

CITY OF PORTLAND, MAINE

PLANNING BOARD



Maggie Stanley, Chair
Brandon Mazer, 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, February 22, 2022, 4:30 p.m.** This meeting will take place remotely using Zoom pursuant to the Remote Meeting Policy adopted by the Planning Board and as authorized under 1 M.R.S. 403-B because of the existence of an emergency or urgent issue that requires the committee to meet by remote methods. Allow your computer to install the free Zoom app to get the best meeting experience.

If you are not able to attend live, a recording will be available following the meeting. 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 unmuted by the host when it is time for public comment.

For more information on how to access the meeting remotely and how to give public comment, please go to <http://www.portlandmaine.gov/remotepud>. Public comments will be taken for each item on the agenda during the estimated allotted time and written comments should be submitted to planningboard@portlandmaine.gov or hp@portlandmaine.gov.

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

ZOOM MEETING INSTRUCTIONS

You are invited to a Zoom webinar.

When: Feb 22, 2022 04:30 PM Eastern Time (US and Canada)

Topic: Planning Board Workshop and Public Hearing 2/22/2022

Please click the link below to join the webinar:

<https://portlandmaine-gov.zoom.us/j/85137364502>

Or One tap mobile :

US: +13126266799,,85137364502# or +19292056099,,85137364502#

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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: 851 3736 4502

International numbers available: <https://portlandmaine-gov.zoom.us/j/kdwTsdOzIQ>

WORKSHOP - 4:30 PM

- i. Zoning Map and Text Amendment; 2 Riverton Drive; Portland Housing Development Corporation, Applicant. (estimated time 4:30 – 5:30 p.m.) The Planning Board will hold a remote workshop to consider rezoning Riverton Park (2 Riverton Drive) from R-5 Residential to B-2 Community Business and R-5a Residential, along with text amendments to allow Place of Assembly uses greater than

10,000 square feet in size within the R-5a Residential zone. These actions are sought to facilitate improvements to the 141-unit Riverton Park campus under a future site plan application.

PUBLIC HEARING - 5:30 PM

1. ROLL CALL AND DECLARATION OF QUORUM

2. COMMUNICATION AND REPORTS

3. REPORT OF ATTENDANCE AT THE MEETING HELD ON FEBRUARY 8, 2022

Afternoon Workshop

One Climate Future Plan: Dundon, Dunfey, Silk, Smith, and Stanley present; Chann and Mazer absent.

392 St. John Street: Dundon, Dunfey, Silk, Smith, and Stanley present; Chann and Mazer absent.

102 State Street: All Present.

Evening Hearing

29 Marginal Way: All Present.

4. REPORTS OF DECISIONS AT THE MEETING HELD ON FEBRUARY 8, 2022

- i. Traffic Movement Permit; 29 Marginal Way; Northland Enterprises & Management Corp., Applicant. Mazer moved and Dunfey seconded a motion to approve the Traffic Movement Permit. Vote 7-0.

5. NEW BUSINESS

- i. 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 public hearing 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.
- ii. Munjoy Hill Neighborhood Conservation Overlay District (estimated time 6:30 p.m.) The Planning Board will hold a public hearing on a map and text amendment which would repeal the Munjoy Hill Neighborhood Conservation Overlay District, striking the applicable text from Table 5-A, Table 7-A, and Sec. 8.7 from the City of Portland Land Use Code, as well as removing the overlay map from the City of Portland zoning map.

Memorandum Planning and Urban Development Department

To: Chair Stanley & Members of the Planning Board
From: Charles Tetelman
Date: February 18, 2022
Re: Portland Housing Authority - Riverton Rezoning
Project ID: ZN-001811-2021
Meeting Date: February 22, 2022

I. INTRODUCTION

The Portland Housing Development Corporation has submitted an application for a Zoning Map and Text Amendment to facilitate future development at their 141-unit Riverton Park campus. As part of this application, the applicant is proposing a map amendment to rezone the property, which is currently zoned R-5 Residential, into two new zones (R-5a and B-2) along with a text amendment to the R-5a zone to allow Places of Assembly uses greater than 10,000 square feet in size as conditional uses. These actions would facilitate the redevelopment and renovation of Riverton Park in a future Major Site Plan application to the Planning Board.



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

The Planning and Urban Development Department mailed 76 notices advertising this meeting to property owners within 500 feet of the site. A legal advertisement ran in the February 12, 2022 and February 13, 2022 editions of the *Portland Press Herald*.

Applicant: Portland Housing Development Corporation
Applicant Representatives: Carroll Associates Landscape Architects, CWS Architects

II. REQUIRED REVIEWS

<i>Review</i>	<i>Applicable Standards</i>
Zoning Standards	Section 14.5, 14.6, 14.7

III. PROJECT DATA

Existing Zoning	R-5 Residential
Property Size	19.9 acres
Existing Use	Residential
Proposed Use	Mixed-Use, Residential

IV. BACKGROUND

The Riverton Park property includes 25 residential buildings consisting of 141 townhome apartments as well as an administrative office building. Built approximately 50 years ago, this residential community has provided affordable housing for Portland residents for several generations. Although the buildings and premises have been maintained over the last half century, the Riverton Park homes are in need of rehabilitation and redevelopment. Portland Housing Authority (PHA) seeks to improve the Riverton Park complex and ensure healthy, safe, accessible, energy-efficient, and affordable housing. Although not part of this zoning application, the proposed zoning map and text amendments will facilitate PHA's future plans at Riverton Park which include:

1. Demolishing four buildings (24 units) closest to Forest Avenue and replacing it with a single four-story multifamily building (59 units) with a ground-floor that includes a PHA Management office, Greater Portland Health clinic, and a small space for neighborhood retail.
2. Rehabilitating 21 residential buildings (~124 residential townhome units).
3. Demolishing the administrative building and replace with a significantly larger community center for resident services (Boys & Girls Club, PHA Study Center, Community Policing, kitchen, food pantry, and gathering spaces).
4. Constructing a new Maintenance Building.

The new multifamily building (#1 above) would be located within the area to be rezoned B-2. The other buildings (2, 3, and 4 above) would be located within the proposed R-5a zone. The figure below delineates the area to be rezoned from R-5 to R-5a in red, and from R-5 to B-2 in blue:

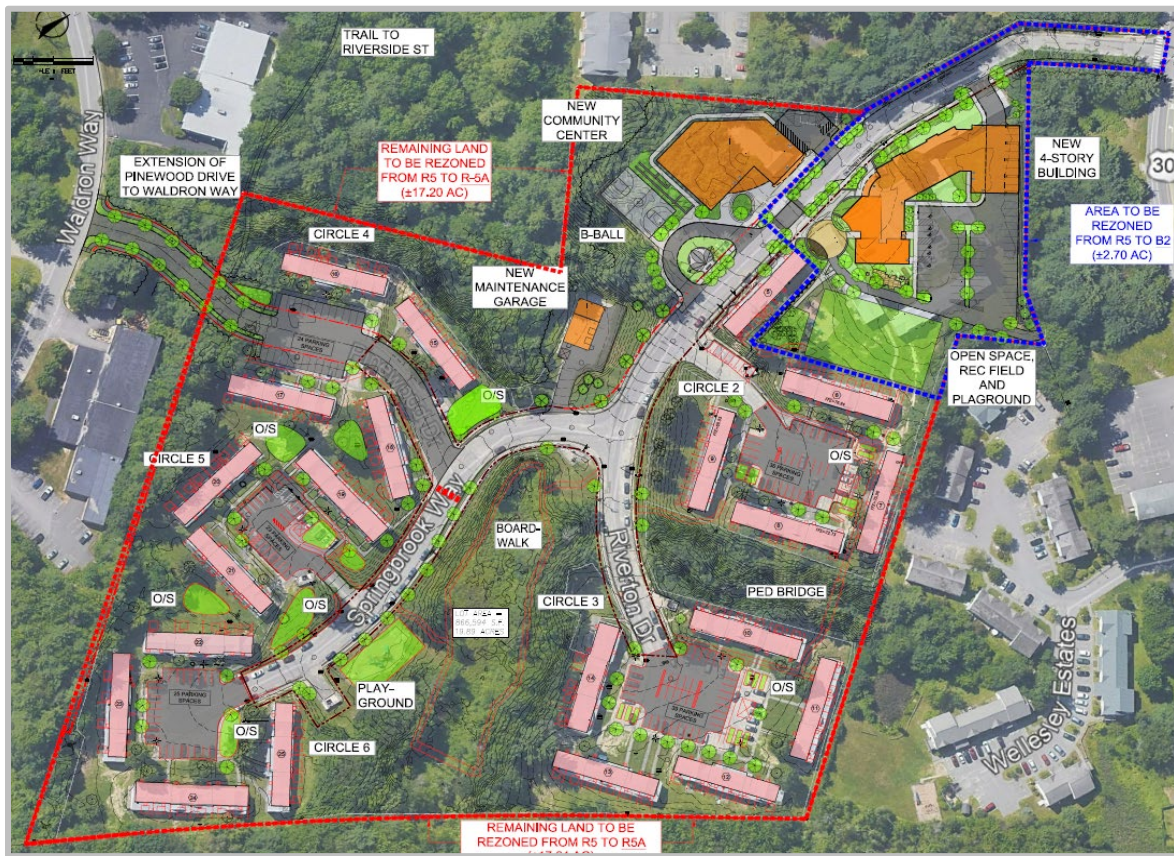


Figure 2: Proposed Redevelopment Site Plan (Plan 3)

V. EXISTING CONDITIONS AND SURROUNDING AREA

The proposed zoning map amendments are within the Riverton Park development (Chart 327, Block B, Lot 12, 2 Riverton Drive), with Riverton Drive as the internal road connecting with Forest Avenue to the north. The site currently consists of 25 residential buildings, 141 townhome apartments, and an administrative building. In addition to the applicant's property, the immediate vicinity west of Interstate 95 includes the mixed-use developments along Forest Avenue and Riverside Street. The Riverton Park property abuts the Terrace Pond Apartments to the West. The businesses within the area include a grocery store, a gas station, auto repair, restaurants, and breweries. Riverton Trolley Park is located across Riverside Street. To the east, inbound Forest Avenue extends toward peninsular Portland, and the remaining section of outbound Forest Avenue heads into Westbrook. Beyond the intersection of Riverside Street and Forest Avenue, Riverside Street includes a mix of light, medium, and heavy industrial zones.

In recent years, the Planning Board approved two projects in the vicinity of the Riverton Park campus, located at 1844 Forest Avenue and 1884 Forest Avenue, respectively. In February of 2021, the Planning Board approved a 17-unit residential development at 1844 Forest Avenue, located several blocks east of Riverton Drive entrance to Riverton Park, which includes converting an existing three-story, commercial building into a residential apartment building. Prior to this, in February of 2020, the Planning Board approved a project comprised of a 5,000 square foot convenience store with eight associated fueling pumps and a 7,800 square foot multi-tenant retail space at 1884 Forest Avenue. This site includes a pedestrian access point to the Riverton Park campus at the rear of the lot, and a METRO bus shelter, to be located within the northwest portion of the lot, was also incorporated into the site.

METRO transit routes near the site include the Greater Portland METRO Local service Route 2 and the Lakes Region Bus route. The nearest transit stops to the applicant's site are along Forest Avenue near the intersection of Riverton Drive and Forest Avenue. 1884 Forest Avenue included a new METRO shelter nearby.

VI. ZONING MAP AND TEXT AMENDMENT PROPOSAL

a. Applicant's Proposal

The applicant proposes a zoning map amendment to rezone the applicant's property located at 2 Riverton Drive from solely R-5 to both B-2 and R-5a. The B-2 zone will allow for a small-scale retail space and the R-5a zone would allow on-site amenities and services while permitting an increase in allowable density and facilitating affordable housing opportunities in the neighborhood. The applicant's submittal (Plan 2) shows that the Riverton Park parcel will be divided within the two above-referenced zones; the B-2 zone will be portion will be adjacent to the Riverton Drive entrance off of Forest Avenue, providing retail and other services for the neighborhood, with the R-5a zone covering the remainder of the parcel.

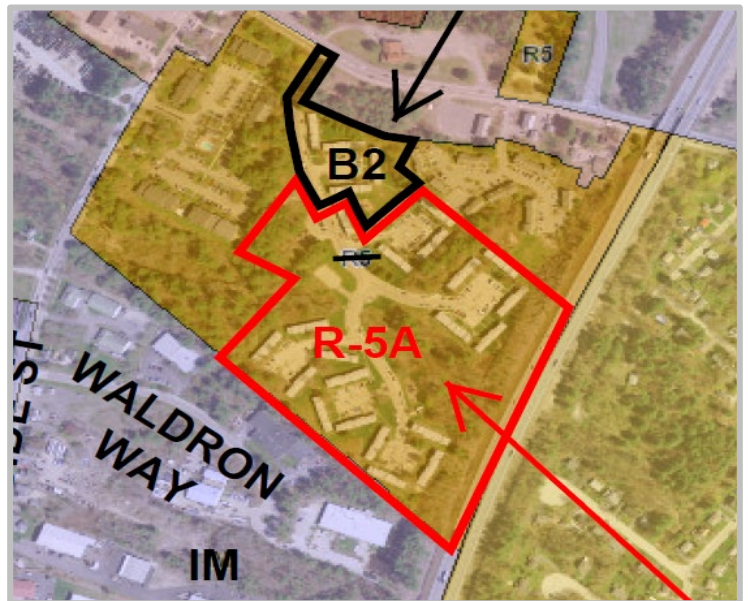


Figure 3: Map Amendment Proposal (Plan 2)

The applicant is also proposing a text amendment to *Table 6-A: Permitted and Conditional Uses in Residential Zones* (Attachment C) and *Table 7-A: Residential Zone Dimensional Standards* (Attachment D) to allow places of assembly in the R-5a zones. The text amendment to Table 6-A labels Places of Assembly (regardless of size) as conditional uses in the R-5a zone. The text amendment to Table 7-A adds a minimum lot area requirement for Places of Assembly of less than 10,000 square feet of a one-half acre and, for Places of Assembly greater than 10,000 square feet, a minimum lot size of one acre.

b. Staff Recommendation

Along with the applicant's parcels, staff recommends that the Planning Board consider extending the B-2 zone to connect to the existing B-2 zone at the corner of Forest Avenue and Riverside Street. The applicant's proposal includes the Right of Way along Riverton Drive. This staff recommendation extends the B-2 zone down Forest Avenue shown below in yellow. The recommended extension would be mapped to a depth that aligns with the existing B-2 zone at the intersection and the applicant's proposed amendment; the goal of this is to rationalize the zoning boundaries in this area given Forest Avenue's status as a major arterial amendable to B-2 uses.



Figure 4: Staff Zoning Recommendation

VII. RIGHT, TITLE, & INTEREST

The applicant submitted a deed transferring the Riverton Park parcel from F.D. Rich Housing Corp. to the Portland Housing Authority dated August 9, 1972 (Attachment F). This document includes lease agreements between Riverton Park, LP, Portland Housing Development Corporation, and Portland Housing Authority.

VIII. ZONING ANALYSIS

R-5 Residential Zone

The existing zoning at 2 Riverton Drive is entirely R-5 Residential. The purpose of the R-5 Residential zone is to:

"...provide appropriate areas of the city for medium-density residential development characterized by single-family, two-family and low-intensity multifamily dwellings on individual lots; to ensure the stability of

established medium-density neighborhoods by controlling residential conversions; and to provide for planned residential unit development on substantially-sized parcels.”

The applicants are seeking zoning that allows for higher density residential development that extends beyond the scope of the R-5 Residential zone. The R-5 zone has a minimum dwelling unit per lot area of 3,000 sq. ft. while the R-5a zone has a minimum dwelling unit per lot area of 1,600 sq. ft. Increased density in the R-5a zone would allow more room for additional development intensity in the proposed redevelopment plan. Furthermore, the R-5 Residential zone does not allow commercial activity within the zone. The future plans for Riverton Park require a rezoning and demonstrate a need for a change to the B-2 Community Business and R-5a Residential zones.

B-2 Community Business Zone

The purpose of the B-2 Community Business zone is to:

“...provide appropriate locations for the development and operation of community centers offering a mixture of commercial uses, housing, and services serving the adjoining neighborhoods and the larger community. The variety, sites, and intensity of the permitted commercial uses in the B-2 zone are intended to be greater than those permitted in the B-1/B-1b zones. The zone provides a broad range of goods and services with a mixture of large and small buildings, such as grocery stores, shops and services located in major shopping centers and along arterial streets. Such establishments should be readily accessible by automobile, by pedestrians and by bicycle. Development in the B-2 zone should relate to the surrounding neighborhoods by design, orientation, and circulation patterns. The zone should provide locations for moderate to high-density housing in urban neighborhoods along arterials.”

With the intention of constructing a multi-use building, the proposed B-2 lot towards the entrance of Riverton Drive off of Forest Avenue would allow for a variety of uses as shown in Table 2 below that support the redevelopment of Riverton Park and the surrounding neighborhood. Furthermore, staff determined that the B-2 zone matches the surrounding zoning context along Forest Avenue and parts of Riverside Street. Accordingly, staff are recommending to extend the B-2 zone from the applicant’s proposal to include the entirety of the Forest Avenue frontage.

R-5a Residential Zone

The purpose of the R-5a Residential zone is to:

“...aside areas on the peninsula for housing characterized primarily by multi-family dwellings at a high density providing a wide range of housing for differing types of households; to conserve the existing housing stock and residential character of neighborhoods by controlling the scale and external impacts of professional offices and other nonresidential uses; and to encourage new housing development consistent with the compact lot development pattern typically found on the peninsula.”

Given the above purpose statement, Planning staff have determined that the proposed R-5a zone to be mapped in the remainder of the parcel is an appropriate district due to the existing residential use, the proposed future changes to the site, and the existing built environment, including access to transportation routes.

Table 1 provides a comparison of the permitted uses for zones under consideration. Uses marked with a ‘P’ are permitted uses in the zone. A ‘C’ indicates a conditional use. Red text or a * indicates proposed

amendments associated with this proposal. Uses with an empty cell are **not** permitted in the zone. ** indicates that other restrictions apply.

Table 2 provides a comparison of the dimensional requirements for zones under consideration.

Table 1 - Permitted Uses	R-5	R-5a	B-2
Single-family dwellings	P	P	P
Two-family dwellings	P	P	P
Multi-family dwellings	C	P	P
Multiplex	P		
Congregate care facilities		P	
Handicapped family units	P	P	
Planned Residential Unit Developments	P	P	
Special needs independent dwelling units	P		
Combined living/working spaces			P
Lodging houses	C		P
Sheltered care group homes	C	C	
Clinics			P
Elementary, middle, and secondary schools	C		P
Governmental uses	P	P	P
Hospitals	C		P
Intermediate care facilities	C	P	P
Long-term and extended care facilities	C	P	P
Places of assembly (<10,000 sq. ft.)	C	C*	P
Places of assembly (>10,000 sq. ft.)	C	C*	P
Preschool facilities	C	C	P
Post-secondary schools	C		P
Adult business establishments			P
Auto, boat, and related dealerships			C
Auto service stations			C
Bars			P
Bed and breakfasts			P
Funeral Homes			P
General offices (<5,000 sq. ft.)			P
General offices (>5,000 sq. ft.)			P
General services (<5,000 sq. ft.)			P
General services (>5,000 sq. ft.)			P
Hotels			P
Marijuana retail store			P
Registered marijuana dispensary			P
Restaurants			P
Retail (<5,000 sq. ft.)			P
Retail (5,000 – 25,000 sq. ft.)			P
Retail (>25,000 sq. ft.)			P
Small-scale marijuana caregiver			P

Theaters and performance halls			P
Veterinary services			P
Communication studios			P
Laboratory and research facilities			C
Low-impact industrial (<10,000 sq. ft.)			P**
Low-impact industrial (>10,000 sq. ft.)			P**
Printing and publishing			C**
Repair services			P
Studios for artists and craftspeople			P
Warehouse, storage, and distribution			C**
Cemeteries			
Off-street parking	C		
Parks and open spaces	P	P	P
Solar energy system (minor)	P	P	P
Utility substations	C	C	P
Wind energy system (minor)			C

Table 2 - Zoning Requirements	R-5	R-5a	B-2
Lot Size (min)	6,000 sq. ft. to 5 ac. (depending on use)	6,000 sq. ft. to 2 ac. (depending on use)	
Density (min)	3,000 sq. ft. (lot area per dwelling unit) 1,000 sq. ft. (lot area per rooming unit) 4,500 sq. ft. (lot area per multiplex unit)	1,600 sq. ft. (lot area per dwelling unit)	1,000 sq. ft. (off-peninsula) 350 sq. ft. (lot area per rooming unit, off-peninsula)
Street Frontage (min)	50 ft.	50 ft.	20 ft.
Front Yard (min)	20 ft.	25 ft.	
Front Yard (max)			10 ft.
Rear Yard (min)	5 ft.	5 ft.	10 ft. (principal) 5 ft. (accessory)
Side Yard (max)	14 ft.	16 ft.	None (principal) 5 ft. (accessory)
Side Yard (Side Street, min)	15 ft.	20 ft.	
Stepbacks			5 ft. (side) 15 ft. (rear)
Lot Coverage (max)	40%	30%	
Impervious Area (max)			None (residential) 80% (other uses)
Lot Width (min)	60 ft. (90 ft. for multiplex)	60 ft.	

Building Height (max)	35 ft.	35 ft.	45 ft. 50 ft. (if first floor is in commercial use) 65 ft. (in lots >5 ac.)
Floor Area (max)			10,000 sq. ft. (laboratory and research facilities, warehousing)

IX. COMPREHENSIVE PLAN CONSISTENCY

Portland's Plan 2030

As part of their application, the applicant highlighted a variety of elements from *Portland's Plan 2030* as it relates to the proposed map and text amendments (Attachment B). Many elements of this attachment relate more directly to the future use associated with 2 Riverton Drive.

The map and text amendments align with these vision statements and goals by enhancing the ability for the applicant to rehabilitate existing affordable housing and redevelop existing structures in the Riverside neighborhood, providing 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. In addition, the map amendments would allow for an increase in residential density with the potential of providing more housing.

Environmental:

Support Sustainable Land Use & Transportation Policies

“Continue to develop land use policies which support complete neighborhoods.”

Housing:

Remove Housing Barriers

“Evaluate whether current zoning allows for new development consistent with historic patterns of form, density, and/or use, as well as whether it allows for priority growth areas.”

Promote Sustainability

“Encourage energy efficiency in new construction and rehabilitation of our housing stock.”

Support Age-Friendly Housing Options

“Create, promote, and facilitate safe, affordable, and practical housing solutions that will meet the evolving needs of Portland’s residents as they age.”

Adapt Affordable Housing

“Assess the capacity of existing affordable housing developments, many of which were built over four decades ago, to adapt to current best practices by improving energy efficiency and physical and social connections to surrounding neighborhoods.”

“Pursue new opportunities for increased energy efficiency, increased densities, mixed incomes, and greater connectivity to surrounding neighborhoods.”

Economy:*Support Local Business Retention & Recruitment*

“Pursue policies that create, nurture, and retain local businesses.”

“Support job creation and business growth through public initiatives, and private, institutional, and regional partnerships.”

Recreation & Open Space:*Ensure Equity*

“Pursue opportunities, in collaboration with partners, to create new open spaces in areas that are currently underserved.”

“Distribute community gardens, playgrounds, fields, public art, historic resources, and other program elements where the demand and need are greatest, and periodically assess demands and needs.”

Future Land Use*Priority Nodes & Corridors*

“Priority nodes and corridors indicate areas that would be appropriate for new development to provide needed housing, businesses, and services proximate to transit, or areas that otherwise warrant some examination of potential for positive change in form and/or function.”

X. NEIGHBORHOOD MEETING & PUBLIC COMMENT

The applicant held a neighborhood meeting on Wednesday, February 2, 2022 (Attachment G). Invitations for the remote meeting were sent to properties within 500 feet of the proposed development and residents on the “interested parties” list. There were no attendees for the meeting.

No public comment has been received.

XI. NEXT STEPS

1. Planning Board Workshop and initial comments
2. Planning Board Public Hearing & Recommendation
3. City Council 1st Reading
4. City Council 2nd Reading and Adoption of Text Amendment (if approved)

XII. ATTACHMENTS**APPLICANT SUBMITTAL**

- A. Project Description
- B. Comprehensive Plan Consistency
- C. Chapter 14 Section 6 Text Amendments
- D. Chapter 14 Section 7 Text Amendments
- E. Application Checklist
- F. Right, Title, and Interest
- G. Riverton Park Neighborhood Meeting Packet

PLANS AND DRAWINGS

- Plan 1. Vicinity Map

Plan 2. Zoning Map – Existing and Proposed
Plan 3. Site Plan and Rezone Areas



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Office: 207-773-4753
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October 15, 2021

Mr. James Rather
City of Portland
389 Congress Street, 4th Floor
Portland, Maine 04101

**RE: Riverton Park – Map & Text Amendment Application
Tax Map 327-B-012**

Dear James,

On behalf of Portland Housing Authority (PHA) and Portland Housing Development Corporation (PHDC), we are pleased to submit this Application for a Map and Text Amendment associated with Riverton Park. Riverton Park is currently entirely within the R-5 residential zone. We propose amending the Portland Zoning Map such that a portion of the site closest to Forest Avenue would be zoned B-2 Community Business and the majority of the property would be zoned R-5A. We also propose text amendments to the R-5A to allow Places of Assembly greater than 10,000 square feet. These amendments will enable PHA and PHDC to carry out a significant renovation and redevelopment of Riverton Park.

The property currently contains 25 residential buildings with 141 townhome apartments, as well as a small administration building. Built in 1972, this Public Housing community faces a long backlog of capital improvements after five-decades without a significant renovation. Though reasonably maintained by dedicated staff and maintenance personnel, only rehabilitation and redevelopment will ensure that Riverton Park homes remain healthy, safe, accessible, energy-efficient and affordable for the long-term.

Our Riverton Park plan aims to preserve and expand Portland's stock of affordable homes, improve resident service delivery, better connect Riverton Park with surrounding neighborhoods, and increase residents' economic opportunities. Four components comprise our plan:

1. Demolition of 4 buildings with 24 units closest to Forest Avenue, and redevelopment with a single, 4-story multifamily building with approximately 59 units. Its ground-floor would house a PHA Management office, Greater Portland Health clinic, and small space for neighborhood retail.
2. Rehabilitation of 21 residential buildings with approximately 124 residential townhome units.
3. Demolition of existing administration building, and redevelopment with a significantly larger new Community Center for resident services, including space for Boys & Girls Club, PHA Study Center, Community Policing, community kitchen, food pantry, and community gathering spaces.
4. New construction of a Maintenance Building.

The new multifamily building (#1 above) would be located within the B-2 zone. Items #2, #3 and #4 above would be located within the proposed R-5A zone.

The project envisions a small, ground-floor neighborhood retail space fronting Riverton Drive within the new multifamily building. The goals of this retail space are to encourage entrepreneurship among our residents, offer additional services/amenities to this neighborhood, and incubate small local businesses, which align with the City Comprehensive Plan. Though the amount of space dedicated to retail will be small compared to the overall proposed project, it is a use that will help cultivate a more complete neighborhood, another Comprehensive Plan goal. This potentially-high-impact effort can help create a more equitable, dynamic and thriving Riverton Park community. As a not-for-profit organization, Portland Housing plans to explore local partnerships that further economic opportunities for our residents. No specific retail tenant, service, or design has yet been confirmed, and we expect more information to be available to the Planning Board as part of Riverton Park's Major Site Plan submission.

It is anticipated that approximately 49% of net new units will be affordable at Riverton Park. Specifically, we anticipate a net increase of 17 affordable units out of 35 total net new units. We request the project receives eligibility for the 25% application fee reduction for Development Fees under Article 18 of ReCode.

We welcome the opportunity to discuss Riverton Park with Planning Staff and the Planning Board, and look forward to working closely with you as this important project advances. Please contact us if you have questions or need additional information.

Sincerely,



Tyler Plante
Development Officer
PHA & PHDC

cc: Patrick Carroll, Carroll Associates Landscape Architects
Ben Walter, CWS Architects

Consistency with Comprehensive Plan

Riverton Park

Policy Guide: Environment

7. Support Sustainable Land Use & Transportation Policies

- *“Continue to develop land use policies which support complete neighborhoods.”* – The project will provide Riverton Park with diverse and affordable housing options, community gathering places/plazas, a community healthcare clinic, convenient resident services, recreation and open spaces, improved pedestrian infrastructure, and neighborhood retail opportunities. These will support the health and wellbeing of residents, building sustainability, community connectivity, youth development, and accessibility and aging-in-place.

Policy Guide: Housing

3. Remove Housing Barriers

- *“Evaluate whether current zoning allows for new development consistent with historic patterns of form, density, and/or use, as well as whether it allows for priority growth areas.”* – Riverton Park currently contains multifamily rental apartments, and the project proposes to increase the overall number of rental units available.

4. Promote Sustainability

- *“Encourage energy efficiency in new construction and rehabilitation of our housing stock.”* – The rehabilitation will significantly improve the energy-efficiency of existing buildings through new windows, doors, roofing, continuous exterior insulation, air sealing, and mechanical/heating equipment. The new multifamily building will be significantly more efficient than a code-built building and aims to achieve Passive House certification, the world's leading standard in energy-efficient construction. The project will add rooftop solar photovoltaic (PV) panels to generate clean, renewable energy for the property.

8. Support Age-Friendly Housing Options

- *“Create, promote, and facilitate safe, affordable, and practical housing solutions that will meet the evolving needs of Portland residents as they age.”* – The project will create approximately 19 accessible units for persons with a physical disability. At least 2% of units will serve persons with a sight- or hearing-impairment. To facilitate aging in place, the new multifamily building will be elevatorized and include a diversity of unit sizes, ranging from studios to three-bedroom units. Sitework will improve accessible routes throughout the site. Many resident services offered at Riverton Park will be intergenerational.

9. Adapt Affordable Housing

- *“Assess the capacity of existing affordable housing developments, many of which were built over four decades ago, to adapt to current best practices by improving energy efficiency and physical and social connections to surrounding neighborhoods.”* – The project will contribute to the physical revitalization of this deeply affordable multifamily community built in the early-70's,

which will significantly improve building energy-efficiency. The project will improve connectivity to surrounding neighborhoods through the potential road extension of Pinewood Drive to Waldron Way.

- *“Pursue new opportunities for increased energy efficiency, increased densities, mixed incomes, and greater connectivity to surrounding neighborhoods.”* – The project will increase energy-efficiency of the community (see “4. Promote Sustainability” above). The project will increase residential densities of the community to approximately 183 units from 141 units currently. The project will add approximately 18 market-rate units to the property. The project will improve connectivity to surrounding neighborhoods through the potential road extension of Pinewood Drive to Waldron Way.

Policy Guide: Economy

2. Support Local Business Retention & Recruitment

- *“Pursue policies that create, nurture, and retain local businesses.”* – A small neighborhood retail space is envisioned to encourage entrepreneurship among Riverton Park residents, offer additional services/amenities to this neighborhood, and incubate small local businesses.
- *“Support job creation and business growth through public initiatives, and private, institutional, and regional partnerships.”* – PHA will draw on our extensive community partnerships to promote economic opportunities and/or small business incubation for the Riverton Park community, using the Community Center and neighborhood retail space to further these goals.

Policy Guide: Recreation & Open Space

4. Ensure Equity

- *“Pursue opportunities, in collaboration with partners, to create new open spaces in areas that are currently underserved.”* – The project will create a new community plaza, recreation field, playground space, and basketball court at Riverton Park. Our on-site resident service partners may utilize these spaces, including the Boys & Girls Club and Opportunity Alliance.
- *“Distribute community gardens, playgrounds, fields, public art, historic resources, and other program elements where the demand and need are greatest, and periodically assess demands and needs.”* – The project proposes to create new community gardens, a new recreation field, a new community plaza, playground space, walking trails through forest, and upgrade existing playgrounds at Riverton Park.

Future Land Use

Priority Nodes & Corridors

- *“Priority nodes and corridors indicate areas that would be appropriate for new development to provide needed housing, businesses, and services proximate to transit, or areas that otherwise warrant some examination of potential for positive change in form and/or function.”* – The project is located off of Forest Avenue, a Priority Corridor, and very close to the Forest Avenue/Riverside Drive intersection, a Priority Node. A METRO Transit Stop is located on Forest Avenue within 100 feet of the Riverton property.

TABLE 6-A: PERMITTED AND CONDITIONAL USES IN RESIDENTIAL ZONES

		R-1	R-2	R-3	R-4	R-5/R-5a	R-6/R-6a	Use Standards
Residential	Single-family dwellings	●	●	●	●	●	●	
	Two-family dwellings				●	●	●	
	Multi-family dwellings			○		○ ¹ /● ²	●	6.5.6(G)
	Multiplex				○	● ¹		6.4.12
	Congregate care facilities					● ²		
	Handicapped family units	●	●	●	●	●	●	
	Planned Residential Unit Developments			● ⁴		● ⁴		
	Special needs independent dwelling units				●	● ¹	●	
Institutional	Lodging houses					○ ^{1,3}	●	6.4.9
	Sheltered care group homes	○	○	○	○	○	○	6.5.6(K)
	Elementary, middle, and secondary schools	○	○	○	○	○ ¹	○	6.5.6(F)
	Governmental uses	●	●	●	●	●	●	
	Hospitals			○		○ ¹	○	
	Intermediate care facilities	○	○	○		○ ¹ /● ²	○	
	Long-term and extended care facilities	○	○	○		○ ¹ /● ²	○	6.5.6(F)
	Places of assembly (<10,000 SF)	○	○	○	○	○ ⁴	○	
	Places of assembly (>10,000 SF)	○	○	○	○	○ ⁴	○	
	Preschool facilities	○	○	○	○	○	○	6.5.6(I)
Comm.	Post-secondary schools		○			○ ¹	○	6.5.6(F)
	Bed and breakfasts						●/○ ⁵	6.4.4
	General offices (<5,000 SF)						○	6.5.6(C)
	Hostels						●/○ ⁶	6.4.8
Other	Agriculture	●	●					
	Cemeteries	○	○		●		●	
	Off-street parking			○	○	○ ¹	○	6.5.6(H)
	Parks and open spaces	●	●	●	●	●	●	
	Raising of domesticated animals	○						6.5.6(J)
	Solar energy system (minor)	●	●	●	●	●	●	6.4.16
	Utility substations	○	○	○	○	○	○	6.5.6(L)

¹ In the R-5 zone only.² In the R-5a zone only.³ Conversions of existing two-family or multiplex structures into lodging houses are permitted as a conditional use, provided that the lodging house shall not be located within 500 ft. of another as measured along street lines.⁴ Must consist of horizontally or vertically attached dwelling units, or a series of such dwelling units, with all land owned and used in common. PRUDs shall be subject to review and approval by the Planning Board under Article 15.⁵ Permitted if a conversion of a structure existing as of 3/3/97 to up to four guest rooms and conditional if a conversion of the same to five to nine rooms.⁶ Permitted if for no more than 10 overnight transient guests and conditional if for between 11 and 20 overnight transient guests. An owner, manager, or operator shall be a permanent resident of the building.



TABLE 7-A: RESIDENTIAL ZONE DIMENSIONAL STANDARDS

	R-1	R-2	R-3 ²	R-4	R-5 ^{2, 3}	R-5a ⁴	R-6 ^{6, 7}	R-6a ¹³
Lot area (min.)	Governmental	15,000 SF	10,000 SF	6,500 SF	6,000 SF	6,000 SF		
	Hospital			10 ac.	5 ac.		2 ac.	
	Intermediate or long-term, extended care facility	3 ac.	3 ac.	2 ac.	2 ac.	1.5 ac.	1 ac. ⁸	
	Lodging house				9,000 SF		2,000 SF	
	Multiplex			9,000 SF	9,000 SF			
	Place of assembly	<10,000 SF	1 ac.	1 ac.	1 ac.	15,000 SF	.5 ac.	10,000 SF
		>10,000 SF	2 ac.	2 ac.	2 ac.	30,000 SF	1 ac.	15,000 SF
	Post-secondary school		2 ac.		2 ac.		2,000 SF	
	Elementary, middle, and secondary school	2 ac.	2 ac.	2 ac.	30,000 SF	30,000 SF	30,000 SF	
	Raising of animals	3 ac.						
	Residential	15,000 SF	10,000 SF	6,500 SF	6,000 SF	6,000 SF ⁹	6,000 SF / 2 ac. max ⁵	2,000 SF
	All other uses	15,000 SF	10,000 SF	6,500 SF	6,000 SF	6,000 SF	2,000 SF	4 ac.
	Lot area per dwelling unit (min.)	15,000 SF	10,000 SF	6,500 SF	3,000 SF	3,000 SF	1,600 SF	725 SF
	Lot area per rooming unit (min.)					1,000 SF		250 SF ⁹
	Lot area per multiplex unit (min.)			3,000 SF for first 3, 6,000 SF thereafter		4,500 SF		
	Lot area per SNIDU ¹ (min.)			2,400 SF	3,600 SF			
Rear setback (min.)	Street frontage (min.)	75 ft.	50 ft.	50 ft.	50 ft.	50 ft.	50 ft.	20 ft.
	Lot width (min.)	100 ft.	80 ft.	65 ft.	60 ft.	60 ft. 90 ft. for multiplex	60 ft.	20 ft.
	Front setback (min.)	25 ft.	25 ft.	25 ft.	25 ft.	20 ft.	25 ft.	5 ft.
		Or average depth of adjacent front yards						
		25 ft.	25 ft.	25 ft.	25 ft.	20 ft.	25 ft.	10 ft.
	Detached accessory (< 250 SF footprint)	5 ft.	5 ft.	5 ft.	5 ft.	5 ft.	5 ft.	5 ft.
	<1.5 stories to 1.5 stories	12 ft.	12 ft.	8 ft.	10 ft.	8 ft.	10 ft.	<45 ft. in height: 10 ft.
	2 stories	14 ft.	14 ft.	14 ft.	14 ft.	12 ft.	14 ft.	
	2.5 stories	16 ft.	16 ft.	16 ft.	16 ft.	14 ft.	16 ft.	5 ft. ¹⁰
	Detached accessory (< 250 SF footprint)	5 ft.	5 ft.	5 ft.	5 ft.	5 ft.	5 ft.	>45 ft. in height: 15 ft.
	On side street (min.)	20 ft.	20 ft.	20 ft.	20 ft.	15 ft.	20 ft.	None
		Or depth of front yard directly abutting the lot.						

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TABLE 7-A (CONT.): RESIDENTIAL ZONE DIMENSIONAL STANDARDS

CITY OF PORTLAND
Planning & Urban Development Department

**MAP AND TEXT AMENDMENT
SUBMISSION CHECKLIST**

- * Please submit each document and drawing as a separate PDF file
- * Please submit all drawings in a 24 x 36 sheet size
- * Please confirm each item by electronically checking the boxes to the left for each document/drawing

Exhibit #

GENERAL APPLICATION DOCUMENTS

1	☒	Project Description Cover Letter with detailed project description
2	☒	Consistency with Comprehensive Plan Analysis of the consistency of the zone change request with the goals, policies and land use plan of Portland's Comprehensive Plan.
3	☒	Proposed Text Amendment Provide proposed language for text amendment(s) and cite the relevant sections to be revised in the Land Use code.
4	☒	Completed Checklist – Map and Text Amendment Application (this document)
5	☒	Right, Title and Interest Deeds, leases, or purchase and sales agreements

PLANS

6	☒	Vicinity Map
7	☒	Proposed Map Amendment (please use the Portland zoning map as a reference)
8	☒	Site Plan (if applicable) On a separate sheet, please provide a site plan of the property showing existing and proposed improvements, including such features as buildings, parking, driveways, walkways, landscape and property boundaries.

Know all Men by these Presents

That F. D. RICH HOUSING CORP., formerly known as F. D. Rich Modular Housing Corp., a corporation organized and existing under the laws of the State of Delaware with an office ~~and~~ located at Stamford - - - - - in the County of Fairfield and State of Connecticut in consideration of one dollar and other valuable considerations, paid by the PORTLAND HOUSING AUTHORITY, a public body duly created and organized pursuant to the laws of the State of Maine, with an office at 211 Cumberland Avenue, Portland, Maine, - - - - - the receipt whereof it does hereby acknowledge, does hereby give, grant, bargain, sell and convey unto the said PORTLAND HOUSING AUTHORITY, its successors - - - - - ~~and~~ and assigns forever,

a certain lot or parcel of land, with the buildings thereon, situated on the southwesterly side of Forest Avenue in the City of Portland, County of Cumberland and State of Maine, being bounded and described as follows:

Beginning at a point on the southwesterly side of said Forest Avenue, which point is 386.56 feet southeasterly, on a course of S 59°-06'-30" E, from the intersection of the southwesterly side line of Forest Avenue with the southeasterly side line of Riverside Street and 50.21 feet northwesterly along Forest Avenue from an iron pin at the most northerly corner of land of the Cornerstone Masonic Corporation; thence S 45°-35' W, along land of this Grantor 188.75 feet to a point; thence S 11°-35' W, 230 feet to a point; thence S 47° W, 360 feet to a point; thence S 43° E, 242 feet to a point; thence S 56°-07'-30" W, 413.61 feet to a point; and land conveyed by Neal D. Lunt to Mary J. Field, et al, by deed dated October 30, 1905 and recorded in the Cumberland County Registry of Deeds, Book 776, Page 165; thence S 30°-53'-30" E, along said Field land, part of which is now or formerly owned by Charles Kaatz, 885.13 feet to a monument at the Westerly corner of land conveyed by Ellie K. Hawes to Maine Turnpike Authority by deed dated October 5, 1954 and recorded in said Registry of Deeds, in Book 2195, Page 453; thence northeasterly along said Maine Turnpike Authority land 750.40 feet to a monument; thence N 42°-41'-30" E, along said Turnpike land, 226.06 feet to an iron pin and the southwesterly side line of land conveyed by Joseph Hawkes to Alexander Bailey by deed dated February 26, 1868, recorded in said Registry of Deeds, in Book 360, Page 337, and now or formerly owned by Walter F. Hawkes; thence N 31°-13'-30" W, along said Hawkes land 656.92 feet to a monument; thence N 47°-52' E, along said Hawkes land 108.53 feet to an iron pin and land of Cornerstone Masonic Corporation; thence N 66°-56'-30" W, along said corporation land 75.27 feet to an iron pin; thence N 47°-17'-30" W, 295.21 feet to a monument at the northwesterly corner of said corporation land; thence N 45°-35' E, along said corporation land 168.81 feet to the said iron pin on the southwesterly side of Forest Avenue at the most northerly corner of said corporation land; thence northwesterly along said Forest Avenue 50.21 feet to the point of beginning.

The above described parcel contains 19.86 acres of land and is part of the premises conveyed to F. D. Rich Construction Co., Inc. by Arthur A. Serunian, Jr., by a Warranty Deed, dated November 28, 1969, as recorded in said Registry of Deeds in Book 3112, Page 252.

Said premises are hereby conveyed subject to a covenant set forth in a deed from Arthur A. Serunian, Jr., to Shell Oil Co., dated September 15, 1967, as recorded in said Registry of Deeds, in Book 3012, Page 817, insofar as it may be applicable to the premises herein conveyed, in which deed the said Arthur A. Serunian, Jr., as Grantor, covenanted with the Grantee, its successors and assigns, that no gasoline, lubricants or other petroleum products for motor vehicles shall be advertised, stored, sold, or distributed on or from any other property then owned by the Grantor within a radius of 1,000 feet of the premises therein conveyed, to which deed reference is hereby made for the full particulars thereof.

Said premises are also conveyed subject to a power line easement as conveyed by this Grantor to Central Maine Power Co., et al, dated September 2, 1971 as recorded in said Registry of Deeds, in Book 3199, Page 607.

Also hereby conveying all rights, easements, privileges, and appurtenances belonging to the premises hereinabove described, together with a permanent drainage easement for the drainage of surface water from the premises herein conveyed across the adjoining land of this Grantor through and along a gully that runs northwesterly from the northwesterly side line of said premises to a 48" road culvert across Riverside Street that is located about 100 feet north-easterly along Riverside Street from a monument at the northwesterly corner of this Grantor's property and about 950 feet along Riverside Street from the southwesterly side line of Forest Avenue. Provided, however, that the Grantor reserves the right to change the course of said drainage easement, in whole or in part through conduits or otherwise, so long as such change in course shall adequately provide for the drainage of surface water from the premises herein conveyed across this Grantor's adjoining land to Riverside Street.

The premises herein conveyed being the same premises as conveyed to this Grantor by F. D. Rich Construction Co., Inc., by a Warranty Deed, dated April 1, 1971, as recorded in said Registry of Deeds in Book 3165, Page 785.

AU
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Book

To Have and to Hold the aforegranted and bargained premises with ³³⁷
all the privileges and appurtenances thereof to the said PORTLAND HOUSING
AUTHORITY, its successors - - - - -

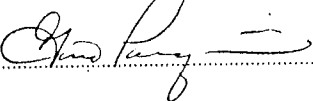
~~And~~ and assigns, to it and their use and behoof forever.

And does COVENANT with the said Grantee, its successors ~~and~~
and assigns, that it is lawfully seized in fee of the premises that they
are free of all encumbrances: except as aforesaid,

that it has ~~have~~ good right to sell and convey the same to the said Grantee to
hold as aforesaid; and that it and its successors and assigns will
WARRANT and DEFEND the same to the said Grantee, its successors
and assigns forever, against the lawful claims and demands of all persons, except
as aforesaid - - - - -

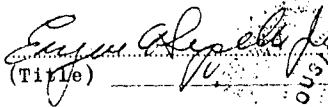
In Witness Whereof, the said F. D. RICH HOUSING CORP. - -
- - has caused this instrument to be sealed with its corporate seal and signed
in its corporate name by EUGENE A. SARELLI, V.P. - -
- - - - - , its VICE-PRES.
thereunto duly authorized, this 9th day of AUGUST
in the year one thousand nine hundred and seventy-two.

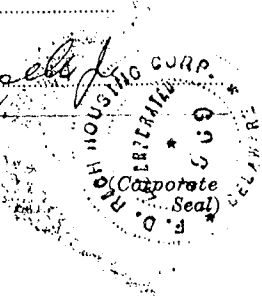
Signed, Sealed and Delivered
in presence of



F. D. RICH HOUSING CORP.

By


(Title)



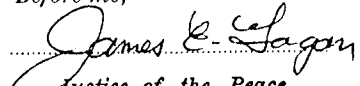
State of Maine,
Cumberland

} ss.

AUGUST 9th 1972

Then personally appeared the above named EUGENE A. SARELLI
VICE-PRESIDENT of said Grantor
Corporation 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 corporation.

Before me,



Justice of the Peace

~~Notary Public~~

Register

AUG 9 1972

REGISTRY OF DEEDS, CUMBERLAND COUNTY, MAINE

Book 3280 Page 329



OPTION TO PURCHASE AGREEMENT

(Riverton Park – land)

THIS OPTION TO PURCHASE AGREEMENT (“Agreement”) dated this 10th day of September, 2019, is by and between PORTLAND HOUSING AUTHORITY, a Maine nonprofit corporation having a mailing address of 14 Baxter Boulevard, Portland, ME 04101 (the “Seller”), and PORTLAND HOUSING DEVELOPMENT CORPORATION, a Maine nonprofit corporation having a mailing address of 14 Baxter Boulevard, Portland, ME 04101 or its assigns (“Buyer”).

RECITALS

WHEREAS, Seller is the owner of a certain parcel of land, and all improvements, buildings and fixtures presently on the real estate, at 2 Riverton Drive, Portland, Maine (the “Property”) currently improved with a 141-unit public housing facility known as Riverton Park (the “Project”) designated as ME 003-008 by the U.S. Department of Housing and Urban Development (“HUD”); and

WHEREAS, Seller has applied to HUD for authority to convert the Project into a privately owned project based subsidized housing project under HUD’s Rental Assistance Demonstration (“RAD”) program subject to all necessary HUD approvals; and may apply to HUD for a demolition/disposition approval for the Project as an alternative; and

WHEREAS, Seller wishes to grant to Buyer, and Buyer wishes to accept, an option to purchase (the “Option”), upon the terms and conditions as set forth herein, the land underlying the Property (hereinafter, the “Premises”), exclusive of the improvements currently located thereon (collectively, the “Buildings”), which Buildings are subject to a purchase option granted by the Seller to Riverton Park, LP, a Maine limited partnership (the “LP”) set forth in a certain Option to Lease Agreement between the Buyer and Seller and the LP of near or even date herewith.

NOW, THEREFORE, in consideration of one dollar (\$1.00) and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties agree as follows:

1. Option Period; Extension; Exercise of Option. Seller hereby grants Buyer the option to purchase the Premises for a period extending through December 31, 2022 (the “Option Period”).
 - a. The Option and the obligation of each of the Seller and Buyer shall be conditional upon (i) approval by HUD of the RAD Conversion of the Property (acting, if applicable through, the Special Applications Center); (ii) or, to the extent desired by Buyer upon approval of a demolition disposition by Seller in order to remove the Premises from any Declarations of Trust currently encumbering the real estate and authority to transfer the Premises to Buyer or its assigns, and/or to a lessee under a long term ground lease, for the development of low and moderate income or mixed income multi-family

housing thereon; (iii) receipt of all required municipal and state approvals for the development of such low and moderate income or mixed income multifamily housing project units to be located on the Premises; (iv) and an award of Low Income Housing Tax Credits for such development and (v) Buyer entering into the Ground Lease, as defined herein.

- b. Buyer may exercise the Option at any time during the Option Period by giving written notice to Seller of its intent to exercise the Option (the "Purchase Notice"). Notice delivered to Seller or sent to Seller by certified mail, return receipt requested, at the above address shall be sufficient.

2. Purchase Price. Subject to adjustment as set forth below, Buyer shall pay Seller a purchase price equal to One Dollar (\$1.00) (the "Purchase Price") plus any additional amount that HUD may require be paid to Seller in connection with the disposition or conversion of the Premises.

3. Closing. If Buyer exercises the Option, closing shall take place at a date and time and at a location agreed upon by the Buyer and the Seller, within ninety (90) days after the date of the Purchase Notice.

4. Conditions to Sale. If Buyer exercises the Option, the following terms and provisions shall apply:

- a. The conditions set forth in Section 1(a) of this Agreement to the extent not yet then satisfied, shall continue as conditions of the sale;
- b. Title to the Premises shall be conveyed to Buyer by good and sufficient Quitclaim Deed With Covenant, which deed shall convey good and clear record and marketable title to the Premises, free from encumbrances except provisions of existing building and zoning laws and any covenants and/or easements of record provided same do not interfere with Buyer's intended use of the Premises; such real estate taxes for the then current tax period which are not due and payable on the date of delivery of such deed; utility and access easements in common with Seller's adjoining developments, and any matters of record which in Buyer's opinion do not interfere with Buyer's plans to develop the property. Buyer shall notify Seller of any defects in title that would make Seller unable to give title to the Premises as herein stipulated. Seller shall be obligated to proceed in good faith to cure any such title defect(s). If required, the closing shall be extended to allow Seller time to cure any such title defects, but in no event shall the closing be extended more than thirty (30) days for such purposes. If a title defect exists, Buyer may elect, by written notice to Seller, either (i) to accept title to the Premises subject to any uncured defects in title or (ii) to terminate the Option, whereupon any extension fee(s) paid by Buyer to Seller shall be immediately refunded to Buyer, the obligations of all parties hereunder shall cease, and neither party shall have any claim against the other by reason of this Agreement;

- c. Each party shall pay one-half of the Maine state transfer tax unless one of the parties is exempt, in which case no transfer tax shall be due from the exempt party; and
 - d. Buyer shall enter into a long term ground lease of the Premises (the "Ground Lease") to Riverton Park, LP, a Maine limited partnership (the "LP"), upon the condition that the LP continues to maintain and improve the Premises for use as a low and moderate income or mixed income multi-family apartment complex. Buyer shall have the right, during the term of this Option, to enter into an option to lease or a letter of intent to lease to the LP, conditioned upon Buyer's acquisition of the Premises in accordance with the terms of this Agreement.
5. Representations. Seller represents, covenants and warrants to and agrees with Buyer as follows:
- a. Seller is the current owner of the Premises, and; subject to approval by HUD, has the legal right, power and authority to enter into this Agreement and to perform all of its obligations hereunder, and the execution and delivery of this Agreement and the performance by Seller of the obligations hereunder will not conflict with, or result in breach of any regulation, order, judgment, injunction or decree of any court or governmental authority or any agreement or instrument to which Seller is a party or by which Seller is bound.
 - b. There are no agreements or contracts affecting the Premises or any use of the Premises that would not be terminable at will by Buyer without penalty from and after the Closing, other than those for which Seller will be seeking approval from HUD in connection with its RAD Conversion and/or demolition disposition application.

Buyer represents, covenants and warrants to Seller that Buyer has the legal right, power and authority to enter into this Agreement and to perform all of its obligations hereunder, and the execution and delivery of this Agreement and the performance by Buyer of its obligations hereunder: (i) have been duly authorized by all requisite action; and (ii) will not conflict with, or result in a breach of, any of the terms, covenants and provisions of the by-laws or articles of organization of Buyer or any law or any regulation, order, judgment, writ, injunction or decree of any court or governmental authority, or any agreement or instrument to which Buyer is a party or by which it is bound.

6. Notice. Whenever notice is given or required to be given by either of the parties hereto to the other, it shall be deemed to have been given if in writing and mailed by certified or registered mail, return receipt requested, postage prepaid, or hand delivered, addressed to the parties at the address set forth in the first paragraph above or to such other address(es) as either party shall have last designated by like notice in writing. All notices shall be effective upon hand delivery or mailing, whichever first occurs.

7. Further Assurances. The parties agree that up to and after the date of closing, they shall do such things and execute, acknowledge and deliver any and all additional instruments, documents and materials as either party may reasonably request to fully effectuate the purposes of this Agreement.

8. Buyer's Access. Buyer and others whom Buyer may designate shall have the right, at all reasonable times, at Buyer's sole cost and expense, risk and hazard, to enter upon the Premises to examine and/or show the same and make, or cause to be made, engineering studies with respect thereto, including, without limitation, surveying, conducting test borings in order to determine sub-soil conditions, and in general conducting all other tests, analysis and studies of the Premises which Buyer deems prudent in connection with Buyer's intended development or use of the Premises. Buyer shall restore the Premises following any testing as reasonably as possible to its pre-existing condition, unless otherwise agreed by Seller.

9. Construction of Agreement. This instrument, executed in duplicate, is to be construed as a Maine contract, is to take effect as a sealed instrument, sets forth the entire contract between the parties, is binding upon and inures to the benefit of the parties hereto and their respective heirs, devisees, executors, administrators, successors and assigns, and may be canceled, modified or amended only by a written instrument executed by both the Seller and Buyer. The captions are used only as a matter of convenience and are not to be considered a part of this Agreement or to be used in determining the intent of the parties to it. Time is of the essence with respect to all dates set forth in this Agreement.

10. Risk of Loss. The risk of loss shall remain on Seller at all times until closing.

11. Assignment. Buyer may assign this Agreement to any party affiliated with Buyer on in which Buyer or an affiliate of Buyer has an interest.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

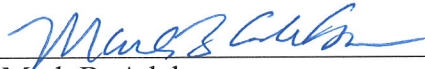
SELLER:

PORTLAND HOUSING AUTHORITY

By: 
Mark B. Adelson
Its Executive Director

BUYER:

PORTLAND HOUSING DEVELOPMENT
CORPORATION

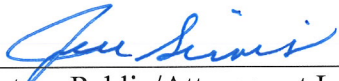
By: 
Mark B. Adelson
Its President

STATE OF MAINE
COUNTY OF CUMBERLAND, SS.

September 10, 2019

Personally appeared the above-named, Mark B. Adelson, Executive Director of Portland Housing Authority and acknowledged the foregoing instrument to be his free act and deed and the free act and deed of said Portland Housing Authority.

Before me,


Notary Public/Attorney at Law

JERE SIROIS
Notary Public, Maine
My Commission Expires July 25, 2021

Printed Name

OPTION TO LEASE AGREEMENT
(Riverton Park)

THIS OPTION TO LEASE AGREEMENT dated this 10th day of September, 2019 (the "Agreement"), is entered into by and between **PORTLAND HOUSING DEVELOPMENT CORPORATION**, a Maine non-profit corporation, having a mailing address of 14 Baxter Boulevard, Portland, ME 04101 (the "Landlord"), **RIVERTON PARK, LP**, a Maine limited partnership having a mailing address of 14 Baxter Boulevard, Portland, ME 04101 (the "Tenant") and **PORTLAND HOUSING AUTHORITY**, a Maine nonprofit corporation having a mailing address of 14 Baxter Boulevard, Portland, ME 04101 (the "Seller").

RECITALS

WHEREAS, Seller is the owner of a certain parcel of land located at 2 Riverton Drive in Portland, Maine (the "Premises") upon which is constructed a 141-unit public housing project known as Riverton Park (the "Project") designated as ME 003-008 by the U.S. Department of Housing and Urban Development ("HUD"); and

WHEREAS, Seller has applied to HUD for authority to convert the Project into a privately owned project based subsidized housing project under HUD's Rental Assistance Demonstration ("RAD") program, subject to all necessary HUD approvals, and may apply to HUD for a demolition/disposition approval for the Project as an alternative; and

WHEREAS, Seller has granted to Landlord a purchase option of near or even date herewith for the land comprising the Premises, exclusive of the improvements currently located thereon (such improvements being hereinafter referred to collectively as the "Buildings"); and

WHEREAS, Landlord wishes to grant to Tenant, and Tenant wishes to accept, an option to enter into a long term ground lease for the Premises (the "Ground Lease"), and provided that the Tenant exercises its option and the Ground Lease is executed, Seller has agreed to simultaneously sell to Tenant, and Tenant has agreed to purchase from Seller, the Buildings, all subject to the terms set forth in this Agreement.

NOW, THEREFORE, in consideration of one dollar (\$1.00) and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties agree as follows:

1. Grant of the Option to Lease; Option Period; Exercise of Option. The Landlord hereby grants to the Tenant the exclusive right and option to lease the Premises, or a portion thereof (the "Option") for a period extending through December 31, 2022 (the "Option Period"). The Ground Lease shall have a term of 95 years, or such shorter or longer term as may be required by the lenders and investors of the Tenant, and total rent shall be \$1.00 for the term of the Ground Lease, with Tenant obligated to pay all operating expenses for the Premises. The Ground Lease shall contain such other commercially reasonable terms as the parties may mutually agree upon.

- a. The Option and the obligation of each of the Landlord and Tenant shall be conditional upon: (i) approval by HUD of the RAD Conversion of the Property; or (ii) to the extent desired by Landlord, upon approval by HUD of a demolition disposition by Seller in order to remove the Premises from any Declarations of Trust currently encumbering the Premises, authority to transfer the Premises to Landlord or its assigns, and to enter into the Ground Lease, for the use of the Premises as a low and moderate income or mixed income multi-family housing project; (iii) receipt of all required municipal and state approvals for such project; (iv) and an award of Low Income Housing Tax Credits for such project; and (v) the exercise of the Landlord's Option to Purchase the Premises, the conveyance of the Premises to Landlord, and the conveyance of the Buildings to the Tenant in accordance with Section 3 hereof.
- b. Tenant may exercise the Option at any time during the Option Period by giving written notice to Landlord of its intent to exercise the Option (the "Option Notice"). Notice delivered to Landlord or sent to Landlord by certified mail, return receipt requested, at the above address shall be sufficient. Upon receipt of the Option Notice by Tenant, Landlord agrees that it will exercise its option to purchase the Premises from Seller, so that Landlord will have title to the Premises in order to enter into the Lease to Tenant.

2. Closing. If Tenant exercises the Option, the parties shall enter into a lease consistent with the terms of this Agreement within ninety (90) days after the date of the Option Notice.

3. Conveyance of the Buildings to the Tenant. If Tenant exercises its Option, Seller hereby agrees that simultaneous with the execution of the Ground Lease, Seller shall transfer to Tenant the Buildings, by good and sufficient Bill of Sale or other transfer instrument satisfactory to Tenant, conveying good and clear title thereto. The purchase price for the Buildings shall be equal to the amount necessary to obtain a release of the Buildings from the security instruments held by Banc of America Leasing & Capital, LLC, or its successors or assigns, given in connection with a certain Taxable QECB Equipment Lease/Purchase Agreement dated June 7, 2013, as amended, and a tax-exempt Lease/Purchase Agreement with Bank of America, N.A. dated June 7, 2013, based on the amount of leased equipment within the Buildings (the "Purchase Price").

4. Representations. The parties hereto represent, covenant and warrant to and agree with each other as follows:

- a. Seller represents, covenants and warrants that it is the current owner of the Premises, and, subject to approval by HUD, has the legal right, power and authority to enter into this Agreement and to perform all of its obligations hereunder, and the execution and delivery of this Agreement and the performance by Seller of the obligations hereunder will not conflict with, or result in breach of any regulation, order, judgment, injunction or decree of

any court or governmental authority or any agreement or instrument to which Seller is a party or by which Seller is bound. There are no agreements or contracts affecting the Premises or any use of the Premises that would not be terminable at will by Landlord without penalty from and after the Closing, other than those for which Seller will be seeking approval from HUD in connection with its demolition disposition application.

- b. Landlord represents, covenants and warrants that it holds an option to purchase the Premises from the current owner of the Premises, and, subject to approval by HUD, has the legal right, power and authority to enter into this Agreement and to perform all of its obligations hereunder, and the execution and delivery of this Agreement and the performance by Landlord of the obligations hereunder will not conflict with, or result in breach of any regulation, order, judgment, injunction or decree of any court or governmental authority or any agreement or instrument to which Landlord is a party or by which Landlord is bound. There are no agreements or contracts affecting the Premises or any use of the Premises that would not be terminable at will by Tenant without penalty from and after the execution of the Lease, other than those for which Landlord will be seeking approval from HUD in connection with its demolition disposition application.
- c. Tenant represents, covenants and warrants that Tenant has the legal right, power and authority to enter into this Agreement and to perform all of its obligations hereunder, and the execution and delivery of this Agreement and the performance by Tenant of its obligations hereunder: (i) have been duly authorized by all requisite action; and (ii) will not conflict with, or result in a breach of, any of the terms, covenants and provisions of the by-laws or articles of organization of Tenant or any law or any regulation, order, judgment, writ, injunction or decree of any court or governmental authority, or any agreement or instrument to which Tenant is a party or by which it is bound.

5. Notice. Whenever notice is given or required to be given by either of the parties hereto to the other, it shall be deemed to have been given if in writing and mailed by certified or registered mail, return receipt requested, postage prepaid, or hand delivered, addressed to the parties at the address set forth in the first paragraph above or to such other address(es) as either party shall have last designated by like notice in writing. All notices shall be effective upon hand delivery or mailing, whichever first occurs.

6. Further Assurances. The parties agree that up to and after the date of closing, they shall do such things and execute, acknowledge and deliver any and all additional instruments, documents and materials as either party may reasonably request to fully effectuate the purposes of this Agreement.

7. Tenant's Access. Tenant and others whom Tenant may designate shall have the right, at all reasonable times, at Tenant's sole cost and expense, risk and hazard, to enter upon the Premises to examine and/or show the same and make, or cause to be made,

engineering studies with respect thereto, including, without limitation, surveying, conducting test borings in order to determine sub-soil conditions, and in general conducting all other tests, analysis and studies of the Premises which Tenant deems prudent in connection with Tenant's intended development or use of the Premises. Tenant shall restore the Premises following any testing as reasonably as possible to its pre-existing condition, unless otherwise agreed by Landlord.

8. Construction of Agreement. This instrument, which may be executed in counterparts, is to be construed as a Maine contract, is to take effect as a sealed instrument, sets forth the entire contract between the parties with respect to the subject matter hereof, is binding upon and inures to the benefit of the parties hereto and their respective heirs, devisees, executors, administrators, successors and assigns, and may be canceled, modified or amended only by a written instrument executed by both the Landlord and Tenant. The captions are used only as a matter of convenience and are not to be considered a part of this Agreement or to be used in determining the intent of the parties to it. Time is of the essence with respect to all dates set forth in this Agreement.

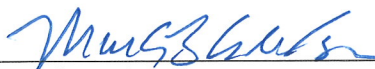
9. Risk of Loss. The risk of loss shall remain on Seller at all times until closing.

10. Assignment. Tenant may assign this Agreement to any party affiliated with Tenant or in which Tenant or an affiliate of Tenant has an interest.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

LANDLORD:

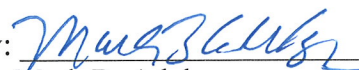
PORTLAND HOUSING DEVELOPMENT
CORPORATION

By: 
Mark B. Adelson
Its President

TENANT:

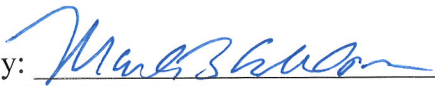
RIVERTON PARK, LP

By: Riverton Park Development, LLC,
its General Partner
By: Portland Housing Development Corporation
Its Sole Member and Manager

By: 
Mark B. Adelson
Its President

SELLER:

PORTLAND HOUSING AUTHORITY

By: 
Mark B. Adelson
Its Executive Director

STATE OF MAINE
COUNTY OF CUMBERLAND, SS.

September 10, 2019

Personally appeared the above-named, Mark B. Adelson in his capacities as President of Portland Housing Development Corporation, and as Executive Director of Portland Housing Authority and acknowledged the foregoing instrument to be his free act in such capacities and the free act and deed of said Portland Housing Development Corporation and Portland Housing Authority.

Before me,


Notary Public/Attorney at Law
JERE SIROLIS
Notary Public, Maine
My Commission Expires July 25, 2021

Printed Name

BOARD OF DIRECTORS

Cheryl A. Sessions, President
Kristin Blum, Vice-President
Luisa Deprez, Director
Christian MilNeil, Director
Monique Mutumwinka, Director
Shirley Peterson, Director
Thomas Valleau, Director



14 Baxter Boulevard
Portland, ME 04101
Office: 207-773-4753
Fax: 207-761-5886

February 3, 2022

Charles Tetelman, Planner
Planning Division
City of Portland
389 Congress Street
Portland, Maine 04101

**RE: Neighborhood Meeting Certification
Riverton Park, 2 Riverton Drive
Rezoning Text & Map Amendment, ZN-001811-2021**

Dear Charles,

I, Tyler Plante, Development Officer for Portland Housing Development Corporation (PHDC) and Portland Housing Authority (PHA), hereby certify that a neighborhood meeting was held on Wednesday February 2, 2022 at 5:00pm via Virtual Meeting for the proposed project located at 2 Riverton Drive.

I also certify that on January 20, 2022, 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 (1,000 feet for subdivisions within an industrial zone or industrial zone changes).
2. Residents on the "interested parties" list.

Signed,

A handwritten signature in blue ink that reads "Tyler Plante".

Tyler Plante
2/3/22

Attachments

1. Copy of the notice sent
2. Sign-in sheet
3. Record of feedback



Neighborhood Meeting for the Riverton Park Redevelopment & Renovation Project

January 20, 2022

Dear Neighbor,

Portland Housing Development Corporation, an affiliate of Portland Housing Authority, has submitted a Zoning Map and Text Amendment application to rezone Riverton Park (2 Riverton Drive) from R-5 Residential to B-2 Community Business and R-5a Residential, along with text amendments to allow Place of Assembly uses greater than 10,000 square feet in size within the R-5a Residential zone. These actions are sought to facilitate improvements to the 141-unit Riverton Park campus under a future site plan application.

Please join us for a virtual neighborhood meeting to discuss our Riverton Park plans:

- Application to rezone Riverton Park from R-5 Residential to B-2 Community Business and R-5a Residential zones, and proposed text amendments.
- Conversion of the Riverton Park Public Housing to the Section 8 Program.
- Redevelopment and renovation project of Riverton Park and future site plan application.

Meeting Date: Wednesday, February 2nd, 2022

Meeting Time: 5:00 PM

Meeting Location: Virtual Meeting (link below)

<https://meetings.vonage.com/419782851>

A project and plan summary is available for viewing on the Citizen Self Service Portal (<https://css.portlandmaine.gov>) by referencing Plan Number ZN-001811-2021. Interpreters available. If you have any questions, please call Tyler Plante at 207-221-8028.

Sincerely,

Cheryl A. Sessions
President

Note: Under the City of Portland land use code, an applicant for a major site plan, master development plan, subdivision of over five lots, or zoning map amendment is required to hold a neighborhood meeting within 30 days of an application being deemed complete and no less than seven calendar days before a public hearing. Should you wish to offer additional comments on this proposed development, you may forward them by e-mail to planning@portlandmaine.gov or by mail to the Planning and Urban Development Department, Planning Division, 4th Floor, 389 Congress Street Portland, ME 04101.

Neighborhood Meeting Sign-In Sheet

Date: Wed 2/2/22

Location: Virtual Meeting Via Vonage Business Meeting

Proposed Project Name & Address: Riverton Park Rezoning Application, 2 Riverton Drive

Members of the Public in Attendance:

Name	Email

Developer and Consultant Team in Attendance:

Name	Email
Cheryl Sessions, Executive Director at PHA & President of PHDC	csessions@porthouse.org
Brian Frost, Deputy Director at PHA	bfrost@porthouse.org
Tyler Plante, Development Officer at PHA & PHDC	tplante@porthouse.org
Cora Lanclos, Director of Property Management at PHA	clanclos@porthouse.org
Christie Gaydos, Family Stability Coach at PHA	cgaydos@porthouse.org
Rebecca Bagley, Architect at CWS Architects	rbagley@cwsarch.com
Matt Phillips, Landscape Architect at Carroll Associates	mphilips@carroll-assoc.com

Commissioners

Kristin Blum, Chair
Monique Mutumwinka, Vice Chair
Luisa Deprez, Commissioner
Christian MilNeil, Commissioner
Shirley Peterson, Commissioner
Thomas Valleau, Commissioner



Cheryl A. Sessions

Executive Director
14 Baxter Blvd.
Portland, Maine 04101
Office: 207-773-4753
Fax: 207-761-5886
www.porthouse.org

Riverton Park Rezoning Neighborhood Meeting Notes

Wed 2/2/22 at 5:00pm

Virtual Meeting through Vonage Business Meeting

PRESENTERS:

Cheryl Sessions, Executive Director at PHA and President of PHDC
Brian Frost, Deputy Director of PHA
Tyler Plante, Development Officer at PHA & PHDC
Cora Lanclos, Director of Property Management at PHA
Christie Gaydos, Family Stability Coach at PHA
Becky Bagley, Architect at CWS Architects
Matt Phillips, Landscape Architect at Carroll Associates Landscape Architects

START TIME

Meeting was scheduled to commence at 5:00pm.

NOTES

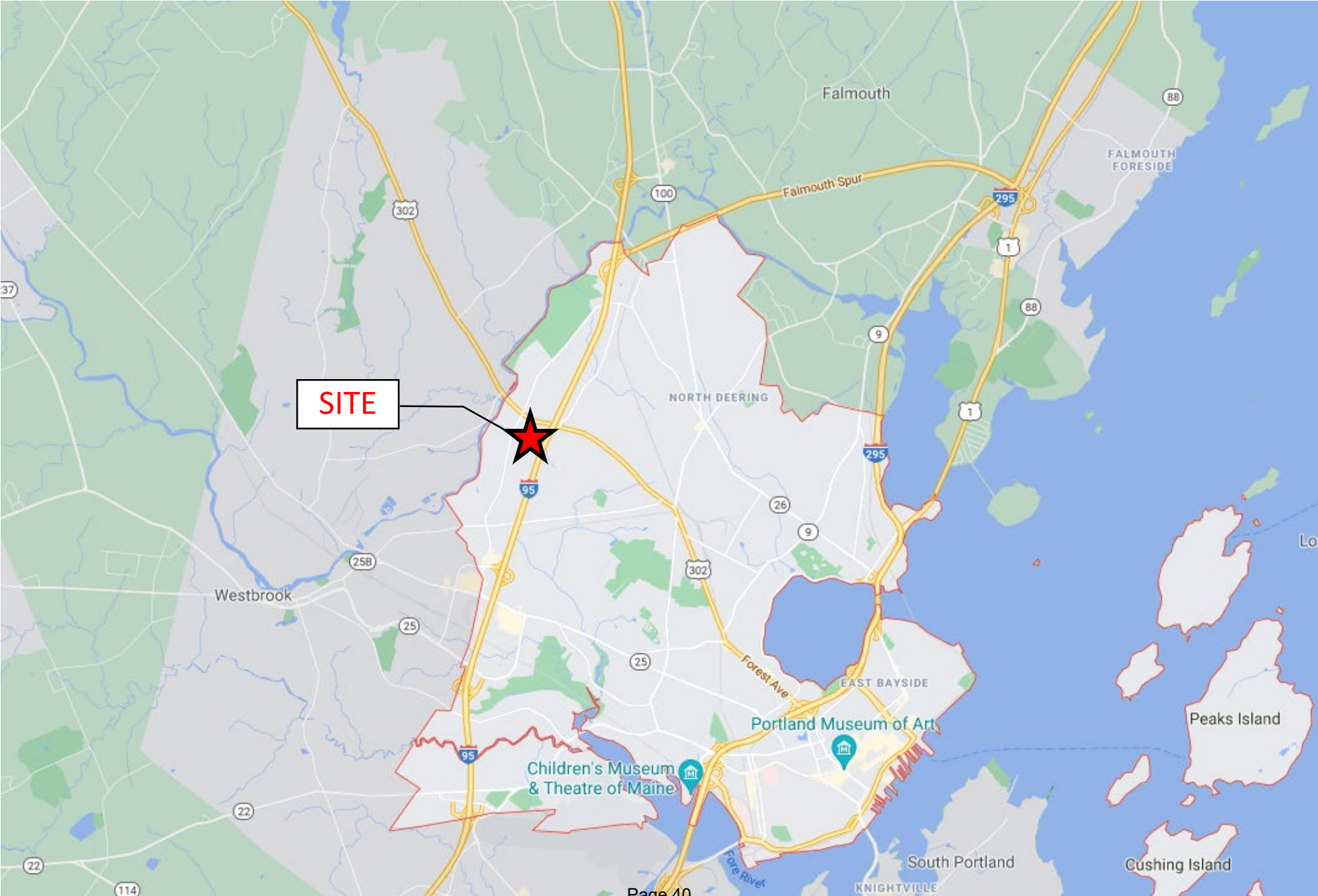
No attendees arrived for the meeting.

END TIME

Presenters waited until 5:20pm and then concluded the meeting.

Riverton Park

2 Riverton Drive, Portland, ME 04103



Riverton Park

2 Riverton Drive, Portland, ME 04103



Riverton Park

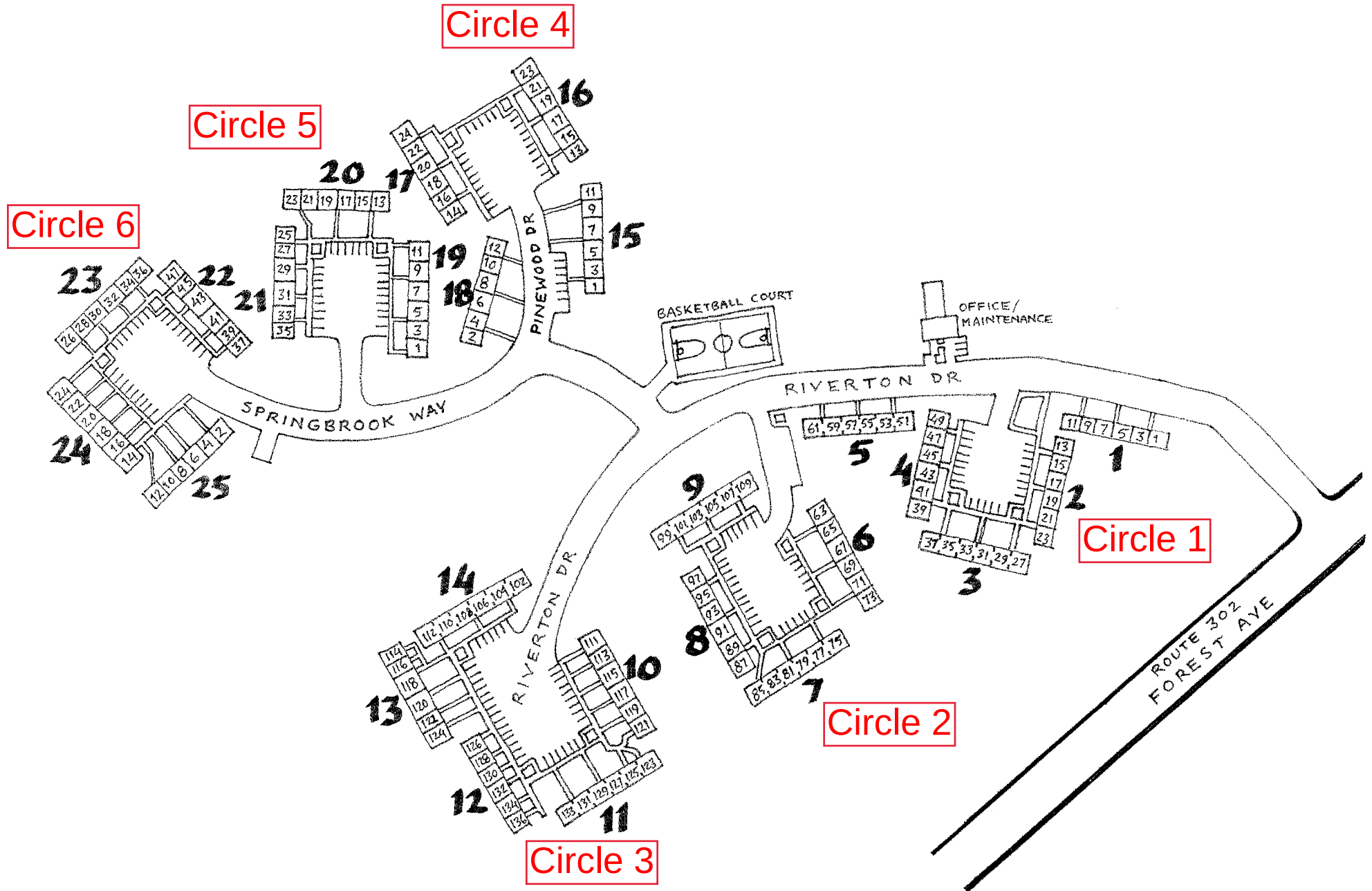
2 Riverton Drive, Portland, ME 04103



Riverton Park

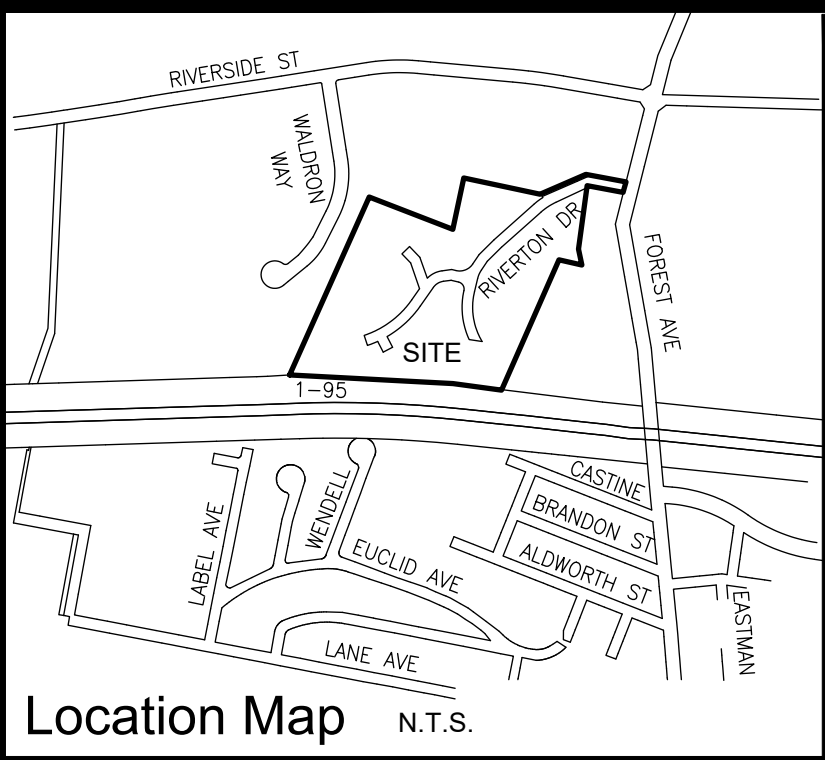
2 Riverton Drive, Portland, ME 04103





RIVERTON PARK ME 3-8

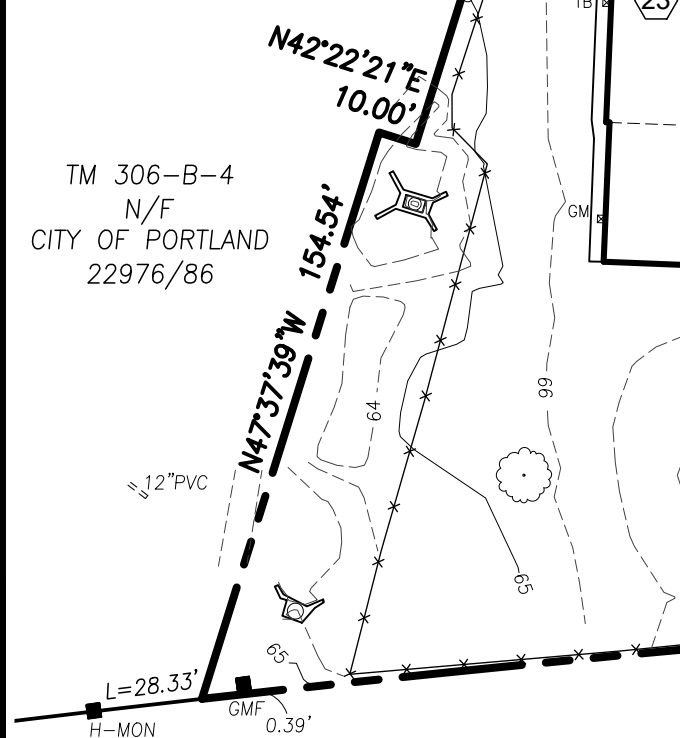
SIDEWALK AREA = 21,600
 PARKING AREA = 53,800 sq ft



CURVE	RADIUS	ARC LENGTH	CHORD BEARING	CHORD LENGTH
C1	298.86'	86.07'	S13°24'09"E	85.77'
C2	126.00'	45.08'	S46°14'11"E	44.84'
C3	315.00'	176.74'	S72°28'08"E	173.47'
C4	385.00'	197.16'	N72°58'42"W	194.77'
C5	34.32'	63.34'	S77°58'42"W	46.13'
C6	70.00'	57.83'	S11°19'07"E	56.20'
C7	498.00'	215.87'	S22°34'03"E	214.19'
C8	498.00'	51.85'	S01°24'42"E	51.82'
C9	448.00'	285.84'	N16°42'27"W	281.02'
C10	120.00'	80.38'	N06°50'30"W	78.88'
C11	74.52'	90.32'	N01°15'50"W	84.89'
C12	348.88'	53.16'	N17°17'13"W	53.11'

LINE BEARING	DISTANCE
L1	S04°59'08"E 188.30'
L2	S21°39'09"E 250.05'
L3	S24°39'09"E 33.56'
L4	S35°59'09"E 49.52'
L5	S56°29'09"E 64.00'
L6	S88°27'09"E 64.38'
L7	S28°27'21"W 65.07'
L8	N88°27'09"W 39.00'
L9	S13°27'21"W 35.82'
L10	S12°20'51"W 36.84'
L11	N34°59'09"W 29.14'
L12	S14°59'09"E 77.69'
L13	N82°43'42"E 67.00'
L14	S01°16'19"E 50.00'
L15	S82°43'42"W 67.00'
L16	N88°25'39"W 50.00'
L17	N34°59'09"W 64.00'
L18	N89°10'04"W 18.04'
L19	N89°10'04"W 110.87'
L20	S66°09'16"W 69.53'
L21	N23°50'44"W 50.00'
L22	N66°09'16"E 70.47'
L23	S89°10'04"E 105.57'
L24	N12°20'51"E 46.18'
L25	N33°27'21"E 20.91'
L26	N35°59'09"W 54.48'
L27	N24°39'09"W 99.54'
L28	N21°39'09"W 251.35'
L29	S77°04'43"W 4.36'
L30	N05°09'09"W 2.00'

- Legend**
- IRON PIPE OR ROD FOUND
 - MONUMENT FOUND
 - UTILITY POLE
 - MANHOLE
 - ELECTRIC/GAS METER
 - TELEPHONE BOX
 - SIGN
 - CATCH BASIN
 - HYDRANT
 - WATER VALVE OR SHUTOFF
 - GAS VALVE
 - LIGHT POLE
 - DECIDUOUS TREE
 - CONIFEROUS TREE
 - CHAIN LINK FENCE
 - CURB
 - OHW
 - OVERHEAD WIRES
 - 1' CONTOUR
 - SD
 - SATELLITE DISH
 - BUILDING NUMBER
 - CAPPED IRON ROD TO BE SET
 - CAPPED IRON ROD FOUND
 - N/F
 - NOW OR FORMERLY
| 000/000 | DEED BOOK / PAGE |
| CONC. | CONCRETE |
| CLF | CHAIN LINK FENCE |
| MB | MAILBOX |
| EM | ELECTRIC METER |
| GM | GAS METER |
| TB | TELEPHONE BOX |
| CMF | CONCRETE MONUMENT FOUND |
| GMF | GRANITE MONUMENT FOUND |



Utility Note

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. CALL 1-888-DIGSAFE AT LEAST THREE BUSINESS DAYS BEFORE PERFORMING ANY CONSTRUCTION. DUE TO OSHA COMPANED SPACE REQUIREMENTS, ALL INVERTS AND PIPE SIZES MUST BE VERIFIED PRIOR TO ANY CONSTRUCTION.

Flood Zone Note

BY GRAPHIC PLOTTING ONLY, THIS PROPERTY IS LOCATED IN ZONE X, AREAS OF MINIMAL FLOODING, ON THE FLOOD INSURANCE RATE MAP, COMMUNITY PANEL NO. 230051 0006C, WHICH BEARS AN EFFECTIVE DATE OF DECEMBER 8, 1998.

Possible Encroachments

Zoning Information

NONE PROVIDED



Legal Description

A CERTAIN LOT OR PARCEL OF LAND, WITH THE BUILDINGS THEREON, SITUATED ON THE SOUTHWESTERLY SIDE OF FOREST AVENUE IN THE CITY OF PORTLAND, COUNTY OF CUMBERLAND AND STATE OF MAINE, BEING BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE SOUTHWESTERLY SIDE OF SAID FOREST AVENUE, WHICH POINT IS 386.56 FEET SOUTHEASTERLY, ON A CURVE OF S 39° 05' 30" E, FROM THE INTERSECTION OF THE SOUTHWESTERLY SIDE LINE OF FOREST AVENUE WITH THE SOUTHEASTERLY SIDE LINE OF RIVERSIDE STREET AND 50.21 FEET NORTHWESTERLY ALONG FOREST AVENUE FROM AN IRON PIN AT THE MOST NORTHERLY CORNER OF LAND OF THE CORNERSTONE MASONIC CORPORATION; THENCE S 45° 35' W, ALONG LAND OF THIS GRANITOR 188.75 FEET TO A POINT; THENCE S 11° 35' W, 230 FEET TO A POINT; THENCE S 47° W, 360 FEET TO A POINT; THENCE S 43° E, 242 FEET TO A POINT; THENCE S 56° 07' 30" W, 413.61 FEET TO A POINT; AND LAND CONVEYED BY NEAL D. LUNT TO MARY J. FIELD, ET AL, BY DEED DATED OCTOBER 30, 1905 AND RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS, BOOK 776, PAGE 165; THENCE S 30° 53' 30" E, ALONG SAID FIELD LAND, PART OF WHICH IS NOW OR FORMERLY OWNED BY CHARLES KAATZ, 885.13 FEET TO A MONUMENT AT THE WESTERLY CORNER OF LAND CONVEYED BY ELLIE K. HAWES TO MAINE TURNPIKE AUTHORITY BY DEED DATED OCTOBER 5, 1954 AND RECORDED IN SAID REGISTRY OF DEEDS, IN BOOK 2195, PAGE 453; THENCE NORTHEASTERLY ALONG SAID MAINE TURNPIKE AUTHORITY LAND 750.40 FEET TO A MONUMENT; THENCE N 42° 41' 30" E, ALONG SAID TURNPIKE LAND, 226.06 FEET TO AN IRON PIN AND THE SOUTHWESTERLY SIDE LINE OF LAND CONVEYED BY JOSEPH HAWKES TO ALEXANDER BAILEY BY DEED DATED FEBRUARY 26, 1868, RECORDED IN SAID REGISTRY OF DEEDS, IN BOOK 360, PAGE 337, AND NOW OR FORMERLY OWNED BY WALTER F. HAWKES; THENCE N 31° 13' 30" W, ALONG SAID HAWKES LAND 656.92 FEET TO A MONUMENT; THENCE N 47° 52' E, ALONG SAID HAWKES LAND 108.55 FEET TO AN IRON PIN AND LAND OF CORNERSTONE MASONIC CORPORATION; THENCE N 66° 56' 30" W, ALONG SAID CORPORATION LAND 75.27 FEET TO AN IRON PIN; THENCE N 47° 17' 30" W, 295.21 FEET TO A MONUMENT AT THE NORTHWESTERLY CORNER OF SAID CORPORATION LAND; THENCE N 45° 35' E, ALONG SAID CORPORATION LAND 168.81 FEET TO THE SAID IRON PIN ON THE SOUTHWESTERLY SIDE OF FOREST AVENUE AT THE MOST NORTHERLY CORNER OF SAID CORPORATION LAND; THENCE NORTHWESTERLY ALONG SAID FOREST AVENUE 50.21 FEET TO THE POINT OF BEGINNING.

Plan References

- "PLAN OF LAND IN PORTLAND, MAINE FOR F.D. RICH COMPANY" DEC. 31, 1968, REV. 3 3-9-70 BY OWEN HASKELL, INC.
- "SITE PLAN, FAMILY TURNKEY HOUSING FOR PORTLAND HOUSING AUTHORITY, PORTLAND, MAINE" JAN. 14, 1971 BY LEASURE, TUTTLE & LEE ARCHITECTS & ENGINEERS.
- "CITY OF PORTLAND, MAINE DEPARTMENT OF PUBLIC WORKS, RIVERTON DRIVE, PINWOOD ROAD & SPRINGBROOK WAY" NOVEMBER 6, 1973.
- "AMENDED SUBDIVISION PLAN ON FOREST AVENUE, PORTLAND, MAINE MADE FOR OWNER: WELLESLEY ESTATES, LLC" OCT. 8, 2002 REV. 4 7-15-03 BY OWEN HASKELL, INC.
- "RECORDING PLAT OF: SAWYER INDUSTRIAL PARK, RIVERSIDE STREET, PORTLAND, MAINE DEVELOPED BY: SAWYER GROUP OF COMPANIES" MARCH 6, 1989 BY SEBAGO TECHINCS, INC. RECORDED IN CUMBERLAND COUNTY REGISTRY OF DEEDS IN PLAN BOOK 178, PAGE 50.
- "EXISTING CONDITIONS PLAN OF: TRITON FOODMART / GAS STATION, 1884 FOREST AVENUE, PORTLAND, MAINE FOR: JOHN CHAU, SHEET 2 OF 9" AUGUST 2011 REV. D 3/19/12 BY SEBAGO TECHINCS.

General Notes

- OWNER OF RECORD: PORTLAND HOUSING AUTHORITY, 14 BAXTER BOULEVARD, PORTLAND, MAINE C.C.R.D. BOOK 3280 PAGE 329 C.C.R.D. BOOK 4549 PAGE 293
- LOCUS IS SHOWN AS LOT 12 BLOCK B ON TAX MAP 327.
- BEARINGS ARE BASED ON MAINE STATE PLANE COORDINATE SYSTEM WEST ZONE NAD 83 PER POST PROCESS GPS OBSERVATIONS.
- ELEVATIONS BASED ON NGVD 29 PER POST PROCESS GPS OBSERVATIONS.
- NO EVIDENCE OF RECENT EARTH MOVING WORK, BUILDING CONSTRUCTION, BUILDING ADDITIONS, OR RECENT STREET OR SIDEWALK CONSTRUCTION OR REPAIRS WAS OBSERVED.
- NO PROPOSED CHANGES IN STREET LINES IS KNOWN BY THIS SURVEYOR.
- AT THE TIME OF THE SURVEY NEW GAS LINES WERE BEING INSTALLED, THE GAS LINES SHOWN HEREON REPRESENT THE LOCATION OF THE ORIGINAL GAS LINES.
- STATE OF MAINE LIDAR DATA WAS USED TO GENERATE CONTOURS WITHIN THE GULLIES.

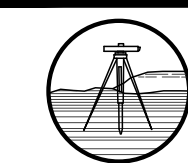
ALTA / NSPS Land Title Survey

Riverton Park
Forest Avenue
Portland, Cumberland County, Maine
Made For
Portland Housing Authority
14 Baxter Boulevard, Portland, Maine

Surveyor's Certification

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1, 2, 3, 4, 6(A), 11, 13, 14, 16, 17, 19 AND 21 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON APRIL 23, 2019.

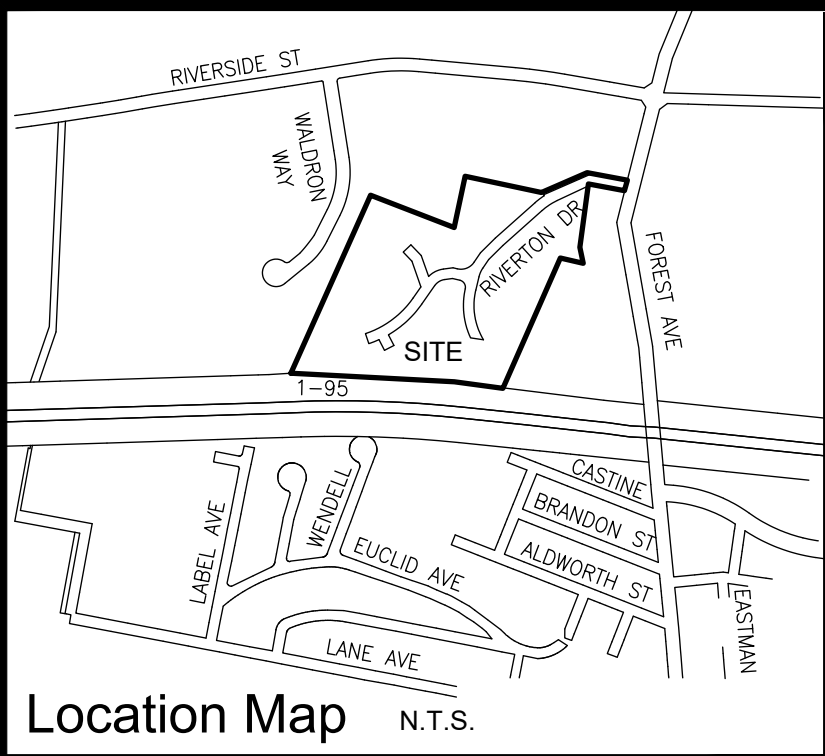
RANDY R. LOUBIER
PROFESSIONAL LAND SURVEYOR NO. 2407
DATE OF PLAT OR MAP: APRIL 30, 2019
DATE OF LAST REVISION:



OWEN HASKELL, INC.

PROFESSIONAL LAND SURVEYORS
390 U.S. ROUTE ONE, UNIT 10, FALMOUTH, MAINE 04105

DRAWN BY: RS / JLW	FIELD BOOK: FILE	JOB NO.: 2019-042 P
CHECKED BY: RRL	SCALE: 1" = 50'	DRWG. NO. 1



Utility Note

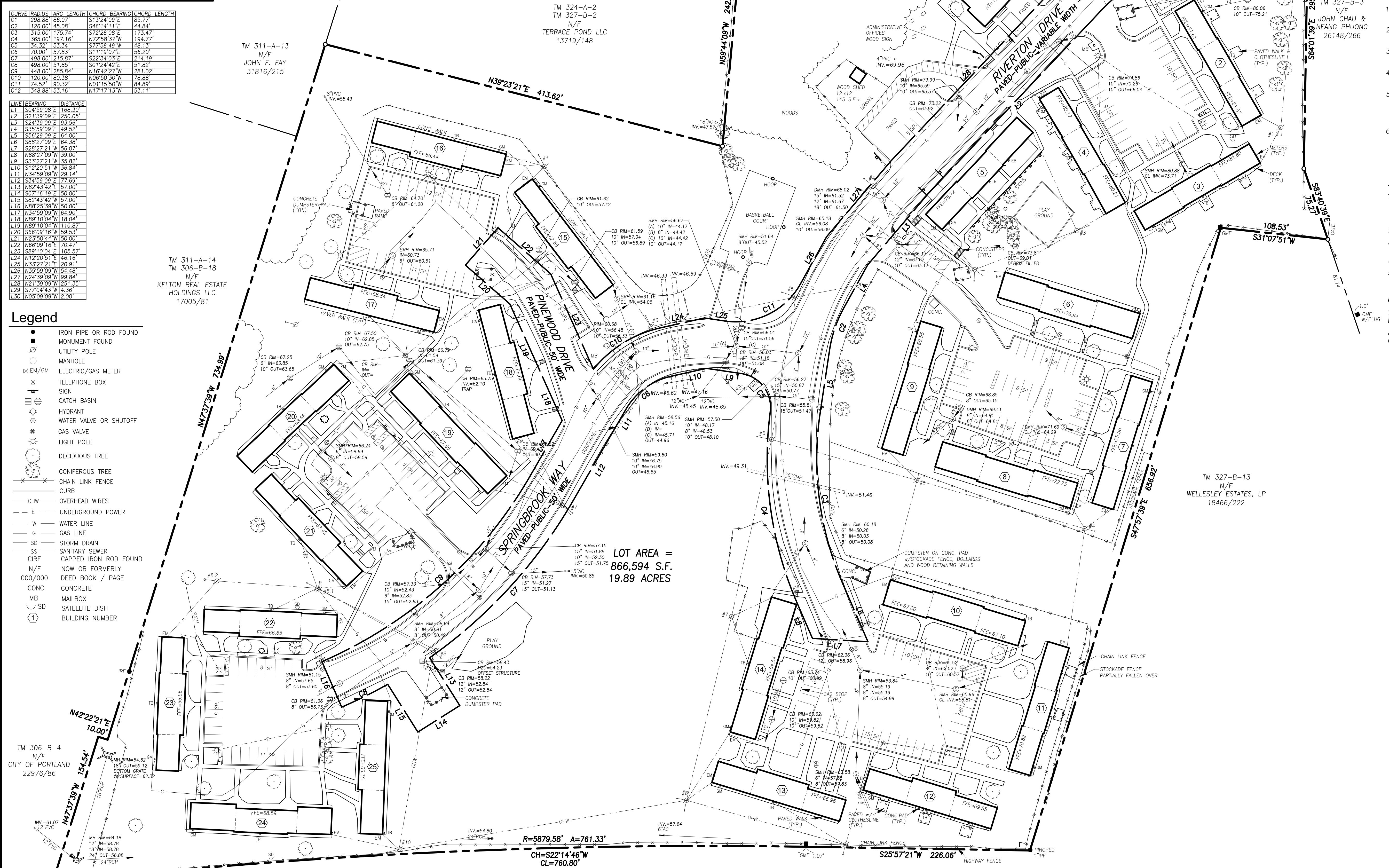
THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. CALL 1-888-DIGSAFE AT LEAST THREE BUSINESS DAYS BEFORE PERFORMING ANY CONSTRUCTION. DUE TO OSHA CONFINED SPACE REQUIREMENTS, ALL INVERTS AND PIPE SIZES MUST BE VERIFIED PRIOR TO ANY CONSTRUCTION.

CURVE	RADIUS	ARC LENGTH	CHORD BEARING	CHORD LENGTH
C1	268.88	66.07	S13°24'09"E	65.77
C2	126.00	46.08	S46°14'11"E	44.84
C3	315.00	175.74	S72°28'08"E	173.47
C4	365.00	197.16	N72°58'37"W	194.77
C5	34.32	63.34	S77°58'42"W	46.13
C6	70.00	57.83	S11°19'07"E	56.20
C7	498.00	215.87	S22°34'03"E	214.19
C8	498.00	51.85	S01°24'42"E	51.82
C9	448.00	285.84	N16°42'27"W	281.02
C10	120.00	80.38	N06°50'30"W	78.88
C11	74.52	90.32	N01°15'50"W	84.89
C12	348.88	53.16	N17°17'13"W	53.11

LINE BEARING	DISTANCE
L1	S04°59'08"E 188.30
L2	S21°39'09"E 250.05
L3	S24°39'09"E 93.56
L4	S39°59'09"E 49.22
L5	S56°29'09"E 64.00
L6	S86°27'09"E 64.38
L7	S26°27'09"W 65.07
L8	N88°27'09"W 39.00
L9	S13°27'21"W 35.82
L10	S17°20'51"W 36.84
L11	N34°59'09"W 29.14
L12	S34°59'09"E 77.69
L13	N62°43'42"E 67.00
L14	S07°16'19"E 50.00
L15	S87°43'42"W 67.00
L16	N88°25'39"W 50.00
L17	N34°59'09"W 64.50
L18	N89°10'04"W 18.04
L19	N89°10'04"W 110.87
L20	S66°09'16"W 19.53
L21	N2°50'44"W 50.00
L22	N66°09'16"E 70.47
L23	S89°10'04"E 105.57
L24	N17°20'51"E 46.16
L25	N33°27'21"E 20.91
L26	N35°59'09"W 54.48
L27	N24°39'09"W 99.94
L28	N21°39'09"W 251.35
L29	S77°04'43"W 14.36
L30	N05°09'09"W 2.00

Legend

- IRON PIPE OR ROD FOUND
- MONUMENT FOUND
- UTILITY POLE
- MANHOLE
- ELECTRIC/GAS METER
- TELEPHONE BOX
- CATCH BASIN
- HYDRANT
- WATER VALVE OR SHUTOFF
- GAS VALVE
- LIGHT POLE
- DECIDUOUS TREE
- CONIFEROUS TREE
- CHAIN LINK FENCE
- CURB
- OHW
- OVERHEAD WIRES
- UNDERGROUND POWER
- W
- WATER LINE
- G
- GAS LINE
- SD
- STORM DRAIN
- SS
- SANITARY SEWER
- CAPPED IRON ROD FOUND
- CHFB
- N/F
- NOW OR FORMERLY
- DEED BOOK / PAGE
- CONC.
- CONCRETE
- MB
- MAILBOX
- SD
- SATELLITE DISH
- BUILDING NUMBER



Plan References

- "PLAN OF LAND IN PORTLAND, MAINE FOR F.D. RICH COMPANY" DEC. 31, 1968, REV. 3 3-9-70 BY OWEN HASKELL, INC.
- "SITE PLAN, FAMILY TURNKEY HOUSING FOR PORTLAND HOUSING AUTHORITY, PORTLAND, MAINE" JAN. 14, 1971 BY LEASURE, TUTTLE & LEE ARCHITECTS & ENGINEERS.
- "CITY OF PORTLAND, MAINE DEPARTMENT OF PUBLIC WORKS, RIVERTON DRIVE, PINWOOD ROAD & SPRINGBROOK WAY" NOVEMBER 6, 1973.
- "AMENDED SUBDIVISION PLAN ON FOREST AVENUE, PORTLAND, MAINE MADE FOR OWNER: WELLESLEY ESTATES, LLC" OCT. 8, 2002 REV. 4 7-15-03 BY OWEN HASKELL, INC.
- "RECORDING PLAT OF: SAWYER INDUSTRIAL PARK, RIVERSIDE STREET, PORTLAND, MAINE DEVELOPED BY: SAWYER GROUP OF COMPANIES" MARCH 6, 1989 BY SEBAGO TECHNICS, INC. RECORDED IN CUMBERLAND COUNTY REGISTRY OF DEEDS IN PLAN BOOK 178, PAGE 50.
- "EXISTING CONDITIONS PLAN OF: TRITON FOODMART / GAS STATION, 1884 FOREST AVENUE, PORTLAND, MAINE FOR: JOHN CHAU, SHEET 2 OF 9" AUGUST 2011 REV. D 3/19/12 BY SEBAGO TECHNICS.

General Notes

- OWNER OF RECORD: PORTLAND HOUSING AUTHORITY, 14 BAXTER BOULEVARD, PORTLAND, MAINE C.C.R.D. BOOK 3280 PAGE 329 C.C.R.D. BOOK 4549 PAGE 293
- LOCUS IS SHOWN AS LOT 12 BLOCK B ON TAX MAP 327.
- BEARINGS ARE BASED ON MAINE STATE PLANE COORDINATE SYSTEM WEST ZONE NAD 83 PER POST PROCESS GPS OBSERVATIONS.
- ELEVATIONS BASED ON NGVD 29 PER POST PROCESS GPS OBSERVATIONS.
- NO EVIDENCE OF RECENT EARTH MOVING WORK, BUILDING CONSTRUCTION, BUILDING ADDITIONS, OR RECENT STREET OR SIDEWALK CONSTRUCTION OR REPAIRS WAS OBSERVED.
- NO PROPOSED CHANGES IN STREET LINES IS KNOWN BY THIS SURVEYOR.
- AT THE TIME OF THE SURVEY NEW GAS LINES WERE BEING INSTALLED. THE GAS LINES SHOWN HEREON REPRESENT THE LOCATION OF THE ORIGINAL GAS LINES.
- STATE OF MAINE LIDAR DATA WAS USED TO GENERATE CONTOURS WITHIN THE GULLIES.

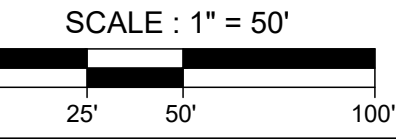
ALTA / NSPS Land Title Survey
Riverton Park
Forest Avenue
Portland, Cumberland County, Maine
Made For
Portland Housing Authority
14 Baxter Boulevard, Portland, Maine

RANDY R. LOUBIER
PROFESSIONAL LAND SURVEYOR NO. 2407
DATE OF PLAT OR MAP: APRIL 30, 2019
DATE OF LAST REVISION:

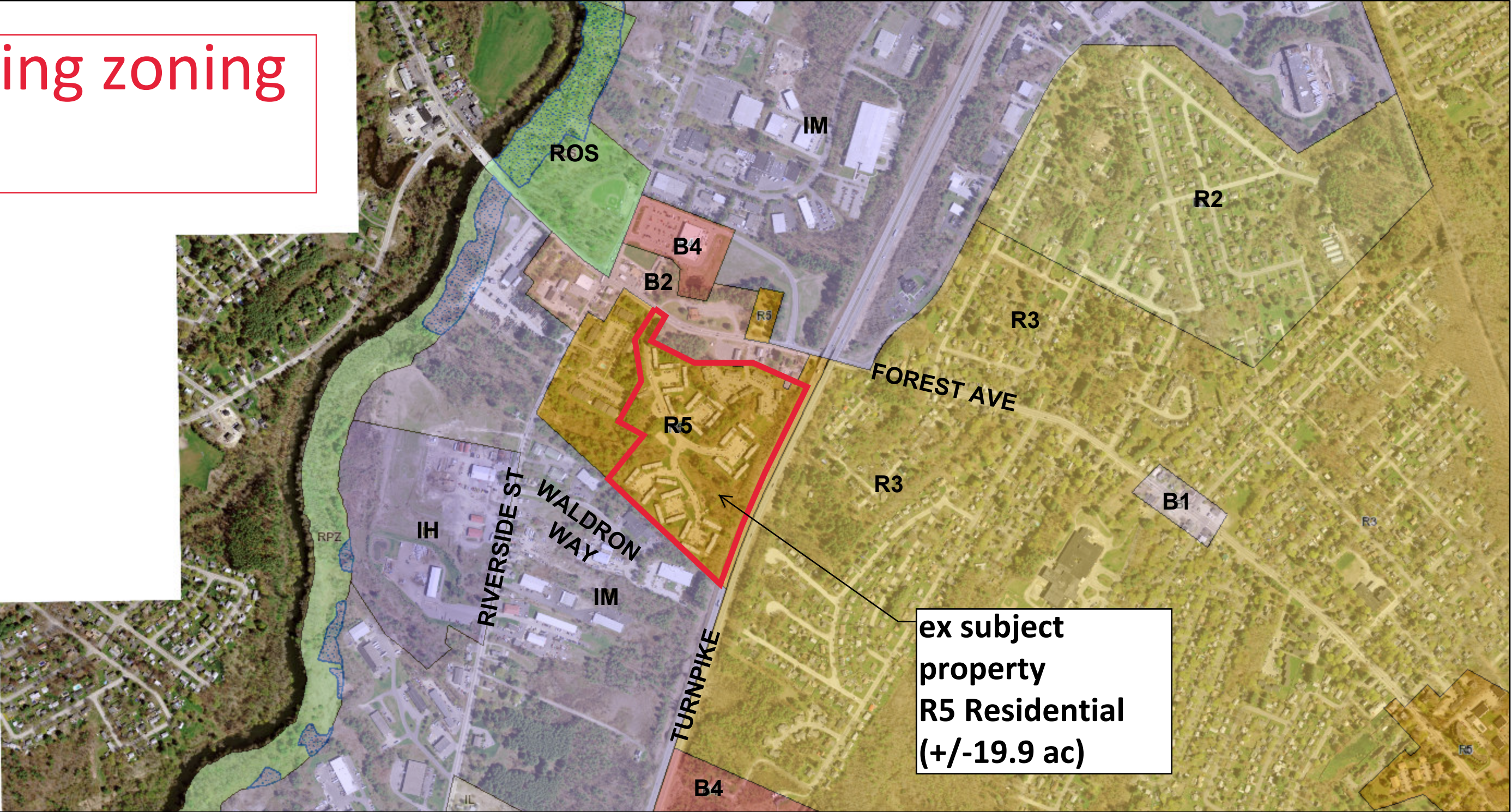


OWEN HASKELL, INC.
PROFESSIONAL LAND SURVEYORS
390 U.S. ROUTE ONE, UNIT 10, FALMOUTH, MAINE 04105

DRAWN BY: RS / JLW	FIELD BOOK: FILE	JOB NO. 2019-042 P
CHECKED BY: RRL	SCALE: 1" = 50'	DRWG. NO. 2



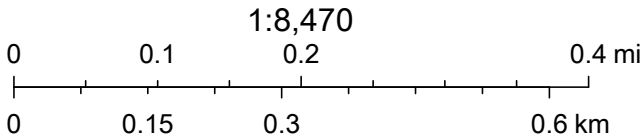
existing zoning
map



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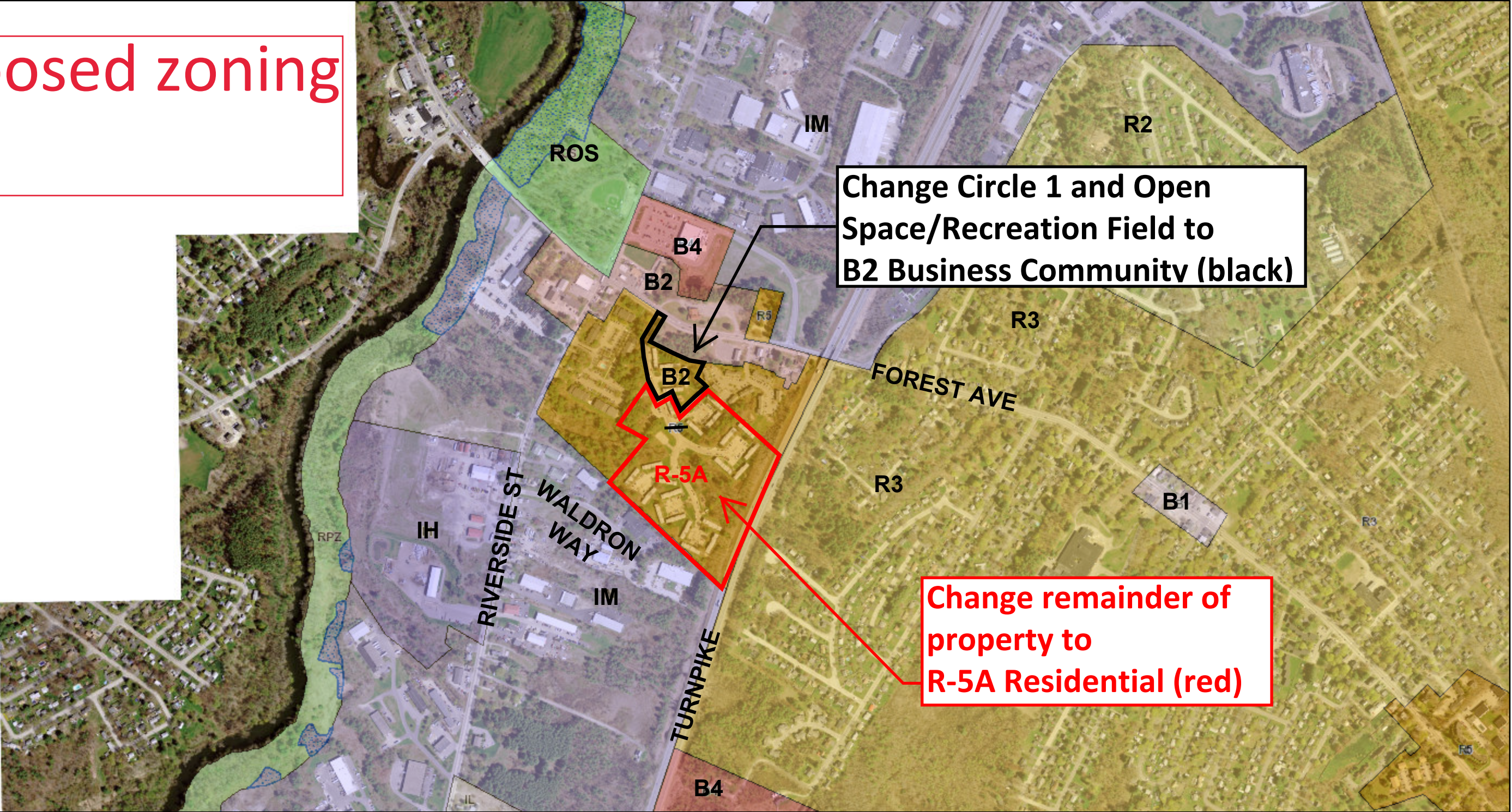
Zoning

R3 Residential	AB Airport Business	B3* Downtown Business	IS-FBC India St Form Based	ROS Recreation Open Space
IR-1 Island Residential	OP Office Park	B3c Downtown Business	IL Industrial - Low Impact	WPDZ Waterfront
IR-2 Island Residential	B1 Neighborhood Business	B4 Commercial Business	ILb Industrial - Low Impact	WCZ* Waterfront
IR-3 Island Residential	B1b Neighborhood Business	B5 Urban Commercial Business	IM Industrial - Moderate Impact	WSUZ Waterfront
I-B Island Business	B2 Business Community	B5b Urban Commercial Business	IMb Industrial - Moderate Impact	EWPZ Waterfront
I-TS Island Transfer Station	B2b Business Community	B6 Urban Commercial Business	IH Industrial - High Impact	Conditional or Contract (see list); C55
R1 Residential	B2c Business Community	B7 Urban Commercial Business	RPZ Resource Protection	Overlay Zones
R2 Residential				Downtown Entertainment (DEOZ)
R3 Residential				
R4 Residential				
R5 Residential				
R-5A Residential				
R6 Residential				
R-6A Residential				
RP Residential Professional				



City of Portland, DPS

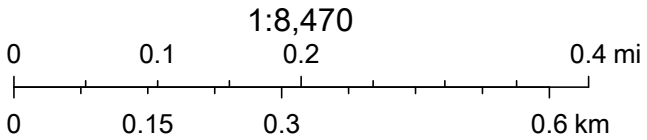
proposed zoning
map



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Zoning

R3 Residential	AB Airport Business	B3* Downtown Business	IS-FBC India St Form Based	ROS Recreation Open Space
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R3 Residential				
R4 Residential				
R5 Residential				
R-5A Residential				
R6 Residential				
R-6A Residential				
RP Residential Professional				



City of Portland, DPS



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OWNER

RIVERTON PARK, LP
14 BAYTER BLVD
PORTLAND, MAINE 04101

PROJECT

RIVERTON PARK
COMMUNITY CENTER –
MAINTENANCE BUILDING
2 RIVERTON DRIVE
PORTLAND, MAINE 04103

CONCEPT PLAN
10.14.2021

CWS PROJECT NUMBER: 15.021

REVISIONS	DATE	DESCRIPTION

DRAWING NUMBER
C1.0

SCALE: AS SHOWN
DATE: 1/12/2019

Planning Board Report

Planning and Urban Development Department



Deering Avenue Residences
 387 Deering Avenue
 Major Site Plan Review
 PL-001495-2021
 Sawyer Island Development, LLC, Applicant

Submitted to:	Portland Planning Board	Prepared By:	Jimmy Dealaman, Planner
Public Hearing Date:	February 22, 2022	Date:	February 18, 2022

I. INTRODUCTION

Sawyer Island Development, LLC is seeking approval for a Major Site Plan application to facilitate development at 387 Deering Avenue that would include constructing two 9,168 square foot multiplex buildings, each consisting of four residential rental units. Together, the two buildings would comprise approximately 19,528 square feet containing a total of eight units. The development program also includes consists of eight outdoor vehicle parking spaces and eight garage parking spaces for a total of 16 vehicle spaces.



Figure 1: Development Site at 387 Deering Avenue

The site (Figure 1) is made up of seven parcels with a combined lot area of 38,309 square feet and is located in the R-5 Residential Zone in the Oakdale neighborhood. This application is being referred to the Planning Board for compliance with the Site Plan Standards within the City of Portland's Land Use Code, Section 14.1.

The Planning and Urban Development Department mailed 126 notices advertising this meeting to property owners within 500 feet of the site. A legal advertisement ran in the February 12th and 13th, 2022 editions of the Portland Press Herald.

The Planning Board held a workshop for this project on June 22, 2021 (See Section V for more information).

Owner/Applicant: Sawyer Island Development, LLC
Engineer: William Walsh; Norm Chamberlain, Walsh Engineering Associates, Inc.
Architect: Steve Weatherhead, Winton Scott Architects

II. REQUIRED REVIEWS

I. Applicant's Proposal	Applicable Standards
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

Waivers	Citation
Driveway Separation (less than the required 125 foot spacing from adjacent driveway with a 50.7-foot separation proposed)	Technical Manual, Section 1.7.2.7 Location and spacing of driveways
Wetland Preservation (to fill 7,223 square feet of wetland to accommodate development)	Land Use Code Sec. 14.6.2.A.1.e



Figure 2: Aerial View of Development Site Existing Conditions – Source: Google

III. PROJECT DATA

Subject	Data
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

	Existing	Proposed	Net Change
Impervious Surface Area	-	15,043 sf	+15,043 sf
Building Floor Area	-	19,528 sf	+19,528 sf
Parking Spaces	-	16 spaces	16 spaces
Bicycle Parking Spaces	-	4 spaces	4 spaces

IV. EXISTING CONDITIONS AND SURROUNDING AREA

The vacant/undeveloped lots comprising the development site total 38,309 square feet in size and 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 the Temple Beth-El at 400 Deering Ave, which has an access drive on Wadsworth Street. Commercial uses are concentrated roughly 0.25 miles to the 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 side 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) a number of invasive Norway Maple trees which make up the site.



Figure 3: Existing Conditions (Image from Front of Property) Source: Google



Figure 4: 3-D Rendering of (North) Multiplex Building

V. PROPOSED DEVELOPMENT

The applicant is proposing construction of two separate low-rise multifamily buildings, each containing four 2-bedroom units for a total of eight multiplex units. Each building will include four garage parking spaces as well as four outdoor vehicle parking spaces (eight per building) for a total of 16 parking spaces, as well as a bicycle hitch available at each building entrance providing a combined total of four 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 37 trees and 364 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, a new grassed soil filter is proposed at the northwest corner of the site and subsurface stormwater detention system connected to focal point stormwater treatment are proposed at the south of the site. In addition, the applicant proposes to connect to City infrastructure via a storm drain on Noyes and Longfellow streets.

Site lighting is proposed at the building entrance as well as pole lighting in parking areas.

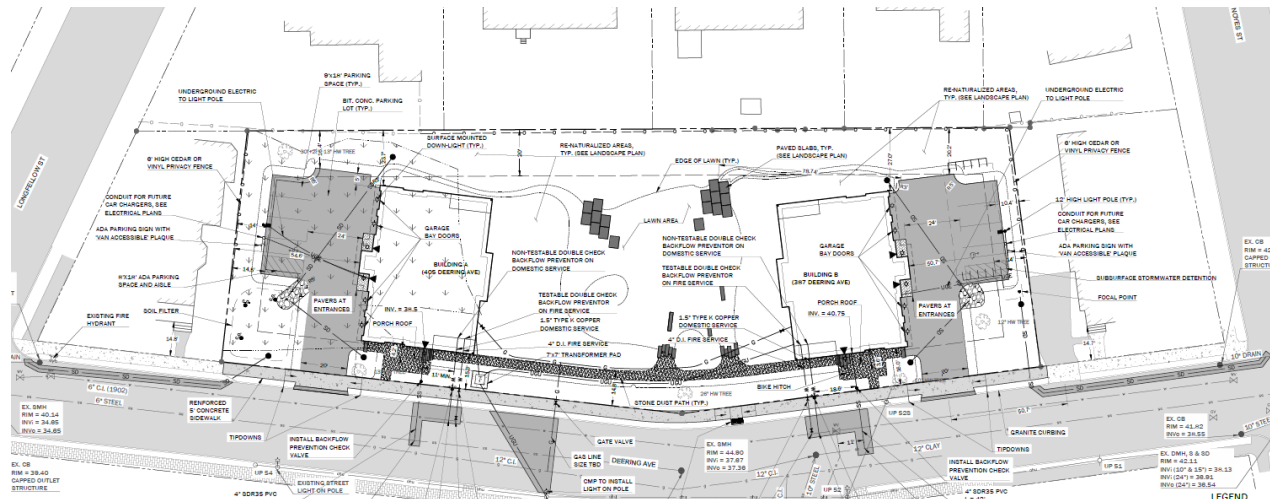


Figure 5: Current Site Plan

VI. PREVIOUS WORKSHOP – June 22, 2021

The project was introduced to the Planning Board by the applicant and staff at a workshop held on June 22, 2021. The Board provided initial feedback about the design, waivers and amount of parking proposed, which is as follows:

Design – Some of the Board supported the flat roof design while others encouraged the applicant to incorporate a pitched roof, as well as looking into improving the legibility of entrances and continuing to work with the City’s urban designer. Several Board members had concerns with the proposed elevator asking if it was absolutely necessary for a structure. The applicant clarified that the Fair Housing Act necessitates the addition of an elevator due to residential units being inaccessible from the first floor. One Board member commented that the parking was driving the legibility of entrances and defined boundary conditions and topography of the site were driving the density. Another Board member encouraged the applicant look into material changes on the first floor to make the proposal more sympathetic with neighborhood context and recommended a single door with sidelights the full width of the corridor in order to improve the entrance appearance, as well as adding parapets on the roof to create more visual interest. Board members encouraged making the entrance more prominent and visible.

Waivers – In general the Board had no concerns with the waivers for driveway separation. One of the Board members encouraged the applicant to look into inverting the parking lot at building B so a waiver for the wetland impact wasn’t necessary. The applicant responded that the current driveway locations are proposed in order to meet the slope criteria for the driveways onsite and at landings and can’t be avoided because the building is within the wetland area. With regard to the waiver for wetland encroachment, one Board member noted that the proposed extent of wetland impact appeared to be minimal.

Parking – One board member expressed concerns with the amount of parking and believed 1 space per unit was appropriate. Due to there being no on street parking on Deering Avenue other board members were supportive of the additional parking onsite given that it could minimize any overflow parking from potentially spilling over into the bicycle lanes on Deering Avenue if not accommodated onsite.

Since the last workshop, the applicant responded to a number of staff comments in October and has worked diligently to finalize their application materials in order to respond to additional staff review comments. For example, the development team and staff have discussed the proposal at length with regards to preserving a significant natural feature onsite—a rare White Oak tree—meanwhile relocating and proposing an alternative stormwater design that’s able to meet all standards.

VII. RIGHT, TITLE, & INTEREST

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.

VIII. FINANCIAL & TECHNICAL CAPACITY

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).

IX. ZONING ANALYSIS

A. DIMENSIONAL AND USE REQUIREMENTS

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. 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

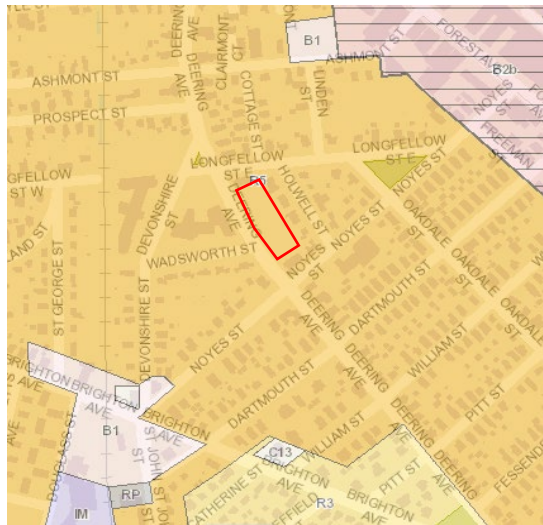


Figure 6: Existing Zoning Map

X. SITE PLAN STANDARDS (Section 14.6)

The proposed development has been reviewed by staff for conformance with the relevant review standards of the City of Portland's Site Plan Ordinance, Section 14.6. Staff comments are below.

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.

Technical Manual Waiver – Driveway Separation

Deering Avenue is a collector street with a posted 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. The driveway spacing requirements are generally intended to minimize the number of driveways in close proximity, as these can potentially become a safety issue by introducing more potential conflict points for traffic along the roadway.

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. In response to staff comments the applicant has also shown the required sight distance of 250 feet on the plan (Plan 20) which has been field measured/verified.

Pedestrian circulation

The applicant has provided internal pedestrian walkways between the two proposed buildings as well as an accessible route from the parking area to the building entrance which then connects to the front sidewalk.

The current plan provides an ADA compliant route through the driveway apron which is acceptable to Public Works (Attachment 1). Staff finds these to be sufficient measures of providing pedestrian access and circulation.

Staff findings: The City's consulting traffic engineer has reviewed the project with staff and finds the project will not generate a significant amount of traffic and would not be expected to create mobility or safety issues in the vicinity of the project, and the on-site vehicle circulation and access to and from the site to be acceptable. Given that the adjacent driveway is limited to one or two vehicles and the proposed project is not anticipated to generate significant volumes the City's traffic engineer and staff support a waiver for driveway separation. Overall staff finds the expected increase in traffic volume to be modest and does not believe the proposed project will substantially increase traffic congestion or create or aggravate any significant hazard to safety on the surrounding street network.

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.

Due to the frontage of the site running along a priority school walking route, in response to staff comment the plans have been updated to show continuation of a 32-inch wide esplanade providing a buffer area between pedestrians and street traffic.

Staff findings: Staff have recently reviewed the updated plan set and details and find the plans conform to the required driveway/sidewalk width and slope requirements (Attachment 1).

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

Vehicle 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. The applicant has submitted justification that due to the lack of on-street parking on Deering Avenue as well as the proposed unit configuration expecting two car households that additional parking is warranted in order to accommodate occupant or visitors to the site. 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).

The City's consulting traffic engineer has reviewed the amount of parking proposed and believes the number of parking spaces proposed is reasonable given that off-site or on-street parking is not permitted in the immediate vicinity; that the additional supply would be beneficial for guests and deliveries; and that based on the ITE Parking Generation Manual the site's location and market characteristics are consistent with parking generation for a higher end of rate range for residential development with two parking spaces proposed per unit (Attachment 2).

Staff Findings: Based on the materials submitted by the applicant and on the recommendation of the City's Parking Director which highlights the absence of on-street parking on this section of Deering Avenue, Planning staff are supportive of the additional parking proposed onsite. Staff review of the parking space layout identified that the parking space design, specifically the width of garage doors and parking lot aisles, are compliant with the minimum width requirement referenced in Section 1.14 of the City's Technical Manual. Please see Section A above for staff review and recommendation on the requested parking aisle waiver. Staff find the project meets all other parking space and aisle dimensional requirements.

Bicycle Parking

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.

Snow Storage

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.

EV Charging Provision

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 (eight total) as well as providing a spare conduit to the edge of each parking lot for future installation of exterior charging stations.

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 requirement for drafting and implementation of a TDM plan.

2. Environmental Quality Standards (Section 14.6.2)

A. Preservation of significant natural features

The application indicated that no endangered or threatened plants, or significant natural features have been identified onsite, with the exception of two aspects of the site which are relevant:

Wetland Impact & Requested Land Use Code Waiver

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 to accommodate the development proposal. There are approximately 7,223 square feet of wetland impact (Plan 22). 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 Findings: Staff review finds that the application has provided sufficient evidence, as indicated above, to support a waiver to the wetland preservation standard (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.

Preservation of Significant Tree

During a site visit conducted by staff, the City Arborist identified a rare 26-inch caliper White Oak Tree on the south of the site, which is a significant tree listed on the on the Official List of Endangered and Threatened Plants in Maine, published by the Maine Natural Areas Program. The applicant has worked extensively with staff in order to provide an alternative plan with a relocated stormwater system in order to save this significant tree. The City Arborist and Planning staff commend the applicant’s plan to preserve this very rare, high-priority, 150-year-old tree, which is native to Portland by incorporating it into the site design.

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 five existing non-invasive trees out of nine present within the required setback areas of the site, which exceeds the minimum preservation requirement of 30 percent (with 56 percent of trees saved).

Staff Finding: this standard has been met.

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 37 trees, with 11 new 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 364 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 areas to buffer the development from adjacent properties. An existing fence will also remain along the northeast lot line to complete the buffer. 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 as well as along rear lot line. The City Arborist has reviewed the submitted landscape and planting plan and finds the landscaping and planting plan to be acceptable (Attachment 5).

Staff Finding: this standard has been met.

D. Water quality/stormwater management/erosion control

The applicant has proposed managing stormwater by incorporating a grassed under drained soil filter at the north corner of the lot adjacent to Deering Avenue, as well as a subsurface stormwater detention system connected to focal point stormwater treatment at the south of the site. The applicant also intends to connect the stormwater system to City infrastructure via a storm drain on Noyes and Longfellow streets.

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, which include the General and Flooding standards. Due to the presence of a significant white Oak Tree the applicant has eliminated the soil filter originally proposed in the south corner of the site, and instead proposes an alternative system (subsurface stormwater detention system connected to focal point treatment), based on staff recommendation.

Staff Finding: the application materials - which include an updated stormwater management plan and report- have been reviewed by the City's consulting stormwater engineer in conjunction with the Water Resources division and determined the design meets all standards, with the exception of needing confirmation from the applicant that a 4-inch pipe connecting the outlet control structure to the Noyes Street infrastructure provides for adequate maintenance of the pipe, as well as confirmation from the manufacturer of the Focal Point device that the stormwater management system has been designed appropriately for their propriety product. Staff are recommending a condition of approval that the applicant provide updated utility and drainage plans addressing the City's stormwater engineer's comments prior to issuance of a building permit. (Attachment 3).

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.

Staff Finding: this standard has been met.

B. Public safety and fire prevention

Planning staff met with a life safety reviewer from the City's Permitting and Inspections Department on June 9th, 2021 and reviewed the public safety and fire prevention standards of the project. 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.

Staff Finding: this standard has been met.

C. Availability and capacity of public utilities

The City's Water Resources Division has provided the applicant with a wastewater authorization letter (Attachment O) confirming 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 (Attachment N).

The development has proposed underground electrical service.

Staff Finding: this standard has been met.

4. Site Design Standards (Section 14.6.4)

A. Massing, ventilation, noise and vibration, and wind impact

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 a dB(a) which is considered minimal levels. HVAC equipment would be located on the rooftop and setback approximately 70 feet from adjacent properties.

Staff Finding: this standard has been met.

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 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 12 of the City's Technical Manual.

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.

Staff Finding: this standard has been met.

G. Signage and wayfinding

Not applicable. No signage is proposed.

H. Zoning-related design standards

The current building design proposes two 3-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 (Figures 1, 7 & 8). 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 11-16).

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 several rounds of design comments (Attachment 6-9). The applicant has provided updated materials (Plans 5-16) in response to staff comment (Attachment S-V). Since the last workshop, in response to staff design review comments the application has incorporated the following updates:

- Updated building materials to provide greater material color contrast;
- Adding sidelights at entrance with door recessed from the predominant building face in order to have similar elements/characteristics with entry porches and stoops found in residential frontages;
- Suspending the front porch canopies to promote permeability and avoid hidden site lines;
- Adding landscaping up to the building to be consistent with the residential frontage types in the area;
- Improving the building siding and glazing and simplifying the color pallet;
- Adding fenestration to break up wall sections and pulling windows proud of the wall surface;
- Articulating roof edges with varying parapet and dropping porch roofs lower than the main roof;
- Adding screening around rooftop HVAC systems

The design review team – made up of Planning staff – have reviewed the most current design and concluded the project has met all design standards (Attachment 9).



Figure 7: Perspective Rendering Depicting Aerial View of Site



Figure 8: Perspective Rendering Depicting Front Entrance View (South Bldg.)

XI. NEIGHBORHOOD MEETING & PUBLIC COMMENT

A remote Neighborhood Meeting was held on May 20, 2021 at 5:30 pm attended by approximately twenty-five (25) people (Attachment W).

At the time of writing this memo, the Planning Department has received seven (7) public comments (PC 1-7).

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. Comments received since the last workshop include one abutter expressing concerns with the loss in wooded open space area. Other comments expressed concerns with the existing conditions of the property as creating unsafe conditions, including attracting trespassers, and potential for debris to pose a fire hazard. Additional comments expressed support for a perimeter fencing, the addition of lighting, communication by owner with abutters during construction as well as taking additional actions if blasting occurs. Other comments requested additional drainage improvements, programmable or motion detection lighting, revisiting building materials and color palette, as well as requiring the project to provide private trash and recycling services onsite.

XII. STAFF RECOMMENDATION

Subject to the proposed motions and conditions of approval listed below, staff recommends that the Planning Board approve application #PL-001495-2021 to construct two multiplex buildings totaling eight residential units with 16 structured and surface parking spaces at 387 Deering Avenue which meets the applicable standards of Portland's Land Use Code.

XIII. PROPOSED MOTIONS

A. WAIVERS

On the basis of the application, plans, reports and other information submitted by the applicant, findings and recommendations contained in the Planning Board Report for the public hearing February 22nd, 2022 for application # PL-001495-2021 relevant to the Site Plan Standards of the Land Use Code and Portland's Technical and Design Standards, and other regulations, and testimony presented at the Planning Board public hearing:

1. Driveway Separation
The Planning Board [**finds/does not find**] based upon the Consulting Traffic Engineer's review, that extraordinary conditions exist or undue hardship may result from strict compliance with Technical Manual Section 1.7.2.7, which requires a minimum 125 foot spacing from adjacent driveways, that substantial justice and the public interest are secured with the proposed variation in this standard, and that variation is consistent with the intent of the ordinance. The Planning Board [**waives/does not waive**] Technical Manual Section 1.7.2.7 to allow a driveway separation of 50.7 feet.
2. Wetland Impact
The Planning Board [**finds/does not find**] based upon the submitted materials, that extraordinary conditions exist or undue hardship may result from strict compliance with Land Use Code Section 14.6.2.A.1.e, which requires all development to preserve and protect significant natural features including wetland areas, that substantial justice and the public interest are secured with the proposed variation in this standard, and that variation is consistent with the intent of the ordinance. The Planning Board [**waives/does not waive**] Land Use Code Section 14.6.2.A.1.e to allow 7,223 square feet of wetland fill.

B. SITE PLAN REVIEW

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the Planning Board Report for the public hearing on February 22, 2022 for application # PL-001495-2021 relevant to the site plan regulations; and the testimony presented at the Planning Board hearing, the Planning Board [**finds/does not find**] that the plan is in conformance with the site plan standards of the Land Use Code, subject to the following condition of approval:

PRIOR TO ISSUANCE OF A BUILDING PERMIT

1. The applicant shall resubmit for review and approval by the Planning Authority and Public Works an updated utility and drainage plan and associated materials to address the consulting stormwater engineer's review comments dated 2/18/2022.

XIV. ATTACHMENTS

PLANNING BOARD REPORT ATTACHMENTS

1. Department of Public Works Comments (email dated 2.17.2022)
2. Consulting Traffic Engineer Comments (email dated 2.17.2022)
3. Consulting Civil Engineer Comments (email dated 2.18.2022)

4. Parking Director Comments (email dated 6.14.2021)
5. City Arborist Review Comments (dated 2.17.2022)
6. Preliminary Design Review Comments (dated 5.5.2021)
7. Updated Design Review Comments (dated 6.16.2021)
8. Updated Design Review Comments (dated 11.10.2021)
9. Final Design Review Comments (dated 1.27.2022)

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. 2.10.2022)
- N. Ability to Serve Letter
- O. Wastewater Capacity Authorization
- 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. Response to City Comments (dated 10.28.2021)
- V. Response to City Comments (dated 1.20.2022)
- W. Neighborhood Meeting Certification and Materials
- X. Construction Management Plan
- Y. HydroCAD Proposed Conditions (rev. 2.16.2022)
- Z. EV Charging Station Specifications

PLANS

- Plan 1. First Floor Plan
- Plan 2. Second Floor Plan
- Plan 3. Third Floor Plan
- Plan 4. Roof Plan
- Plan 5. South Elevation
- Plan 6. East Elevation
- Plan 7. North Elevation
- Plan 8. West Elevation
- Plan 9. Exterior Materials
- Plan 10. Site Sections
- Plan 11. 3D Views

Plan 12. 3D Views
Plan 13. 3D Views
Plan 14. 3D Views
Plan 15. 3D Views
Plan 16. 3D Views
Plan 17. Code Summary
Plan 18. Plat Plan
Plan 19. Existing Conditions
Plan 20. Site Layout and Utilities
Plan 21. Grading and Drainage Plan
Plan 22. Erosion Control and Wetland Impact Plan
Plan 23. Grading Details
Plan 24. Focal Point Plan
Plan 25. Details
Plan 26. Details
Plan 27. Details
Plan 28. Details
Plan 29. Details
Plan 30. Pre-Development Drainage Plan
Plan 31. Post-Development Drainage Plan
Plan 32. 1st Floor Electrical Power & Systems Plan
Plan 33. Photometric Plan
Plan 34. Landscape Plan
Plan 35. Planting Plan
Plan 36. Boundary Survey
Plan 37. Vehicle Turning Simulations

PUBLIC COMMENT

PC1. Alyson Maloy 5-6-2021
PC2. Harty Norris 5-21-2021
PC3. Nancy Hayden 7-24-2021
PC4. Carol Schiller 8-13-2021
PC5. Jacqueline Gaunder 8-14-2021
PC6. Carol Schiller 8-17-2021
PC7. Jacqueline Gaunder 2-17-2022



Jimmy Dealaman <jdealaman@portlandmaine.gov>

DUE - Comments on report (387 Deering Ave)

Jennifer Ladd <jwl@portlandmaine.gov>

Thu, Feb 17, 2022 at 3:40 PM

To: Jimmy Dealaman <jdealaman@portlandmaine.gov>

Yes, Jimmy. The plans as attached address any comments that I had. Thank you.

Jennifer Ladd
Senior Transportation Engineer



[Quoted text hidden]



Jimmy Dealaman <jdealaman@portlandmaine.gov>

387 Deering Avenue - Final Traffic Comments

Tom Errico <thomas.errico@tylin.com>

Thu, Feb 17, 2022 at 1:51 PM

To: James Dealaman <jdealaman@portlandmaine.gov>

Hi Jimmy – I have reviewed the project application materials and offer the following final traffic comments.

1. The project will not generate a significant amount of traffic and would not be expected to create mobility or safety issues in the vicinity of the project. A Traffic Movement Permit is not required.
2. I find on-site vehicle circulation and access to and from the site to be acceptable.
3. The applicant has provided information that acceptable sight distance will be provided from the driveways. I find conditions to be acceptable.
4. The proposed southerly driveway does not meet City driveway separation standards for a roadway with a posted speed limit of 30MPH. Given that the adjacent driveway is limited to one or two vehicles and the proposed project is not anticipated to generate significant traffic volumes, I support a waiver from the City Technical Manual.
5. The project is proposing 16 parking spaces or 2 spaces per unit. One garage parking space and one surface lot parking space will be provided per unit. In my professional opinion the number of parking spaces for the project is reasonable given the following:
 - Off-site or on-street parking is not permitted in the immediate vicinity along Deering Avenue. The proposed supply will be beneficial for guests and deliveries.
 - A review of the ITE Parking Generation Manual indicates a range of parking generation rates for a residential development with some sampled sites generating in excess of 2 spaces per unit. While the average rate is 1.21 spaces per unit, some projects generate a higher parking requirement. This site given location and tenant market characteristics may generate on the higher end of the rate range.

Please contact me if you have any questions.

Best regards,

Thomas A. Errico, PE

Senior Associate

Traffic Engineering Director

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Jimmy Dealaman <jdealaman@portlandmaine.gov>

TIME SENSITIVE - Updated Materials (387 Deering Ave)

Lauren Swett <lswett@woodardcurran.com>

Fri, Feb 18, 2022 at 10:53 AM

To: Jimmy Dealaman <jdealaman@portlandmaine.gov>

Cc: Jodie Keene <JKEENE@portlandmaine.gov>, "bnpearson@gmail.com" <bnp@portlandmaine.gov>

Hi Jimmy,

As a follow-up to our discussion, I have the following comments on this latest set of plans:

- The updated plans have reduced the size of the pipe exiting the site from 12" to 4". This is relatively small in size, and maintenance could be a challenge considering that the pipe has multiple bends, and a direct tie-in to the City's infrastructure in Noyes Street. The Applicant should provide an updated plan that provides for adequate maintenance of the pipe on and off of their property. This may require increasing the size of pipe and/or providing additional access structures. This pipe is located within the right-of way, and final design would be reviewed & approved by the City.
- The Applicant shall provide the letter from the manufacturer of the Focal Point, confirming that the stormwater management system has been designed appropriately for their propriety product. If that letter requires any changes to the system from what has already been presented, updated plans and stormwater calculations should be provided.
- Applicant has previously provided a Stormwater Maintenance Agreement. This will continue to be reviewed by the City for approval prior to Building Permit.

Please let me know if there are any questions!

Thanks,

Lauren

From: Jimmy Dealaman <jdealaman@portlandmaine.gov>**Sent:** Thursday, February 17, 2022 8:50 AM**To:** Lauren Swett <lswett@woodardcurran.com>**Cc:** Jodie Keene <JKEENE@portlandmaine.gov>; bnpearson@gmail.com <bnp@portlandmaine.gov>

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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



Jimmy Dealaman <jdealaman@portlandmaine.gov>

DUE - Comments on report (387 Deering Ave)

Jeff Tarling <jst@portlandmaine.gov>

Wed, Feb 16, 2022 at 3:16 PM

To: Jimmy Dealaman <jdealaman@portlandmaine.gov>

Hi Jimmy -

Sounds good, this single tree is by far the most important feature on the site.

Thanks for trying to save the tree, we would as with any site plan with tree saves make sure the root zone was protected during site work.

Thanks

Jeff

On Wed, Feb 16, 2022 at 11:50 AM Jimmy Dealaman <jdealaman@portlandmaine.gov> wrote:

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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



Planning and Urban Development Department

Subject: R-5 Design Review – 387 Deering Avenue

Written by: Sean King, Urban Designer

Date of Review: Wednesday, November 10, 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: Sean King - Urban Designer, Jimmy Dealaman - Planner, and Kevin Kraft – Deputy Director of the 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 engages the streetscape character and relates to neighborhood context for approachability and residential quality.

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 reflect a connection to the public realm – this is encouraged by the distinction of primary building entrance, landscape area and defined transitional space between public right-of-way and appropriately scale entry.
- The transition space between the street and the primary building entrance, illustrated within the rendering for the entry canopy and expanded door, articulates the front entry. *Consider previous suspended canopy to promote permeability to avoid hidden site lines that may be created by proposed wing walls in latest rendering. In addition, please clarify the intended canopy design throughout the renderings, elevations, and floor plans, as a rendering appears to show an undesired alternative approach (see image below).*



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 – Met*

- The principal façades are front-facing with entrances, stacked porches face street
- The primary entrances orient to the street
- Roof slope is identified above porch to be parallel to street

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*

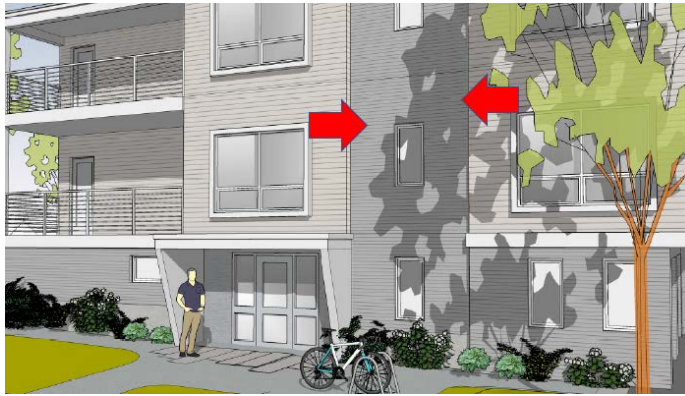
- Garage doors are side facing

7 *Roofs - Not Met*

- Roof form depicted above porch is accepted to relate to the predominant roof form for multi-family buildings in this residential neighborhood, which includes hipped roof with dormers. There are some examples of multi-family buildings with flat roofs, but is not the predominant form.
- 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. Rooftop HVAC systems appear to still be visible. Please show rooftop screening and dimensions.

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.
- It appears new renderings were submitted to illustrate proposed material, please reflect these within updated elevations, floor plans and a schedule of materials' type and color.
- Consideration for greater material color contrast (possibly slightly darker) in front façade at west elevation, to identify the building articulation between bedroom and bathroom. See rendered image.



9 Sound – Met

10 Light and Air – Met

- All units have windows, adequate light and air



Planning and Urban Development Department

Subject: R-5 Design Review – 387 Deering Avenue

Written by: Sean King, Urban Designer

Date of Review: Thursday, January 27, 2022

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: Sean King - Urban Designer, Jimmy Dealaman - Planner, and Kevin Kraft – Deputy Director of the 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:

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 engages the streetscape character and relates to neighborhood context for approachability and residential quality.

2 Public Realm - 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 reflect a connection to the public realm – this is encouraged by the distinction of primary building entrance, landscape area and defined transitional space between public right-of-way and appropriately scale entry.
- The transition space between the street and the primary building entrance, illustrated within the latest rendering for the entry canopy and expanded door, provides a clear entryway visible from the public right-of-way.

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 – Met*

- The principal façades are front-facing with entrances, stacked porches face street
- The primary entrances orient to the street
- Roof slope is identified above porch to be parallel to street

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 - Met*

- Roof form depicted above porch is accepted to relate to the predominant roof form for multi-family buildings in this residential neighborhood, which includes hipped roof with dormers. There are some examples of multi-family buildings with flat roofs, but is not the predominant form.
- Clear main roof form
- Roof of the stacked porches is differentiated
- Rooftop mechanical units are set away from street/building edges and screened appropriately in material selection, height and length.

8 *Materials – Met*

- Metal siding that gives the appearance similar to clapboard is acceptable – applicant has provided samples to illustrate color and finish with proposed locations identified on plans and renderings.
- Predominant character of the surrounding residential neighborhood is a simple material palette. The material palette was revised to use two material types with an appropriate color scheme that relate to the building's massing.

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,

A handwritten signature in black ink, reading "Silas Canavan".

Silas W. Canavan, PE
Walsh Engineering Associates, Inc.

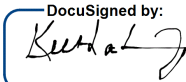
Att. B

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)

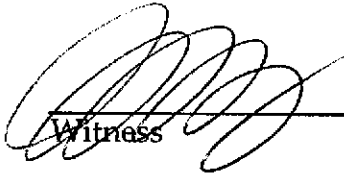
MAINE REAL ESTATE TAX-Paid

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

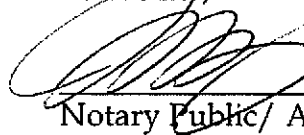
STATE OF MAINE
COUNTY OF CUMBERLAND

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

Matthew J. McDonald
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:

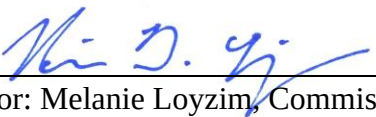
- 1) If construction or operation of the activity is not begun within four (4) years from the date signed, this permit shall lapse and the applicant shall reapply to the Department for a new permit. This permit is transferable only with prior approval from the Department. If the activity is associated 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

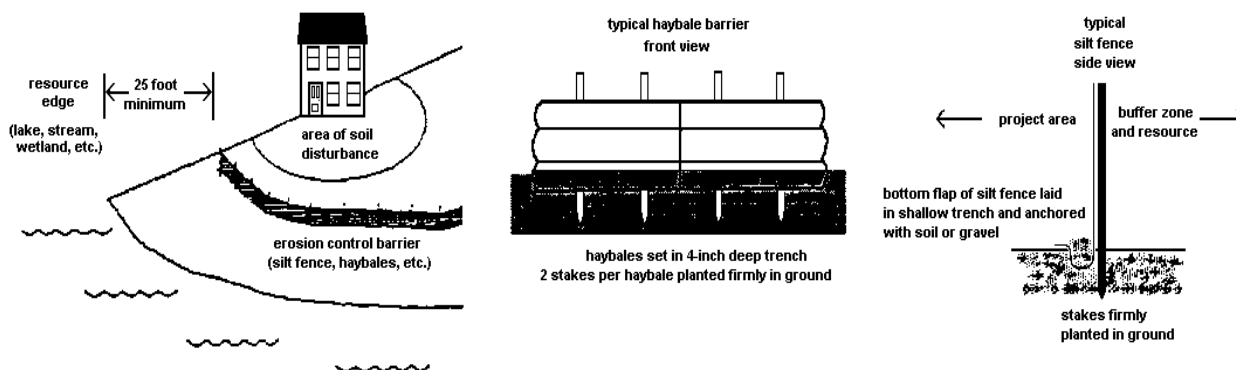


STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
 17 STATE HOUSE STATION, AUGUSTA, MAINE 04333

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.



REPLY TO
ATTENTION OF

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

MAINE GENERAL PERMITS (GPs)
AUTHORIZATION LETTER AND SCREENING SUMMARY

TODD VALENTINE
SAWYER ISLAND DEVELOPMENT, LLC
100 SILVER STREET
PORTLAND, MAINE 04101

CORPS PERMIT # NAE-2021-00663
CORPS GP# 8
STATE ID# L-29139-TB A-N

DESCRIPTION OF WORK:

Place permanent fill in 7,223 SF of freshwater wetland off 387 and 405 Deering Avenue at Portland, Maine in order to construct associated infrastructure for two, four-unit residential buildings. This work is shown on the attached plans entitled "Site Location" in one sheet dated "December 2020" and "Deering Avenue Residences" in five sheets dated "Feb. 24, 2021".

See GENERAL CONDITIONS attached.

LAT/LONG COORDINATES: 43. 660 49 N -70. 23096 W USGS QUAD: PORTLAND WEST, ME

I. CORPS DETERMINATION:

Based on our review of the information you provided, we have determined that your project will have only minimal individual and cumulative impacts on waters and wetlands of the United States. Your work is therefore authorized by the U.S. Army Corps of Engineers under the Federal Permit, the Maine General Permits (GPs) which can be found at: <https://www.nae.usace.army.mil/Missions/Regulatory/State-General-Permits/Maine-General-Permit/>. Accordingly, we do not plan to take any further action on this project.

You must perform the activity authorized herein in compliance with all the terms and conditions of the GP [including any attached Additional Conditions and any conditions placed on the State 401 Water Quality Certification including any required mitigation]. Please review the enclosed GPs, including the GPs conditions beginning on page 5, to familiarize yourself with its contents. You are responsible for complying with all of the GPs requirements; therefore you should be certain that whoever does the work fully understands all of the conditions. You may wish to discuss the conditions of this authorization with your contractor to ensure the contractor can accomplish the work in a manner that conforms to all requirements.

If you change the plans or construction methods for work within our jurisdiction, please contact us immediately to discuss modification of this authorization. This office must approve any changes before you undertake them.

Condition 45 of the GPs (page 19) provides one year for completion of work that has commenced or is under contract to commence prior to the expiration of the GPs on October 14, 2025. You will need to apply for reauthorization for any work within Corps jurisdiction that is not completed by October 14, 2026.

This authorization presumes the work shown on your plans noted above is in waters of the U.S. Should you desire to appeal our jurisdiction, please submit a request for an approved jurisdictional determination in writing to the undersigned.

No work may be started unless and until all other required local, State and Federal licenses and permits have been obtained. This includes but is not limited to a Flood Hazard Development Permit issued by the town if necessary.

II. STATE ACTIONS: PENDING [], ISSUED [X], DENIED [] DATE March 25, 2021

APPLICATION TYPE: PBR: TIER 1: X TIER 2: TIER 3: LURC: DMR LEASE: NA:

III. FEDERAL ACTIONS:

JOINT PROCESSING MEETING: non-screen LEVEL OF REVIEW: SELF-VERIFICATION: X PRE-CONSTRUCTION NOTIFICATION:

AUTHORITY (Based on a review of plans and/or State/Federal applications): SEC 10 404 X 10/404 103

EXCLUSIONS: The exclusionary criteria identified in the general permit do not apply to this project.

FEDERAL RESOURCE AGENCY OBJECTIONS: EPA N/A USF&WS N/A NMFS N/A

If you have any questions on this matter, please contact my staff at 978-318-8676 at our Augusta, Maine Project Office. In order for us to better serve you, we would appreciate your completing our Customer Service Survey located at: <http://corpsmabu.usace.army.mil/cm apex/f?p=136:4:0>

COLIN M. GREENAN
PROJECT MANAGER
MAINE PROJECT OFFICE

Jay L. Clement 4/5/21
FOR FRANK J. DEL GIUDICE DATE
CHIEF, PERMITS & ENFORCEMENT BRANCH
REGULATORY DIVISION



**US Army Corps
of Engineers**
New England District

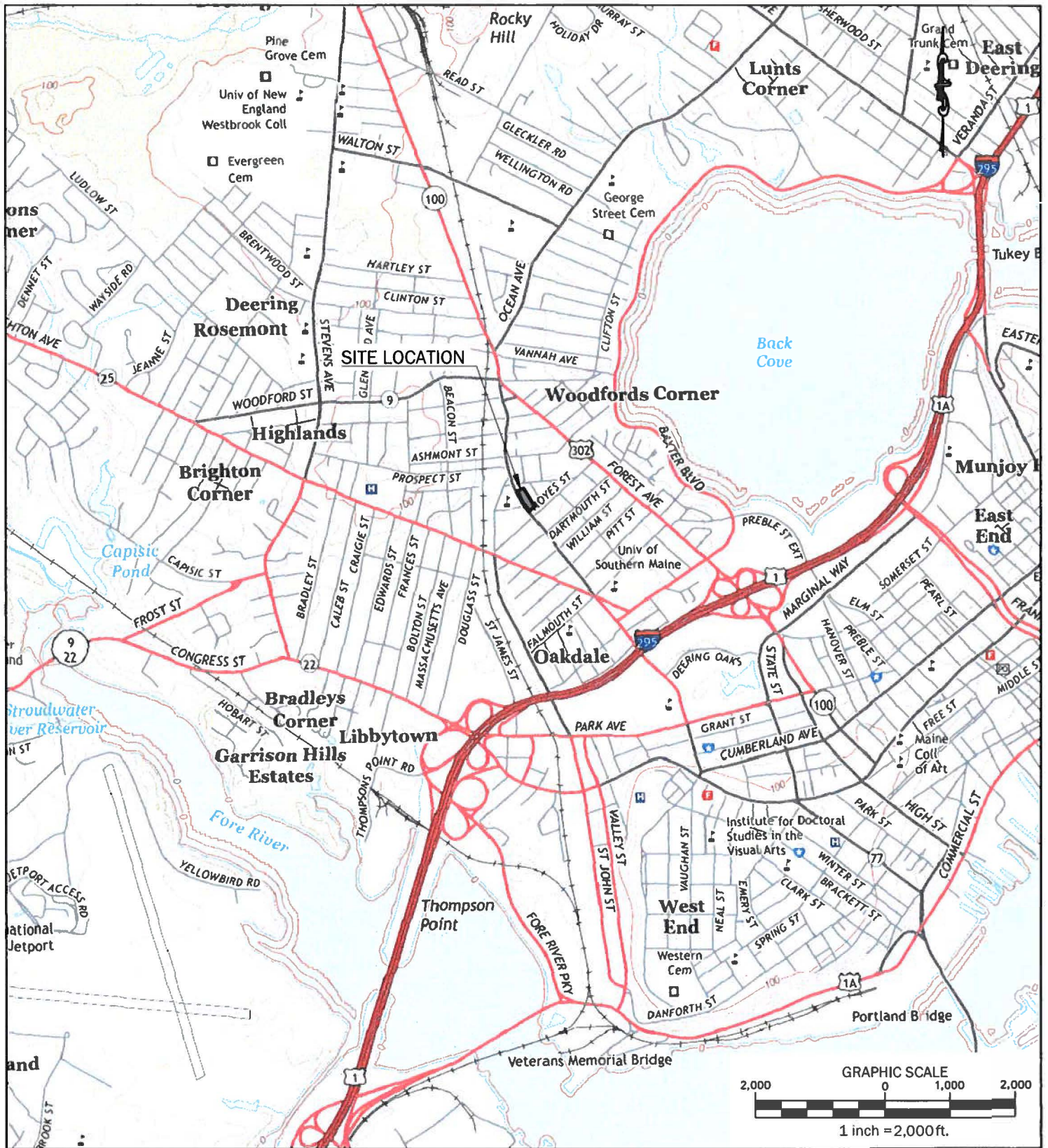
**PLEASE NOTE THE FOLLOWING GENERAL CONDITIONS FOR
DEPARTMENT OF THE ARMY
MAINE GENERAL PERMIT 8
PERMIT NO. NAE-2021-00663**

GENERAL CONDITIONS

23. Soil Erosion, Sediment, and Turbidity Controls: a. Adequate sedimentation and erosion control management measures, practices and devices, such as phased construction, installation of sediment control barriers (i.e. silt fence, vegetated filter strips, geotextile silt fences, erosion control mixes, hay bales or other devices) downhill of all exposed areas, retention of existing vegetated buffers, application of temporary mulching during construction, and permanent seeding and stabilization shall be installed and properly maintained to reduce erosion and retain sediment on-site during and after construction. They shall be capable of preventing erosion; of collecting sediment, suspended and floating materials; and of filtering fine sediment. b. Temporary sediment control barriers shall be removed upon completion of work, but not until all disturbed areas are permanently stabilized. The sediment collected by these sediment barriers shall be removed and placed at an upland location and stabilized to prevent its later erosion into a waterway or wetland. All exposed soil and other fills shall be permanently stabilized at the earliest practicable date.

33. Permit(s)/Authorization Letter On-Site. The permittee shall ensure that a copy of the terms and conditions of these GPs and any accompanying authorization letter with attached plans are at the site of the work authorized by these GPs whenever work is being performed and that all construction personnel performing work which may affect waters of the U.S. are fully aware of the accompanying terms and conditions. The entire permit authorization shall be made a part of any and all contracts and subcontracts for work that affects areas of Corps jurisdiction at the site of the work authorized by these GPs. This shall be achieved by including the entire permit authorization in the specifications for work. The term "entire permit authorization" means all terms and conditions of the GPs, the GPs, and the authorization letter (including its drawings, plans, appendices and other attachments) and subsequent permit modifications as applicable. If the authorization letter is issued after the construction specifications, but before receipt of bids or quotes, the entire permit authorization shall be included as an addendum to the specifications. If the authorization letter is issued after receipt of bids or quotes, the entire permit authorization shall be included in the contract or subcontract. Although the permittee may assign various aspects of the work to different contractors or subcontractors, all contractors and subcontractors shall be obligated by contract to comply with all environmental protection provisions contained within the entire GP authorization,

34. Inspections. The permittee shall allow the Corps to make periodic inspections at any time deemed necessary in order to ensure that the work is eligible for authorization under these GPs, is being, or has been performed in accordance with the terms and conditions of these GPs.



WALSH
ENGINEERING ASSOCIATES, INC.

One Karen Dr., Suite 2A | Westbrook, Maine 04092
ph 207.553.9898 | www.walsh-eng.com

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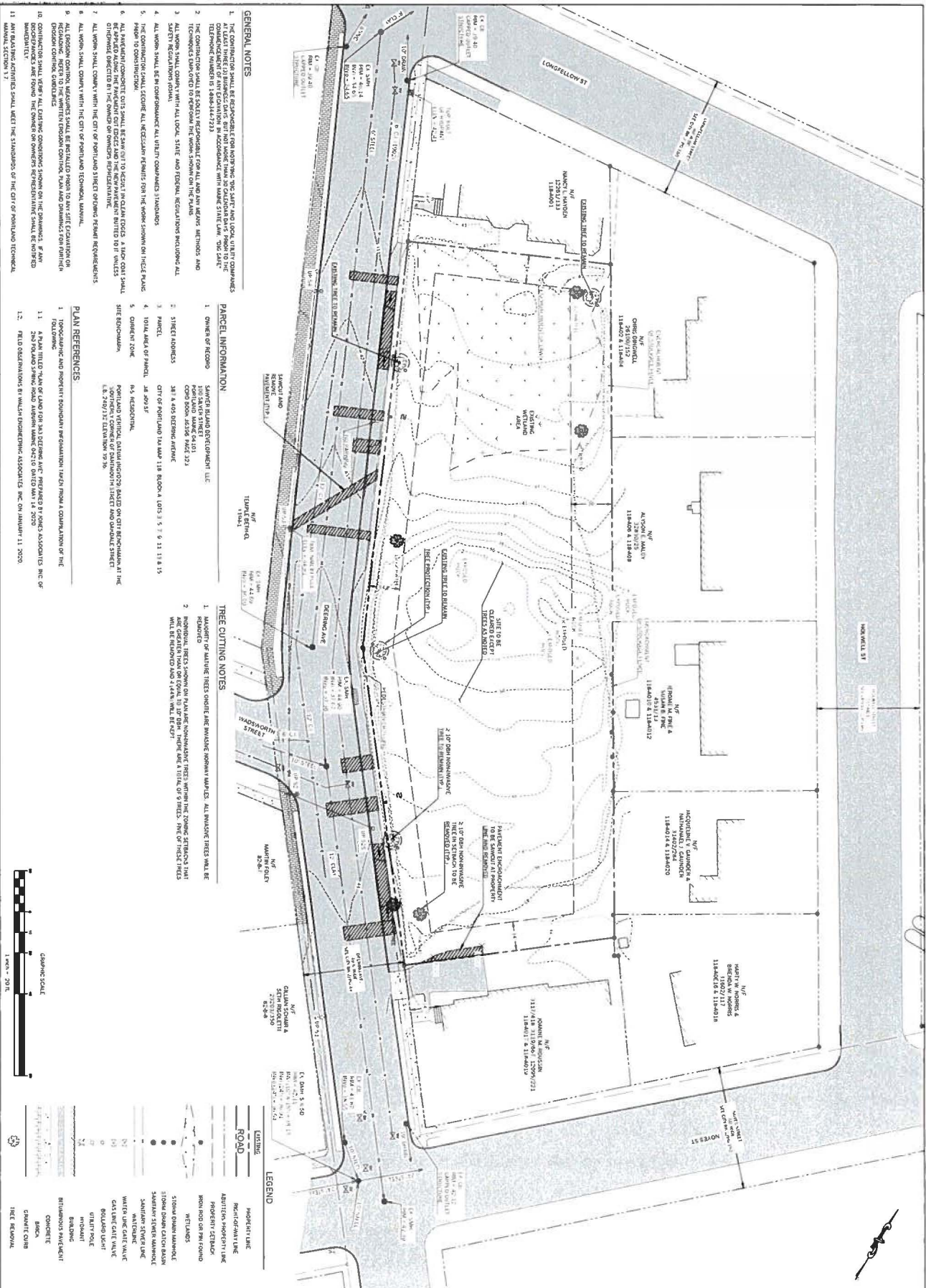
Deering Avenue Residences

387 & 405 Deering Avenue
Portland, Maine 04103
BK 36396, PG 323; CBL 118 A 003001

Sheet Title:

Site Location

Job No.:	613.1
Date:	December 2020
Scale:	1" = 2,000'
Drawn:	CAR
Checked:	SWC



- ### GENERAL NOTES
1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE CITY AND LOCAL UTILITY COMPANIES AT LEAST THREE (3) BUSINESS DAYS BEFORE THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY AND LOCAL UTILITY COMPANIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY AND LOCAL UTILITY COMPANIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY AND LOCAL UTILITY COMPANIES.
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- ### PARCEL INFORMATION
1. OWNER OF RECORD: SAWYER ISLAND DEVELOPMENT LLC
 2. STREET ADDRESS: 1111 DEERING AVE
 3. CITY OF PORTLAND: 1111 DEERING AVE
 4. TOTAL AREA OF PARCEL: 1111 DEERING AVE
 5. ZONING: 1111 DEERING AVE
 6. ADJACENT PARCELS: 1111 DEERING AVE
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- ### TREE CUTTING NOTES
1. MAINTAIN OR PLANT TREES WHERE POSSIBLE. ALL EXISTING TREES SHALL BE MAINTAINED OR REPLANTED.
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 12. MAINTAIN OR PLANT TREES WHERE POSSIBLE. ALL EXISTING TREES SHALL BE MAINTAINED OR REPLANTED.

- ### LEGEND
- EXISTING: EXISTING
 - PROPOSED: PROPOSED
 - PROPERTY LINE: PROPERTY LINE
 - ADJUTANT PROPERTY LINE: ADJUTANT PROPERTY LINE
 - PROPOSED SETBACK: PROPOSED SETBACK
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ISSUED FOR PERMITTING - NOT FOR CONSTRUCTION

EXISTING CONDITIONS & REMOVALS PLAN

C10

Deering Avenue Residences

387 & 470 Deering Avenue
Portland, Maine 04103
SA 34346 PG 2 OF 2 CBS 116 A 05/2021

PREPARED FOR
SAWYER ISLAND DEVELOPMENT LLC

WALSH

ARCHITECTURAL & ENGINEERING

One South Dix Street, Suite 201 Portland, Maine 04103
Tel: 781-551-1000 Fax: 781-551-1001

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- ### EROSION CONTROL NOTES
1. REFER TO SHEET C-3 FOR GENERAL NOTES AND PLAN REFERENCES.
 2. THE CONSTRUCTION SHALL INSTALL ALL EROSION AND SEDIMENTATION CONTROL MEASURES PRIOR TO COMMENCEMENT OF CONSTRUCTION. ALL EROSION CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE MASS DEPARTMENT OF ENVIRONMENTAL PROTECTION (MDEP) AND THE MASS DEPARTMENT OF TRANSPORTATION (MDOT) EROSION CONTROL MANUAL (2003) OR LATEST EDITION.
 3. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. ANY DAMAGE TO EROSION CONTROL MEASURES SHALL BE REPAIRED IMMEDIATELY.
 4. ALL EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY SITE EXCAVATION OR DISTURBANCE. EROSION CONTROL MEASURES SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
 5. DISTURBED AREAS SHALL BE REPAIRED TO PREVIOUS CONDITION OR BETTER. REPAIRS SHALL BE COMPLETED PRIOR TO THE END OF THE CONSTRUCTION PERIOD.
 6. PERMANENT SEDIMENTATION MEASURES SHALL BE INSTALLED PRIOR TO ANY SITE EXCAVATION OR DISTURBANCE. PERMANENT SEDIMENTATION MEASURES SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
 7. EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY SITE EXCAVATION OR DISTURBANCE. EROSION CONTROL MEASURES SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
 8. EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY SITE EXCAVATION OR DISTURBANCE. EROSION CONTROL MEASURES SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.

ISSUED FOR PERMITTING - NOT FOR CONSTRUCTION

NO.	DATE	DESCRIPTION
1	10.11.13	ISSUED FOR PERMITTING

Erosion Control and Wetland Impact Plan

C3

Deering Avenue Residences

387 & 475 Deering Avenue
Portland, Maine 04103
BX 38396 PG 323 CB 111 & 02001

PREPARED FOR
SAWYER ISLAND DEVELOPMENT LLC

WALSH
ENGINEERING & ARCHITECTURE, INC.
One Liberty Dr., Suite 201 Portland, Maine 04103
Tel: 207.533.1888 Fax: 207.533.1889
www.walsheng.com

Project: 2013-001

Scale: 1" = 20' 0"

Section 1: Erosion and Sedimentation Control

1.1. The purpose of this section is to provide a comprehensive guide to the various methods and techniques used to control erosion and sedimentation on construction sites. This includes the identification of erosion-prone areas, the selection of appropriate control measures, and the implementation of a sediment control plan.

1.2. Erosion control measures are designed to prevent the loss of soil and sediment from a construction site. These measures can be implemented at various stages of a project, from site preparation to final site stabilization.

1.3. Sediment control measures are designed to prevent sediment from leaving a construction site and entering nearby water bodies. These measures are typically implemented at the site's perimeter and at key points of sediment discharge.

1.4. The following sections provide detailed information on the various erosion and sediment control measures available, including their advantages, disadvantages, and typical applications.

1.5. It is important to note that the selection and implementation of erosion and sediment control measures must be based on a thorough understanding of the site's specific conditions and the local regulatory requirements.

Section 2: Erosion Control Measures

2.1. **Vegetation:** Planting native vegetation is one of the most effective and long-term methods of erosion control. Vegetation helps to stabilize the soil by its root system and reduces the impact of rain on the soil surface.

2.2. **Grass Seed:** Applying grass seed to bare soil can help to establish a protective cover. This is often used in conjunction with other erosion control measures.

2.3. **Geotextiles:** These are synthetic fabrics that are used to reinforce soil and prevent erosion. They are commonly used in road construction and on steep slopes.

2.4. **Erosion Control Mats:** These are pre-manufactured mats made of straw, coconut fiber, or other natural materials. They are placed over the soil to provide immediate erosion protection.

2.5. **Silt Fences:** These are temporary barriers made of fabric or plastic that are used to filter sediment from runoff. They are typically installed at the perimeter of a construction site.

2.6. **Silt Sacks:** These are large sacks filled with silt or other sediment that are placed at the inlet of a drainage structure to catch sediment before it enters the structure.

2.7. **Silt Basins:** These are temporary basins that are used to collect and settle sediment from runoff. They are typically installed at the outlet of a construction site.

2.8. **Silt Traps:** These are small, temporary structures that are used to catch sediment from runoff. They are typically installed at the inlet of a drainage structure.

2.9. **Silt Pits:** These are temporary pits that are used to collect and settle sediment from runoff. They are typically installed at the outlet of a construction site.

2.10. **Silt Dams:** These are temporary dams made of silt or other sediment that are used to catch sediment from runoff. They are typically installed at the outlet of a construction site.

EROSION AND SEDIMENTATION CONTROL NOTES

1. EROSION AND SEDIMENTATION CONTROL NOTES

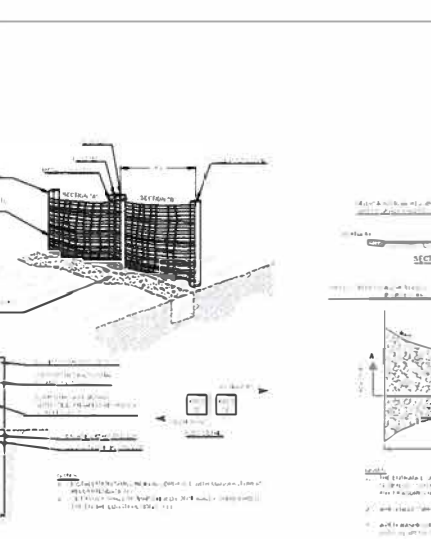
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SEDIMENT BARRIER (EROSION CONTROL MIX)

PREFABRICATED SILT FENCE

Section 3: Erosion Control Measures

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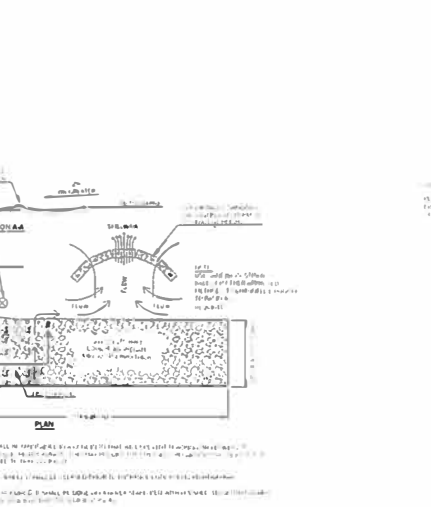
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STABILIZED CONSTRUCTION ENTRANCE



STABILIZED CONSTRUCTION ENTRANCE

Section 4: Erosion Control Measures

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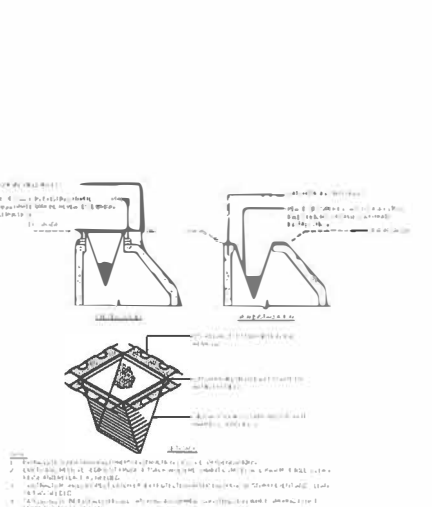
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SILT SACK AT DRAINAGE STRUCTURE INLET



SILT SACK AT DRAINAGE STRUCTURE INLET

WALSH
 ASSOCIATES, INC.
 One Kanan Drive, Suite 200, Kanan, MA 01927
 Tel: 978/881-1000 Fax: 978/881-1001
 www.walsh-inc.com

Deering Avenue Residences
 100 Deering Avenue
 Salem, MA 01970
 Tel: 978/881-1000 Fax: 978/881-1001
 www.walsh-inc.com

SAVIER ISLAND DEVELOPMENT
 100 Savier Island
 Salem, MA 01970
 Tel: 978/881-1000 Fax: 978/881-1001
 www.walsh-inc.com

Rev.	Date	Description
1	01/01/00	Initial Issue
2	02/01/00	Revised for Construction
3	03/01/00	Revised for Construction
4	04/01/00	Revised for Construction
5	05/01/00	Revised for Construction
6	06/01/00	Revised for Construction
7	07/01/00	Revised for Construction
8	08/01/00	Revised for Construction
9	09/01/00	Revised for Construction
10	10/01/00	Revised for Construction
11	11/01/00	Revised for Construction
12	12/01/00	Revised for Construction

Portland, Maine



Yes. Life's good here.

Planning & Urban Development Department

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.



Jimmy Dealaman <jdealaman@portlandmaine.gov>

387 Deering Ave - Question Re Parking Estimate

Todd Valentine <tvalentine@realassetservices.com>

Wed, Feb 16, 2022 at 12:29 PM

To: Stephen Weatherhead <sweatherhead@wintonscott.com>, Jimmy Dealaman <jdealaman@portlandmaine.gov>

Cc: Norm Chamberlain <norm@walsh-eng.com>, Bill Walsh <bill@walsh-eng.com>

Jimmy,

The need for parking is based on the following factors:

- The expected price point and the unit configuration with ensuite bathrooms is pointed towards two professional room mates or a middle class family
- Both possible occupant possibilities are expected to be 2 car households.
- There is not any on-street parking on Deering Avenue to accommodate occupant or visitors.
- Part of our strategy to have some enclosed parking was to limit the size of the exterior parking field.

I believe that these factors were presented and discussed during the project workshop and understood. Please accept this email as a restatement of the need or and strategy for handling the parking demand.

We look forward to Tuesday.

Take Care,

Todd

Todd Valentine

RAS LLC

[14 Town Landing Rd.](#)[Falmouth, ME 04105](#)

(312) 925-9648

From: Stephen Weatherhead <sweatherhead@wintonscott.com>**Sent:** Wednesday, February 16, 2022 11:52 AM**To:** Jimmy Dealaman <jdealaman@portlandmaine.gov>

Cc: Norm Chamberlain <norm@walsh-eng.com>; Bill Walsh <bill@walsh-eng.com>; Todd Valentine <tvalentine@realassetservices.com>

Subject: Re: [387 Deering Ave](#) - Question Re Parking Estimate

Hi Jimmy,

i

[Quoted text hidden]

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.

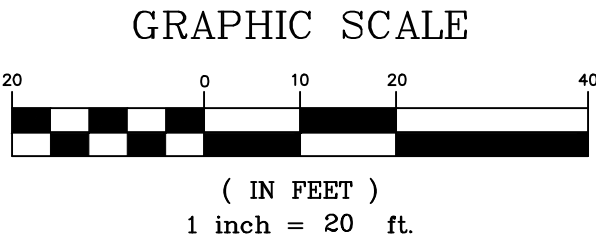
If you have any questions or further matters for discussion, please feel free to contact me by phone (839-5563) or by email at chris@albertfrick.com.

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

February 23, 2021

Revised February 10, 2022

**Prepared for:
Sawyer Island Development, LLC**

Prepared by:

WALSH
ENGINEERING ASSOCIATES, INC.

STORMWATER MANAGEMENT REPORT
Deering Avenue Residences
387 & 405 Deering Avenue, Portland, Maine
Revised February 10, 2022

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.

This revision to the report replaces an above ground underdrained soil filter with a Focal Point filtration system and an underground detention system. The revision has been requested by the City of Portland in order to save a tree located where the proposed above-ground system was.

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 a grassed underdrained soil filter and a Focal Point Treatment system. 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 grassed underdrained soil filter and Focal Point treatment system proposed at the site. The soil filter and Focal Point 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 treatment device will have an outlet control structure to slowly release runoff into the combined sewer and stormwater systems in Deering Avenue. The underdrained soil filter and Focal Point 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	0.1	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 96% of the proposed impervious area and 91% 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 Filter. One (1) grassed underdrained soil filter (Pond SF1) 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.
- Focal Point Stormwater Treatment System. One (1) Focal Point (Ponds 4P and 1P) 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. Note that the Focal Point is not designed to provide channel protection and cooling and therefore, does not have the underdrain system as required by the Maine DEP's approval of the proprietary system.

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.

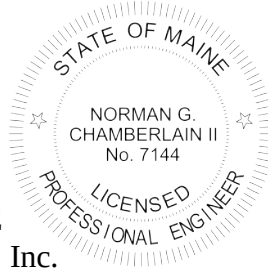
Conclusions:

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,



Norman G. Chamberlain II, PE
Walsh Engineering Associates, Inc.



SUPPORTING DATA AND CALCULATIONS

The following material presents calculations and copies of source material used during the analysis for this study.

Cover Letter & Stormwater Report

Appendix A: Existing Conditions HydroCAD Calculations

Appendix B: Proposed Conditions HydroCAD Calculations

Appendix C: Soils Map

Appendix D: FIRM Map

Appendix E: Inspection & Maintenance Report

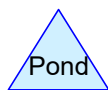
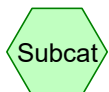
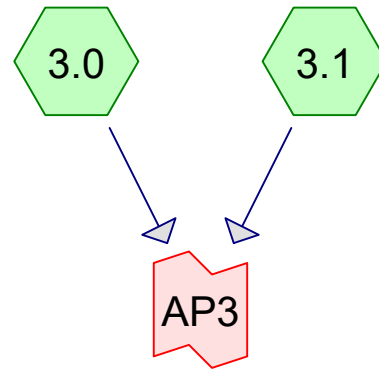
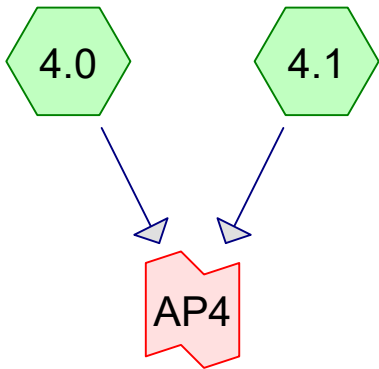
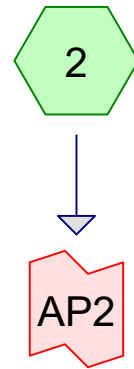
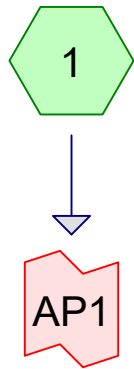
Appendix F: Housekeeping Report & City Maintenance Agreement

Appendix G: Drainage Plans

D1.0: Existing Drainage Analysis

D2.0: Proposed Drainage Analysis

Appendix A:
Existing Conditions HydroCAD Calculations



Routing Diagram for Pre-Development
Prepared by Walsh Engineering Associates, Inc., Printed 2/24/2021
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Pre-Development

Prepared by Walsh Engineering Associates, Inc.
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Deeering Avenue
Type III 24-hr 2-Year Rainfall=3.10"
Printed 2/24/2021
Page 2

Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
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=0.48" Flow Length=205' Tc=19.8 min CN=WQ Runoff=0.15 cfs 712 cf
Subcatchment 2:	Runoff Area=9,262 sf 0.00% Impervious Runoff Depth=0.00" Flow Length=120' Tc=9.1 min CN=WQ 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=8,468 sf 1.16% Impervious Runoff Depth=0.03" Flow Length=160' Tc=10.8 min CN=WQ Runoff=0.01 cfs 23 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=4,332 sf 0.00% Impervious Runoff Depth=0.00" Tc=5.0 min CN=30 Runoff=0.00 cfs 0 cf
Link AP1:	Inflow=0.15 cfs 712 cf Primary=0.15 cfs 712 cf
Link AP2:	Inflow=0.00 cfs 0 cf Primary=0.00 cfs 0 cf
Link AP3:	Inflow=0.19 cfs 655 cf Primary=0.19 cfs 655 cf
Link AP4:	Inflow=0.35 cfs 1,208 cf Primary=0.35 cfs 1,208 cf

Total Runoff Area = 47,536 sf Runoff Volume = 2,575 cf Average Runoff Depth = 0.65"
83.60% Pervious = 39,740 sf 16.40% Impervious = 7,796 sf

Pre-Development

Prepared by Walsh Engineering Associates, Inc.
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Deeering Avenue
 Type III 24-hr 2-Year Rainfall=3.10"
 Printed 2/24/2021
 Page 3

Summary for Subcatchment 1:

Runoff = 0.15 cfs @ 12.29 hrs, Volume= 712 cf, Depth= 0.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 Type III 24-hr 2-Year Rainfall=3.10"

Area (sf)	CN	Description
2,416	39	>75% Grass cover, Good, HSG A
7,875	30	Woods, Good, HSG A
7,485	77	Woods, Good, HSG D
17,776		Weighted Average
17,776		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 @ 0.00 hrs, Volume= 0 cf, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 Type III 24-hr 2-Year Rainfall=3.10"

Area (sf)	CN	Description
2,406	39	>75% Grass cover, Good, HSG A
6,856	30	Woods, Good, HSG A
9,262		Weighted Average
9,262		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.
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Deeering Avenue
Type III 24-hr 2-Year Rainfall=3.10"
Printed 2/24/2021
Page 4

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-Q, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.10"

Area (sf)	CN	Description
* 2,642	98	Impervious
2,642		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 = 0.01 cfs @ 12.15 hrs, Volume= 23 cf, Depth= 0.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.10"

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		Weighted Average
8,370		98.84% Pervious Area
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 = 0.35 cfs @ 12.07 hrs, Volume= 1,208 cf, Depth= 2.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.10"

Pre-Development

Prepared by Walsh Engineering Associates, Inc.
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Deeering Avenue
 Type III 24-hr 2-Year Rainfall=3.10"
 Printed 2/24/2021
 Page 5

	Area (sf)	CN	Description
*	5,056	98	Impervious
	5,056		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 @ 0.00 hrs, Volume= 0 cf, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 Type III 24-hr 2-Year Rainfall=3.10"

	Area (sf)	CN	Description
	4,332	30	Woods, Good, HSG A
	4,332		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Link AP1:

Inflow Area = 17,776 sf, 0.00% Impervious, Inflow Depth = 0.48" for 2-Year event
 Inflow = 0.15 cfs @ 12.29 hrs, Volume= 712 cf
 Primary = 0.15 cfs @ 12.29 hrs, Volume= 712 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Summary for Link AP2:

Inflow Area = 9,262 sf, 0.00% 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 = 11,110 sf, 24.66% Impervious, Inflow Depth = 0.71" for 2-Year event
 Inflow = 0.19 cfs @ 12.07 hrs, Volume= 655 cf
 Primary = 0.19 cfs @ 12.07 hrs, Volume= 655 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.

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Deeering Avenue
Type III 24-hr 2-Year Rainfall=3.10"

Printed 2/24/2021

Page 6

Summary for Link AP4:

Inflow Area = 9,388 sf, 53.86% Impervious, Inflow Depth = 1.54" for 2-Year event
Inflow = 0.35 cfs @ 12.07 hrs, Volume= 1,208 cf
Primary = 0.35 cfs @ 12.07 hrs, Volume= 1,208 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.
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Deeering Avenue
Type III 24-hr 10-Year Rainfall=4.60"
Printed 2/24/2021
Page 7

Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
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=0.98" Flow Length=205' Tc=19.8 min CN=WQ Runoff=0.31 cfs 1,455 cf
Subcatchment 2:	Runoff Area=9,262 sf 0.00% Impervious Runoff Depth=0.03" Flow Length=120' Tc=9.1 min CN=WQ Runoff=0.00 cfs 25 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=8,468 sf 1.16% Impervious Runoff Depth=0.06" Flow Length=160' Tc=10.8 min CN=WQ Runoff=0.01 cfs 45 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=4,332 sf 0.00% Impervious Runoff Depth=0.00" Tc=5.0 min CN=30 Runoff=0.00 cfs 0 cf
Link AP1:	Inflow=0.31 cfs 1,455 cf Primary=0.31 cfs 1,455 cf
Link AP2:	Inflow=0.00 cfs 25 cf Primary=0.00 cfs 25 cf
Link AP3:	Inflow=0.28 cfs 1,005 cf Primary=0.28 cfs 1,005 cf
Link AP4:	Inflow=0.53 cfs 1,839 cf Primary=0.53 cfs 1,839 cf

Total Runoff Area = 47,536 sf Runoff Volume = 4,325 cf Average Runoff Depth = 1.09"
83.60% Pervious = 39,740 sf 16.40% Impervious = 7,796 sf

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 Type III 24-hr 10-Year Rainfall=4.60"
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Summary for Subcatchment 1:

Runoff = 0.31 cfs @ 12.28 hrs, Volume= 1,455 cf, Depth= 0.98"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-Year Rainfall=4.60"

Area (sf)	CN	Description
2,416	39	>75% Grass cover, Good, HSG A
7,875	30	Woods, Good, HSG A
7,485	77	Woods, Good, HSG D
17,776		Weighted Average
17,776		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 @ 14.64 hrs, Volume= 25 cf, Depth= 0.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-Year Rainfall=4.60"

Area (sf)	CN	Description
2,406	39	>75% Grass cover, Good, HSG A
6,856	30	Woods, Good, HSG A
9,262		Weighted Average
9,262		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			

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 Type III 24-hr 10-Year Rainfall=4.60"
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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-Q, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-Year Rainfall=4.60"

Area (sf)	CN	Description
* 2,642	98	Impervious
2,642		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 = 0.01 cfs @ 12.15 hrs, Volume= 45 cf, Depth= 0.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-Year Rainfall=4.60"

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		Weighted Average
8,370		98.84% Pervious Area
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 = 0.53 cfs @ 12.07 hrs, Volume= 1,839 cf, Depth= 4.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-Year Rainfall=4.60"

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 Type III 24-hr 10-Year Rainfall=4.60"
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	Area (sf)	CN	Description
*	5,056	98	Impervious
	5,056		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 @ 0.00 hrs, Volume= 0 cf, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-Year Rainfall=4.60"

	Area (sf)	CN	Description
	4,332	30	Woods, Good, HSG A
	4,332		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Link AP1:

Inflow Area = 17,776 sf, 0.00% Impervious, Inflow Depth = 0.98" for 10-Year event
 Inflow = 0.31 cfs @ 12.28 hrs, Volume= 1,455 cf
 Primary = 0.31 cfs @ 12.28 hrs, Volume= 1,455 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Summary for Link AP2:

Inflow Area = 9,262 sf, 0.00% Impervious, Inflow Depth = 0.03" for 10-Year event
 Inflow = 0.00 cfs @ 14.64 hrs, Volume= 25 cf
 Primary = 0.00 cfs @ 14.64 hrs, Volume= 25 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 = 1.09" for 10-Year event
 Inflow = 0.28 cfs @ 12.07 hrs, Volume= 1,005 cf
 Primary = 0.28 cfs @ 12.07 hrs, Volume= 1,005 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

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Type III 24-hr 10-Year Rainfall=4.60"

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Summary for Link AP4:

Inflow Area = 9,388 sf, 53.86% Impervious, Inflow Depth = 2.35" for 10-Year event
Inflow = 0.53 cfs @ 12.07 hrs, Volume= 1,839 cf
Primary = 0.53 cfs @ 12.07 hrs, Volume= 1,839 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

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Type III 24-hr 25-Year Rainfall=5.80"
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Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
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=1.47" Flow Length=205' Tc=19.8 min CN=WQ Runoff=0.45 cfs 2,174 cf
Subcatchment 2:	Runoff Area=9,262 sf 0.00% Impervious Runoff Depth=0.14" Flow Length=120' Tc=9.1 min CN=WQ Runoff=0.01 cfs 108 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=0.15" Flow Length=160' Tc=10.8 min CN=WQ Runoff=0.01 cfs 106 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
Link AP1:	Inflow=0.45 cfs 2,174 cf Primary=0.45 cfs 2,174 cf
Link AP2:	Inflow=0.01 cfs 108 cf Primary=0.01 cfs 108 cf
Link AP3:	Inflow=0.36 cfs 1,331 cf Primary=0.36 cfs 1,331 cf
Link AP4:	Inflow=0.66 cfs 2,362 cf Primary=0.66 cfs 2,362 cf

Total Runoff Area = 47,536 sf Runoff Volume = 5,976 cf Average Runoff Depth = 1.51"
83.60% Pervious = 39,740 sf 16.40% Impervious = 7,796 sf

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 Type III 24-hr 25-Year Rainfall=5.80"
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Summary for Subcatchment 1:

Runoff = 0.45 cfs @ 12.27 hrs, Volume= 2,174 cf, Depth= 1.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, 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		Weighted Average
17,776		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 = 0.01 cfs @ 12.42 hrs, Volume= 108 cf, Depth= 0.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, 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		Weighted Average
9,262		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			

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 Type III 24-hr 25-Year Rainfall=5.80"
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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-Q, 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		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 = 0.01 cfs @ 12.16 hrs, Volume= 106 cf, Depth= 0.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, 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		Weighted Average
8,370		98.84% Pervious Area
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-Q, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 Type III 24-hr 25-Year Rainfall=5.80"

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 Type III 24-hr 25-Year Rainfall=5.80"
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	Area (sf)	CN	Description
*	5,056	98	Impervious
	5,056		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-Q, 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		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Link AP1:

Inflow Area = 17,776 sf, 0.00% Impervious, Inflow Depth = 1.47" for 25-Year event
 Inflow = 0.45 cfs @ 12.27 hrs, Volume= 2,174 cf
 Primary = 0.45 cfs @ 12.27 hrs, Volume= 2,174 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Summary for Link AP2:

Inflow Area = 9,262 sf, 0.00% Impervious, Inflow Depth = 0.14" for 25-Year event
 Inflow = 0.01 cfs @ 12.42 hrs, Volume= 108 cf
 Primary = 0.01 cfs @ 12.42 hrs, Volume= 108 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 = 1.44" for 25-Year event
 Inflow = 0.36 cfs @ 12.07 hrs, Volume= 1,331 cf
 Primary = 0.36 cfs @ 12.07 hrs, Volume= 1,331 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

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Type III 24-hr 25-Year Rainfall=5.80"

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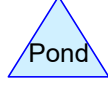
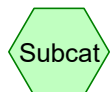
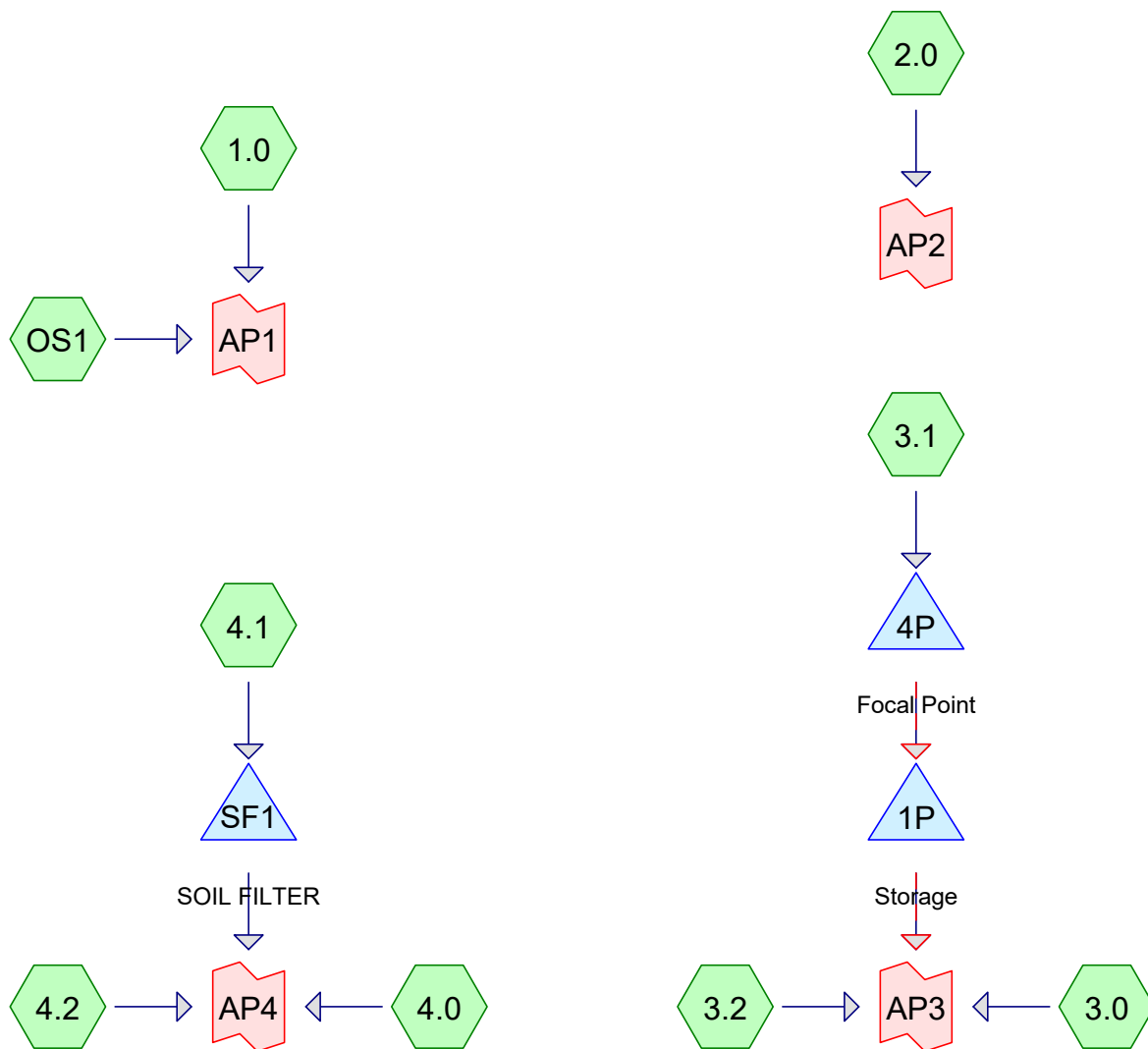
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Summary for Link AP4:

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

Appendix B:
Proposed Conditions HydroCAD Calculations,



Routing Diagram for Post-Development - Subsurface Chambers
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Post-Development - Subsurface Chambers

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Area Listing (selected nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
127	98	(4.1)
6,860	39	>75% Grass cover, Good, HSG A (2.0, 3.0, 3.1, 3.2, 4.2, OS1)
711	80	>75% Grass cover, Good, HSG D (1.0, 4.1)
14,724	30	Brush, Good, HSG A (1.0, 2.0, 3.1, 3.2, 4.1, 4.2)
2,378	73	Brush, Good, HSG D (1.0, 4.1)
92	98	Expanded Parking Aisle (4.1)
319	98	Granite & Ledge (4.1)
1,968	39	Grass, HSG A (4.1)
346	98	Ledge (2.0)
81	98	Ledge and Granite (4.2)
369	30	Meadow, non-grazed, HSG A (3.0)
187	98	Pavement (4.2)
6,144	98	Pavement, Roof (4.1)
147	98	ROAD/DRIVEWAY (3.2)
6,204	98	ROOF AND PAVED PARKING (3.1)
7,429	98	Roadway (3.0, 4.0)
1,490	98	Roofs, HSG A (OS1)
644	89	StoneDust Path (4.1)
344	89	Stonedust Walkway (3.2, 4.2)
621	98	Walkways (3.1)
331	30	Woods, Good, HSG A (3.0)
51,516	66	TOTAL AREA

Post-Development - Subsurface Chambers

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Type III 24-hr 2-Year Rainfall=3.10"

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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=1,751 sf 0.00% Impervious Runoff Depth=0.59" Flow Length=70' Slope=0.0300 '/' Tc=13.9 min CN=66 Runoff=0.0 cfs 87 cf
Subcatchment 2.0:	Runoff Area=3,358 sf 10.30% Impervious Runoff Depth=0.00" Flow Length=35' Slope=0.0600 '/' Tc=6.1 min CN=38 Runoff=0.0 cfs 0 cf
Subcatchment 3.0:	Runoff Area=3,456 sf 68.66% Impervious Runoff Depth=1.20" Tc=5.0 min CN=78 Runoff=0.1 cfs 346 cf
Subcatchment 3.1:	Runoff Area=13,004 sf 52.48% Impervious Runoff Depth=0.68" Flow Length=177' Tc=7.8 min CN=68 Runoff=0.2 cfs 736 cf
Subcatchment 3.2:	Runoff Area=1,281 sf 11.48% Impervious Runoff Depth=0.13" Tc=5.0 min CN=51 Runoff=0.0 cfs 14 cf
Subcatchment 4.0:	Runoff Area=5,056 sf 100.00% Impervious Runoff Depth=2.87" Tc=5.0 min CN=98 Runoff=0.4 cfs 1,208 cf
Subcatchment 4.1:	Runoff Area=17,100 sf 39.08% Impervious Runoff Depth=0.51" Flow Length=235' Tc=10.4 min CN=64 Runoff=0.1 cfs 731 cf
Subcatchment 4.2:	Runoff Area=2,530 sf 10.59% Impervious Runoff Depth=0.00" Tc=5.0 min CN=41 Runoff=0.0 cfs 1 cf
Subcatchment OS1:	Runoff Area=3,980 sf 37.44% Impervious Runoff Depth=0.40" Tc=5.0 min CN=61 Runoff=0.0 cfs 134 cf
Pond 1P: Storage	Peak Elev=40.63' Storage=337 cf Inflow=0.2 cfs 736 cf Outflow=0.0 cfs 635 cf
Pond 4P: Focal Point	Peak Elev=43.00' Storage=15 cf Inflow=0.2 cfs 736 cf Primary=0.2 cfs 736 cf Secondary=0.0 cfs 0 cf Outflow=0.2 cfs 736 cf
Pond SF1: SOIL FILTER	Peak Elev=39.53' Storage=303 cf Inflow=0.1 cfs 731 cf Outflow=0.0 cfs 731 cf
Link AP1:	Inflow=0.0 cfs 220 cf Primary=0.0 cfs 220 cf
Link AP2:	Inflow=0.0 cfs 0 cf Primary=0.0 cfs 0 cf
Link AP3:	Inflow=0.1 cfs 995 cf Primary=0.1 cfs 995 cf
Link AP4:	Inflow=0.4 cfs 1,940 cf Primary=0.4 cfs 1,940 cf

Post-Development - Subsurface Chambers

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Type III 24-hr 2-Year Rainfall=3.10"

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Total Runoff Area = 51,516 sf Runoff Volume = 3,256 cf Average Runoff Depth = 0.76"
54.99% Pervious = 28,329 sf 45.01% Impervious = 23,187 sf

Post-Development - Subsurface Chambers

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Type III 24-hr 2-Year Rainfall=3.10"

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Summary for Subcatchment 1.0:

Runoff = 0.0 cfs @ 12.24 hrs, Volume= 87 cf, Depth= 0.59"

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
1,008	73	Brush, Good, HSG D
343	30	Brush, Good, HSG A
400	80	>75% Grass cover, Good, HSG D
1,751	66	Weighted Average
1,751	66	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 = 0.0 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
2,742	30	Brush, Good, HSG A
* 346	98	Ledge
270	39	>75% Grass cover, Good, HSG A
3,358	38	Weighted Average
3,012	31	89.70% Pervious Area
346	98	10.30% 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 = 0.1 cfs @ 12.08 hrs, Volume= 346 cf, Depth= 1.20"

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"

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Type III 24-hr 2-Year Rainfall=3.10"

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	Area (sf)	CN	Description
*	2,373	98	Roadway
	383	39	>75% Grass cover, Good, HSG A
	331	30	Woods, Good, HSG A
	369	30	Meadow, non-grazed, HSG A
	3,456	78	Weighted Average
	1,083	33	31.34% Pervious Area
	2,373	98	68.66% 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 = 0.2 cfs @ 12.13 hrs, Volume= 736 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 2-Year Rainfall=3.10"

	Area (sf)	CN	Description
*	6,204	98	ROOF AND PAVED PARKING
	2,949	39	>75% Grass cover, Good, HSG A
	3,230	30	Brush, Good, HSG A
*	621	98	Walkways
	13,004	68	Weighted Average
	6,179	34	47.52% Pervious Area
	6,825	98	52.48% 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 = 0.0 cfs @ 12.45 hrs, Volume= 14 cf, Depth= 0.13"

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"

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	Area (sf)	CN	Description
	367	39	>75% Grass cover, Good, HSG A
*	147	98	ROAD/DRIVEWAY
	532	30	Brush, Good, HSG A
*	235	89	Stonedust Walkway
	1,281	51	Weighted Average
	1,134	45	88.52% Pervious Area
	147	98	11.48% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment 4.0:

Runoff = 0.4 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 = 0.1 cfs @ 12.19 hrs, Volume= 731 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	
*	92	98	Expanded Parking Aisle
	17,100	64	Weighted Average
	10,418	42	60.92% Pervious Area
	6,682	98	39.08% Impervious Area

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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 = 0.0 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 = 0.0 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

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Pond 1P: Storage

Inflow Area = 13,004 sf, 52.48% Impervious, Inflow Depth = 0.68" for 2-Year event
Inflow = 0.2 cfs @ 12.15 hrs, Volume= 736 cf
Outflow = 0.0 cfs @ 15.14 hrs, Volume= 635 cf, Atten= 92%, Lag= 179.4 min
Primary = 0.0 cfs @ 15.14 hrs, Volume= 635 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 40.63' @ 15.14 hrs Surf.Area= 1,045 sf Storage= 337 cf

Plug-Flow detention time= 282.8 min calculated for 635 cf (86% of inflow)
Center-of-Mass det. time= 220.3 min (1,108.3 - 888.0)

Volume	Invert	Avail.Storage	Storage Description
#1A	40.21'	22 cf	10.19'W x 5.69'L x 1.54'H Field A 89 cf Overall - 34 cf Embedded = 55 cf x 40.0% Voids
#2A	40.46'	32 cf	ACF R-Tank SD 1 x 14 Inside #1 Inside= 15.7"W x 9.4"H => 0.98 sf x 2.35'L = 2.3 cf Outside= 15.7"W x 9.4"H => 1.03 sf x 2.35'L = 2.4 cf 14 Chambers in 7 Rows
#3B	39.96'	709 cf	21.50'W x 45.92'L x 2.33'H Field B 2,304 cf Overall - 531 cf Embedded = 1,773 cf x 40.0% Voids
#4B	40.46'	531 cf	ADS_StormTech SC-310 +Cap x 36 Inside #3 Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap 36 Chambers in 6 Rows
1,294 cf			Total Available Storage

Storage Group A created with Chamber Wizard

Storage Group B created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	40.21'	4.0" Round Culvert L= 144.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 40.21' / 37.20' S= 0.0209 ' S= 0.0209 ' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.09 sf
#2	Device 1	40.21'	1.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	42.00'	4.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s)

Primary OutFlow Max=0.0 cfs @ 15.14 hrs HW=40.63' TW=0.00' (Dynamic Tailwater)

1=Culvert (Passes 0.0 cfs of 0.2 cfs potential flow)
2=Orifice/Grate (Orifice Controls 0.0 cfs @ 2.94 fps)
3=Sharp-Crested Rectangular Weir (Controls 0.0 cfs)

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Summary for Pond 4P: Focal Point

Inflow Area = 13,004 sf, 52.48% Impervious, Inflow Depth = 0.68" for 2-Year event
 Inflow = 0.2 cfs @ 12.13 hrs, Volume= 736 cf
 Outflow = 0.2 cfs @ 12.15 hrs, Volume= 736 cf, Atten= 0%, Lag= 1.1 min
 Primary = 0.2 cfs @ 12.15 hrs, Volume= 736 cf
 Secondary = 0.0 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 2

Peak Elev= 43.00' @ 12.15 hrs Surf.Area= 98 sf Storage= 15 cf

Flood Elev= 44.00' Surf.Area= 175 sf Storage= 107 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)

Center-of-Mass det. time= 0.5 min (888.0 - 887.5)

Volume	Invert	Avail.Storage	Storage Description
#1	41.25'	15 cf	4.70'W x 9.16'L x 1.75'H Focal Point 75 cf Overall x 20.0% Voids
#2	43.00'	92 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
		107 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
43.00	55	0	0
43.50	91	37	37
44.00	132	56	92

Device	Routing	Invert	Outlet Devices
#1	Primary	41.25'	100.000 in/hr Exfiltration over Surface area Phase-In= 0.01'
#2	Secondary	43.60'	24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.1 cfs @ 12.15 hrs HW=43.00' TW=40.18' (Dynamic Tailwater)↑ **1=Exfiltration** (Exfiltration Controls 0.1 cfs)**Secondary OutFlow** Max=0.0 cfs @ 0.00 hrs HW=41.25' TW=39.96' (Dynamic Tailwater)↑ **2=Orifice/Grate** (Controls 0.0 cfs)**Summary for Pond SF1: SOIL FILTER**

Inflow Area = 17,100 sf, 39.08% Impervious, Inflow Depth = 0.51" for 2-Year event
 Inflow = 0.1 cfs @ 12.19 hrs, Volume= 731 cf
 Outflow = 0.0 cfs @ 15.71 hrs, Volume= 731 cf, Atten= 90%, Lag= 211.0 min
 Primary = 0.0 cfs @ 15.71 hrs, Volume= 731 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 2

Peak Elev= 39.53' @ 15.71 hrs Surf.Area= 1,270 sf Storage= 303 cf

Flood Elev= 40.80' Surf.Area= 1,532 sf Storage= 1,276 cf

Plug-Flow detention time= 244.3 min calculated for 731 cf (100% of inflow)

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Center-of-Mass det. time= 244.3 min (1,151.6 - 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 Limited to weir flow at low heads

Primary OutFlow Max=0.0 cfs @ 15.71 hrs HW=39.53' TW=0.00' (Dynamic Tailwater)

1=Culvert (Passes 0.0 cfs of 0.6 cfs potential flow)
2=Overflow (Controls 0.0 cfs)
3=Orifice/Grate (Orifice Controls 0.0 cfs @ 7.62 fps)

Summary for Link AP1:

Inflow Area = 5,731 sf, 26.00% Impervious, Inflow Depth = 0.46" for 2-Year event
Inflow = 0.0 cfs @ 12.17 hrs, Volume= 220 cf
Primary = 0.0 cfs @ 12.17 hrs, Volume= 220 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Summary for Link AP2:

Inflow Area = 3,358 sf, 10.30% Impervious, Inflow Depth = 0.00" for 2-Year event
Inflow = 0.0 cfs @ 0.00 hrs, Volume= 0 cf
Primary = 0.0 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

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Summary for Link AP3:

Inflow Area = 17,741 sf, 52.67% Impervious, Inflow Depth > 0.67" for 2-Year event
Inflow = 0.1 cfs @ 12.08 hrs, Volume= 995 cf
Primary = 0.1 cfs @ 12.08 hrs, Volume= 995 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 = 24,686 sf, 48.63% Impervious, Inflow Depth = 0.94" for 2-Year event
Inflow = 0.4 cfs @ 12.07 hrs, Volume= 1,940 cf
Primary = 0.4 cfs @ 12.07 hrs, Volume= 1,940 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

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Type III 24-hr 10-Year Rainfall=4.60"

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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=1,751 sf 0.00% Impervious Runoff Depth=1.46" Flow Length=70' Slope=0.0300 '/' Tc=13.9 min CN=66 Runoff=0.0 cfs 213 cf
Subcatchment 2.0:	Runoff Area=3,358 sf 10.30% Impervious Runoff Depth=0.10" Flow Length=35' Slope=0.0600 '/' Tc=6.1 min CN=38 Runoff=0.0 cfs 28 cf
Subcatchment 3.0:	Runoff Area=3,456 sf 68.66% Impervious Runoff Depth=2.38" Tc=5.0 min CN=78 Runoff=0.2 cfs 684 cf
Subcatchment 3.1:	Runoff Area=13,004 sf 52.48% Impervious Runoff Depth=1.60" Flow Length=177' Tc=7.8 min CN=68 Runoff=0.5 cfs 1,734 cf
Subcatchment 3.2:	Runoff Area=1,281 sf 11.48% Impervious Runoff Depth=0.58" Tc=5.0 min CN=51 Runoff=0.0 cfs 62 cf
Subcatchment 4.0:	Runoff Area=5,056 sf 100.00% Impervious Runoff Depth=4.36" Tc=5.0 min CN=98 Runoff=0.5 cfs 1,839 cf
Subcatchment 4.1:	Runoff Area=17,100 sf 39.08% Impervious Runoff Depth=1.33" Flow Length=235' Tc=10.4 min CN=64 Runoff=0.5 cfs 1,891 cf
Subcatchment 4.2:	Runoff Area=2,530 sf 10.59% Impervious Runoff Depth=0.18" Tc=5.0 min CN=41 Runoff=0.0 cfs 39 cf
Subcatchment OS1:	Runoff Area=3,980 sf 37.44% Impervious Runoff Depth=1.14" Tc=5.0 min CN=61 Runoff=0.1 cfs 377 cf
Pond 1P: Storage	Peak Elev=41.50' Storage=961 cf Inflow=0.5 cfs 1,734 cf Outflow=0.0 cfs 1,633 cf
Pond 4P: Focal Point	Peak Elev=43.65' Storage=66 cf Inflow=0.5 cfs 1,734 cf Primary=0.3 cfs 1,692 cf Secondary=0.2 cfs 42 cf Outflow=0.5 cfs 1,734 cf
Pond SF1: SOIL FILTER	Peak Elev=40.70' Storage=1,189 cf Inflow=0.5 cfs 1,891 cf Outflow=0.0 cfs 1,892 cf
Link AP1:	Inflow=0.1 cfs 590 cf Primary=0.1 cfs 590 cf
Link AP2:	Inflow=0.0 cfs 28 cf Primary=0.0 cfs 28 cf
Link AP3:	Inflow=0.2 cfs 2,380 cf Primary=0.2 cfs 2,380 cf
Link AP4:	Inflow=0.5 cfs 3,769 cf Primary=0.5 cfs 3,769 cf

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Total Runoff Area = 51,516 sf Runoff Volume = 6,867 cf Average Runoff Depth = 1.60"
54.99% Pervious = 28,329 sf 45.01% Impervious = 23,187 sf

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Summary for Subcatchment 1.0:

Runoff = 0.0 cfs @ 12.21 hrs, Volume= 213 cf, Depth= 1.46"

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
1,008	73	Brush, Good, HSG D
343	30	Brush, Good, HSG A
400	80	>75% Grass cover, Good, HSG D
1,751	66	Weighted Average
1,751	66	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 = 0.0 cfs @ 14.83 hrs, Volume= 28 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
2,742	30	Brush, Good, HSG A
* 346	98	Ledge
270	39	>75% Grass cover, Good, HSG A
3,358	38	Weighted Average
3,012	31	89.70% Pervious Area
346	98	10.30% 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 = 0.2 cfs @ 12.08 hrs, Volume= 684 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 10-Year Rainfall=4.60"

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	Area (sf)	CN	Description
*	2,373	98	Roadway
	383	39	>75% Grass cover, Good, HSG A
	331	30	Woods, Good, HSG A
	369	30	Meadow, non-grazed, HSG A
	3,456	78	Weighted Average
	1,083	33	31.34% Pervious Area
	2,373	98	68.66% 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 = 0.5 cfs @ 12.12 hrs, Volume= 1,734 cf, Depth= 1.60"

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
*	6,204	98	ROOF AND PAVED PARKING
	2,949	39	>75% Grass cover, Good, HSG A
	3,230	30	Brush, Good, HSG A
*	621	98	Walkways
	13,004	68	Weighted Average
	6,179	34	47.52% Pervious Area
	6,825	98	52.48% 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 = 0.0 cfs @ 12.12 hrs, Volume= 62 cf, Depth= 0.58"

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"

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Type III 24-hr 10-Year Rainfall=4.60"

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	Area (sf)	CN	Description
	367	39	>75% Grass cover, Good, HSG A
*	147	98	ROAD/DRIVEWAY
	532	30	Brush, Good, HSG A
*	235	89	Stonedust Walkway
	1,281	51	Weighted Average
	1,134	45	88.52% Pervious Area
	147	98	11.48% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment 4.0:

Runoff = 0.5 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 = 0.5 cfs @ 12.16 hrs, Volume= 1,891 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	
*	92	98	Expanded Parking Aisle
	17,100	64	Weighted Average
	10,418	42	60.92% Pervious Area
	6,682	98	39.08% Impervious Area

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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 = 0.0 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 = 0.1 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

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Type III 24-hr 10-Year Rainfall=4.60"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Pond 1P: Storage

Inflow Area = 13,004 sf, 52.48% Impervious, Inflow Depth = 1.60" for 10-Year event
 Inflow = 0.5 cfs @ 12.16 hrs, Volume= 1,734 cf
 Outflow = 0.0 cfs @ 15.46 hrs, Volume= 1,633 cf, Atten= 94%, Lag= 198.1 min
 Primary = 0.0 cfs @ 15.46 hrs, Volume= 1,633 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 2
 Peak Elev= 41.50' @ 15.46 hrs Surf.Area= 1,045 sf Storage= 961 cf

Plug-Flow detention time= 427.1 min calculated for 1,633 cf (94% of inflow)
 Center-of-Mass det. time= 396.5 min (1,256.8 - 860.4)

Volume	Invert	Avail.Storage	Storage Description
#1A	40.21'	22 cf	10.19'W x 5.69'L x 1.54'H Field A 89 cf Overall - 34 cf Embedded = 55 cf x 40.0% Voids
#2A	40.46'	32 cf	ACF R-Tank SD 1 x 14 Inside #1 Inside= 15.7"W x 9.4"H => 0.98 sf x 2.35'L = 2.3 cf Outside= 15.7"W x 9.4"H => 1.03 sf x 2.35'L = 2.4 cf 14 Chambers in 7 Rows
#3B	39.96'	709 cf	21.50'W x 45.92'L x 2.33'H Field B 2,304 cf Overall - 531 cf Embedded = 1,773 cf x 40.0% Voids
#4B	40.46'	531 cf	ADS_StormTech SC-310 +Cap x 36 Inside #3 Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap 36 Chambers in 6 Rows
		1,294 cf	Total Available Storage

Storage Group A created with Chamber Wizard
 Storage Group B created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	40.21'	4.0" Round Culvert L= 144.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 40.21' / 37.20' S= 0.0209 ' S= 0.0209 ' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.09 sf
#2	Device 1	40.21'	1.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	42.00'	4.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s)

Primary OutFlow Max=0.0 cfs @ 15.46 hrs HW=41.50' TW=0.00' (Dynamic Tailwater)

1=Culvert (Passes 0.0 cfs of 0.3 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 0.0 cfs @ 5.39 fps)
 3=Sharp-Crested Rectangular Weir (Controls 0.0 cfs)

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Summary for Pond 4P: Focal Point

Inflow Area = 13,004 sf, 52.48% Impervious, Inflow Depth = 1.60" for 10-Year event
Inflow = 0.5 cfs @ 12.12 hrs, Volume= 1,734 cf
Outflow = 0.5 cfs @ 12.16 hrs, Volume= 1,734 cf, Atten= 0%, Lag= 2.1 min
Primary = 0.3 cfs @ 12.17 hrs, Volume= 1,692 cf
Secondary = 0.2 cfs @ 12.15 hrs, Volume= 42 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 2

Peak Elev= 43.65' @ 12.17 hrs Surf.Area= 146 sf Storage= 66 cf

Flood Elev= 44.00' Surf.Area= 175 sf Storage= 107 cf

Plug-Flow detention time= 1.0 min calculated for 1,733 cf (100% of inflow)

Center-of-Mass det. time= 1.0 min (860.4 - 859.4)

Volume	Invert	Avail.Storage	Storage Description
#1	41.25'	15 cf	4.70'W x 9.16'L x 1.75'H Focal Point 75 cf Overall x 20.0% Voids
#2	43.00'	92 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
		107 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
43.00	55	0	0
43.50	91	37	37
44.00	132	56	92

Device	Routing	Invert	Outlet Devices
#1	Primary	41.25'	100.000 in/hr Exfiltration over Surface area Phase-In= 0.01'
#2	Secondary	43.60'	24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.3 cfs @ 12.17 hrs HW=43.63' TW=40.64' (Dynamic Tailwater)

↑ **1=Exfiltration** (Exfiltration Controls 0.3 cfs)

Secondary OutFlow Max=0.2 cfs @ 12.15 hrs HW=43.64' TW=40.61' (Dynamic Tailwater)

↑ **2=Orifice/Grate** (Weir Controls 0.2 cfs @ 0.65 fps)

Summary for Pond SF1: SOIL FILTER

Inflow Area = 17,100 sf, 39.08% Impervious, Inflow Depth = 1.33" for 10-Year event
Inflow = 0.5 cfs @ 12.16 hrs, Volume= 1,891 cf
Outflow = 0.0 cfs @ 17.51 hrs, Volume= 1,892 cf, Atten= 96%, Lag= 321.0 min
Primary = 0.0 cfs @ 17.51 hrs, Volume= 1,892 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 2

Peak Elev= 40.70' @ 17.51 hrs Surf.Area= 1,510 sf Storage= 1,189 cf

Flood Elev= 40.80' Surf.Area= 1,532 sf Storage= 1,276 cf

Plug-Flow detention time= 732.3 min calculated for 1,890 cf (100% of inflow)

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Center-of-Mass det. time= 733.0 min (1,606.3 - 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 ' 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 Limited to weir flow at low heads

Primary OutFlow Max=0.0 cfs @ 17.51 hrs HW=40.70' TW=0.00' (Dynamic Tailwater)

1=Culvert (Passes 0.0 cfs of 0.7 cfs potential flow)
2=Overflow (Weir Controls 0.0 cfs @ 0.16 fps)
3=Orifice/Grate (Orifice Controls 0.0 cfs @ 9.23 fps)

Summary for Link AP1:

Inflow Area = 5,731 sf, 26.00% Impervious, Inflow Depth = 1.23" for 10-Year event
Inflow = 0.1 cfs @ 12.11 hrs, Volume= 590 cf
Primary = 0.1 cfs @ 12.11 hrs, Volume= 590 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Summary for Link AP2:

Inflow Area = 3,358 sf, 10.30% Impervious, Inflow Depth = 0.10" for 10-Year event
Inflow = 0.0 cfs @ 14.83 hrs, Volume= 28 cf
Primary = 0.0 cfs @ 14.83 hrs, Volume= 28 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

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Summary for Link AP3:

Inflow Area = 17,741 sf, 52.67% Impervious, Inflow Depth > 1.61" for 10-Year event
Inflow = 0.2 cfs @ 12.08 hrs, Volume= 2,380 cf
Primary = 0.2 cfs @ 12.08 hrs, Volume= 2,380 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 = 24,686 sf, 48.63% Impervious, Inflow Depth = 1.83" for 10-Year event
Inflow = 0.5 cfs @ 12.07 hrs, Volume= 3,769 cf
Primary = 0.5 cfs @ 12.07 hrs, Volume= 3,769 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

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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=1,751 sf 0.00% Impervious Runoff Depth=2.29" Flow Length=70' Slope=0.0300 '/' Tc=13.9 min CN=66 Runoff=0.1 cfs 335 cf
Subcatchment 2.0:	Runoff Area=3,358 sf 10.30% Impervious Runoff Depth=0.34" Flow Length=35' Slope=0.0600 '/' Tc=6.1 min CN=38 Runoff=0.0 cfs 96 cf
Subcatchment 3.0:	Runoff Area=3,456 sf 68.66% Impervious Runoff Depth=3.40" Tc=5.0 min CN=78 Runoff=0.3 cfs 980 cf
Subcatchment 3.1:	Runoff Area=13,004 sf 52.48% Impervious Runoff Depth=2.47" Flow Length=177' Tc=7.8 min CN=68 Runoff=0.8 cfs 2,675 cf
Subcatchment 3.2:	Runoff Area=1,281 sf 11.48% Impervious Runoff Depth=1.12" Tc=5.0 min CN=51 Runoff=0.0 cfs 119 cf
Subcatchment 4.0:	Runoff Area=5,056 sf 100.00% Impervious Runoff Depth=5.56" Tc=5.0 min CN=98 Runoff=0.7 cfs 2,343 cf
Subcatchment 4.1:	Runoff Area=17,100 sf 39.08% Impervious Runoff Depth=2.12" Flow Length=235' Tc=10.4 min CN=64 Runoff=0.8 cfs 3,024 cf
Subcatchment 4.2:	Runoff Area=2,530 sf 10.59% Impervious Runoff Depth=0.49" Tc=5.0 min CN=41 Runoff=0.0 cfs 104 cf
Subcatchment OS1:	Runoff Area=3,980 sf 37.44% Impervious Runoff Depth=1.87" Tc=5.0 min CN=61 Runoff=0.2 cfs 621 cf
Pond 1P: Storage	Peak Elev=42.07' Storage=1,205 cf Inflow=0.9 cfs 2,675 cf Outflow=0.3 cfs 2,573 cf
Pond 4P: Focal Point	Peak Elev=43.69' Storage=71 cf Inflow=0.8 cfs 2,675 cf Primary=0.3 cfs 2,389 cf Secondary=0.6 cfs 286 cf Outflow=0.9 cfs 2,675 cf
Pond SF1: SOIL FILTER	Peak Elev=40.75' Storage=1,232 cf Inflow=0.8 cfs 3,024 cf Outflow=0.3 cfs 3,024 cf
Link AP1:	Inflow=0.2 cfs 956 cf Primary=0.2 cfs 956 cf
Link AP2:	Inflow=0.0 cfs 96 cf Primary=0.0 cfs 96 cf
Link AP3:	Inflow=0.4 cfs 3,672 cf Primary=0.4 cfs 3,672 cf
Link AP4:	Inflow=0.7 cfs 5,472 cf Primary=0.7 cfs 5,472 cf

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Total Runoff Area = 51,516 sf Runoff Volume = 10,296 cf Average Runoff Depth = 2.40"
54.99% Pervious = 28,329 sf 45.01% Impervious = 23,187 sf

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Summary for Subcatchment 1.0:

Runoff = 0.1 cfs @ 12.20 hrs, Volume= 335 cf, Depth= 2.29"

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
1,008	73	Brush, Good, HSG D
343	30	Brush, Good, HSG A
400	80	>75% Grass cover, Good, HSG D
1,751	66	Weighted Average
1,751	66	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 = 0.0 cfs @ 12.39 hrs, Volume= 96 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
2,742	30	Brush, Good, HSG A
* 346	98	Ledge
270	39	>75% Grass cover, Good, HSG A
3,358	38	Weighted Average
3,012	31	89.70% Pervious Area
346	98	10.30% 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 = 0.3 cfs @ 12.08 hrs, Volume= 980 cf, Depth= 3.40"

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 25-Year Rainfall=5.80"

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	Area (sf)	CN	Description
*	2,373	98	Roadway
	383	39	>75% Grass cover, Good, HSG A
	331	30	Woods, Good, HSG A
	369	30	Meadow, non-grazed, HSG A
	3,456	78	Weighted Average
	1,083	33	31.34% Pervious Area
	2,373	98	68.66% 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 = 0.8 cfs @ 12.12 hrs, Volume= 2,675 cf, Depth= 2.47"

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
*	6,204	98	ROOF AND PAVED PARKING
	2,949	39	>75% Grass cover, Good, HSG A
	3,230	30	Brush, Good, HSG A
*	621	98	Walkways
	13,004	68	Weighted Average
	6,179	34	47.52% Pervious Area
	6,825	98	52.48% 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 = 0.0 cfs @ 12.10 hrs, Volume= 119 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"

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	Area (sf)	CN	Description
	367	39	>75% Grass cover, Good, HSG A
*	147	98	ROAD/DRIVEWAY
	532	30	Brush, Good, HSG A
*	235	89	Stonedust Walkway
	1,281	51	Weighted Average
	1,134	45	88.52% Pervious Area
	147	98	11.48% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment 4.0:

Runoff = 0.7 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 = 0.8 cfs @ 12.16 hrs, Volume= 3,024 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	
*	92	98	Expanded Parking Aisle
	17,100	64	Weighted Average
	10,418	42	60.92% Pervious Area
	6,682	98	39.08% Impervious Area

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Type III 24-hr 25-Year Rainfall=5.80"

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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 = 0.0 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 = 0.2 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 - Subsurface Chambers

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Deering Avenue
Type III 24-hr 25-Year Rainfall=5.80"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Pond 1P: Storage

Inflow Area = 13,004 sf, 52.48% Impervious, Inflow Depth = 2.47" for 25-Year event
Inflow = 0.9 cfs @ 12.11 hrs, Volume= 2,675 cf
Outflow = 0.3 cfs @ 12.61 hrs, Volume= 2,573 cf, Atten= 71%, Lag= 29.9 min
Primary = 0.3 cfs @ 12.61 hrs, Volume= 2,573 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 42.07' @ 12.61 hrs Surf.Area= 1,045 sf Storage= 1,205 cf

Plug-Flow detention time= 381.7 min calculated for 2,570 cf (96% of inflow)
Center-of-Mass det. time= 361.8 min (1,209.2 - 847.5)

Volume	Invert	Avail.Storage	Storage Description
#1A	40.21'	22 cf	10.19'W x 5.69'L x 1.54'H Field A 89 cf Overall - 34 cf Embedded = 55 cf x 40.0% Voids
#2A	40.46'	32 cf	ACF R-Tank SD 1 x 14 Inside #1 Inside= 15.7"W x 9.4"H => 0.98 sf x 2.35'L = 2.3 cf Outside= 15.7"W x 9.4"H => 1.03 sf x 2.35'L = 2.4 cf 14 Chambers in 7 Rows
#3B	39.96'	709 cf	21.50'W x 45.92'L x 2.33'H Field B 2,304 cf Overall - 531 cf Embedded = 1,773 cf x 40.0% Voids
#4B	40.46'	531 cf	ADS_StormTech SC-310 +Cap x 36 Inside #3 Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap 36 Chambers in 6 Rows
1,294 cf			Total Available Storage

Storage Group A created with Chamber Wizard
Storage Group B created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	40.21'	4.0" Round Culvert L= 144.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 40.21' / 37.20' S= 0.0209 ' S= 0.0209 ' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.09 sf
#2	Device 1	40.21'	1.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	42.00'	4.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s)

Primary OutFlow Max=0.3 cfs @ 12.61 hrs HW=42.07' TW=0.00' (Dynamic Tailwater)

- 1=Culvert (Passes 0.3 cfs of 0.3 cfs potential flow)
- 2=Orifice/Grate (Orifice Controls 0.0 cfs @ 6.48 fps)
- 3=Sharp-Crested Rectangular Weir (Weir Controls 0.2 cfs @ 0.84 fps)

Post-Development - Subsurface Chambers

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Type III 24-hr 25-Year Rainfall=5.80"

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Summary for Pond 4P: Focal Point

Inflow Area = 13,004 sf, 52.48% Impervious, Inflow Depth = 2.47" for 25-Year event
 Inflow = 0.8 cfs @ 12.12 hrs, Volume= 2,675 cf
 Outflow = 0.9 cfs @ 12.11 hrs, Volume= 2,675 cf, Atten= 0%, Lag= 0.0 min
 Primary = 0.3 cfs @ 12.11 hrs, Volume= 2,389 cf
 Secondary = 0.6 cfs @ 12.11 hrs, Volume= 286 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 2

Peak Elev= 43.69' @ 12.11 hrs Surf.Area= 150 sf Storage= 71 cf

Flood Elev= 44.00' Surf.Area= 175 sf Storage= 107 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)

Center-of-Mass det. time= 1.1 min (847.5 - 846.4)

Volume	Invert	Avail.Storage	Storage Description
#1	41.25'	15 cf	4.70'W x 9.16'L x 1.75'H Focal Point 75 cf Overall x 20.0% Voids
#2	43.00'	92 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
		107 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
43.00	55	0	0
43.50	91	37	37
44.00	132	56	92

Device	Routing	Invert	Outlet Devices
#1	Primary	41.25'	100.000 in/hr Exfiltration over Surface area Phase-In= 0.01'
#2	Secondary	43.60'	24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.3 cfs @ 12.11 hrs HW=43.68' TW=40.86' (Dynamic Tailwater)↑ **1=Exfiltration** (Exfiltration Controls 0.3 cfs)**Secondary OutFlow** Max=0.5 cfs @ 12.11 hrs HW=43.69' TW=40.85' (Dynamic Tailwater)↑ **2=Orifice/Grate** (Weir Controls 0.5 cfs @ 0.96 fps)**Summary for Pond SF1: SOIL FILTER**

Inflow Area = 17,100 sf, 39.08% Impervious, Inflow Depth = 2.12" for 25-Year event
 Inflow = 0.8 cfs @ 12.16 hrs, Volume= 3,024 cf
 Outflow = 0.3 cfs @ 12.59 hrs, Volume= 3,024 cf, Atten= 69%, Lag= 25.9 min
 Primary = 0.3 cfs @ 12.59 hrs, Volume= 3,024 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 2

Peak Elev= 40.75' @ 12.59 hrs Surf.Area= 1,521 sf Storage= 1,232 cf

Flood Elev= 40.80' Surf.Area= 1,532 sf Storage= 1,276 cf

Plug-Flow detention time= 510.3 min calculated for 3,021 cf (100% of inflow)

Post-Development - Subsurface Chambers

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Deering Avenue
Type III 24-hr 25-Year Rainfall=5.80"

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Center-of-Mass det. time= 511.3 min (1,369.9 - 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 ' 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 Limited to weir flow at low heads

Primary OutFlow Max=0.2 cfs @ 12.59 hrs HW=40.75' TW=0.00' (Dynamic Tailwater)

- 1=Culvert (Passes 0.2 cfs of 0.7 cfs potential flow)
- 2=Overflow (Weir Controls 0.2 cfs @ 0.73 fps)
- 3=Orifice/Grate (Orifice Controls 0.0 cfs @ 9.29 fps)

Summary for Link AP1:

Inflow Area = 5,731 sf, 26.00% Impervious, Inflow Depth = 2.00" for 25-Year event
Inflow = 0.2 cfs @ 12.10 hrs, Volume= 956 cf
Primary = 0.2 cfs @ 12.10 hrs, Volume= 956 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Summary for Link AP2:

Inflow Area = 3,358 sf, 10.30% Impervious, Inflow Depth = 0.34" for 25-Year event
Inflow = 0.0 cfs @ 12.39 hrs, Volume= 96 cf
Primary = 0.0 cfs @ 12.39 hrs, Volume= 96 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Post-Development - Subsurface Chambers

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Deering Avenue
Type III 24-hr 25-Year Rainfall=5.80"

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Summary for Link AP3:

Inflow Area = 17,741 sf, 52.67% Impervious, Inflow Depth > 2.48" for 25-Year event
Inflow = 0.4 cfs @ 12.08 hrs, Volume= 3,672 cf
Primary = 0.4 cfs @ 12.08 hrs, Volume= 3,672 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

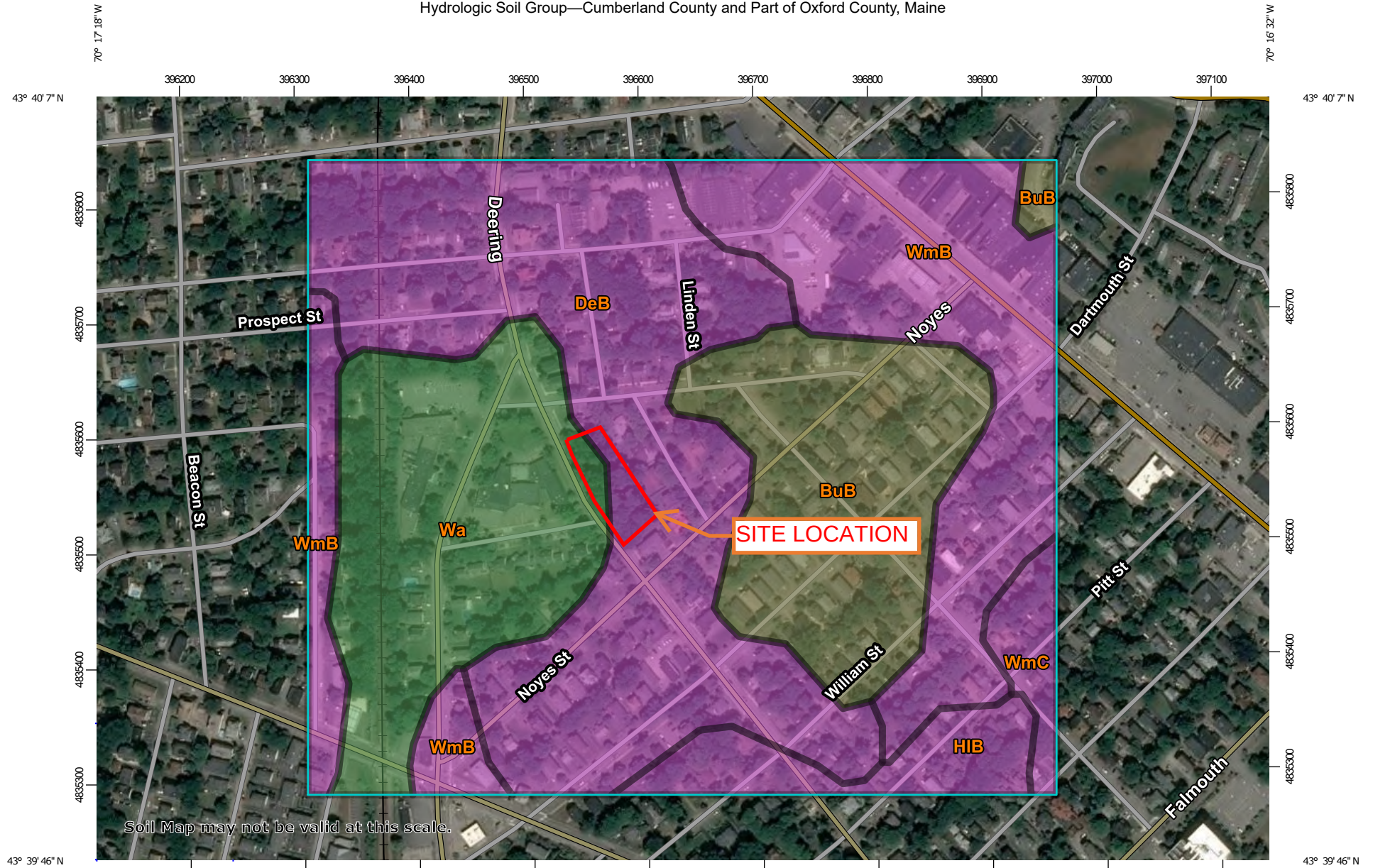
Summary for Link AP4:

Inflow Area = 24,686 sf, 48.63% Impervious, Inflow Depth = 2.66" for 25-Year event
Inflow = 0.7 cfs @ 12.07 hrs, Volume= 5,472 cf
Primary = 0.7 cfs @ 12.07 hrs, Volume= 5,472 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Appendix C: Soils Map

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



Soil Map may not be valid at this scale.

Map Scale: 1:4,680 if printed on A landscape (11" x 8.5") sheet.

0 50 100 200 300 Meters

0 200 400 800 1200 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84



Natural Resources
Conservation Service

Web Soil Survey
National Cooperative Soil Survey
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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 16, Sep 16, 2019

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
BuB	Lamoine silt loam, 3 to 8 percent slopes	C/D	14.8	16.6%
DeB	Deerfield loamy fine sand, 3 to 8 percent slopes	A	30.8	34.5%
HIB	Hinckley loamy sand, 3 to 8 percent slopes	A	4.1	4.6%
Wa	Walpole fine sandy loam	A/D	16.6	18.5%
WmB	Windsor loamy sand, 0 to 8 percent slopes	A	21.1	23.6%
WmC	Windsor loamy sand, 8 to 15 percent slopes	A	2.0	2.2%
Totals for Area of Interest			89.5	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.

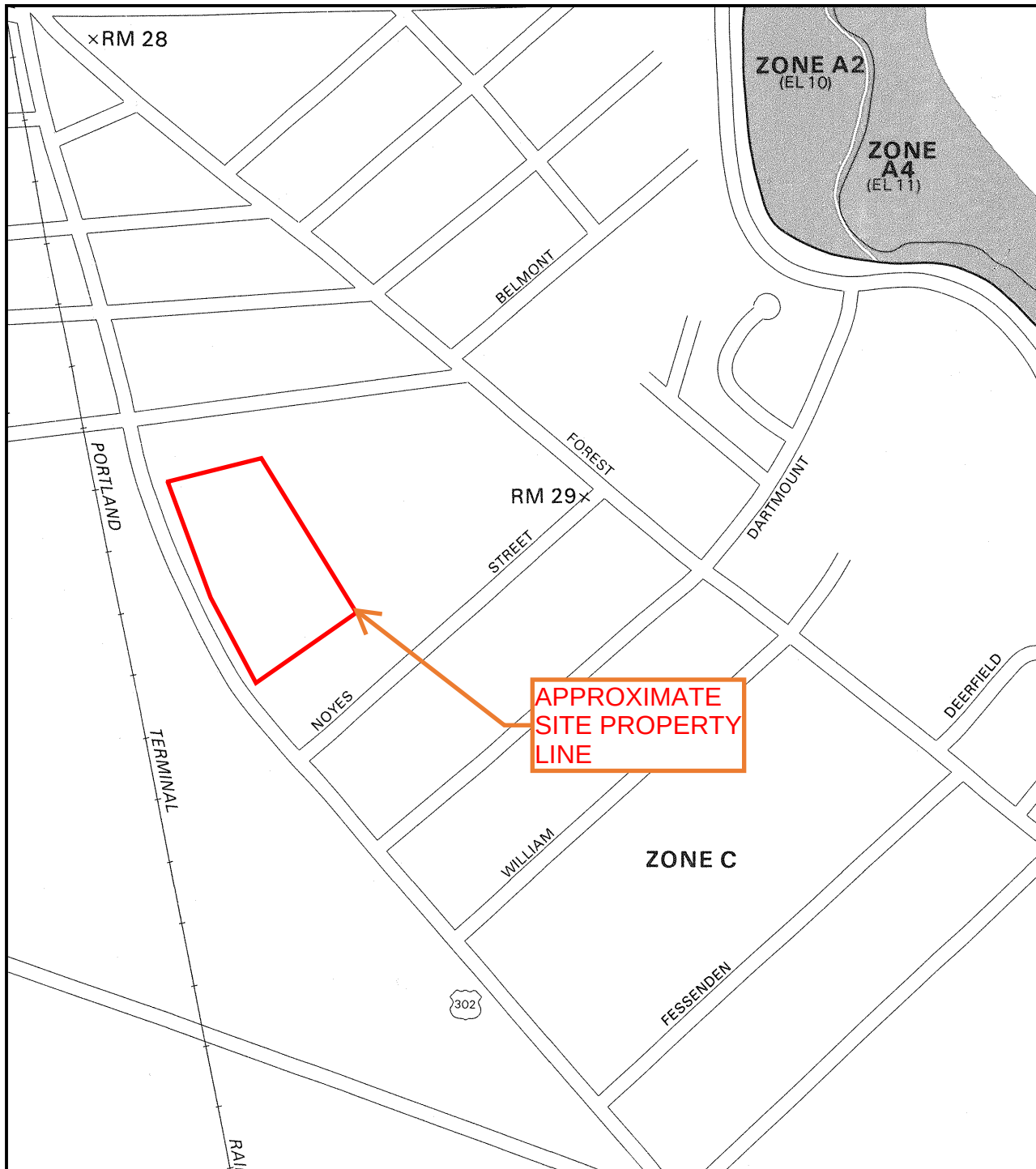
Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Appendix D: FIRM Map





APPROXIMATE SCALE

400 0 400 FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

CITY OF
PORTLAND, MAINE
CUMBERLAND COUNTY

PANEL 13 OF 17
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
230051 0013 B

EFFECTIVE DATE:
JULY 17, 1986



Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

Appendix E:
Inspection & Maintenance Report

**INSPECTION AND MAINTENANCE
OF STORMWATER MANAGEMENT FACILITIES**

Deering Avenue Residences

387 & 405 Deering Avenue

Portland, Maine

Stormwater Management Facilities include swales, ditches, paved surfaces, catch basins, drain pipes, riprapped aprons, and grassed underdrain soil filters. Periodic inspection and maintenance of these site features and devices are necessary to prevent erosion, protect roadways and other paved areas, and remove pollutants from stormwater runoff.

RECORD KEEPING:

Inspections shall be conducted by someone with knowledge of erosion and stormwater control, including standards and conditions in the permit. Post construction inspection and corrective action records shall be retained for a minimum of five years after permanent stabilization has been achieved.

SWALES, DITCHES AND PAVED SURFACES:

Swales, ditches and paved surfaces are easily inspected during a site walk or even a ride-by. Since visual inspection is easy, their condition should be assessed during and/or after significant rainfall events such as thundershowers and periods of heavy or extended rainfall and during periods of significant snowmelt. Any damage or unusual condition such as sedimentation of a ditch, erosion, damaged pavement or dying vegetation should be recorded, dated and initialed by the inspector when observed. Even if there is no damage, the inspector should make record of these inspections at least twice annually.

Paved surfaces should be visually inspected monthly during the winter. The inspector should pay particular attention to the build up of ice and sand along the edge of the road and remove accumulations that block the free flow of surface runoff to the ditches. The date and initials of the inspector should be recorded on the forms provided as well as a notation of any cleanup effort that was made.

DRAIN PIPES:

Drain pipes are road culverts and pipes connecting the catch basins. Inspect drain pipes when inspecting other stormwater maintenance facilities. At least annually make a visual inspection of the pipe. During the daylight you should be able to see light through most pipes as they have been laid to a straight line and grade.

Clean pipes as necessary. Record inspections on the forms provided noting condition of pipe and any maintenance procedures implemented.

RIPRAPPED APRONS:

Riprapped aprons are layers of stone and a geotextile fabric placed over soil at the ends of culverts and other pipes that collect stormwater or discharge stormwater onto the ground. Their purpose is to prevent scour and erosion at the ends of these pipes.

Riprapped aprons are easily inspected during a site walk. In time, sediment will collect in the voids in the stone

and grass or weeds will establish and cover the riprap. Since visual inspection is easy, the condition of riprapped aprons should be assessed during and/or after significant rainfall events such as thundershowers and periods of heavy or extended rainfall. Any damage or unusual condition such as stones being displaced or blocking the culvert ends should be repaired and the observation and repair work noted with the date and initials of the inspector. Even if there is no damage, the inspector should make record of these inspections at least twice annually.

CATCH BASINS AND OUTLET STRUCTURES:

Catch Basins are precast concrete structures with sumps and cast-iron grates used to collect stormwater and trap heavy sediments. Outlet structures are similar to drain manholes without a channel of invert. Outlet structure divert stormwater to a riprap apron. Catch, basins, drain manholes, and outlet structures provide access to the closed storm drain system for inspection and maintenance.

There are catch basins in the new pavement located as shown in the plan set. Throughout the winter/spring sanding period, inspect catch basins monthly and after every significant rainfall event or period of heavy snowmelt. Clean catch basin sumps when sediment level is within 3 inches of the outlet pipe invert. Inspect drain manholes twice annually, once in the spring following the cleanup of winter sand and once in late fall prior to the winter sanding period. Remove sand deposits and debris as necessary. Record dates of inspections, observations and maintenance measures implemented (if any) on the forms provided and initial the entry.

Confined space entry safety procedures should be practiced when entering these structures.

GRASSED UNDERDRAIN SOIL FILTERS:

An underdrained soil filter is a landscaped depression with an underdrained soil bed or soil filter that exfiltrates the stormwater. The depression is designed to temporarily store runoff, which will drain through the soil filter into the underdrains; excess runoff will flow into structures or over earthen spillways.

There are two (2) underdrained soil filters on the site. Details for the underdrained soil filters can be found on Detail 1, Sheet C3.4. The individual underdrained soil filters locations can be found at the following:

Filter SF1, northwest corner of the site near Deering Avenue.

Filter SF2, southeast corner of the site near Deering Avenue.

Soil Filter Inspection: The soil filter should be inspected after every major storm in the first few months to ensure proper function. Thereafter, the filter should be inspected at least once every six months to ensure that it is draining within 48 hours; and that, after storms that fill the system to overflow, it drains in no less than 24 hours. If the filter drains too rapidly, (i.e. prior to 24 hours), then an adjustable orifice shall be installed on the underdrain outlet pipe. The orifice shall be adjusted such that the filter completely drains within 24 to 72 hours.

Underdrain System: The soil filter outlet consists of a layer of planting loam and sand with a stone and perforated pipe underdrain. Outlet inspections shall include flushing of the underdrain through the cleanouts at the end of the pipes. Trash, sediment, and debris shall be removed from the vicinity of the outlet and must be disposed of in accordance with the Maine Solid Waste Disposal Rules.

Soil Filter Replacement: If the filter fails to drain within 72 hours, the surface of the pond shall be rototilled

to promote aeration of the filter media and vegetation shall be re-established. If aeration of the surface soil fails to promote filtration of impounded water within 72 hours, then the filter media shall be replaced as necessary. The stone underdrain shall also be replaced at this time, along with the perforated pipe.

Sediment Removal: Sediment and plant debris should be removed from the pretreatment structure at least annually.

Mowing: Filters with grass cover should be mowed no more than 2 times per growing season to maintain grass heights less than 12 inches.

Fertilization: Fertilization of the underdrained filter area should be avoided unless absolutely necessary to establish vegetation.

Harvesting and Weeding: Harvesting and pruning of excessive growth will need to be done occasionally. Weeding to control unwanted or invasive plants may also be necessary. Add new mulch as necessary for bioretention cells.

Underdrained soil filters shall not be used for snow storage area. Vehicular equipment used to maintain or rehabilitate underdrained soil filters should work from the basin perimeter and not enter the basin area, as this will compact the soil surface and reduce the design infiltration rate. Record all maintenance on forms provided.

FOCAL POINT TREATMENT SYSTEM:

Focal Point treatment systems are a proprietary treatment device. For operations & maintenance see the Focal Point Biofiltration Systems High Performance Modular Biofiltration System (HPMBS) Operations & Maintenance Manual.

There is one (1) Focal Point systems located on this site, specified as Focal Point 1, located on the south side of the site.

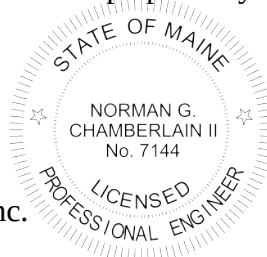
SEDIMENT DISPOSAL:

Any sediment or debris removed during maintenance of the stormwater system must be disposed of in accordance with the Maine Solid Waste Disposal Rules.

This inspection and maintenance plan was prepared by:



Norman G. Chamberlain II, PE
Walsh Engineering Associates, Inc.



**Appendix F:
Housekeeping Report
&
City Maintenance Agreement**

Deering Avenue Apartments
387 & 405 Deering Avenue
Portland, Maine

HOUSEKEEPING REPORT

February 22, 2021

Housekeeping: The developer is responsible for notifying the contractor and owner of the housekeeping standards.

1. **Spill Prevention:** The contractor and owners need to take care with construction and waste materials such that contaminants do not enter the stormwater. The storage of materials such as paint, petroleum products, cleaning agents and the like are to be stored in watertight containers. The use of the products should be in accordance with manufacturer recommendations. When fueling equipment, including snowblowers and lawnmowers, have oil absorbent pads available below the fueling.

Staging areas are noted on the plans for the contractor's use. Refueling of small engines by the owner should occur in the garage or on a paved surface.

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:** Protection of the groundwater is required by the contractor and owner. Petroleum products should be stored in manufactured cans designed for the purpose. Spill preventions procedures should be followed.
3. **Fugitive Sediment and Dust:** The contractor is required to minimize dust from the construction operation. The road should be swept regularly (weekly) and prior to any rain event. The gravel areas are to be watered regularly to minimize dust. Any mud that is tracked off site should be cleaned up prior to it drying and becoming a dust issue.

Do not use oil to control dust.

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:** Construction materials and construction debris should be covered to prevent rainwater from washing contaminants off the site. Any fertilizers, cleaning products, herbicides should be protected from the weather and used in accordance with manufacturers recommendations.

Note any contaminants that are washed off the site by rainwater is a violation of the Clean Waters Act.

Storage Handling and Disposal of Solid Waste items must comply with Maine's Solid Waste Management Rules. Lack of appropriate pollutant control may result in violations of the Groundwater Quality Standards.

This project has a written Erosion Control Plan and Inspection and Maintenance Plan. Modifications to the plan must be approved by the City.

Maintenance of stormwater treatment and control systems must occur regularly. The Inspection and Maintenance Plan provides inspection details and time lines for doing the inspections and reporting to the City and DEP

**Deering Avenue Residences
387 & 405 Deering Avenue, Portland, Maine**

INSPECTION / MAINTENANCE LOG

**SWALES, DITCHES, PAVED SURFACES
AND RIPRAP APRONS**

I: INSPECTED - C: CLEANED - S: SWEEPED - R: REPAIRED

DATE	INITIALS	ACTION	COMMENT
3/28/09	GHI	I, C	EXAMPLE: removed sand along the edge of the road near lots 7 & 8. Heavy rain over the weekend.

**Deering Avenue Residences
387 & 405 Deering Avenue, Portland, Maine**

INSPECTION / MAINTENANCE LOG

OUTLET STRUCTURES, CATCH BASINS, AND DRAIN PIPES

I: INSPECTED - C: CLEANED - R: REPAIRED

DATE	INITIALS	ACTION	COMMENT
7/21/09	JKL	I, C	EXAMPLE: Called ACME to clean the outlet structure in pond 1, cleaned debris from culvert inlet in pond 2.

Deering Avenue Residences 387 & 405 Deering Avenue, Portland, Maine			
INSPECTION / MAINTENANCE LOG			
UNDERDRAINED SOIL FILTERS			
I: INSPECTED - C: CLEANED - S: SWEEPED - R: REPAIRED			
DATE	INITIALS	ACTION	COMMENT
5/10/19	RST	I	EXAMPLE: Cleared sediment and plant debris from inlet area, mowed filter area, crest, and sideslopes.

**Deering Avenue Residences
387 & 405 Deering Avenue, Portland, Maine**

INSPECTION / MAINTENANCE LOG

FOCAL POINT TREATMENT SYSTEM

I: INSPECTED - C: CLEANED - S: SWEEPED - R: REPAIRED

DATE	INITIALS	ACTION	COMMENT
5/10/19	RST	I	EXAMPLE: Cleared sediment and plant debris from inlet area, mowed filter area, crest, and sideslopes.

Deering Avenue Residences 387 & 405 Deering Avenue, Portland, Maine					
STORMWATER MANAGEMENT SYSTEM MAINTENANCE PROGRAM SUMMARY CHECKLIST					
Item	Commentary	Frequency			
		Month	Semi-Annual	Annual	Long-Term
Pavement	Review for damage and buildup of debris and sand.	X	X Sweep		
Swales, Ditches, and Riprap Aprons	Inspect for debris accumulation, erosion and excessive vegetation. Mow monthly, remove debris, repair and revegetate any area of erosion	X Mow		X	
Outlet Structures, Catch Basins, and Drain Pipes	Inspect for sediment buildup in pipe. Flush and remove as required.			X	
Underdrained Soil Filter	Mow twice per year. Inspect for erosion.		X		



FocalPoint

BIOFILTRATION SYSTEMS

HIGH PERFORMANCE MODULAR BIOFILTRATION SYSTEM (HPMBS)

Operations & Maintenance



GENERAL DESCRIPTION

The following general specifications describe the general operations and maintenance requirements for the FocalPoint® High Performance Modular Biofiltration System (HPMBS). The system utilizes physical, chemical and biological mechanisms of a soil, plant and microbe complex to remove pollutants typically found in urban stormwater runoff. The treatment system is a fully equipped, modular, constructed in place system designed to treat contaminated runoff.

Stormwater enters the FocalPoint® HPMBS, is filtered by the High Flow Biofiltration Media and passes through to the underdrain/storage system where the treated water is detained, retained or infiltrated to sub-soils, prior to discharge to the storm sewer system of any remaining flow.

Higher flows bypass the FocalPoint® HPMBS via a downstream inlet or other overflow conveyance. Maintenance is a simple, inexpensive and safe operation that does not require confined space entry, pumping or vacuum equipment, or specialized tools. Properly trained landscape personnel can effectively maintain FocalPoint® HPMBS by following instructions in this manual.



BASIC OPERATIONS

FocalPoint® is a modular, high performance biofiltration system that often works in tandem with other integrated management practices (IMP). Contaminated stormwater runoff enters the biofiltration bed through a conveyance swale, planter box, or directly through a curb cut or false inlet. Energy is dissipated by a rock or vegetative dissipation device and is absorbed by a 3-inch layer of aged, double shredded hardwood mulch, with fines removed, (when specified) on the surface of the biofiltration media.

As the water passes through the mulch layer, most of the larger sediment particles and heavy metals are removed through sedimentation and chemical reactions with the organic material in the mulch. Water passes through the biofiltration media where the finer particles are removed and numerous chemical reactions take place to immobilize and capture pollutants in the soil media.

The cleansed water passes into the underdrain/storage system and remaining flows are directed to a storm sewer system or other appropriate discharge point. Once the pollutants are in the soil, bacteria begin to break down and metabolize the materials and the plants begin to uptake and metabolize the pollutants. Some pollutants such as heavy metals, which are chemically bound to organic particles in the mulch, are released over time as the organic matter decomposes to release the metals to the feeder roots of the plants and the cells of the bacteria in the soil where they remain and are recycled. Other pollutants such as phosphorus are chemically bound to the soil particles and released slowly back to the plants and bacteria and used in their metabolic processes. Nitrogen goes through a variety of very complex biochemical processes where it can ultimately end up in the plant/bacteria biomass, turned to nitrogen gas or dissolves back into the water column as nitrates depending on soil temperature, pH and the availability of oxygen. The pollutants ultimately are retained in the mulch, soil and biomass with some passing out of the system into the air or back into the water.

DESIGN AND INSTALLATION

Each project presents different scopes for the use of FocalPoint® HPMBS. To ensure the safe and specified function of this stormwater BMP, Convergent Water Technologies and/or its Value Added Resellers (VAR) review each application before supply. Information and design assistance is available to the design engineer during the planning process. Correct FocalPoint® sizing is essential to optimum performance. The engineer shall submit calculations for approval by the local jurisdiction when required. The contractor and/or VAR is responsible for the correct installation of FocalPoint® HPMBS units as described in approved plans. A comprehensive installation manual is available at www.convergentwater.com.





MAINTENANCE

Why Maintain?

All stormwater treatment systems require maintenance for effective operation. This necessity is often incorporated in your property's permitting process as a legally binding BMP maintenance agreement. Other reasons for maintenance include:

- Avoid legal challenges from your jurisdiction's maintenance enforcement program.
- Prolong the lifespan of your FocalPoint® HPMBS.
- Avoid costly repairs.
- Help reduce pollutant loads leaving your property.

Simple maintenance of the FocalPoint® HPMBS is required to continue effective pollutant removal from stormwater runoff before any discharge into downstream waters. This procedure will also extend the longevity of the living biofiltration system. The unit will recycle and accumulate pollutants within the biomass, but may also be subjected to other materials entering the surface of the system. This may include trash, silt and leaves etc. which will be contained above the mulch and/or biofiltration media layer. Too much silt may inhibit the FocalPoint's® HPMBS flow rate, which is a primary reason for system maintenance. Removal of accumulated silt/sediment and/or replacement of the mulch layer (when specified), is an important activity that prevents over accumulation of such silt/sediment.

When to Maintain?

Convergent Water Technologies and/or its VAR includes a 1-year maintenance plan with each system purchased. Annual included maintenance consists of two (2) scheduled maintenance visits. Additional maintenance may be necessary depending on sediment and trash loading (by Owner or at additional cost). The start of the maintenance plan begins when the system is activated for full operation. Full operation is defined as when the site is appropriately stabilized, the unit is installed and activated (by VAR), i.e., when mulch (if specified) and plantings are added.

Activation should be avoided until the site is fully stabilized (full landscaping, grass cover, final paving and street sweeping completed). Maintenance visits are scheduled seasonally; the spring visit aims to clean up after winter loads including salts and sands. The fall visit helps the system by removing excessive leaf litter.

A first inspection to determine if maintenance is necessary should be performed at least twice annually after storm events of greater than (1) one inch total depth (subject to regional climate). Please refer to the maintenance checklist for specific conditions that indicate if maintenance is necessary.

It has been found that in regions which receive between 30-50 inches of annual rainfall, (2) two visits are generally required. Regions with less rainfall often only require (1) one visit per annum. Varying land uses can affect maintenance frequency.



Some sites may be subjected to extreme sediment or trash loads, requiring more frequent maintenance visits. This is the reason for detailed notes of maintenance actions per unit, helping the VAR/Maintenance contractor and Owner predict future maintenance frequencies, reflecting individual site conditions.

Owners must promptly notify the VAR/Maintenance contractor of any damage to the plant(s), which constitute(s) an integral part of the biofiltration technology. Owners should also advise other landscape or maintenance contractors to leave all maintenance of the FocalPoint® HPMBs to the VAR/Maintenance contractor (i.e. no pruning or fertilizing).

EXCLUSION OF SERVICES

It is the responsibility of the owner to provide adequate irrigation when necessary to the plant(s) in the FocalPoint® HPMBs.

Clean up due to major contamination such as oils, chemicals, toxic spills, etc. will result in additional costs and are not covered under the VAR/Maintenance contractor maintenance contract. Should a major contamination event occur, the Owner must block off the outlet pipe of the FocalPoint® (where the cleaned runoff drains to, such as drop-inlet) and block off the point where water enters of the FocalPoint® HPMBs. The VAR/Maintenance contractor should be informed immediately.

MAINTENANCE VISIT SUMMARY

Each maintenance visit consists of the following simple tasks (detailed instructions below).

1. Inspection of FocalPoint® HPMBs and surrounding area
2. Removal of debris, trash and mulch
3. Mulch replacement
4. Plant health evaluation (including measurements) and pruning or replacement as necessary
5. Clean area around FocalPoint® HPMBs
6. Complete paperwork, including date stamped photos of the tasks listed above.

MAINTENANCE TOOLS, SAFETY EQUIPMENT AND SUPPLIES

Ideal tools include: camera, bucket, shovel, broom, pruners, hoe/rake, and tape measure. Appropriate Personal Protective Equipment (PPE) should be used in accordance with local or company procedures. This may include impervious gloves where the type of trash is unknown, high visibility clothing and barricades when working in close proximity to traffic and also safety hats and shoes.



Inspection of FocalPoint® HPMBS and surrounding area

Record individual unit before maintenance with photograph (numbered). Record on Maintenance Report (see example in this document) the following:

☐ Standing Water	yes no	☐ Damage to HPMBS System	yes no
☐ Is Bypass Inlet Clear?	yes no	☐ to Overflow conveyance	yes no

Removal of Silt / Sediment / Clay

Dig out silt (if any) and mulch and remove trash & foreign items.

☐ Silt / Clay Found?	yes no	☐ Leaves?	yes no
☐ Cups / Bags Found?	yes no	☐ Volume of material removed _____	(volume or weight)

Removal of debris, trash and mulch

After removal of mulch and debris, measure distance from the top of the FocalPoint® HPMBS engineered media soil to the flow line elevation of the adjacent overflow conveyance. If this distance is greater than that specified on the plans (typ. 6" - 12"), add media (not top soil or other) to recharge to the distance specified.

☐ Distance to media surface to flow line of overflow conveyance (inches) _____
☐ # of Buckets of Media Added _____

Mulch Replacement

Most maintenance visits require only replacement mulch (if utilized) which must be, aged, double shredded hardwood mulch with fines removed. For smaller projects, one cubic foot of mulch will cover four square feet of biofiltration bed, and for larger projects, one cubic yard of mulch will cover 108 square feet of biofiltration bed. Some visits may require additional FocalPoint® HPMBS engineered soil media available from the VAR/Contractor.

☐ Add double shredded, aged hardwood mulch which has been screened to remove fines, evenly across the entire biofiltration media bed to a depth of 3".
☐ Clean accumulated sediment from energy dissipation system at the inlet to the FocalPoint® HPMBS to allow for entry of trash during a storm event.

Plant health evaluation and pruning or replacement as necessary

Examine the plant's health and replace if dead or dying.
Prune as necessary to encourage growth in the correct directions

☐ Height above Grate (feet) _____	☐ Health	alive dead
☐ Width at Widest point (feet) _____	☐ Damage to Plant	yes no

Clean area around FocalPoint® HPMBS

☐ Clean area around unit and remove all refuse to be disposed of appropriately.
--

Complete paperwork

☐ Deliver Maintenance Report and photographs as appropriate.
☐ Some jurisdictions may require submission of maintenance reports in accordance with approvals.
☐ It is the responsibility of the Owner to comply with local regulations.



FocalPoint Warranty

Seller warrants goods sold hereunder against defects in materials and workmanship only, for a period of (1) year from date the Seller activates the system into service. Seller makes no other warranties, express or implied.

Seller's liability hereunder shall be conditioned upon the Buyer's installation, maintenance, and service of the goods in strict compliance with the written instructions and specifications provided by the Seller. Any deviation from Seller's instructions and specifications or any abuse or neglect shall void warranties.

In the event of any claim upon Seller's warranty, the burden shall be upon the Buyer to prove strict compliance with all instructions and specifications provided by the Seller.

Seller's liability hereunder shall be limited only to the cost or replacement of the goods. Buyer agrees that Seller shall not be liable for any consequential losses arising from the purchase, installation, and/or use of the goods.



Maintenance Checklist

<i>Element</i>	<i>Problem</i>	<i>What To Check</i>	<i>Should Exist</i>	<i>Action</i>
Inlet	Excessive sediment or trash accumulation	Accumulation of sediment or trash impair free flow of water into FocalPoint	Inlet free of obstructions allowing free flow into FocalPoint System	Sediments or trash should be removed
Mulch Cover	Trash and floatable debris accumulation	Excessive trash or debris accumulation.	Minimal trash or other debris on mulch cover	Trash and debris should be removed and mulch cover raked level. Ensure that bark nugget
Mulch Cover	Ponding of water on mulch cover	Ponding in unit could be indicative of clogging due to excessive fine sediment accumulation or spill of petroleum oils	Stormwater should drain freely and evenly over mulch cover.	Contact VAR for advice.
Plants	Plants not growing, or in poor condition	Soil/mulch too wet, evidence of spill. Pest infestation. Vandalism to plants.	Plants should be healthy and pest free.	Contact VAR for advice.
Plants	Plant growth excessive	Plants should be appropriate to the species and location of FocalPoint		Trim/prune plants in accordance with typical landscaping and

STORMWATER DRAINAGE SYSTEM MAINTENANCE AGREEMENT

For SUBDIVISIONS

IN CONSIDERATION OF the site plan and subdivision approval granted by the Planning Board of the City of Portland to the proposed _____ (name of developments and project number) shown on the Subdivision Plat (Exhibit A) recorded in Cumberland Registry of Deeds in Plan Book ____, Page ____ submitted by _____, and associated Grading, Drainage & Erosion Control Plan (*insert correct name of plan*) (Exhibit B) prepared by _____ (engineer/agent) of _____(address) dated and pursuant to a condition thereof, _____ (name of owner), a Maine limited liability company with a principal place of business in Portland, Maine, and having a mailing address of _____, the owner of the subject premises, does hereby agree, for itself, its successors and assigns (the “Owner”), as follows:

Maintenance Agreement

That it, its successors and assigns, will, at its own cost and expense and at all times in perpetuity, maintain in good repair and in proper working order the _____ (*details of the system such as underdrained subsurface sand filter BMP system, rain gardens, storm drain pipes, underdrain pipes, catch basins*), (hereinafter collectively referred to as the “stormwater system”), as shown on the _____ Plan in Exhibit B and in strict compliance with the approved Stormwater Maintenance and Inspection Agreement (*insert correct name of document*) prepared for the Owner by _____ (copy attached in Exhibit C) and Chapter 32 of the Portland City Code.

Owner of the subject premises further agrees, at its own cost, to keep a Stormwater Maintenance Log. Such log shall be made available for inspection by the City of Portland upon reasonable notice and request.

Said agreement is for the benefit of the said City of Portland and all persons in lawful possession of said premises and abutters thereto; further, that the said City of Portland and said persons in lawful possession may enforce this Agreement by an action at law or in equity in any court of competent jurisdiction; further, that after giving the Owner written notice and a stated time to perform, the said City of Portland, by its authorized agents or representatives, may, but is not obligated to, enter upon said premises to maintain, repair, or replace said stormwater system in the event of any failure or neglect thereof, the cost and expense thereof to be reimbursed in full to the said City of Portland by the Owner upon written demand. Any funds owed to the City under this paragraph shall be secured by a lien on the property.

This Agreement shall also not be construed to allow any change or deviation from the requirements of the subdivision and/or site plan most recently and formally approved by the Planning Board of the City of Portland.

This agreement shall bind the undersigned only so long as it retains any interest in said premises, and shall run with the land and be binding upon the Owner's successors and assigns as their interests may from time to time appear.

The Owner agrees to record a copy of this Agreement in the Cumberland County Registry of Deeds within thirty (30) days of final execution of this Agreement. The Owner further agrees to provide a copy of this Agreement to any successor or assign and to forward to the City an Addendum signed by any successor or assign in which the successor or assign states that the successor or assign has read the Agreement, agrees to all its terms and conditions and the successor or assign will obtain and forward to the City's Department of Public Services and Department of Planning and Urban Development a similar Addendum from any other successor or assign.

For the purpose of this agreement and release "Owner" is any person or entity who is a successor or assign and has a legal interest in part, or all, of the real estate and any building. The real estate shown by chart, block and lot number in the records on file in the City Assessor's office shall constitute "the property" that may be entered by the City and lienied if the City is not paid all of its costs and charges following the mailing of a written demand for payment to the owner pursuant to the process and with the same force and effect as that established by 36 M.R.S.A. §§ 942 and 943 for real estate tax liens.

Any written notices or demands required by the agreement shall be complete on the date the notice is attached to one or more doors providing entry to any buildings and mailed by certified mail, return receipt requested or ordinary mail or both to the owner of record as shown on the tax roles on file in the City Assessor's Office.

If the property has more than one owner on the tax rolls, service shall be complete by mailing it to only the first listed owner. The failure to receive any written notice required by this agreement shall not prevent the City from entering the property and performing maintenance or repairs on the stormwater system, or any component thereof, or lienied it or create a cause of action against the City.

Dated at Portland, Maine this _____ day of _____, 2014.

(name of company)

(representative of owner, name and title)

STATE OF MAINE
CUMBERLAND, ss.

Date: _____

Personally appeared the above-named _____ (name and title), and acknowledged the foregoing instrument to be his free act and deed in his said capacity.

Before me,

Notary Public/Attorney at Law

Print name: _____

Exhibit A: Subdivision Plat as recorded

Exhibit B: Approved Grading and Drainage Plan (name of the plan showing the Stormwater System in detail)

Exhibit C: Approved Stormwater Maintenance and Inspection Agreement

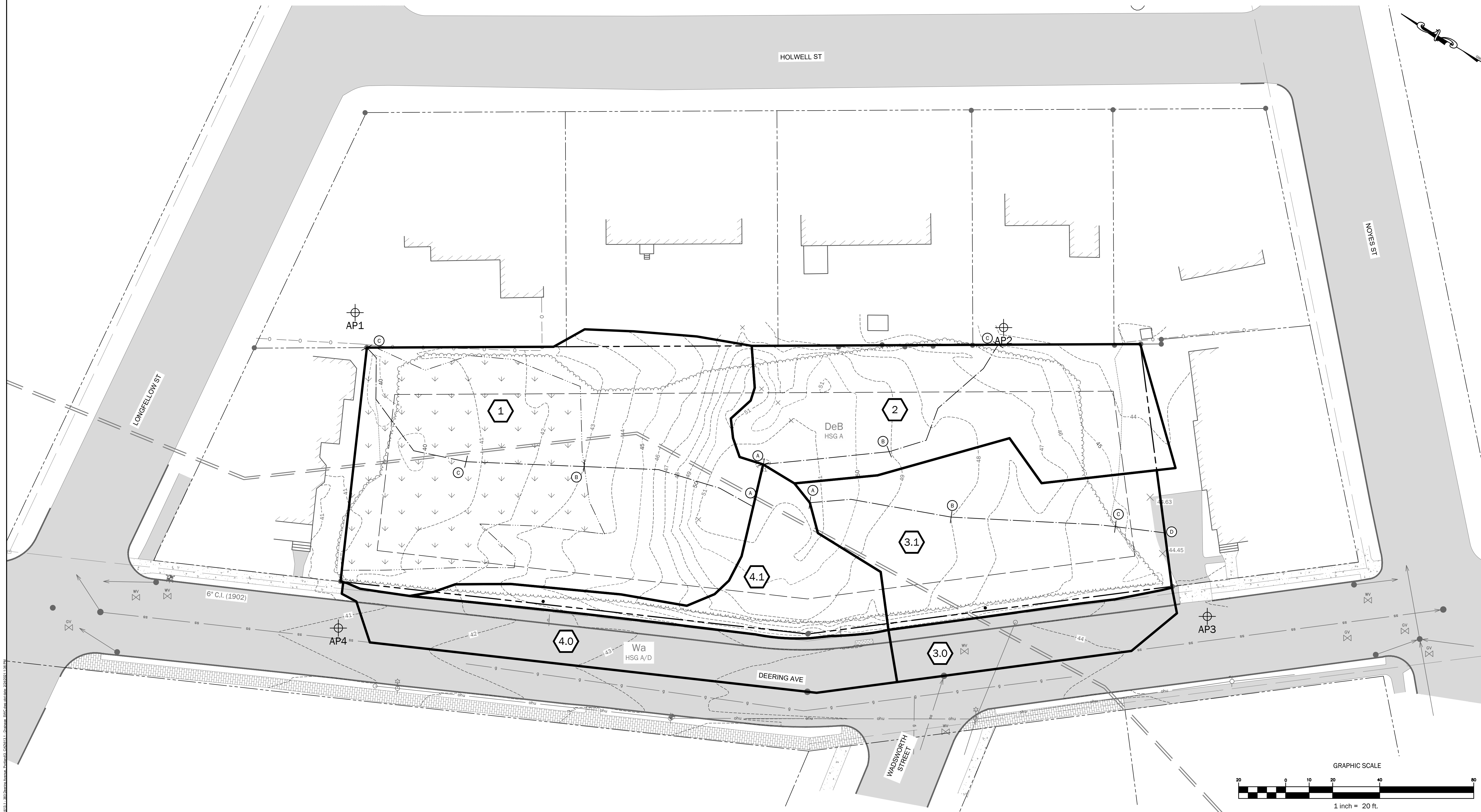
Appendix G: Drainage Plans

D1.0: Pre-Development Drainage Plan

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

The diagram illustrates a cross-section of a riverbed with the following features and symbols:

- SUBCATCHMENT BOUNDARY:** Represented by a solid horizontal line at the top.
- SUBCATCHMENT DESIGNATION:** Represented by a hexagon containing the number "1.0".
- TIME OF CONCENTRATION FLOW:** Represented by a vertical line with a circle at the base, intersecting the subcatchment boundary.
- ANALYSIS POINT:** Represented by a circle with a cross inside, labeled "AP1" below it.
- SOILS BOUNDARY:** Represented by a solid horizontal line below the analysis point.
- SOILS DESIGNATION:** Represented by the text "Sn" and "(HSG C)" below the soils boundary.

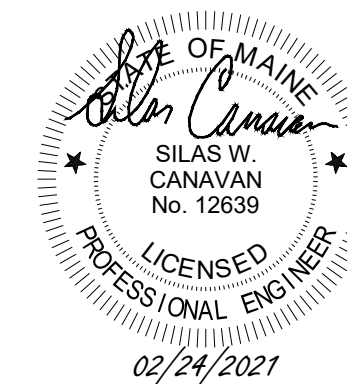


ISSUED FOR PERMITTING - NOT FOR CONSTRUCTION

WALSH
ENGINEERING ASSOCIATES, INC.

One Karen Dr., Suite 2A | Westbrook, Maine 04092
ph: 207.553.9898 | www.walsh-eng.com

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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

[illegible]

Appendix G: Drainage Plans

D2.0: Post-Development Drainage Plan

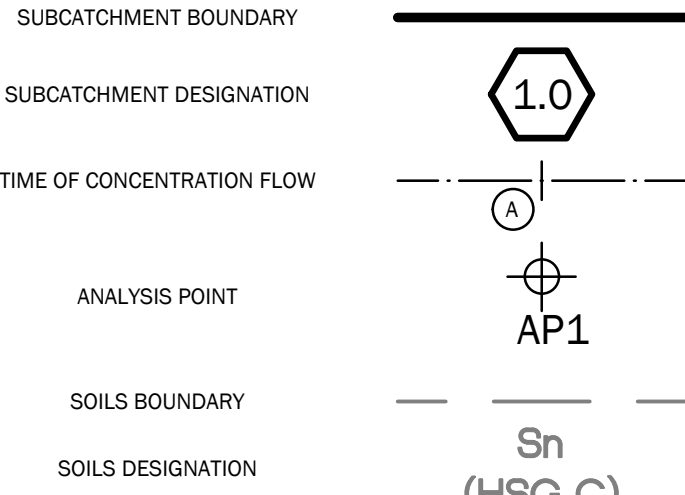
Tc FLOW LINE DATA:

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

TABLE T-1 Stormwater Treatment Calculations Deering Avenue Residences - Portland, Maine												
Watershed	Treatment BMP	Non-Linear Project Area (SF)							Soil Filter Design			
		Total New Developed Area (SF)			Treated Area (SF)				Soil Filter Area (SF)		Water Quality Vol. (CF)	
		Impervious	Landscaped	Developed	Impervious	Landscaped	Developed	Undeveloped	Required	Provided	Required	Provided
1.0		-	400	400	-	-	-	-				
2.0		-	270	270	-	-	-	-				
3.0		-	-	-	-	-	-	-				
3.1	Focal Point	6,825	2,949	9,774	6,825	2,949	9,774	3,230	433	NA	717	NA
3.2		229	184	413	-	-	-	-				
4.0		-	-	-	-	-	-	-				
4.1	SF1	7,326	2,297	9,623	7,326	2,297	9,623	7,495	487	632	808	1,276
4.2		377	401	778	-	-	-	-				
Totals		14,757	6,501	21,258	14,151	5,246	19,397					
Table T-2 Stormwater Treatment Summary												
Development Type		Area (SF)										
Non-Linear Impervious Treated		14,151										
Total Non-Linear Impervious Area		14,757										
Non-Linear Impervious % Treated		96%										
Non-Linear Developed Treated		19,397										
Total Non-Linear Developed Area		21,258										
Non-Linear Developed % Treated		91%										

DRAINAGE



WALSH
ENGINEERING ASSOCIATES, INC.

One Karen Dr., Suite 2A | Westbrook, Maine 04092
ph: 207.553.9898 | www.walsh-eng.com

STATE OF MAINE

WILLIAM R. WALSH, III
No. 8204

LICENSED PROFESSIONAL ENGINEER

2/10/2022

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

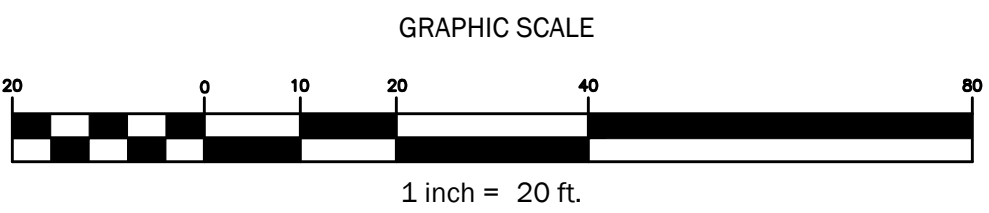
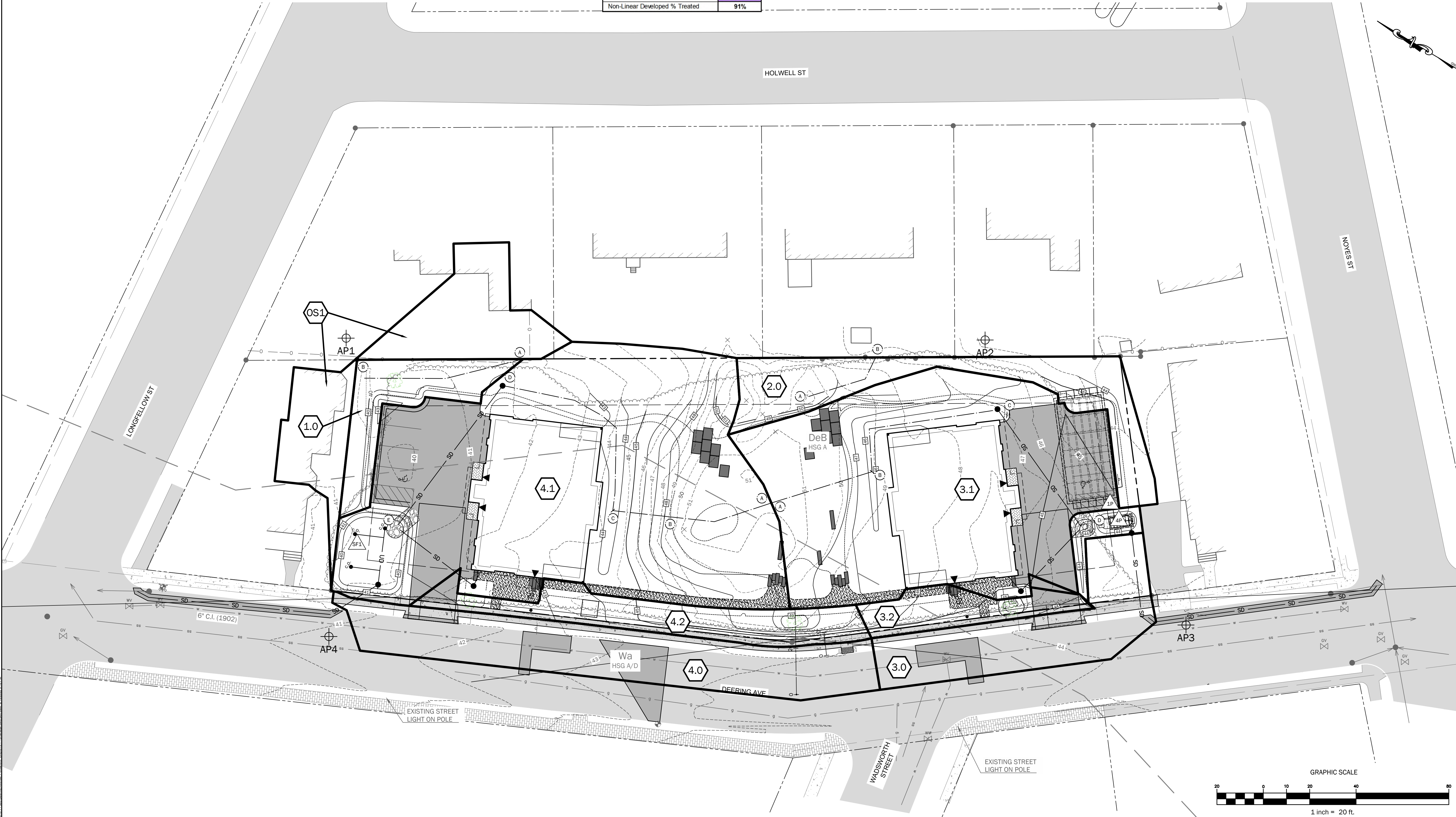
Rev.	Date	Description	Drawn	Check
1	6/15/2021	REVISED PER STAFF COMMENTS	TEF	NGC
2	10/26/2021	REVISED PER STAFF COMMENTS	TEF	NGC
3	1/7/2022	REVISED PER STAFF COMMENTS	TEF	NGC
4	2/10/2022	Redesign South Stormwater Basin	JWG	NGC

Sheet Title:

Post-Development
Drainage Plan

Job No.: 613.1 Sheet No.:
Date: OCTOBER 2021
Scale: AS NOTED
Drawn: MTL
Checked: SWC

D2.0





Att. N

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



Att. O

CITY OF PORTLAND
Department of Public Works
Christopher C. Branch, P.E., Director

Date: October 26, 2021

Re: Wastewater Capacity Authorization

Address: 387-405 Deering Avenue

Applicant: Sawyer Island Development, LLC, c/o Todd Valentine

Planner: Jimmy Dealaman

Anticipated Wastewater Flow:

Estimate of Anticipated Design Flows				
Development	Unit Size	Number of Units	Gallons per Day per Unit	Total Gallons per Day
Existing flow to be removed				
Vacant				0
Proposed flow				
Building A				
Multiple Family Dwelling Units	2-Bedroom	4	180	720
Building B				
Multiple Family Dwelling Units	2-Bedroom	4	180	720
Net Change				+ 1440
*Values based on STATE OF MAINE: SUBSURFACE WASTEWATER DISPOSAL RULES, most recent edition				

Comments:

The Department of Public Works, which includes the Water Resource Division, have reviewed and determined that the downstream sewers from the project address have the capacity to convey the estimated dry weather wastewater flows which will be generated from this development.

You are reminded that the sewers you are proposing to connect into convey both sanitary and stormwater (Combined Sewer) and therefore a backflow preventer is suggested.

If the City can be of further assistance, please contact me at all 874-8840 or brad@portlandmaine.gov

Sincerely,

Bradley A. Roland, P.E.
Senior Project Engineer

212 Canco Road, Ste B • Portland, ME 04103 • 207-874-8801

cbranch@portlandmaine.gov • www.portlandmaine.gov

RSS-B SERIES POLES

ROUND STRAIGHT STEEL

Cat.#

Job

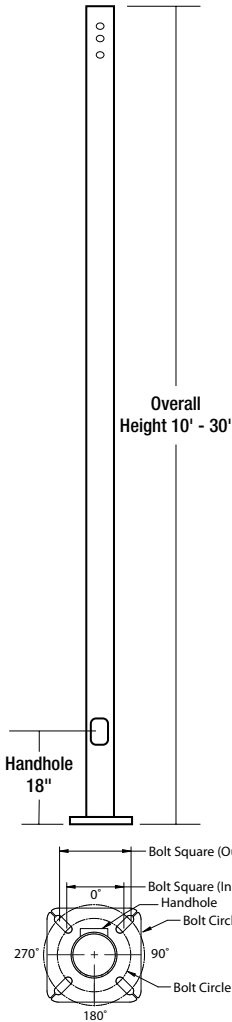
Type



BEACON
design . performance . technology

Approvals

Att. P



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

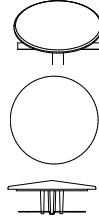
CONSTRUCTION

- 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

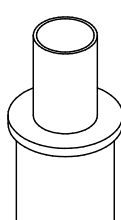
FINISH

- 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;

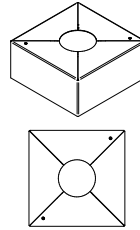
POLE CAP



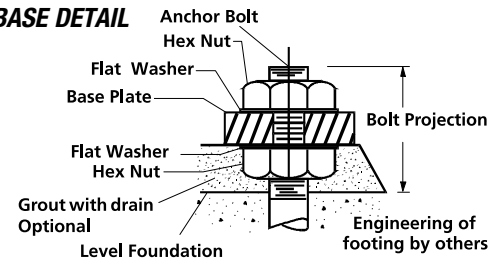
TENON



BASE COVER



BASE DETAIL



ORDERING INFORMATION

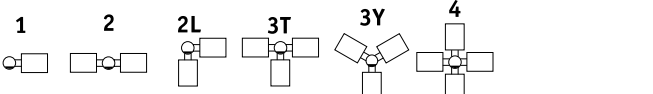
ORDERING EXAMPLE:

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 GFCI 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



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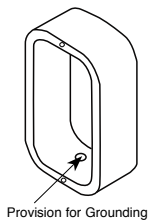
HUBBELL
Lighting

ORDERING INFORMATION Cont.

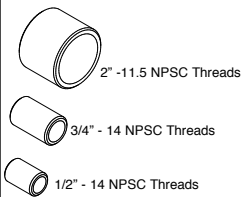
Catalog Number	Height		Nominal Shaft Dimensions	Wall Thickness	Bolt Circle (suggested)	Bolt Circle (range)	Bolt Square (range)	Base Plate Square	Base Plate Thickness	Anchor bolt size	Bolt Projection	Pole weight
	Feet	Meters										
RSS-B-10-40-A	10	3.0	4" round	0.125"	9"	7.5" - 10"	5.30" - 7.07"	9"	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.

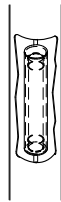
EHH - EXTRA HANDHOLE



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.

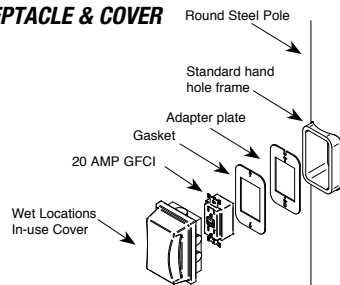
VM2SXX - VIBRATION DAMPER 2ND MODE



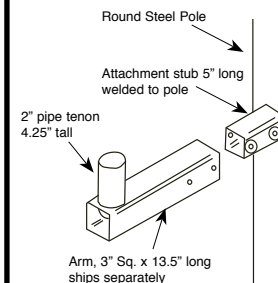
VM2S08 - 8'
VM2S12 - 12'
VM2S16 - 16'
VM2S20 - 20'
VM2S24 - 24'

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

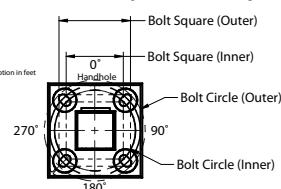


MPB - MID POLE BRACKET



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
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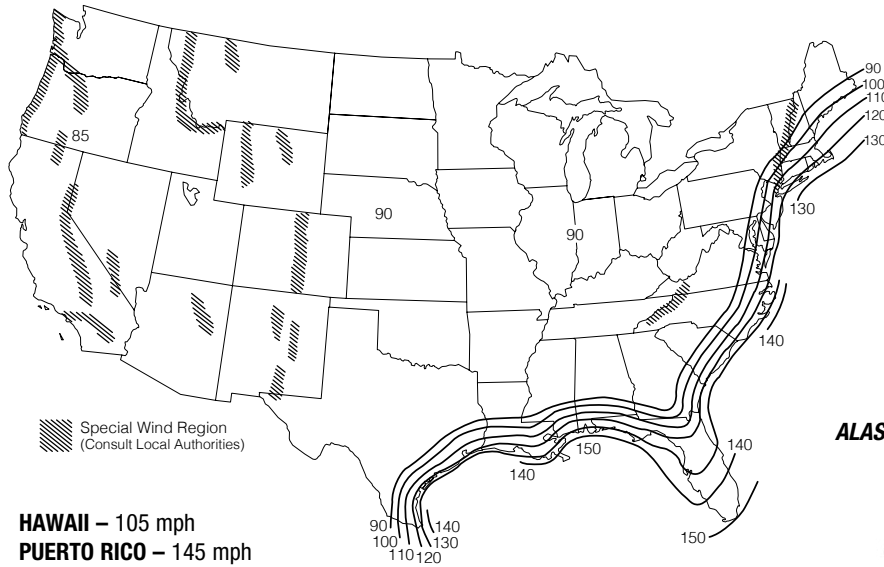
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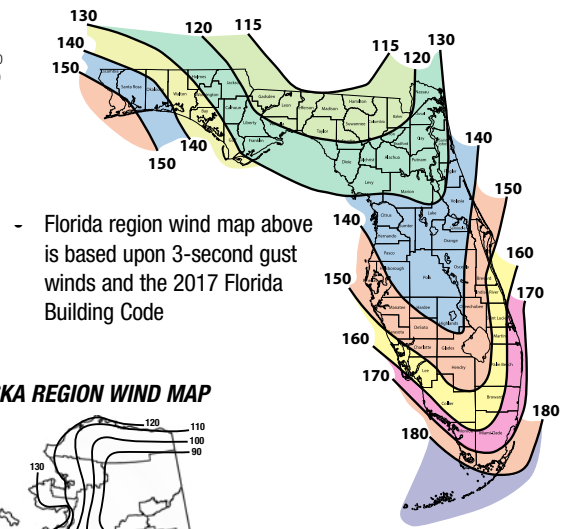
HUBBELL
Lighting

RSS-B POLES-SPEC JULY 28, 2020 8:45 AM

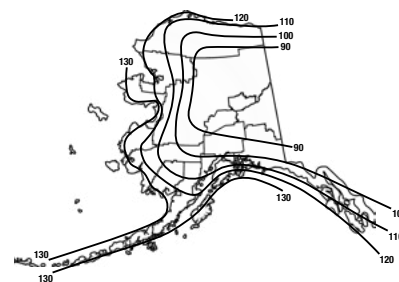


*PRINTED WITH PERMISSION FROM ASCE

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:

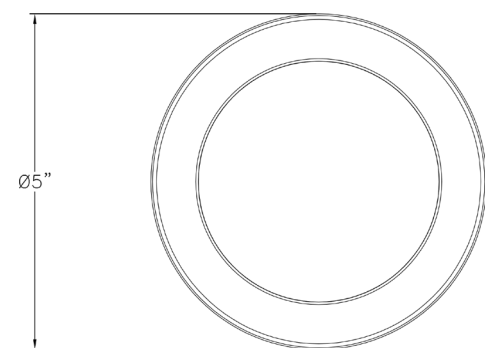
Number of Modules	1
Input Power	12 W
Input Voltage	120 V
Input Frequency	60 Hz
Lumens/LPW (Delivered)	800/69 (LM-79)
CCT	3000 K
CRI	90 CRI
Life (hours)	50000 (L70/TM-21)
EMI/RFI	FCC Title 47, Part 15, Class B
Min. Start Temp	-30 °C
Max. Operating Temp	30 °C
Warranty	5 year warranty
Labels	cCSAus Wet Location Listed
	ENERGY STAR® qualified
	Meets California Title 24 JA8-2019

P810024-030-30



Dimensions:

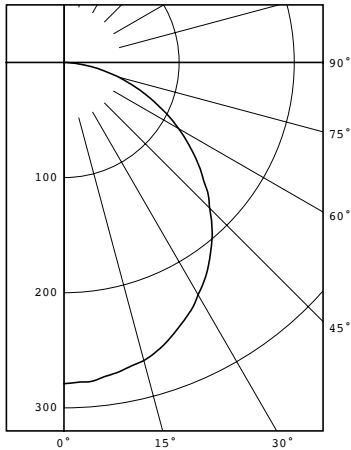
Diameter: 5 in
 Height: 1-1/8 in



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

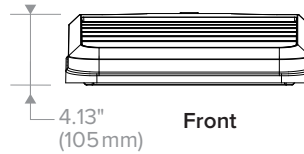
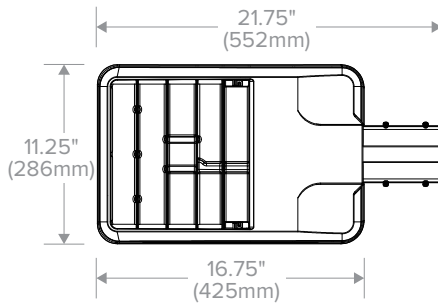
DELIVERED LUMENS

# 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

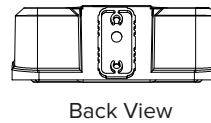
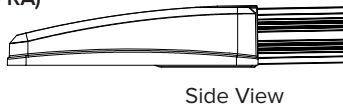
SMALL VIPER LUMINAIRE

DIMENSIONS

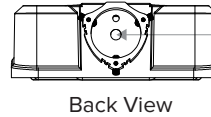
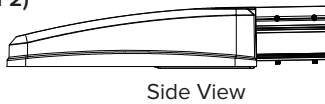


Weight	15.0 lbs (6.8 kg)
EPA	.67 ft ²

A Arm (formerly RA)

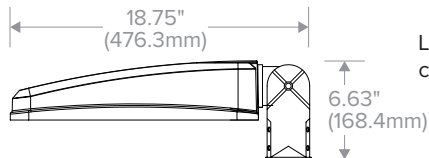


MAF (formerly SF2)



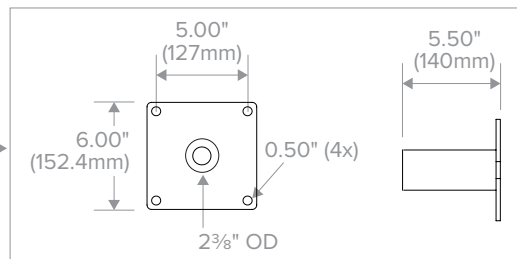
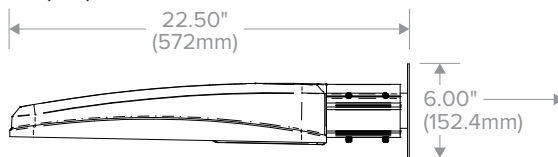
Accepts 2 3/8" OD tenon, min 5" long.

2 3/8" Adjustable Knuckle (K) (formerly PK2)

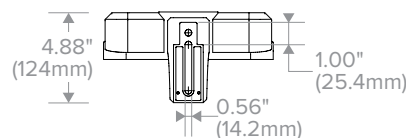
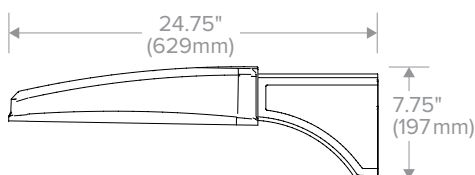


Limit to 30° tilt. Sensor, photocell and wireless controls should not be tilted above horizontal.

Wall Bracket (WB)



AD Decorative Arm



See [page 9](#) for mounting details.

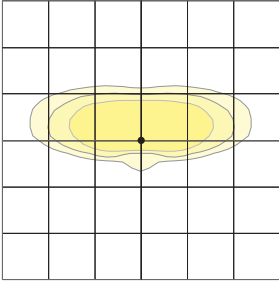
VIPER S

SMALL VIPER LUMINAIRE

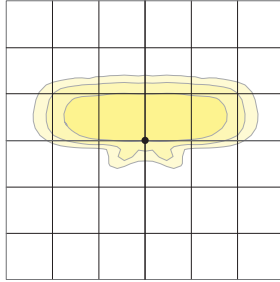
PHOTOMETRY

The following diagrams represent the general distribution options offered for this product. For detailed information on specific product configurations, see [website photometric test reports](#).

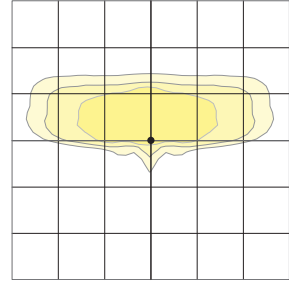
Type FR – Front Row/Auto Optic



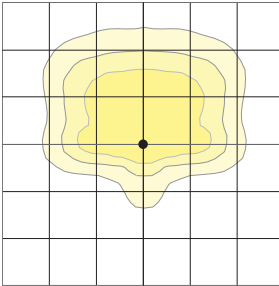
Type 2



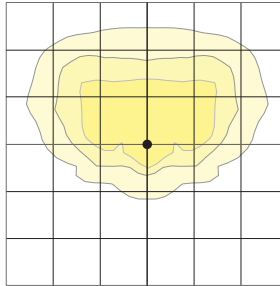
Type 3



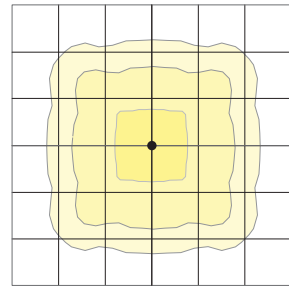
Type 4



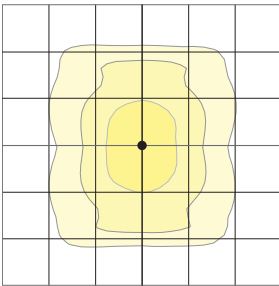
Type 4 Wide



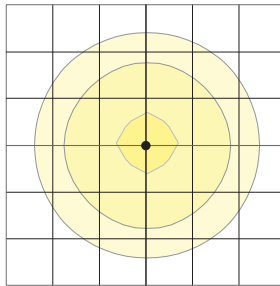
Type 5QM



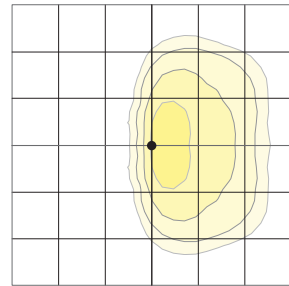
Type 5R (rectangular)



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

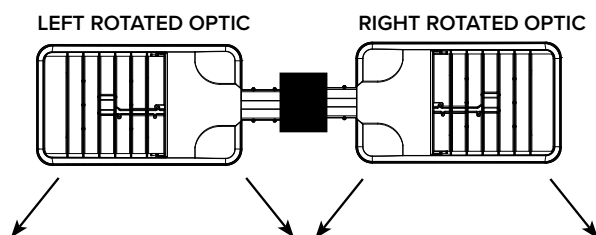
1 Projected per IESNA TM-21-11.
Data references the extrapolated performance projections for the 60 LED base model in a 25°C ambient, based on 10,000 hours of LED testing per IESNA LM-80-08.

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

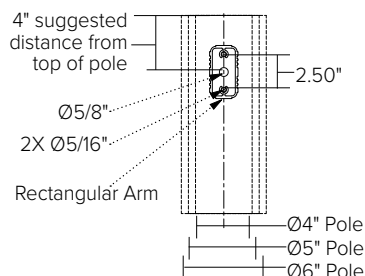
SMALL VIPER LUMINAIRE

ADDITIONAL INFORMATION (CONTINUED)

DRILL PATTERN

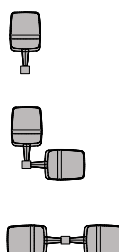
RECTANGULAR ARM (A)

Compatible with Pole drill pattern B3

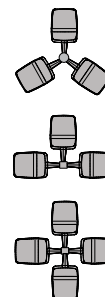


EPA

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



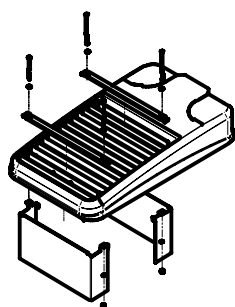
TENON TOP POLE BRACKET ACCESSORIES (ORDER SEPARATELY)

(2 3/8" OD tenon)

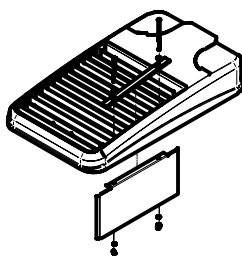
TENON TOP POLE BRACKET ACCESSORIES (Order Separately)

- ☐ 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

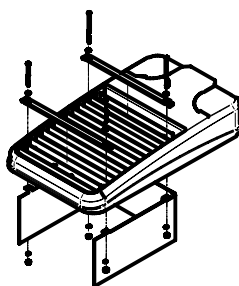
HOUSE SIDE SHIELD FIELD INSTALL ACCESSORIES



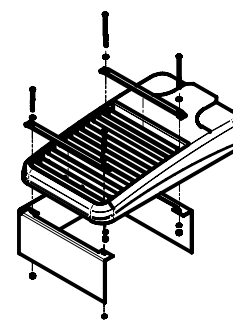
HSS/VP-S/90-FB/XXX
90° shield front or back
(2 shields shown)



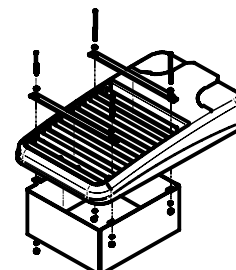
HSS/VP-S/90-LR/XXX
90° shield left or right
(1 shield shown in left orientation)



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)



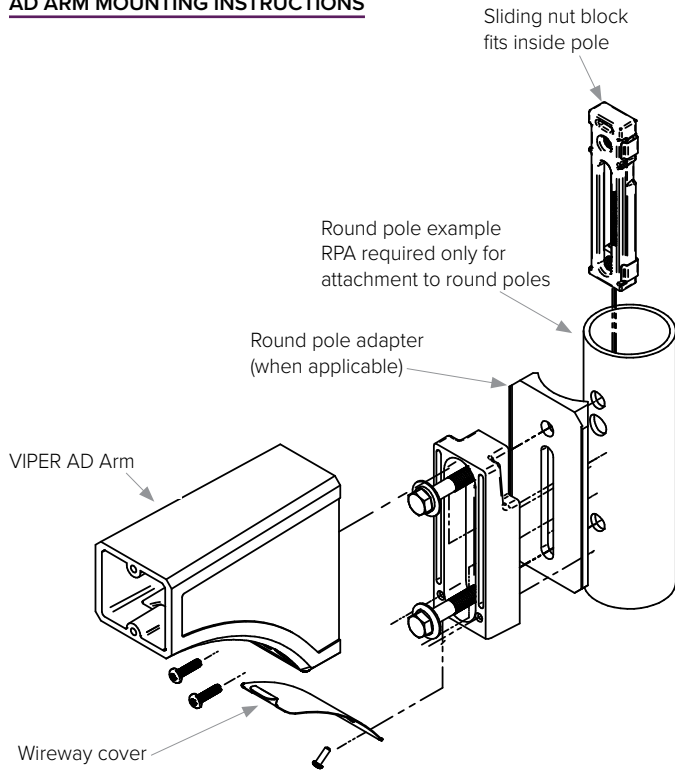
HSS/VP-S/360/XXX
Full shield
(1 shield shown)

VIPER S

SMALL VIPER LUMINAIRE

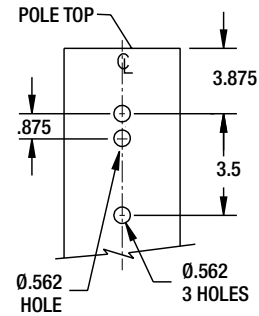
ADDITIONAL INFORMATION (CONTINUED)

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					

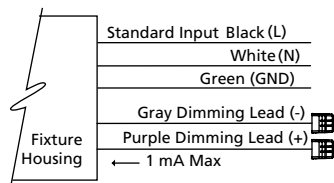
Body	Fixture Finish	Control Options	Voltage	Options
24A 24" OAH, Aluminum	BLS Black Gloss Smooth	SWP ^{1,5} SiteSync pre-commission	UNV 120-277V	EM ⁸ Battery Backup
42A 42" OAH, Aluminum	BLT Black Matte Textured	MW ⁶ Motion sensing (50% dim, 100% output upon detection)	120 ⁷ 120V	LR ⁹ Luminous Accent
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.

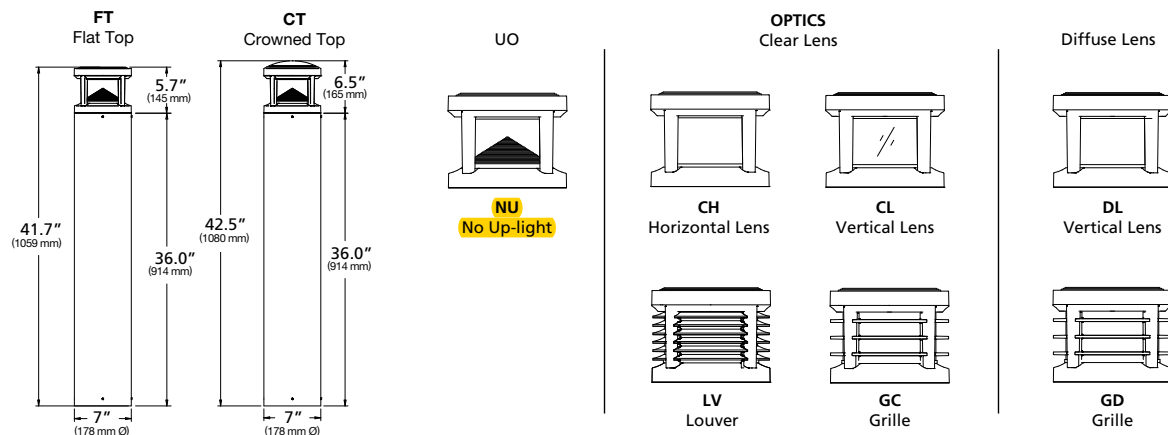
*PRECOMMISSIONED SITESYNC ORDERING INFORMATION: When ordering a fixture with the SiteSync lighting control option, additional information will be required to complete the order. The SiteSync Commissioning Form or alternate schedule information must be completed. This form includes Project location, Group 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



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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

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

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

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

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

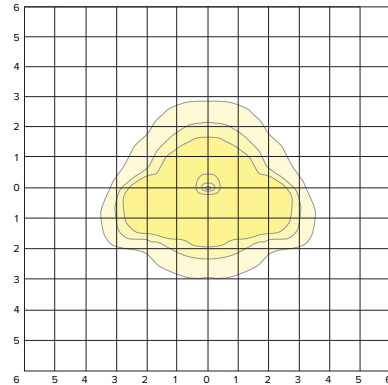
PA7R-CH1-12L-020-4K7

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


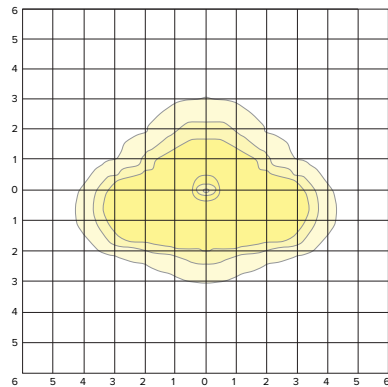
PA7R-CH2-12L-020-4K7

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


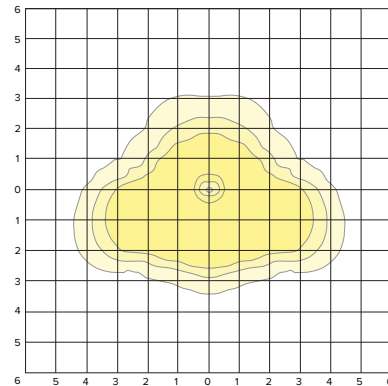
PA7R-CH3-12L-020-4K7

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


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PHOTOMETRY

PA7R-CH3HS-12L-020-4K7

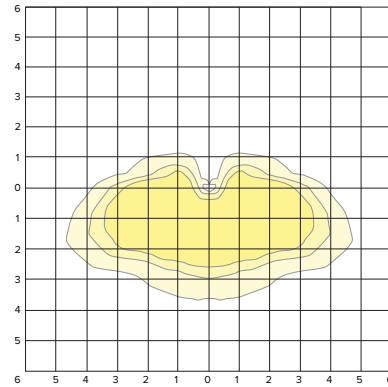
LUMINAIRE DATA

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

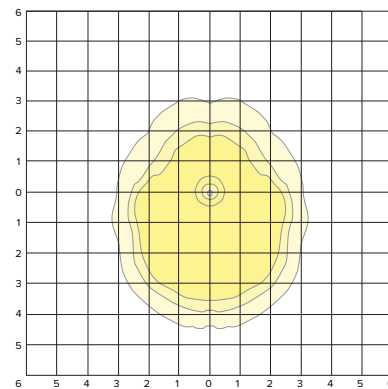
LUMINAIRE DATA

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

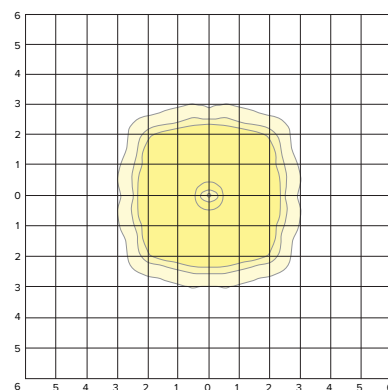
LUMINAIRE DATA

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



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PHOTOMETRY

PA7R-CL1-12L-020-4K7

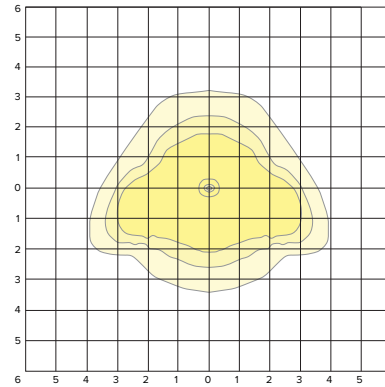
LUMINAIRE DATA

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

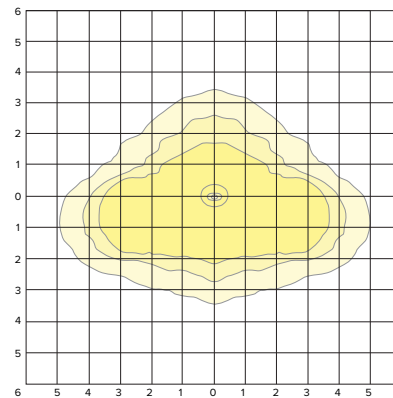
LUMINAIRE DATA

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

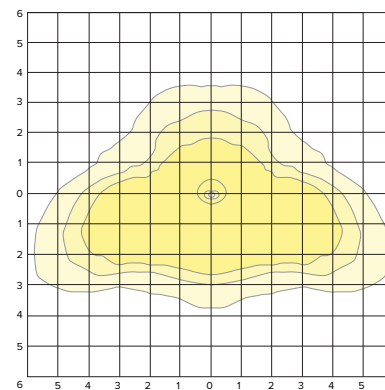
LUMINAIRE DATA

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



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PHOTOMETRY

PA7R-CL3HS-12L-020-4K7

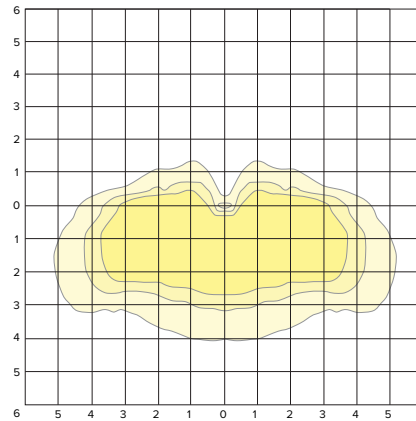
LUMINAIRE DATA

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

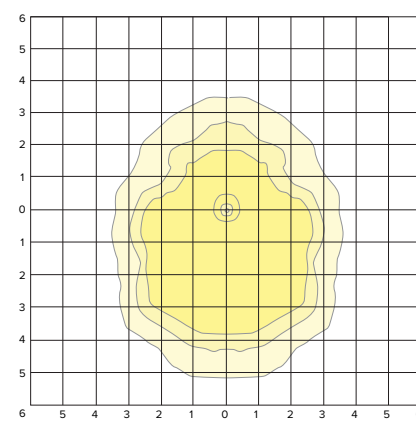
LUMINAIRE DATA

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

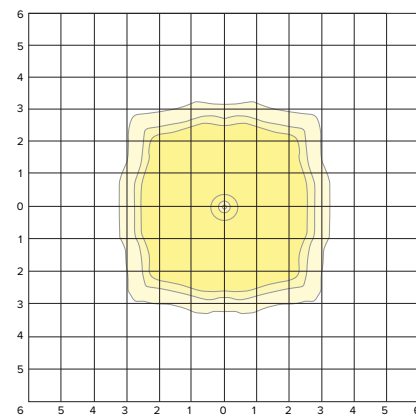
LUMINAIRE DATA

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



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PHOTOMETRY

PA7R-DL1-12L-020-4K7

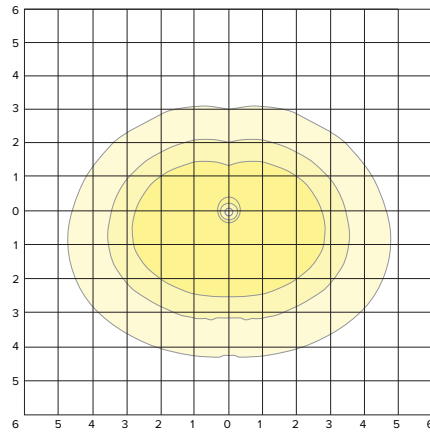
LUMINAIRE DATA

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

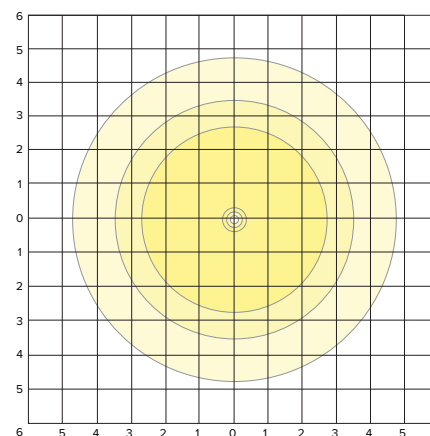
LUMINAIRE DATA

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

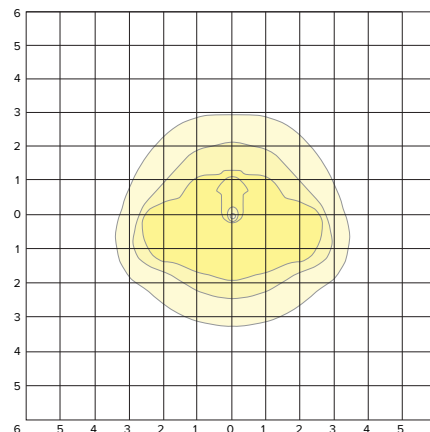
LUMINAIRE DATA

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



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PHOTOMETRY

PA7R-GC2-12L-020-4K7

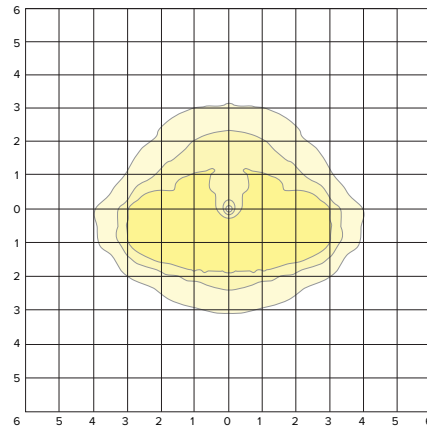
LUMINAIRE DATA

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

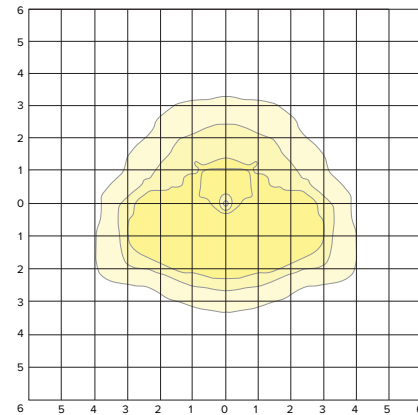
LUMINAIRE DATA

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

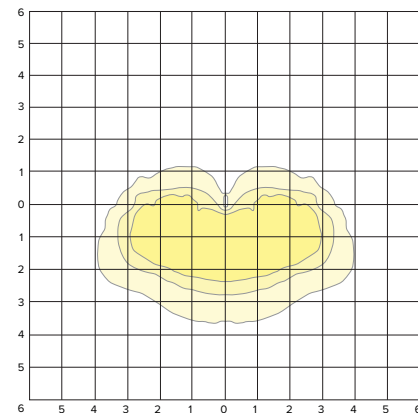
LUMINAIRE DATA

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

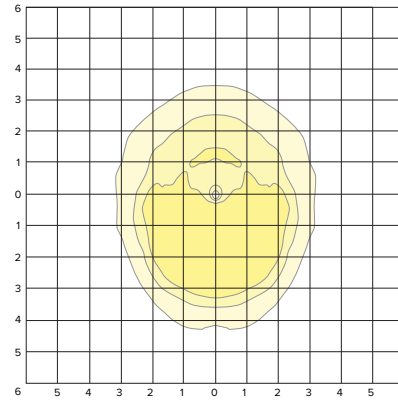
LUMINAIRE DATA

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

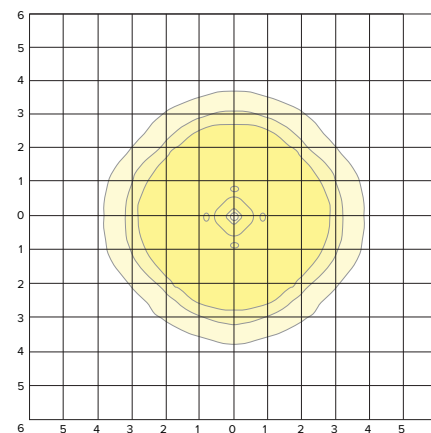
LUMINAIRE DATA

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

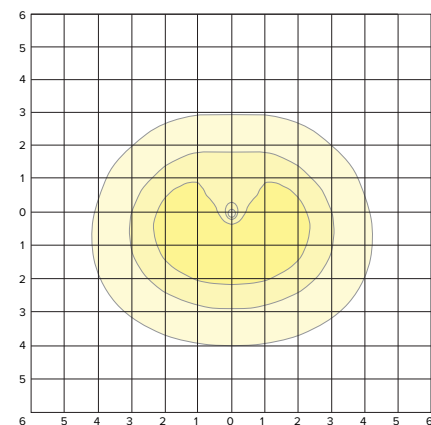
LUMINAIRE DATA

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

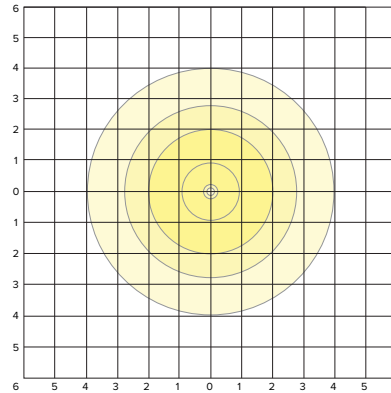
LUMINAIRE DATA

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

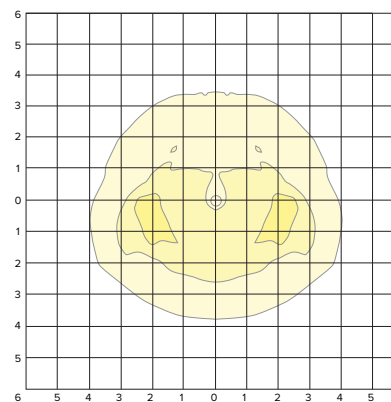
LUMINAIRE DATA

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

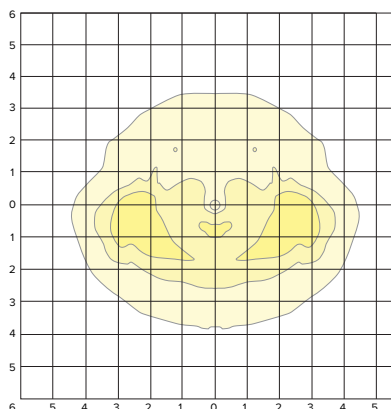
LUMINAIRE DATA

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



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PHOTOMETRY

PA7R-LV3-12L-020-4K7

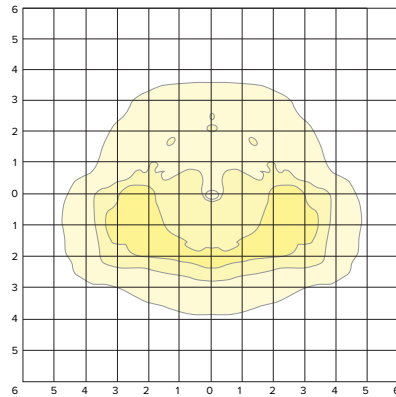
LUMINAIRE DATA

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

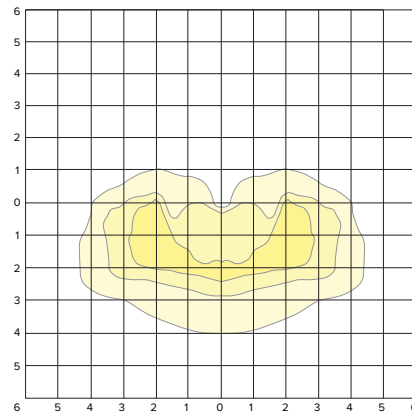
LUMINAIRE DATA

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

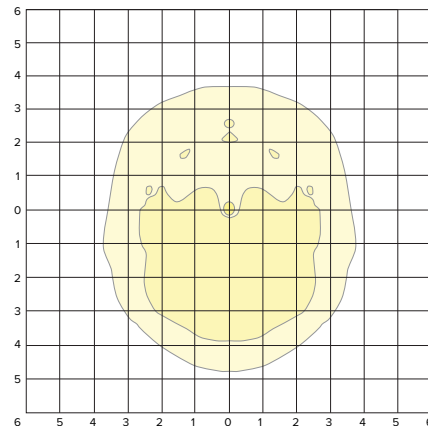
LUMINAIRE DATA

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

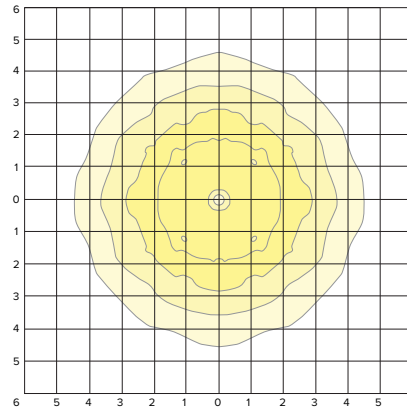
LUMINAIRE DATA

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

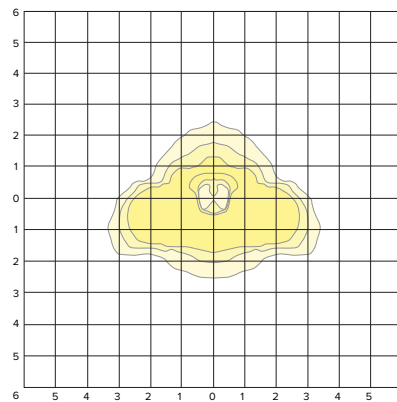
LUMINAIRE DATA

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

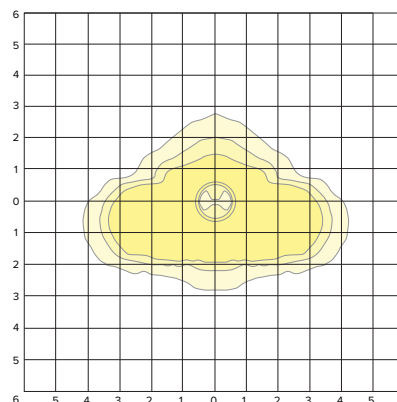
LUMINAIRE DATA

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

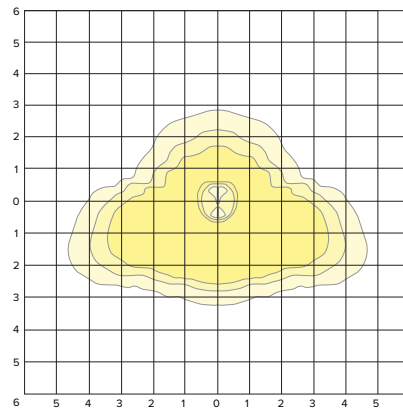
LUMINAIRE DATA

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

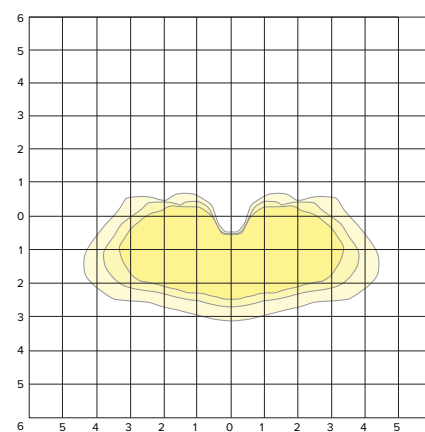
LUMINAIRE DATA

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

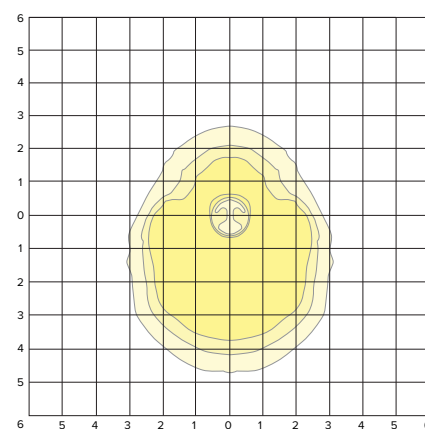
LUMINAIRE DATA

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

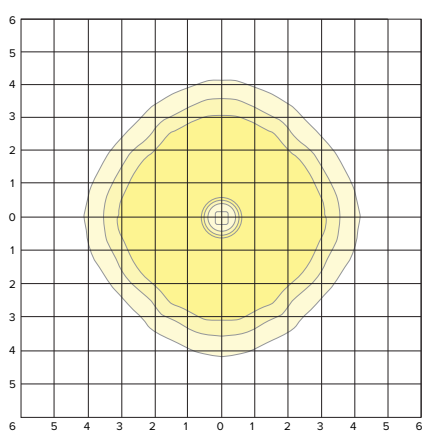
Zone	Lumens	% Luminaire
Downward Street Side	689	50.0%
Downward House Side	689	50.0%
Downward Total	1377	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	1377	100%

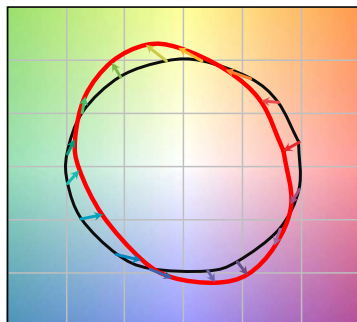
DATE: | LOCATION:

TYPE: | PROJECT:

CATALOG #:

ISOFOOT CANDLE PLOT

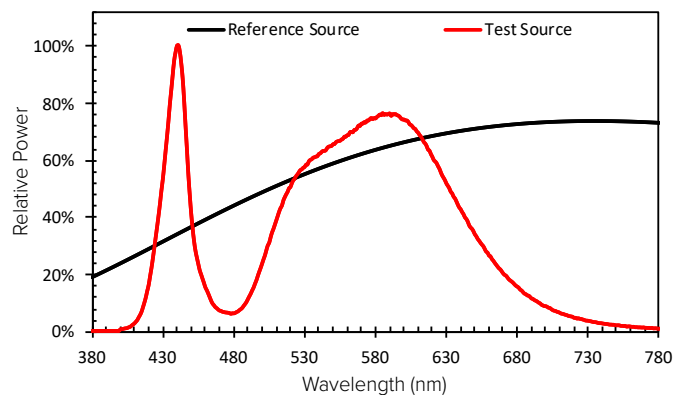


TM-30 DATA
COLOR VECTOR GRAPHIC


— 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

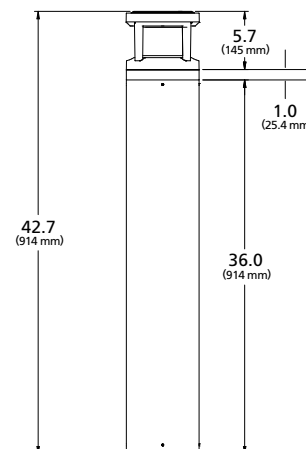
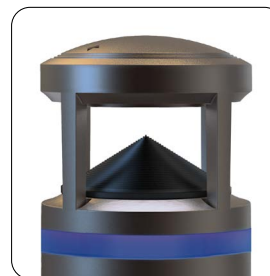
ADDITIONAL INFORMATION

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

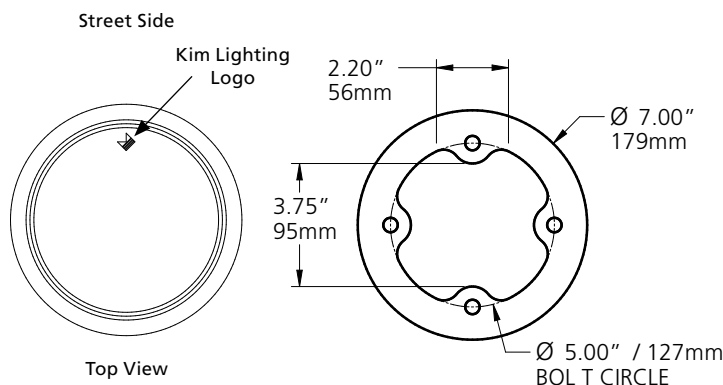
- The Hubbell Lighting RGBW Remote application may be downloaded free of charge from the Apple App Store or Google Play.
- Color selection and adjustment.
- Camera function for color matching.
- Intensity slider for dimming/ramping up.
- Save and rename up to 10 presets.
- Group and rename fixtures.
- 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

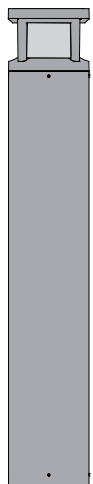
- HS configurations feature factory installed 180° shield(s) that may also be installed in the field for any Optic configuration.



HS Front View



HS Side View

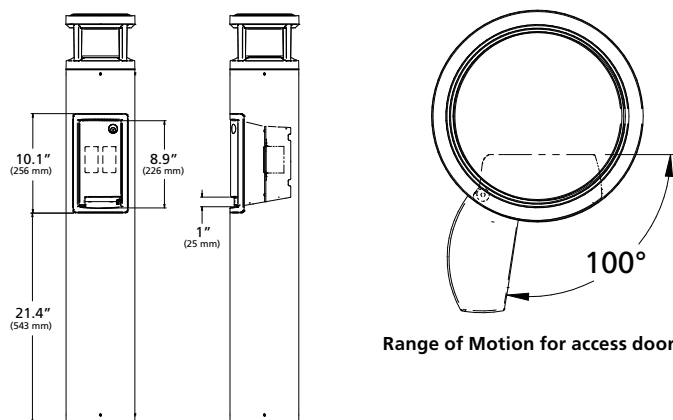


HS Back View

ADDITIONAL INFORMATION (CONTINUED)

RECEPTACLE OUTLET PANEL

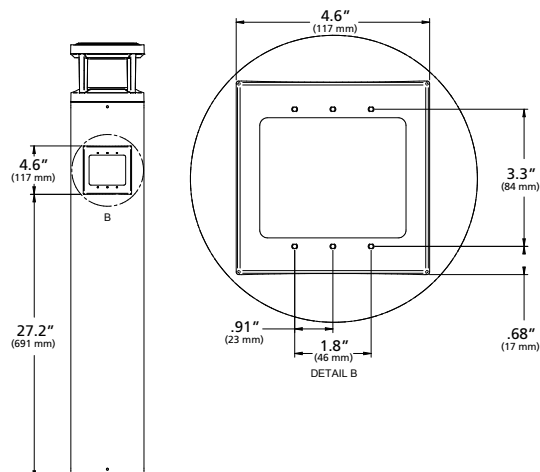
- The Receptacle outlet panel shall be NEMA 3R rated for wet location(s) while in use and shall be compatible with any single receptacle outlet device with standard mounting holes. Door shall be self-closing. Tamper resistant lock must be specified at time of order. Devices and device wiring by others.



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

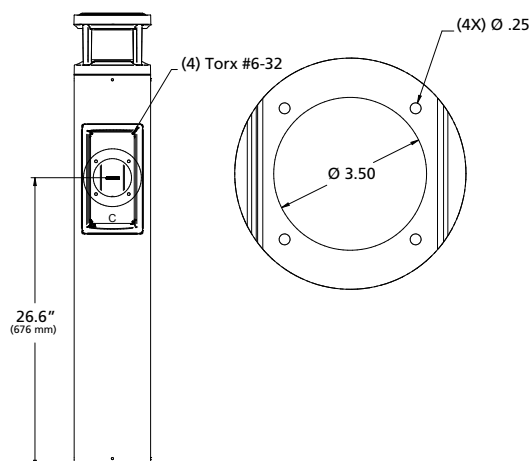
- The integral 2 Gang electrical box shall be # deep and have standard mounting holes for installing either a single receptacle outlet device or a pair of single receptacle outlet device. Devices, device wiring, device hardware and bezel by others.



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.



Job Name: **Deering Ave**
System Reference: **VRF Systems**

**One per apartment and one
for common areas**

Date: **Att. Q**

**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
Compressor Operating Range		Cooling	28.0% to 100.0 %
		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:

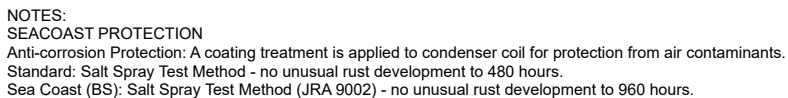
Cooling | Indoor: 81 ° F (27 ° C) DB / 66 ° F (19 ° C) WB; Outdoor: 95 ° F (35 ° C) DB

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° F

²When connecting PKFY-P06NBMU/P08NHMU, PFFY-P06/08/12NEMU or PFFY-P06/08/12NRMU indoor units, the minimum operating range is 50° F

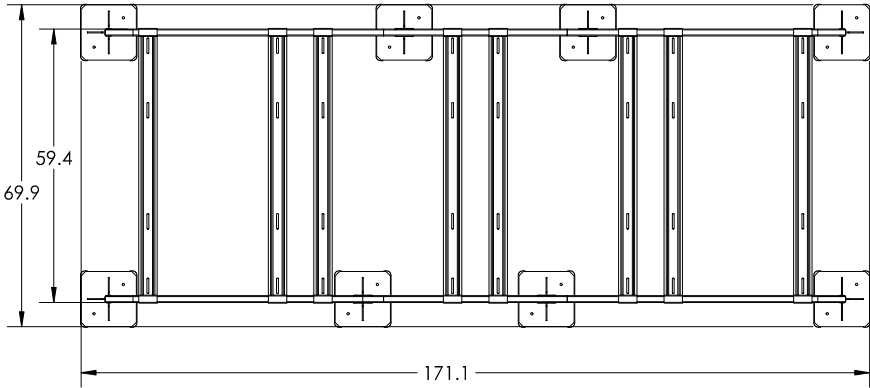
Unit: mm(in)



AHRI CERTIFIED
www.ahridirectory.org
Unitary Small HP
AHRI Standard 210/240
Certification applies only when the complete system is listed with AHRI.

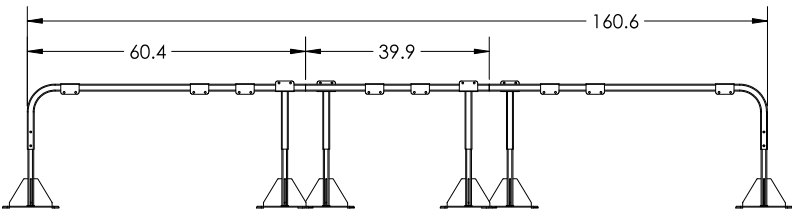


THESE VIEWS SHOW QSMS-3001-24 AND QSMS-3001-24EXT TOGETHER.



EACH EXTENSION KIT ADDS 40" TO THE OVERALL LENGTH.

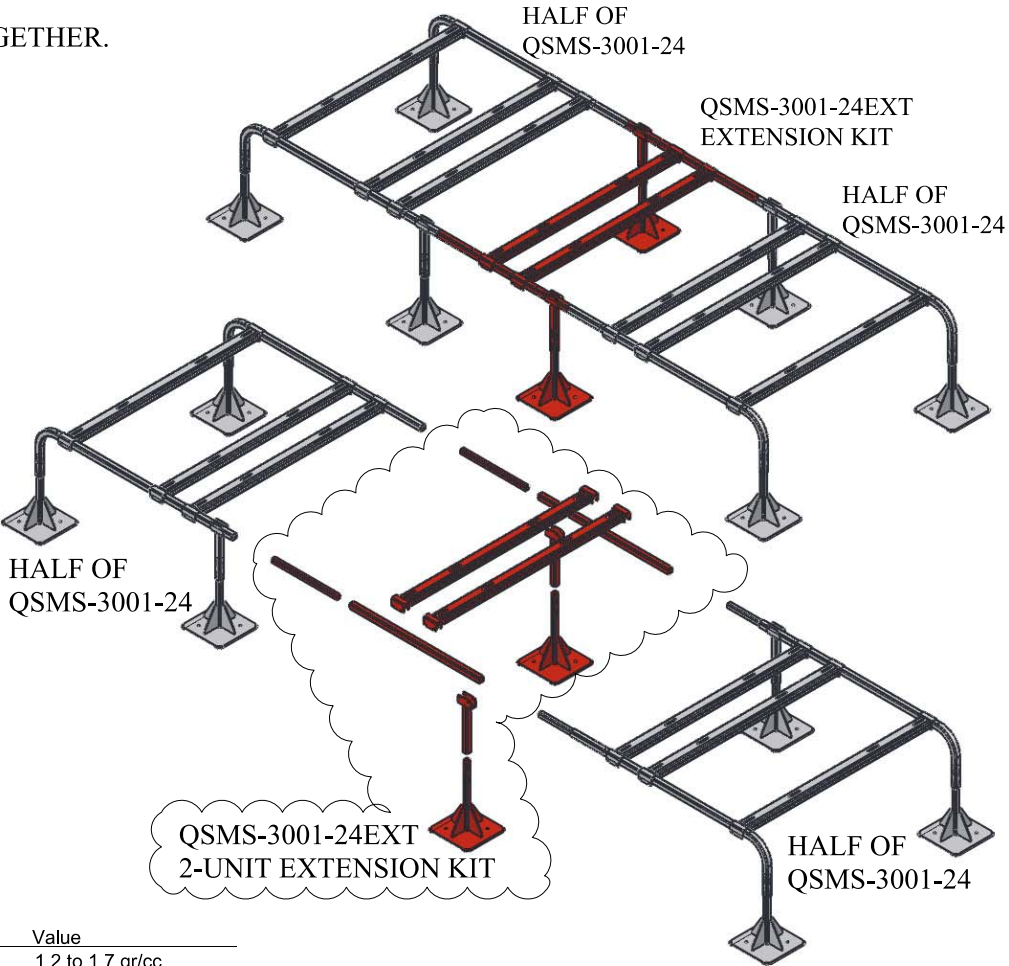
ALL WIDTH DIMENSIONS ARE UNCHANGED.



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

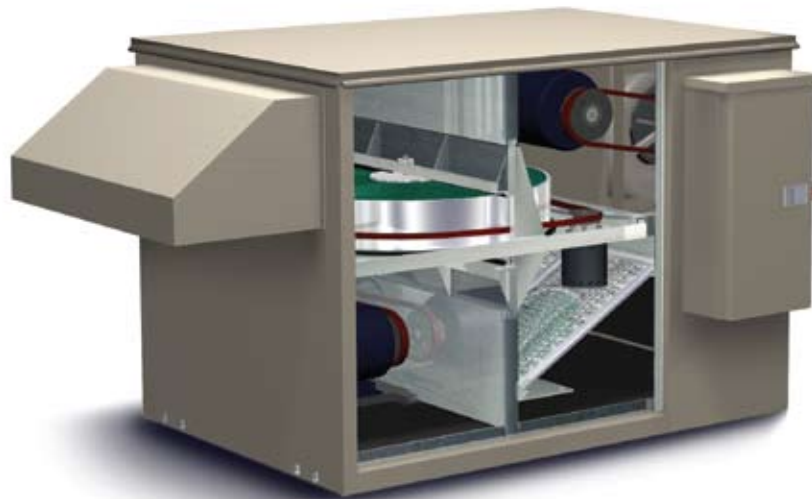
FV-3000

FV-4000

FV-5000

FV-7500

FV-9000



Technical Guide

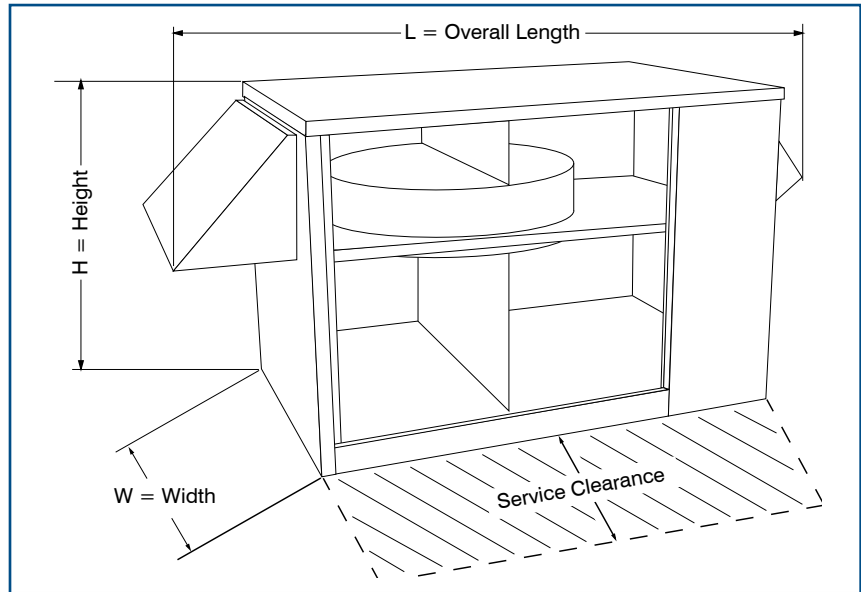
Figure 6. Overall unit dimensions.

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.

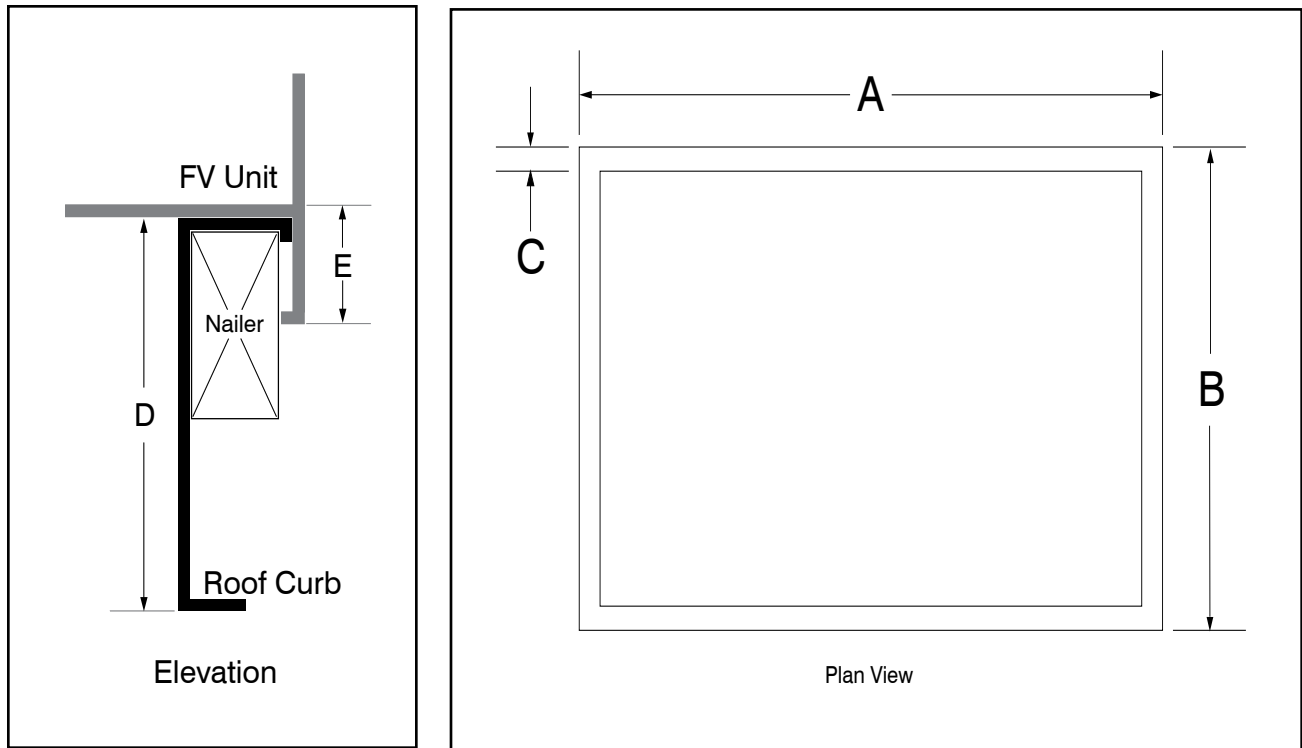


Table 5. Curb dimensions.

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.*

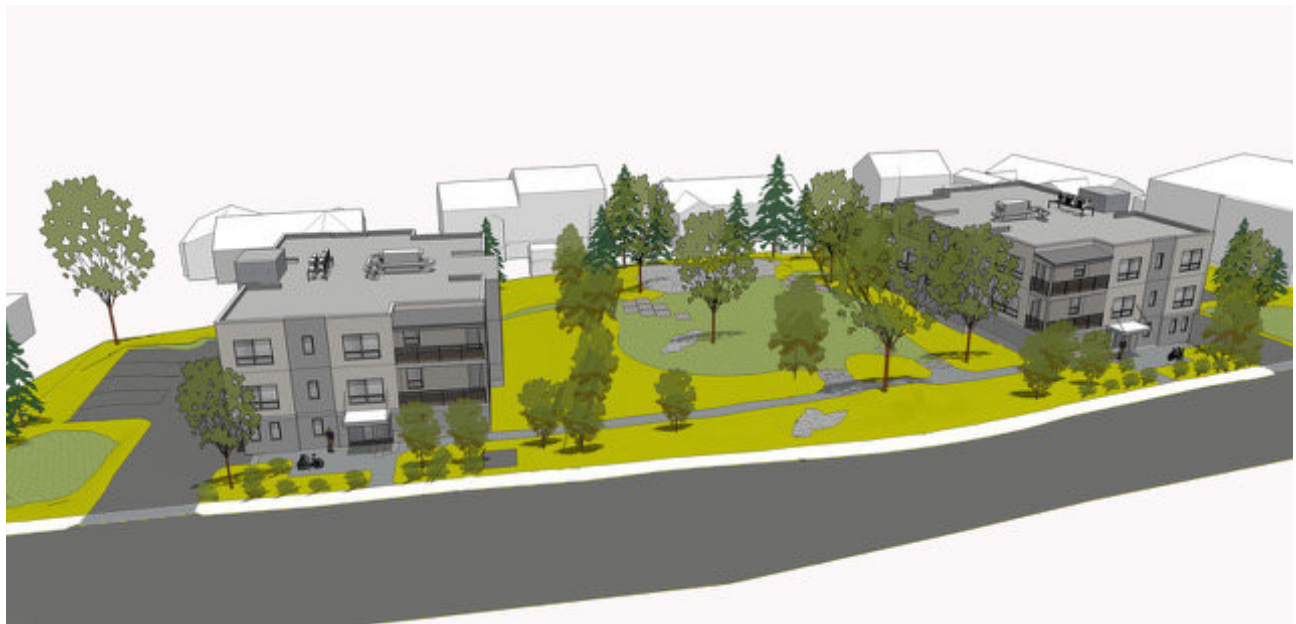
Response:

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 $\times .2 = 3.2$). 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



REAL ASSET SERVICES, LLC
14 TOWN LAND NG ROAD • FALMOUTH, MAINE 04105
TELEPHONE: 207.899.3796 FACSIMILE: 207.615.0592

Att. U

MEMORANDUM

To: Jimmy Dealaman, City of Portland
From: Todd Valentine, RAS LLC
Walsh Engineering
Winton Scott Architects
Date: October 27, 2021
Re: 387 & 405 Deering Ave., Post Workshop Comment Response

Efforts were made to address any open comments that were received prior, during, or after the Planning Board workshop for the 387 & 405 Deering Project.

Site Comments & Responses – Pre-Workshop

1. Transportation Standards

A. Impact on Surrounding Street Systems, Access and Circulation:

- i. Provide the site distance measurements from the proposed driveways.

The site distance measurements were added and are indicated on [Attachment 1 – Sheet C2.0](#).

- ii. Provide ADA compliant route through the driveway apron.

The ADA compliant route through the driveway apron is shown on [Attachment 2 – Sheet C4.1](#).

- iii. Provide turning movements to show adequate space for movement and provide templates for larger vehicles.

The larger vehicle templates (van) were added to the movements which are shown on [Attachment 3 – Sheet T1.0](#).

- iv. The staff recommends making the drive aisle 24' wide to ensure that all spaces are functional.

The parking aisles have been increased to 24' and is reflected on [Attachment 1 – Sheet C2.0](#).

Increasing the parking lane to 24' expanded the impervious area. The stormwater report was recalculated and the stormwater system can service the expanded area. See [Attachment 5 - Stormwater Management Rpt Rev.2](#).

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.

The City Technical Manual was reviewed per Staff reference. The only cite was the size of a standard parking space at 9' x 18' long. A 9' stall is required to comfortably open the car door and exit a standard vehicle.

The external parking stalls are striped at 9' width and the garage parking areas are all in excess of 10' in width. To be clear the doors that enter the garage are 8', which is a standard garage door width. In consideration that the tenant cars are intended to be parked either in the external parking area or in the garage there will be ample room for car access.

Furthermore, access to both the external and internal parking stalls will be easier with the expanding the parking aisle to 24'

See [Attachment 1 – Sheet C2.0](#).

2. Environmental Quality Standards

D. Water Quality, Stormwater Management and Erosion Control

- i. 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.

The stormwater connections were redrawn to show the stormwater system connections in Longfellow and Noyes Streets and is represented on

[Attachment 4 – Sheet C3.0](#).

- ii. 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.

We have been notified that the impact fee credit is not available for this Project. In accordance an impact fee credit application will not be filed.

Site Comments & Responses – Received Post-Workshop

1. Frontage Design: In order to meet the standards related to public realm
 - a. Revise sidewalk design to include an esplanade consistent with the existing, abutting sidewalk

The effects of adding an esplanade were addressed in our pre-workshop comments response:

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 several 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 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.

In addition to the above early comments, we wish to add that the following:

The impacts of adding an esplanade to existing preserved trees will be:

- *12" caliper American Beech – Located on the SW edge adjacent to proposed entry to south building: Approx. 100sf of root impact on the west side of canopy. New edge of sidewalk would land within 24" of base of tree. West side root impacts would be significant.*
- *26" caliper Red Oak – Centrally located on the west edge of the site. Approx. 200sf of root impact on west side canopy. In addition, a retaining condition would be needed to allow for the sidewalk to accommodate an esplanade. This would add considerable impacts to the tree roots on the west side. Potential loss of the grandest tree existing onsite*
- *13" American Cherry – located on the NW edge adjacent to the proposed entry to the north building. Approx. 100sf of root impact on the west side canopy. West side impacts would be significant.*
- *A diagram of the indigenous tree locations with the area of root impacts. See [Attachment 6 – Sheet LP](#).*

- b. Shift front yard landscape area to be against the building consistent with the residential frontage types in the context

The landscaping area around the front entrance will be modified to move the landscaping up to the building per comment. A modified planting plan will be submitted to be integrated with the remainder of the site. An updated landscaping reflecting the selected plantings will be submitted.

See [Attachment 7 – Front Entry](#)

2. Entrance Design: In order to meet the standards for Context and Orientation

- a. Revise street-facing entrance to have similar elements/characteristics to the entry porches and stoops found in residential frontages.
- b. Increase prominence of front door with sidelight or double door.

The front entrance was further refined based on comments received regarding prominence. The entrance was strengthened with the addition of sidelights and with the door being recessed from the predominant building face. Furthermore, a transitional space, similar to typical front porches in the neighborhood, was created using two tapered walls at the edges of a projecting canopy bracketing the front entrance.

To diminish the articulation of the side entrance the doors are now recessed and the portion of the roof overhang that extended past the building face has been eliminated.

See [Attachment 7 – Front Entry](#)

3. **Building Massing and Orientation:** In order to meet standards around context, orientation, and massing, especially related to the lack of living space/activity on the ground floor, the lack of hierarchy and contextual proportions of the street-facing facade, the orientation of bedrooms to the street rather than the living spaces, and the main circulation core located away from the street - take reference from the double houses in terms of proportion, entrance/circulation location:

In conjunction with the pre- and post- workshop comments following design changes were made to improve the building design:

Overall Building:

In addition to the front entry changes noted above the building siding and glazing were improved. The siding selections were simplified and the color pallet made more subdued. The windows were used to break up the wall sections further by pulling the windows proud of the predominant wall surface.

See [Attachment 8 - Building Elevations – North](#)

See [Attachment 9 - Building Elevations - South](#)

Roofs:

The building and roof types were informally surveyed in a two block radius around the Project site. The surrounding neighborhood was developed with a mix of buildings from single family, 2 units, 3 units and above as well as institutional uses.

Many buildings in the neighborhood are functioning with greater unit counts than they were constructed for. A portion of both small and larger single-family homes have been broken up into 2 or more units and some of the two-unit buildings have had an additional units added. How far these occupancy modifications were expanded is dependent on the size of the original building, which is mostly true for the grander single-family conversions. The single families and 2 units (duplexed or stacked) were constructed with sloped roofs.

However, the examples of buildings that were purpose-built to house more 3 units or more are not sloped roofs. As much as it can be identified the purpose-built 3 units in the neighborhood are flat roofed as well as multiplex buildings.

The Project design is for flat roof buildings as it allows for attaining the max units allowed by the R-5 zone, encloses 50% of the parking and provides occupant storage space in partial daylight space, and remains under the height limits. The flat roof also provides a location for the exterior mounted mechanical

equipment – an improvement over mounting the units to the vertical wall surfaces.

Changes were made to the roofs in response to comments received to help soften the flat roof edge. The roofs edges are now articulated with a varying parapet and the porch roofs dropped lower than the main roof.

*See [Attachment 8 - Building Elevations – North](#)
[Attachment 9 - Building Elevations - South](#)*

As mentioned above the mechanical equipment will be located in the middle of the flat roof. There was comment to either screen or integrate the equipment into the design. The equipment, located in the middle of the building, would have zero to no visibility from the ground. Screening could be added if required.

See [Attachment 10 - RTU - No Screen](#)

- a. Rotate the building orientation 90 degrees clockwise to have the symmetrical facade/living spaces facing street, introduce entrance, make central portion read like bays, use a side driveway to access parking in rear/shift buildings towards property lines

Siting and Orientation:

The presented building siting and orientation is a product of the site constraints and the effort to maximize the use of the site. The building siting places the narrow face of the building towards the street which avoids ledge removal and maximizes the amount of area designated for occupant recreation use.

The site, even with the ledge and depth constraints, does provide a benefit in its length. The lots in the neighborhood are, for the most part are single widths with the houses sited with the narrow face towards the street. Consequently, the only active face of these respective buildings is the narrow face towards the street.

The Project parcel is over 300' in length and the proposed buildings are sited at the north and south ends with the front of the buildings parallel with Deering Avenue. The siting takes advantage of a bend in Deering Avenue and the site which plays the building orientation to each other and opens the center of the site.

The length of the site, relative to the other neighborhood parcels, and the splayed building siting exposes the active, living faces of both the front and rear units to Deering Avenue, provides view of the recreation area from both porches and living spaces from all units, and maximizes the amount of open space.

See [Attachment 11 \(Sheet L1.0\)](#)

The comment to rotate the buildings and change the parking field & garage access were reviewed. The rotation would present the long face of the building to the street would have multiple negative effects or plainly not be possible:

- 1. The rotated buildings will require more ledge removal.*
- 2. The Building A north facing tenants and the Building B south facing tenants will have a view only of the parking field and rear drive aisles.*
- 3. Orientating the long face of the building towards the street reduces the amount of area that can be used for the common occupant recreation use.*
- 4. There is not enough area for parking in the rear and/or turn movement into a rear facing garage.*

- b. Or, move circulation core to street facade and rearrange porches, entrance to create activity at street face, shift parking to rear

Same response as to comment 3a.

- c. In either scenario, likely need to raise parapet heights to achieve more appropriate proportions and hide rooftop systems.

See response Roofs above.



REAL ASSET SERVICES, LLC
14 TOWN LAND NG ROAD • FALMOUTH, MAINE 04105
TELEPHONE: 207.899.3796 FACSIMILE: 207.615.0592

V.

MEMORANDUM

To: Jimmy Dealaman City of Portland
From: Todd Valentine RAS LLC
Walsh Engineering
Winton Scott Architects
David Maynes Studio
Date: 01/20/2022
Re: 387 & 405 Deering Ave.
Response to City Comments

Follow-up Site Plan Application Review Comments and Responses

1. Subdivision

-Please respond with narrative addressing the subdivision review standards contained in Section 15.4.

[*Attachment 1 – Subdivision Standards Narrative*](#)

2. Design

-Please see the updated design comments (see attached).

- a. Public Realm. Consider previous suspended canopy to promote permeability to avoid hidden site lines that may be created by proposed wing walls in latest rendering. In addition, please clarify the intended canopy design throughout the renderings, elevations, and floor plans, as a rendering appears to show an undesired alternative approach (see image below).

[*The entrance areas were changed back to suspended canopies.*](#)

[*Attachment 12 - Sheet A4.1 – 3D Views*](#)

- b. Roofs. Rooftop HVAC systems appear to still be visible. Please show rooftop screening and dimensions.

Screening was extended from the front to the rear of the mechanical units.

[Attachment 5 - Sheet A1.4 – Roof Plan](#)

[Attachment 16 – Sheet A4.5 – 3D Views](#)

- c. Materials

- i. It appears new renderings were submitted to illustrate proposed material, please reflect these within updated elevations, floor plans and a schedule of materials' type and color.
- ii. Consideration for greater material color contrast (possibly slightly darker) in front façade at west elevation, to identify the building articulation between bedroom and bathroom. See rendered image.

Materials were updated to reflect the comments request for more contrast and provided the material color and type.

All of the changes in response to Design comments are depicted throughout the included Sheets:

[Attachment 2 – A1.1 – First floor Plan](#)

[Attachment 3 – A1.2 – Second Floor Plan](#)

[Attachment 4 – A1.3 – Third Floor Plan](#)

[Attachment 5 – A1.4 – Roof Plan](#)

[Attachment 6 – A2.1 – Building Elevations](#)

[Attachment 7 – A2.2 – Building Elevations](#)

[Attachment 8 – A2.3 – Building Elevations](#)

[Attachment 9 – A2.4 – Building Elevations](#)

[Attachment 10 – A2.5 – Building Elevations](#)

[Attachment 11 – A3.1 – Site Sections](#)

[Attachment 12 – A4.1 – 3D Views](#)

[Attachment 13 – A4.2 – 3D Views](#)

[Attachment 14 – A4.3 – 3D Views](#)

[Attachment 15 – A4.4 – 3D Views](#)

[Attachment 16 – A4.5 – 3D Views](#)

[Attachment 17 – A4.6 – 3D Views](#)

[Attachment 18 – A5.1 – Code Summary](#)

3. Traffic

Please confirm that the site distance has been field measured/verified. Once this is confirmed staff have the response regarding sight distance and have no further comments.

The site distances were field measured and verified. The sight distances have been added to the plan set.

[Attachment 20 – C1.0 – Site Layout and Utility Plan](#)

4. Access/Circulation

Public Works has some additional comments regarding the driveway and other features:

- Bump out driveway where turning template shows a pinch point and include curbing or guardrail as necessary to limit potential to drive off edge of pavement into soil filter

The turn movements on property were modeled using a large van (18') to ensure there was ample room to maneuver adjacent to the soil filter. It is believed that additional curbing or guardrail is not needed.

[Attachment 26 – T1.0 – Vehicle Turn Simulations](#)

- Some details are incorrect and should be updated:
 - Driveway detail (carry sidewalk slope across apron)
 - ADA panel (not supposed to be yellow, and add to plan)
 - concrete sidewalk detail does not show the 7" curb reveal
 - Vertical granite curbing detail not shown as being set in concrete

[Attachment 24 – C4.1 – Details](#)

- Details for rip-rap forebays do not show overall dimensions, nor does the site plan

[Attachment 21 – C3.0 – Grading and Drainage Plan](#)

- Sidewalk material, curbing, esplanade not labeled on the site plan (though they are shown on the details)

[Attachment 20 – C2.0 – Site Layout and Utility Plan](#)

-ADA ramp and panel needed across Deering for their mid-block crossing to Wadsworth

[Attachment 20 – C2.0 – Site Layout and Utility Plan](#)

-ADA ramp and panel may be needed at Deering / Longfellow corner

The storm drain was moved from being under the sidewalk to within Deering Ave. Consequently, the sidewalk from the project site to the corner of Deering Avenue and Longfellow St. will remain undisturbed.

[Attachment 20 – C2.0 – Site Layout and Utility Plan](#)

5. Stormwater\Utility

-Stormdrain proposed to connect to Longfellow is shown under the sidewalk - this should be within the roadway.

The storm drain was relocated from under the sidewalk to within Deering Ave.

[Attachment 20 – C2.0 – Site Layout and Utility Plan](#)

-Please provide details needed for both stormdrain connections - Longfellow and Noyes

Storm drain connections are shown in the plan set.

[Attachment 25 – Sheet 4.3 - Details](#)

-90* angle in stormdrain connection won't work properly and is not allowed. Please revise

[Attachment 20 – C2.0 – Site Layout and Utility Plan](#)

All of the changes in response to technical comments are depicted throughout the included Sheets:

[Attachment 19 – C1.0 – Existing Conditions](#)

[Attachment 20 – C2.0 – Site Layout and Utility Plan](#)

[Attachment 21 – C3.0 – Grading and Drainage Plan](#)

[Attachment 22 – C3.1 – Erosion Control and Wetland Impact Plan](#)

[Attachment 23 – C3.2 – Grading Details](#)

[Attachment 24 – C4.1 – Details](#)

[Attachment 25 – C4.3 – Details](#)

[Attachment 26 – T1.0 – Vehicle Turn Simulations](#)

6. Landscape/Preservation

The City Arborist would also like to arrange a time to discuss the landscape plan with your landscape architect to help provide any insight to what additional landscaping would be sufficient. We encourage your LA to email planning copying the city arborist at: jst@portlandmaine.gov

There was a landscaping conversation in a conference call with Planning and the City Arborist on December 8, 2021

-The site is along a school walking route and given a higher priority, the sidewalk should include esplanade to carry the same sidewalk design along Deering Ave. Staff noted the existing esplanade is 32" wide which should continue along the site. It's may require a retaining wall at the center of the site in order to accommodate the wider public way. If a retaining wall is added a split rail fence is recommended or some alternative to improve safety along the higher grade.

The esplanade was added to the plan set.

[Attachment 20 – C2.0 – Site Layout and Utility Plan](#)

- The final landscape plan should include a landscape key that includes the plant types, sizes, quantities and specific locations. (this was missing from the L-1.0 Sheet)

The landscaping and planting plans were updated to include plant types, sizes, quantities, and specific locations.

[Attachment 27 – L1.0 – Landscape Plan](#)

[Attachment 28 – L2.0 – Planting Plan](#)

-Planning staff walked the site with the City Arborist and marked significant trees in blue tape that should also be saved. Several of these are already shown on the landscape plan, however, please refer to the image with notes below about adding these tree saves to the plan.



The American Elm was added to the Landscaping Plan.

The White Oak is located within the south storm water treatment and detention area. Alternates were explored to leave the White Oak undisturbed with the best possibility being locating the stormwater management under the parking area.

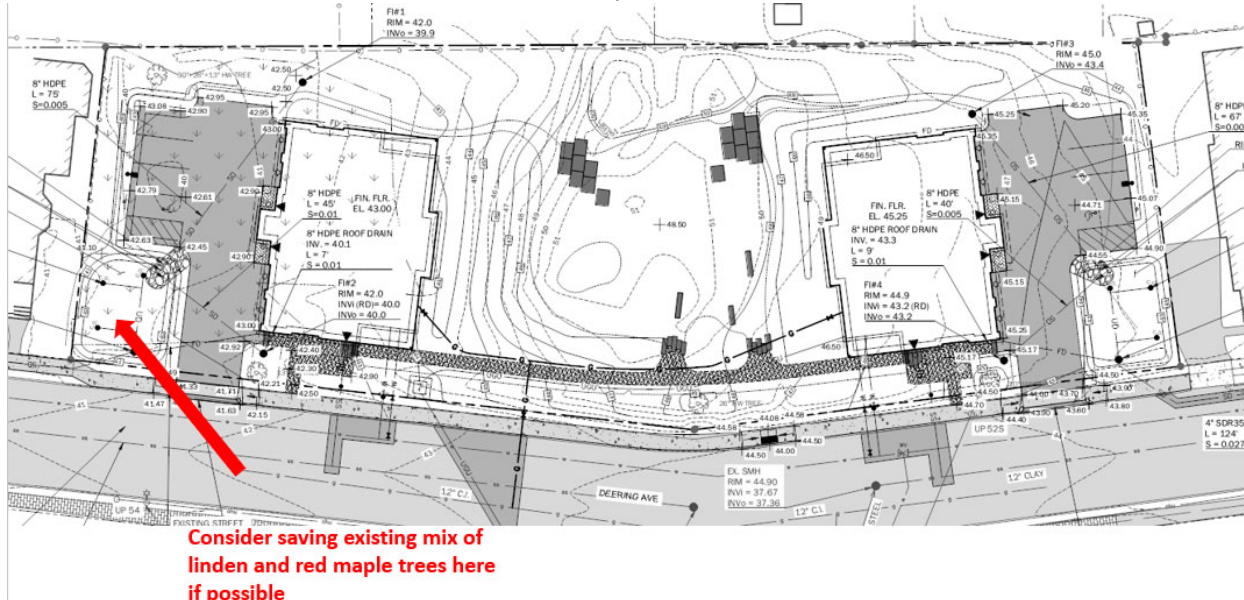
Moving the storm water management under the parking at the south end of the property is capable of managing the stormwater quantity only due to the connection elevation to the City storm water system. Treating the storm water quality adds the filter layers below and even with minimum sized chambers the underdrains would be well below the invert at Noyes Street.

Treating for quantity only with underground chambers will have only 0.3' of elevation to discharge to Noyes Street, which would be approximately 0.2% pipe slope.

Considering that the storm water detention is located at the lowest point on the property to serve the remainder of the property. Consequently, it is impossible to save the White Oak and manage both storm water quantity and quality.

However, if a waiver was granted for storm water treatment – just for the storm water management at the south end of the property – then storm water quantity could be managed under the parking area and the White Oak can be saved.

-The City Arborist recommends preserving the existing trees at the location below (see image below) if possible. However, it's understood that they may need to be removed to accommodate the stormwater system.



The north storm water management area is located at the lowest point to serve its portion of the property and to maintain an elevation that will allow connection to the storm water system in Longfellow Street.

-The City Arborist's is seeking additional screening along the left and right property lines (see image below) to screen headlights from proposed parking spaces and to meet parking lot landscape standards.



The landscaping plan was updated to add screening per the City Arborist comments.

[Attachment 27 – L1.0 – Landscape Plan](#)

[Attachment 28 – L2.0 – Planting Plan](#)

7. Other

-After additional review, given that each building will include separate tenants and there is no expectation for users to be circulating between the two buildings or parking areas, the pathway bollard lighting is not required and could be eliminated.

The bollard lighting was eliminated.

Regardless please submit a written waiver request to Section 12 of the City's Technical Manual 12.3.2. for areas of the site which are under the required minimum level (0.2 foot candles). Staff are supportive of recommending a waiver to the Planning Board given the presence of street lighting available/installed in the vicinity.

The photometrics were reviewed and updated to meet the required minimum level of 0.2 foot-candles.

[Attachment 29 – ES2.0 – Photometric Plan](#)

-Please provide any updates/documentation showing the ACOE approval.

Approvals were received from both the ACOE and the Maine DEP.

[Attachment 30 - ACOE NAE-2021-00663-PERMIT](#)

[Attachment 31 - ME DEP L29139AN](#)

-Please revise and resubmit the Construction Management Plan which is not sufficient. Public Works is seeking that it be developed for the site and not just a reiteration of the City template.

The construction management plan was initially submitted but started with restating the management requirements. The restatement was removed from the narrative that addresses the specifics of the construction management plan.

[Attachment 32 – Construction Management Site Plan](#)

[Attachment 33 – Construction Management Narrative](#)

-Consider coordination with neighbors will be needed when laying the new stormdrain lines

We will inform and notice the abutting neighbors when activities occur outside of the property boundary that will affect access to their property.

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?

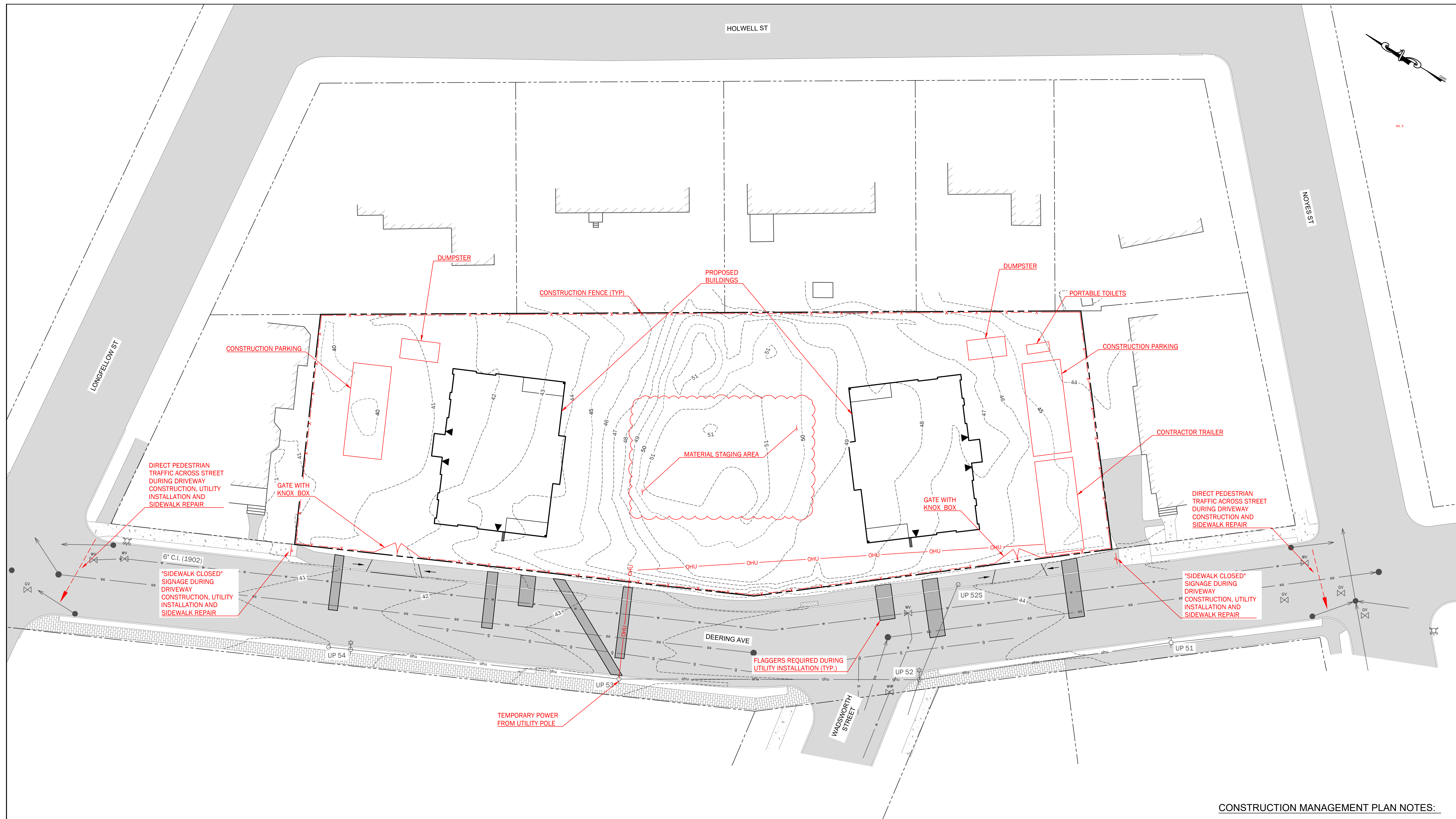
Todd – Absolutely.

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.



Construction Management Plan
Deering Avenue Residences
387 & 405 Deering Avenue

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.

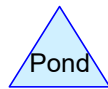
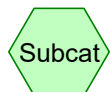
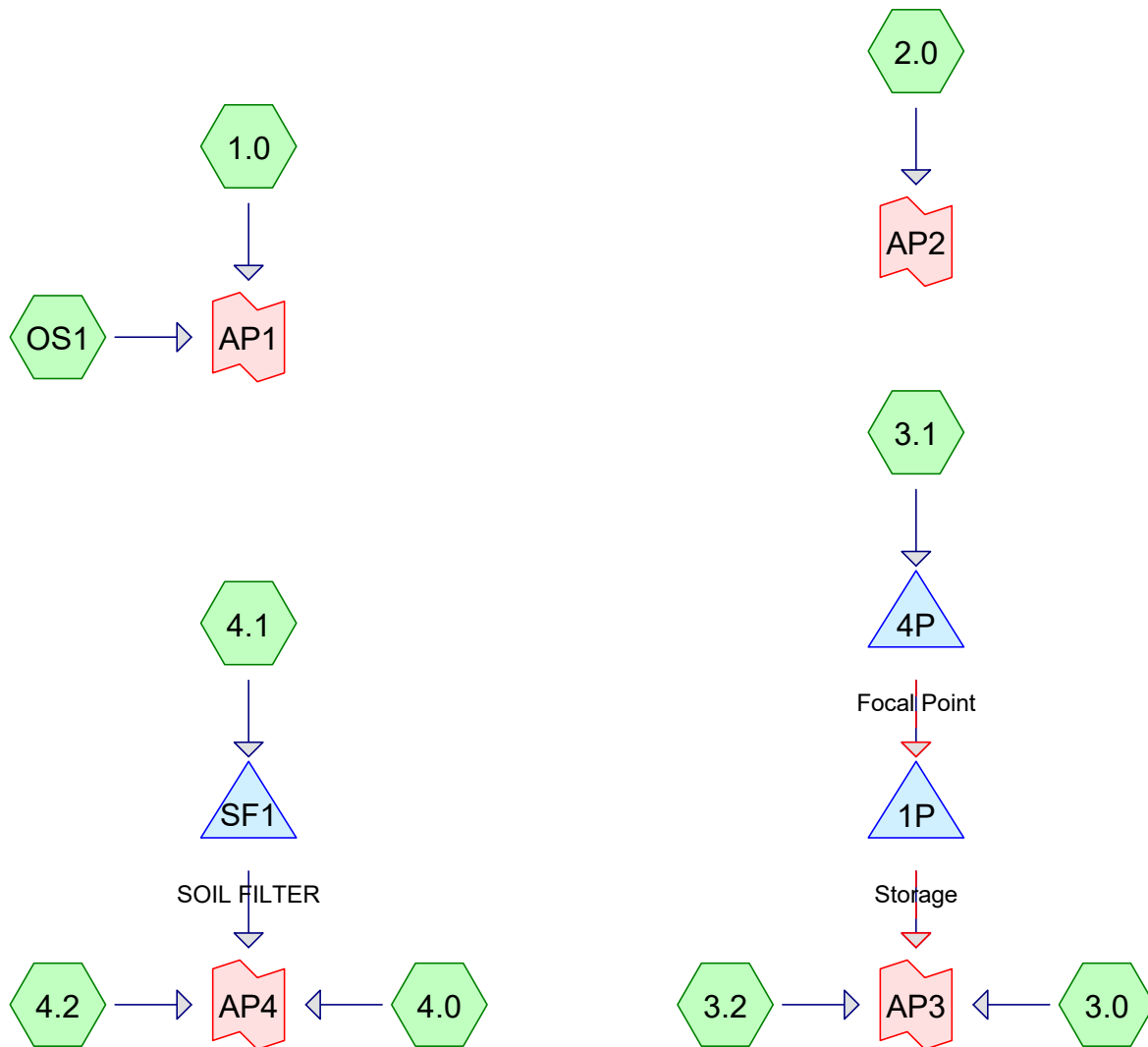
(c) This section shall not apply in the following situations:

- (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 dark, 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.



Routing Diagram for Post-Development - Subsurface Chambers
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Post-Development - Subsurface Chambers

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Area Listing (selected nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
127	98	(4.1)
6,860	39	>75% Grass cover, Good, HSG A (2.0, 3.0, 3.1, 3.2, 4.2, OS1)
711	80	>75% Grass cover, Good, HSG D (1.0, 4.1)
14,724	30	Brush, Good, HSG A (1.0, 2.0, 3.1, 3.2, 4.1, 4.2)
2,378	73	Brush, Good, HSG D (1.0, 4.1)
92	98	Expanded Parking Aisle (4.1)
319	98	Granite & Ledge (4.1)
1,968	39	Grass, HSG A (4.1)
346	98	Ledge (2.0)
81	98	Ledge and Granite (4.2)
369	30	Meadow, non-grazed, HSG A (3.0)
187	98	Pavement (4.2)
6,144	98	Pavement, Roof (4.1)
147	98	ROAD/DRIVEWAY (3.2)
6,204	98	ROOF AND PAVED PARKING (3.1)
7,429	98	Roadway (3.0, 4.0)
1,490	98	Roofs, HSG A (OS1)
644	89	StoneDust Path (4.1)
344	89	Stonedust Walkway (3.2, 4.2)
621	98	Walkways (3.1)
331	30	Woods, Good, HSG A (3.0)
51,516	66	TOTAL AREA

Post-Development - Subsurface Chambers

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Deering Avenue
Type III 24-hr 2-Year Rainfall=3.10"

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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=1,751 sf 0.00% Impervious Runoff Depth=0.59" Flow Length=70' Slope=0.0300 '/' Tc=13.9 min CN=66 Runoff=0.0 cfs 87 cf
Subcatchment 2.0:	Runoff Area=3,358 sf 10.30% Impervious Runoff Depth=0.00" Flow Length=35' Slope=0.0600 '/' Tc=6.1 min CN=38 Runoff=0.0 cfs 0 cf
Subcatchment 3.0:	Runoff Area=3,456 sf 68.66% Impervious Runoff Depth=1.20" Tc=5.0 min CN=78 Runoff=0.1 cfs 346 cf
Subcatchment 3.1:	Runoff Area=13,004 sf 52.48% Impervious Runoff Depth=0.68" Flow Length=177' Tc=7.8 min CN=68 Runoff=0.2 cfs 736 cf
Subcatchment 3.2:	Runoff Area=1,281 sf 11.48% Impervious Runoff Depth=0.13" Tc=5.0 min CN=51 Runoff=0.0 cfs 14 cf
Subcatchment 4.0:	Runoff Area=5,056 sf 100.00% Impervious Runoff Depth=2.87" Tc=5.0 min CN=98 Runoff=0.4 cfs 1,208 cf
Subcatchment 4.1:	Runoff Area=17,100 sf 39.08% Impervious Runoff Depth=0.51" Flow Length=235' Tc=10.4 min CN=64 Runoff=0.1 cfs 731 cf
Subcatchment 4.2:	Runoff Area=2,530 sf 10.59% Impervious Runoff Depth=0.00" Tc=5.0 min CN=41 Runoff=0.0 cfs 1 cf
Subcatchment OS1:	Runoff Area=3,980 sf 37.44% Impervious Runoff Depth=0.40" Tc=5.0 min CN=61 Runoff=0.0 cfs 134 cf
Pond 1P: Storage	Peak Elev=39.56' Storage=407 cf Inflow=0.2 cfs 736 cf Outflow=0.0 cfs 526 cf
Pond 4P: Focal Point	Peak Elev=43.00' Storage=15 cf Inflow=0.2 cfs 736 cf Primary=0.2 cfs 736 cf Secondary=0.0 cfs 0 cf Outflow=0.2 cfs 736 cf
Pond SF1: SOIL FILTER	Peak Elev=39.53' Storage=303 cf Inflow=0.1 cfs 731 cf Outflow=0.0 cfs 731 cf
Link AP1:	Inflow=0.0 cfs 220 cf Primary=0.0 cfs 220 cf
Link AP2:	Inflow=0.0 cfs 0 cf Primary=0.0 cfs 0 cf
Link AP3:	Inflow=0.1 cfs 886 cf Primary=0.1 cfs 886 cf
Link AP4:	Inflow=0.4 cfs 1,940 cf Primary=0.4 cfs 1,940 cf

Post-Development - Subsurface Chambers

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Deering Avenue

Type III 24-hr 2-Year Rainfall=3.10"

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Total Runoff Area = 51,516 sf Runoff Volume = 3,256 cf Average Runoff Depth = 0.76"
54.99% Pervious = 28,329 sf 45.01% Impervious = 23,187 sf

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Summary for Subcatchment 1.0:

Runoff = 0.0 cfs @ 12.24 hrs, Volume= 87 cf, Depth= 0.59"

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
1,008	73	Brush, Good, HSG D
343	30	Brush, Good, HSG A
400	80	>75% Grass cover, Good, HSG D
1,751	66	Weighted Average
1,751	66	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 = 0.0 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
2,742	30	Brush, Good, HSG A
* 346	98	Ledge
270	39	>75% Grass cover, Good, HSG A
3,358	38	Weighted Average
3,012	31	89.70% Pervious Area
346	98	10.30% 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 = 0.1 cfs @ 12.08 hrs, Volume= 346 cf, Depth= 1.20"

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"

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	Area (sf)	CN	Description
*	2,373	98	Roadway
	383	39	>75% Grass cover, Good, HSG A
	331	30	Woods, Good, HSG A
	369	30	Meadow, non-grazed, HSG A
	3,456	78	Weighted Average
	1,083	33	31.34% Pervious Area
	2,373	98	68.66% 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 = 0.2 cfs @ 12.13 hrs, Volume= 736 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 2-Year Rainfall=3.10"

	Area (sf)	CN	Description
*	6,204	98	ROOF AND PAVED PARKING
	2,949	39	>75% Grass cover, Good, HSG A
	3,230	30	Brush, Good, HSG A
*	621	98	Walkways
	13,004	68	Weighted Average
	6,179	34	47.52% Pervious Area
	6,825	98	52.48% 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 = 0.0 cfs @ 12.45 hrs, Volume= 14 cf, Depth= 0.13"

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"

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	Area (sf)	CN	Description
	367	39	>75% Grass cover, Good, HSG A
*	147	98	ROAD/DRIVEWAY
	532	30	Brush, Good, HSG A
*	235	89	Stonedust Walkway
	1,281	51	Weighted Average
	1,134	45	88.52% Pervious Area
	147	98	11.48% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment 4.0:

Runoff = 0.4 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 = 0.1 cfs @ 12.19 hrs, Volume= 731 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	
*	92	98	Expanded Parking Aisle
	17,100	64	Weighted Average
	10,418	42	60.92% Pervious Area
	6,682	98	39.08% Impervious Area

Post-Development - Subsurface Chambers

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Deering Avenue
Type III 24-hr 2-Year Rainfall=3.10"

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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 = 0.0 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 = 0.0 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

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Pond 1P: Storage

Inflow Area = 13,004 sf, 52.48% Impervious, Inflow Depth = 0.68" for 2-Year event
 Inflow = 0.2 cfs @ 12.15 hrs, Volume= 736 cf
 Outflow = 0.0 cfs @ 16.02 hrs, Volume= 526 cf, Atten= 94%, Lag= 231.8 min
 Primary = 0.0 cfs @ 16.02 hrs, Volume= 526 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 2
 Peak Elev= 39.56' @ 16.02 hrs Surf.Area= 1,045 sf Storage= 407 cf

Plug-Flow detention time= 413.3 min calculated for 526 cf (72% of inflow)
 Center-of-Mass det. time= 307.9 min (1,195.9 - 888.0)

Volume	Invert	Avail.Storage	Storage Description
#1A	39.06'	26 cf	10.19'W x 5.69'L x 2.19'H Field A 127 cf Overall - 62 cf Embedded = 65 cf x 40.0% Voids
#2A	39.31'	59 cf	ACF R-Tank HD 1 x 14 Inside #1 Inside= 15.7"W x 17.3"H => 1.80 sf x 2.35'L = 4.2 cf Outside= 15.7"W x 17.3"H => 1.89 sf x 2.35'L = 4.4 cf 14 Chambers in 7 Rows
#3B	38.81'	709 cf	21.50'W x 45.92'L x 2.33'H Field B 2,304 cf Overall - 531 cf Embedded = 1,773 cf x 40.0% Voids
#4B	39.31'	531 cf	ADS_StormTech SC-310 +Cap x 36 Inside #3 Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap 36 Chambers in 6 Rows
		1,325 cf	Total Available Storage

Storage Group A created with Chamber Wizard
 Storage Group B created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	39.31'	4.0" Round Culvert L= 144.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 39.31' / 37.20' S= 0.0147 ' S= 0.0147 ' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.09 sf
#2	Device 1	39.31'	1.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	41.00'	4.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s)

Primary OutFlow Max=0.0 cfs @ 16.02 hrs HW=39.56' TW=0.00' (Dynamic Tailwater)

1=Culvert (Passes 0.0 cfs of 0.1 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 0.0 cfs @ 2.21 fps)
 3=Sharp-Crested Rectangular Weir (Controls 0.0 cfs)

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Type III 24-hr 2-Year Rainfall=3.10"

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Summary for Pond 4P: Focal Point

Inflow Area = 13,004 sf, 52.48% Impervious, Inflow Depth = 0.68" for 2-Year event
 Inflow = 0.2 cfs @ 12.13 hrs, Volume= 736 cf
 Outflow = 0.2 cfs @ 12.15 hrs, Volume= 736 cf, Atten= 0%, Lag= 1.1 min
 Primary = 0.2 cfs @ 12.15 hrs, Volume= 736 cf
 Secondary = 0.0 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 2

Peak Elev= 43.00' @ 12.15 hrs Surf.Area= 98 sf Storage= 15 cf

Flood Elev= 44.00' Surf.Area= 175 sf Storage= 107 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)

Center-of-Mass det. time= 0.5 min (888.0 - 887.5)

Volume	Invert	Avail.Storage	Storage Description
#1	41.25'	15 cf	4.70'W x 9.16'L x 1.75'H Focal Point 75 cf Overall x 20.0% Voids
#2	43.00'	92 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
		107 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
43.00	55	0	0
43.50	91	37	37
44.00	132	56	92

Device	Routing	Invert	Outlet Devices
#1	Primary	41.25'	100.000 in/hr Exfiltration over Surface area Phase-In= 0.01'
#2	Secondary	43.60'	24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.1 cfs @ 12.15 hrs HW=43.00' TW=39.03' (Dynamic Tailwater)↑ **1=Exfiltration** (Exfiltration Controls 0.1 cfs)**Secondary OutFlow** Max=0.0 cfs @ 0.00 hrs HW=41.25' TW=38.81' (Dynamic Tailwater)↑ **2=Orifice/Grate** (Controls 0.0 cfs)**Summary for Pond SF1: SOIL FILTER**

Inflow Area = 17,100 sf, 39.08% Impervious, Inflow Depth = 0.51" for 2-Year event
 Inflow = 0.1 cfs @ 12.19 hrs, Volume= 731 cf
 Outflow = 0.0 cfs @ 15.71 hrs, Volume= 731 cf, Atten= 90%, Lag= 211.0 min
 Primary = 0.0 cfs @ 15.71 hrs, Volume= 731 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 2

Peak Elev= 39.53' @ 15.71 hrs Surf.Area= 1,270 sf Storage= 303 cf

Flood Elev= 40.80' Surf.Area= 1,532 sf Storage= 1,276 cf

Plug-Flow detention time= 244.3 min calculated for 731 cf (100% of inflow)

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Type III 24-hr 2-Year Rainfall=3.10"

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Center-of-Mass det. time= 244.3 min (1,151.6 - 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 Limited to weir flow at low heads

Primary OutFlow Max=0.0 cfs @ 15.71 hrs HW=39.53' TW=0.00' (Dynamic Tailwater)

1=Culvert (Passes 0.0 cfs of 0.6 cfs potential flow)
2=Overflow (Controls 0.0 cfs)
3=Orifice/Grate (Orifice Controls 0.0 cfs @ 7.62 fps)

Summary for Link AP1:

Inflow Area = 5,731 sf, 26.00% Impervious, Inflow Depth = 0.46" for 2-Year event
Inflow = 0.0 cfs @ 12.17 hrs, Volume= 220 cf
Primary = 0.0 cfs @ 12.17 hrs, Volume= 220 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Summary for Link AP2:

Inflow Area = 3,358 sf, 10.30% Impervious, Inflow Depth = 0.00" for 2-Year event
Inflow = 0.0 cfs @ 0.00 hrs, Volume= 0 cf
Primary = 0.0 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

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Summary for Link AP3:

Inflow Area = 17,741 sf, 52.67% Impervious, Inflow Depth > 0.60" for 2-Year event
Inflow = 0.1 cfs @ 12.08 hrs, Volume= 886 cf
Primary = 0.1 cfs @ 12.08 hrs, Volume= 886 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 = 24,686 sf, 48.63% Impervious, Inflow Depth = 0.94" for 2-Year event
Inflow = 0.4 cfs @ 12.07 hrs, Volume= 1,940 cf
Primary = 0.4 cfs @ 12.07 hrs, Volume= 1,940 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

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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=1,751 sf 0.00% Impervious Runoff Depth=1.46" Flow Length=70' Slope=0.0300 '/' Tc=13.9 min CN=66 Runoff=0.0 cfs 213 cf
Subcatchment 2.0:	Runoff Area=3,358 sf 10.30% Impervious Runoff Depth=0.10" Flow Length=35' Slope=0.0600 '/' Tc=6.1 min CN=38 Runoff=0.0 cfs 28 cf
Subcatchment 3.0:	Runoff Area=3,456 sf 68.66% Impervious Runoff Depth=2.38" Tc=5.0 min CN=78 Runoff=0.2 cfs 684 cf
Subcatchment 3.1:	Runoff Area=13,004 sf 52.48% Impervious Runoff Depth=1.60" Flow Length=177' Tc=7.8 min CN=68 Runoff=0.5 cfs 1,734 cf
Subcatchment 3.2:	Runoff Area=1,281 sf 11.48% Impervious Runoff Depth=0.58" Tc=5.0 min CN=51 Runoff=0.0 cfs 62 cf
Subcatchment 4.0:	Runoff Area=5,056 sf 100.00% Impervious Runoff Depth=4.36" Tc=5.0 min CN=98 Runoff=0.5 cfs 1,839 cf
Subcatchment 4.1:	Runoff Area=17,100 sf 39.08% Impervious Runoff Depth=1.33" Flow Length=235' Tc=10.4 min CN=64 Runoff=0.5 cfs 1,891 cf
Subcatchment 4.2:	Runoff Area=2,530 sf 10.59% Impervious Runoff Depth=0.18" Tc=5.0 min CN=41 Runoff=0.0 cfs 39 cf
Subcatchment OS1:	Runoff Area=3,980 sf 37.44% Impervious Runoff Depth=1.14" Tc=5.0 min CN=61 Runoff=0.1 cfs 377 cf
Pond 1P: Storage	Peak Elev=40.42' Storage=1,004 cf Inflow=0.5 cfs 1,734 cf Outflow=0.0 cfs 1,522 cf
Pond 4P: Focal Point	Peak Elev=43.65' Storage=66 cf Inflow=0.5 cfs 1,734 cf Primary=0.3 cfs 1,692 cf Secondary=0.2 cfs 42 cf Outflow=0.5 cfs 1,734 cf
Pond SF1: SOIL FILTER	Peak Elev=40.70' Storage=1,189 cf Inflow=0.5 cfs 1,891 cf Outflow=0.0 cfs 1,892 cf
Link AP1:	Inflow=0.1 cfs 590 cf Primary=0.1 cfs 590 cf
Link AP2:	Inflow=0.0 cfs 28 cf Primary=0.0 cfs 28 cf
Link AP3:	Inflow=0.2 cfs 2,268 cf Primary=0.2 cfs 2,268 cf
Link AP4:	Inflow=0.5 cfs 3,769 cf Primary=0.5 cfs 3,769 cf

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Total Runoff Area = 51,516 sf Runoff Volume = 6,867 cf Average Runoff Depth = 1.60"
54.99% Pervious = 28,329 sf 45.01% Impervious = 23,187 sf

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Summary for Subcatchment 1.0:

Runoff = 0.0 cfs @ 12.21 hrs, Volume= 213 cf, Depth= 1.46"

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
1,008	73	Brush, Good, HSG D
343	30	Brush, Good, HSG A
400	80	>75% Grass cover, Good, HSG D
1,751	66	Weighted Average
1,751	66	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 = 0.0 cfs @ 14.83 hrs, Volume= 28 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
2,742	30	Brush, Good, HSG A
* 346	98	Ledge
270	39	>75% Grass cover, Good, HSG A
3,358	38	Weighted Average
3,012	31	89.70% Pervious Area
346	98	10.30% 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 = 0.2 cfs @ 12.08 hrs, Volume= 684 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 10-Year Rainfall=4.60"

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	Area (sf)	CN	Description
*	2,373	98	Roadway
	383	39	>75% Grass cover, Good, HSG A
	331	30	Woods, Good, HSG A
	369	30	Meadow, non-grazed, HSG A
	3,456	78	Weighted Average
	1,083	33	31.34% Pervious Area
	2,373	98	68.66% 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 = 0.5 cfs @ 12.12 hrs, Volume= 1,734 cf, Depth= 1.60"

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
*	6,204	98	ROOF AND PAVED PARKING
	2,949	39	>75% Grass cover, Good, HSG A
	3,230	30	Brush, Good, HSG A
*	621	98	Walkways
	13,004	68	Weighted Average
	6,179	34	47.52% Pervious Area
	6,825	98	52.48% 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 = 0.0 cfs @ 12.12 hrs, Volume= 62 cf, Depth= 0.58"

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"

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	Area (sf)	CN	Description
	367	39	>75% Grass cover, Good, HSG A
*	147	98	ROAD/DRIVEWAY
	532	30	Brush, Good, HSG A
*	235	89	Stonedust Walkway
	1,281	51	Weighted Average
	1,134	45	88.52% Pervious Area
	147	98	11.48% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment 4.0:

Runoff = 0.5 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 = 0.5 cfs @ 12.16 hrs, Volume= 1,891 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	
*	92	98	Expanded Parking Aisle
	17,100	64	Weighted Average
	10,418	42	60.92% Pervious Area
	6,682	98	39.08% Impervious Area

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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 = 0.0 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 = 0.1 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

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Type III 24-hr 10-Year Rainfall=4.60"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Pond 1P: Storage

Inflow Area = 13,004 sf, 52.48% Impervious, Inflow Depth = 1.60" for 10-Year event
 Inflow = 0.5 cfs @ 12.16 hrs, Volume= 1,734 cf
 Outflow = 0.0 cfs @ 15.69 hrs, Volume= 1,522 cf, Atten= 95%, Lag= 212.3 min
 Primary = 0.0 cfs @ 15.69 hrs, Volume= 1,522 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 2
 Peak Elev= 40.42' @ 15.69 hrs Surf.Area= 1,045 sf Storage= 1,004 cf

Plug-Flow detention time= 480.0 min calculated for 1,520 cf (88% of inflow)
 Center-of-Mass det. time= 424.2 min (1,284.6 - 860.4)

Volume	Invert	Avail.Storage	Storage Description
#1A	39.06'	26 cf	10.19'W x 5.69'L x 2.19'H Field A 127 cf Overall - 62 cf Embedded = 65 cf x 40.0% Voids
#2A	39.31'	59 cf	ACF R-Tank HD 1 x 14 Inside #1 Inside= 15.7"W x 17.3"H => 1.80 sf x 2.35'L = 4.2 cf Outside= 15.7"W x 17.3"H => 1.89 sf x 2.35'L = 4.4 cf 14 Chambers in 7 Rows
#3B	38.81'	709 cf	21.50'W x 45.92'L x 2.33'H Field B 2,304 cf Overall - 531 cf Embedded = 1,773 cf x 40.0% Voids
#4B	39.31'	531 cf	ADS_StormTech SC-310 +Cap x 36 Inside #3 Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap 36 Chambers in 6 Rows
		1,325 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Storage Group B created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	39.31'	4.0" Round Culvert L= 144.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 39.31' / 37.20' S= 0.0147 ' S= 0.0147 ' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.09 sf
#2	Device 1	39.31'	1.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	41.00'	4.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s)

Primary OutFlow Max=0.0 cfs @ 15.69 hrs HW=40.42' TW=0.00' (Dynamic Tailwater)

1=Culvert (Passes 0.0 cfs of 0.3 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 0.0 cfs @ 4.98 fps)
 3=Sharp-Crested Rectangular Weir (Controls 0.0 cfs)

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Summary for Pond 4P: Focal Point

Inflow Area = 13,004 sf, 52.48% Impervious, Inflow Depth = 1.60" for 10-Year event
 Inflow = 0.5 cfs @ 12.12 hrs, Volume= 1,734 cf
 Outflow = 0.5 cfs @ 12.16 hrs, Volume= 1,734 cf, Atten= 0%, Lag= 2.1 min
 Primary = 0.3 cfs @ 12.17 hrs, Volume= 1,692 cf
 Secondary = 0.2 cfs @ 12.15 hrs, Volume= 42 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 2

Peak Elev= 43.65' @ 12.17 hrs Surf.Area= 146 sf Storage= 66 cf

Flood Elev= 44.00' Surf.Area= 175 sf Storage= 107 cf

Plug-Flow detention time= 1.0 min calculated for 1,733 cf (100% of inflow)

Center-of-Mass det. time= 1.0 min (860.4 - 859.4)

Volume	Invert	Avail.Storage	Storage Description
#1	41.25'	15 cf	4.70'W x 9.16'L x 1.75'H Focal Point 75 cf Overall x 20.0% Voids
#2	43.00'	92 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
		107 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
43.00	55	0	0
43.50	91	37	37
44.00	132	56	92

Device	Routing	Invert	Outlet Devices
#1	Primary	41.25'	100.000 in/hr Exfiltration over Surface area Phase-In= 0.01'
#2	Secondary	43.60'	24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.3 cfs @ 12.17 hrs HW=43.63' TW=39.50' (Dynamic Tailwater)↑ **1=Exfiltration** (Exfiltration Controls 0.3 cfs)**Secondary OutFlow** Max=0.2 cfs @ 12.15 hrs HW=43.64' TW=39.47' (Dynamic Tailwater)↑ **2=Orifice/Grate** (Weir Controls 0.2 cfs @ 0.65 fps)**Summary for Pond SF1: SOIL FILTER**

Inflow Area = 17,100 sf, 39.08% Impervious, Inflow Depth = 1.33" for 10-Year event
 Inflow = 0.5 cfs @ 12.16 hrs, Volume= 1,891 cf
 Outflow = 0.0 cfs @ 17.51 hrs, Volume= 1,892 cf, Atten= 96%, Lag= 321.0 min
 Primary = 0.0 cfs @ 17.51 hrs, Volume= 1,892 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 2

Peak Elev= 40.70' @ 17.51 hrs Surf.Area= 1,510 sf Storage= 1,189 cf

Flood Elev= 40.80' Surf.Area= 1,532 sf Storage= 1,276 cf

Plug-Flow detention time= 732.3 min calculated for 1,890 cf (100% of inflow)

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Center-of-Mass det. time= 733.0 min (1,606.3 - 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 ' 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 Limited to weir flow at low heads

Primary OutFlow Max=0.0 cfs @ 17.51 hrs HW=40.70' TW=0.00' (Dynamic Tailwater)

- 1=Culvert (Passes 0.0 cfs of 0.7 cfs potential flow)
- 2=Overflow (Weir Controls 0.0 cfs @ 0.16 fps)
- 3=Orifice/Grate (Orifice Controls 0.0 cfs @ 9.23 fps)

Summary for Link AP1:

Inflow Area = 5,731 sf, 26.00% Impervious, Inflow Depth = 1.23" for 10-Year event
Inflow = 0.1 cfs @ 12.11 hrs, Volume= 590 cf
Primary = 0.1 cfs @ 12.11 hrs, Volume= 590 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Summary for Link AP2:

Inflow Area = 3,358 sf, 10.30% Impervious, Inflow Depth = 0.10" for 10-Year event
Inflow = 0.0 cfs @ 14.83 hrs, Volume= 28 cf
Primary = 0.0 cfs @ 14.83 hrs, Volume= 28 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

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Summary for Link AP3:

Inflow Area = 17,741 sf, 52.67% Impervious, Inflow Depth > 1.53" for 10-Year event
Inflow = 0.2 cfs @ 12.08 hrs, Volume= 2,268 cf
Primary = 0.2 cfs @ 12.08 hrs, Volume= 2,268 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 = 24,686 sf, 48.63% Impervious, Inflow Depth = 1.83" for 10-Year event
Inflow = 0.5 cfs @ 12.07 hrs, Volume= 3,769 cf
Primary = 0.5 cfs @ 12.07 hrs, Volume= 3,769 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

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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=1,751 sf 0.00% Impervious Runoff Depth=2.29" Flow Length=70' Slope=0.0300 '/' Tc=13.9 min CN=66 Runoff=0.1 cfs 335 cf
Subcatchment 2.0:	Runoff Area=3,358 sf 10.30% Impervious Runoff Depth=0.34" Flow Length=35' Slope=0.0600 '/' Tc=6.1 min CN=38 Runoff=0.0 cfs 96 cf
Subcatchment 3.0:	Runoff Area=3,456 sf 68.66% Impervious Runoff Depth=3.40" Tc=5.0 min CN=78 Runoff=0.3 cfs 980 cf
Subcatchment 3.1:	Runoff Area=13,004 sf 52.48% Impervious Runoff Depth=2.47" Flow Length=177' Tc=7.8 min CN=68 Runoff=0.8 cfs 2,675 cf
Subcatchment 3.2:	Runoff Area=1,281 sf 11.48% Impervious Runoff Depth=1.12" Tc=5.0 min CN=51 Runoff=0.0 cfs 119 cf
Subcatchment 4.0:	Runoff Area=5,056 sf 100.00% Impervious Runoff Depth=5.56" Tc=5.0 min CN=98 Runoff=0.7 cfs 2,343 cf
Subcatchment 4.1:	Runoff Area=17,100 sf 39.08% Impervious Runoff Depth=2.12" Flow Length=235' Tc=10.4 min CN=64 Runoff=0.8 cfs 3,024 cf
Subcatchment 4.2:	Runoff Area=2,530 sf 10.59% Impervious Runoff Depth=0.49" Tc=5.0 min CN=41 Runoff=0.0 cfs 104 cf
Subcatchment OS1:	Runoff Area=3,980 sf 37.44% Impervious Runoff Depth=1.87" Tc=5.0 min CN=61 Runoff=0.2 cfs 621 cf
Pond 1P: Storage	Peak Elev=41.04' Storage=1,280 cf Inflow=0.9 cfs 2,675 cf Outflow=0.2 cfs 2,460 cf
Pond 4P: Focal Point	Peak Elev=43.69' Storage=71 cf Inflow=0.8 cfs 2,675 cf Primary=0.3 cfs 2,389 cf Secondary=0.6 cfs 286 cf Outflow=0.9 cfs 2,675 cf
Pond SF1: SOIL FILTER	Peak Elev=40.75' Storage=1,232 cf Inflow=0.8 cfs 3,024 cf Outflow=0.3 cfs 3,024 cf
Link AP1:	Inflow=0.2 cfs 956 cf Primary=0.2 cfs 956 cf
Link AP2:	Inflow=0.0 cfs 96 cf Primary=0.0 cfs 96 cf
Link AP3:	Inflow=0.4 cfs 3,559 cf Primary=0.4 cfs 3,559 cf
Link AP4:	Inflow=0.7 cfs 5,472 cf Primary=0.7 cfs 5,472 cf

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Total Runoff Area = 51,516 sf Runoff Volume = 10,296 cf Average Runoff Depth = 2.40"
54.99% Pervious = 28,329 sf 45.01% Impervious = 23,187 sf

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Summary for Subcatchment 1.0:

Runoff = 0.1 cfs @ 12.20 hrs, Volume= 335 cf, Depth= 2.29"

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
1,008	73	Brush, Good, HSG D
343	30	Brush, Good, HSG A
400	80	>75% Grass cover, Good, HSG D
1,751	66	Weighted Average
1,751	66	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 = 0.0 cfs @ 12.39 hrs, Volume= 96 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
2,742	30	Brush, Good, HSG A
* 346	98	Ledge
270	39	>75% Grass cover, Good, HSG A
3,358	38	Weighted Average
3,012	31	89.70% Pervious Area
346	98	10.30% 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 = 0.3 cfs @ 12.08 hrs, Volume= 980 cf, Depth= 3.40"

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 25-Year Rainfall=5.80"

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	Area (sf)	CN	Description
*	2,373	98	Roadway
	383	39	>75% Grass cover, Good, HSG A
	331	30	Woods, Good, HSG A
	369	30	Meadow, non-grazed, HSG A
	3,456	78	Weighted Average
	1,083	33	31.34% Pervious Area
	2,373	98	68.66% 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 = 0.8 cfs @ 12.12 hrs, Volume= 2,675 cf, Depth= 2.47"

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
*	6,204	98	ROOF AND PAVED PARKING
	2,949	39	>75% Grass cover, Good, HSG A
	3,230	30	Brush, Good, HSG A
*	621	98	Walkways
	13,004	68	Weighted Average
	6,179	34	47.52% Pervious Area
	6,825	98	52.48% 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 = 0.0 cfs @ 12.10 hrs, Volume= 119 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"

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	Area (sf)	CN	Description
	367	39	>75% Grass cover, Good, HSG A
*	147	98	ROAD/DRIVEWAY
	532	30	Brush, Good, HSG A
*	235	89	Stonedust Walkway
	1,281	51	Weighted Average
	1,134	45	88.52% Pervious Area
	147	98	11.48% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment 4.0:

Runoff = 0.7 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 = 0.8 cfs @ 12.16 hrs, Volume= 3,024 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	
*	92	98	Expanded Parking Aisle
	17,100	64	Weighted Average
	10,418	42	60.92% Pervious Area
	6,682	98	39.08% Impervious Area

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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 = 0.0 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 = 0.2 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

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Pond 1P: Storage

Inflow Area = 13,004 sf, 52.48% Impervious, Inflow Depth = 2.47" for 25-Year event
Inflow = 0.9 cfs @ 12.11 hrs, Volume= 2,675 cf
Outflow = 0.2 cfs @ 12.67 hrs, Volume= 2,460 cf, Atten= 83%, Lag= 33.7 min
Primary = 0.2 cfs @ 12.67 hrs, Volume= 2,460 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 41.04' @ 12.65 hrs Surf.Area= 1,045 sf Storage= 1,280 cf

Plug-Flow detention time= 427.1 min calculated for 2,458 cf (92% of inflow)
Center-of-Mass det. time= 387.8 min (1,235.3 - 847.5)

Volume	Invert	Avail.Storage	Storage Description
#1A	39.06'	26 cf	10.19'W x 5.69'L x 2.19'H Field A 127 cf Overall - 62 cf Embedded = 65 cf x 40.0% Voids
#2A	39.31'	59 cf	ACF R-Tank HD 1 x 14 Inside #1 Inside= 15.7"W x 17.3"H => 1.80 sf x 2.35'L = 4.2 cf Outside= 15.7"W x 17.3"H => 1.89 sf x 2.35'L = 4.4 cf 14 Chambers in 7 Rows
#3B	38.81'	709 cf	21.50'W x 45.92'L x 2.33'H Field B 2,304 cf Overall - 531 cf Embedded = 1,773 cf x 40.0% Voids
#4B	39.31'	531 cf	ADS_StormTech SC-310 +Cap x 36 Inside #3 Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap 36 Chambers in 6 Rows
1,325 cf			Total Available Storage

Storage Group A created with Chamber Wizard

Storage Group B created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	39.31'	4.0" Round Culvert L= 144.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 39.31' / 37.20' S= 0.0147 ' S= 0.0147 ' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.09 sf
#2	Device 1	39.31'	1.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	41.00'	4.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s)

Primary OutFlow Max=0.1 cfs @ 12.67 hrs HW=41.04' TW=0.00' (Dynamic Tailwater)

- 1=Culvert (Passes 0.1 cfs of 0.3 cfs potential flow)
- 2=Orifice/Grate (Orifice Controls 0.0 cfs @ 6.26 fps)
- 3=Sharp-Crested Rectangular Weir (Weir Controls 0.1 cfs @ 0.67 fps)

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Summary for Pond 4P: Focal Point

Inflow Area = 13,004 sf, 52.48% Impervious, Inflow Depth = 2.47" for 25-Year event
 Inflow = 0.8 cfs @ 12.12 hrs, Volume= 2,675 cf
 Outflow = 0.9 cfs @ 12.11 hrs, Volume= 2,675 cf, Atten= 0%, Lag= 0.0 min
 Primary = 0.3 cfs @ 12.11 hrs, Volume= 2,389 cf
 Secondary = 0.6 cfs @ 12.11 hrs, Volume= 286 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 2

Peak Elev= 43.69' @ 12.11 hrs Surf.Area= 150 sf Storage= 71 cf

Flood Elev= 44.00' Surf.Area= 175 sf Storage= 107 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)

Center-of-Mass det. time= 1.1 min (847.5 - 846.4)

Volume	Invert	Avail.Storage	Storage Description
#1	41.25'	15 cf	4.70'W x 9.16'L x 1.75'H Focal Point 75 cf Overall x 20.0% Voids
#2	43.00'	92 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
		107 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
43.00	55	0	0
43.50	91	37	37
44.00	132	56	92

Device	Routing	Invert	Outlet Devices
#1	Primary	41.25'	100.000 in/hr Exfiltration over Surface area Phase-In= 0.01'
#2	Secondary	43.60'	24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.3 cfs @ 12.11 hrs HW=43.68' TW=39.73' (Dynamic Tailwater)↑ **1=Exfiltration** (Exfiltration Controls 0.3 cfs)**Secondary OutFlow** Max=0.5 cfs @ 12.11 hrs HW=43.69' TW=39.72' (Dynamic Tailwater)↑ **2=Orifice/Grate** (Weir Controls 0.5 cfs @ 0.96 fps)**Summary for Pond SF1: SOIL FILTER**

Inflow Area = 17,100 sf, 39.08% Impervious, Inflow Depth = 2.12" for 25-Year event
 Inflow = 0.8 cfs @ 12.16 hrs, Volume= 3,024 cf
 Outflow = 0.3 cfs @ 12.59 hrs, Volume= 3,024 cf, Atten= 69%, Lag= 25.9 min
 Primary = 0.3 cfs @ 12.59 hrs, Volume= 3,024 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs / 2

Peak Elev= 40.75' @ 12.59 hrs Surf.Area= 1,521 sf Storage= 1,232 cf

Flood Elev= 40.80' Surf.Area= 1,532 sf Storage= 1,276 cf

Plug-Flow detention time= 510.3 min calculated for 3,021 cf (100% of inflow)

Post-Development - Subsurface Chambers

Prepared by Walsh Engineering Associates

HydroCAD® 10.10-5a s/n 01454 © 2020 HydroCAD Software Solutions LLC

Deering Avenue
Type III 24-hr 25-Year Rainfall=5.80"

Printed 2/16/2022

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Center-of-Mass det. time= 511.3 min (1,369.9 - 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 ' 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 Limited to weir flow at low heads

Primary OutFlow Max=0.2 cfs @ 12.59 hrs HW=40.75' TW=0.00' (Dynamic Tailwater)

- 1=Culvert (Passes 0.2 cfs of 0.7 cfs potential flow)
- 2=Overflow (Weir Controls 0.2 cfs @ 0.73 fps)
- 3=Orifice/Grate (Orifice Controls 0.0 cfs @ 9.29 fps)

Summary for Link AP1:

Inflow Area = 5,731 sf, 26.00% Impervious, Inflow Depth = 2.00" for 25-Year event
Inflow = 0.2 cfs @ 12.10 hrs, Volume= 956 cf
Primary = 0.2 cfs @ 12.10 hrs, Volume= 956 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Summary for Link AP2:

Inflow Area = 3,358 sf, 10.30% Impervious, Inflow Depth = 0.34" for 25-Year event
Inflow = 0.0 cfs @ 12.39 hrs, Volume= 96 cf
Primary = 0.0 cfs @ 12.39 hrs, Volume= 96 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Post-Development - Subsurface Chambers

Prepared by Walsh Engineering Associates

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Deering Avenue
Type III 24-hr 25-Year Rainfall=5.80"

Printed 2/16/2022

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Summary for Link AP3:

Inflow Area = 17,741 sf, 52.67% Impervious, Inflow Depth > 2.41" for 25-Year event
Inflow = 0.4 cfs @ 12.08 hrs, Volume= 3,559 cf
Primary = 0.4 cfs @ 12.08 hrs, Volume= 3,559 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 = 24,686 sf, 48.63% Impervious, Inflow Depth = 2.66" for 25-Year event
Inflow = 0.7 cfs @ 12.07 hrs, Volume= 5,472 cf
Primary = 0.7 cfs @ 12.07 hrs, Volume= 5,472 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

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[LCS-20, 16 Amp, Level 2 EVSE, 240V, with 25 ft cable](#)

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The LCS-20 has a 4 - 6 week lead time. Please contact us at information@clippercreek.net with any questions.



Hardwired



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The popular LCS-20 16 Amp charging station from ClipperCreek is built to automaker standards to ensure the highest reliability. Includes Wall Mount SAE J1772 Connector Holster, the perfect addition to any charging station installation. LCS-20 works with all plug-in vehicles including the Kia Niro PHEV, Hyundai Sonata, Chevy Volt, Prius Prime, and Subaru Crosstrek PHEV.

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to find out which model is best for your installation!

The LCS-20 Features:

- LOW PROFILE - One of the smallest units in the industry
- QUALITY - Technology that works for the life of your current plug-in vehicle and then some
- CONVENIENCE - 25 feet of charging cable for installation and operation flexibility
- DURABILITY - Rugged, fully sealed NEMA 4 enclosure for installation anywhere
- RELIABILITY - Backed by ClipperCreek's 3-year warranty and excellent customer service team
- Lockable SAE J1772 Connector - Connector Lock & Keys Included
- Wall Mount J1172 Connector Holster Included
- Minimal standby power consumption (no on/off switch required)
- [Safety Certified by UL and ETL LISTED](#)
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Options Available:

Plug-in: The LCS-20 is also available with three different plugs:

- [LCS-20P with NEMA 14-50](#) plug
- [LCS-20P with NEMA 6-50](#) plug
- [LCS-20P with NEMA 14-30](#) plug

Compatible Mounting Solutions:

- [ProMountDuo Universal Pedestal \(0300-00-025\)](#)
- [Ruggedized ProMountDuo Universal Pedestal \(0300-00-026\)](#)

Compatible Accessories:

- [Cable Cradle](#) - The ClipperCreek Cable Cradle mounts to a wall near your electric vehicle charging station or connector holster to easily manage the cable, keeping it off the ground and wall when not in use (charging station and connector holster sold separately). \$19
- [Combination Lock for Connector](#) - Provides a simple, low-cost, key-less and re-settable way to ensure only authorized users have access to charging \$5.95

Receive a federal tax credit of 30% of the cost of purchasing and installing an EV charging station. For details please visit the [ClipperCreek Tax Credits page](#).

To read or download the latest Manual for this product, please visit [ClipperCreek Product Manuals](#).



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[Warning: Cancer - www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

General

Charging Power	16 Amp (3.8kW max)
Product Dimensions	11"L x 4"W x 3"D
Product Weight	5.2 lbs.
Installation	Hardwired (3 foot service whip provided)
Supply Circuit	208/240V, 20A
Warranty	3 years
Charge Cable Length	25 feet
Vehicle Connector Type	Lockable SAE J1772
Accessories Included	SAE J1772 Connector Holster (wall mount); Connector Lock & Keys)
Enclosure	Fully Sealed NEMA 4
Environment Rating	Indoor/Outdoor rated
Operating Temperature	-22°F to 122°F (-30°C to 50°C)
Certifications	ETL, cETLus, UL, cULus, ENERGY STAR®
Country of Origin	United States of America
JF	05/05/2021

Good. Good product.



smbstock

01/19/2021

Don't go cheap when charging your EV. I needed a 20 amp charger but my 240 volt outlet was not robust enough, so this hardwired charger was the solution. Installation went well and works like a charm. I had to return a cheaper charger because it wouldn't connect to my car - again, cheap. Don't skimp on charging your EV.



Bill

05/22/2020

Clipper Creek are the best in the market. I have this installed on an off-grid cabin and it works great. The only "problem" is that after the car finishes charging, the EVSE faults out. I suspect it's because the cabin's inverter goes into a low power "search" mode and the EVSE doesn't like that. A simple power reset clears it up.

I've been in the EV business for about 7 years and Clipper Creek are the best.



Michael V. Raffety

04/22/2020

Perfect for charging my hybrid car. Works perfectly for charging my PHEV 2020 BMW 530e.



Steve E.

04/09/2020

Made in the USA. Quality Level 2 charger made in USA. Would highly recommend.



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\$395.00

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The popular LCS-20 16 Amp charging station from ClipperCreek is available as a plug in. The LCS..

★★★★★

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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

July 24, 2021

Silas Canavan, PE
Walsh Engineering Associates, Inc.
One Karen Drive, Suite 2A
Westbrook ME 04092

Re: 387 Deering Avenue, Portland

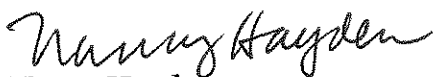
Dear Mr. Canavan,

A belated thank you for your invitation to the May 20th Zoom meeting regarding the project planned for 387 Deering Avenue. I'm deaf and meetings are very difficult so I avoid them when I can.

I'd like you to know that I do not approve the project. I've lived next door for over 20 years and have had great pleasure from the woods: the variety of the colors of the trees and shrubs spring through fall and the sculpture of bare winter branches, watching the birds, skunks, bats, raccoons, and squirrels. I don't like knowing that the view from my bedroom windows will be dramatically altered to a view of a privacy fence at ground level and . And while it is true that the Temple Beth-El's groundskeeper has used the woods as a dumping ground for leaves, those leaf piles (and downed trees) have provided habitat for the creatures that live there. I've been aware for a long time that the Temple could not afford to develop the land, and had I been able to afford to buy it, I would have so that it would be left alone or perhaps managed a bit better

However, I would not like anyone to tell me what to do with my money and my property, so I cannot, with a clear conscience, demand that you cancel your project. All I can do is hire an inspector to check my foundation before you begin blasting, and request your permission to decorate my side of your fence (perhaps with hanging baskets or a vine).

Sincerely,



Nancy Hayden
415 Deering Avenue
Portland ME 04103-4415
Home email: nlhayden067@gmail.com

cc: Planning and Urban Development Dept. 
Planning Division 4th floor
389 Congress St
Portland ME 04101

Temple Beth-El
400 Deering Avenue
Portland ME 04103



Jimmy Dealaman <jdealaman@portlandmaine.gov>

Alert: 387 Deering Ave. Abandoned, Dangerous, Fire Hazard

Carol Schiller <schiller.carol@yahoo.com>

Fri, Aug 13, 2021 at 5:41 PM

To: Todd Valentine <tvalentine@realassetservices.com>, Jennifer Munson <jmy@portlandmaine.gov>, Dena Libner <dlibner@portlandmaine.gov>, Jacqueline Gaunder <jacky.gaunder@gmail.com>, Lucas Malone <lucas.js.malone@gmail.com>, Victoria Kinney <kinneyfam@maine.rr.com>, Zachary Lenhert <zlenhert@portlandmaine.gov>, Jimmy Dealaman <jdealaman@portlandmaine.gov>

UNIVERSITY NEIGHBORHOOD ORGANIZATION

August 13, 2021

Todd Valentine, Agent for Keith Canning

Keith Canning, Owner of [387 Deering Avenue](#) Property - Housing Development

Portland, ME 04103

Dear Mr. Valentine & Mr. Canning:

We are writing to express our deep concern regarding Keith Canning's 387 Deering Ave. property & Housing Development project that appears stalled. Today our neighbor Jacqueline Gaunder, [8 Holwell Street](#), an abutter to your property was alarmed to see a naked man on your property yelling & amassing sticks. Please see her written description alerting police, neighbors & photos for your review & use.

"Jacqueline Gaunder

Oakdale / USM • 2 hr ago

Naked Man in Woods. Good Morning Neighbors, I live on Holwell Street and directly behind me is a wooded plot of land pending a construction project. I let my dogs out in my back yard this morning and heard some strange activity in the woods. My dogs started barking and I heard a man yell shut the hell up. I looked into the woods and about 20 feet from me there was a half naked man breaking sticks. We went inside and I monitored him from my kitchen window and he took off all his clothes and then proceeded to lay down. I called the police since he was naked and obviously wasn't supposed to be there. This land is across the street and adjacent to a school and a community center so it was troublesome. He was gone before the officers showed up, but I wanted everyone in the surrounding area to be aware of this incident. He was

older, large build, with shoulder length gray hair, a baseball hat and about nothing else on. . I have reported this information to the police.

Oakdale, Portland, ME”

During the City's required public meeting with neighbors, we believed the agreed conditions for building permit included fencing around three sides of this property with the exception of Deering Ave. and exterior lighting for your rental tenants and neighborhood safety.

There are fallen trees, brush, branches, strewn about Mr. Canning's property near property lines & throughout his property. We fear under summer's extreme dry conditions, [387 Deering Ave](#) is a fire hazard. In addition, the abandoned property is attracting people to hang out, sleep, drugs, human waste and today's naked guy, etc. We believe Mr. Canning has a responsibility to make his property safe. Right now we are lucky naked man or others have not burned the place down, imagine how quickly a fire could spread from Mr. Canning's wooded lot to abutting homes. The horror is unimaginable, but we know so well from [20 Noyes Street](#) fire what can happen and the impact is unsurmountable.

We are encouraging you, Mr. Valentine, Mr. Canning and the City of Portland to take swift action and expedite your building permit project and or clear and clean up this property before tragedy strikes, install lighting and fencing to protect abutters from your property as promised and protect yourself from liability.

We request an updated report, what is happening with this property? We are requesting that Ms. Munson, Ms. Libner, Inspection & Planning Dept. look into our concerns.

Thank you in advance for your prompt response.

Best Regards,

Carol Schiller, President, UNO
(207) 210-8781

cc.

Jennifer Munson, Planning Dept. Office Manager

Dena Libner, Chief of Staff Executive Dept.

Jimmy Dealman, Planner Planning and Urban Development Department

Jacqueline Gaunder, Holwell Neighbor - Abutter

Lucas Malone, Deering Ave, Neighbor -Abutter

Todd Valentine, Agent - (207) 899-3796

Keith Channing, Owner [387 Deering Ave](#) Property, Swan Island Development, No contact information



Jacqueline Gaunder, [8 Holwell Street](#) yard abuts [387 Deering Ave](#) property, naked man was a few feet from her house standing in Fire hazard lot.



Fallen, cut dry trees & brush, fire hazard waiting to happen. This space encourages dangerous handouts



Jacqueline pointing to her house only a few feet from where naked guy.



Jimmy Dealaman <jdealaman@portlandmaine.gov>

Alert: 387 Deering Ave. Abandoned, Dangerous, Fire Hazard

Jacqueline Gaunder <jacky.gaunder@gmail.com> Sat, Aug 14, 2021 at 2:30 PM

To: Dena Libner <dlibner@portlandmaine.gov>, Todd Valentine <tvalentine@realassetservices.com>

Cc: Carol Schiller <schiller.carol@yahoo.com>, Jennifer Munson <jmy@portlandmaine.gov>, Jimmy Dealaman <jdealaman@portlandmaine.gov>, Lucas Malone <lucas.js.malone@gmail.com>, Victoria Kinney <kinneyfam@maine.rr.com>, Zachary Lenhert <zlenhert@portlandmaine.gov>, "jpj@portlandmaine.gov" <jpj@portlandmaine.gov>

Gaunder Family

[8 Holwell Street](#)
[Portland, Maine 04103](#)
(207) 808-9524

August 14, 2021

Dear Ms. Libner & Mr. Valentine:

First and foremost, I want to thank Carol Schiller, UNO for her assistance, I was very shaken over this incident. I appreciate Carol for her dedication and hard work over all these years trying to keep this community safe and for giving us the resources and contacts to share our concerns.

Our property is located at [8 Holwell Street](#), it has been in our family since the 1960's. Mr. Canning's property at [387 Deering Ave](#) borders our property. Over the years this unkept, abandoned looking property has been attracting unwanted intruders. It filled with dead trees that have either fallen or were cut down and left, large dead branches, dry shrubs and other organic debris. For years now we have feared that droughts and raising temperatures could set fire to this is a very flammable area, a fire hazard that could potentially destroy all the homes on the Holwell property line as well as bordering homes on Deering Avenue like Lucas Malone's property.

A few years back I emailed Jon Jennings to voice my concerns about the lack of lighting in Longfellow park; I also addressed concerns for the property located [387 Deering Ave](#) since it was directly behind my house. We found food, a sleeping bag and clothes stashed between fallen tree limbs on this empty lot, just feet from our home. Years later we are still dealing with the same problems. We were hopeful when Mr. Canning bought the property and we thought that we'd see improvements, but in light of yesterday's events, it's getting worse not better.

This is my home and my first priority is to protect my family. As a Portland resident, tax payer, neighbor, we demand to know what's happening. Is the City preventing Mr. Canning from clearing his lot to prevent fire? From installing a fence and adding security lighting to keep unwanted trespassers out?

We were told at the first planning meeting that this would happen and it was welcomed news! In Mr. Valentine's response sent yesterday it sounds like the City is delaying this process and we urge the City to expedite the permit process so Mr. Canning can address these concerns and can make improvements immediately. Due to the increase of crime and drug use in the area it would be wise for Mr. Canning to also install a security system to monitor what's happening on his lot. The Portland Police Dept. responded quickly to our call and were very helpful. They understood our fears and the potential danger. I plan to submit a police report to document this incident for public record.

We'd also like for the Portland Safety and Inspection Dept. to survey Mr. Canning's property for fire code violations. The debris needs to be cleared and removed. Yesterday I watched a naked intruder gather sticks in a pile, he could have easily been planning to make a fire. We hear strange sounds coming from this property at night, all we need is for someone who's camping out back there to try and make a camp fire, it would lead to disaster. Mr. Valentine is correct, this property was previously owned by the Temple and it's been a growing concern for years. This is a real public safety concern and it needs to be addressed, as seen in the photographs, our back yards are open and only steps away from this property. We urge the city to inspect this property and allow Mr. Canning to clear the grounds.

My Grandparents, Parents, and now my family live at [8 Holwell Street](#). This has been my home for the majority of my life. We are raising our children here and I've never felt so unsafe in my own backyard. I fear for my family's safety. This lot is across the street from Temple Beth-El School, [400 Deering Avenue](#); Portland Community Squash, [66 Noyes Street](#) and the Portland Center for Assisted Living, [68 Devonshire Street](#) are all close by. We see children in summer camps, school, after school programs and elderly residents all the time, we do not want to see them frightened and or injured by intruders camped out in Mr. Canning's Deering Ave. property. We have two daughters which makes this naked man encounter very serious to us. It's time to make this area safer.

Considering all the tragedies that have happened in this neighborhood including the fatal 2014 Noyes Street fire, fatal overdoses, home robberies, bad things have happened here and [387 Deering Ave](#) is a problem and I can't stand to witness another tragedy. What exactly is the hold up on addressing these issues? We demand action to protect our neighborhood!

We look forward to City's & Mr. Canning's response. We want to know when this property will be cleared and made safer. We support Mr. Canning removal of debris, installation of fencing, lighting and a security system. We support and welcome his housing development construction as soon as possible to stop intruders from hiding out.

If you have any questions, please do not hesitate to email and or call me anytime, my cell phone is (207) 808-9524.

Sincerely,

Jacqueline Gaunder & Family
[8 Holwell Street](#)

On Fri, Aug 13, 2021 at 6:10 PM Todd Valentine <tvalentine@realassetservices.com> wrote:

Carol,

Thank you for forwarding the report of the incident this morning at the Deering property. I am glad that Ms. Gaunder called the police as that was the correct thing to do.

I want to share with you the steps that have been taken to develop and improve the property. We have followed the State and City procedures per their requires to receive the approvals and permits needed to clean up this property and build the new structures. The City process required process consists of a neighborhood meeting followed by a Planning Board workshop. Post our workshop we received comments back from City staff which we are working address before they schedule the next workshop. If we are successful then we will be invited to have a hearing.

The property is in the condition that it has been years. The neglect of the property and the need for improvement is what attracted us to acquiring and pursuing improving it. The City process to receive the needed permits is well developed but can consume a fair amount of time as compared to other smaller communities in Maine. I very much want to express that we are making the timely efforts to have what we need in hand to transform and improve the property as soon as we possibly can.

Part of the approvals will identify the tree cutting that will be allowed. Consequently, we have not made any vegetation removals. When we wanted to take some test borings earlier this year we approached the City and requested if we could remove some trees for geotechnical borings. We were advised to wait in consideration of where we were in the process.

But in light of today's events we will contact the City first of Monday morning and request that we can remove any drops and how much undergrowth they will allow us to remove before we have a full permit in hand. I believe that this would help visibility onto the property and not be attractive to enter.

I appreciate that you called earlier. I did return your call later in the afternoon.

I will keep you apprised of what we hear from the City.

As always thank you for your help and your work in the neighborhood. Feel free to call me on Monday or when convenient.

Take Care,

Todd

From: Carol Schiller <schiller.carol@yahoo.com>

Sent: Friday, August 13, 2021 5:42 PM

To: Todd Valentine <tvalentine@realassetservices.com>; Jennifer Munson <jmy@portlandmaine.gov>; Dena Libner <dlibner@portlandmaine.gov>; Jacqueline Gaunder <jacky.gaunder@gmail.com>; Lucas Malone <lucas.js.malone@gmail.com>; Victoria Kinney <kinneyfam@maine.rr.com>; Zachary Lenhert <zlenhert@portlandmaine.gov>; Jimmy Dealaman <jdealaman@portlandmaine.gov>

Subject: Alert: 387 Deering Ave. Abandoned, Dangerous, Fire Hazard

UNIVERSITY NEIGHBORHOOD ORGANIZATION

August 13, 2021

Todd Valentine, Agent for Keith Canning

Keith Canning, Owner of 387 Deering Avenue Property - Housing Development

Portland, ME 04103

Dear Mr. Valentine & Mr. Canning:

We are writing to express our deep concern regarding Keith Canning's 387 Deering Ave. property & Housing Development project that appears stalled. Today our neighbor Jacqueline Gaunder, 8 Holwell Street, an abutter to your property was alarmed to see a naked man on your property yelling & amassing sticks. Please see her written description alerting police, neighbors & photos for your review & use.

"Jacqueline Gaunder

Oakdale / USM • 2 hr ago

Naked Man in Woods. Good Morning Neighbors, I live on Holwell Street and directly behind me is a wooded plot of land pending a construction project. I let my dogs out in my back yard this morning and heard some strange activity in the woods. My dogs started barking and I heard a man yell shut the hell up. I looked into the woods and about 20 feet from me there was a half naked man breaking sticks. We went inside and I monitored him from my kitchen window and he took off all his clothes and then proceeded to lay down. I called the police since he was naked and obviously wasn't supposed to be there. This land is across the street and adjacent to a school and a community center so it was troublesome. He was gone before the officers showed up, but I wanted everyone in the surrounding area to be aware of this incident. He was older, large build, with shoulder length gray hair, a baseball hat and about nothing else on. . I have reported this information to the police.

Oakdale, Portland, ME"

During the City's required public meeting with neighbors, we believed the agreed conditions for building permit included fencing around three sides of this property with the exception of Deering Ave. and exterior lighting for your rental tenants and neighborhood safety.

There are fallen trees, brush, branches, strewn about Mr. Canning's property near property lines & throughout his property. We fear under summer's extreme dry conditions, [387 Deering Ave](#) is a fire hazard. In addition, the abandoned property is attracting people to hang out, sleep, drugs, human waste and today's naked guy, etc. We believe Mr. Canning has a responsibility to make his property safe. Right now we are lucky naked man or others have not burned the place down, imagine how quickly a fire could spread from Mr. Canning's wooded lot to abutting homes. The horror is unimaginable, but we know so well from [20 Noyes Street](#) fire what can happen and the impact is unsurmountable.

We are encouraging you, Mr. Valentine, Mr. Canning and the City of Portland to take swift action and expedite your building permit project and or clear and clean up this property before tragedy strikes, install lighting and fencing to protect abutters from your property as promised and protect yourself from liability.

We request an updated report, what is happening with this property? We are requesting that Ms. Munson, Ms. Libner, Inspection & Planning Dept. look into our concerns.

Thank you in advance for your prompt response.

Best Regards,

Carol Schiller, President, UNO

(207) 210-8781

cc.

Jennifer Munson, Planning Dept. Office Manager

Dena Libner, Chief of Staff Executive Dept.

Jimmy Dealman, Planner Planning and Urban Development Department

Jacqueline Gaunder, Holwell Neighbor - Abutter

Lucas Malone, Deering Ave, Neighbor -Abutter

Todd Valentine, Agent - (207) 899-3796

Keith Channing, Owner [387 Deering Ave](#) Property, Swan Island Development, No contact information



Jacqueline Gaunder, [8 Holwell Street](#) yard abuts [387 Deering Ave](#) property, naked man was a few feet from her house

standing in Fire hazard lot.



Fallen, cut dry trees & brush, fire hazard waiting to happen. This space encourages dangerous handouts



Jacqueline pointing to her house only a few feet from where naked guy.



Jimmy Dealaman <jdealaman@portlandmaine.gov>

Alert: 387 Deering Ave. Abandoned, Dangerous, Fire Hazard

Jimmy Dealaman <jdealaman@portlandmaine.gov> Tue, Aug 17, 2021 at 6:16 PM
To: Jimmy Dealaman <jdealaman@portlandmaine.gov>

----- Forwarded message -----

From: **Jimmy Dealaman** <jdealaman@portlandmaine.gov>

Date: Tue, Aug 17, 2021 at 4:38 PM

Subject: Re: Alert: 387 Deering Ave. Abandoned, Dangerous, Fire Hazard

To: Carol Schiller <schiller.carol@yahoo.com>

Cc: Jacqueline Gaunder <jacky.gaunder@gmail.com>, Dena Libner <dlibner@portlandmaine.gov>, Todd Valentine <tvalentine@realassetservices.com>, Jennifer Munson <jmy@portlandmaine.gov>, Lucas Malone <lucas.js.malone@gmail.com>, Victoria Kinney <kinneyfam@maine.rr.com>, Zachary Lenhart <zlenhart@portlandmaine.gov>, jpj@portlandmaine.gov <jpj@portlandmaine.gov>, Kevin Kraft <kkraft@portlandmaine.gov>

Hi Carol,

Thank you for following up. Our office has authorized the applicant to do some preliminary clearing of the site primarily within the intended development area with the expectation that all trees required to meet the landscape preservation standards be preserved.

If you have any additional questions please let me know.

Thank you,

Jimmy

On Tue, Aug 17, 2021 at 11:47 AM Carol Schiller <schiller.carol@yahoo.com> wrote:

August 17, 2021

Hi Jimmy,

We greatly appreciate your assistance. It appears developers are stalling construction projects waiting for building materials & labor cost to go down. In the meantime, if that's the case here, we urge the planning department to approve allowing Mr. Channing & Mr. Valentine to landscape 387 Deering Avenue property prior to building permit ASAP!

Landscaping includes removing the dead trees, branches and brush strewn all over the lot as well as cutting and removing trees that cloak this property. It has a reputation for attracting drug users, homeless, its a hang out place, & now naked guy, etc. Landscaping, fencing and lighting are solutions to serious social problems. The benefits are many.

We urge the planning dept to put in place pre-construction permit mandates like landscaping, etc to avoid investors buying, holding and neglecting property lots while they wait for better market conditions.

Could you please keep us updated on Planning Board actions.

Thank you in advance for passing along our concerns and recommendations.

Best Regards,

Carol Schiller, UNO
(207) 210-8781

On Aug 16, 2021, at 5:27 PM, Jimmy Dealaman
<jdealaman@portlandmaine.gov> wrote:

Hi Jacqueline and Carol,

Thank you both for your emails and for bringing this to our attention. We're sorry to hear about your recent experience. We're currently waiting on the applicant to submit revised application materials but in the meantime, we will include your comments as part of the public record for this project, which will be shared with the Planning Board.

Please let us know if you have any questions,

Jimmy

On Sat, Aug 14, 2021 at 2:30 PM Jacqueline Gaunder
<jacky.gaunder@gmail.com> wrote:

Gaunder Family
[8 Holwell Street](#)
[Portland, Maine 04103](#)
(207) 808-9524

August 14, 2021

Dear Ms. Libner & Mr. Valentine:

First and foremost, I want to thank Carol Schiller, UNO for her assistance, I was very shaken over this incident. I appreciate Carol for her dedication and hard work over all these years trying to keep this community safe and for giving us the resources and contacts to share our concerns.

Our property is located at [8 Holwell Street](#), it has been in our family since the 1960's. Mr. Canning's property at [387 Deering Ave](#) borders our property. Over the years this unkept, abandoned looking property has been attracting unwanted intruders. It filled with dead trees that have either fallen or were cut down and left, large dead branches, dry shrubs and other organic debris. For years now we have feared that droughts and raising temperatures could set fire to this is a very flammable area, a fire hazard that could potentially destroy all the homes on the Holwell property line as well as bordering homes on Deering Avenue like Lucas Malone's property.

A few years back I emailed Jon Jennings to voice my concerns about the lack of lighting in Longfellow park; I also addressed concerns for the property located 387 Deering Ave since it was directly behind my house. We found food, a sleeping bag and clothes stashed between fallen tree limbs on this empty lot, just feet from our home. Years later we are still dealing with the same problems. We were hopeful when Mr. Canning bought the property and we thought that we'd see improvements, but in light of yesterday's events, it's getting worse not better.

This is my home and my first priority is to protect my family. As a Portland resident, tax payer, neighbor, we demand to know what's happening. Is the City preventing Mr. Canning from clearing his lot to prevent fire? From installing a fence and adding security lighting to keep unwanted trespassers out? We were told at the first planning meeting that this would happen and it was welcomed news! In Mr. Valentine's response sent yesterday it sounds like the City is delaying this process and we urge the City to expedite the permit process so Mr. Canning can address these concerns and can make improvements immediately. Due the the increase of crime and drug use in the area it would be wise for Mr. Canning to also install a security system to monitor what's happening on his lot. The Portland Police Dept. responded quickly to our call and were very helpful. They understood our fears and the potential danger. I plan to submit a police report to document this incident for public record.

We'd also like for the Portland Safety and Inspection Dept. to survey Mr. Canning's property for fire code violations. The debris needs to be cleared and removed. Yesterday I watched a naked intruder gather sticks in a pile, he could have easily been planning to make a fire. We hear strange sounds coming from this property at night, all we need is for someone who's camping out back there to try and make a camp fire, it would lead to disaster. Mr. Valentine is correct, this property was previously owned by the Temple and it's been a growing concern for years. This is a real public safety concern and it needs to be addressed, as seen in the photographs, our back yards are open and only steps away from this property. We urge the city to inspect this property and allow Mr. Canning to clear the grounds.

My Grandparents, Parents, and now my family live at 8 Holwell Street. This has been my home for the majority of my life. We are raising our children here and I've never felt so unsafe in my own backyard. I fear for my family's safety. This lot is across the street from Temple Beth-El School, [400 Deering Avenue](#); Portland Community Squash, [66 Noyes Street](#) and the Portland Center for Assisted Living, [68 Devonshire Street](#) are all close by. We see children in summer camps, school, after school programs and elderly residents all the time, we do not want to see them frightened and or injured by intruders camped out in Mr. Canning's Deering Ave. property. We have two daughters which makes this naked man encounter very serious to us. It's time to make this area safer.

Considering all the tragedies that have happened in this neighborhood including the fatal 2014 Noyes Street fire, fatal overdoses, home robberies, bad things have happened here and [387 Deering Ave](#) is a problem and I can't stand to witness another tragedy. What exactly is the hold up on addressing these issues? We demand action to protect our neighborhood!

We look forward to City's & Mr. Canning's response. We want to know when this property will be cleared and made safer. We support Mr. Canning removal of debris, installation of fencing, lighting and a security system. We support and welcome his housing development construction as soon as possible to stop intruders from hiding out.

If you have any questions, please do not hesitate to email and or call me anytime, my cell phone is (207) 808-9524.

Sincerely,

Jacqueline Gaunder & Family
[8 Holwell Street](#)

On Fri, Aug 13, 2021 at 6:10 PM Todd Valentine
<tvalentine@realassetservices.com> wrote:

Carol,

Thank you for forwarding the report of the incident this morning at the Deering property. I am glad that Ms. Gaunder called the police as that was the correct thing to do.

I want to share with you the steps that have been taken to develop and improve the property. We have followed the State and City procedures per their requires to receive the approvals and permits needed to clean up this property and build the new structures. The City process required process consists of a neighborhood meeting followed by a Planning Board workshop. Post our workshop we received comments back from City staff which we are working address before they schedule the next workshop. If we are successful then we will be invited to have a hearing.

The property is in the condition that it has been years. The neglect of the property and the need for improvement is what attracted us to acquiring and pursuing improving it. The City process to receive the needed permits is well developed but can consume a fair amount of time as compared to other smaller communities in Maine. I very much want to express that we are making the timely efforts to have what we need in hand to transform and improve the property as soon as we possibly can.

Part of the approvals will identify the tree cutting that will be allowed. Consequently, we have not made any vegetation removals. When we wanted to take some test borings earlier this year we approached the City and requested if we could remove some trees for geotechnical borings. We were advised to wait in consideration of where we were in the process.

But in light of today's events we will contact the City first of Monday morning and request that we can remove any drops and

how much undergrowth they will allow us to remove before we have a full permit in hand. I believe that this would help visibility onto the property and not be attractive to enter.

I appreciate that you called earlier. I did return your call later in the afternoon.

I will keep you apprised of what we hear from the City.

As always thank you for your help and your work in the neighborhood. Feel free to call me on Monday or when convenient.

Take Care,

Todd

From: Carol Schiller <schiller.carol@yahoo.com>

Sent: Friday, August 13, 2021 5:42 PM

To: Todd Valentine <tvalentine@realassetservices.com>; Jennifer Munson <jmy@portlandmaine.gov>; Dena Libner <dlibner@portlandmaine.gov>; Jacqueline Gaunder <jacky.gaunder@gmail.com>; Lucas Malone <lucas.js.malone@gmail.com>; Victoria Kinney <kinneyfam@maine.rr.com>; Zachary Lenhert <zlenhert@portlandmaine.gov>; Jimmy Dealaman <jdealaman@portlandmaine.gov>

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Carol Schiller, President, UNO

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cc.

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Todd Valentine, Agent - (207) 899-3796

Keith Channing, Owner [387 Deering Ave](#) Property, Swan Island Development, No contact information

<image001.jpg>

Jacqueline Gaunder, [8 Holwell Street](#) yard abuts [387 Deering Ave](#) property, naked man was a few feet from her house

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<image002.jpg>

Fallen, cut dry trees & brush, fire hazard waiting to happen. This space encourages dangerous handouts

<image003.jpg>

Jacqueline pointing to her house only a few feet from where naked guy.

--

Jimmy Dealaman, Planner
Planning and Urban Development Department
City Hall, 389 Congress Street, 4th Floor
Portland, Maine 04101
(207) 874-8718 (T)
(207) 756-8258 (F)
jdealaman@portlandmaine.gov

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.

--

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(207) 756-8258 (F)

jdealaman@portlandmaine.gov

Jacqueline Gaunder <jacky.gaunder@gmail.com>

Feb 17, 2022, 1:29:18 PM (20 hours ago)



to planningboard@portlandmaine.gov, jdealaman

Letter for Public Comment:

For: February 22, 2022 Portland Planning Board Public Hearing, Public Comment Letter

Submitted: February 17, 2022

Submitted by: Jacqueline Gaunder, 8 Holwell Street

Dear Portland Planning Dept. & Portland Planning Board:

This letter is written on behalf of property owners and residents that abut the Sawyer Island Development plan for an eight-unit, 18,336 square foot income producing residential development along with associated site improvements at 387 Deering Avenue in Portland's historic Oakdale Neighborhood. The subject property is zoned R-5 Residential.

This vacant and undeveloped lot has been here forever. The housing development project represents a big change where we are used to seeing it filled with trees. However, we look forward to new partnerships, being good neighbors, building community and strengthening our neighborhood together with them. We want Sawyer Island Development LLC to be successful and greatly appreciate this opportunity to communicate with the Portland Planning Board to ensure its a successful endeavor.

We request that the Portland Planning Board, please consider our recommendations prior to approving the Sawyer Island Development LLC Building Plan. They are as follows:

RECOMMENDATIONS FOR CITY OF PORTLAND PLANNING BOARD & SAWYER ISLAND DEVELOPMENT LLC

1. COMMUNICATION

Provide & assign a Sawyer Island Development LLC contact person responsible for interfacing and communicating with abutters. This should include but not be limited to providing weekly email construction status updates, planned disruptions, noise notifications, construction schedules with times of active construction work, blasting notification and schedules, and tree removal schedule. This courtesy will eliminate and reduce stress, and allow abutters to plan for long periods of noise and disruptions.

Request building construction hours on Saturdays start at 8:30 A.M. and end by 4:00 P.M. and Mondays thru Fridays start time 7:30 A.M. and end time at 4:00 P.M., and no work on Holidays, July 4th, etc. to accommodate residents. It is important to avoid disruptions, as many residents work from home, have families, are involved with remote learning, and strive to maintain quality of life and normalcy throughout the construction time.

Install a temporary fence around the construction site to prevent debris from entering the surrounding properties, to ensure safety, to protect children and pets and to stop intruders from wandering onto a construction site and abutter properties.

2. Construction Management Plan

Provide Blasting Notifications. If blasting is required, Sawyer Island Development LLC conducts an abutters pre-blasting survey, and has an insurance coverage policy to cover any and all property damage resulting from blasting and or construction work. We need assurance that Sawyer Island Development LLC is responsible for all costs relating to blasting, property damage, not Property Owners.

3. StormWater Design Plan

Provide perimeter drainage plan & strategy to manage and prevent water runoff from damaging abutters' property foundations and flooding land.

4. Fencing Plan

Install & maintain a permanent continuous (no open gaps), solid, six-foot buffer fence, made from cedar wood, water resistant, uniform material that will border on all three sides of the development. They are Noyes, Holwell, and Longfellow property lines. This buffer fence serves to provide privacy, safety and noise control for abutters and occupants of 387 Deering Avenue. This fence will help prevent intruders, inhibit crime, and protect children and pets.

5. **Lighting Plan**

Install & maintain lighting levels that reduce light infiltration on abutters. Recommend using lighting that is programmable with timers and motion detection features for safety measures, and to prevent crimes.

6. **Exterior Building Aesthetic Plan**

Use exterior building materials and historic paint color palette that compliments & preserves the integrity of Portland's historic Oakdale neighborhood. We recommend using earth-tones colors, as described in R-5 Zone Standards:

7. **Property Management Services**

We request that the City of Portland requires Sawyer Island Development LLC provide private trash & recycling services for occupants, not City Trash pick up. This will eliminate all the trash bags and recycling bins cluttering and blocking Deering Avenue sidewalk access and traffic, improve sanitation and avoid occupants injuring themselves transporting large recycling containers and trash bags down sloped, icy entrances.

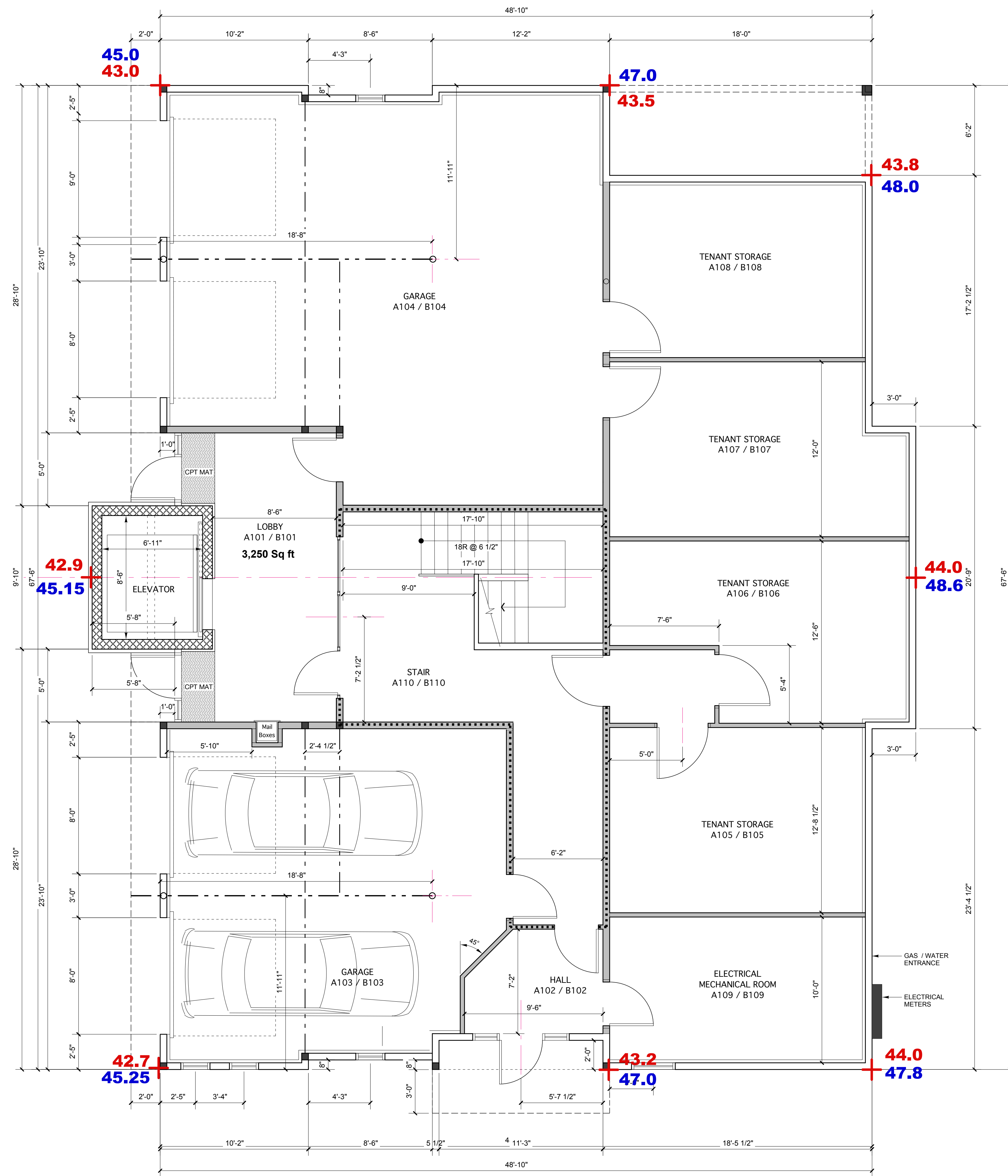
We greatly appreciate this opportunity to communicate with the Portland Planning Dept, Portland Planning Board and Sawyer Island Development LLC, we hope you will recognize our recommendations and make them a part of the building approval process.

If you have any questions, please do not hesitate to contact Jacqueline Gaunder, abutter at [\(207\) 808-9524](tel:2078089524).

In advance we look forward to our new partnership with Sawyer Island Development LLC.

Sincerely yours,

Jacqueline Gaunder,
8 Holwell Street
[\(207\) 808-9524](tel:2078089524)



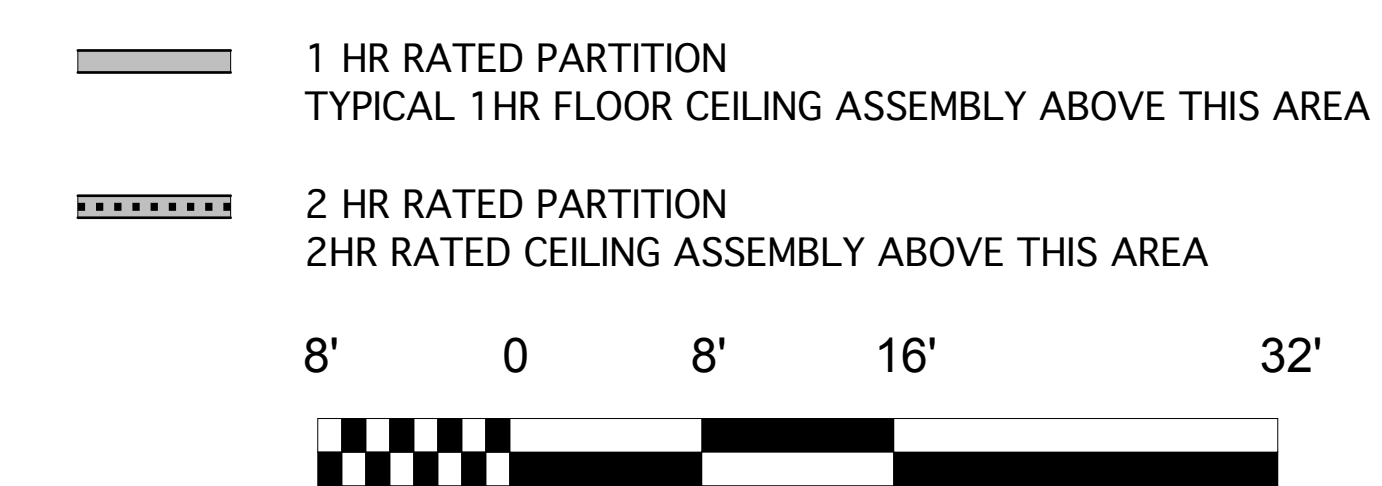
FIN.Flr
BLDG 'A'
= EL. 43.0

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'

1 FLOOR AREA = 3,250 Sq ft



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

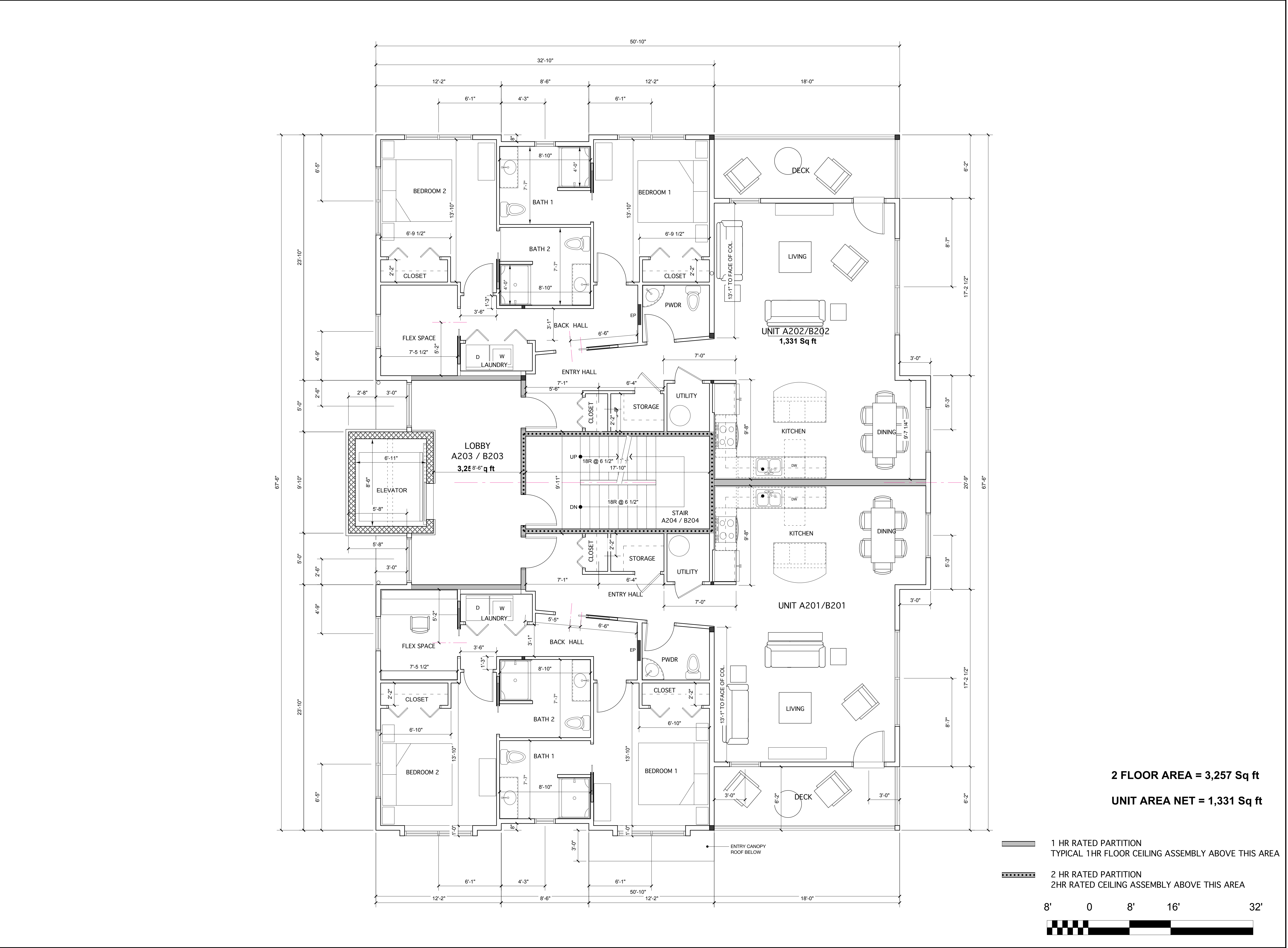
STRUCTURAL INTEGRITY CONSULTING ENGINEERS
46 Forest Avenue
Portland, ME 04101
207.774.4614
www.structuralinteg.com

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



2 FLOOR AREA = 3,257 Sq ft
UNIT AREA NET = 1,331 Sq ft

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1 Kren Drive, Suite 2A
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**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: 12.14.21
Phase: CITY PERMITTING

**WALSH ENGINEERING
ASSOCIATES**

1 Kren Drive, Suite 2A
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**RESIDENCES AT
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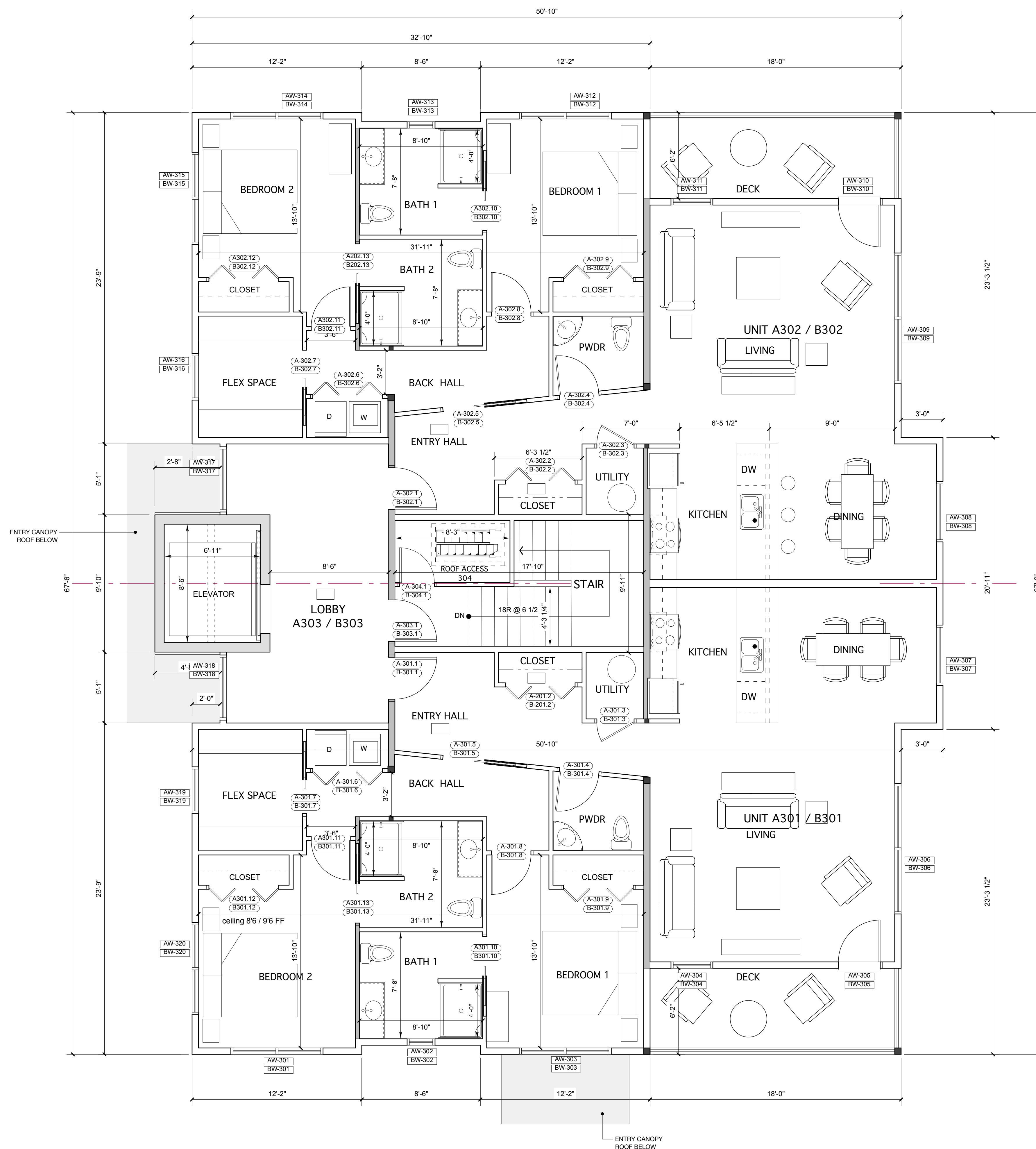
Portland, Maine

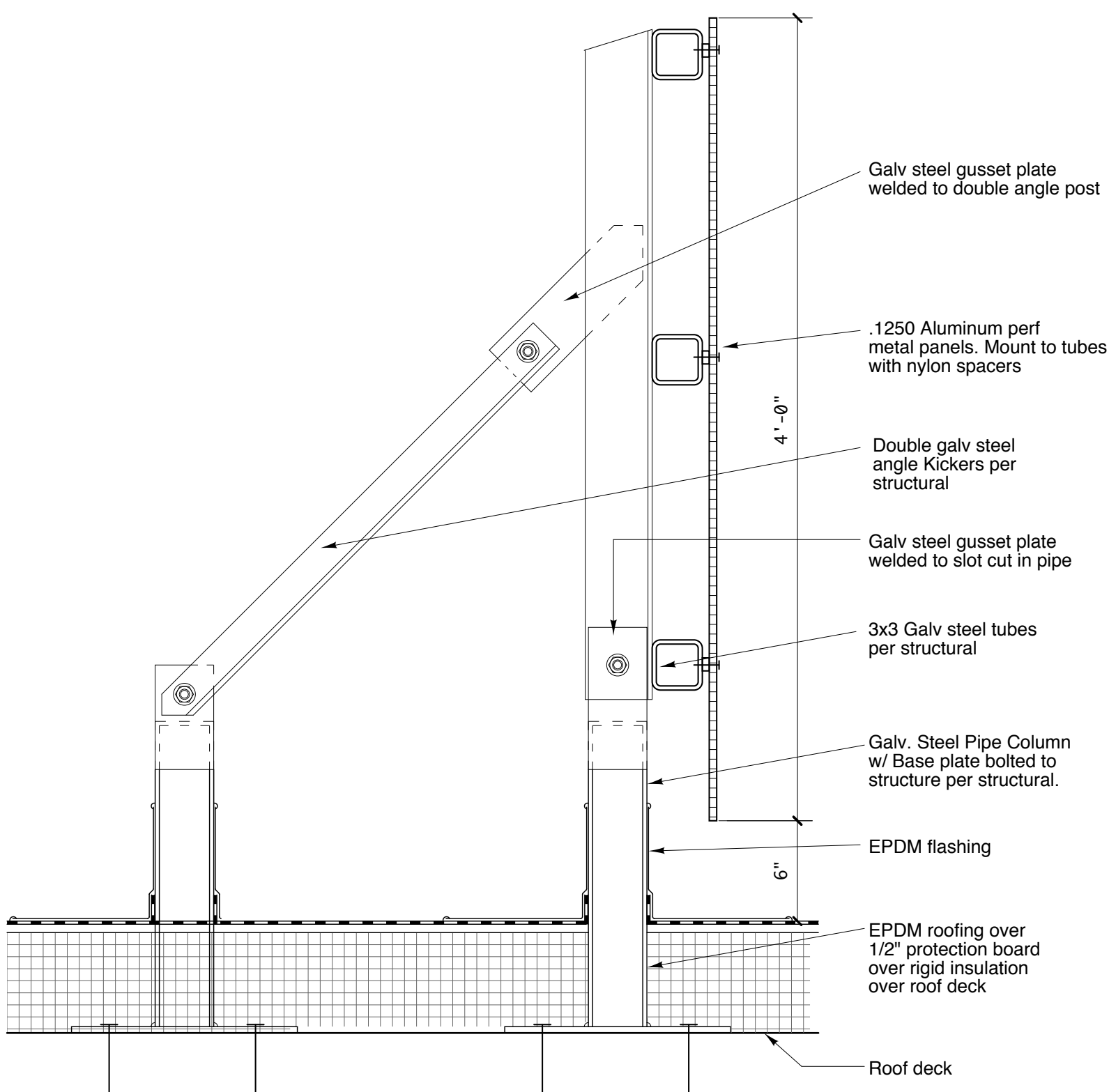
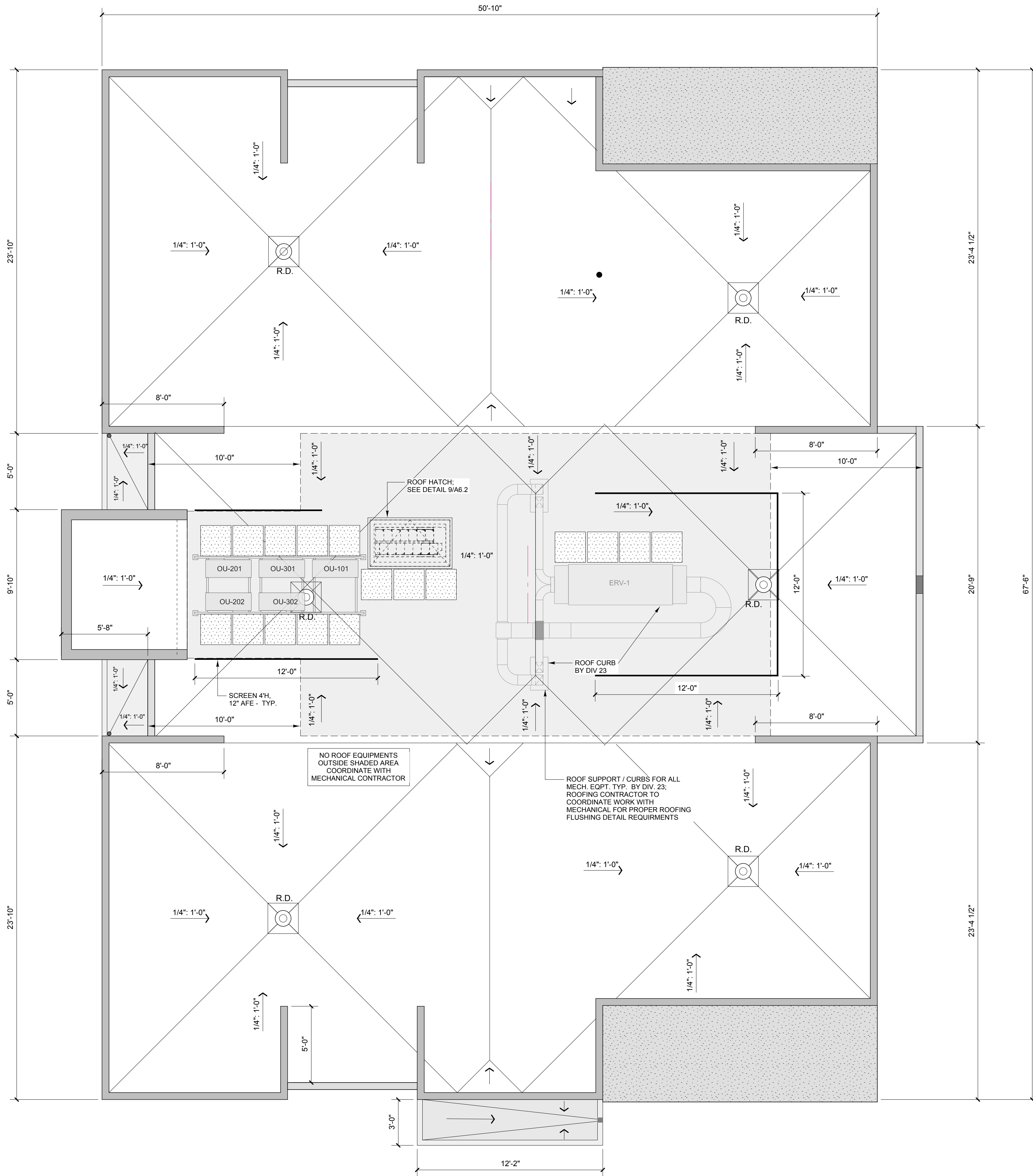
Drawing Title: Scale: 1/4"=1'-0"

THIRD FLOOR PLAN
BUILDING A
BUILDING B MIRROR

A1.3

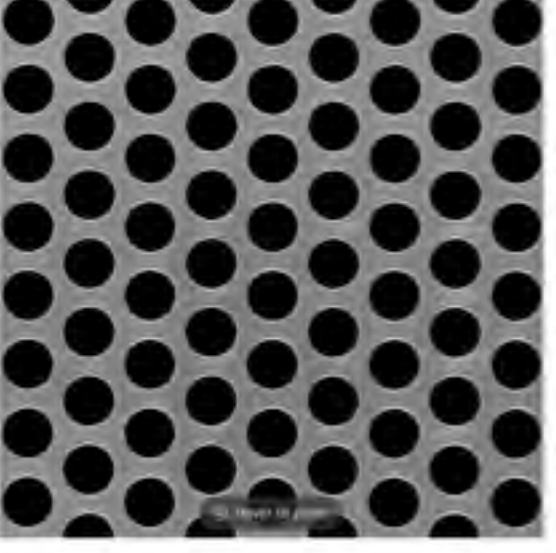
Date: 1.51.21
Phase: DESIGN DEV.





TYPICAL ROOF MECHANICAL SCREEN DETAIL

1 1/2"=1'-0"



McNICHOLS® Perforated Metal
Round, Aluminum, Alloy 5053-H32, .1250" Thick (8 Gauge), 1/2"
Round on 11/16" Staggered Centers, 48% Open Area

McNICHOLS® Perforated Metal, Round, Aluminum, Alloy 5053-H32, Mill Finish, .1250"
Thick (8 Gauge), 1/2" Round on 11/16" Staggered Centers, 5/16" Bar Width, 2.44 Hole Dia.
Square Hole (SPSQ), Minimum Solid Margin Both Sides of Sheet Parallel to Length of Sheet,
Holes Spaced Through Both Ends of Sheet Parallel to Width of Sheet, 48% Open Area.

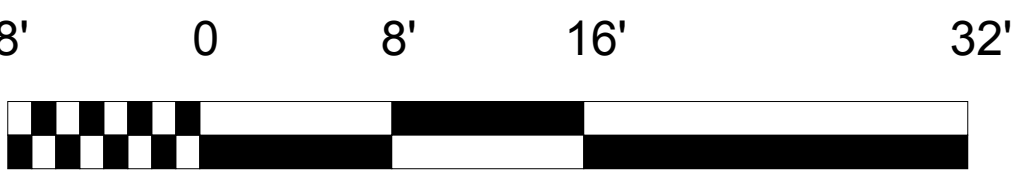
ITEM (723124) 48" x 120" In-Stock

Please Request Quote

PRODUCT SELECTION: 48" x 120" QTY: 1 SUBTOTAL: \$500.00

ADD TO CART

SPECIFICATIONS	OVERVIEW	ORDERING	CHARACTERISTICS	TABLES
Item Number	723124		Wide Arrangement	48" Staggered Centers
Product Line	Perforated Metal		Holes Per Square Inch (HPSI)	2.44
Hole Type	Round		Straight Holes Parallel to	Length of Sheet
Primary Material	Aluminum (AL)		Margins Parallel to Width	Spaced Through Both Ends
Alloy, Grade or Type	Alloy 5053-H32 (PSQSQ)		Margins Parallel to Length	Minimum Solid Both Sides
Material Finish	Mil Finish		End Patterns	Spaced Through Both Sides
Gauge/Thickness	.1250" Thick (8 Gauge)		Percent Open Area	48%
Hole Pattern	1/2" Round on 11/16" Staggered Centers		Weight	0.91 Lbs./Square Foot
Hole Size (Maximum)	1/2"		Product Form	Sheet
Hole Centers	11/16"		Overlaps	End Overlap: 1/8" Side Overlap: 1/8"
Bar Width	5/16"		Sheet Width x Length	48" x 120" (On Stock Available)





SOUTH ELEVATION



**RESIDENCES AT
387 & 405
DEERING
AVENUE**

Portland, Maine

Drawing Title: Scale: 1/4" = 1'-0"

BUILDING ELEVATIONS

A2.1

Date: 12.14.21
Phase: CITY PERMITTING

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**RESIDENCES AT
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Portland, Maine

Drawing Title: Scale: 1/4"=1'-0"

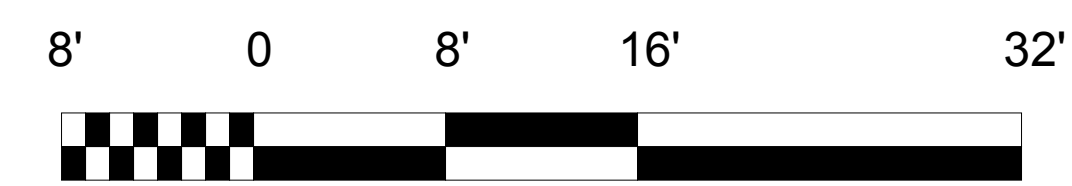
BUILDING ELEVATIONS

A2.2

Date: 12.14.21
Phase: CITY PERMITTING

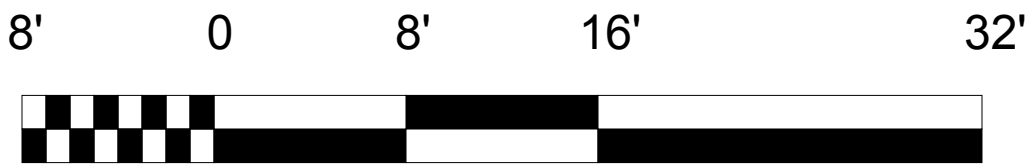


DEERING AVENUE ELEVATION





NORTH ELEVATION



**RESIDENCES AT
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Portland, Maine

Drawing Title: Scale: 1/4" = 1'-0"

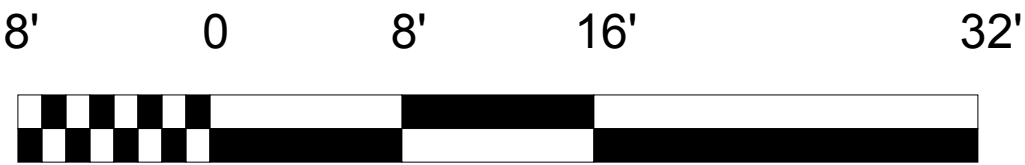
BUILDING ELEVATIONS

A2.3

Date: 12.14.21
Phase: CITY PERMITTING



REAR ELEVATION



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**RESIDENCES AT
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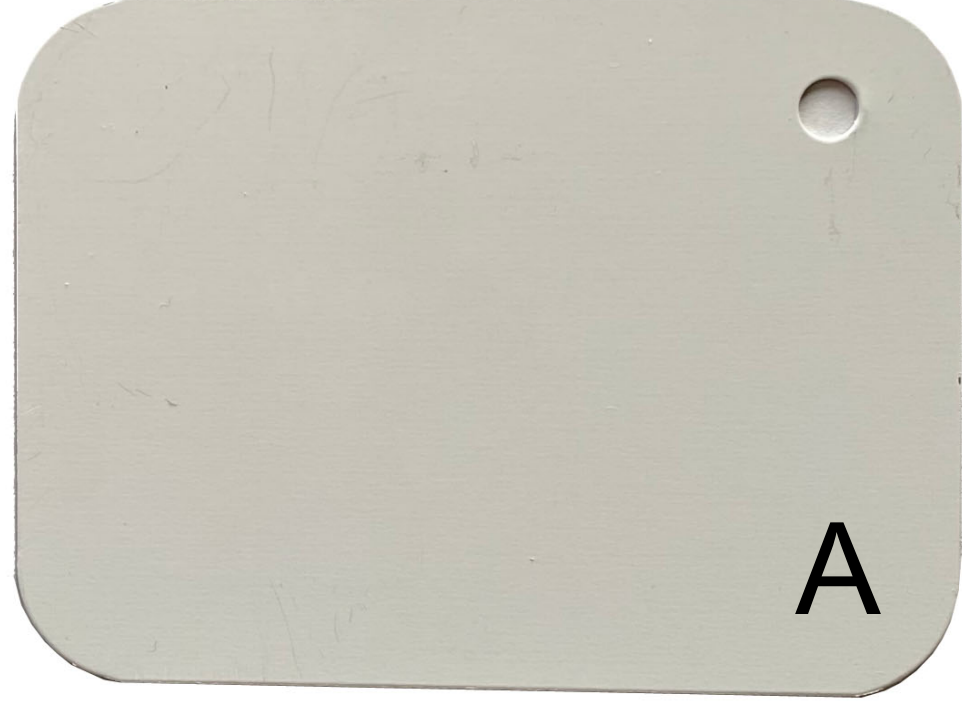
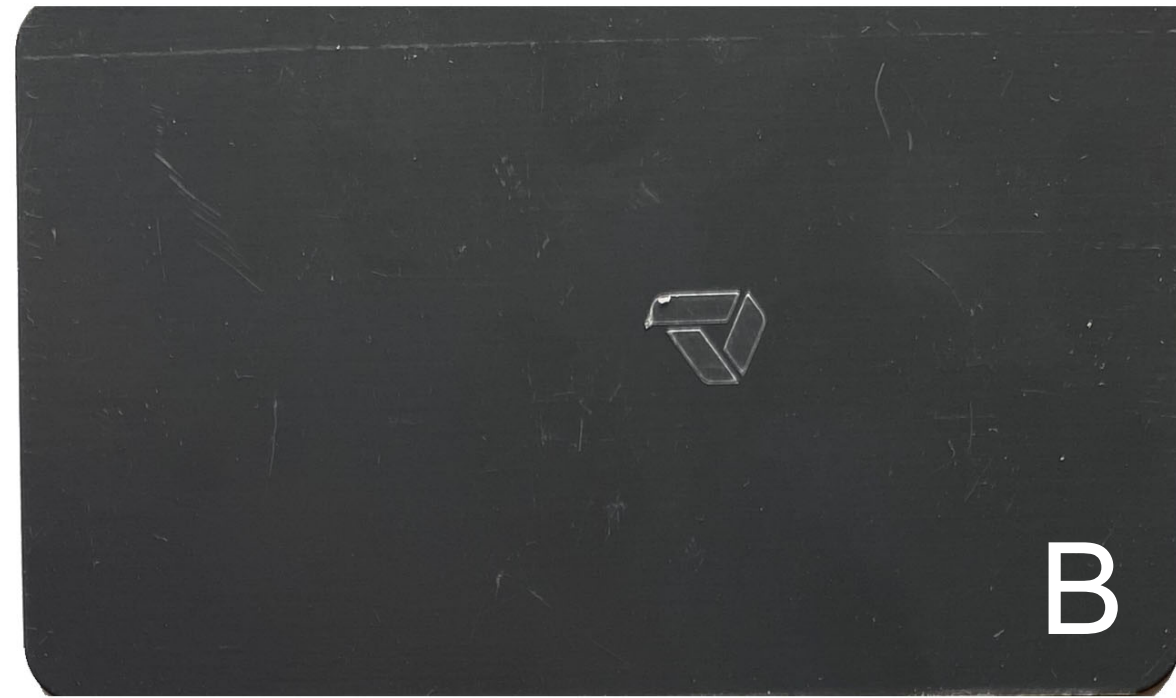
Portland, Maine

Drawing Title: Scale: 1/4" = 1'-0"

BUILDING ELEVATIONS

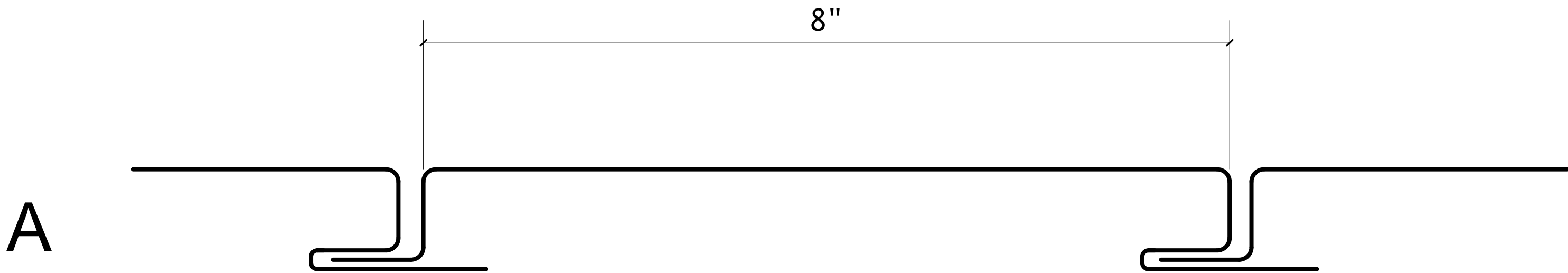
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Date: 12.14.21
Phase: CITY PERMITTING

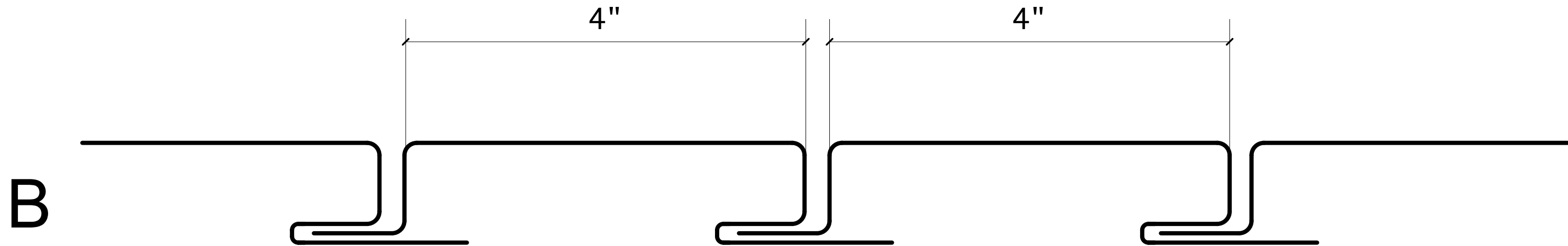


Fiber-reinforced Cement panels

EXTERIOR MATERIALS



Metal Siding - Installed Horizontally



Metal Siding - Installed Horizontally

SIDING PROFILES



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RESIDENCES AT 387 & 405 DEERING AVENUE

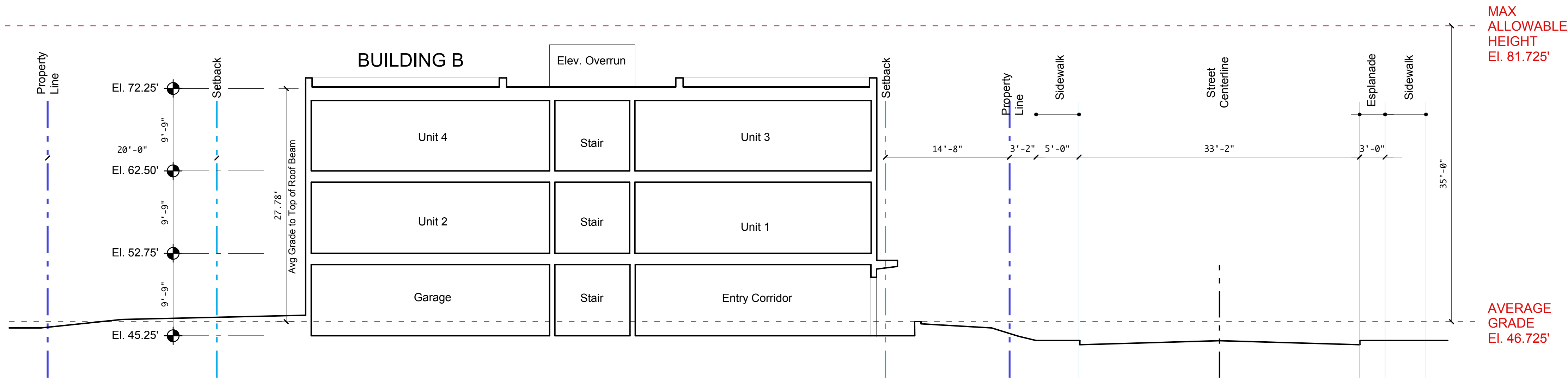
Portland, Maine

Drawing Title: Scale: N.T.S.

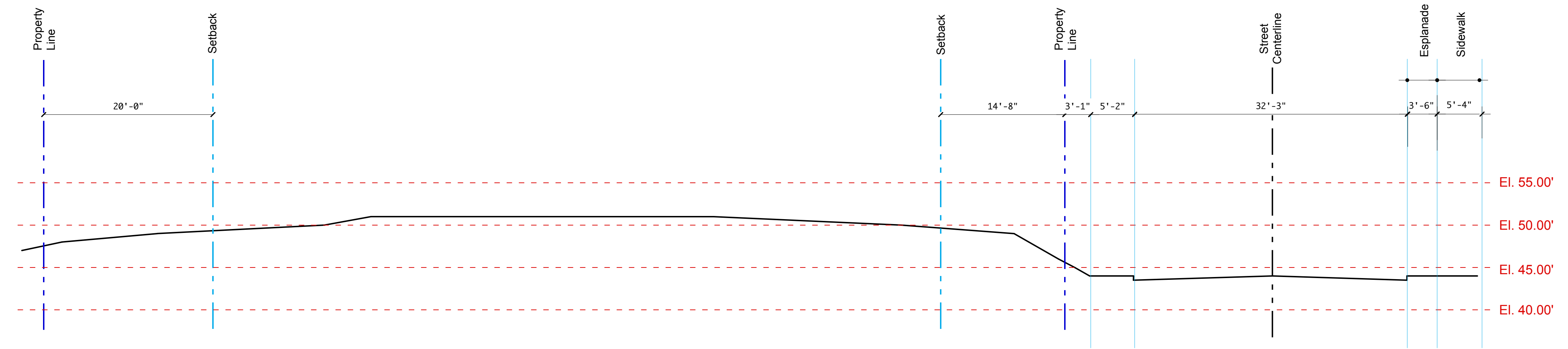
BUILDING ELEVATIONS

A2.5

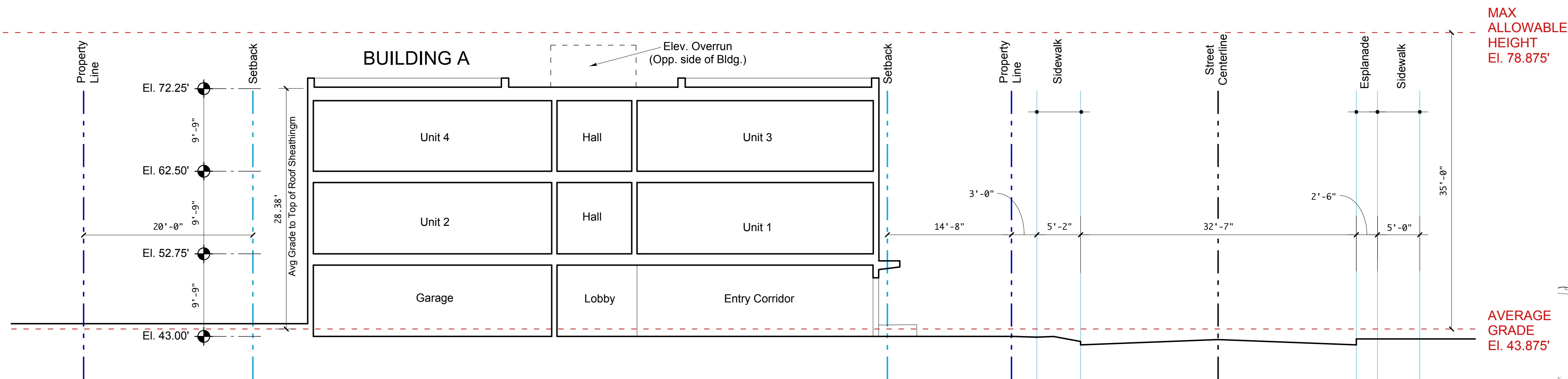
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Phase:



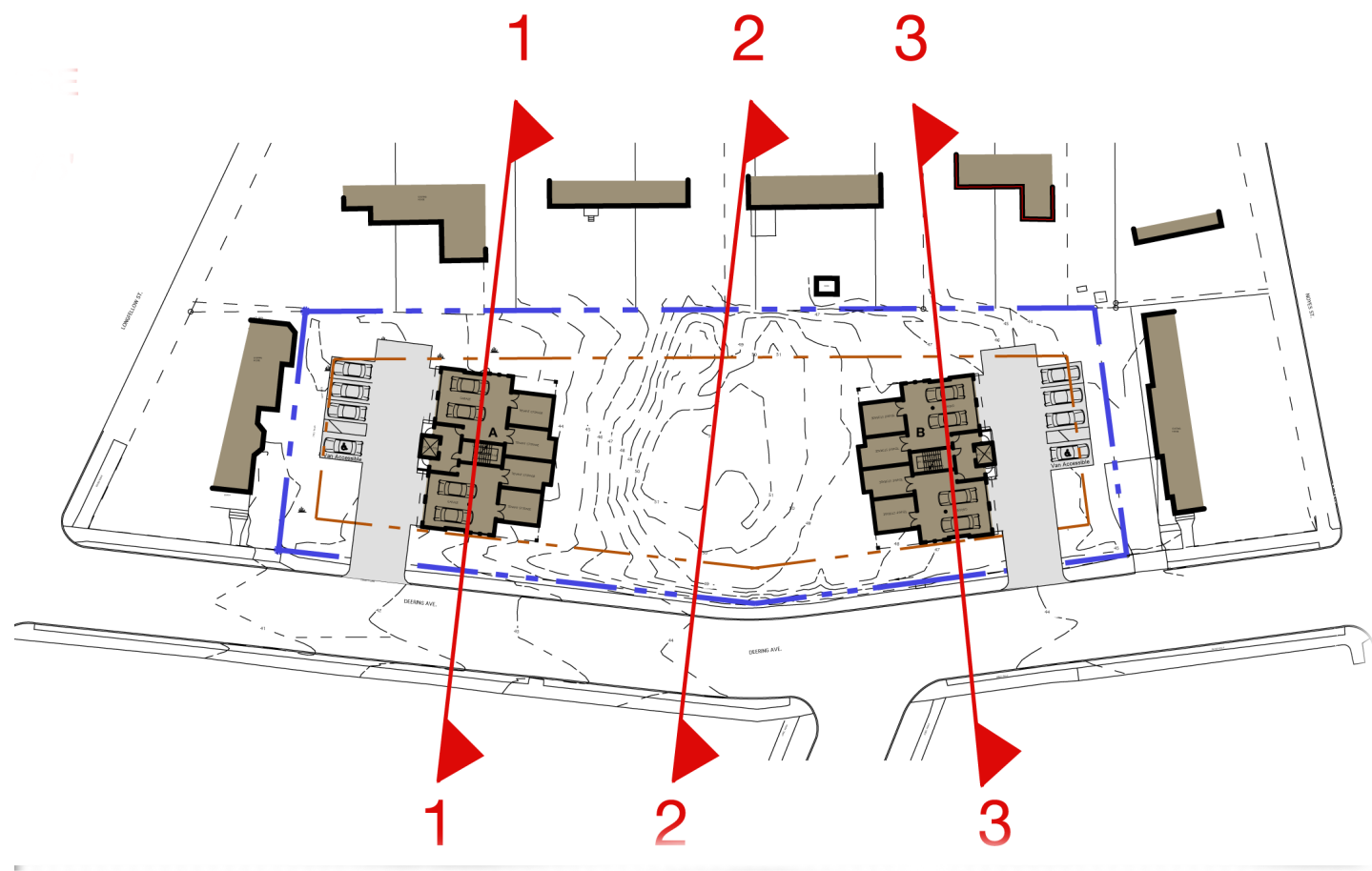
SITE SECTION 3
1/8" = 1'-0"



SITE SECTION 2
1/8" = 1'-0"



SITE SECTION 1
1/8" = 1'-0"



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Portland, Maine

Drawing Title: SITE SECTIONS
Scale: 1/8"=1'-0"

A3.1

Date: 12.14.21
Phase: CITY PERMITTING



VIEW AT DEERING AVENUE

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Portland, Maine

Drawing Title: Scale: N.T.S.

3D VIEWS

A4.1

Date: 12.14.21
Phase: CITY PERMITTING



VIEW AT DEERING AVENUE

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**RESIDENCES AT
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Drawing Title: Scale: N.T.S.

3D VIEWS

A4.2

Date: 12.14.21
Phase: CITY PERMITTING



VIEW AT DEERING AVENUE



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**RESIDENCES AT
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Drawing Title: Scale: N.T.S.

3D VIEWS

A4.3

Date: 12.14.21
Phase: CITY PERMITTING



VIEW AT DEERING AVENUE



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Portland, Maine

Drawing Title: Scale: N.T.S.

3D VIEWS

A4.4

Date: 12.14.21
Phase: CITY PERMITTING



AERIAL VIEW SHOWING ROOF HVAC SCREENING

**RESIDENCES AT
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Portland, Maine

Drawing Title: Scale: N.T.S.

3D VIEWS

A4.5

Date: 1.15.21
Phase: DESIGN DEV.



FRONT ENTRANCE VIEW

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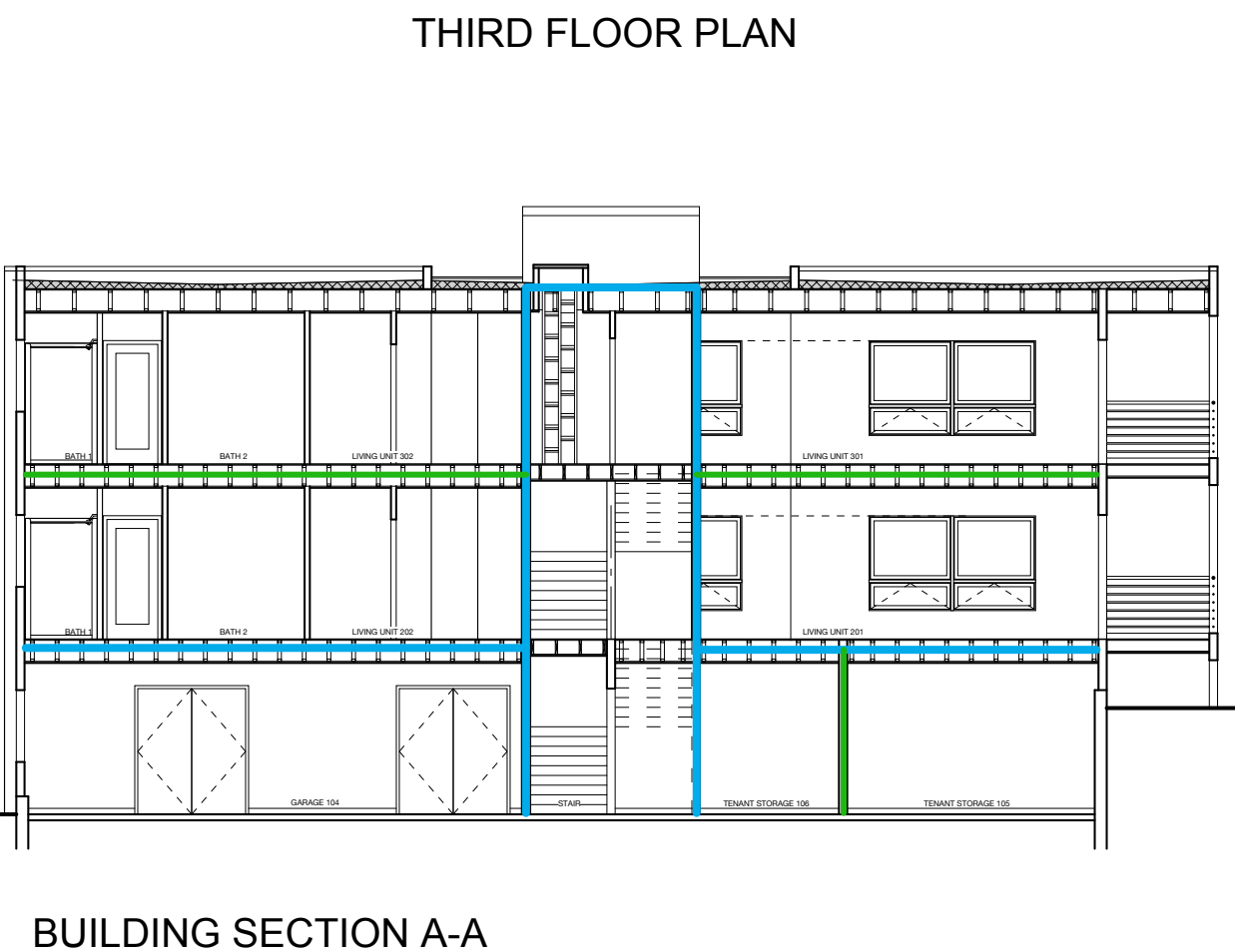
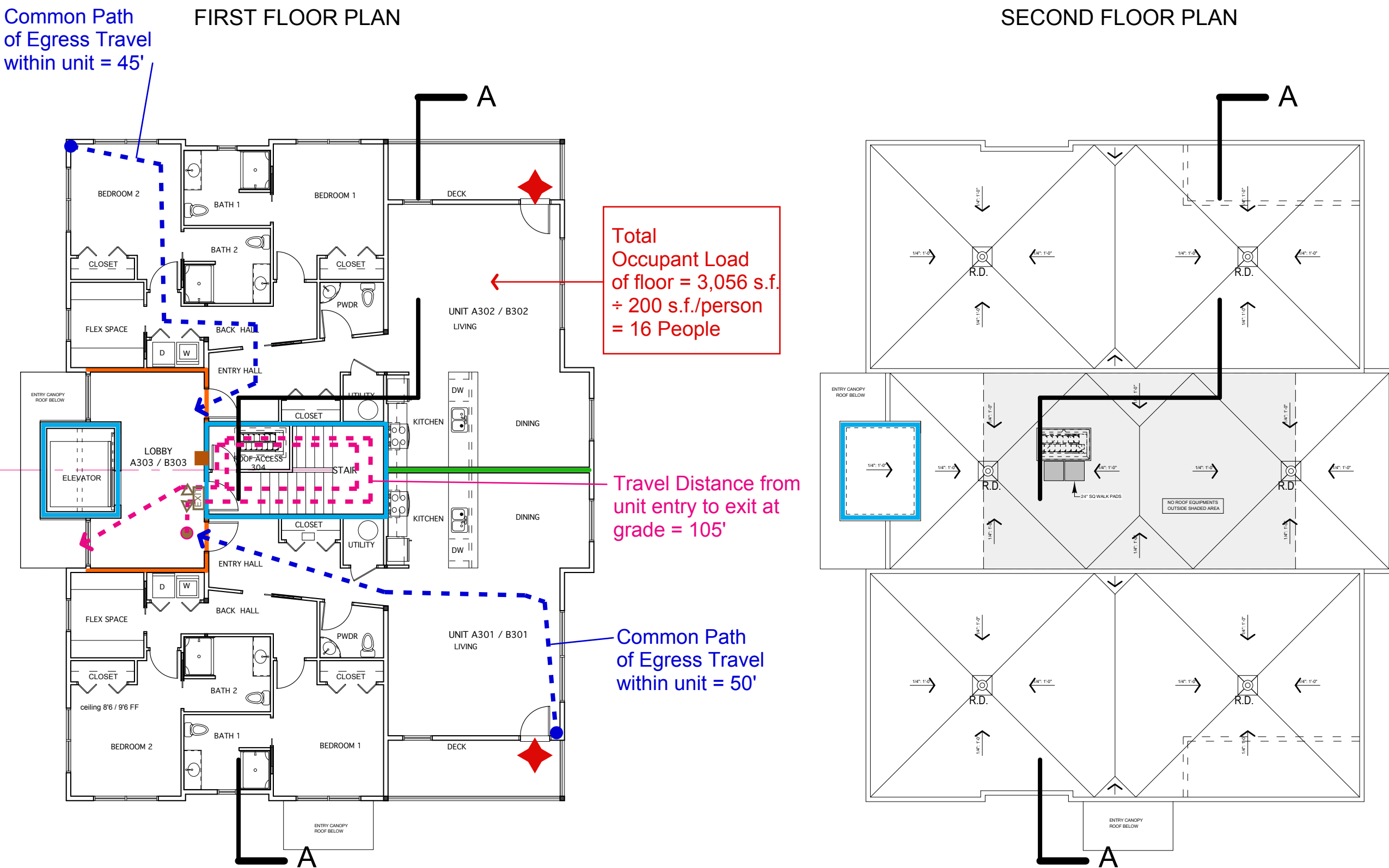
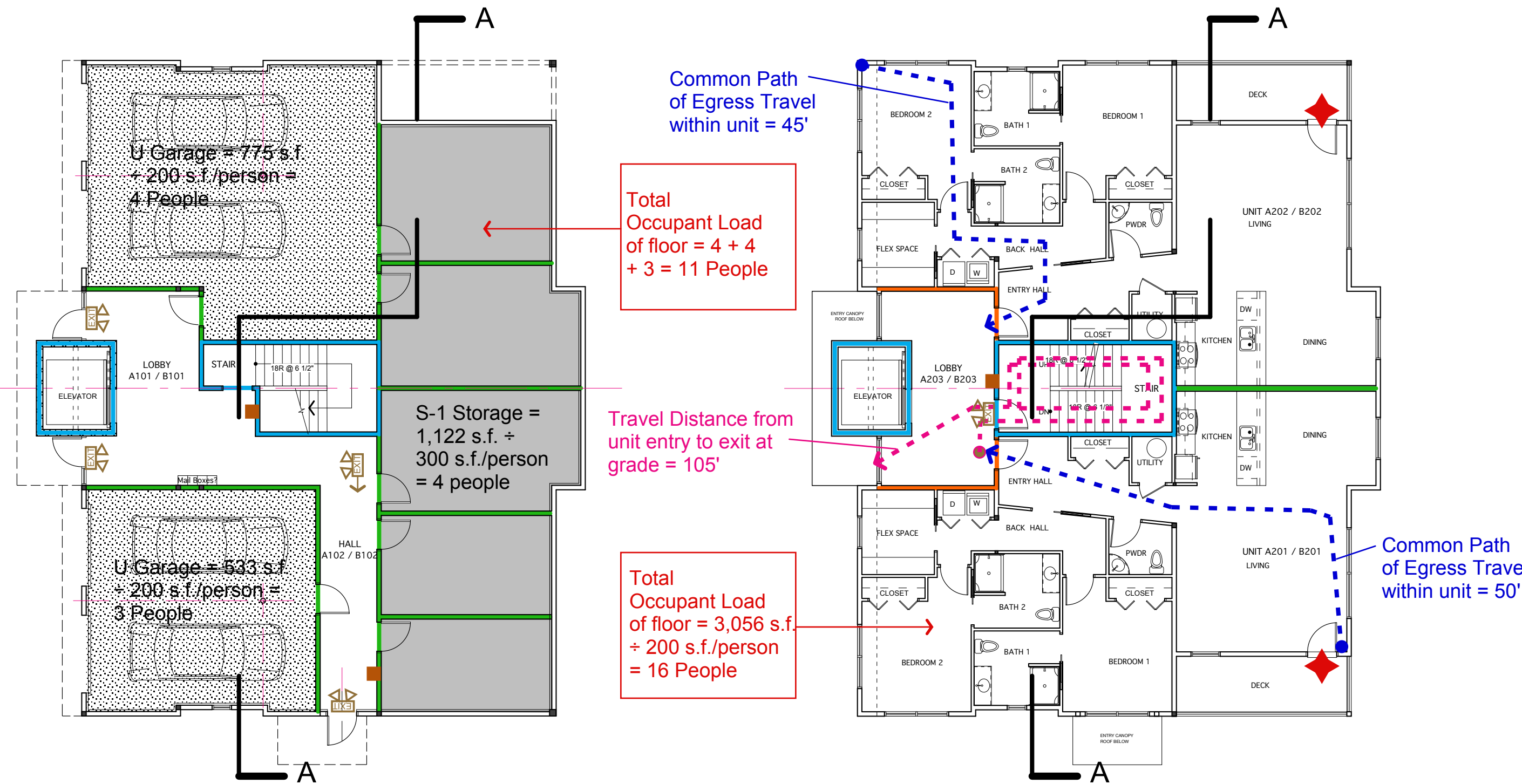
Portland, Maine

Drawing Title: Scale: N.T.S.

3D VIEWS

A4.6

Date: 12.14.21
Phase: CITY PERMITTING



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.
Construction Type:	Type VB: Wood frame construction.	Storage/Utility Use	2 Res. Units
		2 Res. Units	2 Res. Units
		Total:	9,168 sq. ft. 4 Units
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.
Construction Type:	Type 5(000): Wood frame construction. Per Table A.8.2.1.2, no rating is required for building elements.	Storage/Utility Use	2 Res. Units
		2 Res. Units	2 Res. Units
		Total:	9,168 sq. ft. 4 Units
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 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 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.	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 1006.3.2(1), 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. 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.
Travel Distance Limits:	Common Path Limit: 125' (Table 1006.3.2(1)) Dead-end Corridor: 50' if sprinklered (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. 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.
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. 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. 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 30.2.4.3.2, 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 sprinklered. 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. 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.



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DAVID MAYNES STUDIO LANDSCAPE ARCHITECTS
26 Storrs Street
Kennebunk, ME 04043
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www.davidmaynesstudio.com

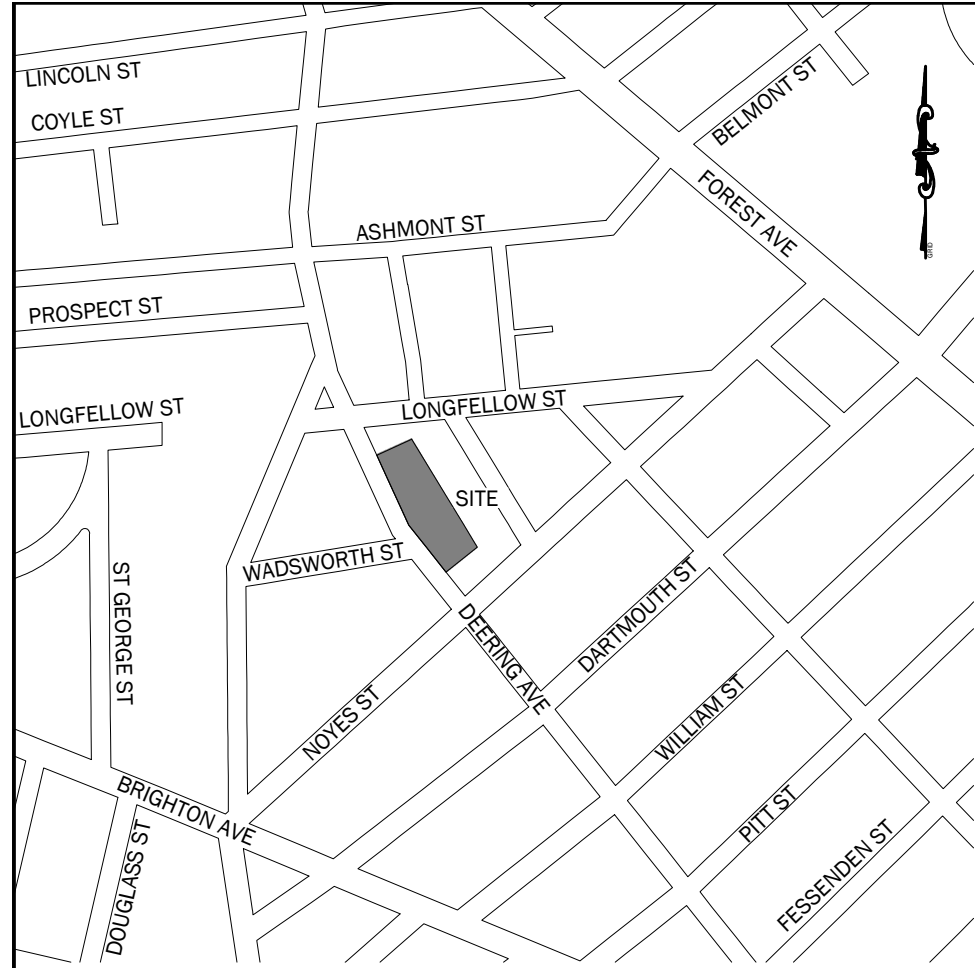
STRUCTURAL INTEGRITY CONSULTING ENGINEERS
46 Forest Avenue
Portland, ME 04101
207.774.4614
www.structuralinteg.com

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:	12.14.21
Phase:	CITY PERMITTING



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 ERECTED 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 MULTIPLY |
| PROVIDED: | 38,309 SF FOR 2 MULTIPLEXES (19,154 SF PER MULTIPLY) |
| 4. LOT AREA PER DWELLING UNIT | 4,500 SF |
| 5. LOT WIDTH MINIMUM | 90 FEET |
| 6. MINIMUM STREET FRONTAGE: | 50 FEET |
| PROVIDED: | 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 |
| 11. MAXIMUM LOT COVERAGE: | BUILDING A: AVG GRADE = 43.25, HEIGHT = 29.00' |
| PROVIDED: | BUILDING B: AVG GRADE = 45.75, HEIGHT = 28.75' |
| | 40% OF LOT AREA |
| | PROP. BLDGS: 17.6% |

ZONING STANDARDS FROM CITY OF PORTLAND
LAND USE ORDINANCE, REVISED DEC. 1, 2020.

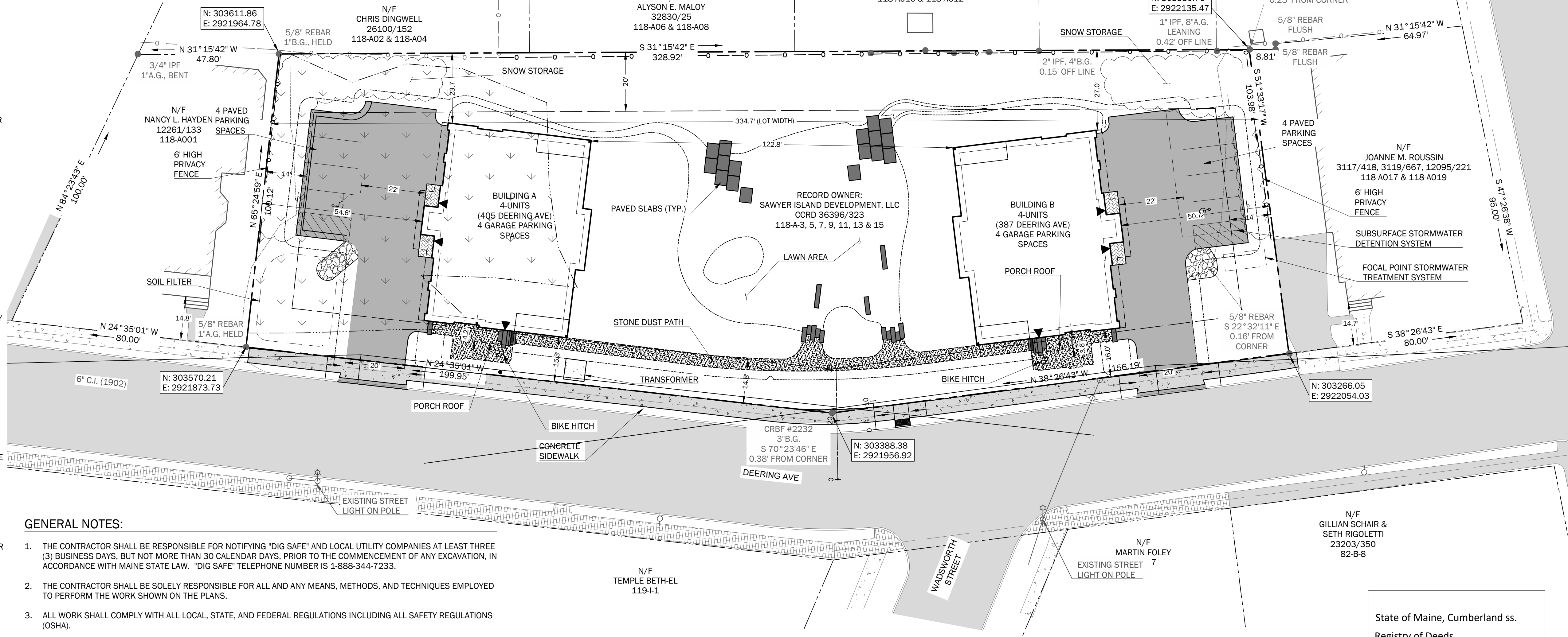
SURVEY GENERAL NOTES

- 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.i: 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:

- OWNER OF RECORD: SAWYER ISLAND DEVELOPMENT, LLC
100 SILVER STREET
PORTLAND, MAINE 04101
CCRD BOOK 36396, PAGE 323
- STREET ADDRESS: 387 & 405 DEERING AVENUE, PORTLAND, MAINE
- 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.

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

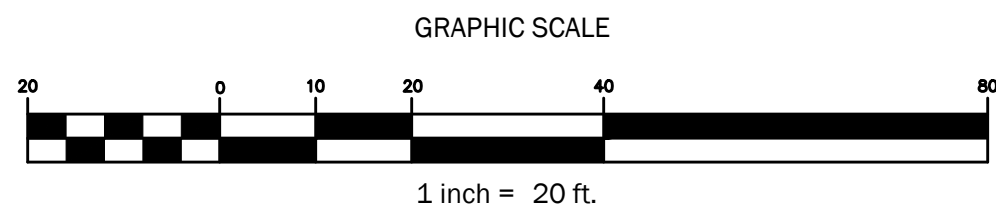
THE PROJECT WILL UTILIZE CITY CURBSIDE TRASH AND RECYCLING SERVICES.

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

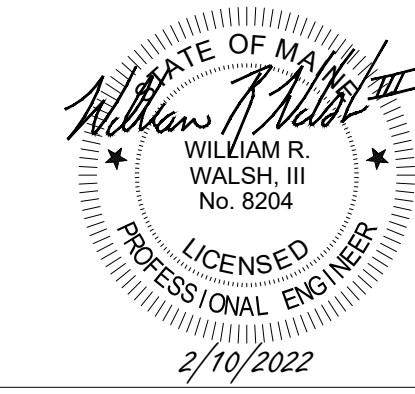
387 & 405 Deering Avenue
Portland, Maine 04103
BK 36396, PG 323; CBL: 118 A 003001

SAWYER ISLAND DEVELOPMENT, LLC.

PREPARED FOR:

100 SILVER STREET
PORTLAND, MAINE 04101

WALSH
ENGINEERING ASSOCIATES, INC.
One Karen Dr., Suite 2A | Westbrook, Maine 04092
ph: 207.553.9898 | www.walsh-eng.com
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ISSUED FOR PERMITTING - NOT FOR CONSTRUCTION

Rev.	Date	Description	Drawn	Check
1	01/05/2021	REVISED PER STAFF COMMENTS	TEF	NGC
2	10/05/2021	REVISED PER STAFF COMMENTS	TEF	NGC
3	1/7/2022	REVISED PER STAFF COMMENTS	TEF	NGC
4	2/10/2022	Redesign South Stormwater Basin	JWG	NGC

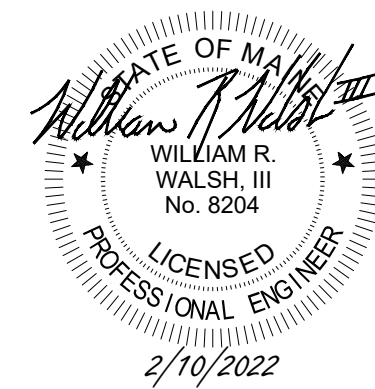
Sheet Title:

SUBDIVISION RECORDING PLAT

Job No.: 613.1
Date: Feb. 24, 2021
Scale: AS NOTED
Drawn: MTL
Checked: SWC

Sheet No.:

C0.1



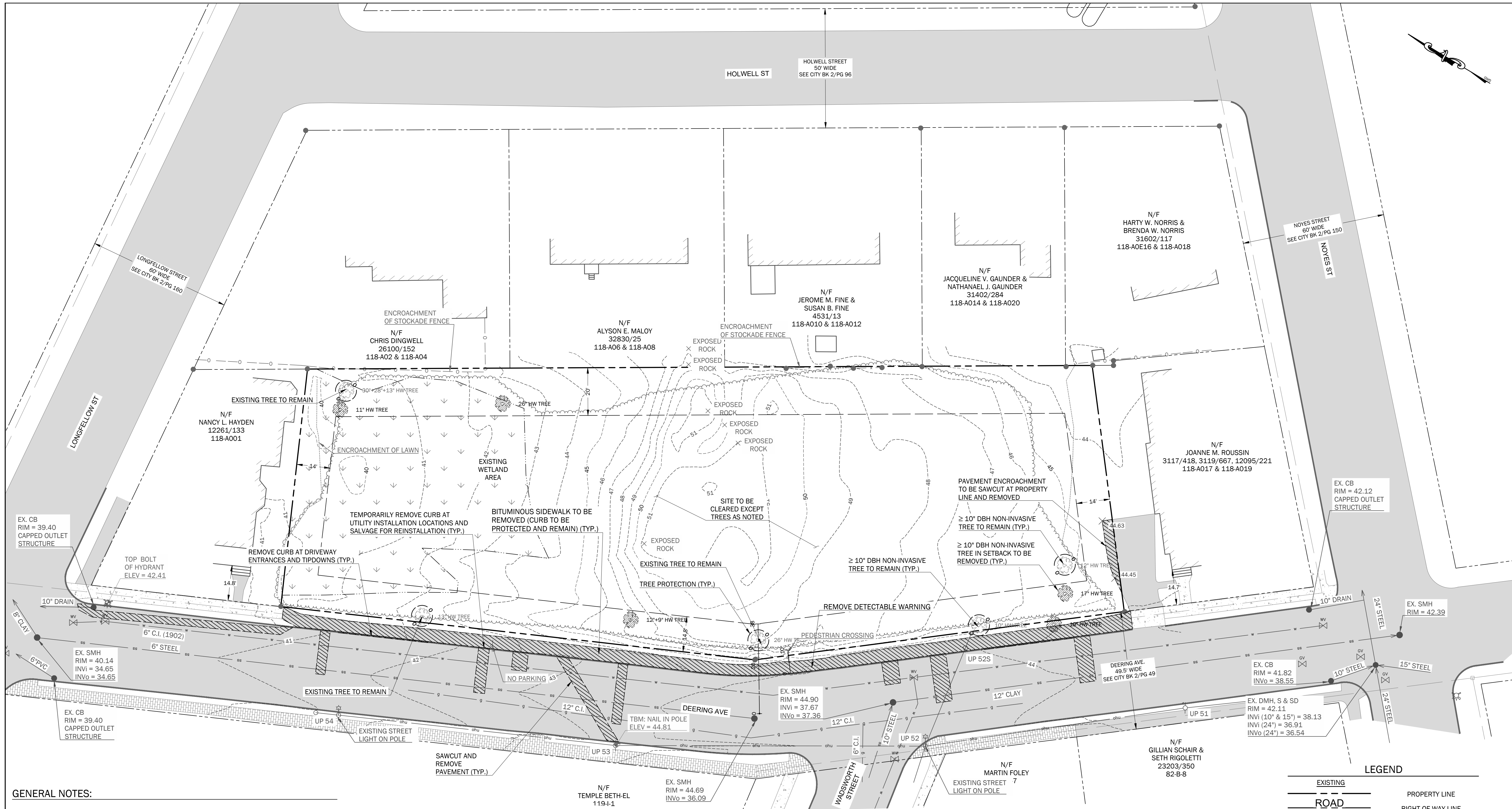
Deering Avenue Residences

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



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PARCEL INFORMATION:

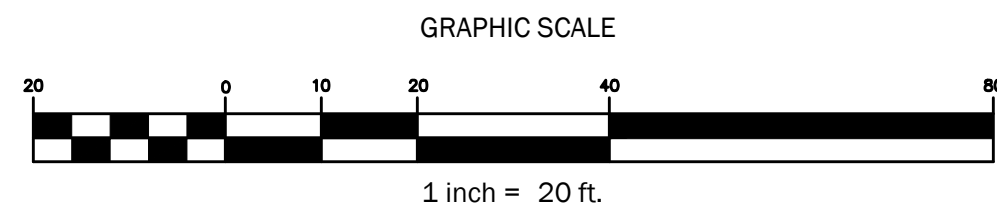
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PORTLAND, MAINE 04101
CCRD BOOK 36396, PAGE 323
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L.B. 240/132 ELEVATION:39.36.

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.



LEGEND

EXISTING	
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

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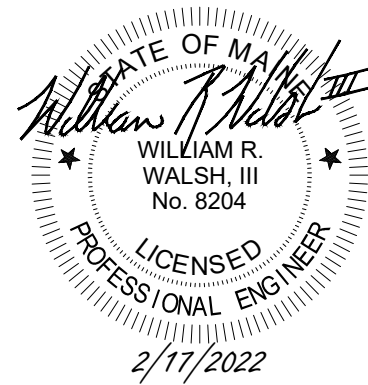
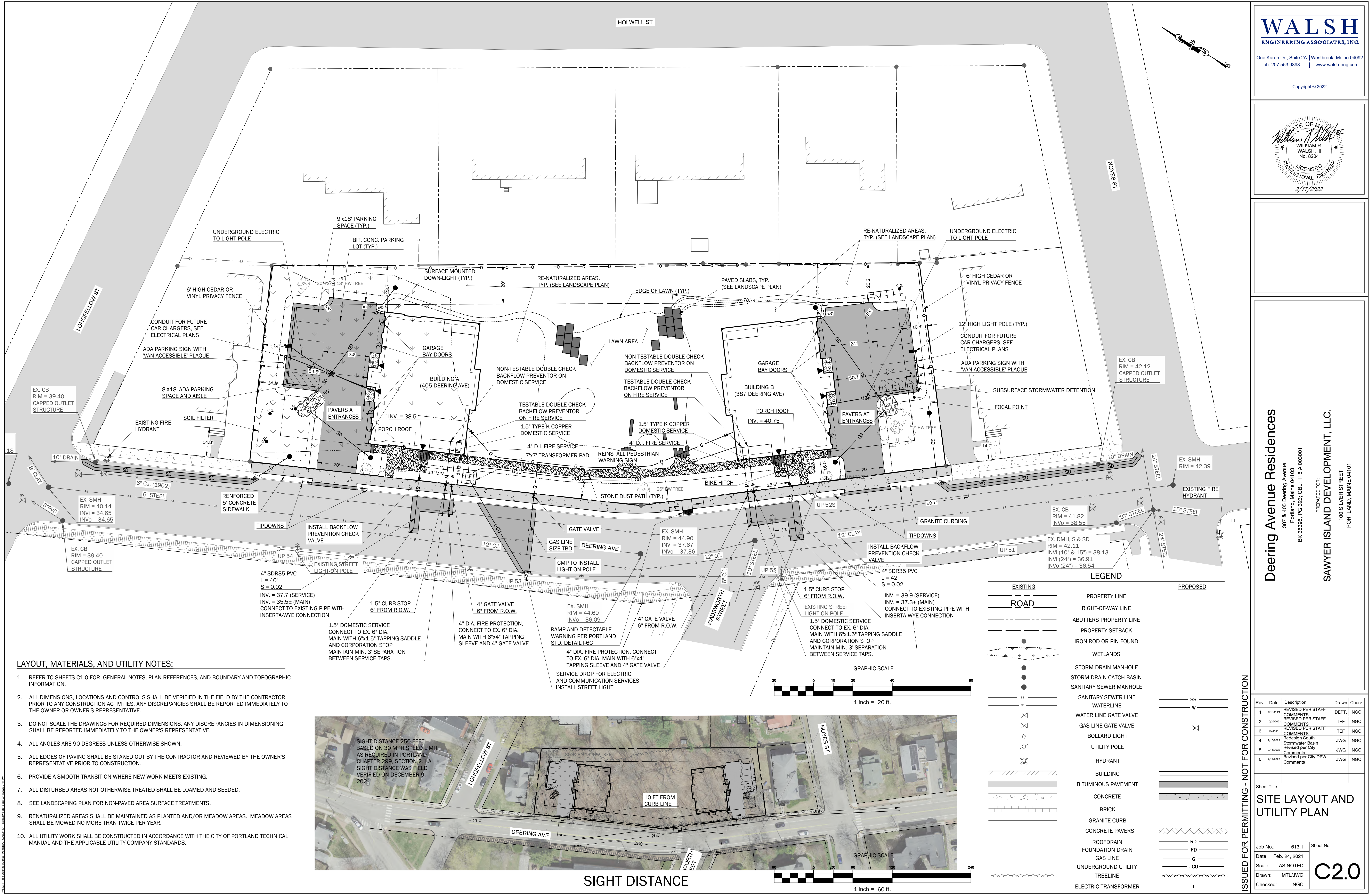
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2	10/26/2021	REVISED PER STAFF COMMENTS	TEF	NGC
3	1/7/2022	REVISED PER STAFF COMMENTS	TEF	NGC
4	2/10/2022	Redesign South Stormwater Basin	JWG	NGC

Sheet Title:

EXISTING
CONDITIONS &
REMOVALS PLAN

Job No.:	613.1	Sheet No.:
Date:	Feb. 24, 2021	
Scale:	AS NOTED	
Drawn:	MTL	
Checked:	SWC	

C1.0



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

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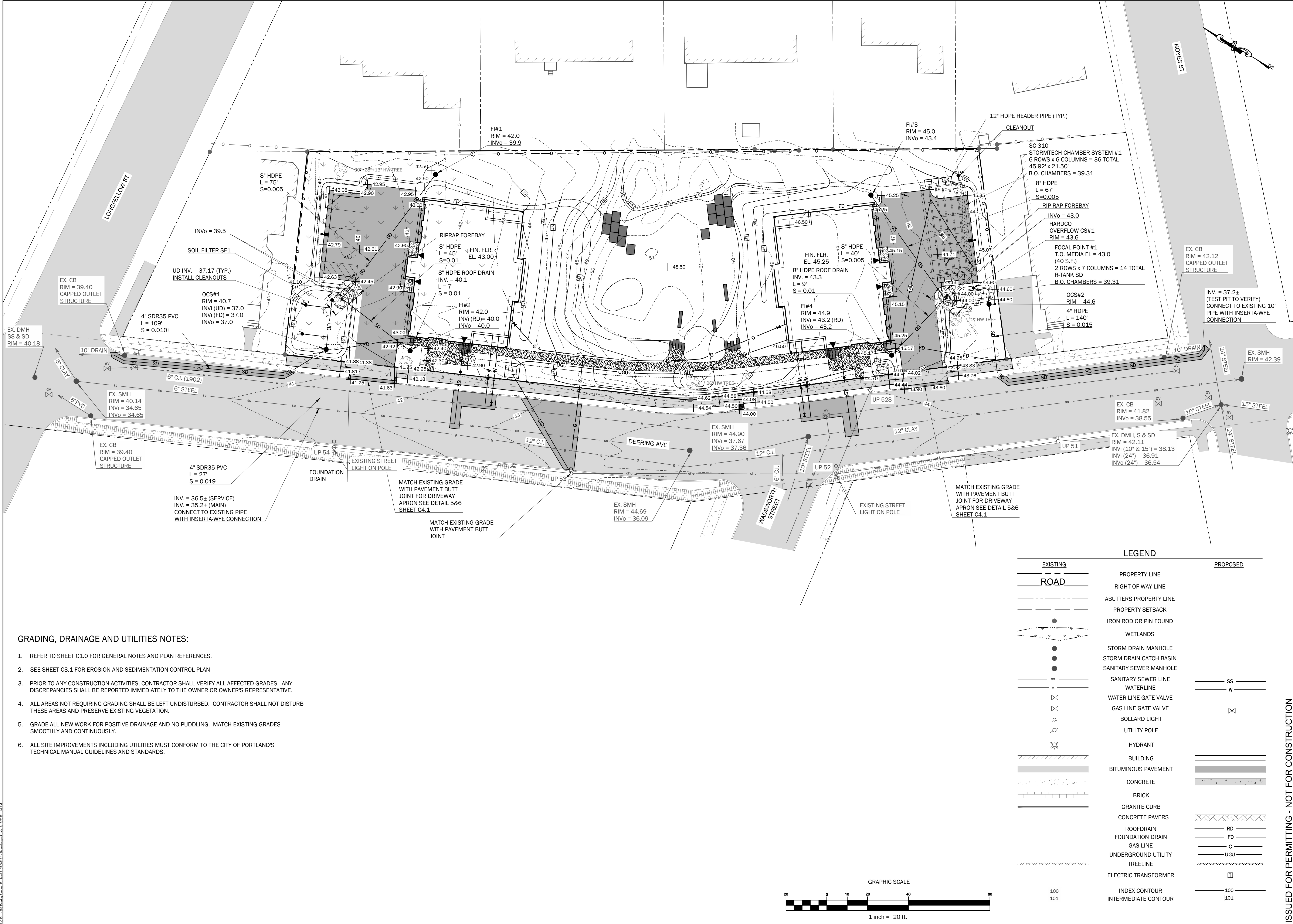
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2	10/09/2021	REVISED PER STAFF COMMENTS	TEF	NGC
3	1/7/2022	REVISED PER STAFF COMMENTS	TEF	NGC
4	2/10/2022	Redesign South Stormwater Basin	JWG	NGC
5	2/16/2022	Revised per City Comments	JWG	NGC
6	2/17/2022	Revised per City DPW Comments	JWG	NGC

Sheet Title:

SITE LAYOUT AND UTILITY PLAN

Job No.:	613.1	Sheet No.:	
Date:	Feb. 24, 2021	Scale:	AS NOTED
Drawn:	MTL/JWG	Checked:	NGC

C2.0



GRADING, DRAINAGE AND UTILITIES NOTES:

1. REFER TO SHEET C1.0 FOR GENERAL NOTES AND PLAN REFERENCES.
2. SEE SHEET C3.1 FOR EROSION AND SEDIMENTATION CONTROL PLAN
3. PRIOR TO ANY CONSTRUCTION ACTIVITIES, CONTRACTOR SHALL VERIFY ALL AFFECTED GRADES. ANY DISCREPANCIES SHALL BE REPORTED IMMEDIATELY TO THE OWNER OR OWNER'S REPRESENTATIVE.
4. ALL AREAS NOT REQUIRING GRADING SHALL BE LEFT UNDISTURBED. CONTRACTOR SHALL NOT DISTURB THESE AREAS AND PRESERVE EXISTING VEGETATION.
5. GRADE ALL NEW WORK FOR POSITIVE DRAINAGE AND NO PUDDLING. MATCH EXISTING GRADES SMOOTHLY AND CONTINUOUSLY.
6. ALL SITE IMPROVEMENTS INCLUDING UTILITIES MUST CONFORM TO THE CITY OF PORTLAND'S TECHNICAL MANUAL GUIDELINES AND STANDARDS.

WALSH

ENGINEERING ASSOCIATES, INC.

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STATE OF MAINE

William R. Walsh, III

WILIAM R. WALSH, III

No. 8204

LICENSED PROFESSIONAL ENGINEER

2/16/2022

Deering Avenue Residences

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Portland, Maine 04103
BK 36396, PG 323; CBL: 118 A 003001

PREPARED FOR:
SAWYER ISLAND DEVELOPMENT, LLC.
100 SILVER STREET
PORTLAND, MAINE 04101

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10/26/2021

REVISED PER STAFF COMMENTS

TEF

NGC

3

1/7/2022

REVISED PER STAFF COMMENTS

TEF

NGC

4

2/10/2022

Redesign South Stormwater Basin

JWG

NGC

5

2/16/2022

Revised per City Comments

JWG

NGC

Sheet Title:
Grading and Drainage Plan

Job No.: 613.1

Scale: Feb. 24, 2021

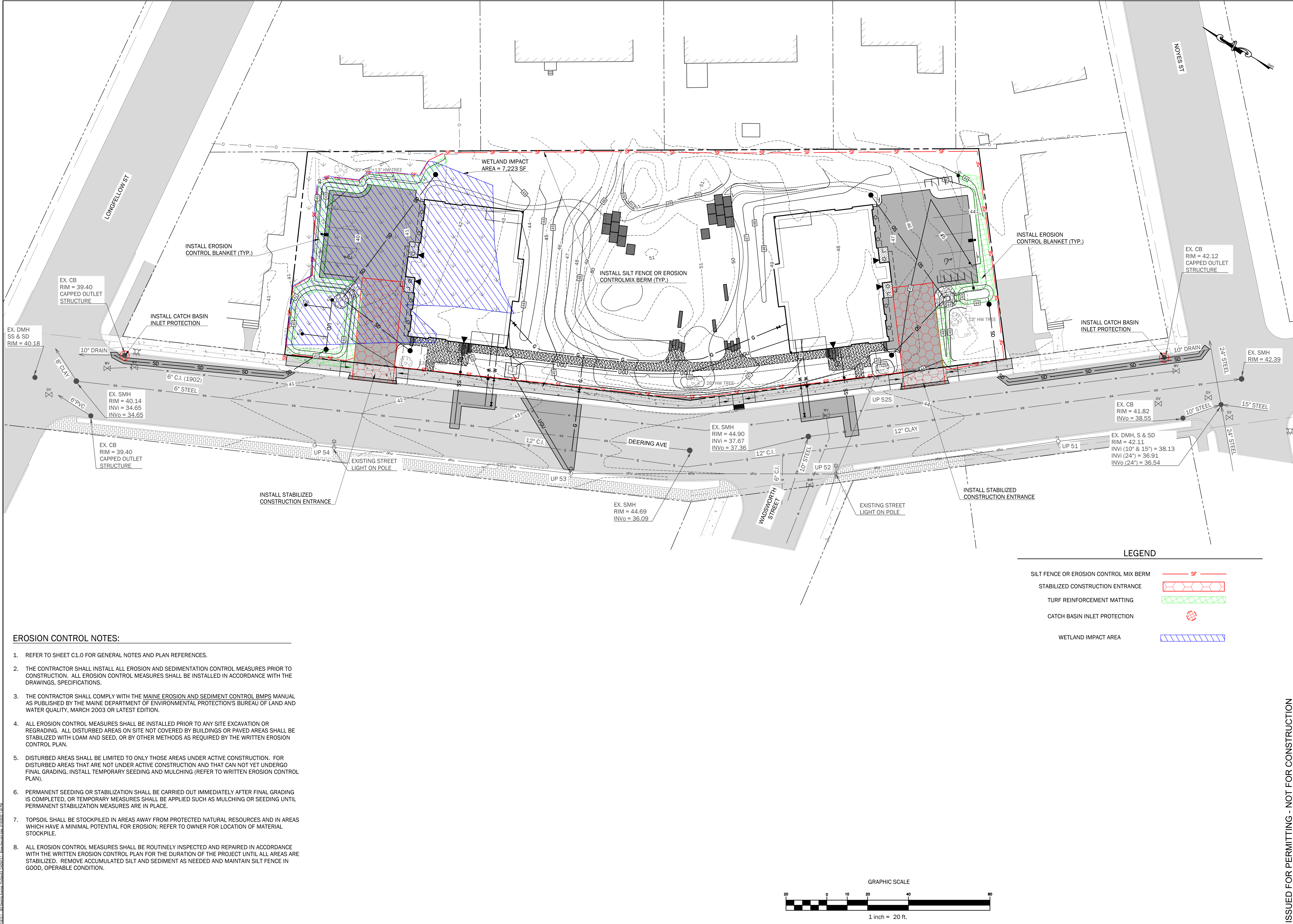
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Sheet No.:
C3.0

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EROSION CONTROL NOTES:

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.

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STATE OF MAINE

WILIAM R. WALSH, III

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2/16/2022

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4	2/10/2022	Redesign South Stormwater Basin	JWG	NGC
5	2/16/2022	Revised per City Comments	JWG	NGC

Sheet Title:
Erosion Control and Wetland Impact Plan

Job No.: 613.1

Date: Feb. 24, 2021

Scale: AS NOTED

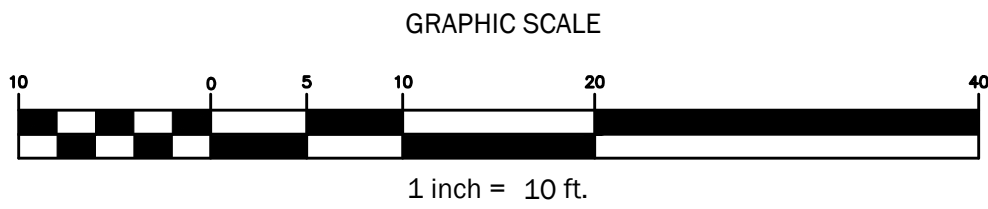
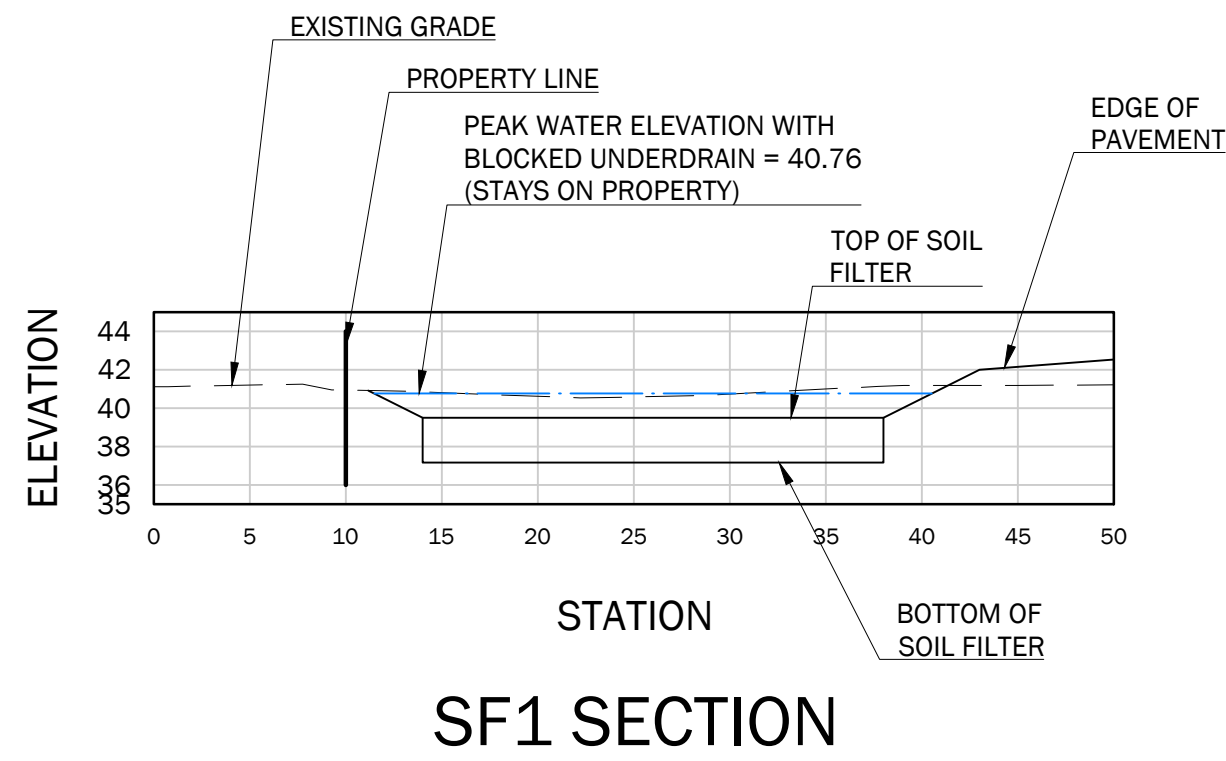
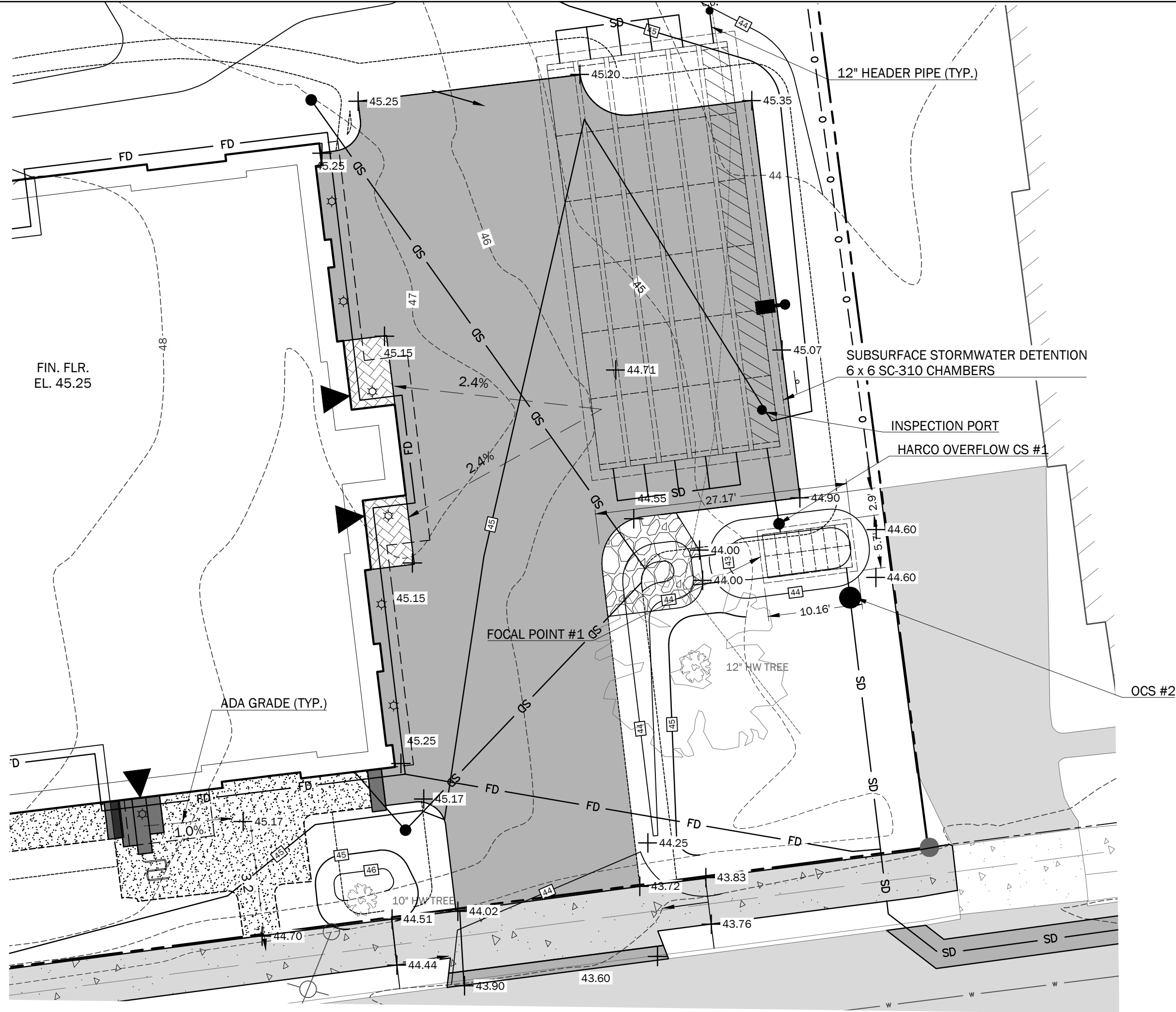
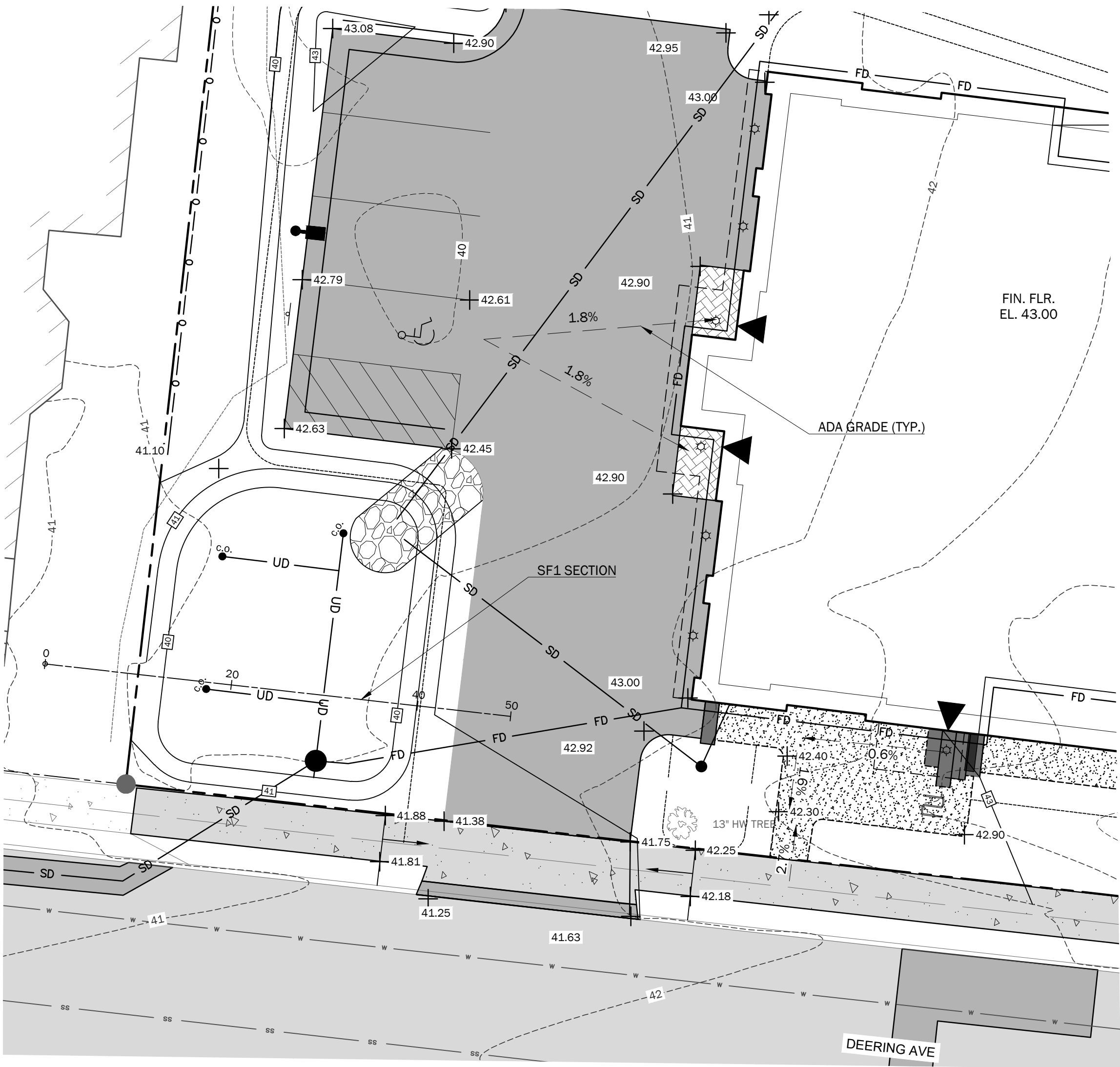
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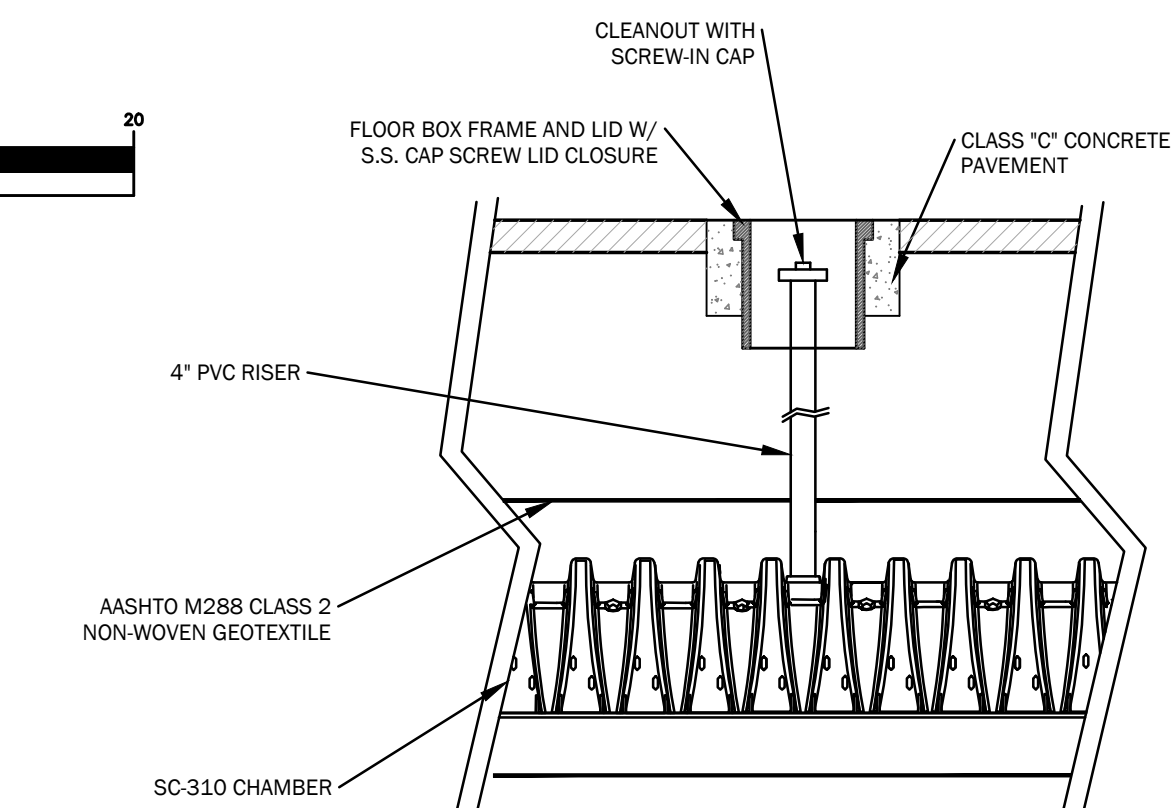
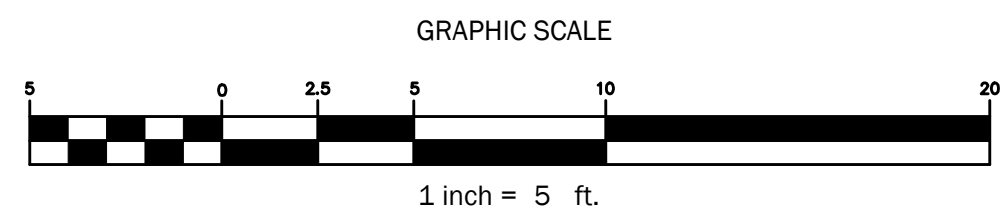
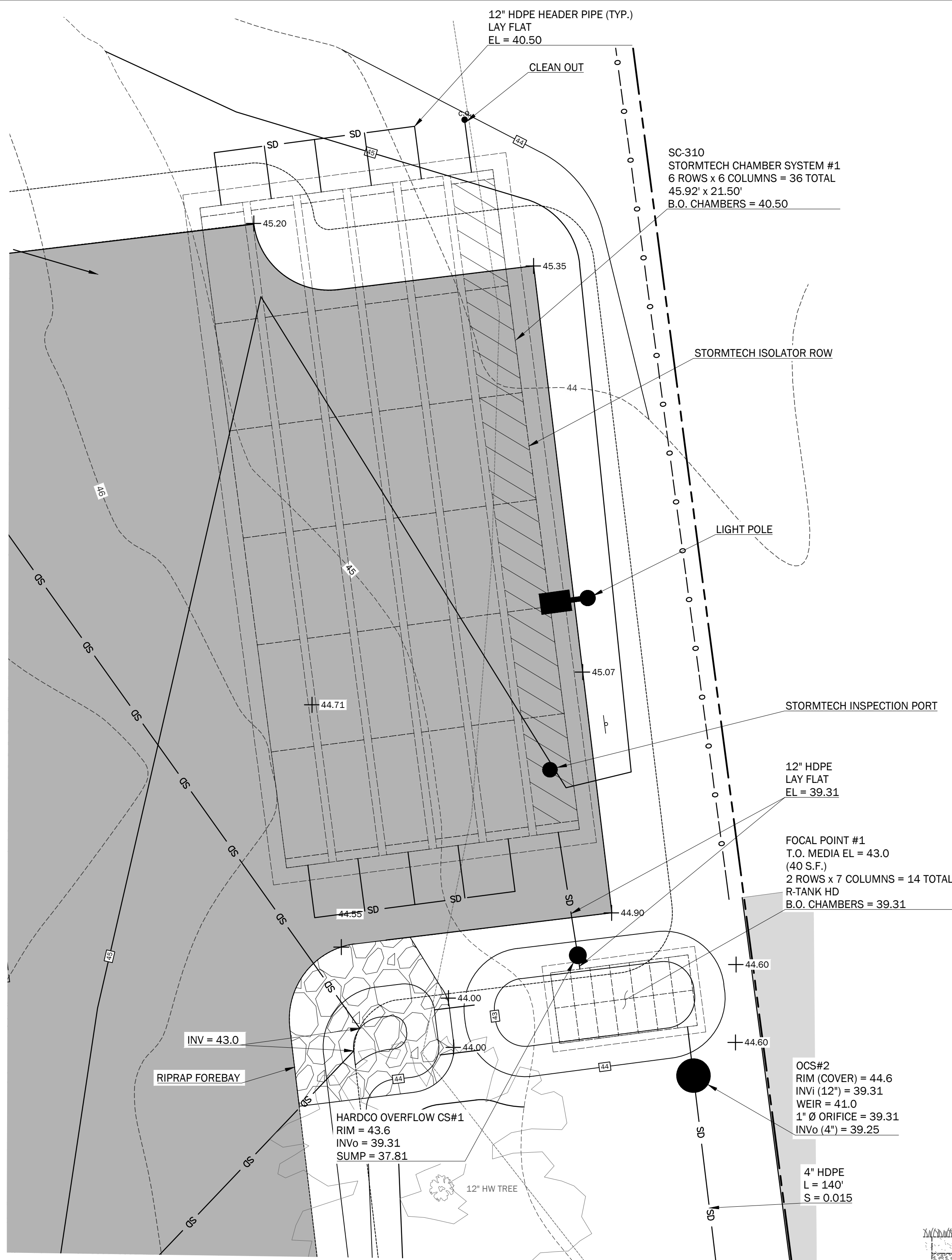
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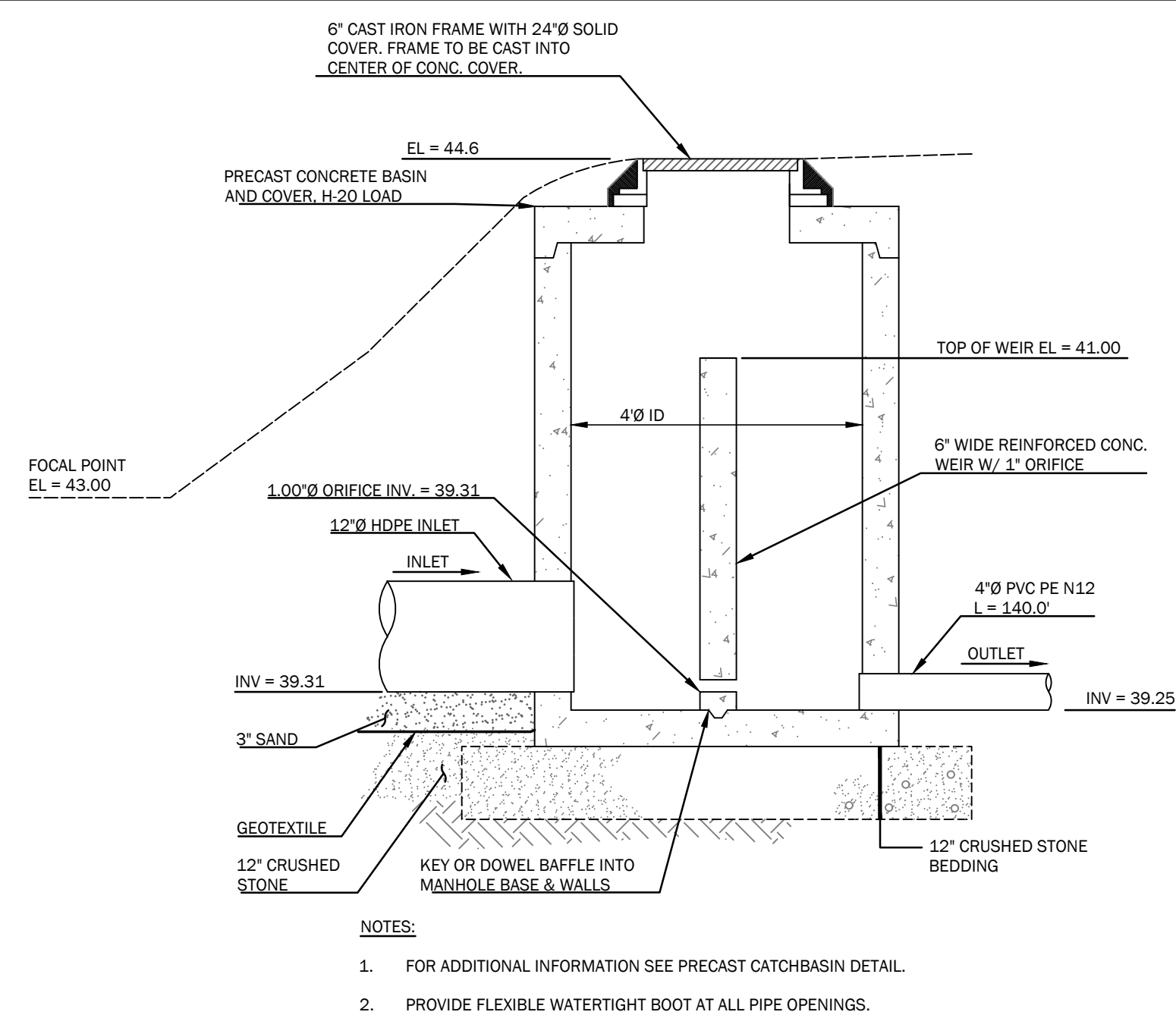


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4	2/10/2022	Redesign South Stormwater Basin	JWG	NGC
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Job No.:		613.1	Sheet No.:	
Date:		Feb. 24, 2021	C3.2	
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NOTE:
INSTALL ONE INSPECTION PORT PER 500 S.F. OF CHAMBER AREA

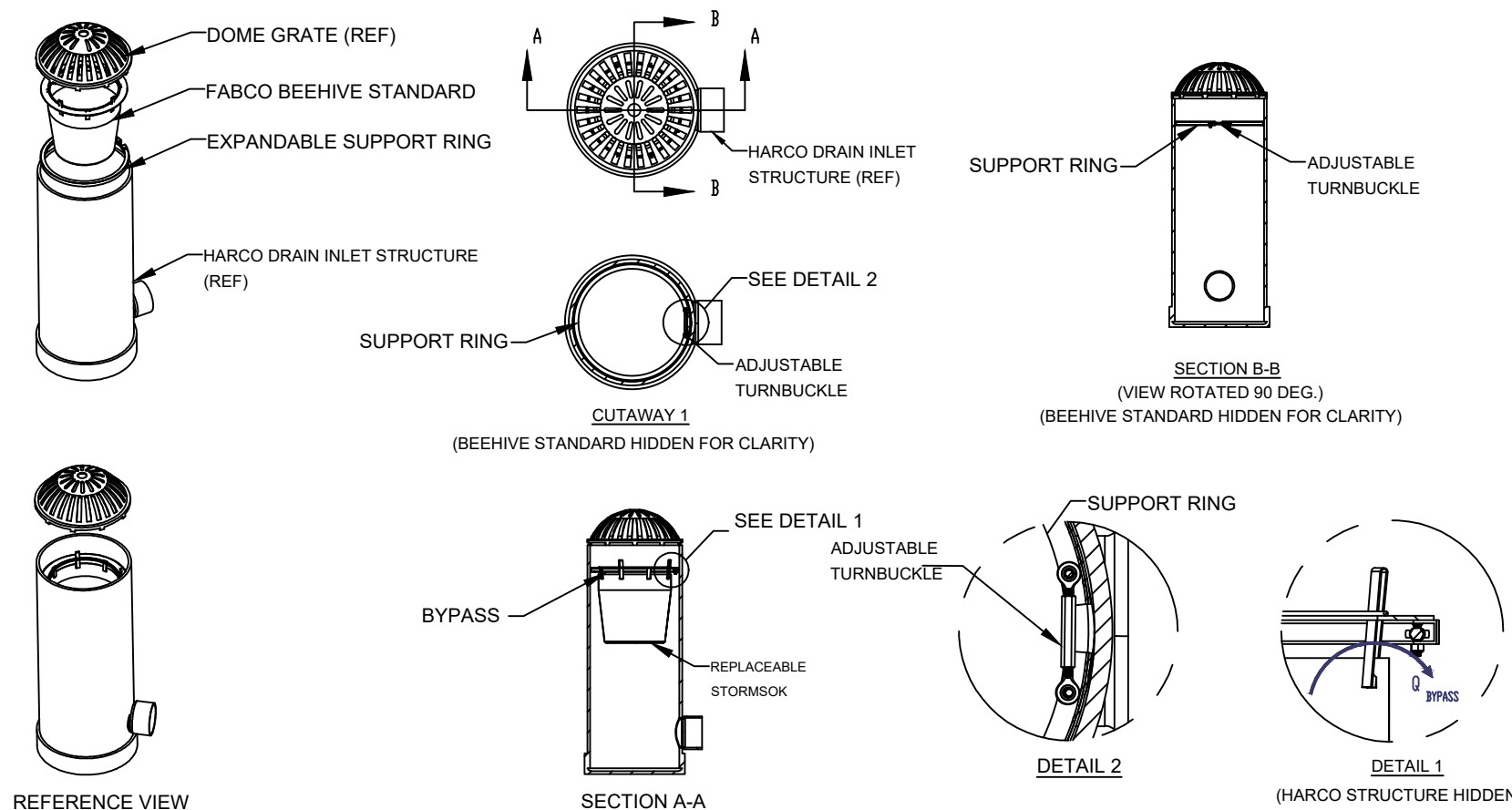
9 STORMTECH INSPECTION POINT
NOT TO SCALE



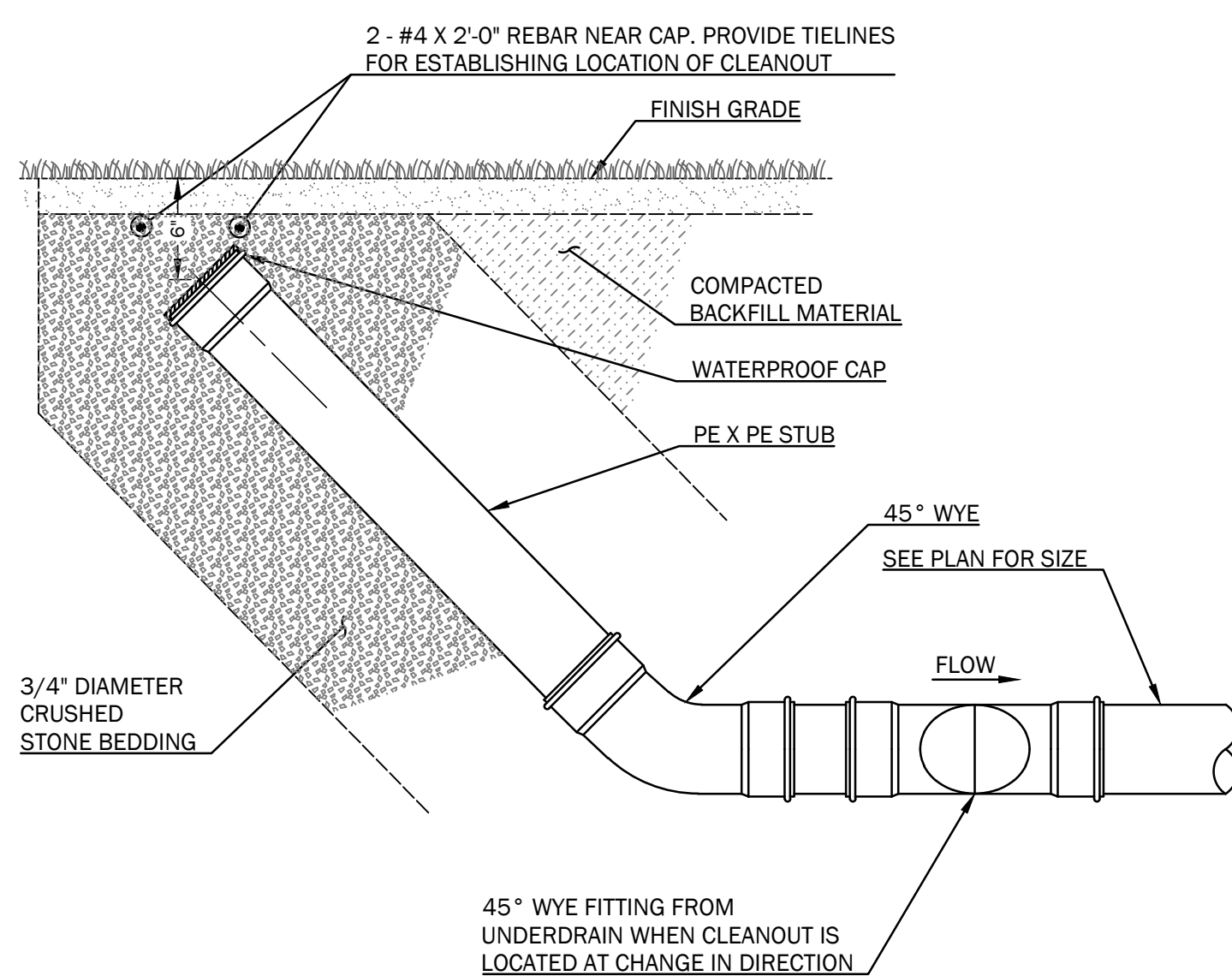
4 OUTLET CONTROL STRUCTURE #2 DETAIL

STRUCTURE DIAMETER (IN.)	DEBRIS CAPACITY (CU FT)	FILTERED FLOWRATE (CFS)	BYPASS FLOWRATE (CFS)
12	0.66	1.7	1.0
15	1.0	2.1	1.3
18	1.2	2.3	1.4
24	2.8	3.9	2.2
30	2.8	3.9	2.2

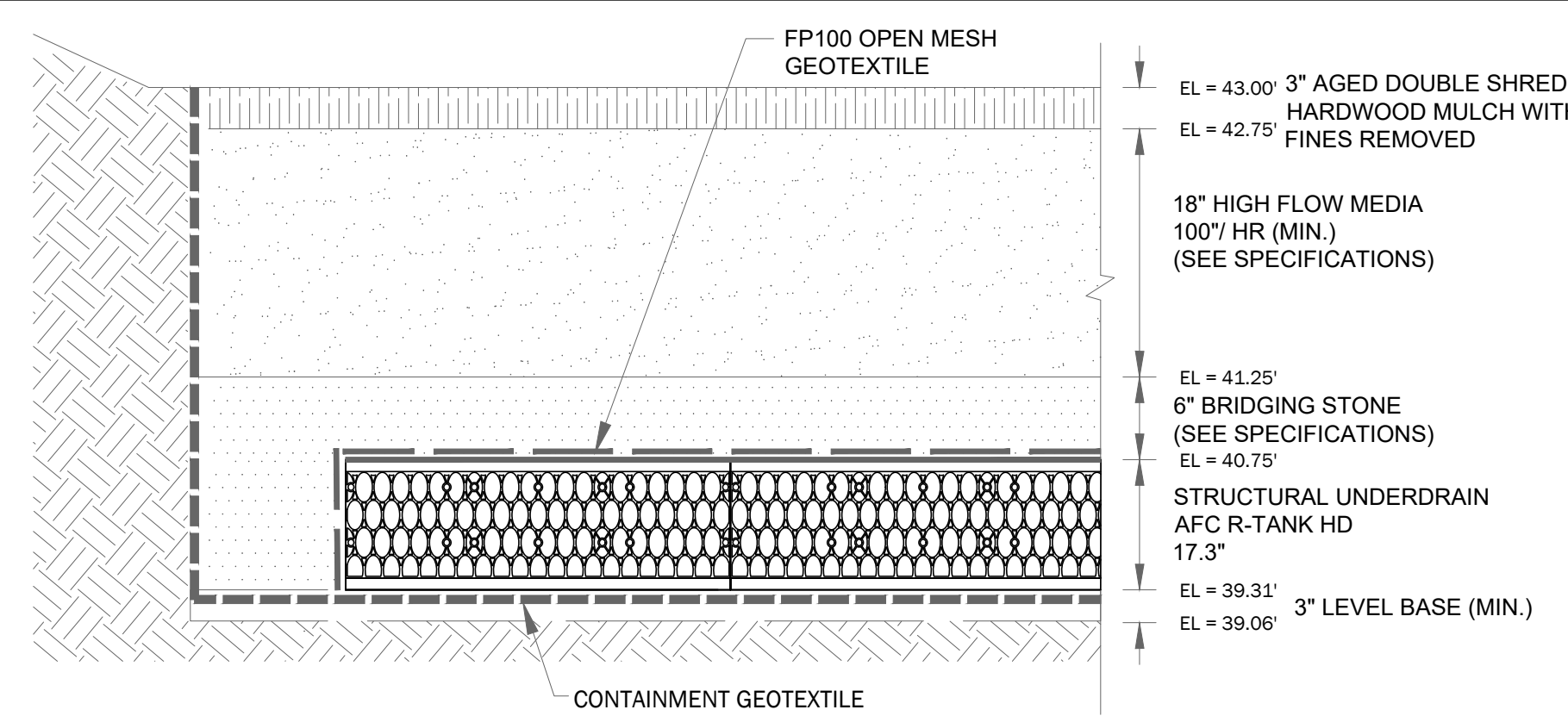
NOTES:
1. MATERIAL:
A) SUPPORT FLANGE: ALUMINUM ALLOY PLATE, 5000 SERIES
B) STORMSK: WOVEN POLYPROPYLENE GEOTEXTILE
C) EXPANSION RING: ALUMINUM ALLOY CHANNEL, 6000 SERIES
D) HARDWARE: STAINLESS STEEL
2. RECOMMENDED MINIMUM VAULT DEPTH: 2'-IN BELOW STORMSK
3. USE ONLY WITH FABCO REPLACEABLE STORMSK



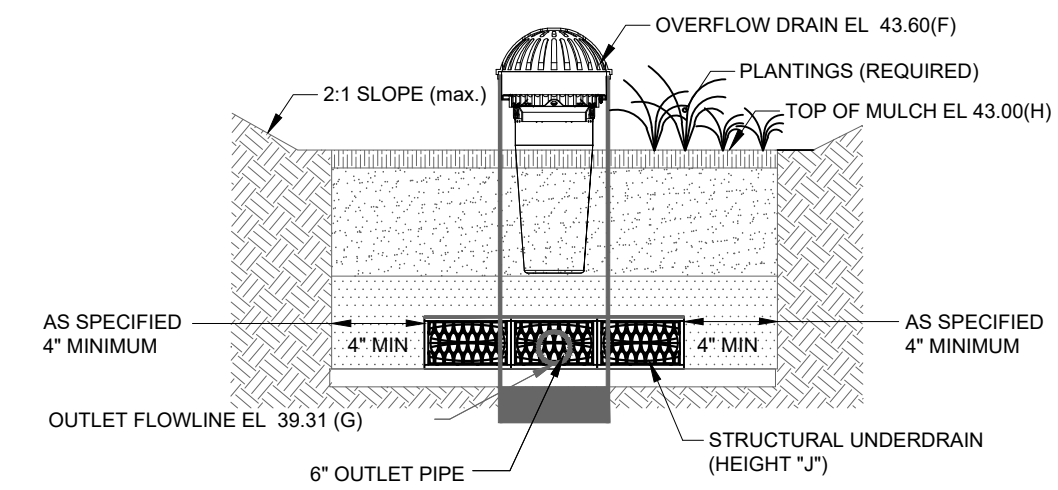
5 HARCO DOMED OVERFLOW WITH FILTER INSERT DETAIL
NOT TO SCALE



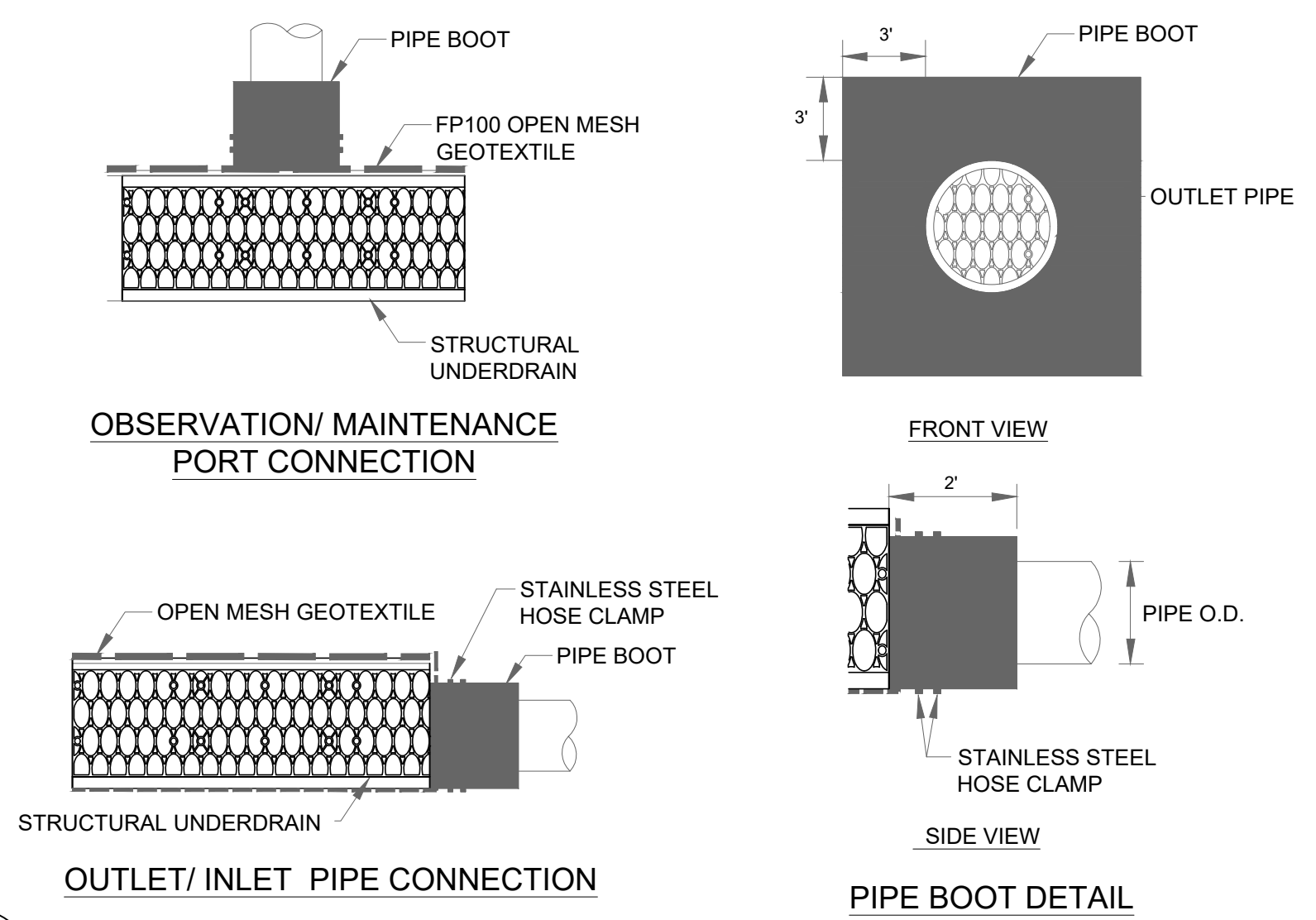
8 SEWER/STORMDRAIN CLEANOUT AT LAWN DETAIL
NOT TO SCALE



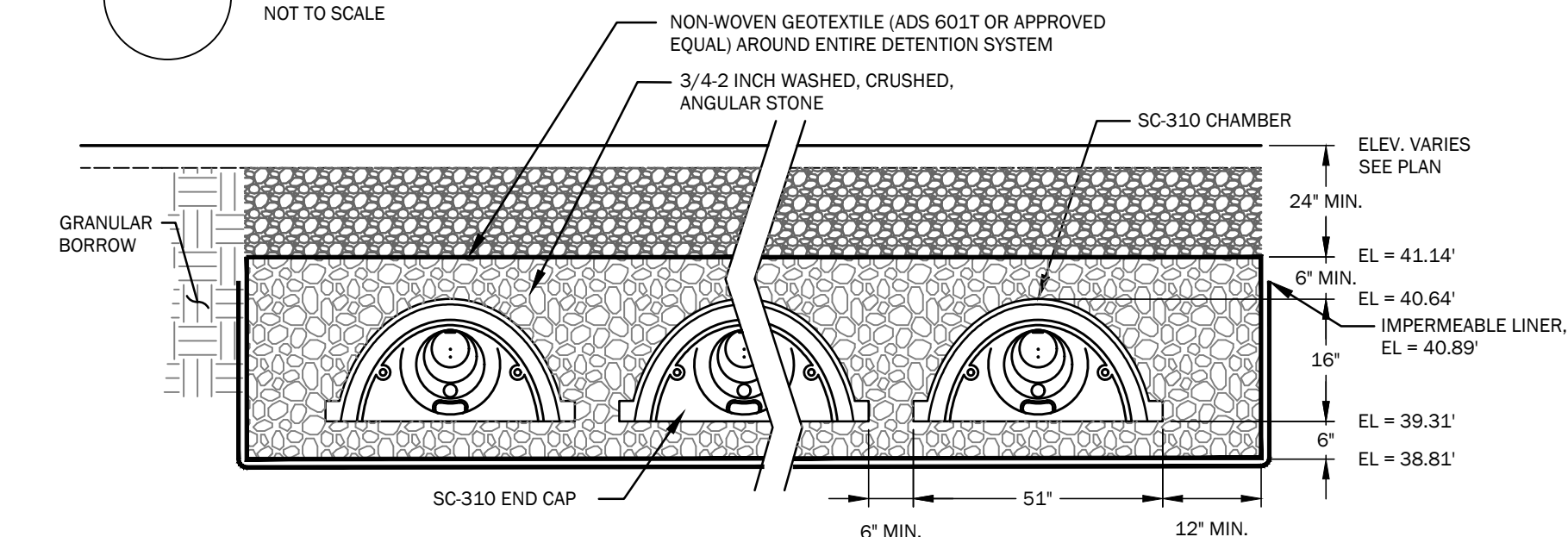
1 FOCAL POINT STORMWATER TREATMENT SYSTEM TYPICAL CROSS-SECTION
NOT TO SCALE



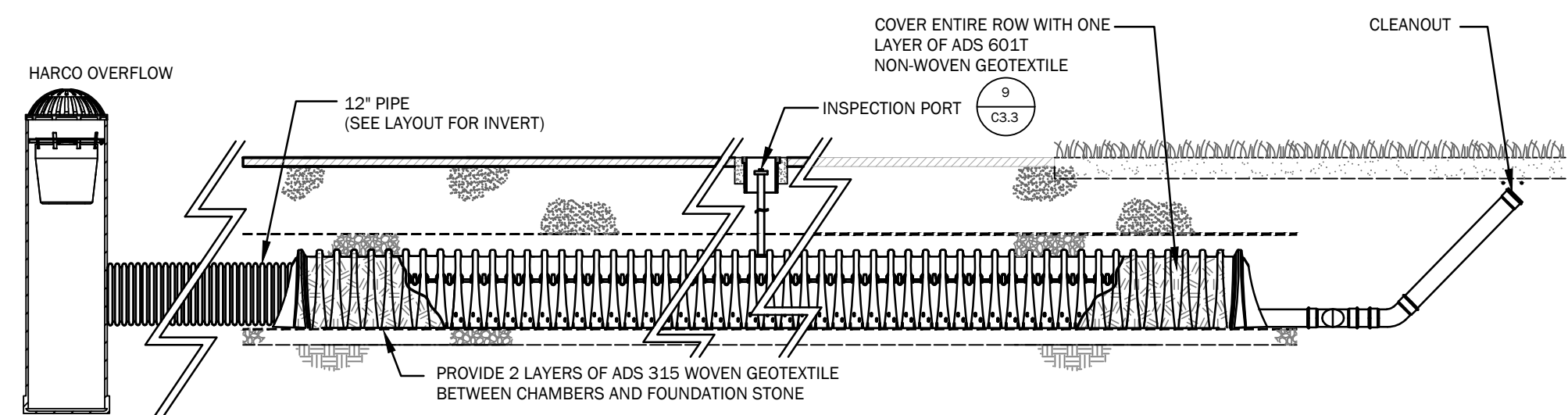
2 FOCAL POINT STORMWATER TREATMENT SYSTEM TYPICAL CROSS-SECTION
NOT TO SCALE



3 PIPE CONNECTION DETAIL
NOT TO SCALE



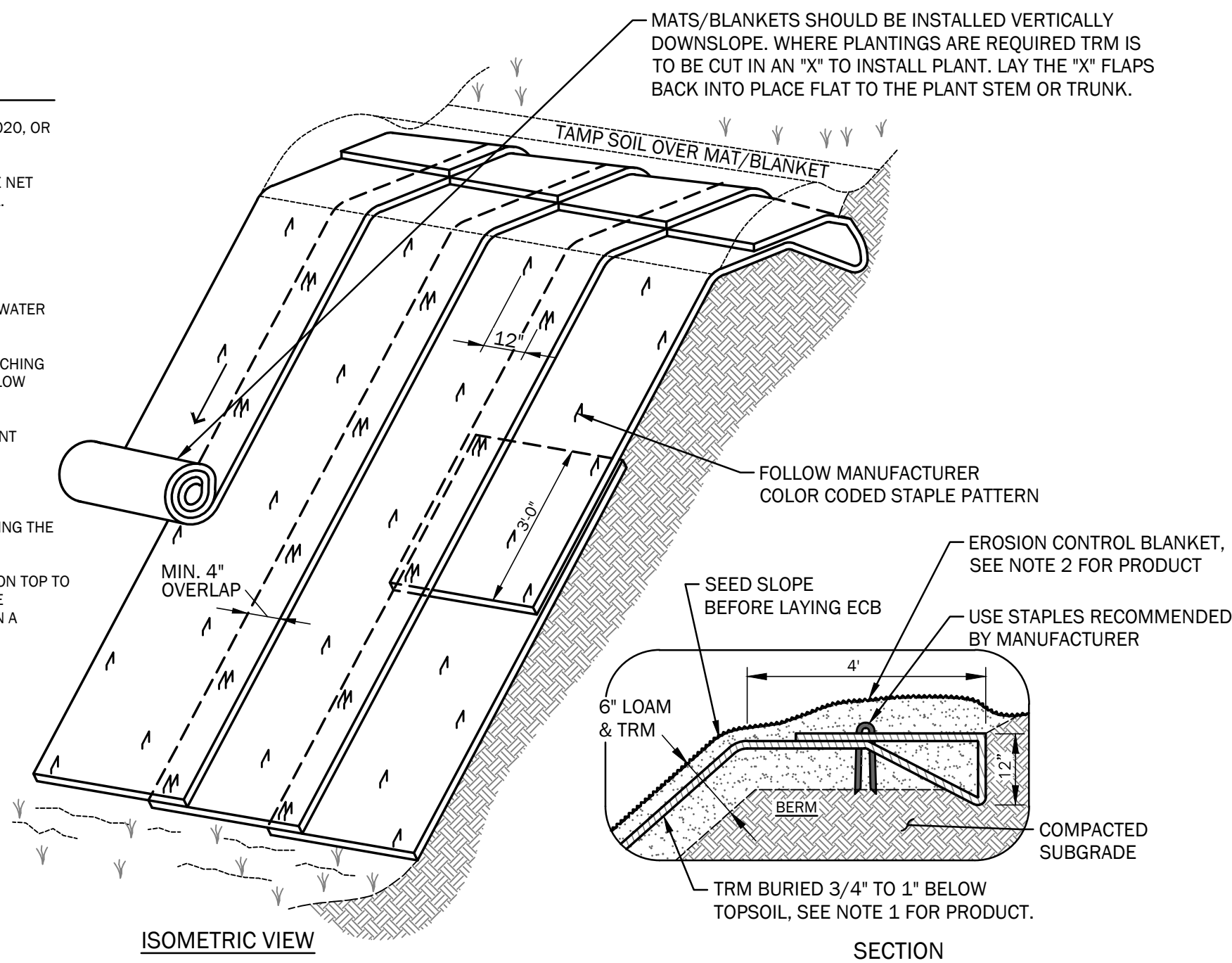
6 STORMTECH STORMWATER DETENTION SYSTEM SECTION
NOT TO SCALE



7 STORMTECH ISOLATOR ROW
NOT TO SCALE

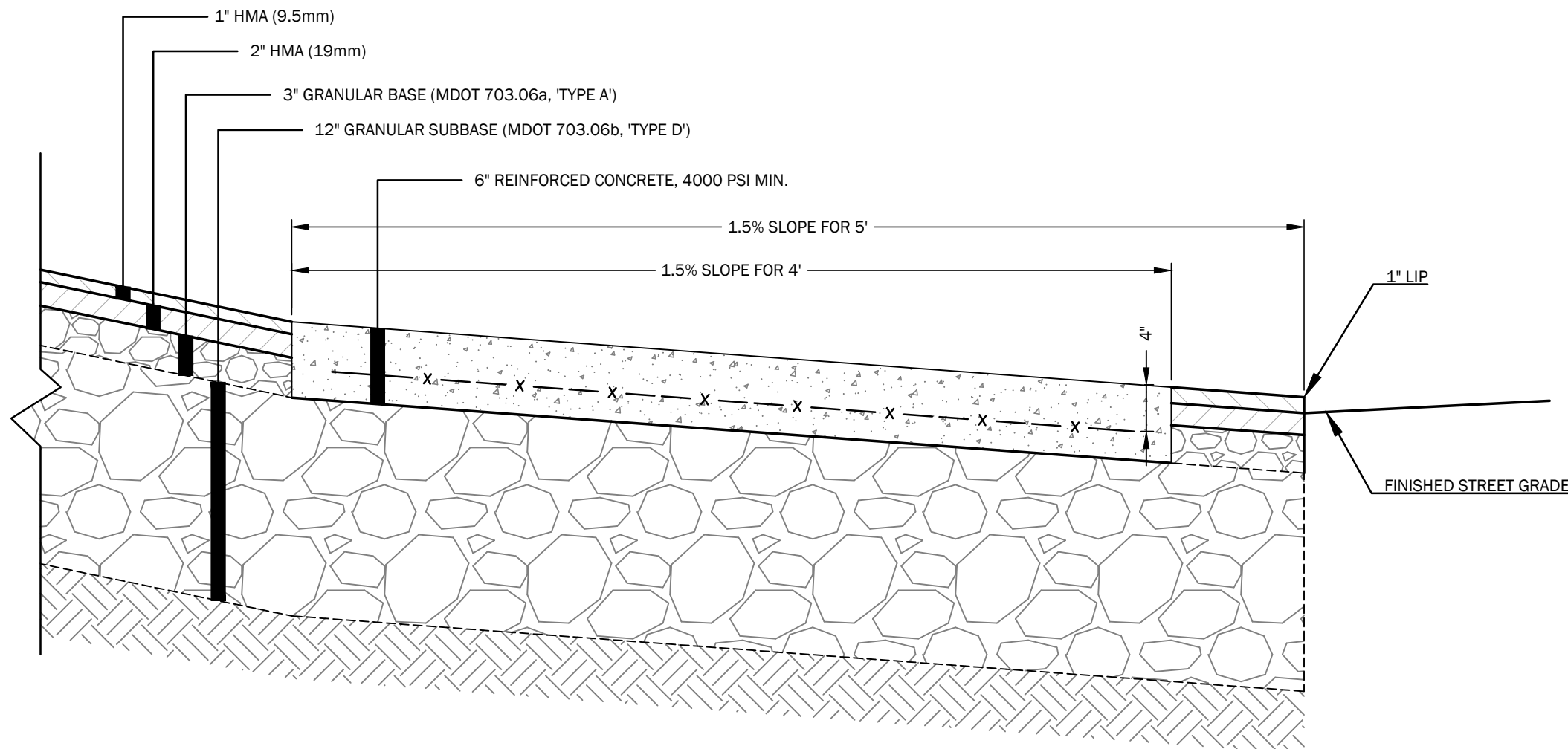
INSTALLATION INSTRUCTIONS:

- 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.



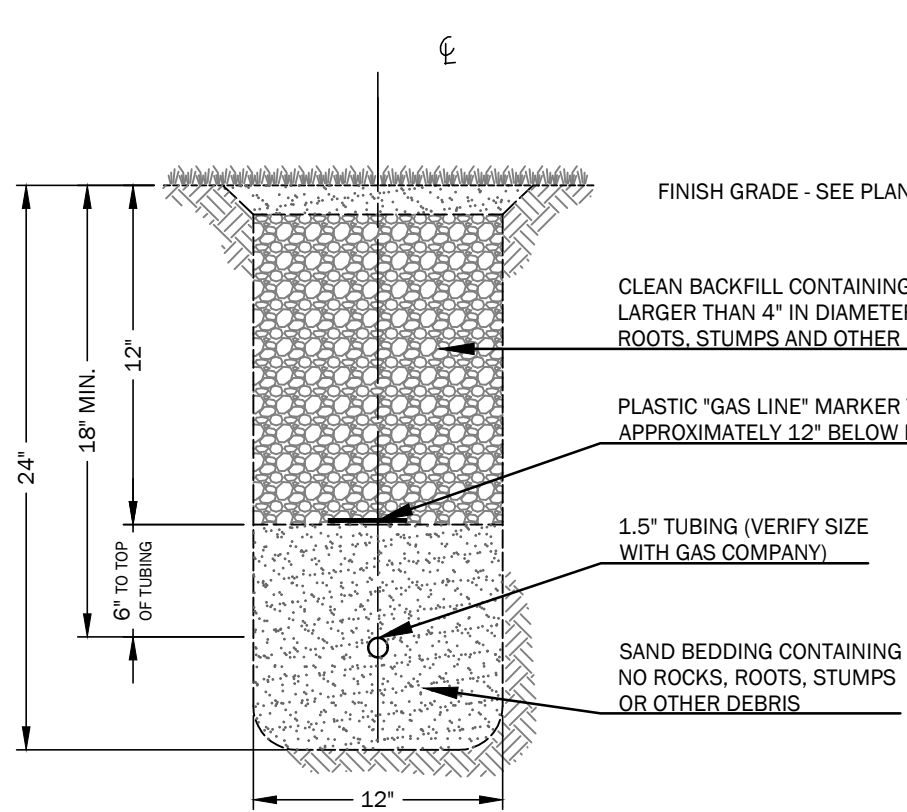
STRAW MATTING (ECB) and TURF REINFORCEMENT MAT (TRM) for SLOPE EROSION CONTROL

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NOT TO SCALE



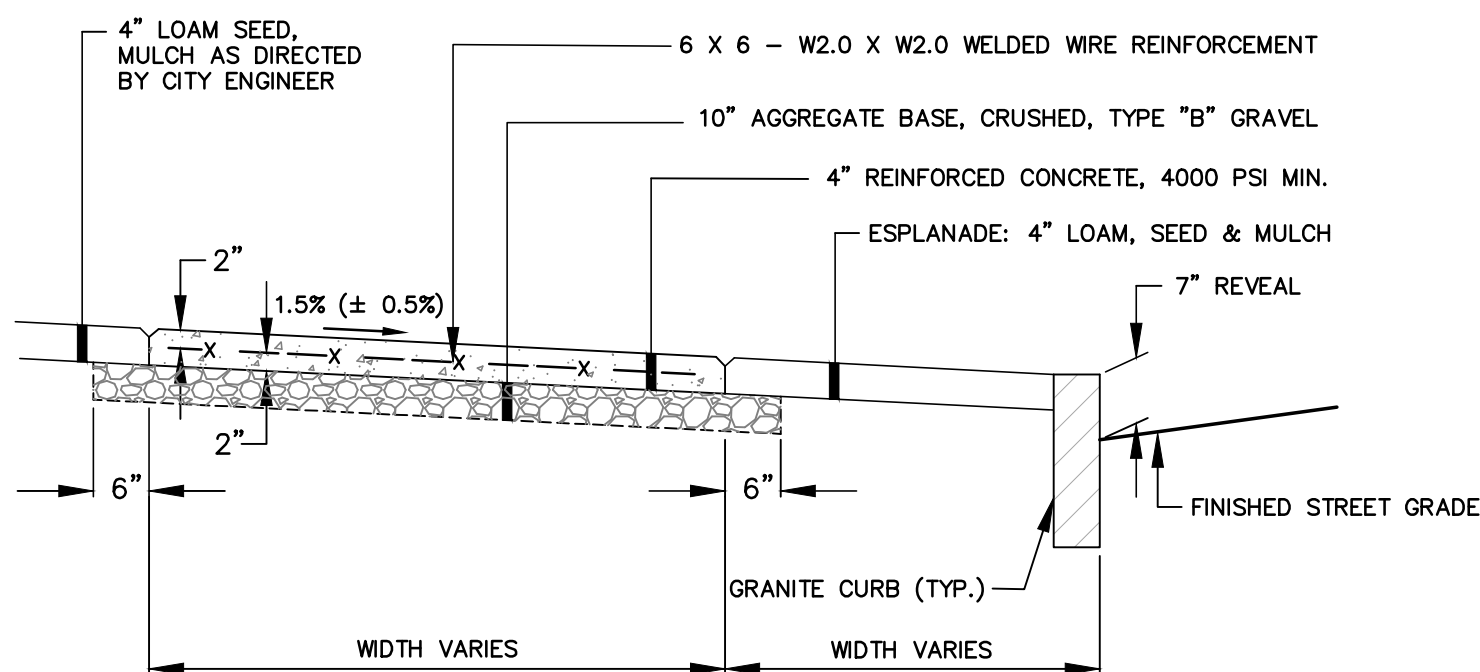
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REINFORCED CONCRETE DRIVEWAY APRON DETAIL



8
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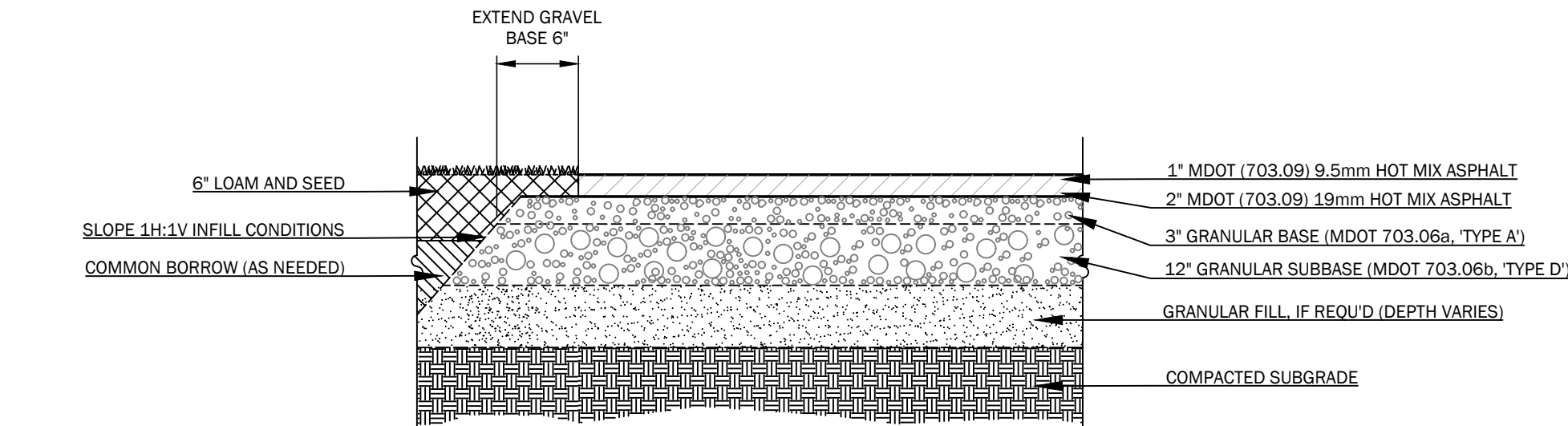
GAS LINE TRENCH SECTION



- NOTES:
- CONCRETE SIDEWALKS TO BE TREATED WITH CONSOLIDECK SALTGUARD WB OR APPROVED EQUAL. FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR APPLICATION.
 - SEE CITY OF PORTLAND, REINFORCED CONCRETE SIDEWALK DETAIL I-11C FOR REFERENCE.

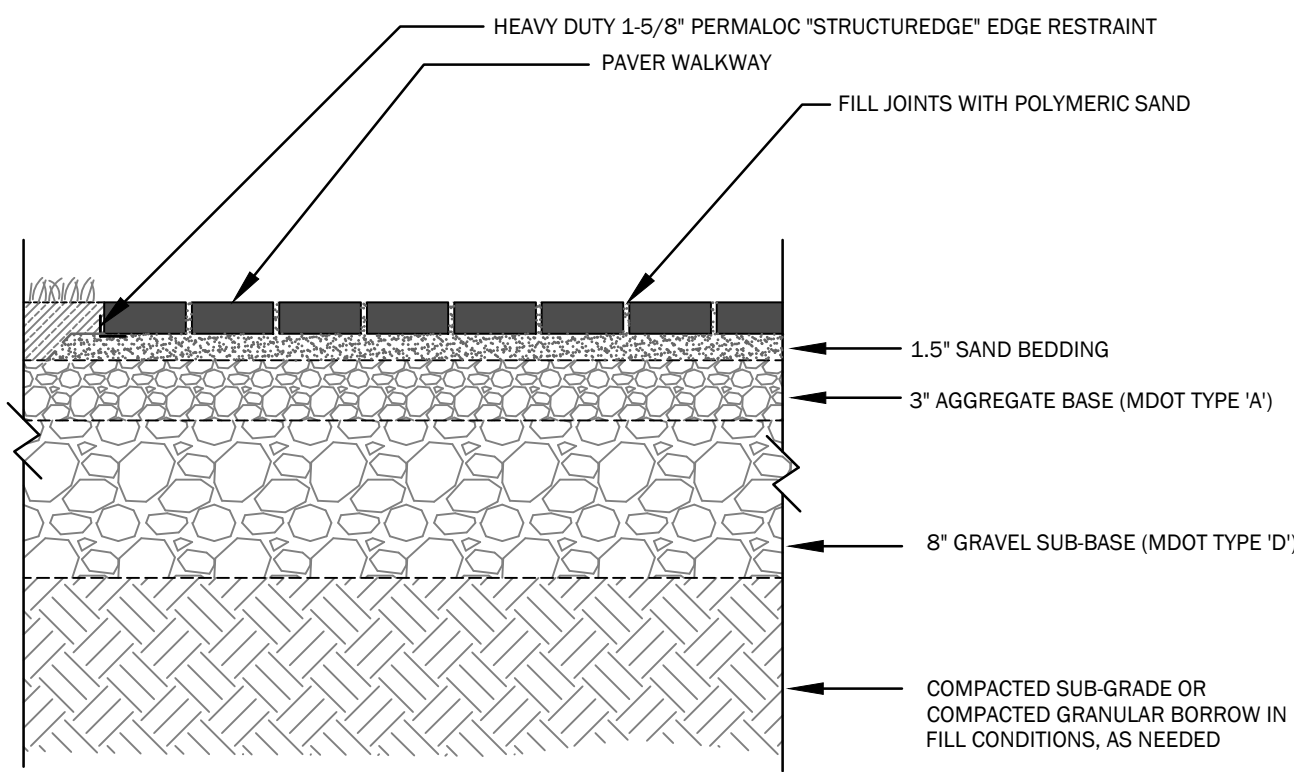
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REINFORCED CONCRETE SIDEWALK



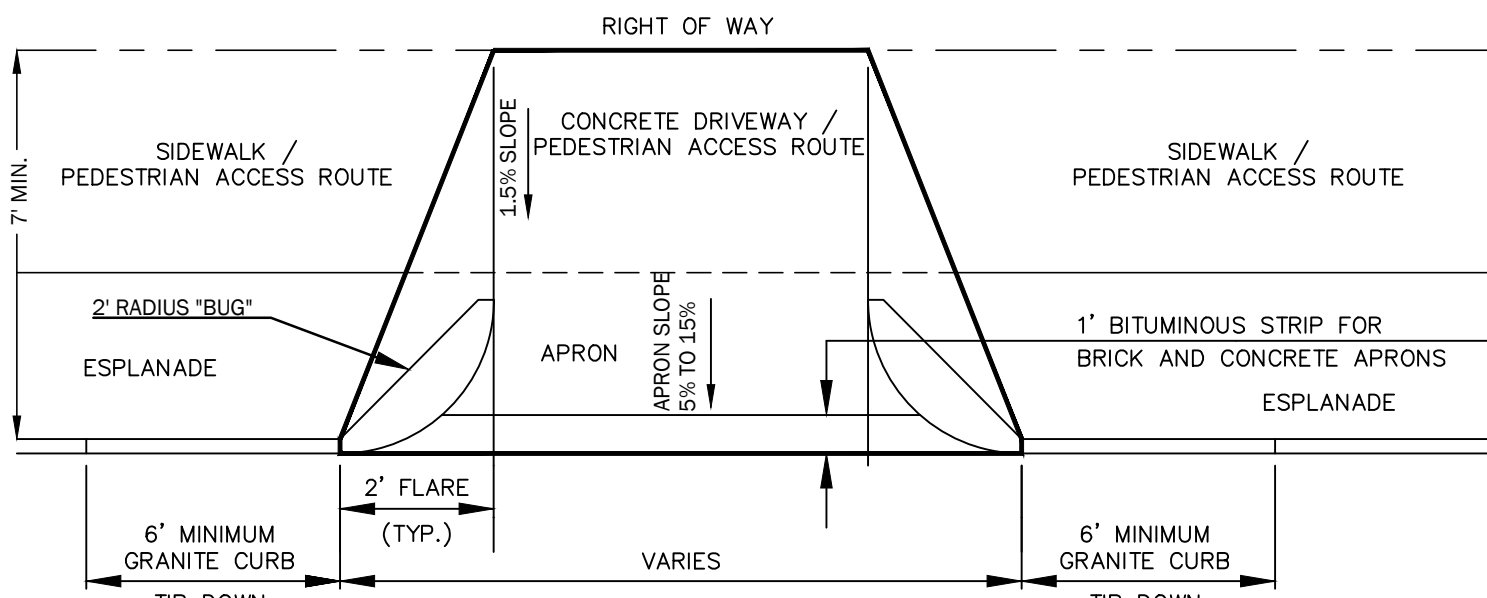
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NOT TO SCALE

PARKING LOT PAVEMENT SECTION



4
C4.1
NOT TO SCALE

STONE PAVER DETAIL

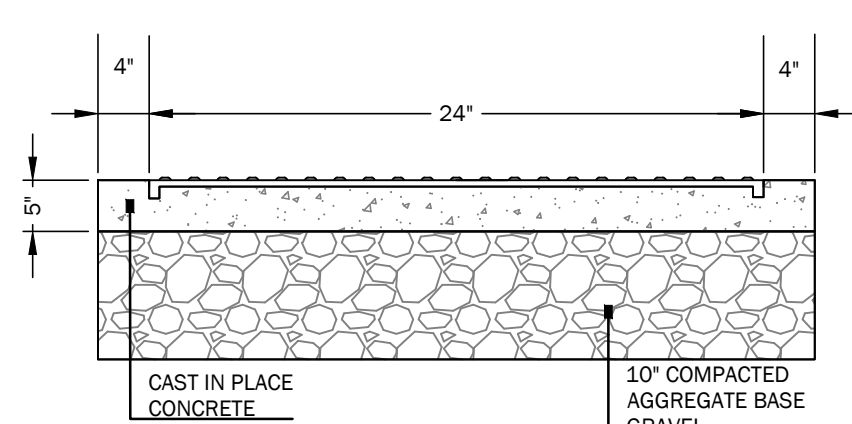


- NOTES:
- MATCH EXISTING GRADE AT R.O.W. LINE, WHERE REQUIRED TO MEET A.D.A AND DRIVEWAY APRON SLOPE REQUIREMENTS, A CONSTRUCTION EASEMENT MAY BE REQUIRED.
 - IF MATCHING THE EXISTING GRADE AT ROW CAUSES APRON SLOPE TO EXCEED RECOMMENDED %, SIDEWALK TRANSITION AREAS MAY BE ADDED, BUT SHALL NOT EXCEED 8.33%.
 - TWO-FOOT RADIUS CORNER GRANITE PIECES ("BUGS") ARE REQUIRED AT LOW-VOLUME DRIVEWAYS UNLESS OTHERWISE DIRECTED BY DPW. AT OTHER DRIVEWAYS, STANDARD FLARE / TIPDOWN TREATMENTS SHALL BE USED.
 - ALL MATERIALS IN ROW TO COMPLY WITH CITY'S SIDEWALK & DRIVEWAY MATERIAL POLICY.
 - SEE CITY OF PORTLAND, RESIDENTIAL DRIVEWAY APRON DETAIL I-9A FOR REFERENCE.

DRIVEWAY APRON LAYOUT

NOT TO SCALE

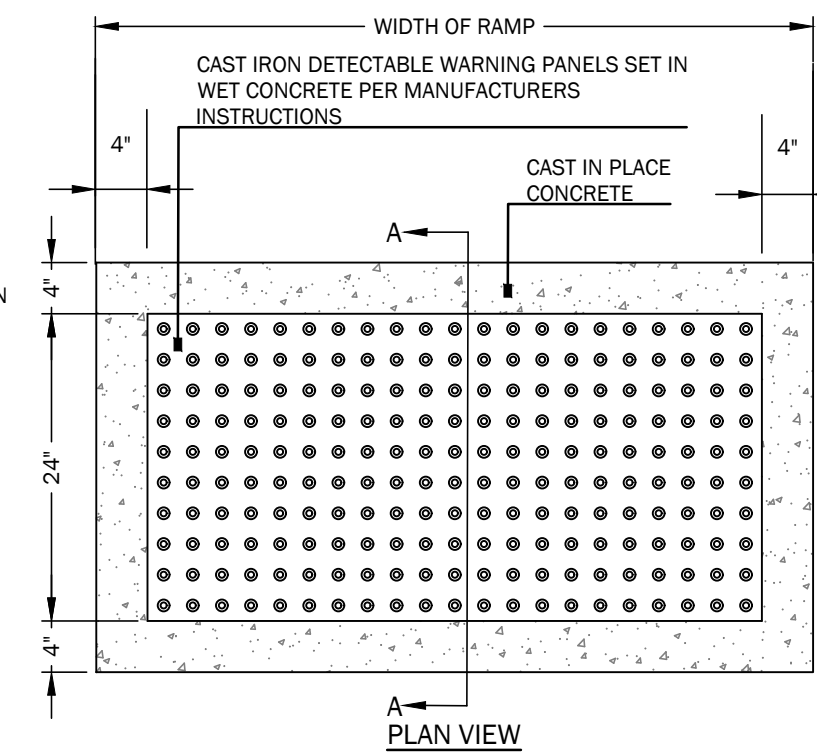
- NOTES:
- ALL DETECTABLE WARNING PLATES SHALL BE UNCOATED CAST IRON. FOLLOW MANUFACTURES INSTRUCTIONS FOR INSTALLATION
 - CAST IN PLACE CONCRETE SHALL MEET SPECIFICATIONS FOR MDOT CLASS A STRUCTURAL CONCRETE. MINIMUM COMPRESSIVE STRENGTH 4,000 PSI. THE EXPOSED CONCRETE BORDER SHALL RECEIVE A UNIFORM BROOM FINISH PERPENDICULAR TO THE FLOW OF PEDESTRIAN TRAFFIC.
 - 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.
 - SIZE: THE DETECTABLE WARNING PLATES SHALL EXTEND 24 INCHES MINIMUM IN THE DIRECTION OF TRAVEL AND THE PLATE WIDTH + CONCRETE SHALL EXTEND THE 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 6 INCHES MINIMUM AND 8 INCHES MAXIMUM FROM THE CURB LINE. THE PANEL SHALL BE ORIENTED TO THE DIRECTION OF TRAVEL AS IDENTIFIED BY THE POINT OF EGRESS.



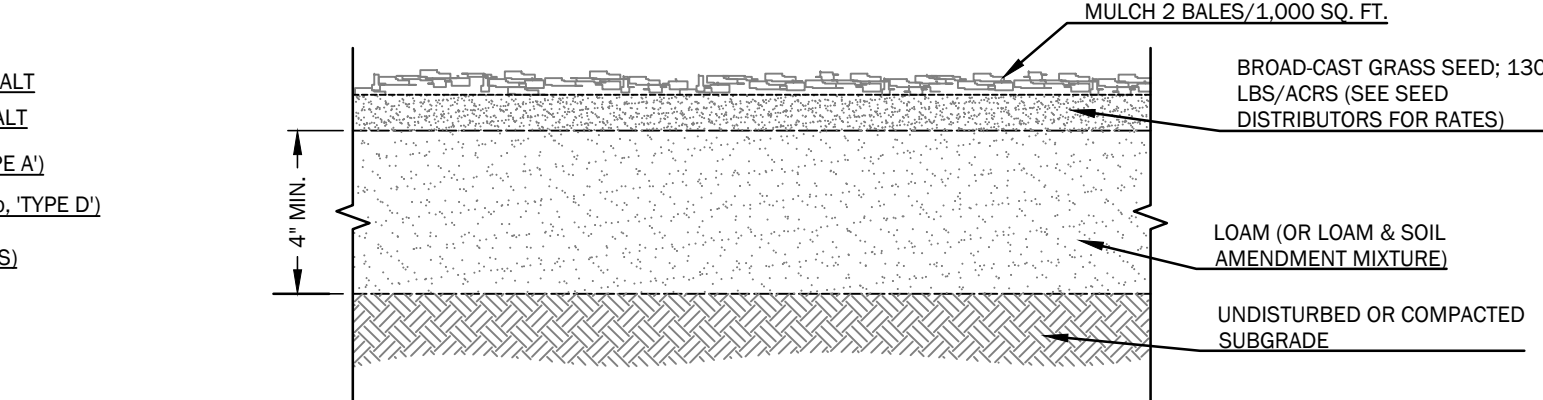
SECTION A-A

10
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NOT TO SCALE

SIDEWALK RAMP DETECTABLE WARNING PANEL

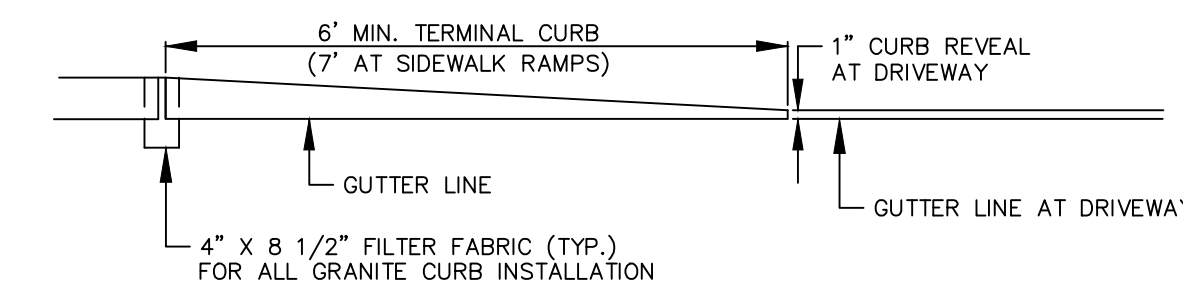


CITY OF PORTLAND; SIDEWALK RAMP DETECTABLE WARNING PANEL

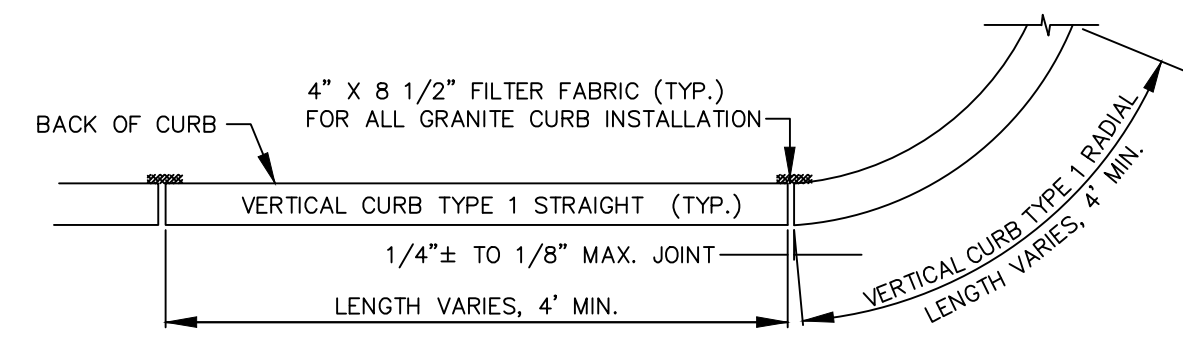


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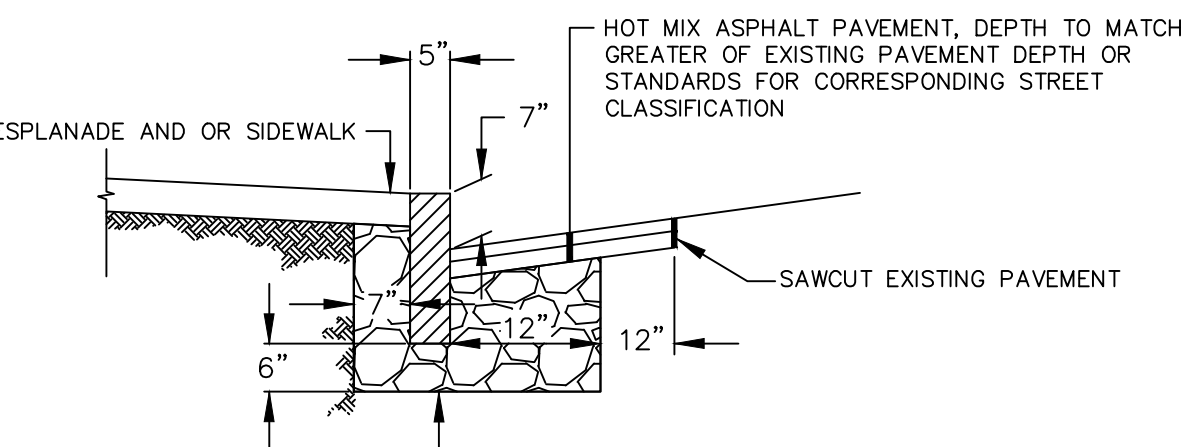
LOAM AND SEED DETAIL



TERMINAL CURB PROFILE



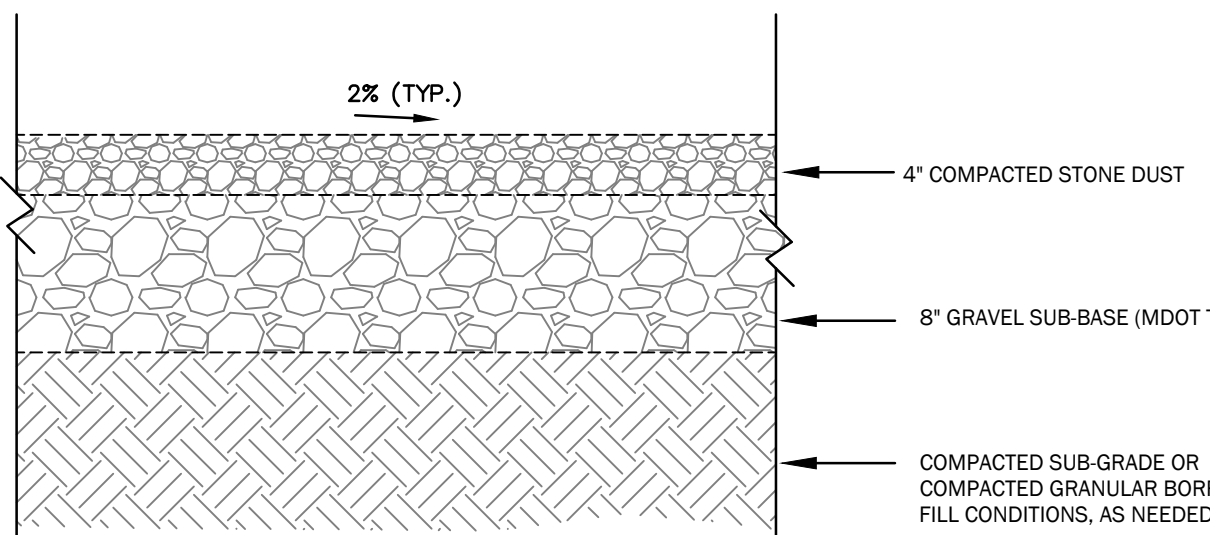
VERTICAL GRANITE CURB PLAN VIEW



VERTICAL GRANITE CURB CROSS SECTION

7
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NOT TO SCALE

VERTICAL GRANITE CURB INSTALLATION IN EXISTING STREETS



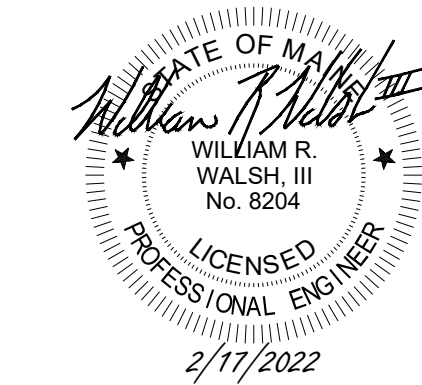
11
C4.1
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STONE DUST PATH DETAIL

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6	2/17/2022	Comments	JWG	NGC

Sheet Title:

DETAILS

Job No.:	613.1	Sheet No.:
Date:	Feb. 24, 2021	Scale:
Drawn:	MTL/JWG	Checked:
Checked:	NGC	

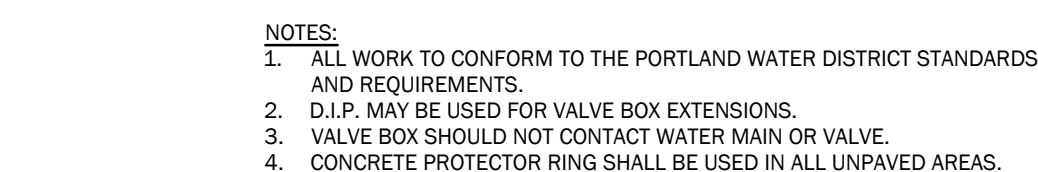
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THRUST BLOCK SCHEDULE

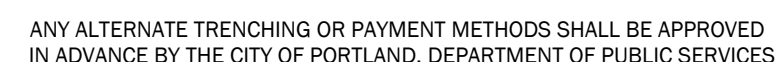


1 THRU
C4.3 NOT TO SCALE



6
C4.3

VALVE
NOT TO SCALE



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
 DIMENSION B SHALL BE AT LEAST 9".
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	4.0
15	5.0
18	- - - - 5.0
24	6.0
27	6.0
30	6.0
36	- - - - 6.0
42	7.0
48	7.0

TYPICAL PIPE INSTALLATION - NOTES

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

[illegible]

Sheet Title:

DETAILS

Job No.: 613.

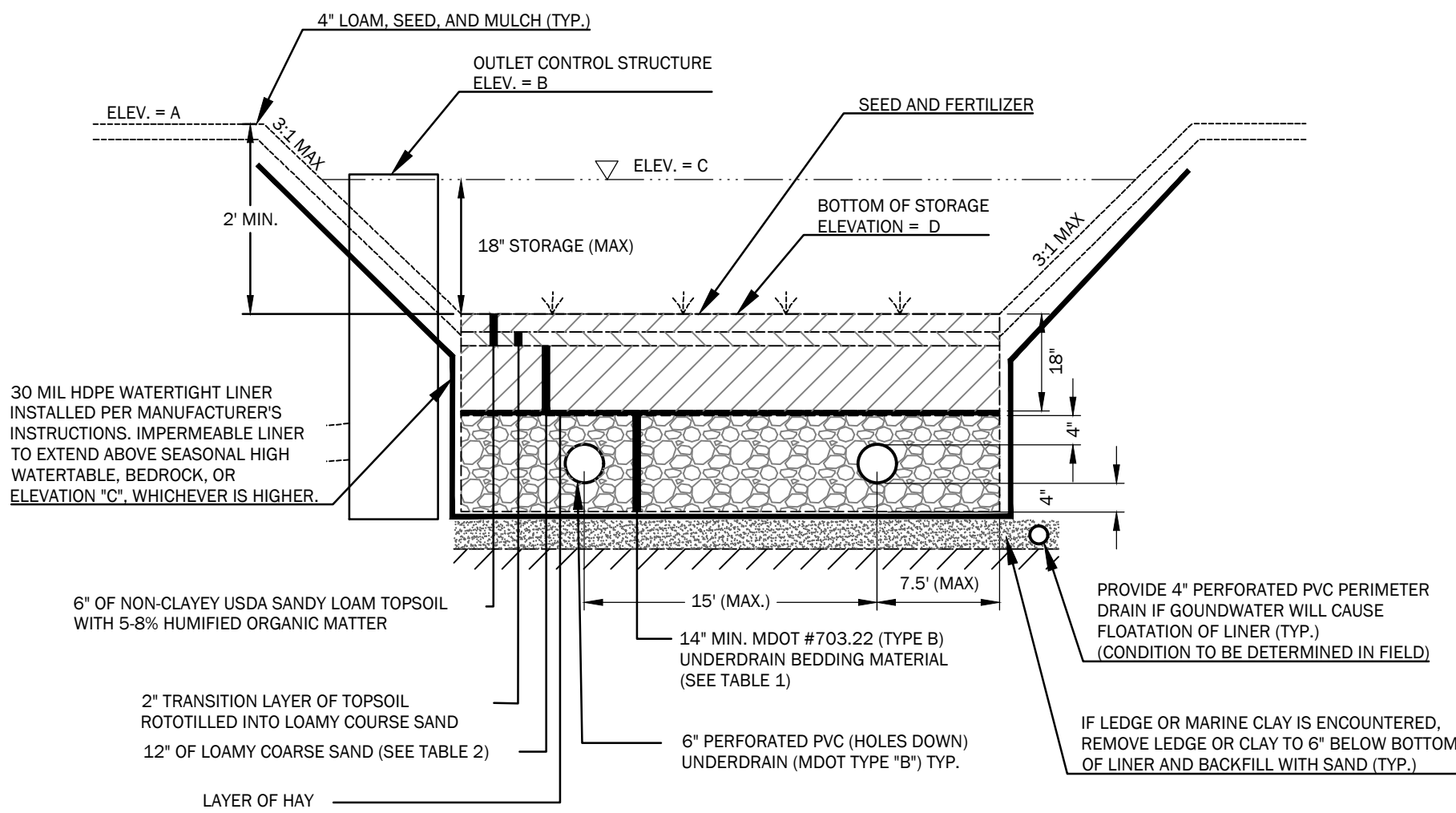
Date: Feb. 24, 202

Scale: AS NOTED

Drawn: MTH

Sheet No.:

C4.3



GRASSED UNDERDRAIN SOIL FILTER NOTES:

- 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
- BOTTOM 2" OF SANDY LOAM TOPSOIL SHALL BE ROTOTILLED INTO TOP SURFACE OF LOAMY COARSE SAND TO CREATE TRANSITION ZONE.
- 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.
- A 1" LAYER OF HAY SHALL BE PLACED BETWEEN THE BOTTOM OF THE SOIL BED AND THE TOP OF THE UNDERDRAIN MATERIAL.
- 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
- REFER TO GRADING PLANS FOR UNDERDRAIN LAYOUT.
- THE MAXIMUM DISTANCE BETWEEN UNDERDRAIN PIPES SHALL BE 15 FEET.
- GRASSED UNDERDRAIN SOIL FILTER MEDIA SHALL NOT BE INSTALLED UNTIL THE TRIBUTARY AREA HAS BEEN PERMANENTLY STABILIZED.
- NO VEHICLES ARE ALLOWED TO DRIVE ON ANY UNDERDRAIN SOIL FILTER AFTER SOIL FILTER MEDIA HAS BEEN INSTALLED.

GRASSED UNDERDRAINED SOIL FILTER SCHEDULE											
GRASSED UNDERDRAINED SOIL 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		
									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:

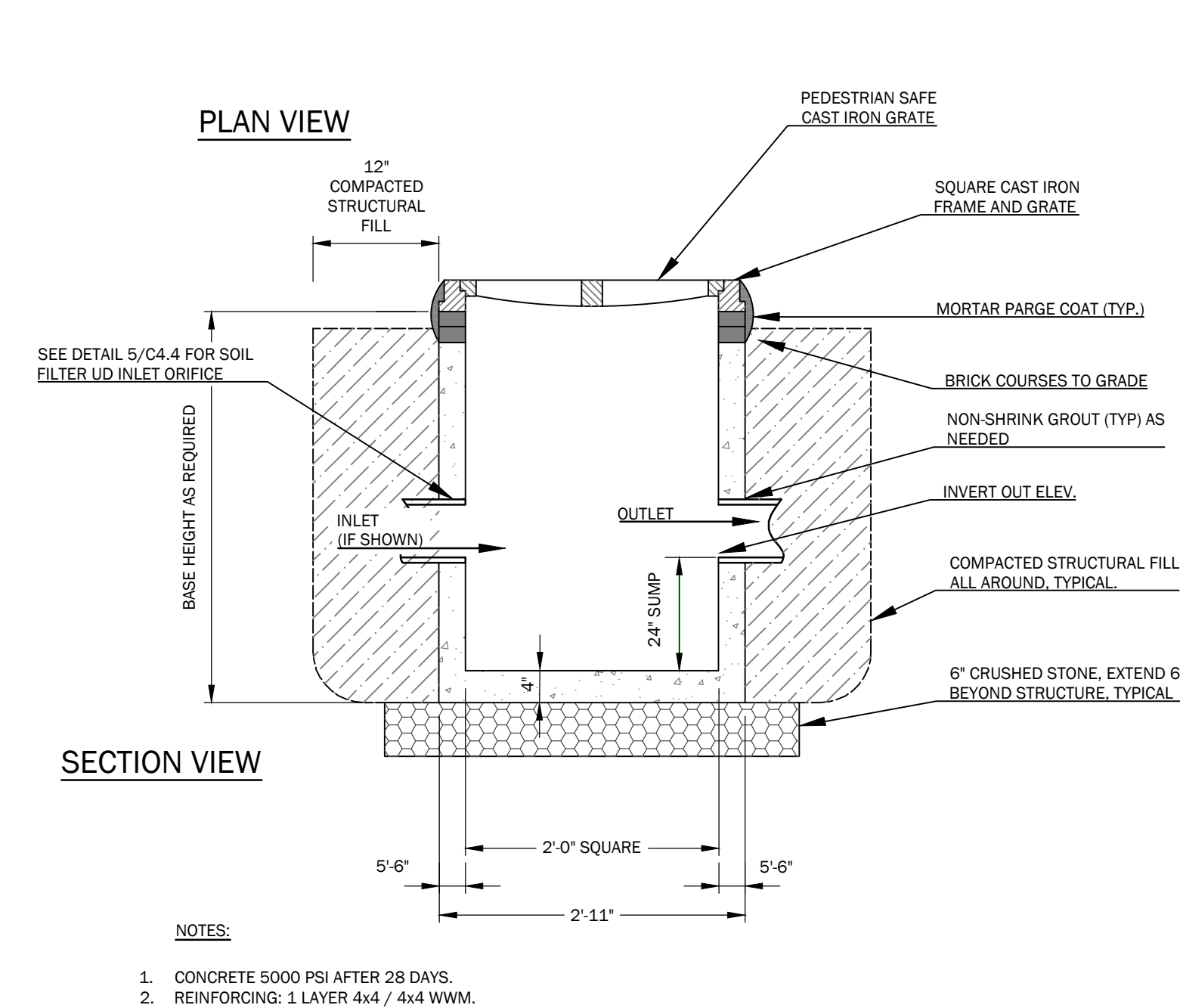
- SUBMIT SAMPLES OF EACH TYPE OF MATERIAL TO BE BLENDED FOR THE MIXED FILTER MEDIA AND SAMPLES OF THE UNDERDRAIN BEDDING MATERIAL. SAMPLES MUST BE A COMPOSITE OF THREE DIFFERENT LOCATIONS (GRABS) FROM THE STOCKPILE OR PIT FACE. SAMPLE SIZE REQUIRED WILL BE DETERMINED BY THE TESTING LABORATORY.
- PERFORM 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.

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

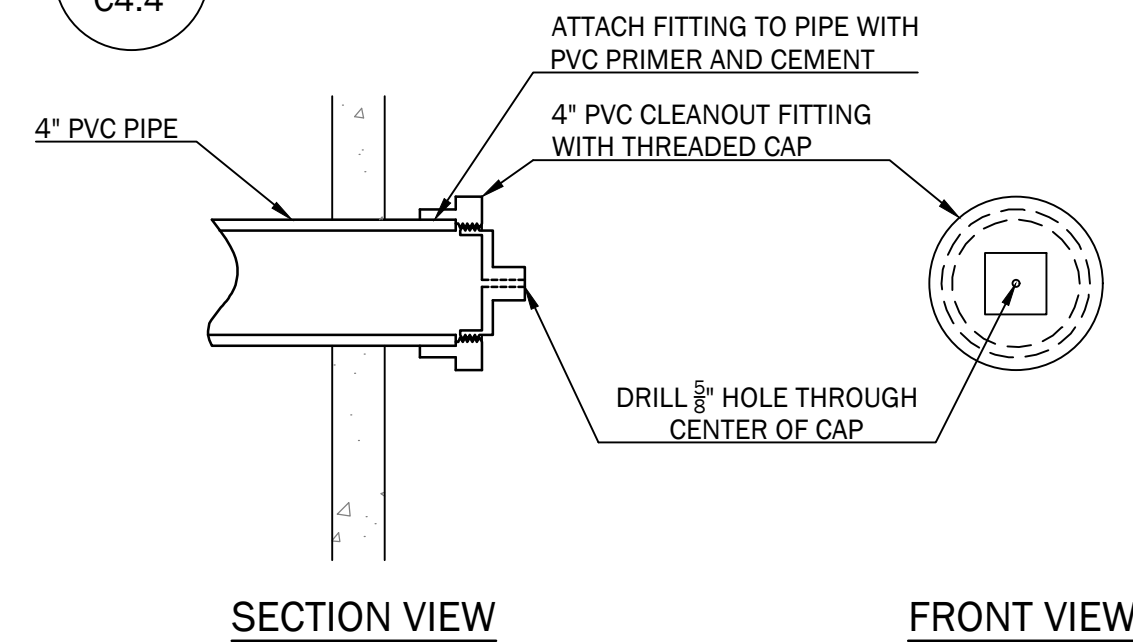
TABLE 2 MDEP LOAMY COARSE SAND GRADATION	
SIEVE SIZE	% BY WEIGHT
#10	85-100
#20	70-100
#60	15-40
#200	8-15
#200 CLAY SIZE	<2%

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

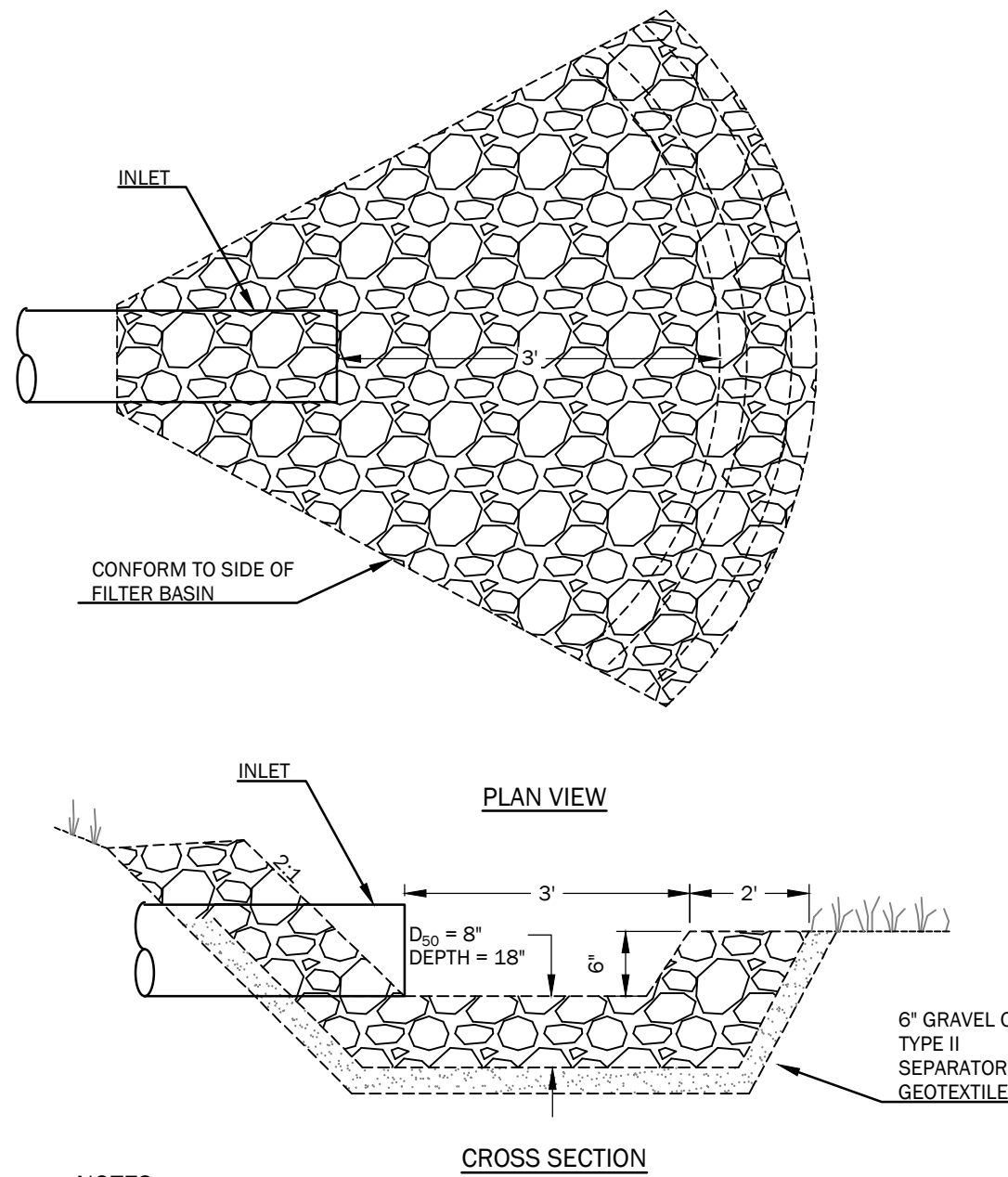
1 GRASSED UNDERDRAIN SOIL FILTER TYPICAL CROSS SECTION
C4.4 NOT TO SCALE



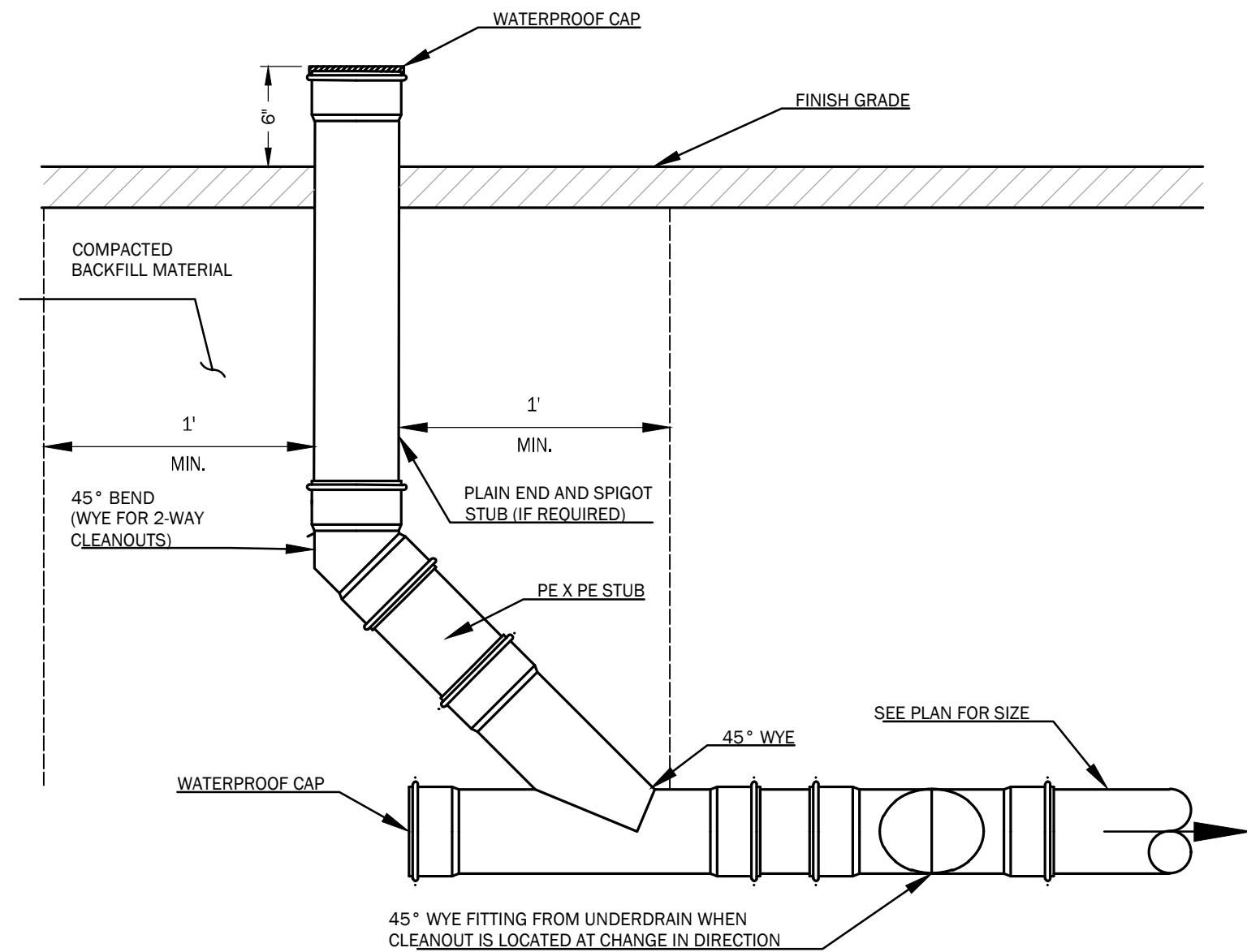
2 PRECAST CONCRETE FIELD INLET AND OCS DETAIL
C4.4 NOT TO SCALE



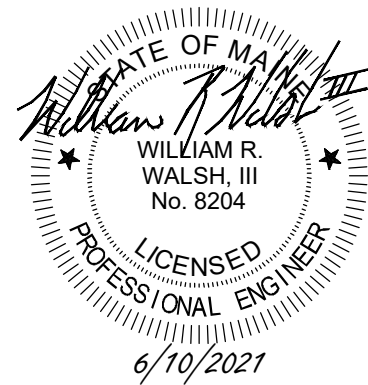
5 SOIL FILTER UD OUTLET ORIFICE DETAIL (FOR OCS'S)
C4.4 NOT TO SCALE



3 RIPRAP INLET FOREBAY
C4.4 NOT TO SCALE



4 SOIL FILTER UNDERDRAIN CLEANOUT
C4.4 NOT TO SCALE



Rev.	Date	Description	Drawn	Check
1	6/10/2021	REVISED PER STAFF COMMENTS	DEPT.	NGC

Sheet Title:

DETAILS

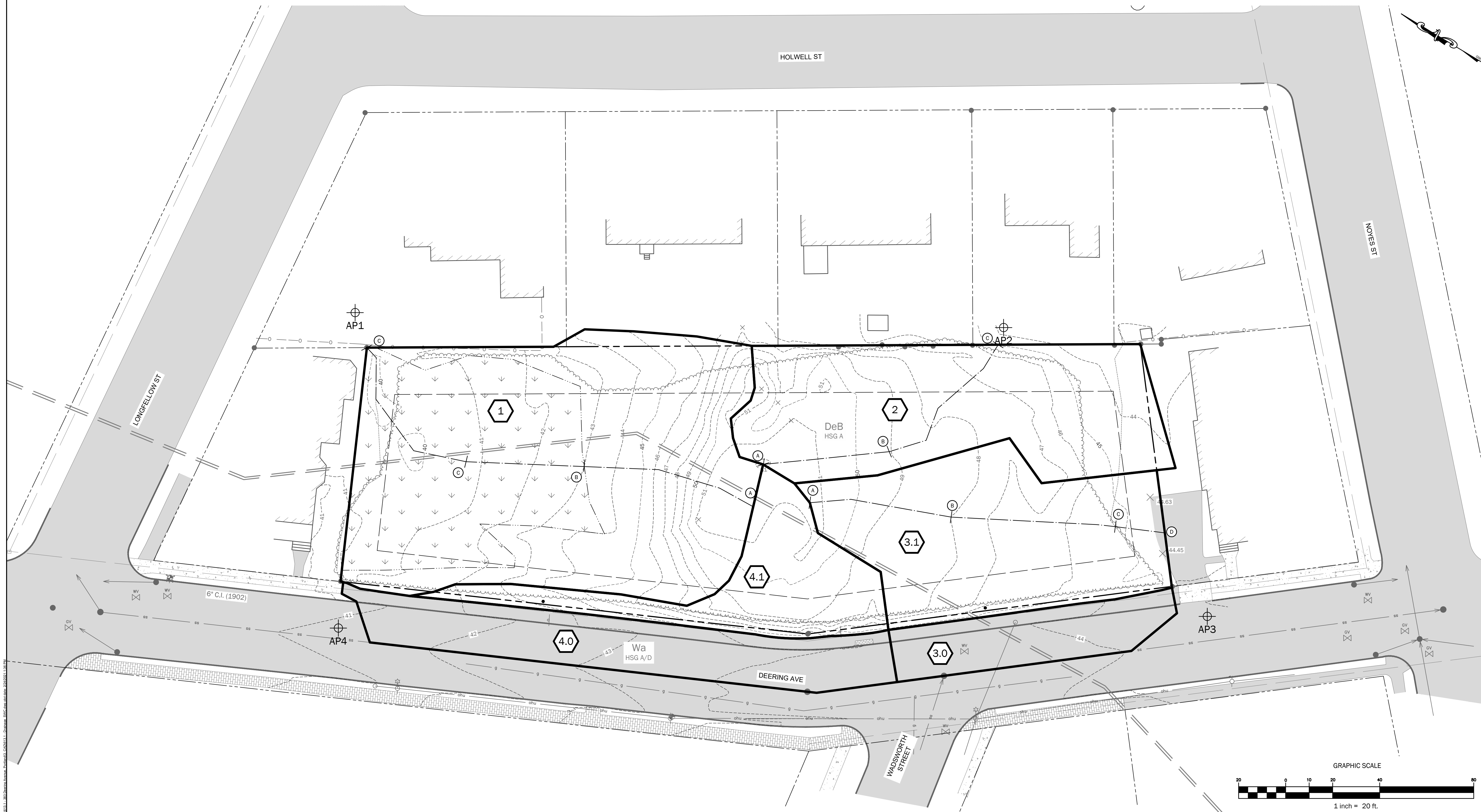
Job No.:	613.1	Sheet No.:	
Date:	Feb. 24, 2021	Scale:	AS NOTED
Drawn:	MTL	Checked:	SWC

C4.4

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

The diagram illustrates a cross-section of a riverbed with the following features and symbols:

- SUBCATCHMENT BOUNDARY:** Represented by a solid horizontal line at the top.
- SUBCATCHMENT DESIGNATION:** Represented by a hexagon containing the number "1.0".
- TIME OF CONCENTRATION FLOW:** Represented by a vertical line with a circle at the bottom, intersecting the horizontal line.
- ANALYSIS POINT:** Represented by a circle with a cross inside, labeled "AP1" below it.
- SOILS BOUNDARY:** Represented by a solid horizontal line below the analysis point.
- SOILS DESIGNATION:** Represented by the text "Sn" and "(HSG C)" below the soils boundary line.



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STATE OF MAINE
Silas W. Canavan
 ★ ★
 SILAS W.
 CANAVAN
 No. 12639
 LICENSED
 PROFESSIONAL ENGINEER
 02/24/2021

Deering Avenue Residences
387 & 405 Deering Avenue
Portland, Maine 04103
BK 36396, PG 323; CBL: 118 A 003001

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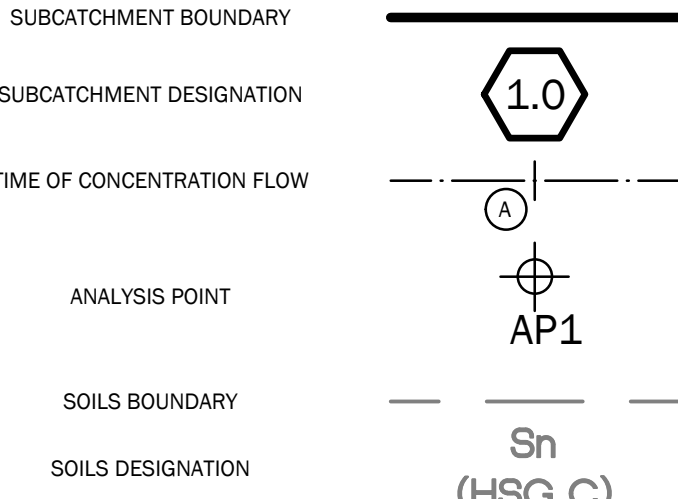
Tc FLOW LINE DATA:

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

TABLE T-1 Stormwater Treatment Calculations Deering Avenue Residences - Portland, Maine												
Watershed	Treatment BMP	Non-Linear Project Area (SF)							Soil Filter Design			
		Total New Developed Area (SF)			Treated Area (SF)				Soil Filter Area (SF)		Water Quality Vol. (CF)	
		Impervious	Landscaped	Developed	Impervious	Landscaped	Developed	Undeveloped	Required	Provided	Required	Provided
1.0		-	400	400	-	-	-	-				
2.0		-	270	270	-	-	-	-				
3.0		-	-	-	-	-	-	-				
3.1	Focal Point	6,825	2,949	9,774	6,825	2,949	9,774	3,230	433	NA	717	NA
3.2		229	184	413	-	-	-	-				
4.0		-	-	-	-	-	-	-				
4.1	SF1	7,326	2,297	9,623	7,326	2,297	9,623	7,495	487	632	808	1,276
4.2		377	401	778	-	-	-	-				
Totals		14,757	6,501	21,258	14,151	5,246	19,397					
Table T-2 Stormwater Treatment Summary												
Development Type		Area (SF)										
Non-Linear Impervious Treated		14,151										
Total Non-Linear Impervious Area		14,757										
Non-Linear Impervious % Treated		96%										
Non-Linear Developed Treated		19,397										
Total Non-Linear Developed Area		21,258										
Non-Linear Developed % Treated		91%										

DRAINAGE



WALSH
ENGINEERING ASSOCIATES, INC.

One Karen Dr., Suite 2A | Westbrook, Maine 04092
ph: 207.553.9898 | www.walsh-eng.com

STATE OF MAINE

WILLIAM R. WALSH, III
No. 8204

LICENSED PROFESSIONAL ENGINEER

2/16/2022

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

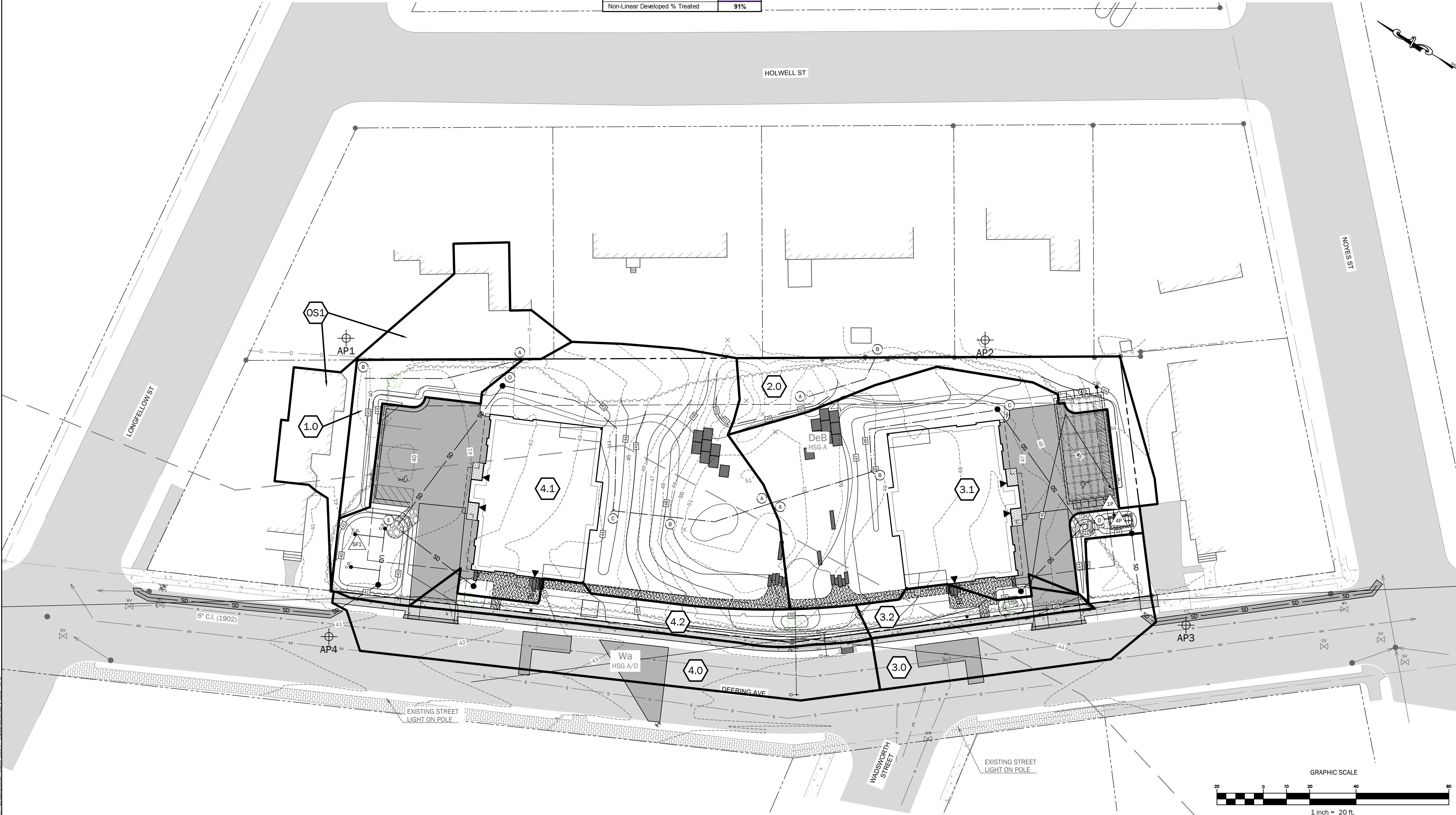
Rev.	Date	Description	Drawn	Check
1	01/10/2021	REVISED PER STAFF COMMENTS	TEF	NGC
2	10/09/2021	REVISED PER STAFF COMMENTS	TEF	NGC
3	1/7/2022	REVISED PER STAFF COMMENTS	JWG	NGC
4	2/10/2022	Redesign South Stormwater Basin	JWG	NGC
5	2/16/2022	Revised per City Comments	JWG	NGC

Sheet Title:

Post-Development Drainage Plan

Job No.: 613.1 Sheet No.:
Date: OCTOBER 2021
Scale: AS NOTED
Drawn: MTL/JWG
Checked: NGC

D2.0



STATE OF MAINE ENGINEERING ASSOCIATES, INC. 387 & 405 DEERING AVENUE PORTLAND, MAINE 04103 BK 36396, PG 323; CBL: 118 A 003001

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.

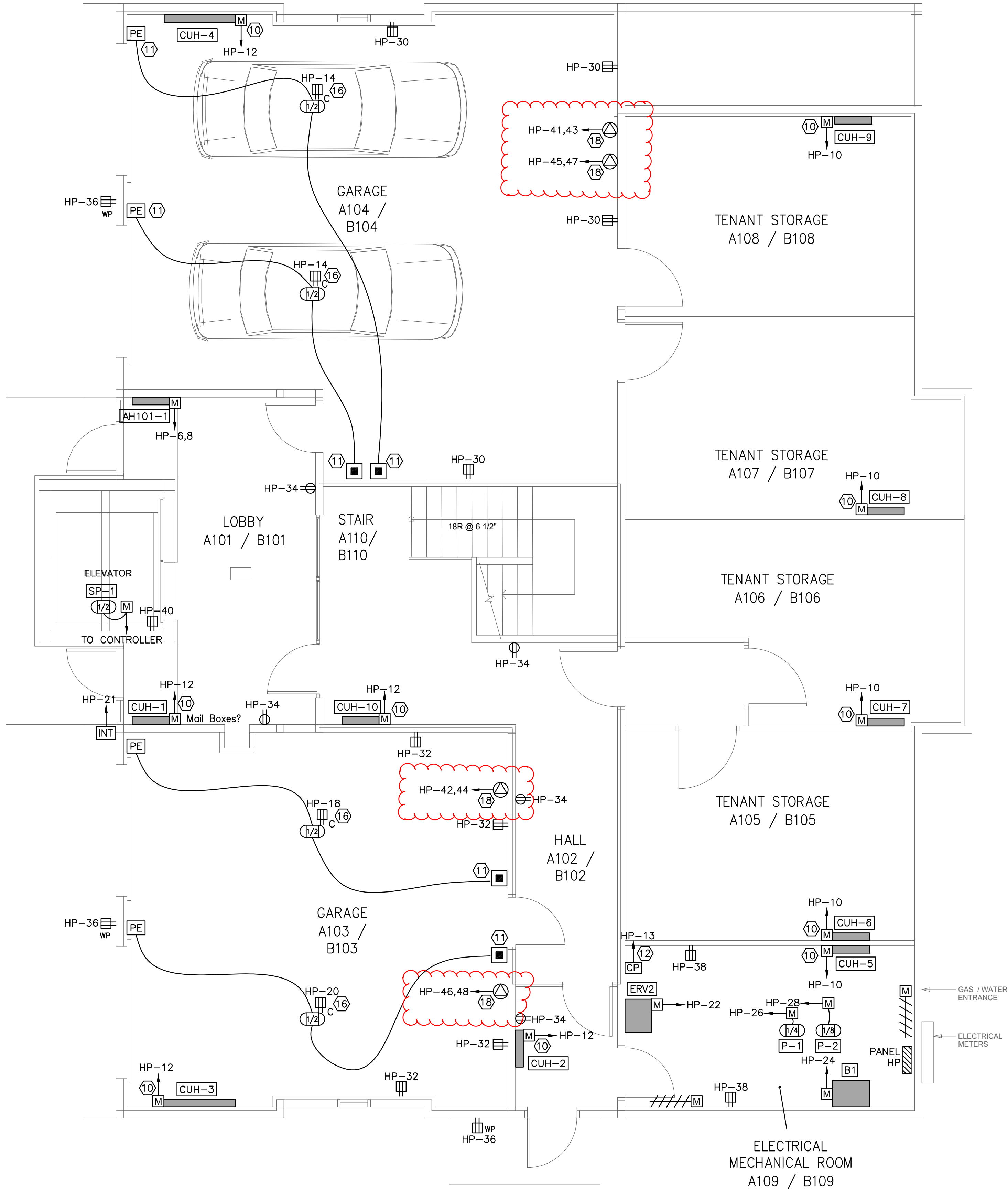
⑭ INDOOR UNIT INCLUDING HEAT. WIRING: 2#10AWG & #10GND.

⑮ DISPOSAL: FURNISH TOGGLE UNDER SINK.

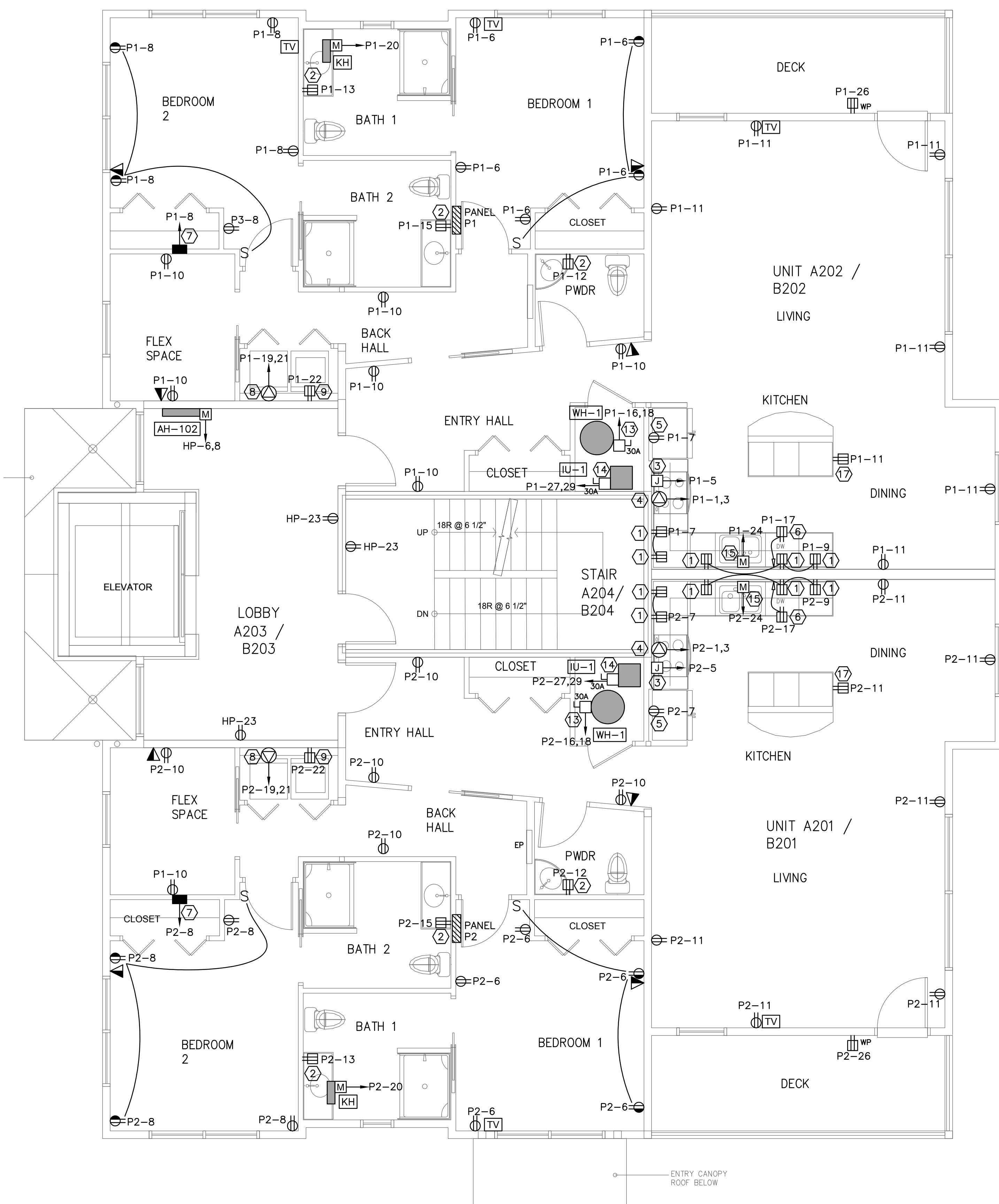
⑯ GARAGE DOOR OPENER FURNISH CEILING MTD RECEPTACLE AND WIRE OPERATOR SWITCH AND AUXILIARIES. AS MANUFACTURED BY OVERHEAD DOOR. DESTINY 1200 OR EQUAL.

⑰ ISLAND RECEPTACLE. COORDINATE MOUNTING WITH CASEWORK.

⑱ 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'

RESIDENCES AT 383 DEERING AVENUE

Portland, Maine

Drawing Title: Scale: AS NOTED

ELECTRICAL POWER & SYSTEMS PLAN – GROUND & 1ST FLR

E1.0

Date: 4.15.21
Phase: BID/CONSTR. CD

EXTERIOR LIGHTING SCHEDULE					
TYPE	DESCRIPTION	MANFACTURER	LAMPS	MOUNTING	NOTES
AA	12' SMALL LED POLE LIGHT, TYPE 4 DISTRIBUTION WITH BACK SHIELD. TEXTURED BLACK FINISH. 120V	BEACON LIGHTING	28W LED 4000K 2799 LUMENS	12' POLE	MODEL #: VP-S-24L-27-4K7-4-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

NOTES:

1. SEE E0.0 FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES.



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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 4B
10 Forest Falls Drive
Yarmouth, ME 04096
207.847.9280

RESIDENCES AT 383 DEERING AVENUE

Portland, Maine

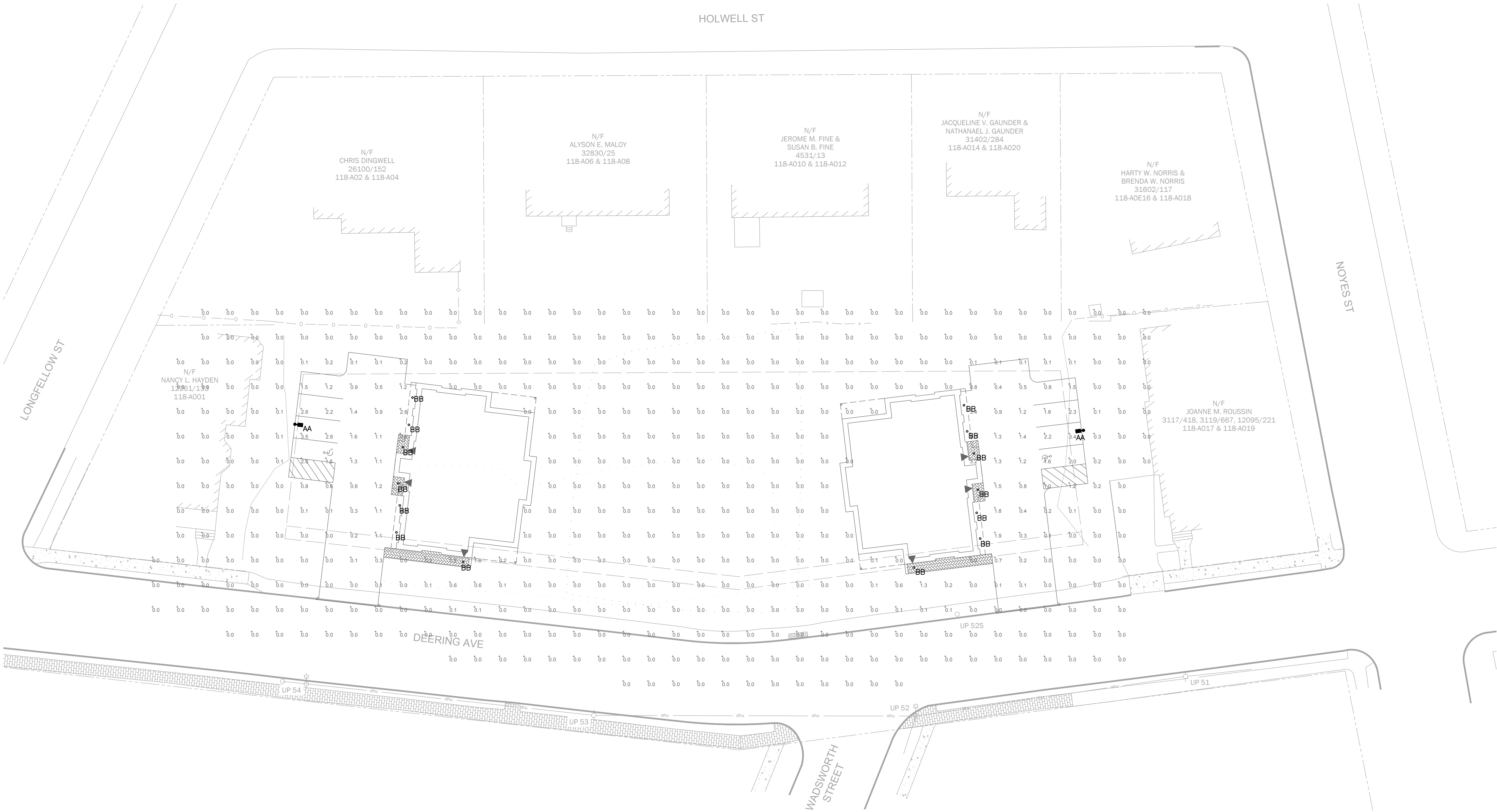


Drawing Title: Scale: AS NOTED
PHOTOMETRIC PLAN

ES2.0

Date: 1.19.21
Phase: CONCEPT PLAN

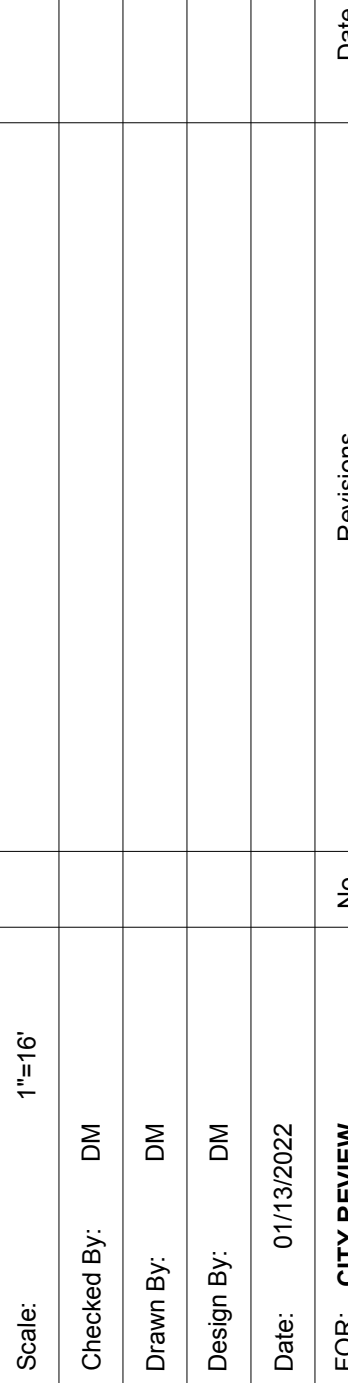
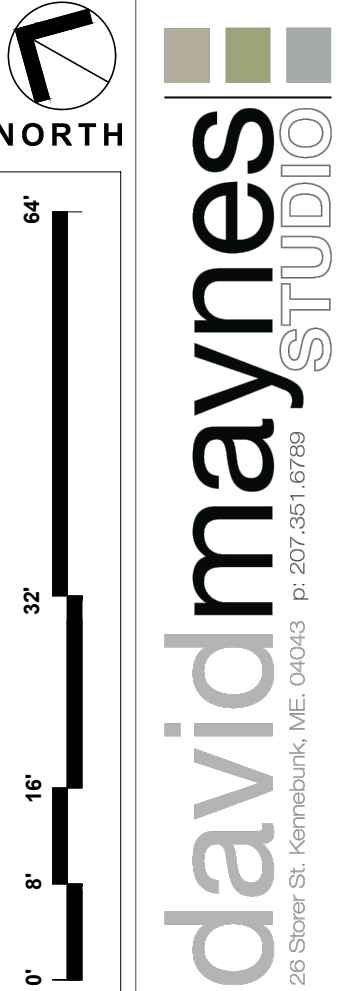
2 EXTERIOR LIGHTING SCHEDULE
SCALE: NOT TO SCALE



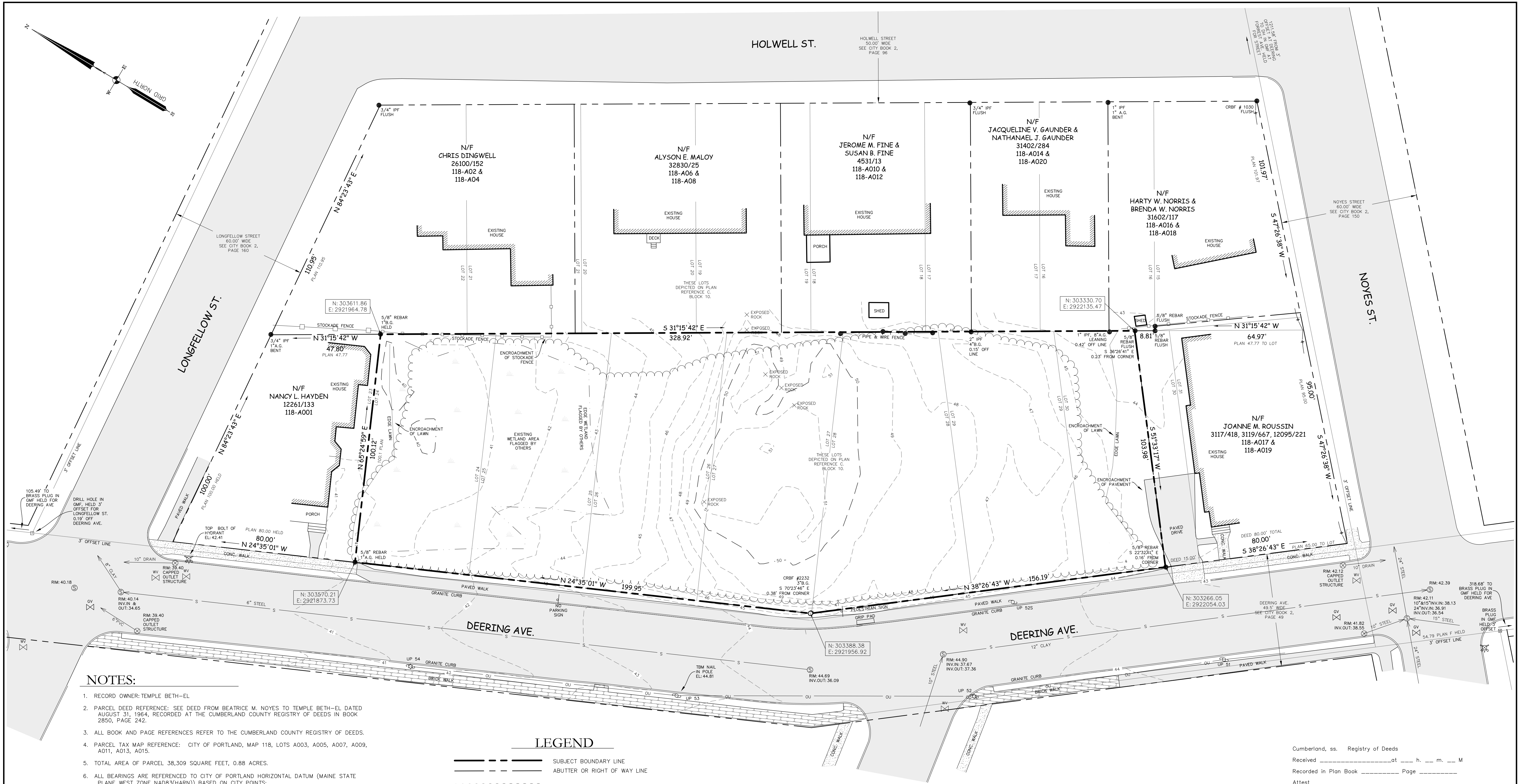
1 ELECTRICAL SITE PLAN
SCALE: 1" = 20'

davidmaynes

davidmaynes



383 DEERING AVENUE MULTIPLEX
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.

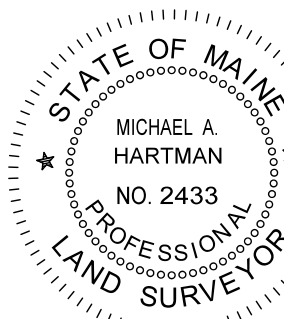
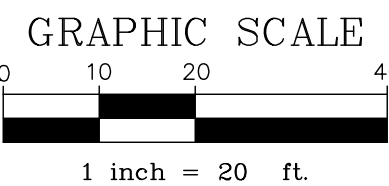
LEGEND

- 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

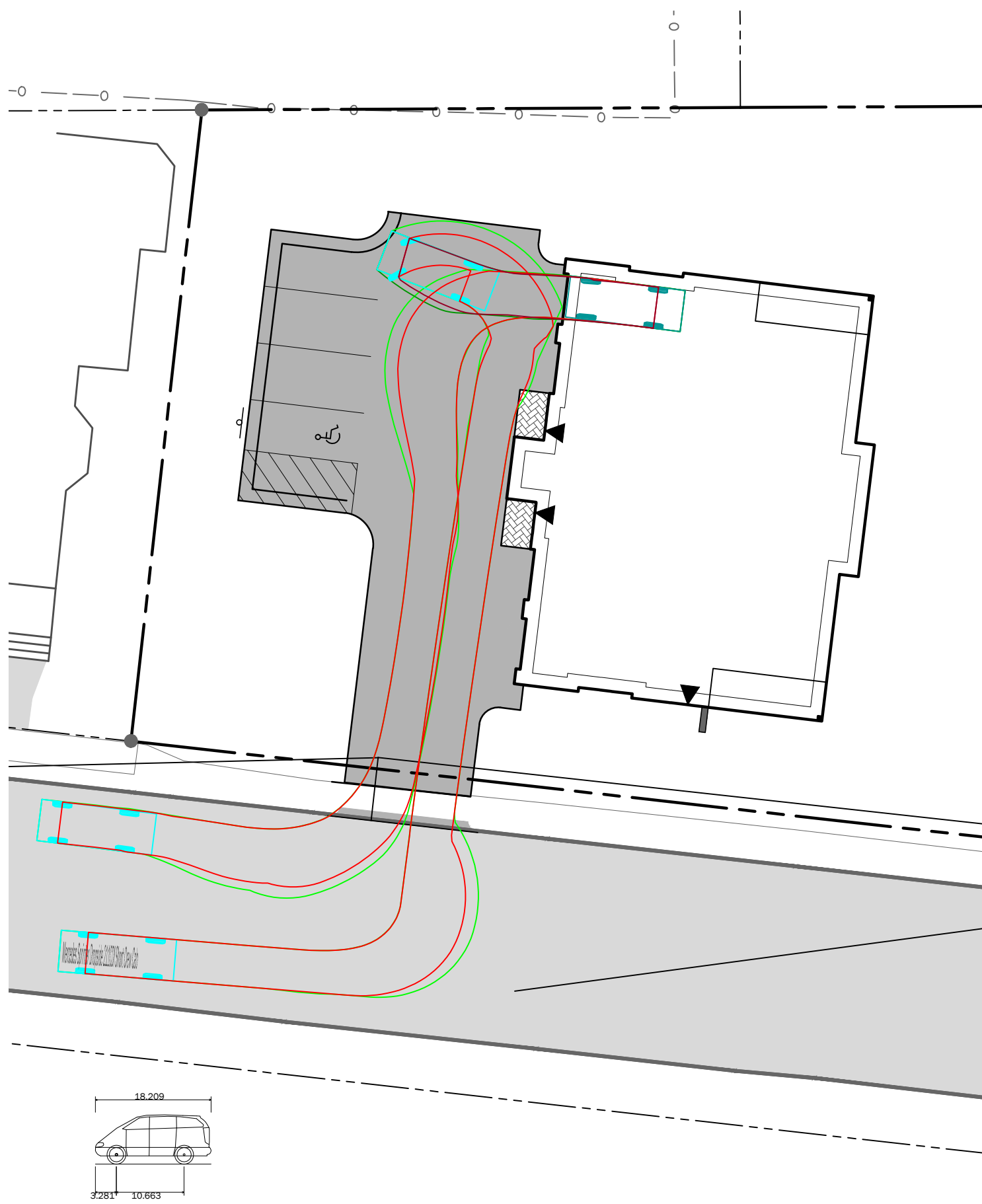
280 POLAND SPRING ROAD, AUBURN, MAINE 04210
(207) 241-0235

RECORD OWNER:
TEMPLE BETH-EL
400 DEERING AVE.
PORTLAND, MAINE

PLAN DATE:
05-14-2020

SCALE: 1"=20'

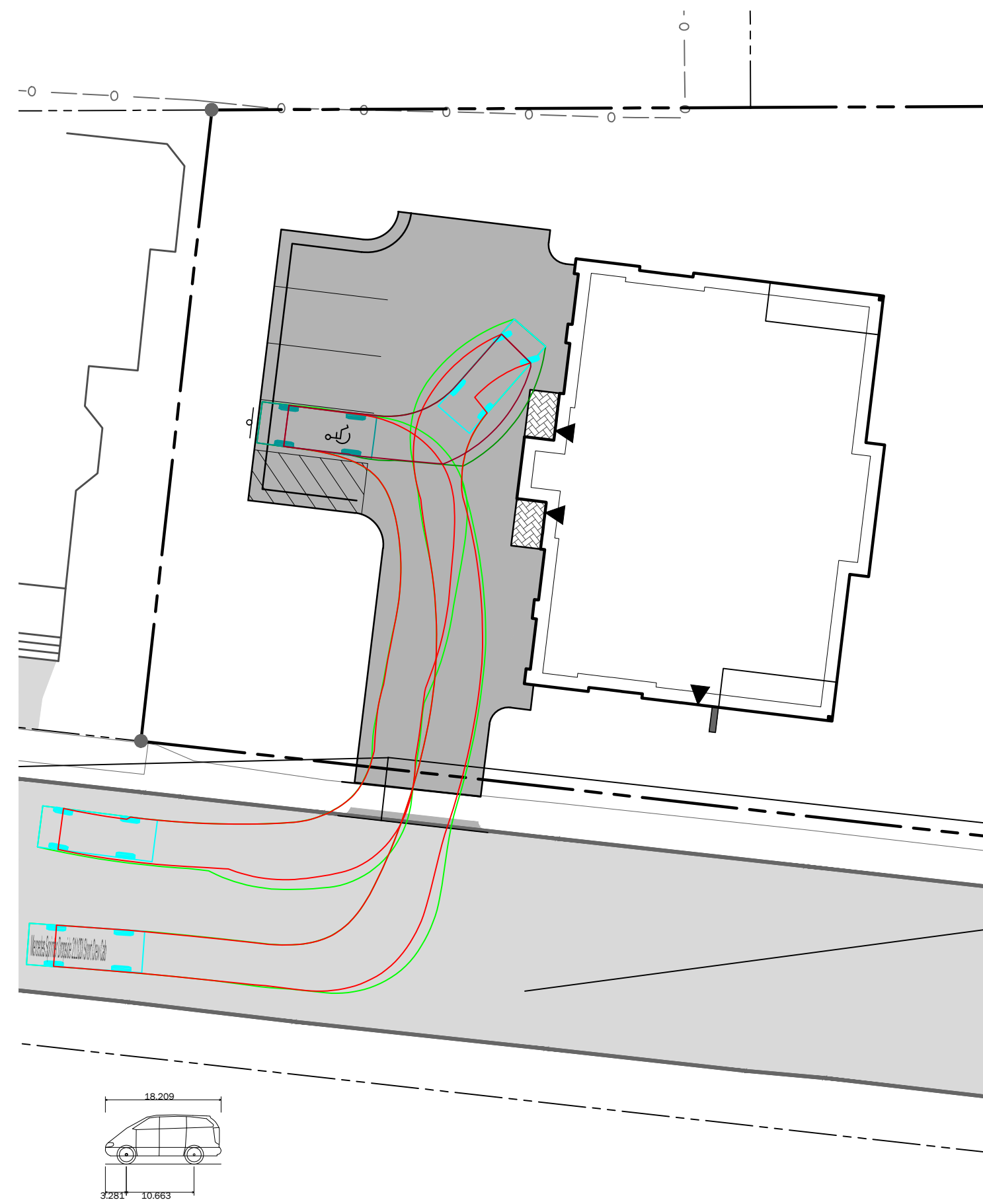
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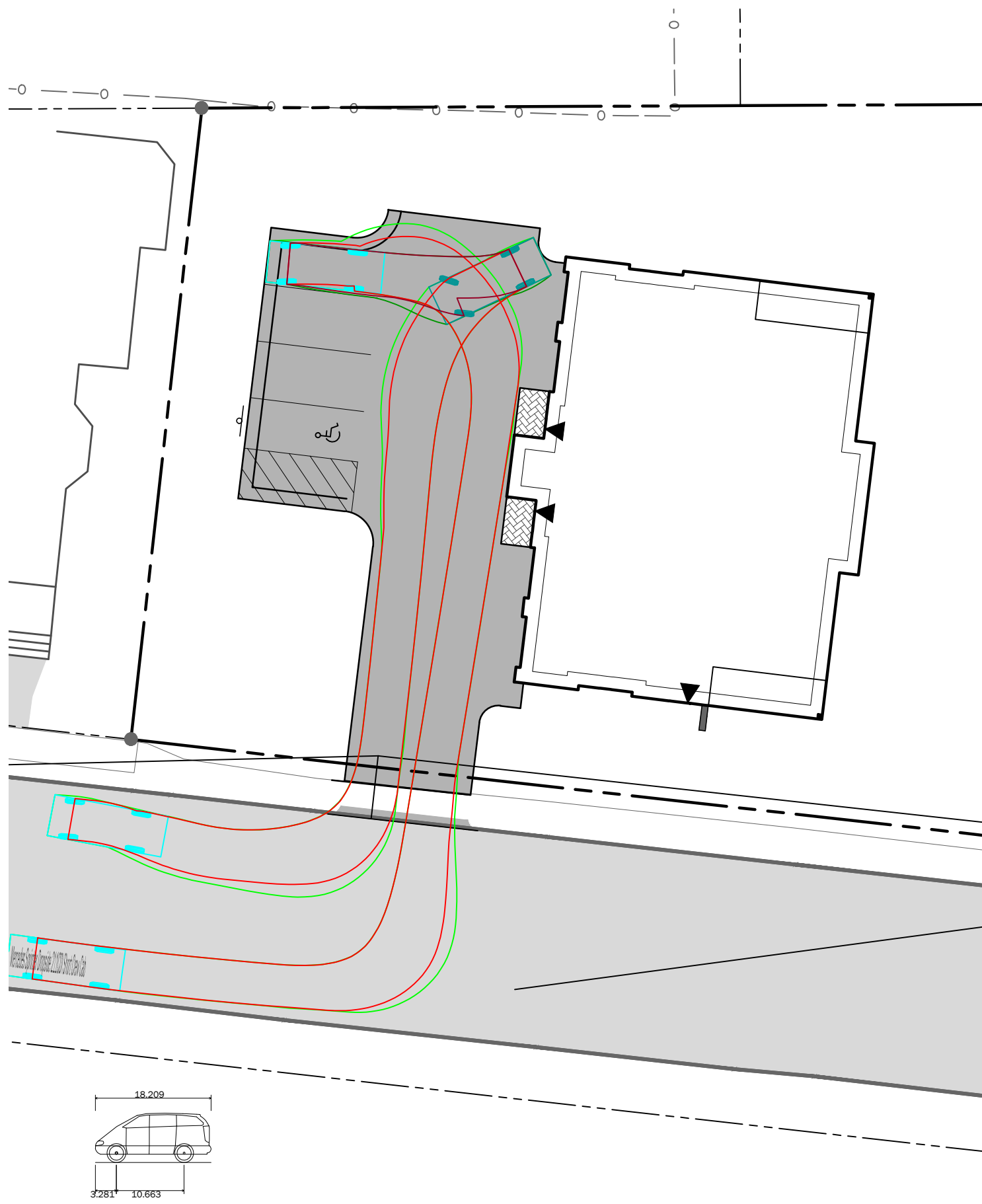
Mercedes Sprinter Dropside 211CDI Short Crew Cab
Overall Length 18.209ft
Overall Width 7.281ft
Overall Body Height 10.663ft
Min Body Ground Clearance 1.312ft
Track Width 6.529ft
Lock-to-lock time 5.01s
Wall to Wall Turning Radius 20.177ft



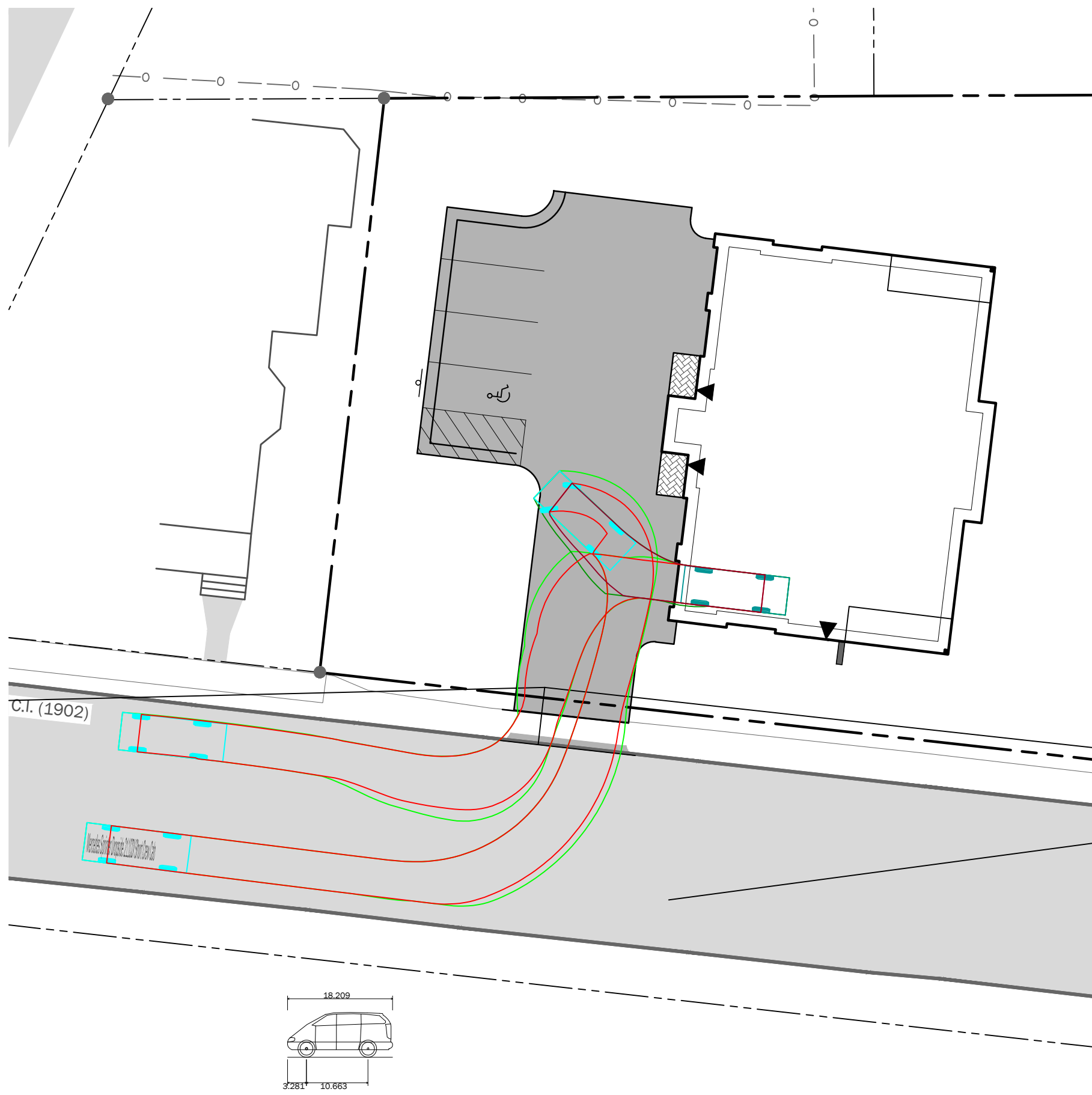
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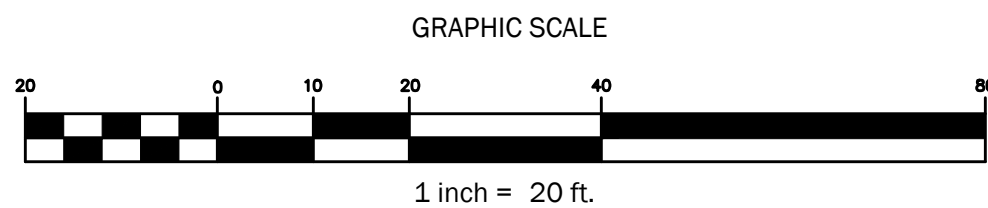
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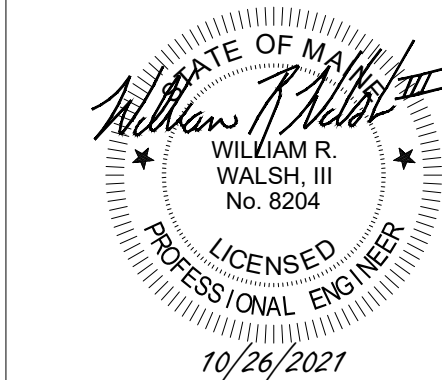


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WALSH
ENGINEERING ASSOCIATES, INC.
One Karen Dr., Suite 2A | Westbrook, Maine 04092
ph: 207.553.9898 | www.walsh-eng.com

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Deering Avenue Residences

387 & 405 Deering Avenue
Portland, Maine 04103
BK 38396, PG 323; CBL: 118 A 003001

SAWYER ISLAND DEVELOPMENT, LLC.

100 SILVER STREET
PORTLAND, MAINE 04101

ISSUED FOR PERMITTING - NOT FOR CONSTRUCTION

Rev.	Date	Description	Drawn	Check
1	01/10/2021	REVISED PER STAFF COMMENTS	DEPT.	NGC
2	10/26/2021	REVISED PER STAFF COMMENTS	TEF	NGC

Sheet Title:
**VEHICLE
TURNING
SIMULATIONS**

Job No.: 613.1
Date: Feb. 24, 2021
Scale: AS NOTED
Drawn: MTL
Checked: SWC

Sheet No.:
T1.0

Planning Board Report
Planning and Urban Development Department



Map and Text Amendment
Munjoy Hill Neighborhood Conservation Overlay District
Amendment to Article 5 (Table 5-A), Article 7 (Table 7-A) and Article 8 (Sec. 8.7)

Submitted to: Chair Stanley and members of the Planning Board Public Hearing Date: February 22, 2022	Prepared by: Christine Grimando, Director Date: February 16, 2022
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I. INTRODUCTION

In 2020, during the course of their review of the Munjoy Hill Historic District, the Planning Board requested that the Munjoy Hill Neighborhood Conservation Overlay District (Sec. 8.7 of the City's Land Use Code, referred to as the overlay below), be brought to the Board for re-evaluation, for potential repeal or amendment. Below is an overview of the overlay, its background and contents, and details of the proposed change.

The Planning Board held a workshop to review the overlay on January 25, 2022. The February 22, 2022 public hearing is on a zoning map and text amendment that would remove the overlay. The legal advertisement for this public hearing ran in the February 10th and 15th editions of the *Portland Press Herald*. The legal ad for the full meeting agenda ran in the February 12th and February 13th editions of the *Portland Press Herald*. 1,047 abutter notices were mailed. As of the writing of this report, seven written public comments have been received.

II. BACKGROUND

Additional discussion of the overlay's original public process, and its relation to the base R-6 and historic district requirements, is included in the January workshop memo (Attachment 1).

The Munjoy Hill neighborhood is characterized by a dense mix of residential building types, including single-family, two-family, and multi-family buildings which range from triple-deckers to substantially taller apartment buildings. Building heights generally range from one-to-four stories, with some exceptions. There are two larger scale residential buildings within the overlay: the Promenade Towers Condominiums and the Portland House. Built in 1975, the Promenade Towers Condominiums are located in the northern portion of the overlay at the corner of Walnut Street and the Eastern Promenade and rises up to approximately 13 stories. Built in 1969, The Portland House is located in the southern portion of the overlay along Fore Street and rises up to approximately 12 stories. Though the types, eras and styles of buildings in the neighborhood varies, the zone that applies to most of the neighborhood, the R-6, has long had a maximum height of 45 feet, and the majority of buildings in the neighborhood are 45 feet and below.

The overlay exists within a portion of the R-6 zone. The purpose statement of the R-6 zone is: *To set aside areas on the peninsula for housing characterized primarily by multi-family dwellings at a high density*

providing a wide range of housing for differing types of households; to conserve the existing housing stock and residential character of neighborhoods by controlling the scale and external impacts of professional offices and other nonresidential uses; and to encourage new housing development consistent with the compact lot development pattern typically found on the peninsula. The overlay encompasses the R-6 portion of Munjoy Hill (see Figure 3), and was implemented in 2018.

The impetus for the creation of the overlay was a Council moratorium on new development applications in response to concerns about the rate of demolitions and the scale and character of resulting infill development. Over the course of the moratorium, Planning staff brought forward interim overlay standards, and then the full overlay, which the Council adopted. The overlay district implemented new dimensional, design, and performance standards for new construction, as well as demolition review provisions. The boundary included all properties in the R-6 zoning district in an area east of Washington Avenue and Mountfort Street, north of Fore Street, and west of the Eastern Promenade. At the time the overlay was adopted, exploration of a Historic District for a portion of the neighborhood was also suggested, with the understanding that the documentation and public process that a district would require would need more time before a proposal could be considered. Since that time, a new district has been adopted for approximately half of the neighborhood.

III. SUMMARY OF OVERLAY ELEMENTS

The overlay contains standards for building form and dimensional requirements for new construction, with specific standards for maximum building height, roof forms, setbacks, parking placement, rooftop appurtenances, and front façade standards that vary from the base R-6 requirements. Where a standard is not specified in the overlay, the regulations default to the R-6 zone. A summary of the key elements of the overlay, and differences from the base R-6 zone standards, are below.

Comparison of Overlay and Base R-6 Zone

In addition to the standards that are applicable to properties in the R-6 zone, all properties within the overlay district have to meet the standards of Section 8.7 of the Land Use Code. Where the overlay district imposes a standard that differs from the base R-6 zone, the overlay district standards control. The R-6 and overlay district dimensional standards are described in Table 7-A and Table 8-E of the Land Use Code respectively, and a comparison of the two zones is provided below.

<i>Standard (min unless otherwise specified)</i>	<i>R-6</i>	<i>Munjoy Hill Neighborhood Conservation Overlay District</i>
Lot Area (residential)	2,000 SF	Same as base R-6 standards
Lot Area Per Dwelling Unit	725 SF	Same as base R-6 standards
Street Frontage	20 ft.	Same as base R-6 standards
Lot Width	20 ft.	Same as base R-6 standards

Height (max)	45 ft.	35 ft.; or 45 ft. for buildings with 3 or more units on lots over 2,000 SF that include at least one workforce housing unit.
Front Setback	5 ft.	5 feet or the minimum depth of immediately abutting street-facing yard, whichever is less.
Rear Yard Setback	10 ft.	Buildings up to 35 ft. in height: 10 ft.
		Buildings over 35 ft. in height: 15 ft.
		As measured from rear decks, porches, or similar unenclosed space: 7.5 ft.
		As measured from accessory structures with a ground coverage of 250 SF or less: 5 ft.
Side Yard Setback	5 ft.	Buildings up to 35 ft. in height: Per underlying zoning
		Buildings over 35 ft. in height: 10 ft. for all side yards, except that a side yard no less than 5 ft. is permitted when used to continue a documented built pattern of the surrounding streetscape, in which case a proportional increase in another side yard must be provided.
Side Setback On Side Street	none	5 ft. or the minimum depth of the immediately abutting street-facing yard, whichever is less.
		None when demonstrated that reduced setbacks are necessary to facilitate the provision of underground parking.
Stepbacks	Above 35 ft. when property line abuts a residential zone: 10 ft. from side property line and 15 ft. from rear property line.	none
Lot Coverage (max)	60%	Same as base R-6 standards
Landscaped Open Area	20%	Same as base R-6 standards

Width of garage opening on front façade (max)	9 ft. or 40% of the front façade, whichever is greater, and in no case more than 20 ft.	Lots smaller than 2,000 SF, shall be permitted one garage door on the front façade 9 ft. or no wider than 30% of the building width.
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Height:

Under the base R-6 zoning regulations, the maximum building height is 45 feet, and in the case of lots where the property line abuts a residential zone, buildings above 35 feet are required to stepback 10 feet from side property lines and 15 feet from the rear property line. For buildings located in the overlay, the maximum permitted building height is up to 35 feet, or 45 feet for buildings with three or more units on lots over 2,000 square feet that include at least one workforce housing unit on-site. Unlike the base R-6 requirements, buildings above 35 feet are not required to provide a stepback. The two-tiered height standard in the overlay was implemented to encourage greater residential development in taller buildings, and also in recognition of historic development patterns, where buildings above 35 feet were most often associated with multi-family buildings, with single- and two-family buildings more often occurring in smaller buildings.

Rooftop Appurtenances:

Within the overlay rooftop appurtenances other than chimneys are restricted from exceeding permitted building heights, except that HVAC equipment is permitted up to five feet above maximum heights if adequately screened, set back from the building edge, and integrated into the building design, and not visible from the public right-of-way. Alternative energy equipment, such as that used for wind or solar energy generation, is also permitted as regulated elsewhere in the Land Use Code.

Roof Forms:

The overlay includes requirements for simple, traditional roof forms, as show in Figure 3, which illustrates roof form permitted for buildings up to 35 feet in height. Flat roofs are also permitted for buildings above 35 feet in height. While the R-6 zone does not include requirements for simple, traditional roof forms in the zoning, the R-6 Design Standards require roofs to refer to the architectural forms found within a two-block radius of the site.

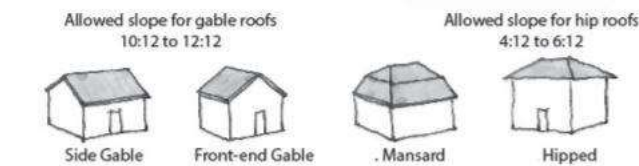


FIGURE 8-F: ROOF FORMS

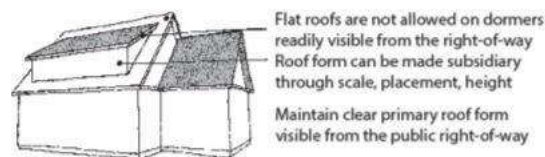


FIGURE 8-G: DORMERS AND SUBSIDIARY ROOFS

Figure 1: Overlay Roof Forms

Front Façade & Parking Placement:

Within the overlay front façade standards require the first floor to contain active living space, such as a living room or bedroom, with windows for at least 50 percent of the width of the front façade in total. The overlay standards require parking to be located on the side or the rear of a building and not within the front 10 feet of depth of the building. Tandem parking spaces are encouraged.

While the R-6 base zone standards are less prescriptive than the overlay regulations related to front façade and parking placement, the R-6 Design Standards include provisions related to composition of principal facades, relationship to street, garages, and fenestration that encourage building designs that will contribute to and be compatible with the predominant character-defining architectural features of the neighborhood.

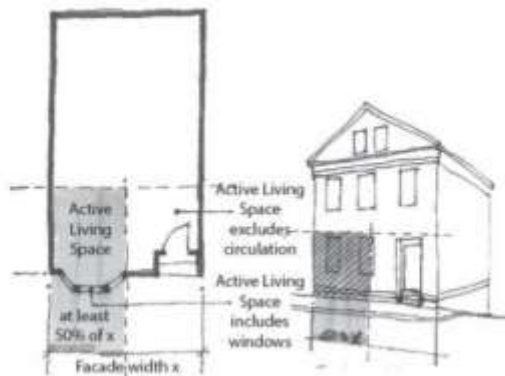


FIGURE 8-H: FRONT FAÇADE - ACTIVE LIVING SPACE

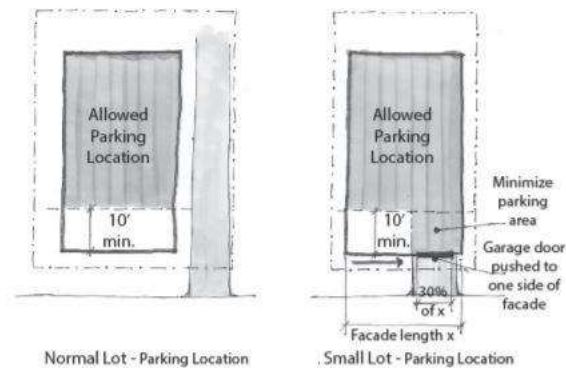


FIGURE 8-I: PARKING LOCATIONS

Figure 2: Overlay Front Façade & Parking Location Diagrams

Alternative Design Review:

For sites located within the R-6 zone a property owner may propose an alternative design by applying for an Alternative Review Design Certificate. The Alternative Design Review process is intended to allow for flexibility when a property owner desires a more contemporary design and does not meet the R-6 zone's design standards in Appendix 7 of the *City of Portland Design Manual*. Consideration is also given to projects which incorporate social or environmental public benefits as part of a project, including the provision of sustainable design, affordable housing units or green technology. In the case of the overlay the Historic Preservation Board is charged with conducting the Alternative Design review. Munjoy Hill is the only neighborhood in which the Alternative Design Review authority is under the jurisdiction of the Historic Preservation Board.

Demolition Review

A central component of the overlay includes demolition review standards for existing structures. Under the demolition provisions, applications to demolish existing structures determined by the Planning Authority to be "preferably preserved" are subject to a delay of up to 12 months in order to consider alternatives to demolition. A building will be considered Preferably Preserved provided: it was constructed prior to 1930; it is representative of a building type and/or architectural style that contributes to the identifiable historic

visual character of Munjoy Hill; it retains sufficient integrity of design, materials, condition, and craftsmanship that adaptive reuse is a viable option.

The demolition review is a delay and not a prohibition on demolition, and the delay period can be reduced if the applicant elects to have their new construction proposal reviewed and approved by the Historic Preservation Board. In that case, the stay is lifted and the preferably preserved building can be demolished and replaced before the end of the 12 month delay. Alternatively, the applicant can wait and move forward with demolition after the 12-month stay. The delay is only applicable to buildings not in a historic district or not designated a landmark.

IV. PLANNING BOARD WORKSHOP

At the January 25, 2022 Planning Board workshop, Planning staff supplied a memo and presentation outlining the origins of the overlay and its relation to other, concurrent regulatory layers. The workshop outlined options for the Board to consider, including repealing it, leaving the overlay unchanged, or considering amendments to improve/modify how it currently works. Based on the meeting materials, public comment, and Board deliberations, the Board directed staff to schedule a public hearing on an amendment that would repeal the overlay in its entirety.

Board deliberations focused on: the regulatory complexity the overlay adds in combination with the new historic district, the base zone standards and design manual standards, all of which concurrently regulate new development in the neighborhood; questions about the need to treat this neighborhood differently from others, and from the rest of the R-6 zone in particular; the lessened need for the overlay in light of the new historic district having surveyed and designated the properties most warranting preservation; the lessened need for the overlay in light of the new historic district and its attendant advisory review providing additional design review over greater than a majority of the neighborhood; and the concern that the overlay requirements were unnecessarily deterring housing creation when there is a clear policy directive for increased housing creation city-wide, and particularly in neighborhoods such as Munjoy Hill that are zoned for relatively dense multifamily housing, due to their proximity to transit, and walking distance to shops, services, and employment. There was also discussion about the challenges of the on-site workforce housing requirement that is in addition to the Inclusionary Zoning requirements and the rooftop appurtenance limits.

Board deliberation also touched on the overlay addressing certain conditions at the time of adoption, but considered that conditions had changed substantially enough to no longer warrant this as a permanent zoning layer, particularly in light of the controls on demolitions and design that the new historic district brings to so many of the properties in the neighborhood. Concerns about the equity and sustainability implications of regulating this neighborhood differently than others in the R-6 were also raised.

In addition to concerns about a recent and future reduction in housing approvals, questions were raised about how many of the approvals were being built (updated table with status of approvals below):

PROJECT STATUS	PROJECT TYPE	TOTAL # OF RES UNITS	# OF IZ UNITS	# OF WORKFORCE UNITS PER HEIGHT >35 FT	YEAR APPROVED	UNDER CONSTRUCTION (Y/N) or YEAR COMPLETED
Approved						
<i>47 Monument Street</i>	Single-family	1	0	0	2019	2020
<i>57 St. Lawrence</i>	Multi-family	16	1.6	1	2019	NO
<i>130 Morning Street</i>	Multi-family	7	0	1	2019	YES
<i>27 Merrill Street</i>	Two-family	2	0	0	2019	NO
<i>128 R North Street</i>	Multi-family	6	1	1	2020	YES
<i>126 North Street</i>	Multi-family	6	1.2	0	2020	NO
<i>19 Willis Street</i>	Multi-family	12	1.2	1	2021	NO
<i>30-32 Atlantic Street</i>	Multi-family	4	0	0	2021	NO
<i>48 Cumberland Street</i>	Single-family	1	0	0	2021	NO
<i>42 Lafayette St</i>	DU Addition	1	0	0	2021	NO
	TOTAL	56	5	4		

The Board also acknowledged that some of the elements of the overlay, particularly in relation to dimensional standards and building form, might warrant consideration for inclusion in the R-6 zone, but since repeal of the overlay would put the area on an even regulatory plane with the rest of areas in the City that are currently zoned R-6, the discussion landed on these particular elements being a suitable ReCode Phase II consideration of whether the zone could benefit from any modifications.

V. PROPOSED MAP & TEXT AMENDMENTS

Map Amendment

Current Zoning: Munjoy Hill Neighborhood Conservation Overlay District/R-6
Proposed Zoning: R-6

The overlay is entirely within the R-6 zone, and removal of the overlay would result in the area still being in the R-6 zone – there is no change proposed to the current base zoning.



Figure 3, Munjoy Hill Conservation Overlay District Boundaries

Text Amendments

Text referencing the overlay appears in Articles 5, 7, and 8 of the Land Use Code.

The following amendment is proposed to Article 5, Zones, Table 5-A, which lists the overlay among other zoning overlays:

Overlay Zones	Compact Urban Residential (R-7)
	Downtown Entertainment Overlay
	Fort Sumner Park Height Overlay
	Helistop Overlay
	Institutional Overlay (IOZ)
	Munjoy Hill Neighborhood
	Conservation
	Island Transfer Station Overlay

Pedestrian Activities District Overlay
 Stream Protection Overlay
 University of Southern Maine
 Overlay
 Waynflete School Overlay

The following amendment is proposed to Article 7, Dimensional Standards, Table 7-A, which removes the overlay from a list of overlays in which height exceptions apply:

TABLE 7-A: RESIDENTIAL ZONE DIMENSIONAL STANDARDS

	R-1	R-2	R-3 ²	R-4	R-5 ^{2, 3}	R-5a ⁴	R-6 ^{6, 7}	R-6a ¹³
...								
Structure height (max.)	35 ft.	35 ft.	35 ft.	35 ft.	35 ft.	35 ft.	45 ft. ¹²	65 ft.
Detached accessory	18 ft.	18 ft.	18 ft.	18 ft.	18 ft.	18 ft.	18 ft.	
...	20%	20%	35%	30%	40%	30%	60%	

¹² Except as provided under the Fort Sumner Park Height Overlay, ~~the Munjoy Hill Conservation Overlay~~, and the Bayside Height Overlay.

The amendment proposes to repeal sec. 8.7 of Article 8, Overlay Zones, in its entirety. Sec. 8.7 includes:

- 8.7.1 Area of effect;
- 8.7.2 Effect of the district;
- 8.7.3 Dimensional standards;
- 8.7.4 Design review;
- 8.7.5 Demolition review;
- Figure 8-E: Munjoy Hill Neighborhood Conservation District Boundaries;
- Figure 8-F: Roof Forms;
- FigureE 8-G: Dormers and Subsidiary Roofs;
- Figure 8-H: Front Facade – Active Living Space;
- Figure 8-I: Parking Locations; and
- Table 8-E: Munjoy Hill Neighborhood Conservation District Dimensional Requirements.

The full amendments also include a non-substantive change to the Table of Contents. Full text of the amendments are included in Attachment 3.

VI. COMPREHENSIVE PLAN

[Portland's Plan 2030](#) has numerous goals and strategies applicable to the proposed text and map amendments, in multiple sections, including Housing, Economy, and Environment. The change would revert to the base zoning currently in effect, and there are many references in the comprehensive plan to the importance of walkability, density, transit proximity, and complete neighborhoods, as well as of allowing incremental change to occur in existing residential neighborhoods – all of which support the intent of the

R-6 zone in peninsula neighborhoods. The overlay was originally found consistent with *Portland's Plan 2030*, and there's nothing generally inconsistent with the comprehensive plan with zoning overlays as a tool that seeks to foster improved or different development outcomes where unusual circumstances apply; the premise of the original overlay was that there were acute, unusual circumstances that required a response distinct and above the regulations of the underlying zone. Both the base R-6, as well as the base R-6 plus the Munjoy Hill Historic District for a portion of the neighborhood have been affirmed as meeting City goals, and each have had extensive public processes and findings.

For the purposes of this amendment, if the Planning Board concludes that the overlay is no longer needed, and/or is hindering other goals of the comprehensive plan, this would serve as a basis for a finding of consistency between the proposed amendments and *Portland's Plan 2030*.

Below are a selection of goals and strategies related to the benefits of land use patterns and policies that support dense, compact, walkable neighborhoods and the city's housing needs.

Environment

- As Maine's largest city, Portland embodies core tenets of sustainable urbanism in its compact form and function, enabling efficiencies in resource consumption, waste reduction, and resiliency. Portland's diversity of housing types and increased densities, strong neighborhoods, proximity of residences to employment, and viability for multimodal transportation offer a durable framework to build upon and enhance. (Introductory text to Environment Policy Guide)
- Adopt sustainable land use and transportation policies that support connectivity, walkable neighborhoods, and multi-modal transportation.
- Coordinate future land use policy changes with long-range regional transportation planning, including planning for transit, pedestrian, and bicycle improvements, to reduce local and regional vehicle miles traveled.
- Continue to develop land use policies which support complete neighborhoods.

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.

Economy

- The city's exceptional urban form is integral to the health of its economy; its compact, walkable downtown and neighborhood centers, strong transit connections, and spectacular setting on Casco Bay all contribute to Portland's distinct advantages. (Introductory text to Economy Policy Guide)

VII. PUBLIC COMMENT

The legal advertisement for this public hearing ran in the February 10th and 15th editions of the *Portland Press Herald*. The legal ad for the full meeting agenda ran in the February 12th and February 13th editions of the *Portland Press Herald*. 1,047 abutter notices were mailed. As of the writing of this report, seven written

public comments have been received. Written and spoken comment have been both in favor of retaining the overlay and in favor of modifying or repealing it. Comments in favor of retaining the overlay include a concern that removing the overlay would raise housing costs; that the overlay promotes neighborhood stability; that it stems gentrification; and the ongoing needs for protections against demolitions. Comments in favor of repeal or modification include a wish for zoning that encourages density and walkability; the challenges of the rooftop appurtenances prohibitions, particularly in regard to elevators; the challenges of the on-site inclusionary unit as a condition for 45 feet max. height allowed as the default elsewhere in the R-6.

VIII. MOTIONS FOR THE BOARD TO CONSIDER

On the basis of materials provided in this report dated February 16, 2022 and its attachments, public testimony, and other information provided during the Planning Board's review process and at the February 22, 2022 public hearing, the Planning Board finds that the proposed amendment to the City of Portland zoning map, repealing the Munjoy Hill Neighborhood Conservation Overlay District, and the proposed text amendments to the City of Portland Land Use Code Articles 5, 7 & 8, striking reference to the Munjoy Hill Neighborhood Conservation Overlay District [are / are not] consistent with the City of Portland's Comprehensive Plan and therefore [recommends / does not recommend] these zoning map and text amendments to the City Council.

IX. ATTACHMENTS

1. Jan. 25th Planning Board workshop memo
2. Jan. 25th workshop presentation
3. Proposed Land Use Code Text Amendments
4. Munjoy Hill Overlay Extent
5. Public Comment



CITY OF PORTLAND
Planning & Urban Development
Christine Grimando, AICP, Director

To: Chair Stanley and members of the Portland Planning Board

From: Christine Grimando, Director, Planning & Urban Development Department
Kevin Kraft, Deputy Director, Planning & Urban Development Department

Date: January 21, 2022

RE: Overview of the Munjoy Hill Neighborhood Conservation Overlay

I. INTRODUCTION

In 2020, during the course of their review of the Munjoy Hill Historic District, the Planning Board requested that the Munjoy Hill Neighborhood Conservation Overlay District (Sec. 8.7 of the City's Land Use Code, and to be referred to as the overlay below), be brought back to the Board for review for potential elimination or revisions. Below is an overview of the overlay, including background on its impetus, how it relates to the base R-6 zone as well as to the Munjoy Hill Historic District. The January workshop does not include proposed amendments, but the below overview concludes with potential changes to the overlay for the Board to consider.

II. PRIOR PLANNING EFFORTS AND MILESTONES

In 2017 a planning initiative began in response to residents' concerns about the scale and character of recent development as well as concern about the number of buildings demolished in the Munjoy Hill neighborhood. On December 4, 2017, to provide time to study and manage the issue, the City Council adopted a moratorium that placed a 180-day pause during which no demolition applications were to be accepted and a 65-day period, during which no development applications were to be accepted, reviewed, or approved. The moratorium further stated that the Department of Planning and Urban Development conduct an analysis of the impacts and effectiveness of then-current zoning and design review standards and develop an interim ordinance to govern development in the R-6 zone on Munjoy Hill for the remaining days of the moratorium.

In response to the moratorium, Planning developed and the Council adopted an Interim Planning Overlay District (IPOD) that continued to prohibit demolitions, but created interim

controls for new development applications in the neighborhood. This IPOD formed the basis of the current overlay district.

In June 2018, the IPOD was replaced and the current overlay district was adopted. The adopted map and text amendments created the overlay district and implemented new dimensional, design, and performance standards related to new construction and demolitions to better manage development in Munjoy Hill. The boundary included all properties in the R-6 zoning district in an area east of Washington Avenue and Mountfort Street, north of Fore Street, and west of the Eastern Promenade.

In 2018, the possibility of the creation of a historic district for a portion of Munjoy Hill was also raised, but due to the need for research and supporting materials for the creation of a district, this was always understood to be a consideration on a different time frame from implementation of the overlay. After an extensive public process, and review by the Historic Preservation Board and the Planning Board, the City Council adopted the Munjoy Hill Historic District on April 12, 2021. The boundaries of the historic district encompass portions of Munjoy Hill that exhibited the strongest concentration of historic structures that retained a sufficient degree of integrity, not the entire neighborhood. In addition to the district itself, five historic structures outside of the boundaries of the historic district were designated as individual landmarks. These include 101-107 Congress Street, 7 Lafayette Street, 8-12 Montreal Street, 51 Monument Street and 28 Waterville Street. Below is a map showing the boundaries of the adopted historic district.

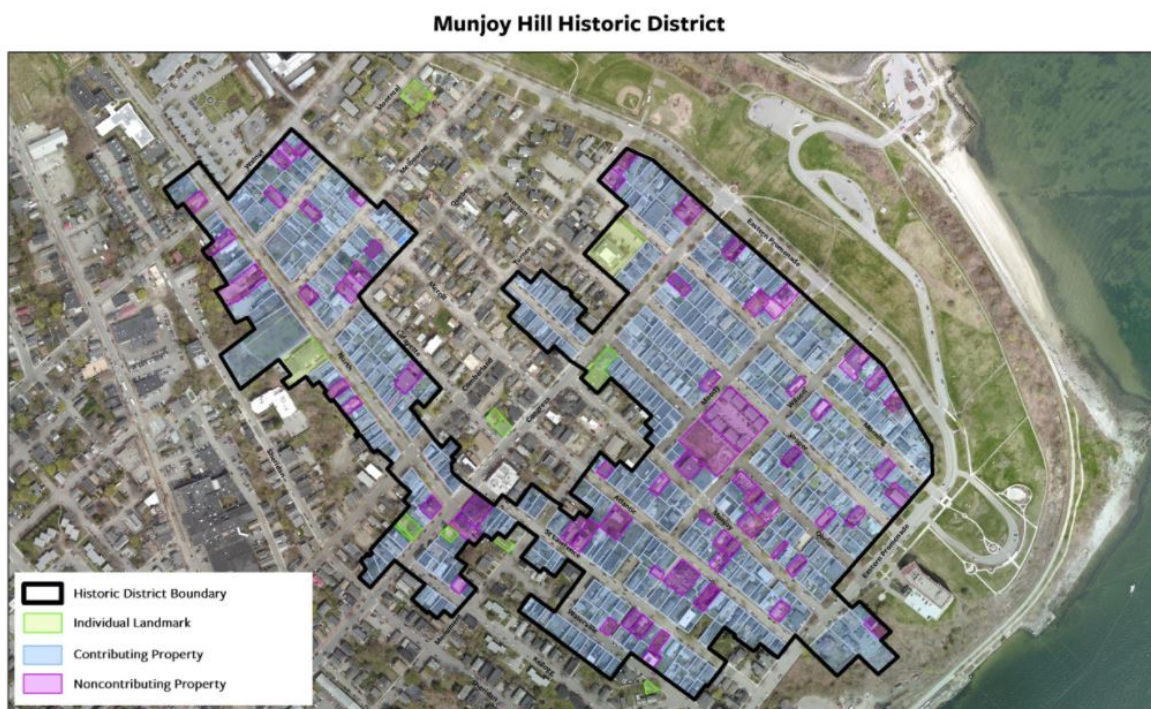


Figure 1: Munjoy Hill Historic District & Designated Landmarks

III. EXISTING CONTEXT

The Munjoy Hill neighborhood is characterized by a mix of residential building types, including single-family, two-family, and multi-family buildings, including triple decker and some larger multi-family elevator buildings. Building heights generally range from one-to-four stories. There are two larger scale residential buildings within the overlay: the Promenade Towers Condominiums and the Portland House. Built in 1975, the Promenade Towers Condominiums are located in the northern portion of the overlay at the corner of Walnut Street and the Eastern Promenade and rises up to approximately 13 stories. Built in 1969, The Portland House is located in the southern portion of the overlay along Fore Street and rises up to approximately 12 stories. Neither of these two larger buildings could be constructed under current zoning regulations.

IV. SUMMARY OF OVERLAY ELEMENTS

The overlay contains standards for building form and dimensional requirements for new construction, with specific standards for maximum building height, roof forms, setbacks, parking placement, rooftop appurtenances, and front façade standards that vary from the base R-6 requirements.

Comparison of Overlay and Base R-6 Zone

In addition to the standards that are applicable to properties in the R-6 zone, all properties within the overlay district shall meet the standards of Section 8.7 of the Land Use Code. Where the overlay district imposes a standard that differs from the base R-6 zone the overlay district standards shall control. The R-6 and overlay district dimensional standards are described in Table 7-A and Table 8-E of the Land Use Code, respectively and a comparison of the two zones is provided below.

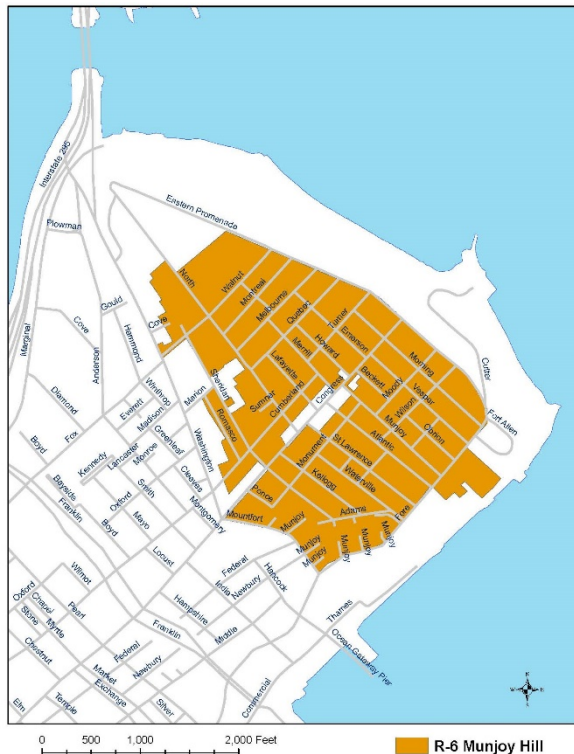


Figure 2 Munjoy Hill Conservation Overlay District

Standard	Base R-6	Munjoy Hill Neighborhood Conservation Overlay District Requirements
Minimum Lot Area (residential)	2,000 SF	Same as base R-6 standards
Lot Area Per Dwelling Unit (min.)	725 SF	Same as base R-6 standards

Street frontage (min.)	20 ft.	Same as base R-6 standards
Minimum Street Frontage	20 ft.	Same as base R-6 standards
Lot Width (min.)	20 ft.	Same as base R-6 standards
Maximum Structure Height	45 ft.	35 ft.; or 45 ft. for buildings with 3 or more units on lots over 2,000 SF that include at least one workforce housing unit.
Minimum Front Setback	5 ft.	5 feet or the minimum depth of immediately abutting street-facing yard, whichever is less.
Minimum Rear Yard Setback	10 ft.	Buildings up to 35 ft. in height: 10 ft.
		Buildings over 35 ft. in height: 15 ft.
		As measured from rear decks, porches, or similar unenclosed space: 7.5 ft.
		As measured from accessory structures with a ground coverage of 250 SF or less: 5 ft.
Side Yard Setback Minimum	5 ft.	Buildings up to 35 ft. in height: Per underlying zoning
		Buildings over 35 ft. in height: 10 ft. for all side yards, except that a side yard no less than 5 ft. is permitted when used to continue a documented built pattern of the surrounding streetscape, in which case a proportional increase in another side yard must be provided.
Side setback on side street (min.)	none	5 ft. or the minimum depth of the immediately abutting street-facing yard, whichever is less.
		None when demonstrated that reduced setbacks are necessary to facilitate the provision of underground parking.
Structure Stepbacks	Above 35 ft. when property line abuts a residential zone: 10 ft. from side property line and 15 ft. from rear property line.	none
Maximum Lot Coverage	60%	Same as base R-6 standards

Minimum Landscaped Open Area	20%	Same as base R-6 standards
Width of garage opening on front façade (max.)	9 ft. or 40% of the front façade, whichever is greater, and in no case more than 20 ft.	Lots smaller than 2,000 SF, shall be permitted one garage door on the front façade 9 ft. or no wider than 30% of the building width.

Height:

Under the base R-6 zoning regulations, the maximum building height is 45 feet, and in the case of lots where the property line abuts a residential zone, buildings above 35 feet are required to stepback 10 feet from side property lines and 15 feet from the rear property line. For buildings located in the overlay, the maximum permitted building height is up to 35 feet, or 45 feet for buildings with three or more units on lots over 2,000 square feet that include at least one workforce housing unit on-site. Unlike the base R-6 requirements buildings above 35 feet are not required to provide a stepback. The two-tiered height standard in the overlay was implemented to encourage greater residential development in taller buildings, and also in recognition of historic development patterns, where buildings above 35 feet were most often associated with multi-family buildings, with single- and two-family buildings more often occurring in smaller buildings. The addition of the on-site workforce housing unit requirement for 45 foot buildings was an addition made by the City Council before they adopted the overlay, and was intended to compel mixed-income developments beyond and in addition to the City's Inclusionary Zoning requirements.

Rooftop Appurtenances:

Within the overlay rooftop appurtenances other than chimneys are restricted from exceeding permitted building heights, except that HVAC equipment is permitted up to five feet above maximum heights if adequately screened, set back from the building edge, and integrated into the building design, and not visible from the public right-of-way. Alternative energy equipment, such as that used for wind or solar energy generation, is also permitted as regulated elsewhere in the Land Use Code.

In contrast to the overlay district, within the base R-6 zone rooftop appurtenances may be erected above the height limitations.

Roof Forms:

The overlay includes requirements for simple, traditional roof forms, as show in Figure 3, which illustrates roof form permitted for buildings up to 35 feet in height. Flat roofs are also permitted for buildings above 35 feet in height.

While the R-6 zone does not include requirements for simple, traditional roof forms in the zoning, the R-6 Design Standards require roofs to refer to the architectural forms found within a two-block radius of the site. In addition, the R-6 Design Standards specify that gable roofs be symmetrical with a pitch between 7:12 and 12:12 and that hip roofs with a shallow pitch and flat roofs have a cornice of at least 12 inches. There are avenues for applicants for new buildings in the R-6 to pursue in the event a different roof form or alternative style is desired; the overlay creates a more prescriptive standard for roof types than in the base

zone, in an effort to require designs more in keeping with the architectural styles that historically comprised much of the Munjoy Hill neighborhood.

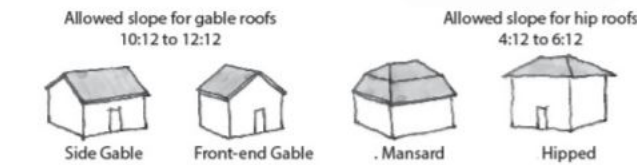


FIGURE 8-F: ROOF FORMS

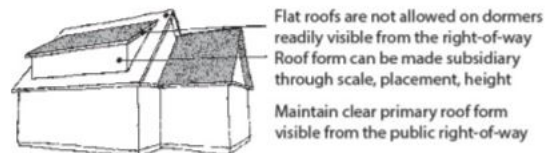


FIGURE 8-G: DORMERS AND SUBSIDIARY ROOFS

Figure 3 Munjoy Hill Conservation District Roof Forms

Front Façade & Parking Placement:

Within the overlay front façade standards require the first floor to contain active living space, such as a living room or bedroom, with windows for at least 50 percent of the width of the front façade in total. The overlay standards require parking to be located on the side or the rear of a building and not within the front 10 feet of depth of the building and tandem parking spaces are encouraged, which is consistent with the built form of the neighborhood.

While the R-6 base zone standards are less prescriptive than the overlay regulations related to front façade and parking placement, the R-6 Design Standards include provisions related to composition of principal facades, relationship to street, garages, and fenestration that encourage building designs that will contribute to and be compatible with the predominant character-defining architectural features of the neighborhood.

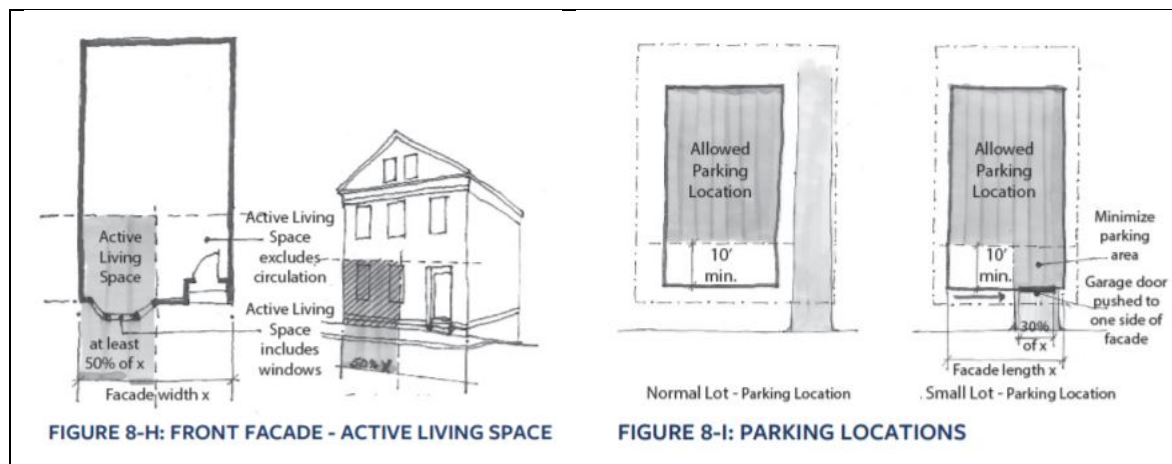


Figure 4: Munjoy Hill Front Façade & Parking Location Diagrams

Alternative Design Review:

For sites located within the R-6 zone a property owner may propose an alternative design approach and request an Alternative Review Design Certificate. The Alternative Design Review process is intended to allow for flexibility when a property owner desires a more contemporary design or incorporates social or environmental public benefits as part of a project, including the provision of sustainable design, affordable housing units or green technology, and does not meet the R-6 zone's base design standards in Appendix 7 of the *City of Portland Design Manual*. In the case of the overlay, under this process, the Historic Preservation Board is charged with conducting the review. If the Alternative Design Review is not approved, an applicant is able to move forward with a project under the base R-6 design manual standards. Munjoy Hill is the only neighborhood in which the Alternative Design Review authority is under the jurisdiction of the Historic Preservation Board.

Demolition Review

In addition to the dimensional and design standards for new construction, a central component of the overlay includes demolition review standards for existing structures. Under the demolition provisions, applications to demolish existing structures determined by the Planning Authority to be "preferably preserved" within the overlay are subject to a delay of up to 12 months in order to consider alternatives to demolition. A building will be considered Preferably Preserved provided: it was constructed prior to 1930; it is representative of a building type and/or architectural style that contributes to the identifiable historic visual character of Munjoy Hill; it retains sufficient integrity of design, materials, condition, and craftsmanship that adaptive reuse is a viable option.

The demolition review is a delay and not a prohibition on demolition, and the delay period can be reduced if the applicant elects to have their new construction proposal reviewed by the Historic Preservation Board and the Board finds that the design proposal meets the historic preservation ordinance's new construction standards. In that case, the stay is lifted and the preferably preserved building can be demolished and replaced before the end of the 12 month delay. Alternatively, the applicant can wait and move forward with demolition after the 12-month stay. The ordinance also makes allowances for natural disaster or safety hazards. The delay is only applicable to buildings not in a historic district or not designated a landmark. The delay is intended to encourage alternatives to demolition of "preferably preserved" buildings.

V. RELATIONSHIP OF OVERLAY TO HISTORIC DISTRICT

The Munjoy Hill Historic District is comprised of 427 parcels within the larger Munjoy Hill neighborhood, representing approximately 49 percent of Munjoy Hill's building stock. The majority of these properties are located within the R-6 residential zone and the overlay district. The remaining 51 percent of Munjoy Hill's building stock is outside the boundaries of the Historic District. Furthermore, there are 262 parcels that are within 100 feet of the Historic District(s), and designated landmarks, and landscapes.

All of the standards of the overlay are applicable in the historic district, with the exception of the demolition delay provisions. The historic preservation ordinance governs demolition within districts. Districts themselves include properties that are considered contributing or noncontributing. Contributing structures may not be demolished, with rare exceptions (with respect to demolition, landmark or contributing structures cannot be demolished unless 1) the applicant can meet the ordinance's economic hardship test which requires demonstration of "no reasonable use of the structure"; or 2) the Historic Preservation Board, upon request of an applicant, amends or rescinds the original landmark or contributing classification. The ordinance includes a process and review criteria for considering such requests), while non-contributing structures may be demolished. As the demolition delay provision of the overlay explicitly does not apply to historic districts, non-contributing structures in the Munjoy Hill Historic District are not subject to a demolition delay. Within the boundaries of a historic district, the merits and rationale for preservation of each property have already been determined at the time of designation, and so no further, duplicative process for consideration of "preferably preserved" is needed or appropriate. Therefore, non-contributing structures have the same ability to be demolished as any property in the city that is not either designated or subject to the demo delay provisions of the overlay.

In addition to the roof and building form standards of the overlay, the Historic Preservation Ordinance review standards for new construction are applied to new buildings as well as additions and alterations within the historic district. Historic designation does not alter the dimensional standards of the zone, and new construction, additions, inclusion of alternative energy features such as solar panels, and building alterations may all occur within the district. Designation puts in place a mechanism to review such changes to ensure that the overall historic character of the neighborhood is preserved and enhanced over time.

For sites outside of the district, but within 100 feet of a district, landmark, or historic landscape, the historic preservation program provides advisory design review.



Figure 5: Boundary of Munjoy Hill Historic District within the Overlay

Figure 6 below shows the Historic District, designated landmarks, and sites within 100 feet of those designations overlaid on the Overlay District boundary.



Figure 6: Parcels Within 100' of Historic District/Landscape/Landmark

VI. DEVELOPMENT TRENDS SINCE ADOPTION

Since adoption of the overlay district there have been nine projects approved and one

project currently under review. The nine approved applications have resulted in the approval of 56 total residential units, five workforce units, and four required on-site workforce housing units to take advantage of the 45 foot height allowance. Below is a breakdown of applications currently approved or in review within the overlay.

PROJECT STATUS	PROJECT TYPE	TOTAL # OF RES UNITS	# OF WORKFORCE UNITS	# OF WORKFORCE UNITS PER HEIGHT >35 FT	YEAR APPROVED
Approved					
<i>57 St. Lawrence</i>	Multi-family	16	1.6	1	2019
<i>130 Morning Street</i>	Multi-family	7	0	1	2019
<i>27 Merrill Street</i>	Two-family	2	0	0	2019
<i>128 R North Street</i>	Multi-family	6	1	1	2020
<i>126 North Street</i>	Multi-family	6	1.2	0	2020
<i>19 Willis Street</i>	Multi-family	12	1.2	1	2021
<i>30-32 Atlantic Street</i>	Multi-family	4	0	0	2021
<i>5 Salem Street</i>	Two-family	2	0	0	2021
<i>48 Cumberland Street</i>	Single-family	1	0	0	2021
	TOTAL	56	5	4	
In Review					
<i>7 Marion Street</i>	Multi-family	3	0	0	

PROJECT TYPE	# OF PROJECTS
Multi-family	7
Two-family	2
Single-family	1
TOTAL	10

VII. DISCUSSION

The R-6 zone is intended to affirm and foster relatively high density (though the zone is not nearly as high in maximum permitted density than Portland's mixed-use B zones) residential neighborhoods on the peninsula; the overlay was not meant to detract from this goal, but to guide new development to better outcomes, in keeping with the urban fabric of the Munjoy Hill neighborhood. In considering whether the overlay is still needed or whether it is in need of any modifications, there are several options for the Board to consider, outlined below.

The overlay and the district can both continue to be in place without conflict, and leaving the overlay in place is one option. Absent any changes, future development in Munjoy Hill would continue to be reviewed against the various regulations and design standards. Demolition delay provisions would continue to apply to preferably preserved buildings not in historic districts or otherwise designated.

Repealing the overlay altogether is also an alternative, and one suggested as a possibility by Board members previously. In the case of repealing it, the base R-6 zone, with the use and dimensional standards that apply within the rest of the R-6 zone would remain in effect, and

the design standards contained in the *City of Portland Design Manual* would continue to be applied to reviews of new construction outside of the historic district. Within the half of the neighborhood within the historic district, the historic preservation ordinance would govern demolitions, as well as design review of new construction and alterations. It's worth noting that the advisory review within 100 feet of a district, landmark or historic landscape means that some level of historic preservation input is applied to well over half of the neighborhood. Repeal would result in Munjoy Hill being subject to the same standards that govern the majority of residential zoning on the peninsula, which is predominantly zoned R-6, and includes several other historic districts. The R-6 zone occurs on Munjoy Hill, in the West End, in parts of Bayside and East Bayside, and Parkside.

Another approach is to retain the overlay district but amend or repeal specific elements. One simple change would be to have the overlay only applicable outside of the historic district. Currently, both layers of regulation exist in addition to the base standards, making for a particularly complex set of overlapping requirements. Other elements for consideration include:

- **On-site workforce housing unit:** Consider eliminating this requirement or adding the flexibility for an applicant to pay a fee-in-lieu. This was included for excellent reasons, but Planning staff has repeatedly heard that it is a difficult standard to meet as written, as it lacks of the fee-in-lieu to the City's Housing Trust Fund as an alternative. Inclusionary Zoning, which requires that projects of 10+ dwelling units include workforce housing units or include a contribution to the City's Housing Trust, has significantly increased what is required in terms of percentage of workforce units and levels of affordability, since the overlay was adopted. At the time of adoption, IZ requirements were for 10% of total dwelling units for households earning 100 or 125% of Area Median Income, and have since changed to 25% of total dwelling units in new housing proposals needing to be provided for households earning 80% of Area Median Income. Not many units (four units have been approved through this provision) of workforce housing have been created from this standard, and to the extent that it may be deterring new housing creation, may not be fulfilling its original intent.
- **Demolition Delay Process:** Currently Munjoy Hill is the only neighborhood subject to a demolition delay. The Historic District adoption process included an evaluation of the neighborhood for historic structures of highest priority. Removal of the demolition delay would remove the lengthened timeframe for the remaining properties in the neighborhood that were not nominated in the rigorous historic designation process; properties not designated would then be subject to the same process for demolition as every other not-designated (including non-contributing properties within historic districts) property in the city. Individually landmarking a property would remain an option for homeowners.
- **Rooftop appurtenances:** In all other districts rooftop appurtenances are permitted to exceed maximum building heights. The current limitations placed on rooftop

appurtenances creates challenges for accommodating mechanical equipment required in many modern apartment buildings such as elevator overruns, which generally extend above height limitations to serve the top floor. In addition to creating challenges for new construction generally, this raises ADA concerns, as well. If the Board recommended keeping this limitation, another alternative would be to grant flexibility for appurtenances for structures that existed prior to the overlay.

Lastly, another alternative is to recommend repeal of the overlay, but consider elements for inclusion in the R-6 zone. These could include any of the overlay dimensional standards, the 35/45 feet height distinction for multi-family, and certain building form standards if they were deemed successful changes or additions to the base zone. Staff would recommend that any elements of the overlay that the Board wished to consider for wider application within the R-6 be incorporated into the ReCode process.

VIII. CONCLUSION & NEXT STEPS

The intention of this initial workshop on the overlay is to provide an overview of its contents as well as to identify potential changes for the Board to consider. Following the January 25th workshop and Planning Board deliberation, staff will follow-up with additional information or amendments for a future Board workshop or public hearing, as needed. Any recommended amendments to the Land Use Code would be forwarded from the Planning Board to the City Council for a decision.

ATTACHMENTS

1. Munjoy Hill Historic District Map
2. Overlay Zones – Chapter 14 Section 8
3. MHN COD with HD100 ft offset



Munjoy Hill Neighborhood Conservation Overlay District

Planning Board Workshop | January 25, 2022

What is the MHNCO?



Impetus

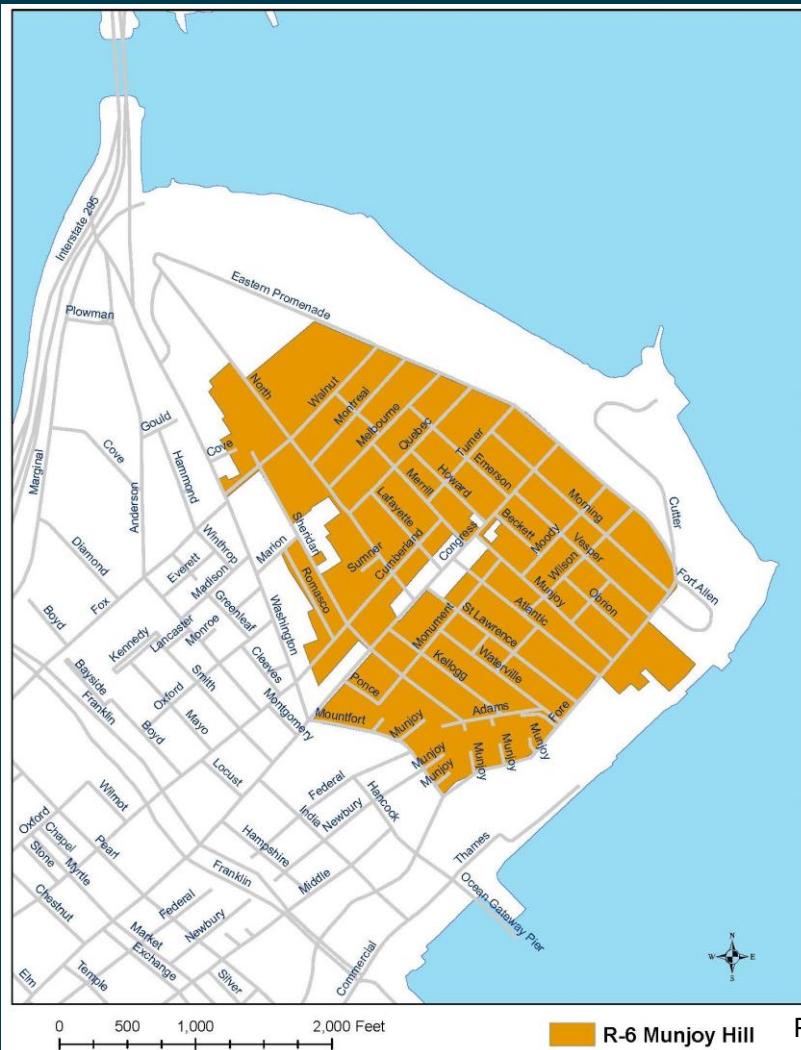
- Concerns w/ rate of demolitions
- Concerns with design and scale of infill
- Moratorium on Demolitions & Development

Contains

- Dimensional Standards
- Design Standards
- Demolition Delay

Planning Processes & Milestones

Year	Milestone
Dec 2017	Moratorium on Development (65 days) & Demolitions (180 days)
2018	Munjoy Hill Interim Planning Overlay District
Feb 2018	Moratorium on Development Expires
June 2018	Moratorium on Demolitions Expires
June 2018	Munjoy Hill Conservation Overlay District Adopted
April 2021	Munjoy Hill Historic District Adopted



Munjoy Hill Conservation Overlay

Base Zone	R-6
Overlay Zone	MHNCOD



R-6/Munjoy Hill Overlay District



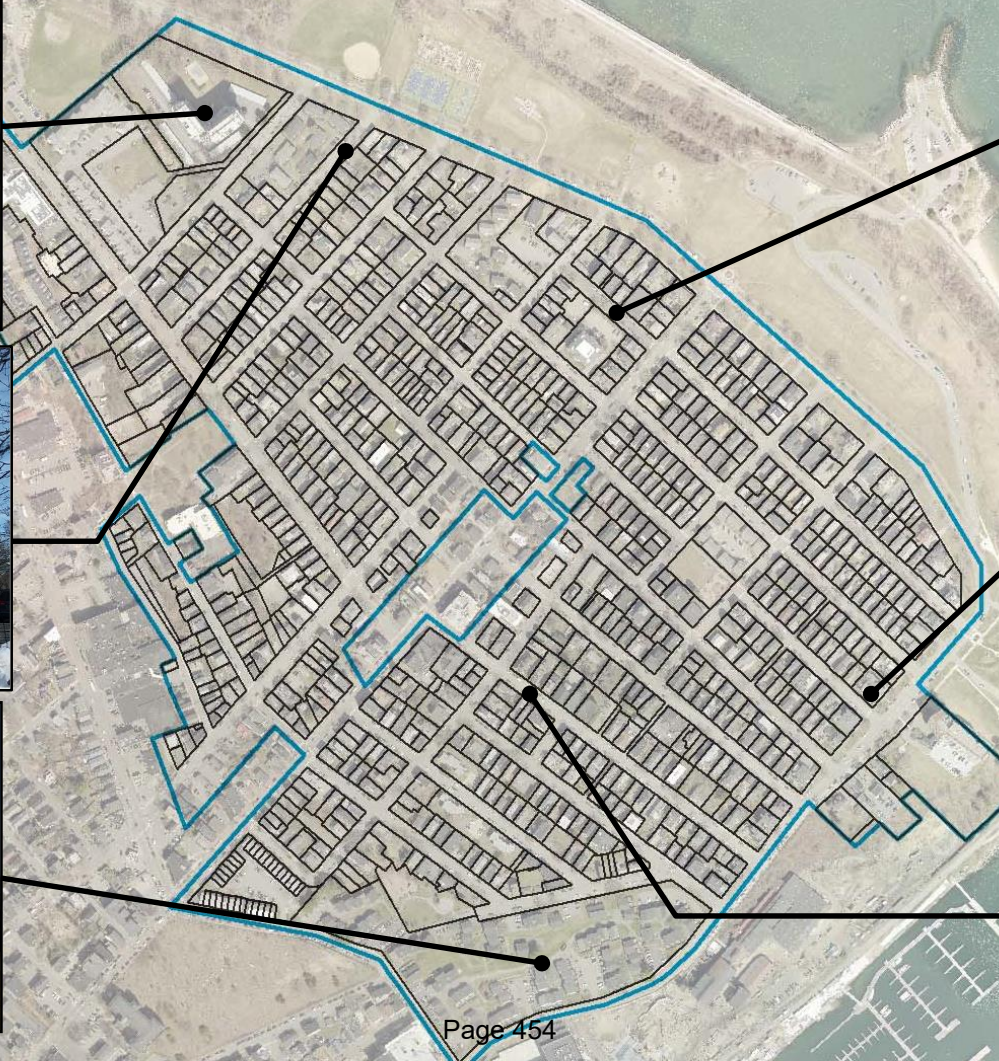
Eastern Prom Condos



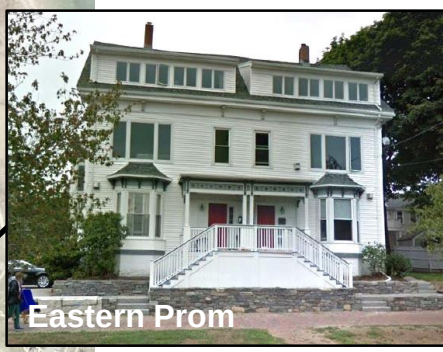
Montreal St.



Munjoy South



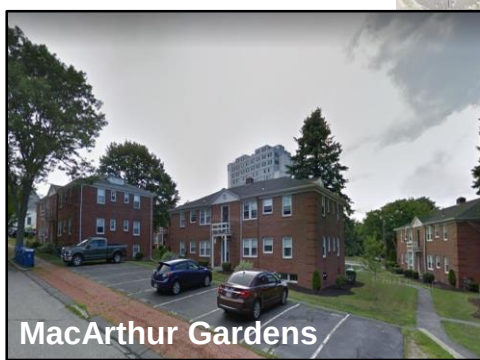
Morning St.



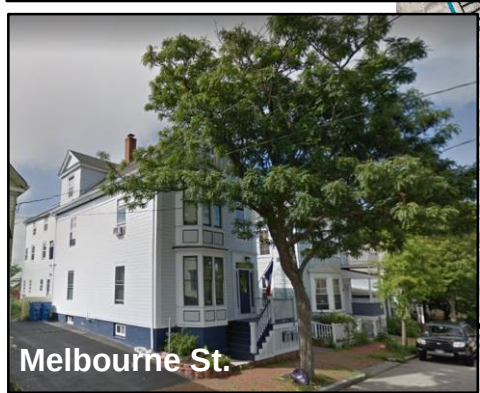
Eastern Prom



St. Lawrence St.



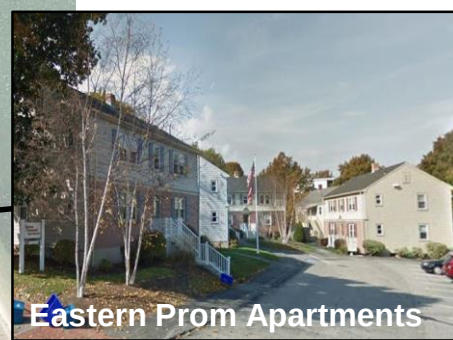
MacArthur Gardens



Melbourne St.



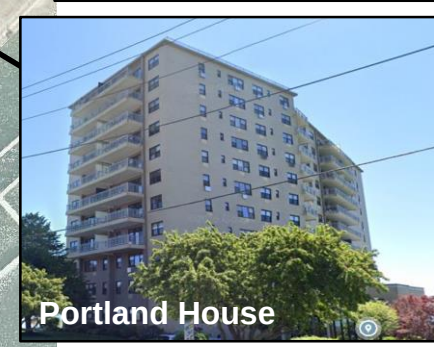
Mountfort St.



Eastern Prom Apartments



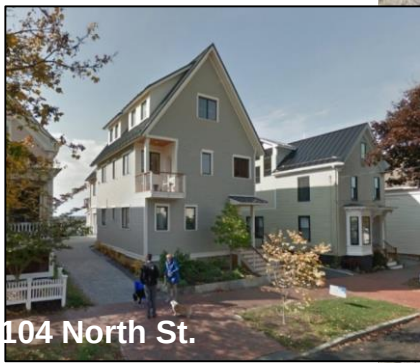
Lafayette St.



Portland House



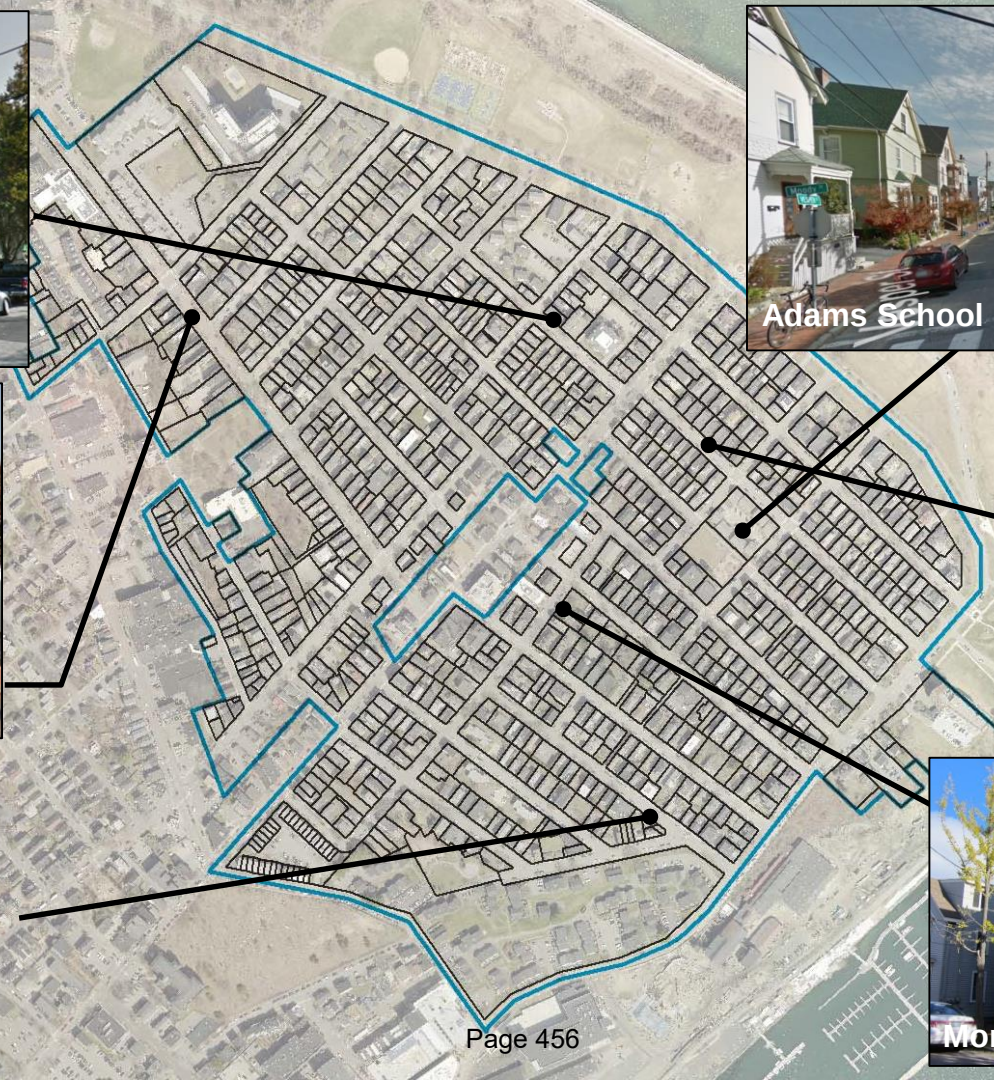
Emerson St.



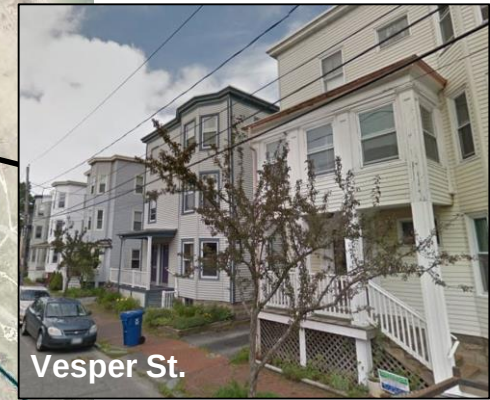
104 North St.



29 Waterville St.



Adams School Development



Vesper St.

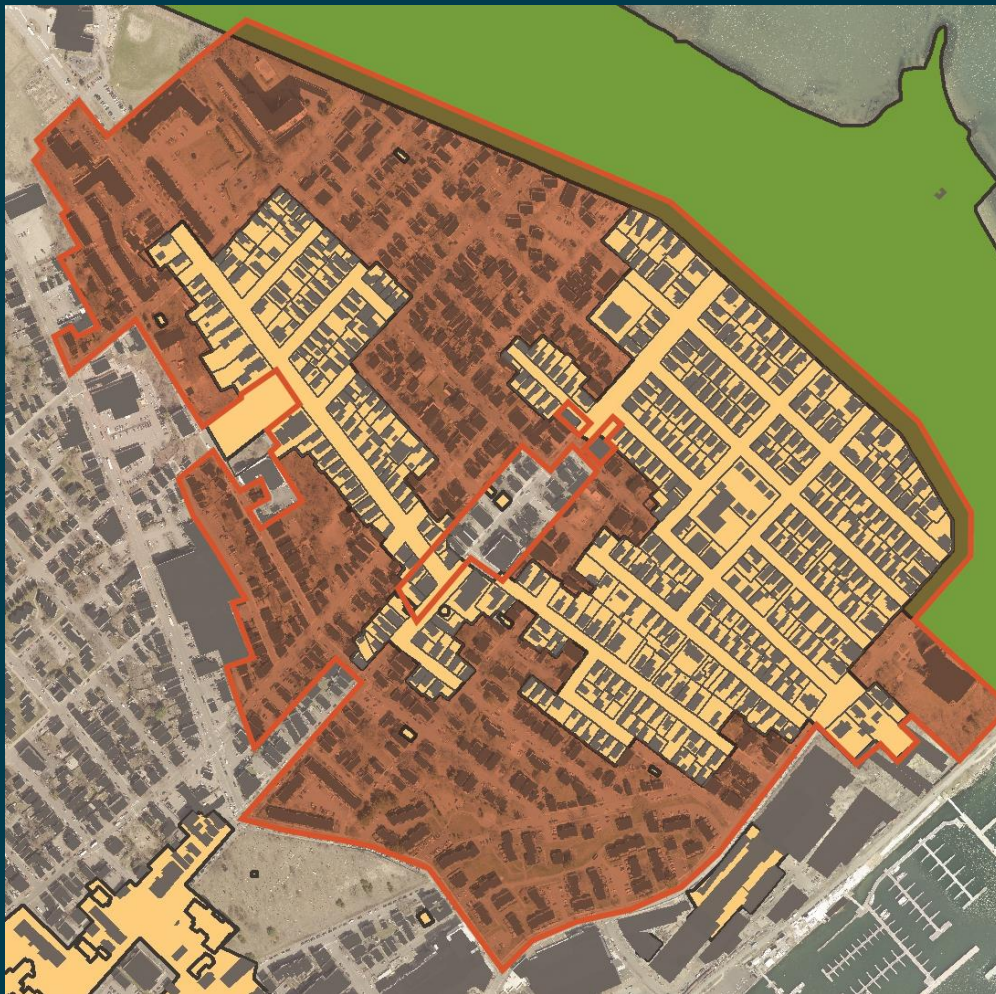


Monument St.



Munjoy Hill Conservation Overlay

Acreage	150.80	100%
Parcels	809	100%



Munjoy Hill Conservation Overlay

Acreage	150.80	100%
Parcels	809	100%

Munjoy Hill Historic District

Acreage	63.68	
Parcels	427	~50%



Munjoy Hill Conservation Overlay

Acreage	150.80	100%
Parcels	809	100%

Munjoy Hill Historic District

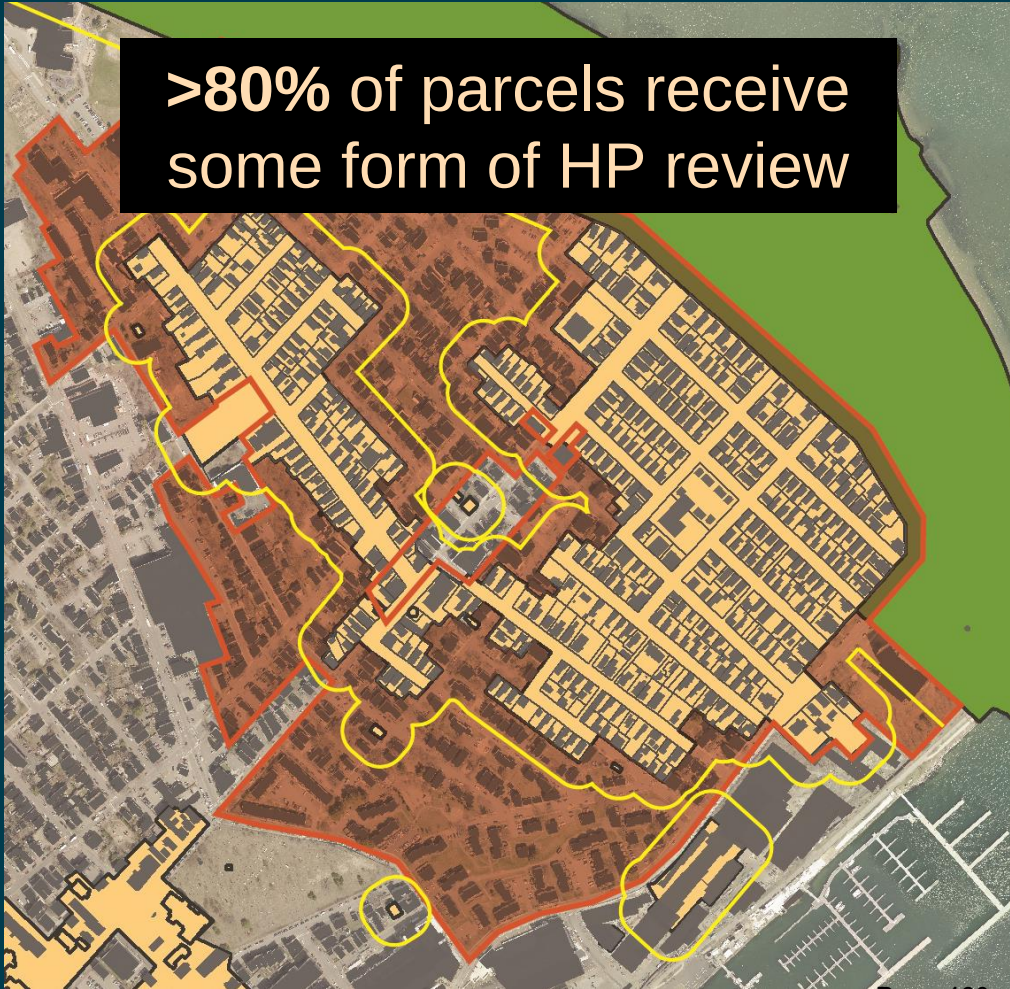
Acreage	63.68	
Parcels	427	~50%

100 Feet Historic District

Parcels	262	32%
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Outside of Historic Review

Parcels	120	15%
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An aerial photograph of a city block. A red line outlines the perimeter of the block. Several yellow circles and lines are drawn on the map, highlighting specific areas and buildings within the block. A black text box is overlaid on the top left of the map.

**>80% of parcels receive
some form of HP review**

Munjoy Hill Conservation Overlay

Acreage	150.80	100%
Parcels	809	100%

Munjoy Hill Historic District

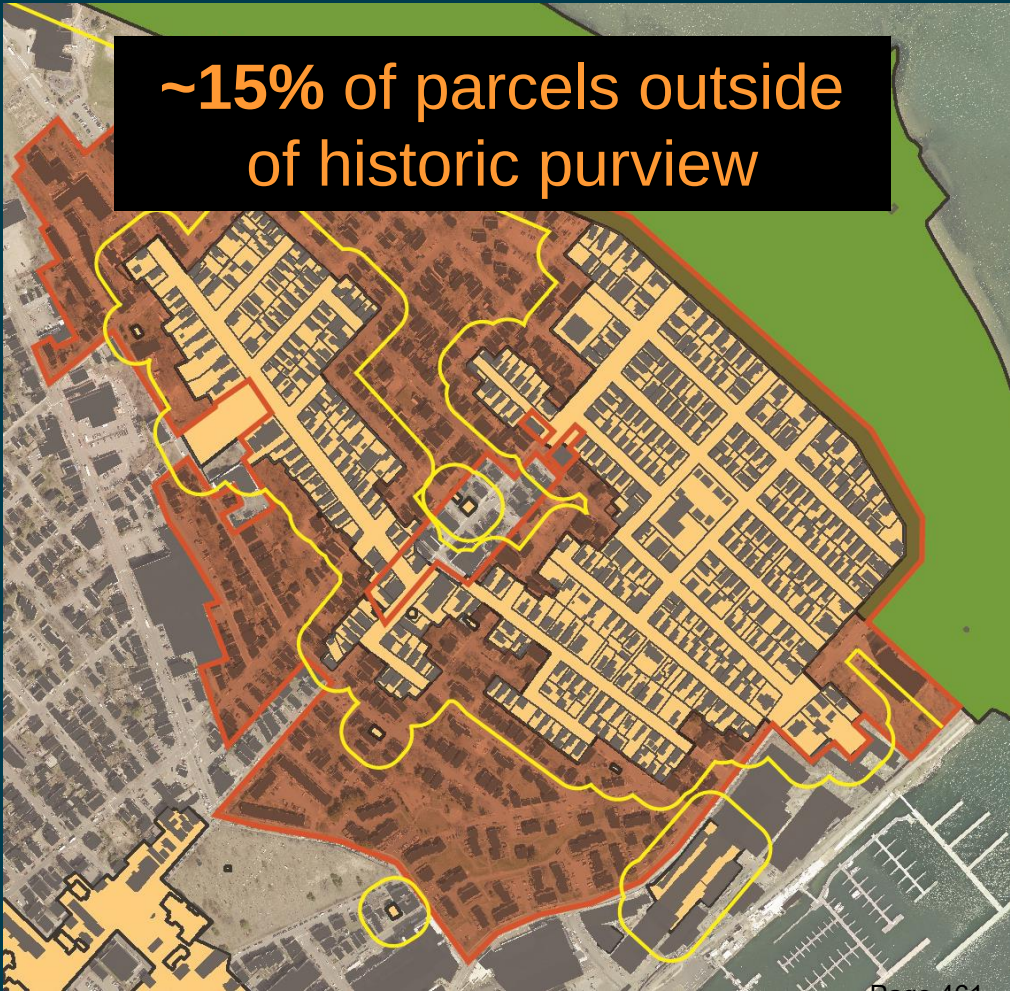
Acreage	63.68	
Parcels	427	~50%

100 Feet Historic District

Parcels	262	32%
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Outside of Historic Review

Parcels	120	15%
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An aerial photograph of a city grid. A red line outlines a large area, and several yellow lines outline smaller, irregular areas within the grid. A black text box is overlaid on the top left of the map.

**~15% of parcels outside
of historic purview**

Munjoy Hill Conservation Overlay

Acreage	150.80	100%
Parcels	809	100%

Munjoy Hill Historic District

Acreage	63.68	
Parcels	427	50%

100 Feet Historic District

Parcels	262	32%
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Outside of Historic Review

Parcels	120	15%
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R-6 Standards

Chapter 6 & 7 Land Use Code

Overlay District Chapter 8 (Section 8.7)

Historic District Chapter 17 Land Use Code

[illegible]

Comparison of Elements

Building Height		
Standard	R-6	MHNCOD
Maximum Structure Height	45 ft.	35 ft.; or 45 ft. for buildings on lots over 2,000 SF that include at least one workforce unit on-site
Structure Stepbacks	Above 35 ft. when property line abuts a residential zone; 10 ft. from side property line; and 15 ft. from rear property line.	None

Comparison of Elements

Building Rear and Front Setbacks

Standard	R-6	MHNCOD
Minimum Front Setback	5 ft.	5 ft. or the minimum depth of immediately abutting street-facing yard, whichever is less.
Minimum Rear Setback	10 ft.	Buildings up to 35 ft. in height: 10 ft.
		Buildings over 35 ft. in height: 15 ft.
		As measured from rear decks, porches, or similar unenclosed space: 7.5 ft.
		As measured from accessory structures w/ a ground coverage of 250 SF or less: 5 ft.

Comparison of Elements

Building Side Yard Setbacks

Standard	R-6	MHNCOD
Minimum Side Yard Setback	5 ft.	Buildings up to 35 ft. in height: Per underlying zoning
		Buildings over 35 ft. in height: 10 ft. for all side yards except that a side yard no less than 5 ft. is permitted when used to continue a documented built pattern of the surrounding streetscape, in which case a proportional increase in another side yard must be provided
Side Setback on Side Street	10 ft.	5 ft. or immediately abutting street-facing yard whichever is less
		None to facilitate underground parking

Overlay District Design Standards

Design Review Section 8.7.4

Standard 1

Roof Forms

Simple traditional roof forms, except flat roofs are permitted in buildings of three or more units.

Dormers and cross gables are allowed but clearly subsidiary to primary roof form

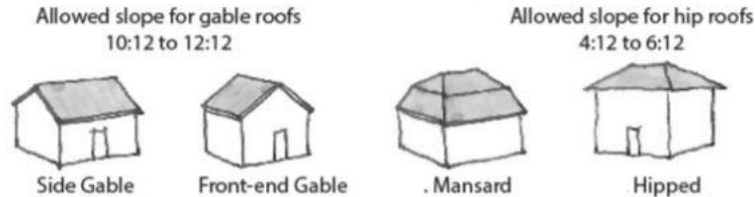


FIGURE 8-F: ROOF FORMS

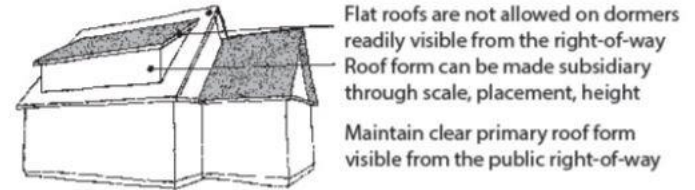


FIGURE 8-G: DORMERS AND SUBSIDIARY ROOFS

Overlay District Design Standards

Design Review Section 8.7.4

Standard 2

First Floor

Contain active living space (living room or bedroom) with windows for at least 50% of the width of front façade.

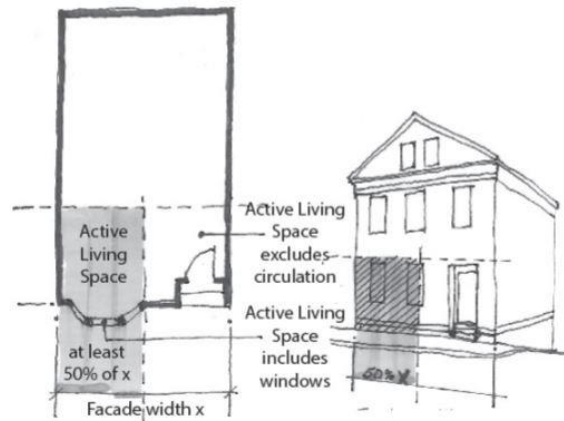


FIGURE 8-H: FRONT FACADE - ACTIVE LIVING SPACE

Overlay District Design Standards

Design Review Section 8.7.4

Standard 3

Parking Placement

Located on side or rear of building and not within front 10 feet of depth of the building;

Smaller lots are permitted one garage door on the front façade no wider than 30% of the building width.

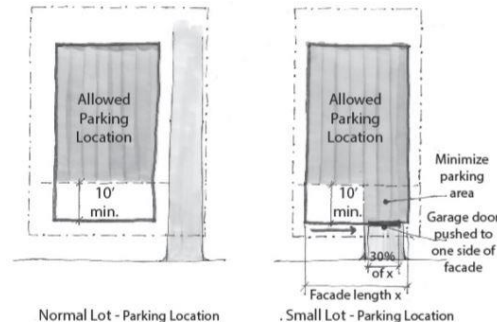


FIGURE 8-1: PARKING LOCATIONS

Historic District

- Protect a neighborhood's historic buildings from demolition. "Noncontributing" buildings may be demolished as-of-right.
- Ensure that alterations and additions to historic properties do not destroy or diminish their historic character
- Ensure that new infill development is compatible with the visual characteristics of its context. Contemporary design is not discouraged in historic districts.
- Provide owners of income-producing properties access to federal and state historic preservation tax credits



Design Review Process

Is the project a Minor or Major Site Plan?	Is project within 100' of a Historic District, Landmark, Landscape?	Is the project within a Historic District/Landmark?
• Projects eligible for design review	• Advisory historic review • HP will determine if review is staff or board level • Advisory comments incorporated in overall review • Reviewed against R6 or multifamily standards	• Design review purview of HP program • New Construction/Additions/Alterations • HP will determine if review is staff or board level • Certificate of Appropriateness Required

Demolition Comparison

Overlay District Demolition Provisions:

- Only **applicable outside** of the Historic District
- **Preferably preserved buildings**, subject to a demo delay up to 12 months; or
- Demo **may proceed prior to 12 month delay** if replacement proposal is deemed by the Historic Preservation Board to meet the HP Ordinance's new construction standards
- **May proceed with demolition** after 12 month delay
- **Does not prohibit** demolitions
- **Does not apply** to non-contributing buildings in Historic District

Historic Preservation Demolition Provisions

- **Contributing Structures cannot** be demolished unless:
 1. Applicant **meets economic hardship test** requiring demonstration of “no reasonable use of the structure”; or
 2. HP Board **amends or rescinds** the original landmark or contributing classification
- **Non-contributing structures may** be demolished

Review Process Comparison

	Design Review Authority				Demo Authority	
	HP	HP Advisory*	R6/Multifamily	Alternative (optional)**	HP Demo***	MH Demo
MH Historic District	X				X	
Overlay, 100' from historic boundary		X	X	X		X
Overlay, Outside District			X	X		X

*HP advisory review. Staff or Board review – Historic Preservation Board review not required

** Alternative Design Review: Optional. Gives HP Board jurisdiction over Alternative Design Review.

*** For designated or contributing buildings only

Development Trends 2018 - Present

PROJECT STATUS	PROJECT TYPE	TOTAL # OF RES UNITS	# OF IZ UNITS	# OF WORKFORCE UNITS PER HEIGHT >35 FT	YEAR APPROVED
Approved					
<i>*47 Monument Street</i>	Single-family	1	0	0	2019
<i>57 St. Lawrence</i>	Multi-family	16	1.6	1	2019
<i>130 Morning Street</i>	Multi-family	7	0	1	2019
<i>27 Merrill Street</i>	Two-family	2	0	0	2019
<i>128 R North Street</i>	Multi-family	6	1	1	2020
<i>126 North Street</i>	Multi-family	6	1.2	0	2020
<i>19 Willis Street</i>	Multi-family	12	1.2	1	2021
<i>30-32 Atlantic Street</i>	Multi-family	4	0	0	2021
<i>5 Salem Street</i>	Two-family	2	0	0	2021
<i>48 Cumberland Street</i>	Single-family	1	0	0	2021
	TOTAL	57	5	4	

**7 Marion Street, included in the original presentation, was listed in error and has been removed*

Demolition Permits 2018 - Present

	Demo Permits	Determined Preferably Preserved	HP Board Approval	Issue Date
TOTAL	7	2	2	
110 SHERIDAN ST				8/30/2018
47 MONUMENT ST				7/13/2018
128R NORTH ST				10/2/2019
37 MONTREAL ST		X	X	9/13/2019
165 SHERIDAN ST				10/16/2020
43 HOWARD ST		X	X	11/3/2020
48 CUMBERLAND AVE				3/25/2021

Next Steps

- Staff follow-up with additional information or draft ordinance changes
- Additional workshop or public hearing
- Ch. 14 changes require City Council adoption



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- 8.2 Downtown Entertainment Overlay
- 8.3 Fort Sumner Park Overlay
- 8.4 Helistop Overlay
- 8.5 Institutional Overlay
- 8.6 Island Transfer Station Overlay
- ~~8.7 Munjoy Hill Neighborhood Conservation Overlay District~~
- 8.8 Pedestrian Activities District (PAD) Overlay
- 8.9 Stream Protection Overlay
- 8.10 University of Southern Maine Overlay
- 8.11 Waynflete School Overlay

....



5 ZONES

5.1 ESTABLISHMENT OF ZONES

In order to carry out the provisions of this Land Use Code, the City of Portland shall be divided into the zones in Table 5-A.

5.2 ZONING MAP

5.2.1 Zoning map adopted

The zones in Table 5-A are shown upon a map filed in the Department of Planning and Urban Development. Such zoning map, with amendments, is hereby adopted as the official zoning map of the City of Portland and as part of this Land Use Code.

5.2.2 Zone boundaries when uncertain

Where uncertainty exists with respect to the boundaries of the various zones, as shown on the zoning map, the following rules shall apply:

- A. Unless otherwise indicated, zone boundary lines are the center lines of streets, alleys, parkways, waterways, or rights-of-way of public utilities and railroads or such lines extended.
- B. Unless otherwise shown, lines within blocks less than 200 feet wide are median lines between their sides, and lines within blocks 200 feet or more wide are 100 feet distant from the less restricted side of the block.
- C. The depictions of the Shoreland Zone and Stream Protection Zone on the zoning map are illustrative of the general location of such zones. The actual boundaries of these zones shall be determined by measurement of the distance indicated on the map and in this Land Use Code from the normal high-water line of the water body or the upland edge of wetlands. Where such measurement is not the same as the location of the boundary of the zoning

TABLE 5-A: ZONES

Residential	R-1, R-2, R-3, R-4, R-5, R-5a, R-6, R-6a
Island	IR-1, IR-2, IR-3 I-B Island Business
Mixed-Use	B-1, B-1b Neighborhood Business B-2, B-2b, and B-2c Community Business B-3, B-3b, and B-3c Downtown Business B-4 Commercial Corridor B-5 and B-5b Urban Commercial B-6 Eastern Waterfront B-7 Mixed Development
Office	O-P Office Park R-P Residence Professional
Industrial & Airport	I-L and I-Lb Low-Impact I-M, I-Ma, and I-Mb Moderate Impact I-H and I-Hb High Impact A-B Airport Business
Open Space	R-OS Recreation and Open Space
Waterfront	EWPZ Eastern Waterfront Port WCZ Waterfront Central WPDZ Waterfront Port Development
Overlay Zones	Compact Urban Residential (R-7) Downtown Entertainment Overlay Fort Sumner Park Height Overlay Helistop Overlay Institutional Overlay (IOZ) Munjoy Hill Neighborhood Conservation Island Transfer Station Overlay Pedestrian Activities District Overlay Stream Protection Overlay University of Southern Maine Overlay Waynflete School Overlay
Form-Based	IS-FBC India Street Form-Based Code
Other	Shoreland Floodplain Management RPZ Resource Protection

...

7 DIMENSIONAL STANDARDS

...

7.1 DIMENSIONAL STANDARDS

Tables 7-A to 7-H shall establish the dimensional standards for each zone.

...

TABLE 7-A: RESIDENTIAL ZONE DIMENSIONAL STANDARDS

		R-1	R-2	R-3 ²	R-4	R-5 ^{2, 3}	R-5a ⁴	R-6 ^{6, 7}	R-6a ¹³
Lot area (min.)	Governmental	15,000 SF	10,000 SF	6,500 SF	6,000 SF	6,000 SF			
	Hospital			10 ac.		5 ac.		2 ac.	
	Intermediate or long-term, extended care facility	3 ac.	3 ac.	2 ac.		2 ac.	1.5 ac.	1 ac. ⁸	
	Lodging house					9,000 SF		2,000 SF	
	Multiplex				9,000 SF	9,000 SF			
	Place of assembly	<10,000 SF	1 ac.	1 ac.	1 ac.	15,000 SF	.5 ac.	10,000 SF	
		>10,000 SF	2 ac.	2 ac.	2 ac.	30,000 SF	1 ac.	15,000 SF	
	Post-secondary school		2 ac.			2 ac.		2,000 SF	
	Elementary, middle, and secondary school	2 ac.	2 ac.	2 ac.	30,000 SF	30,000 SF		30,000 SF	
	Raising of animals	3 ac.							
	Residential	15,000 SF	10,000 SF	6,500 SF	6,000 SF	6,000 SF ³	6,000 SF / 2 ac. max ⁵	2,000 SF	4 ac.
	All other uses	15,000 SF	10,000 SF	6,500 SF	6,000 SF	6,000 SF		2,000 SF	
	Lot area per dwelling unit (min.)	15,000 SF	10,000 SF	6,500 SF	3,000 SF	3,000 SF	1,600 SF	725 SF	
	Lot area per rooming unit (min.)					1,000 SF		250 SF ⁹	
Lot area per multiplex unit (min.)					3,000 SF for first 3, 6,000 SF thereafter	4,500 SF			
Lot area per SNIDU ¹ (min.)					2,400 SF	3,600 SF			
Street frontage (min.)		75 ft.	50 ft.	50 ft.	50 ft.	50 ft.	50 ft.	20 ft.	
Lot width (min.)		100 ft.	80 ft.	65 ft.	60 ft.	60 ft. 90 ft. for multiplex	60 ft.	20 ft.	
Front setback (min.)		25 ft.	25 ft.	25 ft.	25 ft.	20 ft.	25 ft.	5 ft.	
		Or average depth of adjacent front yards							
Rear setback (min.)		25 ft.	25 ft.	25 ft.	25 ft.	20 ft.	25 ft.	10 ft.	
	Detached accessory (< 250 SF footprint)	5 ft.	5 ft.	5 ft.	5 ft.	5 ft.	5 ft.	5 ft.	
Side setback (min.)	<1.5 stories to 1.5 stories	12 ft.	12 ft.	8 ft.	10 ft.	8 ft.	10 ft.		<45 ft. in height: 10 ft.
	2 stories	14 ft.	14 ft.	14 ft.	14 ft.	12 ft.	14 ft.		
	2.5 stories	16 ft.	16 ft.	16 ft.	16 ft.	14 ft.	16 ft.	5 ft. ¹⁰	
	Detached accessory (< 250 SF footprint)	5 ft.	5 ft.	5 ft.	5 ft.	5 ft.	5 ft.		>45 ft. in height: 15 ft.
	On side street (min.)	20 ft.	20 ft.	20 ft.	20 ft.	15 ft.	20 ft.	None	

Or depth of front yard directly abutting the lot.

TABLE 7-A (CONT.): RESIDENTIAL ZONE DIMENSIONAL STANDARDS

	R-1	R-2	R-3 ²	R-4	R-5 ^{2, 3}	R-5a ⁴	R-6 ^{6, 7}	R-6a ¹³
Stepbacks (above 35 ft. when property line abuts a residential zone)(min.)							10 ft. from side property line and 15 ft. from rear property line ¹¹	
Structure height (max.)	35 ft.	35 ft.	35 ft.	35 ft.	35 ft.	35 ft.	45 ft. ¹²	65 ft.
Detached accessory	18 ft.	18 ft.	18 ft.	18 ft.	18 ft.	18 ft.	18 ft.	
Lot coverage (max.)	20%	20%	35%	30%	40%	30%	60%	
Landscaped open space ratio (min.)							20%	
Width of garage opening on front façade (max.)							9 ft. or 40% of the front facade, whichever is greater, and in no case more than 20 ft.	

...

¹² Except as provided under the Fort Sumner Park Height Overlay, ~~the Munjoy Hill Conservation Overlay~~, and the Bayside Height Overlay.

...

8 OVERLAY ZONES

8.1 MUNJOY HILL NEIGHBORHOOD

CONSERVATION OVERLAY DISTRICT

The residential neighborhoods on Munjoy Hill are experiencing specific development pressures related to its location and the nature of the existing building stock, further documented in work by the City's Planning & Urban Development Department in the winter of 2018. In order to address the negative impacts of these pressures and create a positive framework for investment in the area, there shall be a Munjoy Hill Neighborhood Conservation Overlay District (the "District").

FIGURE 8-E: MUNJOY HILL NEIGHBORHOOD CONSERVATION DISTRICT BOUNDARIES

8.7.1 Area of effect

This District will apply in the highlighted area depicted on the map in Figure 8-E and includes all properties in the R-6 zoning district in an area east of Washington Avenue and Mountfort Street, north of Fore Street, and west of the Eastern Promenade.

8.7.2 Effect of the district

In addition to the standards contained in this Land Use Code that are applicable to properties in the R-6 zone, all properties within this District shall meet the standards of Section 8.7. Where this section imposes a standard that differs from the standards contained in Articles 6, 7, 14, and 15 of this Land Use Code, the City of Portland *Design Manual* or City of Portland *Technical Manual*, the standards in this section shall control.

8.7.3 Dimensional standards

Within the District, the dimensional requirements in Table 8-E supersede those dimensional standards outlined elsewhere in this Land Use Code.

8.7.4 Design review

A. Design standards. In addition to the general R-6 design standards, the following design standards shall apply in the Munjoy Hill Neighborhood Conservation District and shall supersede any conflicting design standards:

1. All buildings shall use simple, traditional roof forms as illustrated in Figure 8-F, except that flat roofs are permitted in buildings of three or more units. This requirement may also be modified through Subsection 8.7.4(B) below. Dormers and cross-gables are allowed but where readily visible from the public right-of-way shall be

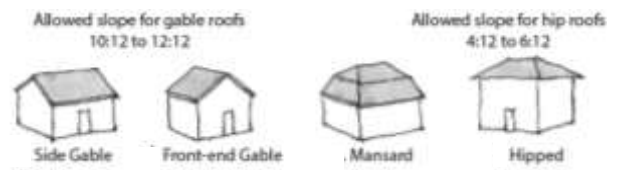


FIGURE 8-F: ROOF FORMS

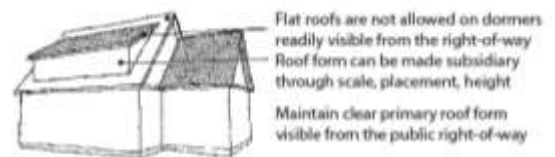
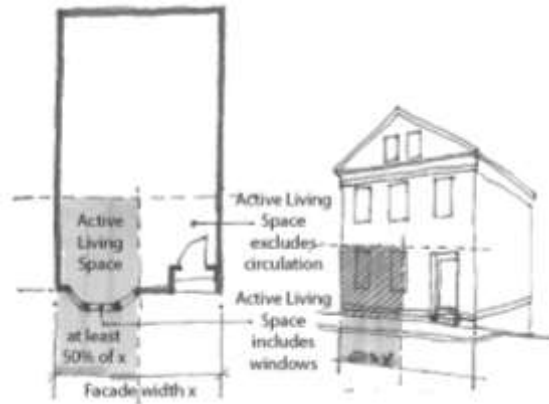


FIGURE 8-G: DORMERS AND SUBSIDIARY ROOFS

clearly subsidiary to the primary roof form.
(See Figure 8-G.)



- 2.—The first floor shall contain active living space, such as a living room or bedroom, with windows for at least 50% of the width of the front façade in total. (See Figure 8-H.) Active living space does not include space intended primarily for circulation or storage.

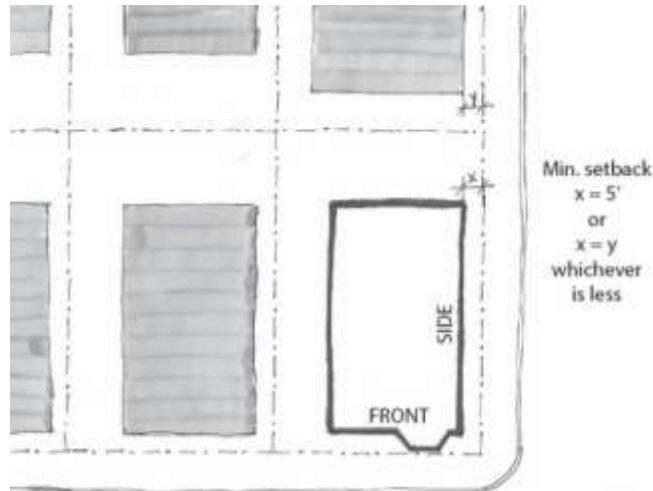
FIGURE 8-H: FRONT FACADE—ACTIVE LIVING SPACE

TABLE 8-E: MUNJOY HILL NEIGHBORHOOD CONSERVATION DISTRICT DIMENSIONAL REQUIREMENTS

Setbacks (min.)	Height (max.) ¹	35 ft. 45 ft. for buildings with 3 or more units on lots over 2,000 SF that include at least one workforce housing unit. ²
	Rear	Buildings up to 35 ft. in height: 10 ft. Buildings over 35 ft. in height: 15 ft. As measured from rear decks, porches, or similar unenclosed space: 7.5 ft. As measured from accessory structures with a ground coverage of 250 SF or less: 5 ft.
	Side	Buildings up to 35 ft. in height: As per underlying zone. Buildings over 35 ft. in height: 10 ft. for all side yards, except that a side yard no less than 5 ft. is permitted when used to continue a documented built pattern of the surrounding streetscape, in which case a proportional increase in another side yard must be provided.

5 ft. or the minimum depth of the immediately abutting street-facing yard, whichever is less.
None when demonstrated that reduced setbacks are necessary to facilitate the provision of underground parking.

Side yard
on side
street



Stepbacks (min.) None

¹Rooftop appurtenances other than chimneys shall not exceed permitted heights, except that HVAC equipment is permitted for up to 5 ft. above these maximum heights if (a) out of view from public rights-of-way, screened adequately, and integrated with the building design and (b) set back at least 5 ft. from the building edge. In addition, height limits and placement of alternative energy equipment is permitted as specified in Articles 6 and 7.

²Unit can be for sale or rent, as defined in Article 3. Workforce units shall be no smaller than 50% of the average size of the other units in the development, must meet the definition for such units and only be sold or rented to a household at or below the applicable income levels. These requirements shall be deed restricted for affordability for the longest term possible under state and federal law.

- 3.—Use of tandem spaces to meet desired parking levels, consistent with the built pattern of the neighborhood, is strongly preferred. Parking shall be located on the side or in the rear of a building, and not within the front 10 feet of depth of the building. The only exception shall be for lots smaller than 2,000 square feet, which shall be permitted one garage door on the front façade no wider than 30% of the

building width, but no less than nine feet.

In that case, the garage door shall:

- a.—Be of high quality design, consistent with the character and pattern of the rest of the façade, including windows as appropriate.
- b.—Be located on one side of the façade.
(See Figure 8-1.)

B.—Alternative Design Review.—Within the District, developments are only eligible for the R-6 “Alternative Design Review” as outlined by the following process, which shall supersede the process in the *City of Portland Design Manual* in cases of conflict:

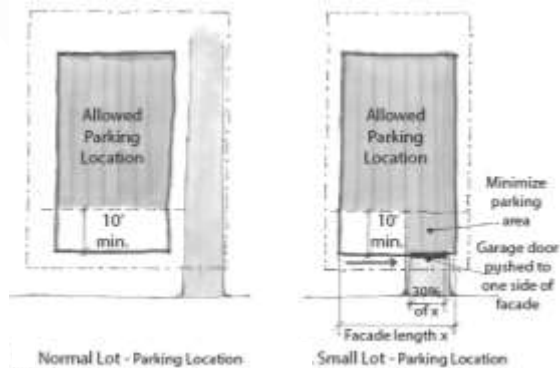


FIGURE 8-1: PARKING LOCATIONS

- 1.— Any use of Alternative Design Review must be approved by a majority of the Historic Preservation Board after a required public hearing.
- 2.— Alternative Design Review does not permit waivers of the additional design requirements in Subsection 8.7.4(A) above except as explicitly stated.
- 3.— Alternative Design Review is a privilege and is granted at the discretion of the Historic Preservation Board. The applicant has the burden of demonstrating that their proposal meets the criteria for Alternative Design Review Design Certificate.

8.7.5—Demolition review

A.— **Purpose.** The purpose of this subsection is to preserve and protect buildings within the District that contribute significantly to one's understanding and appreciation of the architectural, cultural, and/or social history and development pattern of Munjoy Hill and which are outside any designated historic district ("Preferably Preserved Buildings"), encouraging owners of such Preferably Preserved Buildings to explore alternatives to demolition. To achieve this purpose, the issuance of demolition permits for Preferably Preserved

Buildings is regulated and may be delayed as provided below.

B.— **Definitions.** For the purposes of this subsection, the following words and phrases shall have the meanings set forth below:

- 1.— **Demolition.** Removal of more than 10% of the front façade of any building, removal of the primary roof line, or removal of 50% or more of the building surface, determined cumulatively over a three-year period. In kind replacement or similar replacement (such as new windows or siding that may differ from the original) is not considered demolition.
- 2.— **Preferably Preserved Building.** Any building which is determined to be in the public interest to be preserved or rehabilitated rather than demolished based on findings that the building meets the following criteria:
 - a.— It was constructed prior to 1930.
 - b.— It is representative of a building type and/or architectural style that contributes to the identifiable historic visual character of Munjoy Hill.
 - c.— It retains sufficient integrity of design, materials, condition, and craftsmanship that adaptive reuse is a viable option.
- 3.— **Voluntarily demolished.** Any act(s) done by design or intention, which is proposed, intended, or not accidental, that result in demolition. Results of weather events or natural hazards are not considered voluntary demolition. For the purposes of this subsection, the destruction of a Preferably Preserved Building for failure to

properly secure it or by neglect shall be considered voluntary demolition.

~~C. Exclusions. This subsection shall not apply to:~~

- ~~1. Any building either individually designated as a local landmark or located within the boundaries of any designated historic district.~~
- ~~2. Accessory structures with a ground coverage of 250 square feet or less.~~
- ~~3. Buildings that the Building Authority has determined are dangerous to life or property due to fire, accidental catastrophic damage, or a natural disaster.~~
- ~~4. Buildings that have received a previous determination that they are not Preferably Preserved.~~

~~D. Procedure. When the Building Authority receives a demolition permit application for a building within the District, the Building Authority shall, within three business days, notify the Planning Authority in writing that a demolition permit application has been received.~~

- ~~1. Initial determination. The Planning Authority shall make an initial written determination as to whether the building that is the subject of the demolition permit application is a Preferably Preserved Building within 30 days of receiving a copy of the application. In making this determination, the Planning Authority may request additional information from the applicant, including photos of the existing building and the surrounding context or other data that may be relevant to making an initial determination. If the Planning Authority determines that the building is not Preferably Preserved, this~~

determination shall be transmitted to the Building Authority and the applicant of record. The applicant will not be required to take any further steps and the permit may be reviewed by the Building Authority under the standards in Chapter 6 of the City of Portland Code of Ordinances.

- ~~2. If the Planning Authority makes an initial determination that the building is Preferably Preserved, it shall notify the Building Authority and the applicant.~~
- ~~3. If the Planning Authority fails to act in accordance with this subsection or within the prescribed time periods, the Building Authority may grant the demolition permit, provided that the applicant has met all other required by Chapter 6 for a permit, and shall notify the Planning Authority that the permit has been granted.~~
- ~~4. Right to appeal Planning Authority determination. After the Planning Authority's initial determination that a demolition permit application involves a Preferably Preserved Building, the applicant for a demolition permit may appeal the determination to the Historic Preservation Board with any background information regarding the structure and its context that may be deemed relevant to or appropriate for that review. Such material shall include plans for any replacement use of the parcel that may assist in making a determination. Such appeal must be filed with the Planning Authority within thirty days of the Planning Authority's decision.~~
- ~~5. Public hearing. The Historic Preservation Board shall conduct a hearing on the appeal of the Planning Authority's decision~~

within 45 days of the Planning Authority's decision. The Board shall give the public notice of the hearing at least 14 days prior to the hearing. The Board shall also mail a notice of the public hearing to the applicant, the building owner, and all property owners within 100 feet of the subject property at least 10 days prior to the hearing.

6. ~~Final determination of Preferably Preserved Building:~~ Within 21 days following the conclusion of the public hearing, the Historic Preservation Board shall issue a final determination with the Building Authority. If the Board determines that the demolition of the building would be detrimental to the architectural, cultural, or social heritage of Munjoy Hill, it must uphold the initial determination of the Planning Authority of a Preferably Preserved Building. In a case where the initial decision of the Planning Authority is not timely appealed as outlined in Section 8.7.5(D)(4), that decision shall be considered a final decision with respect to the demolition permit, in which case the Planning Authority shall forward the final decision to the Building Authority.

- E. ~~Upon the final determination of Preferably Preserved status, the Building Authority shall not issue a demolition permit for a period of up to 12 months except as specified in (2) below. During this period, the applicant and the owner should actively pursue alternatives to demolition of the Preferably Preserved Building. Should the Historic Preservation Board determine that the building is of sufficient historic and/or architectural~~

~~significance that it should be designated a landmark or otherwise gain historic designation, that process will proceed as it would for any other building.~~

1. ~~Upon a determination of Preferably Preserved status, the owner shall be responsible for properly securing the building.~~
2. ~~Notwithstanding the preceding, the Building Authority may issue a demolition permit for all or any portion of subject building at any time upon authorization from the Planning Authority in the event the Historic Preservation Board approves a development for the site as consistent with the Historic Resource Design Standards as applied to a new building prior to the conclusion of the 12-month delay period. Examples of such proposals may include but are not limited to:~~

- a. ~~Demolition of a portion of the building while maintaining the principal structure and/or most architecturally significant portion of the building.~~
- b. ~~Demolition of the Preferably Preserved Building but with a replacement proposal that is acceptably contextual in the surrounding neighborhood. In this case, the Board may condition demolition on construction of a project substantively consistent with the approved replacement proposal, and any substantive variation from that plan would be treated as a violation under (G) below.~~
- c. ~~Notwithstanding the initial determination, demonstration by the~~

~~applicant, substantiated by the written opinion of a licensed engineer with experience in renovation, restoration or rehabilitation and confirmed by the Building Authority, that the structural condition of the building is so severe as to make it infeasible to rehabilitate.~~

~~F. Emergency demolition. Nothing in this subsection shall interfere with the ability of the Building Authority to permit demolition of buildings determined dangerous to life or property due to a condition that pre-dates the effective date of this subsection or is the result of fire, accidental catastrophic damage, or a natural disaster.~~

~~G. Enforcement~~

~~1. The Planning Authority and Building Authority are each specifically authorized to institute any and all actions and proceedings, in law or in equity, as they deem necessary and appropriate to obtain compliance with the requirements of this subsection, or to prevent a threatened violation thereof.~~

~~2. No building permit shall issue for a new building on any premises where a significant building is voluntarily demolished in violation of this ordinance for a period of two years after the date of demolition.~~

~~H. Reporting. A demolition review shall be reported to the City Council annually as a communication.~~

Peter Murray <pmurray@zwi.net>

Jan 23, 2022, 3:08:16 PM (20 hours ago)

to Planning Board, planning@portlandmaine.gov, Christine Grimando, kkraft, Murray Peter L., Andrews Deborah

Dear Members of the Planning Board -

In anticipation of your Workshop this coming Tuesday, January 25 to consider the state of the Munjoy Hill Neighborhood Conservation Overlay District, here are some comments from a Munjoy Hill resident.

Although we live at 104 North Street in the Munjoy Hill Historic District, our home is right at the edge of the District. Most of the area around us is in the Munjoy Hill Conservation Overlay.

The 2015 changes in the rules governing the R-6 Zone led to dramatic increases in the process of conversion of the existing affordable housing stock on the Hill to luxury residences and condominiums, seriously impacting the historic character of the neighborhood in the process. Neighborhood outcry led to adoption of the Overlay in an effort to slow demolition of worthwhile existing structures, preserve existing housing options, and provide some guidelines for harmonization of new projects with the existing neighborhood architectural fabric.

As has been observed, the Overlay was never intended to serve as the only measure protecting the historic character of the Munjoy Hill neighborhood. At the time it was established, the Council ordered that the possibility of a Historic District be considered for at least a part of the area cover by the Overlay. By the same token, the adoption of a Historic District covering about half of the area of the Overlay was never viewed as supplanting the need for the Overlay on the remainder of the Hill not within the Historic District.

Although the Overlay has not been as effective as we hoped it would be to brake the demolition of existing housing stock for construction of upscale residences and condo projects, we do believe that it has helped some. Now that we have recognized the unique historic character of the Hill by establishing the Historic District, it would be a cruel blow to strip the remainder of the Hill that was not taken up by the Historic District of the modest protection afforded by the Overlay.

In my judgment, the Overlay should be strengthened, not weakened as the Staff Report seems to suggest. There is no evidence that Developers have not been able to find foot on Munjoy Hill. Within a stone's throw of our home are at least three projects now under construction. All of them are luxury condo blocks, one for as many as 46 units. Each one of them will further compromise the character of the neighborhood and the quality of life of those who live there. Why would we want more of these?

It seems clear that we do not yet have the right measures in place to regulate further development on this parts of the Hill that aren't in the Historic District. Pending the public debate about such measures, we should not act prematurely to dismantle the admittedly inadequate measures that are now in place.

Thank you for your consideration of these comments,

Sincerely,

PLM

Peter L. Murray
104 North Street
Portland, ME 04101
pmurray@zwi.net

Maggy W <mwnola@gmail.com>

Jan 23, 2022, 1:48:45 PM (21 hours ago)

to kkraft, Christine Grimando, Planning Board, planning@portlandmaine.gov, Deb Andrews

Planning Department and Planning Board,

It was with dismay that I learned recently that you are already taking up the topic of the Munjoy Hill Conservation Overlay. With the recent passage of the Historic district, along with the Conservation Overlay, we finally have a chance to establish some stability here in our neighborhood. If there is pressure to re-examine the need for the overlay, that seems to be the very proof that we need this protection; this pressure must be coming from Developers and Realtors and others who stand to benefit financially from the replacement of our existing housing stock, not from the people who live here. We have been experiencing gentrification on the hill for decades, but at a rapidly accelerated pace since the zoning was changed in 2015. If we weaken the Overlay District, we risk losing the housing that is now occupied by young renters, and people with limited means. The housing that exists currently on the hill is the housing most able to combat our housing crisis. If we lose the Overlay, we will lose middle class and workforce housing.

We residents of Munjoy Hill never viewed any weakening of the Overlay as a trade-off for getting the Historic District implemented. We need both tools, as well as new and creative measures to incentivize affordable housing, in order to promote diversity in our neighborhood, and to retain the affordable and middle class housing that remain.

Thank you,
Maggy Wolf
28 Saint Lawrence St.

Karen Snyder <karsny@yahoo.com>

9:59 AM (1 hour ago)

to Planning Board, Planning and Urban Development, cdg, Kevin Kraft

Planning Board Members,

It was not a surprise to see the Planning Board now hold a workshop on the MHN COD since several of the Planning Board members voted against the Munjoy Hill Historic District during the 8/11/2020 Planning Board meeting but certain Planning Board members made comments of "concern" over MHN COD being too restrictive.

Below are questions that I would like answered by the Planning Board.

1. What person(s) or department in particular has requested the PB workshop on MHN COD review which was enacted in June 2018?
2. What are the specific reasons and justifications for all ready reviewing the MHN COD in a PB workshop since it was only enacted in June 2018?
3. Why doesn't the Planning Board and Planning Department focus on other residential districts to revise residential zoning rather than this constant targeting of Munjoy Hill?
-This appears discriminatory focus on Munjoy Hill since the last major residential zoning change also happened in 2015 and primarily affected Munjoy Hill.

Until the Planning Dept and Planning Board come up with **effective** housing policies that are **proven** to ensure that:

- Housing can be created or built for primarily long-term residents of **ALL** socio-economic levels and NOT just luxury condos that are lived in part time. *Note: It is NOT about housing density but the correct mix of housing density.*
- Existing long term Munjoy Hill property owners and actual long-term residents are protected against accelerated property values which causes us to pay inequitable higher property taxes on the unrealized gains of our homes compared to other Portland residential districts,

As such, this PB workshop can only be considered disingenuous and goes against the Comprehensive plan of ensuring housing policies that are "equitable, affordable, and sustainable" for actual long-term residents.

Regards,
Karen Snyder
Waterville St.

FW: FW: Conservation Overlay District vs. ReCode Portland

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**Benjamin Brennan**

11:59 AM (1 hour ago)

to planni...@portlandmaine.gov, kkraft

Good Morning,

I am a Portland resident and conduct much of my business in Portland.

In anticipation of your workshop today, I would like to forward along my comments regarding the language included in the Conservation Overlay District that restricts elevator overruns from exceeding building height restrictions.

To summarize the comments offered in more detail below, since elevator overruns extend above the last floor that they serve, preventing the elevator overrun from extending above the height limitations effectively prevents the elevator from serving the top floor. To take it a step further, the State Elevator Inspectors' office current interpretation of a 2002 law requires a stretcher compliant elevator to serve every floor of a new building.

My recommendation would be to revise the language included in the Conservation Overlay District to match that of the ReCode Portland section 7.5.1 that states:

Rooftop appurtenances for the housing of elevators, stairways, tanks, fans, or other building operating equipment not intended for human occupancy, deck railings, skylights, steeples, roof signs, flag poles, chimneys, smokestacks, radio or television masts, telecommunications equipment, water tanks, or silos may be erected above the height limitations herein prescribed.

Thank you for your consideration and continued work to make our city great!

Kind regards,

Ben Brennan

Senior Sales Executive

New Equipment Business

KONE Inc.

81 County Rd. Suite 20

Westbrook, ME 04092

Mobile [207-749-4251](tel:207-749-4251)Email benjamin.brennan@kone.com

www.kone.us*Dedicated to People Flow*

From: Benjamin Brennan
Sent: Tuesday, January 11, 2022 9:01 AM
To: Kevin Kraft <kkraft@portlandmaine.gov>
Subject: RE: FW: Conservation Overlay District vs. ReCode Portland

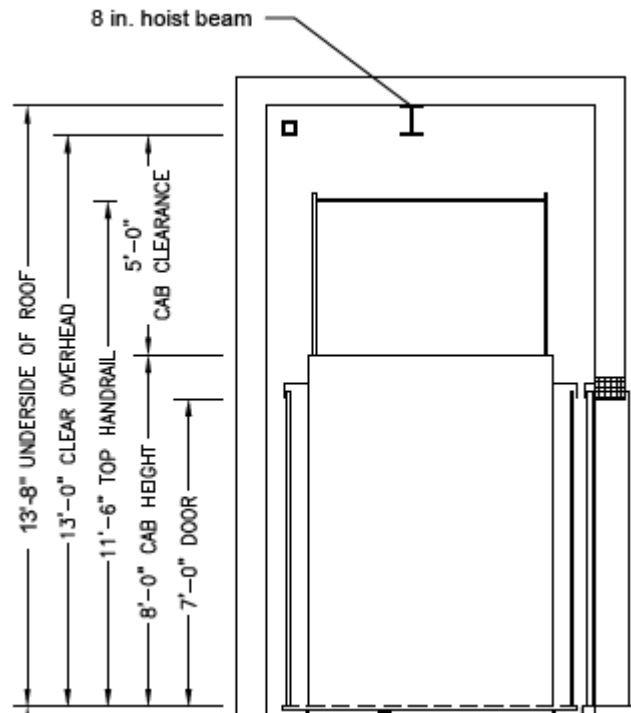
Good Morning Kevin,

Thank you very much for your prompt & detailed response. I will absolutely submit written comment to the planning board.

As for your inquiry regarding the construction costs associated with installing an elevator that doesn't extend above the max building height, it is more often about *whether* it can be done rather than *how much it costs*. The elevator overrun is defined by the height above the finished top floor elevation. This is the aggregate of:

1. Cab Height – Typically 8'-0" minimum
2. Area of Refuge – 5'-0"
3. Hoist beam – Typically 8"
4. Hoistway roof construction – Varies

It is not uncommon for the aggregate to exceed 15' when you consider the required fire rating of the hoistway ceiling & roof construction. The below diagram offers a visual representation to the underside of hoistway roof.



This also only reflects the smallest capacity that is allowed by the Portland Technical Manual (3500 lb. capacity). If you were to increase the capacity to better allow for residential move-ins (i.e. moving couches, mattress etc.), the clear overhead dimensions would increase 8-12" for capacity or 1' for every 1' increase in cab height.

Add to it the 2002 law that states:

§15228. Elevator size

1. Requirements. Notwithstanding [section 15205-A](#), whenever a passenger elevator is installed in a building being newly constructed or in a new addition that extends beyond the exterior walls of an existing building, the passenger elevator must reach all levels within the building and be of sufficient size to allow the transport of a person on an ambulance stretcher in the fully supine position, without having to raise, lower or bend the stretcher in any way. This requirement applies to all plans approved after January 1, 2002. The director shall adopt rules necessary to carry out the provisions of this section. Rules adopted pursuant to this section are routine technical rules as defined in Title 5, chapter 375, subchapter 2-A.

[PL 2013, c. 70, Pt. D, §35 (AMD).]

2. Applicability. This section applies only to multi-story buildings that house private entities or nonprofit organizations that serve the public or are places of public accommodation. Notwithstanding [Title 5, section 4553, subsection 8](#), places of public accommodation include restaurants, cafes, hotels, inns, banks, theaters, motion picture houses, bars, taverns, night clubs, country clubs, convention centers, retail stores, shopping centers, hospitals, private schools, day care centers, senior citizen centers, doctor offices, professional offices, manufacturing facilities, apartment buildings, condominiums, state facilities or any private establishment that in fact caters to, or offers

its goods, facilities or services to, or solicits or accepts patronage from, the general public. This section does not apply to any building owned by a local unit of government.

[PL 2001, c. 178, §1 (NEW).]

...and the Conservation Overlay District language potentially prevents the multi-story buildings from being built to 4 stories.

Please let me know if you have any questions.

Thanks,

Ben Brennan

Senior Sales Executive

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Westbrook, ME 04092

Mobile [207-749-4251](tel:207-749-4251)

Email benjamin.brennan@kone.com

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Dedicated to People Flow

From: Kevin Kraft <kkraft@portlandmaine.gov>

Sent: Tuesday, January 11, 2022 8:35 AM

To: Benjamin Brennan <Benjamin.Brennan@KONE.com>

Subject: Re: FW: Conservation Overlay District vs. ReCode Portland

This message is from an external sender. Be cautious, especially with links and attachments.

Hi Ben,

Thank you for your email. The Munjoy Hill Conservation Overlay District was established in 2018 in response to a number of concerns, one of which was with the design of new buildings and how they were related to the surrounding neighborhood context. The overlay contains standards for building form and dimensional requirements for new construction with standards for roof type, setbacks, parking placement, height, rooftop appurtenances, and parking location to better encourage new construction to fit into the context. The overlay standards supersede the underlying R-6 zone dimensional standards. So while the underlying R-6 zone allows rooftop appurtenances to exceed the max building height, the overlay standards restrict it. This is a standard we realize needs to be revisited because it makes incorporating an elevator in a multi-family building very challenging for the reasons you mention. We intend to revisit this as part of ReCode and our upcoming work on the Munjoy Hill Conservation Overlay District.

To provide some additional context, outside of the Munjoy Hill Conservation Overlay District rooftop appurtenances, including elevator overruns, are allowed to extend above the height limitations. So the two sections are not exactly in conflict, the overlay just adds another layer of regulation, one of which, prevents elevator overruns from extending above the height limitations whereas this is something that would be permitted to happen outside of the overlay.

We will be having a discussion about the Munjoy Hill Conservation Overlay District with the Planning Board during their January 25th meeting. I strongly encourage you to submit a written comment describing the issues caused by restricting elevator overruns to exceed the max building limitations. Written comments can be sent to planningboard@portlandmaine.gov

In your experience how much of an overrun, in feet, is generally necessary and are you able to quantify the extra costs associated with installing an elevator that doesn't extend above the max building height? I'm curious to better understand much this adds to construction costs.

Hope this helps and please let me know if you have any questions.

Kevin

On Mon, Jan 10, 2022 at 10:46 AM Benjamin Brennan <Benjamin.Brennan@kone.com> wrote:

Good Morning Kevin,

In reviewing the ReCode Portland documents, and comparing to the Conservation Overlay District language regarding Munjoy Hill, I believe that the following two sections conflict one another:

Amendment to Portland City Code Chapter 14-140.5 (MUNJOY HILL CONSERVATION OVERLAY DISTRICT) Section c:

Rooftop appurtenances other than chimneys shall not exceed permitted heights, except that HVAC equipment is permitted for up to 5' above these maximum heights if (a) out of view from public rights-of-way, screened adequately, and integrated with the building design and (b) set back at least 5' from

the building edge. In addition, height limits and placement of alternative energy equipment is permitted as specified in 14-430, Height Limits, and as specified in Article X, Alternative Energy.

ReCode Portland Section 7.5.1.D.Rooftop appurtenances:

Rooftop appurtenances for the housing of elevators, stairways, tanks, fans, or other building operating equipment not intended for human occupancy, deck railings, skylights, steeples, roof signs, flag poles, chimneys, smokestacks, radio or television masts, telecommunications equipment, water tanks, or silos may be erected above the height limitations herein prescribed.

The language included in the Munjoy Hill Conservation Overlay District prevents elevator overruns from extending above the height limitations. The ReCode Portland language allows for this.

Since elevator overruns extend above the last floor that they serve, preventing the elevator overrun from extending above the height limitations effectively prevents the elevator from serving the top floor. To take it a step further, the State Elevator Inspectors' office current interpretation of a 2002 law requires a stretcher compliant elevator to serve every floor of a new building.

Would it be possible to update the Conservation Overlay District Language to match that of ReCode Portland? Or do you see another avenue for correction?

I appreciate any feedback you are able to provide on the matter.

Thanks,

Ben Brennan

Senior Sales Executive

New Equipment Business

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Westbrook, ME 04092

Mobile [207-749-4251](tel:207-749-4251)

Email benjamin.brennan@kone.com

www.kone.us



Dedicated to People Flow

--

Kevin Kraft, AICP
Deputy Director Planning & Urban Development Department

389 Congress Street
Portland, Maine 04101
kkraft@portlandmaine.gov

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.

Public Comment: Munjoy Hill Conservation Overlay - Case Study

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George Rheault

11:43 AM (2 hours ago)

to Planning Board, Christine Grimando, kkraft, jra...@portlandmaine.gov, jmy, Abigail Reed

The Conservation Overlay and the fake Historic District both must be discarded.

But first we need a commitment to honesty from both planning staff and the Planning Board.

Is the goal of our entire zoning apparatus (including the Overlay/HD) simply to artificially elevate property values and intentionally create housing scarcity?

That is a fundamental question on the path to actual honesty.

What we absolutely need discarded is the pathetic hypocritical slime that covers most of Portland's elite homeowners in its affluent enclaves. You know the ones - who preoccupy themselves with demanding OTHERS sacrifice to solve the region's housing crisis while FULLY TAKING ADVANTAGE OF THE VERY THINGS THAT CREATED THE CRISIS IN THE FIRST PLACE.

Below is a great case study of one individual who CLUCKS ON about demanding zoning reform in places that have fully embraced exclusionary zoning techniques while omitting to include his home as one of those places!

One would never know his family made a conscious choice in December 2019 to buy into all the benefits of Munjoy Hill's exclusionary zoning regime. Price of admission then: \$755,400 (excluding transaction costs).

At that time the Conservation Overlay was fully in place and the interim protections of the proposed historic district were also fully in effect though they were not made permanent until the Spring of 2021 (thank you Councilor Zarro, Mayor Snyder and the other 3 councilors for their courageous votes of confidence in perpetuating housing apartheid in our city!).

Zillow currently has an estimated value of this person's property at over \$1.2 million.

If the Conservation Overlay is about inflating property values, it appears to have done a very good job!

If it is about addressing affordability and creating more housing abundance in a high-opportunity walkable climate-friendly area? Pretty much a failure!

NB: I have said it before, but the multi-family apartment dwelling proposed for Cape Elizabeth's town center that is the subject of the Twitter virtue-signaling snapshots below IS CURRENTLY ILLEGAL TO BUILD ON MUNJOY HILL DUE TO A HOST OF ZONING RESTRICTIONS (height, density, etc.)



Thread



Ben McCall @benjamintmccall · Nov 30, 2021



This sucks.



[pressherald.com](https://www.pressherald.com)

Developers pull plug on Cape Elizabeth affordable housing project
The proposal for Dunham Court drew opposition from people who criticized its location, size and financing.



2



1



15





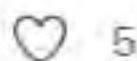
Ben McCall @benjamintmccall · Nov 30, 2021

...

So many unkind and unproductive things I could say about this, but perhaps this is more productive:



1



5



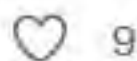
Ben McCall @benjamintmccall · Nov 30, 2021

...

We need housing. Lots of its. Solving that problem needs REGIONAL solutions. It can't and shouldn't be up to Portland alone to create the opportunities necessary to support the type of vibrant, diverse, and equitable community we want.



1



9



Ben McCall

...

@benjamintmccall

Today it's Cape, but yesterday it was Falmouth, and soon it will be Scarborough (yeah, that Scarborough).

12:02 PM · Nov 30, 2021 · Twitter Web App

6 Likes





Ben McCall @benjamintmccall · Nov 30, 2021

...

Replying to [@benjamintmccall](#)

Bottom line: we all need to step up to the plate.

Do better, Cape.



4



Eamonn T. Dundon @etdundon · Nov 30, 2021

...

Replying to [@benjamintmccall](#)

Important discussion in the coming months re growth caps in Scarborough. The state enabling law in need of serious reform as it lets communities like Falmouth and Scarb cap development at 65 and 145 units annually.



1



Slingblade Willy @SlingbladeWilly · Dec 1, 2021

...

Replying to [@benjamintmccall](#)

It seems to me Scarborough has seen HUGE boom in rental units - the complex on Haigis pkwy keeps growing every year





Ben McCall

@benjamintmccall

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Lawyer. Exerciser. [@BatesCollege](#)
Bobcat. Cat Gent. Hot Sauce
Enthusiast. Portlander. Opinions are
mine (unfortunately). [#ZoningIsSexy](#)
[#GGMU](#)

maine.rr.com <cbramley@maine.rr.com>
to planningboard@portlandmaine.gov

Jan 26, 2022, 7:48:33 PM (4 days ago)

I live at 71 Quebec St. in Portland.

I listened to the majority of the working session on the Munjoy Hill Overlay District yesterday. I am writing to you because I could not comment during the meeting due to other obligations.

As someone who has a busy life, it is difficult to even understand some of the complexity of the zoning, overlay, and historic district issues that impact Munjoy Hill. For that reason, I am not going to dig into all the details but address the topic more broadly.

Munjoy Hill is a neighborhood with a unique location and opportunity for density. My business has offices in Lewiston and Portland. During the pandemic, I have taken every opportunity to walk from the East End to my office in the Old Port. I now look forward to the walk in almost any weather. I recognize that this is a privilege that most Mainers don't have. I have also come to see it as part of the urban reality we should strive for in Maine - more housing close to the urban center, more walking and biking, fewer cars.

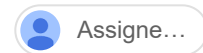
Since the Historic District was proposed, I have attend approximately 8 meetings regarding the Historic District, zoning issues, and individual projects. At each meeting, a few of the same older, white residents have spoken in support of additional restrictions and in opposition to any change that would make it easier to build multi-family housing or a denser neighborhood. Restricting this development drives up the cost of housing and limits the great experience of our neighborhood to fewer, richer people. The true motivation of these repeat speakers is revealed in that they claim to be in favor of more housing while opposing every project and every change that would make more housing available.

I urge the Planning Board to think about approaches to Munjoy Hill that will make it more dense and transit friendly and will give more people the opportunity to live close to downtown and avoid reliance on a car. I believe this means removing the overlay district. I most certainly oppose any expansion of the Historic District and hope that the Board will reconsider the need for a Historic District in the future.

Thank you,

Craig Bramley

Public Comment on Munjoy Hill COD



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Timothy Wells

11:41 AM (2 hours ago)

to Planning Board, Public...@portlandmaine.gov

Planning Board Members:

I am very relieved to see that the City and Planning Board are now reviewing the need for the Munjoy Hill Conservation Overlay District now that the MH Historical District is in place following an in-depth inventory of the housing stock on MH and identifying which homes qualified for historic protection.

I would like to see the MH COD repealed or modified. It would be easier to repeal so that all the R6 is uniform across the City. Any of the design criteria that may be beneficial could then be incorporated into the R6 Recode changes.

The MH COD contains some troublesome requirements that need to be removed if the COD is to be modified and must be kept out of any changes that are incorporated into ReCode.

Specific recommendations:

1. Eliminate language that does not allow for rooftop appurtenances to exceed the roofbeam height and/or maximum height. Elevator over-rides need to be permitted to exceed maximum height by up to 48". All the major elevators manufacturers require an overhead clearance of ~ 13'4" to the bottom of the 8" hoist beam. The hoist beam needs to be 3" to 6" from the bottom of the roof. The materials for the roof require beams, sheathing, insulation and roofing materials. To build to Passive House standards the roof is going to be an R-50 to R-70 roof. Depending on the type of insulation used and the R value it requires 8" – 18" of insulation.

Overhead Clearance

13'4"

Hoist Beam	00'8"
HB to bottom of roof	00'6"
Roof w/Insulation	1'0" to 1'8"
Total	15'6" to 16'4"

2. Rooftop access needs to be allowed with proper insulation and high enough to deal with heavy downpours which are going to become more frequent with climate change. Building have to be designed to deal with changes that are going to occur over the next 50 years. It is quite feasible that in a heavy rain water accumulation exceeds 12". This has to be thought through in the design.
3. Elevator over rides cannot be forced to the interior of the building when underground parking is offered. Please don't make this a requirement as it is not possible and the City should be encouraging underground parking vs. surface parking or utilizing first floor area that could be housing. The override could be made to be more attractive by putting in a window or through screening techniques, etc.
4. Parapets cannot be counted against the building height. Parapets and cornices are needed for proper articulation, to screen mechanicals, to provide a wind-break so that high winds don't cause uplift on solar panels and sweep them off the roof during storms. They are needed for the aesthetics and creating proper character. These types of limitations imposed by the COD are directly in opposition to building resilient, well-designed and sustainable homes. It is in direct conflict with Portland's Comprehensive Plan.
5. Restrictions on the historical R6 height have to be reformulated. Multi-unit buildings have to be allowed to be built to 45'. The COD reducing the height on MH to 35' and then saying that the City if offering a "bonus" to build to 45' is gaslighting at its worst. This was a very damaging decision for a City Councilor to structure this "Bonus" language in this manner which erodes people's faith in fairness, truthfulness and the effectiveness of government. These decisions cannot be made lightly and the way this was put forth and done was totally unnecessary. It is really sad to see this type of tactic in Portland. The discussion around height limits was to prevent a single family home from building a 45' tall building. It was to reserve the right to use the maximum height for buildings that needed the height to provide more homes and to not allow someone with the financial means to abuse the height allowance. This all got turned upside down at midnight at the council meeting that the COD was voted on.

**I recommend these changes to the
R6:**

		<u>Number of homes</u>	
<u>Height allowed</u>			<u>Housing Fund</u>
<u>Contribution</u>			
		1	
	45'		\$1,000,000
		2	
	45'		\$
800,000			
		3	
	45'		\$
500,000			
		4	
	45'		\$
150,000			
		5	
	45'		\$
75,000			
		6 or more	
	45'		None
		10 or more(Bonus)	
55'			\$
500,000			

These are the major items that need to be addressed. I have more recommendations that I will put in a more useful format and send to the PB and City Staff.

I appreciate the City and PB for taking up this item and I greatly hope that it is repealed or modified so that it is in alignment with the Comprehensive Plan, meeting the housing needs of Portland residents and workers and in addressing the urgency of climate change.

Warmest regards,

Tim Wells

The MH COD greatly increases barriers and damages housing production. The language was purposefully constructed to erect barriers to development at a time that the City is facing a housing crisis and experiencing unprecedented increases in the cost of building. The COD is in direct conflict with the majority of the principles, values and goals laid out in Portland's Comprehensive Plan. The COD significantly increasing building costs, limits access to homes for those with mobility restrictions, hampers quality design and forces poor design choices that make buildings less sustainable, more costly to maintain and It could also be amended with some changes.

Timothy L. Wells

Winston Lumpkins <winston.lumpkins@gmail.com> Feb 17, 2022, 5:56:03 PM (16 hours ago)
to planningboard@portlandmaine.gov

Good afternoon esteemed members of the Portland Planning Board,

This is not the time to repeal the MHNCO.

Rental property all over Portland is under a lot of strain, nowhere more so than on Munjoy hill.

Rental properties, for some reason, saw a high tax increase (especially [compared to condos](#)) during the botched reevaluation. Landlords feel squeezed due to rent control. It's often more profitable to run a short term rental than it is to rent to real people, but those are capped and may soon be banned altogether.

Landlords are under a lot of pressure to sell & once they do it's hard to make enough off of rental properties to pay "Portland in 2022 mortgages", so the folks they sell too will soon be under a lot of pressure to do SOMETHING. Possibly something drastic.

I'm concerned that repealing the MHNCO would allow owners & developers to easily demolish old rental properties & replace them with more valuable condos, easy to sell at ludicrous prices (far out of reach of Portlanders). This was, after all, happening before the overlay district..

Portland's condo conversion regulations don't apply to teardowns.

I'm fairly sure that that's why this conservation overlay exists, to conserve historical & affordable housing until the condo conversion fee loophole is closed. I'm pretty damn sure that has not happened yet, though, perhaps I missed it?

Until Portland's condo conversion fees are *significantly* raised and applied to teardown conversions, the MHNCO should stick around. Y'all will probably have to wait on the council to do that, but hopefully this new council will get on it!

I do generally believe that more housing is good housing, but destroying existing housing to create luxury housing is actually LESS lived in housing.

Yours,
A concerned renter.

~Winston Lumpkins
Waterville Street,
Portland, Maine.

Mike Hoover <chzstk@gmail.com>

7:16 AM (3 hours ago)

to planningboard@portlandmaine.gov, planning@portlandmaine.gov, Christine Grimando, kkraft

Chair Stanley and Planning Board Members:

As a resident and homeowner living on Munjoy Hill, I am concerned about any zoning changes which may affect the character and livability of the neighborhood. Currently, the city is in the process of updating and possibly modifying zoning in a city-wide, comprehensive manner. City Council, in 2018, envisioned and approved an approach whereby a strategy implementing multiple land use strategies including the implementation of the Munjoy Hill Neighborhood Conservation Overlay Zone (MHNCOZ), the consideration of implementing historic districts, and the comprehensive revision of the R-6 Design Standards. The consideration by the Planning Board of the elimination of the MHNCOZ as a stand-alone action is simply not compatible or timely with regard to the larger, comprehensive effort put in place by City Council.

An example of the incompatibility of the Planning Board's recommendation for the elimination of the MHNCOZ would be the loss of the workforce housing initiative for the overlay zone. The ability to have affordable housing in the City of Portland is important to the entire city. The elimination of this incentive has the potential to have wide ranging effects on housing development patterns in the city. This change, if enacted, will be implemented without the lens of a comprehensive land use and zoning evaluation implemented by City Council. In my opinion, this comprehensive evaluation is necessary. A piecemeal dismantling of current zoning district regulations will most likely result in unintended, adverse land use decisions for Munjoy Hill and the city as a whole.

This is just one example of the potential impacts to the city as a whole, and more importantly to the residents of Munjoy Hill. To this point, the consideration of a proposed zoning change without meaningful public input is premature. The most important element of any zoning modification is the meaningful, thorough, and properly documented input of the residents of the zone where the change is proposed. To date, with just one workshop and now a public hearing, the process does not show that this input has not been developed for consideration of any change to the MHNCOZ.

For the reasons outlined above, I am in opposition to the Planning Board's consideration of changes to a single zoning designation within the city. I ask that the Planning Board vote to not propose this stand-alone zoning change, and allow the city to move forward with their land planning efforts, as implemented by Council, in a comprehensive manner.

Thank you. Michael Hoover

Dear Planning Board,

I support the Munjoy Hill Neighborhood Conservation Overlay District (MHNCOD) for the following reasons.

1. Planning Board has not provided any alternative replacement to ensure the following:
 - Ensuring diversity in housing stock and NOT just luxury condominiums are built.
 - Ensuring that of existing housing that is providing affordable housing is not having to pay unrealized gains on property values if they do not want to sell their house.
2. It is the only zoning tool incentivizing affordable housing units if building higher outside a Historic District on Munjoy Hill.
3. Removing the MHNCOD will only accelerate gentrification and will only reduce existing housing affordability for property owners and tenants.
4. It is not in the purview of the Planning Board to instigate a zoning change and spend city staff resources on this repeal.

To just state housing density is needed is misleading. Housing density does NOT translate to long term resident. It is about the correct mix of housing density that translates to long term residents and not just property investments for the wealthy.

Regards,
Karen Snyder
Waterville St.

Wayne@redhookdesignalliance.com 11:34 AM (2 hours ago)
<Wayne@redhookdesignalliance....>
to planningboard@portlandmaine.gov, Christine Grimando, kkraft, Wayne@redhookdesignalliance.com, Carolyn Swartz

Chair Stanley and Planning Board Members,

By now, you will have received several letters from those who support the preservation of the MHNCOZ with very strong arguments, and supporting data, describing its importance in the preservation of the architectural fabric of Munjoy Hill.

Of equal importance is the significant contribution that the Munjoy Hill Historic District makes by providing desperately needed affordable housing. There is in fact, through speculative development, a significant, documented, net loss of affordable housing units which are not otherwise replaced by the development of new high value multi-unit structures. The effect of the loss of affordable living space within the communities that enable our vibrant restaurant, brewery, arts institutions, and tourist industries is becoming apparent as the shortage in staffing results in closures, shorter hours of operation, and an overall loss in guest satisfaction. For a city that literally "banks" on a vibrant tourist industry, this is a significant problem. While commuting is suggested as an alternative to living within the community that one works, the time and expense of travel, as well as the new paradigm of remote work from home employment challenges that logic.

Historic Districts are vital to how cities like Portland function. It's true that they provide a historical reference, but more importantly they make financial sense for their inhabitants, and the businesses and agencies that depend on those inhabitants. The Munjoy Hill Historic District, and the Munjoy Hill Conservation Overlay Zone offer essential protection to the delicate economic balance of affordable housing in a city where people of all socio-economic levels wish to live and work.

I request that the Historic District and MHCOZ be left in place and strengthened.

Thank you for your careful consideration,



Wayne Valzania

Munjoy Hill Resident and Property Owner

Berry Manter <bmanter1@gmail.com>
to Planning Board

11:37 AM (2 hours ago)

Dear Portland Planning Board members:

I am perplexed and questioning the need at this time to be discussing a repeal the MHNOCZ? Where does the pressure to do this come from?

It is my understanding that the current Overlay created guidelines for development based on an analysis that established a *cohesive structural integrity based upon the scale of existing development*. The goal of the Overlay was to encourage redevelopment that would be more compatible with the current urban fabric of this district.

What comes of eliminating this protection? Developers have long been pressuring the city for highly profitable luxury condos in this area, which diminish the existing mixed economic population. They offer vague plans, then ask for variances that further distort their projects.

Portland has some clearly under-developed areas that would greatly benefit from the creation of denser housing, creating populated neighborhoods to support the growth of more restaurants, coffee shops, and small businesses, creating viable neighborhoods, rather than satellites to the peninsula businesses. With the attraction of arts and businesses to Westbrook, an opportunity for expanded middle-income housing as well as improved city transportation would benefit the city as a whole.

Concentrating “the wealth” on Munjoy Hill decimates existing housing for lower and middle-class Portlanders. Protection of existing structures protects the integrity of design, of opportunities for a wide spectrum of incomes and cultures to continue to reside in this neighborhood.

Please, do not be hasty. Let’s look at the needs of the whole of Portland, before eliminating the currently in place MHNOCZ.

Respectfully,

Berry Manter
46 E. Prom
Portland

Barbara Vestal <vestal@chesterandvestal.com>

Feb 17, 2022, 11:42:25 AM (yesterday)

to planningboard@portlandmaine.gov, Christine Grimando, kkraft

Chair Stanley and Planning Board Members:

Based on statements made at the Planning Board workshop on this matter, it seems that the Planning Board is determined to revoke the Munjoy Hill Neighborhood Conservation Overlay Zone. I believe that is both premature and unwise for the following reasons:

1. **THE OVERLAY ZONE SHOULD BE EVALUATED IN THE BROADER CONTEXT OF RECODE 2, NOT PULLED OUT FOR ACTION NOW.** The Planning Board is supposed to implement policy established by the City Council. In this instance the Planning Board is seeking to initiate the policy. True, it will require approval of the City Council. But assessment of the policy should occur in the context of a comprehensive reassessment, which is underway in Recode 2.
2. **REPEAL OF THE MHNCOZ WILL REMOVE THE ONLY MUNJOY-HILL SPECIFIC INCENTIVE FOR WORKFORCE HOUSING, WITHOUT REPLACING IT WITH ANY OTHER INCENTIVE.** The 10-foot height bonus for inclusion of a workforce unit in a structure of 3 or more units on a lot of 2,000 square feet or greater is not without its issues. But it is the only Munjoy Hill incentive we have at this time. To remove it, at a time when neighborhood residents and many others, are advocating for additional workforce housing, and to remove it without substituting any other incentive for affordable or workforce housing, seems counterproductive.
3. **REPEAL OF THE MHNCOZ WILL REPEAL THE ONLY PROTECTIONS FOR POCKETS OF HISTORICALLY BLACK RESIDENCES WHICH ARE OUTSIDE OF THE HISTORIC DISTRICT AT A TIME WHEN THEY ARE PARTICULARLY VULNERABLE TO DEMOLITION.** The MHNCOZ includes a form of historic preservation by establishing a 12-month demolition delay for buildings deemed to be preferably preserved by the Planning Authority. While the conservatively-drawn boundaries of the Munjoy Hill Historic District do include some historically Black-owned residences, there are additional areas on Lafayette Street, Merrill Street and adjacent areas which are **just outside** the Historic District boundaries. They are generally smaller structures, some on relatively larger lots, making them prime targets for demolition and redevelopment. It seems particularly unwise to remove these protections now, just as the consultant for the City-sponsored evaluation of the impact of the historic preservation program is beginning its work.
4. **THE WORK ENVISIONED BY THE COUNCIL IN JUNE 2018 IS ONLY PARTIALLY COMPLETE.** In June 2018, when the MHNCOZ was enacted at the end of a 6-month moratorium on demolitions on Munjoy Hill, the Council identified it as part of a 3-pronged strategy: 1) enactment of the MHNCOZ, 2) a review and revision of the R-6 design standards, promised to occur in the next few months, and 3) an evaluation of adoption of one or more historic districts for part or all of Munjoy Hill. The MHNCOZ was designed to exist as one of these three legs, not as a temporary measure. **A historic district was enacted, but for less than 1/2 of the overlay area.** The protections of the overlay zone apply to the historic district portion AND to the portion that is not in the historic district; only the demolition delay portion of the overlay ordinance does not apply within the historic district because it has its own demolition protections and has already made a determination of what is preferably preserved within the historic district as part of the designation process. **The review and revision of the R-6 design standards started but has not yet been completed.** Only two prongs of the three-pronged strategy exist now; repeal of the MHNCOZ would remove one of them, leaving only one prong (the historic district, applicable to less than 1/2 of Munjoy Hill). For the reasons it was enacted in the first place, the MHNCOZ, which applies to the entire Hill, is still relevant and needed.
5. **THE SUGGESTION THAT THE 100' SITE PLAN STANDARD SUPPLIES SIGNIFICANT PROTECTION IS DISINGENUOUS.** A map is included in the materials that shows the land area of Munjoy Hill that is within a Historic District or within 100 feet of a landmark structure or a historic district. It is misleading to suggest that the 100' site plan standard provides protection that substitutes for the MHNCOZ. **If the MHNCOZ is repealed, for areas within 100', there would be no review or possible delay of demolitions, there would be no dimensional standards different from the standard R-6, and there would be no height bonus for workforce housing.** The only impact is that for new development within the 100' penumbra which is undergoing Level 3 site plan review, the historic preservation staff is required to produce a memo for Planning Board consideration addressing whether the proposed development would be compatible with the adjacent historic district. While not completely insignificant, it only applies to a limited number of projects and is very limited in scope to design issues.

6. MORE STUDY IS REQUIRED TO SAVE WHAT IS IMPORTANT IN THE MHNCOZ RATHER THAN REPEALING IT ENTIRELY. When the MHNCOZ was being developed, the Planning staff engaged in an unusual, and welcomed, outreach effort in the neighborhood to help determine what kind of development would be considered compatible and promote neighborhood stability. As part of the effort to have zoning dimensional standards more closely conform to the existing land use pattern, the general R-6 height was reduced by the MHNCOZ from 45' to 35' for all new single and two family structures, and for all new 3 or more unit structures that did not include at least one workforce housing unit. This was an important change. The appropriateness of having different R-6 height limits for different neighborhoods should be assessed as part of the Recode 2 process.

For all of these reasons I believe it is shortsighted and inappropriate to recommend repeal of the MHNCOZ as this time.

Regards,

Barbara Vestal

104 North Street
Portland, Me 04101

February 18, 2022

Portland Planning Board
City Hall
289 Congress Street
Portland, ME 04101

By e-mail to planningboard@portlandmaine.gov

Re: Munjoy Hill Neighborhood Conservation Overlay

Dear Chair and Members of the Portland Planning Board:

Here's hoping that this reaches you in time for your consideration in connection with the Workshop scheduled for February 22 to consider a proposed repeal of the Munjoy Hill Neighborhood Conservation Overlay. In the interest of saving the affordable housing that remains on the Hill, we ask you to defer consideration of this proposal and incorporate it into the Phase 2 Recode discussion that is just about to start. Although the Conservation Overlay has not been ideal, it does tend to slow the pace of luxury condo-gentrification of the neighborhood at the expense of affordable houses and their occupants.

The Hill was originally developed in the second half of the 19th century and the first two decades of the 20th as a working-class residential neighborhood with a large number of simple one- and two-family wood-frame houses on very small lots and a sprinkling of 3-deckers and larger buildings. It continued to fulfill this role throughout the 20th century. During the first half of the century the Hill was home to diverse first- and second-generation immigrant families and others who worked in Portland's factories, warehouses, rail yards and on the docks. During the last couple of decades of the 20th century, young people getting their start in life inhabited the many apartments and small houses on Munjoy Hill. Many a middle-aged or older Portlander can reminisce about early days and a first apartment "on the Hill."

As urban life became more attractive in the early days of the 21st century, land values and utilization on the Hill remained stable. This was largely because most of the small lots on the Hill were smaller than the minimum lot size in the R-6 zone. It was not possible for a developer to tear down a house and redevelop the lot. Property owners were incentivized to continue to maintain their existing properties and rent them at relatively reasonable rents.

All this changed in 2015 when the City Council, on recommendation of the Planning Board, drastically changed the R-6 zone by reducing the minimum lot size from 4,500 square feet to 2,000 square feet and liberalizing a number of other criteria including lot coverage, unit size and setbacks. It suddenly became possible for developers to buy existing Hill properties, tear down the houses, and build condominium blocks on the lots.

This effort to increase the residential density of one of Portland already most dense residential neighborhoods turned out to be misguided. Developers took advantage of the liberalization to buy up affordable residential properties, tear them down, and replace them with luxury housing, sometimes single family but usually luxury condominium blocks. Not a single unit of affordable rental housing has been built on the Hill following the 2015 amendments, but more than 20 existing affordable housing units have been lost to gentrification.

Hill residents, horrified at seeing the affordable homes in their neighborhood disappear, petitioned the City Council for relief. The result was the Munjoy Hill Neighborhood Conservation Overlay. It is designed to help save the affordable housing that has been provided in the original stock of small frame dwellings by 1) providing for a limited demolition delay of properties deemed by the Planning Director to be “preferably preserved”, 2) requiring a “workforce” unit in any building that seeks a 45-foot height limit, and 3) providing limited design guidance to make sure that replacement structures are consonant with what is there.

Although most of the recently completed luxury properties on the Hill started the approval process before the Conservation Overlay was adopted, three recently approved projects will result in three new workforce units, the only ones to be built on the Hill in many a long year.

The adoption of a Historic District for approximately half of the Hill area is no reason to repeal the Conservation Overlay as affecting the remainder. Indeed, the planning staff reassured neighbors who were apprehensive about the limited coverage of the Historic District that the Conservation Overlay would be there for the rest of the neighborhood. It is ironic to see that same staff now seeking to repeal it.

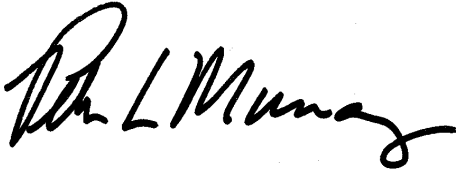
It has been suggested that the so-called 100-foot rule calling for advisory HP input on projects within 100 feet of the Historic District will give similar protection for a large part of the remainder of the Hill not in the Historic District. This is clearly wrong. There is no restraint on demolition in the 100-foot zone, nor is there any requirement to provide workforce housing in 45’ residential buildings. Repealing the Conservation Overlay will leave half of the Hill essentially naked for gentrification and loss of more affordable housing.

In any event, we should not address this issue piecemeal as we prepare for a comprehensive revision to the substantive parts of Portland’s entire Land Use Code. One suggestion that has been made is that the important features of the Conservation Overlay

might be incorporated in the R-6 District city wide. Such consideration can only take place in the context of an overall review like the one that is getting underway.

For the foregoing reasons, we request the Planning Board to defer consideration of any repeal of the Munjoy Hill Neighborhood Conservation Overlay at this time and until an appropriate time in the overall review of the Portland Land Use Code that is currently getting under way.

Sincerely,

A handwritten signature in black ink, appearing to read "Peter L. Murray". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

Peter L. Murray

Rich Entel <entelrich@gmail.com>
to planningboard@portlandmaine.gov

Feb 18, 2022, 11:46:20 PM (3 days ago)

I SUPPORT REMOVING the overlay map. As an owner of an 1895 house on 60 Kellogg Street I have followed this issue. I attend to my house well, keeping it up and conserving it beautifully on my own. I oppose being brought into a historic district and all that it imposes on historic house owners with no real benefit for them.

Remove the overlay map! There are other ways of keeping Portland beautiful without using this approach.

Limiting and more strictly regulating new structures is a better way to preserve the neighborhood.

Sincerely,
Rich Entel
60 Kellogg St.
Portland, ME 04101

Carle Henry <cdhenry3@yahoo.com>

Feb 19, 2022, 7:21:05 AM (3 days ago)

to Planning Board

Thank you again for unanimously signaling that it's time to remove the overlay.

1. Portland's housing crisis will benefit from its removal. Constraints on adding density will be alleviated.
2. My neighborhood, Munjoy Hill, is not special: It's an R6 like other R6 areas. Both the hill's overlay and the historic district are detrimental to the City achieving its goals.

Please hold steady to your position and do not be distracted by the onslaught of NIMBY emails you will undoubtedly receive during the required public comment period.

Carle Henry
[207.807.4078](tel:207.807.4078) | m
Sent from my iPhone

Joanna Sturiano <joannasturiano@gmail.com>
to planningboard@portlandmaine.gov

Feb 20, 2022, 4:32:42 PM (yesterday)

Dear City of Portland Planning Board,

This message is to voice my support, as a resident of Portland's District 1 and the Munjoy Hill Neighborhood Conservation Overlay District, for the preservation of the overlay district. I write to you with the understanding that it is your duty to listen to and make decisions in line with the wishes of Portland residents directly impacted by this issue: the residents of the MHNCO. Please prioritize our voices, *not* the voices of those outside interests who wish to influence policy in this sphere because they stand to profit off the potential ability to rebuild this section of Portland exclusively for wealthy buyers.

I live and work in Portland. My livelihood as a working-class resident here is directly impacted by decisions on issues such as these which stand to alter the fabric of Portland neighborhoods for current and future generations.

Planning Board members, the immediate context you consider in deliberating over the status of this conservation overlay district must be the housing crisis Portland currently faces. You must recognize the essential need for a clause in city planning policy to require developers to include affordable housing units in their new development plans in this section of our city. You must acknowledge the ways in which the artificially inflated values of existing properties in this district (due to skyrocketing property tax valuations affected by recently built luxury housing) have penalized those property owners who actually live in, and/or attempt to offer affordable rental housing in, their properties here.

Without the MHNCO, there is no city policy in place to protect would-be renters and property owners from current property owners' choosing to rent out their properties as wildly overpriced "market-rate" apartments affordable only to the highest bidders, or to convert them to lucrative short-term rentals or expensive condos, or other modes which entirely remove housing units from Portland's stock and contribute to the housing crisis. You must preserve this conservation overlay district as a tool to protect Portland against further exclusive gentrification and exacerbation of the housing crisis by discriminatory housing restructuring. You must not make it easier for those who stand to profit off of Munjoy Hill real estate values to further push out its working-class residents and reduce the amount of its housing stock that can be rented to or owned affordably by non-wealthy residents.

Please preserve housing affordability in our district for current and future residents, and consider the housing needs of all equitably in your deliberations on the MHNCO. Please protect this conservation overlay district to preserve a diverse, inclusive Portland.

Sincerely,
Joanna Sturiano

JEAN MC MANAMY <ninimaine@aol.com>

Feb 21, 2022, 5:02:54 PM (15 hours ago)

to planningboard@portlandmaine.gov

Dear chair Mazer and members of the planning board:

I am writing to ask you to reject the proposal to eliminate the Overlay District on Munjoy Hill. As you know, demolition and the displacement of moderate priced housing with high-cost and high-profit condos has slowed since the implementation of the Overlay District. The neighborhood has been stabilized substantially.

Recent attempts to meet Portland's housing need—densification, the affordable unit inclusion requirements, and several new condo projects under construction—are not solving the housing crisis. In fact, they seem to be contributing, by increasing opportunities for high end development, and particularly on the geographically challenged peninsula.

Right now the city is fully subsidizing over 1000 people in motels, hotels, and apartments, many outside the city. The city is also subsidizing residents in more stable and family friendly apartments within the city. The city budget cannot sustain this program, and the human need is growing.

Let us not as a city confuse human need with human wants. The wants of developers should not be our priority.

Your time and that of our city staff is limited, and it would be better spent doing the following:

1. Working with the council to eliminate exclusive zoning which prevents the development of complete neighborhoods with diverse populations along major transportation routes. Creating a complete neighborhood initiative to assist in the build out.
2. Working with the council, staff, and legislative delegation to get whatever legislative changes are needed to permit local option taxes.
3. Implementing more effective linkage fees for all high end developments, including realistic condo conversion fees, that don't permit developers to "buy out" of the affordable unit program so easily.
4. Treating air bnbs like the hotels that they are.
5. Identifying housing targets for the sheltering of vulnerable populations and focusing incentives and resources on those needs. Make the progress towards those goals more transparent with public reports.
6. Considering the impact of spillover development on Bayside, and the extension of overlay protections to the peninsula as a whole.

Thank you for your consideration.

Jean (Nini) McManamy
10 Willis St

Markos Miller <markossmiller@hotmail.com>
to planning@portlandmaine.gov

Feb 19, 2022, 1:51:39 PM (2 days ago)

Planning Board Stanely and fellow members of the Portland Planning Board,

I'm writing in support of the proposal to terminate the Munjoy Hill Conservation Overlay Zone. While the Conservation Overlay was imperfect, I initially was supportive of it as a compromise between the calls for greater preservation and the great need for more housing. However, my neighborhood now does have the restrictions of the Historic District designation, compounded by the Overlay Zone. Some will argue that these two regulatory efforts were intended to work together. I argue that the Overlay was a failed compromise with preservation advocates, and the two frameworks compound restrictions on the creation of housing. Please vote to remove the Overlay Zone (and advocate for the future re-evaluation of the HD designation).

The Overlay Zone does have some worthy elements that should be maintained or improved upon to support the much-needed development of transit-oriented housing for low and middle-income populations. These include:

- location of garage entrances
- density bonuses for buildings that maximize number of housing units, specifically low/middle-income units
- scaling up of the R-6 city-wide

These issues should be taken up as part of the ReCode process.

I appreciate your thoughtful consideration of these issues and your service to our community.

Sincerely,
Markos

Markos Miller
17 Atlantic St
Portland, ME
04101
[\(207\) 807-2681](tel:2078072681)