PARTY WALL AGREEMENT

The Owners hereby acknowledge the Parcel 1 Building and the Parcel 2 Buildings have a common wall approximately sixty-one (61) feet in length (the "Party Wall"). The parties wish to acknowledge the status of the Party Wall, to set forth their respective responsibilities for upkeep and care of the Party Wall, and to provide that the agreements and easements herein regarding the Party Wall shall run with the land of each Owner. The Owners agree that each shall have a perpetual right and easement and each Owner hereby grants to the other Owner, and to its respective successors and assigns forever, the perpetual right and easement to use the Party Wall between the Parcels for the support of the existing structures, including the right to repair or replace the Party Wall. The Owners further agree, and each Owner hereby grants to the other Owner an easement on and over the Parcel of the other party for all purposes relating to the repair, maintenance and rebuilding of the Party Wall and other rights described above. Each Owner agrees to maintain the portion of the Party Wall on its respective Parcel in good condition and repair, and to replace the Party Wall if necessary, unless damaged or destroyed by an uninsurable risk or cause beyond their control (or that of their agents, employees, or tenants) that is uninsured, so that the Party Wall will remain available for as long as the buildings benefited thereby (as repaired or replaced) exist. The Owners further covenant and agree that if it is necessary to repair or rebuild the Party Wall or any portion thereof, the expense of such repair or rebuilding shall be borne equally by the parties. Such repair or rebuilding shall be in substantially the same vicinity as it now exists and will be built, rebuilt or repaired of the same size and of similar or superior quality of materials and construction. The Owners agree that this agreement shall at all times be construed as a covenant running with the land and that no part of the fee in the land upon which the Party Wall stands as repaired or rebuilt shall pass to the other Owner by virtue of the occupation of the land by the Party Wall.

ARTICLE II

EASEMENTS

Section 2.1 Parcel 1 Access Easement.

Fresnel hereby grants to CP4 a perpetual, non-exclusive access easement over those portions of Parcel 1 that are currently used for ingress and egress to/from the Parcel 2 Buildings, including all applicable doorways, hallways, stairwells, fire escapes and such other areas, for purposes of pedestrian ingress and egress to/from the Parcel 2 Buildings (the "Parcel 1 Access Easement"). Fresnel shall repair as necessary and maintain all Parcel 1 Access Easement areas in good condition and repair at its sole cost and expense. Notwithstanding the forgoing, any repairs or replacements to any portions of the Parcel 1 Access Easement areas necessitated by the action or inaction of CP4 or its employees, agents, tenants or invitees, or anyone acting by, through or under CP4 shall be paid for by CP4.

Section 2.2 Parcel 2 Access Easement.

CP4 hereby grants to Fresnel a perpetual, non-exclusive access easement over those portions of Parcel 2 that are currently used for ingress and egress to/from the Parcel 1 Building, including all applicable doorways, hallways, stairwells, fire escapes and such other areas, for purposes of pedestrian ingress and egress to/from the Parcel 1 Building (the "Parcel 2 Access Easement"). CP4 shall repair as necessary and maintain all Parcel 2 Access Easement areas in good condition and repair at its sole cost and expense. Notwithstanding the forgoing, any repairs or replacements to any portions of the Parcel 2 Access Easement areas necessitated by the action or inaction of Fresnel or its employees, agents, tenants or invitees, or anyone acting by, through or under Fresnel shall be paid for by Fresnel.

Section 2.3 Parcel 1 Utilities and Building Systems Easement.

Fresnel hereby grants to CP4 a perpetual, non-exclusive easement over those portions of Parcel 1 in which any utility and/or building system lines, pipes, conduits, cables, wires, ducts, public utility lines, or other equipment or infrastructure serving the Parcel 2 Buildings are currently located, for purposes of using, accessing, maintaining, repairing and replacing the same (the "Parcel 1 Utilities and Building Systems Easement"). Fresnel shall repair as necessary and maintain all Parcel 1 Utilities and Building Systems Easement areas (but not the actual lines and infrastructure located therein) in good condition and repair at its sole cost and expense. Notwithstanding the forgoing, any repairs or replacements to any portion of the Parcel 1 Utilities and Building Systems Easement areas necessitated by the action or inaction of CP4 or its employees, agents, tenants or invitees, or anyone acting by, through or under CP4 shall be paid for by CP4.

Section 2.4 Parcel 2 Utilities and Building Systems Easement.

CP4 hereby grants to Fresnel a perpetual, non-exclusive easement over those portions of Parcel 2 in which any utility and/or building system lines, pipes, conduits, cables, wires, ducts, public utility lines, or other equipment or infrastructure serving the Parcel 1 Building are currently located, for purposes of using, accessing, maintaining, repairing and replacing the same (the "Parcel 2 Utilities and Building Systems Easement"). CP4 shall repair as necessary and maintain all Parcel 2 Utilities and Building Systems Easement areas (but not the actual lines and infrastructure located therein) in good condition and repair at its sole cost and expense.

Notwithstanding the forgoing, any repairs or replacements to any portions of the Parcel 2 Utilities and Building Systems Easement areas necessitated by the action or inaction of Fresnel or its employees, agents, tenants or invitees, or anyone acting by, through or under Fresnel shall be paid for by Fresnel.

Section 2.5 Fire Suppression System Easement.

(a) The Parcel 1 Building and the Parcel 2 Buildings share a single fire suppression system (the "Shared Sprinkler System"). Fresnel hereby grants to CP4 a perpetual, non-exclusive easement over Parcel 1 as may be reasonably necessary to use, maintain, repair and replace that portion of the Shared Sprinkler System located on Parcel 1. CP4 hereby grants to Fresnel a perpetual, non-exclusive easement over Parcel 2 as may be reasonably necessary to use, maintain, repair and replace that portion of the Shared Sprinkler System located on Parcel 2.

(b) The cost to monitor, maintain, repair and replace the Shared Sprinkler System shall be shared equally between the Owners. Fresnel shall be responsible to arrange for the monitoring, maintenance, repair or replacement of the Shared Sprinkler System, and CP4 shall promptly reimburse Fresnel for one-half of the actual cost of such monitoring, maintenance, repair or replacement without additional management fees. Any repairs or replacements to the Shared Sprinkler System necessitated by the action or inaction of either Owner or anyone acting by, through or under said Owner, shall be paid for by said Owner. If either Owner desires, or is required, to expand the Shared Sprinkler System to serve their building the entire cost of such expansion shall be paid by the Owner of the building served by the expansion.

ARTICLE III

INSURANCE AND RISK ALLOCATION

Section 3.1. Insurance.

(a) At all times each Owner, at its sole cost, shall maintain (i) commercial general liability insurance (including, without limitation, premises, independent contractors, contractual liability, and a broad form of comprehensive general liability endorsement) with limits of not less than One Million Dollars (\$1,000,000) combined for bodily injury, death and property damage (such amount of insurance to be increased from time to time as is customary for insurance of such type to reasonably reflect inflation and other matters). All commercial general liability insurance required by this Agreement to be maintained by the Owners under this Section shall name the other Owner as an additional insured. Each Owner shall, upon request, provide current certificates of such insurance to the Owner requesting the same. Such certificates shall provide that any change restricting or reducing any such coverage or the cancellation of any policy under which any such certificate is issued shall not be valid except upon at least ten (10) days' notice in writing to the other Owner of such change or cancellation. All such policies shall be obtained from responsible insurance companies qualified to do business in the State of Maine and in good standing therein.

(b) Insofar as and to the extent that the following provisions may be effective without invalidating or making it impossible to secure insurance coverage obtainable from responsible insurance companies doing business in the State of Maine (even though extra premium may result therefrom), each Owner mutually agrees, and their insurance policies shall provide, that with respect to any loss that is covered by insurance then being carried by them, or required by be carried by them by this Agreement, or which would be covered by insurance policies required by this Agreement if such policies had no deductible amount, the Owner carrying or required to carry such insurance and suffering said loss hereby releases the other Owner, and its employees, agents, tenants, guests and invitees of and from any and all claims with respect such loss; and they further mutually agree that their respective insurance companies shall have no right of subrogation against the other Owner or its employees, agents, tenants, guests and invitees on account thereof, nor shall the Owner suffering the loss have any claim against the other Owner and its employees, agents, tenants, guests and invitees with respect to any such loss not covered by its insurance that would have been covered had insurance policies maintained by the injured Owner had no deductible amount. This provision is intended to limit (to the extent permitted by law) each Owner's right to recover to its respective insurance carrier to the extent of such coverage, and waive fully, and for the benefit of each Owner, any rights and/or claims that might give rise to a right of subrogation in any insurance carrier. The foregoing notwithstanding, no Owner shall be released from any claims to the extent that such claim arises as a result of the willful acts of such Owner.

Section 3.2. Indemnity.

(a) Subject to the limitation set forth in subsection (b) below, each Owner covenants and agrees, at its sole cost and expense and in addition to any other right or remedy hereunder, to indemnify and save harmless the other Owner from and against all loss, cost, expense, liability and claims (but excluding any liability arising out of the negligence or willful misconduct of the indemnified Owner, or its agents, employees or contractors), including, without limitation, reasonable attorneys' fees and court costs, arising from or in connection with (i) the exercise by the indemnifying Owner, or its employees, agents, tenants, contractors or invitees, of the rights and easements herein; (ii) any breach or default on the part of the indemnifying Owner, or its employees, agents, tenants, contractors or invitees, in the performance of any covenant or agreement on the part of such Owner to be performed pursuant to the terms of this Agreement, or (iii) any act or negligence or willful misconduct of the indemnifying Owner or its employees, agents, tenants, contractors or invitees.

(b) Notwithstanding anything to the contrary in Section 3.2(a), no indemnification claim shall lie with respect to any loss that (i) is caused or based upon the willful act of the Owner seeking indemnification, or its employees, agents, tenants, guests and invitees; or (ii) is covered by insurance then being carried, or required by this Agreement to be carried, by the Owner seeking indemnification, or which would be covered by insurance policies required by this Agreement if such policies had no deductible amount or that would otherwise be covered by the release provision of Section 3.1(b).

(c) In the event that any action or proceeding is brought against an Owner by reason of any claims covered by the foregoing indemnity, the indemnifying Owner will, upon notice

from the Owner seeking indemnification, resist or defend such action or proceeding by counsel reasonably satisfactory to the indemnified Owner. The indemnifying Owner shall not enter into any settlement that obligates indemnified Owner to take any action or incur any expense or which otherwise prejudices the indemnified Owner without the prior written consent of the indemnified Owner.

ARTICLE IV

GENERAL PROVISIONS

Section 4.1. Applicability of Covenants and Restrictions. Each present and future Owner, tenant, occupant and mortgagee, and their respective successors and assigns, and their employees, agents, contractors and invitees, shall be subject to and shall comply with the easements, covenants, conditions and restrictions set forth in this Agreement. The acceptance of a deed or mortgage to a Parcel, or any portion thereof, or the entering into of a lease or the entering into occupancy of a Parcel or any portion thereof, shall constitute an agreement that the easements, restrictions, covenants and conditions set forth in this Agreement and any deed are accepted and ratified by such grantee, mortgagee, tenant or occupant. All of such provisions shall be covenants running with the land and shall bind any person having at any time any interest or estate in any of the Parcels, as though such provisions were recited and stipulated at length in each and every deed, conveyance, mortgage or lease thereof. Each Owner shall have a right of action against the other Owner who fails to comply with the provisions of this Agreement.

Section 4.2 No Third Party Benefit. Nothing herein contained shall be deemed to be a gift or dedication of any portion of either Parcel or portion thereof to the general public, or for any public use or purpose whatsoever. Except as herein specifically provided, no right, privileges or immunities of any party hereto shall inure to the benefit of any third-party, nor shall any third-party be deemed to be a beneficiary of any of the provisions contained herein, except for employees, agents, tenants and invitees of an Owner.

Section 4.3 Notices. All notices, demands, requests and other communications required or permitted under this Agreement shall be in writing and shall be: (a) personally hand delivered; (b) sent by certified mail, return receipt requested, postage prepaid; or (c) sent by a national overnight delivery service which maintains delivery records. Notices shall be delivered or mailed (as applicable) to the addresses indicated below. All notices shall be effective and deemed received upon delivery (or refusal to accept delivery).

If intended for Fresnel LLC:

100 Commercial Street
Portland, Maine 04101

If intended for Cow Plaza 4 LLC:

100 Commercial Street
Portland, Maine 04101

Upon at least ten (10) days prior written notice to each other Owner, an Owner shall have the right to change its address to any other address within the United States of America.

Section 4.4 Counterpart Signatures. This Agreement may be executed in one or more counterpart signature pages, which when compiled together shall constitute one complete original document.

Section 4.5 Severability. Invalidation of any one of these covenants or restrictions by a court shall in no way affect any other provision hereof, and all such other provisions shall remain in full force and effect.

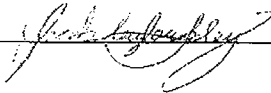
Section 4.6 Applicable Law; Binding Effect. This Agreement shall be covered by and interpreted in accordance with the laws of the State of Maine and shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns.

*[Balance of page is intentionally blank
Signature page follows]*

IN WITNESS WHEREOF, the undersigned have caused this instrument to be executed under seal by their respective duly authorized representatives as of the date set forth above.

WITNESS:

FRESNEL LLC



By:

J. Tim Soley
Its Manager

WITNESS:

COW PLAZA 4 LLC

By: East Brown Cow Holdings II LLC

Its: Sole Member



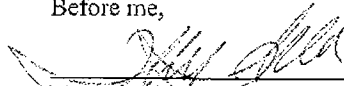
By:

J. Tim Soley
Its Manager

STATE OF MAINE
COUNTY OF CUMBERLAND, ss.

On January 12, 2021, personally appeared before me the above named J. Tim Soley, as Manager of Fresnel LLC, 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 limited liability company.

Before me,

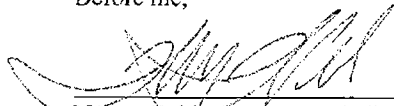

Notary Public / Attorney-At-Law

Printed Name: William M. Welch

STATE OF MAINE
COUNTY OF CUMBERLAND, ss.

On January 12, 2021, personally appeared before me the above named J. Tim Solely, as Manager of East Brown Cow Holdings II LLC, the Sole Member of Cow Plaza 4 LLC, 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 limited liability companies.

Before me,


Notary Public / Attorney-At-Law

Printed Name: William M. Welch

CITY OF PORTLAND
Planning & Urban Development Department

SUBDIVISION GENERAL DOCUMENT AND DRAWINGS CHECKLIST Please submit each document as a separate PDF file. Please confirm by electronically checking the boxes in the left-hand column. ** PLEASE FILL OUT AND UPLOAD THE ZONING ASSESSMENT TABLE AND WAIVER TABLE SEPARATELY AS NOTED BELOW ** At the time of application submission, please contact the Department of Public Works regarding E-911 addressing of your project.	
GENERAL APPLICATION DOCUMENTS	
Yes ☒ NA	Project Description Cover letter with detailed project description
Yes ☒ NA	Completed Checklist (this document)
Yes ☒ NA	Evidence of Right, Title, and Interest Deeds, leases, or purchase and sales agreements
Yes NA ☒	Evidence of State or Federal Approvals Permits or letters of non-jurisdiction, if applicable
Yes ☒ NA	Zoning Assessment (see Zoning Assessment Table) Summary of compliance with use and dimensional standards of the land use code
Yes ☒ NA	Subdivision Standards Assessment (see Article 15.4 of the land use code) Summary of compliance with subdivision review standards of the land use code
Yes ☒ NA	Existing and/or Proposed Easements or Covenants, applicable. Evidence of existing easements and any proposed easements
Yes NA ☒	Waiver Requests (see Waiver Table) Written request for waiver describing request and compliance with applicable waiver standards
Yes NA ☒	Financial Capability Letter or evidence from a financial institution or third party verifying financial capacity to undertake project
Yes NA ☒	Technical Capability Evidence of technical capability of applicant and consultants – resumes and/or examples of past projects

Zoning and Subdivision Assessment for 174-188 Middle Street Subdivision

Zoning Assessment

Because the proposed subdivision divides developed parcels and the property is located in the B-3 Business Zone, there are few zoning issues presented by the proposal. There are no changes to the buildings or uses presented as part of this subdivision application. Any changes will be brought forward under separate application, as required, in the future. As you can see in the attached table, the only requirement relevant to this division is street frontage. The minimum street frontage required in the B-3 zone is 15 feet. The three parcels will have the following street frontages: 75.43' (#178), 19.68' (#184), 68.66' (4 Canal).

Subdivision Standards Assessment

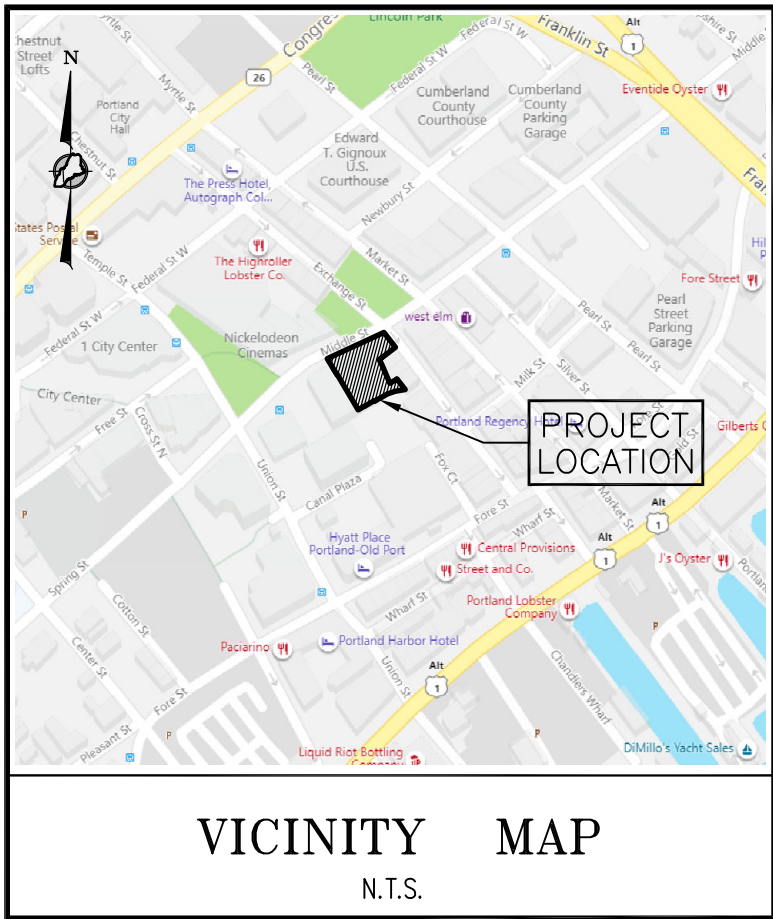
The proposed subdivision divides developed property and does not contemplate changes to the building or the uses therein. We have reviewed Section 15.4 of the Land Use Code and confirmed that the proposed subdivision does not trigger any of the standards and therefore meets the standards.



ZONING ANALYSIS Relevant Zone(s) B-3 & DEOZ

All Projects:

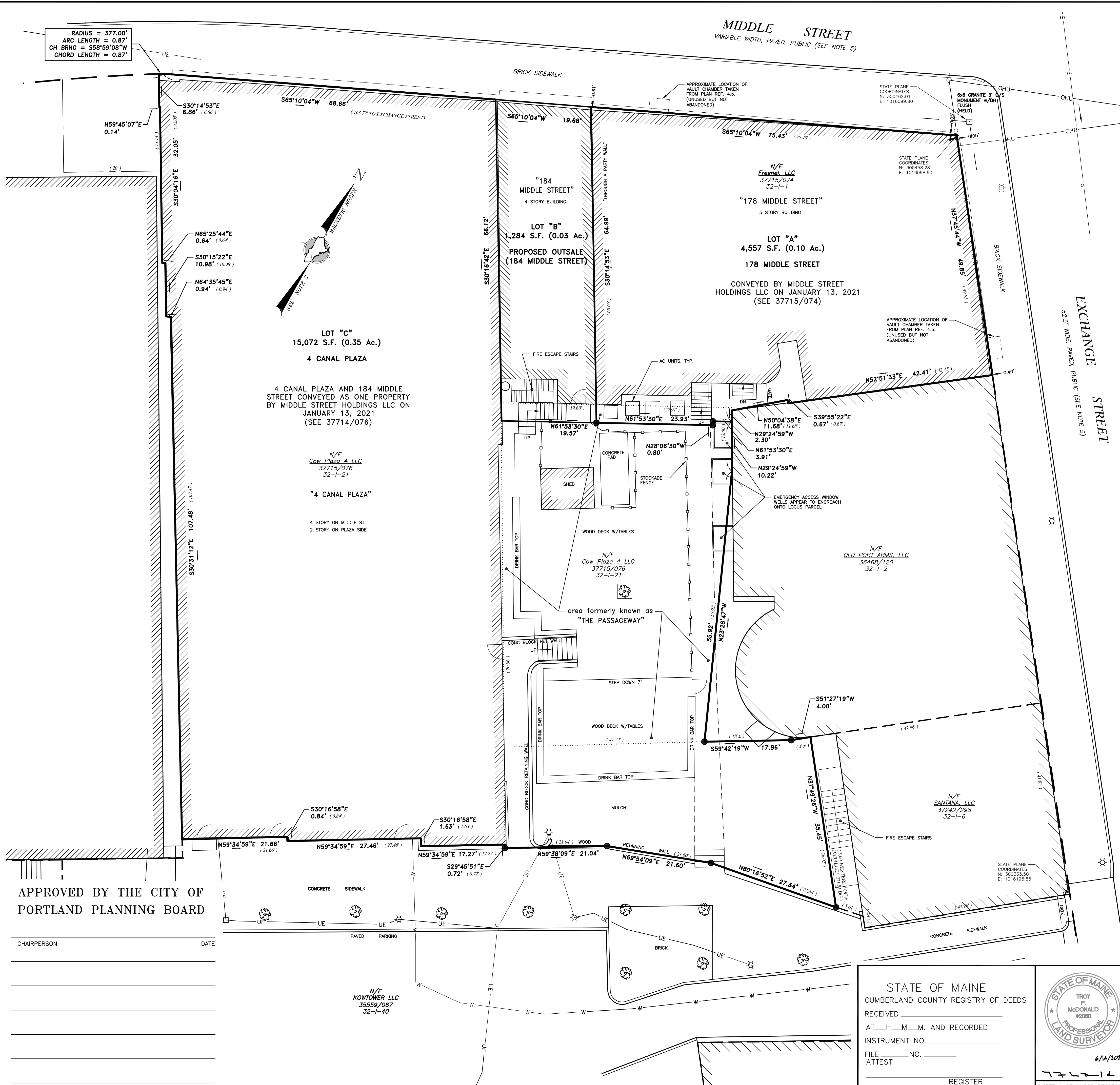
	Required	Proposed
Lot Size	None	
Area Per Dwelling Unit	None	
Minimum Street Frontage	15 feet	75.43', 19.68', 68'
Front Yard Minimum	none	
Front Yard Maximum	5'	Less than 1'
Rear Yard	None	
Yard Right	None	
Yard Left	None	
Side Street Setback	None	
Step Back	None	
Maximum Lot Coverage	None	
Minimum Lot Coverage	None	
Maximum Height	65'	Existing Building
Open Space	None	
Maximum Impervious Area	None	
Pavement Setback	None	
Floor Area Ratio	None	
Off Street Parking Spaces	N/A	
Loading Bays	N/A	
Other 1		
Other 2		
Other 3		



VICINITY MAP
N.T.S.

SUBDIVISION NOTES

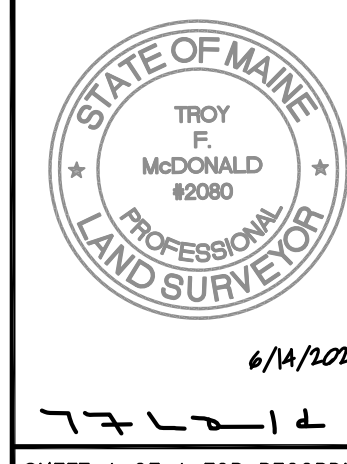
- S-1. DEVELOPER: EAST BROWN COW DEVELOPMENT
- S-2. SURVEYING / ENGINEERING: NORTHEAST CIVIL SOLUTIONS, INC. 381 PAYNE ROAD SCARBOROUGH, MAINE 04074
- S-3. WETLAND DELINEATION: NONE
- S-4. THE SUBJECT PARCEL IS LOCATED IN B3 ZONE. PORTIONS OF BULK & SPACE REQUIREMENTS ARE AS FOLLOWS:
FRONT SETBACK = 5' MAX
REAR SETBACK = NONE
SIDE SETBACK = NONE
MIN. LOT FRONTAGE = 15'



APPROVED BY THE CITY OF
PORTLAND PLANNING BOARD

CHAIRPERSON	DATE

STATE OF MAINE
CUMBERLAND COUNTY REGISTRY OF DEEDS
RECEIVED _____
AT _____ M. AND RECORDED
INSTRUMENT NO. _____
FILE _____ NO. _____
ATTEST _____
REGISTER



SHEET 1 OF 1 FOR RECORDING

LEGEND

- #5 REBAR WITH CAP (PROPOSED)
□ FOUND MONUMENT (SIZE & TYPE AS NOTED)
○ UTILITY POLE (NUMBER AS NOTED)
○ FOUND DECIDUOUS TREE (SIZE & TYPE AS NOTED)
- BOUNDARY LINE
--- EASEMENT LINE
--- EDGE OF PAVEMENT
--- RIGHT-OF-WAY LINE
--- ABUTTER LINE
--- OVERHEAD UTILITY
--- FORMER DEED LINES
--- NOW OR FORMERLY OWNED BY
--- DEED BOOK AND PAGE
--- TAX MAP--LOT
--- PARENTHESIS DENOTE RECORD DATA
- N/F
1234/567
12-34
(123.45)

BOUNDARY NOTES

1. RECORD OWNER OF THE PARCELS SURVEYED ARE AS FOLLOWS:
178 MIDDLE STREET - FRESNEL LLC AS DESCRIBED IN A DEED FROM MIDDLE STREET HOLDINGS LLC, DATED JANUARY 13, 2021 AND RECORDED IN BOOK 37715, PAGE 074 IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS.
4 CANAL PLAZA & 184 MIDDLE STREET - COW PLAZA 4 LLC AS DESCRIBED IN A DEED FROM MIDDLE STREET HOLDINGS LLC, DATED JANUARY 13, 2021 AND RECORDED IN BOOK 37715, PAGE 076 IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS.
TOTAL LOT AREA IS: 20,913 S.F. OR 0.48 Ac.
2. THE PARCELS SURVEYED ARE IDENTIFIED ON THE CITY OF PORTLAND TAX ASSESSOR'S MAP 32, BLOCK 1, PARCELS 1, 21 & 38.
3. THE BEARINGS SHOWN ON THIS PLAN ARE BASED ON MAGNETIC NORTH, 1967.
4. PLAN REFERENCES:
a. "ALTA/ACSM SURVEY "BOYD BLOCK" 176-188 MIDDLE STREET, PORTLAND, MAINE" BY LIVINGSTON - HUGHES, DATED AUGUST 13, 2014, NOT RECORDED.
b. "CONDOMINIUM PLAT, BOYD BLOCK CONDOMINIUM, 176-188 MIDDLE STREET & 4 CANAL PLAZA, PORTLAND, MAINE" BY OWEN HASKELL, INC., DATED AUGUST 2, 2011, RECORDED IN PLAN BOOK 211, PAGE 226.
5. THE WIDTH OF MIDDLE STREET IS VARIABLE AND THE WIDTH OF EXCHANGE STREET IS 52.5' BASED ON CITY OF PORTLAND RECORDS. THE LAYOUT OF THE RIGHT-OF-WAY LIMITS IS BASED ON CITY STREET LINE SHEETS AND MONUMENTS FOUND.
6. REFERENCE IS MADE TO THE FOLLOWING EASEMENTS OF RECORD:
a. RIGHTS FOR A SEWER LINE, GENERAL ACCESS (EXCLUDING PARKING), STEPS ON SOUTHEAST SIDE OF BUILDING AND AN ACCESS FROM MIDDLE STREET AS DESCRIBED IN A DEED DATED MARCH 14, 1974 AND RECORDED IN BOOK 3519, PAGE 165.
b. RIGHT TO MAINTAIN 2 EXISTING CHIMNEYS, RIGHTS OF PEDESTRIAN AND VEHICULAR PASSAGE FOR GAINING ACCESS TO REAR OF ABUTTING PROPERTY AND MAINTAINING BUILDINGS. ALSO RIGHT OF GRANTOR FOR LOCKED GATE AT EXCHANGE STREET ENTRANCE AS DESCRIBED IN A DEED DATED DECEMBER 21, 1973 AND RECORDED IN BOOK 3495, PAGE 183.
c. PARTY WALL AND RECIPROCAL EASEMENTS AGREEMENT BY AND BETWEEN FRESNEL LLC AND COW PLAZA 4 LLC, DATED JANUARY 19, 2021 AND RECORDED IN BOOK 37715, PAGE 080.
7. AS OF THE ORIGINAL DATE OF THIS PLAN, THE PARCELS SURVEYED ARE LOCATED IN THE B3 ZONE. PORTIONS OF BULK & SPACE REQUIREMENTS ARE AS FOLLOWS:
MINIMUM LOT AREA = NONE
MINIMUM FRONTAGE = 15'
SETBACKS:
FRONT = 5' MAX.
SIDE = NONE
REAR = NONE
OTHER MUNICIPAL AND STATE OVERLAY ZONES MAY EXIST AND APPLY. BEFORE PROCEEDING ON ANY PROJECT WE RECOMMEND VERIFYING CURRENT ZONE AND ALL APPLICABLE SETBACKS AND RESTRICTIONS WITH THE APPROPRIATE AGENCIES.
8. THE UTILITIES SHOWN ON THIS PLAN WERE FROM FIELD OBSERVATION ONLY. THERE MAY BE OTHER UTILITIES EXISTING THAT ARE NOT SHOWN. CONTACT DIG-SAFE (888)DIG-SAFE PRIOR TO ANY EXCAVATION WORK.

Revision:	By:	Date:	Change:
1	JAP	6/14/2021	REVISED PER TOWN COMMENTS

PROJECT: 42346	DRAWING NAME: 42346 SUBDIVISION.dwg
DATE: FEBRUARY 3, 2021	SCALE: 1"=10' FB # 471 DRAWN BY: JAP
FIELD BY: JAP / CJB	FIELD DATE: 1/21/2021 CHECKED BY: DMM / TFM

Drawing Name and Location:
PROPOSED SUBDIVISION
178-188 MIDDLE STREET, PORTLAND, MAINE
Owner:
FRESNEL LLC AND COW PLAZA 4 LLC
100 COMMERCIAL STREET, PORTLAND, MAINE 04101

Prepared For:
EAST BROWN COW DEVELOPMENT

Northeast Civil Solutions
INCORPORATED
381 PAYNE ROAD, SCARBOROUGH, MAINE 04074
tel 207.883.1000 fax 207.883.1001 e-mail / website info@northeastcivilsolutions.com www.northeastcivilsolutions.com