CITY OF PORTLAND, MAINE

PLANNING BOARD

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

AGENDA
PORTLAND PLANNING BOARD MEETING

The Planning Board will hold a remote meeting on Tuesday, September 28, 2021, 4:30 p.m. Due to the existence of an emergency or urgent issue, the Planning Board will conduct this meeting by remote methods/technology at the Zoom link provided below in accordance with the requirements of 1 M.R.S. section 403-B and the City Council's Remote Participation Policy.

Public comments will be taken for each item on the agenda during the allotted time and written comments should be submitted to hp@portlandmaine.gov or planningboard@portlandmaine.gov. Please note that the placement of items on the agenda are subject to change. Please check the Agenda & Minutes Center prior to the meeting for each item's approximate start time.

When participating via Zoom, allow your computer to install the free Zoom app to get the best meeting experience. **For public comment, you will need to use the "raise your hand" feature. To raise your hand via the telephone, please hit *9. You will be un-muted by the moderator when it is time for public comment.** For more information on how to use Zoom, please go to: https://www.portlandmaine.gov/remotePUD

You are invited to a Zoom webinar.
When: Sep 28, 2021 04:30 PM Eastern Time (US and Canada)
Topic: Planning Board Workshop and Public Hearing 9-28-2021

Please click the link below to join the webinar: https://us02web.zoom.us/j/89579152193
Or One tap mobile : US: +13126266799,,89579152193# or +19292056099,,89579152193#
Or Telephone: Dial(for higher quality, dial a number based on your current location): US: +1 312 626 6799 or +1 929 205 6099 or +1 301 715 8592 or +1 346 248 7799 or +1 669 900 6833 or +1 253 215 8782

Webinar ID: 895 7915 2193
International numbers available: https://us02web.zoom.us/u/kij6j0GrM

WORKSHOP - 4:30 PM

i. Master Development Plan and Zoning Text Amendment; 58 Fore Street; Portland Foreside Development Company, Applicant. (estimated time 4:30 - 6:00 p.m.) The Planning Board will hold a workshop to consider a master development plan and text amendment for interim building and site modifications in connection with the Fore Points Marina to allow the temporary (three-year) siting of improvements that fall outside of the scope of the approved 2018 Level II site plan and 2016 Master Development Plan, as well as changes to the Land Use Code to facilitate the siting of restaurants and food service establishments associated with marina facilities in the EWPZ zone. The subject property is a 10-acre parcel zoned B-6 and EWPZ, a portion of which lies within the Shoreland Zone.

ii. Major Site Plan; 50 (44) Bedford Street; University of Southern Maine, Applicant. (estimated time 6:00 - 7:00 p.m.) The Planning Board will hold a workshop to consider a proposal for the development of a five-level, 632 space parking garage with a footprint of 45,100 square feet, along with associated site improvements, at 50 (44) Bedford Street. The subject property is 8.1 acres in size and is located in the R-5 Residential and B-2 Community Business zones as well as in the USM Overlay Zone.

PUBLIC HEARING - 7:00 PM

1. ROLL CALL AND DECLARATION OF QUORUM

2. COMMUNICATION AND REPORTS

3. REPORT OF ATTENDANCE AT THE MEETING HELD ON SEPTEMBER 14, 2021

Evening Hearing
57 Douglass Street: Chann, Dundon, Dunfey, Silk, Smith, and Stanley present; Mazer absent
803 Forest Avenue: Chann, Dundon, Dunfey, Silk, Smith, and Stanley present; Mazer recused
Executive Session: Chann, Dundon, Dunfey, Mazer, Smith, and Stanley present; Silk recused
654 (638) Riverside Street: Chann, Dundon, Dunfey, Mazer, Smith, and Stanley present; Silk recused

4. REPORTS OF DECISIONS AT THE MEETING HELD ON SEPTEMBER 14, 2021

i. Zoning Map Amendment; 57 Douglass Street; Douglass Commons, LLC.,Applicant. Dundon moved and Dunfey seconded a motion to find the zoning map amendment from R-5 to R-5a at 91 and 41 (47) Douglass Street consistent with the Comprehensive Plan for the City of Portland and recommended its adoption to the City Council. Vote 6-0, Mazer absent.

ii. Conditional Use; 803R Forest Avenue; Avenue Auto Co., LLC., Applicant. Dundon moved and Silk seconded a motion to approve the conditional use permit with one condition of approval. Vote 6-0, Mazer recused.

iii. Executive Session Stanley moved and Dunfey seconded a motion to enter executive session. Vote 2-4 (Mazer, Chann, Dunfey, and Smith opposed); the motion failed.

iv. Major Site Plan and Conditional Use; 654 (638) Riverside Street; DC Predevelopment, LLC. and City of Portland, Applicant. Stanley moved and Dundon seconded a motion to waive Technical Manual Section 5.III – Maine DEP Chapter 500 Flooding Standard. Vote 5-1 (Chann opposed, Silk recused). Stanley moved and Dundon seconded a motion to find the plan in conformance with the site plan standards of the Land Use Code and with Site Location of Development Act standards with eight conditions of approval. Vote 5-1 (Chann opposed, Silk recused). Stanley moved and Dundon seconded a motion to approve the conditional use permit. Vote 4-2 (Chann, Dunfey opposed, Silk recused).

5. NEW BUSINESS

i. Level III Site Plan and Subdivision; 126 and 128 North Street; Upright Properties, LLC., and Josh Wojcik, Co-Applicants. (estimated time 7:00 p.m.) The Planning Board will hold a remote public hearing to make further findings of fact related to a reduction in the parking requirement in response to a remand order from the Superior Court and pursuant to Section 14-332.2(b) of the Land Use Code in connection with the approved application for a three-story, six-unit apartment building at 126 North Street and a four-story, six unit condominium building at 128 North Street. The development site is located within an R-6 zone and the Munjoy Hill Neighborhood Conservation Overlay District. The application associated with the parking reduction, PL-000791-2019, was approved by the Planning Board at its September 8, 2020 meeting.

Memorandum
Planning and Urban Development Department

To:	Chair Mazer & Members of the Planning Board
From:	Matthew Grooms, AICP, Senior Planner
Date:	September 24, 2021
Re:	58 Fore Street MDP Amendment and Text Amendment
Project ID:	PL-001654-2021, ZN-01698-2021
CBL:	018 A002001
Meeting Date:	September 28, 2021

I. INTRODUCTION

The Fore Points Marina is part of a Master Development Plan (MDP) for the site at 58 Fore Street. It began operations in May of 2019; since opening, the owner, Portland Foreside Development Company, has constructed various elements not included either on approved site plans or on the MDP. These elements include a series of sheds adjacent to the Fore Points Marina, a new fence, an office trailer, and other changes. . Some of these structures were initially given temporary authorizations. In addition, in 2020, Fore Points Marina began serving food and beverages with temporary event licenses, but intends to pursue permanent food service on the site, a use not allowed in the Eastern Waterfront Port Zone (EWPZ). In response to noted violations of the City's Code, also including those related to required building permits, the City and the applicant entered into a consent agreement (Attachment 2) that requires the applicant to seek the appropriate approvals to formalize the marina's land side layout, or to remove any unlawful structures and cease the food and beverage service use by November 8, 2021. Therefore, the applicant is seeking amendments to gain approval of the marina's layout and allow restaurants as a permanent permitted use accessory to a marina.

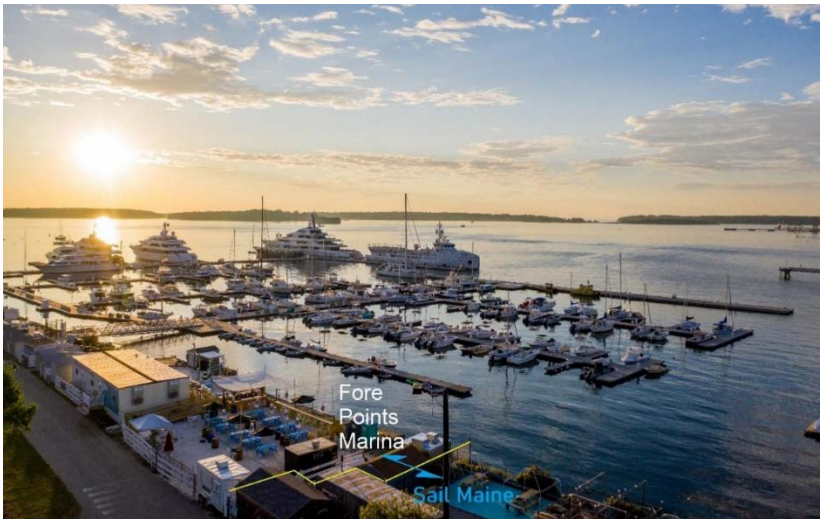


Figure 1: Interim condition for Fore Points Marina is prompting MDP, site plan, and text amendment applications presented in this memo

Portland Foreside Development Company has submitted two separate applications for Planning Board consideration; the first to amend the 58 Fore Street Master Development Plan (MDP) originally approved by the Planning Board on December 20, 2016, and the second, a zoning text

amendment application to amend Article 10 of the City's Land Use Code to permit restaurants as an accessory component to a marina and allow such accessory use to occur within 25 feet of the pier edge, an area currently reserved for water dependent uses in the Eastern Waterfront Port Zone (EWPZ). In addition to the proposed MDP amendment and text amendment, a staff-level minor site plan application has also been submitted for Planning Authority review, which would amend the previously approved site plan for the marina to include existing and proposed temporary structures. The site plan amendment will be reviewed both for consistency with site plan standards and consistency with the approved MDP. Site Plan submission materials are attached for additional context (Attachments E and F, and P5-P7).

These applications are being referred to the Planning Board for compliance with the City of Portland's Land Use Code Master Development Plan standards (Section 14.7), and Eastern Waterfront Port Zone (EWPZ) standards, and are also being reviewed by the Planning Authority for compliance with the Site Plan standards, Shoreland zone, and Flood Plain standards. The below review includes context for the site and previous approvals, and distinct reviews for both the Master Development Plan amendment and the zoning text amendment.

The Planning and Urban Development Department mailed 259 notices advertising this meeting to property owners within 500 feet of the site and interested citizens. A legal advertisement ran in the September 17 and September 18, 2021 editions of the *Portland Press Herald*. As of the writing of this memo, 38 written public comment have been received. As of now the applicant has not held the required neighborhood meeting.

Applicant:	Portland Foreside Development Company (Casey Prentice)
Applicant Representatives:	Mary McCrann, David Senus

II. MASTER DEVELOPMENT PLAN OVERVIEW

A Master Development Plan (or MDP) is a regulatory option, applied for at the discretion of the applicant, for sites with one acre or more in cumulative lot area that's designed as a cohesive and integral development program consisting of multiple buildings and associated site improvements built in phases over an extended timeframe (Section 14.7). An approved MDP establishes parameters to be adhered to for the full development, including total residential units, types of uses, lot coverage, open space, stormwater management, infrastructure, traffic, parking, site layout and circulation. MDPs may be developed concurrently with site plans and/or subdivisions, or independently. Approval does not constitute an authorization for development, but it does maintain the applicability of regulations in effect at the time of the approval for as long as the MDP approval remains valid. MDP submission requirements are deliberately not as detailed as Site Plan and (when applicable) Subdivision requirements to allow for some flexibility in the final buildout of a large, phased project. Site plan applications, and any other required approvals are required before any development on the site can proceed, as outlined by the City's Land Use Code:

As stated under Sections 14-524.a.3.ciii, and 14-524.f.iv of the City's prior adopted version of the Land Use Code, (*Planning Board Master Development Plan Decisions*) states that the Planning Board *shall approve, approve with conditions, or deny a Master Development Plan application based upon the applicable review standards. An approval, including an approval of waivers, establishes the general parameters to be adhered to for the development, including the supporting documentation for floor area ratio and/or residential density, general types of uses, building coverage, generalized open space plans and infrastructure systems.*

A Master Development Plan approval shall not be construed as final authorization of the development. Approval shall confer pending proceeding status upon the development with the effect of maintaining the applicability of regulations in effect at the time of approval for as long as the Master Development Plan approval remains valid, including permissible extensions if granted.

All site plans for each phase shall be in general conformance with the Master Development Plan.

III. REQUIRED REVIEWS

Review	*Applicable Standards*
Master Development Plan	Section 14.7
Eastern Waterfront Port Zone	Article 10.2

IV. PROJECT DATA

Existing Zoning	Eastern Waterfront Mixed-Use (B-6) and Eastern Waterfront Port Zone (EWPZ), Historic District, Shoreland Zone, Floodplain
Property Size	23.2 acres (13.2 acres submerged land)
Existing Use	Mixed-use commercial, office, residential, marina, event space
Proposed Use	Restaurant use to be added to marina

V. BACKGROUND

A. 58 Fore Street Master Development Plan (Project #2016-224)

On December 20, 2016, the Planning Board approved the 58 Fore Street Master Development Plan (MDP) (Project #: 2016-224), which included a proposal to comprehensively redevelop the Portland Company property, a 23.2 acre (approximately 10 acres of land area and 13.2 acres in submerged land lease) former industrial site. The approved proposal would effectively create a new mixed-use neighborhood along Portland's eastern waterfront with nearly one million square feet of new commercial and residential space, 638 residential units, structured parking for up to 736 vehicles, marina, public open space, and a new walking path along the water's edge. The approved MDP established the general parameters to be adhered to for redevelopment of the site and provided an overall plan that including building layouts, open space plans, and circulation. As part of this approval a marina for up to 220 slip spaces for seasonal and transient vessels, and a

2,600 square foot building for marina facilities along with waterfront access that included the Eastern Promenade Trail as well as a pedestrian walkway that would run for the length of the property was envisioned. The alignment of the relocated Eastern Prom Trail across the site is still subject to finalization of a pending three party land exchange between the applicant, Maine DOT and the City. Finalization of the land exchange will allow for the anticipated reconfiguring of both the trail and rail right-of-way alignments to ensure that adequate dedicated public trail space is preserved.

Figure 2: Rendering of 58 Fore Street MDP full buildout, with Marina and publicly accessible waterfront in foreground

B. Fore Points Marina (PL-000330-2018 and PL-000906-2019)

On January 16, 2019, the Planning Authority approved a Level II Site Plan application (PL-000330-2018) for the Fore Points Marina; a proposal to expand the existing marina from 69 slips to 141 slips, with 1,776 feet of slip length for the side tie of boats, and additional features to provide protection against wind, waves and boat wake. This increase in capacity and accommodation was sought so as to provide a wider range of boat users with convenient waterside access to downtown amenities. As part of this approval, the Planning Authority granted a waiver of the site plan standards for site landscaping, because at the time, the project was not providing onshore site improvements and landscaping would be required to be incorporated into subsequent phases of the development.

Fore Points Marina began operations in May of 2019. During that time the owner installed a new fence along the entire length of the property, not shown on the approved plan. There had previously been a fence in this area of the site, though one was not shown in the proposed final condition. Fences are not prohibited, but are subject to review to the extent that site circulation, relationship of marina operations to the rest of the site, visual permeability and other elements of the MDP and site plan are impacted.

C. Phase I Site Plan (PL-000924-2019)

On January 28, 2020, a Level III site plan, subdivision, and conditional use application was approved by the Planning Board for the first major phase of the 58 Fore Street MDP, a proposal to construct

Figure 3: View of Phase I development looking towards the southeast corner of the Sun Life building

a new mixed-use building with office, retail, and parking use, reconstruct historic building #12, develop a parking structure with space for 722 vehicles, and renovate a number of the buildings in the center of the development site. Upon completion, this phase will result in 14 residential units, 110,000 square feet in office space, 49,500 square feet of retail, service and restaurant space, and 17,900 square feet of event space. As of the writing of this memorandum this phase is still under construction.

D. Fore Points Marina Level II Site Plan Amendment (PL-000906-2019)

On April 17, 2020, the Planning Authority approved a Level II Site Plan amendment application for seawall repairs and modifications, stormwater outfall installation, and utility changes at 58 Fore Street. As a condition of the Level II Site Plan amendment approval the owner was to remove the temporary fence within six months of the date of Site Plan amendment approval (October 17,

2020) or have its replacement be reviewed and approved by the Planning Authority. Review of this element is now included in the current applications.

E. Temporary Uses and MDP/Site Plan Violations

In the spring of 2020, the Owner applied for building permit BLDC2020-01384 for various temporary buildings at the marina site, including an office trailer, two regular bathroom sheds, one ADA bathroom shed, one laundry shed, one utility shed, and three sheds for guest services, all connected with the Marina property for marina use between May 1 – November 1, 2020. These were given limited approval as temporary structures. In 2020, Evo restaurant applied for a liquor catering license for multiple, fourteen-day events at the Marina Property to operate a food truck and provide liquor service and were granted liquor catering licenses for multiple, fourteen-day events operating liquor service at the Marina Property, with the understanding that continuous food and liquor can't occur under current zoning. In the Summer of 2020, the Permitting & Inspections Department found structures erected without building permits and not shown on approved plans. These include a drink service bar, a walk-in refrigeration unit, and a storage shed. In Spring of 2021, inspectors found that these previous violations had not been remedied, and that additional unapproved structures, such as new sheds, holding tanks and expanded food service seating area had been erected on the site. These unapproved changes also impact site circulation and layout, and present issues related to floodplain compliance as well.

Following these inspections, the City and the applicant executed a consent agreement (Attachment 2), in which the applicant agreed to address outstanding code violations, and also outlined a process and timeline for the required applications to Planning, including filing an application to amend the approved 2016 MDP application and a separate application to amend Article 10 of the Land Use Code to permit restaurants. Also required is a site plan amendment consistent with the approved MDP. As the MDP is in review for an amendment, final review of the site plan application will follow the conclusion of the Planning Board's MDP review. The site plan application does not cross review thresholds that would send it to the Planning Board for review, and is being review by Planning staff. Site Plan details are therefore included as attachments to this memo for illustrative purposes only. Per the consent agreement, the MDP and Site Plan approvals would need to be in place prior to November 8, 2021 in order to satisfy the conditions of the agreement, though a provision in the consent agreement allows for an extension of the timeline provided that delay beyond that date is due to the City's review schedule. The proposed text amendment would need to be adopted by the City Council prior to a restaurant establishment operating on the site for the upcoming season.

VI. EXISTING CONDITIONS AND SURROUNDING AREA

The Portland Foreside development site is 23.2 acres, including 13.2 acres of submerged land, and is the site of the former Portland Company, with several former industrial buildings and warehouses remaining on the site. This property is located on Portland's eastern waterfront, with nearly 1,000 linear feet of direct water access, and is currently in the midst of active construction. Phase I of the Portland Foreside development, described previously in this memo, was approved in January

2020 (PL-000924-2019). Once completed, the Phase I development will include 14 residential units, 110,700 square feet of office space, 49,500 square feet of retail, service and/or restaurant use, 17,900 square feet of event space, and structures parking for 722 vehicles. Portland Foreside also features a commercial marina, which was approved by the Planning Authority (PL-000330-2018) and developed in 2019 with slip space for 141 vessels. Landside components of the marina were not proposed as part of the initial marina site plan application.

Figure 4: Appearance of Portland Foreside in 2021 with approximate property boundary shown in yellow.

The majority of the site is located within the B-6 Eastern Waterfront Mixed Zone, with a portion falling within the Eastern Waterfront Port Zone (EWPZ). The latter zone has a depth of 75 feet, and encompasses approximately 1,000 feet of waterfront frontage. In addition to the two base zones, there are multiple other overlays on the property – a portion of the site is within a flood hazard zone and in the Shoreland Zone; and the B-6 upland portion of the site is included in the Building Height Overlay and Building Envelopes map. A portion of the property is a local historic district. The immediately adjacent zones are the R-6 residential zone to the east and north, ROS (Recreation and Open Space) to the east, B-6 to the west, and EWPZ to the west and south.

Portland Foreside is adjacent to the India Street Neighborhood, with the mixed-use retail and office development at 100 Fore Street being immediately adjacent, and the WEX headquarters located just to the west of the property. Along the water's edge, nearby uses include the Ocean Gateway cruise ship terminal, the Amethyst Lot Park, the Maine Narrow Gauge Railroad and Eastern Promenade Trail (both of which tranverse the Portland Foreside site), and Sail Maine. The Munjoy Hill neighborhood is located immediately to the north, featuring predominantly mid- to high-density residential uses in an established neighborhood context. Direct access between Portland Foreside and Munjoy Hill is somewhat limited due to the grade differential that exists between the development site and Fore Street, though the MDP proposal for the site improves connectivity to the surrounding neighborhoods considerably. Access to the site is through the

new Fore Street connector, a garage entrance off of Fore Street directly across Waterville Street, and a newly proposed set of publicly accessible stairs at the northeast corner of the Sun Life Building, currently under construction.

In regards to service by public transit, the nearest available routes are the #1 METRO Route, with stops along Fore Street/Eastern Promenade, and Atlantic Street. The #8 METRO Route meanwhile can be accessed off of India Street.

VII. APPROVED 2016 MASTER DEVELOPMENT PLAN PROGRAM

The originally approved MDP application proposed a mixed-use center that included a marina, retail, office, restaurant, and residential space. At 10+/- acres it would constitute a new mixed-use neighborhood for the city including open spaces in the forms of plazas, a public access easement, a waterfront walkway as well as integration of the existing, public trail. Buildings included a mixture of repurposed, existing, historic structures and new construction.

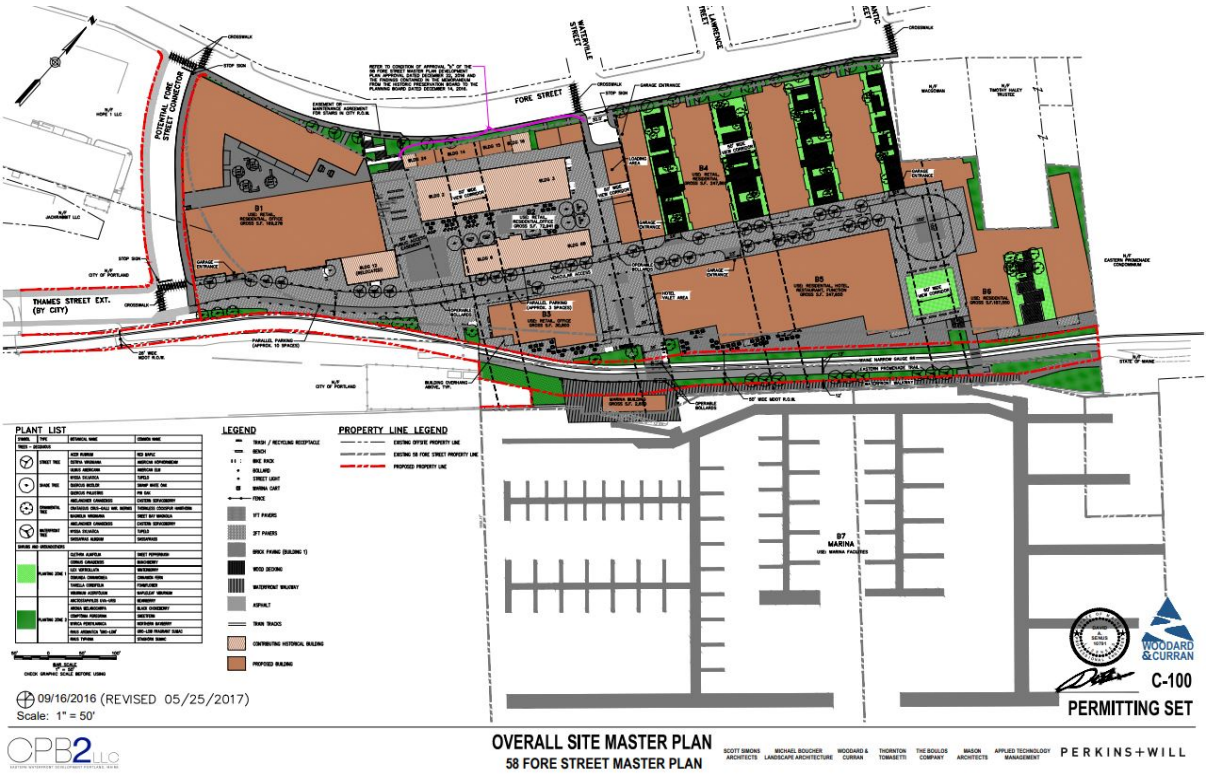


Figure 5: Approved MDP site plan (Application # 2016-224)

The approved development program included:

- 958,679 sf of mixed residential and commercial uses
- 435,200 sf parking to hold 736 spaces
- 638 residential units
- A marina for 220 slip spaces for seasonal and transient vessels, and a 2,600 sf building for marina facilities.

- Waterfront access that includes the Eastern Promenade Trail as well as a pedestrian walkway that runs for the length of the property. The property connects to the city-owned Amethyst lot, which was recently developed as a new public open space.

VIII. PROPOSED DEVELOPMENT

The proposed MDP and site plan amendments are intended to formalize an interim site condition for the Portland Foreside Marina, in the period of time preceding the development of a permanent marina building. In addition, the applicant is seeking a text amendment to allow restaurants as accessory to a marina to legalize the existing non-conforming Marina Bar, not currently permitted in the EWPZ.

The Planning Board approved the 58 Fore Street MDP multiple provisions related to pedestrian circulation and public waterfront accessibility. These include a requirement for a public access easement area from Fore Street to the water's edge, as well as dedicated public circulation across the site, east to west, in the preservation and realignment of the Eastern Promenade Trail, and an additional walkway along the water's edge:

Master Development Plan Amendments

A minor amendment to a master development plan is defined as a change which is generally consistent with the approved master development plan layout of buildings, circulation infrastructure, and open spaces, and:

- Is generally consistent with the approved plan.
- Does not impact the layout of buildings and open space.
- Does not propose new uses.
- Does not increase building ground coverage, floor area ratio, or residential density.
- Do not substantially change access, circulation, or infrastructure on or adjacent to the site.
- Does not involve new waiver requests.
- Does not affect any condition or requirement of the Planning Board.

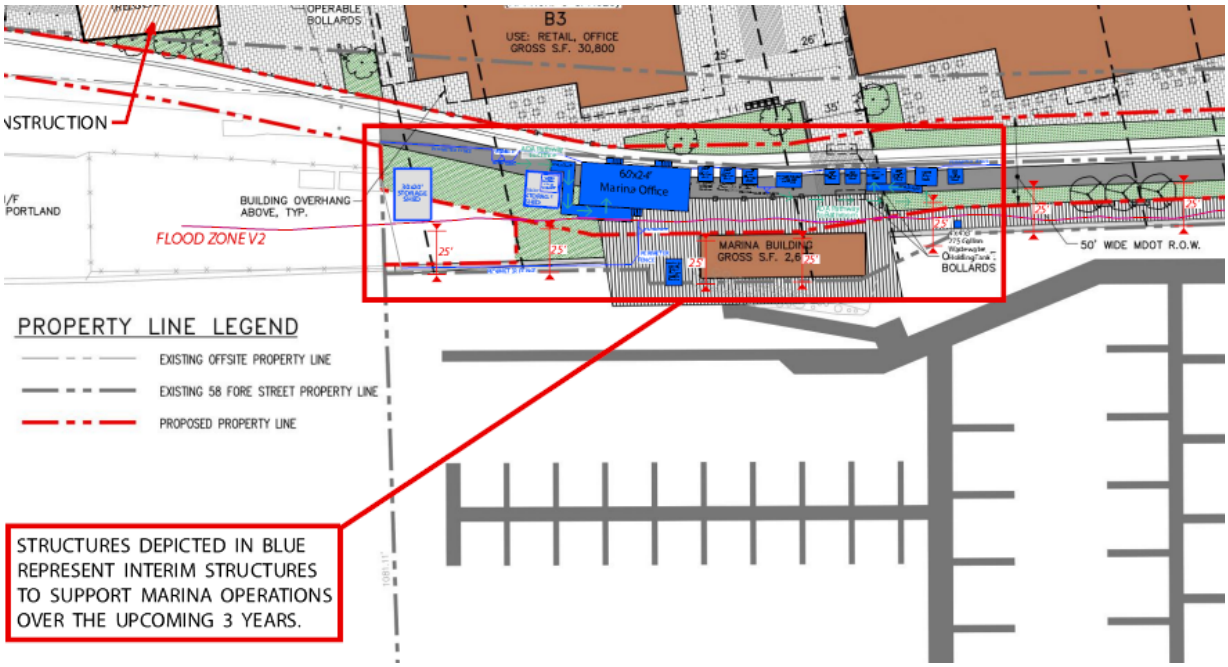


Figure 6: MDP site plan amendment. Modifications shown within callouts only. Existing structures and other modifications (not approved as part of a site plan application) are shown as solid blue, while proposed structures are depicted by outlined blue footprints

Staff, in discussions with the applicant, noted that the existing Marina Bar operating on the site and the proposal to continue such use shown on the site plan inhibits public access to the water's edge and significantly changes pedestrian circulation through the site, a key feature of the MDP approval, as well as appearing to formalize what was permitted as a temporary use. Aside from the restaurant/bar space, an 8,000-gallon wastewater storage tank was installed without approval and is located within the proposed waterfront walkway as well as additional supporting structures. In addition, perimeter fencing is shown erected around the easterly marina dock entrance as an added security feature. The applicant has stated that the seawall is structurally unsound, resulting in further restricting of access to the water's edge until changes to the seawall can be made.

Other site modifications, which are currently in place and in violation of City Code, include 14 temporary sheds for use as bathrooms, guest service kiosks, laundry, utility and tool shed, and storage sheds and two separate waste water holding tanks, which constitute a significantly different structure layout than originally proposed. The application also shows new perimeter fencing, as well as a shade and seating structure. The site will be serviced by a temporary 4-inch domestic water line and 8-inch fire protection line. The application states that this interim condition will exist for a period of approximately three years.

The application references a variety of storage, utility, restroom and guest service sheds and other improvements that are intended as accessory supportive facilities to the approved marina

operation. The application does not yet show food service as a permanent use on the site, as a restaurant is not currently permitted under the EWPZ use standards (though it is permitted in the MDP as a whole and is not considered a new use for the development program overall). The below review still takes into account the site needs and impacts of this new layout. If a zoning amendment were to be approved to allow restaurants as accessory to marinas in the EWPZ, this would be reflected on amended plans, and the subsequent site plan review would include a more detailed review of restaurant-specific use impacts.

Given that these proposed changes will significantly alter on-site pedestrian circulation and that these numerous small changes to the marina layout cumulatively result in a substantive change to the pattern of development for the marina than the approved, the application is considered a major MDP amendment and is subject to Planning Board review.

IX. RIGHT, TITLE, & INTEREST

The applicant has supplied a short form quitclaim deed with covenant as demonstration of Right, Title & Interest. The property contains multiple easements, including an easement held by Portland Water District, Central Maine Power and PF Marina LLC.

X. ZONING ANALYSIS

The marina site, which is the subject of this review, is within the EWPZ. The purpose of the EWPZ is to nurture a wide range of deepwater-dependent industry and commerce, particularly the marine passenger industry and upland support for the marine passenger industry. Piers, uplands, and circulation patterns consistent with the transportation needs of marine facilities are included in the purpose of the zone, as well as the encouragement of non-marine uses that support deepwater activities, provided that they do not conflict or compete for limited space with existing or anticipated deepwater-dependent needs. Its primary emphasis, however, is on the berthing and support of large vessels. A second priority is for shallow water-dependent uses. Consistent with the hierarchy of the City's other waterfront zones, certain non-marine dependent uses are permitted provided they do not interfere with and are not incompatible with higher priority uses.

Allowed uses in the EWPZ are prefaced with language that no use in the zone may have an adverse impact on marine uses. Permitted uses (Section 10.2.3) allow for a host of marine uses, including marine passenger facilities, transient and long-term commercial berthing; boat and marine equipment storage; harbor and marine supplies and services, chandleries, and ship supply such as fueling and bunkering of vessels; public, non-profit, or commercial marine transportation and excursion services, including captained charter services, sport fishing and, water taxis; marinas located east of the eastern boundary of the parcel of land owned by the City of Portland; and

marine offices, including but not limited to offices of owners of marinas, wharves or their agents, and naval architects, and seafood brokers.

A number of uses are permitted as conditional uses (Section 10.2.4) provided that such uses do not impede or preclude existing or potential water-dependent development within the zone, will allow for adequate right-of-way access to the water, and are compatible with marine uses, including marine related uses; fish byproducts processing; commercial uses such as offices on upper floors; and passenger support services; and maritime museums. Prohibited uses include residential, amusement/theme parks, bulk freight facilities, and on-site gambling casinos not accessory to and located aboard either a ferry or inter-port cruise ship. In addition, Section 10.2.7 Dimensional requirements further restricts restaurants, drinking, or other non-water dependent uses or off-street parking to be located within 25 feet from the edge of any pier, wharf, or working edge of the hardened shoreline (Section 10.2.7.C.4).

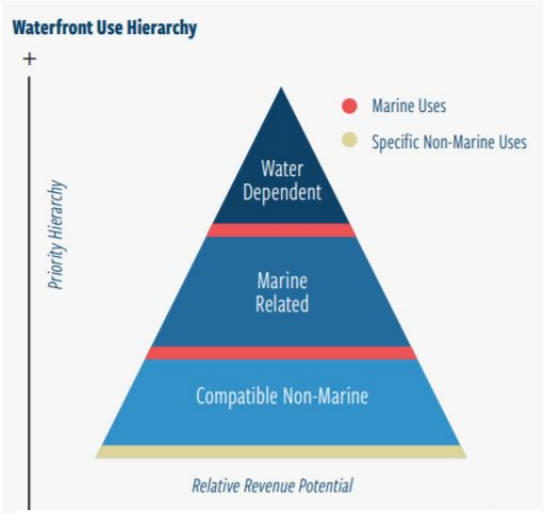


Figure 7: Hierarchy of waterfront uses concept adopted as City policy in *Portland's Plan 2030.*

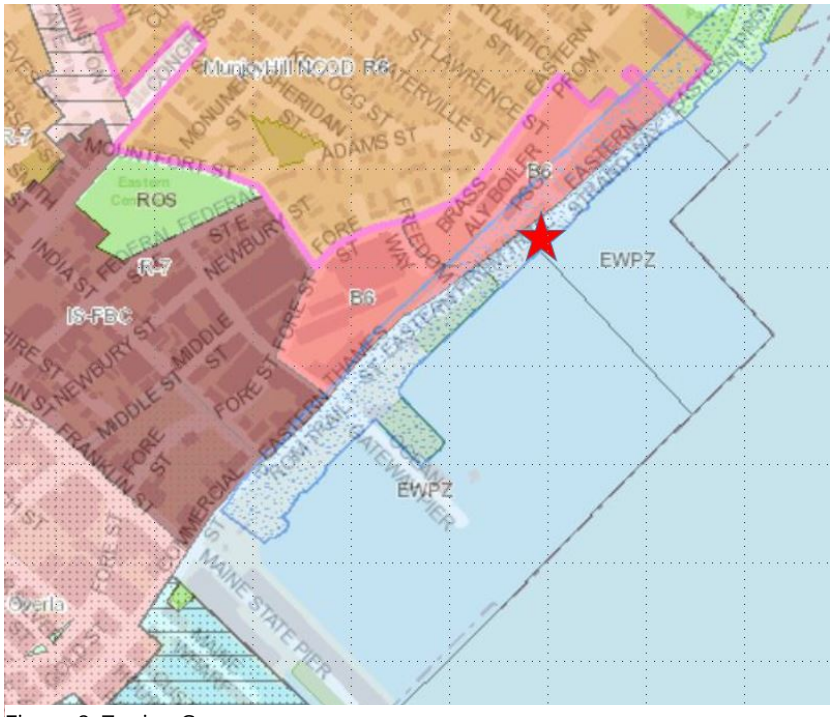


Figure 8: Zoning Context

With regards to dimensional standards (Section 10.2.7), the EWPZ is fairly permissive, with no minimum lot size, no property boundary setbacks, allowances for up to 100 percent impervious surface, and height allowances of up to 45 feet above average grade. The one applicable dimensional standard is a 25-foot pier edge setback for all uses aside from marine offices. Given that the shed structures are in place and function as an extension of and supportive of the temporary marina office structure, Planning staff have reviewed these structures as a marine office use, which is subject to a 5-foot pier edge setback. All structures except one utility shed appear outside of the required 5-foot setback, and staff are asking that that additional shed be relocated outside of the setback area. If

the use of the structures for marina support were to change, their location on the lot may need to change to meet greater setback requirements.

The project is also within a flood hazard zone and within the City's shoreland zone. These reviews typically occur as part of a building permit application, which in this instance, is happening concurrently with the site plan and MDP amendment. Final approval, permitting and ongoing occupancy of structures on site will need to demonstrate consistency with the City's Shoreland and Floodplain regulations.

XI. MASTER DEVELOPMENT PLAN REVIEW STANDARDS (Section 14.7)

The proposed development has been reviewed by staff (Attachment 1) for conformance with the relevant review standards of the City of Portland's Site Plan Ordinance, Section 14.7 related to Master Development Plan applications. Staff comments are provided below.

As a note, in 2016, the Planning Board voted unanimously to find that the 58 Fore Street MDP met all of the applicable MDP review standards (listed below), subject to ten conditions of approval. As this is an amendment of that prior approval, staff's discussion will focus exclusively on those elements that are not part of that prior approval, which includes introduction of new activities (currently as occurring as ongoing temporary events), different building layout, fencing and utility infrastructure within the 25-foot pier edge setback and along the water's edge, which significantly impacts site circulation and public access as shown in the 2016 MDP approval.

1. In General (Section 14.7.1)

A. Integration with the surrounding context. This standards states that: a *master development plan shall be designed to integrate with the surrounding context with respect to land use, architecture, open space and pedestrian networks, vehicular access and circulation, off-site public facilities and all other infrastructure.* Portland Foreside constitutes a major mixed-use redevelopment of a large former industrial site located in a prominent area of Portland's eastern waterfront. The development is proximate to other large-scale mixed-use developments with a similar program of uses, notably the development at 100 Fore Street and is designed to seamlessly extend public infrastructure and the rich urban environments that currently exist in the India Street neighborhood. As noted above, the City's waterfront zones prioritize water dependent uses, and review of water dependent uses and other uses permitted in the EWPZ include consideration for adequate operational space for those needs. The initial proposal to rezone of this area to EWPZ and the remainder of the site to B-6 included deliberations on what was a minimum adequate depth of the EWPZ to serve it's intended purpose before the zone boundary was drawn, though it is still a relatively constricted amount of land area.

With regards to site circulation and pedestrian connectivity, the proposed interim conditions constitute a substantive change. The cumulative vehicular traffic patterns in and out of the full MDP site are expected to remain unchanged, while the prominent Eastern Promenade trail will continue to operate across the site in its current alignment rather

than the altered alignment proposed in the original MDP (which would also, if it remained in this alignment, have implications for other adjacent future buildings). The proposed pathway along the water's edge, which is a critical element of the MDP approval is altered in this amendment, though unlike the trail, this secondary pathway is privately owned; it was reviewed as one of several routes of circulation for the public through the site. The area of the marina, including the sheds, supporting structures, and the area proposed to be occupied by a restaurant, would no longer be generally accessible to the public as shown on the plan. Both installed utility infrastructure and proposed security features would reduce access further at the easterly extent of this pathway. It is worth noting that at this point in time, the pathway has not yet been developed, and so no physical changes to access will be apparent with respect to existing conditions.

Figure 8: Photos of the Fore Points Marina Bar. Photo sources: Marinalife.com, forepointsmarina.com

B. Consistency with City Plans – Portland's Plan 2030 adopts a 'hierarchy of uses' policy for development along Portland's waterfront that prioritizes water-dependent uses, followed by marine supportive uses, followed by compatible non-marine uses. This policy framework precedes Portland's Plan 2030 and was reaffirmed in it. The zoning text amendment application will include an analysis of this policy. Portland's Plan also strongly encourages providing public access to the waterfront. As stated previously, a key element of the approved MDP was the provision of public waterside access and adequate circulation throughout the site. The level of access originally detailed in the MDP would change as a result of this proposed modification. It is important to note that public access is different from a private commercial establishment that is accessible to members of the public who may patronize the restaurant.

The proposed layout of the marina also has implications for public access via its orientation to the Eastern Promenade Trail in terms of delivery and loading patterns, and the potential for customers using the trail for queuing and related spillover from the site onto this critical piece of public open space and transportation infrastructure. Marina/temporary food service activities over the past year have included not optimal or safe delivery patterns to the site, placement of a-frame signs that caused conflict with the trail, queueing of people onto the trail, and placement of structures within areas designated for the future pathway. In sum, the proposed site layout has implications

for the safe and cohesive functioning of the full MDP site which will need to be addressed as part of this review. The marina changes are nested within a larger site and approval of changes to circulation, design, and layout need to be considered within the 58 Fore site as a whole.

2. Natural Features and Open Space (Section 14.7.2)
   A. Preservation of natural features – The proposed interim conditions plan features improvements within a fairly narrow strip of land immediately along the water's edge that contained no existing natural features as described in this standard. Furthermore, the condition of Casco Bay immediately adjacent is not expected to be negatively impacted by the proposed changes.

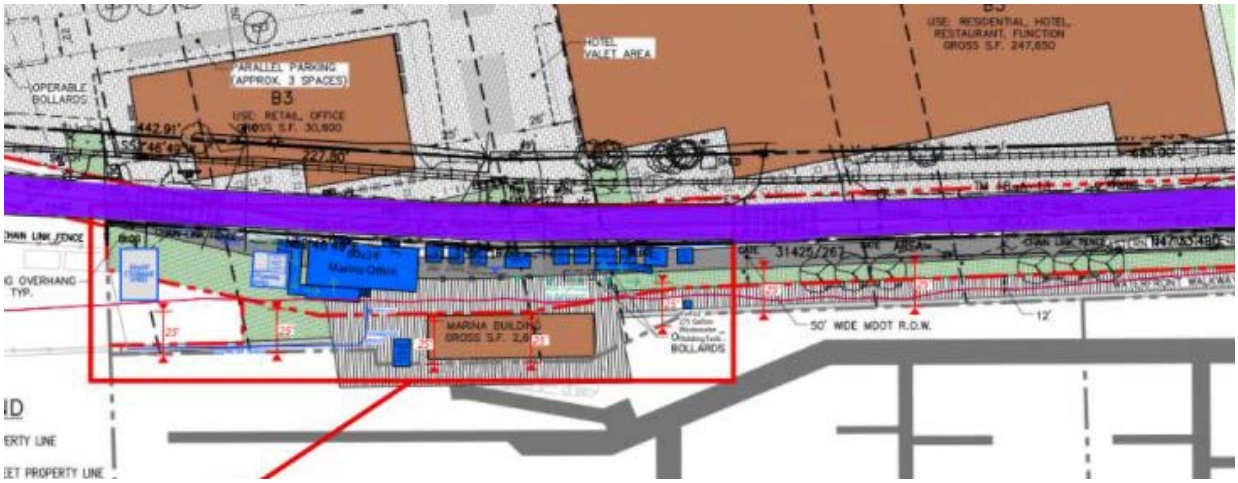


Figure 9: MDP proposed site layout (Marina). Existing Eastern Promenade Trail shown in purple; overlaid on original 2016 MDP approval.

B. Provisions for Open Space – A defining characteristic of the 58 Fore Street MDP had been the provision of an area for public benefit measuring approximately 1,000 linear feet in length along the water's edge that would feature a waterfront pedestrian walkway. Also an important piece of the open space provisions of this site is the execution of a public access easement that would grant this amenity in perpetuity for use by visitors to the site from Fore Street to the water; the MDP public access easement is not impacted by this amendment. In discussions with City staff, the applicant has noted that the interim conditions plan is temporary in nature, and is proposed to be superseded by the previously approved MDP in approximately 3-years' time. However, the interim condition does include several features, expected to permanently remain, that would limit public access beyond what is shown in the approved MDP such as the security fencing and certain utility infrastructure.

3. Historic Preservation (Section 14.7.3) – While a portion of the Portland Foreside property does fall within a designated historic district, the portion currently under review is located more than 100 feet from that district, and is therefore not subject to either direct or advisory review by the Historic Preservation Board.

4. Infrastructure (Section 14.7.4)

Figure 11: MDP Pedestrian Circulation plan. Approved as part of MDP in 2016. Waterfront walkway shown in solid orange, Eastern Promenade Trail shown in green.

A. Adequacy of Infrastructure Capacity – Utility plans were reviewed as part of the Level II site plan amendment, and found to be suitable in light of the proposed changes. Utility details

will again be revisited if the site plan is further amended to accommodate a future restaurant, pending adoption of the text amendment from the City Council.

B. Continuation of Street Grid – The street system remains entirely unchanged from what was approved by the Planning Board in the 2016 MDP approval, the 2019 approval of the Fore Points Marina expansion, and the 2020 Phase I approval. The MDP overall improves connections to Munjoy Hill, to Thames and Fore Street, and maintains its connection to the Eastern Prom Trail.

5. Design (Section 14.7.5)

Creation of a Cohesive Identity requires that an MDP be *designed to create a cohesive identity through building scale, massing, and articulation; use of quality exterior materials and architectural detailing at pedestrian scale; consistency of design and materials for streetscape and pedestrian amenities; framing of outdoor open space and linkages; a clear conveyance of the function and significance of various buildings, entrances, and features; and to generally comply with design and development standards of the zone in which it is located.* The modifications to 58 Fore Street's MDP do not alter the overall design beyond the noted marina layout and circulation changes. All uses shown on the plan, including the proposal for an accessory restaurant use, were contemplated elsewhere across the Portland Foreside property. This standard does call for the use of high-quality building materials and architectural design, as well as the use of consistent design principles. The structures and site layout need to be evaluated for how well they do or do not meet the high-quality building design and consistency of design standards and the application review should include consideration of what constitutes an interim condition that still addresses consistency with MDP standards. If approved as an interim condition, the approval of the application would include conditions to this effect.

The standard also calls for the framing of prominent open spaces and linkages. Based upon the interim MDP provided, it is unclear if or how the interim condition will impact the viability of the waterfront walkway going forward. Given that areas on either end are to have restricted access, the purpose of this space may change from functioning as a trail to a more static and privatized open space. In addition to the discussed restriction of public waterfront access, the inclusion of a privacy fence and multiple buildings along the waterfront obstructs both physical and visual access to the waterfront well beyond the approved MDP.

XII. PROPOSED ZONING TEXT AMENDMENT

A. Overview of Text Amendment

As mentioned earlier in this memo, in 2020 the applicant began operating a food and beverage service use at the Portland Foreside Marina property on a temporary basis during the Covid-19 pandemic. The applicant would now like to make this a permitted use and therefore Portland Foreside Development Company has submitted a zoning text amendment application requesting that Section 10.2.3.B.11(a) and Section 10.2.7.C.4 of the City's Land Use Code be amended to allow restaurants as an accessory use to a marina.

This amendment would limit the use to less than 1,000 square feet of interior space, and constrain outdoor activities to within 100 feet of the principal marina building. Further, this request is seeking to permit such accessory use within the required 25-foot pier edge setback applicable to most uses in the EWPZ.

The proposed text amendments are below.

Addition to from Article 10, Waterfront Zones, Eastern Waterfront Port Zone, Permitted Uses:

*"**Section 10.2.3.B.11(a):** Marinas located east of the eastern boundary of the parcel of land owned by the City of Portland pursuant to a deed from the State of Maine dated February 1982 and recorded in the Cumberland County Registry of Deeds at Book 4916, Page 26.*

a. *Restaurants and food service establishments shall be permitted as accessory uses if such uses are within 100 feet of the principal marina building and do not exceed 1,000 square feet of total interior floor area of the building; and further provided that such accessory uses are open to the general public."*

And

Addition to from Article 10, Waterfront Zones, Eastern Waterfront Port Zone, Dimensional Requirements:

*"**Section 10.2.7.C.4** – Setback from pier line: Notwithstanding the above requirements, a minimum setback of 25 feet from the edge of any pier, wharf or working edge of the hardened shoreline shall be required for any structure, provided that marine offices, as defined in Section 10.2.3 (B)(12), may be located up to five feet from the edge of any pier, wharf, or working edge of the hardened shoreline. The setback area may be utilized for water-dependent uses, restaurants and food service establishments accessory to marinas, and public uses and activities, subject to the provisions of Subsections 10.2.2 and 10.2.4, and shall not be utilized for ~~restaurant, drinking, or~~ other non-water-dependent uses or for off-street parking. The edge of any pier, wharf, or bulkhead shall include any attached apron(s)."*

B. Staff Policy Analysis

In reviewing the proposed amendment, Planning Staff focused primarily on ensuring that the restaurant was consistent with policy priorities for the City's waterfront and the eastern waterfront in particular. As mentioned above, this includes a policy framework that prioritizes water dependent uses, as well as ensuring that other uses are compatible with those uses. In this case, that policy direction would limit restaurant uses in scope, and discourage such uses as principal uses. Based upon the current boundaries of the EWPZ, this marina development is likely to be the only marina in the EWPZ, and so the zoning should be considered for how it will function in this relatively constrained physical context. Staff provided input to the applicant early in this

process on this policy framework, and the resulting proposal addressed that feedback by only allowing restaurants as accessory to a marina, a capped size of 1,000 square feet, having it be public in nature rather than limited to marina customers, and limited in terms of its footprint as to not have an adverse impact on marine uses and waterfront access. Staff's initial assessment of the draft amendment is that it succeeds in proposing a change to permitted uses that is generally consistent with the zone, with waterfront priorities, with precedents in other waterfront zones in Portland's Land Use Code, and with the common functioning and amenities often associated with marinas.

In regard to allowing accessory restaurants within the 25-foot pier edge setback, if the use allowed

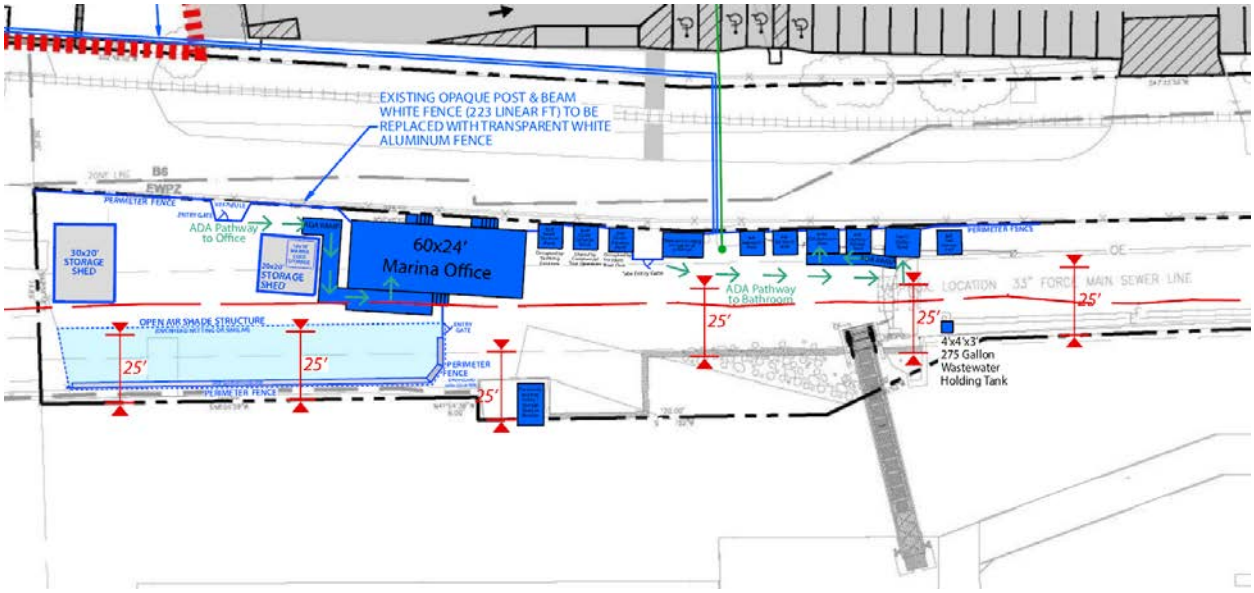


Figure 10: Site plan for Level II Site Plan Amendment application, showing existing and proposed structures in relation to 25-foot pier edge setback. Restaurant use would occur within that area as requested in text amendment application.

for adequate right-of-way access to the water, and did not impede or preclude existing or potential water-dependent development within the site, and was in accordance with Shoreland Zoning and Flood Plain standards, it would also be generally consistent with the purpose of these dimensional requirements. Staff would recommend for consideration by the Board that the amendment require restaurant use occur outside of that 25-foot setback area, unless housed within the principal marina building.. Locating outdoor dining outside of that setback, so that that the setback area may instead be utilized for water dependent uses and/or public access, would also strengthen the proposal.

Potential impacts of such a use on this site would still require rigorous review under site plan standards, it would have to be reviewed for consistency with the MDP approval, and the ultimate form and functioning of it would still need to be determined through that process if the amendment for this accessory use were adopted.

Currently, restaurants and food service establishments are permitted in all three waterfronts zones (WPDZ, WCZ, EWPZ) in a variety of forms described below:

Waterfront Port Development Zone (WPDZ), the purpose of the WPDZ is to ensure the continued viability of the Port of Portland. Permitted uses are primarily limited to those uses which are dependent upon deep-water and which contribute to port activity. Non-marine activity may be allowed to the extent that it will not have any adverse impact on marine uses. Much like the EWPZ, restaurants and drinking establishments are expressly prohibited, however, as specified in Table 10-A, footnote 2, food service establishments, including food trucks and other similar retail and service support uses are permitted as accessory uses if all such uses do not exceed 2,000 SF in total floor area of the building and each individual use does not exceed 1,000 SF in total floor area of the building; and further provided that such accessory uses provide goods or services that are supportive of the principal use and its clientele.

Waterfront Central Zone (WCZ), the purpose of the WCZ is to protect and nurture water-dependent and marine-related support uses so that they may grow and prosper in the present and into the future in an environment and area dedicated to this purpose. Non-marine uses are encouraged provided they do not interfere with and are not incompatible with the first and second priority uses, specifically interior accessory uses including *food service establishments shall be permitted as accessory uses if they are part of and located within the lot lines of a use set forth in Subsections 10.3.3(A)(1), (7), (11), or (12); such uses do not exceed 2,000 SF in total floor area of the building, or 25 percent of the total floor area of the building, whichever is less, and each individual accessory use does not exceed 1,000 square feet in total floor area of the building; and further provided that such accessory uses provide goods or services that are supportive of the principal use and its clientele.* In addition, marine-compatible uses, including restaurants, are encouraged to locate and grow along Commercial Street within the Commercial Street Overlay Zone, while higher priority marine uses are protected on the waterfront.

Eastern Waterfront Port Zone (EWPZ), is intended to nurture a wide range of deepwater-dependent industry and commerce as well as the encouragement of non-marine uses that support deepwater activities. Currently, the EWPZ allows restaurants/food services as a conditional use in association with marine passenger use facilities, including, Intermodal marine passenger facilities; cruise ship home port and port-of-call berthing and support, and international and domestic ferries. The use is further restricted to equal or less than 35 percent of the gross floor area of the principal associated marine passenger use and no more than 35,000 gross square feet (cumulatively) in the EWPZ. Currently, restaurants and drinking uses are not permitted within the minimum 25 foot setback from the edge of any pier, wharf, or working edge of the hardened shoreline.

While all three waterfront zones allow restaurants and food service establishments in a variety of manners, the common theme is that all three zones restrict these uses to a minimal size, and are intended to be accessory and subsidiary to water dependent uses and public access.

XIII. COMPREHENSIVE PLAN CONSISTENCY

Portland's Plan 2030

Portland's Plan maintains a long-standing City policy to prioritize and promote our city's unique mixture of water-dependent, marine-related and compatible non-marine uses along our waterfronts. Looking at regional and national examples, restaurants are often co-located within or alongside marinas, as a restaurant does not inhibit a marina's operation and serves to attract other users to the site, providing revenue to a traditional marine industry. The key to finding the introduction of restaurants in the EWPZ consistent with the comprehensive plan is balancing that use with the waterfront priorities of the zone. A restaurant use with no limits on size or location may be generally consistent with some economic development goals for the city as a whole, but more importantly for the purposes of this review, specifically inconsistent with the priorities for the waterfront. As proposed, the amendment addresses that priority, though staff has noted that the proposal would be strengthened by prohibiting outdoor dining within the 25-foot pier edge setback, so as to maintain that space for public access or marine-related uses. The addition of a restaurant, if tailored in its application, reinforces the waterfront as a key component of Portland's economic health, balancing traditional and emerging industries with tourism and recreation. This is further supported by the fact that the restaurant would only be permitted as an accessory use to a marina, and would be subject to restrictive dimensional standards.

Figure 11: Vision Statement from Portland's Plan 2030

XIV. NEIGHBORHOOD MEETING & PUBLIC COMMENT

As of the writing of this memorandum, the neighborhood meeting has not yet been held for the amendment to the MDP or the zoning text amendment. This meeting will need to occur prior to a public hearing. Fifty-three (53) written public comments have been received (Attachment 4), all but one of which express support for the proposed text amendment to allow restaurants as an accessory use to a marina. These comments cite the amendment's potential to support the local economy and provide a much-desired amenity to Portland's waterfront. One public comment was written in opposition to the proposed text amendment and MDP amendments, on the basis that this applicant has violated City regulations, and has restricted public waterfront access, a key element of the original MDP approval.

XV. NEXT STEPS

Following the Planning Board workshop, City staff will coordinate with the applicant regarding additional updates to the Level II site plan amendment per Planning Board feedback associated with the MDP and text amendment applications.

With regards to the two applications undergoing Planning Board review, the applicant shall:

- Address any comments from City staff or the Planning Board in a written response to City staff, and update the application materials and plans accordingly.
- Hold a neighborhood meeting as required under Article 14.5.5.
- Schedule and hold a second workshop or Planning Board public hearing depending upon the status of these applications.

XVI. ATTACHMENTS

Report Attachments

1. MDP and Site Plan Review Comments
2. Consent Agreement
3. Public Comment

Applicant's Submittal

MDP Amendment

A. Application Form
B. Right, Title & Interest
C. MDP Amendment Application Narrative

Article 10 Text Amendment

D. Text Amendment Application Narrative

Level II Site Plan Amendment

E. Level II Site Plan Application Narrative
F. Site Plan Compliance Narrative

Plans

MDP Amendment

P1. Final Approved MDP Site Plan (2016)
P2. MDP Pedestrian Circulation Plan (2016)
P3. MDP Interim Conditions Plan
P3a. MDP Interim Conditions Plan Existing Trail
P4. Temporary Structure Elevations

Level II Site Plan Amendment

P5. Approved Site Plan (2020)
P6. Site Plan Amendment
P7. Fence Detail

Portland Maine Yes. Google's good here.

Matthew Grooms <mgrooms@portlandmaine.gov>

Follow Up

Matthew Grooms <mgrooms@portlandmaine.gov> Wed, Sep 1, 2021 at 10:48 AM
To: Mary McCrann <mcm@portlandforeside.com>
Cc: David Senus <das@portlandforeside.com>

Hi Mary,

Yes, Kevin and I have connected a few times on this. We are trying to figure out a path forward on the shipping and receiving building, and have reached out to Corporation Counsel regarding a letter clarifying the 11/8 date listed in the consent agreement. Our read of the agreement is that the site plan and MDP amendment will need to be approved by that date, but that if you are actively working with the City and have been delayed due to our Planning Board schedule, that we can proceed past that date for those two applications. Our goal is to have everything approved prior to then, but we'd like that confirmation just in case. And for the text amendment, that shouldn't be an issue that that would not have been adopted by the Council at that point, so long as the existing food service use does not continue past that date. I believe that is the plan anyways, since this is a seasonal use right?

I was planning to include my revised comments once I had that feedback in hand, but I'll just share them now and will update in the future if needed.

MDP Amendment Comments

- Placing a sunset on the use of the temporary structures to avoid having this be a permanent condition. **Staff are recommending that a condition of approval be included in the MDP and site plan amendment, that would permit the interim condition for a certain period of time. Staff welcome input from the applicant on how such a condition may be framed.**
- Developing a better understanding of the traffic demand associated with the restaurant use and plans to accommodate any vehicle traffic under current site conditions.
- Plans to address any identified structural deficiencies in the seawall and allow for public access. **The applicant should clarify during which phase of the MDP, the proposed waterside pedestrian access/pathway will be provided.**
- Plans should clarify the extent of proposed fencing. **The interim MDP should highlight semi-permanent or permanent features that will be in place during the duration of this interim condition. For example, the wastewater storage tank is shown in direct conflict with the waterside pedestrian area. Assuming this tank remains, how will the pathway be rerouted? Similarly, several areas of the pedestrian area are currently fenced off. This should be reflected on the plans.**
- **Based upon our conversation last week, the temporary shipping/receiving building should be shown on both the MDP and site plan amendment. Assuming these applications are approved, this building would no longer need to be removed per the Consent Agreement. Staff will confirm with Corporation Counsel that this is acceptable in light of the language in the Consent Agreement.**

Level II Site Plan Amendment

- The applicant shall assess whether the recent LOMA finding necessitates any additional site changes to comply with the City's Flood Plain standards. Please see email from the City's Zoning Administrator, attached. **Following last week's call, staff will wait for confirmation of the LOMA status.**
- Additional detail shall be provided on the shade structure, supports and dropguard with counter.
- The Marina Office and Bathrooms are shown with an ADA accessible route. Additional detail shall be provided to demonstrate ADA accommodation across the rest of the site that is publicly accessible.
- Location of proposed fencing is unclear on the site plan. Also, two different symbols appear to be used to demarcate 'perimeter fence'. Will the same fence type be used across the site? Plans shall be updated to more clearly define fence locations.
- As stated previously, staff would request that additional fencing is limited to the extent possible in and around dock locations and that alternative security measures which maintain greater visual transparency be evaluated. A detailed overview of security measures shall be provided.
- What are the anticipated hours of operation for the food/beverage service use, and how will those spaces be secured after working hours? **Staff understand that the food and beverage operation will necessitate an amendment to this site plan at a later date. Noting this, no response to this comment is required.**

Thanks,

Matt
[Quoted text hidden]
--
Matthew Grooms, AICP
Senior Planner
Planning Division
City Hall, 389 Congress Street, 4th Floor
Portland, Maine 04101
(207) 874-8725 (T)
(207) 756-8258 (F)
mgrooms@portlandmaine.gov

CONSENT AGREEMENT

The parties, the City of Portland (the "City") and PF Marina LLC ("PF Marina") and PF Land LLC ("PF Land" and, together with PF Marina, "Owner") hereby enter into this Consent Agreement as follows:

THE MARINA PROPERTY

WHEREAS, PF Marina is the owner and manager of certain commercial property located at 58 Fore Street/1 Marina Way in Portland, Maine, which is further described on the City of Portland Tax Maps as CBL 018 A002001 (the "Marina Property");

WHEREAS, the Marina Property is in the Eastern Waterfront Port Zone ("EWPZ");

WHEREAS, PF Marina received a Level II Site Plan approval on January 16, 2019 to construct and operate Fore Points Marina at the Marina Property;

WHEREAS, Fore Points Marina began operations in May 2019;

WHEREAS, the Master Development Plan approval for the Marina Property contemplates a permanent marine office building located five feet from the water's edge;

WHEREAS, a number of factors have delayed the construction of a permanent marina office building on the Marina Property;

THE UPLAND PROPERTY

WHEREAS, PF Land is the owner and manager of certain commercial property also located at 58 Fore Street in Portland, Maine, which is further described on the City of Portland Tax Maps as CBL 018 A001001 (the "Upland Property");

WHEREAS, PF Marina and PF Land share common ownership;

THE FENCE

WHEREAS, Owner constructed a wooden fence along a portion of the perimeter of the Property (the "Fence") that was to either be removed by November 17, 2020, or have its replacement be reviewed and approved by the Planning Authority, as a condition of Owner's Level II Site Plan approval for the Marina Property;

WHEREAS, Owner has not removed the Fence, and has not received approval for the Fence or its replacement, in violation of its Level II Site Plan approval (the "Fence Violation");

WHEREAS, the City has told Owner that it needs to remove the Fence or have its replacement be reviewed and approved by the Planning Authority, but, the City has not yet issued a notice of violation for the Fence Violation;

THE MARINA STRUCTURES

WHEREAS, in the spring of 2020, Owner applied for building permit BLDC2020-01384 for various temporary buildings at the Property, including an office trailer, two regular bathroom sheds, one ADA bathroom shed, one laundry shed, one utility shed, and three sheds for guest services, all connected with the approved marina use at the Marina Property (the "Marina Structures");

WHEREAS, building permit BLDC2020-01384 was granted on the express condition that the Marina Structures be removed from the Property no later than November 1, 2020;

WHEREAS, in light of the fact that the Marina Structures were intended to be temporary, the City chose not to enforce the requirement that the Marina Structures be reviewed and

approved as part of an amendment to the Master Development Plan for the Marina Property or to the Level II Site Plan for the Marina Property before granting BLDC2020-01384;

THE ADDITIONAL STRUCTURES

WHEREAS, in 2020, PF Marina also added additional structures to the Marina Property, including a drink service bar, a walk-in refrigeration unit, and a storage shed (together, the "Additional Structures"), without any required permits or approvals;

THE TEMPORARY EVENTS

WHEREAS, "temporary public and private events including but not limited to exhibitions, conferences, meetings, and trade shows" are permitted uses in the EWPZ;

WHEREAS, in 2020, Evo applied for a liquor catering license for multiple, fourteen-day events at the Marina Property operating a food truck and liquor service;

WHEREAS, in light of the COVID-19 pandemic and emergency orders issued at the state and local levels, the City issued the liquor catering license for the multiple, fourteen-day events operating liquor service at the Marina Property;

JULY 2020 INSPECTION AND VIOLATIONS

WHEREAS, on July 21, 2020, the City of Portland Permitting and Inspections Department ("Permitting") inspected the Marina Property for violations of the City's Code of Ordinances ("City Code");

WHEREAS, Permitting did find violations at the Property, specifically:

i. Occupying the various Marina Structures without final inspections;

ii. Various electrical violations, including unprotected electrical feeders, and undersized and improperly supported SER cable, and missing heavy duty covers for cord and plug connected electricity (the "First Electrical Violation");

iii. Lack of compliant guards installed for drops of more than 30" (the "Guard Violation"); and

iv. The construction of the Additional Structures, which were installed without amending the Master Development Plan or Site Plan, and without any building permits, inspections, or approvals;

WHEREAS, all of these violations were described in a September 2, 2020 Notice of Violation and Order to Correct (the "NOV"), which Owner did not appeal;

MARCH 2021 INSPECTION AND VIOLATIONS

WHEREAS, on March 3, 2021, Permitting again inspected the Marina Property and found that the violations described in the NOV had not been corrected, that the Marina Structures had not been removed by November 1, 2020, as required by building permit BLDC2020-01384, and that the unpermitted Additional Structures had not been removed;

WHEREAS, the City has not yet issued a second notice of violation for the violations observed on March 3, 2021 in the hopes of reaching a mutually agreeable resolution with Owner so that an NOV becomes unnecessary;

APRIL AND MAY 2021 INSPECTIONS AND VIOLATIONS

WHEREAS, the City conducted a site walk on April 29, 2021 and an inspection on May 3, 2021 and observed additional violations at the Marina Property (collectively, the "Subsequent Violations"), specifically:

i. Owner conducted additional electrical work at the Marina Property without a permit or inspections, specifically installing electrical outlets under multiple picnic tables at the Marina Property (the "Second Electrical Violation");

ii. Owner also began installing a drop guard at the Marina Property without the required permits or other approvals;

iii. Owner began installing a shade structure at the Marina Property without the required permits or other approvals (the "Shade Structure Violation");

iv. Owner located two boat waste holding tanks at the Marina Property without the required permits or approvals;

v. Owner began installing a second ejector pump at the Marina Property without the required plumbing permits (the "Ejector Pump Violation");

vi. Owner had installed a temporary flush water holding tank and related plumbing in the office without the required permits or approvals (the "Temporary Tank Violation");

vii. Owner also had several inspection violations relating to the Marina Structures, including non-compliant stair height on the bathroom sheds, missing non-slip surface on the ramp to the ADA accessible bathroom shed, excessive storage in the utility shed, a missing GFCI outlet near the sink in the office, unsafe use of extension cords in the office, and several fire and life safety code violations relating to access and the knox box key (collectively, the "Inspection Violations");

WHEREAS, the City has not yet issued a notice of violation for the Subsequent Violations in the hopes of reaching a mutually agreeable resolution with Owner so that an NOV becomes unnecessary;

VIOLATION CORRECTIONS

WHEREAS, Owner has corrected the First Electrical Violation, which correction was confirmed by Permitting at an inspection on May 3, 2021;

WHEREAS, Owner has corrected the Second Electrical Violation by submitting a statement by the electrician who performed the work that the electrical service was installed in accordance with the National Electric Code requirements;

WHEREAS, Owner has corrected the Temporary Tank Violation by removing the tank and all associated plumbing, which has been verified by Permitting;

WHEREAS, Owner has taken the first step in remedying the Ejector Pump Violation by applying for plumbing permit PLUMB2021-01469, although that permit has not been granted and the work is still subject to inspection;

WHEREAS, Owner has also corrected the Inspection Violations, which corrections have been verified by Permitting;

WHEREAS, Owner submitted an application for a Level II Site Plan Amendment on February 22, 2021, and an amended application on April 2, 2021, although that application is not yet complete;

2021 APPLICATIONS

WHEREAS, PF Marina has applied for building permit BLDC2021-01943 for the Marina Structures for the 2021 season;

WHEREAS, PF Marina has also applied for building permit BLDC2021-01944 for the Additional Structures and the fall guard on the Marina Property for the 2021 season;

WHEREAS, PF Land has applied for building permit BLDC2021-01942 for a shed on the Upland Property to receive shipments for the marina (the "Receiving Shed");

WHEREAS, Evo has applied for a catering liquor license to serve up to 150 people at the Marina Property during consecutive fourteen-day events at the Marina Property (the "Catering License");

WHEREAS, PF Marina has also applied for an outdoor entertainment license for the Marina Property, including adding a stage to the property;

WHEREAS, Owner wishes to continue to use the Marina Structures for the 2021 season, to host consecutive temporary events at the Property for the 2021 season, to use the Additional Structures and Receiving Shed for the 2021 season, and to conduct other activities at the Marina Property and the Upland Property while it is pursuing the required approvals to make all such structures and uses fully compliant with state and federal law and the City Code; and

WHEREAS, under certain conditions, the City is willing to allow Owner to continue to use the Marina Structures for the 2021 season, to host consecutive temporary events at the Property for the 2021 season, to use the Additional Structures and Receiving Shed for the 2021 season, and to conduct other activities at the Marina Property and the Upland Property while Owner is pursuing the required approvals to make all such structures and uses fully compliant with state and federal law and the City Code.

NOW, THEREFORE, the parties agree to the following:

1. By no later than May 19, 2021, Owner will revise and resubmit building permit application BLDC2021-01943 for the Marina Structures so that it is full and complete and includes at least the following required information:

   a. Detailed uses for each of the Marina Structures; and

   b. An updated site sketch also showing (i) the location of the 25' setback from the "working edge of the hardened shoreline;" (ii) the location of the A2 flood zone; and (iii) how the area around the Marina Structures will be made to meet ADA accessibility requirements.

So long as the permit application meets all other required standards, the City will grant permit application BLDC2021-01943 for the Marina Structures on a temporary basis until November 8, 2021 only.

2. By no later than May 19, 2021, Owner will revise and resubmit building permit application BLDC2021-01944 so that it is full and complete and reflects the following:

   a. Owner shall remove the storage shed, walk-in refrigeration unit, service bar and any other structures from the BLDC2021-01944 application, so that the only remaining structure is the drop guard;

   b. Owner shall provide all required details for the drop guard sufficient for Permitting to determine that the drop guard meets all required standards, however, the drop guard shall not contain a counter and drink rail and/or support a shade structure;

c. Owner shall revise the permit application to reflect a new use for the area for temporary events pursuant to Sec. 10.2.3(C)(2) of the City Code for the 2021 season;

d. Owner shall provide sufficient information to support the new use, including each event details and dates;

e. Owner shall provide a revised site sketch showing the temporary event area, including the picnic tables, fall guard, and other features of the site.

So long as the permit application meets all other required standards, the City will grant permit application BLDC2021-01944 for the drop guard and the use of the property for temporary events for the 2021 season only until November 8, 2021. Owner must make any required changes to the drop guard as necessary to comply with the BLDC2021-01944 permit no later than seven days after approval.

3. By no later than May 19, 2021, Owner will revise and resubmit building permit application BLDC2021-01942 for the Upland Property so that it is full and complete and includes - in addition to the Receiving Shed - the storage shed and the walk-in refrigeration unit, both of which shall be shown as relocated to the Upland Property on the amended permit application. So long as the permit application meets all other required standards, the City will grant permit application BLDC2021-01944 until November 8, 2021. Owner must relocate the storage shed and the walk-in refrigeration unit to the Upland Property no later than seven days after BLDC2021-01944 is granted, consistent with that permit approval.

4. By no later than May 19, 2021, Owner shall submit full and complete minor flood plain permits for the following:

a. The Marina Structures;

b. The drop guard; and

c. The boat pump out waste holding tanks.

So long as Owner meets all required standards, the City will grant the flood plain permits described in this paragraph. Owner agrees that if any modifications are required to the Marina Structures, the drop guard, and/or the boat pump out waste holding tanks in order to comply with the flood plain permits, that Owner will make such modifications within seven days of the date that the flood plain permits are granted.

5. Owner will remove the shade structure components no later than May 21, 2021.

6. Owner will diligently pursue plumbing permit PLUMB2021-01469, will cooperate in all required inspections, and will promptly make any necessary corrections if violations are identified through those inspections or otherwise.

7. By no later than May 19, 20201, Owner will withdraw its application for a full entertainment license at the Marina Property. Owner may, however, apply for five separate one-day entertainment licenses, which the City will grant, so long as Owner meets all other requirements. Owner agrees that any entertainment at the Marina Property must strictly comply with all City of Portland requirements. Owner agrees that any requested structures associated with the one-day entertainment licenses, such as a temporary stage, must also receive a tent/stage permit, which structures must not be constructed without approval, and must be removed immediately after the approved event.

8. So long as Owner complies with the other requirements of this Agreement, the City will grant the Catering License applications to cater the fourteen-day temporary events at the Marina Property, except that the Catering License will only be granted for the number of individuals as calculated by the City based on occupancy load, up to a maximum of 150 people.

9. The parties understand and agree that:

a. Owner may have a food truck at the Marina Property so long as it operates in accordance with the City's Food Truck Rules;

b. Owner may have a liquor service bar that is truly temporary, is on wheels, is easily moveable, is not anchored into the ground, and has no electricity or plumbing run to it, etc.;

c. Owner may install a temporary tent or canopy at the Marina Property only if it first obtains a tent/stage permit and any such tent or canopy is not anchored to the ground or otherwise a permanent fixture at the Marina Property.

10. Owner agrees that no further buildings or structures will be placed, constructed, or erected on either the Marina Property or the Upland Property without first obtaining all required permits and approvals from the City.

11. By no later than June 1, 2021, Owner agrees to submit a full, complete, and final amendment to its Master Development Plan and Level II Site Plan. City Staff will determine, in their sole discretion, whether Owner's submission is complete for the purposes of this Agreement. The amendments shall reflect the following:

a. Any use of the Marina Property that Owner wishes to engage in after November 8, 2021; and

b. Any structures that Owner wishes to keep, place, or construct on the Marina Property after November 8, 2021, including any permanent or interim fencing, holding tanks, and similar structures.

Owner agrees to diligently pursue the Master Development Plan and Level II Site Plan amendment applications. Delays in the Planning Board's consideration caused by iterative

revisions to submittals after June 1, 2021 will be attributed to Owner. Owner understands that approval of any Master Development Plan and Level II Site Plan amendments is in the discretion of the Portland Planning Board and is not guaranteed.

12. Owner understands and agrees that the structures to be constructed and/or placed on the Upland Property (storage shed, Receiving Shed, and walk-in cooler) must be removed no later than November 8, 2021. These temporary structures are accessory to the marina use of the Marina Property, are not consistent with the permitted use of the Upland Property, and are not eligible for Master Development Plan or Site Plan approvals or building permits after November 8, 2021 on the Upland Property. No extensions for removing these structures will be considered or granted.

13. Owner understands and agrees that the Marina Structures and the fence must be removed from the Marina Property no later than November 8, 2021, unless Owner has received Master Development Plan approval and Site Plan approval for the structures and the fence, and has also received permanent (not temporary) building permits for the Marina Structures prior to that date. The November 8, 2021 deadline may be extended in the sole discretion of the City if Owner has met all other requirements of this Agreement, including the requirements of Paragraph 11 above, and any delay in obtaining the required approvals is attributable to the City and not to the Owner.

14. Owner understands and agrees that, after November 8, 2021, if Owner wishes to have food or liquor service at the Property, other than a food truck or in connection with a bona fide temporary event that fully complies with the requirements of Sec. 14.10.2.3(C)(2) of the City Code, that Owner must first obtain a text amendment to the City Code allowing such uses in the EWPZ, must obtain Master Development Plan approval, must obtain Site Plan approval, and

must obtain a permanent building permit for any related structures. Owner understands that a text amendment is in the sole discretion of the Portland City Council, after receiving a recommendation from the Portland Planning Board, and is not guaranteed.

15. All work shall be completed in accordance with the City of Portland Code of Ordinances and to the satisfaction of the relevant City official.

16. If Owner fails to comply with any provision of this Agreement within the timeframes provided, or if Owner violates any other provision of the City Code in the conduct of business at the Property, then Owner agrees as follows:

a. The City will give Owner notice of the violation and a 48-hour right to cure period. If Owner does not cure the violation to the satisfaction of the City in that right to cure period, the City will take the remaining steps in this paragraph.

b. The City will revoke all permits granted under the terms of this Agreement, and Owner waives all rights to challenge such revocation;

c. Within ten days of notice of revocation by the City, Owner will remove all temporary structures from the Property; and

d. Upon notice of revocation by the City, Owner will immediately cease and desist from all activity on the Property, other than the approved marina use.

17. Owner admits liability to the City of Portland for civil penalties in the amount of $11,100, which represents civil penalties in the amount of $100 per day from the date of the July 1, 2020 inspection through April 1, 2021.

a. All of the civil penalties shall be waived if Owner fully complies with the remaining terms of this Agreement.

b. If Owner fails to comply with any provision of this Agreement within the timeframes provided, civil penalties shall be due within ten days of demand by the City.

c. Additionally, if Owner fails to comply with any provision of this Agreement, Owner further admits liability to the City for an additional $200 per day from April 1, 2021 until all terms of this Agreement are complied with or the Property is brought into full compliance with the City Code.

18. So long as Owner remains in compliance with this Agreement, the City agrees to forbear from issuing a summons or otherwise taking court action with respect to the violations described in the NOV, and further agrees to forbear from issuing an NOV for the Fence Violation, for the violations observed on March 3, 2021, or for the Subsequent Violations.

SEEN AND AGREED,

Date:

CITY OF PORTLAND

By: Jessica Hanscombe, Christine Grimando
Its:Director of Permitting & Inspections,
Director of Planning & Urban Development

Date:

~~PF~~ MARINA, ~~LLC~~

By:Casey W. Prentice
Its: Manager

Date:

PF LAND, LLC

By: Casey W. Prentice
Its: Manager

FORESIDE/
PORTLAND, MAINE
254 Commercial Street, Suite 118, Portland, Maine 04101

June 1, 2021

Matthew Grooms
Planner
Portland City Hall
389 Congress Street
Portland, ME 04101

Re: 58 Fore Street Master Development Plan
Master Development Plan | Interim Building & Site Modifications Application
Project ID: 2016-224

Dear Matt,

In 2016, the City of Portland approved a Master Development Plan for the redevelopment of 58 Fore Street in Portland, Maine (Project ID: 2016-224). We are requesting approval of an interim building and site modifications condition associated with this Master Development Plan. The interim building and site modifications are associated with Block 7 of the project, which is Fore Points Marina, located at 1 Marina Way, Portland, Maine. We do not wish to formally process a Master Development Plan Amendment with the City of Portland at this time, we are only asking for approval of these interim building and site modifications. It is our intention to proceed with permanent building and site modifications that were previously approved under the Master Development Plan in 2016.

DEFINITIONS

For the purpose of this application and to provide consistency in the language, we would like to define the following terms:

Interim Building & Site Modifications

- A period of time ranging from present day up to 3 years from the date of this application where the interim building and site modifications will exist at Fore Points Marina, located at 1 Marina Way, Portland, ME. Should the conditions need to exist past the 3-year time period, the property owner would need to submit an updated application and receive approval from the Planning Authority.

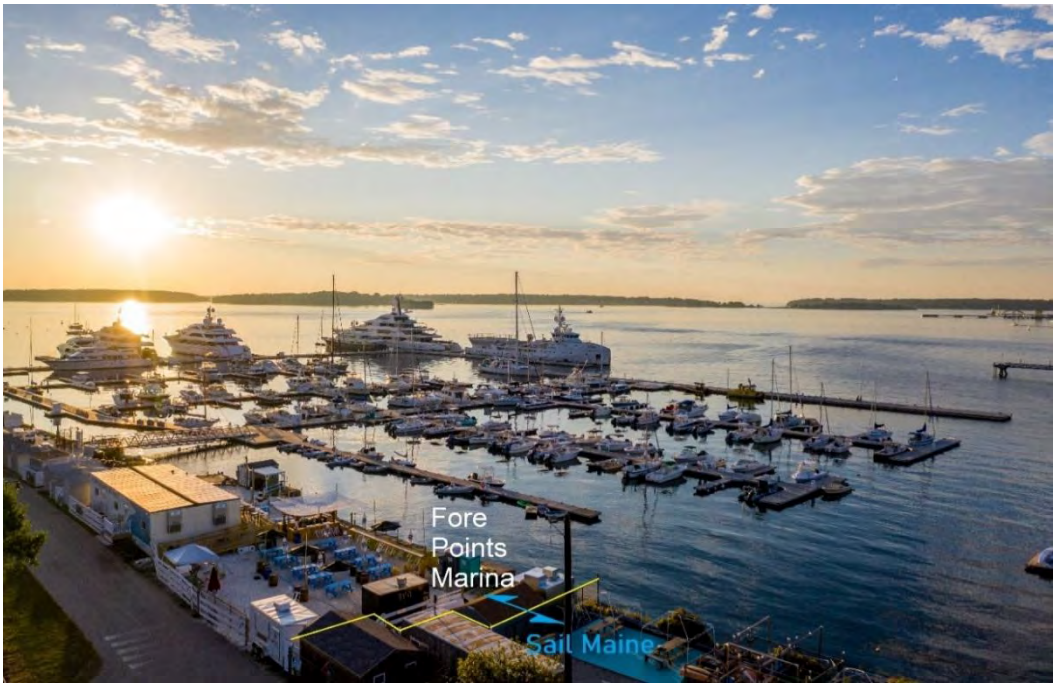
Permanent Building & Site Modifications

- After the interim condition period of time, the permanent building and site changes that will occur at Fore Points Marina located at 1 Marina Way, Portland, ME which are consistent with the originally approved Master Development Plan or as otherwise amended.

SECTION 1: BACKGROUND INFORMATION

Portland Foreside Development Company is coming forward with this application for Interim Building & Site Modifications for several reasons.

1) **COVID-19 Impacts:** We had hoped to put forth an application to the Planning Authority for a permanent Marina Office Building in 2021, however like many other businesses, Fore Points Marina was impacted by the COVID-19 pandemic. In lieu of coming forward with permanent buildings at this time, we seek to continue our operations and would like to document the permitted temporary structures that are being used to operate Fore Points Marina until we can come forward with an application for permanent structures. We believe the changes are consistent with the use of this property as an operational Marina and are generally consistent with the building layout proposed during the Master Development Planning process. For reference, we have included the photo below of Fore Points Marina during the summer of 2020.



2) **Land Exchange with City of Portland:** During the Master Development Planning process, a three-party land exchange agreement between the property owner, the City of Portland and the MaineDOT was drafted and executed by all three parties. The right to execute the land exchanges as contemplated in this agreement has been extended to October 31, 2023 by all three parties.

SECTION 2: PREVIOUSLY APPROVED BUILDING & SITE CONDITIONS | 2016 MASTER DEVELOPMENT PLAN

In 2016, the Portland Planning Board approved a single 2,600 square foot structure on the property associated with Fore Points Marina for a marina office and operations as part of the Master Development Plan. The Master Development Plan also approved the following:

- ~3,000 SF of deck space surrounding the 2,600 square foot marina office structure
- 220 slip marina
- 110 parking spaces
- New infrastructure, floating dock space and wave attenuators
- Continued pedestrian access along the Maine DOT corridor (to be maintained by Maine DOT and Portland Trails) and an extended privately owned walkway along the water where access points would cross the bike/pedestrian path as well as the rail line.
- The Master Development Plan was approved to modify the Maine DOT easement, rail line and bike/pedestrian path that currently is adjacent to Fore Points Marina by bringing these assets closer to the water.
- The waterfront section of the Master Development Plan was fully envisioned to accommodate pedestrian, bicycle and train movement and to be continuous with the Eastern Promenade Trail.

SECTION 3: INTERIM BUILDING & SITE MODIFICATIONS

For the reasons noted in Section 1, at this time, Fore Points Marina needs to operate in an interim building and site condition. More specifically, we are seeking approval for the following interim building and site modifications (see **Table *1***).

Table 1: Interim Building & Site Modifications

Building/Structure	Square Footage
Office Trailer (60x24)*	**1,440**
(2) Regular Bathroom Sheds *Each Bathroom Shed is 64 SF**	**128**
(1) ADA Bathroom Shed*	**80**
(1) Laundry Shed*	**64**
(1) Utility Shed*	**120**
(1) Tool Storage Shed*	**64**
(3) Sheds for Guest Services, *Each Guest Shed is 64 SF**	**192**
Storage Shed #1**	600
Storage Shed #2**	400
Cold Storage**	100
TOTAL	**3,188**

** Note: Structure was used during the summer of 2020 and summer of 2021 for Marina operations. These received Building Permits and Floodplain Permits from the City of Portland, ME.*

*** Note: These structures are not currently on the Fore Points Marina property. We would like to include them during the interim building and site modification period until we can come forward with a permanent building and site condition.*

SECTION 4: SITE PLAN REVIEW STANDARDS (SECTION 14.6)

The interim building and site modifications requested within this application exceed the criteria for a minor amendment due to layout of buildings and circulations and we understand will be reviewed by the Planning Board for Major Site Plan Review. Below is a narrative regarding how the interim building and site modifications meet the review standards of Section 14.6.

Transportation Standards (Section 14.6.1)

- **Impact on Surrounding Street Systems (Section 14.6.1.a)**
  A Traffic Analysis was prepared during the Master Development Plan process for 58 Fore Street which included Fore Points Marina and an analysis of impact on the surrounding street system. There is no change to impact on surrounding street systems due to the interim building and site modifications requested.

- **Access and Circulation (Section 14.6.1.b)**
  Access and circulation associated with Fore Points Marina was reviewed as part of the Master Development Plan for 58 Fore Street. As noted in Section 2, pedestrian access along the waterfront and an extended walkway was part of the overall Master Development Plan. This application is focused on interim building and site modifications and is not our permanent building and site conditions.

  Pedestrian access outside of the existing MDOT corridor is not possible at this time for several reasons. The area where pedestrian access is intended to be provided in a permanent condition is currently not safe. There has been a seawall collapse and there are sink holes on this part of the property.

  Attachment 3 is the Pedestrian Circulation Plan from the approved Master Development Plan. This plan shows three crossing points from the upland area to the Marina property. Currently, we are using one crossing point (the second orange dashed line) to move Marina visitors and guests from the parking area to the Marina building and property. This circulation of guests would remain as part of the interim building and site conditions being proposed.

  Marina visitors and guests currently use one crossing point from the parking area to the Marina building and property. This circulation of guests would remain as part of the interim building and site conditions being proposed. Also, during the interim building and site conditions, the trail network would remain as it is today for pedestrians and bicyclists.

- **Public Transit Access (Section 14.6.1.c)**
  Public Transit Access for Fore Points Marina was reviewed as part of the Master Development Plan for 58 Fore Street. There is no change to public transit access as previously discussed with the interim building and site modifications proposed.

- **Parking (Section 14.6.1.d)**
  Our original Master Development Plan application indicated that there would be 110 parking spaces for Fore Points Marina. The interim building and site modifications are

to support the marina use and no additional parking is being proposed. Furthermore, parking, bicycle storage and electric vehicle charging were all discussed as part of the Master Development Plan for 58 Fore Street which included Fore Points Marina. There is no change to parking needs or access discussed with the interim building and site modifications proposed.

Parking for bicycles is provided at Fore Points Marina with a bike rack on the Marina property next to our western gangway which is near the entrance gate and Marina Office. This bike rack can accommodate 10 bicycles.

- **Transportation Demand Management (Section 14.6.1.e)**
  A Transportation Demand Management Plan was prepared during the Master Development Plan process for 58 Fore Street which included Fore Points Marina. There is no change to transportation demand management with the interim building and site modifications proposed.

Environmental Quality Standards (Section 14.6.2)

- **Preservation of Significant Natural Features (Section 14.6.2.a)**
  Preservation of Significant Natural Features associated with Fore Points Marina was reviewed as part of the Master Development Plan for 58 Fore Street and as part of the original Level II Site Plan submittal for Fore Points Marina in Section 12. There is no change to preservation of significant natural features with the interim building and site modifications proposed.

- **Landscape Preservation (Section 14.6.2.b)**
  Landscape preservation associated with Fore Points Marina was reviewed as part of the Master Development Plan for 58 Fore Street. There is no change to landscape preservation with the interim building and site modifications proposed. During the Level II Site Plan process a waiver was requested for this standard. We have requested this same waiver with our Level II Site Plan Amendment application dated June 1, 2021.

- **Site Landscaping Buffers (Section 14.6.2.c)**
  Site landscaping buffers associated with Fore Points Marina was reviewed as part of the Master Development Plan for 58 Fore Street. There is no change to site landscaping buffers with the interim building and site modifications proposed. During the Level II Site Plan process a waiver was requested for this standard. We have requested this same waiver with our Level II Site Plan Amendment application dated June 1, 2021

- **Water Quality, Stormwater Management and Erosion Control (Section 14.6.2.d)**
  Water quality, stormwater management and erosion control associated with Fore Points Marina was reviewed as part of the Master Development Plan for 58 Fore Street and as part of the original Level II Site Plan submittal in Section 13.

  The strategy for stormwater quality management has not changed from the Master Plan. The permanent buildings and site modifications will need to comply with the overall water quality treatment parameters for the project upon construction of those improvements. Under the current, interim building & site modification site conditions,

the trailer and shed structures reside over existing compacted gravel. Rainfall runoff from these structures flows onto a newly placed crushed shell surface, which covers the existing compacted gravel. As noted in the Minor Site Plan amendment, crushed shells provide an improvement over the existing packed gravel surface. Crushed shells slow runoff, reduce erosion and have been proven to provide limited water quality enhancement in past studies based on use of crushed shells in water quality media filters.

Evidence of the existing compacted gravel condition at the site are evident in historical aerial imagery from Google Earth. In the attached images, one can see that the waterfront area associated with the marina has had marina and boat-maintenance services on the land over the past 10 years, with imagery from April 2012 (prior to purchase of the property in 2013), May 2018 (prior to start of construction the present marina), and July 2019 (start of operations at the current marina).

April 2012 (Source: Google Earth)

May 2018 (Source: Google Earth)

July 2019 (Source: Google Earth)

Public Infrastructure & Community Safety Standards (Section 14.6.3)

- **Consistency With City Master Plans (Section 14.6.3.a)**
  Consistency with City Master Plans associated with Fore Points Marina was reviewed as part of the Master Development Plan for 58 Fore Street and as part of the original Level II Site Plan submittal in Section 14. There is no change to consistency with City Master Plans with the interim building and site modifications proposed.

- **Public Safety and Fire Prevention (Section 14.6.3.b)**
  Public Safety and Fire Prevention associated with Fore Points Marina was reviewed as part of the Master Development Plan for 58 Fore Street and as part of the original Level II Site Plan submittal (see Section 17). We have been working with Public Safety and Fire Prevention during this interim condition period and the buildings and site has been inspected as recently as April and May 2021. Any corrections that were communicated have been made immediately and City staff has been notified.

- **Public Utilities (Section 14.6.3.c)**
  Public utilities associated with Fore Points Marina was reviewed as part of the Master Development Plan for 58 Fore Street and as part of the original Level II Site Plan submittal (see Section 15 and Section 16).

  In accordance with past approvals, permanent domestic water and fire protection service is installed and in place to the marina.

  The master plan envisions that wastewater needs will be accommodated by means of a future pump station to be installed between building blocks 3 & 5. In the current, interim condition, wastewater from the marina office and marina bathrooms flows to a small residential size ejector pump (EOne pump) and is discharged thru a low pressure, small diameter force main to a gravity sewer on the upland site that connects to the City sewer system in Thames Street, as reviewed and approved by the City of Portland Water Resources Department. Wastewater discharge from vessels is presently held in temporary holding tanks on the shore and pumped out / hauled by septic haulers to the wastewater treatment plant. The small ejector pump and hold tanks represent an interim condition, as the permanent condition anticipates a plumbed connection from the marina to the future permanent pump station to address all future wastewater needs at the marina. This permanent condition will be completed as part of future permanent building and site modification work.

  The electrical service to the marina is a temporary (interim condition) overhead service from Fore Street down to a transformer situated on the east end of the upland site, with secondary wiring that runs overhead to distribution panels situated at the head of both the east and west gangways, as approved under previous Level II Site Plan documents. The master plan envisions underground electrical feeds to the marina. These underground electrical feeds are partially installed as part of a current upland development project (Phase 1) and will be extended to the marina at a future date to accommodate the permanent building and site modifications.

Site Design Standards (Section 14.6.4 a-d and f-i)
The interim building and site modifications associated with this Master Development Plan are approximately 2,914 sf in total and meet the Site Design Standards.

Historic Resources (Section 14.6.5.e)
The interim building and site modifications associated with this Master Development Plan will not affect any designated historic landmarks or historic districts.

Assessment of Zoning
The interim building and site modifications associated with this Master Development Plan are not permanent structures being proposed. The marina office, bathrooms and laundry facility support the marina use which is an allowed use in the Eastern Waterfront Port Zone. The interim buildings and site modifications have been reviewed with City staff, including Zoning, as recently as April and May 2021 and any corrections that were communicated have been made.

We have included a Proposed Interim Building & Site Modification Plan indicating each of these interim structures (see Attachment 2). Thank you for your consideration. We look forward to meeting with you.

Sincerely,

David Senus, PE | Director of Planning & Design
Portland Foreside Development Company

Attachments

- Approved Master Development Plan, Dated May 25, 2017
- Proposed Interim Building & Site Modifications, Dated June 1, 2021
- Approved Master Development Plan, Pedestrian Circulation Plan, 2016
- Deed to PF Marina LLC

FORESIDE/
PORTLAND, MAINE
254 Commercial Street, Suite 118, Portland, Maine 04101

June 29, 2021

Matt Grooms, Planner
City of Portland
Portland City Hall
389 Congress Street
Portland, ME 04101

Re: Eastern Waterfront Port Zone
Zoning Text Amendment Application
Fore Points Marina, 1 Marina Way, Portland, ME

Dear Matt,

On behalf of PF Marina LLC, Portland Foreside Development Company is pleased to submit this package of materials for a proposed Zoning Text Amendment related to the Eastern Waterfront Port Zone and the property located at 1 Marina Way, Portland, ME, Fore Points Marina (FPM). Thank you to the City of Portland Planning Department for working with us in advance of this application to help make sure that our proposed Zoning Text Amendment aligns well with the City's existing Land Use Code and Comprehensive Plan.

Fore Points Marina

Located in the Eastern Waterfront Port Zone (EWPZ), FPM opened for business for its first partial season in 2019. The 2020 season was the first full season which included welcoming seasonal slip holders, transient boaters from the Casco Bay area and beyond, and larger sailboats and yachts.

Zoning Text Amendment Request

Presently, the EWPZ contains property from only two landowners, the City of Portland and FPM. The EWPZ allows for restaurant/food service; however, this allowance is currently tied to marine passenger use facilities, including:

1. Intermodal marine passenger facilities.
2. Cruise ship home port and port-of-call berthing and support.
3. International and domestic ferries.

The language also restricts this use to equal or less than 35% of the gross floor area of the principal associated marine passenger use and no more than 35,000 gsf cumulative in the EWPZ.

We seek a Text Amendment to **Section 10.2.3(B)(11) and Section 10.2.7(C)(4)** of the City of Portland's Land Use Code to allow for restaurants and food service establishments in the EWPZ so long as they are directly associated with a marina facility and also open to the general public. This requested Zoning Text Amendment is consistent with the City of Portland's Comprehensive Plan, Portland's Plan 2030; further detail is provided in Attachment E. The proposed amendment is consistent with uses already conditionally allowed in the EWPZ, and ensures that these uses are directly associated with and in the immediate proximity of marina facilities. The limited

extent of EWPZ land area and the makeup of land ownership in the zone, solely consisting of the City and FPM, affords a strong level of predictability for the outcome of this amendment.

Portland Land Use Code Context

The City of Portland's Land Use Code acknowledges that the growth of Portland's marine passenger industry requires supporting services and activities to provide an enjoyable travel experience. It states that ***"non-marine uses that complement the marine passenger industry, are compatible with existing and future-water dependent uses, and provide opportunities for residents and visitors alike to enjoy the Eastern Waterfront throughout the year, are encouraged."***

In the EWPZ, there is a hierarchy of uses that focus on deep-water-dependent uses and shallow-water-dependent uses, followed by other uses only if they do not interfere with and are not incompatible with higher priority uses.

The proposed Zoning Text Amendment does not interfere with any deep-water or shallow-water-dependent uses and, in fact complements and supports higher priority uses by further attracting transient and seasonal boat activity to the site, intermixed with public usage and enjoyment. Numerous marinas throughout the State of Maine provide food and beverage service for their guests and to the public. This mix of use (marina and food/beverage) is successful in these communities as it opens private marina facilities to the public and community as a whole. Food/beverage use at FPM, which will be open and inviting to the public, allows for the community to enjoy a waterfront location which could otherwise be reserved solely for marina guests.

Our package is intended to meet the City's submission requirements for a Zoning Text Amendment application and includes the following:

- Application Form
- Right, Title & Interest
- Vicinity Map
- Proposed Zoning Text Amendment
- Consistency with City Comprehensive Plan Narrative

Thank you for your consideration and we look forward to speaking with you about this Zoning Text Amendment request.

Sincerely,

David A. Senus, PE
Director of Planning & Design

Zoning Map/Text Amendment Application
Portland, Maine

Planning and Urban Development Department
Planning Division and Planning Board

Portland's Planning and Urban Development Department coordinates the development review process for requests for zoning map amendments, zoning text amendments and contract or conditional re-zoning. The Division also coordinates site plan, subdivision and other applications under the City's Land Use Code. The **Application Process for a Zone Change** is summarized below under Section I and the associated costs for reviews are found under Section II, **Development Review Fees, Public Notices and Guarantees,** and are listed on the fee structure sheet.

I. APPLICATON SUBMITTAL

Pre-application meeting

Prior to submitting a zoning amendment application, the Planning Division recommends that the applicant or the designated representative schedule a pre-application meeting to discuss the review process and applicable standards for a proposal. Please contact Barbara Barhydt, Development Review Services Manager at 874-8699 to schedule a meeting.

Zoning Amendment Application

All plans and written application materials must be uploaded to a website for review. At the time of application, instructions for uploading the plans will be provided to the applicant. One paper set of the plans, written materials and application fee must be submitted to the Planning Division Office to start the review process.

- Submit one (1) complete paper set of the zoning amendment application with a concept plan and a written narrative. Contract and conditional rezoning applications must include site plans and written material that address physical development and operation of the property to ensure that the rezoning and subsequent development are consistent with the comprehensive plan, meet applicable land use regulations, and compatible with the surrounding neighborhood. Applications may be submitted between 8 a.m. and 4:30 p.m. Monday through Friday at the Planning Division on the 4th floor of City Hall, 389 Congress Street, Portland.
- All applications are processed in the order in which they are received.
- In order for the Planning Division's Administrative Staff to accept and log-in an application, the application form must be complete, it shall be signed by the applicant's or the applicant's designated representative, and all applicable fees paid at the time of submittal.
- The Land Use Code is available on the City's website at www.portlandmaine.gov.
- If the application is found to be incomplete, the applicant will be informed in writing of the required plans and materials.

II. DEVELOPMENT REVIEW FEES, PUBLIC NOTICES AND GUARANTEES

Zoning Application Fees

- Each application must be submitted with the applicable fees as listed in the fee structure on page 4. The fees cover general administrative processing costs.
- Application fees may be paid in cash or by check (addressed to the City of Portland).
- An application will not be processed without the required application fees.

Fee for City Review Services

- The City of Portland charges fees for service to cover the cost of reviews by Planning and Legal staff members. The charges will be billed at an hourly rate and will be invoiced monthly for reimbursement.
- Current billing rates: Planning services, $40.00/ hour and Legal services: $75.00/hour.

Fee for Third Party Review

- Portland contracts with local engineering firms to conduct engineering reviews of development proposals. The direct cost of all engineering services or third-party consultant reviews, such as the civil engineering review of stormwater management plans, traffic impact reviews and such other reviews as required under the City's Ordinances, will be included in the monthly invoices for reimbursement.

Public Notices

- Public notices must be sent to property owners within 500 for all proposals at the time an application is received. Zoning map amendments for Industrial zones require notices to be sent to property owners within 1,000 feet.
- In advance of a Planning Board workshop or public hearing, public notices for projects must be sent to property owners and are posted in a legal ad in the Portland Press Herald and on the City's web site.
- In addition, zoning map amendments, text amendments and conditional rezoning agreements require individual notices to be posted in the Portland Press Herald.
- The Planning Division mails public notices and posts notices in the newspaper. The applicant will be billed for actual or apportioned costs for advertising and sending mailed notices.
- The applicant is required to hold a neighborhood meeting under the City's regulations for zone change requests. The mailing labels must be purchased from the Planning Division for the neighborhood meeting invitation. A request for labels requires a minimum of two business days to generate the mailing labels and a charge of $1.00 per sheet will be payable upon receipt of the labels.

Third Party Review Fees

- Engineer and Third Party Review Fees - The fees are assessed by the Consulting Engineers and Third Party Reviewers.
- Inspection Fee - This fee is 2% of the Performance Guarantee or as assessed by Planning or Public Works Engineer with $300.00 being the minimum.

Noticing/Advertisements Planning Board/City Council Review

- Legal Advertisement: Percent of total bill
- Notices: .75 cents each

(notices are sent to neighbors upon receipt of an application, workshop and public hearing meetings for Planning Board and public hearing meeting for City Council)

Planning Division	**Office Hours**
Fourth Floor, City Hall	Monday thru Friday
389 Congress Street	8:00 a.m. – 4:30 p.m.
(207) 874-8721 or 874-8719	

PROJECT ADDRESS: Fore Points Marina, 1 Marina Way, Portland, ME 04101

CHART/BLOCK/LOT: Map 18, Lot A002

DESCRIPTION OF PROPOSED ZONE CHANGE AND PROJECT:

This Zoning Text Amendment is to modify Section 10.2.3.B.12 to allow for restaurants and food service establishments with outside dining at a marina office or facility as permitted uses, by right in the Eastern Waterfront Port Zone.

CONTACT INFORMATION:	**Applicant's Contact for electronic plans** Name: Mary McCrann, AICP e-mail Address mcm@portlandforeside.com work # 207-318-4806
Applicant – **must be owner, Lessee or Buyer** Name: PF Marina LLC Business Name, if applicable: Fore Points Marina Address: 1 Marina Way City/State : Portland, ME Zip Code:	**Applicant Contact Information** Work # 207.517.1100 Home# Cell # Fax# e-mail: cwp@portlandforeside.com
Owner – (if different from Applicant) Name: Same Address: City/State : Zip Code:	**Owner Contact Information** Work # Same Home# Cell # Fax# e-mail:
Agent/ Representative Name: None Address: City/State : Zip Code:	**Agent/Representative Contact information** Work # None Cell # e-mail:
Billing Information Name: Chris Burchill Address: 254 Commercial Street, Suite 118 City/State : Portland, ME Zip Code: 04101	**Billing Information** Work # 207.517.1100 Cell # Fax# e-mail: accounting@portlandforeside.com
Engineer Name: Not Applicable Address: City/State : Zip Code:	**Engineer Contact Information** Work # Not Applicable Cell # Fax# e-mail:

Surveyor	Surveyor Contact Information
Name: Not Applicable Address: City/State : Zip Code:	Work # Not Applicable Cell # Fax# e-mail:
Architect	**Architect Contact Information**
Name: Not Applicable Address: City/State : Zip Code:	Work # Not Applicable Cell # Fax# e-mail:
Attorney	**Attorney Contact Information**
Name: Mary Costigan, Bernstein Shur Address: 100 Middle Street City/State : Portland, ME Zip Code: 04101	Work # 207-774-1200 Cell # Fax# e-mail: mcostigan@bernsteinshur.com

Right, Title, or Interest: Please identify the status of the applicant's right, title, or interest in the subject property:

Eastern Waterfront Port Zone
Please see the attached deed and survey identifying the applicant's right, title and interest in the subject property.

Provide documentary evidence, attached to this application, of applicant's right, title, or interest in the subject property. (For example, a deed, option or contract to purchase or lease the subject property.)

Vicinity Map: Attach a map showing the subject parcel and abutting parcels, labeled as to ownership and/or current use. (Applicant may utilize the City Zoning Map or Parcel Map as a source.)

Existing Use: Describe the existing use of the subject property:

The subject property is currently used by Fore Points Marina as a marina facility for recreational boaters including dockage, a marina office, restrooms, laundry and outdoor space for gathering.

Current Zoning Designation(s):

Eastern Waterfront Port Zone

Proposed Use of Property: Please describe the proposed use of the subject property. If construction or development is proposed, please describe any changes to the physical condition of the property.

The proposed use of the property will remain the same as the existing use of the property - to serve Fore Points Marina and marina guests as a recreational boating facility. With this zoning text amendment, restaurants/food service would be permitted by right in lieu of the temporary event category.

Site Plan: 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. This may be a professionally drawn plan, or a carefully drawn plan, to scale, by the applicant. (Scale to suit, range from 1" = 10' to 1' = 50'.) Contract and conditional rezoning applications may require additional site plans and written material that address physical development and operation of the property to ensure that the rezoning and subsequent development are consistent with the comprehensive plan, meet applicable land use regulations, and compatible with the surrounding neighborhood.

There are no improvements to a Site Plan being proposed as part of this zoning text amendment application.

APPLICATION FEE:

Check the type of zoning review that applies. Payment may be made in cash or check payable to the City of Portland.

Zoning Map Amendment ___ $2,000.00 (from ___ zone to ___ zone) **Zoning Text Amendment** _X_ $2,000.00 (to Section 14- 10.2.3.B.12 (For a zoning text amendment, attach on a separate sheet the exact language being proposed, including existing relevant text, in which language to be deleted is depicted as crossed out (~~example~~) and language to be added is depicted as underline (example) **Combination Zoning Text Amendment and Zoning Map Amendment** ___ $3,000.00 **Conditional or Contract Zone** ___ $3,000.00 (A conditional or contract rezoning map be requested by an applicant in cases where limitations, conditions, or special assurances related to the physical development and operation of the property are needed to ensure that the rezoning and subsequent development are consistent with the comprehensive plan, meet applicable land use regulations, and compatible with the surrounding neighborhood. Please refer to Division 1.5, Sections 14-60 to 62.)	**Fees Paid** (office use) ___ ___ ___ ___	The City invoices separately for the following: • Notices ($.75 each) (notices are sent to neighbors upon receipt of an application, workshop and public hearing meetings for Planning Board and public hearing meeting for City Council) • Legal Ad (% of total Ad) • Planning Review ($40.00 hour) • Legal Review ($75.00 hour) Third party review is assessed separately.

Signature of Applicant:	**Date:**

Further Information

In the event of withdrawal of the zoning amendment application by the applicant, a refund of two-thirds of the amount of the zone change fee will be made to the applicant as long as the request is submitted to the Planning Division prior to the advertisement being submitted to the news paper.

SHORT FORM QUITCLAIM DEED WITH COVENANT
DLN: **1001840028303**

CPB2 I LLC (formerly known as **CPB2 LLC**), a Delaware limited liability company, with a mailing address of 254 Commercial Street, Suite 118, Portland, Maine 04101 (the "Grantor"), FOR CONSIDERATION PAID, grants to PF MARINA LLC, a Maine limited liability company, with a mailing address of 254 Commercial Street, Suite 118, Portland, Maine 04101 (the "Grantee"), with QUITCLAIM COVENANT, certain real property, together with any improvements thereon, situated southerly of but not adjacent to Fore Street, in the City of Portland, County of Cumberland and State of Maine, more particularly described on **Exhibit A** attached hereto and made a part hereof.

IN WITNESS WHEREOF, CPB2 I LLC has caused this instrument to be executed by Casey W. Prentice, Manager of CPB2 Management LLC, Manager of CPB2 I LLC, thereunto duly authorized, this 29 day of May, 2018.

WITNESS:

Name: Peter D. Klein

CPB2 I LLC
By: CPB2 Management LLC, Manager

By: _____
Casey W. Prentice, Manager

State of Maine
County of Cumberland, ss.

May 24, 2018

PERSONALLY APPEARED the above-named Casey W. Prentice, Manager of CPB2 Management LLC, Manager of CPB2 I LLC, as aforesaid, and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of said limited liability companies.

Before me,

~~Notary Public~~/Attorney at Law
Print Name: Christopher Devlin
Commission Expires:

WORKSITE_ACTIVE:10166625.4

EXHIBIT A

A certain lot or parcel of land situated southerly of but not adjacent to Fore Street in the City of Portland, County of Cumberland and State of Maine bounded and described as follows:

Commencing at a point on the northerly line of land of the State of Maine at the most easterly corner of land of CPB2 as described in deed book 30879, page 75;

Thence, S 46°23'41" E along land of the State of Maine 50.23 feet to the point of beginning;

Thence, the following courses and distances along land of the State of Maine:

S 46°23'41" E	56.23 feet;
S 45°50'49" W	27.46 feet;
S 61°40'11" W	94.07 feet;
S 46°50'49" W	475.00 feet;
S 23°05'49" W	60.00 feet;
S 48°05'49" W	120.00 feet;
N 41°54'41" W	8.00 feet;
S 48°04'56" W	150.00 feet to land of said City of Portland;

Thence, N 42°54'21" W along land of said City of Portland 5.00 feet;

Thence, N 48°03'05" E a distance of 74.90 feet;

Thence, N 41°37'32" W a distance of 25.00 feet;

Thence, N 61°02'10" E a distance of 5.79 feet;

Thence, N 48°05'49" E a distance of 215.52 feet;

Thence, N 39°58'09" E a distance of 25.10 feet;

Thence, N 46°50'49" E a distance of 478.88 feet;

Thence, N 38°07'23" E a distance of 115.79 feet to the point of beginning.

The Grantor also conveys to the Grantee, its successors and assigns, (a) the perpetual, nonexclusive right and easement on, over and across the streets, driveways and other travel ways now existing or hereafter constructed on the remaining land of the Grantors' property, as described in deed from The Portland Company to CPB2 LLC dated April 1, 2014 and recorded at Cumberland County Registry of Deeds in Book 31425, Page 267 and in Trustee's Deed from Elizabeth M. Sprague, Eric Thomas Sprague and Phineas M. Sprague, Trustees of the Buena Vista Trust, dated April 19, 2013 and recorded at Cumberland County Registry of Deeds in Book 30879, Page 75 (collectively, the "Grantor's Land"), for ingress and egress between (i) the Grantee's Land (as defined below) and (ii) the public streets currently known as Fore Street and Thames Street (as the same may be extended, modified and/or altered from time to time), for

pedestrians and all types of vehicles, (b) the perpetual, nonexclusive right and easement under, on, over and across Grantor's Land to install, lay, construct, operate, maintain, repair, replace and remove the utility lines, conduits, pipes and related facilities that now or hereafter serve the Grantee's Land, including, without limitation, those related to gas, electricity, cable, fiber optics, telephone, telecommunications, sewer, water, storm, and drainage, and (c) the perpetual, nonexclusive right to use, in common with others, the Grantee's allocable share of the parking spaces now exiting or hereafter constructed on Grantor's Land, subject to the terms and conditions adopted by the Grantor from time to time (the easements described in clauses (a) and (b) and the parking rights described in clause (c) being hereinafter collectively referred to as "Rights"), provided that any such acts shall be performed at the Grantee's sole cost and expense in such a manner as to reasonably minimize the interference with the Grantor's use and enjoyment of the Grantor's Land, and that the location of such future utility lines, conduits, pipes and related facilities under, on, over and across the Grantor's Land is subject to the prior written approval of the Grantor, which approval shall not be unreasonably withheld, delayed or conditioned. The Rights, all rights incidental thereto, are for the benefit of and are intended to be appurtenant to the property herein conveyed (the "Grantee's Land").

Together with the appurtenant rights and easements to cross the "Rail-Trail Corridor" described in Indenture Deed by and between Maine Department of Transportation and Phineas Sprague dated August 30, 1993 and recorded at Cumberland County Registry of Deeds in Book 10924, Page 97.

The Grantee's Land is being conveyed subject to the terms and conditions of the Boating Infrastructure Grant Program Agreement between the Maine Department of Transportation and CPB2 LLC dated December 30, 2016 (the "BIG Agreement") and assigned by CPB2 I LLC (formerly known as CPB2 LLC) to PF Marina LLC through the execution of an Assignment and Assumption Agreement of even date herewith, for a period of twenty (20) years from the date of completion of the Fore Street Marina described in the BIG Agreement, as further evidenced in a Notice of Grant Agreement executed by PF Marina LLC of even date herewith to be recorded at the Cumberland County Registry of Deeds.

For Grantor's source of title see deed from The Portland Company to CPB2 LLC dated April 1, 2014 and recorded at Cumberland County Registry of Deeds in Book 31425, Page 267. Reference is made to Affidavit dated March 21, 2018 and recorded at Cumberland County Registry of Deeds in Book 34737, Page 327.

Received
Recorded Register of Deeds
May 29,2018 03:37:53P
Cumberland County
Nancy A. Lane

MAINE REAL ESTATE TAX-Paid

SHORT FORM QUITCLAIM DEED WITH COVENANT
DLN: **1002140130067**

CPB2 I LLC (formerly known as CPB2 LLC), a Delaware limited liability company, with a mailing address of 254 Commercial Street, Suite 118, Portland, Maine 04101 (the "Grantor"), FOR CONSIDERATION PAID, grants to **PF MARINA LLC**, a Maine limited liability company, with a mailing address of 1 Marina Way, Portland, Maine 04101 (the "Grantee"), with QUITCLAIM COVENANT, certain real property, together with any improvements thereon, situated southerly of but not adjacent to Fore Street, in the City of Portland, County of Cumberland and State of Maine, more particularly described on **Exhibit A** attached hereto and made a part hereof.

IN WITNESS WHEREOF, CPB2 I LLC has caused this instrument to be executed by Casey W. Prentice, Manager of CPB2 Management LLC, Manager of CPB2 I LLC, thereunto duly authorized, this 22 day of January, 2021.

WITNESS:

Name:

CPB2 I LLC
By: CPB2 Management LLC, Manager

By: _____
Casey W. Prentice, Manager

State of Maine
County of Cumberland, ss.

January 22, 2021

PERSONALLY APPEARED the above-named Casey W. Prentice, Manager, of CPB2 Management LLC, Manager of CPB2 I LLC, as aforesaid, and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of said limited liability companies.

Before me,

Notary Public/Attorney at Law
Print Name:
Commission Expires

MARION S. LOGAN
Notary Public, Maine
My Commission Expires March 23, 2021

EXHIBIT A

A certain lot or parcel of land situated southerly of but not adjacent to Fore Street in the City of Portland, County of Cumberland and State of Maine bounded and described as follows:

Commencing at a point on the northerly line of land of the State of Maine at the most easterly corner of land of CPB2 I LLC as described in deed Book 30879, Page 75;

Thence, S 46°23'41" E along land of State of Maine 50.12 feet to the point of beginning;

Thence, S 46°23'41" E continuing along land of State of Maine 0.11 feet to land now or formerly of PF Marina as described in deed Book 34869, Page 50;

Thence, the following courses and distances along said PF Marina:

S 38°07'23" W a distance of 115.79 feet;

S 46°50'49" W a distance of 478.88 feet;

S 39°58'09" W a distance of 25.10 feet;

S 48°05'49" W a distance of 215.52 feet;

S 61°02'10" W a distance of 5.79 feet;

S 41°37'32" E a distance of 25.00 feet;

S 48°03'05" W a distance of 74.90 feet to land now or formerly of City of Portland;

Thence, N 42°54'21" W along land of said City of Portland 69.89 feet to land now or formerly of State of Maine as described in Book 10924, Page 91;

Thence, N 52°46'49" E along land of said State of Maine 225.10 feet;

Thence, N 47°33'49" E continuing along land of State of Maine 690.74 to the point of beginning, containing 24,434 s.f. or 0.56 acres, more or less.

Together with the appurtenant rights and easements to cross the "Rail-Trail Corridor" described in Indenture Deed by and between Maine Department of Transportation and Phineas Sprague dated August 30, 1993 and recorded at Cumberland County Registry of Deeds in Book 10924, Page 97.

The real property conveyed in this Deed is SUBJECT TO the rights, easements, covenants, restrictions, encumbrances, terms and conditions set forth in the instruments listed on **Exhibit B** attached hereto and made a part hereof.

For Grantor's source of title see deed from The Portland Company to CPB2 LLC dated April 1, 2014 and recorded at Cumberland County Registry of Deeds in Book 31425, Page 267. Reference is made to Affidavit dated March 21, 2018 and recorded at Cumberland County Registry of Deeds in Book 34737, Page 327.

DOC :6014 BK:37742 PG:211
RECEIVED - RECORDED, CUMBERLAND COUNTY REGISTER OF DEEDS
01/26/2021, 01:59:27P
Register of Deeds Nancy A. Lane E-RECORDED

EXHIBIT B

EXCEPTIONS

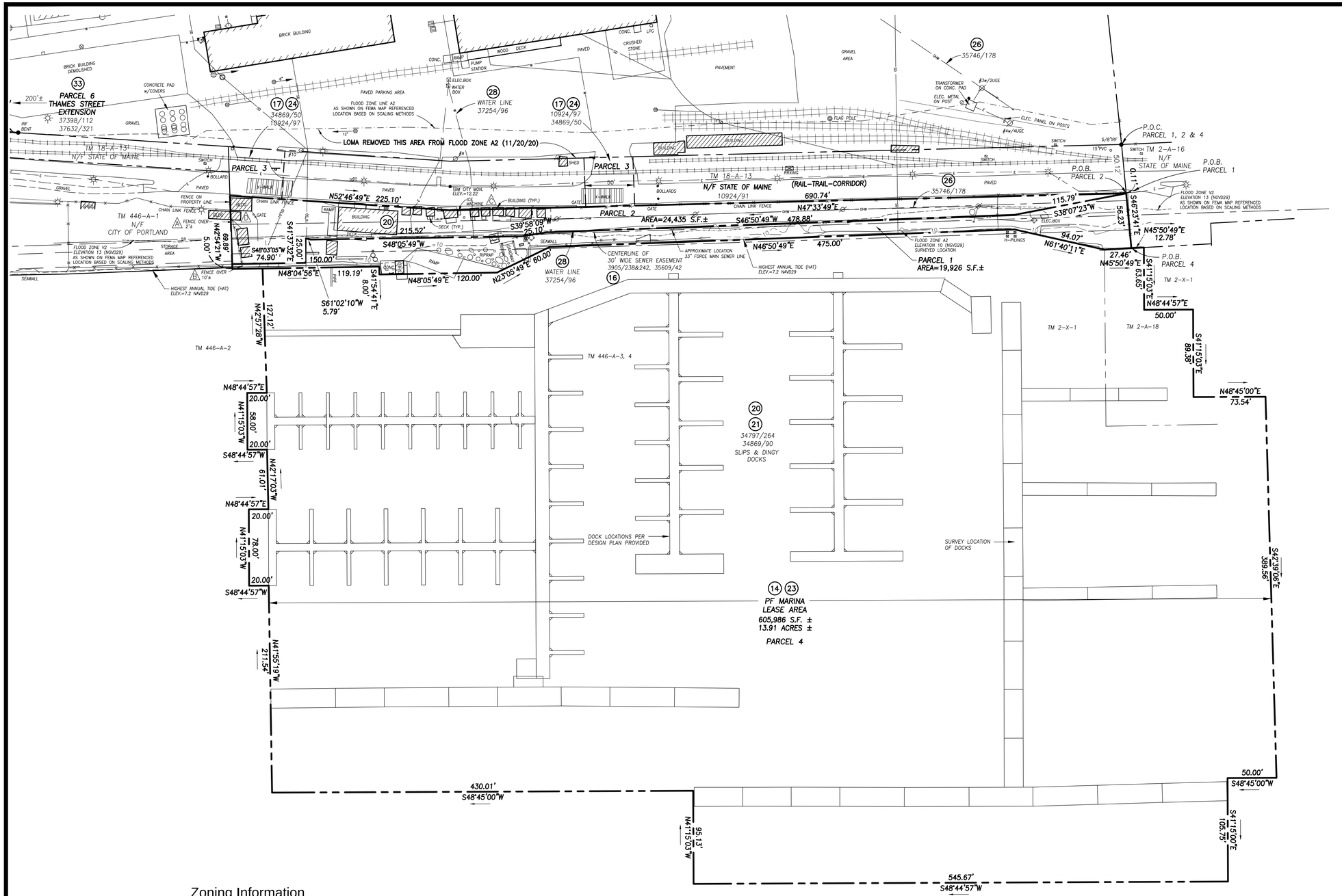
1. Rights and easements granted by Canadian National Railway Company to Portland Water District by instruments dated September 2, 1976 and recorded in the Cumberland County Registry of Deeds in Book 3905, Page 238 and in Book 3905, Page 242, as affected by Easement Modification Agreement dated April 29, 2019 and recorded in the Cumberland County Registry of Deeds in Book 35609, Page 42.

2. Terms, provisions, obligations, exceptions, covenants, reservations, and agreements described in Indenture by and between Maine Department of Transportation and Phineas Sprague, Jr. dated August 30, 1993 and recorded in the Cumberland County Registry of Deeds in Book 10924, Page 97.

3. Rights, easements, terms, conditions and agreemenet described in Deed from CPB2 I LLC to PF Marina LLC dated May 29, 2018 and recorded in the Cumberland County Registry of Deeds in Book 34869, Page 50.

4. Rights and easements granted by CPB2 I LLC to Central Maine Power Company and Northern New England Telephone Operations LLC by instrument dated April 4, 2019 and recorded in the Cumberland County Registry of Deeds in Book 35746, Page 178.

5. Memorandum of Agreement by and between Portland Water District and CPB2 LLC dated August 31, 2020 and recorded in the Cumberland County Registry of Deeds in Book 37254, Page 96.



Plan References

1. *"BOUNDARY & TOPOGRAPHY SURVEY AT 58 FORE STREET, PORTLAND, MAINE MADE FOR WOODARD & CURRAN" AUGUST 29, 2016, REVISED OCT. 3, 2016 BY OWEN HASKELL, INC.*

2. *"ALTA/ACSM LAND TITLE SURVEY, 58 FORE STREET, PORTLAND, MAINE MADE FOR CPB2 LLC" BY OWEN HASKELL, INC. DATED MAY 22, 2013.*

3. *"ALTA/ACSM LAND TITLE SURVEY, 58 FORE STREET, PORTLAND, MAINE MADE FOR PF MARINA LLC" BY OWEN HASKELL, INC. DATED MAY 22, 2018 AND PLAN OF PF MARINA LEASE AREA AT 58 FORE STREET, PORTLAND, MAINE MADE FOR PF MARINA LLC BY OWEN HASKELL, INC. DATED MAY 17, 2018 AS REVISED ON JANUARY 22, 2019.*

4. *"ALTA/ACSM LAND TITLE SURVEY, 58 FORE STREET, PORTLAND, MAINE MADE FOR PF ONE DEVCO LLC AND PF LAND LLC" BY OWEN HASKELL, INC. DATED MARCH 4, 2020 LAST REVISED NOVEMBER 5, 2020.*

5. *"SUBDIVISION PLAT, PORTLAND FORESIDE, THAMES STREET & FORE STREET, PORTLAND, MAINE MADE FOR OWNER OF RECORD, CPB2 I LLC," BY OWEN HASKELL INC. DATED FEBRUARY 13, 2020 AND RECORDED AT CUMBERLAND COUNTY REGISTRY OF DEEDS IN PLAN BOOK 220, PAGE 65.*

6. *"AMENDED SUBDIVISION PLAT, PORTLAND FORESIDE, THAMES STREET AND FORE STREET, PORTLAND MAINE, MADE FOR OWNER OF RECORD, PF ONE DEVCO LLC AND PF LAND LLC" BY OWEN HASKELL, INC. DATED NOVEMBER 20, 2020 AND RECORDED AT CUMBERLAND COUNTY REGISTRY OF DEEDS IN PLAN BOOK 220, PAGE 446.*

General Notes

1. *OWNERS OF RECORD:*

   PARCELS ONE & THREE: PF MARINA LLC
   C.C.R.D. BOOK 34869 PAGE 50

   PARCEL TWO: PF MARINA LLC
   C.C.R.D. BOOK 37742, PAGE 208

2. *PARCEL IS SHOWN AS LOT 2 BLOCK A ON THE CITY OF PORTLAND'S ASSESSORS MAP 18.*

3. *BEARINGS ARE BASED ON MAINE STATE PLANE COORDINATES WEST ZONE NAD83.*
   CITY POINTS: T-113-80-206 N:302687.77 E:2932345.31
   T-113-12-111 N:302722.13 E:2933029.45

4. *UTILITIES SHOWN HEREON ARE BASED ON OBSERVED EVIDENCE ONLY OF SURFACE FEATURES. THE SURVEYED PROPERTY IS SERVED BY PUBLIC WATER, ELECTRICAL, COMMUNICATIONS SERVICES AND PUBLIC SEWER FROM LOCATIONS IN FORE STREET.*

5. *THE SURVEYED PROPERTY DEPICTED HEREON IS THE SAME PROPERTY DESCRIBED ON EXHIBIT A OF THE CATIC COMMITMENT NO. 123120-01 AND CONTAIN NO GAPS OR GORES BETWEEN THE COMMON BOUNDARY LINE OF EACH PARCEL.*

Legend

- IRON PIPE OR ROD FOUND
- UTILITY POLE
- MANHOLE
- CATCH BASIN
- HYDRANT
- SS — SANITARY SEWER
- W — WATER LINE
- SD — STORM DRAIN
- N/F — NOW OR FORMERLY
- 000/000 — DEED BOOK / PAGE
- (1) — SCHEDULE B EXCEPTION
- (A) — POSSIBLE ENCROACHMENT
- P.O.C. — POINT OF COMMENCEMENT
- P.O.B. — POINT OF BEGINNING

SCALE : 1" = 50'

0' 25' 50' 100'

Zoning Information

NONE PROVIDED

Possible Encroachments

- (A) *FENCE ONTO PREMISES 2'±*
- (B) *FENCE ONTO PREMISES 10'±*
- (C) *BUILDINGS OVER PROPERTY LINE UP TO 2'±*
- (D) *BUILDING OVER PROPERTY LINE 10'±*

Flood Zone Note

BY GRAPHIC PLOTTING ONLY, THIS PROPERTY IS PARTIALLY LOCATED IN FLOOD ZONE A2 ELEV. 10, AREAS OF 100-YEAR FLOOD AND PARTIALLY LOCATED IN FLOOD ZONE V2 ELEV. 13, AREAS OF 100-YEAR COASTAL FLOOD WITH VELOCITY ON THE FLOOD INSURANCE RATE MAP, COMMUNITY PANEL NO. 230051-0014B, WHICH BEARS AN EFFECTIVE DATE OF JULY 17, 1986. THE FEMA FIRM ZONE A2 FLOOD LINE IS DEMARKED ON THE PLAN BY THE ELEVATION 10 CONTOUR. ALL POINTS NORTH OF THIS CONTOUR ON THE SUBJECT PROPERTY EXCEEDS THIS ELEVATION AND THEREFORE FALL OUTSIDE OF THE A2 ZONE.

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.

SEE SHEET 2 FOR LEGAL DESCRIPTION AND EXCEPTIONS

ALTA / NSPS Land Title Survey

1 Marina Way
Portland, Cumberland County, Maine
Made For
PF MARINA, LLC
1 Marina Way, Portland, Maine

Surveyor's Certification

TO: PF MARINA, LLC; CATIC; BAR HARBOR BANK & TRUST, ITS SUCCESSORS AND/OR ASSIGNS AS THEIR INTEREST MAY APPEAR

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 2, 3, 4, 7A, 11, AND 13 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON JANUARY 21, 2021.

RANDY R. LOUBIER
PROFESSIONAL LAND SURVEYOR NO. 2407

DATE OF PLAT OR MAP: JANUARY 26, 2021
DATE OF LAST REVISION: MARCH 18, 2021

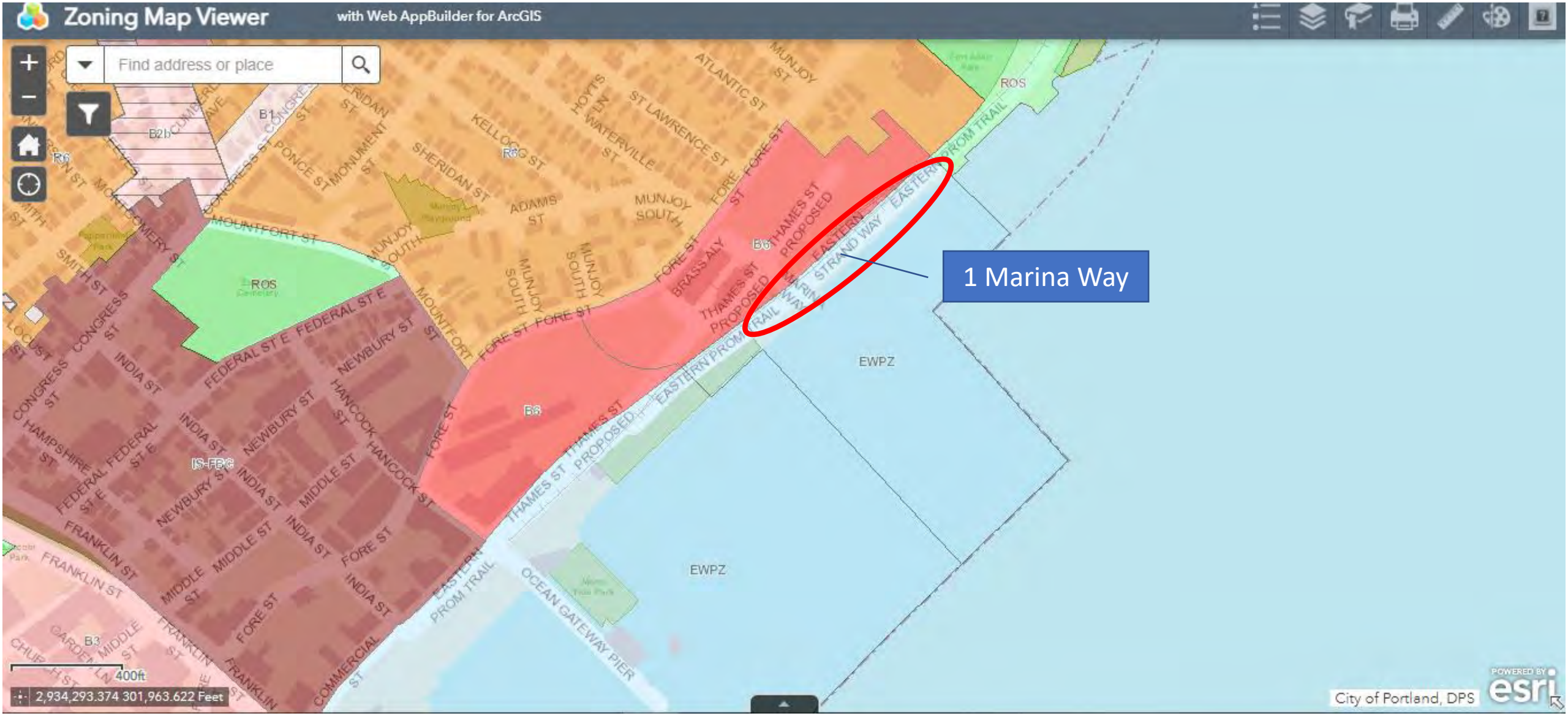
STATE OF MAINE — RANDY R. LOUBIER 2407 — PROFESSIONAL LAND SURVEYOR

OWEN HASKELL, INC.
PROFESSIONAL LAND SURVEYORS
390 U.S. ROUTE 1, UNIT 10, FALMOUTH, ME 04105 TEL. 207-774-0424

DRAWN BY: RRL / JLW	FIELD BOOK: FILE		JOB NO. 2019-031 P
CHECKED BY: RRL/SDG	SCALE: 1" = 50'		DRWG. # MARINA-ALTA

Vicinity Map of 1 Marina Way
Showing Eastern Waterfront, Including Ocean Gateway

December 2020



Vicinity Map of 1 Marina Way
Showing Eastern Waterfront

December 2020

Vicinity Map of 1 Marina Way
Showing Ownership and Use of Abutting Parcels

December 2020

1982 and recorded in the Cumberland County Registry of Deeds at Book 4916, Page 26.

a. Restaurants and food service establishments shall be permitted as accessory uses if such uses are within 100 feet of the principal marina building and do not exceed 1,000 SF of total interior floor area of the building; and further provided that such accessory uses are open to the general public.

12. Marine office, including but not limited to offices of owners of marinas, wharves or their agents, and naval architects, and seafood brokers.

C. Commercial

1. Professional, business, government, and general office located in upper floors of structures existing as of September 18, 2006.

**Editor's Note - On-site parking for non-marine commercial uses are permitted as conditional uses subject to the provisions of Subsection 10.2.4.*

2. Temporary events, except festivals as otherwise governed under paragraph (3) listed below. Buildings, piers and lands within the EWPZ may be used for temporary public and private events including but not limited to exhibitions, conferences, meetings, and trade shows under the following conditions:

a. Temporary events occupying more than 10,000 square feet of building or outdoor space shall not exceed a combined total of 60 days between May 1st to October 31st.

b. No temporary event may continue for more than 14 days of continuous operation.

c. Any temporary event that anticipates more than 5,000 people in attendance on any single day must provide and be subject to a parking management plan. The parking management plan must be submitted for the review and approval of the public works authority at least 60 days prior to the first day of the event.

3. Festivals subject to City license.

4. Street vendors licensed pursuant to Chapter 19 of the City of Portland Code of Ordinances.

D. Public

1. Fire, police, and emergency services.

2. Governmental agency emergency operations/crisis centers.

3. Research, military and visiting attraction vessel berthing.

4. Landscaped pedestrian parks, plazas and other similar outdoor pedestrian spaces, including without limitation pedestrian and/or bicycle trails.

E. Other

1. A facility for non-profit organizations whose facility may include offices, classrooms, equipment, equipment rentals, storage, and bathrooms for the public.

10.2.4 Conditional uses

A. The following uses shall be permitted as conditional uses in the Eastern Waterfront Port Zone, provided that, notwithstanding Subsection 6.5.1, or any other provision of this code, the Planning Board shall be substituted for the Board of Appeals as the review authority, and provided further that in addition to the provisions of Subsection 6.5.2, such uses will not impede or preclude existing or potential water-dependent development within the zone, will allow for adequate right-of-way access to the water, are compatible with marine uses, and meet all additional standards set forth below.

maintenance of the marine infrastructure for commercial vessels, and visual and physical access to the waterfront for the general public.

5. The non-marine portion of the development will not significantly restrict air or light for marine uses located in the immediate vicinity; will not create significant adverse local climatic effects on marine uses such as an undue increase of winds or shadowing; and will not adversely affect the efficient operation of marine uses, such as by producing less efficient traffic, parking or circulation patterns.
6. The rezoning contains adequate provisions and/or conditions to ensure that on-site water-dependent infrastructure remains occupied by commercial marine use(s) listed in Subsections 10.2.3 and 10.2.4 and that said use is not abandoned after the project is developed.

B. Notwithstanding Subsection 10.2.8(H) and off-street parking standards of Article 14, all on-site parking constructed or used for non-marine uses allowed only by contract or conditional rezoning shall be subject to the conditional use provisions Subsection 10.2.4(C)(5). Additionally, the total amount of parking shall be established by the City Council in the conditional or contract rezoning agreement after consideration of the Planning Board's recommendation on the same.

10.2.7 Dimensional requirements.

In addition to the generally applicable provisions of Section 7.5 of this Land Use Code, lots in the EWPZ shall be subject to the following requirements:

A. Minimum lot size: None
B. Minimum frontage: None
C. Minimum yard dimensions:
   1. *Front setback:* None
   2. *Side setback:* None
   3. *Rear setback:* None
   4. *Setback from pier line:* Notwithstanding the above requirements, a minimum setback of 25 feet from the edge of any pier, wharf or working edge of the hardened shoreline shall be required for any structure, provided that marine offices, as defined in Section 10.2.3(B)(12), may be located up to five feet from the edge of any pier, wharf, or working edge of the hardened shoreline. The setback area may be utilized for water-dependent uses, restaurants and food service establishments accessory to marinas, and public uses and activities, subject to the provisions of Subsections 10.2.2 and 10.2.4, and shall not be utilized for ~~restaurant, drinking, or~~ other non water-dependent uses or for off-street parking. The edge of any pier, wharf or bulkhead shall include any attached apron(s).
D. Maximum impervious surface: 100%
E. Maximum building height: 45 feet, except as follows:
   1. For purposes of this subsection only, moveable elements such as cranes and gantries, connection devices such as conveyors or bridges, and floating vessels shall not be subject to the space and bulk requirements, but shall be subject to a determination by the Federal Aviation Administration that the location of such equipment will not create a hazard to air traffic.

Attachment E
Consistency with City of Portland Comprehensive Plan
Portland's Plan 2030

This proposed amendment to the Eastern Waterfront Port Zone text to allow for restaurants and food service establishments associated with a marina helps advance several specific goals and strategies of the City of Portland Comprehensive Plan, Portland's Plan 2030, and is consistent with the vision statement of the City's Plan.

SECTION 1. GOALS & STRATEGIES

Waterfront Policy Guide

The Waterfront Policy Guide specifically includes the following **goals** which align with this request for a Zoning Text Amendment:

- Prioritize and promote Portland's unique mix of water-dependent, marine-related uses and compatible non-marine uses.
- Promote passive and active recreational access to the waterfront.

Food and beverage service are compatible non-marine uses that support and complement existing water-dependent, marine related uses in Portland. Providing the opportunity for residents and visitors to visit, eat, drink and gather near the waterfront promotes more passive access to the waterfront as well.

Specific **strategies and actions** in the Waterfront Policy Guide which also support this Zoning Text Amendment include:

- Expand waterfront access
    - Expand waterfront access for the public where possible and where appropriate, and
    - Protect and promote access to the waterfront and Portland islands for commercial and marine activity, including berthing.

- Support traditional and emerging marine industries
    - Collaborate with private pier and waterfront property owners to implement waterfront policies that promote and protect the marine economy.

The restaurants and food service establishments use, accompanying an existing marina, provides residents and visitors with greater waterfront access in a location that has traditionally been viewed as either private, restricted to marina access or private industry. In addition, introducing a restaurant and food service establishment that is linked with the existing marina encourages additional visitors to Portland from the boating community. These visitors may be island residents, Maine residents that sail in Casco Bay out of nearby towns and cities, or national or international transient boaters arriving in Portland from across the globe.

Although the menu offerings of a restaurant and food service establishment are not dictated in zoning language, the expectation is that any food business at this location will have a strong focus on local seafood offerings purchased from Portland fish markets and fishermen.

Economic Policy Guide

In addition to consistency with the Waterfront Policy Guide, this Zoning Text Amendment is also consistent with a number of **goals** from the Economy Policy Guide, they include:

- Create economic prosperity by growing Portland's tax and employment base.
- Value innovation and creativity as cornerstones of the local economy and as central to Portland's uniqueness and diversity.
- Reinforce the waterfront as a key component of Portland's economic health, balancing traditional and emerging industries with tourism and recreation.
- Respect that our unique quality of place is key to our current and future economic success.
- Value and nurture Portland-based businesses.

Particularly as Portland emerges from the COVID-19 pandemic, the support of local businesses who intend to foster and grow Portland's tax and employment base is critical. The start of food and beverage offerings at Fore Points Marina was innovative and creative, a response to demand from the Portland community, and something truly unique to Portland's waterfront. There is no other space that offers the waterfront access and trail access to food and beverage service like Fore Points Marina. In addition, allowing for these non-marine uses, by right, does help reinforce a balance between the traditional marine use of the marina and tourism and passive recreation opportunities. The quality of place of this location is unique and we should all encourage that this food and beverage offering be shared with the general public in addition to the marina guests.

Future Land Use Policy Guide

The Future Land Use Policy Guide of the Comprehensive Plan acknowledges that change will occur along the waterfront over the next decade. The change will be consistent with existing waterfront land use policies, including offering public and recreational access to the water where possible.

This Zoning Text Amendment is directly supportive of this guidance, as it offers improved public access to a unique location of the waterfront where public access had not previously been promoted.

SECTION 2. VISION STATEMENT

The Vision Statement in Portland's Plan 2030 offers support for a Zoning Text Amendment associated with Fore Points Marina. While this text amendment is modest in nature, it is supportive of the following 6 points from the Vision Statement:

- Portland will grow in order to sustain our community, infrastructure, and economy,
- Vibrant arts and cultural life will be central to our identity,
- We will embrace innovation in order for our community to thrive,
- We will strive to create a resilient economy through innovation, investment, and commitment to diversity,
- We will support our working waterfront as a commitment to maintaining a vibrant maritime economy in the 21st century, and
- We will invest in and support our local economy.

In many ways, allowing for restaurants and food service establishments at Fore Points Marina is providing support to the City of Portland's economy and ability to grow. These services in this waterfront location also complement the culture that has been created by FPM which welcomes boaters, residents, and visitors alike to enjoy the waterfront. These services are supportive to this marine use along the working waterfront as well as the local economy.

SECTION 3. ZONING

Eastern Waterfront Port Zone

Waterfront Zoning in the City of Portland has a long history. The EWPZ was created to nurture deepwater-dependent activity within the context of the established eastern waterfront neighborhood. Fore Points Marina meets this intent by providing marina services to vessels of all sizes, both private and commercial. As noted in the City's Zoning Code, the Eastern Waterfront is *"uniquely situated to support a wide range of water-dependent industry and commerce through a variety of marine activities."*

The Zoning Code also acknowledges that the growth of Portland's marina passenger industry requires supporting services and activities to provide an enjoyable travel experience. The Code further states that *"non-marine uses that complement the marine passenger industry, are compatible with existing and future-water dependent uses,* ***and provide opportunities for residents and visitors alike to enjoy the Eastern Waterfront throughout the year, are encouraged****."*

In the EWPZ, there is a hierarchy of uses that focus on deepwater-dependent uses, and shallow water-dependent uses, followed by other uses only if they do not interfere with and are not incompatible with higher priority uses. The proposed Zoning Text Amendment does not interfere with any deepwater or shallow water dependent uses and, in fact, complements and supports higher priority uses by further attracting transient and seasonal boating activity to the site, intermixed with the public enjoyment.

In the Waterfront Central Zone (WCZ), water-dependent and marine uses are prioritized, but limited non-marine development is allowed to provide needed revenues to pier owners. Portland's Plan 2030 promotes this balance between these uses where the marine use is given space and protection, while the pier owner is given opportunity to generate revenue for maintenance and a return on investment. This same model is welcome and necessary in the EWPZ which is limited to two property owners, and where there is an opportunity for FPM, the marine use, to also generate revenue for maintenance of the asset, including the land area and sea wall, and to maximize return on investment.

FORESIDE
PORTLAND, MAINE
254 Commercial Street, Suite 118, Portland, Maine 04101

June 1, 2021

Matthew Grooms
Planner
Portland City Hall
389 Congress Street
Portland, ME 04101

Re: Fore Points Marina | Level II Site Plan
Second Amendment Request
Project ID: 000330-2018

Dear Matt,

Portland Foreside Development Company would like to submit this Level II Site Plan Amendment for interim building and site modifications located at Fore Points Marina, 1 Marina Way, Portland, Maine. In parallel with this Level II Site Plan Amendment, we are also pursuing an interim building and site modification condition to our approved Master Development Plan that was granted in 2016 for the redevelopment of 58 Fore Street.

DEFINITIONS

For the purpose of this application and to provide consistency in the language, we would like to define the following terms:

Interim Building & Site Modifications

- A period of time ranging from present day up to 3 years from the date of this application where the interim building and site modifications will exist at Fore Points Marina, located at 1 Marina Way, Portland, ME. Should the conditions need to exist past the 3-year time period, the property owner would need to submit an updated application and receive approval from the Planning Authority.

Permanent Building & Site Modifications

- After the interim condition period of time, the permanent building and site changes that will occur at Fore Points Marina located at 1 Marina Way, Portland, ME which are consistent with the originally approved Master Development Plan or as otherwise amended.

Fore Points Marina has been operating with temporary structures. We consider this Level II Site Plan Amendment an Interim Building & Site Modification until we can move forward with a Permanent Building & Site Modification.

Level II Site Plan Amendment Request

In the fall of 2020, the City of Portland Planning Department met with the Fore Points Marina team at the marina site and requested that we provide a Level II Site Plan Amendment to capture and memorialize all temporary building structures on the marina property. Some of these temporary

building structures had been previously permitted through the issuance of a Temporary Building Permit. City Staff requested that we memorialized all work contemplated or completed to date within the Site Plan review process. This letter and the appended plan serve to fulfill the City's request to formally amend the Fore Points Marina Level II Site Plan that was approved on January 16, 2019 (letter dated January 18, 2019). Please note, we still consider all land-side structures depicted on the appended figures to be temporary, movable structures and we anticipate bringing forward a more formal application within 3 years for the design of permanent building structures for the marina. The exact timeframe of that future work is challenging to define at this time due to the ongoing uncertainties associated with the COVID 19 pandemic and finalization of the 3-party land exchange between our land holdings, the City and the MaineDOT.

PFDC is requesting an amendment to the approved Level II Site Plan (Project ID: 000330-2018) for the temporary structures at Fore Points Marina (**BLDC2020-01384)** as well as two additional temporary structures and a cooler. In addition, as required on the original Site Plan (Project ID: 000330-2018), we would like to replace 223 linear feet of an existing white fence with 223 linear feet of a white aluminum fence. We are including a spec sheet with this submittal for this fence. We would also like to add a counter attachment to an existing fall protection drop guard, a 20x130 foot open air shade structure and continued use of two wastewater holding tanks. The table below provides a summary.

Building/Structure	**Square Footage**
Office Trailer*	1,440
(2) Regular Bathroom Sheds *Each Bathroom Shed is 64 SF**	128
(1) ADA Bathroom Shed*	80
(1) Laundry Shed*	64
(1) Utility Shed*	120
(3) Sheds for Guest Services, *Each Guest Shed is 64 SF**	192
Storage Shed**	600
Storage Shed**	400
(1) Cooler**	100
TOTAL	**3,188**
Site Features & Equipment	
223 Linear Feet of White Aluminum Fence to replace existing white, wooden fence	
130 linear feet of fall protection drop guard* with counter attachment**	
20x130 foot shade structure**	
4x4x3 275 gallon wastewater holding tank*	
15x8x8 8,000 gallon wastewater holding tank*	

** Note: Structure was used during the summer of 2020 and summer of 2021 for Marina operations. These previously received Building Permits and Floodplain Permits from the City of Portland, ME that will expire in November 2021.*
*** Note: These structures are not currently on the Fore Points Marina property. We would like to include them during the interim building and site modification period until we can come forward with a permanent building and site condition.*

We have included an updated Site Plan indicating each of these interim buildings and site modifications. Please let me know if you would like to discuss this in further detail. Thank you for your consideration.

Sincerely,

David Senus, PE | Director of Planning & Design
Portland Foreside Development Company

Attachments

- Approved Marina Site Plan, April 2020
- Overall Marina Site Plan, Figure 1 Showing Proposed Amendments
- Narrative in Support of Level II Site Plan Amendment
- Spec Sheet for Aluminum White Fence
- Deed for PF Marina LLC

FORESIDE
PORTLAND, MAINE
254 Commercial Street, Suite 118, Portland, Maine 04101

MEMORANDUM

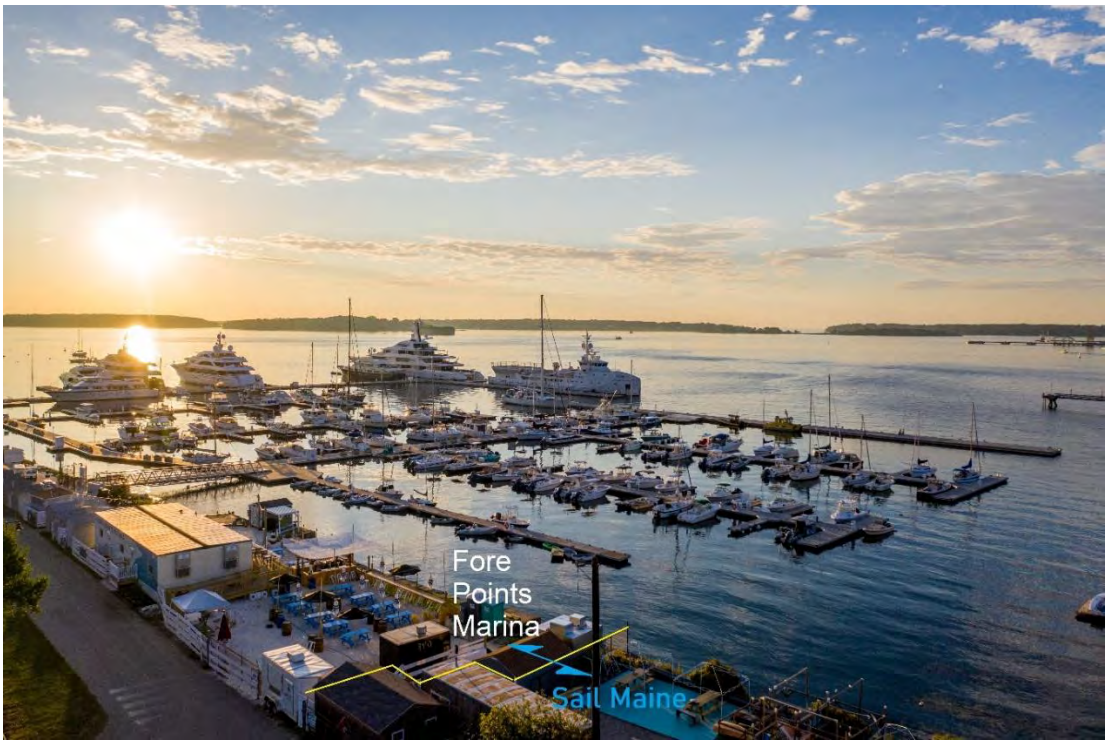
To: Matthew Grooms, Planner
City of Portland, Maine

From: David Senus, PE, Director of Planning & Design
Portland Foreside Development Company

Date: June 1, 2021

Subject: Fore Points Marina
Narrative for Second Level II Site Plan Amendment Request
Project ID: 000330-2018

In association with our letter dated June 1, 2021 we have prepared the following narrative to support the Level II Site Plan Amendment application. The application is focused on amending our existing Level II Site Plan to include interim building structures and site modifications. We had hoped to put forth an application to the Planning Authority for a permanent Marina Office Building in 2021, however like many other businesses, Fore Points Marina was impacted by the COVID-19 pandemic pandemic and construction financing for this use remains unavailable. In lieu of coming forward with permanent buildings at this time, we seek to document the interim buildings and site modifications that are being used to operate Fore Points Marina until we can come forward with an application for permanent structures. We believe the changes are consistent with the use of this property as an operational Marina. For reference, we have included the photo below of Fore Points Marina during the summer of 2020.



SECTION 4: SITE PLAN REVIEW STANDARDS (SECTION 14.6)

The interim building and site modifications requested with this second Level II Site Plan Amendment (Project ID: 000330-2018) meet the criteria for a minor amendment. Below is a narrative regarding how the interim buildings and site modifications meet the review standards of Section 14.6.

Transportation Standards (Section 14.6.1)

- **Impact on Surrounding Street Systems (Section 14.6.1.a)**
  A Traffic Analysis was prepared during the Master Development Plan process for 58 Fore Street which included Fore Points Marina and an analysis of impact on the surrounding street system. There is no change to impact on surrounding street systems due to the interim building and site modifications requested. Traffic impacts were not anticipated during the Level II Site Plan process as discussed in the original application in Section 11.

- **Access and Circulation (Section 14.6.1.b)**
  Access and circulation associated with Fore Points Marina was reviewed as part of the Master Development Plan for 58 Fore Street. Pedestrian access along the waterfront and an extended walkway was part of the overall Master Development Plan. The approved Level II Site Plan did not include any components of the pedestrian walkway. This application is focused on interim building and site modifications and is not our permanent building and site conditions.

  Pedestrian access along the waterfront is not possible at this time for several reasons. The area where pedestrian access will be provided in a permanent condition is currently not safe. There has been a seawall collapse and there are sink holes on this part of the property. In addition, the land exchange with the City of Portland has not occurred yet.

  Marina visitors and guests currently use one crossing point from the parking area to the Marina building and property. This circulation of guests would remain as part of the interim building and site conditions being proposed. Also, during the interim building and site conditions, the trail network would remain as it is today for pedestrians and bicyclists.

- **Public Transit Access (Section 14.6.1.c)**
  Public Transit Access for Fore Points Marina was reviewed as part of the Master Development Plan for 58 Fore Street. There is no change to public transit access as previously discussed with the interim building and site modifications proposed.

- **Parking (Section 14.6.1.d)**
  Our original Master Development Plan application indicated that there would be 110 parking spaces for Fore Points Marina. The original Level II Site Plan also included 110 parking spaces on the application. The interim building and site modifications are to support the marina use and no additional parking is being propose. Furthermore, parking, bicycle storage and electric vehicle charging were all discussed as part of the Master Development Plan for 58 Fore Street which included Fore Points Marina. There is no change to parking needs or access discussed with the interim building and site modifications proposed.

Parking for bicycles is provided at Fore Points Marina with a bike rack on the Marina property next to our western gangway which is near the entrance gate and Marina Office. This bike rack can accommodate 10 bicycles.

- **Transportation Demand Management (Section 14.6.1.e)**
  A Transportation Demand Management Plan was prepared during the Master Development Plan process for 58 Fore Street which included Fore Points Marina. There is no change to transportation demand management with the interim building and site modifications proposed.

Environmental Quality Standards (Section 14.6.2)

- **Preservation of Significant Natural Features (Section 14.6.2.a)**
  Preservation of Significant Natural Features associated with Fore Points Marina was reviewed as part of the Master Development Plan for 58 Fore Street and as part of the original Level II Site Plan submittal for Fore Points Marina in Section 12. There is no change to preservation of significant natural features with the interim building and site modifications proposed.

- **Landscape Preservation (Section 14.6.2.b)**
  Landscape preservation associated with Fore Points Marina was reviewed as part of the Master Development Plan for 58 Fore Street and a waiver for landscaping was requested on the original Level II Site Plan submittal for Fore Points Marina. There are no changes related to landscape preservation and the interim building and site modifications proposed.

  Waiver Request: Because this is an interim building and site modification and not our final permanent solution, we are requesting a waiver of landscaping requirements.

- **Site Landscaping Buffers (Section 14.6.2.c)**
  Site landscaping buffers associated with Fore Points Marina was reviewed as part of the Master Development Plan for 58 Fore Street and a waiver for landscaping was requested on the original Level II Site Plan submittal for Fore Points Marina. There are no changes related to landscape preservation and the interim building and site modifications proposed.

  Waiver Request: Because this is an interim building and site modification and not our final permanent solution, we are requesting a waiver of landscaping requirements.

- **Water Quality, Stormwater Management and Erosion Control (Section 14.6.2.d)**
  Water quality, stormwater management and erosion control associated with Fore Points Marina was reviewed as part of the Master Development Plan for 58 Fore Street and as part of the original Level II Site Plan submittal in Section 13.

  The strategy for stormwater quality management has not changed from the Master Plan. The permanent buildings and site modifications will need to comply with the overall water quality treatment parameters for the project upon construction of those improvements. Under the current, interim building & site modification site conditions, the trailer and shed structures reside over existing compacted gravel. Rainfall runoff from these structures flows onto a newly placed crushed shell surface, which covers the existing compacted gravel. As noted in the Minor Site Plan amendment, crushed shells provide an improvement over the existing packed gravel

surface. Crushed shells slow runoff, reduce erosion and have been proven to provide limited water quality enhancement in past studies based on use of crushed shells in water quality media filters.

Evidence of the existing compacted gravel condition at the site are evident in historical aerial imagery from Google Earth. In the attached images, one can see that the waterfront area associated with the marina has had marina and boat-maintenance services on the land over the past 10 years, with imagery from April 2012 (prior to purchase of the property in 2013), May 2018 (prior to start of construction the present marina), and July 2019 (start of operations at the current marina).

April 2012 (Source: Google Earth)

May 2018 (Source: Google Earth)

July 2019 (Source: Google Earth)

Public Infrastructure & Community Safety Standards (Section 14.6.3)

- **Consistency With City Master Plans (Section 14.6.3.a)**
  Consistency with City Master Plans associated with Fore Points Marina was reviewed as part of the Master Development Plan for 58 Fore Street and as part of the original Level II Site Plan submittal in Section 14. There is no change to consistency with City Master Plans with the interim building and site modifications proposed.

- **Public Safety and Fire Prevention (Section 14.6.3.b)**
  Public Safety and Fire Prevention associated with Fore Points Marina was reviewed as part of the Master Development Plan for 58 Fore Street and as part of the original Level II Site Plan submittal (see Section 17). We have been working with Public Safety and Fire Prevention during this interim condition period and the buildings and site has been inspected as recently as April and May 2021. Any corrections that were communicated have been made immediately and City staff has been notified.

- **Public Utilities (Section 14.6.3.c)**
  Public utilities associated with Fore Points Marina was reviewed as part of the Master Development Plan for 58 Fore Street and as part of the original Level II Site Plan submittal (see Section 15 and Section 16).

In accordance with past approvals, permanent domestic water and fire protection service is installed and in place to the marina.

The master plan envisions that wastewater needs will be accommodated by means of a future pump station to be installed between building blocks 3 & 5. In the current, interim condition, wastewater from the marina office and marina bathrooms flows to a small residential size ejector pump (EOne pump) and is discharged thru a low pressure, small diameter force main to a gravity sewer on the upland site that connects to the City sewer system in Thames Street, as reviewed and approved by the City of Portland Water Resources Department. Wastewater discharge from vessels is presently held in temporary holding tanks on the shore and pumped out / hauled by septic haulers to the wastewater treatment plant. The small ejector pump and hold tanks represent an interim condition, as the permanent condition anticipates a plumbed connection from the marina to the future permanent pump station to address all future wastewater needs at the marina. This permanent condition will be completed as part of future permanent building and site modification work.

The electrical service to the marina is a temporary (interim condition) overhead service from Fore Street down to a transformer situated on the east end of the upland site, with secondary wiring that runs overhead to distribution panels situated at the head of both the east and west gangways, as approved under previous Level II Site Plan documents. The master plan envisions underground electrical feeds to the marina. These underground electrical feeds are partially installed as part of a current upland development project (Phase 1) and will be extended to the marina at a future date to accommodate the permanent building and site modifications.

Site Design Standards (Section 14.6.4 a-d and f-i)
The interim building and site modifications associated with this Level II Site Plan Amendment are approximately 3,188 sf in total and meet the Site Design Standards.

Historic Resources (Section 14.6.5.e)
The interim building and site modifications associated with this Master Development Plan will not affect any designated historic landmarks or historic districts.

Assessment of Zoning
The interim building and site modifications associated with this Level II Site Plan are not permanent structures being proposed. The marina office, bathroom and laundry facility support the marina use which is an allowed use in the Eastern Waterfront Port Zone. The interim buildings and site modifications have been reviewed with City staff, including Zoning, as recently as April and May 2021 and any corrections that were communicated have been made.

We appreciate the assistance from City Staff throughout this process and look forward to ongoing coordination with the Planning Department.

PC1

Four Points Marina

0 views

Assigned to me Subscribe

Adrianna DiBiase <dibiaseadrianna@gmail.... Sep 19, 2021, 3:10:29 PM (18 hours ago)

to planning@portlandmaine.gov, planningboard@portlandmaine.gov, publiccomment@portlandmaine.gov

Good afternoon,

I am writing to support the marina's zoning text amendment to allow food and beverage at the marina.

Bruce K. White | Sea Tow Portland <bkwhite@seatow.c… Sep 1, 2021, 11:18:56 AM (6 days ago)
to planning@portlandmaine.gov

Hello,

I am taking a moment to express my support of a change to the Easter Waterfront Zoning ordinances, which would allow food and beverage providers associated with marinas be allowed permanent status.
This would not only increase the public's ability to access and enjoy the waterfront of Portland, it would provide more employment for the service industry and broaden the tax base.

Specifically, the temporary food and beverage service at Fore Points is well run, and a very enjoyable location to enjoy a little of Portland Harbor.
What a nice draw for visitors to Portland either by land or sea, to be able to watch the ships and boats come and go from this special harbor, while enjoying a meal.
I am a business owner, employing 14, with many of them hailing from Portland, or the sounding communities,

Thank you for your consideration and time.

Bruce White

Bruce White
Sea Tow Portland/Midcoast & Portland Sea Taxi
92 Cape Newagen Road
Southport Island, Maine 04576
207-772-6724
bkwhite@seatow.com
https://www.seatow.com/local/portland/

PC3

Fore Points Marina

0 views

Assigned to me Subscribe

Chelsea Roy <chelsearoy.me@gmail.com> Sep 18, 2021, 8:31:13 AM (2 days ago)

to Planning@portlandmaine.gov, planningboard@portlandmaine.gov, publiccomment@portlandmaine.gov

Hello,

I support the zoning text amendment to allow food and beverage at the Marina.

-Chelsea Roy

PC4

Support for the Marina Bar at Fore Pts. Marina

Assigned to me Subscribe

0 views

Christopher Riccardo <criccardo@visitportland… Sep 1, 2021, 1:02:30 PM (6 days ago)
to planning@portlandmaine.gov

Hello,

It was recently brought to my attention that there is an opportunity arising for the rezoning of the Eastern Waterfront Port Zone that would allow the Fore Points Marina Bar to operate on a more consistent permanent manner.

In my opinion, as Visitor Services Manager at Visit Portland, that would be an asset to that portion of the waterfront and the city. With more and more development happening in the region it is drawing a growing number of traffic from visitors and locals alike. The food and beverage service would be welcomed in that location and it would offer one more option, if only for patrons, for bathrooms.

I lend my full support to this opportunity to rezone the area.

Please let me know if you have any questions or if I can elaborate on anything.

Regards,

Christopher Riccardo

Visitor Services Manager

Visit Portland

207.772.5800

14 Ocean Gateway Pier | Portland, Maine 04101

criccardo@visitportland.com

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visitportland.com | @visitportland | #VisitPortlandME

PC5

Ciara Price <management@ciaraprice.co> Sep 17, 2021, 1:43:35 PM (2 days ago)

to Planning@portlandmaine.gov, planningboard@portlandmaine.gov, publiccomment@portlandmaine.gov

I am writing to support the marina's zoning text amendment to allow food and beverage at the Marina.

The Marina Bar is a safe place and a wonderful environment. When you think of Portland, Maine you think coastal and Fore Points Marina is the real life vision. Actually experiencing the entrance of Casco Bay with local food and beverages is something that resonates not only to locals but to tourists who help drive and support our city. I hope you will be open minded and allow the city to grow.

Best,
Ciara

Fore Points Marina

0 views

Assigned to me Subscribe

Dannie Nichols <daniellefaye.n@gmail.com> Sep 17, 2021, 3:26:48 PM (2 days ago)

to planning@portlandmaine.gov, planningboard@portlandmaine.gov, publiccomment@portlandmaine.gov

I am writing to support the marina's zoning text amendment to allow food and beverage at the marina!

Fore Points has been a staple for me and my friends when we visit Portland. Our trips there just won't be the same without it. It's such a special space for locals and visitors.

Best,

Dannie Nichols
daniellefaye.n@gmail.com
910-352-0193

PC7

Deanna Povec <deannapovec@gmail.com> Sep 20, 2021, 8:37:28 PM (11 hours ago)
to Planning@portlandmaine.gov, planningboard@portlandmaine.gov, publiccomment@portlandmaine.gov

Hello,

I am writing to support the marina's zoning text amendment to allow food and beverage at the Marina.

The Marina Bar has been a place where we have enjoyed an after work drink in our beautiful backyard. We have made some life long friends here and would not be the same and provide these opportunities if you don't consider keeping food and beverage as part of this amazing space for all to enjoy.

Please consider.

Thank you,
Deanna

Drew Johnson <abjohnson.drew@gmail.com> Sep 19, 2021, 7:00:09 AM (yesterday)
to planning@portlandmaine.gov

Hello,

I am writing to support the marina's zoning text amendment to allow food and beverage at the marina.

The Portland waterfront needs to maintain as many of these types of watercraft accessible restaurants/bars as possible. It is an invaluable asset to the city and Casco bay. It is what helps make Portland great!

It is also a great addition to the bike path.

Thank you for your consideration!

Drew Johnson
25 Gleckler Rd, Portland.

Fore Points Marina 0 views

Assigned to me Subscribe

Gregory Thayer <gregorythayer@gmail.com> 11:17 AM (1 hour ago)

to planning@portlandmaine.gov, planningboard@portlandmaine.gov, publiccomment@portlandmaine.gov

Hello,

I am writing to support the marina's zoning text amendment to allow food and beverage at the marina.

Portland has the unique identity of being a seafaring city with accessible views that no other city in America rivals. We are also known as a city that excels in food and beverage, and have a burgeoning food truck scene. I believe that by not allowing the marina bar to reopen next summer and subsequent summers, Portland is only hurting itself. My wife and I love to enjoy a place to have food and drink outdoors- a place where Maine as a whole excels. We love to gaze upon the boats and see the islands and open ocean beyond. It would be a shame to no longer have this option.

I believe that supporting the marina's zoning text amendment is a benefit to Portlanders, Mainers, and all who come to visit. For those sailing in and landing at the marine, what a wonderful and welcoming first impression.

Greg Thayer
Portland, ME

PC10

Fore Points Marina

0 views

Assigned to me Subscribe

Hoyt David Morgan <hoytmorgan@gmail.c… Sep 17, 2021, 6:21:51 PM (2 days ago)

to Planning@portlandmaine.gov, planningboard@portlandmaine.gov, publiccomment@portlandmaine.gov

I am writing to support the marina's zoning amendment to allow food and beverage at the Marina.

I believe the marina and development surrounding it has been / will be very positive for the city and food and beverage is an important piece of this.

Thank you for your consideration.

Sincerely,
Hoyt Morgan

PC11

Jack Cowie IV <jcowie@varneyagency.com> Sep 17, 2021, 1:58:33 PM (2 days ago)

to planning@portlandmaine.gov, planningboard@portlandmaine.gov, publiccomment@portlandmaine.gov

I am writing to support the marina's zoning text amendment to allow food and beverage at the Marina.

I've been living and doing business in greater Portland for a majority of my life. During that period the waterfront dynamic has changed considerably. One thing that has been consistent, however, are the barriers placed for motivated persons to contribute to positive change and I would hate to see that happen again with the Marina Bar. The Prentice Group is rooted in greater Portland and has a vested interest in the economic growth of the City while being devoted to expanding upon what makes it great. Whether it's the restaurants, new development, marinas, or a combination, we need to fan the flames of motivated, in state entrepreneurs while we can. Portland is going to continue to grow at a rapid pace, the Marina Bar and Food Truck obviously fill a void the city is desperate for and it would be incredibly frustrating to see such a success story be stifled by zoning headwinds. Please look upon this and future zoning amendments favorably, it's the best thing for Portland's economy, residents, and visitors.

Thank you,

Jack Cowie IV WCP

Sr. Risk Manager- Real Estate & Development

PC12

Fore points marina

0 views

Assigned to me Subscribe

Jane Ellis <jmdellis@gmail.com> Sep 18, 2021, 4:51:56 PM (yesterday)

to planning@portlandmaine.gov, planningboard@portlandmaine.gov, publiccomment@portlandmaine.gov

Love this place !! Please support zoning text amendment to allow food and beverages. There should be an extra Reason to share this great place - and let everyone know it's great here! Food with drinks and friends !
Jane Ellis

ennifer.rice knottytide.com <jennifer.rice@knottytide.c… Sep 20, 2021, 2:39:46 PM (17 hours ago)
to Gregory Thayer, planning@portlandmaine.gov, planningboard@portlandmaine.gov, publiccomment@portlandmaine.gov

Hello,

I'm also writing to support the marina's zoning text amendment to allow food and beverage at the fore points marina.

This is a wonderful, eclectic, and growing city. The marina bar offers yet another unique and compelling option for locals and tourists alike to enjoy the waterfront of Portland. I believe that Portland has a tremendous opportunity to stay historic, unique, quirky, and modern all at the same time. The merging of old-new and "something in between" is where Portland excels and I only see the marina bar as a shining example of that juncture. The space caters to all whom love the water and all whom seek a relaxed and inviting atmosphere. I see it not only as a "here and now" but as a staple for all to enjoy for years to come.

It would be a true shame for the community to lose this pop-up gem. We love it.

Thank you,

Jen

Jennifer Rice
Regulatory Affairs Consultant
P: (717) 891-7145
E: Jennifer.Rice@knottytide.com

Jessica Goodman <jlgoodman19@gmail.com> Sep 17, 2021, 3:24:03 PM (2 days ago)

to Planning@portlandmaine.gov, planningboard@portlandmaine.gov, publiccomment@portlandmaine.gov

Good Afternoon,
I am writing to support Fore Points Marina's zoning text amendment to allow food and beverage at Fore Points Marina. It's been such a great resource to have during COVID - we still have time before winter sets in - it would be great to continue to have a safe outdoor space to visit with food and beverage. Thank you for your consideration!
Kind regards,
Jessica

Jessica Goodman, PhD
Portland Resident

jlgoodman19@gmail.com
585-820-9296

Joe Hezlep <joehez@yahoo.com> 8:06 AM (1 hour ago)

to Planning@portlandmaine.gov, planningboard@portlandmaine.gov, publiccomment@portlandmaine.gov

Hi,
I am writing to support the marina's zoning text amendment to allow food and beverage at the Marina.

I have found that Four Points Marina has truly been a special place over the last two summers in Portland and really added a lot to the waterfront community. Do you ownership truly cares about Portland and its future and the staff have been amazing to both locals and tourists alike. Places like this are exactly what has led to the rise in Portland being a destination city for so many tourists.

Having local people invest in their local community is always the most ideal way for any city or town to grow. And I truly feel like Casey Prentice and his team want what's best for not only their company but also their community.

Thank you for your consideration in this matter.

Joe Hezlep

"You can't live a perfect day without doing something for someone who will never be able to repay you." ~ John Wooden

Sent from Yahoo Mail on Android

Julia Bergquist <bergquist.julia@gmail.com> Sep 21, 2021, 12:58:17 PM (19 hours ago)

to planning@portlandmaine.gov

Good Afternoon,

I am writing to support the marina's zoning text amendment to allow food and drink at the marina. This was my favorite outdoor space in Portland this summer, and drew a lot of additional income to our city. Please do not prevent Portland natives from enjoying a new form of beautiful waterfront outdoor dining just as it is getting on its feet.

Thank you for your time,

Julia Bergquist

PC17

FORE POINTS MARINA

Assigned to … Subscribe

0 views

Justin Bryand <jbryand@hotmail.com> Sep 18, 2021, 10:43:39 AM (yesterday)
to planning@portlandmaine.gov, planningboard@portlandmaine.gov, publiccomment@portlandmaine.gov

I am writing to support the marina's zoning text amendment to all food and beverage at the marina.

PC18

kane.kathleen1@gmail.com <kane.kathleen1@gmail.co… Sep 18, 2021, 9:48:11 AM (yesterday)
to planning@portlandmaine.gov, publiccomment@portlandmaine.gov, planningboard@portlandmaine.gov

To whom it may concern,

I am writing to support the Marina's zoning amendment to allow food and beverages at the marina.

This has become such a special place to gather safely during the pandemic. We have been able to celebrate birthdays and engagements here while enjoying the beauty of the city we love and delicious food. The staff are warm and supportive of the community. Please consider the zoning amendment.

Thank you,
Kathleen

Fore Points Marina

0 views

Assigned to me Subscribe

Katilyn Coburn <katilyncoburn@gmail.co… Sep 19, 2021, 10:28:31 AM (22 hours ago)

to planning@portlandmaine.gov, planningboard@portlandmaine.gov, publiccomment@portlandmaine.gov

Hello,

I am writing to support the marinas zoning text amendment to allow food and beverage at the marina.

Thank you for your consideration!
Katilyn Coburn

PC20

Kayla Bubar <k.m.bubar@gmail.com> Sep 18, 2021, 9:25:33 AM (yesterday)
to planningboard@portlandmaine.gov, publicomment@portlandmaine.gov

Hello,

My name is Kayla Bubar - I am a resident of Portland. I am writing today to support the marina's zoning text amendment to allow food and beverage at the marina. It's one of my favorite spots in Portland to grab a bite to eat and a drink. It's unique atmosphere with games, great food, and fantastic cocktails, brings me back every time. It would be a shame to make it difficult for more small businesses to succeed. We've had enough of that this year. Please save Fore Points Marina. We need to keep the heart of Portland alive.

Thank you for your time.

Kayla Bubar

Fore Points Marina 0 views

Assigned to me Subscribe

Kelley Burich <kelleyaburich@gmail.com> Sep 21, 2021, 5:27:25 PM (15 hours ago)

to planning@portlabdmaine.gov, planningboard@portlandmaine.gov, publiccomment@portlandmaine.gov

Hello, I am writing to support the Marina's zoning text amendment to allow food and beverage at the marina. It's a great space that brings something unique to Portland that you can't find anywhere else in the area.

Thank you,

Kelley

PC22

Fore points marina 0 views

Kimberly Wallingford <kimberly.wallingford2010@gmail.com>
to planning@portlandmaine.gov, planningboard@portlandmaine.gov

To Whom It May Concern,

I am writing to support the Marina's zoning text amendment to allow food and beverage at the marina

Kimberly MacVane

Sent from my iPhone

Reply all Reply to author Forward

Kristin Kostka <kristinmkostka@gmail.com> Sep 19, 2021, 9:42:00 PM (11 hours ago)
to planning@portlandmaine.gov, planningboard@portlandmaine.gov, publiccomment@portlandmaine.gov

To Whom It May Concern:

I am writing to support the marina's zoning text amendment to allow food and beverage at the Marina.

As a new member of the Portland community working at the Roux Institute, the Marina is an incredible asset to the community. I look forward to bringing my researchers and students to partake in many more beautiful evenings on the Marina. I fully support this amendment!

Best,

Kristin Kostka
Director of the OHDSI Center
The Roux Institute
Northeastern University
--
Kristin Kostka
p: 508-523-7554

Fore Points Marina 0 views

Assigned to me Subscribe

Laurel Ellis <laurel.l.ellis@gmail.com> Sep 18, 2021, 4:41:55 PM (yesterday)
to planning@portlandmaine.gov, planningboard@portlandmaine.gov, publiccomment@portlandmaine.gov

Hello!

I am writing to support the Marina's zoning text amendment to allow food and beverage at the Marina. It is such a great spot to relax, everyone is always happy and safe there. I have been several times and truly believe it only brings positivity to the neighborhood. Hope they are able to stay open next season.

Thank you for your consideration!

Laurel
(Downtown Portland resident)

PC25

Fore Points Marina

0 views

Assigned to me Subscribe

Lily Hutchinson <lilyhutch95@gmail.com> Sep 18, 2021, 12:43:45 PM (yesterday)

to planning@portlandmaine.gov, planningboard@portlandmaine.gov, publiccomment@portlandmaine.gov

Good afternoon,

I am writing to support the marina's zoning text amendment to allow food and beverage at the Marina.The marina is such a quiet and peaceful place as well as a lovely location to have food and beverages. The marina is a place for people to gather whether they are coming or going from Portland. Please allow this amendment. Thank you.

Very respectfully,
Lily Hutchinson

PC26

Fore Points Marina Bar

Assigned to … Subscribe

0 views

Mina Moutzourogeorgos Miller <mmoutz@ao… Sep 18, 2021, 10:43:21 AM (yesterday)
to Planning@portlandmaine.gov, publiccomment@portlandmaine.gov, planningboard@portlandmaine.gov

I am writing to support the marina's zoning text amendment to allow food and beverage at the Marina.

The Marina Bar has been a wonderful source of enjoyment and entertainment for 2 years now to many people; young and old. The views are the best in the city & the Marina Bar has been enjoyed by so many- residents & tourists alike.

It is a great and popular draw because of it's location. The marina bar should be allowed to continue to operated there with food, beverages & even live music (as it was allowed to do last year).

It is a gem in the Portland landscape now and the Marina Bar should be allowed to operate there forever. It's was and remains a great idea with great views, drinks, food and live music should be allowed back - for ALL to enjoy.

Sincerely,
Mina Miller

PC27

Fore Points Marina

0 views

Assigned to me Subscribe

Nate Burbury <nateburbury@gmail.com> Sep 19, 2021, 1:06:22 AM (yesterday)

to planningboard@portlandmaine.gov

I am writing to support the marina's zoning text amendment to allow food and beverage at the marina

PC28

Noelle Chamberland <noelle.chamberland@gmail.com> Sep 18, 2021, 8:56:37 AM (2 days ago)
to planning@portlandmaine.gov, planningboard@portlandmaine.gov, publiccomment@portlandmaine.gov

To whom it may concern,

I am writing to support the marina's zoning text amendment to allow food and beverage at the marina.

Fore Points Marina has become a favorite gathering place for family and friends, and we would be so disappointed to lose the access to Evo X and the other tasty offerings in the area. Please don't take this away from us! We've really enjoyed the development of this under-utilized area of Portland and we hope for even further growth and development.

Thanks for listening!

Noelle Chamberland

PC29

Fore Points Marina

0 views

Assigned to me Subscribe

PAUL SZATKOWSKI <szatkowski@aol.com> Sep 18, 2021, 10:11:53 AM (yesterday)

to planning@portlandmaine.gov, planningboard@portlandmaine.gov, publiccomment@portlandmaine.gov

I am writing to support the marina's zoning text amendment to allow food and beverage at the marina. As property owner in the area and soon to be multiple property owner, I feel that the presence of the marina bar outdoor space has greatly added to that area of waterfront and was something that was sorely needed, as well as taking a lead in the redevelopment of that area. In this "new normal" outdoor venues such as Fore Points should be encouraged and supported, particularly those that add to the waterfront. Thank you.

Paul Szatkowski

Fore Points Marina

0 views

Assigned to me Subscribe

Pete Vernon <pfvern@gmail.com> Sep 18, 2021, 2:18:52 PM (yesterday)

to planning@portlandmaine.gov, planningboard@portlandmaine.gov

Good afternoon,

I am writing to support the Marina's zoning text amendment to allow food and drink sales at the Marina. The Marina Bar has been a great addition to the neighborhood for those of us who live in Munjoy Hill.

Especially at a time when we are still experiencing high levels of transmission of Covid, having a safe outdoor gathering spot like the Marina Bar has been a lifesaver. It would be a shame not to allow for the zoning amendment.

Thank you for your consideration,
Pete Vernon

Support for FPM proposed Zoning Text Amendment

1 view

Pierre de Rochefort
<pierre.derochefort@icloud.com>

Aug 10, 2021, 10:04:48 AM
to planning@portlandmaine.gov, Nina DeRochefort

Dear City of Portland, Planning and Urban Development Department;

We are writing to express support for the Portland Foreside Development Company's Zoning Text Amendment proposal related to the Eastern Waterfront Port Zone (EWPZ) and the Fore Points Marina (FPM) property located at 1 Marina Way. Despite the challenging 2020 COVID context, the FPM has been a significant addition to the EWPZ since it opened in 2019. Within the FPM, the availability of a food and beverage amenity has already proved extremely successful, providing an attractive water-front alternative while adding a compelling dimension in terms of increasing public access to and enjoyment of the water front. In voicing our support, we would suggest that the proposed Zoning Text Amendment is:

- Entirely in line with the City of Portland's Land Use Code allowing for restaurants and food service establishments in the EWPZ so long as they are directly associated with a marina facility and also open to the general public.
- Consistent with the City of Portland's Comprehensive Plan, Portland's Plan 2030 in terms of uses already conditionally allowed in the EWPZ, and ensures that these uses are directly associated with and in the immediate proximity of marina facilities.
- Complementary to and supportive of the City of Portland's Land Use Code that acknowledges that the growth of Portland's marine passenger industry requires supporting services and activities to provide an enjoyable travel experience. The Code states that "non-marine uses that complement the marine passenger industry, are compatible with existing and future-water dependent uses, and provide opportunities for residents and visitors alike to enjoy the Eastern Waterfront throughout the year, are encouraged."
- Complementary to and supportive of higher priority uses by further attracting transient and seasonal boat activity to the site, intermixed with public usage and enjoyment. The mix of use (marina and food/beverage) at FPM, open and inviting to the public, allows for the wider community to enjoy a waterfront location.

Relating this to a wider context, we would also express support for the potentially transformative nature of the entire Portland Foreside project. The Portland Foreside Development Company's current vision is compelling — a mixed-use neighborhood with a focus on community in the best sense of the term, designing sustainably and cohesively to meet the vital historical significance of the area while promoting local residents and visitor's year-round enjoyment of Portland's waterfront through housing, office, lodging, dining, retail, events, and outdoor areas that will promote a sense of inclusiveness, community, and public gathering. In short, we believe the project will be a game-changer for Portland, providing a model for community-based urban planning (and living) for years to come.

Respectfully,

Pierre and Nina de Rochefort
503 Chandler's Wharf, Portland

PC32

Sam Basile <sam.basile@zoominfo.com> 7:46 AM (1 hour ago)

to Planning@portlandmaine.gov, planningboard@portlandmaine.gov, publiccomment@portlandmaine.gov

Hello,

I am writing to support the marina's zoning text amendment to allow food and beverage at the Marina.

If you want to add anything about why you support food and beverage at the Marina it never hurts!

Thank you so much and hope to see you this weekend for a final season beverage!!

Sam Basile
Manager, Strategic Customer Success

O: 617-826-2953
E: sam.basile@zoominfo.com

275 Wyman St. Waltham, MA 02451

PC33

Fore Points Marina

0 views

Assigned to me Subscribe

Samantha Taube <samantha.taube@gmail.c… Sep 18, 2021, 10:09:47 AM (yesterday)

to planning@portlandmaine.gov, planningboard@portlandmaine.gov, publiccomment@portlandmaine.gov

I am writing to support the marina's zoning text amendment to allow food and beverage at the marina.

Thank you.
--
Samantha Taube

Sarah Pritchard <smpritchard8@gmail.com> Sep 19, 2021, 9:17:12 AM (24 hours ago)

to planning@portlandmaine.gov, planningboard@portlandmaine.gov, publiccomment@portlandmaine.gov

To whom it may concern,
I am writing to support the marina's zoning text amendment to allow food and beverage at the Marina.

Thank you,
Sarah Pritchard

Four Points Marina

0 views

Assigned to me Subscribe

Sean <smalone703@gmail.com> Sep 18, 2021, 8:42:10 PM (yesterday)

to planning@portlandmaine.gov, planningboard@portlandmaine.gov, publiccomment@portlandmaine.gov

Hello,

I'm not sure why you would put a small company out of business due to recently established zoning changes. The very small operation there is probably easy to look over but the effect to patrons and staff shouldn't be. Please consider the community you support and strive to ensure the employees at four points marina dont needlessly lose their jobs. They deserve better.

A loyal patron

Sean

Stephanie Hill <hill.stephanielynn@gmail.com> Sep 17, 2021, 2:59:55 PM (2 days ago)

to planning@portlandmaine.gov, planningboard@portlandmaine.gov, publiccomment@portlanaine.gov

I am writing to support the Marina's zoning to allow food and beverage at the marina.
It offers family friendly environment with a great view. The same can't be said for other establishments in the area that cater more to drunken debauchery.
Please consider allowing the marina bar to continue to operate. The summers and nice outdoor weather is limited on the waterfront and many of us would like to be able to get the most out of that time.

Thank you,
Stephanie

Stephanie Peer <speer207@gmail.com> Sep 18, 2021, 8:48:14 AM (2 days ago)

to planning@portlandmaine.gov, planningboard@portlandmaine.gov, publiccomment@portlandmaine.gov

Hi there,

I'm writing to support the Marina's zoning text amendment to allow food and beverage at the marina. It is delicious, quiet, and such a treat!

Thank you,
Stephanie Peer
71 Deane Street, Portland

Fwd: Fore Points Marina

0 views

Assigned to me Subscribe

Stephanie Woods <nearhos00@yahoo.co… Sep 19, 2021, 5:16:11 PM (16 hours ago)

to planningboard@portlandmaine.gov

Hello
> I am writing to support the marina's zoning text amendment to allow food and beverage at the marina. This past two years the marina bar and EvoX food truck have been a welcome addition to Portland's food and bar scene providing a welcoming open space on the waterfront.
> Thank you

welmaurya@gmail.com <welmaurya@gmail.com> 10:06 AM (5 hours ago)
to Planning Board, Planning@portlandmaine.gov

Planning Board Members,

I am writing in support of the Portland Foreside & Fore Points Marina's application for a text amendment to allow for restaurant use.

I walk the Eastern Promenade trail almost every day and have often stopped in to enjoy the outside dining with a friend. The text amendment will allow permanent and increased public access to the waterfront. It really is unique in Portland and serves as a public amenity. The language proposed is measured and well thought out and with no real downside. In many aspects it reinforces the City's goals and Comp Plan.

I hope the Planning Board will vote in favor of this proposal.

Best regards,

Tim Wells

PC40

Fore Points Marina Bar

Assigned to … Subscribe

0 views

Miller, Travis <travis.miller@ubs.com> Sep 20, 2021, 1:30:55 PM (18 hours ago)

to Planning@portlandmaine.gov, publiccomment@portlandmaine.gov, planningboard@portlandmaine.gov

I am writing to support the marina's zoning text amendment to allow food and beverage at the Marina.

The Marina Bar has been a wonderful source of enjoyment and entertainment for 2 years now to many people; young and old. The views are the best in the city & the Marina Bar has been enjoyed by so many residents & tourists alike.

It is a great and popular draw because of its location. The marina bar should be allowed to continue to be operated there with food, beverages & even live music (as it could do last year).

It is a gem in the Portland landscape now and the Marina Bar should be allowed to operate there forever. It's was and remains a great idea with great views, drinks, food, and live music should be allowed back for ALL to enjoy.

Sincerely,

Travis Miller

PC41

Fore Points Marina

0 views

Assigned to me Subscribe

Will Silton <willsilton@gmail.com> Sep 18, 2021, 1:01:40 PM (yesterday)

to planning@portlandmaine.gov, planningboard@portlandmaine.gov, publiccomment@portlandmaine.gov

I am writing to support the marina's zoning text amendment to allow food and beverage at the marina.

Fore Points is culturally intertwined with the East End (my neighborhood) and I love the fun vibe it has brought to an otherwise non-value added space for Portland residents.

Thank you for your consideration!

Will Silton

Michael Hoover
40 Melbourne Street
Portland, ME 04101

September 22, 2021

Brendan Mazar, Chair
City of Portland Planning Board
389 Congress St, 4th Floor
Portland, ME 04101

VIA EMAIL: planningboard@portlandmaine.gov

RE: 58 Fore Street Master Plan Amendment Proposal Workshop

Chair Mazar and Planning Board Members:

To be clear, the master development approvals granted by the City of Portland for the marina facility at 58 Fore Street consisted of with a single marina building of high-quality design and a public "waterfront walkway" extending for the entire width of the marina. The current development at the site exhibits absolutely no resemblance the approved design concept. In contrast, the area is now occupied by a "marina office" (of approximately the same footprint as the proposed permanent marina building), PLUS a series of pre-fab huts of no architectural distinction which are sited so as to block most views, a sprawling de facto restaurant/bar posing as a temporary event, and a temporary fence that blocks any remaining views to the water which are not already obstructed by the temporary structures.

The 58 Fore Street developer, and applicant for this proposed change to the master development plan and zoning uses, has abused the courtesy offered by the City of Portland to operate the facility in a temporary manner. This abuse must stop, immediately. The developer has had more than enough time to operate with temporary structures and that it should not be granted a 3-year extension to continue to avoid what it promised previously. The public access in the vicinity of the marina was to be one of the few benefits for citizens, and was consistent with the proposed development of water dependent uses in this zoning district. Instead, the developer, with the help of the City, has privatized the waterfront for its own financial gain with the development of a non-water dependent use (the seasonal restaurant), with no consideration paid to public interests.

The developer offers no reasonable explanation for this three year period of "temporary" occupancy. Blaming the pandemic as the reason for a request for the continued operation of the facility in a temporary manner is simply a continuation of this unacceptable behavior, and is not in any way a reasonable justification for this proposal.

In addition to the egregious abuse of existing development permits, the developer has not chosen to construct the temporary facilities in accordance with existing building codes. This is another example of this developed choosing not to comply with existing requirements. These actions, in combination with the use of "temporary" development activities, has resulted in a Consent Agreement with the City to

correct the noncompliant actions taken to date. We understand the "Consent Agreement" requires that all the temporary structures be removed by 11/8/21 but we were unable to locate a detail in the proposed Minor Site Plan amendment (or other documents) specifying where the structures will be placed after removal from the site. Is the City requiring that they be moved completely off the site of 58 Fore Street, or is the applicant proposing just to move them to a slightly different location on the property? They should not be allowed to remain between the Eastern Promenade Trail and the water. Since we could not find answers to these important elements of the approved activity, we ask that the City requires a specific removal plan for public review.

It is also extremely unfortunate that the City allowed the developer to evade the regulatory language by granting multiple consecutive 14-day "temporary events" permits to allow the establishment of the Fore Points Marina Bar. I support that the City is now prohibiting food or liquor service at the property after November 8, 2021 (other than a food truck) except for bona fide temporary events as defined by Code unless the developer is approved for a text amendment. Given the poor decisions taken by the developer to date, I am opposed to such a text amendment. The area immediately along the waterfront is so narrow in the vicinity of the Eastern Waterfront Port Zone that the entire area should be reserved for water-dependent uses. Non-water-dependent uses, like bars and restaurants should be located landward of this zone.

If, despite this, an amendment is approved to allow a bar/restaurant as accessory to a marina use, it should be restricted to being located within a permanent marina structure itself (not a temporary structure), and it should not allow an outside seating or stage presence. Requiring it to be housed in a permanent structure would create an incentive to get rid of the temporary hut-village. Moreover, light and sound carry over the water. Neighboring residential areas should not be subjected to the light and sound intrusion from the introduction of an incompatible new bar/restaurant use in this location.

I also want to bring to your attention the fact that I remain very concerned about the unauthorized filling and other extensive site work that is occurring on the property (and has been occurring for months) which appears to be outside of sections of the property which have obtained approved site plans. I do not believe it is appropriate to approve any amendment to the Master Development Plan whatsoever until this issue of apparently unauthorized site work has been resolved. I have not identified any documentation of the need for large areas of staging necessary for soil deposition, and it is clear that no real efforts to control erosion or runoff is being addressed in this area of the property. Additionally, it took multiple letters to city staff and the DEP this year to force the developer to remove 75 yards of unpermitted fill at the northern end of the site.

From my perspective, the developer is incorporating one more activity designed to take advantage of "temporary" activities which are altering the physical characteristics of the site outside approved plans, and which will conveniently benefit future land development activities at the property without the benefit of review or approval by the city and affected residents. It is my understanding that the only changes made to the entire property known as 58 Fore Street must be consistent with one or more approved site plans. As these site plans are being proposed in stages, there are large areas that have not been the subject of site plan approval. Yet extensive filling has occurred in the entire area east of an extension of St. Lawrence Street outside of the designated limit of disturbance on the approved site plan. I have not identified any site plan notes or approval language addressing the need for, and

approval of, staging disturbances which extend beyond approved limits of disturbance. Moreover, the filling that is occurring seems to be inconsistent with the approved Master Development Plan.

In closing, the long term rampant and egregious disregard for existing approvals for the development of the marina facility as well as for site development at the project should lead the Planning Board to require that the applicant simply commence to adhering to the existing approvals for the Master Plan and site plans at this development. In addition, no changes to the existing zoning language should be adopted. These changes are only requested to benefit the continued misuse of the current approvals by the developer. I ask for your support in requiring that the actions taken by the developer which are not consistent with existing approvals be denied, and that no future zoning language changes be enacted which will simply benefit these well documented, egregious activities in the future.

Regards,

/s/

Michael Hoover

Michael DeCandia <michael@mdcarchitects.com> Sep 22, 2021, 3:50:30 PM (17 hours ago)

to planningboard@portlandmaine.gov

I am a Portland resident and I really enjoy having access to food and beverages at the Four Points Marina. Please allow this to continue indefinitely. I support their application.

Michael DeCandia
305 Commercial Street

Cindy Warren <cindy_warren@live.com> Sep 22, 2021, 4:13:21 PM (16 hours ago)
to publiccomment@portlandmaine.gov, planningboard@portlandmaine.gov, planning@portlandmaine.gov, Cindy Warren

Hello –

I grew up in the Portland area. One of the things that truly amazes me is how well Portland has allowed the waterfront to be used and enjoyed by all. Allowing the continued use and availability of the Four Point Marina with access to beverages and food uses only contributes to the city's human scale and gives us spaces and use that people of all ages will enjoy.

I remember as a kid and young adult how inaccessible this area was.

To see and personally experience its transformation is magical.

At a time when many of us continue to feel like public access is becoming more and more restricted, having access to a place like this with a beautiful view, a place to feel a cool summer breeze, grab a bite to eat and enjoy the company of others is a gift.

This amendment places a jewel in the areas connecting the East Promenade to the Old Port and Munjoy Hill – places we all know and love. We need to maintain and grow these beautiful ties to the great outdoors and fun spaces. Fill in the blanks.

Maine and its communities have a rich history of giving people access to beaches (Crescent Beach; Scarborough Beach; Popham Beach; Ferry Beach) beautiful views (Two Lights; Portland Headlight) historic places (Admiral Perry's Home), public parks (Katahdin/Baxter State Park; Western and Eastern Promenades; Deering Oaks) and spaces and water access to both the ocean and fresh water. There are too many beautiful sites to mention here.

This amendment will continue to enhance the vibrant and unique nature of the city, its livability and allows it to continue to grow and mature in a way we can all enjoy! There's nothing like it for hundreds of miles!

I urge you to vote "YES" and approve this Four Point Marina Zoning Text Amendment.

Sincerely,

Cindy Warren

821 Barretts Mill Rd

Concord MA 01742

Ross Maniaci <rossmaniaci@gmail.com> Sep 22, 2021, 4:31:32 PM (16 hours ago)

to planning@portlandmaine.gov, planningboard@portlandmaine.gov, publiccomment@portlandmaine.gov

Hi -

I'm writing to support the Marina's zoning text amendment to allow food & beverage at the Marina.

This is an amazing addition to the waterfront & the Portland Trail.

Thanks - Ross Maniaci

Ross Maniaci
rossmaniaci@gmail.com
Cell: 315-415-0285

PC46

Fore Points Marina Zoning Text Amendment

Assig… Subscribe

0 views

Johanna Young <johanna.w.young@gmail.… Sep 22, 2021, 4:54:04 PM (16 hours ago)
to planningboard@portlandmaine.gov, publiccomment@portlandmaine.gov, planning@portlandmaine.gov

To whom it may concern,

As a city resident I would like to express my deep support of the Fore Points Marina Zoning Text Amendment.
The Marina Bar is a wonderful addition to the Portland waterfront and encompasses the working waterfront feel of the city that makes it so special.
There is nothing better in the summer months than enjoying time sitting by the water with friends and family. I brought out-of-state visitors to the Marina Bar as a ritual because of the excellent food, drinks and views of the harbour!
It's a shame that the city is not welcoming and celebrating a venue such as this in the first place. Let us reach out a hand to these businesses instead of making more roadblocks for them.

Best,
Johanna Young
Hawthorne St. Portland, ME

Sara Piwowarski <saraepiwowarski@gmail.com> Sep 22, 2021, 5:42:55 PM (15 hours ago)

to planning@portlandmaine.gov, planningboard@portlandmaine.gov, publiccomment@portlandmaine.gov

I am writing to support the Marina's zoning text amendment to allow food and beverage at the marina.

Best,
Sara

PC48

James Meagher <jmmps@maine.rr.com> Sep 22, 2021, 7:56:19 PM (13 hours ago)

to planningboard@portlandmaine.gov

Planning Board Members,

As a member of the marine construction community, the facility at Four Points is well received by those who visit Portland by water.

Thanks,

James E. Meagher, Director

Underwater Mineral Processing Services

50 Market St. So. Portland, Maine 04106

207-741-2955 phone

207-799-3782 fax

jmmps@maine.rr.com

http://www.mpsmaine.com

PC49

thomas coleman harmon <motionhero@yahoo.com> Sep 22, 2021, 8:58:37 PM (12 hours ago)

to planning@portlandmaine.gov

Love this bar and food would be a welcomed addition. Please permit it as it's a stop for me when I come to Portland.

PC50

Marie Gardner <peatrisha85@me.com> 9:27 AM (22 minutes ago)

to planning@portlandmaine.gov, planningboard@portlandmaine.gov, publiccomment@portlandmaine.gov

I am writing to support the Marina's zoning text amendment to allow food and beverage at the marina.

Sent from my iPhone

Mykaela Twitchell <mtwitchell19@gmail.com> 9:42 AM (8 minutes ago)

to planing@portlandmaine.gov, planningboard@portlandmaine.gov, publiccomment@portlandmaine.gov

Hello—

I am writing to support the marina's zoning text amendment to allow food and beverage at the marina.

Thank you,

Mykaela Twitchell

PC52

Fore Points Marina - Support for food and beverage on the eastern waterfront

Assi… Subscribe

0 views

Timothy Schneider <tstimberworks@gmail.com> 11:09 AM (7 minutes ago)

to planning@portlandmaine.gov, planningboard@portlandmaine.gov, publiccomment@portlandmaine.gov

To whom it may concern,
On behalf of my friends and family, please let this serve as support for continued and future food and beverage options at and around the Fore Points Marina, 58 Fore St. development and along the eastern waterfront.

Thank you in advance for your consideration of these great improvements and support for additional options for the eastern prom area residents and visitors alike.

Sincerely,
Timothy Schneider.

PC53

Fore Points Marina

0 views

Assigned to me Subscribe

daneel dafni <daneeldafni@yahoo.com> 8:21 AM (8 minutes ago)

to planning@portlandmaine.gov, planningboard@portlandmaine.gov, publiccomment@portlandmaine.gov

I am writing to support the marina's zoning text amendment to allow food and beverage at the marina. This spot is one of the only accessible places to enjoy a casual beverage and meal by the water. Please don't continue to take such wonderful places away from the public when we already don't have enough. It would be extremely defeating and disappointing.

Thank you for saving our scene,

Daneel Dafni

Ryan Young <rpyoung1@gmail.com> Sep 23, 2021, 4:18:47 PM (16 hours ago)
to planningboard@portlandmaine.gov, publiccomment@portlandmaine.gov, planning@portlandmaine.gov

I'm writing to support the Marina's zoning text amendment to allow food and beverage at the Marina. This is a wonderful and much needed small business in Portland. My wife and I started coming back into Portland more and more this summer and Fore Points Marina bar was the draw, no exaggeration. Please consider their ammendment and keep the business alive.

Thank you

Ryan and Breanna Young

P.O. Box 153
Raymond, Maine
04071
207.441.7533

Fore Points Marina 0 views

Assigned to me Subscribe

Rachel Freid <rachel.freid75@gmail.com> 11:45 AM (15 minutes ago)

to planning@portlandmaine.gov, planningboard@portlandmaine.gov, publiccomment@portlandmaine.gov

Hello,

I am writing to support the marina's zoning text amendment to allow food and beverage at the Marina.

On a personal note -

STOP MAKING DUMB RULES AND KEEP THIS PLACE OPEN. My goodness, I can't believe I have to write this email - what a waste of everyone's time and energy. Put your money and effort towards things that actually matter. Let people live and drink and eat!

Sincerely,
Portland Resident

PC56

Fore Points Marina 0 views

Assigned to me Subscribe

Sophie Samuels <sophialsamuels@gmail.com> 11:56 AM (5 minutes ago)

to planning@portlandmaine.gov, planningboard@portlandmaine.gov, publiccomment@portlandmaine.gov

I am writing to support the marina's zoning text amendment to allow food and beverage at the Marina. I feel that the bar and restaurant extend the usable space of the Eastern Prom and give life to an area that previously felt abandoned and somewhat unsafe.

Thank you,

Sophie Samuels
Resident of Portland's East End

PC57

Fore Points Marina

0 views

Assigned to me Subscribe

I

Ian Crowley <ian@greatharbordigital.com> 11:56 AM (5 minutes ago)

to planning@portlandmaine.gov, planningboard@portlandmaine.gov, publiccomment@portlandmaine.gov

I am writing to support the marina's zoning text amendment to allow food and beverage at the marina.

PC58

Fore Points Marina

0 views

Assigned to me Subscribe

Hannah Wolper <hannah.wolper@gmail.com> 12:42 PM (3 hours ago)

to planning@portlandmaine.gov, planningboard@portlandmaine.gov, publiccomment@portlandmaine.gov

Hello,

I am writing to support the marina's zoning text amendment to allow food and beverage at the Marina.

Cheers,
Hannah

--

Hannah Wolper ☆

PC59

Fore Points Marina

0 views

Assigned to me Subscribe

Hannah Mitchell <hannah.mitchell21@outlook.com> 1:34 PM (3 hours ago)

to planning@portlandmaine.gov, planningboard@portlandmaine.gov, publiccomment@portlandmaine.gov

I am wri ng to support the Marina's zoning text amendment to allow food and beverage at the marina.

PC60

Fore Points Marina 0 views

Assigned to me Subscribe

Corey Merrill <merrill.corey@gmail.com> 1:46 PM (2 hours ago)

to planning@portlandmaine.gov, planningboard@portlandmaine.gov, publiccomment@portlandmaine.gov

Hi - by way of introduction my name is Corey Merrill and I grew up in Portland, Maine and currently reside in Brooklyn, NY.

I travel to Portland to visit my family at least 6+ times per year and my favorite part about the city (very similar to what I love about living in New York City) - is the restaurant and bar scene. More so than ever before my friends in NYC are asking me for my favorite restaurants / bars to help them plan their long weekend getaways to Portland - so I've essentially created a running list of my favorite spots that I have shared 20+ times this year alone.

All that being said - **I am extremely saddened to hear that one of my favorite spots (the Fore Points Marina Bar) is at risk of closing due to the marina's zoning text amendments. PLEASE, let me know what I can do to help persuade you to avoid doing this - I've seen NYC grow over the 13 years I've lived here and can say that progressive places like what popped up on that Marina last summer are what gives cities like NY and Portland that "it" factor - and what will keep the money flowing.**

Thanks for reading my email and again - if there's anything else you need from me please don't hesitate to reach out.

Thanks,
Corey Merrill

Fore Points Marina

0 views

Assigned to me Subscribe

Hailee Flaherty <HFLAHERTY@smhc.org> 2:41 PM (1 hour ago)

to planning@portlandmaine.gov, planningboard@portlandmaine.gov, publiccomment@portlandmaine.gov

I am writing to support the marina's zoning text amendment to allow food and beverages at the Marina. Fore Points Marina Bar has been such an amazing asset to Portland. Going to the marina bar had brought me into Portland countless of times, when normally I would have just stayed home. I have seen a ton of other of businesses that I never would have known existed if it wasn't for driving down to the marina bar, and I have brought business to those businesses because of it. Closing down the Fore Points marina bar would be a huge mistake.

Hailee Flaherty

Fore Points Marina 0 views

Assigned to me Subscribe

Frank Gruber <frankgruber5@gmail.com> 2:58 PM (1 hour ago)

to planning@portlandmaine.gov, planningboard@portlandmaine.gov, publiccomment@portlandmaine.gov

Hello Portland Maine Planning Board,

I'm writing to support the marina's zoning text amendment to allow food and beverage at the marina. What started as a temporary setup has brought value to the area and brings life to the water's edge. There are not too many places to eat or drink in the area so I would hate to see it go.

Thanks,
Frank

Fore Points Marina

0 views

Assigned to me Subscribe

Sarah Davidson <sarahdavidson635@gmail.com> 3:14 PM (1 hour ago)

to planning@portlandmaine.gov, planningboard@portlandmaine.gov, publiccomment@portlandmaine.gov

Hi!

I am writing to support the marina's zoning text amendment to allow food and beverage at the Marina. We love Evo X and look forward to spending many more summers with them! Please don't take this away from us!

Thank you!
Sarah

--
Sarah Davidson

PC64

FORE POINTS MARINA

Assigned to … Subscribe

0 views

Tom Fitzpatrick <tfitzy92@yahoo.com> 3:48 PM (19 minutes ago)
to planning@portlandmaine.gov, planningboard@portlandmaine.gov, publiccomment@portlandmaine.gov

I am writing to support the Marina's zoning text amendment to allow food and beverage at the marina.

Fwd: Fore Points Marine

Assigned to … Subscribe

0 views

J Glover <jglover1@maine.rr.com> 3:51 PM (17 minutes ago)
to planningboard@portlandmaine.gov

> I am writing to support the Marina ‘s zoning text amendment to allow food and beverage service at the Marina.
>
> Well run, excellent food, and a boost to Portland’s economy.
>
> John S Glover

Fore Points Marina

Elizabeth Freeman
Sep 24, 2021, 4:20:30 PM

to planning@portlandmaine.gov, planningboard@portlandmaine.gov, publiccomment@portlandmaine.gov

I am writing to support the marina's zoning text amendment to allow food and beverage at the marina.

Elizabeth Freeman
Portland Maine Resident

Fore Points Marina

Rhonda Green
Sep 24, 2021, 4:31:22 PM

to planning@portlandmaine.gov, planningboard@portlandmaine.gov, publiccomment@portlandmaine.gov

I am writing to SUPPORT the marina's zoning text amendment to allow food and beverage at the Marina.

The Fore Point bar was fully open to the public and embraced by the public- all ages. A fabulous spot that highlights the super energy and by the water location of Portland Maine.

Bravo
Rhonda Green
156 Sheridan St
Portland ME 04101

Fore Points Marina Bar

PC68

david bannon
Sep 24, 2021, 4:33:12 PM

to planning@portlandmaine.gov, planningboard@portlandmaine.gov

Dear Sir/Madam,

As a resident of Turner Street on Munjoy Hill, I have really enjoyed the opportunity to stop in at the Fore Points Marina on my way to and from my home from downtown. The business and the location represents a perfect halfway point for visitors walking to & from Old Port and the Eastern Promenade.

As such, I am writing to support the marina's zoning text amendment to allow food and beverage at the Marina.

Sincerely

David Bannon

Fore Points Marina Zoning Text Amendment PC69

Kristen Diver

Sep 24, 2021, 4:37:54 PM
to planning@portlandmaine.gov

To Whom it may Concern,

I would love to support the efforts of keeping food and beverage at the Fore Points Marina!

Thank you,
Kristen Diver

51 Moody St #2
Portland, ME 04101

Zoning Inquiry: 447 Riverside St PC70

Maya Lorimer

Sep 24, 2021, 6:16:38 PM

to planning@portlandmaine.gov

Hello,

We're interested in potentially acquiring the property located at 447 Riverside St. Our uses would consist of self-storage, U-Haul truck and trailer share, and related retail sales. Are you able to confirm the zoning district of the property and whether or not the above-mentioned uses are permitted?

Thank you,

Maya Lorimer
Amerco Real Estate
2727 N. Central Ave., Suite 500
Phoenix, AZ 85004
(602) 263 6555 Ext. 515302
maya_lorimer@uhaul.com

Fore Points Marina

PC71

Tenni Luna

Sep 24, 2021, 6:40:56 PM

to planning@portlandmaine.gov

I'm writing to support the marina's zoning text amendment to allow food and beverage at the marina

The best painkillers in all of Maine are found at this marina. The views and sunsets are incredible, it's a pet-friendly establishment and it's something unique that the rest of Portland doesn't have.

As a longtime resident of Portland, please allow the marina to continue being a place where we can all enjoy those short summer days.

Winston really loves this place!

Sent from my iPhone

CHANDON
SASSY WOOF

Fore Points Marina

PC72

Katie Kennedy

Sep 24, 2021, 7:07:01 PM

to planning@portlandmaine.gov, planningboard@portlandmaine.gov, publiccomment@portlandmaine.gov

To whom it may concern,

I am writing to support the Marina's zoning text amendment to allow food and beverage at the marina.

Our family (including young children) has thoroughly enjoyed this waterfront, outdoor dining space at Fore Points Marina. It's been hard the past couple of years with Covid to find outdoor dining that felt safe for children and this was one of our favorites.

Sincerely,
Katherine Kennedy
396 Brighton Ave
Portland, ME 04102

Fore Points Marina

PC73

Courtney Russell
Sep 25, 2021, 8:16:35 AM

to planning@portlandmaine.gov, publiccomment@portlandmaine.gov, planningboard@portlandmaine.gov

I am writing to support the marina's zoning text amendment to allow food and beverage at the marina. Please let them stay!

Courtney

Fore Points Marine

PC74

Jeffrey Hargenrader

Sep 25, 2021, 8:28:39 AM

to planning@portlandmaine.gov, planningboard@portlandmaine.gov, publiccomment@portlandmaine.gov

I'm writing to NOT SUPPORT the marinas zoning text amendment to allow food and drink at the Marina bar.

When Fore points showed up on the marina scene I had nothing but good feelings towards what they could provide for the community. After a couple seasons, they are a disaster, they care not about the city, people, and most importantly a wholesome atmosphere around boats. If you were to allow them To have food and drink I think it should be extremely expensive for the license. They are making some serious money down there, And they are not catering to Portland they are catering to massive yachts that we don't need here to begin with.

Thank-you,
Jeffrey Hargenrader

Fore Points Marina

PC75

Megan Cook

Sep 25, 2021, 11:59:28 AM

to planning@portlandmaine.gov, planningboard@portlandmaine.gov, publiccomment@portlandmaine.gov

Hello,

I'm a Munjoy Hill resident and frequently use the Eastern Prom trails for running and walking. I am writing to support the marina's zoning text amendment to allow food and beverage at the Marina.

Thanks for your time,
Megan

Four Points Marina

PC76

Larlee, Peter (ES)

9:20 AM

to planning@portlandmaine.gov

I am writing to support the marina's zoning text amendment to allow food and beverage at the Marina. I moved to Portland in July 2021 and love the energy that the Old Port has to offer.

My wife and I have been supporting as many local businesses as possible that are in the city.

- I don't go to Lowes or Home Depot, I go to Maine Hardware.
- I try to go to use local markets like Micucci's when possible.
- I have also noticed my entertainment budget increase significantly, supporting many small business and their employees.

I do this to support the City I have now decided to call home, even though in my mind I know I am paying a slight premium to do so. We also entertain friends from neighboring towns as they all want to "see and be introduced" to new locations. If they have a good experience I am sure they are spreading the knowledge to more people to visit and commerce.

Four Points Marina is a great location to grab a coffee, some food, or a beverage. When asked by visitors to the city, I generally recommend Four Points as the Staff is friendly, responsive and the location shows the beauty of Casco Bay and the City.

I would love to see the location remain in business especially with the added development from Sun Life, WEX, and the new retail building being restored.

Thanks for your consideration

Peter Larlee

781-443-5907 **Mobile**

peter.larlee@adp.com

ADVISOR // INFLUENCER

Fore Points Marina

PC77

Nick Vlahos

Sep 25, 2021, 12:33:17 AM

to planni...@portlandmaine.gov

I am writing to support the marina's zoning text amendment to allow food and beverage at the Marina

Thanks,

Fore Points Marina

PC78

Joan Libby
Sep 27, 2021
to Plan...@portlandmaine.gov, planni...@portlandmaine.gov, public...@portlandmaine.gov

I am writing to support the marina's zoning text amendment to allow food and beverage at the Marina. This place has been such a great addition to Portland. Perfect for boaters, families, children and dogs. A relaxed environment without dealing with the nonsense of those restaurants on the wharf.

Fore Points Marina

PC79

John Gillis

Sep 27, 2021

to plan...@portlandmaine.gov, planni...@portlandmaine.gov, public...@portlandmaine.gov

To whom it may concern,

I am writing to support the marina's zoning text amendment to allow food and beverage at the marina.

Thank you,

John

Fore Points Marina

Carrie Nalad
Sep 27, 2021

to planni...@portlandmaine.gov

Hello,

I am writing to support the marina's zoning text amendment to allow food and beverage at the Marina. Marina Bar has been a place for locals and visitors alike to gather and enjoy the beautiful views of Casco Bay and great company. We look forward to the hospitality of those working at the Marina Bar, and it has become a go-to spot for all occasions.

Thank you for your consideration,
Carrie

Fore Points Marina

PC81

Alexandra Andrews

Sep 27, 2021
to plan...@portlandmaine.gov, planni...@portlandmaine.gov, public...@portlandmaine.gov

Good afternoon,

I am writing to support the marina's zoning text amendment to allow food and beverage at the Marina. The marina bar has been such a wonderful addition to the area, especially having a beautiful outdoor space during this pandemic. It has helped to bring tourism back to the Old Port and it became a hot spot for locals to gather. It will be sorely missed this winter and needs to be able to return next spring.

Best regards,

--
Alexandra Andrews
alexandrews207@gmail.com
(207)671-3211

Fore Points Marina

Jessica Eames

Sep 27, 2021
to plan...@portlandmaine.gov, planni...@portlandmaine.gov, public...@portlandmaine.gov

Hello!

I am writing to support the marina's zoning text amendment to allow food and beverage at the marina.

This is a one-of-a-kind establishment like no other in Portland and draws a consistent crowd throughout the summer. It would be a shame and mega loss to Portland to lose it.

Sincerely,
Jess Eames

--

Jessica Eames
jessicaeames89@gmail.com

Fore Points Marina

PC83

Eric Dodge

Sep 27, 2021
to planni...@portlandmaine.gov

Hi,

I'm writing to support the marina's zoning text amendment to allow food and beverage at the marina. It's such a unique space, and eliminating the ability to enjoy food and beverage there I think would be a massive loss for the city. Especially during the pandemic, I think we need all the outdoor dining opportunities we can get to help manage the spread of the virus.

I hope you'll consider! Thanks!

-Eric Dodge
396 Brighton Ave.
Portland, ME 04102

Fore Points Marina

PC84

Watters, Dianne
Sep 27, 2021
to plan...@portlandmaine.gov, planni...@portlandmaine.gov, public...@portlandmaine.gov

Hello,

I'm writing to support the zoning amendment to allow food and beverage at the Marina.

This has become a family and friends favorite for summertime visits. A great way to enjoy the East end trail, and stop in for a break to take in the view. We have few spots that allow dogs, so we love to stop in when we can.

Thank you for your support!

Dianne

Dianne Watters, PMP
Senior Product Marketing Manager
Tyler Technologies, Inc.

P: 800.772.2260 ext. 4140

www.tylertech.com

Four Points Marina

PC85

Aja Brill

Sep 27, 2021
to plan...@portlandmaine.gov, planni...@portlandmaine.gov, public...@portlandmaine.gov

Hello,

I am writing to support the Marina's zoning text amendment to allow food and beverage at the marina. We really enjoy spending time here and would be sad if the food and beverage service was taken away.

Thanks,
Aja

Sent from my iPhone

Fore Points Marina PC86

Julia Clark

Sep 27, 2021
to plan...@portlandmaine.gov, planni...@portlandmaine.gov, public...@portlandmaine.gov

Hello, I am writing to support the marina's zoning text amendment to allow food and beverage at the marina.

I moved to Portland this past December to plant roots back east where I am from.
Fore points became a home base for me over the summer where i could meet folks who lived in my neighborhood and feel safe and social without being afraid or feeling uncomfortable. Through a hard time the Marina Bar was a place that I could look forward to going after long hard days at work and could always rely on a friendly staff, a great crowd of people of all ages and walks and excellent food and service.

It would be a detriment to our great community to no longer have this safe space to gather and enjoy time outdoors and on the water in true Maine style.

Thank you,
Julia
--
Julia Clark, PhD, MPH

Phone: 401-368-5558

Fore Points Marina

PC87

Travis McKenzie

Sep 27, 2021
to plan...@portlandmaine.gov, planni...@portlandmaine.gov, public...@portlandmaine.gov

Hello,

I am writing to support the marina's zoning text amendment to allow food and beverage at the Marina.

It is such a fabulous place for families and is something I'd like to see come back in the future.

Thanks for your consideration,

Travis

Travis McKenzie
INNERVOICE Media Group
617-230-6130

Fore Points Marina

PC88

Heather York

Sep 27, 2021
to planni...@portlandmaine.gov, public...@portlandmaine.gov, plan...@portlandmaine.gov

Good evening,

I am writing to support the marina's zoning text amendment to allow food and beverage at the Marina. It is a positive addition to the Portland food and beverage community and has been a wonderful COVID-friendly option this year. I look forward to many more summers visiting the marina.

Thank you,
Heather York

Fore Points Marina

PC89

Suzanne Johnson

Sep 27, 2021
to plan...@portlandmaine.gov, planni...@portlandmaine.gov, public...@portlandmaine.gov

I am writing to support the marina's zoning text amendment to allow food snd beverage at the marina.

I am an employee of Sun Life and will soon be working there. Lots of us will enjoy having this as option and it's a great way to enjoy the scenery here of the Atlantic ocean.

Suzanne Johnson
Falmouth, ME

Thank you.

Fore Points Marina support

PC90

Tom Bander

Sep 27, 2021
to plan...@portlandmaine.gov, planni...@portlandmaine.gov, public...@portlandmaine.gov

I am writing to express strong support for the marina's zoning text amendment to allow food and beverage at the marina. My wife and I live nearby on Munjoy Hill and love the sense of community at the marina bar. We regularly walk there or meet with friends (and our dogs!) for food and cocktails. The outdoor setting is very special and also encourages patrons to walk through town, rather than drive. We also appreciate that they highlighted a local charity to support each week throughout the summer.

Thanks,

Tom

--
Tom Bander, MD
Director of Procedural Dermatology
Maine Medical Partners - Dermatology
616-481-4191

Fore Points Marina Bar

PC91

Christine

Sep 27, 2021
to plan...@portlandmaine.gov, public...@portlandmaine.gov, planni...@portlandmaine.gov

To the decision makers—

I am writing to support the Marina's zoning text amendment to allow food and beverage at the Marina.

I have been a longtime resident of the East End, and cannot imagine a future without Fore Points Marina Bar. Marina Bar has been a place for my friends and I (along with our pups and new babies) to come together and celebrate with food and drinks the many life changes that have happened to us. It is a warm, fun, accessible and beautiful space to gather and I truly hope you consider these messages and what it means to so many to have a place like Marina Bar to go to eat, drink and be merry!

Warmest Regards,
Christine and Zeek

Fore Points Marina

PC92

Martha Bleeker

Sep 27, 2021
to plan...@portlandmaine.gov, planni...@portlandmaine.gov, public...@portlandmaine.gov

Hi,
I'm writing to support the marina's zoning text ammendment to allow food and beverage at the marina. The FP Marina Bar is my all-time favorite spot in Portland to grab a drink with my wife and friends and enjoy the beauty of my favorite town. I love bringing visitors there to take in the spectacular views while enjoying a lobster roll and Allagash White. Please consider allowing them to reopen next year!! Thank you!!!

-Martha Bleeker

Fore Points Marina

PC93

Kristin Silvani

Sep 27, 2021,
to plan...@portlandmaine.gov, planni...@portlandmaine.gov

Hello,
I'm writing to support the marina's zoning text ammendment to allow food and beverage at the marina. The FP Marina Bar is my all-time favorite spot in Portland to grab a drink with my wife and friends and enjoy the beauty of my favorite town. I love bringing visitors there to take in the spectacular views while enjoying a lobster roll and Allagash White. Please consider allowing them to reopen next year!! Thank you!!!

-Kristin Silvani

Fore Points Marina

PC94

Gabe Balzano-Brookes

Sep 27, 2021

羊

to planni...@portlandmaine.gov

Hello,

I am writing to support the marina's zoning text amendment to allow food and beverage at the Marina. I have really enjoyed gathering outside with friends and family at the Marina Bar and enjoying the beautiful views of Casco Bay, great drinks, delicious food, and great company. We look forward to the hospitality of those working at the Marina Bar.

Thank you for your consideration,
Gabe

Sent from my iPhone

Fore Points Marina

PC95

Kaylie Friel

Sep 27, 2021
to plan...@portlandmaine.gov, planni...@portlandmaine.gov, public...@portlandmaine.gov

To whom it may concern:

I am writing to support the marina's zoning text amendment to allow food and beverage at the marina.

The Fore Points Marina bar has added new life to the waterfront in a tucked away spot. It's beautiful 'off the beaten path' location and wonderful atmosphere have been a bright spot for the city of Portland!

Thank you,

Kaylie Friel

Amy Oberlin PC96
unread,
Sep 27, 2021,
to plan...@portlandmaine.gov, planni...@portlandmaine.gov, public...@portlandmaine.gov

Hello all,

I am writing to support the marina's zoning text amendment to allow food and beverage at the marina.

I am a resident of Portland on Munjoy Hill and I am a huge fan and have been a frequent patron of the Fore Points Marina Bar and Evo X food truck, both this summer and last summer. The bar and food truck is a fantastic use of the waterfront space and is one of my favorite places to eat in the city. We take nearly every guest there to eat by the waterside, and as our neighbors discovered it over the summer they have had nothing but great things to say about it. None of us have boats but the food and drink makes the marina bar an essential meeting spot for us, where we have already celebrated multiple birthdays during its short existence.

In short: we love the marina bar! Please let her stay!

Thanks for your time,
Amy Oberlin

Amy Oberlin
6:54 AM (4 hours ago)
to plan...@portlandmaine.gov, planni...@portlandmaine.gov, public...@portlandmaine.gov

An addendum to my earlier message:

TO BE CLEAR I am actually extremely excited about the Foreside/58 Fore development plans, particularly the "historic core" market and the badly needed housing, and I do NOT think preserving the marina bar should take priority over this development going forward. I would simply like to eat fried fish and drink frozen margaritas at this lovely waterside spot until construction actually begins!

Thank you!
Amy Oberlin

9/28/2021 - PB Workshop on 58 Fore St Developer Abuse of Approved Permit

Karen Snyder

10:48 AM
to Planning Board

Dear Chair Mazer and Planning Board Members,

There has been great concern about 58 Fore St /Foreside developers refusal to follow what was approved in the Master Plan permit.

This developer instead of following what was approved has attempted to thwart it in various egregious ways. Examples are as follows:

Issue #1: Blocked Public Views from the Marina
It originally was approved to be a single marina building and a public waterfront view from public walk which was to be the entire length of marina frontage. Instead, there are multiple buildings and fencing including porta potties which block approximately 450 feet marina frontage of the public ocean views. However, the ENTIRE marina frontage length has been blocked with a fence or buildings by the developer which the City has allowed this waterfront frontage to be privatized. ***See below photos taken as of this morning.***

Issue #2: Abuse of Temporary Event Permit:
The developer has also continues to be granted multiple consecutive 2 week temporary events to allow a marina bar at the site. This is abuse of what was approved for zoning. Temporary events were suppose to be for a few events that are temporary.. not a full time operating bar.

Issue #3: Abuse of Infill
The developer for at least the last year has been putting infill on the property. Per approved permit, they were allowed to be granted only one (1) 15- ton truck of infill deposited on approved permit. As shown in below photos, there is obviously more than one 15-ton truck load because the infill soil is higher that the grey facility building and runs the length of

approximately 500 feet towards east towards Portland House. The volume of this infill was not calculated but it obviously more than one 15-ton truckload. It appears this developer is attempting to build up the mid grade slope in order to build higher due to the fact the Planning Dept refuses to ensure in the zoning language and clarify building height calculations. Therefore, the developers know they can "trick" the system by building the soil height higher in order for the building height to be higher. ***See below evidence of photos taken as of this morning.***

In conclusion, it is obvious that this developer will not follow approved permits knowing that they will only get a slap on the wrist by the city as they overwhelm a portions of the the eastern waterfront, change the landscape, and block public water views in order to maximize their profit margin at the expense of the public.

How can the City, Planning Board, and residents trust anything this developer does when the developer obviously ignores what was permitted, takes advantage of every loop hole, and works around the system? This developer clearly disrespects the City Hall procedures and the residents of Portland.

Regards,
Karen Snyder
Munjoy Hill Resident

58 Fore St/Foreside Marina Frontage As of 9/28/2021

ntage As of 9/28/2021

NOTE: An estimated 450 feet of marina frontage is blocked by multiple buildings and porta potties

58 Fore St/Foreside Infill Efforts As of 9/28/2021

Panoramic view facing North from public sidewalk from West to East of the infill by 58 F

Note: The infill height is as high as the gray facility building which is the farthest eastern building on site.

As of 9/28/2021

West to East of the infill by 58 Fore St/Forside developer

Fore Points Marina

PC98

Elena Usova

10:44 AM
to planni...@portlandmaine.gov, plan...@portlandmaine.gov, public...@portlandmaine.gov

I’m writing to support the marina’s zoning text amendment to allow food and beverage at the Marina. This summer it was a very special place for me and my friends. It would be wonderful if we could have them next summer again.
Thank you

Elena

Fore Point Marina

PC99

Art Timofejev

11:10 AM
to planni...@portlandmaine.gov, plan...@portlandmaine.gov, public...@portlandmaine.gov

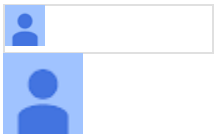
Hello,

I’m writing to support the marina’s zoning text amendment to allow food and beverage at the Marina.
This summer it was a very special place for me and my friends. It would be wonderful if we could have them next summer again.
Thank you

Art.

Fore points marina

PC100



dani-...@yandex.ru
unread,
11:37 AM (1 hour ago)

to plan...@portlandmaine.gov, planni...@portlandmaine.gov, public...@portlandmaine.gov

I'm writing to support the marina's zoning text amendment to allow food and beverage at the Marina.
Thank you

Dani

Fore Points Marina Bar

PC101

Daniel Tonini
<captaindan4u@gmail.com>
10:23 AM (2 hours ago)
to planning@portlandmaine.gov

I am writing to support the Marina Bar zoning text amendment to allow food and beverage at the marina. In a rapidly growing city, it is preposterous that objections to the harmonious nature of this type of business should not be allowed. The Marina Bar is a great example of a vibrant meeting place that gives landlocked people access to the waterfront, as well as the marina facility's member/customer base. The blend of tourism, business, yachting, and commercial activities, all benefit by the placement, soundness, and overall vibe of what Portland was, is, and should remain being.

Thanx for reviewing,
Captain Dan Tonini

Long Live Marina Bar

PC102

Veronica Willette
<veronica.willette@gmail.com>

Sep 27, 2021
to planning@portlandmaine.gov

Hello,

I'm a second generation Munjoy Hiller and have been so proud of Portland for finally having a no frills spot on the water at the foot of the hill to relax and hang out at after work. It's outdoor set up was perfect for playing it safe with COVID, too. Please let this low-key spot with character stay amongst all of the high-end development that has no character.

Many thanks,
Veronica Rollette

Fore Points Marina

PC103

Jennifer Flaxman
3:03 PM (6 minutes ago)

to planni...@portlandmaine.gov

I am writing to support the marina's zoning text amendment to allow food and beverage at the Marina. The Marina Bar is a gem on Portland's waterfront. Please keep it open for years to come!

Jennifer Flaxman
7 Atlantic St, Portland, ME 04101

PLANT LIST

SYMBOL	TYPE	BOTANICAL NAME	COMMON NAME
TREES – DECIDUOUS			
	STREET TREE	ACER RUBRUM	RED MAPLE
		OSTRYA VIRGINIANA	AMERICAN HOPHORNBEAM
		ULMUS AMERICANA	AMERICAN ELM
	SHADE TREE	NYSSA SYLVATICA	TUPELO
		QUERCUS BICOLOR	SWAMP WHITE OAK
		QUERCUS PALUSTRIS	PIN OAK
	ORNAMENTAL TREE	AMELANCHIER CANADENSIS	EASTERN SERVICEBERRY
		CRATAEGUS CRUS-GALLI VAR. INERMIS	THORNLESS COCKSPUR HAWTHORN
		MAGNOLIA VIRGINIANA	SWEET BAY MAGNOLIA
	WATERFRONT TREE	AMELANCHIER CANADENSIS	EASTERN SERVICEBERRY
		NYSSA SYLVATICA	TUPELO
		SASSAFRAS ALBIDUM	SASSAFRASS
SHRUBS AND GROUNDCOVERS			
	PLANTING ZONE 1	CLETHRA ALNIFOLIA	SWEET PEPPERBUSH
		CORNUS CANADENSIS	BUNCHBERRY
		ILEX VERTICILLATA	WINTERBERRY
		OSMUNDA CINNAMOMEA	CINNAMON FERN
		TIARELLA CORDIFOLIA	FOAMFLOWER
		VIBURNUM ACERIFOLIUM	MAPLELEAF VIBURNUM
	PLANTING ZONE 2	ARCTOSTAPHYLOS UVA-URSI	BEARBERRY
		ARONIA MELANOCARPA	BLACK CHOKEBERRY
		COMPTONIA PEREGRINA	SWEETFERN
		MYRICA PENSYLVANICA	NORTHERN BAYBERRY
		RHUS AROMATICA 'GRO-LOW'	GRO-LOW FRAGRANT SUMAC
		RHUS TYPHINA	STAGHORN SUMAC

50' 0 50' 100'

BAR SCALE
1" = 50'
CHECK GRAPHIC SCALE BEFORE USING

LEGEND

- TRASH / RECYCLING RECEPTACLE
- BENCH
- BIKE RACK
- BOLLARD
- STREET LIGHT
- MARINA CART
- FENCE
- 1FT PAVERS
- 2FT PAVERS
- BRICK PAVING (BUILDING 1)
- WOOD DECKING
- WATERFRONT WALKWAY
- ASPHALT
- TRAIN TRACKS
- CONTRIBUTING HISTORICAL BUILDING
- PROPOSED BUILDING

PROPERTY LINE LEGEND

- EXISTING OFFSITE PROPERTY LINE
- EXISTING 58 FORE STREET PROPERTY LINE
- PROPOSED PROPERTY LINE

09/16/2016 (REVISED 05/25/2017)

Scale: 1" = 50'

STATE OF MAINE
DAVID A. SENUS 10791
LICENSED PROFESSIONAL ENGINEER

WOODARD & CURRAN

C-100

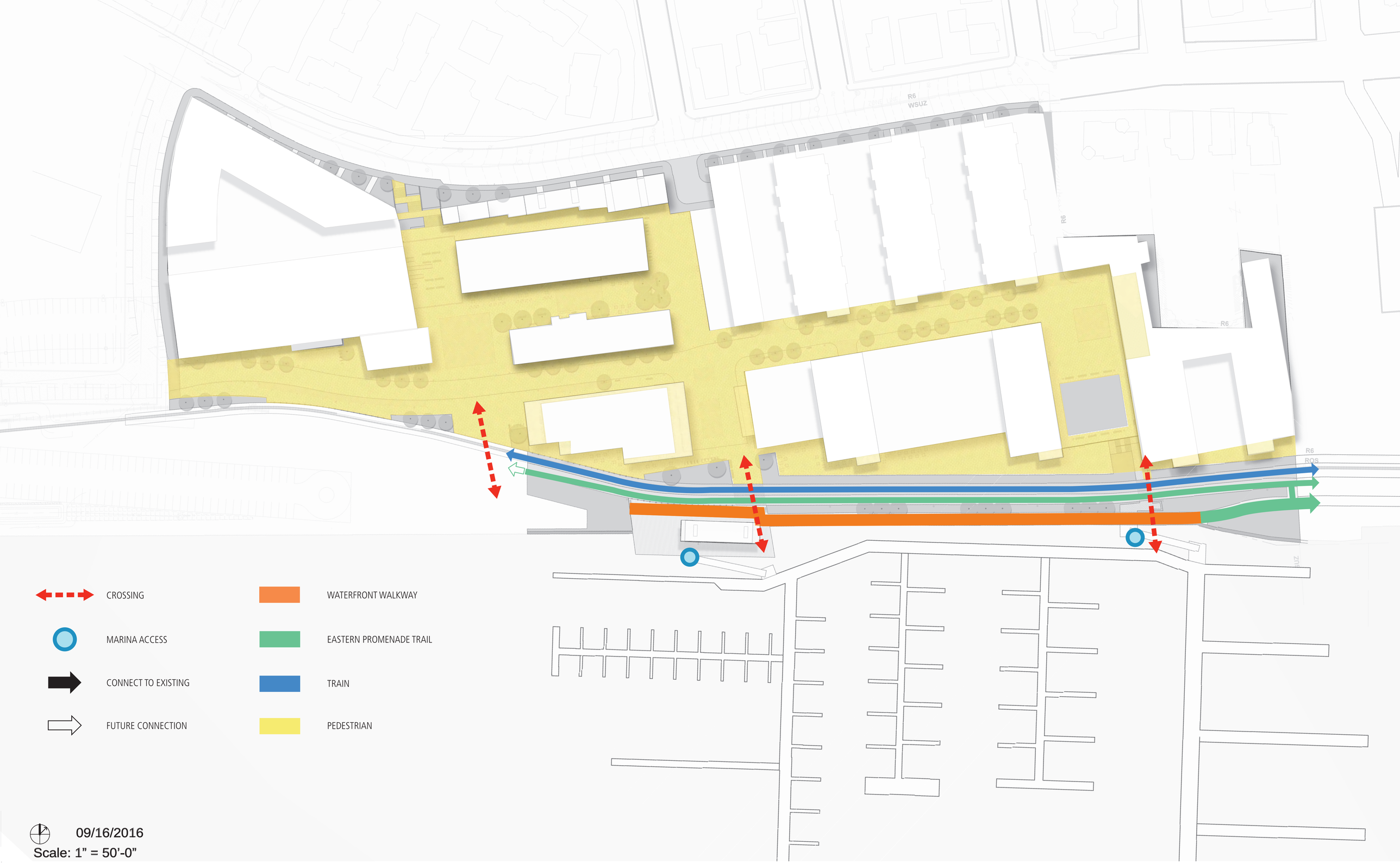
PERMITTING SET

CPB2 LLC
EASTERN WATERFRONT DEVELOPMENT PORTLAND, MAINE

OVERALL SITE MASTER PLAN

58 FORE STREET MASTER PLAN

SCOTT SIMONS ARCHITECTS | MICHAEL BOUCHER LANDSCAPE ARCHITECTURE | WOODARD & CURRAN | THORNTON TOMASETTI | THE BOULOS COMPANY | MASON ARCHITECTS | APPLIED TECHNOLOGY MANAGEMENT | PERKINS+WILL



CROSSING

MARINA ACCESS

CONNECT TO EXISTING

FUTURE CONNECTION

WATERFRONT WALKWAY

EASTERN PROMENADE TRAIL

TRAIN

PEDESTRIAN

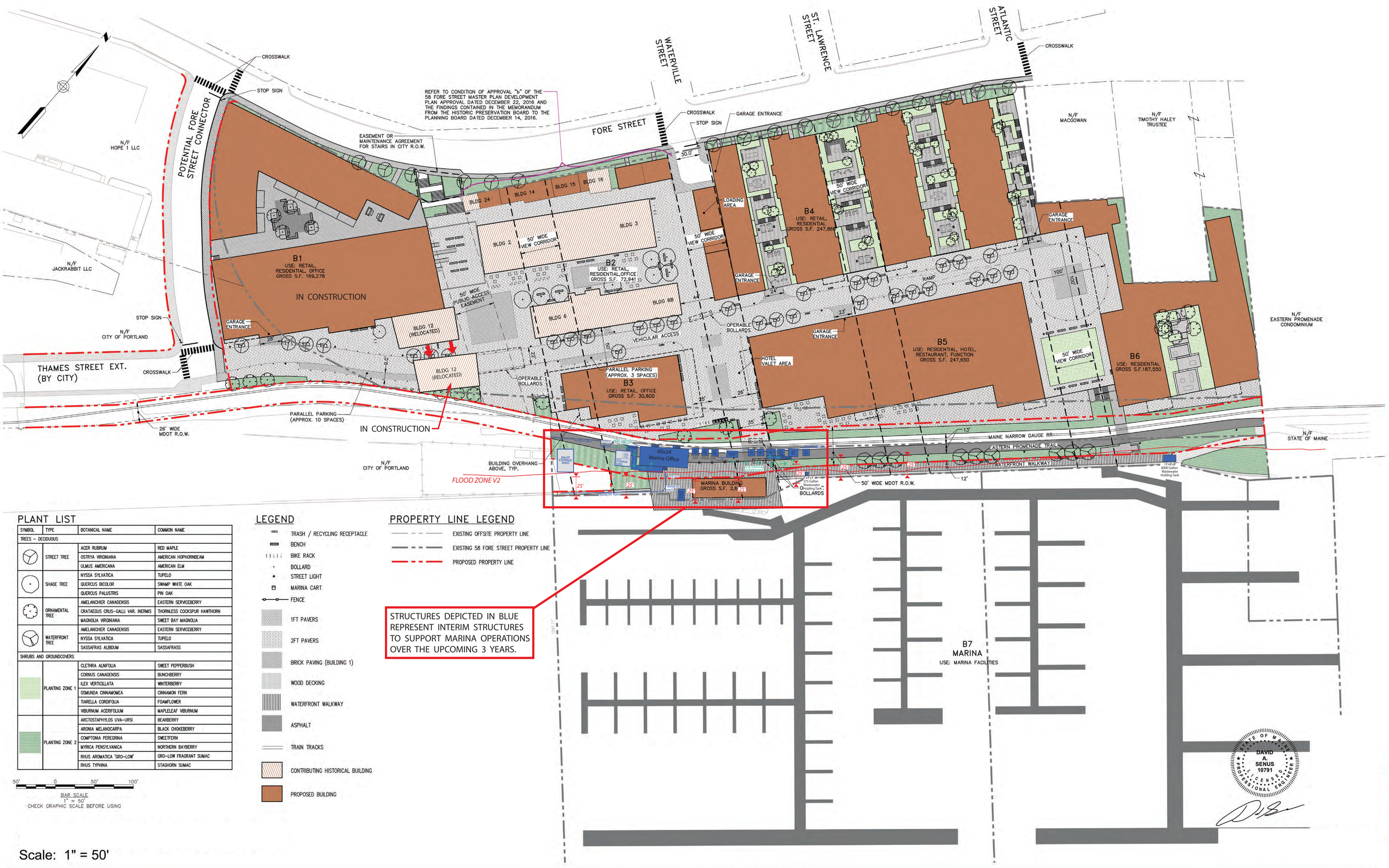
09/16/2016

Scale: 1” = 50’-0”

CPB2 LLC
EASTERN WATERFRONT DEVELOPMENT PORTLAND, MAINE

CIRCULATION DIAGRAM
58 FORE STREET MASTERPLAN

SCOTT SIMONS ARCHITECTS | MICHAEL BOUCHER LANDSCAPE ARCHITECTURE | WOODARD & CURRAN | THORNTON TOMASETTI | THE BOULOS COMPANY | MASON ARCHITECTS | APPLIED TECHNOLOGY MANAGEMENT | PERKINS+WILL



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PROPERTY LINE LEGEND

- EXISTING OFFSITE PROPERTY LINE
- EXISTING 58 FORE STREET PROPERTY LINE
- PROPOSED PROPERTY LINE

STRUCTURES DEPICTED IN BLUE REPRESENT INTERIM STRUCTURES TO SUPPORT MARINA OPERATIONS OVER THE UPCOMING 3 YEARS.

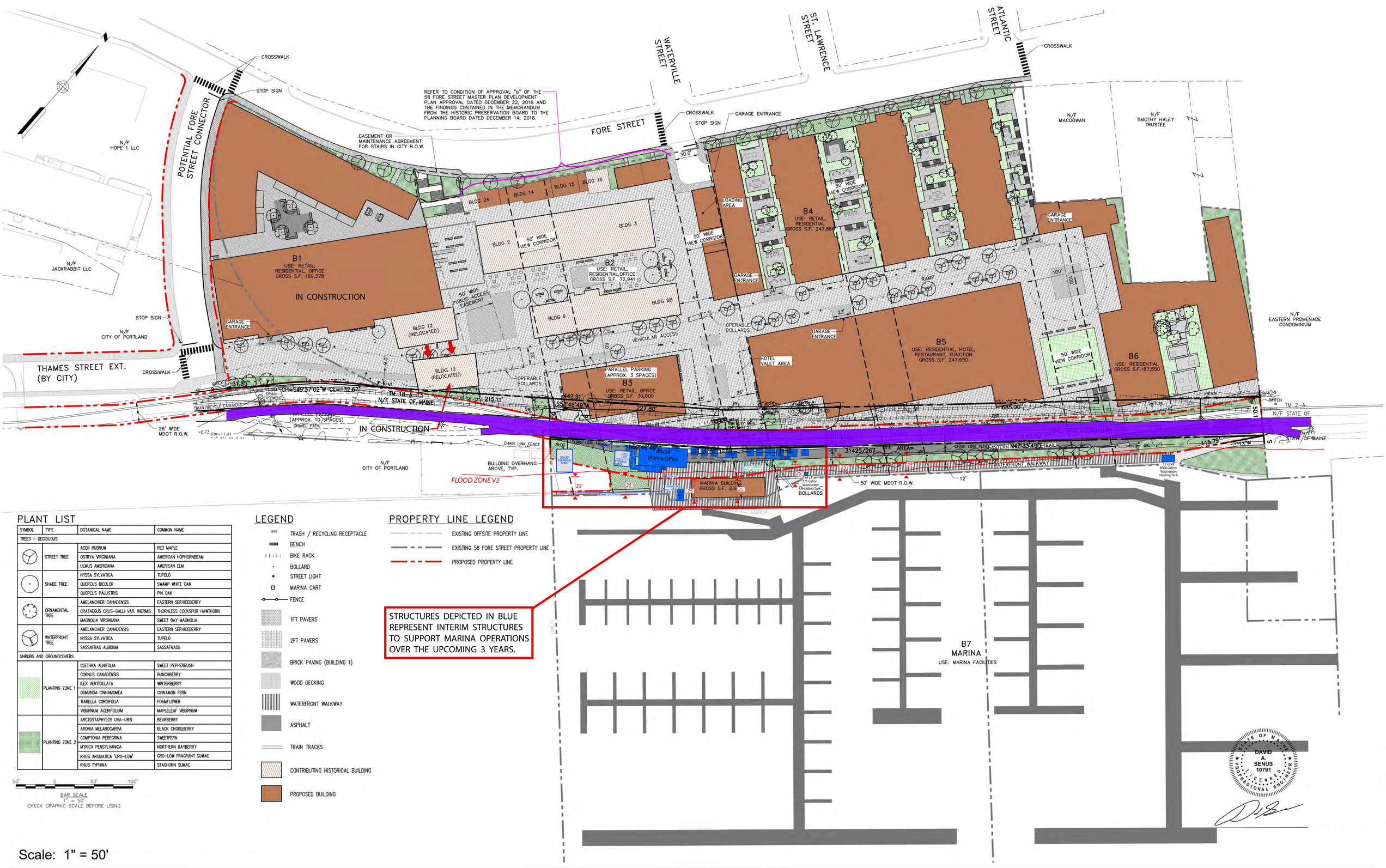
STATE OF MAINE
DAVID A. SENUS
10791
LICENSED PROFESSIONAL ENGINEER

Scale: 1" = 50'

DATE: 6/1/2021
BASE FIGURE DEPICTS APPROVED MASTER DEVELOPMENT PLAN DATED 9/16/2016 WITH CONDITION OF APPROVAL SUBMITTAL OF 5/25/2017.

OVERALL SITE MASTER PLAN

58 FORE STREET MASTER PLAN



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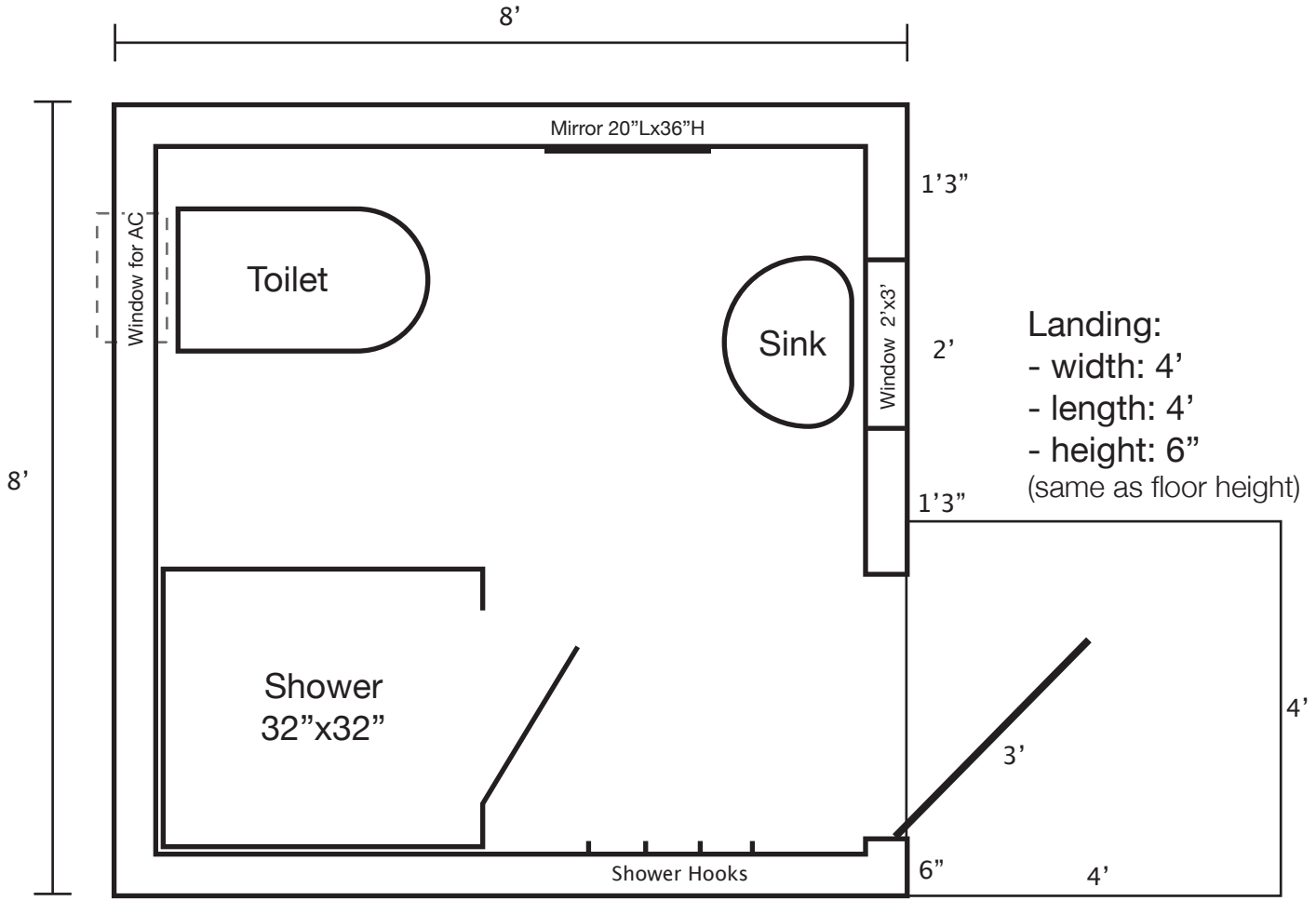
OVERALL SITE MASTER PLAN

58 FORE STREET MASTER PLAN

Fore Points Marina Temporary Bathroom (2 units)

FLOOR PLAN



*Sheds core and shell pre-fabricated off site. Sheds will be plumbed and wired on site.

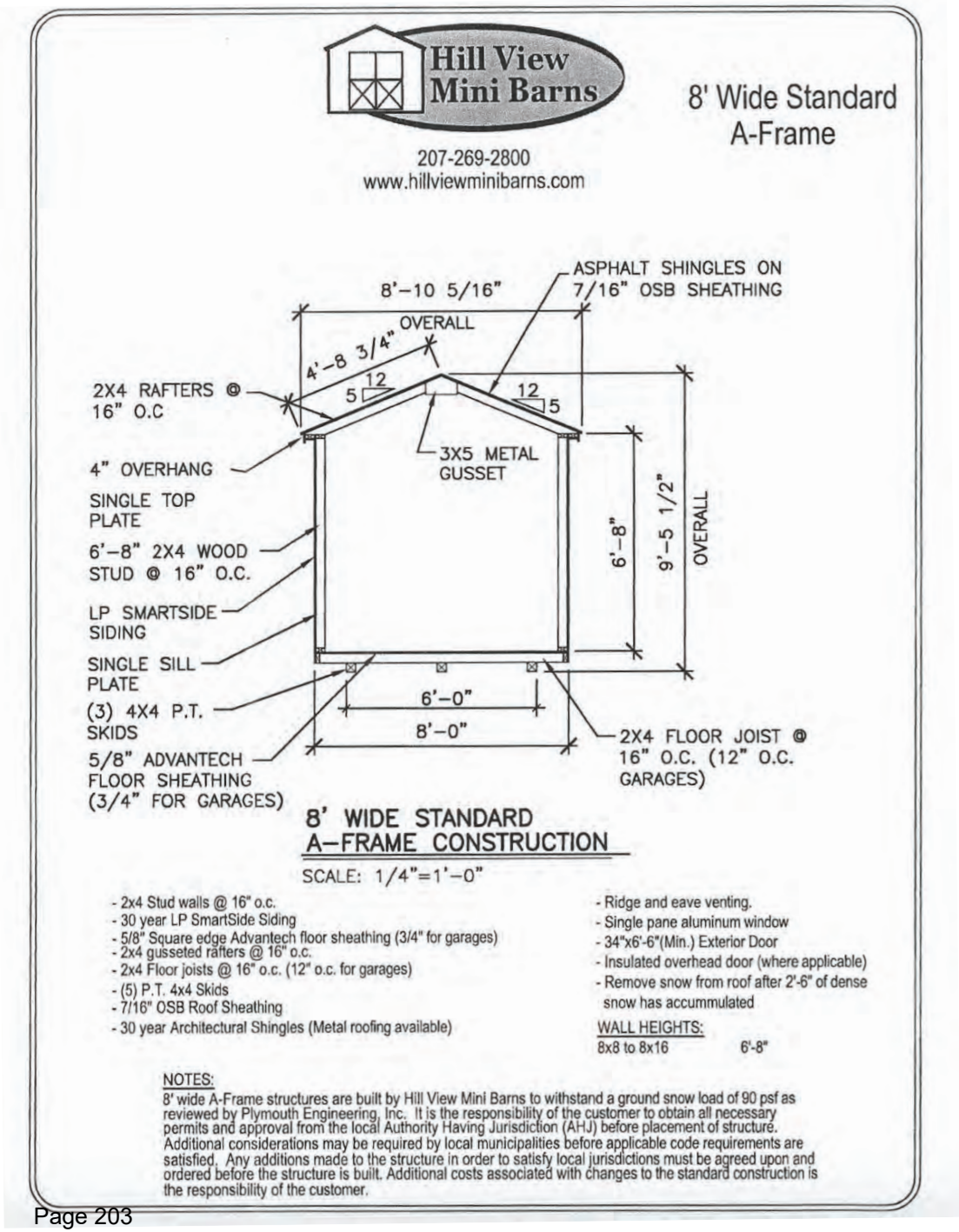
Fore Points Marina Temporary Bathroom (2 units)

SUPPLIER CONSTRUCTION SPECS

(*all wood construction except where specified)

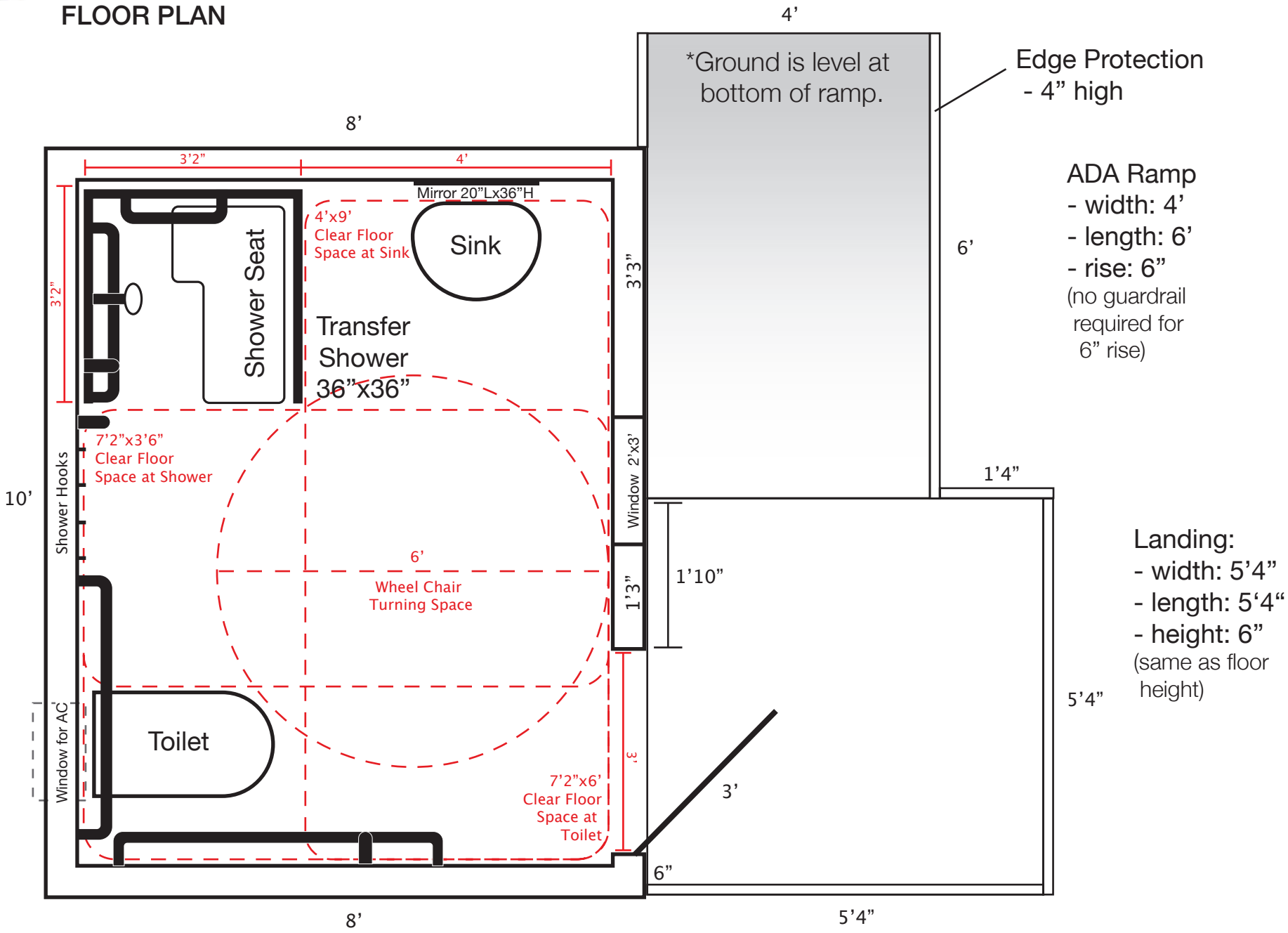
8x8 A-Frame

~ 80" high walls - 2x4 studs 16" 0.C.
~ 3 Pressure Treated 4x4 skids
~ Snow load rating of 90 P.S.F.
~ Lifetime Architectural or Metal Roof
~ TechShield roof sheathing
~ 30 year LP SmartSide Siding
~ 50 year Advantech Floor
~ LP Smartsiding
~ Fiberglass pre-hung entrance door
solid 6 pnl. out swing (R.O. 38.5"x81.75")
Left Hinged
~ 24"x36" Vertical sliding aluminum
window w/grids - White



Fore Points Marina Temporary Bathroom / ADA Model (1 unit)

FLOOR PLAN



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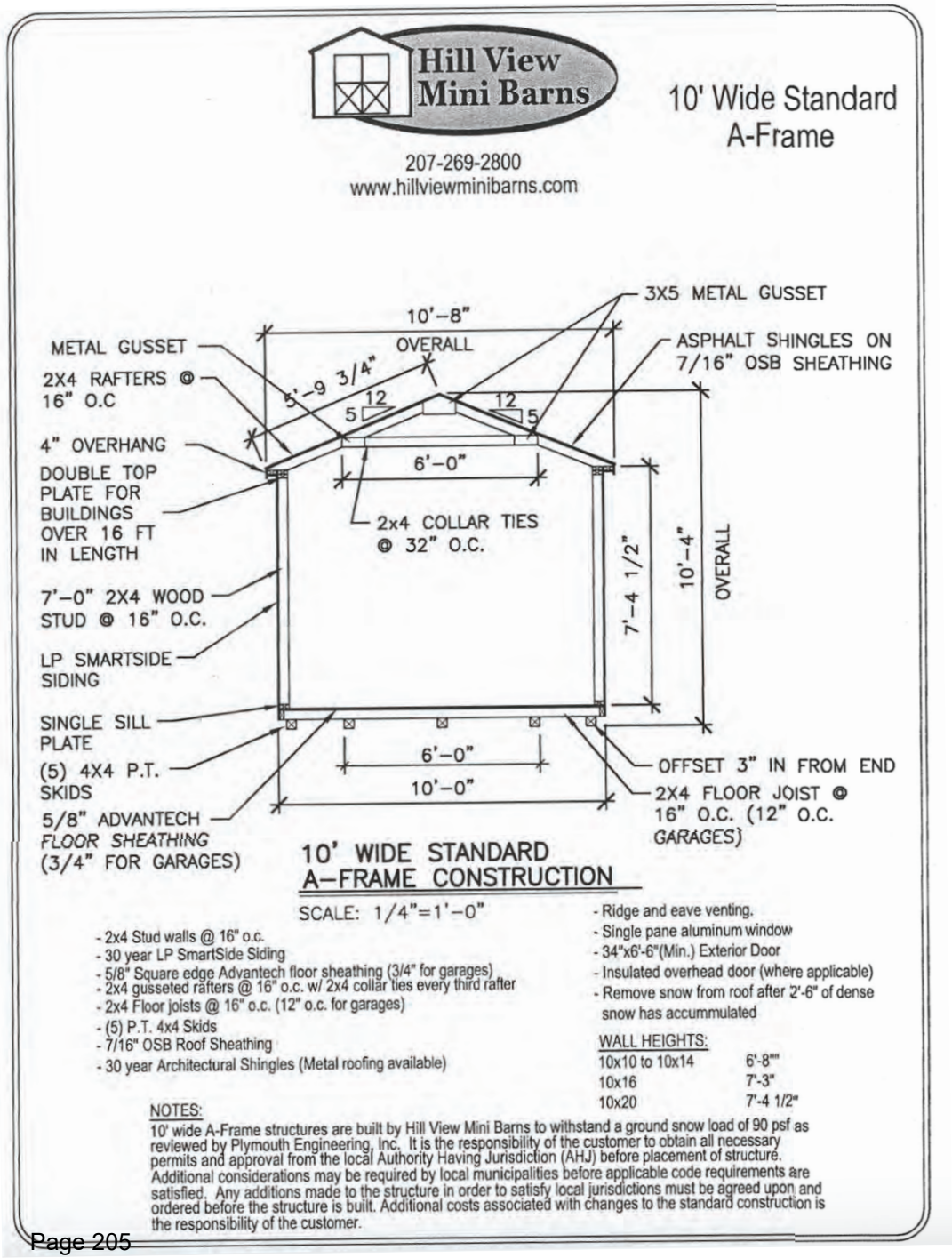
Fore Points Marina Temporary Bathroom / ADA Model (1 unit)

SUPPLIER CONSTRUCTION SPECS

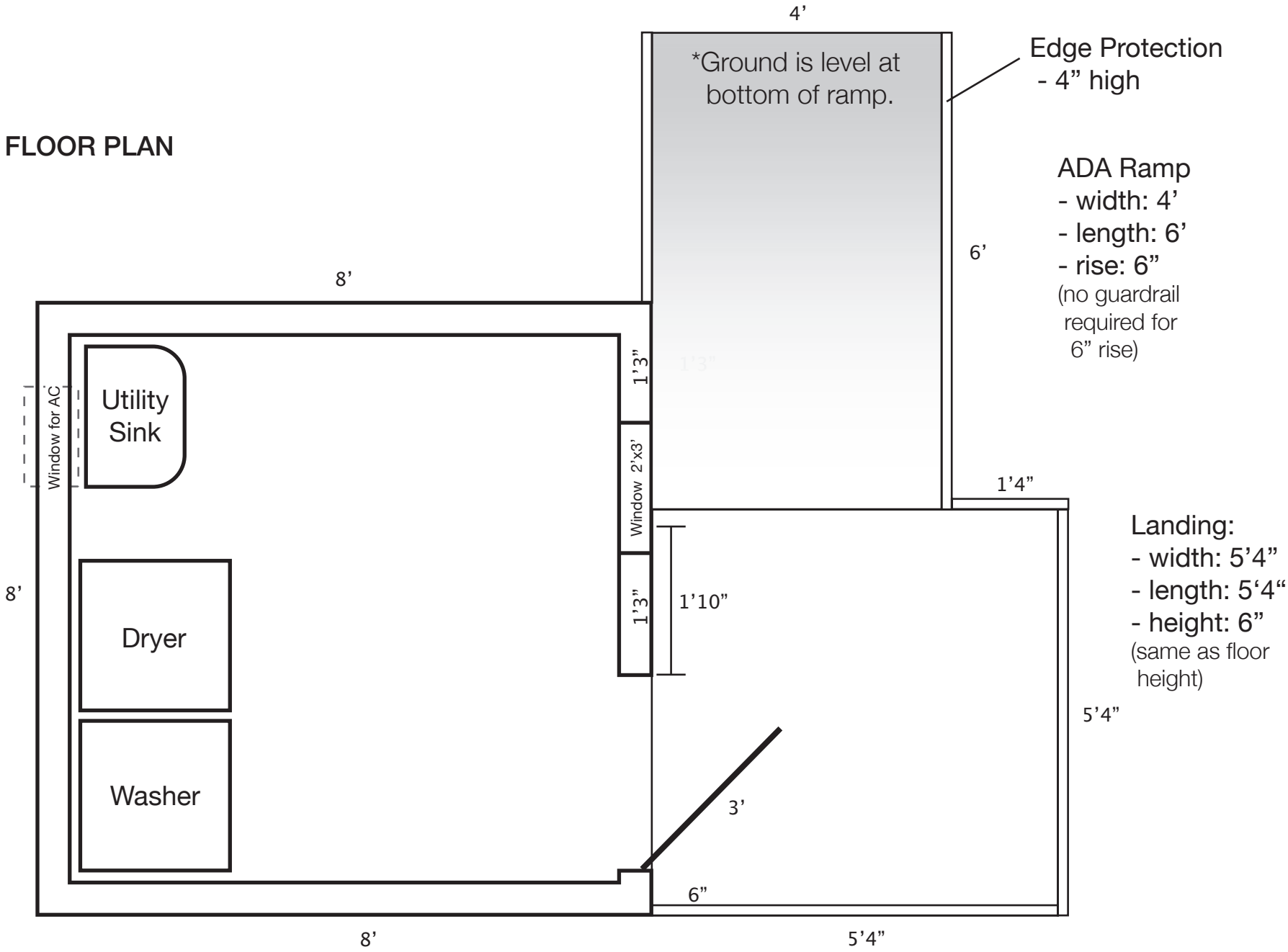
(*all wood construction except where specified)

10x8 A-Frame

~ 80" high walls - 2x4 studs 16" 0.C.
~ 5 Pressure Treated 4x4 skids
~ Snow load rating of 90 P.S.F.
~ Lifetime Architectural or Metal Roof
~ TechShield roof sheathing
~ 30 year LP SmartSide Siding
~ 50 year Advantech Floor
~ LP Smartsiding
~ Fiberglass pre-hung entrance door solid 6 pnl. out swing (R.O. 38.5"x81.75") Left Hinged
~ 24"x36" Vertical sliding aluminum window w/grids - White



Fore Points Marina Temporary Laundry Room / ADA (1 unit)



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Fore Points Marina Temporary Laundry Room / ADA (1 unit)

SUPPLIER CONSTRUCTION SPECS

(*all wood construction except where specified)

8x8 A-Frame

~ 80" high walls - 2x4 studs 16" 0.C.
~ 3 Pressure Treated 4x4 skids
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~ Fiberglass pre-hung entrance door
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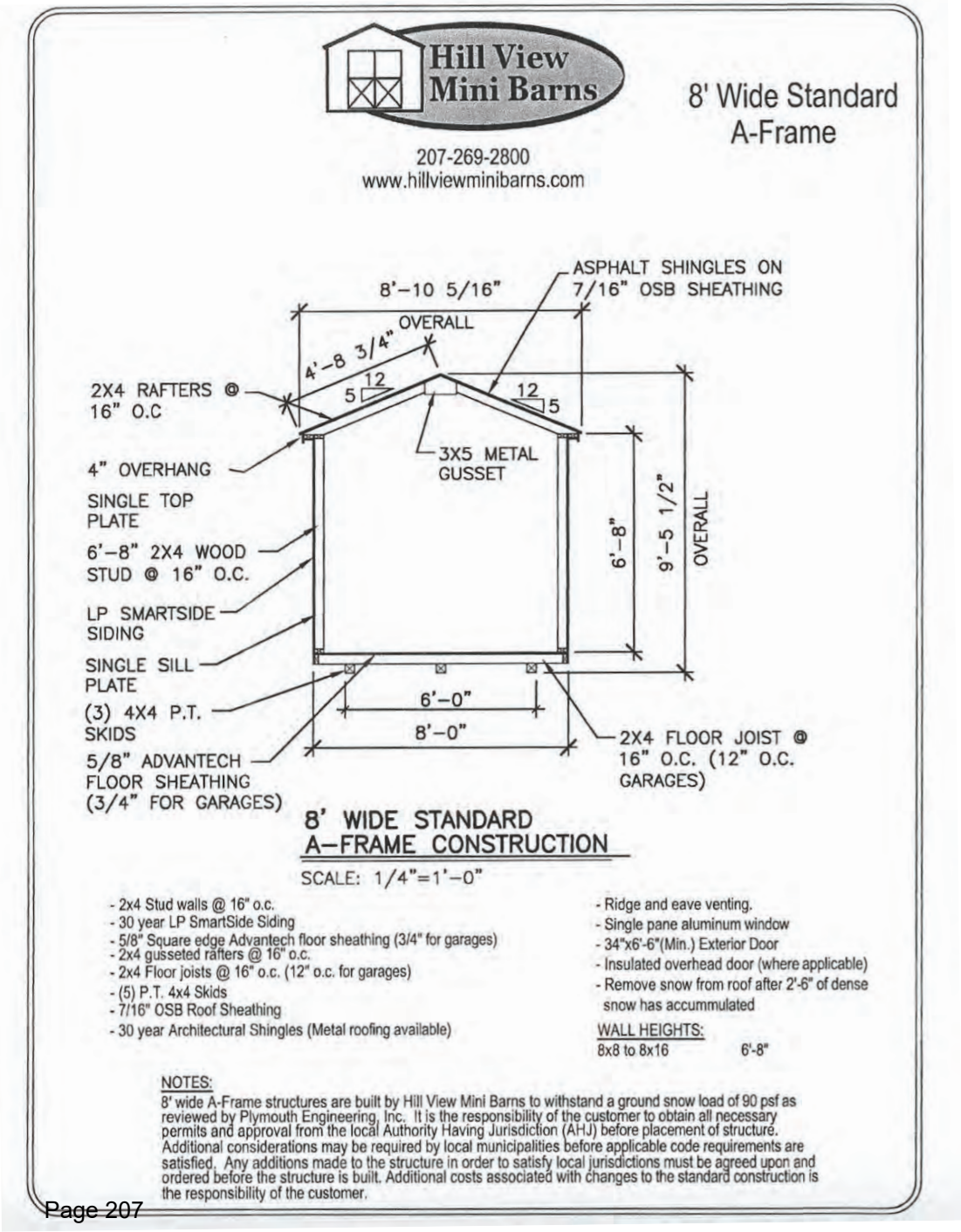
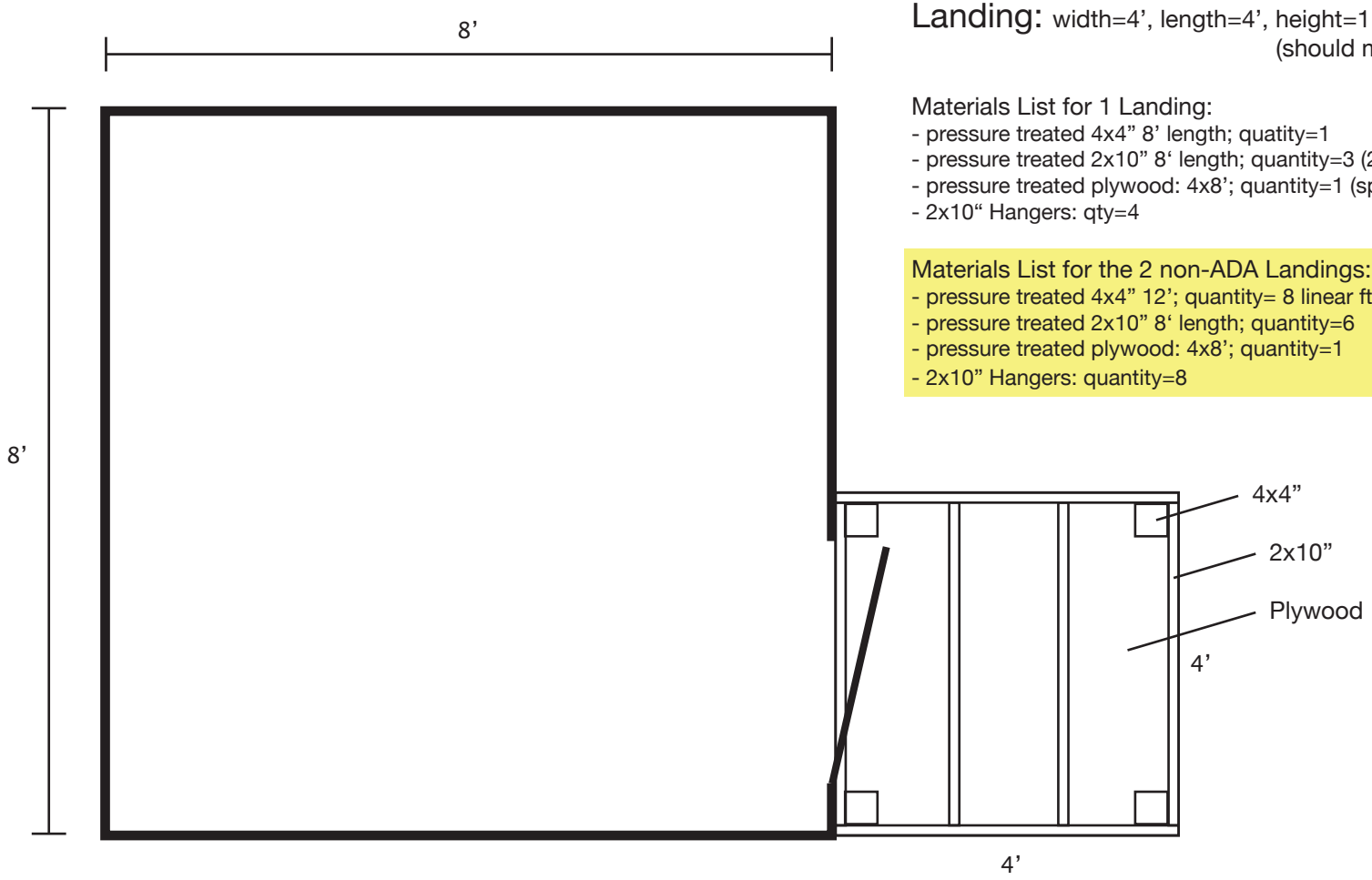


Fore Points Marina Bathroom Non-ADA Landings (2 units)

FLOOR PLAN



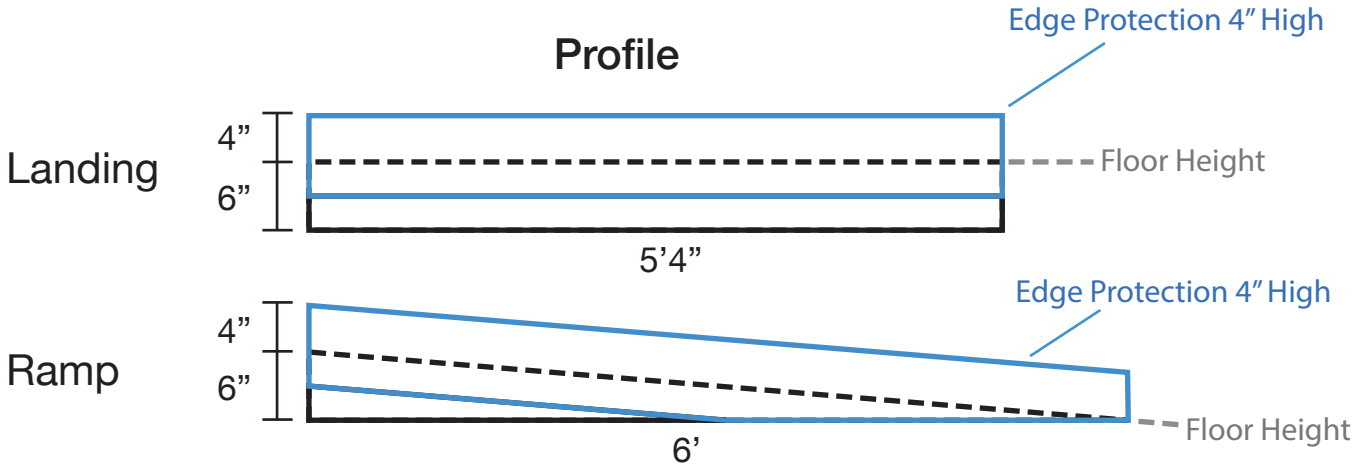
Landing: width=4’, length=4’, height=11.5” for both non-ADA sheds (should match interior floor height)

Materials List for 1 Landing:
- pressure treated 4x4” 8’ length; quatity=1
- pressure treated 2x10” 8‘ length; quantity=3 (24 linear feet)
- pressure treated plywood: 4x8’; quantity=1 (split between 2 landings)
- 2x10“ Hangers: qty=4

Materials List for the 2 non-ADA Landings:
- pressure treated 4x4” 12’; quantity= 8 linear ft
- pressure treated 2x10” 8‘ length; quantity=6
- pressure treated plywood: 4x8’; quantity=1
- 2x10” Hangers: quantity=8

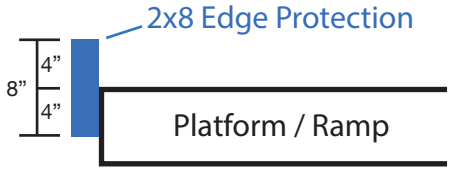
Fore Points Marina ADA Ramp & Landing Construction

Profile

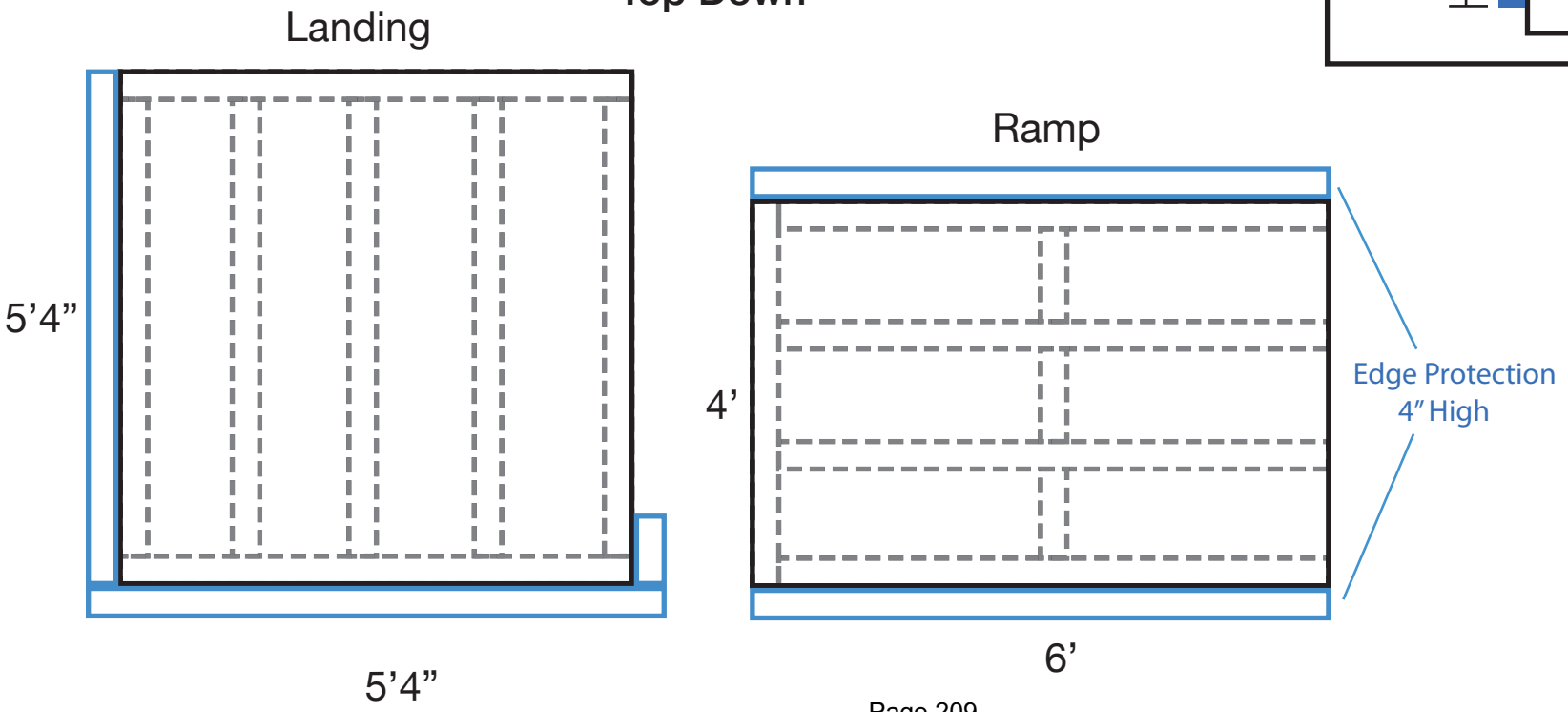


5'4"x5'4" Landing
~ 2x6 Pressure Treated base
~ Pressure Treated Plywood top
~ ULINE Non Skid Tape - Top Coating
~ 2x8 boards for 4" high edges

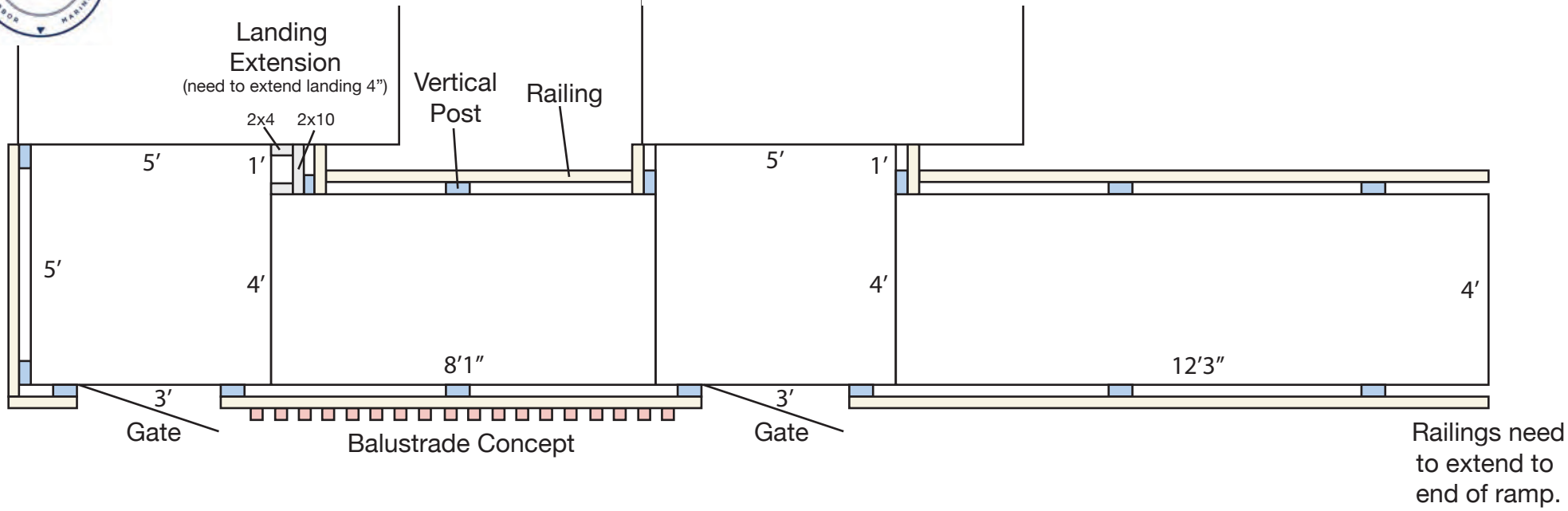
6x4 Ramp
~ 2x6 Pressure Treated base
~ Pressure Treated Plywood Top
~ ULINE Non Skid Tape - Top Coating
~ 2x8 boards for 4" high edges

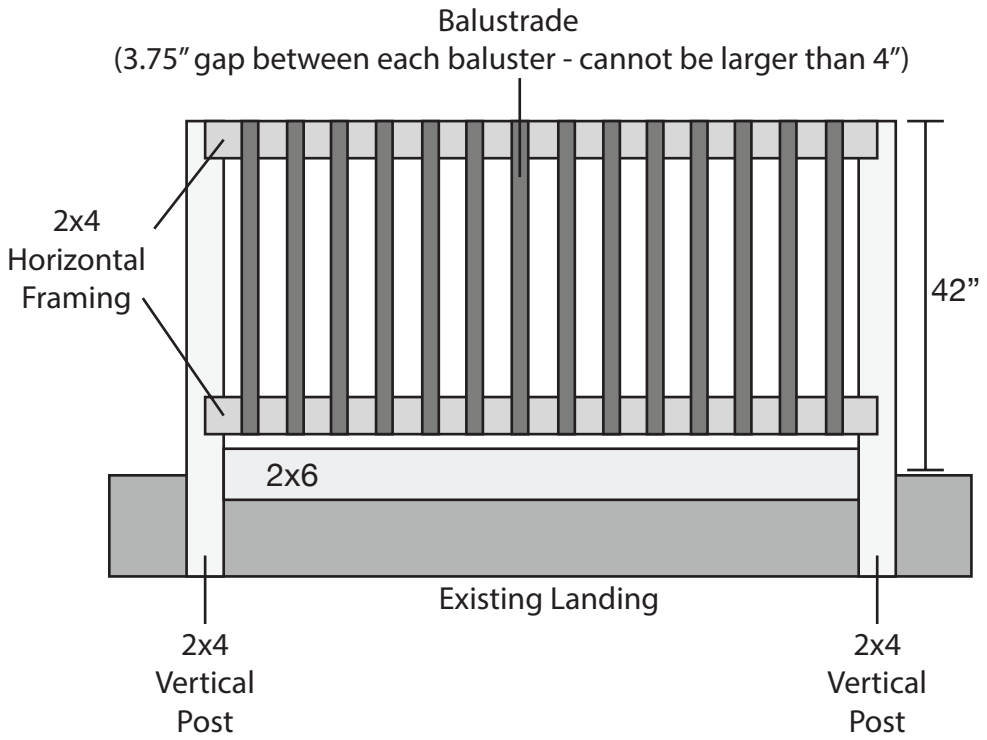


Top Down



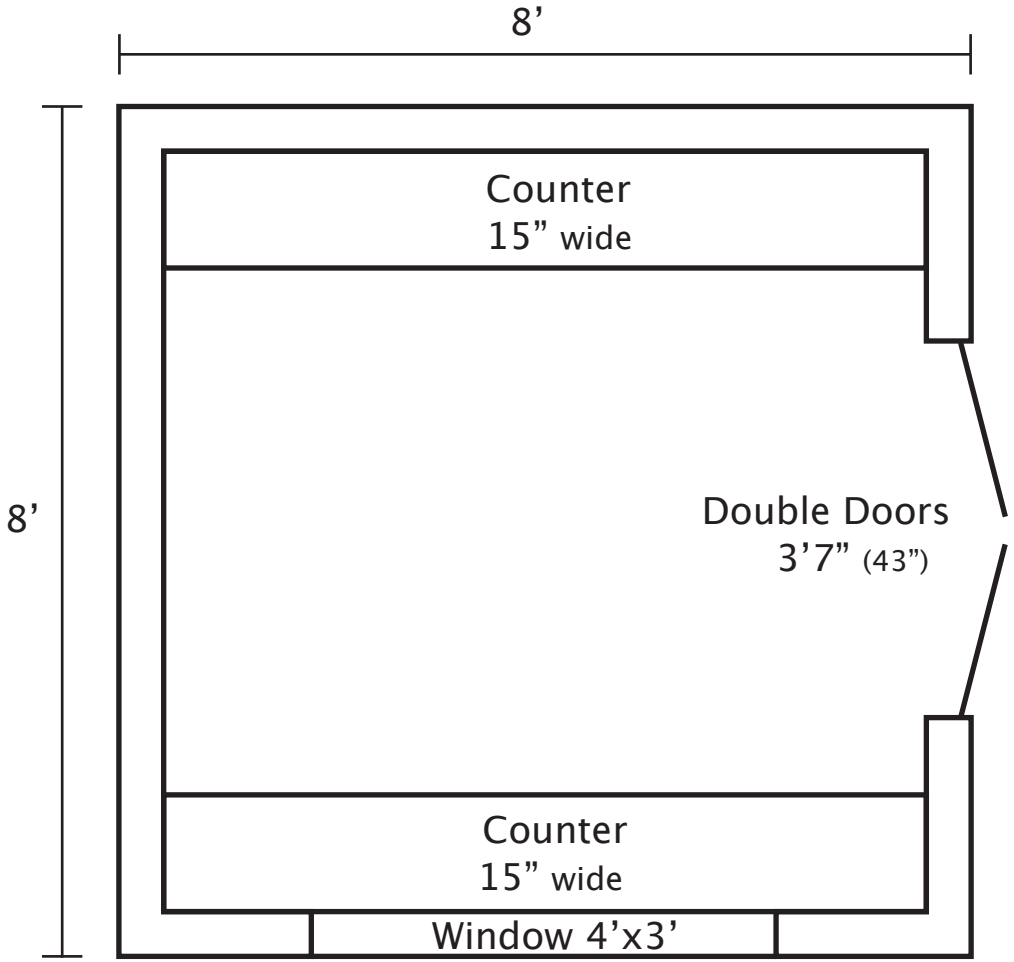
Marina Bathroom Railings Design





Fore Points Marina Commercial Shed (3 units)

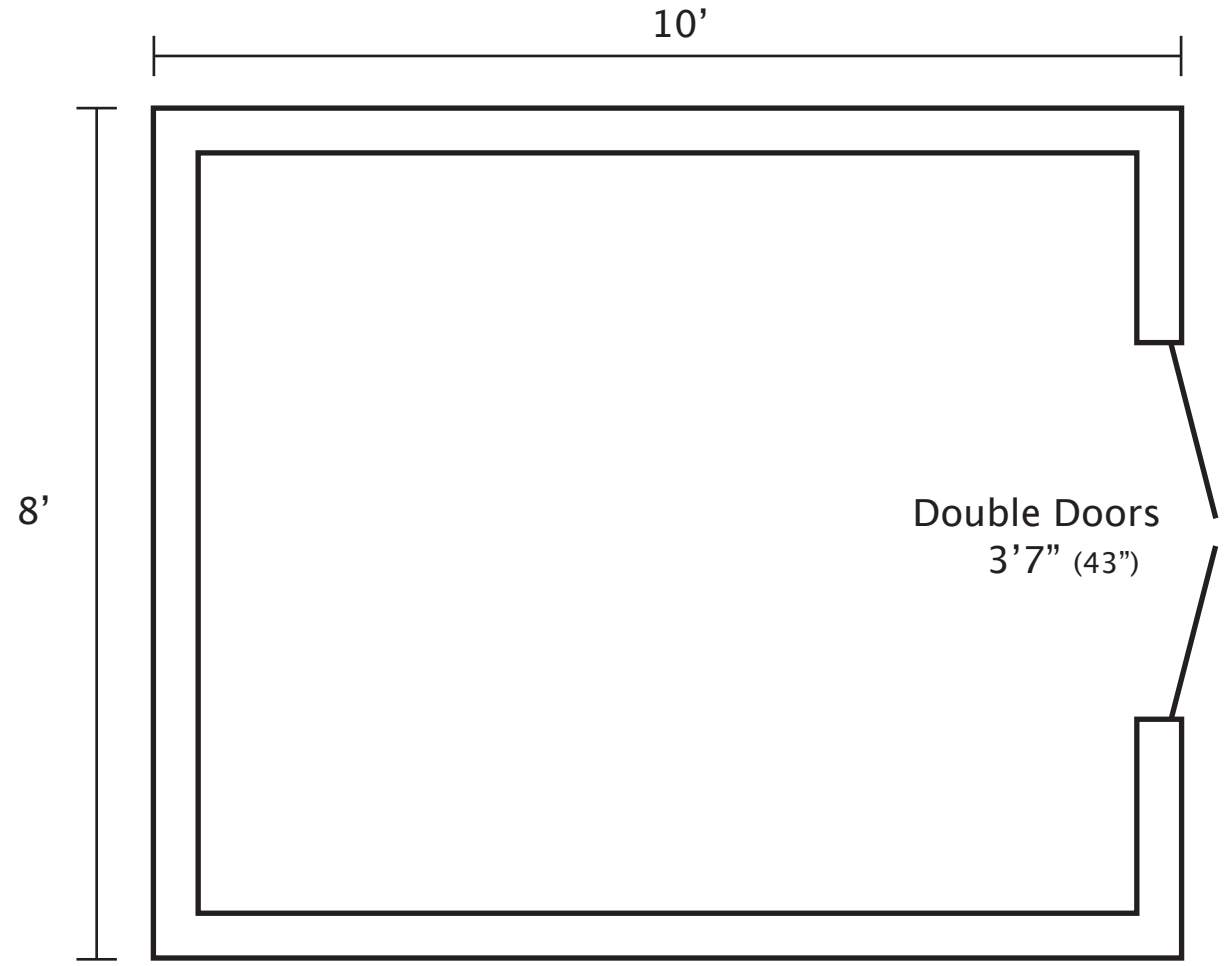
FLOOR PLAN



*Sheds core and shell pre-fabricated off site. Sheds will be wired on site.

Fore Points Marina Utility Shed (1 unit)

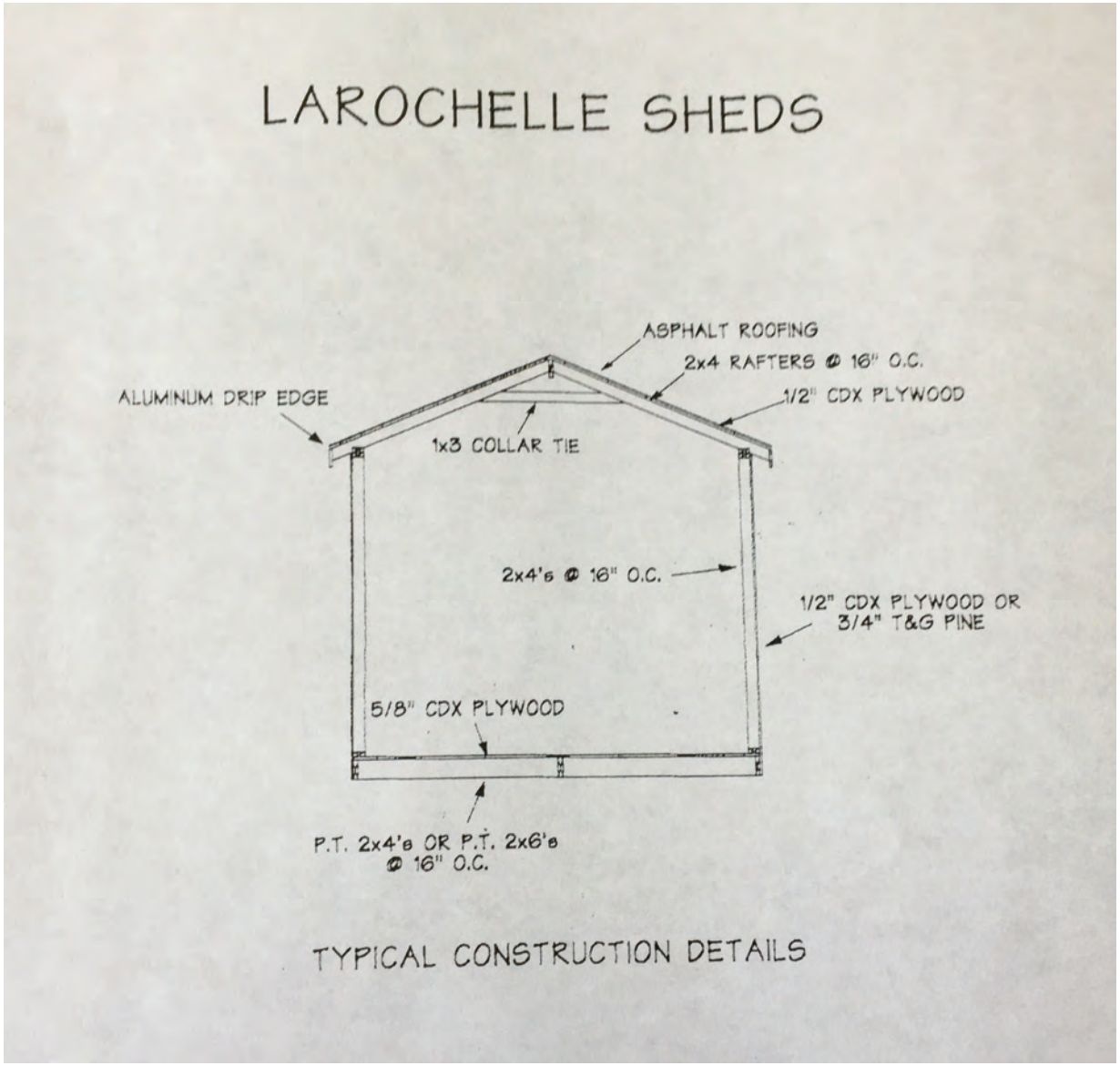
FLOOR PLAN



*Shed pre-fabricated off site.

SUPPLIER CONSTRUCTION SPECS

(*all wood construction except where specified)

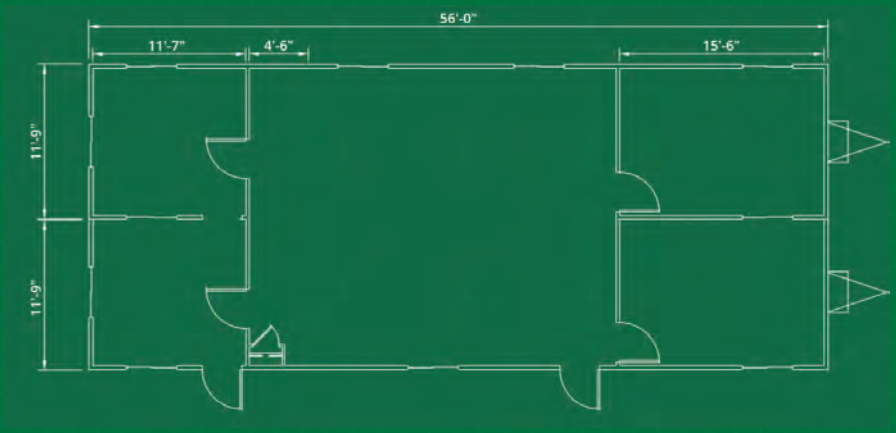


WILLSCOT

60' x 24' MOBILE OFFICE

(1 unit)

In addition to your office solution, we can provide additional products and services that complete your space- creating a more productive, comfortable, and safe work environment.



CUSTOMIZATION

Steps & Ramps
Furniture & Appliances
Technology
Site Services
Loss Protection

Dimensions

60' Long (including hitch)
56' Box size
24' Wide
8' Ceiling height

Exterior Finish

Aluminum or wood siding
I-Beam Frame
Standard drip rail gutters

Interior Finish

Paneled walls
Carpet or vinyl tile floor
Gypsum or T-grid suspended ceiling

Electric

Fluorescent ceiling lights
Breaker panel

Heating/Cooling

Central HVAC or thru-wall AC

Windows/Doors

Horizontal slider windows
(2) Vision panel doors with standard locks or (2) steel doors with dead bolt lock

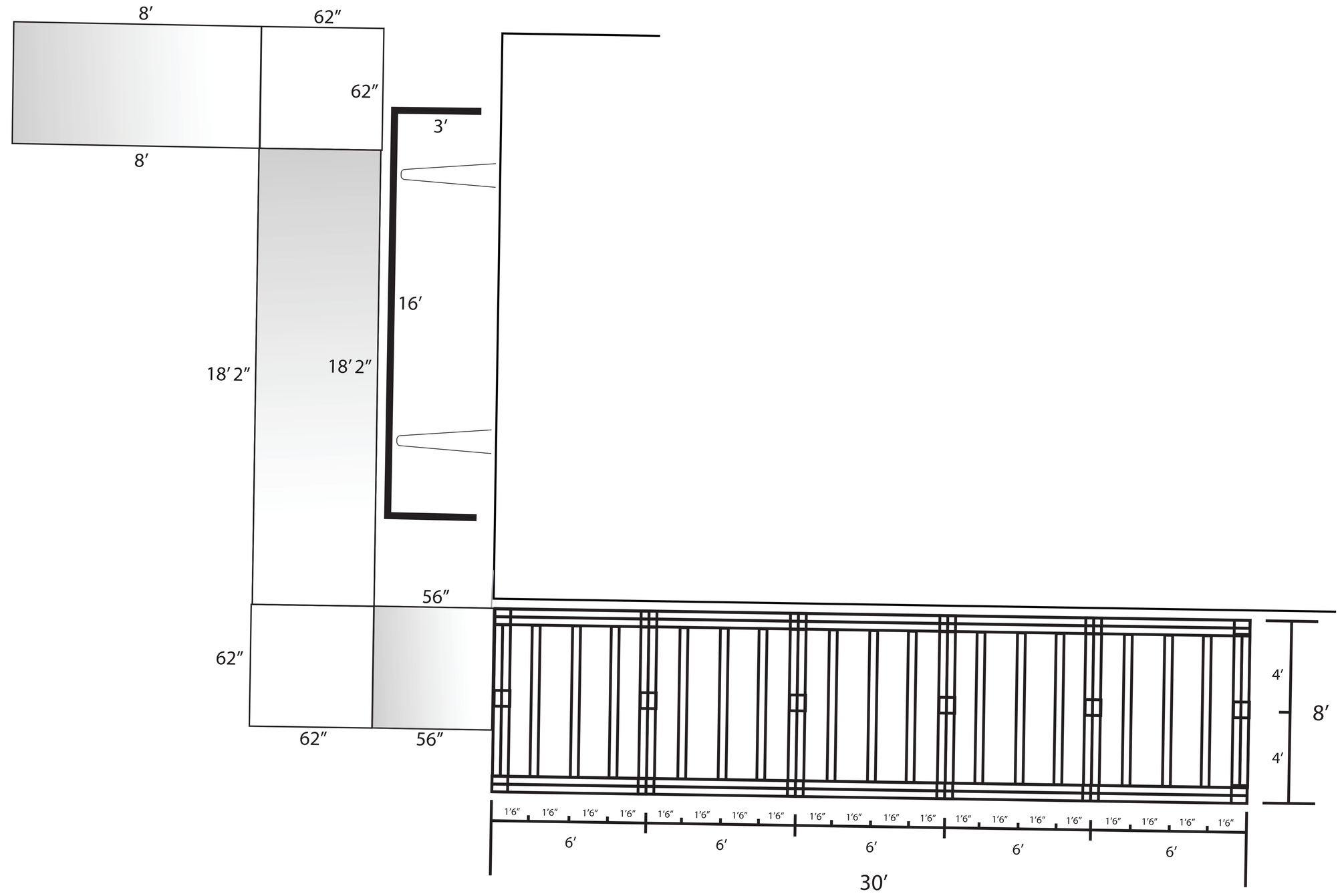
Other

Private office(s)
Optional restroom

READY TO WORK · EXPERTS · ASSETS · SOLUTIONS

** Photos are representational; actual products vary. Additional floor plans and specifications may vary from*

Marina Office ADA Ramp Design and Materials List



VERSASTEP

The Ultimate in Modular Access Versatility

Configured exactly as you need it:

Versa-Step OSHA Model

Configured as 3-step Or Configured as 2-step

Versa-Step CAL-OSHA / MASS. code Model

Configured as 4-step Or Configured as 3-step

(Shown with MASS. code Handrail)

See back cover for step configuration height and adjustability specifications.

Models

Model #	Description
TAVSO23	2 & 3 step OSHA compliant model
TAVSM34	3 & 4 step MASS. compliant model
TAVSC34	3 & 4 step CAL-OSHA compliant model

Specifications

Specification	TAVSO23	TAVSM34 TAVSC34
PLATFORM		
Construction	Aluminum	
Tread	Perforated	
Width	38″	
Depth	60″	
STEPS		
Construction	Aluminum	
Tread	Perforated	
Rise	8.5″	7.0″
Tread depth	12″	
Tread width	36″	
Standard elevations	25.5″ & 34″	28″ & 35″
LEGS		
Construction	Flo-Coat® galvanized steel	
Adjustability range	9″	
Adjustability increments	1/4″	
Foot pads construction	Polyethylene plastic	
GUARDRAILS		
Construction	Flo-Coat® galvanized steel	
Height with mid-rail	42″	
HANDRAILS		
Construction	Flo-Coat® galvanized steel	
Height to top rails	36″	
Mid-rail	Standard	
Horizontal extension*	N/A	12″
Vertical extension*	N/A	24″

*TAVSC34 only for each spec.

For information on additional Tri-Arc products including Scaffolding, Warehouse Ladders, and other products for the modular industry, please contact us or visit our web site.

Tri-Arc Manufacturing Company

Reaching your needs **one step at a time**™

390 Fountain Street Pittsburgh, PA 15238 **800-565-2165** Toll Free 800-530-8329 Fax

www.tri-arc.com

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VERSASTEP

The Ultimate in Modular Access Versatility

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TRI-ARC

Reaching your needs **one step at a time**™

VERSASTEP

Designed to offer the **most versatility** of any modular access step product on the market today.

Versa-Step's features will save you time and money, and remove the hassles associated with site erection of modular access.

Versatility

- **2-in-1**
  Versa-Step's OneStair system enables the stairway to be configured as either a 2-step or 3-step model for OSHA compliant models and 3-step or 4-step model for both CAL-OSHA and MASS. compliant models.

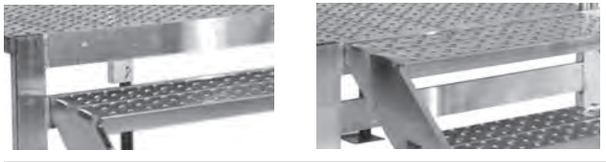
- **Max-Adjust**
  Versa-Step's PerfAdjust legs offer maximum adjustability, making it easier to position the platform flush with the threshold of the building door.

Functionality

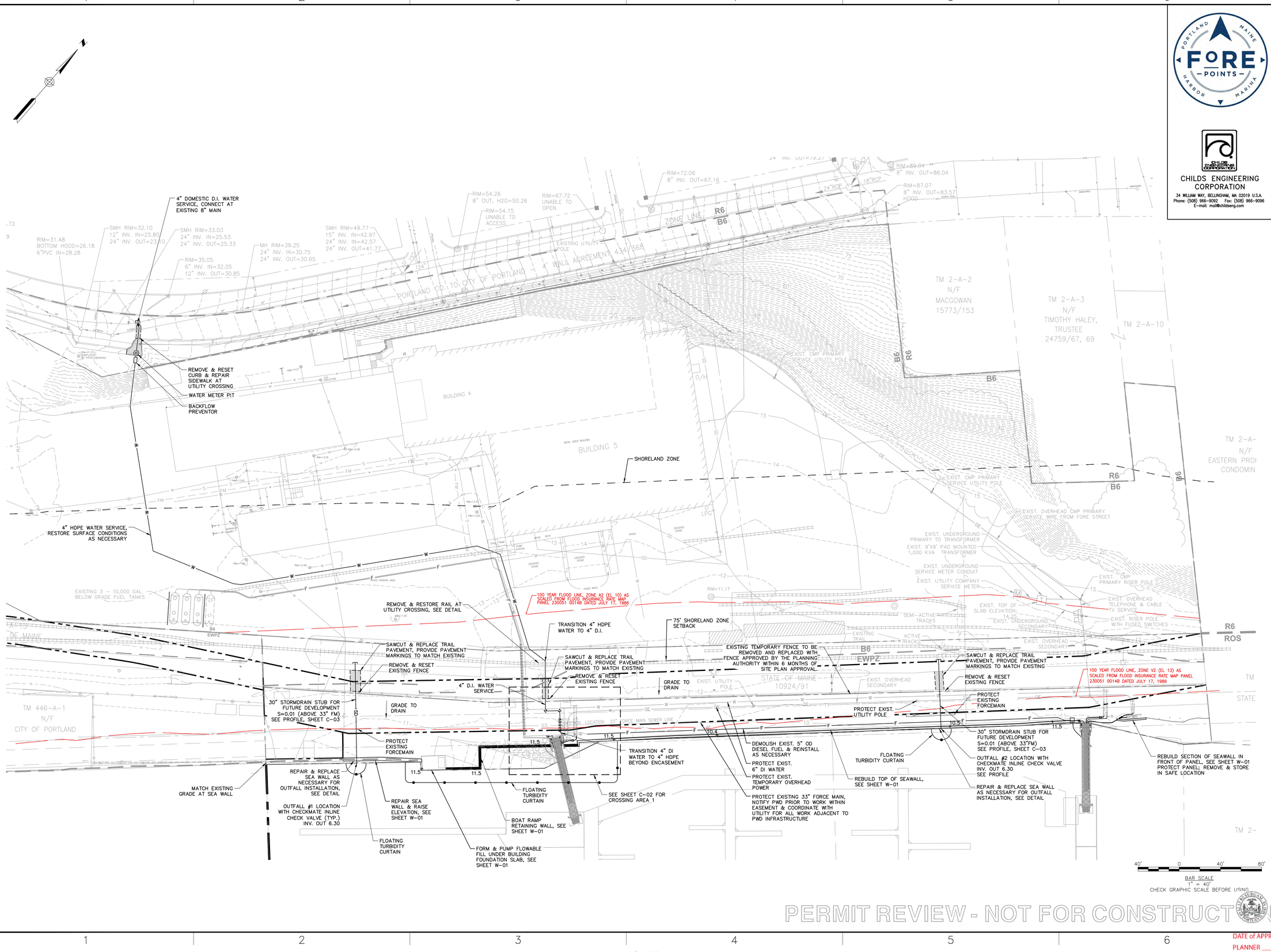
- **Versa-Step's** functionality makes it very quick and simple to set up, position flush against the door threshold and attach to the trailer.

- **Versa-Step's** unique modular leg and foot pad design ensures preservation of each **PerfAdjust** leg for future field applications even when disassembly occurs in the most difficult ground surface conditions.

Contact us today: 800-565-2165
or www.tri-arc.com

Features		Advantages
OneStair Stairway Unlike most modular stair systems, Versa-Step's **OneStair** can be configured with the platform as either a 2 or 3 step stairway or 3 or 4 step stairway depending on the model		▪ Purchase one model instead of two ▪ Eliminates extra trips to site ▪ Reduces inventory of step and parts ▪ Reduces overall expenses ▪ **Saves time and money**
PerfAdjust Legs The unique perforated individual adjustable legs provide 9" of total adjustability in 1/4" increments		▪ Easily positions platform to threshold of door ▪ No need to shimmy legs ▪ Increases safety of step ▪ **Saves time and money**
Plastic Foot Pad High density polyethylene plastic material design securely fits onto legs		▪ Eliminates need to replace entire leg if damaged or requires breaking to remove from ground ▪ Reduces replacement parts costs ▪ **Saves time and money**
Offset Rail The back guard rail is designed to be offset so that it does not make contact with the building when the step is positioned against the building		▪ Eliminates damages caused by rail making contact with siding panel of building ▪ Saves time required to repair siding panel ▪ Eliminates costs associated with repairs ▪ **Saves time and money**

24x36 SHEET
1:1



FORE POINTS MARINA
PORTLAND MAINE HARBOR MARINA

CHILDS ENGINEERING CORPORATION
34 WILLIAM WAY, BELLINGHAM, MA 02019 U.S.A.
Phone: (508) 966-9092 Fax: (508) 966-9096
E-mail: mail@childseng.com

41 Hutchins Drive
Portland, Maine 04102
800.426.4262 | www.woodardcurran.com
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WOODARD & CURRAN

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STATE OF MAINE
LAUREN JANE SWETT
No. 12284
REGISTERED PROFESSIONAL ENGINEER

REV	DESCRIPTION	DATE

DESIGNED BY: LJS
DRAWN BY: BCM
CHECKED BY: DLC
227007.50 C10X.dwg

OVERALL SITE PLAN

PF MARINA, LLC
PORTLAND, MAINE

FORE POINTS MARINA
SEASON 1 WATERFRONT IMPROVEMENTS

JOB NO.: 227007.16
DATE: APRIL 2020
SCALE: 1"=40'
SHEET NO.: C-02

CITY OF PORTLAND
APPROVED SITE PLAN
Subject to Conditions of Approval and Standard Conditions

C-02

DATE of APPROVAL 4-17-2020
PLANNER Christian Roadman
PROJECT NO. PL-000906-2019

PERMIT REVIEW - NOT FOR CONSTRUCTION

C:\Users\bmcdevitt\appdata\local\temp\AcPublish_12244\227007.50 C10X.dwg, Oct 25, 2019 - 3:55pm

42x30 SHEET
1:1

FORESIDE
PORTLAND, MAINE

FORE STREET
WATERVILLE STREET
ST. LAWRENCE STREET
ATLANTIC STREET
THAMES STREET EXTENSION

PORTLAND FORESIDE DEVELOPMENT
PHASE 1 - UNDER CONSTRUCTION

BUILDING 1A
BUILDING 2
BUILDING 3
BUILDING 4
BUILDING 5
BUILDING 6
BUILDING 6B
BUILDING 12
BLDG. 16
MARINA

TEMPORARY 1-1/2" LOW PRESSURE WASTEWATER DISCHARGE LINE TO CITY SEWER
TEMPORARY 4" DOMESTIC WATER AND 8" FIRE PROTECTION WATER
EXISTING OPAQUE POST & BEAM WHITE FENCE (223 LINEAR FT) TO BE REPLACED WITH TRANSPARENT WHITE ALUMINUM FENCE
ADA Pathway to Office
ADA Pathway to Bathroom
60x24' Marina Office
30x20 STORAGE SHED
STORAGE SHED
OPEN AIR SHADE STRUCTURE
PERIMETER FENCE
FLOOD ZONE V2
4'x8'x3' 275 Gallon Wastewater Holding Tank
15'x8'x8' 8000 Gallon Wastewater Holding Tank
PERIMETER FENCE
LOCATION .33" FORCE MAIN SEWER LINE

LEGEND:

EXISTING INTERIM STRUCTURES

PROPOSED INTERIM STRUCTURES

BAR SCALE
1" = 40'
CHECK GRAPHIC SCALE BEFORE USING

REV	DESCRIPTION	DRAWN BY:
REV	DESCRIPTION	DESIGNED BY:

DATE	DESCRIPTION	CHECKED BY:

MARINA SITE PLAN

PF MARINA LLC
PORTLAND, ME 04101

MINOR SITE PLAN AMENDMENT

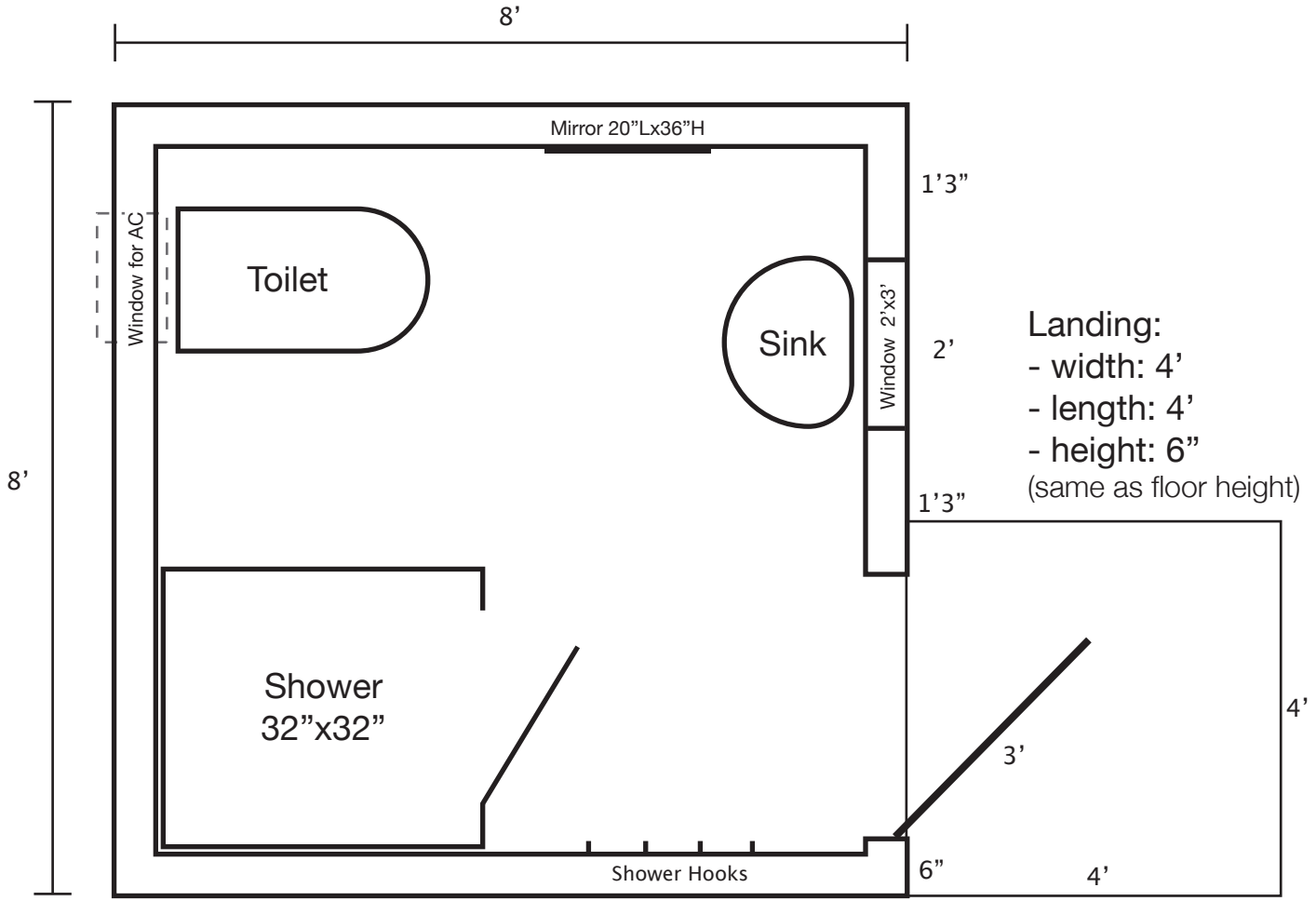
JOB NO.:
DATE: JUNE 1, 2021
SCALE: 1"=40'
SHEET: 1 OF 1

C-100

C:\Users\jvincelette\OneDrive - Woodard & Curran_PDF\dden\Vaseloop\July pf4d\Phase 1 - Site Plan Submission\V2\27027 Rev Phase 1 - Site Plan dwg, Aug 21, 2020 - 1:45pm

Fore Points Marina Temporary Bathroom (2 units)

FLOOR PLAN



*Sheds core and shell pre-fabricated off site. Sheds will be plumbed and wired on site.

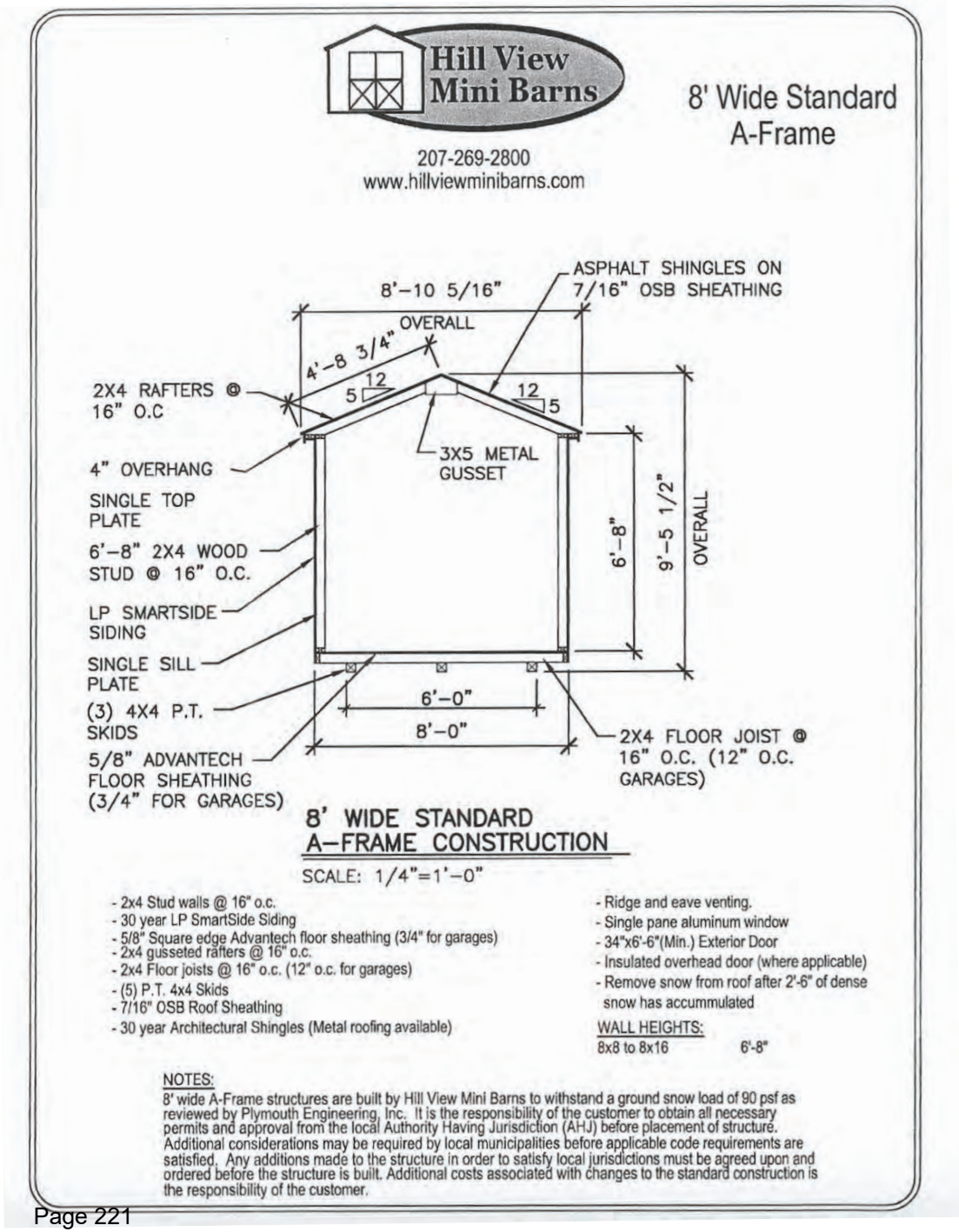
Fore Points Marina Temporary Bathroom (2 units)

SUPPLIER CONSTRUCTION SPECS

(*all wood construction except where specified)

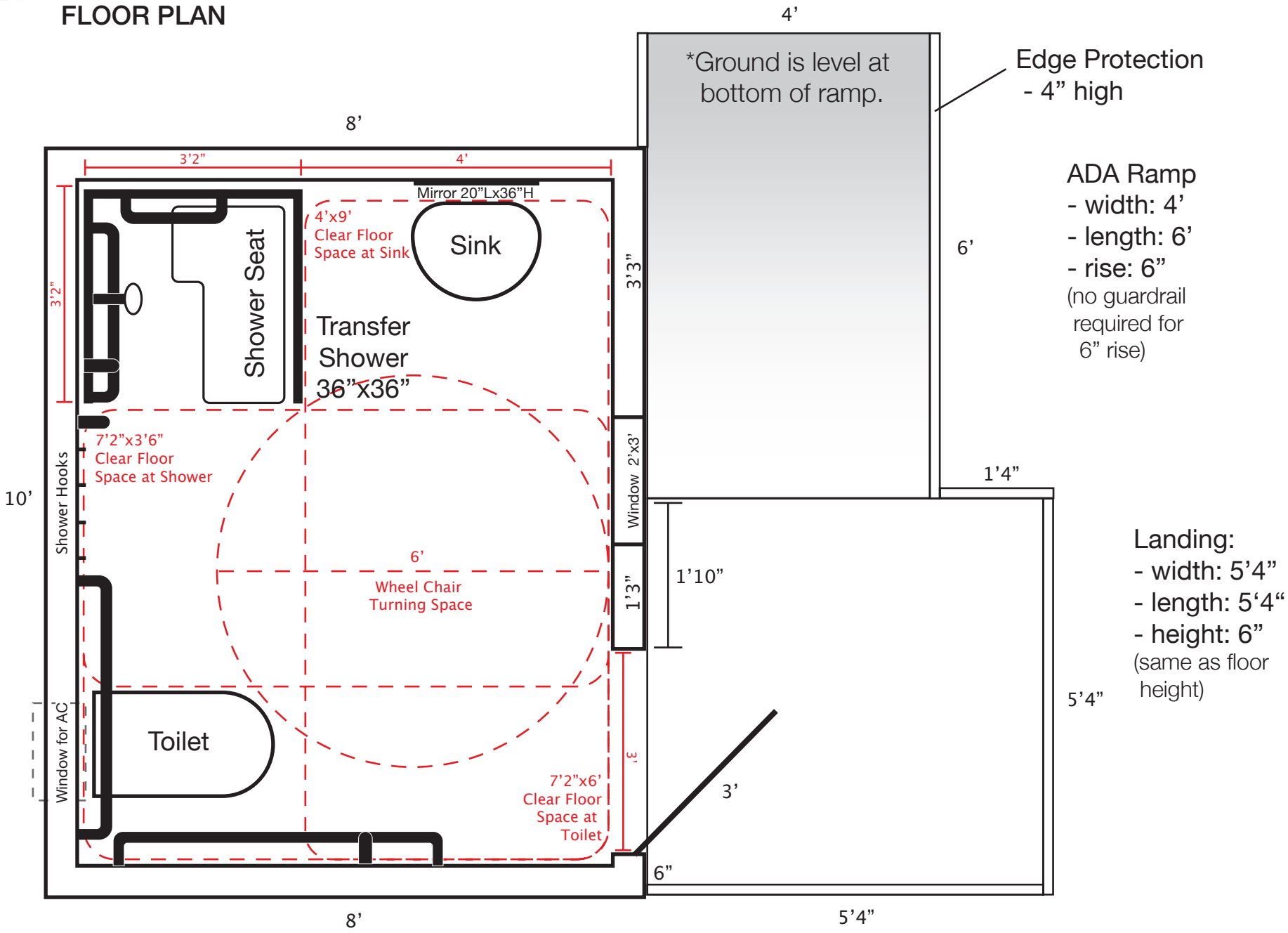
8x8 A-Frame

~ 80" high walls - 2x4 studs 16" 0.C.
~ 3 Pressure Treated 4x4 skids
~ Snow load rating of 90 P.S.F.
~ Lifetime Architectural or Metal Roof
~ TechShield roof sheathing
~ 30 year LP SmartSide Siding
~ 50 year Advantech Floor
~ LP Smartsiding
~ Fiberglass pre-hung entrance door
solid 6 pnl. out swing (R.O. 38.5"x81.75")
Left Hinged
~ 24"x36" Vertical sliding aluminum
window w/grids - White



Fore Points Marina Temporary Bathroom / ADA Model (1 unit)

FLOOR PLAN



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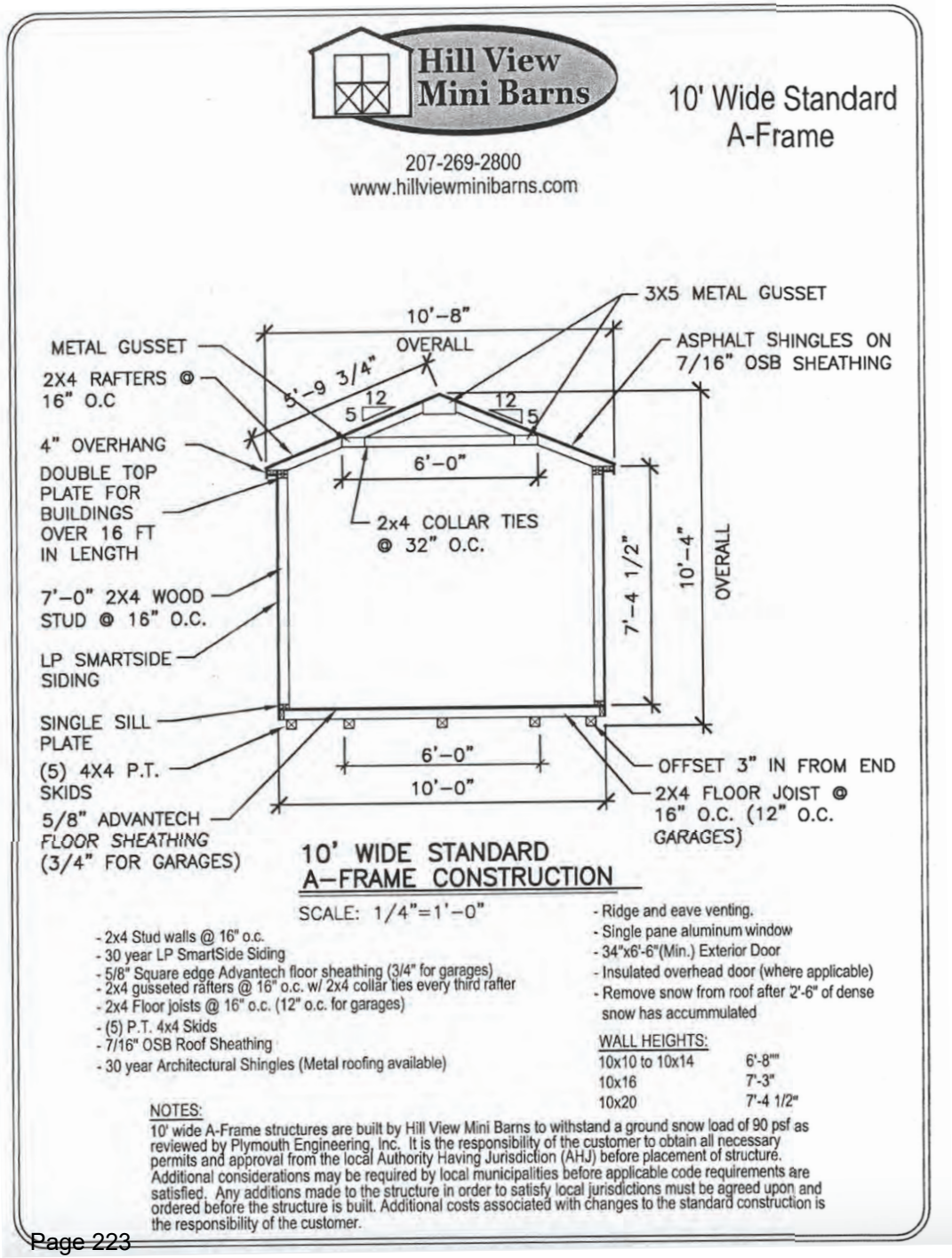
Fore Points Marina Temporary Bathroom / ADA Model (1 unit)

SUPPLIER CONSTRUCTION SPECS

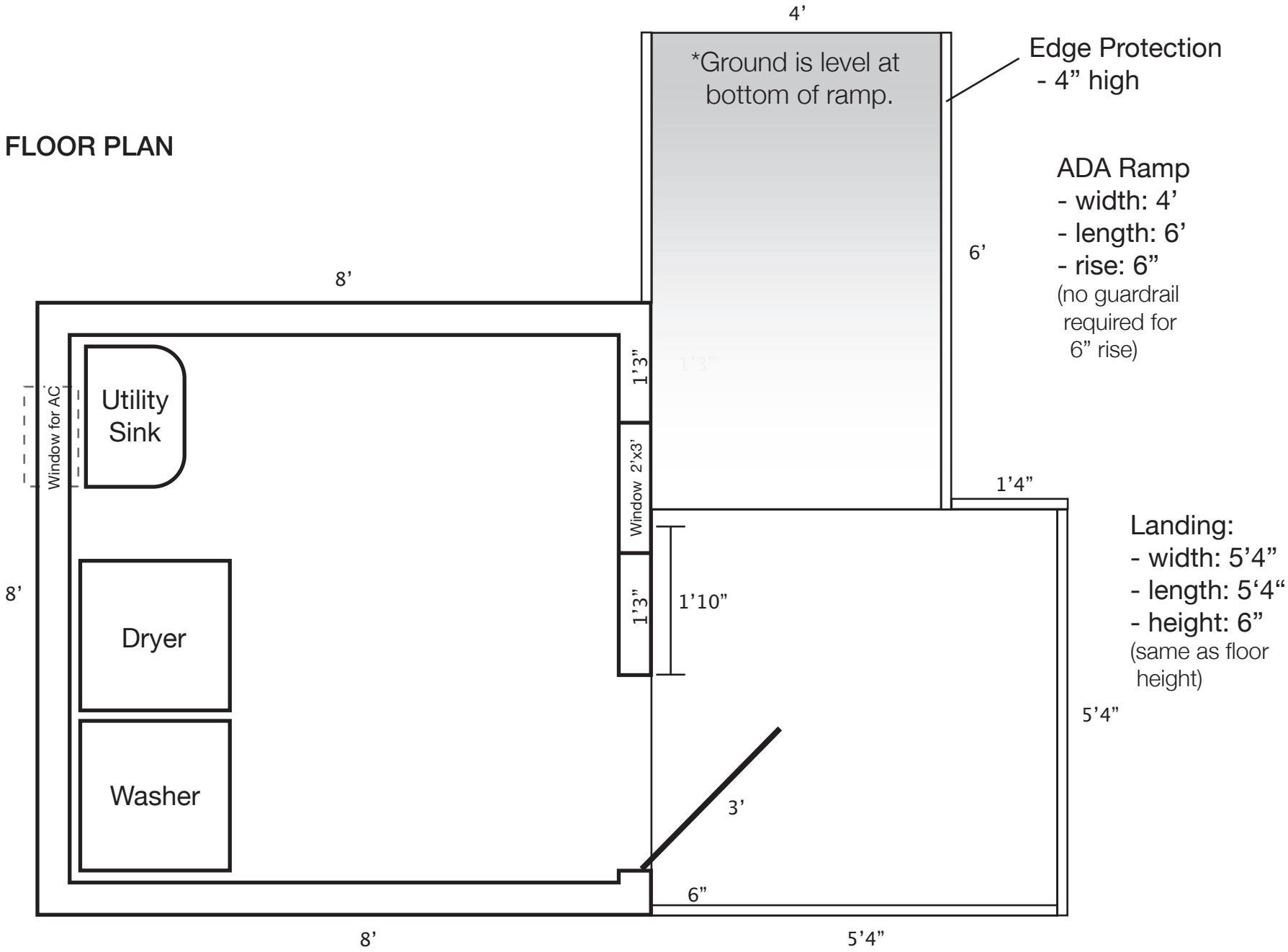
(*all wood construction except where specified)

10x8 A-Frame

~ 80" high walls - 2x4 studs 16" 0.C.
~ 5 Pressure Treated 4x4 skids
~ Snow load rating of 90 P.S.F.
~ Lifetime Architectural or Metal Roof
~ TechShield roof sheathing
~ 30 year LP SmartSide Siding
~ 50 year Advantech Floor
~ LP Smartsiding
~ Fiberglass pre-hung entrance door solid 6 pnl. out swing (R.O. 38.5"x81.75") Left Hinged
~ 24"x36" Vertical sliding aluminum window w/grids - White



Fore Points Marina Temporary Laundry Room / ADA (1 unit)



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Fore Points Marina Temporary Laundry Room / ADA (1 unit)

SUPPLIER CONSTRUCTION SPECS

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8x8 A-Frame

~ 80" high walls - 2x4 studs 16" 0.C.
~ 3 Pressure Treated 4x4 skids
~ Snow load rating of 90 P.S.F.
~ Lifetime Architectural or Metal Roof
~ TechShield roof sheathing
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~ 50 year Advantech Floor
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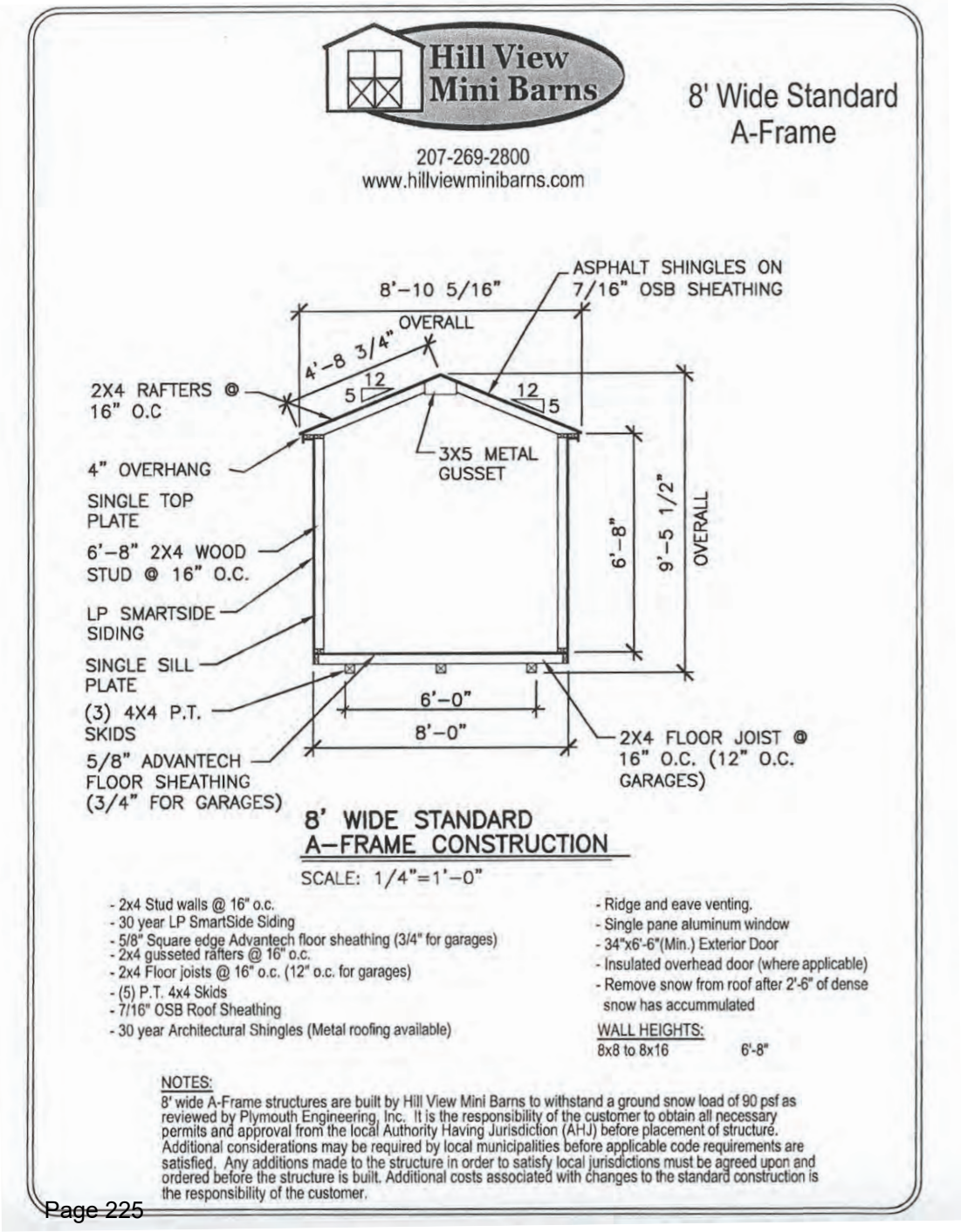
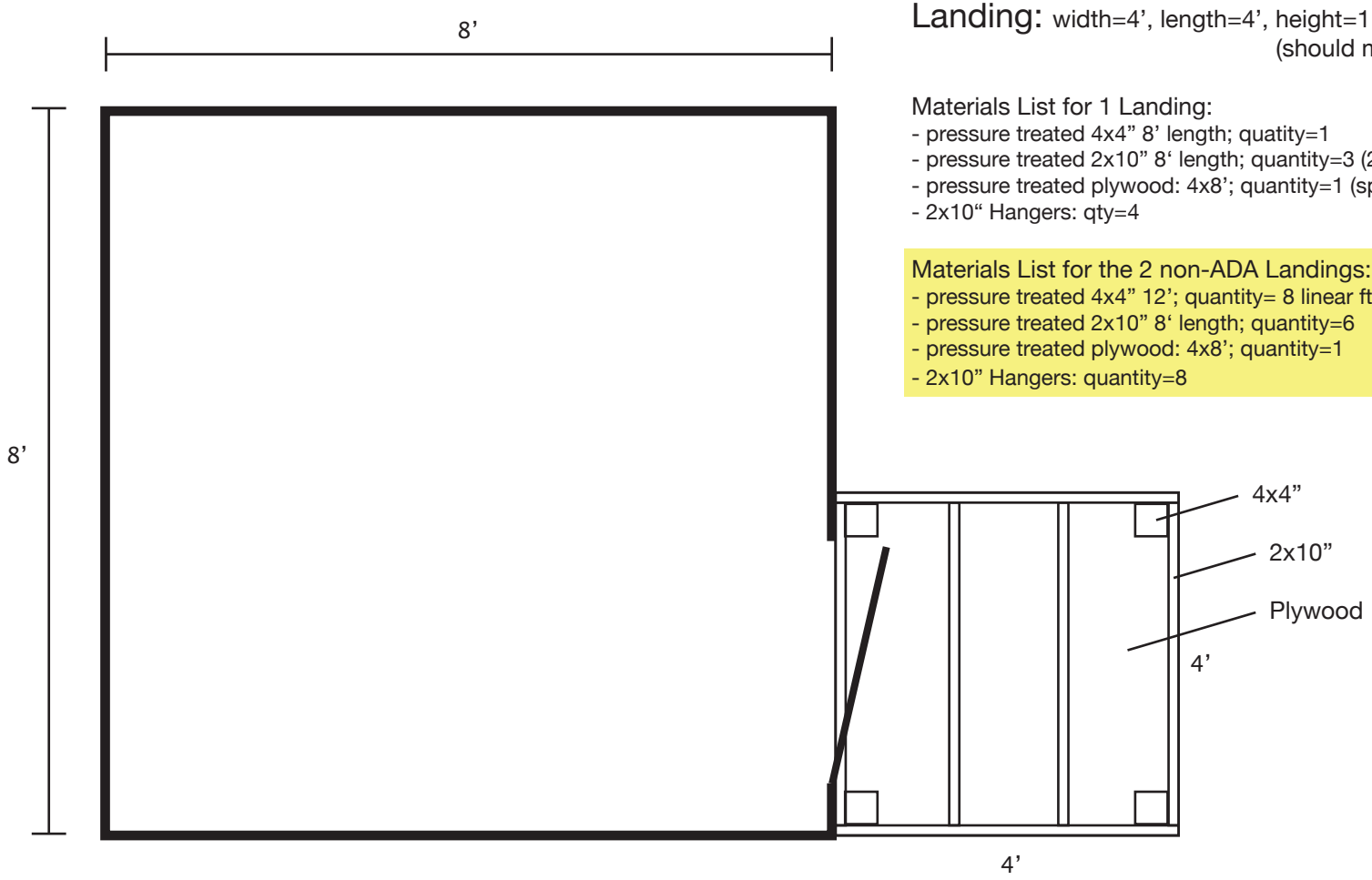


Fore Points Marina Bathroom Non-ADA Landings (2 units)

FLOOR PLAN



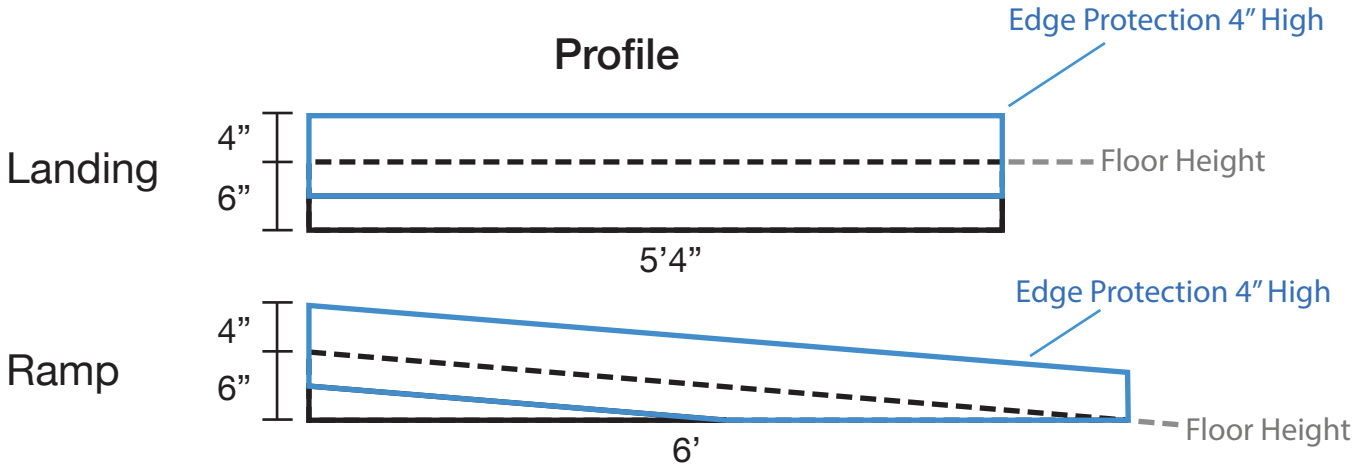
Landing: width=4’, length=4’, height=11.5” for both non-ADA sheds (should match interior floor height)

Materials List for 1 Landing:
- pressure treated 4x4” 8’ length; quatity=1
- pressure treated 2x10” 8‘ length; quantity=3 (24 linear feet)
- pressure treated plywood: 4x8’; quantity=1 (split between 2 landings)
- 2x10“ Hangers: qty=4

Materials List for the 2 non-ADA Landings:
- pressure treated 4x4” 12’; quantity= 8 linear ft
- pressure treated 2x10” 8‘ length; quantity=6
- pressure treated plywood: 4x8’; quantity=1
- 2x10” Hangers: quantity=8

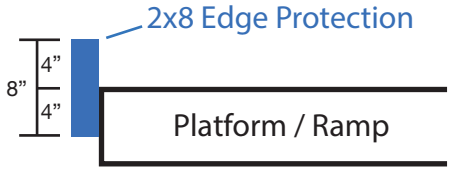
Fore Points Marina ADA Ramp & Landing Construction

Profile

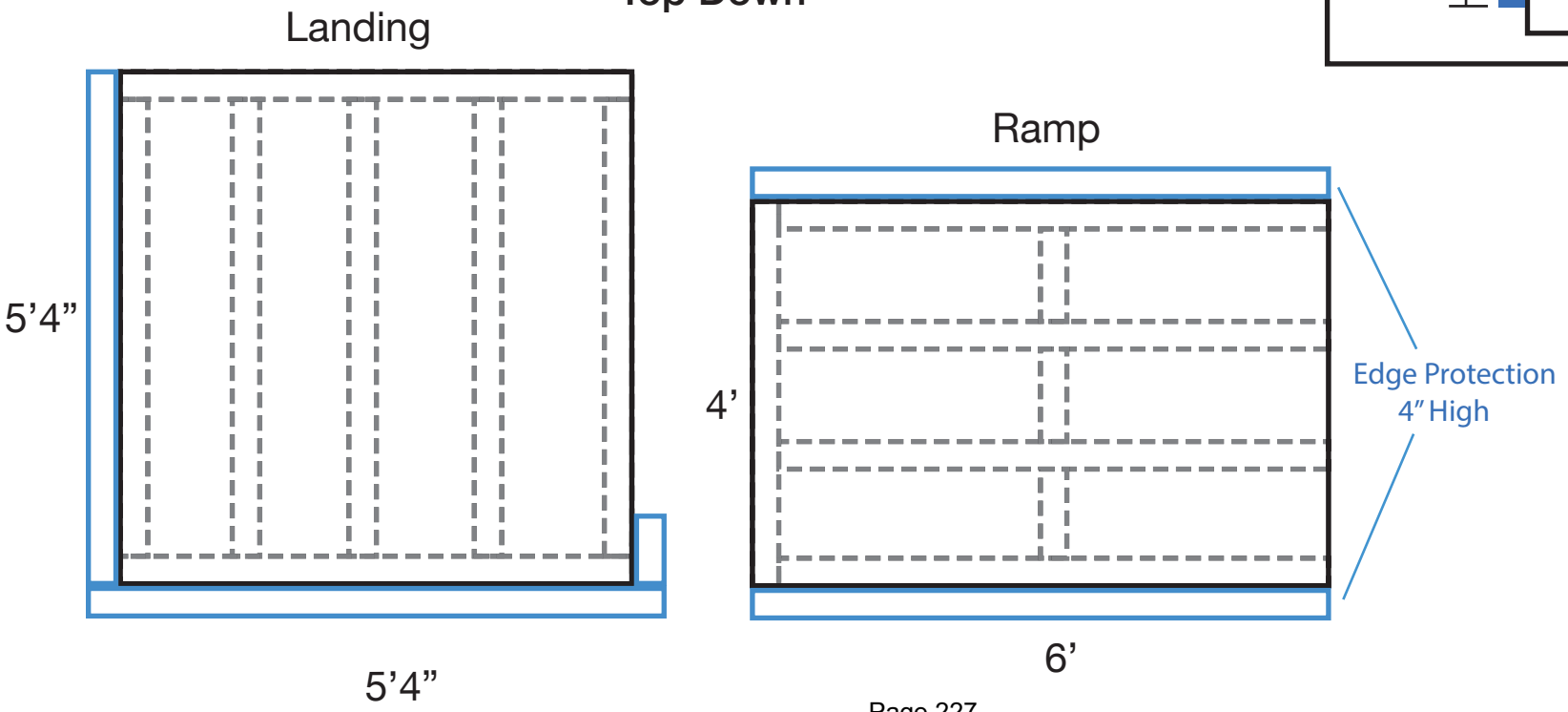


5'4"x5'4" Landing
~ 2x6 Pressure Treated base
~ Pressure Treated Plywood top
~ ULINE Non Skid Tape - Top Coating
~ 2x8 boards for 4" high edges

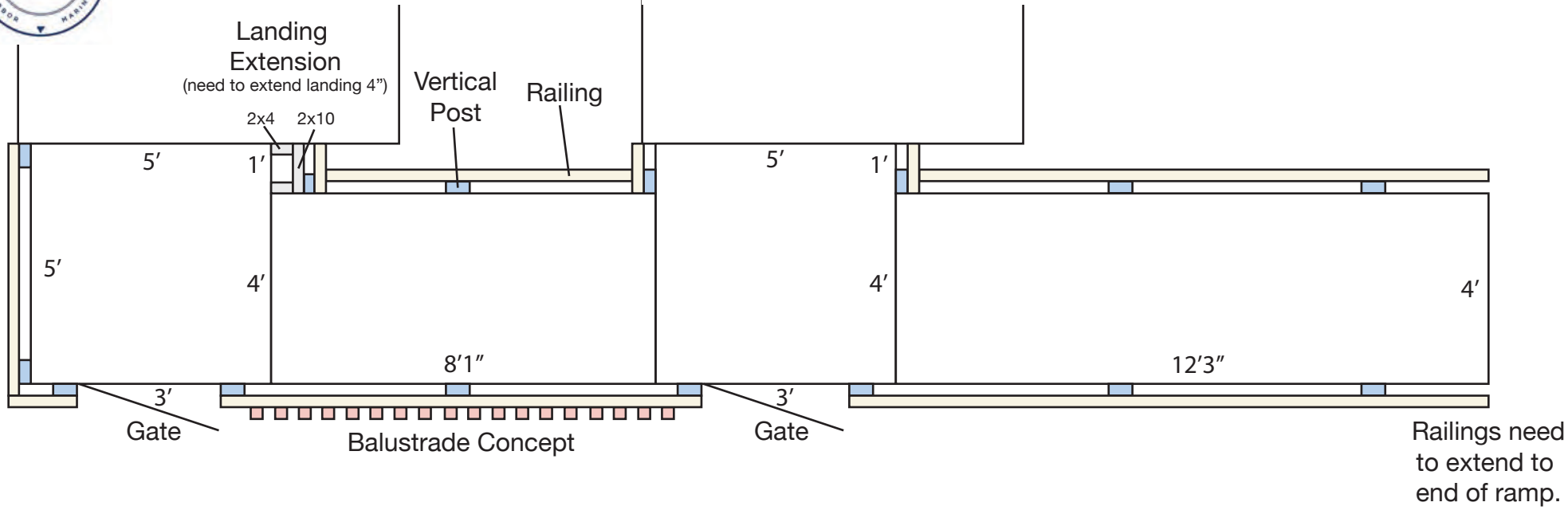
6x4 Ramp
~ 2x6 Pressure Treated base
~ Pressure Treated Plywood Top
~ ULINE Non Skid Tape - Top Coating
~ 2x8 boards for 4" high edges

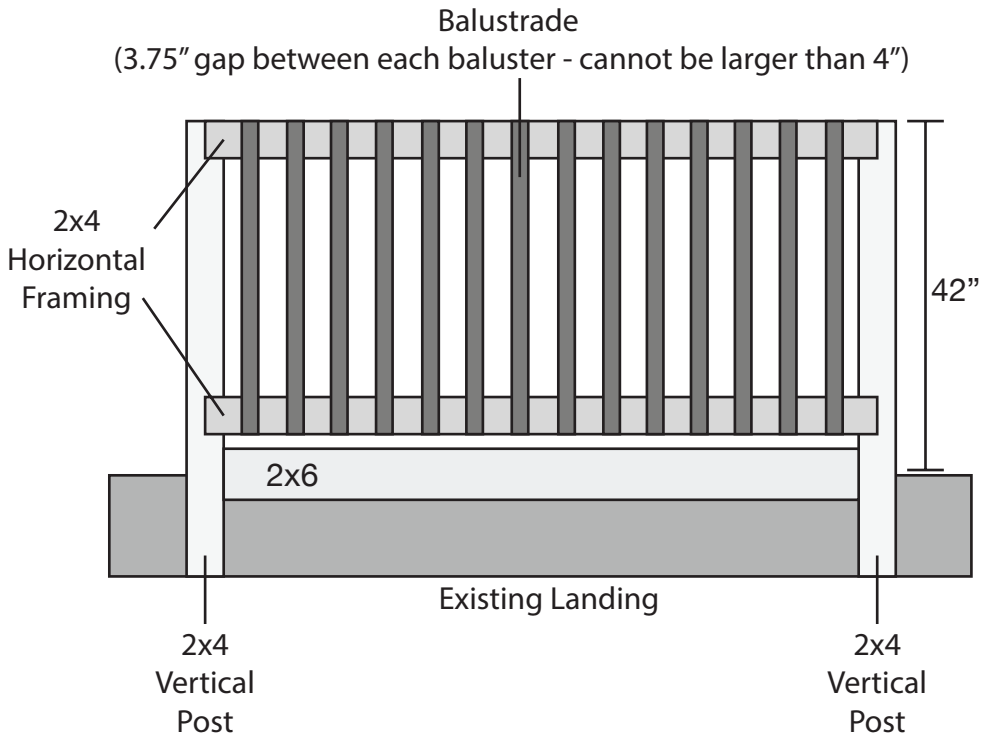


Top Down



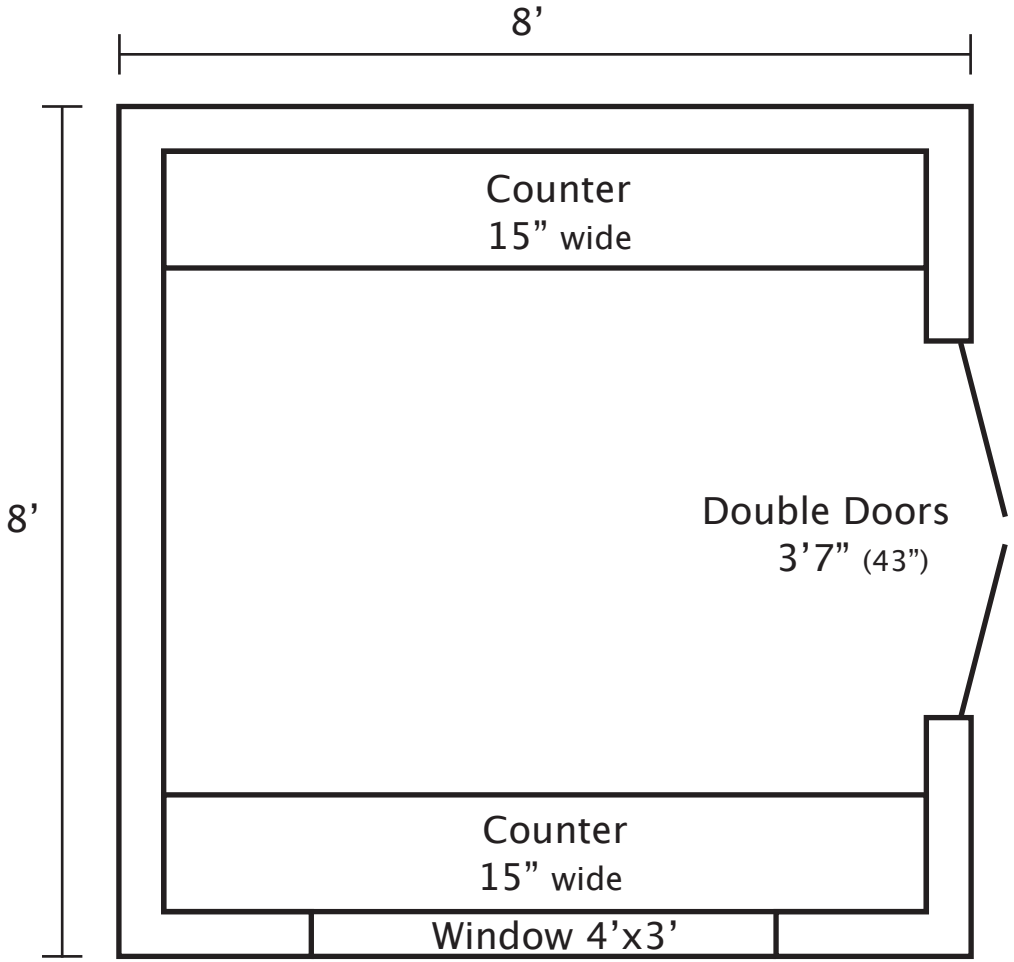
Marina Bathroom Railings Design





Fore Points Marina Commercial Shed (3 units)

FLOOR PLAN



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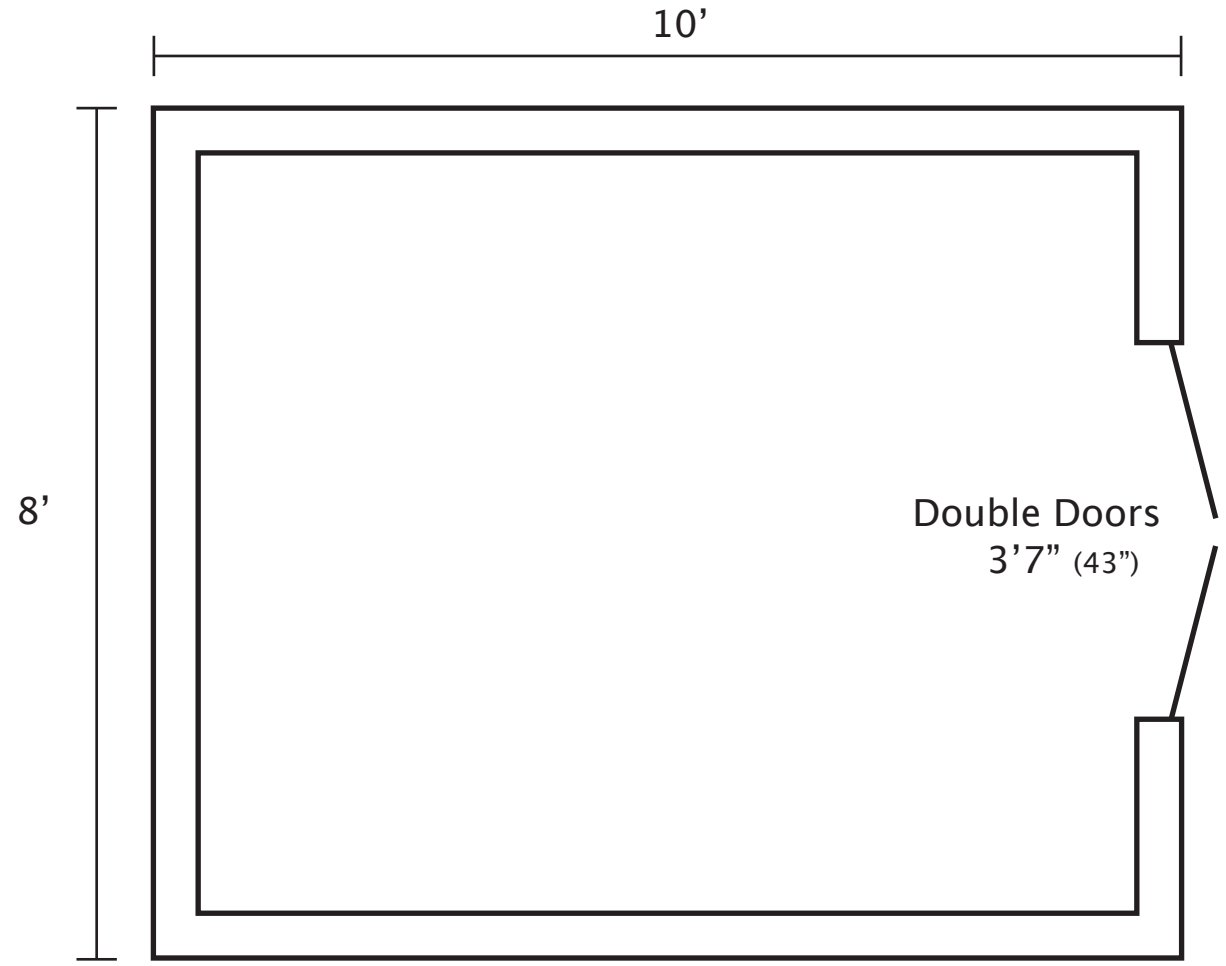
Fore Points Marina Utility Shed (1 unit)

FLOOR PLAN



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SUPPLIER CONSTRUCTION SPECS

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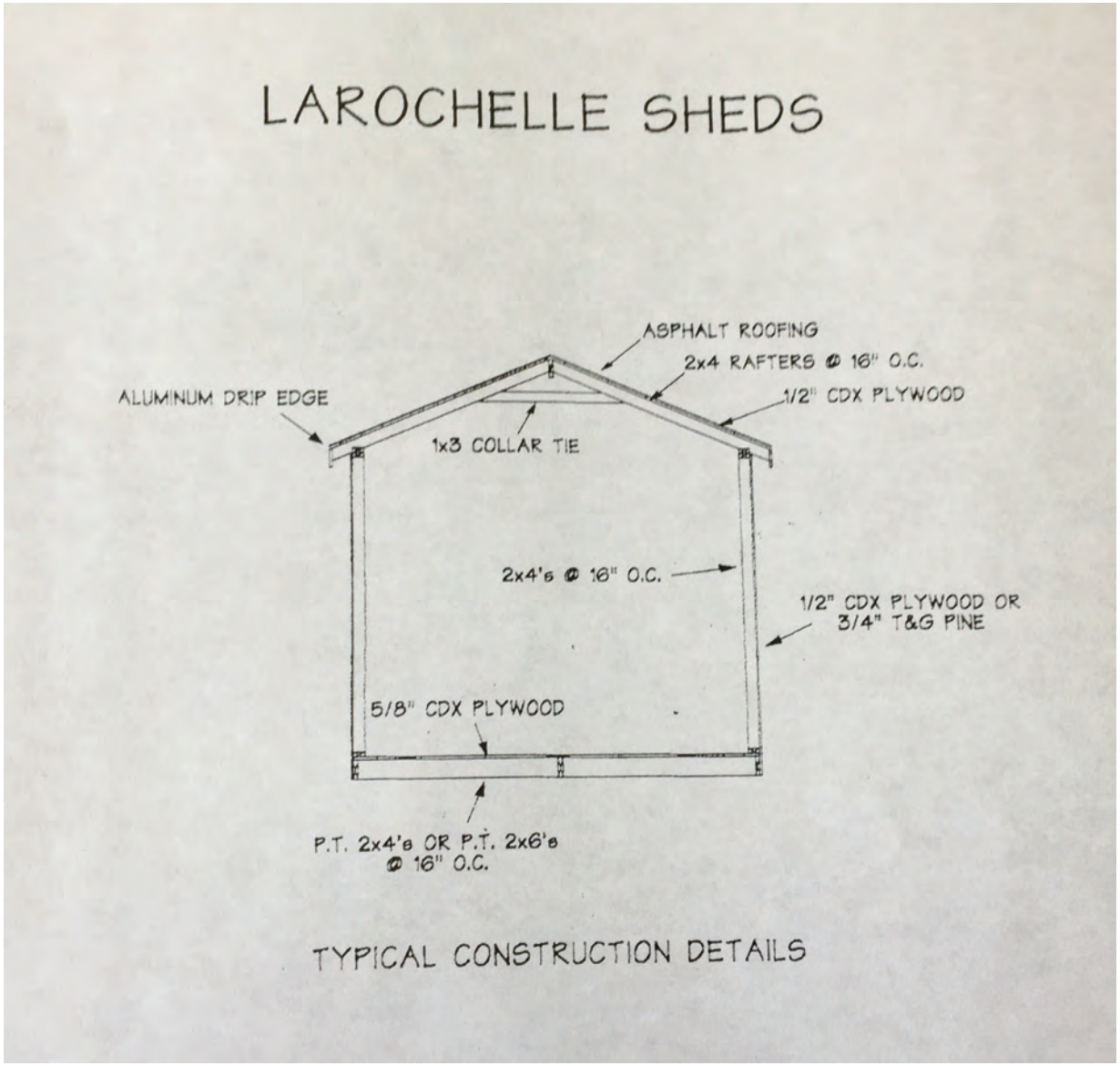

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60' x 24' MOBILE OFFICE

(1 unit)

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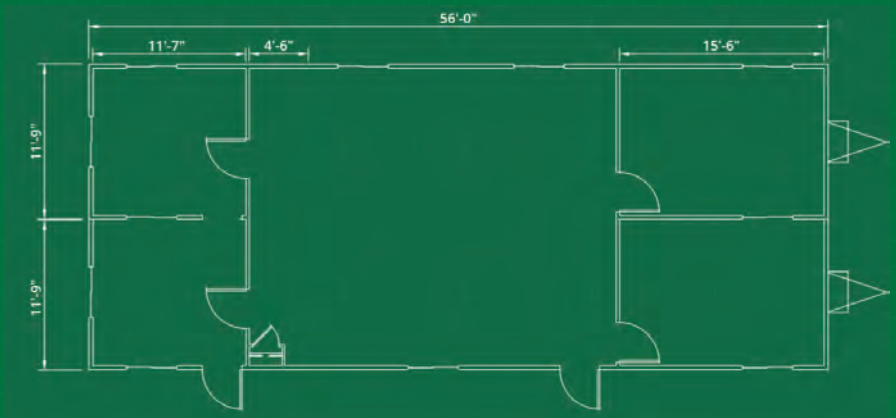

CUSTOMIZATION

Steps & Ramps
Furniture & Appliances
Technology
Site Services
Loss Protection

Dimensions

60' Long (including hitch)
56' Box size
24' Wide
8' Ceiling height

Exterior Finish

Aluminum or wood siding
I-Beam Frame
Standard drip rail gutters

Interior Finish

Paneled walls
Carpet or vinyl tile floor
Gypsum or T-grid suspended ceiling

Electric

Fluorescent ceiling lights
Breaker panel

Heating/Cooling

Central HVAC or thru-wall AC

Windows/Doors

Horizontal slider windows
(2) Vision panel doors with standard locks or (2) steel doors with dead bolt lock

Other

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Optional restroom

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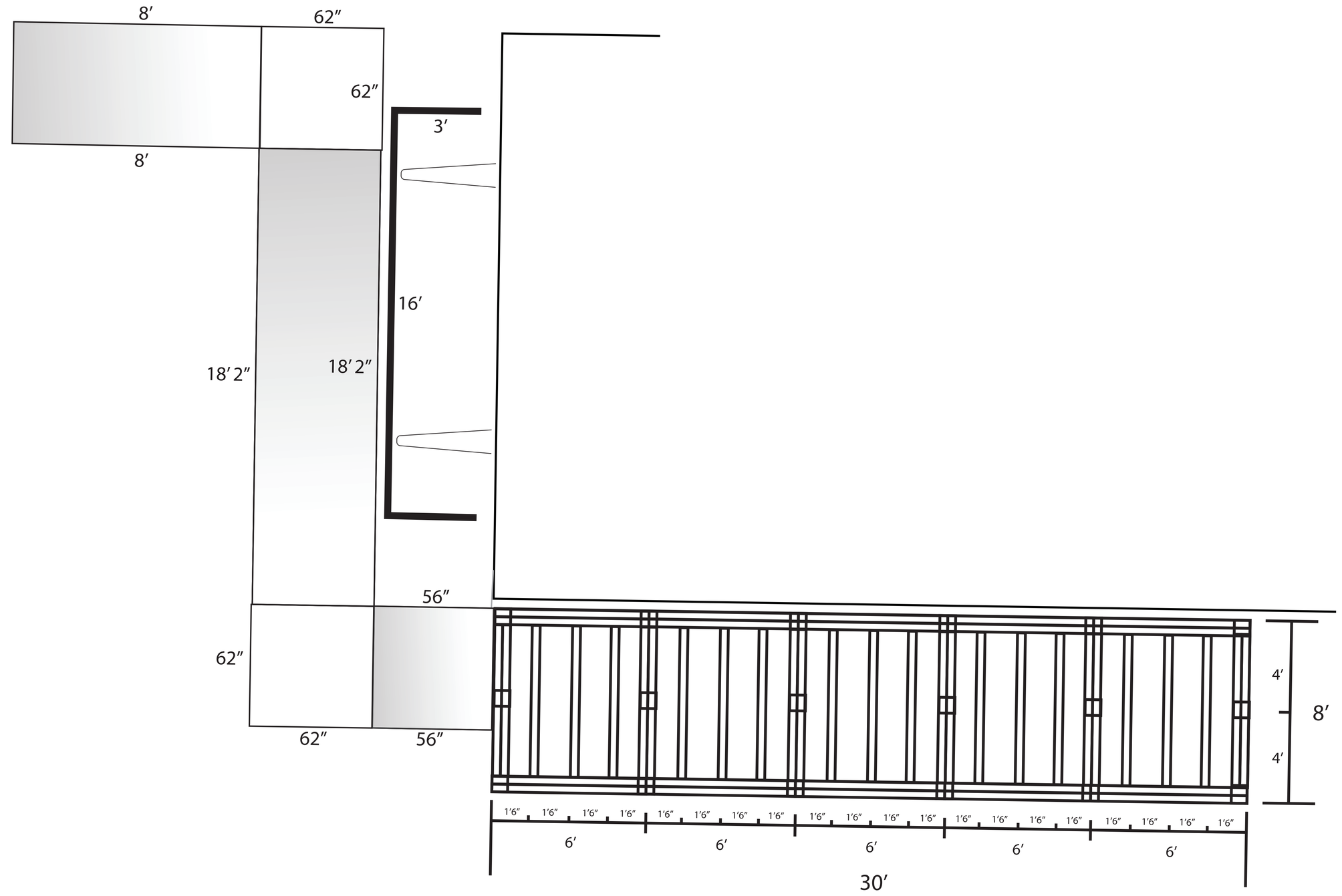
** Photos are representational; actual products vary. Additional floor plans and specifications may vary from*

Marina Office ADA Ramp Design and Materials List



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Configured exactly as you need it:

Versa-Step OSHA Model

Configured as 3-step | Or | Configured as 2-step

Versa-Step CAL-OSHA / MASS. code Model

Configured as 4-step | Or | Configured as 3-step

(Shown with MASS. code Handrail)

See back cover for step configuration height and adjustability specifications.

VERSASTEP

Models

Model #	Description
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Specifications

Specification	TAVSO23	TAVSM34 TAVSC34
PLATFORM		
Construction	Aluminum	
Tread	Perforated	
Width	38″	
Depth	60″	
STEPS		
Construction	Aluminum	
Tread	Perforated	
Rise	8.5″	7.0″
Tread depth	12″	
Tread width	36″	
Standard elevations	25.5″ & 34″	28″ & 35″
LEGS		
Construction	Flo-Coat® galvanized steel	
Adjustability range	9″	
Adjustability increments	1/4″	
Foot pads construction	Polyethylene plastic	
GUARDRAILS		
Construction	Flo-Coat® galvanized steel	
Height with mid-rail	42″	
HANDRAILS		
Construction	Flo-Coat® galvanized steel	
Height to top rails	36″	
Mid-rail	Standard	
Horizontal extension*	N/A	12″
Vertical extension*	N/A	24″

*TAVSC34 only for each spec.

For information on additional Tri-Arc products including Scaffolding, Warehouse Ladders, and other products for the modular industry, please contact us or visit our web site.

Tri-Arc Manufacturing Company

Reaching your needs **one step at a time**™

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  Versa-Step's PerfAdjust legs offer maximum adjustability, making it easier to position the platform flush with the threshold of the building door.

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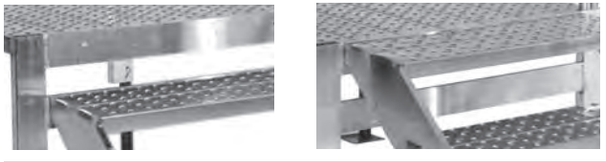
Features		Advantages
OneStair Stairway Unlike most modular stair systems, Versa-Step's **OneStair** can be configured with the platform as either a 2 or 3 step stairway or 3 or 4 step stairway depending on the model		▪ Purchase one model instead of two ▪ Eliminates extra trips to site ▪ Reduces inventory of step and parts ▪ Reduces overall expenses ▪ **Saves time and money**
PerfAdjust Legs The unique perforated individual adjustable legs provide 9" of total adjustability in 1/4" increments		▪ Easily positions platform to threshold of door ▪ No need to shimmy legs ▪ Increases safety of step ▪ **Saves time and money**
Plastic Foot Pad High density polyethylene plastic material design securely fits onto legs		▪ Eliminates need to replace entire leg if damaged or requires breaking to remove from ground ▪ Reduces replacement parts costs ▪ **Saves time and money**
Offset Rail The back guard rail is designed to be offset so that it does not make contact with the building when the step is positioned against the building		▪ Eliminates damages caused by rail making contact with siding panel of building ▪ Saves time required to repair siding panel ▪ Eliminates costs associated with repairs ▪ **Saves time and money**

Memorandum
Planning and Urban Development Department

To: Chair Mazer & Members of the Planning Board
From: Jimmy Dealaman, Planner
Date: September 24, 2021
Re: USM Parking Garage
Project ID: PL-001729-2021
CBL: 114 A001
Meeting Date: September 28, 2021

I. INTRODUCTION

The University of Southern Maine (USM) has submitted a Major Site Plan application to facilitate the construction of a five-level, 225,640 square foot structured parking garage with 631 parking spaces at 50 Bedford Street. The site is located in the Oakdale neighborhood and within the R-5 Residential, B-2 Community Business zones, and USM overlay zone.

Figure 1 – Aerial View of Subject Parcel

This application is being referred to the Planning Board for compliance with the City of Portland's Land Use Code Site Plan Standards, Section 14.6, along with delegated review of an amendment to a previous Maine Site Location of Development Act (SLODA) approval.

The Planning and Urban Development Department mailed 56 notices advertising this meeting to interested parties and property owners within 500 feet of the site. A legal advertisement ran in the September 17th and 18th, 2021 editions of the *Portland Press Herald*.

Applicant: The University of Southern Maine
Applicant Representatives: Woodard & Curran; Winton Scott Architects

II. REQUIRED REVIEWS

Review	*Applicable Standards*
Site Plan	Section 14.6
Design Review	City of Portland Design Manual Section (e) University of Southern Maine Overlay Zone, Appendix 3 Principles and Standards
Traffic Movement Permit (TMP) Amendment	Delegated Review from Maine DOT, Technical Manual, Section 1.1 – Traffic Studies
Maine Site Location of Development (SLODA) Amendment	Delegated Review from Maine DEP, Technical Manual Section 14

Waiver Requests	*Applicable Standards*
Request: EV charging spaces less than 20 percent of total spaces provided	Technical Manual, Section 1.17 Electric Vehicle Infrastructure: 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

III. PROJECT DATA

Existing Zoning	R-5 Residential Zone, B-2 Business Zone, USM Overlay Zone
Property Size	353,446 square feet (8.1 acres)
Existing Use	Post-Secondary School (University)
Proposed Use	No Change
Proposed Development Program	Structured Parking Garage Accessory to University

	Existing	*Proposed*	*Net Change*
Building Footprint	0	44,266 SF	+44,266 SF
Building Floor Area	0	225,640 SF	+225,640 SF
Impervious Surface Area	63,162 SF	87,942 SF	+21,780 SF
Parking Spaces	1,247 spaces	1,786 spaces	+539 spaces
Bicycle Parking Spaces	84 spaces	334 spaces	+250 spaces
EV Charging Stations	0	58	+58

Figure 2 – Aerial View of USM Portland Campus and Surrounding Neighborhood Facing Southwest

IV. BACKGROUND

On November 10, 2020 the Planning Board Approved a Level III Site Plan application (PL-001040-2020) to facilitate construction of a student center, dorms, and associated open spaces at 25 Bedford Street. As a condition of approval the applicant is required to provide proof of parking commitments sufficient to provide the 396 parking spaces required by the proposed development, or shall submit a site plan application for a parking garage providing these spaces. The subject application would satisfy this condition.

V. EXISTING CONDITIONS AND SURROUNDING AREA

The University of Southern Maine occupies an approximately 29-acres campus just north of Portland's peninsula and situated in the Oakdale neighborhood. The campus is bounded by Forest Avenue and Durham Street to the East, Falmouth Street to the North, Exeter Street to the West and I-295 and Chamberlain Street to the South. The campus operates in conjunction with USM's two other campuses located in Gorham and Lewiston, and at present, largely serves a commuter student population, with residence halls housed on the university's Gorham campus. The campus consists of 34 buildings ranging from repurposed single-family homes to large academic buildings, ten surface parking lots, one parking garage, and pathways across campus.

Figure 3 – View of Proposed Development Site Facing East

The proposed development is planned for an 8.1-acre parcel located at 44 Bedford Street known informally as the Wishcamper Lot, which is currently utilized as surface parking totaling 92 spaces (See Figure 3). This parcel also received Planning Board approvals for a 207-space surface parking lot at its May 26, 2020 meeting; however, the applicant no longer intends to pursue those approvals. Currently, this parcel is occupied by several existing uses: i) the Glickman Family Library, a seven story structure, originally built as a commercial bakery in 1911, and was acquired in 1993 by USM; ii) the Abromson Community Education Center which includes classrooms, a 500-seat lecture hall/auditorium and 1,155 space parking garage and; iii) the Wishcamper Center, which hosts the schools Osher Lifelong Learning Institute, Cutler Institute, and Muskie School of Public Service.

The parcel is intersected by the R-5 Residential zone on the lower portion of the lot which continues to the south and west, and the B-2 Community Business zone on the upper portion of the lot which continues to the north and east of the site. The site also falls within the USM Overlay Zone which supersedes any requirements of the underlying zoning districts.

The site is also proximate to public transit with METRO routes including local service route 4 to Westbrook, the Huskie Line which connects to the Gorham Campus, Westbrook, and Downtown Portland, as well as the Zoom Turnpike Express which connects the campus to Biddeford and Saco.

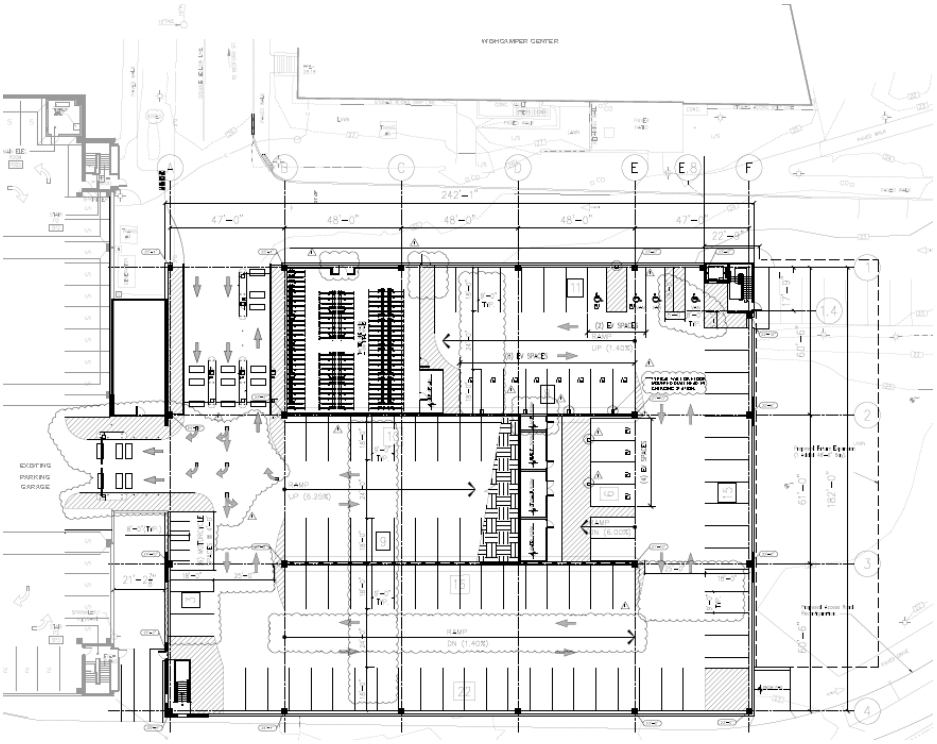


Figure 4 – Ground Level Striping Plan

VI. PROPOSED DEVELOPMENT

The development proposal includes a five-level 631 space structured parking garage, a vehicle turnaround drive, two (2) drop-off spaces accessing Glickman Library, a reconfigured library plaza space, new landscaping, lighting, extended fire access drive, pedestrian walkways and other associated site improvements. The proposed garage also includes a bicycle repair room with capacity for storing approximately 250 bikes. The application also proposes making traffic and pedestrian site improvements along Bedford and Surrenden Streets.

The proposed development would have a height of 50 feet, slightly higher than the existing/adjacent garage, and is approximately one story lower than the Wishcamper Center and four stories lower than Glickman Library. The proposed garage would be set apart approximately 21 feet from the existing parking garage, and connected via a one-way vehicle access route directing traffic towards the existing garage. Primary site access to the garage is proposed to occur via the existing access drive (referred to as Winslow Street) to the Wishcamper site and vehicles would be directed to exit through the existing parking garage to Surrenden Street connecting back to Bedford Street to the west. 58 of the parking spaces would include EV chargers.

The proposed structured parking garage is intended to accommodate the additional long-term parking needs associated with the development of a new Residence Hall (Portland Commons), which is currently under construction and expected to open in early summer of 2023.

VII. RIGHT, TITLE, & INTEREST

The owner of the property is the University of Maine System. The applicant has provided a copy of quitclaim and governor's deed, recorded at the Cumberland County Registry of Deeds (Book 29219 Page 218 and Book 24387 Page 258, respectively), which demonstrates their right, title and interest in the property (Attachment E).

VIII. FINANCIAL & TECHNICAL CAPACITY

The applicant has submitted a Statement of Financial Capacity letter from their COO, as demonstration of their financial capacity (Attachment J).

The applicant has submitted a Technical Capability narrative summary explaining the development teams relevant experience to complete the proposed development (Attachment J).

IX. ZONING ANALYSIS

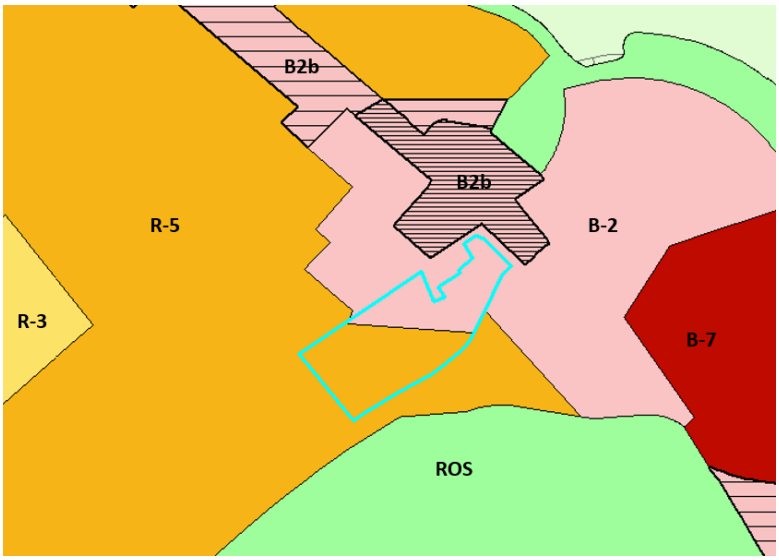


Figure 5 – Zoning Map with Subject Parcel Outlined in Blue

The parcel is located in the R-5 Residential and B-2 Community Business zones, and is also within the USM Overlay Zone which supersedes any of the specific requirements of the underlying zoning districts. In parcels with a split zone condition, the zoning requirements consider the more restrictive dimensional standard unless modified by an overlay zone or other Land Use Code provisions.

The proposed use of parking garage is listed as a permitted use in the USM Overlay Zone (Section 8.10.3.A.12).

Staff analyzed the proposal and found that the project complies with all dimensional requirements. The applicable dimensional standards under the USM Overlay Zone (Section 8.10.5) and underlying zones (Section 7.3) which are summarized below. The University Campus Overlay Setback and Height Map is attached to this report as additional reference (Attachment 1).

USM Overlay Zone	*Permitted*	*Proposed*
Minimum Setbacks	10 feet	>10 feet
Maximum Building Height	85 feet	50 feet
Minimum Building Height	35 feet	50 feet
Maximum Impervious Surface Ratio (of USM overlay zone)	66 percent	55%
Maximum Coverage by Buildings (of USM overlay zone)	40 percent	30%

R-5 Residential Zone	*Permitted*	*Proposed*
Minimum Lot Area (Post-secondary school)	2 acres	8.1 acres
Minimum Street Frontage	50 feet	>50 feet
Minimum Lot Width	60 feet	>60 feet

X. SITE PLAN REVIEW 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

The proposed project is expected to increase the traffic and circulation for access and egress to the existing and proposed parking garages and also necessitate updates to the Bedford Street Corridor (See Figure 6), which were submitted as part of the applicant's Traffic Movement Permit (TMP) application. The updates currently proposed on Bedford Street include but are not limited to: adding a dedicated left turn lane for vehicles entering Winslow Street, replacing the raised median island and relocating the crosswalk, and extending a painted median to separate vehicle and bicycle traffic in each direction. Additionally, access and circulation to the parking garages would be updated so vehicles would enter via Winslow Street and exit via Surrenden Street. The onsite changes to circulation are summarized further (See Section B) below.

The proposed project at 50 Bedford Street is anticipated to generate up to 160 trips during the AM and PM peak hour. Due to projected trip generation levels that exceed 100 passenger car equivalents during peak hour, under Maine state statute 704—A, a Traffic Movement Permit (TMP) is required. The applicant has submitted a TMP Modification Application (Attachment P) to amend the previously approved TMP for USM's student center, residence hall, & quad project (PL-001040-2020) which included a parking garage with access on Falmouth Street. Staff will continue to review the TMP Modification Application in conjunction with the City's consulting Traffic Engineer, and at the time of writing this report the required scoping meeting has been scheduled for September 27th, 2021.

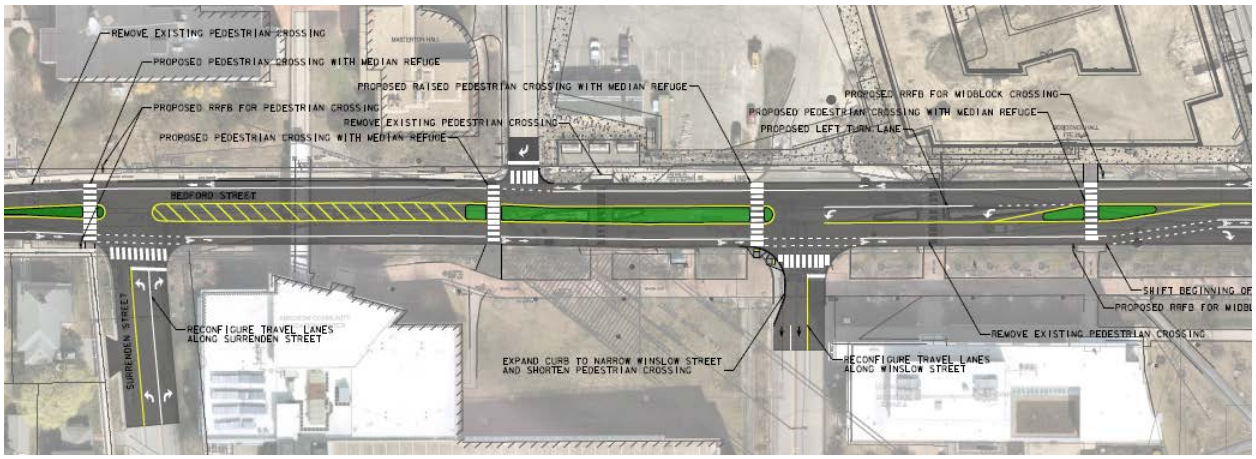


Figure 6 – Proposed Conceptual Plan for USM Intersection Improvements for Parking Garage Circulation

B. Access and circulation

The existing site is primarily accessed via a two-way access drive (referred to in the proposal as 'Winslow Street'). Additional vehicle traffic to the site occurs from Bedford Street to Surrenden Street which circulates through the existing parking garage and empties as exit-only to Winslow Street. The existing parking garage also includes as a dead-end emergency vehicle access drive with gated/restricted access off of Winslow Street. The main access drive ('Winslow Street') provides a loop for vehicles to access surface parking areas which serve the Wishcamper Center and Glickman Library. There are also existing asphalt walkways and sidewalks connecting buildings and the brick sidewalk on the main Bedford Street frontage.

The application is proposing updated traffic circulation for access and egress to the existing and proposed parking garages. Vehicles are now proposed to enter the parking garages via Winslow Street, and exit west one-way through the existing parking garage (Plan 1), exiting along Surrenden Street to Bedford Street. The Winslow Street access drive is reconfigured to provide a much narrower loop road which extends to a two-vehicle loading/unloading spaces in front of the Glickman library as well as an emergency access road to the rear of the parking garage (See Figure 7). The applicant has submitted vehicle turning templates to demonstrate sufficient turning radius of emergency vehicles (Plan 35). The emergency access drive will extend behind the existing and proposed garage and will continue to be gated to restrict unauthorized access.

The proposal (Plan 15) also shows a new concrete pedestrian walkway running along the front of the new garage which connects via two crosswalks across the access drive to repaved asphalt walkways and an updated plaza area fronting Glickman library. The applicant has submitted a plan showing pedestrian routes between the three buildings (Plan 36). The proposal also provides pedestrian access to a bicycle repair/storage room off the front of the parking garage within a recessed alcove.

City staff continue to review access and circulation standards in conjunction with the TMP application and Impact on Surrounding Street System standards above (See Section A) and comments will be forthcoming at the next public meeting.

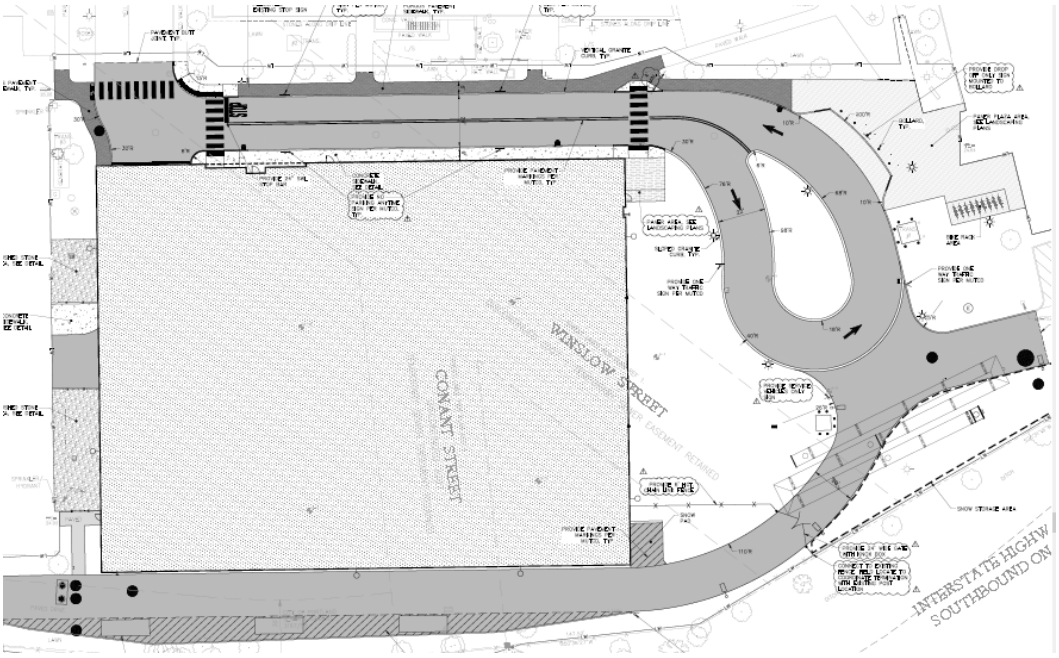


Figure 7 – Site Layout and Materials Plan

C. Public transit access

The University is located along the 2, 4, and Husky METRO lines) which connects to the Westbrook and Gorham Campus and Downtown Portland. No changes to public transit access are proposed as part of this project.

D. Parking

Vehicular Parking: Based on the requirements in the University Overlay Zone (Land Use Code Section 8.10.6), the parking requirement/amount for any university buildings must be determined by the Planning Board during site plan review.

The proposed development is proposing 631 new parking spaces. The amount of parking currently proposed is in part to meet a condition of approval set by the Planning Board under a separate Major Site Plan application (PL-001040-2020) which approved a student center, dorm, & quad (Attachment 5). The condition provided in the Planning Board approval letter required **396 parking spaces** to replace parking that will be displaced by the residence hall and CSSC project and to meet demand for residential parking.

Under another separate Planning Board approval (PL-000974-2020) for the Wishcamper Parking Lot Expansion (Attachment 6) approved **207 parking spaces** (92 existing + 115 additional spaces). The applicant has since indicated that those spaces would not be constructed.

The combined total of parking spaces - either approved or conditioned by the Planning Board - is 603 spaces. **The current development would expand the number of parking spaces set by the Planning Board by 28 spaces** for a total of 631 spaces. Planning staff are attaching USM's Parking Analysis (Attachment S) that was submitted as part of the student center, dorm, & quad November 2020 approval,

which considered all university owned land to arrive at campus-wide parking demand projections. Staff review finds that the additional 28 parking spaces is not a significant increase in parking demand from what was already approved by the Planning Board and that 28 additional parking spaces, in the event of higher than expected enrollment projections, will provide an additional buffer against inadequate parking supply.

When determining the parking requirement for university buildings, the Planning Board is asked to take such factors into consideration such as:

Land Use Code Section 8.10.6 Parking:
"A. The availability of off-campus parking and shuttle transportation to and from such off campus facilities.
B. The ratio of commuter students to resident students.
C. The use of centrally located on-campus parking facilities so situated that students, faculty, staff and visitors arriving on campus can reasonably be expected to park in the central facilities and walk to their various on-campus destinations during the course of a school day.
D. Shared use of a single parking facility by two or more buildings when the peak parking demand period for such buildings do not overlap.
E. Development and implementation of a parking management plan which discourages on-street parking. On-street parking shall not be used to satisfy the university's parking demand.
F. Development and implementation of programs designed to reduce the number of automobiles parking on campus, such as ride share programs and incentives for use of bicycles and public transportation."

Staff is seeking Planning Board feedback if the 631 parking space amount is supported/not supported as a requirement for the new building.

Bicycle Parking: The proposal includes a covered and secured bicycle repair and storage room with a capacity of 250 bikes to accommodate commuter students as well as the storage needs of the new dormitory.

Additional bicycle parking includes 84 existing outdoor spaces.

Snow Storage: The applicant is proposing snow storage areas to occur primarily on landscaped areas. The submitted drawings show the location of a snow pad off of the landscaped area (Plan 30). The applicant has indicated that if snow exceeds the available space on-site it will be hauled off-site. Staff will continue to review the snow storage in conjunction with the City Arborist to confirm landscaping in the designated snow storage areas can withstand the snow piles.

Electric Vehicle (EV) charging: The development is required by Section 1.17 of the Technical Manual to include Level 2 or higher EV charging for 20 percent of all parking spaces. The remaining spaces must be served by sufficient conduit/wiring/electrical service to allow for future installation of electric vehicles supply equipment.

The proposed 631 parking space parking garage necessitates the applicant provide 126 EV charging stations to meet the requirement. The applicant has requested a partial waiver to the EV standard and is proposing nine percent (58 charging stations) of all spaces to be outfitted with EV charging stations. As a basis for a waiver the applicant explains that 58 stations will meet the 2023 forecasted demand for campus commuters and residents. Additionally, USM has stated they are prepared to increase the supply of EV charging stations to meet future demand and plans to monitor the EV demand by utilizing charging stations usage data as

well as collecting data during parking pass registration. The applicant's full waiver request and analysis are attached (Attachment I) and provided below is a short excerpt from the application to further supplement this request:

"The number of charging stations proposed with construction of the garage is based upon an analysis of the current and future demand for EV charging stations by the targeted users of the garage. The proposed Level 2 charging station rates are generally between 10 and 60 miles of range per hour, with 35 miles of range per hour being typical. Additionally, and consistent with recent City of Portland policy discussions, the University will build into its EV charging station network a policy which uses idle fees to be assessed beyond permitted charge times, to promote turnover and maximize the use and investment in charging stations"

Additionally, in response to staff comments the applicant has noted on their plan (Plan 16) that the remainder of required EV charging spaces will be constructed in a manner that allows for future expansion of EV charging spaces and the electric service to the garage will be sized to accommodate the remaining required EV spaces. In addition, the remaining spaces would have a conduit installed to a future transformer pad site to accommodate future EV readiness. Staff are providing an additional excerpt from the applicant's materials to further supplement the waiver request:

"This approach:
1. Limits unused materials from being installed and subject to deterioration and/or damage;
2. Ensures that capability to expand, as needed, is in place now; and
3. Limits spending for elements that might never be necessary."

Staff have reviewed the request and generally find it to be reasonable given the high number of parking spaces associated with the structured parking garage. Staff find the 58 charging stations proposed and additional EV readiness measures being taken are an adequate basis for consideration of a partial waiver.

Staff are seeking the Planning Board's feedback on whether a partial waiver to the 20 percent EV charging station requirement and EV readiness approach for remaining spaces is supported.

E. Transportation demand management (TDM)

Due to the proposal having trip generation based upon a separate site plan application (PL-001040-2020) no TDM was required for this project. However, given that the number of parking spaces proposed in this application may change TDM data contained in the original application reviewed by the Planning Board, staff are requesting that the applicant submit an updated TDM plan reflecting any changes to the Planning Staff. This document should be available for the Planning Board at the next public meeting.

2. Environmental Quality Standards (Section 14.6.2)

A. Preservation of significant natural features

The applicant reports that the site is currently developed with no known areas of significant natural features. While US Fish and Wildlife has identified the northern long-eared bat as a federally threatened species that may live within the project area, the applicant states that *"tree-clearing for this project will be minimal; it is not anticipated that this project will have an impact on the northern long-eared bat species."*

B. Landscape preservation

To accommodate the proposed development, the plans intend to remove a majority of the existing landscaping/trees present throughout the site. Most of these removals are outside the 10-foot setback area, however, review of the tree preservation and removals is ongoing with the City Arborist.

The applicant is currently proposing an erosion control berm around the southwest property line as well as noting that existing trees along the Wishcamper Center will be protected (Plan 14). Staff are requesting that the applicant provide additional detail to show all tree protection measures.

C. Site landscaping and buffers

The Applicant has submitted a Planting Plan (Plan 32) proposing 23 Princeton Elm Trees which will create a vibrant tree canopy within the open space at the end of the Winslow Street access loop. Five additional bayberry shrubs are also proposed to screen the transformer and generator at the entrance to the new parking garage. The City Arborist's preliminary feedback has been provided (Attachment 7), and Planning Staff continue to review the landscaping proposal to ensure sufficient landscaping and screening is provided

D. Water quality/storm water management/erosion control

The proposed development provides a stormwater management system comprised of a series of catch basins, a subsurface detention system, and proprietary treatment unit. Once stormwater flows are treated, the site runoff will be piped and discharged to the City's separated stormwater system on Forest Avenue.

The City's consulting stormwater engineer has reviewed the applicant's grading plan (Plan 16) Stormwater Management Report and Plans (Attachment O) for water quality and erosion control and provided preliminary comments (Attachment 3). The applicant has submitted a response to these comments (Attachment R) and Public Works and stormwater consultant will continue to review the proposal for compliance with MaineDEP Chapter 500 Stormwater Standards, Section 5 of the City Technical Manual as well as the Site Location of Development Act Permit requirements.

3. Public Infrastructure and Community Safety Standards (Section 14.6.3)

A. Consistency with City Master Plans

The applicant has analyzed the City's comprehensive plan, Portland's Plan 2030, and finds that the project is aligned with the document given the project will help support the growth of the University of Southern Maine's student body, a vital resource for the economic development of the City of Portland.

B. Public safety and fire prevention

In order to demonstrate how public safety CPTED principles are incorporated into the site's design, the applicant has provided an analysis highlighting how the design promotes natural surveillance conditions and manages access to the site (Attachment K). The applicant explains that the program of the outdoor space will include clusters of picnic tables to encourage small group use in dedicated spaces. The site also provides walkways which are open and readily connected to plazas and destination uses. Additionally, the applicant is proposing site lighting to provide uniform coverage of entrances, exits and pathways. Due to the garage's 24-hours a day accessibility, it includes a surveillance system, monitored in the parking office, that will allow for viewing areas not easily observed within the garage. However, staff do continue to have concerns about the about the interstitial space between the garages as having the potential to become a dark inhospitable space. Staff are recommending that full cutoff fixtures be installed in this area to ensure pedestrians potentially circulating between the garages are visible and the area is well lit.

Review of the fire safety aspects of the project is still ongoing, but in response to staff comments, the applicant has submitted turning templates sized for fire truck access to the site (Plan 35). Additionally, the applicant has provided additional information about the emergency access lane behind the parking garage and plans showing gated access to restrict unauthorized vehicles from entering. A knox box will be provided at the gate which is accessible to the Fire Department.

C. Availability and capacity of public utilities

The proposed parking garage does not propose any new water services with the exception of the dry stand pipe and sprinkler system with a Fire Department Connection (FDC). Planning Staff are awaiting receipt of the applicant's Capacity to Serve letter from the Portland Water District, which will be provided by the applicant once obtained to ensure public infrastructure is not overburdened.

The applicant has submitted a Utility Plan (Plan 16) which continues to be reviewed by Public Works Staff in conjunction with the City's consulting engineer. The plan proposes a new sewer service and oil/water separator along the southern edge of the garage for the floor drains in the lower levels of the garage. Both will discharge to the combined sewer. The applicant has submitted a Wastewater Capacity Application to Public Works Department which will be forwarded to Planning Staff once a determination is made.

4. Site Design Standards (Section 14.6.4)

A. Massing, ventilation, and wind impact

The massing of the proposed structured garage is similar to the existing garage but slightly higher in height. The applicant states that the garage was designed within the context of the surrounding scaled buildings. The development is not anticipated to have adverse impacts related to ventilation and wind.

B. Shadows

The applicant has described that the new structure was designed to minimize impacts of shadows on open space and public areas that would affect the viability of the public use and existing vegetation. The landscaped space is situated to the north of the site and trees are spaced approximately 20 feet to minimize the effects of building shadows on open space. The development is not anticipated to have adverse impacts related to shadows.

C. Snow and ice loading

The applicant shows a snow dump gate from the rooftop (Plan 7) as well as a snow pad to dispose of snow. The applicant states that the structure is deigned to prevent snow and ice from accumulating and falling onto abutting properties and public ways. Additionally, the applicant has indicated that snow that exceeds the available space on-site will be hauled off-site. The development is not anticipated to have adverse impacts related to snow and ice loading.

D. View corridor

There are no designated view corridors within the project vicinity.

E. Historic resources

The proposed development is not located in or within a 100 feet of a historic district or historic landmark.

F. Exterior lighting

The applicant has submitted a photometric plan (Plan 34) and associated catalog cut sheets (Attachment K). At the time of writing this report, staff review of the applicable standards is still ongoing.

G. Noise and vibration

No adverse impacts related to noise and vibration are anticipated as mechanical equipment away from residential properties.

H. Signage and wayfinding

Existing signage is proposed to be maintained, and new traffic signage will be provided as shown on the drawings.

I. Zoning-related design standards

The proposed garage is subject to meeting all applicable USM Overlay Zone design standards under Section e and Appendix 3 of the design manual (Attachment 8). As part of the original application, the applicant submitted a narrative about the project's consistency with the USM Design Principles (Attachment L), as well as elevations (Plans 7, 8) and perspective views (9, 10, 33) which have been updated in response to staff comment.

Figure 8 – Perspective View of Proposed Garage (Building Front)

In August the project was reviewed by a design review team made up of Planning staff and preliminary comments were shared with the applicant (Attachment 4). Overall, staff found the project met the goals to minimize the impact on the street and to create an attractive façade to neighboring uses

Figure 9 – Perspective View of Bicycle Storage and Vehicle Entrances

(Principle C). Initial staff feedback sought to better understand the bicycle/pedestrian circulation routes, and the applicant has since provided a circulation plan (Plan 36) to better clarify the pedestrian environment and experience (Standard A-3).

Additionally, staff were requesting that the pedestrian/bicyclist entrance be more emphasized and made more legible from circulation routes for visual interest (Standard C-1). The applicant has revised the bicycle storage entrance to provide a larger door with recessed alcove to better define and provide access to the bicycle entrance/storage area. Staff are currently recommending that the applicant consider adding double doors to the bicycle area to make the space more functional, as well as consider adding signage on the awning to promote a visual interest and use by students.

Staff are also seeking to understand if there are any visible HVAC systems that will be planned for the building which might be obtrusive or require screening. (Standard C-6).

Staff are seeking the Planning Board's feedback on the USM Overlay Zone design standards (Attachment 8).

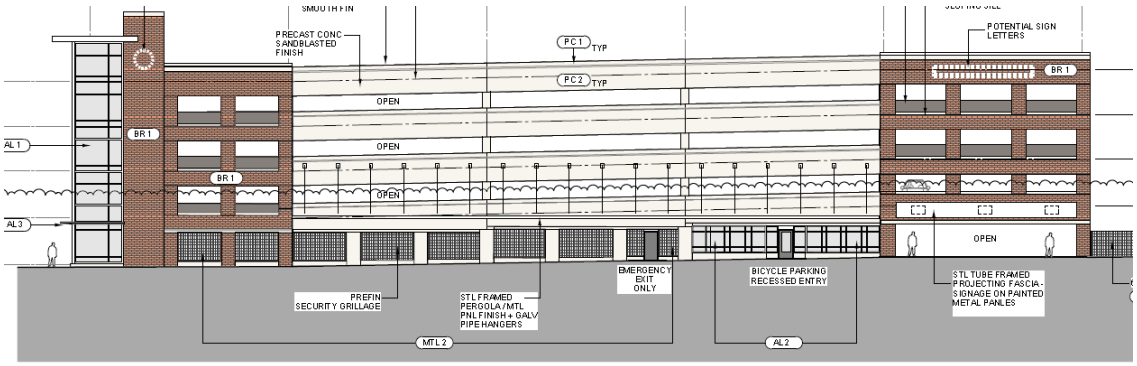


Figure 10 – North Elevation

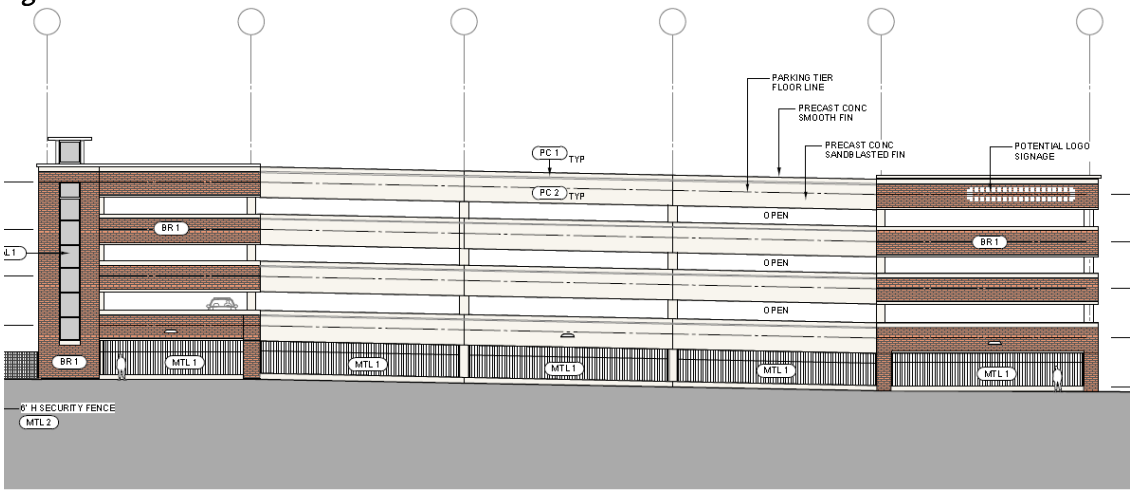


Figure 11 – South Elevation

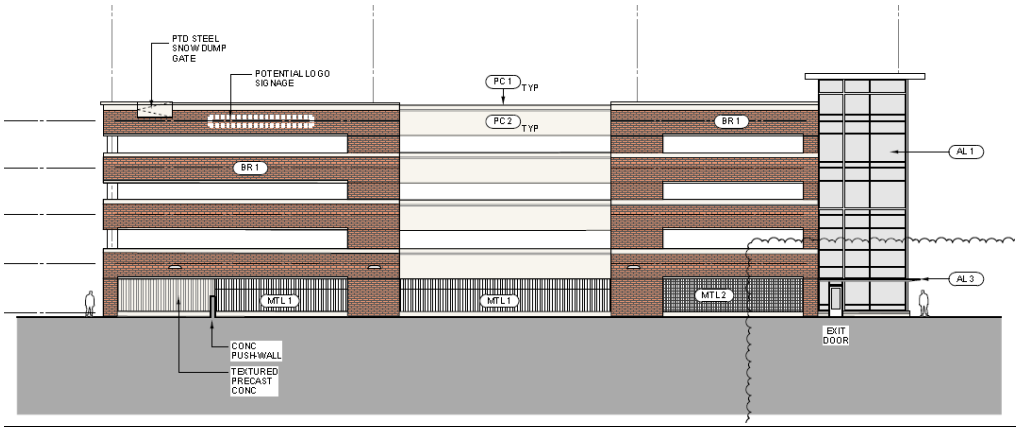


Figure 12 – East Elevation

XI. SITE LOCATION OF DEVELOPMENT (SLOD) AMENDMENT

As part of the Major Site Plan application the applicant also prepared a SLOD Amendment which Planning Staff have submitted to MaineDEP (Attachment 2) in accordance with the Chapter 500 Rules.

The City of Portland has delegated review authority from the MaineDEP for large projects that trigger Site Location of Development Act (SLODA) review. According to the standards for this review listed under Section 14 of the City's Technical Manual, sections are responded to below which overlap with a number of site plan standards:

- Financial & Technical Capacity: see Section VIII above.
- Traffic Movement: see site plan standards, X.1.A., above, and Traffic Movement Permit, below.
- No Adverse Effect on the Natural Environment, Ground Water, Flooding, Storm Water Management & Erosion and Sedimentation Control: see site plan standards, X.2.D., above. The development is not located within a flood hazard zone, as shown on the FEMA Flood Insurance Rate Map provided in this application. The proposed development is not anticipated to cause or increase flooding or cause an unreasonable hazard to any adjacent structures (Attachments 2, O).
- Soil Types: The applicant provided a soil survey, the applicant is also participating in a VRAP for the site. A soil management plan will be developed for the site (Attachment 2).
- Infrastructure: see site plan standards, X.3.C., above.

XII. TRAFFIC MOVEMENT PERMIT (TMP)

The TMP Amendment Application is currently being reviewed by staff and staff comments will be forthcoming at the next public meeting. Please see Section X.1.A *Impact on surrounding street systems* for additional information.

XIII. NEIGHBORHOOD MEETING & PUBLIC COMMENT

The applicant's neighborhood meeting is scheduled for September 22nd, 2021. At the time of writing this report the neighborhood meeting documentation has not yet been received, but will be provided as part of the report materials and public record.

At the time of writing this report no written public comments have yet been received for this project.

XIV. NEXT STEPS

At this time staff are specifically seeking feedback about the **parking requirement, design standards, and the EV charging station waiver.**

Following the first workshop, the application will:

1. Continue to address staff and board review comments related to design and site plan standards
2. Conduct a required TMP scoping meeting
3. Prepare final plan submission.
4. Schedule and hold planning board public meeting

XV. ATTACHMENTS

PLANNING BOARD REPORT ATTACHMENTS

1. University Campus Overlay Setback and Height Map
2. SLOD Application
3. Consulting Civil Engineer Review (email dated 9.3.2021)
4. Design Review Preliminary Comments (dated 8.27.2021)
5. Planning Board Approval Letter for 25 Bedford Street (dated 11.10.2020)
6. Planning Board Approval Letter for 44 Bedford Street (dated 5.26.2020)
7. Comments from City Arborist (dated 9.13.2021)
8. Design Manual, Appendix 3

APPLICANT'S SUBMITTAL

A. Cover Letter & Table of Contents
B. Application Checklist
C. Application Fees
D. Project Description
E. Right, Title & Interest
F. Evidence of State and Federal Approvals
G. Zoning Assessment
H. Easements & Other Burdens
I. Waiver Requests
J. Financial & Technical Capability
K. Compliance with Site Plan Standards
L. Consistency with USM Design Principles
M. Construction Management Plan
N. Boundary Survey
O. Stormwater Management Report
P. TMP Modification Application (dated 9.10.2021)
Q. Response to Staff Comments (dated 9.13.2021)
R. Response to Staff Comments (dated 9.17.2021)
S. 2020 Parking Analysis

PLANS

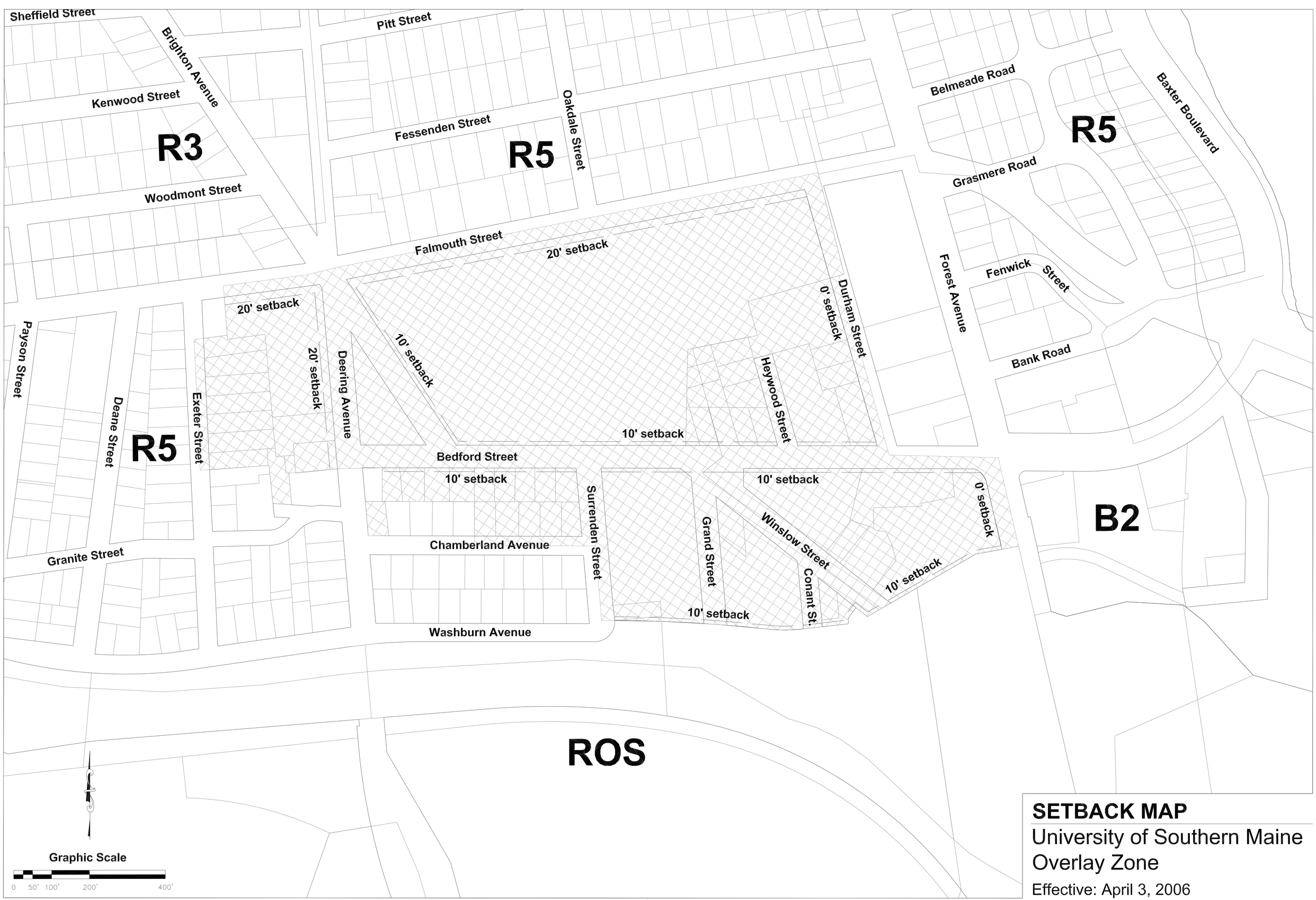
Plan 1	A-100 SITE PLAN
Plan 2	A-101 GROUND LEVEL STRIPING PLAN
Plan 3	A-102 FIRST LEVEL STRIPING PLAN
Plan 4	A-103 SECOND LEVEL STRIPING PLAN
Plan 5	A-104 THIRD LEVEL STRIPING PLAN
Plan 6	A-105 ROOF LEVEL STRIPING PLAN
Plan 7	A200 Elevations With IDF Rooms
Plan 8	A201 Elevations With IDF Rooms
Plan 9	A202 Views (Bedford-Entrance View)
Plan 10	A203 Views (Stairway-Bike Entrance)
Plan 11	C-000 General Notes & Legend
Plan 12	C-100 Existing Conditions Survey - 1
Plan 13	C-101 Existing Conditions Survey -2
Plan 14	C-102 Demolition & Erosion & Sediment Control Plan
Plan 15	C-103 Site Layout & Materials Plan
Plan 16	C-104 Utility & Grading Plan
Plan 17	D-200 Civil Details – 1
Plan 18	D-201 Civil Details – 2
Plan 19	D-202 Civil Details – 3
Plan 20	D-203 Civil Details – 4
Plan 21	D-204 Civil Details – 5
Plan 22	E-000 - ELECTRICAL LEGEND AND ABBREVIATIONS
Plan 23	E-500 - ELECTRICAL DETAILS
Plan 24	E-501 - ELECTRICAL DETAILS
Plan 25	E-600 - ELECTRICAL SCHEDULES
Plan 26	ES-000 - ELECTRICAL SITE LEGEND, DETAILS, AND NOTES
Plan 27	ES-100 - ELECTRICAL SITE PLAN AND NOTES
Plan 28	G-000 Cover Sheet
Plan 29	G100 Context Plan
Plan 30	G101 Ground Level Code Information Plan
Plan 31	G102 Upper Levels Code Information Plan
Plan 32	L-100 Planting Plan
Plan 33	North Aerial View
Plan 34	SL-100 - SITE PHOTOMETRIC PLAN AND SCHEDULES
Plan 35	Turning Templates
Plan 36	Pedestrian Routes

Sheffield Street
Brighton Avenue
Pitt Street
Kenwood Street
Fessenden Street
Oakdale Street
Belmeade Road
Baxter Boulevard
R3
R5
R5
Woodmont Street
Grasmere Road
Falmouth Street
Forest Avenue
Fenwick Street
Durham Street
Payson Street
Deering Avenue
Heywood Street
Bank Road
Deane Street
Exeter Street
R5
Bedford Street
Surrenden Street
Grand Street
Winslow Street
Conant St.
B2
Chamberland Avenue
Granite Street
Washburn Avenue
ROS
Graphic Scale
0 50' 100' 200' 400'

OVERLAY ZONE MAP
University of Southern Maine

Overlay Zone

Efffective: April 3, 2006


Sheffield Street
Brighton Avenue
Kenwood Street
R3
Woodmont Street
Pitt Street
Fessenden Street
R5
Oakdale Street
Belmeade Road
Baxter Boulevard
R5
Grasmere Road
Falmouth Street
20' setback
20' setback
Forest Avenue
Fenwick Street
Bank Road
Payson Street
Deane Street
R5
Exeter Street
20' setback
Deering Avenue
10' setback
Durham Street
0' setback
Heywood Street
10' setback
Bedford Street
10' setback
10' setback
Surrenden Street
Grand Street
Winslow Street
Conant St.
10' setback
10' setback
0' setback
B2
Chamberland Avenue
Granite Street
Washburn Avenue
ROS
Graphic Scale
0 50' 100' 200' 400'
SETBACK MAP
University of Southern Maine
Overlay Zone
Effective: April 3, 2006

Sheffield Street
Brighton Avenue
Pitt Street
Kenwood Street
Fessenden Street
Oakdale Street
Belmeade Road
Baxter Boulevard
R3
R5
R5
Woodmont Street
Grasmere Road
160'
Falmouth Street
80'
B: 75'
B: 75'
C: 85'
Durham Street
Forest Avenue
Fenwick Street
Bank Road
Payson Street
Deering Avenue
Heywood Street
Deane Street
Exeter Street
R5
Bedford Street
384'
800'
A: 45'
R5: 35'
R5: 35'
Surrenden Street
B: 75'
Grand Street
Winslow Street
Conant St.
C: 85'
B2
Granite Street
Chamberland Avenue
Washburn Avenue
ROS
Graphic Scale
0 50' 100' 200' 400'

HEIGHT MAP

University of Southern Maine
Overlay Zone

Effective: April 3, 2006

DEPARTMENT OF ENVIRONMENTAL PROTECTION
Bureau of Land Quality Control
State House Station 17
Augusta, Maine 34333
Tel: (207) 287-2111

FOR DEP USE

#L- _____
Date Received _____

NOTIFICATION OF APPLICATION ACCEPTANCE
MUNICIPAL REVIEW OF DEVELOPMENT
(38 M.R.S.A. Section 489-A)

This form is to be used by a registered municipality to notify the Department upon the acceptance of an application for review pursuant to 38 M.R.S.A. Section 489-A. This form must be received by the Department within 14 days of acceptance of an application. The municipality must also submit one copy of the project application and one copy of the record of review and action.

If the application which is the subject of this notice should subsequently be amended during the review process, this form should also be used to submit notice to the Department of the amendment.

Municipality: Portland, ME

Contact Person: James Dealaman, Planner

Address/Phone: Portland Planning and Urban Development, 389 Congress St., Portland, ME 04101. General Number (207) 874-8719.

Project Applicant: University of Southern Maine

Address/Phone: 25 Bedford St., Portland ME (207)780-4177

Title of Project: Structured Parking Garage

Date Accepted as Complete by Municipality: 8/24/2021

I. Type of Project for which permit is sought: (Check One)

_____ Subdivision as described in section 482, subsection 5 of more than 20 acres but less than 100 acres; *(Note: Subdivision review will occur at future dates)*

__✓__ Structure as described in section 482, subsection 6, paragraph B, in excess of 3 acres but less than 7 acres;

_____ Excavation on more than 5 acres of land for borrow, topsoil, clay or silt, whether alone or in combination as described in section 482, subsection 2-B.

II. Description of Project. (Include number of units or lots, parcel size, footprint, etc.)

The project is seeking an amendment to the Site Location of Development (SLOD) Permit for the University of Southern Maine (USM) Portland campus located at 44 Bedford Street. The proposed work will take place on a single parcel, identified by the City of Portland Assessor as Tax Map 114, Lot A001001, which is approximately 8.1 acres in size. The proposed work will be limited to approximately 2.4-acres of the property.

The project proposes constructing a new five-level, 632 space structured parking garage with a footprint of 45,100 square feet, along with associated site improvements, at 50 (44) Bedford Street. Site work includes installing sidewalks, landscaping, utilities, and stormwater management infrastructure.

III. Submit as attachments to this form:

A. One copy of complete application filed with municipality (include site plans);

Included as an attachment.

B. Identification of any outside review agents or consultants who will be performing reviews of any aspect of the application;

Thomas Errico, P.E. TY Lin, Traffic
Michael Guethle, P.E., Wright Pierce, Stormwater

C. One copy of the legal notices served by the municipality.

The Legal Notice for Receipt of Application is included as an attachment.

NOTE: APPLICANT IS ADVISED TO REVIEW THE NATURAL RESOURCES PROTECTION ACT 38 M.R.S.A. SECTIONS 480-A 480-U (N.R.P.A.) TO ENSURE CONSISTENCY WITH THAT LAW. THE MUNICIPALITY'S DELEGATED REVIEW AUTHORITY PURSUANT TO 38 M.R.S.A. SECTION 489-A DOES NOT EXTEND TO THE N.R.P.A. IF AN N.R.P.A. PERMIT IS NECESSARY IT MUST BE OBTAINED FROM THE DEPARTMENT PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.

Town or City of: PORTLAND, ME Date: September 1, 2021

By: _____

Printed Name: James Dealaman

Title: Planner

COMMITMENT & INTEGRITY
DRIVE RESULTS

41 Hutchins Drive
Portland, Maine 04102
www.woodardcurran.com

T 800.426.4262
T 207.774.2112
F 207.774.6635

July 26, 2021

James Rather
City of Portland Development Review Services Manager
389 Congress Street
Portland, ME 04101

Re: University of Southern Maine Structured Parking Garage
Major Site Plan Application & Site Location of Development Amendment

Dear James:

On behalf of the University of Southern Maine, Woodard & Curran is pleased to submit applications for a Major Site Plan Review and a Site Location of Development (SLOD) Amendment for a structured parking garage located at 44 Bedford Street. The proposed development includes a five-level structured parking garage, vehicle turnaround and drop-off area, fire access drive, pedestrian walkways, site landscaping, exterior lighting, and associated site improvements. The proposed parking garage will be approximately 45,100 square-feet in size and will create a total of 632 parking spaces, which includes 13 ADA accessible parking stalls, for a net increase in 425 additional off-street parking spaces for the University. The proposed garage will provide parking for the Portland Commons Residence Hall, which is currently under construction, and enable future developments at the University by replacing some of the parking that will be displaced by future developments (to be submitted under separate cover at a later date). The proposed stormwater management plan will consist of a subsurface detention and proprietary treatment device.

This application has been prepared in accordance with the City of Portland's Land Use Code of Ordinances and the applicable sections of the City of Portland Design and Technical Manuals. The SLOD Amendment has been prepared in accordance with Maine Department of Environmental Protection Chapter 500 Rules. It is our understanding that the City will be reviewing the SLOD Amendment under their Delegated Review Authority.

The application materials, supporting documents, and design drawings will be uploaded into the Eplan folder when it is available for the project. Thank you for coordinating the review of this project. If you have any questions regarding this application, please feel free to contact me at (207) 558-3665 or by email at aefletcher@woodardcurran.com.

Sincerely,

WOODARD & CURRAN INC.

Ashley Fletcher, PE
Technical Manager

cc: Ann Vashon, University of Southern Maine
Wes Wilson, Desman Design Management, Inc.

Department of Environmental Protection
Bureau of Land & Water Quality
17 State House Station
Augusta, Maine 04333
Telephone: 207-287-3901

FOR DEP USE **FORM A PAGE 1**
ATS # _____
L-_____
Total Fees: _____
Date: Received _____

****

SITE LOCATION OF DEVELOPMENT PERMIT APPLICATION 38 M.R.SA. §§481-490

PLEASE TYPE OR PRINT IN *INK ONLY*

This application is for: (CHECK THE ONE THAT APPLIES)	☐ **20 acre development** ☐ **Planning Permit** ☐ **Metallic Mining**	☐ **Marine Oil Terminal** ☐ **Structure** ☐ **Subdivision**	☐ **Major Amendment** ☒ **Minor Amendment**

1. Name of Applicant:	University of Southern Maine	**6. Name of Agent (if applicable):**	Ashley Fletcher, PE (W&C)
2. Applicant's Mailing Address:	25 Bedford St., Portland ME	**7. Agent's Mailing Address:**	41 Hutchins Drive, Portland, ME
3. Applicant's Daytime Phone #:	(207)780-4177	**8. Agent's Daytime Phone # :**	(207)558-3665
4. Applicant's Fax # (if available):	N/A	**9. Agent's Fax # (if available):**	N/A
5. Applicant's *e-mail address* (REQUIRED -license will be sent via: e-mail):	ann.vashon@maine.edu	**10. Agent's *e-mail address* (REQUIRED - license will be sent via e-mail):**	aefletcher@woodardcurran.com

PROJECT INFORMATION

11. Name of Development:	USM Structured Parking Garage						
12. Map and Lot #'s:	**Map #:** 114	**Lot #:** A001	**13. Deed Reference #'s:**		**Book #:**	**Page #:**	
14. Location of Project City/Town:	Portland	**15. County:**	Cumberland	**16. UTM Northing**		**17. UTM Easting**	
18. Brief Description of Project including total parcel size:	Construction of a new structured parking garage and associated storm water infrastructure.						

19. Type of Direct Watershed: (Check all that apply)

☐ Lake not most at risk ☐ River, stream or brook ☒ Coastal wetland
☐ Lake most at risk ☐ Urban impaired stream ☐ Wellhead or public water
☐ Lake most at risk, severely blooming ☐ Freshwater wetland

20. Name of Waterbody Project Site drains to:	Casco Bay		
21. Amount of Developed Area:	Total acres: 2.37	Existing Developed area: 2.37 acres	New Developed area: 0 acres
22. Amount of Impervious Area:	Total acres: 1.95	Existing Impervious areas 1.45 acres	New Impervious area: 0.5 acres

23. Development started prior to obtaining a license?:	☐ **Yes** ☒ **No**		
24. .Development or any portion of the site subject to enforcement action?	☐ **Yes** ☐ **No**	**If yes**, name of enforcement staff involved?	
25. Common scheme of development?:	☐ **Yes** ☐ **No**	**26. Title, Right or Interest:**	☒ **own** ☐ **lease** ☐ **purchase option** ☐ **written agreement**
27. Natural Resources Protection Act permit required?:	☐ **Yes** ☐ **No**	**If yes:** ☐ **PBR** ☐ **Tier 1** ☐ **Full Permit** ☐ **Tier 2**	
28. Existing DEP Permit number (if applicable):	L-20438-22-D-A		
29. Names of DEP staff person(s) present at the pre-application meeting:	N/A		
30. Does agent have an interest in project? If yes, what is the interest?	☐ **Yes** ☒ **No**		

CERTIFICATIONS AND SIGNATURES LOCATED ON PAGE 2

IMPORTANT: IF THE SIGNATURE BELOW IS NOT THE APPLICANT'S SIGNATURE, ATTACH LETTER OF AGENT AUTHORIZATION SIGNED BY THE APPLICANT.

By signing below the applicant (or authorized agent), certifies that he or she has read and understood the following :

CERTIFICATIONS / SIGNATURES

"I certify under penalty of law that I have personally examined the information submitted in this document and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the information is true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment. I authorize the Department to enter the property that is the subject of this application, at reasonable hours, including buildings, structures or conveyances on the property, to determine the accuracy of any information provided herein.

Further, I hereby authorize the DEP to send me an electronically signed decision on the license I am applying for with this application by emailing the decision to the electronic address located on the front page of this application (see #5 for the applicant and #10 for the agent)"..

Signed: _____ **Title** Technical Manager **Date:** 7/28/21

Notice of Intent to Comply with Maine Construction General Permit	**With this Site Law application form and my signature, I am filing notice of my intent to carry out work which meets the requirements of the Maine Construction General Permit (MCGP). I have read and will comply with all of the MCGP standards.** **If this form is not being signed by the landowner or lessee of the property, attach documentation showing authorization to sign.** **Signed** _____ **Date:** 7/28/21

NOTE: You must file a MCGP Notice of Termination (Form K) within 20 days of completing permanent stabilization of the project site.

CERTIFICATION

The person responsible for preparing this application and/or attaching pertinent site and design information hereto, by signing below, certifies that the application for development approval is complete and accurate to the best of his/her knowledge.

Signature: _____

Name (print): Ashley Fletcher, PE

Date: 7/29/21

Re/Cert/Lic No.: _____

Engineer 13750

Geologist _____

Soil Scientist _____

Land Surveyor _____

Site Evaluator _____

Active Member of the Maine Bar _____

Professional Landscape Architect _____

Other _____

University Services
Facilities Management

University of Southern Maine

Maine's Public Universities
UNIVERSITY OF MAINE SYSTEM

University of Southern Maine
Facilities Management Department (CPPM)
96 Falmouth St
Portland, ME 04103
Tel: 207-780-4655
Fax: 207-780-4538
umaine.edu

July 28, 2021

To: Local, State, and Federal Review Officials

RE: AUTHORIZED REPRESENTATIVE – USM Structured Parking Garage

The University of Southern Maine, a member of the University of Maine System, is preparing plans for the new USM Structured Parking Garage located on the University of Southern Maine, Portland Campus. The University has retained Woodard & Curran, Inc., via Desman Design Management Inc., as our garage consultant, to assist in the preparation of the applications associated with permitting approvals for this project. When necessary, Woodard & Curran, Inc., is authorized as its agent to represent the University in addressing questions on the plans, or applicable applications, for this project.

Sincerely,

John M. Souther,
Executive Director of Facilities Management,
University of Southern Maine for the
University of Maine System

cc: to file.

FORM D

SUBMISSIONS CHECKLIST

If a provision is not applicable, put "NA"

Section 1. Development description

A. Narrative

X 1. Objectives and details

X 2. Existing facilities (with dates of construction)

B. Topographic map

X 1. Location of development boundaries

X 2. Quadrangle name

C. Construction plan

X 1. Outline of construction sequence (major aspects)

2. Dates

D. Drawings

X 1. Development facilities

X a. Location, function and ground area

X b. Length/cross-sections for roads

X 2. Site work (nature and extent)

X 3. Existing facilities (location, function ground area and floor area)

4. Topography

X a. Pre- and post-development (contours 2 ft or less)

X b. Previous construction, facilities and lot lines

X **Section 2. Title, right or interest** (copy of document)

Section 3. Financial capacity

X A. Estimated costs

B. Financing

____ 1. Letter of commitment to fund

2. Self-financing

____ a. Annual report

____ b. Bank statement

3. Other

____ a. Cash equity commitment

____ b. Financial plan

X c. Letter

NA 4. Affordable housing information

Section 4. Technical ability (description)

X A. Prior experience (statement)

x B. Personnel (documents)

Section 5. Noise

X A. Developments producing a minor noise impact (statement)

NA 1. Residential developments

NA 2. Certain non-residential subdivisions

NA 3. Schools and hospitals

X 4. Other developments

X a. Type, source and location of noise

NA b. Uses, zoning and plans

NA c. Protected locations

X d. Minor nature of impact

NA e. Demonstration
NA B. Developments producing a major noise impact (full noise study)
NA 1. Baseline
NA a. Uses, zoning and plans
NA b. Protected locations
NA c. Quiet area
NA 2. Noise generated by the development
NA a. Type, source and location of noise
NA b. Sound levels
NA c. Control measures
NA d. Comparison with regulatory limits
NA e. Comparison with local limits

X **Section 6. Visual quality and scenic character**(narrative, description, visual impact analysis)

X **Section 7. Wildlife and fisheries** (narrative)

X **Section 8. Historic sites** (narrative)

X **Section 9. Unusual natural areas** (narrative)

Section 10. Buffers
NA A. Site plan and narrative

Section 11. Soils
X A. Soil survey map and report
X 1. Soil investigation narrative
X 2. Soil survey map
NA B. Soil survey intensity level by development type
1. Class A (High Intensity) Soil Survey
2. Class B (High Intensity) Soil Survey
3. Class C (Medium High-Intensity) Soil Survey
4. Class D (Medium Intensity) Soil Survey
C. Geotechnical Investigation
NA D. Hydric soils mapping

Section 12. Stormwater management
A. Narrative
X 1. Development location
NA 2. Surface water on or abutting the site
NA 3. Downstream ponds and lakes
X 4. General topography
X 5. Flooding
NA 6. Alterations to natural drainage ways
X 7. Alterations to land cover
X 8. Modeling assumptions
X 9. Basic standard
X 10. Flooding standard
X 11. General standard
X 12. Parcel size
X 13. Developed area
X 14. Disturbed area
X 15. Impervious area
B. Maps
X 1. U.S.G.S. map with site boundaries
X 2. S.C.S. soils map with site boundaries
X C. Drainage Plans (a pre-development plan and a post-development plan)

X 1. Contours
X 2. Plan elements
X 3. Land cover types and boundaries
X 4. Soil group boundaries
X 5. Stormwater quantity subwatershed boundaries
X 6. Stormwater quality subwatershed boundaries
X 7. Watershed analysis points
X 8. Hydrologic flow lines (w/flow types and flow lengths labeled)
X 9. Runoff storage areas
X 10. Roads and drives
X 11. Buildings, parking lots, and other facilities
X 12. Drainage system layout for storm drains, catch basins, and culverts
NA 13. Natural and man-made open drainage channels
NA 14. Wetlands
NA 15. Flooded areas
X 16. Benchmark
X 17. Stormwater detention, retention, and infiltration facilities
X 18. Stormwater treatment facilities
NA 19. Drainage easements
X 20. Identify reaches, ponds, and subwatersheds matching stormwater model
NA 21. Buffers

X D. Runoff analysis (pre-development and post development)
X 1. Curve number computations
X 2. Time of concentration calculations
X 3. Travel time calculations
X 4. Peak discharge calculations
NA 5. Reservoir routing calculations

X E. Flooding Standard
NA 1. Variance submissions (if applicable)
NA a. Submissions for discharge to the ocean, great pond, or major river
NA i. Map
NA ii. Drainage plan
NA iii. Drainage system design
NA iv. Outfall design
NA v. Easements
NA b. Insignificant increase
NA i. Downstream impacts
NA
NA c. Submissions for discharge to a public stormwater system
NA i. Letter of permission
NA ii. Proof of capacity
NA ii. Outfall analysis and design (pictures)
X 2. Sizing of storm drains and culverts
NA 3. Stormwater ponds and basins
NA a. Impoundment sizing calculations
NA b. Inlet calculations
NA c. Outlet calculations
NA d. Emergency spillway calculations
NA e. Subsurface investigation report
NA f. Embankment specifications
NA g. Embankment seepage controls
NA h. Outlet seepage controls
NA i. Detail sheet
NA j. Basin cross sections
NA k. Basin plan sheet
NA 4. Infiltration systems
NA a. Well locations map
NA b. Sand and gravel aquifer map
NA c. Subsurface investigation report with test pit or boring logs

NA d. Permeability analysis
NA e. Infiltration structure design
NA f. Pollutant generation and transport analysis
NA g. Monitoring and operations plan
NA i. Locations of storage points of potential contaminants
NA ii. Locations of observation wells and infiltration monitoring plan
NA iii. Groundwater quality monitoring plan
NA 5. Drainage easement declarations.
X F. Stormwater quality treatment plan peak discharge calculations
X 1. Basic stabilization plan
NA a. Ditches, swales, and other open channel stabilization
NA b. Culvert and storm-drain outfall stabilization
NA c. Earthen slope and embankment stabilization
X d. Disturbed area stabilization
NA e. Gravel roads and drives stabilization

X 2. General Standard
X a. Calculations for sizing BMP
X b. Impervious area calculation
X c. Developed area calculation
X d. Summary spreadsheet of calculations

NA 3. Phosphorus control plan
NA a. Calculations for the site's allowable phosphorus export
NA b. Calculations for determining the developed site's phosphorus export
NA c. Calculations for determining any phosphorus compensation fees
NA 4. Offset Credits
NA a. Urban impaired stream
NA Offset credit calculation
NA b. Phosphorus credit determination
NA i. Location map
NA ii. Scaled plan
NA iii. Title and right
NA iv. Demolition plan
NA v. Vegetation plan
NA vi. Offset credit calculation
NA vii. Calculation for the new allowable export
X 5. Runoff treatment measures
X a. structural measures
X i. Design drawings and specifications
X ii. Design calculations
X iii. Maintenance plan
X iv. TSS removal or phosphorus treatment factor determinations
X v. Stabilization plan
NA b. Vegetated buffers
NA i. Soil survey
NA ii. Buffer plan
NA iii. Turnout and level spreader designs
NA iv. Deed restrictions
NA 6. Control plan for thermal impacts to coldwater fisheries
NA 7. Control plan for other pollutants
X 8. Engineering inspection of stormwater management facilities

X G. Maintenance of common facilities or property
X 1. Components of the maintenance plan
X A. Maintenance of facilities by owner or operator
X 1. Site owner or operator (name legally responsible party)
X 2. Contact person responsible for maintenance
X 3. Transfer mechanism

X 4. List of facilities to be maintained
X 5. List of inspection and maintenance tasks for each facility
X 6. Identifications of any deed covenants, easements, or restrictions
X 7. Sample maintenance log
X 8. Copies of any third-party maintenance contracts
NA B. Maintenance of facilities by homeowner's association
NA 1. Incorporation documents for the association
NA 2. Membership criteria
NA 3. Association officer responsible for maintenance
NA 4. Establishment of fee assessment for maintenance work
NA 5. Establishment of lien system
NA 6. Reference to department order(s) in association charter
NA 7. Transfer mechanism from developer to association
NA 8. List of facilities to be maintained
NA 9. Identification of any deed covenants, easements, or restrictions
NA 10. Renewal of covenants and leases
NA 11. List of inspection and maintenance tasks for each facility
NA 12. Sample maintenance log
NA 13. Copies of any third-party maintenance contracts
NA C. Maintenance of facilities by municipality or municipal district
NA 1. Identification of the municipal department or utility district
NA 2. Contact person responsible for maintenance
NA 3. Evidence of acceptance of maintenance responsibility
NA 4. Transfer mechanism from developer
NA 5. List of facilities to be maintained
NA 6. List of inspection and maintenance tasks for each facility
NA 7. Identifications of any deed covenants, easements, or restrictions
NA 8. Sample maintenance log
X 2. General inspection and maintenance requirements
NA a. Drainage easements
X b. Ditches, culverts, and catch-basin systems
X c. Roadways and parking surfaces
X d. Stormwater detention and retention facilities
NA 1. Embankment inspection and maintenance
X 2. Outlet inspection and clean-out
NA 3. Spillway maintenance
X 4. Sediment removal and disposal
NA e. Stormwater infiltration facilities
NA 1. Sediment protection plan
NA 2. Infiltration rehabilitation plan
NA 3. Sediment removal and disposal
NA 4. Groundwater monitoring plan
X f. Proprietary treatment devices
NA g. Buffers
NA h. Other practices and measures

Section 13. Urban Impaired Stream Submissions

NA 1. Off-site credits
NA 2. Compensation fees (Urban Impaired Stream/Phosphorus)
NA 3. Development impacts

Section 14. Basic Standards

X A. Narrative
X 1. Soil types
NA 2. Existing erosion problems
NA 3. Critical areas
NA 4. Protected natural resources
X 5. Erosion control measures

X 6. Site stabilization
X B. Implementation schedule
X C. Erosion and sediment control plan
X 1. Pre-development and post-development contours
X 2. Plan scale and elements
X 3. Land cover types and boundaries
NA 4. Existing erosion problems
NA 5. Critical areas
NA 6. Protected natural resources
X 7. Locations (general)
X 8. Locations of controls
X 9. Disturbed areas
X 10. Stabilized construction entrance
X D. Details and specifications (for both temporary and permanent measures)
X E. Design calculations
X F. Stabilization plan
X 1. Temporary seeding
X 2. Permanent seeding
NA 3. Sodding
X 4. Temporary mulching
X 5. Permanent mulching
X G. Winter construction plan
X 1. Dormant seeding
X 2. Winter mulching
X H. Third-party inspections
1. Inspector's name, address, and telephone number
X 2. Inspector's qualifications
X 3. Inspection schedule
4. Contractor contact
X 5. Reporting protocol

Section 15. Groundwater

X A. Narrative
NA 1. Location and maps
NA 2. Quantity
NA 3. Sources
NA 4. Measures to prevent degradation
NA B. Groundwater protection plan
NA C. Monitoring plan
NA 1. Monitoring points
NA 2. Monitoring frequency
NA 3. Background conditions
NA 4. Monitoring parameters
NA 5. Personnel qualifications
NA 6. Proof of training
NA 7. Equipment and methods
NA 8. Quality assurance/quality control
NA 9. Reporting requirements
NA 10. Remedial action plan
NA D. Monitoring well installation report
NA 1. Well location map
NA 2. Elevation data
NA 3. Well installation data
NA 4. Well construction details
NA 5. Borehole logs
NA 6. Summary of depth measurements
NA 7. Characteristics of subsurface strata
NA 8. Well installation contract

NA 9. Schematic cross-sections
NA 10. Monitoring point summary table
NA 11. Protective casing
NA 12. On-site well identification

Section 16. Water supply

NA A. Water supply method
NA 1. Individual wells (evidence of sufficient/healthful supply)
NA a. Support of findings by well drillers
NA b. Support of findings by geologist
NA 2. Common well(s) (reports)
NA a. Hydrogeology report
NA b. Engineering report
NA c. Well installation report
NA d. Long-term safe yield and zone of influence determination
NA e. Public water supply
NA i. Proposed well or wells
NA ii. Existing well or wells
NA iii. Water quality analysis
NA 3. Well construction in shallow-to-bedrock areas
NA 4. Additional information
NA 5. Off-site utility company or public agency
NA 6. Other sources
NA B. Subsurface wastewater disposal systems (locations of systems and wells)
NA C. Total usage (statement re: total anticipated water usage)

Section 17. Wastewater disposal

NA A. On-site subsurface wastewater disposal systems (investigation results)
NA 1. Site plan
2. Soil conditions summary table
NA 3. Logs of subsurface explorations
4. Additional test pits, borings or probes
NA a. Soil conditions A
NA b. Soils with Profiles 8 and 9 parent material
NA c. Soil conditions D
NA d. Disposal field length 60 feet or greater
NA 5. 3-bedroom design
NA 6. Larger disposal systems
a. System design details
NA b. Plan view
NA c. Cross sections
NA d. Test pit data
NA e. Mounding analysis
NA B. Nitrate-nitrogen impact assessment
NA 1. When required
NA a. Exempted____
i. Conventional systems meeting certain setbacks
NA ii. Denitrification systems
NA b. Special conditions and other exemptions
NA 2. Assumptions
NA a. Initial concentration
NA b. Background concentration
NA c. Contribution from development
NA d. Mixing and dilution
NA e. Severe-drought scenario
NA f. Wastewater flow to subsurface wastewater disposal fields

NA 3. Assessment report minimum requirements
NA a. Narrative and calculations
NA b. Site plan
NA i. Well locations
NA ii. 10 mg/l and 8 mg/l isocons
NA iii. Groundwater contours and groundwater flow divides
NA c. References
NA 4. Denitrification systems
NA a. Design plans and specifications
NA b. Installation information
NA c. Monitoring plan
NA d. Maintenance
NA e. Backup system
X D. Municipal facility or utility company letter
NA E. Storage or treatment lagoons

X **Section 18. Solid waste** (list: type, quantity, method of collection and location)
NA A. Commercial solid waste facility (final disposal location)
X B. Off-site disposal of construction/demolition debris (final disposal location)
C. On-site disposal of woodwaste/land clearing debris
NA 1. Applicability of rules (evidence re: applicability of rules)
2. Burning of wood wastes
NA a. Delineation on site plan
NA b. Plans for handling unburned woodwaste and woodash
NA c. Evidence of capacity to accept waste (approved facility)
NA d. Usage of materials
NA e. Data on mixing ratios and application rates
X D. Special or Hazardous Waste

Section 19. Flooding
NA A. Explanation of flooding impact
NA B. Site plan showing 100-year flood elevation
NA C. Hydrology analysis
X D. FEMA flood zone map with site boundaries

Section 20. Blasting
NA A. Site Plan or map
NA B. Report
1. Assessment
2. Blasting plan

Section 21. Air emissions (narrative and summary)
NA A. Point and non-point sources identified
NA B. Emission components (point sources)

Section 22. Odors
NA A. Identification of nature/source
NA B. Estimate of areas affected
NA C. Methods of control)

NA **Section 23. Water vapor** (narrative)

NA **Section 24. Sunlight** (statement and drawing, if required)

Section 25. Notices
NA A. Evidence that notice sent
NA B. List of abutters for purposes of notice

DEPARTMENT OF ENVIRONMENTAL PROTECTION
STORMWATER APPLICATION CHECKLIST

Applicant: University of Southern Maine			
Project Name: Structured Parking Garage			
Town: Portland			
Application Type:		☐ Stormwater	☑ Site Law
Watershed Name: MS4			
Watershed Type:	☐ UIS	☐ Phosphorus	☑ Neither

Project Area Information

	Existing to Remain[1]	New / Proposed	Total
Impervious (Im)	1.45 acres	0.5 acres	1.95 acres
Landscaped (Land)	0.92 acres	-0.5 acres	0.42 acres
Developed (Dev)[2]	2.37 acres	0	2.37 acres

1- If area is not subject to treatment, provide reason and show in a separate column in the Water Quality Calc table.
2- Developed area = Impervious Area + Landscaped Area

A. BASIC STANDARD

1. **Erosion and Sedimentation Controls** (Appendix A, page 32 of Chapter 500: https://www.maine.gov/sos/cec/rules/06/096/096c500.docx:)
   - Guidance in Department ESC BMP Manuals

2. **Inspection & Maintenance** (Appendix B, page 37 of Chapter 500)

   Construction Phase: Show on Plans the following:
   - Responsibility for inspection and maintenance
   - Construction schedule (how long will it take and in what sequence/critical path to build)
   - Inspection frequency
   - Scope of inspection
   - Inspector qualifications
   - Define storm event that triggers a wet weather inspection (0.5” of rain in 24 hours)
   - Documentation (3 years minimum)

   Post-Construction: Include in written I&M Plan the following:
   - Responsibility for inspection and maintenance
   - Inspection frequency for each BMP
   - Inspection form for each BMP
   - Inspector qualifications
   - Define storm event that triggers a wet weather inspection (1” of rain in 24 hours)
   - Documentation (5 years, minimum)
   - Project is subject to Department 5-Year Recertification

3. **Good Housekeeping** (Appendix C, page 41 of Chapter 500)
   - Show all seven elements on Plans.

B. GENERAL STANDARD

Must provide the following on WQ Treatment Plan: All BMPs with subcatchments including time of concentration (Tc) lines, flow lengths and flow types.

1. **Soil Explorations** (test pit completed by a certified soil scientist) at each proposed BMP
   - Include test pit summary table on detail plan.
   - If there is potential ledge, address in design.
   - If shallow groundwater, address in design.

2. **Treatment Standards** (modify to fit project): Fill out the following table for the applicable standards that apply.

Applicable Standard	Section in Ch. 500	Required Treatment (Im / Dev)	Area Eligible		Area Treated		Provided Treatment %	
			Im	Dev	Im	Dev	Im	Dev
General Standard	4(C)(2(a)(i)	95% / 80%						
Increased Runoff Treated[1]	4(C)(2)(a)(ii)	90% / 80% min						
% Parcel Developed[2]	4(C)(2)(a)(iii)	90% / 75% min						
Redevelopment[3] (Dev Area)	4(C)(2)(d)	0% min (SW) 50% min (Site)		2.37 ac.		1.42 ac.		60%
Linear	4(C)(5)(c)	75% / 50% min						
Other: Offsite Treatment/Mitigation								
Project Total Area =				2.37 ac.		1.42 ac.		60%

1- If proposing to treat more than the first flush, state why meeting Ch. 500, § 4(C)(2(a)(i) is not practicable.
2- Reduced % based on portion of parcel developed.
3- Include pollutant impact ranking calculations (current and proposed) and a figure showing the Redevelopment window.

3. **Proposed BMPs:** Please provide the following information on the Table below for EACH BMP.

BMPs Proposed	#	Pretreatment	Sizing calcs	Detail on Plans[1]	CPV Draindown Time	HydroCAD
StormFilter	1	See Contech Letter		D-204	See Contech Letter	14P

1- BMP details (cross sections, elevation sections, plan view)

Link to Stormwater Design BMP Volumes I, II, III
https://www.maine.gov/dep/land/stormwater/stormwaterbmps/index.html

- Provide Construction Oversight Notes.
- If BMP is unlined, review and satisfy (Appendix E Sections 4(b) and 4(c), page 50 of Chapter 500).
- Treatment buffers (Appendix F, page 56 of Chapter 500): must provide sample deed restriction (Appendix G, page 64 of Chapter 500).
- Infiltration must satisfy Appendix D, page 44 of Chapter 500.
- Is conveyance designed to a 10-year, 24-hour storm?
- Is a drainage easement required for any areas to be flooded?
- Discharge to a public storm sewer system: Must provide authorization from the authority.

If proposing Proprietary BMPs, provide:

- Letter from vendor approving sizing and siting https://www.maine.gov/dep/land/stormwater/stormwaterbmps/index.html.
- Executed 5-Year I&M Agreement with a provider approved by vendor.
- Narrative section and specific inspection forms in the written I&M Plan.
- Pervious pavement: Must provide Executed 5-Year I&M Agreement and vacuum equipment used.

C. PHOSPHORUS STANDARD

MUST provide on the WQ Treatment Plan: BMPs with subcatchments including time of concentration (Tc) lines, flow lengths and flow types;

Provide export calculations clearly showing distinct BMPs: Phosphorus Table Calculations Worksheet 4 july 2015.xlsx.

D. FLOODING STANDARD

1. Add pre- and post- peak flow rates table to post development plan for storms (2-, 10-, 25-year).
2. Is primary access road passable up to a 25-year, 24-hour storm?
3. If requesting a waiver of the Flooding Standard, must state justification for the waiver.
4. HydroCad or other runoff model
   - If post peak flow rate is > pre-peak flow, a waiver request will be needed with justification Ch. 500, § 4(F)(3)(a) or (b),
   - If discharging to wetland see Chap. 500, § 4(I).

This checklist has been designed by DEP stormwater engineers as a guidance tool to assist applicants and their consultants when preparing stormwater applications. Completing the checklist is recommended and valuable, but it is not a substitute for reviewing Ch. 500, and completing all the items on the checklist does not automatically mean all the Ch. 500 requirements have been satisfied. The contents of Ch. 500 should be reviewed carefully for the applicable requirements that apply to your proposed project.

I have reviewed this checklist and included in my submission all the required elements of this checklist that apply to the proposed project.

Maine Engineer of Record:

7/27/21

Signature **Date**

Ashley Fletcher, PE

Name (print)

USM Structured Parking Garage

Site Location of Development Amendment

41 Hutchins Drive
Portland, ME 04102
800-426-4262

woodardcurran.com
COMMITMENT & INTEGRITY DRIVE RESULTS

0233035.00
University of Southern Maine
July 2021

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1. DEVELOPMENT DESCRIPTION

This narrative is being submitted in support of an amendment to the Site Location of Development (SLOD) Permit for the University of Southern Maine (USM) Portland campus located at 44 Bedford Street. The proposed work will take place on a single parcel, identified by the City of Portland Assessor as Tax Map 114, Lot A001001, which is approximately 8.1 acres in size. The proposed work will be limited to approximately 2.4-acres of the property. Proposed work includes construction of a structured parking garage and associated site improvements, sidewalks, landscaping, utilities, and stormwater management infrastructure.

In addition to this SLOD Amendment, the proposed project will require a City of Portland Site Plan Review. It is our understanding that the City of Portland will have delegated review authority over this project.

1.1 OBJECTIVES & DETAILS

As the University of Southern Maine expands to better serve its growing student body, available surface parking will be displaced. The proposed parking garage will enable future developments (a new residence hall (Portland Commons) and Career and Student Success Center (CSSC)) at the University by meeting parking demand for these developments and replacing displaced surface parking spaces.

The proposed development includes a five-level structured parking garage, access drive, pedestrian walkways, and associated site improvements, including landscaping and exterior lighting. The proposed parking garage will provide 632 parking spaces for a net increase in 425 parking spaces for the University. The proposed garage includes the required ADA accessible parking. A 250-space bike storage room and bike repair room will be included on the interior of the garage, and additional bike spaces will be provided outside. A small plaza and drop-off area will be developed in front of the Osher/Glickman Library entrance.

The proposed stormwater management system is comprised of a series of catch basins which discharge to a subsurface detention and treatment system that ultimately discharges to the separated storm sewer on Forest Avenue. Design drawings for the proposed project are included with this application.

1.2 EXISTING FACILITIES

The existing Site consists of several buildings, a parking lot, and a parking garage. Stormwater runoff from the project site drains to City of Portland infrastructure, and ultimately discharges to the Casco Bay. Existing site conditions are described in greater detail in the following sections of this Report.

1.3 TOPOGRAPHIC MAP

A USGS topographic map showing the approximate location of proposed development is attached to this Section for your reference.

1.4 CONSTRUCTION PLAN

Construction is anticipated to commence in the Spring of 2022 upon receipt of permit approvals, and will be completed by the Spring of 2023. The following is the anticipated sequence of construction for major aspects of the development:

- Installation of erosion and sediment control measures;
- Clearing and site preparation activities;
- Demolition and relocation of utilities and other subsurface infrastructure displaced by the building foundation;
- Construction of the structured parking garage and associated stormwater management system;
- Stabilization of the Site; and

- Removal of erosion and sediment control measures.

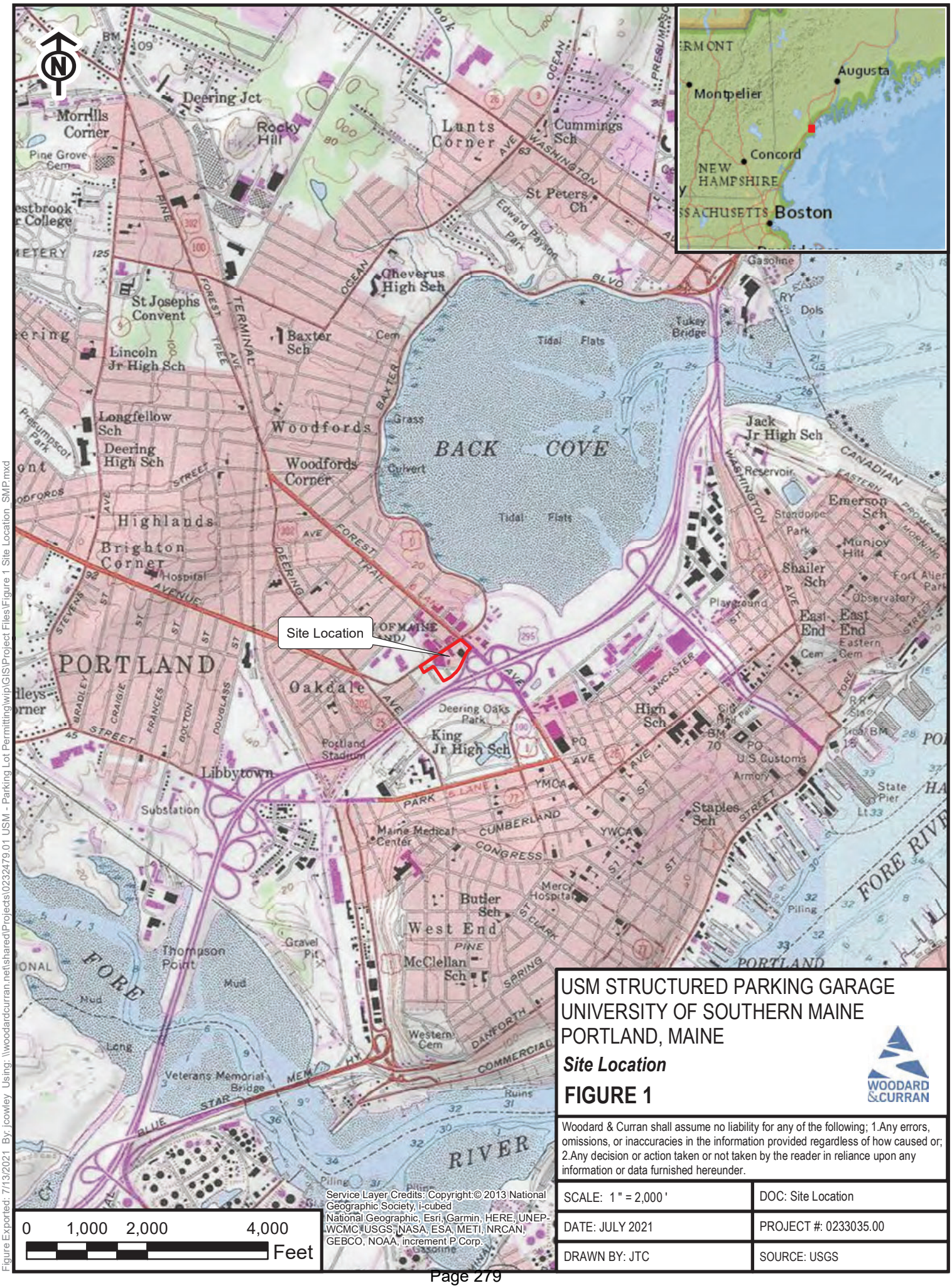
1.5 DRAWINGS

A survey of the existing Site, as well as design drawings of the proposed development, is attached to this Section for your reference. The design drawings show all proposed construction activities, site work, existing facilities, and topography.

1.6 LIST OF ATTACHMENTS

The following documents are attached to this Section:

- Topographic Map; and
- Design Drawings (bound separately).



USM STRUCTURED PARKING GARAGE
UNIVERSITY OF SOUTHERN MAINE
PORTLAND, MAINE

Site Location

FIGURE 1

WOODARD &CURRAN

Woodard & Curran shall assume no liability for any of the following; 1.Any errors, omissions, or inaccuracies in the information provided regardless of how caused or; 2.Any decision or action taken or not taken by the reader in reliance upon any information or data furnished hereunder.

SCALE: 1 " = 2,000 '	DOC: Site Location
DATE: JULY 2021	PROJECT #: 0233035.00
DRAWN BY: JTC	SOURCE: USGS

Figure Exported: 7/13/2021 By: jcowley Using: \\woodardcurran.net\shared\Projects\0232479.01 USM - Parking Lot Permitting\wip\GIS\Project Files\Figure 1 Site Location_SMP.mxd

2. TITLE, RIGHT, OR INTEREST

The proposed development is located on properties owned by the Applicant and identified as Tax Map 114, Lot A001001. Attached is a copy of the deeds associated with this property.

2.1 LIST OF ATTACHMENTS

- Deeds.

GOVERNOR'S DEED
(with Reverter)

KNOW ALL PERSONS BY THESE PRESENTS, that the STATE OF MAINE, acting by and through its Governor, on recommendation of the Commissioner of its DEPARTMENT OF TRANSPORTATION, under and pursuant to the provisions of 23 M.R.S.A., Section 61, for consideration, the sufficiency of which is hereby acknowledged, RELEASES to THE UNIVERSITY OF MAINE SYSTEM, organized as a non-profit corporation of the State of Maine, with offices at 16 Central Street in Bangor, Maine, its successors and assigns forever, all its right, title and interest in and to a certain lot or parcel of land situated on the southerly side of Winslow Street, so-called, at its intersection with the westerly sideline of the right-of-way of State Highway "295", also known as Interstate 295, in Portland, County of Cumberland and State of Maine, and being as shown on a Right-of-way Map for State Highway "295" Portland, Cumberland County, Federal Aid Project Number I-295-3(28), dated January 1967, File Number 3-185, sheet 57 of 73, on file at the offices of the Maine Department of Transportation in Augusta, bounded and described as follows:

BEGINNING at a point on the southerly sideline of Winslow Street at its intersection with the westerly sideline of the right-of-way of Route 295;

THENCE S 26° 51' 18" W along said westerly sideline of Route 295, a distance of 34.00 feet;

THENCE S 51° 22' 05" W continuing along said westerly sideline of Route 295, a distance of 23.93 feet to land now or formerly of the University Of Southern Maine Foundation;

THENCE N 38° 37' 55" W along said University Of Southern Maine Foundation land 20.00 feet;

THENCE N 6° 51' 23" E continuing along said University Of Southern Maine Foundation land, 33.28 feet to the southerly sideline of said Winslow Street;

THENCE S 85° 26' 46" E along said southerly sideline of Winslow Street, 42.70 feet, more or less to the aforementioned westerly sideline of the right-of-way of Route 295 and the POINT OF BEGINNING, and containing one thousand four hundred twenty-seven square feet, more or less (1,427 sq. ft. ±).

EXCEPTING AND RESERVING from this conveyance any and all rights of access from the herein described parcel of land to State Highway "295", also known as Interstate 295, all of which rights of access are expressly reserved to, and retained by, the State of Maine.

ALSO RESERVING to the State of Maine the perpetual right to enter upon said parcel to maintain any highway slopes and drainage facilities or installations that may exist.

SUBJECT TO all utility easements and installations located on the above described premises, including those shown on the herein referred to Right-of-way Map, and to those rights which any utility enjoys over the subject premises for maintenance, location or relocation of poles and other installations.

NOTWITHSTANDING the foregoing, Grantor gives this deed, and Grantee accepts the same, upon the express CONDITION that the property hereby conveyed is to be retained by the University of Maine system and used for

public purposes only; and if said property or any interest in it, or any portion of it, is transferred, or if it is used for any commercial or other non-public purposes, said property shall at once REVERT to, and re-vest in, the Grantor, its successors or assigns; and that such reversion, should it occur, shall be automatic and require no further act of conveyance or documentation in order to be effective.

BEING a portion of premises acquired by the State of Maine from Charles T. Hayes, Jr. and Beatrice Hayes by warranty deed dated July 19, 1968 and recorded at the Cumberland County Registry of Deeds on July 23, 1968 in Volume 3049 at Page 553; and a portion of premises acquired from Reuben Katz by warranty deed dated January 10, 1969 and recorded at said Registry Of Deeds on January 15, 1969 in Volume 3072 at Page 435.

THE STATE OF MAINE makes no representations or warranties with respect to the premises hereby conveyed. The representations and warranties so excluded encompass, but are not limited to, those pertaining to: land use and environmental matters; fitness of the premises or any portion thereof for any particular purposes; water quality or quantity; the condition or quality of the soil; inchoate or unrecorded liens; status of title to or rights within that area lying between the high and low water marks; or the existence, status, or condition of access to, or public utilities serving the premises. Any subsequent use of, improvement to, or construction on the parcel shall be subject to all applicable laws, regulations, ordinances, and permitting requirements.

IN WITNESS WHEREOF, I, John E. Baldacci, Governor of the State of Maine, have caused the name and Great Seal of the State of Maine to be hereunto affixed this 11th day of Sept. in the year two thousand six.

STATE OF MAINE

By: _____, Governor
John E. Baldacci

Received
Recorded Register of Deeds
Sep 20,2006 02:29:02P
Cumberland County
John B OBrien

Affixed by: _____
Secretary of State

STATE OF MAINE
Kennebec, *ss.*

Sept. 11th, 2006

Personally appeared the above-named, John E. Baldacci, Governor of the State of Maine and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of the State of Maine.

Before me, _____
Notary Public/~~Attorney at Law~~

Print Name: _____

My commission expires: _____

ROSEMARIE D. SMITH
Notary Public, Maine
My Commission Expires: January 6, 2009

SEAL

SHORT FORM QUITCLAIM DEED WITH COVENANT

MAINE REAL ESTATE TAX PAID

THE UNIVERSITY OF SOUTHERN MAINE FOUNDATION, a Maine nonprofit corporation with a mailing address of 96 Falmouth Street, Portland, Maine 04104, FOR CONSIDERATION PAID, grants to UNIVERSITY OF MAINE SYSTEM, a body politic and instrumentality of the State of Maine, with a mailing address of 16 Central Street, Bangor, Maine 04401, with QUITCLAIM COVENANT, certain real property, together with any improvements thereon, located in the City of Portland, Cumberland County, Maine and more particularly described on Exhibit A attached hereto and made a part hereof.

Being the same premises conveyed to the grantor herein by a Short Form Quitclaim Deed With Covenant from Frederick J. Olsen dated April 27, 2005 and recorded at the Cumberland County Registry of Deeds in Book 22577, Page 79.

IN WITNESS WHEREOF, The University of Southern Maine Foundation, has caused this instrument to be executed and delivered as of the 20th day of December, 2011.

The University of Southern Maine Foundation

Witness

By: Margaret A. Weston
Name: Margaret A. Weston
Its: President

State of Maine
County of Cumberland, ss.

December 16, 2011

Personally appeared the above-named Margaret A. Weston, President of The University of Southern Maine Foundation, and acknowledged the foregoing instrument to be her free act and deed in her said capacity and the free act and deed of The University of Southern Maine Foundation.

Before me,

Amy Blaisdell
Notary Public/Attorney at Law
Name: Amy Blaisdell
Commission Expires: 10/16/2015

Amy Blaisdell
NOTARY PUBLIC
Lisbon Falls, ME
Commission expires on
October 16, 2015

Exhibit A

Formerly Tax Map 114, Block D, Lot 21:

Three (3) certain lots or parcels of land, with the buildings thereon, situated on the northerly side of Winslow Street in the City of Portland, County of Cumberland, State of Maine, being lots numbered 1, 2 and 3 on an unrecorded plan of the Heater piece at and adjoining the junction of said Winslow Street and Bedford Street made by E.C. Jordan & Co., Civ. Eng., in January 1918, and on file in the office of said E.C. Jordan & Co., said three lots taken together, being bounded and described as follows:

Beginning at a point on said northerly line of Winslow Street at the southwest corner of land now or formerly of John W. Lovely heirs and thence running, with an included angle of 88° 43' and by the westerly line of said Lovely land eighty-six (86) feet to a post and land now or formerly of the T.A. Huston & Co.; thence northwesterly and along said Huston land, forty-nine (49) feet to a post; thence northwesterly and along said Huston land thirty-two and three tenths (32.3) feet to an iron post; thence westerly and along said Huston land twenty-two and thirty-five hundredths (22.35) feet to an iron post; thence westerly and along said Huston land nineteen and eighty-four hundredths (19.84) feet to a post; said post being the southeasterly corner of lot numbered 11 on said plan; thence westerly and along the rear or southerly line of said lot numbered 11, fifty-nine and thirty-seven hundredths (59.37) feet to the southwesterly corner of lot numbered 11; thence southwesterly at right angles to said Winslow Street one hundred (100) feet to said northerly line of Winslow Street; thence easterly and along said northerly line of Winslow Street one hundred fifty-nine (159) feet to the point or place of beginning; said three lots having together an area of 18,027 square feet, be the same more or less.

EXCEPTING AND RESERVING from the above-described premises that portion thereof which was conveyed by Ellestad Hansen, Warren K. Webber and Mary E. Hansen to Charles A. Adams by deed dated April 8, 1924 and recorded in the Cumberland County Registry of Deeds in Book 1165, Page 79, and such portion thereof as may have been conveyed by Mary E. Hansen to the State of Maine by deed dated January 7, 1970 and recorded in the said Registry of Deeds in Book 3114, Page 724.

Formerly Tax Map 114, Block D, Lot 22:

ALSO a certain lot or parcel of land situated on the northerly side of Winslow Street in the City of Portland, County of Cumberland and State of Maine, bounded and described as follows, to wit:

Beginning at an iron hub at the southwest corner of a lot of land conveyed by Edward D. Noyes, et al. to Ellestad Hansen and Warren K. Webber by deed dated November 14, 1923 and recorded in the Cumberland County Registry of Deeds in Book 1153, Page 280; thence easterly along the northerly side line of Winslow Street forty-seven (47) feet to a stake; thence northerly at right angles to said Winslow Street one hundred sixteen and thirty-three hundredths (116.33) feet to an iron hub in the northerly line of the lot above mentioned; thence westerly with an included angle of seventy (70) degrees and thirty-six (36) minutes to the right, forty-nine and seventy-six hundredths (49.76) feet to a stake at the northwest corner of the lot above mentioned; thence southerly on a line at right angles to said Winslow Street one hundred (100) feet to the point of beginning.

Formerly Tax Map 114, Block C, Lot 1:

ALSO a certain lot or parcel of land in the City of Portland, County of Cumberland and State of Maine, described as follows: Beginning at a stake on the southerly side of Winslow Street at the intersection with the easterly side of Conant Street; thence 25° E by Conant Street one hundred ten (110) feet; thence easterly at right angles with Conant Street forty-six and thirty-one hundredths (46.31) feet to a stake; thence northerly to a point in the southerly side of Winslow Street distant easterly sixty-three and seventy-two hundredths (63.72) feet from the point of beginning; thence N 71° 37' W by said Winslow Street sixty-three and seventy-two hundredths (63.72) feet to the point of beginning.

Formerly Tax Map 114, Block C, Lot 2:

ALSO a certain lot or parcel of land situated in the City of Portland, County of Cumberland and State of Maine bounded and described as follows, to wit:

Beginning at a point on the present southerly boundary line of Winslow Street at the northeasterly line of land now or formerly of Frederick J. Olsen; thence southeasterly along the northeasterly line of land now or formerly of said Olsen, about sixty-six (66) feet to a corner; thence southwesterly along the southeasterly line of land now or formerly of said Olsen, about forty-six and three tenths (46.3) feet to the northeasterly boundary line of Conant Street; thence southeasterly along the northeasterly boundary line of Conant Street about eighteen (18) feet to a monument located about seventy-one (71) feet northwesterly from and as measured along a line normal to the Ramp F.A. 6 Base Line at about Sta. 5+50; thence northeasterly about sixty-six (66) feet to a point on a line, said line being a projected line between the beforementioned monument and a monument located fifty (50) feet northwesterly from and as measured along a line normal to the Ramp F.A. 6 Base Line at Sta. 4+50, said point being twenty-five (25) feet southwesterly of and as measured along said projected line from said monument located

northwesterly of Sta. 4+50; thence northwesterly at right angles to said projected line twenty (20) feet to a point; thence northerly by a direct course to a point on the present southerly boundary line of Winslow Street; thence westerly along the present southerly boundary line of Winslow Street sixty (60) feet to the point of beginning. Said lot or parcel of land contains about 2,867 square feet and is a portion of that land as acquired from Charles T. Hayes, Jr. and Beatrice Hayes, pursuant to a Notice of Layout and Taking dated March 8, 1973 and recorded at the Cumberland County Registry of Deeds in Book 3367, Page 58. Said parcel is shown on a certain Maine Department of Transportation Right-of-way Map entitled "State Highway '295', Portland, Cumberland County, Federal Aid Project No. 1-295-3(28)" dated January 1967, on file in Augusta, File No. 3-185.

The premises herein conveyed is SUBJECT to a State of Maine Notice of Layout and Taking dated February 28, 1973 and recorded in said Cumberland County Registry of Deeds in Book 3367, Page 58.

Received
Recorded Register of Deeds
Dec 21,2011 12:40:48P
Cumberland County
Pamela E. Lovley

3. FINANCIAL CAPACITY

The proposed project will cost approximately $22,000,000 to construct. Evidence of the University's financial capability to complete the proposed project is attached to this Section.

3.1 LIST OF ATTACHMENTS

- Evidence of Financial Capability.

DocuSign Envelope ID: 78157A2A-6DE5-4E27-B7A8-4B2065B0545F

UNIVERSITY OF SOUTHERN MAINE
Finance and Administration

July 27, 2021

Mr. Darrin Stairs
Woodard & Curran
41 Hutchins Drive
Portland, ME 04102

Dear Mr. Stairs:

The University of Southern Maine expects the Structured Parking project to cost approximately $22 million.

To fund the project, the University would utilize bond anticipation notes and revenue bonding pursuant to approval by the University of Maine System Board of Trustees.

Thank you for your consideration.

Sincerely,

DocuSigned by:
Alexander E. Porteous
73AFFEE3455845F...

Alexander E. Porteous
Chief Operating Officer & Chief Business Officer

P.O. Box 9300, Portland, ME 04104-9300
(207) 780-4484 TTY (207) 780-5646, FAX (207) 780-4549
www.usm.maine.edu
A member of the University of Maine System

4. TECHNICAL ABILITY

On behalf of the Applicant, Woodard & Curran is preparing this application for the proposed development. **Woodard & Curran (W&C)**, a Portland-based consulting firm, has provided engineering services to the public and private sector for over 40 years, including permitting, civil/site engineering, stormwater management, and construction services. W&C has completed projects for colleges, universities, and healthcare institutions that build strong, sustainable infrastructure and environmental programs serving both their business needs and the communities that make them so vibrant. With extensive experience in design and permitting for site development projects, W&C has completed many projects within the City of Portland and for the University of Maine System.

The University of Southern Maine (USM) is a public university with over 8,000 undergraduate and graduate students taking courses online and at campuses in Portland, Gorham, and Lewiston. Known for its academic excellence, student focus and engagement with the community, USM provides students with hands-on experience that complements classroom learning and leads to employment opportunities in one of the nation's most desirable places to live. USM is a member of the University of Maine System (UMS), the State's largest educational enterprise that includes seven universities and an annual enrollment of nearly 30,000 students.

Desman, Inc. is recognized as one of the nation's leading consulting architectural and engineering firms specializing in the planning, design and restoration of structured parking facilities, transportation improvements and other parking related consulting services. Desman offers a complete scope of services in the parking industry including planning, design, restoration, construction administration, financing methods, parking access/revenue control, operational and management techniques. In brief, its core business is parking planning, design, and all other parking related consulting services. Desman has over 45 years of experience in providing these services for parking structures and parking related projects.

Winston Scott Architects Established in 1975, Winton Scott Architects is a small, design-oriented architectural practice located in Portland, Maine. Their work encompasses a diverse array of project types and scales ranging from multi-block urban developments to historic renovations, commercial and institutional buildings, and multifamily and single-family residences. The firm has been recognized numerous times for design excellence by the Maine and New England Chapters of the American Institute of Architects, as well as the United States Green Building Council; and our work has been profiled in national trade journals, local publications, and several books focused on design and architecture.

Michael Boucher Landscape Architecture (MBLA) is a professional landscape design firm located in southern Maine. MBLA, founded in 1994, is engaged in ongoing collaborations with many acclaimed architecture firms. The office is currently involved in a variety of projects nationally and internationally, connecting them to many landscape typologies, cultural viewpoints, and methods of building. This experience benefits their clients and projects in providing a sense of objectivity that we fold into each new undertaking. MBLA offers a full scope of landscape architecture services tailored to assist clients in developing clear visions for their properties.

5. NOISE

The noise impact from the proposed development will be minor. The primary source of noise from the proposed project will be the result of construction. Construction activities will be limited to the hours permitted by the City. Noise associated with the proposed development will not exceed regulated levels and is not anticipated to negatively impact the surrounding urban environment.

6. VISUAL QUALITY & SCENIC CHARACTER

The proposed parking garage structure has been sited adjacent to the existing parking garage structure, and the architecture and landscaping have been designed to be consistent with the scenic character of the surrounding urban area and to meet City of Portland Standards, as shown on the drawings. It is not anticipated that the proposed development will result in any negative visual impacts.

7. WILDLIFE & FISHERIES

The Site has been previously developed and there are no known areas of significant natural features, including areas of significant wildlife habitats or wetlands. The attached Official Species List identifies the northern long-eared bat, which has been listed as a Federally Threatened Species, in association with the project area; however, there are no critical habitat areas located within the project area. Based on US Fish & Wildlife information, the northern long-eared bat typically lives in caves during the winter months and in trees larger than three inches in diameter during the summer, with migration between these two habitats in the spring in the fall. Tree-clearing for this project will be minimal.

A letter has been sent to the Maine Department of Inland Fisheries and Wildlife (MDIFW) requesting information regarding any known threatened or endangered species or critical habitat relative to the project area; a copy of this letter is attached to this Section for your reference. A copy of the MDIFW response can be provided upon receipt. It is not anticipated that the proposed development will have a negative impact on the northern long-eared bat.

7.1 LIST OF ATTACHMENTS

- Official Species List; and
- MDIFW Environmental Review Request Letter.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Maine Ecological Services Field Office
P. O. Box A
East Orland, ME 04431
Phone: (207) 469-7300 Fax: (207) 902-1588
http://www.fws.gov/mainefieldoffice/index.html

In Reply Refer To: April 01, 2021
Consultation Code: 05E1ME00-2021-SLI-0915
Event Code: 05E1ME00-2021-E-02772
Project Name: USM Garage

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies the threatened, endangered, candidate, and proposed species and designated or proposed critical habitat that may occur within the boundary of your proposed project or may be affected by your proposed project. This species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC Web site at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the Endangered Species Consultation Handbook at: http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

This species list also identifies candidate species under review for listing and those species that the Service considers species of concern. Candidate species have no protection under the Act but are included for consideration because they could be listed prior to completion of your project. Species of concern are those taxa whose conservation status is of concern to the Service (i.e., species previously known as Category 2 candidates), but for which further information is needed.

If a proposed project may affect only candidate species or species of concern, you are not required to prepare a Biological Assessment or biological evaluation or to consult with the Service. However, the Service recommends minimizing effects to these species to prevent future conflicts. Therefore, if early evaluation indicates that a project will affect a candidate species or species of concern, you may wish to request technical assistance from this office to identify appropriate minimization measures.

Please be aware that bald and golden eagles are not protected under the Endangered Species Act but are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.). Projects affecting these species may require development of an eagle conservation plan: http://www.fws.gov/windenergy/eagle_guidance.html Information on the location of bald eagle nests in Maine can be found on the Maine Field Office Web site: http://www.fws.gov/mainefieldoffice/Project%20review4.html

Additionally, wind energy projects should follow the wind energy guidelines: http://www.fws.gov/windenergy/ for minimizing impacts to migratory birds and bats. Projects may require development of an avian and bat protection plan.

Migratory birds are also a Service trust resource. Under the Migratory Bird Treaty Act, construction activities in grassland, wetland, stream, woodland, and other habitats that would result in the take of migratory birds, eggs, young, or active nests should be avoided. Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm and at:

http://www.towerkill.com; and at:
http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Maine Ecological Services Field Office
P. O. Box A
East Orland, ME 04431
(207) 469-7300

Project Summary

Consultation Code: 05E1ME00-2021-SLI-0915
Event Code: 05E1ME00-2021-E-02772
Project Name: USM Garage
Project Type: DEVELOPMENT
Project Description: An addition to the existing USM Surrenden Street Parking Garage on the University of Southern Maine's campus.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@43.66203135,-70.27331546908917,14z

Counties: Cumberland County, Maine

Endangered Species Act Species

There is a total of 1 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis*	Threatened

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/9045

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

COMMITMENT & INTEGRITY
DRIVE RESULTS

41 Hutchins Drive
Portland, ME 04102
www.woodardcurran.com

T 800.426.4262
T 207.774.2112
F 207.774.6635

July 27, 2021

Maine Department of Inland Fisheries and Wildlife
41 State House Station
Augusta, ME 04333

RE: USM Structured Parking Garage – Environmental Review Request

To Whom It May Concern:

The University of Southern Maine Portland Campus is proposing to construct a structured parking garage adjacent to the existing garage located at 44 Bedford Street in Portland, Maine. The proposed project will include the construction of a structured parking garage and associated lighting, landscaping, utilities, and stormwater management infrastructure. The entire limit of work has been previously developed. The proposed work will require a Maine Department of Environmental Protection Site Location of Development Permit Amendment, which requires coordination with the Maine Department of Inland Fisheries and Wildlife.

On behalf of the University, we are requesting a review of the project area for any known threatened or endangered species or critical habitat. A site location map and Site Plan have been attached for your reference. If you have any questions regarding this information or the proposed project, please do not hesitate to contact me at (207) 558-3665 or aefletcher@woodardcurran.com. Thank you for your assistance.

Sincerely,

WOODARD & CURRAN INC.

Ashley Fletcher, PE
Technical Manager

Enclosures: Site Location Map
Site Plan

Cc: MaineDEP

8. HISTORIC SITES

A letter has been sent to the Maine Historic Preservation Commission (MHPC) requesting a review of the project area relative to historic properties; a copy of this letter is attached to this Section for your reference. A copy of the MHPC response can be provided upon receipt.

8.1 LIST OF ATTACHMENTS

- MHPC Project Review Request Letter.

COMMITMENT & INTEGRITY
DRIVE RESULTS

41 Hutchins Drive
Portland, ME 04102
www.woodardcurran.com

T 800.426.4262
T 207.774.2112
F 207.774.6635

July 27, 2021

Kirk F. Mohney, Director
Maine Historic Preservation Commission
55 Capitol Street, 65 State House Station
Augusta, Maine 04333-0065

Re: USM Structured Parking Garage – Project Review Request

Dear Mr. Mohney:

The University of Southern Maine Portland Campus is proposing to construct a structured parking garage adjacent to the existing garage located at 44 Bedford Street in Portland, Maine. The proposed project will include the construction of a structured parking garage and associated lighting, landscaping, utilities, and stormwater management infrastructure. The entire limit of work has been previously developed. The proposed work will require a Maine Department of Environmental Protection Site Location of Development Permit Amendment, which requires coordination with the Maine Historic Preservation Commission.

On behalf of the University, we are requesting a review of the project area relative to historic properties. Please note that no bridges or buildings or other structures will be directly impacted by the proposed work, but that the proposed project is located adjacent to the Glickman Family Library, which was built in 1900. The building is located northeast of the proposed project, across a site access road, as shown on the enclosed Site Plan; a photo of the building, a USGS topographic map, and proposed Site Plan have been enclosed for your reference. The project is not located adjacent to or within any known historic properties or districts.

We appreciate your review of this project. If you have any questions regarding this information or the proposed project, please do not hesitate to contact me at (207) 558-3665 or aefletcher@woodardcurran.com. Thank you for your assistance.

Sincerely,

WOODARD & CURRAN INC.

Ashley Fletcher, PE
Technical Manager

Enclosures: Photograph of Glickman Family Library
USGS Map
Site Plan

Cc: MaineDEP

9. UNUSUAL NATURAL AREAS

The Site has been previously developed and there are no known unusual natural areas. A letter has been sent to the Maine Natural Areas Program (MNAP) requesting a review of the Site relative to rare and exemplary botanical features; a copy of their response confirming that there are no rare botanical features located within the project area is attached to this Section for your reference.

9.1 LIST OF ATTACHMENTS

- MNAP Site Review Letter.

STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY
177 STATE HOUSE STATION
AUGUSTA, MAINE 04333

JANET T. MILLS
GOVERNOR

AMANDA E. BEAL
COMMISSIONER

July 27, 2021

Ashley Fletcher
Woodard & Curran
41 Hutchins Drive
Portland, ME 04102

Via email: aefletcher@woodardcurran.com

Re: Rare and exemplary botanical features in proximity to: #0233035.00, USM Structured Parking Garage, Portland, Maine

Dear Ms. Fletcher:

I have searched the Maine Natural Areas Program's Biological and Conservation Data System files in response to your request received July 27, 2021 for information on the presence of rare or unique botanical features documented from the vicinity of the project in Portland, Maine. Rare and unique botanical features include the habitat of rare, threatened, or endangered plant species and unique or exemplary natural communities. Our review involves examining maps, manual and computerized records, other sources of information such as scientific articles or published references, and the personal knowledge of staff or cooperating experts.

Our official response covers only botanical features. For authoritative information and official response for zoological features you must make a similar request to the Maine Department of Inland Fisheries and Wildlife, 284 State Street, Augusta, Maine 04333.

According to the information currently in our Biological and Conservation Data System files, there are no rare botanical features documented specifically within the project area. Based on the information in our files and the landscape context of this project, there is a low probability that rare or significant botanical features occur at this project location.

This finding is available and appropriate for preparation and review of environmental assessments, but it is not a substitute for on-site surveys. Comprehensive field surveys do not exist for all natural areas in Maine, and in the absence of a specific field investigation, the Maine Natural Areas Program cannot provide a definitive statement on the presence or absence of unusual natural features at this site.

The Maine Natural Areas Program (MNAP) is continuously working to achieve a more comprehensive database of exemplary natural features in Maine. We would appreciate the contribution of any information obtained should you decide to do field work. MNAP welcomes coordination with individuals or organizations proposing environmental alteration or conducting environmental assessments. If, however, data provided by MNAP are to be published in any form, the Program should be informed at the outset and credited as the source.

The Maine Natural Areas Program has instituted a fee structure of $75.00 an hour to recover the actual cost of processing your request for information. You will receive an invoice for $150.00 for two hours of our services.

MOLLY DOCHERTY, DIRECTOR
MAINE NATURAL AREAS PROGRAM
BLOSSOM LANE, DEERING BUILDING

PHONE: (207) 287-804490
WWW.MAINE.GOV/DACF/MNAP

Thank you for using MNAP in the environmental review process. Please do not hesitate to contact me if you have further questions about the Natural Areas Program or about rare or unique botanical features on this site.

Sincerely,

Lisa St. Hilaire

Lisa St. Hilaire | Information Manager | Maine Natural Areas Program
207-287-8044 | lisa.st.hilaire@maine.gov

10. BUFFERS

The Site has been previously developed. There are no existing or proposed buffers. This Section is not applicable.

11. SOILS

A copy of the United States Department of Agriculture Natural Resources Conservation Service Web Soil Survey is attached to this Section for your reference. Environmental assessments of the Site have been conducted and the Owner is a participant in the Maine Department of Environmental Protection Voluntary Response Action Program (VRAP). A soil management plan will be developed for the site.

11.1 LIST OF ATTACHMENTS

- United States Department of Agriculture Natural Resources Conservation Service Web Soil Survey.

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Cumberland County and Part of Oxford County, Maine

May 3, 2021

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map

Map Scale: 1:1,190 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 15 30 60 90

Feet: 0 50 100 200 300

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

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

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

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Data not available.

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
WmB	Windsor loamy sand, 0 to 8 percent slopes	2.8	100.0%
Totals for Area of Interest		**2.8**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Cumberland County and Part of Oxford County, Maine

WmB—Windsor loamy sand, 0 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2w2x2
Elevation: 0 to 1,410 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Windsor and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Windsor

Setting

Landform: Deltas, outwash plains, dunes, outwash terraces
Landform position (three-dimensional): Riser, tread
Down-slope shape: Linear, convex
Across-slope shape: Linear, convex
Parent material: Loose sandy glaciofluvial deposits derived from granite and/or loose sandy glaciofluvial deposits derived from schist and/or loose sandy glaciofluvial deposits derived from gneiss

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 3 inches: loamy sand
Bw - 3 to 25 inches: loamy sand
C - 25 to 65 inches: sand

Properties and qualities

Slope: 0 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water capacity: Low (about 4.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Hinckley

Percent of map unit: 5 percent
Landform: Outwash plains, eskers, deltas, kames
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Nose slope, side slope, crest, head slope, rise
Down-slope shape: Convex
Across-slope shape: Linear, convex
Hydric soil rating: No

Agawam

Percent of map unit: 5 percent
Landform: Kames, moraines, outwash terraces, kame terraces, outwash plains
Landform position (two-dimensional): Footslope, summit, backslope, shoulder
Landform position (three-dimensional): Side slope, crest, tread, riser, rise
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Deerfield

Percent of map unit: 5 percent
Landform: Outwash plains, deltas, terraces
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread, talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

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12. STORMWATER MANAGEMENT

The attached Stormwater Management Plan describes the proposed stormwater management measures for the project, as shown on the design drawings attached to Section 1 of this Report. A USGS map and a soils map are attached to Section 1 and Section 11 of this Report, respectively.

12.1 LIST OF ATTACHMENTS

- Stormwater Management Plan (Bound Separately)

13. URBAN IMPAIRED STREAM

The proposed development is not located within the watershed of an Urban Impaired Stream; the Urban Impaired Stream Standard does not apply.

14. BASIC STANDARD

The overall goal of the Soil Erosion and Sediment Control Plan is to restrict the potential for erosion and sedimentation at the site and down-gradient of the site. A variety of erosion control techniques will be implemented to achieve this goal. During construction, these include:

- Positive grades throughout the construction site to direct flow to sediment control barriers;
- Diversion barriers to keep up-gradient runoff from flowing through the active construction areas;
- Preservation and maintenance of vegetated areas to the maximum extent possible;
- Temporary stabilization of disturbed vegetated areas to be exposed for more than seven days;
- Installation and maintenance of sediment barriers adjacent to and down-gradient of the construction site;
- Installation and maintenance of construction entrances at the travelled interface between stabilized and non-stabilized areas;
- Controls for fugitive sediment and dust, debris, and other materials;
- Application of seeding and mulching (or other permanent surface treatment as indicated on the drawings) applied as soon as areas achieve final grades; and
- Inspection of all in-place measures after every significant rainfall until permanent measures are in place and the Site has been stabilized.

Structural measures will be installed where shown on the design drawings. Details for the installation of these measures, as well as implementation notes, are included on the drawings. All measures will be implemented in accordance with the "Maine Erosion and Sedimentation Handbook for Construction: Best Management Practices". All temporary measures will be installed prior to any earthmoving operation and removed after the areas are permanently stabilized. Permanent erosion control measures for the development will include vegetation and pavement. The anticipated construction schedule is provided in Section 1.3 of this Report, and information on soil types and protected natural resources is provided in Section 11 of this Report.

All measures will be maintained in an effective operating condition until the Site is permanently stabilized. During construction, the Contractor will be responsible for conducting inspections in accordance with the attached *Stormwater Erosion & Sediment Control Inspection Report Form* (or equivalent). Inspections shall be performed at least once a week, as well as before and after storm events. A person with knowledge of stormwater management and erosion and sediment control, including the standards and conditions in the permit, shall conduct the inspections and perform maintenance of the facilities. If maintenance or modifications are necessary, implementation will be completed within seven days and prior to any rainfall event. After construction, the responsible party for the owner will conduct inspections of the Site per the inspection and maintenance requirements outlined in Section 12 of this Report.

14.1 LIST OF ATTACHMENTS

- Stormwater Erosion & Sediment Control Inspection Report Form.

EROSION & SEDIMENT CONTROL
INSPECTION REPORT FORM

Inspectors: Date: ___ / ___ / _____

_____ of _____ (Project Owner)
_____ of _____ (Contractor)
_____ of _____
_____ of _____

Storm Event? ☐ Yes ☐ No Rainfall Amount _____ Storm Duration _____ hours

Visual Observations of Activity and Site Conditions:

Disturbed Soil Areas:

Storage Of Soils:

Sediment & Erosion Control Measures:

Construction Site Entrance:

Surface Stabilization:

Corrective Action Taken:

Attachments (if any):

Signature:

Name Title Date

15. GROUNDWATER

The proposed development is not located within a Significant Sand and Gravel Aquifer. Environmental assessments of the Site have been conducted and the Owner is a participant in the Maine Department of Environmental Protection Voluntary Response Action Program (VRAP). The proposed development will not infiltrate to or extract groundwater and is not anticipated to produce any hazardous waste. It is not anticipated that the proposed development will result in any impacts to groundwater.

16. WATER SUPPLY

The proposed project will not include any new water services; this Section is not applicable.

17. WASTEWATER DISPOSAL

The proposed parking garage will include floor drains and an associated oil/water separator that will discharge to the City's combined sewer system. A Wastewater Capacity Application was submitted to the City under separate cover as part of the Site Plan Application for the proposed development. A copy of the City's approval can be provided upon receipt.

18. SOLID WASTE

18.1 SOLID WASTE

The proposed project will not result in any additional solid waste after construction has been completed.

18.2 CONSTRUCTION & DEMOLITION DEBRIS

As with any construction project, the proposed construction will generate construction waste and demolition debris (CDD). The construction contractor(s) will be responsible for hauling the CDD or contracting with a waste management service to haul the CDD from the project site. The contractor(s) will be fully responsible for handling, managing, and disposing of all waste generated by construction in accordance with Maine Solid Waste Management Regulations – 06-096 CMR 400-409. The contractor(s) will be bound by contract to dispose of all materials in full accordance with all applicable local state and federal regulations.

18.3 SPECIAL & HAZARDOUS WASTE

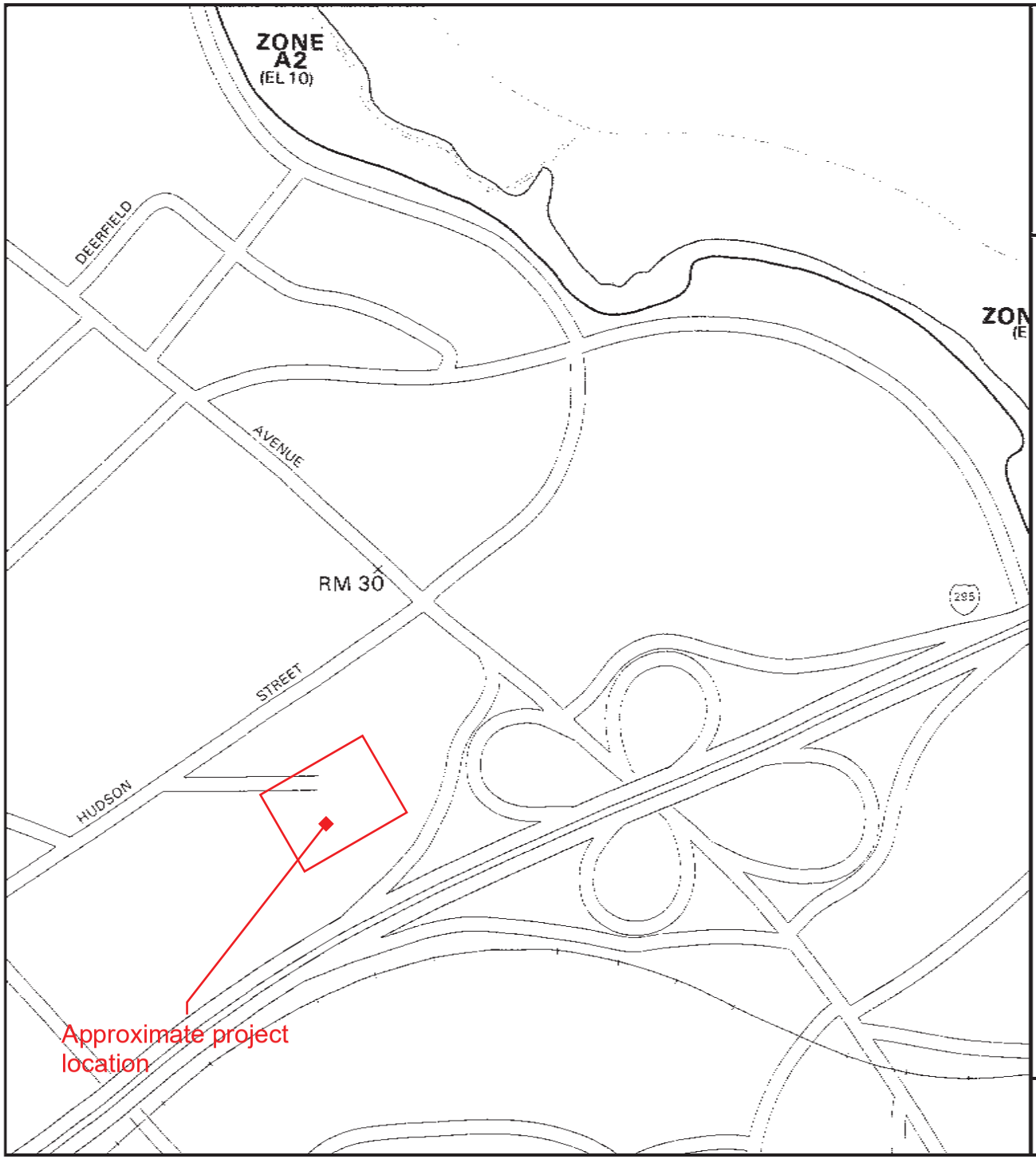
The proposed development is not anticipated to produce any hazardous waste. Environmental assessments of the Site have been conducted and the Owner is a participant in the Maine Department of Environmental Protection Voluntary Response Action Program (VRAP). A soil management plan will be developed for the Site.

19. FLOODING

The project is not located in a flood hazard zone, as shown on the attached FEMA FIRM Map.

19.1 LIST OF ATTACHMENTS

- FEMA Flood Insurance Rate 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

20. BLASTING

No blasting is anticipated for this project; this Section is not applicable.

21. AIR EMISSIONS

The project will not require an air emissions license; this Section is not applicable.

22. ODORS

The proposed development will not involve any processes that emit significant odors; this Section is not applicable.

23. WATER VAPOR

The proposed development will not use water for any processes that would emit water vapor; this Section is not applicable.

24. SUNLIGHT

The proposed development will not block access to sunlight for any structures utilizing solar energy; this Section is not applicable.

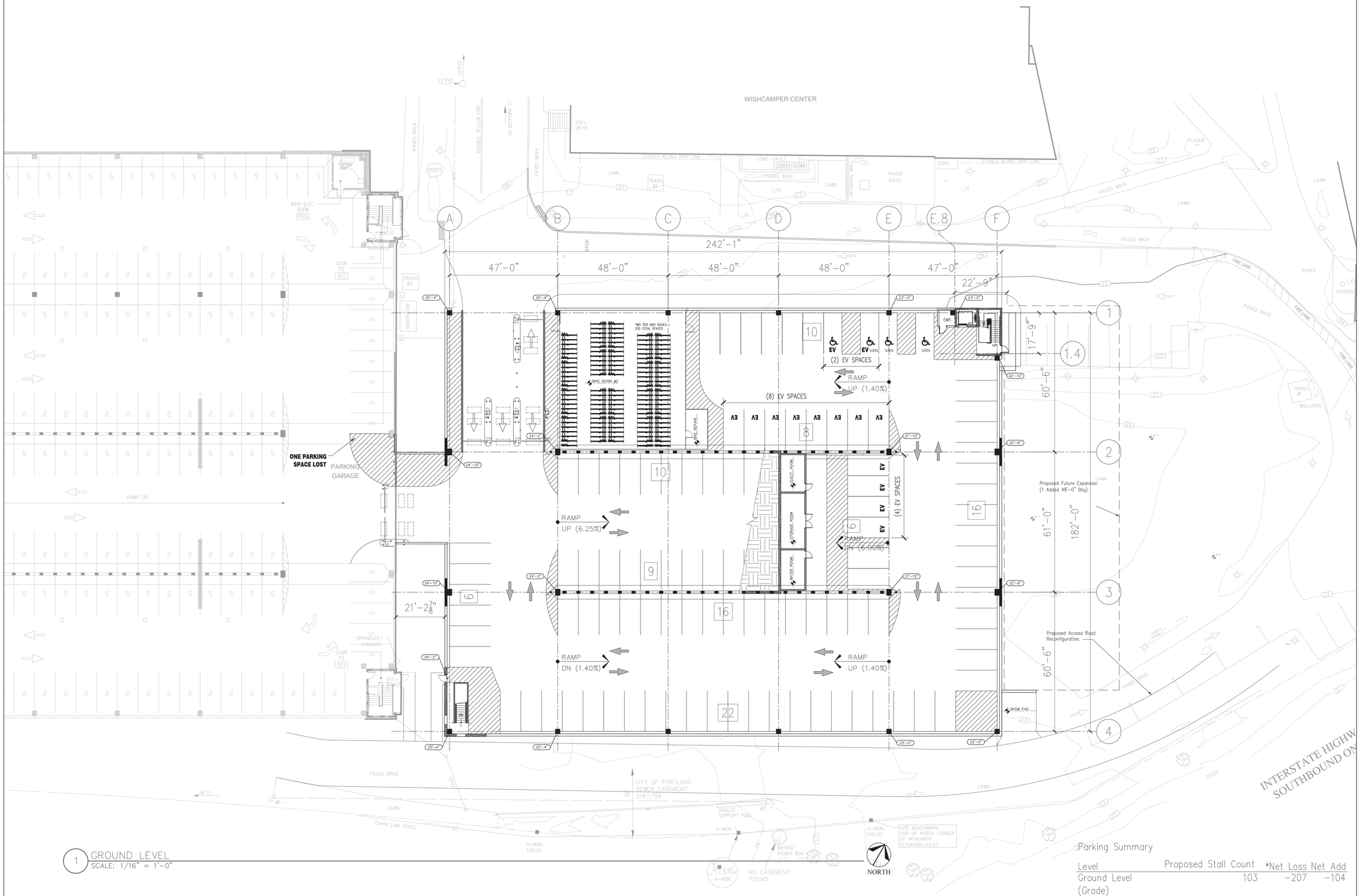
25. NOTICES

The City of Portland has Delegated Review Authority for this application; as such, it is our understanding that the public notice requirements associated with MaineDEP Site Law do not apply.

WOODARD &CURRAN

woodardcurran.com

COMMITMENT & INTEGRITY DRIVE RESULTS



1 GROUND LEVEL
SCALE: 1/16" = 1'-0"

Parking Summary

Level	Proposed Stall Count	*Net Loss	Net Add
Ground Level (Grade)	103	−207	−104
First Level	137	0	137
Second Level	137	0	137
Third Level	137	0	137
Fourth Level (Roof)	120	0	120
Total	634	−207	427

*Includes loss of stalls in the adjacent parking garage and off-site parking

** Includes 13 ADA Parking Stalls

UNIVERSITY OF SOUTHERN MAINE

25 Bedford Street, Portland, ME 04104
207.712.5183 | USM.MAINE.EDU

PROJECT TEAM:

CLIENT
UNIVERSITY OF SOUTHERN MAINE

PRIME CONSULTANT & STRUCTURAL ENGINEER
DESMAN Design Management
18 Tremont Street #300
Boston, MA 02108

ARCHITECT
WINTON-SCOTT ARCHITECTS
5 MILK STREET
PORTLAND, ME 04101

CIVIL ENGINEER
WOODARD & CURRAN
41 HUTCHINS DRIVE
PORTLAND, ME 04102

LANDSCAPE ARCHITECT
MICHAEL BOUCHER LANDSCAPE ARCHITECTURE
457 US ROUTE 1 SUITE 2
FREEPORT, ME 04032

MEP/FP ENGINEER
ALLIED ENGINEERING
160 VERANDA STREET
PORTLAND, ME 04103

GEOTECHNICAL ENGINEER
S.W. COLE
286 PORTLAND ROAD
GREY, ME 04039

TRAFFIC ENGINEER
VANASSE HANGEN BRUSTLIN INC
40 IDX DR 100 #200, SOUTH
BURLINGTON, VT 05403

COST ESTIMATOR
PREFERRED CONSTRUCTION MGMT
94 AUBURN ST,
PORTLAND, ME 04103

SEAL / SIGNATURE

© DESMAN, Inc. 2021

PROJECT:

USM - Structured Parking Garage

Address

44 Bedford Street,
Portland ME 04104

REVISIONS:

No.	Date	Description
	07/30/21	Site Plan Submittal

SUBMISSIONS:

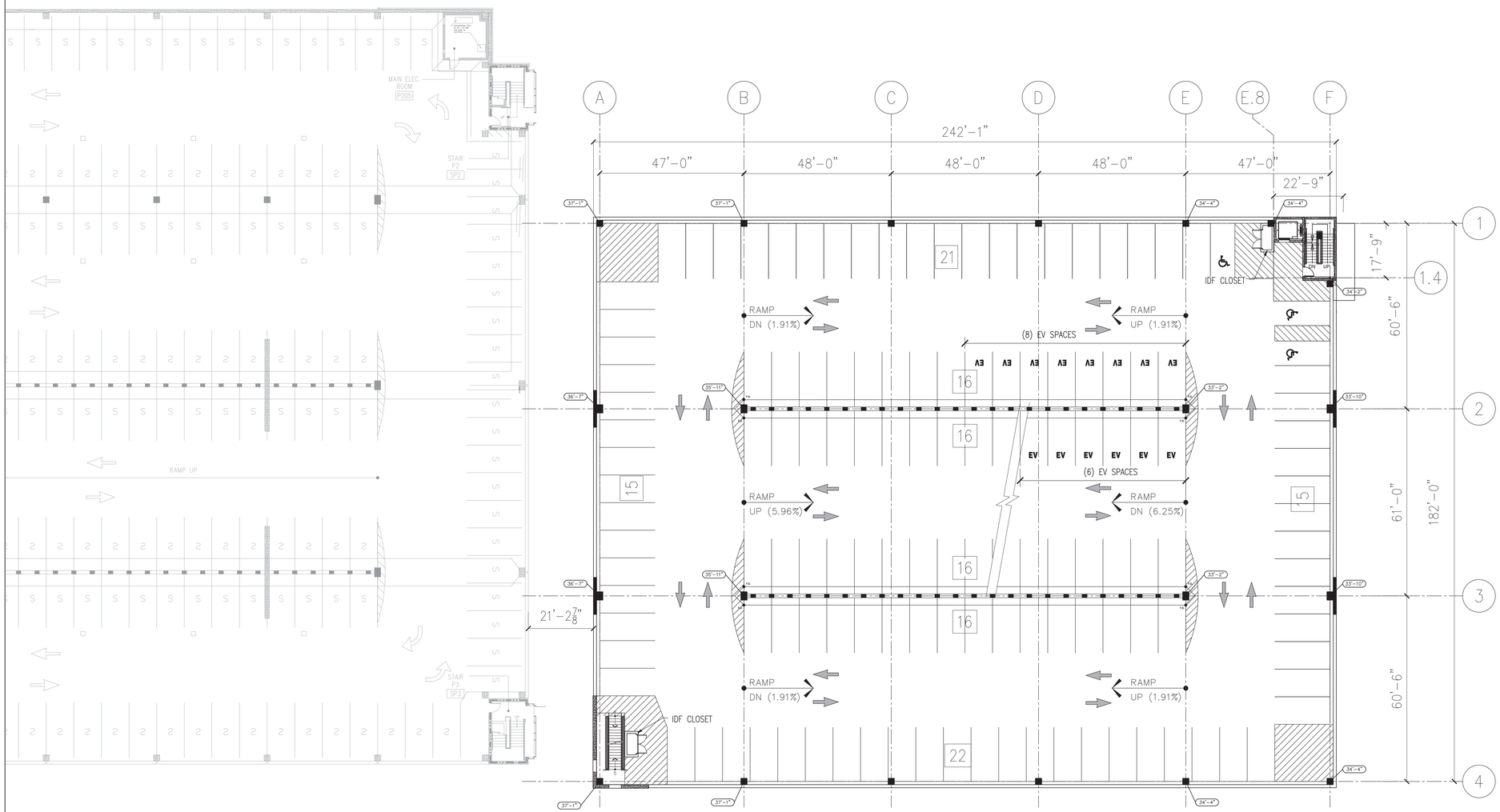
Date	Issued For:

SCALE	1/16" = 1'-0"
DATE ISSUED	07/30/2021
PROJECT NO	20-20145.00-1
DRAWN BY	C.M.
CHECKED BY	B.F.

SHEET TITLE:

GROUND LEVEL STRIPING PLAN

A-101



1 FIRST LEVEL
SCALE: 1/16" = 1'-0"

NORTH

UNIVERSITY OF SOUTHERN MAINE

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286 PORTLAND ROAD
GREY, ME 04039

TRAFFIC ENGINEER
VANASSE HANGEN BRUSTLIN INC

40 IDX DR 100 #200, SOUTH
BURLINGTON, VT 05403

COST ESTIMATOR
PREFERRED CONSTRUCTION MGMT

94 AUBURN ST,
PORTLAND, ME 04103

SEAL / SIGNATURE

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2021

PROJECT:

USM - Structured Parking Garage

Address

44 Bedford Street,
Portland ME 04104

REVISIONS:

No.	Date	Description
	07/30/21	Site Plan Submittal

SUBMISSIONS:

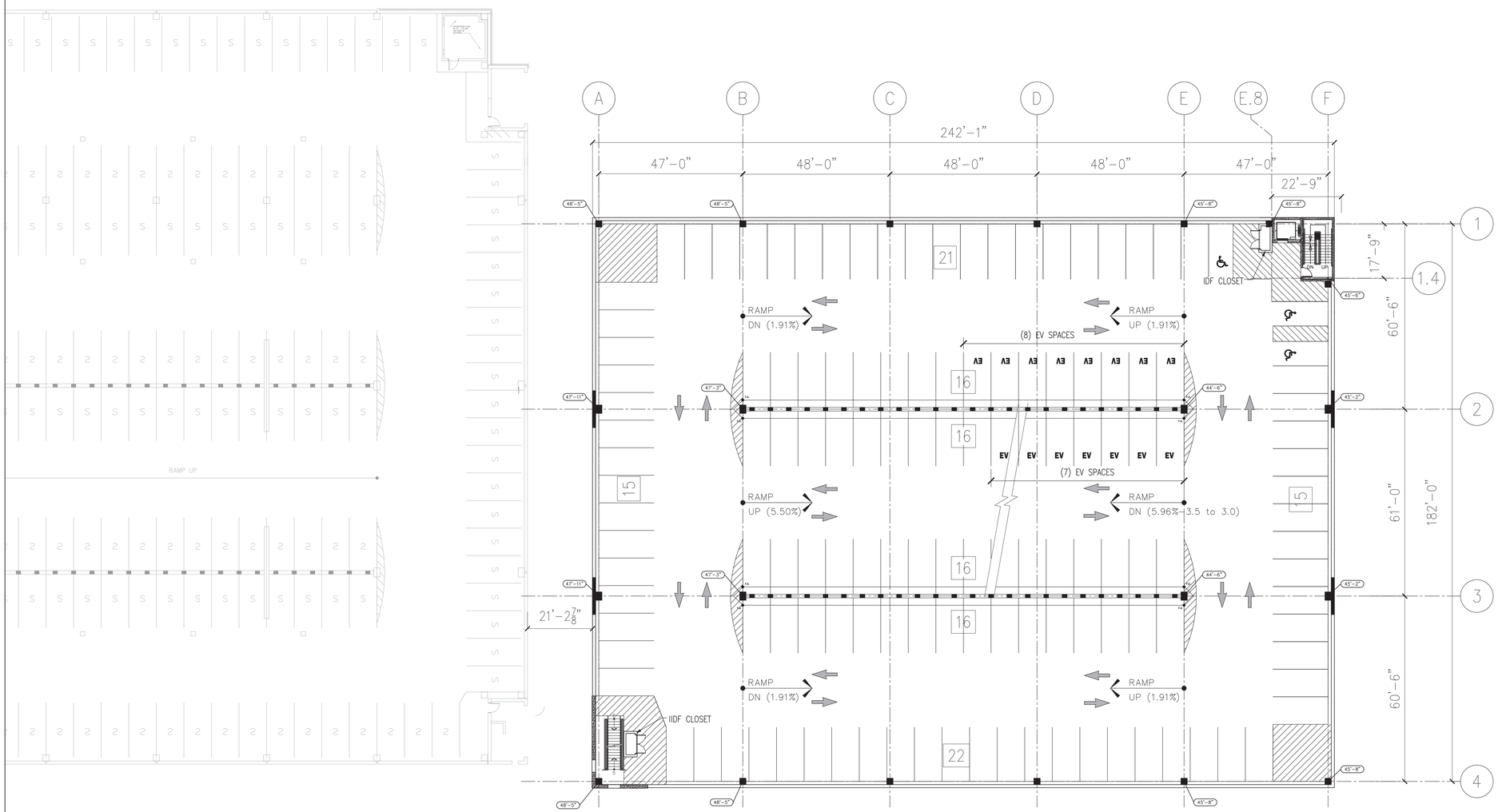
Date	Issued For:

SCALE	**1/16" = 1'-0"**
DATE ISSUED	**07/30/2021**
PROJECT NO	**20-20145.00-1**
DRAWN BY	**C.M.**
CHECKED BY	**B.F.**

SHEET TITLE:

FIRST LEVEL STRIPING PLAN

A-102



1 SECOND LEVEL
SCALE: 1/16" = 1'–0"

NORTH

UNIVERSITY OF SOUTHERN MAINE

25 Bedford Street, Portland, ME 04104
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PROJECT TEAM:

CLIENT
UNIVERSITY OF SOUTHERN MAINE

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CIVIL ENGINEER
WOODARD & CURRAN

41 HUTCHINS DRIVE
PORTLAND, ME 04102

LANDSCAPE ARCHITECT
MICHAEL BOUCHER LANDSCAPE ARCHITECTURE

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FREEPORT, ME 04032

MEP/FP ENGINEER
ALLIED ENGINEERING

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S.W. COLE

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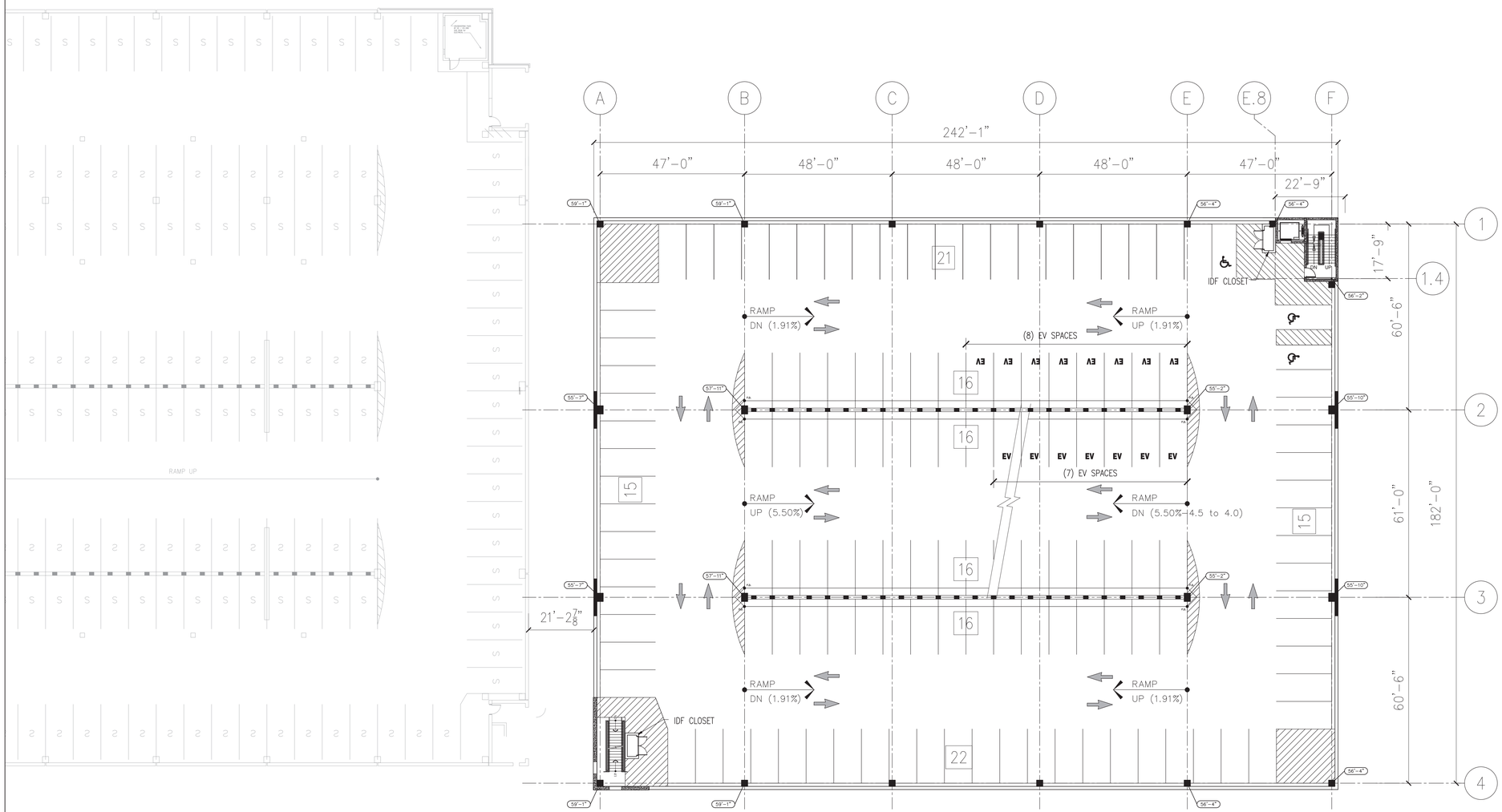
DRAWN BY	**C.M.**
CHECKED BY	**B.F.**

SHEET TITLE:

SECOND LEVEL STRIPING PLAN

A-103



1 THIRD LEVEL
SCALE: 1/16" = 1'-0"

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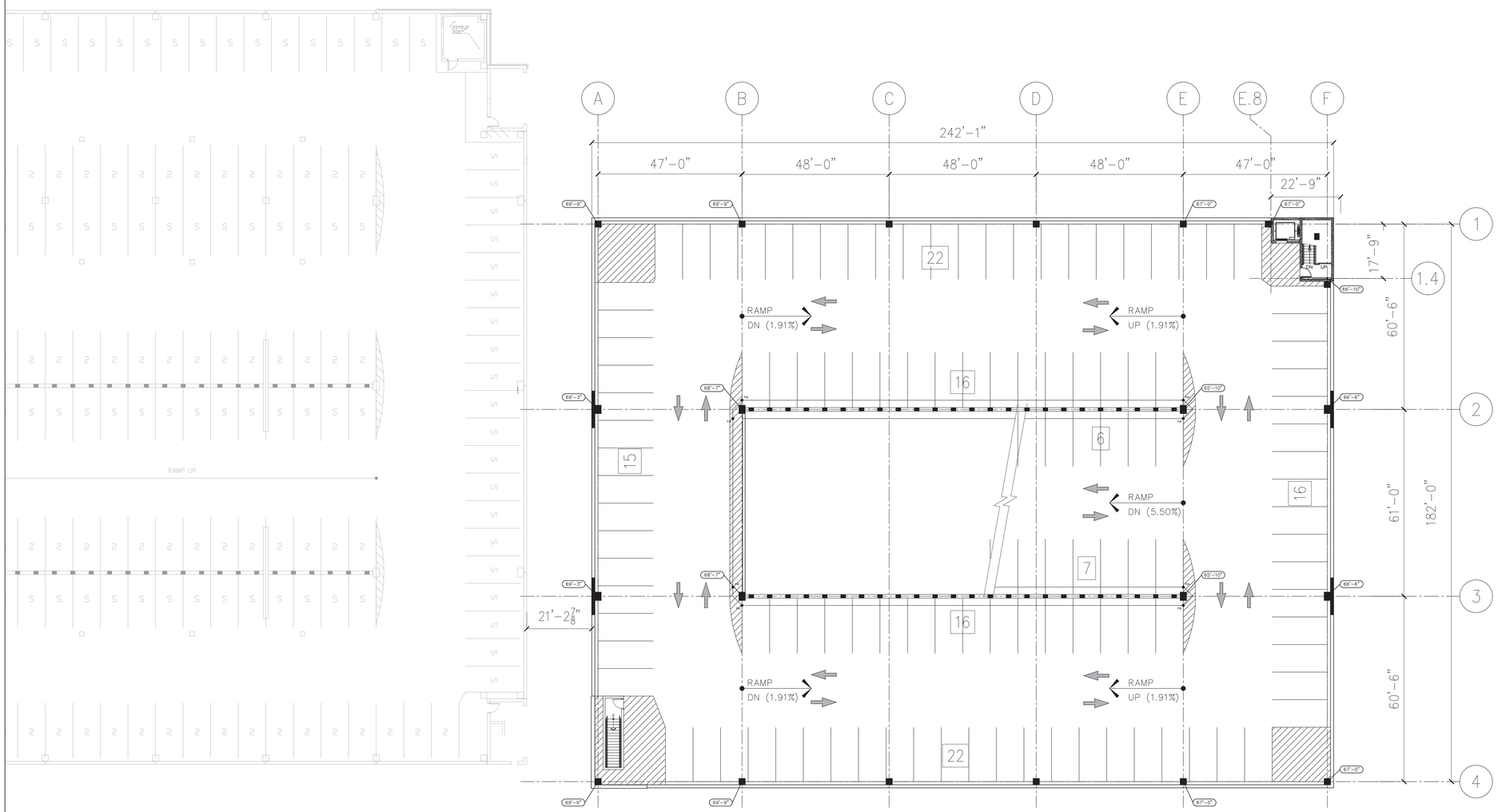
DRAWN BY	**C.M.**
CHECKED BY	**B.F.**

SHEET TITLE:

THIRD LEVEL STRIPING PLAN

A-104



1 ROOF LEVEL
SCALE: 1/16" = 1'-0"

NORTH

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SUBMISSIONS:

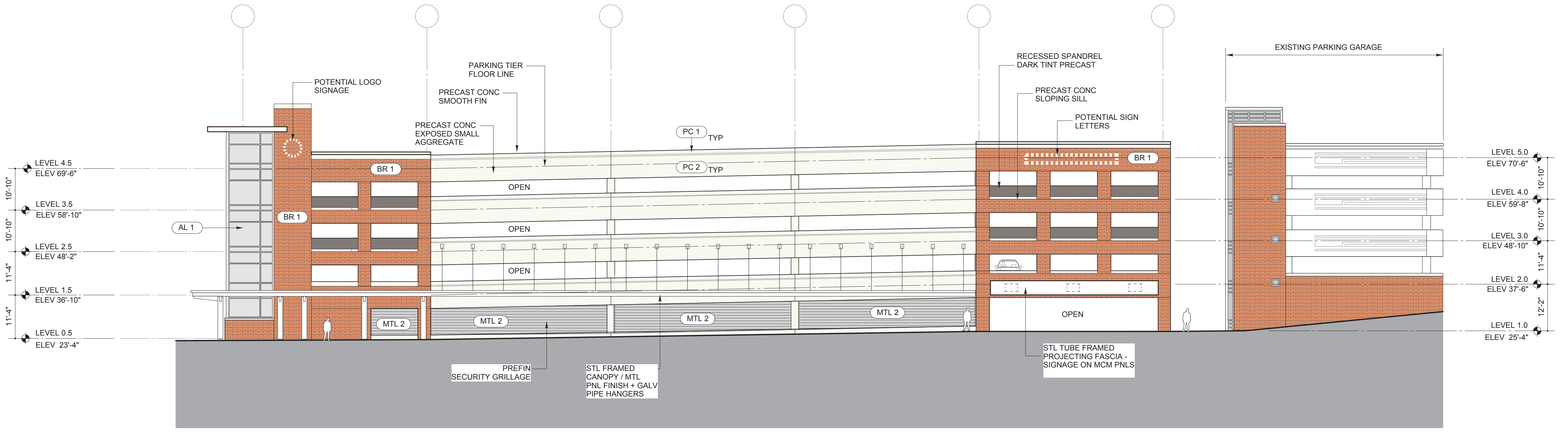
Date	Issued For:

SCALE	**1/16" = 1'-0"**
DATE ISSUED	**07/30/2021**
PROJECT NO	**20-20145.00-1**
DRAWN BY	**C.M.**
CHECKED BY	**B.F.**

SHEET TITLE:

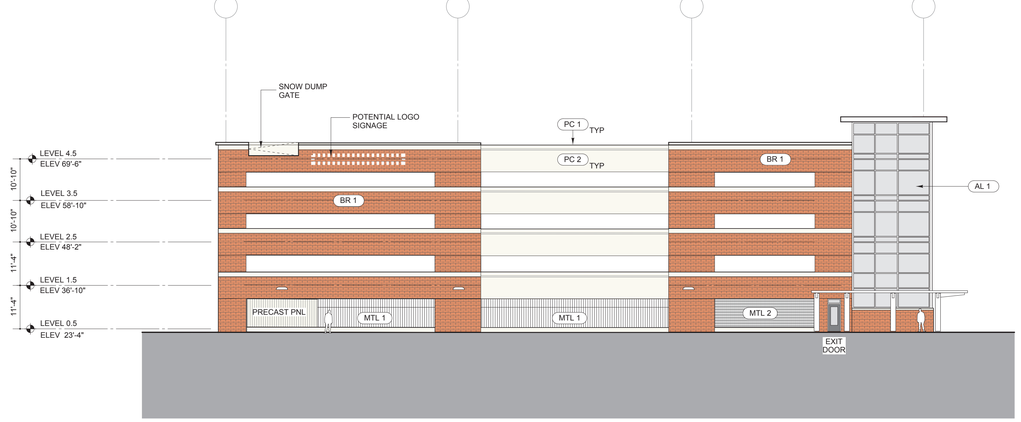
ROOF LEVEL STRIPING PLAN

A-105



NORTH ELEVATION

1/16" = 1' - 0"



EAST ELEVATION

1/16" = 1' - 0"

SECURITY BAR GRATING - MTL 2

BRICK - BR 1
GLEN-GERY 387 RUSTIC RED

MATERIALS LEGEND

KEY	MATERIAL	NOTES
AL 1	ALUMINUM CURTAINWALL	CLEAR ANODIZED / UN-TINTED GLASS
BR 1	BRICK	THIN BRICK INTEGRAL TO PRECAST
MTL 1	SECURITY BARS	1/2" BAR @ 9" O.C. / PAINTED DK BLUE
MTL 2	SECURITY BAR GRATING	2" x 5" OPENING / DK BLUE PREFINISH
MTL 3	PAINTED STEEL	FLUSH PANEL
PC 1	PRECAST CONCRETE	SMOOTH FINISH
PC 2	PRECAST CONCRETE	MEDIUM SANDBLASTED FINISH

16 0 16 32

BAR SCALE
1" = 16'
CHECK GRAPHIC SCALE BEFORE USING

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PROJECT TEAM:

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PROJECT:

USM - Structured Parking Garage

Address
44 Bedford Street,
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REVISIONS:

No.	Date	Description

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SCALE	1/16" = 1'-0"
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PROJECT NO	20-20145.00-1
DRAWN BY	
CHECKED BY	

SHEET TITLE:

Building Elevations

A - 200

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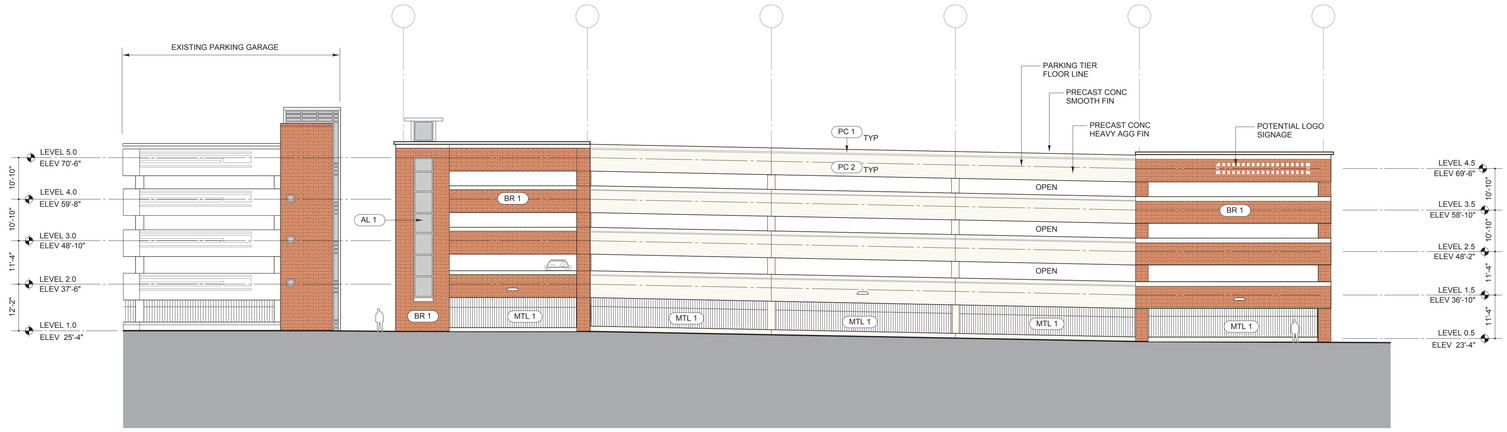
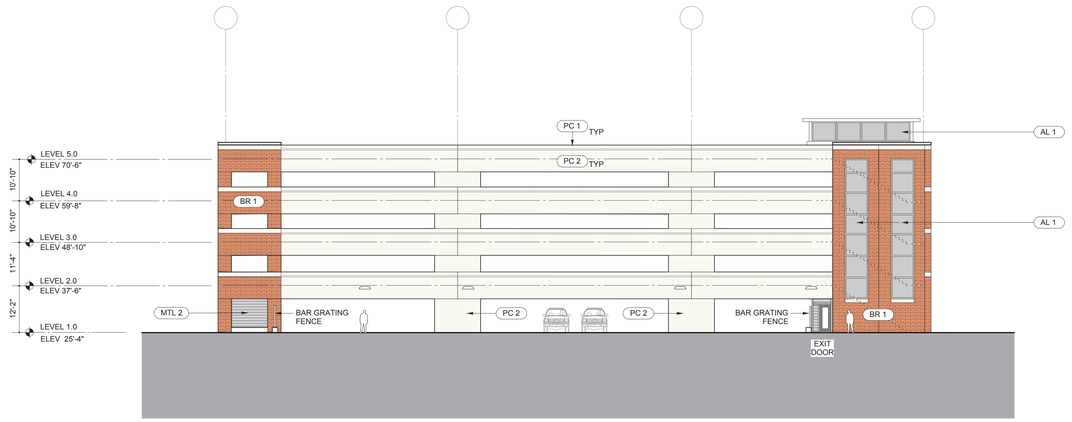


SOUTH ELEVATION

1/16" = 1' - 0"



WEST ELEVATION

1/16" = 1' - 0"

MATERIALS LEGEND

KEY	MATERIAL	NOTES
AL 1	ALUMINUM CURTAINWALL	CLEAR ANODIZED / UN-TINTED GLASS
BR 1	BRICK	THIN BRICK INTEGRAL TO PRECAST
MTL 1	SECURITY BARS	1/2" BAR @ 9" O.C. / PAINTED DK BLUE
MTL 2	SECURITY BAR GRATING	2" x 5" OPENING / DK BLUE PREFINISH
MTL 3	PAINTED STEEL	FLUSH PANEL
PC 1	PRECAST CONCRETE	SMOOTH FINISH
PC 2	PRECAST CONCRETE	MEDIUM SANDBLASTED FINISH

16 0 16 32

BAR SCALE

1" = 16'

CHECK GRAPHIC SCALE BEFORE USING

7/2/2021 3:16:33 PM

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PROJECT TEAM:

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41 HUTCHINS DRIVE
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LANDSCAPE ARCHITECTURE
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PROJECT:

USM - Structured Parking Garage

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Portland ME 04104

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DATE ISSUED	07/30/2021
PROJECT NO	20-20145.00-1
DRAWN BY	
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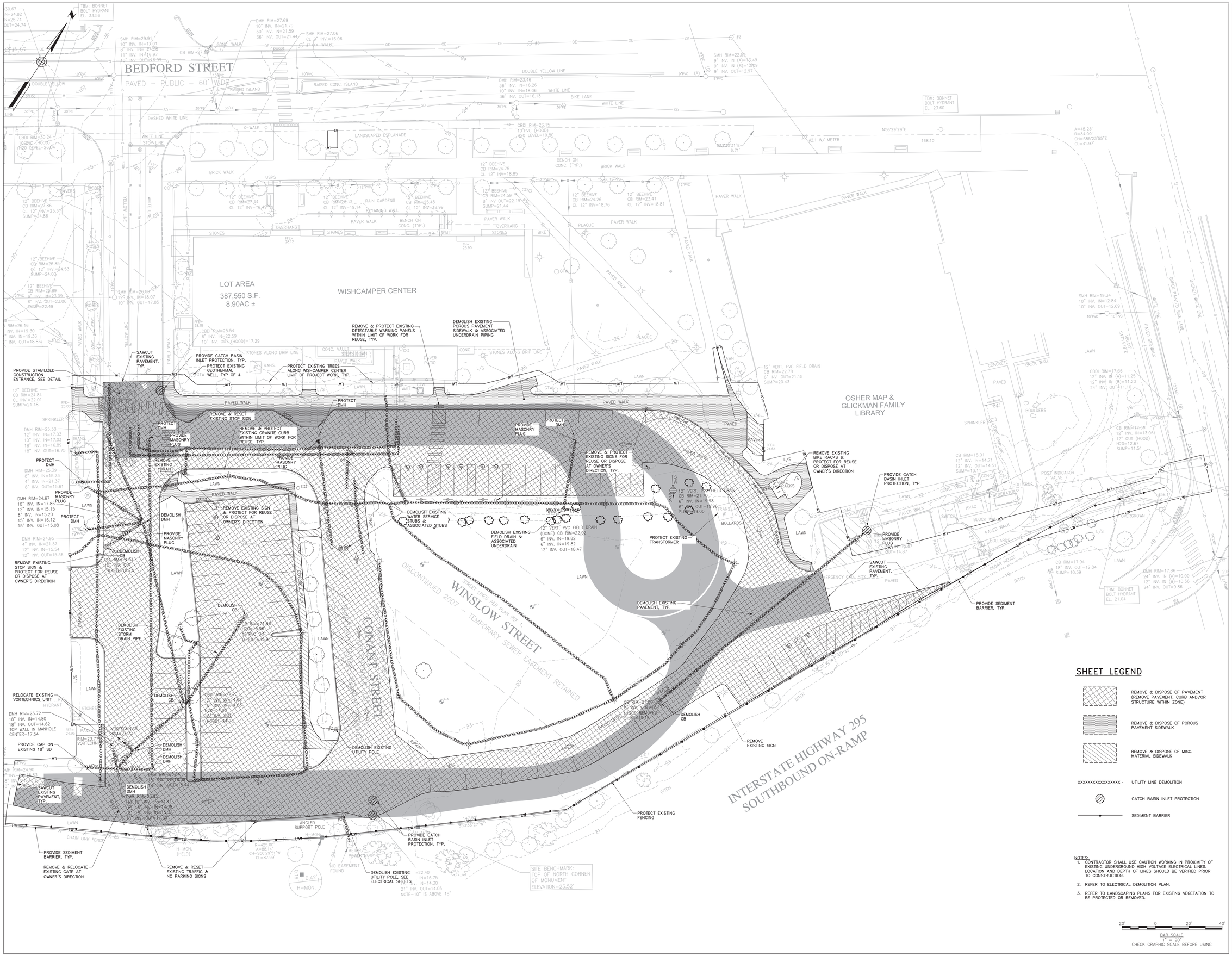
SHEET TITLE:

Building Elevations

A - 501

University of Southern Maine Parking Garage

Bedford Street View



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STATE OF MAINE
ASHLEY FLETCHER
No. 13750
LICENSED
PROFESSIONAL ENGINEER

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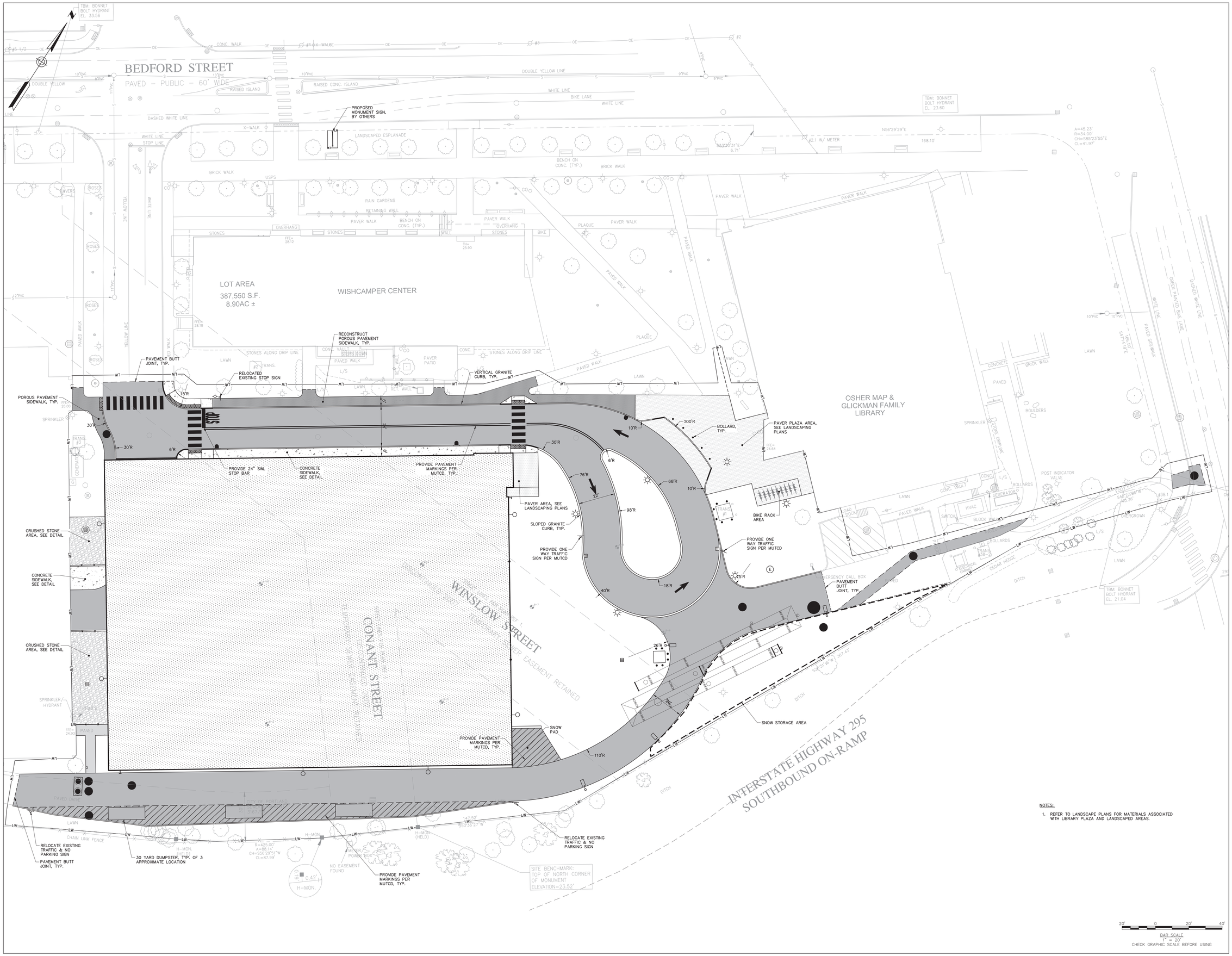
DRAWN BY	**B.C.M.**
CHECKED BY	**A.E.F.**

SHEET TITLE:

DEMOLITION & EROSION & SEDIMENT CONTROL PLAN

C-001



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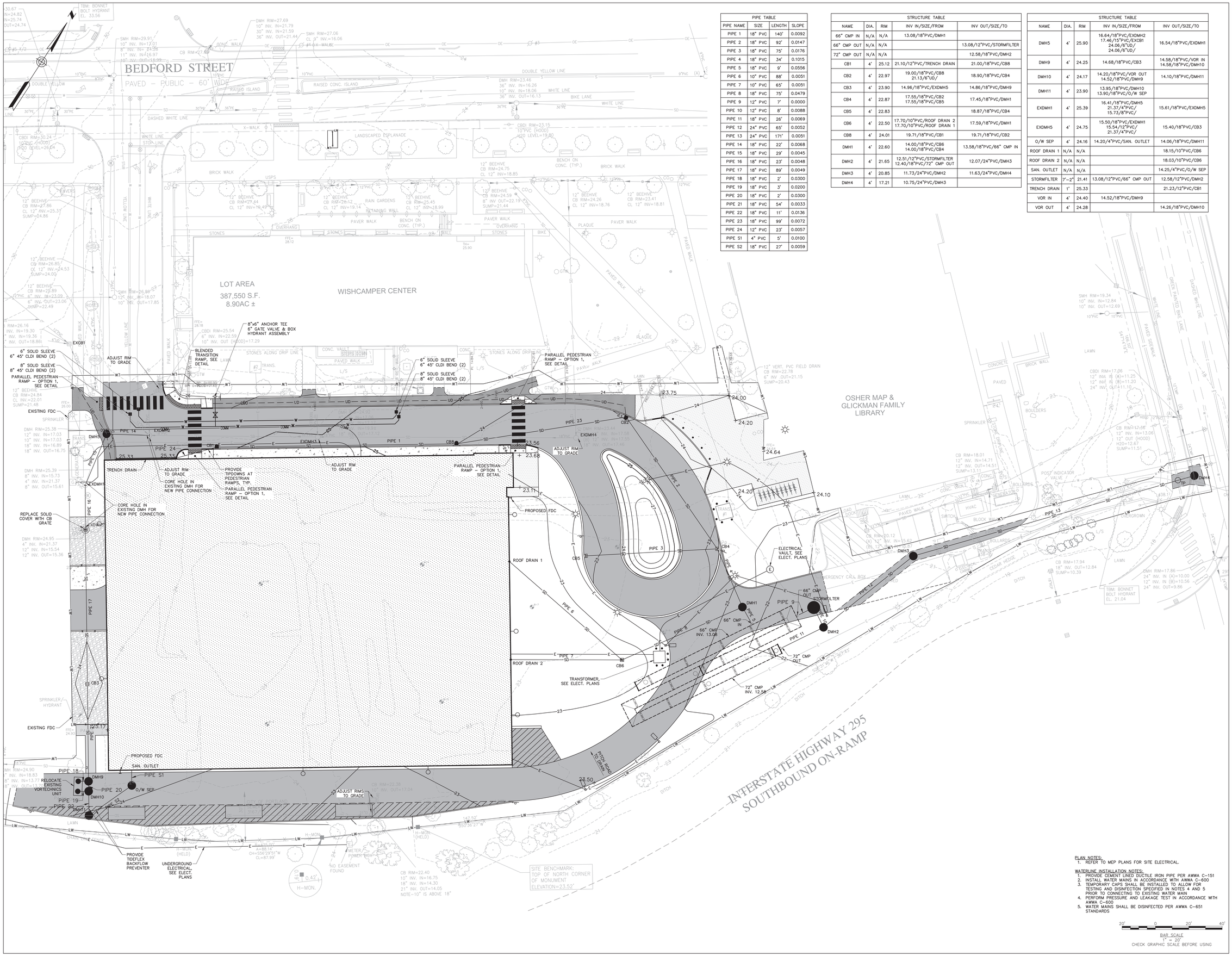
CHECKED BY	**A.E.F.**

SHEET TITLE:

SITE LAYOUT & MATERIALS PLAN

C-100



PIPE TABLE			
PIPE NAME	SIZE	LENGTH	SLOPE
PIPE 1	18" PVC	140'	0.0092
PIPE 2	18" PVC	92'	0.0147
PIPE 3	18" PVC	75'	0.0176
PIPE 4	18" PVC	34'	0.1015
PIPE 5	18" PVC	9'	0.0556
PIPE 6	10" PVC	88'	0.0051
PIPE 7	10" PVC	65'	0.0051
PIPE 8	18" PVC	75'	0.0479
PIPE 9	12" PVC	7'	0.0000
PIPE 10	12" PVC	8'	0.0088
PIPE 11	18" PVC	26'	0.0069
PIPE 12	24" PVC	65'	0.0052
PIPE 13	24" PVC	171'	0.0051
PIPE 14	18" PVC	22'	0.0068
PIPE 15	18" PVC	29'	0.0045
PIPE 16	18" PVC	23'	0.0048
PIPE 17	18" PVC	89'	0.0049
PIPE 18	18" PVC	2'	0.0300
PIPE 19	18" PVC	3'	0.0200
PIPE 20	18" PVC	2'	0.0300
PIPE 21	18" PVC	54'	0.0033
PIPE 22	18" PVC	11'	0.0136
PIPE 23	18" PVC	99'	0.0072
PIPE 24	12" PVC	23'	0.0057
PIPE S1	4" PVC	5'	0.0100
PIPE S2	18" PVC	27'	0.0059

STRUCTURE TABLE				
NAME	DIA.	RIM	INV IN/SIZE/FROM	INV OUT/SIZE/TO
66" CMP IN	N/A	N/A	13.08/18"PVC/DMH1	
66" CMP OUT	N/A	N/A		13.08/12"PVC/STORMFILTER
72" CMP OUT	N/A	N/A		12.58/18"PVC/DMH2
CB1	4'	25.12	21.10/12"PVC/TRENCH DRAIN	21.00/18"PVC/CB8
CB2	4'	22.97	19.00/18"PVC/CB8 21.13/6"UD/	18.90/18"PVC/CB4
CB3	4'	23.90	14.96/18"PVC/EXDMH5	14.86/18"PVC/DMH9
CB4	4'	22.87	17.55/18"PVC/CB2 17.55/18"PVC/CB5	17.45/18"PVC/DMH1
CB5	4'	22.83		18.87/18"PVC/CB4
CB6	4'	22.50	17.70/10"PVC/ROOF DRAIN 2 17.70/10"PVC/ROOF DRAIN 1	17.59/18"PVC/DMH1
CB8	4'	24.01	19.71/18"PVC/CB1	19.71/18"PVC/CB2
DMH1	4'	22.60	14.00/18"PVC/CB6 14.00/18"PVC/CB4	13.58/18"PVC/66" CMP IN
DMH2	4'	21.65	12.51/12"PVC/STORMFILTER 12.40/18"PVC/72" CMP OUT	12.07/24"PVC/DMH3
DMH3	4'	20.85	11.73/24"PVC/DMH2	11.63/24"PVC/DMH4
DMH4	4'	17.21	10.75/24"PVC/DMH3	

STRUCTURE TABLE				
NAME	DIA.	RIM	INV IN/SIZE/FROM	INV OUT/SIZE/TO
DMH5	4'	25.90	16.64/18"PVC/EXDMH2 17.46/15"PVC/EXCB1 24.06/6"UD/ 24.06/6"UD/	16.54/18"PVC/EXDMH1
DMH9	4'	24.25	14.68/18"PVC/CB3	14.58/18"PVC/VOR IN 14.58/18"PVC/DMH10
DMH10	4'	24.17	14.20/18"PVC/VOR OUT 14.52/18"PVC/DMH9	14.10/18"PVC/DMH11
DMH11	4'	23.90	13.95/18"PVC/DMH10 13.90/18"PVC/O/W SEP	
EXDMH1	4'	25.39	16.41/18"PVC/DMH5 21.37/4"PVC/ 15.73/8"PVC/	15.61/18"PVC/EXDMH5
EXDMH5	4'	24.75	15.50/18"PVC/EXDMH1 15.54/12"PVC/ 21.37/4"PVC/	15.40/18"PVC/CB3
O/W SEP	4'	24.16	14.20/4"PVC/SAN. OUTLET	14.06/18"PVC/DMH11
ROOF DRAIN 1	N/A	N/A		18.15/10"PVC/CB6
ROOF DRAIN 2	N/A	N/A		18.03/10"PVC/CB6
SAN. OUTLET	N/A	N/A		14.25/4"PVC/O/W SEP
STORMFILTER	7'–2"	21.41	13.08/12"PVC/66" CMP OUT	12.58/12"PVC/DMH2
TRENCH DRAIN	1'	25.33		21.23/12"PVC/CB1
VOR IN	4'	24.40	14.52/18"PVC/DMH9	
VOR OUT	4'	24.28		14.26/18"PVC/DMH10

PLAN NOTES:
1. REFER TO MEP PLANS FOR SITE ELECTRICAL.

WATERLINE INSTALLATION NOTES:
1. PROVIDE CEMENT LINED DUCTILE IRON PIPE PER AWWA C–151
2. INSTALL WATER MAINS IN ACCORDANCE WITH AWWA C–600
3. TEMPORARY CAPS SHALL BE INSTALLED TO ALLOW FOR TESTING AND DISINFECTION SPECIFIED IN NOTES 4 AND 5 PRIOR TO CONNECTING TO EXISTING WATER MAIN
4. PERFORM PRESSURE AND LEAKAGE TEST IN ACCORDANCE WITH AWWA C–600
5. WATER MAINS SHALL BE DISINFECTED PER AWWA C–651 STANDARDS

20' 0 20' 40'
BAR SCALE
1" = 20'
CHECK GRAPHIC SCALE BEFORE USING

UNIVERSITY OF SOUTHERN MAINE
25 Bedford Street, Portland, ME 04104
207.712.5183 | USM.MAINE.EDU

PROJECT TEAM:

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SEAL / SIGNATURE

STATE OF MAINE
ASHLEY FLETCHER
No. 13750
LICENSED PROFESSIONAL ENGINEER

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2021

PROJECT:

USM - Structured Parking Garage

Address

44 Bedford Street,
Portland ME 04104

REVISIONS:

No.	Date	Description

SUBMISSIONS:

Date	Issued For:
07/30/21	Site Plan Submittal

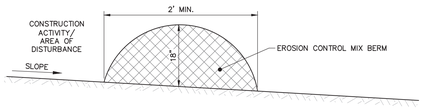
SCALE	**1"=20'**
DATE ISSUED	**7/30/2021**
PROJECT NO	**20-20145.00-1**
DRAWN BY	**B.C.M.**
CHECKED BY	**A.E.F.**

SHEET TITLE:

UTILITY & GRADING PLAN

C-101

\\woodardcurran.net\shared\Projects\20230535.00 usm - falmouth street garage\wip\Drawings\Civil\230535.00 C10X.dwg, Jul 29, 2021 - 2:50pm BMCDEVITT

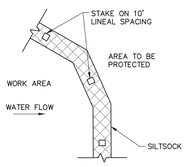


NOTES:

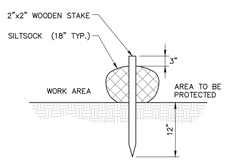
1. EROSION CONTROL MIX CAN BE MANUFACTURED ON OR OFF THE PROJECT SITE. IT MUST CONSIST PRIMARILY OF ORGANIC MATERIAL AND MAY INCLUDE: SHREDDED BARK, STUMP GRINDINGS, COMPOSTED BARK, OR ACCEPTABLE MANUFACTURED PRODUCTS. WOOD AND BARK CHIPS, GROUND CONSTRUCTION DEBRIS OR REPROCESSED WOOD PRODUCTS WILL NOT BE ACCEPTABLE AS THE ORGANIC COMPONENT OF THE MIX.
2. EROSION CONTROL MIX SHALL CONTAIN A WELL-GRADED MIXTURE OF PARTICLE SIZES AND MAY CONTAIN ROCKS LESS THAN 4" IN DIAMETER. EROSION CONTROL MIX MUST BE FREE OF REFUSE, PHYSICAL CONTAMINANTS, AND MATERIAL TOXIC TO PLANT GROWTH. THE MIX COMPOSITION SHALL MEET THE FOLLOWING STANDARDS:
   - THE ORGANIC MATTER CONTENT SHALL BE BETWEEN 80 AND 100%, DRY WEIGHT BASIS.
   - PARTICLE SIZE BY WEIGHT SHALL BE 100% PASSING A 6" SCREEN AND A MINIMUM OF 70%, MAXIMUM OF 85%, PASSING A 0.75" SCREEN.
   - THE ORGANIC PORTION NEEDS TO BE FIBROUS AND ELONGATED.
   - LARGE PORTIONS OF SILTS, CLAYS OR FINE SANDS ARE NOT ACCEPTABLE IN THE MIX.
   - SOLUBLE SALTS CONTENT SHALL BE < 4.0 MMHOS/CM.
   - THE PH SHOULD FALL BETWEEN 5.0 AND 8.0.

EROSION CONTROL MIX BERM (SEDIMENT BARRIER OPTION)

N.T.S.



PLAN VIEW



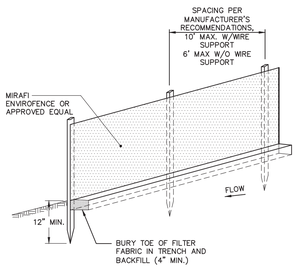
SECTION

NOTE:

1. WHEN STAKING IS NOT POSSIBLE, HEAVY CONCRETE BLOCKS SHALL BE USED BEHIND THE SEDIMENT BARRIER TO HELP STABILIZE DURING RAINFALL/RUNOFF EVENTS.

SILT SOCK (SEDIMENT BARRIER OPTION)

N.T.S.



NOTES:

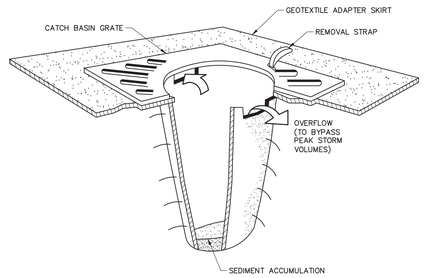
- INSTALL FABRIC ON UPHILL SIDE OF SUPPORT POSTS
- INSTALL SILT FENCE ACROSS SLOPES
- SILT FENCE SHALL NOT BE USED IN DRAINAGE WAYS

MAINTENANCE: INSPECT FOR TEARS IN THE FABRIC OR DAMAGE TO SUPPORTS. REPAIR AS NECESSARY. REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES A DEPTH OF SIX-INCHES OR LESS.

REMOVAL: WHEN UPSLOPE AREAS ARE STABILIZED, THE STRUCTURE AND ANY ACCUMULATED SEDIMENT WILL BE REMOVED.

SILTATION FENCE (SEDIMENT BARRIER OPTION)

N.T.S.



NOTES:

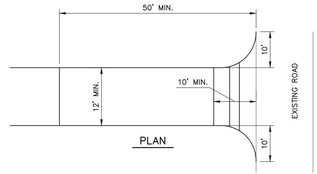
CATCH BASIN PROTECTION TO BE "SILTSACK" (BY ACF ENVIRONMENTAL) OR "STREAM GUARD" (BY FOSS ENVIRONMENTAL SERVICES).

INSERT TO BE EMPTIED IN AN APPROVED MANNER WHEN IT IS 1/2 FULL OF SEDIMENT.

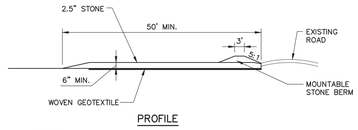
INSPECT INSERT AFTER ALL RAINFALL EVENTS, REPAIR AND MAINTAIN AS REQUIRED.

CATCH BASIN INLET PROTECTION DEVICE (SILTSACK OR EQUAL)

N.T.S.



PLAN



PROFILE

NOTES:

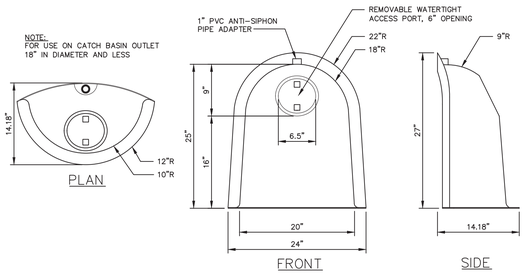
- CONSTRUCTION ENTRANCES MAY BE RELOCATED AS CONSTRUCTION PROGRESSES.
- WHEEL WASH PITS MAY ALSO BE USED, IF APPROVED.

MAINTENANCE: INSPECT FOR EFFECTIVE REMOVAL OF SOIL FROM VEHICLES PRIOR TO LEAVING THE SITE. SWEEP ANY SOIL FROM ADJACENT ROADWAYS.

AT LEAST ONE CONSTRUCTION ENTRANCE SHALL BE MAINTAINED UNTIL ALL AREAS OF THE SITE ARE STABILIZED.

STABILIZED CONSTRUCTION ENTRANCE

N.T.S.



PLAN FRONT SIDE

"THE SNOUT"

N.T.S.

EROSION AND SEDIMENT CONTROL NOTES

Temporary Controls

Contractor shall prepare and submit a soil erosion and water pollution control plan to engineer.

Measure	Dates For Use	Timing, Activity, and Location
Sediment Barrier	ALL	Before soil disturbance, install downhill of areas to be disturbed and around material stockpiles.
Up-slope Diversion	ALL	Before soil disturbance, install uphill of areas to be disturbed and material stockpiles.
Catch Basin Protection	ALL	Before soil or pavement disturbance, install ACF Environmental, Inc. High Flow Siltsack, Siltsaver Inlet Filter. or equal, installed per manufacturer's requirements.
Dust Control	ALL	During dry weather, apply water and calcium chloride to control dust.
Temporary Seeding	April 15 to Oct. 1	Soil stockpiles that are not covered and disturbed areas that will not be disturbed again within 14 days. If grass growth provides less than 95% soil coverage by Nov. 1, apply mulch and anchor with erosion control blanket.
Mulch	April 15 to Sept. 15	On all areas of exposed soil prior to rain events or every 7 days, apply 100-150 lbs (2.5 bales) per 1,000 sq ft. by mechanical blower.
Winter Mulch	Sept. 16 to Oct. 31	On all areas of exposed soil prior to precipitation or every 7 days, apply 150 to 170 lbs. mulch (4 bales) per 1,000 sq. ft. by mechanical blower, Erosion control blanket may be used as a substitute for winter mulch.
	Nov. 1 to April 14	On all areas of exposed soil, apply 150 to 170 lbs. mulch (4 bales) per 1,000 sq. ft. and anchor with netting at the end of each working day. Erosion control blanket may be used as a substitute for winter mulch.
Inspections	Until site is permanently stabilized	Inspect the erosion and sedimentation control measures daily, and maintain and repair as necessary.

Permanent Controls:

Measure	Dates For Use	Timing, Activity, and Location
Pavement – Base Course – Final Course	When no frost is in ground	Install only in areas shown on the plan, shortly after pavement base is brought to final grade. Install near completion of project.
Permanent Seeding	April 15 to Sept. 15	On final grade areas, within 7 days of grade preparation, prepare topsoil, followed by seed and mulch application.
Dormant Seeding	Sept. 16 to April 15	On final grade areas, with prepared topsoil. Apply seed at double the specified rate on bare soil, and follow with an application of winter mulch.
Ground Cover, Trees, Shrubs	April 15 to Nov. 1	Install with final landscaping.
Permanent Mulch	ALL	Install with final landscaping.

Inspections:

Regular inspections of all erosion and sedimentation controls shall be made at least weekly and prior to and following storm events. Minimum inspections shall be made as listed in the table below.

Inspected Item	Look For
Mulched Surfaces	Thin mulch or inadequate application. Wind movement.
Seeded Surfaces	Poor seed germination. Loss of mulch. Development of rivulets.
Sediment Barrier	Sediment build-up to one half the height of the barrier. Undermining of the barrier. Supporting stakes loose, toppled, or unmarked. Breaks in barrier.
Perimeter Diversion	Discharge is to stabilized area. Erosion or breaks in barrier. Supporting stakes loose, toppled or unmarked.
Catch Basin Protection	Sediment build-up and structure blockages. Slow flow/Ponding water. Breaks in fabric or voids in barrier.
Dewatering Filter	Breaks in fabric or supporting structure. Slow flow, indicating high sediment build-up.
Construction Entrance	Sedimentation of roadways. Off-site dust complaints.

EROSION AND SEDIMENT CONTROL NOTES

TEMPORARY EROSION CONTROL MEASURES MAY INCLUDE THE USE OF STABILIZED CONSTRUCTION ENTRANCES, HYDRAULIC MULCH, HAY AND STRAW MULCH, EROSION CONTROL BLANKET, TURF REINFORCED MATTING, RIPRAP AND TEMPORARY SEEDING. TEMPORARY SEDIMENT CONTROL MEASURES INCLUDE THE USE OF SILT FENCE, EROSION CONTROL MIX BERMS, CATCHBASIN SEDIMENT COLLECTION BAGS AND GEOTEXTILE FILTER BAGS. PERMANENT MEASURES INCLUDE PERMANENT VEGETATION OR PAVING.

GENERAL

A. THE PROJECT SHALL CONFORM WITH THE STANDARDS OF THE MAINE CONSTRUCTION GENERAL PERMIT.

B. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MAINE EROSION AND SEDIMENT CONTROL BMPS HANDBOOK PUBLISHED BY THE MAINE DEP UNLESS OTHERWISE NOTED IN THESE PLANS.

C. ANY ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES DEEMED NECESSARY BY THE OWNER'S REPRESENTATIVE, DEPARTMENT OF ENVIRONMENTAL PROTECTION, AND/OR MUNICIPAL OFFICIALS SHALL BE INSTALLED BY THE CONTRACTOR.

D. THE CONTRACTOR IS RESPONSIBLE FOR ALL FINES RESULTING FROM EROSION OR SEDIMENTATION FROM THE SITE TO SURROUNDING PROPERTIES, WATER BODIES, OR WETLANDS AS A RESULT OF THIS PROJECT.

E. THE CONTRACTOR SHALL MINIMIZE DISTURBANCE TO THE SITE WHENEVER POSSIBLE WHILE ALLOWING PROPER SITE DEVELOPMENT.

F. CONSTRUCTION STAGING SHALL BE CONDUCTED IN A WAY TO MINIMIZE THE POTENTIAL FOR STORMWATER RUN-ON TO DISTURBED AREAS.

G. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR/REPLACEMENT/MAINTENANCE OF ALL EROSION CONTROL MEASURES UNTIL ALL DISTURBED AREAS ARE STABILIZED TO THE SATISFACTION OF THE ABOVE PERSONNEL. DESCRIPTIONS OF PERMANENT STABILIZATION FOR VARIOUS COVER TYPES FOLLOWS:

   i. FOR SEEDED AREAS, PERMANENT STABILIZATION MEANS THAT 90% OF THE DISTURBED AREA IS COVERED WITH REASONABLY THICK UNIFORM STAND OF PERMANENT GRASS SPECIES, FREE FROM SIZABLE THIN OR BARE SPOTS.
   ii. FOR SODDED AREAS, PERMANENT STABILIZATION MEANS THAT COMPLETE BINDING OF THE SOD ROOTS INTO THE UNDERLYING SOIL WITH NO SLUMPING OF THE SOD OR DIE OFF.
   iii. FOR MULCHED AREAS, PERMANENT STABILIZATION MEANS TOTAL COVERAGE OF THE EXPOSED AREA WITH AN APPROVED MULCH MATERIAL.
   iv. FOR PAVED AREAS, PERMANENT STABILIZATION MEANS THE PLACEMENT OF THE ASPHALT BINDER COURSE.

H. IF THE AREA WILL REMAIN UNWORKED FOR MORE THAN ONE YEAR OR HAS BEEN BROUGHT TO FINAL GRADE, AND WILL NOT BE BUILT ON, THEN IMMEDIATELY PROVIDE PERMANENT STABILIZATION USING VEGETATION THROUGH PLANTING, SEEDING, SOD OR THROUGH THE USE OF PERMANENT MULCH OR RIPRAP. IF USING VEGETATION FOR STABILIZATION, SELECT THE PROPER VEGETATION FOR THE LIGHT, MOISTURE, AND SOIL CONDITIONS. AMEND AREAS OF DISTURBED, OVERLY-COMPACTED SUBSOIL WITH TOPSOIL OR COMPOST AND LIGHTLY TILL 2-3" OF SOIL AMENDMENTS INTO THE TOP 8" OF SOIL.

I. PERMANENT SEEDING SPECIFICATION: IT IS RECOMMENDED THAT PERMANENT SEEDING BE COMPLETED BETWEEN APRIL 1 AND AUGUST 15 OF EACH YEAR. LATE SEASON SEEDING MAY BE DONE BETWEEN AUGUST 15 AND SEPTEMBER 15. AREAS NOT SEEDED OR WHICH DO NOT OBTAIN A SATISFACTORY GROWTH BY OCTOBER 1 SHALL BE SEEDED WITH AROOSTOCK WINTER RYE OR MULCHED AT SPECIFIED RATES. SEE WINTER SEEDING AND MULCHING SPECIFICATIONS FOR STABILIZATION AFTER NOVEMBER 1.

   i. APPLY TOPSOIL TO A DEPTH OF 6 INCHES. IN COMPACTED AREAS TILL 2-3" OF COMPOST INTO UPPER 8" OF DISTURBED SOIL AND THEN APPLY 6 INCHES OF TOPSOIL.
   ii. APPLY LIME AND FERTILIZER ACCORDING TO SOIL TESTS. IN LIEU OF SOIL TESTS, APPLY GROUND LIMESTONE AT A RATE OF 33 LBS PER 1000 SQUARE FEET AND GRANULAR, COMMERCIAL-GRADE FERTILIZER 10-10-10 AT A RATE OF 18 LBS PER 1000 SQUARE FEET.
   iii. UNIFORMLY APPLY SEED MIXTURE AT THE RECOMMENDED SEEDING RATES AND DATES, APPLY HAY OR STRAW MULCH AT A RATE OF 2.5 BALES PER 1000 SQUARE FEET AND ANCHOR AS NECESSARY.

J. PROTECT ALL SEEDED AREAS WITH MULCH OR EROSION CONTROL BLANKET IN AREAS OF SHEET OR CONCENTRATED FLOWS. MULCH ALL AREAS SO THAT SOIL IS NOT VISIBLE THROUGH THE MULCH REGARDLESS OF THE APPLICATION RATE. SCHEDULE SEEDING OR SODDING TO AVOID FAILURE DUE TO SUMMER DROUGHT AND FALL FROST. NEWLY SEEDED AREAS SHOULD BE PROTECTED FROM VEHICLE TRAFFIC, PEDESTRIAN TRAFFIC AND CONCENTRATED RUNOFF UNTIL THE VEGETATION IS WELL ESTABLISHED. AREAS MUST BE REWORKED AND RESTABILIZED IF GERMINATION IS SPARSE OR SURFACE EROSION IS EVIDENT.

K. EROSION CONTROL BLANKET SHALL BE INSTALLED ON ALL PERMANENT SLOPES STEEPER THAN 3:1 OR AS OTHERWISE NOTED, EROSION CONTROL BLANKET SHALL BE NORTH AMERICAN GREEN S150BN OR APPROVED EQUAL. EROSION CONTROL BLANKET SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

L. THE CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL TEMPORARY EROSION CONTROL MEASURE UPON STABILIZATION OF PROJECT AREA & COST SHALL BE INCIDENTAL TO CONTRACT.

WINTER CONDITIONS

A. WINTER CONSTRUCTION IS CONSTRUCTION ACTIVITY PERFORMED DURING THE PERIOD FROM NOVEMBER 1 THROUGH APRIL 1. IF AREAS WITHIN THE CONSTRUCTION AREA ARE NOT STABILIZED WITH TEMPORARY OR PERMANENT MEASURES OUTLINED ABOVE BY NOVEMBER 15 THEN THE SITE MUST BE PROTECTED WITH ADDITIONAL STABILIZATION MEASURES THAT ARE SPECIFIC TO WINTER CONDITIONS.

GOOD HOUSEKEEPING AND POLLUTION PREVENTION

A. SPILL PREVENTION CONTROLS MUST BE USED TO PREVENT POLLUTANTS FROM BEING DISCHARGED FROM MATERIALS ON SITE, INCLUDING STORAGE PRACTICES TO MINIMIZE EXPOSURE OF THE MATERIALS TO STORMWATER RUNOFF AND APPROPRIATE SPILL PREVENTION, CONTAINMENT AND RESPONSE PLANNING AND IMPLEMENTATION.

B. DURING CONSTRUCTION, PETROLEUM PRODUCTS AND OTHER HAZARDOUS MATERIALS WITH THE POTENTIAL TO CONTAMINATE GROUND OR SURFACE WATERS MAY NOT BE STORED OR HANDLED IN AREAS OF THE SITE DRAINING TO INFILTRATION AREAS. AN "INFILTRATION AREA" IS ANY ARE OF THE SITE THAT BY DESIGN, OR AS A RESULTS OF SOIL AND TOPOGRAPHY, ACCUMULATES RUNOFF THAT INFILTRATES IN THE SOIL. DIKES, BERMS, SUMPS AND OTHER FORMS OF TEMPORARY SECONDARY CONTAINMENT THAT PREVENT DISCHARGE TO GROUNDWATER MAY BE USED TO ISOLATE PORTIONS OF THE SITE FOR THE PURPOSES OF STORAGE AND HANDLING OF THESE MATERIALS.

C. LOCATE ALL MATERIAL STOCKPILES WITH CONSIDERATION FOR STORMWATER DRAINAGE PATTERNS AND INFRASTRUCTURE.

D. TAKE ALL REASONABLE MEASURES TO MINIMIZE DUST RESULTING FROM THE PROJECT. OIL MAY NOT BE USED FOR DUST CONTROL.

E. LOCATE ALL LITTER, CONSTRUCTION DEBRIS AND CONSTRUCTION CHEMICALS WITH CONSIDERATION FOR STORMWATER DRAINAGE PATTERNS AND INFRASTRUCTURE.

F. TRENCH OR FOUNDATION DE-WATERING MUST BE SPREAD THROUGH SUFFICIENT NATURAL BUFFERS THAT HAVE CAPACITY TO INFILTRATE THE PUMPED WATER OR SHOULD BE PUMPED TO DESIGNED CONSTRUCTION DEWATERING DEVICES AS DESCRIBED IN THE MAINE EROSION AND SEDIMENT CONTROL BMPS HANDBOOK.

G. SEDIMENTS AND SOIL MATERIALS SHOULD BE SWEPT FROM PAVED SURFACES AT THE END OF EACH WORKDAY OR PRIOR TO RAIN EVENTS, WHENEVER POSSIBLE.

INSPECTION AND MAINTENANCE

A. A PERSON WITH KNOWLEDGE OF EROSION AND STORMWATER CONTROLS, INCLUDING THE STANDARDS IN THE MAINE CONSTRUCTION GENERAL PERMIT, THE MAINE EROSION AND SEDIMENT CONTROL BMPS HANDBOOK OR ANY MUNICIPAL REQUIREMENTS MUST CONDUCT THE INSPECTION. THIS PERSON MUST BE IDENTIFIED IN THE INSPECTION LOG. IF ADDITIONAL BMPS OR MODIFICATIONS TO BMPS ARE NECESSARY, THE MODIFICATIONS MUST BE IMPLEMENTED WITH 7 CALENDAR DAYS OR PRIOR TO ANY PRECIPITATION EVENT. ALL MEASURES MUST BE MAINTAINED IN EFFECTIVE OPERATING CONDITION UNTIL AREAS ARE PERMANENTLY STABILIZED.

B. AN INSPECTION AND MAINTENANCE LOG MUST BE KEPT BY THE CONTRACTOR, SUMMARIZING THE SCOPE OF THE INSPECTION, DATE, AND MAJOR OBSERVATIONS RELATING TO THE OPERATION OF EROSION AND SEDIMENT CONTROL BMPS, MATERIAL STORAGE AREAS, AND VEHICLE ACCESS POINTS TO THE CONSTRUCTION AREA. THE INSPECTION LOG SHOULD BE DELIVERED TO THE PROPERTY OWNER OR RESPONSIBLE CONTRACTING ENTITY UPON COMPLETION OF THE PROJECT.

C. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL INSPECTION AND MAINTENANCE DESCRIBED HEREIN.

D. EROSION AND SEDIMENT CONTROLS SHALL BE INSTALLED PRIOR TO INITIATING CONSTRUCTION ACTIVITIES, SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION, AND REMOVED UPON ACHIEVING FINAL STABILIZATION.

E. WET WEATHER INSPECTIONS SHALL BE CONDUCTED AFTER ALL RAIN EVENTS EXCEEDING 0.5-INCHES IN 24-HOURS.

F. ALL INSPECTION AND MAINTENANCE DOCUMENTATION SHALL BE KEPT AS PROJECT RECORD FOR A MINIMUM OF THREE YEARS.

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PROJECT TEAM:

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PREFERRED CONSTRUCTION MGMT
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PORTLAND, ME 04103

SEAL / SIGNATURE

STATE OF MAINE · ASHLEY FLETCHER No. 13750 · LICENSED PROFESSIONAL ENGINEER

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2021

PROJECT:

USM - Structured Parking Garage

Address

44 Bedford Street,
Portland ME 04104

REVISIONS:

No.	Date	Description

SUBMISSIONS:

Date	Issued For:
07/30/21	Site Plan Submittal

SCALE	**AS NOTED**
DATE ISSUED	**7/30/2021**
PROJECT NO	**20-20145.00-1**
DRAWN BY	**B.C.M.**
CHECKED BY	**A.E.F.**

SHEET TITLE:

CIVIL DETAILS - 1

D-200

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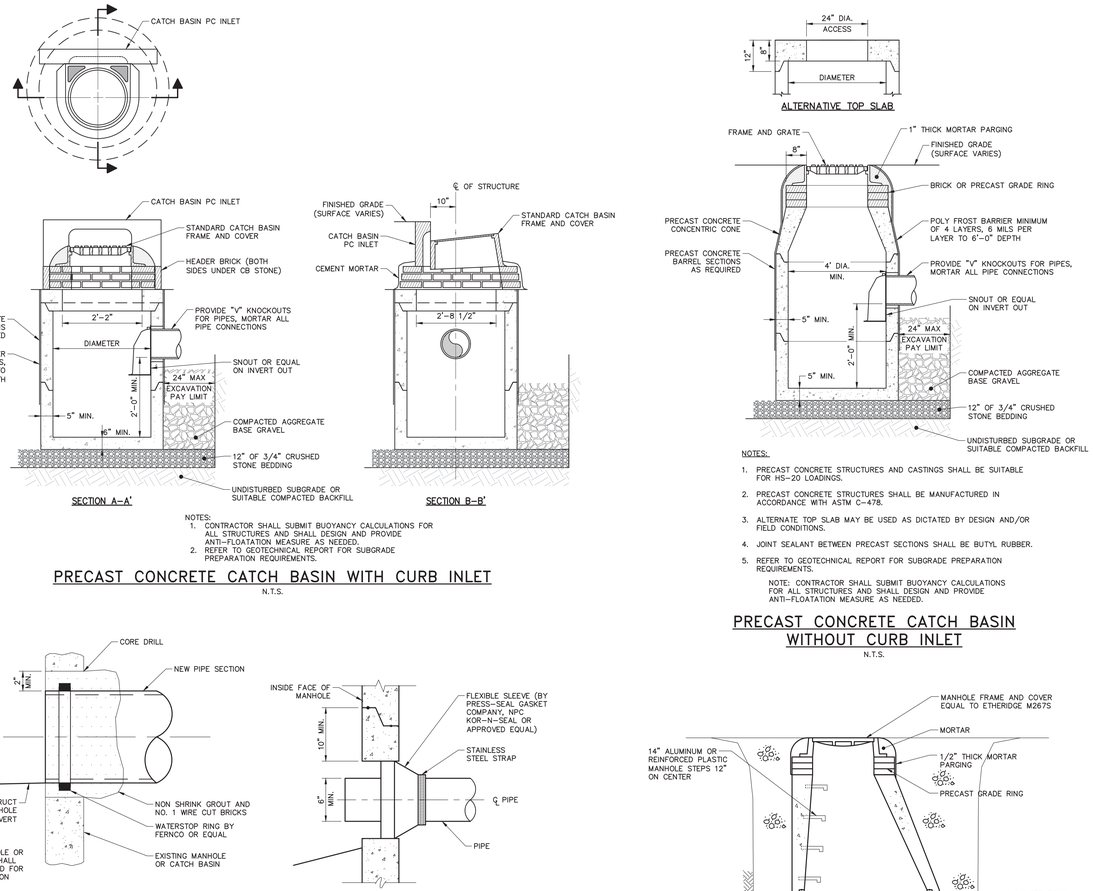


NOTES:
1. CONTRACTOR SHALL SUBMIT BUOYANCY CALCULATIONS FOR ALL STRUCTURES AND SHALL DESIGN AND PROVIDE ANTI-FLOATATION MEASURE AS NEEDED.
2. REFER TO GEOTECHNICAL REPORT FOR SUBGRADE PREPARATION REQUIREMENTS.

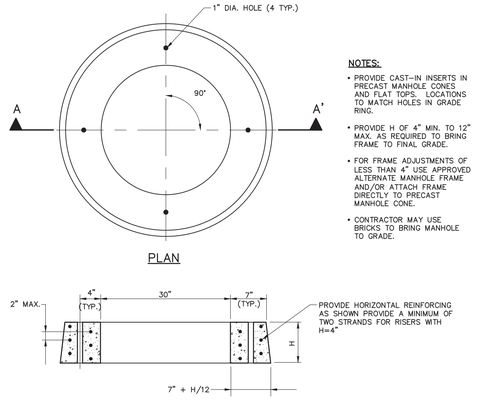
PRECAST CONCRETE CATCH BASIN WITH CURB INLET
N.T.S.

ALTERNATIVE TOP SLAB

NOTES:
1. PRECAST CONCRETE STRUCTURES AND CASTINGS SHALL BE SUITABLE FOR HS-20 LOADINGS.
2. PRECAST CONCRETE STRUCTURES SHALL BE MANUFACTURED IN ACCORDANCE WITH ASTM C-478.
3. ALTERNATE TOP SLAB MAY BE USED AS DICTATED BY DESIGN AND/OR FIELD CONDITIONS.
4. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE BUTYL RUBBER.
5. REFER TO GEOTECHNICAL REPORT FOR SUBGRADE PREPARATION REQUIREMENTS.

NOTE: CONTRACTOR SHALL SUBMIT BUOYANCY CALCULATIONS FOR ALL STRUCTURES AND SHALL DESIGN AND PROVIDE ANTI-FLOATATION MEASURE AS NEEDED.

PRECAST CONCRETE CATCH BASIN WITHOUT CURB INLET
N.T.S.

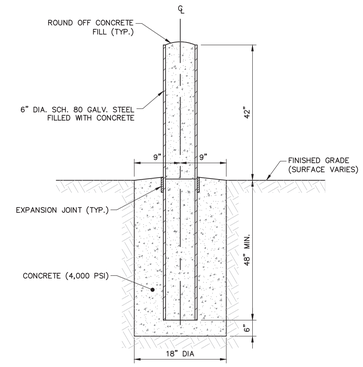


PLAN

SECTION A-A'

NOTES:
- PROVIDE CAST-IN INSERTS IN PRECAST MANHOLE CONES AND FLAT TOPS. LOCATIONS TO MATCH HOLES IN GRADE RING.
- PROVIDE H OF 4" MIN. TO 12" MAX. AS REQUIRED TO BRING FRAME TO FINAL GRADE.
- FOR FRAME ADJUSTMENTS OF LESS THAN 4" USE APPROVED ALTERNATE MANHOLE FRAME AND/OR ATTACH FRAME DIRECTLY TO PRECAST MANHOLE CONE.
- CONTRACTOR MAY USE BRICKS TO BRING MANHOLE TO GRADE.

PRECAST CONCRETE GRADE RING
N.T.S.



NOTE:
1. ALL BOLLARDS SHALL BE PAINTED. COLOR SELECTED BY OWNER.

6" DIA. SECURITY BOLLARD
N.T.S.

NOTE:
EXISTING MANHOLE OR CATCH BASIN SHALL BE CORE DRILLED FOR PIPE INSTALLATION

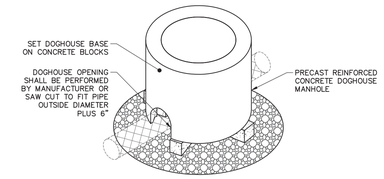
NEW PIPE TO EXISTING STRUCTURE
N.T.S.

NEW PIPE TO NEW STRUCTURE CONNECTION DETAIL
N.T.S.

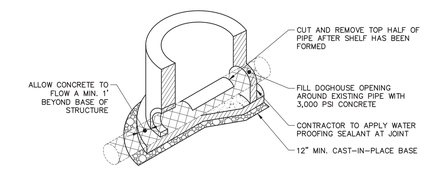
NOTES:
1. CONTRACTOR SHALL SUBMIT BUOYANCY CALCULATIONS FOR ALL STRUCTURES AND SHALL DESIGN AND PROVIDE ANTI-FLOATATION MEASURE AS NEEDED.
2. REFER TO GEOTECHNICAL REPORT FOR SUBGRADE PREPARATION REQUIREMENTS.

PRECAST MANHOLE
N.T.S.

BASE ISOMETRIC VIEW

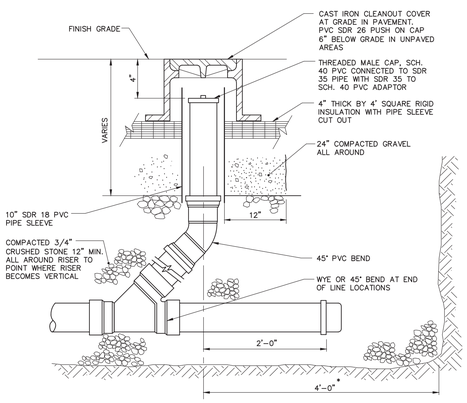


RISER ISOMETRIC VIEW

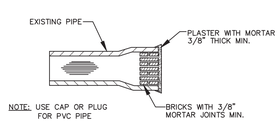


FOUNDATION SECTION VIEW

DOG HOUSE MANHOLE
N.T.S.

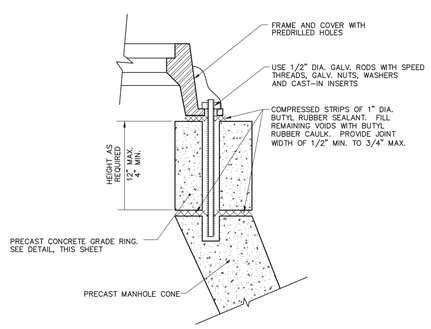


CLEANOUT
N.T.S.



NOTE: USE CAP OR PLUG FOR PVC PIPE

MASONRY PLUG
N.T.S.



MANHOLE FRAME FASTENING
N.T.S.

UNIVERSITY OF SOUTHERN MAINE
25 Bedford Street, Portland, ME 04104
207.712.5183 | USM.MAINE.EDU

PROJECT TEAM:

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PORTLAND, ME 04103

SEAL / SIGNATURE

STATE OF MAINE · ASHLEY FLETCHER No. 13750 · LICENSED PROFESSIONAL ENGINEER

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2021

PROJECT:

USM - Structured Parking Garage

Address

44 Bedford Street,
Portland ME 04104

REVISIONS:

No.	Date	Description

SUBMISSIONS:

Date	Issued For:
07/30/21	Site Plan Submittal

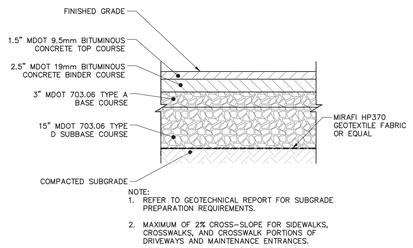
SCALE	**AS NOTED**
DATE ISSUED	**7/30/2021**
PROJECT NO	**20-20145.00-1**
DRAWN BY	**B.C.M.**
CHECKED BY	**A.E.F.**

SHEET TITLE:

CIVIL DETAILS - 2

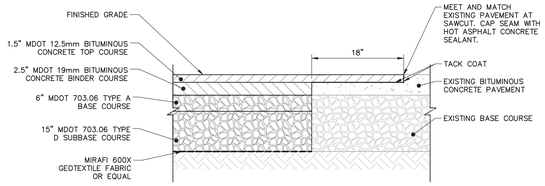
D-201

\\woodardcurran.net\shared\Projects\20233035.00 usm - falmouth street garage\wip\Drawings\Civil\20233035.00 C20X.dwg, Jul 29, 2021 - 2:51pm BMCDEVITT

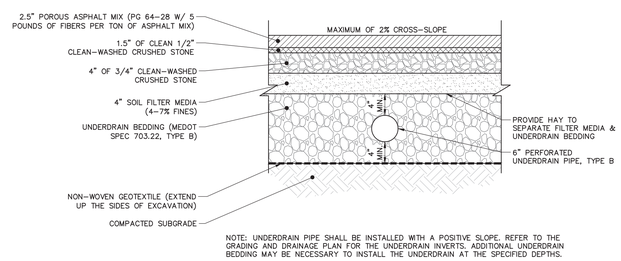


NOTE:
1. REFER TO GEOTECHNICAL REPORT FOR SUBGRADE PREPARATION REQUIREMENTS.
2. MAXIMUM OF 2% CROSS-SLOPE FOR SIDEWALKS, CROSSWALKS, AND CROSSWALK PORTIONS OF DRIVEWAYS AND MAINTENANCE ENTRANCES.

BITUMINOUS CONCRETE PAVEMENT SECTION
N.T.S.

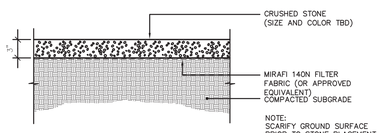


BITUMINOUS CONCRETE PAVEMENT BUTT JOINT
N.T.S.

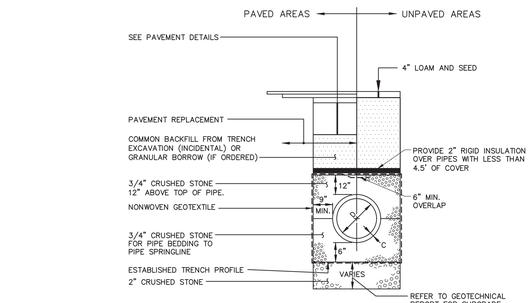


NOTE: UNDERDRAIN PIPE SHALL BE INSTALLED WITH A POSITIVE SLOPE. REFER TO THE GRADING AND DRAINAGE PLAN FOR THE UNDERDRAIN INVERTS. ADDITIONAL UNDERDRAIN BEDDING MAY BE NECESSARY TO INSTALL THE UNDERDRAIN AT THE SPECIFIED DEPTHS.

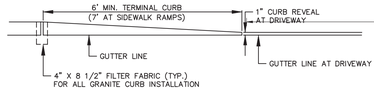
POROUS ASPHALT PAVEMENT
N.T.S.



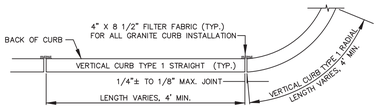
CRUSHED STONE AREA
N.T.S.



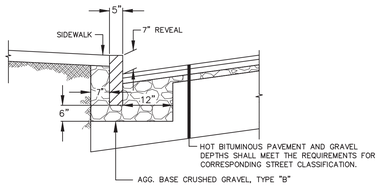
TYPICAL STORMDRAIN PIPE TRENCH INSTALLATION
N.T.S.



TERMINAL CURB PROFILE

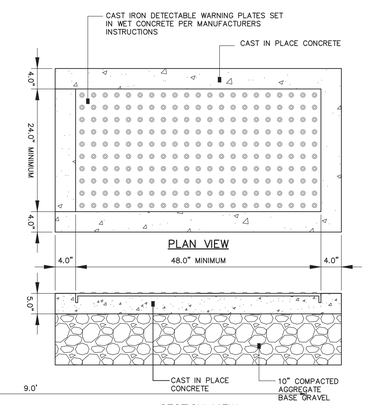


VERTICAL GRANITE CURB PLAN VIEW



VERTICAL GRANITE CURB CROSS SECTION

VERTICAL GRANITE CURB
N.T.S.

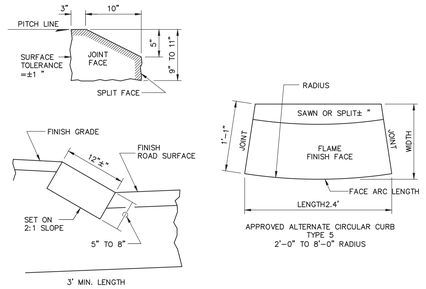


PLAN VIEW

SECTION VIEW

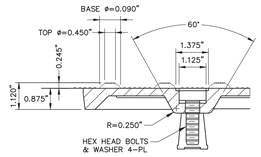
SIDEWALK RAMP DETECTABLE WARNING
N.T.S.

NOTES:
1. ALL DETECTABLE WARNING PLATES SHALL BE UNCOATED CAST IRON. FOLLOW MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION.
2. CAST IN PLACE CONCRETE SHALL MEET SPECIFICATIONS FOR MAINE D.O.T. CLASS A STRUCTURAL CONCRETE, MINIMUM COMPRESSIVE STRENGTH 4,000 PSI. THE EXPOSED CONCRETE BORDER SHALL RECEIVE A UNIFORM BROOM FINISH PERPENDICULAR TO THE FLOW OF PEDESTRIAN TRAFFIC.
3. TRUNCATED DOMES SHALL BE ALIGNED IN ROWS, PARALLEL AND PERPENDICULAR TO THE PREDOMINANT DIRECTION OF TRAVEL. TRUNCATED DOME BRICKS AND GRANITE PAVERS ARE NOT ALLOWED.
4. SIZE: THE DETECTABLE WARNING PLATES SHALL EXTEND 24 INCHES MINIMUM IN THE DIRECTION OF TRAVEL AND THE PLATE WIDTH AND CONCRETE SHALL EXTEND THE WIDTH OF THE CURB RAMP, LANDING, OR BLENDING TRANSITION TO THE STREET.
5. ORIENTATION: THE DETECTABLE WARNING PANEL SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE IS 6 INCHES MINIMUM AND 8 INCHES MAXIMUM FROM THE CURB LINE. THE PANEL SHALL BE ORIENTED TO THE DIRECTION OF TRAVEL AS IDENTIFIED BY THE POINT OF EGRESS.

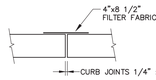


APPROVED ALTERNATE CIRCULAR CURB TYPE 5
2'-0" TO 8'-0" RADIUS

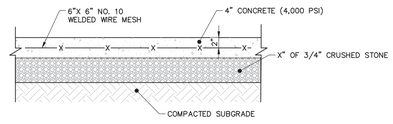
TYPICAL TYPE 5 SLOPED GRANITE CURB INSTALLATION
N.T.S.



BOLT DETAIL

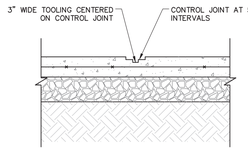


PLAN

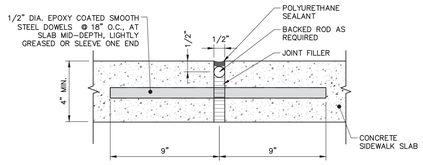


NOTES:
1. PROVIDE 1/2-INCH PREMOLDED BITUMINOUS EXPANSION JOINTS AT 20 FT. INTERVALS.
2. PROVIDE CONTROL JOINTS AT 5-FEET INTERVALS.
3. PROVIDE LIGHT BROOM FINISH WITH 3-INCH EDGE.

CAST-IN-PLACE CONCRETE SIDEWALK
NOT TO SCALE

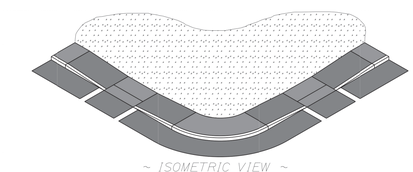


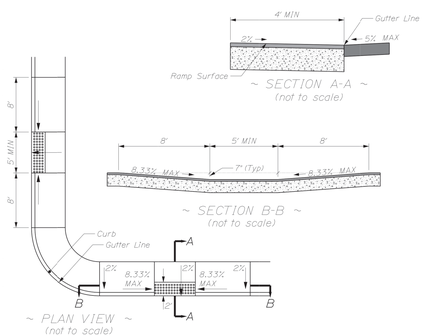
SIDEWALK CONTROL JOINT
NOT TO SCALE



NOTES:
1. EXPANSION JOINTS SHALL BE 60' O.C.
2. DISCONTINUE REINFORCING AT EACH SIDE OF JOINT.
3. DOWELS SHALL BE CUT STRAIGHT AND DEBURRED.

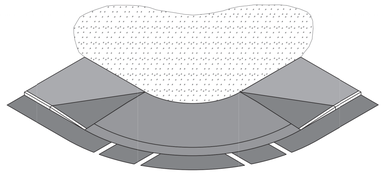
CONCRETE SIDEWALK EXPANSION JOINT
NOT TO SCALE

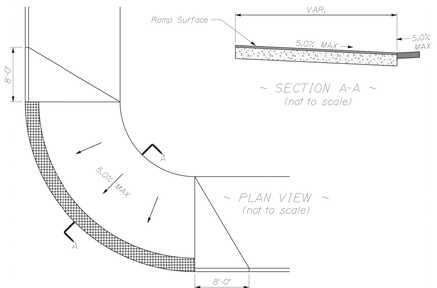




Note:
- This desirable design is the prefered option. Use other options only when required by design constraints.

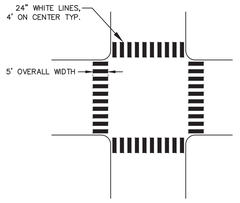
PARALLEL PEDESTRIAN RAMP - OPTION I
801(14)



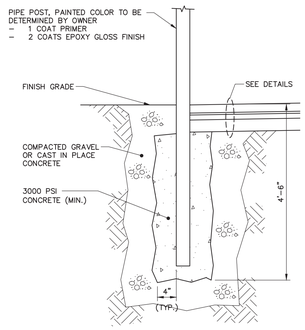


Note:
This option should only be used after all other options have been considered and deemed infeasible.

BLENDED TRANSITION
801(26)



CROSSWALK MARKINGS
N.T.S.



POST SPECIFICATION			
TYPE	HEIGHT ABOVE FIN. GRADE	POST DIAMATER	POST MATERIAL
STREET SIGNAGE	7'-0"	2 3/8" (I.D.)	GALV. STEEL

TYPICAL POST DETAIL
N.T.S.

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207.712.5183 | USM.MAINE.EDU

PROJECT TEAM:

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& STRUCTURAL ENGINEER
DESMAN Design Management
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PREFERRED CONSTRUCTION MGMT
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PORTLAND, ME 04103

SEAL / SIGNATURE

STATE OF MAINE · ASHLEY FLETCHER No. 13750 · LICENSED PROFESSIONAL ENGINEER

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2021

PROJECT:

USM - Structured Parking Garage

Address

44 Bedford Street,
Portland ME 04104

REVISIONS:

No.	Date	Description

SUBMISSIONS:

Date	Issued For:
07/30/21	Site Plan Submittal

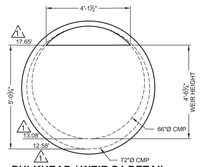
SCALE	**AS NOTED**
DATE ISSUED	**7/30/2021**
PROJECT NO	**20-20145.00-1**
DRAWN BY	**B.C.M.**
CHECKED BY	**A.E.F.**

SHEET TITLE:

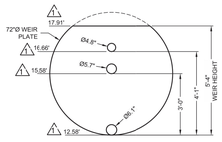
CIVIL DETAILS - 3

D-202

\\woodardcurran.net\shared\Projects\20233035.00 - falmouth street garage\wip\Drawings\Civil\233035.00 C20X.dwg, Jul 29, 2021 - 2:51pm BMCDEVITT



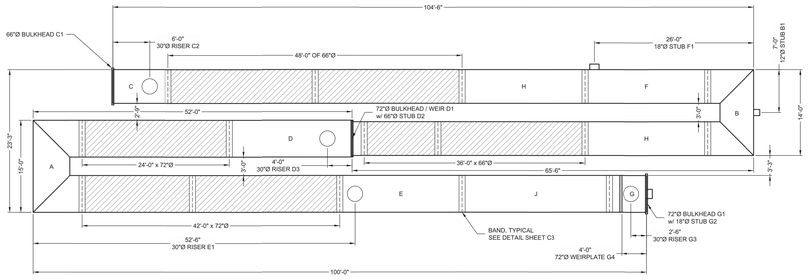
BULKHEAD / WEIR D1 DETAIL
NOT TO SCALE



WEIR PLATE G4 DETAIL
NOT TO SCALE

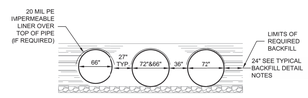
RISER INFORMATION		
PIECE	RIM ELEV.	SYSTEM INVERT
30"Ø RISER C2	20.38	13.08
30"Ø RISER D3	20.60	12.58
30"Ø RISER E1	20.39	12.58
30"Ø RISER G3	21.27	12.58

STUB INFORMATION		
PIECE	STUB INVERT	SYSTEM INVERT
12"Ø STUB B1	13.58	13.08
66"Ø STUB D2	13.08	12.58
18"Ø STUB F1	13.58	13.08
18"Ø STUB G2	12.58	12.58



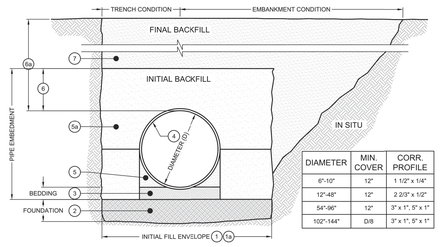
⚠1 CMP STORAGE SYSTEM HAS BEEN PREVIOUSLY PROCURED, BUT WILL NEED TO BE MODIFIED AND SUPPLEMENTED WITH ADDITIONAL MATERIALS AS SHOWN.

ASSEMBLY ⚠1
SCALE: 1" = 10'
PIPE STORAGE: 8492.5 CF
LOADING: H20
66" PIPE INV. = 13.08±
72" PIPE INV. = 12.58±



TYPICAL SECTION VIEW
NOT TO SCALE

NOTE: IF SALTING AGENTS FOR SNOW AND ICE REMOVAL ARE USED ON OR NEAR THE PROJECT, A GEOMEMBRANE BARRIER IS RECOMMENDED WITH THE SYSTEM. THE GEOMEMBRANE LINER IS INTENDED TO HELP PROTECT THE SYSTEM FROM THE POTENTIAL ADVERSE EFFECTS THAT MAY RESULT FROM A CHANGE IN THE SURROUNDING ENVIRONMENT OVER A PERIOD OF TIME. PLEASE REFER TO THE CORRUGATED METAL PIPE DETENTION DESIGN GUIDE FOR ADDITIONAL INFORMATION.



DIAMETER	MIN. COVER	CORR. PROFILE
6"-10"	12"	1 1/2" x 1/4"
12"-48"	12"	2 2/3" x 1/2"
54"-96"	12"	3" x 1", 5" x 1"
102"-144"	D/8	3" x 1", 5" x 1"

BACKFILL REQUIREMENTS FOLLOW THE GUIDELINES OF AASHTO LRFD BRIDGE DESIGN (SEC 12) AND CONSTRUCTION (SEC 26)

1 MINIMUM TRENCH WIDTH MUST ALLOW ROOM FOR PROPER COMPACTION OF HAUNCH MATERIALS UNDER THE PIPE.
THE MINIMUM TRENCH WIDTH (12.6.6.1):
PIPE ≤ 12": D + 16"
PIPE > 12": 1.5D + 12"

1a MINIMUM EMBANKMENT WIDTH (IN FEET) FOR INITIAL FILL ENVELOPE (12.6.6.2):
PIPE < 24": 3.0D
PIPE 24" - 144": D + 4'0"
PIPE > 144": D + 10'0"

2 THE FOUNDATION UNDER THE PIPE AND SIDE BACKFILL SHALL BE ADEQUATE TO SUPPORT THE LOADS ACTING UPON IT (26.5.2).

3 ENGINEER TO DETERMINE IF BEDDING IS REQUIRED. BEDDNG MATERIAL SHALL BE A RELATIVELY LOOSE MATERIAL THAT IS ROUGHLY SHAPED TO FIT THE BOTTOM OF THE PIPE, AND A MINIMUM OF TWICE THE CORRUGATION DEPTH IN THICKNESS, WITH THE MAXIMUM PARTICLE SIZE OF ONE-HALF OF THE CORRUGATION DEPTH (26.3.8.1, 26.5.3).

4 CORRUGATED STEEL PIPE (CSP / HEL-COR).

5 HAUNCH ZONE MATERIAL SHALL BE HAND SHOVELED OR S-HOVEL SLICED INTO PLACE TO ALLOW FOR PROPER COMPACTION (26.5.4).

5a INITIAL BACKFILL FOR PIPE EMBEDMENT TO MEET AASHTO A-1, A-2 OR A-3 CLASSIFICATION, OR APPROVED EQUAL, COMPACTED TO 90% STANDARD PROCTOR (T 99). MAXIMUM PARTICLE SIZE NOT TO EXCEED 3" (12.4.1.2). ALL LIFTS PLACED IN A CONTROLLED MANNER. IT IS RECOMMENDED THAT LIFTS NOT EXCEED AN 8" UNCOMPACTED LIFT HEIGHT TO PREVENT UNEVEN LOADING, AND THE LESSER OF 1/3 THE DIAMETER OR 24" AS THE MAXIMUM DIFFERENTIAL SIDE-TO-SIDE (26.5.4).

6 INITIAL BACKFILL ABOVE PIPE MAY INCLUDE ROAD BASE MATERIAL (AND RIGID PAVEMENT IF APPLICABLE). SEE TABLE ABOVE.

6a TOTAL HEIGHT OF COMPACTED COVER FOR CONVENTIONAL HIGHWAY LOADS IS MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TOP OF RIGID PAVEMENT (12.6.6.3).

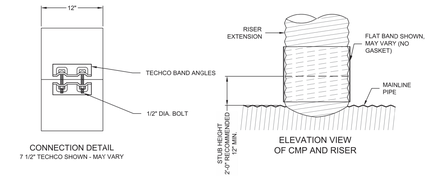
7 FINAL BACKFILL MATERIAL SELECTION AND COMPACTION REQUIREMENTS SHALL FOLLOW THE PROJECT PLANS AND SPECIFICATIONS PER THE ENGINEER OF RECORD (26.5.4.1).

NOTES:
- ENGINEER TO DETERMINE IF GEOTEXTILE SHOULD BE USED TO PREVENT SOIL MIGRATION INTO VARYING SOIL TYPES (PROJECT ENGINEER).
- FOR MULTIPLE BARREL INSTALLATIONS THE RECOMMENDED STANDARD SPACING BETWEEN PARALLEL PIPE RUNS SHALL BE PIPE DIA./2 BUT NO LESS THAN 12", OR 36" FOR PIPE DIAMETERS 72" AND LARGER.
- CONTACT YOUR CONTECH REPRESENTATIVE FOR NONSTANDARD SPACING (TABLE C12.6.7.1).

TYPICAL BACKFILL DETAIL
NOT TO SCALE

NOTE: CONTRACTOR SHALL SUBMIT BUOYANCY CALCULATIONS FOR ALL STRUCTURES AND SHALL DESIGN AND PROVIDE ANTI-FLOATATION MEASURE AS NEEDED.

CMP STORAGE SYSTEM DETAILS
N.T.S.



CONNECTION DETAIL
7 1/2" TECHCO SHOWN - MAY VARY

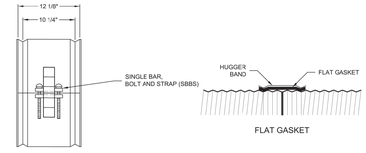
ELEVATION VIEW
OF CMP AND RISER

PLAIN END CMP RISER PIPE

GENERAL NOTES:

1. **DELIVERED BAND STYLE AND FASTENER TYPE MAY VARY BY FABRICATION PLANT.**
2. JOINT IS TO BE ASSEMBLED PER AASHTO BRIDGE CONSTRUCTION SPECIFICATION SEC 26.4.2.4.
3. BAND MATERIAL AND GAGE TO BE SAME AS RISER MATERIAL.
4. IF RISER HAS A HEIGHT OF COVER OF 10' OR MORE, USE A SLIP JOINT.
5. BANDS ARE NORMALLY FURNISHED AS FOLLOWS:
   - 12" THRU 48" 1-PIECE
   - 54" 2-PIECES
6. ALL RISER JOINT COMPONENTS WILL BE FIELD ASSEMB.ED.
7. MANHOLE RISERS IN APPLICATIONS WHERE TRAFFIC LOADS ARE IMPOSED REQUIRE SPECIAL DESIGN CONSIDERATIONS.
8. DIMENSIONS SUBJECT TO MANUFACTURING TOLERANCES.

12" RISER BAND DETAIL
NOT TO SCALE



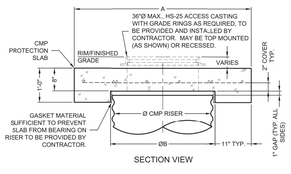
CONNECTION DETAIL
(SBBS)

2 2/3"x1/2" RE-ROLLED END HEL-COR PIPE

GENERAL NOTES:

1. JOINT IS TO BE ASSEMBLED PER AASHTO BRIDGE CONSTRUCTION SPECIFICATION SEC 26.4.2.4.
2. BAND MATERIALS AND/OR COATING CAN VARY BY LOCATION. CONTACT YOUR CONTECH REPRESENTATIVE FOR AVAILABILITY.
3. BANDS ARE SHAFED TO MATCH THE PIPE-ARCH WHEN APPLICABLE.
4. BANDS ARE NORMALLY FURNISHED AS FOLLOWS:
   - 12" THRU 48" 1-PIECE
   - 54" THRU 96" 2-PIECES
   - 102" THRU 144" 3-PIECES
5. BAND FASTENERS ARE ATTACHED WITH SPOT WELDS, RIVETS OR HAND WELDS.
6. ALL CMP IS RERCLLED TO HAVE ANNULAR END CORRUGATIONS OF 2 2/3"x1/2"
7. DIMENSIONS ARE SUBJECT TO MANUFACTURING TOLERANCES.
8. ORDER SHALL DESIGNATE GASKET OPTION, IF REQUIRED (SEE DETAILS ABOVE).

H-12 HUGGER BAND DETAIL
NOT TO SCALE

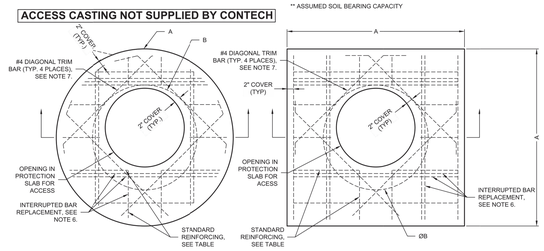


SECTION VIEW

REINFORCING TABLE				
Ø CMP RISER	A	B Ø	REINFORCING	**BEARING PRESSURE (PSF)
24"	4'Ø 4'x4'	26"	#5 @ 10" OCEW #5 @ 10" OCEW	2,540 1,900
30"	4'-6"Ø 4'-6" x 4'-6"	32"	#5 @ 10" OCEW #5 @ 9" OCEW	2,260 1,670
36"	5'Ø 5' x 5'	38"	#5 @ 9" OCEW #5 @ 8" OCEW	2,060 1,500
42"	5'-6"Ø 5'-6" x 5'-6"	44"	#5 @ 8" OCEW #5 @ 8" OCEW	1,490 1,370
48"	6'Ø 6' x 6'	50"	#5 @ 7" OCEW #5 @ 7" OCEW	1,210 1,270

** ASSUMED SOIL BEARING CAPACITY

ACCESS CASTING NOT SUPPLIED BY CONTECH



ROUND OPTION PLAN VIEW

SQUARE OPTION PLAN VIEW

NOTES:

1. DESIGN IN ACCORDANCE WITH AASHTO, 17th EDITION AND ACI 350.
2. DESIGN LOAD HS25.
3. EARTH COVER = 1' MAX.
4. CONCRETE STRENGTH = 4,000 psi
5. REINFORCING STEEL = ASTM A615, GRADE 60.
6. PROVIDE ADDITIONAL REINFORCING AROUND OPENINGS EQUAL TO THE BARS INTERRUPTED, HALF EACH SIDE. ADDITIONAL BARS TO BE IN THE SAME PLANE.
7. TRIM OPENING WITH DIAGONAL #4 BARS, EXTEND BARS A MINIMUM OF 12" BEYOND OPENING, BEND BARS AS REQUIRED TO MAINTAIN BAR COVER.
8. PROTECTION SLAB AND ALL MATERIALS TO BE PROVIDED AND INSTALLED BY CONTRACTOR.
9. DETAIL DESIGN BY DELTA ENGINEERS, ARCHITECTS AND LAND SURVEYORS, ENDWELL, NY.

MANHOLE CAP DETAIL
NOT TO SCALE

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COST ESTIMATOR
PREFERRED CONSTRUCTION MGMT
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PORTLAND, ME 04103

SEAL / SIGNATURE

STATE OF MAINE ★ ASHLEY FLETCHER No. 13750 ★ LICENSED PROFESSIONAL ENGINEER

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2021

PROJECT:

USM - Structured Parking Garage

Address

44 Bedford Street,
Portland ME 04104

REVISIONS:

No.	Date	Description

SUBMISSIONS:

Date	Issued For:
07/30/21	Site Plan Submittal

SCALE	**AS NOTED**
DATE ISSUED	**7/30/2021**
PROJECT NO	**20-20145.00-1**
DRAWN BY	**B.C.M.**
CHECKED BY	**A.E.F.**

SHEET TITLE:

CIVIL DETAILS - 4

D-203

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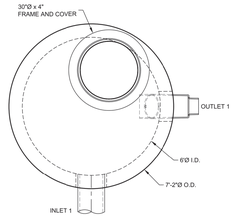
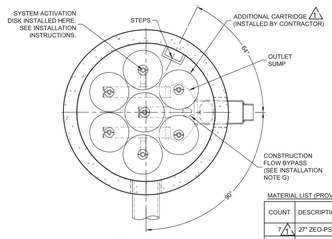
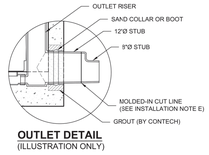


PLAN VIEW
CARTRIDGES AND FLOW KIT NOT SHOWN

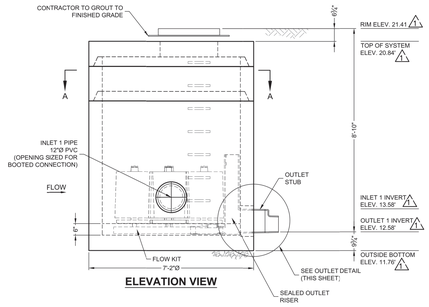


SECTION A-A



OUTLET DETAIL
(ILLUSTRATION ONLY)

• INLET PIPE CONNECTION SHALL HAVE A BOOTED CONNECTOR



ELEVATION VIEW

COUNT	DESCRIPTION	INSTALLED BY
7 ⚠1	27" ZEO-PSORB CARTRIDGE	CONTECH
7	2 GPM RESTRICTOR DISK (BLK)	CONTECH
0 ⚠1	2" PVC SLIP PLUG	CONTECH
1	42A FLOWKIT	CONTECH
1	SF ACTIVATION DISK	CONTECH
1	SEALED OUTLET RISER	CONTECH
7	STEPS, P10CTS, LANE LADDER, OR EQUIV.	CONTECH
1	GENERIC PIPE BOOT	CONTECH
1	SEALANT FOR JOINTS	CONTRACTOR
1	30"Ø x 4" FRAME & COVER, EJ#41600484, OR EQUIV.	CONTRACTOR

PERFORMANCE SPECIFICATION
FILTER CARTRIDGES SHALL BE MEDIA-FILLED, PASSIVE, SIPHON ACTUATED, RADIAL FLOW, AND SELF CLEANING. RADIAL MEDIA DEPTH SHALL BE 7-INCHES. FILTER MEDIA CONTACT TIME SHALL BE AT LEAST 38 SECONDS.
SPECIFIC FLOW RATE SHALL BE 0 GPM/SF (MAXIMUM). SPECIFIC FLOW RATE IS THE MEASURE OF THE FLOW (GPM) DIVIDED BY THE MEDIA SURFACE CONTACT AREA (SF). MEDIA VOLUMETRIC FLOW RATE SHALL BE 6 GPM/CF OF MEDIA (MAXIMUM).

GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com
3. STORMFILTER WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. STRUCTURE SHALL MEET AASHTO HS-20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 5', AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. CASTINGS SHALL MEET AASHTO M306 LOAD RATING AND BE CAST WITH THE CONTECH LOGO.
5. STORMFILTER STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-478 AND AASHTO LOAD FACTOR DESIGN METHOD.

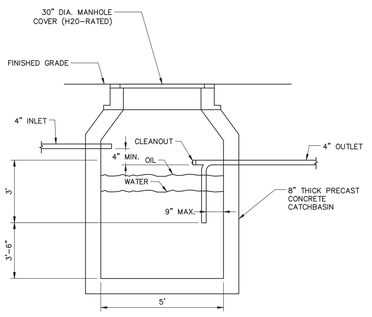
INSTALLATION NOTES
A. ANTI-FLOTATION PROVISIONS SHALL BE DESIGNED AND PROVIDED BY CONTRACTOR.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STORMFILTER STRUCTURE.
C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET PIPE(S). ALL PIPE CENTERLINES TO MATCH PIPE OPENING CENTERLINES.
E. CONTRACTOR TO PROVIDE AND INSTALL CONNECTOR TO THE OUTLET RISER STUB. STORMFILTER EQUIPPED WITH A DUAL DIAMETER HDPE OUTLET STUB. IF OUTLET PIPE IS LARGER THAN 8 INCHES, CONTRACTOR TO REMOVE THE 8 INCH OUTLET STUB AT MOLDED IN CUT LINE. COUPLING BY FERNCO OR EQUAL AND PROVIDED BY CONTRACTOR.
F. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT CARTRIDGES FROM CONSTRUCTION-RELATED EROSION RUNOFF.
G. CONTRACTOR TO INSTALL SUPPLIED PLUG IN CONSTRUCTION FLOW BYPASS WHEN SYSTEM IS BROUGHT ON LINE (PRESSURE FIT ONLY, DO NOT GLUE).

STRUCTURE WEIGHT
APPROXIMATE HEAVIEST PICK = 18,000 LBS. OF 3 PIECES
BASE SECTION SHIPPED WITH CARTRIDGES INSTALLED
MAX FOOTPRINT = 07'-2"

⚠1 STORMFILTER STRUCTURE HAS BEEN PREVIOUSLY PROCURED, BUT WILL NEED TO BE MODIFIED AND SUPPLEMENTED WITH ADDITIONAL CARTRIDGE AS SHOWN.

NOTE: CONTRACTOR SHALL SUBMIT BUOYANCY CALCULATIONS FOR ALL STRUCTURES AND SHALL DESIGN AND PROVIDE ANTI-FLOATATION MEASURE AS NEEDED.

STORMFILTER DETAIL
N.T.S.



OIL WATER SEPARATOR
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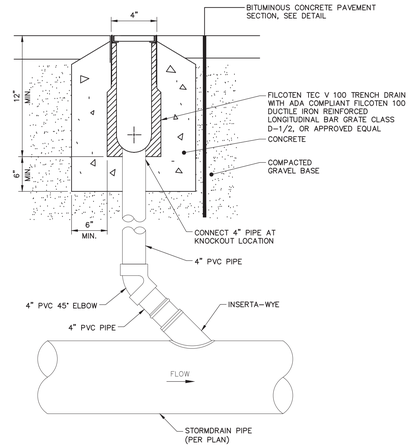

TRENCH DRAIN DETAIL
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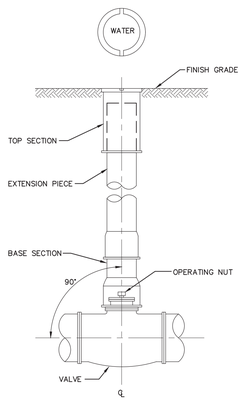
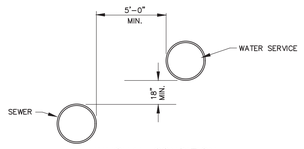


VALVE WITH VALVE BOX, 18" AND SMALLER
N.T.S.



NOTES:

THE SEPARATION OF WATER MAINS AND SEWERS SHALL COMPLY WITH THE FOLLOWING GENERAL REQUIREMENTS.

A. PARALLEL INSTALLATION:

1. NORMAL CONDITIONS: THE INSIDE EDGE OF A WATER MAIN SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM THE INSIDE EDGE OF ANY SANITARY SEWER, STORM SEWER OR SEWER MANHOLE.
2. UNUSUAL CONDITIONS: WHEN LOCAL CONDITIONS PREVENT A HORIZONTAL SEPARATION OF 10 FEET, THE INSIDE EDGE OF A WATER MAIN MAY BE LAID A MINIMUM OF 5 FEET FROM THE INSIDE EDGE OF A SEWER PROVIDED THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST 18 INCHES HIGHER THAN THE TOP OF THE SEWER (SEE DETAIL).

B. CROSSINGS:

1. NORMAL CONDITIONS: WHENEVER POSSIBLE, THE BOTTOM OF THE WATER MAIN SHALL BE AT LEAST 18 INCHES HIGHER THAN THE TOP OF THE SEWER.
2. UNUSUAL CONDITIONS: IF A WATER MAIN MUST CROSS UNDER A SEWER, THE TOP OF THE WATER MAIN SHALL BE AT LEAST 18 INCHES LOWER THAN THE BOTTOM OF THE SEWER, THE WATER MAIN PIPE SHALL BE CENTERED AT THE CROSSING SO THAT THE JOINTS ARE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE SEWER, AND ADEQUATE STRUCTURAL SUPPORT SHALL BE PROVIDED FOR THE SEWER TO PREVENT EXCESSIVE DEFLECTION OF THE SEWER AT THE CROSSING.

MINIMUM WATER AND SEWER PIPE SEPARATION DETAIL
NTS

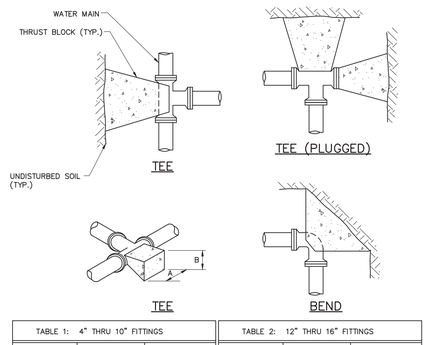
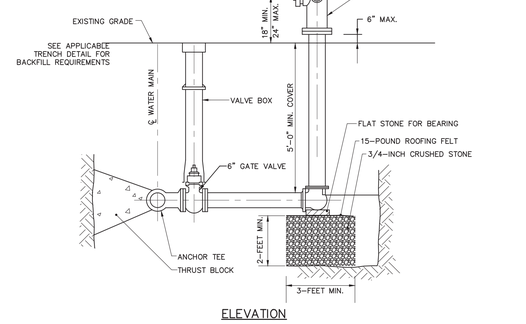


TABLE 1: 4" THRU 10" FITTINGS				
SOIL TYPE	TEES		BENDS	
	A	B	A	B
SOFT CLAY	48"	24"	48"	24"
SAND	24"	24"	24"	24"
GRAVEL	24"	18"	24"	18"

TABLE 2: 12" THRU 16" FITTINGS				
SOIL TYPE	TEES		BENDS	
	A	B	A	B
SOFT CLAY	60"	36"	72"	36"
SAND	36"	30"	48"	30"
GRAVEL	30"	24"	40"	24"

NOTES:
1. CONCRETE FOR ALL THRUST BLOCKS TO BE MINIMUM 3,000 PSI., 28 DAY STRENGTH, TYPE I CEMENT, 3/4" STONE.
2. WHERE POSSIBLE, CONSTRUCT THRUST BLOCKS AGAINST UNDISTURBED SOIL. WHERE NOT POSSIBLE, PLACE FILL BETWEEN THE THRUST BLOCK AND THE UNDISTURBED SOIL COMPACTED TO 95% STANDARD PROCTOR DENSITY.
3. WRAP FITTINGS WITH POLYETHYLENE PRIOR TO CONSTRUCTING THRUST BLOCKS. NO JOINTS SHALL BE COVERED WITH CONCRETE.
4. THRUST BLOCK DIMENSIONS ARE BASED ON A MAXIMUM WATER MAIN PRESSURE OF 150 PSI.

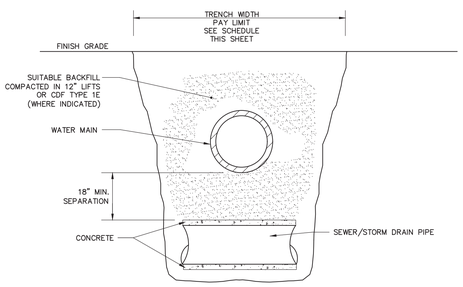
TYPICAL THRUST BLOCK DETAIL
N.T.S.



ELEVATION

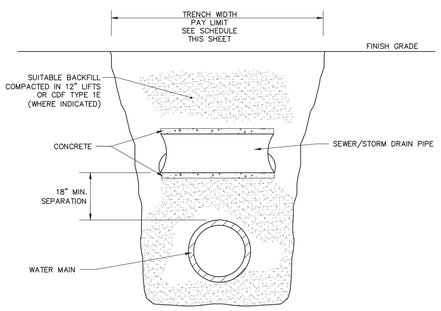
HYDRANT DETAIL
N.T.S.

NOTES:
- ALL JOINTS FOR HYDRANT INSTALLATION SHALL BE APPROVED RETAINER GLANDS.
- HYDRANT LATERALS SHALL BE CONSTRUCTED FROM ONE CONTINUOUS PIPE LENGTH. HYDRANT LATERALS WITH BELL JOINTS AND COUPLINGS SHALL NOT BE ACCEPTED.
- CONTRACTOR SHALL CONSTRUCT A HYDRANT DRAINING SUMP TO EITHER SIDE OF THE HYDRANT. THE HYDRANT DRAINING SUMP SHALL BE 3-FEET WIDE BY 2-FEET IN DEPTH. THE SUMP SHALL CONSIST OF 3/4-INCH GRAVEL STONE WITH 15-POUND ROOFING FELT LAID OVER THE 3/4-INCH GRAVEL STONE.



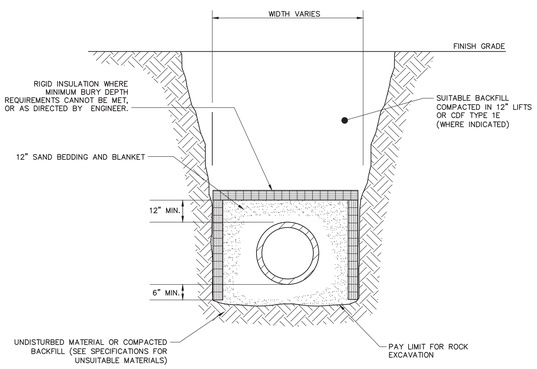
NOTE:
SEE ADDITIONAL REQUIREMENTS AS SPECIFIED IN SECTION 33 10 00, ARTICLE 3.030.

TYPICAL UTILITY CROSSING TRENCH DETAIL 1
N.T.S.

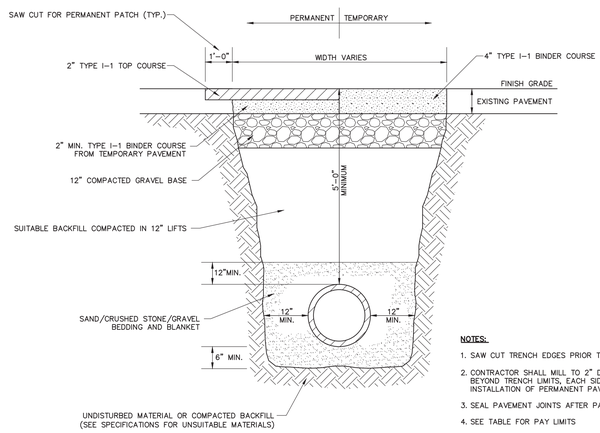


NOTE:
SEE ADDITIONAL REQUIREMENTS AS SPECIFIED IN SECTION 33 10 00, ARTICLE 3.030.

TYPICAL UTILITY CROSSING TRENCH DETAIL 2
N.T.S.



TYPICAL TRENCH DETAIL FOR PIPE INSULATION
N.T.S.



NOTES:
1. SAW CUT TRENCH EDGES PRIOR TO EXCAVATING.
2. CONTRACTOR SHALL MILL TO 2" DEPTH, 1'-0" BEYOND TRENCH LIMITS, EACH SIDE, PRIOR TO INSTALLATION OF PERMANENT PAVEMENT.
3. SEAL PAVEMENT JOINTS AFTER PAVING.
4. SEE TABLE FOR PAY LIMITS

TYPICAL WATER TRENCH DETAIL
N.T.S.

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WOODARD & CURRAN
41 HUTCHINS DRIVE
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MICHAEL BOUCHER LANDSCAPE ARCHITECTURE
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MEP/FP ENGINEER
ALLIED ENGINEERING
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GEOTECHNICAL ENGINEER
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SEAL / SIGNATURE

STATE OF MAINE · ASHLEY FLETCHER No. 13750 · LICENSED PROFESSIONAL ENGINEER

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PROJECT:

USM - Structured Parking Garage

Address

44 Bedford Street,
Portland ME 04104

REVISIONS:

No.	Date	Description

SUBMISSIONS:

Date	Issued For:
07/30/21	Site Plan Submittal

SCALE	AS NOTED
DATE ISSUED	7/30/2021
PROJECT NO	20-20145.00-1
DRAWN BY	B.C.M.
CHECKED BY	A.E.F.

SHEET TITLE:

CIVIL DETAILS - 5

D-204

\\woodardcurran.net\shared\Projects\20233035.00 - falmouth street garage\wip\Drawings\Civil\233035.00 C20X.dwg, Jul 29, 2021 - 2:52pm BMCDEVITT

A	AMPERE
AC	ALTERNATING CURRENT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
AIC	AMPERES INTERRUPTING CAPACITY
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
BAS	BUILDING AUTOMATION SYSTEM
BKBD	BACKBOARD
C	CONDUIT
CAT	CATALOG, CATEGORY
CATV	CABLE TV
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CM	CIRCULAR MILS
COMM	COMMUNICATIONS
CU	MECH CONDENSING UNIT
CU	COPPER
CUH	CABINET UNIT HEATER
DC	DIRECT CURRENT
DDC	DIGITAL DIRECT CONTROL
DN	DOWN
DW	DISHWASHER
DWG	DRAWING
EF	EXHAUST FAN
ELEV	ELEVATOR
EMT	ELECTRICAL METALLIC TUBING
EP	EXPLOSION PROOF
ERU	ENERGY RECOVERY UNIT
EWC	ELECTRIC WATER COOLER
FACP	FIRE ALARM CONTROL PANEL
FB	FLOOR BOX
FLA	FULL LOAD AMPS
FWE	FURNISHED WITH EQUIPMENT
G, GND	GROUND
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFP	GROUND FAULT PROTECTION
HID	HIGH INTENSITY DISCHARGE
HOA	HAND-OFF-AUTO SELECTOR SWITCH
HP	HORSEPOWER
HVAC	HEATING, VENTILATION AND COOLING UNIT
IDS	INTRUSION DETECTION SYSTEM
IG	ISOLATED GROUND
IMC	INTERMEDIATE METAL CONDUIT
IR	INFRARED
K	KILO
KCMIL	KILO CIRCULAR MILS
KW	KILOWATT
KVA	KILO VOLT-AMPS
LAN	LOCAL AREA NETWORK
LC	LIGHTING CONTACTOR
LF	LINEAR FEET
LC	LOADCENTER
LCP	LIGHTING CONTROL PANEL
LED	LIGHT EMITTING DIODE
LTG	LIGHTING
LTS	LIGHTS
MAX	MAXIMUM
MCB	MAIN CIRCUIT BREAKER
MECH	MECHANICAL
MH	MOUNTING HEIGHT
MC	MICROPHONE
MW	MICROWAVE
MLO	MAIN LUG ONLY
MT	MOUNT
MTS	MANUAL TRANSFER SWITCH
MCP	MOTOR CONTROL PANEL
MH	METAL HALIDE
MDP	MAIN DISTRIBUTION PANEL
MIN	MINIMUM
N	NEUTRAL
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIC	NOT IN CONTRACT
NF	NON-FUSED
NO	NORMALLY OPEN
NO., #	NUMBER
NTS	NOT TO SCALE
OC	ON CENTER
OCC	OCCUPANCY
OH	OVERHEAD
P	POLE
PA	PUBLIC ADDRESS
PB	PULLBOX
PH,	PHASE
PIR	PASSIVE INFRARED
PNL	PANELBOARD
P/O	PART OF
PV	PHOTOVOLTAIC
PVC	POLY-VINYL CHLORIDE
REC RECEPT	RECEPTACLE
REF	REFRIGERATOR
RF	RETURN FAN
RGS	RIGID GALVANIZED STEEL
RM	ROOM
RMC	RIGID METAL CONDUIT
RTU	ROOFTOP UNIT
REF	REFRIGERATOR
SF	SUPPLY FAN
ST	SHUNT TRIP
SPDT	SINGLE POLE, DOUBLE THROW
SQ	SQUARE
TEL	TELEPHONE
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
TYP	TYPICAL
UF	UNDER FLOOR
UG	UNDERGROUND
UH	UNIT HEATER
UL	UNDERWRITER'S LABORATORY
UNO	UNLESS NOTED OTHERWISE
UPS	UNINTERRUPTIBLE POWER SUPPLY
V	VOLTS
VFD	VARIABLE FREQUENCY DRIVE
W	WATT
WP	WEATHERPROOF
WG	WIREGUARD
XFMR	TRANSFORMER
(E)	EXISTING ITEM TO REMAIN
(R)	REMOVE ITEM AND DISPOSE OF PROPERLY
(ER)	RELOCATED ITEM AT NEW LOCATION
(RL)	REMOVE AND RELOCATE

NOTE

SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET ARE FOR REFERENCE ONLY AND DO NOT NECESSARILY INDICATE THEIR INCORPORATION INTO THE DESIGN

A1 ABBREVIATIONS

FACP FIRE ALARM CONTROL PANEL, MOUNT WITH TOP OF PANEL NOT MORE THAN 72"AFF

FAA FIRE ALARM ANNUNCIATOR, MOUNT WITH TOP OF PANEL NOT MORE THAN 72"AFF, WIRED TO FACP

SMOKE DETECTOR, WIRED TO FACP

E SMOKE DETECTOR, "E" INDICATES CONNECTION FOR ELEVATOR RECALL, WIRED TO FACP

SS SINGLE STATION SMOKE DETECTOR WITH AUDIBLE INDICATING APPLIANCE, WALL MOUNTED

SS AV SINGLE STATION SMOKE DETECTOR WITH AUDIBLE/VISUAL INDICATING APPLIANCE, CEILING MOUNTED

SS SS SINGLE/MULTI-STATION SMOKE/CARBON MONOXIDE DETECTOR WITH AUDIBLE/VISIBLE INDICATING APPLIANCE, CEILING MOUNTED

SS SS SINGLE/MULTI-STATION SMOKE/CARBON MONOXIDE DETECTOR WITH AUDIBLE INDICATING APPLIANCE, WALL MOUNTED

HEAT DETECTOR, WIRED TO FACP ~ COMBINATION 135° FIXED TEMPERATURE AND RATE-OF-RISE U.N.O.

E HEAT DETECTOR, "E" INDICATES CONNECTION FOR ELEVATOR RECALL, WIRED TO FACP

DUCT SMOKE DETECTOR, WIRED TO FACP

GAS DETECTOR, WIRED TO FACP

GAS VALVE, WIRED TO FACP

FLAME DETECTOR, WIRED TO FACP

RTS RTS REMOTE TEST/INDICATOR FOR DUCT SMOKES, MOUNT ON CEILING BENEATH UNIT, OR WALL MOUNT WHERE INDICATED ON PLANS

F MANUAL PULL STATION, MOUNT 48" AFF

F HORN/STROBE, WALL MOUNTED CANDELA AS NOTED ON PLANS, WIRED TO FACP

F HORN/STROBE, CEILING MOUNTED, CANDELA AS NOTED ON PLANS, WIRED TO FACP

STROBE ONLY INDICATING APPLIANCE, WALL MOUNTED, CANDELA AS NOTED ON PLANS, WIRED TO FACP

STROBE ONLY INDICATING APPLIANCE, CEILING MOUNTED, CANDELA AS NOTED ON PLANS, WIRED TO FACP

R STROBE ONLY INDICATING APPLIANCE, CEILING MOUNTED, CANDELA AS NOTED ON PLANS, 120V, CONNECT TO OPERATE UPON ACTIVATION OF ROOM SMOKE DETECTOR

R STROBE ONLY INDICATING APPLIANCE, WALL MOUNTED, CANDELA AS NOTED ON PLANS, 120V, CONNECT TO OPERATE UPON ACTIVATION OF ROOM SMOKE DETECTOR

MH MINI HORN, WALL MOUNTED, WIRED TO FACP

MH MINI HORN, CEILING MOUNTED, WIRED TO FACP

F F HORN/STROBE WITH PULL STATION DIRECTLY BELOW

FIRE ALARM BEACON

MAGNETIC DOOR HOLD OPEN DEVICE, WIRED TO FACP

T TRANSFORMER

SPRINKLER SYSTEM WATER FLOW SWITCH, PROVIDED UNDER DIVISION 23, WIRED TO FACP UNDER DIVISION 26

T SPRINKLER SYSTEM TAMPER SWITCH, PROVIDED UNDER DIVISION 23, WIRED TO FACP UNDER DIVISION 26

SPRINKLER SYSTEM CHECK VALVE PRESSURE SWITCH, FURNISHED AND INSTALLED UNDER DIVISION 23, WIRED TO FACP UNDER DIVISION 26

SPRINKLER SYSTEM PRE-ACTION VALVE, FURNISHED AND INSTALLED UNDER DIVISION 21, WIRED TO FACP UNDER DIVISION 26

K KNOX BOX, MOUNT 60" AFF

SD SMOKE DAMPER, WIRED TO FACP

FSD FIRE AND SMOKE DAMPER, WIRED TO FACP
HORN/STROBE, CANDELA AS NOTED ON PLANS, WIRED TO FACP

S SPEAKER/STROBE, WALL MOUNTED, CANDELA AS NOTED ON PLANS, WIRED TO FACP

S SPEAKER/STROBE, CEILING MOUNTED, CANDELA AS NOTED ON PLANS, WIRED TO FACP

M MASTER BOX

A3 FIRE ALARM

SEC SECURITY PANEL, MOUNT WITH TOP OF PANEL NOT MORE THAN 72"AFF

ANN ANNUNCIATOR, MOUNT WITH TOP OF PANEL NOT MORE THAN 72"AFF

KP KEYPAD, MOUNT 48"AFF

MSP MOTION SENSOR, PASSIVE INFRARED (PIR), WALL MOUNTED 96"AFF

MSP MOTION SENSOR, PASSIVE INFRARED (PIR), CEILING MOUNTED

MSM MOTION SENSOR, MICROWAVE, WALL MOUNTED

MSM MOTION SENSOR, MICROWAVE, CEILING MOUNTED

MS MOTION SENSOR, DUAL TECHNOLOGY, PIR/MICROWAVE, WALL MOUNTED

MS MOTION SENSOR, DUAL TECHNOLOGY, PIR/MICROWAVE, CEILING MOUNTED

T TRANSFORMER

C CAMERA

CA CARD ACCESS, PROVIDE 3/4" CONDUIT FROM 48" AFF/AFG TO ABOVE CEILING

DC DOOR CONTACT

DL MAGNETIC DOOR LOCK

DR DOOR RELEASE BUTTON

DS DOOR SWITCH

C CHIME

SS STROBE

SH HORN

B BELL

D JUNCTION BOX WITH 120V POWER FOR DOORS

REX REQUEST-TO-EXIT MOTION SENSOR

A5 POWER DISTRIBUTION

PANELBOARD ~ SURFACE MOUNTED

PANELBOARD ~ FLUSH MOUNTED

FUSED DISCONNECT SWITCH

NON-FUSED DISCONNECT SWITCH

00 MOTOR STARTER ~ NUMBER INDICATES NEMA SIZE

00 COMBINATION MOTOR STARTER/FUSED DISCONNECT

MOTOR OR FAN

M METER AND CABINET

J JUNCTION BOX ~ CEILING MOUNTED

J JUNCTION BOX ~ WALL MOUNTED

J JUNCTION BOX ~ FLUSH FLOOR MOUNTED

P J JUNCTION BOX ~ PEDESTAL MOUNTED

T# TRANSFORMER ~ NUMBER INDICATES DESIGNATION SEE TRANSFORMER SCHEDULE

VFD VARIABLE FREQUENCY DRIVE

TVSS TRANSIENT VOLTAGE SURGE SUPPRESSOR

E EMERGENCY SHUTOFF SWITCH ~ WALL MOUNTED 48" TO CENTERLINE ~ PROVIDE TAMPER-PROOF COVER

S SHUT-OFF SWITCH

CONDUIT TURNING UP

CONDUIT TURNING DOWN

WIRING UNDERGROUND OR UNDERSLAB

HOMERUN ~ (2)#12+(1)#12G UNO (EXCEPT LIGHTING CIRCUITS: (1)#12+(1)#10N+(1)#12G UNO)

SINGLE-PHASE HOMERUN OR MULTIPLE HOMERUN UTILIZING THE SAME CONDUIT

3-PHASE HOMERUN OR MULTIPLE HOMERUN UTILIZING THE SAME CONDUIT

FLEXIBLE CONNECTION

GROUNDING SYSTEM

P POWER POLE

PUSHBUTTON

C DOORBELL CHIME

F SYSTEMS FURNITURE WHIP, DUAL SERVICE, WALL MOUNTED

P MOTORIZED DOOR OPERATOR AND PUSH PADDLE ~ DEVICES FURNISHED BY DIV 08, POWER WIRING, BOXES, AND CONDUIT BY DIV 26

CB ENCLOSED CIRCUIT BREAKER

ATS AUTOMATIC TRANSFER SWITCH

H HAND DRYER, COORDINATE HEIGHT WITH ARCHITECTURAL PLANS

SF SYSTEMS FURNITURE FEED

B5 SECURITY

PS PAY STATION KIOSK ~ SEE INSTALLATION DETAIL D3 ON DRAWING E501.

EC EMERGENCY CALL BOX LOCATION WITH BLUE LIGHT BEACON ~ SEE DETAIL B4 ON DRAWING E501.

EVSE ELECTRIC VEHICLE SUPPLY EQUIPMENT (VEHICLE CHARGING STATION). DUAL SERVICE UNIT. SEE DETAIL C4 ON DRAWING E501.

B7 SPECIALTY EQUIPMENT

A7 RECEPTACLES

SINGLE RECEPTACLES

20A, 125V, 2P, 3W, NEMA 5-20R

20A, 125V, 2P, 3W, NEMA L5-20R (TWISTLOCK)

30A DRYER RECEPTACLE ~ 125/250V, 3P, 4W, GROUNDING, NEMA 14-30R, (3)#10+(1)#10G TO 30A, 2P CIRCUIT BREAKER

30A, 250V, 2P, 3W, NEMA 6-30R

50A RANGE RECEPTACLE ~ 125/250V, 3P, 4W, GROUNDING, NEMA 14-50R, (3)#6+(1)#10 TO 50A, 2P CIRCUIT BREAKER

20A, 250V, 2P, 3W, NEMA 6-20R

NOTE:

PROVIDE MATCHING CORD AND PLUG FOR SINGLE RECEPTACLES

FLOOR AND CEILING DEVICES

F DUPLEX RECEPTACLE, 20A, 125V, 2P, 3W, NEMA 5-20R, MOUNT IN FLUSH FLOOR BOX

F DOUBLE DUPLEX RECEPTACLE, 20A, 125V, 2P, 3W, NEMA 5-20R, MOUNT IN FLUSH FLOOR BOX

P DUPLEX RECEPTACLE, PEDESTAL MOUNTED

P SINGLE RECEPTACLE, PEDESTAL MOUNTED

C DUPLEX RECEPTACLE, FLUSH MOUNTED IN CEILING

C DOUBLE DUPLEX RECEPTACLE, FLUSH MOUNTED IN CEILING

C DUPLEX GFCI RECEPTACLE, FLUSH MOUNTED IN CEILING

C DOUBLE DUPLEX GFCI RECEPTACLE, FLUSH MOUNTED IN CEILING

OVERHEAD RECEPTACLE DROP, DUPLEX

OVERHEAD RECEPTACLE DROP, DOUBLE DUPLEX

OVERHEAD RECEPTACLE DROP, GFCI

PT-1 4" POKE-THRU DEVICE, DUAL SERVICE FURNITURE FEED. BASIS OF DESIGN: WIREMOLD AFFATC

PT-2 6" POKE-THRU DEVICE, WITH (2) DUPLEX RECEPTACLES AND TEL/DATA AS INDICATED ON PLANS. BASIS OF DESIGN: LEGRAND 6AT SERIES.

F MULTI-SERVICE FLUSH FLOOR BOX ~ WIREMOLD EFB45 SERIES OR APPROVED EQUAL. COVER SHALL BE FLUSH STYLE WITH FLOOR INSERT. COVER FINISH COLOR SHALL BE SELECTED BY ARCHITECT FROM MANUFACTURER'S STANDARD FINISHES.

RECEPTACLES

DUPLEX RECEPTACLE ~ 20A, 125V, 2P, 3W, NEMA 5-20R

DOUBLE DUPLEX RECEPTACLE

DUPLEX RECEPTACLE, HATCH INDICATES AFCI PROTECTION AND TAMPERPROOF

T TAMPERPROOF DUPLEX RECEPTACLE

GFCI DUPLEX RECEPTACLE, MOUNT 44" AFF UNO

GFCI DOUBLE DUPLEX RECEPTACLE, MOUNT 44" AFF UNO

EWC GFCI RECEPTACLE FOR ELECTRIC WATER COOLER - COORDINATE LOCATION WITH DIVISION 22.

WP GFCI RECEPTACLE WITH WEATHERPROOF COVER

WP GFCI RECEPTACLE IN WP ENCLOSURE ON ROOF

MULTI-OUTLET STRIP, PROVIDE OUTLETS 24" OC UNO, MOUNT 48" AFF UNO

SURFACE RACEWAY WITH DIVIDER, MOUNT 44" AFF UNO. PROVIDE NEMA 5-20 RECEPTACLES AND TECHNOLOGY OUTLETS AS SHOWN ON PLAN

NOTES:

1. MOUNT RECEPTACLES WITH CENTERLINE 18" AFF UNO
2. MOUNT EXTERIOR RECEPTACLES WITH CENTERLINE 24" AFG UNO

A9 LUMINAIRES

LIGHTING SWITCHES

$a LIGHT SWITCH, 20A,125/277V

$3 THREE-WAY LIGHT SWITCH

$4 FOUR-WAY LIGHT SWITCH

$2 TWO-POLE SWITCH

$K KEY OPERATED SWITCH

$M MOTOR RATED SWITCH

$P SINGLE POLE SWITCH WITH RED PILOT LIGHT ~ RED LIGHT SHALL GLOW WHEN CIRCUIT IS ENERGIZED

$a $b MULTI-GANGED SWITCHES, GANG UNDER ONE PLATE, LETTER INDICATES SWITCHING

$OS OCCUPANCY SENSOR SWITCH, WALL MOUNTED

$OS2 2-BUTTON OCCUPANCY SENSOR SWITCH

$OS3 OCCUPANCY SENSOR SWITCH WIRED FOR 3-WAY OPERATION

$OSD OCCUPANCY SENSOR SWITCH WITH DIMMING ~ COORDINATE DIMMING TECHNOLOGY WITH LOAD TO BE DIMMED

OS OCCUPANCY SENSOR, CEILING MOUNTED

OS OCCUPANCY SENSOR, WALL MOUNTED

$D DIMMER SWITCH ~ COORDINATE DIMMING TECHNOLOGY WITH LOAD TO BE DIMMED

$F $L HANDICAP SWITCHES FOR HOOD LIGHT AND FAN

$T TIMER SWITCH

$LV LOW VOLTAGE LIGHT SWITCH, MOMENTARY CONTACT

LTC LIGHTING TIME CLOCK

LC LIGHTING CONTACTOR

LCP LIGHTING CONTROL PANEL

PC OUTDOOR PHOTOELECTRIC SWITCH

DS DAYLIGHT HARVESTING SENSOR

NOTES:

1. MOUNT LIGHT SWITCHES WITH CENTERLINE 48" AFF, UNO
2. LOWER CASE LETTER AT SWITCH INDICATES SWITCHING

EMERGENCY LIGHTING

WHERE NOTED ON PLANS FIXTURE CONNECTED TO CENTRAL INVERTER. CONTROL AS INDICATED ON PLANS.

EM "EM" INDICATES EMERGENCY WHERE SYMBOL HATCHING IS UNCLEAR

BP# EMER BATTERY UNIT WITH NO HEADS, MT 7'-6"AFF
BP# INDICATES BATTERY UNIT DESIGNATION, CONNECT TO UNSWITCHED PORTION OF AREA LIGHTING BRANCH CIRCUIT, U.N.O.

BP# EMER BATTERY UNIT WITH INTEGRAL HEADS, MT 7'-6"AFF
BP# INDICATES BATTERY UNIT DESIGNATION, CONNECT TO UNSWITCHED PORTION OF AREA LIGHTING BRANCH CIRCUIT, U.N.O.

BP# SINGLE REMOTE EMERGENCY LIGHT HEAD, MOUNT 7'-6"AFF
BP# INDICATES BATTERY UNIT CONNECTED TO

BP# DOUBLE REMOTE EMERGENCY LIGHT HEAD, MOUNT 7'-6"AFF
BP# INDICATES BATTERY UNIT CONNECTED TO

BP# DOUBLE REMOTE EMERGENCY LIGHT HEAD, CEILING MOUNTED
BP# INDICATES BATTERY UNIT CONNECTED TO

EXIT SIGN, CEILING MOUNTED, SHADING INDICATES FACE(S)
ARROWHEAD INDICATES CHEVRON(S) REQUIRED, CONNECT TO UNSWITCHED PORTION OF AREA LIGHTING BRANCH CIRCUIT, U.N.O.

EXIT SIGN, WALL MOUNTED, SHADING INDICATES FACE(S)
MOUNT AT 7'-6"AFF OR OVER DOOR, CONNECT TO UNSWITCHED PORTION OF AREA LIGHTING BRANCH CIRCUIT, U.N.O.

INV CENTRAL LIGHTING INVERTER

REFER TO LUMINAIRE SCHEDULE FOR FIXTURE LEGEND

TYPICAL FOR ALL FIXTURE TYPES:

R1 a # — INDICATES LUMINAIRE TYPE ON SCHEDULE; LOWER CASE LETTER INDICATES SWITCHING; INDICATES CIRCUIT NUMBER

7/2/2021 3:16:33 PM

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SEAL / SIGNATURE

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2021

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PROJECT NO	**20-20145.00-1**
DRAWN BY	**GMC**
CHECKED BY	**BTG**

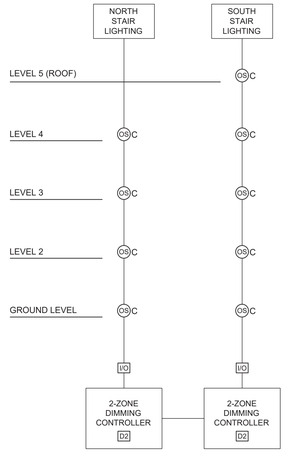
SHEET TITLE:

ELECTRICAL LEGEND AND ABBREVIATIONS

E-000

LIGHTING CONTROL DIAGRAM LEGEND & NOTES:

- D2 — 2-ZONE DIMMER CONTROLLER (WATTSTOPPER #LMRC-212)
- I/O — INPUT/OUTPUT INTERFACE MODULE (WATTSTOPPER #LMIO)
- QTD — EMERGENCY LIGHTING CONTROL UNIT (WATTSTOPPER #ELCU-200). PROVIDE (1) UNIT FOR EACH EMERGENCY CIRCUIT
- OS C — COLD TEMPERATURE WEATHERPROOF PASSIVE INFRARED OCCUPANCY SENSOR WITH MIDDLE AREA COVERAGE (WATTSTOPPER #FS-L3W)

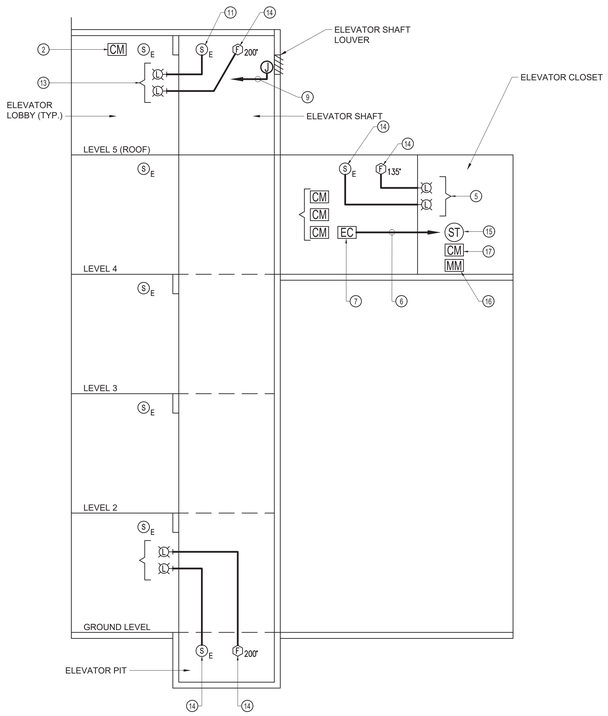


A2 — STAIR LIGHTING CONTROL DETAIL

DO NOT SCALE

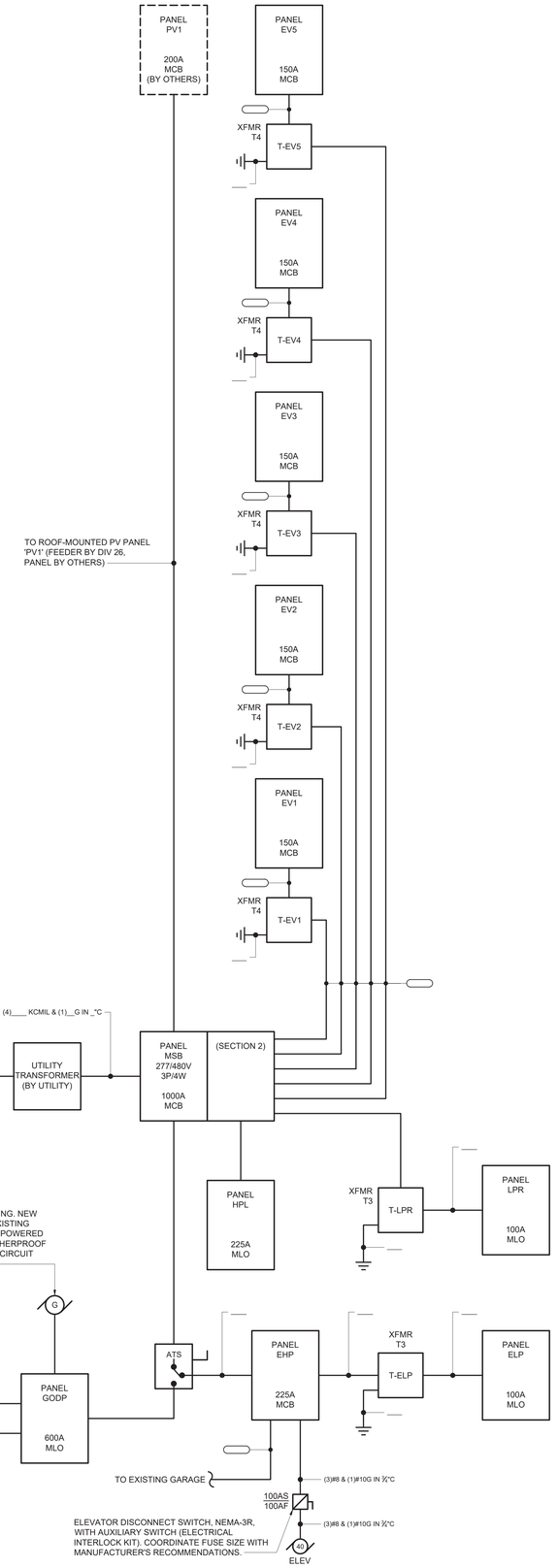
NOTES:

1. ELEVATOR MACHINE ROOM; REFER TO FLOOR PLANS FOR EXACT FLOOR LOCATION AND ADJACENCY (EG. TOP FLOOR, PENTHOUSE, FIRST FLOOR, BASEMENT)
2. FIRE ALARM CONTROL MODULE, RELAY AND WIRING PROVIDED FOR SENDING FIRE ALARM SYSTEM CONTROL SIGNAL TO OPEN ELEVATOR SHAFT LOUVER DURING A FIRE EVENT; REFER TO MECHANICAL PLANS FOR EXACT LOCATION AND CONTROL CIRCUIT INTEGRATION POINT. THE CONTROL MODULE SHALL BE LOCATED ABOVE CLOSEST ACCESSIBLE CEILING TO THE LOUVER CONTROL CIRCUIT INTEGRATION POINT. THE CONTROL WIRING FROM THE CONTROL MODULE TO THE LOUVER OPERATOR SHALL BE PERFORMED BY THE CONTRACTOR RESPONSIBLE FOR DIVISION 23 SCOPE. THE CONTROL MODULE SHALL BE PROGRAMMED TO RECEIVE A SIGNAL UPON ACTIVATION OF ANY FIRE ALARM DETECTION DEVICE WITHIN THE RESPECTIVE BUILDING.
3. SMOKE DETECTOR LOCATED WITHIN 21 FEET OF THE CENTERLINE OF EACH ELEVATOR DOOR (FOR LOBBY CEILINGS 15'-0" AFF OR LESS); REFER TO FLOOR PLAN FOR PROPOSED LOCATION AND QUANTITY OF DETECTORS IN RESPECTIVE ELEVATOR LOBBY.
4. "E" ON DETECTORS DENOTES THAT THE RESPECTIVE FIRE ALARM SYSTEM DETECTOR (UPON ACTIVATION) SHALL BE PROGRAMMED TO INITIATE THE REQUIRED ELEVATOR RECALL SEQUENCE.
5. REMOTE INDICATOR LIGHT(S) LOCATED OUTSIDE AND ABOVE THE RESPECTIVE ELEVATOR MACHINE ROOM DOOR. THE INDICATOR LIGHT SHALL BE ACTIVATED WHEN THE ASSOCIATED DETECTOR WITHIN THE ELEVATOR MACHINE ROOM ENTERS AN ALARM CONDITION.
6. POWER FEEDER TO ELEVATOR CONTROLLER (REFER TO POWER PLANS FOR SOURCE AND FEEDER SIZE)
7. ELEVATOR CONTROLLER; FURNISHED AND INSTALLED BY THE CONTRACTOR RESPONSIBLE FOR DIVISION 14 SCOPE.
8. PROVIDE THREE FIRE ALARM CONTROL MODULES, RELAYS AND WIRING FOR SENDING FIRE ALARM SYSTEM CONTROL SIGNAL TO THE ELEVATOR CONTROLLER; ONE TO ACTIVATE THE ELEVATOR RECALL SEQUENCE (PRIMARY LEVEL), THE SECOND TO ACTIVATE THE ELEVATOR RECALL SEQUENCE (ALTERNATE LEVEL), AND THE THIRD TO ACTIVATE THE ELEVATOR CAB WARNING SEQUENCE (FIREMAN'S HAT) . THE CONTROL WIRING FROM EACH MODULE TO THE ELEVATOR CONTROLLER SHALL BE PERFORMED BY THE CONTRACTOR RESPONSIBLE FOR DIVISION 14 SCOPE.
9. POWER BRANCH CIRCUIT TO ELEVATOR SHAFT LOUVER OPERATOR (REFER TO PLAN FOR SOURCE AND BRANCH CIRCUIT SIZE).
10. REFER TO POWER PLANS FOR REQUIRED ELEVATOR EQUIPMENT POWER AND MAINTENANCE POWER PROVISIONS.
11. SMOKE DETECTOR LOCATED AT THE TOP OF THE ELEVATOR SHAFT (EXACT LOCATION PER NFPA 72 STANDARDS).
12. SMOKE DETECTOR LOCATED AT THE ELEVATOR PIT (EXACT LOCATION PER NFPA 72 STANDARDS).
13. REMOTE INDICATOR LIGHT(S) LOCATED OUTSIDE AND ABOVE THE RESPECTIVE FLOOR ELEVATOR CAB DOOR. THE INDICATOR LIGHT SHALL BE ACTIVATED WHEN THE ASSOCIATED DETECTOR ENTERS AN ALARM CONDITION.
14. WHEN SPRINKLER HEADS ARE PRESENT IN THE ELEVATOR SHAFT, ELEVATOR PIT OR ELEVATOR MACHINE ROOM, LOCATE THE FIRE ALARM SYSTEM DETECTOR(S) WITHIN (2) FEET OF THE RESPECTIVE SPRINKLER HEAD.
15. SHUNT TRIP MODULE PROVIDED WITH THE RESPECTIVE ELEVATOR FEEDER CIRCUIT BREAKER FOR SHUTTING DOWN ELEVATOR POWER.
16. FIRE ALARM MONITOR MODULE, RELAY AND WIRING PROVIDED FOR RECEIVING FIRE ALARM SYSTEM MONITOR SIGNAL FROM THE ELEVATOR FEEDER SHUNT TRIP MODULE FOR VERIFYING THE SHUNT TRIP CONTROL POWER CIRCUIT IS FUNCTIONING PROPERLY. THE MONITOR MODULE SHALL BE PROGRAMMED TO SEND A SIGNAL (SUPERVISORY) IF THE CONTROL POWER CIRCUIT IS DE-ENERGIZED.
17. FIRE ALARM CONTROL MODULE, RELAY AND WIRING PROVIDED FOR SENDING FIRE ALARM SYSTEM CONTROL SIGNAL TO INITIATE THE ELEVATOR POWER SHUNT TRIP SEQUENCE. THE CONTROL MODULE SHALL BE PROGRAMMED TO RECEIVE A SIGNAL UPON ACTIVATION OF ANY HEAT DETECTOR LOCATED WITHIN THE ELEVATOR SHAFT, ELEVATOR PIT OR ELEVATOR MACHINE ROOM.
18. FIXED TEMPERATURE (135 DEGREE F) HEAT DETECTOR LOCATED IN THE ELEVATOR MACHINE ROOM.
19. FIXED TEMPERATURE (135 DEGREE F) HEAT DETECTOR LOCATED AT THE ELEVATOR PIT.
20. FIXED TEMPERATURE (190 DEGREE F) HEAT DETECTOR LOCATED AT THE TOP OF THE ELEVATOR SHAFT.
21. ALL HEAT DETECTORS WITHIN ELEVATOR SHAFT/PIT/MACHINE ROOM SHALL BE PROVIDED WITH TEMPERATURE AND RTI RATINGS THAT ARE LOWER THAN THE ASSOCIATED SPRINKLER HEAD.



A1 — FIRE ALARM CONTROL DIAGRAM FOR ELEVATOR WITH SHAFT/ MACHINE ROOM PROTECTION SPRINKLERS

DO NOT SCALE



A3 — POWER RISER DIAGRAM

DO NOT SCALE

UNIVERSITY OF SOUTHERN MAINE

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PREFERRED CONSTRUCTION MGMT
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PORTLAND, ME 04103

SEAL / SIGNATURE

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2021

PROJECT:

USM - Structured Parking Garage

Address

44 Bedford Street,
Portland ME 04104

REVISIONS:

No.	Date	Description

SUBMISSIONS:

Date	Issued For:
07/30/21	Site Plan Submittal

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DATE ISSUED	**07/30/2021**
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DRAWN BY	**GMC**
CHECKED BY	**BTG**

SHEET TITLE:

ELECTRICAL DETAILS

E-500

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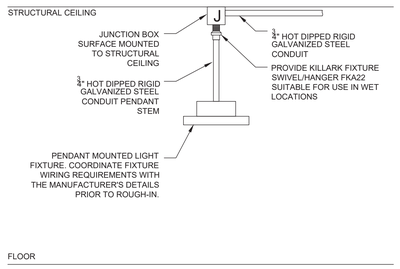
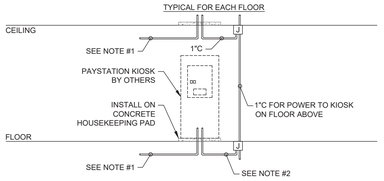


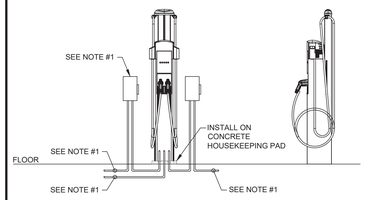
D2	CEILING MOUNTED GARAGE FIXTURE DETAIL
DO NOT SCALE	



NOTES:

1. PROVIDE (1) 1"C EMPTY CONDUIT WITH NYLON PULLSTRING BACK TO THE MAIN ELECTRICAL ROOM FOR EACH PAYSTATION KIOSK. TELECOMMUNICATIONS CABLING BY OTHERS. STUB CONDUIT UP TO 6" ABOVE FINISHED FLOOR AND CAP FOR FUTURE.
2. PROVIDE (1) 1"C EMPTY CONDUIT WITH NYLON PULLSTRING AND JUNCTION BOX AT EACH LEVEL FOR FUTURE POWER BRANCH CIRCUIT WIRING. STUB CONDUIT UP TO 6" ABOVE FINISHED FLOOR AND CAP FOR FUTURE. AT THE LOWER LEVEL, CONDUIT SHALL BE ROUTED BACK TO THE MAIN ELECTRICAL ROOM AND TERMINATED IN PANELBOARD 'RP2G'. CONDUITS SHALL BE MARKED FOR FUTURE PAYSTATION KIOSK.

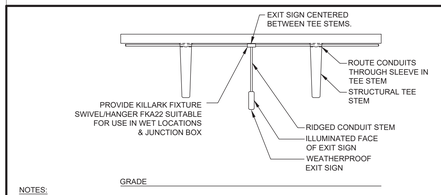
D3	PAYSTATION KIOSK DETAIL
DO NOT SCALE	



NOTES:

1. ELECTRICAL VEHICLE CHARGING SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH NEC 625. THE ELECTRICAL CONTRACTOR SHALL MEET ALL INSTALLATION REQUIREMENTS WHETHER INCORPORATED INTO THE MANUFACTURED ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE) OR PROVIDED SEPARATELY.
2. PROVIDE DISCONNECT IN A READILY ACCESSIBLE LOCATION FOR ELECTRIC VEHICLE CHARGING STATIONS 480/277V ONLY. DISCONNECT SHALL BE LOCKABLE OPEN TYPE IN ACCORDANCE WITH NEC 110.25. WHERE 208/120V (EVSE) IS UTILIZED, DISCONNECTING MEANS IS NOT REQUIRED.
3. PROVIDE (2) 1" HOT-DIPPED GALVANIZED RIGID STEEL POWER CONDUITS STUBBED UP 12"AFF AND TERMINATED IN WEATHERPROOF CAST JUNCTION BOX WITHIN THE (EVSE). PROVIDE LFMC WHIP CONNECTION TO EQUIPMENT TERMINATION POINT.
4. PROVIDE (1) 1" HOT-DIPPED GALVANIZED RIGID STEEL TELECOMMUNICATIONS CONDUITS STUBBED UP 12" AFF FOR COMMUNICATION CABLING FOR RFID OR CREDIT CARD EQUIPMENT. ROUTE CONDUIT TO TELECOMMUNICATIONS BACKBOARD/SERVER EQUIPMENT.

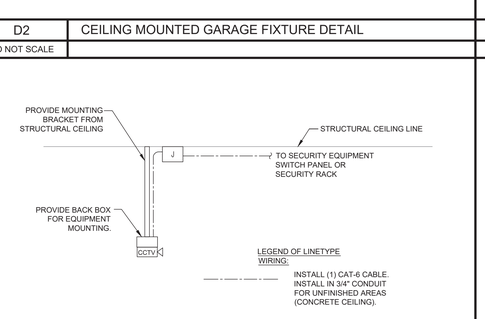
C4	ELECTRIC VEHICLE CHARGING SYSTEM
DO NOT SCALE	



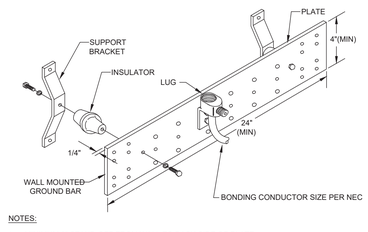
NOTES:

1. EXIT SIGNS SHALL BE INSTALLED SUCH THAT THE FACE OF THE EXIT SIGN IN THE PRIMARY DIRECTION OF EGRESS (SHORTEST PATH TO EGRESS DOOR) IS FACING OUT AND AWAY FROM THE STRUCTURAL TEE STEM.
2. EXIT SIGN SHALL BE INSTALLED SUCH THAT THE BOTTOM OF THE EXIT SIGN IS A MINIMUM OF 7'-2" ABOVE FINISHED FLOOR WHERE LOCATED IN THE GARAGE DRIVE LANE OR PARKING STALL.
3. WHERE EXIT SIGNS ARE PROTECTED FROM VEHICULAR DAMAGE VIA BOLLARDS, PARKING STOPPERS, STRUCTURAL MEMBERS, ETC. THE SIGNAGE SHALL BE PENDANT MOUNTED TO TOP OF EXIT SIGN FLUSH WITH THE BOTTOM OF THE TEE STEM (I.E. ELEVATOR LOBBY, STAIR LOBBY, ETC.)

C1	EXIT SIGN GARAGE AREA MOUNTING DETAIL
DO NOT SCALE	



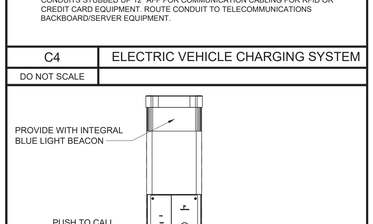
C2	CAMERA MOUNTING DETAIL
DO NOT SCALE	



NOTES:

1. MINIMUM 2" STAND-OFF FROM WALL TO BACK SIDE OF PLATE

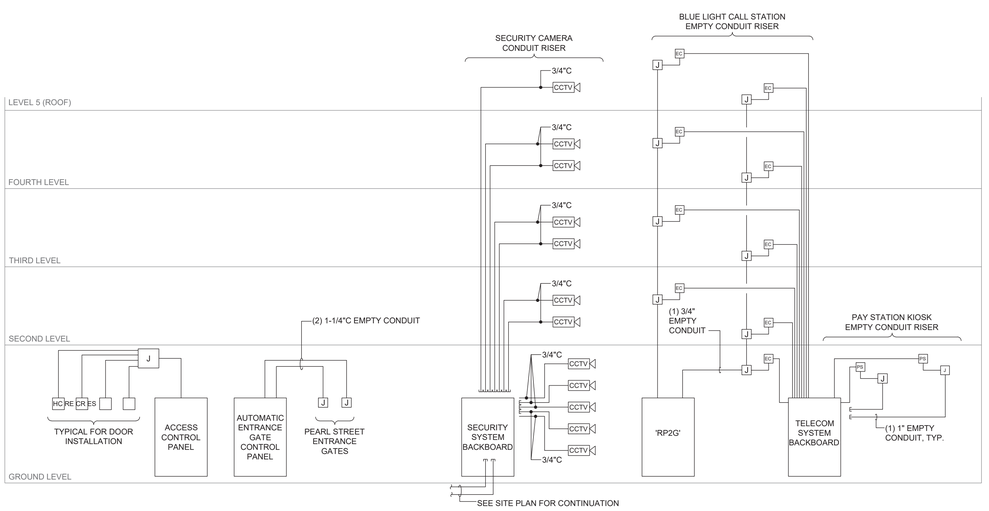
C3	GROUND BAR DETAIL
DO NOT SCALE	



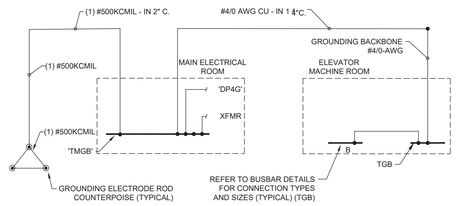
NOTES:

1. COORDINATE INSTALLATION DETAILS WITH MANUFACTURER'S INSTRUCTIONS.
2. PROVIDE (1) 3/4"C EMPTY CONDUIT WITH NYLON PULLSTRING BACK TO THE MAIN ELECTRICAL ROOM FOR EACH EMERGENCY PHONE STATION. TELECOMMUNICATIONS CABLING BY OTHERS.

B4	CALLSTATION WITH BLUE LIGHT
DO NOT SCALE	



A1	CONDUIT RISER DIAGRAM
DO NOT SCALE	



B3	GROUNDING RISER DIAGRAM
DO NOT SCALE	

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2021

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USM - Structured Parking Garage

Address

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REVISIONS:

No.	Date	Description

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Date	Issued For:
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CHECKED BY	**BTG**

SHEET TITLE:

ELECTRICAL DETAILS

E-501

LUMINAIRE SCHEDULE

TYPE	DESCRIPTION	MFR	CATALOG SERIES NUMBER SEE NOTE 1	MOUNTING, U.N.O.	VOLTS	LAMP				KEY NOTES
						QTY PER FIXTURE	WATTS	LUMENS	TYPE	
G	LED PARKING GARAGE LIGHT	LITHONIA	VCPG-LED-V4-P4-40K-70CRI-___-MVOLT-PM	PENDANT	UNV	1	56	____	LED ARRAY ~ 4000K	
B	LED STRIP LIGHT	LITHONIA	FEM-L48-4000LM-LPPFL-WD-MVOLT-GZ10-40K-80CRI	SURFACE	UNV	1	30	4,257	LED ARRAY ~ 4000K	
GP	GARAGE ROOF LED LIGHT AND POLE	LITHONIA	LIGHT: RSX1-LED-P3-40K-R5-MVOLT-SPA POLE: SSS-14-4C-DM19AS	SURFACE	UNV	1	109	14,397	LED ARRAY ~ 4000K	
EXIT	EXIT SIGN, AC ONLY	LITHONIA	LV-S-W-*-R	SEE PLAN	UNV	1		PER CODE	LED ARRAY	3,6
P1	SITE LIGHT AND POLE, "ICE CREAM CONE" SHAPE	SEE NOTE 8		14' POLE	277	1	24	3,330	LED ARRAY ~ 4000K	8,9
P2	SITE LIGHT AND POLE, "SHOEBOX" SHAPE	SEE NOTE 8		14' POLE	277	1	18	2,160	LED ARRAY ~ 4000K	8,10
SW1	WALL MOUNTED EXTERIOR LIGHT	LITHONIA	KAXW-LED-P1-40K-R4-MVOLT	KEYNOTE 5	UNV	1	29	3,643	LED ARRAY ~ 4000K	5
SR1	RECESSED CANOPY LIGHT	LITHONIA	LDN4SQ-40-07-LS4-AR-LSS-MVOLT	RECESSED CANOPY	UNV	1	8.6	620	LED ARRAY ~ 4000K	

	NOTES
1	**NOTE THAT THESE NUMBERS ARE NOT COMPLETE CATALOG NUMBERS. PROVIDE ALL REQUIREMENTS ON SCHEDULE, NOTES, SPECS, AND DRAWINGS COMBINED.**
2	**CATALOG SERIES NUMBERS ARE USED TO ESTABLISH A LEVEL OF QUALITY AND NOT INTENDED TO LIMIT COMPETITION. SERIES NUMBERS ARE NOT COMPLETE CATALOG NUMBERS. COMPLY WITH ADDITIONAL REQUIREMENTS IN SPECIFICATIONS AND DRAWINGS.**
3	PROVIDE WALL,CEILING, OR PENDANT MOUNTING AS INDICATED ON PLANS. PROVIDE NUMBER OF FACES AND ARROWS AS INDICATED.
4	VERIFY CEILING STRUCTURE AND MOUNTING HEIGHT PRIOR TO ORDERING ANY LIGHT FIXTURES.
5	COORDINATE MOUNTING HEIGHT WITH STRUCTURAL AND ARCHITECTURAL DRAWINGS.
6	PROVIDE COLD WEATHER OPTION.
7	CONFIRM EXACT FIXTURE CONFIGURATION AND OPTIONS WITH MUNICIPALITY PRIOR TO ORDERING FIXTURE.
8	FIXTURE AND POLE SHALL BE PROVIDED BY OWNER FROM EXISTING OWNER'S STOCK.
9	PROVIDE SCREW-IN LED RETROFIT LAMP. BASIS OF DESIGN IS MFG. BY LIGHT EFFICIENT DESIGN, PART NO. LED-8029E345-A.
10	PROVIDE SCREW-IN LED RETROFIT LAMP. BASIS OF DESIGN IS MFG. BY LIGHT EFFICIENT DESIGN, PART NO. LED-8039E40-A.

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2021

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SHEET TITLE:

ELECTRICAL SCHEDULES

E-600

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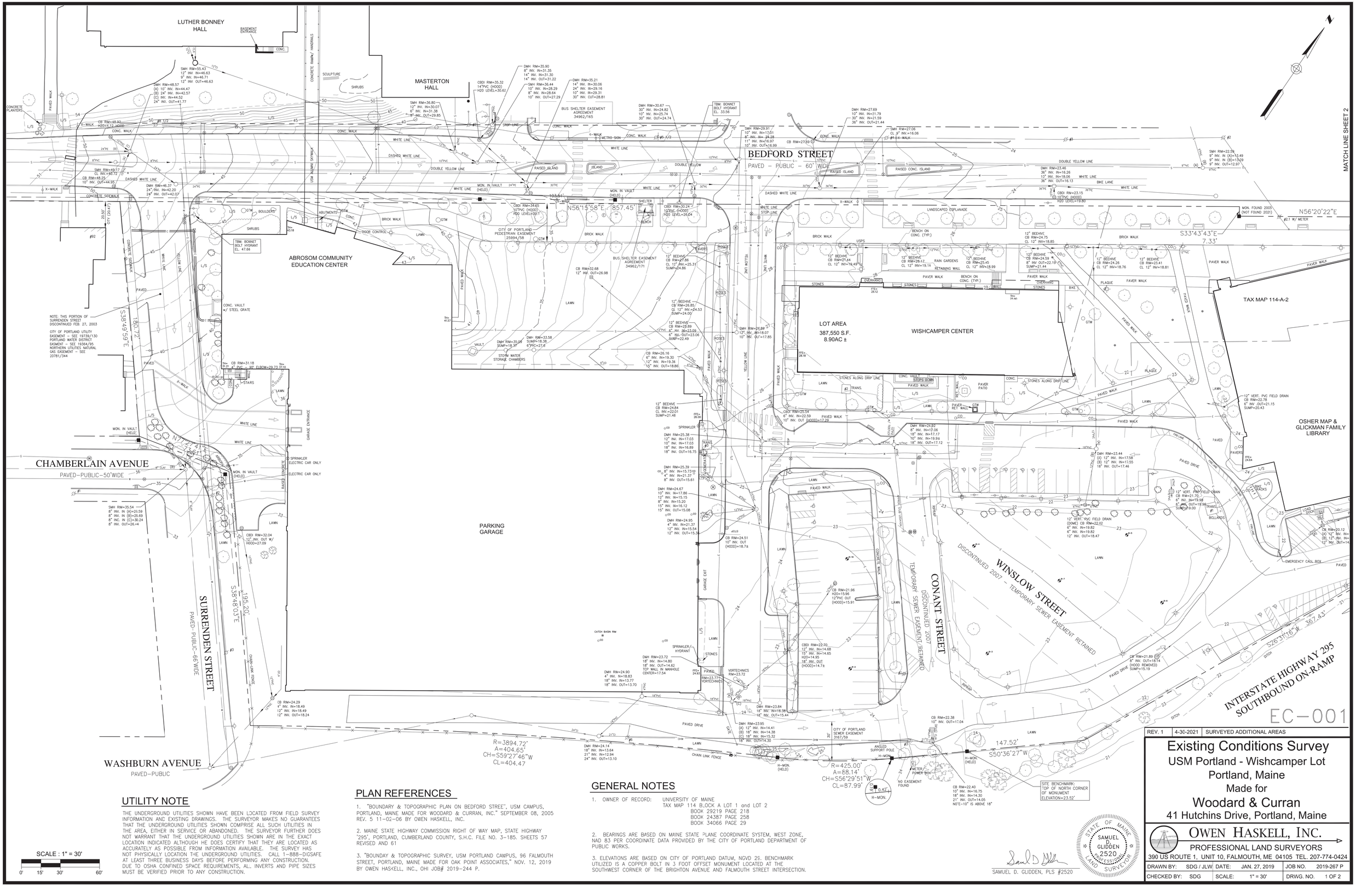


UTILITY NOTE

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEY HAS NOT PHYSICALLY LOCATION 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.

PLAN REFERENCES

1. "BOUNDARY & TOPOGRAPHIC PLAN ON BEDFORD STREET, USM CAMPUS, PORTLAND, MAINE MADE FOR WOODARD & CURRAN, INC." SEPTEMBER 08, 2005 REV. 5 11-02-06 BY OWEN HASKELL, INC.

2. MAINE STATE HIGHWAY COMMISSION RIGHT OF WAY MAP, STATE HIGHWAY '295', PORTLAND, CUMBERLAND COUNTY, S.H.C. FILE NO. 3-185. SHEETS 57 REVISED AND 61

3. "BOUNDAY & TOPOGRAPHIC SURVEY, USM PORTLAND CAMPUS, 96 FALMOUTH STREET, PORTLAND, MAINE MADE FOR OAK POINT ASSOCIATES," NOV. 12, 2019 BY OWEN HASKELL, INC., OHI JOB# 2019-244 P.

GENERAL NOTES

1. OWNER OF RECORD: UNIVERSITY OF MAINE
TAX MAP 114 BLOCK A LOT 1 and LOT 2
BOOK 29219 PAGE 218
BOOK 24387 PAGE 258
BOOK 34066 PAGE 29

2. BEARINGS ARE BASED ON MAINE STATE PLANE COORDINATE SYSTEM, WEST ZONE, NAD 83 PER COORDINATE DATA PROVIDED BY THE CITY OF PORTLAND DEPARTMENT OF PUBLIC WORKS.

3. ELEVATIONS ARE BASED ON CITY OF PORTLAND DATUM, NGVD 29. BENCHMARK UTILIZED IS A COPPER BOLT IN 3 FOOT OFFSET MONUMENT LOCATED AT THE SOUTHWEST CORNER OF THE BRIGHTON AVENUE AND FALMOUTH STREET INTERSECTION.

SAMUEL D. GLIDDEN, PLS #2520

REV.	DATE	DESCRIPTION
1	4-30-2021	SURVEYED ADDITIONAL AREAS

Existing Conditions Survey

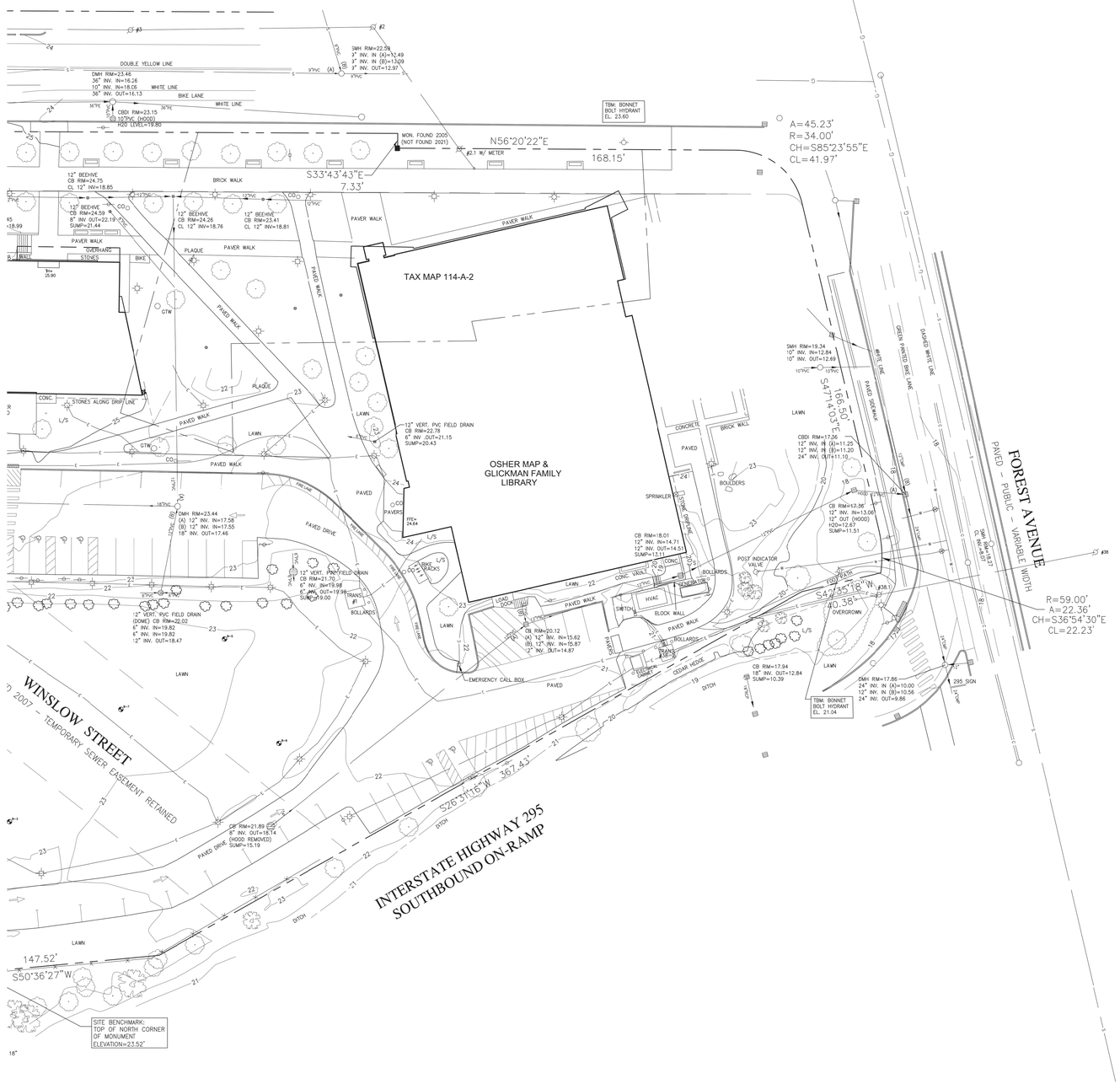
USM Portland - Wishcamper Lot
Portland, Maine
Made for
Woodard & Curran
41 Hutchins Drive, Portland, Maine

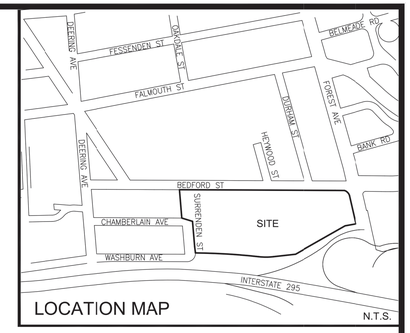
OWEN HASKELL, INC.
PROFESSIONAL LAND SURVEYORS
390 US ROUTE 1, UNIT 10, FALMOUTH, ME 04105 TEL. 207-774-0424

DRAWN BY: SDG / JLW	DATE: JAN. 27, 2019	JOB NO. 2019-267 P	
CHECKED BY: SDG	SCALE: 1" = 30'	DRWG. NO. 1 OF 2	

EC-001

MATCH LINE SHEET 1





LOCATION MAP N.T.S.

LEGEND

- IRON PIPE OR ROD FOUND
- MONUMENT FOUND
- UTILITY POLE
- MANHOLE
- ELECTRIC/GAS METER
- SIGN
- CATCH BASIN
- HYDRANT
- WATER VALVE OR SHUTOFF
- GAS VALVE
- LIGHT POLE
- DECIDUOUS TREE
- CONIFEROUS TREE
- SHRUB / BUSH
- GTW GEOTHERMAL WELL
- ELECTRICAL JUNCT. BOX
- FENCE
- CURB
- OVERHEAD WIRES
- E UNDERGROUND POWER
- C COMMUNICATION
- W WATER LINE
- G GAS LINE
- T TELEPHONE
- SD STORM DRAIN
- SS SANITARY SEWER
- STM STEAM LINE

IPF/IRF	IRON PIPE OR ROD FOUND
L/S	LANDSCAPED AREA
CONC.	CONCRETE
FFE	FINISHED FLOOR ELEVATION
THRES.	THRESHOLD
N/F	NOW OR FORMERLY
000/000	DEED BOOK / PAGE

UTILITY NOTE

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SCALE : 1" = 30'

0' 15' 30' 60'

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SAMUEL D. GLIDDEN, PLS #2520

STATE OF MAINE · SAMUEL D GLIDDEN · 2520 · PROFESSIONAL LAND SURVEYOR

EC-002

REV. 1	4-30-2021	SURVEYED ADDITIONAL AREAS

Existing Conditions Survey

USM Portland - Wishcamper Lot
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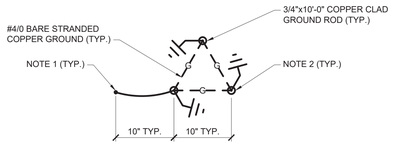
DRAWN BY: SDG / JLW	DATE: JAN 27, 2019	JOB NO.	2019-267 P
CHECKED BY: SDG	SCALE: 1" = 30'	DRWG. NO.	2 OF 2

OH	OVERHEAD WIRING, TYPE AS INDICATED
	UNDERGROUND OR UNDERSLAB WIRING, TYPE AS INDICATED
	UTILITY POLE
	FUSED DISCONNECT SWITCH
	NON-FUSED DISCONNECT SWITCH
	MOTOR
	GROUNDING SYSTEM
J	JUNCTION BOX, WALL MOUNTED
J	JUNCTION BOX, IN-GROUND
M	ELECTRICAL MANHOLE, COORDINATE LOCATION WITH OTHER UNDERGROUND UTILITIES
T	COMMUNICATIONS MANHOLE, COORDINATE LOCATION WITH OTHER UNDERGROUND UTILITIES
T / P S / F	PADMOUNT TRANSFORMER ~ F= FRONT
PB	4'X6' PULL BOX WITH 32" COVER PLATE IN ACCORDANCE WITH UTILITY STANDARDS
P	PEDESTAL LOCATION, PEDESTAL BY SERVICE PROVIDER, STUB UP (2) 2" CONDUITS WITH CONNECTORS AND BUSHINGS FROM HANDHOLE
H	HANDHOLE, MINIMUM 18"x36"x24", SIZE PER NEC FOR NUMBER OF CONDUITS INSTALLED
M	METER & CT CABINET, PEDESTAL MOUNTED
	SINGLE POLE MOUNTED LIGHT
	DOUBLE POLE MOUNTED LIGHT
	WALL MOUNTED LIGHT FIXTURE
	SINGLE POLE HOMERUN: (2)#12+(1)#12G UNO, CONNECT TO PANEL INDICATED
	SINGLE-PHASE HOMERUN OR MULTIPLE HOMERUN UTILIZING THE SAME CONDUIT, CONNECT TO PANEL INDICATED
	3-PHASE HOMERUN OR MULTIPLE HOMERUN UTILIZING THE SAME CONDUIT, CONNECT TO PANEL INDICATED
A1 / ES-000	DETAIL CALL-OUT
A1 / ES-000	SECTION/ELEVATION CALL-OUT

B1 ELECTRICAL SITE LEGEND

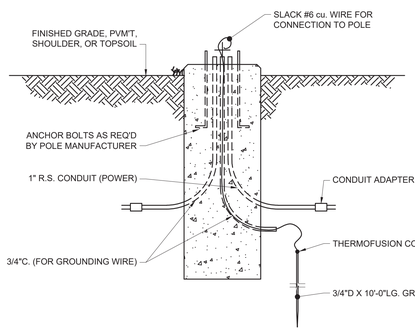


NOTES:

1. RUN #4/0 BARE STRANDED CU GROUND CABLE DOWN IN 1" PVC CONCEALED UNDER ROOF, CEILING AND WALLS. TYPICAL FOR ALL DOWNERS OUT TO GROUNDING COUNTERPOISE.
2. COPPER CLAD STEEL GROUND RODS 3/4"x10'-0", TOP OF RODS BURIED 2'-0" BELOW TOP OF FINISHED GRADE.

A3 GROUNDING ROD DETAILS

DO NOT SCALE

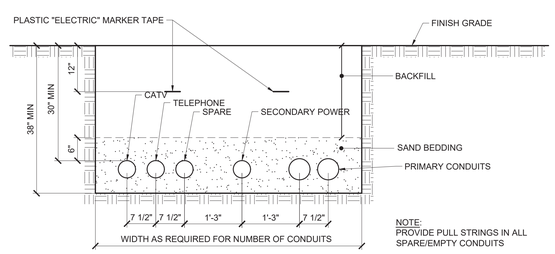


NOTES:

1. LIGHT POLE FOUNDATION SHALL BE PROVIDED BY DIVISION 2. ELECTRICAL SUBCONTRACTOR SHALL FURNISH CONDUITS, AND ANCHOR BOLTS TO CIVIL CONTRACTOR FOR CASTING INTO POLE BASE. THIS DETAIL REFERS TO SITE PARKING LOT AND ROAD LIGHTING FIXTURES ONLY. SEE CIVIL DRAWINGS FOR CONSTRUCTION INFORMATION.
2. ELECTRICAL CONTRACTOR SHALL INSTALL GROUND ROD AND PULL GROUNDING WIRE.

A2 SITE LIGHTING POLE BASE DETAIL

DO NOT SCALE

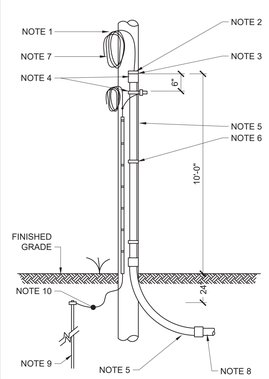


NOTE:
PROVIDE PULL STRINGS IN ALL SPARE/EMPTY CONDUITS

DETAIL INDICATES TYPICAL SPACING BETWEEN CONDUITS OF VARIOUS SYSTEMS, REFER TO SITE PLAN FOR SIZES AND NUMBER OF CONDUITS

A1 TYPICAL SEPARATION OF UTILITIES

DO NOT SCALE



NOTES:

1. PRIMARY CABLES TO BE INSTALLED BY UTILITY COMPANY.
2. CONDUIT SEAL BY CONTRACTOR.
3. INSULATING BUSHING.
4. GALVANIZED STEEL CONDUIT AND BEND SHALL BE GROUNDED BY BONDING TO APPROVED GROUND CLAMP 6" FROM TOP OF THE CONDUIT. A CONDUCTOR OF SUFFICIENT LENGTH SHALL BE PROVIDED TO EXTEND TO UTILITY COMPANY SECONDARY NEUTRAL.
5. PROVIDE 2-4" GALVANIZED STEEL CONDUITS. 2 TOTAL 10 FEET CONDUITS SHALL RISE ON THE SIDE OF THE POLE AWAY FROM THE ROAD, AND SPARE CONDUITS SHALL BE CAPPED 6" ABOVE GRADE.
6. PIPE STRAPS, INSTALL AT NOT MORE THAN 30" INTERVALS.
7. CONTRACTOR TO SEAL CABLE ENDS TO PREVENT ENTRANCE OF MOISTURE.
8. ADAPTER COUPLING STEEL TO PVC.
9. GROUND ROD - 3/4"D.x10'-0" LONG. INSTALL MINIMUM 3 FEET FROM THE POLE.
10. PROVIDE #4cu. GROUND WIRE.

B1 RISER POLE CONDUIT DETAIL

DO NOT SCALE

7/2/2021 3:16:33 PM

UNIVERSITY OF SOUTHERN MAINE

25 Bedford Street, Portland, ME 04104
207.712.5183 | USM.MAINE.EDU

PROJECT TEAM:

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UNIVERSITY OF SOUTHERN MAINE

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WOODARD & CURRAN
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LANDSCAPE ARCHITECT
MICHAEL BOUCHER LANDSCAPE ARCHITECTURE
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MEP/FP ENGINEER
ALLIED ENGINEERING
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GEOTECHNICAL ENGINEER
S.W. COLE
286 PORTLAND ROAD
GREY, ME 04039

TRAFFIC ENGINEER
VANASSE HANGEN BRUSTLIN INC
40 IDX DR 100 #200, SOUTH
BURLINGTON, VT 05403

COST ESTIMATOR
PREFERRED CONSTRUCTION MGMT
94 AUBURN ST,
PORTLAND, ME 04103

SEAL / SIGNATURE

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PROJECT:

USM - Structured Parking Garage

Address

44 Bedford Street,
Portland ME 04104

REVISIONS:

No.	Date	Description

SUBMISSIONS:

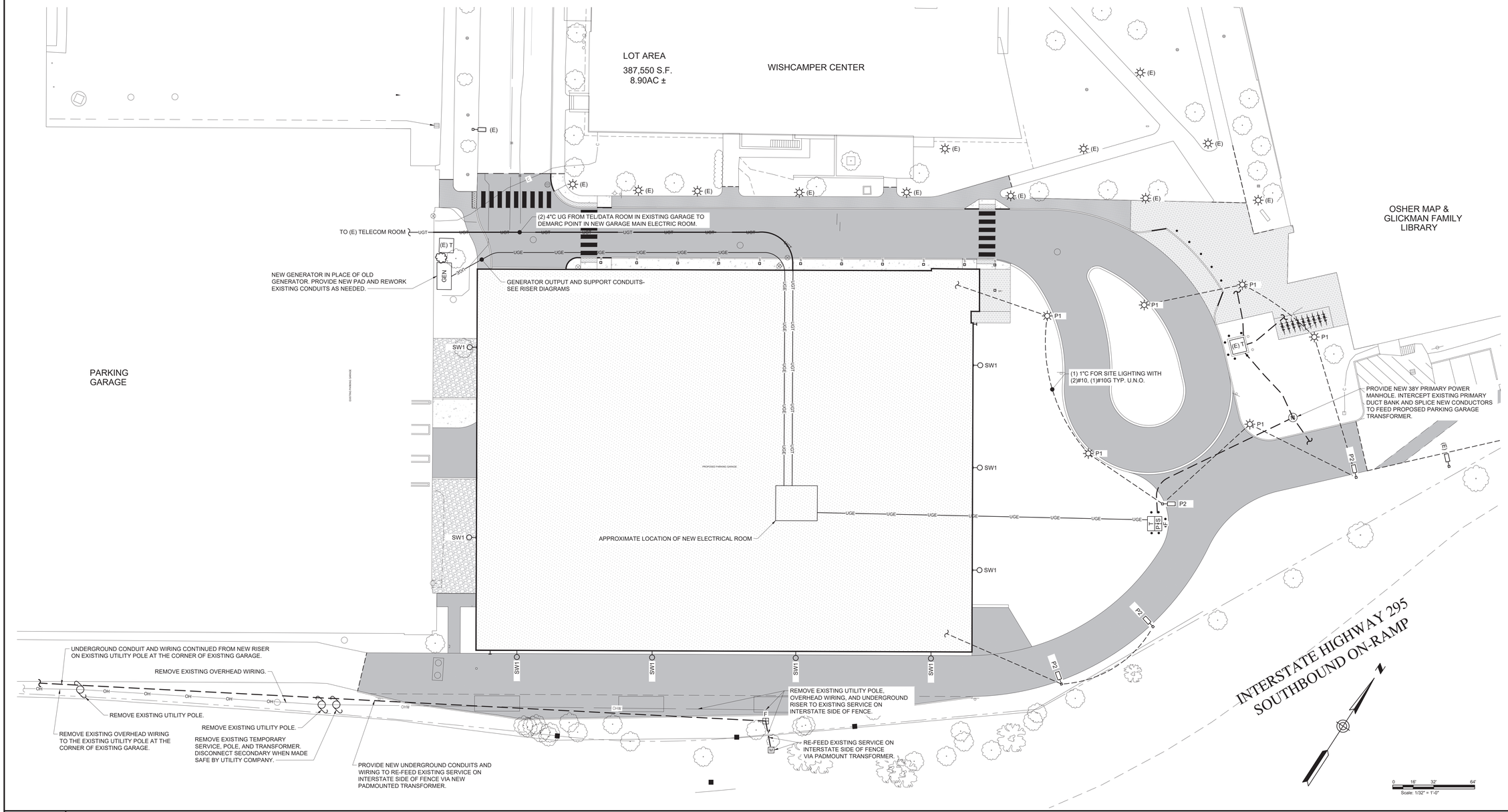
Date	Issued For:
07/30/21	Site Plan Submittal

SCALE	**AS NOTED**
DATE ISSUED	**07/30/2021**
PROJECT NO	**20-20145.00-1**
DRAWN BY	**GMC**
CHECKED BY	**BTG**

SHEET TITLE:

ELECTRICAL SITE LEGEND, DETAILS, AND NOTES

ES-000



A1	ELECTRICAL SITE PLAN
SCALE: 1"=20'-0"	

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UNIVERSITY OF SOUTHERN MAINE

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2021

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PROJECT NO	**20-20145.00-1**
DRAWN BY	**GMC**
CHECKED BY	**BTG**

SHEET TITLE:

ELECTRICAL SITE PLAN AND NOTES

ES-100

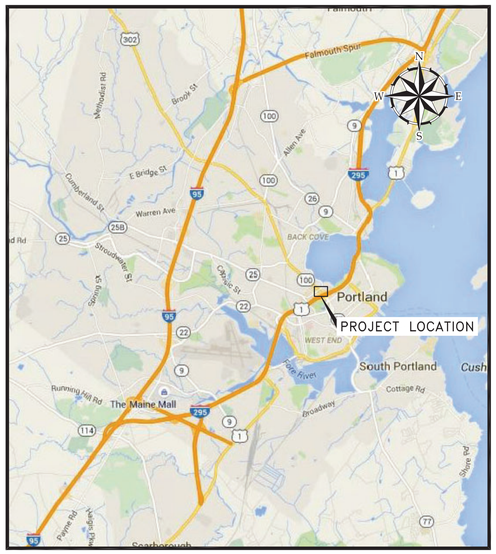
UNIVERSITY OF SOUTHERN MAINE
PORTLAND, MAINE

USM STRUCTURED PARKING GARAGE

PROJECT NO.
0233035.00

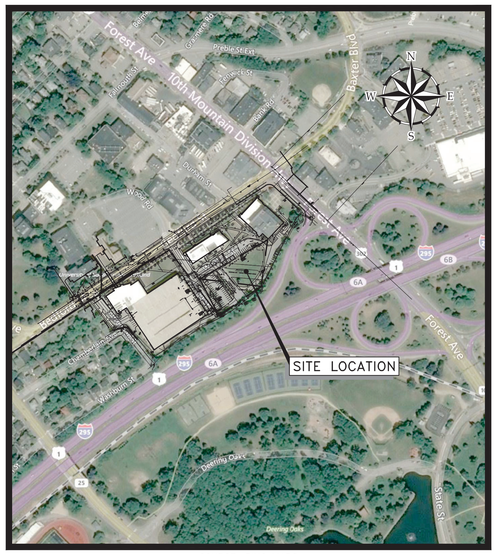
7/30/2021

SHEET INDEX		
Sheet Number	Sheet Title	Sheet Description
COVER	G-000	
1	G-001	GENERAL NOTES & LEGEND
2	EC-001	EXISTING CONDITIONS SURVEY -1
3	EC-002	EXISTING CONDISITONS SURVEY - 2
4	C-001	DEMOLITION & EROSION & SEDIMENT CONTROL PLAN
5	C-100	SITE LAYOUT & MATERIALS PLAN
6	C-101	UTILITY & GRADING PLAN
7	D-200	CIVIL DETAILS - 1
8	D-201	CIVIL DETAILS - 2
9	D-202	CIVIL DETAILS - 3
10	D-203	CIVIL DETAILS - 4
11	D-204	CIVIL DETAILS - 5



PROJECT LOCATION MAP

1 0 1 2
scale mile



SOURCE: BING MAPS

SITE LOCATION MAP

600 0 300 600
scale feet

41 Hutchins Drive
Portland, Maine 04102
800.426.4262 | www.woodardcurran.com

COMMITMENT & INTEGRITY DRIVE RESULTS

\\woodardcurran.net\shared\Projects\0233035.00 usm - falmouth street garage\wip\Drawings\General\0233035.00 G000.dwg, Jul 29, 2021 - 2:58pm BMCDEVITT

GENERAL NOTES:

1. EXISTING CONDITIONS SHOWN HEREON HAVE BEEN PROVIDED FROM A FIELD SURVEY PREPARED BY OWEN HASKELL, INC TITLED "EXISTING CONDITIONS SURVEY – USM PORTLAND – WISHCAMPER LOT – PORTLAND MAINE", DATED JANUARY 27, 2019 AND REVISED WITH ADDITIONAL SURVEY ON APRIL 30, 2021.
2. ELEVATIONS ARE BASED ON CITY OF PORTLAND DATUM, NGVD 29.
3. BEARING ARE BASED ON MAINE STATE PLANE COORDINATE SYSTEM, WEST ZONE, NAD 83 PER COORDINATE DATA PROVIDED BY THE CITY OF PORTLAND DEPARTMENT OF PUBLIC WORKS..
4. EXISTING UTILITIES SHOWN ON THESE PLANS WERE COMPILED FROM A FIELD SURVEY PREPARED BY OWEN HASKELL, INC. THESE PLANS DO NOT NECESSARILY DEPICT THE EXACT LOCATIONS OF ALL UTILITIES, WHICH MAY EXIST AT THIS TIME WITHIN THE SURVEY LIMITS. THERE MAY BE EXISTING LINES OTHER THAN THOSE INDICATED. THE LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES SHALL BE CONSIDERED APPROXIMATE AND MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO ANY UTILITY CONNECTIONS OR CROSSINGS OF PROPOSED OR EXISTING UTILITIES. THE CONTRACTOR SHALL REPORT ANY DISCREPANCIES TO THE ENGINEER IN WRITING. THE CONTRACTOR SHALL CONTACT THE RESPECTIVE UTILITY COMPANIES RELATIVE TO THE LOCATIONS AND ELEVATIONS OF THESE LINES. NO SEPARATE OR ADDITIONAL COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR DUE TO ANY VARIANCE BETWEEN THE DATA SHOWN ON THE PLANS AND ACTUAL FIELD CONDITIONS ENCOUNTERED. THE CONTRACTOR IS RESPONSIBLE FOR HIS/HER OWN DETERMINATION AS TO THE TYPE AND LOCATION OF THE EXISTING UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE AND TO FACILITATE THE PROPOSED CONNECTION(S).
5. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RELOCATIONS THAT CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE SITE DRAWINGS, INCLUDING BUT NOT LIMITED TO ALL UTILITIES, STORM INFRASTRUCTURE, SIGNS, UTILITY POLES, FENCES, ETC. AS REQUIRED. ALL WORK SHALL BE IN ACCORDANCE WITH THE GOVERNING AUTHORITY'S SPECIFICATIONS AND SHALL BE APPROVED BY SUCH. ALL COSTS SHALL BE INCURRED BY THE CONTRACTOR.
6. THE CONTRACTOR SHALL CALL "DIG SAFE" (811) AT LEAST 72 HOURS PRIOR TO EXCAVATION IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL SAFETY CODES.
7. LAND OUTSIDE THE PROPOSED LIMIT OF WORK SHALL NOT BE DISTURBED BY THE CONTRACTOR.
8. PRIOR TO CONSTRUCTION, THE ENGINEER AND CONTRACTOR WILL REVIEW THE PERMITTED LIMITS OF WORK.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING ALL CONTROL POINTS AND BENCH MARKS NECESSARY FOR THE WORK.
10. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL SAFETY CODES, REGULATIONS, LEGAL REQUIREMENTS, PERMIT CONDITIONS, ETC.
11. THE CONTRACTOR SHALL TAKE ADEQUATE PRECAUTIONS TO PROTECT ALL WALKS, STREETS, PAVEMENTS, CURBING, TREES, PLANTINGS, LAWN, FENCING TO REMAIN ON OR OFF THE PREMISES, AND SHALL REPAIR AND REPLACE AT HIS/HER OWN EXPENSE, AS DIRECTED BY THE ENGINEER, ANY ITEMS DAMAGED AS A RESULT OF THE CONTRACTOR'S WORK.
12. THE CONTRACTOR SHALL PROVIDE ADEQUATE BRACING AND SHORING OF ALL EXCAVATIONS IN ACCORDANCE WITH THE REQUIREMENTS OF ALL GOVERNING CODES AND REGULATIONS.
13. WORK WITHIN PUBLIC RIGHT–OF–WAY SHALL COMPLY WITH APPLICABLE MUNICIPAL AND STATE REQUIREMENTS.
14. IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY.
15. IF IMPORTED FILL MATERIAL IS REQUIRED, IT SHALL BE CERTIFIED IN WRITING BY A STATE LICENSED PROFESSIONAL ENGINEER AS NON–CONTAMINATED, CLEAN FILL SUITABLE FOR THE INTENDED USE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TESTING OF ENVIRONMENTAL PARAMETERS AS OUTLINED IN THE PROJECT SPECIFICATIONS.
16. RESTORE ALL AREAS DISTURBED BY CONTRACTOR'S OPERATIONS TO ORIGINAL FINISH (GRAVEL, PAVEMENT, RIPRAP, GRASS, ETC.) UNLESS OTHERWISE NOTED ON PLANS. RESTORATION OF ALL AREAS DAMAGED BY CONTRACTOR SHALL BE INCIDENTAL TO THE PROJECT.
17. ALL CURB DAMAGED DURING CONSTRUCTION SHALL BE REPLACED IN KIND AND SHALL CONFORM TO SPECIFICATIONS. COST IS INCIDENTAL TO CONTRACT.
18. PROPERLY PROTECT AND DO NOT DISTURB PROPERTY IRONS, MONITORING WELLS, AND MONUMENTS. IF DISTURBED, THE PROPERTY MONUMENT WILL BE RESET AT THE CONTRACTOR'S EXPENSE BY A REGISTERED LAND SURVEYOR APPROVED BY THE ENGINEER.
19. ALL MATERIAL SHALL BE FURNISHED BY CONTRACTOR UNLESS OTHERWISE NOTED.
20. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF ALL DIMENSIONS PRIOR TO START OF CONSTRUCTION.
21. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY CONSTRUCTION PERMITS SO AS NOT TO DELAY CONSTRUCTION.
22. ALL SIGNAGE SHALL CONFORM WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
23. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL CONDITIONS OF THE LOCAL/ STATE/ FEDERAL PERMITS.
24. 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.
25. DO NOT PARK, IMPEDE ACCESS TO, OR STORE EQUIPMENT ON ADJACENT CITY OR PRIVATELY OWNED LOTS, UNLESS PERMISSION HAS BEEN GRANTED IN ADVANCE IN WRITING BY CITY AND/OR LAND OWNER
26. PRIOR TO CONSTRUCTION, A PRECONSTRUCTION MEETING SHALL BE HELD AT THE PROJECT SITE WITH THE CONTRACTOR, ENGINEER, CITY OF PORTLAND DEVELOPMENT REVIEW COORDINATOR, CITY OF PORTLAND DEPARTMENT OF PUBLIC WORKS REPRESENTATIVE, AND OWNER TO REVIEW THE CONSTRUCTION SCHEDULE AND CRITICAL ASPECTS OF THE SITE WORK. AT THAT TIME, THE SITE/BUILDING CONTRACTOR SHALL PROVIDE THREE (3) COPIES OF A DETAILED CONSTRUCTION SCHEDULE TO THE ATTENDING CITY REPRESENTATIVE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ARRANGE A MUTUALLY AGREEABLE TIME FOR THE PRECONSTRUCTION MEETING.
27. CONTRACTOR SHALL PROVIDE AND MAINTAIN EROSION AND SEDIMENTATION CONTROL MEASURES IN ACCORDANCE WITH THESE PLANS AND THE LATEST EDITION OF THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION'S BEST MANAGEMENT PRACTICES MANUAL. KEEP ALL STREETS FREE OF DUST, MUD, AND DEBRIS. STREETS AND WALKWAYS SHALL BE SWEPT REGULARLY, AND TEMPORARY CONSTRUCTION ENTRANCES SHALL BE UTILIZED DURING CONSTRUCTION.
28. CONTRACTOR IS REQUIRED TO PERFORM ALL WORK IN ACCORDANCE WITH REQUIREMENTS OUTLINED WITHIN THE MAINE CONSTRUCTION GENERAL PERMIT. CONTRACTOR SHALL FILE A NOTICE OF TERMINATION WITH PHOTOGRAPHS AND REQUIRED ATTACHMENTS TO THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION UPON COMPLETION OF THE PROJECT. A DRAFT OF THE NOTICE WILL BE PROVIDED TO THE OWNER AND THE OWNER'S REPRESENTATIVE FOR REVIEW PRIOR TO SUBMISSION. A COPY OF THE NOTICE CAN BE OBTAINED AT WWW.MAINE.GOV/DEP/LAND/STORMWATER/CONSTRUCTION.HTML
29. CONTRACTOR SHALL MAINTAIN EROSION CONTROL AND STORMWATER POLLUTION PREVENTION SYSTEMS IN COMPLIANCE WITH THE REQUIREMENTS OF THE MAINE CONSTRUCTION GENERAL PERMIT (MCGP). CONTRACTOR SHALL CONDUCT AND MAINTAIN RECORDS OF EROSION CONTROL INSPECTIONS PER THE NOTICE OF INTENT TO COMPLY WITH THE MAINE CONSTRUCTION GENERAL PERMIT. SUBMIT A COPY OF THE INSPECTION RECORDS TO THE OWNER AND ENGINEER.
30. A COMPLETE SET OF "RECORD" DRAWINGS THAT REFLECT ANY AND ALL MODIFICATIONS TO THE STORM SEWER SYSTEM AND ANY OTHER UTILITY INSTALLATIONS OR ALTERATIONS WITHIN THE PROJECT LIMITS SHALL BE SUBMITTED TO THE OWNER AND ENGINEER.
31. ACTIVITIES THAT HAVE THE POTENTIAL TO DISTURB SOIL SUCH AS UTILITY AND SUBSURFACE STRUCTURE INSTALLATION/RELOCATION WORK, GRADING, PAVING, AND LANDSCAPING SHALL BE CONDUCTED IN ACCORDANCE WITH THE SOIL MANAGEMENT PLAN. APPLICABLE SOIL MANAGEMENT PROCEDURES INCLUDE SITE CONTROLS AND CONSTRUCTION MEASURES TO REDUCE EXPOSURE TO SOIL DURING CONSTRUCTION, AS WELL AS TO FACILITATE THE PROPER HANDLING, STORAGE, CHARACTERIZATION, TRANSPORT, ONSITE REUSE, AND/OR OFFSITE REUSE, OR DISPOSAL, OF EXCESS SOIL THAT MAY BE GENERATED DURING CONSTRUCTION.
32. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE A MAINTENANCE AND PROTECTION OF TRAFFIC (MPT) PLAN IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REQUIREMENTS.

DEMOLITION NOTES:

1. PRIOR TO THE START OF DEMOLITION, THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND/OR APPROVALS FROM THE CITY OF PORTLAND, AND ALL OTHER AUTHORITIES HAVING JURISDICTION.
2. CONSTRUCTION/DEMOLITION DEBRIS NOT APPROVED FOR REUSE ON–SITE, SHALL BE REMOVED AND DISPOSED OFF SITE IN ACCORDANCE WITH THE REQUIREMENTS OF ALL AUTHORITIES HAVING JURISDICTION. WASTE MANIFEST FORMS DOCUMENTING PROPER OFF–SITE DISPOSAL SHALL BE PROVIDED TO THE SITE/CIVIL ENGINEER AND THE CITY OF PORTLAND.
3. PRIOR TO THE START OF DEMOLITION, THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING UTILITIES TO BE DEMOLISHED OR TO REMAIN PROTECTED DURING CONSTRUCTION. IF ANY DISCREPANCIES ARE FOUND, THE CONTRACTOR SHALL NOTIFY THE OWNER AND ENGINEER IN WRITING OF THE CONFLICT.
4. THE CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES TO REMAIN. ANY TEMPORARY SHUT DOWNS REQUIRED TO FACILITATE THE PROPOSED CONSTRUCTION, WHICH MAY AFFECT USES ON ADJACENT PROPERTIES SHALL BE COORDINATED BY THE CONTRACTOR AND THE APPROPRIATE UTILITY.
5. CONTRACTOR SHALL REPAIR OR REPLACE ANY STRUCTURES OR UTILITIES DAMAGED DURING CONSTRUCTION. THE CONTRACTOR SHALL PROCEED WITH CAUTION WITHIN THE PROPOSED WORK AREA TO PREVENT ANY INTERRUPTION TO EXISTING UTILITY SERVICE.
6. CONTRACTOR SHALL COVER CONSTRUCTION DUMPSTERS AND ROLL–OFF CONTAINERS, AND STORE ALL CONSTRUCTION CHEMICALS INSIDE THE CONSTRUCTION TRAILER OR UNDER A COVERED AREA DURING PERIODS WHEN CONSTRUCTION CEASES.
7. SAWCUTS IN EXISTING PAVEMENT SHALL BE SMOOTH AND STRAIGHT.
8. EXISTING FACILITIES (I.E. SIGNS, POLES, CURB, ETC.) SHALL BE REMOVED AND PROTECTED DURING CONSTRUCTION. OWNER RETAINS RIGHT TO KEEP ANY AND ALL REMOVED FACILITIES. CONTRACTOR SHALL DISPOSE OF ANY REMOVED FACILITY AT THE REQUEST OF THE OWNER AT CONTRACTOR'S EXPENSE.

LAYOUT AND MATERIALS NOTES:

1. ALL DIMENSIONS AND RADII ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.

GRADING AND DRAINAGE NOTES:

1. CASTINGS FOR EXISTING STRUCTURES TO REMAIN AND PROPOSED STRUCTURES SHALL BE SET TO THE PROPOSED ELEVATIONS SHOWN ON THE DRAWINGS.
2. THE FILLING OF SOIL OVER THE ROOTS OF TREES TO BE PRESERVED IS PROHIBITED.
3. CLEAN AND/OR FLUSH ALL MANHOLES AND SITE PIPING AFTER THE WORK HAS BEEN COMPLETED. NO SEPARATE PAYMENT WILL BE MADE FOR THIS WORK.
4. PROVIDE END CAPS ON ALL UNDERDRAIN PIPING EXCEPT WHERE DAYLIGHTED, UNLESS OTHERWISE NOTED.

UTILITIES NOTES:

1. ALL PROPOSED UTILITIES (WATER, ELECTRIC, SANITARY, STORM SEWER, ETC.) AND THEIR CONNECTIONS, DISCONNECTION AND RELOCATION OF EXISTING UTILITIES SHALL BE COMPLETED IN ACCORDANCE WITH THE REQUIREMENTS OF THE UTILITY COMPANY HAVING JURISDICTION. ANY COORDINATION WITH THE MUNICIPALITY AND/OR UTILITY COMPANY, PERMITS OR APPROVALS REQUIRED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

CONSTRUCTION PHASING:

CONSTRUCTION SHALL BE PHASED SUCH THAT ALL DISTURBED AREAS SHALL FIRST BE PROTECTED WITH EROSION AND SEDIMENT CONTROLS AS INDICATED ON THE PLANS PRIOR TO THE START OF ANY GROUND DISTURBING ACTIVITIES. THE CONSTRUCTION PHASING DESCRIBED BELOW IS FOR GENERAL PURPOSES ONLY, AND WILL BE DETERMINED BY THE CONTRACTOR. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR HIS/HER MEANS AND METHODS OF CONSTRUCTION. GENERAL CONSTRUCTION SEQUENCING IS AS FOLLOWS:

1. INSTALLATION OF EROSION AND SEDIMENT CONTROL PRACTICES AS INDICATED ON THE PLANS.
2. DEMOLITION AND REMOVAL OF EXISTING PAVEMENT, CURB, TREES, UTILITIES, ETC.
3. STRIP AND STOCKPILE TOPSOIL AT DESIGNATED STORAGE AREA.
4. BEGIN ROUGH GRADING AND EARTHWORK ACTIVITIES (EXCAVATION OPERATIONS).
5. INSTALL STORM SEWER SYSTEM (BEGINNING AT FURTHEST DOWNSTREAM STRUCTURE).
6. PLACE INLET PROTECTION ON PROPOSED CATCH BASINS AS SHOWN ON THE DRAWINGS.
7. INSTALL ELECTRICAL UTILITIES.
8. INSTALL BITUMINOUS CONCRETE PAVEMENT SUBBASE AND BITUMINOUS CONCRETE BINDER COURSES AS SPECIFIED ON PLANS.
9. FINISH GRADING, REDISTRIBUTE STOCKPILED TOPSOIL AND ESTABLISH VEGETATION ON ALL DISTURBED AND NEW PERVIOUS AREAS.
10. CLEAN BITUMINOUS CONCRETE PAVEMENT AND STORM SEWER OF ALL DEBRIS AND SEDIMENT.
11. COMPLETE SITE CONSTRUCTION.
12. INSTALLATION OF BITUMINOUS PAVEMENT CONCRETE TOP COURSE (THIS WEARING COURSE SHALL BE INSTALLED NEAR COMPLETION OF PROJECT).
13. ACHIEVE PERMANENT AND FINAL STABILIZATION OF AREAS DISTURBED DURING CONSTRUCTION.
14. REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL PRACTICES FROM THE SITE.

LEGEND

EXISTING		PROPOSED
122	CONTOUR (1' INTERVAL)	122
120	CONTOUR (INDEX)	120
S	SANITARY SEWER	S
FM	FORCE MAIN	
SD	STORM DRAIN	SD
UD	UNDERDRAIN	UD
W	WATER MAIN	
E	UNDERGROUND ELECTRIC	E
T	UNDERGROUND TELEPHONE	
G	GAS LINE	G
OE	OVERHEAD ELECTRIC	
P	PROPERTY LINE	
R/W	RIGHT OF WAY	
	EASEMENT	
X X	FENCE	
	VERTICAL CURB	
	SLOPED GRANITE CURB	
	TIPDOWN CURB	
	EDGE OF PAVEMENT	
	EDGE OF GRAVEL	
	GUARDRAIL	
	STORM DRAIN PIPE & CATCH BASIN	
	SEDIMENT BARRIER	
	LIMIT OF WORK	LW
	SANITARY SEWER MANHOLE	
CO	CLEAN OUT	CO
	DRAINAGE MANHOLE	DMH
	CATCH BASIN	
	SEWER MANHOLE	SMH
	GAS METER BOX	
	GAS VENT	
	GATE GATE	
	TRANSFORMER	
	UTILITY POLE	
	UTILITY PILE WITH GUY	
	LIGHTPOST	
	WATER GATE	
	CURB STOP	
	HYDRANT	
	PROPERTY MONUMENT	
	STREET AND MISCELLANEOUS SIGNS	
XXX.XX	SPOT ELEVATION	XXX.XX
	DECIDUOUS TREE	
	CONIFEROUS TREE	
	SHRUB	
	BITUMINOUS PAVEMENT	
	POROUS PAVEMENT	
	CONCRETE SIDEWALK	
	PAVER AREA, SEE LANDSCAPING PLANS	
	STONE AREA, SEE LANDSCAPING PLANS	

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SEAL / SIGNATURE

STATE OF MAINE · ASHLEY FLETCHER · No. 13750 · LICENSED PROFESSIONAL ENGINEER

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2021

PROJECT:

USM - Structured Parking Garage

Address

44 Bedford Street,
Portland ME 04104

REVISIONS:

No.	Date	Description

SUBMISSIONS:

Date	Issued For:
07/30/21	Site Plan Submittal

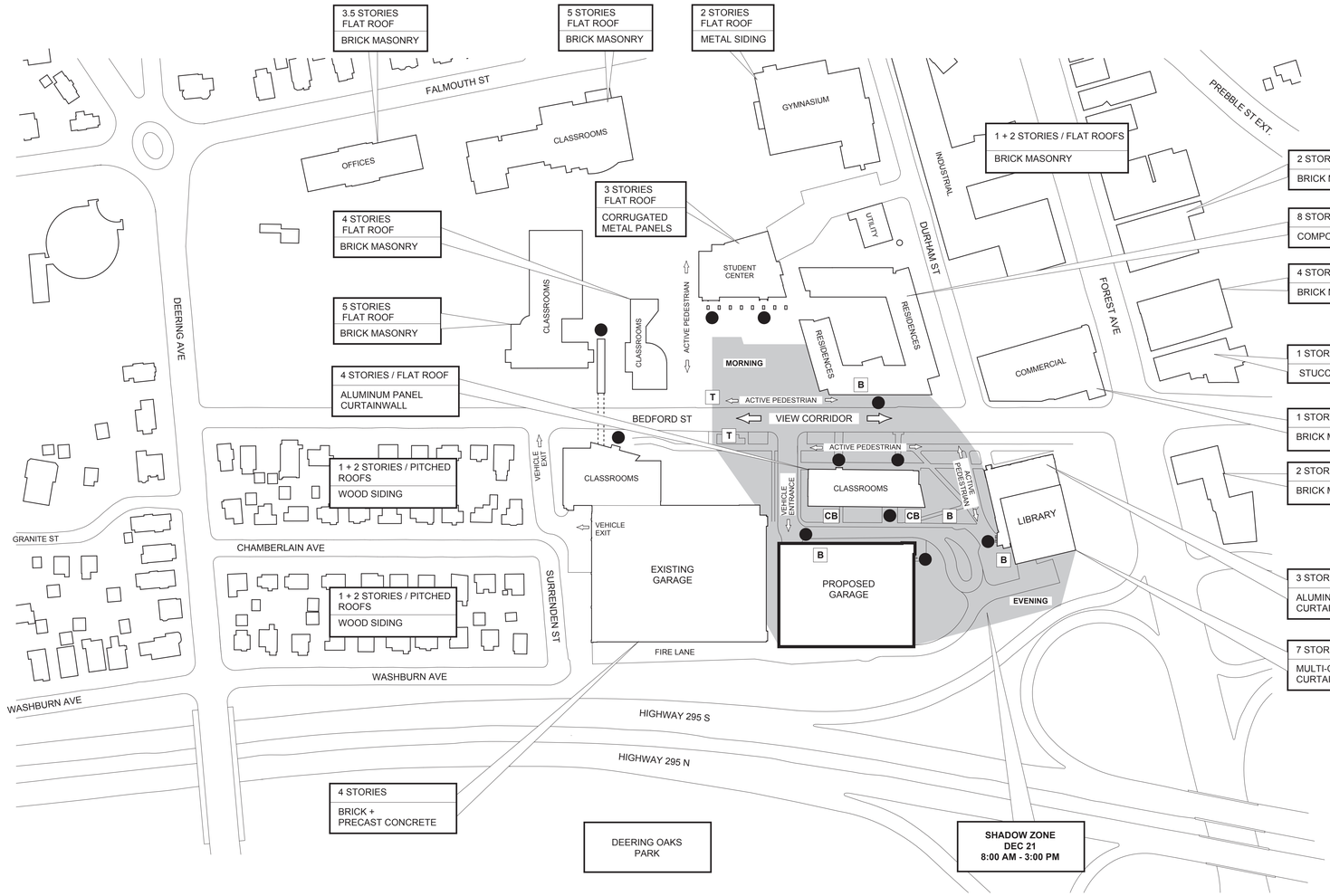
SCALE	**1"=20'**
DATE ISSUED	**7/30/2021**
PROJECT NO	**20-20145.00-1**
DRAWN BY	**B.C.M.**
CHECKED BY	**A.E.F.**

SHEET TITLE:

GENERAL NOTES & LEGEND

G-001

\\woodardcurran.net\shared\Projects\02235035.00 usm - falmouth street garage\vdc\Drawings\General\02235035.00 G001.dwg, Jul 29, 2021 - 2:48pm RMCDEVITT



G: 25.0 T: 74.0 H: 49	G: 23.0 T: 72.0 H: 49
G: 25.0 T: 74.0 H: 49	G: 23.0 T: 72.0 H: 49

PROPOSED GARAGE HEIGHT DIAGRAM

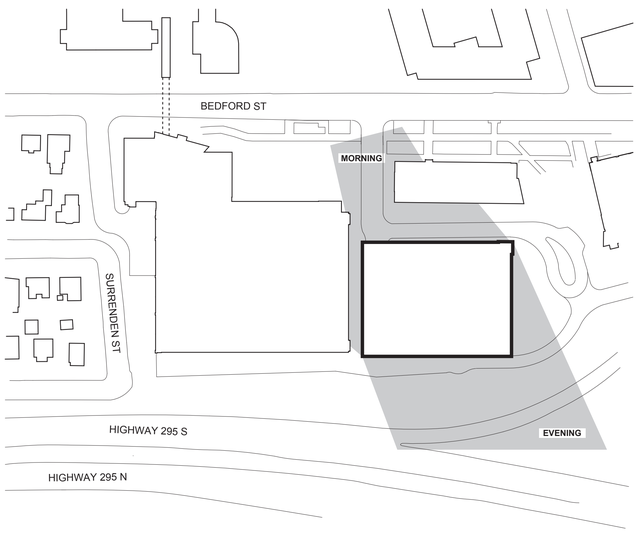
G - ELEVATION OF GRADE AT CORNER
T - ELEVATION OF TOP OF ROOF LEVEL SPANDREL BEAM
H - HEIGHT OF BUILDING AT CORNER

AVERAGE HEIGHT = 49'

USM OVERLAY ZONE ALLOWS 85'

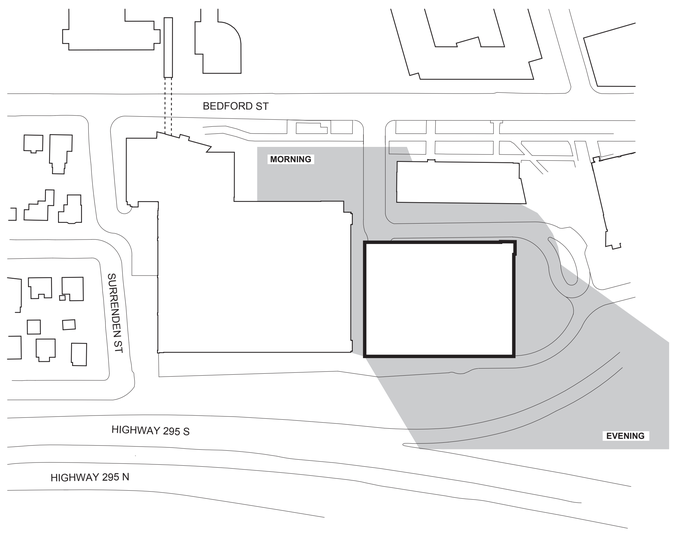
LEGEND

- AREA SUBJECT TO SHADOW CAST BY PROPOSED GARAGE ON WINTER SOLSTICE BETWEEN 1 HOUR AFTER SUNRISE TO 1 HOUR BEFORE SUNSET
- MAJOR PEDESTRIAN ARRIVAL POINTS
- B — BICYCLE RACK OR STORAGE ROOM
- CB — FUTURE CITIBIKE STATION
- T — BUS STOP



SHADOWS CAST MARCH + SEPTEMBER 21ST

6:46 AM TO 4:50 PM



SHADOWS CAST JUNE 21ST

5:05 AM TO 6:20 PM

NORTH

100 0 100 200

BAR SCALE
1" = 100'
CHECK GRAPHIC SCALE BEFORE USING

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PROJECT:

USM - Structured Parking Garage

Address
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REVISIONS:

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07/30/21	Site Plan Submittal

SCALE	1" = 100'
DATE ISSUED	07/30/2021
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CHECKED BY	

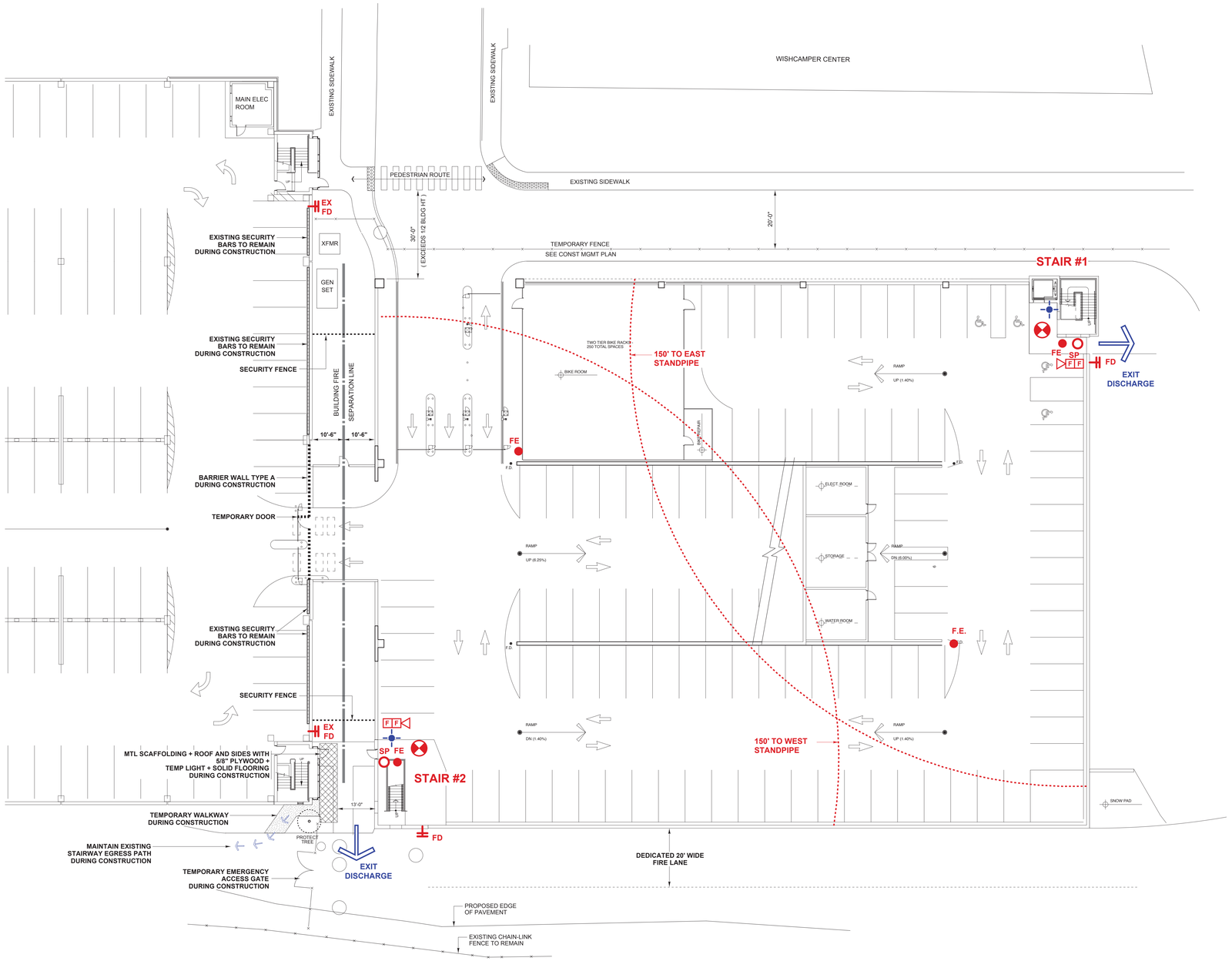
SHEET TITLE:

Context +

Shadow Plans

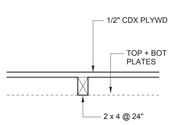
G - 100

7/2/2021 3:16:33 PM



GROUND LEVEL LAYOUT PLAN

1" = 16' - 0"



BARRIER WALL TYPE A

INFILL OPENING IN EXISTING PRECAST CONC WALL

TEMPORARY BARRIER WALL TYPES

1" = 1' - 0"

Legend

- EXIT
- SP — DRY STANDPIPE
- EX FD — EXISTING STANDPIPE HOSE CONNECTION
- FD — STANDPIPE HOSE CONNECTION
- FE — FIRE EXTINGUISHER
- SECURITY CALL BOX
- F F — FIRE ALARM PULL STATION + ANNUNCIATOR

NORTH

16 0 16 32

BAR SCALE

1" = 16'

CHECK GRAPHIC SCALE BEFORE USING

BUILDING CODE SUMMARY

University of Southern Maine Parking Garage
Building Address: Portland, ME

APPLICABLE CODES (Per MUBEC: Maine Uniform Building and Energy Code)

Building	IBC 2015 (International Building Code)
	IEBC 201 (International Existing Building Code)
Electrical	National Electrical Code 2009
Fire Protection	NFPA Life Safety Code 2015 and NFPA 1 Uniform Fire Code
Mechanical	International Mechanical Code 2015
Plumbing	Maine State Internal Plumbing Code (UPC 2015)
Energy	IECC 2015 (International Energy Conservation Code)
Accessibility	ADA 2010 (Americans With Disabilities Act)

PROJECT DESCRIPTION:

New Construction - Parking Garage	
Open or Closed	**Open**
Proposed Construction Type :	Type II B / NFPA II (000)
Gross Area Per Tier:	45,050 +/- Per Tier
Height :	Grade + 4 Tiers / 49'-9" (Top of Roof Spandrel Beams)
Use Group IBC :	Open Parking Garage Section 406
Use Group NFPA :	Open Parking Garage Chapter 42.8
High Rise Requirements	Not Applicable
Automatic Suppression System	No
Dry Standpipe System	Yes
Multiple Occupancies	No

BUILDING CODE REQUIREMENTS (IBC 2015)

Height and Area Summary (Table 406.5.4)

Allowable Height :	8 Tiers
Allowable Area	50,000 SF/Tier

REQUIRED FIRE RESISTANCE RATINGS

ELEMENT (IBC Table 601/NFPA 101 Table A8.2.1.2)	RATING (In Hours)
Primary Structural Frame	**0**
Bearing Walls:	
Exterior	**0**
Interior	**0**
Non-Bearing Walls & Partitions	
Exterior	**0**
Interior	**0**
Floor Construction & Secondary Members	**0 (1 Hour Provided)**
Roof Construction & Secondary Members	**0 (1 Hour Provided)**

SPECIFIC ROOM RATINGS	RATING (In Hours)
Stairs and Floor Openings	**0**
Parking Open Ramps	**0**
Offices + Break Room	**0**
Electrical	**0**
Elevator Shaftway	**2**

EXTERIOR WALL PROTECTION

Wall Fire Resistance Rating (Table 602)	**0** (No rating for 10' or greater per Note c.)
Openings Rating (Table 705.8)	**0** (No rating for 10' or greater per Note g.)

OCCUPANCY LOADS

NFPA Per Chapter 42.8.1.7 :	None
IBC Per Table 1004.1.2 :	1 Per 200 GSF / 226 Per Tier
Egress Width Required : Stairs @ 0.3" Per Person	68"
Egress Width Provided :	96" / (2) 48" Wide Stairs
Stair Exit Door Width Required: 0.2" Per Person	46"
Stair Exit Door Width Provided:	32" Clear Door @ Each Stair

NOTES

1. THE CONSTRUCTION MANAGER SHALL PROVIDE A CONSTRUCTION PHASING PLAN OUTLINING WORK ZONES AND PROTECTION AND SEPARATION FEATURES.
2. CONSTRUCTION MANAGER SHALL OBTAIN APPROVAL OF PROTECTION AND SEPARATION PROVISIONS PRIOR TO EACH PHASE FROM THE CITY CODES ENFORCEMENT OFFICE.

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Address
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REVISIONS:

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SHEET TITLE:

Ground Level Code Information Plan

G - 101

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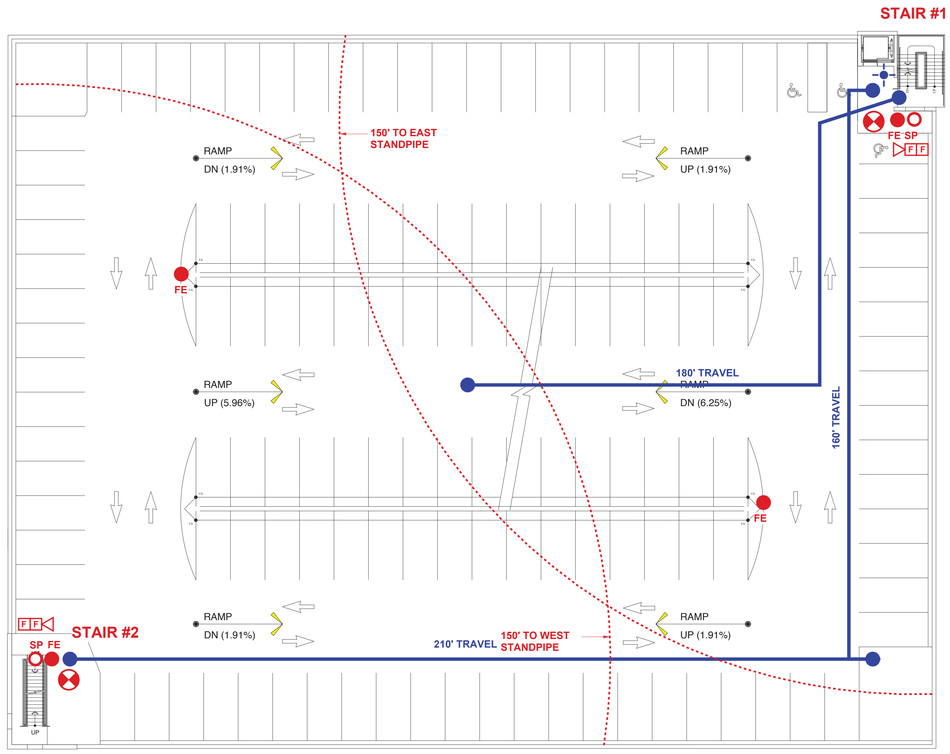

TYPICAL FLOOR LAYOUT PLAN

1" = 16' - 0"

Legend

- EXIT
- SP — DRY STANDPIPE
- EX FD — EXISTING STANDPIPE HOSE CONNECTION
- FD — STANDPIPE HOSE CONNECTION
- FE — FIRE EXTINGUISHER
- SECURITY CALL BOX
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NORTH

16 0 16 32

BAR SCALE

1" = 16'

CHECK GRAPHIC SCALE BEFORE USING

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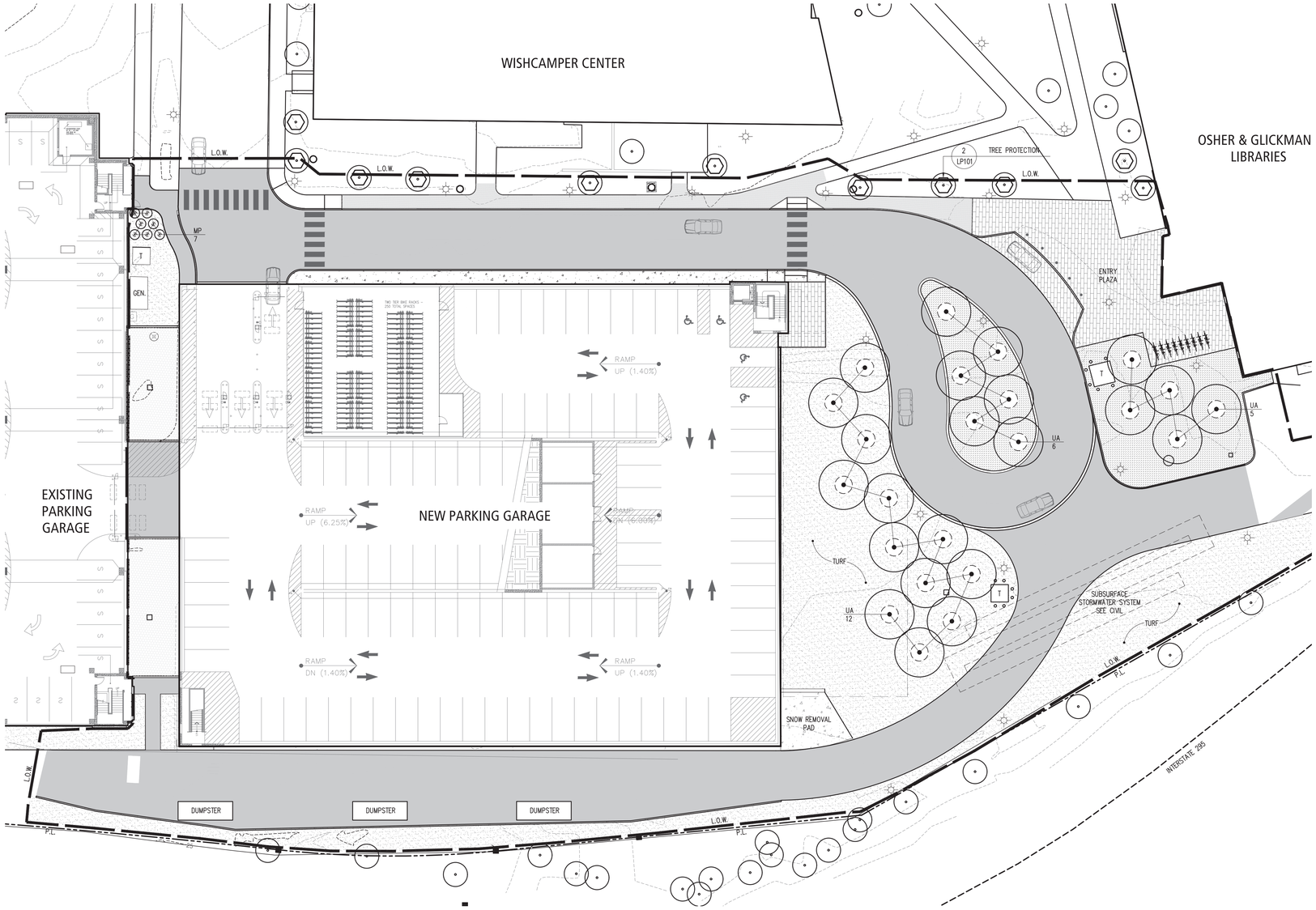
SHEET TITLE:

Upper Levels Code Information Plan
Levels 1 / 2 / 3 + ROOF

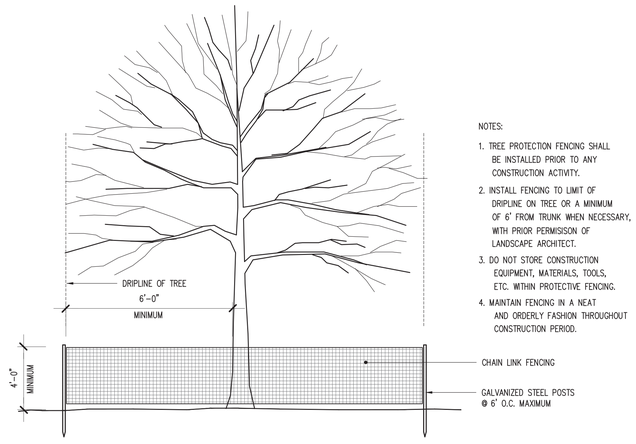
G - 102

NOT FOR CONSTRUCTION



1 PLANTING PLAN

1" = 20'-0"

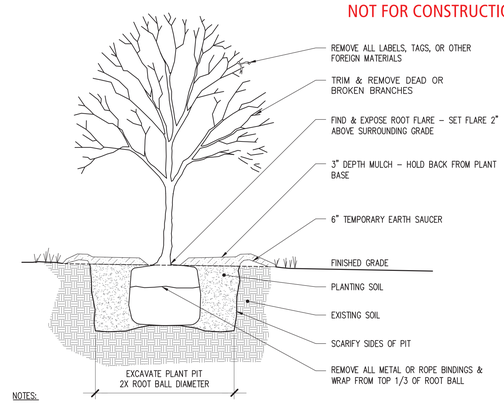


NOTES:

1. TREE PROTECTION FENCING SHALL BE INSTALLED PRIOR TO ANY CONSTRUCTION ACTIVITY.
2. INSTALL FENCING TO LIMIT OF DRIPLINE ON TREE OR A MINIMUM OF 6' FROM TRUNK WHEN NECESSARY, WITH PRIOR PERMISISON OF LANDSCAPE ARCHITECT.
3. DO NOT STORE CONSTRUCTION EQUIPMENT, MATERIALS, TOOLS, ETC. WITHIN PROTECTIVE FENCING.
4. MAINTAIN FENCING IN A NEAT AND ORDERLY FASHION THROUGHOUT CONSTRUCTION PERIOD.

2 TREE PROTECTION DETAIL

N.T.S.

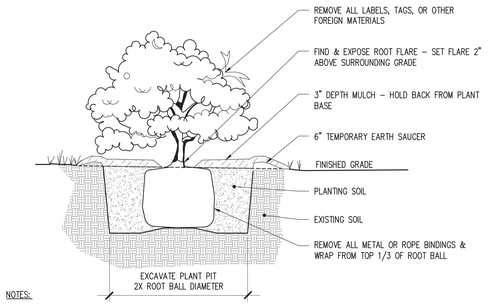


NOTES:

1. TREE TO BE SET PLUMB.
2. SECURE TREE AS MAY BE REQUIRED ACCORDING TO TREE SIZE, LOCATION, & WIND/WEATHER CONDITIONS.
3. IF USING ROOTBALL STABILIZATION, FOLLOW MANUFACTURER'S RECOMMENDATIONS.

3 TREE PLANTING DETAIL

1/2" = 1'-0"

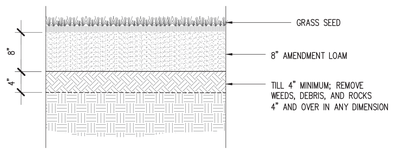


NOTES:

1. SHRUB TO BE SET PLUMB.
2. SECURE SHRUB AS MAY BE REQUIRED ACCORDING TO SIZE, LOCATION, & WIND/WEATHER CONDITIONS.
3. IF USING ROOTBALL STABILIZATION, FOLLOW MANUFACTURER'S RECOMMENDATIONS.

4 SHRUB / GROUNDCOVER PLANTING DETAIL

1/2" = 1'-0"



5 TURF PLANTING DETAIL

1" = 1'-0"

PLANT LIST

KEY	QTY	AREA	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	COMMENT
TREES							
UA	23		ULMUS AMERICANA 'PRINCETON'	PRINCETON ELM	4" CAL.	B&B	REC. TREE LIST
SHRUBS							
MP	7		MYRICA PENNSYLVANICA	BAYBERRY	#3	POT	
GROUNDCOVER							
	GC	4,760 SF	--	NATIVE GROUNDCOVER	--	--	
	TURF	17,990 SF	--	TURF GRASS	--	SEED	COMPLIANT WITH CITY OF PORTAND PESTICIDE ORDINANCE

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REVISIONS:

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SCALE	**AS NOTED**
DATE ISSUED	**07/30/2021**
PROJECT NO	**20-20145.00-1**
DRAWN BY	**G.G.**
CHECKED BY	**-**

SHEET TITLE:

Planting and Landscape Plan

LP-101

University of Southern Maine Parking Garage

Overview From North

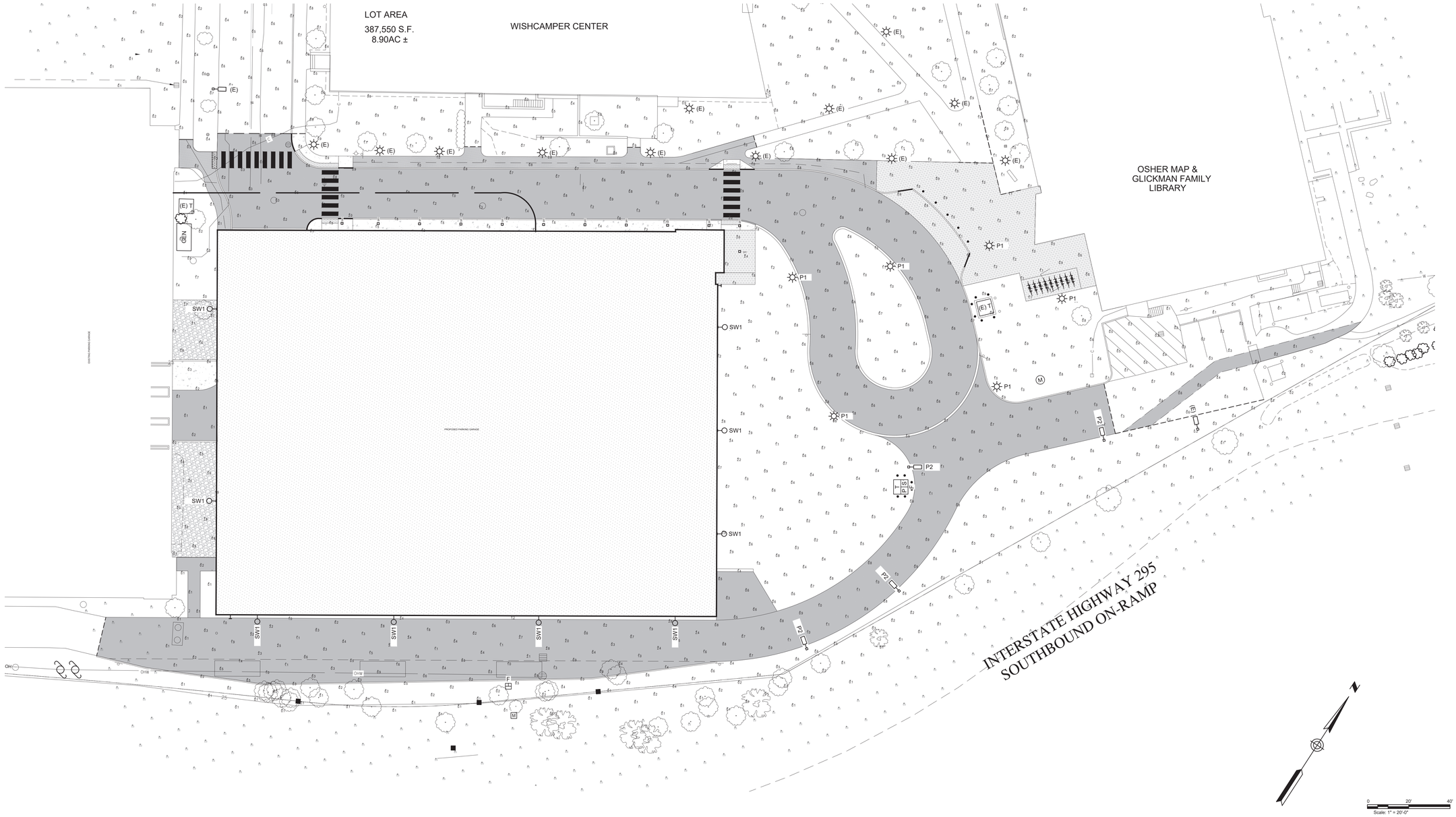
LUMINAIRE SCHEDULE ~ SITE

TYPE	DESCRIPTION	MFR	CATALOG SERIES NUMBER SEE NOTE 1	MOUNTING, U.N.O.	VOLTS	LAMP				KEY NOTES
						QTY PER FIXTURE	WATTS	LUMENS	TYPE	
P1	SITE LIGHT AND POLE, "ICE CREAM CONE" SHAPE	SEE NOTE 8		14' POLE	277	1	24	3,330	LED ARRAY ~ 4000K	8,9
P2	SITE LIGHT AND POLE, "SHOEBOX" SHAPE	SEE NOTE 8		14' POLE	277	1	18	2,160	LED ARRAY ~ 4000K	8,10
SW1	WALL MOUNTED EXTERIOR LIGHT	LITHONIA	KAXW-LED-P1-40K-R4-MVOLT	KEYNOTE 5	UNV	1	29	3,643	LED ARRAY ~ 4000K	5
SR1	RECESSED CANOPY LIGHT	LITHONIA	LDN4SQ-40-07-LS4-AR-LSS-MVOLT	RECESSED CANOPY	UNV	1	8.6	620	LED ARRAY ~ 4000K	

	NOTES
1	**NOTE THAT THESE NUMBERS ARE NOT COMPLETE CATALOG NUMBERS. PROVIDE ALL REQUIREMENTS ON SCHEDULE, NOTES, SPECS, AND DRAWINGS COMBINED.**
2	**CATALOG SERIES NUMBERS ARE USED TO ESTABLISH A LEVEL OF QUALITY AND NOT INTENDED TO LIMIT COMPETITION. SERIES NUMBERS ARE NOT COMPLETE CATALOG NUMBERS. COMPLY WITH ADDITIONAL REQUIREMENTS IN SPECIFICATIONS AND DRAWINGS.**
3	PROVIDE WALL,CEILING, OR PENDANT MOUNTING AS INDICATED ON PLANS. PROVIDE NUMBER OF FACES AND ARROWS AS INDICATED.
4	VERIFY CEILING STRUCTURE AND MOUNTING HEIGHT PRIOR TO ORDERING ANY LIGHT FIXTURES.
5	COORDINATE MOUNTING HEIGHT WITH STRUCTURAL AND ARCHITECTURAL DRAWINGS.
6	PROVIDE COLD WEATHER OPTION.
7	CONFIRM EXACT FIXTURE CONFIGURATION AND OPTIONS WITH MUNICIPALITY PRIOR TO ORDERING FIXTURE.
8	FIXTURE AND POLE SHALL BE PROVIDED BY OWNER FROM EXISTING OWNER'S STOCK.
9	PROVIDE SCREW-IN LED RETROFIT LAMP. BASIS OF DESIGN IS MFG. BY LIGHT EFFICIENT DESIGN, PART NO. LED-8029E345-A.
10	PROVIDE SCREW-IN LED RETROFIT LAMP. BASIS OF DESIGN IS MFG. BY LIGHT EFFICIENT DESIGN, PART NO. LED-8039E40-A.

Calculation Summary

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
DRIVES	Illuminance	Fc	0.99	3.5	0.2	4.95	17.50
WALKWAY- GLICKMAN	Illuminance	Fc	1.00	1.3	0.5	2.00	2.60
WALKWAY- NEW GARAGE	Illuminance	Fc	1.46	1.7	1.2	1.22	1.42



A1	PHOTOMETRIC SITE PLAN
SCALE: 1"=20'-0"	

7/2/2021 3:16:33 PM

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GREY, ME 04039

TRAFFIC ENGINEER
VANASSE HANGEN BRUSTLIN INC
40 IDX DR 100 #200, SOUTH
BURLINGTON, VT 05403

COST ESTIMATOR
PREFERRED CONSTRUCTION MGMT
94 AUBURN ST,
PORTLAND, ME 04103

SEAL / SIGNATURE

© DESMAN, Inc.
2021

PROJECT:

USM - Structured Parking Garage

Address

44 Bedford Street,
Portland ME 04104

REVISIONS:

No.	Date	Description

SUBMISSIONS:

Date	Issued For:
07/30/21	Site Plan Submittal

SCALE	**AS NOTED**
DATE ISSUED	**07/30/2021**
PROJECT NO	**20-20145.00-1**
DRAWN BY	**GMC**
CHECKED BY	**BTG**

SHEET TITLE:

SITE PHOTOMETRIC PLAN AND SCHEDULES

SL-100

University of Southern Maine Parking Garage

Stairway Entrance

University of Southern Maine Parking Garage

Garage Entrance

NOTICE FROM CITY OF PORTLAND PLANNING DIVISION

IN THE VICINITY OF 50 BEDFORD ST

To residents and property owners: The University of Southern Maine has submitted a Major Site Plan application to facilitate the development of a five-level, 632 space parking garage with a footprint of 45,100 square feet, along with associated site improvements, at 50 (44) Bedford Street. The subject property is 8.1 acres in size and is located in the R-5 Residential and B-2 Community Business zones as well as in the USM Overlay Zone.

In accordance with the Portland Land Use Ordinance, notices of receipt of a Major Site Plan application must be sent to property owners within 500 ft. of the subject property (or 1,000 ft. if the project is a subdivision or map amendment for a site located within an Industrial Zone). You will be notified of future Planning Board meetings by receiving notices from the Planning Division prior to any workshops or public hearings.

A project and plan summary is available for viewing on the Citizen Self Service Portal (https://css.portlandmaine.gov/), by referencing Plan Number PL-001729-2021. Written comments should be submitted to planningboard@portlandmaine.gov. If you have any questions regarding the proposal, please contact James Dealaman, Planner, by phone at (207)874-8718 or e-mail at jdealaman@portlandmaine.gov.

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50 Bedford - preliminary design comments

1 message

Caitlin Cameron <ccameron@portlandmaine.gov> Fri, Aug 27, 2021 at 4:31 PM
To: James Dealaman <jdealaman@portlandmaine.gov>

The submission for 50 Bedford Street parking garage was reviewed by Caitlin Cameron and James Dealaman against the USM design standards with the following comments.

- provide additional information on landscape/screening of hvac systems
- see attached rendering with notes

A-3 Pedestrian Environment: The bike/ped circulation routes do not seem to be indicated or thought through. The pedestrian and bike entrances to the building are not legible or clear from either direction.

In addition, the interstitial space between the two garages has the potential to become dark, inhospitable spaces. To make this space feel secure and comfortable consider how visual interest or screening will be accommodated either in the design of the fencing, with lighting, or other amenities to indicate what is safe, habitable space.

C-1 Structures: Scale, Massing, and material selection are compatible with adjacent, existing garage structure. Building is setback with minimal visual impact on Bedford Street. Front facade treated with material changes that correspond to entry points/building corners, scaling elements such as canopy and banners. The pedestrian/bike experience does not seem fully functional or adequately accommodated. Pedestrian entrances should emphasized and made more legible from the circulation routes - especially from adjacent building entrances. Bike room entrances are not directly accessible, functional. What is circulation pattern for peds/bikes? Staff recommend that the ground floor bay for bikes be differentiated with material and set back from the building face to accommodate maneuvering - a visible and wide/accessible entrance to the bike storage should be placed on the front facade. The remaining two car bays might carry the brick cladding to help the differentiation.

Principle C - overall the project meets the goals to minimize the impact on the street and to create an attractive facade to neighboring uses.

C-2 Active Uses: The building is setback at least 35' from Bedford Street and is placed behind the more active Wishcamper Center.

C-3 Decks and Ramps: Ramps throughout the building including where visible from public rights of way. However, building is setback from all rights of way and ramps are screened so as to appear mostly horizontal floors from exterior.

C-4 Surface Lots: n/a

C-5 Loading and Services: n/a

C-6 Utility Services: Provide screening for existing equipment visible from driveway. Where, if any, will additional hvac units be located?

--
Caitlin Cameron, AICP, Associate AIA, LEED AP
Urban Designer
Planning & Urban Development Department
389 Congress Street
Portland, ME 04101
phone: (207) 874-8901
email: ccameron@portlandmaine.gov

50 Bedford prelim design.pdf
281K

this entrance more prominent/legible

continue red brick treatment where car parking bays

double door or overhead door 8/27/21 ccameron

recess bike parking bay to different taste + provide functional space + possible signage

University of Southern Maine Parking Garage

Garage Entrance

WRIGHT-PIERCE
Engineering a Better Environment

MEMORANDUM

TO:	Jimmy Dealaman, Planner	**DATE:**	9/3/2021
FROM:	Michael Guethle, PE	**PROJECT NO.:**	20309C
SUBJECT:	50 Bedford Street – Level III Site Plan, PL - 001729-2021		

Wright-Pierce has reviewed the initial Level III Site Plan Application information provided for the redevelopment at 50 Bedford Street, as defined in the above subject line. The proposed project is located on a 2.4 +/- acre site of land at the USM campus. The proposed project includes redevelopment of existing parking area with a new parking garage facility.

Documents Reviewed by Wright-Pierce:

- Level III Site Plan application, dated (most recent) July 27, 2021
- Engineering Permitting Plans, uploaded (most recent) July 27, 2021

Comments:

For stormwater treatment, Level III Site Plan applications with the City of Portland must submit a stormwater plan pursuant to the regulations of MaineDEP Chapter 500 Stormwater Management Rules. This includes conformance with the Basic, General, and Flooding Standards (Ref: Technical Manual, Section 5. II. Applicability in Portland. C. a.; and Ref: City of Portland Code of Ordinances, former code Sec. 14-526. Site Plan Standards, (b). 3. b.)

1) Basic Standard: Per the City's Technical Manual *Portland Stormwater Management Standards And Maine Dep Chapter 500 Stormwater Management*, an Erosion & Sediment Control management plan, notes, and details per the Chapter 500 Rules must be provided to meet the Basic Standard.
    a. Erosion and Sedimentation Control best management practices were observed on the Erosion and Sediment Control Plan and associated Details. An Inspection, Maintenance, and Housekeeping Plan has been provided with the erosion details and notes.

b. In general, application of erosion and sedimentation control devices is appropriate. The following items are in need of clarification:
    i. Inspection and Maintenance Log should include Oil/Water Separator inspection requirements;
    ii. Inspection and Maintenance Log should reference the inspector to MaineDEP Stormwater BMP Handbook for engineers and designers (current edition) for a full list of required inspection items.

2) General Standard: The applicant has provided information regarding the size and scope of the project, and has indicated the project is subject to the General Standard under the requirements of the Site Location of Development Act (SLODA). The project is being reviewed under the redevelopment guidelines and requirements.
    a. The applicant has provided an impact analysis to compare pre-development and post-development land use pollutant rankings under MaineDEP redevelopment guidelines. The written analysis indicated that the proposed development had a higher pollutant ranking than the existing site by a magnitude between 0 and 1, and is therefore required to treat 60% of the proposed site's disturbed surface area.
        i. A summary of pollutant rankings was provided by the applicant, reviewed, and it is generally agreed that the site required surface runoff treatment for 60% of the disturbed surface area for the proposed project.
        ii. To help confirm the approach, please provide a brief discussion confirming the specific use of different paved surfaces and the roof area. Please confirm how those values relates to the indicated pollutant rankings for the existing and proposed parking lots and roof areas.
    b. High-pollutant surface areas should be prioritized to a practicable extent for stormwater treatment under the redevelopment standard. Please provide a calculation of what percentage of surfaces with a pollutant ranking of 4 are being treated.
        i. If there are limitations to treating high-ranked surface areas, please indicate what site limitations would drive this design need.

c. An executed maintenance contract for the BMP systems is required. Maintenance agreements may be provided as a condition of approval.

3) Porous Pavement, Stormfilter, and Subsurface Storage Design:
   a. Porous pavement design is included within the proposed project. However, the applicant has indicated proprietary devices are being used to meet the Water Quality Design standards, and porous pavement has not been included in the calculations for Treatment Design Calculations section of Appendix B. Please confirm intent of porous pavement on this project.
   b. StormFilter and Subsurface Storage Design
      i. A letter from the manufacturer is provided stating the StormFilter and storage conduit meets their approval for the specific project. The subsurface alignment is provided to remove a portion of granular solids prior to entering the treatment system.
      ii. The information provided has indicated the project meets the minimum treatment requirements under Chapter 500. Further review of HydroCAD files will be provided once Department of Public Works clarifies intent and allowable activities for connections to the existing combined sewer system.
4) Flooding Standard: The applicant has submitted HydroCAD files indicating the pre-development runoff rates do not exceed the post-development runoff rates for the combined flow rates from the two study points at the facility.
   a. It is understood that these two study points are located in separate watersheds for the proposed project, with one study point leading towards a combined sewer system, and the other conveying flows towards a separated sewer system. As such, the reviewer does not necessarily agree with the statement that the proposed flow rates have the represented net change in the Peak Runoff Rates table as these flow rates are not necessarily additive.
      i. The City of Portland Department of Public Works is responsible for issuing certification of any connection to Existing Stormwater Systems. E-mail, or otherwise written, confirmation from the Department of Public Works

accepting this connection is requested to confirm that this connection is appropriate under Land Use section (prior number) 14-526 (b) 3 a. (iv); and 14-526 (c) 3 a., as well as adherence to MaineDEP Chapter 500.

1. It is understood the connection to the combined sewer system has not been approved by Public Works at this time.

ii. It is appreciated there are two competing design requirements; to both remove stormwater flows to the combined sewer system, and to also meet the requirement to reduce flow rates to each study point. In many ways, these requirements work in opposition to achieve a common goal.

iii. There is a potential ability to waive the requirements of the Flooding Standard, governing flow rates to each study point, within the existing codes. This would require the following information:

1. The applicant indicating the storm drainage system ultimately discharges to tidal waterways;
2. The applicant indicating through calculations, or receiving confirmation from the Department of Public Works, to allow an increase for surface water flows to the drainage system in interval rain events as noted in the Land Use Code;
3. The applicant requesting this waiver to discharge to tidal waterways, and having such waiver approved by the City Planning authority.

iv. Connection to the existing combined sewer must be coordinated with the Department of Public Works.

5) Grading and Drainage:

a. The applicant has indicated Maine Construction General Permit will likely be required for the project due to the extent of disturbed surface area. No further action necessary.

b. Typical details show a maximum 2% cross-slope for sidewalks, crosswalks, and crosswalk portions of driveways and maintenance entrances. No further action necessary.

c. Further review of grading and drainage, in particular reviewing pipe information for positive flows, will be provided once the City Department of Public Works confirms the approved path forward for the flow rates as mentioned in Section 4 of these comments.

6) Utility Connections

a. Ability to serve letters have not been provided for utilities impacted by the proposed project, but have been requested by the applicant for applicable utilities. Please confirm these letters will be provided to the Planning Department when received.

b. Standard design for the electrical utility has been provided.

i. Please confirm intent of infrastructure on the roadway side of fencing. While no work appears to be occurring outside of the property limits, temporary removal of the existing fence may be considered a safety concern to vehicles on the interstate, particularly if new above-ground electrical systems are placed near the property line.

CITY OF PORTLAND, MAINE

PLANNING BOARD

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

11/18/2020

Alec Porteous
University of Southern Maine
P.O. Box 9300
Portland, Maine 04101

Darrin Stairs
Woodard & Curran
41 Hutchins Drive
Portland, ME 04102

Project Name:	Student Center, Dorm, & Quad	**Project ID:**	PL-001040-2020
Address:	25 Bedford Street	**CBL:**	114A G009
Applicant:	University of Southern Maine		
Planner:	Christian Roadman		

Mr. Porteous,

On November 10, the Planning Board approved your application to construct a 218,612 square foot student housing facility, a 41,249 square foot student center, and associated open space at 25 Bedford Street in the B-2 and R-5 zones and the University of Southern Maine overlay zone.

The Planning Board reviewed the proposal for conformance with the site plan and site location of development standards of Portland's Land Use Code. The Planning Board voted 7-0 to approve the application with the following waivers and conditions as presented below.

Waivers

1. The Planning Board voted unanimously (7-0) based upon the submitted materials, that extraordinary conditions exist or undue hardship may result from strict compliance with the Design Manual standard (e) University of Southern Maine Overlay Zone, Appendix 3 Standard D-7 Materials which prohibits use of fiber cement panels. The Planning Board waived the Design Manual standard (e) University of Southern Maine Overlay Zone, Appendix 3 Standard D-7 Materials to allow use of fiber cement panel.

Site Plan and Site Location of Development Review

The Planning Board voted unanimously (7-0) that the plan is in conformance with the site plan standards of the Land Use Code and the Site Location of Development Act standards subject to the following conditions of approval:

PRIOR TO APPLYING FOR A BUILDING PERMIT

1. The applicant shall submit an ability to serve letter from the Portland Water District.

2. The applicant shall submit confirmation of adequate wastewater capacity from the Department of Public Works.

3. The applicant shall submit a dewatering plan for review and approval by the Department of Public Works.

4. The applicant shall submit an updated construction management plan for review and approval by the Department of Public Works.

5. The applicant shall submit a request to connect to the municipal storm drain system with updated calculations for review and approval by the Department of Public Works.

6. The applicant shall submit an updated stormwater management report, including calculations and updated stormwater infrastructure designs and details, for review and approval by the Planning Authority and consulting civil engineer.

7. If modifications to the stormwater management design impact design plans, then the applicant shall submit an updated grading and drainage plan for review and approval by the Planning Authority and consulting civil engineer.

SIX MONTHS AFTER ISSUANCE OF A BUILDING PERMIT

8. The applicant shall provide proof of parking commitments sufficient to provide the 396 parking spaces required by the proposed development, or shall submit a site plan application for a parking garage providing these spaces, for review and approval by the Planning Authority.

PRIOR TO CERTIFICATE OF OCCUPANCY

9. The applicant shall obtain a certificate of occupancy for a parking garage providing the 396 parking spaces required by the proposed development, or shall provide a final parking management plan and executed leases providing these spaces, for review and approval by the Planning Authority.

Traffic Movement Permit

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 November 10, 2020 for application PL-001040-2020 relevant to Portland's technical and design standards and other regulations; and the testimony presented at the Planning Board hearing, the Planning Board voted unanimously (7-0) to find that the plan is in conformance with 23 MRSA 704-A and Chapter 305 Rules and Regulations pertaining to Traffic Movement Permits, subject to the following conditions of approval:

1) The applicant shall provide conceptual design plans, preliminary and final plans and specifications for Traffic calming / pedestrian improvements at the Falmouth Street / Oakdale Street intersection for review and approval by the Department of Public Works and Planning Authority. Said improvements shall be constructed by the applicant prior to completion of a parking garage structure or five years from TMP approval, whichever is sooner.

PRIOR TO CERTIFICATE OF OCCUPANCY

2) The applicant shall provide a $10,000 contribution to the City towards Forest Avenue traffic signal optimization at the Forest Avenue / Bedford Street / Baxter Boulevard and Forest Avenue / Falmouth Street / Preble Street Extension intersections with the intent of improving mobility efficiencies.

3) The applicant shall provide conceptual design plans, preliminary and final plans and specifications for improvements at the Forest Avenue/Bedford Street/Baxter Boulevard intersection based on the Smart Corridor Study recommendations for review and approval by the Department of Public Works and Planning Authority. These shall include geometric modifications to the corners on the Baxter Boulevard approach and upgrades to pedestrian traffic signal equipment on those corners. The applicant shall construct the said improvements prior to Certificate of Occupancy, with all work complying with ADA standards.

4) The applicant shall provide conceptual design plans, preliminary and final plans and specifications for improvements at the Forest Avenue/Falmouth Street/Preble Street Extension intersection based on the Smart Corridor Study recommendations for review and approval by the Department of Public Works and Planning Authority. These shall include geometric modifications to the southeast corner, a crosswalk on the southerly Forest Avenue approach, and upgraded pedestrian traffic signal equipment. It should be noted that the new crosswalk will require installation of a new sidewalk ramp on the westerly side of Forest Avenue. Thus, improvements are proposed on the southeast and southwest corners of the intersection as a part of this condition. The applicant shall construct the said improvements prior to Certificate of Occupancy, with all work complying with ADA standards.

The approval is based on the submitted plans and findings related to site plan review, site location of development review, and traffic movement permit review as contained in the Planning Board report dated 11/106/2020 for application PL-001040-2020 which is attached.

Standard Procedures

Please Note: The following standard procedures apply to all approved site plans:

1. Stormwater Management Agreement The developer / contractor / subcontractor must comply with the conditions of the construction stormwater management plan and sediment and erosion control plan based on City standards and state guidelines.

   The owner / operator of the approved stormwater management system, and all assigns, shall comply with the conditions of Chapter 32 Stormwater including Article III, Post Construction Stormwater Management, which specifies the annual inspections and reporting requirements.

A maintenance agreement for the stormwater drainage system, as attached, or in substantially the same form, shall be submitted for review by Corporation Counsel. Once approved, the document shall be signed and recorded at the Cumberland County Registry of Deeds prior to the issuance of a building permit. Please submit final copies to both the Department of Planning and Urban Development and the Department of Public Works.

2. Site Plan Expiration Site plan approval will be deemed to have expired unless work has commenced within one (1) year of the approval or within a time period up to three (3) years from the approval date as agreed upon in writing by the City and the applicant. Requests to extend approvals must be received before the one (1) year expiration date.

3. Separate Building Permits Are Required This approval does not constitute approval of building plans, which must be reviewed and approved by the City of Portland's Permitting and Inspections Department.

4. Performance Guarantee and Inspection Fees A performance guarantee covering the site improvements and an inspection fee payment of 2.0% of the guarantee amount must be submitted to and approved by the Planning and Urban Development Department and Public Works Department prior to the release of a building permit, street opening permit or certificate of occupancy for site plans.

5. Construction Management Plans The applicant, contractor and subcontractors are required to conform to the approved Construction Management Plan, and all conditions contained within the project's approval, for the entire duration of the project. Any amendments to the approved Construction Management Plan shall be reviewed and approved by the Department of Public Works prior to the execution. The Planning Authority and the Department of Public Works have the right to seek revisions to an approved Construction Management Plan. The applicant shall coordinate the project's construction schedule with the timing of nearby construction activities to avoid cumulative impacts on a neighborhood and prevent unsafe vehicle and pedestrian movements. Accordingly, nearby construction activities could involve a delay in the commencement of construction.

6. Preconstruction Meeting A pre-construction meeting shall be held at the project site with the contractor, Development Review Coordinator, Public Works representative and owner to review the construction schedule and critical aspects of the site work. At that time, the Development Review Coordinator will confirm that the contractor is working from the approved site plan and the approved Construction Management Plan. It shall be the contractor's responsibility to arrange a mutually agreeable time for the pre-construction meeting.

7. Department of Public Works Permits If work or obstructions will occur within the public right-of-way, such as utilities, curb, sidewalk, driveway construction, site deliveries and equipment siting, a Street Opening and/or Occupancy Permits are required for your site. Please contact the Department of Public Works Permit Clerk at 874-8300, ext. 8828. (Only excavators licensed by the City of Portland are eligible.)

8. Develop Site According to Plan The site shall be developed and maintained as depicted on the site plan and in the written submission of the applicant. Any modifications of an approved site

plan or alteration of a parcel, or of approved exterior elevations, which was the subject of site plan approval after May 20, 1974, shall require the prior approval of an amended site plan by the Planning Board or Planning Authority pursuant to the terms of Chapter 14, Land Use, of the Portland City Code.

9. Design Review of Exterior Elevations If the project is subject to design review, then the exterior elevations shall be constructed and maintained as depicted on the approved elevation drawings and in the written submission of the applicant. Modification of any approved exterior elevations shall require the approval of the revised plans by the Planning Board or Planning Authority pursuant to the terms of Chapter 14, Land Use of the Portland City Code.

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

11. As-Built Final Plans Final sets of as-built plans shall be submitted digitally to the Planning and Urban Development Department, on a CD or DVD, in AutoCAD format (.dwg), release AutoCAD 2005 or greater.

12. Impact Fees New development or changes of use that result in net new residential dwelling units, non-residential building square footage, or water meters are subject to the City of Portland's impact fee ordinance (Chapter 14, Article XVII). Impact fees are calculated at the time of building permit and must be paid prior to the certificate of occupancy. For more information, visit https://www.portlandmaine.gov/2409/Impact-Fees

The Development Review Coordinator must be notified five (5) working days prior to the date required for final site inspection. The Development Review Coordinator can be reached at the Planning and Urban Development Department at (207) 874-8632. All site plan requirements must be completed and approved by the Development Review Coordinator prior to issuance of a Certificate of Occupancy. Please schedule any property closing with these requirements in mind.

If there are any questions, please contact Christian Roadman at (207) 874-8984.

Sincerely,

Brandon Mazer
Chair, Portland Planning Board

Attachments:
1. Planning Board Report for Application PL-001040-2020
2. Draft Stormwater Maintenance Agreement
3. Performance Guarantee Packet

PLANNING BOARD REPORT
PORTLAND, MAINE

Student Center, Dormitory, & Quad
25 Bedford Street
Level III Site Plan and Site Location of Development Review
PL-001040-2020
University of Southern Maine, Applicant

Submitted to: Portland Planning Board **Public Hearing Date:** 11/10/2020	**Prepared by:** Christian Roadman, Planner **Date Prepared:** 11/6/2020

I. INTRODUCTION / PROPOSED DEVELOPMENT

The University of Southern Maine (USM) seeks to redevelop a portion of their campus, replacing two existing buildings and a parking lot with a 42,000 square foot student center, a 580 bed dormitory, and one-acre quad.

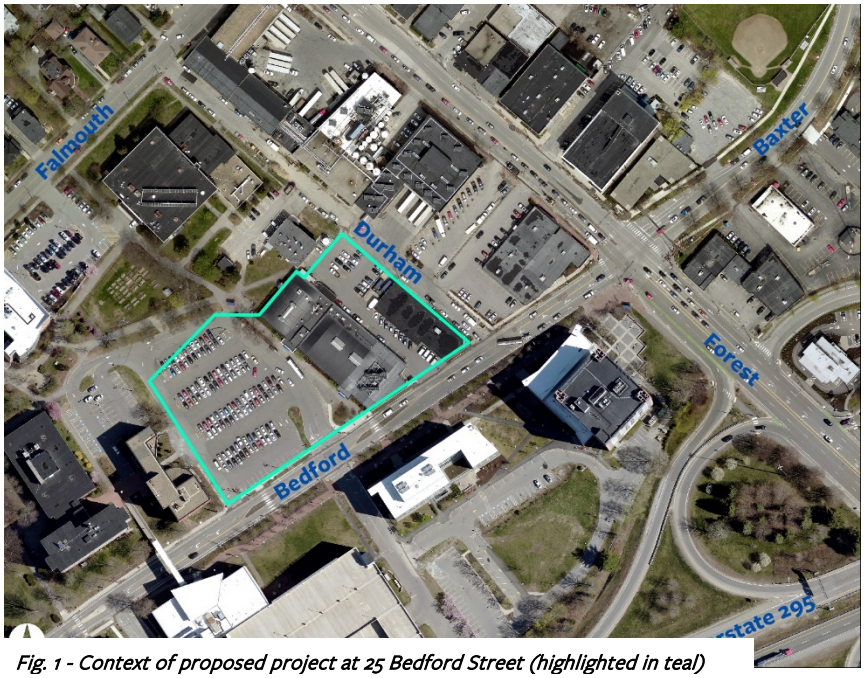

Fig. 1 - Context of proposed project at 25 Bedford Street (highlighted in teal)

The proposed project is located mostly within the R-5 Residential Zone, with a portion at the easternmost edge of the site in the B-2 Community Business Zone. USM's entire Portland campus also lies within the USM overlay zone, created to allow the University the flexibility to operate uses typical of an institution of higher education.

In addition to the City's site plan review requirements, this development is subject to a Site Location of Development (SLODA) review and requires a Maine DOT Traffic Movement Permit (TMP). The City of Portland is the delegated review authority for both.

Between removal of an existing 171 space parking lot and the new buildings, the development as currently proposed would result in a deficit of approximately 400 parking spaces. The University plans to construct a parking garage prior to completing this project; however, the Planning Board cannot assume that an appropriate facility would be planned, reviewed, permitted, and constructed within the necessary time frame. Because of this, USM developed a contingency plan (**Attachment D**) involving remote parking at offsite lots along METRO routes (or utilizing shuttles) and potential changes to existing parking operations to increase efficiency. Progress towards, and then provision of, adequate parking is suggested as a **condition of approval**.

Notices have been sent to 190 property owners and a legal advertisement was published in the October 30 and October 31 editions of the *Portland Press Herald*.

Fig. 2 - Rendering of proposed project at 25 Bedford Street in context viewed from the southwest (image: Applicant)

Applicant: University of Southern Maine
Consultants: Woodard & Curran, Inc. (civil engineering); SMRT Architects & Elkus Manfredi Architects (building design) Capstone Development Partners (student housing developer)

II. REQUIRED REVIEWS

Waiver Requests	Applicable Standards
Use of materials (fiber cement panel) identified as 'low quality' Staff support this waiver based on improved quality of fiber cement paneling	City of Portland Design Manual – (e) University of Southern Maine Overlay Zone, Appendix 3 Standard D-7 Materials
Review	**Applicable Standards**
Site Plan	Section 14-526
Site Location of Development	Technical Manual Section 14
Traffic Movement Permit	Delegated Review from Maine DOT

III. PROJECT DATA

Existing Zoning	R-5 Residential, B-2 Community Business, USM Overlay Zone
Existing Use	Student center, university facilities building, parking
Proposed Use	Student center, dormitory, quad
Property Size (sf.)	~673,000 (~144, 600 disturbed)

	Existing	Proposed	Net Change
Building Footprint (sf.)	36,906	48,477	+8,571
Building Floor Area (sf.)	36,906	259,861	+222,955
Impervious Surface Area (sf.)	123,178	70,334	-52,844
Parking Spaces	~171	0 (offsite spaces plan intended to offset need)	-171
Bicycle Parking Spaces	14	~36	+22

Fig. 3 - Rendering of the proposed project Bedford Street; the proposed dorm is to the right, partially visible. (image: applicant)

IV. EXISTING CONDITIONS

The University of Southern Maine's Portland Campus occupies more than 15 acres of land just outside of Portland's peninsula in the Oakdale neighborhood, and is bounded by Forest Avenue and Durham Street to the East, Falmouth Street to the North, Exeter Street to the West and I-295 and Chamberlain Street to the South. The campus operates in conjunction with USM's two other campuses located in Gorham and Lewiston, and at present, largely serves a commuter student population, with residence halls housed on the university's Gorham campus. The campus consists of 34 buildings ranging from repurposed single-family homes to large academic buildings, ten surface parking lots, one parking garage, and pathways across campus.

The buildings proposed for demolition as part of the redevelopment house campus services and facilities management.

V. PUBLIC COMMENT AND NEIGHBORHOOD MEETING

The applicant held a required neighborhood meeting virtually via Zoom on July 15, 2020. 21 members of the public attended. Those who spoke commented their appreciation for the architecture of the new buildings and overall design. The neighborhood meeting notification, sign-in sheet and minutes are included as **Attachment B**.

As of this writing, public comment received (**PC1 – PC7**) generally expresses neighborhood concern regarding potential traffic and parking impacts on the nearby residential neighborhood and also the business operations of Oakhurst Dairy. One "comment" is a neighborhood petition supported by approximately 44 neighbors which expresses particular concern regarding the applicant's intended parking garage and how it is not included in this application.

VI. RIGHT, TITLE, & INTEREST AND FINANCIAL & TECHNICAL CAPACITY

The applicant provided four deeds (**Attachment F**) to evidence ownership of the property.

The applicant provided a letter listing voter-approved general obligation debt, philanthropic contributions, and revenue bonds as financial resources facilitating the proposed project (**Attachment F**).

The applicant cited consultant experience and expertise as evidence of technical capacity (**Attachment F**).

VII. ZONING ANALYSIS

The development site is located within the R-5 Residential Zone, the B-2 Community Business Zone, and the USM Overlay Zone. The purpose of the USM Overlay Zone is to allow the University's existing campus to "be continued and reasonably expanded within defined boundaries" while recognizing "the unique qualities of a university campus while at the same time protecting the value and integrity of established neighborhoods."

University buildings and structures are subject to the requirements of the underlying zoning districts, except as modified by the USM Overlay Zone. The Overlay Zone allows for an 85 foot building height in the area of the campus where this development is to occur, with required setbacks of 10 feet along Bedford Street, 0 feet along Durham Street, and 20 feet along Falmouth Street.

The uses proposed for this project, which are classified as 'university uses', are permitted within the USM Overlay Zone. These include classrooms, student unions, dining halls, bookstores, auditoriums, outdoor use areas, student housing and offices.

The proposed buildings conform to height restrictions in the zone – a portion of one building exceeding the height limit (**Attachment P17**) is for a stair tower and elevator overrun, which is allowable.

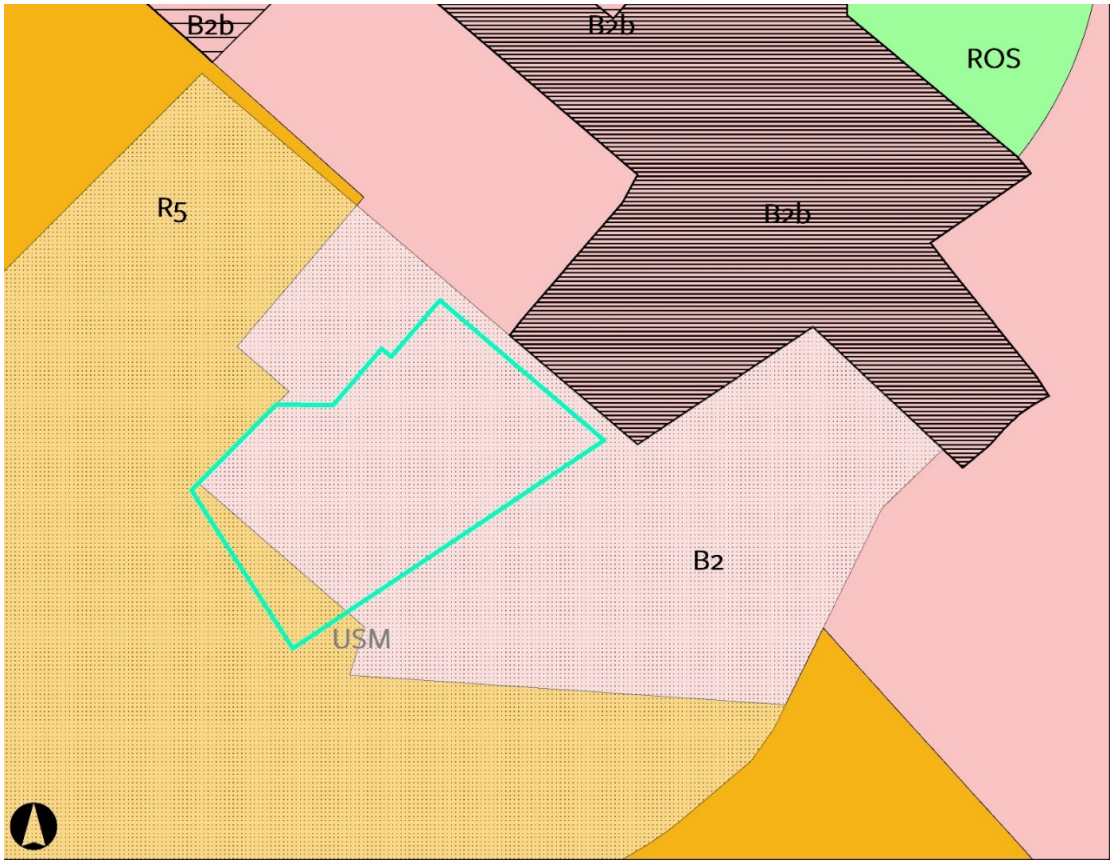

Fig. 4 - Zoning context of the proposed project at 25 Bedford Street (highlighted in teal). The stippled portion of the map represents the USM overlay zone.

VIII. DEVELOPMENT REVIEW

A. SITE PLAN STANDARDS (Section 14-526)

Staff reviewed the proposed development for conformance with the relevant review standards of Portland's site plan ordinance and applicable regulations, and staff comments relative to each standard are below:

a) Transportation Standards

Impact on Surrounding Street Systems and Access and Circulation; Access and Circulation; Public Transit Access; Parking; Transportation Demand Management

The proposed development is not expected to significantly impact the surrounding street system as the proposed uses are not expected to generate more traffic than current uses; the residence hall may reduce traffic demand on campus. Two curb cuts along Bedford Street would be eliminated, which should improve traffic flow on campus. Prior to the completion of this development, a new roundabout will be built at the intersection of Brighton Avenue and Deering Avenue, which at present is the most deficient intersection in the vicinity of the university. The roundabout is anticipated to improve traffic flow through that intersection and is currently under construction.

The University is located along the 2, 4, and Husky METRO (the latter connects its Gorham and Portland campuses). On campus, proposed pedestrian infrastructure connections are intended to improve pedestrian mobility.

In the short term, this development is expected to result in an overall decrease in the supply of off-street parking, as 171 surface spaces are being eliminated. As noted above, the University plans to construct a parking garage prior to completing this project; however, the Planning Board cannot assume that an appropriate facility would be planned, reviewed, permitted, and constructed within the necessary time frame.

Because of this, USM developed a contingency plan (**Attachment D**) involving remote parking at offsite lots along METRO routes or shuttle service, and potential changes to existing parking operations; utilizing parking attendants would allow cars to be "parked in" to maximize efficiency, and then be retrieved when needed by attendants. Additionally, USM proposed leasing parking spaces at one of two locations in Westbrook: Rock Row or 183 County Road in Westbrook. At the former, the existing Husky Line would allow students to then take the bus to campus and back. At the latter, the University would need to coordinate additional bus service or institute a shuttle service to that lot.

Progress towards, and then provision of, adequate parking is suggested as a **condition of approval**.

The University provided a Transportation Demand Management (TDM) plan (**Attachment C**) including a trip reduction goal of between 3% and 6%, and a parking reduction of between 10% and 14 % by the year 2025 (after presumed completion of the student center, residence hall and desired garage). The plan was reviewed and approved by the City's Transportation Programs Manager (**Attachment 1**), who noted that previous staff comments based on commitment to core strategies, development of greenhouse gas and mode split targets, expansion of monitoring / reporting on trip and parking reductions were addressed substantively to the satisfaction of staff.

The Department of Public Works senior engineer (**Attachment 3**) and consulting traffic engineer (**Attachment 2**) also participated in review of the project. Both are generally satisfied with the current application, but request specific conditions of approval tied to the applicant's Traffic Movement Permit (addressed below) and improvements to the applicant's construction management plan.

b) Environmental Quality Standards

Preservation of Significant Natural Features; Landscaping & Landscape Preservation; Water Quality, Storm Water Management and Erosion Control

The proposed project site is entirely developed, and as such, contains no significant natural features. The project introduces two new major green spaces: a one-acre campus quadrangle and a semi-private half-acre courtyard partially surrounded by the residence hall.

The proposed redevelopment will reduce the amount of impervious surface for this site but still must treat at least 50% of impervious area. To meet this threshold, the applicant proposes grassed underdrained soil filters and bioretention cell soil filters. The City's consulting civil engineer reviewed the applicant's proposal (**Attachment 4**) and requested updates and clarifications to several stormwater calculations and details. Revisions are anticipated prior to the Planning Board's public hearing on Tuesday. Otherwise, additional conditions of approval may be necessary.

The Department of Public Works requires (**Attachment 5**) a dewatering plan from the applicant. This is suggested as a **condition of approval**.

c) Public Infrastructure and Community Safety Standards

a. Consistency with related Master Plans; Public Safety and Fire Prevention; Availability and Capacity of Public Utilities

The project as shown appears consistent with master plans adopted by the City. The application was reviewed for compliance with relevant life/safety requirements and deemed satisfactory in this regard. The project proposes new utility connections for water, gas, electric and sewer. Confirmation of adequate wastewater capacity by the Department of Public Works and confirmation of ability to serve by the Portland Water District are suggested as **conditions of approval**.

d) Site Design Standards

1. Massing, Ventilation and Wind Impact; Shadows; Snow and Ice Loading; View Corridors; Historic Resources; Exterior Lighting; Noise and Vibration; Signage and Wayfinding

   The proposed building massing complements the existing campus environment, and promotes an improved pedestrian experience along Bedford Street with a more uniform street wall. The development is not anticipated to have adverse impacts related to either ventilation or wind, nor adverse impacts related to building shadows or snow and ice loading.

   There are no designated view corridors within the project vicinity, and lighting proposed (**Attachments G and P11**) meets City standards for light trespass and full cutoff fixtures. Lighting consists of bollard, wall pack and pole mounted fixtures that are concentrated along walkways, at building entrances and within the residence hall courtyard.

   No adverse impacts related to noise and vibration are anticipated as mechanical equipment is to be roof-mounted and away from public open spaces and other residential areas.

2. Zoning Related Design Standards

   The City's Urban Designer reviewed the proposed project (**Attachment 6**) against the USM Campus Design Principles and Standards (Appendix 3 of the Design Manual), and generally supported the proposed project design.

B. COMPREHENSIVE PLAN

Portland's Plan 2030 identifies a vision statement and policy goals for the City. Several of these are applicable to the proposed project and are reproduced below.

Vision statement:

- Equitable:
  "We will incorporate the needs of all our residents in planning for our future."

- Sustainable*:*

  "Portland will grow in order to sustain our community, infrastructure, and economy."

- Dynamic:

  "We will welcome new residents into our community because they enrich and sustain our community."

- Secure:
  "We will be committed to accessible housing and healthy food for all our residents."

- Authentic:
  "We will invest in and support our local economy.

  Policy goals:

- Environment:

  "Adopt sustainable land use and transportation policies that support connectivity, walkable neighborhoods, and multi-modal transportation."

- Economy:

  "Support sustainable growth in our educational, medical, and cultural institutions."

- Housing:
  "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."

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

C. SITE LOCATION OF DEVELOPMENT

The City of Portland has delegated review authority from the Maine DEP for large projects that trigger Site Location of Development Act (SLODA) review. The standards for this review include the items below, which largely dovetail with Portland's existing site plan review standards:

- *Financial & Technical Capacity*: see section VI, above.
- *Traffic Movement*: see site plan standards, a, above, and Traffic Movement Permit, below.
- *No Adverse Effect on the Natural Environment, Ground Water, Flooding, Storm Water Management & Erosion and Sedimentation Control*: see site plan standards, b, above. The development is not located within a flood hazard zone, as shown on the FEMA Flood Insurance Rate Map provided in this application. The proposed development is not anticipated to cause or increase flooding or cause an unreasonable hazard to any adjacent structures.
- *Soil Types:* The applicant provided a draft geotechnical report and information regarding strategies to appropriately stabilize the building (Attachment X).
- *Infrastructure*: see site plan standards, c, above.

D. TRAFFIC MOVEMENT PERMIT

As defined under Maine state statute 704—A, a traffic movement permit is required of any project that generates 100 or more passenger car equivalents at peak hour. Any project surpassing this threshold is required to make adequate provision for traffic movement of all types into and out of the project area such that any traffic increase that is attributable to the project will not result in unreasonable congestion or unsafe conditions within the vicinity of the development.

Per the applicant's TMP materials (Attachment U) The proposed development is expected to generate 160 new morning peak hour trips am peak hour trips, and 160 new evening peak hour trips. Based on staff and

reviewer feedback, the applicant agreed to help fund and implement, in coordination with the City, physical infrastructure and signal timing improvements intended to mitigate traffic impacts and increase pedestrian safety in the area of the USM campus. Specifically, the applicant is required as a condition of approval, to:

1) Implement improvements at the Forest Avenue/Bedford Street/Baxter Boulevard intersection based on the Smart Corridor Study recommendations. This shall include geometric modifications to the corners on the Baxter Boulevard approach, upgrading pedestrian traffic signal equipment with all work complying with ADA standards.

2) Implement improvements at the Forest Avenue/Falmouth Street/Preble Street Extension intersection based on the Smart Corridor Study recommendations. This shall include geometric modifications to the southeast corner, implementing a crosswalk on the southerly Forest Avenue approach, upgrading pedestrian traffic signal equipment with all work complying with ADA requirements. It should be noted that the new crosswalk will require installation of a new sidewalk ramp on the westerly side of Forest Avenue.

3) Contribute $10,000 towards Forest Avenue Traffic Signal Optimization at the Forest Avenue/Bedford Street/Baxter Boulevard and Forest Avenue/Falmouth Street/Preble Street Extension intersections with the intent of improving mobility efficiencies.

4) Implement traffic calming / pedestrian improvements at the Falmouth Street / Oakdale Street intersection (including a raised intersection with supporting features for review and design by the Portland Department of Public Works) before completion of a parking garage structure or five years from TMP approval, whichever is sooner.

IX. PROPOSED MOTIONS

A. WAIVERS

On the basis of the application, plans, reports and other information submitted by the applicant, findings and recommendations contained in the Planning Board report for the public hearing on November 10, 2020 for application PL-001040-2020 relevant to Portland's technical and design standards and other regulations; and the testimony presented at the Planning Board hearing:

1. The Planning Board **[finds / does not find]** based upon the submitted materials, that extraordinary conditions exist or undue hardship may result from strict compliance with the Design Manual standard (e) University of Southern Maine Overlay Zone, Appendix 3 Standard D-7 Materials which prohibits use of fiber cement panels. The Planning Board **[waives / does not waive]** the Design Manual standard ((e) University of Southern Maine Overlay Zone, Appendix 3 Standard D-7 Materials) to allow use of fiber cement panel.

B. SITE PLAN REVIEW & SITE LOCATION OF DEVELOPMENT

On the basis of the application, plans, reports, and other information submitted by the applicant; findings and recommendations contained in the Planning Board report for the public hearing on November 10, 2020 for application PL-001040-2020 relevant to the site plan and Site Location of Development Act regulations; and the testimony presented at the Planning Board hearing, the Planning Board finds that the plan **[is / is not]** in conformance with the site plan standards of the land use code and the Site Location of Development Act standards, subject to the following conditions of approval:

PRIOR TO APPLYING FOR A BUILDING PERMIT

1. The applicant shall submit an ability to serve letter from the Portland Water District.

2. The applicant shall submit confirmation of adequate wastewater capacity from the Department of Public Works.

3. The applicant shall submit a dewatering plan for review and approval by the Department of Public Works.

SIX MONTHS AFTER ISSUANCE OF A BUILDING PERMIT

4. The applicant shall provide proof of parking commitments sufficient to provide the 396 parking spaces required by the proposed development, or shall submit a site plan application for a parking garage providing these spaces, for review and approval by the Planning Authority.

PRIOR TO CERTIFICATE OF OCCUPANCY

5. The applicant shall obtain a certificate of occupancy for a parking garage providing the 396 parking spaces required by the proposed development, or shall provide a final management plan and executed leases providing these spaces, for review and approval by the Planning Authority.

C. TRAFFIC MOVEMENT PERMIT

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 November 10, 2020 for application PL-001040-2020 relevant to Portland's technical and design standards and other regulations; and the testimony presented at the Planning Board hearing, the Planning Board finds that the plan [is / is not] in conformance with 23 MRSA 704-A and Chapter 305 Rules and Regulations pertaining to Traffic Movement Permits, subject to the following conditions of approval:

1. The applicant shall provide conceptual design plans, preliminary and final plans and specifications (for review and approval by the Department of Public Works and Planning Authority) and then implementation of Traffic calming / pedestrian improvements at the Falmouth Street / Oakdale Street intersection (including a raised intersection with supporting features for review and design by the Portland Department of Public Works) before completion of a parking garage structure or five years from TMP approval, whichever is sooner.

PRIOR TO CERTIFICATE OF OCCUPANCY

2. The applicant shall provide a $10,000 contribution to the City towards Forest Avenue traffic signal optimization at the Forest Avenue / Bedford Street / Baxter Boulevard and Forest Avenue / Falmouth Street / Preble Street Extension intersections with the intent of improving mobility efficiencies.

3. The applicant shall provide conceptual design plans, preliminary and final plans and specifications (for review and approval by the Department of Public Works and Planning Authority) and then implementation of the following:

    - Improvements at the Forest Avenue/Bedford Street/Baxter Boulevard intersection based on the Smart Corridor Study recommendations. This shall include geometric modifications to the corners on the Baxter Boulevard approach, upgrading pedestrian traffic signal equipment with all work complying with ADA standards.

- Improvements at the Forest Avenue/Falmouth Street/Preble Street Extension intersection based on the Smart Corridor Study recommendations. This shall include geometric modifications to the southeast corner, implementing a crosswalk on the southerly Forest Avenue approach, upgrading pedestrian traffic signal equipment with all work complying with ADA requirements. It should be noted that the new crosswalk will require installation of a new sidewalk ramp on the westerly side of Forest Avenue.

XI. ATTACHMENTS

Report Attachments

1. Transportation Programs Manager TDM Memo
2. Consulting Transportation Engineer TMP Comments
3. Department of Public Works Senior Engineer CM Plan Memo
4. Consulting Civil Engineer Comments Memo
5. Department of Public Works Water Resources Comments
6. Urban Designer Review Memo

Public Comment

PC1 - PC 7.

Applicant's Submittals

A. Cover Letter and Project Summary
B. Neighborhood Meeting Materials
C. Transportation Demand Management
D. Interim Parking Management Plan Memo
E. Site Location of Development Application
F. Site Plan Requirements Narratives
G. Lighting Cut Sheets
H. Stormwater Report
I. USM Facilities Master Plan
J. Traffic Memo
K. Street Parking Memo
L. Design Narrative
M. Response to Comments Letters
N. Portland Commons Window to Wall Ratio
O. Landscape Design Concept Memo
P. Housing Survey Market Analysis
Q. Parking Analysis
R. Parking Garage Feasibility Study
S. Preliminary Plan for Move-In
T. Sightline Diagrams
U. TMP Section 7

Plans

P1. Cover Sheet
P2. Site Notes & Legends

P3. Existing Conditions & Removals Plan
P4. Building Demolition Plan
P5. Site Layout
P6. Utilities
P7. Planting & Landscape
P8. Grading & Drainage
P9. Erosion & Sedimentation Controls
P10. Steam Line
P11. Photometric
P12. Post Development Watershed Plan
P13. Post Development Water Quality Plan
P14. Construction Management
P15. USM Survey
P16. Floor Plans
P17. Elevations
P18. Renderings

CITY OF PORTLAND

Planning & Urban Development

Performance Guarantee, Inspection Fee, and Infrastructure Financial Contribution Packet

A. Site Plan/Subdivision Performance Guarantees Required

Portland's Land Use Code requires all developers with approved site plan and/or subdivision applications to submit a performance guarantee to the City prior to the start of any construction or site improvements. The performance guarantee represents 100% of the total cost of site improvements, as determined by the City.

The code further requires developers to pay an inspection fee of 2% of the performance guarantee amount to the City for the administrative costs associated with inspecting construction activity to ensure that it conforms with plans and specifications.

(Portland's Land Use Code, Sections 14-501 and 14-530)

B. Cost Estimate Form and Inspection Fee

The performance guarantee covers major site improvements related to site plan and subdivision review, such as paving, roadway, utility connections, drainage, landscaping, lighting, etc. Please submit an itemized cost estimate form to determine the detailed costs of both public and private site improvements to the Planning Division for review and approval. The cost estimate form (excel format) can be downloaded from the city's website here: http://portlandmaine.gov/costestimate The approved amount on the Cost Estimate form is the amount to be covered by the performance guarantee and is the basis for calculating the 2% inspection fee.

C. Acceptable Types of Performance Guarantees

The accepted forms of a performance guarantee, covering the amount approved on the Cost Estimate form, must be one of the following options consistent with the attached templates, with **NO** exceptions. The templates and instructions be located on our website at: https://www.portlandmaine.gov/2157/Performance-Guarantee

1. A letter of credit from a bank/credit union
2. A deposit into a bank-held escrow account
3. A deposit into a City-held escrow account

NOTE: No land use application of any kind shall be processed, reviewed or issued, no signed subdivision plat shall be released or recorded, and no building permit of any kind shall be issued unless all fees have been paid and every aspect of the proposed development is in compliance with City Codes as determined by the Development Review Coordinator in the Planning Division.

The developer is eligible to receive up to three reductions from the performance guarantee in a calendar year equal to the estimated cost of the completed improvements. In no case, however, shall any performance guarantee be reduced 1) in any line item where improvements remain to be completed; or 2) to a value which is less than the estimated cost of completing all remaining required improvements; or 3) to a value less than 10% of the Performance Guarantee. *(The Cost Estimate Form can also be used during the construction phase to submit reductions of fully completed site work items)*

At the conclusion of the project, the City will release 90% of the performance guarantee after the Development Review Coordinator determines that site improvements have been satisfactorily completed at the time of the final inspection. The City will then retain a 10% defect guarantee to cover the workmanship and durability of materials used in construction. The defect guarantee will be released one
(1) year from date of acceptance, subject to the Development Review Coordinator inspecting the site and finding it in compliance with the approved site plan.

D. Housing Replacement Performance Guarantees

For those projects that are subject to Portland's Housing Preservation and Replacement Ordinance (Section 24-
483) and have an approved plan, then a performance guarantee is required for housing replacement. An owner or developer must post a performance guarantee in the form of a letter of credit in the amount equivalent to the amount the applicant would have been required to contribute to the City's Housing Fund, if the applicant had chosen that option. The guarantee shall be valid for no more than three years, after which the full amount shall be provided to the City's Housing Trust Fund, if replacement units meeting the code do not have certificates of occupancy. The guarantee can be released upon the issuance of a certificate of occupancy for the replacement units. A suggested template for a Housing Replacement Performance Guarantee is included as Attachment 4.

E. Infrastructure Accounts

Contributions to infrastructure accounts may be required as part of the conditions of site plan approval. The contributions must be submitted prior to the issuance of any permits, unless stated otherwise in the approval. The form for submitted required contributions is included as Attachment 5.

F. Administrative Process for Submitting Performance Guarantee

- **Step 1 – Submit a Cost Estimate for Review**

  Submit completed cost estimate form to the Planning Division for review and approval. Once approved, use this total amount as the performance guarantee amount in Step 2.

- **Step 2 – Drafting a Performance Guarantee**

  Complete a draft of 1 of the 3 attached performance guarantee templates, inputting project specific information (Reference Guide for Drafting for help) into blank and bracketed areas, and submit to the Planning Division for final approval. Submit a draft to **planning@portlandmaine.gov** to

ensure fields are correctly entered. Once staff approved the draft, the applicant shall submit the official signed original performance guarantee document, which for option 1) or 2) must be on Bank/Credit Union letterhead with original signatures.

- **Step 3 - Submit Performance Guarantee, Inspection Fee, and Infrastructure Contributions** Submit the final original Performance Guarantee, the required inspection fee, and any infrastructure contributions (Include Attachment 6 form) to the Planning Division. The Planning Division will confirm that the final documents are accurate and acceptable.

- **Step 4 - Release of Recording Plat and Permits**
  Only after the performance guarantee is issued, fees paid, and all other conditions of site plan approval and compliance are met, will the recording plat be released for recording at the Cumberland County Registry of Deeds and/or City permits issued.

Contact: Please email the Cost Estimate Form to Jodie Keene at **jkeene@portlandmaine.gov** After the cost estimate is approved, all Performance Guarantees and Infrastructure Contributions can be submitted by mail to: **City of Portland Planning Division, 389 Congress Street, 4th Floor, Portland, ME 04101**. Please call our office with any questions: 207-874-8632

STORMWATER DRAINAGE SYSTEM
MAINTENANCE AGREEMENT

For SITE PLANS (THAT ARE NOT SUBDIVISIONS)

IN CONSIDERATION OF the site plan approval granted by the Planning Board/Planning Authority of the City of Portland to the proposed _____ (*name of development and project number)*), and the associated Grading, Drainage & Erosion Control Plan (*insert correct name of plan)* (Exhibit A) submitted by_____, 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 A and in strict compliance with the approved Stormwater Maintenance and Inspection Agreement (*insert correct name of document)* prepared for the Owner by _____ (copy attached at Exhibit B) 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 site plan most recently and formally approved by the Planning Board/Planning Authority 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 Condominium Association or management company, and 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 liened 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 liening 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: Approved Grading and Drainage Plan *(name of the plan showing the Stormwater System in detail)*

Exhibit B: Approved Stormwater Maintenance and Inspection Agreement

CITY OF PORTLAND, MAINE

PLANNING BOARD

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

June 15, 2020

Joe Gallant
University of Southern Maine
25 Bedford Street
Portland, ME, 04101

Ashley Fletcher
Woodard & Curran
41 Hutchins Drive
Portland, ME, 04102

Project Name:	Wishcamper Parking Lot Expansion	**Project ID:**	PL-000974-2020
Address:	44 Bedford Street	**CBL:**	114 A001
Applicant:	University of Southern Maine		
Planner:	Andrew Tufts		

Dear Mr. Gallant:

On May 26, 2020, the Planning Board considered the University of Southern Maine's Level III Site Plan application for the proposed Wishcamper parking expansion and associated site improvements at 44 Bedford Street. The Planning Board reviewed the proposal for conformance with the site plan standards of the City of Portland Land Use Code and with the Site Location of Development Act permit requirements. The Planning Board voted (6-1, Silk opposed) to approve the application with the following conditions as presented below.

The approval is based on the submitted plans and findings, as contained in the attached Planning Report (5-26-2020) for application PL-000974-2020.

Site Plan Review

The Planning Board voted (6-1, Silk opposed) that the plan is in conformance with the site plan standards of the Land Use Code and the *Site Location of Development Act*, subject to the following conditions of approval:

PRIOR TO ISSUANCE OF A BUILDING PERMIT

1. The applicant shall submit a revised final plan set to include the addition of landscape islands for the interior of the parking lot and proposed bicycle parking spaces to be reviewed and approved by the Planning Authority.

Standard Procedures

Note: The following standard procedures and requirements apply to all approved site plans:

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

2. Separate Building Permits Are Required This approval does not constitute approval of building plans, which must be reviewed and approved by the City of Portland's Permitting and Inspections Department.

3. Performance Guarantee and Inspection Fees A performance guarantee covering the site improvements and an inspection fee payment of 2.0% of the guarantee amount and three (3) final sets of plans must be submitted to and approved by the Planning and Urban Development Department and Public Works Department prior to the release of a building permit, street opening permit or certificate of occupancy for site plans.

7. Construction Management Plans The applicant, contractor and subcontractors are required to conform to the approved Construction Management Plan, and all conditions contained within the project's approval, for the entire duration of the project. Any amendments to the approved Construction Management Plan shall be reviewed and approved by the Department of Public Works prior to the execution. The Planning Authority and the Department of Public Works have the right to seek revisions to an approved Construction Management Plan. The applicant shall coordinate the project's construction schedule with the timing of nearby construction activities to avoid cumulative impacts on a neighborhood and prevent unsafe vehicle and pedestrian movements. Accordingly, nearby construction activities could involve a delay in the commencement of construction.

8. Preconstruction Meeting Prior to the release of a building permit and scheduling of a preconstruction meeting, a hard copy set of approved plans shall be submitted to the Development Review Coordinator. A pre-construction meeting shall be held at the project site with the contractor, Development Review Coordinator, Public Works representative, and owner to review the construction schedule and critical aspects of the site work. At that time, the Development Review Coordinator will confirm that the contractor is working from the approved site plan and the approved Construction Management Plan. The site/building contractor shall provide one (1) copy 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 pre-construction meeting.

9. Department of Public Works Permits If work or obstructions will occur within the public right-of-way, such as utilities, curb, sidewalk, driveway construction, site deliveries and equipment siting, a Street Opening and/or Occupancy Permits are required for your site. Please contact the Department of Public Works Permit Clerk at (207) 874-8300, ext. 8828. (Only excavators licensed by the City of Portland are eligible.)

10. Develop Site According to Plan The site shall be developed and maintained as depicted on the site plan and in the written submission of the applicant. Any modifications of an approved site plan or alteration of a parcel, or of any approved exterior elevations, which were the subject of site plan approval after May 20, 1974, shall require the prior approval of an amended site plan by the Planning Board or Planning Authority pursuant to the terms of Chapter 14, Land Use, of the Portland City Code.

11. Stormwater Management The owner/operator of an approved stormwater management system, and all assigns shall comply with the conditions of Chapter 32, Stormwater including Article III, Post Construction Stormwater Management, which specifies the annual inspections and reporting requirements.

    A maintenance agreement for the stormwater drainage system, as attached, or in substantially the same form, shall be submitted for review by Corporation Counsel. Once approved, the document shall be signed and recorded at the Cumberland County Registry of Deeds prior to the issuance of a building permit. Final copies shall be submitted to both the Department of Planning and Urban Development and the Department of Public Works.

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

13. As-Built Final Plans Final sets of as-built plans shall be submitted digitally to the Planning and Urban Development Department, on a CD or DVD, in AutoCAD format (.dwg), release AutoCAD 2005 or greater.

14. Mylar Copies Mylar copies of the as-built drawings for the public streets and other public infrastructure in the subdivision must be submitted to Public Works prior to the issuance of a certificate of occupancy.

The Development Review Coordinator must be notified five (5) working days prior to the date required for final site inspection. The Development Review Coordinator can be reached at the Planning and Urban Development Department at (207) 874-8632. All site plan requirements must be completed and approved by the Development Review Coordinator prior to issuance of a Certificate of Occupancy. Please schedule any property closing with these requirements in mind.

If there are any questions, please contact Andrew Tufts at (207) 874-8724.

Sincerely,

Brandon Mazer, Chair
Portland Planning Board

ATTACHMENTS

PLANNING BOARD REPORT

PLANNING BOARD REPORT
PORTLAND, MAINE

44 Bedford Street Development
Level III Site Plan Review
University of Southern Maine, Applicant
PL-000974-2020 CBL: 114 A001

Submitted to: Portland Planning Board Public Hearing Date: May 26, 2020	Prepared by: Andrew Tufts, Planner Date: May 22, 2020

Figure 1: Parcel outline - Source: City of Portland Maine Parcel Viewer

I. INTRODUCTION

The University of Southern Maine has submitted a Level III Site Plan application for the expansion of the Wishcamper parking lot located at 44 Bedford Street. The proposed project would create 122 additional parking spaces. The site is located in the R-5 and B-2 Zones, as well as the University of Southern Maine Overlay Zone. The proposed activity will not result in any change to the site's existing use.

The Planning Department sent 41 notices advertising this meeting to property owners within 500 feet of the site. Legal advertisements ran in the May 15th & May 16th editions of the Portland Press Herald.

Applicant: University of Southern Maine

Consultants: Ashley Fletcher (Woodard & Curran) John Schwanda (Owen Haskell Inc (Surveying)) Joe Gallant (University of Southern Maine)

II. REQUIRED REVIEWS

Waiver Requests	*Applicable Standards*
Review	*Applicable Standards*
Site Plan	*Section 14-526*

III. PROJECT DATA

Existing Zoning	R-5, B-2 Zones, USM Overlay
Existing Use	*Parking Lot*
Proposed Use	*Parking Lot*
Parcel Size	63,200 SF

	Existing	*Proposed*	*Net Change*
Building Footprint	NA	NA	NA
Building Floor Area	NA	NA	NA
Impervious Surface Area	27,900 SF	52,300 SF	+ 24,400 SF
Parking Spaces	82	214	+ 132
Bicycle Parking Spaces	0	0	0

Figure 2: Existing Conditions - Source: Google Maps

IV. EXISTING CONDITIONS

The proposed development site is located on 44 Bedford Street which extends between Forest Avenue and Deering Avenue. The parcel is approximately 63,200 SF in size. The site is part of the University of Southern Maine Portland campus, and is surrounded by Hannaford Hall Parking Garage to the west, the Muskie School's Wishcamper Building to the north, Osher Library to the east, and Interstate 295 to the south. The existing grassed area interior to the site that will be converted to parking is not considered open space used for recreation; it is currently used for overflow parking and storage.

The applicant and owner of the parcel is the University of Southern Maine. The site is currently developed as an 82-space surface parking lot with landscaped islands. Owen Haskell, Inc. completed a boundary and topographic survey of the site. There were no existing or proposed easements identified.

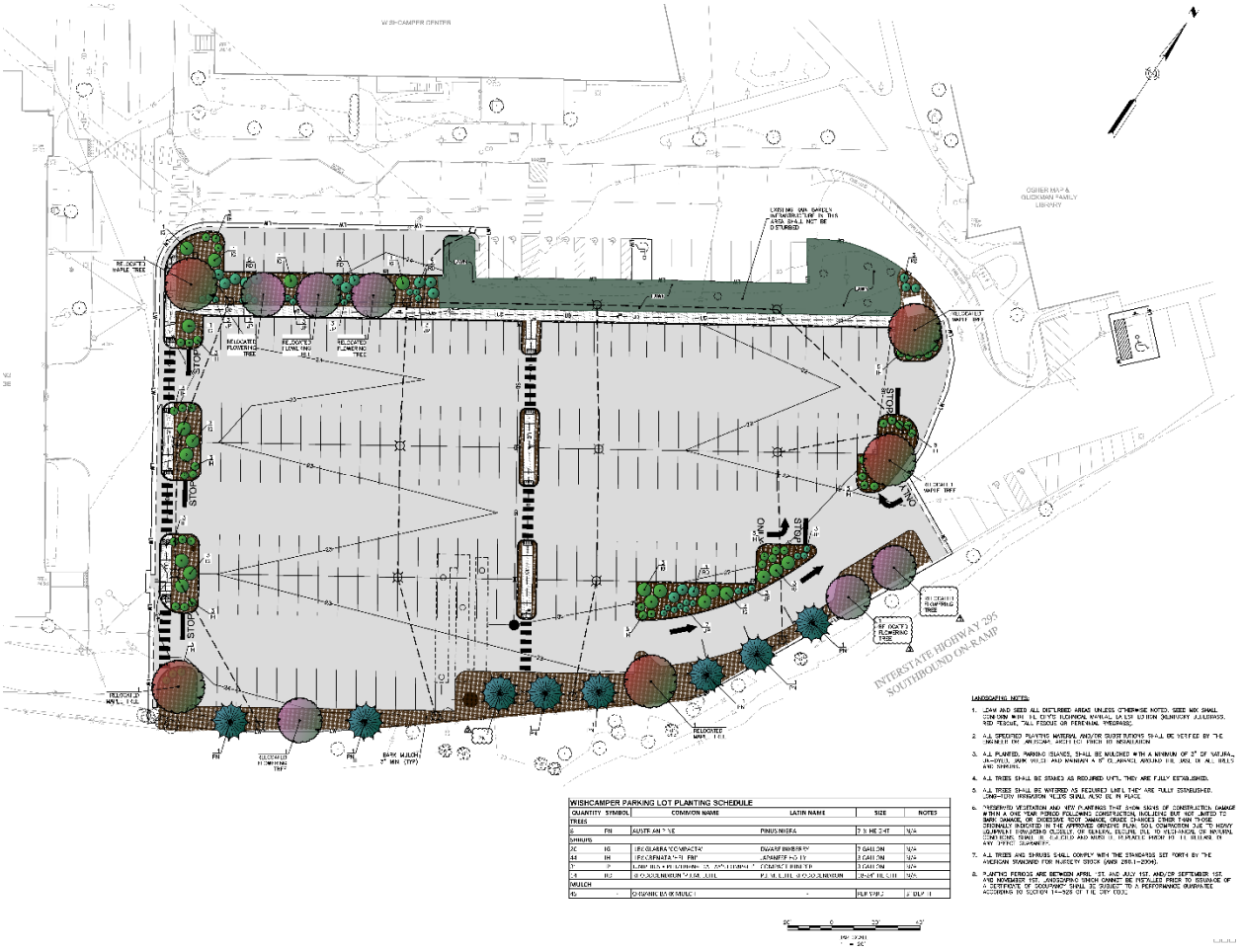

Figure 3: Proposed Landscape Plan - Source: Woodard & Curran

V. PROPOSED DEVELOPMENT

The proposed development includes the creation of an additional 122 parking spaces resulting in a total of 214 surface parking spaces (82 existing + 122 additional). The proposed project is intended to enable the University to replace some of the parking that will be displaced by the planned future development of a new Student Center and Student Residential Building (to be submitted under a separate application). The proposed parking lot will include the necessary ADA accessible parking spaces as well as compact spaces. The proposed stormwater management plan will consist of porous pavement walkways, similar to existing walkways throughout the University, and a subsurface detention and proprietary treatment device. The parking field consists of 166 standard spaces, 38 compact spaces and 10 handicap accessible spaces comprising 52,300 square feet of impervious paving. The total area of the project is 63,200 square feet.

VI. PUBLIC COMMENT AND NEIGHBORHOOD MEETING

The applicant team held a neighborhood meeting on the evening of March 4, 2020 from 5:30 PM at the Talbot Lecture Hall within Luther Bonney Hall on Bedford Street in Portland, ME. The meeting was attended by two abutters and one individual who did not sign in, along with members of the project team. Attending on behalf of the development team were Ashley Fletcher and Darrin Stairs of Woodard & Curran, and Alec Porteous of USM. A presentation was provided by Darrin Stairs & Alec Porteous. Comments

included questions regarding associated traffic from the project, as well as specifics on overall campus parking plans. **(See Attachment Q)**

VII. RIGHT, TITLE, & INTEREST AND FINANCIAL & TECHNICAL CAPACITY

The owner of the property is The University of Southern Maine Foundation. The applicant provided a copy of the warranty deed, recorded at the Cumberland County Registry of Deeds in CCRD Book 29219 page 218, which demonstrates their right, title and interest in the property. The applicant team cited their experience and qualifications to demonstrate capacity to design and construct the project. The anticipated total cost of the project is projected to be $1,710,000. **(See Attachments D & E)**

VIII. ZONING ANALYSIS

Dimensional requirements for this project are dictated by the R-5, B-2, & USM Overlay Zones.

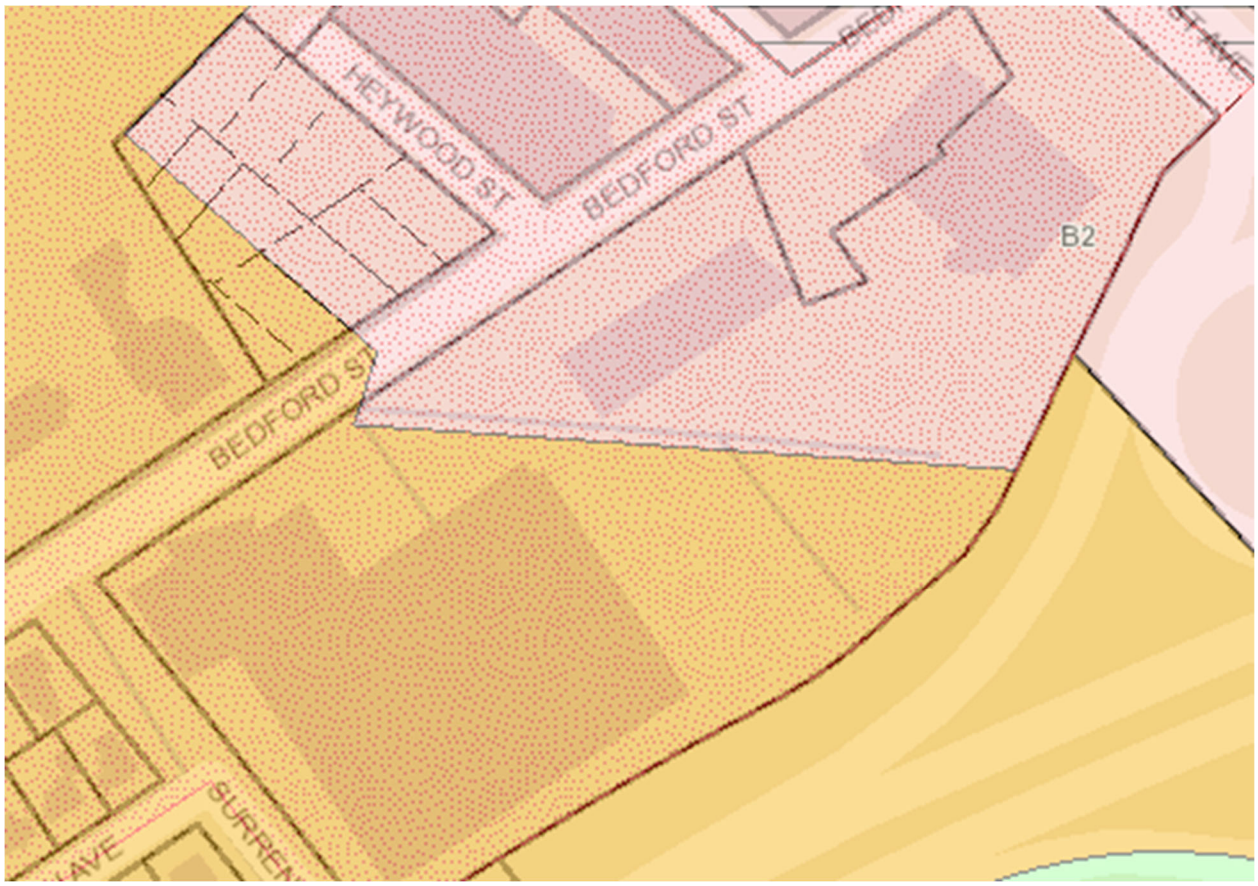

Figure 4: Zoning Map

Zoning Requirements	I-M	Provided	+/-
Minimum Lot Size	None	62,300 SF	N/A
Minimum Street Frontage	NA	NA	
Maximum Lot Coverage	66%	55%	-11%
Parking	NA	214	NA
Bicycle Parking	NA	NA	NA

IX. DEVELOPMENT REVIEW

A. SITE PLAN SUBMISSION REQUIREMENTS (Section 14-527)

SITE PLAN STANDARDS (Section 14-526)

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

1. *Transportation Standards*

a. Impact on Surrounding Street Systems and Access and Circulation

The proposed parking lot will include the construction of ADA accessible parking and pedestrian walkways. Traffic signage and pavement markings will be provided to circulate pedestrian and vehicular traffic throughout the Site. The proposed project will maintain Site's existing access and traffic patterns.

b. Sidewalks

Internal sidewalks and ADA ramps will be provided, as shown and detailed on the design drawings. The proposed project will not include any work along street frontages or in the public Right-of-Way.

c. Public Transit Access

No changes to public transit access are proposed as part of this project.

d. Parking

The purpose of the proposed parking lot is to replace parking that will be displaced by the University's future developments; the intent is to construct the proposed parking lot in advance of future developments in order to satisfy the University's existing parking demands. The University is currently conducting a campus-wide parking study that will be submitted as part of future applications. The proposed project will create 122 additional off-street parking spaces, including required ADA parking; a parking summary is provided on the Site Plan. The proposed parking lot has been designed in accordance with the

dimensional standards of Section 1 of the City's Technical Design Manual, as shown on the design drawings.

e. Bicycle Parking

The University does not currently anticipate an increase in the demand for bicycle parking; additional bicycle parking may be provided as part of future developments. In response to comments from planning staff, 10 bike spaces will be added to the site plan.

2. Environmental Quality Standards

a. Preservation of Significant Natural Features

The Site has been previously developed and there are no known areas of significant natural features, including rare or endangered botanical features, significant wildlife habitats, or wetland areas.

b. Landscaping and Landscape Preservation

Landscaping Plans are included in the drawings referenced in Section 3 of this Report. These Plans show proposed landscaped islands within the proposed parking area, as well as screening of the Site; plant sizes are specified in the planting schedule provided on the Plans. A Tree Preservation & Removals Plan is included in the design drawings; this Plan shows what existing trees will be preserved and specifies protection measures.

c. Water Quality, Storm Water Management and Erosion Control

The project must comply with the water quality, stormwater management, and erosion control standards identified by the City of Portland in the Land Use Chapter of the Code of Ordinances and Section 5 of the City's Technical Manual, as well as the Maine DEP Chapter 500 Stormwater Standards associated with Site Location of Development Act Permit requirements. The Stormwater Management Plan included with the application demonstrates that the proposed development meets the applicable standards. Stormwater treatment will be provided by porous pavement walkways and a Storm Filter system. Erosion and sediment control measures are shown and detailed on the drawings.

The Stormwater Management Plan was reviewed by consulting civil engineer Wright-Pierce and found to be in conformance with City standards and Chapter 500.

3. Public Infrastructure and Community Safety Standards

a. Public Safety and Fire Prevention

Overhead lighting will be provided to promote public safety and emergency vehicle access to the Site will be maintained. No new structures requiring Fire Department review are proposed as part of this project.

b. Availability and Adequate Capacity of Public Utilities

Proposed lighting will connect to an existing underground electric conduit, as shown on the drawings, and will be served by an existing electrical panel in Wishcamper Center. Water and sewer utilities are not included in the proposed work. The proposed project will also generate construction waste and demolition debris (CDD). The contractor will be responsible for hauling the CDD or contracting with a waste management service to haul the CDD from the project site.

4. Site Design Standards

a. Snow and Ice Loading

Proposed snow storage areas are indicated on the drawings. The proposed landscaped areas will be the primary source for snow storage. Parking demands are lower during the winter months, so some of the proposed parking along the southern perimeter of the site may be utilized for additional snow storage. Snow that exceeds the available space on-site will be hauled off-site.

b. View Corridors

N/A

c. Historic Resources

N/A

d. Exterior Lighting

Overhead lighting is proposed in accordance with Section 12 of the City's Technical Manual. A Photometric Plan and details for the proposed lighting fixtures are included in the drawings; cut sheets of the proposed lighting fixtures are also attached to this Section for your reference. It should be noted that the project abuts the I-295 corridor; according to Section 12 of the Technical Manual, public rights-of-way is considered a non-sensitive use and, as such, illumination at the property boundary must not exceed 1.0 foot-candles; the lighting plan has been designed in accordance with these standards.

e. Noise and Vibration

The proposed project will not result in any increase in noise or vibration on the Site.

f. Signage and Wayfinding

Existing signage will be maintained, and new traffic signage will be provided as shown on the drawings.

g. Zoning Related Design Standards

According to the City's Land Use Ordinance, Chapter 14 of the Code of Ordinances, the proposed work is subject to a maximum impervious surface ratio of 66% of the total land

area within the University of Southern Maine overlay zone exclusive of public streets. Based on available data from the City of Portland's Online Stormwater Fee Lookup service, the University currently has an impervious surface ratio of approximately 54%; the proposed parking lot will result in an impervious surface ratio of approximately 55%.

h. Construction Management Plan

The construction management plan was reviewed and approved by city staff. **(See Attachment P16. CONSTRUCTION MANAGEMENT PLAN)**

X. SITE LOCATION OF DEVELOPMENT REVIEW

The City of Portland has delegated review authority from the Maine DEP for large projects that trigger Site Location of Development Act (SLODA) review; this project meets the threshold requiring SLODA review. The standards for this review generally dovetail with Portland's existing site plan and subdivision standards:

- Financial & Technical Capacity: see section VII, above.
- Traffic Movement: see site plan standards, a, above.
- No Adverse Effect on the Natural Environment: see site plan standards, b, above.
- Soil Types: see site plan standards, b, above.
- Ground Water: see site plan standards, 2, above.
- Infrastructure: see site plan 2, 3, and 4, above.
- Flooding: see site plan, 2, above.
- Storm Water Management & Erosion and Sedimentation Control: see site plan 2, above.

Staff finds that the project meets SLODA standards.

XI. STAFF RECOMMENDATION

Subject to the proposed motions and conditions of approval listed below, Planning Division staff recommends that the Planning Board find that the 44 Bedford Street development project meets the applicable standards of Portland's Land Use Code.

XII. PROPOSED MOTIONS FOR THE BOARD TO CONSIDER

A. SITE PLAN REVIEW & SITE LOCATION OF DEVELOPMENT

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the Planning Board Report for the public hearing on May 26, 2020, for application #PL-000974-2020, 44 Bedford Street relevant to the site plan and Site Location of Development Act regulations; and the testimony presented at the Planning Board hearing, the Planning Board [finds/does not find] that the plan is in conformance with the site plan standards of the Land Use Code.

XIII. ATTACHMENTS
PLANNING BOARD REPORT ATTACHMENTS

1. COMMENT RESPONSE LETTER
2. WRIGHT PIERCE STORMWATER COMMENTS
3. WISHCAMPER PARKING LOT STORMWATER CONNECTION
4. JEFF TARLING LANDSCAPE COMMENTS

APPLICANT'S SUBMITTALS

A - COVER
B – SUBMISSION CHECKLIST
C – PROJECT DESCRIPTION
D – RIGHT, TITLE & INTEREST
E – FINANCIAL CAPACITY
F – STATE & FEDERAL APPROVALS
G – APPLICATION FEES
H - ZONING
I - EASEMENTS
J – SURVEY
K – CONSTRUCTION MANAGEMENT PLAN
L – SLOD
M – COMPLIANCE WITH SITE PLAN STANDARDS
N – STORMWATER REPORT
O – REVISED STORMWATER INSPECTION CHECKLIST
P – REQUEST FOR SD CONNECTION
Q - NEIGHBORHOOD MEETING
R - MHPC REVIEW LETTER
S - MNAP REVIEW LETTER
T - MDIFW REVIEW LETTER
U - 3.25 RESPONSE TO COMMENTS LETTER
V - 5.07 RESPONSE TO COMMENTS LETTER

PLANS

P1. COVER SHEET
P2. SITE PLAN
P3. EXISTING CONDITIONS
P4. LANDSCAPE PLAN
P5. LANDSCAPE DETAILS
P6. TREE PRESERVATION & REMOVALS PLAN
P7. GRADING & DRAINAGE PLAN
P8. MATERIALS & LAYOUT
P9. EROSION & SEDIMENT CONTROL PLAN
P10. CIVIL DETAILS
P11. ELECTRICAL & PHOTOMETRICS
P12. GENERAL NOTES & LEGEND

Portland Maine Yes. Google's good here.

Jimmy Dealaman <jdealaman@portlandmaine.gov>

USM Garage - Comments for PB Workshop?

Jeff Tarling <jst@portlandmaine.gov> Fri, Sep 17, 2021 at 2:05 PM
To: Jimmy Dealaman <jdealaman@portlandmaine.gov>

Hi Jimmy -

Sorry for the delay, was in the field most of the day.

In review of the USM parking garage landscape, the tree numbers look good.

The tree species, 'Princeton' American Elm, which we like but... we maintain dozens of these
in various parks and public grounds and while resistant to Dutch Elm Disease, they do
get this once and awhile. Our recommendation would be to diversify the planting with one or
two others, either break up the large planting of 12, creating 5 & 7 or change the center trees
or the 6 on the right side. Other tree types might include:

'Street-Keeper' Honeylocust
'Regal Prince' (upright) Oak
'Bowhall' Red Maple.

The proposed caliper size of 4" is above the required 2.5"-3" caliper and maybe easier to source.

Overall the plan looks good, it might be best to mix up the tree types to prevent future decline.
Dutch Elm Disease can spread by rootgraft making a large planting somewhat iffy.

Thanks,

Jeff

Jeff Tarling
City Arborist - City of Portland Maine
Parks, Recreation & Facilities

Forestry, Parks & Horticulture
212 Canco Road - Suite A
Portland, ME. 04103
(207) 808-5400
jst@portlandmaine.gov

[Quoted text hidden]

University of Southern Maine
Campus Design Principles and Standards

Adopted May 23, 2006

1. PURPOSE

The *University of Southern Maine Campus Design Principles and Standards* have been created in recognition of the need of the university to grow in a vibrant, aesthetic, and sustainable manner that provides a strong sense of place, and conveys an identity as a high-quality institution of learning.

All new buildings shall be designed to create a visual connection with existing campus buildings with a goal of achieving a cohesive campus appearance. New development shall be characterized by excellence in architectural design, craftsmanship, materials, streetscape and landscape improvements, signage and lighting appropriate for a university in an urban setting in the Northeast.

These principles and standards are intended to regulate the future build out of the institution while ensuring that new development is sensitive to adjacent residential neighborhoods and commercial areas, and is successfully integrated with the City as a whole.

2. APPLICABILITY

The following principles and standards shall apply to all development on the University of Southern Maine Portland campus.

3. PRINCIPLES AND STANDARDS

PRINCIPLE A Campus Design

The campus design shall create a strong identity and sense of place. New development may be contemporary in architectural style, but shall be organized according to time-tested and traditional principles of urban and landscape design in order to integrate these buildings into a coherent whole. These principles shall serve to strengthen the overall image of the campus, establish defined boundaries, ensure a sensitive interface with surrounding neighborhoods and the city, enhance the physical amenities of the campus, create a pedestrian oriented environment with safe and vital streets, and provide a series of significant open spaces.

STANDARD A-1: **Campus Edges.** New development along the edges of the campus shall be designed to coordinate with the surrounding neighborhood, and provide a transition between institutional and smaller-scale uses through mitigation of height, stepbacks and materials. Parking lots and structures, blank walls, or backs of buildings shall not be sited in a manner that forms a boundary to neighborhoods and the city. Dormitories shall be sited in a manner that is sensitive to private residential neighborhoods. Campus facilities that are available for use by the public shall be sited so that they are accessible to the surrounding neighborhoods.

STANDARD A-2: **Building Orientation**. Development shall be oriented to streets, major pedestrian access routes, and large scale open spaces in order to create a cohesive pedestrian-oriented environment. Buildings shall not be oriented toward parking lots. Large-scale open spaces shall be partially bordered by buildings in order to form defined courtyards or quadrangles. Structures shall be sited to create safe pedestrian spaces that maximize exposure to sun and block winds.

STANDARD A-3: **Pedestrian Environment.** Development along public streets shall be designed to enhance the pedestrian environment through such means as fully-functioning building entries oriented to the street; traffic calming, visible crosswalks and adequately sized sidewalks; pedestrian scaled street lights; exterior gathering spaces; trees and landscaping; street furniture; and public art and other visual amenities. To the extent that the campus includes a mix of campus-related uses that serve students and neighborhood residents (*e.g.*, cafes, bookstores, day care facilities, health facilities, libraries, and meeting spaces), the University shall endeavor to locate such uses at the public street level in order to enhance the neighborhood and create a vital pedestrian environment.

STANDARD A-4: **Gateways.** Gateways to the campus shall be designed to signify the arrival to a distinct place and shall be clearly articulated through the use of elements such as distinguishing architecture, landscaping, signage, lighting, and other amenities. The key campus gateways are at Deering Avenue and Falmouth Street, Deering Avenue and Bedford Street, Durham Street and Falmouth Street, and Forest Avenue and Bedford Street.

STANDARD A-5: **Views and Landmarks.** View corridors and terminations to landmarks such as campus buildings, city buildings and natural resources, shall be highlighted with design elements such as significant architectural features, quality materials, landscaping, public art or other visual amenities. View corridors and termination points shall include the view up Bedford Street and west across Deering Ave., and other important views as may be identified during campus planning and the City's development review process.

PRINCIPLE B Access and Circulation

Campus streets and sidewalks shall be scaled for expected traffic; encourage pedestrian, bicycle, and transit activity; and connect to neighborhood streets and sidewalks.

STANDARD B-1: **Connectivity.** An internal campus circulation system shall coordinate and intersect with neighborhood streets and sidewalks at multiple access points.

STANDARD B-2: **Circulation.** A primary circulation system shall be developed through the creation of streets, sidewalks and walkways at ground level. A secondary circulation system shall be provided internally within non-residential buildings through the use of fully functioning entrances on every side of a building, and internal corridors that permeate through buildings unless the building program precludes such design for security reasons (See Standard D-5). Skywalks shall be utilized only when a compelling case can be made for the need from a pedestrian safety or traffic management perspective.

STANDARD B-3: **Multi-modality.** New development shall relate to a campus circulation system that serves pedestrians/bicyclists, autos, public transportation, service vehicles, and emergency vehicles. New development along transit corridors shall provide convenient and accessible routes from the building to the nearest transit stop.

STANDARD B-4: **Traffic-calming.** Circulation improvements internal to the campus shall be designed to create a pedestrian-oriented environment and to discourage speed. Appropriate traffic calming measures may include gateway treatments that signal arrival in to the campus environment, corner neck-downs, narrowed travel lanes, roundabouts, speed tables, and other devices. Development along public streets shall be designed with traffic calming measures to the extent allowed by City and State policies and requirements at a minimum.

STANDARD B-5: **Sidewalks.** Clay brick sidewalks shall be provided on both sides of all public streets. New sidewalks along public streets shall be at least 8 feet wide, except where it can be demonstrated that site constraints preclude such width.

STANDARD B-6: **Street lights.** Streetlights along public streets shall be pedestrian in scale and distinctive in design in order to help establish an identity for the neighborhood.

PRINCIPLE C Parking, Loading and Service Areas

Parking structures shall be designed and located so as to present an attractive façade to neighboring uses in order to minimize the impact along streets and residential areas. Surface parking lots shall be sited and designed to minimize their visual presence on the campus.

STANDARDS C-1: **Structures**. Parking structures shall be compatible with adjacent uses and architecture in form, bulk, massing, articulation, and materials. Parking structures shall incorporate architectural design elements in order to achieve visual interest on street frontage facades, and along major pedestrian ways, for the full height of the structure, that serve to enhance the pedestrian experience.

STANDARD C-2: **Active Uses:** Parking structures shall incorporate liner buildings or enclosed active uses on the first floor along all primary frontages (excluding frontage dedicated to entrances, lobbies, and stair towers). Such space shall be provided with a minimum of 9 foot floor to ceiling clearance height and a 25 foot depth (measured from the exterior building wall). Alternatively, the parking structures may be set back at least 35 feet from the primary street right of way and that space shall not be occupied by surface parking or access lanes, and shall be designated for future development. The set back space shall be provided with all stubbed utilities and other provisions needed to accommodate further development.

STANDARD C-3: **Decks and Ramps.** Parking structures shall have horizontal decks on all levels where the decks are visible from the public rights of way. Ramps and non-horizontal parking decks shall be screened from all visible angles and shall not be permitted

on facades located along or within 45 feet of a public street (Note: such space would allow for the construction of a liner building and a ten foot separation).

STANDARD C-4: **Surface Lots**. Parking lots shall be located behind buildings or to the side of existing or future buildings, but shall not occupy more than 64 feet of public street frontage within 45 feet of the street right of way (to allow for a future building). The areas devoted to surface parking shall be screened from streets, walkways, and significant views through the use of design elements such as plantings, fencing, grade changes, and/or walls.

STANDARD C-5: **Loading and Service Areas.** Wherever possible, loading ramps and service entrances shall be located near industrial uses, such as along Durham Street. Loading ramps and service entrances shall be located at the rear or side of structures. If visible from the public right of way, the garage doors shall be minimized and the loading shall be screened from view and with materials, colors and finishes that are consistent with the exterior elevations of the overall building. Buildings that face more than one public street shall have loading and service entrances oriented to the more secondary street.

STANDARD C-6: **Utility Services.** Service and utility infrastructure such as power generators, HVAC, fuel tanks and similar campus or building services shall be located unobtrusively and shall be visually screened from adjacent residences and shall not result in adverse visual and audible or other impacts on adjacent residential properties.

PRINCIPLE D Architectural Design

All new buildings shall be designed to create a visual connection with existing campus buildings with a goal of achieving a cohesive campus appearance. Buildings shall be characterized by excellence in architectural design, craftsmanship, materials, signage and lighting appropriate for a university in an urban setting in the Northeast.

STANDARD D-1: **Height**. Building heights along campus edges shall transition to the scale of adjacent off campus development through design elements such as stepbacks, variations in massing, and through the use of design details and materials.

STANDARD D-2: **Setbacks**. Buildings along public streets shall have a front yard setback that does not exceed ten (10) feet from the street right of way, except where existing campus buildings create a consistent street wall, in which instance the setback may conform to that existing street wall. An alternative would be to create a landscaped design feature such as a boulevard for vehicles, or a promenade for pedestrian access, and to set the building back along the line of this feature.

STANDARD D-3: **Stepbacks.** The street wall heights of campus buildings on Falmouth Street shall be stepped back 15 feet minimum once they exceed 50% more height than the average height of the buildings in close proximity, across the street.

STANDARD D-4: **Massing**. Facades visible from public streets shall incorporate design elements that break the facades into components scaled to the context of buildings on

the street. Buildings shall include features such as expression of the building's base, middle and top, vertical fenestration, variation in the planes of the façade, and architectural details such as trim, entries, balconies, cornices, etc. No more than 20 consecutive linear feet of blank wall shall be allowed at the first floor level along public streets. Windows and functional doors shall be used to break up blank walls. Design elements such as pilasters, materials, permanent artwork, distinctive lighting and/or landscaping may be used to mitigate blank walls if it can be demonstrated that the purposes of the building interior preclude the use of windows or functional doors every 20 feet at the first floor level.

STANDARD D-5: **Entrances.** Buildings along public streets shall have the primary entrances oriented to the street. Buildings that are internal to the campus shall have primary entrances oriented to major pedestrian corridors. Primary entrances may not be oriented to a parking lot. Academic buildings shall be permeable and accessible on all sides unless the building program precludes such design for reasonably necessary security purposes. Dormitory buildings are only required to have one entrance for security purposes. All building entrances should be fully functional in design and use and shall provide access to lobbies, elevators, stairs and common areas. Primary entrances shall be emphasized and integrated into the design of the building through features such as expressed or recessed entries, trim detailing, lighting, and landscaping. Entrances shall be scaled to the overall massing of the building.

STANDARD D-6: **Windows**. Windows with a visible transmittance of .7 or greater shall be located on all facades visible from public ways in order to provide light and views internally, and to provide security and vitality to external spaces. Window style shall be appropriate to the overall building style and scaled to the overall massing. The first floor transparency along public streets shall be equal to at least 50% of the wall area between the height of 2 and 9 feet. Upper floors of all new buildings shall have at least 15% to 40% transparency of wall surface along public street facades, with the range depending on program requirements. If it can be demonstrated that the building program precludes transparent windows along first floor street frontages, then other surface details shall be used (See Standard D-4).

STANDARD D-7: **Materials**. Facades visible from public rights of way shall use natural building materials that are considered to be permanent for 100 years. Predominant materials shall be brick, stone, precast concrete and other masonry products, wood, glass and high quality metals such as titanium and copper. Renewable and recyclable materials approved for use by LEED Standards (Leadership in Environmental Design) may be used. Low grade materials such as enamel metal panels and exterior insulation and finish systems (EIFS), panelized "thin brick", fiber-cement or cementitious panel siding, vinyl siding or vinyl dimensional stock, or stucco shall not be used on facades visible from public rights of way. Fiber-cement clapboard and shingles may be used but shall be installed with a reveal commonly found on the street.

First floor windows shall use untinted or lightly tinted glass, or the minimum tint needed to meet LEED Standards. Upper windows shall use untinted, lightly tinted, or the minimum tint needed to meet LEED Standards, or spandrel glass. Heavily tinted or reflective glass shall

not be allowed on facades that are visible from public rights of way. The selection of façade materials shall be consistent with the façade design (e.g. brick facing should not appear to be thin layers on the façade, or to overhang without apparent support). Loading and service areas and rooftop appurtenances that are visible from public rights of way shall be screened with materials, colors and finishes that are consistent with the overall building. Public spaces shall be constructed of permanent, durable materials such as concrete, brick or stone.

STANDARD D-8: **Signage.** New buildings shall have a building name and street address mounted in a location that is highly visible from public rights of way by both pedestrians and motorists. The size of the lettering shall be proportional to the size of the building. Building signage shall be made of high-quality permanent materials such as fabricated dimensional lettering or cut or cast metal lettering that is pinned to the building, carved stone or concrete, or painted wood or glass. Internally illuminated or screen printed plastic signage shall not be allowed on facades visible from public rights of way.

STANDARD D-9: **Historic Structures**. Historic structures shall be rehabilitated in a way that is consistent with their original architectural intent. New additions to historic buildings shall be designed to be compatible with the original structure in size, style, and material, and should result in the minimum necessary loss of original architectural material.

STANDARD D-10: **Original Residential Structures** The architectural and structural integrity of buildings that were originally residential uses shall be preserved when such buildings are renovated or enlarged. If a common treatment is utilized (i.e. the same siding is used for all university structures that were originally residential structures), the treatment must reflect the original residential character of the building and of other buildings on the street (e.g. contrasting paint between the trim and body of the structure, and building details which are expressed). Original siding shall be preserved, repaired or replaced with like material as needed. Vinyl siding and vinyl dimensional stock shall not be allowed. Fiber-cement clapboard and shingles may be used but shall be installed with a reveal commonly found on the street. Windows, doors and other features shall be preserved, repaired or replaced in a manner consistent with the original residential character of the building. Signage on buildings that were originally residential structures shall be subdued, and in scale with the building. This Standard D-10 does not apply to replacement buildings.

GLOSSARY [To be defined]

Active uses
Auto-oriented
Building Orientation
Campus Edges
Circulation system
Cohesive
Connectivity
Contemporary
Contextual
Defensible Space
Gateways
Institutional
Landmarks
Liner Buildings
Massing
Multi-modality
Pedestrian oriented environment
Proportion
Scale
Setbacks
Stepbacks
Traffic calming
View Corridors
View Terminations

41 Hutchins Drive
Portland, Maine 04102
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T 800.426.4262
T 207.774.2112
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July 26, 2021

James Rather
City of Portland Development Review Services Manager
389 Congress Street
Portland, ME 04101

Re: University of Southern Maine Structured Parking Garage
Major Site Plan Application & Site Location of Development Amendment

Dear James:

On behalf of the University of Southern Maine, Woodard & Curran is pleased to submit applications for a Major Site Plan Review and a Site Location of Development (SLOD) Amendment for a structured parking garage located at 44 Bedford Street. The proposed development includes a five-level structured parking garage, vehicle turnaround and drop-off area, fire access drive, pedestrian walkways, site landscaping, exterior lighting, and associated site improvements. The proposed parking garage will be approximately 45,100 square-feet in size and will create a total of 632 parking spaces, which includes 13 ADA accessible parking stalls, for a net increase in 425 additional off-street parking spaces for the University. The proposed garage will provide parking for the Portland Commons Residence Hall, which is currently under construction, and enable future developments at the University by replacing some of the parking that will be displaced by future developments (to be submitted under separate cover at a later date). The proposed stormwater management plan will consist of a subsurface detention and proprietary treatment device.

This application has been prepared in accordance with the City of Portland's Land Use Code of Ordinances and the applicable sections of the City of Portland Design and Technical Manuals. The SLOD Amendment has been prepared in accordance with Maine Department of Environmental Protection Chapter 500 Rules. It is our understanding that the City will be reviewing the SLOD Amendment under their Delegated Review Authority.

The application materials, supporting documents, and design drawings will be uploaded into the Eplan folder when it is available for the project. Thank you for coordinating the review of this project. If you have any questions regarding this application, please feel free to contact me at (207) 558-3665 or by email at aefletcher@woodardcurran.com.

Sincerely,

WOODARD & CURRAN INC.

Ashley Fletcher, PE
Technical Manager

cc: Ann Vashon, University of Southern Maine
Wes Wilson, Desman Design Management, Inc.

USM Structured Parking Garage

44 Bedford Street

Major Site Plan Application

41 Hutchins Drive
Portland, ME 04102
800-426-4262

0233035.00
University of Southern Maine
July 2021

woodardcurran.com
COMMITMENT & INTEGRITY DRIVE RESULTS

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1. APPLICATION CHECKLIST

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	
Yes NA X	**Project Description** • Cover letter with detailed project description
Yes NA X	**Completed Checklist** (this document)
Yes NA X	**Evidence of Right, Title, and Interest** • Deeds, leases, or purchase and sales agreements
Yes NA X	**Evidence of State or Federal Approvals** • Permits or letters of non-jurisdiction, if applicable
Yes NA X	**Zoning Assessment** (see Zoning Assessment Table) Summary of compliance with use and dimensional standards of the land use code
Yes NA X	**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
Yes NA X	**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
Yes NA X	**Waiver Requests** (see Waiver Table) • Written request for waiver describing request and compliance with applicable waiver standards
Yes NA X	**Financial Capability** • Letter or evidence from a financial institution or third party verifying financial capacity to undertake project
Yes NA X	**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 X	NA	**Impact on Surrounding Street Systems (14-14.6.1(A))** ● Describe incremental volume of traffic impacts and mitigation measures. If needed
Yes X	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 X	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 X	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 X	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 X	**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 X	**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 X	**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 X	**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 X	**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 X	**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 X	**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 X	**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 X	**Shadows (14-14.6.4(B)), if applicable** ● Provide shadow analysis of impacts on publicly accessible open space (Technical Manual, Section 11)
Yes NA X	**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 X	**View Corridors (14-14.6.4(D)), if applicable** ● Describe any protection of designated view corridors (Portland Design Manual, Appendix. 1)
Yes NA X	**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	
X		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
X		

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

2. APPLICATION FEES

A check for the required application fee will be provided to the Planning Department. It is our understanding that the application fee includes:

- Major Site Plan – 200,000 to 300,000 sq. ft.: $5,000
- SLOD Review: $3,500
- Traffic Movement Permit Amendment: $1,500

3. PROJECT DESCRIPTION

On behalf of the University of Southern Maine (Applicant), Woodard & Curran is pleased to submit this application for Major Site Plan Review for a new parking garage. This project represents another significant step in the growth of the campus and will specifically support the Portland Commons Residence Hall currently under construction.

This application has been prepared in accordance with the City of Portland's Chapter 14, Land Use Code of Ordinances and the applicable sections of the City of Portland Design and Technical Manuals. It is submitted by Woodard & Curran under authority to act as agent on behalf of the University of Southern Maine (USM) granted in the attached Agent Authorization Letter.

3.1 PROJECT SITE & BACKGROUND

The project site is located at 44 Bedford Street (Tax Map/Lot No. 114 A001001), in the area south of the Wishcamper Center and north of the I-295 corridor. A Site Location Map is attached to this Section for your reference. The subject property is in the R-5 Residential, B-2 Community Business, and University of Southern Maine Overlay Zones. The purpose of the USM Overlay zone is to allow the University to continue and reasonably expand within defined boundaries; and to recognize the unique qualities of a university campus, while at the same time protecting the value and integrity of established neighborhoods. This project is in alignment with that purpose. University buildings and structures are subject to the requirements of the underlying zoning districts, except as modified by the USM Overlay Zone.

The project is not located in a flood hazard zone, as shown on the FEMA FIRM Map attached to this Section.

3.2 PROJECT PURPOSE AND NEED

The University of Southern Maine is comprised of three campus locations in central and southern Maine, a region that is viewed nationally as among the most livable and desirable in the country. The three campuses, located in Portland, Gorham, and Lewiston, have different physical features and dynamics, and each offers a variety of educational, cultural, and recreational opportunities to USM students.

USM completed a Facilities Master Plan in January 2019, which was approved by the Board of Trustees for the University of Maine System. The Facilities Master Plan included a new residence hall (Portland Commons) and Career and Student Success Center (CSSC) on the Portland campus, which are currently under construction and scheduled to be open in the early summer of 2023. Those projects support USM's goals and objectives with respect to advancing student development, providing needed space for student activities, and strengthening of the USM community of residential and commuter students.

The development of the Residence Hall results in additional parking needs for the campus, which will be accommodated with the new structured parking. The additional parking need was determined during the Site Plan approval process for the CSSC and Residence Hall in November of 2020 (Portland File No. PL-001040-2020). The calculation included: projected parking rates for the new residents; displaced parking from the construction of the Residence Hall and new Campus Quad; planned parking to be provided by a surface lot to be developed at the Wishcamper site; and reductions for Transportation Demand Management (TDM). The projected total need was determined to be 396 spaces.

Upon completion of a site study for location of the new structured parking, the Wishcamper site was selected for the new garage. In addition to the 396 spaces required to meet the residence hall needs, the new garage will accommodate the 207 surface parking spaces that were planned for this location under a separate site plan approval. That previous approval, the Wishcamper Parking Lot (PL-974-2020, approved May 26,2020), will not be constructed.

3.3 PROPOSED PROJECT

The proposed development includes a five-level structured parking garage, vehicle turnaround and drop-off area, fire access drive, pedestrian walkways, and associated site improvements, including landscaping and exterior lighting. The proposed parking garage will provide 632 parking spaces for a net increase in 425 parking spaces for the University (632 minus the 207 surface parking spaces on the Wishcamper lot). The proposed garage includes the required ADA accessible parking. A 250-space bike storage room and bike repair room will be included on the interior of the garage. A small plaza and drop-off area will be developed in front of the Osher/Glickman Library entrance. Traffic and pedestrian improvements are also proposed along Bedford and Surrenden Streets in conjunction with the development of the garage and as part of the Traffic Movement Permit (TMP) prepared by others.

3.3.1 Civil Engineering Approach

The site has been designed to provide safe access and circulation for pedestrians, bicyclists, passenger vehicles, delivery vehicles, fire trucks and other emergency vehicles and buses. The site design includes a vehicle turnaround with a two-space drop-off area. Delivery vehicle access to the back of the library and fire truck access through the site and south of the garage will be maintained. The proposed stormwater management system will collect and convey surface runoff to a subsurface detention and treatment system that ultimately discharges to the separated storm sewer on Forest Avenue. Design drawings for the proposed project are included with this application.

3.3.2 Architectural Approach

3.3.2.1 Site Location Criteria

Following an analysis of four portions of the campus, the current development site was selected by USM. There are many benefits of locating the new garage near the existing one. The site is an existing surface parking lot and is adjacent to the nearby uses which will use the garage. Circulation of vehicles and pedestrians is arranged without conflicts and is achieved by extending existing patterns and not by introducing new conflicting ones. One factor in particular is the proximity to the new dormitory, and the garage will readily accommodate long term parking. Since the area is already an open parking lot, the construction of the new garage will not require demolition of existing buildings, either new or historic.

This new location is a part of USM with newer vintage buildings, forming a context which lends itself to a distinct cohesive “neighborhood” within the larger campus. The massing of the new structure will be consistent with its neighbors, the existing garage, and the Wishcamper Center classroom building. Although a building height of 85 feet is allowed at this location in the overlay zone, the new garage will be 50 feet tall, making it similar in size to the existing garage and approximately one story lower than Wishcamper. This design strategy will also keep the library, a taller facility, as the appropriately dominant feature of the southeast part of the campus.

3.3.2.2 Overlay Zone Design Guidelines

The proposed garage will be a significant structure, and as such has been approached with context relationships as a primary design consideration. The concept of best uses of campus edges has featured in the site selection, with the garage located on a campus edge where its use will not provide an inappropriate adjacency. It has both connections to the pedestrian environment as well as having no impact on the Bedford Street view corridor. It is, in fact, located on the campus at the furthest spot possible from the nearby residential neighborhoods.

Given its location in the campus context of the University, the design of the structure as well as its uses has been a driver of the resulting design. The garage itself consists of a central portion of gently sloped tiers, of an understated nature, largely unseen from Bedford Street, which have been developed as a secondary zone in relationship to more detailed end bays. These end bays provide an articulated massing response to the need for a contextual relationship

to the surrounding structures. This intent has been carried into the materials and elevation layouts. Materials in general will be high quality, long lasting, and weather resistant.

- Structural Elements Precast reinforced concrete
- Exposed Spandrels Colored and textured precast concrete or brick-faced precast panels
- Window Framing Clear anodized aluminum
- Window Glass Clear insulating units

3.3.2.3 Crime Prevention Through Environmental Design

Parking garages in particular benefit from inclusion of CPTED features in their design. At many times of the day, users may be alone in the structure while walking to their cars. A sense of community ownership within the garage has been established in the new garage by its inclusion of bicycle storage and designated long term parking spaces. Over time, this will help users be able to differentiate those who are users and those who have no business in the facility.

The structure itself will also contribute to the safety and security of the facility. It is primarily an open structure, with ample views both within the parking tiers and views from the garage of the nearby roads and sidewalks on all sides. Stairways feature large, glazed walls, so that a sense of what lies outside them can be seen. Security call stations will be provided, and will be readily accessed, their blue beacons easily visible in the garage.

3.3.3 Landscaping Approach

The landscape plan for the new parking garage at USM accommodates new vehicular and pedestrian patterns, while prioritizing the campus pedestrian experience through the creation of a new plaza at the Glickman/Osher entrance, and by maintaining access to existing campus nodes.

Vehicular access to the site for pedestrian drop-offs, school buses, and book pickups/drop-offs have been accommodated with a vehicular loop integrated into a large grove of trees. Safe pedestrian drop-offs are accommodated with 2 pullout drop off spaces, continuous with plaza paving, proximal to the Glickman/Osher entrance and accessible to Wishcamper entrances. This paved plaza at the entrance of Glickman/Osher creates a new campus node for pedestrian and school group drop-offs, book pickup, access to an existing book drop slot, expanded bike parking, and a central meeting and gathering spot for students, faculty, or staff- at a scale that complements the buildings and the increasing use of the outdoor space between Glickman/Osher and Wishcamper. Cyclists are accommodated at the plaza as well, the bike racks at the Glickman entrance are expanded from existing capacity of 8 bikes to a new capacity of 18 bikes, honoring the 10 additional short-term bike parking spaces USM said it would include in the original Wishcamper surface lot proposed expansion. An existing nearby rack accommodating 32 bikes will remain.

Service and emergency access are newly separated from pedestrian activity, further enhancing the campus experience and pedestrian safety; only service vehicles and emergency vehicles will travel beyond the drop off loop to access the Glickman loading dock and the fire lane along the south façade of both parking garages.

The grove of native deciduous trees from the City of Portland's Recommended Tree list expands upon the existing planted zones from Bedford Street through the space between Wishcamper and Glickman/Osher. Turf lawn is indicated to the east of the garage beneath and beyond the grove, welcoming students to gather on the grass. Native groundcover is planned for the sculpted mound in the middle of the loop, and for the zone between the loading dock and pedestrian plaza at the Glickman/Osher entry vestibule. All plantings are low maintenance, and deciduous native canopy trees and low native groundcover allow for visibility beneath tree canopies to enhance campus safety.

3.4 ATTACHMENTS

- Agent Authorization Letter
- Site Location Map
- FEMA FIRMette
- Design Drawings (Bound Separately)

University Services
Facilities Management

University of Southern Maine

Maine's Public Universities
UNIVERSITY OF MAINE SYSTEM

University of Southern Maine
Facilities Management Department (CPPM)
96 Falmouth St
Portland, ME 04103
Tel: 207-780-4655
Fax: 207-780-4538
umaine.edu

July 28, 2021

To: Local, State, and Federal Review Officials

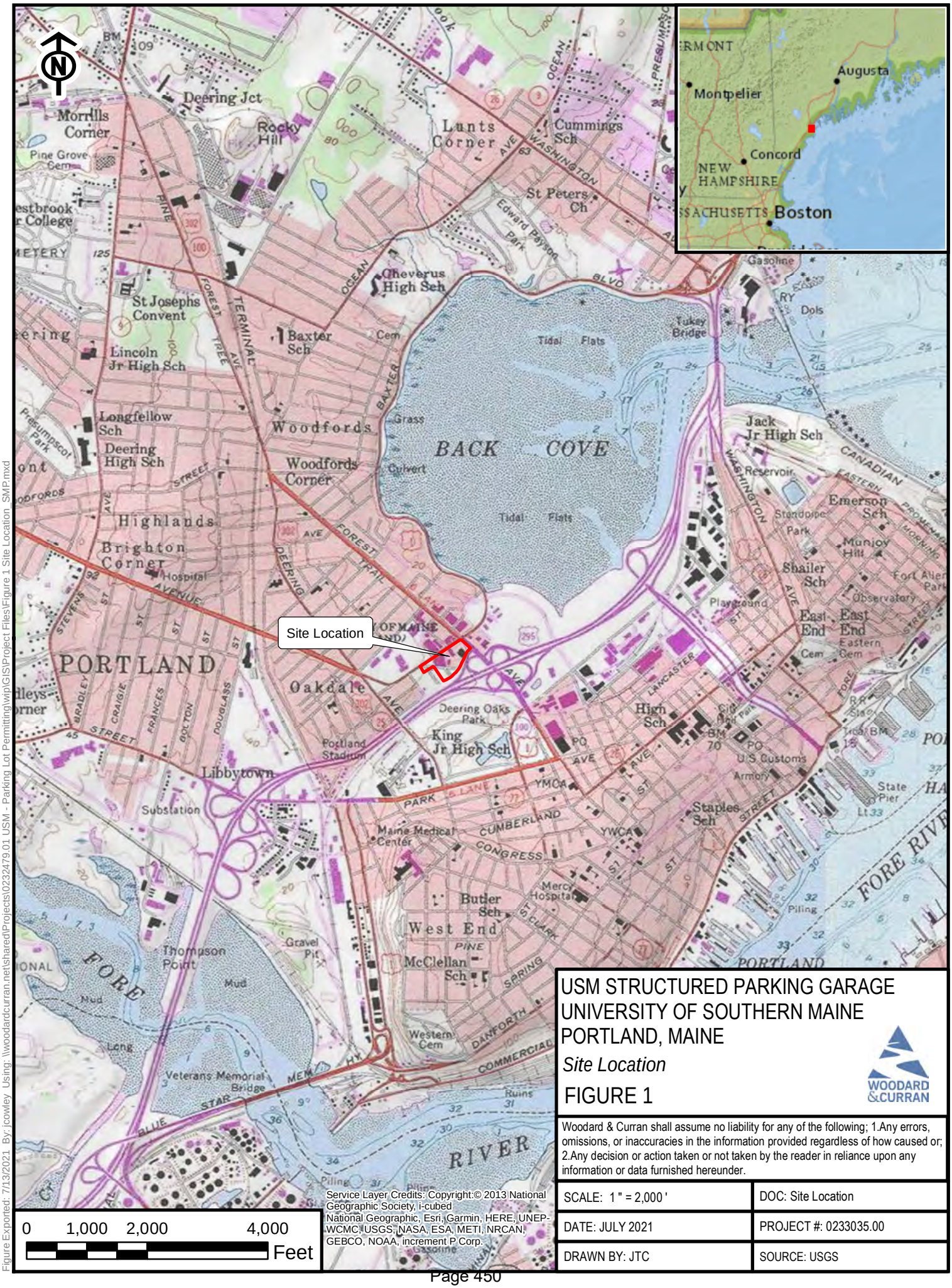
RE: AUTHORIZED REPRESENTATIVE – USM Structured Parking Garage

The University of Southern Maine, a member of the University of Maine System, is preparing plans for the new USM Structured Parking Garage located on the University of Southern Maine, Portland Campus. The University has retained Woodard & Curran, Inc., via Desman Design Management Inc., as our garage consultant, to assist in the preparation of the applications associated with permitting approvals for this project. When necessary, Woodard & Curran, Inc., is authorized as its agent to represent the University in addressing questions on the plans, or applicable applications, for this project.

Sincerely,

John M. Souther,
Executive Director of Facilities Management,
University of Southern Maine for the
University of Maine System

cc: to file.



USM STRUCTURED PARKING GARAGE
UNIVERSITY OF SOUTHERN MAINE
PORTLAND, MAINE

Site Location

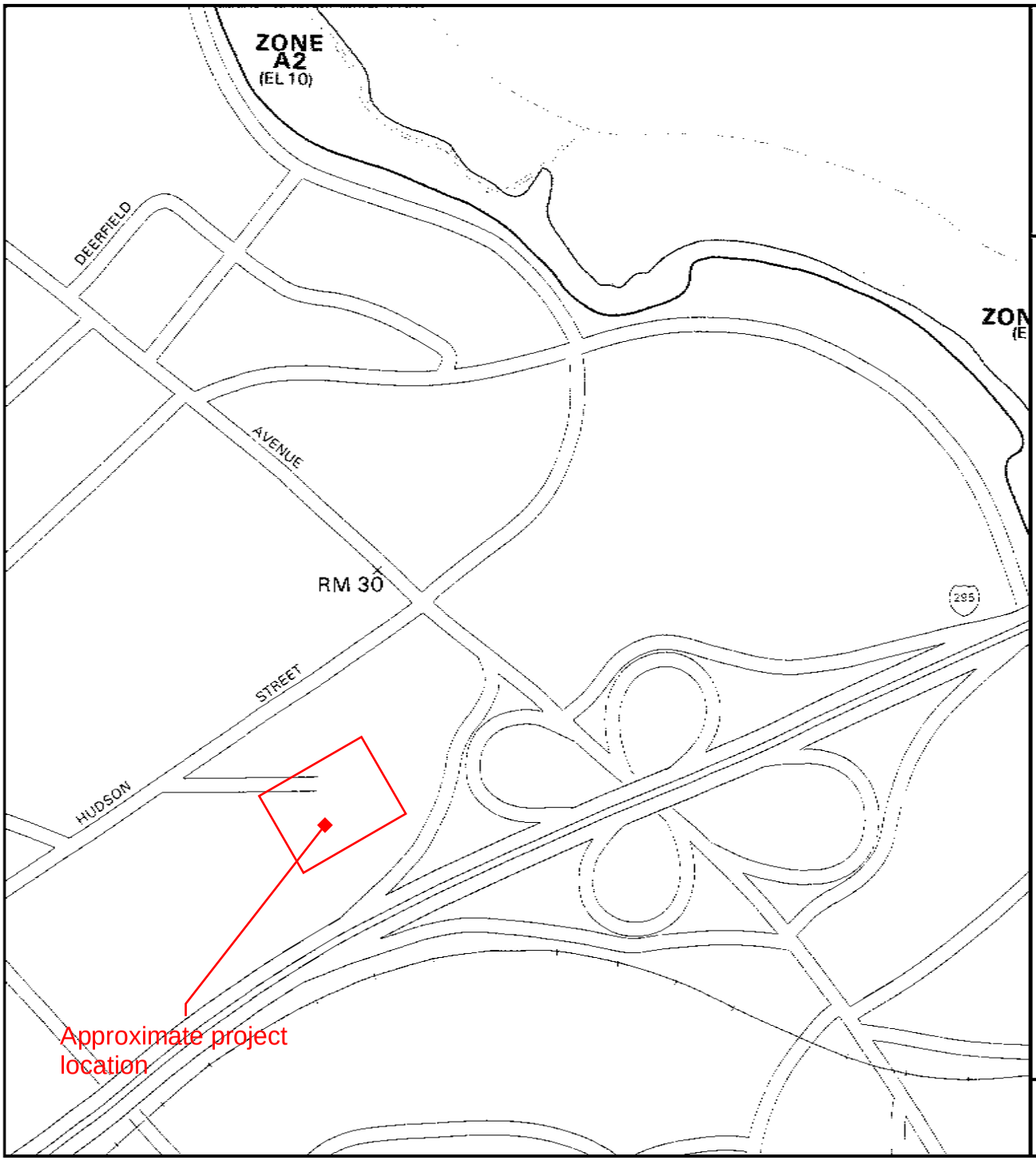
FIGURE 1

WOODARD &CURRAN

Woodard & Curran shall assume no liability for any of the following; 1.Any errors, omissions, or inaccuracies in the information provided regardless of how caused or; 2.Any decision or action taken or not taken by the reader in reliance upon any information or data furnished hereunder.

SCALE: 1 " = 2,000 '	DOC: Site Location
DATE: JULY 2021	PROJECT #: 0233035.00
DRAWN BY: JTC	SOURCE: USGS

Figure Exported: 7/13/2021 By: jcowley Using: \\woodardcurran.net\shared\Projects\0232479.01 USM - Parking Lot Permitting\wip\GIS\Project Files\Figure 1 Site Location_SMP.mxd



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

4. RIGHT, TITLE, & INTEREST

The proposed project is located on property owned by the Applicant and identified as Tax Map 114, Lot A001001. Attached is a copy of the deeds associated with this property.

4.1 ATTACHMENTS

- Deeds

GOVERNOR'S DEED
(with Reverter)

KNOW ALL PERSONS BY THESE PRESENTS, that the STATE OF MAINE, acting by and through its Governor, on recommendation of the Commissioner of its DEPARTMENT OF TRANSPORTATION, under and pursuant to the provisions of 23 M.R.S.A., Section 61, for consideration, the sufficiency of which is hereby acknowledged, RELEASES to THE UNIVERSITY OF MAINE SYSTEM, organized as a non-profit corporation of the State of Maine, with offices at 16 Central Street in Bangor, Maine, its successors and assigns forever, all its right, title and interest in and to a certain lot or parcel of land situated on the southerly side of Winslow Street, so-called, at its intersection with the westerly sideline of the right-of-way of State Highway "295", also known as Interstate 295, in Portland, County of Cumberland and State of Maine, and being as shown on a Right-of-way Map for State Highway "295" Portland, Cumberland County, Federal Aid Project Number I-295-3(28), dated January 1967, File Number 3-185, sheet 57 of 73, on file at the offices of the Maine Department of Transportation in Augusta, bounded and described as follows:

BEGINNING at a point on the southerly sideline of Winslow Street at its intersection with the westerly sideline of the right-of-way of Route 295;

THENCE S 26° 51' 18" W along said westerly sideline of Route 295, a distance of 34.00 feet;

THENCE S 51° 22' 05" W continuing along said westerly sideline of Route 295, a distance of 23.93 feet to land now or formerly of the University Of Southern Maine Foundation;

THENCE N 38° 37' 55" W along said University Of Southern Maine Foundation land 20.00 feet;

THENCE N 6° 51' 23" E continuing along said University Of Southern Maine Foundation land, 33.28 feet to the southerly sideline of said Winslow Street;

THENCE S 85° 26' 46" E along said southerly sideline of Winslow Street, 42.70 feet, more or less to the aforementioned westerly sideline of the right-of-way of Route 295 and the POINT OF BEGINNING, and containing one thousand four hundred twenty-seven square feet, more or less (1,427 sq. ft. ±).

EXCEPTING AND RESERVING from this conveyance any and all rights of access from the herein described parcel of land to State Highway "295", also known as Interstate 295, all of which rights of access are expressly reserved to, and retained by, the State of Maine.

ALSO RESERVING to the State of Maine the perpetual right to enter upon said parcel to maintain any highway slopes and drainage facilities or installations that may exist.

SUBJECT TO all utility easements and installations located on the above described premises, including those shown on the herein referred to Right-of-way Map, and to those rights which any utility enjoys over the subject premises for maintenance, location or relocation of poles and other installations.

NOTWITHSTANDING the foregoing, Grantor gives this deed, and Grantee accepts the same, upon the express CONDITION that the property hereby conveyed is to be retained by the University of Maine system and used for

public purposes only; and if said property or any interest in it, or any portion of it, is transferred, or if it is used for any commercial or other non-public purposes, said property shall at once REVERT to, and re-vest in, the Grantor, its successors or assigns; and that such reversion, should it occur, shall be automatic and require no further act of conveyance or documentation in order to be effective.

BEING a portion of premises acquired by the State of Maine from Charles T. Hayes, Jr. and Beatrice Hayes by warranty deed dated July 19, 1968 and recorded at the Cumberland County Registry of Deeds on July 23, 1968 in Volume 3049 at Page 553; and a portion of premises acquired from Reuben Katz by warranty deed dated January 10, 1969 and recorded at said Registry Of Deeds on January 15, 1969 in Volume 3072 at Page 435.

THE STATE OF MAINE makes no representations or warranties with respect to the premises hereby conveyed. The representations and warranties so excluded encompass, but are not limited to, those pertaining to: land use and environmental matters; fitness of the premises or any portion thereof for any particular purposes; water quality or quantity; the condition or quality of the soil; inchoate or unrecorded liens; status of title to or rights within that area lying between the high and low water marks; or the existence, status, or condition of access to, or public utilities serving the premises. Any subsequent use of, improvement to, or construction on the parcel shall be subject to all applicable laws, regulations, ordinances, and permitting requirements.

IN WITNESS WHEREOF, I, John E. Baldacci, Governor of the State of Maine, have caused the name and Great Seal of the State of Maine to be hereunto affixed this 11th day of Sept. in the year two thousand six.

STATE OF MAINE

By: _____, Governor
John E. Baldacci

Received
Recorded Register of Deeds
Sep 20,2006 02:29:02P
Cumberland County
John B OBrien

Affixed by: _____
Secretary of State

STATE OF MAINE
Kennebec, *ss.*

Sept. 11th, 2006

Personally appeared the above-named, John E. Baldacci, Governor of the State of Maine and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of the State of Maine.

Before me, _____
Notary Public/~~Attorney at Law~~

Print Name: _____

My commission expires: _____

ROSEMARIE D. SMITH
Notary Public, Maine
My Commission Expires January 6, 2009

SEAL

SHORT FORM QUITCLAIM DEED WITH COVENANT

MAINE REAL ESTATE TAX PAID

THE UNIVERSITY OF SOUTHERN MAINE FOUNDATION, a Maine nonprofit corporation with a mailing address of 96 Falmouth Street, Portland, Maine 04104, FOR CONSIDERATION PAID, grants to UNIVERSITY OF MAINE SYSTEM, a body politic and instrumentality of the State of Maine, with a mailing address of 16 Central Street, Bangor, Maine 04401, with QUITCLAIM COVENANT, certain real property, together with any improvements thereon, located in the City of Portland, Cumberland County, Maine and more particularly described on Exhibit A attached hereto and made a part hereof.

Being the same premises conveyed to the grantor herein by a Short Form Quitclaim Deed With Covenant from Frederick J. Olsen dated April 27, 2005 and recorded at the Cumberland County Registry of Deeds in Book 22577, Page 79.

IN WITNESS WHEREOF, The University of Southern Maine Foundation, has caused this instrument to be executed and delivered as of the 20th day of December, 2011.

The University of Southern Maine Foundation

Witness

By: _____
Name: Margaret A. Weston
Its: President

State of Maine
County of Cumberland, ss. December 16, 2011

Personally appeared the above-named Margaret A. Weston, President of The University of Southern Maine Foundation, and acknowledged the foregoing instrument to be her free act and deed in her said capacity and the free act and deed of The University of Southern Maine Foundation.

Before me,

_____
Notary Public/Attorney at Law
Name: Amy Blaisdell
Commission Expires: 10/16/2015

Amy Blaisdell
NOTARY PUBLIC
Lisbon Falls, ME
Commission expires on
October 16, 2015

Exhibit A

Formerly Tax Map 114, Block D, Lot 21:

Three (3) certain lots or parcels of land, with the buildings thereon, situated on the northerly side of Winslow Street in the City of Portland, County of Cumberland, State of Maine, being lots numbered 1, 2 and 3 on an unrecorded plan of the Heater piece at and adjoining the junction of said Winslow Street and Bedford Street made by E.C. Jordan & Co., Civ. Eng., in January 1918, and on file in the office of said E.C. Jordan & Co., said three lots taken together, being bounded and described as follows:

Beginning at a point on said northerly line of Winslow Street at the southwest corner of land now or formerly of John W. Lovely heirs and thence running, with an included angle of 88° 43' and by the westerly line of said Lovely land eighty-six (86) feet to a post and land now or formerly of the T.A. Huston & Co.; thence northwesterly and along said Huston land, forty-nine (49) feet to a post; thence northwesterly and along said Huston land thirty-two and three tenths (32.3) feet to an iron post; thence westerly and along said Huston land twenty-two and thirty-five hundredths (22.35) feet to an iron post; thence westerly and along said Huston land nineteen and eighty-four hundredths (19.84) feet to a post; said post being the southeasterly corner of lot numbered 11 on said plan; thence westerly and along the rear or southerly line of said lot numbered 11, fifty-nine and thirty-seven hundredths (59.37) feet to the southwesterly corner of lot numbered 11; thence southwesterly at right angles to said Winslow Street one hundred (100) feet to said northerly line of Winslow Street; thence easterly and along said northerly line of Winslow Street one hundred fifty-nine (159) feet to the point or place of beginning; said three lots having together an area of 18,027 square feet, be the same more or less.

EXCEPTING AND RESERVING from the above-described premises that portion thereof which was conveyed by Ellestad Hansen, Warren K. Webber and Mary E. Hansen to Charles A. Adams by deed dated April 8, 1924 and recorded in the Cumberland County Registry of Deeds in Book 1165, Page 79, and such portion thereof as may have been conveyed by Mary E. Hansen to the State of Maine by deed dated January 7, 1970 and recorded in the said Registry of Deeds in Book 3114, Page 724.

Formerly Tax Map 114, Block D, Lot 22:

ALSO a certain lot or parcel of land situated on the northerly side of Winslow Street in the City of Portland, County of Cumberland and State of Maine, bounded and described as follows, to wit:

Beginning at an iron hub at the southwest corner of a lot of land conveyed by Edward D. Noyes, et al. to Ellestad Hansen and Warren K. Webber by deed dated November 14, 1923 and recorded in the Cumberland County Registry of Deeds in Book 1153, Page 280; thence easterly along the northerly side line of Winslow Street forty-seven (47) feet to a stake; thence northerly at right angles to said Winslow Street one hundred sixteen and thirty-three hundredths (116.33) feet to an iron hub in the northerly line of the lot above mentioned; thence westerly with an included angle of seventy (70) degrees and thirty-six (36) minutes to the right, forty-nine and seventy-six hundredths (49.76) feet to a stake at the northwest corner of the lot above mentioned; thence southerly on a line at right angles to said Winslow Street one hundred (100) feet to the point of beginning.

Formerly Tax Map 114, Block C, Lot 1:

ALSO a certain lot or parcel of land in the City of Portland, County of Cumberland and State of Maine, described as follows: Beginning at a stake on the southerly side of Winslow Street at the intersection with the easterly side of Conant Street; thence 25° E by Conant Street one hundred ten (110) feet; thence easterly at right angles with Conant Street forty-six and thirty-one hundredths (46.31) feet to a stake; thence northerly to a point in the southerly side of Winslow Street distant easterly sixty-three and seventy-two hundredths (63.72) feet from the point of beginning; thence N 71° 37' W by said Winslow Street sixty-three and seventy-two hundredths (63.72) feet to the point of beginning.

Formerly Tax Map 114, Block C, Lot 2:

ALSO a certain lot or parcel of land situated in the City of Portland, County of Cumberland and State of Maine bounded and described as follows, to wit:

Beginning at a point on the present southerly boundary line of Winslow Street at the northeasterly line of land now or formerly of Frederick J. Olsen; thence southeasterly along the northeasterly line of land now or formerly of said Olsen, about sixty-six (66) feet to a corner; thence southwesterly along the southeasterly line of land now or formerly of said Olsen, about forty-six and three tenths (46.3) feet to the northeasterly boundary line of Conant Street; thence southeasterly along the northeasterly boundary line of Conant Street about eighteen (18) feet to a monument located about seventy-one (71) feet northwesterly from and as measured along a line normal to the Ramp F.A. 6 Base Line at about Sta. 5+50; thence northeasterly about sixty-six (66) feet to a point on a line, said line being a projected line between the beforementioned monument and a monument located fifty (50) feet northwesterly from and as measured along a line normal to the Ramp F.A. 6 Base Line at Sta. 4+50, said point being twenty-five (25) feet southwesterly of and as measured along said projected line from said monument located

northwesterly of Sta. 4+50; thence northwesterly at right angles to said projected line twenty (20) feet to a point; thence northerly by a direct course to a point on the present southerly boundary line of Winslow Street; thence westerly along the present southerly boundary line of Winslow Street sixty (60) feet to the point of beginning. Said lot or parcel of land contains about 2,867 square feet and is a portion of that land as acquired from Charles T. Hayes, Jr. and Beatrice Hayes, pursuant to a Notice of Layout and Taking dated March 8, 1973 and recorded at the Cumberland County Registry of Deeds in Book 3367, Page 58. Said parcel is shown on a certain Maine Department of Transportation Right-of-way Map entitled "State Highway '295', Portland, Cumberland County, Federal Aid Project No. 1-295-3(28)" dated January 1967, on file in Augusta, File No. 3-185.

The premises herein conveyed is SUBJECT to a State of Maine Notice of Layout and Taking dated February 28, 1973 and recorded in said Cumberland County Registry of Deeds in Book 3367, Page 58.

Received
Recorded Register of Deeds
Dec 21,2011 12:40:48P
Cumberland County
Pamela E. Lovley

5. EVIDENCE OF STATE AND/OR FEDERAL APPROVALS

The following state and federal permits will be required for the proposed work:

- Maine Department of Environmental Protection Site Location of Development Act Permit Amendment (reviewed by City of Portland under Delegated Review Authority); and
- Maine Construction General Permit Notice of Intent.

Copies of permits can be provided to the City under separate cover as they become available.

6. ZONING ASSESSMENT

The project is located within the City of Portland R-5 and B-2 Zones, as well as the University of Southern Maine Overlay Zone. The entirety of the project is in the USM Overlay Zone, which is governed by Section 8.10 of the Land Use Code. The purpose of the USM Overlay zone is to allow the University to continue and reasonably expand within defined boundaries, and to recognize the unique qualities of a university campus while at the same time protecting the value and integrity of established neighborhoods. University buildings and structures are subject to the requirements of the underlying zoning districts, except as modified by the USM Overlay Zone. Parking Garages are listed as a permitted use in the Overlay Zone. The Overlay Zone provides for an 85-foot building height in the portion of the campus where the new parking garage will be located, and yard setbacks of 10 feet from Bedford Street; 0 feet from Forest Avenue; and 10 feet from the I-295 right-of-way.

The existing grassed area interior to the site that will be converted to parking is not considered open space used for recreation; it is currently used for overflow parking and storage and consists largely of a weedy overgrowth and dirt. It should be noted that the University's plans for development of the CSSC and Portland Commons includes creating an open space that will be central to the campus, which will provide a better opportunity for recreational use than the area that will be replaced by the proposed parking garage.

According to the City's Land Use Ordinance, Chapter 14 of the Code of Ordinances, the proposed work is subject to a maximum impervious surface ratio of 66% of the total land area within the University of Southern Maine overlay zone exclusive of public streets. Based on available data from the City of Portland's Online Stormwater Fee Lookup service, the University currently has an impervious surface ratio of approximately 54%; the proposed parking garage will result in an impervious surface ratio of approximately 56%.

The attached Zoning Assessment Table summarizes how the proposed project will comply with the dimensional requirements specified in the City's Land Use Ordinance.

6.1 ATTACHMENTS

- Zoning Assessment Table

ZONING ANALYSIS Relevant Zone(s) R-5, B-2 & USM Overlay

All Projects:

	Required	Proposed
Lot Size	N/A	N/A
Area Per Dwelling Unit	N/A	N/A
Minimum Street Frontage	N/A	N/A
Front Yard Minimum	10'	>10'
Front Yard Maximum	N/A	N/A
Rear Yard	10'	>10'
Yard Right	10'	>10'
Yard Left	10'	>10'
Side Street Setback	N/A	N/A
Step Back	N/A	N/A
Maximum Lot Coverage	40%	30%
Minimum Lot Coverage	N/A	N/A
Maximum Height	85'	<85'
Open Space	N/A	N/A
Maximum Impervious Area	66%	55%
Pavement Setback	N/A	N/A
Floor Area Ratio	N/A	N/A
Off Street Parking Spaces	N/A	632
Loading Bays	N/A	N/A
Other 1		
Other 2		
Other 3		

N/A

Planned Residential Unit Developments (PRUD) Requirements

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

N/A

Affordable Housing Density Bonuses (if applicable)

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

7. EASEMENTS & OTHER BURDENS

Existing easements associated with the Site are shown on the enclosed drawings; no new easements will be created as part of the proposed project.

8. WAIVER REQUESTS

A waiver from the City of Portland Technical Manual Section 1 - Transportation Systems - Subsection 1.17 Electric Vehicle Infrastructure is requested as described in the attached waiver table and supporting narrative below. No additional waivers are being requested at this time.

8.1 WAIVER REQUEST FOR PORTLAND TECHNICAL MANUAL SECTION 1 – TRANSPORTATION SYSTEMS – SUBSECTION 1.17 ELECTRIC VEHICLE INFRASTRUCTURE

Section 1.17 Electric Vehicle Infrastructure within Section 1 – Transportation Systems of the City of Portland Technical Manual requires new structured parking facilities of five or more spaces to 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). Applying that formula to this garage would require a total of 127 charging stations. Consistent with the intent of paragraph 1.17, the University is proposing fifty-eight (58) Level 2 electric vehicle charging station parking spaces within the proposed garage. These stations will meet the 2023 forecasted demand for campus commuters and residents, hereafter referred to as Commuters and Portland Commons, respectively. The University is also prepared and committed to increase supply of electric vehicle (EV) charging stations to meet future demand.

The number of charging stations proposed with construction of the garage is based upon an analysis of the current and future demand for EV charging stations by the targeted users of the garage. The proposed Level 2 charging station rates are generally between 10 and 60 miles of range per hour, with 35 miles of range per hour being typical. Additionally, and consistent with recent City of Portland policy discussions, the University will build into its EV charging station network a policy which uses idle fees to be assessed beyond permitted charge times, to promote turnover and maximize the use and investment in charging stations. Note, one (1) dual-head charging station provides charging to two (2) EV parking spaces. With regard to assumptions herein on electrical vehicles on campus, EV includes BEV (powered solely by battery) and PHEV (plug-in hybrid that also run on gas or diesel) automobiles.

Commuters: The Pew Research Center[1] found "new electric car registrations and automobile market share" to be equal to 2.0% in 2020. For comparison, the University's Office of Sustainability analyzed roughly 3,000 parking permits issued in 2020 and based on that analysis, determined the University had an estimated maximum of 56 electric or plug-in hybrid vehicles in total, across all three campuses (Portland, Gorham & Lewiston). An estimation was required because prior to the date of this Site Plan application, the University did not collect data to determine EV versus non-EV.

To forecast the number of commuter EVs at the University by 2023 (garage opening) and charging station demand, the Office of Sustainability assumed a US - EV market share of 4% (double the 2020 market share), based upon analysis by Deloitte[2]. In 2019, the most recent school year not impacted by the pandemic, the University issued roughly 7,500 parking permits per year, between Portland and Gorham campuses. Based upon campus enrollment and headcount distribution and the Office of Admissions, we forecast the campus split to migrate from 64%/36% (Portland/Gorham) to 70%/30% (Portland/Gorham) by 2023, and thus 5,250 of the 7,500 parking permits will be on the Portland campus. Further, these 5,250 parking permits are inclusive of Portland Commons residents and the 394 parking spaces allocated and approved by the Planning Board for that purpose. By removing the 394 spaces, we forecast 4% of the estimated 4,856 commuter parking permits issued in 2023 (5,250 minus 394) will be EVs, equal to 194 commuter EVs.

Given the Level 2 charging rate, a 2-hour charge will typically provide 70 miles of range to an EV and well within average commuting distance. For reference, the Planning Board approved 2020 USM Portland Campus TDM Plan found the average one-way commuting distance to be 13.8 miles for the USM population, and 50% of faculty and staff living less than a 20-minute drive from campus. The University will furnish and install signage and EV charging stations

which will limit vehicles to a 2-hour maximum charge, with idle fees assessed after 2 hours of charging. With a 2-hour charge limit, over the course of a typical 8-hour school day, one EV charging station will provide for four (4) EVs to charge.

To accommodate a scenario where all the forecast 194 commuter EVs come to the Portland campus on the same day in 2023, the University will provide fifty (50) EV charging station spaces, designated for Commuter use.

Portland Commons: As referenced above, per the Planning Board approved off-street parking requirements for the Portland Commons project, 394 parking spaces were required to be constructed and allocated to that project. To forecast the number of Portland Commons residential EVs at the University by 2023 (garage opening), the Office of Sustainability similarly assumed an US - EV market share of 4%, based upon analysis by Deloitte[2]. This assumption forecasts sixteen (16) Portland Commons residential EVs. To support "home charging" for these residents, the University will furnish and install signage and EV charging stations which will allow Portland Commons residents a 12-hour maximum charge, with idle fees after 12 hours. This 12-hour charge limit accommodates two EVs with each EV charging station per day.

To accommodate all the forecast sixteen (16) residential EVs, the University will provide eight (8) EV charging stations spaces, designated for Portland Commons residents.

SUMMARY

In addition to providing these fifty-eight (58) charging stations spaces, the University will track the usage of the EV charging stations spaces and utilize the data to aid in the University's future forecasting of EV charging demand, including re-signing charging stations as appropriate for Commuter and Portland Commons users to maximize their use. The University has also updated its Parking Permit program to include a requirement in the application process to provide information that allows the University to track EV ownership on the Portland campus, and thus supplement the data for forecasting future EV charging station demand.

The University is committed to meeting EV charging demand and based on the data collected will increase the number of EV charging stations within the garage, over time. Given the pace of change in EV charging technology and equipment, the University is not proposing to install EV charging stations or other infrastructure beyond the fifty-eight (58) charging stations spaces as described herein; the pre-cast concrete construction type of this garage easily accommodates additional EV charging station installation, and the electrical infrastructure has been sized to accommodate growth. Said monitoring and installation in response to demand will allow the University to remain current with the quickly-improving technology.

With this Application, we request a Waiver from paragraph 1.17 Electric Vehicle Infrastructure within Section 1 – Transportation Systems outlined in the City of Portland Technical Manual from 127 electric vehicle chargers to 58 chargers.

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[1] Pew Research Center-Today's electric vehicle market: Slow growth in U.S., faster in China, Europe 7 June 2021. https://www.pewresearch.org/fact-tank/2021/06/07/todays-electric-vehicle-market-slow-growth-in-u-s-faster-in-china-europe/

[2] Deloitte Insights Electric Vehicles, Setting a course for 2030 published 28 July 2020. https://www2.deloitte.com/us/en/insights/focus/future-of-mobility/electric-vehicle-trends-2030.html

8.2 ATTACHMENTS

- Waiver Table

Standard to be Waived: Cite Ordinance or Technical Manual Standard	Cite Standard Language: Cite specific language of applicable Ordinance or Technical Manual Standard	Waiver Being Sought: Describe waiver being sought. Ex. – We are requesting a two-way parking lot drive aisle width of 20' feet.	Justification for Waiver: Address specific waiver criteria, if applicable, and document reasons for the waiver request.
City of Portland Technical Manual Section 1 - Transportation Systems - Subsection 1.17 Electric Vehicle Infrastructure	New structured garages shall provide EV charging to 20% of parking spaces. Remaining spaces must be served by sufficient conduit, wiring, and electrical service to allow for future installation of electric vehicle supply equipment.	58 Charging Stations (9% of garage spaces), tracking usage and forecasting demand, commitment to meet EV charging demand in future and sizing electrical infrastructure to accommodate growth as described in attached narrative.	See Section 8.1 of the Site Plan Narrative for waiver justification.

9. FINANCIAL & TECHNICAL CAPABILITY

9.1 FINANCIAL CAPABILITY

Attached is evidence of the University's financial capability to complete the proposed project.

9.2 TECHNICAL CAPABILITY

The University of Southern Maine (USM) is a public university with over 8,000 undergraduate and graduate students taking courses online and at campuses in Portland, Gorham, and Lewiston. Known for its academic excellence, student focus and engagement with the community, USM provides students with hands-on experience that complements classroom learning and leads to employment opportunities in one of the nation's most desirable places to live. USM is a member of the University of Maine System (UMS), the State's largest educational enterprise that includes seven universities and an annual enrollment of nearly 30,000 students.

Desman, Inc. is recognized as one of the nation's leading consulting architectural and engineering firms specializing in the planning, design and restoration of structured parking facilities, transportation improvements and other parking related consulting services. Desman offers a complete scope of services in the parking industry including planning, design, restoration, construction administration, financing methods, parking access/revenue control, operational and management techniques. In brief, its core business is parking planning, design, and all other parking related consulting services. Desman has over 45 years of experience in providing these services for parking structures and parking related projects.

Woodard & Curran (W&C), a 1,000-person Portland-based firm, has provided engineering services to the public and private sector for over 40 years, including permitting, civil/site engineering, stormwater, and construction management services. W&C has completed projects for colleges, universities, and healthcare institutions that build strong, sustainable infrastructure and environmental programs serving both their business needs and the communities that make them so vibrant. With extensive experience in design and permitting for site development projects, W&C has completed many projects within the City of Portland and for the University of Maine System.

Winston Scott Architects is a small, design-oriented architectural practice established in 1975 and located in Portland, Maine. Their work encompasses a diverse array of project types and scales ranging from multi-block urban developments to historic renovations, commercial and institutional buildings, and multifamily and single-family residences. The firm has been recognized numerous times for design excellence by the Maine and New England Chapters of the American Institute of Architects, as well as the United States Green Building Council; and their work has been profiled in national trade journals, local publications, and several books focused on design and architecture.

Michael Boucher Landscape Architecture (MBLA) is a professional landscape design firm located in southern Maine. MBLA, founded in 1994, is engaged in ongoing collaborations with many acclaimed architecture firms. The office is currently involved in a variety of projects nationally and internationally, connecting them to many landscape typologies, cultural viewpoints, and methods of building. This experience benefits their clients and projects in providing a sense of objectivity that we fold into each new undertaking. MBLA offers a full scope of landscape architecture services tailored to assist clients in developing clear visions for their properties.

9.3 ATTACHMENTS

- Evidence of Financial Capability

DocuSign Envelope ID: 78157A2A-6DE5-4E27-B7A8-4B2065B0545F

UNIVERSITY OF
SOUTHERN MAINE
Finance and Administration

July 27, 2021

Mr. Darrin Stairs
Woodard & Curran
41 Hutchins Drive
Portland, ME 04102

Dear Mr. Stairs:

The University of Southern Maine expects the Structured Parking project to cost approximately $22 million.

To fund the project, the University would utilize bond anticipation notes and revenue bonding pursuant to approval by the University of Maine System Board of Trustees.

Thank you for your consideration.

Sincerely,

DocuSigned by:
Alexander E. Porteous
73AFFEE3455845F...

Alexander E. Porteous
Chief Operating Officer & Chief Business Officer

P.O. Box 9300, Portland, ME 04104-9300
(207) 780-4484 TTY (207) 780-5646, FAX (207) 780-4549
www.usm.maine.edu
A member of the University of Maine System

10. COMPLIANCE WITH SITE PLAN STANDARDS

Article 14 of the City of Portland's Land Use Code outlines the site plan standards that must be met by Major Site Plan projects. The proposed project will comply with the City's design standards as described in the following sections:

10.1 TRANSPORTATION

The proposed project will not increase traffic or parking demand. The proposed parking lot will enable future developments (the Portland Commons residential hall and CSSC) at the University by replacing a portion of the parking that will be displaced by these planned developments. By constructing the proposed parking lot in advance of future developments, the University's existing parking demands will be satisfied for future construction. It should be noted that the University has developed a campus-wide Transportation Demand Management (TDM) Plan that comprehensively addresses the University's long-term goals for future developments. This TDM Plan was presented as part of the CSSC and Portland Residence Hall Site Plan and Traffic Movement Plan applications.

10.1.1 Traffic Impact

VHB has conducted a technical analysis in support of a modification of the Traffic Movement Permit (TMP) previously approved for the development of a new residence hall and Student Center on the University of Southern Maine (USM) campus. Although in the approved TMP for Project ID PL-001040-2020, a parking garage was not the primary subject of the permit application, for the purposes of the traffic analysis, the proposed parking garage location was situated off Falmouth Street. Anticipated new trips to and from the campus were assumed to utilize the new parking garage structure.

The proposed location of the parking garage has since been relocated as a response to neighborhood feedback and a site evaluation process. The locations of the 580-bed residence hall and Student Center that were previously permitted have not changed. The new parking garage will now be located adjacent to the existing parking structure on campus with joint access to and from Bedford Street. As a result, the traffic that had previously been assigned to the garage on Falmouth Street will instead access the proposed parking structure location. This traffic was redistributed across the adjacent street network and reevaluated to assess the resulting traffic impacts.

The shift to add these trips to the roadway network at the new proposed parking garage location along Bedford Street results in some delay increases at the intersection of Forest Avenue with Bedford Street and Baxter Boulevard as compared to the garage location along Falmouth Street. Advance queue detection should be considered in order to ensure that the addition of this traffic to intersection of Forest Avenue with Bedford Street does not cause an impact beyond the available queue storage and impact the operation of the I-295 off ramp. Overall, this proposed location for the parking garage is not anticipated to adversely affect traffic operations in the vicinity of the USM campus.

Updated traffic circulation for access and egress to the existing and proposed parking garages will compel updates to the Bedford Street corridor. It is proposed that vehicles will enter the parking garages via Winslow Street and exit the parking garages via Surrenden Street, as previously discussed and depicted in Figure 1 below. A dedicated left turn lane will be provided for vehicles traveling westbound on Bedford Street and entering the parking garages via Winslow Street, replacing the raised median island and crosswalk currently set back from the intersection on the east leg. This crosswalk will be replaced by a crossing on the west leg of the intersection to limit the number of vehicular lanes pedestrians will need to cross to two. A painted median will be extended beyond the existing raised median island between Bedford Street and Winslow Street, separating the single vehicular through lanes and painted bike lanes in each direction. The need for a single departure lane from the intersection on Winslow Street will allow for a pedestrian bumpout to be implemented. The bumpout will effectively shorten the crossing distance for pedestrians across the Winslow Street leg of the intersection and widen back to two lanes to maximize the queuing space for vehicles entering

the parking garages. An amendment to USM's Traffic Movement Permit (TMP) describing the proposed improvements in more detail and supplemental design drawings will be submitted to the City under separate cover.

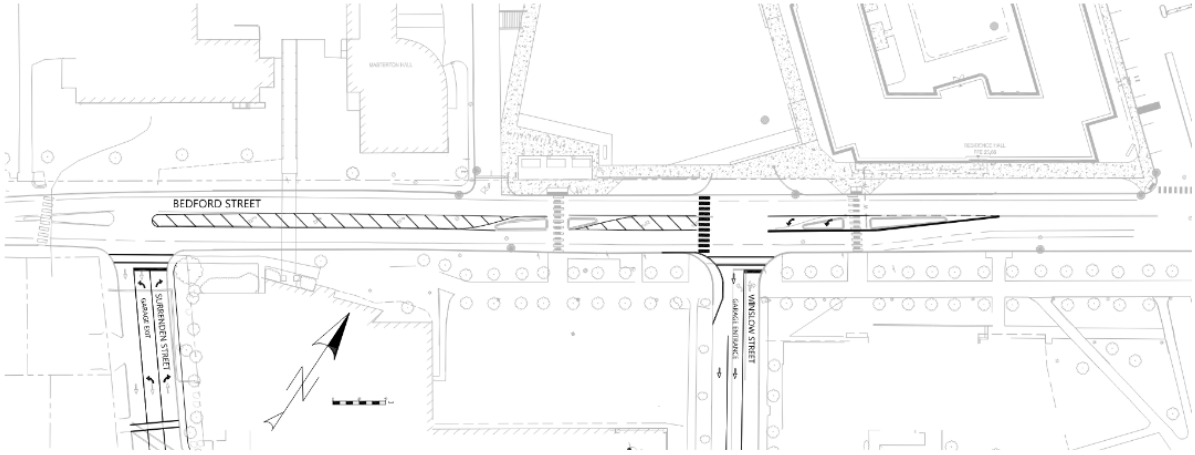

Figure 1. Conceptual Plan for Bedford Street and Parking Garage Circulation

10.1.2 Access & Circulation

The proposed parking garage will include ADA accessible parking spaces at ground-level and accessible pedestrian walkways. Traffic signage, pavement markings and various paving materials/patterns will be provided to circulate pedestrian and vehicular traffic throughout the Site. A loop road has been provided to the drop off area in front of the Osher/Glickman library, as well as maintenance of an emergency access road to the rear of the parking garages.

10.1.3 Loading & Servicing

The proposed project will not include any changes to the Site's loading or servicing needs. modification to the loop road will continue to service the loading and service areas behind the Osher/Glickman Library, as well as drop offs to the library and Wishcamper.

10.1.4 Sidewalks

Internal sidewalks and ADA ramps will be provided, as shown, and detailed on the design drawings.

10.1.5 Public Transit

No changes to public transit access are proposed as part of this project.

10.1.6 Parking

As previously described, the purpose of the proposed parking garage is to replace parking that will be displaced by the residence hall and CSSC project and to meet demand for residential parking. The proposed parking garage will provide 632 parking spaces for a net increase in 425 parking spaces for the University, including required ADA parking; a parking summary is provided on the Plans. The proposed parking garage has been designed in accordance with the dimensional standards of Section 1 of the City's Technical Design Manual, as shown on the design drawings.

10.1.7 Bicycle Parking

The proposed parking garage will include a covered and secured bicycle storage area capable of holding 250 bikes. This storage will serve commuter students who ride bicycles to campus as well as bicycle storage needs for the new dormitory, Portland Commons. Additional bicycle parking is provided along the sidewalk and building entrances elsewhere on the site.

10.1.8 Snow Storage

Proposed snow storage areas are indicated on the drawings. The proposed landscaped areas will be the primary source for snow storage. Snow that exceeds the available space on-site will be hauled off-site. A snow dump area is provided from the roof deck of the new garage in the southeast corner.

10.1.9 Traffic Demand Management

USM has a robust Traffic Demand Management (TDM) plan in place. This was provided as part of the CSSC and Residence Hall project, and copies can be provided upon request

10.2 ENVIRONMENTAL & LANDSCAPE FEATURES

10.2.1 Preservation of Significant Natural Features

The Site has been previously developed and there are no known areas of significant natural features, including rare or endangered botanical features, significant wildlife habitats, or wetland areas. The attached Official Species List identifies the northern long-eared bat, which has been listed as a Federally Threatened Species, in association with the project area (a common designation across the state); however, there are no critical habitat areas located within the project area. Based on US Fish & Wildlife information, the northern long-eared bat typically lives in caves during the winter months, and in trees larger than three inches in diameter during the summer, with migration between these two habitats in the spring in the fall. Tree-clearing for this project will be minimal; it is not anticipated that this project will have an impact on the northern long-eared bat species.

10.2.2 Landscape Preservation

A Tree Preservation & Removals Plan is included in the design drawings; this Plan shows what existing trees will be preserved and specifies protection measures.

10.2.3 Site Landscaping

Landscaping Plans are included in the drawings referenced in Section 3 of this Report. These Plans show proposed landscaping and screening of the Site; plant sizes are specified in the planting schedule provided on the Plans.

10.3 ENVIRONMENTAL & STORMWATER

10.3.1 Water Quality, Stormwater Management, & Erosion Control

The project must comply with the water quality, stormwater management, and erosion control standards identified by the City of Portland in the Land Use Chapter of the Code of Ordinances and Section 5 of the City's Technical Manual, as well as the MaineDEP Chapter 500 Stormwater Standards associated with Site Location of Development Act Permit requirements. The stormwater management system is comprised of a series of catch basins, a subsurface detention system, and proprietary treatment unit. The subsurface detention and treatment system will consist of large metal pipe and a StormFilter unit, which will provide storage and treatment for site runoff prior to discharging to the City's separated stormwater system in Forest Avenue. The Stormwater Management Plan included with this application demonstrates

that the proposed development meets the applicable standards. The project will not result in the flooding of adjacent lots or City property.

Erosion and sediment control measures are shown and detailed on the drawings. The project is not located within the watershed of an Urban Impaired Stream and is not anticipated to pose a risk of groundwater contamination during or after construction; the project does not include subsurface sanitary sewage disposal.

10.4 PUBLIC INFRASTRUCTURE & SAFETY

10.4.1 Consistency with City Master Plans

The proposed project is consistent with the City of Portland Comprehensive Plan, Portland's Plan 2030, developed in 2017. The proposed project will help support the growth of the University of Southern Maine's student body, a vital resource for the economic development of the City of Portland.

10.4.2 Public Safety & Fire Prevention

10.4.2.1 Natural Surveillance

The layout of the site and the features of the garage have been designed to create formal and informal natural surveillance conditions. These conditions of "see and be seen" will enhance the safety of legitimate users and deter potential offenders. The site layout will include zones of use which will be readily identifiable to users:

Private: Areas within the garage will be screened from the public areas.

Semi-Private: Clusters of picnic tables will encourage small group use in dedicated spaces.

Public: Open walkways will interconnect with plazas and destination uses.

Lighting of the site and garage will meet the City's standards and will also provide uniform coverage of the entrances, exits and pathways to create a saft people-oriented environment. Clear observation conditions will create the feeling of safety and belonging which will foster active use without concerns of areas which need to be avoided.

The garage will also include a surveillance system that will allow viewing of areas not easily observed within the garage. This system will be an extension of the security system in the existing garage, and will be monitored in the existing parking office. It will provide general viewing of all areas of the garage. In addition, the system will also provide close views of key points – entries, elevator lobbies and stairs.

10.4.2.2 Access Management

The site has been designed with a hierarchy of pathways, plazas, and vehicular routes which are coordinated and serve to reinforce guidance place-making for the USM community. Emergency use areas will be gated so that while that while still readily usable by staff, fire and security forces, they will be off-limits for others.

10.4.2.3 Territorial Reinforcement

The site has been designed with a hierarchy of pathways, plazas, and vehicular routes which are coordinated and serve to reinforce guidance place-making for the USM community.

10.4.2.4 Fire Department Access and Operations

The garage has been designed to the applicable requirements of NFPA standards outlined in the Technical Standards. It will include a dry standpipe system, with interconnected risers, available to be fed from a fire hydrant near the garage.

The site layout for the garage will extend the existing 20' at the south side of the existing garage for the full length of the new facility. This will provide full access for operations on three sides of the garage. Stair towers in the garage will exit directly to exterior walks, and the stair exits in the existing garage will be maintained. An emergency access road will be maintained to the south of the two garages.

10.4.3 Availability & Adequacy of Public Utilities

Portions of the existing water, sewer, and stormwater utility infrastructure on-site will be displaced to accommodate construction of the garage and its foundation, including a fire hydrant and Vortechnics unit. Locations of relocated utilities are shown on the Utility Plan in the design drawings attached to Section 3 of this Report. No water services are proposed to the new garage. The garage design includes a dry stand pipe and sprinkler system with a Fire Department Connection (FDC) in the northeast corner stairwell. Woodard & Curran will coordinate with the Portland Water District to approval for the proposed design; documentation of Portland Water District approval can be provided upon receipt.

A new sewer service and oil/water separator will be provided along the southern edge of the garage for the floor drains in the lower levels of the garage. The sewer service and oil/water separator will discharge to the combined sewer interior to the site. Runoff from the rooftop level of the garage will be conveyed to the separated storm sewer system, as shown on the design drawings, and described in the Stormwater Management Report (submitted under separate cover). The attached letter was provided to the Portland Department of Public Works to request confirmation of ability to serve the proposed development; the Wastewater Capacity Application was submitted with this letter. A copy of the City's determination will be provided upon receipt.

As described in the Stormwater Management Report, the stormwater management system for the site will be comprised of a series of catch basins, a subsurface detention system, and proprietary treatment unit that discharge to the City's separated stormwater system in Forest Avenue. As requested by the City, site drainage patterns will be modified to direct stormwater runoff from the proposed development to the City's separated stormwater system in Forest Avenue instead of the combined sewer; the City has indicated that the stormwater system on Forest Avenue has capacity to convey additional stormwater flow from the site.

The proposed project will also generate construction waste and demolition debris (CDD). The Contractor will be responsible for hauling the CDD or contracting with a waste management service to haul the CDD, from the project site. The Contractor will be fully responsible for handling, managing, and disposing of all waste generated by construction in accordance with Maine Solid Waste Management Regulations – 06-096 CMR 400-409 and all other applicable local, state, and federal regulations.

The proposed development is not anticipated to produce any hazardous waste. Environmental assessments of the Site have been conducted and the Owner is a participant in the Maine Department of Environmental Protection Voluntary Response Action Program (VRAP). A soil management plan will be developed for the Site.

The proposed project will not result in any additional solid waste after construction has been completed.

10.5 SITE DESIGN

10.5.1 Massing, Ventilation, & Wind Impact

The parking structure has been designed within the context of the surrounding similarly scaled buildings.

10.5.2 Shadows

The parking structure has been designed to minimize impacts of shadows on open space and public areas that would affect the viability of the public use and existing vegetation.

10.5.3 Snow & Ice Loading

The parking structure has been designed to prevent snow and ice from accumulating and falling onto abutting properties and public ways.

10.5.4 View Corridors

The parking structure will not obstruct public view corridors identified in the City's Downtown Vision View Corridor Protection Plan.

10.5.5 Historic Resources

The proposed development is not located in or adjacent to a historic district or historic landmark.

10.5.6 Exterior Lighting

Proposed exterior lighting is shown on the drawings. A Photometric Plan and details for the proposed lighting fixtures are included in the drawings; cut sheets of the proposed lighting fixtures are also attached to this Section for your reference. It should be noted that the project abuts the I-295 corridor; according to Section 12 of the Technical Manual, public rights-of-way is considered a non-sensitive use and, as such, illumination at the property boundary must not exceed 1.0 foot-candles; the lighting plan has been designed in accordance with these standards. Existing light poles in the surface parking lot will be demolished as shown on the Demolition plan in the design drawings.

10.5.7 Noise & Vibration

The proposed project will not result in any increase in noise or vibration on the Site.

10.5.8 Signage & Wayfinding

Existing signage will be maintained, and new traffic signage will be provided as shown on the drawings.

10.5.9 Zoning Related Design Standards

A summary of the project's compliance with zoning related design standards is provided in Section 6 of this Report.

10.6 ATTACHMENTS

- Traffic Movement Permit Amendment Application (submitted under separate cover)
- Official Species List
- Stormwater Management Plan (submitted under separate cover)
- Wastewater Ability-to-Serve Letter & Application
- Photometric Plan
- Light Fixture Cut Sheets

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Maine Ecological Services Field Office
P. O. Box A
East Orland, ME 04431
Phone: (207) 469-7300 Fax: (207) 902-1588
http://www.fws.gov/mainefieldoffice/index.html

In Reply Refer To: April 01, 2021
Consultation Code: 05E1ME00-2021-SLI-0915
Event Code: 05E1ME00-2021-E-02772
Project Name: USM Garage

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies the threatened, endangered, candidate, and proposed species and designated or proposed critical habitat that may occur within the boundary of your proposed project or may be affected by your proposed project. This species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC Web site at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the Endangered Species Consultation Handbook at: http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

This species list also identifies candidate species under review for listing and those species that the Service considers species of concern. Candidate species have no protection under the Act but are included for consideration because they could be listed prior to completion of your project. Species of concern are those taxa whose conservation status is of concern to the Service (i.e., species previously known as Category 2 candidates), but for which further information is needed.

If a proposed project may affect only candidate species or species of concern, you are not required to prepare a Biological Assessment or biological evaluation or to consult with the Service. However, the Service recommends minimizing effects to these species to prevent future conflicts. Therefore, if early evaluation indicates that a project will affect a candidate species or species of concern, you may wish to request technical assistance from this office to identify appropriate minimization measures.

Please be aware that bald and golden eagles are not protected under the Endangered Species Act but are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.). Projects affecting these species may require development of an eagle conservation plan: http://www.fws.gov/windenergy/eagle_guidance.html Information on the location of bald eagle nests in Maine can be found on the Maine Field Office Web site: http://www.fws.gov/mainefieldoffice/Project%20review4.html

Additionally, wind energy projects should follow the wind energy guidelines: http://www.fws.gov/windenergy/ for minimizing impacts to migratory birds and bats. Projects may require development of an avian and bat protection plan.

Migratory birds are also a Service trust resource. Under the Migratory Bird Treaty Act, construction activities in grassland, wetland, stream, woodland, and other habitats that would result in the take of migratory birds, eggs, young, or active nests should be avoided. Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm and at:

http://www.towerkill.com; and at:
http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Maine Ecological Services Field Office
P. O. Box A
East Orland, ME 04431
(207) 469-7300

Project Summary

Consultation Code: 05E1ME00-2021-SLI-0915
Event Code: 05E1ME00-2021-E-02772
Project Name: USM Garage
Project Type: DEVELOPMENT
Project Description: An addition to the existing USM Surrenden Street Parking Garage on the University of Southern Maine's campus.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@43.66203135,-70.27331546908917,14z

Counties: Cumberland County, Maine

Endangered Species Act Species

There is a total of 1 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis*	Threatened

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/9045

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

COMMITMENT & INTEGRITY
DRIVE RESULTS

41 Hutchins Drive
Portland, Maine 04102
www.woodardcurran.com

T 800.426.4262
T 207.774.2112
F 207.774.6635

July 30, 2021

ATTN: Bradley Roland, P.E.
Department of Public Works
212 Canco Road
Portland, ME 04103

Re: USM Structured Parking Garage – Request for Evidence of Ability to Serve

Dear Mr. Roland:

The University of Southern Maine Portland Campus is proposing to construct a structured parking garage adjacent to the existing garage located at 44 Bedford Street in Portland, Maine. The proposed project will include the construction of a structured parking garage with associated site improvements including lighting, landscaping, utilities, and stormwater management infrastructure. Please refer to the enclosed Utility Plan for locations and sizes of proposed service connection and associated oil/water separator for the proposed parking garage floor drain. Upon completion of development, the proposed project is anticipated to discharge approximately 20 gallons per minute to the site's combined sewer system; the proposed project will not generate any wastewater flow. We have submitted a Major Site Plan Application for the proposed project to the City of Portland Planning Department and would appreciate documentation regarding the City's ability to accommodate the proposed flows.

Please let us know if any additional information is required to facilitate your review. We appreciate your assistance. If you have any questions or require any additional information, please do not hesitate to contact me at (207) 558-3665 or aefletcher@woodardcurran.com.

Sincerely,

WOODARD & CURRAN INC.

Ashley Fletcher, PE
Technical Manager

Enclosures: Utility Plan
City of Portland Wastewater Capacity Application Form

cc:

PN: 0233035.00

CITY OF PORTLAND WASTEWATER CAPACITY APPLICATION

Portland Dept. of Public Works -
Water Resources
55 Portland Street,
Portland, Maine 04101-2991

Bradley Roland, P.E.
Water Resources Division
Department of Public Works
55 Portland Street
Portland, ME 04103

Date: **July 30, 2021**

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

Site Address: **44 Bedford Street**

Chart Block Lot Number: **114 A001001**

Proposed Use: **Parking Garage**
Previous Use: **Surface Parking**
Existing Sanitary Flows: **0** GPD
Existing Process Flows: **0** GPD
Description and location of City sewer that is to receive the proposed building sewer lateral.

21" combined sewer between Bedford Street & I295.

Site Category		
	Commercial *(see part 4 below)*	X
	Industrial *(complete part 5 below)*	
	Governmental	
	Residential	
	Other *(specify)*	

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

2. Please, Submit Contact Information.

City Planner's Name: **James Rather** Phone: **207-874-8699**
Owner/Developer Name: **University of Southern Maine, c/o Ann Vashon**
Owner/Developer Address: **25 Bedford Street, Portland, ME 04104**
Phone: **(207) 780-4177** Fax: **N/A** E-mail: **ann.vashon@maine.edu**
Engineering Consultant Name: **Woodard & Curran, c/o Ashley Fletcher, PE**
Engineering Consultant Address: **41 Hutchins Drive, Portland, ME 04101**
Phone: **(207) 558-3665** Fax: **N/A** E-mail: **aefletcher@woodardcurran.com**

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

3. Please, Submit Domestic Wastewater Design Flow Calculations.

Estimated Domestic Wastewater Flow Generated: **0 gpd**
Peaking Factor/ Peak Times: **Peak flow = 20 gpm (rainy days)**
Specify the source of design guidelines: *(i.e.__"Handbook of Subsurface Wastewater Disposal in Maine," "Plumbers and Pipe Fitters Calculation Manual," __ Portland Water District Records, __ Other (specify)*

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

4. Please, Submit External Grease Interceptor Calculations.

Total Drainage Fixture Unit (DFU) Values: **N/A**

Size of External Grease Interceptor: _____

Retention Time: _____

Peaking Factor/ Peak Times: _____

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

5. Please, Submit Industrial Process Wastewater Flow Calculations

Estimated Industrial Process Wastewater Flows Generated: **N/A** GPD

Do you currently hold Federal or State discharge permits? Yes ____ No ____

Is the process wastewater termed categorical under CFR 40? Yes ____ No ____

OSHA Standard Industrial Code (SIC): *(http://www.osha.gov/oshstats/sicser.html)*

Peaking Factor/Peak Process Times: _____

Note: On the submitted plans, please show where the building's domestic sanitary sewer laterals, as well as the building's industrial-commercial process wastewater sewer laterals exits the facility. Also, show where these building sewer laterals enter the city's sewer. Finally, show the location of the wet wells, control manholes, or other access points; and, the locations of filters, strainers, or grease traps.

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

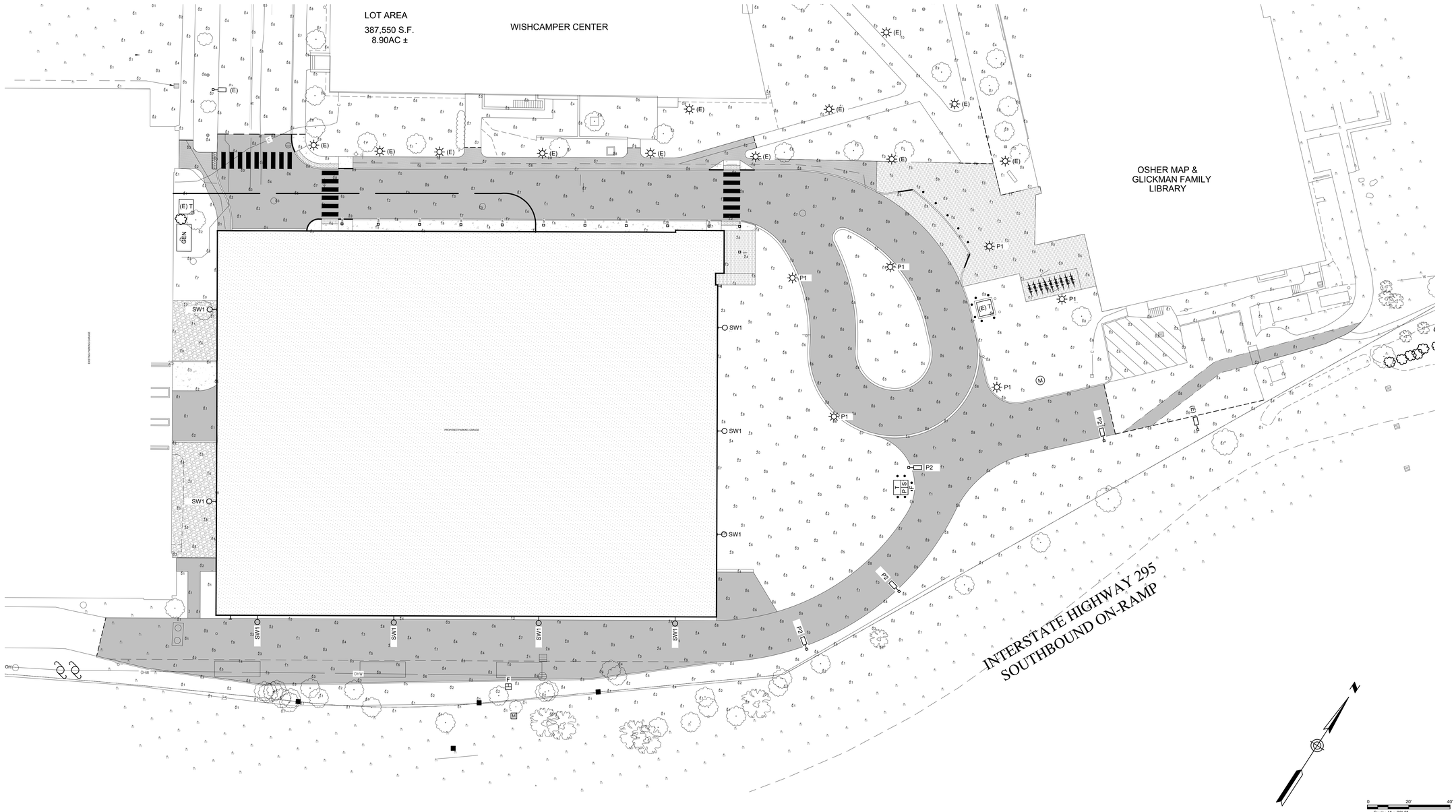
LUMINAIRE SCHEDULE ~ SITE

TYPE	DESCRIPTION	MFR	CATALOG SERIES NUMBER SEE NOTE 1	MOUNTING, U.N.O.	VOLTS	LAMP				KEY NOTES
						QTY PER FIXTURE	WATTS	LUMENS	TYPE	
P1	SITE LIGHT AND POLE, "ICE CREAM CONE" SHAPE	SEE NOTE 8		14' POLE	277	1	24	3,330	LED ARRAY ~ 4000K	8,9
P2	SITE LIGHT AND POLE, "SHOEBOX" SHAPE	SEE NOTE 8		14' POLE	277	1	18	2,160	LED ARRAY ~ 4000K	8,10
SW1	WALL MOUNTED EXTERIOR LIGHT	LITHONIA	KAXW-LED-P1-40K-R4-MVOLT	KEYNOTE 5	UNV	1	29	3,643	LED ARRAY ~ 4000K	5
SR1	RECESSED CANOPY LIGHT	LITHONIA	LDN4SQ-40-07-LS4-AR-LSS-MVOLT	RECESSED CANOPY	UNV	1	8.6	620	LED ARRAY ~ 4000K	

	NOTES
1	**NOTE THAT THESE NUMBERS ARE NOT COMPLETE CATALOG NUMBERS. PROVIDE ALL REQUIREMENTS ON SCHEDULE, NOTES, SPECS, AND DRAWINGS COMBINED.**
2	**CATALOG SERIES NUMBERS ARE USED TO ESTABLISH A LEVEL OF QUALITY AND NOT INTENDED TO LIMIT COMPETITION. SERIES NUMBERS ARE NOT COMPLETE CATALOG NUMBERS. COMPLY WITH ADDITIONAL REQUIREMENTS IN SPECIFICATIONS AND DRAWINGS.**
3	PROVIDE WALL,CEILING, OR PENDANT MOUNTING AS INDICATED ON PLANS. PROVIDE NUMBER OF FACES AND ARROWS AS INDICATED.
4	VERIFY CEILING STRUCTURE AND MOUNTING HEIGHT PRIOR TO ORDERING ANY LIGHT FIXTURES.
5	COORDINATE MOUNTING HEIGHT WITH STRUCTURAL AND ARCHITECTURAL DRAWINGS.
6	PROVIDE COLD WEATHER OPTION.
7	CONFIRM EXACT FIXTURE CONFIGURATION AND OPTIONS WITH MUNICIPALITY PRIOR TO ORDERING FIXTURE.
8	FIXTURE AND POLE SHALL BE PROVIDED BY OWNER FROM EXISTING OWNER'S STOCK.
9	PROVIDE SCREW-IN LED RETROFIT LAMP. BASIS OF DESIGN IS MFG. BY LIGHT EFFICIENT DESIGN, PART NO. LED-8029E345-A.
10	PROVIDE SCREW-IN LED RETROFIT LAMP. BASIS OF DESIGN IS MFG. BY LIGHT EFFICIENT DESIGN, PART NO. LED-8039E40-A.

Calculation Summary

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
DRIVES	Illuminance	Fc	0.99	3.5	0.2	4.95	17.50
WALKWAY- GLICKMAN	Illuminance	Fc	1.00	1.3	0.5	2.00	2.60
WALKWAY- NEW GARAGE	Illuminance	Fc	1.46	1.7	1.2	1.22	1.42



A1	PHOTOMETRIC SITE PLAN
SCALE: 1"=20'-0"	

7/2/2021 3:16:33 PM

UNIVERSITY OF SOUTHERN MAINE

25 Bedford Street, Portland, ME 04104
207.712.5183 | USM.MAINE.EDU

PROJECT TEAM:

CLIENT
UNIVERSITY OF SOUTHERN MAINE

PRIME CONSULTANT
& STRUCTURAL ENGINEER
DESMAN Design Management
18 Tremont Street #300
Boston, MA 02108

ARCHITECT
WINTON-SCOTT ARCHITECTS
5 MILK STREET
PORTLAND, ME 04101

CIVIL ENGINEER
WOODARD & CURRAN
41 HUTCHINS DRIVE
PORTLAND, ME 04102

LANDSCAPE ARCHITECT
MICHAEL BOUCHER LANDSCAPE ARCHITECTURE
457 US ROUTE 1 SUITE 2
FREEPORT, ME 04032

MEP/FP ENGINEER
ALLIED ENGINEERING
160 VERANDA STREET
PORTLAND, ME 04103

GEOTECHNICAL ENGINEER
S.W. COLE
286 PORTLAND ROAD
GREY, ME 04039

TRAFFIC ENGINEER
VANASSE HANGEN BRUSTLIN INC
40 IDX DR 100 #200, SOUTH
BURLINGTON, VT 05403

COST ESTIMATOR
PREFERRED CONSTRUCTION MGMT
94 AUBURN ST,
PORTLAND, ME 04103

SEAL / SIGNATURE

© DESMAN, Inc.
2021

PROJECT:

USM - Structured Parking Garage

Address

44 Bedford Street,
Portland ME 04104

REVISIONS:

No.	Date	Description

SUBMISSIONS:

Date	Issued For:
07/30/21	Site Plan Submittal

SCALE	**AS NOTED**
DATE ISSUED	**07/30/2021**
PROJECT NO	**20-20145.00-1**
DRAWN BY	**GMC**
CHECKED BY	**BTG**

SHEET TITLE:

SITE PHOTOMETRIC PLAN AND SCHEDULES

SL-100

ORDERING INFORMATION

Sample Number: MSA-400-MH-MT-3S-FG-BK-L

MSA	100	MH	480	5S	FG	DP		

Product Family [1]
MSA=MESA

Lamp Wattage [2]
HID
50=50W
70=70W
100=100W
150=150W
175=175W
250=250W
320=320W [3]
350=350W [3]
400=400W [4]
Compact Fluorescent
42=42W [5]
57=57W [5,6]
114=(2) 57W [7]
140=(2) 70W [7]
Electrodeless Fluorescent
85=85W [8]

Lamp Type
MH=Metal Halide
MP=Pulse Start Metal Halide
HPS=High Pressure Sodium
CF=Compact Fluorescent [9]
QL=Electrodeless Fluorescent

Voltage [10]
120=120V
208=208V
240=240V
277=277V
347=347V
480=480V
DT=Dual-Tap Wired 277V [11]
MT=Multi-Tap Wired 277V [11]
TT=Triple-Tap Wired 347V [11]

Distribution
2S=Type II
3S=Type III
4S=Type IV
5S=Type V
SL=Forward Throw Spill Light Eliminator

Lens Type
FG=Flat Glass
FR=Frosted Flat Glass
SG=Sag Glass
FRS=Frosted Sag Glass
VS=Polycarbonate Vandal Shield [12]

Colors (add as suffix/must specify) [13]
BK=Black
AP=Grey
BZ=Bronze
WH=White
DP=Dark Platinum
GM=Graphite Metallic
GN=Hartford Green

Options (add as suffix)
F=Single Fuse (120, 277, or 347V / Specify Voltage)
FF=Double Fuse (208, 240 or 480V / Specify Voltage)
Q=Quartz Restrike [14]
EM=Quartz Restrike with Delay (Also Strikes at Cold Start) [14]
EM/SC=Quartz Emergency Separate Circuit [14]
42CF/EM=Emergency Battery Backup [15]
R=NEMA Twistlock Photocontrol Receptacle
PC=Button Photocontrol
DS=Dual Fluorescent Switching Control [16]
HS=House Side Shield [17]
L=Lamp Included

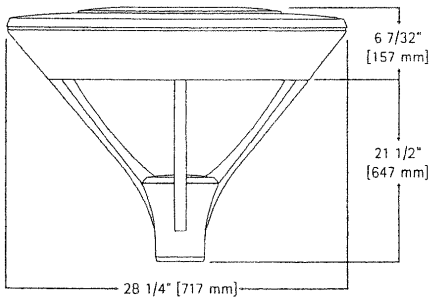
Accessories (order separately/ replace XX with color suffix)
VA6028-XX=Dual Mount Arm
VA6029-XX=Wall Mount Arm
OA/RA1016=Photocontrol-Multi-tap
OA/RA1027=Photocontrol-480V
OA/RA1201=Photocontrol-Multi-tap 347V

DL1

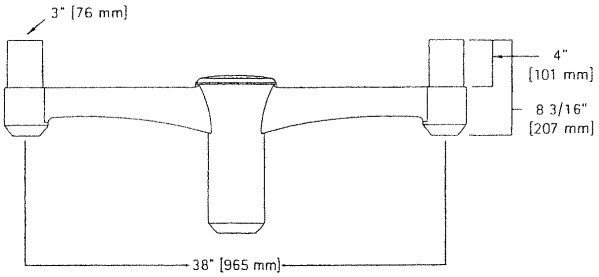
NOTES: 1 Slipfits over 3" O.D. tenon. 2 50-175W HID lamps use medium-base lampholders. 250-400W HID lamps use mogul-base lampholders. 3 320 and 350W Pulse Start Metal Halide only. 4 400W Metal Halide requires reduced envelope ED-28 lamps. 5 Compact Fluorescent lamp only. Available in Type 3S, 4S and 5S distributions only. 6 Nominal M.O.L. lamp length of 57W CFL not to exceed 7". 7 Dual 57 and 70W Compact Fluorescent lamp available in Type 4S distribution only. 8 Electrodeless Fluorescent lamp option available in Type 3S and 5S distributions only. 120V only. 9 Compact Fluorescent ballasts contain internal fusing. No supplemental fusing is necessary. CF ballasts are 120 through 277V. 10 Products also available in non-US voltages and 50Hz for international markets. Consult factory for availability and ordering information. 11 Dual-Tap is 120/277V wired 277V. Multi-Tap is 120/208/240/277V wired 277V. Triple-Tap ballast is 120/277/347V wired 347V. 12 Maximum wattage of 250W HID. 13 RAL and custom color matches available. Consult your INVUE Lighting Systems Representative. 14 Quartz options not available with SL optic. 15 Battery backup provides 90 minutes of supplemental light at 60% of initial rated lamp lumens. Type 3S, 4S, 5S optics only. Must specify 42W Compact Fluorescent lamp. 16 Dual switching requires dual 57W or dual 70W Compact Fluorescent lamps, and allows independent switching control of each lamp through use of two (2) electronic ballasts. Allows 50% power reduction. 17 House side shield not available on 5S or SL optics.

DIMENSIONS

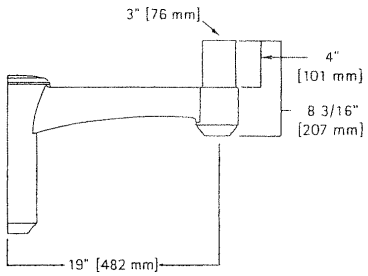
MESA [EPA 1.1]



Dual Mount Arm [EPA 1.36]



Wall Mount Arm



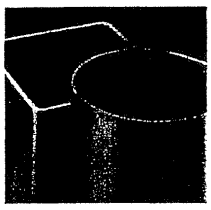
WATTAGE TABLE

	MSA
Metal Halide	50, 70, 100, 175, 250, 400W
Pulse Start Metal Halide	250, 320, 350, 400W
High Pressure Sodium	50, 70, 100, 150, 250, 400W
Compact Fluorescent	42, 57, (2) 57, (2) 70W
Electrodeless Fluorescent	85W

SHIPPING DATA

	MSA
Net. Weight (lbs.)	50
E.P.A.	1.1

NOTE: The above are approximate weights and volumes.



POLES

INVUE Lighting Systems offers a comprehensive package of steel, aluminum and decorative poles to suit any site lighting application. Consult the INVUE Poles brochure for ordering information and product specifications.

STANDARD COLORS

BK Black
AP Grey
BZ Bronze
WH White
DP Dark Platinum
GM Graphite Metallic
GN Hartford Green

APPLICATIONS DEPARTMENT

Let the application experts at Cooper Lighting design your next lighting layout. Aided by the latest computer simulation software and a comprehensive lighting background, our Application Engineers can design, analyze, and provide statistical layouts for any lighting application. Whether the design criteria calls for Illuminance, Luminance, or Small Target Visibility (STV) compliance, Cooper Lighting can provide the fixture layout and supporting documentation necessary to help secure your next project.

INVUE WEBSITE

Visit invuelighting.com for the latest product information from INVUE Lighting Systems. With instant access to IES photometric files, PDF product specification sheets, new product announcements, and other helpful specification tools, the INVUE Lighting website is an invaluable resource for getting information to customers-quickly.

ARX=ORDERING INFORMATION

The following information illustrates the correct way to enter an order for ARS4T08NGMA1V. The ordering designation is detailed as follows.

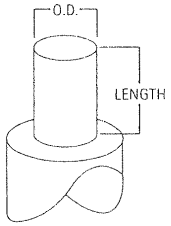
Aluminum	Round	Straight	Shaft Dia. (at base)	Wall Thickness	Mounting Height (ft.)	Base Type	Colors	Fixture Mounting + Type	No. + Location of Arms	Accessories (Vibration Damper)
A	R	X	4	T	08	N	GM	A	1	V

Mtg. Height (Ft.) MH	Catalog Number[3]	Wall Thickness (In.)	Shaft Dia. (In.) B	Bolt Proj. (In.) BP	Bolt Circle Dia. (In.) BC	Anchor Bolt D x AB x H (In.) AB	Net. Wt. (Lbs.)	EPA (Sq. Ft.)[2,4] At Pole Top 70	80	90	100	EPA (Sq. Ft.)[2,4] 18" Above Pole Top 70	80	90	100	Max. Fixture Load—Include Bracket (Lbs.)
8	ARX4T08NBZ	.125	4	1 7/8	6 3/4	3/4 x 17 x 3	20	18.9	14.2	10.9	8.6	15.6	11.7	9.0	7.1	100
10	ARX4T10NBZ	.125	4	1 7/8	6 3/4	3/4 x 17 x 3	24	14.0	10.3	7.8	6.0	11.9	8.8	6.6	5.1	100
12	ARX4T12NBZ	.125	4	1 7/8	6 3/4	3/4 x 17 x 3	27	10.6	7.6	5.6	4.2	9.2	6.6	4.9	3.7	100
12	ARX5T12NBZ	.125	5	1 7/8	7 3/4	3/4 x 17 x 3	33	17.9	13.2	10.2	8.2	15.6	11.5	9.0	7.1	100
15	ARX4T15NBZ	.125	4	1 7/8	6 3/4	3/4 x 17 x 3	33	7.0	4.8	3.2	2.3	6.3	4.3	2.9	2.0	100
15	ARX5T15NBZ	.125	5	1 7/8	7 3/4	3/4 x 17 x 3	40	12.5	9.0	6.9	5.4	11.2	8.0	6.1	4.8	100
18	ARX4M18NBZ[1]	.188	4	1 7/8	6 3/4	3/4 x 17 x 3	54	8.1	5.5	3.7	2.5	7.3	5.0	3.3	2.3	100
18	ARX5M18NBZ	.188	5	1 7/8	7 3/4	3/4 x 17 x 3	66	14.4	10.3	7.9	6.2	13.1	9.4	7.2	5.6	150
20	ARX5M20NBZ	.188	5	1 7/8	7 3/4	3/4 x 17 x 3	73	11.7	8.2	6.2	4.8	10.8	7.5	5.7	4.4	150

NOTES: 1 Factory installed vibration dampeners.
2 The above is our standard offering. Where higher EPA/wind speed capability or mounting height is required, other shaft dimensions and/or wall thickness are available. Consult INVUE Lighting Representative for pricing and lead times. The above E.P.A. capacities are based on loading from (1994) and pole drag coefficients from (2001) American Association of State Highway and Transportation Officials Specification.
3 Catalog item includes one set of anchor bolts, single nuts and (2) leveling shims.
4 EPAs based on shaft properties with wind normal to flat. EPAs calculated using base wind velocity as indicated plus 30% gust factor.

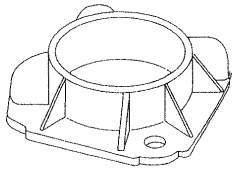
MOUNTING OPTIONS=FIXED TENON [add as suffix]

Designation Number	O.D. (in.)	Length (in.)
1	2 3/8"	3 1/2"
2	2 3/8"	4"
5	3"	4"
4	4"	6"

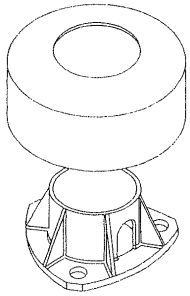


ACCESSORIES
C=Convenience Outlet
E=GFI Convenience Outlet
F=Vibration Pad
G=Ground Lug
V=Vibration Damper
D=Base Cover ("A" Base Only)

STANDARD BASE [Round Aluminum Pole only]
Type A=6", 7", 8" or 10"



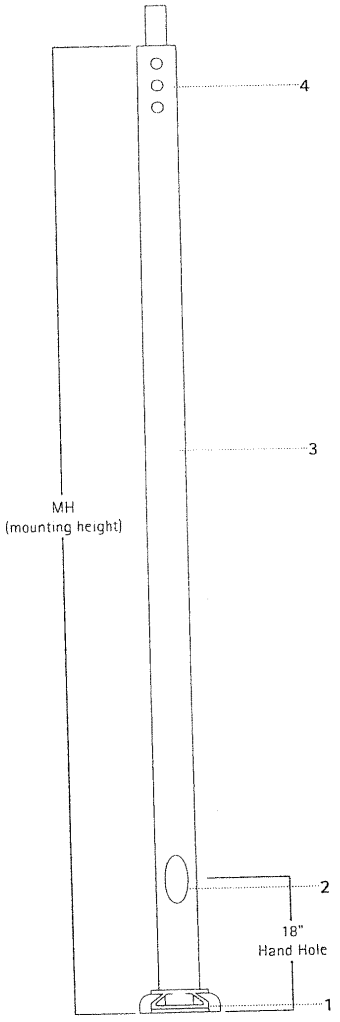
STANDARD BASE [Round Aluminum Pole only]
Type N=4", 5", or 6" (Standard with Base Cover)



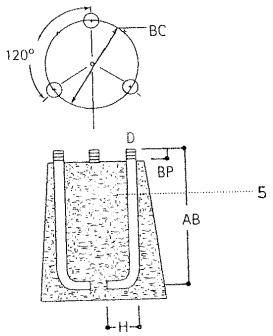
ARX=ALUMINUM ROUND STRAIGHT

8'–20' Mounting Height

PL1



Base View



SPECIFICATION FEATURES

1 356-T6 cast aluminum alloy shoe base with aluminum alloy bolt covers or base cover dependent upon base type.

2 Flush hand hole assembly 2 3/8" x 4 1/2" for 4" and 3" x 5" for 5" shafts with ground lug located opposite opening drilled and tapped. Ground lug located opposite hand hole opening drilled and tapped for 3/8" 16NC-2 grounding screw.

3 Straight round shaft 6063-T6 aluminum alloy finished in premium TGIC polyester powder coat.

4 Drilled or Tenon (specify).

5 Anchor bolt per ASTM A576 with (1) nut, (1) flat washer, and (2) shims. Nuts, washers and threaded portion of bolt are hot dip galvanized.

POLE COMPATIBILITY MATRIX	DRILL	EPA + MOUNTING CONFIGURATIONS					
	PATTERN	Single w/Arm	2 @ 180°	2 @ 90°	3 @ 90°	3 @ 120°	4 @ 90°
PRODUCT	TENON	[1]	[2]	[5]	[3]	[6]	[4]
ICON SMALL	A	0.69	1.38	1.38	1.84	1.84	2.07
ICON MEDIUM	C	1.09	2.18	2.18	2.86	2.86	3.20
ICON SMALL STRUCTURAL MOUNT	J	0.71	1.42	1.42	1.90	1.90	2.14
ICON MEDIUM STRUCTURAL MOUNT	K	1.11	2.22	2.22	2.92	2.92	3.27
SLIDE	4*	2.97	--	--	--	--	--
FLITE	4*	1.56	--	--	--	--	--
VISION SMALL	E	1.27	2.54	2.54	3.60	3.60	4.13
VISION MEDIUM	M	1.6	3.20	3.20	4.50	4.50	5.55
VISION SMALL STRUCTURAL MOUNT	F	1.28	2.56	2.56	3.63	3.63	4.17
VISION MEDIUM STRUCTURAL MOUNT	G	1.82	3.64	3.64	4.96	4.96	5.62
ASCENT SMALL	A	0.85	1.70	1.70	2.35	2.35	2.68
ASCENT MEDIUM	C	1.35	2.70	2.70	3.83	3.83	4.56
STRUT SMALL	A	1.03	2.06	2.06	2.89	2.89	3.49
STRUT MEDIUM	C	1.64	3.28	3.28	4.70	4.70	5.77
X-FORM SMALL	E	1.15	2.30	2.30	3.20	3.20	3.81
X-FORM MEDIUM	M	2.1	4.20	4.20	6.00	6.00	7.50
MESA	5**	1.1	3.56	--	--	--	--
EPIC MEDIUM	4*	Consult EPIC brochure for system EPA data					
EPIC LARGE	4*	Consult EPIC brochure for system EPA data					

* Fits 4" O.D. by 6" long tenon or slipfits over 4" ARX or SRX pole. ** Fits 3" O.D. by 4" long tenon.

THREE BOLT ANCHORAGE [see ordering information]

BC=Bolt Circle
PB=Bolt Projection
AB=Bolt Dimensions
D=Bolt Diameter
H=Bolt Dimensions

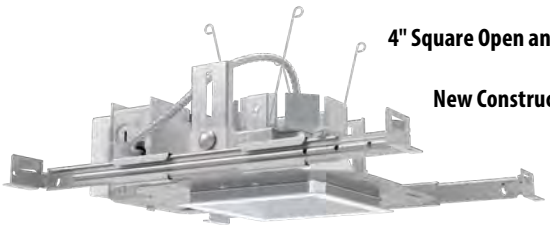
NOTE: Specifications and dimensions subject to change without notice.

LITHONIA LIGHTING®

Catalog Number	
Notes	
Type	

LDN4SQ

4" Square Open and WallWash LED
Non-IC
New Construction Downlight



FEATURES & SPECIFICATIONS

INTENDED USE — Typical applications include corridors, lobbies, conference rooms and private offices.

CONSTRUCTION — Durable square metal reflectors retained by torsion springs.

Galvanized steel mounting/plaster frame; galvanized steel junction box with bottom-hinged access covers and spring latches.

Vertically adjustable mounting brackets with commercial bar hangers provide 3-3/4" total adjustment.

Two combination 1/2"-3/4" and four 1/2" knockouts for straight-through conduit runs. Capacity: 8 (4 in, 4 out). No. 12 AWG conductors, rated for 90°C.

Accommodates 12"-24" joist spacing.

Passive cooling thermal management for 25°C standard; high ambient (40°C) option available. Light engine and drivers are accessible from above or below ceiling.

Max ceiling thickness 1-1/2".

OPTICS — LEDs are binned to a 3-step SDCM; 80 CRI minimum. 90 CRI optional.

LED light source concealed with diffusing optical lens.

General illumination lighting with 1.0 S/MH and 55° cutoff to source and source image.

Self-flanged anodized reflectors in specular, semi-specular, or matte diffuse finishes. Also available in white and black painted reflectors.

Self-flanged anodized reflectors in specular, semi-specular, or matte diffuse finishes.

ELECTRICAL — Multi-volt (120-277V, 50/60Hz) 0-10V dimming drivers mounted to junction box, 10% or 1% minimum dimming level available.

0-10V dimming fixture requires two (2) additional low-voltage wires to be pulled.

70% lumen maintenance at 60,000 hours.

LISTINGS — Certified to US and Canadian safety standards. Wet location standard (covered ceiling). IP55 rated. ENERGY STAR® certified product.

BUY AMERICAN — Product with the BAA option is assembled in the USA and meets the Buy America(n) government procurement requirements under FAR, DFARS and DOT.

Please refer to www.acuitybrands.com/buy-american for additional information.

WARRANTY — 5-year limited warranty. Complete warranty terms located at:
www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application.

All values are design or typical values, measured under laboratory conditions at 25 °C.

Specifications subject to change without notice.

Buy American

battery pack

A+ Capable options indicated by this color background.

ORDERING INFORMATION

Lead times will vary depending on options selected. Consult with your sales representative.

Example: LDN4SQ 35/15 LS4AR LSS MVOLT EZ1

LDN4SQ															
Series		**Color temperature**		**Lumens**[1]				**Aperture/Trim Color**				**Finish**		**Voltage**	
LDN4SQ	4" square	27/	2700K	05	500 lumens	20	2000 lumens	LS4	Downlight	AR	Clear	LSS	Semi-specular	MVOLT	Multi-volt
		30/	3000K	07	750 lumens	25	2500 lumens	LSW4	Wallwash	WR[2]	White	LD	Matte diffuse	120	120V
		35/	3500K	10	1000 lumens	30	3000 lumens			BR[2]	Black	LS	Specular	277	277V
		40/	4000K	15	1500 lumens	40	4000 lumens							347[3]	347V
		50/	5000K												

Driver		**Options**			
GZ10	0-10V driver dims to 10%	SF[4]	Single fuse	NPS80EZ[7]	nLight® dimming pack controls 0-10V eldoLED drivers (EZ10, EZ1).
GZ1	0-10V driver dims to 1%	TRW[5]	White painted flange	NPS80EZER[7]	nLight® dimming pack controls 0-10V eldoLED drivers (EZ10, EZ1). ER controls fixtures on emergency circuit.
D10	Minimum dimming 10% driver for use with JOT	TRBL[5]	Black painted flange	NLTAIR2[8,10]	nLight® Air enabled
D1	Minimum dimming 1% driver for use with JOT	EL[6]	Emergency battery pack with integral test switch. 10W Constant Power, Not Certified in CA Title 20 MAEDBS	NLTAIRER2[8,10]	nLight® AIR Dimming Pack Wireless Controls. Controls fixtures on emergency circuit, not available with battery pack options
EZ10	0-10V eldoLED driver with smooth and flicker-free deep dimming performance down to 10%	ELR[6]	Emergency battery pack with remote test switch. 10W Constant Power, Not Certified in CA Title 20 MAEDBS	NLTAIREM2[8,10]	nLight® AIR Dimming Pack Wireless Controls. UL924 Emergency Operation, via power interrupt detection. Available with battery pack options.
EZ1	0-10V eldoLED driver with smooth and flicker-free deep dimming performance down to 1%	ELSD[6]	Emergency battery pack with self-diagnostics, 10W Constant Power, integral test switch. Not Certified in CA Title 20 MAEDBS	N80[9]	nLight™ Lumen Compensation
EDAB	eldoLED DALI SOLDRIVE dim to dark	ELRSD[6]	Emergency battery pack with self-diagnostics, 10W Constant Power, remote test switch. Not Certified in CA Title 20 MAEDBS	JOT[13]	Wireless room control with "Just One Touch" pairing
		E10WCP[6]	Emergency battery pack, 10W Constant Power with integral test switch. Certified in CA Title 20 MAEDB	HAO[11]	High ambient option (40°C)
		E10WCPR[6]	Emergency battery pack, 10W Constant Power with remote test switch. Certified in CA Title 20 MAEDB	CP[12]	Chicago Plenum
		NPP16D[7]	nLight® network power/relay pack with 0-10V dimming for non-eldoLED drivers (GZ10, GZ1).	RRL___	RELOC®-ready luminaire connectors enable a simple and consistent factory installed option across all ABL luminaire brands. Refer to RRL for complete nomenclature. Available only in RRLA, RRLB, RRLAE, and RRLC12S.
		NPP16DER[7]	nLight® network power/relay pack with 0-10V dimming for non-eldoLED drivers (GZ10, GZ1). ER controls fixtures on emergency circuit.	BAA	Buy America(n) Act Compliant
				90CRI	High CRI (90+)

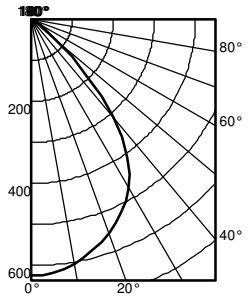
Notes

1. Overall height varies based on lumen package; refer to dimensional chart on page 3.
2. Not available with finishes.
3. Not available with emergency options.
4. Must specify voltage 120V or 277V.
5. Available with clear (AR) reflector only.
6. 12.5" of plenum depth or top access required for battery pack maintenance.
7. Specify voltage. ER for use with generator supply EM power. Will require an emergency hot feed and normal hot feed.
8. NLTAIR2, NLTAIRER2 and NLTAIREM2 not recommended for metal ceiling installations.
9. Fixture begins at 80% light level. Must be specified with NPS80EZ or NPS80EZ ER. Only available with EZ10 and EZ1 drivers.
10. Not available with CP, NPS80EZ, NPS80EZER, NPP16D, NPP16DER or N80 options.
11. Fixture height is 5-11/16" for all lumen packages with HAO.
12. Must specify voltage for 3000lm. Not available with emergency battery pack option.
13. Must specify D10 or D1 driver. Not available with nLight options. Not available with CP. Not recommended for metal ceiling installation. Not for use with emergency backup power systems other than battery packs.

PHOTOMETRY

Distribution Curve	Distribution Data	Output Data	Coefficient of Utilization	Illuminance Data at 30" Above Floor for a Single Luminaire

LDN4SQ 35/10 LS4AR, input watts: 10.58, delivered lumens: 908.4, LM/W = 85.86, spacing criterion at 0= 1.15, test no. ISF 35250P109



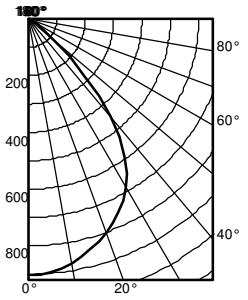
	Ave	Lumens
0	625	
5	621	59
15	580	163
25	519	238
35	409	251
45	192	148
55	37	38
65	7	8
75	2	2
85	0	0
90	0	

Zone	Lumens	% Lamp
0° - 30°	460.2	50.7
0° - 40°	710.8	78.2
0° - 60°	897.5	98.8
0° - 90°	908.1	100.0
90° - 120°	0.0	0.0
90° - 130°	0.0	0.0
90° - 150°	0.1	0.0
90° - 180°	0.3	0.0
0° - 180°	908.4	*100.0
*Efficiency		

pf	20%								
pc	80%			70%			50%		
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%
0	119	119	119	116	116	116	111	111	111
1	109	107	104	107	105	102	103	101	99
2	100	96	92	99	94	91	95	92	89
3	92	86	82	90	85	81	88	83	80
4	84	78	73	83	77	73	81	76	72
5	78	71	66	77	70	66	75	69	65
6	72	65	60	71	64	60	69	63	59
7	66	59	54	66	59	54	64	58	54
8	62	55	50	61	54	50	60	54	50
9	57	50	46	57	50	46	56	50	46
10	53	47	42	53	47	42	52	46	42

		50% beam - 59.5°		10% beam - 90.9°	
Mounting Height	Inital FC Center Beam	Diameter	FC	Diameter	FC
8.0	20.6	6.3	10.3	11.2	2.1
10.0	11.1	8.6	5.5	15.2	1.1
12.0	6.9	10.9	3.5	19.3	0.7
14.0	4.7	13.1	2.4	23.4	0.5
16.0	3.4	15.4	1.7	27.4	0.3

LDN4SQ 35/15 LS4AR, input watts: 17.5, delivered lumens: 1314.4, LM/W = 75.10, spacing criterion at 0= 1.15, test no. ISF 35250P114.



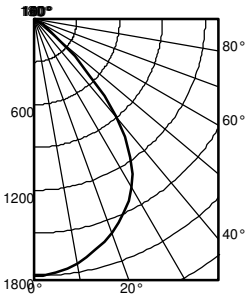
	Ave	Lumens
0	904	
5	898	85
15	840	237
25	751	344
35	592	363
45	277	214
55	54	56
65	11	12
75	2	3
85	1	1
90	0	

Zone	Lumens	% Lamp
0° - 30°	665.9	50.7
0° - 40°	1028.5	78.2
0° - 60°	1298.6	98.8
0° - 90°	1314.0	100.0
90° - 120°	0.0	0.0
90° - 130°	0.0	0.0
90° - 150°	0.1	0.0
90° - 180°	0.4	0.0
0° - 180°	1314.4	*100.0
*Efficiency		

pf	20%								
pc	80%			70%			50%		
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%
0	119	119	119	116	116	116	111	111	111
1	109	107	104	107	105	102	103	101	99
2	100	96	92	99	94	91	95	92	89
3	92	86	82	90	85	81	88	83	80
4	84	78	73	83	77	73	81	76	72
5	78	71	66	77	70	66	75	69	65
6	72	65	60	71	64	60	69	63	59
7	66	59	54	66	59	54	64	58	54
8	62	55	50	61	54	50	60	54	50
9	57	50	46	57	50	46	56	50	46
10	53	47	42	53	47	42	52	46	42

		50% beam - 59.5°		10% beam - 90.9°	
Mounting Height	Inital FC Center Beam	Diameter	FC	Diameter	FC
8.0	29.9	6.3	14.9	11.2	3.0
10.0	16.1	8.6	8.0	15.2	1.6
12.0	10.0	10.9	5.0	19.3	1.0
14.0	6.8	13.1	3.4	23.4	0.7
16.0	5.0	15.4	2.5	27.4	0.5

LDN4SQ 35/30 LS4AR, input watts: 32.1, delivered lumens: 2614.1, LM/W = 83.78, spacing criterion at 0= 1.15, test no. ISF 31036P129.



	Ave	Lumens
0	1797	
5	1786	169
15	1670	470
25	1493	685
35	1178	721
45	551	426
55	107	111
65	21	24
75	5	6
85	1	1
90	0	

Zone	Lumens	% Lamp
0° - 30°	1324.3	50.7
0° - 40°	2045.4	78.2
0° - 60°	2582.5	98.8
0° - 90°	2613.2	100.0
90° - 120°	0.0	0.0
90° - 130°	0.0	0.0
90° - 150°	0.2	0.0
90° - 180°	0.8	0.0
0° - 180°	2614.0	*100.0
*Efficiency		

pf	20%								
pc	80%			70%			50%		
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%
0	119	119	119	116	116	116	111	111	111
1	109	107	104	107	105	102	103	101	99
2	100	96	92	99	94	91	95	92	89
3	92	86	82	90	85	81	88	83	80
4	84	78	73	83	77	73	81	76	72
5	78	71	66	77	70	66	75	69	65
6	72	65	60	71	64	60	69	63	59
7	66	59	54	66	59	54	64	58	54
8	62	55	50	61	54	50	60	54	50
9	57	50	46	57	50	46	56	50	46
10	53	47	42	53	47	42	52	46	42

		50% beam - 59.5°		10% beam - 90.9°	
Mounting Height	Inital FC Center Beam	Diameter	FC	Diameter	FC
8.0	59.4	6.3	29.7	11.2	5.9
10.0	32.0	8.6	16.0	15.2	3.2
12.0	19.9	10.9	10.0	19.3	2.0
14.0	13.6	13.1	6.8	23.4	1.4
16.0	9.9	15.4	4.9	27.4	1.0

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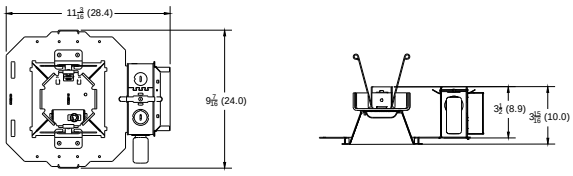
LDN4SQ

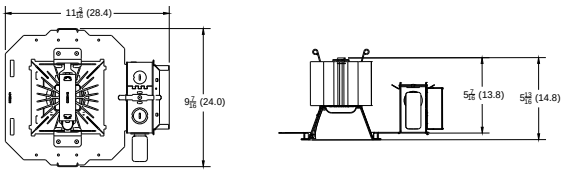
* All dimensions are inches (centimeters) unless otherwise noted.

LDN4 500 - 1500 LUMENS



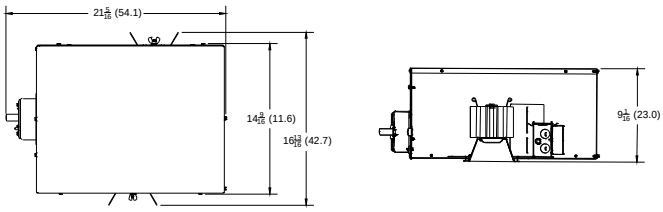
Aperture: 4-5/16" (11)
Ceiling Opening: 5-1/8" (13)
Overlap Trim: 5-7/16" (13.8)

LDN4 2000 - 3000 LUMENS



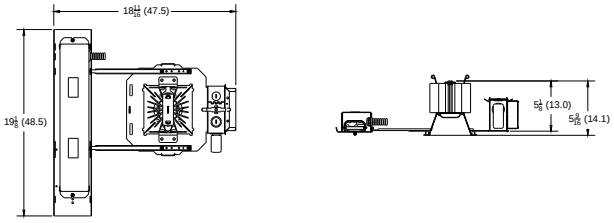
Aperture: 4-5/16" (11)
Ceiling Opening: 5-1/8" (13)
Overlap Trim: 5-7/16" (13.8)

LDN4 CP



Aperture: 4-5/16" (11)
Ceiling Opening: 5-1/8" (13)
Overlap Trim: 5-7/16" (13.8)

LDN4 EL



Aperture: 4-5/16" (11)
Ceiling Opening: 5-1/8" (13)
Overlap Trim: 5-7/16" (13.8)

LDN4SQ			
Nominal	**Lumens**	**Wattage**	**Lm/W**
500	432.5	5.7	75.3
750	620	8.6	72.1
1000	863	10.6	81.6
1500	1249	17.5	71.4
2000	1657	22.1	74.9
2500	2218	26.1	85.0
3000	2483	32.1	77.4
4000	3479	43.0	80.9

LUMEN OUTPUT MULTIPLIERS ☒FINISH			
	Clear (AR)	**White (WR)**	**Black (BR)**
Specular (LS)	1.0	N/A	N/A
Semi-specular (LSS)	0.950	N/A	N/A
Matte di☒use (LD)	0.85	N/A	N/A
Painted	N/A	0.87	0.73

HOW TO ESTIMATE DELIVERED LUMENS IN EMERGENCY MODE

Use the formula below to estimate the delivered lumens in emergency mode

Delivered Lumens = 1.25 x P x LPW

P = Ouput power of emergency driver. P = 10W for PS1055CP

LPW = Lumen per watt rating of the luminaire. This information is available on the ABL luminaire spec sheet.
The LPW rating is also available at Designlight Consortium.

LUMEN OUTPUT MULTIPLIERS ☒CCT					
	2700K	**3000K**	**3500K**	**4000K**	**5000K**
80CRI	0.950	0.966	1.000	1.025	1.101

Notes

- Tested in accordance with IESNA LM-79-08.
- Tested to current IES and NEMA standards under stabilized laboratory conditions.
- CRI: 80 typical.

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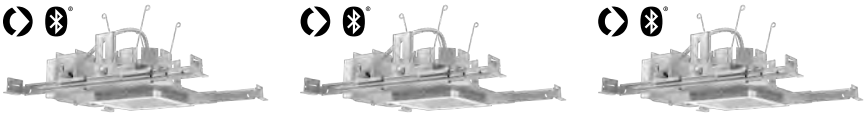
ADDITIONAL DATA

JOT
JUST ONE TOUCH

The Sensor Switch JOT enabled solution offers a wireless, app-free approach to single room lighting control. JOT enabled products use Bluetooth® Low Energy (BLE) technology to enable wireless dimming and switching.

Diagram



LDN4SQ Series

Sensor Switch
WSXA JOT

1. **Power:** Install JOT enabled fixtures and controls as instructed.
2. **Pair:** Insert the pairing tool into the pinhole on the wall switch; press and hold any button for 6 seconds.
3. **Play:** Once paired, each fixture will individually dim down to 10% brightness. All products will be fully functional.

COMPATIBLE 0-10V WALL-MOUNT DIMMERS		
MANUFACTURER	PART NO.	POWER BOOSTER AVAILABLE
Lutron®	Diva® DVTV	
	Diva® DVSCTV	
	Nova T® NTFTV	
	Nova® NFTV	
Leviton®	AWSMT-7DW	CN100
	AWSMG-7DW	PE300
	AMRMG-7DW	
	Leviton Centura Fluorescent Control System	
	IllumaTech® IP7 Series	
Synergy®	ISD BC	RDMFC
	SLD LPCS	
	Digital Equinox (DEQ BC)	
Douglas Lighting Controls	WPC-5721	
Entertainment Technology	Tap Glide TG600FAM120 (120V)	
	Tap Glide Heatsink TGH1500FAM120 (120V)	
	Oasis OA2000FAMU	
Honeywell	EL7315A1019	EL7305A1010 (optional)
	EL7315A1009	
HUNT Dimming	Preset slide: PS-010-IV and PS-010-WH	
	Preset slide: PS-010-3W-IV and PS-010-3W-WH	
	Preset slide, controls FD-010: PS-IFC-010-IV and PS-IFC-010-WH-120/277V	
	Preset slide, controls FD-010: PS-IFC-010-3W-IV and PS-IFC-010-3W-WH-120/277V	
	Remote mounted unit: FD-010	
Lehigh Electronic Products	Solitaire	PBX
PDM Electrical Products	WPC-5721	
Starfield Controls	TR61 with DALI interface port	RT03 DALInet Router
WattStopper®	LS-4 used with LCD-101 and LCD-103	

A+ Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and out-of-the-box control compatibility with simple commissioning.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is part of an A+ Certified solution for nLight® control networks when ordered with drivers marked by a shaded background*
- This luminaire is part of an A+ Certified solution for nLight control networks, providing advanced control functionality at the luminaire level, when selection includes driver and control options marked by a shaded background*

To learn more about A+, visit www.acuitybrands.com/aplus.

*See ordering tree for details

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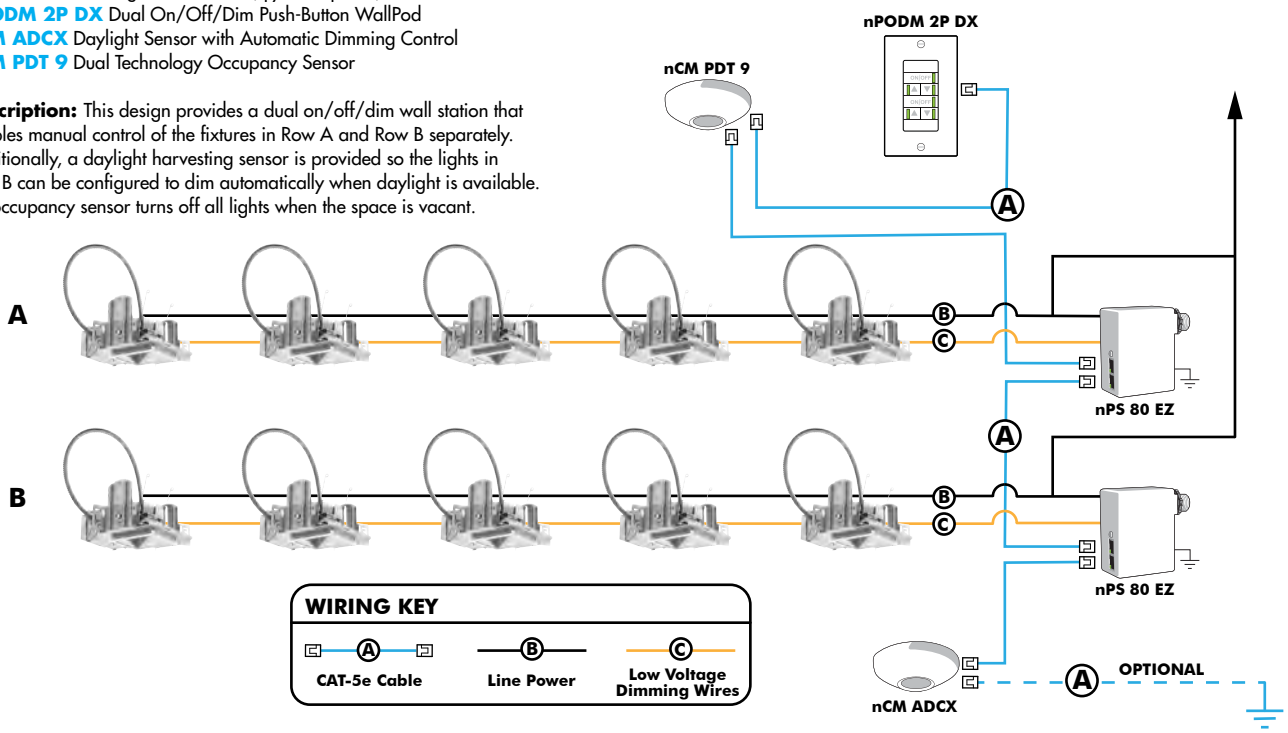
LDN4SQ

EXAMPLE
Group Fixture Control*
*Appiication diagram applies for fixtures with eldoLED drivers only.

nPS 80 EZ Dimming/Control Pack (qty: 2 required)
nPODM 2P DX Dual On/Off/Dim Push-Button WallPod
nCM ADCX Daylight Sensor with Automatic Dimming Control
nCM PDT 9 Dual Technology Occupancy Sensor

Description: This design provides a dual on/off/dim wall station that enables manual control of the fixtures in Row A and Row B separately. Additionally, a daylight harvesting sensor is provided so the lights in Row B can be configured to dim automatically when daylight is available. An occupancy sensor turns off all lights when the space is vacant.



Choose Wall Controls

nLight offers multiple styles of wall controls - each with varying features and user experience.

Push-Button Wallpod
Traditional tactile buttons and LED user feedback

Graphic Wallpod
Full color touch screen provides a sophisticated look and feel

nLight® Wired Controls Accessories:			
Order as separate catalog number. Visit www.acuitybrands.com/products/controls/nlight for complete listing of nLight controls.			
WallPod Stations	**Model number**	**Occupancy sensors**	**Model Number**
On/Off	nPODM (Color)	Small motion 360°, ceiling (PIR/dual Tech)	nCM 9 / nCM PDT 9
On/Off & Raise/Lower	nPOD DX (Color)	Large motion 360°, ceiling (PIR/dual tech)	nCM 10 / nCM PDT 10
Graphic Touchscreen	nPOD GFX (Color)	Wide View (PIR/dual tech)	nWV 16 / nWV PDT 16
Photocell controls	**Model Number**	Wall Switch w/ Raise/Lower (PIR/dual tech)	nWSX LV DX / nWSX PDT LV DX
Dimming	nCM ADCX	**Cat-5 cables (plenum rated)**	**Model Number**
		10', CAT5 10FT	CAT5 10FT J1
		15, CAT5 15FT	CAT5 15FT J1

nLight® AIR Control Accessories: *Order as separate catalog number. Visit www.acuitybrands.com/products/controls/nlightair.*	
Wall switches	**Model number**
On/Off single pole	rPODB [color]
On/Off two pole	rPODB 2P [color]
On/Off & raise/lower single pole	rPODB DX [color]
On/Off & raise/lower two pole	rPODB 2P DX [color]
On/Off & raise/lower single pole	rPODBZ DX WH[1]

Notes
1 Can only be ordered with the RES7Z zone control sensor version.

nLight AIR

nLight AIR is the ideal solution for retrofit or new construction spaces where adding communication is cost prohibitive. The integrated nLight AIR rPP20 Power Pack is part of each Lithonia LDN Luminaire. These individually addressable controls offer the ultimate in flexibility during initial setup and for space repurposing.

Simple as 1,2,3

1. Install the nLight® AIR fixtures with embedded smart sensor
2. Install the wireless battery-powered wall switch
3. With CLAIRITY app, pair the fixtures with the wall switch and if desired, customize the sensor settings for the desired outcome

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KAXW
LED Wall Luminaire

Catalog Number

Notes

Type

Hit the Tab key or mouse over the page to see all interactive elements.

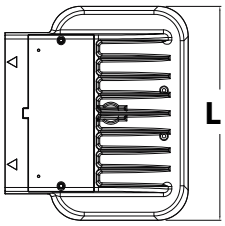
Specifications

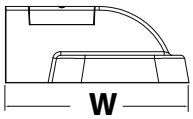
Length: 14" (35.6 cm)

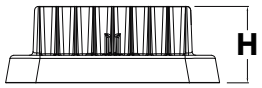
Width: 12" (35.6 cm)

Height: 5" (12.7 cm)

Weight (max): 19.7 lbs (8.9 kg)







A+ Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and system-level interoperability.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is A+ Certified when ordered with DTL® controls marked by a shaded background. DTL DLL equipped luminaires meet the A+ specification for luminaire to photocontrol interoperability1
- This luminaire is part of an A+ Certified solution for ROAM® or XPoint™ Wireless control networks, providing out-of-the-box control compatibility with simple commissioning, when ordered with drivers and control options marked by a shaded background[1]

To learn more about A+, visit www.acuitybrands.com/aplus.

1. See ordering tree for details.

A+ Capable options indicated by this color background.

Ordering Information

EXAMPLE: KAXW LED P3 40K R3 MVOLT DDBXD

KAXW LED

Series	Performance package	Color temperature	Distribution	Voltage	Mounting	Control options	Other options	Finish *(required)*
KAXW LED	P1 P2 P3	30K 3000 K 40K 4000 K 50K 5000 K	R3 Type 3 R4 Type 4	MVOLT [1] 120 [1] 208 [1] 240 [1] 277 [1] 347 [2] 480 [2]	**Shipped included** (blank) Surface mounting bracket	**Shipped installed** PER NEMA twist-lock receptacle only (controls ordered separate)[3,4] PER5 Five-wire receptacle only (controls ordered separate)[4,5] PER7 Seven-wire receptacle only (controls ordered separate)[4,5] PIR 180° motion/ambient light sensor, <15' mtg ht [6] FAO Field adjustable output[7] PIRH Bi-level, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 5fc [6] PIR1FC3V Bi-level, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 1fc [6] PIRH1FC3V Bi-level, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 1fc [6]	**Shipped installed** SF Single fuse (120, 277 or 347V)[8] DF Double fuse (208, 240 or 480V)[9] HS House-side shield [10] LCE Left Conduit Entry [11] RCE Right Conduit Entry [11] **Shipped separately** BSW Bird-deterrent spikes[10] EGS External glare shield[10]	DDBXD Dark bronze DBLXD Black DNAXD Natural aluminum DWHXD White DSSXD Sandstone DDBTXD Textured dark bronze DBLBXD Textured black DNATXD Textured natural aluminum DWHGXD Textured white DSSTXD Textured sandstone

NOTES

1 MVOLT driver operates on any line voltage from 120-277V (50/60 Hz).
2 Not available in the P1 performance package.
3 Not available with ROAM®. See PER5 or PER7 option.
4 Photocell ordered and shipped as a separate line item from Acuity Brands Controls. See Accessories information.
5 If ROAM® node required, it must be ordered and shipped as a separate line item from Acuity Brands Controls.
6 Specifies the Sensor Switch MSOD-7-ODP control; see Outdoor Control Technical Guide for details. Dimming driver standard. Not available with PER5 or PER7. Must specify 120V or 277V. Requires PER or separate on/off.
7 Not available with PER5 or PER7 options.
8 Must specify 120, 277, or 347V option.
9 Must specify 208, 240, or 480V option.
10 Also available as a separate accessory; see Accessories information.
11 Requires a contractor supplied ½" EMT raintight fitting.
12 Requires luminaire to be specified with PER, PER5 or PER7 option. Ordered and shipped as a separate line item from Acuity Brands Controls.

Accessories

Ordered and shipped separately.

DLL127F 1.5 JU	Photocell - SSL twist-lock (120-277V) [12]
DLL347F 1.5 CUL JU	Photocell - SSL twist-lock (347V) [12]
DLL480F 1.5 CUL JU	Photocell - SSL twist-lock (480V) [12]
DSHORT SBK U	Shorting cap
KAXWHS U	House-side shield
KAXWBSW U	Bird-deterrent spikes
KAXWEGS U	External glare shield

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Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

Performance Package	System Watts	Dist. Type	30K (3000 K, 70 CRI)					40K (4000 K, 70 CRI)					50K (5000 K, 70 CRI)				
			Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
P1	29W	R3	3,322	1	0	1	115	3,545	1	0	1	122	3,607	1	0	1	124
		R4	3,415	1	0	1	118	3,643	1	0	1	126	3,707	1	0	1	128
P2	49W	R3	5,731	1	0	1	117	6,115	1	0	1	125	6,222	1	0	1	127
		R4	5,891	1	0	1	120	6,285	1	0	1	128	6,396	1	0	1	131
P3	79W	R3	8,852	1	0	1	112	9,445	2	0	2	120	9,611	2	0	2	122
		R4	9,099	2	0	2	115	9,708	2	0	2	123	9,879	2	0	2	125

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-50°C (32-122°F).
* Shaded cells include active dynamic temperature sensing.

Ambient	Lumen Multiplier		
	P1	P2	P3
0°C	1.05	1.05	1.05
10°C	1.03	1.03	1.03
20°C	1.01	1.01	1.01
25°C	1	1	1
30°C	0.99	0.99	0.99
40°C	0.97	0.97	0.93
45°C	0.96	0.96	0.84
50°C	0.95	0.95	0.74

Electrical Load

Package		120V	208V	240V	277V	347V	480V
P1	Current (A)	0.24A	0.14A	0.13A	0.11A		
	System Watts	29W	29W	29W	29W		
P2	Current (A)	0.41A	0.24A	0.21A	0.18A	0.14A	0.11A
	System Watts	49W	48W	48W	48W	47W	47W
P3	Current (A)	0.66A	0.38A	0.33A	0.29A	0.23A	0.17A
	System Watts	79W	78W	78W	78W	77W	76W

Projected LED Lumen Maintenance

Operating Hours	25,000	50,000	100,000
Lumen Maintenance Factor	>0.94	>0.89	>0.80

Values calculated according to IESNA TM-21-11 methodology and valid up to 40°C.

PER Table						
Control	PER (3 wire)	PER5 (5 wire)		PER7 (7 wire)		
			Wire 4/Wire5		Wire 4/Wire5	Wire 6/Wire7
Photocontrol Only (On/Off)	✔	⚠	Wired to dimming leads on driver	⚠	Wired to dimming leads on driver	Wires Capped inside fixture
ROAM	⃠	✔	Wired to dimming leads on driver	⚠	Wired to dimming leads on driver	Wires Capped inside fixture
ROAM with Motion (ROAM on/off only)	⃠	⚠	Wires Capped inside fixture	⚠	Wires Capped inside fixture	Wires Capped inside fixture
Future-proof*	⃠	⚠	Wired to dimming leads on driver	✔	Wired to dimming leads on driver	Wires Capped inside fixture
Future-proof* with Motion	⃠	⚠	Wires Capped inside fixture	✔	Wires Capped inside fixture	Wires Capped inside fixture

✔ Recommended
⃠ Will not work
⚠ Alternate

*Future-proof means: Ability to change controls in the future.

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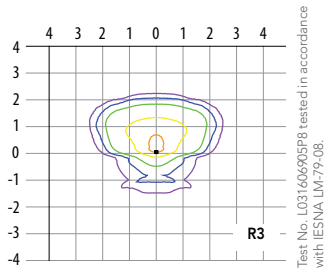
Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's KAXW homepage.

Isofootcandle plots for the KAXW LED P3 40K. Distances are in units of mounting height (20').

LEGEND

0.1 fc
0.5 fc
1.0 fc
2.0 fc
5.0 fc



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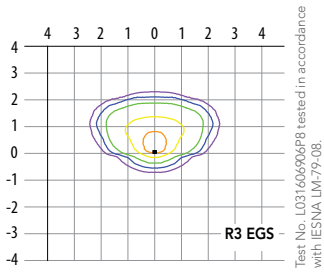

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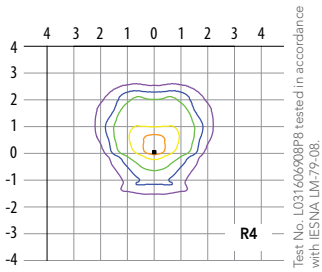

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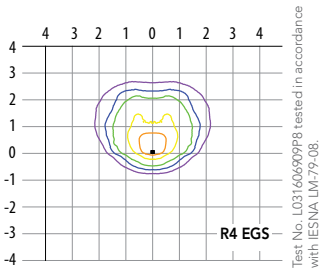

Test No. L031606909P8 tested in accordance with IESNA LM-79-08.

FEATURES & SPECIFICATIONS

INTENDED USE
This feature-rich luminaire embodies the highest level of functionality with extraordinary efficacy which maximizes your application efficiency providing high levels of light for minimal cost specifically for building-mounted doorway and pathway illumination on nearly any type of facility.

CONSTRUCTION
The die-cast aluminum housing has integral heat sink fins to optimize thermal management through conductive and convective cooling. This modular design allows for ease of maintenance and future light engine upgrades. The LED driver is installed in a separate compartment to thermally isolate it from the light engines for low operating temperature and long life. The housing is completely sealed against moisture and environmental contaminants (IP65).

FINISH
Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Available in both textured and non-textured finishes.

OPTICS
Individually formed acrylic lenses are engineered for superior application efficiency which maximizes the light in the areas where it is most needed. Light engines are available in 3000 K, 4000 K or 5000 K (minimum 70 CRI) configurations. The KAXW has zero uplight and qualifies as a Nighttime Friendly™ product, meaning it is consistent with the LEED® and Green Globes™ criteria for eliminating wasteful uplight.

ELECTRICAL
Light engine(s) configurations consist of high-efficacy LEDs mounted to metal-core circuit boards to maximize heat dissipation and promote long life (up to >L80/100,000 hours). Class 1 electronic drivers are designed to have a power factor >90%, THD <20%, and an expected life of 100,000 hours.

INSTALLATION
Included wall mount plate facilitates a quick and easy installation. Mounting bolts feature a 1000-hour salt fog finish. Optional bi-level motion sensor and NEMA 3, 5 or 7 pin twist lock photocontrol receptacle are also available.

LISTINGS
CSA Listed for wet locations. Light engines and electrical compartment are IP66 rated. Rated for temperatures as low as -40°C minimum ambient.

DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

WARRANTY
5-year limited warranty. Complete warranty terms located at:
www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx.

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

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11. CONSISTENCY WITH USM DESIGN PRINCIPLES AND STANDARDS

The *University of Southern Maine Campus and Design Principles and Standards* were created in recognition of the need of the university to grow in a vibrant, aesthetic, and sustainable manner that provides a strong sense of place and conveys an identity as a high-quality institution of learning.

All new buildings shall be designed to create a visual connection with existing campus buildings with a goal of achieving a cohesive campus appearance. New development shall be characterized by excellence in architectural design, craftsmanship, materials, streetscape and landscape improvements, signage, and lighting appropriate for a university in an urban setting in the Northeast.

These principles and standards were intended to regulate the future build out of the institution while ensuring that new development is sensitive to adjacent residential neighborhoods and commercial areas and is successfully integrated with the City as a whole.

11.1 APPLICABILITY

The principles and standards apply to all development on the University of Southern Maine Portland campus. The following summarizes how the proposed project addresses each of the principles and standards found in the USM Campus and Design Principles and Standards.

11.2 PRINCIPLES AND STANDARDS

Principle A Campus Design

Standard A-1: Campus Edges.

Following an extensive evaluation of available sites on the campus, the proposed parking garage has been located on the campus edge bordering Route 295. This site replaces an existing surface lot with a higher density structure, which is remotely located with respect to other campus edges abutting residential neighborhoods.

Standard A-2: Building Orientation

The new parking garage is oriented so that its users easily connect to existing major pedestrian routes between the garage and university destination activities. The massing of the garage reinforces an existing open space which affords access to the Glickman Library, and effectively creates a new courtyard which further highlights the library entrance.

Standard A-3: Pedestrian Environment

The main pedestrian exit of the new parking garage at the northeast stair tower features a canopy overhead, and opens to a large, paved landing to accommodate larger numbers of pedestrians for events. The secondary pedestrian entrance/exit at the northwest, shared with the vehicular entrance, is continuous with an existing sidewalk along the access road leading to Bedford Street, and is within view of the stair tower exit at the existing parking garage. A 6' concrete sidewalk and lighted canopy is planned along the north façade of the new garage as refuge for pedestrians as well. All exits lead to existing campus paths and sidewalks adjacent to vehicle ways or planted zones of lawn and trees. Three crosswalks safely guide pedestrians from the parking garage to important campus destinations.

Standard A-4: Gateways

This standard is not applicable.

Standard A-5: Views and Landmarks

Neither the Bedford Street View Corridor nor the views of the Glickman Library entrance have been impacted by the new garage.

Principle B Access and Circulation

Standard B-1: Connectivity

The new parking garage, located between Wishcamper Center, Glickman/Osher Libraries, and the existing parking garage, provides new pedestrian connections for users of the garage to Wishcamper and Glickman/Osher, as well as connections to existing north south routes to the campus center.

Standard B-2: Circulation

The main pedestrian exit opens to a large, paved landing leading pedestrians to a crosswalk strategically placed at a node to the north of the access road at the closest point to serve Wishcamper, Glickman/Osher, and an existing path to Bedford Street and campus center. The secondary exit, to the northwest, is adjacent to the stair tower exit of the existing garage and leads pedestrians to an existing sidewalk along the access road to Bedford Street, or, to a crosswalk to access the sidewalk along the south of Wishcamper. At the Glickman/Osher library entrance a new paved plaza with a pullout drop off space allows for safe vehicular, and bus drop off of pedestrians, bike parking near the entrance of Glickman, and book drop off. Service and emergency access are newly separated from pedestrian activity; only service vehicles and emergency vehicles will travel beyond the drop off loop and grove to access the Glickman loading dock and the fire lane along the south façade of both parking garages.

Standard B-3: Multi-modality

The proposed site layout will provide clear, safe, and convenient multi-modal circulation paths on-site. A bus and vehicle turnaround and drop-off area is provided by the library entrance. Fire and emergency vehicle access is provided along the southern edge of the building. Measures have been taken to clarify and minimize pedestrian and vehicular crossings. Convenient and accessible routes are provided from the parking garage pedestrian entrances to the adjacent buildings.

The proposed parking garage will include a covered and secured bicycle storage area with capacity to serve bicycle commuters and bicycles owned by residents of new dormitory, Portland Commons. A separate entrance is provided for the bicycle storage area to provide separation from traffic in the garage. Additional bicycle parking is provided along the sidewalk and at building entrances for convenience.

Standard B-4: Traffic Calming

The pedestrian environment is the focus of this design and measures have been taken to enhance this and create a higher level of safety for pedestrians by limiting pedestrian and vehicular interaction.

Standard B-5: Sidewalks

As previously described in Section 10.1 of this Report, several improvements associated with the project are proposed along Bedford Street. This standard will be addressed as part of the TMP Amendment application submitted under separate cover. Private sidewalk layout and materials are shown on the design drawings.

Standard B-6: Street Lights

No work is proposed along public streets; this standard is not applicable.

Principle C Parking, Loading and Service Areas

Standard C-1: Parking Structures - Structure

The proposed parking garage will be a structure which is compatible with its adjacent uses. Its apparent size will match that of the existing garage, and its combination of materials will be compatible also. Thin brick, permanently bonded to precast panels will give the new facility a relationship to other buildings on the campus including the existing garage. This brick, due to the manufacturing standards for precast panels, must be more dimensionally uniform than waterstruck brick, but will have a variegated mixture of tones and will match or complement nearby brickwork. Thin brick that has a uniform sheen or a lack of texture will not be used. Precast concrete spandrels will be a buff color similar to the existing garage and will feature a sandblasted texture with slightly exposed aggregate. Each panel will have a smooth finish top, similar in concept to a coping stone, which will be separated from the face of the panel by a simple shadow joint.

Standard C-2: Parking Structures – Active Uses

This standard is not applicable; the new garage is set back approximately 185 feet from Bedford Street.

Standard C-3: Parking Structures – Decks and Ramps

Because of space limitations on the chosen site, sloping decks will be needed for all parking tiers. A sloping deck of 5% to 6% will be used in the middle bay of the structure, but its length will not be adequate to rise a full story. Sloping decks of 1.9% will be utilized at center portions of the north and south sides of the garage to make up the difference. Only a portion of the center of the north side will be visible from Bedford Street due to its 185-foot setback and its location behind the Wishcamper Center. The visual focus of the views from Bedford Street will be the emphasized pavilions of the north and south ends of the garage.

Standard C-4: Surface Lots

The existing surface parking lot will be replaced by the parking garage; this standard is not applicable.

Standard C-5: Loading and Service Areas

Service areas are consolidated along the southern edge of the garage to conceal them from public view.

Standard C-6: Utility Services

All utilities are located adjacent to the proposed garage out of public view and access.

Principle D Architectural Design

Standard D1: Height

The proposed garage is 50' high, very slightly higher than the existing garage. This is lower than the height allowed by the overlay zone criteria which allows 85'. The height is approximately one story lower than the Wishcamper Center and four stories lower than the Glickman Library. This maintains the precedence of the nearby destination uses and continues their landmark status on the Campus.

Standard D-2: Setbacks

This standard is not applicable.

Standard D-3: Stepbacks

This standard is not applicable.

Standard D-4: Massing

This standard is not applicable.

Standard D-5: Entrances

The primary entrance to the parking garage is located adjacent to a pedestrian route between the Glickman Library and the Wishcamper Center and has been emphasized by a glass-enclosed stair. The secondary entrance which is combined with the vehicles entrance is also adjacent to major pedestrian routes to the campus at the north end of Wishcamper. This location also includes a major bicycle storage facility for 250 bicycles, secured within the new garage.

Standard D-6: Windows

Although the garage will be open to the weather without windows, the concept of transparency at the ground level will be utilized. Instead of walls, this level will be enclosed by metal security gratings, which easily allow views into and out of the garage. A dark color will be used to avoid veiling. This will enhance security and the awareness of activity.

Standard D-7: Materials

The new garage will be constructed of 100-year materials including precast concrete, prefinished metal trim, clear anodized aluminum curtainwall with clear glass.

Standard D-8: Signage

Wayfinding to the new garage will be denoted to the public with a new monument sign at the corner of the garage access drive and Bedford Street.

Wayfinding within the garage will begin with a signboard over the vehicle entrance and will continue within the garage using overhead signage.

Standard D-9: Historic Structures

This standard is not applicable.

Standard D-10 Original Residential Structures

This standard is not applicable.

12. CONSTRUCTION MANAGEMENT PLAN

A Construction Management Plan has been prepared for the proposed project per the City of Portland guidelines. The Contractor will be required to provide adequate safety fencing and signage directing pedestrians safely around the construction area. The Construction Management Plan is attached to this Section for your reference.

12.1 ATTACHMENTS

- Construction Management Plan

Construction Management Plan

Project: University of Southern Maine - Structured Parking Garage

The University of Southern Maine - Structured Parking Garage Construction Management Plan depicts the overall planning, coordination, and control of the proposed construction site, including sequential phasing, from beginning to completion.

The following construction management plan has been developed by the University's Design Team Members based on the components of the project and the City's goal for a plan is to support a safe construction site and protect the public safety, accessibility (including preserving accessible pedestrian, bicycle, and vehicular modes of transport throughout the city), and welfare during construction. This plan minimizes construction impacts in their duration and magnitude to the surrounding area and provides a visual framework to convey and communication the process for addressing site logistics, minimizing conflicts and addressing access for university, construction and emergency vehicles and pedestrians.

Presently the University is soliciting proposals from qualified Construction Managers. It is the intent of the University to allocate the management of the Construction Management Plan to the selected Construction Manager.

The following construction management plan for the USM - Structured Parking Garage may be subject to adjustments based on coordination with the Construction Manager following selection. The Construction Management Plan shall include the following submissions:

1) a construction management site plan;
2) a construction schedule (time frame); and
3) a written narrative addressing the categories below.

A. Construction Management Principles

The purpose of this Construction Management Plan is to maintain a safe construction site and minimize impacts to adjacent buildings, university operations and surrounding neighborhood. The selected Construction Manager shall maintain open lines of communication between the University, City, Public and Consultants to mitigate concerns in the most effective manner during construction. This goal is to be attained by continued planning, review, update, communication and execution with all parties. The following sections further define this approach for the successful application of the Construction Management Plan.

B. Development Review of Construction Management Plan

The Construction Manager will continually maintain and update the Construction Management Plan for the duration of the project to augment and improve site safety measures. This is intended to be a live document that is updated as the project progresses

and site conditions change. The focus of each update will be to ensure the safety of the public, pro-active elimination of adverse situations and maintenance of accessibility for necessary services in and around the construction site. As a part of this plan development the initial Construction Management Phasing and Logistics Plans are included at the end of this document.

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

Prior to scheduling a preconstruction meeting and the issuance of any city required permits, the University of Southern Maine and their selected Construction Manager shall meet all of the requirements contained in Section 14-530. Development review fees and post approval requirements and 14-532. General requirements and enforcement of Portland's Land Use Code.

Anticipated permits, (if applicable) include:

1. **Street Opening and Street Occupancy Permits:** Construction activity in the public right-of-way shall be in accordance with Chapter 25. Sewer and stormwater system connections shall be in accordance with Chapters 24 and 32 of the Land Use Code. All required permits shall be obtained through the Department of Public Works and the requests shall conform with the approved construction management plan.

2. **Blasting:** Blasting, if required, shall conform with Article VIII. Regulation of Explosives in the Land Use Code and Section 3.7 Standards for Blasting and Regulation of Explosives in Portland's Technical Manual.

   Based on preliminary geotechnical findings and information it is not anticipated that blasting will be required.

3. **Building Code:** Employ the best practices, as applicable, of Chapter 33 Safeguards During Construction, from the 2015 International Building Code.

Vehicular access will be maintained around the construction site for the entirety of the project for emergency fire access to the rear of the existing parking garage and access to the Glickman Loading dock. Pedestrian access will remain to the Glickman and Wishcamper buildings. Work within Bedford Street may require the temporary closure of lanes.

D. Construction Administration and Communication

USM and the Construction Manager will work diligently to implement a communication strategy that is agreed upon by the City, Stakeholders and Neighbors. The communication strategy is intended to ensure that all construction operations are performed in accordance with all agreements, ordinances and special permits applicable to this project. The Construction Manager will work closely with adjacent abutters, businesses, nearby

construction sites, and all parties informed, as far in advance as possible, of scheduled work, particularly work anticipated to cause significant noise, vibrations, or dust. The final construction management plan shall provide for the following:

1. Contact Person and contact information for USM staff and Construction Manager personnel that is available 24 hours.
2. Construction Signage posted on the site with Contact Information for Construction Manager.
3. Describe any additional communication strategies.
4. All construction and temporary site signage, including signage at cross walks, existing garage and main streets, shall be updated, adjusted and removed as project progresses through each construction phase and at project completion.

E. Construction Schedule

Construction of the garage is anticipated to commence in the winter/spring of 2022 and be substantially complete in April 2023. The initial phase of construction will include alterations to the parking access control equipment within the existing garage and closure of the east entry/exit. This schedule is in line with, and is in support of, the nearby construction of the Portland Commons & Student Success Center buildings.

Work hours to follow City of Portland regulations during the daytime hours as defined in Section 17-18 “Construction Activities for Building permit” and Section 25-129 “Noise, dust and debris” of the City’s Code of Ordinances. Any required off-hour work will be coordinated directly with the City.

Material Deliveries will be coordinated within normal work hours and be stored on-site as shown in the site logistics plans. Construction deliveries are expected to travel from 295 to Forrest Avenue to Bedford Street and then onto the project site.

F. Security & Public Safety

The construction site will be enclosed by temporary chain link fencing during construction. The fencing will be moved in a phased approach in coordination with the site logistics plan. Primary site access will be from Bedford Street to the garage access road and then into the construction site via a swinging site gate. Secondary gates will be provided for emergency access to the rear of the existing garage and the roadway will be maintained and open at all times for access. Gates will be locked during non-work hours and equipped with knox box for emergency access. Emergency Access and deliveries around the project site to the existing USM parking structure, Wishcamper building and Glickman will be maintained at all times. The construction site will follow all requirements of IBC Chapter 33 “Safeguards during Construction” and NFPA 241 “Standard for Safeguarding Construction, Alteration, and Demolition Operations" including construction and placement of necessary separation and safety barriers between the existing garage and construction site.

Structures undergoing construction, alteration, or demolition operations, including those in underground locations, shall comply with NFPA 1 Chapter 16. A complete fire safety and access plan will be developed in coordination with the City of Portland prior to project commencement.

G. Construction Permitting and Traffic Control Plans

Construction Activity in Public Streets: Construction activity in the public right-of- way is controlled by Chapter 25 Article VII of the City Code of Ordinances. The contractor will work to minimize impacts from construction and provide safe access around the site. The project shall follow City of Portland requirements for traffic control throughout the duration of the project. Construction activities and deliveries will not impact public access or streets unless directly coordinated and notified prior.

Sewer and Stormwater: Sewer and stormwater water system connections are controlled by Chapters 24 and 32 of the City Code of Ordinance. Tie-ins of the new connections will occur within the existing surface parking lot. All tie-in connections will obtain the appropriate permits and be coordinated with the DPW.

Traffic Control Plans: Construction activity that impacts the existing public street system will (where applicable) be controlled to protect the safety of the construction workers and all modes of the traveling public. Phased construction of the proposed ring road will include traffic control and safety measures. Traffic controls will include temporary signage and barriers where necessary to manage all modes of travel including, vehicle, pedestrian, and bicycle traffic. ADA compliance for affected public pathways will be maintained for the duration of the project.

H. Site Management and Controls

The Construction Manager will address maintaining the site in a safe condition and will include the following:

1. Regular trash and debris removal including the recycling of materials to meet USM's adopted ParkSmart Certification criteria. Trash dumpsters and areas around the dumpsters will be maintained in a clean and orderly manner.
2. Dust controls- The construction shall comply with Portland's requirements under Section 25-129 on Noise, dust and debris (below). Dust control will include street sweeping, water trucks, truck pads and similar measures to minimize dust from construction activities.

Sec. 25-129. Noise, dust and debris.

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.

3. Noise: The construction shall comply with the University's and Portland's requirements as defined under Section 17- 18 of the City Code (below) and Section 25-129 on Noise, dust and debris

Sec. 17-18. Construction activities.

(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.

4. Rodent Control will be provided, if applicable, by a professional exterminator and

consistent with Chapter 22 of the City Code.

5. Snow Removal: Pursuant to Section 25-173 Contractors to ensure a safe means of travel within and areas affected by the work zone including:
    1) Snow/ice removal or commence automatically from (1" of snow and up) or Ice
    2) Remove snow as needed within the work zone, including parking spaces & not to block any driveways or sight lines with the piles of snow.
    3) Clear all walks & ramps with the work zone
    4) Sand or Salt as needed
    5) Clear all basin or drainage to help snow melt
    6) This would include Monday-Friday Sat/Sunday/Holidays
6. The construction manager shall ensure the site follows all requirements of IBC Chapter 33 “Safeguards during Construction” and NFPA 241 “Standard for Safeguarding Construction, Alteration, and Demolition Operations"

I. Erosion Control and Preservation of Trees

Prior to construction, erosion and sediment controls with be installed as shown on the design drawings. These shall be regularly inspected and maintained for the duration of the project. The preservation of trees and landscaping shall be as shown on the landscaping plans. Care will be taken to avoid damage to the trees and landscaping that is to remain. Landscape, soils and plantings damage during construction activities will be restored, replaced and re-planted to assimilate pre-existing conditions as cataloged by pre-construction photographic documentation, surveys and similar records.

J. Construction Staging Area

The site logistics plan shows planned locations for staging and laydown areas, onsite truck washing stations, materials storage and construction trailers.

Standard deliveries will be coordinated with the effort to minimize disruption to both the surrounding public spaces and the construction site as much as possible. Precast concrete piece deliveries will be continuous throughout the day during the superstructure erection. An off-site queuing yard will be coordinated to optimize deliveries in coordination with on-going erection activities and avoid queuing of vehicles.

K. Parking During Construction

For portions of the project, minimal on-site parking will be available for construction workers. It is anticipated during these times, that parking will be required off-site with transportation to the site. Parking for workers will be prohibited along nearby public roads.

Closure of a limited number of spaces within the existing garage will be required during construction. The CM will provide phasing documents showing the timeframe and quantity of required parking closures within the existing garage. Garage patrons will be provided advance

notification of proposed modifications to create awareness prior to application.

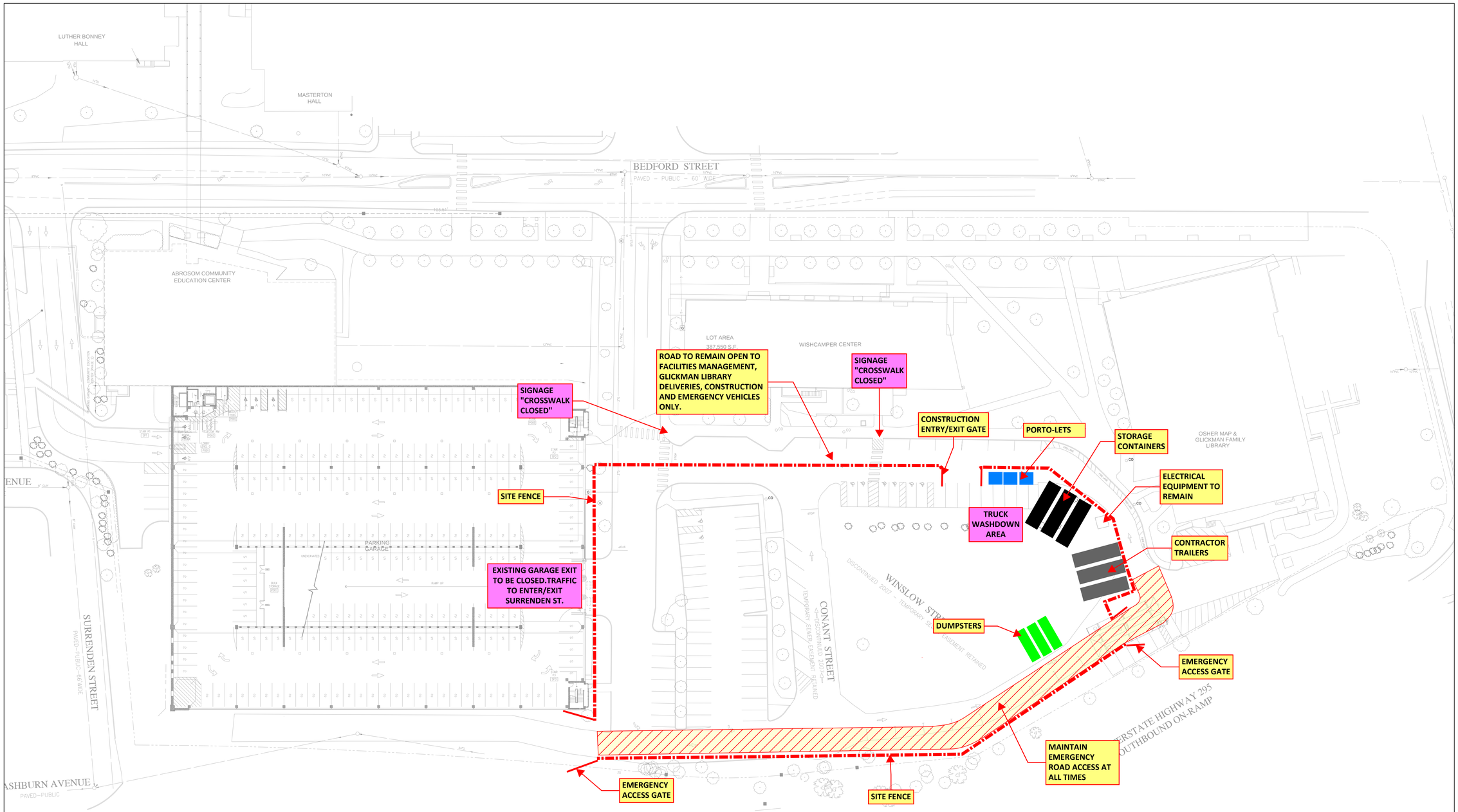
L. Dewatering Plans

A dewatering plan and recommendations will be developed as recommended by the geotechnical report prepared by S.W. Cole. The dewater plan will be submitted and coordinated with the City of Portland. Based on the preliminary geotechnical report it is anticipated that sumping and pumping of shallow excavation will be sufficient to control groundwater.

M. Special Measures as Necessary

The project is proposed to include deep pile-foundations which generally require pile-driving equipment. This technique typically results in ground vibrations in and around the immediate vicinity. To pro-actively mitigate the effects of this construction technique, pre-construction surveys and photographic documentation will be conducted on the surrounding facilities and buildings and, were necessary, vibration monitors installed to document the intensity of the vibrations. An action and monitoring plan along with a photographic catalog of surrounding structures will be will developed and shared with the City and USM in advance of this construction activity.

While is expected that this Construction Management Plan will be updated by the selected Construction Manager, the logistics, staging and control measures presented in this plan are expected in large part, to remain as presented herein. Any modifications, updates or changes in the plan will be submitted to the City of Portland for approval in advance of preceding with any work or portions of work affected by such updates.



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5 MILK STREET
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CIVIL ENGINEER
WOODARD & CURRAN
41 HUTCHINS DRIVE
PORTLAND, ME 04102

LANDSCAPE ARCHITECT
MICHAEL BOUCHER LANDSCAPE ARCHITECTURE
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MEP/FP ENGINEER
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160 VERANDA STREET
PORTLAND, ME 04103

GEOTECHNICAL ENGINEER
S.W. COLE
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GREY, ME 04039

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VANASSE HANGEN BRUSTLIN INC
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BURLINGTON, VT 05403

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PROJECT:

USM - Structured Parking Garage Phasing Plan

Address

44 Bedford Street,
Portland ME 04104

REVISIONS:

No.	Date	Description

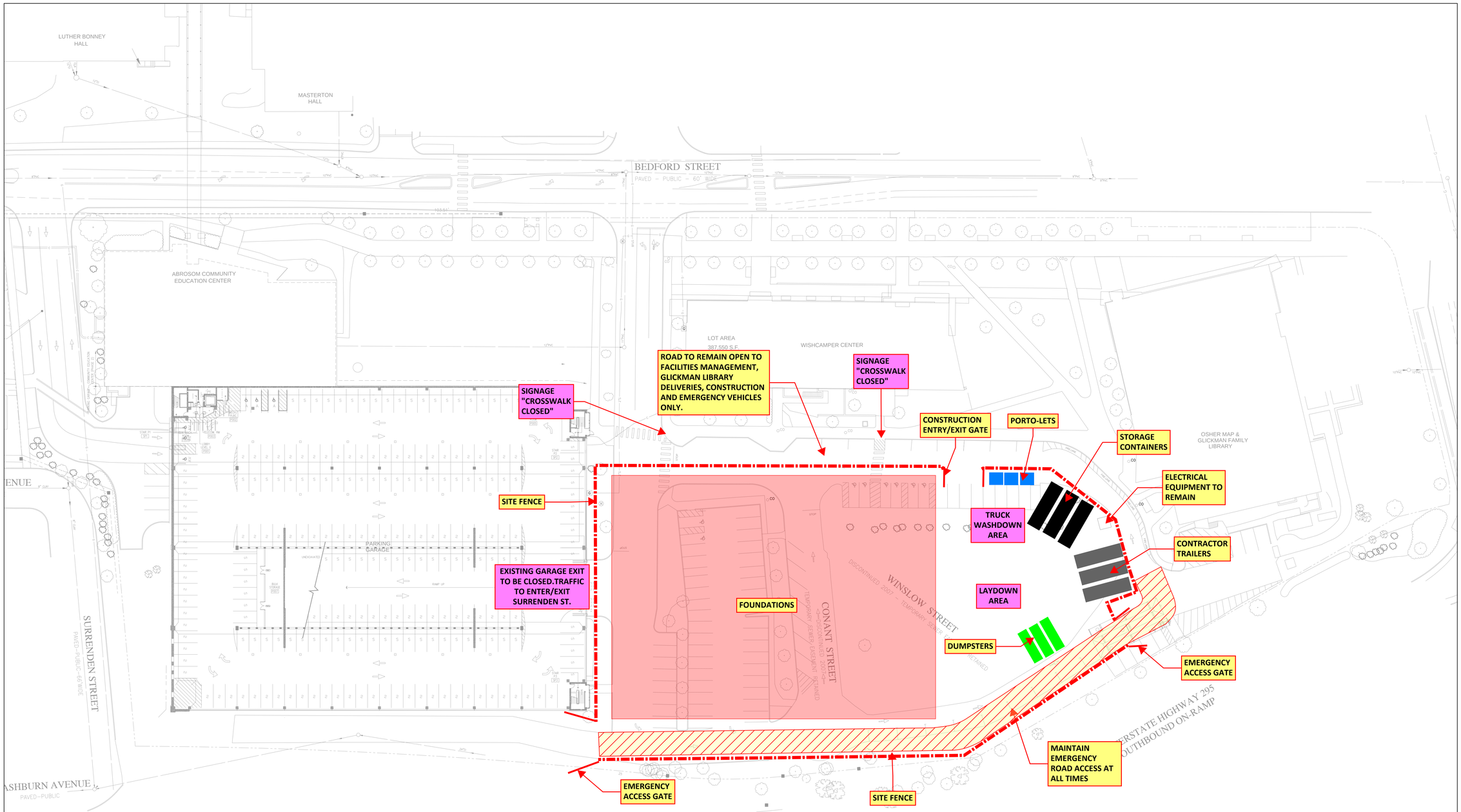
SUBMISSIONS:

Date	Issued For:
07/30/21	Site Plan Submittal

SCALE	**1/16" = 1'-0"**
DATE ISSUED	**07/12/2021**
PROJECT NO	**20-20145.00-1**
DRAWN BY	**C.M.**
CHECKED BY	**B.F.**

SHEET TITLE:

PHASE 1 - SITE PREPARATION



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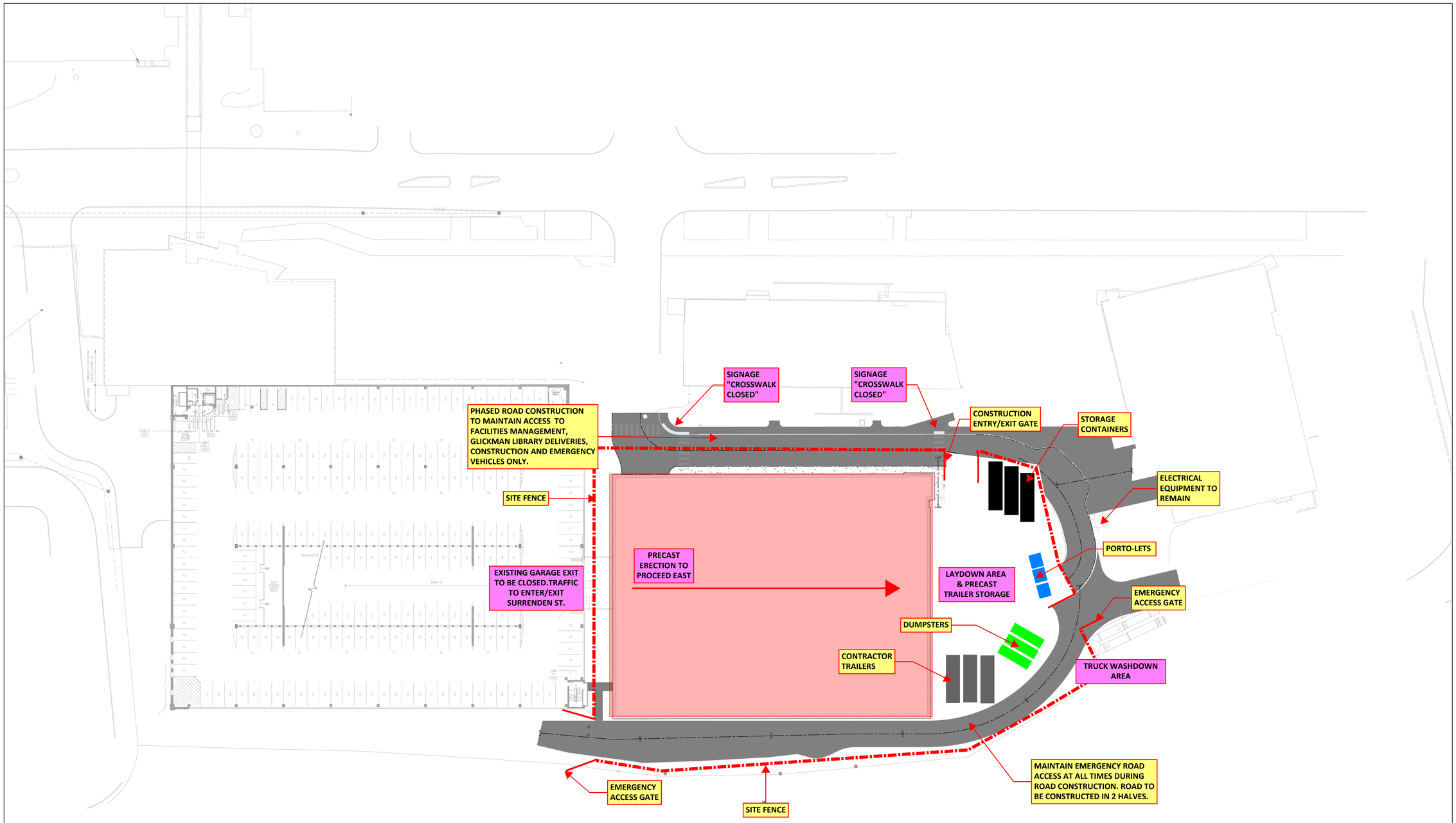
PHASE 2 - FOUNDATIONS



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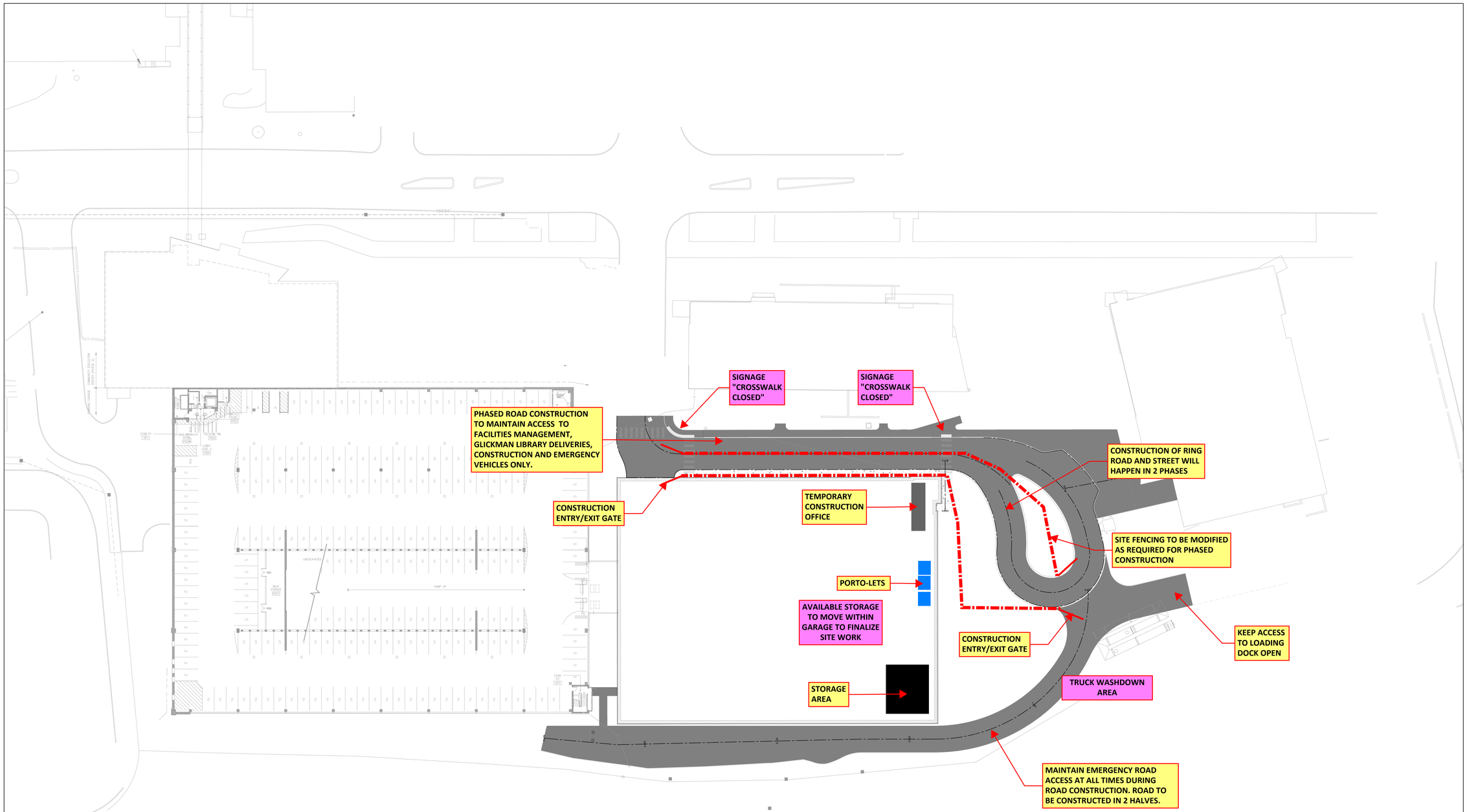
PHASE 3 - STRUCTURE ERECTION



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SHEET TITLE:

PHASE 4 -RING ROAD & LANDSCAPE

13. BOUNDARY SURVEY

A boundary and topographic survey of the Site was completed by Owen Haskell, Inc. Professional Land Surveyors. The survey is included with the drawings referenced in Section 3 of this Report.

STORMWATER MANAGEMENT PLAN

USM Structured Parking Garage

41 Hutchins Drive
Portland, ME 04102
800-426-4262

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COMMITMENT & INTEGRITY DRIVE RESULTS

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University of Southern Maine
July 2021

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1. STORMWATER MANAGEMENT PLAN

This Stormwater Management Plan (SWMP) describes existing site conditions, the proposed development, inspection and maintenance requirements for the proposed stormwater system, and compliance with applicable stormwater standards for the proposed structured parking garage located on the University of Southern Maine campus at 44 Bedford Street in Portland, Maine.

1.1 Existing Conditions

The project site is a portion of an approximately 29-acre University campus, south of the Wishcamper Center and north of the I-295 corridor. The project area has been previously developed and is currently utilized for surface parking. Existing conditions consist primarily of impervious paved area and vegetated area utilized for overflow parking and storage. This vegetated parking area consists of a weedy overgrowth and patches of dirt. The project site is not located in a FEMA flood hazard zone. Stormwater runoff from the Site is collected in catch basins and discharged to the City of Portland combined sewer interior to the Site. A small portion of the project area currently drains towards the separated stormwater system in Forest Avenue.

1.2 Proposed Development

The proposed development consists of a structured parking garage, access drive, pedestrian walkways, and associated site improvements. The project will result in approximately 2.4-acres of disturbance. The stormwater management system is comprised of a series of catch basins, a subsurface detention system, and proprietary treatment unit. The subsurface detention and treatment system will consist of large metal pipe and a StormFilter unit, which will provide storage and treatment for site runoff prior to discharging to the City's separated stormwater system in Forest Avenue. As requested by the City, site drainage patterns will be modified to direct stormwater runoff from the proposed development to the City's separated stormwater system in Forest Avenue; the City has indicated that the stormwater system on Forest Avenue has capacity to convey additional stormwater flow from the site.

1.3 Inspection & Maintenance Requirements

General inspection and maintenance of stormwater systems will take place during and after construction. During construction, the Contractor will be responsible for inspecting and maintaining the Site, as described in Section 1.4.1 of this Report. Upon completion of construction, the property owner will be responsible for implementing the Inspection and Maintenance Plan for the proposed stormwater system, which is provided in Appendix A of this Report.

1.4 Stormwater Standards

The project is subject to the MaineDEP Chapter 500 Stormwater Standards. The project is not located within the watershed of an Urban Impaired Stream and is therefore not subject to the Urban Impaired Stream Standard. The following sections describe the project's compliance with the applicable stormwater standards.

1.4.1 Basic Standard (Soil Erosion & Sediment Control)

A variety of erosion and sediment control measures will be utilized during construction, including but not limited to the following:

- Stabilized construction entrances;
- Up-gradient runoff diversion barriers;
- Downgradient sediment barriers;
- Catch basin inlet protection devices;

- Preservation and maintenance of vegetated areas to the maximum extent possible;
- Temporary stabilization of disturbed areas to be exposed for more than seven days;
- Permanent stabilization of final graded areas;
- Controls for fugitive dust, debris, and other materials; and
- Inspection of all measures until the Site is permanently stabilized.

Structural measures will be installed as shown on the design drawings. Details and specifications for these measures are included on the drawings. All measures will be implemented in accordance with the "Maine Erosion and Sedimentation Handbook for Construction: Best Management Practices". All temporary measures will be installed prior to any earth-disturbing activities and will be removed upon permanent stabilization of the Site. The Contractor will be responsible for implementing and maintaining all erosion and sediment control measures in an effective operating condition during construction. Permanent erosion control measures will include vegetation and pavement. After construction, the Owner will be responsible for inspecting and maintaining the Site as described in Section 1.3 of this Report.

1.4.2 General Standard (Stormwater Quality)

The proposed project is considered redevelopment and is therefore subject to Section 4.C(2)(d) of the MaineDEP Chapter 500 Stormwater Standards. As demonstrated by the calculations provided in Appendix B of this Report, the proposed project is required to provide treatment for 60% of the redeveloped area and the proposed StormFilter treatment unit will provide the required treatment. The StormFilter treatment system has been designed in accordance with the MaineDEP proprietary BMP approval letter to Contech dated March 13, 2015. Larger storm events will bypass the StormFilter unit via a weir in the upstream corrugated metal pipe (CMP) system. A letter prepared by Contech describing the design of the StormFilter treatment system is also provided in Appendix B of this Report.

1.4.3 Flooding Standard (Stormwater Quantity)

The project is required to comply with the flooding standard, as the project requires review pursuant to MaineDEP Site Law. Chapter 500 Stormwater Rules require that the stormwater management system detain, retain, or result in the infiltration of the stormwater flows from the 24-hour storm of the 2-year, 10-year, and 25-year frequencies, such that peak flows from the post-development Site do not exceed those from the pre-development Site. Stormwater models were developed for the pre-development and post-development site conditions. Adequate provisions have been made to collect and control stormwater via the proposed stormwater detention system. The following sections describe the stormwater modeling methodology and the results of the HydroCAD analysis.

1.4.3.1 Stormwater Modeling Methodology

Stormwater modeling was completed using the HydroCAD 10.00 Stormwater Modeling System by Applied Microcomputer Systems, which uses TR-20 runoff calculation methodology. The HydroCAD output for both the pre- and post-development models are provided in Appendix C. A 24-hour duration and Type III rainfall distribution was applied to the rainfall depths for the 2-year, 10-year, and 25-year storm events from Appendix H of the DEPs Chapter 500 Rules.

HydroCAD provides a lookup table for curve number (CN), which is a measure of the retention and runoff properties of various surfaces based on the Hydrological Soil Group (HSG) and land cover type using TR-55 methodology. The Site contains Hydrologic Soil Group A soils. The area of each land cover type was delineated utilizing topographical survey information and HydroCAD computed the final CN for each subcatchment based on an area-weighted average. It should be noted that the curve number utilized for the proposed porous pavement is based upon data from the Rhode Island Stormwater Design and Installation Standards Manual.

The Time of Concentration (Tc) is the time required for runoff to travel from the most hydrologically distant point of a watershed to the point of discharge. The longest hydraulic flow path is partitioned into segments based on flow types, land cover, and slopes. The Tc for each watershed is computed within HydroCAD as the sum of the travel times for each consecutive flow segment along the longest hydraulic flow path. The primary types of flow consist of sheet flow, shallow concentrated flow, and channel flows; sheet flow typically occurs within the first 100-feet of runoff. A minimum Tc of six minutes was utilized for all watershed areas.

The HydroCAD model has been prepared utilizing conservative assumptions about the proposed porous pavement walkways. While we anticipate that the proposed walkways will provide some detention and infiltration, this has not been included in the HydroCAD model for the purposes of this stormwater analysis. As previously described, the project area ultimately discharges runoff in two locations; these two discharge points have been utilized as the Study Points for the stormwater analysis:

- Study Point 1: Forest Avenue Storm Drain System; and
- Study Point 2: Combined Sewer System interior to the Site.

Existing and proposed drainage patterns and features are shown on the figures provided in Appendix D.

1.4.3.2 Pre- and Post-Development Peak Runoff Rate Results

The table below provides a summary of the peak runoff rates for the 24-hour, 2-, 10-, and 25-year Type III storm events:

Study Point		Peak Runoff Rate (cfs)		
		2-Year Storm	10-Year Storm	25-Year Storm
#1 (Separated Stormwater System)	Pre-Development	0.9	1.9	2.7
	Post-Development	1.7	3.9	8.4
#2 (Combined Sewer System)	Pre-Development	2.6	5.2	7.6
	Post-Development	0.5	1.0	1.5
Net Change	Pre-Development	3.5	7.1	10.3
	Post-Development	2.2	4.9	9.9

The proposed stormwater management system has been designed to improve and maintain current runoff conditions to the maximum extent possible. As previously noted, the City of Portland has requested that the site drainage patterns be modified to direct stormwater runoff from the proposed development to the City's separated stormwater system in Forest Avenue; as demonstrated by the table above, the result is a reduction in peak runoff rates to the combined sewer system (Study Point #2), an increase in peak runoff rates to the separated stormwater system (Study Point #1), but an overall reduction in the net peak runoff rates from the site during the 2-, 10- and 25-year storm events.

The City of Portland has indicated that the Forest Avenue separated stormwater system has capacity for additional stormwater flow. Additionally, the proposed stormwater management system has been adequately sized to safely convey runoff from the proposed site. Therefore, we do not anticipate that the proposed development will result in any adverse effects, including flooding and erosion, to abutting properties as a result of the project. We respectfully request approval for the proposed increase in the peak rate of runoff to the Forest Avenue stormwater system in order to satisfy the City's desire to separate the runoff from the proposed development from the combined sewer.

APPENDIX A: STORMWATER INSPECTION & MAINTENANCE PLAN

STORMWATER INSPECTION & MAINTENANCE PLAN

USM Structured Parking Garage, Portland, Maine

General inspection and maintenance during and after construction must take place in accordance with the requirements outlined in Appendix B of the Maine Department of Environmental Protection (MaineDEP) Chapter 500 Rules. Upon completion of the project, the Owner will assume responsibility for overseeing the property, including the inspection and maintenance of the Site's stormwater drainage system and treatment measures outlined herein. A person with knowledge of stormwater management and erosion and sediment control, including the standards and conditions in the permit, shall conduct the inspections and perform maintenance of the facilities.

Inspection and maintenance activities will be performed per the attached checklist, schedule, StormFilter guidelines; an example page of the BMP Maintenance Log that shall be kept on-site is also attached.

Storm Drain System

Trash, debris, and sediment shall be removed from storm drain pipes and catch basins as needed on a semi-annual basis. In addition to the inspection and maintenance of stormwater systems, paved areas will be inspected annually each spring. Visual inspections will enable parking areas to be kept clean and clear through periodic sweeping and winter plowing as required. The inspections will also ensure pavement markings are repainted as needed to maintain proper traffic circulation and parking space delineation. Paved areas will be plowed and sanded as often as necessary to maintain public safety. Periodic sweeping of pavement will keep the parking areas clean and will reduce the amount of sediment available to enter the stormwater systems, in turn reducing the need to clean the stormwater systems.

Porous Pavement

Winter maintenance procedures may be problematic (e.g., scraping by plows, clogging by sand, clogging by or inability to treat de-icing chemicals). Snow removal and deicing activities should be done carefully to avoid disturbance to the pavement structure. The plow blade should be raised 1" above the surface or outfitted with a flexible rubber bottom piece. Porous pavement has the potential to become impervious if not properly maintained. Proper maintenance should consist of the following:

- Frequent inspections should be performed during the first few months following construction; the system should inspected routinely on an annual basis thereafter. Inspections should be made after significant storm events to check for surface ponding that could indicate failure due to clogging. Non-routine maintenance may require reconstruction of the surface treatment, and possibly the filter and reservoir layers, to relieve major clogging.
- Prevent sedimentation due to the erosion of areas upgradient of the porous pavement.
- Prevent vehicles with muddy wheels from accessing the porous pavement.
- Sweep, vacuum and/or pressure wash pavement twice annually at a minimum.
- Limit salt use for deicing and do not use sand.
- Remove leaves and organic debris in the fall.
- Measures should be taken to ensure that an area designed to be porous does not receive a future overlay of conventional non-porous paving.

StormFilter System

The StormFilter system must be inspected at least once every six months, and the filters maintained annually per the manufacturer's guidelines, which are outlined in the attached guidance document.

STORMWATER INSPECTION CHECKLIST

Inspection by: _____ Date: _____

Stormwater Management Feature	Condition						Comments
Subsurface Detention System	no siltation		some siltation		heavily silted in		
Subsurface Detention System	no clogging/flooding		some clogging/flooding		heavy clogging/flooding		
Subsurface Detention System	outlet free of erosion		some erosion at outlet		outlet heavily eroded		
Subsurface Detention System	inlet/outlet clear		some debris		completely blocked		
StormFilter System*	Cartridges are in good condition		Cartridges in need of cleaning		Cartridges in need of replacement		
StormFilter System*	no clogging/flooding		some clogging/flooding		heavy clogging/flooding		
Porous Pavement	No sediment or debris accumulation		Some sediment or debris accumulation		Excessive sediment or debris accumulation		
Porous Pavement	Structure is in good condition.		Structure has small visible wear.		Structure has excessive visible wear.		

**See attached manufacturer's guidelines for StormFilter System maintenance and inspection.*

Recommended Actions: _____

_____

Actions Completed: _____ Date: _____

STORMWATER MAINTENANCE TASKS & RECOMMENDED SCHEDULE

TASKS	DETENTION AND STORMFILTER SYSTEM	POROUS PAVEMENT	STORM DRAIN PIPES	SCHEDULE
Inspect for sediment & debris accumulation	X	X	X	Spring and Fall
Remove sediment & Debris accumulation	X	X	X	As needed
Inspect for erosion				As needed
Reestablish vegetation in erosion areas				Early spring
Inspect structural elements during wet weather and compare to as-built plans	X	X	X	Annually
Make adjustments or replacements as determined by wet weather observations	X	X	X	As needed
Keep records of all inspections and maintenance activities	X	X	X	Annually
Have a professional engineer perform emergency inspections upon identification of severe problems	X	X	X	As needed

CONTECH®
ENGINEERED SOLUTIONS

StormFilter Inspection and Maintenance Procedures

The Stormwater Management StormFilter®

Maintenance Guidelines

The primary purpose of the Stormwater Management StormFilter® is to filter and prevent pollutants from entering our waterways. Like any effective filtration system, periodically these pollutants must be removed to restore the StormFilter to its full efficiency and effectiveness.

Maintenance requirements and frequency are dependent on the pollutant load characteristics of each site. Maintenance activities may be required in the event of a chemical spill or due to excessive sediment loading from site erosion or extreme storms. It is a good practice to inspect the system after major storm events.

Maintenance Procedures

Although there are many effective maintenance options, we believe the following procedure to be efficient, using common equipment and existing maintenance protocols. The following two-step procedure is recommended::

1. **Inspection**
   - Inspection of the vault interior to determine the need for maintenance.
2. **Maintenance**
   - Cartridge replacement
   - Sediment removal

Inspection and Maintenance Timing

At least one scheduled inspection should take place per year with maintenance following as warranted.

First, an inspection should be done before the winter season. During the inspection the need for maintenance should be determined and, if disposal during maintenance will be required, samples of the accumulated sediments and media should be obtained.

Second, if warranted, a maintenance (replacement of the filter cartridges and removal of accumulated sediments) should be performed during periods of dry weather.

In addition to these two activities, it is important to check the condition of the StormFilter unit after major storms for potential damage caused by high flows and for high sediment accumulation that may be caused by localized erosion in the drainage area. It may be necessary to adjust the inspection/ maintenance schedule depending on the actual operating conditions encountered by the system. In general, inspection activities can be conducted at any time, and maintenance should occur, if warranted, during dryer months in late summer to early fall.

Maintenance Frequency

The primary factor for determining frequency of maintenance for the StormFilter is sediment loading.

A properly functioning system will remove solids from water by trapping particulates in the porous structure of the filter media inside the cartridges. The flow through the system will naturally decrease as more and more particulates are trapped. Eventually the flow through the cartridges will be low enough to require replacement. It may be possible to extend the usable span of the cartridges by removing sediment from upstream trapping devices on a routine as-needed basis, in order to prevent material from being re-suspended and discharged to the StormFilter treatment system.

The average maintenance lifecycle is approximately 1-5 years. Site conditions greatly influence maintenance requirements. StormFilter units located in areas with erosion or active construction may need to be inspected and maintained more often than those with fully stabilized surface conditions.

Regulatory requirements or a chemical spill can shift maintenance timing as well. The maintenance frequency may be adjusted as additional monitoring information becomes available during the inspection program. Areas that develop known problems should be inspected more frequently than areas that demonstrate no problems, particularly after major storms. Ultimately, inspection and maintenance activities should be scheduled based on the historic records and characteristics of an individual StormFilter system or site. It is recommended that the site owner develop a database to properly manage StormFilter inspection and maintenance programs..

Inspection Procedures

The primary goal of an inspection is to assess the condition of the cartridges relative to the level of visual sediment loading as it relates to decreased treatment capacity. It may be desirable to conduct this inspection during a storm to observe the relative flow through the filter cartridges. If the submerged cartridges are severely plugged, then typically large amounts of sediments will be present and very little flow will be discharged from the drainage pipes. If this is the case, then maintenance is warranted and the cartridges need to be replaced.

Warning: In the case of a spill, the worker should abort inspection activities until the proper guidance is obtained. Notify the local hazard control agency and Contech Engineered Solutions immediately.

To conduct an inspection:

Important: Inspection should be performed by a person who is familiar with the operation and configuration of the StormFilter treatment unit.

1. If applicable, set up safety equipment to protect and notify surrounding vehicle and pedestrian traffic.
2. Visually inspect the external condition of the unit and take notes concerning defects/problems.
3. Open the access portals to the vault and allow the system vent.
4. Without entering the vault, visually inspect the inside of the unit, and note accumulations of liquids and solids.
5. Be sure to record the level of sediment build-up on the floor of the vault, in the forebay, and on top of the cartridges. If flow is occurring, note the flow of water per drainage pipe. Record all observations. Digital pictures are valuable for historical documentation.
6. Close and fasten the access portals.
7. Remove safety equipment.
8. If appropriate, make notes about the local drainage area relative to ongoing construction, erosion problems, or high loading of other materials to the system.
9. Discuss conditions that suggest maintenance and make decision as to weather or not maintenance is needed.

Maintenance Decision Tree

The need for maintenance is typically based on results of the inspection. The following Maintenance Decision Tree should be used as a general guide. (Other factors, such as Regulatory Requirements, may need to be considered)

1. Sediment loading on the vault floor.
   a. If >4" of accumulated sediment, maintenance is required.
2. Sediment loading on top of the cartridge.
   a. If >1/4" of accumulation, maintenance is required.
3. Submerged cartridges.
   a. If >4" of static water above cartridge bottom for more than 24 hours after end of rain event, maintenance is required. (Catch basins have standing water in the cartridge bay.)
4. Plugged media.
   a. If pore space between media granules is absent, maintenance is required.
5. Bypass condition.
   a. If inspection is conducted during an average rain fall event and StormFilter remains in bypass condition (water over the internal outlet baffle wall or submerged cartridges), maintenance is required.
6. Hazardous material release.
   a. If hazardous material release (automotive fluids or other) is reported, maintenance is required.
7. Pronounced scum line.
   a. If pronounced scum line (say ≥ 1/4" thick) is present above top cap, maintenance is required.

Maintenance

Depending on the configuration of the particular system, maintenance personnel will be required to enter the vault to perform the maintenance.

Important: If vault entry is required, OSHA rules for confined space entry must be followed.

Filter cartridge replacement should occur during dry weather. It may be necessary to plug the filter inlet pipe if base flows is occurring.

Replacement cartridges can be delivered to the site or customers facility. Information concerning how to obtain the replacement cartridges is available from Contech Engineered Solutions.

Warning: In the case of a spill, the maintenance personnel should abort maintenance activities until the proper guidance is obtained. Notify the local hazard control agency and Contech Engineered Solutions immediately.

To conduct cartridge replacement and sediment removal maintenance:

1. If applicable, set up safety equipment to protect maintenance personnel and pedestrians from site hazards.
2. Visually inspect the external condition of the unit and take notes concerning defects/problems.
3. Open the doors (access portals) to the vault and allow the system to vent.
4. Without entering the vault, give the inside of the unit, including components, a general condition inspection.
5. Make notes about the external and internal condition of the vault. Give particular attention to recording the level of sediment build-up on the floor of the vault, in the forebay, and on top of the internal components.
6. Using appropriate equipment offload the replacement cartridges (up to 150 lbs. each) and set aside.
7. Remove used cartridges from the vault using one of the following methods:

Method 1:

A. This activity will require that maintenance personnel enter the vault to remove the cartridges from the under drain manifold and place them under the vault opening for lifting (removal). Disconnect each filter cartridge from the underdrain connector by rotating counterclockwise 1/4 of a turn. Roll the loose cartridge, on edge, to a convenient spot beneath the vault access.

   Using appropriate hoisting equipment, attach a cable from the boom, crane, or tripod to the loose cartridge. Contact Contech Engineered Solutions for suggested attachment devices.

B. Remove the used cartridges (up to 250 lbs. each) from the vault.

Important: Care must be used to avoid damaging the cartridges during removal and installation. The cost of repairing components damaged during maintenance will be the responsibility of the owner.

C. Set the used cartridge aside or load onto the hauling truck.

D. Continue steps a through c until all cartridges have been removed.

Method 2:

A. This activity will require that maintenance personnel enter the vault to remove the cartridges from the under drain manifold and place them under the vault opening for lifting (removal). Disconnect each filter cartridge from the underdrain connector by rotating counterclockwise 1/4 of a turn. Roll the loose cartridge, on edge, to a convenient spot beneath the vault access.

B. Unscrew the cartridge cap.

C. Remove the cartridge hood and float.

D. At location under structure access, tip the cartridge on its side.

E. Empty the cartridge onto the vault floor. Reassemble the empty cartridge.

F. Set the empty, used cartridge aside or load onto the hauling truck.

G. Continue steps a through e until all cartridges have been removed.

8. Remove accumulated sediment from the floor of the vault and from the forebay. This can most effectively be accomplished by use of a vacuum truck.
9. Once the sediments are removed, assess the condition of the vault and the condition of the connectors.
10. Using the vacuum truck boom, crane, or tripod, lower and install the new cartridges. Once again, take care not to damage connections.
11. Close and fasten the door.
12. Remove safety equipment.
13. Finally, dispose of the accumulated materials in accordance with applicable regulations. Make arrangements to return the used **empty** cartridges to Contech Engineered Solutions.

Material Disposal

The accumulated sediment found in stormwater treatment and conveyance systems must be handled and disposed of in accordance with regulatory protocols. It is possible for sediments to contain measurable concentrations of heavy metals and organic chemicals (such as pesticides and petroleum products). Areas with the greatest potential for high pollutant loading include industrial areas and heavily traveled roads.

Sediments and water must be disposed of in accordance with all applicable waste disposal regulations. When scheduling maintenance, consideration must be made for the disposal of solid and liquid wastes. This typically requires coordination with a local landfill for solid waste disposal. For liquid waste disposal a number of options are available including a municipal vacuum truck decant facility, local waste water treatment plant or on-site treatment and discharge.

Related Maintenance Activities - Performed on an as-needed basis

StormFilter units are often just one of many structures in a more comprehensive stormwater drainage and treatment system.

In order for maintenance of the StormFilter to be successful, it is imperative that all other components be properly maintained. The maintenance/repair of upstream facilities should be carried out prior to StormFilter maintenance activities.

In addition to considering upstream facilities, it is also important to correct any problems identified in the drainage area. Drainage area concerns may include: erosion problems, heavy oil loading, and discharges of inappropriate materials.

Inspection Report

Date: Personnel:

Location: System Size:

System Type: Vault ☐ Cast-In-Place ☐ Linear Catch Basin ☐ Manhole ☐ Other ☐

Sediment Thickness in Forebay: Date:

Sediment Depth on Vault Floor:

Structural Damage:

Estimated Flow from Drainage Pipes (if available):

Cartridges Submerged: Yes ☐ No ☐ Depth of Standing Water:

StormFilter Maintenance Activities (check off if done and give description)

☐ Trash and Debris Removal:

☐ Minor Structural Repairs:

☐ Drainage Area Report

Excessive Oil Loading: Yes ☐ No ☐ Source:

Sediment Accumulation on Pavement: Yes ☐ No ☐ Source:

Erosion of Landscaped Areas: Yes ☐ No ☐ Source:

Items Needing Further Work:

Owners should contact the local public works department and inquire about how the department disposes of their street waste residuals.

Other Comments:

Review the condition reports from the previous inspection visits.

StormFilter Maintenance Report

Date: _____ Personnel: _____

Location: _____ System Size: _____

System Type: Vault ☐ Cast-In-Place ☐ Linear Catch Basin ☐ Manhole ☐ Other ☐

List Safety Procedures and Equipment Used: _____

_____

_____

System Observations

Months in Service:

Oil in Forebay (if present): Yes ☐ No ☐

Sediment Depth in Forebay (if present): _____

Sediment Depth on Vault Floor: _____

Structural Damage: _____

Drainage Area Report

Excessive Oil Loading: Yes ☐ No ☐ Source: _____

Sediment Accumulation on Pavement: Yes ☐ No ☐ Source: _____

Erosion of Landscaped Areas: Yes ☐ No ☐ Source: _____

StormFilter Cartridge Replacement Maintenance Activities

Remove Trash and Debris: Yes ☐ No ☐ Details: _____

Replace Cartridges: Yes ☐ No ☐ Details: _____

Sediment Removed: Yes ☐ No ☐ Details: _____

Quantity of Sediment Removed (estimate?):

Minor Structural Repairs: Yes ☐ No ☐ Details: _____

Residuals (debris, sediment) Disposal Methods: _____

Notes:

_____

_____

_____

_____

_____

_____

_____

RECYCLED PAPER

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- Drawings and specifications are available at www.conteches.com.
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Stormwater BMP Maintenance Log

BMP Structure	Inspector (Name)	Work Performed	Date Performed	Comments
Pavement Sweeping				
Porous Pavement				
Catch Basins				
CMP System				
StormFilter System				
Other				
Additional Comments:				

APPENDIX B: STORMWATER QUALITY CALCULATIONS

WOODARD &CURRAN COMMITMENT & INTEGRITY DRIVE RESULTS
41 HUTCHINS DRIVE
PORTLAND, MAINE 04102

CLIENT: USM
PROJECT: Structured Parking Garage
CALCS BY: JTC/AEF
DATE: 7/12/2021
PROJECT NO.: 233035.00

Redevelopment Treatment Calculations - Per Section 4.C.2.d of the MaineDEP Chapter 500 Rules

Area of Redevelopment (acres) = 2.37

a. Existing Pollutant Impact

Land Use	Pollutant Ranking	Land Area (Ac.)	Impact
High Use Roads	5	0.00	0.00
Medium Use Roads/Parking Lot	4	1.29	5.15
Other Parking Lots/Flat Asphalt Roofs/Industrial Roofs	3	0.00	0.00
Other Roofs/Landscaped Area/Paved Walkway	2	1.07	2.13
Non-grass Landscaping/Stormwater	1	0.02	0.02
Forest/Meadow	0	0.00	0.00
	Sum:	2.37	7.30

b. Proposed Pollutant Impact

Land Use	Pollutant Ranking	Land Area (Ac.)	Impact
High Use Roads	5	0.00	0.00
Medium Use Roads/Parking Lot	4	1.72	6.88
Other Parking Lots/Flat Asphalt Roofs/Industrial Roofs	3	0.00	0.00
Other Roofs/Landscaped Area/Paved Walkway	2	0.65	1.29
Non-grass Landscaping/Stormwater	1	0.00	0.00
Forest/Meadow	0	0.00	0.00
	Sum:	2.37	8.17

c. Existing Impact/Total Redevelopment Acres

3.1

d. Proposed Impact/Total Redevelopment Acres

3.4

e. Item D Minus Item C

0.4

Treatment Requirements - Per Table 3 of the MaineDEP Chapter 500 Rules

Treatment Required (%) = 60%
Treatment Area Required (SF) = 61,940

Treatment Design Calculations

StormFilter System:

Treated Area = 61940 SF
WQV (required) = 1" x Treatment Area Required = 5162 CF

*Refer to Contech Design Review Letter for information on the sizing and design of the StormFilter Treatment System.

Contech Engineered Solutions LLC
71 US Rte 1, Suite F
Scarborough, ME 04074
Phone: (207) 885-6191
www.ContechES.com

Amy Lebel
Woodard & Curran
41 Hutchins Drive
Portland, ME 04102

July 28, 2021

RE: University of Southern Maine Structured Parking Garage (Contech Reference No. 635857)
Review of StormFilter Design

To whom it may concern,

The purpose of this letter is to document Contech Engineered Solutions review of the plans and the proposed application of the StormFilter Media Filtration System water quality unit for the USM Structured Parking Garage site in Portland, ME.

Contech Engineered Solutions (Contech) has reviewed the StormFilter (SF) design for this project. We believe the SF configuration to be an appropriate water quality solution for this site.

The SF system with Zeolite-Phosphosorb (Zeo-Psorb) cartridges is approved for use by MEDEP meeting the General Standard of the Stormwater rules (Chapter 500) if designed, installed, and maintained in accordance with the provisions noted in the March 13, 2015 approval letter from the MEDEP.

The SF system is designed in accordance with the maximum drain down rate of 0.27 gallons per minute per square foot of filter surface area (3 gpm per 27" cartridge). Additionally, the SF is designed with an upstream sumped water quality volume (WQv) detention system to retain, route and treat the entire WQ event flow from the contributing drainage area to the treatment unit. The resultant volume from the WQ event storm is detained in the upstream detention to an elevation below any bypass flow paths resulting in a routed storm event volume through the SF cartridges with a required emptying time of 24 to 48 hours. Due to the extended detention time upstream of the SF in the sumped WQv detention system, Contech assumes sedimentation of the larger solids at an estimated 50 percent reduction of the total suspended solids prior to the treatment by the SF.

The engineer of record provided a WQv of 5,162 cf and a drainage area of 2.02 ac, of which 1.54 ac is impervious. In order to adequately treat the runoff from this area, Contech recommends a SF manhole SFMH72 with seven (7) – 27" Zeo-Psorb cartridges.

The SF system requires a hydraulic headwater condition to fully immerse the media and activate the cartridge float valve. For 27" SF cartridges, this headwater condition is 3.05 ft above SF outlet invert. This is achieved by the either physical inlet to outlet pipe elevation drop or an upstream WQ detention filling during the WQ storm flow to the required SF float valve activation elevation.

The site detention system storage is designed to store the WQv and flood control volume separately. The two parts of the detention system are separated by a weir to ensure that the WQv is captured for treatment prior to overflowing into the flood control detention. The WQv shall be stored in a 66" diameter corrugated metal pipe (CMP) with a 6" sump depth. The treatment flow outlet pipe stub is positioned 6" above the 66" CMP WQv detention invert.

The WQv is routed through the SF vault with a drain down flow rate of 0.047 cfs (3 gpm per cartridge x 7 cartridges / 448.83 gpm/cfs) and is estimated to drain down in 30.5 hours. The resulting cumulative treated volume for this design is 5,185 cf.

Contech Engineered Solutions LLC
71 US Rte 1, Suite F
Scarborough, ME 04074
Phone: (207) 885-6191
www.ContechES.com

The weir plate between the WQv and the Flood Control Detention CMP with high overflow weir is positioned to allow storms larger than the WQ storm to overflow into the flood control detention. The flood control detention is a 72" diameter CMP system with an internal flow control wall to control outlet flows to a downstream structure.

Our systems require periodic maintenance to continue operating properly. Given typical runoff pollutant loading rates, Contech recommends maintenance inspections on an annual basis.

This system is expected to operate in accordance with Contech's design intent. Please feel free to contact me if you have any questions or concerns.

Sincerely,

David Adams, PE
Contech Engineered Solutions, LLC.
(207) 885-6191
dave.adams@ContechES.com

Determining Number of Cartridges for Systems Downstream of Detention

CONTECH Engineered Solutions Engineer: **DRA**
Date Prepared: **7/22/2021**

Site Information

Project Name	**USM Structured Parking Garage**
Project State	**Maine**
Project Location	**Portland**
Drainage Area, Ad	**2.02** ac
Impervious Area, Ai	**1.54** ac
Pervious Area, Ap	**0.48**
% Impervious	**76.09%**
Runoff Coefficient, Rc	**0.73**

Upstream Detention System

Water Quality Volume	**5,162** cf
	(provided by Woodard and Curran)
24-hr release rate	**27** gpm
48-hr release rate	**13** gpm
Detention pretreatment credit	**50%**

Mass loading calculations

Mean Annual Rainfall, P	**47.33** in
Agency required % removal	**85%**
Percent Runoff Capture	**85%**
MEDEP Mean Annual Runoff, Vt	**252,674** ft^3
Event Mean Concentration of Pollutant, EMC	**68** mg/l

Filter System

Filtration brand	**StormFilter**
Cartridge height	**27** in
Specific Flow Rate per MEDEP authorization	**3.00** gpm/cart

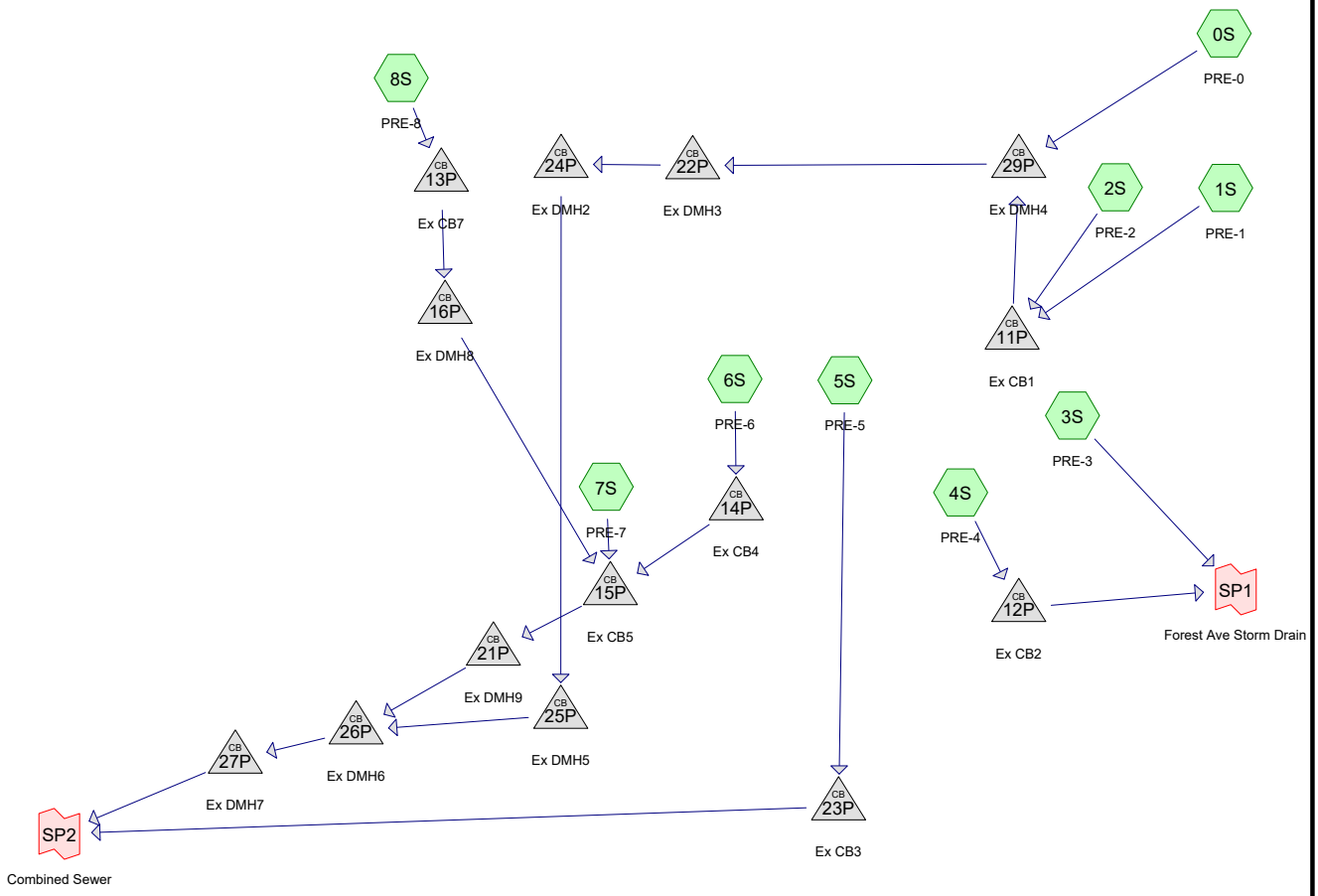
Number of cartridges - mass loading

Mass removed by pretreatment system, M_{pre}	**536** lbs
Mass load to filters after pretreatment, M_{pass1}	**536** lbs
Estimate the required filter efficiency, E_{filter}	**0.70**
Mass to be captured by filters, M_{filter}	**375** lbs
Allowable Cartridge Flow rate, Q_{cart}	**22.50** gpm
Mass load per cartridge, M_{cart} (lbs)	**54** lbs
Number of Cartridges required, N_{mass}	**7** ea
Treatment Capacity	**21** gpm

Determine Critical Sizing Value

SUMMARY	
Mass Loading	
Treatment Mass (lbs)	375
Cartridge Mass Capacity (lbs)	54
Number of Cartridges	7

APPENDIX C: HYDROCAD REPORTS



Subcat Reach Pond Link

Routing Diagram for C1. Pre
Prepared by Woodard Curran, Printed 7/28/2021
HydroCAD® 10.00-21 s/n 01204 © 2018 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.60	68	Grass cover (parking area), HSG A (1S, 2S, 3S, 4S, 5S)
0.60	39	Grass cover, Good, HSG A (0S, 1S, 2S, 3S, 4S, 5S, 6S, 7S, 8S)
1.45	98	Paved parking, HSG A (0S, 1S, 2S, 3S, 4S, 5S, 6S, 7S, 8S)
0.15	40	Porous Pavement (0S, 1S, 2S, 3S, 5S, 6S, 8S)
2.79	**76**	**TOTAL AREA**

Summary for Subcatchment 0S: PRE-0

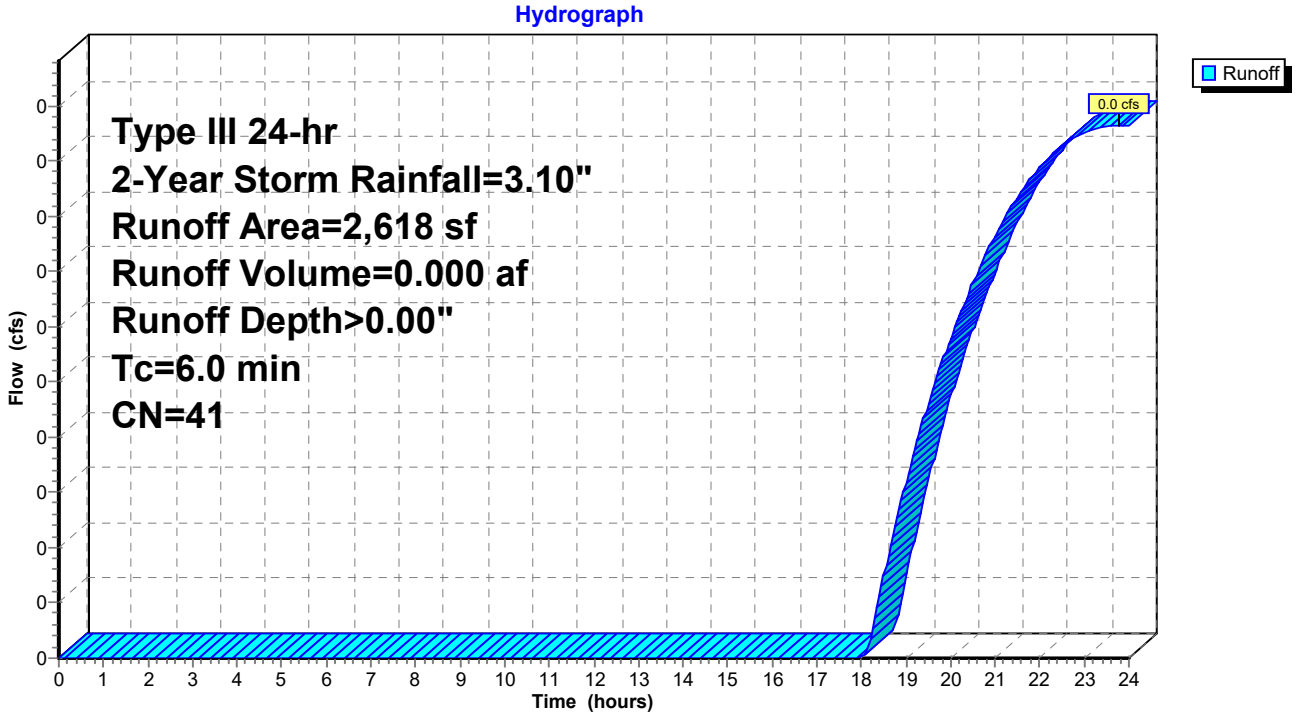
Runoff = 0.0 cfs @ 23.77 hrs, Volume= 0.000 af, Depth> 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Storm Rainfall=3.10"

	Area (sf)	CN	Description
	70	98	Paved parking, HSG A
	1,403	39	Grass cover, Good, HSG A
*	1,145	40	Porous Pavement
	2,618	41	Weighted Average
	2,548		97.33% Pervious Area
	70		2.67% Impervious Area

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

Subcatchment 0S: PRE-0



Summary for Subcatchment 1S: PRE-1

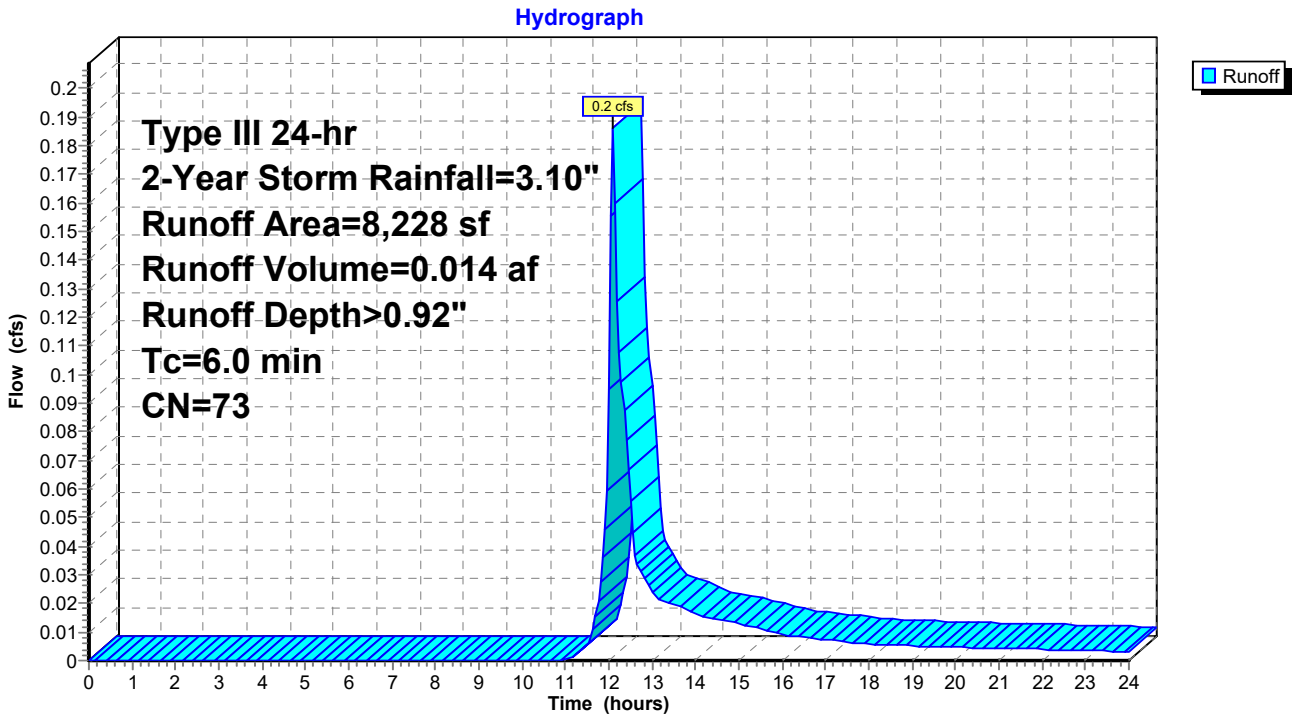
Runoff = 0.2 cfs @ 12.10 hrs, Volume= 0.014 af, Depth> 0.92"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Storm Rainfall=3.10"

	Area (sf)	CN	Description
	4,083	98	Paved parking, HSG A
	1,673	39	Grass cover, Good, HSG A
*	1,374	68	Grass cover (parking area), HSG A
*	1,098	40	Porous Pavement
	8,228	73	Weighted Average
	4,145		50.38% Pervious Area
	4,083		49.62% Impervious Area

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

Subcatchment 1S: PRE-1



Summary for Subcatchment 2S: PRE-2

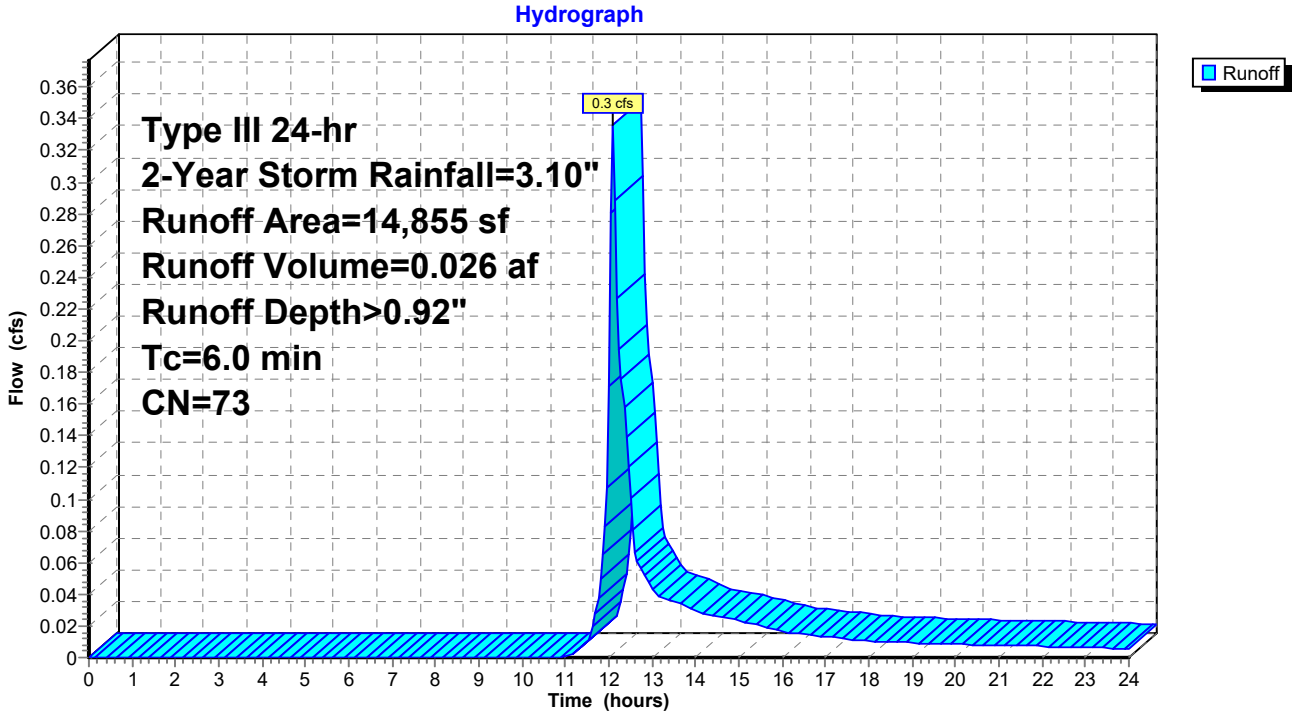
Runoff = 0.3 cfs @ 12.10 hrs, Volume= 0.026 af, Depth> 0.92"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Storm Rainfall=3.10"

	Area (sf)	CN	Description
	6,344	98	Paved parking, HSG A
	2,948	39	Grass cover, Good, HSG A
	4,408	68	Grass cover (parking area), HSG A
*	1,155	40	Porous Pavement
	14,855	73	Weighted Average
	8,511		57.29% Pervious Area
	6,344		42.71% Impervious Area

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

Subcatchment 2S: PRE-2



Summary for Subcatchment 3S: PRE-3

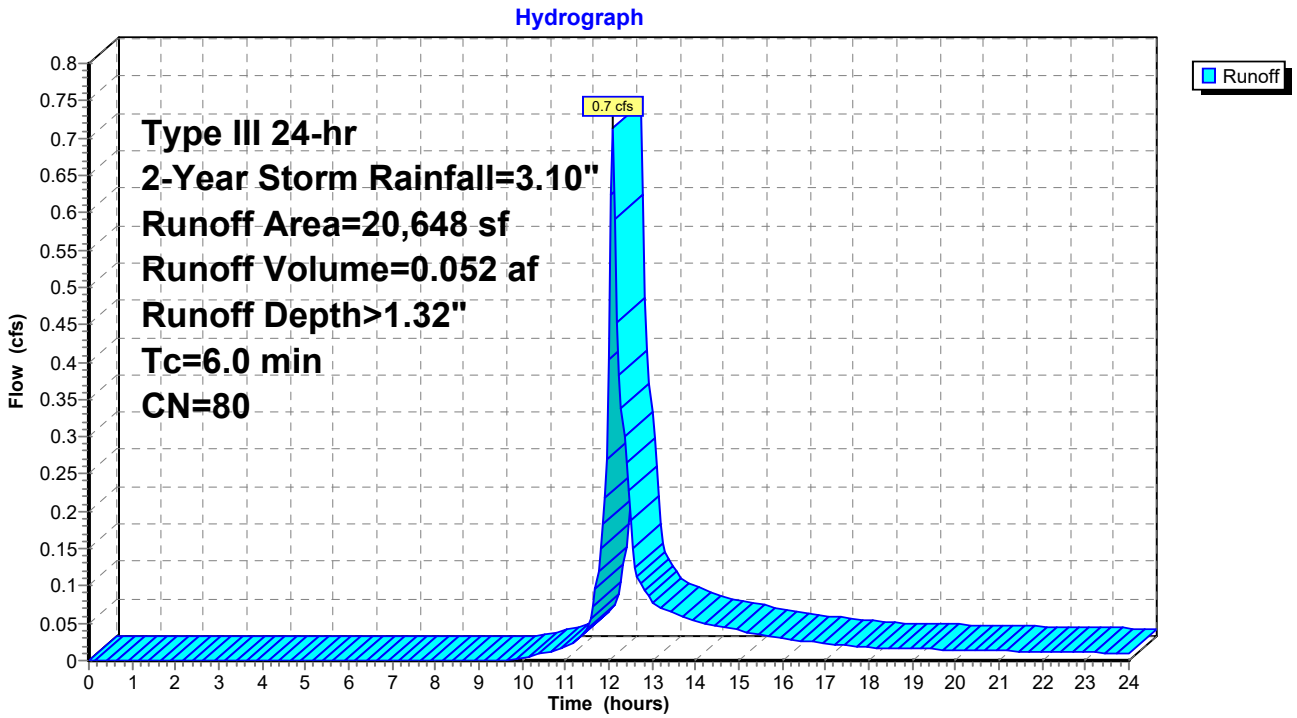
Runoff = 0.7 cfs @ 12.10 hrs, Volume= 0.052 af, Depth> 1.32"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Storm Rainfall=3.10"

	Area (sf)	CN	Description
	10,577	98	Paved parking, HSG A
	1,903	39	Grass cover, Good, HSG A
	7,715	68	Grass cover (parking area), HSG A
*	453	40	Porous Pavement
	20,648	80	Weighted Average
	10,071		48.77% Pervious Area
	10,577		51.23% Impervious Area

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

Subcatchment 3S: PRE-3



Summary for Subcatchment 4S: PRE-4

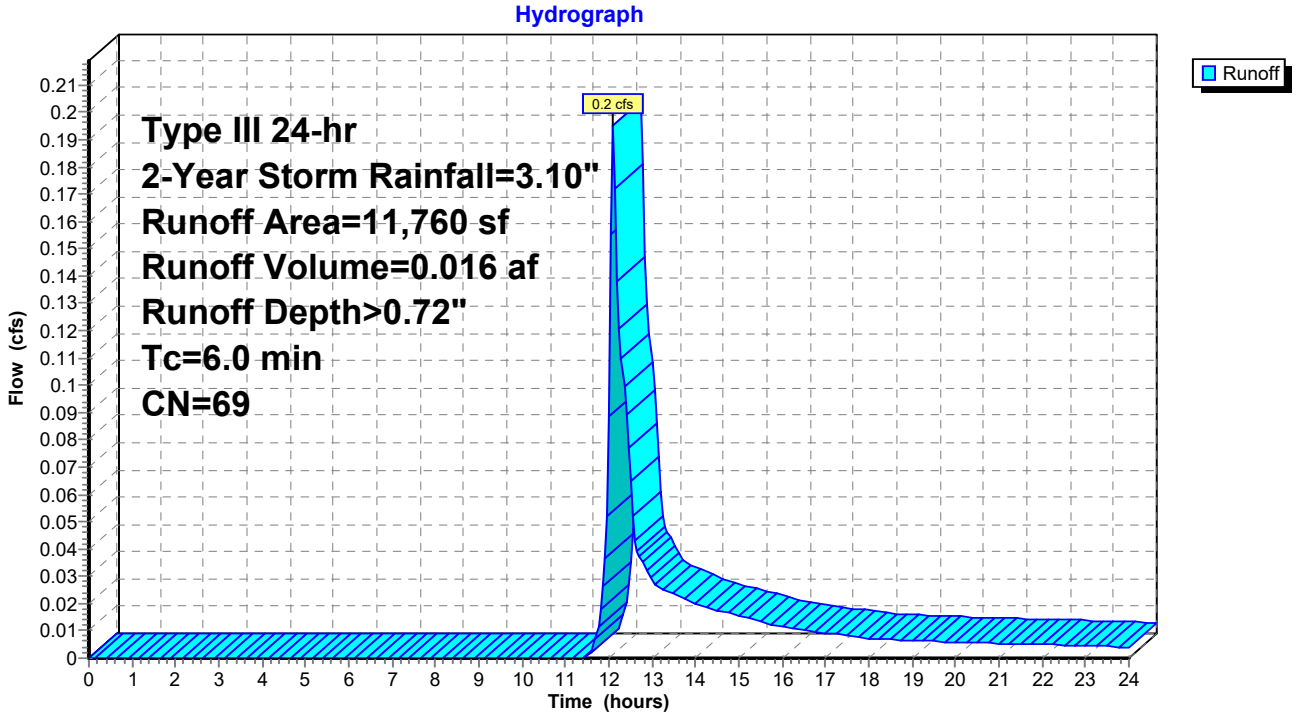
Runoff = 0.2 cfs @ 12.11 hrs, Volume= 0.016 af, Depth> 0.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Storm Rainfall=3.10"

Area (sf)	CN	Description
2,321	98	Paved parking, HSG A
1,957	39	Grass cover, Good, HSG A
7,482	68	Grass cover (parking area), HSG A
11,760	69	Weighted Average
9,439		80.26% Pervious Area
2,321		19.74% Impervious Area

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

Subcatchment 4S: PRE-4



Summary for Subcatchment 5S: PRE-5

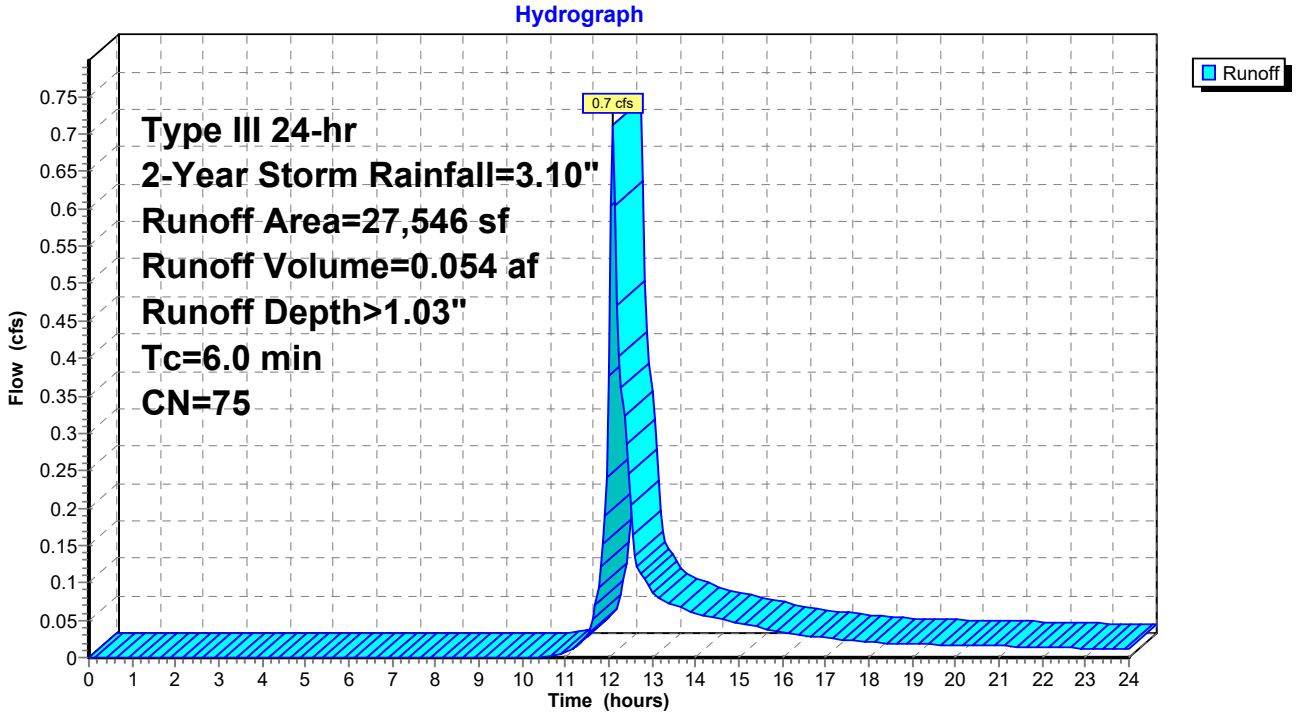
Runoff = 0.7 cfs @ 12.10 hrs, Volume= 0.054 af, Depth> 1.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Storm Rainfall=3.10"

	Area (sf)	CN	Description
	14,114	98	Paved parking, HSG A
	6,700	39	Grass cover, Good, HSG A
	5,072	68	Grass cover (parking area), HSG A
*	1,660	40	Porous Pavement
	27,546	75	Weighted Average
	13,432		48.76% Pervious Area
	14,114		51.24% Impervious Area

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

Subcatchment 5S: PRE-5



Summary for Subcatchment 6S: PRE-6

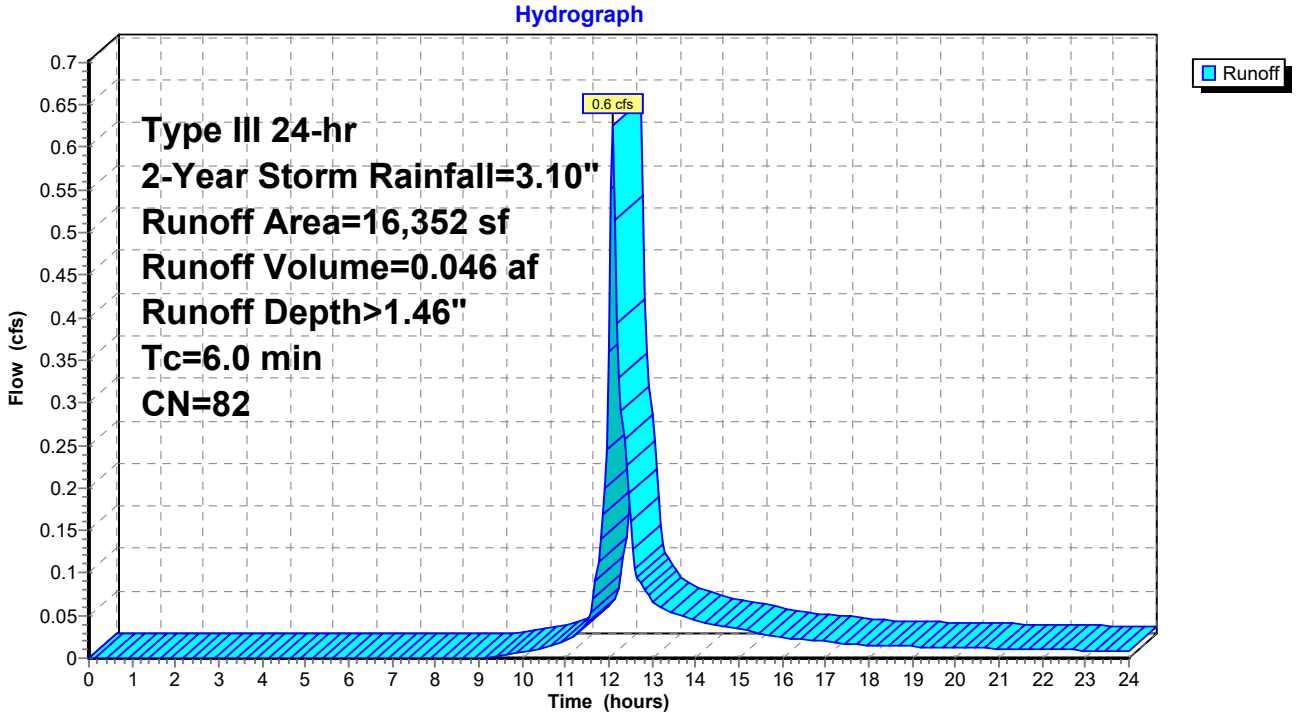
Runoff = 0.6 cfs @ 12.09 hrs, Volume= 0.046 af, Depth> 1.46"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Storm Rainfall=3.10"

	Area (sf)	CN	Description
	11,768	98	Paved parking, HSG A
	3,865	39	Grass cover, Good, HSG A
*	719	40	Porous Pavement
	16,352	82	Weighted Average
	4,584		28.03% Pervious Area
	11,768		71.97% Impervious Area

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

Subcatchment 6S: PRE-6



Summary for Subcatchment 7S: PRE-7

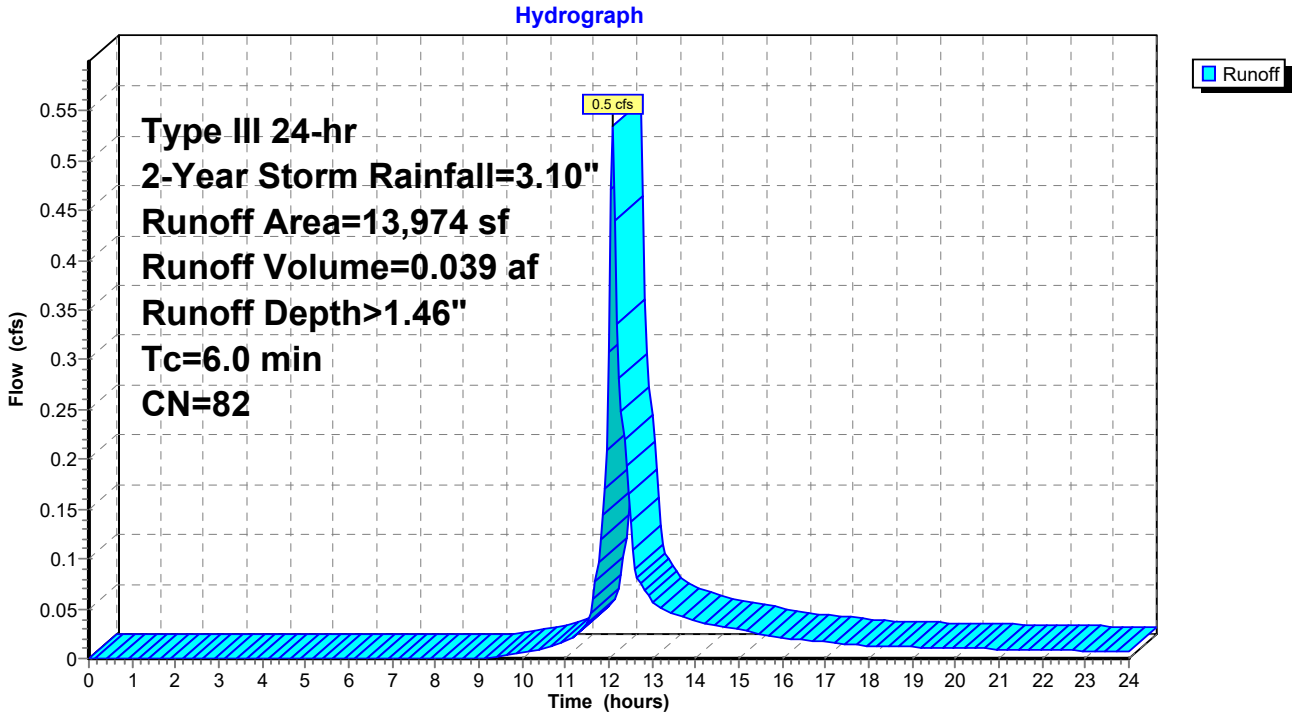
Runoff = 0.5 cfs @ 12.09 hrs, Volume= 0.039 af, Depth> 1.46"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Storm Rainfall=3.10"

Area (sf)	CN	Description
10,235	98	Paved parking, HSG A
3,739	39	Grass cover, Good, HSG A
13,974	82	Weighted Average
3,739		26.76% Pervious Area
10,235		73.24% Impervious Area

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

Subcatchment 7S: PRE-7



Summary for Subcatchment 8S: PRE-8

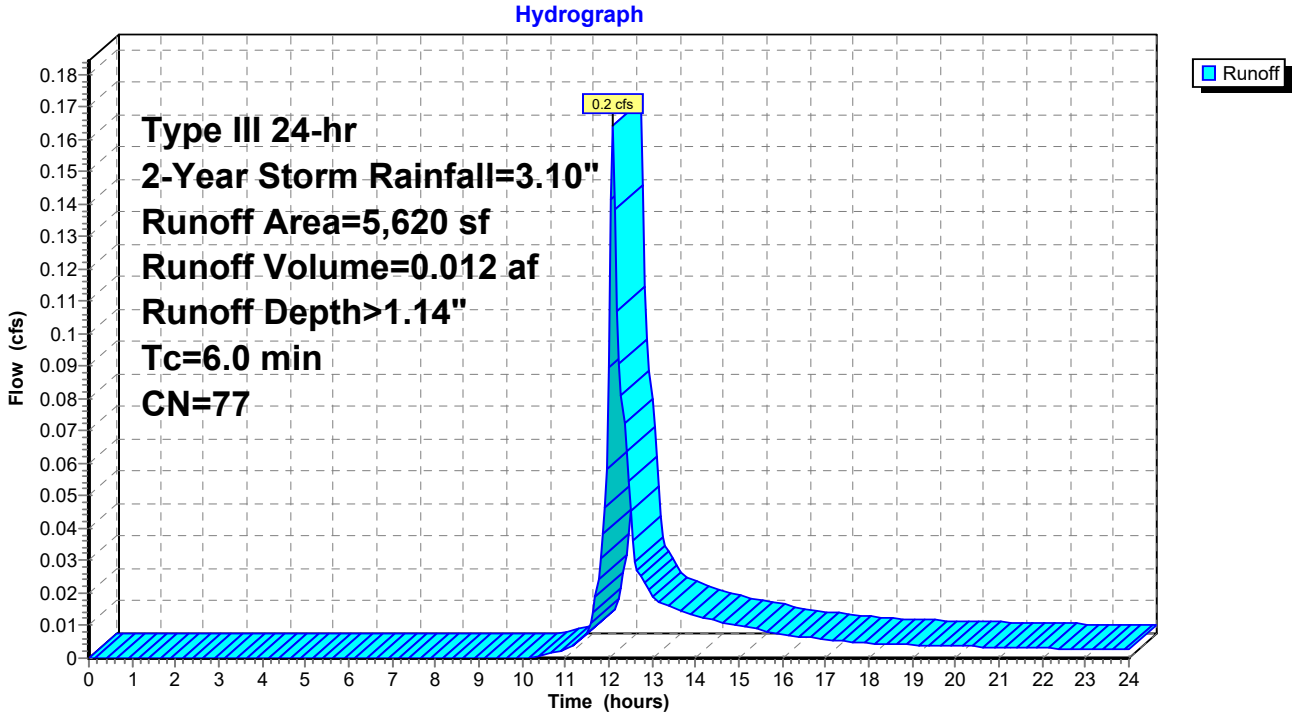
Runoff = 0.2 cfs @ 12.10 hrs, Volume= 0.012 af, Depth> 1.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Storm Rainfall=3.10"

	Area (sf)	CN	Description
	3,664	98	Paved parking, HSG A
	1,857	39	Grass cover, Good, HSG A
*	99	40	Porous Pavement
	5,620	77	Weighted Average
	1,956		34.80% Pervious Area
	3,664		65.20% Impervious Area

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

Subcatchment 8S: PRE-8



Summary for Pond 11P: Ex CB1

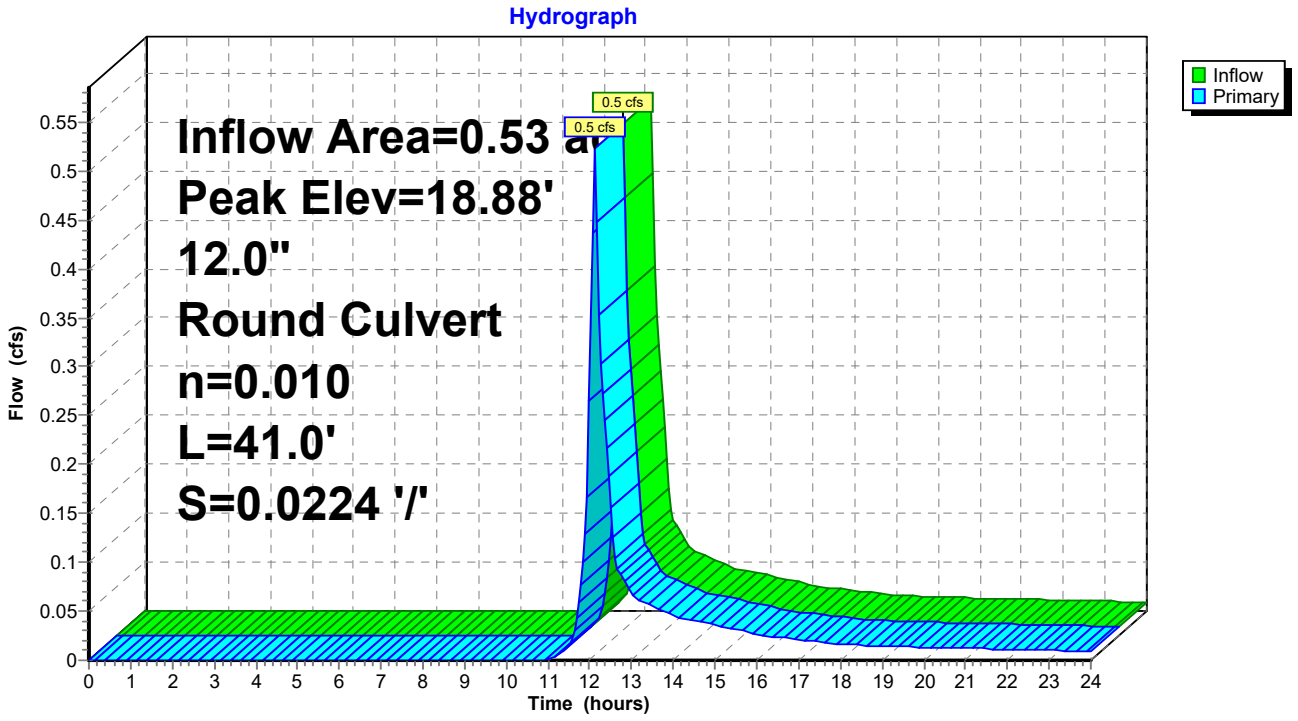
Inflow Area = 0.53 ac, 45.17% Impervious, Inflow Depth > 0.92" for 2-Year Storm event
Inflow = 0.5 cfs @ 12.10 hrs, Volume= 0.041 af
Outflow = 0.5 cfs @ 12.10 hrs, Volume= 0.041 af, Atten= 0%, Lag= 0.0 min
Primary = 0.5 cfs @ 12.10 hrs, Volume= 0.041 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 18.88' @ 12.10 hrs
Flood Elev= 22.02'

Device	Routing	Invert	Outlet Devices
#1	Primary	18.47'	**12.0" Round Culvert** L= 41.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 18.47' / 17.55' S= 0.0224 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.5 cfs @ 12.10 hrs HW=18.88' TW=17.87' (Dynamic Tailwater)
1=Culvert (Inlet Controls 0.5 cfs @ 1.72 fps)

Pond 11P: Ex CB1



Summary for Pond 12P: Ex CB2

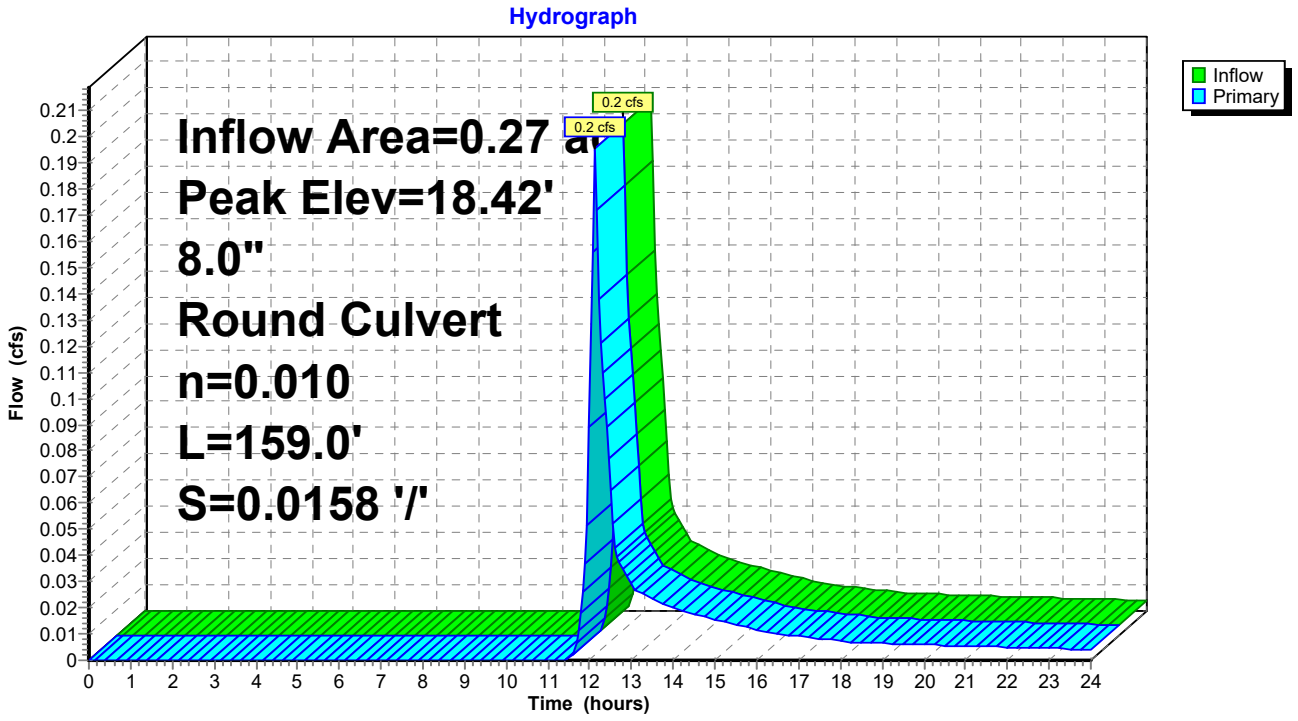
Inflow Area = 0.27 ac, 19.74% Impervious, Inflow Depth > 0.72" for 2-Year Storm event
Inflow = 0.2 cfs @ 12.11 hrs, Volume= 0.016 af
Outflow = 0.2 cfs @ 12.11 hrs, Volume= 0.016 af, Atten= 0%, Lag= 0.0 min
Primary = 0.2 cfs @ 12.11 hrs, Volume= 0.016 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 18.42' @ 12.11 hrs
Flood Elev= 22.15'

Device	Routing	Invert	Outlet Devices
#1	Primary	18.14'	**8.0" Round Culvert** L= 159.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 18.14' / 15.62' S= 0.0158 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=0.2 cfs @ 12.11 hrs HW=18.42' TW=0.00' (Dynamic Tailwater)
1=Culvert (Inlet Controls 0.2 cfs @ 1.41 fps)

Pond 12P: Ex CB2



Summary for Pond 13P: Ex CB7

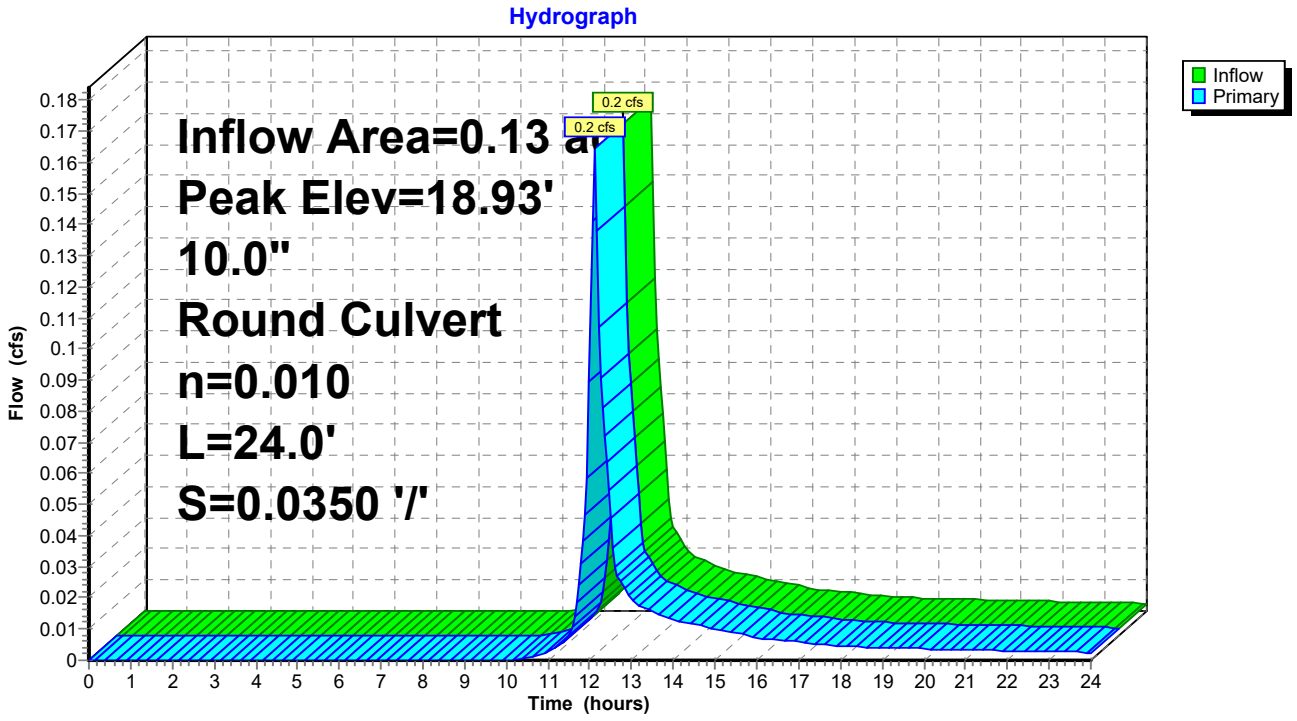
Inflow Area = 0.13 ac, 65.20% Impervious, Inflow Depth > 1.14" for 2-Year Storm event
Inflow = 0.2 cfs @ 12.10 hrs, Volume= 0.012 af
Outflow = 0.2 cfs @ 12.10 hrs, Volume= 0.012 af, Atten= 0%, Lag= 0.0 min
Primary = 0.2 cfs @ 12.10 hrs, Volume= 0.012 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 18.93' @ 12.10 hrs
Flood Elev= 24.51'

Device	Routing	Invert	Outlet Devices
#1	Primary	18.70'	**10.0" Round Culvert** L= 24.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 18.70' / 17.86' S= 0.0350 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf

Primary OutFlow Max=0.2 cfs @ 12.10 hrs HW=18.93' TW=15.45' (Dynamic Tailwater)
1=Culvert (Inlet Controls 0.2 cfs @ 1.30 fps)

Pond 13P: Ex CB7



Summary for Pond 14P: Ex CB4

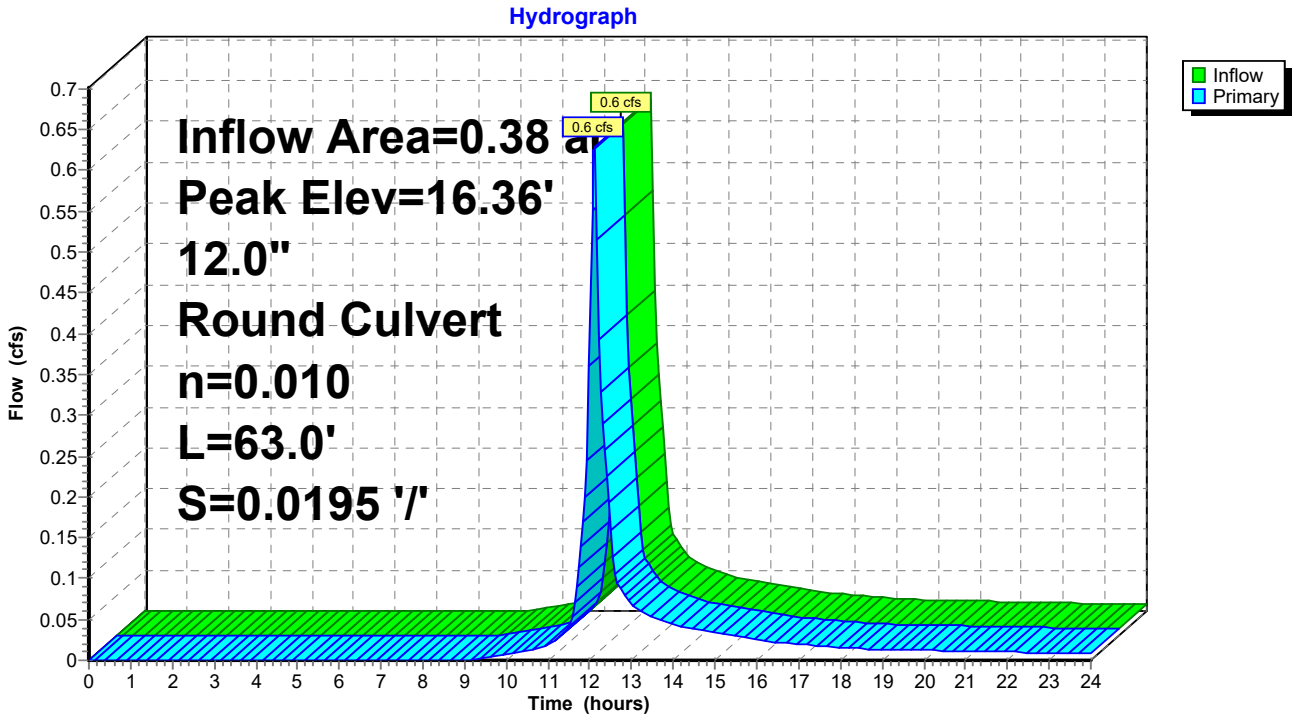
Inflow Area = 0.38 ac, 71.97% Impervious, Inflow Depth > 1.46" for 2-Year Storm event
Inflow = 0.6 cfs @ 12.09 hrs, Volume= 0.046 af
Outflow = 0.6 cfs @ 12.09 hrs, Volume= 0.046 af, Atten= 0%, Lag= 0.0 min
Primary = 0.6 cfs @ 12.09 hrs, Volume= 0.046 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 16.36' @ 12.09 hrs
Flood Elev= 21.96'

Device	Routing	Invert	Outlet Devices
#1	Primary	15.91'	**12.0" Round Culvert** L= 63.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 15.91' / 14.68' S= 0.0195 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.6 cfs @ 12.09 hrs HW=16.36' TW=15.44' (Dynamic Tailwater)
1=Culvert (Inlet Controls 0.6 cfs @ 1.80 fps)

Pond 14P: Ex CB4



Summary for Pond 15P: Ex CB5

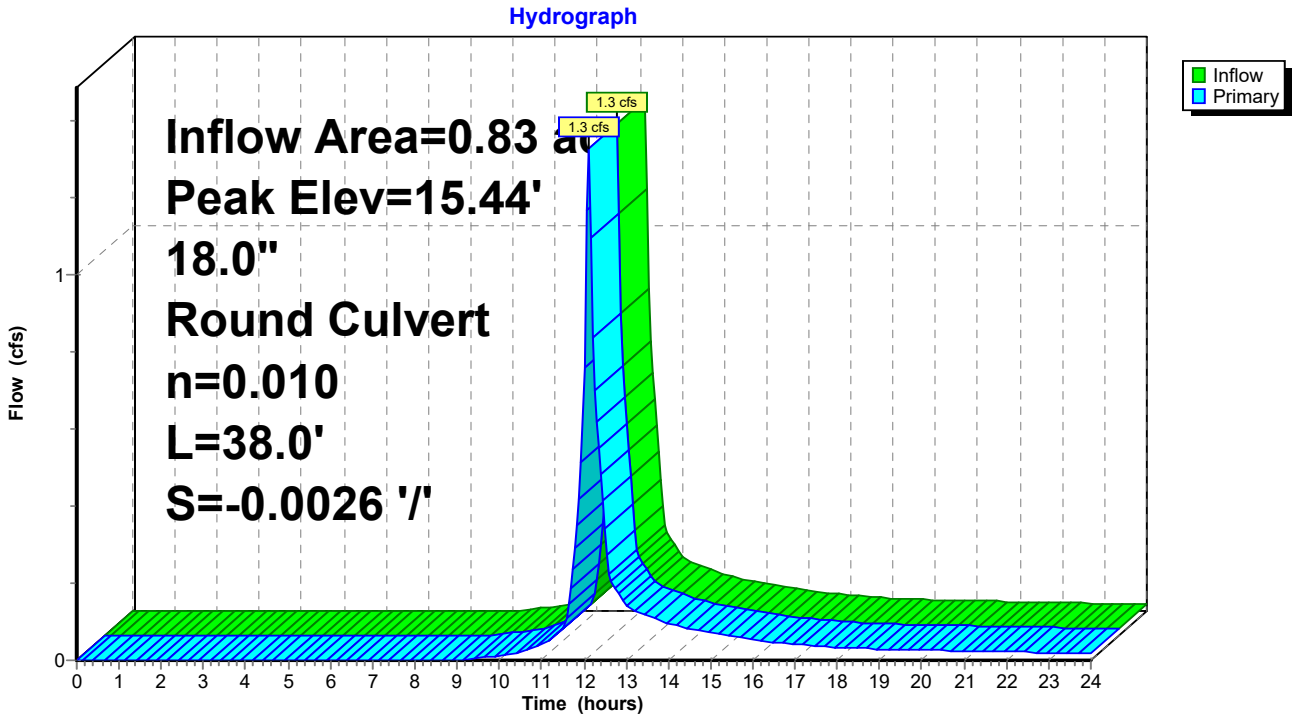
Inflow Area = 0.83 ac, 71.40% Impervious, Inflow Depth > 1.41" for 2-Year Storm event
Inflow = 1.3 cfs @ 12.10 hrs, Volume= 0.097 af
Outflow = 1.3 cfs @ 12.10 hrs, Volume= 0.097 af, Atten= 0%, Lag= 0.0 min
Primary = 1.3 cfs @ 12.10 hrs, Volume= 0.097 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 15.44' @ 12.10 hrs
Flood Elev= 22.70'

Device	Routing	Invert	Outlet Devices
#1	Primary	14.80'	**18.0" Round Culvert** L= 38.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 14.70' / 14.80' S= -0.0026 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=1.3 cfs @ 12.10 hrs HW=15.44' TW=15.22' (Dynamic Tailwater)
1=Culvert (Inlet Controls 1.3 cfs @ 1.76 fps)

Pond 15P: Ex CB5



Summary for Pond 16P: Ex DMH8

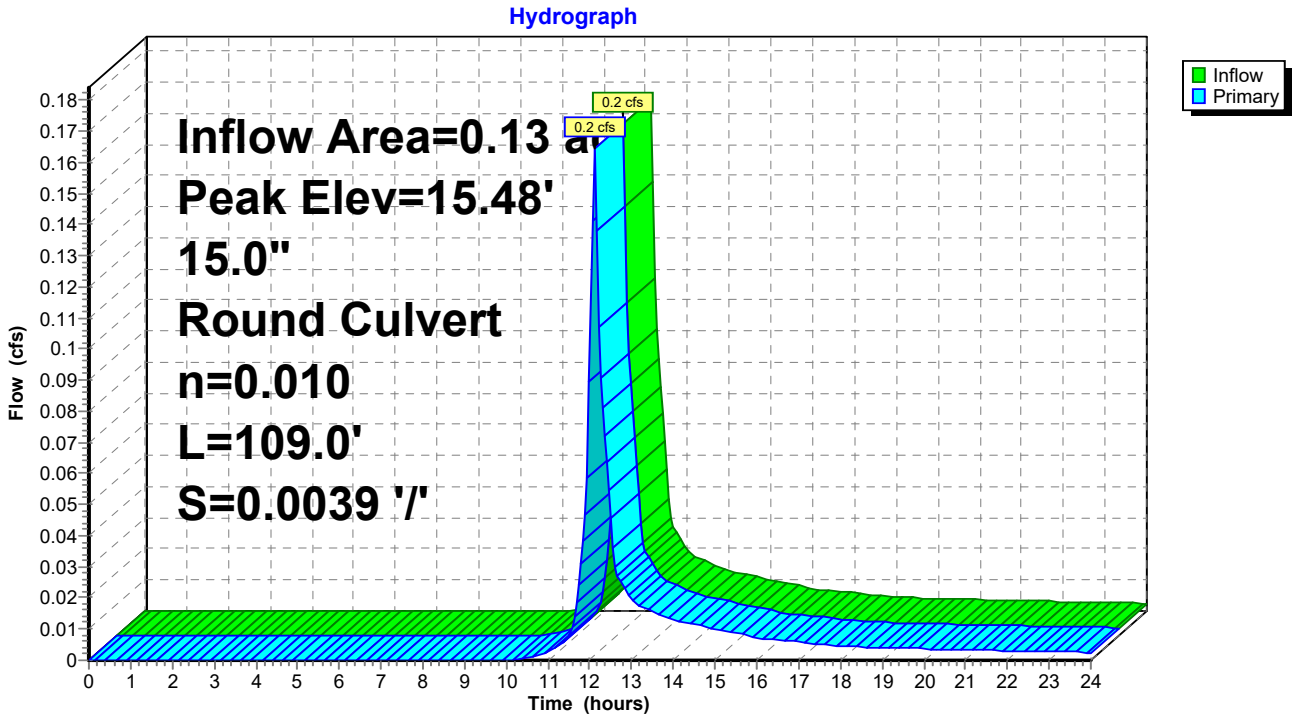
Inflow Area = 0.13 ac, 65.20% Impervious, Inflow Depth > 1.14" for 2-Year Storm event
Inflow = 0.2 cfs @ 12.10 hrs, Volume= 0.012 af
Outflow = 0.2 cfs @ 12.10 hrs, Volume= 0.012 af, Atten= 0%, Lag= 0.0 min
Primary = 0.2 cfs @ 12.10 hrs, Volume= 0.012 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 15.48' @ 12.14 hrs
Flood Elev= 24.67'

Device	Routing	Invert	Outlet Devices
#1	Primary	15.08'	**15.0" Round Culvert** L= 109.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 15.08' / 14.65' S= 0.0039 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=0.1 cfs @ 12.10 hrs HW=15.45' TW=15.44' (Dynamic Tailwater)
1=Culvert (Outlet Controls 0.1 cfs @ 0.28 fps)

Pond 16P: Ex DMH8



Summary for Pond 21P: Ex DMH9

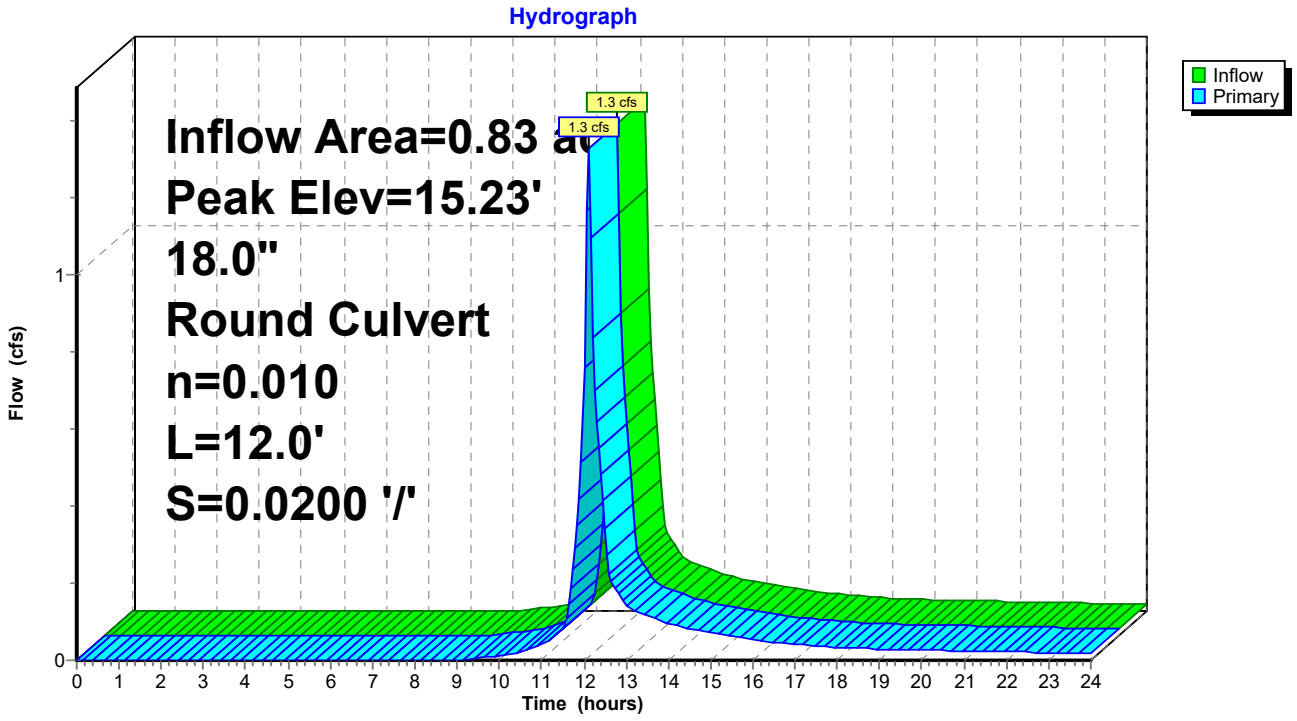
Inflow Area = 0.83 ac, 71.40% Impervious, Inflow Depth > 1.41" for 2-Year Storm event
Inflow = 1.3 cfs @ 12.10 hrs, Volume= 0.097 af
Outflow = 1.3 cfs @ 12.10 hrs, Volume= 0.097 af, Atten= 0%, Lag= 0.0 min
Primary = 1.3 cfs @ 12.10 hrs, Volume= 0.097 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 15.23' @ 12.11 hrs
Flood Elev= 23.72'

Device	Routing	Invert	Outlet Devices
#1	Primary	14.62'	**18.0" Round Culvert** L= 12.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 14.62' / 14.38' S= 0.0200 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=1.2 cfs @ 12.10 hrs HW=15.22' TW=15.00' (Dynamic Tailwater)
1=Culvert (Outlet Controls 1.2 cfs @ 2.61 fps)

Pond 21P: Ex DMH9



Summary for Pond 22P: Ex DMH3

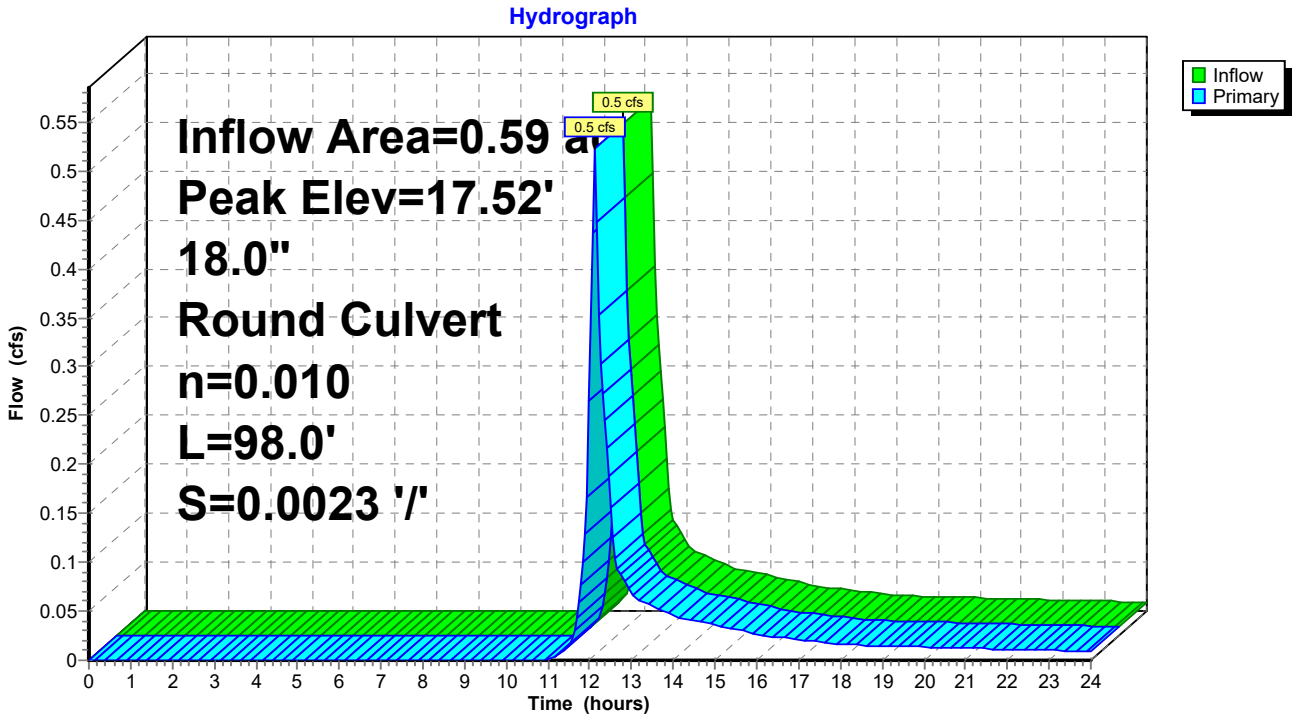
Inflow Area = 0.59 ac, 40.84% Impervious, Inflow Depth > 0.83" for 2-Year Storm event
Inflow = 0.5 cfs @ 12.10 hrs, Volume= 0.041 af
Outflow = 0.5 cfs @ 12.10 hrs, Volume= 0.041 af, Atten= 0%, Lag= 0.0 min
Primary = 0.5 cfs @ 12.10 hrs, Volume= 0.041 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 17.52' @ 12.10 hrs
Flood Elev= 24.92'

Device	Routing	Invert	Outlet Devices
#1	Primary	17.12'	**18.0" Round Culvert** L= 98.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 17.12' / 16.89' S= 0.0023 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=0.5 cfs @ 12.10 hrs HW=17.51' TW=17.16' (Dynamic Tailwater)
1=Culvert (Barrel Controls 0.5 cfs @ 2.11 fps)

Pond 22P: Ex DMH3



Summary for Pond 23P: Ex CB3

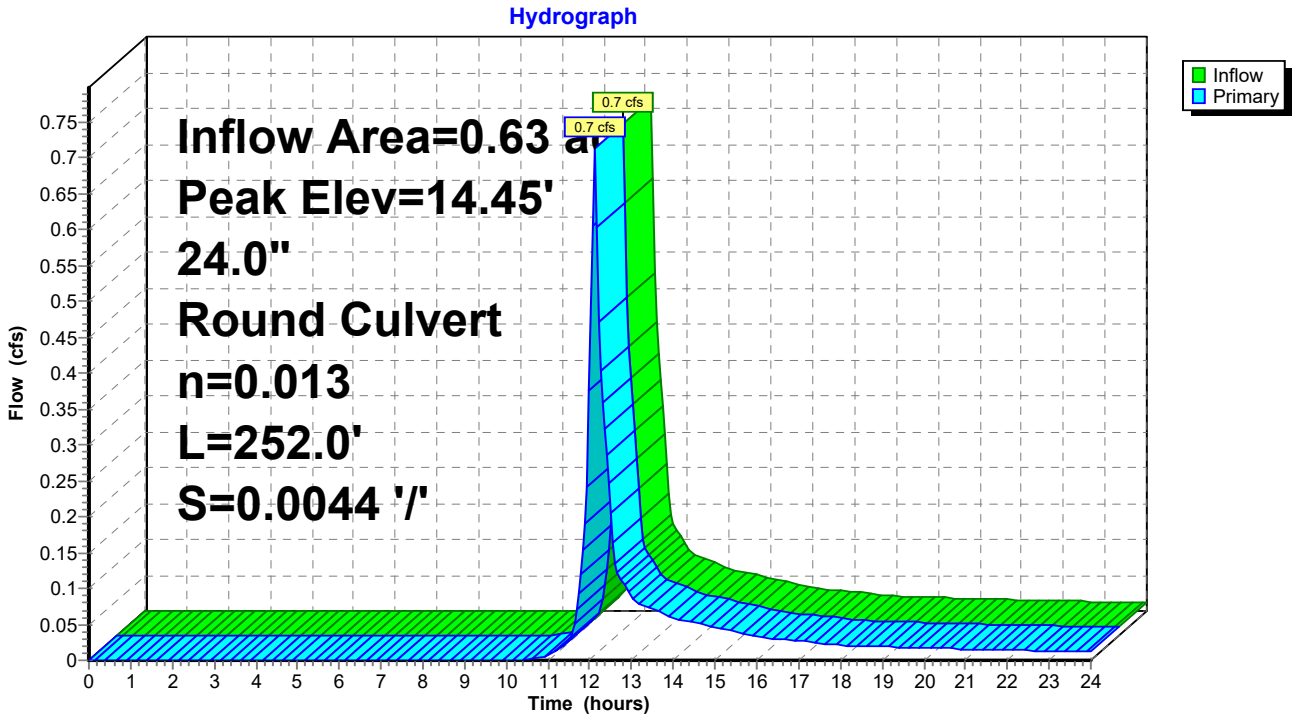
Inflow Area = 0.63 ac, 51.24% Impervious, Inflow Depth > 1.03" for 2-Year Storm event
Inflow = 0.7 cfs @ 12.10 hrs, Volume= 0.054 af
Outflow = 0.7 cfs @ 12.10 hrs, Volume= 0.054 af, Atten= 0%, Lag= 0.0 min
Primary = 0.7 cfs @ 12.10 hrs, Volume= 0.054 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 14.45' @ 12.10 hrs
Flood Elev= 23.60'

Device	Routing	Invert	Outlet Devices
#1	Primary	14.05'	**24.0" Round Culvert** L= 252.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 14.05' / 12.94' S= 0.0044 '/' Cc= 0.900 n= 0.013 Cast iron, coated, Flow Area= 3.14 sf

Primary OutFlow Max=0.7 cfs @ 12.10 hrs HW=14.45' TW=0.00' (Dynamic Tailwater)
1=Culvert (Barrel Controls 0.7 cfs @ 2.40 fps)

Pond 23P: Ex CB3



Summary for Pond 24P: Ex DMH2

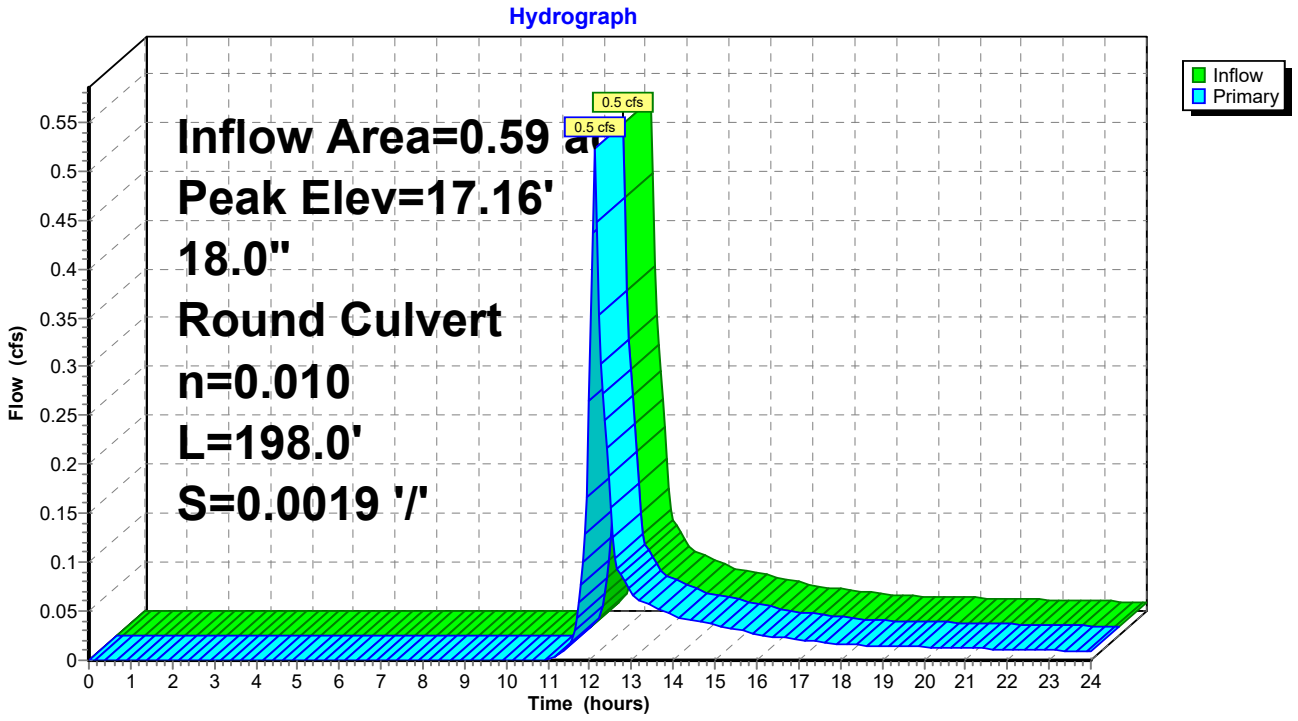
Inflow Area = 0.59 ac, 40.84% Impervious, Inflow Depth > 0.83" for 2-Year Storm event
Inflow = 0.5 cfs @ 12.10 hrs, Volume= 0.041 af
Outflow = 0.5 cfs @ 12.10 hrs, Volume= 0.041 af, Atten= 0%, Lag= 0.0 min
Primary = 0.5 cfs @ 12.10 hrs, Volume= 0.041 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 17.16' @ 12.10 hrs
Flood Elev= 25.38'

Device	Routing	Invert	Outlet Devices
#1	Primary	16.75'	**18.0" Round Culvert** L= 198.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 16.75' / 16.38' S= 0.0019 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=0.5 cfs @ 12.10 hrs HW=17.16' TW=15.80' (Dynamic Tailwater)
1=Culvert (Barrel Controls 0.5 cfs @ 2.02 fps)

Pond 24P: Ex DMH2



Summary for Pond 25P: Ex DMH5

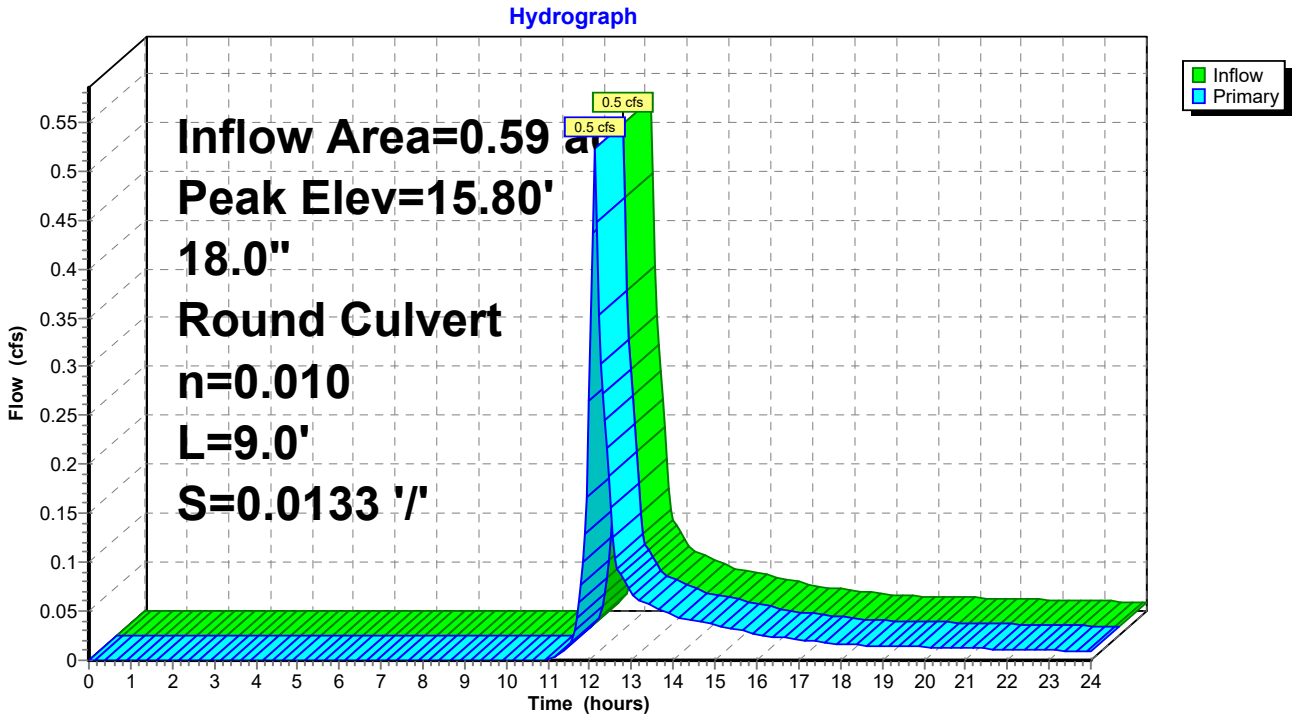
Inflow Area = 0.59 ac, 40.84% Impervious, Inflow Depth > 0.83" for 2-Year Storm event
Inflow = 0.5 cfs @ 12.10 hrs, Volume= 0.041 af
Outflow = 0.5 cfs @ 12.10 hrs, Volume= 0.041 af, Atten= 0%, Lag= 0.0 min
Primary = 0.5 cfs @ 12.10 hrs, Volume= 0.041 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 15.80' @ 12.10 hrs
Flood Elev= 23.84'

Device	Routing	Invert	Outlet Devices
#1	Primary	15.44'	**18.0" Round Culvert** L= 9.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 15.44' / 15.32' S= 0.0133 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=0.5 cfs @ 12.10 hrs HW=15.80' TW=15.00' (Dynamic Tailwater)
1=Culvert (Inlet Controls 0.5 cfs @ 1.61 fps)

Pond 25P: Ex DMH5



Summary for Pond 26P: Ex DMH6

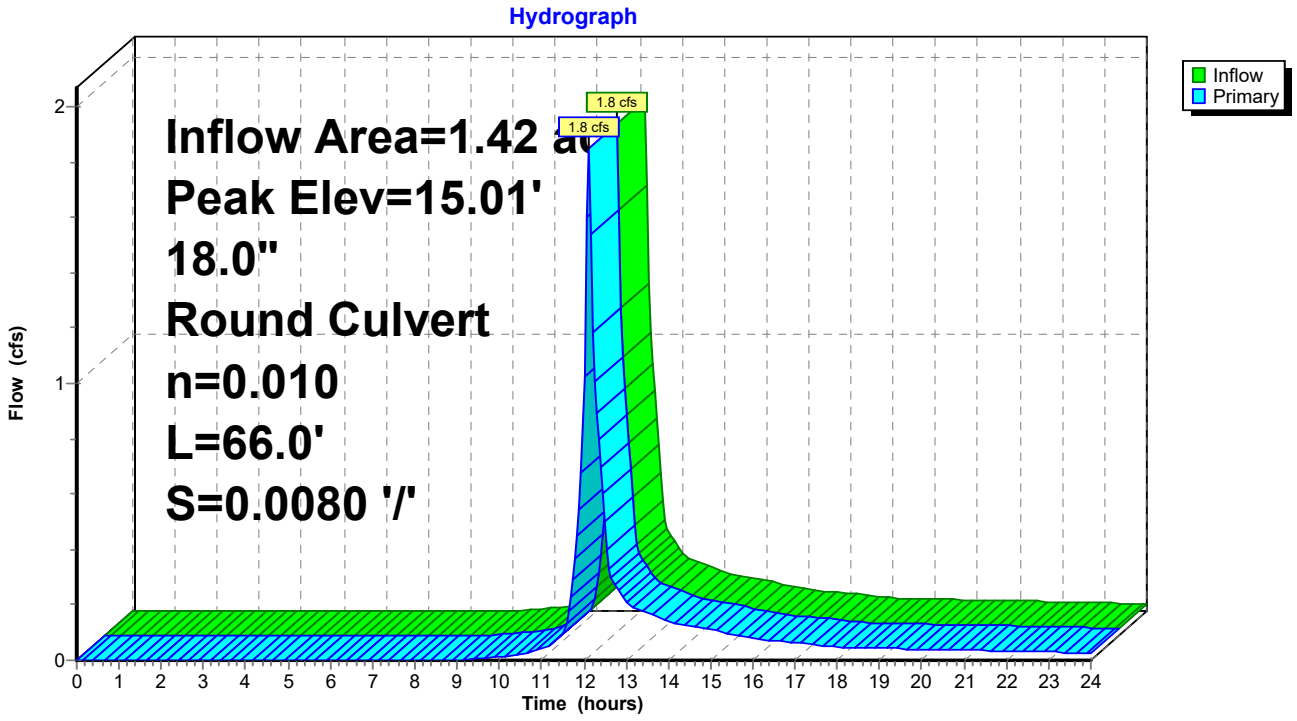
Inflow Area = 1.42 ac, 58.66% Impervious, Inflow Depth > 1.16" for 2-Year Storm event
Inflow = 1.8 cfs @ 12.10 hrs, Volume= 0.137 af
Outflow = 1.8 cfs @ 12.10 hrs, Volume= 0.137 af, Atten= 0%, Lag= 0.0 min
Primary = 1.8 cfs @ 12.10 hrs, Volume= 0.137 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 15.01' @ 12.10 hrs
Flood Elev= 23.95'

Device	Routing	Invert	Outlet Devices
#1	Primary	14.30'	**18.0" Round Culvert** L= 66.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 14.30' / 13.77' S= 0.0080 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=1.8 cfs @ 12.10 hrs HW=15.00' TW=14.53' (Dynamic Tailwater)
1=Culvert (Outlet Controls 1.8 cfs @ 3.25 fps)

Pond 26P: Ex DMH6



Summary for Pond 27P: Ex DMH7

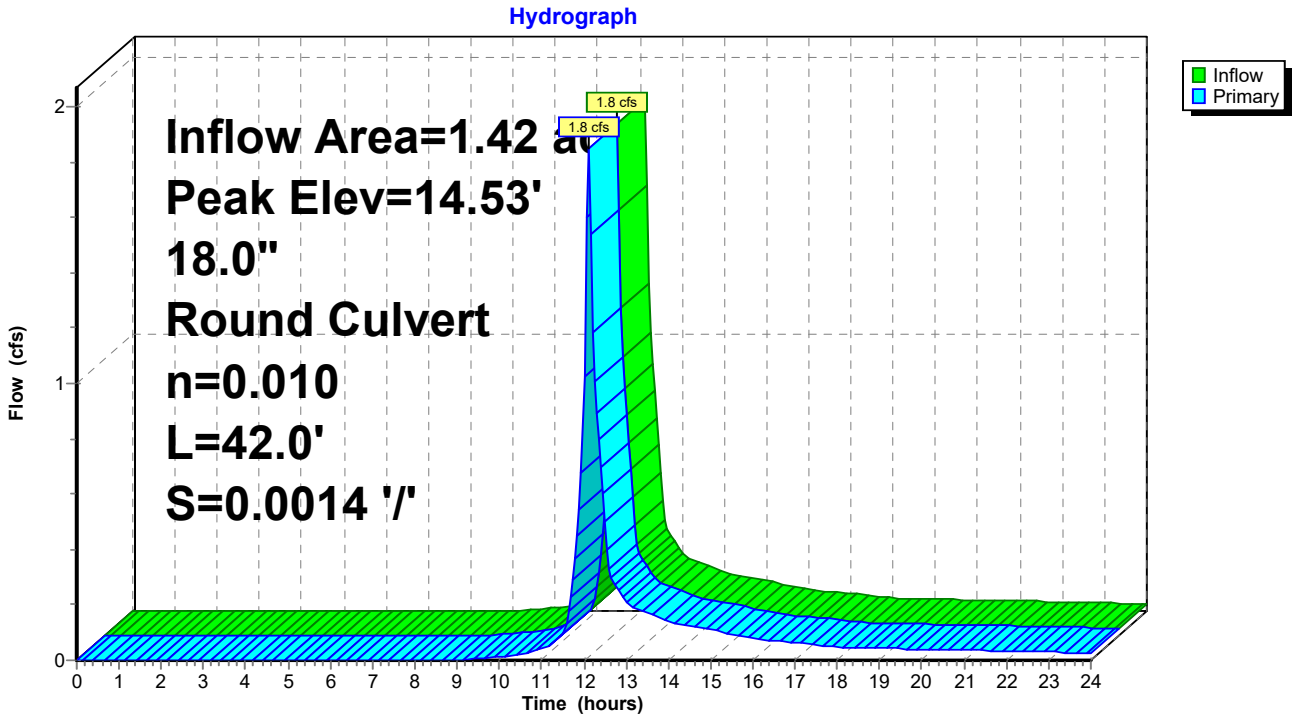
Inflow Area = 1.42 ac, 58.66% Impervious, Inflow Depth > 1.16" for 2-Year Storm event
Inflow = 1.8 cfs @ 12.10 hrs, Volume= 0.137 af
Outflow = 1.8 cfs @ 12.10 hrs, Volume= 0.137 af, Atten= 0%, Lag= 0.0 min
Primary = 1.8 cfs @ 12.10 hrs, Volume= 0.137 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 14.53' @ 12.10 hrs
Flood Elev= 24.90'

Device	Routing	Invert	Outlet Devices
#1	Primary	13.70'	**18.0" Round Culvert** L= 42.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 13.70' / 13.64' S= 0.0014 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=1.8 cfs @ 12.10 hrs HW=14.53' TW=0.00' (Dynamic Tailwater)
1=Culvert (Barrel Controls 1.8 cfs @ 2.65 fps)

Pond 27P: Ex DMH7



Summary for Pond 29P: Ex DMH4

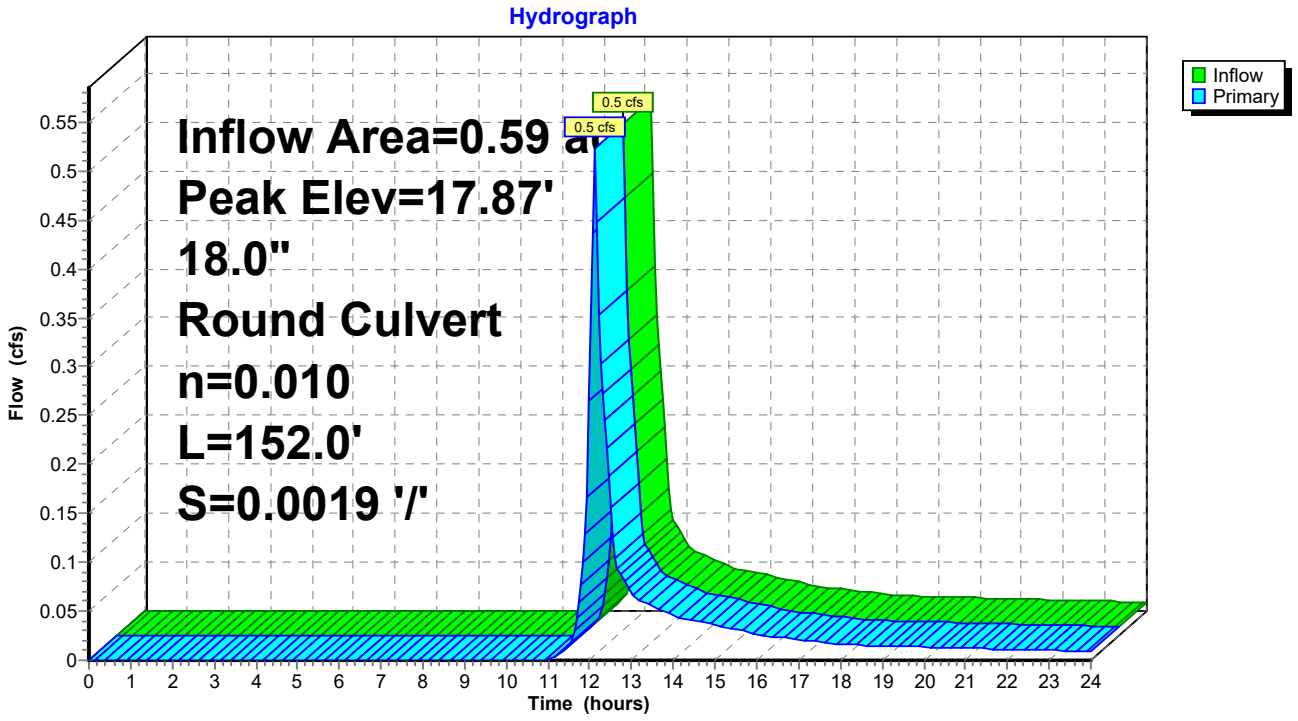
Inflow Area = 0.59 ac, 40.84% Impervious, Inflow Depth > 0.83" for 2-Year Storm event
Inflow = 0.5 cfs @ 12.10 hrs, Volume= 0.041 af
Outflow = 0.5 cfs @ 12.10 hrs, Volume= 0.041 af, Atten= 0%, Lag= 0.0 min
Primary = 0.5 cfs @ 12.10 hrs, Volume= 0.041 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 17.87' @ 12.11 hrs
Flood Elev= 23.44'

Device	Routing	Invert	Outlet Devices
#1	Primary	17.46'	**18.0" Round Culvert** L= 152.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 17.46' / 17.17' S= 0.0019 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=0.5 cfs @ 12.10 hrs HW=17.87' TW=17.51' (Dynamic Tailwater)
1=Culvert (Outlet Controls 0.5 cfs @ 1.92 fps)

Pond 29P: Ex DMH4

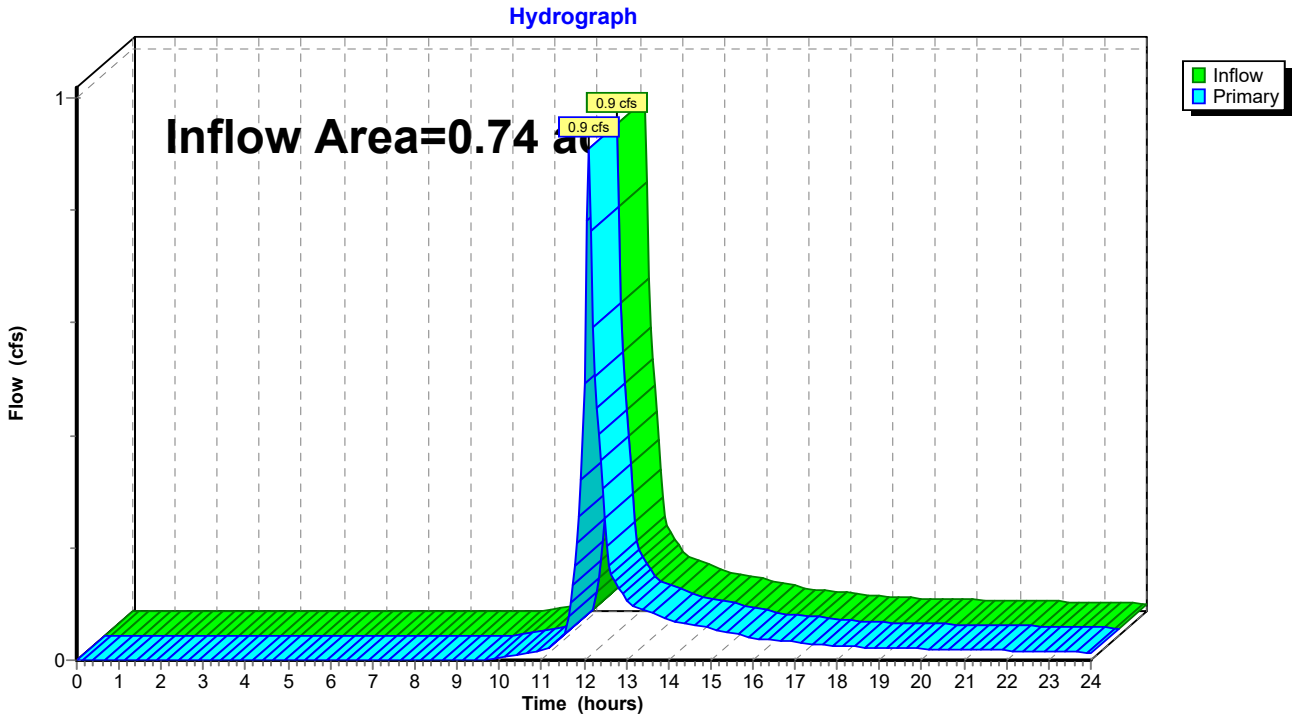


Summary for Link SP1: Forest Ave Storm Drain

Inflow Area = 0.74 ac, 39.80% Impervious, Inflow Depth > 1.11" for 2-Year Storm event
Inflow = 0.9 cfs @ 12.10 hrs, Volume= 0.069 af
Primary = 0.9 cfs @ 12.10 hrs, Volume= 0.069 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link SP1: Forest Ave Storm Drain

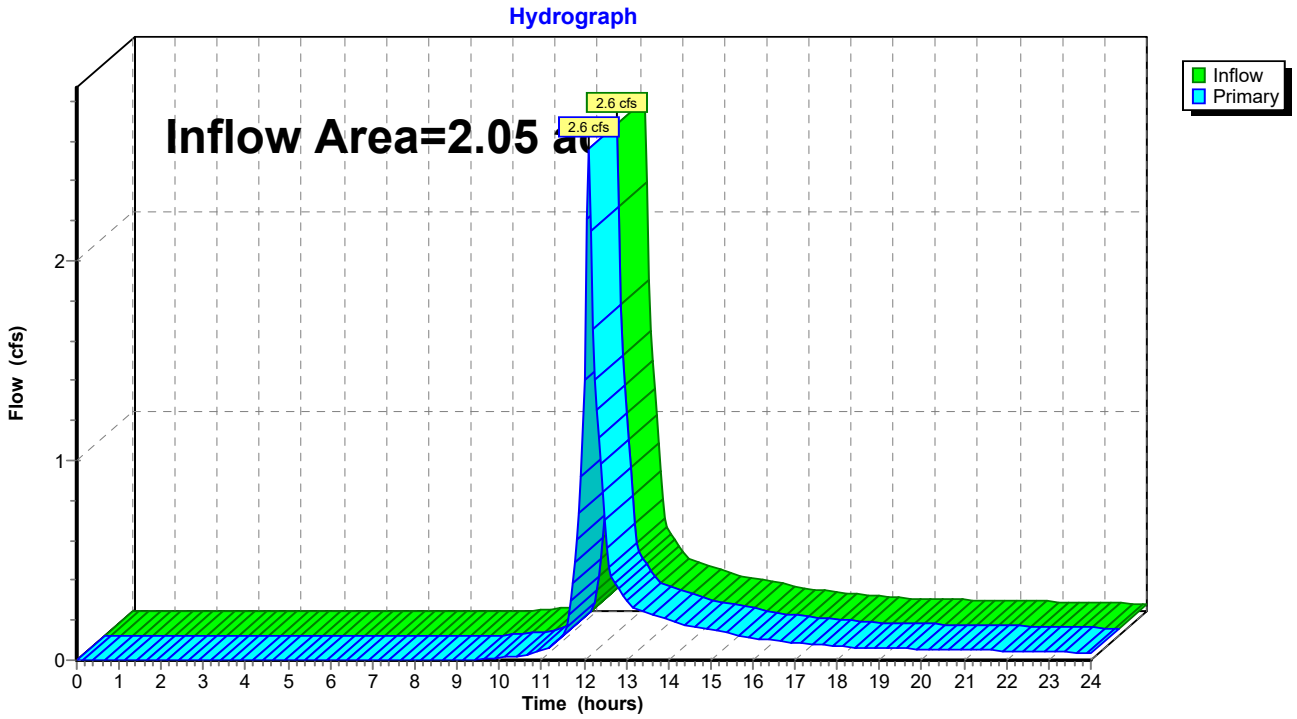


Summary for Link SP2: Combined Sewer

Inflow Area = 2.05 ac, 56.37% Impervious, Inflow Depth > 1.12" for 2-Year Storm event
Inflow = 2.6 cfs @ 12.10 hrs, Volume= 0.191 af
Primary = 2.6 cfs @ 12.10 hrs, Volume= 0.191 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link SP2: Combined Sewer



Summary for Subcatchment 0S: PRE-0

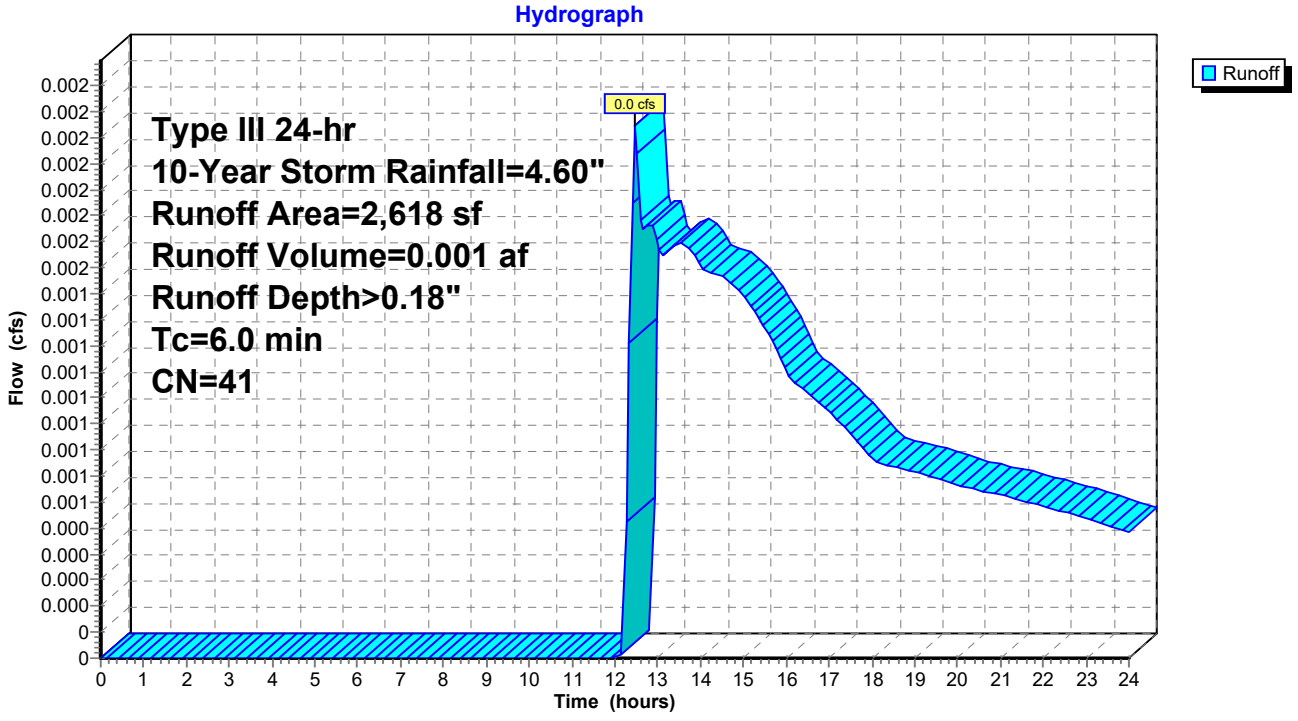
Runoff = 0.0 cfs @ 12.48 hrs, Volume= 0.001 af, Depth> 0.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Storm Rainfall=4.60"

	Area (sf)	CN	Description
	70	98	Paved parking, HSG A
	1,403	39	Grass cover, Good, HSG A
*	1,145	40	Porous Pavement
	2,618	41	Weighted Average
	2,548		97.33% Pervious Area
	70		2.67% Impervious Area

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

Subcatchment 0S: PRE-0



Summary for Subcatchment 1S: PRE-1

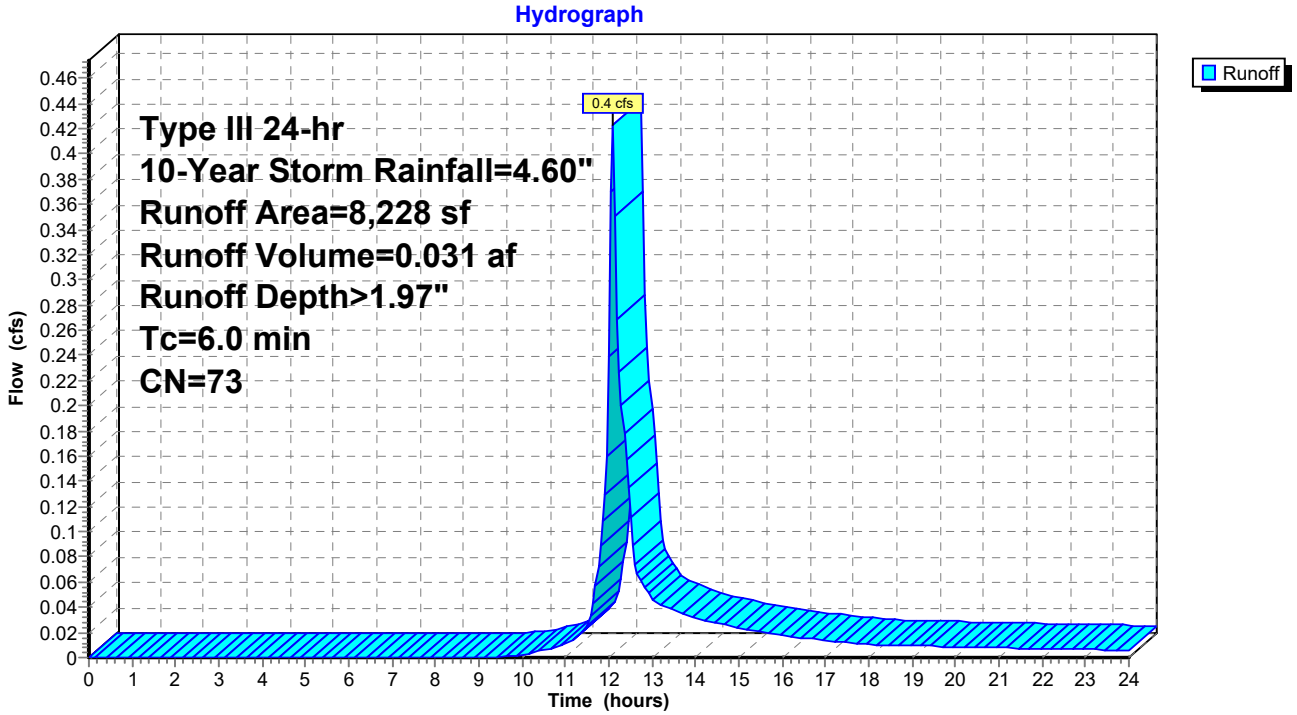
Runoff = 0.4 cfs @ 12.10 hrs, Volume= 0.031 af, Depth> 1.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Storm Rainfall=4.60"

	Area (sf)	CN	Description
	4,083	98	Paved parking, HSG A
	1,673	39	Grass cover, Good, HSG A
*	1,374	68	Grass cover (parking area), HSG A
*	1,098	40	Porous Pavement
	8,228	73	Weighted Average
	4,145		50.38% Pervious Area
	4,083		49.62% Impervious Area

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

Subcatchment 1S: PRE-1



Summary for Subcatchment 2S: PRE-2

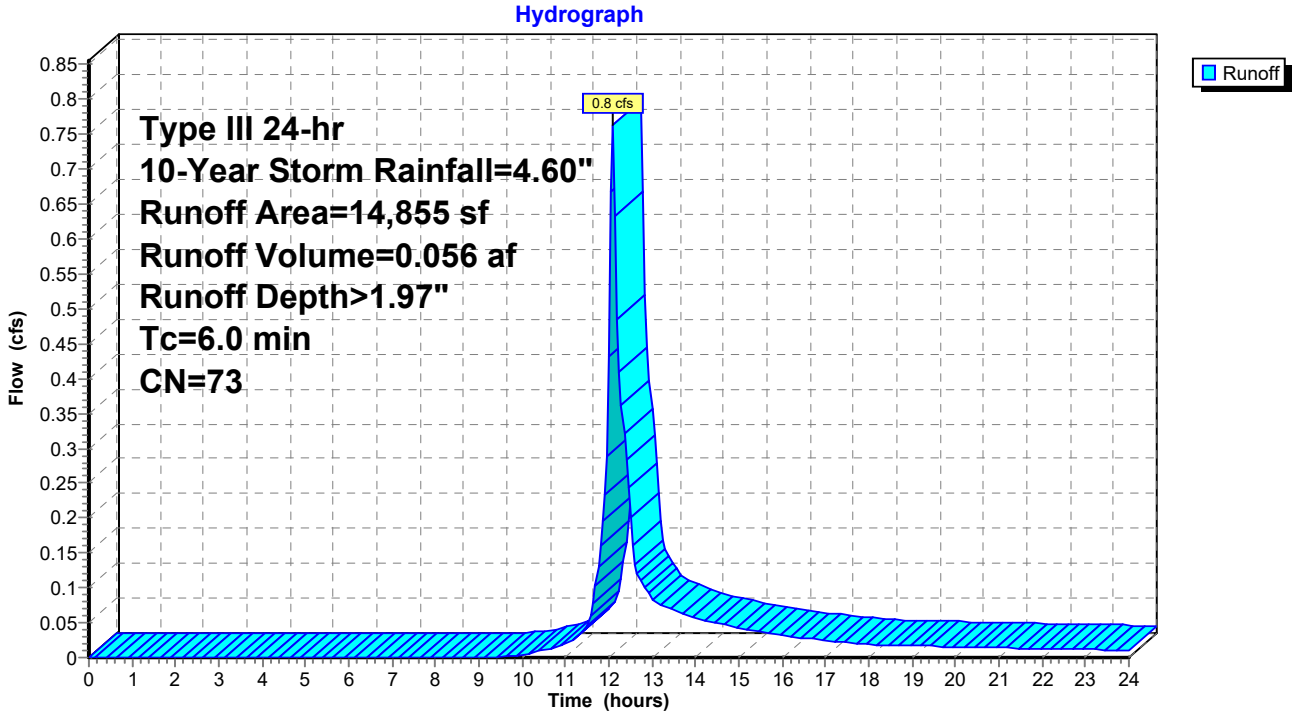
Runoff = 0.8 cfs @ 12.10 hrs, Volume= 0.056 af, Depth> 1.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Storm Rainfall=4.60"

	Area (sf)	CN	Description
	6,344	98	Paved parking, HSG A
	2,948	39	Grass cover, Good, HSG A
	4,408	68	Grass cover (parking area), HSG A
*	1,155	40	Porous Pavement
	14,855	73	Weighted Average
	8,511		57.29% Pervious Area
	6,344		42.71% Impervious Area

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

Subcatchment 2S: PRE-2



Summary for Subcatchment 3S: PRE-3

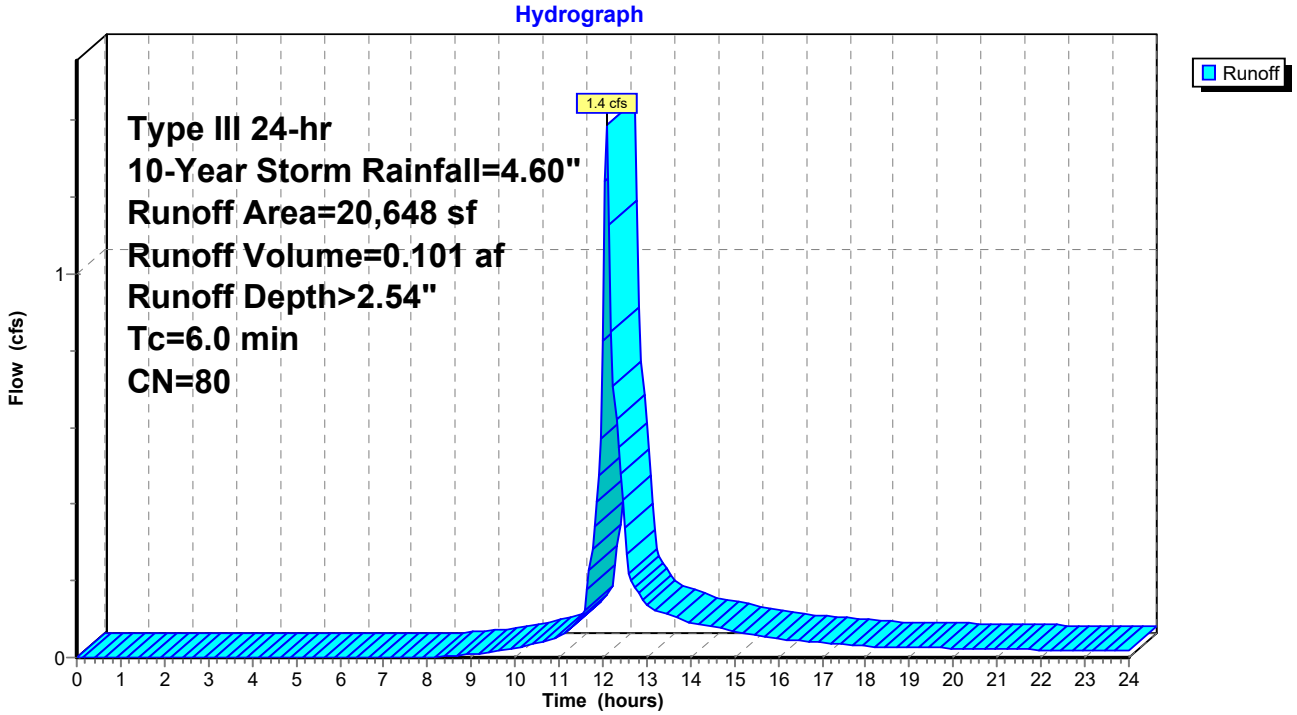
Runoff = 1.4 cfs @ 12.09 hrs, Volume= 0.101 af, Depth> 2.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Storm Rainfall=4.60"

	Area (sf)	CN	Description
	10,577	98	Paved parking, HSG A
	1,903	39	Grass cover, Good, HSG A
	7,715	68	Grass cover (parking area), HSG A
*	453	40	Porous Pavement
	20,648	80	Weighted Average
	10,071		48.77% Pervious Area
	10,577		51.23% Impervious Area

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

Subcatchment 3S: PRE-3



Summary for Subcatchment 4S: PRE-4

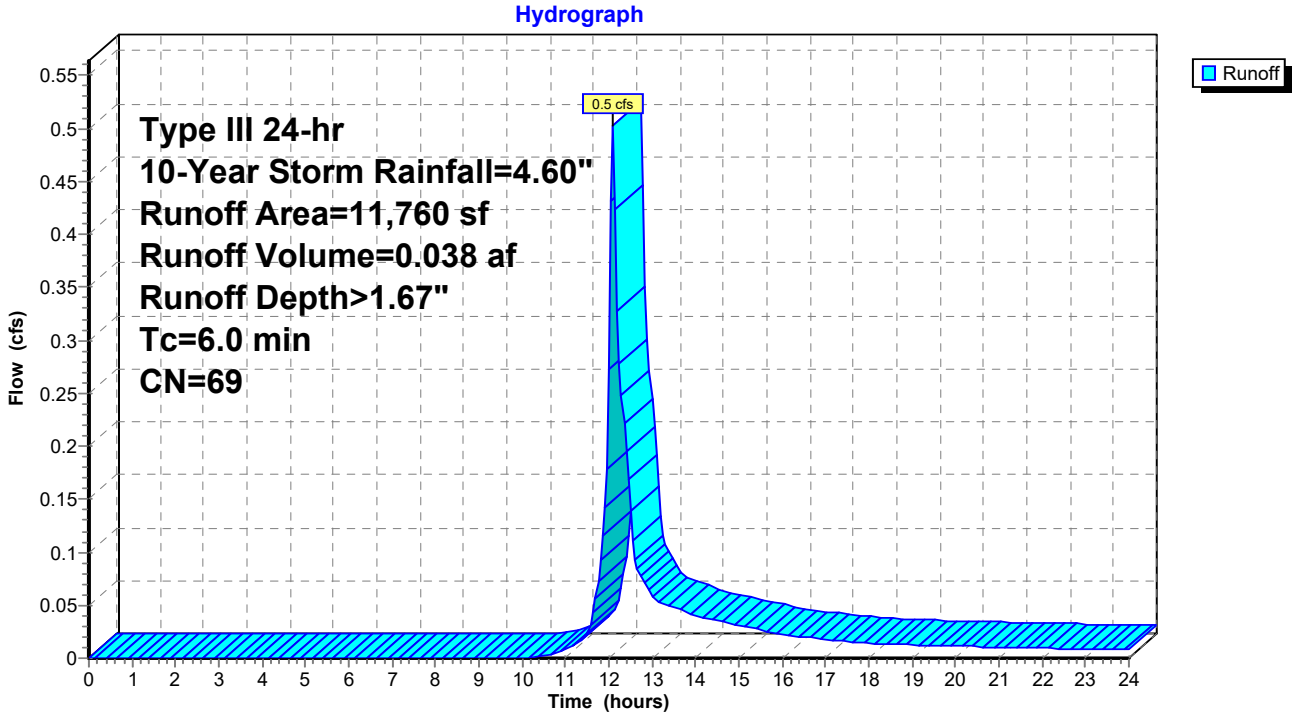
Runoff = 0.5 cfs @ 12.10 hrs, Volume= 0.038 af, Depth> 1.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Storm Rainfall=4.60"

Area (sf)	CN	Description
2,321	98	Paved parking, HSG A
1,957	39	Grass cover, Good, HSG A
7,482	68	Grass cover (parking area), HSG A
11,760	69	Weighted Average
9,439		80.26% Pervious Area
2,321		19.74% Impervious Area

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

Subcatchment 4S: PRE-4



Summary for Subcatchment 5S: PRE-5

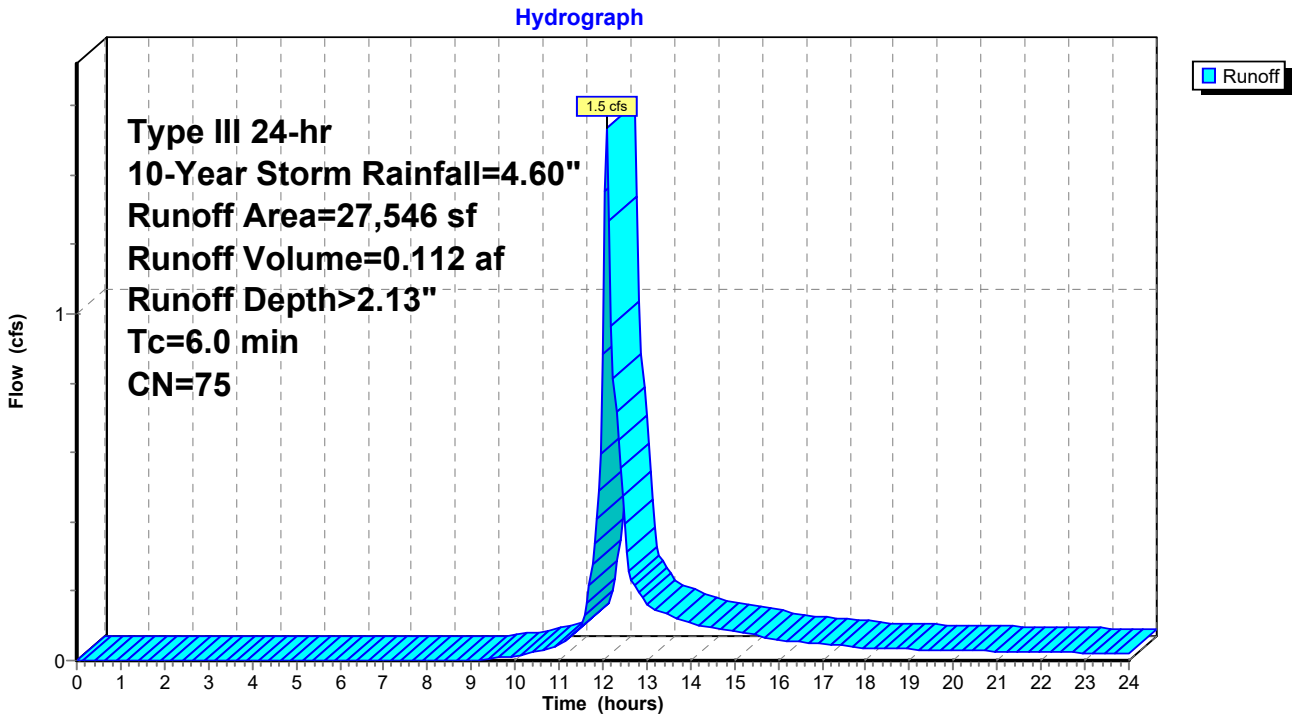
Runoff = 1.5 cfs @ 12.10 hrs, Volume= 0.112 af, Depth> 2.13"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Storm Rainfall=4.60"

	Area (sf)	CN	Description
	14,114	98	Paved parking, HSG A
	6,700	39	Grass cover, Good, HSG A
	5,072	68	Grass cover (parking area), HSG A
*	1,660	40	Porous Pavement
	27,546	75	Weighted Average
	13,432		48.76% Pervious Area
	14,114		51.24% Impervious Area

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

Subcatchment 5S: PRE-5



Summary for Subcatchment 6S: PRE-6

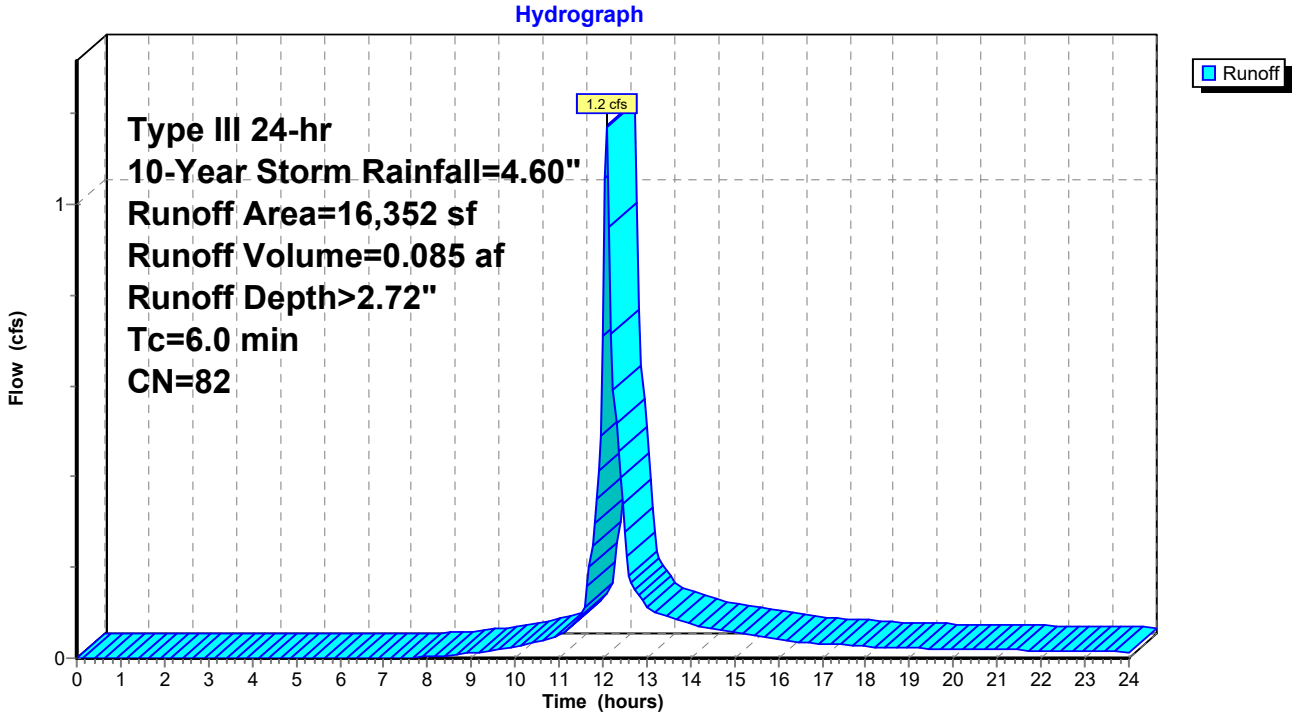
Runoff = 1.2 cfs @ 12.09 hrs, Volume= 0.085 af, Depth> 2.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Storm Rainfall=4.60"

	Area (sf)	CN	Description
	11,768	98	Paved parking, HSG A
	3,865	39	Grass cover, Good, HSG A
*	719	40	Porous Pavement
	16,352	82	Weighted Average
	4,584		28.03% Pervious Area
	11,768		71.97% Impervious Area

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

Subcatchment 6S: PRE-6



Summary for Subcatchment 7S: PRE-7

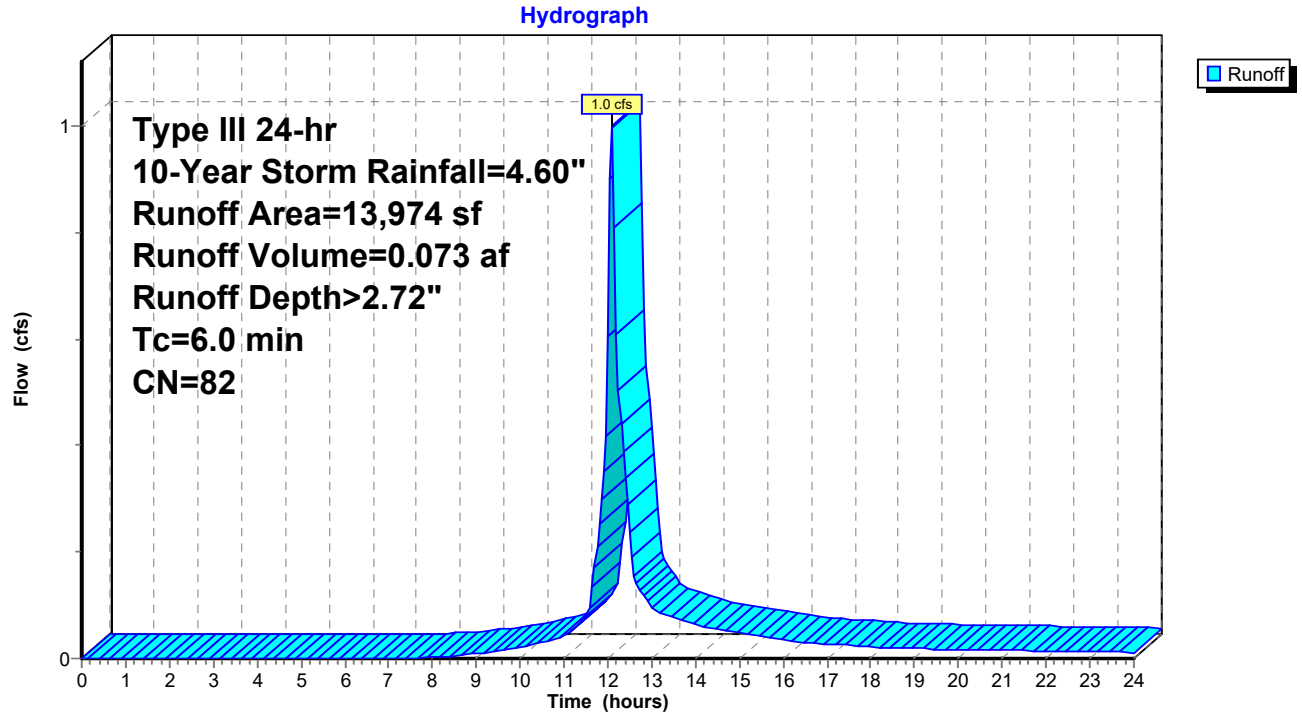
Runoff = 1.0 cfs @ 12.09 hrs, Volume= 0.073 af, Depth> 2.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Storm Rainfall=4.60"

Area (sf)	CN	Description
10,235	98	Paved parking, HSG A
3,739	39	Grass cover, Good, HSG A
13,974	82	Weighted Average
3,739		26.76% Pervious Area
10,235		73.24% Impervious Area

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

Subcatchment 7S: PRE-7



Summary for Subcatchment 8S: PRE-8

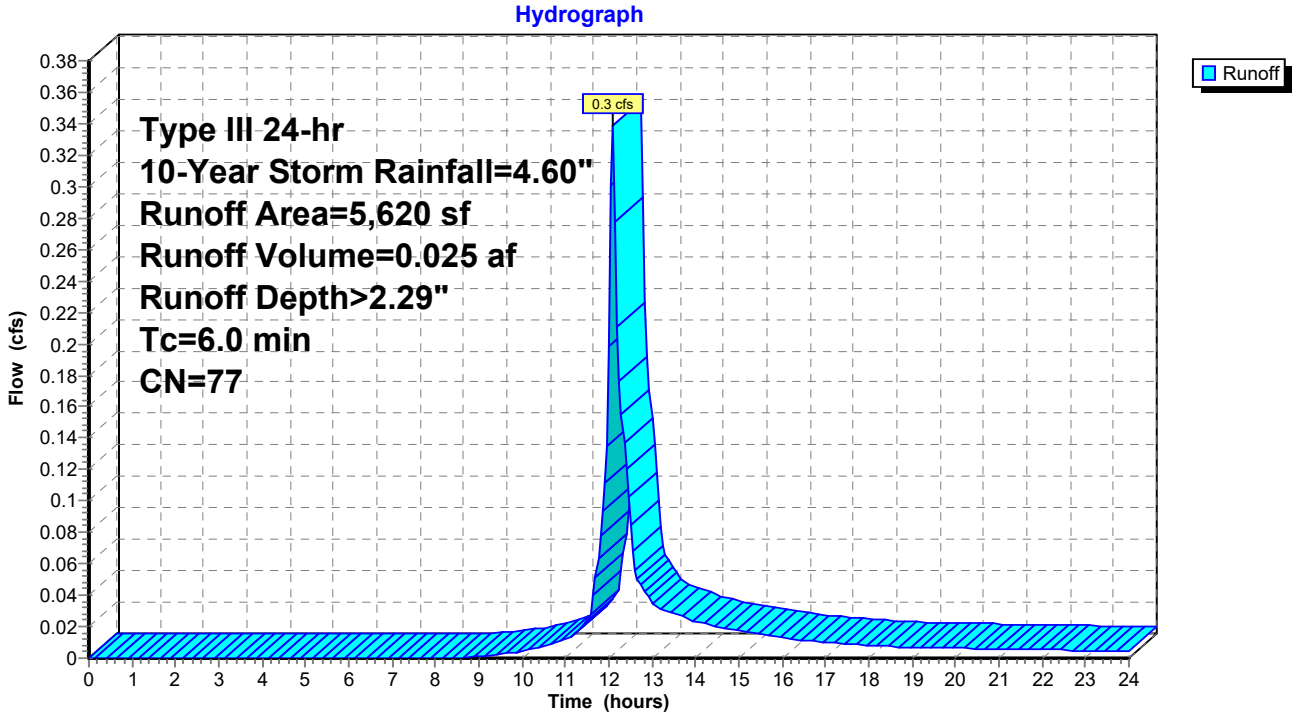
Runoff = 0.3 cfs @ 12.09 hrs, Volume= 0.025 af, Depth> 2.29"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Storm Rainfall=4.60"

	Area (sf)	CN	Description
	3,664	98	Paved parking, HSG A
	1,857	39	Grass cover, Good, HSG A
*	99	40	Porous Pavement
	5,620	77	Weighted Average
	1,956		34.80% Pervious Area
	3,664		65.20% Impervious Area

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

Subcatchment 8S: PRE-8



Summary for Pond 11P: Ex CB1

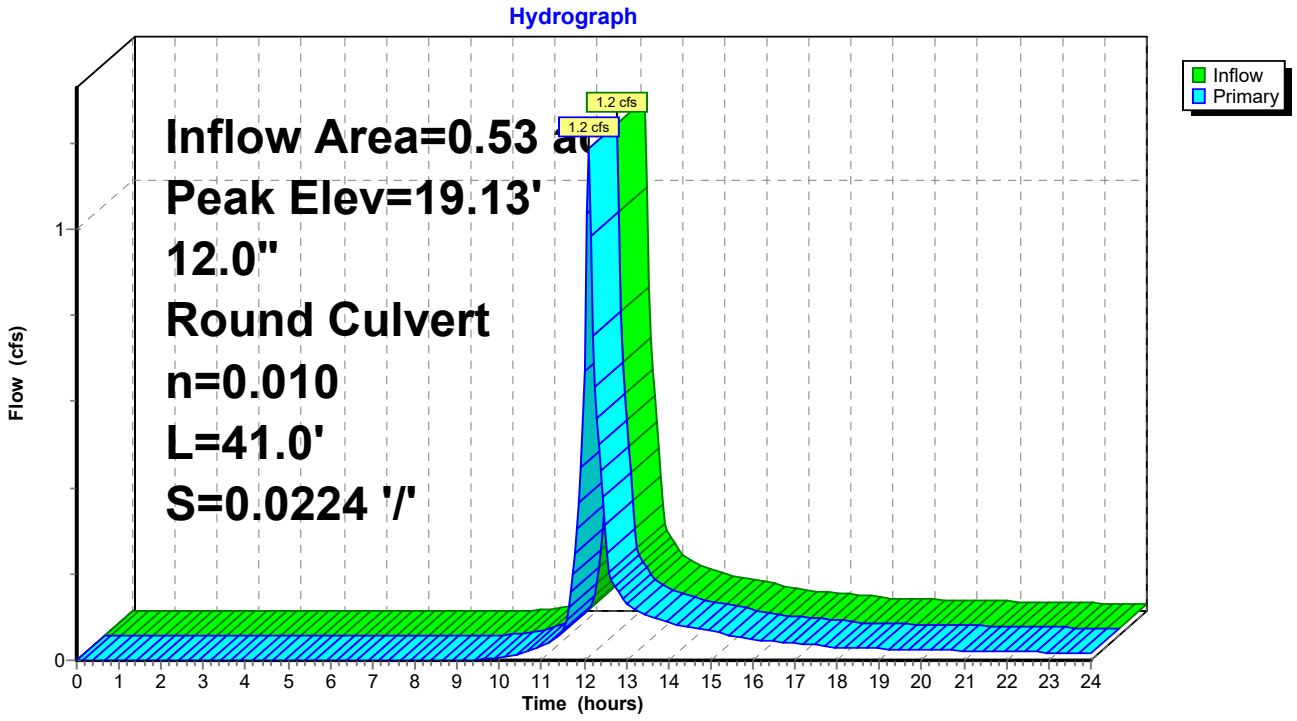
Inflow Area = 0.53 ac, 45.17% Impervious, Inflow Depth > 1.97" for 10-Year Storm event
Inflow = 1.2 cfs @ 12.10 hrs, Volume= 0.087 af
Outflow = 1.2 cfs @ 12.10 hrs, Volume= 0.087 af, Atten= 0%, Lag= 0.0 min
Primary = 1.2 cfs @ 12.10 hrs, Volume= 0.087 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 19.13' @ 12.10 hrs
Flood Elev= 22.02'

Device	Routing	Invert	Outlet Devices
#1	Primary	18.47'	**12.0" Round Culvert** L= 41.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 18.47' / 17.55' S= 0.0224 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.2 cfs @ 12.10 hrs HW=19.12' TW=18.09' (Dynamic Tailwater)
1=Culvert (Inlet Controls 1.2 cfs @ 2.17 fps)

Pond 11P: Ex CB1



Summary for Pond 12P: Ex CB2

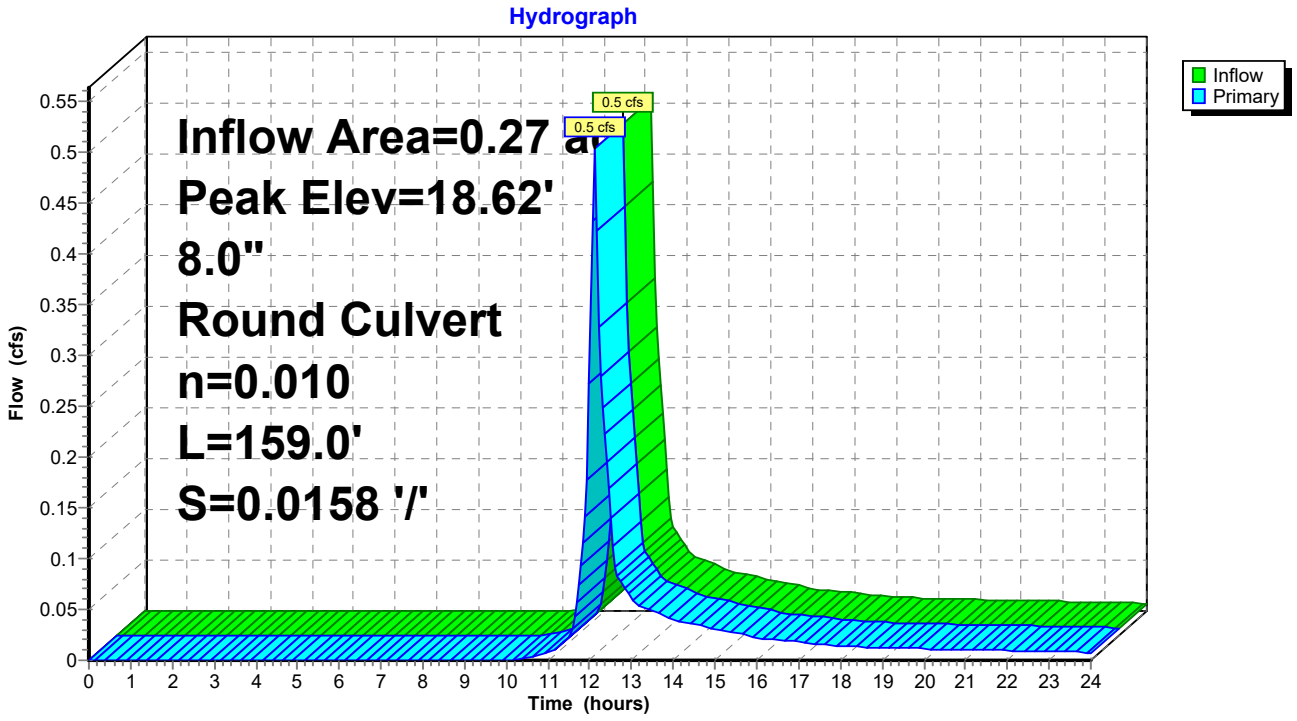
Inflow Area = 0.27 ac, 19.74% Impervious, Inflow Depth > 1.67" for 10-Year Storm event
Inflow = 0.5 cfs @ 12.10 hrs, Volume= 0.038 af
Outflow = 0.5 cfs @ 12.10 hrs, Volume= 0.038 af, Atten= 0%, Lag= 0.0 min
Primary = 0.5 cfs @ 12.10 hrs, Volume= 0.038 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 18.62' @ 12.10 hrs
Flood Elev= 22.15'

Device	Routing	Invert	Outlet Devices
#1	Primary	18.14'	**8.0" Round Culvert** L= 159.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 18.14' / 15.62' S= 0.0158 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=0.5 cfs @ 12.10 hrs HW=18.62' TW=0.00' (Dynamic Tailwater)
1=Culvert (Inlet Controls 0.5 cfs @ 1.86 fps)

Pond 12P: Ex CB2



Summary for Pond 13P: Ex CB7

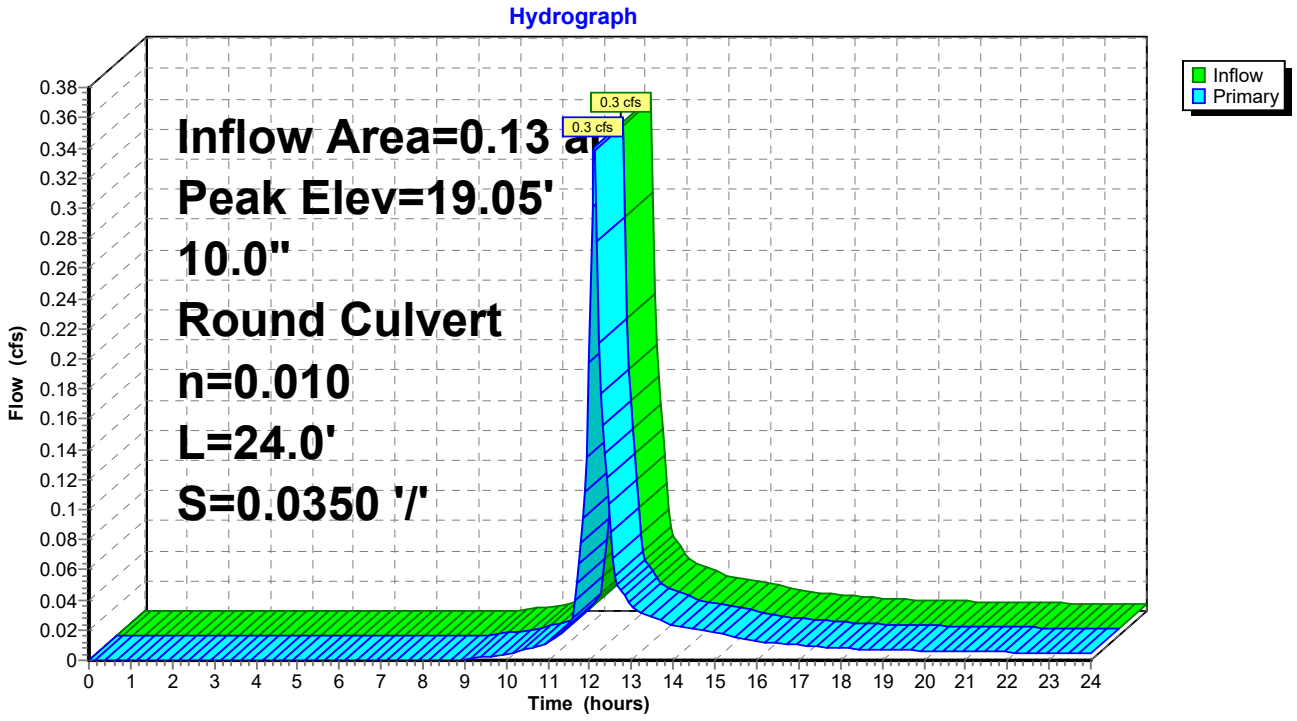
Inflow Area = 0.13 ac, 65.20% Impervious, Inflow Depth > 2.29" for 10-Year Storm event
Inflow = 0.3 cfs @ 12.09 hrs, Volume= 0.025 af
Outflow = 0.3 cfs @ 12.09 hrs, Volume= 0.025 af, Atten= 0%, Lag= 0.0 min
Primary = 0.3 cfs @ 12.09 hrs, Volume= 0.025 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 19.05' @ 12.09 hrs
Flood Elev= 24.51'

Device	Routing	Invert	Outlet Devices
#1	Primary	18.70'	**10.0" Round Culvert** L= 24.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 18.70' / 17.86' S= 0.0350 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf

Primary OutFlow Max=0.3 cfs @ 12.09 hrs HW=19.04' TW=15.70' (Dynamic Tailwater)
1=Culvert (Inlet Controls 0.3 cfs @ 1.58 fps)

Pond 13P: Ex CB7



Summary for Pond 14P: Ex CB4

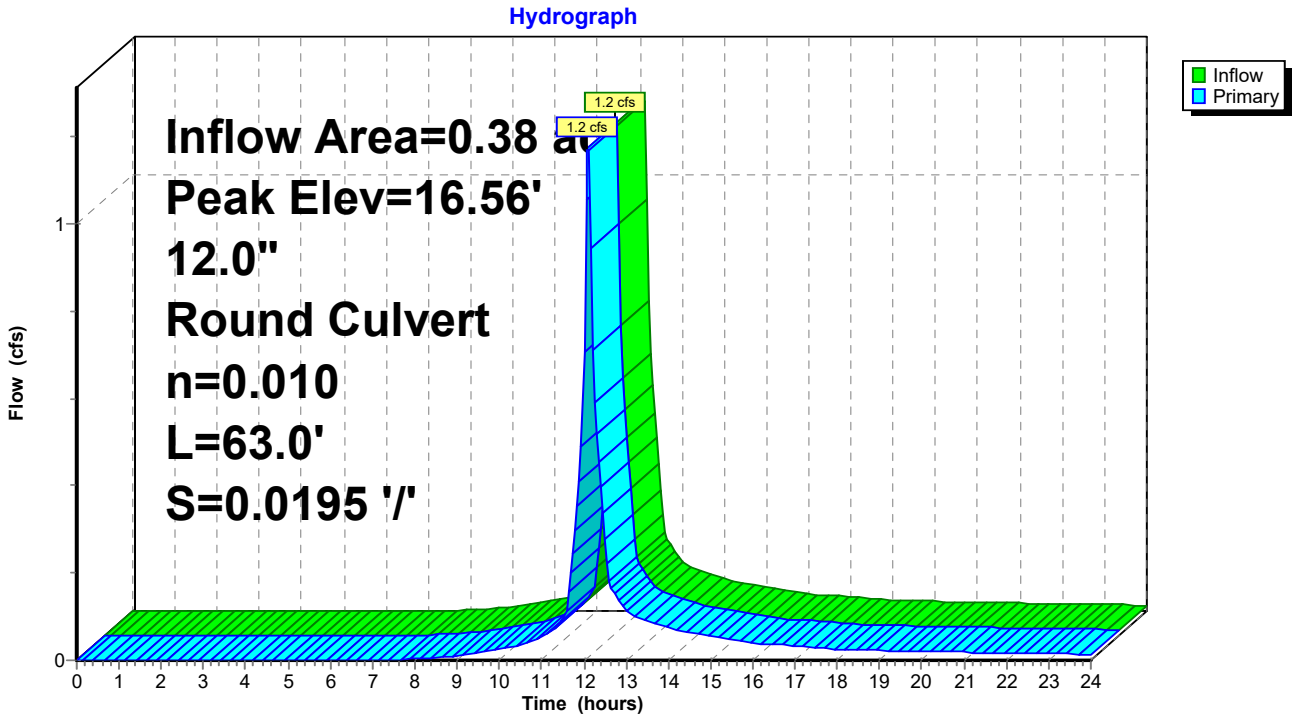
Inflow Area = 0.38 ac, 71.97% Impervious, Inflow Depth > 2.72" for 10-Year Storm event
Inflow = 1.2 cfs @ 12.09 hrs, Volume= 0.085 af
Outflow = 1.2 cfs @ 12.09 hrs, Volume= 0.085 af, Atten= 0%, Lag= 0.0 min
Primary = 1.2 cfs @ 12.09 hrs, Volume= 0.085 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 16.56' @ 12.09 hrs
Flood Elev= 21.96'

Device	Routing	Invert	Outlet Devices
#1	Primary	15.91'	**12.0" Round Culvert** L= 63.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 15.91' / 14.68' S= 0.0195 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.2 cfs @ 12.09 hrs HW=16.55' TW=15.74' (Dynamic Tailwater)
1=Culvert (Inlet Controls 1.2 cfs @ 2.16 fps)

Pond 14P: Ex CB4



Summary for Pond 15P: Ex CB5

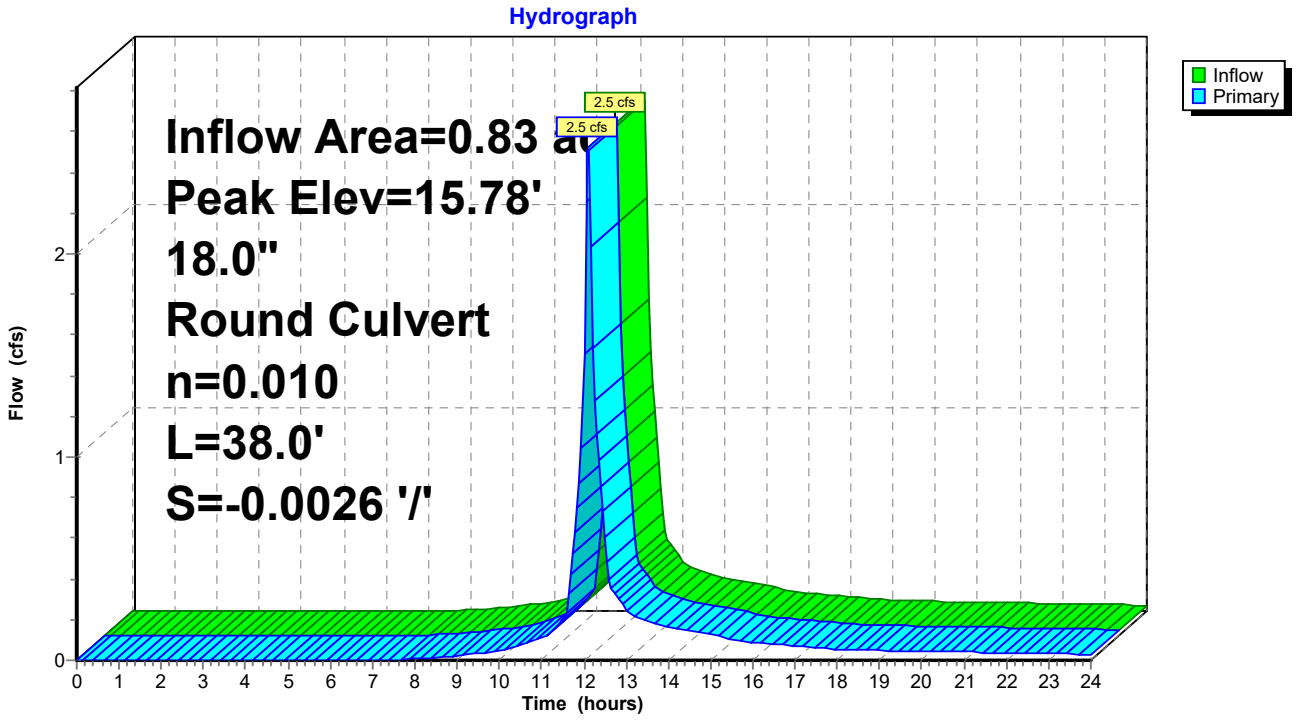
Inflow Area = 0.83 ac, 71.40% Impervious, Inflow Depth > 2.65" for 10-Year Storm event
Inflow = 2.5 cfs @ 12.09 hrs, Volume= 0.183 af
Outflow = 2.5 cfs @ 12.09 hrs, Volume= 0.183 af, Atten= 0%, Lag= 0.0 min
Primary = 2.5 cfs @ 12.09 hrs, Volume= 0.183 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 15.78' @ 12.14 hrs
Flood Elev= 22.70'

Device	Routing	Invert	Outlet Devices
#1	Primary	14.80'	**18.0" Round Culvert** L= 38.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 14.70' / 14.80' S= -0.0026 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=1.9 cfs @ 12.09 hrs HW=15.74' TW=15.56' (Dynamic Tailwater)
1=Culvert (Inlet Controls 1.9 cfs @ 1.59 fps)

Pond 15P: Ex CB5



Summary for Pond 16P: Ex DMH8

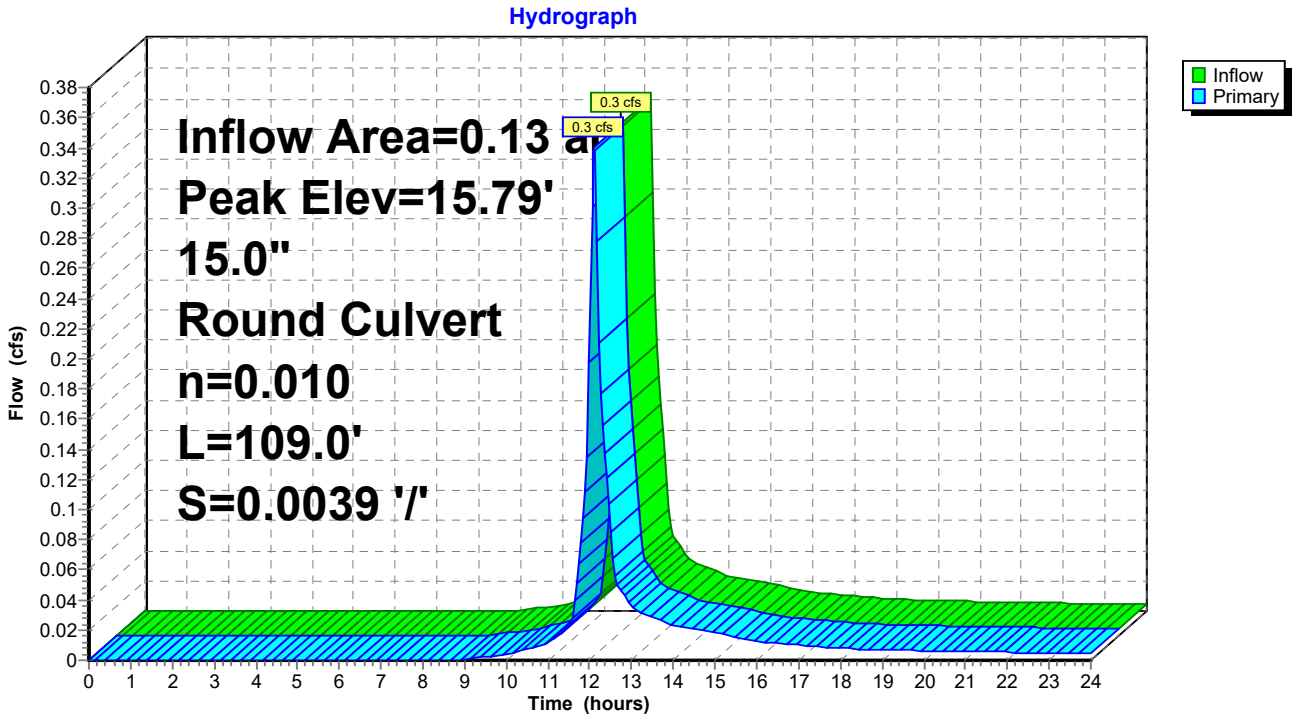
Inflow Area = 0.13 ac, 65.20% Impervious, Inflow Depth > 2.29" for 10-Year Storm event
Inflow = 0.3 cfs @ 12.09 hrs, Volume= 0.025 af
Outflow = 0.3 cfs @ 12.09 hrs, Volume= 0.025 af, Atten= 0%, Lag= 0.0 min
Primary = 0.3 cfs @ 12.09 hrs, Volume= 0.025 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 15.79' @ 12.19 hrs
Flood Elev= 24.67'

Device	Routing	Invert	Outlet Devices
#1	Primary	15.08'	**15.0" Round Culvert** L= 109.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 15.08' / 14.65' S= 0.0039 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=0.0 cfs @ 12.09 hrs HW=15.70' TW=15.74' (Dynamic Tailwater)
↑**1=Culvert** (Controls 0.0 cfs)

Pond 16P: Ex DMH8



Summary for Pond 21P: Ex DMH9

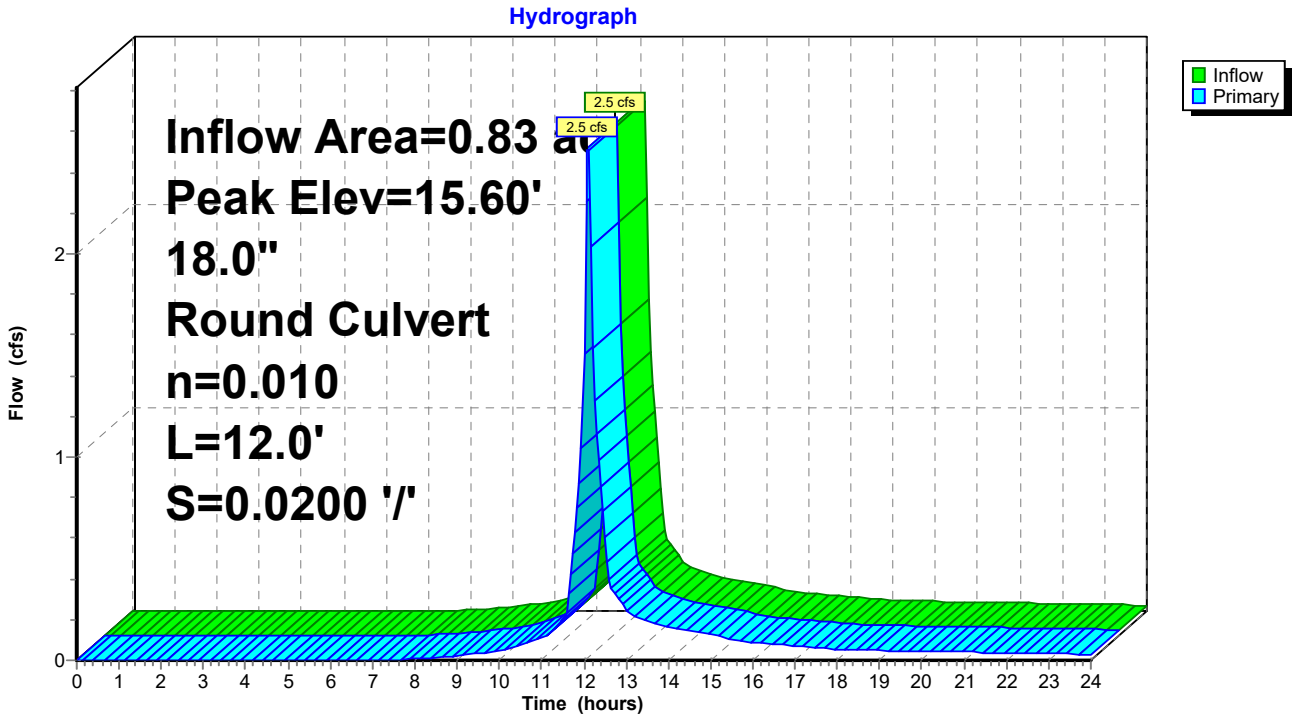
Inflow Area = 0.83 ac, 71.40% Impervious, Inflow Depth > 2.65" for 10-Year Storm event
Inflow = 2.5 cfs @ 12.09 hrs, Volume= 0.183 af
Outflow = 2.5 cfs @ 12.09 hrs, Volume= 0.183 af, Atten= 0%, Lag= 0.0 min
Primary = 2.5 cfs @ 12.09 hrs, Volume= 0.183 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 15.60' @ 12.13 hrs
Flood Elev= 23.72'

Device	Routing	Invert	Outlet Devices
#1	Primary	14.62'	**18.0" Round Culvert** L= 12.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 14.62' / 14.38' S= 0.0200 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=1.9 cfs @ 12.09 hrs HW=15.56' TW=15.38' (Dynamic Tailwater)
1=Culvert (Inlet Controls 1.9 cfs @ 1.62 fps)

Pond 21P: Ex DMH9



Summary for Pond 22P: Ex DMH3

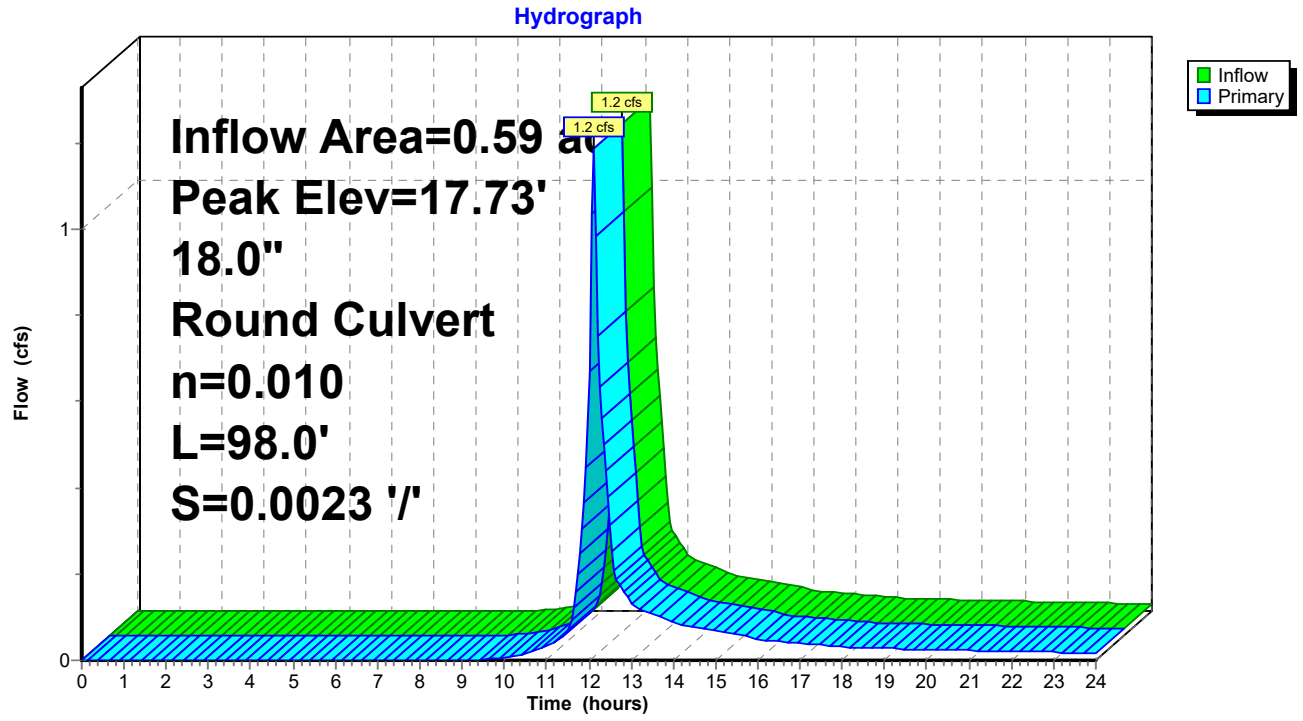
Inflow Area = 0.59 ac, 40.84% Impervious, Inflow Depth > 1.79" for 10-Year Storm event
Inflow = 1.2 cfs @ 12.10 hrs, Volume= 0.088 af
Outflow = 1.2 cfs @ 12.10 hrs, Volume= 0.088 af, Atten= 0%, Lag= 0.0 min
Primary = 1.2 cfs @ 12.10 hrs, Volume= 0.088 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 17.73' @ 12.10 hrs
Flood Elev= 24.92'

Device	Routing	Invert	Outlet Devices
#1	Primary	17.12'	**18.0" Round Culvert** L= 98.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 17.12' / 16.89' S= 0.0023 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=1.1 cfs @ 12.10 hrs HW=17.73' TW=17.37' (Dynamic Tailwater)
1=Culvert (Outlet Controls 1.1 cfs @ 2.51 fps)

Pond 22P: Ex DMH3



Summary for Pond 23P: Ex CB3

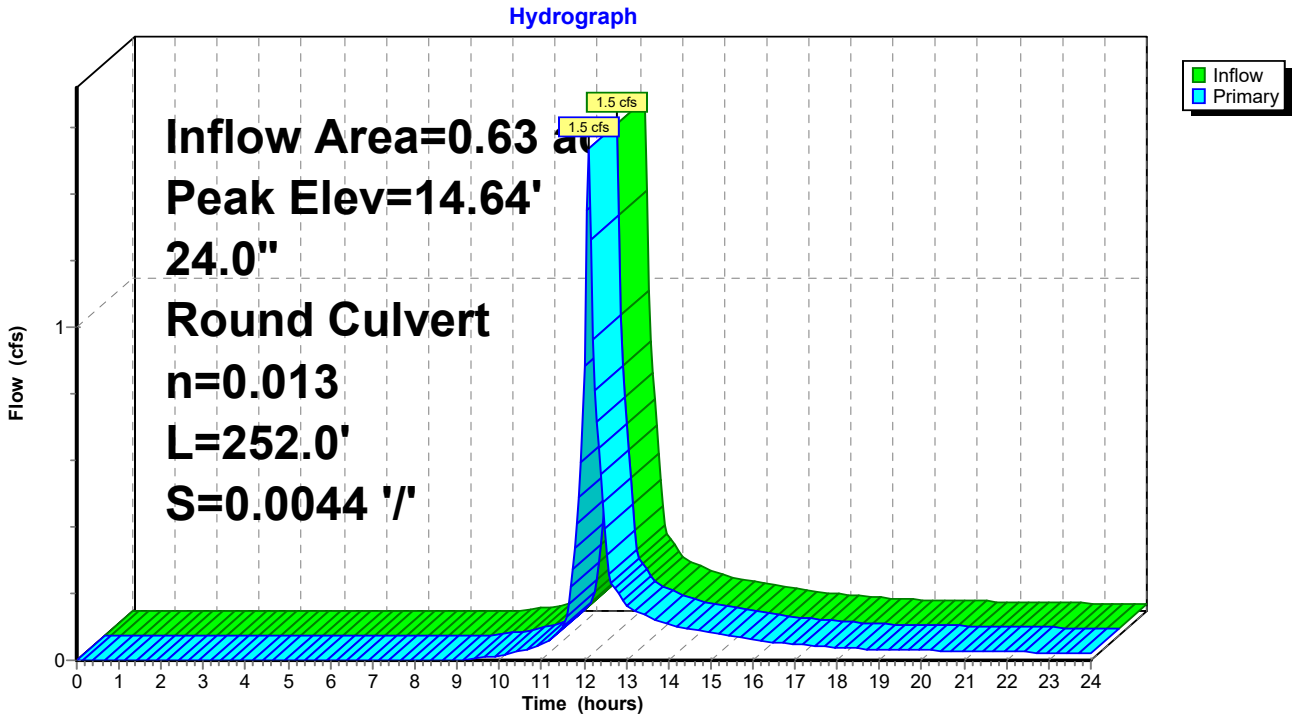
Inflow Area = 0.63 ac, 51.24% Impervious, Inflow Depth > 2.13" for 10-Year Storm event
Inflow = 1.5 cfs @ 12.10 hrs, Volume= 0.112 af
Outflow = 1.5 cfs @ 12.10 hrs, Volume= 0.112 af, Atten= 0%, Lag= 0.0 min
Primary = 1.5 cfs @ 12.10 hrs, Volume= 0.112 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 14.64' @ 12.09 hrs
Flood Elev= 23.60'

Device	Routing	Invert	Outlet Devices
#1	Primary	14.05'	**24.0" Round Culvert** L= 252.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 14.05' / 12.94' S= 0.0044 '/' Cc= 0.900 n= 0.013 Cast iron, coated, Flow Area= 3.14 sf

Primary OutFlow Max=1.5 cfs @ 12.10 hrs HW=14.64' TW=0.00' (Dynamic Tailwater)
1=Culvert (Barrel Controls 1.5 cfs @ 2.95 fps)

Pond 23P: Ex CB3



Summary for Pond 24P: Ex DMH2

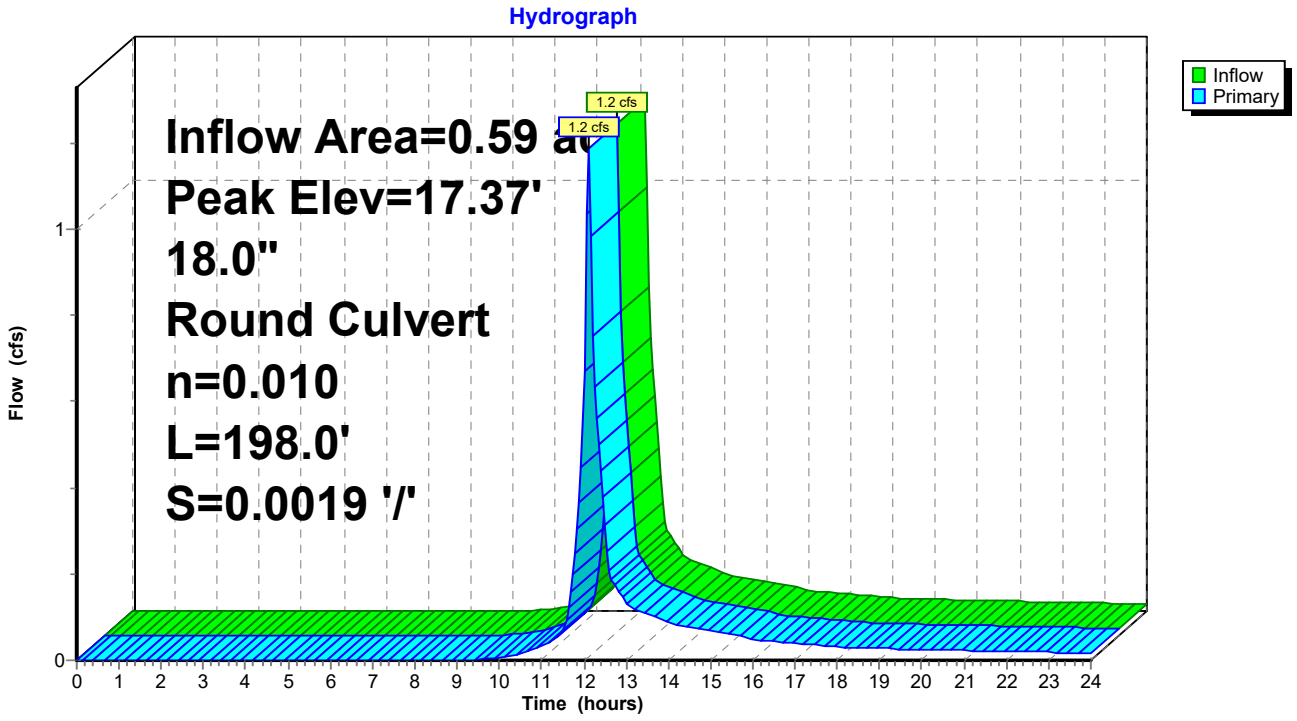
Inflow Area = 0.59 ac, 40.84% Impervious, Inflow Depth > 1.79" for 10-Year Storm event
Inflow = 1.2 cfs @ 12.10 hrs, Volume= 0.088 af
Outflow = 1.2 cfs @ 12.10 hrs, Volume= 0.088 af, Atten= 0%, Lag= 0.0 min
Primary = 1.2 cfs @ 12.10 hrs, Volume= 0.088 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 17.37' @ 12.10 hrs
Flood Elev= 25.38'

Device	Routing	Invert	Outlet Devices
#1	Primary	16.75'	**18.0" Round Culvert** L= 198.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 16.75' / 16.38' S= 0.0019 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=1.2 cfs @ 12.10 hrs HW=17.37' TW=16.01' (Dynamic Tailwater)
1=Culvert (Barrel Controls 1.2 cfs @ 2.52 fps)

Pond 24P: Ex DMH2



Summary for Pond 25P: Ex DMH5

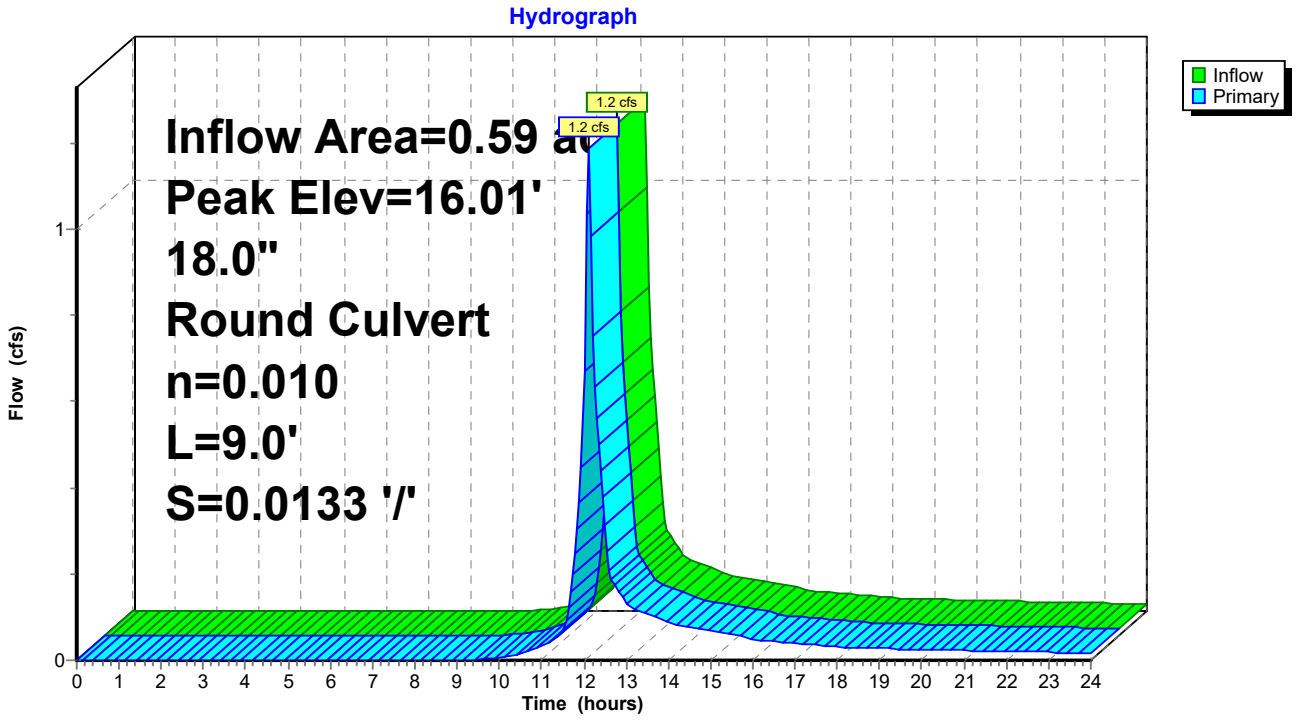
Inflow Area = 0.59 ac, 40.84% Impervious, Inflow Depth > 1.79" for 10-Year Storm event
Inflow = 1.2 cfs @ 12.10 hrs, Volume= 0.088 af
Outflow = 1.2 cfs @ 12.10 hrs, Volume= 0.088 af, Atten= 0%, Lag= 0.0 min
Primary = 1.2 cfs @ 12.10 hrs, Volume= 0.088 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 16.01' @ 12.10 hrs
Flood Elev= 23.84'

Device	Routing	Invert	Outlet Devices
#1	Primary	15.44'	**18.0" Round Culvert** L= 9.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 15.44' / 15.32' S= 0.0133 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=1.2 cfs @ 12.10 hrs HW=16.01' TW=15.39' (Dynamic Tailwater)
1=Culvert (Barrel Controls 1.2 cfs @ 2.85 fps)

Pond 25P: Ex DMH5



Summary for Pond 26P: Ex DMH6

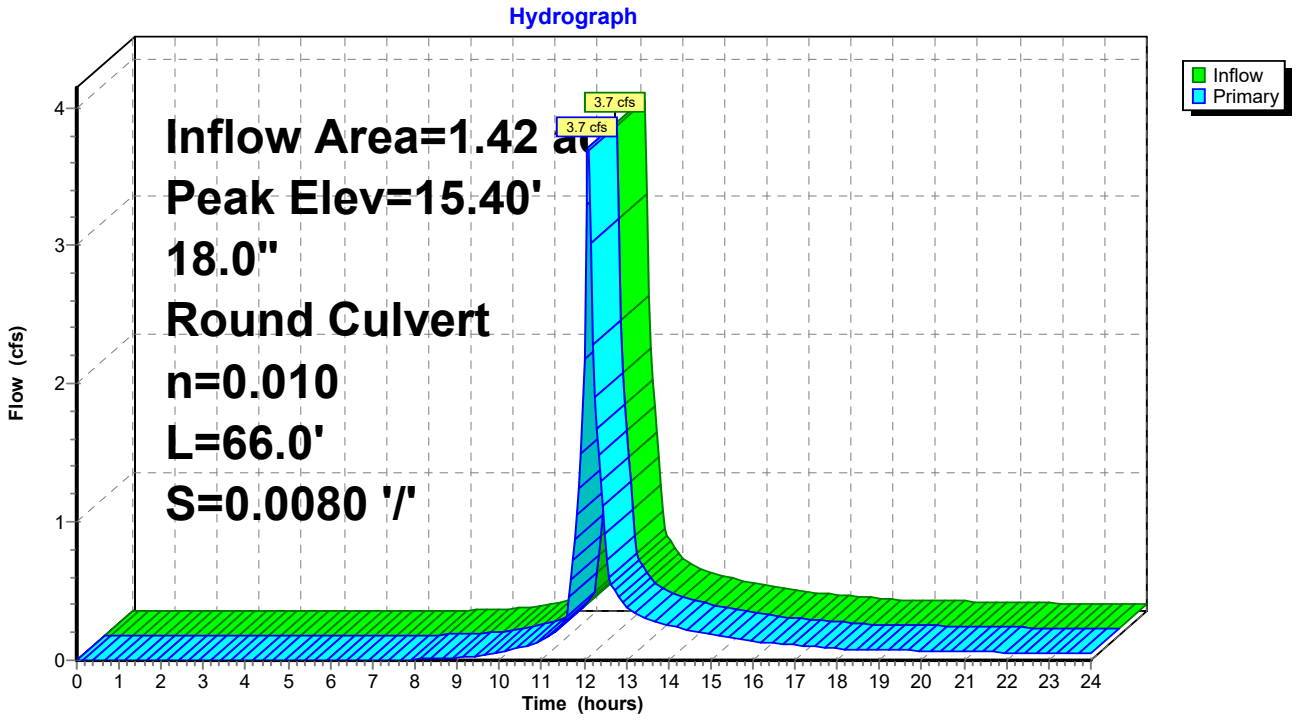
Inflow Area = 1.42 ac, 58.66% Impervious, Inflow Depth > 2.29" for 10-Year Storm event
Inflow = 3.7 cfs @ 12.09 hrs, Volume= 0.270 af
Outflow = 3.7 cfs @ 12.09 hrs, Volume= 0.270 af, Atten= 0%, Lag= 0.0 min
Primary = 3.7 cfs @ 12.09 hrs, Volume= 0.270 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 15.40' @ 12.11 hrs
Flood Elev= 23.95'

Device	Routing	Invert	Outlet Devices
#1	Primary	14.30'	**18.0" Round Culvert** L= 66.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 14.30' / 13.77' S= 0.0080 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=3.3 cfs @ 12.09 hrs HW=15.39' TW=14.93' (Dynamic Tailwater)
1=Culvert (Outlet Controls 3.3 cfs @ 3.40 fps)

Pond 26P: Ex DMH6



Summary for Pond 27P: Ex DMH7

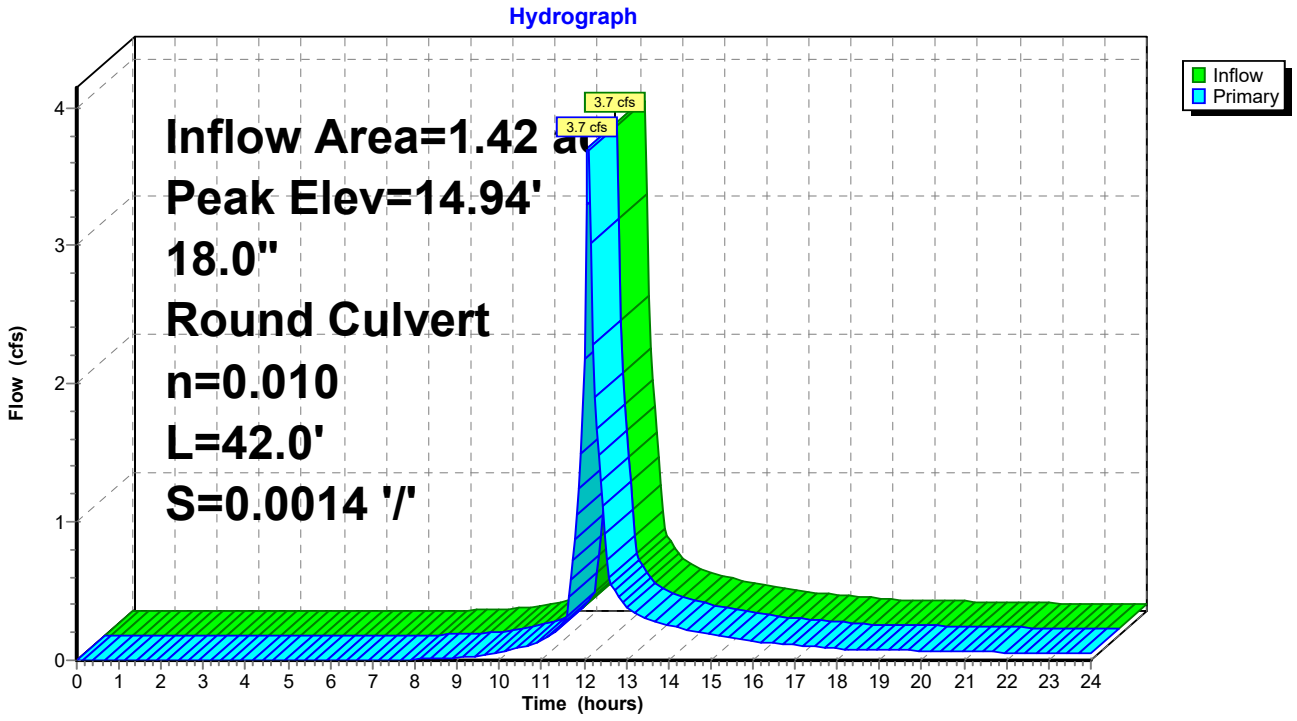
Inflow Area = 1.42 ac, 58.66% Impervious, Inflow Depth > 2.29" for 10-Year Storm event
Inflow = 3.7 cfs @ 12.09 hrs, Volume= 0.270 af
Outflow = 3.7 cfs @ 12.09 hrs, Volume= 0.270 af, Atten= 0%, Lag= 0.0 min
Primary = 3.7 cfs @ 12.09 hrs, Volume= 0.270 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 14.94' @ 12.09 hrs
Flood Elev= 24.90'

Device	Routing	Invert	Outlet Devices
#1	Primary	13.70'	**18.0" Round Culvert** L= 42.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 13.70' / 13.64' S= 0.0014 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=3.6 cfs @ 12.09 hrs HW=14.93' TW=0.00' (Dynamic Tailwater)
1=Culvert (Barrel Controls 3.6 cfs @ 3.21 fps)

Pond 27P: Ex DMH7



Summary for Pond 29P: Ex DMH4

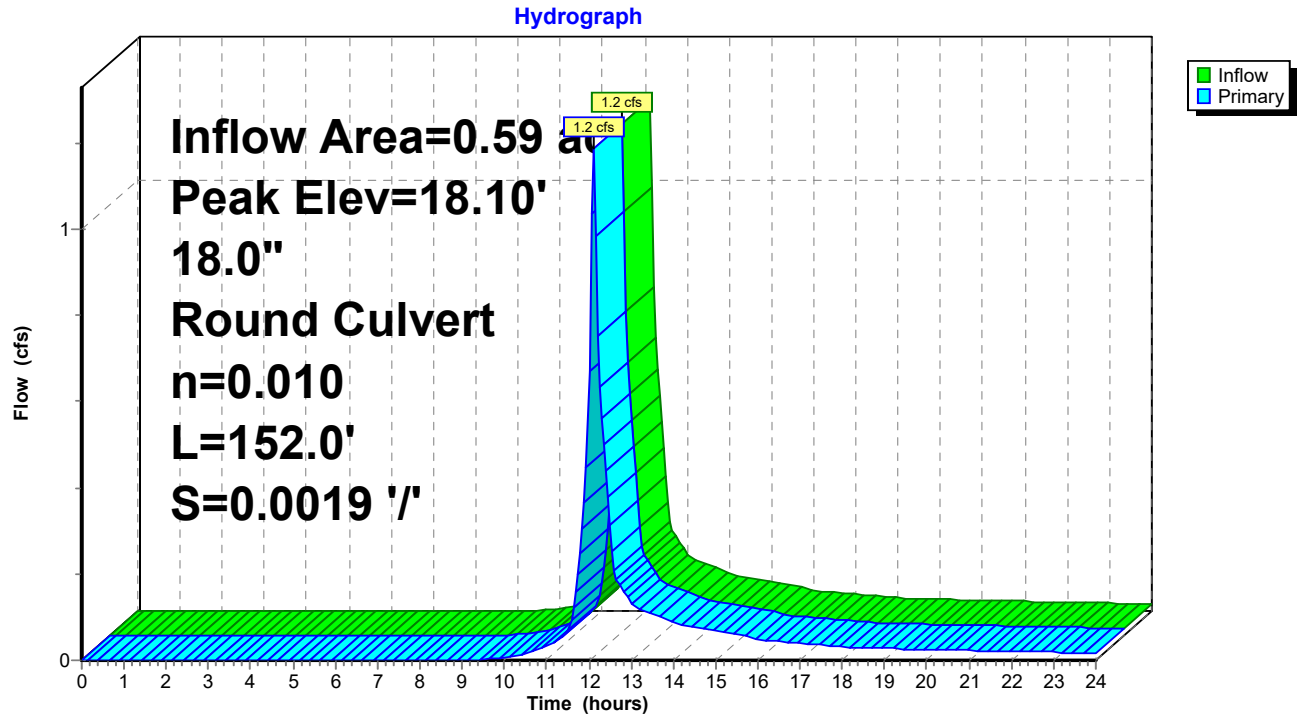
Inflow Area = 0.59 ac, 40.84% Impervious, Inflow Depth > 1.79" for 10-Year Storm event
Inflow = 1.2 cfs @ 12.10 hrs, Volume= 0.088 af
Outflow = 1.2 cfs @ 12.10 hrs, Volume= 0.088 af, Atten= 0%, Lag= 0.0 min
Primary = 1.2 cfs @ 12.10 hrs, Volume= 0.088 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 18.10' @ 12.11 hrs
Flood Elev= 23.44'

Device	Routing	Invert	Outlet Devices
#1	Primary	17.46'	**18.0" Round Culvert** L= 152.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 17.46' / 17.17' S= 0.0019 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=1.1 cfs @ 12.10 hrs HW=18.09' TW=17.73' (Dynamic Tailwater)
1=Culvert (Outlet Controls 1.1 cfs @ 2.30 fps)

Pond 29P: Ex DMH4

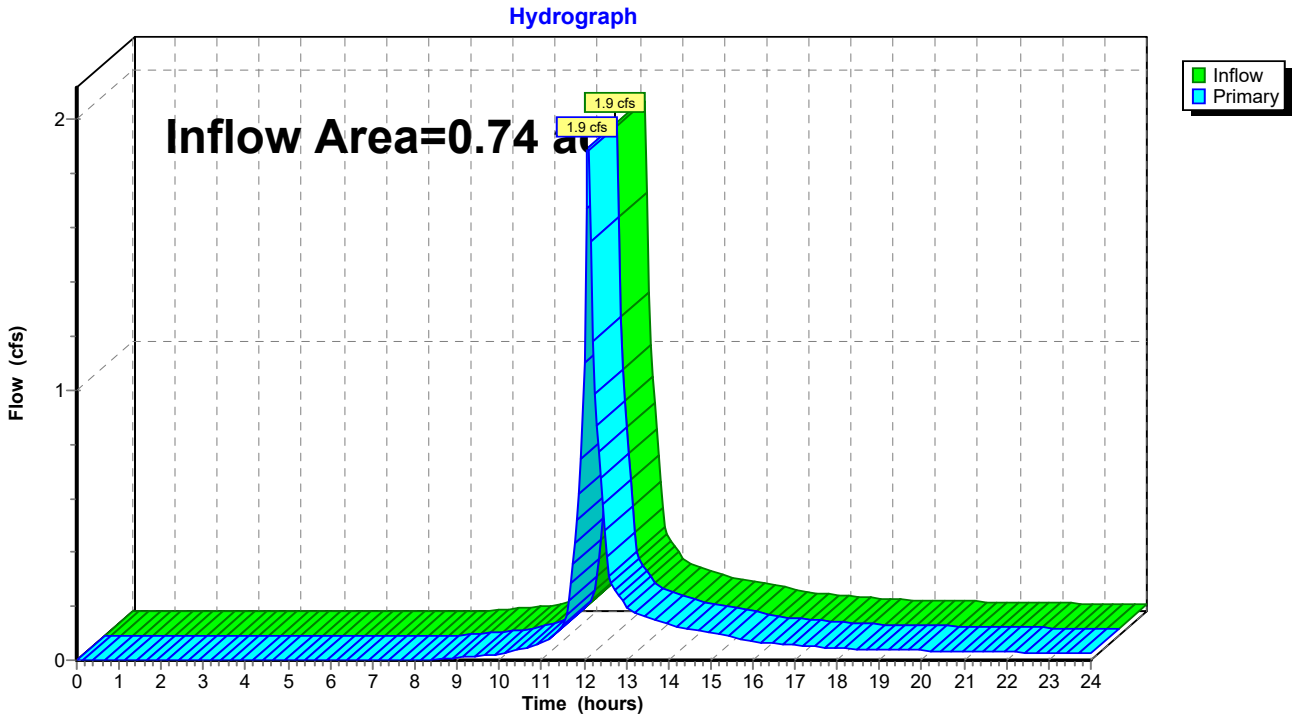


Summary for Link SP1: Forest Ave Storm Drain

Inflow Area = 0.74 ac, 39.80% Impervious, Inflow Depth > 2.23" for 10-Year Storm event
Inflow = 1.9 cfs @ 12.09 hrs, Volume= 0.138 af
Primary = 1.9 cfs @ 12.09 hrs, Volume= 0.138 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link SP1: Forest Ave Storm Drain

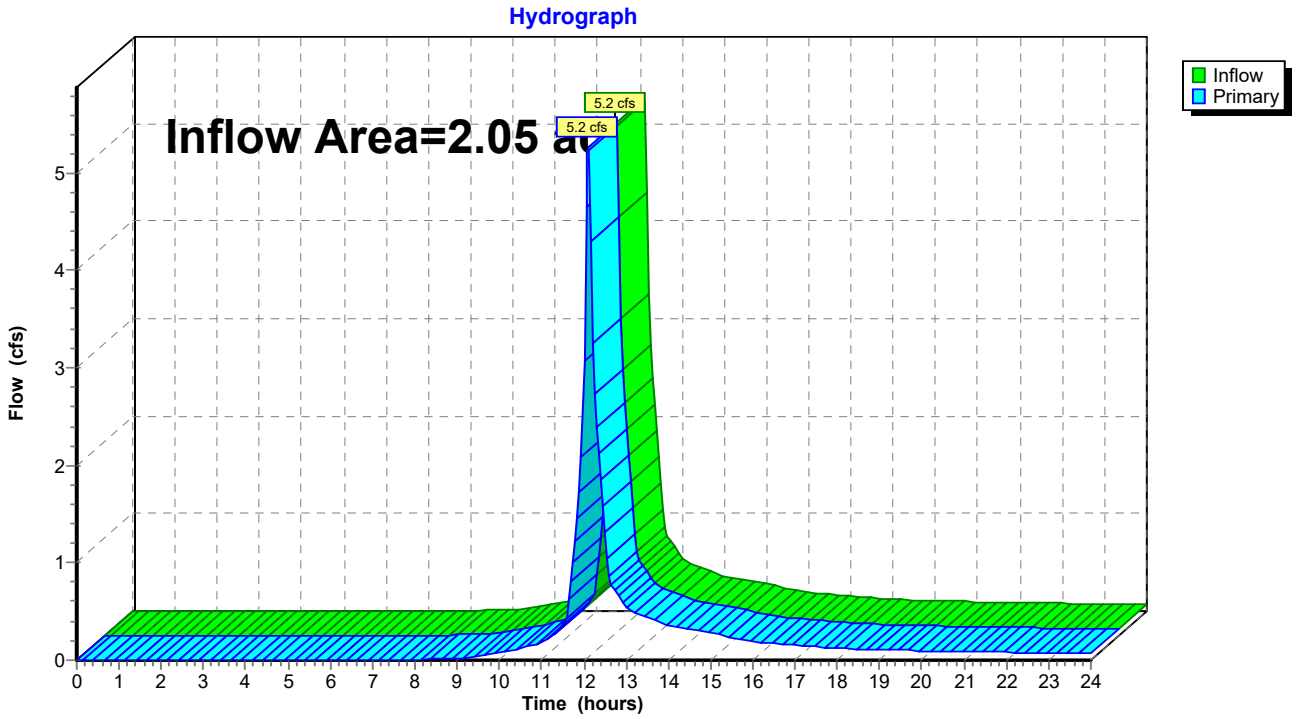


Summary for Link SP2: Combined Sewer

Inflow Area = 2.05 ac, 56.37% Impervious, Inflow Depth > 2.24" for 10-Year Storm event
Inflow = 5.2 cfs @ 12.09 hrs, Volume= 0.382 af
Primary = 5.2 cfs @ 12.09 hrs, Volume= 0.382 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link SP2: Combined Sewer



Summary for Subcatchment 0S: PRE-0

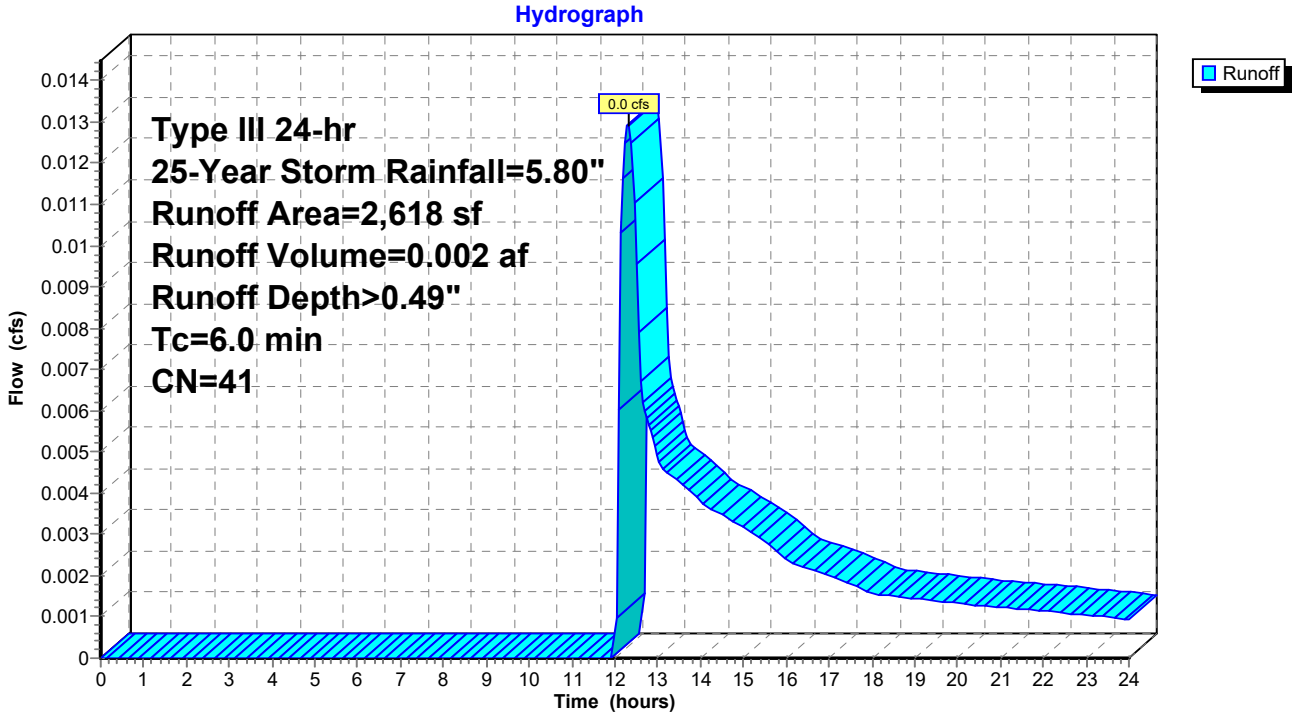
Runoff = 0.0 cfs @ 12.31 hrs, Volume= 0.002 af, Depth> 0.49"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
	70	98	Paved parking, HSG A
	1,403	39	Grass cover, Good, HSG A
*	1,145	40	Porous Pavement
	2,618	41	Weighted Average
	2,548		97.33% Pervious Area
	70		2.67% Impervious Area

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

Subcatchment 0S: PRE-0



Summary for Subcatchment 1S: PRE-1

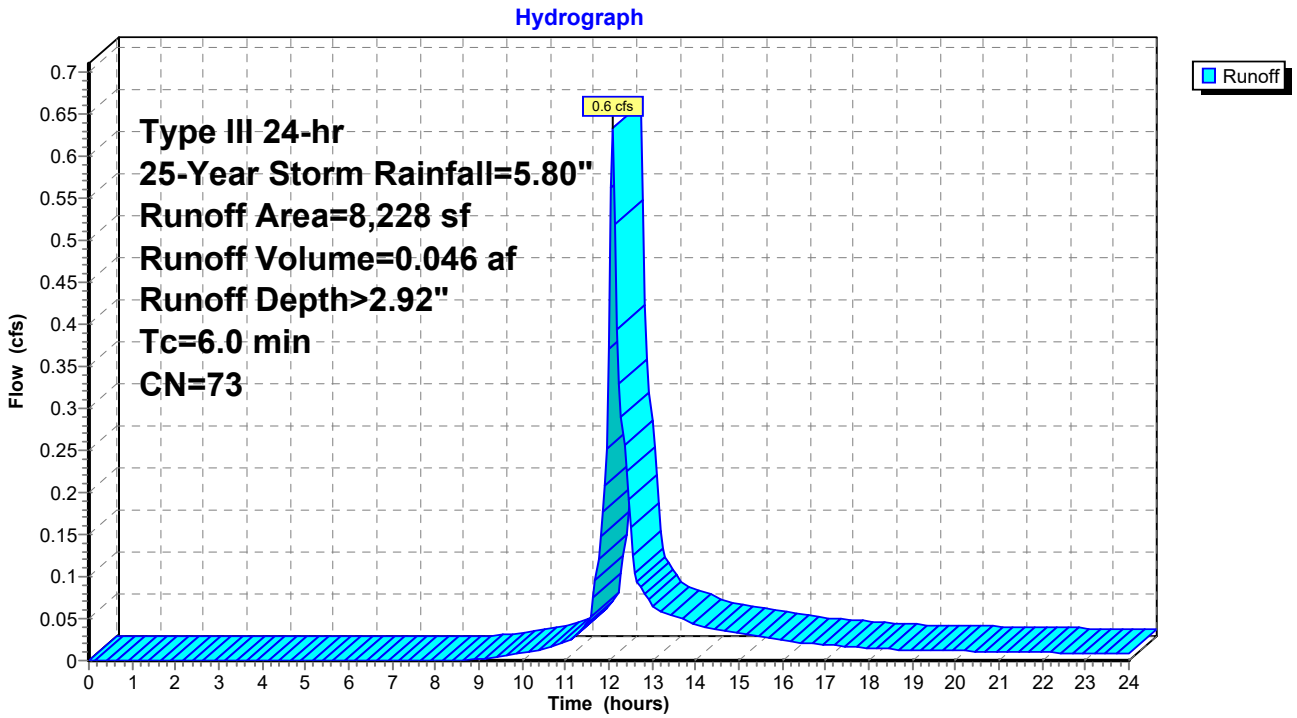
Runoff = 0.6 cfs @ 12.09 hrs, Volume= 0.046 af, Depth> 2.92"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
	4,083	98	Paved parking, HSG A
	1,673	39	Grass cover, Good, HSG A
*	1,374	68	Grass cover (parking area), HSG A
*	1,098	40	Porous Pavement
	8,228	73	Weighted Average
	4,145		50.38% Pervious Area
	4,083		49.62% Impervious Area

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

Subcatchment 1S: PRE-1



Summary for Subcatchment 2S: PRE-2

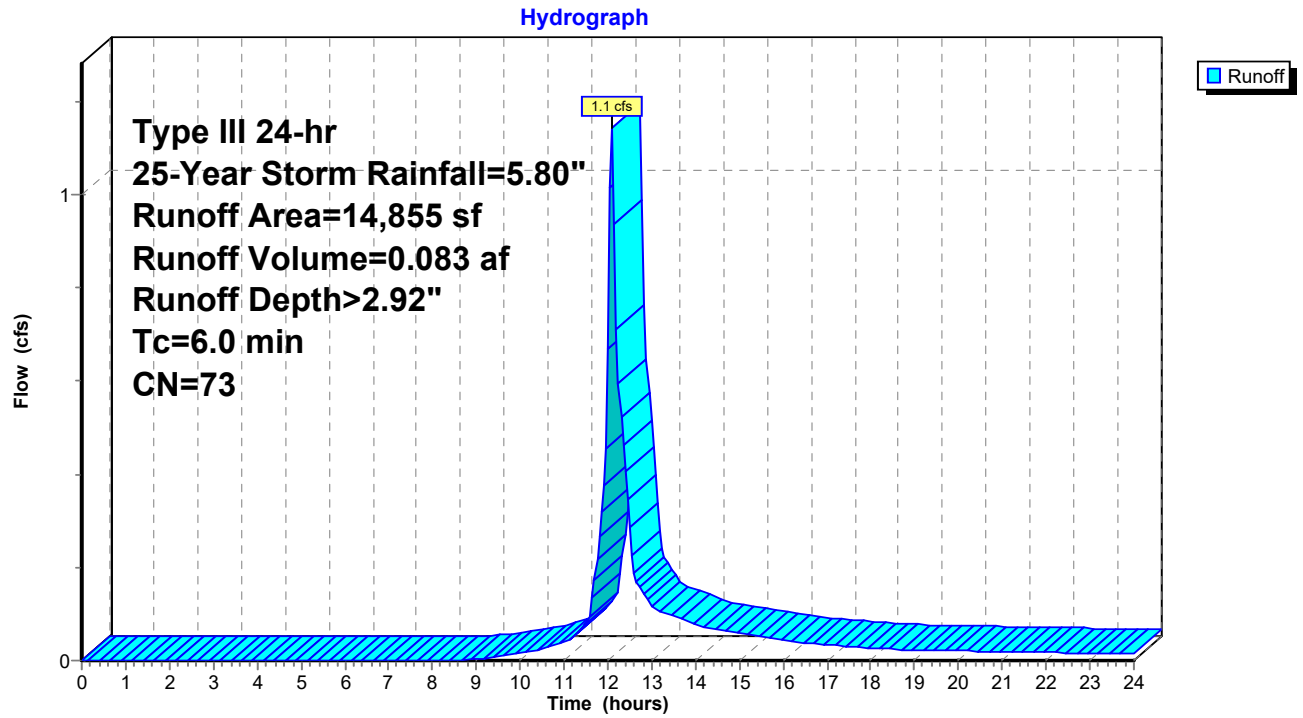
Runoff = 1.1 cfs @ 12.09 hrs, Volume= 0.083 af, Depth> 2.92"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
	6,344	98	Paved parking, HSG A
	2,948	39	Grass cover, Good, HSG A
	4,408	68	Grass cover (parking area), HSG A
*	1,155	40	Porous Pavement
	14,855	73	Weighted Average
	8,511		57.29% Pervious Area
	6,344		42.71% Impervious Area

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

Subcatchment 2S: PRE-2



Summary for Subcatchment 3S: PRE-3

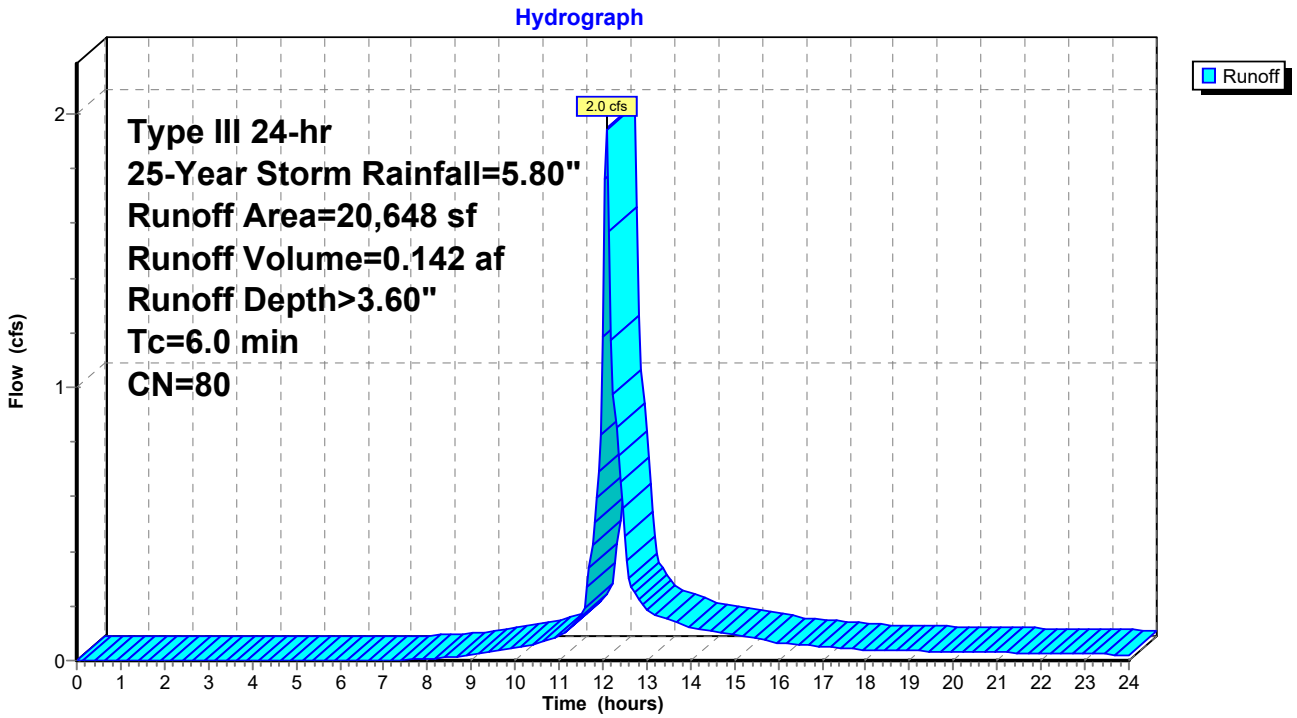
Runoff = 2.0 cfs @ 12.09 hrs, Volume= 0.142 af, Depth> 3.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
	10,577	98	Paved parking, HSG A
	1,903	39	Grass cover, Good, HSG A
	7,715	68	Grass cover (parking area), HSG A
*	453	40	Porous Pavement
	20,648	80	Weighted Average
	10,071		48.77% Pervious Area
	10,577		51.23% Impervious Area

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

Subcatchment 3S: PRE-3



Summary for Subcatchment 4S: PRE-4

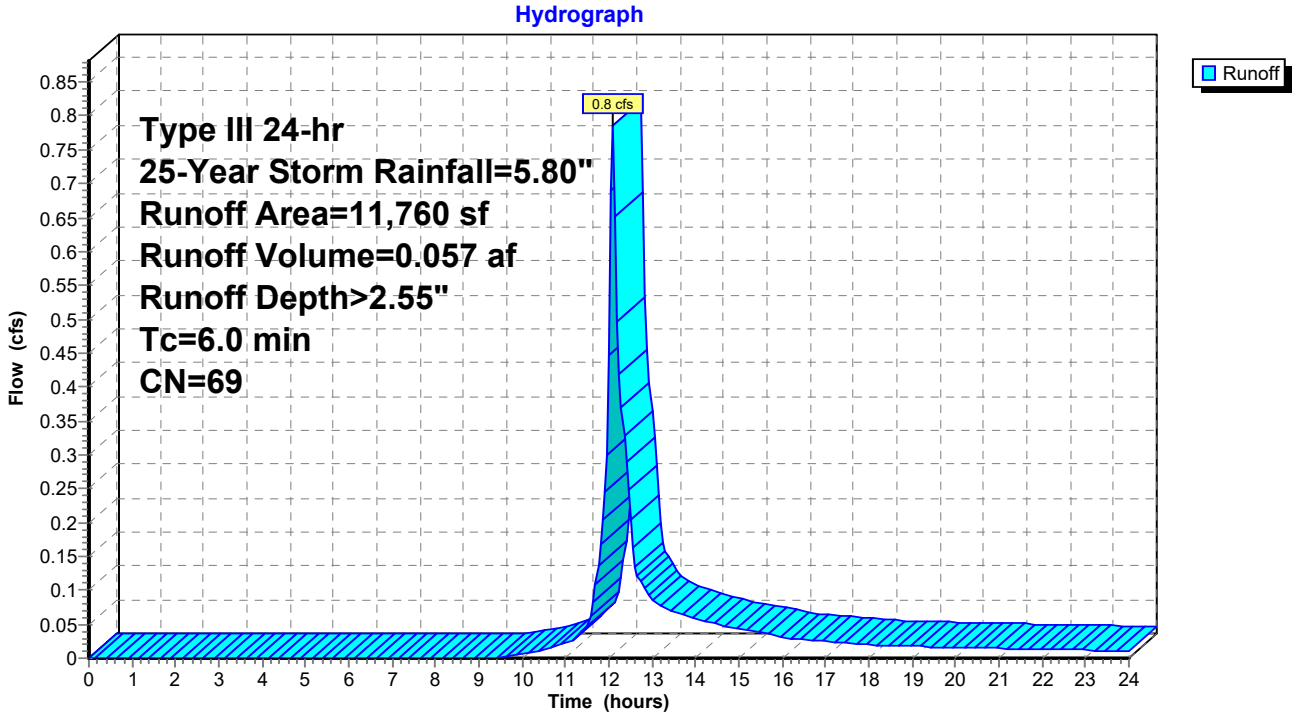
Runoff = 0.8 cfs @ 12.10 hrs, Volume= 0.057 af, Depth> 2.55"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

Area (sf)	CN	Description
2,321	98	Paved parking, HSG A
1,957	39	Grass cover, Good, HSG A
7,482	68	Grass cover (parking area), HSG A
11,760	69	Weighted Average
9,439		80.26% Pervious Area
2,321		19.74% Impervious Area

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

Subcatchment 4S: PRE-4



Summary for Subcatchment 5S: PRE-5

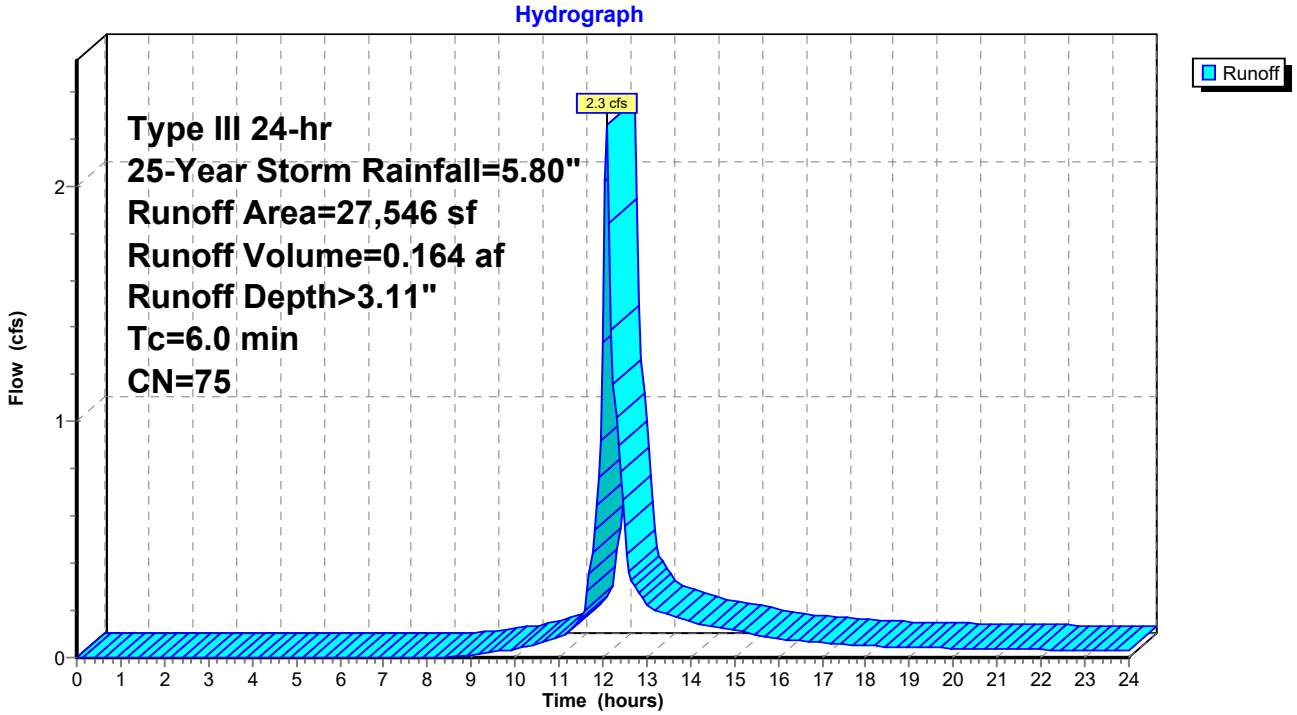
Runoff = 2.3 cfs @ 12.09 hrs, Volume= 0.164 af, Depth> 3.11"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
	14,114	98	Paved parking, HSG A
	6,700	39	Grass cover, Good, HSG A
	5,072	68	Grass cover (parking area), HSG A
*	1,660	40	Porous Pavement
	27,546	75	Weighted Average
	13,432		48.76% Pervious Area
	14,114		51.24% Impervious Area

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

Subcatchment 5S: PRE-5



Summary for Subcatchment 6S: PRE-6

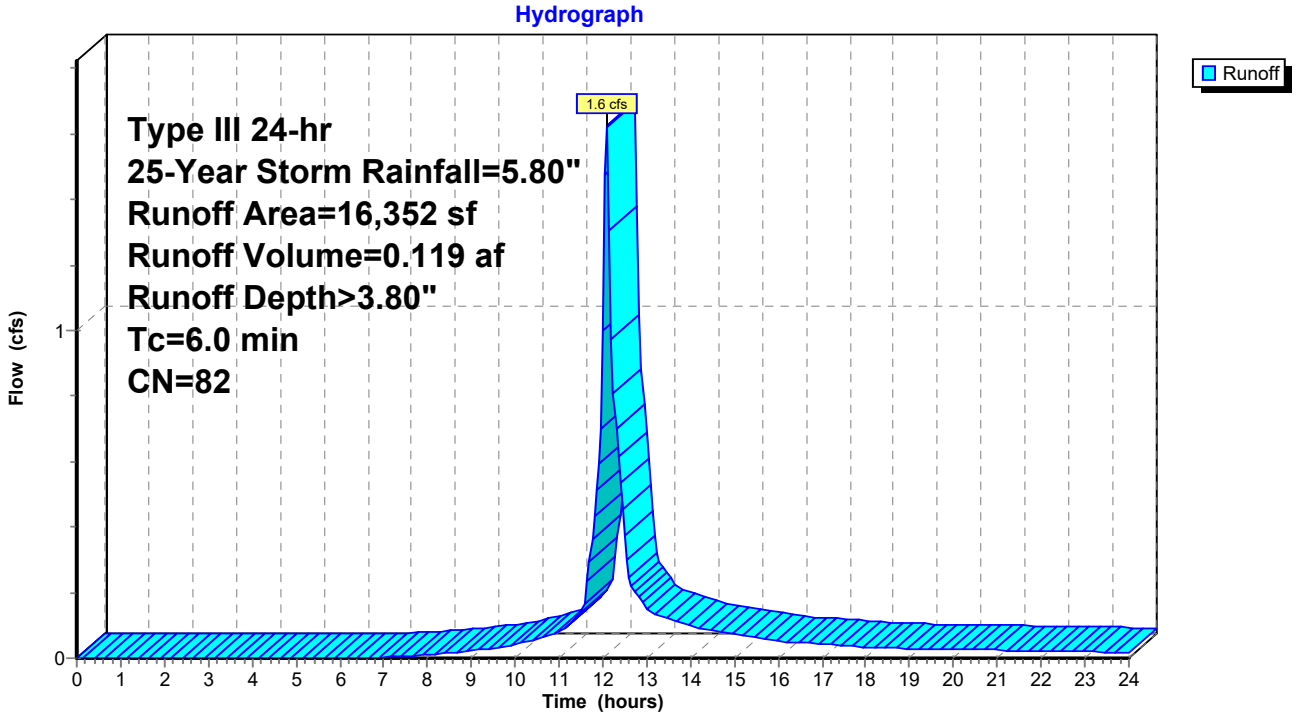
Runoff = 1.6 cfs @ 12.09 hrs, Volume= 0.119 af, Depth> 3.80"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
	11,768	98	Paved parking, HSG A
	3,865	39	Grass cover, Good, HSG A
*	719	40	Porous Pavement
	16,352	82	Weighted Average
	4,584		28.03% Pervious Area
	11,768		71.97% Impervious Area

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

Subcatchment 6S: PRE-6



Summary for Subcatchment 7S: PRE-7

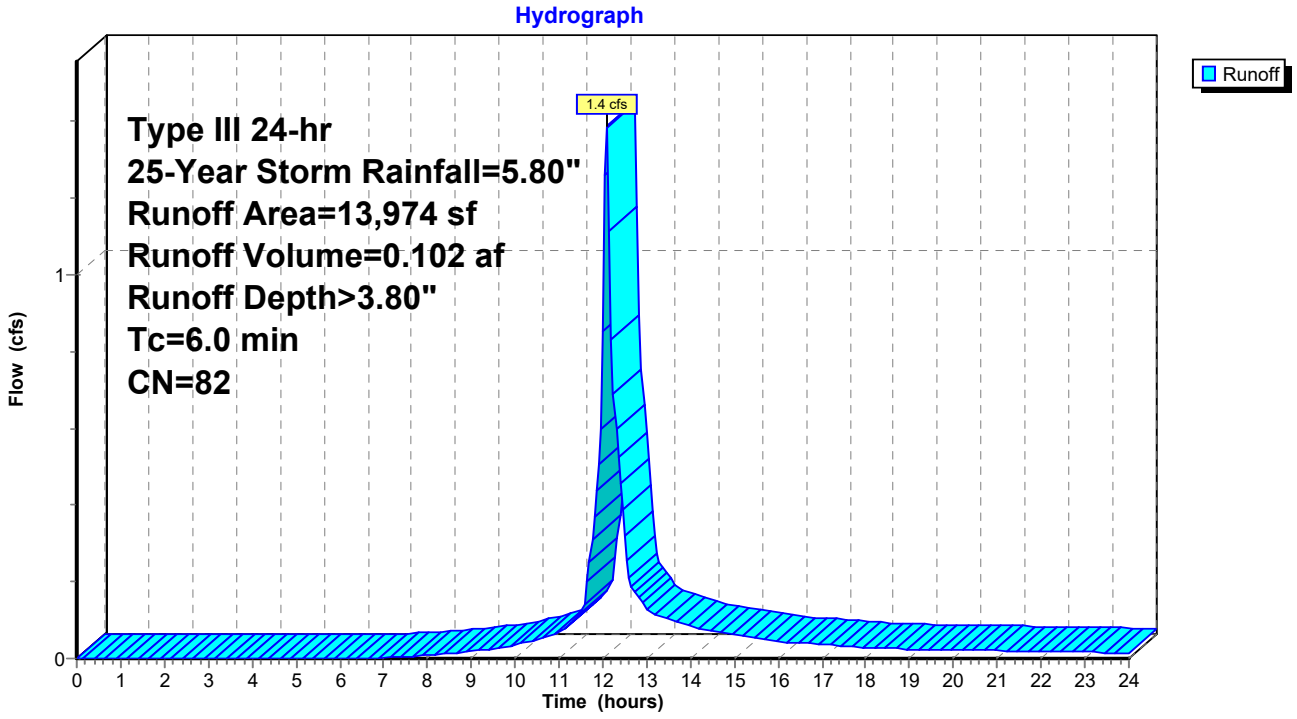
Runoff = 1.4 cfs @ 12.09 hrs, Volume= 0.102 af, Depth> 3.80"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

Area (sf)	CN	Description
10,235	98	Paved parking, HSG A
3,739	39	Grass cover, Good, HSG A
13,974	82	Weighted Average
3,739		26.76% Pervious Area
10,235		73.24% Impervious Area

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

Subcatchment 7S: PRE-7



Summary for Subcatchment 8S: PRE-8

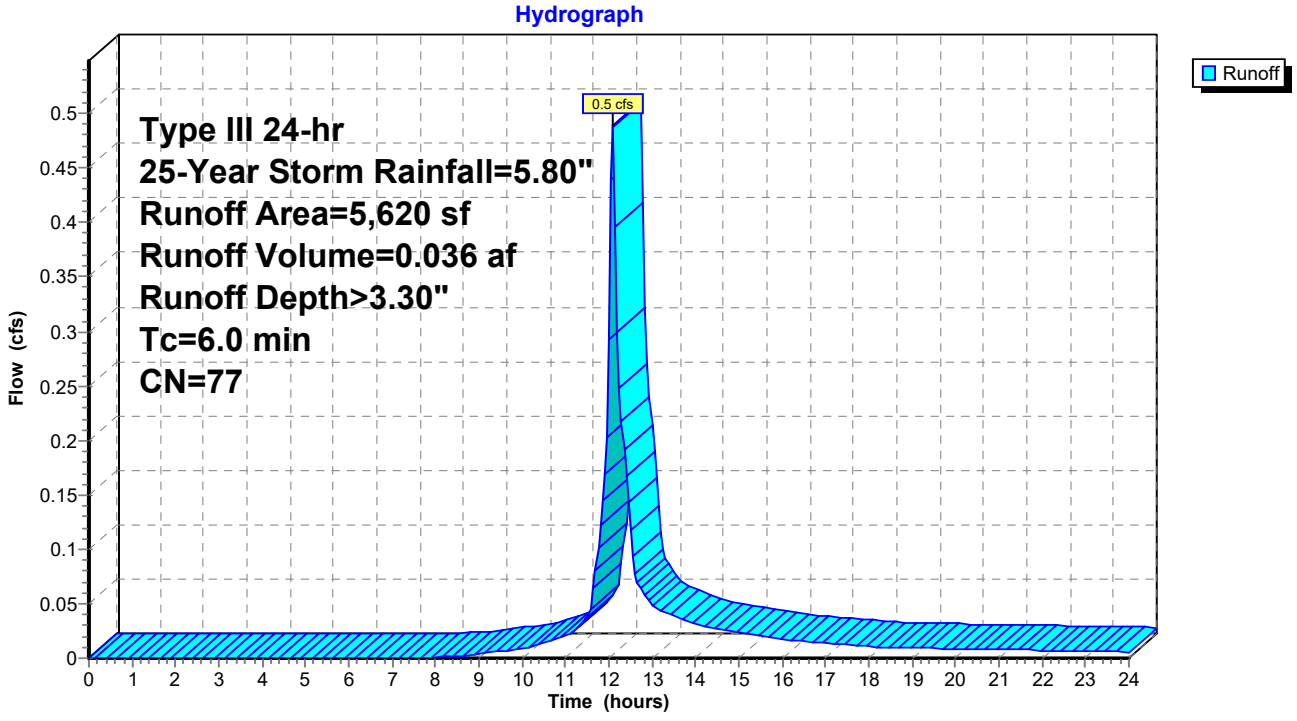
Runoff = 0.5 cfs @ 12.09 hrs, Volume= 0.036 af, Depth> 3.30"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
	3,664	98	Paved parking, HSG A
	1,857	39	Grass cover, Good, HSG A
*	99	40	Porous Pavement
	5,620	77	Weighted Average
	1,956		34.80% Pervious Area
	3,664		65.20% Impervious Area

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

Subcatchment 8S: PRE-8



Summary for Pond 11P: Ex CB1

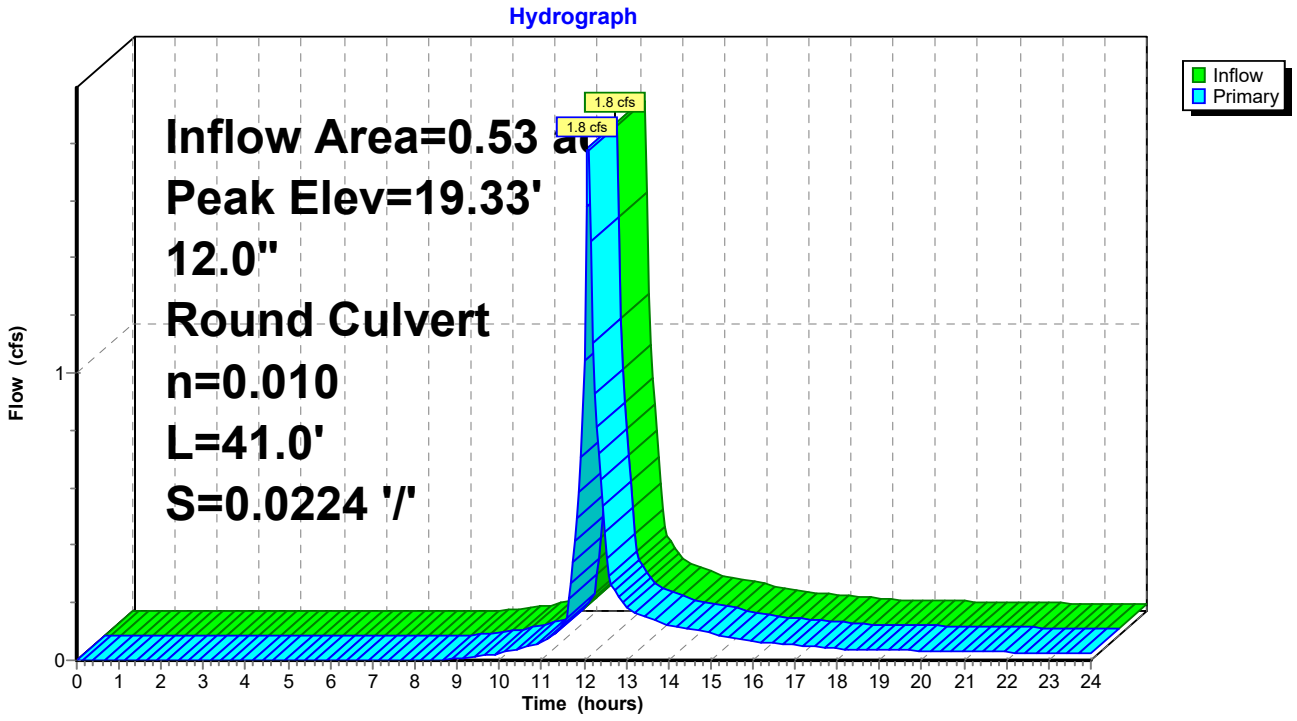
Inflow Area = 0.53 ac, 45.17% Impervious, Inflow Depth > 2.92" for 25-Year Storm event
Inflow = 1.8 cfs @ 12.09 hrs, Volume= 0.129 af
Outflow = 1.8 cfs @ 12.09 hrs, Volume= 0.129 af, Atten= 0%, Lag= 0.0 min
Primary = 1.8 cfs @ 12.09 hrs, Volume= 0.129 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 19.33' @ 12.09 hrs
Flood Elev= 22.02'

Device	Routing	Invert	Outlet Devices
#1	Primary	18.47'	**12.0" Round Culvert** L= 41.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 18.47' / 17.55' S= 0.0224 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.8 cfs @ 12.09 hrs HW=19.32' TW=18.26' (Dynamic Tailwater)
1=Culvert (Inlet Controls 1.8 cfs @ 2.47 fps)

Pond 11P: Ex CB1



Summary for Pond 12P: Ex CB2

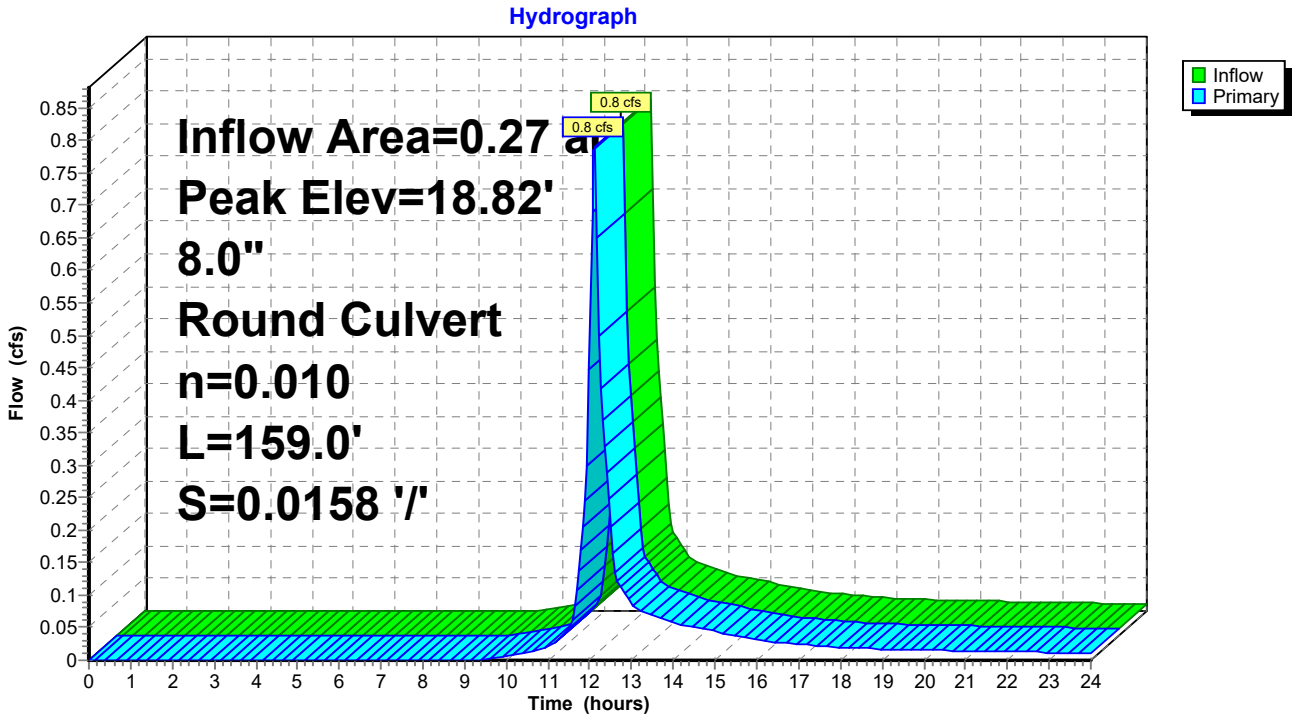
Inflow Area = 0.27 ac, 19.74% Impervious, Inflow Depth > 2.55" for 25-Year Storm event
Inflow = 0.8 cfs @ 12.10 hrs, Volume= 0.057 af
Outflow = 0.8 cfs @ 12.10 hrs, Volume= 0.057 af, Atten= 0%, Lag= 0.0 min
Primary = 0.8 cfs @ 12.10 hrs, Volume= 0.057 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 18.82' @ 12.10 hrs
Flood Elev= 22.15'

Device	Routing	Invert	Outlet Devices
#1	Primary	18.14'	**8.0" Round Culvert** L= 159.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 18.14' / 15.62' S= 0.0158 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=0.8 cfs @ 12.10 hrs HW=18.82' TW=0.00' (Dynamic Tailwater)
1=Culvert (Inlet Controls 0.8 cfs @ 2.23 fps)

Pond 12P: Ex CB2



Summary for Pond 13P: Ex CB7

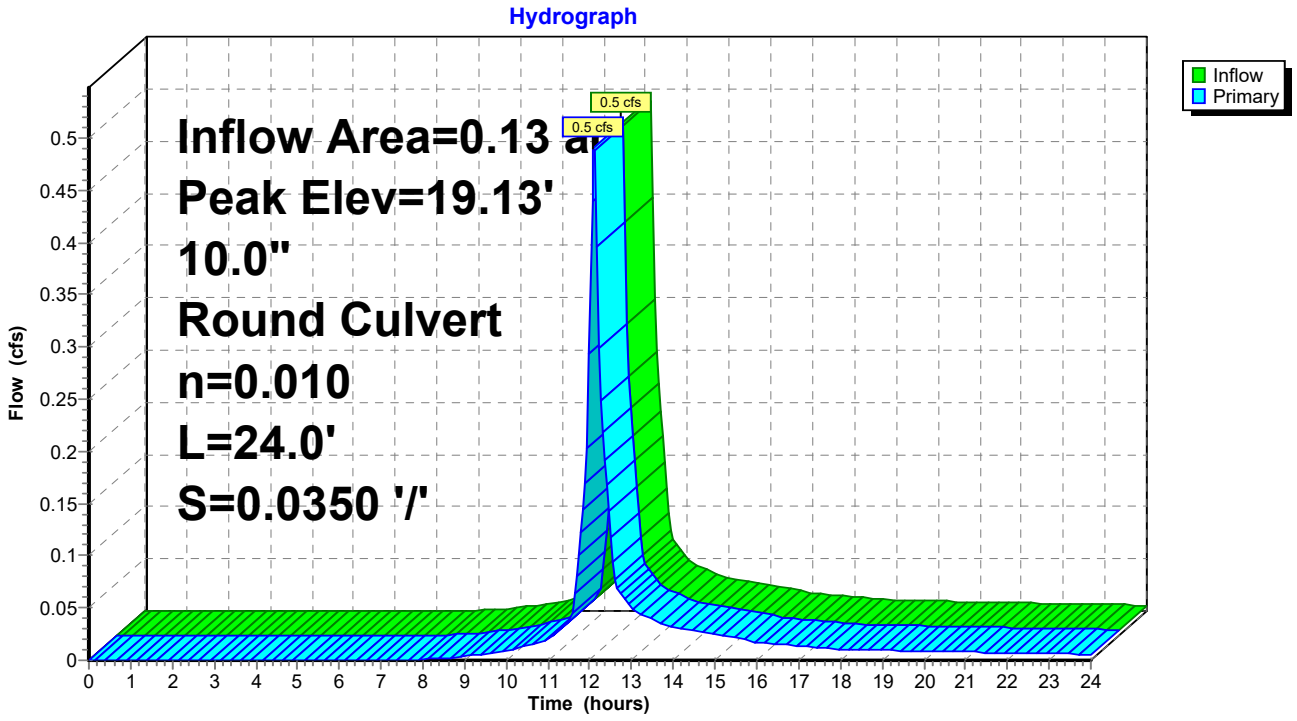
Inflow Area = 0.13 ac, 65.20% Impervious, Inflow Depth > 3.30" for 25-Year Storm event
Inflow = 0.5 cfs @ 12.09 hrs, Volume= 0.036 af
Outflow = 0.5 cfs @ 12.09 hrs, Volume= 0.036 af, Atten= 0%, Lag= 0.0 min
Primary = 0.5 cfs @ 12.09 hrs, Volume= 0.036 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 19.13' @ 12.09 hrs
Flood Elev= 24.51'

Device	Routing	Invert	Outlet Devices
#1	Primary	18.70'	**10.0" Round Culvert** L= 24.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 18.70' / 17.86' S= 0.0350 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf

Primary OutFlow Max=0.5 cfs @ 12.09 hrs HW=19.12' TW=15.89' (Dynamic Tailwater)
1=Culvert (Inlet Controls 0.5 cfs @ 1.74 fps)

Pond 13P: Ex CB7



Summary for Pond 14P: Ex CB4

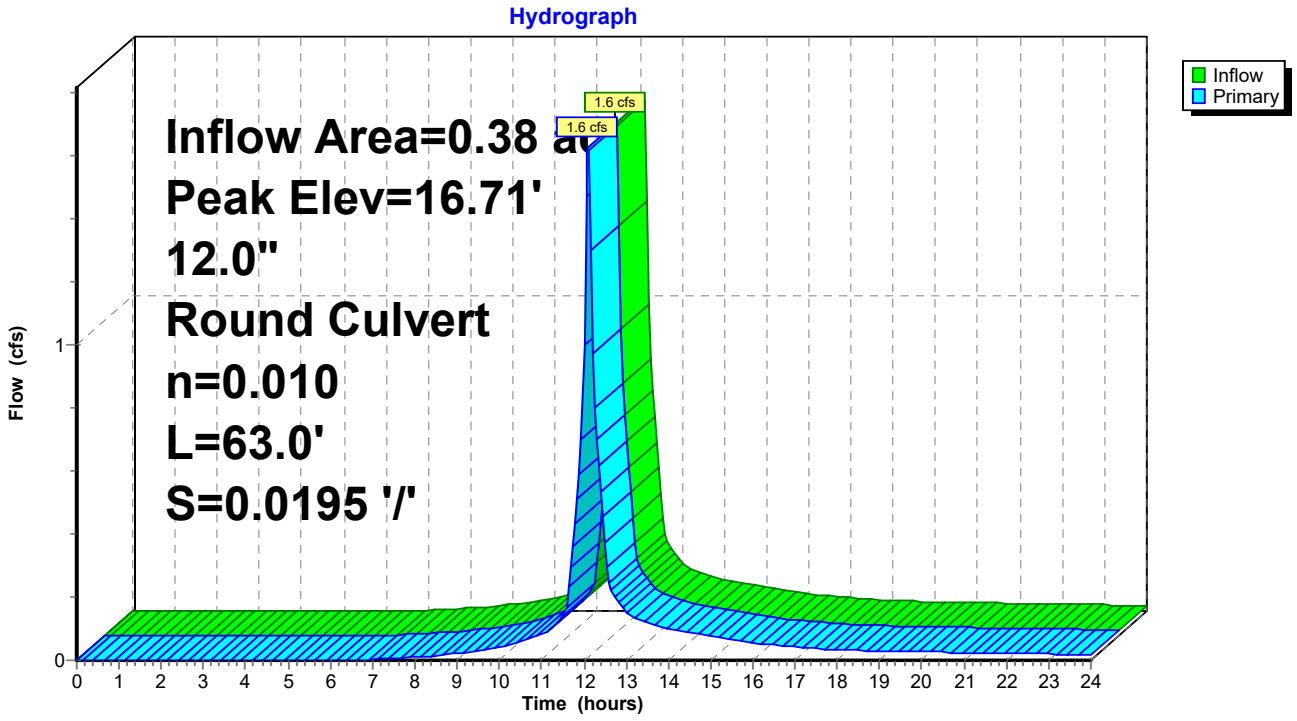
Inflow Area = 0.38 ac, 71.97% Impervious, Inflow Depth > 3.80" for 25-Year Storm event
Inflow = 1.6 cfs @ 12.09 hrs, Volume= 0.119 af
Outflow = 1.6 cfs @ 12.09 hrs, Volume= 0.119 af, Atten= 0%, Lag= 0.0 min
Primary = 1.6 cfs @ 12.09 hrs, Volume= 0.119 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 16.71' @ 12.09 hrs
Flood Elev= 21.96'

Device	Routing	Invert	Outlet Devices
#1	Primary	15.91'	**12.0" Round Culvert** L= 63.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 15.91' / 14.68' S= 0.0195 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.6 cfs @ 12.09 hrs HW=16.70' TW=16.00' (Dynamic Tailwater)
1=Culvert (Inlet Controls 1.6 cfs @ 2.39 fps)

Pond 14P: Ex CB4



Summary for Pond 15P: Ex CB5

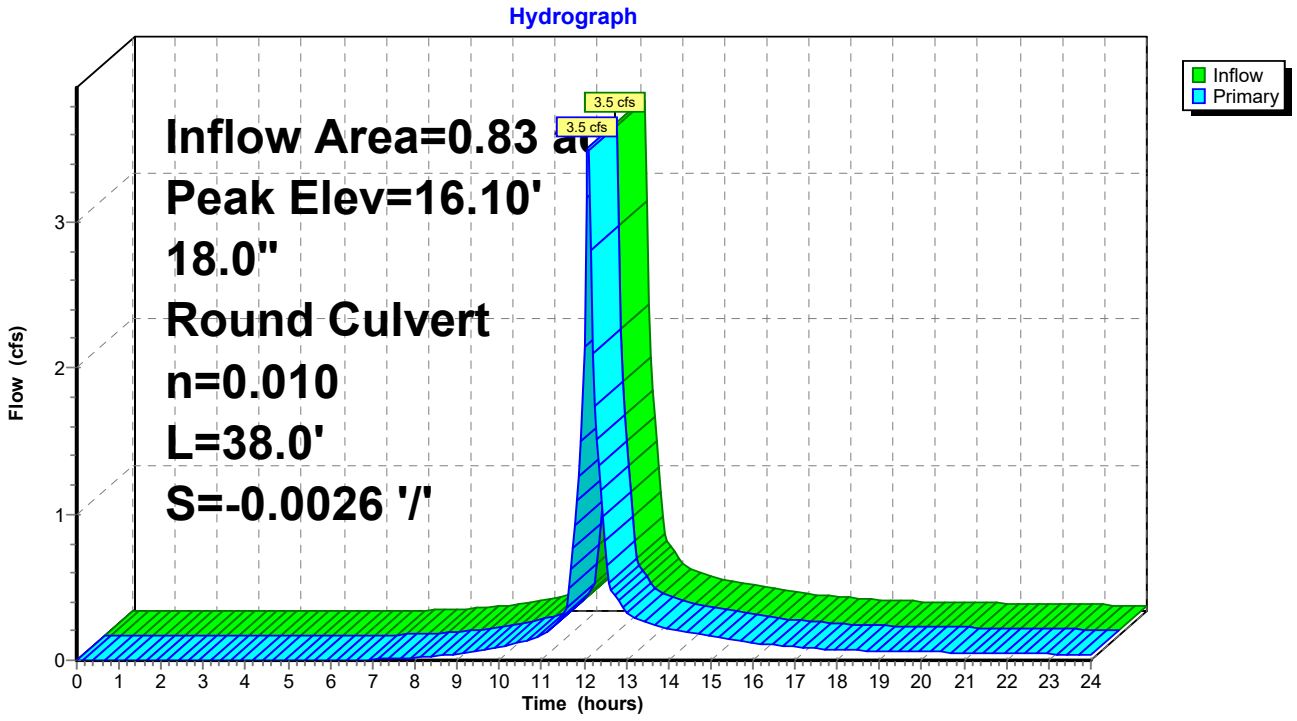
Inflow Area = 0.83 ac, 71.40% Impervious, Inflow Depth > 3.72" for 25-Year Storm event
Inflow = 3.5 cfs @ 12.09 hrs, Volume= 0.256 af
Outflow = 3.5 cfs @ 12.09 hrs, Volume= 0.256 af, Atten= 0%, Lag= 0.0 min
Primary = 3.5 cfs @ 12.09 hrs, Volume= 0.256 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 16.10' @ 12.17 hrs
Flood Elev= 22.70'

Device	Routing	Invert	Outlet Devices
#1	Primary	14.80'	**18.0" Round Culvert** L= 38.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 14.70' / 14.80' S= -0.0026 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=2.2 cfs @ 12.09 hrs HW=16.00' TW=15.85' (Dynamic Tailwater)
1=Culvert (Inlet Controls 2.2 cfs @ 1.48 fps)

Pond 15P: Ex CB5



Summary for Pond 16P: Ex DMH8

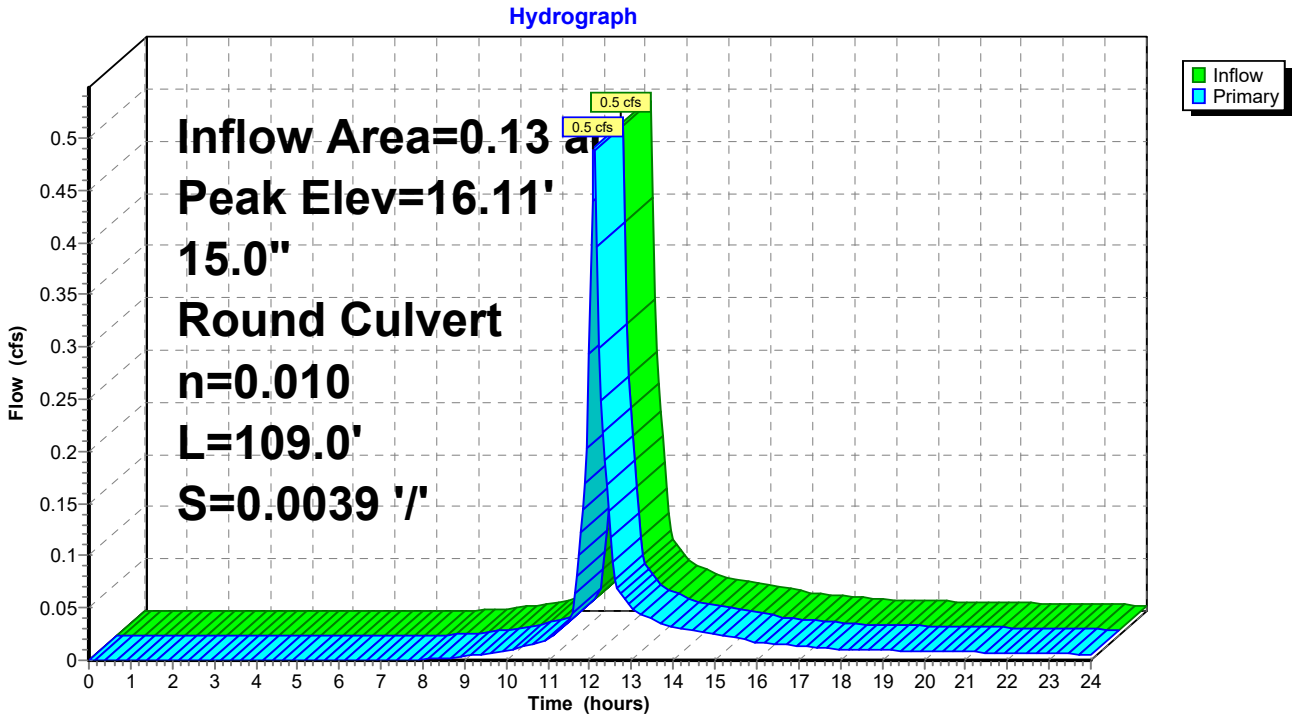
Inflow Area = 0.13 ac, 65.20% Impervious, Inflow Depth > 3.30" for 25-Year Storm event
Inflow = 0.5 cfs @ 12.09 hrs, Volume= 0.036 af
Outflow = 0.5 cfs @ 12.09 hrs, Volume= 0.036 af, Atten= 0%, Lag= 0.0 min
Primary = 0.5 cfs @ 12.09 hrs, Volume= 0.036 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 16.11' @ 12.22 hrs
Flood Elev= 24.67'

Device	Routing	Invert	Outlet Devices
#1	Primary	15.08'	**15.0" Round Culvert** L= 109.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 15.08' / 14.65' S= 0.0039 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=0.0 cfs @ 12.09 hrs HW=15.89' TW=16.00' (Dynamic Tailwater)
↑**1=Culvert** (Controls 0.0 cfs)

Pond 16P: Ex DMH8



Summary for Pond 21P: Ex DMH9

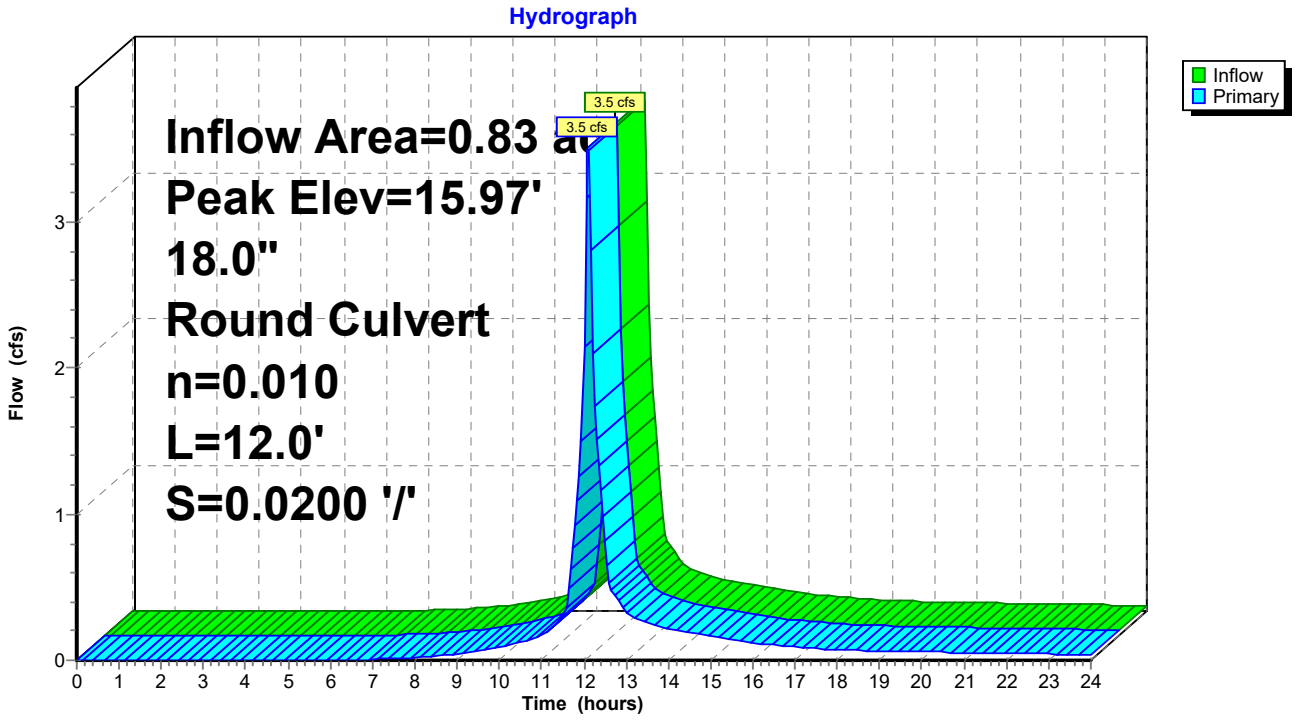
Inflow Area = 0.83 ac, 71.40% Impervious, Inflow Depth > 3.72" for 25-Year Storm event
Inflow = 3.5 cfs @ 12.09 hrs, Volume= 0.256 af
Outflow = 3.5 cfs @ 12.09 hrs, Volume= 0.256 af, Atten= 0%, Lag= 0.0 min
Primary = 3.5 cfs @ 12.09 hrs, Volume= 0.256 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 15.97' @ 12.14 hrs
Flood Elev= 23.72'

Device	Routing	Invert	Outlet Devices
#1	Primary	14.62'	**18.0" Round Culvert** L= 12.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 14.62' / 14.38' S= 0.0200 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=2.0 cfs @ 12.09 hrs HW=15.85' TW=15.73' (Dynamic Tailwater)
1=Culvert (Inlet Controls 2.0 cfs @ 1.30 fps)

Pond 21P: Ex DMH9



Summary for Pond 22P: Ex DMH3

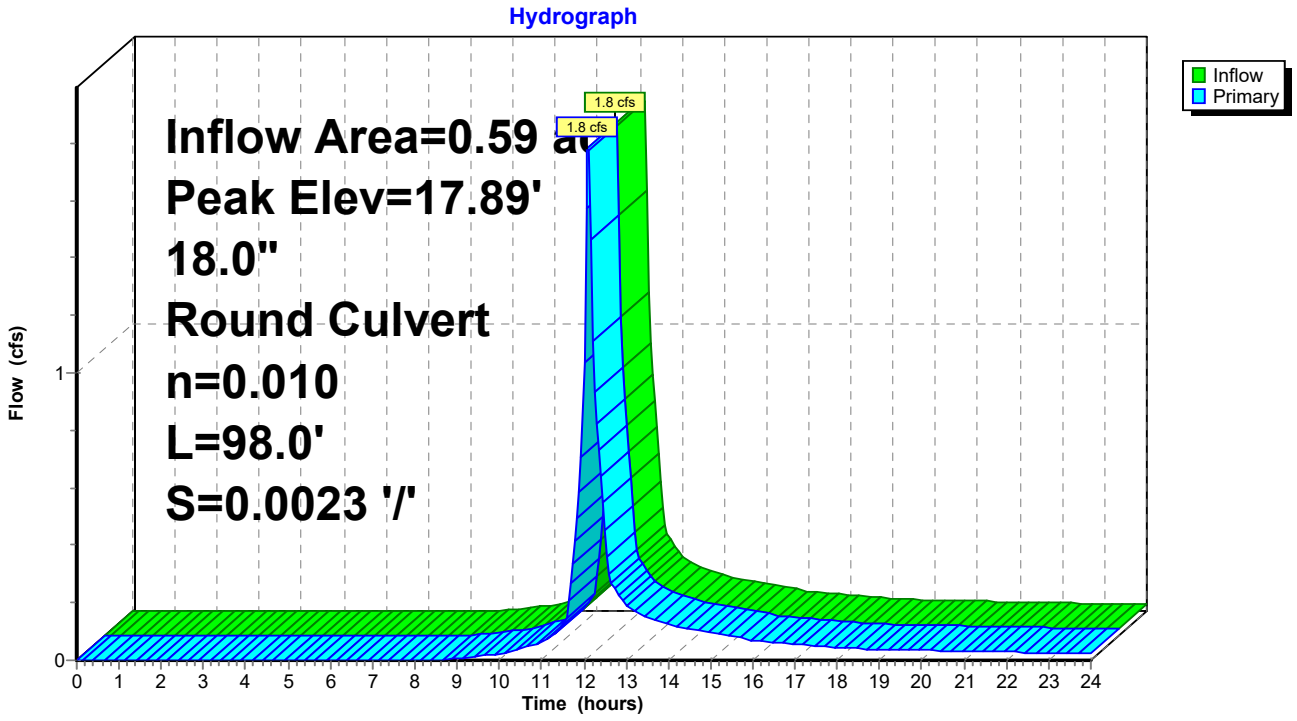
Inflow Area = 0.59 ac, 40.84% Impervious, Inflow Depth > 2.67" for 25-Year Storm event
Inflow = 1.8 cfs @ 12.09 hrs, Volume= 0.131 af
Outflow = 1.8 cfs @ 12.09 hrs, Volume= 0.131 af, Atten= 0%, Lag= 0.0 min
Primary = 1.8 cfs @ 12.09 hrs, Volume= 0.131 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 17.89' @ 12.10 hrs
Flood Elev= 24.92'

Device	Routing	Invert	Outlet Devices
#1	Primary	17.12'	**18.0" Round Culvert** L= 98.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 17.12' / 16.89' S= 0.0023 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=1.6 cfs @ 12.09 hrs HW=17.88' TW=17.52' (Dynamic Tailwater)
1=Culvert (Outlet Controls 1.6 cfs @ 2.67 fps)

Pond 22P: Ex DMH3



Summary for Pond 23P: Ex CB3

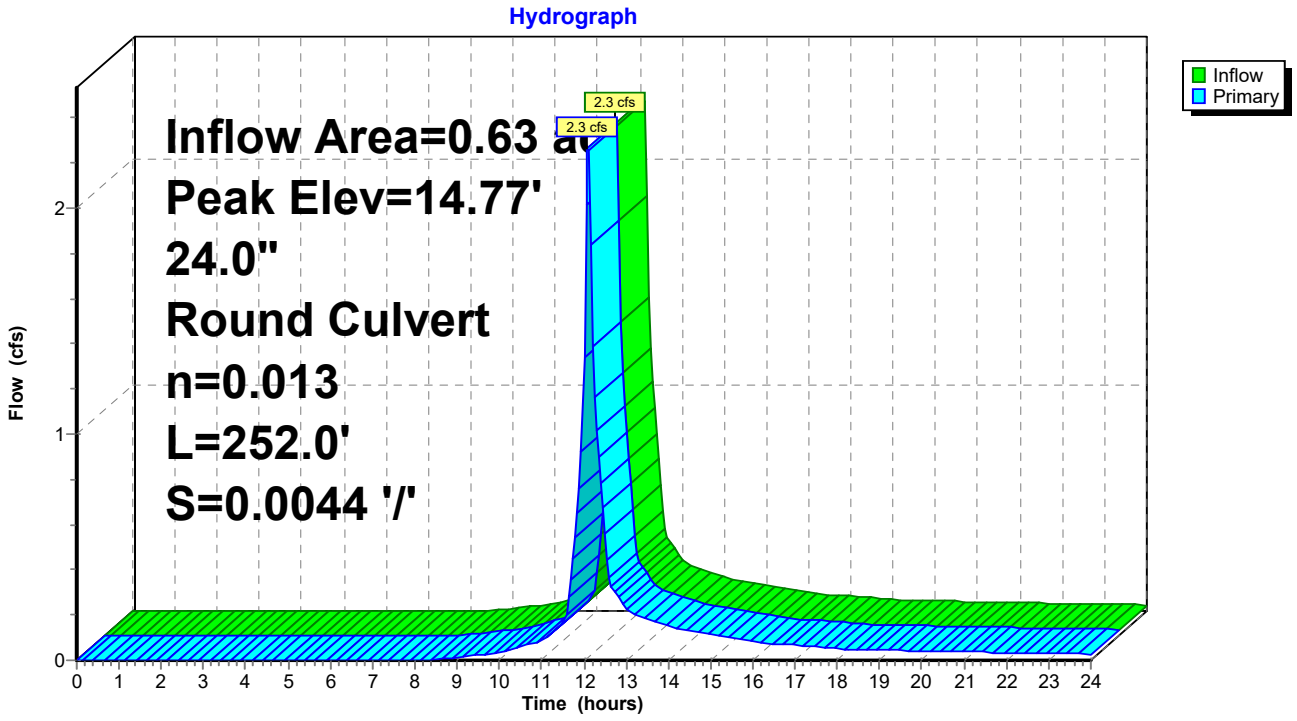
Inflow Area = 0.63 ac, 51.24% Impervious, Inflow Depth > 3.11" for 25-Year Storm event
Inflow = 2.3 cfs @ 12.09 hrs, Volume= 0.164 af
Outflow = 2.3 cfs @ 12.09 hrs, Volume= 0.164 af, Atten= 0%, Lag= 0.0 min
Primary = 2.3 cfs @ 12.09 hrs, Volume= 0.164 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 14.77' @ 12.09 hrs
Flood Elev= 23.60'

Device	Routing	Invert	Outlet Devices
#1	Primary	14.05'	**24.0" Round Culvert** L= 252.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 14.05' / 12.94' S= 0.0044 '/' Cc= 0.900 n= 0.013 Cast iron, coated, Flow Area= 3.14 sf

Primary OutFlow Max=2.2 cfs @ 12.09 hrs HW=14.77' TW=0.00' (Dynamic Tailwater)
1=Culvert (Barrel Controls 2.2 cfs @ 3.27 fps)

Pond 23P: Ex CB3



Summary for Pond 24P: Ex DMH2

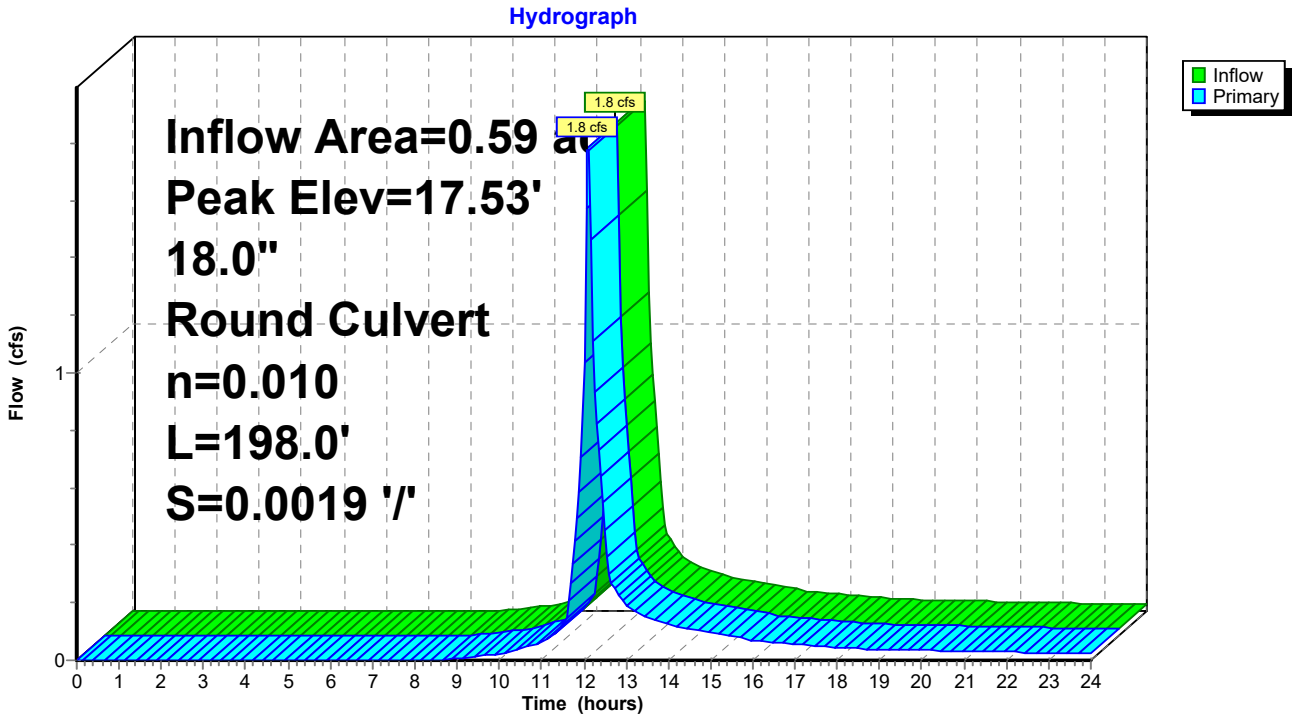
Inflow Area = 0.59 ac, 40.84% Impervious, Inflow Depth > 2.67" for 25-Year Storm event
Inflow = 1.8 cfs @ 12.09 hrs, Volume= 0.131 af
Outflow = 1.8 cfs @ 12.09 hrs, Volume= 0.131 af, Atten= 0%, Lag= 0.0 min
Primary = 1.8 cfs @ 12.09 hrs, Volume= 0.131 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 17.53' @ 12.09 hrs
Flood Elev= 25.38'

Device	Routing	Invert	Outlet Devices
#1	Primary	16.75'	**18.0" Round Culvert** L= 198.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 16.75' / 16.38' S= 0.0019 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=1.8 cfs @ 12.09 hrs HW=17.52' TW=16.16' (Dynamic Tailwater)
1=Culvert (Barrel Controls 1.8 cfs @ 2.80 fps)

Pond 24P: Ex DMH2



Summary for Pond 25P: Ex DMH5

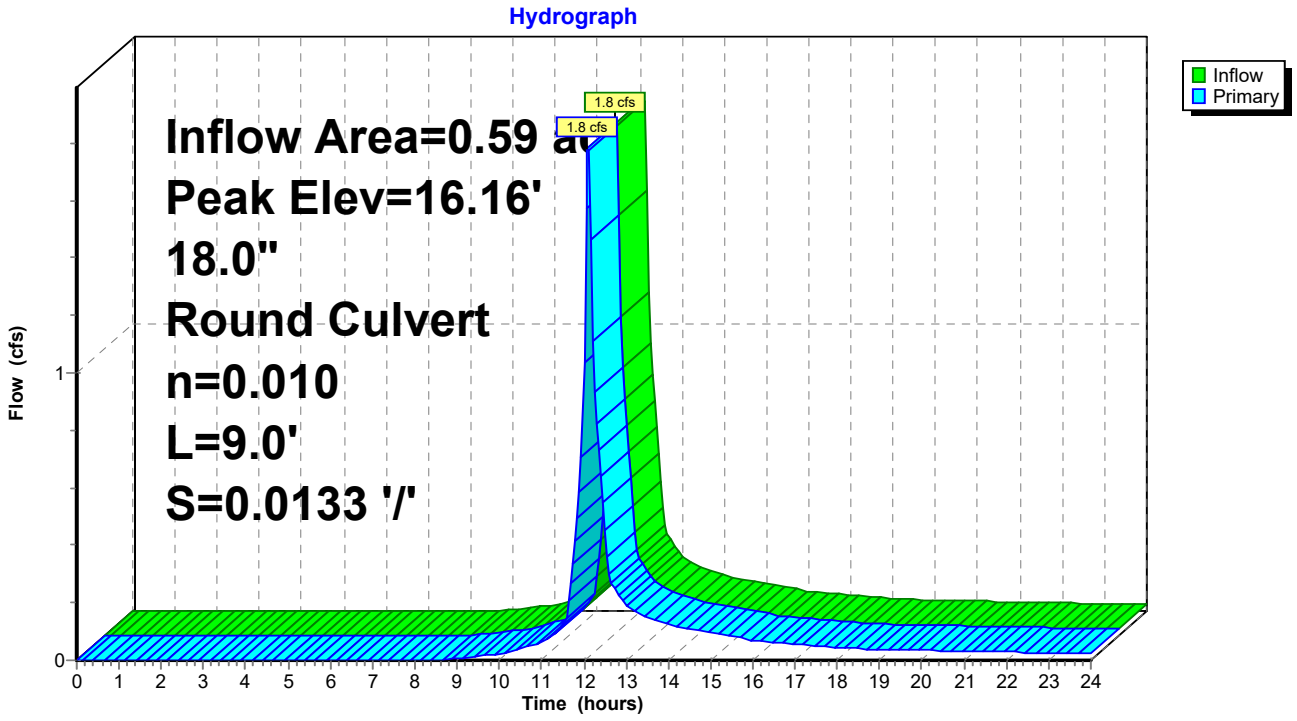
Inflow Area = 0.59 ac, 40.84% Impervious, Inflow Depth > 2.67" for 25-Year Storm event
Inflow = 1.8 cfs @ 12.09 hrs, Volume= 0.131 af
Outflow = 1.8 cfs @ 12.09 hrs, Volume= 0.131 af, Atten= 0%, Lag= 0.0 min
Primary = 1.8 cfs @ 12.09 hrs, Volume= 0.131 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 16.16' @ 12.09 hrs
Flood Elev= 23.84'

Device	Routing	Invert	Outlet Devices
#1	Primary	15.44'	**18.0" Round Culvert** L= 9.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 15.44' / 15.32' S= 0.0133 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=1.8 cfs @ 12.09 hrs HW=16.16' TW=15.75' (Dynamic Tailwater)
1=Culvert (Barrel Controls 1.8 cfs @ 3.08 fps)

Pond 25P: Ex DMH5



Summary for Pond 26P: Ex DMH6

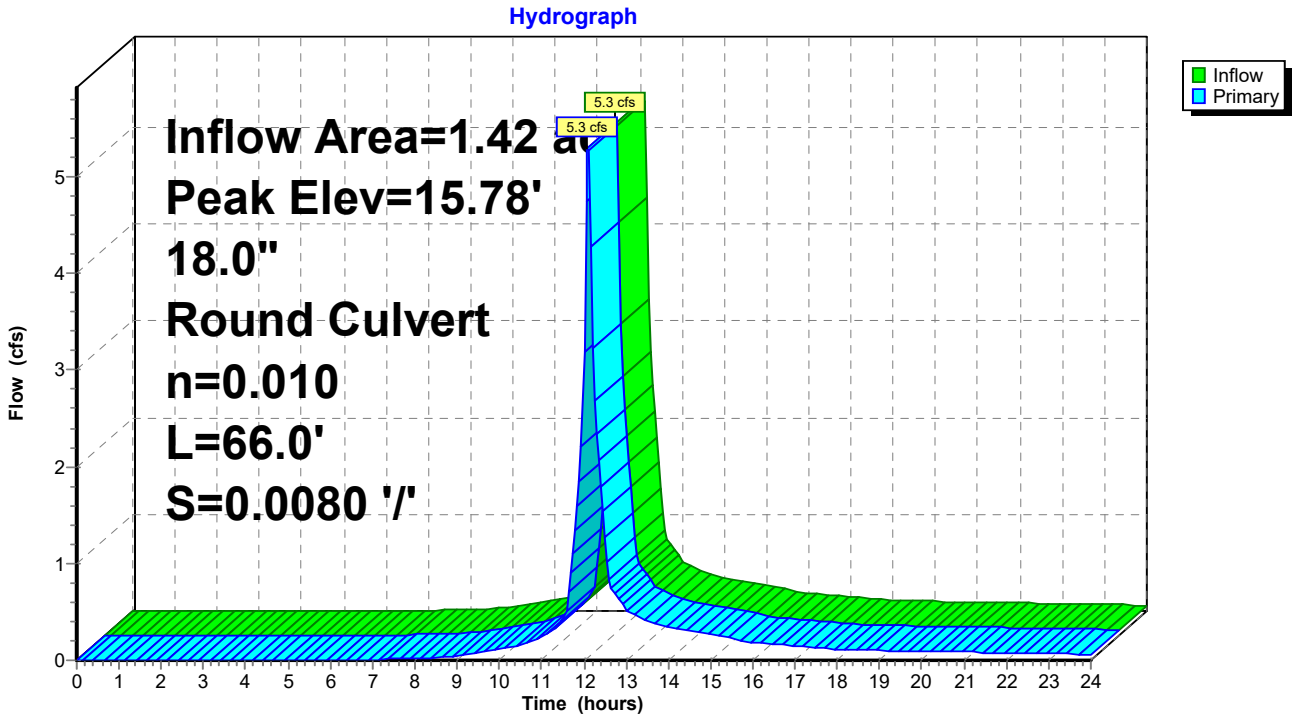
Inflow Area = 1.42 ac, 58.66% Impervious, Inflow Depth > 3.29" for 25-Year Storm event
Inflow = 5.3 cfs @ 12.09 hrs, Volume= 0.387 af
Outflow = 5.3 cfs @ 12.09 hrs, Volume= 0.387 af, Atten= 0%, Lag= 0.0 min
Primary = 5.3 cfs @ 12.09 hrs, Volume= 0.387 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 15.78' @ 12.11 hrs
Flood Elev= 23.95'

Device	Routing	Invert	Outlet Devices
#1	Primary	14.30'	**18.0" Round Culvert** L= 66.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 14.30' / 13.77' S= 0.0080 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=4.7 cfs @ 12.09 hrs HW=15.74' TW=15.24' (Dynamic Tailwater)
1=Culvert (Inlet Controls 4.7 cfs @ 2.69 fps)

Pond 26P: Ex DMH6



Summary for Pond 27P: Ex DMH7

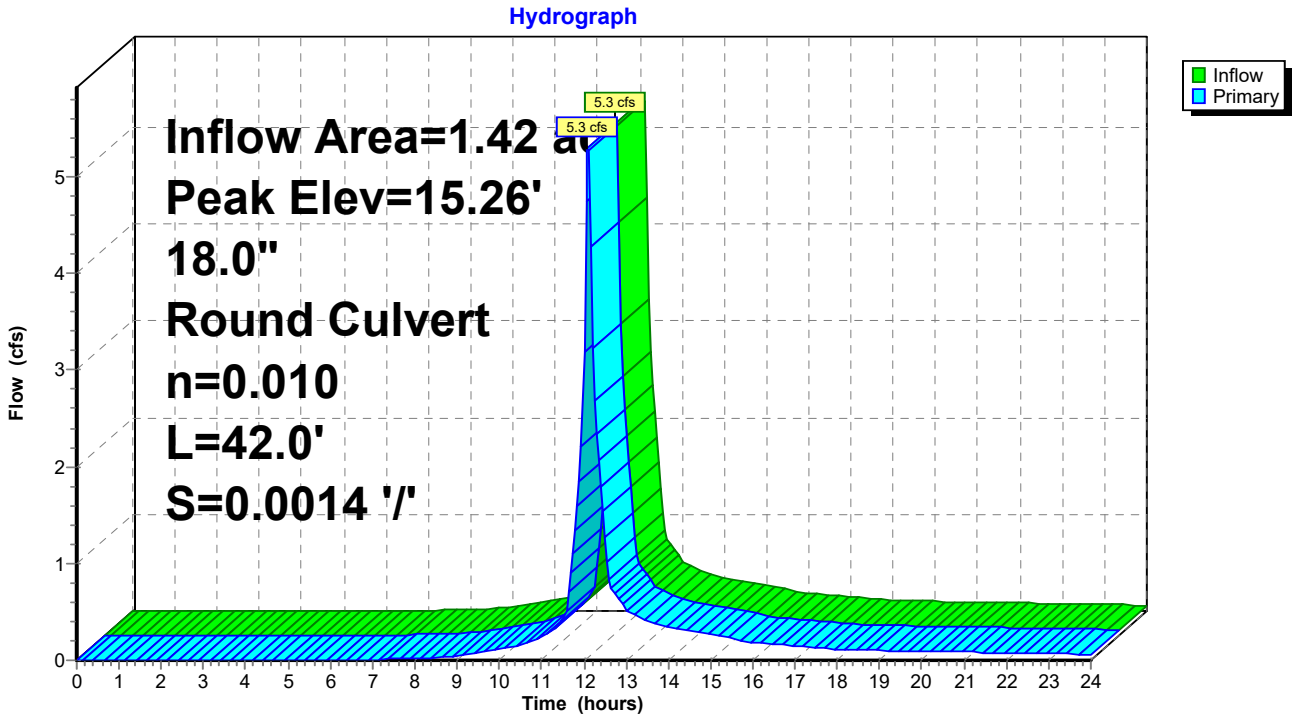
Inflow Area = 1.42 ac, 58.66% Impervious, Inflow Depth > 3.29" for 25-Year Storm event
Inflow = 5.3 cfs @ 12.09 hrs, Volume= 0.387 af
Outflow = 5.3 cfs @ 12.09 hrs, Volume= 0.387 af, Atten= 0%, Lag= 0.0 min
Primary = 5.3 cfs @ 12.09 hrs, Volume= 0.387 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 15.26' @ 12.09 hrs
Flood Elev= 24.90'

Device	Routing	Invert	Outlet Devices
#1	Primary	13.70'	**18.0" Round Culvert** L= 42.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 13.70' / 13.64' S= 0.0014 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=5.2 cfs @ 12.09 hrs HW=15.24' TW=0.00' (Dynamic Tailwater)
1=Culvert (Barrel Controls 5.2 cfs @ 3.56 fps)

Pond 27P: Ex DMH7



Summary for Pond 29P: Ex DMH4

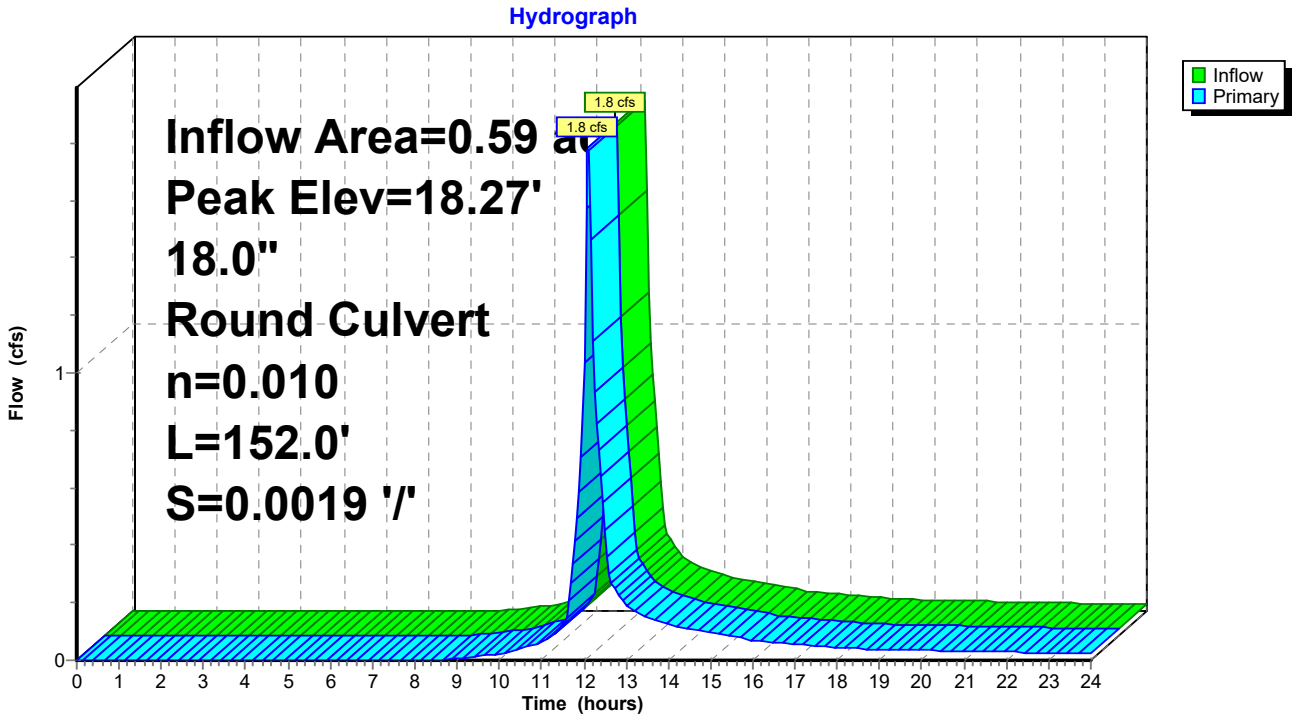
Inflow Area = 0.59 ac, 40.84% Impervious, Inflow Depth > 2.67" for 25-Year Storm event
Inflow = 1.8 cfs @ 12.09 hrs, Volume= 0.131 af
Outflow = 1.8 cfs @ 12.09 hrs, Volume= 0.131 af, Atten= 0%, Lag= 0.0 min
Primary = 1.8 cfs @ 12.09 hrs, Volume= 0.131 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 18.27' @ 12.11 hrs
Flood Elev= 23.44'

Device	Routing	Invert	Outlet Devices
#1	Primary	17.46'	**18.0" Round Culvert** L= 152.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 17.46' / 17.17' S= 0.0019 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=1.6 cfs @ 12.09 hrs HW=18.26' TW=17.88' (Dynamic Tailwater)
1=Culvert (Outlet Controls 1.6 cfs @ 2.48 fps)

Pond 29P: Ex DMH4

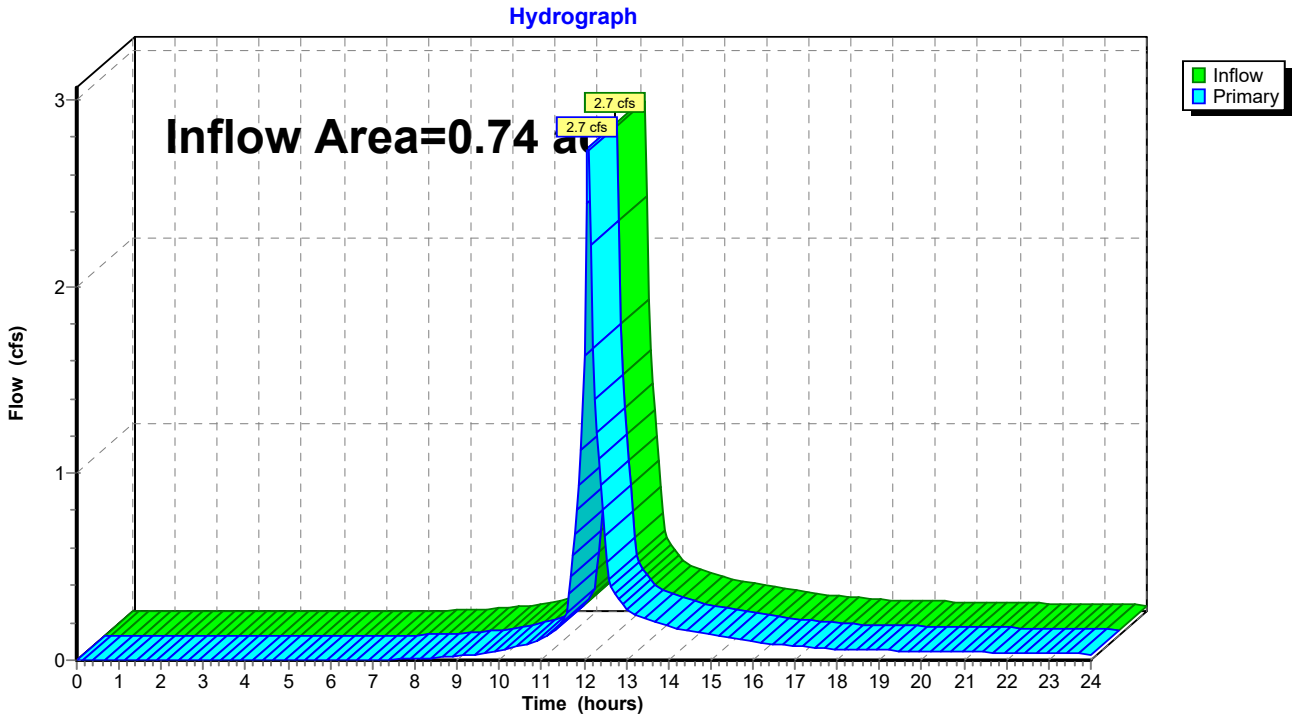


Summary for Link SP1: Forest Ave Storm Drain

Inflow Area = 0.74 ac, 39.80% Impervious, Inflow Depth > 3.22" for 25-Year Storm event
Inflow = 2.7 cfs @ 12.09 hrs, Volume= 0.200 af
Primary = 2.7 cfs @ 12.09 hrs, Volume= 0.200 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link SP1: Forest Ave Storm Drain

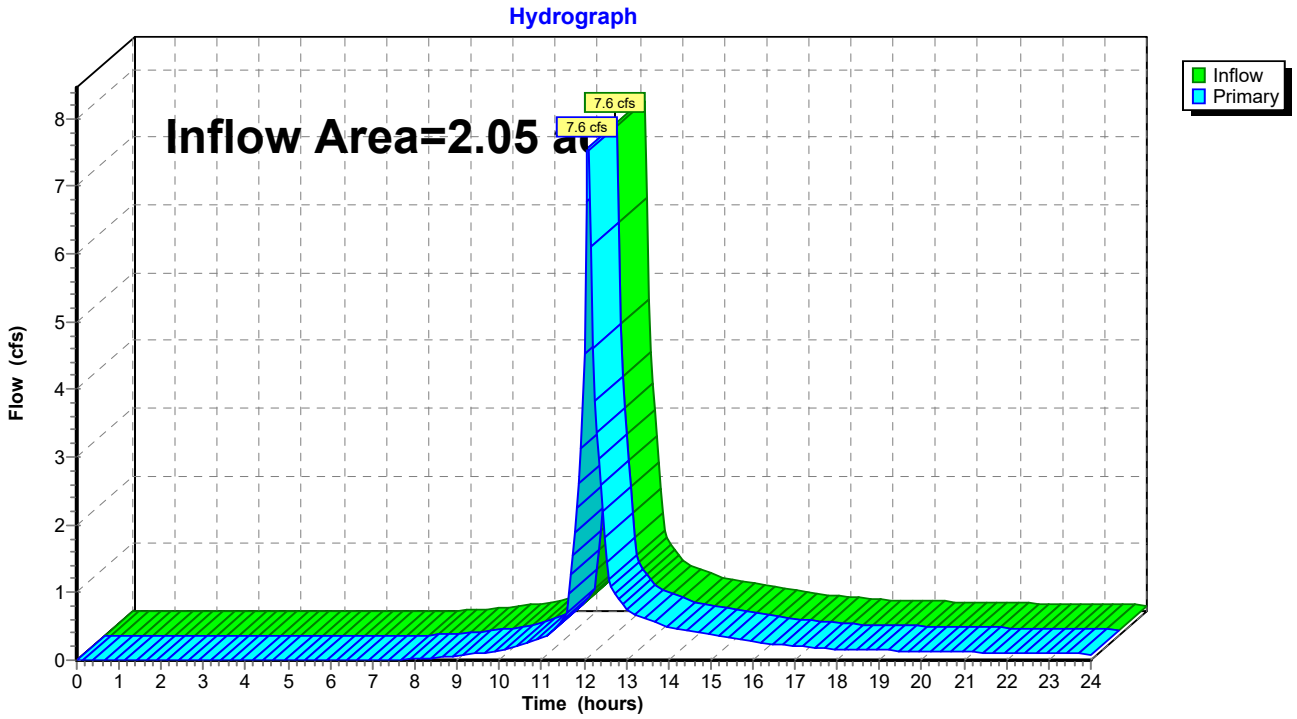


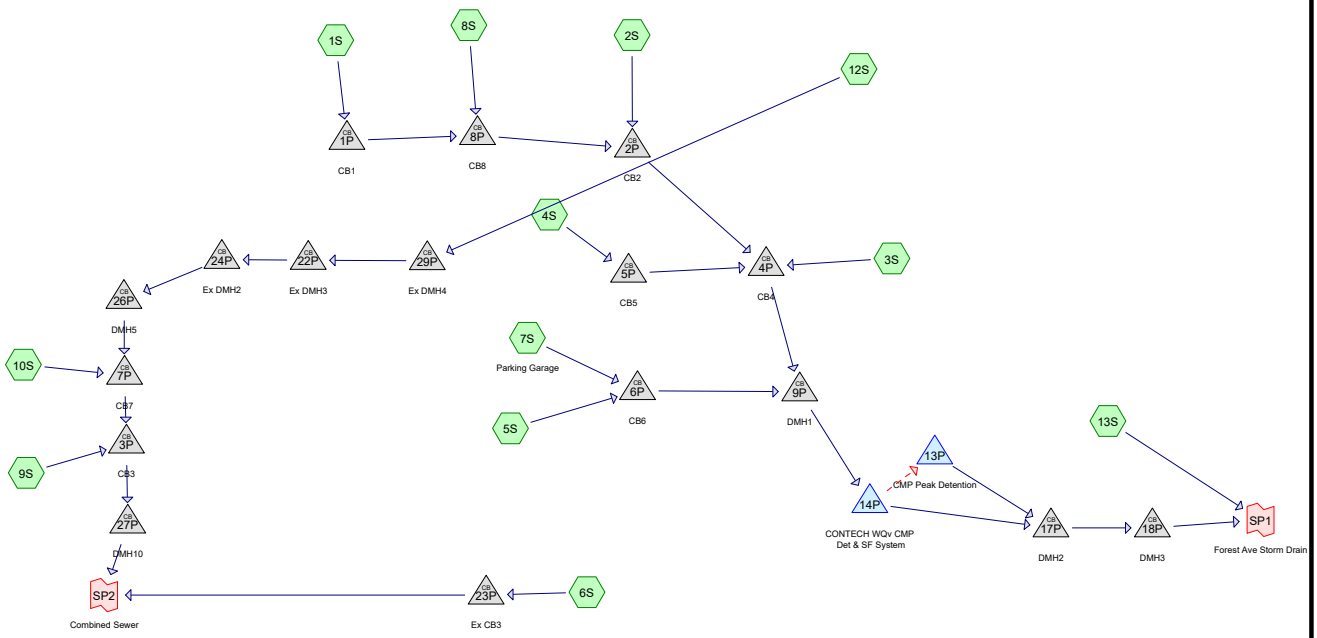
Summary for Link SP2: Combined Sewer

Inflow Area = 2.05 ac, 56.37% Impervious, Inflow Depth > 3.23" for 25-Year Storm event
Inflow = 7.6 cfs @ 12.09 hrs, Volume= 0.551 af
Primary = 7.6 cfs @ 12.09 hrs, Volume= 0.551 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link SP2: Combined Sewer





Subcat Reach Pond Link

Routing Diagram for C2. Post
Prepared by Woodard Curran, Printed 7/28/2021
HydroCAD® 10.00-21 s/n 01204 © 2018 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.76	39	Grass cover, Good, HSG A (1S, 2S, 3S, 4S, 5S, 6S, 8S, 9S, 10S, 12S, 13S)
1.95	98	Impervious (1S, 2S, 3S, 4S, 5S, 6S, 7S, 8S, 9S, 10S, 12S, 13S)
0.08	40	Porous Pavement (1S, 2S, 8S, 12S)
2.79	**80**	**TOTAL AREA**

Summary for Subcatchment 1S:

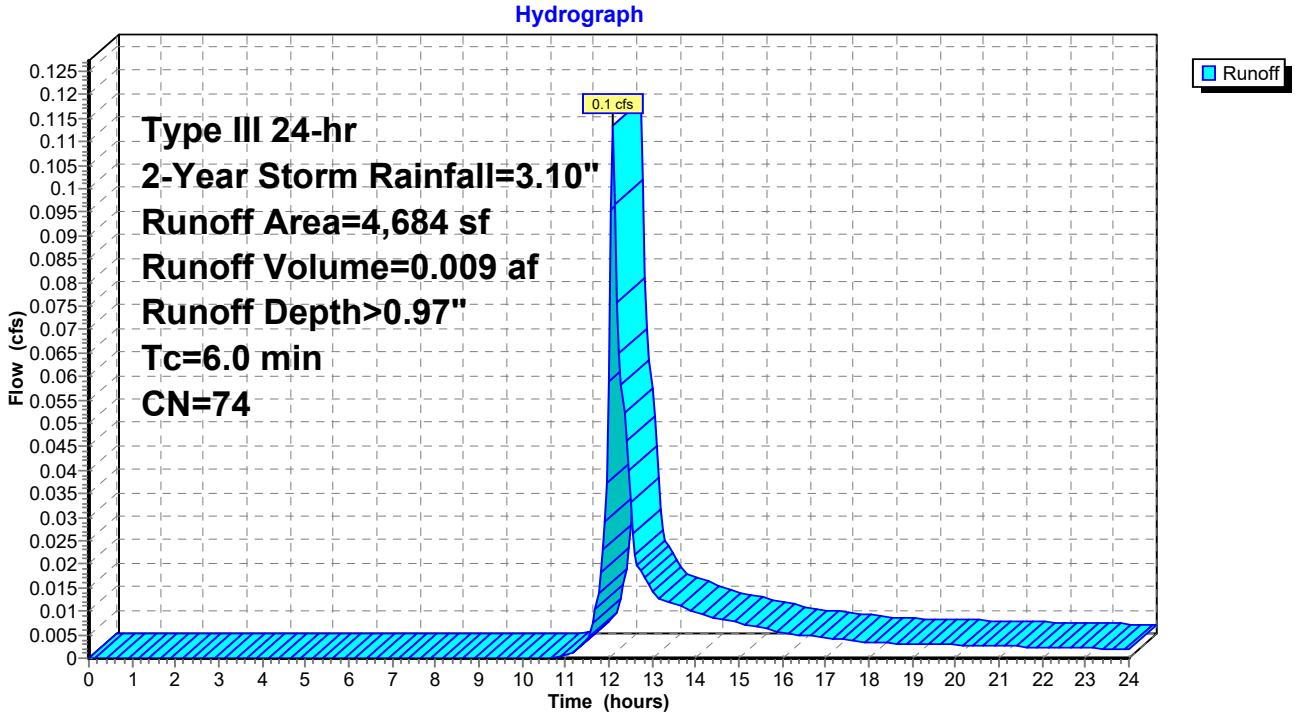
Runoff = 0.1 cfs @ 12.10 hrs, Volume= 0.009 af, Depth> 0.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Storm Rainfall=3.10"

	Area (sf)	CN	Description
*	2,770	98	Impervious
	1,237	39	Grass cover, Good, HSG A
*	677	40	Porous Pavement
	4,684	74	Weighted Average
	1,914		40.86% Pervious Area
	2,770		59.14% Impervious Area

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

Subcatchment 1S:



Summary for Subcatchment 2S:

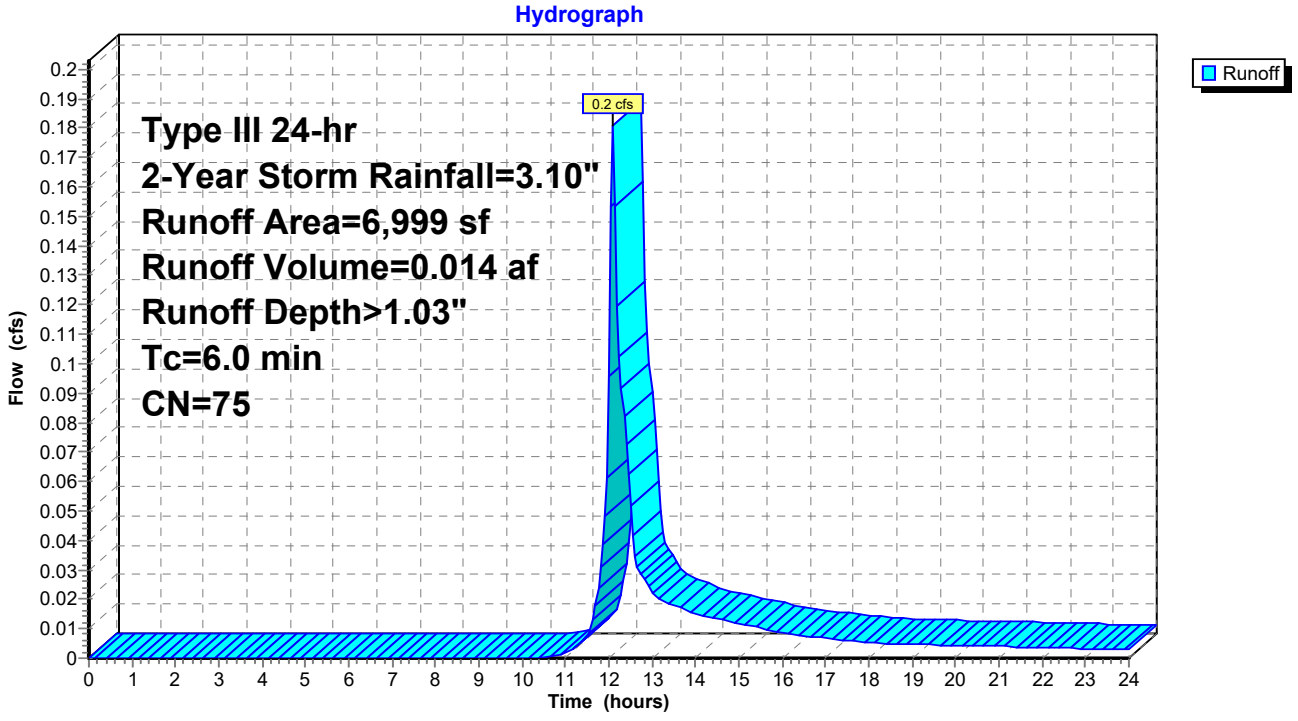
Runoff = 0.2 cfs @ 12.10 hrs, Volume= 0.014 af, Depth> 1.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Storm Rainfall=3.10"

	Area (sf)	CN	Description
*	4,238	98	Impervious
	1,996	39	Grass cover, Good, HSG A
*	765	40	Porous Pavement
	6,999	75	Weighted Average
	2,761		39.45% Pervious Area
	4,238		60.55% Impervious Area

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

Subcatchment 2S:



Summary for Subcatchment 3S:

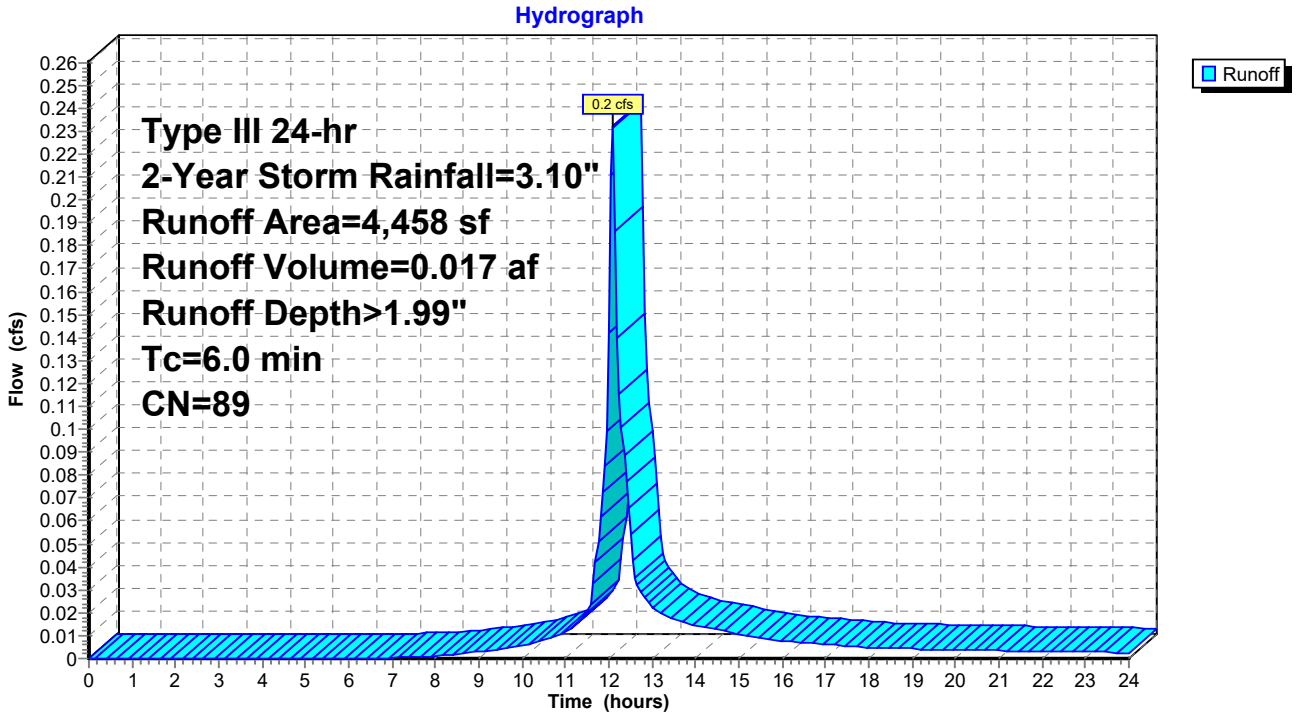
Runoff = 0.2 cfs @ 12.09 hrs, Volume= 0.017 af, Depth> 1.99"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Storm Rainfall=3.10"

	Area (sf)	CN	Description
*	3,789	98	Impervious
	669	39	Grass cover, Good, HSG A
	4,458	89	Weighted Average
	669		15.01% Pervious Area
	3,789		84.99% Impervious Area

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

Subcatchment 3S:



Summary for Subcatchment 4S:

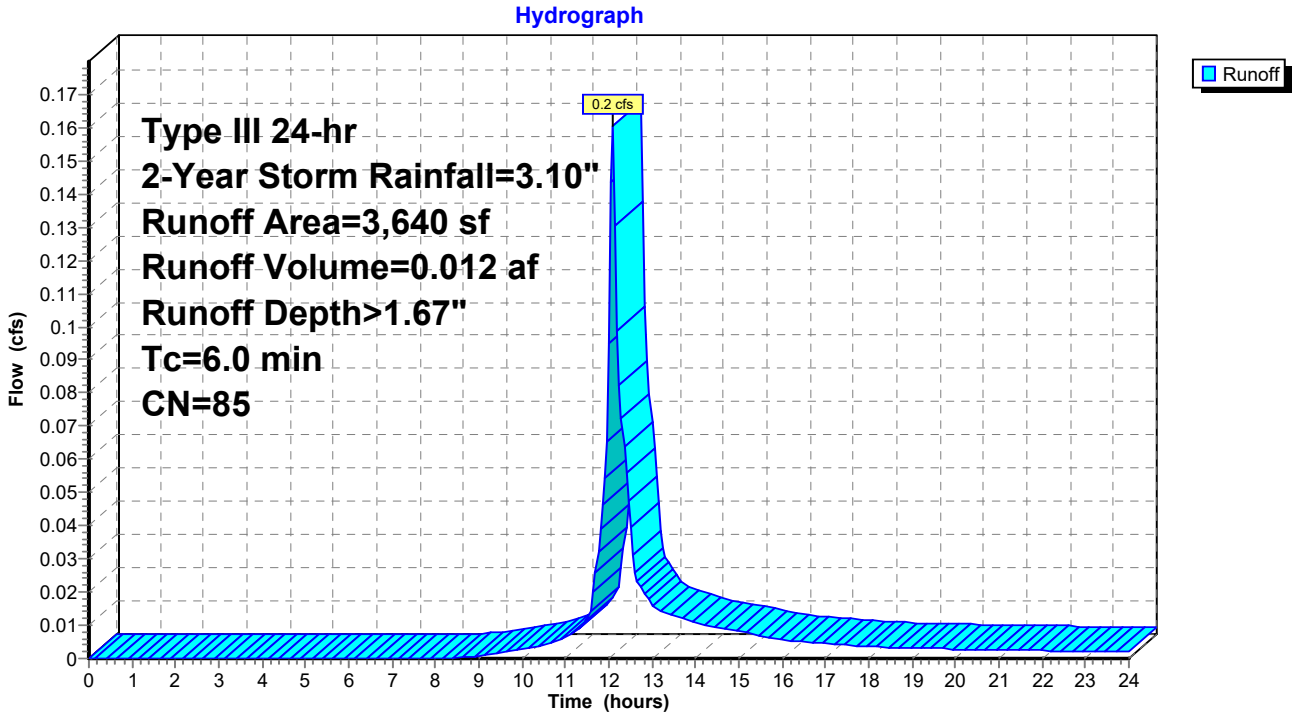
Runoff = 0.2 cfs @ 12.09 hrs, Volume= 0.012 af, Depth> 1.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Storm Rainfall=3.10"

	Area (sf)	CN	Description
*	2,814	98	Impervious
	826	39	Grass cover, Good, HSG A
	3,640	85	Weighted Average
	826		22.69% Pervious Area
	2,814		77.31% Impervious Area

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

Subcatchment 4S:



Summary for Subcatchment 5S:

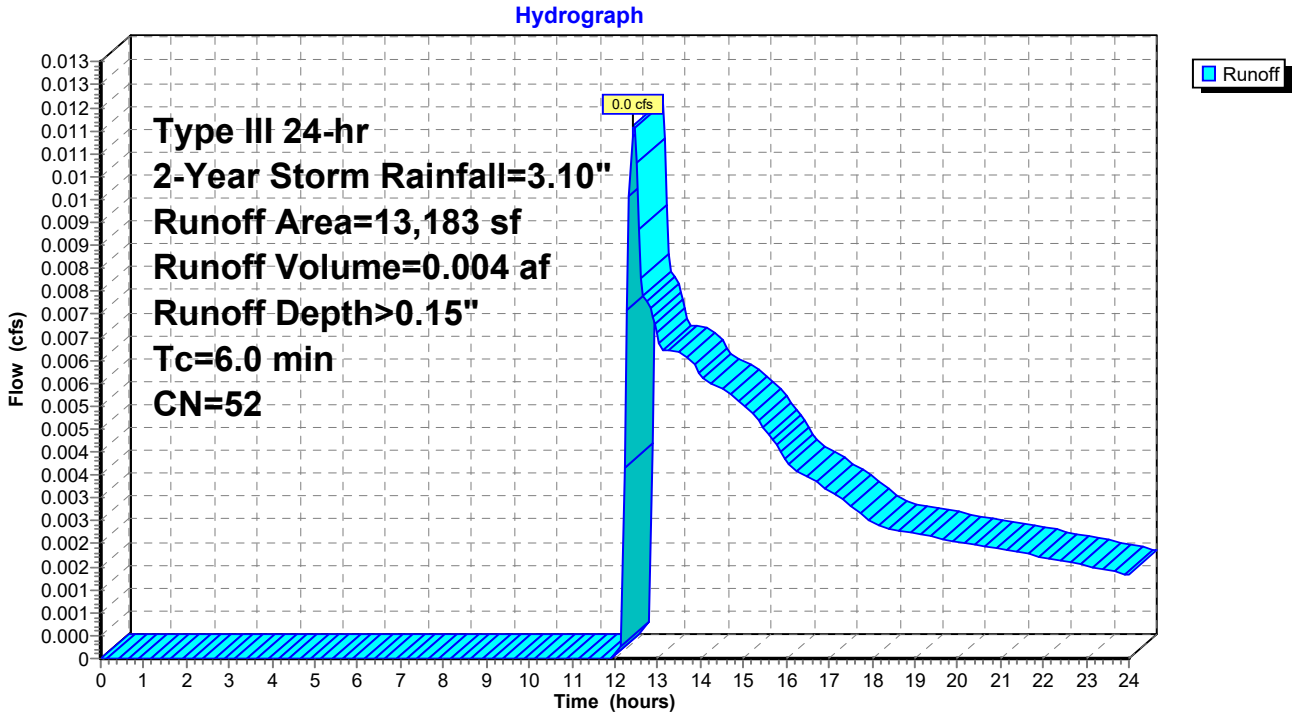
Runoff = 0.0 cfs @ 12.43 hrs, Volume= 0.004 af, Depth> 0.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Storm Rainfall=3.10"

	Area (sf)	CN	Description
*	2,965	98	Impervious
	10,218	39	Grass cover, Good, HSG A
	13,183	52	Weighted Average
	10,218		77.51% Pervious Area
	2,965		22.49% Impervious Area

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

Subcatchment 5S:



Summary for Subcatchment 6S:

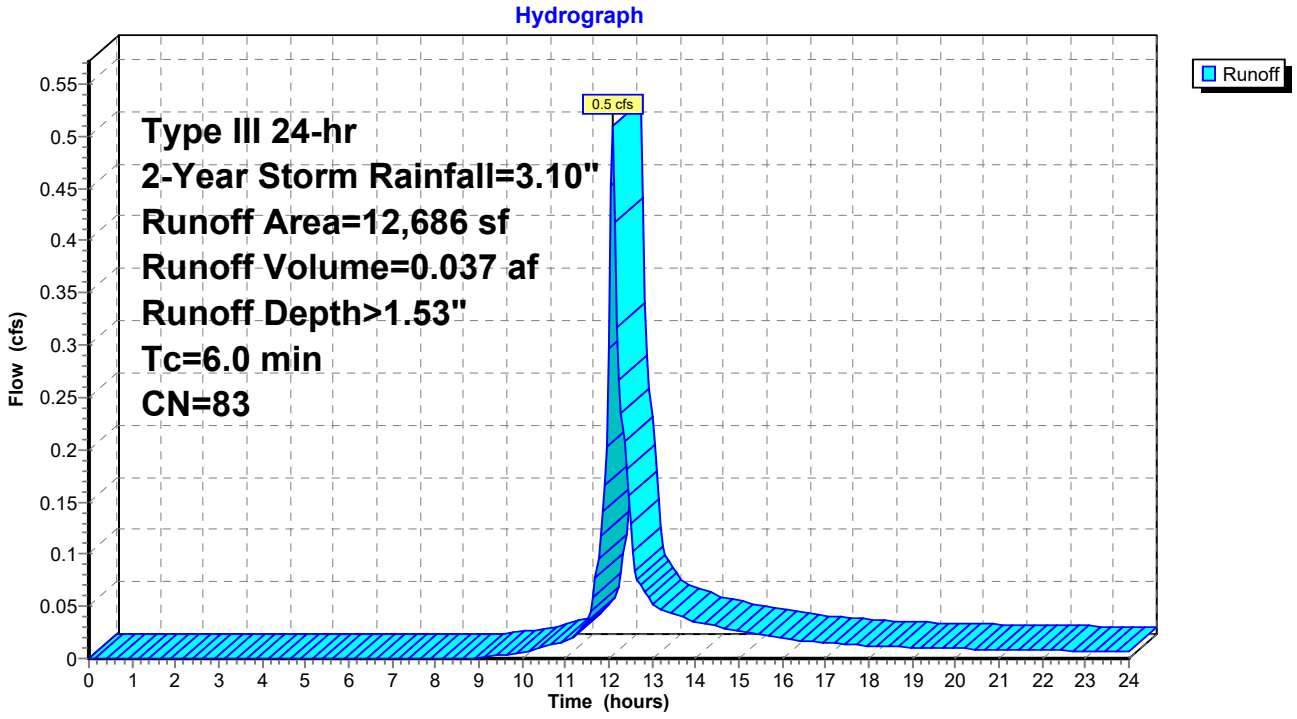
Runoff = 0.5 cfs @ 12.09 hrs, Volume= 0.037 af, Depth> 1.53"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Storm Rainfall=3.10"

	Area (sf)	CN	Description
*	9,384	98	Impervious
	3,302	39	Grass cover, Good, HSG A
	12,686	83	Weighted Average
	3,302		26.03% Pervious Area
	9,384		73.97% Impervious Area

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

Subcatchment 6S:



Summary for Subcatchment 7S: Parking Garage

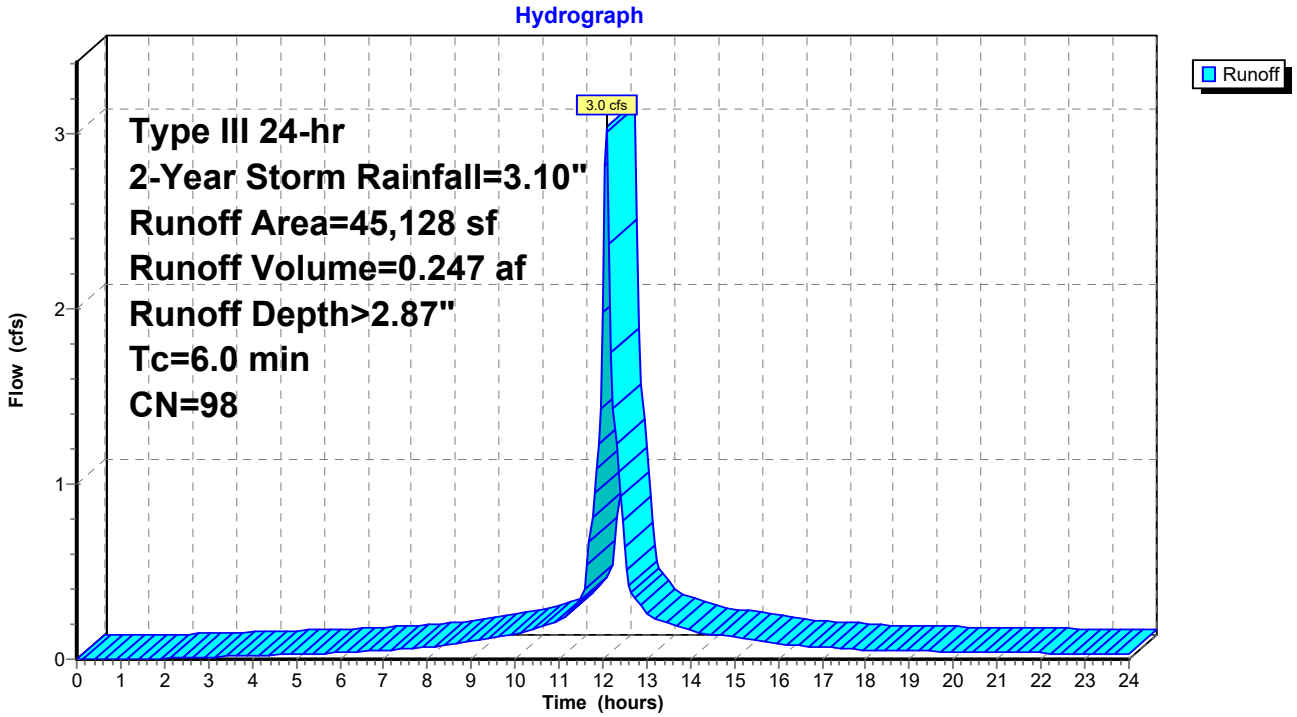
Runoff = 3.0 cfs @ 12.09 hrs, Volume= 0.247 af, Depth> 2.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Storm Rainfall=3.10"

	Area (sf)	CN	Description
*	45,128	98	Impervious
	45,128		100.00% Impervious Area

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

Subcatchment 7S: Parking Garage



Summary for Subcatchment 8S:

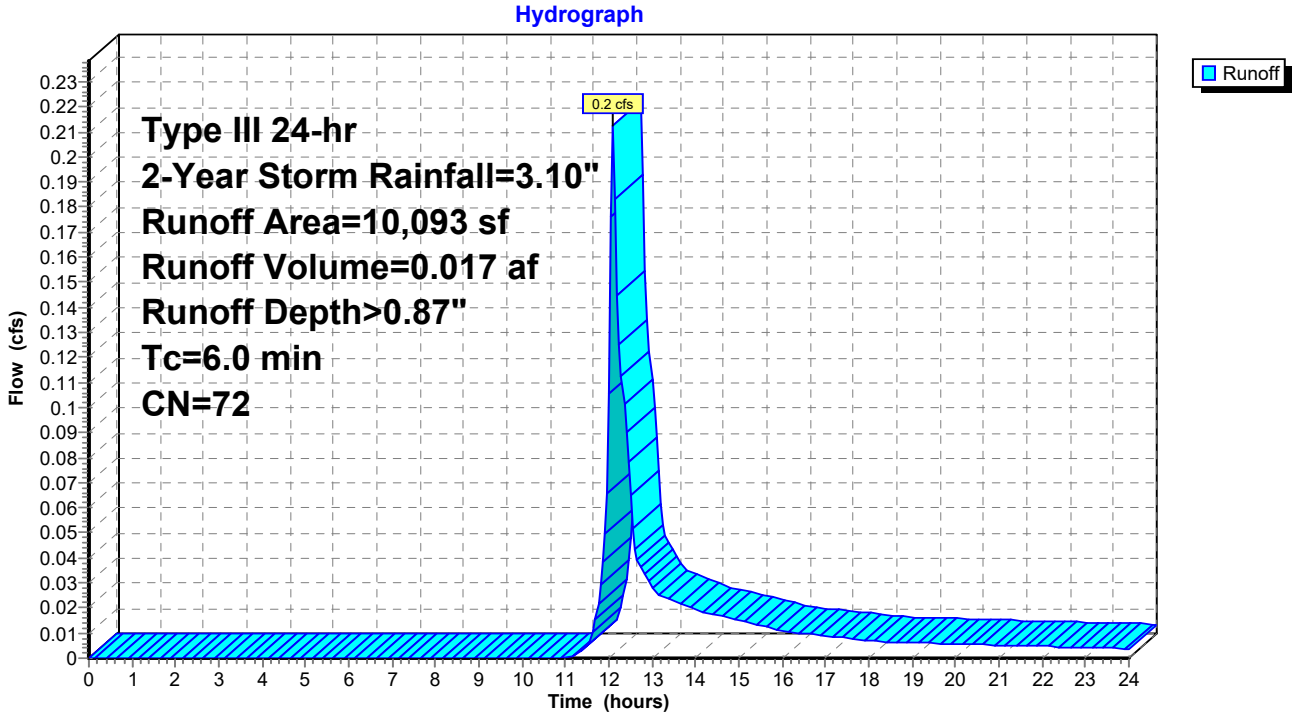
Runoff = 0.2 cfs @ 12.10 hrs, Volume= 0.017 af, Depth> 0.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Storm Rainfall=3.10"

	Area (sf)	CN	Description
*	5,667	98	Impervious
	3,193	39	Grass cover, Good, HSG A
*	1,233	40	Porous Pavement
	10,093	72	Weighted Average
	4,426		43.85% Pervious Area
	5,667		56.15% Impervious Area

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

Subcatchment 8S:



Summary for Subcatchment 9S:

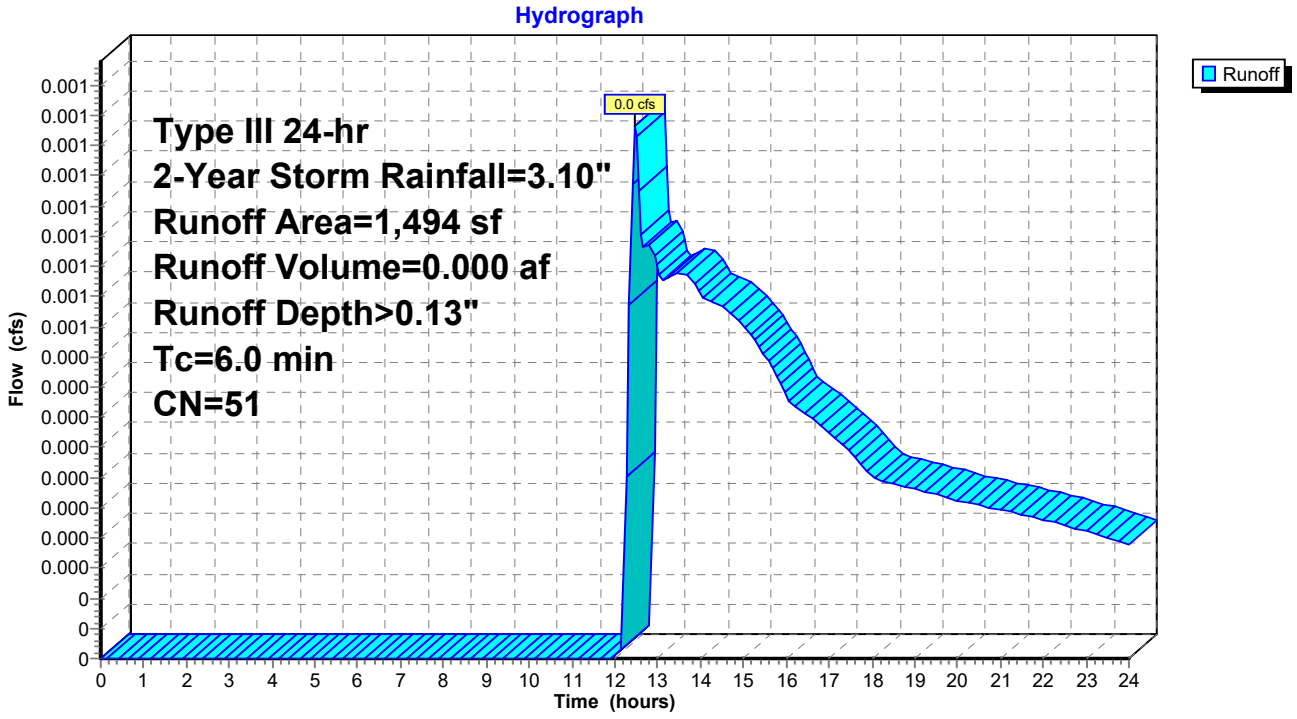
Runoff = 0.0 cfs @ 12.47 hrs, Volume= 0.000 af, Depth> 0.13"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Storm Rainfall=3.10"

	Area (sf)	CN	Description
*	302	98	Impervious
	1,192	39	Grass cover, Good, HSG A
	1,494	51	Weighted Average
	1,192		79.79% Pervious Area
	302		20.21% Impervious Area

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

Subcatchment 9S:



Summary for Subcatchment 10S:

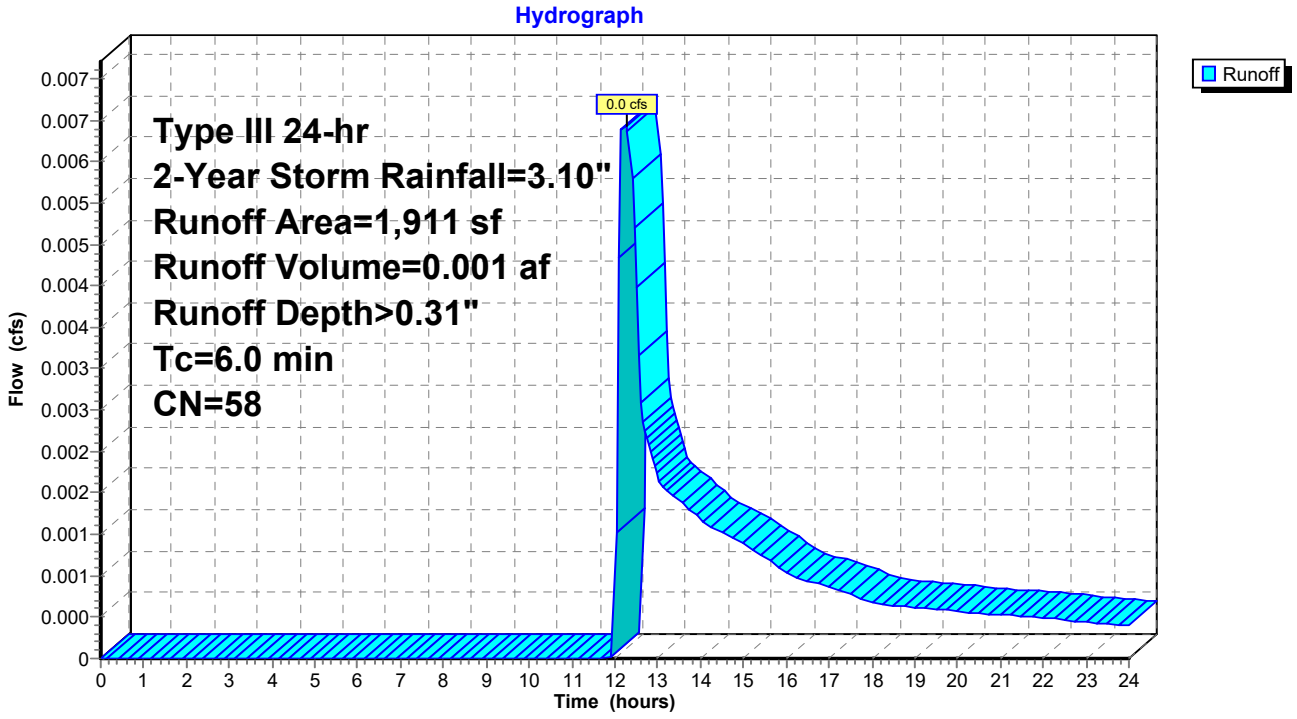
Runoff = 0.0 cfs @ 12.26 hrs, Volume= 0.001 af, Depth> 0.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Storm Rainfall=3.10"

	Area (sf)	CN	Description
*	617	98	Impervious
	1,294	39	Grass cover, Good, HSG A
	1,911	58	Weighted Average
	1,294		67.71% Pervious Area
	617		32.29% Impervious Area

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

Subcatchment 10S:



Summary for Subcatchment 12S:

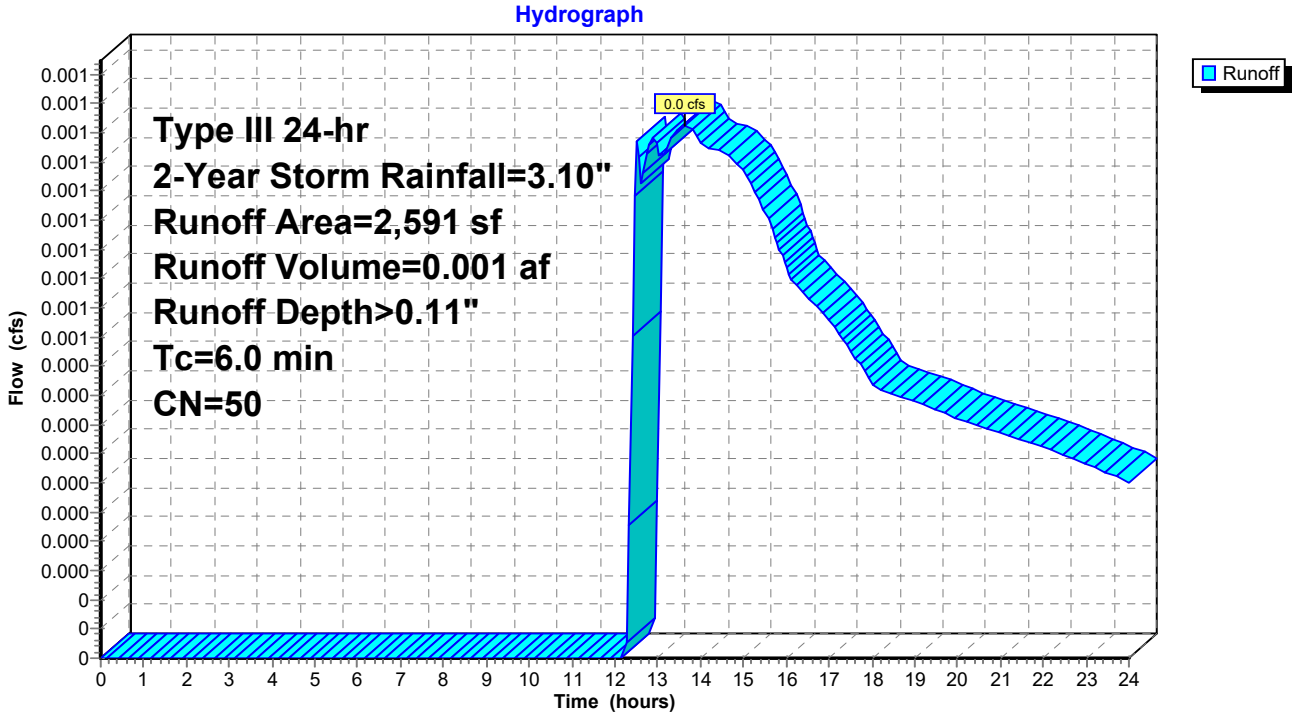
Runoff = 0.0 cfs @ 13.63 hrs, Volume= 0.001 af, Depth> 0.11"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Storm Rainfall=3.10"

	Area (sf)	CN	Description
*	466	98	Impervious
	1,499	39	Grass cover, Good, HSG A
*	626	40	Porous Pavement
	2,591	50	Weighted Average
	2,125		82.01% Pervious Area
	466		17.99% Impervious Area

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

Subcatchment 12S:



Summary for Subcatchment 13S:

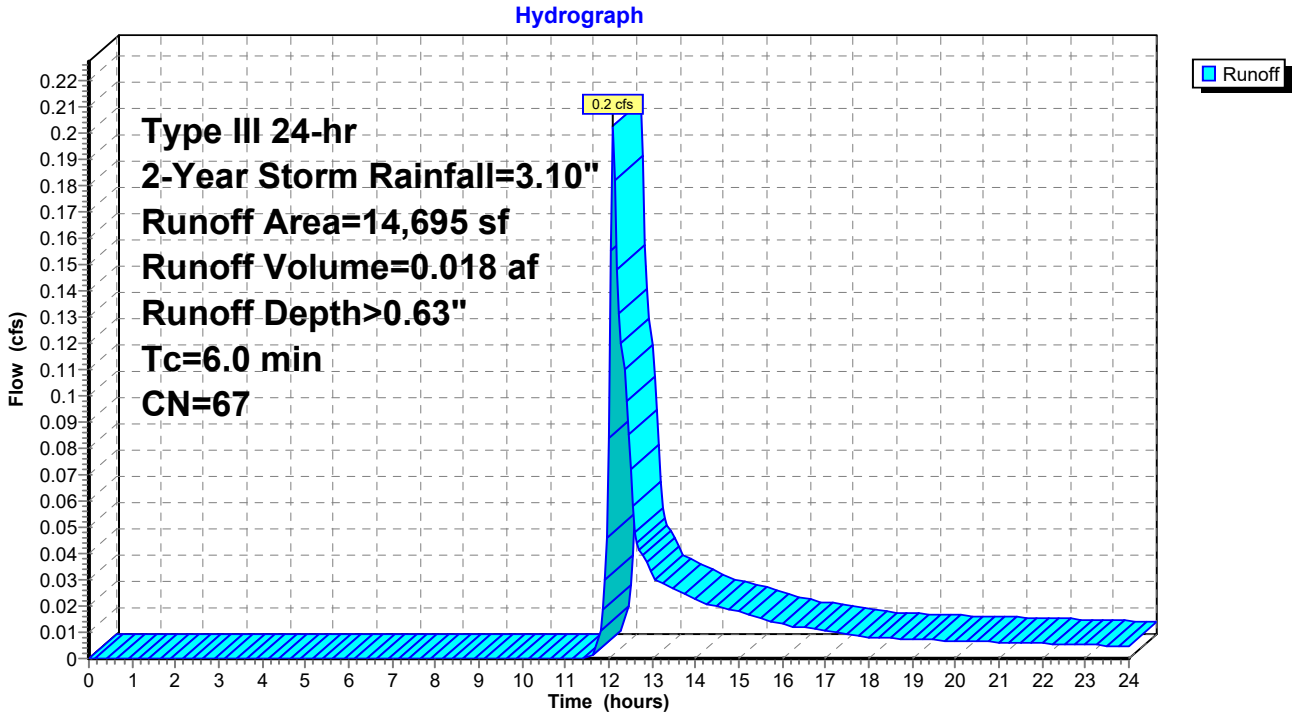
Runoff = 0.2 cfs @ 12.11 hrs, Volume= 0.018 af, Depth> 0.63"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Storm Rainfall=3.10"

	Area (sf)	CN	Description
*	7,017	98	Impervious
	7,678	39	Grass cover, Good, HSG A
	14,695	67	Weighted Average
	7,678		52.25% Pervious Area
	7,017		47.75% Impervious Area

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

Subcatchment 13S:



Summary for Pond 1P: CB1

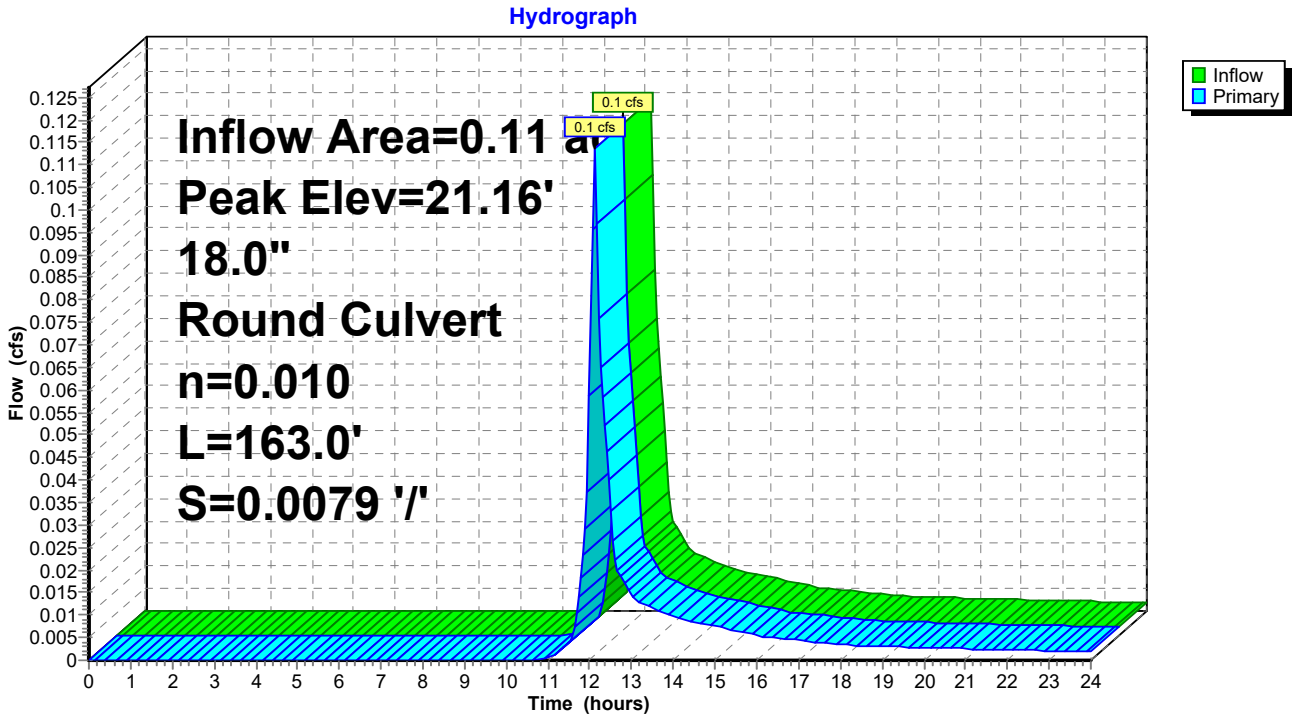
Inflow Area = 0.11 ac, 59.14% Impervious, Inflow Depth > 0.97" for 2-Year Storm event
Inflow = 0.1 cfs @ 12.10 hrs, Volume= 0.009 af
Outflow = 0.1 cfs @ 12.10 hrs, Volume= 0.009 af, Atten= 0%, Lag= 0.0 min
Primary = 0.1 cfs @ 12.10 hrs, Volume= 0.009 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 21.16' @ 12.10 hrs
Flood Elev= 25.12'

Device	Routing	Invert	Outlet Devices
#1	Primary	21.00'	**18.0" Round Culvert** L= 163.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 21.00' / 19.71' S= 0.0079 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=0.1 cfs @ 12.10 hrs HW=21.16' TW=19.99' (Dynamic Tailwater)
1=Culvert (Inlet Controls 0.1 cfs @ 1.09 fps)

Pond 1P: CB1



Summary for Pond 2P: CB2

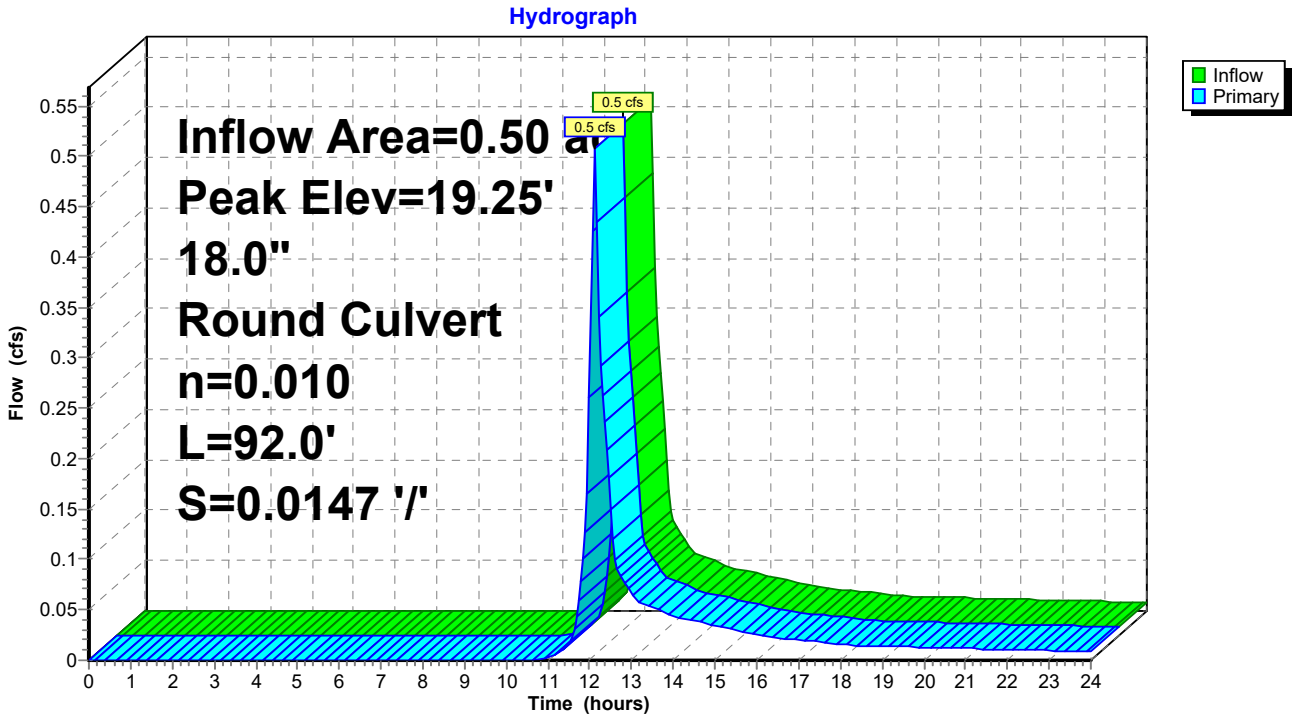
Inflow Area = 0.50 ac, 58.21% Impervious, Inflow Depth > 0.94" for 2-Year Storm event
Inflow = 0.5 cfs @ 12.10 hrs, Volume= 0.039 af
Outflow = 0.5 cfs @ 12.10 hrs, Volume= 0.039 af, Atten= 0%, Lag= 0.0 min
Primary = 0.5 cfs @ 12.10 hrs, Volume= 0.039 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 19.25' @ 12.10 hrs
Flood Elev= 22.97'

Device	Routing	Invert	Outlet Devices
#1	Primary	18.90'	**18.0" Round Culvert** L= 92.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 18.90' / 17.55' S= 0.0147 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=0.5 cfs @ 12.10 hrs HW=19.25' TW=18.31' (Dynamic Tailwater)
1=Culvert (Inlet Controls 0.5 cfs @ 1.60 fps)

Pond 2P: CB2



Summary for Pond 3P: CB3

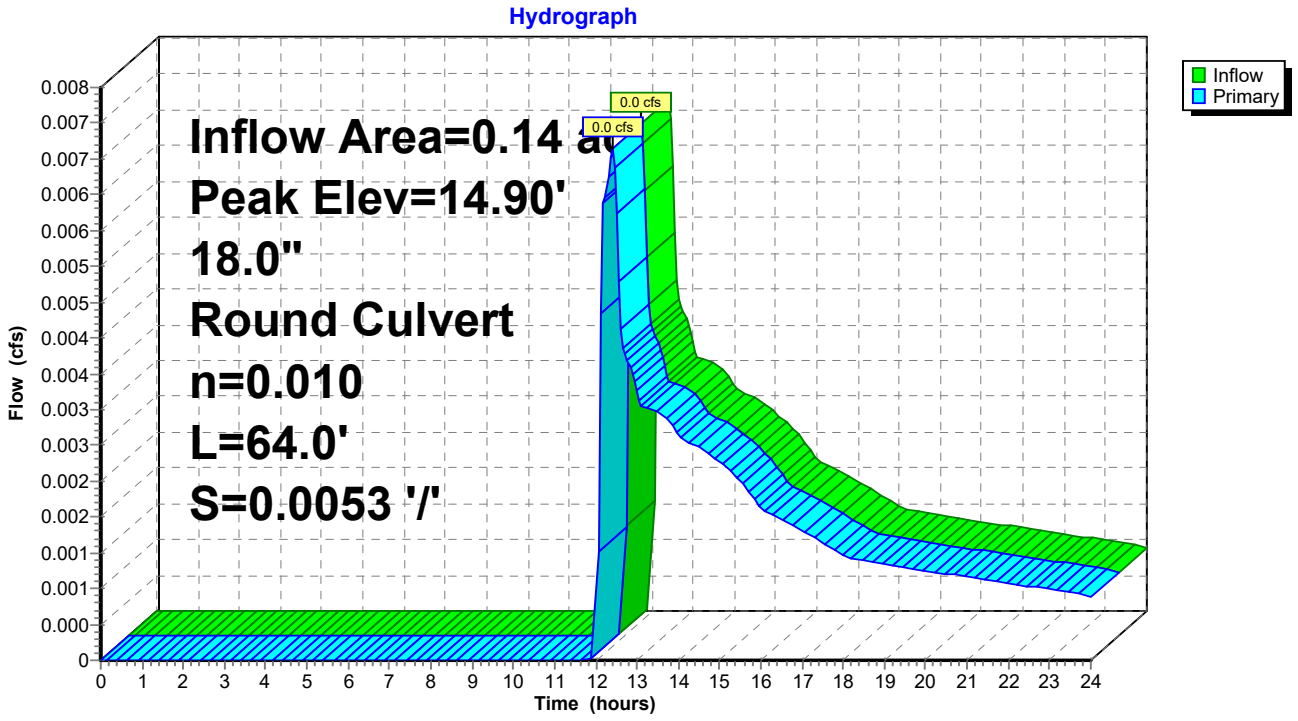
Inflow Area = 0.14 ac, 23.10% Impervious, Inflow Depth > 0.18" for 2-Year Storm event
Inflow = 0.0 cfs @ 12.39 hrs, Volume= 0.002 af
Outflow = 0.0 cfs @ 12.39 hrs, Volume= 0.002 af, Atten= 0%, Lag= 0.0 min
Primary = 0.0 cfs @ 12.39 hrs, Volume= 0.002 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 14.90' @ 12.39 hrs
Flood Elev= 23.90'

Device	Routing	Invert	Outlet Devices
#1	Primary	14.86'	**18.0" Round Culvert** L= 64.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 14.86' / 14.52' S= 0.0053 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=0.0 cfs @ 12.39 hrs HW=14.90' TW=14.14' (Dynamic Tailwater)
↑**1=Culvert** (Barrel Controls 0.0 cfs @ 0.80 fps)

Pond 3P: CB3



Summary for Pond 4P: CB4

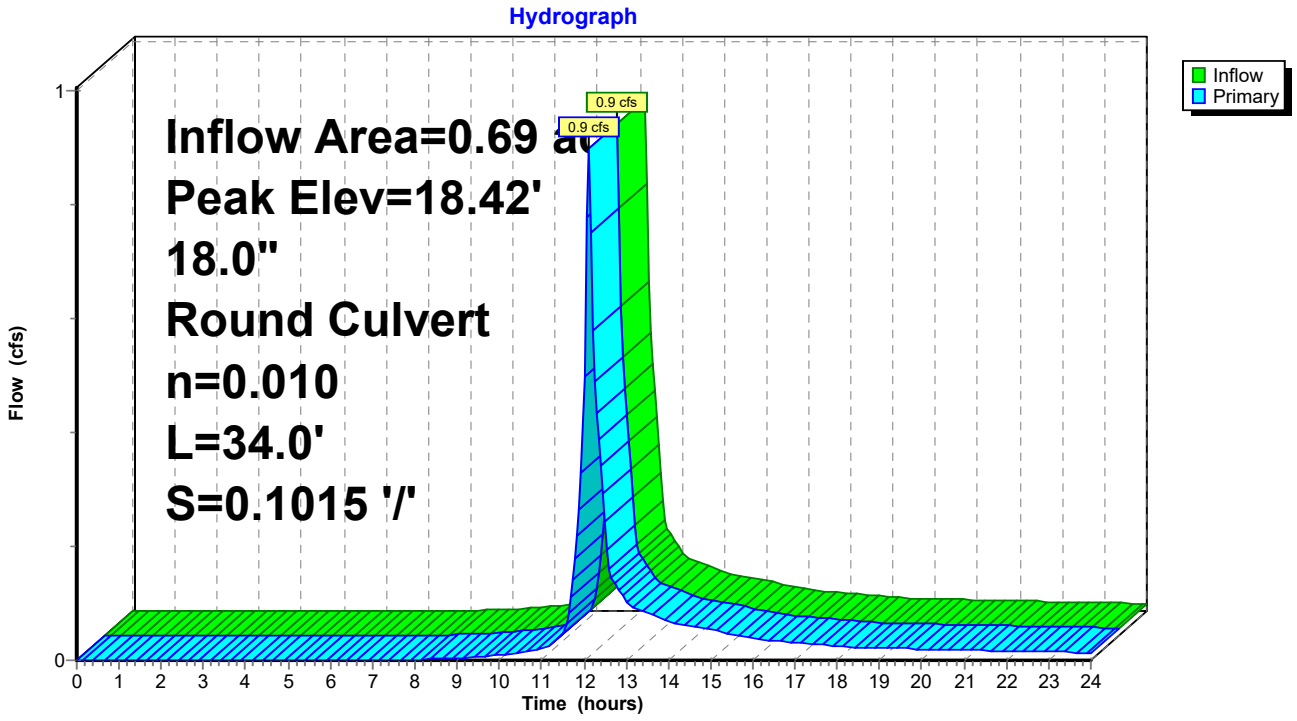
Inflow Area = 0.69 ac, 64.53% Impervious, Inflow Depth > 1.19" for 2-Year Storm event
Inflow = 0.9 cfs @ 12.10 hrs, Volume= 0.068 af
Outflow = 0.9 cfs @ 12.10 hrs, Volume= 0.068 af, Atten= 0%, Lag= 0.0 min
Primary = 0.9 cfs @ 12.10 hrs, Volume= 0.068 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 18.42' @ 12.16 hrs
Flood Elev= 22.87'

Device	Routing	Invert	Outlet Devices
#1	Primary	17.45'	**18.0" Round Culvert** L= 34.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 17.45' / 14.00' S= 0.1015 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=0.0 cfs @ 12.10 hrs HW=18.29' TW=18.38' (Dynamic Tailwater)
↑**1=Culvert** (Controls 0.0 cfs)

Pond 4P: CB4



Summary for Pond 5P: CB5

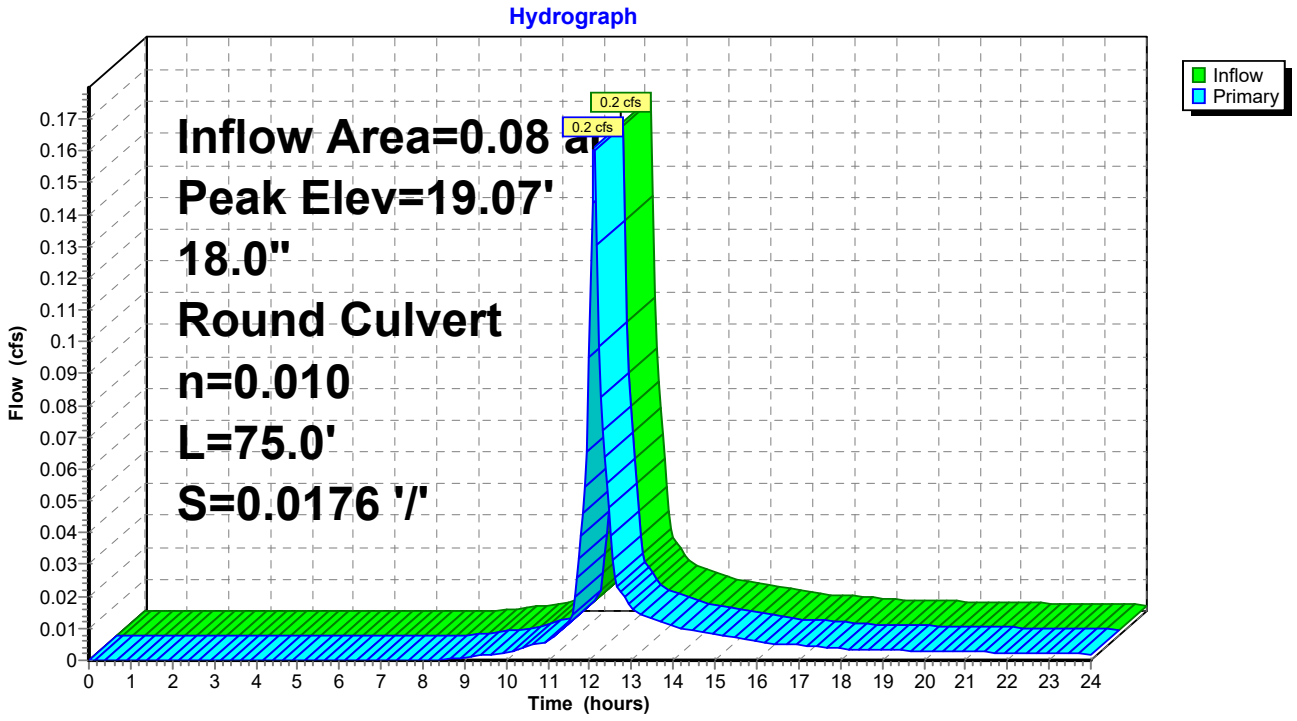
Inflow Area = 0.08 ac, 77.31% Impervious, Inflow Depth > 1.67" for 2-Year Storm event
Inflow = 0.2 cfs @ 12.09 hrs, Volume= 0.012 af
Outflow = 0.2 cfs @ 12.09 hrs, Volume= 0.012 af, Atten= 0%, Lag= 0.0 min
Primary = 0.2 cfs @ 12.09 hrs, Volume= 0.012 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 19.07' @ 12.09 hrs
Flood Elev= 22.83'

Device	Routing	Invert	Outlet Devices
#1	Primary	18.87'	**18.0" Round Culvert** L= 75.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 18.87' / 17.55' S= 0.0176 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=0.2 cfs @ 12.09 hrs HW=19.06' TW=18.27' (Dynamic Tailwater)
1=Culvert (Inlet Controls 0.2 cfs @ 1.18 fps)

Pond 5P: CB5



Summary for Pond 6P: CB6

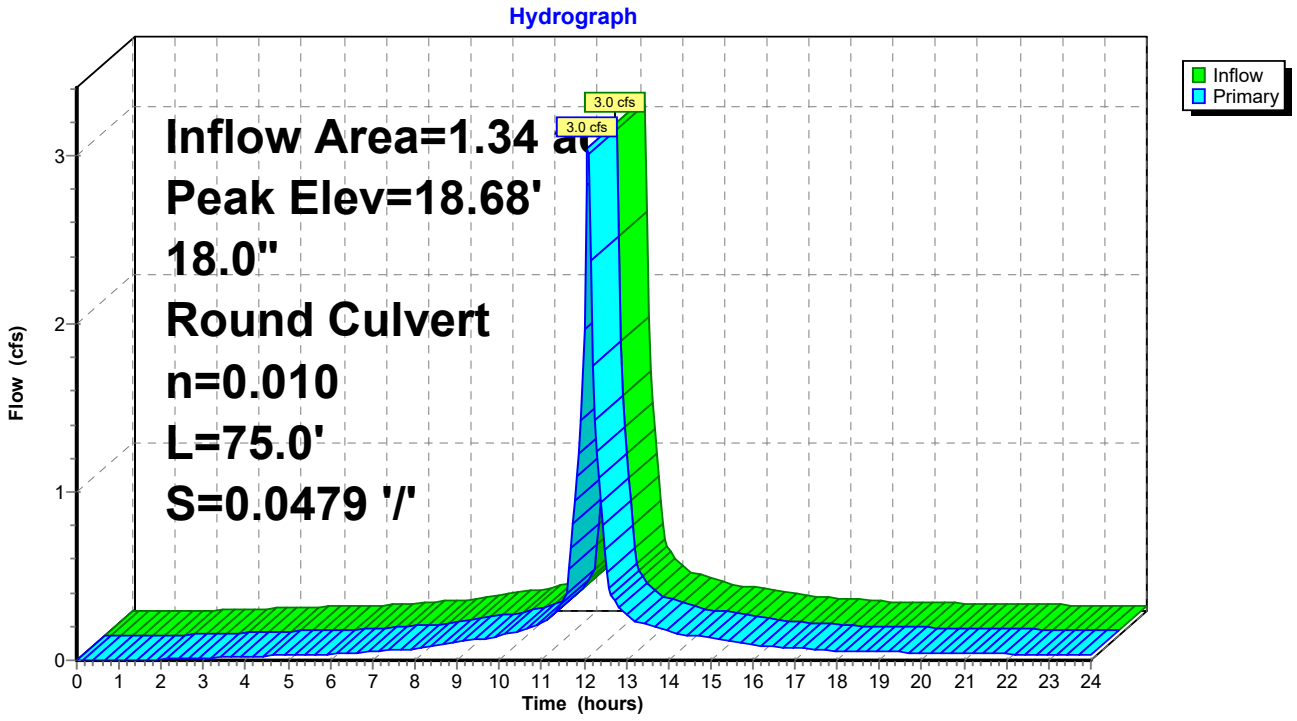
Inflow Area = 1.34 ac, 82.48% Impervious, Inflow Depth > 2.25" for 2-Year Storm event
Inflow = 3.0 cfs @ 12.09 hrs, Volume= 0.251 af
Outflow = 3.0 cfs @ 12.09 hrs, Volume= 0.251 af, Atten= 0%, Lag= 0.0 min
Primary = 3.0 cfs @ 12.09 hrs, Volume= 0.251 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 18.68' @ 12.12 hrs
Flood Elev= 22.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	17.59'	**18.0" Round Culvert** L= 75.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 17.59' / 14.00' S= 0.0479 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=2.3 cfs @ 12.09 hrs HW=18.61' TW=18.35' (Dynamic Tailwater)
1=Culvert (Outlet Controls 2.3 cfs @ 2.49 fps)

Pond 6P: CB6



Summary for Pond 7P: CB7

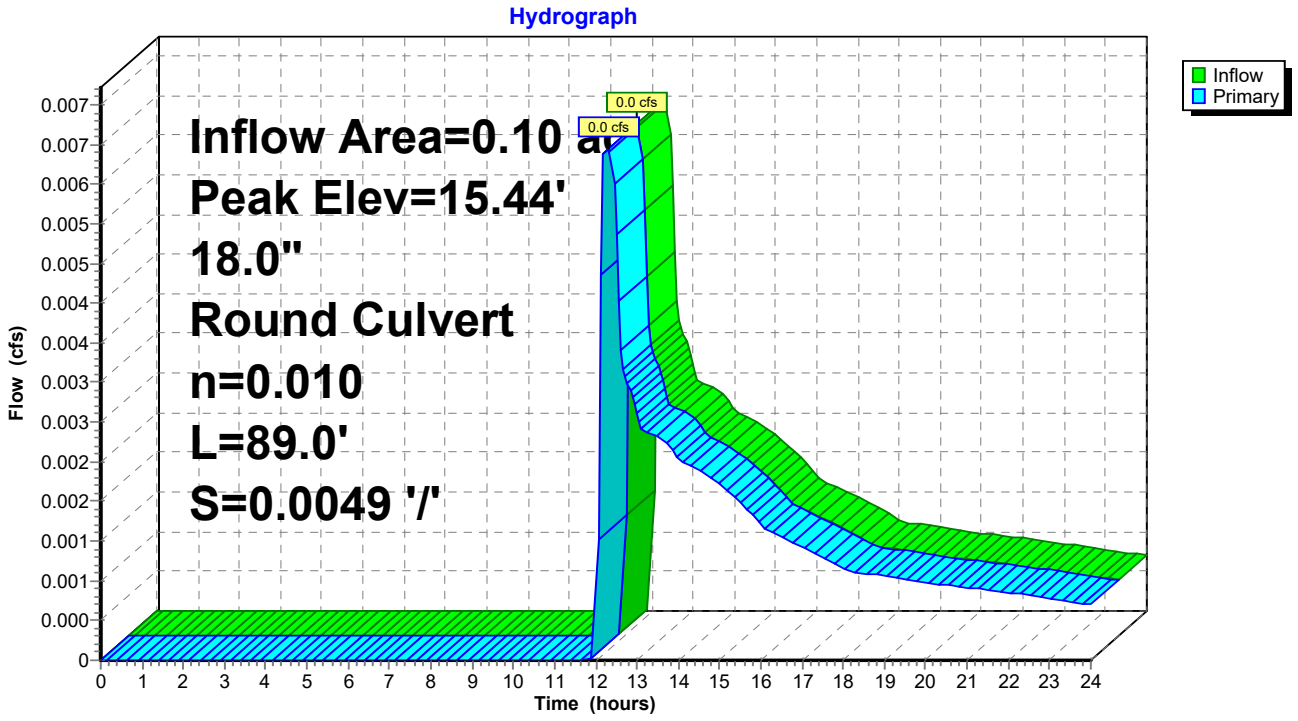
Inflow Area = 0.10 ac, 24.06% Impervious, Inflow Depth > 0.19" for 2-Year Storm event
Inflow = 0.0 cfs @ 12.30 hrs, Volume= 0.002 af
Outflow = 0.0 cfs @ 12.30 hrs, Volume= 0.002 af, Atten= 0%, Lag= 0.0 min
Primary = 0.0 cfs @ 12.30 hrs, Volume= 0.002 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 15.44' @ 12.30 hrs
Flood Elev= 24.75'

Device	Routing	Invert	Outlet Devices
#1	Primary	15.40'	**18.0" Round Culvert** L= 89.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 15.40' / 14.96' S= 0.0049 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=0.0 cfs @ 12.30 hrs HW=15.44' TW=14.90' (Dynamic Tailwater)
↳**1=Culvert** (Barrel Controls 0.0 cfs @ 0.76 fps)

Pond 7P: CB7



Summary for Pond 8P: CB8

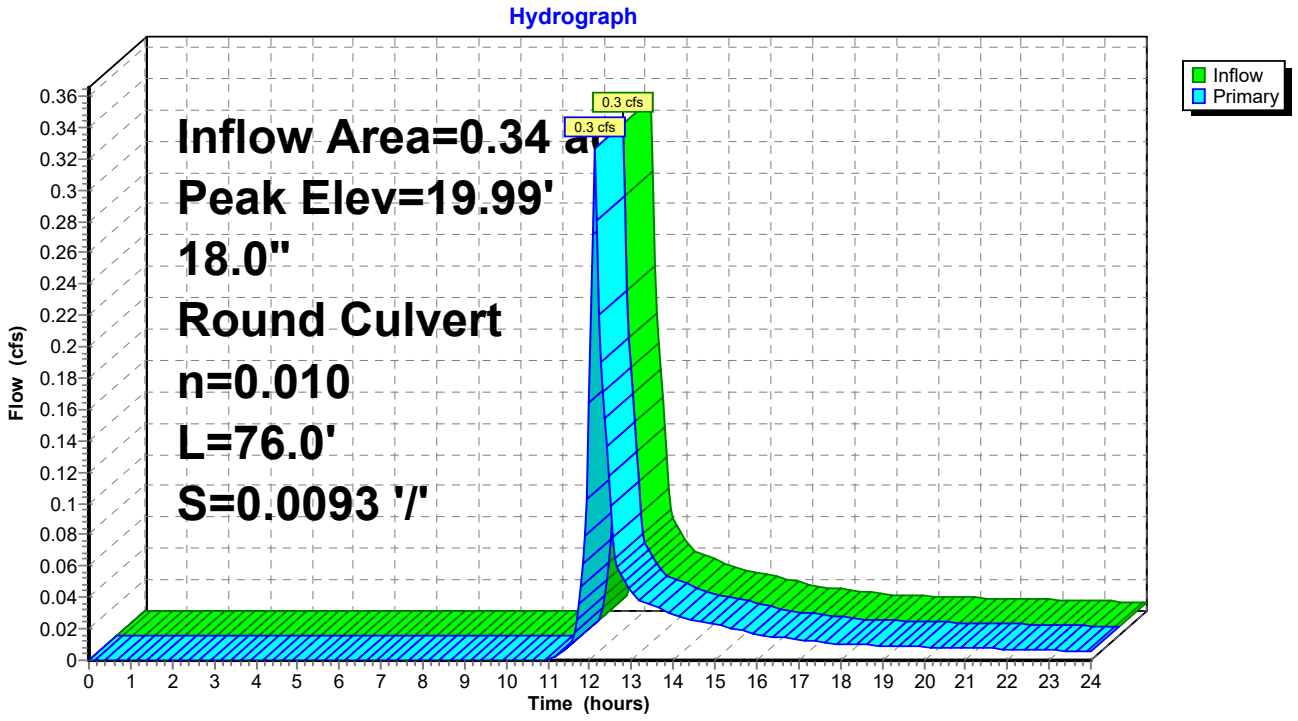
Inflow Area = 0.34 ac, 57.10% Impervious, Inflow Depth > 0.90" for 2-Year Storm event
Inflow = 0.3 cfs @ 12.10 hrs, Volume= 0.025 af
Outflow = 0.3 cfs @ 12.10 hrs, Volume= 0.025 af, Atten= 0%, Lag= 0.0 min
Primary = 0.3 cfs @ 12.10 hrs, Volume= 0.025 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 19.99' @ 12.10 hrs
Flood Elev= 23.60'

Device	Routing	Invert	Outlet Devices
#1	Primary	19.71'	**18.0" Round Culvert** L= 76.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 19.71' / 19.00' S= 0.0093 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=0.3 cfs @ 12.10 hrs HW=19.99' TW=19.25' (Dynamic Tailwater)
↑**1=Culvert** (Inlet Controls 0.3 cfs @ 1.42 fps)

Pond 8P: CB8



Summary for Pond 9P: DMH1

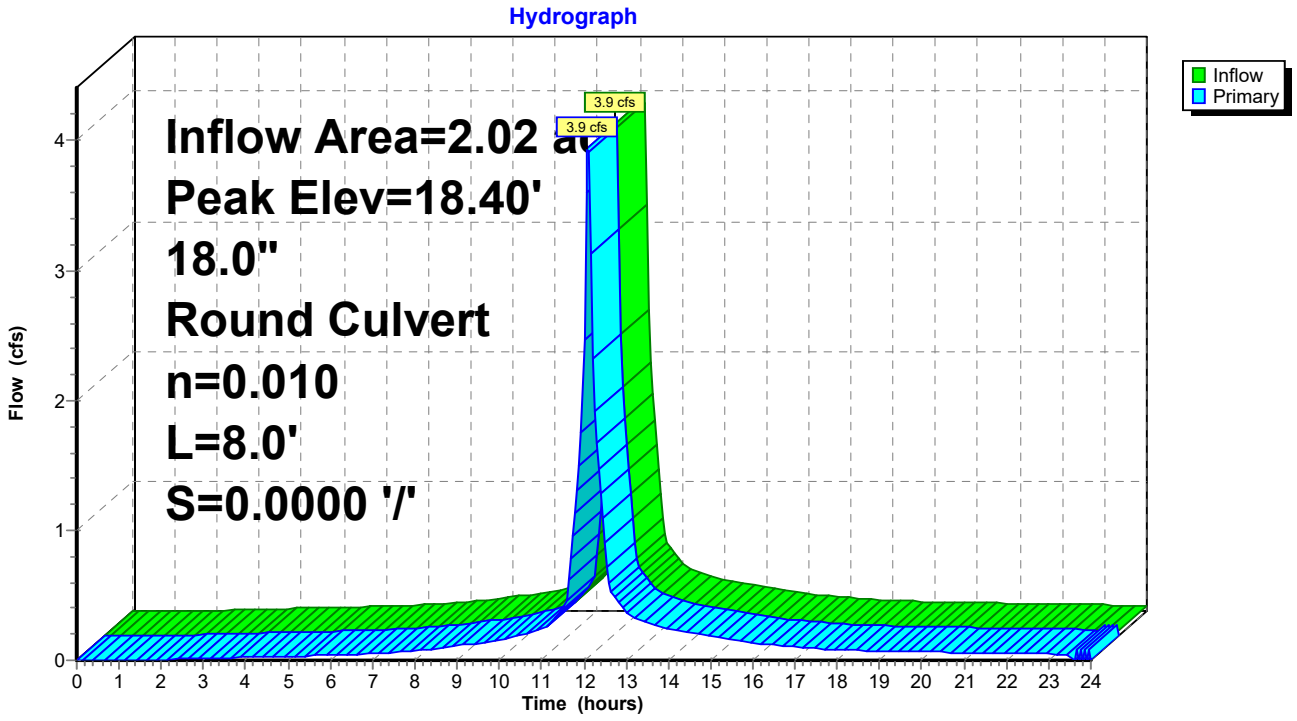
Inflow Area = 2.02 ac, 76.40% Impervious, Inflow Depth > 1.89" for 2-Year Storm event
Inflow = 3.9 cfs @ 12.09 hrs, Volume= 0.319 af
Outflow = 3.9 cfs @ 12.09 hrs, Volume= 0.319 af, Atten= 0%, Lag= 0.0 min
Primary = 3.9 cfs @ 12.09 hrs, Volume= 0.319 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 18.40' @ 12.11 hrs
Flood Elev= 22.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	13.58'	**18.0" Round Culvert** L= 8.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 13.58' / 13.58' S= 0.0000 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=3.4 cfs @ 12.09 hrs HW=18.36' TW=18.10' (Dynamic Tailwater)
1=Culvert (Inlet Controls 3.4 cfs @ 1.94 fps)

Pond 9P: DMH1



Summary for Pond 13P: CMP Peak Detention

Inflow	=	3.9 cfs @	12.10 hrs, Volume=	0.178 af
Outflow	=	1.5 cfs @	12.34 hrs, Volume=	0.178 af, Atten= 60%, Lag= 14.2 min
Primary	=	1.5 cfs @	12.34 hrs, Volume=	0.178 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 15.33' @ 12.34 hrs Surf.Area= 1,224 sf Storage= 1,904 cf
Flood Elev= 20.87' Surf.Area= 1,224 sf Storage= 4,269 cf

Plug-Flow detention time= 12.7 min calculated for 0.178 af (100% of inflow)
Center-of-Mass det. time= 12.7 min (809.1 - 796.4)

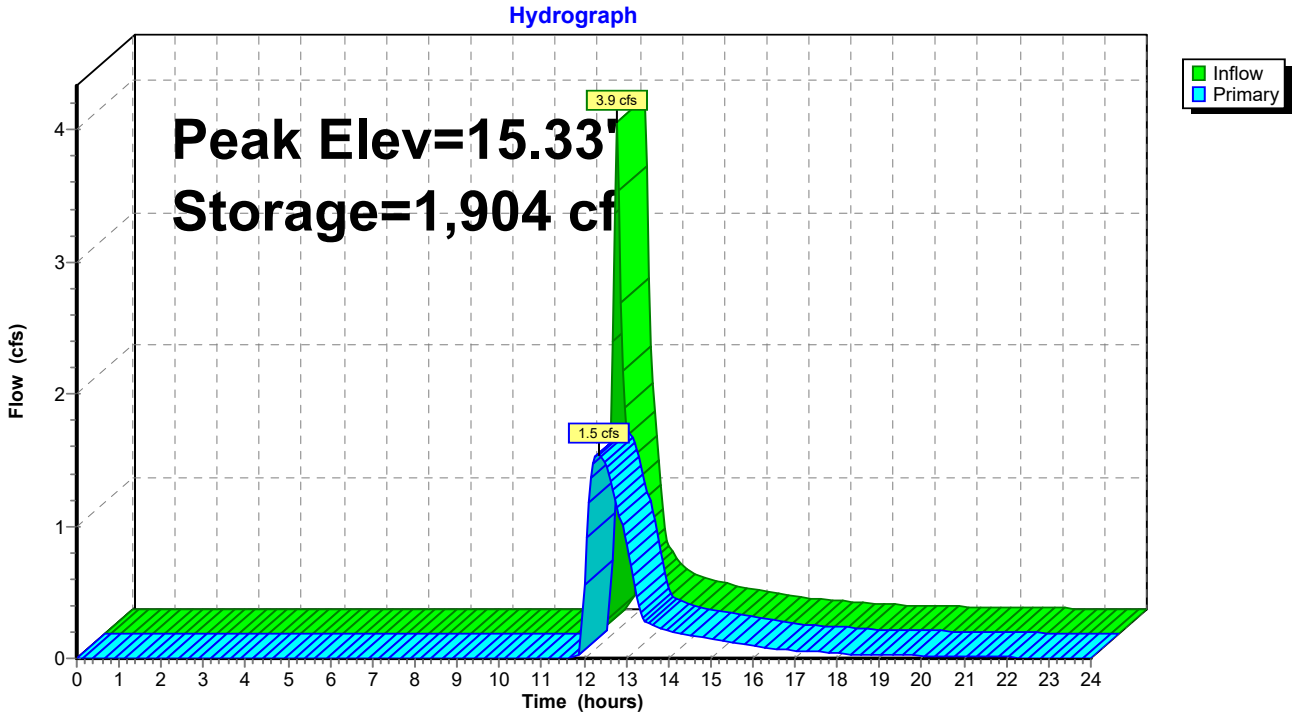
Volume	Invert	Avail.Storage	Storage Description
#1A	12.58'	0 cf	**8.00'W x 153.00'L x 6.00'H Field A** 7,344 cf Overall - 4,268 cf Embedded = 3,076 cf x 0.0% Voids
#2A	12.58'	4,268 cf	**CMP Round 72** x 7 Inside #1 Effective Size= 72.0"W x 72.0"H => 28.26 sf x 20.00'L = 565.2 cf Overall Size= 72.0"W x 72.0"H x 20.00'L Row Length Adjustment= +11.00' x 28.26 sf x 1 rows
		4,268 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	12.58'	**18.0" Round Culvert** L= 20.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 12.58' / 12.20' S= 0.0190 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf
#2	Device 1	12.58'	**6.1" Vert. Orifice/Grate** C= 0.600
#3	Device 1	15.58'	**5.7" Vert. Orifice/Grate** C= 0.600
#4	Device 1	16.66'	**4.8" Vert. Orifice/Grate** C= 0.600
#5	Device 1	17.92'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 3.21 3.27 3.33 3.39 3.45 3.51 3.57 3.63 3.69 3.75 3.81 3.87 Width (feet) 3.75 3.60 3.43 3.26 3.06 2.85 2.62 2.35 2.05 1.68 1.19 0.00

Primary OutFlow Max=1.5 cfs @ 12.34 hrs HW=15.32' TW=12.66' (Dynamic Tailwater)
└─**1=Culvert** (Passes 1.5 cfs of 12.0 cfs potential flow)
  ├─**2=Orifice/Grate** (Orifice Controls 1.5 cfs @ 7.59 fps)
  ├─**3=Orifice/Grate** (Controls 0.0 cfs)
  ├─**4=Orifice/Grate** (Controls 0.0 cfs)
  └─**5=Custom Weir/Orifice** (Controls 0.0 cfs)

Pond 13P: CMP Peak Detention



Summary for Pond 14P: CONTECH WQv CMP Det & SF System

Inflow Area = 2.02 ac, 76.40% Impervious, Inflow Depth > 1.89" for 2-Year Storm event
Inflow = 3.9 cfs @ 12.09 hrs, Volume= 0.319 af
Outflow = 3.9 cfs @ 12.10 hrs, Volume= 0.240 af, Atten= 0%, Lag= 0.9 min
Primary = 0.0 cfs @ 12.10 hrs, Volume= 0.061 af
Secondary = 3.9 cfs @ 12.10 hrs, Volume= 0.178 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Starting Elev= 13.58' Surf.Area= 1,313 sf Storage= 186 cf
Peak Elev= 18.11' @ 12.10 hrs Surf.Area= 1,313 sf Storage= 3,942 cf (3,756 cf above start)
Flood Elev= 20.87' Surf.Area= 1,313 sf Storage= 4,110 cf (3,924 cf above start)

Plug-Flow detention time= 157.5 min calculated for 0.235 af (74% of inflow)
Center-of-Mass det. time= 55.9 min (833.8 - 777.9)

Volume	Invert	Avail.Storage	Storage Description
#1A	13.08'	0 cf	**7.50'W x 175.00'L x 5.50'H Field A** 7,219 cf Overall - 4,108 cf Embedded = 3,110 cf x 0.0% Voids
#2A	13.08'	4,108 cf	**CMP Round 66** x 8 Inside #1 Effective Size= 66.0"W x 66.0"H => 23.75 sf x 20.00'L = 475.0 cf Overall Size= 66.0"W x 66.0"H x 20.00'L Row Length Adjustment= +13.00' x 23.75 sf x 1 rows
		4,108 cf	Total Available Storage

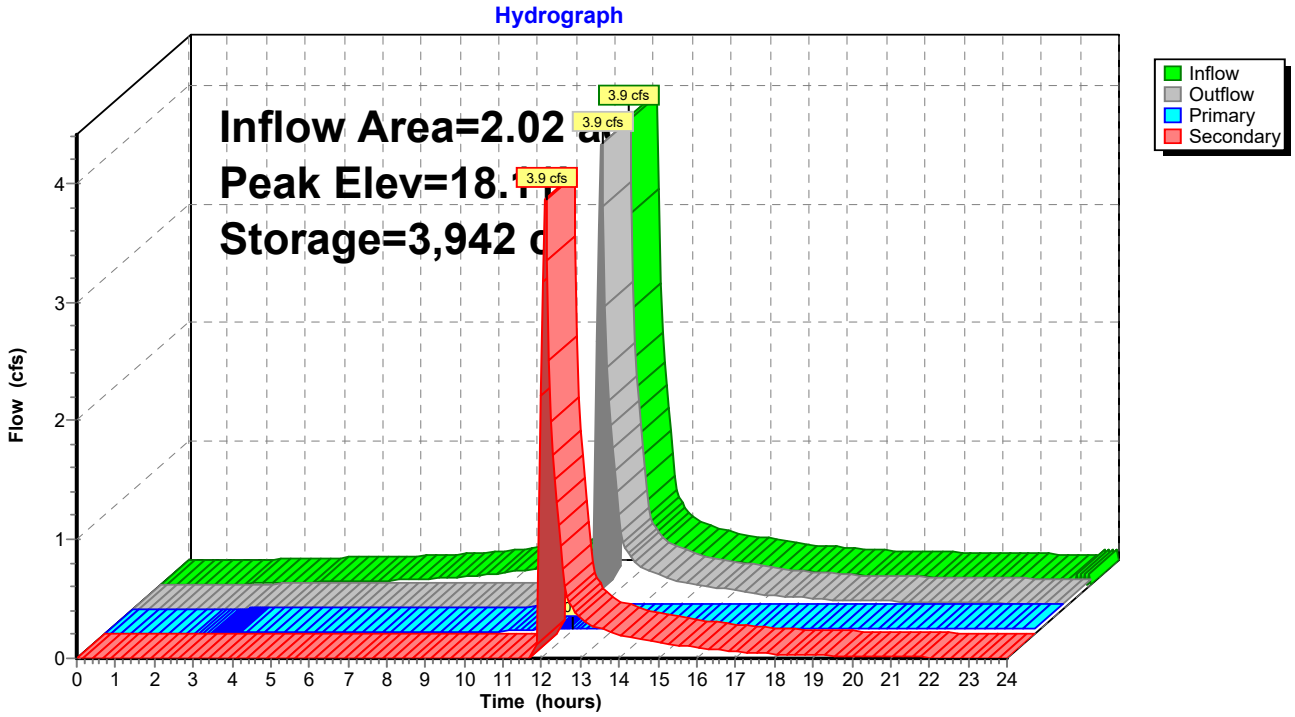
Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Device 2	13.58'	**12.0" Round Culvert** L= 3.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 13.58' / 13.56' S= 0.0067 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Primary	12.58'	**Tube/Siphon/Float Valve X 7.00** Starts@15.33' Breaks@13.25' 0.336" Diameter, C= 0.600, 0.263" Trickle Diameter
#3	Secondary	17.65'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 2.44 2.49 2.54 2.60 2.66 2.71 2.76 2.82 2.87 2.93 2.99 3.04 3.09 3.15 3.20 3.26 3.32 3.37 Width (feet) 4.13 4.03 3.93 3.82 3.70 3.57 3.44 3.30 3.15 2.98 2.81 2.61 2.40 2.16 1.88 1.54 1.09 0.00

Primary OutFlow Max=0.0 cfs @ 12.10 hrs HW=18.11' TW=12.59' (Dynamic Tailwater)
└─**2=Tube/Siphon/Float Valve** (Orifice Controls 0.0 cfs @ 11.32 fps)
└─**1=Culvert** (Passes 0.0 cfs of 7.6 cfs potential flow)

Secondary OutFlow Max=3.8 cfs @ 12.10 hrs HW=18.11' TW=14.33' (Dynamic Tailwater)
└─**3=Custom Weir/Orifice** (Weir Controls 3.8 cfs @ 2.29 fps)

Pond 14P: CONTECH WQv CMP Det & SF System



Summary for Pond 17P: DMH2

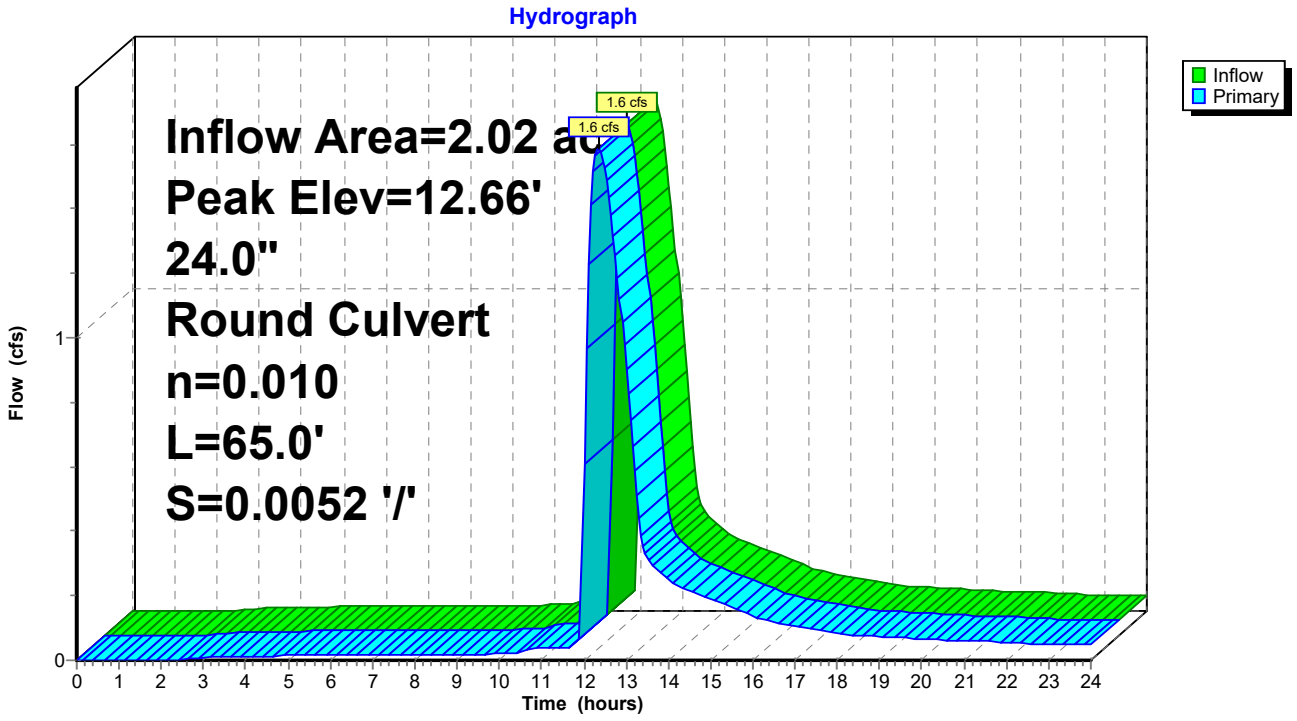
Inflow Area = 2.02 ac, 76.40% Impervious, Inflow Depth > 1.42" for 2-Year Storm event
Inflow = 1.6 cfs @ 12.34 hrs, Volume= 0.240 af
Outflow = 1.6 cfs @ 12.34 hrs, Volume= 0.240 af, Atten= 0%, Lag= 0.0 min
Primary = 1.6 cfs @ 12.34 hrs, Volume= 0.240 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 12.66' @ 12.35 hrs
Flood Elev= 21.65'

Device	Routing	Invert	Outlet Devices
#1	Primary	12.07'	**24.0" Round Culvert** L= 65.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 12.07' / 11.73' S= 0.0052 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=1.6 cfs @ 12.34 hrs HW=12.66' TW=12.22' (Dynamic Tailwater)
1=Culvert (Outlet Controls 1.6 cfs @ 3.07 fps)

Pond 17P: DMH2



Summary for Pond 18P: DMH3

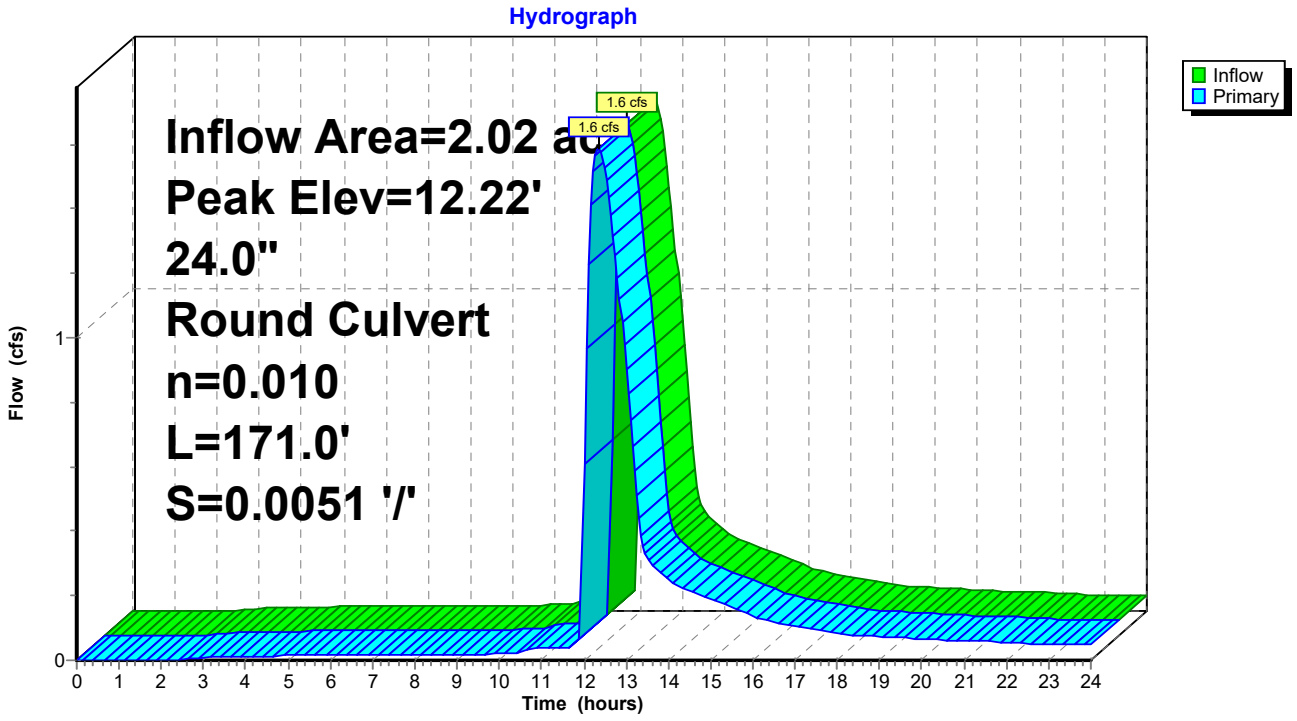
Inflow Area = 2.02 ac, 76.40% Impervious, Inflow Depth > 1.42" for 2-Year Storm event
Inflow = 1.6 cfs @ 12.34 hrs, Volume= 0.240 af
Outflow = 1.6 cfs @ 12.34 hrs, Volume= 0.240 af, Atten= 0%, Lag= 0.0 min
Primary = 1.6 cfs @ 12.34 hrs, Volume= 0.240 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 12.22' @ 12.34 hrs
Flood Elev= 20.85'

Device	Routing	Invert	Outlet Devices
#1	Primary	11.63'	**24.0" Round Culvert** L= 171.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 11.63' / 10.75' S= 0.0051 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=1.6 cfs @ 12.34 hrs HW=12.22' TW=0.00' (Dynamic Tailwater)
1=Culvert (Inlet Controls 1.6 cfs @ 2.06 fps)

Pond 18P: DMH3



Summary for Pond 22P: Ex DMH3

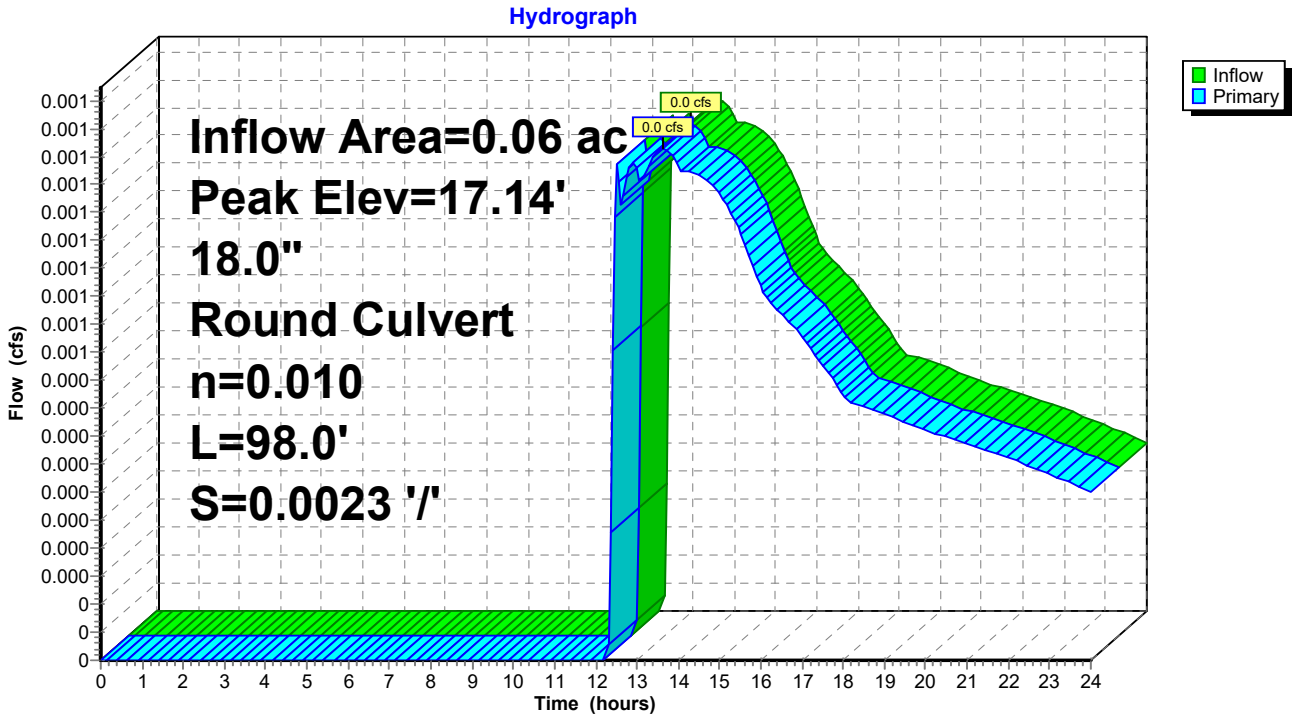
Inflow Area = 0.06 ac, 17.99% Impervious, Inflow Depth > 0.11" for 2-Year Storm event
Inflow = 0.0 cfs @ 13.61 hrs, Volume= 0.001 af
Outflow = 0.0 cfs @ 13.61 hrs, Volume= 0.001 af, Atten= 0%, Lag= 0.0 min
Primary = 0.0 cfs @ 13.61 hrs, Volume= 0.001 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 17.14' @ 13.61 hrs
Flood Elev= 24.92'

Device	Routing	Invert	Outlet Devices
#1	Primary	17.12'	**18.0" Round Culvert** L= 98.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 17.12' / 16.89' S= 0.0023 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=0.0 cfs @ 13.61 hrs HW=17.14' TW=16.77' (Dynamic Tailwater)
1=Culvert (Barrel Controls 0.0 cfs @ 0.32 fps)

Pond 22P: Ex DMH3



Summary for Pond 23P: Ex CB3

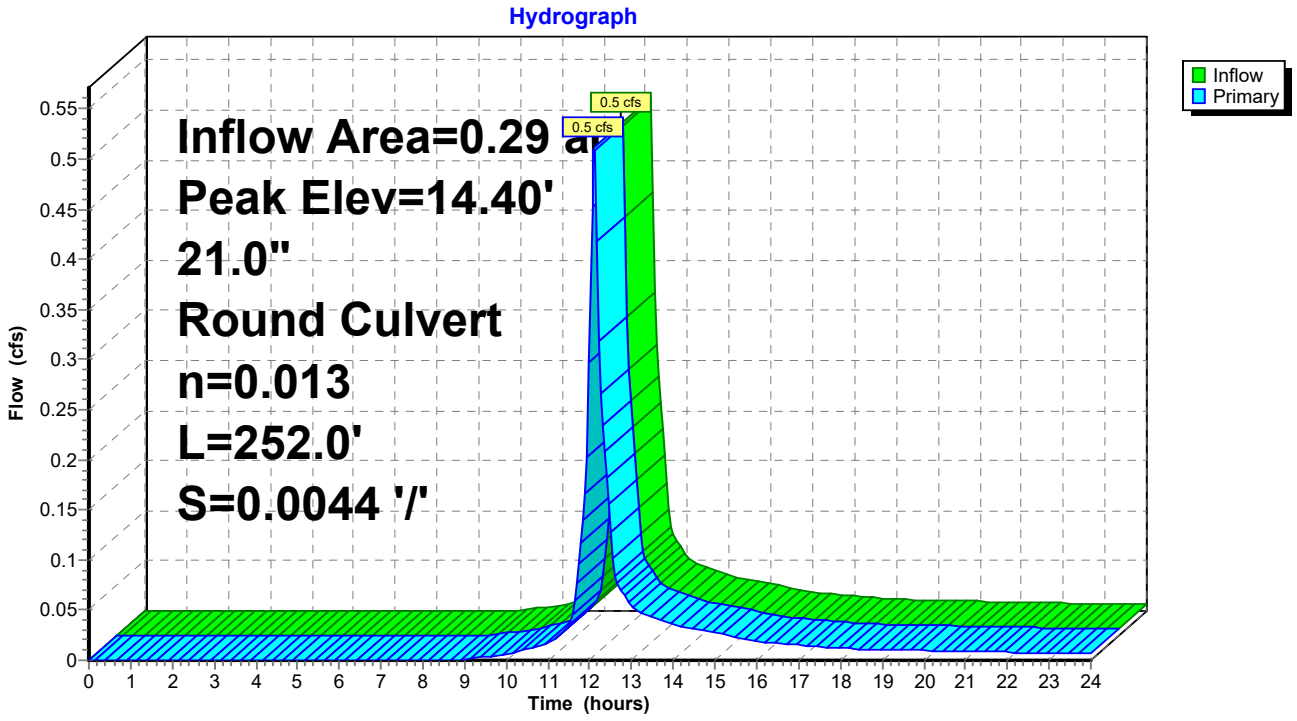
Inflow Area = 0.29 ac, 73.97% Impervious, Inflow Depth > 1.53" for 2-Year Storm event
Inflow = 0.5 cfs @ 12.09 hrs, Volume= 0.037 af
Outflow = 0.5 cfs @ 12.09 hrs, Volume= 0.037 af, Atten= 0%, Lag= 0.0 min
Primary = 0.5 cfs @ 12.09 hrs, Volume= 0.037 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 14.40' @ 12.09 hrs
Flood Elev= 23.60'

Device	Routing	Invert	Outlet Devices
#1	Primary	14.05'	**21.0" Round Culvert** L= 252.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 14.05' / 12.94' S= 0.0044 '/' Cc= 0.900 n= 0.013 Cast iron, coated, Flow Area= 2.41 sf

Primary OutFlow Max=0.5 cfs @ 12.09 hrs HW=14.40' TW=0.00' (Dynamic Tailwater)
1=Culvert (Barrel Controls 0.5 cfs @ 2.21 fps)

Pond 23P: Ex CB3



Summary for Pond 24P: Ex DMH2

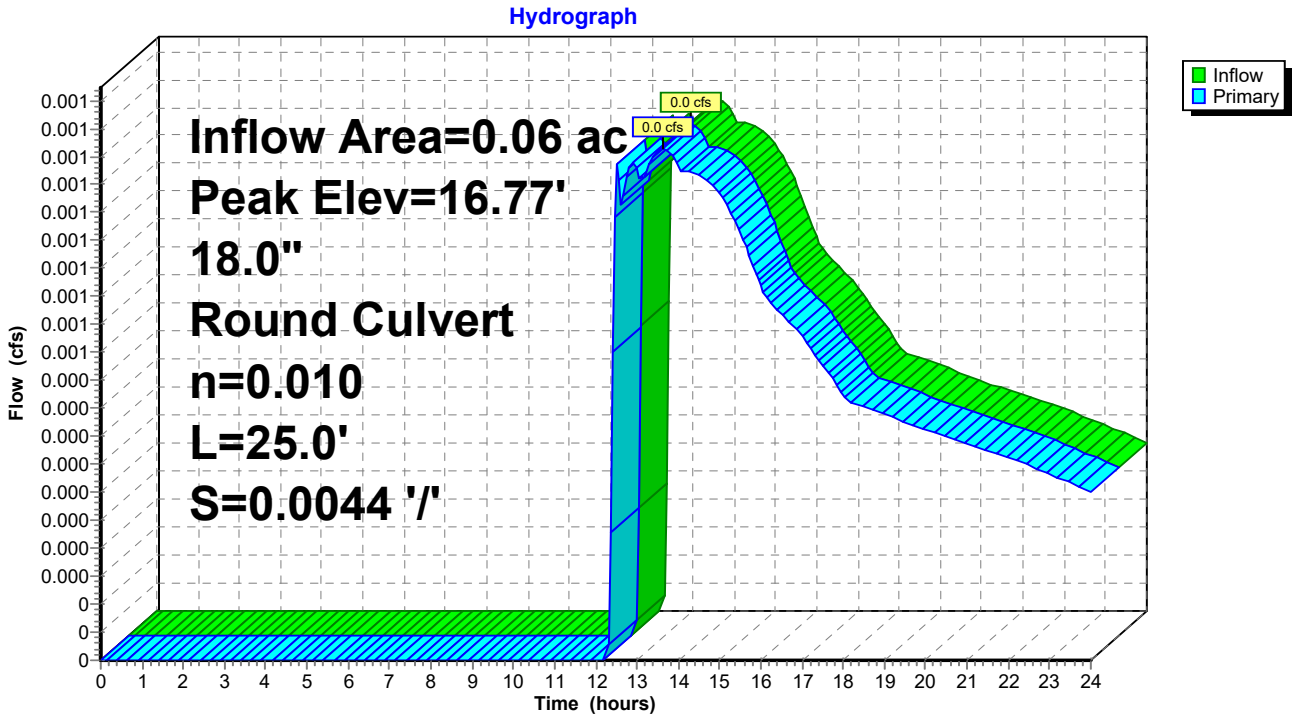
Inflow Area = 0.06 ac, 17.99% Impervious, Inflow Depth > 0.11" for 2-Year Storm event
Inflow = 0.0 cfs @ 13.61 hrs, Volume= 0.001 af
Outflow = 0.0 cfs @ 13.62 hrs, Volume= 0.001 af, Atten= 0%, Lag= 0.3 min
Primary = 0.0 cfs @ 13.62 hrs, Volume= 0.001 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 16.77' @ 13.62 hrs
Flood Elev= 25.38'

Device	Routing	Invert	Outlet Devices
#1	Primary	16.75'	**18.0" Round Culvert** L= 25.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 16.75' / 16.64' S= 0.0044 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=0.0 cfs @ 13.62 hrs HW=16.77' TW=16.55' (Dynamic Tailwater)
1=Culvert (Barrel Controls 0.0 cfs @ 0.40 fps)

Pond 24P: Ex DMH2



Summary for Pond 26P: DMH5

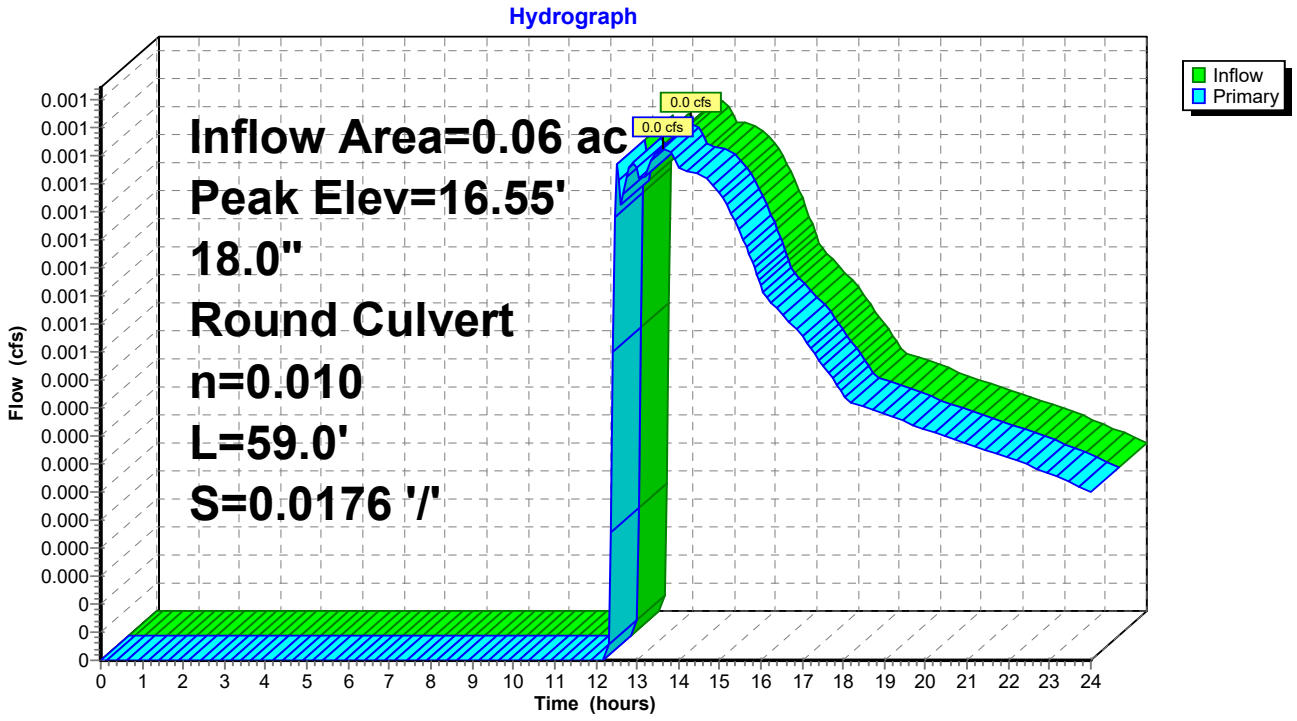
Inflow Area = 0.06 ac, 17.99% Impervious, Inflow Depth > 0.11" for 2-Year Storm event
Inflow = 0.0 cfs @ 13.62 hrs, Volume= 0.001 af
Outflow = 0.0 cfs @ 13.62 hrs, Volume= 0.001 af, Atten= 0%, Lag= 0.5 min
Primary = 0.0 cfs @ 13.62 hrs, Volume= 0.001 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 16.55' @ 13.62 hrs
Flood Elev= 25.90'

Device	Routing	Invert	Outlet Devices
#1	Primary	16.54'	**18.0" Round Culvert** L= 59.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 16.54' / 15.50' S= 0.0176 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=0.0 cfs @ 13.62 hrs HW=16.55' TW=15.43' (Dynamic Tailwater)
1=Culvert (Inlet Controls 0.0 cfs @ 0.32 fps)

Pond 26P: DMH5



Summary for Pond 27P: DMH10

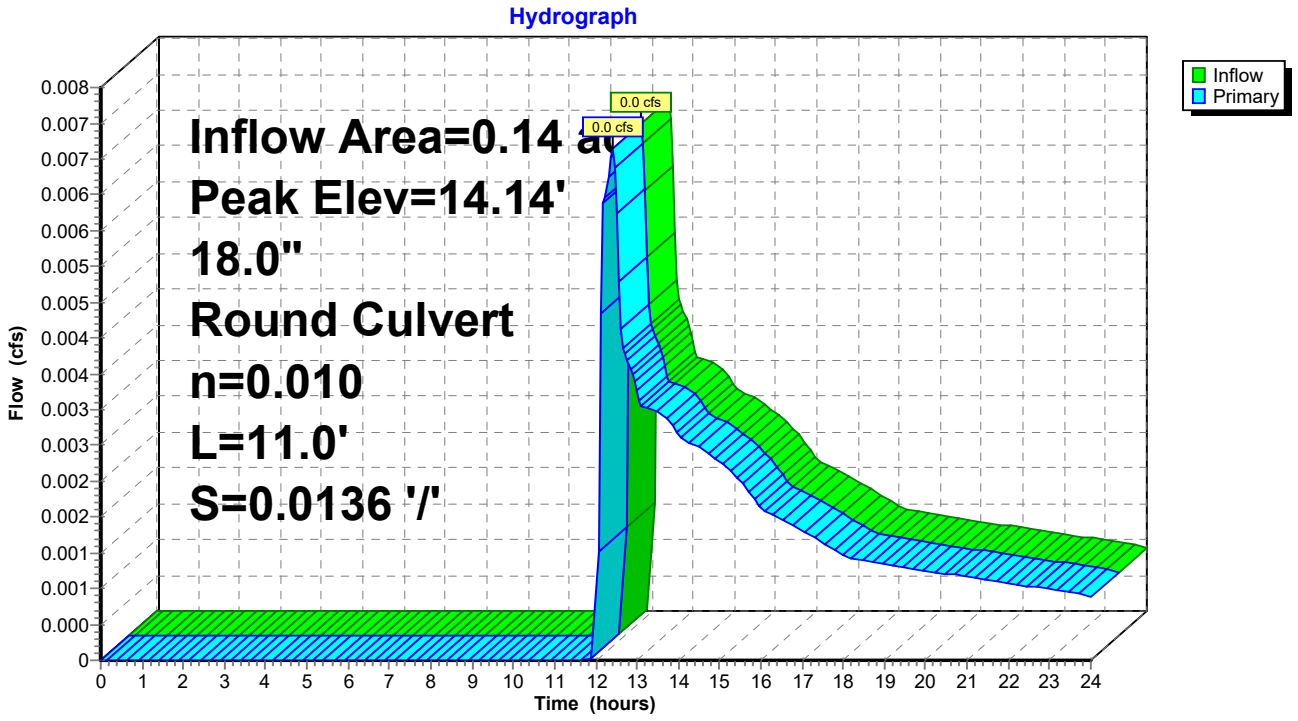
Inflow Area = 0.14 ac, 23.10% Impervious, Inflow Depth > 0.18" for 2-Year Storm event
Inflow = 0.0 cfs @ 12.39 hrs, Volume= 0.002 af
Outflow = 0.0 cfs @ 12.39 hrs, Volume= 0.002 af, Atten= 0%, Lag= 0.0 min
Primary = 0.0 cfs @ 12.39 hrs, Volume= 0.002 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 14.14' @ 12.39 hrs
Flood Elev= 24.17'

Device	Routing	Invert	Outlet Devices
#1	Primary	14.10'	**18.0" Round Culvert** L= 11.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 14.10' / 13.95' S= 0.0136 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=0.0 cfs @ 12.39 hrs HW=14.14' TW=0.00' (Dynamic Tailwater)
1=Culvert (Inlet Controls 0.0 cfs @ 0.54 fps)

Pond 27P: DMH10



Summary for Pond 29P: Ex DMH4

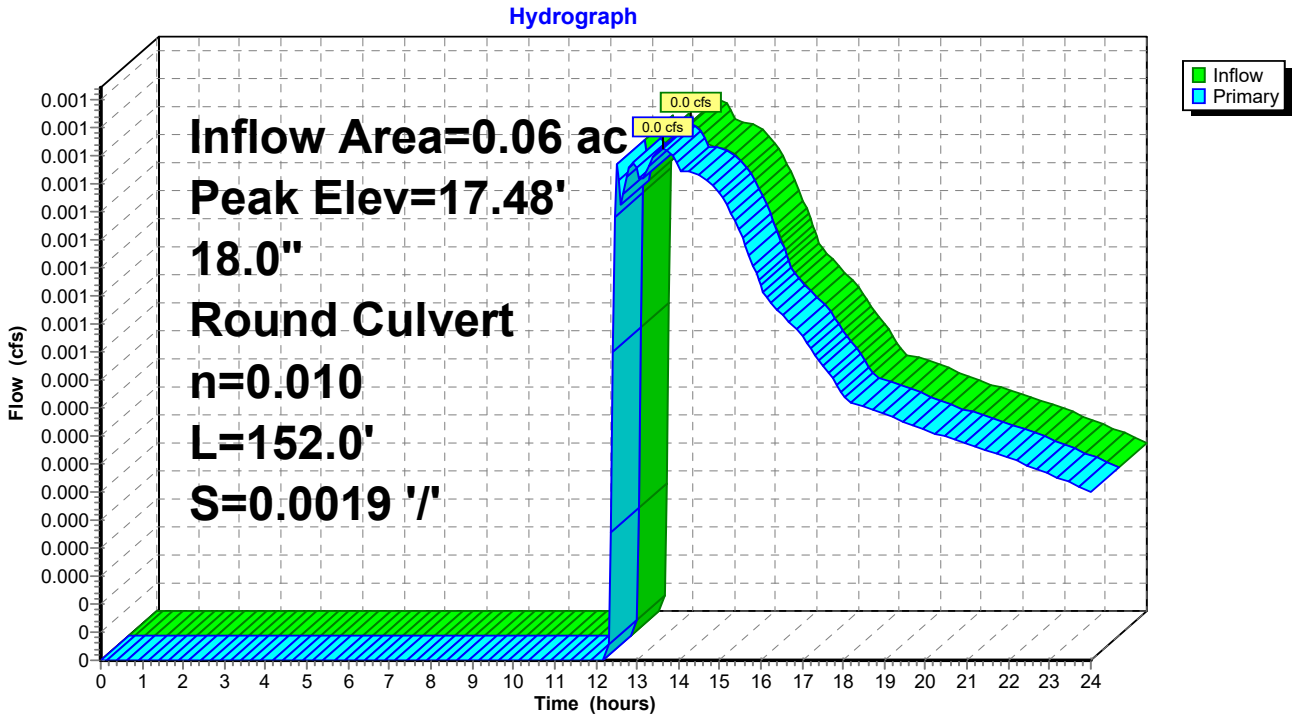
Inflow Area = 0.06 ac, 17.99% Impervious, Inflow Depth > 0.11" for 2-Year Storm event
Inflow = 0.0 cfs @ 13.63 hrs, Volume= 0.001 af
Outflow = 0.0 cfs @ 13.61 hrs, Volume= 0.001 af, Atten= 0%, Lag= 0.0 min
Primary = 0.0 cfs @ 13.61 hrs, Volume= 0.001 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 17.48' @ 13.61 hrs
Flood Elev= 23.44'

Device	Routing	Invert	Outlet Devices
#1	Primary	17.46'	**18.0" Round Culvert** L= 152.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 17.46' / 17.17' S= 0.0019 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=0.0 cfs @ 13.61 hrs HW=17.48' TW=17.14' (Dynamic Tailwater)
1=Culvert (Barrel Controls 0.0 cfs @ 0.30 fps)

Pond 29P: Ex DMH4

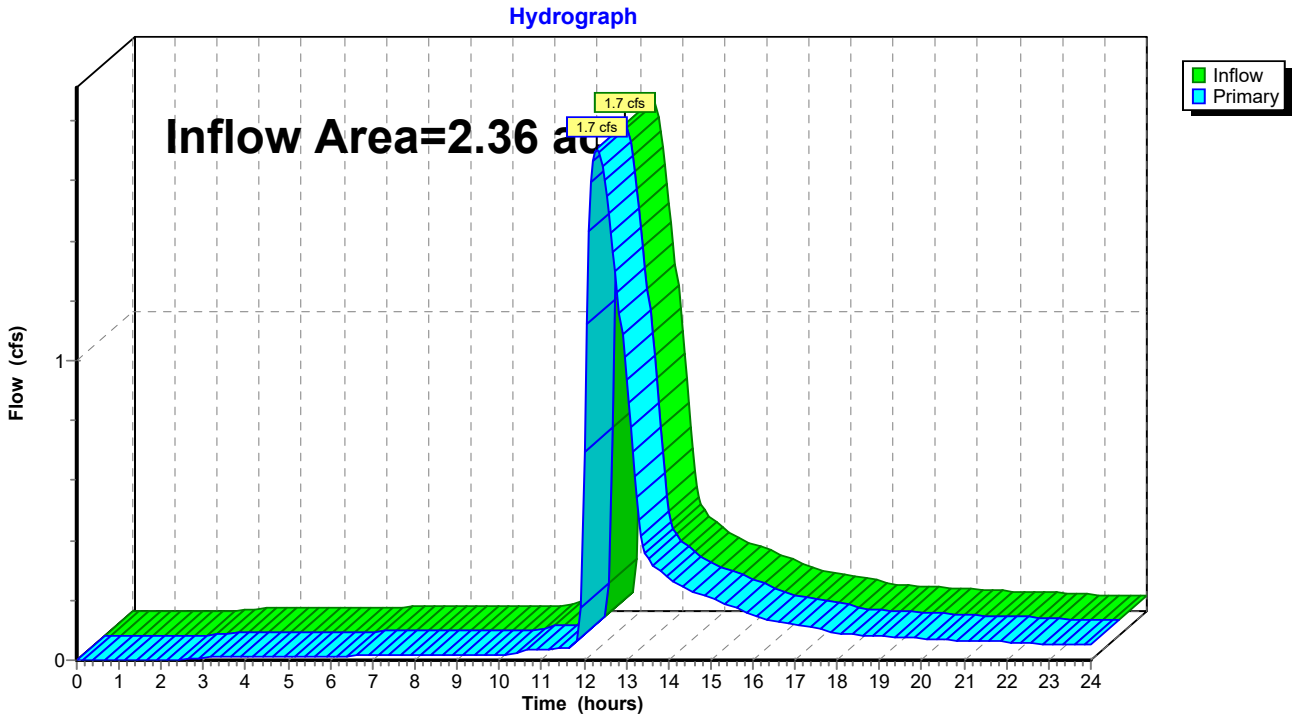


Summary for Link SP1: Forest Ave Storm Drain

Inflow Area = 2.36 ac, 72.31% Impervious, Inflow Depth > 1.31" for 2-Year Storm event
Inflow = 1.7 cfs @ 12.30 hrs, Volume= 0.257 af
Primary = 1.7 cfs @ 12.30 hrs, Volume= 0.257 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link SP1: Forest Ave Storm Drain

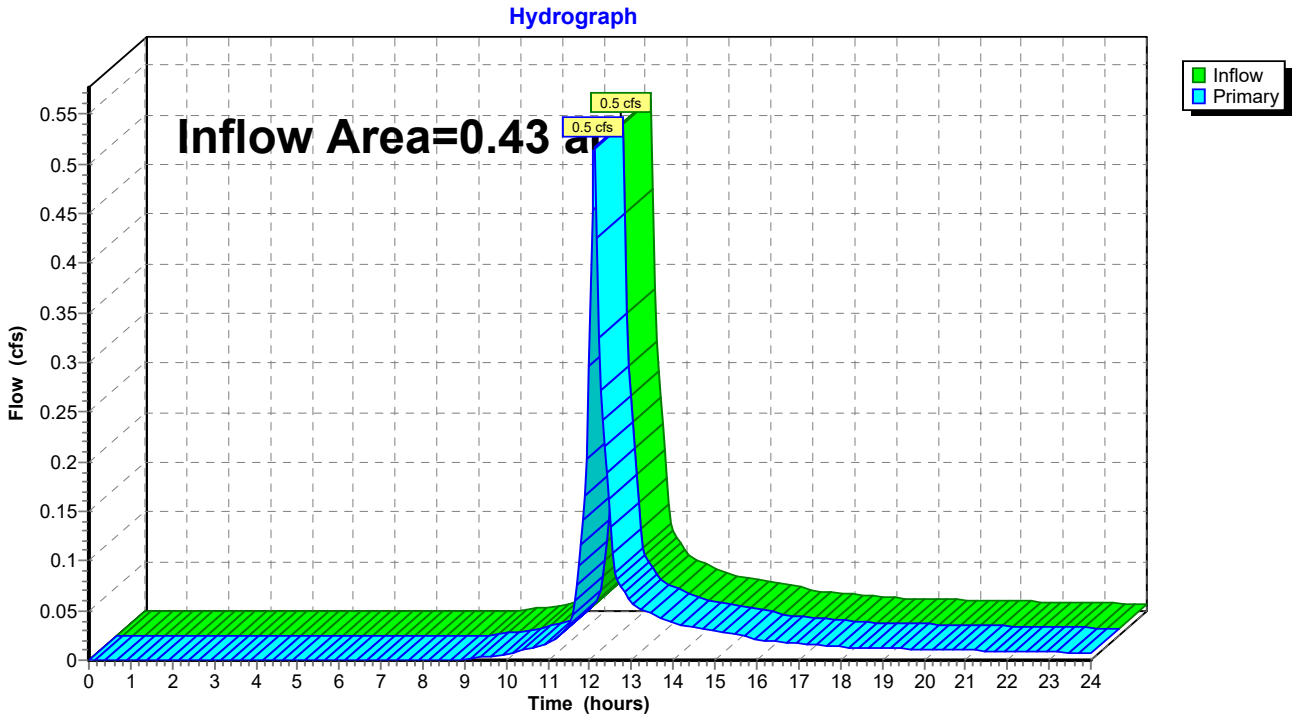


Summary for Link SP2: Combined Sewer

Inflow Area = 0.43 ac, 57.64% Impervious, Inflow Depth > 1.09" for 2-Year Storm event
Inflow = 0.5 cfs @ 12.10 hrs, Volume= 0.039 af
Primary = 0.5 cfs @ 12.10 hrs, Volume= 0.039 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link SP2: Combined Sewer



Summary for Subcatchment 1S:

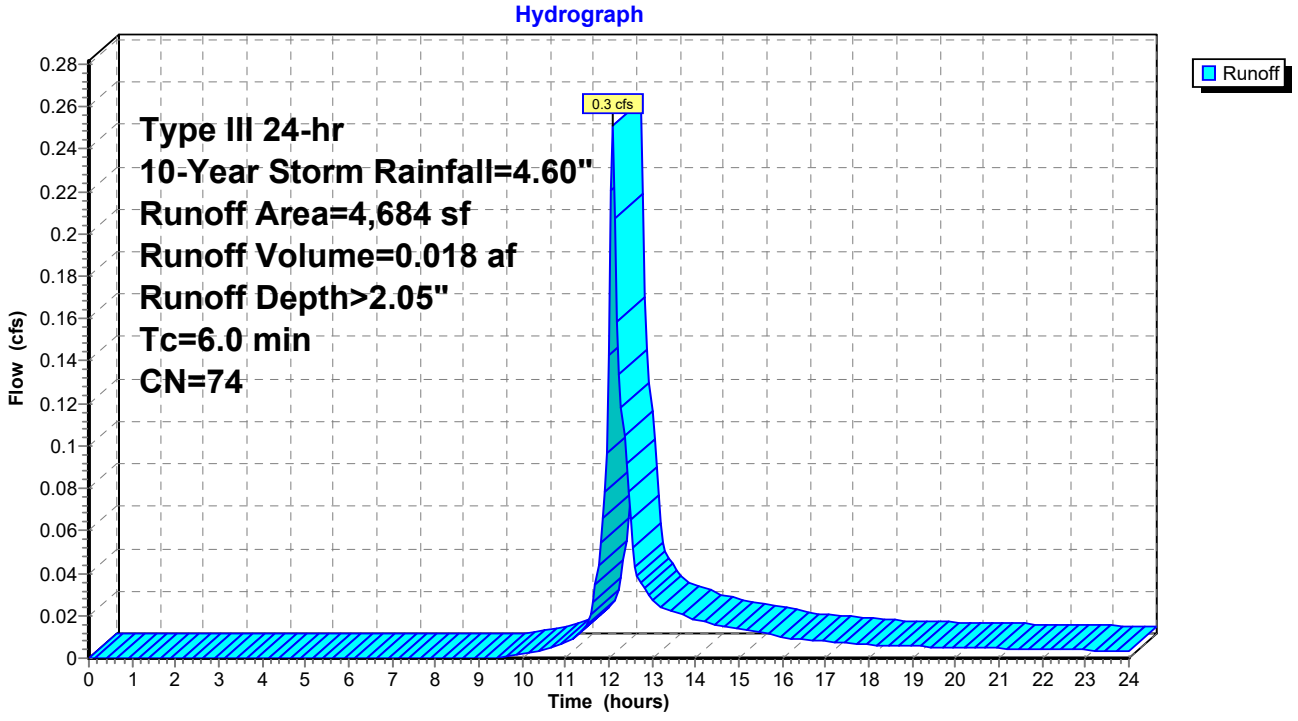
Runoff = 0.3 cfs @ 12.10 hrs, Volume= 0.018 af, Depth> 2.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Storm Rainfall=4.60"

	Area (sf)	CN	Description
*	2,770	98	Impervious
	1,237	39	Grass cover, Good, HSG A
*	677	40	Porous Pavement
	4,684	74	Weighted Average
	1,914		40.86% Pervious Area
	2,770		59.14% Impervious Area

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

Subcatchment 1S:



Summary for Subcatchment 2S:

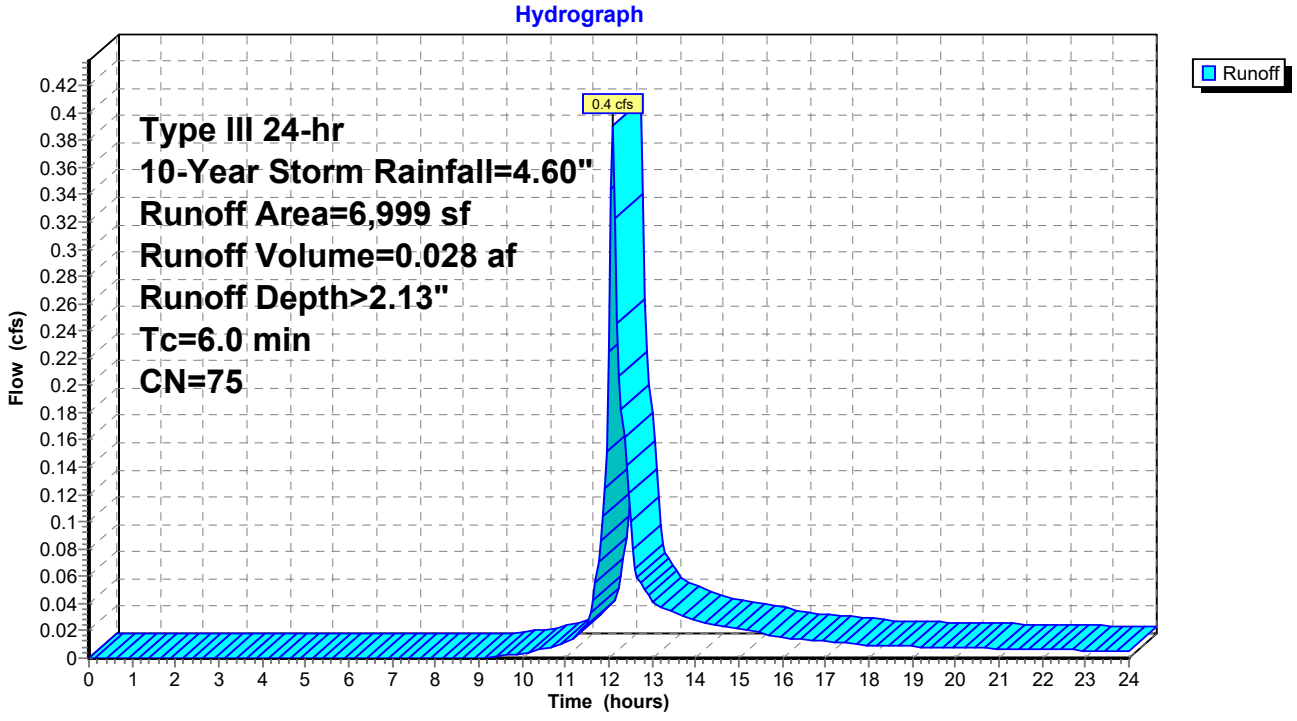
Runoff = 0.4 cfs @ 12.10 hrs, Volume= 0.028 af, Depth> 2.13"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Storm Rainfall=4.60"

	Area (sf)	CN	Description
*	4,238	98	Impervious
	1,996	39	Grass cover, Good, HSG A
*	765	40	Porous Pavement
	6,999	75	Weighted Average
	2,761		39.45% Pervious Area
	4,238		60.55% Impervious Area

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

Subcatchment 2S:



Summary for Subcatchment 3S:

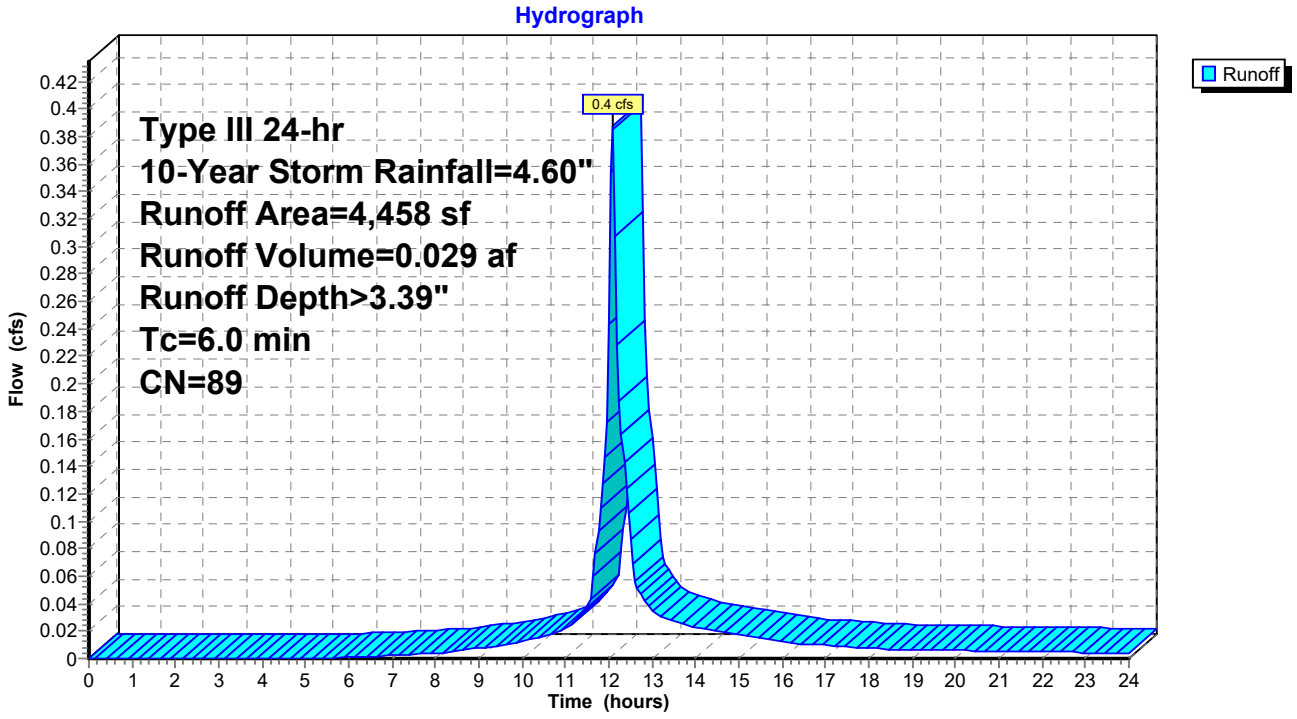
Runoff = 0.4 cfs @ 12.09 hrs, Volume= 0.029 af, Depth> 3.39"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Storm Rainfall=4.60"

	Area (sf)	CN	Description
*	3,789	98	Impervious
	669	39	Grass cover, Good, HSG A
	4,458	89	Weighted Average
	669		15.01% Pervious Area
	3,789		84.99% Impervious Area

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

Subcatchment 3S:



Summary for Subcatchment 4S:

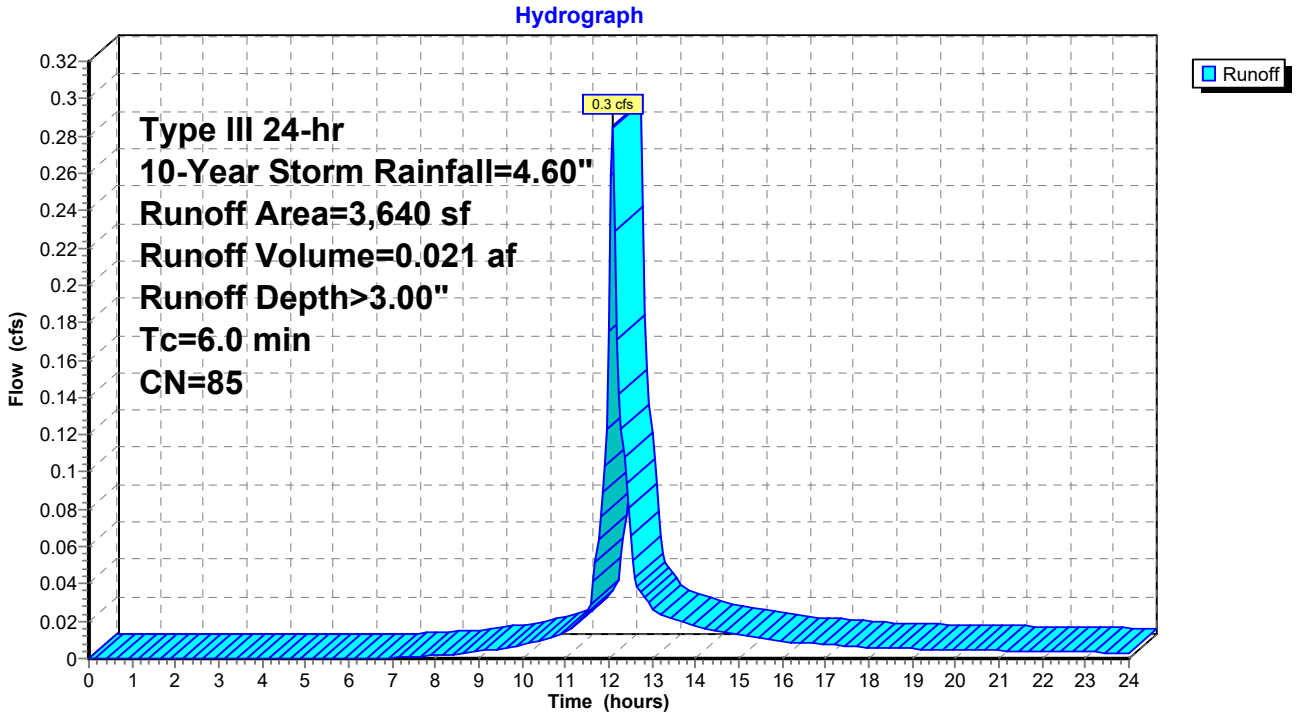
Runoff = 0.3 cfs @ 12.09 hrs, Volume= 0.021 af, Depth> 3.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Storm Rainfall=4.60"

	Area (sf)	CN	Description
*	2,814	98	Impervious
	826	39	Grass cover, Good, HSG A
	3,640	85	Weighted Average
	826		22.69% Pervious Area
	2,814		77.31% Impervious Area

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

Subcatchment 4S:



Summary for Subcatchment 5S:

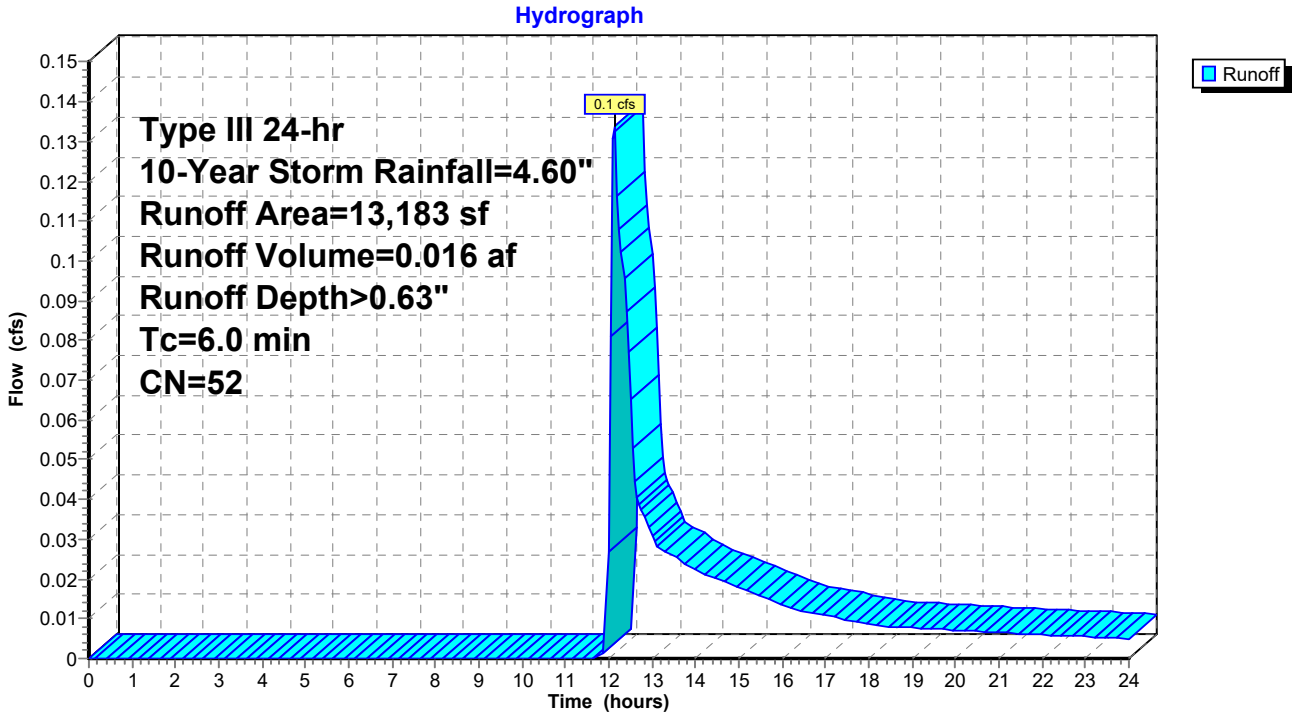
Runoff = 0.1 cfs @ 12.13 hrs, Volume= 0.016 af, Depth> 0.63"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Storm Rainfall=4.60"

	Area (sf)	CN	Description
*	2,965	98	Impervious
	10,218	39	Grass cover, Good, HSG A
	13,183	52	Weighted Average
	10,218		77.51% Pervious Area
	2,965		22.49% Impervious Area

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

Subcatchment 5S:



Summary for Subcatchment 6S:

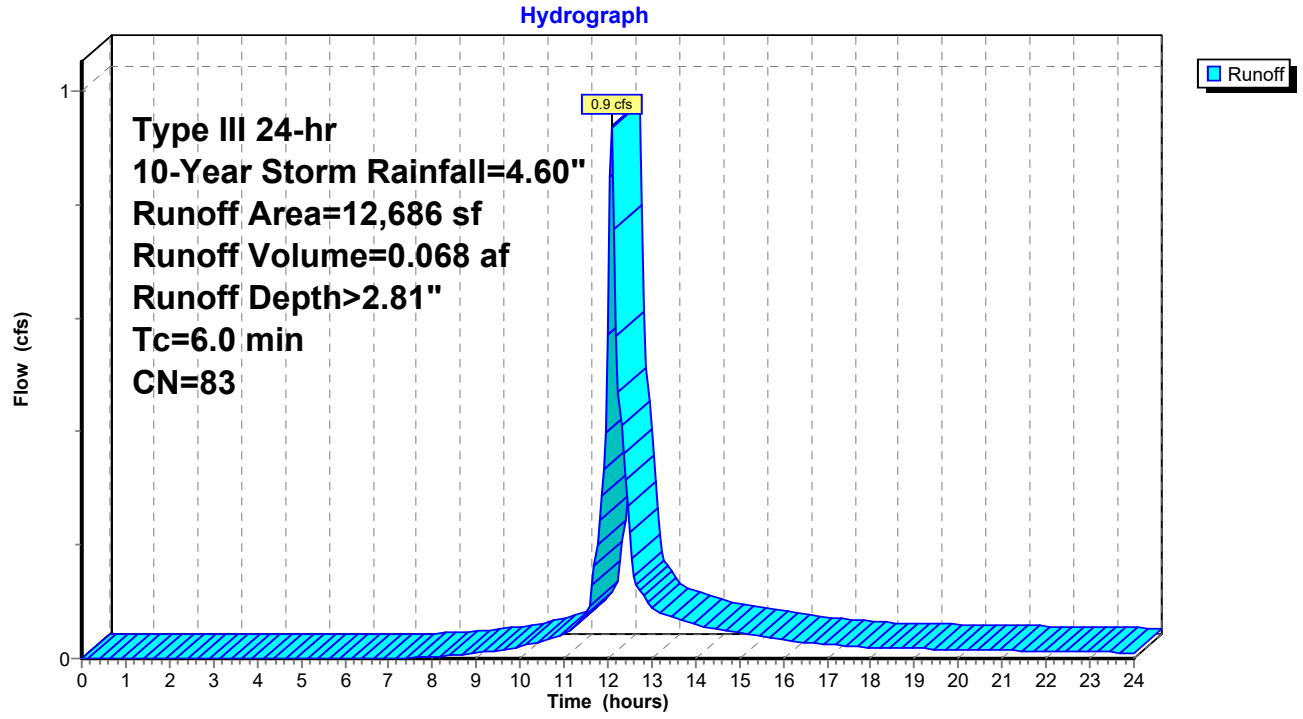
Runoff = 0.9 cfs @ 12.09 hrs, Volume= 0.068 af, Depth> 2.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Storm Rainfall=4.60"

	Area (sf)	CN	Description
*	9,384	98	Impervious
	3,302	39	Grass cover, Good, HSG A
	12,686	83	Weighted Average
	3,302		26.03% Pervious Area
	9,384		73.97% Impervious Area

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

Subcatchment 6S:



Summary for Subcatchment 7S: Parking Garage

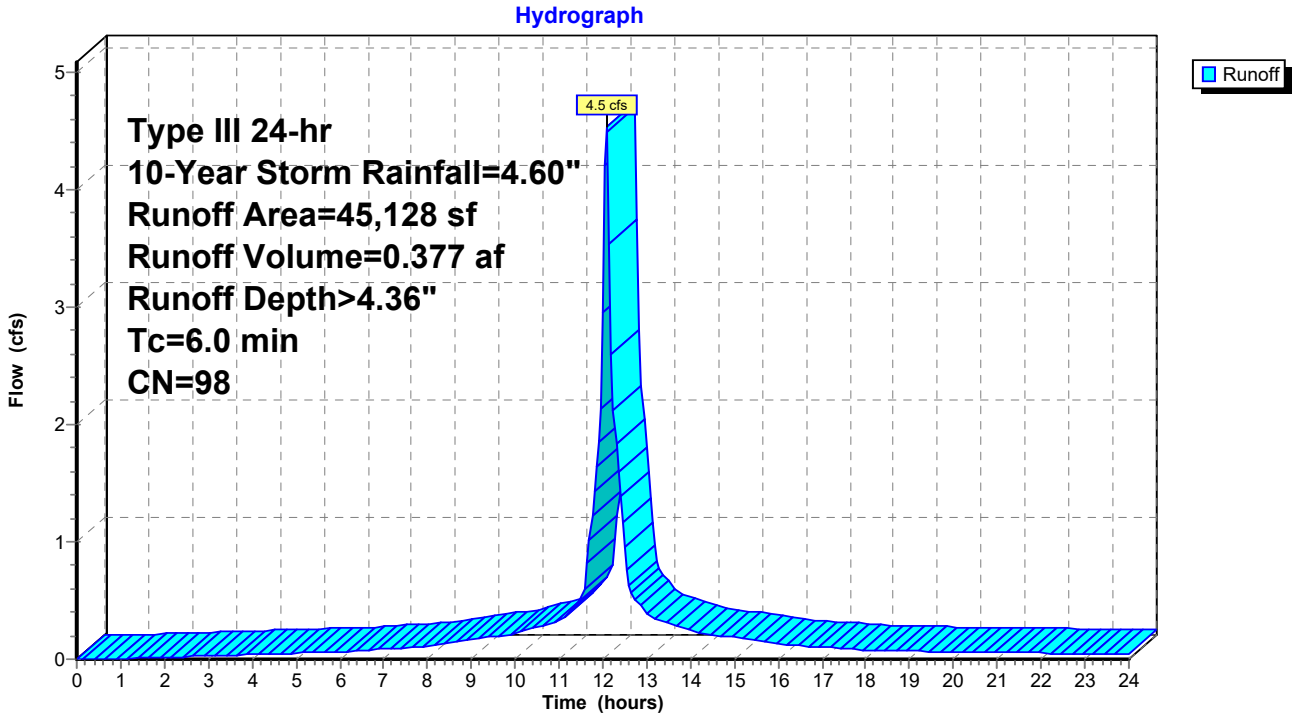
Runoff = 4.5 cfs @ 12.09 hrs, Volume= 0.377 af, Depth> 4.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Storm Rainfall=4.60"

	Area (sf)	CN	Description
*	45,128	98	Impervious
	45,128		100.00% Impervious Area

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

Subcatchment 7S: Parking Garage



Summary for Subcatchment 8S:

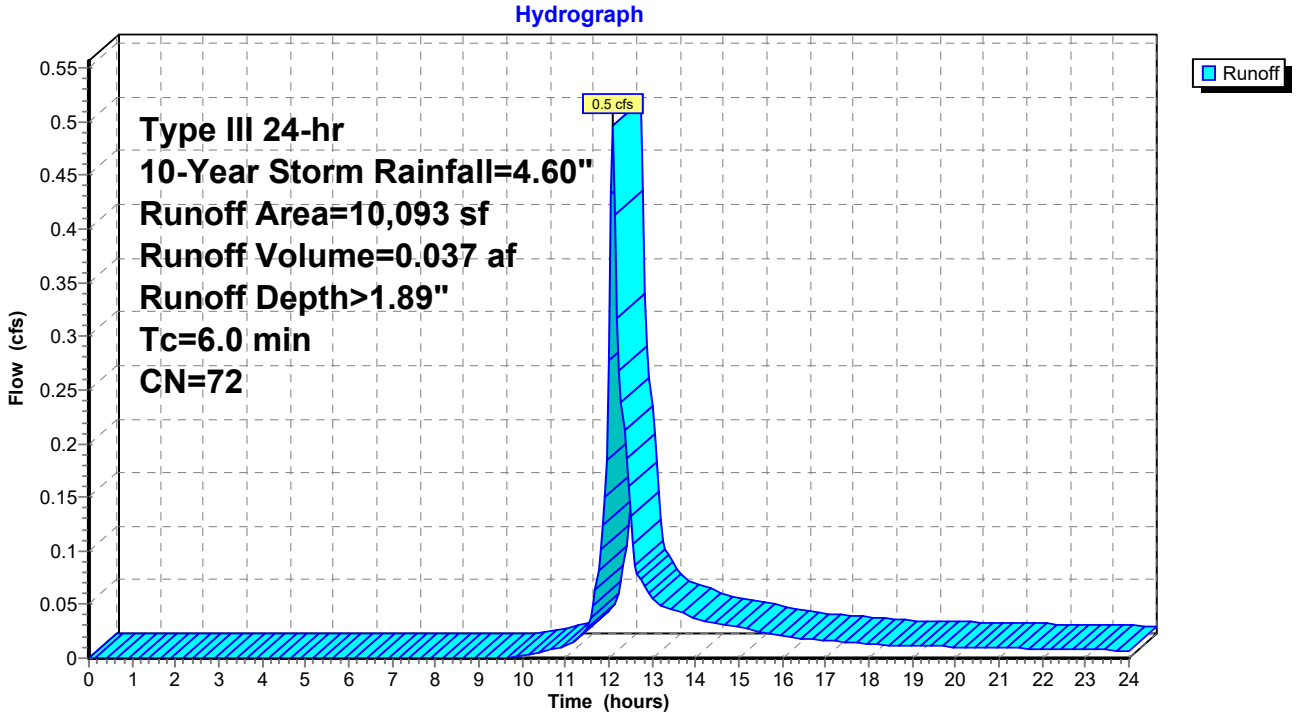
Runoff = 0.5 cfs @ 12.10 hrs, Volume= 0.037 af, Depth> 1.89"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Storm Rainfall=4.60"

	Area (sf)	CN	Description
*	5,667	98	Impervious
	3,193	39	Grass cover, Good, HSG A
*	1,233	40	Porous Pavement
	10,093	72	Weighted Average
	4,426		43.85% Pervious Area
	5,667		56.15% Impervious Area

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

Subcatchment 8S:



Summary for Subcatchment 9S:

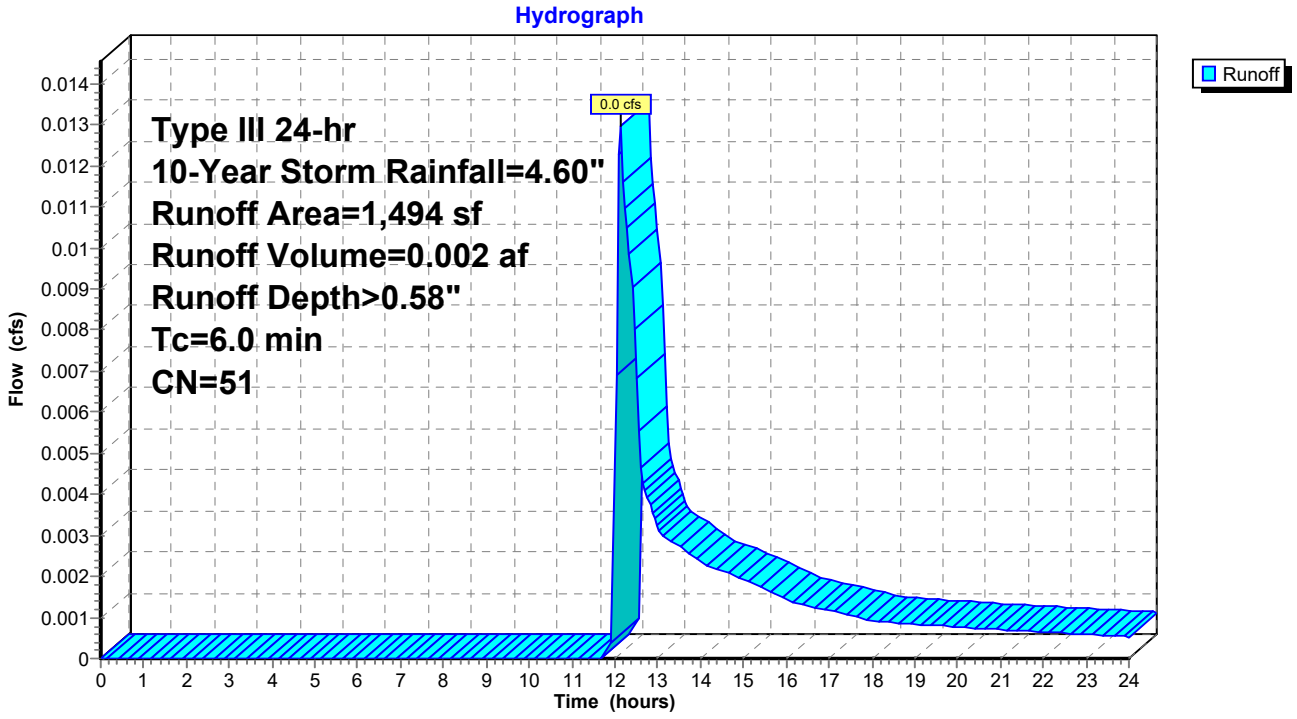
Runoff = 0.0 cfs @ 12.14 hrs, Volume= 0.002 af, Depth> 0.58"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Storm Rainfall=4.60"

	Area (sf)	CN	Description
*	302	98	Impervious
	1,192	39	Grass cover, Good, HSG A
	1,494	51	Weighted Average
	1,192		79.79% Pervious Area
	302		20.21% Impervious Area

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

Subcatchment 9S:



Summary for Subcatchment 10S:

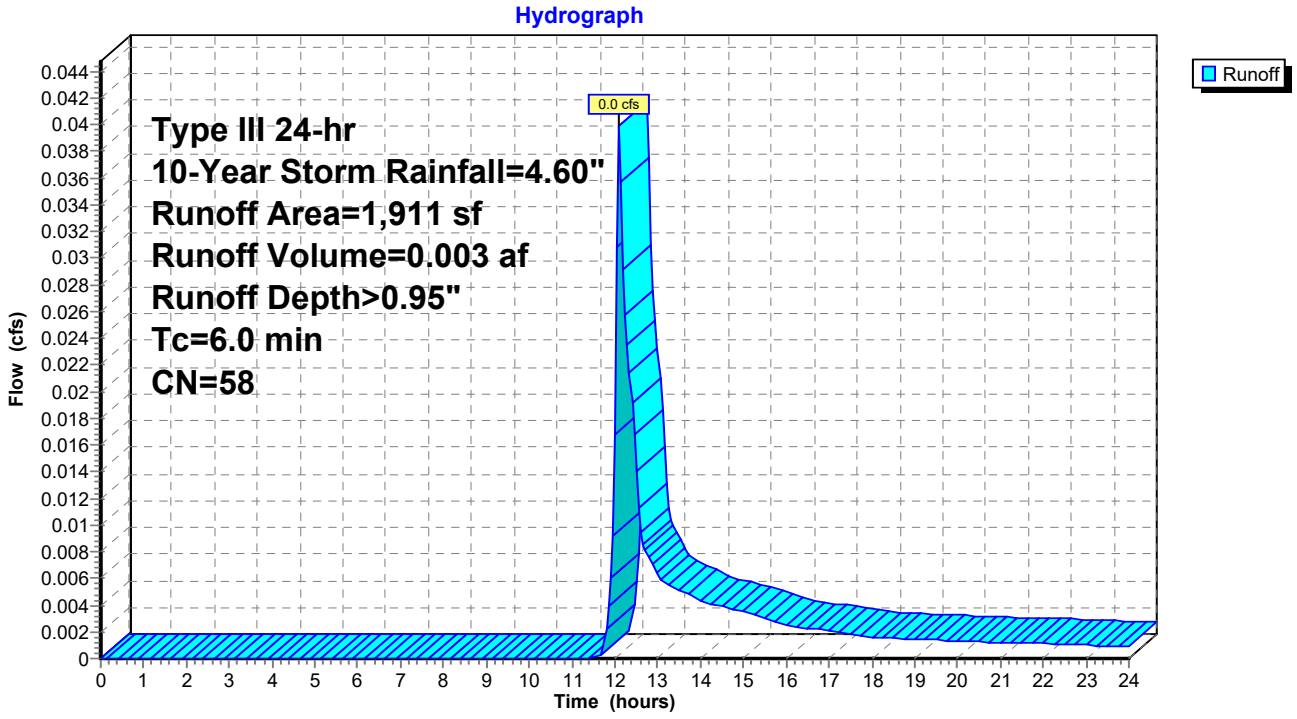
Runoff = 0.0 cfs @ 12.11 hrs, Volume= 0.003 af, Depth> 0.95"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Storm Rainfall=4.60"

	Area (sf)	CN	Description
*	617	98	Impervious
	1,294	39	Grass cover, Good, HSG A
	1,911	58	Weighted Average
	1,294		67.71% Pervious Area
	617		32.29% Impervious Area

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

Subcatchment 10S:



Summary for Subcatchment 12S:

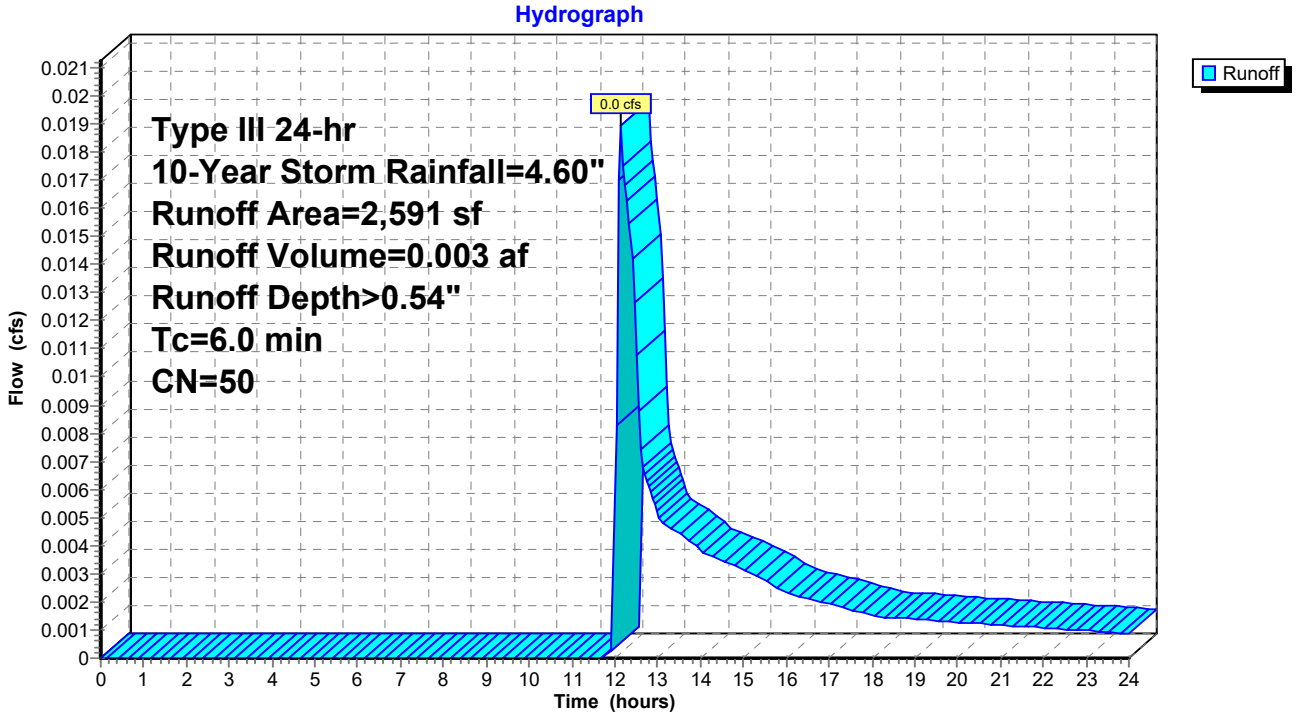
Runoff = 0.0 cfs @ 12.15 hrs, Volume= 0.003 af, Depth> 0.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Storm Rainfall=4.60"

	Area (sf)	CN	Description
*	466	98	Impervious
	1,499	39	Grass cover, Good, HSG A
*	626	40	Porous Pavement
	2,591	50	Weighted Average
	2,125		82.01% Pervious Area
	466		17.99% Impervious Area

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

Subcatchment 12S:



Summary for Subcatchment 13S:

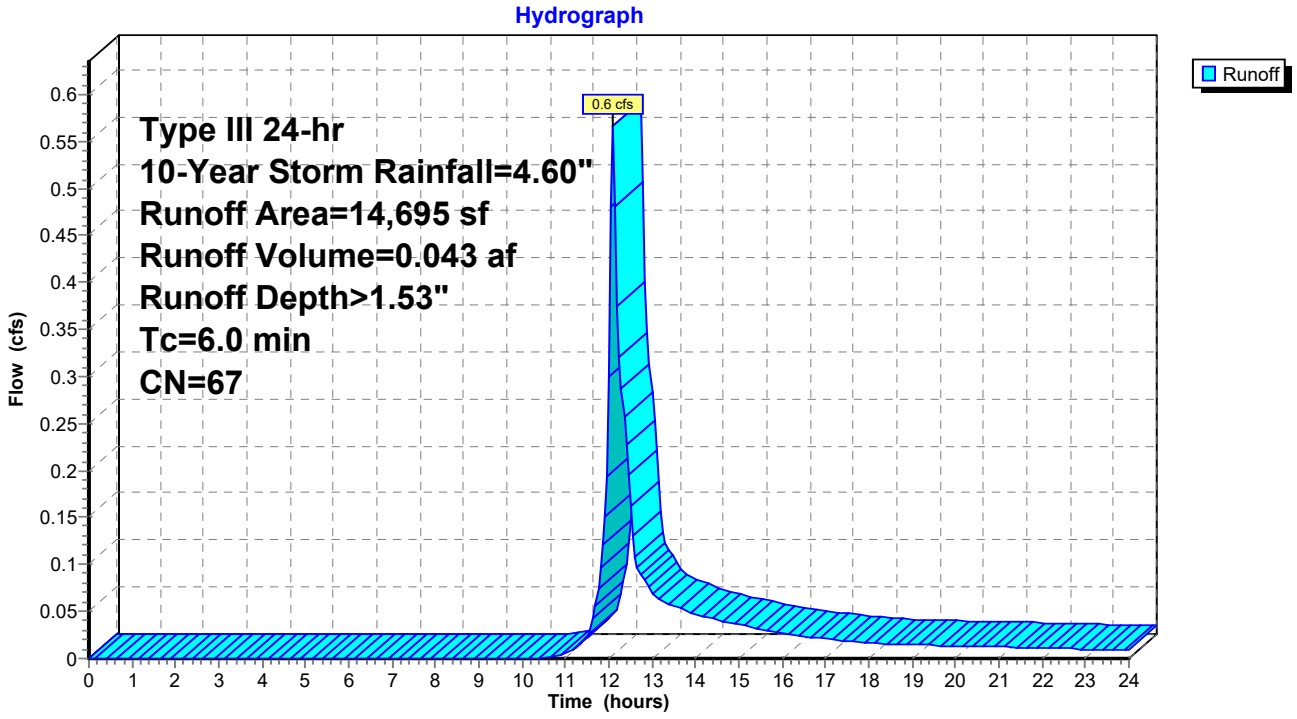
Runoff = 0.6 cfs @ 12.10 hrs, Volume= 0.043 af, Depth> 1.53"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Storm Rainfall=4.60"

	Area (sf)	CN	Description
*	7,017	98	Impervious
	7,678	39	Grass cover, Good, HSG A
	14,695	67	Weighted Average
	7,678		52.25% Pervious Area
	7,017		47.75% Impervious Area

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

Subcatchment 13S:



Summary for Pond 1P: CB1

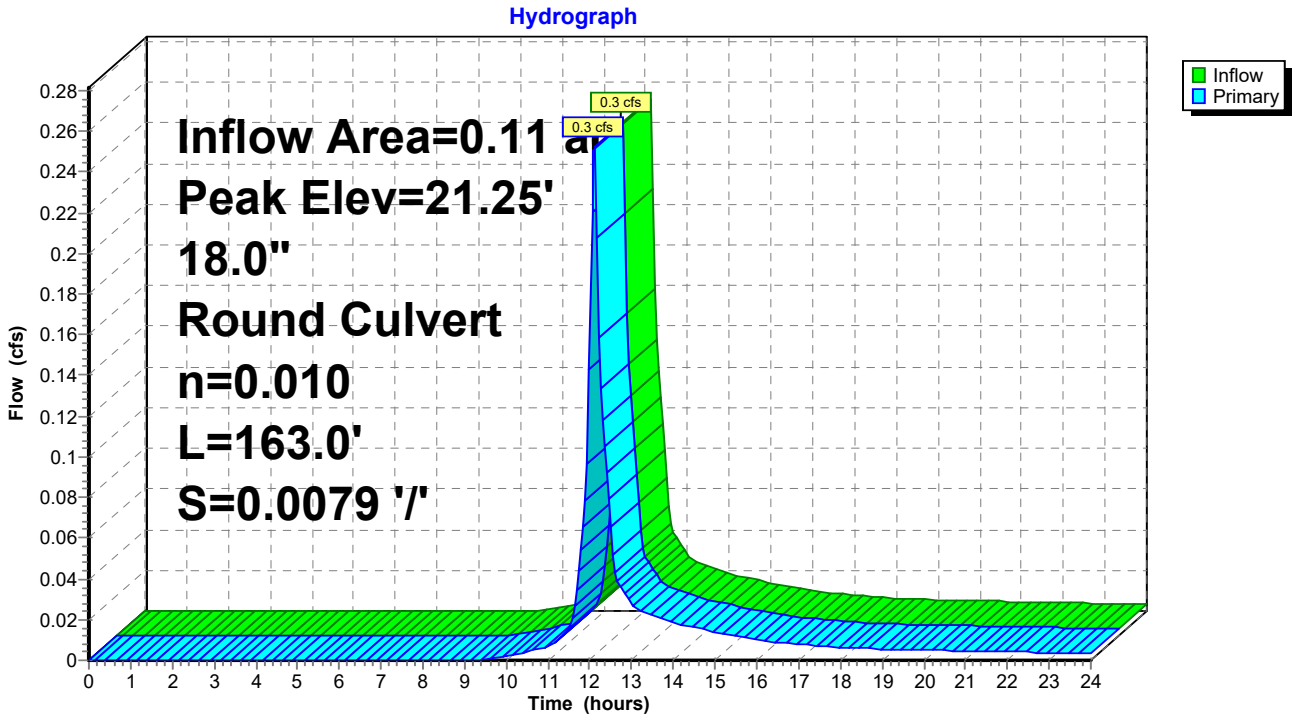
Inflow Area = 0.11 ac, 59.14% Impervious, Inflow Depth > 2.05" for 10-Year Storm event
Inflow = 0.3 cfs @ 12.10 hrs, Volume= 0.018 af
Outflow = 0.3 cfs @ 12.10 hrs, Volume= 0.018 af, Atten= 0%, Lag= 0.0 min
Primary = 0.3 cfs @ 12.10 hrs, Volume= 0.018 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 21.25' @ 12.10 hrs
Flood Elev= 25.12'

Device	Routing	Invert	Outlet Devices
#1	Primary	21.00'	**18.0" Round Culvert** L= 163.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 21.00' / 19.71' S= 0.0079 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=0.2 cfs @ 12.10 hrs HW=21.24' TW=20.14' (Dynamic Tailwater)
1=Culvert (Inlet Controls 0.2 cfs @ 1.33 fps)

Pond 1P: CB1



Summary for Pond 2P: CB2

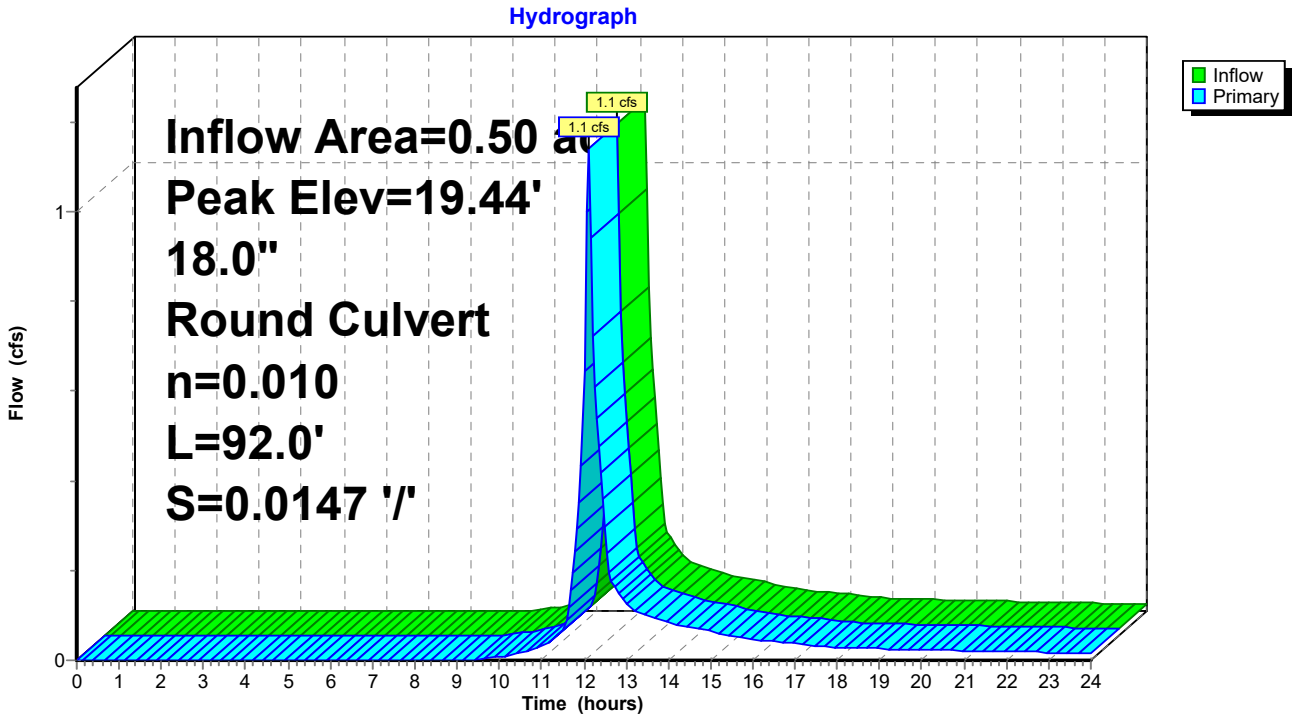
Inflow Area = 0.50 ac, 58.21% Impervious, Inflow Depth > 2.00" for 10-Year Storm event
Inflow = 1.1 cfs @ 12.10 hrs, Volume= 0.083 af
Outflow = 1.1 cfs @ 12.10 hrs, Volume= 0.083 af, Atten= 0%, Lag= 0.0 min
Primary = 1.1 cfs @ 12.10 hrs, Volume= 0.083 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 19.44' @ 12.10 hrs
Flood Elev= 22.97'

Device	Routing	Invert	Outlet Devices
#1	Primary	18.90'	**18.0" Round Culvert** L= 92.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 18.90' / 17.55' S= 0.0147 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=1.1 cfs @ 12.10 hrs HW=19.44' TW=18.90' (Dynamic Tailwater)
1=Culvert (Inlet Controls 1.1 cfs @ 1.97 fps)

Pond 2P: CB2



Summary for Pond 3P: CB3

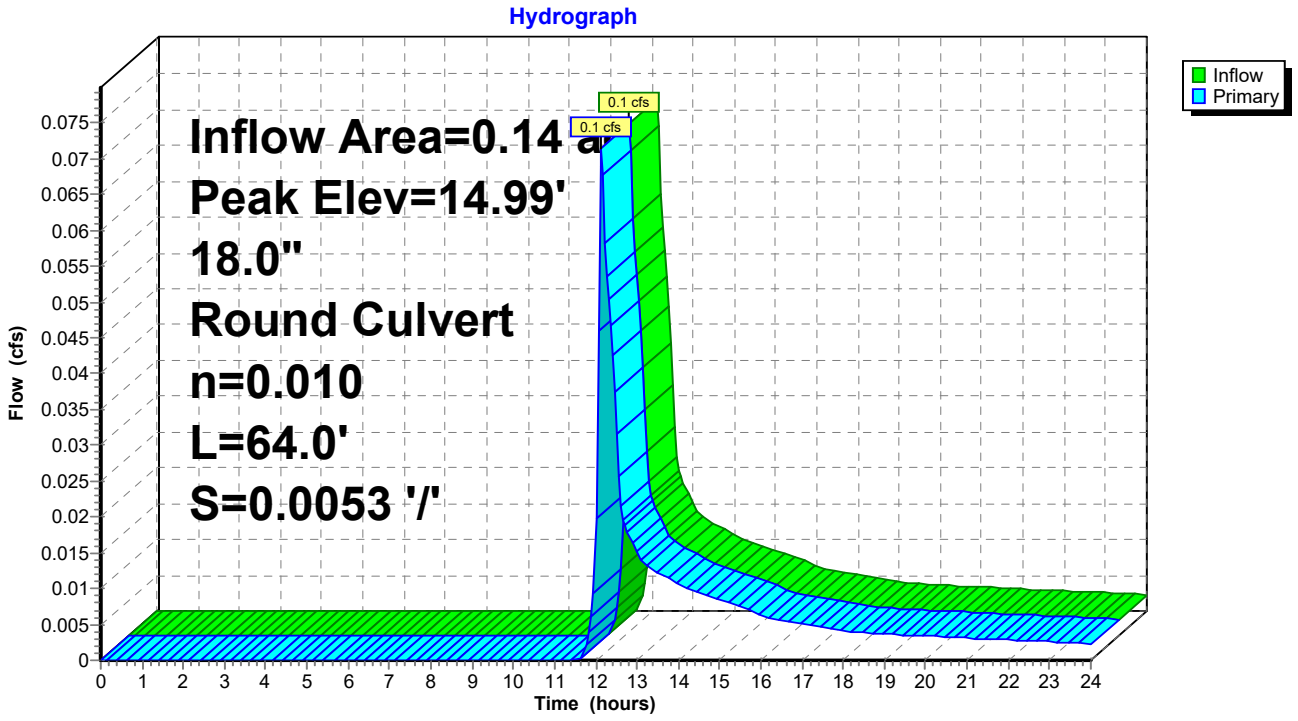
Inflow Area = 0.14 ac, 23.10% Impervious, Inflow Depth > 0.68" for 10-Year Storm event
Inflow = 0.1 cfs @ 12.12 hrs, Volume= 0.008 af
Outflow = 0.1 cfs @ 12.12 hrs, Volume= 0.008 af, Atten= 0%, Lag= 0.0 min
Primary = 0.1 cfs @ 12.12 hrs, Volume= 0.008 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 14.99' @ 12.12 hrs
Flood Elev= 23.90'

Device	Routing	Invert	Outlet Devices
#1	Primary	14.86'	**18.0" Round Culvert** L= 64.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 14.86' / 14.52' S= 0.0053 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=0.1 cfs @ 12.12 hrs HW=14.99' TW=14.23' (Dynamic Tailwater)
1=Culvert (Inlet Controls 0.1 cfs @ 0.96 fps)

Pond 3P: CB3



Summary for Pond 4P: CB4

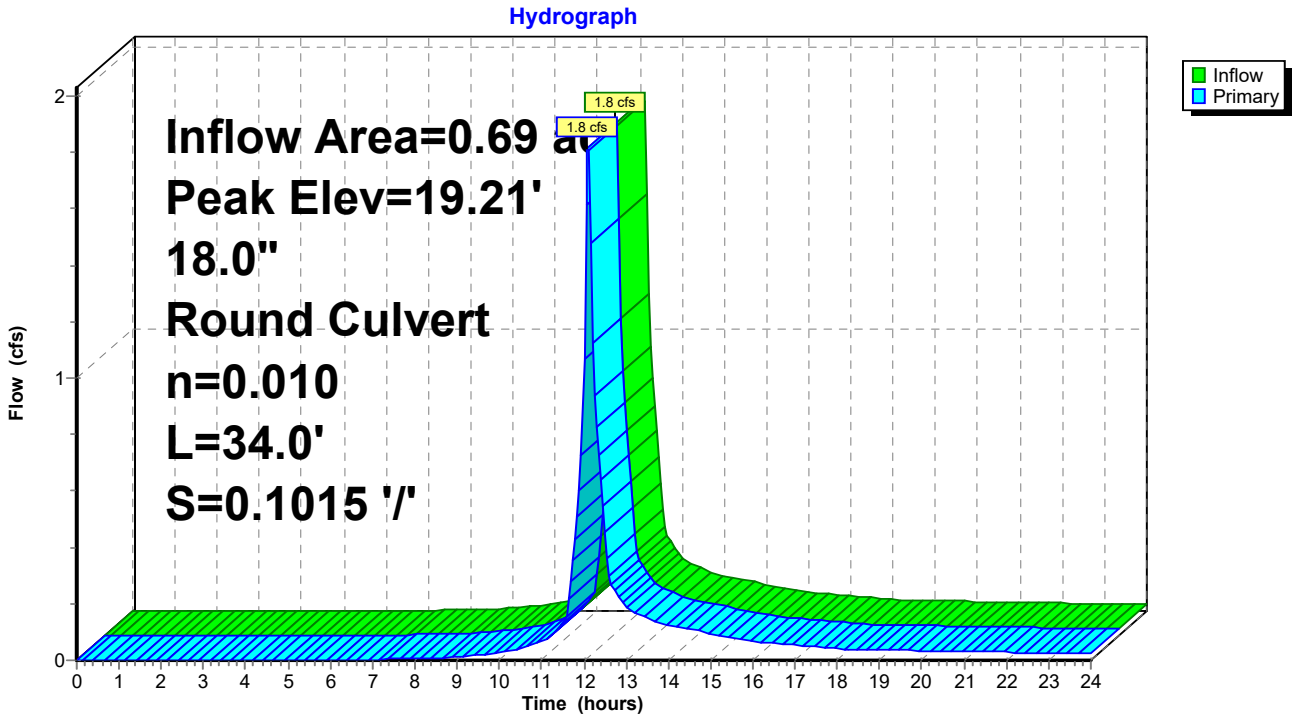
Inflow Area = 0.69 ac, 64.53% Impervious, Inflow Depth > 2.33" for 10-Year Storm event
Inflow = 1.8 cfs @ 12.09 hrs, Volume= 0.133 af
Outflow = 1.8 cfs @ 12.09 hrs, Volume= 0.133 af, Atten= 0%, Lag= 0.0 min
Primary = 1.8 cfs @ 12.09 hrs, Volume= 0.133 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 19.21' @ 12.15 hrs
Flood Elev= 22.87'

Device	Routing	Invert	Outlet Devices
#1	Primary	17.45'	**18.0" Round Culvert** L= 34.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 17.45' / 14.00' S= 0.1015 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=0.0 cfs @ 12.09 hrs HW=18.88' TW=19.13' (Dynamic Tailwater)
1=Culvert (Controls 0.0 cfs)

Pond 4P: CB4



Summary for Pond 5P: CB5

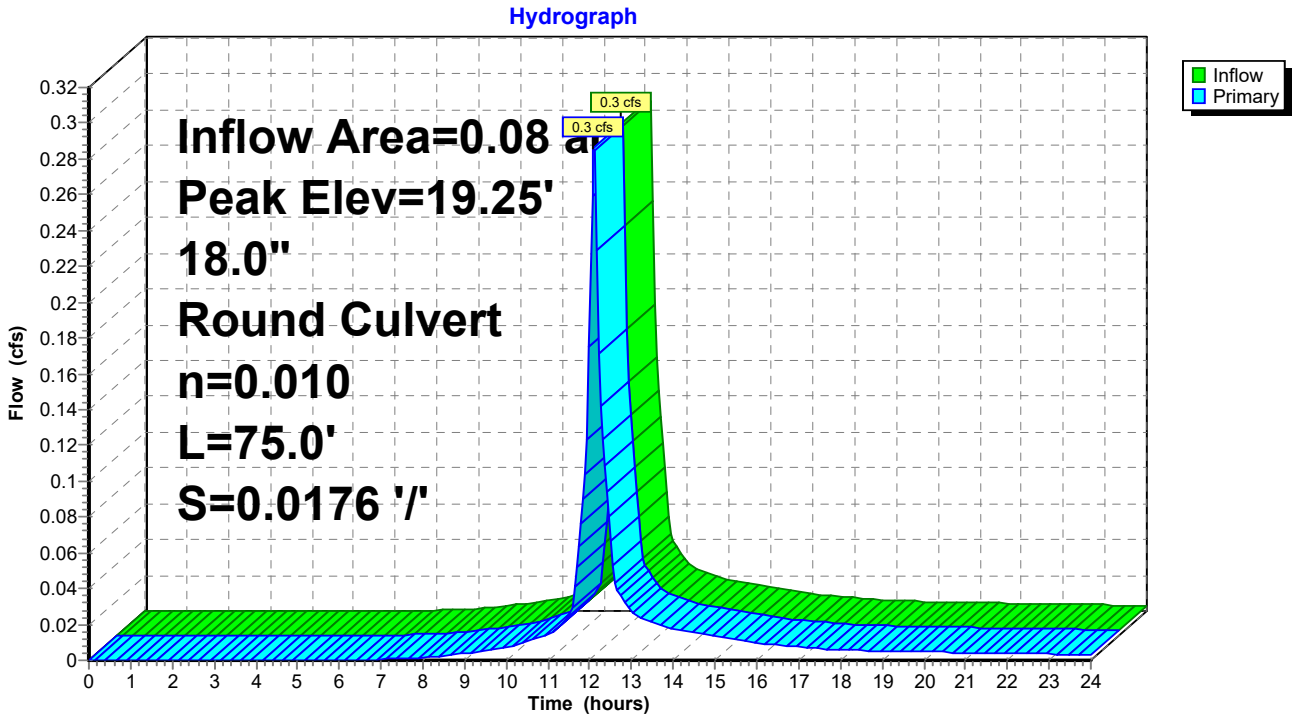
Inflow Area = 0.08 ac, 77.31% Impervious, Inflow Depth > 3.00" for 10-Year Storm event
Inflow = 0.3 cfs @ 12.09 hrs, Volume= 0.021 af
Outflow = 0.3 cfs @ 12.09 hrs, Volume= 0.021 af, Atten= 0%, Lag= 0.0 min
Primary = 0.3 cfs @ 12.09 hrs, Volume= 0.021 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 19.25' @ 12.20 hrs
Flood Elev= 22.83'

Device	Routing	Invert	Outlet Devices
#1	Primary	18.87'	**18.0" Round Culvert** L= 75.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 18.87' / 17.55' S= 0.0176 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=0.2 cfs @ 12.09 hrs HW=19.13' TW=18.85' (Dynamic Tailwater)
1=Culvert (Outlet Controls 0.2 cfs @ 1.79 fps)

Pond 5P: CB5



Summary for Pond 6P: CB6

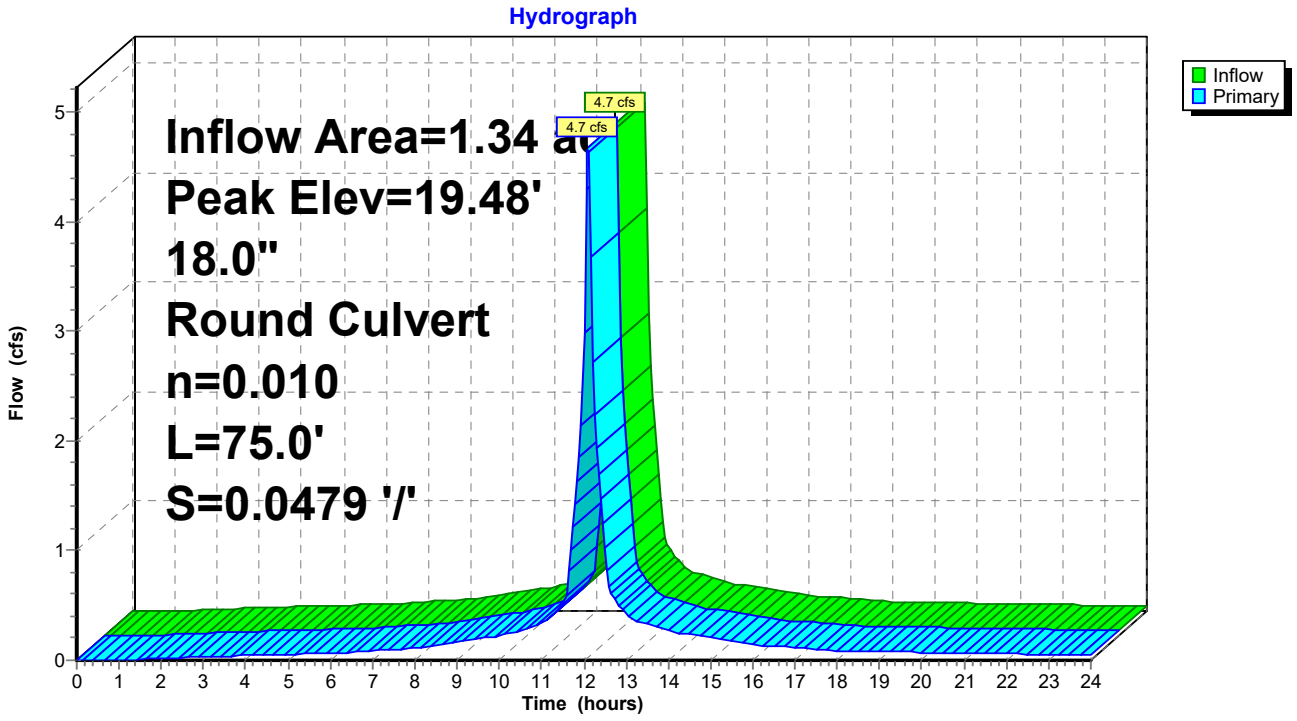
Inflow Area = 1.34 ac, 82.48% Impervious, Inflow Depth > 3.52" for 10-Year Storm event
Inflow = 4.7 cfs @ 12.09 hrs, Volume= 0.392 af
Outflow = 4.7 cfs @ 12.09 hrs, Volume= 0.392 af, Atten= 0%, Lag= 0.0 min
Primary = 4.7 cfs @ 12.09 hrs, Volume= 0.392 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 19.48' @ 12.14 hrs
Flood Elev= 22.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	17.59'	**18.0" Round Culvert** L= 75.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 17.59' / 14.00' S= 0.0479 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=2.5 cfs @ 12.09 hrs HW=19.23' TW=19.09' (Dynamic Tailwater)
1=Culvert (Inlet Controls 2.5 cfs @ 1.42 fps)

Pond 6P: CB6



Summary for Pond 7P: CB7

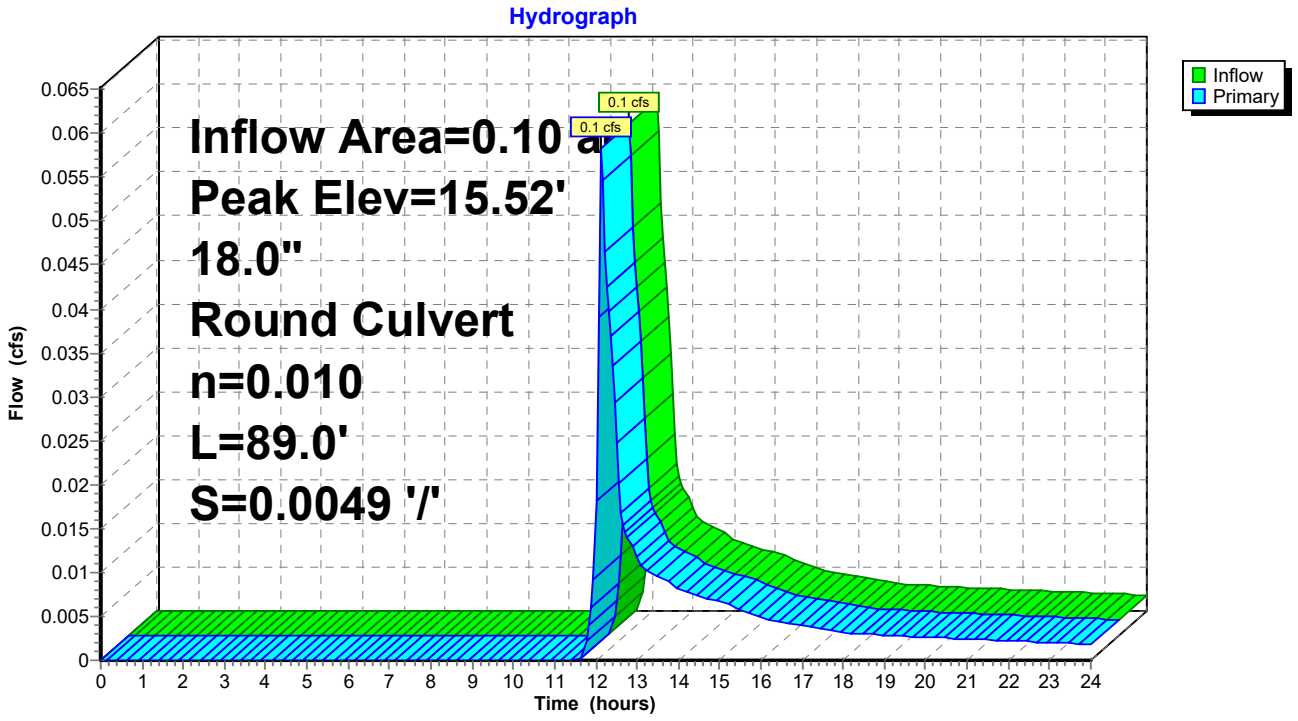
Inflow Area = 0.10 ac, 24.06% Impervious, Inflow Depth > 0.71" for 10-Year Storm event
Inflow = 0.1 cfs @ 12.12 hrs, Volume= 0.006 af
Outflow = 0.1 cfs @ 12.12 hrs, Volume= 0.006 af, Atten= 0%, Lag= 0.0 min
Primary = 0.1 cfs @ 12.12 hrs, Volume= 0.006 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 15.52' @ 12.12 hrs
Flood Elev= 24.75'

Device	Routing	Invert	Outlet Devices
#1	Primary	15.40'	**18.0" Round Culvert** L= 89.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 15.40' / 14.96' S= 0.0049 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=0.1 cfs @ 12.12 hrs HW=15.51' TW=14.99' (Dynamic Tailwater)
1=Culvert (Inlet Controls 0.1 cfs @ 0.91 fps)

Pond 7P: CB7



Summary for Pond 8P: CB8

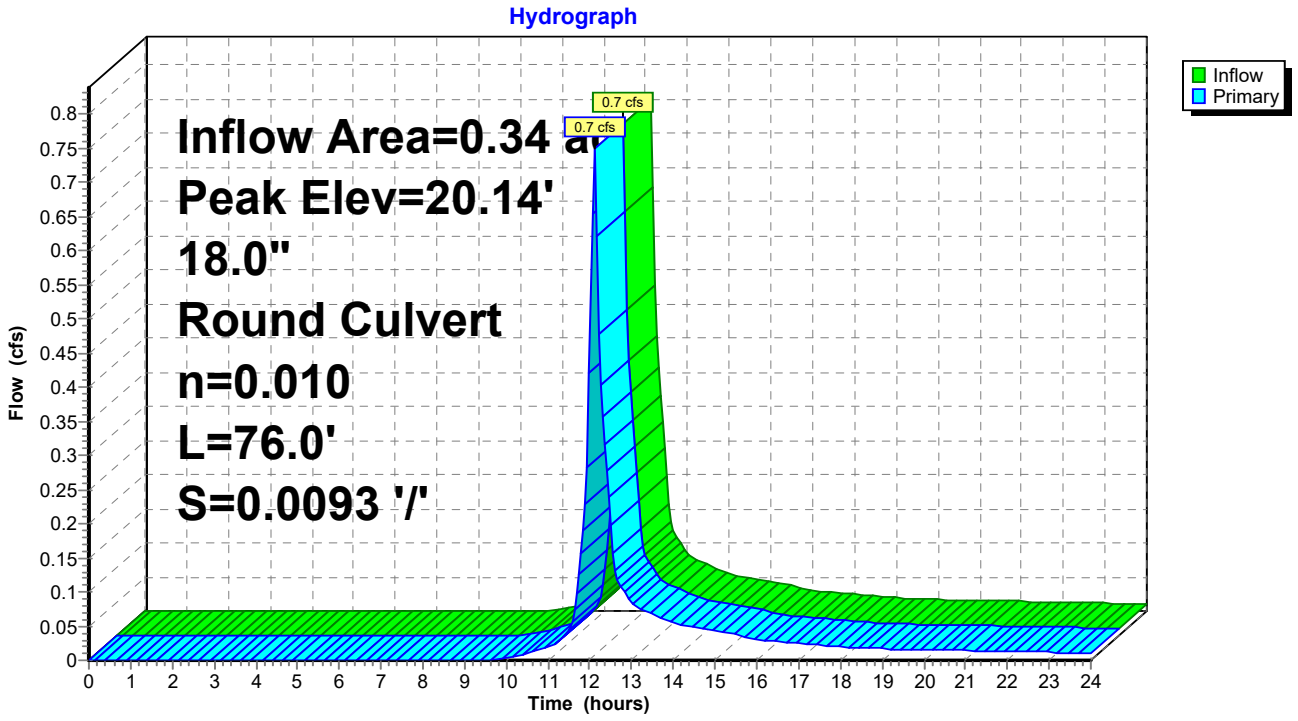
Inflow Area = 0.34 ac, 57.10% Impervious, Inflow Depth > 1.94" for 10-Year Storm event
Inflow = 0.7 cfs @ 12.10 hrs, Volume= 0.055 af
Outflow = 0.7 cfs @ 12.10 hrs, Volume= 0.055 af, Atten= 0%, Lag= 0.0 min
Primary = 0.7 cfs @ 12.10 hrs, Volume= 0.055 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 20.14' @ 12.10 hrs
Flood Elev= 23.60'

Device	Routing	Invert	Outlet Devices
#1	Primary	19.71'	**18.0" Round Culvert** L= 76.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 19.71' / 19.00' S= 0.0093 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=0.7 cfs @ 12.10 hrs HW=20.14' TW=19.44' (Dynamic Tailwater)
1=Culvert (Inlet Controls 0.7 cfs @ 1.76 fps)

Pond 8P: CB8



Summary for Pond 9P: DMH1

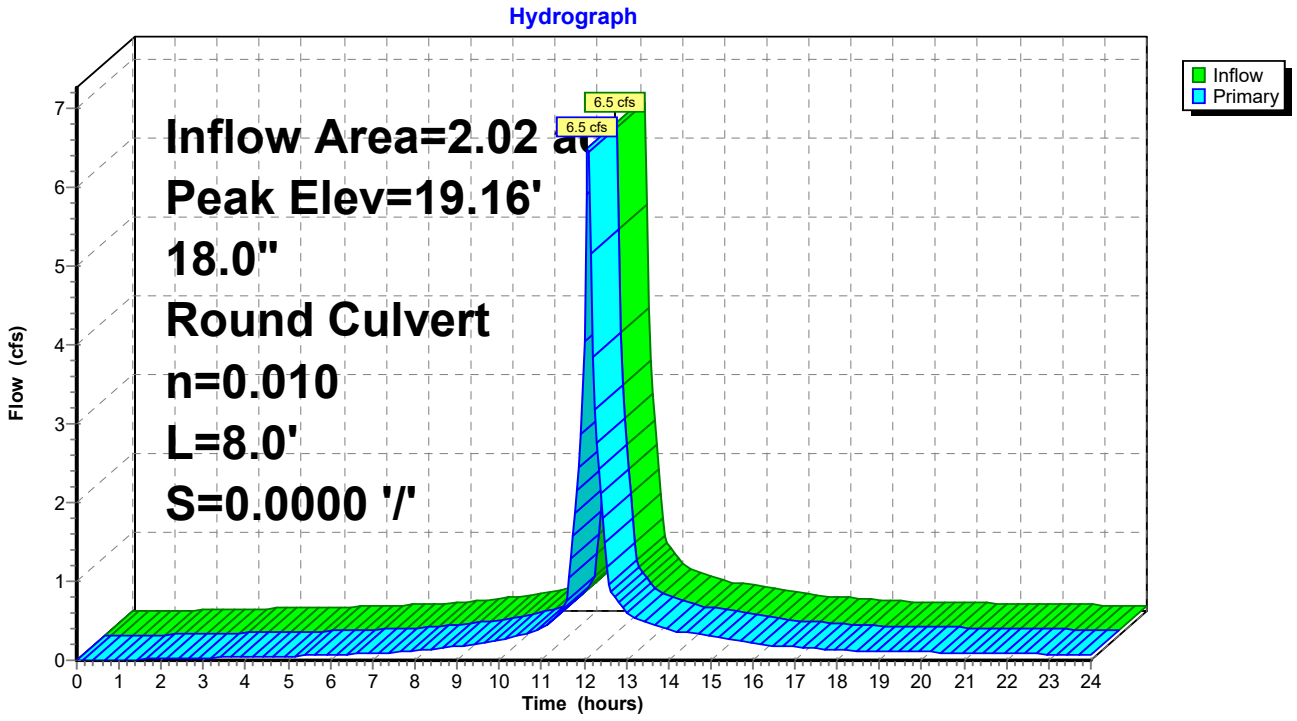
Inflow Area = 2.02 ac, 76.40% Impervious, Inflow Depth > 3.12" for 10-Year Storm event
Inflow = 6.5 cfs @ 12.09 hrs, Volume= 0.526 af
Outflow = 6.5 cfs @ 12.09 hrs, Volume= 0.526 af, Atten= 0%, Lag= 0.0 min
Primary = 6.5 cfs @ 12.09 hrs, Volume= 0.526 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 19.16' @ 12.10 hrs
Flood Elev= 22.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	13.58'	**18.0" Round Culvert** L= 8.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 13.58' / 13.58' S= 0.0000 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=6.0 cfs @ 12.09 hrs HW=19.10' TW=18.31' (Dynamic Tailwater)
1=Culvert (Inlet Controls 6.0 cfs @ 3.38 fps)

Pond 9P: DMH1



Summary for Pond 13P: CMP Peak Detention

Inflow	=	6.4 cfs @	12.10 hrs, Volume=	0.380 af
Outflow	=	3.5 cfs @	12.24 hrs, Volume=	0.379 af, Atten= 46%, Lag= 8.2 min
Primary	=	3.5 cfs @	12.24 hrs, Volume=	0.379 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 17.32' @ 12.24 hrs Surf.Area= 1,224 sf Storage= 3,616 cf
Flood Elev= 20.87' Surf.Area= 1,224 sf Storage= 4,269 cf

Plug-Flow detention time= 13.7 min calculated for 0.378 af (100% of inflow)
Center-of-Mass det. time= 13.2 min (815.4 - 802.2)

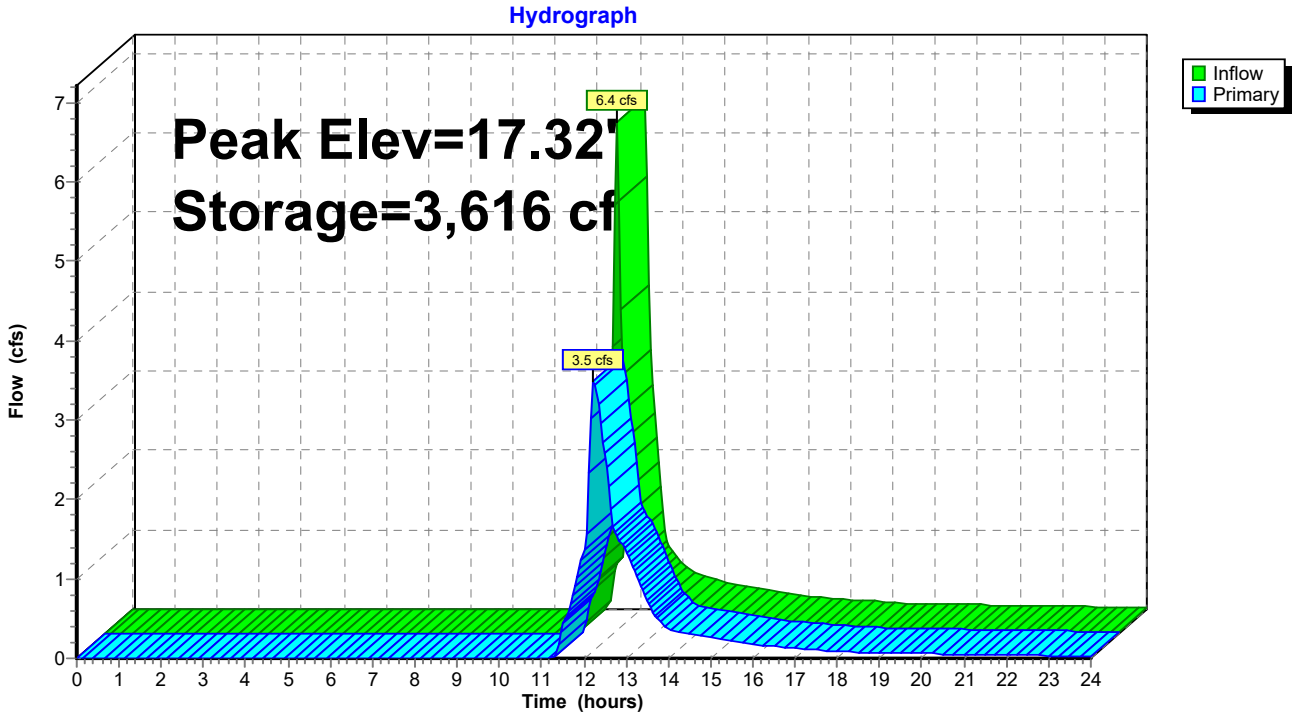
Volume	Invert	Avail.Storage	Storage Description
#1A	12.58'	0 cf	**8.00'W x 153.00'L x 6.00'H Field A** 7,344 cf Overall - 4,268 cf Embedded = 3,076 cf x 0.0% Voids
#2A	12.58'	4,268 cf	**CMP Round 72** x 7 Inside #1 Effective Size= 72.0"W x 72.0"H => 28.26 sf x 20.00'L = 565.2 cf Overall Size= 72.0"W x 72.0"H x 20.00'L Row Length Adjustment= +11.00' x 28.26 sf x 1 rows
		4,268 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	12.58'	**18.0" Round Culvert** L= 20.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 12.58' / 12.20' S= 0.0190 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf
#2	Device 1	12.58'	**6.1" Vert. Orifice/Grate** C= 0.600
#3	Device 1	15.58'	**5.7" Vert. Orifice/Grate** C= 0.600
#4	Device 1	16.66'	**4.8" Vert. Orifice/Grate** C= 0.600
#5	Device 1	17.92'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 3.21 3.27 3.33 3.39 3.45 3.51 3.57 3.63 3.69 3.75 3.81 3.87 Width (feet) 3.75 3.60 3.43 3.26 3.06 2.85 2.62 2.35 2.05 1.68 1.19 0.00

Primary OutFlow Max=3.5 cfs @ 12.24 hrs HW=17.30' TW=13.01' (Dynamic Tailwater)
- **1=Culvert** (Passes 3.5 cfs of 17.0 cfs potential flow)
  - **2=Orifice/Grate** (Orifice Controls 2.0 cfs @ 9.97 fps)
  - **3=Orifice/Grate** (Orifice Controls 1.0 cfs @ 5.87 fps)
  - **4=Orifice/Grate** (Orifice Controls 0.4 cfs @ 3.20 fps)
  - **5=Custom Weir/Orifice** (Controls 0.0 cfs)

Pond 13P: CMP Peak Detention



Summary for Pond 14P: CONTECH WQv CMP Det & SF System

Inflow Area = 2.02 ac, 76.40% Impervious, Inflow Depth > 3.12" for 10-Year Storm event
Inflow = 6.5 cfs @ 12.09 hrs, Volume= 0.526 af
Outflow = 6.5 cfs @ 12.10 hrs, Volume= 0.446 af, Atten= 0%, Lag= 0.7 min
Primary = 0.0 cfs @ 12.08 hrs, Volume= 0.066 af
Secondary = 6.4 cfs @ 12.10 hrs, Volume= 0.380 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Starting Elev= 13.58' Surf.Area= 1,313 sf Storage= 186 cf
Peak Elev= 18.33' @ 12.10 hrs Surf.Area= 1,313 sf Storage= 4,043 cf (3,857 cf above start)
Flood Elev= 20.87' Surf.Area= 1,313 sf Storage= 4,110 cf (3,924 cf above start)

Plug-Flow detention time= 118.8 min calculated for 0.442 af (84% of inflow)
Center-of-Mass det. time= 44.0 min (817.9 - 773.9)

Volume	Invert	Avail.Storage	Storage Description
#1A	13.08'	0 cf	**7.50'W x 175.00'L x 5.50'H Field A** 7,219 cf Overall - 4,108 cf Embedded = 3,110 cf x 0.0% Voids
#2A	13.08'	4,108 cf	**CMP Round 66** x 8 Inside #1 Effective Size= 66.0"W x 66.0"H => 23.75 sf x 20.00'L = 475.0 cf Overall Size= 66.0"W x 66.0"H x 20.00'L Row Length Adjustment= +13.00' x 23.75 sf x 1 rows
		4,108 cf	Total Available Storage

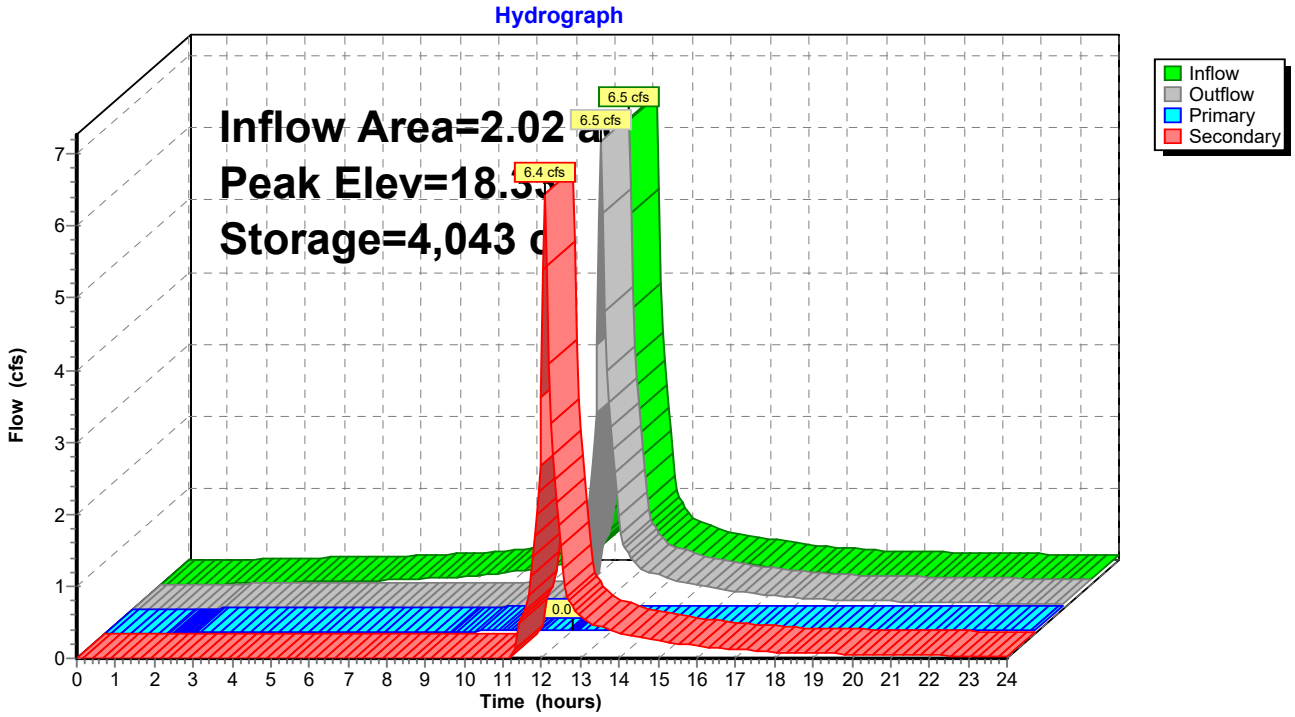
Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Device 2	13.58'	**12.0" Round Culvert** L= 3.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 13.58' / 13.56' S= 0.0067 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Primary	12.58'	**Tube/Siphon/Float Valve X 7.00** Starts@15.33' Breaks@13.25' 0.336" Diameter, C= 0.600, 0.263" Trickle Diameter
#3	Secondary	17.65'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 2.44 2.49 2.54 2.60 2.66 2.71 2.76 2.82 2.87 2.93 2.99 3.04 3.09 3.15 3.20 3.26 3.32 3.37 Width (feet) 4.13 4.03 3.93 3.82 3.70 3.57 3.44 3.30 3.15 2.98 2.81 2.61 2.40 2.16 1.88 1.54 1.09 0.00

Primary OutFlow Max=0.0 cfs @ 12.08 hrs HW=18.30' TW=12.76' (Dynamic Tailwater)
└─**2=Tube/Siphon/Float Valve** (Orifice Controls 0.0 cfs @ 11.34 fps)
└─**1=Culvert** (Passes 0.0 cfs of 7.8 cfs potential flow)

Secondary OutFlow Max=6.4 cfs @ 12.10 hrs HW=18.33' TW=16.23' (Dynamic Tailwater)
└─**3=Custom Weir/Orifice** (Weir Controls 6.4 cfs @ 2.84 fps)

Pond 14P: CONTECH WQv CMP Det & SF System



Summary for Pond 17P: DMH2

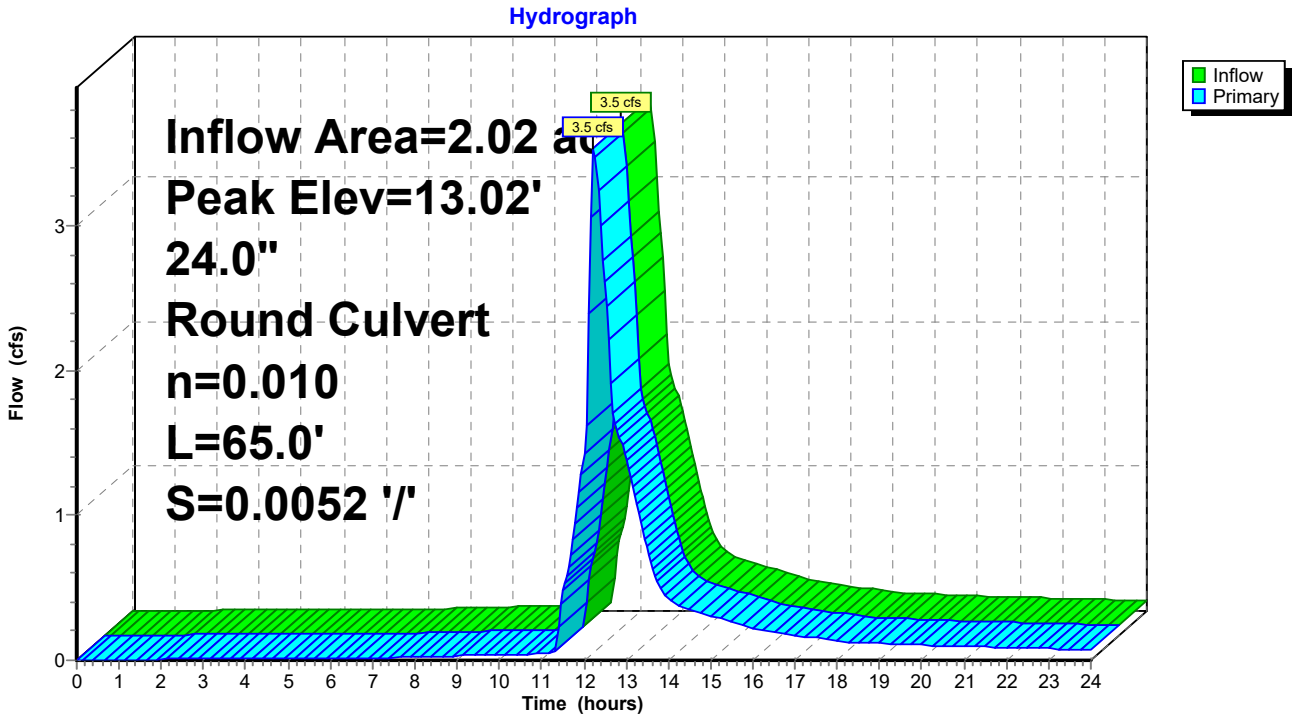
Inflow Area = 2.02 ac, 76.40% Impervious, Inflow Depth > 2.64" for 10-Year Storm event
Inflow = 3.5 cfs @ 12.24 hrs, Volume= 0.446 af
Outflow = 3.5 cfs @ 12.24 hrs, Volume= 0.446 af, Atten= 0%, Lag= 0.0 min
Primary = 3.5 cfs @ 12.24 hrs, Volume= 0.446 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 13.02' @ 12.26 hrs
Flood Elev= 21.65'

Device	Routing	Invert	Outlet Devices
#1	Primary	12.07'	**24.0" Round Culvert** L= 65.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 12.07' / 11.73' S= 0.0052 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=3.5 cfs @ 12.24 hrs HW=13.01' TW=12.53' (Dynamic Tailwater)
1=Culvert (Outlet Controls 3.5 cfs @ 3.47 fps)

Pond 17P: DMH2



Summary for Pond 18P: DMH3

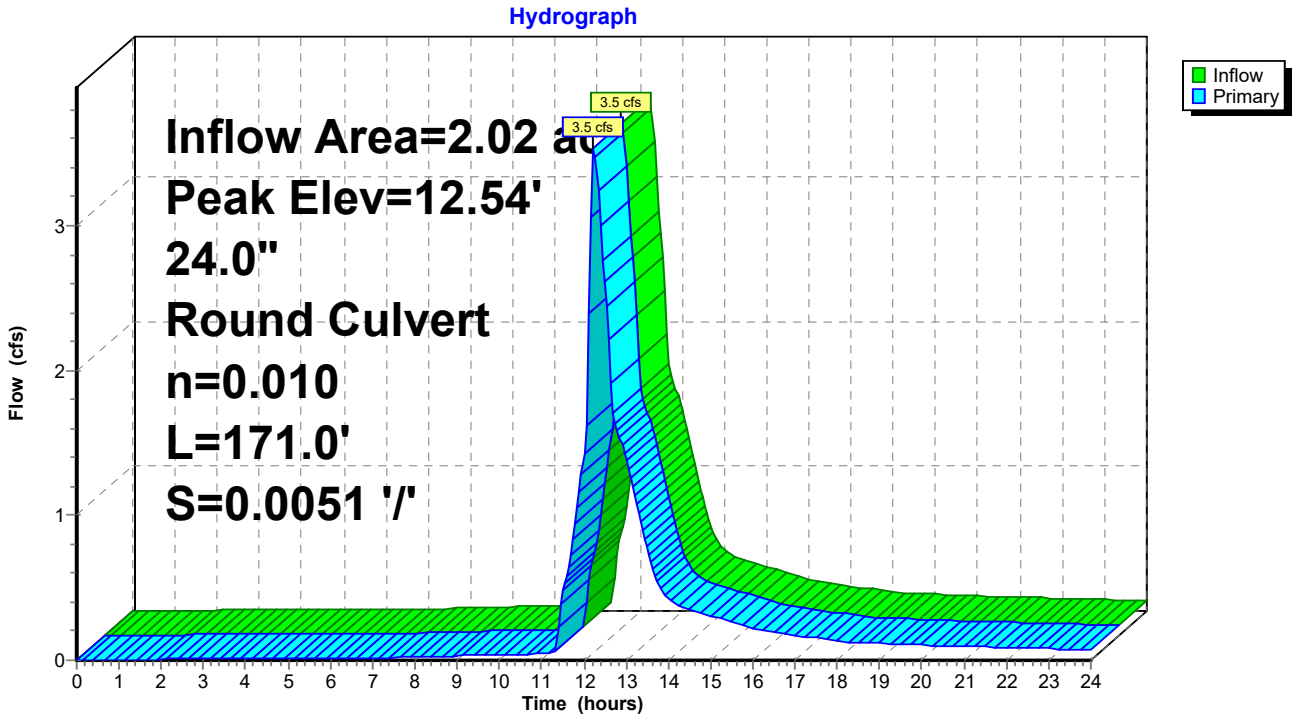
Inflow Area = 2.02 ac, 76.40% Impervious, Inflow Depth > 2.64" for 10-Year Storm event
Inflow = 3.5 cfs @ 12.24 hrs, Volume= 0.446 af
Outflow = 3.5 cfs @ 12.24 hrs, Volume= 0.446 af, Atten= 0%, Lag= 0.0 min
Primary = 3.5 cfs @ 12.24 hrs, Volume= 0.446 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 12.54' @ 12.24 hrs
Flood Elev= 20.85'

Device	Routing	Invert	Outlet Devices
#1	Primary	11.63'	**24.0" Round Culvert** L= 171.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 11.63' / 10.75' S= 0.0051 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=3.5 cfs @ 12.24 hrs HW=12.53' TW=0.00' (Dynamic Tailwater)
1=Culvert (Inlet Controls 3.5 cfs @ 2.56 fps)

Pond 18P: DMH3



Summary for Pond 22P: Ex DMH3

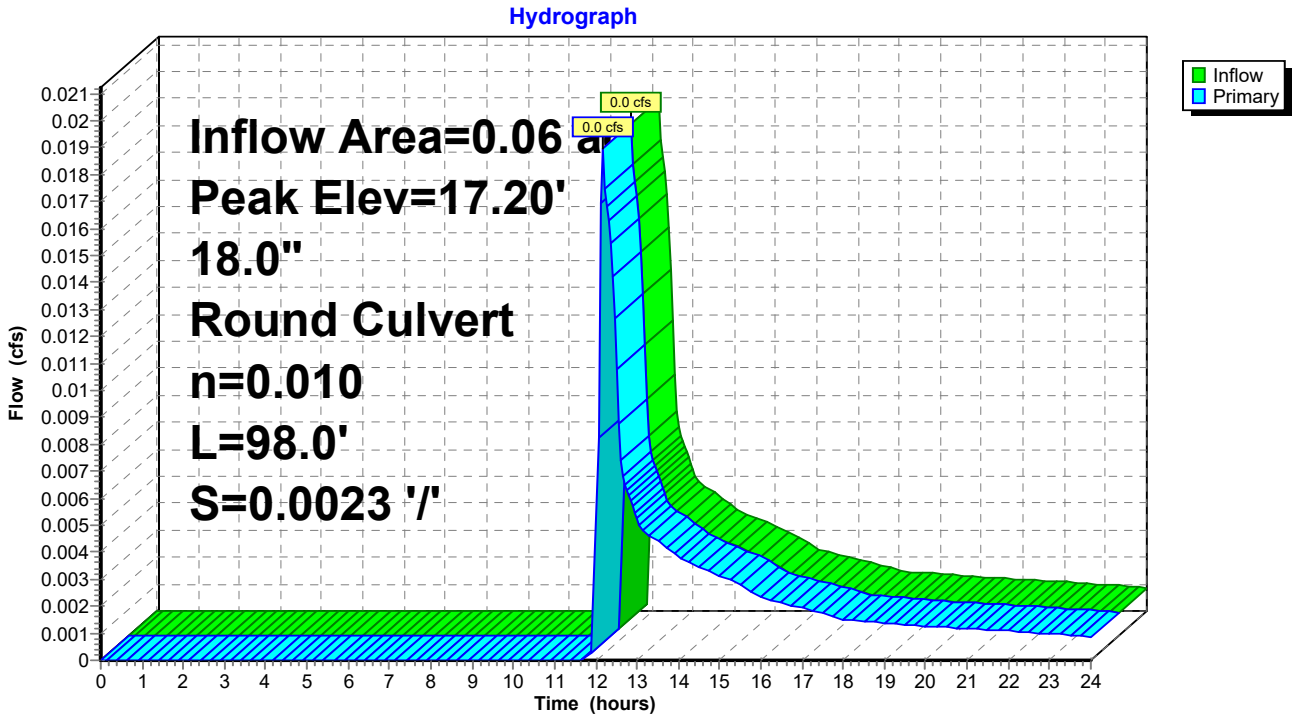
Inflow Area = 0.06 ac, 17.99% Impervious, Inflow Depth > 0.54" for 10-Year Storm event
Inflow = 0.0 cfs @ 12.15 hrs, Volume= 0.003 af
Outflow = 0.0 cfs @ 12.15 hrs, Volume= 0.003 af, Atten= 0%, Lag= 0.0 min
Primary = 0.0 cfs @ 12.15 hrs, Volume= 0.003 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 17.20' @ 12.15 hrs
Flood Elev= 24.92'

Device	Routing	Invert	Outlet Devices
#1	Primary	17.12'	**18.0" Round Culvert** L= 98.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 17.12' / 16.89' S= 0.0023 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=0.0 cfs @ 12.15 hrs HW=17.20' TW=16.82' (Dynamic Tailwater)
1=Culvert (Barrel Controls 0.0 cfs @ 0.82 fps)

Pond 22P: Ex DMH3



Summary for Pond 23P: Ex CB3

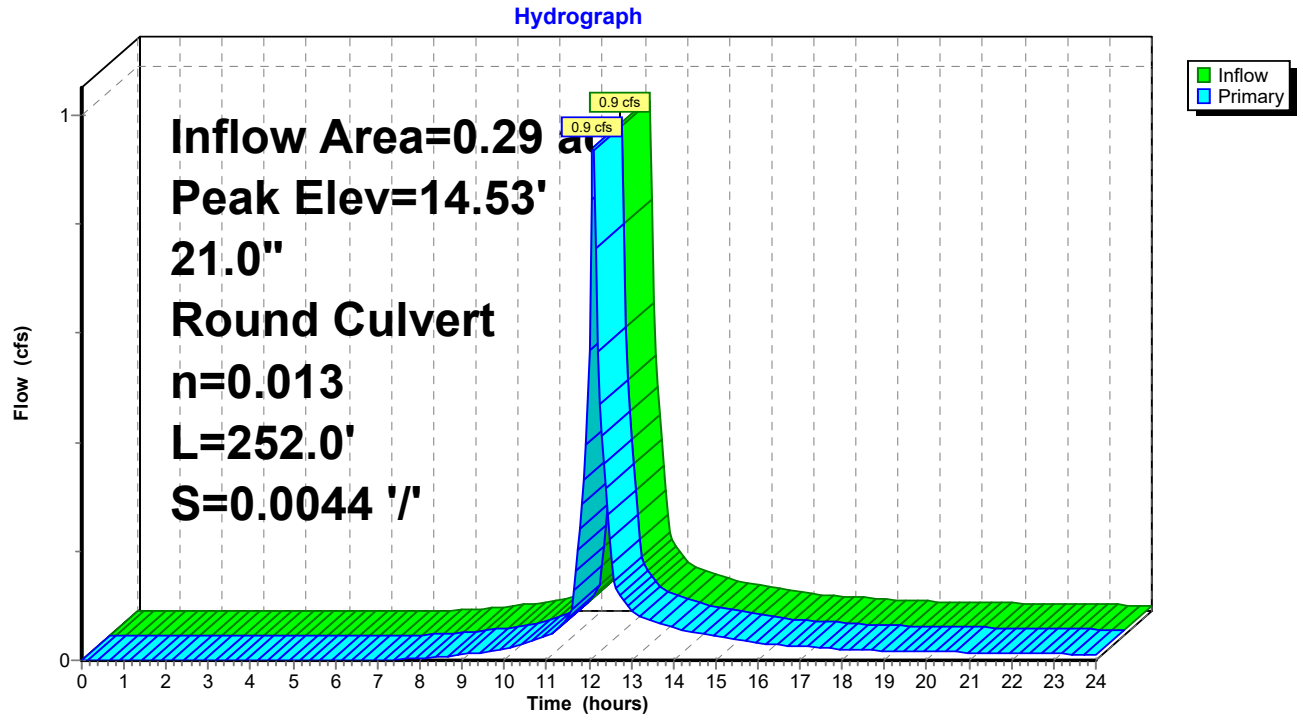
Inflow Area = 0.29 ac, 73.97% Impervious, Inflow Depth > 2.81" for 10-Year Storm event
Inflow = 0.9 cfs @ 12.09 hrs, Volume= 0.068 af
Outflow = 0.9 cfs @ 12.09 hrs, Volume= 0.068 af, Atten= 0%, Lag= 0.0 min
Primary = 0.9 cfs @ 12.09 hrs, Volume= 0.068 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 14.53' @ 12.09 hrs
Flood Elev= 23.60'

Device	Routing	Invert	Outlet Devices
#1	Primary	14.05'	**21.0" Round Culvert** L= 252.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 14.05' / 12.94' S= 0.0044 '/' Cc= 0.900 n= 0.013 Cast iron, coated, Flow Area= 2.41 sf

Primary OutFlow Max=0.9 cfs @ 12.09 hrs HW=14.53' TW=0.00' (Dynamic Tailwater)
1=Culvert (Barrel Controls 0.9 cfs @ 2.61 fps)

Pond 23P: Ex CB3



Summary for Pond 24P: Ex DMH2

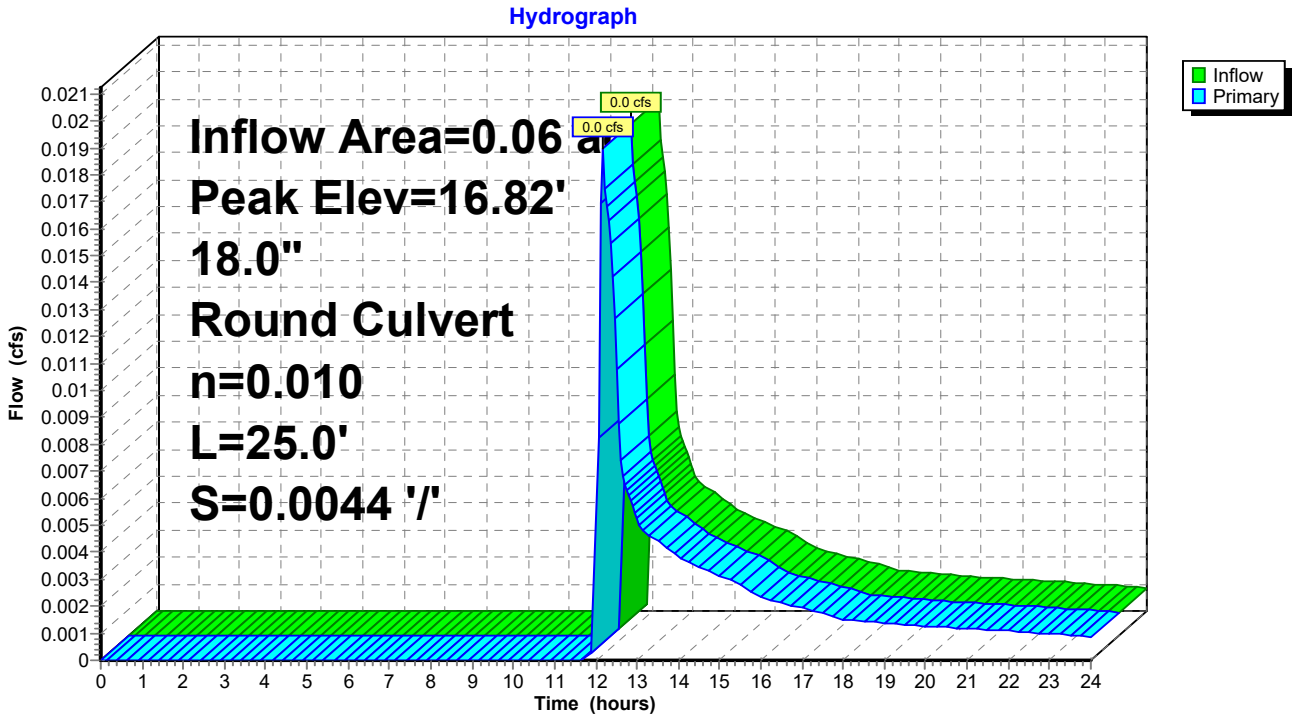
Inflow Area = 0.06 ac, 17.99% Impervious, Inflow Depth > 0.54" for 10-Year Storm event
Inflow = 0.0 cfs @ 12.15 hrs, Volume= 0.003 af
Outflow = 0.0 cfs @ 12.15 hrs, Volume= 0.003 af, Atten= 0%, Lag= 0.0 min
Primary = 0.0 cfs @ 12.15 hrs, Volume= 0.003 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 16.82' @ 12.15 hrs
Flood Elev= 25.38'

Device	Routing	Invert	Outlet Devices
#1	Primary	16.75'	**18.0" Round Culvert** L= 25.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 16.75' / 16.64' S= 0.0044 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=0.0 cfs @ 12.15 hrs HW=16.82' TW=16.61' (Dynamic Tailwater)
1=Culvert (Barrel Controls 0.0 cfs @ 0.98 fps)

Pond 24P: Ex DMH2



Summary for Pond 26P: DMH5

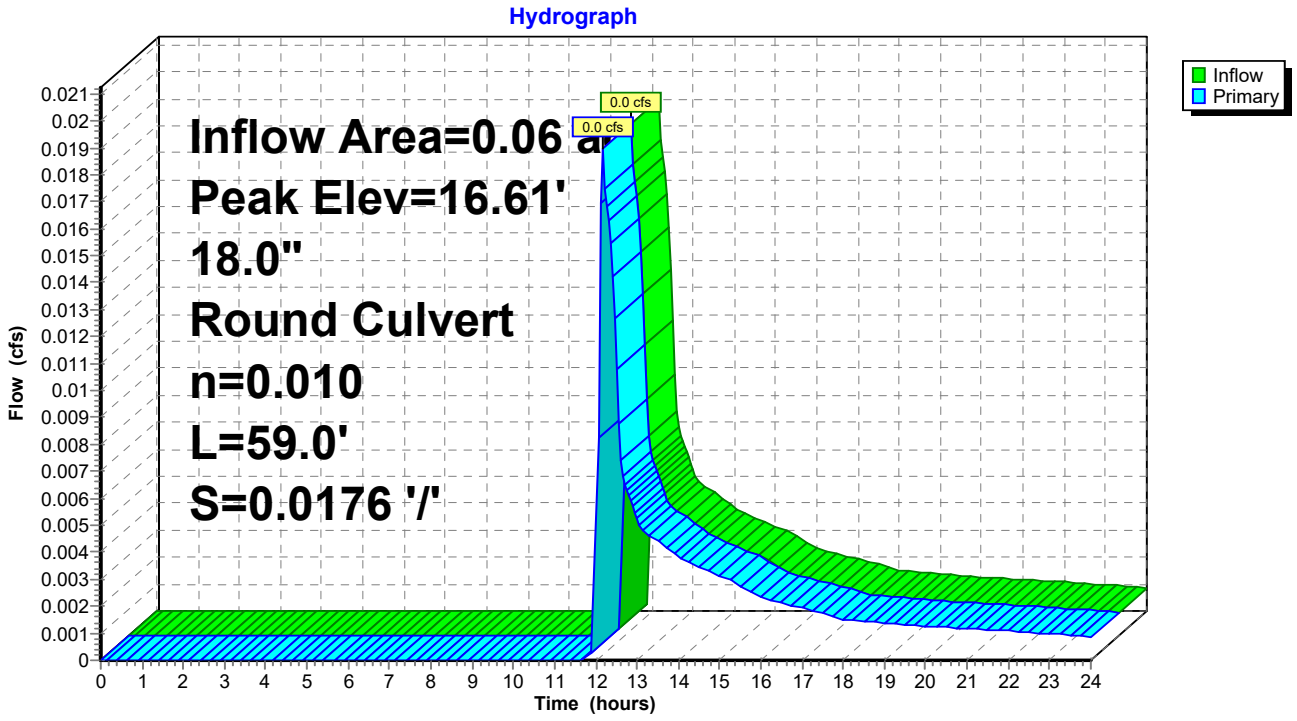
Inflow Area = 0.06 ac, 17.99% Impervious, Inflow Depth > 0.54" for 10-Year Storm event
Inflow = 0.0 cfs @ 12.15 hrs, Volume= 0.003 af
Outflow = 0.0 cfs @ 12.15 hrs, Volume= 0.003 af, Atten= 0%, Lag= 0.0 min
Primary = 0.0 cfs @ 12.15 hrs, Volume= 0.003 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 16.61' @ 12.15 hrs
Flood Elev= 25.90'

Device	Routing	Invert	Outlet Devices
#1	Primary	16.54'	**18.0" Round Culvert** L= 59.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 16.54' / 15.50' S= 0.0176 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=0.0 cfs @ 12.15 hrs HW=16.61' TW=15.51' (Dynamic Tailwater)
1=Culvert (Inlet Controls 0.0 cfs @ 0.69 fps)

Pond 26P: DMH5



Summary for Pond 27P: DMH10

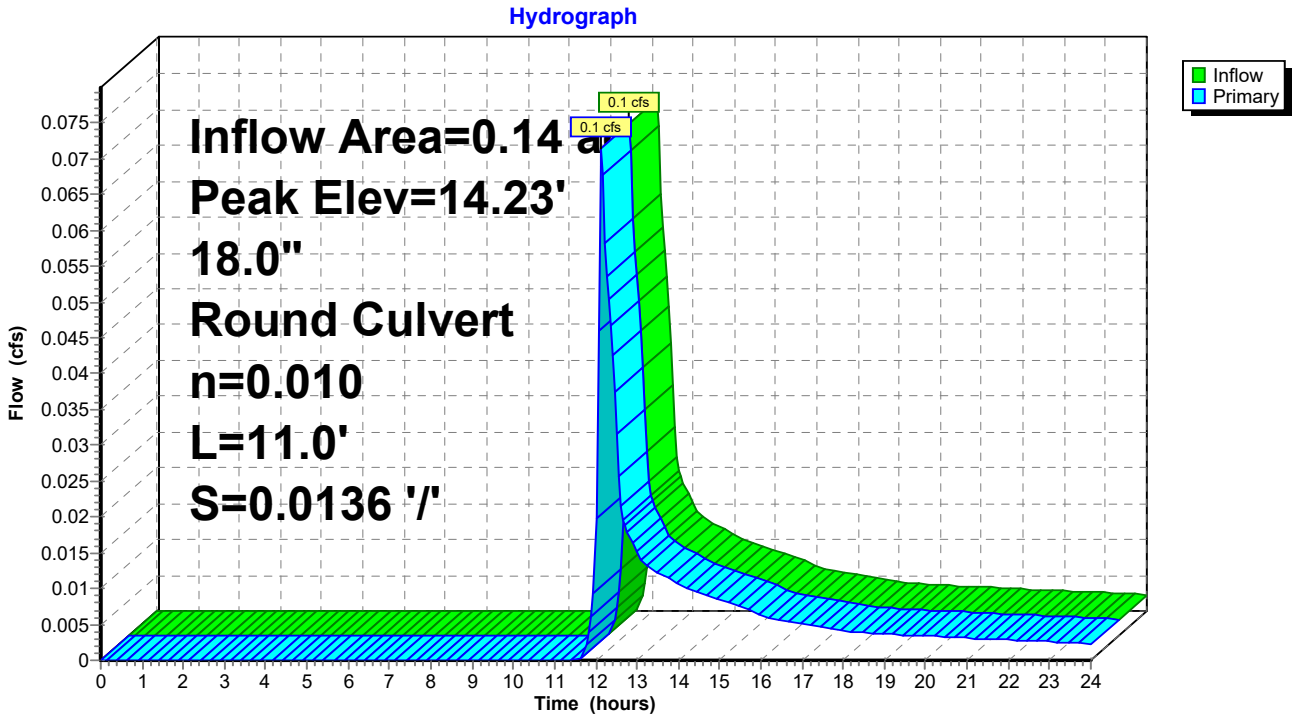
Inflow Area = 0.14 ac, 23.10% Impervious, Inflow Depth > 0.68" for 10-Year Storm event
Inflow = 0.1 cfs @ 12.12 hrs, Volume= 0.008 af
Outflow = 0.1 cfs @ 12.12 hrs, Volume= 0.008 af, Atten= 0%, Lag= 0.0 min
Primary = 0.1 cfs @ 12.12 hrs, Volume= 0.008 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 14.23' @ 12.12 hrs
Flood Elev= 24.17'

Device	Routing	Invert	Outlet Devices
#1	Primary	14.10'	**18.0" Round Culvert** L= 11.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 14.10' / 13.95' S= 0.0136 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=0.1 cfs @ 12.12 hrs HW=14.23' TW=0.00' (Dynamic Tailwater)
1=Culvert (Inlet Controls 0.1 cfs @ 0.96 fps)

Pond 27P: DMH10



Summary for Pond 29P: Ex DMH4

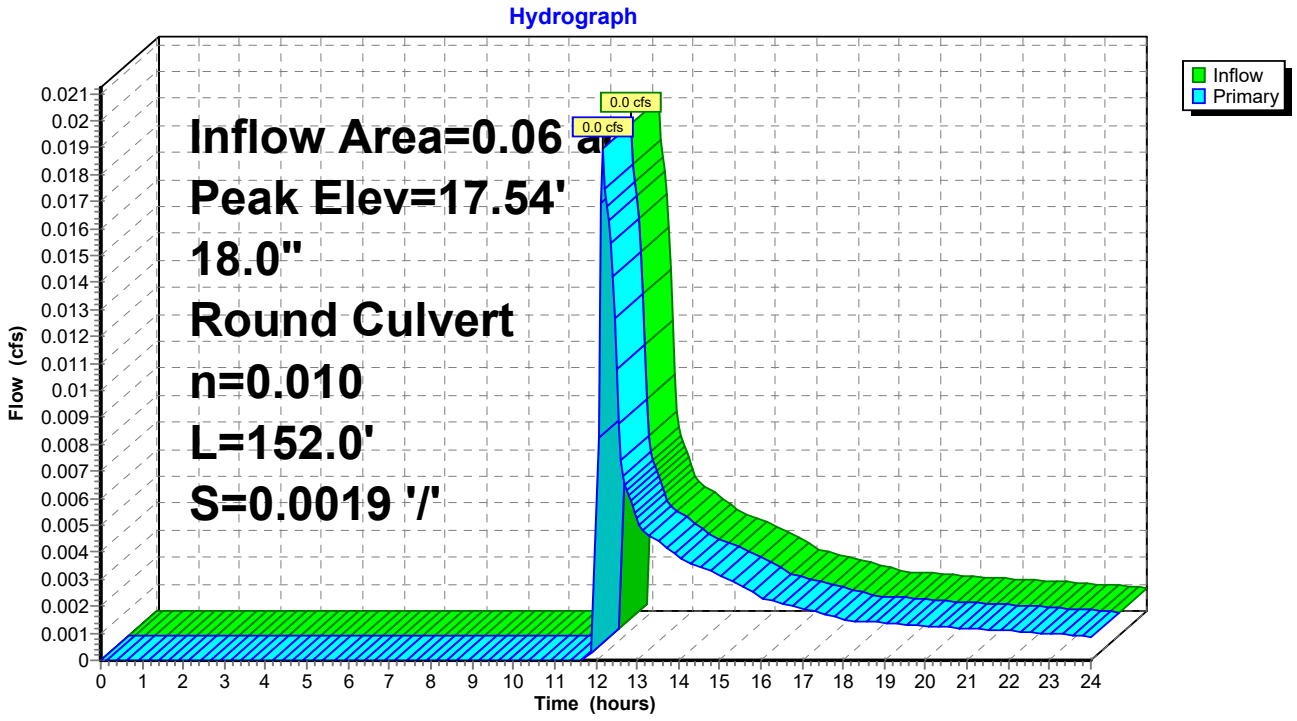
Inflow Area = 0.06 ac, 17.99% Impervious, Inflow Depth > 0.54" for 10-Year Storm event
Inflow = 0.0 cfs @ 12.15 hrs, Volume= 0.003 af
Outflow = 0.0 cfs @ 12.15 hrs, Volume= 0.003 af, Atten= 0%, Lag= 0.0 min
Primary = 0.0 cfs @ 12.15 hrs, Volume= 0.003 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 17.54' @ 12.15 hrs
Flood Elev= 23.44'

Device	Routing	Invert	Outlet Devices
#1	Primary	17.46'	**18.0" Round Culvert** L= 152.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 17.46' / 17.17' S= 0.0019 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=0.0 cfs @ 12.15 hrs HW=17.54' TW=17.20' (Dynamic Tailwater)
1=Culvert (Barrel Controls 0.0 cfs @ 0.77 fps)

Pond 29P: Ex DMH4

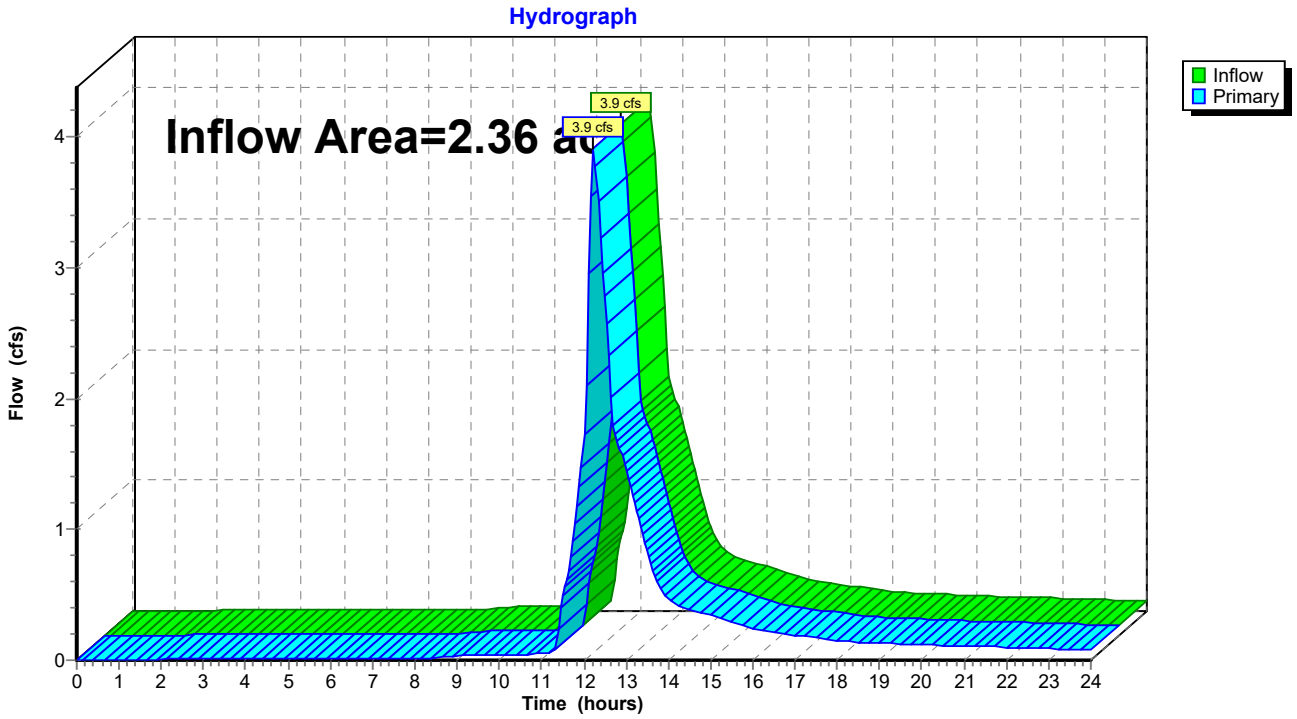


Summary for Link SP1: Forest Ave Storm Drain

Inflow Area = 2.36 ac, 72.31% Impervious, Inflow Depth > 2.48" for 10-Year Storm event
Inflow = 3.9 cfs @ 12.22 hrs, Volume= 0.489 af
Primary = 3.9 cfs @ 12.22 hrs, Volume= 0.489 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link SP1: Forest Ave Storm Drain

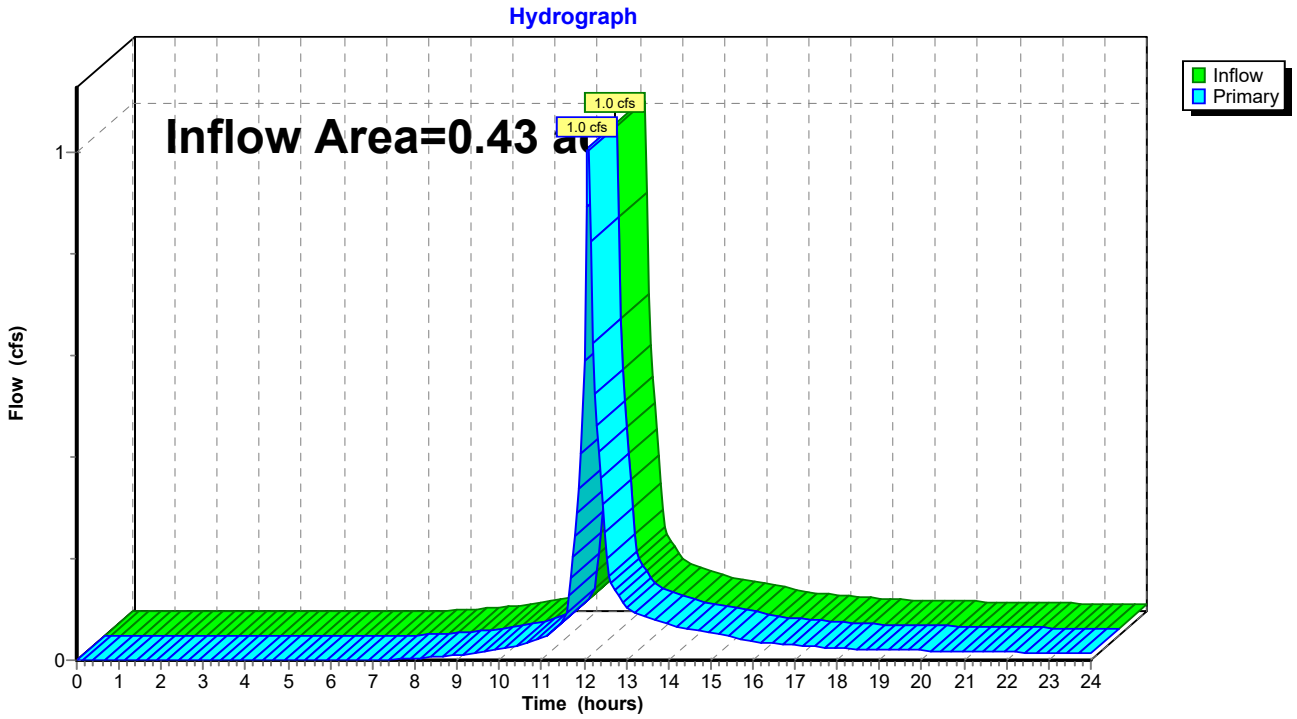


Summary for Link SP2: Combined Sewer

Inflow Area = 0.43 ac, 57.64% Impervious, Inflow Depth > 2.13" for 10-Year Storm event
Inflow = 1.0 cfs @ 12.09 hrs, Volume= 0.076 af
Primary = 1.0 cfs @ 12.09 hrs, Volume= 0.076 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link SP2: Combined Sewer



Summary for Subcatchment 1S:

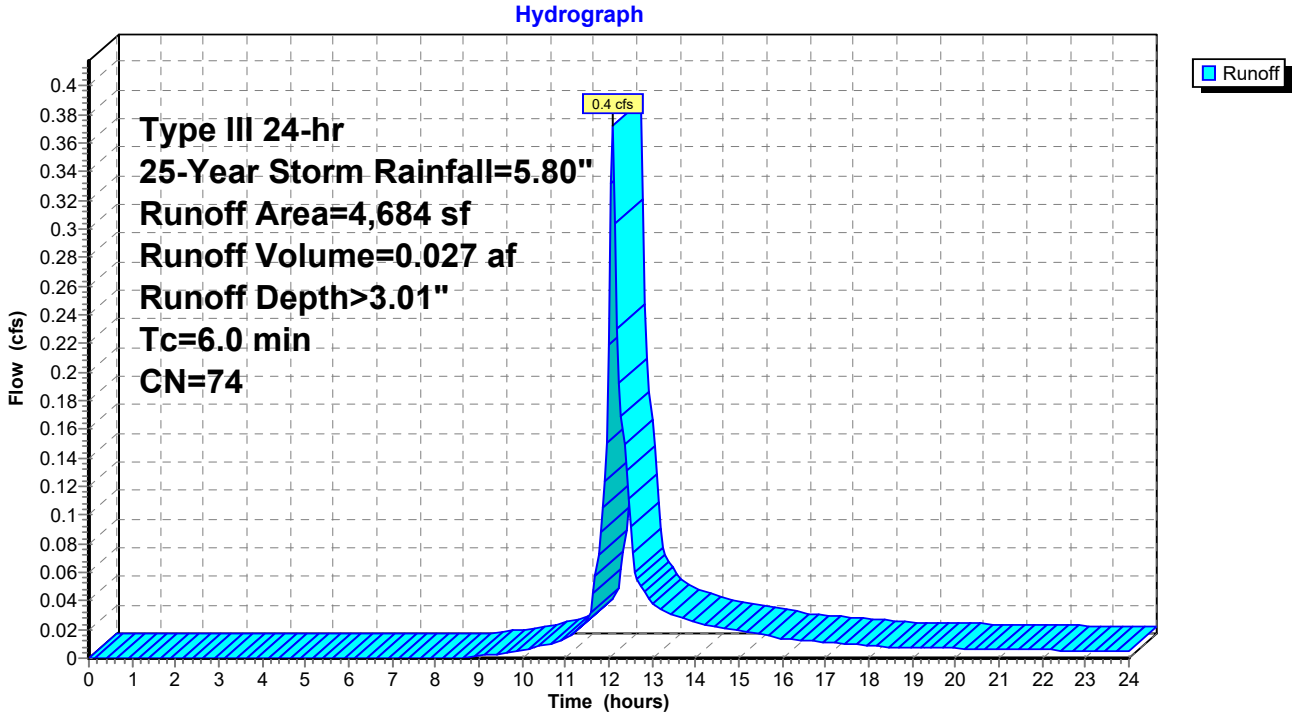
Runoff = 0.4 cfs @ 12.09 hrs, Volume= 0.027 af, Depth> 3.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	2,770	98	Impervious
	1,237	39	Grass cover, Good, HSG A
*	677	40	Porous Pavement
	4,684	74	Weighted Average
	1,914		40.86% Pervious Area
	2,770		59.14% Impervious Area

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

Subcatchment 1S:



Summary for Subcatchment 2S:

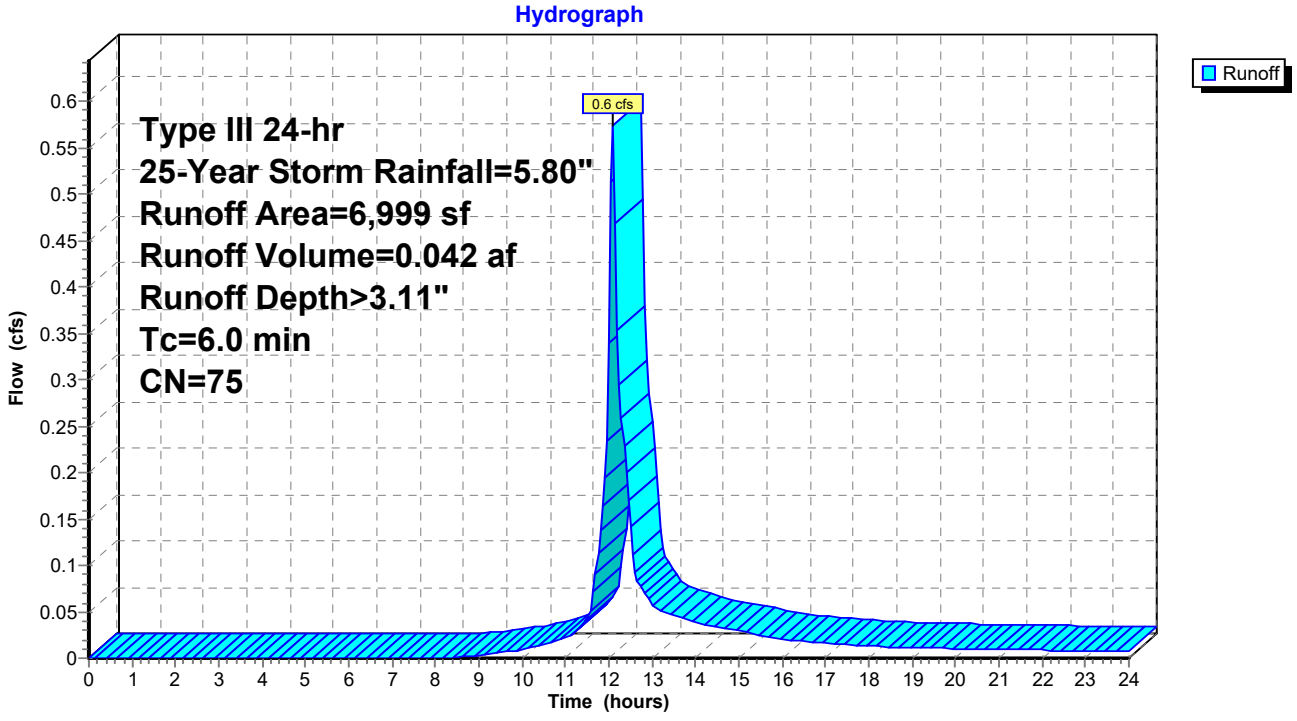
Runoff = 0.6 cfs @ 12.09 hrs, Volume= 0.042 af, Depth> 3.11"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	4,238	98	Impervious
	1,996	39	Grass cover, Good, HSG A
*	765	40	Porous Pavement
	6,999	75	Weighted Average
	2,761		39.45% Pervious Area
	4,238		60.55% Impervious Area

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

Subcatchment 2S:



Summary for Subcatchment 3S:

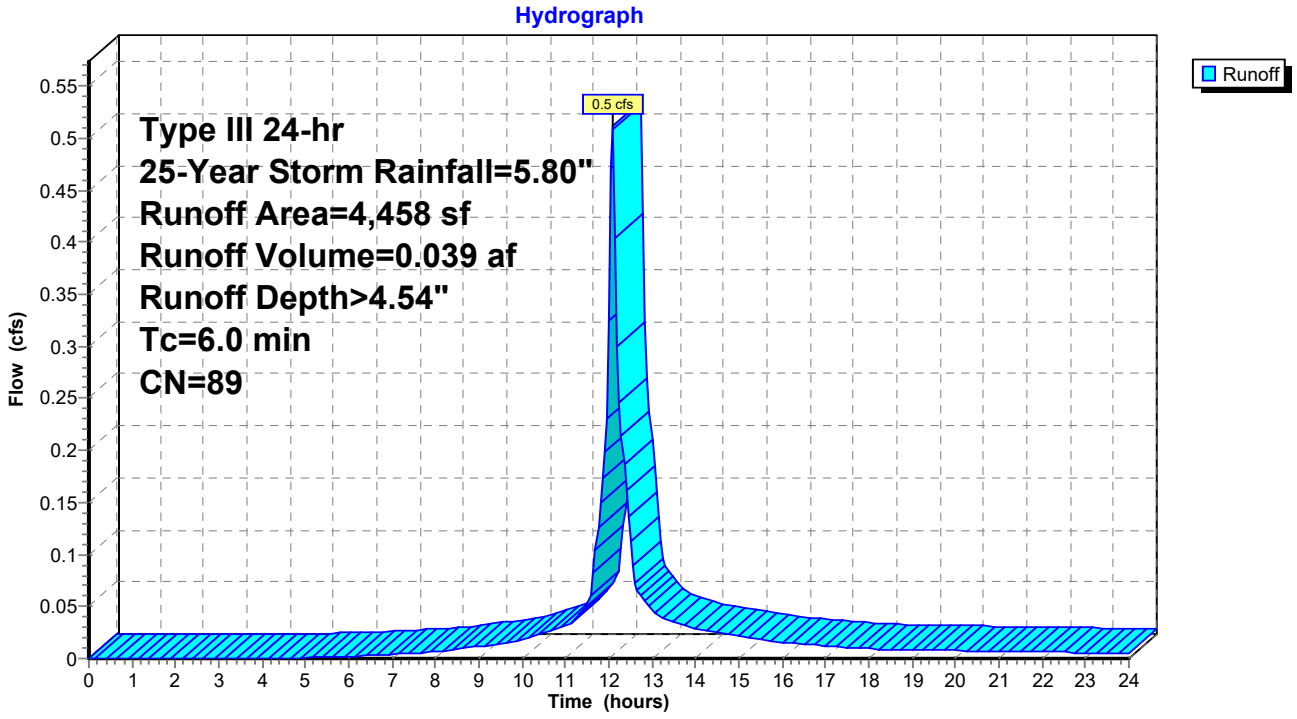
Runoff = 0.5 cfs @ 12.09 hrs, Volume= 0.039 af, Depth> 4.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	3,789	98	Impervious
	669	39	Grass cover, Good, HSG A
	4,458	89	Weighted Average
	669		15.01% Pervious Area
	3,789		84.99% Impervious Area

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

Subcatchment 3S:



Summary for Subcatchment 4S:

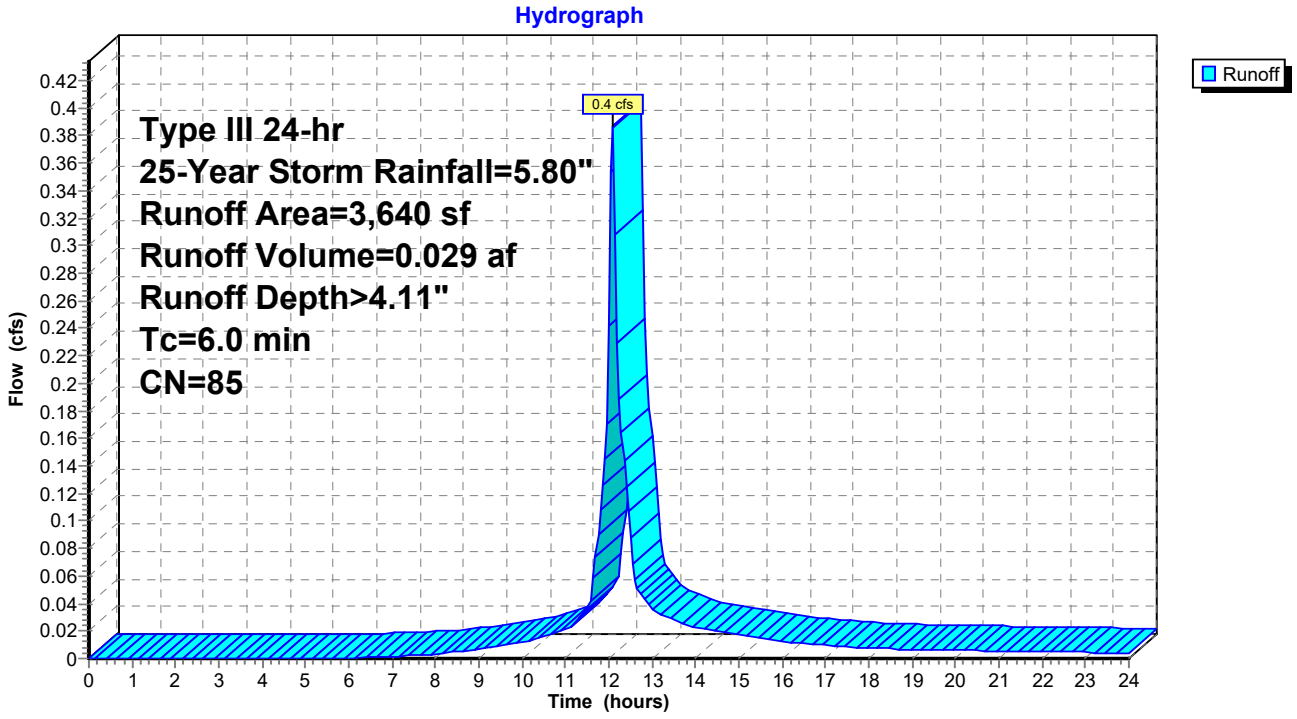
Runoff = 0.4 cfs @ 12.09 hrs, Volume= 0.029 af, Depth> 4.11"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	2,814	98	Impervious
	826	39	Grass cover, Good, HSG A
	3,640	85	Weighted Average
	826		22.69% Pervious Area
	2,814		77.31% Impervious Area

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

Subcatchment 4S:



Summary for Subcatchment 5S:

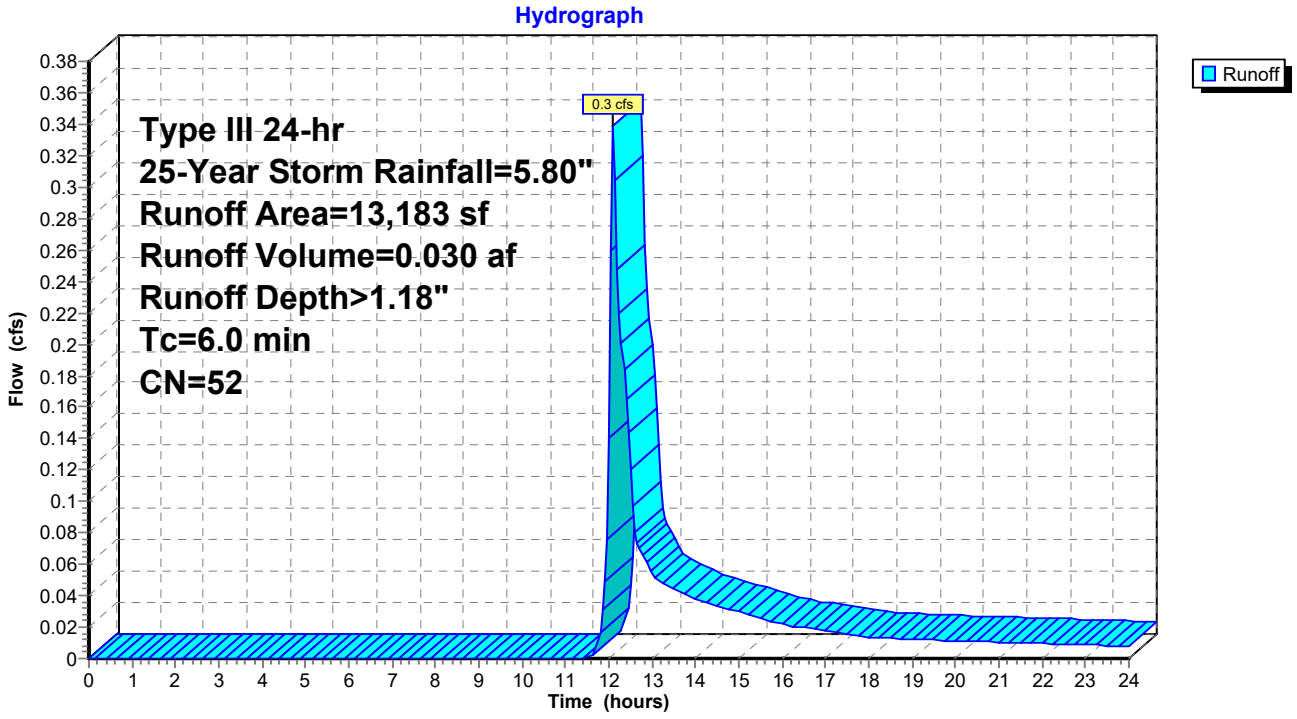
Runoff = 0.3 cfs @ 12.11 hrs, Volume= 0.030 af, Depth> 1.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	2,965	98	Impervious
	10,218	39	Grass cover, Good, HSG A
	13,183	52	Weighted Average
	10,218		77.51% Pervious Area
	2,965		22.49% Impervious Area

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

Subcatchment 5S:



Summary for Subcatchment 6S:

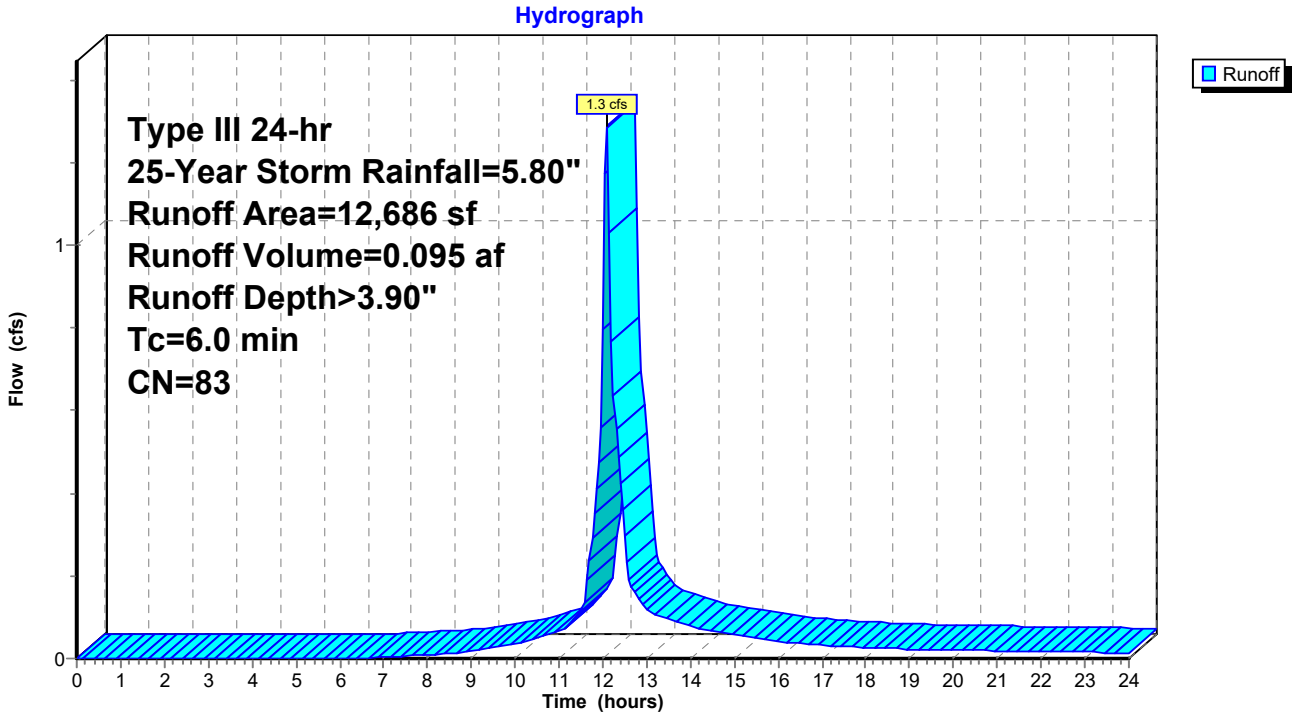
Runoff = 1.3 cfs @ 12.09 hrs, Volume= 0.095 af, Depth> 3.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	9,384	98	Impervious
	3,302	39	Grass cover, Good, HSG A
	12,686	83	Weighted Average
	3,302		26.03% Pervious Area
	9,384		73.97% Impervious Area

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

Subcatchment 6S:



Summary for Subcatchment 7S: Parking Garage

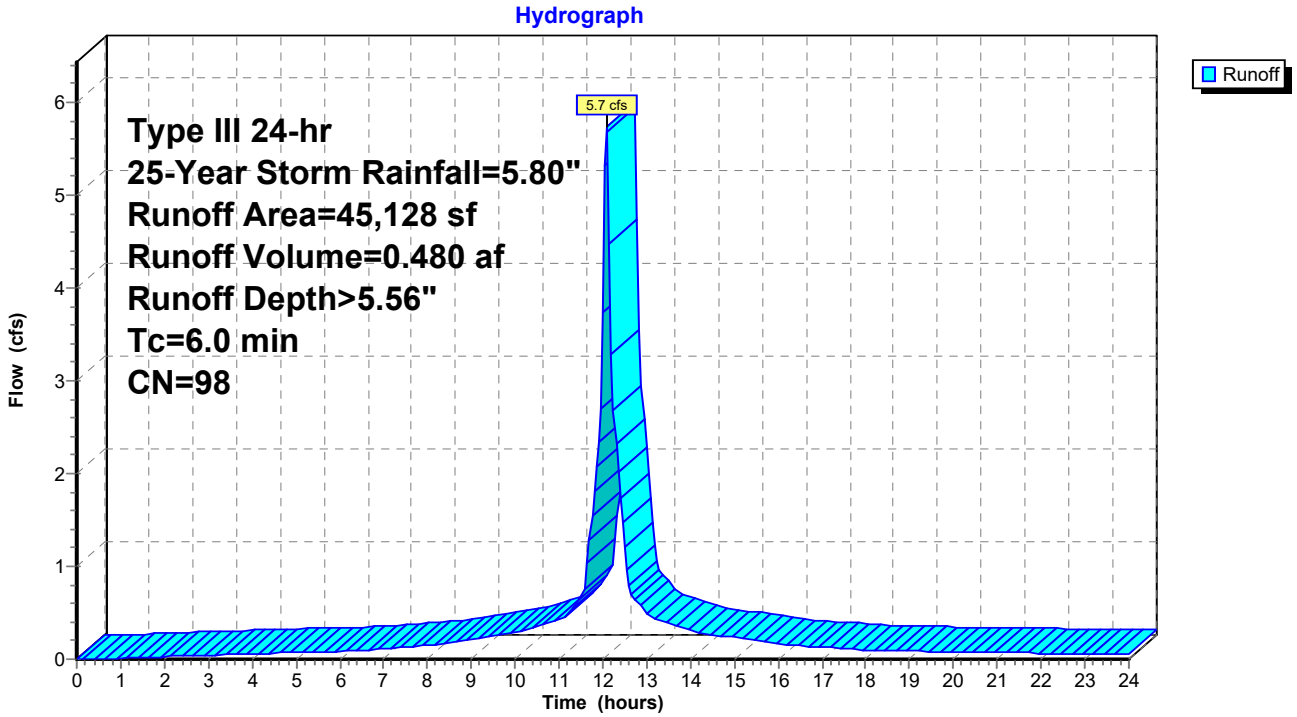
Runoff = 5.7 cfs @ 12.09 hrs, Volume= 0.480 af, Depth> 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	45,128	98	Impervious
	45,128		100.00% Impervious Area

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

Subcatchment 7S: Parking Garage



Summary for Subcatchment 8S:

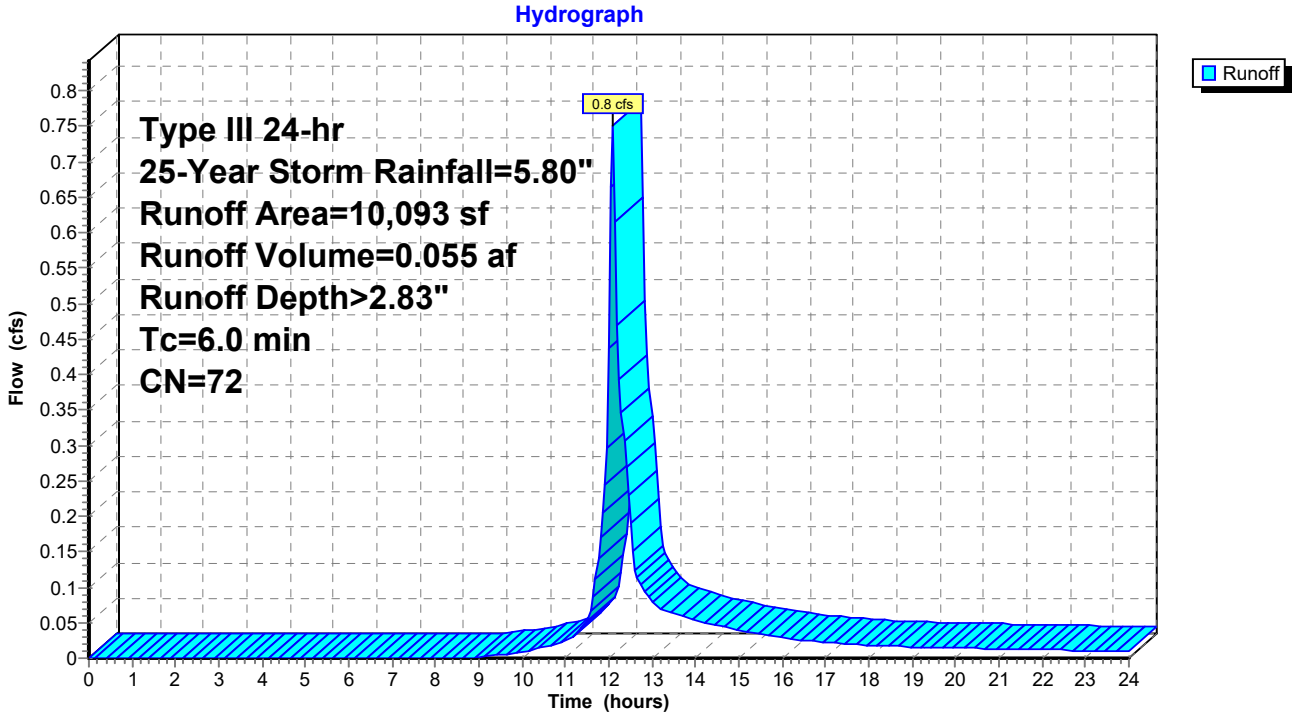
Runoff = 0.8 cfs @ 12.09 hrs, Volume= 0.055 af, Depth> 2.83"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	5,667	98	Impervious
	3,193	39	Grass cover, Good, HSG A
*	1,233	40	Porous Pavement
	10,093	72	Weighted Average
	4,426		43.85% Pervious Area
	5,667		56.15% Impervious Area

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

Subcatchment 8S:



Summary for Subcatchment 9S:

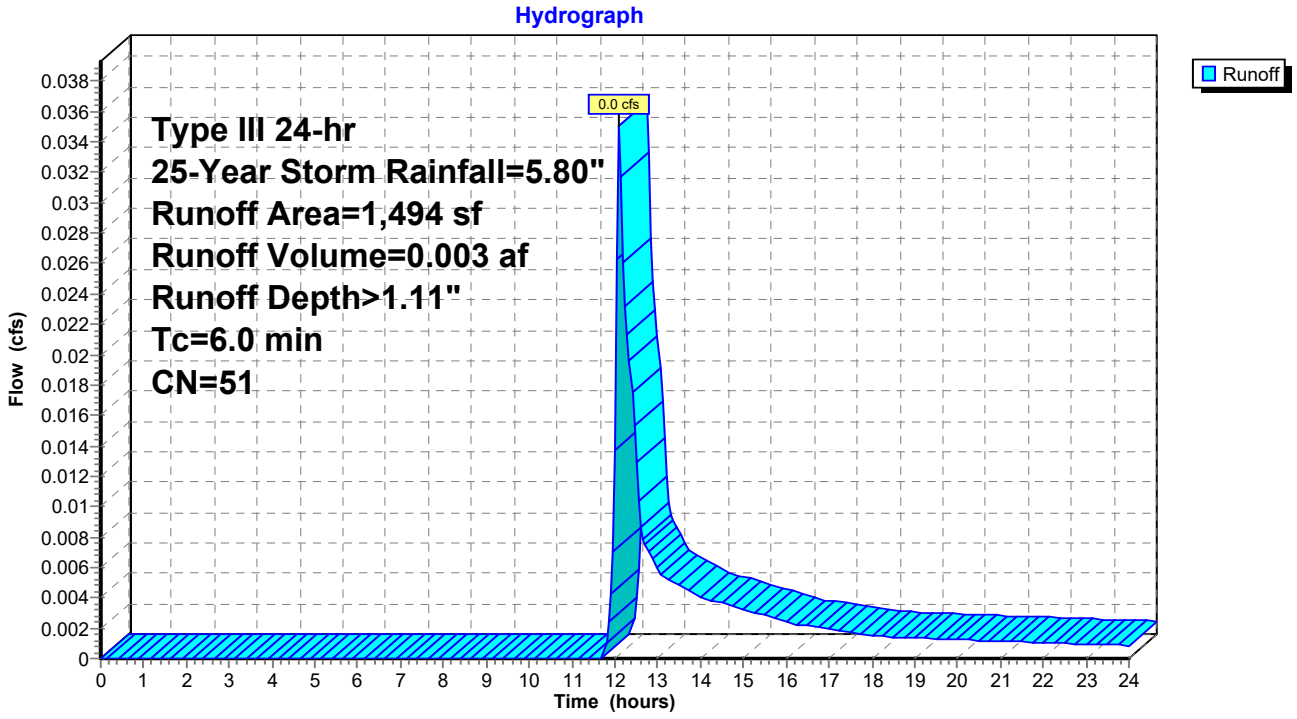
Runoff = 0.0 cfs @ 12.11 hrs, Volume= 0.003 af, Depth> 1.11"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	302	98	Impervious
	1,192	39	Grass cover, Good, HSG A
	1,494	51	Weighted Average
	1,192		79.79% Pervious Area
	302		20.21% Impervious Area

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

Subcatchment 9S:



Summary for Subcatchment 10S:

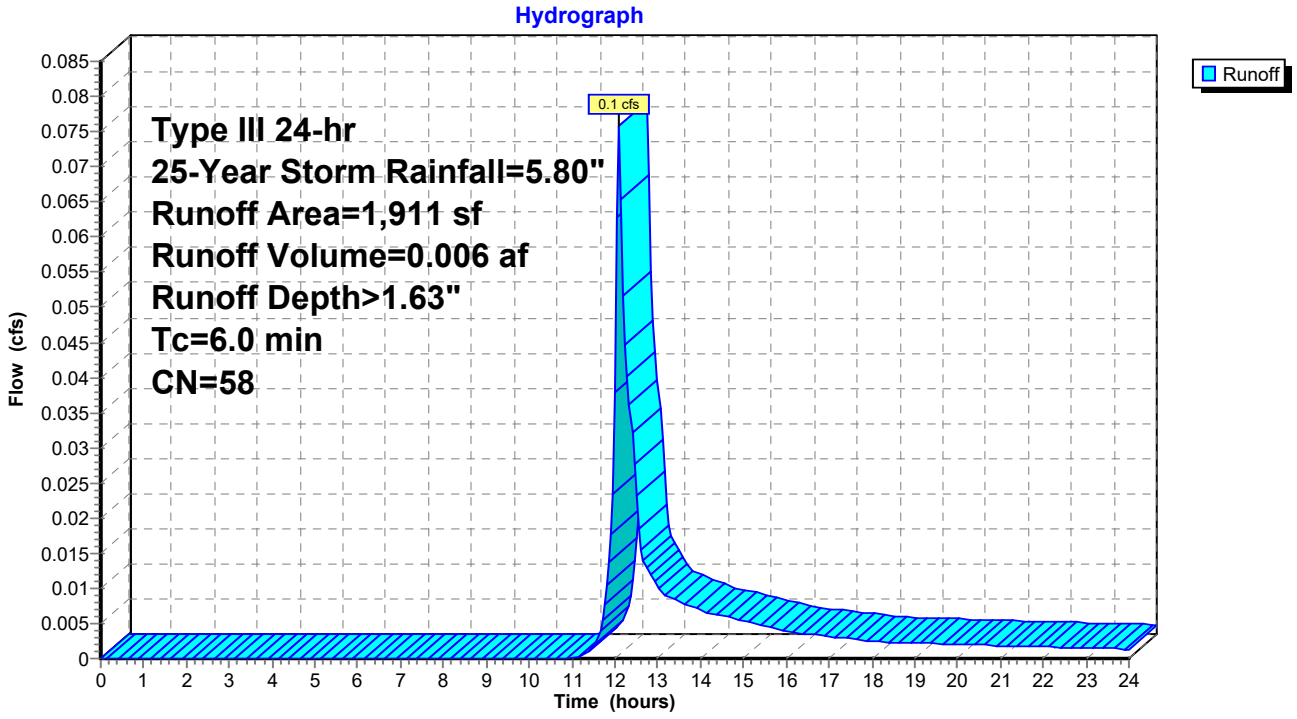
Runoff = 0.1 cfs @ 12.10 hrs, Volume= 0.006 af, Depth> 1.63"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	617	98	Impervious
	1,294	39	Grass cover, Good, HSG A
	1,911	58	Weighted Average
	1,294		67.71% Pervious Area
	617		32.29% Impervious Area

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

Subcatchment 10S:



Summary for Subcatchment 12S:

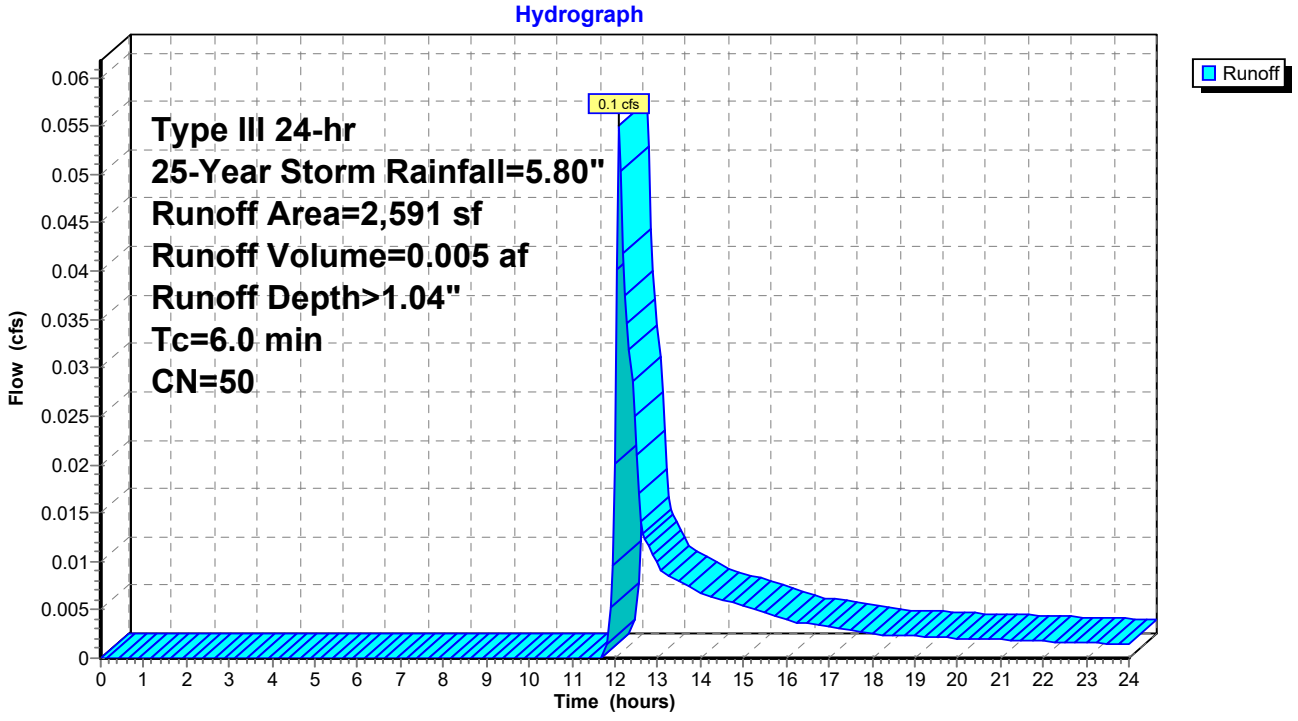
Runoff = 0.1 cfs @ 12.11 hrs, Volume= 0.005 af, Depth> 1.04"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	466	98	Impervious
	1,499	39	Grass cover, Good, HSG A
*	626	40	Porous Pavement
	2,591	50	Weighted Average
	2,125		82.01% Pervious Area
	466		17.99% Impervious Area

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

Subcatchment 12S:



Summary for Subcatchment 13S:

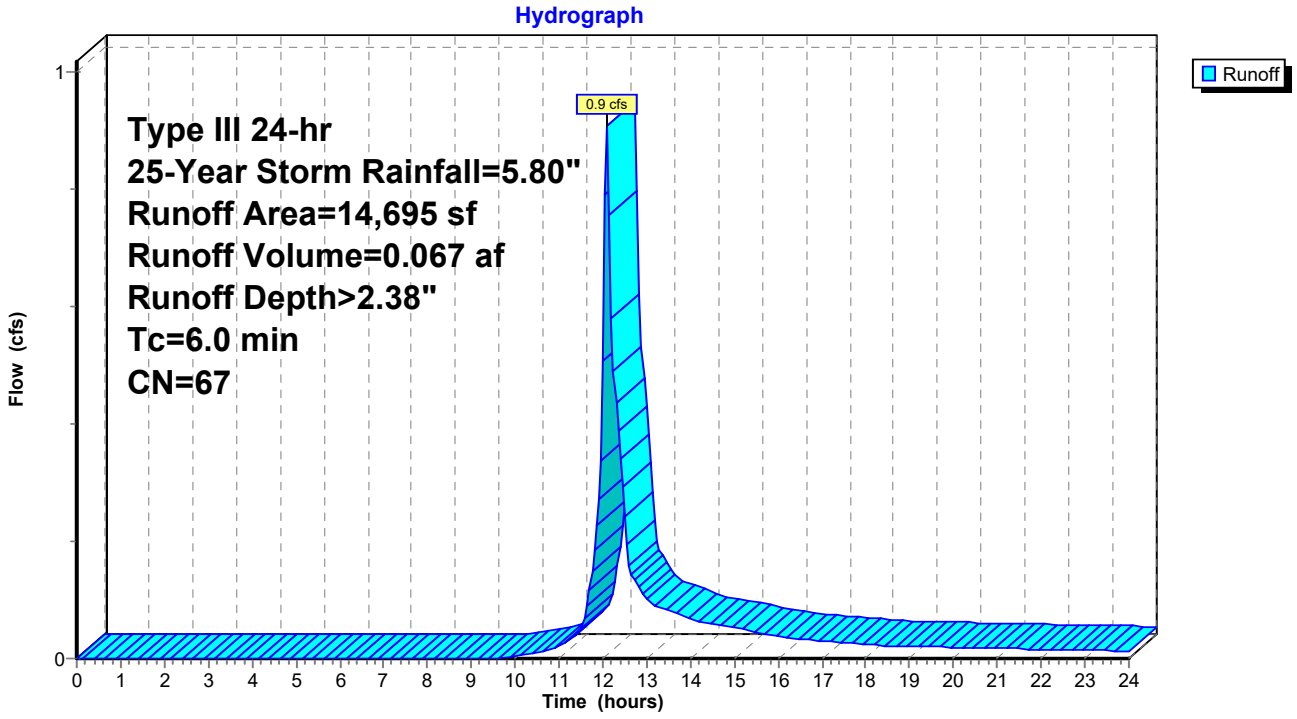
Runoff = 0.9 cfs @ 12.10 hrs, Volume= 0.067 af, Depth> 2.38"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Storm Rainfall=5.80"

	Area (sf)	CN	Description
*	7,017	98	Impervious
	7,678	39	Grass cover, Good, HSG A
	14,695	67	Weighted Average
	7,678		52.25% Pervious Area
	7,017		47.75% Impervious Area

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

Subcatchment 13S:



Summary for Pond 1P: CB1

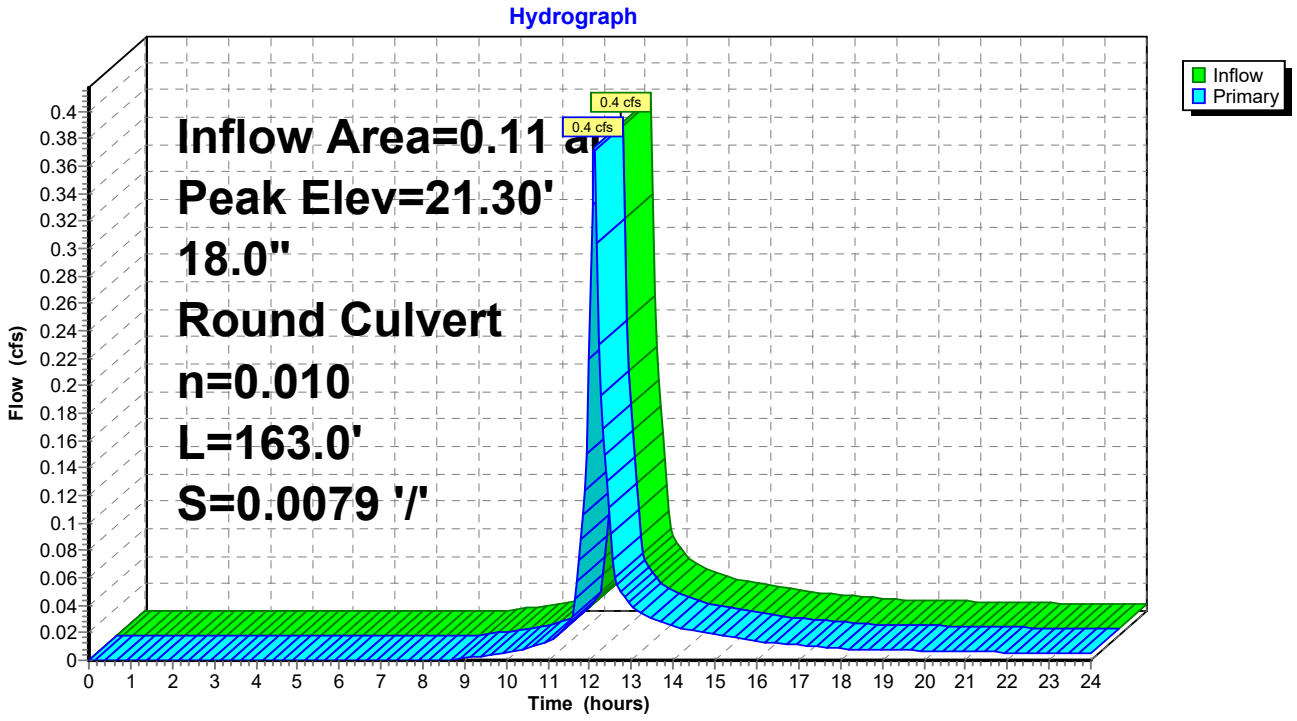
Inflow Area = 0.11 ac, 59.14% Impervious, Inflow Depth > 3.01" for 25-Year Storm event
Inflow = 0.4 cfs @ 12.09 hrs, Volume= 0.027 af
Outflow = 0.4 cfs @ 12.09 hrs, Volume= 0.027 af, Atten= 0%, Lag= 0.0 min
Primary = 0.4 cfs @ 12.09 hrs, Volume= 0.027 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 21.30' @ 12.09 hrs
Flood Elev= 25.12'

Device	Routing	Invert	Outlet Devices
#1	Primary	21.00'	**18.0" Round Culvert** L= 163.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 21.00' / 19.71' S= 0.0079 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=0.4 cfs @ 12.09 hrs HW=21.30' TW=20.24' (Dynamic Tailwater)
1=Culvert (Inlet Controls 0.4 cfs @ 1.47 fps)

Pond 1P: CB1



Summary for Pond 2P: CB2

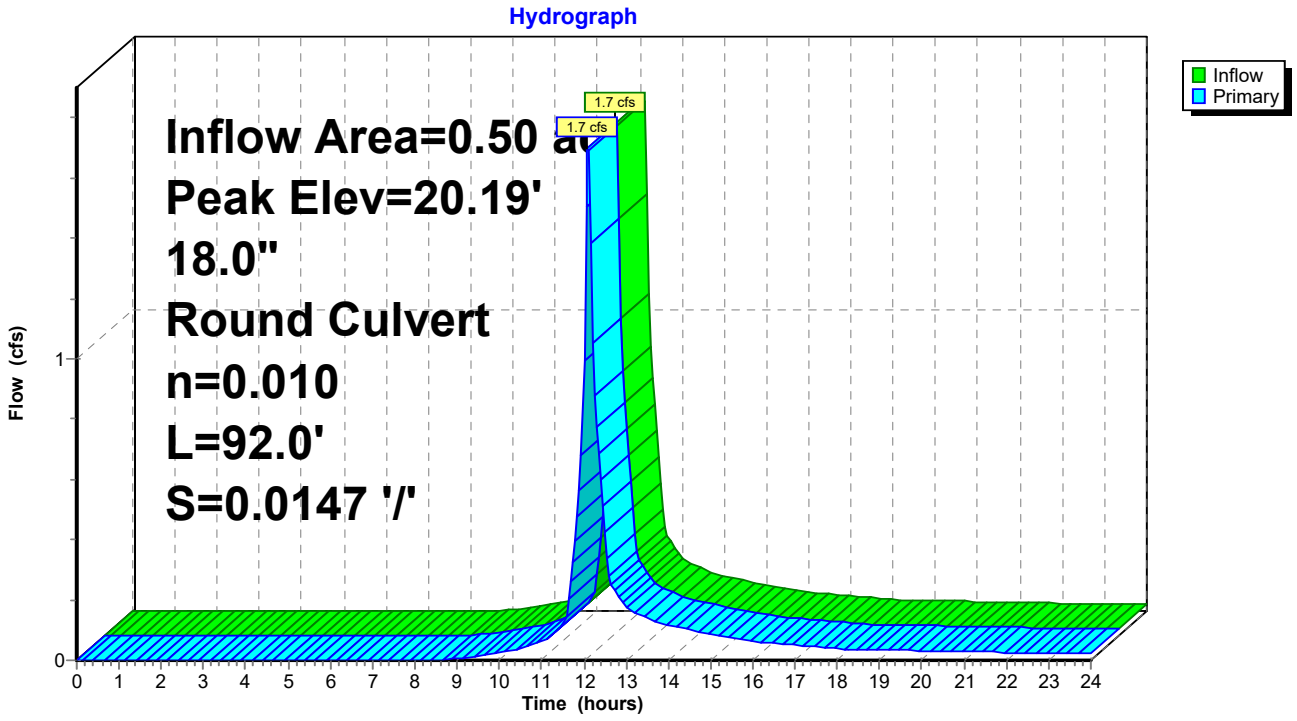
Inflow Area = 0.50 ac, 58.21% Impervious, Inflow Depth > 2.96" for 25-Year Storm event
Inflow = 1.7 cfs @ 12.09 hrs, Volume= 0.123 af
Outflow = 1.7 cfs @ 12.09 hrs, Volume= 0.123 af, Atten= 0%, Lag= 0.0 min
Primary = 1.7 cfs @ 12.09 hrs, Volume= 0.123 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 20.19' @ 12.19 hrs
Flood Elev= 22.97'

Device	Routing	Invert	Outlet Devices
#1	Primary	18.90'	**18.0" Round Culvert** L= 92.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 18.90' / 17.55' S= 0.0147 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=0.0 cfs @ 12.09 hrs HW=19.57' TW=19.64' (Dynamic Tailwater)
↑**1=Culvert** (Controls 0.0 cfs)

Pond 2P: CB2



Summary for Pond 3P: CB3

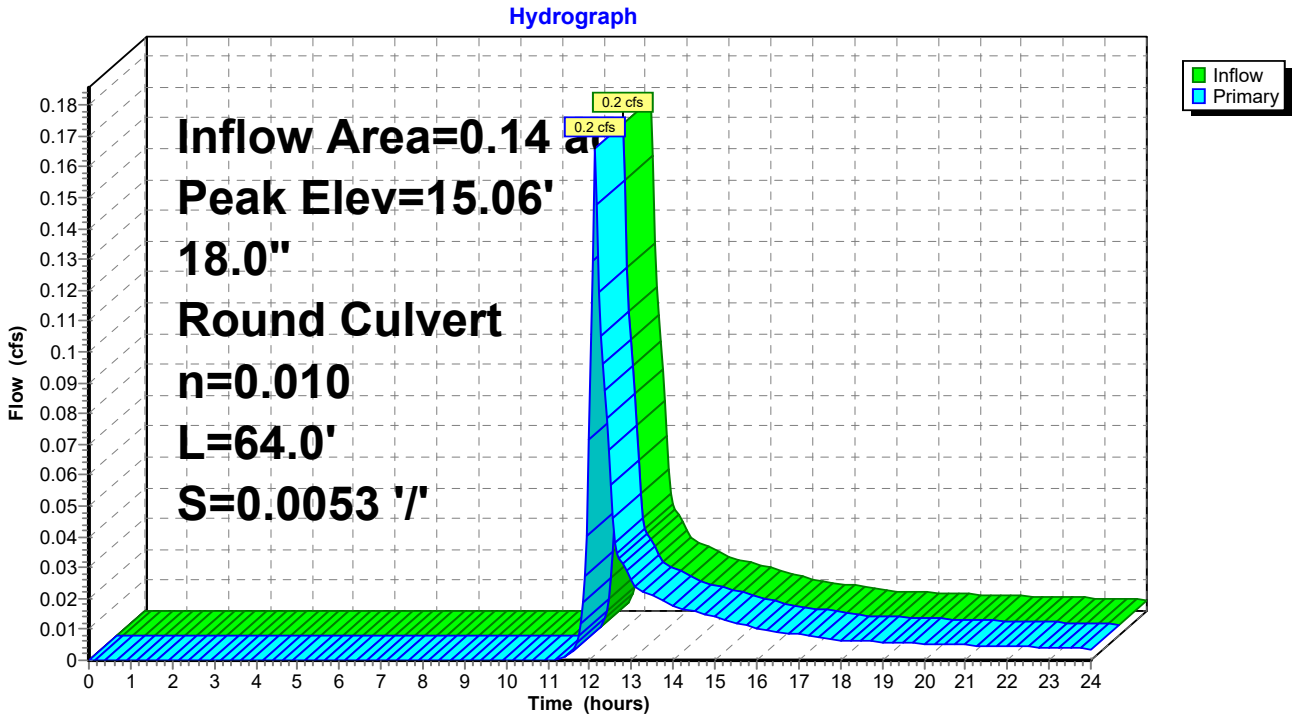
Inflow Area = 0.14 ac, 23.10% Impervious, Inflow Depth > 1.25" for 25-Year Storm event
Inflow = 0.2 cfs @ 12.11 hrs, Volume= 0.014 af
Outflow = 0.2 cfs @ 12.11 hrs, Volume= 0.014 af, Atten= 0%, Lag= 0.0 min
Primary = 0.2 cfs @ 12.11 hrs, Volume= 0.014 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 15.06' @ 12.11 hrs
Flood Elev= 23.90'

Device	Routing	Invert	Outlet Devices
#1	Primary	14.86'	**18.0" Round Culvert** L= 64.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 14.86' / 14.52' S= 0.0053 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=0.2 cfs @ 12.11 hrs HW=15.06' TW=14.30' (Dynamic Tailwater)
1=Culvert (Inlet Controls 0.2 cfs @ 1.19 fps)

Pond 3P: CB3



Summary for Pond 4P: CB4

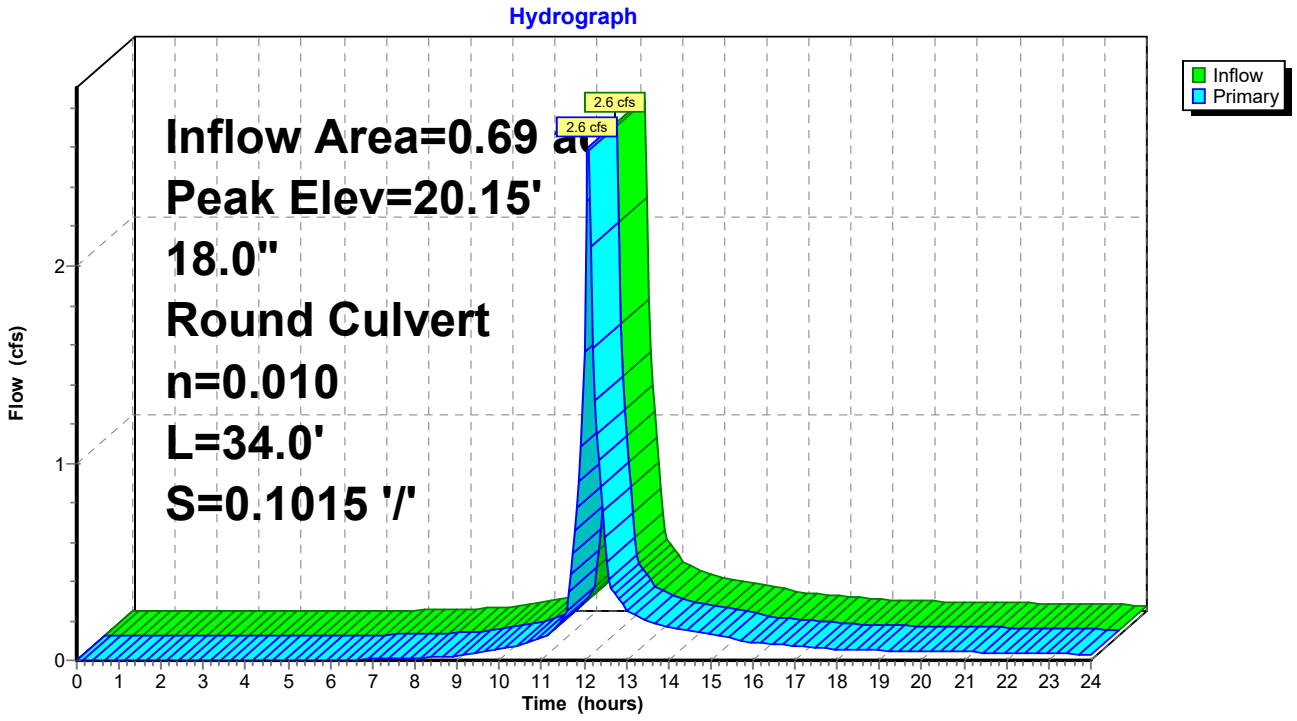
Inflow Area = 0.69 ac, 64.53% Impervious, Inflow Depth > 3.33" for 25-Year Storm event
Inflow = 2.6 cfs @ 12.09 hrs, Volume= 0.191 af
Outflow = 2.6 cfs @ 12.09 hrs, Volume= 0.191 af, Atten= 0%, Lag= 0.0 min
Primary = 2.6 cfs @ 12.09 hrs, Volume= 0.191 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 20.15' @ 12.15 hrs
Flood Elev= 22.87'

Device	Routing	Invert	Outlet Devices
#1	Primary	17.45'	**18.0" Round Culvert** L= 34.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 17.45' / 14.00' S= 0.1015 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=0.0 cfs @ 12.09 hrs HW=19.61' TW=19.98' (Dynamic Tailwater)
↑**1=Culvert** (Controls 0.0 cfs)

Pond 4P: CB4



Summary for Pond 5P: CB5

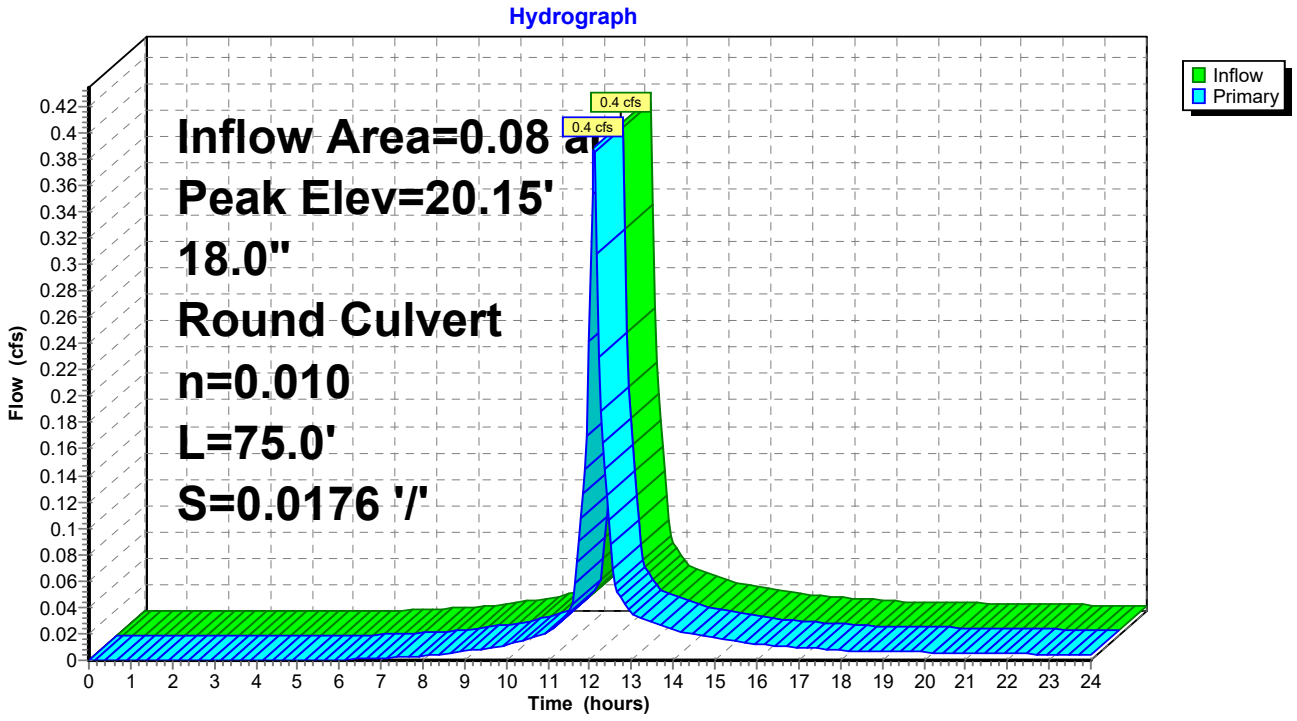
Inflow Area = 0.08 ac, 77.31% Impervious, Inflow Depth > 4.11" for 25-Year Storm event
Inflow = 0.4 cfs @ 12.09 hrs, Volume= 0.029 af
Outflow = 0.4 cfs @ 12.09 hrs, Volume= 0.029 af, Atten= 0%, Lag= 0.0 min
Primary = 0.4 cfs @ 12.09 hrs, Volume= 0.029 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 20.15' @ 12.20 hrs
Flood Elev= 22.83'

Device	Routing	Invert	Outlet Devices
#1	Primary	18.87'	**18.0" Round Culvert** L= 75.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 18.87' / 17.55' S= 0.0176 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=0.0 cfs @ 12.09 hrs HW=19.19' TW=19.56' (Dynamic Tailwater)
↑**1=Culvert** (Controls 0.0 cfs)

Pond 5P: CB5



Summary for Pond 6P: CB6

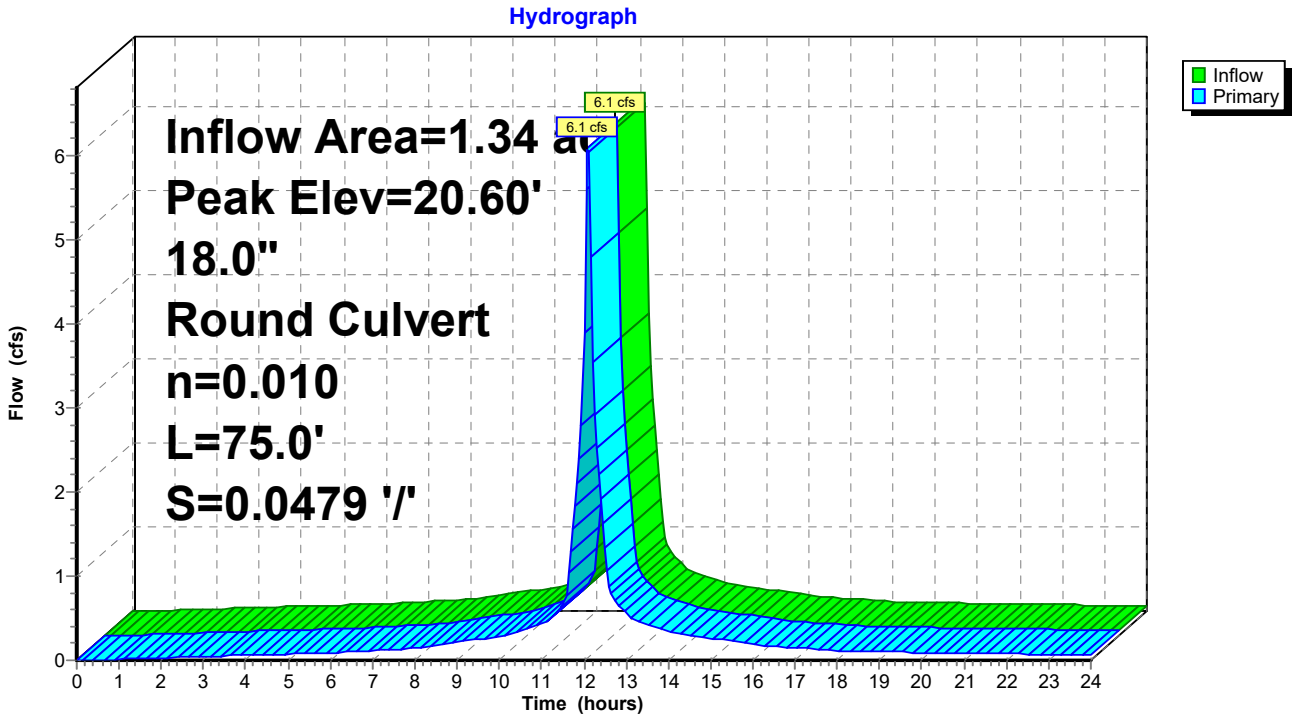
Inflow Area = 1.34 ac, 82.48% Impervious, Inflow Depth > 4.57" for 25-Year Storm event
Inflow = 6.1 cfs @ 12.09 hrs, Volume= 0.510 af
Outflow = 6.1 cfs @ 12.09 hrs, Volume= 0.510 af, Atten= 0%, Lag= 0.0 min
Primary = 6.1 cfs @ 12.09 hrs, Volume= 0.510 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 20.60' @ 12.13 hrs
Flood Elev= 22.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	17.59'	**18.0" Round Culvert** L= 75.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 17.59' / 14.00' S= 0.0479 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=3.2 cfs @ 12.09 hrs HW=20.17' TW=19.94' (Dynamic Tailwater)
1=Culvert (Inlet Controls 3.2 cfs @ 1.81 fps)

Pond 6P: CB6



Summary for Pond 7P: CB7

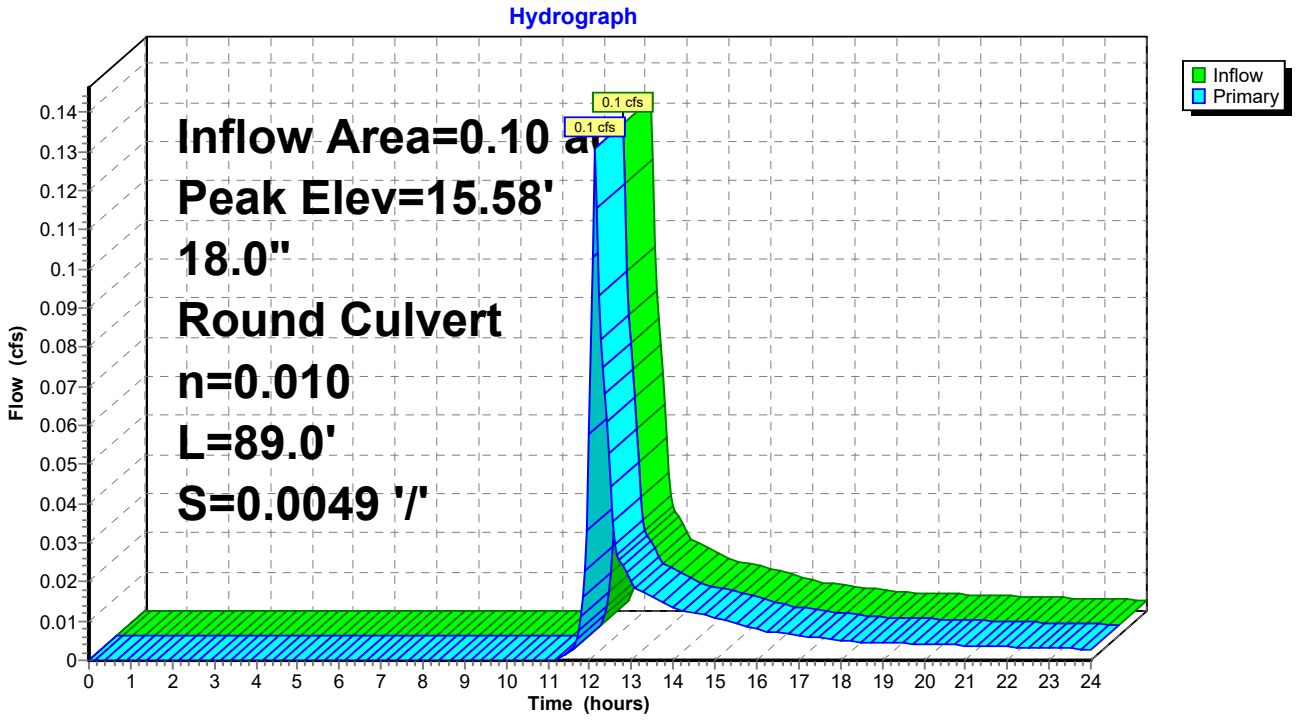
Inflow Area = 0.10 ac, 24.06% Impervious, Inflow Depth > 1.29" for 25-Year Storm event
Inflow = 0.1 cfs @ 12.11 hrs, Volume= 0.011 af
Outflow = 0.1 cfs @ 12.11 hrs, Volume= 0.011 af, Atten= 0%, Lag= 0.0 min
Primary = 0.1 cfs @ 12.11 hrs, Volume= 0.011 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 15.58' @ 12.11 hrs
Flood Elev= 24.75'

Device	Routing	Invert	Outlet Devices
#1	Primary	15.40'	**18.0" Round Culvert** L= 89.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 15.40' / 14.96' S= 0.0049 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=0.1 cfs @ 12.11 hrs HW=15.57' TW=15.06' (Dynamic Tailwater)
1=Culvert (Inlet Controls 0.1 cfs @ 1.12 fps)

Pond 7P: CB7



Summary for Pond 8P: CB8

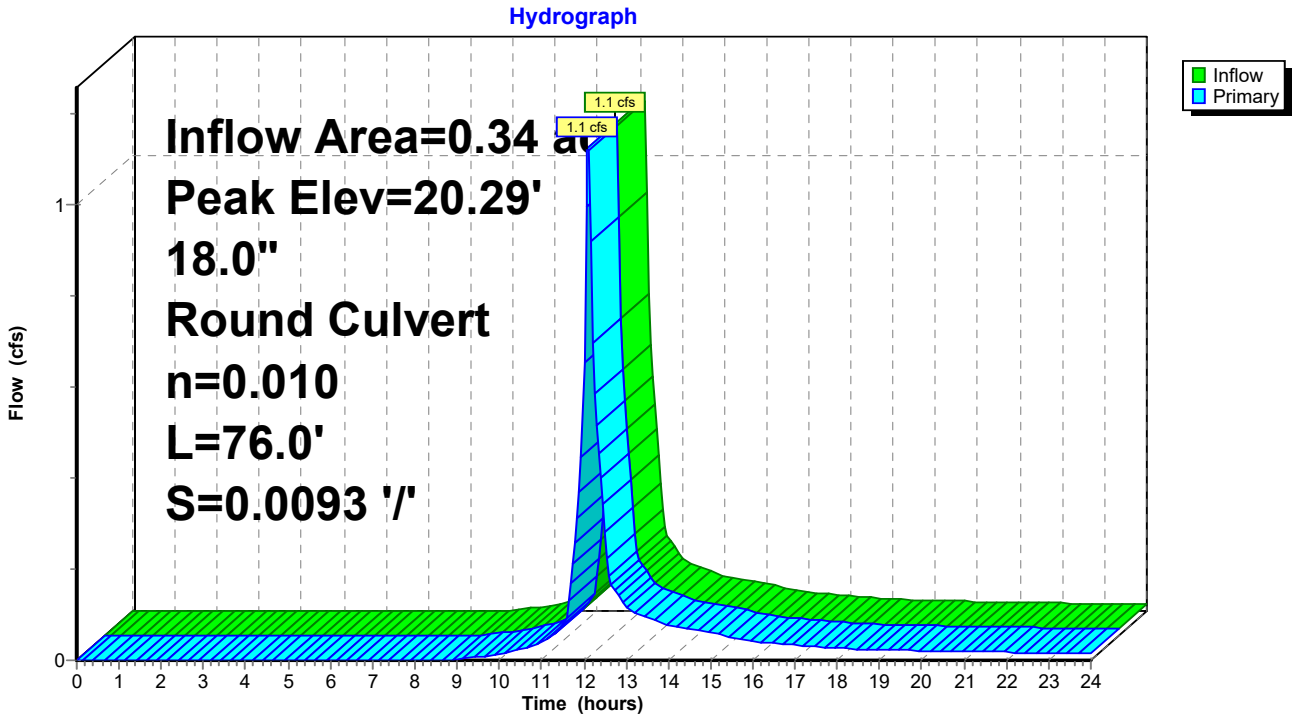
Inflow Area = 0.34 ac, 57.10% Impervious, Inflow Depth > 2.89" for 25-Year Storm event
Inflow = 1.1 cfs @ 12.09 hrs, Volume= 0.082 af
Outflow = 1.1 cfs @ 12.09 hrs, Volume= 0.082 af, Atten= 0%, Lag= 0.0 min
Primary = 1.1 cfs @ 12.09 hrs, Volume= 0.082 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 20.29' @ 12.24 hrs
Flood Elev= 23.60'

Device	Routing	Invert	Outlet Devices
#1	Primary	19.71'	**18.0" Round Culvert** L= 76.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 19.71' / 19.00' S= 0.0093 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=1.1 cfs @ 12.09 hrs HW=20.24' TW=19.57' (Dynamic Tailwater)
1=Culvert (Inlet Controls 1.1 cfs @ 1.96 fps)

Pond 8P: CB8



Summary for Pond 9P: DMH1

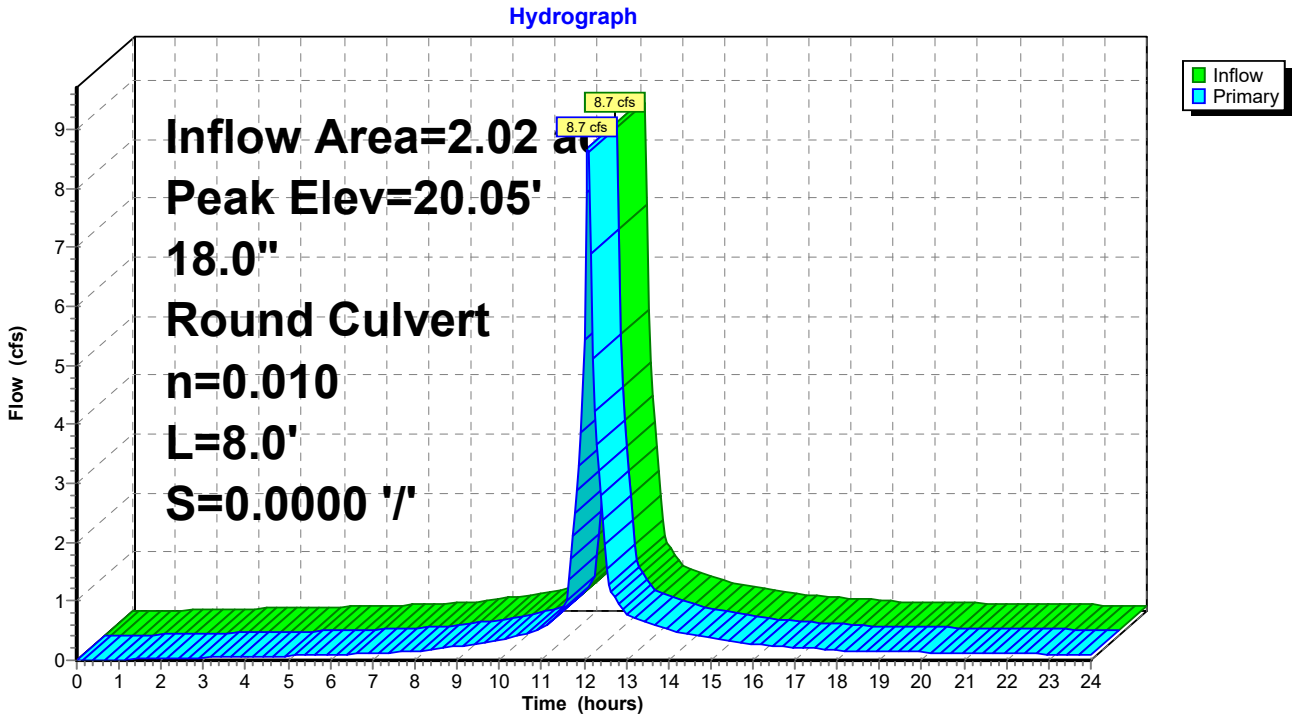
Inflow Area = 2.02 ac, 76.40% Impervious, Inflow Depth > 4.15" for 25-Year Storm event
Inflow = 8.7 cfs @ 12.09 hrs, Volume= 0.700 af
Outflow = 8.7 cfs @ 12.09 hrs, Volume= 0.700 af, Atten= 0%, Lag= 0.0 min
Primary = 8.7 cfs @ 12.09 hrs, Volume= 0.700 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 20.05' @ 12.10 hrs
Flood Elev= 22.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	13.58'	**18.0" Round Culvert** L= 8.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 13.58' / 13.58' S= 0.0000 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=8.1 cfs @ 12.09 hrs HW=19.95' TW=18.49' (Dynamic Tailwater)
1=Culvert (Inlet Controls 8.1 cfs @ 4.59 fps)

Pond 9P: DMH1



Summary for Pond 13P: CMP Peak Detention

Inflow	=	8.7 cfs @	12.10 hrs, Volume=	0.551 af
Outflow	=	7.6 cfs @	12.16 hrs, Volume=	0.551 af, Atten= 12%, Lag= 3.5 min
Primary	=	7.6 cfs @	12.16 hrs, Volume=	0.551 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 18.41' @ 12.16 hrs Surf.Area= 1,224 sf Storage= 4,234 cf
Flood Elev= 20.87' Surf.Area= 1,224 sf Storage= 4,269 cf

Plug-Flow detention time= 12.7 min calculated for 0.549 af (100% of inflow)
Center-of-Mass det. time= 12.1 min (812.4 - 800.3)

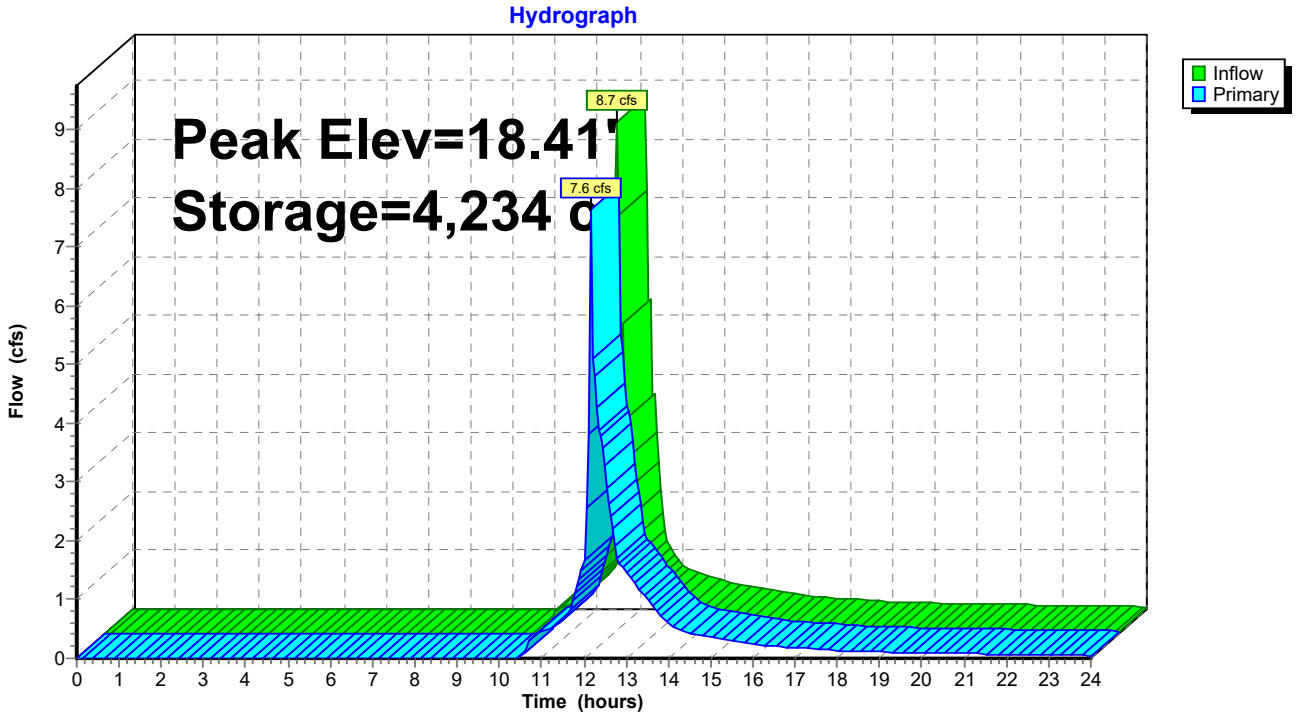
Volume	Invert	Avail.Storage	Storage Description
#1A	12.58'	0 cf	**8.00'W x 153.00'L x 6.00'H Field A** 7,344 cf Overall - 4,268 cf Embedded = 3,076 cf x 0.0% Voids
#2A	12.58'	4,268 cf	**CMP Round 72** x 7 Inside #1 Effective Size= 72.0"W x 72.0"H => 28.26 sf x 20.00'L = 565.2 cf Overall Size= 72.0"W x 72.0"H x 20.00'L Row Length Adjustment= +11.00' x 28.26 sf x 1 rows
		4,268 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	12.58'	**18.0" Round Culvert** L= 20.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 12.58' / 12.20' S= 0.0190 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf
#2	Device 1	12.58'	**6.1" Vert. Orifice/Grate** C= 0.600
#3	Device 1	15.58'	**5.7" Vert. Orifice/Grate** C= 0.600
#4	Device 1	16.66'	**4.8" Vert. Orifice/Grate** C= 0.600
#5	Device 1	17.92'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 3.21 3.27 3.33 3.39 3.45 3.51 3.57 3.63 3.69 3.75 3.81 3.87 Width (feet) 3.75 3.60 3.43 3.26 3.06 2.85 2.62 2.35 2.05 1.68 1.19 0.00

Primary OutFlow Max=7.2 cfs @ 12.16 hrs HW=18.35' TW=13.51' (Dynamic Tailwater)
- **1=Culvert** (Passes 7.2 cfs of 18.7 cfs potential flow)
  - **2=Orifice/Grate** (Orifice Controls 2.1 cfs @ 10.59 fps)
  - **3=Orifice/Grate** (Orifice Controls 1.4 cfs @ 7.66 fps)
  - **4=Orifice/Grate** (Orifice Controls 0.7 cfs @ 5.88 fps)
  - **5=Custom Weir/Orifice** (Weir Controls 3.0 cfs @ 2.25 fps)

Pond 13P: CMP Peak Detention



Summary for Pond 14P: CONTECH WQv CMP Det & SF System

Inflow Area = 2.02 ac, 76.40% Impervious, Inflow Depth > 4.15" for 25-Year Storm event
Inflow = 8.7 cfs @ 12.09 hrs, Volume= 0.700 af
Outflow = 8.8 cfs @ 12.10 hrs, Volume= 0.620 af, Atten= 0%, Lag= 0.5 min
Primary = 0.0 cfs @ 12.06 hrs, Volume= 0.069 af
Secondary = 8.7 cfs @ 12.10 hrs, Volume= 0.551 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Starting Elev= 13.58' Surf.Area= 1,313 sf Storage= 186 cf
Peak Elev= 18.52' @ 12.10 hrs Surf.Area= 1,313 sf Storage= 4,102 cf (3,916 cf above start)
Flood Elev= 20.87' Surf.Area= 1,313 sf Storage= 4,110 cf (3,924 cf above start)

Plug-Flow detention time= 100.2 min calculated for 0.616 af (88% of inflow)
Center-of-Mass det. time= 38.8 min (810.0 - 771.2)

Volume	Invert	Avail.Storage	Storage Description
#1A	13.08'	0 cf	**7.50'W x 175.00'L x 5.50'H Field A** 7,219 cf Overall - 4,108 cf Embedded = 3,110 cf x 0.0% Voids
#2A	13.08'	4,108 cf	**CMP Round 66** x 8 Inside #1 Effective Size= 66.0"W x 66.0"H => 23.75 sf x 20.00'L = 475.0 cf Overall Size= 66.0"W x 66.0"H x 20.00'L Row Length Adjustment= +13.00' x 23.75 sf x 1 rows
		4,108 cf	Total Available Storage

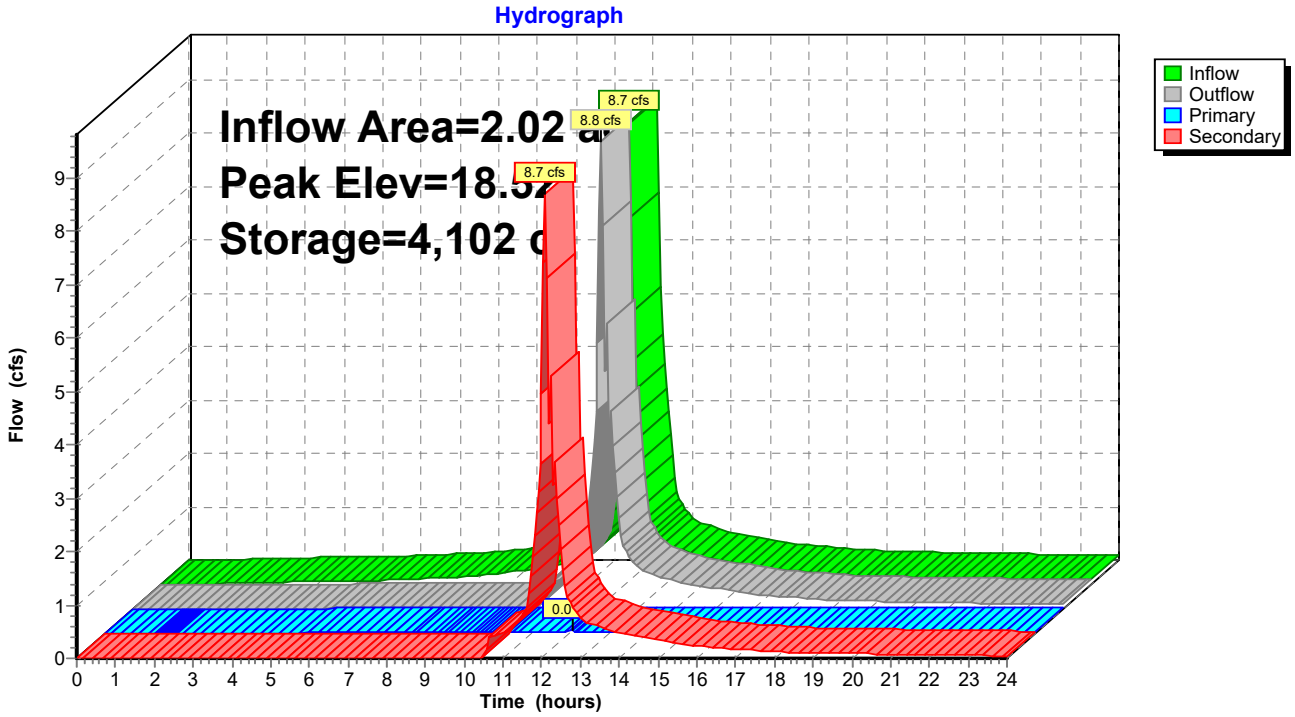
Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Device 2	13.58'	**12.0" Round Culvert** L= 3.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 13.58' / 13.56' S= 0.0067 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Primary	12.58'	**Tube/Siphon/Float Valve X 7.00** Starts@15.33' Breaks@13.25' 0.336" Diameter, C= 0.600, 0.263" Trickle Diameter
#3	Secondary	17.65'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 2.44 2.49 2.54 2.60 2.66 2.71 2.76 2.82 2.87 2.93 2.99 3.04 3.09 3.15 3.20 3.26 3.32 3.37 Width (feet) 4.13 4.03 3.93 3.82 3.70 3.57 3.44 3.30 3.15 2.98 2.81 2.61 2.40 2.16 1.88 1.54 1.09 0.00

Primary OutFlow Max=0.0 cfs @ 12.06 hrs HW=18.44' TW=12.89' (Dynamic Tailwater)
└─**2=Tube/Siphon/Float Valve** (Orifice Controls 0.0 cfs @ 11.34 fps)
└─**1=Culvert** (Passes 0.0 cfs of 7.9 cfs potential flow)

Secondary OutFlow Max=8.6 cfs @ 12.10 hrs HW=18.51' TW=17.56' (Dynamic Tailwater)
└─**3=Custom Weir/Orifice** (Weir Controls 8.6 cfs @ 3.32 fps)

Pond 14P: CONTECH WQv CMP Det & SF System



Summary for Pond 17P: DMH2

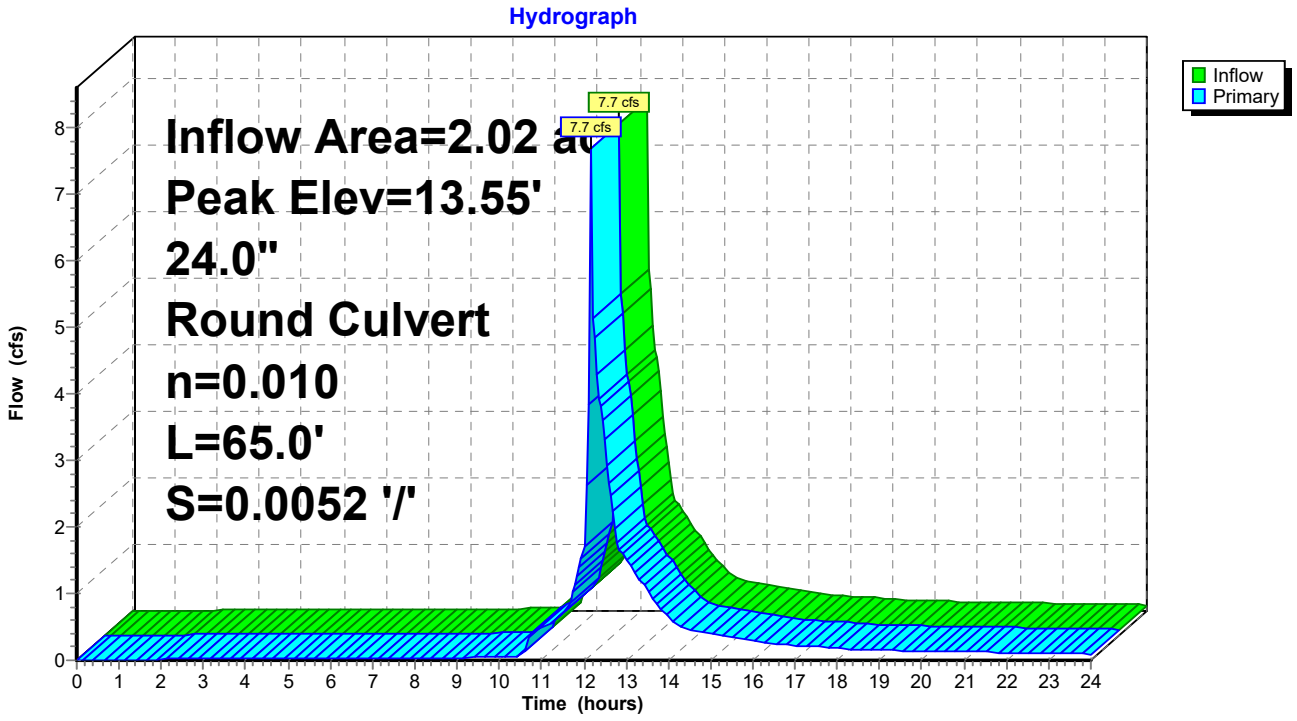
Inflow Area = 2.02 ac, 76.40% Impervious, Inflow Depth > 3.67" for 25-Year Storm event
Inflow = 7.7 cfs @ 12.16 hrs, Volume= 0.620 af
Outflow = 7.7 cfs @ 12.16 hrs, Volume= 0.620 af, Atten= 0%, Lag= 0.0 min
Primary = 7.7 cfs @ 12.16 hrs, Volume= 0.620 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 13.55' @ 12.17 hrs
Flood Elev= 21.65'

Device	Routing	Invert	Outlet Devices
#1	Primary	12.07'	**24.0" Round Culvert** L= 65.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 12.07' / 11.73' S= 0.0052 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=6.3 cfs @ 12.16 hrs HW=13.51' TW=13.02' (Dynamic Tailwater)
1=Culvert (Outlet Controls 6.3 cfs @ 3.66 fps)

Pond 17P: DMH2



Summary for Pond 18P: DMH3

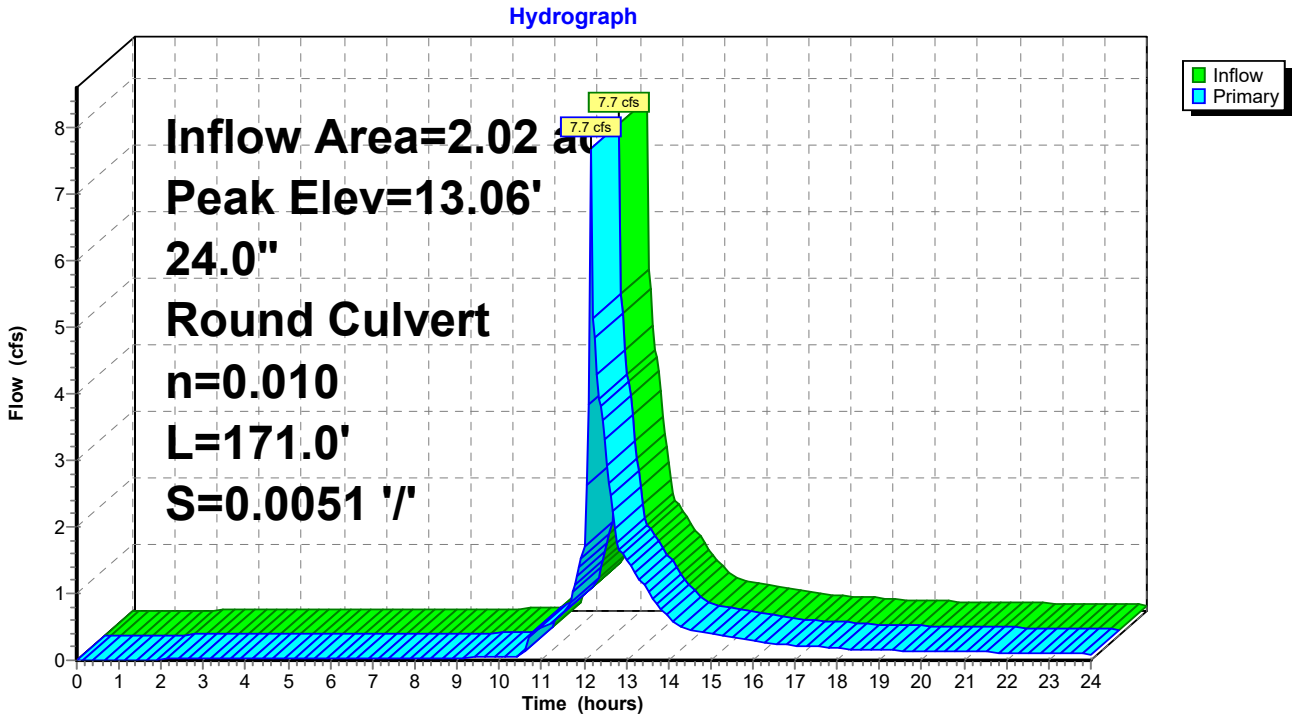
Inflow Area = 2.02 ac, 76.40% Impervious, Inflow Depth > 3.67" for 25-Year Storm event
Inflow = 7.7 cfs @ 12.16 hrs, Volume= 0.620 af
Outflow = 7.7 cfs @ 12.16 hrs, Volume= 0.620 af, Atten= 0%, Lag= 0.0 min
Primary = 7.7 cfs @ 12.16 hrs, Volume= 0.620 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 13.06' @ 12.16 hrs
Flood Elev= 20.85'

Device	Routing	Invert	Outlet Devices
#1	Primary	11.63'	**24.0" Round Culvert** L= 171.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 11.63' / 10.75' S= 0.0051 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=7.4 cfs @ 12.16 hrs HW=13.02' TW=0.00' (Dynamic Tailwater)
1=Culvert (Inlet Controls 7.4 cfs @ 3.17 fps)

Pond 18P: DMH3



Summary for Pond 22P: Ex DMH3

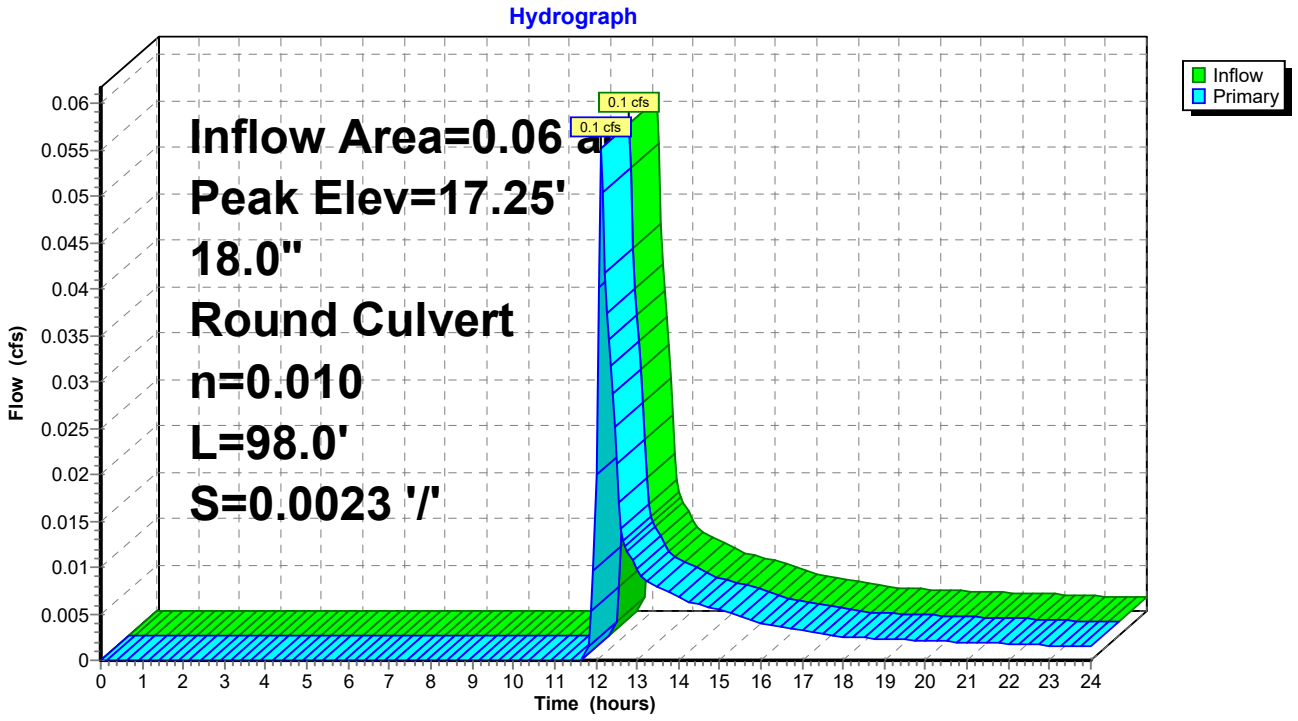
Inflow Area = 0.06 ac, 17.99% Impervious, Inflow Depth > 1.04" for 25-Year Storm event
Inflow = 0.1 cfs @ 12.11 hrs, Volume= 0.005 af
Outflow = 0.1 cfs @ 12.11 hrs, Volume= 0.005 af, Atten= 0%, Lag= 0.0 min
Primary = 0.1 cfs @ 12.11 hrs, Volume= 0.005 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 17.25' @ 12.11 hrs
Flood Elev= 24.92'

Device	Routing	Invert	Outlet Devices
#1	Primary	17.12'	**18.0" Round Culvert** L= 98.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 17.12' / 16.89' S= 0.0023 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=0.1 cfs @ 12.11 hrs HW=17.25' TW=16.87' (Dynamic Tailwater)
1=Culvert (Barrel Controls 0.1 cfs @ 1.12 fps)

Pond 22P: Ex DMH3



Summary for Pond 23P: Ex CB3

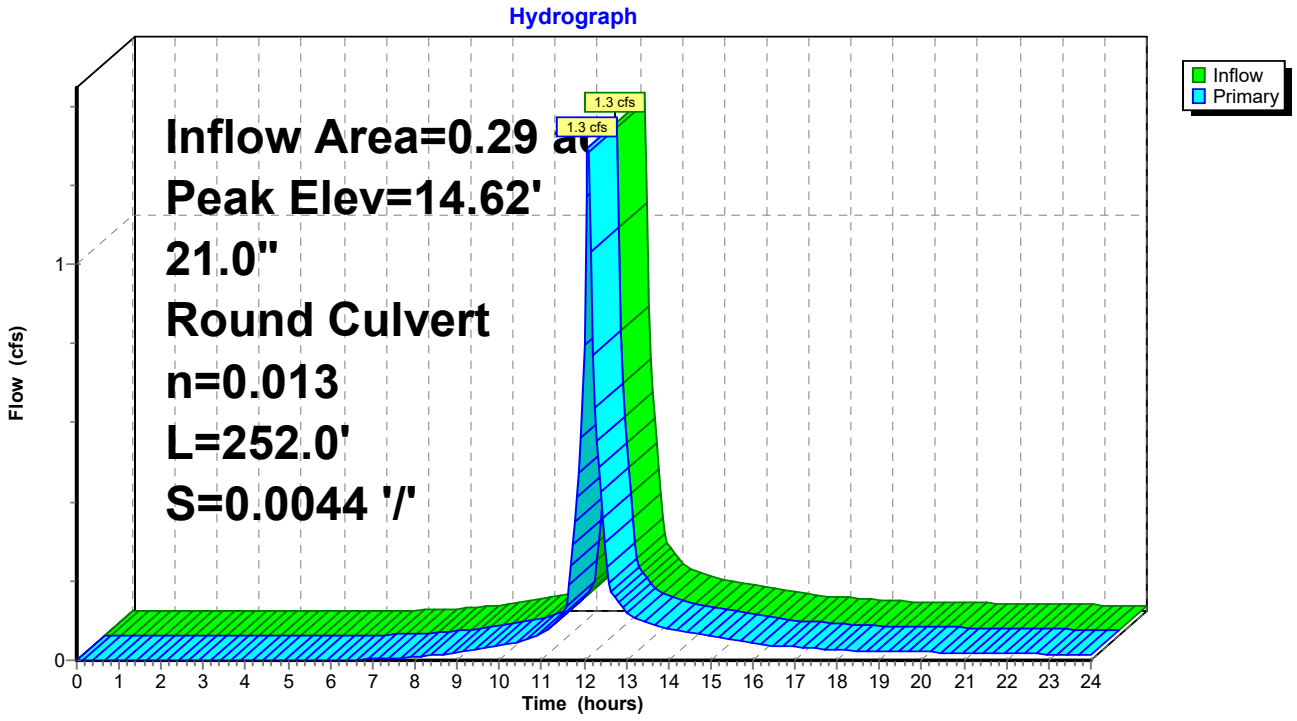
Inflow Area = 0.29 ac, 73.97% Impervious, Inflow Depth > 3.90" for 25-Year Storm event
Inflow = 1.3 cfs @ 12.09 hrs, Volume= 0.095 af
Outflow = 1.3 cfs @ 12.09 hrs, Volume= 0.095 af, Atten= 0%, Lag= 0.0 min
Primary = 1.3 cfs @ 12.09 hrs, Volume= 0.095 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 14.62' @ 12.09 hrs
Flood Elev= 23.60'

Device	Routing	Invert	Outlet Devices
#1	Primary	14.05'	**21.0" Round Culvert** L= 252.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 14.05' / 12.94' S= 0.0044 '/' Cc= 0.900 n= 0.013 Cast iron, coated, Flow Area= 2.41 sf

Primary OutFlow Max=1.3 cfs @ 12.09 hrs HW=14.61' TW=0.00' (Dynamic Tailwater)
1=Culvert (Barrel Controls 1.3 cfs @ 2.85 fps)

Pond 23P: Ex CB3



Summary for Pond 24P: Ex DMH2

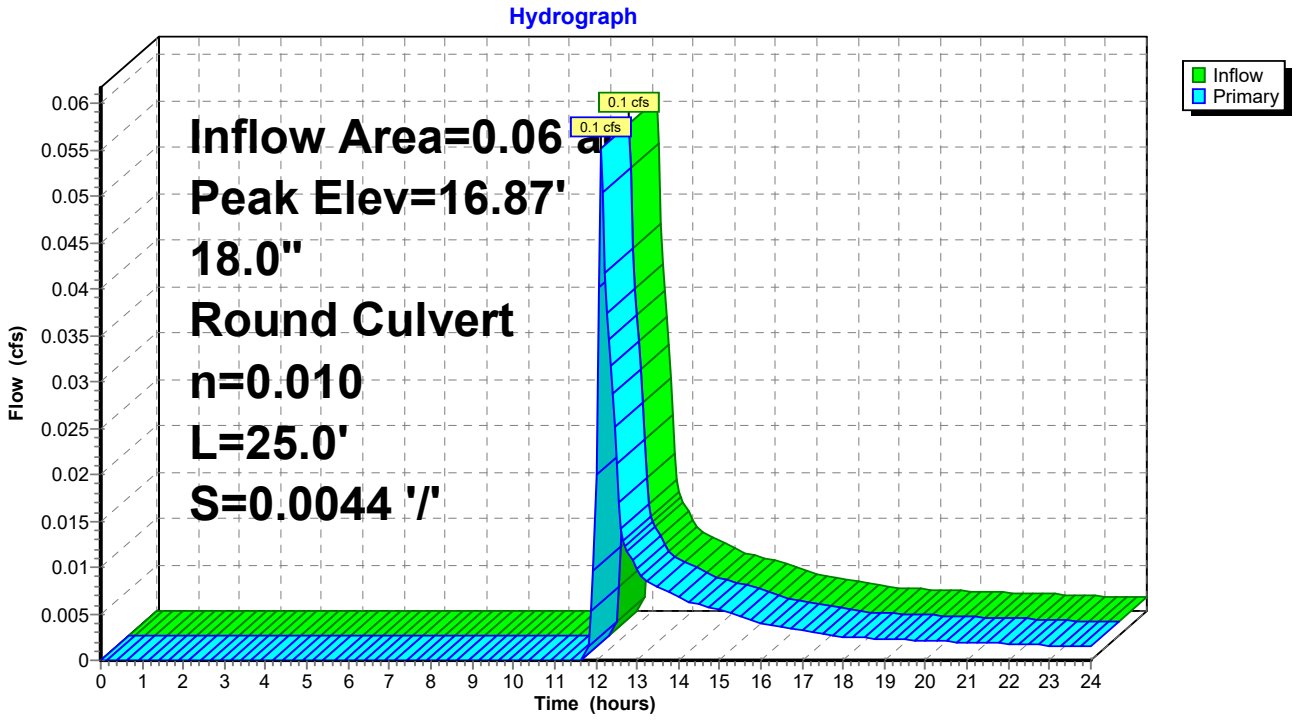
Inflow Area = 0.06 ac, 17.99% Impervious, Inflow Depth > 1.04" for 25-Year Storm event
Inflow = 0.1 cfs @ 12.11 hrs, Volume= 0.005 af
Outflow = 0.1 cfs @ 12.11 hrs, Volume= 0.005 af, Atten= 0%, Lag= 0.0 min
Primary = 0.1 cfs @ 12.11 hrs, Volume= 0.005 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 16.87' @ 12.11 hrs
Flood Elev= 25.38'

Device	Routing	Invert	Outlet Devices
#1	Primary	16.75'	**18.0" Round Culvert** L= 25.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 16.75' / 16.64' S= 0.0044 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=0.1 cfs @ 12.11 hrs HW=16.87' TW=16.65' (Dynamic Tailwater)
1=Culvert (Barrel Controls 0.1 cfs @ 1.30 fps)

Pond 24P: Ex DMH2



Summary for Pond 26P: DMH5

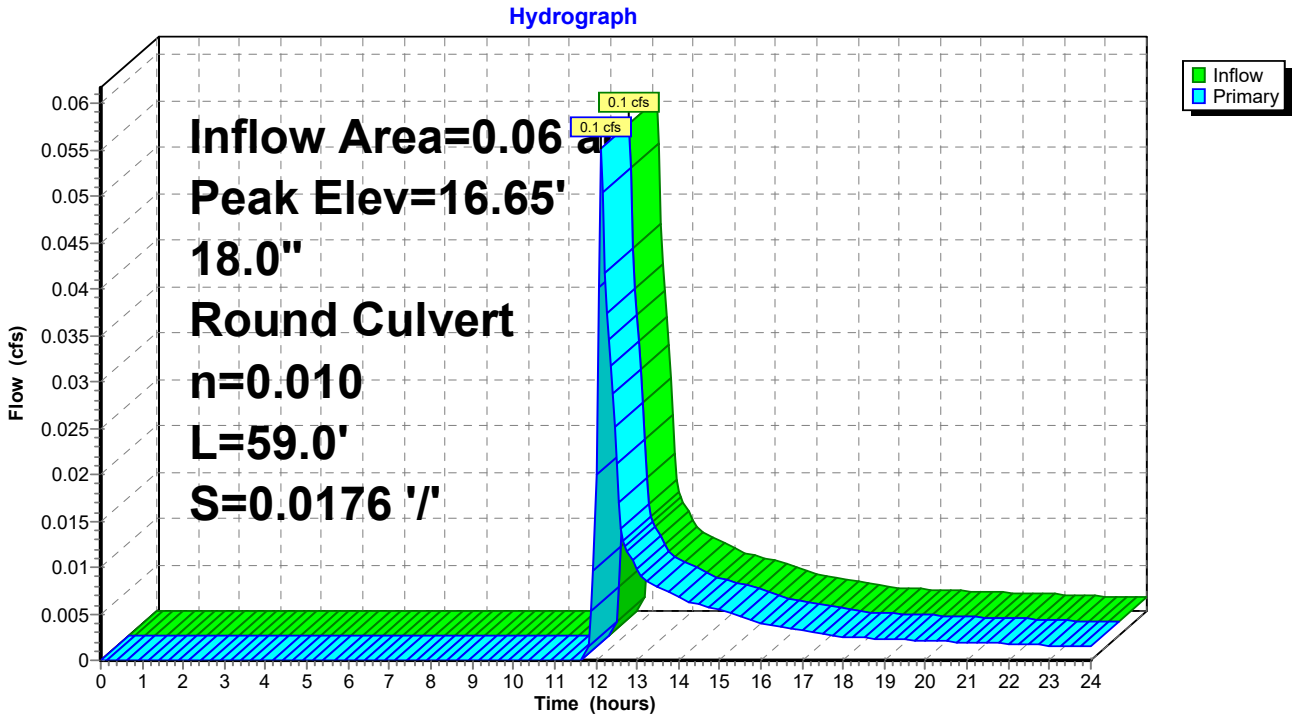
Inflow Area = 0.06 ac, 17.99% Impervious, Inflow Depth > 1.04" for 25-Year Storm event
Inflow = 0.1 cfs @ 12.11 hrs, Volume= 0.005 af
Outflow = 0.1 cfs @ 12.11 hrs, Volume= 0.005 af, Atten= 0%, Lag= 0.0 min
Primary = 0.1 cfs @ 12.11 hrs, Volume= 0.005 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 16.65' @ 12.11 hrs
Flood Elev= 25.90'

Device	Routing	Invert	Outlet Devices
#1	Primary	16.54'	**18.0" Round Culvert** L= 59.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 16.54' / 15.50' S= 0.0176 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=0.1 cfs @ 12.11 hrs HW=16.65' TW=15.57' (Dynamic Tailwater)
1=Culvert (Inlet Controls 0.1 cfs @ 0.90 fps)

Pond 26P: DMH5



Summary for Pond 27P: DMH10

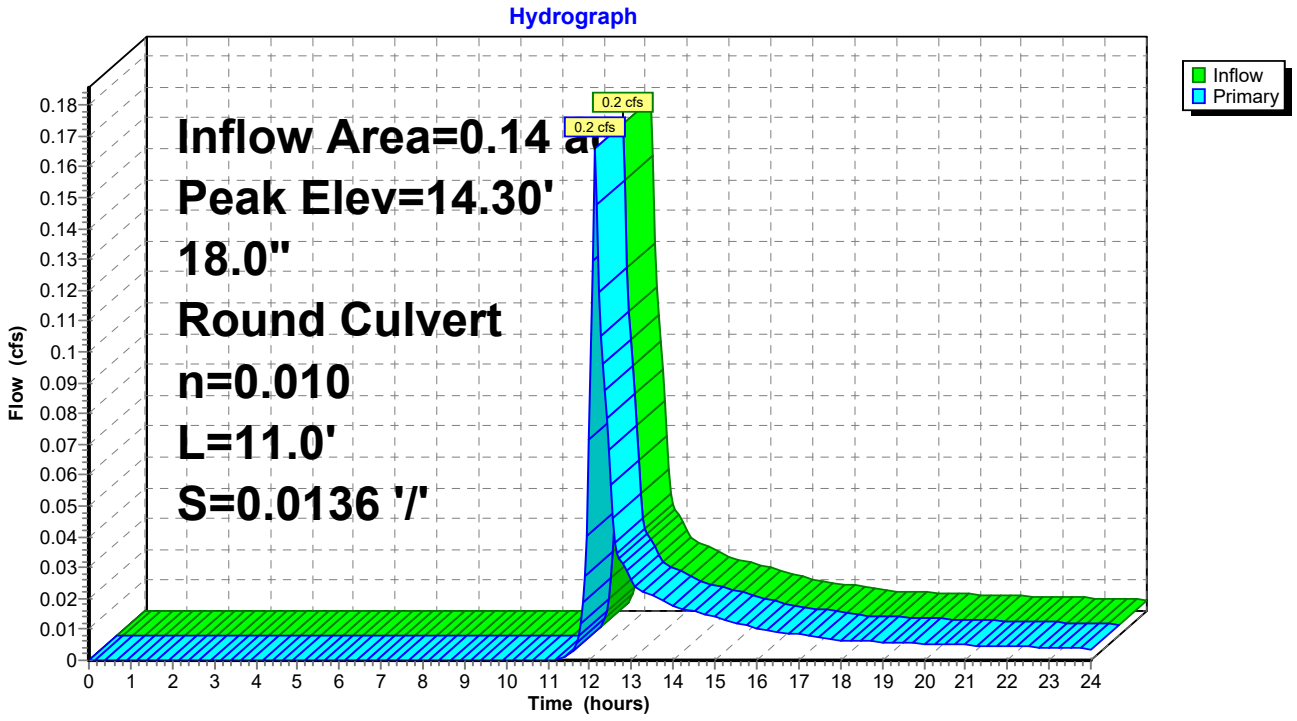
Inflow Area = 0.14 ac, 23.10% Impervious, Inflow Depth > 1.25" for 25-Year Storm event
Inflow = 0.2 cfs @ 12.11 hrs, Volume= 0.014 af
Outflow = 0.2 cfs @ 12.11 hrs, Volume= 0.014 af, Atten= 0%, Lag= 0.0 min
Primary = 0.2 cfs @ 12.11 hrs, Volume= 0.014 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 14.30' @ 12.11 hrs
Flood Elev= 24.17'

Device	Routing	Invert	Outlet Devices
#1	Primary	14.10'	**18.0" Round Culvert** L= 11.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 14.10' / 13.95' S= 0.0136 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=0.2 cfs @ 12.11 hrs HW=14.30' TW=0.00' (Dynamic Tailwater)
1=Culvert (Inlet Controls 0.2 cfs @ 1.19 fps)

Pond 27P: DMH10



Summary for Pond 29P: Ex DMH4

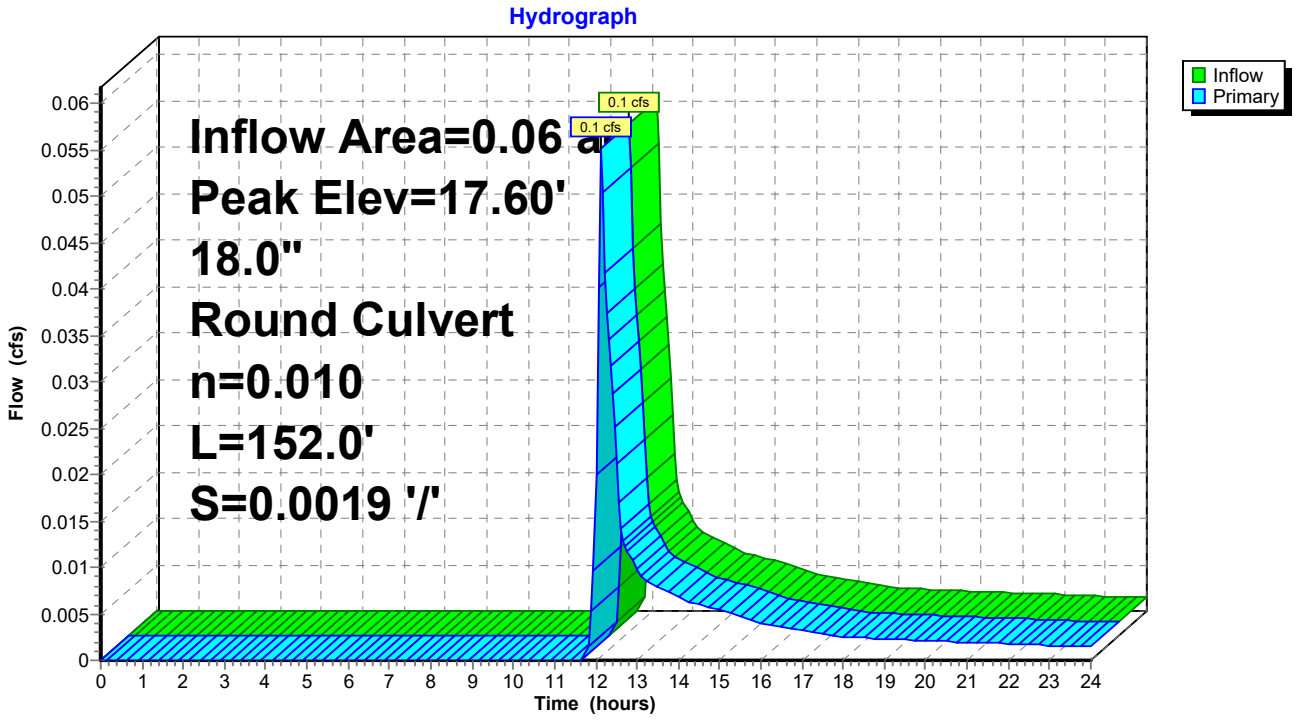
Inflow Area = 0.06 ac, 17.99% Impervious, Inflow Depth > 1.04" for 25-Year Storm event
Inflow = 0.1 cfs @ 12.11 hrs, Volume= 0.005 af
Outflow = 0.1 cfs @ 12.11 hrs, Volume= 0.005 af, Atten= 0%, Lag= 0.0 min
Primary = 0.1 cfs @ 12.11 hrs, Volume= 0.005 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 17.60' @ 12.11 hrs
Flood Elev= 23.44'

Device	Routing	Invert	Outlet Devices
#1	Primary	17.46'	**18.0" Round Culvert** L= 152.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 17.46' / 17.17' S= 0.0019 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=0.1 cfs @ 12.11 hrs HW=17.59' TW=17.25' (Dynamic Tailwater)
1=Culvert (Barrel Controls 0.1 cfs @ 1.05 fps)

Pond 29P: Ex DMH4

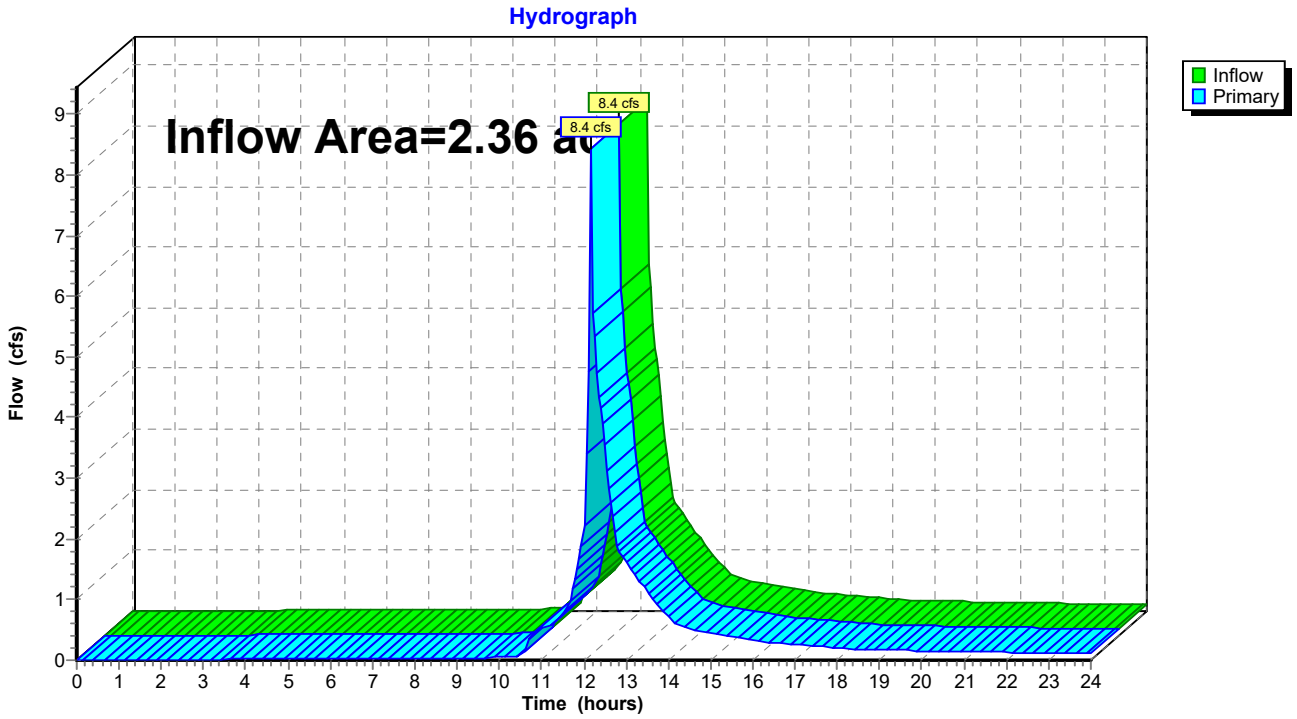


Summary for Link SP1: Forest Ave Storm Drain

Inflow Area = 2.36 ac, 72.31% Impervious, Inflow Depth > 3.49" for 25-Year Storm event
Inflow = 8.4 cfs @ 12.15 hrs, Volume= 0.687 af
Primary = 8.4 cfs @ 12.15 hrs, Volume= 0.687 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link SP1: Forest Ave Storm Drain

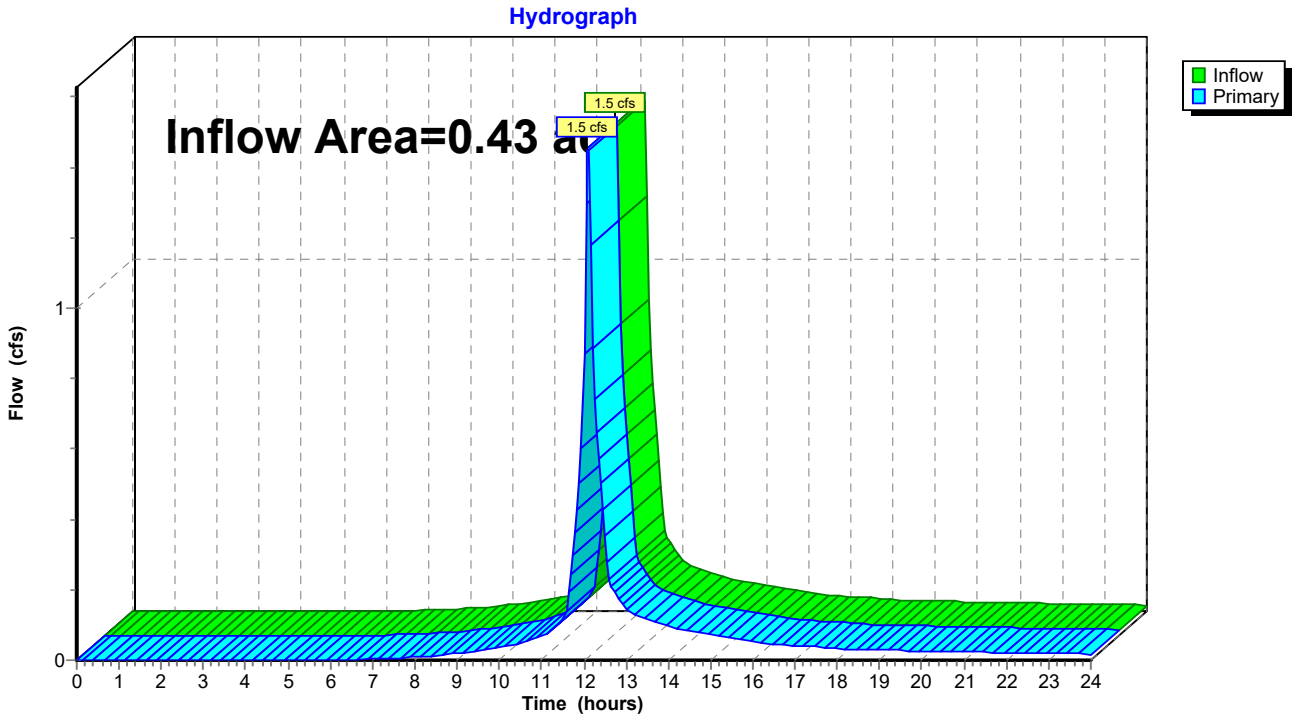


Summary for Link SP2: Combined Sewer

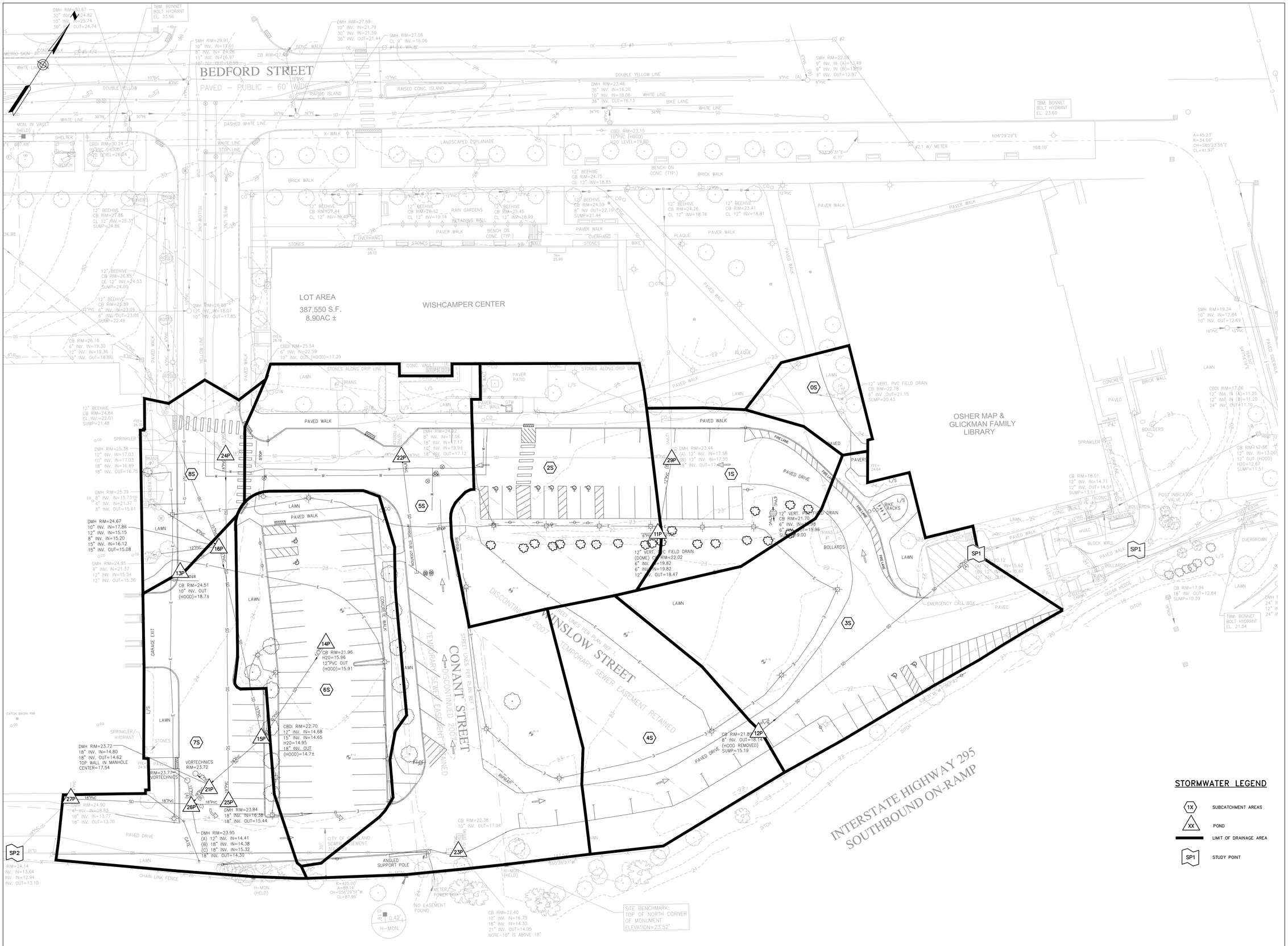
Inflow Area = 0.43 ac, 57.64% Impervious, Inflow Depth > 3.05" for 25-Year Storm event
Inflow = 1.5 cfs @ 12.09 hrs, Volume= 0.109 af
Primary = 1.5 cfs @ 12.09 hrs, Volume= 0.109 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link SP2: Combined Sewer



APPENDIX D: FIGURES



UNIVERSITY OF SOUTHERN MAINE

25 Bedford Street, Portland, ME 04104
207.712.5183 | USM.MAINE.EDU

PROJECT TEAM:

CLIENT
UNIVERSITY OF SOUTHERN MAINE

PRIME CONSULTANT
& STRUCTURAL ENGINEER

DESMAN Design Management

18 Tremont Street #300
Boston, MA 02108

ARCHITECT
WINTON-SCOTT ARCHITECTS

5 MILK STREET
PORTLAND, ME 04101

CIVIL ENGINEER
WOODARD & CURRAN

41 HUTCHINS DRIVE
PORTLAND, ME 04102

LANDSCAPE ARCHITECT
MICHAEL BOUCHER LANDSCAPE ARCHITECTURE

457 US ROUTE 1 SUITE 2
FREEPORT, ME 04032

MEP/FP ENGINEER
ALLIED ENGINEERING

160 VERANDA STREET
PORTLAND, ME 04103

GEOTECHNICAL ENGINEER
S.W. COLE

286 PORTLAND ROAD
GREY, ME 04039

TRAFFIC ENGINEER
VANASSE HANGEN BRUSTLIN INC

40 IDX DR 100 #200, SOUTH
BURLINGTON, VT 05403

COST ESTIMATOR
PREFERRED CONSTRUCTION MGMT

94 AUBURN ST,
PORTLAND, ME 04103

SEAL / SIGNATURE

© DESMAN, Inc.
2021

PROJECT:

USM - Structured Parking Garage

Address

44 Bedford Street,
Portland ME 04104

REVISIONS:

No.	Date	Description

SUBMISSIONS:

Date	Issued For:
07/12/21	Schematic Design Progress Set

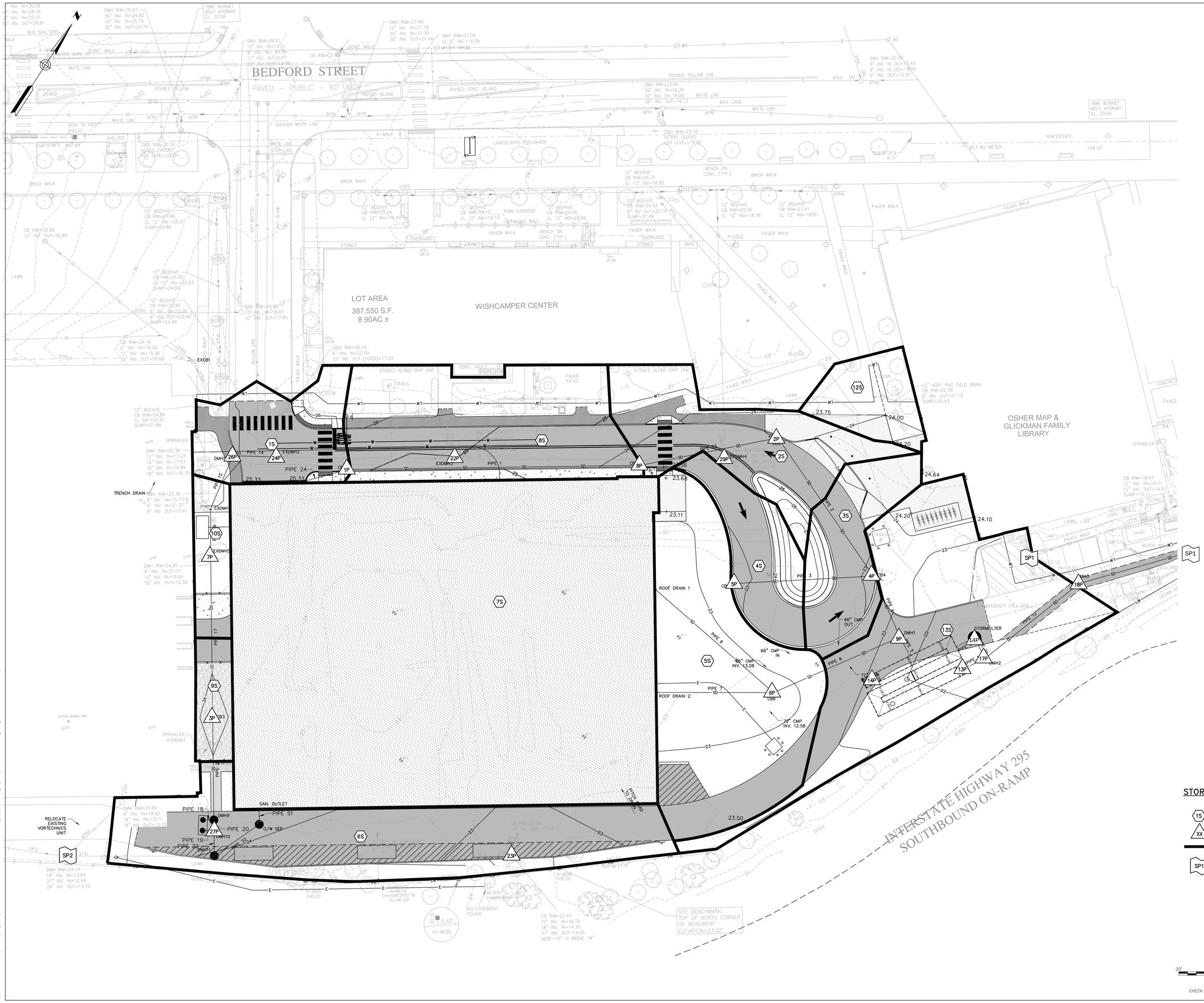
SCALE	**1"=20'**
DATE ISSUED	**JULY 2021**
PROJECT NO	**20-20145.00-1**
DRAWN BY	**B.C.M.**
CHECKED BY	**A.E.F.**

SHEET TITLE:

PRE DEVELOPMENT

PRE

\\vessbsdcurran.net\Shared\Projects\20230535.00 USM - Falmouth Street Garage\wip\Drawings\Civil\20230535.00 SW Figs.dwg, Jul 16, 2021 - 3:25pm JCOWLEY



\\woodardcurran.net\Shared\Projects\02\233035.00 USM - Falmouth Street Garage\wip\Drawings\Civil\233035.00 SW Fig4.dwg, Jul 16, 2021 - 3:24pm, JCONLEY

UNIVERSITY OF SOUTHERN MAINE

25 Bedford Street, Portland, ME 04104
207.712.5183 | USM.MAINE.EDU

PROJECT TEAM:

CLIENT
UNIVERSITY OF SOUTHERN MAINE

PRIME CONSULTANT
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COST ESTIMATOR
PREFERRED CONSTRUCTION MGMT

94 AUBURN ST,
PORTLAND, ME 04103

SEAL / SIGNATURE

© DESMAN, Inc.
2021

PROJECT:

USM - Structured Parking Garage

Address

44 Bedford Street,
Portland ME 04104

REVISIONS:

No.	Date	Description

SUBMISSIONS:

Date	Issued For:
07/12/21	Schematic Design Progress Set

SCALE	**1"=20'**
DATE ISSUED	**JULY 2021**
PROJECT NO	**20-20145.00-1**
DRAWN BY	**B.C.M.**
CHECKED BY	**A.E.F.**

SHEET TITLE:

POST DEVELOPMENT

POST

[redacted]

WOODARD &CURRAN

woodardcurran.com

COMMITMENT & INTEGRITY DRIVE RESULTS

September 10, 2021

Mr. Matthew Grooms
City of Portland
389 Congress Street, 4th floor
Portland, Maine 04101

Re: Application for Traffic Movement Permit Modification
University of Southern Maine
Portland, Maine

Dear Matthew,

On behalf of University of Southern Maine (applicant), VHB is pleased to submit this Traffic Movement Permit Modification Application detailing the relocation of the parking garage that was previously permitted as part of Project ID PL-001040-2020. The previous approval for a student center and residential hall included a parking garage with access on Falmouth Street. In response to feedback from the surrounding neighborhood and a parking garage site selection process, this modification application seeks approval for relocation of the parking garage south of Bedford Street in Portland.

We have attached the following information in support of this application:

- Updates to Sections 1-7
- Signed Modification Application Form
- Notice of Intent to File
- List of Abutters

As the $500 application fee will be sent to you separately, please advise an appropriate address. We look forward to scheduling a meeting in the near future.

Very truly yours,

Jennifer Conley, PE, PTOE
Director, Transportation Systems
Jconley@vhb.com

Engineers | Scientists | Planners | Designers

500 Southborough Drive
Suite 105B
South Portland, Maine 04106
P 207.889.3150
F 207.253.5596

DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING DIVISION

ID#:_____
Fees Paid:_____
Date Received:_____

APPLICATION FOR TRAFFIC MOVEMENT PERMIT MODIFICATION

This form shall be used to request approval of minor changes to: (a) project design or operation; or (b) the conditions of a permit as previously approved by the Department of Transportation or the Department of Environmental Protection.

A processing fee of $500.00 (check payable to Treasurer, State of Maine) is required at the time of application submittal.

If significant changes are proposed, then a complete new or amendment application may be required by the Department.

(Please type or print)

Name of Applicant: University of Southern Maine

Address: 37 College Avenue, Gorham, ME 04038

Telephone Number: (207) 780-4585

Name of Contact or Agent: Aaron Witham

Telephone Number: (207) 780-5947

LOCATION OF ACTIVITY

Name of Project: University of Southern Maine Residence Hall, Student Center and Parking Garage

Municipality or Township: Portland County: Cumberland

REQUIRED INFORMATION

1. Existing DOT or DEP Permit Number: PL-001040-2020

2. DOT or DEP Project Manager for previous application (if known): Matthew Grooms

3. Description of Proposed Change: Prior approval of a Residential Hall and Student Center included a location for a parking garage with access and egress to Falmouth Street. In response to feedback from the community and a site selection process, the parking garage site was relocated to a site with access and egress to Bedford Street.

(Attach additional sheet(s), if necessary)

4. Provide all documentation necessary to support the proposed change. This documentation shall include, as appropriate, revised site plans, construction drawings and technical data. (If you are unsure of what information to include, please contact the original DOT or DEP project manager, or the Traffic Engineering Division.

5. Does your proposal involve a significant expansion of the project, change the nature of the project, or modify any Department findings with respect to any licensing criteria? no (if you are unsure how to answer this or if your answer is "yes", please contact the original DOT or DEP project manager, or the Division of Land Resource Regulation in either Portland, Augusta, or Bangor for assistance).

If yes, you must provide public notice (see attached form). By signing this application, you certify that the completed notice has been sent by certified mail to abutters and municipal officials; and has been published once in a newspaper circulated in the area where the project is located.

NOTE: All supporting documents summarized above must be attached to this form and sent to the nearest appropriate DOT Office located below: File the modification "Attention Division Traffic Engineer" in the appropriate Division office.

MDOT Division P.O. Box 1178 41 Rice Street Presque Isle, ME 04769 Tel: (207) 764-2060	MDOT Division 2 P.O. Box 539 High Street Ellsworth, ME 04605 Tel: (207) 667-5556	MDOT Division 3 P.O. Box 1208 219 Hogan Road Bangor, ME 04402-1208 Tel: (207) 941-4500
MDOT Division 4 Route 201 10 Mountain Ave. Fairfield, ME 04937 Tel: (207) 453-7377	MDOT Division 5 143 Rankin St. P.O. Box 566 Rockland, ME 04841 Tel: (207) 596-2230	MDOT Division 6 P.O. Box 1940 Portland, ME 04104 Tel: (207) 883-5546
MDOT Division 7 P.O. Box 817 Dixfield, ME 04224-0683 Tel: (207) 562-4228		

"I certify under penalty of law that I have personally examined the information submitted in this document and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the information is true, accurate, and complete I authorize the Department to enter the property that is the subject of this application, at reasonable hours, including buildings, structures or conveyances on the property, to determine the accuracy of any information provided herein. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment".

Aaron Witham .....DATE: 09-09-2021

SIGNATURE OF APPLICANT

Aaron Witham

PRINT OR TYPED NAME

Director of Sustainability, USM

TITLE

THE APPLICATION FEE IS DUE AT THE TIME OF APPLICATION SUBMITTAL. THE APPLICATION WILL NOT BE PROCESSED UNTIL THIS FEE IS PAID.

1/2000

CERTIFICATION

The traffic engineer responsible for preparing this application and/or attaching pertinent site and traffic information hereto, by signing below, certifies that the application for traffic approval is complete and accurate to the best of his/her knowledge.

Signature: Jennifer Conley Re/Cert/Lic No.: 15652

Name (print): Jennifer Conley

Date: September 3, 2021

If the signature below is not the applicant's signature, attach letter of agent authorization signed by applicant.

"I certify under penalty of law that I have personally examined the information submitted in this document and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the information is true, accurate, and complete. I authorize the Department to enter the property that is the subject of this application, at reasonable hours, including buildings, structures or conveyances on the property, to determine the accuracy of any information provided herein. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

Aaron Witham 09-09-2021

Signature of applicant Date

FORM C 7/97

NOTICE OF INTENT TO FILE

Please take notice that

University of Southern Maine
96 Falmouth St
Portland, ME 04103

is intending to file a Traffic Movement Permit application with the Maine Department of Transportation pursuant to the provisions of 23 M.R.S.A. § 704 - A on or about September 7, 2021.

The application is for the relocation of a parking garage previously approved as part of the development of a residential hall and student center on the University of Southern Maine campus in Portland. In response to feedback from the neighboring community and a parking garage site evaluation, the originally proposed parking garage located adjacent to the Sullivan Gymnasium Complex was shifted to a site adjacent to the existing parking garage south of Wishcamper Center. Construction of the parking garage, residential hall, and student center is anticipated to be completed and occupied in 2023. The project, as was previously approved, is anticipated to generate up to 160 AM peak hour and 160 PM peak hour trips based on ITE Trip Generation, 10th Edition, estimates for the forecasted enrollment out to 2028. The project site is adjacent to the Wishcamper Center, Glickman Family and Osher Map Libraries, and existing parking garage on Bedford Street at the following location:

Tax Map/Lot No. 114 A001
44 Bedford Street
Portland, ME 04101

A request for a public hearing must be received by the Department, in writing, no later than 20 days after the application is found by the Department to be complete and is accepted for processing. Public comment on the application will be accepted throughout the processing of the application.

The application will be filed for public inspection at the Department of Transportation Division office (Presque Isle, Ellsworth, Bangor, Fairfield, Rockland, Scarborough or Dixfield) during normal working hours. A copy of the application may also be seen at the City of Portland offices in Portland, Maine.

Written public comments may be sent to the following address: Attention Matthew Grooms, Planning Department, City of Portland, 289 Congress Street, Portland, ME 04101.

Abutters List

Name	Address			
15 BAXTER BOULEVARD LLC	PO BOX 255	BRUNSWICK	ME	04011
343 LLC	PO BOX 66749	FALMOUTH	ME	04105
BAXTER 43 HOLDINGS LLC	712 MAIN ST	RICHMOND	ME	04357
BAYVIEW COURT LLC	ONE CITY CENTER 4TH FL	PORTLAND	ME	04101
MAUREEN BYRNE	11 GLENN LN	YORK	ME	03909
PETER CALLNAN	25 WASHBURN ST	PORTLAND	ME	04101
HAROLD COZENS	16 CHAMBERLAIN AVE	PORTLAND	ME	04101
CPORT CREDIT UNION	PO BOX 777	PORTLAND	ME	04104
SEAN DOWLING	1209 N TAFT ST # C	ARLINGTON	VA	22201
MICHAEL ELING	23 CHAMBERLAIN AVE	PORTLAND	ME	04101
DANIEL FINK	35 WASHBURN AVE	PORTLAND	ME	04101
DAWN GAY	8 CHAMBERLAIN AVE	PORTLAND	ME	04101
HANNAFORD BROS CO #351C	PO BOX 1000	PORTLAND	ME	04104
ANNE HEELAN	7 WASHBURN AVE	PORTLAND	ME	04101
ADAM MOSES	24 CHAMBERLAIN AVE	PORTLAND	ME	04101
OAKHURST DAIRY	364 FOREST AVE	PORTLAND	ME	04101
JOHN OGOREK	20 CHAMBERLAIN AVE	PORTLAND	ME	04101
PALMER SPRING CO	PO BOX 8009	PORTLAND	ME	04104
GEORGIA PORTER	29 WASHBURN AVE	PORTLAND	ME	04101
PORTLAND HOUSING AUTHORITY	14 BAXTER BLVD	PORTLAND	ME	04101
AMANDA POWELL	4 CHAMBERLAIN AVE	PORTLAND	ME	04101
DEBRA SMITH	3 WASHBURN AVE	PORTLAND	ME	04101
JOHN STEVENS	29 CHAMBERLAIN AVE	PORTLAND	ME	04101
EVAN THOMAS	34 CHAMBERLAIN AVE	PORTLAND	ME	04101
LISA TUPPER	30 CHAMBERLAIN AVE	PORTLAND	ME	04101
UNIVERSITY OF MAINE	107 MAINE AVE	BANGOR	ME	04401
UNIVERSITY OF MAINE SYSTEM	96 FALMOUTH ST	PORTLAND	ME	04103
UNIVERSITY OF MAINE SYSTEM	5703 ALUMNI HALL	ORONO	ME	04469
UNIVERSITY OF MAINE SYSTEM	107 MAINE AVE	BANGOR	ME	04401

Abutters List

Name	Address			
UNIVERSITY OF MAINE SYSTEM CHIEF FINANCIAL OFFICER	PO BOX 9300	PORTLAND	ME	04104
UNIVERSITY OF MAINE THE	107 MAINE AVE	BANGOR	ME	04401
KATHERINE URBANEK	PO BOX 66749	FALMOUTH	ME	04105
LUCAS WALKER	21 WASHBURN AVE	PORTLAND	ME	04101
PETER WEED	33 CHAMBERLAIN AVE	PORTLAND	ME	04101
TROY WILKINS	PO BOX 3891	PORTLAND	ME	04104
WILLIAM C ROWELL FAMILY LIMITED PARTNERSHIP	PO BOX 3615	PORTLAND	ME	04104

Section 1

Site and Traffic Information

1.A. Site Description and Site Plan

A modification to the original Traffic Movement Permit (TMP) for Project ID PL-001040-2020 is being pursued based on change to the proposed location of the multi-level parking garage intended to provide parking for the residence hall and student center that were permitted originally. The sites for the residence hall and student center remain as described in the original permit, located on the block between Bedford Street, Brighton Avenue, Falmouth Street, and Durham Street (Tax Map/Lot No. 114A).

The project site for the proposed parking garage is located at 44 Bedford Street (Tax Map/Lot No. 114 A001), in the area south of the Wishcamper Center and north of the I-295 corridor. The site is owned by the University of Southern Maine and is proposed to provide parking for the residence hall and student center permitted in the original TMP. The site and boundary surveys, as well as the proposed site plan are included in Attachment 1A. The garage site that was described in the original TMP is no longer applicable.

1.B. Existing and Proposed Site Uses

The existing and proposed uses for the residence hall and student center sites remain the same as previously permitted. The existing use of the proposed parking garage site is surface parking adjacent to the Wishcamper Center, Glickman Family and Osher Map Libraries, and the existing parking garage. The proposed multi-level parking facility will provide up to 650 parking spaces. Proposed garage access will be from Bedford Street with traffic entering via Winslow Street and exiting through the existing garage to Surrenden Street.

1.C. Regional Mapping

No Change

1.D. Proposed Uses in the Vicinity of the Proposed Development

No Change

1.E. Trip Generation

The trip generation remained consistent with the previously approved TMP and was calculated based on the Institute of Transportation Engineers (ITE) publication, Trip Generation, 10th edition.

		Trip Generation - Proposed Site[1]
Weekday AM Peak Hour	Enter	125
	Exit	35
	Total	160
Weekday PM Peak Hour	Enter	51
	Exit	109
	Total	160

1 Trip Generation based on ITE 10th Edition, LUC 550, University/College (1,066 Students).

1.F. Trip Distribution

The regional trip distribution patterns remained consistent with the previously approved TMP, as outlined below. The distribution of the site related traffic was based on USM Portland student zip code information assuming the University will continue to draw from similar geographic areas.

Most site trips are anticipated to be generated to and from the south on Forest Avenue with 46 percent of traffic oriented to and from I-295 and an additional seven percent oriented to and from downtown Portland and parts of South Portland. The next sources of trips are 30 percent to and from Brighton Avenue and 14 percent to and from points north via Forest Avenue. Minor percentages access USM from Preble Street (two percent) and Deering Avenue points south (one percent).

1.G. Trip Assignment

The trips associated with increased enrollment and previously oriented to and from the garage site on Falmouth Street are now anticipated to derive to and from the proposed multi-level parking garage off Bedford Street. As such, the trips previously assigned to the driveway on Falmouth Street were redistributed to the Winslow Street entrance and from the Surrenden Street exit of the proposed garage site. The trips are now assigned to and from the proposed garage site following the likely path to and from the respective student zip codes. The resulting site trip reassignment is depicted in Attachment 1B.

Attachments

Attachment 1A – Site survey, Proposed site plans

Attachment 1B –Trip generation calculations, site trip diagrams

Section 2

Traffic Crashes

No changes

Section 3

Development Entrances and Exits

3.A Entrance and Exit Locations

The sites for the residence hall and student center previously approved remain unchanged. As such, the driveway locations and anticipated entering and exiting travel patterns to and from these facilities remain largely the same as previously outlined in the approved TMP. Any anticipated shift in travel patterns surrounding the residence hall and student center will result from the relocation of the parking garage from the site adjacent to Sullivan Gymnasium Complex to the site adjacent to the existing parking garage. It is anticipated that access between the residence hall or student center and the proposed garage will concentrate non-motorized travel to Bedford Street.

The proposed multi-level parking garage site is located off Bedford Street between Wishcamper Center, Glickman Family and Osher Map Libraries, and the existing parking garage. The current access to the garage site is provided via Winslow Street. Winslow Street facilitates vehicles entering and exiting the current surface parking areas and drop off locations behind Wishcamper and the libraries, as well as vehicles exiting the existing parking garage. It is proposed that the access to the garage site along Bedford Street will shift to circulate vehicles entering the parking garages via Winslow Street and vehicles exiting the parking garages via Surrenden Street. Both Winslow Street and Surrenden Street will remain two-way facilities to provide access to local driveways, parking, and drop-off locations.

The change in circulation for access and egress to the proposed and existing parking garages, as well as the anticipated concentration of non-motorized activity along and across Bedford Street, will compel improvements to the Bedford Street corridor in the vicinity of the Surrenden Street and Winslow Street intersections. The proposed improvements for vehicular traffic include the addition of a westbound left turn lane on Bedford Street to process vehicles entering the parking garages at Winslow Street, reconfiguration of Winslow Street to two lanes southbound to process the queues entering the garages, reconfiguration of Surrenden Street to two lanes northbound with dedicated left and right turn lanes to process vehicles exiting the garages, and raised median islands along the corridor to channelize traffic and encourage slower speeds. From a non-vehicular standpoint, improvements along Bedford Street include maintenance of full width bike lanes in both directions, a pedestrian bump-out to narrow the pedestrian crossing at Winslow Street, relocation and improvement of the three existing crosswalks to locations with new raised median islands for mid-crossing pedestrian refuge and enhancement such as raised crosswalks and rectangular rapid flashing beacons(RRFBs), the addition of a new crosswalk, and compliant ramps and connections to the new crossing locations.

Attachment 3 provides a conceptual plan for the proposed improvements on Bedford Street, Winslow Street, and Surrenden Street.

3.B Plan View

Attachment 1A of Section 1 shows the proposed site plan. As shown, the site fronts onto Winslow Street with access via Bedford Street. Attachment 3 shows all intersection roads, speed limits, and sight distances for each entrance/exit.

3.C Stopping Sight Distances

The access points to and from the garage are located on minor roadways with low traffic volumes and traveling speeds. In both cases (entry and exit), the proposed garage is sharing an access with the existing garage with a configuration that the garage access is a continuation of the main roadway and not intersecting with it.

3.D Entrance/Exit Compliance with Design Requirements

As indicated above, the entrances and exits are designed as continuations of through roadways and not as driveway entrances. As such, the criteria specified in the MaineDOT's Chapter 299 Highway Driveway and Entrance Rules is not applicable.

Section 4

Title, Right, or Interest

4.A Evidence of Title, Right, or Interest

The proposed development is located on property owned by the Applicant and identified as Tax Map 114A Lot A-1. Attached are copies of the deeds associated with this property.

- Deed, dated September 11, 2006, Cumberland County Registry of Deeds, Book 24387, Pg 261.
- Deed, dated December 16, 2011, Cumberland County Registry of Deeds, Book 29219, Pg 218.

Section 5

Public or Private Right-of-Way

5.A Public or Private Rights-of-Way

The site is proposed to be accessed as described in Section 3. No additional public or private rights of way are proposed.

Section 6

Schedule

6.A Schedule

Construction of the residence hall and student center is underway with anticipated opening in Summer 2023. The proposed parking garage project is planned to be constructed in coordination with the ongoing projects, with anticipated construction beginning in 2022 and completed in 2023.

LUTHER BONNEY HALL

BASEMENT ENTRANCE

MASTERTON HALL

ABROSOM COMMUNITY EDUCATION CENTER

BEDFORD STREET
PAVED – PUBLIC – 60' WIDE

WISHCAMPER CENTER

LOT AREA
387,550 S.F.
8.90AC ±

TAX MAP 114-A-2

OSHER MAP & GLICKMAN FAMILY LIBRARY

MATCH LINE SHEET 2

CHAMBERLAIN AVENUE
PAVED–PUBLIC–50'WIDE

SURRENDEN STREET
PAVED–PUBLIC–66'WIDE

WASHBURN AVENUE
PAVED–PUBLIC

PARKING GARAGE

WINSLOW STREET
DISCONTINUED 2007 – TEMPORARY SEWER EASEMENT RETAINED

CONANT STREET
DISCONTINUED 2007 – TEMPORARY SEWER EASEMENT RETAINED

INTERSTATE HIGHWAY 295
SOUTHBOUND ON-RAMP

NOTE: THIS PORTION OF SURRENDEN STREET DISCONTINUED FEB. 27, 2003

CITY OF PORTLAND UTILITY EASEMENT – SEE 19739/130
PORTLAND WATER DISTRICT EASEMENT – SEE 19364/95
NORTHERN UTILITIES NATURAL GAS EASEMENT – SEE 20781/344

UTILITY NOTE

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

SCALE : 1" = 30'
0' 15' 30' 60'

PLAN REFERENCES

1. "BOUNDARY & TOPOGRAPHIC PLAN ON BEDFORD STREET, USM CAMPUS, PORTLAND, MAINE MADE FOR WOODARD & CURRAN, INC." SEPTEMBER 08, 2005 REV. 5 11–02–06 BY OWEN HASKELL, INC.

2. MAINE STATE HIGHWAY COMMISSION RIGHT OF WAY MAP, STATE HIGHWAY '295', PORTLAND, CUMBERLAND COUNTY, S.H.C. FILE NO. 3–185. SHEETS 57 REVISED AND 61

3. "BOUNDAY & TOPOGRAPHIC SURVEY, USM PORTLAND CAMPUS, 96 FALMOUTH STREET, PORTLAND, MAINE MADE FOR OAK POINT ASSOCIATES," NOV. 12, 2019 BY OWEN HASKELL, INC., OHI JOB# 2019–244 P.

GENERAL NOTES

1. OWNER OF RECORD: UNIVERSITY OF MAINE
TAX MAP 114 BLOCK A LOT 1 and LOT 2
BOOK 29219 PAGE 218
BOOK 24387 PAGE 258
BOOK 34066 PAGE 29

2. BEARINGS ARE BASED ON MAINE STATE PLANE COORDINATE SYSTEM, WEST ZONE, NAD 83 PER COORDINATE DATA PROVIDED BY THE CITY OF PORTLAND DEPARTMENT OF PUBLIC WORKS.

3. ELEVATIONS ARE BASED ON CITY OF PORTLAND DATUM, NGVD 29. BENCHMARK UTILIZED IS A COPPER BOLT IN 3 FOOT OFFSET MONUMENT LOCATED AT THE SOUTHWEST CORNER OF THE BRIGHTON AVENUE AND FALMOUTH STREET INTERSECTION.

SAMUEL D. GLIDDEN, PLS #2520

REV.	DATE	DESCRIPTION
1	4-30-2021	SURVEYED ADDITIONAL AREAS

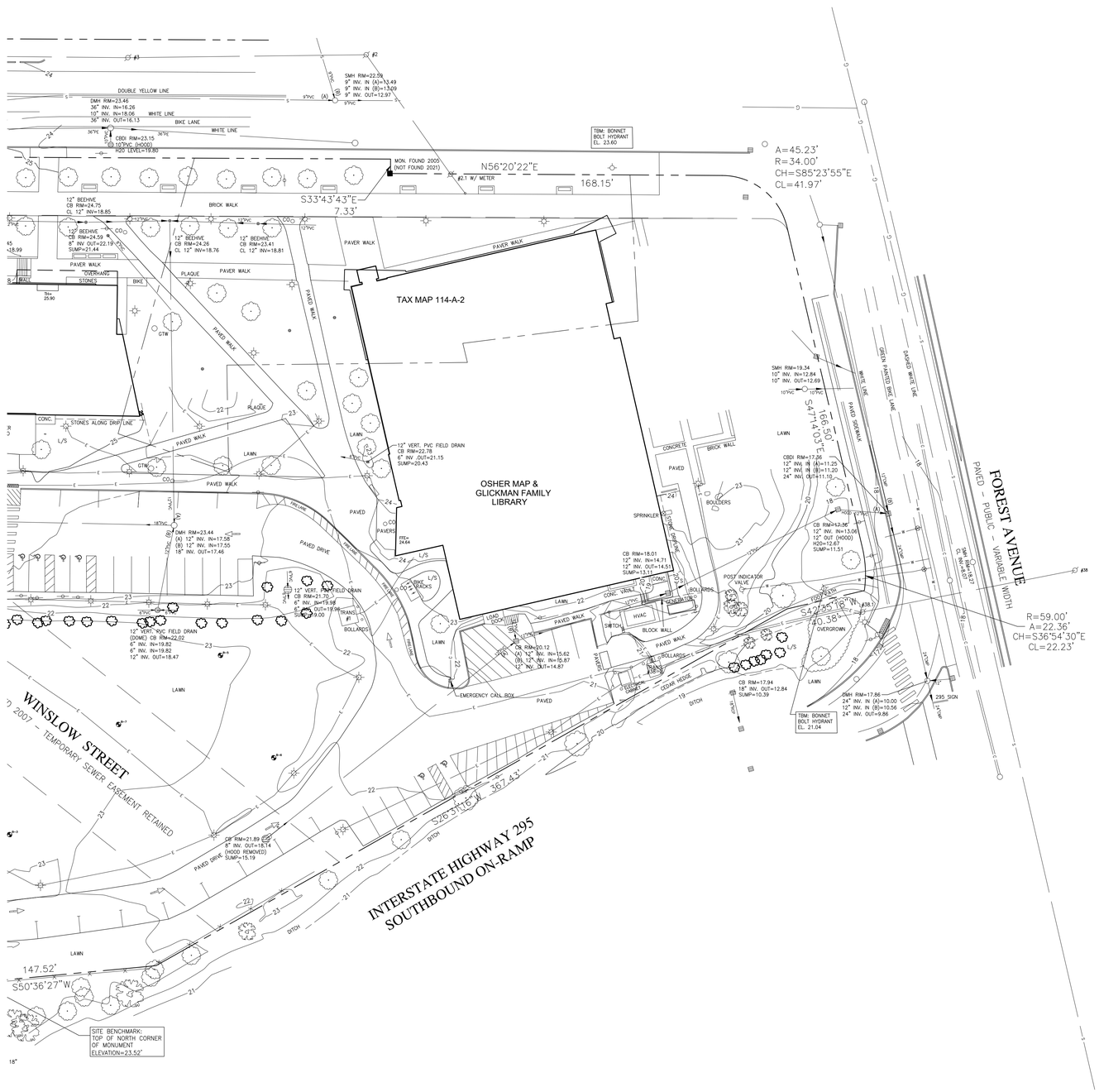
Existing Conditions Survey

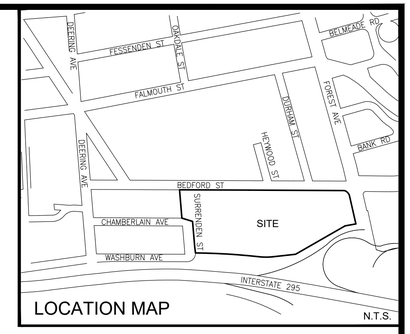
USM Portland - Wishcamper Lot
Portland, Maine
Made for
Woodard & Curran
41 Hutchins Drive, Portland, Maine

OWEN HASKELL, INC.
PROFESSIONAL LAND SURVEYORS
390 US ROUTE 1, UNIT 10, FALMOUTH, ME 04105 TEL. 207-774-0424

DRAWN BY: SDG / JLW	DATE: JAN. 27, 2019	JOB NO. 2019-267 P	
CHECKED BY: SDG	SCALE: 1" = 30'	DRWG. NO. 1 OF 2	

MATCH LINE SHEET 1





LEGEND

●	IRON PIPE OR ROD FOUND	-X-X-	FENCE
■	MONUMENT FOUND	═══	CURB
	UTILITY POLE	- - - -	OVERHEAD WIRES
	MANHOLE	E	UNDERGROUND POWER
E G	ELECTRIC/GAS METER	C	COMMUNICATION
	SIGN	W	WATER LINE
	CATCH BASIN	G	GAS LINE
	HYDRANT	T	TELEPHONE
	WATER VALVE OR SHUTOFF	SD	STORM DRAIN
	GAS VALVE	SS	SANITARY SEWER
	LIGHT POLE	STM	STEAM LINE
	DECIDUOUS TREE	IPF/IRF	IRON PIPE OR ROD FOUND
	CONIFEROUS TREE	L/S	LANDSCAPED AREA
	SHRUB / BUSH	CONC.	CONCRETE
GTW	GEOTHERMAL WELL	FFE	FINISHED FLOOR ELEVATION
	ELECTRICAL JUNCT. BOX	THRES.	THRESHOLD
		N/F	NOW OR FORMERLY
		000/000	DEED BOOK / PAGE

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0' 15' 30' 60'

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Samuel D Glidden

SAMUEL D. GLIDDEN, PLS #2520

STATE OF MAINE · SAMUEL D GLIDDEN · 2520 · PROFESSIONAL · LAND SURVEYOR

REV.	DATE	DESCRIPTION
1	4-30-2021	SURVEYED ADDITIONAL AREAS

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OWEN HASKELL, INC.
PROFESSIONAL LAND SURVEYORS
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DRAWN BY:	SDG / JLW	DATE: JAN 27, 2019	JOB NO. 2019-267 P
CHECKED BY:	SDG	SCALE: 1" = 30'	DRWG. NO. 2 OF 2

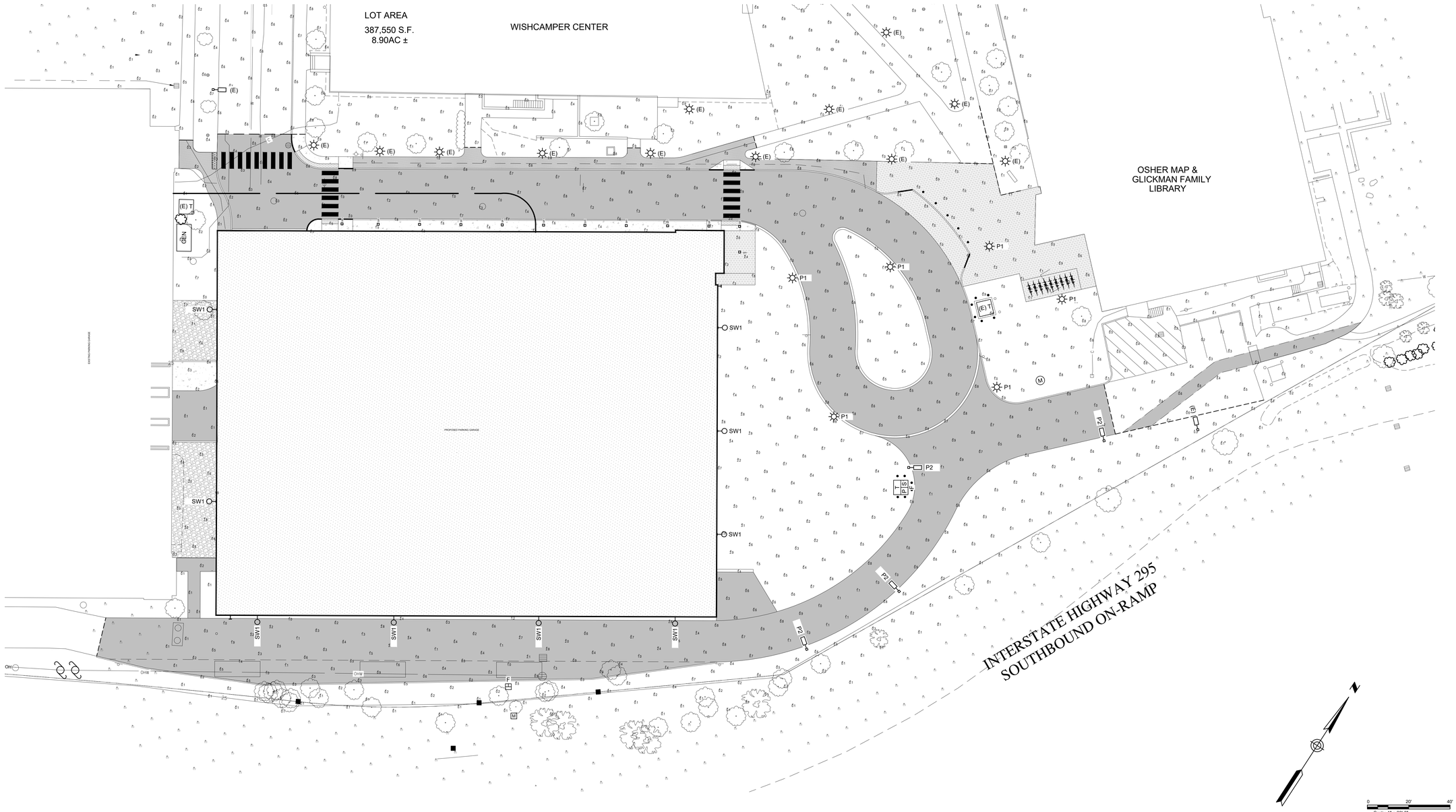
LUMINAIRE SCHEDULE ~ SITE

TYPE	DESCRIPTION	MFR	CATALOG SERIES NUMBER SEE NOTE 1	MOUNTING, U.N.O.	VOLTS	LAMP				KEY NOTES
						QTY PER FIXTURE	WATTS	LUMENS	TYPE	
P1	SITE LIGHT AND POLE, "ICE CREAM CONE" SHAPE	SEE NOTE 8		14' POLE	277	1	24	3,330	LED ARRAY ~ 4000K	8,9
P2	SITE LIGHT AND POLE, "SHOEBOX" SHAPE	SEE NOTE 8		14' POLE	277	1	18	2,160	LED ARRAY ~ 4000K	8,10
SW1	WALL MOUNTED EXTERIOR LIGHT	LITHONIA	KAXW-LED-P1-40K-R4-MVOLT	KEYNOTE 5	UNV	1	29	3,643	LED ARRAY ~ 4000K	5
SR1	RECESSED CANOPY LIGHT	LITHONIA	LDN4SQ-40-07-LS4-AR-LSS-MVOLT	RECESSED CANOPY	UNV	1	8.6	620	LED ARRAY ~ 4000K	

	NOTES
1	**NOTE THAT THESE NUMBERS ARE NOT COMPLETE CATALOG NUMBERS. PROVIDE ALL REQUIREMENTS ON SCHEDULE, NOTES, SPECS, AND DRAWINGS COMBINED.**
2	**CATALOG SERIES NUMBERS ARE USED TO ESTABLISH A LEVEL OF QUALITY AND NOT INTENDED TO LIMIT COMPETITION. SERIES NUMBERS ARE NOT COMPLETE CATALOG NUMBERS. COMPLY WITH ADDITIONAL REQUIREMENTS IN SPECIFICATIONS AND DRAWINGS.**
3	PROVIDE WALL,CEILING, OR PENDANT MOUNTING AS INDICATED ON PLANS. PROVIDE NUMBER OF FACES AND ARROWS AS INDICATED.
4	VERIFY CEILING STRUCTURE AND MOUNTING HEIGHT PRIOR TO ORDERING ANY LIGHT FIXTURES.
5	COORDINATE MOUNTING HEIGHT WITH STRUCTURAL AND ARCHITECTURAL DRAWINGS.
6	PROVIDE COLD WEATHER OPTION.
7	CONFIRM EXACT FIXTURE CONFIGURATION AND OPTIONS WITH MUNICIPALITY PRIOR TO ORDERING FIXTURE.
8	FIXTURE AND POLE SHALL BE PROVIDED BY OWNER FROM EXISTING OWNER'S STOCK.
9	PROVIDE SCREW-IN LED RETROFIT LAMP. BASIS OF DESIGN IS MFG. BY LIGHT EFFICIENT DESIGN, PART NO. LED-8029E345-A.
10	PROVIDE SCREW-IN LED RETROFIT LAMP. BASIS OF DESIGN IS MFG. BY LIGHT EFFICIENT DESIGN, PART NO. LED-8039E40-A.

Calculation Summary

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
DRIVES	Illuminance	Fc	0.99	3.5	0.2	4.95	17.50
WALKWAY- GLICKMAN	Illuminance	Fc	1.00	1.3	0.5	2.00	2.60
WALKWAY- NEW GARAGE	Illuminance	Fc	1.46	1.7	1.2	1.22	1.42



A1	PHOTOMETRIC SITE PLAN
SCALE: 1"=20'-0"	

7/2/2021 3:16:33 PM

UNIVERSITY OF SOUTHERN MAINE

25 Bedford Street, Portland, ME 04104
207.712.5183 | USM.MAINE.EDU

PROJECT TEAM:

CLIENT
UNIVERSITY OF SOUTHERN MAINE

PRIME CONSULTANT
& STRUCTURAL ENGINEER
DESMAN Design Management
18 Tremont Street #300
Boston, MA 02108

ARCHITECT
WINTON-SCOTT ARCHITECTS
5 MILK STREET
PORTLAND, ME 04101

CIVIL ENGINEER
WOODARD & CURRAN
41 HUTCHINS DRIVE
PORTLAND, ME 04102

LANDSCAPE ARCHITECT
MICHAEL BOUCHER LANDSCAPE ARCHITECTURE
457 US ROUTE 1 SUITE 2
FREEPORT, ME 04032

MEP/FP ENGINEER
ALLIED ENGINEERING
160 VERANDA STREET
PORTLAND, ME 04103

GEOTECHNICAL ENGINEER
S.W. COLE
286 PORTLAND ROAD
GREY, ME 04039

TRAFFIC ENGINEER
VANASSE HANGEN BRUSTLIN INC
40 IDX DR 100 #200, SOUTH
BURLINGTON, VT 05403

COST ESTIMATOR
PREFERRED CONSTRUCTION MGMT
94 AUBURN ST,
PORTLAND, ME 04103

SEAL / SIGNATURE

© DESMAN, Inc.
2021

PROJECT:

USM - Structured Parking Garage

Address

44 Bedford Street,
Portland ME 04104

REVISIONS:

No.	Date	Description

SUBMISSIONS:

Date	Issued For:
07/30/21	Site Plan Submittal

SCALE	**AS NOTED**
DATE ISSUED	**07/30/2021**
PROJECT NO	**20-20145.00-1**
DRAWN BY	**GMC**
CHECKED BY	**BTG**

SHEET TITLE:

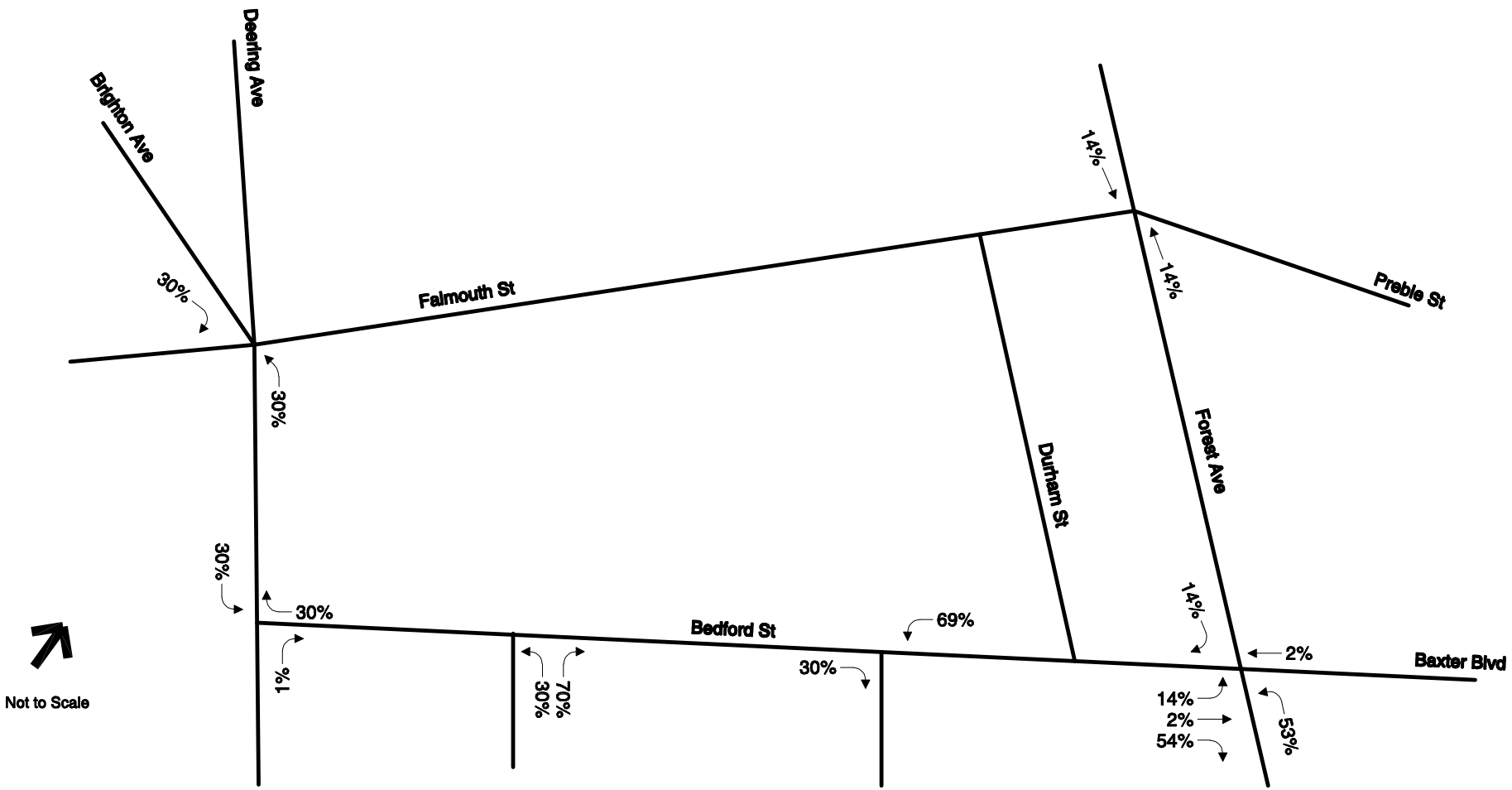
SITE PHOTOMETRIC PLAN AND SCHEDULES

SL-100

Trip Generation

Total Site generated trips (not accounting for internal, pass-by, or diverted trips)

	Site Land Uses and Descriptions				AM PK HR OF GENERATOR										PM PK HR OF GENERATOR									
					directional dist.		average				# trips				directional dist.		average				# trips			
	Code	Land Use	Size	Unit	% enter	% exit	# studies	Avg Rate	Std Dev.	Total by Avg	Method Chosen	Total Trips	Entering	Exiting	% enter	% exit	# studies	Avg Rate	Std Dev.	Total by Avg	Method Chosen	Total Trips	Entering	Exiting
	1	2	3	4	16	17	18	19	20	21	24	25			26	27	28	29	30	31	34	35		
10th	550	University / College	1066	students	78%	20%	7.00	0.15	0.05	160	average	**160**	**125**	**35**	32%	68%	9.00	0.15	0.05	160	average	**160**	**51**	**109**



Trip Distribution Percentages

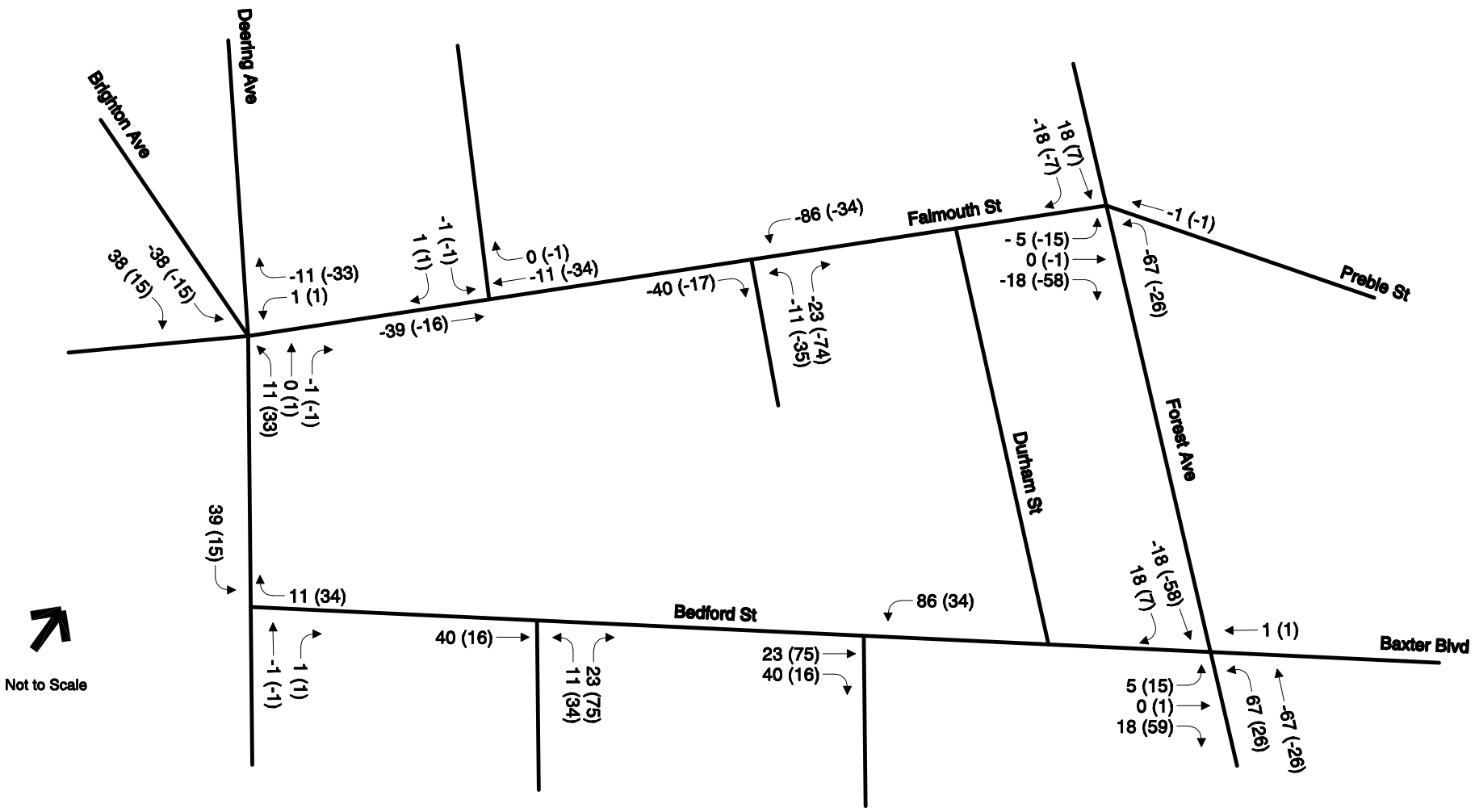
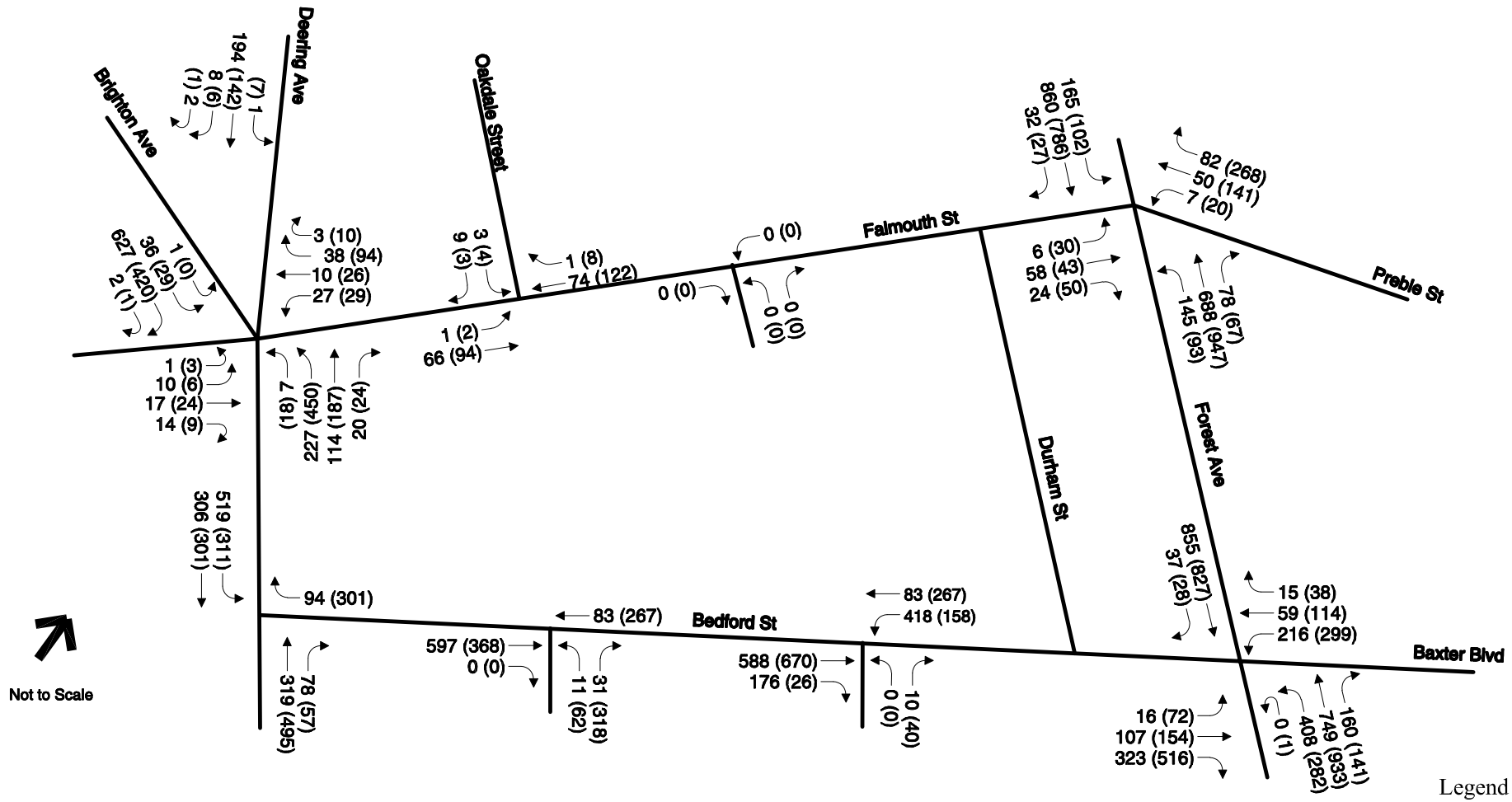


Figure 5: Trip Generation for the Proposed Site

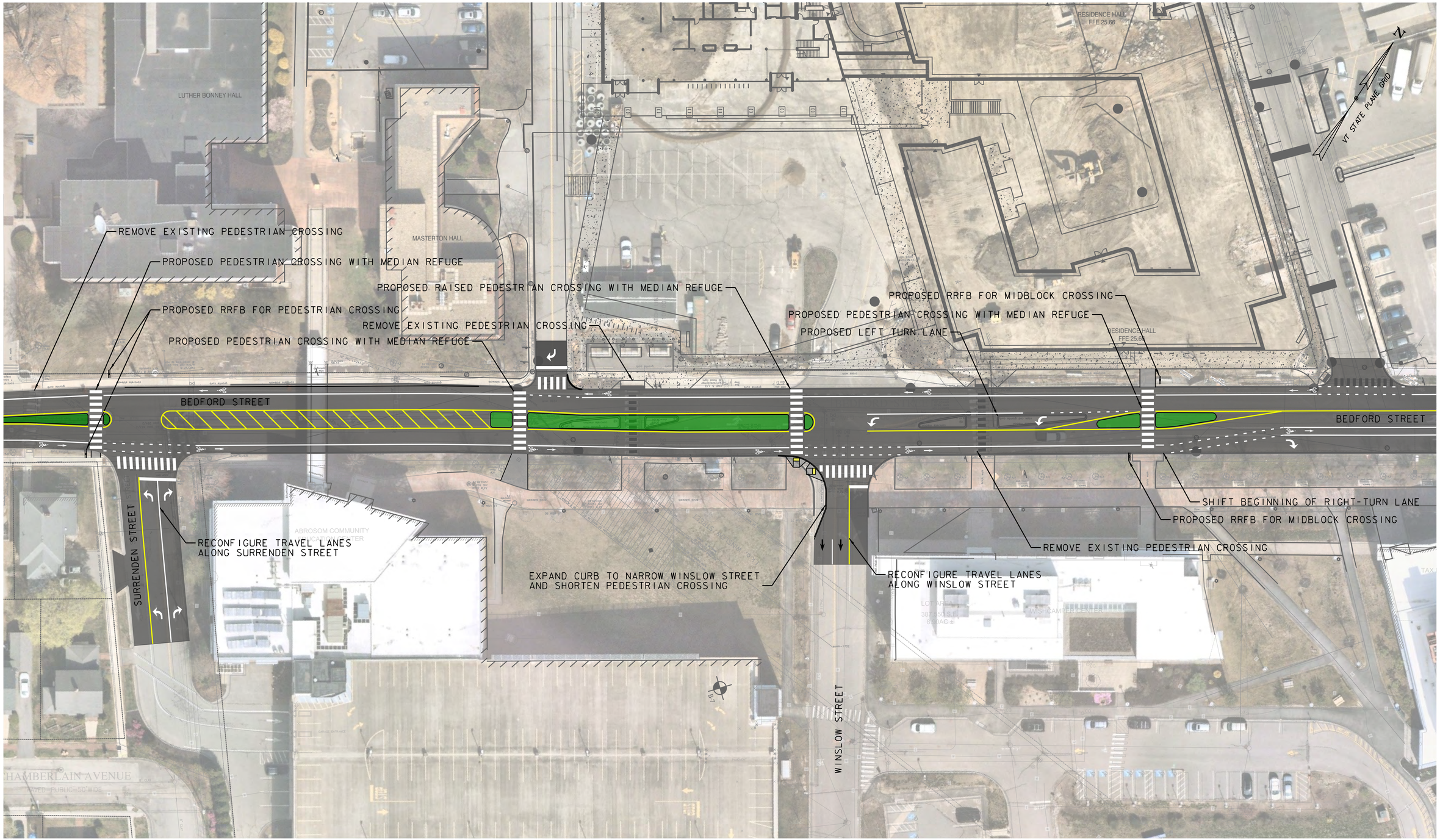
2028 TMP Modification Traffic Volumes



Legend

AM Peak Hour
(PM Peak Hour)

2028 Build Traffic Volumes
(TMP Modification)



PROJECT NAME:	USM INTERSECTION IMPROVEMENTS
PROJECT NUMBER:	52718.01

FILE NAME: bdr_concepts.dgn	PLOT DATE: 09/03/21
PROJECT LEADER: J.A. CONLEY	DRAWN BY: D.A. GINGRAS
DESIGNED BY: D.A. GINGRAS	CHECKED BY: J.A. CONLEY
BEDFORD STREET CONCEPT	SHEET 3 OF 4

GOVERNOR'S DEED
(with Reverter)

KNOW ALL PERSONS BY THESE PRESENTS, that the STATE OF MAINE, acting by and through its Governor, on recommendation of the Commissioner of its DEPARTMENT OF TRANSPORTATION, under and pursuant to the provisions of 23 M.R.S.A., Section 61, for consideration, the sufficiency of which is hereby acknowledged, RELEASES to THE UNIVERSITY OF MAINE SYSTEM, organized as a non-profit corporation of the State of Maine, with offices at 16 Central Street in Bangor, Maine, its successors and assigns forever, all its right, title and interest in and to a certain lot or parcel of land situated on the southerly side of Winslow Street, so-called, at its intersection with the westerly sideline of the right-of-way of State Highway "295", also known as Interstate 295, in Portland, County of Cumberland and State of Maine, and being as shown on a Right-of-way Map for State Highway "295" Portland, Cumberland County, Federal Aid Project Number I-295-3(28), dated January 1967, File Number 3-185, sheet 57 of 73, on file at the offices of the Maine Department of Transportation in Augusta, bounded and described as follows:

BEGINNING at a point on the southerly sideline of Winslow Street at its intersection with the westerly sideline of the right-of-way of Route 295;

THENCE S 26° 51' 18" W along said westerly sideline of Route 295, a distance of 34.00 feet;

THENCE S 51° 22' 05" W continuing along said westerly sideline of Route 295, a distance of 23.93 feet to land now or formerly of the University Of Southern Maine Foundation;

THENCE N 38° 37' 55" W along said University Of Southern Maine Foundation land 20.00 feet;

THENCE N 6° 51' 23" E continuing along said University Of Southern Maine Foundation land, 33.28 feet to the southerly sideline of said Winslow Street;

THENCE S 85° 26' 46" E along said southerly sideline of Winslow Street, 42.70 feet, more or less to the aforementioned westerly sideline of the right-of-way of Route 295 and the POINT OF BEGINNING, and containing one thousand four hundred twenty-seven square feet, more or less (1,427 sq. ft. ±).

EXCEPTING AND RESERVING from this conveyance any and all rights of access from the herein described parcel of land to State Highway "295", also known as Interstate 295, all of which rights of access are expressly reserved to, and retained by, the State of Maine.

ALSO RESERVING to the State of Maine the perpetual right to enter upon said parcel to maintain any highway slopes and drainage facilities or installations that may exist.

SUBJECT TO all utility easements and installations located on the above described premises, including those shown on the herein referred to Right-of-way Map, and to those rights which any utility enjoys over the subject premises for maintenance, location or relocation of poles and other installations.

NOTWITHSTANDING the foregoing, Grantor gives this deed, and Grantee accepts the same, upon the express CONDITION that the property hereby conveyed is to be retained by the University of Maine system and used for

public purposes only; and if said property or any interest in it, or any portion of it, is transferred, or if it is used for any commercial or other non-public purposes, said property shall at once REVERT to, and re-vest in, the Grantor, its successors or assigns; and that such reversion, should it occur, shall be automatic and require no further act of conveyance or documentation in order to be effective.

BEING a portion of premises acquired by the State of Maine from Charles T. Hayes, Jr. and Beatrice Hayes by warranty deed dated July 19, 1968 and recorded at the Cumberland County Registry of Deeds on July 23, 1968 in Volume 3049 at Page 553; and a portion of premises acquired from Reuben Katz by warranty deed dated January 10, 1969 and recorded at said Registry Of Deeds on January 15, 1969 in Volume 3072 at Page 435.

THE STATE OF MAINE makes no representations or warranties with respect to the premises hereby conveyed. The representations and warranties so excluded encompass, but are not limited to, those pertaining to: land use and environmental matters; fitness of the premises or any portion thereof for any particular purposes; water quality or quantity; the condition or quality of the soil; inchoate or unrecorded liens; status of title to or rights within that area lying between the high and low water marks; or the existence, status, or condition of access to, or public utilities serving the premises. Any subsequent use of, improvement to, or construction on the parcel shall be subject to all applicable laws, regulations, ordinances, and permitting requirements.

IN WITNESS WHEREOF, I, John E. Baldacci, Governor of the State of Maine, have caused the name and Great Seal of the State of Maine to be hereunto affixed this 11th day of Sept. in the year two thousand six.

STATE OF MAINE

By: _____, Governor
John E. Baldacci

Received
Recorded Register of Deeds
Sep 20,2006 02:29:02P
Cumberland County
John B OBrien

Affixed by: _____
Secretary of State

STATE OF MAINE
Kennebec, *ss.*

Sept. 11th, 2006

Personally appeared the above-named, John E. Baldacci, Governor of the State of Maine and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of the State of Maine.

Before me, _____
Notary Public/~~Attorney at Law~~

Print Name: _____

My commission expires: _____

ROSEMARIE D. SMITH
Notary Public, Maine
My Commission Expires January 6, 2009

SEAL

SHORT FORM QUITCLAIM DEED WITH COVENANT

MAINE REAL ESTATE TAX PAID

THE UNIVERSITY OF SOUTHERN MAINE FOUNDATION, a Maine nonprofit corporation with a mailing address of 96 Falmouth Street, Portland, Maine 04104, FOR CONSIDERATION PAID, grants to UNIVERSITY OF MAINE SYSTEM, a body politic and instrumentality of the State of Maine, with a mailing address of 16 Central Street, Bangor, Maine 04401, with QUITCLAIM COVENANT, certain real property, together with any improvements thereon, located in the City of Portland, Cumberland County, Maine and more particularly described on Exhibit A attached hereto and made a part hereof.

Being the same premises conveyed to the grantor herein by a Short Form Quitclaim Deed With Covenant from Frederick J. Olsen dated April 27, 2005 and recorded at the Cumberland County Registry of Deeds in Book 22577, Page 79.

IN WITNESS WHEREOF, The University of Southern Maine Foundation, has caused this instrument to be executed and delivered as of the 20th day of December, 2011.

The University of Southern Maine Foundation

Witness

By: _____
Name: Margaret A. Weston
Its: President

State of Maine
County of Cumberland, ss.

December 16, 2011

Personally appeared the above-named Margaret A. Weston, President of The University of Southern Maine Foundation, and acknowledged the foregoing instrument to be her free act and deed in her said capacity and the free act and deed of The University of Southern Maine Foundation.

Before me,

_____
Notary Public/Attorney at Law
Name: Amy Blaisdell
Commission Expires: 10/16/2015

Amy Blaisdell
NOTARY PUBLIC
Lisbon Falls, ME
Commission expires on
October 16, 2015

Exhibit A

Formerly Tax Map 114, Block D, Lot 21:

Three (3) certain lots or parcels of land, with the buildings thereon, situated on the northerly side of Winslow Street in the City of Portland, County of Cumberland, State of Maine, being lots numbered 1, 2 and 3 on an unrecorded plan of the Heater piece at and adjoining the junction of said Winslow Street and Bedford Street made by E.C. Jordan & Co., Civ. Eng., in January 1918, and on file in the office of said E.C. Jordan & Co., said three lots taken together, being bounded and described as follows:

Beginning at a point on said northerly line of Winslow Street at the southwest corner of land now or formerly of John W. Lovely heirs and thence running, with an included angle of 88° 43' and by the westerly line of said Lovely land eighty-six (86) feet to a post and land now or formerly of the T.A. Huston & Co.; thence northwesterly and along said Huston land, forty-nine (49) feet to a post; thence northwesterly and along said Huston land thirty-two and three tenths (32.3) feet to an iron post; thence westerly and along said Huston land twenty-two and thirty-five hundredths (22.35) feet to an iron post; thence westerly and along said Huston land nineteen and eighty-four hundredths (19.84) feet to a post; said post being the southeasterly corner of lot numbered 11 on said plan; thence westerly and along the rear or southerly line of said lot numbered 11, fifty-nine and thirty-seven hundredths (59.37) feet to the southwesterly corner of lot numbered 11; thence southwesterly at right angles to said Winslow Street one hundred (100) feet to said northerly line of Winslow Street; thence easterly and along said northerly line of Winslow Street one hundred fifty-nine (159) feet to the point or place of beginning; said three lots having together an area of 18,027 square feet, be the same more or less.

EXCEPTING AND RESERVING from the above-described premises that portion thereof which was conveyed by Ellestad Hansen, Warren K. Webber and Mary E. Hansen to Charles A. Adams by deed dated April 8, 1924 and recorded in the Cumberland County Registry of Deeds in Book 1165, Page 79, and such portion thereof as may have been conveyed by Mary E. Hansen to the State of Maine by deed dated January 7, 1970 and recorded in the said Registry of Deeds in Book 3114, Page 724.

Formerly Tax Map 114, Block D, Lot 22:

ALSO a certain lot or parcel of land situated on the northerly side of Winslow Street in the City of Portland, County of Cumberland and State of Maine, bounded and described as follows, to wit:

Beginning at an iron hub at the southwest corner of a lot of land conveyed by Edward D. Noyes, et al. to Ellestad Hansen and Warren K. Webber by deed dated November 14, 1923 and recorded in the Cumberland County Registry of Deeds in Book 1153, Page 280; thence easterly along the northerly side line of Winslow Street forty-seven (47) feet to a stake; thence northerly at right angles to said Winslow Street one hundred sixteen and thirty-three hundredths (116.33) feet to an iron hub in the northerly line of the lot above mentioned; thence westerly with an included angle of seventy (70) degrees and thirty-six (36) minutes to the right, forty-nine and seventy-six hundredths (49.76) feet to a stake at the northwest corner of the lot above mentioned; thence southerly on a line at right angles to said Winslow Street one hundred (100) feet to the point of beginning.

Formerly Tax Map 114, Block C, Lot 1:

ALSO a certain lot or parcel of land in the City of Portland, County of Cumberland and State of Maine, described as follows: Beginning at a stake on the southerly side of Winslow Street at the intersection with the easterly side of Conant Street; thence 25° E by Conant Street one hundred ten (110) feet; thence easterly at right angles with Conant Street forty-six and thirty-one hundredths (46.31) feet to a stake; thence northerly to a point in the southerly side of Winslow Street distant easterly sixty-three and seventy-two hundredths (63.72) feet from the point of beginning; thence N 71° 37' W by said Winslow Street sixty-three and seventy-two hundredths (63.72) feet to the point of beginning.

Formerly Tax Map 114, Block C, Lot 2:

ALSO a certain lot or parcel of land situated in the City of Portland, County of Cumberland and State of Maine bounded and described as follows, to wit:

Beginning at a point on the present southerly boundary line of Winslow Street at the northeasterly line of land now or formerly of Frederick J. Olsen; thence southeasterly along the northeasterly line of land now or formerly of said Olsen, about sixty-six (66) feet to a corner; thence southwesterly along the southeasterly line of land now or formerly of said Olsen, about forty-six and three tenths (46.3) feet to the northeasterly boundary line of Conant Street; thence southeasterly along the northeasterly boundary line of Conant Street about eighteen (18) feet to a monument located about seventy-one (71) feet northwesterly from and as measured along a line normal to the Ramp F.A. 6 Base Line at about Sta. 5+50; thence northeasterly about sixty-six (66) feet to a point on a line, said line being a projected line between the beforementioned monument and a monument located fifty (50) feet northwesterly from and as measured along a line normal to the Ramp F.A. 6 Base Line at Sta. 4+50, said point being twenty-five (25) feet southwesterly of and as measured along said projected line from said monument located

northwesterly of Sta. 4+50; thence northwesterly at right angles to said projected line twenty (20) feet to a point; thence northerly by a direct course to a point on the present southerly boundary line of Winslow Street; thence westerly along the present southerly boundary line of Winslow Street sixty (60) feet to the point of beginning. Said lot or parcel of land contains about 2,867 square feet and is a portion of that land as acquired from Charles T. Hayes, Jr. and Beatrice Hayes, pursuant to a Notice of Layout and Taking dated March 8, 1973 and recorded at the Cumberland County Registry of Deeds in Book 3367, Page 58. Said parcel is shown on a certain Maine Department of Transportation Right-of-way Map entitled "State Highway '295', Portland, Cumberland County, Federal Aid Project No. 1-295-3(28)" dated January 1967, on file in Augusta, File No. 3-185.

The premises herein conveyed is SUBJECT to a State of Maine Notice of Layout and Taking dated February 28, 1973 and recorded in said Cumberland County Registry of Deeds in Book 3367, Page 58.

Received
Recorded Register of Deeds
Dec 21,2011 12:40:48P
Cumberland County
Pamela E. Lovley

University of Southern Maine

Traffic Movement Permit - Section 7

Proposed Residence Hall, Student Center, and Parking Garage

August 2021

Introduction

VHB has conducted a technical analysis in support of a Traffic Movement Permit (TMP) modification for development of a new residence hall and Student Center on the University of Southern Maine (USM) campus. Although in the approved TMP for Project ID PL-001040-2020, a parking garage was not the primary subject of the permit application, for the purposes of the traffic analysis, the proposed parking garage location was situated off of Falmouth Street. Anticipated new trips to and from the campus were assumed to utilize the new parking garage structure.

The proposed location of the parking garage has since been relocated as a response to neighborhood feedback and a site evaluation process. The locations of the 580-bed residence hall and Student Center that were previously permitted have not changed. The new parking garage will now be located adjacent to the existing parking structure on campus with joint access to and from Bedford Street. As a result, the traffic that had previously been assigned to the garage on Falmouth Street will instead access the proposed parking structure location on Bedford Street. This traffic was redistributed across the adjacent street network and reevaluated to assess the resulting traffic impacts.

Future Conditions

The future traffic conditions in the study area were analyzed with the proposed project in place and compared to the conditions outlined in the TMP traffic analysis. The TMP future traffic volumes and intersection operations for the future horizon year of 2028 were analyzed for the Build condition, with the parking garage located off of Bedford Street. The results for the Base condition, with the parking garage located off of Falmouth Street, were included as previous permitted.

Infrastructure Improvements

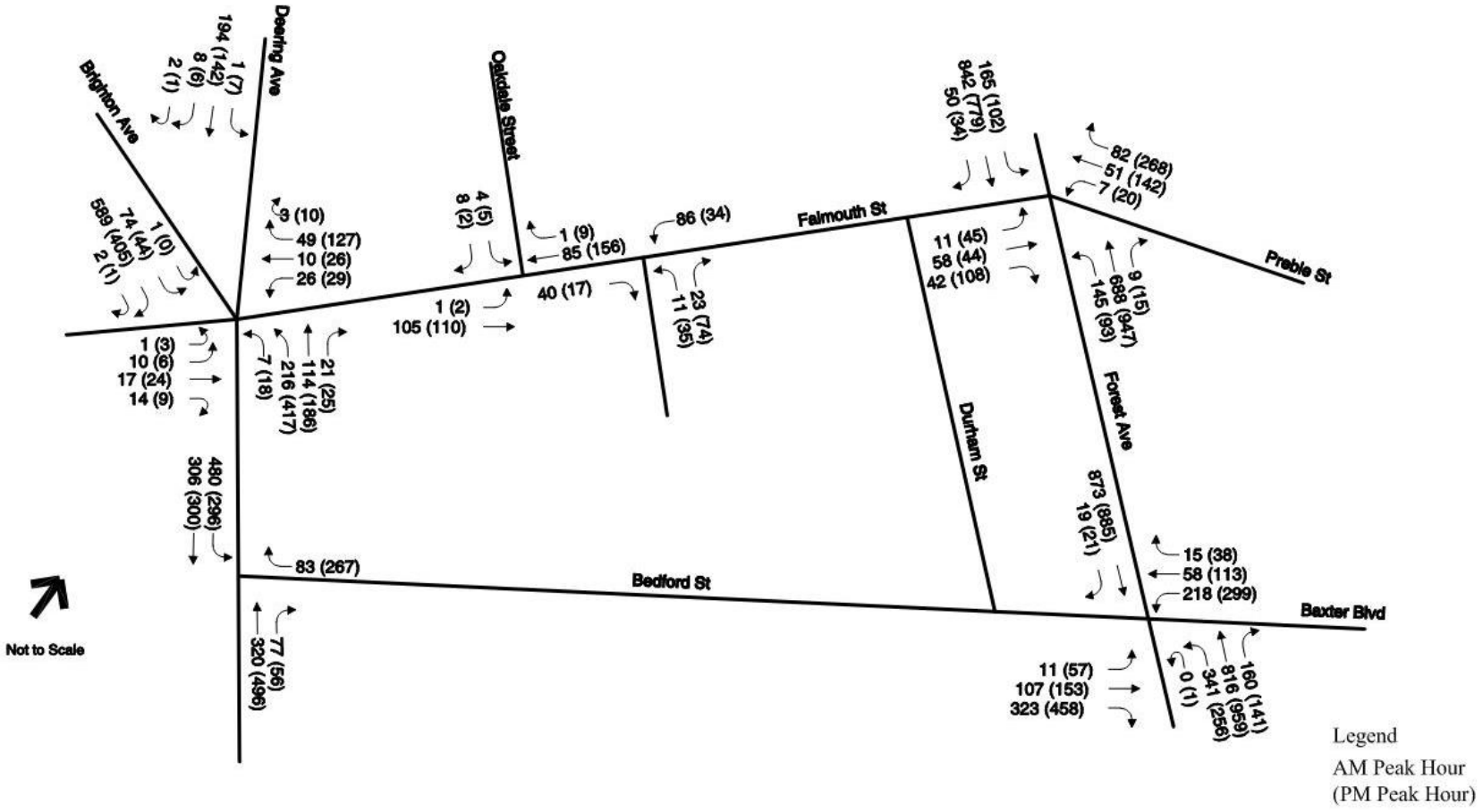
Construction of a roundabout at the intersection of Falmouth Street, Brighton Avenue and Deering Avenue is currently being completed. As such, the TMP permit traffic analysis as well as the traffic analysis for the current garage location on Bedford Street both include a completed roundabout at this location.

The traffic volume data collected at the intersection of Falmouth Street, Brighton Avenue and Deering Avenue was redistributed to represent the volumes that will exist at the five-leg roundabout in the future, rather than the current six-leg condition.

Baseline Traffic Conditions

The TMP traffic analysis included a one percent per year background traffic growth rate, the traffic associated with identified projects in the area, and the trip generation associated with the growth anticipated on campus assigned to a parking garage on Falmouth Street. The resulting traffic networks from the 2028 TMP Build conditions serve as the baseline condition for this analysis, as illustrated in Figure 1.

Figure 1. 2028 Base Network (TMP Condition with garage on Falmouth Street)



Trip Generation Reassignment

To determine the impact of the proposed garage location, VHB reassigned the trips destined for the proposed parking garage from the location on Falmouth Street to the location on Bedford Street. As a reminder, based on industry standards and MaineDOT guidance, the number of new peak hour trips anticipated with the growth in enrollment is 160 trips (125 in and 35 out) in the highest AM peak hour and 160 trips (51 and 109 out) in the highest PM peak hour with no adjustments for the high portion of transit trips to and from the campus. It is important to note that existing campus mode shares are already high and with additional Transportation Demand Management initiatives, the number of students and employees walking, biking, riding transit, or carpooling is expected to rise. To remain conservative, the trip generation for this analysis was not reduced to reflect the existing or anticipated mode split based on TDM measures.

The proposed garage circulation will involve an entrance at Winslow Street and an exit at Surrenden Street via the existing garage. The trips to and from the existing garage will also follow the new entry and exit pattern and were redistributed accordingly. The trips to and from the existing Bedford Street garage were added to that network based on garage entry and exit data from October 2019 (determined to represent a typical school year condition).

The new garage trips were assigned to local roadways based on campus user zip code data. The redistributed trips were added to the 2028 baseline networks to determine the 2028 Build networks. The trip reassignment based on the new proposed garage location is shown in Figure 2.

The resulting 2028 Build networks for the TMP Modification are shown in Figure 3.

Figure 2. Redistribution of Trip Generation based on Proposed Parking Relocation

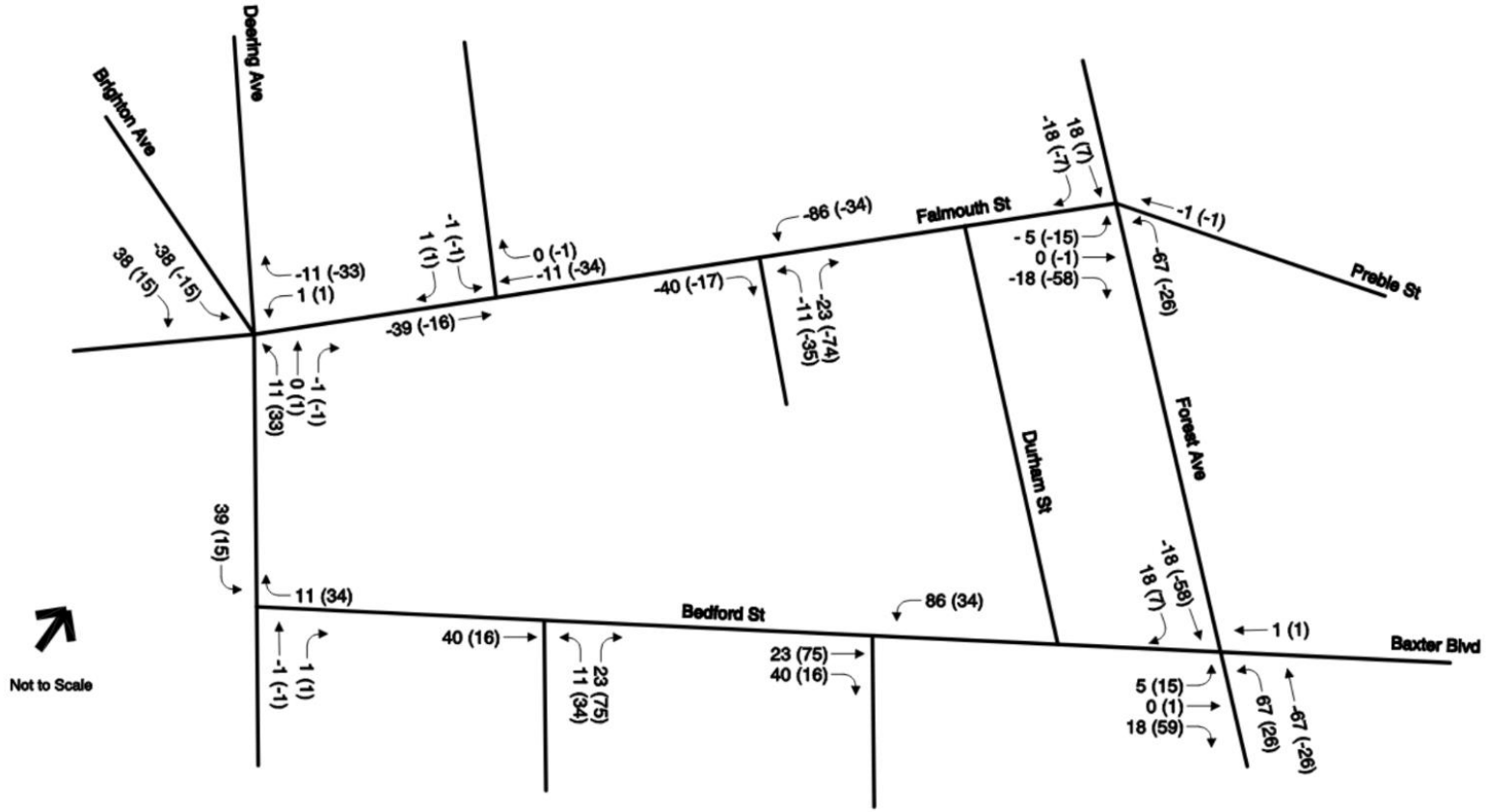
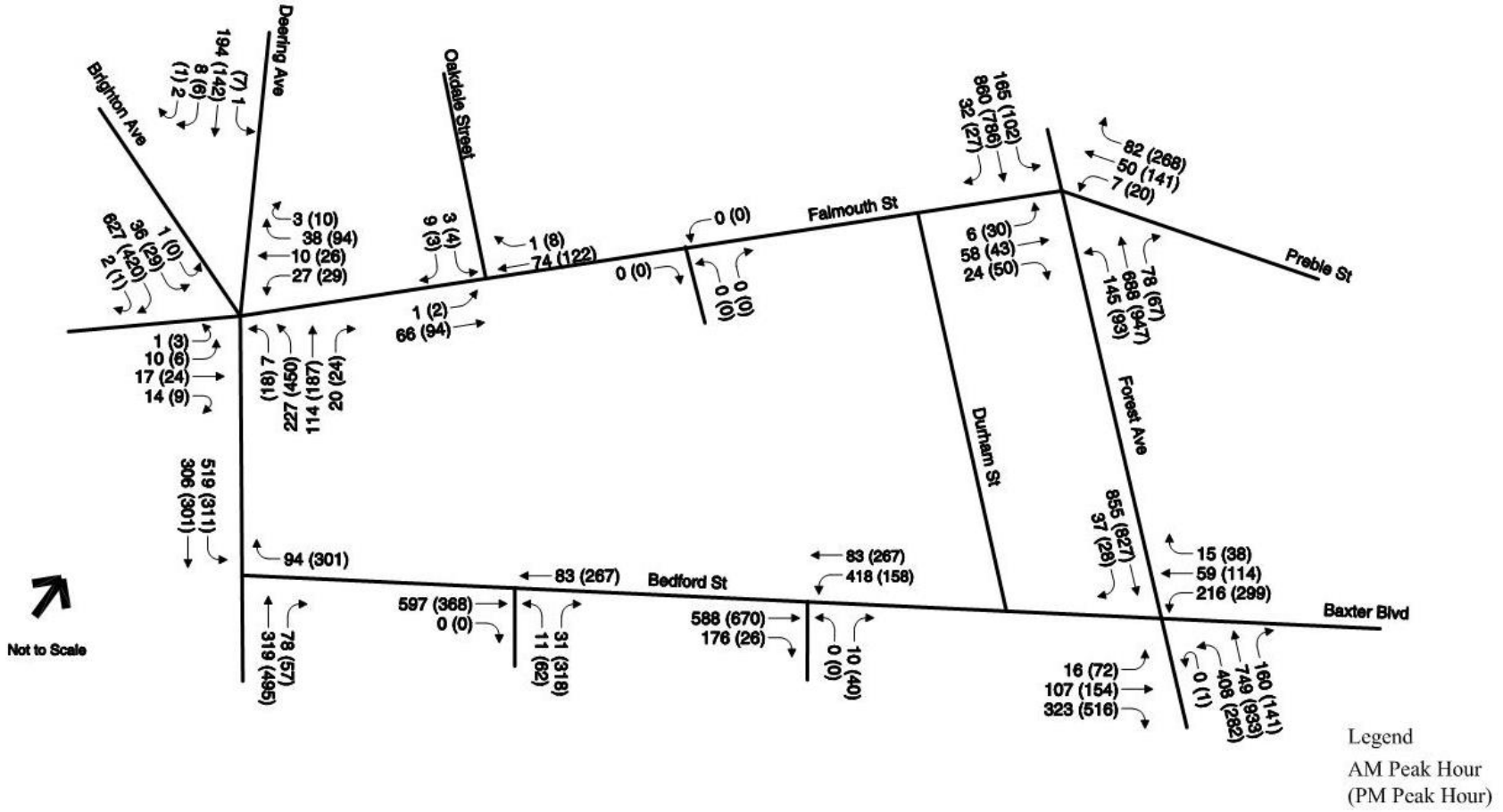


Figure 3. 2028 TMP Modification Build Condition Traffic Volumes



TRAFFIC ANALYSES

Intersection Capacity Analyses

Intersection capacity analyses were performed for the study area intersections consistent with the traffic analysis provided in the TMP traffic analysis. Levels of service (LOS) were calculated based on the criteria published in the *2000 Highway Capacity Manual*.[1] Level of service is the term that defines the conditions that may occur on a given roadway or at an intersection when accommodating various traffic volume loads. Levels of service range from A to F with LOS A representing generally free flowing operating conditions and LOS F representing generally congested conditions. Synchro 10 was used to determine the LOS at signalized intersections and Sidra Intersection 8 was used to determine the LOS at the proposed roundabout. Copies of the LOS calculations are provided in the Appendix.

Table 1 summarizes the operational analysis at the signalized study area intersections during the 2028 weekday AM and PM peak hours under Base (Falmouth Street garage) and Build (Bedford Street garage) conditions. As shown, the intersection of Forest Avenue at Falmouth Street is expected to operate at LOS B/C in 2028. The redistribution of some trips away from this intersection was anticipated to reduce the overall delay at the intersection by just over two seconds in the AM peak hour and by less than a second in the PM peak hour compared to the already permitted Base condition.

The signalized intersection of Forest Avenue at Bedford Street is expected to operate at LOS D in 2028 both in the Base condition and the Build condition. With the relocation of the parking garage to the Bedford Street site, it is anticipated that the overall delay at the intersection will increase by approximately seven seconds in the AM peak hour and only about 2 seconds in the PM peak hour. Even in the No Build condition, without project traffic, a number of movements at this intersection are currently operating at LOS E. The installation of adaptive signal control would ensure that the intersection operates at optimal conditions throughout the day.

Table 1. 2028 Signalized Intersection Operation

Intersection	2028 Baseline			2028 Build		
Peak Hour	**v/c+**	**Delay***	**LOS****	**v/c+**	**Delay***	**LOS****
Forest Avenue at Falmouth Street/Preble Street						
AM Peak Hour	0.53	19.6	B	0.49	17.4	B
PM Peak Hour	0.54	20.6	C	0.54	20.1	C
Forest Avenue at Bedford Street/Baxter Blvd						
AM Peak Hour	0.80	38.4	D	0.84	45.8	D
PM Peak Hour	0.93	49.7	D	0.96	51.9	D

+ Volume to capacity ratio
* Delay expressed in seconds per vehicles
** Level of Service

Based on the impact associated with the new garage location trips at the intersection of Forest Avenue at Bedford Avenue and Baxter Street, potential improvements were investigated. Pedestrian accommodations are being improved at this location by USM as a part of the permit condition for the residence hall and student center. However,

[1] Highway Capacity Manual, Federal Highway Administration, Transportation Research Board, 2000.

vehicular delays will also be impacted. In particular, the northbound left turn movement from Forest Avenue onto Bedford Street is anticipated to operate at LOS E in the AM and LOS F in the PM. Queues for the northbound left movement were reported to be 565' and 445' in the AM and PM, respectively.

To better understand the queuing, simulations were observed that produced queues with spill back past the I-295 off-ramp of 3 to 5 vehicles. A queue of 375 feet will block vehicles from exiting the ramp from I-295 Southbound. It was observed however, that queues forming on the ramp of 424' in the AM and 341' in the PM dissipated quickly when the northbound movements of the Forest / Baxter / Bedford intersection were served. Advanced detection would ensure the northbound lanes get cleared and alleviate potential queuing on the exit ramp. As with the no build condition evaluated in the original analysis, the westbound left and southbound through movements are anticipated to have queues that exceed storage in the AM and PM peak hours. Additionally, in the PM peak hour the eastbound lanes at the intersection are anticipated to have queues that exceed storage, however, it was observed in the simulation that these queues clear with the help of an overlap phase.

Table 2 summarizes the operational analysis at the Brighton Avenue, Deering Avenue and Falmouth Street roundabout during the 2028 weekday AM and PM peak hours under Base and Build conditions. As shown, even with anticipated growth, project related traffic, and relocation of the parking garage, the proposed infrastructure will result in a LOS B or better condition for all approaches during the peak hours.

Table 2. Roundabout Levels of Service

Peak Hour		2028 Base (Falmouth Site)				2028 Build (Bedford Site)			
Movement	**SL^**	**v/c+**	**Delay***	**LOS****	**Queue**	**v/c+**	**Delay***	**LOS****	**Queue**
Falmouth Street at Deering Street and Brighton Avenue									
AM Peak Hour									
Deering Ave, SE	200	0.401	4.4	A	6	0.379	4.0	A	6
Falmouth St, NE	290	0.146	5.4	A	2	0.128	5.7	A	1
Deering Ave, NW	420	0.39	5.0	A	5	0.388	5.0	A	5
Brighton Ave, E	165	0.838	12.1	B	33	0.839	11.9	B	33
Falmouth St, SW	625	0.166	12.5	B	2	0.167	12.5	B	2
Overall		**0.838**	**8.4**	**A**		**0.839**	**8.3**	**A**	
PM Peak Hour									
Deering Ave, SE	200	0.663	4.8	A	15	0.675	4.7	A	16
Falmouth St, NE	290	0.467	11.3	B	8	0.407	11	B	6
Deering Ave, NW	420	0.431	11.1	B	6	0.435	11.1	B	6
Brighton Ave, E	165	0.566	4.7	A	11	0.567	4.6	A	11
Falmouth St, SW	625	0.101	7.5	A	1	0.102	7.5	A	1
Overall		**0.663**	**6.4**	**A**		**0.675**	**6.1**	**A**	

^ Storage length measured in feet, distance to adjacent intersection
+ Volume to capacity ratio
* Delay expressed in seconds per vehicles
** Level of Service
Queue measured in feet

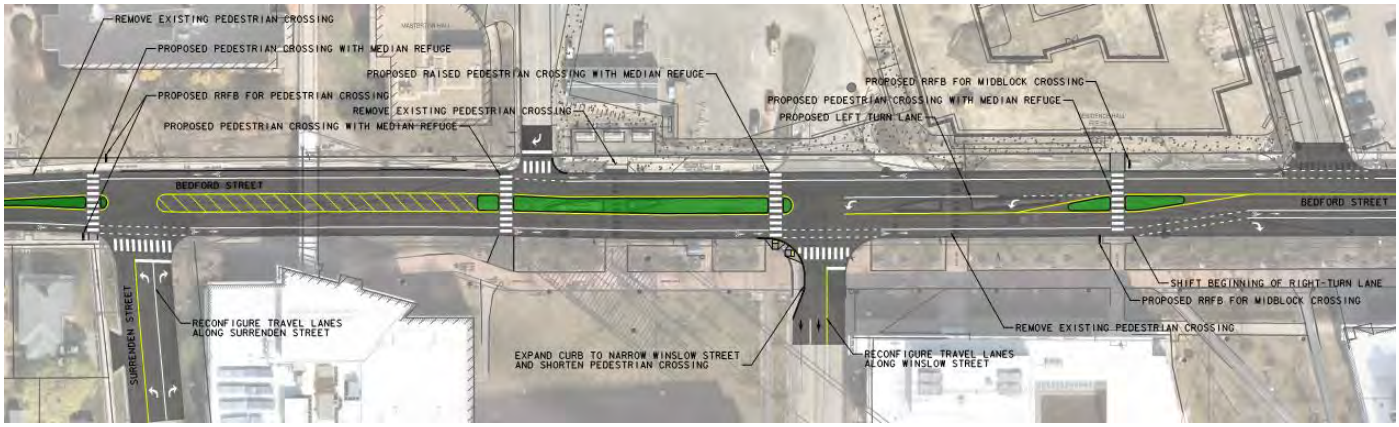
The approaches of the driveway exiting the joint garage proposed on Bedford Street at Surrenden Street is anticipated to operate at LOS B/C with 13 to 17 seconds of delay during both the AM and PM peak hours, the highest delay occurring for the PM peak hour left hand turn lane. The entering driveway proposed for the joint garage on Bedford Street at Winslow Street is anticipated to have a 10 to 15 second delay when making the left hand turning movement to enter from Bedford Street. It is anticipated that this movement will be accommodated in a separate left turn lane.

Bedford Street Concept

Updated traffic circulation for access and egress to the existing and proposed parking garages will compel updates to the Bedford Street corridor. It is proposed that vehicles will enter the parking garages via Winslow Street and exit the parking garages via Surrenden Street, as previously discussed and depicted in Figure 3 below. A dedicated left turn lane will be provided for vehicles traveling westbound on Bedford Street and entering the parking garages via Winslow Street, replacing the raised median island and crosswalk currently set back from the intersection on the east leg. This crosswalk will be replaced by a raised crossing on the west leg of the intersection to limit the number of vehicular lanes pedestrians will need to cross to two with a raised pedestrian refuge island between the lanes. The raised island will extend to the west to discourage vehicles from passing busses in the bus stop and keep vehicular speeds low. The need for a single departure lane from the intersection on Winslow Street will allow for a pedestrian bumpout to be implemented. The bumpout will effectively shorten the crossing distance for pedestrians across the Winslow Street leg of the intersection and widen back to two lanes to maximize the queuing space for vehicles entering the parking garages.

Additional crossing improvements have also been proposed. Crosswalks with rectangular rapid flashing beacons (RRFBs) are proposed to the west of Surrenden Street and midblock between Winslow Street and Durham Street as there is anticipated to be a desire line in that vicinity between the residence hall and student center to the north and the library and parking garage to the south.

Figure 3. Conceptual Plan for Bedford Street and Parking Garage Circulation



Transportation Demand Management (TDM)

The University of Southern Maine (USM) has recently developed a Transportation Demand Management (TDM) plan that provides a cohesive strategy for establishing and implementing a successful TDM program for the Portland campus. The TDM plan seeks to enhance multimodal accessibility, ensure the use of non-vehicular modes, and discourage the use of driving through parking management, to achieve and build upon the university's parking demand reduction goals for the campus. The TDM Plan presents a suite of strategies and timeframe for when USM intends to implement the various strategies. The strategies aim at promoting walking and bicycling, improving transit service to promote ridership, promoting carpooling, changing time-of-day travel demands to eliminate or reduce

vehicle trips, and managing parking demand via changes to USM's pricing and permit policies. The implementation of TDM will reduce the vehicle trips to the site and reduce delays at area intersections.

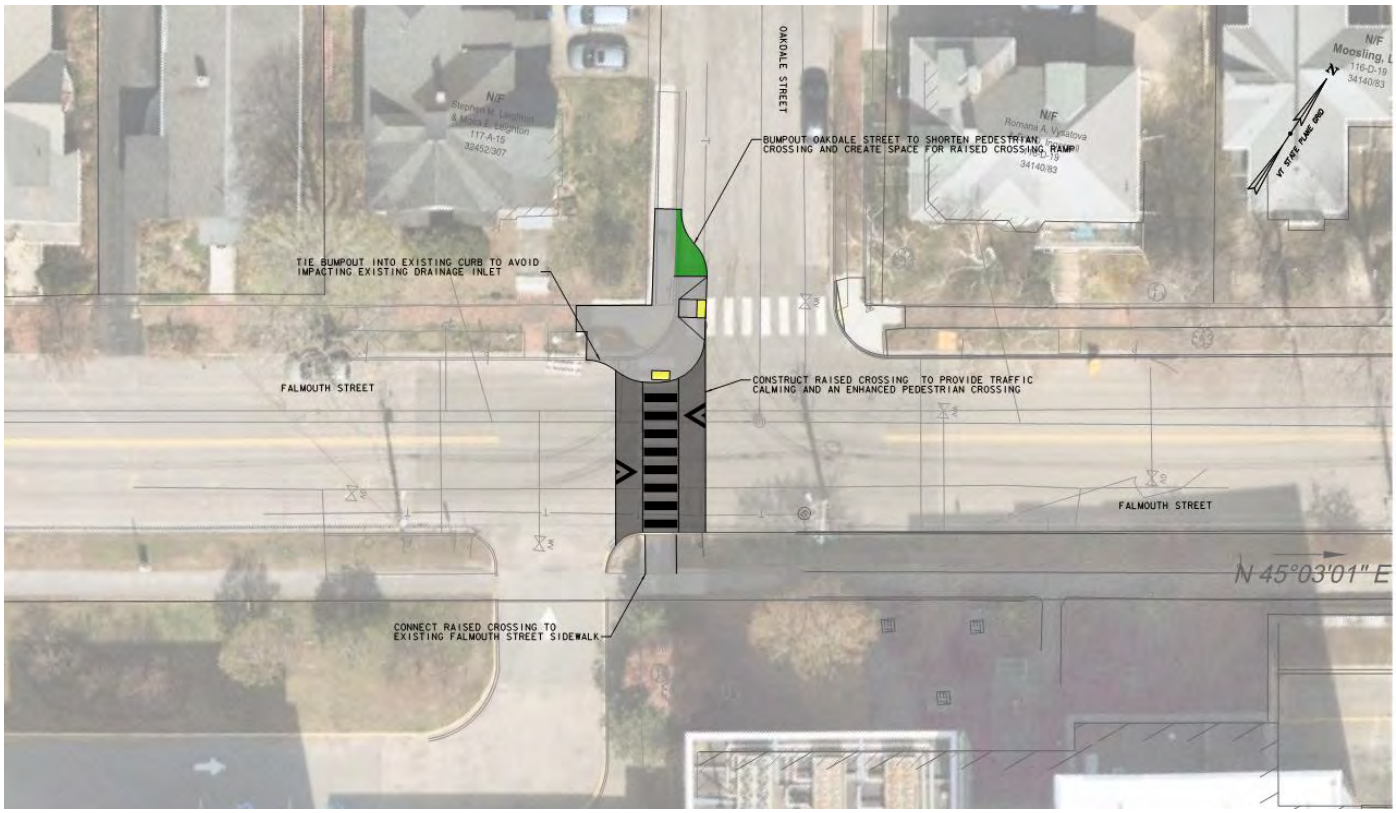
Neighbor Concern – Oakhurst Dairy

USM has worked with Oakhurst Dairy to understand their concerns associated with the proposed project. One concern raised by Oakhurst Dairy is the length of queue on Forest Avenue northbound and that it causes a backup on the I-295 off ramp. As indicated above, USM is committed to addressing this concern. Oakhurst is even more concerned with queues blocking the Oakhurst driveway on Forest Avenue. Although this has been a longstanding concern, recently, traffic signal operation at Forest Avenue at Bedford Street and Baxter Boulevard has resulted in longer queues. A discussion with the City Traffic Engineer reveals that the City has had an issue with vehicle detection at this location and as a result the signal is not operating optimally. A representative from Oakhurst has shared video that documents these queuing concerns. In order to address the issues with the operation at this intersection so that the impacts to our neighbor are reduced, we have engaged a traffic signal technician to work with the City to troubleshoot and determine a plan for remedying this issue. Because Oakhurst remains concerned about the operation at their driveway and the queues on Forest Avenue that block that driveway, USM is committed to work with Oakhurst and the City to develop a plan to discourage vehicles from blocking the driveway. Preliminary discussions indicate that the City could be agreeable to signage and/or striping to not "Block the Box". USM plans to continue to work with Oakhurst on this issue.

Neighbor Concern – Falmouth Street/Oakdale Street and Bedford Street

USM has worked with neighborhood since the previous permitting process to ensure that their concerns are being addressed. USM held an open meeting with residential neighbors on August 26th to discuss traffic impacts and proposed mitigation measures. The neighborhood had previously expressed concern with traffic speed and volumes on Falmouth Street, and as such an undefined traffic calming measure was written into a condition of approval on the residence hall & student center project. The University shared a conceptual draft of the Falmouth Street traffic calming measure at the meeting with the neighborhood (see Figure 4 below). The neighborhood's reception of the drawing seemed favorable. However, the neighborhood expressed some concerns about traffic along Bedford Street and that traffic would be made worse by pedestrian safety measures such as pedestrian island improvements and by higher volumes of vehicles entering/exiting the South side of Bedford. Several items were brought up from individuals along the lines of wanting traffic to flow efficiently, but one specific item brought up by multiple residents was concern that USM was not proposing bus pull-outs for the METRO, and that this could lead to traffic backing up behind stopped buses. USM explored this issue at length internally, and also had two meetings with METRO to discuss it. Ultimately, USM decided that pedestrian safety should outweigh vehicular traffic efficiency when the two are opposed as an in-line bus stop would minimize the ability of vehicles to drive past buses that are offloading people. USM feels that the suite of measures currently proposed offers the best trade-off between efficiency and safety given the siting of the garage on Bedford Street. Bedford Street was the location the neighborhood favored over Falmouth Street and Deering Avenue, and this was one of the most important factors in deciding on the garage's location.

Figure 4. Conceptual Plan for Pedestrian Improvements at Falmouth Street at Oakdale Street



Conclusions

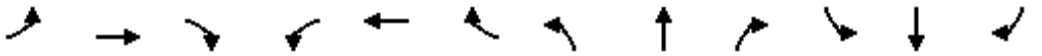
The proposal to relocate the parking garage to Bedford Street is positive for a number of reasons. However, adding these trips to the roadway network at the new proposed parking garage location along Bedford Street results in some delay increases at the intersection of Forest Avenue with Bedford Street and Baxter Boulevard as compared to the garage location along Falmouth Street. Advance queue detection should be considered in order to ensure that the addition of this traffic to the intersection of Forest Avenue with Bedford Street and Baxter Boulevard does not cause an impact beyond the available queue storage or impact the operation of the I-295 off ramp. In addition, USM is committed to creating a Bedford Street that is hospitable to pedestrians, transit and bicyclists. Finally, USM is working to improve the operations at Forest Street at Bedford Street and Baxter Boulevard in the short term to ensure that the traffic signal is operating as it was intended. Overall, this proposed location for the parking garage is not anticipated to adversely affect traffic operations in the vicinity of the USM campus.

Memorandum

Technical Appendix

Synchro Intersection Capacity Analysis

SIDRA Roundabout Capacity Analysis

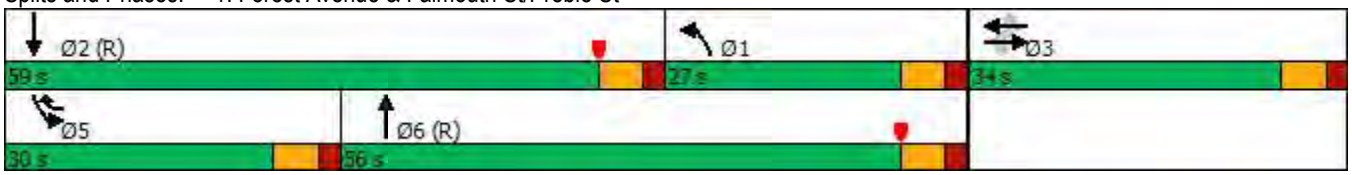


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	58	24	7	50	82	78	688	9	165	860	32
Future Volume (vph)	6	58	24	7	50	82	78	688	9	165	860	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0	200		0	150		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		1.00	0.99		1.00	0.99	1.00	1.00		1.00	1.00	
Frt			0.850			0.850		0.998			0.995	
Flt Protected		0.995			0.994		0.950			0.950		
Satd. Flow (prot)	0	1890	1615	0	1811	1583	1703	3499	0	1719	3486	0
Flt Permitted		0.970			0.958		0.950			0.950		
Satd. Flow (perm)	0	1843	1593	0	1746	1560	1697	3499	0	1718	3486	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			136			88		1			4	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		771			1265			804			1168	
Travel Time (s)		17.5			28.8			18.3			26.5	
Confl. Peds. (#/hr)	2		1	1		2	5		1	1		5
Peak Hour Factor	0.77	0.77	0.77	0.93	0.93	0.93	0.91	0.91	0.91	0.82	0.82	0.82
Heavy Vehicles (%)	0%	0%	0%	33%	0%	2%	6%	3%	0%	5%	3%	0%
Adj. Flow (vph)	8	75	31	8	54	88	86	756	10	201	1049	39
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	83	31	0	62	88	86	766	0	201	1088	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			10			18			16	
Link Offset(ft)		0			-6			0			-2	
Crosswalk Width(ft)		16			16			30			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50	50	50	50	50	50	50		50	50	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	50	50	50	50	50	50	50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	Perm	NA	Perm	Perm	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases		3			3	5	1	6		5	2	
Permitted Phases	3		3	3		3						
Detector Phase	3	3	3	3	3	5	1	6		5	2	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	10.0		5.0	10.0	
Minimum Split (s)	32.0	32.0	32.0	32.0	32.0	16.0	16.0	37.0		16.0	25.0	
Total Split (s)	34.0	34.0	34.0	34.0	34.0	30.0	27.0	56.0		30.0	59.0	
Total Split (%)	28.3%	28.3%	28.3%	28.3%	28.3%	25.0%	22.5%	46.7%		25.0%	49.2%	
Maximum Green (s)	28.0	28.0	28.0	28.0	28.0	24.0	21.0	50.0		24.0	53.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-2.0	-2.0		-2.0	-2.0	-2.0	-2.0		-2.0	-2.0	
Total Lost Time (s)		4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag						Lead	Lag	Lag		Lead	Lead	
Lead-Lag Optimize?												
Vehicle Extension (s)	2.5	2.5	2.5	2.5	2.5	2.0	2.0	3.0		2.0	3.0	
Recall Mode	None	None	None	None	None	None	None	C-Min		None	C-Min	
Walk Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	
Flash Dont Walk (s)	21.0	21.0	21.0	21.0	21.0			26.0			14.0	
Pedestrian Calls (#/hr)	4	4	4	4	4			7			4	
Act Effct Green (s)		14.4	14.4		14.4	34.7	16.3	73.3		20.3	79.7	
Actuated g/C Ratio		0.12	0.12		0.12	0.29	0.14	0.61		0.17	0.66	
v/c Ratio		0.38	0.10		0.30	0.17	0.37	0.36		0.69	0.47	
Control Delay		51.4	0.6		49.3	4.9	36.1	7.5		58.9	12.8	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		51.4	0.6		49.3	4.9	36.1	7.5		58.9	12.8	
LOS		D	A		D	A	D	A		E	B	
Approach Delay		37.6			23.2			10.4			19.9	
Approach LOS		D			C			B			B	

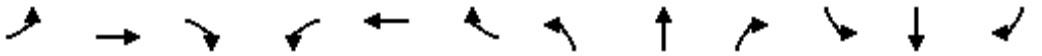
Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow			
Natural Cycle: 85			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay: 17.6		Intersection LOS: B	
Intersection Capacity Utilization 53.5%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 1: Forest Avenue & Falmouth St/Preble St



Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	83	31	62	88	86	766	201	1088
v/c Ratio	0.38	0.10	0.30	0.17	0.37	0.36	0.69	0.47
Control Delay	51.4	0.6	49.3	4.9	36.1	7.5	58.9	12.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.4	0.6	49.3	4.9	36.1	7.5	58.9	12.8
Queue Length 50th (ft)	61	0	45	0	61	70	148	213
Queue Length 95th (ft)	82	0	78	28	114	141	193	306
Internal Link Dist (ft)	691		1185			724		1088
Turn Bay Length (ft)		150			200		150	
Base Capacity (vph)	460	500	436	590	326	2138	375	2317
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.06	0.14	0.15	0.26	0.36	0.54	0.47

Intersection Summary

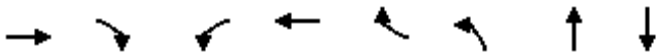


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	107	323	218	59	15	408	749	160	0	855	37
Future Volume (vph)	16	107	323	218	59	15	408	749	160	0	855	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		375	140		75	0		0	0		0
Storage Lanes	0		1	1		1	1		0	0		0
Taper Length (ft)	100			75			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		1.00		0.99		0.98		1.00			1.00	
Frt			0.850			0.850		0.974			0.994	
Flt Protected		0.994		0.950			0.950					
Satd. Flow (prot)	0	1656	1439	1608	1676	1454	1608	3068	0	0	3156	0
Flt Permitted		0.963		0.950			0.950					
Satd. Flow (perm)	0	1603	1439	1593	1676	1424	1608	3068	0	0	3156	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			82			82		34			4	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		609			1168			275			804	
Travel Time (s)		13.8			26.5			6.3			18.3	
Confl. Peds. (#/hr)	5		7	7		5			5			5
Peak Hour Factor	0.83	0.83	0.83	0.92	0.92	0.92	0.97	0.97	0.97	0.96	0.96	0.96
Heavy Vehicles (%)	7%	2%	1%	1%	2%	0%	1%	3%	2%	0%	2%	7%
Adj. Flow (vph)	19	129	389	237	64	16	421	772	165	0	891	39
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	148	389	237	64	16	421	937	0	0	930	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			12			18			4	
Link Offset(ft)		0			3			0			0	
Crosswalk Width(ft)		20			10			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		15	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	1			1	
Detector Template												
Leading Detector (ft)	50	50	50	50	50	50	50	50			50	
Trailing Detector (ft)	0	0	0	0	0	0	0	0			0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0			0	
Detector 1 Size(ft)	50	50	50	50	50	50	50	50			50	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	
Turn Type	Perm	NA	pt+ov	Prot	NA	Perm	Prot	NA			NA	
Protected Phases		4	4 5	3	8		5	2			6	
Permitted Phases	4					8						
Detector Phase	4	4	4 5	3	8	8	5	2			6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	7.0	7.0		5.0	5.0	5.0	5.0	10.0			10.0	
Minimum Split (s)	29.0	29.0		16.0	29.0	29.0	16.0	34.0			34.0	
Total Split (s)	29.0	29.0		23.0	52.0	52.0	31.0	68.0			37.0	
Total Split (%)	24.2%	24.2%		19.2%	43.3%	43.3%	25.8%	56.7%			30.8%	
Maximum Green (s)	23.0	23.0		17.0	46.0	46.0	25.0	62.0			31.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0			4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0			2.0	
Lost Time Adjust (s)		-4.0		-4.0	-4.0	-4.0	-4.0	-4.0			-4.0	
Total Lost Time (s)		2.0		2.0	2.0	2.0	2.0	2.0			2.0	
Lead/Lag	Lag	Lag		Lead			Lead				Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	3.5	3.0			3.0	
Recall Mode	None	None		None	None	None	None	C-Min			C-Min	
Walk Time (s)	4.0	4.0			4.0	4.0		4.0			4.0	
Flash Dont Walk (s)	18.0	18.0			18.0	18.0		23.0			23.0	
Pedestrian Calls (#/hr)	10	10			1	1		1			1	
Act Effct Green (s)		24.0	58.3	20.7	46.7	46.7	32.3	69.3			35.0	
Actuated g/C Ratio		0.20	0.49	0.17	0.39	0.39	0.27	0.58			0.29	
v/c Ratio		0.46	0.53	0.86	0.10	0.03	0.97	0.53			1.01	
Control Delay		46.5	19.5	76.0	22.4	0.1	82.4	16.7			67.1	
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	
Total Delay		46.5	19.5	76.0	22.4	0.1	82.4	16.7			67.1	
LOS		D	B	E	C	A	F	B			E	
Approach Delay		26.9			61.3			37.0			67.1	
Approach LOS		C			E			D			E	

Intersection Summary			
Area Type:	CBD		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow			
Natural Cycle: 105			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.01			
Intersection Signal Delay: 46.7		Intersection LOS: D	
Intersection Capacity Utilization 82.8%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 2: Forest Avenue & Bedford St/Baxter Blvd



Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	148	389	237	64	16	421	937	930
v/c Ratio	0.46	0.53	0.86	0.10	0.03	0.97	0.53	1.01
Control Delay	46.5	19.5	76.0	22.4	0.1	82.4	16.7	67.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.5	19.5	76.0	22.4	0.1	82.4	16.7	67.1
Queue Length 50th (ft)	99	159	180	30	0	~361	225	~409
Queue Length 95th (ft)	149	220	#318	58	0	#565	287	#530
Internal Link Dist (ft)	529			1088			195	724
Turn Bay Length (ft)		375	140		75			
Base Capacity (vph)	360	737	281	698	641	432	1784	923
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.53	0.84	0.09	0.02	0.97	0.53	1.01

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	69	0	0	75	0	0
Future Volume (vph)	69	0	0	75	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	0	1863	1863	0
Flt Permitted						
Satd. Flow (perm)	1863	0	0	1863	1863	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	198			771	187	
Travel Time (s)	4.5			17.5	4.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	75	0	0	82	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	75	0	0	82	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 7.3%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	69	0	0	75	0	0
Future Volume (Veh/h)	69	0	0	75	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	75	0	0	82	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				771		
pX, platoon unblocked						
vC, conflicting volume			75		157	75
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			75		157	75
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1524		834	986

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	75	82	0
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1524	1700
Volume to Capacity	0.04	0.00	0.00
Queue Length 95th (ft)	0	0	0
Control Delay (s)	0.0	0.0	0.0
Lane LOS			A
Approach Delay (s)	0.0	0.0	0.0
Approach LOS			A

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	7.3%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	3	9	1	66	74	1
Future Volume (vph)	3	9	1	66	74	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.896				0.998	
Flt Protected	0.989			0.999		
Satd. Flow (prot)	1651	0	0	1861	1859	0
Flt Permitted	0.989			0.999		
Satd. Flow (perm)	1651	0	0	1861	1859	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	291			602	198	
Travel Time (s)	6.6			13.7	4.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	3	10	1	72	80	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	13	0	0	73	81	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 14.3%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (veh/h)	3	9	1	66	74	1
Future Volume (Veh/h)	3	9	1	66	74	1
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	3	10	1	72	80	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					969	
pX, platoon unblocked						
vC, conflicting volume	154	80	81			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	154	80	81			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	99	100			
cM capacity (veh/h)	836	980	1517			

Direction, Lane #	SE 1	NE 1	SW 1
Volume Total	13	73	81
Volume Left	3	1	0
Volume Right	10	0	1
cSH	942	1517	1700
Volume to Capacity	0.01	0.00	0.05
Queue Length 95th (ft)	1	0	0
Control Delay (s)	8.9	0.1	0.0
Lane LOS	A	A	
Approach Delay (s)	8.9	0.1	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	14.3%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	11	31	597	0	0	83
Future Volume (vph)	11	31	597	0	0	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				
Flt Protected	0.950					
Satd. Flow (prot)	1770	1583	1863	0	0	1863
Flt Permitted	0.950					
Satd. Flow (perm)	1770	1583	1863	0	0	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	225		566			440
Travel Time (s)	5.1		12.9			10.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	12	34	649	0	0	90
Shared Lane Traffic (%)						
Lane Group Flow (vph)	12	34	649	0	0	90
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	41.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (veh/h)	11	31	597	0	0	83
Future Volume (Veh/h)	11	31	597	0	0	83
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	12	34	649	0	0	90
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						1049
pX, platoon unblocked						
vC, conflicting volume	739	649			649	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	739	649			649	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	97	93			100	
cM capacity (veh/h)	385	470			937	

Direction, Lane #	NW 1	NW 2	NE 1	SW 1
Volume Total	12	34	649	90
Volume Left	12	0	0	0
Volume Right	0	34	0	0
cSH	385	470	1700	937
Volume to Capacity	0.03	0.07	0.38	0.00
Queue Length 95th (ft)	2	6	0	0
Control Delay (s)	14.7	13.3	0.0	0.0
Lane LOS	B	B		
Approach Delay (s)	13.6		0.0	0.0
Approach LOS	B			

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	41.4%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	0	10	588	176	418	83
Future Volume (vph)	0	10	588	176	418	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	100	
Storage Lanes	1	0		0	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.865		0.969			
Flt Protected					0.950	
Satd. Flow (prot)	1611	0	1805	0	1770	1863
Flt Permitted					0.950	
Satd. Flow (perm)	1611	0	1805	0	1770	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	239		440			609
Travel Time (s)	5.4		10.0			13.8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	11	639	191	454	90
Shared Lane Traffic (%)						
Lane Group Flow (vph)	11	0	830	0	454	90
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 78.1%		ICU Level of Service D	
Analysis Period (min) 15			

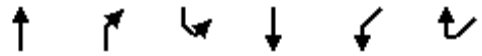
Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (veh/h)	0	10	588	176	418	83
Future Volume (Veh/h)	0	10	588	176	418	83
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	11	639	191	454	90
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						609
pX, platoon unblocked						
vC, conflicting volume	1732	734			830	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1732	734			830	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	97			43	
cM capacity (veh/h)	42	420			802	

Direction, Lane #	NW 1	NE 1	SW 1	SW 2
Volume Total	11	830	454	90
Volume Left	0	0	454	0
Volume Right	11	191	0	0
cSH	420	1700	802	1700
Volume to Capacity	0.03	0.49	0.57	0.05
Queue Length 95th (ft)	2	0	90	0
Control Delay (s)	13.8	0.0	15.2	0.0
Lane LOS	B		C	
Approach Delay (s)	13.8	0.0	12.7	
Approach LOS	B			

Intersection Summary			
Average Delay	5.1		
Intersection Capacity Utilization	78.1%	ICU Level of Service	D
Analysis Period (min)	15		

Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	319	78	519	306	0	94
Future Volume (vph)	319	78	519	306	0	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.973					0.865
Flt Protected				0.970		
Satd. Flow (prot)	1812	0	0	1807	0	1611
Flt Permitted				0.970		
Satd. Flow (perm)	1812	0	0	1807	0	1611
Link Speed (mph)	30			30	30	
Link Distance (ft)	205			164	566	
Travel Time (s)	4.7			3.7	12.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	347	85	564	333	0	102
Shared Lane Traffic (%)						
Lane Group Flow (vph)	432	0	0	897	0	102
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

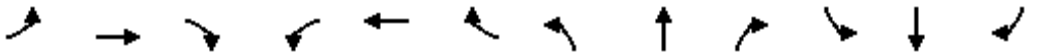
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 73.0%		ICU Level of Service D	
Analysis Period (min) 15			



Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Traffic Volume (veh/h)	319	78	519	306	0	94
Future Volume (Veh/h)	319	78	519	306	0	94
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	347	85	564	333	0	102
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			432		1850	390
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			432		1850	390
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			50		100	85
cM capacity (veh/h)			1128		41	659

Direction, Lane #	NB 1	SB 1	SW 1
Volume Total	432	897	102
Volume Left	0	564	0
Volume Right	85	0	102
cSH	1700	1128	659
Volume to Capacity	0.25	0.50	0.15
Queue Length 95th (ft)	0	72	14
Control Delay (s)	0.0	9.8	11.5
Lane LOS		A	B
Approach Delay (s)	0.0	9.8	11.5
Approach LOS			B

Intersection Summary			
Average Delay	6.9		
Intersection Capacity Utilization	73.0%	ICU Level of Service	D
Analysis Period (min)	15		

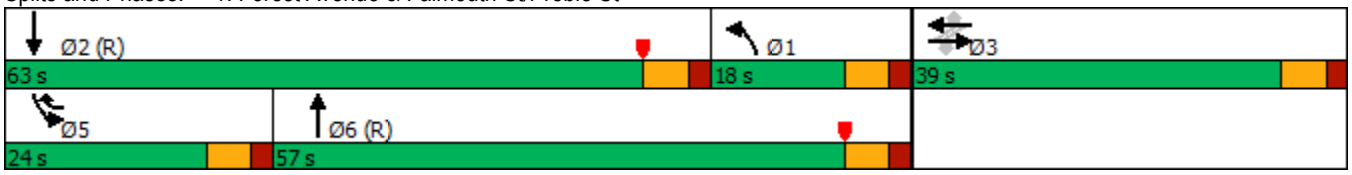


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	44	108	20	142	268	93	947	15	102	779	34
Future Volume (vph)	45	44	108	20	142	268	93	947	15	102	779	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0	200		0	150		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850			0.850		0.998			0.994	
Flt Protected		0.975			0.994		0.950			0.950		
Satd. Flow (prot)	0	1852	1615	0	1858	1599	1805	3466	0	1805	3554	0
Flt Permitted		0.482			0.950		0.950			0.950		
Satd. Flow (perm)	0	916	1615	0	1776	1599	1805	3466	0	1805	3554	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			140			82		2			5	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		675			1256			804			1168	
Travel Time (s)		15.3			28.5			18.3			26.5	
Peak Hour Factor	0.77	0.77	0.77	0.81	0.81	0.81	0.96	0.96	0.96	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	6%	1%	1%	0%	4%	1%	0%	1%	0%
Adj. Flow (vph)	58	57	140	25	175	331	97	986	16	107	820	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	115	140	0	200	331	97	1002	0	107	856	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			10			18			16	
Link Offset(ft)		0			-6			0			-2	
Crosswalk Width(ft)		16			16			30			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50	50	50	50	50	50	50		50	50	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	50	50	50	50	50	50	50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	Perm	NA	Perm	Perm	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases		3			3	5	1	6		5	2	
Permitted Phases	3		3	3		3						
Detector Phase	3	3	3	3	3	5	1	6		5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	10.0		5.0	10.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	32.0	32.0	32.0	32.0	32.0	16.0	16.0	37.0		16.0	25.0	
Total Split (s)	39.0	39.0	39.0	39.0	39.0	24.0	18.0	57.0		24.0	63.0	
Total Split (%)	32.5%	32.5%	32.5%	32.5%	32.5%	20.0%	15.0%	47.5%		20.0%	52.5%	
Maximum Green (s)	33.0	33.0	33.0	33.0	33.0	18.0	12.0	51.0		18.0	57.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-2.0	-2.0		-2.0	-2.0	-2.0	-2.0		-2.0	-2.0	
Total Lost Time (s)		4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag						Lead	Lag	Lag		Lead	Lead	
Lead-Lag Optimize?												
Vehicle Extension (s)	2.5	2.5	2.5	2.5	2.5	2.0	2.0	3.0		2.0	3.0	
Recall Mode	None	None	None	None	None	None	None	C-Min		None	C-Min	
Walk Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	
Flash Dont Walk (s)	21.0	21.0	21.0	21.0	21.0			26.0			14.0	
Pedestrian Calls (#/hr)	4	4	4	4	4			7			4	
Act Effct Green (s)		20.4	20.4		20.4	37.8	21.1	74.2		13.3	66.5	
Actuated g/C Ratio		0.17	0.17		0.17	0.32	0.18	0.62		0.11	0.55	
v/c Ratio		0.74	0.36		0.66	0.59	0.31	0.47		0.54	0.43	
Control Delay		73.4	9.0		56.6	28.8	25.3	4.5		74.7	10.9	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		73.4	9.0		56.6	28.8	25.3	4.5		74.7	10.9	
LOS		E	A		E	C	C	A		E	B	
Approach Delay		38.0			39.3			6.4			18.0	
Approach LOS		D			D			A			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 21 (18%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow			
Natural Cycle: 85			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay: 19.3		Intersection LOS: B	
Intersection Capacity Utilization 59.0%		ICU Level of Service B	
Analysis Period (min) 15			

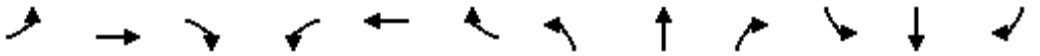
Splits and Phases: 1: Forest Avenue & Falmouth St/Preble St



Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	115	140	200	331	97	1002	107	856
v/c Ratio	0.74	0.36	0.66	0.59	0.31	0.47	0.54	0.43
Control Delay	73.4	9.0	56.6	28.8	25.3	4.5	74.7	10.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	73.4	9.0	56.6	28.8	25.3	4.5	74.7	10.9
Queue Length 50th (ft)	86	0	147	162	58	56	89	93
Queue Length 95th (ft)	119	31	187	186	m87	41	m119	126
Internal Link Dist (ft)	595		1176			724		1088
Turn Bay Length (ft)		150			200		150	
Base Capacity (vph)	267	570	518	643	317	2144	300	1976
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.25	0.39	0.51	0.31	0.47	0.36	0.43

Intersection Summary

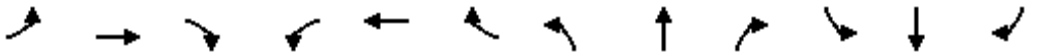
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	44	108	20	142	268	93	947	15	102	779	34
Future Volume (vph)	45	44	108	20	142	268	93	947	15	102	779	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	1.00		1.00	0.99	
Flt Protected		0.98	1.00		0.99	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1853	1615		1858	1599	1805	3464		1805	3553	
Flt Permitted		0.48	1.00		0.95	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		917	1615		1775	1599	1805	3464		1805	3553	
Peak-hour factor, PHF	0.77	0.77	0.77	0.81	0.81	0.81	0.96	0.96	0.96	0.95	0.95	0.95
Growth Factor (vph)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Adj. Flow (vph)	58	57	140	25	175	331	97	986	16	107	820	36
RTOR Reduction (vph)	0	0	116	0	0	59	0	1	0	0	2	0
Lane Group Flow (vph)	0	115	24	0	200	272	97	1001	0	107	854	0
Heavy Vehicles (%)	0%	0%	0%	6%	1%	1%	0%	4%	1%	0%	1%	0%
Turn Type	Perm	NA	Perm	Perm	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases		3			3	5	1	6		5	2	
Permitted Phases	3		3	3		3						
Actuated Green, G (s)		18.4	18.4		18.4	29.7	19.1	72.3		11.3	64.5	
Effective Green, g (s)		20.4	20.4		20.4	33.7	21.1	74.3		13.3	66.5	
Actuated g/C Ratio		0.17	0.17		0.17	0.28	0.18	0.62		0.11	0.55	
Clearance Time (s)		6.0	6.0		6.0	6.0	6.0	6.0		6.0	6.0	
Vehicle Extension (s)		2.5	2.5		2.5	2.0	2.0	3.0		2.0	3.0	
Lane Grp Cap (vph)		155	274		301	502	317	2144		200	1968	
v/s Ratio Prot						c0.06	0.05	c0.29		0.06	0.24	
v/s Ratio Perm		c0.13	0.01		0.11	0.11						
v/c Ratio		0.74	0.09		0.66	0.54	0.31	0.47		0.54	0.43	
Uniform Delay, d1		47.3	42.0		46.6	36.6	43.1	12.2		50.4	15.7	
Progression Factor		1.00	1.00		1.00	1.00	0.54	0.29		1.35	0.63	
Incremental Delay, d2		16.5	0.1		4.9	0.6	0.1	0.5		1.0	0.5	
Delay (s)		63.8	42.1		51.5	37.2	23.6	4.1		69.3	10.4	
Level of Service		E	D		D	D	C	A		E	B	
Approach Delay (s)		51.9			42.6			5.8			16.9	
Approach LOS		D			D			A			B	

Intersection Summary			
HCM 2000 Control Delay	20.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	59.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

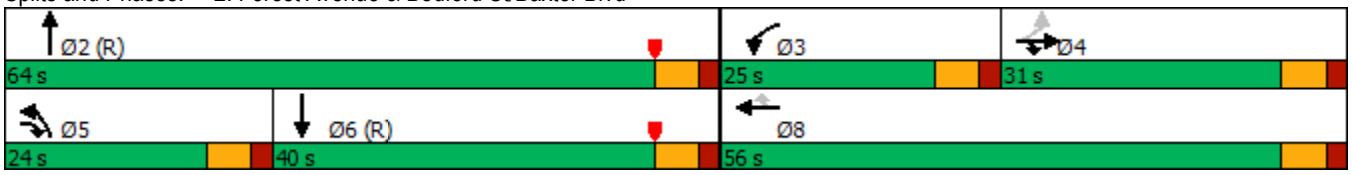


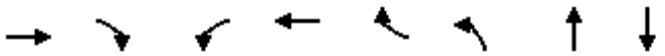
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	57	153	458	299	113	38	256	959	141	0	885	21
Future Volume (vph)	57	153	458	299	113	38	256	959	141	0	885	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		375	140		75	0		0	0		0
Storage Lanes	0		1	1		1	1		0	0		0
Taper Length (ft)	100			75			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850			0.850		0.981			0.996	
Flt Protected		0.987		0.950			0.950					
Satd. Flow (prot)	0	1655	1425	1608	1693	1439	1593	3125	0	0	3173	0
Flt Permitted		0.882		0.950			0.950					
Satd. Flow (perm)	0	1479	1425	1608	1693	1439	1593	3125	0	0	3173	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			82			82		20			2	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		609			1329			253			804	
Travel Time (s)		13.8			30.2			5.8			18.3	
Peak Hour Factor	0.87	0.87	0.87	0.85	0.85	0.85	0.91	0.91	0.91	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	66	176	526	352	133	45	281	1054	155	0	962	23
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	242	526	352	133	45	281	1209	0	0	985	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			12			18			4	
Link Offset(ft)		0			3			0			0	
Crosswalk Width(ft)		20			10			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		15	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	1			1	
Detector Template												
Leading Detector (ft)	50	50	50	50	50	50	50	50			50	
Trailing Detector (ft)	0	0	0	0	0	0	0	0			0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0			0	
Detector 1 Size(ft)	50	50	50	50	50	50	50	50			50	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	
Turn Type	Perm	NA	pt+ov	Prot	NA	Perm	Prot	NA			NA	
Protected Phases		4	4 5	3	8		5	2			6	
Permitted Phases	4					8						
Detector Phase	4	4	4 5	3	8	8	5	2			6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		5.0	5.0	5.0	5.0	10.0			10.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	29.0	29.0		16.0	29.0	29.0	16.0	34.0			34.0	
Total Split (s)	31.0	31.0		25.0	56.0	56.0	24.0	64.0			40.0	
Total Split (%)	25.8%	25.8%		20.8%	46.7%	46.7%	20.0%	53.3%			33.3%	
Maximum Green (s)	25.0	25.0		19.0	50.0	50.0	18.0	58.0			34.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0			4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0			2.0	
Lost Time Adjust (s)		-4.0		-4.0	-4.0	-4.0	-4.0	-4.0			-4.0	
Total Lost Time (s)		2.0		2.0	2.0	2.0	2.0	2.0			2.0	
Lead/Lag	Lag	Lag		Lead			Lead				Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	3.5	3.0			3.0	
Recall Mode	None	None		None	None	None	None	C-Min			C-Min	
Walk Time (s)	4.0	4.0			4.0	4.0		4.0			4.0	
Flash Dont Walk (s)	18.0	18.0			18.0	18.0		23.0			23.0	
Pedestrian Calls (#/hr)	10	10			1	1		1			1	
Act Effct Green (s)		28.5	53.0	23.0	53.5	53.5	22.5	62.5			38.0	
Actuated g/C Ratio		0.24	0.44	0.19	0.45	0.45	0.19	0.52			0.32	
v/c Ratio		0.69	0.78	1.14	0.18	0.07	0.94	0.74			0.98	
Control Delay		52.9	33.3	139.5	20.6	1.0	88.3	25.6			52.0	
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	
Total Delay		52.9	33.3	139.5	20.6	1.0	88.3	25.6			52.0	
LOS		D	C	F	C	A	F	C			D	
Approach Delay		39.5			97.9			37.4			52.0	
Approach LOS		D			F			D			D	

Intersection Summary			
Area Type:	CBD		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 9 (8%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow			
Natural Cycle: 105			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.14			
Intersection Signal Delay: 50.1		Intersection LOS: D	
Intersection Capacity Utilization 87.9%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 2: Forest Avenue & Bedford St/Baxter Blvd



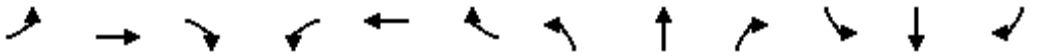


Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	242	526	352	133	45	281	1209	985
v/c Ratio	0.69	0.78	1.14	0.18	0.07	0.94	0.74	0.98
Control Delay	52.9	33.3	139.5	20.6	1.0	88.3	25.6	52.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.9	33.3	139.5	20.6	1.0	88.3	25.6	52.0
Queue Length 50th (ft)	171	293	~319	60	0	218	367	407
Queue Length 95th (ft)	253	421	#466	95	3	#392	456	#534
Internal Link Dist (ft)	529			1249			173	724
Turn Bay Length (ft)		375	140		75			
Base Capacity (vph)	357	675	308	761	692	298	1636	1006
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.78	1.14	0.17	0.07	0.94	0.74	0.98

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

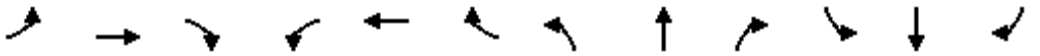
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	57	153	458	299	113	38	256	959	141	0	885	21
Future Volume (vph)	57	153	458	299	113	38	256	959	141	0	885	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		2.0	2.0	2.0	2.0	2.0	2.0	2.0			2.0	
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00	1.00	0.95			0.95	
Frt		1.00	0.85	1.00	1.00	0.85	1.00	0.98			1.00	
Flt Protected		0.99	1.00	0.95	1.00	1.00	0.95	1.00			1.00	
Satd. Flow (prot)		1654	1425	1608	1693	1439	1593	3124			3174	
Flt Permitted		0.88	1.00	0.95	1.00	1.00	0.95	1.00			1.00	
Satd. Flow (perm)		1478	1425	1608	1693	1439	1593	3124			3174	
Peak-hour factor, PHF	0.87	0.87	0.87	0.85	0.85	0.85	0.91	0.91	0.91	0.92	0.92	0.92
Growth Factor (vph)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Adj. Flow (vph)	66	176	526	352	133	45	281	1054	155	0	962	23
RTOR Reduction (vph)	0	0	46	0	0	25	0	10	0	0	1	0
Lane Group Flow (vph)	0	242	480	352	133	20	281	1199	0	0	984	0
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	2%	2%	2%	2%	2%	2%
Turn Type	Perm	NA	pt+ov	Prot	NA	Perm	Prot	NA			NA	
Protected Phases		4	4 5	3	8		5	2			6	
Permitted Phases	4					8						
Actuated Green, G (s)		24.5	49.0	19.0	49.5	49.5	18.5	58.5			34.0	
Effective Green, g (s)		28.5	53.0	23.0	53.5	53.5	22.5	62.5			38.0	
Actuated g/C Ratio		0.24	0.44	0.19	0.45	0.45	0.19	0.52			0.32	
Clearance Time (s)		6.0		6.0	6.0	6.0	6.0	6.0			6.0	
Vehicle Extension (s)		2.0		2.0	2.0	2.0	3.5	3.0			3.0	
Lane Grp Cap (vph)		351	629	308	754	641	298	1627			1005	
v/s Ratio Prot			c0.34	c0.22	0.08		c0.18	0.38			c0.31	
v/s Ratio Perm		0.16				0.01						
v/c Ratio		0.69	0.76	1.14	0.18	0.03	0.94	0.74			0.98	
Uniform Delay, d1		41.7	28.2	48.5	20.0	18.7	48.1	22.4			40.6	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00			0.69	
Incremental Delay, d2		4.5	4.9	95.7	0.0	0.0	37.3	3.0			22.7	
Delay (s)		46.2	33.2	144.2	20.0	18.7	85.4	25.4			50.8	
Level of Service		D	C	F	C	B	F	C			D	
Approach Delay (s)		37.3			102.4			36.7			50.8	
Approach LOS		D			F			D			D	

Intersection Summary			
HCM 2000 Control Delay	49.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	87.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

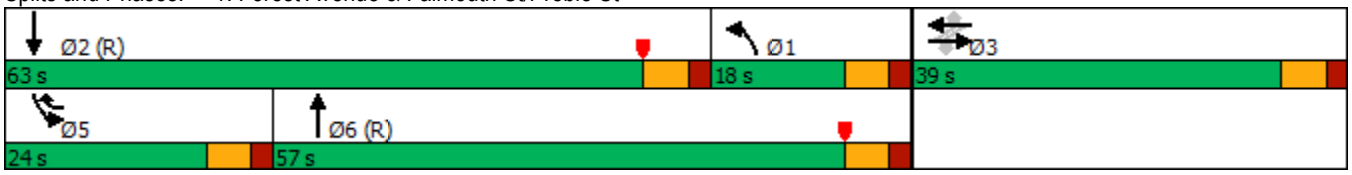


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	44	108	20	141	268	67	947	15	102	786	27
Future Volume (vph)	45	44	108	20	141	268	67	947	15	102	786	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0	200		0	150		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850			0.850		0.998			0.995	
Flt Protected		0.975			0.994		0.950			0.950		
Satd. Flow (prot)	0	1852	1615	0	1858	1599	1805	3466	0	1805	3558	0
Flt Permitted		0.485			0.949		0.950			0.950		
Satd. Flow (perm)	0	922	1615	0	1774	1599	1805	3466	0	1805	3558	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			140			82		2			4	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		675			1256			804			1168	
Travel Time (s)		15.3			28.5			18.3			26.5	
Peak Hour Factor	0.77	0.77	0.77	0.81	0.81	0.81	0.96	0.96	0.96	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	6%	1%	1%	0%	4%	1%	0%	1%	0%
Adj. Flow (vph)	58	57	140	25	174	331	70	986	16	107	827	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	115	140	0	199	331	70	1002	0	107	855	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			10			18			16	
Link Offset(ft)		0			-6			0			-2	
Crosswalk Width(ft)		16			16			30			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50	50	50	50	50	50	50		50	50	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	50	50	50	50	50	50	50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	Perm	NA	Perm	Perm	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases		3			3	5	1	6		5	2	
Permitted Phases	3		3	3		3						
Detector Phase	3	3	3	3	3	5	1	6		5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	10.0		5.0	10.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	32.0	32.0	32.0	32.0	32.0	16.0	16.0	37.0		16.0	25.0	
Total Split (s)	39.0	39.0	39.0	39.0	39.0	24.0	18.0	57.0		24.0	63.0	
Total Split (%)	32.5%	32.5%	32.5%	32.5%	32.5%	20.0%	15.0%	47.5%		20.0%	52.5%	
Maximum Green (s)	33.0	33.0	33.0	33.0	33.0	18.0	12.0	51.0		18.0	57.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-2.0	-2.0		-2.0	-2.0	-2.0	-2.0		-2.0	-2.0	
Total Lost Time (s)		4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag						Lead	Lag	Lag		Lead	Lead	
Lead-Lag Optimize?												
Vehicle Extension (s)	2.5	2.5	2.5	2.5	2.5	2.0	2.0	3.0		2.0	3.0	
Recall Mode	None	None	None	None	None	None	None	C-Min		None	C-Min	
Walk Time (s)	4.0	4.0	4.0	4.0	4.0			4.0			4.0	
Flash Dont Walk (s)	21.0	21.0	21.0	21.0	21.0			26.0			14.0	
Pedestrian Calls (#/hr)	4	4	4	4	4			7			4	
Act Effct Green (s)		20.4	20.4		20.4	37.7	18.6	74.3		13.3	71.3	
Actuated g/C Ratio		0.17	0.17		0.17	0.31	0.16	0.62		0.11	0.59	
v/c Ratio		0.74	0.36		0.66	0.59	0.25	0.47		0.54	0.40	
Control Delay		73.0	9.0		56.6	28.8	25.6	4.7		74.7	9.9	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		73.0	9.0		56.6	28.8	25.6	4.7		74.7	9.9	
LOS		E	A		E	C	C	A		E	A	
Approach Delay		37.9			39.3			6.0			17.1	
Approach LOS		D			D			A			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 21 (18%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow			
Natural Cycle: 85			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay: 18.9		Intersection LOS: B	
Intersection Capacity Utilization 59.0%		ICU Level of Service B	
Analysis Period (min) 15			

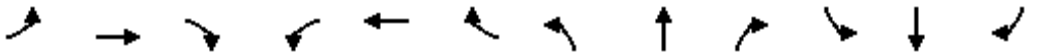
Splits and Phases: 1: Forest Avenue & Falmouth St/Preble St



Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	115	140	199	331	70	1002	107	855
v/c Ratio	0.74	0.36	0.66	0.59	0.25	0.47	0.54	0.40
Control Delay	73.0	9.0	56.6	28.8	25.6	4.7	74.7	9.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	73.0	9.0	56.6	28.8	25.6	4.7	74.7	9.9
Queue Length 50th (ft)	86	0	146	162	41	57	89	93
Queue Length 95th (ft)	119	31	186	186	m62	49	m119	126
Internal Link Dist (ft)	595		1176			724		1088
Turn Bay Length (ft)		150			200		150	
Base Capacity (vph)	268	570	517	643	300	2146	300	2120
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.25	0.38	0.51	0.23	0.47	0.36	0.40

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

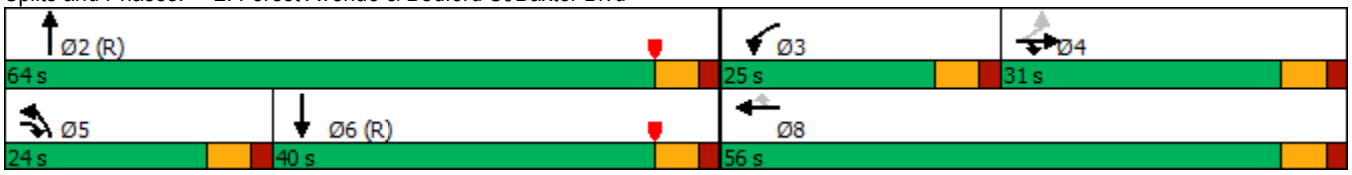


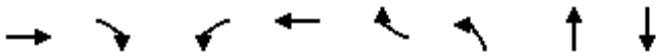
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	72	154	516	299	114	38	282	933	141	0	827	28
Future Volume (vph)	72	154	516	299	114	38	282	933	141	0	827	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		375	140		75	0		0	0		0
Storage Lanes	0		1	1		1	1		0	0		0
Taper Length (ft)	100			75			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850			0.850		0.980			0.995	
Flt Protected		0.984		0.950			0.950					
Satd. Flow (prot)	0	1650	1425	1608	1693	1439	1593	3122	0	0	3169	0
Flt Permitted		0.858		0.950			0.950					
Satd. Flow (perm)	0	1438	1425	1608	1693	1439	1593	3122	0	0	3169	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			82			82		21			3	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		609			1329			253			804	
Travel Time (s)		13.8			30.2			5.8			18.3	
Peak Hour Factor	0.87	0.87	0.87	0.85	0.85	0.85	0.91	0.91	0.91	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	83	177	593	352	134	45	310	1025	155	0	899	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	260	593	352	134	45	310	1180	0	0	929	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			12			18			4	
Link Offset(ft)		0			3			0			0	
Crosswalk Width(ft)		20			10			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		15	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	1			1	
Detector Template												
Leading Detector (ft)	50	50	50	50	50	50	50	50			50	
Trailing Detector (ft)	0	0	0	0	0	0	0	0			0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0			0	
Detector 1 Size(ft)	50	50	50	50	50	50	50	50			50	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	
Turn Type	Perm	NA	pt+ov	Prot	NA	Perm	Prot	NA			NA	
Protected Phases		4	4 5	3	8		5	2			6	
Permitted Phases	4					8						
Detector Phase	4	4	4 5	3	8	8	5	2			6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		5.0	5.0	5.0	5.0	10.0			10.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	29.0	29.0		16.0	29.0	29.0	16.0	34.0			34.0	
Total Split (s)	31.0	31.0		25.0	56.0	56.0	24.0	64.0			40.0	
Total Split (%)	25.8%	25.8%		20.8%	46.7%	46.7%	20.0%	53.3%			33.3%	
Maximum Green (s)	25.0	25.0		19.0	50.0	50.0	18.0	58.0			34.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0			4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0			2.0	
Lost Time Adjust (s)		-4.0		-4.0	-4.0	-4.0	-4.0	-4.0			-4.0	
Total Lost Time (s)		2.0		2.0	2.0	2.0	2.0	2.0			2.0	
Lead/Lag	Lag	Lag		Lead			Lead				Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	3.5	3.0			3.0	
Recall Mode	None	None		None	None	None	None	C-Min			C-Min	
Walk Time (s)	4.0	4.0			4.0	4.0		4.0			4.0	
Flash Dont Walk (s)	18.0	18.0			18.0	18.0		23.0			23.0	
Pedestrian Calls (#/hr)	10	10			1	1		1			1	
Act Effct Green (s)		29.0	53.0	23.0	54.0	54.0	22.0	62.0			38.0	
Actuated g/C Ratio		0.24	0.44	0.19	0.45	0.45	0.18	0.52			0.32	
v/c Ratio		0.75	0.88	1.14	0.18	0.07	1.06	0.73			0.92	
Control Delay		56.9	42.3	139.5	20.5	1.0	116.9	25.3			42.3	
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	
Total Delay		56.9	42.3	139.5	20.5	1.0	116.9	25.3			42.3	
LOS		E	D	F	C	A	F	C			D	
Approach Delay		46.7			97.8			44.4			42.3	
Approach LOS		D			F			D			D	

Intersection Summary			
Area Type:	CBD		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 9 (8%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow			
Natural Cycle: 105			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.14			
Intersection Signal Delay: 51.8		Intersection LOS: D	
Intersection Capacity Utilization 90.3%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 2: Forest Avenue & Bedford St/Baxter Blvd





Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	260	593	352	134	45	310	1180	929
v/c Ratio	0.75	0.88	1.14	0.18	0.07	1.06	0.73	0.92
Control Delay	56.9	42.3	139.5	20.5	1.0	116.9	25.3	42.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.9	42.3	139.5	20.5	1.0	116.9	25.3	42.3
Queue Length 50th (ft)	187	365	~319	61	0	~264	353	377
Queue Length 95th (ft)	#280	#557	#466	96	3	#445	438	#484
Internal Link Dist (ft)	529			1249			173	724
Turn Bay Length (ft)		375	140		75			
Base Capacity (vph)	347	675	308	761	692	292	1623	1005
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.88	1.14	0.18	0.07	1.06	0.73	0.92

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

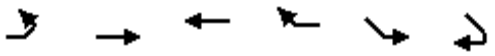
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	98	0	0	130	0	0
Future Volume (vph)	98	0	0	130	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	0	1863	1863	0
Flt Permitted						
Satd. Flow (perm)	1863	0	0	1863	1863	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	136			675	183	
Travel Time (s)	3.1			15.3	4.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Adj. Flow (vph)	107	0	0	141	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	107	0	0	141	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	10.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	98	0	0	130	0	0
Future Volume (Veh/h)	98	0	0	130	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	107	0	0	141	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				675		
pX, platoon unblocked						
vC, conflicting volume			107		248	107
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			107		248	107
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1484		740	947

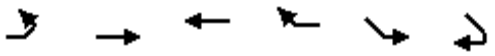
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	107	141	0
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1484	1700
Volume to Capacity	0.06	0.00	0.00
Queue Length 95th (ft)	0	0	0
Control Delay (s)	0.0	0.0	0.0
Lane LOS			A
Approach Delay (s)	0.0	0.0	0.0
Approach LOS			A

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	10.2%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Traffic Volume (vph)	2	94	122	8	4	3
Future Volume (vph)	2	94	122	8	4	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.991		0.942	
Flt Protected		0.999			0.972	
Satd. Flow (prot)	0	1861	1846	0	1706	0
Flt Permitted		0.999			0.972	
Satd. Flow (perm)	0	1861	1846	0	1706	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		733	136		287	
Travel Time (s)		16.7	3.1		6.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Adj. Flow (vph)	2	102	133	9	4	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	104	142	0	7	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 16.9%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Traffic Volume (veh/h)	2	94	122	8	4	3
Future Volume (Veh/h)	2	94	122	8	4	3
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	102	133	9	4	3
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			811			
pX, platoon unblocked						
vC, conflicting volume	142				244	138
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	142				244	138
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				99	100
cM capacity (veh/h)	1441				744	911

Direction, Lane #	EB 1	WB 1	SE 1
Volume Total	104	142	7
Volume Left	2	0	4
Volume Right	0	9	3
cSH	1441	1700	807
Volume to Capacity	0.00	0.08	0.01
Queue Length 95th (ft)	0	0	1
Control Delay (s)	0.2	0.0	9.5
Lane LOS	A		A
Approach Delay (s)	0.2	0.0	9.5
Approach LOS			A

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	16.9%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	62	318	368	0	0	267
Future Volume (vph)	62	318	368	0	0	267
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				
Flt Protected	0.950					
Satd. Flow (prot)	1770	1583	1863	0	0	1863
Flt Permitted	0.950					
Satd. Flow (perm)	1770	1583	1863	0	0	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	218		550			444
Travel Time (s)	5.0		12.5			10.1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Adj. Flow (vph)	67	346	400	0	0	290
Shared Lane Traffic (%)						
Lane Group Flow (vph)	67	346	400	0	0	290
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 45.7%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (veh/h)	62	318	368	0	0	267
Future Volume (Veh/h)	62	318	368	0	0	267
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	67	346	400	0	0	290
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						1053
pX, platoon unblocked						
vC, conflicting volume	690	400			400	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	690	400			400	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	84	47			100	
cM capacity (veh/h)	411	650			1159	

Direction, Lane #	NW 1	NW 2	NE 1	SW 1
Volume Total	67	346	400	290
Volume Left	67	0	0	0
Volume Right	0	346	0	0
cSH	411	650	1700	1159
Volume to Capacity	0.16	0.53	0.24	0.00
Queue Length 95th (ft)	14	79	0	0
Control Delay (s)	15.5	16.7	0.0	0.0
Lane LOS	C	C		
Approach Delay (s)	16.5		0.0	0.0
Approach LOS	C			

Intersection Summary			
Average Delay	6.2		
Intersection Capacity Utilization	45.7%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	NBL	NBR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	0	40	670	26	158	267
Future Volume (vph)	0	40	670	26	158	267
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	100	
Storage Lanes	1	0		0	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.865		0.995			
Flt Protected					0.950	
Satd. Flow (prot)	1611	0	1853	0	1770	1863
Flt Permitted					0.950	
Satd. Flow (perm)	1611	0	1853	0	1770	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	212		444			609
Travel Time (s)	4.8		10.1			13.8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Adj. Flow (vph)	0	43	728	28	172	290
Shared Lane Traffic (%)						
Lane Group Flow (vph)	43	0	756	0	172	290
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 58.9%		ICU Level of Service B	
Analysis Period (min) 15			

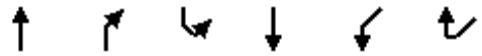
Movement	NBL	NBR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (veh/h)	0	40	670	26	158	267
Future Volume (Veh/h)	0	40	670	26	158	267
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	43	728	28	172	290
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						609
pX, platoon unblocked						
vC, conflicting volume	1376	742			756	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1376	742			756	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	90			80	
cM capacity (veh/h)	128	416			855	

Direction, Lane #	NB 1	NE 1	SW 1	SW 2
Volume Total	43	756	172	290
Volume Left	0	0	172	0
Volume Right	43	28	0	0
cSH	416	1700	855	1700
Volume to Capacity	0.10	0.44	0.20	0.17
Queue Length 95th (ft)	9	0	19	0
Control Delay (s)	14.7	0.0	10.3	0.0
Lane LOS	B		B	
Approach Delay (s)	14.7	0.0	3.8	
Approach LOS	B			

Intersection Summary			
Average Delay	1.9		
Intersection Capacity Utilization	58.9%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	495	57	311	301	0	301
Future Volume (vph)	495	57	311	301	0	301
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.986					0.865
Flt Protected				0.975		
Satd. Flow (prot)	1837	0	0	1816	0	1611
Flt Permitted				0.975		
Satd. Flow (perm)	1837	0	0	1816	0	1611
Link Speed (mph)	30			30	30	
Link Distance (ft)	214			201	550	
Travel Time (s)	4.9			4.6	12.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Adj. Flow (vph)	538	62	338	327	0	327
Shared Lane Traffic (%)						
Lane Group Flow (vph)	600	0	0	665	0	327
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 69.2%		ICU Level of Service C	
Analysis Period (min) 15			



Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Traffic Volume (veh/h)	495	57	311	301	0	301
Future Volume (Veh/h)	495	57	311	301	0	301
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	538	62	338	327	0	327
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			600		1572	569
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			600		1572	569
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			65		100	37
cM capacity (veh/h)			977		79	522

Direction, Lane #	NB 1	SB 1	SW 1
Volume Total	600	665	327
Volume Left	0	338	0
Volume Right	62	0	327
cSH	1700	977	522
Volume to Capacity	0.35	0.35	0.63
Queue Length 95th (ft)	0	39	107
Control Delay (s)	0.0	7.6	22.8
Lane LOS		A	C
Approach Delay (s)	0.0	7.6	22.8
Approach LOS			C

Intersection Summary			
Average Delay	7.9		
Intersection Capacity Utilization	69.2%	ICU Level of Service	C
Analysis Period (min)	15		

MOVEMENT SUMMARY

Site: 101 [AM Peak Hour - 2028 Build - Bedford Garage]

Deering Ave / Brighton Ave / Falmouth St
Portland, ME
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
SouthEast: Deering Ave											
21	L2	9	0.0	0.379	6.1	LOS A	2.7	19.3	0.33	0.44	39.5
21a	L1	284	2.4	0.379	5.3	LOS A	2.7	19.3	0.33	0.44	39.1
22	T1	143	1.0	0.379	1.6	LOS A	2.7	19.3	0.33	0.44	39.1
23	R2	25	0.0	0.379	2.2	LOS A	2.7	19.3	0.33	0.44	38.3
Approach		460	1.8	0.379	4.0	LOS A	2.7	19.3	0.33	0.44	39.0
NorthEast: Falmouth St											
24	L2	34	0.0	0.128	8.6	LOS A	0.7	4.8	0.59	0.61	39.1
25	T1	13	0.0	0.128	4.2	LOS A	0.7	4.8	0.59	0.61	38.7
26a	R1	48	0.0	0.128	4.1	LOS A	0.7	4.8	0.59	0.61	38.4
26	R2	4	0.0	0.128	4.7	LOS A	0.7	4.8	0.59	0.61	38.0
Approach		98	0.0	0.128	5.7	LOS A	0.7	4.8	0.59	0.61	38.7
NorthWest: Deering Ave											
27	L2	1	0.0	0.388	9.2	LOS A	2.1	15.3	0.63	0.64	39.4
28	T1	240	5.4	0.388	5.0	LOS A	2.1	15.3	0.63	0.64	39.0
29	R2	10	0.0	0.388	5.4	LOS A	2.1	15.3	0.63	0.64	38.2
29b	R3	2	0.0	0.388	5.8	LOS A	2.1	15.3	0.63	0.64	38.0
Approach		253	5.1	0.388	5.0	LOS A	2.1	15.3	0.63	0.64	39.0
West: Brighton Ave											
10b	L3	1	0.0	0.839	16.9	LOS B	15.0	107.1	1.00	1.13	37.0
10a	L1	40	0.0	0.839	15.4	LOS B	15.0	107.1	1.00	1.13	36.4
12a	R1	704	2.7	0.839	11.7	LOS B	15.0	107.1	1.00	1.13	36.1
12b	R3	2	0.0	0.839	12.7	LOS B	15.0	107.1	1.00	1.13	35.5
Approach		748	2.5	0.839	11.9	LOS B	15.0	107.1	1.00	1.13	36.1
SouthWest: Falmouth St											
30b	L3	1	0.0	0.167	16.1	LOS B	1.1	7.9	0.92	0.90	36.8
30	L2	14	0.0	0.167	15.4	LOS B	1.1	7.9	0.92	0.90	36.5
31	T1	24	0.0	0.167	11.0	LOS B	1.1	7.9	0.92	0.90	36.1
32	R2	20	8.0	0.167	12.1	LOS B	1.1	7.9	0.92	0.90	35.5
Approach		59	2.7	0.167	12.5	LOS B	1.1	7.9	0.92	0.90	36.0
All Vehicles		1618	2.6	0.839	8.3	LOS A	15.0	107.1	0.72	0.81	37.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [PM Peak Hour - 2028 Build - Bedford Garage]

Deering Ave / Brighton Ave / Falmouth St
Portland, ME
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
SouthEast: Deering Ave											
21	L2	23	0.0	0.675	6.5	LOS A	7.4	52.6	0.52	0.48	39.1
21a	L1	563	1.7	0.675	5.8	LOS A	7.4	52.6	0.52	0.48	38.7
22	T1	234	0.7	0.675	2.1	LOS A	7.4	52.6	0.52	0.48	38.7
23	R2	30	0.0	0.675	2.6	LOS A	7.4	52.6	0.52	0.48	37.9
Approach		849	1.3	0.675	4.7	LOS A	7.4	52.6	0.52	0.48	38.7
NorthEast: Falmouth St											
24	L2	36	0.0	0.407	14.6	LOS B	2.8	19.8	0.88	0.96	37.1
25	T1	33	0.0	0.407	10.2	LOS B	2.8	19.8	0.88	0.96	36.7
26a	R1	118	0.0	0.407	10.1	LOS B	2.8	19.8	0.88	0.96	36.5
26	R2	13	0.0	0.407	10.7	LOS B	2.8	19.8	0.88	0.96	36.0
Approach		199	0.0	0.407	11.0	LOS B	2.8	19.8	0.88	0.96	36.6
NorthWest: Deering Ave											
27	L2	9	16.7	0.435	16.5	LOS B	2.7	19.0	0.82	0.92	37.0
28	T1	175	0.0	0.435	10.9	LOS B	2.7	19.0	0.82	0.92	36.7
29	R2	7	0.0	0.435	11.4	LOS B	2.7	19.0	0.82	0.92	36.0
29b	R3	1	0.0	0.435	11.9	LOS B	2.7	19.0	0.82	0.92	35.8
Approach		193	0.7	0.435	11.1	LOS B	2.7	19.0	0.82	0.92	36.6
West: Brighton Ave											
10b	L3	1	0.0	0.567	9.5	LOS A	4.9	34.8	0.72	0.66	39.9
10a	L1	33	0.0	0.567	8.0	LOS A	4.9	34.8	0.72	0.66	39.1
12a	R1	472	3.0	0.567	4.3	LOS A	4.9	34.8	0.72	0.66	38.8
12b	R3	1	0.0	0.567	5.3	LOS A	4.9	34.8	0.72	0.66	38.1
Approach		507	2.8	0.567	4.6	LOS A	4.9	34.8	0.72	0.66	38.8
SouthWest: Falmouth St											
30b	L3	4	0.0	0.102	11.4	LOS B	0.6	4.2	0.75	0.71	38.8
30	L2	8	20.0	0.102	11.6	LOS B	0.6	4.2	0.75	0.71	38.4
31	T1	34	0.0	0.102	6.3	LOS A	0.6	4.2	0.75	0.71	38.0
32	R2	13	0.0	0.102	6.8	LOS A	0.6	4.2	0.75	0.71	37.3
Approach		59	2.9	0.102	7.5	LOS A	0.6	4.2	0.75	0.71	38.0
All Vehicles		1806	1.6	0.675	6.1	LOS A	7.4	52.6	0.65	0.63	38.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

COMMITMENT & INTEGRITY
DRIVE RESULTS

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Att. Q

Via Electronic Mail

September 13, 2021

Jimmy Dealaman, Planner
Planning and Urban Development Department
City Hall, 389 Congress Street, 4th Floor
Portland, Maine 04101

Re: 50 Bedford Street – Response to Site Plan Application Review Comments

Dear Jimmy:

The following are responses to comments received from the City of Portland in an email dated August 29, 2021; the comments received are provided below for your reference, followed by our response in italics:

Preliminary Site Plan Review Comments

Zoning

According to Land Use Code Section 8.10.5 the University of Southern Maine Overlay Zone (exclusive of public streets), is subject to a maximum lot coverage of 40% for building footprints and the maximum impervious area of 66%. Staff request an estimate of where the USM campus is at with each of these metrics in order to confirm the maximum is not exceeded.

RESPONSE: As noted in the Zoning Analysis Table attached to Section 6 of our application, the proposed building lot coverage is 30%, and the proposed impervious area coverage is 55%.

Impact on Surrounding Street Systems

The City's consulting traffic engineer has determined that modification to the TMP application is acceptable. Staff request that the applicant's traffic engineer (VHB) submit appropriate materials to amend the TMP application. Once the amended TMP application is submitted for review, please email Tom Errico thomas.errico@tylin.com to schedule the required scoping with between the applicant team and City staff.

RESPONSE: The TMP Amendment Application is in progress; the traffic engineer will reach out to Tom Errico to schedule the scoping meeting.

Are any additional street improvements at the entrance to the driveway on Bedford Street proposed or anticipated that might impact circulation into the access drive to the site?

RESPONSE: A figure depicting the conceptual-level plan for Bedford Street improvements and supporting narrative description was provided in Section 10.1.1 of the Site Plan

Narrative. The design is still in progress; design drawings and supplemental narrative for these improvements will be provided under separate cover as part of the TMP Amendment Application.

Access and Circulation

The width of the door to the bicycle storage space appears to be narrow which may discourage access to this area. Please revisit the entrance to this location.

RESPONSE: The bicycle storage entrance has been re-worked to provide a larger door with recessed alcove to better define and provide access to the bicycle entrance/storage area. Please see the revised Drawing A101.

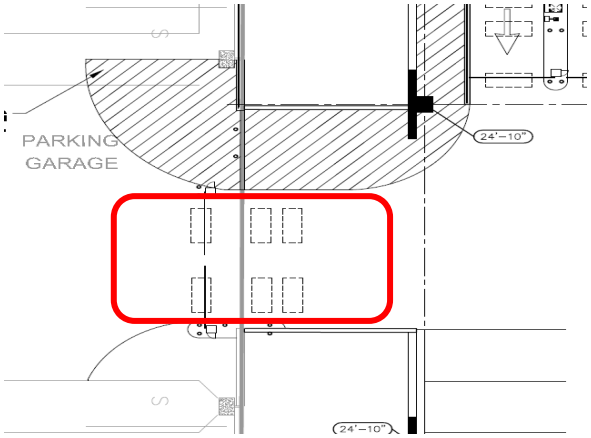
Referencing the State of Maine's guide on ADA design standards, the size of the garage appears to necessitate adding more accessible spaces. Please revisit the minimum # of required handicap accessible parking spaces, or provide staff with more information showing how the requirement for accessible spaces is being met for the project.

RESPONSE: The car count table on sheet A101 has been updated to show the number of accessible parking spaces provided with a note identifying the ADA Criteria.

Please clarify the interaction between the two garages. Please show any directional striping to clarify vehicle circulation between the two garages (i.e. is there two way traffic between the garages, any special signage for directing vehicles to the exit?)

RESPONSE: Two-way traffic will not be permitted between garages; this will be controlled by "Free-in" gates that allow entry-only into the existing garage, except for limited USM facility vehicles. Directional arrows have been added along with planned active and static signage to the Striping Plans (Sheets A-101 through A-105).

Please label for clarification what is proposed in the area shown below (see image) between the two garages on the ground level striping plan. (i.e. gate, speed bump, etc.)



RESPONSE: The Ground-Level Striping Plan (Sheet A-101) has been revised to include directional arrows to aid with patron wayfinding (see previous response).

Please provide additional narrative about how the south drive behind the garage will be utilized? It appears to be used as a fire lane to access the building as well as for trash pick-up. How do trash trucks access the dumpsters in that vicinity and how regularly? Also, please explain what generates the trash that the dumpsters will be accommodating, and where are these operations located? What restricts movement of unauthorized vehicles from using this lane (gate, signage, etc.) The narrative suggests gated emergency access. Please show any features related to vehicle circulation on the plan. Also please clarify if restricted access continues behind the existing garage. Please note whether this is a one-way drive? If so, please show any proposed signage.

RESPONSE: Similar to existing conditions, the area south of the garage will be fenced and gated to restrict unauthorized access. The fire access drive is a 20-foot wide, two-way drive with limited and restricted use. Emergency vehicle access will be provided via a Knox box at the gate. The Site Layout & Materials Plan (Drawing Sheet C-103) has been updated to depict fence, gate, and Knox box locations.

Three open-top, roll-off container dumpsters are proposed to manage bulky waste generated by the USM Portland campus that cannot fit into regular municipal solid waste dumpsters or compactors. Each container will store a different type of bulky waste: yard waste (grass clippings and leaves); construction and demolition (C&D) debris (branches cut from trees, broken wooden furniture, lumber, and carpet from renovations, etc.); and metal (scrap metal from various projects, metal desks, filing cabinets, metal pieces of chairs, etc.). Apart from emergency vehicle access, only ground, waste, and custodial Facilities supervisors will be allowed keyed entry into the gated area to access the dumpsters. Two pulls are expected each month, which means two of the three dumpsters will be pulled each month and returned. The dumpsters will be removed from campus for the winter months, so as not to impede snow removal. During the warmer months, the yard waste and C&D dumpsters will remain, while the waste dumpster will be on-site intermittently (only around about 25% of the time). The dumpsters will not be used for liquid material, food, hazardous waste, or regular municipal solid waste.

It appears a waiver will be needed to the City's Technical Manual Section 1.14.5. for drive aisles being under 24 feet wide (shown in I-27 of Section 1 of the Technical Manual). If a waiver is being sought, please provide a written request explaining the basis for justifying a waiver.

RESPONSE: The proposed drive aisle into the site and up to the turnaround is 24-feet wide to accommodate two-way traffic in accordance with the City's Technical Manual. The turnaround lanes are 22-feet and will be one-way as indicated by the signage specified on the Site Layout & Materials Plan (Drawing Sheet C-103); in accordance with Section 1.7.2.2 of the City's Technical Manual, the minimum width for one-way traffic is 12-feet. The proposed emergency access drive along the south side of the site is 20-feet wide and is not

intended for general traffic. Furthermore, in accordance with Section 1.7.2.3 of the Technical Manual, it is our understanding that the minimum two-way drive aisle width is 20-feet, with a preferred width of 24-feet. Section 1.14.5 and Figure I-27 of the Technical Manual apply to parking lot and parking space design; the proposed drive aisle is not associated with a parking lot. We do not believe a waiver is needed for the proposed drive aisles but will complete one if the City determines one is necessary.

Please show all dimensions within the garage parking areas. Also please add a scale for staff to reference on the floor/striping plan sheets. In particular please be sure to show the dimension aisle width behind the handicap accessible spaces. Staff are also wondering if the EV charging stations will occupy any space and if so, accounting for those dimensions in the parking layout design accordingly.

RESPONSE: Dimensions identifying drive aisle widths, stall depths, stall widths, and dual-head EV charging station locations (between stalls so as not to interfere with the parking spaces) have been added to the floor/striping plan sheets.

Please label any compact parking spaces that are being proposed so staff can differentiate these.

RESPONSE: Presently there are no compact parking spaces planned.

Staff are wondering how traffic and parking to the garage is being regulated (how do students know which garage to enter, and what type of device is used to allow entry to the garage)

RESPONSE: Active signage will be included above the main entrance directing visitors, monthly permit holders, and students to the appropriate entry lane. Internal to the garage signage, floor striping will further direct patrons to the appropriate zone of parking.

What are the hours of the garage?

RESPONSE: The new garage will be open 24 hours/day, 7days/week.

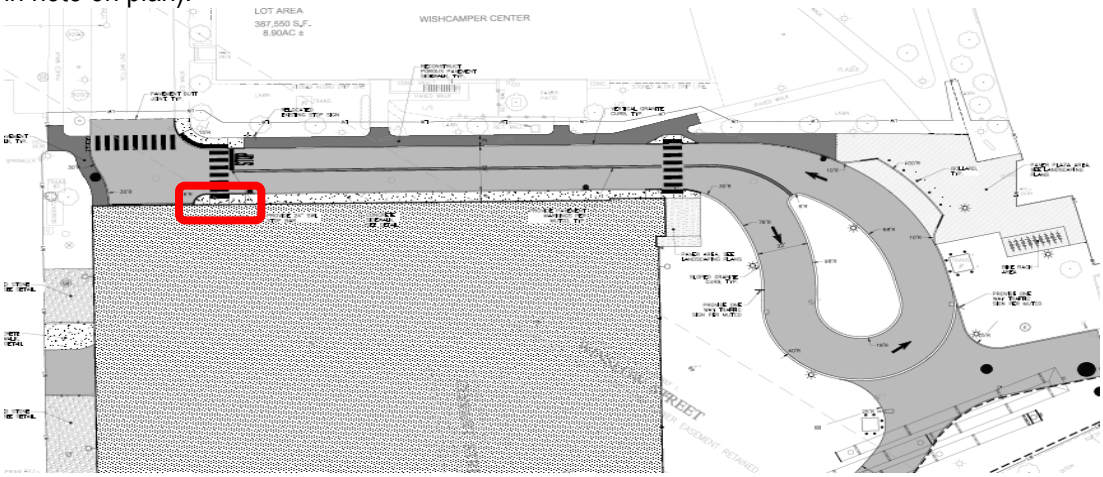
Will there be a maximum duration for vehicles charging at EV stations? What will deter parking at EV charging stations longer than required to charge vehicle?

RESPONSE: EV charging stations will be specified to have a user interface application that will prompt users when their car is charged (and to move it to a non-EV stall). Potential monetary fines for not moving a charged vehicle will be considered.

Is the extent of impervious surface area in the vicinity of the vehicle turnaround (towards the Forest Avenue side of site) necessary? Staff wonder if any unnecessary paving not needed for turning could be reduced. Staff recommend seeing a better outcome for this space if possible (e.g. increasing green space, etc.)

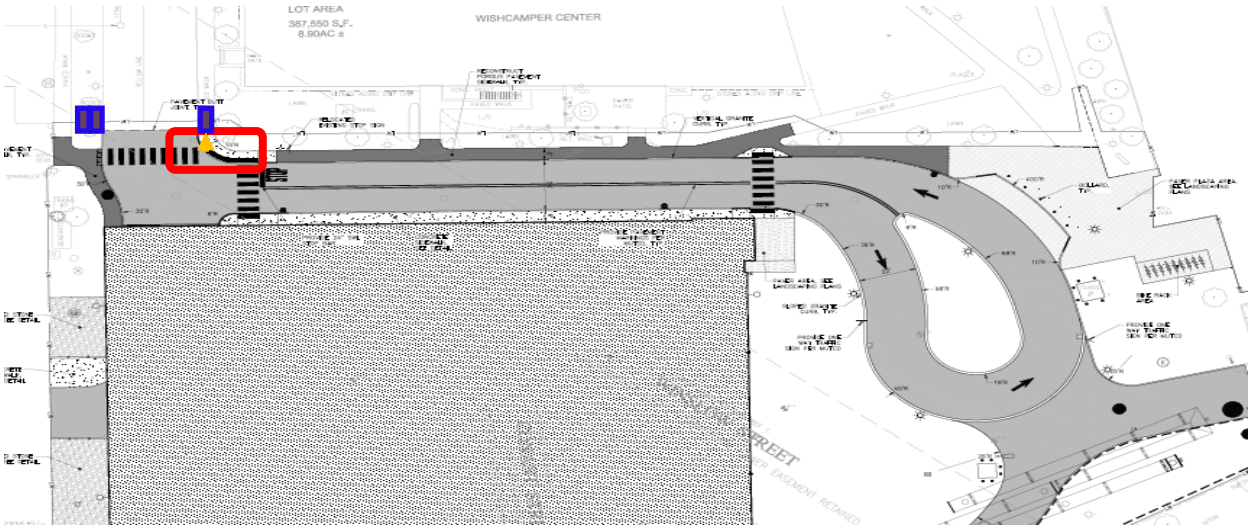
RESPONSE: As shown by the enclosed turning template showing fire truck access route, the extent of impervious surface area in the vicinity of the vehicle turnaround is necessary for fire truck access and maneuvering.

Please revisit the design of the ramps and landing at the location shown below. Pedestrian routes should be accessible (not exceeding 2% max slope) The interior hallway should also be revisited for its interface/relationship with the sidewalk. Please label slope or provide detail (citing detail in note on plan).



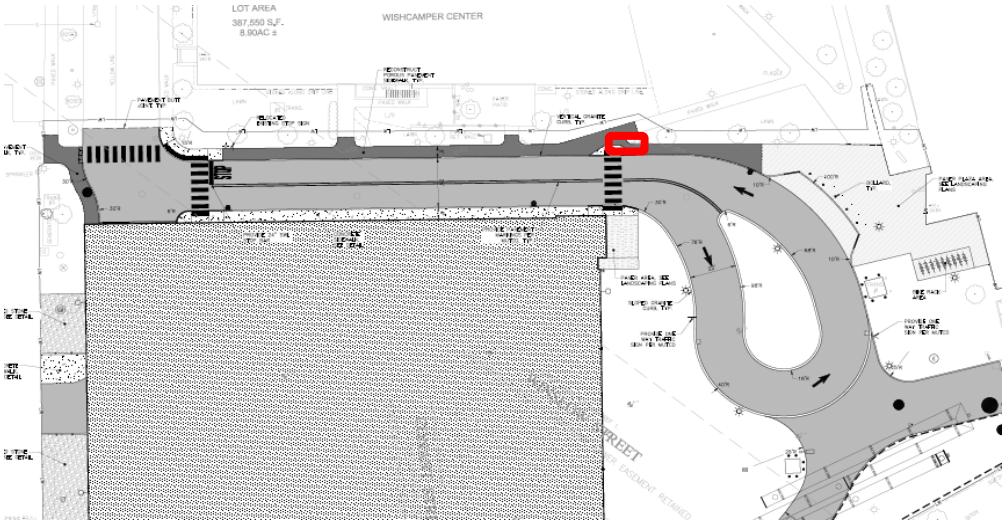
RESPONSE: Details specifying maximum slopes for all pedestrian ramps are cited on the Grading Plan (Drawing Sheet C-104); all pedestrian routes are ADA accessible.

The entirely of the detectable warning panel location (see image below) should be within the crosswalk. Please revisit this location. The panel could potentially be shifted slightly (see blue locations) and the ramps could be separated to meet each crosswalk.



RESPONSE: As specified on the Grading Plan (Drawing Sheet C-104), the proposed ramp has been designed to be a "Blended Transition Ramp"; this is a Maine Department of Transportation (MaineDOT) Standard Detail for Pedestrian Ramps (per MaineDOT Standard Details 801(26)) and an ADA acceptable configuration. All other options for ramp configurations have been deemed infeasible given the site's tight constraints. The ramp cannot be relocated further north as sketched above as it would conflict with existing stormwater features located along the west side of the driveway entrance into the site.

Please revisit the path at the location below (see image). It appears to be 3 feet from the top of the ramp, so this path should likely be extended to provide sufficient access and turning.



RESPONSE: The sidewalk width was increased in this area to provide a minimum 4-foot landing at the top of the ADA ramp; this change is reflected on the Site Layout & Materials Plan (Drawing Sheet C-103).

Parking

Please label any parking spaces that are expected along the access drive (if any are expected), also show any signage for loading or no parking areas.

RESPONSE: "No Parking" signs will be provided along the access drive loop. Two vehicle loading/unloading spaces are provided proximal to the Glickman/Osher entrance for safe pedestrian drop-offs. Proposed signage is depicted on the Site Layout & Materials Plan (Drawing Sheet C-103).

Based on the waiver documentation submitted, staff are open to supporting a partial waiver for the electric vehicle charging station requirement. Please provide a note on the utility plans that remaining spaces will be served by sufficient conduit, wiring, and electrical service to allow for future installation of electric vehicle supply equipment.

RESPONSE: A note has been added to the Utility & Grading Plan (Sheet C-104) regarding the accommodation of future electric vehicle supply equipment. Electrical conduit in the garage is surface mounted and easily expandable. Electrical circuits will also be designed to be expandable as new equipment is added.

To be clear, the applicant is proposing the following:

1. *Size the transformer now to accommodate a 20% EV buildout (install the 29 dual head units (58 spaces) or 9.4% of the current 618 spaces at this time, as indicated in the waiver request.*
2. *Install the conduit from the electric room to the future transformer pad site to accommodate the remaining 80% EV spaces.*
3. *Ensure there is sufficient room for future panels in the electric room and the satellite electric rooms on the various floors.*
4. *Design pathways for future conduit (and wiring) to those satellite electric rooms.*
5. *Future conduit from the satellite electric rooms will be overhead and utilize the blockouts that will be provided in the double tees. This will allow for additional conduit to be ceiling mounted and enable routing to all parking spaces if/when needed.*

This approach:

1. *Limits unused materials from being installed and subject to deterioration and/or damage;*
2. *Ensures that capability to expand, as needed, is in place now; and*
3. *Limits spending for elements that might never be necessary.*

Also, please clarify what parking areas might be reserved or intended for students/guests/faculty/etc.

RESPONSE: The parking program will include the nesting of daily credentialed patrons to park in the existing garage and utilize the Surrenden Street Exit. Long-term resident, visitor, and off-peak patrons will utilize the new garage.

Will any special signage be shown to inform visitors if parking lot is full or which garage has capacity? Will this be monitored?

RESPONSE: Active signage will be provided above the main entrance and a monument sign off of Bedford Street will direct garage patrons to the garage entrance (off of Winslow Street).

Is there any demand or parking areas that will be set aside for motorcycle, etc. If so, where will this be located and how will it be reserved for these vehicles?

RESPONSE: Motorcycle parking has been added on the ground-level of the garage as shown on Sheet A-101.

Public Safety and Fire Prevention

Please provide a turning template showing fire truck access route, also showing how vehicle is expected to turn around.

RESPONSE: Fire truck access and turnaround turning templates are enclosed.

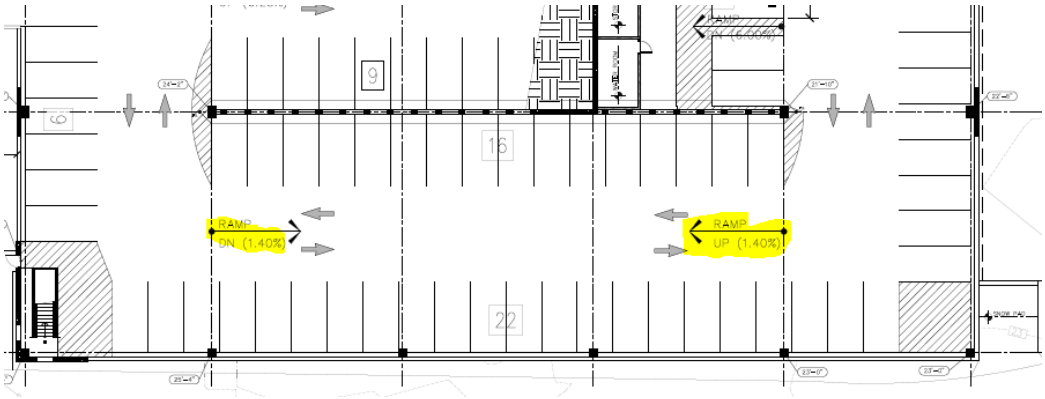
Site Design Standards

Also included as part of these preliminary comments, staff are providing design review comments (please see separate attachment).

RESPONSE: Noted. Responses to preliminary design review comments are provided in the following sections.

General

Please verify that the slopes provided on the ground level striping plan are correct (see image below). These appear to be possibly unintended so staff want confirm this is accurate.



RESPONSE: The Striping Plans (Sheets A101 through A105) have been revised to clarify ramp slope.

Preliminary Design Review Comments

Provide additional information on landscape/screening of hvac systems.
See attached rendering with notes (dated 8/27/21 by ccameron).

RESPONSE: There are no HVAC systems in the landscape to be screened.

A-3 Pedestrian Environment

The bike/ped circulation routes do not seem to be indicated or thought through. The pedestrian and bike entrances to the building are not legible or clear from either direction.

RESPONSE: Pedestrian routes have been considered and accommodated in the site design as shown on the enclosed Pedestrian Routes diagram. Building façade changes have also been proposed. Please see updated renderings, architectural elevations, and narrative responses below.

In addition, the interstitial space between the two garages has the potential to become dark, inhospitable spaces. To make this space feel secure and comfortable consider how visual interest or screening will be accommodated either in the design of the fencing, with lighting, or other amenities to indicate what is safe, habitable space.

RESPONSE: The space between the buildings is not intended to be a habitable space; however, it will be well lit and easy to maintain, with crushed stone at the ground-plane. There will be 36" concrete knee walls between the parking garage interior and these spaces, and 6' fencing between these spaces and the exterior. See drawings A200 and A201 for fencing, see drawing A201 for light fixtures. View A202 shows the perspective from the driveway entrance.

C-1 Structures

Scale, Massing, and material selection are compatible with adjacent, existing garage structure. Building is setback with minimal visual impact on Bedford Street. Front facade treated with material changes that correspond to entry points/building corners, scaling elements such as canopy and banners. The pedestrian/bike experience does not seem fully functional or adequately accommodated. Pedestrian entrances should emphasized and made more legible from the circulation routes - especially from adjacent building entrances. Bike room entrances are not directly accessible, functional. What is circulation pattern for peds/bikes? Staff recommend that the ground floor bay for bikes be differentiated with material and set back from the building face to accommodate maneuvering - a visible and wide/accessible entrance to the bike storage should be placed on the front facade. The remaining two car bays might carry the brick cladding to help the differentiation.

RESPONSE. Please see updated renderings and architectural elevations, showing building façade changes. A new recessed entry for the bicycle storage room has been added to provide more maneuvering space for cyclists apart from car traffic. The existing pedestrian stair tower has been emphasized as an entrance by removing the wrap-around canopy and extending the mass of glass to grade. A sunscreen of smaller scale has been added to draw interest around to the east side entry door location. The ground level of the east side of the garage in general has had piers added within each structural bay which creates a storefront expression for both the car and bike parking zones.

Principle C

Overall the project meets the goals to minimize the impact on the street and to create an attractive facade to neighboring uses.

RESPONSE: Acknowledged.

C-2 Active Uses

The building is setback at least 35' from Bedford Street and is placed behind the more active Wishcamper Center.

RESPONSE: Acknowledged.

C-3 Decks and Ramps

Ramps throughout the building including where visible from public rights of way. However, building is setback from all rights of way and ramps are screened so as to appear mostly horizontal floors from exterior.

RESPONSE: Acknowledged.

C-6 Utility Services

Provide screening for existing equipment visible from driveway. Where, if any, will additional hvac units be located?

RESPONSE: The existing transformer and existing generator near vehicular entry are being screened from entry driveway by five bayberry shrubs. These woody shrubs are semi evergreen, very hardy, and grow to about 8' tall. All transformers must have clear access 10' from front of unit and cannot be screened between front of unit and vehicular way. Any additional HVAC units will be integrated into the design of the garage.

In addition to changes made to the plans in response to the above comments, a 1.5" domestic water service connection to the proposed garage has been added to the Utility & Grading Plan (Sheet C-104). While daily use of domestic water in the garage is not expected, occasional use via hose hookups is anticipated to facilitate occasional garage maintenance. An ability to serve request letter has been prepared and sent to Portland Water District; a copy of this letter is enclosed. An ability to serve determination will be provided upon receipt.

Thank you for your feedback and comments as we continue to move forward with this project. Please contact me should you have any questions.

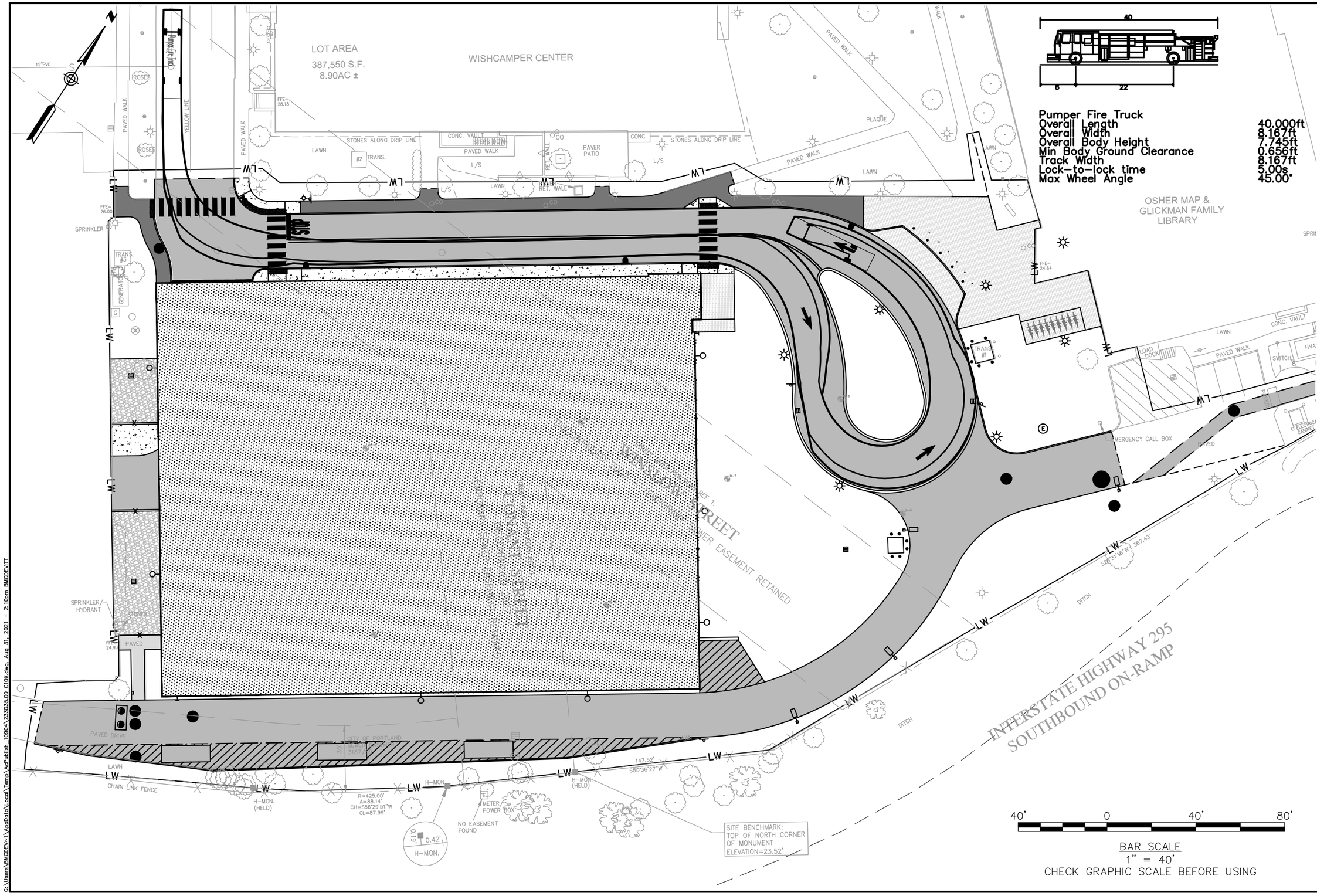
Sincerely,

WOODARD & CURRAN, INC.

Darrin Stairs, PE
Project Manager

Enclosure(s): Fire Truck Vehicle Movement Figures 1-3
Pedestrian Routes Diagram
Water Ability to Serve Request Letter
Revised Plans (uploaded under separate cover to Eplan)
- A-100 Site Plan
- A-101 Ground Level Striping Plan
- A-102 First Level Striping Plan
- A-103 Second Level Striping Plan
- A-104 Third Level Striping Plan
- A-105 Roof Level Striping Plan
- A-200 Building Elevations
- A-201 Building Elevations
- A-202 Building Views
- A-203 Building Views
- C-103 Site Layout & Materials Plan
- C-104 Utility & Grading Plan
- D-201 Civil Details – 2
- L-100 Planting Plan

cc: Wes Wilson, Desman Design Management
Ann Vashon, USM



41 Hutchins Drive
Portland, Maine 04102
800.426.4262 | www.woodardcurran.com
COMMITMENT & INTEGRITY DRIVE RESULTS
WOODARD &CURRAN

VEHICLE MOVEMENT

DESIGNED BY: ANL
DRAWN BY: BCM
CHECKED BY: DBS
233035.00 C10X.dwg

UNIVERSITY OF SOUTHERN MAINE
PORTLAND, MAINE

USM – STRUCTURED PARKING GARAGE
50 BEDFORD ST. PORTLAND, ME 04104

JOB NO: 233035.00
DATE: SEPTEMBER 2021
SCALE: 1"=40'

VEH. 1

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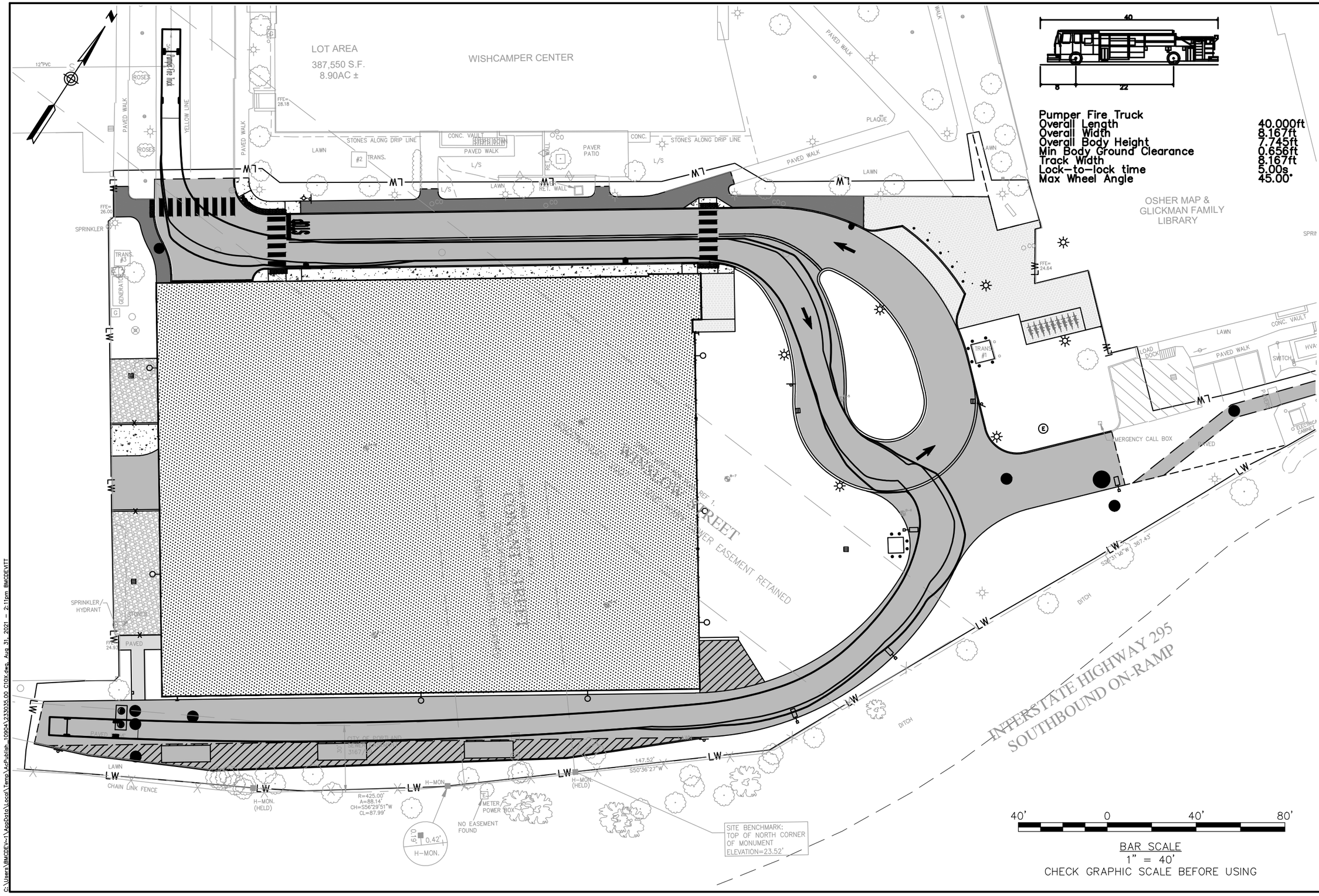

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Portland, Maine 04102
800.426.4262 | www.woodardcurran.com
COMMITMENT & INTEGRITY DRIVE RESULTS
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VEHICLE MOVEMENT FIGURE – 2

DESIGNED BY:	ANL
DRAWN BY:	BCM
CHECKED BY:	DBS
233035.00 C10X.dwg	

UNIVERSITY OF SOUTHERN MAINE
PORTLAND, MAINE

USM – STRUCTURED PARKING GARAGE
50 BEDFORD ST. PORTLAND, ME 04104

JOB NO: 233035.00
DATE: SEPTEMBER 2021
SCALE: 1"=40'

VEH. 2

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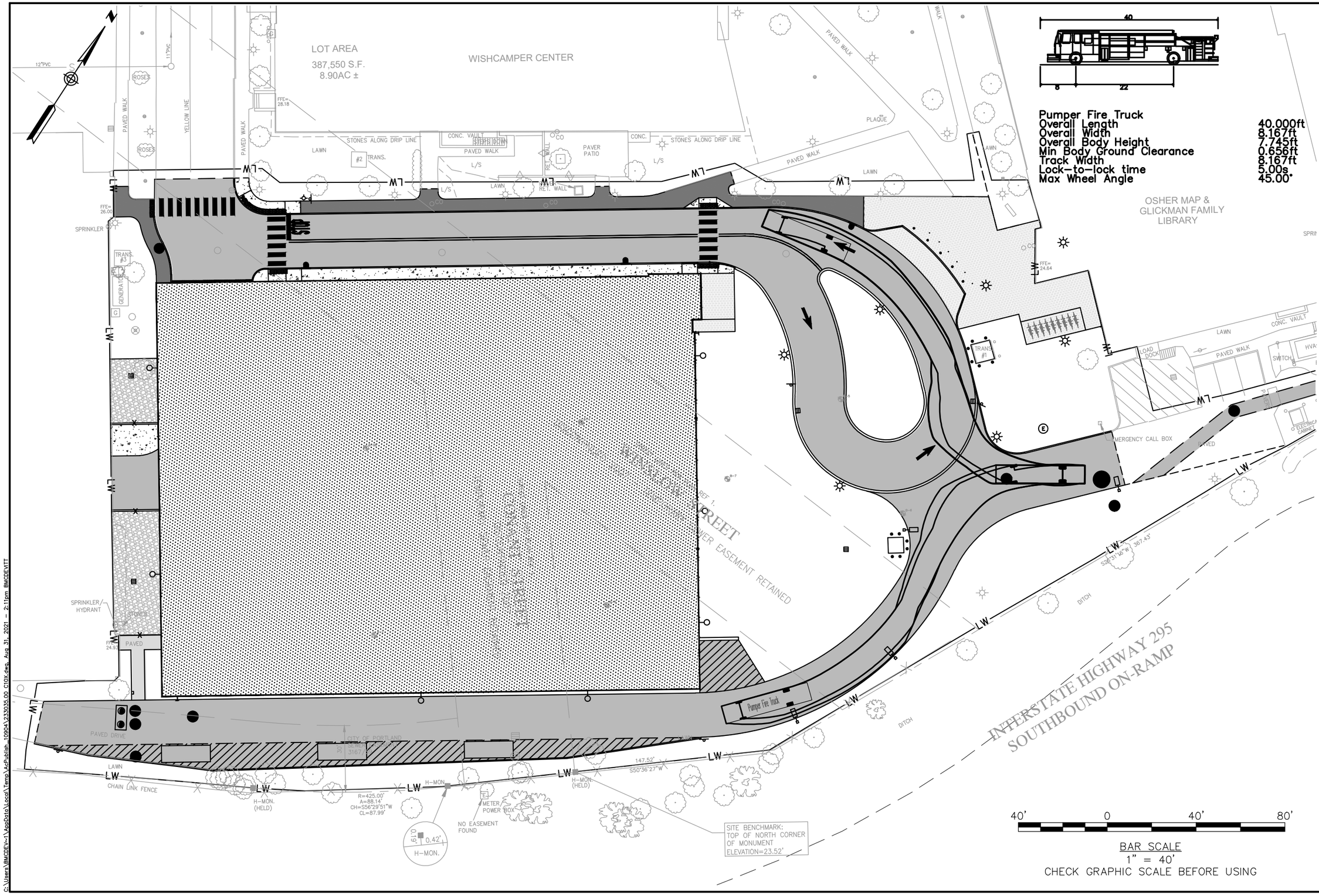

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VEHICLE MOVEMENT FIGURE – 3

DESIGNED BY:	ANL
DRAWN BY:	BCM
CHECKED BY:	DBS
233035.00 C10X.dwg	

UNIVERSITY OF SOUTHERN MAINE
PORTLAND, MAINE

USM – STRUCTURED PARKING GARAGE
50 BEDFORD ST. PORTLAND, ME 04104

JOB NO: 233035.00
DATE: SEPTEMBER 2021
SCALE: 1"=40'

VEH. 3

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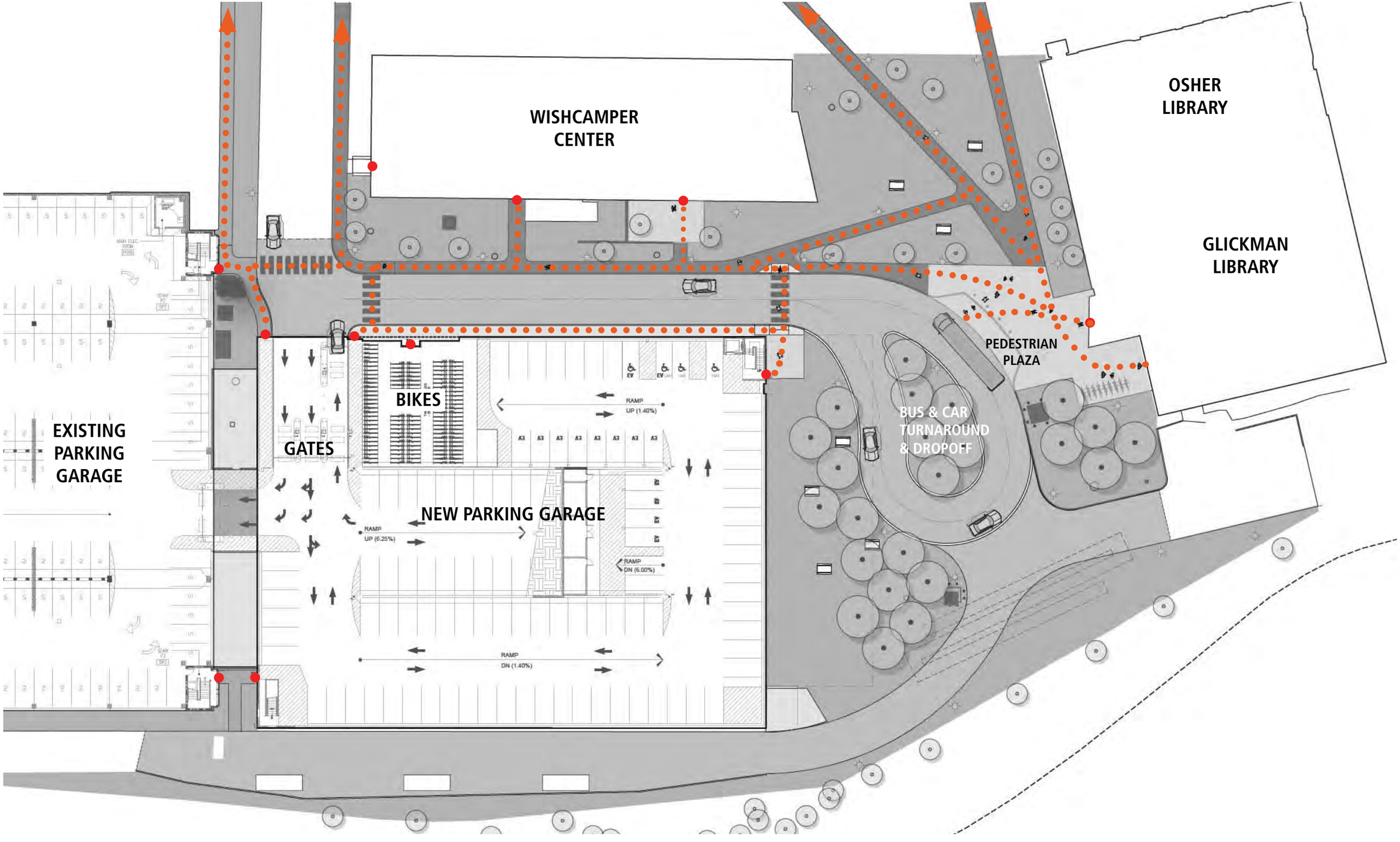

USM PARKING GARAGE: **WISHCAMPER SITE**
Portland, Maine

PEDESTRIAN ROUTES
1 SEPTEMBER 2021
mbla | inc

COMMITMENT & INTEGRITY
DRIVE RESULTS

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WOODARD &CURRAN

September 2, 2021

MEANS Group
Portland Water District
225 Douglass Street
Portland, ME 04104

Re: USM Structured Parking Garage – Request for Evidence of Ability to Serve

To Whom It May Concern:

The University of Southern Maine Portland Campus is proposing to construct a structured parking garage adjacent to the existing garage located at 44 Bedford Street in Portland, Maine. The proposed project will include the construction of a five-level structured parking garage with associated site improvements including lighting, landscaping, utilities, and stormwater management infrastructure. Portions of the existing water services on-site will be displaced to accommodate construction of the garage and its foundation, including a fire hydrant. The garage design includes a 1.5" domestic water service and a dry standpipe and sprinkler system with a Fire Department Connection (FDC) in the northeast corner stairwell. Locations and sizes of proposed water services, hydrant, valves, and service connection are shown on the enclosed Utility Plan. A fixture count spreadsheet is also enclosed to assist in determining peak flow for the site.

Daily use of domestic water is not anticipated for the proposed development. Hose hookups in the garage will facilitate occasional and infrequent garage maintenance. This estimate is based on the preliminary design of the interior layout. We do not anticipate changes that would result in significant water usage increases but will notify the Water District if design development results in any major changes. We have submitted a Major Site Plan Application for the proposed project to the City of Portland Planning Department and would appreciate documentation regarding Portland Water District's ability to serve the proposed development with potable water.

Please let us know if any additional information is required to facilitate your review. We appreciate your assistance and look forward to working with you further. Please do not hesitate to contact me at (207)558-3662 or dstairs@woodardcurran.com.

Sincerely,

WOODARD & CURRAN

Darrin Stairs, P.E.
Project Manager

Enclosure(s) Utility Plan
Fixture Count Spreadsheet

PN: 0233035.00

41 Hutchins Drive
Portland, Maine 04102
www.woodardcurran.com

T 800.426.4262
T 207.774.2112
F 207.774.6635

Via Electronic Mail

September 17, 2021

Jimmy Dealaman, Planner
Planning and Urban Development Department
City Hall, 389 Congress Street, 4th Floor
Portland, Maine 04101

Re: 50 Bedford Street – Response to Wright-Pierce Stormwater Review Comments

Dear Jimmy:

Thank you for coordinating the review of the proposed parking garage located at 50 (44) Bedford Street. We received the September 3, 2021 memo from Wright-Pierce (3rd party peer reviewer); the comments provided by Wright-Pierce are provided below for your reference and our response follows each comment in italics:

September 3, 2021 Memo from Wright-Pierce

Basic Standard

- Erosion and Sedimentation Control best management practices were observed on the Erosion and Sediment Control Plan and associated Details. An Inspection, Maintenance, and Housekeeping Plan has been provided with the erosion details and notes. In general, application of erosion and sedimentation control devices is appropriate. The following items are in need of clarification:
    - Inspection and Maintenance Log should include Oil/Water Separator inspection requirements.
    - Inspection and Maintenance Log should reference the inspector to MaineDEP Stormwater BMP Handbook for engineers and designers (current edition) for a full list of required inspection items.

  RESPONSE: Only flows captured by the garage's interior floor drains will discharge to the proposed oil/water separator; these flows are considered wastewater and will discharge to the combined sewer. Since the oil/water separator will not be treating stormwater, it is not included in the Stormwater Inspection and Maintenance Plan. The proposed oil/water separator will be maintained by USM similar to other oil/water separators on campus. The reference to the MaineDEP Stormwater BMP Handbook has been added to the Inspection and Maintenance Plan and BMP Log.

General Standard

- The applicant has provided an impact analysis to compare pre-development and post-development land use pollutant rankings under MaineDEP redevelopment guidelines. The written analysis indicated that the proposed development had a higher pollutant ranking than the existing site by a magnitude between 0 and 1, and is therefore required to treat 60% of the proposed site's disturbed surface area. A summary of pollutant rankings was provided by the applicant, reviewed, and it is generally agreed that the site required surface runoff treatment for 60% of the disturbed surface area for the proposed project. To help confirm the approach, please provide a brief discussion confirming the specific use of different paved surfaces and the roof area. Please confirm how those values relates to the indicated pollutant rankings for the existing and proposed parking lots and roof areas.

RESPONSE: All impervious areas with uncovered vehicular traffic, including paved parking lot area, drive aisles, fire access road, and driveways were considered Pollutant Ranking 4 – Medium Use Roads/Parking lot in both the pre- and post-development pollutant impact analysis. For the post-development analysis, the garage roof, which consists of uncovered parking spaces, and the drop off pull-out spaces off the loop driveway were also assigned Pollutant Ranking 4 – Medium Use Roads/Parking. Paved and concrete walkways, paver plaza area, pervious pavement, and grassed landscaped areas were considered Pollutant Ranking 2 – Landscaped Area/Paved Walkway.

- High-pollutant surface areas should be prioritized to a practicable extent for stormwater treatment under the redevelopment standard. Please provide a calculation of what percentage of surfaces with a pollutant ranking of 4 are being treated. If there are limitations to treating high-ranked surface areas, please indicate what site limitations would drive this design need.

  RESPONSE: High-pollutant surface areas were prioritized for treatment during design of the stormwater system. Of the 2.37-acre redevelopment area, Pollutant Ranking 4 encompasses 1.72 acres in the post-development condition. Approximately 1.44 acres or 83.5% of Pollutant Ranking 4 area is treated by the proposed subsurface stormwater treatment system. The remaining area is located over the treatment system (4.5% of Pollutant Ranking 4 area), at ground-level between the garages (1%) and along the portion of the fire-access road south of the proposed garage where existing stormwater infrastructure will be preserved (11%).

- An executed maintenance contract for the BMP systems is required. Maintenance agreements may be provided as a condition of approval.

  RESPONSE: Acknowledged.

<u>Porous Pavement, Stormfilter, and Subsurface Storage Design</u>

- Porous pavement design is included within the proposed project. However, the applicant has indicated proprietary devices are being used to meet the Water Quality Design standards, and porous pavement has not been included in the calculations for Treatment Design Calculations section of Appendix B. Please confirm intent of porous pavement on this project.

  RESPONSE: Existing porous pavement sidewalk will be impacted to construct the proposed improvements. Porous pavement was not allocated treatment credit in the Design Calculations because the proposed work will be maintenance and repair of existing porous pavement.

- A letter from the manufacturer is provided stating the StormFilter and storage conduit meets their approval for the specific project. The subsurface alignment is provided to remove a portion of granular solids prior to entering the treatment system.

  RESPONSE: Acknowledged.

- The information provided has indicated the project meets the minimum treatment requirements under Chapter 500. Further review of HydroCAD files will be provided once Department of Public Works clarifies intent and allowable activities for connections to the existing combined sewer system.

  RESPONSE: Acknowledged.

Flooding Standard

- It is understood that these two study points are located in separate watersheds for the proposed project, with one study point leading towards a combined sewer system, and the other conveying flows towards a separated sewer system. As such, the reviewer does not necessarily agree with the statement that the proposed flow rates have the represented net change in the Peak Runoff Rates table as these flow rates are not necessarily additive. The City of Portland Department of Public Works is responsible for issuing certification of any connection to Existing Stormwater Systems. E-mail, or otherwise written, confirmation from the Department of Public Works accepting this connection is requested to confirm that this connection is appropriate under Land Use section (prior number) 14-526 (b) 3 a. (iv); and 14-526 (c) 3 a., as well as adherence to MaineDEP Chapter 500.
    - It is understood the connection to the combined sewer system has not been approved by Public Works at this time.
    - It is appreciated there are two competing design requirements; to both remove stormwater flows to the combined sewer system, and to also meet the requirement to reduce flow rates to each study point. In many ways, these requirements work in opposition to achieve a common goal.
    - There is a potential ability to waive the requirements of the Flooding Standard, governing flow rates to each study point, within the existing codes. This would require the following information:
        - The applicant indicating the storm drainage system ultimately discharges to tidal waterways;
        - The applicant indicating through calculations, or receiving confirmation from the Department of Public Works, to allow an increase for surface water flows to the drainage system in interval rain events as noted in the Land Use Code;
        - The applicant requesting this waiver to discharge to tidal waterways, and having such waiver approved by the City Planning authority.
    - Connection to the existing combined sewer must be coordinated with the Department of Public Works.

  RESPONSE: The design, as proposed, is the result of a specific request of City DPW staff to direct stormwater flows, to the maximum extent possible, to the separated sewer located in Forest Avenue. It is the applicant's understanding that the Forest Avenue storm system has adequate capacity to handle the flows. A revised ability to serve request has been submitted to DPW for review, clarifying the separation of building sewer flows (building floor drains) to the combined sewer system as required by the City of Portland Technical Standards.

Grading and Drainage

- The applicant has indicated Maine Construction General Permit will likely be required for the project due to the extent of disturbed surface area. No further action necessary.

  RESPONSE: Acknowledged.

- Typical details should show a maximum 2% cross-slope for sidewalks, crosswalks, and crosswalk portions of driveways and maintenance entrances. No further action necessary.

  RESPONSE: Acknowledged.

- Further review of grading and drainage, in particular reviewing pipe information for positive flows, will be provided once the City Department of Public Works confirms the approved path forward for the flow rates as mentioned in Section 4 of these comments.

  RESPONSE: Acknowledged.

Utility Connections

- Ability to serve letters have not been provided for utilities impacted by the proposed project, but have been requested by the applicant for applicable utilities. Please confirm these letters will be provided to the Planning Department when received.

  RESPONSE: Water and sewer ability to serve determinations will be submitted to Planning upon receipt.

- Standard design for the electrical utility has been provided. Please confirm intent of infrastructure on the roadway side of fencing. While no work appears to be occurring outside of the property limits, temporary removal of the existing fence may be considered a safety concern to vehicles on the interstate, particularly if new above-ground electrical systems are placed near the property line.

  RESPONSE: The proposed electrical service will be underground from Forest Avenue. Please see sheet ES-100 Electrical Site Plan previously provided.

  The electrical work shown near the property line (adjacent to the I-295 corridor) is a relocated secondary electrical service to the interstate lighting circuit. This work is being coordinated directly with Maine DOT and Central Maine Power.

If you have any questions or require additional information, please do not hesitate to contact me at (207) 558-3662 or by email at dstairs@woodardcurran.com.

Sincerely,

WOODARD & CURRAN INC.

Darrin Stairs, PE
Project Manager

cc: University of Southern Maine

Enclosures:
1. Revised Stormwater Inspection & Maintenance Plan and Inspection Checklist
2. Stormwater BMP Maintenance Log

STORMWATER INSPECTION & MAINTENANCE PLAN

USM Structured Parking Garage, Portland, Maine

General inspection and maintenance during and after construction must take place in accordance with the requirements outlined in Appendix B of the Maine Department of Environmental Protection (MaineDEP) Chapter 500 Rules. Upon completion of the project, the Owner will assume responsibility for overseeing the property, including the inspection and maintenance of the Site's stormwater drainage system and treatment measures outlined herein. A person with knowledge of stormwater management and erosion and sediment control, including the standards and conditions in the permit, shall conduct the inspections and perform maintenance of the facilities. The inspector should refer to the MaineDEP Stormwater BMP Handbook for engineers and designers (current edition) for a full list of required inspection items.

Inspection and maintenance activities will be performed per the attached checklist, schedule, StormFilter guidelines; an example page of the BMP Maintenance Log that shall be kept on-site is also attached.

Storm Drain System

Trash, debris, and sediment shall be removed from storm drain pipes and catch basins as needed on a semi-annual basis. In addition to the inspection and maintenance of stormwater systems, paved areas will be inspected annually each spring. Visual inspections will enable parking areas to be kept clean and clear through periodic sweeping and winter plowing as required. The inspections will also ensure pavement markings are repainted as needed to maintain proper traffic circulation and parking space delineation. Paved areas will be plowed and sanded as often as necessary to maintain public safety. Periodic sweeping of pavement will keep the parking areas clean and will reduce the amount of sediment available to enter the stormwater systems, in turn reducing the need to clean the stormwater systems.

Porous Pavement

Winter maintenance procedures may be problematic (e.g., scraping by plows, clogging by sand, clogging by or inability to treat de-icing chemicals). Snow removal and deicing activities should be done carefully to avoid disturbance to the pavement structure. The plow blade should be raised 1" above the surface or outfitted with a flexible rubber bottom piece. Porous pavement has the potential to become impervious if not properly maintained. Proper maintenance should consist of the following:

- Frequent inspections should be performed during the first few months following construction; the system should inspected routinely on an annual basis thereafter. Inspections should be made after significant storm events to check for surface ponding that could indicate failure due to clogging. Non-routine maintenance may require reconstruction of the surface treatment, and possibly the filter and reservoir layers, to relieve major clogging.
- Prevent sedimentation due to the erosion of areas upgradient of the porous pavement.
- Prevent vehicles with muddy wheels from accessing the porous pavement.
- Sweep, vacuum and/or pressure wash pavement twice annually at a minimum.
- Limit salt use for deicing and do not use sand.
- Remove leaves and organic debris in the fall.
- Measures should be taken to ensure that an area designed to be porous does not receive a future overlay of conventional non-porous paving.

StormFilter System

The StormFilter system must be inspected at least once every six months, and the filters maintained annually per the manufacturer's guidelines, which are outlined in the attached guidance document.

STORMWATER INSPECTION CHECKLIST

Inspection by: _____ Date: _____

Stormwater Management Feature	Condition						Comments
Subsurface Detention System	no siltation		some siltation		heavily silted in		
Subsurface Detention System	no clogging/flooding		some clogging/flooding		heavy clogging/flooding		
Subsurface Detention System	outlet free of erosion		some erosion at outlet		outlet heavily eroded		
Subsurface Detention System	inlet/outlet clear		some debris		completely blocked		
StormFilter System*	Cartridges are in good condition		Cartridges in need of cleaning		Cartridges in need of replacement		
StormFilter System*	no clogging/flooding		some clogging/flooding		heavy clogging/flooding		
Porous Pavement	No sediment or debris accumulation		Some sediment or debris accumulation		Excessive sediment or debris accumulation		
Porous Pavement	Structure is in good condition.		Structure has small visible wear.		Structure has excessive visible wear.		

**See attached manufacturer's guidelines for StormFilter System maintenance and inspection.*
***Refer to the MaineDEP Stormwater BMP Handbook for Engineers and Designers (current edition) for a full list of required inspection items.*

Recommended Actions: _____

_____

Actions Completed: _____ Date: _____

STORMWATER MAINTENANCE TASKS & RECOMMENDED SCHEDULE

TASKS	DETENTION AND STORMFILTER SYSTEM	POROUS PAVEMENT	STORM DRAIN PIPES	SCHEDULE
Inspect for sediment & debris accumulation	X	X	X	Spring and Fall
Remove sediment & Debris accumulation	X	X	X	As needed
Inspect for erosion				As needed
Reestablish vegetation in erosion areas				Early spring
Inspect structural elements during wet weather and compare to as-built plans	X	X	X	Annually
Make adjustments or replacements as determined by wet weather observations	X	X	X	As needed
Keep records of all inspections and maintenance activities	X	X	X	Annually
Have a professional engineer perform emergency inspections upon identification of severe problems	X	X	X	As needed

Stormwater BMP Maintenance Log

BMP Structure	Inspector (Name)	Work Performed	Date Performed	Comments
Pavement Sweeping				
Porous Pavement				
Catch Basins				
CMP System				
StormFilter System				
Other				
Additional Comments:				

The Inspector should refer to the MaineDEP Stormwater BMP Handbook for Engineers and Designers (current edition) for a full list of required inspection items.

USM Parking Assessment: Existing and Future Conditions

Presented by
LOURENÇO DANTAS, AICP
FEDERICO TALLIS, AICP

January 17, 2020

Contents

- Study Purpose
- Current Parking Supply
- Future Parking Supply
- Current Parking Demand
- Enrollment and Parking Demand Forecasts
- Future Parking Supply vs. Demand
- Key Takeaways
- Appendix
  - Parking Demand by Lot/Facility
  - Proposed USM TDM Strategies

Study Purpose

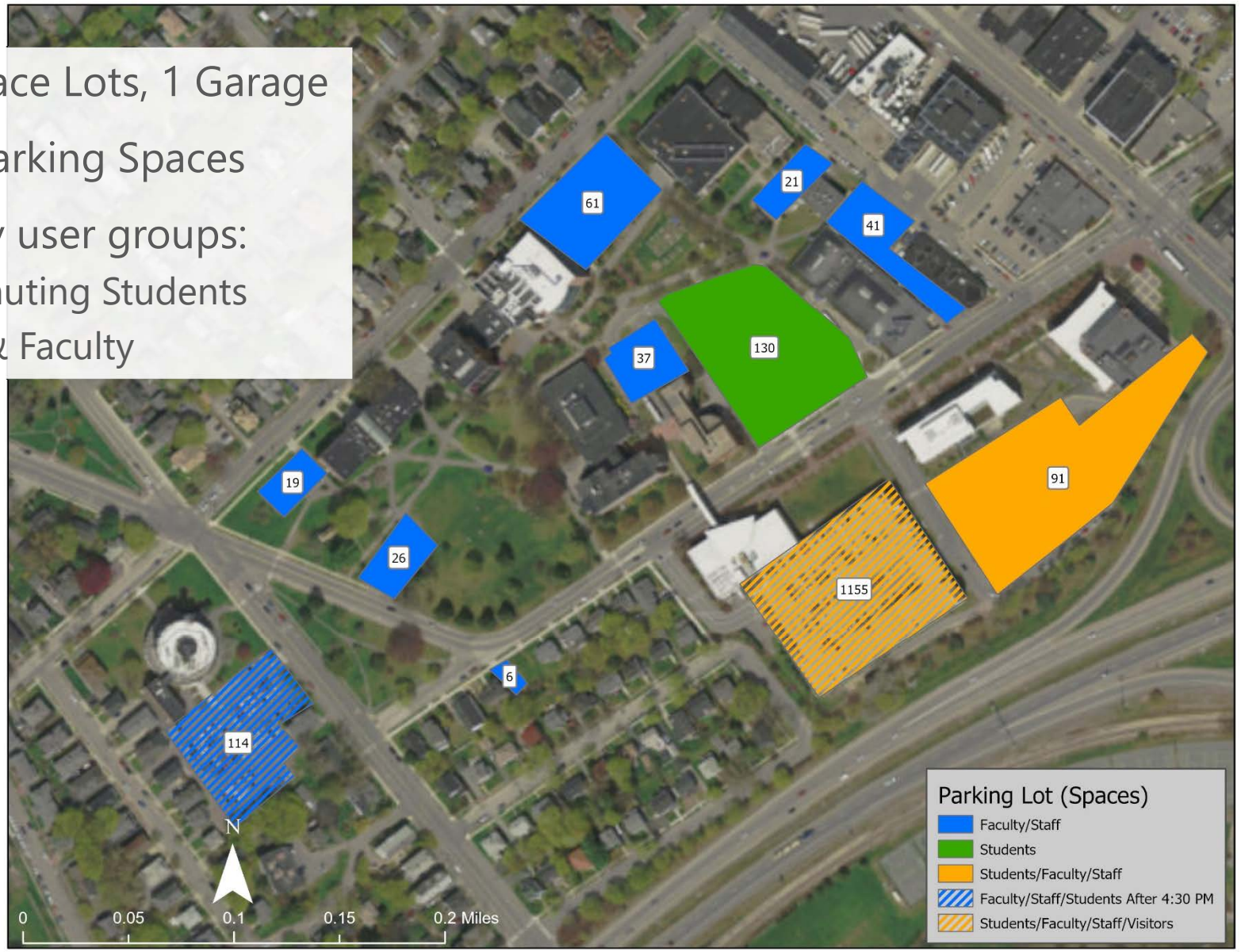
To develop a comprehensive profile of current on-campus parking conditions and to estimate future parking demand levels based upon projections of student enrollment, employment growth, and changes to campus activities.

Key milestones include:

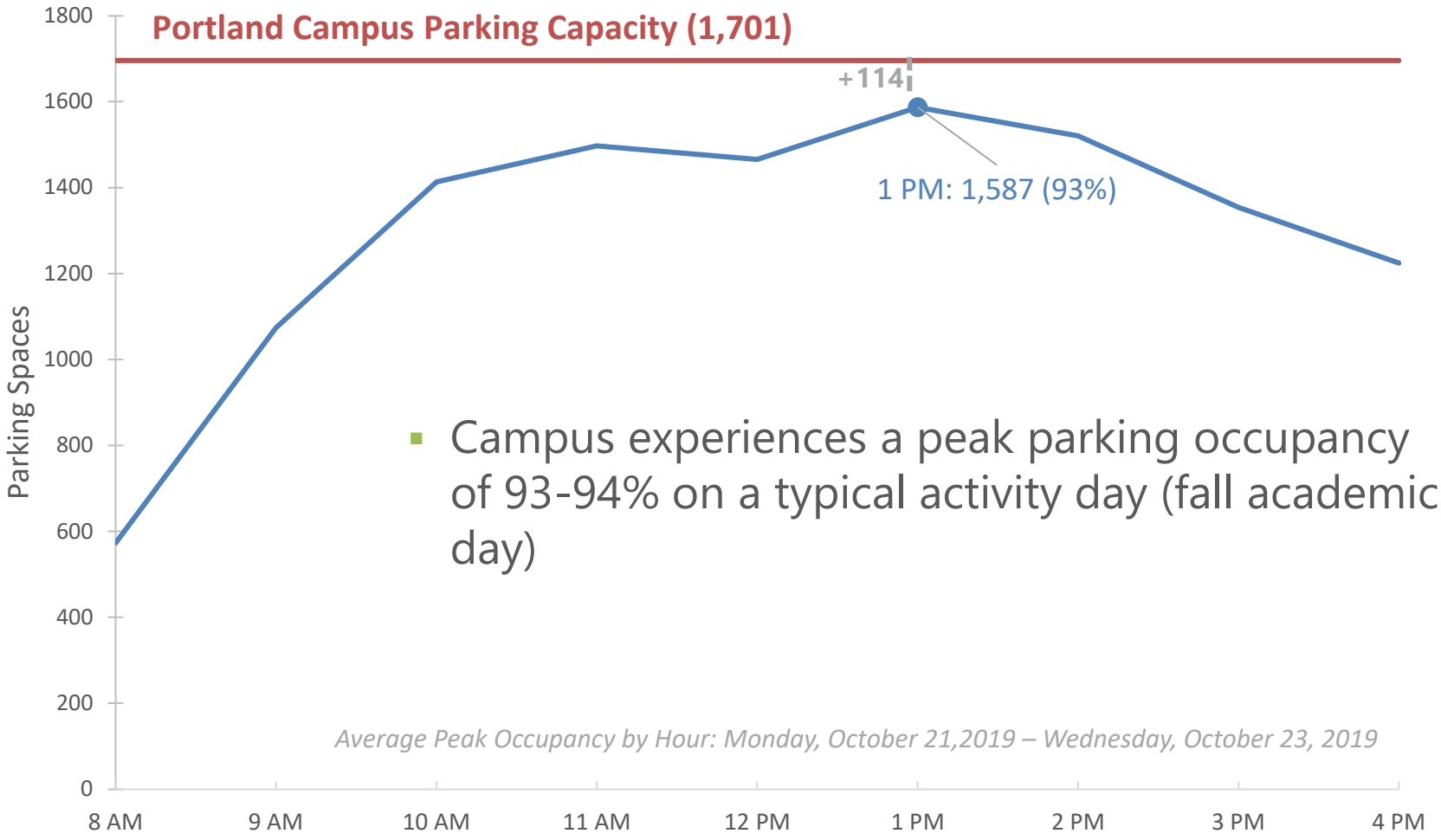
- 2022 – completion of student center & residence hall, including loss of Woodbury parking lot (P2)
- 2025 & 2030

Current Parking Supply

- 10 Surface Lots, 1 Garage
- 1,701 Parking Spaces
- Two key user groups:
  - Commuting Students
  - Staff & Faculty



Current Parking Demand

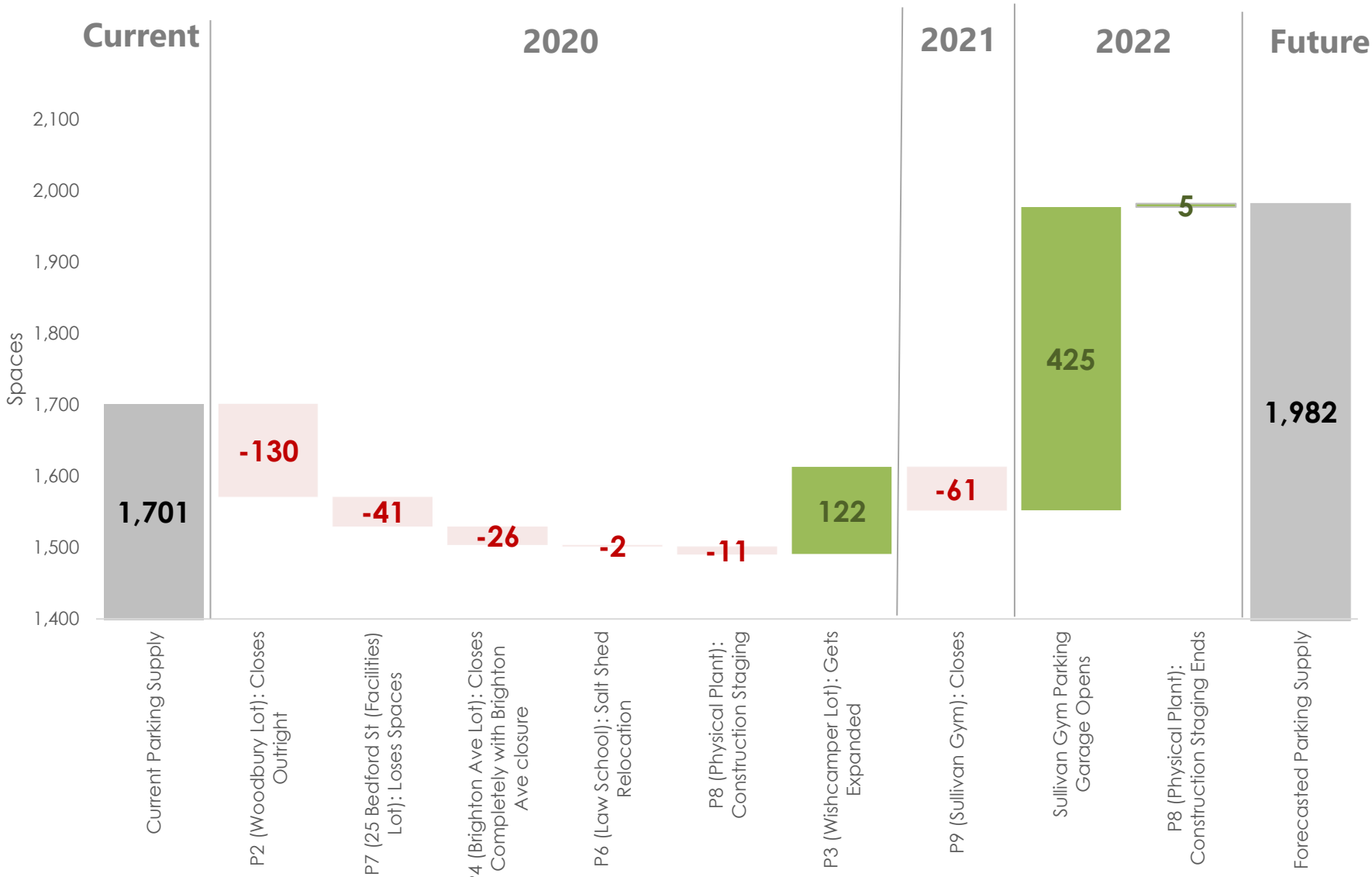


- Campus experiences a peak parking occupancy of 93-94% on a typical activity day (fall academic day)

Current Parking Demand

- Current Parking Peak Hour occurs at 1 PM
- Campus is currently at 93% occupancy during peak, typical activity day
- 5 of 11 lots noted occupancy beyond capacity (see details in appendix) including:
  - P2 Campus Center (Woodbury Parking Lot)
  - P3 Wishcamper Center/Library
  - P4 Off Brighton Ave
  - P5 92-120 Bedford
  - P10 Payson Smith

Future Parking Supply



Future Parking Supply

On-Campus	2019	2020	2021	2022	Milestone Notes (from USM)
Parking Garage	1155	1155	1155	1155	
P1 Luther Bonney & Masterton Halls	37	37	37	37	
P2 Campus Center (Woodbury Parking Lot)	130	0	0	0	Lose all of Woodbury parking lot permanently
P3 Wishcamper Center/Library	91	213	213	213	Wishcamper parking lot will be temporarily lost for the summer 2020 Gain 122 spots in new Wishcamper surface lot by September 2020
P4 Off Brighton Ave	26	0	0	0	Lose Brighton Ave extension parking lot by May 2020
P5 92-120 Bedford	6	6	6	6	
P6 Law Building	114	112	112	112	Salt shed being relocated to this lot to make way for construction of new buildings
P7 Facilities Building	41	0	0	0	Lose all of this lot, except access to oil fill in June of 2020
P8 Physical Plant	21	10	10	15	Lose half of this lot in 2020 and 2021 for use as a laydown/staging area for construction of new buildings and creation of service area
P9 Sullivan Recreation	61	61	0	0	Lose lot to construction zone for new parking garage
P10 Payson Smith	19	19	19	19	
USM Sullivan Lot Garage	0	0	0	425	Parking garage with 425 spaces
Total	**1,701**	**1,613**	**1,552**	**1,982**	

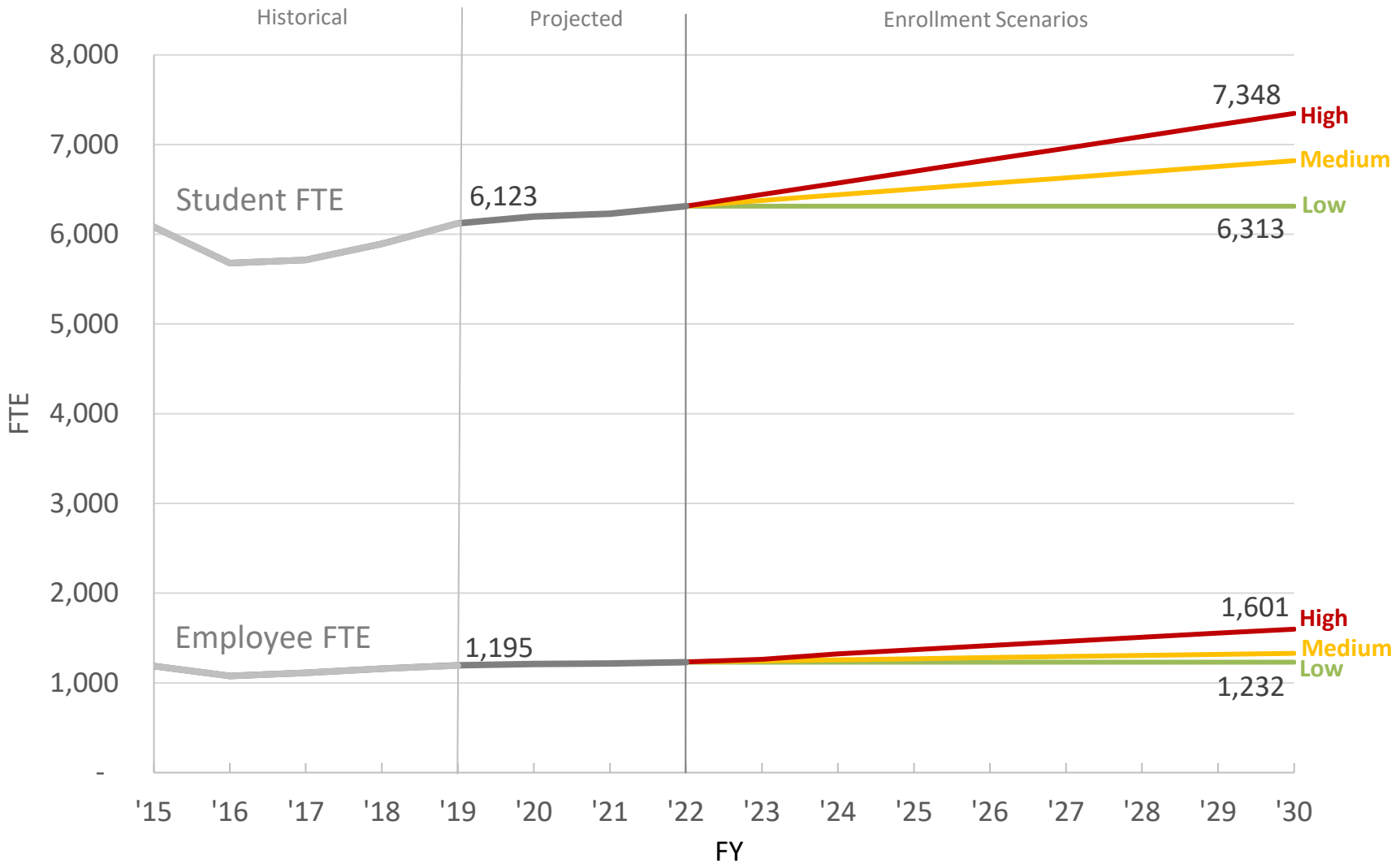
Enrollment Forecast Methodology

- What we know:
  - 2019 Student and Employee FTE
    - Student FTE: 6,123
    - Employee FTE: 1,195
  - Projected Student Growth Through 2022
    - 2020 Student FTE: 6,199
    - 2021 Student FTE: 6,230
    - 2022 Student FTE: 6,313
- What we don't know:
  - 2020 – 2022 Employee FTE
    - Employee FTE was grown proportionally to student enrollment using 2019 ratios for 2020 – 2022; could have a different growth rate
  - How USM will grow beyond 2022

Enrollment Forecast Methodology

- To determine demand beyond 2022 three scenarios were determined:
  - **Low:** Student enrollment and employment remains flat beyond 2022
    - Average Annual Growth Rate: 0%
  - **Mid:** Student enrollment continues to grow steadily based on growth from 2019 to 2022. Employment grows proportionally to student enrollment.
    - Average Annual Growth Rate: 1%
  - **High:** Student enrollment and employment grows back to peak enrollment, 2006 levels.
    - Average Annual Growth Rate: 2%

Student and Employee FTE Projections



Translating Enrollment to Parking Demand

- What we know:
  - Portland Campus Parking Demand
    - Peak hour demand: 1,587 (93%)
  - USM Portland Campus Headcount vs Total USM Enrollment
    - From Master Plan: Portland has 64% of total USM student headcount
  - Employee vs. Student Parking Demand
    - From parking count, 44% of Portland campus permits are from employees whereas 56% are from students
  - Residential Student Parking Permit Demand
    - From Master Plan 1,200 beds in Gorham and 815 registered permits from permit data = 0.68 parking space/bed.
    - Based on demographic of expected student population, a higher 0.75 parking space/bed rate was used.

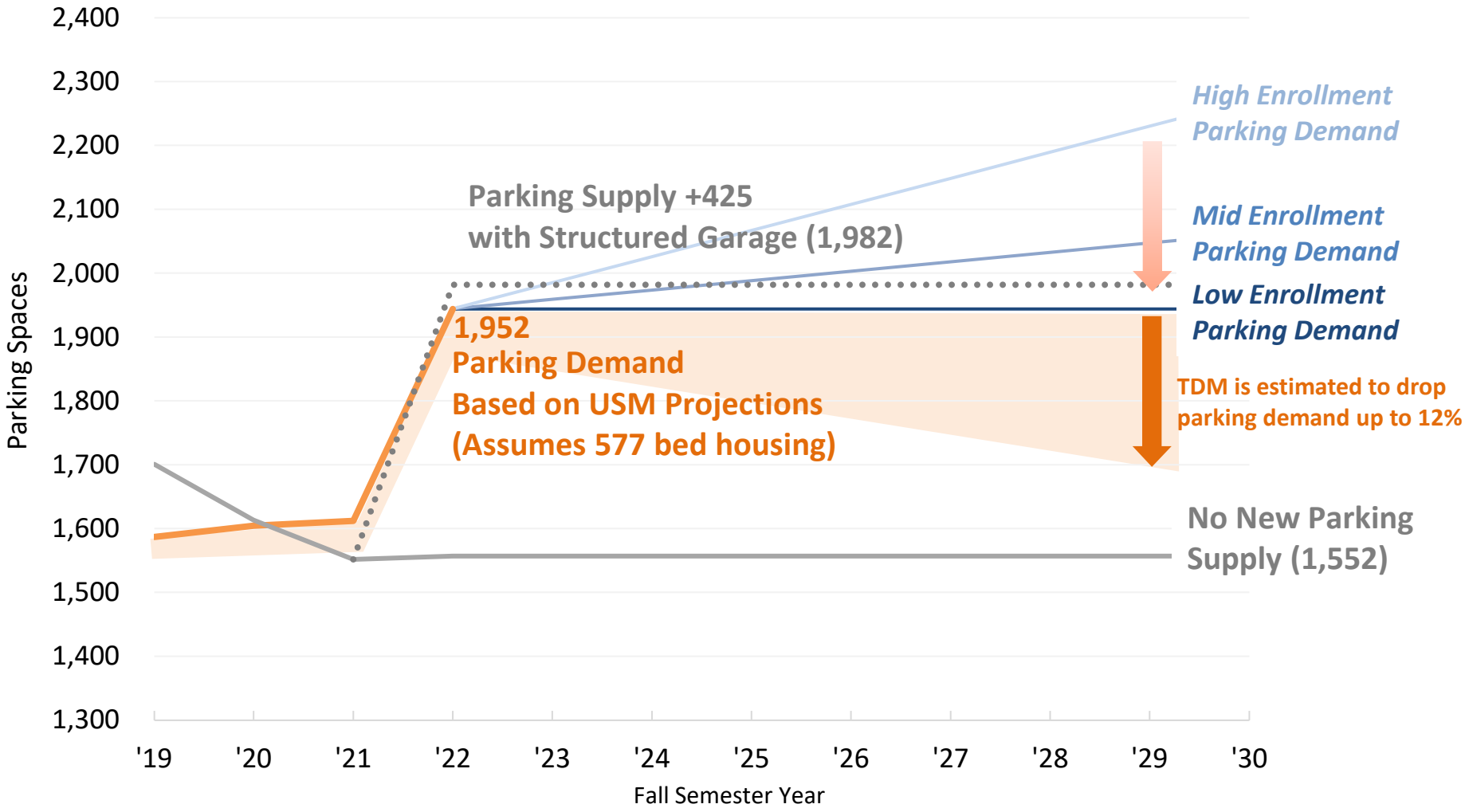
Translating Enrollment to Parking Demand

- To Calculate Parking Demand:
  1. USM Student Enrollment was translated to Portland Campus Student Enrollment
  2. For each forecasted year Portland student enrollment was split into two categories: Commuter student vs Residential student
     - 577 residents assumed on-campus from 2022 into the future.
     - Commuter students equal to total Portland headcount minus on-campus students
  3. Commuter student, residential student, employee, OLLI, and conference attendee parking rates were calculated:
     - Commuter student, employee, OLLI, and conference parking rates were calculated using existing permit demand data ratios
     - Residential student rates were calculated based on Gorham bed counts and resident student permits registered
  4. Calculated parking rates were multiplied by expected population for each year to determine final parking demand by group
  5. Final commuter student, residential student, and employee parking demand were summed to determine total parking demand

Calculating TDM Reduction

- To Calculate the impacts of a TDM program on USM:
  1. A laundry list of appropriate TDM strategies were chosen for USM based the peer review and the assessment of existing transportation conditions.
  2. Impact vs. cost of individual strategies were determined based on USM permit data sales and the transportation survey.
  3. USM narrowed laundry list from step 1 based on political and financial feasibility.
  4. VHB took final package of strategies and simulated potential mode split based on USM permit data and transportation survey.
  5. Mode split was translated to parking reduction based on existing mode split vs. parking demand patterns.
- A list of proposed TDM Strategies are contained in the appendix.

Future Parking Supply vs. Demand

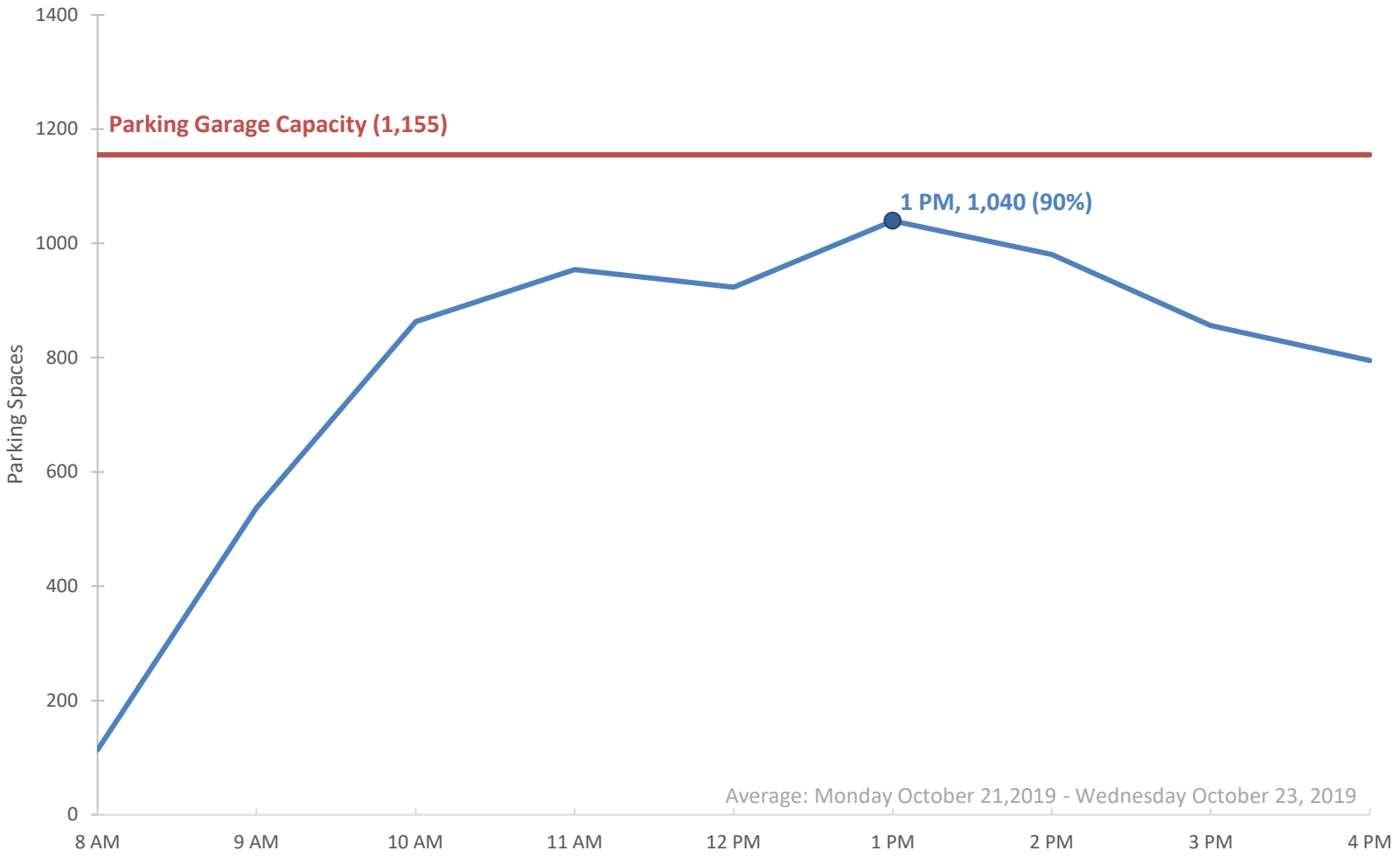


Takeaways

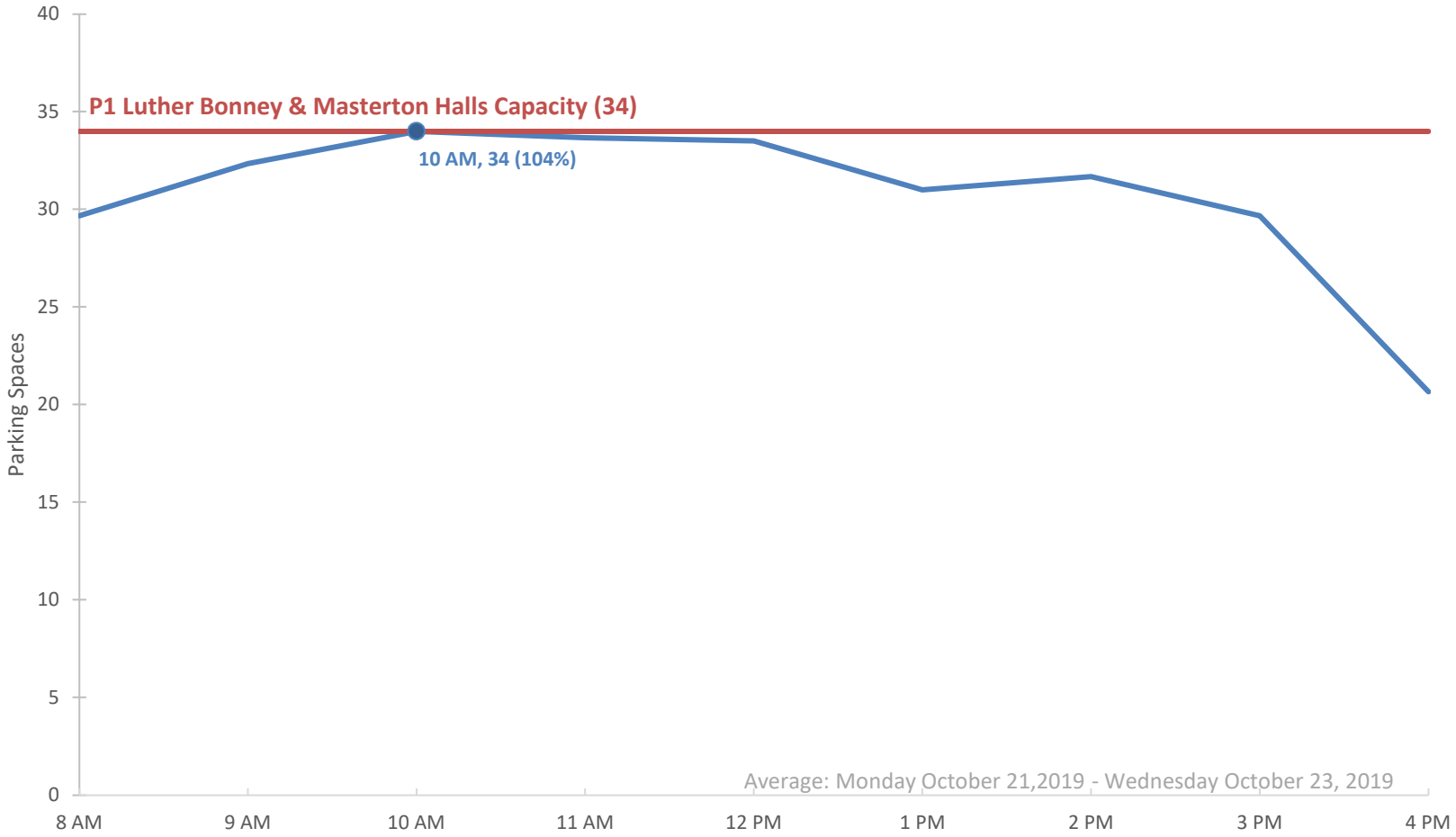
- With construction of a new residence hall and student center, new parking capacity is needed and/or parking demand needs to decrease
  - A moderately aggressive TDM program of strategies, including parking pricing and policy changes, could result in demand reductions of up to about 12 percent for USM
- Depending on enrollment projections, parking supply may not be adequate. USM would have to consider building more parking supply or further reducing parking demand
  - Not anticipated to be an issue until at least 2026 (under a modest 1 percent annual growth in student enrollment and without TDM implementation)
- Enrollment growth may not always directly contribute to growth during the peak demand hour:
  - E.g. Evening classes, distribution of classes among campuses, use of campus for conferences and at-large community events

Appendix:
Hourly Demand Charts by Parking Facility

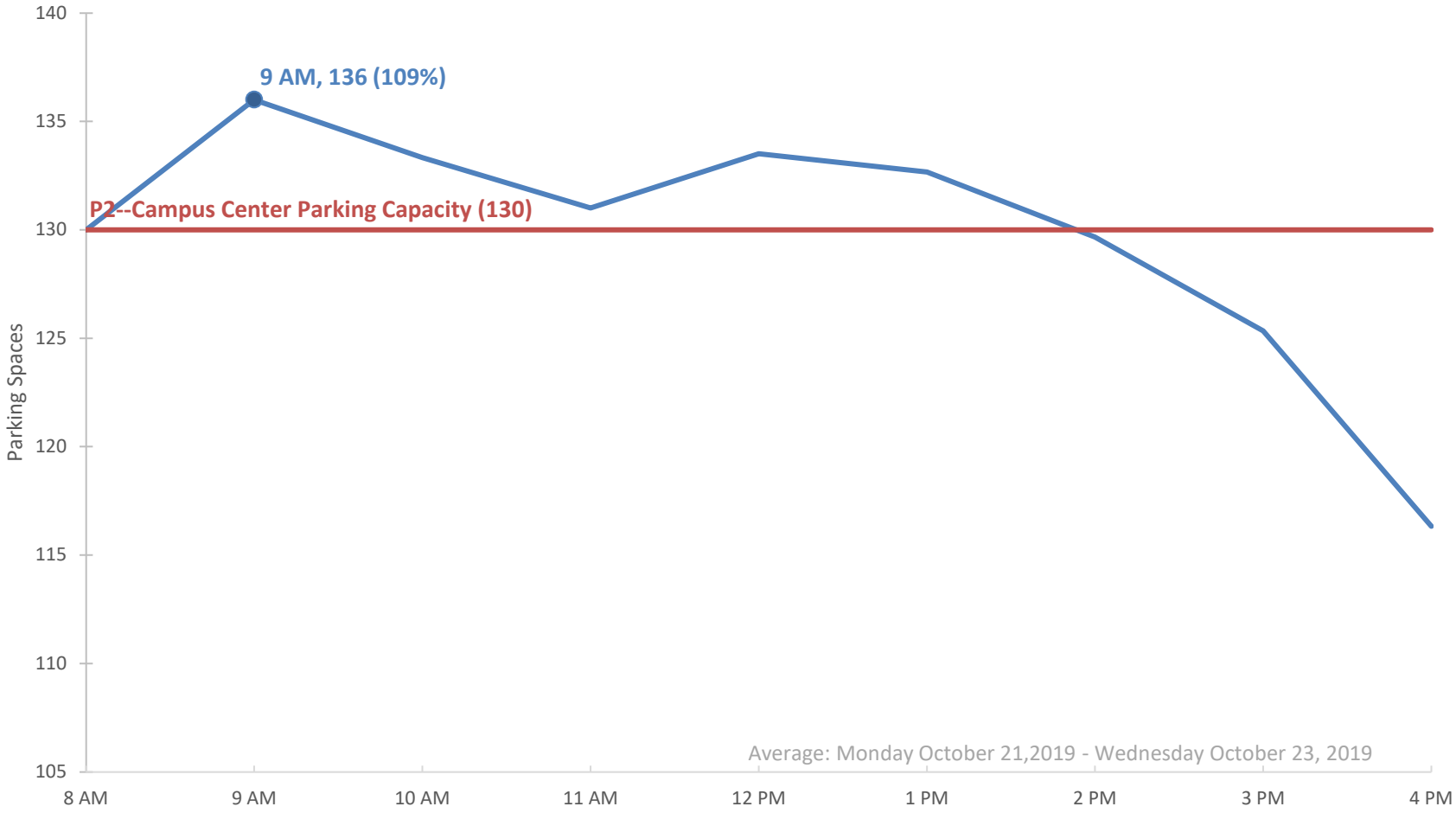
Parking Garage Demand



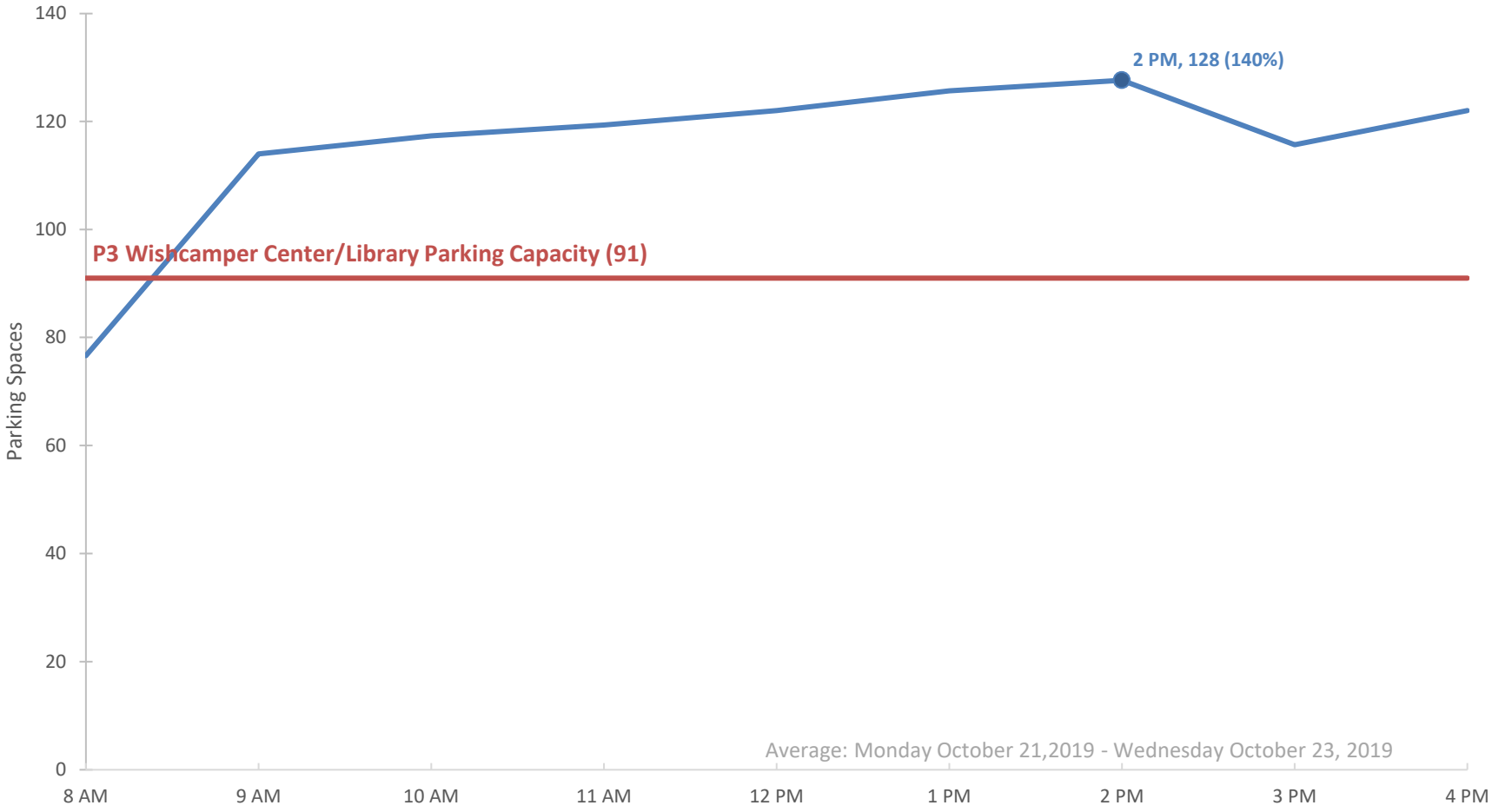
P1 Luther Bonney & Masterton Halls Parking Demand



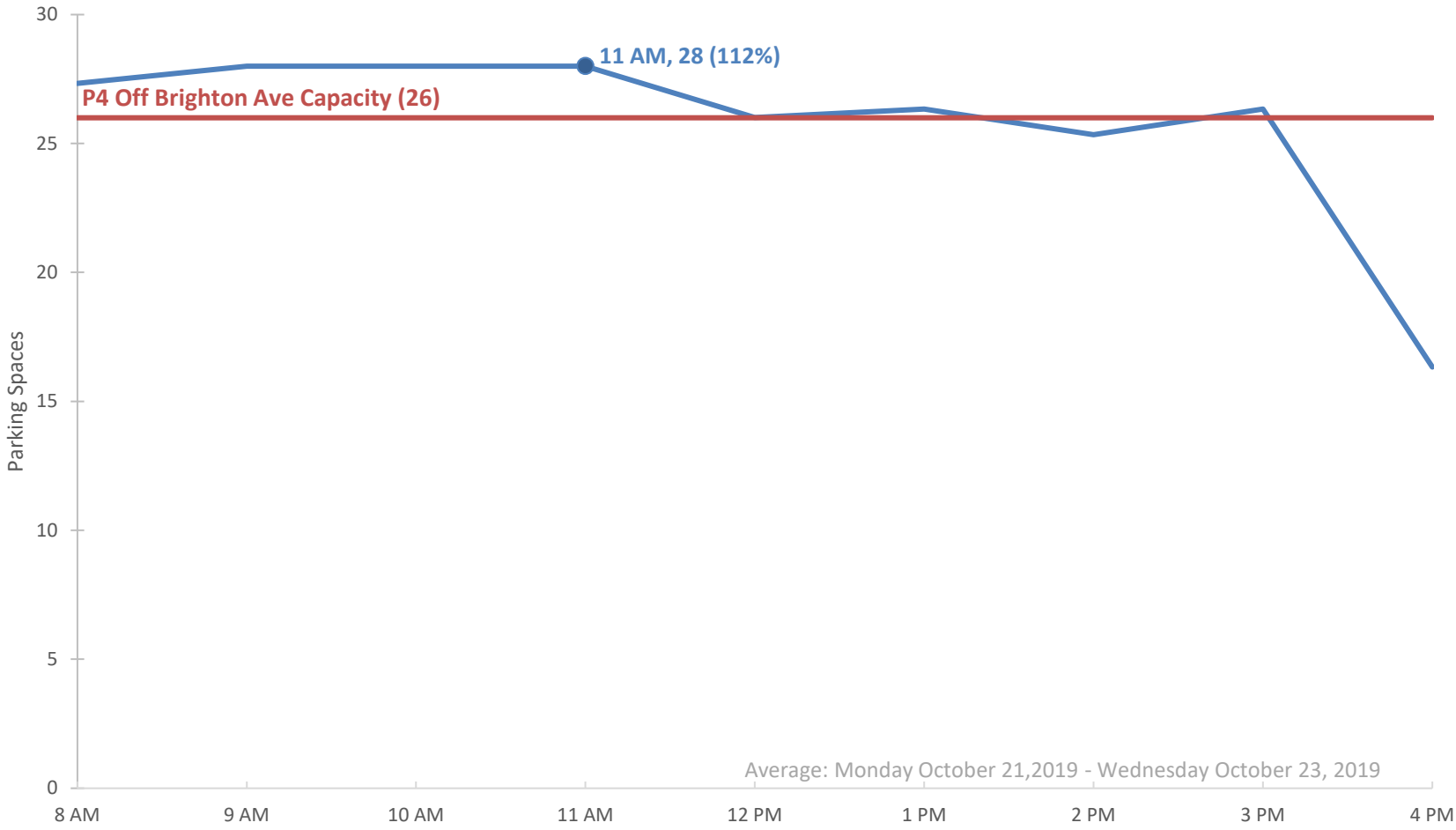
P2 Campus Center (Woodbury Parking Lot)



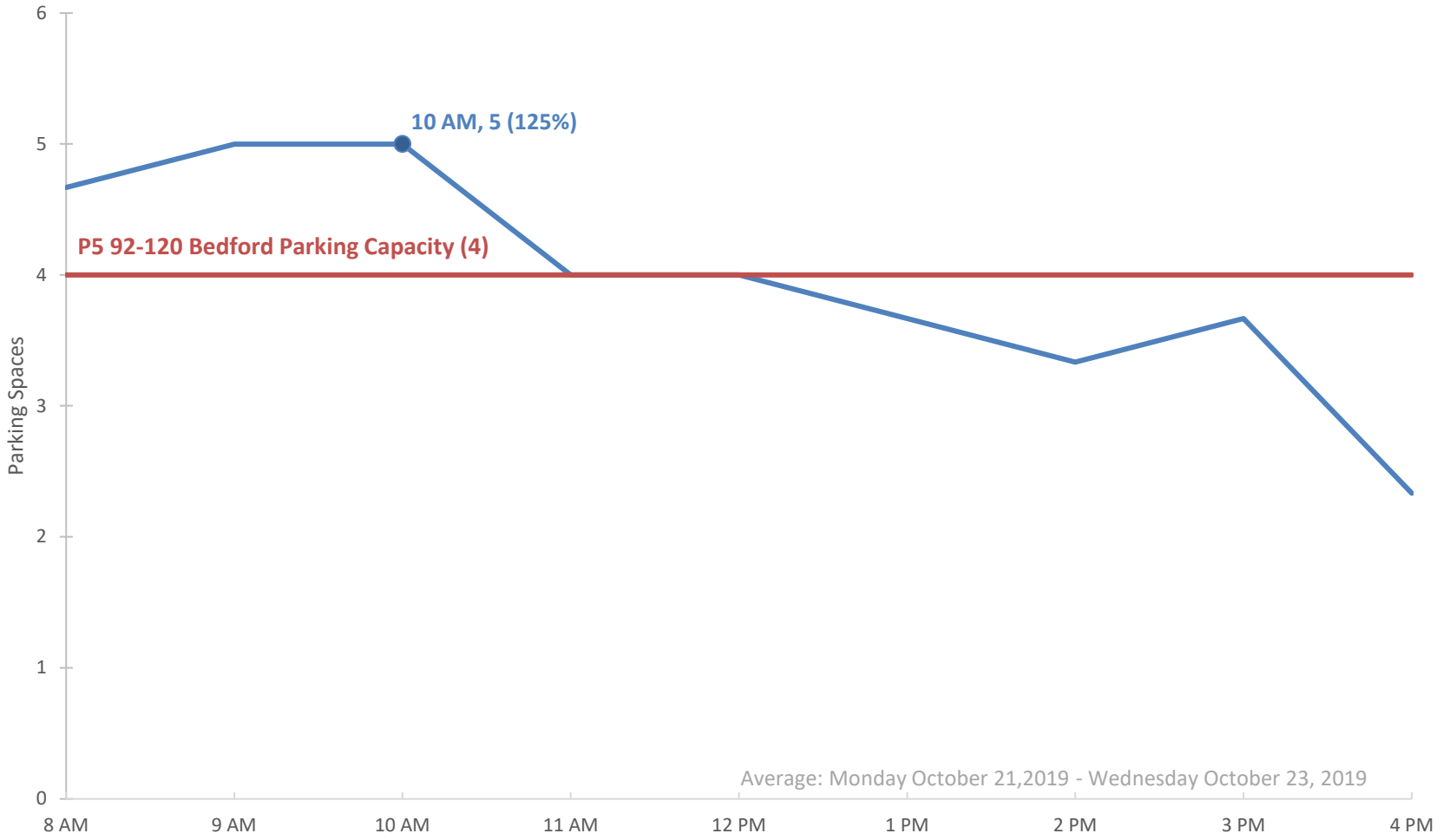
P3 Wishcamper Center/Library Parking Demand



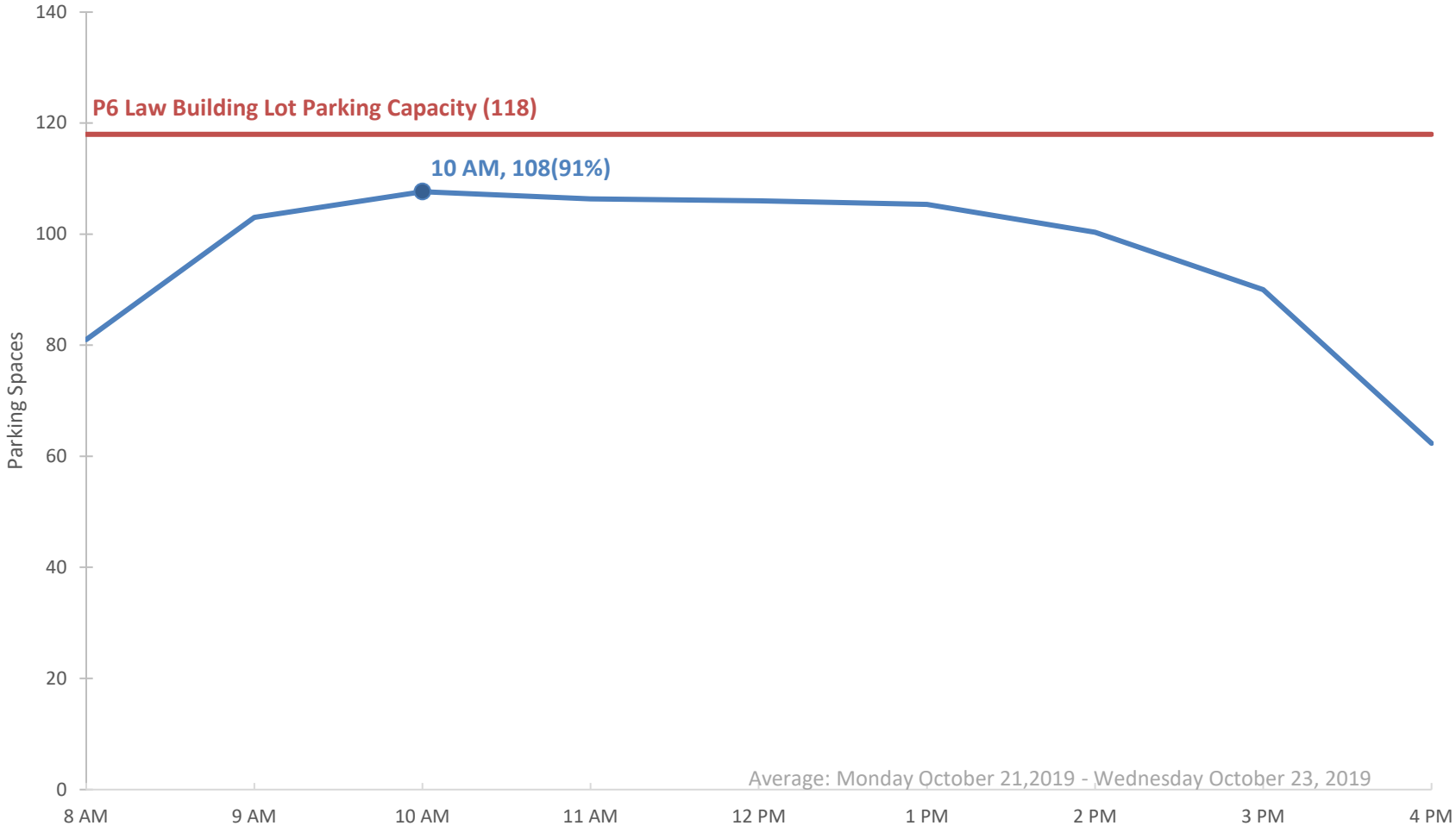
P4 Off Brighton Ave Parking Demand



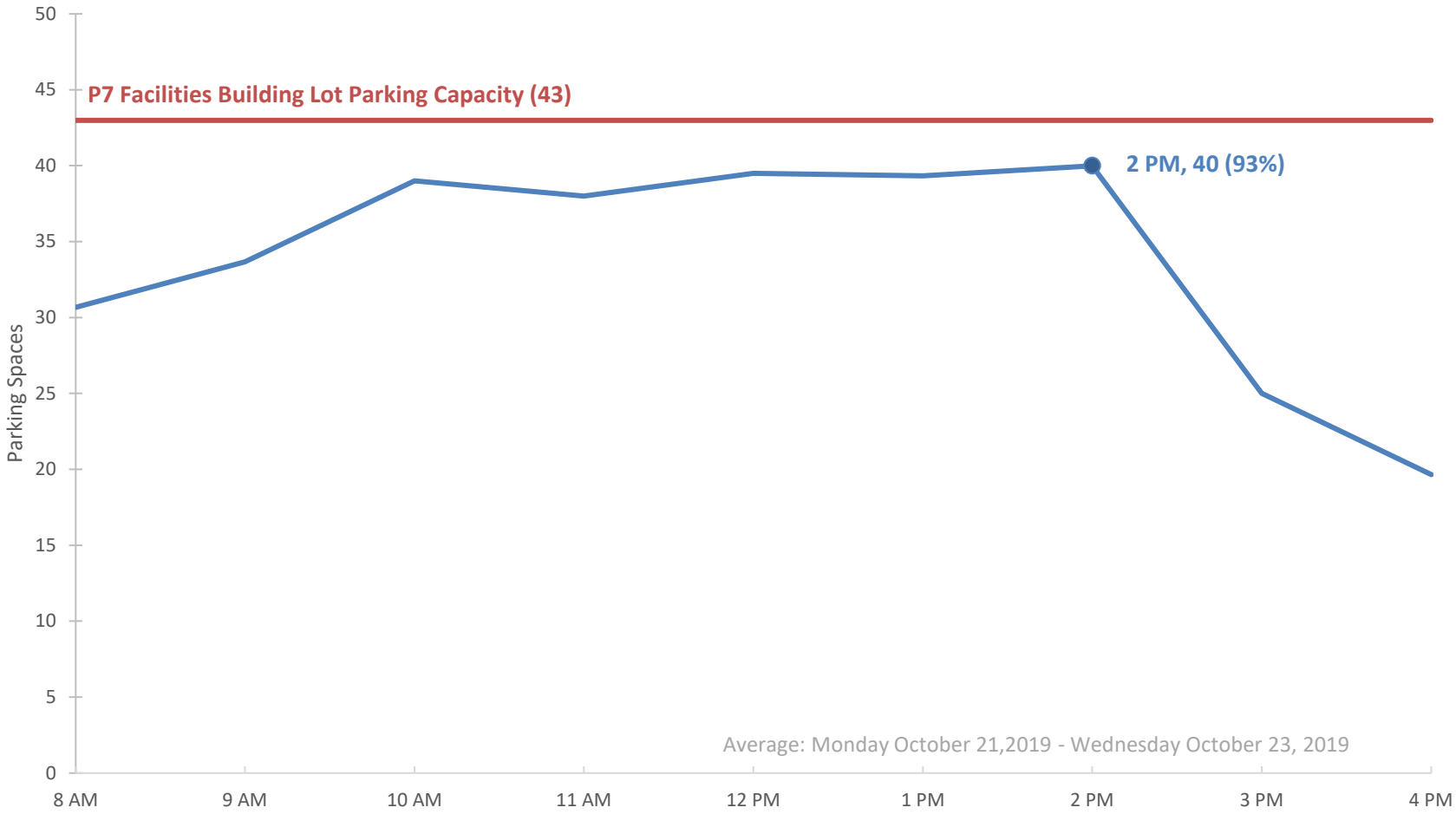
P5 92-120 Bedford Parking Demand



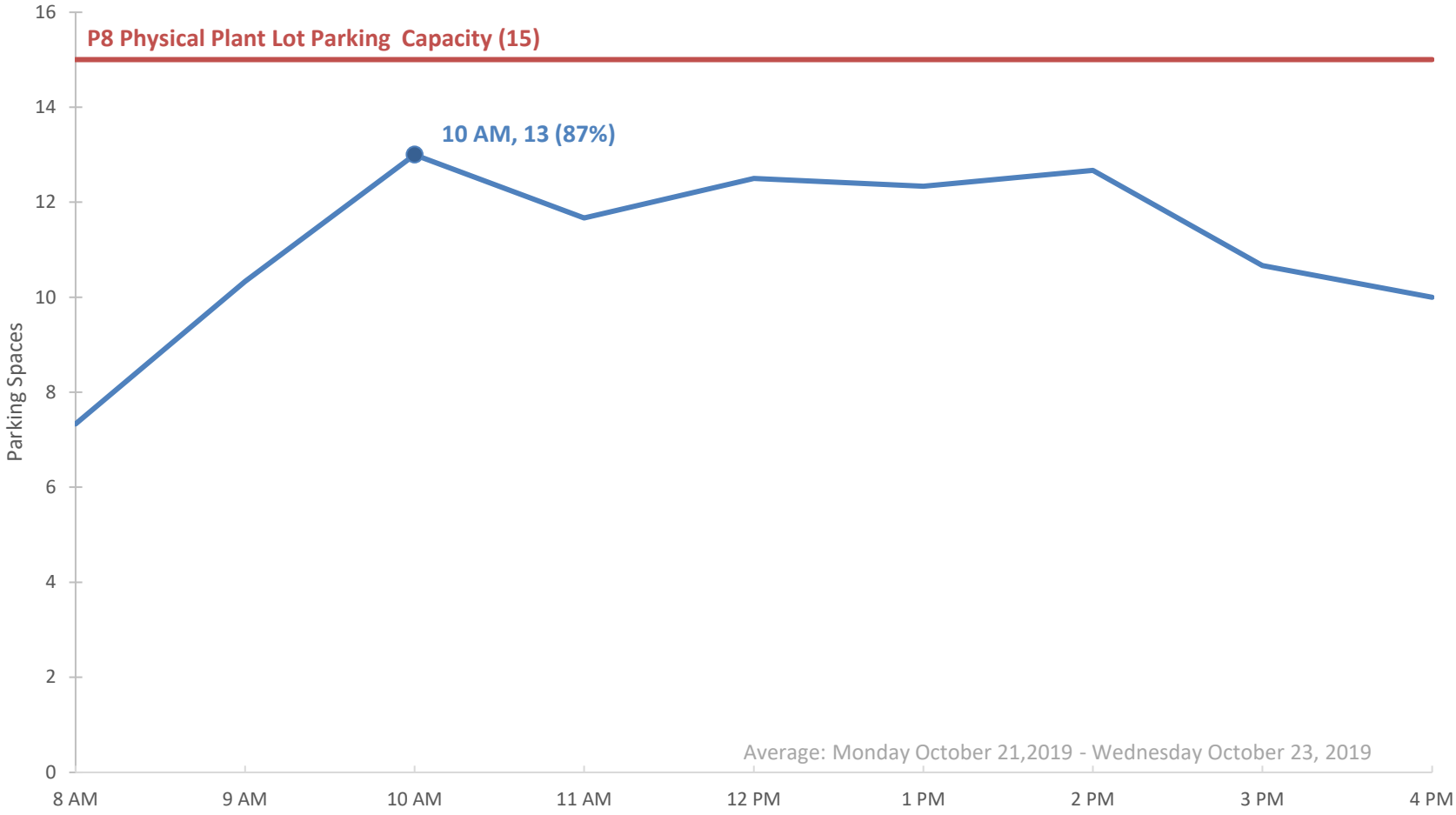
P6 Law Building Lot Parking Demand



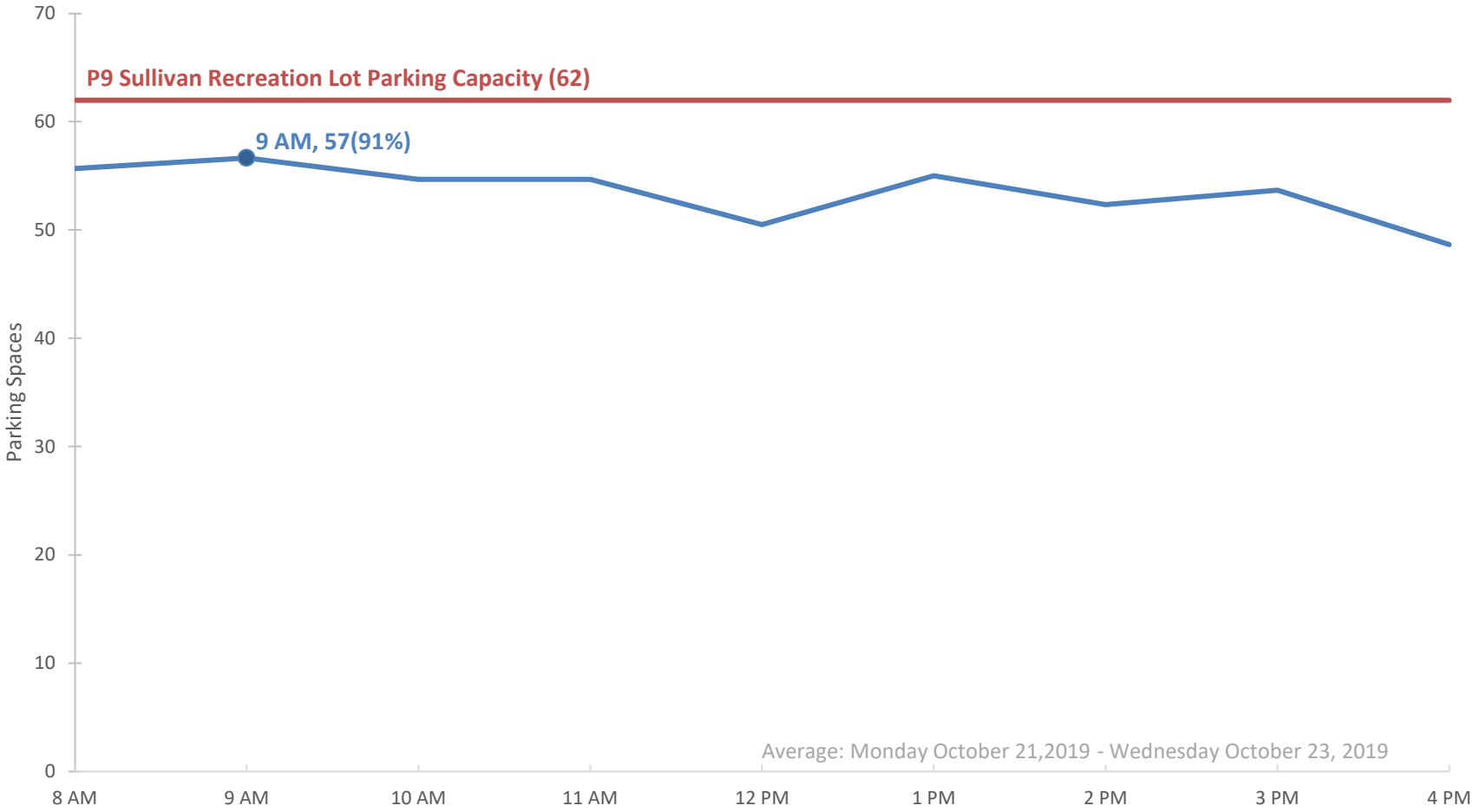
P7 Facilities Building Lot Parking Demand



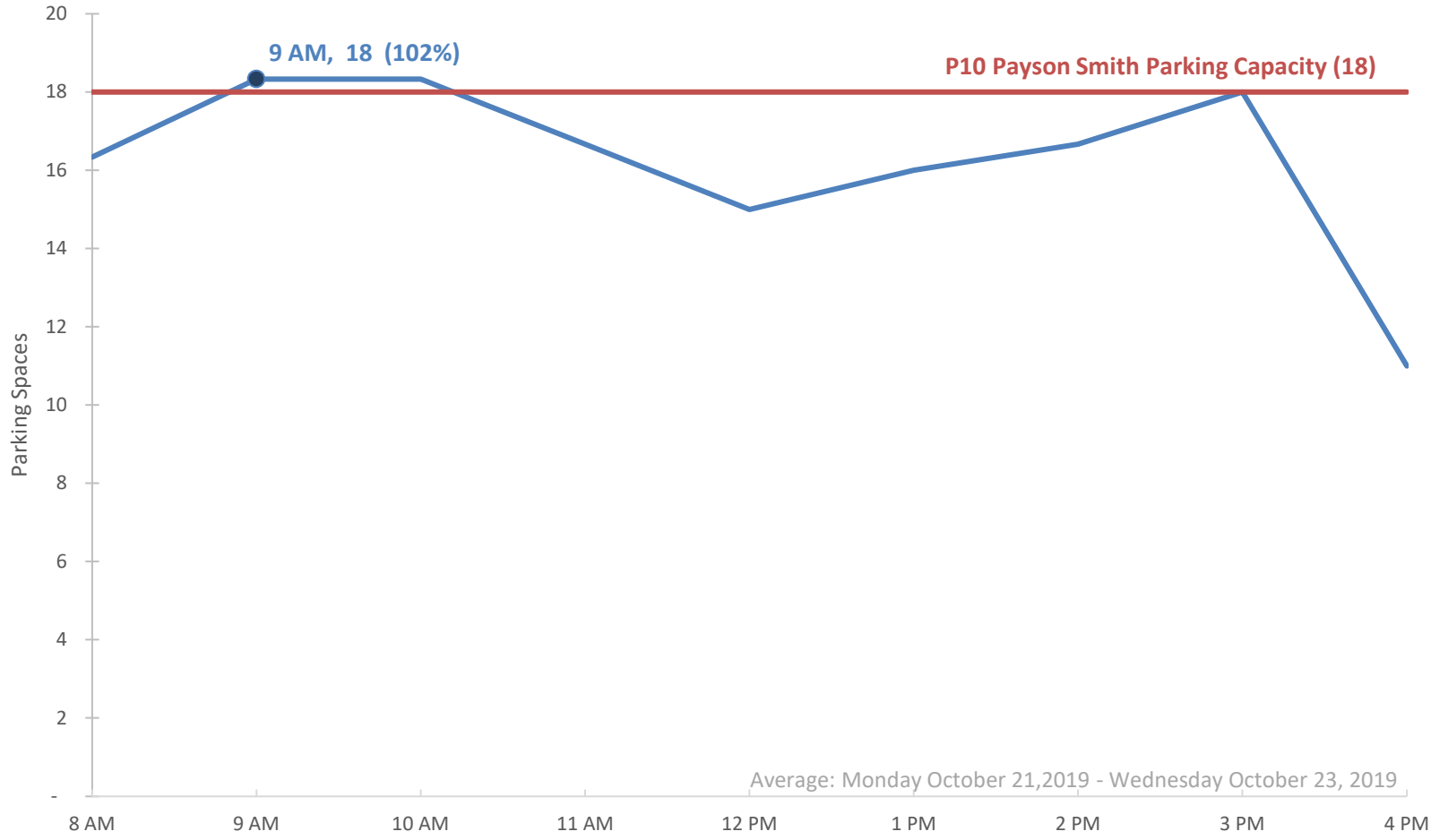
P8 Physical Plant Lot Parking Demand

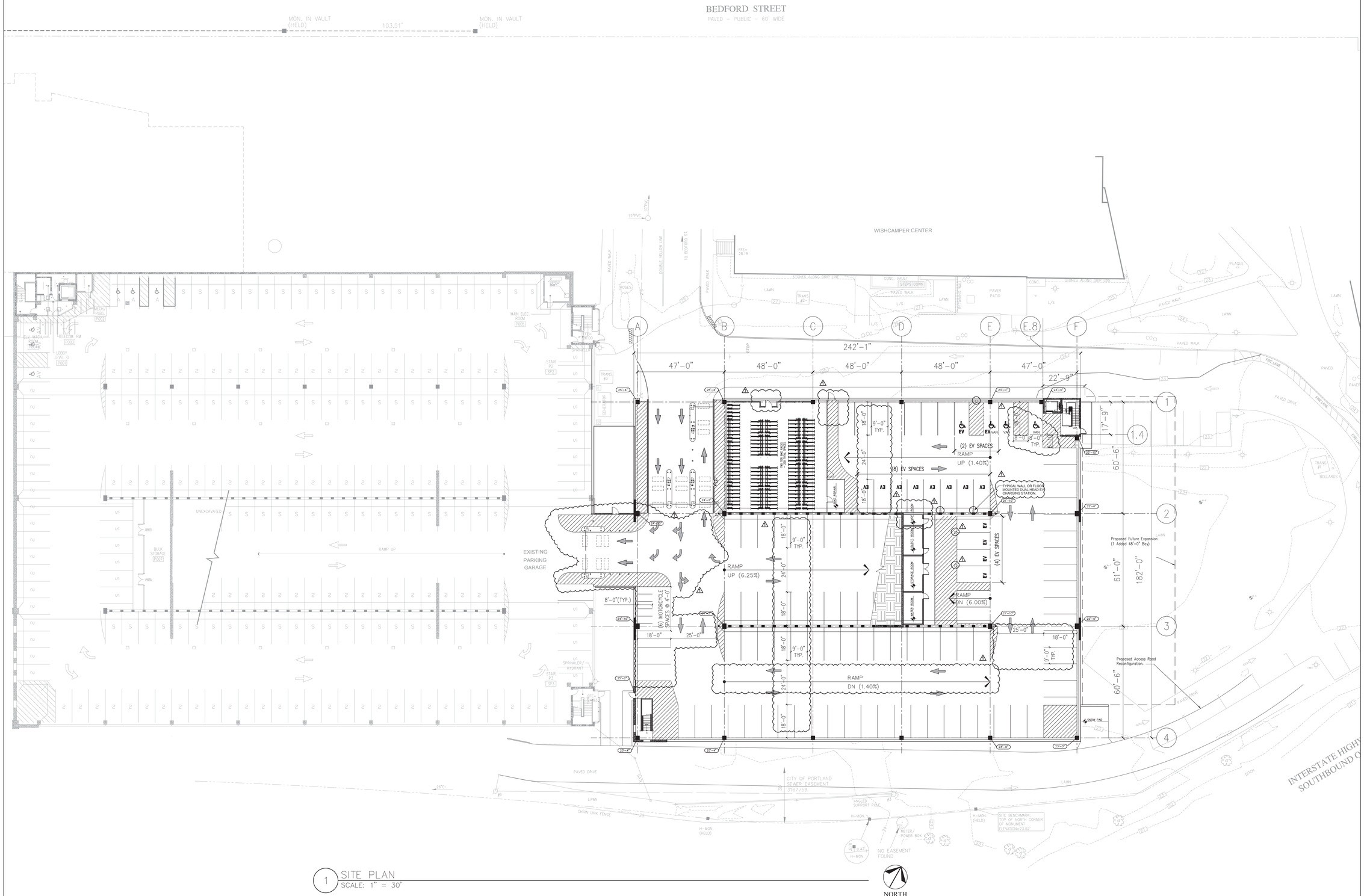


P9 Sullivan Recreation Lot Parking Demand



P10 Payson Smith Parking Demand





1 SITE PLAN
SCALE: 1" = 30'

NORTH

UNIVERSITY OF SOUTHERN MAINE

25 Bedford Street, Portland, ME 04104
207.712.5183 | USM.MAINE.EDU

PROJECT TEAM:

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BURLINGTON, VT 05403

COST ESTIMATOR
PREFERRED CONSTRUCTION MGMT
94 AUBURN ST,
PORTLAND, ME 04103

SEAL / SIGNATURE

© DESMAN, Inc.
2021

PROJECT:

USM - Structured Parking Garage

Address

50 Bedford Street,
Portland ME 04104

REVISIONS:

No.	Date	Description
1	9/1/21	Response to City Comments

SUBMISSIONS:

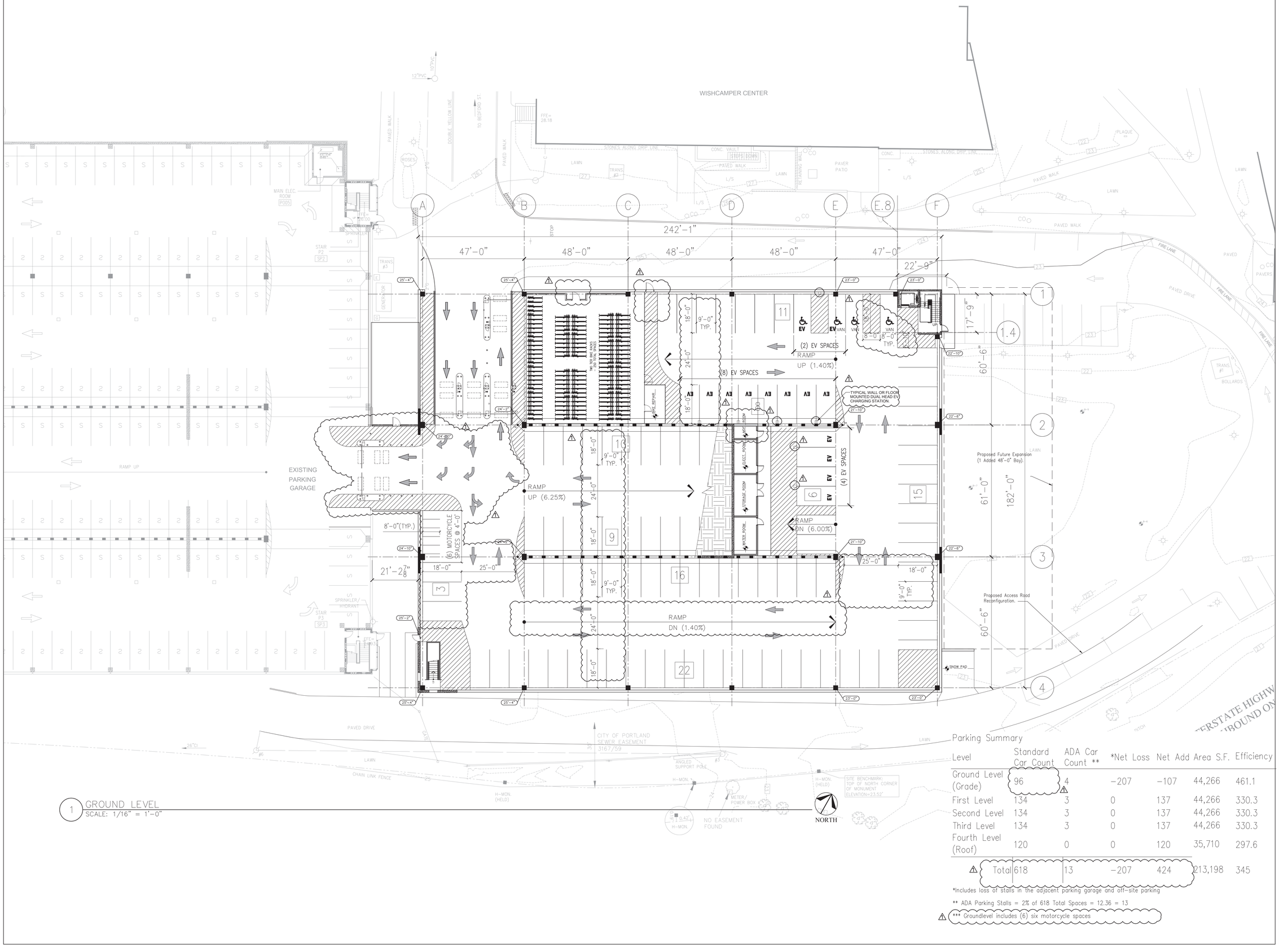
Date	Issued For:
08/09/21	Schematic Design

SCALE	**1" = 20'-0"**
DATE ISSUED	**08/31/2021**
PROJECT NO	**20-20145.00-1**
DRAWN BY	**C.M.**
CHECKED BY	**B.F.**

SHEET TITLE:

SITE PLAN

A-100



1 GROUND LEVEL
SCALE: 1/16" = 1'-0"

Parking Summary

Level	Standard Car Count	ADA Car Count **	*Net Loss	Net Add	Area S.F.	Efficiency
Ground Level (Grade)	96	4	−207	−107	44,266	461.1
First Level	134	3	0	137	44,266	330.3
Second Level	134	3	0	137	44,266	330.3
Third Level	134	3	0	137	44,266	330.3
Fourth Level (Roof)	120	0	0	120	35,710	297.6
Total	618	13	−207	424	213,198	345

*Includes loss of stalls in the adjacent parking garage and off-site parking

** ADA Parking Stalls = 2% of 618 Total Spaces = 12.36 = 13

*** Groundlevel includes (6) six motorcycle spaces

UNIVERSITY OF SOUTHERN MAINE

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PREFERRED CONSTRUCTION MGMT
94 AUBURN ST,
PORTLAND, ME 04103

SEAL / SIGNATURE

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PROJECT:

USM - Structured Parking Garage

Address

50 Bedford Street,
Portland ME 04104

REVISIONS:

No.	Date	Description
1	9/1/21	Response to City Comments

SUBMISSIONS:

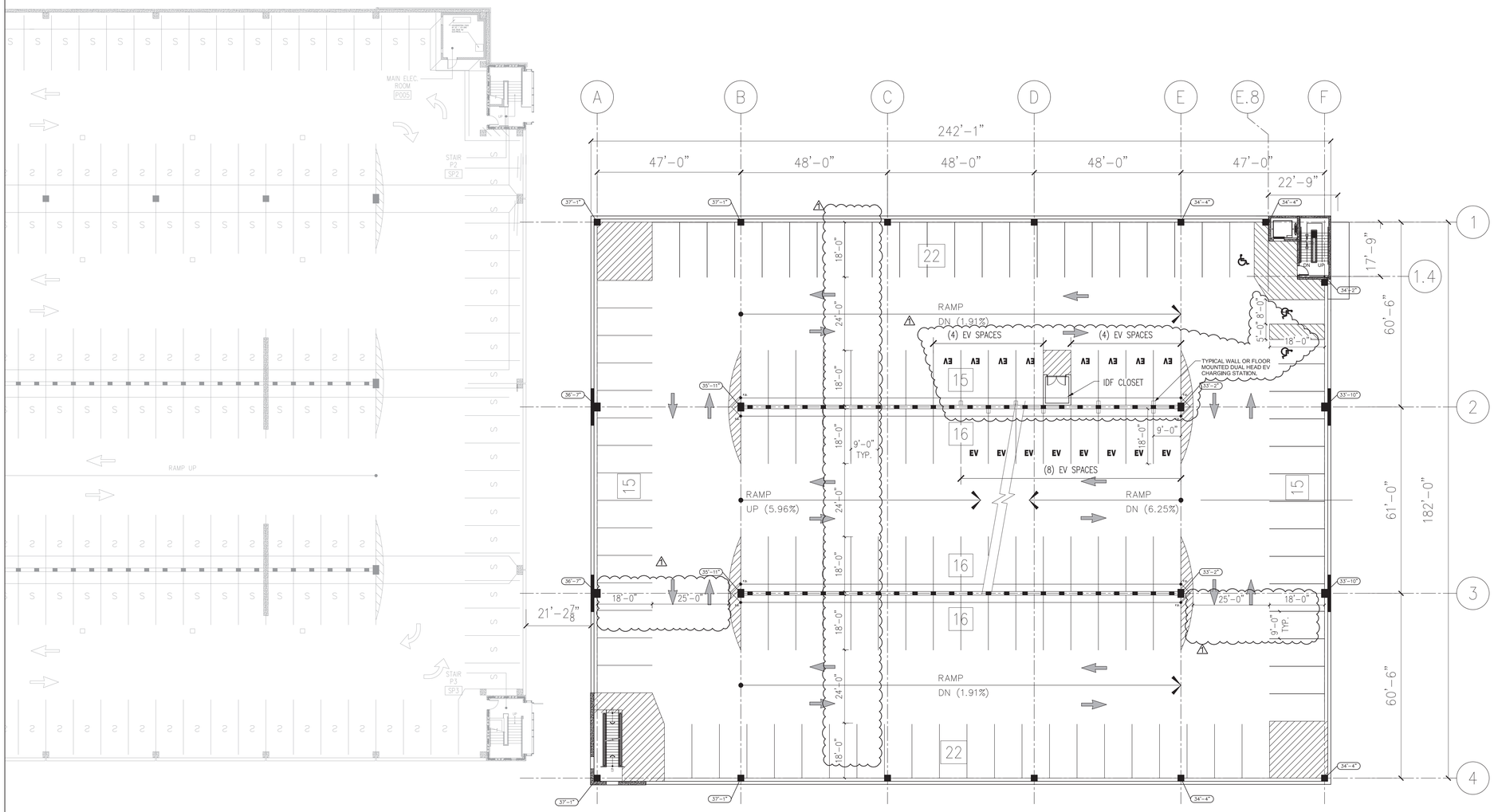
Date	Issued For:
08/09/21	Schematic Design

SCALE	1/16" = 1'-0"
DATE ISSUED	08/31/2021
PROJECT NO	20-20145.00-1
DRAWN BY	C.M.
CHECKED BY	B.F.

SHEET TITLE:

GROUND LEVEL STRIPING PLAN

A-101



1 FIRST LEVEL
SCALE: 1/16" = 1'-0"

NORTH

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LANDSCAPE ARCHITECT
MICHAEL BOUCHER LANDSCAPE ARCHITECTURE

457 US ROUTE 1 SUITE 2
FREEPORT, ME 04032

MEP/FP ENGINEER
ALLIED ENGINEERING

160 VERANDA STREET
PORTLAND, ME 04103

GEOTECHNICAL ENGINEER
S.W. COLE

286 PORTLAND ROAD
GREY, ME 04039

TRAFFIC ENGINEER
VANASSE HANGEN BRUSTLIN INC

40 IDX DR 100 #200, SOUTH
BURLINGTON, VT 05403

COST ESTIMATOR
PREFERRED CONSTRUCTION MGMT

94 AUBURN ST,
PORTLAND, ME 04103

SEAL / SIGNATURE

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2021

PROJECT:

USM - Structured Parking Garage

Address

50 Bedford Street,
Portland ME 04104

REVISIONS:

No.	Date	Description
1	9/1/21	Response to City Comments

SUBMISSIONS:

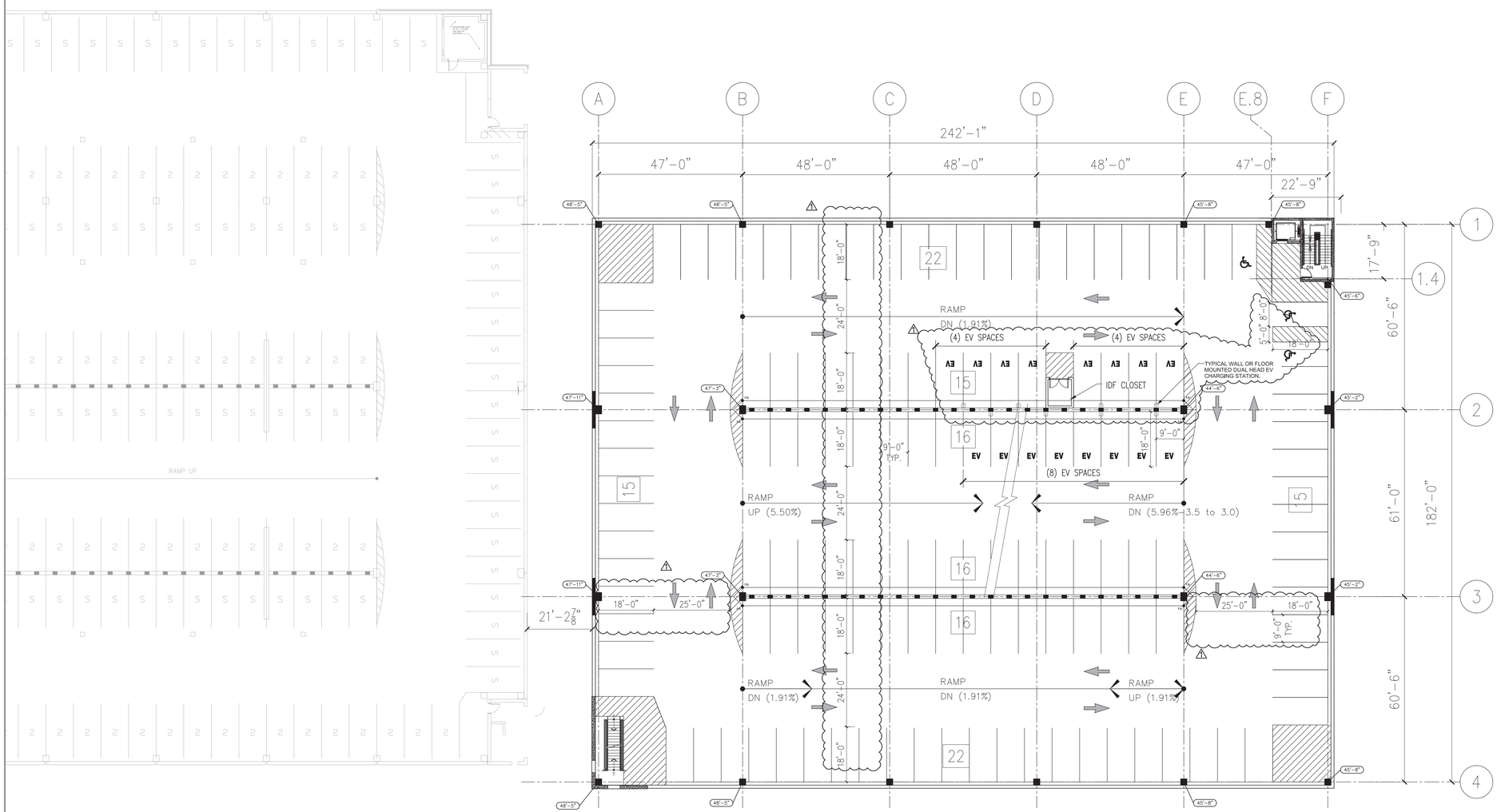
Date	Issued For:
08/09/21	Schematic Design

SCALE	**1/16" = 1'-0"**
DATE ISSUED	**08/31/2021**
PROJECT NO	**20-20145.00-1**
DRAWN BY	**C.M.**
CHECKED BY	**B.F.**

SHEET TITLE:

FIRST LEVEL STRIPING PLAN

A-102



1 SECOND LEVEL
SCALE: 1/16" = 1'-0"

NORTH

UNIVERSITY OF SOUTHERN MAINE

25 Bedford Street, Portland, ME 04104
207.712.5183 | USM.MAINE.EDU

PROJECT TEAM:

CLIENT
UNIVERSITY OF SOUTHERN MAINE

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& STRUCTURAL ENGINEER
DESMAN
Design Management

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Boston, MA 02108

ARCHITECT
WINTON SCOTT ARCHITECTS

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CIVIL ENGINEER
WOODARD & CURRAN

41 HUTCHINS DRIVE
PORTLAND, ME 04102

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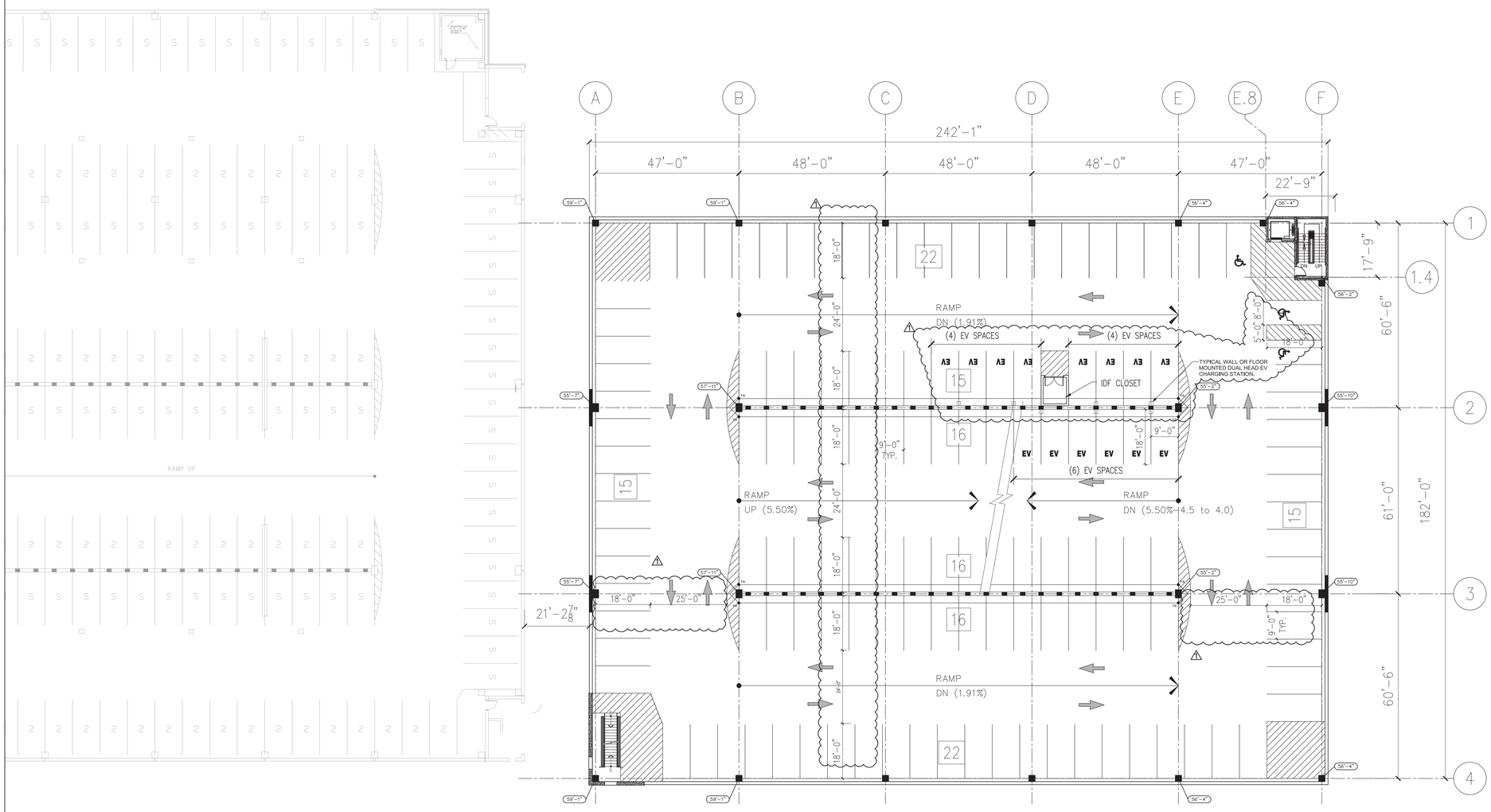
CHECKED BY	**B.F.**

SHEET TITLE:

SECOND LEVEL STRIPING PLAN

A-103



1 THIRD LEVEL
SCALE: 1/16" = 1'-0"

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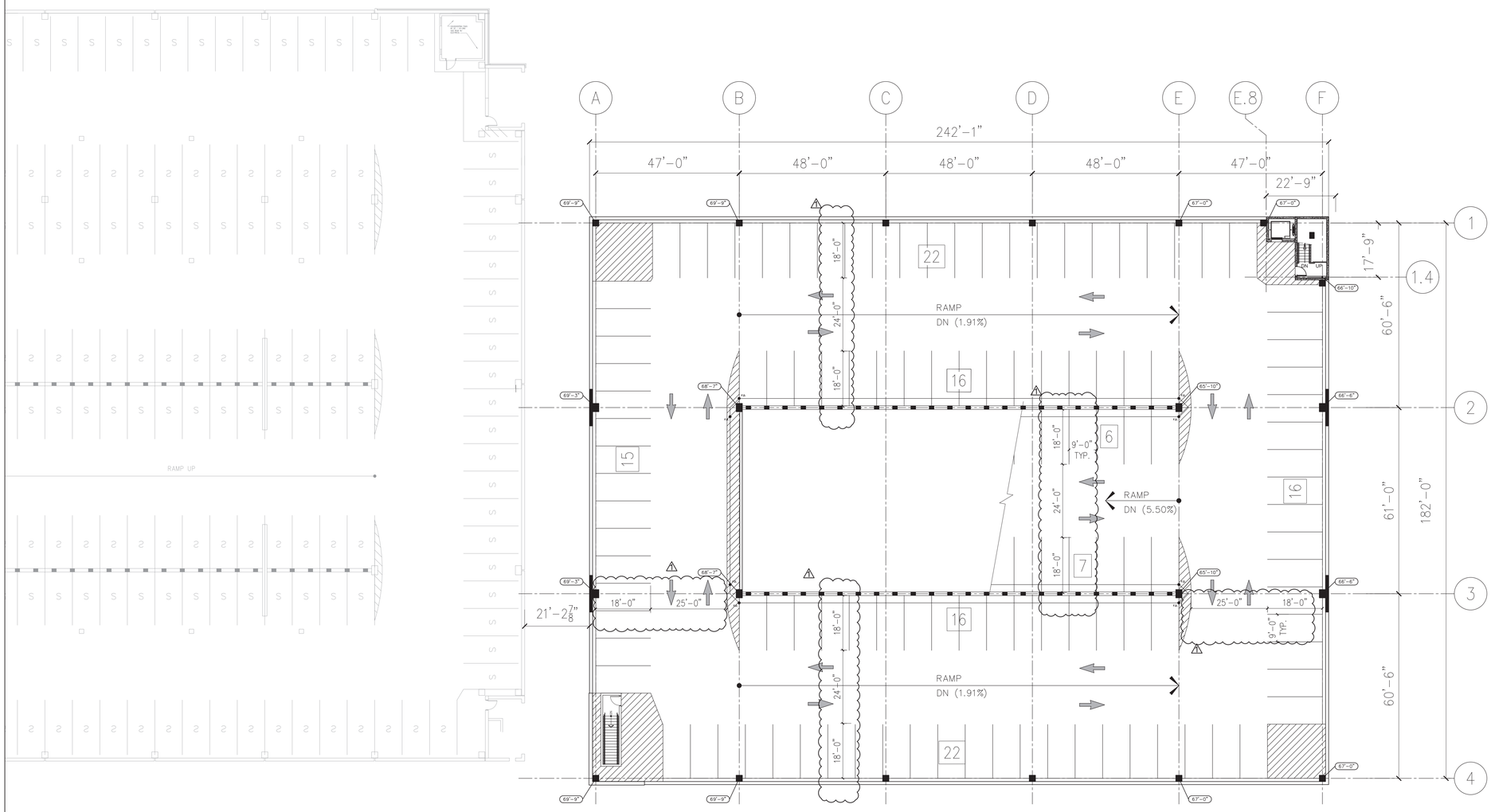
DRAWN BY	**C.M.**
CHECKED BY	**B.F.**

SHEET TITLE:

THIRD LEVEL STRIPING PLAN

A-104



1 ROOF LEVEL
SCALE: 1/16" = 1'–0"

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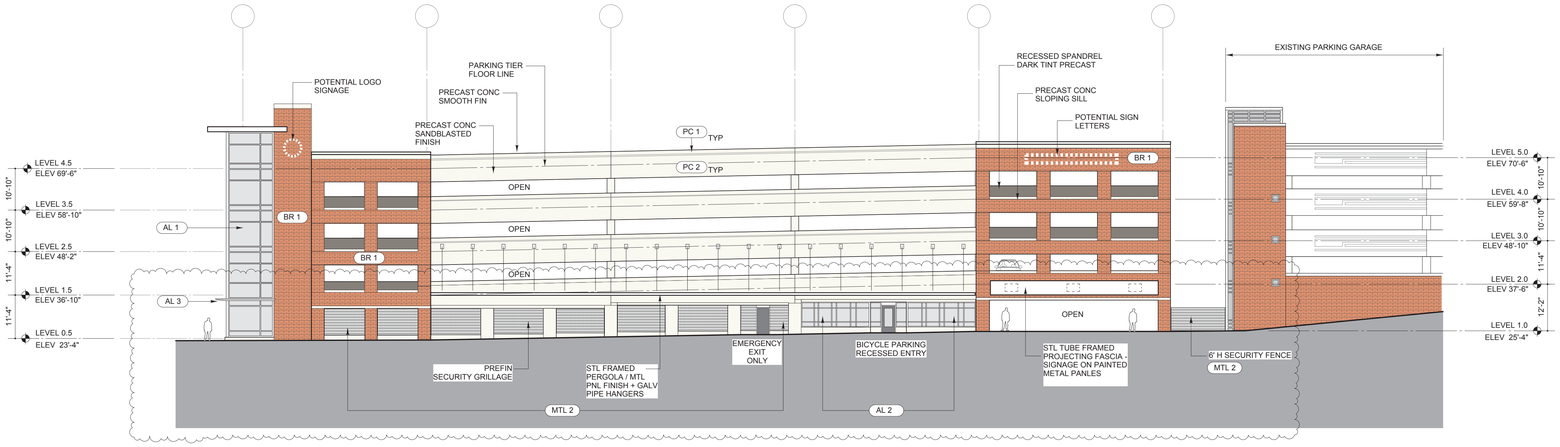
DRAWN BY	**C.M.**
CHECKED BY	**B.F.**

SHEET TITLE:

ROOF LEVEL STRIPING PLAN

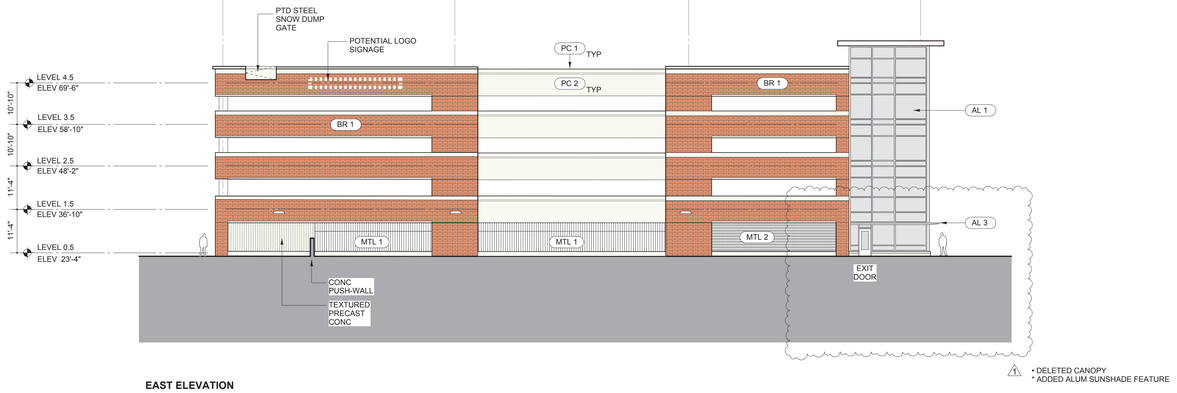
A-105



NORTH ELEVATION

1/16" = 1' - 0"

1 ADDED:
- SECURITY FENCE BETWEEN EXISTING AND NEW GARAGE
- RECESSED ENTRY TO BIKE STORAGE
- GLAZED ALUM STOREFRONT AT BIKE STORAGE
- PIERS TO SUBDIVIDE BAYS AT GROUND LEVEL
- STEEL PERGOLA IN LIEU OF FULL CANOPY
- EXTENDED GLASS AT EAST STAIR TO GRADE LEVEL
- ALUM SUNSCREEN FEATURE AT EAST STAIR

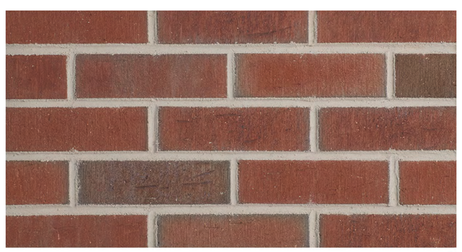


EAST ELEVATION

1/16" = 1' - 0"

1 • DELETED CANOPY
* ADDED ALUM SUNSHADE FEATURE

SECURITY BAR GRATING - MTL 2



BRICK - BR 1
GLEN-GERY 387 RUSTIC RED

MATERIALS LEGEND

KEY	MATERIAL	NOTES
AL 1	ALUMINUM CURTAINWALL	CLEAR ANODIZED / UN-TINTED GLASS
AL 2	ALUMINUM STOREFRONT	CLEAR ANODIZED / UN-TINTED GLASS
AL 3	ALUMINUM SUNSCREEN	CLEAR ANODIZED FRAME + BLADES
BR 1	BRICK	THIN BRICK INTEGRAL TO PRECAST
MTL 1	SECURITY BARS	1/2" BAR @ 9" O.C. / PAINTED
MTL 2	SECURITY BAR GRATING	2" x 5" OPENING / PREFINISH ENAMEL
MTL 3	PAINTED STEEL	FLUSH PANEL
PC 1	PRECAST CONCRETE	SMOOTH FINISH
PC 2	PRECAST CONCRETE	MEDIUM SANDBLASTED FINISH

16 0 16 32

BAR SCALE

1" = 16'

CHECK GRAPHIC SCALE BEFORE USING

UNIVERSITY OF SOUTHERN MAINE

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PROJECT TEAM:

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& STRUCTURAL ENGINEER
DESMAN Design Management
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WOODARD & CURRAN
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DRAWN BY	
CHECKED BY	

SHEET TITLE:

Building Elevations

A - 200

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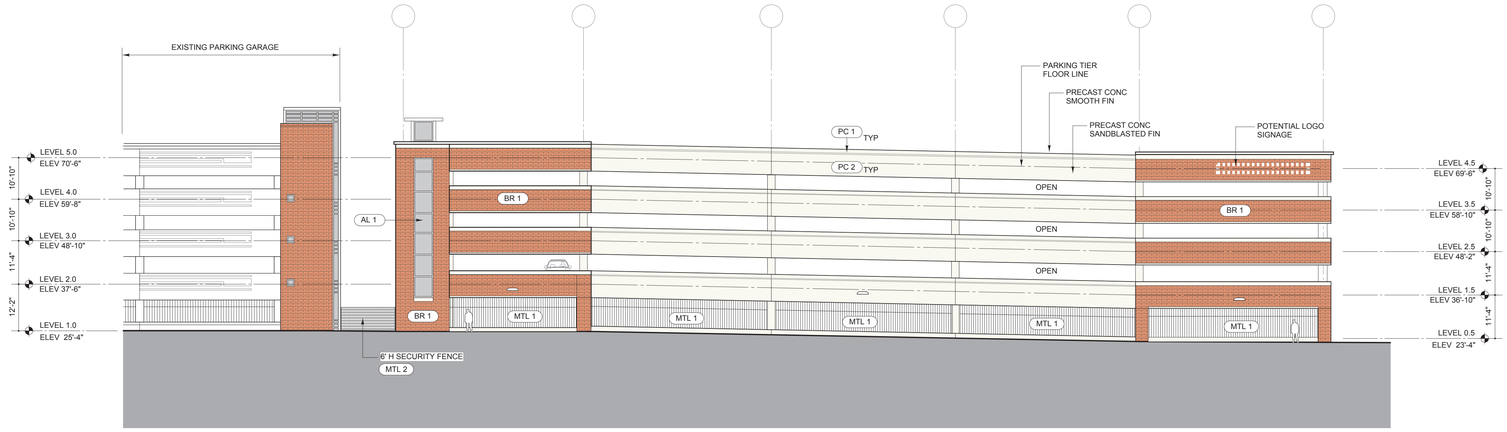
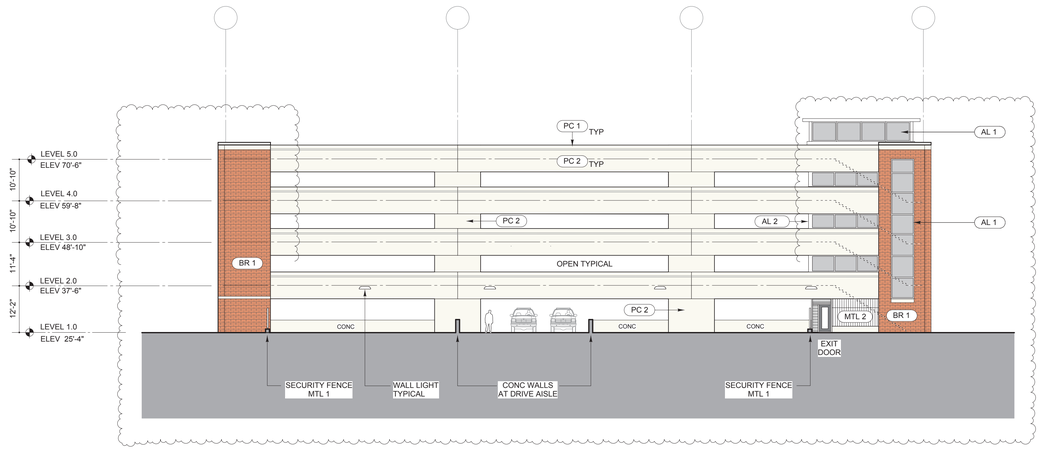


SOUTH ELEVATION

1/16" = 1' - 0"



WEST ELEVATION

1/16" = 1' - 0"

1 • WALL LIGHTS CALLED OUT
• CONCRETE KNEEWALLS ADDED
• SOUTHWEST STAIR ENCLOSURE MODIFIED
• PIERS TO SUBDIVIDE BAYS AT GROUND LEVEL
• STEEL PERGOLA IN LIEU OF FULL CANOPY
• EXTENDED GLASS AT EAST STAIR TO GRADE LEVEL
• ALUM SUNSCREEN FEATURE AT EAST STAIR

MATERIALS LEGEND

KEY	MATERIAL	NOTES
AL 1	ALUMINUM CURTAINWALL	CLEAR ANODIZED / UN-TINTED GLASS
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PC 1	PRECAST CONCRETE	SMOOTH FINISH
PC 2	PRECAST CONCRETE	MEDIUM SANDBLASTED FINISH

16 0 16 32

BAR SCALE

1" = 16'

CHECK GRAPHIC SCALE BEFORE USING

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SHEET TITLE:

Building Elevations

A - 501

OVERVIEW

BEDFORD STREET VIEW

GARAGE ENTRANCE

1 DESIGN REVISIONS

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SHEET TITLE:

Building Views

A - 202

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STAIRWAY ENTRANCE

⚠ DESIGN REVISIONS

BICYCLE ROOM ENTRANCE

⚠ DESIGN REVISIONS

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CHECKED BY	

SHEET TITLE:

Building Views

A - 203

GENERAL NOTES:

1. EXISTING CONDITIONS SHOWN HEREON HAVE BEEN PROVIDED FROM A FIELD SURVEY PREPARED BY OWEN HASKELL, INC TITLED "EXISTING CONDITIONS SURVEY – USM PORTLAND – WISHCAMPER LOT – PORTLAND MAINE", DATED JANUARY 27, 2019 AND REVISED WITH ADDITIONAL SURVEY ON APRIL 30, 2021.
2. ELEVATIONS ARE BASED ON CITY OF PORTLAND DATUM, NGVD 29.
3. BEARING ARE BASED ON MAINE STATE PLANE COORDINATE SYSTEM, WEST ZONE, NAD 83 PER COORDINATE DATA PROVIDED BY THE CITY OF PORTLAND DEPARTMENT OF PUBLIC WORKS..
4. EXISTING UTILITIES SHOWN ON THESE PLANS WERE COMPILED FROM A FIELD SURVEY PREPARED BY OWEN HASKELL, INC. THESE PLANS DO NOT NECESSARILY DEPICT THE EXACT LOCATIONS OF ALL UTILITIES, WHICH MAY EXIST AT THIS TIME WITHIN THE SURVEY LIMITS. THERE MAY BE EXISTING LINES OTHER THAN THOSE INDICATED. THE LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES SHALL BE CONSIDERED APPROXIMATE AND MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO ANY UTILITY CONNECTIONS OR CROSSINGS OF PROPOSED OR EXISTING UTILITIES. THE CONTRACTOR SHALL REPORT ANY DISCREPANCIES TO THE ENGINEER IN WRITING. THE CONTRACTOR SHALL CONTACT THE RESPECTIVE UTILITY COMPANIES RELATIVE TO THE LOCATIONS AND ELEVATIONS OF THESE LINES. NO SEPARATE OR ADDITIONAL COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR DUE TO ANY VARIANCE BETWEEN THE DATA SHOWN ON THE PLANS AND ACTUAL FIELD CONDITIONS ENCOUNTERED. THE CONTRACTOR IS RESPONSIBLE FOR HIS/HER OWN DETERMINATION AS TO THE TYPE AND LOCATION OF THE EXISTING UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE AND TO FACILITATE THE PROPOSED CONNECTION(S).
5. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RELOCATIONS THAT CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE SITE DRAWINGS, INCLUDING BUT NOT LIMITED TO ALL UTILITIES, STORM INFRASTRUCTURE, SIGNS, UTILITY POLES, FENCES, ETC. AS REQUIRED. ALL WORK SHALL BE IN ACCORDANCE WITH THE GOVERNING AUTHORITY'S SPECIFICATIONS AND SHALL BE APPROVED BY SUCH. ALL COSTS SHALL BE INCURRED BY THE CONTRACTOR.
6. THE CONTRACTOR SHALL CALL "DIG SAFE" (811) AT LEAST 72 HOURS PRIOR TO EXCAVATION IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL SAFETY CODES.
7. LAND OUTSIDE THE PROPOSED LIMIT OF WORK SHALL NOT BE DISTURBED BY THE CONTRACTOR.
8. PRIOR TO CONSTRUCTION, THE ENGINEER AND CONTRACTOR WILL REVIEW THE PERMITTED LIMITS OF WORK.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING ALL CONTROL POINTS AND BENCH MARKS NECESSARY FOR THE WORK.
10. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL SAFETY CODES, REGULATIONS, LEGAL REQUIREMENTS, PERMIT CONDITIONS, ETC.
11. THE CONTRACTOR SHALL TAKE ADEQUATE PRECAUTIONS TO PROTECT ALL WALKS, STREETS, PAVEMENTS, CURBING, TREES, PLANTINGS, LAWN, FENCING TO REMAIN ON OR OFF THE PREMISES, AND SHALL REPAIR AND REPLACE AT HIS/HER OWN EXPENSE, AS DIRECTED BY THE ENGINEER, ANY ITEMS DAMAGED AS A RESULT OF THE CONTRACTOR'S WORK.
12. THE CONTRACTOR SHALL PROVIDE ADEQUATE BRACING AND SHORING OF ALL EXCAVATIONS IN ACCORDANCE WITH THE REQUIREMENTS OF ALL GOVERNING CODES AND REGULATIONS.
13. WORK WITHIN PUBLIC RIGHT–OF–WAY SHALL COMPLY WITH APPLICABLE MUNICIPAL AND STATE REQUIREMENTS.
14. IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY.
15. IF IMPORTED FILL MATERIAL IS REQUIRED, IT SHALL BE CERTIFIED IN WRITING BY A STATE LICENSED PROFESSIONAL ENGINEER AS NON–CONTAMINATED, CLEAN FILL SUITABLE FOR THE INTENDED USE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TESTING OF ENVIRONMENTAL PARAMETERS AS OUTLINED IN THE PROJECT SPECIFICATIONS.
16. RESTORE ALL AREAS DISTURBED BY CONTRACTOR'S OPERATIONS TO ORIGINAL FINISH (GRAVEL, PAVEMENT, RIPRAP, GRASS, ETC.) UNLESS OTHERWISE NOTED ON PLANS. RESTORATION OF ALL AREAS DAMAGED BY CONTRACTOR SHALL BE INCIDENTAL TO THE PROJECT.
17. ALL CURB DAMAGED DURING CONSTRUCTION SHALL BE REPLACED IN KIND AND SHALL CONFORM TO SPECIFICATIONS. COST IS INCIDENTAL TO CONTRACT.
18. PROPERLY PROTECT AND DO NOT DISTURB PROPERTY IRONS, MONITORING WELLS, AND MONUMENTS. IF DISTURBED, THE PROPERTY MONUMENT WILL BE RESET AT THE CONTRACTOR'S EXPENSE BY A REGISTERED LAND SURVEYOR APPROVED BY THE ENGINEER.
19. ALL MATERIAL SHALL BE FURNISHED BY CONTRACTOR UNLESS OTHERWISE NOTED.
20. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF ALL DIMENSIONS PRIOR TO START OF CONSTRUCTION.
21. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY CONSTRUCTION PERMITS SO AS NOT TO DELAY CONSTRUCTION.
22. ALL SIGNAGE SHALL CONFORM WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
23. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL CONDITIONS OF THE LOCAL/ STATE/ FEDERAL PERMITS.
24. 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.
25. DO NOT PARK, IMPEDE ACCESS TO, OR STORE EQUIPMENT ON ADJACENT CITY OR PRIVATELY OWNED LOTS, UNLESS PERMISSION HAS BEEN GRANTED IN ADVANCE IN WRITING BY CITY AND/OR LAND OWNER
26. PRIOR TO CONSTRUCTION, A PRECONSTRUCTION MEETING SHALL BE HELD AT THE PROJECT SITE WITH THE CONTRACTOR, ENGINEER, CITY OF PORTLAND DEVELOPMENT REVIEW COORDINATOR, CITY OF PORTLAND DEPARTMENT OF PUBLIC WORKS REPRESENTATIVE, AND OWNER TO REVIEW THE CONSTRUCTION SCHEDULE AND CRITICAL ASPECTS OF THE SITE WORK. AT THAT TIME, THE SITE/BUILDING CONTRACTOR SHALL PROVIDE THREE (3) COPIES OF A DETAILED CONSTRUCTION SCHEDULE TO THE ATTENDING CITY REPRESENTATIVE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ARRANGE A MUTUALLY AGREEABLE TIME FOR THE PRECONSTRUCTION MEETING.
27. CONTRACTOR SHALL PROVIDE AND MAINTAIN EROSION AND SEDIMENTATION CONTROL MEASURES IN ACCORDANCE WITH THESE PLANS AND THE LATEST EDITION OF THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION'S BEST MANAGEMENT PRACTICES MANUAL. KEEP ALL STREETS FREE OF DUST, MUD, AND DEBRIS. STREETS AND WALKWAYS SHALL BE SWEPT REGULARLY, AND TEMPORARY CONSTRUCTION ENTRANCES SHALL BE UTILIZED DURING CONSTRUCTION.
28. CONTRACTOR IS REQUIRED TO PERFORM ALL WORK IN ACCORDANCE WITH REQUIREMENTS OUTLINED WITHIN THE MAINE CONSTRUCTION GENERAL PERMIT. CONTRACTOR SHALL FILE A NOTICE OF TERMINATION WITH PHOTOGRAPHS AND REQUIRED ATTACHMENTS TO THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION UPON COMPLETION OF THE PROJECT. A DRAFT OF THE NOTICE WILL BE PROVIDED TO THE OWNER AND THE OWNER'S REPRESENTATIVE FOR REVIEW PRIOR TO SUBMISSION. A COPY OF THE NOTICE CAN BE OBTAINED AT WWW.MAINE.GOV/DEP/LAND/STORMWATER/CONSTRUCTION.HTML
29. CONTRACTOR SHALL MAINTAIN EROSION CONTROL AND STORMWATER POLLUTION PREVENTION SYSTEMS IN COMPLIANCE WITH THE REQUIREMENTS OF THE MAINE CONSTRUCTION GENERAL PERMIT (MCGP). CONTRACTOR SHALL CONDUCT AND MAINTAIN RECORDS OF EROSION CONTROL INSPECTIONS PER THE NOTICE OF INTENT TO COMPLY WITH THE MAINE CONSTRUCTION GENERAL PERMIT. SUBMIT A COPY OF THE INSPECTION RECORDS TO THE OWNER AND ENGINEER.
30. A COMPLETE SET OF "RECORD" DRAWINGS THAT REFLECT ANY AND ALL MODIFICATIONS TO THE STORM SEWER SYSTEM AND ANY OTHER UTILITY INSTALLATIONS OR ALTERATIONS WITHIN THE PROJECT LIMITS SHALL BE SUBMITTED TO THE OWNER AND ENGINEER.
31. ACTIVITIES THAT HAVE THE POTENTIAL TO DISTURB SOIL SUCH AS UTILITY AND SUBSURFACE STRUCTURE INSTALLATION/RELOCATION WORK, GRADING, PAVING, AND LANDSCAPING SHALL BE CONDUCTED IN ACCORDANCE WITH THE SOIL MANAGEMENT PLAN. APPLICABLE SOIL MANAGEMENT PROCEDURES INCLUDE SITE CONTROLS AND CONSTRUCTION MEASURES TO REDUCE EXPOSURE TO SOIL DURING CONSTRUCTION, AS WELL AS TO FACILITATE THE PROPER HANDLING, STORAGE, CHARACTERIZATION, TRANSPORT, ONSITE REUSE, AND/OR OFFSITE REUSE, OR DISPOSAL, OF EXCESS SOIL THAT MAY BE GENERATED DURING CONSTRUCTION.
32. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE A MAINTENANCE AND PROTECTION OF TRAFFIC (MPT) PLAN IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REQUIREMENTS.

DEMOLITION NOTES:

1. PRIOR TO THE START OF DEMOLITION, THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND/OR APPROVALS FROM THE CITY OF PORTLAND, AND ALL OTHER AUTHORITIES HAVING JURISDICTION.
2. CONSTRUCTION/DEMOLITION DEBRIS NOT APPROVED FOR REUSE ON–SITE, SHALL BE REMOVED AND DISPOSED OFF SITE IN ACCORDANCE WITH THE REQUIREMENTS OF ALL AUTHORITIES HAVING JURISDICTION. WASTE MANIFEST FORMS DOCUMENTING PROPER OFF–SITE DISPOSAL SHALL BE PROVIDED TO THE SITE/CIVIL ENGINEER AND THE CITY OF PORTLAND.
3. PRIOR TO THE START OF DEMOLITION, THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING UTILITIES TO BE DEMOLISHED OR TO REMAIN PROTECTED DURING CONSTRUCTION. IF ANY DISCREPANCIES ARE FOUND, THE CONTRACTOR SHALL NOTIFY THE OWNER AND ENGINEER IN WRITING OF THE CONFLICT.
4. THE CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES TO REMAIN. ANY TEMPORARY SHUT DOWNS REQUIRED TO FACILITATE THE PROPOSED CONSTRUCTION, WHICH MAY AFFECT USES ON ADJACENT PROPERTIES SHALL BE COORDINATED BY THE CONTRACTOR AND THE APPROPRIATE UTILITY.
5. CONTRACTOR SHALL REPAIR OR REPLACE ANY STRUCTURES OR UTILITIES DAMAGED DURING CONSTRUCTION. THE CONTRACTOR SHALL PROCEED WITH CAUTION WITHIN THE PROPOSED WORK AREA TO PREVENT ANY INTERRUPTION TO EXISTING UTILITY SERVICE.
6. CONTRACTOR SHALL COVER CONSTRUCTION DUMPSTERS AND ROLL–OFF CONTAINERS, AND STORE ALL CONSTRUCTION CHEMICALS INSIDE THE CONSTRUCTION TRAILER OR UNDER A COVERED AREA DURING PERIODS WHEN CONSTRUCTION CEASES.
7. SAWCUTS IN EXISTING PAVEMENT SHALL BE SMOOTH AND STRAIGHT.
8. EXISTING FACILITIES (I.E. SIGNS, POLES, CURB, ETC.) SHALL BE REMOVED AND PROTECTED DURING CONSTRUCTION. OWNER RETAINS RIGHT TO KEEP ANY AND ALL REMOVED FACILITIES. CONTRACTOR SHALL DISPOSE OF ANY REMOVED FACILITY AT THE REQUEST OF THE OWNER AT CONTRACTOR'S EXPENSE.

LAYOUT AND MATERIALS NOTES:

1. ALL DIMENSIONS AND RADII ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.

GRADING AND DRAINAGE NOTES:

1. CASTINGS FOR EXISTING STRUCTURES TO REMAIN AND PROPOSED STRUCTURES SHALL BE SET TO THE PROPOSED ELEVATIONS SHOWN ON THE DRAWINGS.
2. THE FILLING OF SOIL OVER THE ROOTS OF TREES TO BE PRESERVED IS PROHIBITED.
3. CLEAN AND/OR FLUSH ALL MANHOLES AND SITE PIPING AFTER THE WORK HAS BEEN COMPLETED. NO SEPARATE PAYMENT WILL BE MADE FOR THIS WORK.
4. PROVIDE END CAPS ON ALL UNDERDRAIN PIPING EXCEPT WHERE DAYLIGHTED, UNLESS OTHERWISE NOTED.

UTILITIES NOTES:

1. ALL PROPOSED UTILITIES (WATER, ELECTRIC, SANITARY, STORM SEWER, ETC.) AND THEIR CONNECTIONS, DISCONNECTION AND RELOCATION OF EXISTING UTILITIES SHALL BE COMPLETED IN ACCORDANCE WITH THE REQUIREMENTS OF THE UTILITY COMPANY HAVING JURISDICTION. ANY COORDINATION WITH THE MUNICIPALITY AND/OR UTILITY COMPANY, PERMITS OR APPROVALS REQUIRED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

CONSTRUCTION PHASING:

CONSTRUCTION SHALL BE PHASED SUCH THAT ALL DISTURBED AREAS SHALL FIRST BE PROTECTED WITH EROSION AND SEDIMENT CONTROLS AS INDICATED ON THE PLANS PRIOR TO THE START OF ANY GROUND DISTURBING ACTIVITIES. THE CONSTRUCTION PHASING DESCRIBED BELOW IS FOR GENERAL PURPOSES ONLY, AND WILL BE DETERMINED BY THE CONTRACTOR. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR HIS/HER MEANS AND METHODS OF CONSTRUCTION. GENERAL CONSTRUCTION SEQUENCING IS AS FOLLOWS:

1. INSTALLATION OF EROSION AND SEDIMENT CONTROL PRACTICES AS INDICATED ON THE PLANS.
2. DEMOLITION AND REMOVAL OF EXISTING PAVEMENT, CURB, TREES, UTILITIES, ETC.
3. STRIP AND STOCKPILE TOPSOIL AT DESIGNATED STORAGE AREA.
4. BEGIN ROUGH GRADING AND EARTHWORK ACTIVITIES (EXCAVATION OPERATIONS).
5. INSTALL STORM SEWER SYSTEM (BEGINNING AT FURTHEST DOWNSTREAM STRUCTURE).
6. PLACE INLET PROTECTION ON PROPOSED CATCH BASINS AS SHOWN ON THE DRAWINGS.
7. INSTALL ELECTRICAL UTILITIES.
8. INSTALL BITUMINOUS CONCRETE PAVEMENT SUBBASE AND BITUMINOUS CONCRETE BINDER COURSES AS SPECIFIED ON PLANS.
9. FINISH GRADING, REDISTRIBUTE STOCKPILED TOPSOIL AND ESTABLISH VEGETATION ON ALL DISTURBED AND NEW PERVIOUS AREAS.
10. CLEAN BITUMINOUS CONCRETE PAVEMENT AND STORM SEWER OF ALL DEBRIS AND SEDIMENT.
11. COMPLETE SITE CONSTRUCTION.
12. INSTALLATION OF BITUMINOUS PAVEMENT CONCRETE TOP COURSE (THIS WEARING COURSE SHALL BE INSTALLED NEAR COMPLETION OF PROJECT).
13. ACHIEVE PERMANENT AND FINAL STABILIZATION OF AREAS DISTURBED DURING CONSTRUCTION.
14. REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL PRACTICES FROM THE SITE.

LEGEND

EXISTING		PROPOSED
122	CONTOUR (1' INTERVAL)	122
120	CONTOUR (INDEX)	120
S	SANITARY SEWER	S
FM	FORCE MAIN	
SD	STORM DRAIN	SD
UD	UNDERDRAIN	UD
W	WATER MAIN	
E	UNDERGROUND ELECTRIC	E
T	UNDERGROUND TELEPHONE	
G	GAS LINE	G
OE	OVERHEAD ELECTRIC	
P	PROPERTY LINE	
R/W	RIGHT OF WAY	
	EASEMENT	
X X	FENCE	
	VERTICAL CURB	
	SLOPED GRANITE CURB	
	TIPDOWN CURB	
	EDGE OF PAVEMENT	
	EDGE OF GRAVEL	
	GUARDRAIL	
	STORM DRAIN PIPE & CATCH BASIN	
	SEDIMENT BARRIER	
	LIMIT OF WORK	LW
	SANITARY SEWER MANHOLE	
	CLEAN OUT	CO
	DRAINAGE MANHOLE	DMH
	CATCH BASIN	
	SEWER MANHOLE	SMH
	GAS METER BOX	
	GAS VENT	
	GATE GATE	
	TRANSFORMER	
	UTILITY POLE	
	UTILITY PILE WITH GUY	
	LIGHTPOST	
	WATER GATE	
	CURB STOP	
	HYDRANT	
	PROPERTY MONUMENT	
	STREET AND MISCELLANEOUS SIGNS	
XXX.XX	SPOT ELEVATION	XXX.XX
	DECIDUOUS TREE	
	CONIFEROUS TREE	
	SHRUB	
	BITUMINOUS PAVEMENT	
	POROUS PAVEMENT	
	CONCRETE SIDEWALK	
	PAVER AREA, SEE LANDSCAPING PLANS	
	STONE AREA, SEE LANDSCAPING PLANS	

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PROJECT TEAM:

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94 AUBURN ST,
PORTLAND, ME 04103

SEAL / SIGNATURE

STATE OF MAINE
ASHLEY FLETCHER
No. 13750
LICENSED PROFESSIONAL ENGINEER

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PROJECT:

USM - Structured Parking Garage

Address

50 Bedford Street,
Portland ME 04104

REVISIONS:

No.	Date	Description
	08/09/21	Schematic Design

SUBMISSIONS:

Date	Issued For:

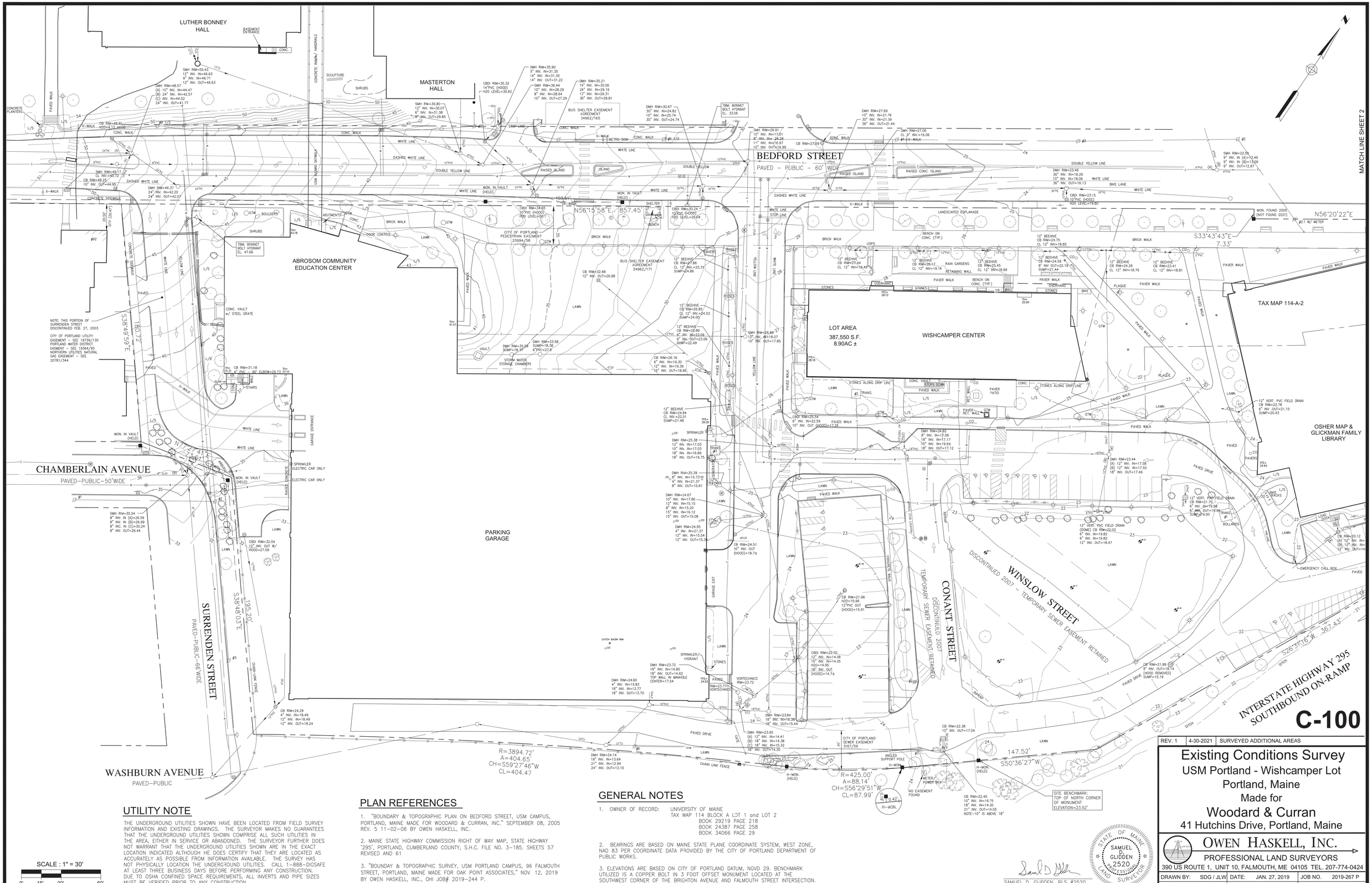
SCALE	**1"=20'**
DATE ISSUED	**8/9/2021**
PROJECT NO	**20-20145.00-1**
DRAWN BY	**B.C.M.**
CHECKED BY	**A.E.F.**

SHEET TITLE:

GENERAL NOTES & LEGEND

C-000

\\woodardcurran.net\shared\Projects\023535.00 USM - Falmouth Street Garage\wip\Drawings\General\023535.00 G001.dwg, Aug 06, 2021 - 1:08pm BMCDEVITT



UTILITY NOTE

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEY HAS NOT PHYSICALLY LOCATION 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.

PLAN REFERENCES

1. "BOUNDARY & TOPOGRAPHIC PLAN ON BEDFORD STREET, USM CAMPUS, PORTLAND, MAINE MADE FOR WOODARD & CURRAN, INC." SEPTEMBER 08, 2005 REV. 5 11-02-06 BY OWEN HASKELL, INC.

2. MAINE STATE HIGHWAY COMMISSION RIGHT OF WAY MAP, STATE HIGHWAY "295", PORTLAND, CUMBERLAND COUNTY, S.H.C. FILE NO. 3-185. SHEETS 57 REVISED AND 61

3. "BOUNDAY & TOPOGRAPHIC SURVEY, USM PORTLAND CAMPUS, 96 FALMOUTH STREET, PORTLAND, MAINE MADE FOR OAK POINT ASSOCIATES," NOV. 12, 2019 BY OWEN HASKELL, INC., OHI JOB# 2019-244 P.

GENERAL NOTES

1. OWNER OF RECORD: UNIVERSITY OF MAINE
TAX MAP 114 BLOCK A LOT 1 and LOT 2
BOOK 29219 PAGE 218
BOOK 24387 PAGE 258
BOOK 34066 PAGE 29

2. BEARINGS ARE BASED ON MAINE STATE PLANE COORDINATE SYSTEM, WEST ZONE, NAD 83 PER COORDINATE DATA PROVIDED BY THE CITY OF PORTLAND DEPARTMENT OF PUBLIC WORKS.

3. ELEVATIONS ARE BASED ON CITY OF PORTLAND DATUM, NGVD 29. BENCHMARK UTILIZED IS A COPPER BOLT IN 3 FOOT OFFSET MONUMENT LOCATED AT THE SOUTHWEST CORNER OF THE BRIGHTON AVENUE AND FALMOUTH STREET INTERSECTION.

SAMUEL D. GLIDDEN, PLS #2520

STATE OF MAINE · SAMUEL D. GLIDDEN · 2520 · REGISTERED LAND SURVEYOR

C-100

REV. 1	4-30-2021	SURVEYED ADDITIONAL AREAS

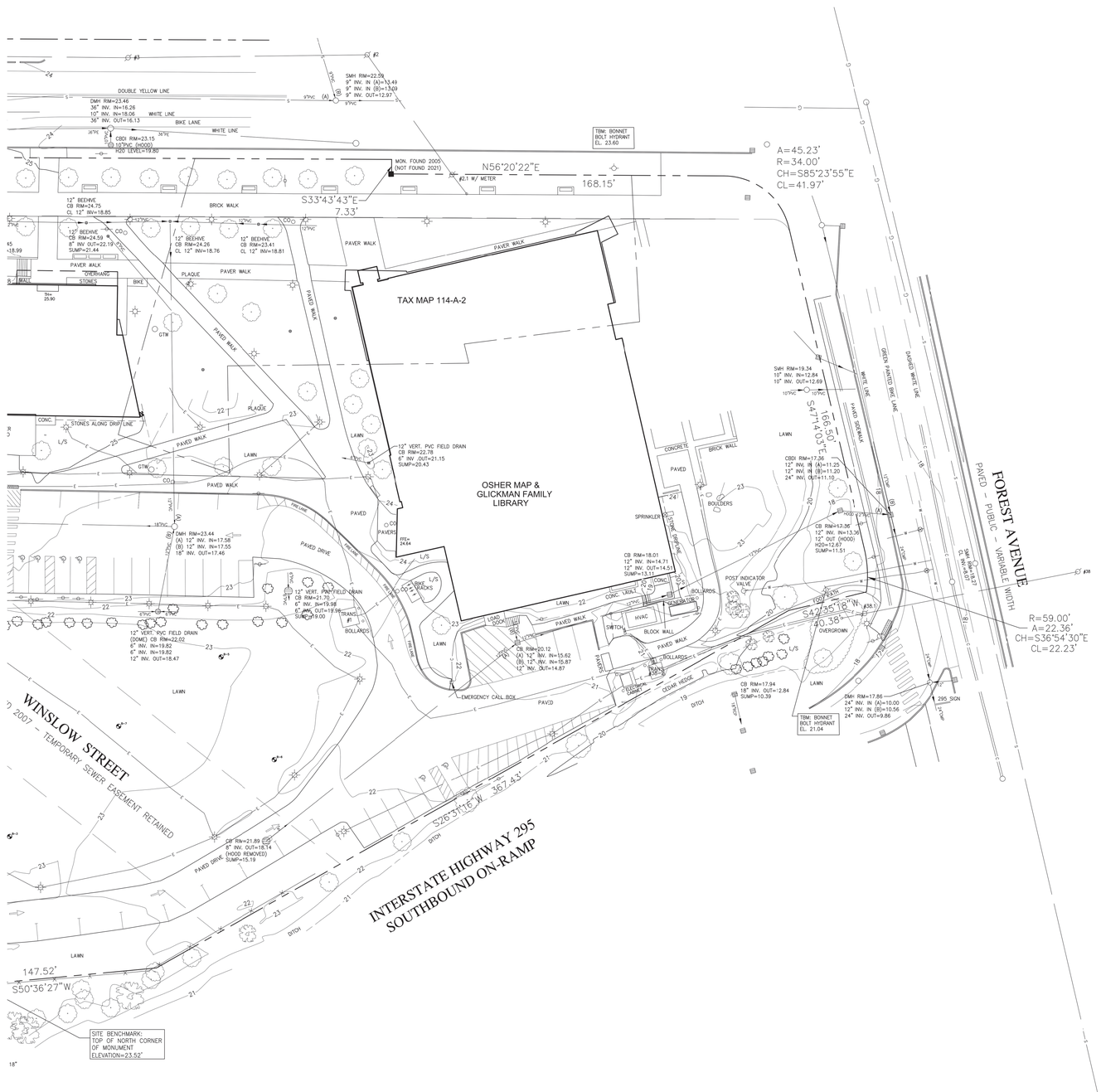
Existing Conditions Survey

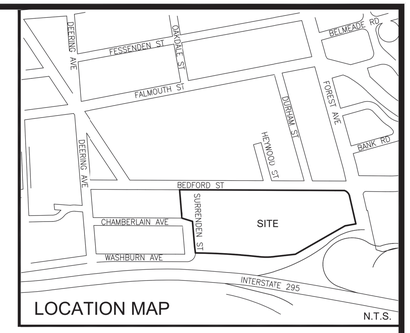
USM Portland - Wishcamper Lot
Portland, Maine
Made for
Woodard & Curran
41 Hutchins Drive, Portland, Maine

OWEN HASKELL, INC.
PROFESSIONAL LAND SURVEYORS
390 US ROUTE 1, UNIT 10, FALMOUTH, ME 04105 TEL. 207-774-0424

DRAWN BY:	SDG / JLW	DATE:	JAN. 27, 2019	JOB NO.	2019-267 P
CHECKED BY:	SDG	SCALE:	1" = 30'	DRWG. NO.	1 OF 2

MATCH LINE SHEET 1





LEGEND

- IRON PIPE OR ROD FOUND
- MCNUMENT FOUND
- UTILITY POLE
- MANHOLE
- ELECTRIC/GAS METER
- SIGN
- CATCH BASIN
- HYDRANT
- WATER VALVE OR SHUTOFF
- GAS VALVE
- LIGHT POLE
- DECIDUOUS TREE
- CONIFEROUS TREE
- SHRUB / BUSH
- GTW GEOTHERMAL WELL
- ELECTRICAL JUNCT. BOX
- FENCE
- CURB
- OVERHEAD WIRES
- E UNDERGROUND POWER
- C COMMUNICATION
- W WATER LINE
- G GAS LINE
- T TELEPHONE
- SD STORM DRAIN
- SS SANITARY SEWER
- STM STEAM LINE

IPF/IRF	IRON PIPE OR ROD FOUND
L/S	LANDSCAPED AREA
CONC.	CONCRETE
FFE	FINISHED FLOOR ELEVATION
THRES.	THRESHOLD
N/F	NOW OR FORMERLY
000/000	DEED BOOK / PAGE

SCALE : 1" = 30'

0' 15' 30' 60'

UTILITY NOTE

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3. "BOUNDAY & TOPOGRAPHIC SURVEY, USM PORTLAND CAMPUS, 96 FALMOUTH STREET, PORTLAND, MAINE MADE FOR OAK POINT ASSOCIATES," NOV. 12, 2019 BY OWEN HASKELL, INC., CHI JOB# 2019-244 P.

GENERAL NOTES

1. OWNER OF RECORD: UNIVERSITY OF MAINE
TAX MAP 114 BLOCK A LOT 1 and LOT 2
BOOK 29219 PAGE 218
BOOK 24387 PAGE 258
BOOK 34066 PAGE 29

2. BEARINGS ARE BASED ON MAINE STATE PLANE COORDINATE SYSTEM, WEST ZONE, NAD 83 PER COORDINATE DATA PROVIDED BY THE CITY OF PORTLAND DEPARTMENT OF PUBLIC WORKS.

3. ELEVATIONS ARE BASED ON CITY OF PORTLAND DATUM, NGVD 29. BENCHMARK UTILIZED IS A COPPER BOLT IN 3 FOOT OFFSET MONUMENT LOCATED AT THE SOUTHWEST CORNER OF THE BRIGHTON AVENUE AND FALMOUTH STREET INTERSECTION.

SAMUEL D. GLIDDEN, PLS #2520

STATE OF MAINE · SAMUEL D GLIDDEN · 2520 · PROFESSIONAL LAND SURVEYOR

C-101

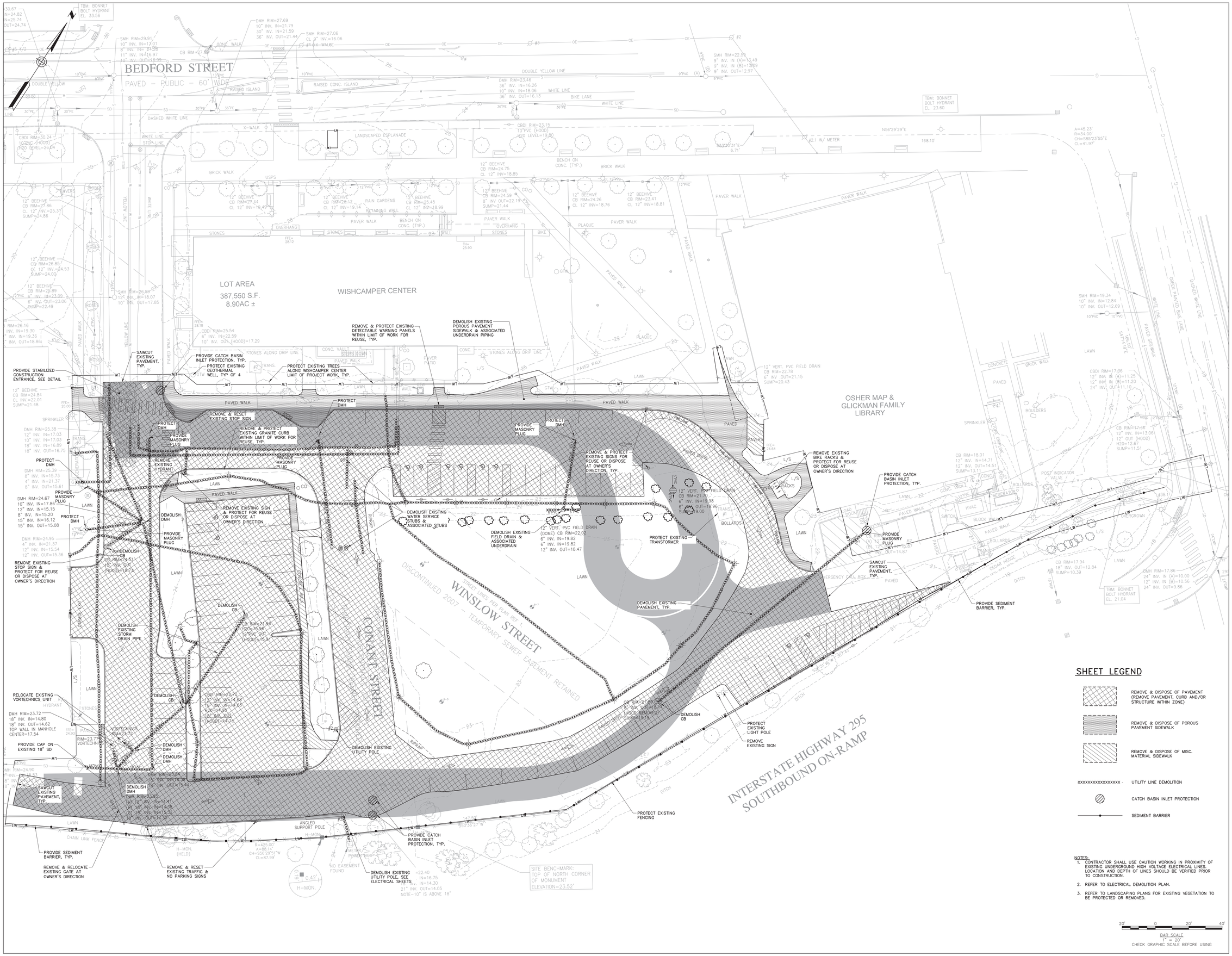
REV.	DATE	DESCRIPTION
1	4-30-2021	SURVEYED ADDITIONAL AREAS

Existing Conditions Survey

USM Portland - Wishcamper Lot
Portland, Maine
Made for
Woodard & Curran
41 Hutchins Drive, Portland, Maine

OWEN HASKELL, INC.
PROFESSIONAL LAND SURVEYORS
390 US ROUTE 1, UNIT 10, FALMOUTH, ME 04105 TEL. 207-774-0424

DRAWN BY: SDG / JLW	DATE: JAN 27, 2019	JOB NO. 2019-267 P	
CHECKED BY: SDG	SCALE: 1" = 30'	DRWG. NO. 2 OF 2	



\\woodardcurran.net\shared\Projects\20235035.00 USM - Falmouth Street Garage\wip\Drawings\Civil\235035.00 C102.dwg, Aug 06, 2021 - 1:10pm, RMCDEVITT

UNIVERSITY OF SOUTHERN MAINE
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207.712.5183 | USM.MAINE.EDU

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MICHAEL BOUCHER LANDSCAPE ARCHITECTURE
457 US ROUTE 1 SUITE 2
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MEP/FP ENGINEER
ALLIED ENGINEERING
160 VERANDA STREET
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SEAL / SIGNATURE

STATE OF MAINE
ASHLEY FLETCHER
No. 13750
LICENSED PROFESSIONAL ENGINEER

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PROJECT:

USM - Structured Parking Garage

Address

50 Bedford Street,
Portland ME 04104

REVISIONS:

No.	Date	Description
	08/09/21	Schematic Design

SUBMISSIONS:

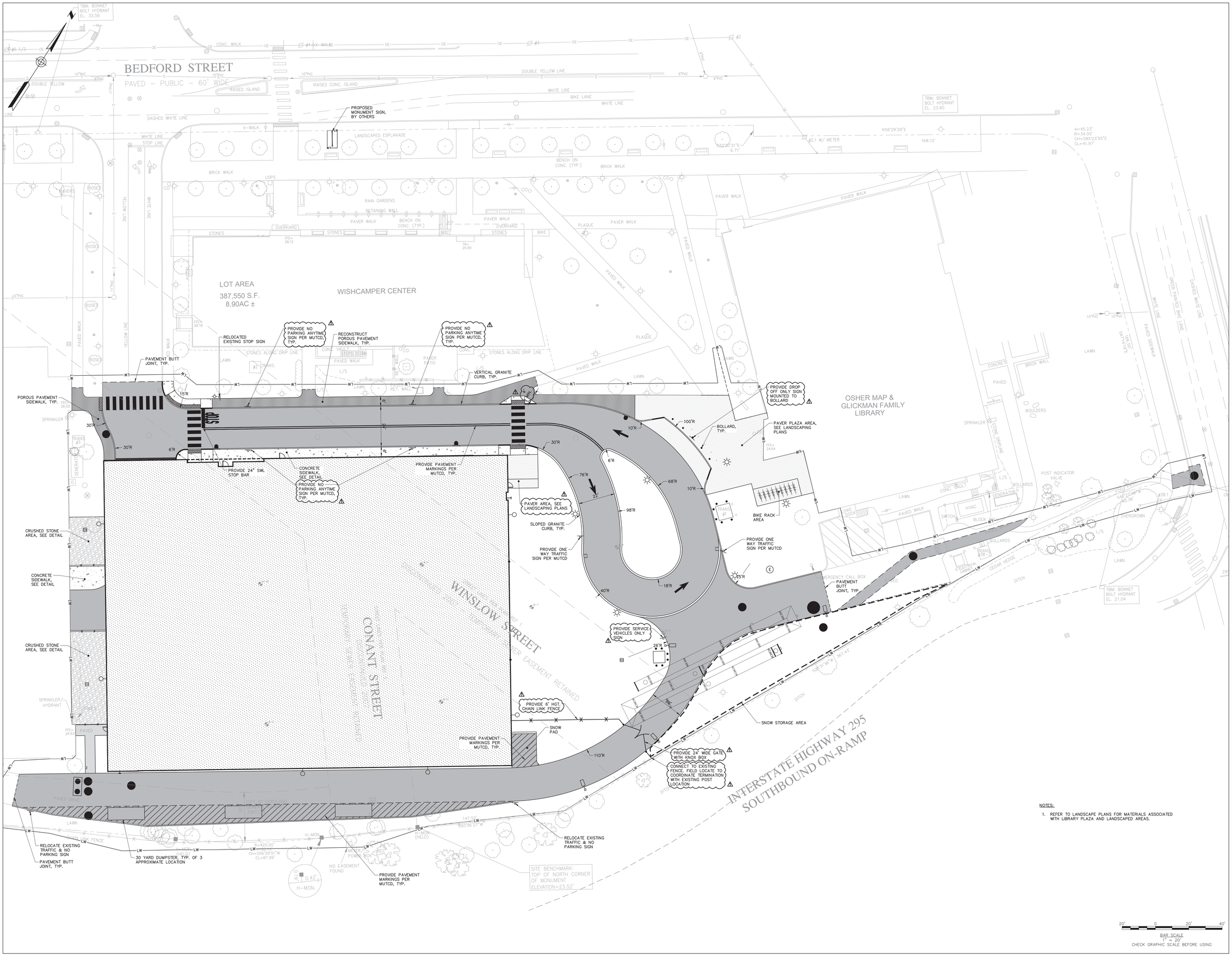
Date	Issued For:

SCALE	**1"=20'**
DATE ISSUED	**8/9/2021**
PROJECT NO	**20-20145.00-1**
DRAWN BY	**B.C.M.**
CHECKED BY	**A.E.F.**

SHEET TITLE:

DEMOLITION & EROSION & SEDIMENT CONTROL PLAN

C-102



NOTES:

1. REFER TO LANDSCAPE PLANS FOR MATERIALS ASSOCIATED WITH LIBRARY PLAZA AND LANDSCAPED AREAS.

UNIVERSITY OF SOUTHERN MAINE

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MICHAEL BOUCHER LANDSCAPE ARCHITECTURE

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SEAL / SIGNATURE

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DARRIN B. STAIRS
No. 15118
LICENSED PROFESSIONAL ENGINEER

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PROJECT:

USM - Structured Parking Garage

Address

50 Bedford Street,
Portland ME 04104

REVISIONS:

No.	Date	Description
	08/09/21	Schematic Design
1	9/1/21	Response to City Comments

SUBMISSIONS:

Date	Issued For:

SCALE	**1"=20'**
DATE ISSUED	**8/9/2021**
PROJECT NO	**20-20145.00-1**
DRAWN BY	**B.C.M.**
CHECKED BY	**D.B.S.**

SHEET TITLE:

SITE LAYOUT & MATERIALS PLAN

C-103

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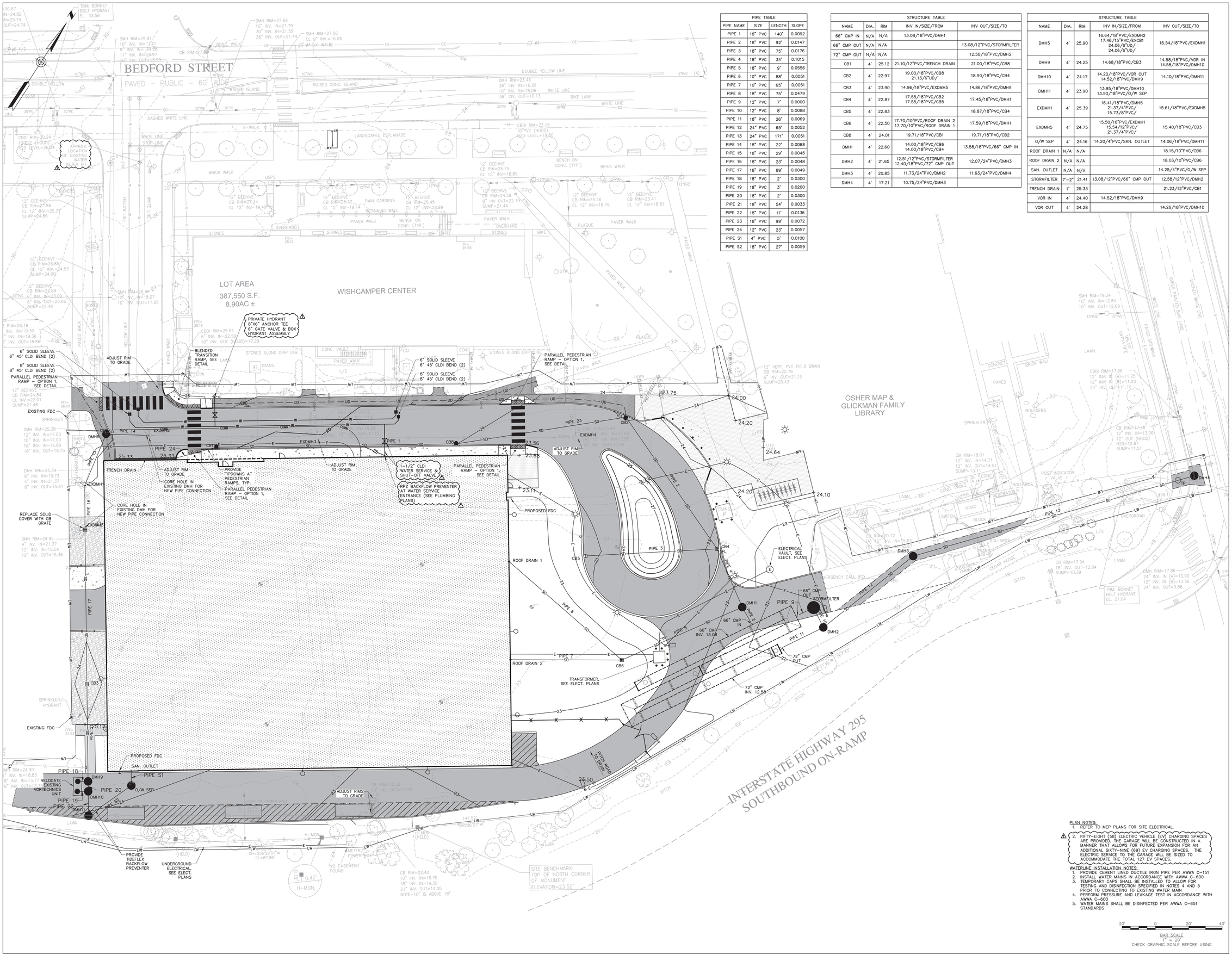
BEDFORD STREET
PAVED – PUBLIC – 60' WIDE
WISHCAMPER CENTER
LOT AREA
387,550 S.F.
8.90AC ±
OSHER MAP & GLICKMAN FAMILY LIBRARY
INTERSTATE HIGHWAY 295
SOUTHBOUND ON-RAMP
PROPOSED FDC
EXISTING FDC
PRIVATE HYDRANT 8"X6" ANCHOR TEE 6" GATE VALVE & BOX HYDRANT ASSEMBLY
BLENDED TRANSITION RAMP, SEE DETAIL
PARALLEL PEDESTRIAN RAMP – OPTION 1, SEE DETAIL
ADJUST RIM TO GRADE
TRENCH DRAIN
PROVIDE TIPDOWNS AT PEDESTRIAN RAMPS, TYP.
CORE HOLE IN EXISTING DMH FOR NEW PIPE CONNECTION
REPLACE SOLID COVER WITH CB GRATE
1–1/2" CDI WATER SERVICE & SHUT–OFF VALVE
RPZ BACKFLOW PREVENTER AT WATER SERVICE ENTRANCE (SEE PLUMBING PLANS)
ROOF DRAIN 1
ROOF DRAIN 2
TRANSFORMER, SEE ELECT. PLANS
ELECTRICAL VAULT, SEE ELECT. PLANS
EMERGENCY CALL BOX
PITCH ROAD TO DRAIN
RELOCATE EXISTING VORTECHNICS UNIT
PROVIDE TIDEFLEX BACKFLOW PREVENTER
UNDERGROUND ELECTRICAL, SEE ELECT. PLANS
SITE BENCHMARK: TOP OF NORTH CORNER OF MONUMENT ELEVATION=23.52'
TBM: BONNET BOLT HYDRANT EL. 33.56
APPROX. LOCATION OF EXISTING WATER MAIN TAP
LANDSCAPED ESPLANADE
RAIN GARDENS
RETAINING WALL
BENCH ON CONC. (TYP.)
BRICK WALK
PAVER WALK
PAVED WALK
DOUBLE YELLOW LINE
WHITE LINE
BIKE LANE
DASHED WHITE LINE
STOP LINE
RAISED CONC. ISLAND
RAISED ISLAND
CONC. WALK
OVERHANG
STONES
PLAQUE
USPS
SPRINKLER/ HYDRANT
SPRINKLER
CONC. VAULT
STONES ALONG DRIP LINE
GREEN PAINTED BIKE LANE
DASHED WHITE LINE
CONCRETE
BOULDERS
POST INDICATOR VALVE
HOSE BIBB
HVAC
GENERATOR
SWITCH
BLOCK
GAS
GAS DOOR
CONC. PAD
CONC. STEPS
GUARD RAIL
GUARD POST
CEDAR HEDGE
OVERGROWN
DITCH
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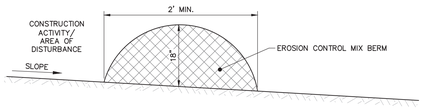

NOTES:

1. EROSION CONTROL MIX CAN BE MANUFACTURED ON OR OFF THE PROJECT SITE. IT MUST CONSIST PRIMARILY OF ORGANIC MATERIAL AND MAY INCLUDE: SHREDDED BARK, STUMP GRINDINGS, COMPOSTED BARK, OR ACCEPTABLE MANUFACTURED PRODUCTS. WOOD AND BARK CHIPS, GROUND CONSTRUCTION DEBRIS OR REPROCESSED WOOD PRODUCTS WILL NOT BE ACCEPTABLE AS THE ORGANIC COMPONENT OF THE MIX.
2. EROSION CONTROL MIX SHALL CONTAIN A WELL-GRADED MIXTURE OF PARTICLE SIZES AND MAY CONTAIN ROCKS LESS THAN 4" IN DIAMETER. EROSION CONTROL MIX MUST BE FREE OF REFUSE, PHYSICAL CONTAMINANTS, AND MATERIAL TOXIC TO PLANT GROWTH. THE MIX COMPOSITION SHALL MEET THE FOLLOWING STANDARDS:
   - THE ORGANIC MATTER CONTENT SHALL BE BETWEEN 80 AND 100%, DRY WEIGHT BASIS.
   - PARTICLE SIZE BY WEIGHT SHALL BE 100% PASSING A 6" SCREEN AND A MINIMUM OF 70%, MAXIMUM OF 85%, PASSING A 0.75" SCREEN.
   - THE ORGANIC PORTION NEEDS TO BE FIBROUS AND ELONGATED.
   - LARGE PORTIONS OF SILTS, CLAYS OR FINE SANDS ARE NOT ACCEPTABLE IN THE MIX.
   - SOLUBLE SALTS CONTENT SHALL BE < 4.0 MMHOS/CM.
   - THE PH SHOULD FALL BETWEEN 5.0 AND 8.0.

EROSION CONTROL MIX BERM (SEDIMENT BARRIER OPTION)

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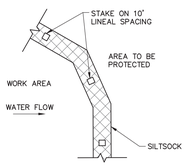
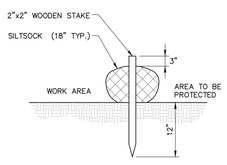


PLAN VIEW



SECTION

NOTE:

1. WHEN STAKING IS NOT POSSIBLE, HEAVY CONCRETE BLOCKS SHALL BE USED BEHIND THE SEDIMENT BARRIER TO HELP STABILIZE DURING RAINFALL/RUNOFF EVENTS.

SILT SOCK (SEDIMENT BARRIER OPTION)

N.T.S.

NOTES:

- INSTALL FABRIC ON UPHILL SIDE OF SUPPORT POSTS
- INSTALL SILT FENCE ACROSS SLOPES
- SILT FENCE SHALL NOT BE USED IN DRAINAGE WAYS

MAINTENANCE: INSPECT FOR TEARS IN THE FABRIC OR DAMAGE TO SUPPORTS. REPAIR AS NECESSARY. REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES A DEPTH OF SIX-INCHES OR LESS.

REMOVAL: WHEN UPSLOPE AREAS ARE STABILIZED, THE STRUCTURE AND ANY ACCUMULATED SEDIMENT WILL BE REMOVED.

SILTATION FENCE (SEDIMENT BARRIER OPTION)

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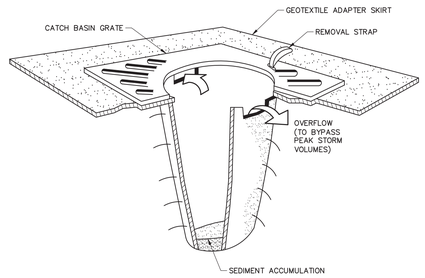

NOTES:

CATCH BASIN PROTECTION TO BE "SILTSACK" (BY ACF ENVIRONMENTAL) OR "STREAM GUARD" (BY FOSS ENVIRONMENTAL SERVICES).

INSERT TO BE EMPTIED IN AN APPROVED MANNER WHEN IT IS 1/2 FULL OF SEDIMENT.

INSPECT INSERT AFTER ALL RAINFALL EVENTS, REPAIR AND MAINTAIN AS REQUIRED.

CATCH BASIN INLET PROTECTION DEVICE (SILTSACK OR EQUAL)

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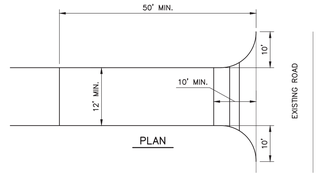
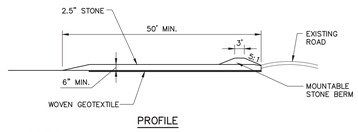


PLAN



PROFILE

NOTES:

- CONSTRUCTION ENTRANCES MAY BE RELOCATED AS CONSTRUCTION PROGRESSES.
- WHEEL WASH PITS MAY ALSO BE USED, IF APPROVED.

MAINTENANCE: INSPECT FOR EFFECTIVE REMOVAL OF SOIL FROM VEHICLES PRIOR TO LEAVING THE SITE. SWEEP ANY SOIL FROM ADJACENT ROADWAYS.

AT LEAST ONE CONSTRUCTION ENTRANCE SHALL BE MAINTAINED UNTIL ALL AREAS OF THE SITE ARE STABILIZED.

STABILIZED CONSTRUCTION ENTRANCE

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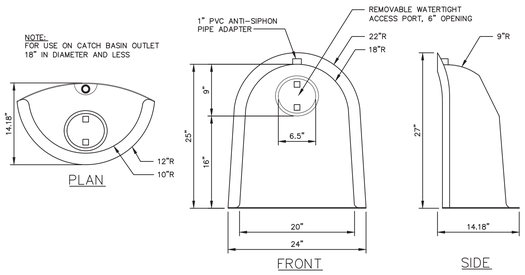

PLAN FRONT SIDE

"THE SNOUT"

N.T.S.

EROSION AND SEDIMENT CONTROL NOTES

Temporary Controls

Contractor shall prepare and submit a soil erosion and water pollution control plan to engineer.

Measure	Dates For Use	Timing, Activity, and Location
Sediment Barrier	ALL	Before soil disturbance, install downhill of areas to be disturbed and around material stockpiles.
Up-slope Diversion	ALL	Before soil disturbance, install uphill of areas to be disturbed and material stockpiles.
Catch Basin Protection	ALL	Before soil or pavement disturbance, install ACF Environmental, Inc. High Flow Siltsack, Siltsaver Inlet Filter. or equal, installed per manufacturer's requirements.
Dust Control	ALL	During dry weather, apply water and calcium chloride to control dust.
Temporary Seeding	April 15 to Oct. 1	Soil stockpiles that are not covered and disturbed areas that will not be disturbed again within 14 days. If grass growth provides less than 95% soil coverage by Nov. 1, apply mulch and anchor with erosion control blanket.
Mulch	April 15 to Sept. 15	On all areas of exposed soil prior to rain events or every 7 days, apply 100-150 lbs (2.5 bales) per 1,000 sq ft. by mechanical blower.
Winter Mulch	Sept. 16 to Oct. 31	On all areas of exposed soil prior to precipitation or every 7 days, apply 150 to 170 lbs. mulch (4 bales) per 1,000 sq. ft. by mechanical blower, Erosion control blanket may be used as a substitute for winter mulch.
	Nov. 1 to April 14	On all areas of exposed soil, apply 150 to 170 lbs. mulch (4 bales) per 1,000 sq. ft. and anchor with netting at the end of each working day. Erosion control blanket may be used as a substitute for winter mulch.
Inspections	Until site is permanently stabilized	Inspect the erosion and sedimentation control measures daily, and maintain and repair as necessary.

Permanent Controls:

Measure	Dates For Use	Timing, Activity, and Location
Pavement – Base Course – Final Course	When no frost is in ground	Install only in areas shown on the plan, shortly after pavement base is brought to final grade. Install near completion of project.
Permanent Seeding	April 15 to Sept. 15	On final grade areas, within 7 days of grade preparation, prepare topsoil, followed by seed and mulch application.
Dormant Seeding	Sept. 16 to April 15	On final grade areas, with prepared topsoil. Apply seed at double the specified rate on bare soil, and follow with an application of winter mulch.
Ground Cover, Trees, Shrubs	April 15 to Nov. 1	Install with final landscaping.
Permanent Mulch	ALL	Install with final landscaping.

Inspections:

Regular inspections of all erosion and sedimentation controls shall be made at least weekly and prior to and following storm events. Minimum inspections shall be made as listed in the table below.

Inspected Item	Look For
Mulched Surfaces	Thin mulch or inadequate application. Wind movement.
Seeded Surfaces	Poor seed germination. Loss of mulch. Development of rivulets.
Sediment Barrier	Sediment build-up to one half the height of the barrier. Undermining of the barrier. Supporting stakes loose, toppled, or unmarked. Breaks in barrier.
Perimeter Diversion	Discharge is to stabilized area. Erosion or breaks in barrier. Supporting stakes loose, toppled or unmarked.
Catch Basin Protection	Sediment build-up and structure blockages. Slow flow/Ponding water. Breaks in fabric or voids in barrier.
Dewatering Filter	Breaks in fabric or supporting structure. Slow flow, indicating high sediment build-up.
Construction Entrance	Sedimentation of roadways. Off-site dust complaints.

EROSION AND SEDIMENT CONTROL NOTES

TEMPORARY EROSION CONTROL MEASURES MAY INCLUDE THE USE OF STABILIZED CONSTRUCTION ENTRANCES, HYDRAULIC MULCH, HAY AND STRAW MULCH, EROSION CONTROL BLANKET, TURF REINFORCED MATTING, RIPRAP AND TEMPORARY SEEDING. TEMPORARY SEDIMENT CONTROL MEASURES INCLUDE THE USE OF SILT FENCE, EROSION CONTROL MIX BERMS, CATCHBASIN SEDIMENT COLLECTION BAGS AND GEOTEXTILE FILTER BAGS. PERMANENT MEASURES INCLUDE PERMANENT VEGETATION OR PAVING.

GENERAL

A. THE PROJECT SHALL CONFORM WITH THE STANDARDS OF THE MAINE CONSTRUCTION GENERAL PERMIT.

B. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MAINE EROSION AND SEDIMENT CONTROL BMPS HANDBOOK PUBLISHED BY THE MAINE DEP UNLESS OTHERWISE NOTED IN THESE PLANS.

C. ANY ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES DEEMED NECESSARY BY THE OWNER'S REPRESENTATIVE, DEPARTMENT OF ENVIRONMENTAL PROTECTION, AND/OR MUNICIPAL OFFICIALS SHALL BE INSTALLED BY THE CONTRACTOR.

D. THE CONTRACTOR IS RESPONSIBLE FOR ALL FINES RESULTING FROM EROSION OR SEDIMENTATION FROM THE SITE TO SURROUNDING PROPERTIES, WATER BODIES, OR WETLANDS AS A RESULT OF THIS PROJECT.

E. THE CONTRACTOR SHALL MINIMIZE DISTURBANCE TO THE SITE WHENEVER POSSIBLE WHILE ALLOWING PROPER SITE DEVELOPMENT.

F. CONSTRUCTION STAGING SHALL BE CONDUCTED IN A WAY TO MINIMIZE THE POTENTIAL FOR STORMWATER RUN-ON TO DISTURBED AREAS.

G. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR/REPLACEMENT/MAINTENANCE OF ALL EROSION CONTROL MEASURES UNTIL ALL DISTURBED AREAS ARE STABILIZED TO THE SATISFACTION OF THE ABOVE PERSONNEL. DESCRIPTIONS OF PERMANENT STABILIZATION FOR VARIOUS COVER TYPES FOLLOWS:

   i. FOR SEEDED AREAS, PERMANENT STABILIZATION MEANS THAT 90% OF THE DISTURBED AREA IS COVERED WITH REASONABLY THICK UNIFORM STAND OF PERMANENT GRASS SPECIES, FREE FROM SIZABLE THIN OR BARE SPOTS.
   ii. FOR SODDED AREAS, PERMANENT STABILIZATION MEANS THAT COMPLETE BINDING OF THE SOD ROOTS INTO THE UNDERLYING SOIL WITH NO SLUMPING OF THE SOD OR DIE OFF.
   iii. FOR MULCHED AREAS, PERMANENT STABILIZATION MEANS TOTAL COVERAGE OF THE EXPOSED AREA WITH AN APPROVED MULCH MATERIAL.
   iv. FOR PAVED AREAS, PERMANENT STABILIZATION MEANS THE PLACEMENT OF THE ASPHALT BINDER COURSE.

H. IF THE AREA WILL REMAIN UNWORKED FOR MORE THAN ONE YEAR OR HAS BEEN BROUGHT TO FINAL GRADE, AND WILL NOT BE BUILT ON, THEN IMMEDIATELY PROVIDE PERMANENT STABILIZATION USING VEGETATION THROUGH PLANTING, SEEDING, SOD OR THROUGH THE USE OF PERMANENT MULCH OR RIPRAP. IF USING VEGETATION FOR STABILIZATION, SELECT THE PROPER VEGETATION FOR THE LIGHT, MOISTURE, AND SOIL CONDITIONS. AMEND AREAS OF DISTURBED, OVERLY-COMPACTED SUBSOIL WITH TOPSOIL OR COMPOST AND LIGHTLY TILL 2-3" OF SOIL AMENDMENTS INTO THE TOP 8" OF SOIL.

I. PERMANENT SEEDING SPECIFICATION: IT IS RECOMMENDED THAT PERMANENT SEEDING BE COMPLETED BETWEEN APRIL 1 AND AUGUST 15 OF EACH YEAR. LATE SEASON SEEDING MAY BE DONE BETWEEN AUGUST 15 AND SEPTEMBER 15. AREAS NOT SEEDED OR WHICH DO NOT OBTAIN A SATISFACTORY GROWTH BY OCTOBER 1 SHALL BE SEEDED WITH AROOSTOCK WINTER RYE OR MULCHED AT SPECIFIED RATES. SEE WINTER SEEDING AND MULCHING SPECIFICATIONS FOR STABILIZATION AFTER NOVEMBER 1.

   i. APPLY TOPSOIL TO A DEPTH OF 6 INCHES. IN COMPACTED AREAS TILL 2-3" OF COMPOST INTO UPPER 8" OF DISTURBED SOIL AND THEN APPLY 6 INCHES OF TOPSOIL.
   ii. APPLY LIME AND FERTILIZER ACCORDING TO SOIL TESTS. IN LIEU OF SOIL TESTS, APPLY GROUND LIMESTONE AT A RATE OF 33 LBS PER 1000 SQUARE FEET AND GRANULAR, COMMERCIAL-GRADE FERTILIZER 10-10-10 AT A RATE OF 18 LBS PER 1000 SQUARE FEET.
   iii. UNIFORMLY APPLY SEED MIXTURE AT THE RECOMMENDED SEEDING RATES AND DATES, APPLY HAY OR STRAW MULCH AT A RATE OF 2.5 BALES PER 1000 SQUARE FEET AND ANCHOR AS NECESSARY.

J. PROTECT ALL SEEDED AREAS WITH MULCH OR EROSION CONTROL BLANKET IN AREAS OF SHEET OR CONCENTRATED FLOWS. MULCH ALL AREAS SO THAT SOIL IS NOT VISIBLE THROUGH THE MULCH REGARDLESS OF THE APPLICATION RATE. SCHEDULE SEEDING OR SODDING TO AVOID FAILURE DUE TO SUMMER DROUGHT AND FALL FROST. NEWLY SEEDED AREAS SHOULD BE PROTECTED FROM VEHICLE TRAFFIC, PEDESTRIAN TRAFFIC AND CONCENTRATED RUNOFF UNTIL THE VEGETATION IS WELL ESTABLISHED. AREAS MUST BE REWORKED AND RESTABILIZED IF GERMINATION IS SPARSE OR SURFACE EROSION IS EVIDENT.

K. EROSION CONTROL BLANKET SHALL BE INSTALLED ON ALL PERMANENT SLOPES STEEPER THAN 3:1 OR AS OTHERWISE NOTED, EROSION CONTROL BLANKET SHALL BE NORTH AMERICAN GREEN S150BN OR APPROVED EQUAL. EROSION CONTROL BLANKET SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

L. THE CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL TEMPORARY EROSION CONTROL MEASURE UPON STABILIZATION OF PROJECT AREA & COST SHALL BE INCIDENTAL TO CONTRACT.

WINTER CONDITIONS

A. WINTER CONSTRUCTION IS CONSTRUCTION ACTIVITY PERFORMED DURING THE PERIOD FROM NOVEMBER 1 THROUGH APRIL 1. IF AREAS WITHIN THE CONSTRUCTION AREA ARE NOT STABILIZED WITH TEMPORARY OR PERMANENT MEASURES OUTLINED ABOVE BY NOVEMBER 15 THEN THE SITE MUST BE PROTECTED WITH ADDITIONAL STABILIZATION MEASURES THAT ARE SPECIFIC TO WINTER CONDITIONS.

GOOD HOUSEKEEPING AND POLLUTION PREVENTION

A. SPILL PREVENTION CONTROLS MUST BE USED TO PREVENT POLLUTANTS FROM BEING DISCHARGED FROM MATERIALS ON SITE, INCLUDING STORAGE PRACTICES TO MINIMIZE EXPOSURE OF THE MATERIALS TO STORMWATER RUNOFF AND APPROPRIATE SPILL PREVENTION, CONTAINMENT AND RESPONSE PLANNING AND IMPLEMENTATION.

B. DURING CONSTRUCTION, PETROLEUM PRODUCTS AND OTHER HAZARDOUS MATERIALS WITH THE POTENTIAL TO CONTAMINATE GROUND OR SURFACE WATERS MAY NOT BE STORED OR HANDLED IN AREAS OF THE SITE DRAINING TO INFILTRATION AREAS. AN "INFILTRATION AREA" IS ANY ARE OF THE SITE THAT BY DESIGN, OR AS A RESULTS OF SOIL AND TOPOGRAPHY, ACCUMULATES RUNOFF THAT INFILTRATES IN THE SOIL. DIKES, BERMS, SUMPS AND OTHER FORMS OF TEMPORARY SECONDARY CONTAINMENT THAT PREVENT DISCHARGE TO GROUNDWATER MAY BE USED TO ISOLATE PORTIONS OF THE SITE FOR THE PURPOSES OF STORAGE AND HANDLING OF THESE MATERIALS.

C. LOCATE ALL MATERIAL STOCKPILES WITH CONSIDERATION FOR STORMWATER DRAINAGE PATTERNS AND INFRASTRUCTURE.

D. TAKE ALL REASONABLE MEASURES TO MINIMIZE DUST RESULTING FROM THE PROJECT. OIL MAY NOT BE USED FOR DUST CONTROL.

E. LOCATE ALL LITTER, CONSTRUCTION DEBRIS AND CONSTRUCTION CHEMICALS WITH CONSIDERATION FOR STORMWATER DRAINAGE PATTERNS AND INFRASTRUCTURE.

F. TRENCH OR FOUNDATION DE-WATERING MUST BE SPREAD THROUGH SUFFICIENT NATURAL BUFFERS THAT HAVE CAPACITY TO INFILTRATE THE PUMPED WATER OR SHOULD BE PUMPED TO DESIGNED CONSTRUCTION DEWATERING DEVICES AS DESCRIBED IN THE MAINE EROSION AND SEDIMENT CONTROL BMPS HANDBOOK.

G. SEDIMENTS AND SOIL MATERIALS SHOULD BE SWEPT FROM PAVED SURFACES AT THE END OF EACH WORKDAY OR PRIOR TO RAIN EVENTS, WHENEVER POSSIBLE.

INSPECTION AND MAINTENANCE

A. A PERSON WITH KNOWLEDGE OF EROSION AND STORMWATER CONTROLS, INCLUDING THE STANDARDS IN THE MAINE CONSTRUCTION GENERAL PERMIT, THE MAINE EROSION AND SEDIMENT CONTROL BMPS HANDBOOK OR ANY MUNICIPAL REQUIREMENTS MUST CONDUCT THE INSPECTION. THIS PERSON MUST BE IDENTIFIED IN THE INSPECTION LOG. IF ADDITIONAL BMPS OR MODIFICATIONS TO BMPS ARE NECESSARY, THE MODIFICATIONS MUST BE IMPLEMENTED WITH 7 CALENDAR DAYS OR PRIOR TO ANY PRECIPITATION EVENT. ALL MEASURES MUST BE MAINTAINED IN EFFECTIVE OPERATING CONDITION UNTIL AREAS ARE PERMANENTLY STABILIZED.

B. AN INSPECTION AND MAINTENANCE LOG MUST BE KEPT BY THE CONTRACTOR, SUMMARIZING THE SCOPE OF THE INSPECTION, DATE, AND MAJOR OBSERVATIONS RELATING TO THE OPERATION OF EROSION AND SEDIMENT CONTROL BMPS, MATERIAL STORAGE AREAS, AND VEHICLE ACCESS POINTS TO THE CONSTRUCTION AREA. THE INSPECTION LOG SHOULD BE DELIVERED TO THE PROPERTY OWNER OR RESPONSIBLE CONTRACTING ENTITY UPON COMPLETION OF THE PROJECT.

C. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL INSPECTION AND MAINTENANCE DESCRIBED HEREIN.

D. EROSION AND SEDIMENT CONTROLS SHALL BE INSTALLED PRIOR TO INITIATING CONSTRUCTION ACTIVITIES, SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION, AND REMOVED UPON ACHIEVING FINAL STABILIZATION.

E. WET WEATHER INSPECTIONS SHALL BE CONDUCTED AFTER ALL RAIN EVENTS EXCEEDING 0.5-INCHES IN 24-HOURS.

F. ALL INSPECTION AND MAINTENANCE DOCUMENTATION SHALL BE KEPT AS PROJECT RECORD FOR A MINIMUM OF THREE YEARS.

UNIVERSITY OF SOUTHERN MAINE
25 Bedford Street, Portland, ME 04104
207.712.5183 | USM.MAINE.EDU

PROJECT TEAM:

CLIENT
UNIVERSITY OF SOUTHERN MAINE

PRIME CONSULTANT & STRUCTURAL ENGINEER
DESMAN Design Management
18 Tremont Street #300
Boston, MA 02108

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CIVIL ENGINEER
WOODARD & CURRAN
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LANDSCAPE ARCHITECT
MICHAEL BOUCHER LANDSCAPE ARCHITECTURE
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FREEPORT, ME 04032

MEP/FP ENGINEER
ALLIED ENGINEERING
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PORTLAND, ME 04103

GEOTECHNICAL ENGINEER
S.W. COLE
286 PORTLAND ROAD
GREY, ME 04039

TRAFFIC ENGINEER
VANASSE HANGEN BRUSTLIN INC
40 IDX DR 100 #200, SOUTH
BURLINGTON, VT 05403

COST ESTIMATOR
PREFERRED CONSTRUCTION MGMT
94 AUBURN ST,
PORTLAND, ME 04103

SEAL / SIGNATURE

STATE OF MAINE · ASHLEY FLETCHER No. 13750 · LICENSED PROFESSIONAL ENGINEER

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2021

PROJECT:

USM - Structured Parking Garage

Address

44 Bedford Street,
Portland ME 04104

REVISIONS:

No.	Date	Description

SUBMISSIONS:

Date	Issued For:
07/30/21	Site Plan Submittal

SCALE	**AS NOTED**
DATE ISSUED	**7/30/2021**
PROJECT NO	**20-20145.00-1**
DRAWN BY	**B.C.M.**
CHECKED BY	**A.E.F.**

SHEET TITLE:

CIVIL DETAILS - 1

D-200

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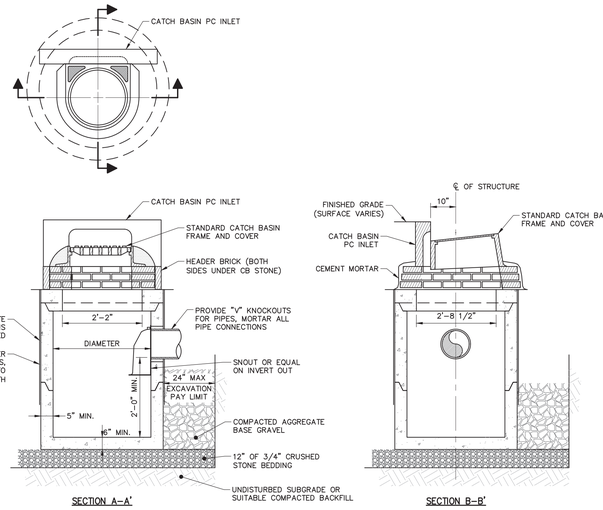
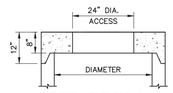
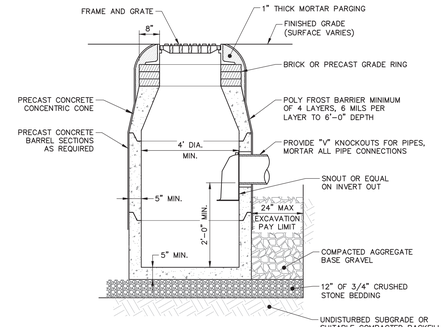


NOTES:
1. CONTRACTOR SHALL SUBMIT BUOYANCY CALCULATIONS FOR ALL STRUCTURES AND SHALL DESIGN AND PROVIDE ANTI-FLOATATION MEASURE AS NEEDED.
2. REFER TO GEOTECHNICAL REPORT FOR SUBGRADE PREPARATION REQUIREMENTS.

PRECAST CONCRETE CATCH BASIN WITH CURB INLET
N.T.S.



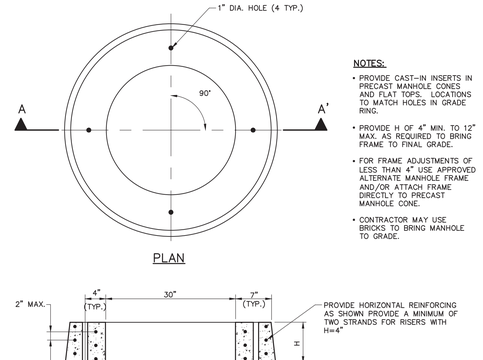
ALTERNATIVE TOP SLAB



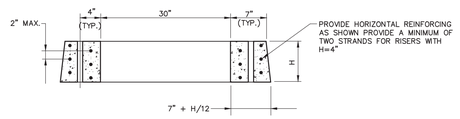
NOTES:
1. PRECAST CONCRETE STRUCTURES AND CASTINGS SHALL BE SUITABLE FOR HS-20 LOADINGS.
2. PRECAST CONCRETE STRUCTURES SHALL BE MANUFACTURED IN ACCORDANCE WITH ASTM C-478.
3. ALTERNATE TOP SLAB MAY BE USED AS DICTATED BY DESIGN AND/OR FIELD CONDITIONS.
4. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE BUTYL RUBBER.
5. REFER TO GEOTECHNICAL REPORT FOR SUBGRADE PREPARATION REQUIREMENTS.

NOTE: CONTRACTOR SHALL SUBMIT BUOYANCY CALCULATIONS FOR ALL STRUCTURES AND SHALL DESIGN AND PROVIDE ANTI-FLOATATION MEASURE AS NEEDED.

PRECAST CONCRETE CATCH BASIN WITHOUT CURB INLET
N.T.S.



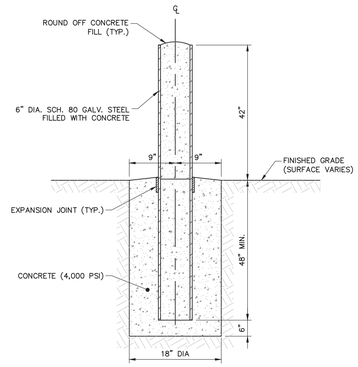
PLAN



SECTION A-A'

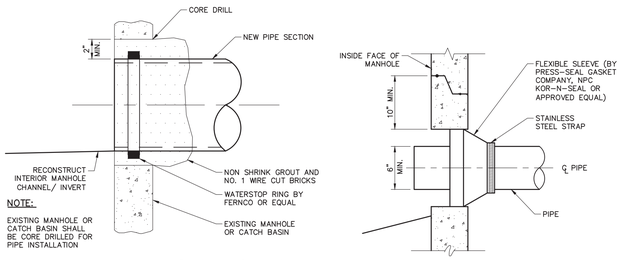
NOTES:
- PROVIDE CAST-IN INSERTS IN PRECAST MANHOLE CONES AND FLAT TOPS. LOCATIONS TO MATCH HOLES IN GRADE RING.
- PROVIDE H OF 4" MIN. TO 12" MAX. AS REQUIRED TO BRING FRAME TO FINAL GRADE.
- FOR FRAME ADJUSTMENTS OF LESS THAN 4" USE APPROVED ALTERNATE MANHOLE FRAME AND/OR ATTACH FRAME DIRECTLY TO PRECAST MANHOLE CONE.
- CONTRACTOR MAY USE BRICKS TO BRING MANHOLE TO GRADE.

PRECAST CONCRETE GRADE RING
N.T.S.



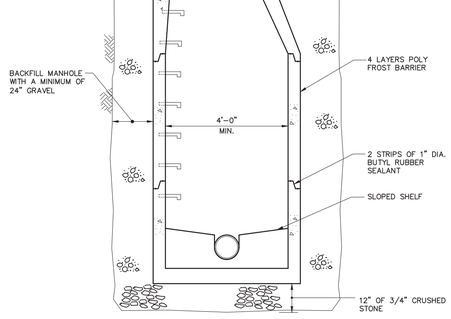
NOTE:
1. ALL BOLLARDS SHALL BE PAINTED. COLOR SELECTED BY OWNER.

6" DIA. SECURITY BOLLARD
N.T.S.



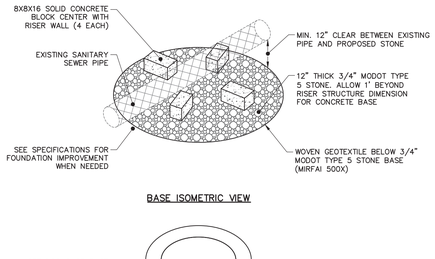
NEW PIPE TO EXISTING STRUCTURE
N.T.S.

NEW PIPE TO NEW STRUCTURE CONNECTION DETAIL
N.T.S.

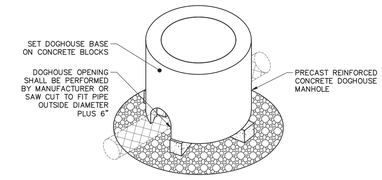


NOTES:
1. CONTRACTOR SHALL SUBMIT BUOYANCY CALCULATIONS FOR ALL STRUCTURES AND SHALL DESIGN AND PROVIDE ANTI-FLOATATION MEASURE AS NEEDED.
2. REFER TO GEOTECHNICAL REPORT FOR SUBGRADE PREPARATION REQUIREMENTS.

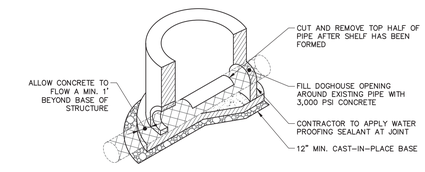
PRECAST MANHOLE
N.T.S.



BASE ISOMETRIC VIEW

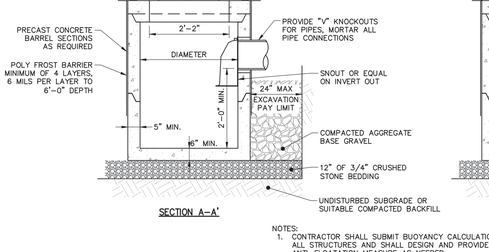


RISER ISOMETRIC VIEW

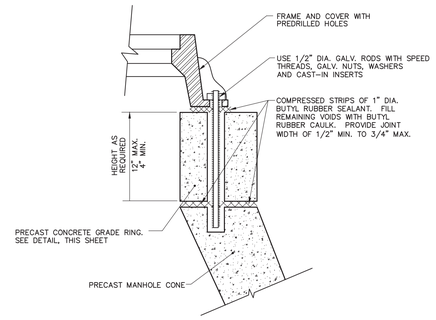


FOUNDATION SECTION VIEW

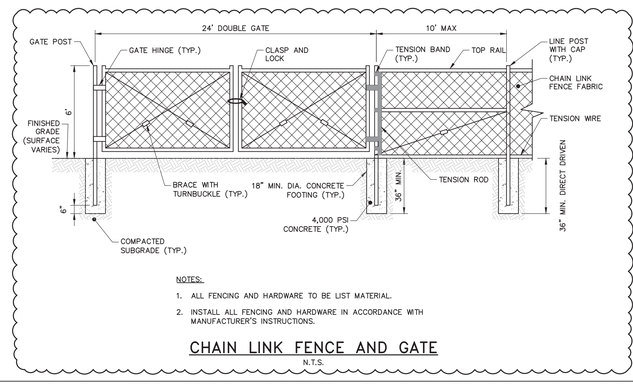
DOG HOUSE MANHOLE
N.T.S.



CLEANOUT
N.T.S.

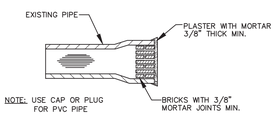


MANHOLE FRAME FASTENING
N.T.S.



NOTES:
1. ALL FENCING AND HARDWARE TO BE LIST MATERIAL.
2. INSTALL ALL FENCING AND HARDWARE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

CHAIN LINK FENCE AND GATE
N.T.S.



MASONRY PLUG
N.T.S.

UNIVERSITY OF SOUTHERN MAINE
25 Bedford Street, Portland, ME 04104
207.712.5183 | USM.MAINE.EDU

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PREFERRED CONSTRUCTION MGMT
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PORTLAND, ME 04103

SEAL / SIGNATURE

STATE OF MAINE · DARRIN B. STAIRS No. 15118 · LICENSED PROFESSIONAL ENGINEER

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PROJECT:

USM - Structured Parking Garage

Address

50 Bedford Street,
Portland ME 04104

REVISIONS:

No.	Date	Description
	08/09/21	Schematic Design
1	9/1/21	Response to City Comments

SUBMISSIONS:

Date	Issued For:

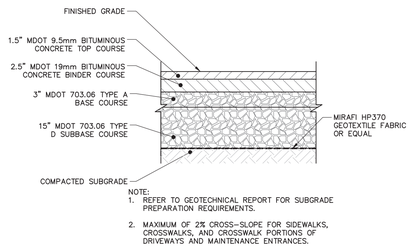
SCALE	**AS NOTED**
DATE ISSUED	**8/9/2021**
PROJECT NO	**20-20145.00-1**
DRAWN BY	**B.C.M.**
CHECKED BY	**D.B.S.**

SHEET TITLE:

CIVIL DETAILS - 2

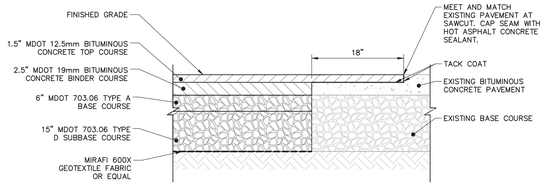
C-201

\\vesdosfcurran.net\shared\Projects\023S035.00 USM - Falmouth Street Garage\wip\Drawings\Civil\233035.00 C20X.dwg, Sep 07, 2021 - 9:20am BMCBEVITT

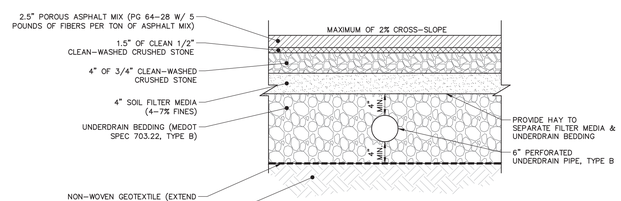


NOTE:
1. REFER TO GEOTECHNICAL REPORT FOR SUBGRADE PREPARATION REQUIREMENTS.
2. MAXIMUM OF 2% CROSS-SLOPE FOR SIDEWALKS, CROSSWALKS, AND CROSSWALK PORTIONS OF DRIVEWAYS AND MAINTENANCE ENTRANCES.

BITUMINOUS CONCRETE PAVEMENT SECTION
N.T.S.

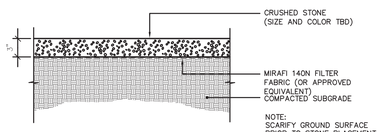


BITUMINOUS CONCRETE PAVEMENT BUTT JOINT
N.T.S.



NOTE: UNDERDRAIN PIPE SHALL BE INSTALLED WITH A POSITIVE SLOPE. REFER TO THE GRADING AND DRAINAGE PLAN FOR THE UNDERDRAIN INVERTS. ADDITIONAL UNDERDRAIN BEDDING MAY BE NECESSARY TO INSTALL THE UNDERDRAIN AT THE SPECIFIED DEPTHS.

POROUS ASPHALT PAVEMENT
N.T.S.



CRUSHED STONE AREA
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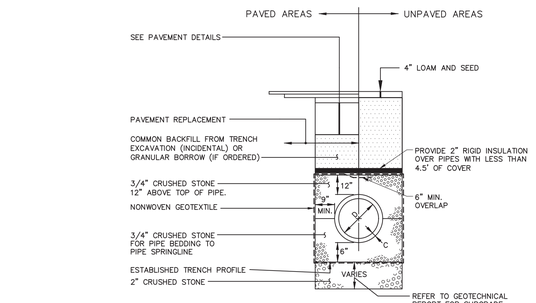
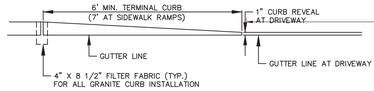
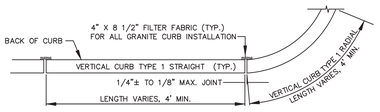


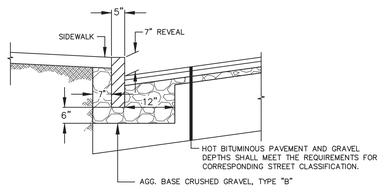
TYPICAL STORMDRAIN PIPE TRENCH INSTALLATION
N.T.S.



TERMINAL CURB PROFILE

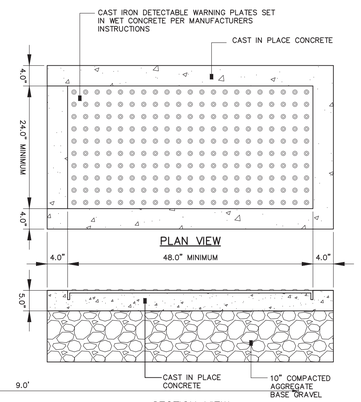


VERTICAL GRANITE CURB PLAN VIEW



VERTICAL GRANITE CURB CROSS SECTION

VERTICAL GRANITE CURB
N.T.S.

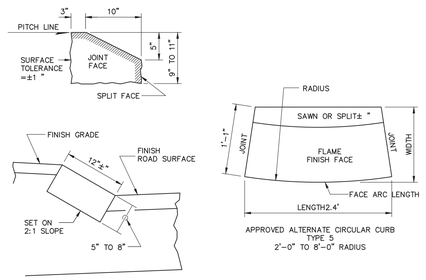


PLAN VIEW

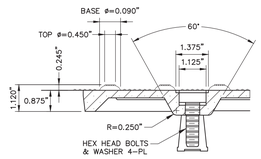
SECTION VIEW

SIDEWALK RAMP DETECTABLE WARNING
N.T.S.

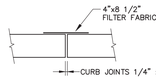
NOTES:
1. ALL DETECTABLE WARNING PLATES SHALL BE UNCOATED CAST IRON. FOLLOW MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION.
2. CAST IN PLACE CONCRETE SHALL MEET SPECIFICATIONS FOR MAINE D.O.T. CLASS A STRUCTURAL CONCRETE, MINIMUM COMPRESSIVE STRENGTH 4,000 PSI. THE EXPOSED CONCRETE BORDER SHALL RECEIVE A UNIFORM BROOM FINISH PERPENDICULAR TO THE FLOW OF PEDESTRIAN TRAFFIC.
3. TRUNCATED DOMES SHALL BE ALIGNED IN ROWS, PARALLEL AND PERPENDICULAR TO THE PREDOMINANT DIRECTION OF TRAVEL. TRUNCATED DOME BRICKS AND GRANITE PAVERS ARE NOT ALLOWED.
4. SIZE: THE DETECTABLE WARNING PLATES SHALL EXTEND 24 INCHES MINIMUM IN THE DIRECTION OF TRAVEL AND THE PLATE WIDTH AND CONCRETE SHALL EXTEND THE WIDTH OF THE CURB RAMP, LANDING, OR BLENDING TRANSITION TO THE STREET.
5. ORIENTATION: THE DETECTABLE WARNING PANEL SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE IS 6 INCHES MINIMUM AND 8 INCHES MAXIMUM FROM THE CURB LINE. THE PANEL SHALL BE ORIENTED TO THE DIRECTION OF TRAVEL AS IDENTIFIED BY THE POINT OF EGRESS.



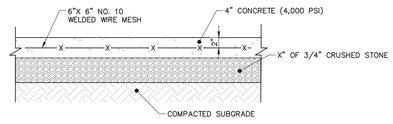
TYPICAL TYPE 5 SLOPED GRANITE CURB INSTALLATION
N.T.S.



BOLT DETAIL

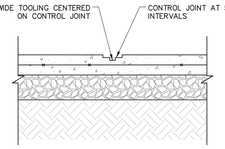


PLAN

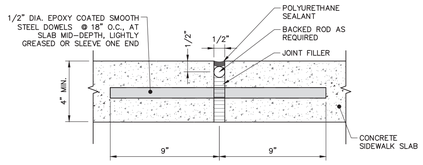


NOTES:
1. PROVIDE 1/2-INCH PREMOLDED BITUMINOUS EXPANSION JOINTS AT 20 FT. INTERVALS.
2. PROVIDE CONTROL JOINTS AT 5-FEET INTERVALS.
3. PROVIDE LIGHT BROOM FINISH WITH 3-INCH EDGE.

CAST-IN-PLACE CONCRETE SIDEWALK
NOT TO SCALE

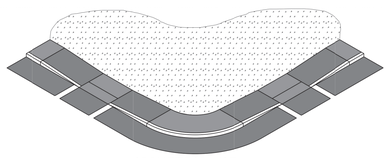


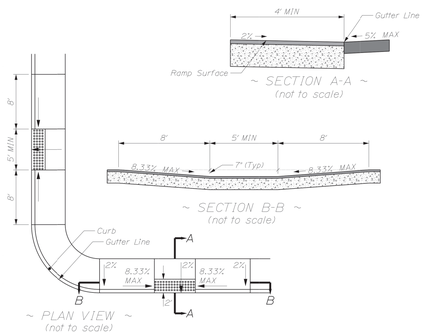
SIDEWALK CONTROL JOINT
NOT TO SCALE



NOTES:
1. EXPANSION JOINTS SHALL BE 60' O.C.
2. DISCONTINUE REINFORCING AT EACH SIDE OF JOINT.
3. DOWELS SHALL BE CUT STRAIGHT AND DEBURRED.

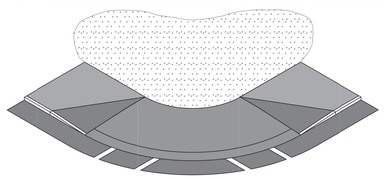
CONCRETE SIDEWALK EXPANSION JOINT
NOT TO SCALE

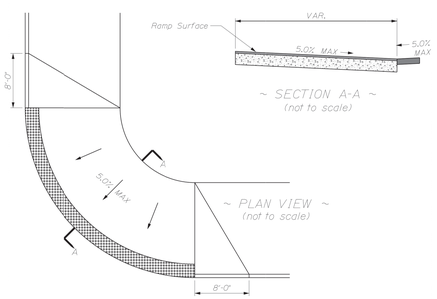




Note:
- This desirable design is the prefered option. Use other options only when required by design constraints.

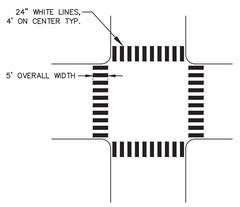
PARALLEL PEDESTRIAN RAMP - OPTION I
801(14)



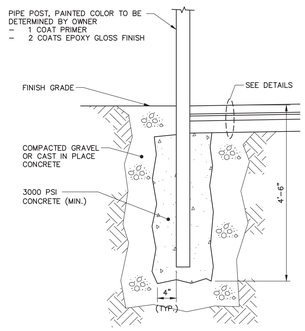


Note:
This option should only be used after all other options have been considered and deemed infeasible.

BLENDED TRANSITION
801(26)



CROSSWALK MARKINGS
N.T.S.



POST SPECIFICATION			
TYPE	HEIGHT ABOVE FIN. GRADE	POST DIAMATER	POST MATERIAL
STREET SIGNAGE	7'-0"	2 3/8" (I.D.)	GALV. STEEL

TYPICAL POST DETAIL
N.T.S.

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CIVIL ENGINEER
WOODARD & CURRAN
41 HUTCHINS DRIVE
PORTLAND, ME 04102

LANDSCAPE ARCHITECT
MICHAEL BOUCHER LANDSCAPE ARCHITECTURE
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FREEPORT, ME 04032

MEP/FP ENGINEER
ALLIED ENGINEERING
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PORTLAND, ME 04103

GEOTECHNICAL ENGINEER
S.W. COLE
286 PORTLAND ROAD
GREY, ME 04039

TRAFFIC ENGINEER
VANASSE HANGEN BRUSTLIN INC
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COST ESTIMATOR
PREFERRED CONSTRUCTION MGMT
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PORTLAND, ME 04103

SEAL / SIGNATURE

STATE OF MAINE · ASHLEY FLETCHER No. 13750 · LICENSED PROFESSIONAL ENGINEER

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2021

PROJECT:

USM - Structured Parking Garage

Address

44 Bedford Street,
Portland ME 04104

REVISIONS:

No.	Date	Description

SUBMISSIONS:

Date	Issued For:
07/30/21	Site Plan Submittal

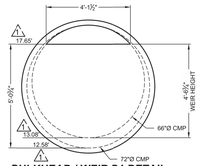
SCALE	**AS NOTED**
DATE ISSUED	**7/30/2021**
PROJECT NO	**20-20145.00-1**
DRAWN BY	**B.C.M.**
CHECKED BY	**A.E.F.**

SHEET TITLE:

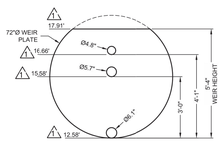
CIVIL DETAILS - 3

D-202

\\woodardcurran.net\shared\Projects\20233035.00 - falmouth street garage\wip\Drawings\Civil\233035.00 C20X.dwg, Jul 29, 2021 - 2:51pm BMCDEVITT



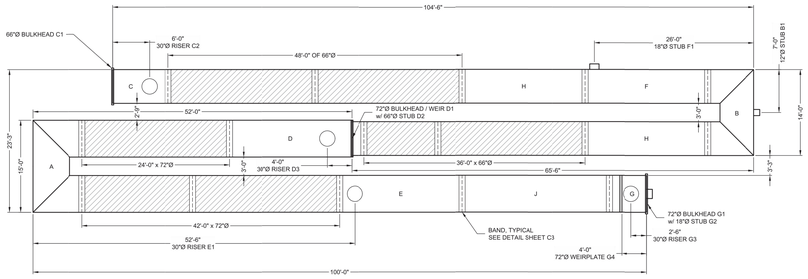
BULKHEAD / WEIR D1 DETAIL
NOT TO SCALE



WEIR PLATE G4 DETAIL
NOT TO SCALE

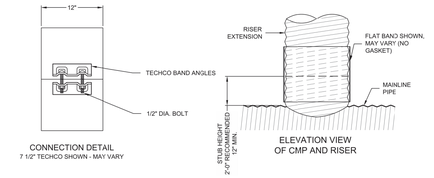
RISER INFORMATION		
PIECE	RIM ELEV.	SYSTEM INVERT
30"Ø RISER C2	20.38	13.08
30"Ø RISER D3	20.60	12.58
30"Ø RISER E1	20.39	12.58
30"Ø RISER G3	21.27	12.58

STUB INFORMATION		
PIECE	STUB INVERT	SYSTEM INVERT
12"Ø STUB B1	13.58	13.08
66"Ø STUB D2	13.08	12.58
18"Ø STUB F1	13.58	13.08
18"Ø STUB G2	12.58	12.58



⚠1 CMP STORAGE SYSTEM HAS BEEN PREVIOUSLY PROCURED, BUT WILL NEED TO BE MODIFIED AND SUPPLEMENTED WITH ADDITIONAL MATERIALS AS SHOWN.

ASSEMBLY ⚠1
SCALE: 1" = 10'
PIPE STORAGE: 8492.5 CF
LOADING: H20
66" PIPE INV. = 13.08±
72" PIPE INV. = 12.58±



CONNECTION DETAIL
7 1/2" TECHCO SHOWN - MAY VARY

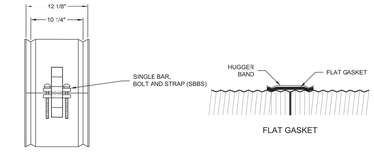
ELEVATION VIEW
OF CMP AND RISER

PLAIN END CMP RISER PIPE

GENERAL NOTES:

1. **DELIVERED BAND STYLE AND FASTENER TYPE MAY VARY BY FABRICATION PLANT.**
2. JOINT IS TO BE ASSEMBLED PER AASHTO BRIDGE CONSTRUCTION SPECIFICATION SEC 26.4.2.4.
3. BAND MATERIAL AND GAGE TO BE SAME AS RISER MATERIAL.
4. IF RISER HAS A HEIGHT OF COVER OF 10' OR MORE, USE A SLIP JOINT.
5. BANDS ARE NORMALLY FURNISHED AS FOLLOWS:
   - 12" THRU 48" 1-PIECE
   - 54" 2-PIECES
6. ALL RISER JOINT COMPONENTS WILL BE FIELD ASSEMB.ED.
7. MANHOLE RISERS IN APPLICATIONS WHERE TRAFFIC LOADS ARE IMPOSED REQUIRE SPICIAL DESIGN CONSIDERATIONS.
8. DIMENSIONS SUBJECT TO MANUFACTURING TOLERANCES.

12" RISER BAND DETAIL
NOT TO SCALE



CONNECTION DETAIL
(SBBS)

2 2/3"x1/2" RE-ROLLED END HEL-COR PIPE

GENERAL NOTES:

1. JOINT IS TO BE ASSEMBLED PER AASHTO BRIDGE CONSTRUCTION SPECIFICATION SEC 26.4.2.4.
2. BAND MATERIALS AND/OR COATING CAN VARY BY LOCATION. CONTACT YOUR CONTECH REPRESENTATIVE FOR AVAILABILITY.
3. BANDS ARE SHAFED TO MATCH THE PIPE-ARCH WHEN APPLICABLE.
4. BANDS ARE NORMALLY FURNISHED AS FOLLOWS:
   - 12" THRU 48" 1-PIECE
   - 54" THRU 96" 2-PIECES
   - 102" THRU 144" 3-PIECES
5. BAND FASTENERS ARE ATTACHED WITH SPOT WELDS, RIVETS OR HAND WELDS.
6. ALL CMP IS RERCLLED TO HAVE ANNULAR END CORRUGATIONS OF 2 2/3"x1/2"
7. DIMENSIONS ARE SUBJECT TO MANUFACTURING TOLERANCES.
8. ORDER SHALL DESIGNATE GASKET OPTION, IF REQUIRED (SEE DETAILS ABOVE).

H-12 HUGGER BAND DETAIL
NOT TO SCALE

TYPICAL SECTION VIEW
NOT TO SCALE

NOTE: IF SALTING AGENTS FOR SNOW AND ICE REMOVAL ARE USED ON OR NEAR THE PROJECT, A GEOMEMBRANE BARRIER IS RECOMMENDED WITH THE SYSTEM. THE GEOMEMBRANE LINER IS INTENDED TO HELP PROTECT THE SYSTEM FROM THE POTENTIAL ADVERSE EFFECTS THAT MAY RESULT FROM A CHANGE IN THE SURROUNDING ENVIRONMENT OVER A PERIOD OF TIME. PLEASE REFER TO THE CORRUGATED METAL PIPE DETENTION DESIGN GUIDE FOR ADDITIONAL INFORMATION.

DIAMETER	MIN. COVER	CORR. PROFILE
8"-10"	12"	1 1/2" x 1/4"
12"-48"	12"	2 2/3" x 1/2"
54"-96"	12"	3" x 1", 5" x 1"
102"-144"	D/8	3" x 1", 5" x 1"

BACKFILL REQUIREMENTS FOLLOW THE GUIDELINES OF AASHTO LRFD BRIDGE DESIGN (SEC 12) AND CONSTRUCTION (SEC 26)

1 MINIMUM TRENCH WIDTH MUST ALLOW ROOM FOR PROPER COMPACTION OF HAUNCH MATERIALS UNDER THE PIPE.
THE MINIMUM TRENCH WIDTH (12.6.6.1):
PIPE ≤ 12": D + 16"
PIPE > 12": 1.5D + 12"

1a MINIMUM EMBANKMENT WIDTH (IN FEET) FOR INITIAL FILL ENVELOPE (12.6.6.2):
PIPE < 24": 3.0D
PIPE 24" - 144": D + 4'0"
PIPE > 144": D + 10'0"

2 THE FOUNDATION UNDER THE PIPE AND SIDE BACKFILL SHALL BE ADEQUATE TO SUPPORT THE LOADS ACTING UPON IT (26.5.2).

3 ENGINEER TO DETERMINE IF BEDDING IS REQUIRED. BEDDNG MATERIAL SHALL BE A RELA"IVELY LOOSE MATERIAL THAT IS ROUGHLY SHAPED TO FIT THE BOTTOM OF THE PIPE, AND A MINIMUM OF TWICE THE CORRUGATION CEPTH IN THICKNESS, WITH THE MAXIMUM PARTICLE SIZE OF ONE-HALF OF THE CORRUGATION DEPTH (26.3.8.1, 26.5.3).

4 CORRUGATED STEEL PIPE (CSP / HEL-COR).

5 HAUNCH ZONE MATERIAL SHALL BE HAND SHOVELED OR S-IOVEL SLICED INTO PLACE TO ALLOW FOR PROPER COMPACTIOV (26.5.4).

5a INITIAL BACKFILL FOR PIPE EMBEDMENT TO MEET AASHTO A-1, A-2 OR A-3 CLASSIFICATION. OR APPROVED EQUAL, COMPACTED TO 90% STANDARD PROCTOR (T 99). MAXIMUM PARTICLE SIZE NOT TO EXCEED 3" (12.4.1.2). ALL LIF"S PLACED IN A CONTROLLED MANNER. IT IS RECOMMENDED THAT LIFTS NOT EXCEED AN 8" UNCOMPACTED LIFT HEIGHT TO PREVENT UNEVEN LOADING, AND THE LESSER OF 1/3 THE DIAMETER OR 24" AS THE MAXIMUM DIFFERENTIAL SIDE-TO-SIDE (26.5.4).

6 INITIAL BACKFILL ABOVE PIPE MAY INCLUDE ROAD BASE MATERIAL (AND RIGID PAVEMENT IF APPLICABLE). SEE TABLE ABOVE.

6a TOTAL HEIGHT OF COMPACTED COVER FOR CONVENTIONAL HIGHWAY LOADS IS MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TOP OF RIGID PAVEMENT (12.6.6.3).

7 FINAL BACKFILL MATERIAL SELECTION AND COMPACTION REQUIREMENTS SHALL FOLLOW 'THE PROJECT PLANS AND SPECIFICATIONS PER THE ENGINEER OF RECORD (26.5.4.1).

NOTES:
- ENGINEER TO DETERMINE IF GEOTEXTILE SHOULD BE USED TO PREVENT SOIL MIGRATION INTO VARYING SOIL TYPES (PROJECT ENGINEER).
- FOR MULTIPLE BARREL INSTALLATIONS THE RECOMMENDED STANDARD SPACING BETWEE'N PARALLEL PIPE RUNS SHALL BE PIPE DIA./2 BUT NO LESS THAN 12", OR 36" FOR PIPE DIAMETERS 72" AND LARGER.
- CONTACT YOUR CONTECH REPRESENTATIVE FOR NONSTANDARD SPACING (TABLE C12.6.7.1).

TYPICAL BACKFILL DETAIL
NOT TO SCALE

NOTE: CONTRACTOR SHALL SUBMIT BUOYANCY CALCULATIONS FOR ALL STRUCTURES AND SHALL DESIGN AND PROVIDE ANTI-FLOATATION MEASURE AS NEEDED.

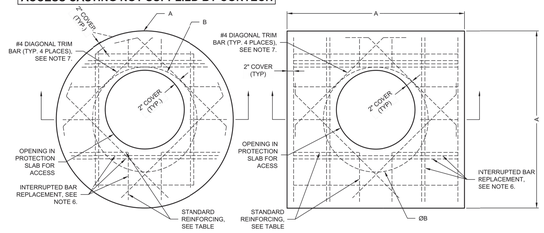
CMP STORAGE SYSTEM DETAILS
N.T.S.

SECTION VIEW

REINFORCING TABLE				
Ø CMP RISER	A	B Ø	REINFORCING	**BEARING PRESSURE (PSF)
24"	4'Ø 4'x4'	26"	#5 @ 10" OCEW #5 @ 10" OCEW	2,540 1,900
30"	4'-6"Ø 4'-6" x 4'-6"	32"	#5 @ 10" OCEW #5 @ 9" OCEW	2,260 1,670
36"	5'Ø 5' x 5'	38"	#5 @ 9" OCEW #5 @ 8" OCEW	2,060 1,500
42"	5'-6"Ø 5'-6" x 5'-6"	44"	#5 @ 8" OCEW #5 @ 8" OCEW	1,490 1,370
48"	6'Ø 6' x 6'	50"	#5 @ 7" OCEW #5 @ 7" OCEW	1,210 1,270

** ASSUMED SOIL BEARING CAPACITY

ACCESS CASTING NOT SUPPLIED BY CONTECH



ROUND OPTION PLAN VIEW

SQUARE OPTION PLAN VIEW

NOTES:

1. DESIGN IN ACCORDANCE WITH AASHTO, 17th EDITION AND ACI 350.
2. DESIGN LOAD HS25.
3. EARTH COVER = 1'MAX.
4. CONCRETE STRENGTH = 4,000 psi
5. REINFORCING STEEL = ASTM A615, GRADE 60.
6. PROVIDE ADDITIONAL REINFORCING AROUND OPENINGS EQUAL TO THE BARS INTERRUPTED, HALF EACH SIDE. ADDITIONAL BARS TO BE IN THE SAME PLANE.
7. TRIM OPENING WITH DIAGONAL #4 BARS, EXTEND BARS A MINIMUM OF 12" BEYOND OPENING, BEND BARS AS REQUIRED TO MAINTAIN BAR COVER.
8. PROTECTION SLAB AND ALL MATERIALS TO BE PROVIDED AND INSTALLED BY CONTRACTOR.
9. DETAIL DESIGN BY DELTA ENGINEERS, ARCHITECTS AND LAND SURVEYORS, ENDWELL, NY.

MANHOLE CAP DETAIL
NOT TO SCALE

UNIVERSITY OF SOUTHERN MAINE
25 Bedford Street, Portland, ME 04104
207.712.5183 | USM.MAINE.EDU

PROJECT TEAM:

CLIENT
UNIVERSITY OF SOUTHERN MAINE

PRIME CONSULTANT
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18 Tremont Street #300
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CIVIL ENGINEER
WOODARD & CURRAN
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LANDSCAPE ARCHITECT
MICHAEL BOUCHER LANDSCAPE ARCHITECTURE
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FREEPORT, ME 04032

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ALLIED ENGINEERING
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GEOTECHNICAL ENGINEER
S.W. COLE
286 PORTLAND ROAD
GREY, ME 04039

TRAFFIC ENGINEER
VANASSE HANGEN BRUSTLIN INC
40 IDX DR 100 #200, SOUTH
BURLINGTON, VT 05403

COST ESTIMATOR
PREFERRED CONSTRUCTION MGMT
94 AUBURN ST,
PORTLAND, ME 04103

SEAL / SIGNATURE

STATE OF MAINE ★ ASHLEY FLETCHER No. 13750 ★ LICENSED PROFESSIONAL ENGINEER

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2021

PROJECT:

USM - Structured Parking Garage

Address

44 Bedford Street,
Portland ME 04104

REVISIONS:

No.	Date	Description

SUBMISSIONS:

Date	Issued For:
07/30/21	Site Plan Submittal

SCALE	**AS NOTED**
DATE ISSUED	**7/30/2021**
PROJECT NO	**20-20145.00-1**
DRAWN BY	**B.C.M.**
CHECKED BY	**A.E.F.**

SHEET TITLE:

CIVIL DETAILS - 4

D-203

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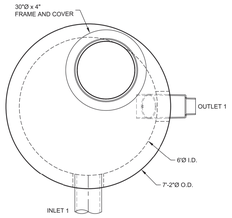
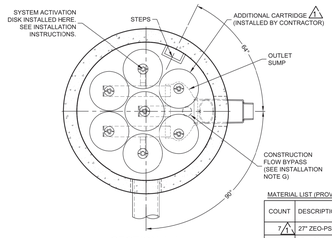
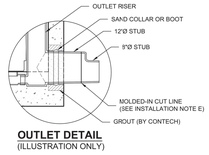


PLAN VIEW
CARTRIDGES AND FLOW KIT NOT SHOWN

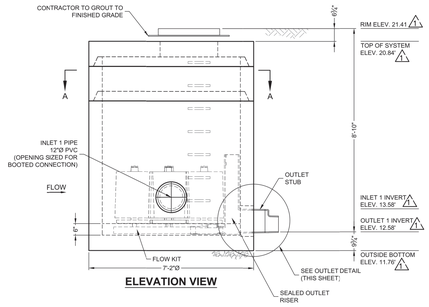


SECTION A-A



OUTLET DETAIL
(ILLUSTRATION ONLY)

• INLET PIPE CONNECTION SHALL HAVE A BOOTED CONNECTOR



ELEVATION VIEW

MATERIAL LIST (PROVIDED BY CONTECH)

COUNT	DESCRIPTION	INSTALLED BY
7 ⚠1	27" ZEO-PSORB CARTRIDGE	CONTECH
7	2 GPM RESTRICTOR DISK (BLK)	CONTECH
0 ⚠1	2" PVC SLIP PLUG	CONTECH
1	42A FLOWKIT	CONTECH
1	SF ACTIVATION DISK	CONTECH
1	SEALED OUTLET RISER	CONTECH
7	STEPS, P10CTS, LANE LADDER, OR EQUIV.	CONTECH
1	GENERIC PIPE BOOT	CONTECH
1	SEALANT FOR JOINTS	CONTRACTOR
1	30"Ø x 4" FRAME & COVER, EJ#41600484, OR EQUIV.	CONTRACTOR

PERFORMANCE SPECIFICATION
FILTER CARTRIDGES SHALL BE MEDIA-FILLED, PASSIVE, SIPHON ACTUATED, RADIAL FLOW, AND SELF CLEANING. RADIAL MEDIA DEPTH SHALL BE 7-INCHES. FILTER MEDIA CONTACT TIME SHALL BE AT LEAST 38 SECONDS.
SPECIFIC FLOW RATE SHALL BE 0 GPM/SF (MAXIMUM). SPECIFIC FLOW RATE IS THE MEASURE OF THE FLOW (GPM) DIVIDED BY THE MEDIA SURFACE CONTACT AREA (SF). MEDIA VOLUMETRIC FLOW RATE SHALL BE 6 GPM/CF OF MEDIA (MAXIMUM).

GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com
3. STORMFILTER WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. STRUCTURE SHALL MEET AASHTO HS-20 LOAD RATING, ASSUMING EARTH COVER OF 0'-5', AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. CASTINGS SHALL MEET AASHTO M306 LOAD RATING AND BE CAST WITH THE CONTECH LOGO.
5. STORMFILTER STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-478 AND AASHTO LOAD FACTOR DESIGN METHOD.

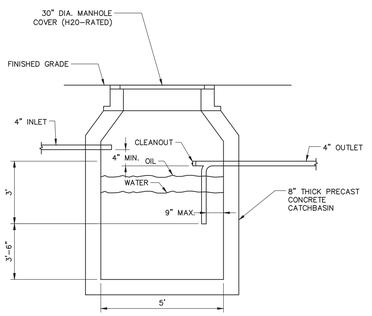
INSTALLATION NOTES
A. ANTI-FLOTATION PROVISIONS SHALL BE DESIGNED AND PROVIDED BY CONTRACTOR.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STORMFILTER STRUCTURE.
C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET PIPE(S). ALL PIPE CENTERLINES TO MATCH PIPE OPENING CENTERLINES.
E. CONTRACTOR TO PROVIDE AND INSTALL CONNECTOR TO THE OUTLET RISER STUB. STORMFILTER EQUIPPED WITH A DUAL DIAMETER HDPE OUTLET STUB. IF OUTLET PIPE IS LARGER THAN 8 INCHES, CONTRACTOR TO REMOVE THE 8 INCH OUTLET STUB AT MOLDED IN CUT LINE. COUPLING BY FERNCO OR EQUAL AND PROVIDED BY CONTRACTOR.
F. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT CARTRIDGES FROM CONSTRUCTION-RELATED EROSION RUNOFF.
G. CONTRACTOR TO INSTALL SUPPLIED PLUG IN CONSTRUCTION FLOW BYPASS WHEN SYSTEM IS BROUGHT ON LINE (PRESSURE FIT ONLY, DO NOT GLUE).

STRUCTURE WEIGHT
APPROXIMATE HEAVIEST PICK = 18,000 LBS. OF 3 PIECES
BASE SECTION SHIPPED WITH CARTRIDGES INSTALLED
MAX FOOTPRINT = 07'-2"

⚠1 STORMFILTER STRUCTURE HAS BEEN PREVIOUSLY PROCURED, BUT WILL NEED TO BE MODIFIED AND SUPPLEMENTED WITH ADDITIONAL CARTRIDGE AS SHOWN.

NOTE: CONTRACTOR SHALL SUBMIT BUOYANCY CALCULATIONS FOR ALL STRUCTURES AND SHALL DESIGN AND PROVIDE ANTI-FLOATATION MEASURE AS NEEDED.

STORMFILTER DETAIL
N.T.S.



OIL WATER SEPARATOR
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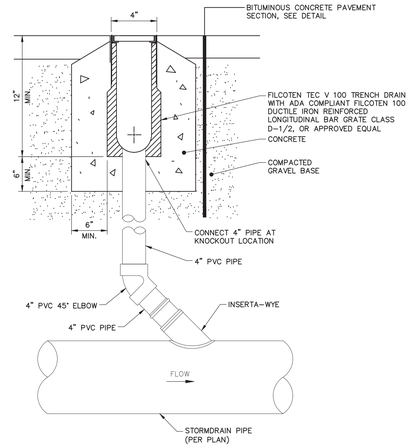

TRENCH DRAIN DETAIL
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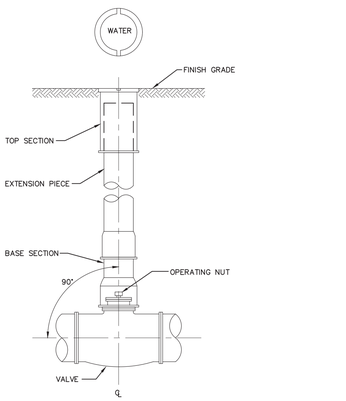
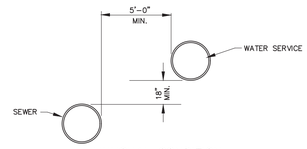


VALVE WITH VALVE BOX, 18" AND SMALLER
N.T.S.



NOTES:

THE SEPARATION OF WATER MAINS AND SEWERS SHALL COMPLY WITH THE FOLLOWING GENERAL REQUIREMENTS.

A. PARALLEL INSTALLATION:

1. NORMAL CONDITIONS: THE INSIDE EDGE OF A WATER MAIN SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM THE INSIDE EDGE OF ANY SANITARY SEWER, STORM SEWER OR SEWER MANHOLE.
2. UNUSUAL CONDITIONS: WHEN LOCAL CONDITIONS PREVENT A HORIZONTAL SEPARATION OF 10 FEET, THE INSIDE EDGE OF A WATER MAIN MAY BE LAID A MINIMUM OF 5 FEET FROM THE INSIDE EDGE OF A SEWER PROVIDED THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST 18 INCHES HIGHER THAN THE TOP OF THE SEWER (SEE DETAIL).

B. CROSSINGS:

1. NORMAL CONDITIONS: WHENEVER POSSIBLE, THE BOTTOM OF THE WATER MAIN SHALL BE AT LEAST 18 INCHES HIGHER THAN THE TOP OF THE SEWER.
2. UNUSUAL CONDITIONS: IF A WATER MAIN MUST CROSS UNDER A SEWER, THE TOP OF THE WATER MAIN SHALL BE AT LEAST 18 INCHES LOWER THAN THE BOTTOM OF THE SEWER, THE WATER MAIN PIPE SHALL BE CENTERED AT THE CROSSING SO THAT THE JOINTS ARE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE SEWER, AND ADEQUATE STRUCTURAL SUPPORT SHALL BE PROVIDED FOR THE SEWER TO PREVENT EXCESSIVE DEFLECTION OF THE SEWER AT THE CROSSING.

MINIMUM WATER AND SEWER PIPE SEPARATION DETAIL
NTS

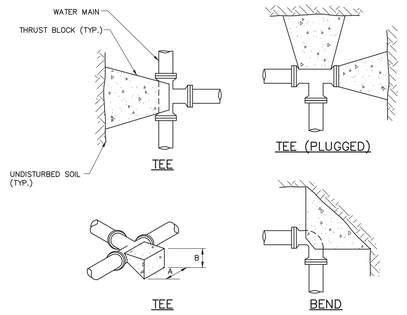


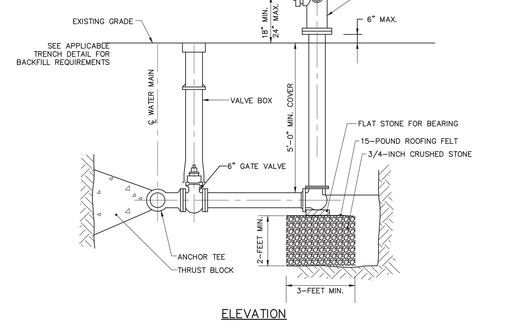
TABLE 1: 4" THRU 10" FITTINGS				
SOIL TYPE	TEES		BENDS	
	A	B	A	B
SOFT CLAY	48"	24"	48"	24"
SAND	24"	24"	24"	24"
GRAVEL	24"	18"	24"	18"

TABLE 2: 12" THRU 16" FITTINGS				
SOIL TYPE	TEES		BENDS	
	A	B	A	B
SOFT CLAY	60"	36"	72"	36"
SAND	36"	30"	48"	30"
GRAVEL	30"	24"	40"	24"

NOTES:

1. CONCRETE FOR ALL THRUST BLOCKS TO BE MINIMUM 3,000 PSI., 28 DAY STRENGTH, TYPE I CEMENT, 3/4" STONE.
2. WHERE POSSIBLE, CONSTRUCT THRUST BLOCKS AGAINST UNDISTURBED SOIL. WHERE NOT POSSIBLE, PLACE FILL BETWEEN THE THRUST BLOCK AND THE UNDISTURBED SOIL COMPACTED TO 95% STANDARD PROCTOR DENSITY.
3. WRAP FITTINGS WITH POLYETHYLENE PRIOR TO CONSTRUCTING THRUST BLOCKS. NO JOINTS SHALL BE COVERED WITH CONCRETE.
4. THRUST BLOCK DIMENSIONS ARE BASED ON A MAXIMUM WATER MAIN PRESSURE OF 150 PSI.

TYPICAL THRUST BLOCK DETAIL
N.T.S.

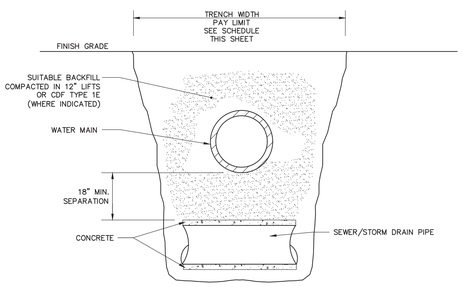


ELEVATION

HYDRANT DETAIL
N.T.S.

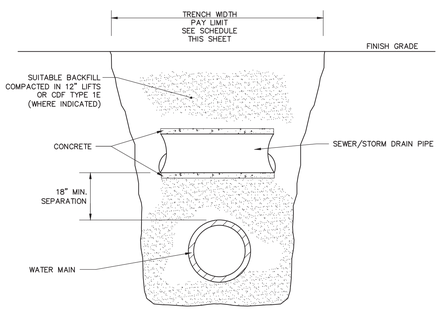
NOTES:

- ALL JOINTS FOR HYDRANT INSTALLATION SHALL BE APPROVED RETAINER GLANDS.
- HYDRANT LATERALS SHALL BE CONSTRUCTED FROM ONE CONTINUOUS PIPE LENGTH. HYDRANT LATERALS WITH BELL JOINTS AND COUPLINGS SHALL NOT BE ACCEPTED.
- CONTRACTOR SHALL CONSTRUCT A HYDRANT DRAINING SUMP TO EITHER SIDE OF THE HYDRANT. THE HYDRANT DRAINING SUMP SHALL BE 3-FEET WIDE BY 2-FEET IN DEPTH. THE SUMP SHALL CONSIST OF 3/4-INCH GRAVEL STONE WITH 15-POUND ROOFING FELT LAID OVER THE 3/4-INCH GRAVEL STONE.



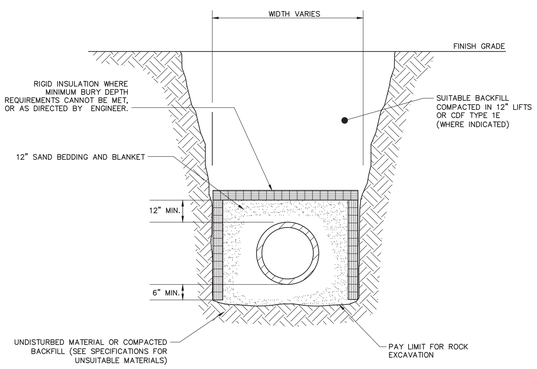
NOTE:
SEE ADDITIONAL REQUIREMENTS AS SPECIFIED IN SECTION 33 10 00, ARTICLE 3.030.

TYPICAL UTILITY CROSSING TRENCH DETAIL 1
N.T.S.

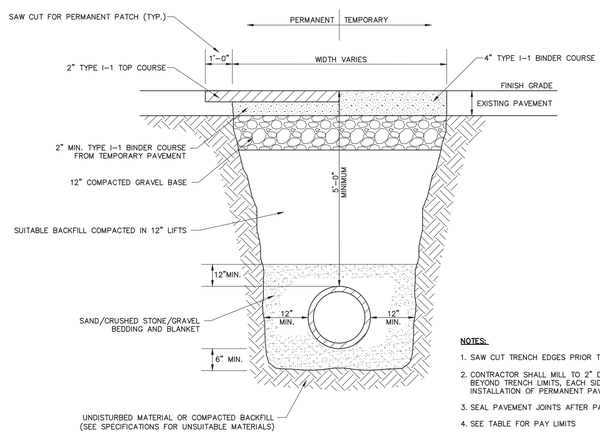


NOTE:
SEE ADDITIONAL REQUIREMENTS AS SPECIFIED IN SECTION 33 10 00, ARTICLE 3.030.

TYPICAL UTILITY CROSSING TRENCH DETAIL 2
N.T.S.



TYPICAL TRENCH DETAIL FOR PIPE INSULATION
N.T.S.



NOTES:

1. SAW CUT TRENCH EDGES PRIOR TO EXCAVATING.
2. CONTRACTOR SHALL MILL TO 2" DEPTH, 1'-0" BEYOND TRENCH LIMITS, EACH SIDE, PRIOR TO INSTALLATION OF PERMANENT PAVEMENT.
3. SEAL PAVEMENT JOINTS AFTER PAVING.
4. SEE TABLE FOR PAY LIMITS

TYPICAL WATER TRENCH DETAIL
N.T.S.

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PROJECT:

USM - Structured Parking Garage

Address

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REVISIONS:

No.	Date	Description

SUBMISSIONS:

Date	Issued For:
07/30/21	Site Plan Submittal

SCALE	**AS NOTED**
DATE ISSUED	**7/30/2021**
PROJECT NO	**20-20145.00-1**
DRAWN BY	**B.C.M.**
CHECKED BY	**A.E.F.**

SHEET TITLE:

CIVIL DETAILS - 5

D-204

\\woodardcurran.net\shared\Projects\20233035.00 - falmouth street garage\wip\Drawings\Civil\233035.00 C20X.dwg, Jul 29, 2021 - 2:52pm BMCDEVITT

A	AMPERE
AC	ALTERNATING CURRENT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
AIC	AMPERES INTERRUPTING CAPACITY
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
BAS	BUILDING AUTOMATION SYSTEM
BKBD	BACKBOARD
C	CONDUIT
CAT	CATALOG, CATEGORY
CATV	CABLE TV
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CM	CIRCULAR MILS
COMM	COMMUNICATIONS
CU	MECH CONDENSING UNIT
CU	COPPER
CUH	CABINET UNIT HEATER
DC	DIRECT CURRENT
DDC	DIGITAL DIRECT CONTROL
DN	DOWN
DW	DISHWASHER
DWG	DRAWING
EF	EXHAUST FAN
ELEV	ELEVATOR
EMT	ELECTRICAL METALLIC TUBING
EP	EXPLOSION PROOF
ERU	ENERGY RECOVERY UNIT
EWC	ELECTRIC WATER COOLER
FACP	FIRE ALARM CONTROL PANEL
FB	FLOOR BOX
FLA	FULL LOAD AMPS
FWE	FURNISHED WITH EQUIPMENT
G, GND	GROUND
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFP	GROUND FAULT PROTECTION
HID	HIGH INTENSITY DISCHARGE
HOA	HAND-OFF-AUTO SELECTOR SWITCH
HP	HORSEPOWER
HVAC	HEATING, VENTILATION AND COOLING UNIT
IDS	INTRUSION DETECTION SYSTEM
IG	ISOLATED GROUND
IMC	INTERMEDIATE METAL CONDUIT
IR	INFRARED
K	KILO
KCMIL	KILO CIRCULAR MILS
KW	KILOWATT
KVA	KILO VOLT-AMPS
LAN	LOCAL AREA NETWORK
LC	LIGHTING CONTACTOR
LF	LINEAR FEET
LC	LOADCENTER
LCP	LIGHTING CONTROL PANEL
LED	LIGHT EMITTING DIODE
LTG	LIGHTING
LTS	LIGHTS
MAX	MAXIMUM
MCB	MAIN CIRCUIT BREAKER
MECH	MECHANICAL
MH	MOUNTING HEIGHT
MC	MICROPHONE
MW	MICROWAVE
MLO	MAIN LUG ONLY
MT	MOUNT
MTS	MANUAL TRANSFER SWITCH
MCP	MOTOR CONTROL PANEL
MH	METAL HALIDE
MDP	MAIN DISTRIBUTION PANEL
MIN	MINIMUM
N	NEUTRAL
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIC	NOT IN CONTRACT
NF	NON-FUSED
NO	NORMALLY OPEN
NO., #	NUMBER
NTS	NOT TO SCALE
OC	ON CENTER
OCC	OCCUPANCY
OH	OVERHEAD
P	POLE
PA	PUBLIC ADDRESS
PB	PULLBOX
PH,	PHASE
PIR	PASSIVE INFRARED
PNL	PANELBOARD
P/O	PART OF
PV	PHOTOVOLTAIC
PVC	POLY-VINYL CHLORIDE
REC RECEPT	RECEPTACLE
REF	REFRIGERATOR
RF	RETURN FAN
RGS	RIGID GALVANIZED STEEL
RM	ROOM
RMC	RIGID METAL CONDUIT
RTU	ROOFTOP UNIT
REF	REFRIGERATOR
SF	SUPPLY FAN
ST	SHUNT TRIP
SPDT	SINGLE POLE, DOUBLE THROW
SQ	SQUARE
TEL	TELEPHONE
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
TYP	TYPICAL
UF	UNDER FLOOR
UG	UNDERGROUND
UH	UNIT HEATER
UL	UNDERWRITER'S LABORATORY
UNO	UNLESS NOTED OTHERWISE
UPS	UNINTERRUPTIBLE POWER SUPPLY
V	VOLTS
VFD	VARIABLE FREQUENCY DRIVE
W	WATT
WP	WEATHERPROOF
WG	WIREGUARD
XFMR	TRANSFORMER
(E)	EXISTING ITEM TO REMAIN
(R)	REMOVE ITEM AND DISPOSE OF PROPERLY
(ER)	RELOCATED ITEM AT NEW LOCATION
(RL)	REMOVE AND RELOCATE

NOTE

SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET ARE FOR REFERENCE ONLY AND DO NOT NECESSARILY INDICATE THEIR INCORPORATION INTO THE DESIGN

A3 FIRE ALARM

- FACP — FIRE ALARM CONTROL PANEL, MOUNT WITH TOP OF PANEL NOT MORE THAN 72"AFF
- FAA — FIRE ALARM ANNUNCIATOR, MOUNT WITH TOP OF PANEL NOT MORE THAN 72"AFF, WIRED TO FACP
- SMOKE DETECTOR, WIRED TO FACP
- E — SMOKE DETECTOR, "E" INDICATES CONNECTION FOR ELEVATOR RECALL, WIRED TO FACP
- SS — SINGLE STATION SMOKE DETECTOR WITH AUDIBLE INDICATING APPLIANCE, WALL MOUNTED
- SS AV — SINGLE STATION SMOKE DETECTOR WITH AUDIBLE/VISUAL INDICATING APPLIANCE, CEILING MOUNTED
- SS CO/SS — SINGLE/MULTI-STATION SMOKE/CARBON MONOXIDE DETECTOR WITH AUDIBLE/VISIBLE INDICATING APPLIANCE, CEILING MOUNTED
- SS CO — SINGLE/MULTI-STATION SMOKE/CARBON MONOXIDE DETECTOR WITH AUDIBLE INDICATING APPLIANCE, WALL MOUNTED
- HEAT DETECTOR, WIRED TO FACP ~ COMBINATION 135° FIXED TEMPERATURE AND RATE-OF-RISE U.N.O.
- E — HEAT DETECTOR, "E" INDICATES CONNECTION FOR ELEVATOR RECALL, WIRED TO FACP
- DUCT SMOKE DETECTOR, WIRED TO FACP
- GAS — GAS DETECTOR, WIRED TO FACP
- GAS VALVE, WIRED TO FACP
- FLAME DETECTOR, WIRED TO FACP
- RTS RTS — REMOTE TEST/INDICATOR FOR DUCT SMOKES, MOUNT ON CEILING BENEATH UNIT, OR WALL MOUNT WHERE INDICATED ON PLANS
- F — MANUAL PULL STATION, MOUNT 48" AFF
- F — HORN/STROBE, WALL MOUNTED CANDELA AS NOTED ON PLANS, WIRED TO FACP
- F — HORN/STROBE, CEILING MOUNTED, CANDELA AS NOTED ON PLANS, WIRED TO FACP
- STROBE ONLY INDICATING APPLIANCE, WALL MOUNTED, CANDELA AS NOTED ON PLANS, WIRED TO FACP
- STROBE ONLY INDICATING APPLIANCE, CEILING MOUNTED, CANDELA AS NOTED ON PLANS, WIRED TO FACP
- R — STROBE ONLY INDICATING APPLIANCE, CEILING MOUNTED, CANDELA AS NOTED ON PLANS, 120V, CONNECT TO OPERATE UPON ACTIVATION OF ROOM SMOKE DETECTOR
- R — STROBE ONLY INDICATING APPLIANCE, WALL MOUNTED, CANDELA AS NOTED ON PLANS, 120V, CONNECT TO OPERATE UPON ACTIVATION OF ROOM SMOKE DETECTOR
- MH — MINI HORN, WALL MOUNTED, WIRED TO FACP
- MH — MINI HORN, CEILING MOUNTED, WIRED TO FACP
- F — F — HORN/STROBE WITH PULL STATION DIRECTLY BELOW
- FIRE ALARM BEACON
- MAGNETIC DOOR HOLD OPEN DEVICE, WIRED TO FACP
- T — TRANSFORMER
- SPRINKLER SYSTEM WATER FLOW SWITCH, PROVIDED UNDER DIVISION 23, WIRED TO FACP UNDER DIVISION 26
- SPRINKLER SYSTEM TAMPER SWITCH, PROVIDED UNDER DIVISION 23, WIRED TO FACP UNDER DIVISION 26
- SPRINKLER SYSTEM CHECK VALVE PRESSURE SWITCH, FURNISHED AND INSTALLED UNDER DIVISION 23, WIRED TO FACP UNDER DIVISION 26
- SPRINKLER SYSTEM PRE-ACTION VALVE, FURNISHED AND INSTALLED UNDER DIVISION 21, WIRED TO FACP UNDER DIVISION 26
- K — KNOX BOX, MOUNT 60" AFF
- SD — SMOKE DAMPER, WIRED TO FACP
- FSD — FIRE AND SMOKE DAMPER, WIRED TO FACP
- HORN/STROBE, CANDELA AS NOTED ON PLANS, WIRED TO FACP
- S — SPEAKER/STROBE, WALL MOUNTED, CANDELA AS NOTED ON PLANS, WIRED TO FACP
- S — SPEAKER/STROBE, CEILING MOUNTED, CANDELA AS NOTED ON PLANS, WIRED TO FACP
- M — MASTER BOX

A5 POWER DISTRIBUTION

- SEC — SECURITY PANEL, MOUNT WITH TOP OF PANEL NOT MORE THAN 72"AFF
- ANN — ANNUNCIATOR, MOUNT WITH TOP OF PANEL NOT MORE THAN 72"AFF
- KP — KEYPAD, MOUNT 48"AFF
- MSP — MOTION SENSOR, PASSIVE INFRARED (PIR), WALL MOUNTED 96"AFF
- MSP — MOTION SENSOR, PASSIVE INFRARED (PIR), CEILING MOUNTED
- MSM — MOTION SENSOR, MICROWAVE, WALL MOUNTED
- MSM — MOTION SENSOR, MICROWAVE, CEILING MOUNTED
- MS — MOTION SENSOR, DUAL TECHNOLOGY, PIR/MICROWAVE, WALL MOUNTED
- MS — MOTION SENSOR, DUAL TECHNOLOGY, PIR/MICROWAVE, CEILING MOUNTED
- T — TRANSFORMER
- C — CAMERA
- CA — CARD ACCESS, PROVIDE 3/4" CONDUIT FROM 48" AFF/AFG TO ABOVE CEILING
- DC — DOOR CONTACT
- DL — MAGNETIC DOOR LOCK
- DR — DOOR RELEASE BUTTON
- DS — DOOR SWITCH
- C — CHIME
- SS — STROBE
- SH — HORN
- B — BELL
- D — JUNCTION BOX WITH 120V POWER FOR DOORS
- REX — REQUEST-TO-EXIT MOTION SENSOR

B5 SECURITY

- PANELBOARD ~ SURFACE MOUNTED
- PANELBOARD ~ FLUSH MOUNTED
- FUSED DISCONNECT SWITCH
- NON-FUSED DISCONNECT SWITCH
- 00 — MOTOR STARTER ~ NUMBER INDICATES NEMA SIZE
- 00 — COMBINATION MOTOR STARTER/FUSED DISCONNECT
- MOTOR OR FAN
- M — METER AND CABINET
- J — JUNCTION BOX ~ CEILING MOUNTED
- J — JUNCTION BOX ~ WALL MOUNTED
- J — JUNCTION BOX ~ FLUSH FLOOR MOUNTED
- P J — JUNCTION BOX ~ PEDESTAL MOUNTED
- T# — TRANSFORMER ~ NUMBER INDICATES DESIGNATION SEE TRANSFORMER SCHEDULE
- VFD — VARIABLE FREQUENCY DRIVE
- TVSS — TRANSIENT VOLTAGE SURGE SUPPRESSOR
- E — EMERGENCY SHUTOFF SWITCH ~ WALL MOUNTED 48" TO CENTERLINE ~ PROVIDE TAMPER-PROOF COVER
- S — SHUT-OFF SWITCH
- CONDUIT TURNING UP
- CONDUIT TURNING DOWN
- WIRING UNDERGROUND OR UNDERSLAB
- HOMERUN ~ (2)#12+(1)#12G UNO (EXCEPT LIGHTING CIRCUITS: (1)#12+(1)#10N+(1)#12G UNO)
- SINGLE-PHASE HOMERUN OR MULTIPLE HOMERUN UTILIZING THE SAME CONDUIT
- 3-PHASE HOMERUN OR MULTIPLE HOMERUN UTILIZING THE SAME CONDUIT
- FLEXIBLE CONNECTION
- GROUNDING SYSTEM
- P — POWER POLE
- PUSHBUTTON
- C — DOORBELL CHIME
- F — SYSTEMS FURNITURE WHIP, DUAL SERVICE, WALL MOUNTED
- P — MOTORIZED DOOR OPERATOR AND PUSH PADDLE ~ DEVICES FURNISHED BY DIV 08, POWER WIRING, BOXES, AND CONDUIT BY DIV 26
- CB — ENCLOSED CIRCUIT BREAKER
- ATS — AUTOMATIC TRANSFER SWITCH
- H — HAND DRYER, COORDINATE HEIGHT WITH ARCHITECTURAL PLANS
- SF — SYSTEMS FURNITURE FEED

- PS — PAY STATION KIOSK ~ SEE INSTALLATION DETAIL D3 ON DRAWING E501.
- EC — EMERGENCY CALL BOX LOCATION WITH BLUE LIGHT BEACON ~ SEE DETAIL B4 ON DRAWING E501.
- EVSE — ELECTRIC VEHICLE SUPPLY EQUIPMENT (VEHICLE CHARGING STATION). DUAL SERVICE UNIT. SEE DETAIL C4 ON DRAWING E501.

B7 SPECIALTY EQUIPMENT

SINGLE RECEPTACLES

- 20A, 125V, 2P, 3W, NEMA 5-20R
- 20A, 125V, 2P, 3W, NEMA L5-20R (TWISTLOCK)
- 30A DRYER RECEPTACLE ~ 125/250V, 3P, 4W, GROUNDING, NEMA 14-30R, (3)#10+(1)#10G TO 30A, 2P CIRCUIT BREAKER
- 30A, 250V, 2P, 3W, NEMA 6-30R
- 50A RANGE RECEPTACLE ~ 125/250V, 3P, 4W, GROUNDING, NEMA 14-50R, (3)#6+(1)#10 TO 50A, 2P CIRCUIT BREAKER
- 20A, 250V, 2P, 3W, NEMA 6-20R

NOTE:

PROVIDE MATCHING CORD AND PLUG FOR SINGLE RECEPTACLES

FLOOR AND CEILING DEVICES

- F — DUPLEX RECEPTACLE, 20A, 125V, 2P, 3W, NEMA 5-20R, MOUNT IN FLUSH FLOOR BOX
- F — DOUBLE DUPLEX RECEPTACLE, 20A, 125V, 2P, 3W, NEMA 5-20R, MOUNT IN FLUSH FLOOR BOX
- P — DUPLEX RECEPTACLE, PEDESTAL MOUNTED
- P — SINGLE RECEPTACLE, PEDESTAL MOUNTED
- C — DUPLEX RECEPTACLE, FLUSH MOUNTED IN CEILING
- C — DOUBLE DUPLEX RECEPTACLE, FLUSH MOUNTED IN CEILING
- C — DUPLEX GFCI RECEPTACLE, FLUSH MOUNTED IN CEILING
- C — DOUBLE DUPLEX GFCI RECEPTACLE, FLUSH MOUNTED IN CEILING
- OVERHEAD RECEPTACLE DROP, DUPLEX
- OVERHEAD RECEPTACLE DROP, DOUBLE DUPLEX
- OVERHEAD RECEPTACLE DROP, GFCI
- PT-1 — 4" POKE-THRU DEVICE, DUAL SERVICE FURNITURE FEED. BASIS OF DESIGN: WIREMOLD AFFATC
- PT-2 — 6" POKE-THRU DEVICE, WITH (2) DUPLEX RECEPTACLES AND TEL/DATA AS INDICATED ON PLANS. BASIS OF DESIGN: LEGRAND 6AT SERIES.
- F — MULTI-SERVICE FLUSH FLOOR BOX ~ WIREMOLD EFB45 SERIES OR APPROVED EQUAL. COVER SHALL BE FLUSH STYLE WITH FLOOR INSERT. COVER FINISH COLOR SHALL BE SELECTED BY ARCHITECT FROM MANUFACTURER'S STANDARD FINISHES.

RECEPTACLES

- DUPLEX RECEPTACLE ~ 20A, 125V, 2P, 3W, NEMA 5-20R
- DOUBLE DUPLEX RECEPTACLE
- DUPLEX RECEPTACLE, HATCH INDICATES AFCI PROTECTION AND TAMPERPROOF
- T — TAMPERPROOF DUPLEX RECEPTACLE
- GFCI DUPLEX RECEPTACLE, MOUNT 44" AFF UNO
- GFCI DOUBLE DUPLEX RECEPTACLE, MOUNT 44" AFF UNO
- EWC — GFCI RECEPTACLE FOR ELECTRIC WATER COOLER - COORDINATE LOCATION WITH DIVISION 22.
- WP — GFCI RECEPTACLE WITH WEATHERPROOF COVER
- WP — GFCI RECEPTACLE IN WP ENCLOSURE ON ROOF
- MULTI-OUTLET STRIP, PROVIDE OUTLETS 24" OC UNO, MOUNT 48" AFF UNO
- SURFACE RACEWAY WITH DIVIDER, MOUNT 44" AFF UNO. PROVIDE NEMA 5-20 RECEPTACLES AND TECHNOLOGY OUTLETS AS SHOWN ON PLAN

NOTES:

1. MOUNT RECEPTACLES WITH CENTERLINE 18" AFF UNO
2. MOUNT EXTERIOR RECEPTACLES WITH CENTERLINE 24" AFG UNO

A9 LUMINAIRES

LIGHTING SWITCHES

- $a — LIGHT SWITCH, 20A,125/277V
- $3 — THREE-WAY LIGHT SWITCH
- $4 — FOUR-WAY LIGHT SWITCH
- $2 — TWO-POLE SWITCH
- $K — KEY OPERATED SWITCH
- $M — MOTOR RATED SWITCH
- $P — SINGLE POLE SWITCH WITH RED PILOT LIGHT ~ RED LIGHT SHALL GLOW WHEN CIRCUIT IS ENERGIZED
- $a $b — MULTI-GANGED SWITCHES, GANG UNDER ONE PLATE, LETTER INDICATES SWITCHING
- $OS — OCCUPANCY SENSOR SWITCH, WALL MOUNTED
- $OS2 — 2-BUTTON OCCUPANCY SENSOR SWITCH
- $OS3 — OCCUPANCY SENSOR SWITCH WIRED FOR 3-WAY OPERATION
- $OSD — OCCUPANCY SENSOR SWITCH WITH DIMMING ~ COORDINATE DIMMING TECHNOLOGY WITH LOAD TO BE DIMMED
- OS — OCCUPANCY SENSOR, CEILING MOUNTED
- OS — OCCUPANCY SENSOR, WALL MOUNTED
- $D — DIMMER SWITCH ~ COORDINATE DIMMING TECHNOLOGY WITH LOAD TO BE DIMMED
- $F $L — HANDICAP SWITCHES FOR HOOD LIGHT AND FAN
- $T — TIMER SWITCH
- $LV — LOW VOLTAGE LIGHT SWITCH, MOMENTARY CONTACT
- LTC — LIGHTING TIME CLOCK
- LC — LIGHTING CONTACTOR
- LCP — LIGHTING CONTROL PANEL
- PC — OUTDOOR PHOTOELECTRIC SWITCH
- DS — DAYLIGHT HARVESTING SENSOR

NOTES:

1. MOUNT LIGHT SWITCHES WITH CENTERLINE 48" AFF, UNO
2. LOWER CASE LETTER AT SWITCH INDICATES SWITCHING

EMERGENCY LIGHTING

- WHERE NOTED ON PLANS FIXTURE CONNECTED TO CENTRAL INVERTER. CONTROL AS INDICATED ON PLANS.
- EM — "EM" INDICATES EMERGENCY WHERE SYMBOL HATCHING IS UNCLEAR
- BP# — EMER BATTERY UNIT WITH NO HEADS, MT 7'-6"AFF BP# INDICATES BATTERY UNIT DESIGNATION, CONNECT TO UNSWITCHED PORTION OF AREA LIGHTING BRANCH CIRCUIT, U.N.O.
- BP# — EMER BATTERY UNIT WITH INTEGRAL HEADS, MT 7'-6"AFF BP# INDICATES BATTERY UNIT DESIGNATION, CONNECT TO UNSWITCHED PORTION OF AREA LIGHTING BRANCH CIRCUIT, U.N.O.
- BP# — SINGLE REMOTE EMERGENCY LIGHT HEAD, MOUNT 7'-6"AFF BP# INDICATES BATTERY UNIT CONNECTED TO
- BP# — DOUBLE REMOTE EMERGENCY LIGHT HEAD, MOUNT 7'-6"AFF BP# INDICATES BATTERY UNIT CONNECTED TO
- BP# — DOUBLE REMOTE EMERGENCY LIGHT HEAD, CEILING MOUNTED BP# INDICATES BATTERY UNIT CONNECTED TO
- EXIT SIGN, CEILING MOUNTED, SHADING INDICATES FACE(S) ARROWHEAD INDICATES CHEVRON(S) REQUIRED, CONNECT TO UNSWITCHED PORTION OF AREA LIGHTING BRANCH CIRCUIT, U.N.O.
- EXIT SIGN, WALL MOUNTED, SHADING INDICATES FACE(S) MOUNT AT 7'-6"AFF OR OVER DOOR, CONNECT TO UNSWITCHED PORTION OF AREA LIGHTING BRANCH CIRCUIT, U.N.O.
- INV — CENTRAL LIGHTING INVERTER

REFER TO LUMINAIRE SCHEDULE FOR FIXTURE LEGEND

TYPICAL FOR ALL FIXTURE TYPES:

R1 a # — INDICATES LUMINAIRE TYPE ON SCHEDULE; LOWER CASE LETTER INDICATES SWITCHING; INDICATES CIRCUIT NUMBER

7/2/2021 3:16:33 PM

A1	ABBREVIATIONS	A3	FIRE ALARM	A5	POWER DISTRIBUTION	A7	RECEPTACLES	A9	LUMINAIRES

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SEAL / SIGNATURE

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2021

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DATE ISSUED	**07/30/2021**
PROJECT NO	**20-20145.00-1**
DRAWN BY	**GMC**
CHECKED BY	**BTG**

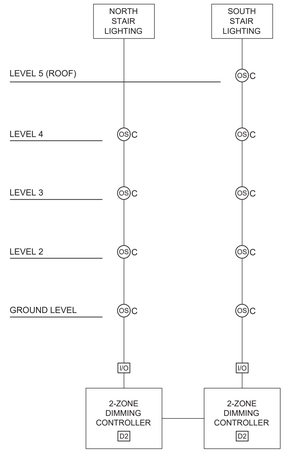
SHEET TITLE:

ELECTRICAL LEGEND AND ABBREVIATIONS

E-000

LIGHTING CONTROL DIAGRAM LEGEND & NOTES:

- D2 — 2-ZONE DIMMER CONTROLLER (WATTSTOPPER #LMRC-212)
- I/O — INPUT/OUTPUT INTERFACE MODULE (WATTSTOPPER #LMIO)
- QTD — EMERGENCY LIGHTING CONTROL UNIT (WATTSTOPPER #ELCU-200). PROVIDE (1) UNIT FOR EACH EMERGENCY CIRCUIT
- OS C — COLD TEMPERATURE WEATHERPROOF PASSIVE INFRARED OCCUPANCY SENSOR WITH MIDDLE AREA COVERAGE (WATTSTOPPER #FS-L3W)

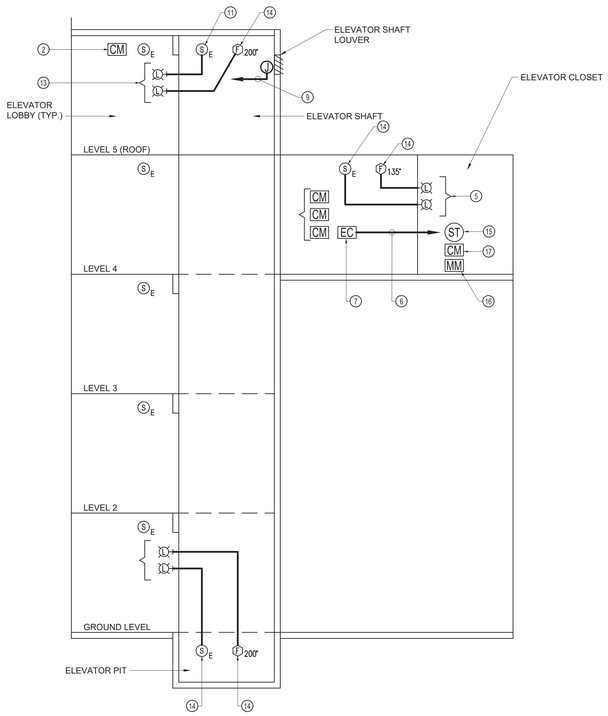


A2 — STAIR LIGHTING CONTROL DETAIL

DO NOT SCALE

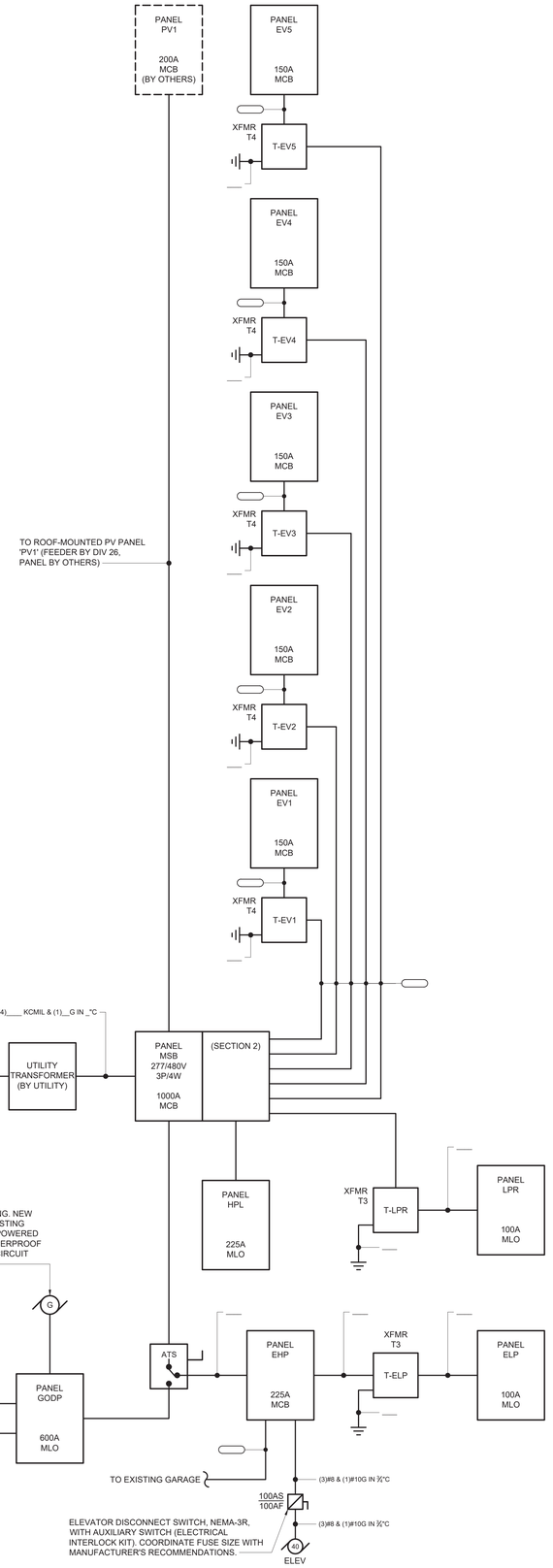
NOTES:

1. ELEVATOR MACHINE ROOM; REFER TO FLOOR PLANS FOR EXACT FLOOR LOCATION AND ADJACENCY (EG. TOP FLOOR, PENTHOUSE, FIRST FLOOR, BASEMENT)
2. FIRE ALARM CONTROL MODULE, RELAY AND WIRING PROVIDED FOR SENDING FIRE ALARM SYSTEM CONTROL SIGNAL TO OPEN ELEVATOR SHAFT LOUVER DURING A FIRE EVENT; REFER TO MECHANICAL PLANS FOR EXACT LOCATION AND CONTROL CIRCUIT INTEGRATION POINT. THE CONTROL MODULE SHALL BE LOCATED ABOVE CLOSEST ACCESSIBLE CEILING TO THE LOUVER CONTROL CIRCUIT INTEGRATION POINT. THE CONTROL WIRING FROM THE CONTROL MODULE TO THE LOUVER OPERATOR SHALL BE PERFORMED BY THE CONTRACTOR RESPONSIBLE FOR DIVISION 23 SCOPE. THE CONTROL MODULE SHALL BE PROGRAMMED TO RECEIVE A SIGNAL UPON ACTIVATION OF ANY FIRE ALARM DETECTION DEVICE WITHIN THE RESPECTIVE BUILDING.
3. SMOKE DETECTOR LOCATED WITHIN 21 FEET OF THE CENTERLINE OF EACH ELEVATOR DOOR (FOR LOBBY CEILINGS 15'-0" AFF OR LESS); REFER TO FLOOR PLAN FOR PROPOSED LOCATION AND QUANTITY OF DETECTORS IN RESPECTIVE ELEVATOR LOBBY.
4. "E" ON DETECTORS DENOTES THAT THE RESPECTIVE FIRE ALARM SYSTEM DETECTOR (UPON ACTIVATION) SHALL BE PROGRAMMED TO INITIATE THE REQUIRED ELEVATOR RECALL SEQUENCE.
5. REMOTE INDICATOR LIGHT(S) LOCATED OUTSIDE AND ABOVE THE RESPECTIVE ELEVATOR MACHINE ROOM DOOR. THE INDICATOR LIGHT SHALL BE ACTIVATED WHEN THE ASSOCIATED DETECTOR WITHIN THE ELEVATOR MACHINE ROOM ENTERS AN ALARM CONDITION.
6. POWER FEEDER TO ELEVATOR CONTROLLER (REFER TO POWER PLANS FOR SOURCE AND FEEDER SIZE)
7. ELEVATOR CONTROLLER; FURNISHED AND INSTALLED BY THE CONTRACTOR RESPONSIBLE FOR DIVISION 14 SCOPE.
8. PROVIDE THREE FIRE ALARM CONTROL MODULES, RELAYS AND WIRING FOR SENDING FIRE ALARM SYSTEM CONTROL SIGNAL TO THE ELEVATOR CONTROLLER; ONE TO ACTIVATE THE ELEVATOR RECALL SEQUENCE (PRIMARY LEVEL), THE SECOND TO ACTIVATE THE ELEVATOR RECALL SEQUENCE (ALTERNATE LEVEL), AND THE THIRD TO ACTIVATE THE ELEVATOR CAB WARNING SEQUENCE (FIREMAN'S HAT) . THE CONTROL WIRING FROM EACH MODULE TO THE ELEVATOR CONTROLLER SHALL BE PERFORMED BY THE CONTRACTOR RESPONSIBLE FOR DIVISION 14 SCOPE.
9. POWER BRANCH CIRCUIT TO ELEVATOR SHAFT LOUVER OPERATOR (REFER TO PLAN FOR SOURCE AND BRANCH CIRCUIT SIZE).
10. REFER TO POWER PLANS FOR REQUIRED ELEVATOR EQUIPMENT POWER AND MAINTENANCE POWER PROVISIONS.
11. SMOKE DETECTOR LOCATED AT THE TOP OF THE ELEVATOR SHAFT (EXACT LOCATION PER NFPA 72 STANDARDS).
12. SMOKE DETECTOR LOCATED AT THE ELEVATOR PIT (EXACT LOCATION PER NFPA 72 STANDARDS).
13. REMOTE INDICATOR LIGHT(S) LOCATED OUTSIDE AND ABOVE THE RESPECTIVE FLOOR ELEVATOR CAB DOOR. THE INDICATOR LIGHT SHALL BE ACTIVATED WHEN THE ASSOCIATED DETECTOR ENTERS AN ALARM CONDITION.
14. WHEN SPRINKLER HEADS ARE PRESENT IN THE ELEVATOR SHAFT, ELEVATOR PIT OR ELEVATOR MACHINE ROOM, LOCATE THE FIRE ALARM SYSTEM DETECTOR(S) WITHIN (2) FEET OF THE RESPECTIVE SPRINKLER HEAD.
15. SHUNT TRIP MODULE PROVIDED WITH THE RESPECTIVE ELEVATOR FEEDER CIRCUIT BREAKER FOR SHUTTING DOWN ELEVATOR POWER.
16. FIRE ALARM MONITOR MODULE, RELAY AND WIRING PROVIDED FOR RECEIVING FIRE ALARM SYSTEM MONITOR SIGNAL FROM THE ELEVATOR FEEDER SHUNT TRIP MODULE FOR VERIFYING THE SHUNT TRIP CONTROL POWER CIRCUIT IS FUNCTIONING PROPERLY. THE MONITOR MODULE SHALL BE PROGRAMMED TO SEND A SIGNAL (SUPERVISORY) IF THE CONTROL POWER CIRCUIT IS DE-ENERGIZED.
17. FIRE ALARM CONTROL MODULE, RELAY AND WIRING PROVIDED FOR SENDING FIRE ALARM SYSTEM CONTROL SIGNAL TO INITIATE THE ELEVATOR POWER SHUNT TRIP SEQUENCE. THE CONTROL MODULE SHALL BE PROGRAMMED TO RECEIVE A SIGNAL UPON ACTIVATION OF ANY HEAT DETECTOR LOCATED WITHIN THE ELEVATOR SHAFT, ELEVATOR PIT OR ELEVATOR MACHINE ROOM.
18. FIXED TEMPERATURE (135 DEGREE F) HEAT DETECTOR LOCATED IN THE ELEVATOR MACHINE ROOM.
19. FIXED TEMPERATURE (135 DEGREE F) HEAT DETECTOR LOCATED AT THE ELEVATOR PIT.
20. FIXED TEMPERATURE (190 DEGREE F) HEAT DETECTOR LOCATED AT THE TOP OF THE ELEVATOR SHAFT.
21. ALL HEAT DETECTORS WITHIN ELEVATOR SHAFT/PIT/MACHINE ROOM SHALL BE PROVIDED WITH TEMPERATURE AND RTI RATINGS THAT ARE LOWER THAN THE ASSOCIATED SPRINKLER HEAD.



A1 — FIRE ALARM CONTROL DIAGRAM FOR ELEVATOR WITH SHAFT/ MACHINE ROOM PROTECTION SPRINKLERS

DO NOT SCALE



A3 — POWER RISER DIAGRAM

DO NOT SCALE

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PROJECT:

USM - Structured Parking Garage

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REVISIONS:

No.	Date	Description

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Date	Issued For:
07/30/21	Site Plan Submittal

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DATE ISSUED	**07/30/2021**
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DRAWN BY	**GMC**
CHECKED BY	**BTG**

SHEET TITLE:

ELECTRICAL DETAILS

E-500

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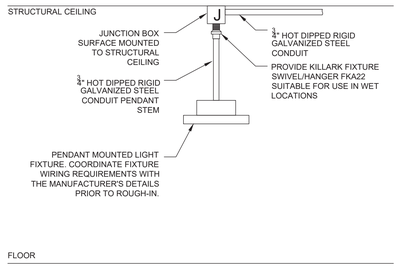
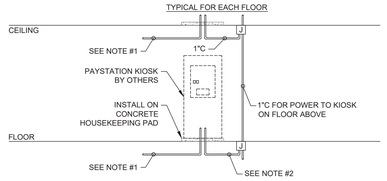


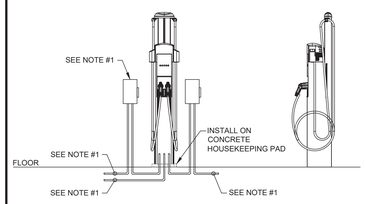
D2	CEILING MOUNTED GARAGE FIXTURE DETAIL
DO NOT SCALE	



NOTES:

1. PROVIDE (1) 1"C EMPTY CONDUIT WITH NYLON PULLSTRING BACK TO THE MAIN ELECTRICAL ROOM FOR EACH PAYSTATION KIOSK. TELECOMMUNICATIONS CABLING BY OTHERS. STUB CONDUIT UP TO 6" ABOVE FINISHED FLOOR AND CAP FOR FUTURE.
2. PROVIDE (1) 1"C EMPTY CONDUIT WITH NYLON PULLSTRING AND JUNCTION BOX AT EACH LEVEL FOR FUTURE POWER BRANCH CIRCUIT WIRING. STUB CONDUIT UP TO 6" ABOVE FINISHED FLOOR AND CAP FOR FUTURE. AT THE LOWER LEVEL, CONDUIT SHALL BE ROUTED BACK TO THE MAIN ELECTRICAL ROOM AND TERMINATED IN PANELBOARD 'RP2G'. CONDUITS SHALL BE MARKED FOR FUTURE PAYSTATION KIOSK.

D3	PAYSTATION KIOSK DETAIL
DO NOT SCALE	



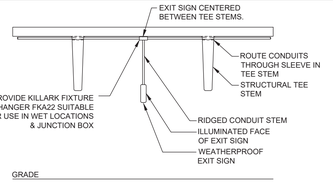
NOTES:

1. ELECTRICAL VEHICLE CHARGING SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH NEC 625. THE ELECTRICAL CONTRACTOR SHALL MEET ALL INSTALLATION REQUIREMENTS WHETHER INCORPORATED INTO THE MANUFACTURED ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE) OR PROVIDED SEPARATELY.
2. PROVIDE DISCONNECT IN A READILY ACCESSIBLE LOCATION FOR ELECTRIC VEHICLE CHARGING STATIONS 480/277V ONLY. DISCONNECT SHALL BE LOCKABLE OPEN TYPE IN ACCORDANCE WITH NEC 110.25. WHERE 208/120V (EVSE) IS UTILIZED, DISCONNECTING MEANS IS NOT REQUIRED.
3. PROVIDE (2) 1" HOT-DIPPED GALVANIZED RIGID STEEL POWER CONDUITS STUBBED UP 12"AFF AND TERMINATED IN WEATHERPROOF CAST JUNCTION BOX WITHIN THE (EVSE). PROVIDE LFMC WHIP CONNECTION TO EQUIPMENT TERMINATION POINT.
4. PROVIDE (1) 1" HOT-DIPPED GALVANIZED RIGID STEEL TELECOMMUNICATIONS CONDUITS STUBBED UP 12" AFF FOR COMMUNICATION CABLING FOR RFID OR CREDIT CARD EQUIPMENT. ROUTE CONDUIT TO TELECOMMUNICATIONS BACKBOARD/SERVER EQUIPMENT.

C4	ELECTRIC VEHICLE CHARGING SYSTEM
DO NOT SCALE	

NOTES:

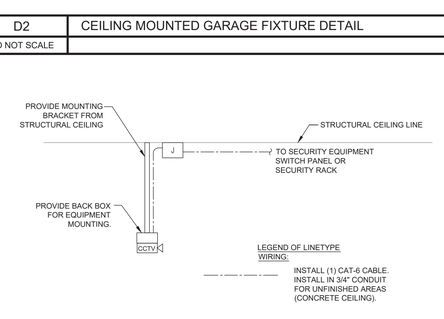
1. COORDINATE INSTALLATION DETAILS WITH MANUFACTURER'S INSTRUCTIONS.
2. PROVIDE (1) 3/4"C EMPTY CONDUIT WITH NYLON PULLSTRING BACK TO THE MAIN ELECTRICAL ROOM FOR EACH EMERGENCY PHONE STATION. TELECOMMUNICATIONS CABLING BY OTHERS.



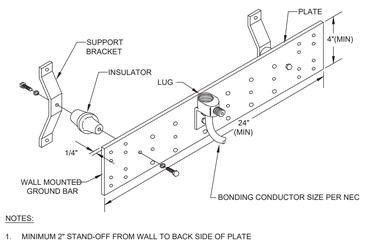
NOTES:

1. EXIT SIGNS SHALL BE INSTALLED SUCH THAT THE FACE OF THE EXIT SIGN IN THE PRIMARY DIRECTION OF EGRESS (SHORTEST PATH TO EGRESS DOOR) IS FACING OUT AND AWAY FROM THE STRUCTURAL TEE STEM.
2. EXIT SIGN SHALL BE INSTALLED SUCH THAT THE BOTTOM OF THE EXIT SIGN IS A MINIMUM OF 7'-2" ABOVE FINISHED FLOOR WHERE LOCATED IN THE GARAGE DRIVE LANE OR PARKING STALL.
3. WHERE EXIT SIGNS ARE PROTECTED FROM VEHICULAR DAMAGE VIA BOLLARDS, PARKING STOPPERS, STRUCTURAL MEMBERS, ETC. THE SIGNAGE SHALL BE PENDANT MOUNTED TO TOP OF EXIT SIGN FLUSH WITH THE BOTTOM OF THE TEE STEM (I.E. ELEVATOR LOBBY, STAIR LOBBY, ETC.)

C1	EXIT SIGN GARAGE AREA MOUNTING DETAIL
DO NOT SCALE	



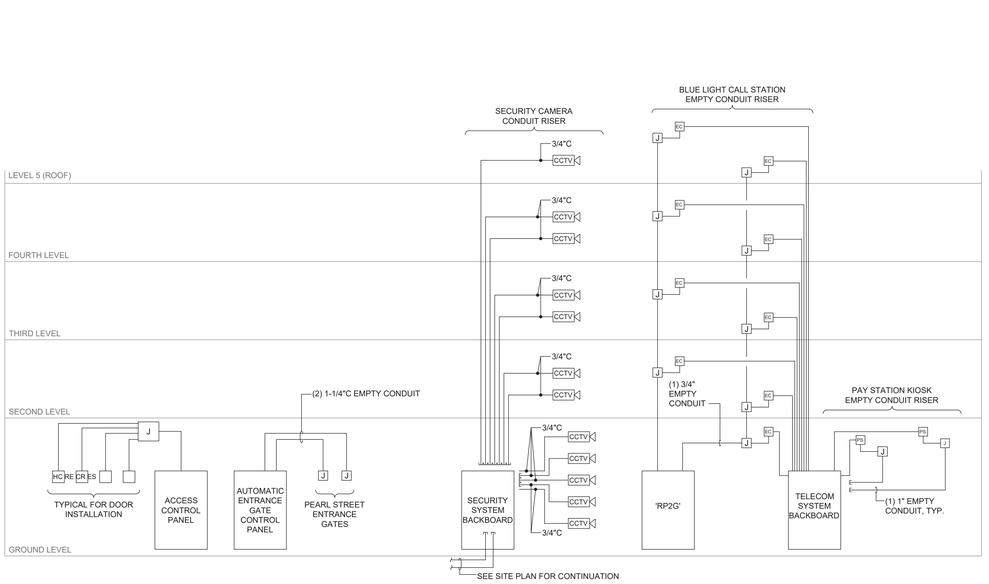
C2	CAMERA MOUNTING DETAIL
DO NOT SCALE	



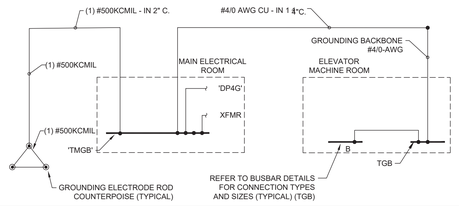
NOTES:

1. MINIMUM 2" STAND-OFF FROM WALL TO BACK SIDE OF PLATE

C3	GROUND BAR DETAIL
DO NOT SCALE	



A1	CONDUIT RISER DIAGRAM
DO NOT SCALE	



B3	GROUNDING RISER DIAGRAM
DO NOT SCALE	

B4	CALLSTATION WITH BLUE LIGHT
DO NOT SCALE	

7/2/2021 3:16:33 PM

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SHEET TITLE:

ELECTRICAL DETAILS

E-501

LUMINAIRE SCHEDULE

TYPE	DESCRIPTION	MFR	CATALOG SERIES NUMBER SEE NOTE 1	MOUNTING, U.N.O.	VOLTS	LAMP				KEY NOTES
						QTY PER FIXTURE	WATTS	LUMENS	TYPE	
G	LED PARKING GARAGE LIGHT	LITHONIA	VCPG-LED-V4-P4-40K-70CRI-___-MVOLT-PM	PENDANT	UNV	1	56	____	LED ARRAY ~ 4000K	
B	LED STRIP LIGHT	LITHONIA	FEM-L48-4000LM-LPPFL-WD-MVOLT-GZ10-40K-80CRI	SURFACE	UNV	1	30	4,257	LED ARRAY ~ 4000K	
GP	GARAGE ROOF LED LIGHT AND POLE	LITHONIA	LIGHT: RSX1-LED-P3-40K-R5-MVOLT-SPA POLE: SSS-14-4C-DM19AS	SURFACE	UNV	1	109	14,397	LED ARRAY ~ 4000K	
EXIT	EXIT SIGN, AC ONLY	LITHONIA	LV-S-W-*-R	SEE PLAN	UNV	1		PER CODE	LED ARRAY	3,6
P1	SITE LIGHT AND POLE, "ICE CREAM CONE" SHAPE	SEE NOTE 8		14' POLE	277	1	24	3,330	LED ARRAY ~ 4000K	8,9
P2	SITE LIGHT AND POLE, "SHOEBOX" SHAPE	SEE NOTE 8		14' POLE	277	1	18	2,160	LED ARRAY ~ 4000K	8,10
SW1	WALL MOUNTED EXTERIOR LIGHT	LITHONIA	KAXW-LED-P1-40K-R4-MVOLT	KEYNOTE 5	UNV	1	29	3,643	LED ARRAY ~ 4000K	5
SR1	RECESSED CANOPY LIGHT	LITHONIA	LDN4SQ-40-07-LS4-AR-LSS-MVOLT	RECESSED CANOPY	UNV	1	8.6	620	LED ARRAY ~ 4000K	

	NOTES
1	**NOTE THAT THESE NUMBERS ARE NOT COMPLETE CATALOG NUMBERS. PROVIDE ALL REQUIREMENTS ON SCHEDULE, NOTES, SPECS, AND DRAWINGS COMBINED.**
2	**CATALOG SERIES NUMBERS ARE USED TO ESTABLISH A LEVEL OF QUALITY AND NOT INTENDED TO LIMIT COMPETITION. SERIES NUMBERS ARE NOT COMPLETE CATALOG NUMBERS. COMPLY WITH ADDITIONAL REQUIREMENTS IN SPECIFICATIONS AND DRAWINGS.**
3	PROVIDE WALL,CEILING, OR PENDANT MOUNTING AS INDICATED ON PLANS. PROVIDE NUMBER OF FACES AND ARROWS AS INDICATED.
4	VERIFY CEILING STRUCTURE AND MOUNTING HEIGHT PRIOR TO ORDERING ANY LIGHT FIXTURES.
5	COORDINATE MOUNTING HEIGHT WITH STRUCTURAL AND ARCHITECTURAL DRAWINGS.
6	PROVIDE COLD WEATHER OPTION.
7	CONFIRM EXACT FIXTURE CONFIGURATION AND OPTIONS WITH MUNICIPALITY PRIOR TO ORDERING FIXTURE.
8	FIXTURE AND POLE SHALL BE PROVIDED BY OWNER FROM EXISTING OWNER'S STOCK.
9	PROVIDE SCREW-IN LED RETROFIT LAMP. BASIS OF DESIGN IS MFG. BY LIGHT EFFICIENT DESIGN, PART NO. LED-8029E345-A.
10	PROVIDE SCREW-IN LED RETROFIT LAMP. BASIS OF DESIGN IS MFG. BY LIGHT EFFICIENT DESIGN, PART NO. LED-8039E40-A.

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SHEET TITLE:

ELECTRICAL SCHEDULES

E-600

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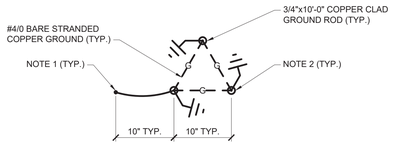
OH	OVERHEAD WIRING, TYPE AS INDICATED
	UNDERGROUND OR UNDERSLAB WIRING, TYPE AS INDICATED
	UTILITY POLE
	FUSED DISCONNECT SWITCH
	NON-FUSED DISCONNECT SWITCH
	MOTOR
	GROUNDING SYSTEM
J	JUNCTION BOX, WALL MOUNTED
J	JUNCTION BOX, IN-GROUND
M	ELECTRICAL MANHOLE, COORDINATE LOCATION WITH OTHER UNDERGROUND UTILITIES
T	COMMUNICATIONS MANHOLE, COORDINATE LOCATION WITH OTHER UNDERGROUND UTILITIES
T / P S / F	PADMOUNT TRANSFORMER ~ F= FRONT
PB	4'X6' PULL BOX WITH 32" COVER PLATE IN ACCORDANCE WITH UTILITY STANDARDS
P	PEDESTAL LOCATION, PEDESTAL BY SERVICE PROVIDER, STUB UP (2) 2" CONDUITS WITH CONNECTORS AND BUSHINGS FROM HANDHOLE
H	HANDHOLE, MINIMUM 18"x36"x24", SIZE PER NEC FOR NUMBER OF CONDUITS INSTALLED
M	METER & CT CABINET, PEDESTAL MOUNTED
	SINGLE POLE MOUNTED LIGHT
	DOUBLE POLE MOUNTED LIGHT
	WALL MOUNTED LIGHT FIXTURE
	SINGLE POLE HOMERUN: (2)#12+(1)#12G UNO, CONNECT TO PANEL INDICATED
	SINGLE-PHASE HOMERUN OR MULTIPLE HOMERUN UTILIZING THE SAME CONDUIT, CONNECT TO PANEL INDICATED
	3-PHASE HOMERUN OR MULTIPLE HOMERUN UTILIZING THE SAME CONDUIT, CONNECT TO PANEL INDICATED
A1 / ES-000	DETAIL CALL-OUT
A1 / ES-000	SECTION/ELEVATION CALL-OUT

B1 ELECTRICAL SITE LEGEND

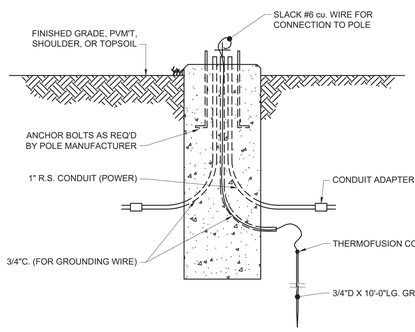


NOTES:

1. RUN #4/0 BARE STRANDED CU GROUND CABLE DOWN IN 1" PVC CONCEALED UNDER ROOF, CEILING AND WALLS. TYPICAL FOR ALL DOWNERS OUT TO GROUNDING COUNTERPOISE.
2. COPPER CLAD STEEL GROUND RODS 3/4"x10'-0", TOP OF RODS BURIED 2'-0" BELOW TOP OF FINISHED GRADE.

A3 GROUNDING ROD DETAILS

DO NOT SCALE

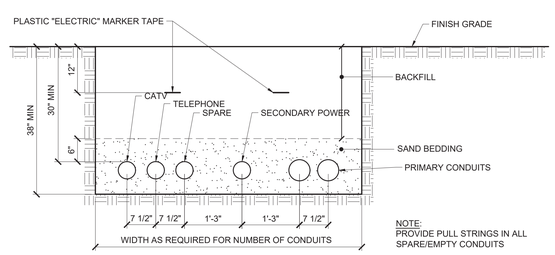


NOTES:

1. LIGHT POLE FOUNDATION SHALL BE PROVIDED BY DIVISION 2. ELECTRICAL SUBCONTRACTOR SHALL FURNISH CONDUITS, AND ANCHOR BOLTS TO CIVIL CONTRACTOR FOR CASTING INTO POLE BASE. THIS DETAIL REFERS TO SITE PARKING LOT AND ROAD LIGHTING FIXTURES ONLY. SEE CIVIL DRAWINGS FOR CONSTRUCTION INFORMATION.
2. ELECTRICAL CONTRACTOR SHALL INSTALL GROUND ROD AND PULL GROUNDING WIRE.

A2 SITE LIGHTING POLE BASE DETAIL

DO NOT SCALE

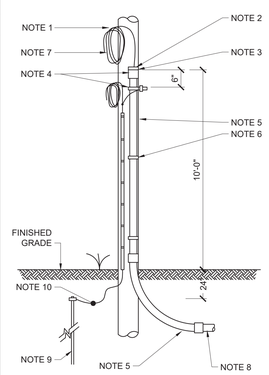


NOTE:
PROVIDE PULL STRINGS IN ALL SPARE/EMPTY CONDUITS

DETAIL INDICATES TYPICAL SPACING BETWEEN CONDUITS OF VARIOUS SYSTEMS, REFER TO SITE PLAN FOR SIZES AND NUMBER OF CONDUITS

A1 TYPICAL SEPARATION OF UTILITIES

DO NOT SCALE



NOTES:

1. PRIMARY CABLES TO BE INSTALLED BY UTILITY COMPANY.
2. CONDUIT SEAL BY CONTRACTOR.
3. INSULATING BUSHING.
4. GALVANIZED STEEL CONDUIT AND BEND SHALL BE GROUNDED BY BONDING TO APPROVED GROUND CLAMP 6" FROM TOP OF THE CONDUIT. A CONDUCTOR OF SUFFICIENT LENGTH SHALL BE PROVIDED TO EXTEND TO UTILITY COMPANY SECONDARY NEUTRAL.
5. PROVIDE 2-4" GALVANIZED STEEL CONDUITS. 2 TOTAL 10 FEET CONDUITS SHALL RISE ON THE SIDE OF THE POLE AWAY FROM THE ROAD, AND SPARE CONDUITS SHALL BE CAPPED 6" ABOVE GRADE.
6. PIPE STRAPS, INSTALL AT NOT MORE THAN 30" INTERVALS.
7. CONTRACTOR TO SEAL CABLE ENDS TO PREVENT ENTRANCE OF MOISTURE.
8. ADAPTER COUPLING STEEL TO PVC.
9. GROUND ROD - 3/4"D.x10'-0" LONG. INSTALL MINIMUM 3 FEET FROM THE POLE.
10. PROVIDE #4cu. GROUND WIRE.

B1 RISER POLE CONDUIT DETAIL

DO NOT SCALE

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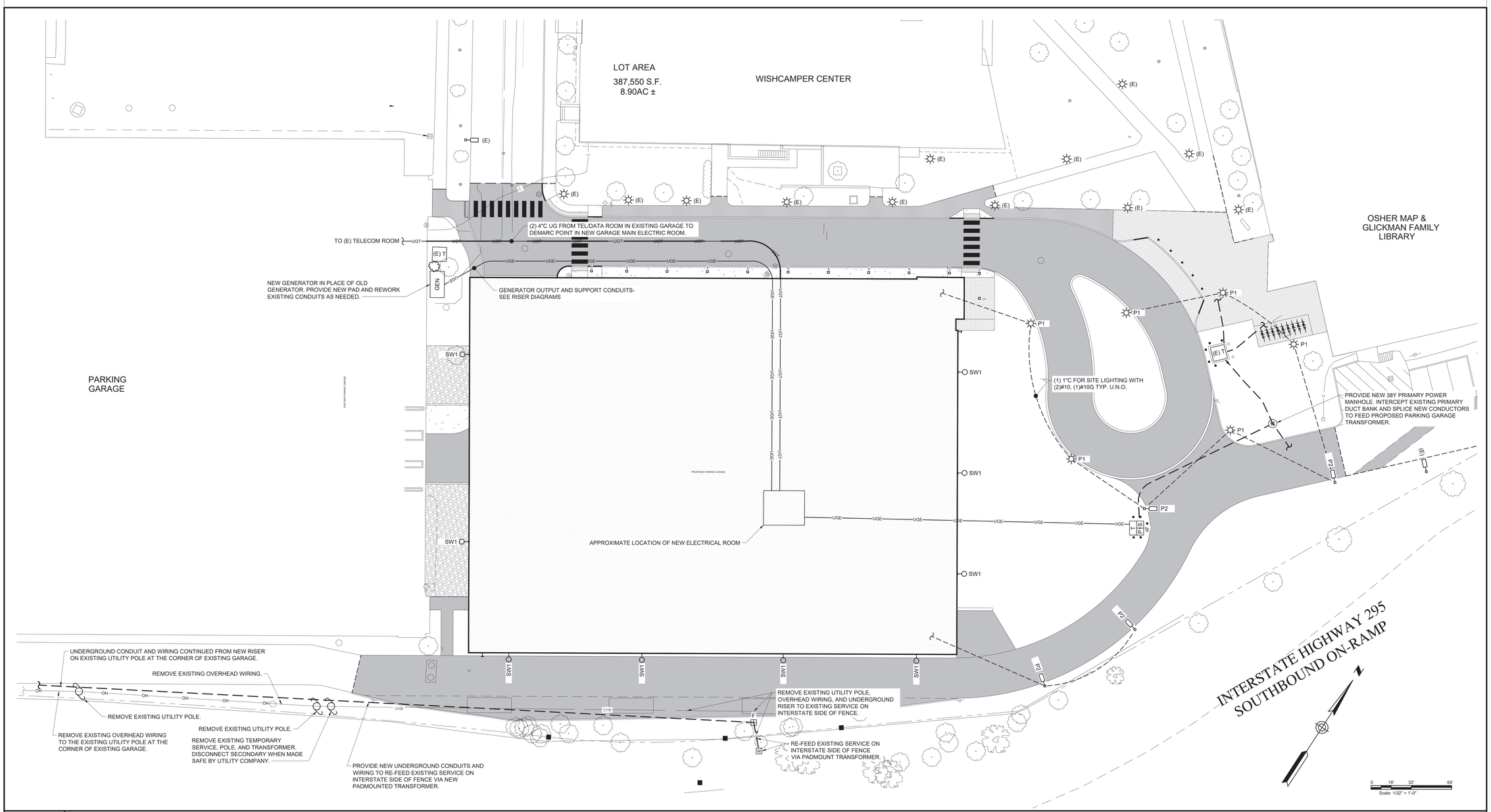
CHECKED BY	**BTG**

SHEET TITLE:

ELECTRICAL SITE LEGEND, DETAILS, AND NOTES

ES-000



A1	ELECTRICAL SITE PLAN
SCALE: 1"=20'-0"	

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SHEET TITLE:

ELECTRICAL SITE PLAN AND NOTES

ES-100

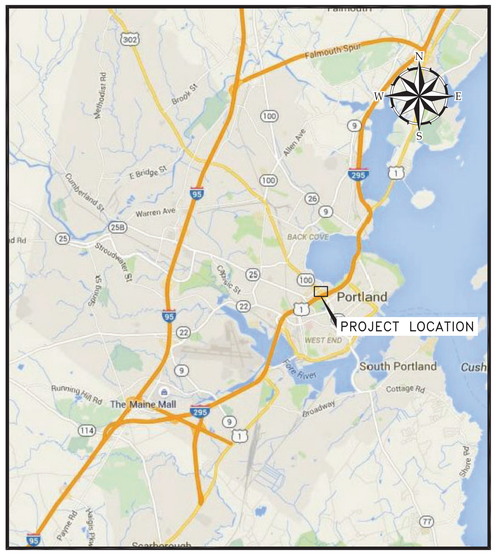
UNIVERSITY OF SOUTHERN MAINE
PORTLAND, MAINE

USM STRUCTURED PARKING GARAGE

PROJECT NO.
0233035.00

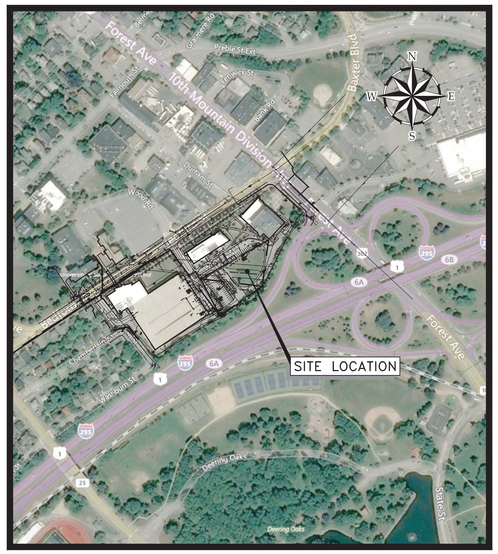
7/30/2021

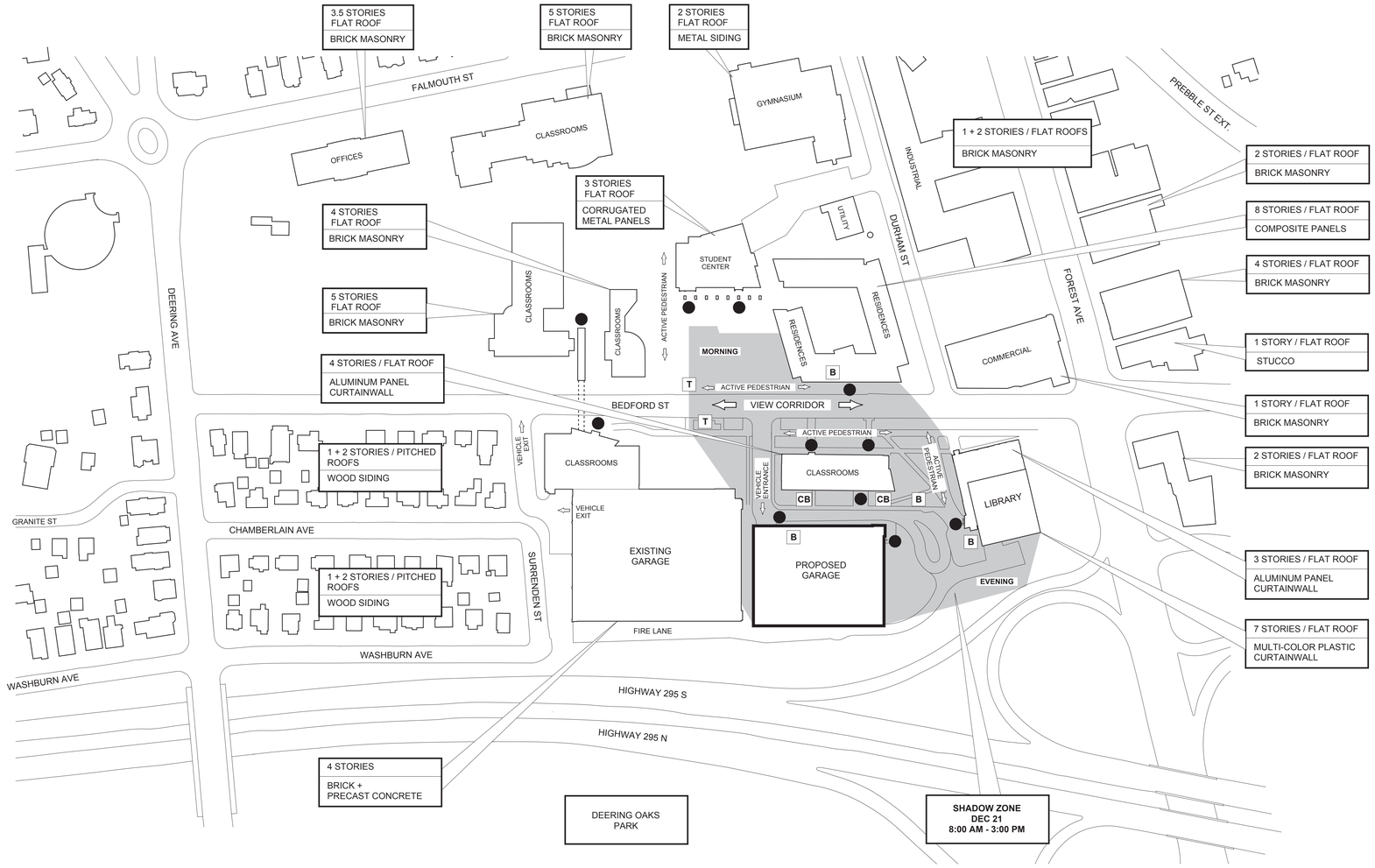
SHEET INDEX		
Sheet Number	Sheet Title	Sheet Description
COVER	G-000	
1	G-001	GENERAL NOTES & LEGEND
2	EC-001	EXISTING CONDITIONS SURVEY -1
3	EC-002	EXISTING CONDISITONS SURVEY - 2
4	C-001	DEMOLITION & EROSION & SEDIMENT CONTROL PLAN
5	C-100	SITE LAYOUT & MATERIALS PLAN
6	C-101	UTILITY & GRADING PLAN
7	D-200	CIVIL DETAILS - 1
8	D-201	CIVIL DETAILS - 2
9	D-202	CIVIL DETAILS - 3
10	D-203	CIVIL DETAILS - 4
11	D-204	CIVIL DETAILS - 5



PROJECT LOCATION MAP

1 0 1 2
scale mile





G: 25.0 T: 74.0 H: 49	G: 23.0 T: 72.0 H: 49
G: 25.0 T: 74.0 H: 49	G: 23.0 T: 72.0 H: 49

PROPOSED GARAGE HEIGHT DIAGRAM

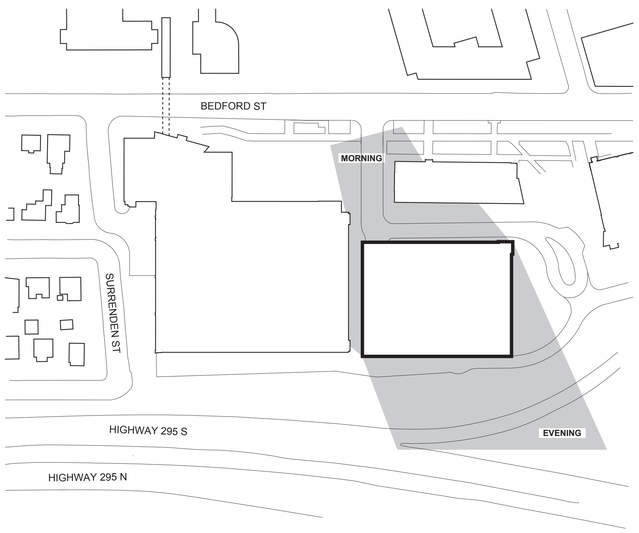
G - ELEVATION OF GRADE AT CORNER
T - ELEVATION OF TOP OF ROOF LEVEL SPANDREL BEAM
H - HEIGHT OF BUILDING AT CORNER

AVERAGE HEIGHT = 49'

USM OVERLAY ZONE ALLOWS 85'

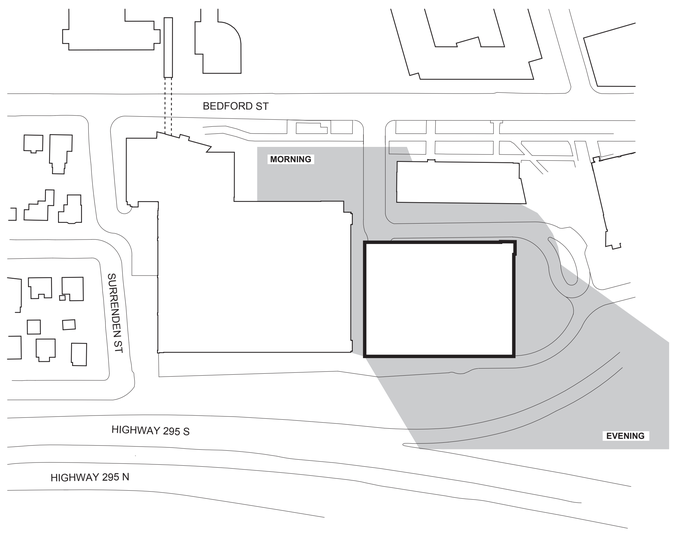
LEGEND

- AREA SUBJECT TO SHADOW CAST BY PROPOSED GARAGE ON WINTER SOLSTICE BETWEEN 1 HOUR AFTER SUNRISE TO 1 HOUR BEFORE SUNSET
- MAJOR PEDESTRIAN ARRIVAL POINTS
- B — BICYCLE RACK OR STORAGE ROOM
- CB — FUTURE CITIBIKE STATION
- T — BUS STOP



SHADOWS CAST MARCH + SEPTEMBER 21ST

6:46 AM TO 4:50 PM



SHADOWS CAST JUNE 21ST

5:05 AM TO 6:20 PM

NORTH

100 0 100 200

BAR SCALE
1" = 100'
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SHEET TITLE:

Context +

Shadow Plans

G - 100

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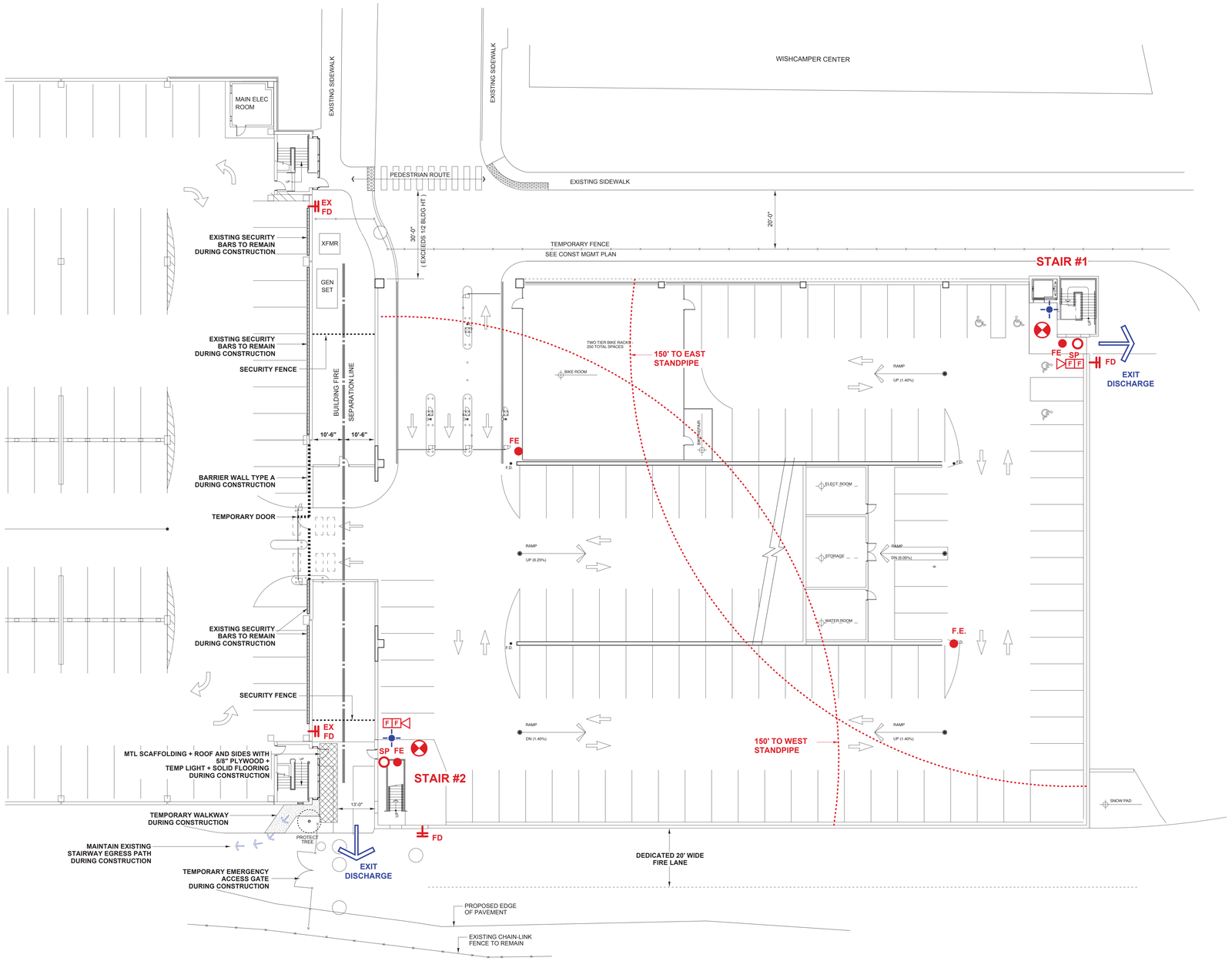
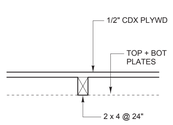


GROUND LEVEL LAYOUT PLAN

1" = 16' - 0"



BARRIER WALL TYPE A

INFILL OPENING IN EXISTING PRECAST CONC WALL

TEMPORARY BARRIER WALL TYPES

1" = 1' - 0"

BUILDING CODE SUMMARY

University of Southern Maine Parking Garage
Building Address: Portland, ME

APPLICABLE CODES (Per MUBEC: Maine Uniform Building and Energy Code)

Building	IBC 2015 (International Building Code)
	IEBC 201 (International Existing Building Code)
Electrical	National Electrical Code 2009
Fire Protection	NFPA Life Safety Code 2015 and NFPA 1 Uniform Fire Code
Mechanical	International Mechanical Code 2015
Plumbing	Maine State Internal Plumbing Code (UPC 2015)
Energy	IECC 2015 (International Energy Conservation Code)
Accessibility	ADA 2010 (Americans With Disabilities Act)

PROJECT DESCRIPTION:

New Construction - Parking Garage	
Open or Closed	**Open**
Proposed Construction Type :	Type II B / NFPA II (000)
Gross Area Per Tier:	45,050 +/- Per Tier
Height :	Grade + 4 Tiers / 49'-9" (Top of Roof Spandrel Beams)
Use Group IBC :	Open Parking Garage Section 406
Use Group NFPA :	Open Parking Garage Chapter 42.8
High Rise Requirements	Not Applicable
Automatic Suppression System	No
Dry Standpipe System	Yes
Multiple Occupancies	No

BUILDING CODE REQUIREMENTS (IBC 2015)

Height and Area Summary (Table 406.5.4)

Allowable Height :	8 Tiers
Allowable Area	50,000 SF/Tier

REQUIRED FIRE RESISTANCE RATINGS

ELEMENT (IBC Table 601/NFPA 101 Table A8.2.1.2)	RATING (In Hours)
Primary Structural Frame	**0**
Bearing Walls:	
Exterior	**0**
Interior	**0**
Non-Bearing Walls & Partitions	
Exterior	**0**
Interior	**0**
Floor Construction & Secondary Members	**0 (1 Hour Provided)**
Roof Construction & Secondary Members	**0 (1 Hour Provided)**

SPECIFIC ROOM RATINGS	RATING (In Hours)
Stairs and Floor Openings	**0**
Parking Open Ramps	**0**
Offices + Break Room	**0**
Electrical	**0**
Elevator Shaftway	**2**

EXTERIOR WALL PROTECTION

Wall Fire Resistance Rating (Table 602)	**0** (No rating for 10' or greater per Note c.)
Openings Rating (Table 705.8)	**0** (No rating for 10' or greater per Note g.)

OCCUPANCY LOADS

NFPA Per Chapter 42.8.1.7 :	None
IBC Per Table 1004.1.2 :	1 Per 200 GSF / 226 Per Tier
Egress Width Required : Stairs @ 0.3" Per Person	68"
Egress Width Provided :	96" / (2) 48" Wide Stairs
Stair Exit Door Width Required: 0.2" Per Person	46"
Stair Exit Door Width Provided:	32" Clear Door @ Each Stair

NOTES

1. THE CONSTRUCTION MANAGER SHALL PROVIDE A CONSTRUCTION PHASING PLAN OUTLINING WORK ZONES AND PROTECTION AND SEPARATION FEATURES.
2. CONSTRUCTION MANAGER SHALL OBTAIN APPROVAL OF PROTECTION AND SEPARATION PROVISIONS PRIOR TO EACH PHASE FROM THE CITY CODES ENFORCEMENT OFFICE.

Legend

- EXIT
- SP — DRY STANDPIPE
- EX FD — EXISTING STANDPIPE HOSE CONNECTION
- FD — STANDPIPE HOSE CONNECTION
- FE — FIRE EXTINGUISHER
- SECURITY CALL BOX
- F F — FIRE ALARM PULL STATION + ANNUNCIATOR

NORTH

16 0 16 32

BAR SCALE
1" = 16'
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SCALE	1/16" = 1'-0"
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Ground Level Code Information Plan

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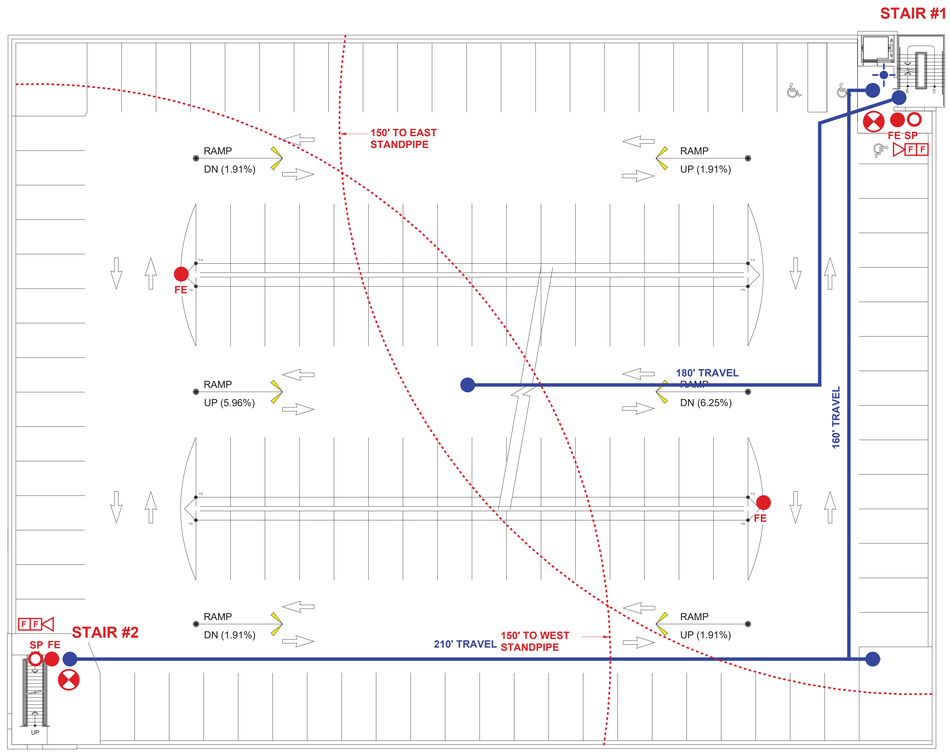

TYPICAL FLOOR LAYOUT PLAN

1" = 16' - 0"

Legend

- EXIT
- SP — DRY STANDPIPE
- EX FD — EXISTING STANDPIPE HOSE CONNECTION
- FD — STANDPIPE HOSE CONNECTION
- FE — FIRE EXTINGUISHER
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NORTH

16 0 16 32

BAR SCALE

1" = 16'

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Upper Levels Code Information Plan

Levels 1 / 2 / 3 + ROOF

G - 102

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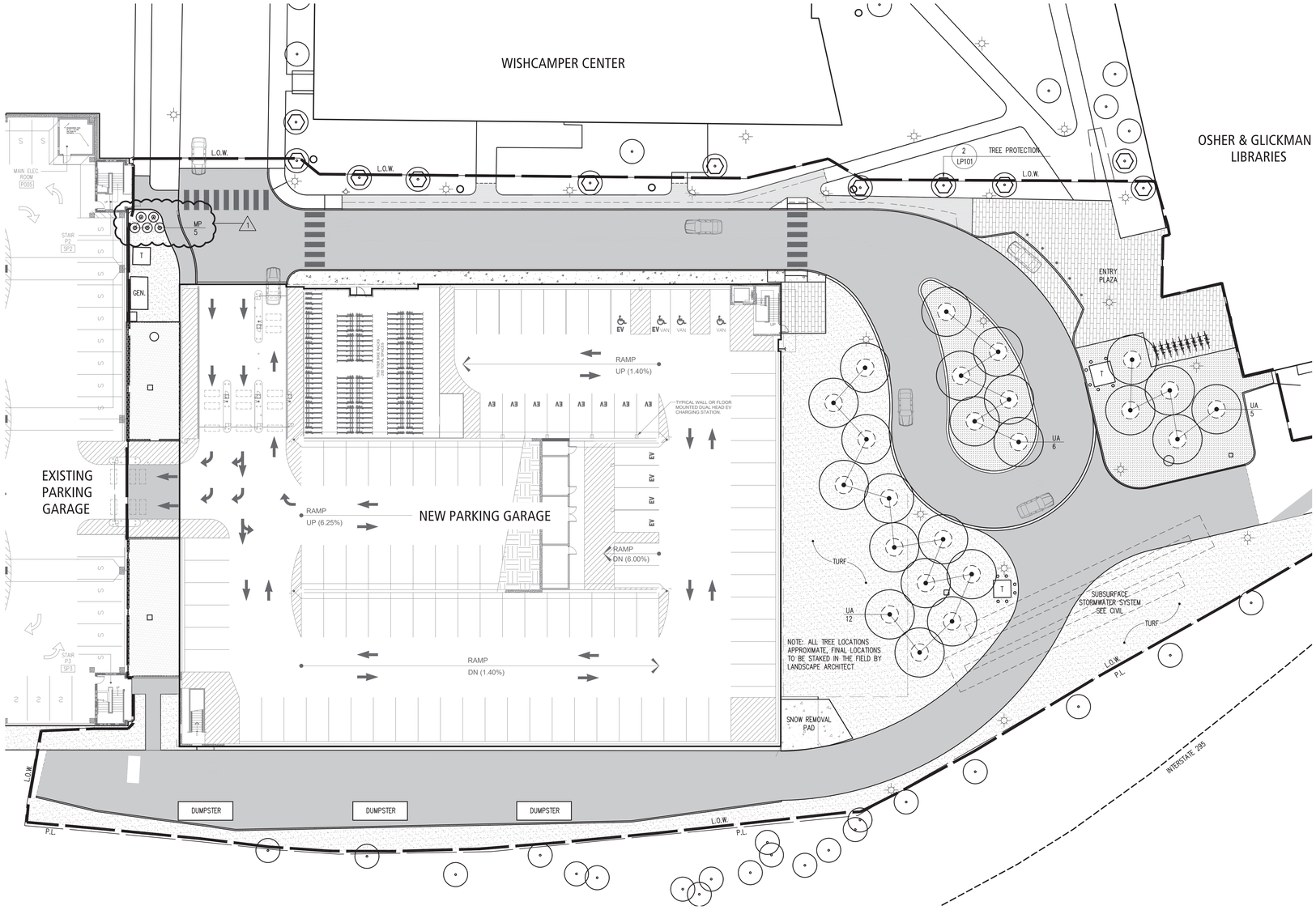
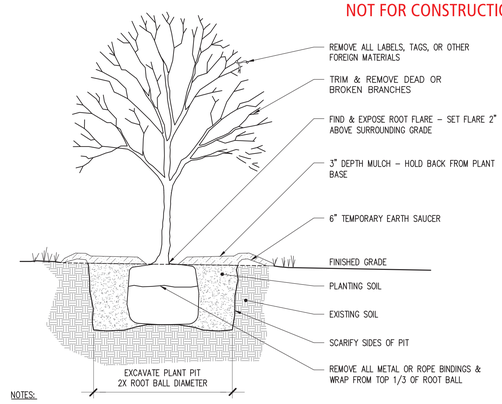
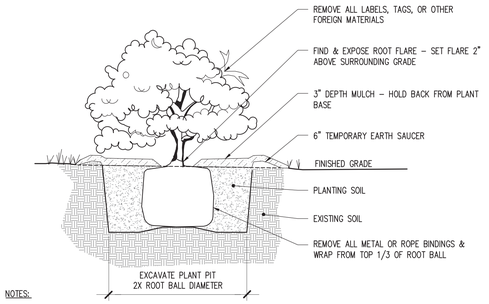




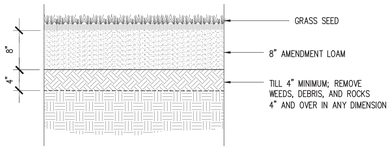
NOTES:

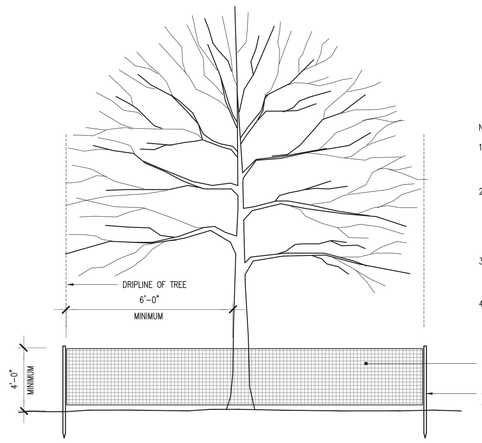
1. TREE TO BE SET PLUMB.
2. SECURE TREE AS MAY BE REQUIRED ACCORDING TO TREE SIZE, LOCATION, & WIND/WEATHER CONDITIONS.
3. IF USING ROOTBALL STABILIZATION, FOLLOW MANUFACTURER'S RECOMMENDATIONS.



NOTES:

1. SHRUB TO BE SET PLUMB.
2. SECURE SHRUB AS MAY BE REQUIRED ACCORDING TO SIZE, LOCATION, & WIND/WEATHER CONDITIONS.
3. IF USING ROOTBALL STABILIZATION, FOLLOW MANUFACTURER'S RECOMMENDATIONS.





NOTES:

1. TREE PROTECTION FENCING SHALL BE INSTALLED PRIOR TO ANY CONSTRUCTION ACTIVITY.
2. INSTALL FENCING TO LIMIT OF DRIPLINE ON TREE OR A MINIMUM OF 6' FROM TRUNK WHEN NECESSARY, WITH PRIOR PERMISISON OF LANDSCAPE ARCHITECT.
3. DO NOT STORE CONSTRUCTION EQUIPMENT, MATERIALS, TOOLS, ETC. WITHIN PROTECTIVE FENCING.
4. MAINTAIN FENCING IN A NEAT AND ORDERLY FASHION THROUGHOUT CONSTRUCTION PERIOD.

PLANT LIST

KEY	QTY	AREA	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	COMMENT
TREES							
UA	23		ULMUS AMERICANA 'PRINCETON'	PRINCETON ELM	4" CAL.	B&B	REC. TREE LIST
SHRUBS							
MP	5	1	MYRICA PENNSYLVANICA	BAYBERRY	#3	POT	
GROUNDCOVER							
	GC	4,760 SF	---	NATIVE GROUNDCOVER	---	---	
	TURF	17,990 SF	---	TURF GRASS	---	SEED	COMPLIANT WITH CITY OF PORTAND PESTICIDE ORDINANCE

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08/09/21	Schematic Design
09/01/21	Revision 1

SCALE **AS NOTED**
DATE ISSUED **08/09/2021**
PROJECT NO **20-20145.00-1**
DRAWN BY **G.G.**
CHECKED BY **-**

SHEET TITLE:

Planting and Landscape Plan

L-100

University of Southern Maine Parking Garage

Overview From North

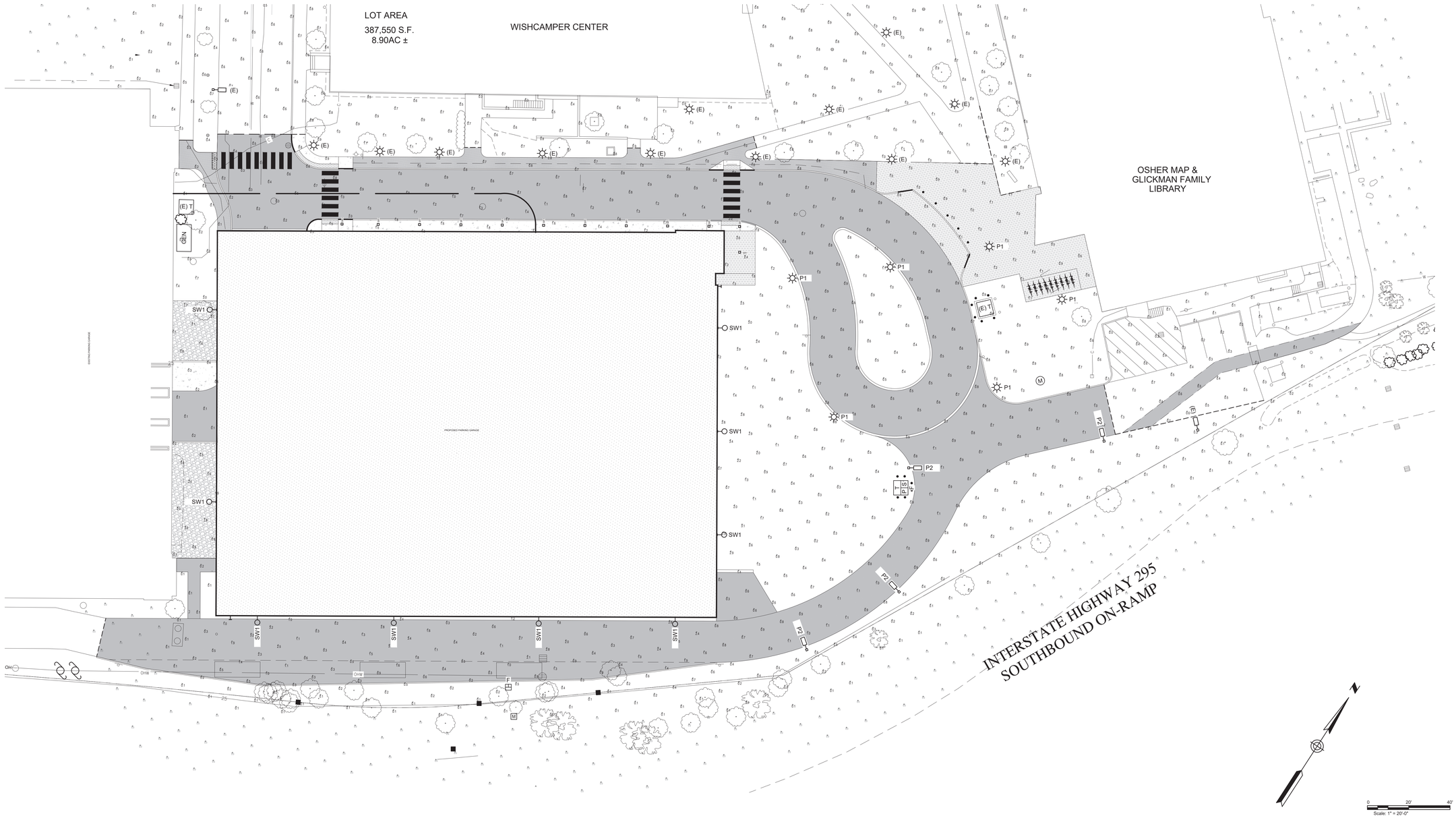
LUMINAIRE SCHEDULE ~ SITE

TYPE	DESCRIPTION	MFR	CATALOG SERIES NUMBER SEE NOTE 1	MOUNTING, U.N.O.	VOLTS	LAMP				KEY NOTES
						QTY PER FIXTURE	WATTS	LUMENS	TYPE	
P1	SITE LIGHT AND POLE, "ICE CREAM CONE" SHAPE	SEE NOTE 8		14' POLE	277	1	24	3,330	LED ARRAY ~ 4000K	8,9
P2	SITE LIGHT AND POLE, "SHOEBOX" SHAPE	SEE NOTE 8		14' POLE	277	1	18	2,160	LED ARRAY ~ 4000K	8,10
SW1	WALL MOUNTED EXTERIOR LIGHT	LITHONIA	KAXW-LED-P1-40K-R4-MVOLT	KEYNOTE 5	UNV	1	29	3,643	LED ARRAY ~ 4000K	5
SR1	RECESSED CANOPY LIGHT	LITHONIA	LDN4SQ-40-07-LS4-AR-LSS-MVOLT	RECESSED CANOPY	UNV	1	8.6	620	LED ARRAY ~ 4000K	

	NOTES
1	**NOTE THAT THESE NUMBERS ARE NOT COMPLETE CATALOG NUMBERS. PROVIDE ALL REQUIREMENTS ON SCHEDULE, NOTES, SPECS, AND DRAWINGS COMBINED.**
2	**CATALOG SERIES NUMBERS ARE USED TO ESTABLISH A LEVEL OF QUALITY AND NOT INTENDED TO LIMIT COMPETITION. SERIES NUMBERS ARE NOT COMPLETE CATALOG NUMBERS. COMPLY WITH ADDITIONAL REQUIREMENTS IN SPECIFICATIONS AND DRAWINGS.**
3	PROVIDE WALL,CEILING, OR PENDANT MOUNTING AS INDICATED ON PLANS. PROVIDE NUMBER OF FACES AND ARROWS AS INDICATED.
4	VERIFY CEILING STRUCTURE AND MOUNTING HEIGHT PRIOR TO ORDERING ANY LIGHT FIXTURES.
5	COORDINATE MOUNTING HEIGHT WITH STRUCTURAL AND ARCHITECTURAL DRAWINGS.
6	PROVIDE COLD WEATHER OPTION.
7	CONFIRM EXACT FIXTURE CONFIGURATION AND OPTIONS WITH MUNICIPALITY PRIOR TO ORDERING FIXTURE.
8	FIXTURE AND POLE SHALL BE PROVIDED BY OWNER FROM EXISTING OWNER'S STOCK.
9	PROVIDE SCREW-IN LED RETROFIT LAMP. BASIS OF DESIGN IS MFG. BY LIGHT EFFICIENT DESIGN, PART NO. LED-8029E345-A.
10	PROVIDE SCREW-IN LED RETROFIT LAMP. BASIS OF DESIGN IS MFG. BY LIGHT EFFICIENT DESIGN, PART NO. LED-8039E40-A.

Calculation Summary

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
DRIVES	Illuminance	Fc	0.99	3.5	0.2	4.95	17.50
WALKWAY- GLICKMAN	Illuminance	Fc	1.00	1.3	0.5	2.00	2.60
WALKWAY- NEW GARAGE	Illuminance	Fc	1.46	1.7	1.2	1.22	1.42



A1	PHOTOMETRIC SITE PLAN
SCALE: 1"=20'-0"	

7/2/2021 3:16:33 PM

UNIVERSITY OF SOUTHERN MAINE

25 Bedford Street, Portland, ME 04104
207.712.5183 | USM.MAINE.EDU

PROJECT TEAM:

CLIENT
UNIVERSITY OF SOUTHERN MAINE

PRIME CONSULTANT
& STRUCTURAL ENGINEER
DESMAN Design Management
18 Tremont Street #300
Boston, MA 02108

ARCHITECT
WINTON-SCOTT ARCHITECTS
5 MILK STREET
PORTLAND, ME 04101

CIVIL ENGINEER
WOODARD & CURRAN
41 HUTCHINS DRIVE
PORTLAND, ME 04102

LANDSCAPE ARCHITECT
MICHAEL BOUCHER LANDSCAPE ARCHITECTURE
457 US ROUTE 1 SUITE 2
FREEPORT, ME 04032

MEP/FP ENGINEER
ALLIED ENGINEERING
160 VERANDA STREET
PORTLAND, ME 04103

GEOTECHNICAL ENGINEER
S.W. COLE
286 PORTLAND ROAD
GREY, ME 04039

TRAFFIC ENGINEER
VANASSE HANGEN BRUSTLIN INC
40 IDX DR 100 #200, SOUTH
BURLINGTON, VT 05403

COST ESTIMATOR
PREFERRED CONSTRUCTION MGMT
94 AUBURN ST,
PORTLAND, ME 04103

SEAL / SIGNATURE

© DESMAN, Inc.
2021

PROJECT:

USM - Structured Parking Garage

Address

44 Bedford Street,
Portland ME 04104

REVISIONS:

No.	Date	Description

SUBMISSIONS:

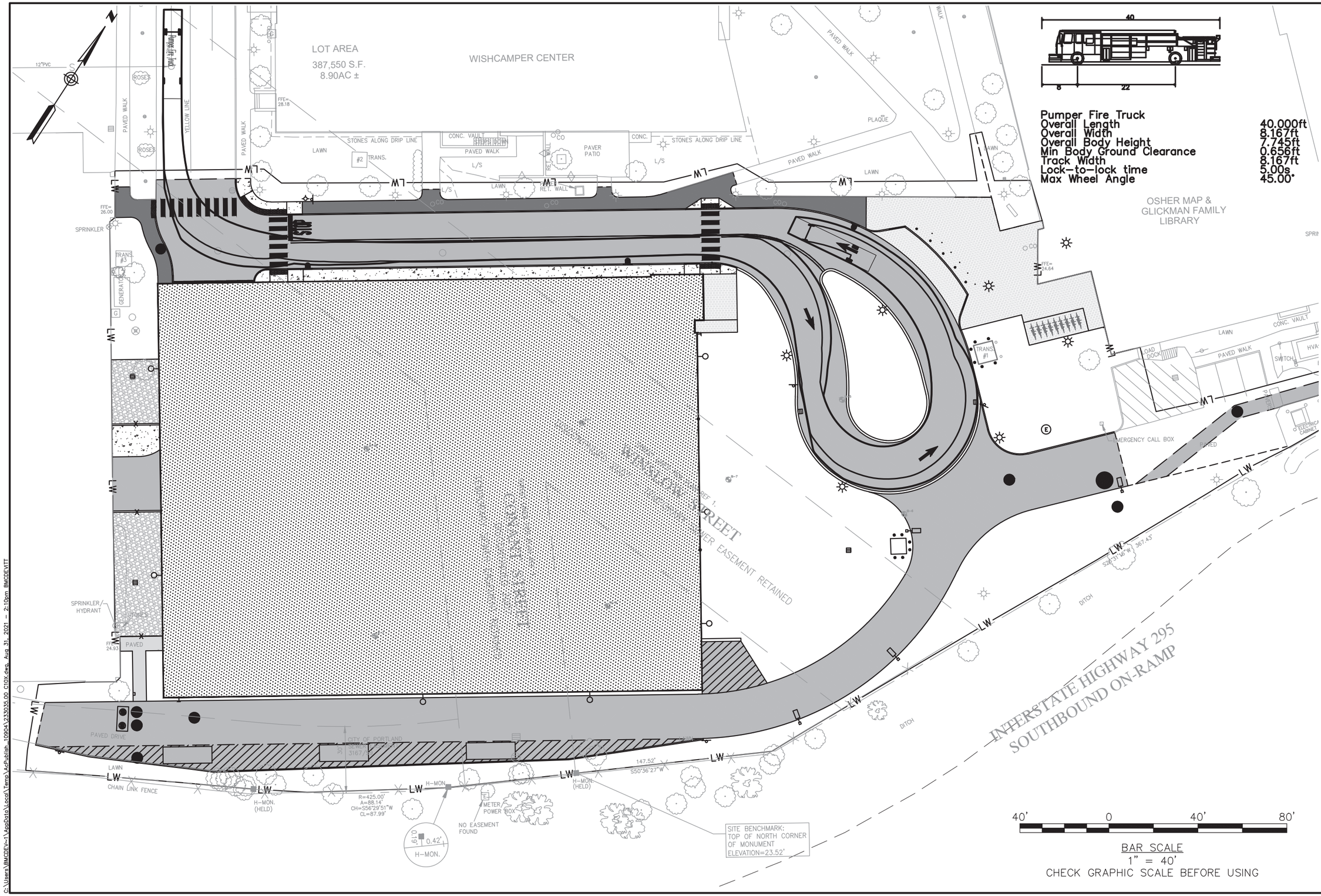
Date	Issued For:
07/30/21	Site Plan Submittal

SCALE	**AS NOTED**
DATE ISSUED	**07/30/2021**
PROJECT NO	**20-20145.00-1**
DRAWN BY	**GMC**
CHECKED BY	**BTG**

SHEET TITLE:

SITE PHOTOMETRIC PLAN AND SCHEDULES

SL-100



41 Hutchins Drive
Portland, Maine 04102
800.426.4262 | www.woodardcurran.com

COMMITMENT & INTEGRITY DRIVE RESULTS

WOODARD & CURRAN

VEHICLE MOVEMENT – FIGURE 1

DESIGNED BY: ANL
DRAWN BY: BCM
CHECKED BY: DBS
233035.00 C10X.dwg

UNIVERSITY OF SOUTHERN MAINE
PORTLAND, MAINE

USM – STRUCTURED PARKING GARAGE
50 BEDFORD ST. PORTLAND, ME 04104

JOB NO: 233035.00
DATE: SEPTEMBER 2021
SCALE: 1"=40'

VEH. 1

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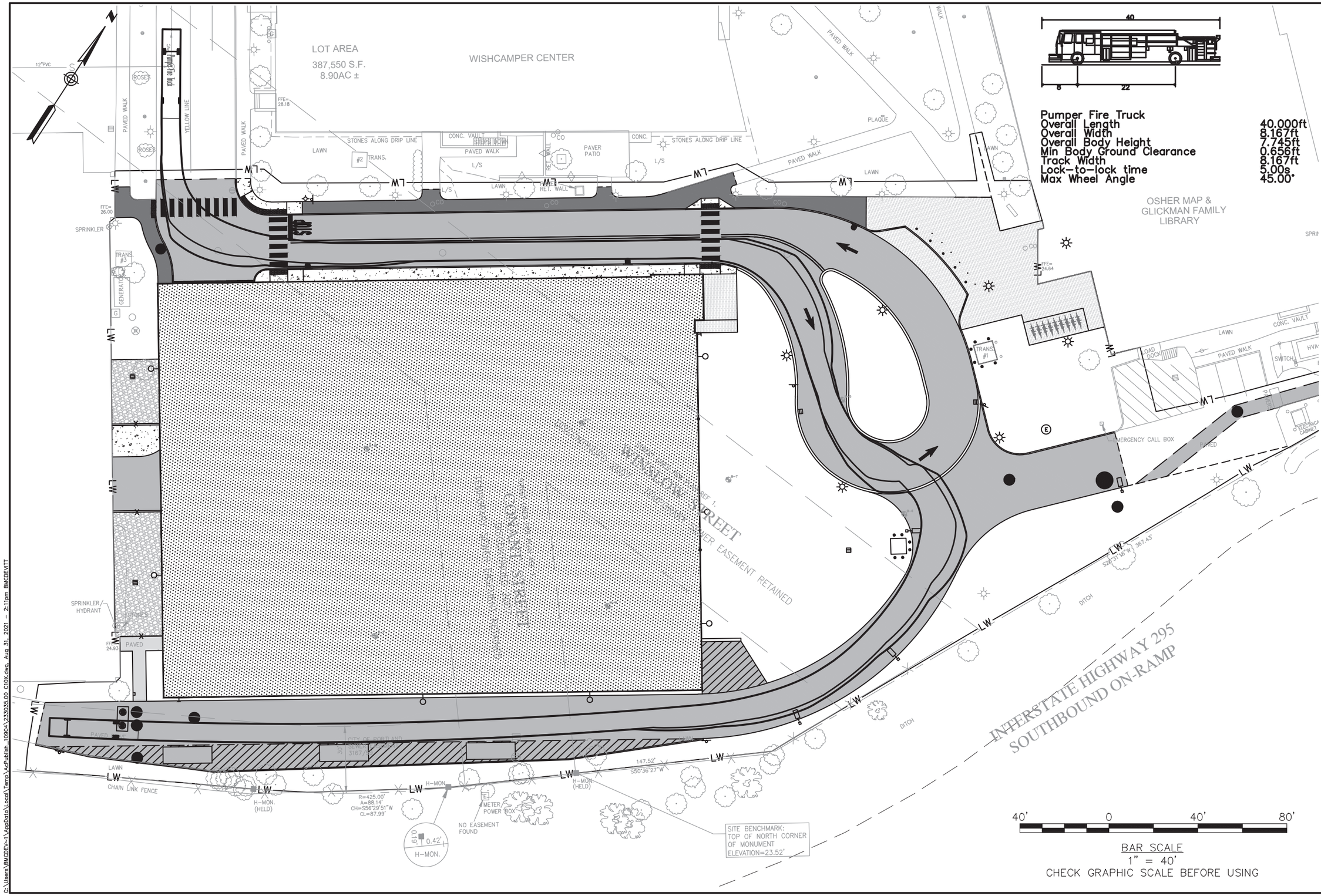

VEHICLE MOVEMENT FIGURE – 2

DESIGNED BY:	ANL
DRAWN BY:	BCM
CHECKED BY:	DBS
	233035.00 C10X.dwg

UNIVERSITY OF SOUTHERN MAINE
PORTLAND, MAINE

USM – STRUCTURED PARKING GARAGE
50 BEDFORD ST. PORTLAND, ME 04104

JOB NO: 233035.00
DATE: SEPTEMBER 2021
SCALE: 1"=40'

VEH. 2

41 Hutchins Drive
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COMMITMENT & INTEGRITY DRIVE RESULTS

WOODARD & CURRAN

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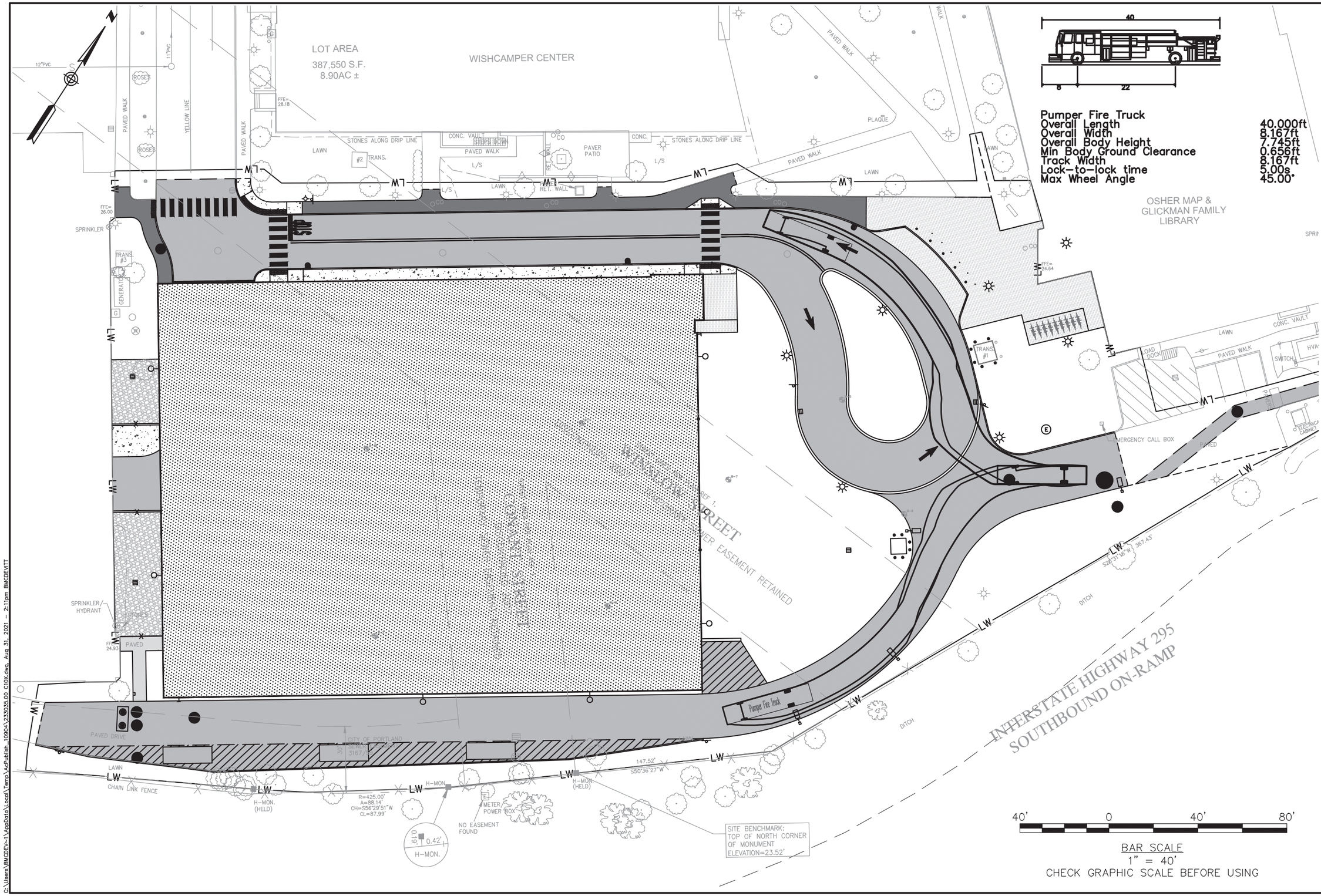

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Portland, Maine 04102
800.426.4262 | www.woodardcurran.com

COMMITMENT & INTEGRITY DRIVE RESULTS

WOODARD & CURRAN

VEHICLE MOVEMENT FIGURE – 3

DESIGNED BY:	ANL	CHECKED BY: DBS
DRAWN BY:	BCM	233035.00 C10X.dwg

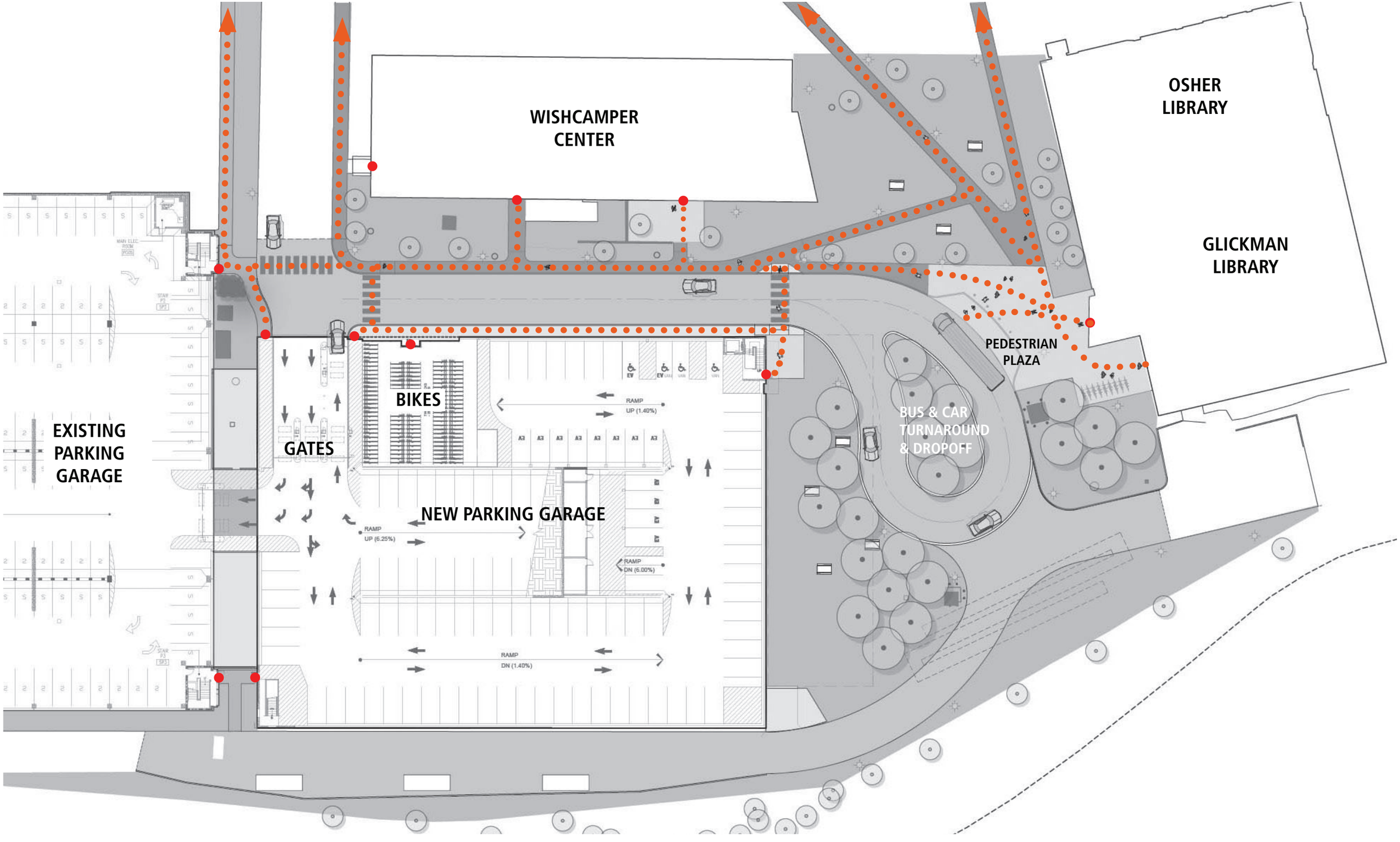
UNIVERSITY OF SOUTHERN MAINE
PORTLAND, MAINE

USM – STRUCTURED PARKING GARAGE
50 BEDFORD ST. PORTLAND, ME 04104

JOB NO: 233035.00
DATE: SEPTEMBER 2021
SCALE: 1"=40'

VEH. 3

C:\Users\BMCDEV~1\AppData\Local\Temp\AcPublish_10904\233035.00 C10X.dwg, Aug 31, 2021 - 2:11pm BMCDEVITT



USM PARKING GARAGE: WISHCAMPER SITE
Portland, Maine

PEDESTRIAN ROUTES

1 SEPTEMBER 2021
mbla | inc

PLANNING BOARD REPORT
PORTLAND, MAINE

126 and 128R North Street
Level III Site Plan and Subdivision
PL-000791-2019
Upright Properties, LLC, Applicant

Submitted to: Portland Planning Board Public Hearing Date: September 28, 2021	Prepared by: James Rather Date: September 24, 2021

I. INTRODUCTION

At its September 8, 2020 meeting, the Planning Board voted 7-0 to approve an application for a three-story, six-unit residential building at 126 North Street and a four-story, six-unit condominium building at 128R North Street, for a total of twelve residential units. The Planning Board decision was appealed by abutters. In the appeal, abutters challenged the Board's findings on a number of bases. The Superior Court ultimately upheld the Board's decision on all points, except for its grant of the applicant's request for a waiver of the parking requirement under the provisions of the affordable housing ordinance. According to the Court, because there were not sufficient findings of fact contained in the Board's decision as to how the application met the standards for a parking waiver, another hearing to allow for fact finding on that question was required. The application is therefore back before the Board so that it can engage in fact finding on that discrete question: whether and on what basis the application meets the standard for a waiver of the parking requirement under Section 14-332.2 of Chapter 14, the version of the Land Use Code that governs this application. Although the scope of the Board's review is narrowly focused on whether the application satisfies the parking waiver standard, what follows is a brief overview of the project and the evidence in the record related to satisfaction of the site plan ordinance's parking standards.

Figure 1 – Aerial of the Development Site

The development site is located in the R-6 Residential zone and is within the Munjoy Hill Neighborhood Conservation Overlay District. This redevelopment project includes the demolition of the existing structures on the sites and construction of two structures with a six-unit condominium building and a six-unit rental housing building, both with on-site parking – a mix of surface and structured. The project will house six parking spaces at 128R North Street and two spaces at 126 North Street.

The application had three workshops; the first one was held on January 28, 2020, the second was held on May 26, 2020, and third was on July 21, 2020, with the public hearing on September 8, 2020. As this application was reviewed and approved under the pre-December 2020 Land Use Code, all code citations reference that document. The Planning and Urban Development Department mailed 211 notices advertising this meeting to interested parties and property owners within 500 feet of the site. A legal advertisement ran in the September 17th and 18th, 2021 editions of the *Portland Press Herald*. As of this writing, no public comments have been received.

Applicant: Upright Properties, LLC
Consultants: Will Savage, PE, Acorn Engineering, Inc.
Tracie Reed, Architect, Dextrous Creative

II. REQUIRED REVIEWS

Waiver Requests	Applicable Standards
Request: To reduce the required 18-foot wide parking stall dimensional requirement to 16.5 feet	Technical Manual, *Section 1.14,* requiring that standard parking space to be 9 feet wide by 18 feet long
Request: Reduction of required parking spaces	Sec. 14-332.2
Reviewed Against the following	**Applicable Standards**
Site Plan	Section 14-526
Subdivision	Section 14-497
Inclusionary Zoning (IZ)	Section 14-474, Section 14-487
Munjoy Hill Neighborhood Conservation Overlay District	Sec. 14-140.5
R-6 Small Infill Development Design Principles & Standards	Appendix 7 of the Design Manual

III. PROJECT DATA

Existing Zoning	R-6 Residential, MHNC overlay
Existing Use	Residential
Proposed Use	Residential
- Bedroom Mix	Seven 2-BR, Four 1-BR, One 4-BR
Combined Parcel Size	9,787 SF

	Existing		Proposed		Net Change	
	126	**128R**	**126**	**128R**	**126**	**128R**
Building Footprint	1,885 SF	1,404 SF	1,670 SF	3,380 SF	-215 SF	+1,976 SF
Building Floor Area	4,360 SF	0 SF	4,820 SF	11,441 SF	+460 SF	+11,441 SF
Impervious Surface Area	82.4%	27.5%	80%	60%	-2.4%	+52.5%
Parking Spaces	3	0	2	6	-1	+6
Bicycle Parking Spaces	0	0	2	2	2	+2
Estimated Cost of Project	$3,000,000					

IV. BACKGROUND

The development site is located at 126 and 128R North Street and within both the R-6 Residential zone and the Munjoy Hill Neighborhood Conservation Overlay District. 126 North Street has frontage on North Street, whereas 128R North Street is a rear lot immediately adjacent to the Munjoy Heights condominium complex and across the street from the Island View apartment complex. Both properties are currently accessed by bituminous driveways off North Street.

Figure 2 - Existing 126 and 128R (at rear) North Street

The 128R site currently shares a driveway with the neighboring property under different ownership. On the side that abuts the Munjoy Heights condominiums, the site slopes down significantly and extends towards a concrete block retaining wall constructed as part of a condominium project from 2015. There is a ten-foot maintenance easement along the rear property line which would provide future access for the Munjoy Heights property to repair or replace the wall when necessary.

Figure 3 – Zoning Context

V. APPROVED DEVELOPMENT

The approved development is a three-story, six-unit residential building fronting on North Street and a four-story, six-unit condominium building at the rear of the lot. The three-story building will have five two-bedroom apartments, one one-bedroom accessible unit, and two off-street, tandem parking spaces. The condominium building will have six units; one is a workforce housing unit on the ground floor and five units serviced via an elevator on upper floors and six parking spaces. A workforce housing unit was proposed in order to obtain the height bonus for the 128R North Street building. The existing curb cuts/driveways will continue to provide access for the two buildings. At its public hearing on September 8, 2020, the Board 7-0 voted to approve the project.

Figure 4 – Site Plan

The Planning Board Report for the original application approved on September 8, 2020, which includes the original findings made by the Board as well as applicable waivers and approval conditions, is attached to this report as Attachment A.

V. DEVELOPMENT REVIEW

SITE PLAN STANDARDS (Section 14-332.2)
Under the Superior Court's remand order, the sole question before the Board is whether the application satisfies the requirements of Section 14-332.2 such that a reduction of the usual parking requirement is appropriate. The language below addresses the standards governing this aspect of the project. Staff comments on each of the required findings in this section have been included below and constitute proposed findings of fact for the Board's consideration.

a) Transportation Standards

1.

a. Parking

Division 20 of the Land Use Code requires one parking space/unit for residential development located on the peninsula. Section 14-332.1 (k) states: "for residential development on the peninsula and in the R-6 and R-6A Zones, including new construction, the parking requirement is one space per dwelling unit, the first three units are exempt from providing parking". Therefore, applicant would be required to provide a total of nine spaces for the development, unless an exception or waiver applies. The applicant sought a reduction of the parking ratio for the development under Section 14-332.2(b), which contemplates a reduction in required parking spaces where a project includes onsite affordable housing and meets the eligibility criteria outlined in the ordinance. Specifically, Section Section 14-332.2 (b) provides:

> *For each low-income or workforce housing unit for rent or sale within an eligible project under the Affordable Housing Ordinance established in Division 30 of this article, no more than one (1) parking space shall be required. The planning board may establish a parking requirement for affordable housing units for rent or sale within an eligible project that is less than one (1) parking space per affordable housing unit, regardless of the size of the structure.*

Land Use Code Sec. 14-485, in turn, defines an "eligible project" to mean a development project:

(a) That is permissible under the provisions of this chapter in the zone in which is proposed;

Staff comment: this project, as a multifamily residential use located in the R-6 Residential zone and Munjoy Hill Neighborhood Conservation Overlay District, is a permitted use in the zone in which it is proposed. See Attachment A – Planning Board Report 9.08.2020. The project therefore meets this criterion.

(b) That will be a single-family or multi-family dwelling, or subdivision consisting of a group of dwellings, and will not be located in an R-1 or R-2 zone;

Staff comment: this project is a multifamily dwelling, and is located in an R-6 zone and not in either an R-1 or R-2 zone, thus satisfying this requirement. See Figure 3 – Zoning Context and Attachment A.

(c) That creates new dwelling units, among which is at least one low-income or workforce unit for rent or sale, through new construction, substantial rehabilitation of existing structures, adaptive reuse or conversion of a non-residential use to residential use, or any combination of these elements. Affordable housing units for sale or rent may not differ in exterior design from other units within an eligible project; and

Staff comment: This project, as a new construction multifamily residential development with both for-sale and rental components, proposes to create new dwelling units, including two new

workforce housing units on Munjoy Hill. The new affordable units are proposed to be included in the same structures as the other 10 dwelling units being proposed by the applicant. Because both the new affordable units and the new market rate units will be housed together, the exterior design of the affordable units will not differ from the rest of the development such that the project satisfies this requirement.

(d) Projects shall not be considered "eligible projects" solely because they are subject to Section 14-487 ("Ensuring Workforce Housing")

Staff comment: While this project is subject to Section 14-487, it is also subject to the above referenced criteria (a) through (c). As outlined above, the project is consistent with those additional criteria. Further, the project – and the provision of onsite affordable units – advances the purposes of Section 14-332, including a desire to incentivize developers to create more affordable housing units in the City of Portland in spite of a robust demand for market-rate units. See Attachment B – Chapter 14 (Superceded) Excerpts. The project advances the objectives of Section 14-332 in that the applicant is committing to actually constructing the affordable units as part of the proposed project, rather simply than paying a fee in lieu as it is entitled to do under Section 14-487. As a result, there will be two new affordable housing units available much more quickly than if the applicant were satisfying its Inclusionary Zoning obligations simply by paying a fee in lieu. Additionally, by providing the affordable units on site rather than building them at a different location, this project will contribute to the integration of affordable and market rate housing in a manner that advances the objectives of the Affordable Housing ordinance more broadly. All of these factors support a finding that the proposed affordable units do more than merely satisfy 14-487's minimum requirements – such that the project is appropriately deemed to be an "eligible project."

As the subject application is subject to criteria (a) through (d) above and, based on the evidence outlined above, satisfies each of the elements required for the grant of a parking reduction under Section 14-332, staff recommends that the Planning Board conclude that the project is eligible for a parking reduction and approve the requested reduction in required parking from nine spaces to eight spaces.

VI. PLANNING BOARD PROPOSED MOTIONS

A. SITE PLAN REVIEW – PARKING REDUCTION

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 September 28, 2021 for application PL-000791-2019 relevant to the parking requirement; and the testimony presented at the Planning Board hearing, the Planning Board [**approves/does not approve**] a reduced parking requirement of eight parking spaces.

XIII. ATTACHMENTS

PLANNING BOARD REPORT ATTACHMENTS

A. Planning Board Report 9.08.2020
B. Chapter 14 (Superceded) Excerpts

APPLICANT'S SUBMITTALS (FROM ORIGINAL APPLICATION)

A. Cover Letter
   A1. Cover Letter 08.27.2020
B. Application Form
C. Right, Title & Interest

C1. Purchase and Sale
D. Zoning Assessment
E. Easements
E1. MH Easement Opinion Letter
F. Waivers
G. Financial Capacity
H. Technical Capacity
I. Conformity with Land Use Ordinance
J. Stormwater Management Report
K. Erosion and Sedimentation Control Report
L. Fire Department Letter
M. Wastewater Capacity
N. Lighting
O. Architectural Design Narrative
P. Utility Cover
Q. Construction Management Report
R. Solid Waste Disposal
S. Parking Analysis
T. Neighborhood Study & Project Renderings
U. Neighborhood Meeting Invitation
V. Certification Letter
W. Neighborhood Meeting Minutes
X. Sign-in Sheet
Y. Neighborhood Presentation
Z. Comment Response Letter
AA. Neighborhood Invitation 2
BB. Certification Letter 2
CC. Meeting Minutes 2
DD. Sign-In Sheet 2
EE. Comment Response Letter II
FF. Rifugio - A Condo Declaration V.3
FF1. Rifugio COA Bylaws V.3
FF2. Rifugio Rules & Regs V.3
GG. Project Schedule
HH. Comment Response Letter III

PLANS

Plan 1. Cover Sheet
Plan 2. General Notes
Plan 3. Survey
Plan 4. Construction Management Plan
Plan 5. Site Plan
Plan 6. Landscape Plan
Plan 7. Utility Plan
Plan 8. Grading & Drainage Plan
Plan 9. Site Details I
Plan 10. Site Details II
Plan 11. Landscape Details
Plan 12. Utility Details I
Plan 13. Utility Details II
Plan 14. Drainage Details
Plan 15. Focal Point Rain Garden Details
Plan 16. Erosion & Sedimentation Control Notes
Plan 17. Basement Plan
Plan 18. First Floor Plan
Plan 19. Second and Third Floor Plan
Plan 20. Fourth Floor Plan
Plan 21. Roof Plan
Plan 22. Basement Plan
Plan 23. Front and Back Elevations – A
Plan 24. Front and Back Elevations – B
Plan 25. Side Elevations – A
Plan 26. Side Elevations – B
Plan 27. Perspectives – A
Plan 28. Perspectives – B
Plan 29. Subdivision Plat
Plan 30. Subdivision Plat - Phase 2
Plan 31. Phase 2 Plans
Plan 32. Phase 2 Perspectives – A
Plan 33. Phase 2 Perspectives – B
Plan 34. Front and Back Elevations - Phase 2
Plan 35. Side Elevations - Phase 2
Plan 36. Site Section
Plan 37. Color Site Plan
Plan 38. Civil 2-13-20-Color - Site

Att. 1

Portland Maine Yes. Google's good here.

Shukria Wiar <shukriaw@portlandmaine.gov>

128 North Street

Mike Tremblay <mtremblay@portlandmaine.gov> Fri, Mar 13, 2020 at 2:25 PM
To: Shukria Wiar <shukriaw@portlandmaine.gov>

Shukria,

Here are my comments on 126 + 128 North Street:

- Space 5 in the 128R North Street is not a sufficient size to be considered a legal parking space under the city's zoning. Its dimensions are below what the city considers to be a compact space (8x15'). While the space is about 16.7 feet long, it narrows to less than 8.0 feet after about 10 feet. As requested previously, this space should not be shown as a marked parking space.

- The newest proposed site plan has 6 units in each of the two buildings, for a total of 12 units. Seven sufficiently-sized parking spaces are required. As a whole, the project's parking supply is sufficient on the assumption that each building (not the lot as a whole) is exempt from providing the first three parking spaces, with a 1:1 ratio required thereafter. However, the lopsidedness in the parking supply may not be acceptable based on the easements with the adjacent property. The Applicant has previously stated that vehicles associated with 126 North Street may not be permitted to use the access easement associated with 128R North Street. If this is the case, then only two parking spaces are being provided for 126 North Street, possibly in violation of zoning. Zoning should review determine whether a conflict exists, and if so, the applicant should revisit the site plan, providing the correct number of parking spaces at each address.

- The 11x20' turnaround provided in the site plan is required for vehicles to turn around and exit the site facing forward. As such, this area may not be used as parking or for extensive snow storage.

- The drive aisle accessing 128R North Street is sufficient. DPW defers to FPD with regard to drive aisle clear width within the Technical Manual's standards. The drive aisle plus 5-foot walkway combine to a 16-foot clear area sufficient for emergency vehicles. The full width of this clear area should remain clear of obstructions.

- Snow storage areas are shown on the site plan. Additional snow removal measures will likely need to be taken after heavy storms.

Thank you,
Mike

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

[Quoted text hidden]

Att. 2

Portland Maine Yes. Google's good here.

Shukria Wiar <shukriaw@portlandmaine.gov>

128 North Street - No Comments

Lauren Swett <lswett@woodardcurran.com> Fri, Aug 14, 2020 at 8:27 AM
To: Shukria Wiar <shukriaw@portlandmaine.gov>

Hi Shukria,

I just wanted to follow up on the discussion from Development Review. The Applicant had addressed all of my prior comments, and I have no additional comments for the 128 North Street project.

If you need anything else on this let me know.

Thanks,

Lauren

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

Lauren Swett, P.E.*

Technical Manager

Woodard & Curran

41 Hutchins Drive

Portland, Maine 04102

Phone: (207)558-3763 (direct)

(207)219-3591 (cell)

(800)426-4262 (office)

Email: lswett@woodardcurran.com

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M.ASCE

Chair, Leader Training Committee

American Society of Civil Engineers

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

Att. 3

Portland Maine Yes. Google's good here.

Shukria Wiar <shukriaw@portlandmaine.gov>

North Street

Jeff Tarling <jst@portlandmaine.gov> Tue, Jan 21, 2020 at 7:10 PM
To: Shukria Wiar <shukriaw@portlandmaine.gov>

Hi Shukria -

The North Street project should include some type of landscape treatment, after looking at the site they may want to consider smaller scale trees / shrubs like Amelanchier, which can be a small tree or shrub depending on the cultivar selected. Lilacs or viburnums could also work. Plantings can be in groves or along the property line.

We can suggest types, sizes and spacing.

Thanks

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

Portland Maine Yes. Google's good here.

Shukria Wiar <shukriaw@portlandmaine.gov>

128 North Street PL-000791-2019

Jason Grant <jgrant@portlandmaine.gov> Wed, May 20, 2020 at 1:08 PM
To: Shukria Wiar <shukriaw@portlandmaine.gov>

The Fire Department approves the site plan for 128 North Street with the following condition. The construction of the rear unit may begin and be completed with the existing site access. However before the Certificate of Occupancy for the rear unit is issued, the existing unit shall be demolished and the proposed access lane (driveway) for the rear unit shall be completed.

Jason Grant CFI-2, CFPE
Life Safety CEO / Plan Reviewer
Permitting and Inspections Department
City of Portland
389 Congress Street Rm 315
Portland, Maine 04101
Phone:(207) 756-8187

Planning and Urban Development Department
Planning Division

Subject: R-6 Small Infill/Multi-family Design Review – 128R North Street

Written by: Caitlin Cameron, Urban Designer

Date of Review: Wednesday, December 4, 2019

A design review according to the *City of Portland Design Manual* Standards was performed for the revised proposal for new construction of a multi-family dwelling at 128 North Street. The review was performed by Caitlin Cameron, Urban Designer, Shukria Wiar, Planner, and Deb Andrews, Historic Preservation Program Manager. The project was reviewed against the *R-6 Small Infill Development Design Principles & Standards* (Appendix 7 of the Design Manual).

Findings of the Design Review:
The proposed design **passes** all of the criteria of the R6 Design Standards.

- The predominant characteristics of the neighborhood include simple forms, material selection and placement, and limited window types and articulation methods used consistently throughout the building with regular rhythm of patterns. Multi-family buildings typically have a vertically proportioned façade with a flat roof line, massing variation with bay windows or stacked porches integrated into the form.
- This project has massing that is more complex and larger in footprint and scale that the neighborhood context and especially as it relates the adjacent residential buildings. Therefore, in order to be contextual, massing variation, scale, and other design elements must break the building into proportions and scales that relate to the multi-family context nearby.
- The building should be treated like one building with attention to being consistent, cohesive, but also recessive.
- Because the building is a rear lot, the relationship to the street and neighboring buildings is evaluated differently given the anomalous and less visible context.

Design Review Comments *(red text denotes principles or standards that are not met):*
Appendix 7: R-6 Infill Development
Principle A Overall Context –Met – see below.

- *A-1 Scale and Form:* The context is predominantly single and two-family buildings with simple forms, one and a half to two and half stories in height, vertical proportions, and masonry bases with clapboard siding. Larger multi-family buildings typically are 3 stories, use balconies or bay windows, flat roofs, and vertical proportions. In those rare instances where a larger scale, wider building has been built, the scale is mitigated by keeping setbacks as a buffer and through massing variation with elements such as bay windows and porches, and scaling elements such as canopies, material variation, and balconies. The overall building scale and form is larger and more complex than those found in the context. Some scale mitigation has been achieved by varying the massing at the front, maintaining a flat roof, and varying materials. The design creates façade

compositions reminiscent of triple-deckers at the corners of the building to create a relatable scale and form. In this situation, a building is found to meet the standard because the massing is manipulated to relate to the context buildings and create perceived massing and scale that relate. Staff find that the current iteration of massing relationships and proportions are now related enough to the context buildings to mitigate the scale and complexity. This is especially the case given the rear lot relationship to the street and the mitigation of scale and width being set back from the street and behind other residential buildings.

- *A-2 Composition of Principal Facades:* The façade composition in some ways relates to those in context – staff find it appropriate as a large, rear lot building, to be quiet, recessive and simple in the façade composition. The facade is treated with a consistent language but with color and massing variation to create positive scale and proportional relationships. The fenestration patterns, roof lines, materials are consistent throughout with a cohesive façade with a single roof line, consistent window type and placement, integration of balconies, and simple material placement. Predominantly, traditional façade compositions include vertical proportions and narrower buildings – the massing variation and façade composition were revised to better reflect these patterns. The façade composition is also impacted by placement of circulation at the front façade and the overall width of the building, which is much wider than the buildings with which it shares the streetscape.
- *A-3 Relationship to the Street:* The project has an anomalous relationship with the street as a rear lot and is not expected to directly relate to the street in the same way as a project with frontage. The building orients to the street and has visible entrances.

Principle B Massing – Met – The building is larger in scale than what is found in the context in both height and width of the building. In that situation, projects must use massing variation to elicit references to the proportions, forms, and massing found in traditional multi-family buildings and to mitigate the scale impact of this larger building adjacent to small, single family buildings. In this case, the building massing results in perceived masses that relate to the context in the scale, proportion, and relationships found in the triple-decker buildings.

- *B-1 Massing:* The proposed massing is complex in a context where buildings have simple form and massing. The scale and massing of this new project is taller, wider and more complex than the residential context – in order to be considered to meet the standard to be harmonious with the massing of existing buildings, the proposed massing variation breaks down the perceived scale and relates in proportion. In this case, the balconies, three-story flat roof, massing variations define portions of the building into smaller, vertical proportions that are harmonious with the massing of the existing buildings.
- *B-2 Roof Forms:* The proposed flat roof form is in keeping with the traditional multi-family building types found in the context. This form is emphasized with a strong, overhanging cornice line.
- *B-3 Main Roofs and Subsidiary Roofs:* The roof was revised to have one main roof form.
- *B-4 Roof Pitch:* The roof is flat.
- *B-5 Façade Articulation:* The project employs a covered entry, balconies.
- *B-6 Garages:* The garage is attached with living space above, door is recessed from facade.

Principle C Orientation to the Street – Met – This project has an anomalous relationship to the street as a rear lot. The building is oriented towards the street with street-oriented entrances

though the building is set back from the street and the lot does not have a direct relationship with the sidewalk.

- *C-1 Entrances:* The main entries are oriented towards the street and are emphasized by special materials, canopy. The hierarchy of the entrances was addressed by bringing more emphasis to the "main" entrance and down-playing the single unit entrance.
- *C-2 Visual Privacy:* Visual privacy is adequately addressed; all living spaces are elevated or set back from the street.
- *C-3 Transition Spaces:* The transition from the sidewalk to the building entrance is significant given the rear lot placement of the building.

Principle D Proportion and Scale – Met – The proportion and massing of the front façade was revised to feel more cohesive and consistent with proportions that reference the traditional multi-family buildings in the context. The individual building elements are human-scaled.

- *D-1 Windows:* The majority of windows are rectangular and have a vertical proportion. The proportional relationship of the fenestration to the façade is appropriate to the context.
- *D-2 Fenestration:* The project appears to meet the 12% fenestration requirement and appropriately scaled to the massing of the building. Appropriately scaled openings are provided on all sides of the building.
- *D-3 Porches:* The balconies meet the size requirement.

Principle E Balance – Met – The façade uses local symmetry and alignment as described in the standards below, the overall project with an overall sense of balance with the massing, façade proportions, and fenestration patterns. As a rear lot, the front façade is not viewed from the front and is best treated to be recessive.

- *E-1 Window and Door Height:* The majority of window and door head heights align along a common horizontal datum.
- *E-2 Window and Door Alignment:* The majority of windows shall stack so that centerlines of windows are in vertical alignment.
- *E-3 Symmetricality:* Primary window compositions are arranged symmetrically around discernable vertical axes.

Principle F Articulation –

- *F-1 Articulation:* The design uses balconies, a strong roof line, and the texture of the material to provide surface articulation and visual interest.
- *F-2 Window Types:* Two window types are used with consistency with the window types, rhythm, and placement.
- *F-3 Visual Cohesion:* The visual cohesion of the façade was improved with simple materials, limited window types, consistent roofline. The massing variation and proportions were revised to be referential to the triple-decker proportions, massing relationships, and stacked balcony treatment. The project, though a different footprint and scale than the traditional triple-deckers, creates visual cohesion – material selection, placement, consistent details and window patterns throughout.
- *F-4 Delineation between Floors:* The balconies provide the most apparent floor delineation. The entry canopy also makes this distinction.
- *F-5 Porches, etc.:* The entrances were revised to integrate into the overall design. The articulation methods used – change in material, canopy, landscape wall – signify the entrances while keeping within the language of the overall building. The balconies now

have a more appropriate railing and the stacked porches are better integrated into the overall façade design and use the railings as an opportunity to introduce articulation detail.

- *F-6 Main Entries:* There are many entries – legibility of the entrances was improved. The main entry is visible from the street approach, emphasized with a canopy, material change, landscape wall, glazing. The single unit entry is now down-played as secondary but still includes planters and a canopy to signify the entrance.
- *F-7 Articulation Elements:* The rake of the roof meets the 6" requirement; no trim; offsets in the principal façade are at least 12", cornice line is pronounced.

Principle G Materials – Met – The material choice of clapboard is contextual and fine-grained. Material variation is appropriate at the entrances to assist with legibility and emphasis. Otherwise, material placement should be simple and consistent throughout the building.

- *G-1 Materials:* The residential context is predominantly clapboards with occasional shingle or brick. The clapboard is a fine-grain materials in keeping with the context. The residential entry is differentiated appropriately with an accent material.
- *G-2 Material and Façade Design:* The materials are appropriately placed according to their nature.
- *G-3 Chimneys:* Not applicable.
- *G-4 Window Types:* Two window types are used on the front façade. Where the building is predominantly circulation space, the windows could be a recessive but consistent pattern similar to the side elevations of neighborhood multi-family buildings. Detailing is consistent throughout.
- *G-5 Patios and Plazas:* n/a

Planning and Urban Development Department
Planning Division

Subject: R-6 Small Infill/Multi-family Design Review – 126 North Street
Written by: Caitlin Cameron, Urban Designer

Date of Review: Friday, July 16, 2020

A design review according to the *City of Portland Design Manual* Standards was performed for the new construction of a multi-family dwelling at 126 North Street. The review was performed by Caitlin Cameron, Urban Designer, Shukria Wiar, Planner, and Deb Andrews, Historic Preservation Program Manager. The project was reviewed against the *R-6 Small Infill Development Design Principles & Standards* (Appendix 7 of the Design Manual).

Findings of the Design Review:
The proposed design **passes** all of the criteria of the R6 Design Standards – please refer to comments below.

- The predominant characteristics of the neighborhood include simple forms, material selection and placement, and limited window types and articulation methods used consistently throughout the building with regular rhythm of patterns. Multi-family buildings typically have a vertically proportioned façade with a flat roof line.
- This project sits at grade with living space and entries directly accessible from grade.
- The final submission addresses Board comment with regards to the privacy of the street-facing, ground floor living space as well as the emphasis for the primary entrance.

Design Review Comments *(red text denotes principles or standards that are not met):*
Appendix 7: R-6 Infill Development
Principle A Overall Context –Met – see below.

- *A-1 Scale and Form:* The context is predominantly single and two-family buildings with simple forms, one and a half to two and half stories in height, vertical proportions, and masonry bases with clapboard siding. Larger multi-family buildings typically are 3 stories, use balconies or bay windows, flat roofs, and vertical proportions The design uses a form and proportions that relate to the neighborhood context. The scale is a story taller than typical multi-family buildings but staff find one story to be within an acceptable tolerance to meet the standard. The building uses a front-end gable rather than a flat roof which reduces the perceived scale. The building sits at grade which also minimizes the overall scale of the building.
- *A-2 Composition of Principal Facades:* The façade composition closely relates to those in context with a two-bay composition with a multi-story bay window. There is overall and local symmetry and vertical proportioned elements.
- *A-3 Relationship to the Street:* The project is slightly set back from the street, more so than the neighboring buildings – staff suggest that the applicant use the average of the two setbacks to establish the setback line and bring the building more in alignment with the neighboring facades.

Principle B Massing – Met – The building is one story taller than the typical multi-family triple-decker building – staff find this scale difference to be compatible and harmonious with the surrounding scale especially given the contextual proportions and roof form with the massing variation provided by the bay window. The front-end gable roof, vertical proportions, and bay window reinforce the traditional building character of the neighborhood.

- *B-1 Massing:* The proposed massing is simple and reflects the forms, building width, footprint, and proportions found in the context to which this building relates.
- *B-2 Roof Forms:* The proposed front-end gable roof form meets the zoning standard and if referential to traditional, simple roof forms.
- *B-3 Main Roofs and Subsidiary Roofs:* There is a clear primary roof form.
- *B-4 Roof Pitch:* Roof pitch on the elevations meets zoning requirements.
- *B-5 Façade Articulation:* The project employs a covered entry porch, bay window.
- *B-6 Garages:* The garage is attached but to the side and not visible from the street.

Principle C Orientation to the Street – Met – The building is oriented towards the street with one street-oriented entrance. However, the building is at grade which is anomalous with the traditional residential building relationship to the street – this might be considered to meet the principle if more is done to create a transition and relationship to the street similar to context (transition at the entry, visual privacy).

- *C-1 Entrances:* The main entry was revised to include a porch-like entrance oriented towards the street. This approach unifies the entry point and makes more legible the building entrances from the street. **More emphasis is now provided with different treatment of the support posts, material change, building number, lighting.**
- *C-2 Visual Privacy:* The ground floor living spaces are at grade and the windows are not raised at least 48" above grade. **The applicant proposes to meet this standard through small front-yard setback and landscape according to Planning Board direction.**
- *C-3 Transition Spaces:* There is a transition from the sidewalk to the building entrance through the front-yard setback/landscape buffer. The revised entry creates transition to the entrances from the at-grade entry point with a porch extending to the side entries.

Principle D Proportion and Scale – Met – The proportion and massing of the front façade is harmonious. The individual building elements are human-scaled.

- *D-1 Windows:* The majority of windows are rectangular and have a vertical proportion. The proportional relationship of the fenestration to the façade is appropriate to the context.
- *D-2 Fenestration:* The project appears to meet the 12% fenestration requirement and appropriately scaled to the massing of the building. Appropriately scaled openings are provided on all sides of the building.
- *D-3 Porches:* Currently no porches – however, a porch may resolve some of the concerns raised in other standards about the prominence and integration of the main entrance.

Principle E Balance – Met – The façade uses local symmetry and alignment as described in the standards below. The overall project creates a sense of balance with the massing, façade proportions, and fenestration patterns – the result is cohesion and balance to the overall project composition similar to the traditional buildings nearby.

- *E-1 Window and Door Height:* The majority of window and door head heights align along a common horizontal datum.
- *E-2 Window and Door Alignment:* The majority of windows shall stack so that centerlines of windows are in vertical alignment.
- *E-3 Symmetricality:* Primary window compositions are arranged symmetrically around discernable vertical axes.

Principle F Articulation – Met

- *F-1 Articulation:* The design uses a bay window, a strong roof line, and the texture of the material to provide surface articulation and visual interest.
- *F-2 Window Types:* Two window types are used with consistent placement, rhythm.
- *F-3 Visual Cohesion:* The visual cohesion of the façade is good with simple design.
- *F-4 Delineation between Floors:* The window alignment provide the most apparent floor delineation. The entry canopy also makes this distinction.
- *F-5 Porches, etc.:* The entrance was revised to be more integrated with the overall design and provide common entry point accessible from the street. A covered entry "porch" was introduced extending to the street and accessing the side-facing entries.
- *F-6 Main Entries:* The entrance is adequately integrated into the overall design. Whereas in the context, the entry is raised above the grade and includes a stoop or porch that visually relates to the elements of the façade. This project differs from the traditional buildings in that the ground floor is not elevated above grade. This creates an entry condition that is slightly anomalous from what is nearby. The "porch" extends to the street-facing façade providing a common entry point. **Since the entry is not indicated with steps to an elevated porch, more emphasis to this entry was achieved by differentiating the columns/supports, providing some kind of material or color differentiation, building numbers, lighting.**
- *F-7 Articulation Elements:* The rake of the roof meets the 6" requirement; trim must be at least 4"; offsets in the principal façade are at least 12", cornice line is pronounced.

Principle G Materials – Met – The material choice of clapboard is contextual and fine-grained. Material variation is appropriate at the entrances to assist with legibility and emphasis. Otherwise, material placement should be simple and consistent throughout the building.

- *G-1 Materials:* The residential context is predominantly clapboards with occasional shingle or brick. The clapboard is a fine-grain materials in keeping with the context.
- *G-2 Material and Façade Design:* The materials are appropriately placed according to their nature.
- *G-3 Chimneys:* Not applicable.
- *G-4 Window Types:* Two window types are used on the front façade. Detailing is consistent throughout.
- *G-5 Patios and Plazas:* n/a

Portland, Maine Yes. Life's good here.

Planning & Urban Development Department

To: Shukria Wiar, Planner, Planning & Urban Development Department

From: Victoria Volent, Housing Program Manager, Housing & Community Development Division

Date: August 5, 2020

Subject: 126 and 128R North Street– Inclusionary Zoning Conditional Use and Munjoy Hill Neighborhood Conservation Overlay District

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All developments of ten (10) units or more are conditional uses subject to Planning Board review on the condition that they comply with the requirements set forth in Division 30, Section 14-487 of the Zoning Ordinance.

Division 30, Section 14-487

Division 30, Section 14-487, Ensuring Workforce Housing, requires at least ten percent (10%) of the dwelling units in the development shall meet the definition of Workforce Housing units for sale or for rent. A fractional fee-in-lieu would result when the calculation of a project's inclusionary obligation results in a fractional unit. The fractional unit obligation will be provided in the form of a proportional fee-in-lieu. The in-lieu fee shall be calculated and paid into the Housing Trust Fund as defined in Sec. 14-489, on or before the date upon which a certificate of occupancy is issued. The ordinance under Section 14-487 e 3 also requires the number of bedrooms in the Workforce units shall be at least 10% of the total number of bedrooms made available as part of the development.

The development located at 126 and 128R North Street proposes to demolish the existing rental unit at 126 North and has already demolished the single family dwelling unit at 128R North Street and will replace 126 North with a six (6) unit rental building and will replace 128R North with a six (6) condominium unit building. As the construction of 128R North is conditioned upon the demolition of 126 North Street, this project is determined to be one development project. According to Section 14-487 e 1, "projects shall not be segmented or phased to avoid compliance with these provisions."

The six (6) dwelling units of rental housing at 126 North Street would consist of five (5) two-bedroom units and one (1) one-bedroom unit. The six (6) condominium units at 128R North Street would consist of three (3) one-bedroom units, two (2) two-bedroom units, and one (1) four-bedroom unit. The applicant may determine the location of the workforce unit (126 or 128R North Street). The unit must be a minimum of two-bedrooms. Per my conversation with the applicant, the workforce unit would be located 126 North Street. As a dwelling unit for rent,

the designated Workforce Unit will be restricted to a household earning up to 100% of Area Median Income (AMI). Based on the requirements outlined in Section 14-487, the applicant is required to either; provide a minimum of one (1) workforce unit consisting of a total of two (2) bedrooms and pay a fractional fee-in-lieu of $21,757 (.2 X $108,757) or, pay a fee-in-lieu for 1.2 units (or $130,543). The Applicant has elected to provide one (1) two-bedroom workforce unit on-site, and pay a fractional fee-in-lieu of $21,757 to satisfy the ordinance's minimum requirements. As such, the project has met the minimum requirements set forth in Section 14-487.

Section 14-140.5 c,

Section 14-140.5 c, Munjoy Hill Neighborhood Conservation Overlay District- height bonus, requires developments of three or more units on lots over 2000 sf, with a building height of greater than 35' to a maximum of 45' in height, include at least one workforce housing unit for rent or for sale. The Workforce unit shall be no smaller than 50% of the average size of the other units in the development and only be sold or rented to a household at or below the applicable income levels. The workforce unit shall be deed restricted for affordability for the longest term possible under the state and federal law.

The development at 128R North Street proposes the creation of a building that triggers the maximum height requirement within the Munjoy Hill Neighborhood Conservation Overlay District. Based on the requirements outlined in Section 14-140.5 c, the Applicant is required to create a housing unit that is no smaller than 50% of the average size of the other units (or 672 sf). The Applicant has elected to provide the first floor unit, a one (1) one-bedroom unit that is 672 sf. As such, the project has met the minimum requirements set forth in Section 14-140.5.

Staff Recommendation

Staff recommends the Board Approve the Inclusionary Zoning Conditional Use (Division 30, Section 14-487) provided the Applicant and the City enter into an Affordable Housing Agreement (AHA) for a two-bedroom workforce unit located at 126 North Street before a Building Permit may be issued.

Staff recommends, should the Board Approve the Munjoy Hill Neighborhood Conservation Overlay District height density bonus, the Board require the Applicant and the City to enter into an Affordable Housing Agreement (AHA) for the first floor unit located at 128R North Street before a Building Permit may be issued.

The Affordable Housing Agreement(s) will outline the details of the affordability restrictions placed on the workforce units and will be filed as a covenant to the 126 and 128R North Street property deeds with the Cumberland County Registry of Deeds before a certificate of occupancy may be issued.

Staff recommends the agreed upon fee-in-lieu of $21,757 be paid into the City's Housing Trust Fund prior to issuance of the certificate of occupancy for 126 North Street.

Sincerely,

Victoria Volent
Housing Program Manager

PLANNING BOARD REPORT
PORTLAND, MAINE

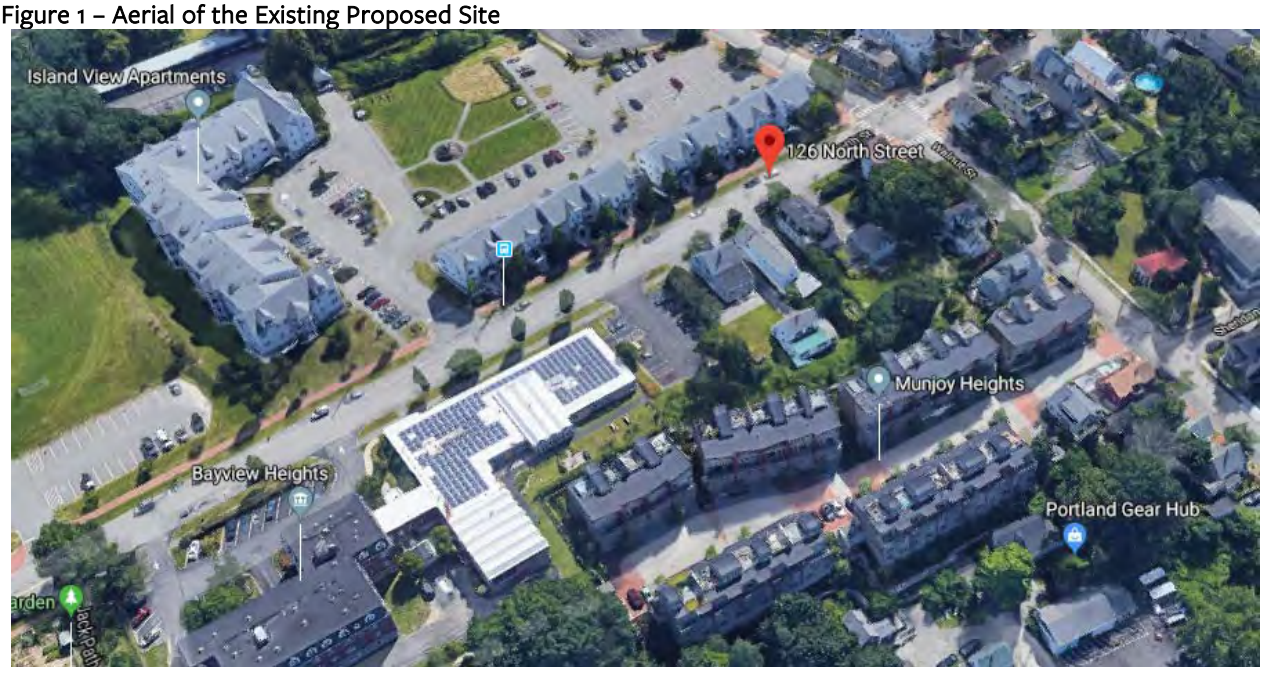
126 and 128R North Street
Level III Site Plan and Subdivision
PL-000791-2019
Upright Properties, LLC, Applicant

Submitted to: Portland Planning Board Public Hearing Date: September 8, 2020	Prepared by: Shukria Wiar, Planner Date: September 4, 2020

I. INTRODUCTION

This is the public hearing for the Upright Properties, LLC application for a three-story, six-unit residential building at 126 North Street and a four-story, six-unit condominium building at 128R North Street, for a total of twelve residential units. The project site is located in the R-6 zone and is within the Munjoy Hill Neighborhood Conservation Overlay. This redevelopment project includes the demolition of the existing structures on the sites and construction of two structures with a six-unit condominium and a six-unit rental, both with on-site parking – a mix of surface and structured. The project will house six parking spaces at 128R and two spaces at 126 North Street. Previously, the development was to be constructed on two separate parcels. The applicant has now elected to merge the two lots into a single lot. For ease of reference, the building at the front will be referred to as 126 and the proposed building at the rear of the lot will be referred to as 128R.

Figure 1 – Aerial of the Existing Proposed Site



This is proposed to be a phased development; Phase One is the structure at 128R North Street and Phase Two is the building at 126 North Street.

The 128R building will contain condominiums and will be owner-occupied. It includes a first-floor workforce housing unit, in order to get a height bonus, and all of the units will be FHA compliant. The 126 residential building will house six apartments for rent. No roof top decks are proposed and none of the roof-mounted condensers will be visible from the street.

The development has had three workshops; the first one was held on January 28, 2020, the second was held on May 26, 2020, and third one was on July 21, 2020. The July 21st workshop was not a required step for approval of the project, but the application was scheduled for additional review to provide the public with ample opportunity to contribute in the public process for the project. A public hearing was scheduled for August 18, 2020 and was tabled to September 8, 2020 at the request of the applicant. The Planning Board will consider this application on the basis of its compliance with the City's site plan and subdivision standards. As the project is over ten units, it will be required to meet the standards of the Inclusionary Zoning ordinance. The applicant is proposing one affordable unit at 126 North Street.

Applicant: Upright Properties, LLC
Consultants: Will Savage, PE, Acorn Engineering, Inc.
Tracie Reed, Architect, Dextrous Creative

II. REQUIRED REVIEWS

Waiver Requests	Applicable Standards
Request: To reduce the required 18-foot wide parking stall dimensional requirement to 16.5 feet	Technical Manual, *Section 1.14,* requiring that standard parking space to be 9 feet wide by 18 feet long
Review	**Applicable Standards**
Site Plan	Section 14-526
Subdivision	Section 14-497
Inclusionary Zoning (IZ)	Section 14-474, Section 14-487
Munjoy Hill Neighborhood Conservation Overlay District	Sec. 14-140.5
R-6 Small Infill Development Design Principles & Standards	Appendix 7 of the Design Manual

III. PROJECT DATA

Existing Zoning	R-6 Residential, MHNC overlay
Existing Use	Residential
Proposed Use	Residential
- Bedroom Mix	Seven 2-BR, Four 1-BR, One 4-BR
CombinedParcel Size	9, 787 SF

	Existing		Proposed		Net Change	
	126	**128R**	**126**	**128R**	**126**	**128R**
Building Footprint	1,885 SF	1,404 SF	1,670 SF	3,380 SF	-215 SF	+1,976 SF
Building Floor Area	4,360 SF	0 SF	4,820 SF	11,441 SF	+460 SF	+11,441 SF
Impervious Surface Area	82.4%	27.5%	80%	60%	-2.4%	+52.5%
Parking Spaces	3	0	2	6	-1	+6
Bicycle Parking Spaces	0	0	2	2	2	+2
Estimated Cost of Project	$3,000,000					

IV. EXISTING CONDITIONS and BACKGROUND

The project site is located at 126 and 128R North Street. North Street has frontage on North Street, whereas 128R North Street is a rear lot immediately adjacent to the Bayview Heights senior apartments and across the street from the Island View Apartment complex. Any existing buildings on the site will be demolished - the 126 North Street parcel

currently contains a four-unit residential building and the rear lot, 128R, previously housed a single-family home and is now vacant. Both properties are currently accessed by bituminous driveways off North Street.

Figure 2 - Existing 126 and 128R (at rear) North Street

The 128R site currently shares a driveway with the neighboring property under different ownership. To the west, the parcel abuts Munjoy Heights Condominiums, where the site slopes down significantly and runs towards a concrete block retaining wall constructed as part of a condominium project from 2015. There is a 10′ maintenance easement along the rear property line which would provide future access for the Munjoy Heights property to repair or replace the wall when necessary.

The building at 126 North Street was determined to be "preferably preserved" according to the MHNC overlay demolition criteria. In that circumstance, the applicant may either go through design review of 126 North Street with the Historic Preservation Board according to the R-6 Alternative Design Review criteria, or wait for a demolition delay of one year to expire before receiving building permits for 126 North Street. In the latter option, which this application has pursued, the building design must meet the R-6 MHNC zoning and the R-6 Design Standards as determined by the Planning Board in the course of their application review. The project application includes two phases:

Figure 3 – Phasing of Project

- Phase One (in yellow on Figure 4) includes the new six-unit condominium building at 128R, the new widened 16' driveway access using the existing curb cut, and demolition of the building at 126 North Street in order to create the 16' driveway. The existing single-family home has already been demolished.

- Phase Two (in orange on Figure 4) includes the redevelopment of 126 into a three-story building with six rental units and two surface parking spaces using a separate driveway. This phase will take place at least one year after the November 2019 determination of a demolition delay.

The overall phased project will have a net increase of seven dwelling units. Additionally, 126 would grant 128R a five-foot-wide easement to provide a 16-foot-wide access way, providing greater emergency access for three properties.

As part of the development, a single-family home was demolished last year at 128R and five additional units will be demolished at 126 North Street. All units are counted cumulatively across buildings being demolished for one site plan application. This triggers the City's Housing Preservation and Replacement ordinance and the guaranty must be paid prior to issuance of a demolition permit, as stated in the standard below:

Section 14-483 (j). Performance Guaranty/Letter of Credit. Owners or affiliates must post a performance guaranty in the form of a letter of credit, or other security acceptable to the city attorney, in the amount equivalent to the amount the applicant would have been required to contribute to the City's Housing Trust Fund if the applicant had chosen that option pursuant to sub-section g. Such a performance guaranty shall be valid for no more than three years, after which the full amount due shall be provided to the City's Housing Trust Fund if replacement units satisfying the conditions of this Division 29 do not have Certificates of Occupancy.

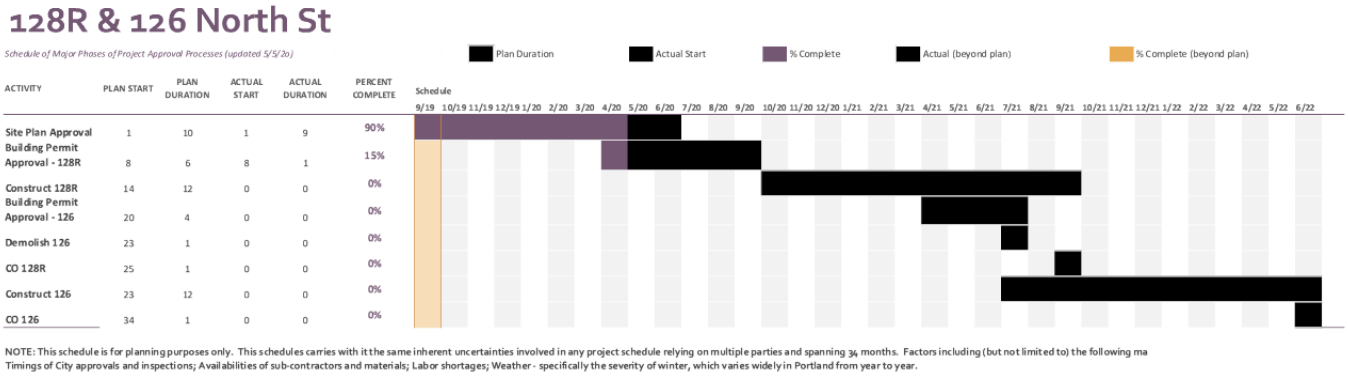
V. PROPOSED DEVELOPMENT

Figure 4 - Rendering of 128R North Street

The development is a three-story, six-unit residential building at along North Street and a four-story, six-unit condominium building at the rear of the lot. The three-story building will have five two-bedroom apartments, one one-bedroom accessible unit, and two off-street, tandem parking spaces. The condominium building will have six units; one is a workforce housing unit on the ground floor and five units serviced via an elevator on upper floors and six parking spaces. A workforce housing unit is proposed in order to obtain the height bonus for the 128R North Street building. The existing curb cuts/driveways will continue to provide access for the two buildings. The applicant is proposing a phased development, with the construction of the rear building at 128R as the first phase and the front building at 126 as the second phase. Approval of the project will need to ensure proper sequencing of these phases to allow for adequate access to the rear development site. The new building at front will now be directly accessed by pedestrians from the sidewalk rather than using the shared driveway. The applicant states that this new driveway to 128R will "*improve access for vehicles and increases visibility for pedestrians and cyclists visiting 128R and 126 via a brick walkway leading from North Street*".

Figure 5 – Elevation of 126 North Street in the front and 128R at the Rear

During the first workshop, Board members had questions about the development schedule. The applicant has provided a timeline of the project from the site plan and subdivision application to the final certificate of occupancy, included below:



128R & 126 North St

Schedule of Major Phases of Project Approval Processes (updated 5/5/20)

Plan Duration | Actual Start | % Complete | Actual (beyond plan) | % Complete (beyond plan)

ACTIVITY	PLAN START	PLAN DURATION	ACTUAL START	ACTUAL DURATION	PERCENT COMPLETE
Site Plan Approval	1	10	1	9	90%
Building Permit Approval - 128R	8	6	8	1	15%
Construct 128R	14	12	0	0	0%
Building Permit Approval - 126	20	4	0	0	0%
Demolish 126	23	1	0	0	0%
CO 128R	25	1	0	0	0%
Construct 126	23	12	0	0	0%
CO 126	34	1	0	0	0%

Schedule 9/19 10/19 11/19 12/19 1/20 2/20 3/20 4/20 5/20 6/20 7/20 8/20 9/20 10/20 11/20 12/20 1/21 2/21 3/21 4/21 5/21 6/21 7/21 8/21 9/21 10/21 11/21 12/21 1/22 2/22 3/22 4/22 5/22 6/22

NOTE: This schedule is for planning purposes only. This schedules carries with it the same inherent uncertainties involved in any project schedule relying on multiple parties and spanning 34 months. Factors including (but not limited to) the following ma
Timings of City approvals and inspections; Availabilities of sub-contractors and materials; Labor shortages; Weather - specifically the severity of winter, which varies widely in Portland from year to year.

VI. PUBLIC COMMENT AND NEIGHBORHOOD MEETING

A legal ad for the Board workshop was posted on the City's web page and appeared in the *Portland Press Herald* on September 6th and 7th, 2020. Notices were also sent to 211 property owners within 500 feet of the site and to the interested citizen list.

The project team held two neighborhood meetings to introduce the proposed buildings to the neighbors on September 18, 2019 and January 16, 2020. Nineteen attendees signed in at the meeting. Questions generally focused

on the design of the building, vehicular parking, and emergency vehicles access (see Attachment U - DD for the Neighborhood Meeting minutes). Two additional public comments have been received since the July's third workshop (Attachment PC1- PC43). Neighbors reiterated concerns about the building design and scale.

VII. RIGHT, TITLE, & INTEREST AND FINANCIAL & TECHNICAL CAPACITY

The owner of the property is Upright Properties, LLC. The applicant has provided a copy of a quitclaim deed, recorded at the Cumberland County Registry of Deeds (Book 34890 Page 304), which demonstrates their right, title and interest in the property. The estimated cost of the development is $3,000,000. The applicant has submitted a letter from Bangor Savings Bank, dated September 4, 2020 (Attachment G), as a demonstration of their financial capacity to complete the proposed development.

In order to address concerns raised by the neighborhood about the extent to which the 128R North Street lot is a nonconforming lot due to a lack of street frontage, the applicant has indicated that lots 126 and 128R North Street will be merged in order to create a single lot that is better able to meet the City's dimensional requirements. The applicant has submitted a purchase and sale (Attachment C1) outlining that intention and has agreed that submission of a duly executed and recorded deed merging the two lots as a condition of approval and prior to issuance of a building permit is feasible.

VIII. ZONING ANALYSIS

A. DIMENSIONAL AND USE REQUIREMENTS

Although the zoning analysis for this application previously focused on the historic nonconformity of Lot 128R due to a lack of road frontage, the applicant has opted to merge lots 126 and 128R, thereby removing the non-conformity. Frontage for the newly merged lot would be on North Street and, as outlined in the Zoning Administrator's analysis, all other dimensional requirements are also met by the newly merged lot.

The proposed twelve (12) residential units are a permitted use in the Residential R-6 zone, which allows multi-family dwellings. Ms. Machado has reviewed the development for zoning requirements and states all of the dimensional requirements (other than street frontage) are being met under the R-6 zone:

> *Based on the Plan C-10 Revised 3/17/20, the proposed building at 128 R North St. meets the dimensional requirements of the R-6 Zone and the MHNCOD. The height of the elevator overrun will need to be confirmed when the shell of the building is built to ensure that it does not go above 45 feet since it scales at approximately 44'.*

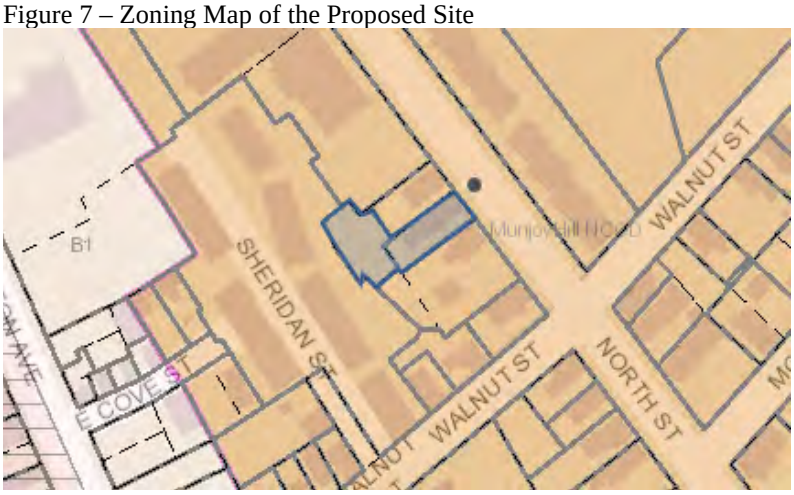
The table below contains the relevant dimensional standards for the project.

	Required	Proposed	
		126	128R
Lot Size - Combined	2,000 SF	9, 787 SF	
Area Per Dwelling Unit	725 SF or a max of 13 units	12 units- Combined Total	
Minimum Street Frontage	20'	38'	
Front Yard Minimum	5'	4' (average)	5.25'
Rear Yard	10'; Buildings more than 35': 15'	16'	15.08'
Yard Right	5'; Buildings more than 35': 10'	5'	12.14'
Yard Left	5'; Buildings more than 35': 10'	10.02'	10.10'
Maximum Lot Coverage	60%	51%	
Maximum Height	35' *	33.32'	44.61 *
Open Space	20%	20%	40%
Off-Street Parking	1 space/unit after first 3 units = 3	2	6
*** Height bonus for 128R North Street -** 45' for developments of 3 units or more on lots over 2000 sf. that include at least one "workforce housing unit for rent" or "workforce housing unit for sale". Applicant is providing a workforce housing unit.			

^or the average of the depth of adjacent front yards

A 10′ maintenance easement runs along the rear property line in connection with a concrete block retaining wall constructed as part of the Munjoy Heights project in 2015, which provide future access for the Munjoy Heights Homeowner's Association to repair or replace the retaining wall when necessary. Review of all setbacks for compliance by the Zoning Administrator is complete and the building has been updated to show that upper decks now meet 10'-0" maintenance easement at the rear and upper deck and the rear corner has been pulled in to eliminate side-setback intrusion. Ann Machado also reviewed the easement in regard to setbacks and states that the "*existing ten-foot maintenance easement along the rear of the lot for the abutting property is being maintained.... Where it serves as a foundation, the minimum 7.5′ setback for rear decks and porches is being met".*

Figure 7 – Zoning Map of the Proposed Site



B. CONDITIONAL USE – INCLUSIONARY ZONING

As required by the City's Inclusionary Zoning Ordinance, residential developments with ten (10) or more units are required to provide a minimum of ten percent (10%) of the dwelling units as Workforce Housing units, and the units themselves must contain in total, ten percent (10%) of the total bedroom count for the entire development. The City's Housing Program Manager, Victoria Volent, has reviewed the application and offers the following comments (Attachment 5):

> The development located at 126 and 128R North Street proposes to demolish the existing rental unit at 126 North and has already demolished the single-family dwelling unit at 128R North Street and will replace 126 North with a six (6) unit rental building and will replace 128R North with a six (6) condominium unit building. As the construction of 128R North is conditioned upon the demolition of 126 North Street, this project is determined to be one development project. According to Section 14-487 e 1, "projects shall not be segmented or phased to avoid compliance with these provisions."
>
> The six (6) dwelling units of rental housing at 126 North Street would consist of five (5) two-bedroom units and one (1) one-bedroom unit. The six (6) condominium units at 128R North Street would consist of three (3) one-bedroom units, two (2) two-bedroom units, and one (1) four-bedroom unit. The applicant may determine the location of the workforce unit (126 or 128R North Street). The unit must be a minimum of two-bedrooms. Per my conversation with the applicant, the workforce unit would be located 126 North Street. As a dwelling unit for rent, the designated Workforce Unit will be restricted to a household earning up to 100% of Area Median Income (AMI). Based on the requirements outlined in Section 14-487, the applicant is required to either; provide a minimum of one (1) workforce unit consisting of a total of two (2) bedrooms and pay a fractional fee-in-lieu of $21,757 (.2 X $108,757) or, pay a fee-in-lieu for 1.2 units (or $130,543). The Applicant has elected to provide one (1) two-bedroom workforce unit on-site, and pay a fractional fee-in-lieu of $21,757 to satisfy the ordinance's minimum requirements. As such, the project has met the minimum requirements set forth in Section 14-487.
>
> Section 14-140.5 c,
> Section 14-140.5 c, Munjoy Hill Neighborhood Conservation Overlay District- height bonus, requires developments of three or more units on lots over 2000 sf, with a building height of greater than 35' to a

maximum of 45' in height, include at least one workforce housing unit for rent or for sale. The Workforce unit shall be no smaller than 50% of the average size of the other units in the development and only be sold or rented to a household at or below the applicable income levels. The workforce unit shall be deed restricted for affordability for the longest term possible under the state and federal law.

The development at 128R North Street proposes the creation of a building that allows the maximum height within the Munjoy Hill Neighborhood Conservation Overlay District. Based on the requirements outlined in Section 14-140.5 c, the Applicant is required to create a housing unit that is no smaller than 50% of the average size of the other units (or 672 sf). The Applicant has elected to provide the first-floor unit, a one (1) one-bedroom unit that is 672 sf. As such, the project has met the minimum requirements set forth in Section 14-140.5.

As mentioned above, the applicant has provided a workforce housing unit at 128R in order to be eligible for a height bonus. They are also providing an affordable unit onsite within 126 North Street as well to meet the requirement of Inclusionary Zoning Ordinance. Therefore, the project is eligible for the 25% density increase per Section 14-488 (g) that states:

(g) Projects under 14-487. Projects that are subject to 14-487 that choose to provide the required workforce housing units on site are eligible for a 25% increase in total permitted units. If an eligible project is also subject to 14- 487, the applicant shall have the option of utilizing either this bonus or any bonuses they are eligible for under 14-488.1 but not both.

IX. DEVELOPMENT REVIEW

A. SITE PLAN SUBMISSION REQUIREMENTS (Section 14-527) and SUBDIVISION PLAT AND RECORDING PLAT REQUIREMENTS (Section 14-496)

The applicant has submitted recording plats for the two phases of the development. The final review of the plat details is pending and any changes required before filing will be coordinated between staff and the applicant.

B. SUBDIVISION (Section 14-496)

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

1. Will Not Result in Undue Water and Air Pollution (Section 14-497 (a) 1), and Will Not Result in Undue Soil Erosion (Section 14-497 (a) 4)
   Lauren Swett, P.E. with Woodard and Curran Engineering, has reviewed the erosion and sediment control plan and states the applicant has provided plans, notes, and details have been that erosion and sediment control requirements and inspection and maintenance requirements.

2. Sufficient Water Available (Section 14-497 (a) 2 and 3)
   The project will be served by new water service located in North Street. Confirmation of ability to serve water from the Portland Water District has been submitted to the Planning Authority. The staff finds the proposal in conformance with this standard.

3. Will Not Cause Unreasonable Traffic Congestion (Section 14-497 (a) 5)
   The site will be accessed by an existing curb cut on North Street. The proposed project is not anticipated to cause unreasonable traffic congestion. Mike Tremblay, Senior Engineer at Department of Public Works, reviewed the proposal's details including the access, parking, and vehicle circulation, below are his comments (Attachment 1):

- Space 5 in the 128R North Street parking lot is not a sufficient size to be considered a legal parking space under the city's zoning. Its dimensions are below what the city considers to be a compact space (8x15'). While the space is about 16.7 feet long, it narrows to less than 8.0 feet after about 10 feet.

  Update: Applicant is requesting a waiver of the parking stall dimensions.

4. Will Provide for Adequate Sanitary Sewer and Stormwater Disposal (Section 14-497 (a) 6), and Will Not Cause an Unreasonable Burden on Municipal Solid Waste and Sewage (Section 14-497 (a) 7)
   There is an existing sewer lateral in North Street that will be serve the new project. Ms. Swett has reviewed the plans and finds the plans acceptable. Confirmation of ability to serve sewer from Department of Public Works has been submitted. The staff finds the proposal in conformance with this standard.

5. Will not have an undue adverse effect on the scenic or natural beauty of the area, aesthetics, historic sites, significant wildlife habitat (Section 14-497 (a) 8)
   The proposal site is not within an historic district. It is in an urban neighborhood surrounded by a variety of residential building types. The proposed building does not impact the natural beauty of the area or adversely affect any significant wildlife habitat, rare or irreplaceable natural areas, or any public access to the shoreline. The staff finds the proposal in conformance with this standard.

6. Comprehensive Plan (Section 14-497 (a) 9)
   The staff has identified the following goals and policies which are relevant to the proposed housing development and finds the proposal in conformance with the Comprehensive Plan.

   The central vision of Portland's Plan 2030 is represented by the Venn diagram demonstrating the integral interrelation of the community's core belief that Portland is equitable, sustainable, connected, dynamic, authentic and secure. The vision conveys the message of the City's need to balance many competing needs to assure the advance of the vision as a unified concept. In this instance, that the City's goals for job growth and transforming Portland through orderly growth and development be balanced with needs for connectivity of the street grid, sustainability of infrastructure and the ability to maintain that infrastructure, and security in the sense of public safety.

   In addition, the Housing Policy section of Plan 2030 includes specific, applicable housing goals and strategies, included below.

   Housing: A Livable City
   State Goals: To encourage and promote affordable decent, housing opportunities for all Maine citizens
   Local Goals:
   - Increase, preserve, and modify the overall supply of housing City-wide to meet the needs, preferences and financial capabilities of all Portland households.
   - Encourage additional contextually-appropriate housing density in and proximate to neighborhood centers, concentrations of services, and transit nodes and corridors as a means of supporting complete neighborhoods.
   - Pursue policies to enable people who work in Portland to have the option to live in Portland.
   - Encourage quality, sustainable design in new housing development.

   From Future Strategies:
   9. Adopt Affordable Housing
   - Pursue new opportunities for increased energy efficiency, increased densities, mixed incomes, and greater connectivity to surrounding neighborhoods.

7. Adequate financial and technical capacity (Section 14-497 (a) 10)
The estimated cost of the development is $3,000,000. The applicant has submitted a letter from Bangor Savings Bank, dated June 25, 2019, as a demonstration of their financial capacity to complete the proposed development. The Applicant has also provided a financial capacity letter for 126 North Street dated October 22, 2019.

B. SITE PLAN STANDARDS (Section 14-526)

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

a) Transportation Standards

1. Impact on Surrounding Street Systems and Access and Circulation
See Subdivision, Paragraph IX (B) (3), above.

a. Sidewalks
The applicant is proposing to install new brick sidewalk along their frontage on North Street, as well as internal walkway for pedestrian access to 128R North Street. The staff finds the proposal in conformance with this standard.

b. Parking
Division 20 of the land use ordinance requires one parking space/unit for residential development located on the peninsula (*Section 14-332(a)3*) and Section 14-332.1 (k) states "for residential development on the peninsula and in the R-6 and R-6A Zones, including new construction, the parking requirement is one space per dwelling unit, the first three units are exempt from providing parking". Therefore, applicant is required to provide a total of nine space for the development. The applicant is requesting that the Planning Board reduced the parking ratio for the development since an affordable unit is being proposed. The Planning Board may establish a parking ratio that is less than one per unit as part of the final review. Section 14-332.2 (b) of Division 20, Incentives for affordable housing parking reductions, allows the Planning Board to determine the number of parking spaces for affordable housing:

> *For each low-income or workforce housing unit for rent or sale within an eligible project under the Affordable Housing Ordinance established in Division 30 of this article, no more than one (1) parking space shall be required. The planning board may establish a parking requirement for affordable housing units for rent or sale within an eligible project that is less than one (1) parking space per affordable housing unit, regardless of the size of the structure.*

c. Bicycle Parking
The development proposes interior bicycle storage room in each building. This will allow a minimum of two bicycles on each site to be parked in a secure location, with the potential for additional storage within each owner's individual unit. The staff finds the proposal in conformance with this standard.

b) Environmental Quality Standards

1. Preservation of Significant Natural Features
There are no known significant natural features on the site. The staff finds the proposal in conformance with this standard.

2. Landscaping and Landscape Preservation
The site will have a green wall along the sides of the building at 126 North Street as well landscaping at the front and rear of the building. Trellises and screens are proposed to enhance visual interest along the pedestrian walkway. 128R North Street will have a rain garden, trees and shrubs, and a

fence at the westerly side of the property that will have English ivy planted on it. The rear of the property will be landscaped with evergreens.

The street tree requirement would be one tree per unit, or twelve street trees, in or near the ROW. There are two existing street trees on North Street that is proposed to remain. Due to the limited frontage for both parcels, the applicant will pay a contribution of $4,000 to the Portland Tree Fund as per City requirements. The staff finds the proposal in conformance with this standard.

3. Water Quality, Storm Water Management and Erosion Control

Under Section 5 of the City of Portland Technical Manual, a Level III development project is required to submit a stormwater management plan pursuant to the regulations of MaineDEP Chapter 500 Stormwater Management Rules, including conformance with the Basic, General, and Flooding Standards. A rain garden at the northerly corner of the site will catch stormwater from the roof drains, gutters, and a downspout, the entirety of the roof and deck runoff (which is essentially the extent of the 128R parking). The runoff generated by the building and driveway at 126 will be routed to a catch basin and storm drain lateral directed to the sewer main.

Lauren Swett, P.E. with Woodard and Curran Engineering, has reviewed the drainage plan and stormwater report, and states that the "applicant has addressed all of my prior comments on erosion control and stormwater management and I have no additional comments". The staff finds the proposal in conformance with this standard.

c) Public Infrastructure and Community Safety Standards

1. Consistency with City Master Plans

See Subdivision, Paragraph IX (B) (6), above.

2. Public Safety and Fire Prevention (CPTED and Fire)

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

Jason Grant, Life Safety CEO/ Plan Reviewer, reviewed the plans on behalf of the Fire Department, and stated:

> The Fire Department approves the site plan for 128 North Street with the following condition: *The construction of the rear unit may begin and be completed with the existing site access. However, before the Certificate of Occupancy for the rear unit is issued, the existing unit shall be demolished and the proposed access lane (driveway) for the rear unit shall be completed.*

The staff finds the proposal in conformance with this standard.

3. Availability and Adequate Capacity of Public Utilities

The project will be served by the Portland Water District, City Department of Public Works, and underground power/cable/communications. The applicant has submitted an ability to serve letter from the Department of Public Works and Portland Water District to the Planning Authority. Ms. Swett reviewed the utility plans and states that "*Consideration should be made for landscaping conflicts with utilities. In particular, consider the oak and blue point juniper proposed to the southeast of the southern building. These trees are located over a bank of proposed subsurface utility lines*". The staff finds the proposal in conformance with this standard.

d) Site Design Standards

1. Snow and Ice Loading
Snow storage areas are shown on the site plan. Additional snow removal measures will likely need to be taken after heavy storms. Proposed snow storage areas will be on the green spaces around the buildings. The staff finds the proposal in conformance with this standard.

2. View Corridors
This site is not within a Protected View Corridor as per the "View Corridor Protection Plan" approved by the Portland City Council in 2001.

3. Historic Resources
The site is not in a historic district or within 100 feet of a historic district; therefore, the project does not have to be reviewed by Historic Preservation.

4. Exterior Lighting
The applicant has submitted a lighting and photometric plan that shows all the proposed lighting fixtures and photometrics on site. Catalog cuts of the proposed lighting fixtures were submitted and reviewed by staff and meets standards. The staff finds the proposal in conformance with this standard.

5. Noise and Vibration
All heating, ventilation and air conditioning equipment (HVAC), air handling units (AHU), emergency generators, and similar equipment has been shown on the plans and meet state and federal emissions requirements. This mechanical equipment is to be located to the interior of the site, away from abutting residential properties, and be screened from view from any public street and from adjacent sites by structure walls, evergreen landscaping, fencing, masonry wall or a combination thereof.

6. Signage and Wayfinding
No signage or wayfinding is proposed.

7. Zoning Related Design Standards
A design review according to the *City of Portland Design Manual* standards was performed for the new construction of multi-family dwellings at 126 and 128R North Street. The review was performed by Caitlin Cameron, Urban Designer, Shukria Wiar, Planner, and Deb Andrews, Historic Preservation Program Manager. The project was reviewed against the *R-6 Small Infill Development Design Principles & Standards* (Appendix 7 of the Design Manual). The proposed designs meet the criteria of the R-6 Design Standards. The staff finds the proposal in conformance with this standard. The recent proposal to merge lots 126 and 128R does not change the analysis under the R-6 design standards.

X. PLANNING BOARD PROPOSED MOTIONS

A. CONDITIONAL USE

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 September 8, 2020 for application PL-000791-2019 relevant to Portland's Conditional Use Standards and other regulations, and the testimony presented at the Planning Board hearing The Planning Board finds the proposed conditional use for workforce housing [**does** or **does not**] meet the standards of Section 14-484 with the following conditions:

PRIOR TO ISSUANCE OF A BUILDING PERMIT

1. The Applicant and the City shall enter into an Affordable Housing Agreement (AHA) for a two-bedroom workforce unit located at 126 North Street; and

2. For the Munjoy Hill Neighborhood Conservation Overlay District height density bonus, the Applicant and the City shall enter into Agreement (AHA) for the first-floor unit located at 128R North Street.

PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY

3. The Affordable Housing Agreements shall outline the details of the affordability restrictions placed on the workforce units and shall be filed as a covenant to the 126 and 128R North Street property deeds with the Cumberland County Registry of Deeds; and

4. The Applicant shall pay fee-in-lieu of $21,757 into the City's Housing Trust Fund prior to issuance of the certificate of occupancy for 126 North Street.

B. WAIVERS

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the planning board report for the public hearing on September 8, 2020 for application PL-000791-2019 relevant to Portland's technical and design standards and other regulations; and the testimony presented at the Planning Board hearing:

1. The Planning Board [finds/does not find], based upon the City Engineer's review, that extraordinary conditions exist or undue hardship may result from strict compliance with the *Technical Manual* standard *(Section 1.14)* which requires that standard parking spaces be 9 feet wide by 18 feet long. The Planning Board [waives/does not waive] the *Technical Manual* standard *(Section 1.14)* to allow parking space #5 to be 9' x 16.5' in dimension at the interior parking of 128R North Street.

C. SUBDIVISION

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the Planning Board report for the public hearing on September 8, 2020 for application PL-000791-2019 relevant to the subdivision regulations; and the testimony presented at the Planning Board hearing, the Planning Board finds that the plan [is/is not] in conformance with the subdivision standards of the land use code, subject to the following conditions of approval, which must be met prior to the signing of the plat:

PRIOR TO ISSUANCE OF A BUILDING PERMIT

1. A copy of the duly executed and recorded deed merging the two lots shall be submitted for review by the Planning Authority and Corporation Counsel;

2. The applicant shall finalize the subdivision plat for review and approval by the Planning Authority, Corporation Counsel, and the Department of Public Works; and

PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY

3. The applicant shall submit the final version of the condominium documentation for review and approval by Corporation Counsel.

D. SITE PLAN

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 September 8, 2020 for application PL-000791-2019 relevant to the site plan regulations; and the testimony presented at the Planning Board hearing, the Planning Board finds that the plan [is/is not] in conformance with the site plan standards of the land use code, subject to the following conditions of approval:

PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY

1. That the applicant shall comply with conditions of the construction stormwater management plan and sediment and erosion control plan based on City standards and state guidelines. The owner/operator of the approved stormwater management system, and all assigns shall comply with the conditions of Chapter 32 Stormwater including Article III, Post Construction Stormwater Management, which specifies the annual inspections and reporting requirements. A maintenance agreement for the stormwater drainage system, as attached, or in substantially the same form, shall be submitted for review by Corporation Counsel. Once approved, the document shall be signed and recorded at the Cumberland County Registry of Deeds. Final copies shall be submitted to both the Department of Planning and Urban Development and the Department of Public Works.

2. Due to the limited frontage of the site, the applicant shall pay a contribution of $4,000 to the City of Portland Tree Fund.

XIII. ATTACHMENTS

PLANNING BOARD REPORT ATTACHMENTS

1. DPW Senior Engineer Review 3.13.2020
2. Consulting Civil Engineer Review 05.20.2020
3. City Arborist Review 01.21.2020
4. Fire Department Review 05.20.2020
5. Urban Designer Comments - 128 North R-6 Design Review (Final)
    a. 126 North R-6 Design Review (Preliminary)

6. 126 and 128 North Street IZ memo for PB

PUBLIC COMMENT

PC1 Betty Lorber 9-16-19
PC2 Eldon Mayer 9-22-19
PC3 Ann Casady and Peter Pitegoff 9-22-19
PC4 Richard Marino 9-23-19
PC5 Leslie Hart 9-26-19
PC6 Kevin Schochat 9-26-19
PC7 Liz Hays 9-27-18
PC8 Sue Robins 9-30-19
PC9 Deborah Cole 10-4-19
PC10 Nancy Machesney 10-9-19
PC11 Annette and Steven Frye 10-16-19
PC12 Pete Roehrig 10-31-19
PC13 Elizabeth Helming 10-30-19
PC14 Frances Savage
PC15 Katharine Wojcik 10-31-19
PC16 Meagan Sway & Sage Friedman
PC17 Lindsay Mann 9-10-19
PC18 Deborah Cole 1-22-20
PC19 Ann Casady & Peter Pitegoff 1-23-20
PC20 Vana Carmona 1-24-20
PC21 Lindsay Mann 1-24-20
PC22 Leslie Hart 1-24-20
PC23 Kevin Schochat 1-24-20
PC24 Tracy Davis & Michael Kennedy 1-24-20
PC25 David Machesney 1-24-20
PC26 Richard Marino 1-28-20
PC27 Tom Federle 2-10-2020
PC28 George Rheault 5-26-2020
PC29Travis Davis 5-28-2020
PC30 Leslie Hart 5-28-2020
PC31 Marianna Pratt 5-28-2020
PC32 Nancy Machesney 5-30-2020
PC33 Lindsay Mann 5-31-2020
PC34 Deborah Cole 6-1-2020
PC35 Linda Englert 6-1-2020
PC36 Betts Mayer 6-3-2020
PC36 Sue Robins 6-3-2020
PC37 Eldon Mayer 6-3-2020
PC38 Mary Morse 6-3-2020
PC39 Vana Carmona 6-7-2020
PC40Michael and Linda Englert 6-17-2020
PC41 Liz Hays 6-22-2020
PC42 Ann Casady 7-16-2020 DUPLICATE OF TOM'S BELOW

PC43 Tom Federle Memorandum to City 06.18.2020

APPLICANT'S SUBMITTALS

A. Cover Letter
   A1. Cover Letter 08.27.2020
B. Application Form
C. Right, Title & Interest
   C1. Purchase and Sale
D. Zoning Assessment
E. Easements
   E1. MH Easement Opinion Letter
F. Waivers
G. Financial Capacity
H. Technical Capacity
I. Conformity with Land Use Ordinance
J. Stormwater Management Report
K. Erosion and Sedimentation Control Report
L. Fire Department Letter
M. Wastewater Capacity
N. Lighting
O. Architectural Design Narrative
P. Utility Cover
Q. Construction Management Report
R. Solid Waste Disposal
S. Parking Analysis
T. Neighborhood Study & Project Renderings
U. Neighborhood Meeting Invitation
V. Certification Letter
W. Neighborhood Meeting Minutes
X. Sign-in Sheet
Y. Neighborhood Presentation
Z. Comment Response Letter
AA. Neighborhood Invitation 2
BB. Certification Letter 2
CC. Meeting Minutes 2
DD. Sign-In Sheet 2
EE. Comment Response Letter II
FF. Rifugio - A Condo Declaration V.3
   FF1. Rifugio COA Bylaws V.3
   FF2. Rifugio Rules & Regs V.3
GG. Project Schedule
HH. Comment Response Letter III

PLANS

Plan 1. Cover Sheet
Plan 2. General Notes
Plan 3. Survey
Plan 4. Construction Management Plan
Plan 5. Site Plan
Plan 6. Landscape Plan
Plan 7. Utility Plan
Plan 8. Grading & Drainage Plan
Plan 9. Site Details I
Plan 10. Site Details II
Plan 11. Landscape Details
Plan 12. Utility Details I
Plan 13. Utility Details II
Plan 14. Drainage Details
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Sec. 14-330.16. Conditions on after-hours food service in the downtown entertainment overlay zone.

(a) Following a hearing held pursuant to chapter 15, section 15-10, the clerk may impose conditions to maintain or improve public safety on the food service license of any business in the downtown entertainment overlay zone that operates between 1:00 a.m. and 4:00 a.m., following a written recommendation from the Portland police department that such conditions are necessary.

(b) The clerk's decision may be appealed to the city manager pursuant to section 15-9 of this code.

(c) Nothing in this section shall be construed to limit the clerk's authority in chapter 15 to deny, suspend or revoke any license pursuant to the standards and process in that chapter.
(Ord. No. 164-06/07, 4-4-07)

DIVISION 20. OFF-STREET PARKING

Sec. 14-331. Defined.

Off-street parking, either by means of open-air spaces or by garage spaces which meet the standards set forth in the City of Portland Technical Manual, as hereafter amended, in addition to being a permitted use in certain zones, shall be considered as an accessory use when required or provided to serve conforming uses in any zone.
(Code 1968, § 602.14.A; Ord. No. 272-77, 5-16-77; Ord. No. 389-89, § 1, 4-3-89; Ord. No. 278-09/10, 7-19-10)

Cross reference(s)—Definitions and rules of construction generally, § 1-2.

Sec. 14-332. Uses requiring off-street parking.

Except as provided in Section 14-332.1, 14-332.2 (exceptions) and 14-345 (fee in-lieu of parking) of this division, for the uses listed below the following minimum off-street parking requirements shall be provided and maintained in the case of new construction, alterations which increase the number of units, and changes of use:

(a) Residential structures:

1. For new construction, two, (2) parking spaces for each dwelling unit.

2. For alterations or changes of use in existing structures, which create new or additional dwelling units in such structures, and for accessory units pursuant to §§14-68,78,88, one (1) additional parking spaces for each such unit. Existing parking spaces shall not be used to meet the parking requirements of this paragraph, unless the existing parking spaces exceed one (1) space for each dwelling unit.

3. For residential development in the B-2, B-2b, B-2c zones:

   a. One (1) parking space per dwelling unit.

(b) Motel: One (1) parking space for each sleeping room.

(c) Hotels: One (1) parking space for each four (4) guest rooms.

(d) Schools providing instruction for students up to and including those fifteen (15) years of age: One (1) parking space for each room used for purposes of instruction.

(e) Schools providing instruction for students sixteen (16) years of age and over: One (1) parking space for each ten (10) seats or major fraction thereof, used for purposes of instruction; if no fixed seats, one (1) parking space for each one hundred (100) square feet or major fraction thereof used for purposes of instruction.

(f) Hospitals: One (1) parking space for each five hundred (500) square feet or major fraction thereof, of floor area, exclusive of cellar.

(g) Auditoriums, theaters, assembly halls, funeral homes: One (1) parking space for each five (5) seats or for each one hundred (100) square feet, or major fraction thereof, of assemblage space if no fixed seats.

(h) Retail stores: One (1) parking space for each two hundred (200) square feet of first floor area in excess of two thousand (2,000) square feet not used for bulk storage and one (1) parking space for each seven hundred (700) square feet, or major fraction

thereof, for each floor above the first floor not used for bulk storage.

(i) Restaurants or establishments constructed and intended for the dispensing of food and drink as the principal activity: One (1) parking space for each one hundred fifty (150) square feet, or major fraction thereof, of floor area not used for bulk storage or food preparation.

(j) Offices; professional and public buildings: One (1) parking space for each four hundred (400) square feet, or major fraction thereof, of floor area exclusive of cellar not used for bulk storage.

(k) Places of assembly (which includes private club and fraternal halls, places of religious assembly, and community halls): One (1) parking space for reach one hundred and twenty five (125) square feet, or major fraction thereof, of floor area used for assembly area not including bathrooms, bulk storage, stairways, closets or other non-assembly areas.

(l) For that part of every business, manufacturing, and industrial building not catering to retail trade and with floor area over three thousand (3,000) square feet: One (1) parking space for each one thousand (1,000) square feet of floor area, or major fraction thereof.

(m) Hostels: One (1) parking space for each eight (8) beds, or major fraction thereof. This requirement may be reduced to one (1) parking space for each twelve (12) beds if the site is within one quarter (1/4) mile of a public transit stop.

(n) Long-term, extended care and intermediate care facilities: One (1) parking space for each five (5) beds, or major fraction thereof, plus one (1) parking space per each employee normally present during one (1) weekday morning shift.

(o) Lodging houses: One (1) parking space for each five (5) rooming units, except in the R-5 zone; in the R-5 zone, one (1) parking space for every two (2) rooming units.

(p) Sheltered care group homes and emergency shelters: One (1) parking space for every two (2) employees.

(q) Congregate care facilities: One (1) parking space for every three (3) living units.

(r) Special needs independent living units: One (1) parking space per every four (4) living units, plus one (1) parking space for each staff member, if any, normally present at any one time.

(s) Bed and breakfast:

1. Except in the I-B zone: One (1) parking space for each two (2) guest rooms or fraction thereof for the first four (4) guest rooms; one (1) parking space for each additional guest room in excess of four (4).

2. In the I-B zone: No off-street parking required.

(t) Day care facilities: Off-street parking shall be provided on the site for all staff of the facility. Parking for the facility shall not interfere with access to or use of play areas. In residential zones parking spaces may be stacked or placed side by side in order to less their impact on the residential character of the lots and the neighborhood, and shall not be located closer than five (5) feet from the property line of any abutting residential use or residentially zoned site.

(u) Private clubs: One (1) parking space for each one hundred fifty (150) square feet, or major fraction thereof, of floor area.

(v) Neighborhood Centers: One (1) parking space for each 150 square feet, or major fraction thereof, of floor area, except for neighborhood centers which serve primarily clientele from the surrounding neighborhood, the parking requirement shall be one (1) parking space per 1,000 square feet, or major fraction thereof, of floor area.

(Code 1968, § 602.14.B; Ord. No. 268-77, 5-16-77; Ord. No. 431-82, § 2, 2-22-82; Ord. No. 575-86, §§ 1, 2, 5-19-86; Ord. No. 65-87, 11-2-87; Ord. No. 230-90, § 2, 3-5-90; Ord. No. 33-91, § 14, 1-23-91; Ord. No. 243-91, § 1, 3-11-91; Ord. No. 33A-91, § 8, 4-17-91; Ord. No. 125-97, § 10, 3-3-97; Ord. No. 232, §4, 3-15-99; Ord. No. 94-99, 11-15-99; Ord. No. 77-02/03, § 1, 10-21-02; Ord. No. 199-04/05,

4-4-05; Ord. No. 84-08/09, 10-20-08; Ord. No.36-09/10, 8-17-09; Ord. No. 127-09/10, 1-4-10 emergency passage; Ord. No. 240-09/10, 6-21-10; Ord. No. 241-09/10, 11-15-10; Ord. No. 149-10/11, 3-7-11; Ord. No. 279-09/10, 6-6-11; Ord. No. 73-14/15, 10-20-2014; Ord. 209-14/15, 5/4/2015)

Sec. 14-332.1. Zone specific off-street parking exceptions and modifications.

The off-street parking requirements established for uses, established above in section 14-332 of this division, are hereby modified for the following zones according to the provisions described below.

(a) IR-3, Island Residential Zone, Off-street parking: Off-street parking shall not be required irrespective of the requirements of division 20 (off-street parking) of this article.

(b) USM Overlay Zone, parking: The parking requirements of section 14-332 (division 2) shall not apply to university buildings. Instead, the amount of parking required for any university building or building addition shall be determined by the planning board during site plan review, based on an analysis of campus-wide parking demand and supply, pursuant to a comprehensive university parking management plan, and treating all contiguous land (including land on opposite sides of the street) owned by the university as one lot. In determining the amount of parking required for any university building, the planning board may take into account such factors as:

1. The availability of off-campus parking and shuttle transportation to and from such off-campus facilities.

2. The ratio of commuter students to resident students.

3. The use of centrally located on-campus parking facilities so situated that students, faculty, staff and visitors arriving on campus can reasonably be expected to park in the central facilities and walk to their various on-campus destinations during the course of a school day.

4. Shared use of a single parking facility by two or

more buildings when the peak parking demand period for such buildings do not overlap.

5. Development and implementation of a parking management plan which discourages on-street parking. On-street parking shall not be used to satisfy the university's parking demand.

6. Development and implementation of programs designed to reduce the number of automobiles parking on campus, such as ride share programs and incentives for use of bicycles and public transportation.

(c) *Recreation open space zone:* Off-street parking adequate to serve projected employee and visitor needs shall be provided. Parking needs projections provided by the applicant or the planning department should be considered in the review.

(d) Change of use in the B-2b or IS-FBC zone:

1. A change of use of 10,000 sq. ft. or less of floor area of a building or a portion of a building need not provide parking for non-residential uses, provided that if the number of existing parking spaces serving the site is less than the requirements of this division, that number of parking spaces may not be reduced lower than the required amount prior to the change of use except:

   a. To the extent necessary to meet the requirements of the Americans with Disability Act; or

   b. To the extent it is a requirement or a condition of site plan review; or

   c. To the extent the change of use requires less parking than the previous use and the total number of parking spaces serving the site exceeds the parking requirements of this division for all uses on the site including the change of use.

2. A newly constructed building, a building addition

or a change of the use of a building exceeding 10,000 sq. ft. of floor area, shall provide the parking required by this division.

(e) B-3 Zone: No off-street parking is required for changes of use.

(f) I-R1, Island Business Zone: Off-street parking shall be required at twenty-five (25%) percent of the required number of parking spaces for specified uses as provided in division 20 (off-street parking) of this article, except that residential uses shall meet the full parking requirement.

(g) B-5 Zone: No off-street parking shall be required.

(h) B-6 Eastern Waterfront Mixed Use Zone: Off-street parking for all projects regardless of size shall be governed by 14-332.2(c) of this article.

(i) B-7, Mixed Development District Zone: Off-street parking for all projects regardless of size, shall be governed by 14-332.2(c) of this article.

(j) Waterfront Zone parking requirements; Eastern Waterfront Port Zone; Waterfront Central Zone; Waterfront Port Development Zone; Waterfront Special Use Zone: Off-street parking is required at fifty (50%) percent of the required number of parking spaces for specifi8ed uses as otherwise provided in division 20 of this article.

(k) Residential development on the peninsula and in the R-6 and R-6A Zones, including new construction, alterations that increase the number of units, and changes of use:

1. Except as provided below, there shall be one (1) space per unit

2. The required parking for multi-unit residential buildings may be partially met through provision of shared-use vehicles, which are vehicles owned and maintained by the owner/manager of the building and available for use on a fee basis to the residents of the building. One shared use vehicle shall be deemed to satisfy eight (8) required car spaces,

but in no case shall more than 50% of the parking requirement be satisfied by shared vehicle use.

3. The planning board may establish a parking requirement that is less than the normally required number of spaces upon a finding of unique conditions that result in a lesser parking demand, such as housing for persons who cannot drive, housing that participates in a travel demand management program, availability of transit, or housing which includes permanent restrictions on automobile usage, and which is permanently restricted from utilizing resident on-street parking stickers.

4. No parking shall be required for the first three units in the R-6 Residential Zone or the IS-FBC Zone.

5. For alterations of buildings containing three or more dwelling units in the R-6 zone no parking shall be required for the creation of one additional dwelling unit above existing conditions as of June 3, 2015. This exemption may be utilized one time.

(Ord. No. 240-09/10, 6-21-10; Ord. 209-14/15, 5/4/2015; (Ord. 83-15/16, 11-2-2015; Ord. No. 192-15/16, 4-4-2016)

Sec. 14-332.2. Categorical exceptions and modifications to off-street parking requirements.

Regardless of which zone a project of use is located, the following exceptions to the off-street parking requirements listed above in section 14-332 are additionally hereby established.

(a) Home occupations, Section 14-410: Any need for parking generated by the conduct of a home occupation allowed under section 14-410 of this article shall be met off the street and other than in a required front yard.

(b) Incentives for affordable housing- parking reductions: For each low-income or workforce housing unit for rent or sale within an eligible project under the Affordable Housing Ordinance established in Division 30 of this article, no more than one (1) parking space

shall be required. The planning board may establish a parking requirement for affordable housing units for rent or sale within an eligible project that is less than one (1) parking space per affordable housing unit, regardless of the size of the structure.

(c) Site plans over 50,000 square feet and projects in the B-6, B-7, and USM Overlay Zones: Where construction is proposed of new structures having a total floor area in excess of fifty thousand (50,000) square feet, the planning board shall establish the parking requirement for such structures. The parking requirement shall be determined based upon a parking analysis submitted by the applicant and upon the recommendation of the city transportation engineer.

(d) Exception for historic structures: No parking in excess of that existing on or servicing the lot as of March 15, 1999 shall be required for any structure under Article IX of this chapter, as a contributing structure in a local or National Register historical district, or as a locally designated or National Register landmark building; however, parking may not be decreased from that existing on or servicing the lot on March 15, 1999 except to the extent necessary to meet the requirements of the Americans with Disabilities Act.

(Ord. No. 240-09/10, 6-21-10; Ord. 82-15/16, 10-19-2015)

Sec. 14-332.3. Uses requiring off-street bicycle parking.

In all zones where off-street motor vehicle parking is required, minimum off-street bicycle parking requirements shall be provided and maintained in the case of new construction, alterations and changes of use as specified in Section 14-526(a)(2) (Site Plan Standards).

(Ord. NO. 134-07/08, 2-4-08)

Sec. 14-333. To be located on lot with principal use in residential zones; exceptions.

Required off-street parking in all residential zones and accessory off-street parking in R-1 through R-5 zones shall be located on the same lot with the principal building or use, except that the Board of Appeals may permit such off-street parking to be located at a distance of not more than three hundred (300) feet from the principal building or use, measured along lines of public access where it cannot reasonably be

include units of affordable housing within development projects, thereby mitigating the impact of market rate housing construction, or the demonstrated increase in affordable housing needs resulting from the creation of new lower-income jobs, on the limited supply of available land for suitable housing, and helping to meet the housing needs of all economic groups within the city. The city believes that this division will assist in meeting the city's comprehensive goals for affordable housing, in the prevention of overcrowding and deterioration of the limited supply of affordable housing, and by doing so promote the health, safety and welfare of its citizens.
(Ord. No. 98-06/07, 12-4-06; Ord. 82-15/16, 10-19-2015; Ord. No. 134-18/19, 1-23-2019)

Sec. 14-485. Definitions.

Affordable means that the percentage of income a household is charged in rent and other housing expenses or must pay in monthly mortgage payments (including condominium/HOA fees, mortgage insurance, other insurance and real estate taxes), does not exceed 30% of a household's income, or other amount established in city regulations that does not vary significantly from this amount.

Low-income housing unit for rent means a dwelling unit for which:

(a) The rent is affordable to a household earning 80% or less of Area Median Income (AMI) as defined by the United States Department of Housing and Urban Development (HUD);

(b) The unit is rented to a household earning 80% or less of AMI; and

(c) The requirements of (a) and (b) above are limited by deed restriction or other legally binding agreement for the applicable length of time in this ordinance..

Low-income housing unit for sale means a dwelling unit for which:

(a) The sale price is affordable to a household earning 100% or less of AMI;

(b) The unit is sold to a household earning 100% or less of AMI; and

(c) The requirements of (a) and (b) above are limited by deed restriction or other legally binding agreement for future sales for the applicable length of time in this ordinance.

Development fees means:

(a) The following fees, as described in this chapter: site plan review and inspection fees; subdivision review and inspection fees; impact fees; and administrative fees; and

(b) Construction and permit fees as described in Chapter 6. “Development fees” does not include any fees charged for reviews conducted by a party other than the city.

Dwelling unit has the same meaning as that term is defined in section 14-47.

Eligible project means a development project:

(a) That is permissible under the provisions of this chapter in the zone in which it is proposed;

(b) That will be a single-family or multi-family dwelling, or subdivision consisting of a group of dwellings, and will not be located in an R-1 or R-2 zone;

(c) That creates new dwelling units, among which is at least one low-income or workforce housing unit for rent or sale, through new construction, substantial rehabilitation of existing structures, adaptive reuse or conversion of a non-residential use to residential use, or any combination of these elements. Affordable housing units for sale or rent may not differ in exterior design from other units within an eligible project; and

(d) Projects shall not be considered “eligible projects” solely because they are subject to Section 14-487 (“Ensuring Workforce Housing”).

Hotel Project means any hotel, inn or motel, as defined in Section 14-47 of Chapter 14 of the Portland City Code, consisting of 10 or more guest rooms for rent. Any such development that

10% up to but not including 15%	10% reduction	$9.90 per $1,000
15% up to but not including 20%	15% reduction	$9.35 per $1,000
20% up to but not including 25%	20% reduction	$8.80 per $1,000
25% or more	25% reduction	$8.25 per $1,000

The planning and urban development department shall perform its review of an eligible project in as expedited a manner as is practical, without impairing the scope or thoroughness of the review. The planning and urban development department may adopt administrative procedures to prioritize review of eligible projects and facilitate this expedited review.

The planning board shall make its best efforts to give priority in scheduling workshops and public hearings related to any plans or applications required for an eligible project that are within the planning board's jurisdiction, without impairing the scope or thoroughness of its review. At the conclusion of these public meetings, the planning board shall promptly issue a decision on all such plans and applications before it for consideration.

(Ord. No. 98-06/07, 12-4-06; Ord. 82-15/16, 10-19-2015; Ord. No. 165-15/16, 3-7-2016; Ord. No. 196-15/16, 3-21-2016)

Sec. 14-487. Ensuring Workforce Housing.

(a) *Purpose.* Based on the city's Comprehensive Plan and the housing study completed in 2015, it is in the public interest to promote an adequate supply of housing that is affordable to a range of households at different income levels. The purpose of this section is to ensure that housing developments over a certain size provide a portion of workforce housing units and, by doing so, promote the health, safety, and welfare of Portland citizens.

(b) *Applicability*. This division shall apply to development projects that create ten or more new dwelling units for rent or for sale through new construction, substantial rehabilitation of existing structures, adaptive reuse or conversion of a non-residential use to residential use, or any combination of these elements.

(c) *All Developments of Ten Units or More Conditional Uses*. Notwithstanding any language to the contrary in Chapter 14, all developments of ten units or more are conditional uses subject to Planning Board review on the condition that they comply with the requirements of this section, 14-487 unless they are within the India Street Form Based Code district, in which case the review will be conducted administratively or by the Planning Board in accordance with the thresholds of site plan review for the district.

(d) *Workforce Housing Minimum.* At least ten percent (10%) of the units in the project shall meet the definition of workforce housing unit for sale or for rent. The project shall have the option of paying a partial fee-in-lieu as per (e)4 below for any fractional value or providing an additional unit on site.

(e) *Standards.*

1. Projects shall not be segmented or phased to avoid compliance with these provisions. In cases where projects are completed in phases, affordable units shall be provided in proportion to the development of market rate units unless otherwise permitted through regulations.

2. Workforce units are encouraged to be integrated with the rest of the development, should use a common entrance and should provide no indications from common areas that these units are workforce housing units.

3. Workforce units need not be the same size as other units in the development but the number of bedrooms in such units, either on- or off-site, shall be no less than 10 percent of the total number of bedrooms in the development. For the purposes of calculating the number of bedrooms in a development, every 400 square feet in each market rate unit will count as a bedroom if the Planning Authority determines this method is appropriate in lieu of counting actual bedrooms.

4. As an alternative to providing workforce housing units, projects may pay a fee in lieu of some or all of the units. In-lieu fees shall be paid into

the Housing Trust Fund as defined in Sec. 14-489. The fee for affordable units not provided shall be $100,000 per unit, adjusted annually in the same way as the fee under Division 29 for Housing Replacement.

5. Workforce housing units for sale, if converted to workforce housing units for rent, shall become subject to the income limits and other requirements of such units.

6. If at least 33 percent of the units in a development are workforce units, the development is eligible for subsidy through an Affordable Housing TIF, subject to City Council approval.

7. The term of affordability for the required 10 percent workforce units provided shall be defined as follows:

Percentage of Workforce Units Provided	Minimum Term of Affordability for Required Workforce Units
10%	Longest term permitted under federal, state and local laws and ordinances
25%	30 years
50%	20 years
100%	10 years

(f) *Implementing Regulations*. Regulations to further specify the details of this section shall be developed, including, but not limited to:

1. Specific methodology for income verification;

2. Situations where less than permanent affordability might be considered; and

3. Guidelines for meeting the requirement that off-site units be “in the same neighborhood”.

(g) *Reporting to City Council.* In conjunction with the annual report on the Housing Trust, city planning staff shall annually report on developments subject to this section, the number of units produced, the amount of fee-in-lieu collected, and the overall effectiveness of this section in achieving its

stated purpose.
(Ord. No. 98-06/07, 12-4-06; Ord. 82-15/16, 10-19-2015; Ord. No. 247-17/18, 6-18-2018)

Sec. 14-488. Density, parking and dimensional bonuses and reductions.

Notwithstanding any other provision of this chapter to the contrary, in order to encourage low income and workforce units in designated growth areas, eligible projects may avail themselves of the following options.

(a) *Density bonuses.* The maximum number of units that would otherwise be allowed under this chapter shall be increased for an eligible project in the manner described in the following table.

Eligible projects in all B-1, B-1b, B-2, B-2b, B-2c, B-3, B-3b, B-3c, B-5, R-7, and R-P Zones

Percentage Low Income Units for Sale/Rent	Percentage Workforce Units for Sale/Rent	Density Permitted*	Additional Height Permitted***	Setback Reductions**
10%	20%	1.1 x base	N/A	N/A
20%	40%	1.2 x base	10 feet	N/A
30%	60%	1.3 x base	10 feet	5′
50%	100%	2.0 x base	15 feet	5′
75%	N/A	2.5 x base	25 feet	10′

: "Base" is the number of units allowed under the zoning without this bonus but with any other bonuses applied. In R-P zones, multifamily is permitted with a "base" no less than 1 unit per 1,500 sf. of land area. If an eligible project is providing both workforce and affordable housing units, the applicant shall have the option of utilizing applicable incentives, but not cumulatively.

***: Setback reductions are absolute reductions in front, side and/or rear yard setback requirements. The maximum setback reductions in the B-1, B-1b and R-P zones shall be 5 feet.*

**** The maximum additional height permitted in the B-1 zones and the R-P zone shall be 15 feet. In addition, the maximum structure height is 50 feet within 750 feet of the Portland Observatory.*

(b) *Off-street parking.* Off-street parking is required as

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STATE OF MAINE
CUMBERLAND, ss.

Civil Action
Docket No. AP-20-21

LINDSAY MANN and SUSAN MANN,

Plaintiffs,

v.

THE CITY OF PORTLAND,

Defendant,

UPRIGHT PROPERTIES, LLC and JOSH WOJCIK,

Parties-in-Interest.

ORDER GRANTING CONSENTED-TO MOTION FOR RELIEF FROM JUDGMENT OR ORDER

Without objection and for good cause shown, the Motion for Relief from Judgment or Order filed by Parties-in-Interest Upright Properties, LLC and Josh Wojcik pursuant to Maine Rule of Civil Procedure 60(a) is hereby **GRANTED.**

The Court hereby issues the "~~Revised~~ Amended Order" attached hereto.

The Clerk may enter this Order on the docket by reference pursuant to M. R. Civ. P. 79(a).

Dated: 7/8/21

Justice, Superior Court

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STATE OF MAINE
CUMBERLAND, ss.

SUPERIOR COURT
CIVIL ACTION
DOCKET NO. AP-20-021

LINDSAY MANN
et. al.

v.

AMENDED[1] ORDER

CITY OF PORTLAND
et. al.

Before the court is a Rule 80B appeal of a City of Portland Planning Board ("Board") decision approving a North Street condominium project. Lindsey and Susan Mann, abutting property owners, and Munjoy Heights Condominium Association ("Association"), the Association for abutting condominium owners, object to the Planning Board's approval. For the reasons stated herein, the matter is remanded to the Planning Board for findings with respect to the parking spaces. Otherwise the Planning Board's decision is affirmed.

BACKGROUND

Parties in Interest, Upright Properties LLC and Joshua Wojcik ("Developer") applied to the Planning Board to construct a condominium project on North Street in Portland. The Developer purchased Lot 128R. Lot 128R's access to North St was by an easement ("Kremer Easement") across Lot 128 owned by the Kremers. ("Kremer Lot"). That easement was created by a 1923 deed splitting lot 128R from the Kremer lot. In 2018, the Developer acquired 480 square feet from an abutting parcel ("Roy Parcel") and joined it to 128 R.

Entered on the Docket: 7/9/21

[1] The Developers correctly identified clerical errors on page 8 in the court's order docketed on June 24. This Amended Order corrects those mistakes and corrects an incomplete citation on page 4, a stray period on page 4, and a misspelling on page 9.

The easement across the Kremer Lot was only 11 feet wide. In order to make it 16 feet wide, the Developer added Lot 126, which abutted both the Kremer Lot and Lot 128R. This 2 Lot development would include a 16 foot easement benefitting lot 128R would run across both the Kremer Lot and Lot 126. The Friday before the hearing, the Developer revised the Plan, merging the Lots and creating one development.

The Munjoy Heights condominium parcel is behind and downhill from Lot 128R,. Prior to the development of the condominium, both the Parcel and 128R were owned by Redfern Munjoy LLC ("Redfern"). There is a large retaining wall that was constructed as part of Redfern's condominium project designed to protect the downhill condominium property. In 2014, Redfern conveyed 128R to Upright. When it did so, it retained a 10 foot easement for the use of the Association to maintain the retaining wall.

On September 8, 2020, the Planning Board considered and approved the Developer's condominium project for a three story six unit residential building at 126 North St. and a three story six unit condominium building at 128R North Street. That is the operative decision from which the parties appeal.

DISCUSSION

On appeal, the Court's review of administrative decision-making is deferential and limited. The Superior Court reviews a local agency's decision for abuse of discretion, errors of law, and findings not supported by the evidence. *Beal v. Town of Stockton Springs*, 2017 ME 6, ¶ 13, 153 A.3d 768. The Manns and the Association bear the burden of persuasion on appeal because they seek to vacate the Planning Board's decision. *Fitanides v. City of Saco*, 2015 ME 32, ¶ 8, 113 A.3d 1088.

A court will review local interpretations of local ordinances de novo as a question of law. *Aydelott v. City of Portland*, 2010 ME 25, ¶ 10, 990 A.2d 1024. The court interprets an ordinance for its plain meaning and construes its terms reasonably in light of the purposes and objectives of the ordinance and its general structure. *Grant v. Town of Belgrade*, 2019 ME 160, ¶ 14, 221 A.3d 112. If an ordinance is clear on its face the court will look no further than its plain meaning. Local characterizations or fact-findings as to what meets ordinance standards are accorded "substantial deference." *Rudolph v. Golick,* 2010 ME 106, ¶ 8, 8 A.3d 684; *Jordan v. City of Ellsworth,* 2003 ME 82, ¶ 9, 828 A.2d 768.

Upon review of an agency's findings of fact, when the appellant did not have the burden of proof before the agency, the court must examine "the entire record to determine whether, on the basis of all the testimony and exhibits before it, the agency could fairly and reasonably find the facts as it did." *Friends of Lincoln Lakes v. Bd. of Env'l Prot.*, 2010 ME 18, ¶ 13, 989 A.2d 1128. "The court shall not substitute its judgment for that of the agency on questions of fact." 5 M.R.S. § 11007(3). The Law Court, or the Superior Court, will affirm findings of fact if they are supported by "substantial evidence in the record", even if the record contains inconsistent evidence or evidence contrary to the result reached by the agency. *Passadumkeag Mountain Friends v. Bd. of Environmental Prot.*, 2014 ME 116, ¶¶ 12, 14, 102 A.3d 1181. The municipal board's findings of fact will be vacated only if there is no competent evidence in the record to support a decision. *Lakeside at Pleasant Mountain Condo. Ass'n v. Town of Bridgton*, 2009 ME 64, ¶ 11, 974 A.2d 893.

When the Board's findings of fact are insufficient, the court should remand for further findings of fact to allow for meaningful judicial review. *Appletree Cottage LLC v. Town of Cape Elizabeth,* 2017 ME 177, ¶ 9; *Christian Fellowship & Renewal Ctr.*, 2001 ME 16, ¶¶ 12-18. A

failure to make proper finding of facts, however, does not result in an automatic remand. *City of Christian Fellowship,* ¶ 19. A remand is not necessary when the findings may be easily inferred from the record. *Id.* When there is sufficient evidence in the record, the municipal agency's decision may be supported by implicit factfinding. *Old Town v. Expera Old Town, LLC,* 2021 ME ¶ 22; *Town of Minot v. Starbird,* 2012 ME 25, ¶11, n.4.

In the absence of a request for findings of fact, the court may assume that findings were made for the prevailing party on all factual issues necessary to the decision. *Herrick v. Town of Mechanic Falls*, 673 A.2d 1348, 1350 (Me. 1996); *Advanced Medical Research Foundation v. Cushing*, 555 A.2d 1040, 1041. An appellant's failure to request findings of fact does not prevent the court from remanding a matter if the court finds that the findings are insufficient for meaningful review. *Christian Fellowship,* ¶ 17.

A. Mann Appeal.

The Manns raise three issues: the Developer's right, title and interest in an easement accessing the property, the number of parking spaces, and setback requirements.

1. *The Board did not abuse its discretion when it determined the Developer had sufficient right title and interest in the easement to proceed to approve the project.*

The court is required to explore the common issue of what a Planning Board is supposed to do when there is a dispute over the scope of an easement benefitting the property that is the subject of the approval. Like many ordinances, the Portland Site Plan standards require an applicant to submit "Evidence of Right, Title and Interest." Code, §14-527(a)(4). The parties agree that this requirement does not mean that the Planning Board should decide the real estate dispute over the scope of the Developer's easement over the Kremer property. Instead, the scope of an easement is appropriately determined by a court in the context of a declaratory judgment action. *Tomasino v. Town of Casco,* 2020 ME 96, ¶ 8, 237 A.3d 175. In fact, the Kreiners have

filed a declaratory judgment action to determine the scope of the easement that is currently pending.

The issue here, then, is what should the Board, and this court on appeal, do when there is a dispute over whether the scope of an easement is sufficient to allow access the proposed development. The City and the Developer argue that the Planning Board's approval of the project infers a factual determination by the Board that there is sufficient "evidence" of right, title, and interest to proceed and the court should defer to that finding. The City and Developer concede that the Board has not decided the dispute over the easement, but the approval process is complete, leaving the easement dispute to be resolved in the civil action.

The Manns on the other hand, argue that because the Board cannot resolve the easement dispute, the Board cannot find right, title, and interest and should have denied the application. Therefore, this court should vacate the approval. The issue comes to whether the project may be approved now with the real estate dispute resolved later or whether the approval must await resolution of the easement dispute.

Both parties find support in the Law Court's recent decision in *Tomasino.* In *Tomasino,* a homeowner's property enjoyed the benefit of an easement across land owned by an abutter. There was a dispute over whether the homeowner could cut down trees to build a driveway on the easement. *Id.* ¶ 3. The Town's Board of Appeals reversed the issuance of a building permit, finding there was "insufficient information" allowing the BOA "to definitively resolve this issue." *Id.* The homeowner appealed, the Superior Court affirmed, and the homeowner appealed to the Law Court. The Law Court confirmed that the municipal board did not have the authority to decide the easement dispute. *Id.* ¶ 7. The Law Court also affirmed the municipality's finding that the owner did not have right, title and interest. *Id.*

Tomasino leaves three different approaches to the right, title, and interest issue as applied to an easement. The first option, that "right, title, and interest," means that the applicant only needs to establish a threshold, colorable, interest in an easement in order to establish "right, title, and interest" as a matter of law. In *Tomasino,* the Law Court explicitly rejected that approach. *Id.* ¶¶ 6, 7.

There is some support in *Tomasino* for the second option which would require the Board to reject any application where there is a dispute over "right, title, and interest." Under this approach, because the Board cannot interpret deeds to decide the dispute, the applicant should legally resolve that dispute before it can have a "legally cognizable expectation of having the power to use the site in the ways that he would be authorized by the permit or license he seeks." *Id.* ¶ 11. "[I]n the face of a dispute between private property owners, that requirement is not met by an easement whose parameters have not been factually determined by a court with jurisdiction to do so." *Id.* ¶ 15.

The problem with this approach is that it suggests that anytime someone stands up at a planning board meeting and claims rights to land, to a deed restriction, or to a dispute over the scope of an easement, then the municipal board must stop the approval process until the applicant has filed a declaratory judgment action and a court has resolved the dispute. There must be some discretion for a planning board to allow an application to proceed even though a property dispute is unresolved. The court does not interpret *Tomasino* to require this option.

Instead, the court adopts the third approach. Here, the court reviews the record to determine whether there is sufficient evidence in the record to support the Board's finding that there is "evidence of right, title and interest" in the easement. No one suggests that by approval,

the planning board has resolved the land dispute. Nevertheless, the administrative procedure is over, leaving the land dispute for a decision by a court.

This option is consistent with the Law Court's decision in *Tomasino*. There, the Court made clear that it was rejecting the applicant's argument that they had met the threshold requirement of right, title and interest *as a matter of law*. *Id.*, ¶9. The Court in *Tomasino* deferred to the determination of the municipal agency. There is nothing in *Tomasino* that requires that a planning board find no evidence of right title and interest as a matter of law merely because there is the existence of a dispute. Therefore, the court treats the Board's finding with the same deference it would any other finding.

Here, there was sufficient evidence in the record to support a finding that there is "evidence" of "right title and interest." The 1923 deed creating the easement and the plans depicting the location of the existing easement constitute sufficient evidence in the record to determine there was "evidence of right title and interest" in the easement.

The court would have preferred that the issue was specifically addressed in the final planner's report which the City treats as a findings of fact. *See* V 1, 433 (no mention of the easement in the "Right Title and Interest" section.) The appellant, however, did not request further findings of facts. More important, the basis for the Board's decision is easily found in the record. If the court remanded for further factual findings, the court would be asking the Board to engage in an analysis of property rights which is not within its authority. Remanding to the Board on this issue would not assist the court to conduct meaningful judicial review. The court

is not going to assess the scope of the easement in this proceeding.[2] Therefore, the court affirms the Board's decision on this issue.

2. *The Board did not consider whether the proposed project was an "eligible project" under the Affordable Housing Ordinance when considering whether to reduce the number of parking places warranting remand on that issue.*

The City's site plan standards required nine parking spaces for this project. V 1 437. Based on provisions of the Affordable Housing Ordinance, the City approved a parking plan with eight parking spaces.

The Petitioners argue that the ordinance does not permit the reduction in the number of parking places. The Developer and the City rely on an exception for affordable housing units in its approval of less than nine parking spaces. "The planning board may establish a parking requirement for affordable housing for rent or sale within an *eligible project* that is less than one (1) parking space per affordable housing unit, regardless of the size of the structure." 14-332.2(b) (emphasis supplied). The definition of "eligible project" contains four elements. Section 14-485. There is no dispute the project meets the first three elements of an "eligible project." The ordinance, however, requires that the project meet the first three elements "*and* (d) Projects *shall not* be considered "eligible projects" solely because they are subject to Section 14-487." Section 14-485 (emphasis supplied). Section 14 – 487 is an ordinance that requires that projects of 10 or more units dedicate 10% of the units to meet the definition of workforce housing, or pay a fee in lieu of providing the affordable units. It appears as though the two affordable housing units in this project may exist solely to allow the Developer to meet the

[2] This decision implies nothing with respect to determination of the Developer's rights to the easement. That issue is currently being litigated in the other matter and the court's decision here is not intended to suggest that the court has formed a position.

requirements of Section 14-487. In that case, this project may not be "an eligible project" as defined in the ordinance.

The record provides no evidence whether the Board considered subsection (d) of the definition of "eligible project" when approving this project. Regardless of whether the Petitioners requested additional facts, the record is insufficient to allow the court to determine whether the approval of the project violated the ordinance. Therefore, the court remands the matter for further findings regarding whether the application of the affordable housing exception to the parking requirements is appropriate in light of the ordinance's definition of an "eligible project".

3. *The Board acted within its discretion when determining that the parking garage foundation was part of an "unenclosed space" when calculating the setback provision.*

The sole issue here is whether a wall marking the outside of a parking garage is part of a "rear deck, porch, or similar unenclosed space," allowing installation within 10 feet from the rear boundary of the property. Section 14-140.5. Review of the record easily provides the evidence supporting the Board's decision. Reviewing the depiction at V3 181, the court finds that it was in the Board's discretion to find that the wall was part of a "similar unenclosed space." The wall supports and marks the edge of a parking area exposed to the elements. The wall supports posts which, in turn, support upper level porches. There is a decorative screen on the outside of the parking area, but the screen does not fully enclose the parking area. Therefore, the court affirms the Board's determination with respect to the set back.

B. Munjoy Heights Appeal

Munjoy Heights Condominiums are located downhill from the project. The Association intervened with respect to the uphill project's impact on its maintenance easement and the effect of the new project on the large retaining wall protecting Munjoy Heights Condominiums that

pre-existed the project. The Association's arguments do not provide any reason not to affirm the Board's decision.

The retaining wall was designed and built at the time that the condominiums were built. When developing the Munjoy Heights project, Redfern used the same engineer as the Developers in this case. The Developer and Redfern entered into a Release and Easement Agreement ultimately benefitting the Association and burdening the Developer. The Agreement creates an Easement Area consisting of a 10 foot strip on the Developer's side of the retaining wall. The Agreement gives the Association an easement to "enter the Easement Area" with "men and equipment, including heavy equipment, to maintain, repair, shore up and replace" the retaining wall. The maintenance easement did not, however, specifically provide access to North Street to allow the Association to maintain the wall from the uphill side of the property. The engineer testified that the wall was properly sized and constructed.

1. *Maintenance Easement.*

The Association argues that the existence of the easement, including an implied easement to access the strip from North Street, means that the Developer does not have sufficient right title and interest in the property. As described earlier with respect to the Kremer easement, the court examines the record to see if there is sufficient evidence for the Board's finding that there is "evidence" of right, title and interest. *See, supra,* pp 4-7.

As with the Kremer easement, the court here finds that there is sufficient evidence of right, title, and interest to proceed with the project in spite of the maintenance easement. The record shows that the 10 foot strip is left undeveloped. The easement does not contain an explicit grant allowing the Association to access the maintenance easement from North Street. The record is devoid of evidence from a knowledgeable witness with respect to what type of

equipment is necessary to maintain the wall and specific evidence of whether any maintenance or repair procedure requires equipment to enter from North Street. The only evidence with respect to how a maintenance easement will be used is a brief statement from Upright's engineer, who also designed the wall, that it was anticipated that maintenance work would come from the Munjoy Heights side.[3]

Therefore, for the purposes of the administrative approval, the court defers to the Board's finding that there is sufficient evidence of right, title and interest to allow the project to go forward. As with the Kremer easement, the court finds the deeds provide *evidence* that the project does not interfere with the maintenance issue. There is nothing in the deed that suggests that the project interferes with the maintenance easement. The only competent evidence presented to the Board was the engineer's testimony that the project would not interfere with the easement. In their brief, the Association engaged in a long discussion of their easement rights. It is not appropriate as part of the appeal to determine easement rights and nothing about this decision indicates how the court would rule in a civil action to decide whether the Association's easement rights are infringed. Any further consideration by the Board on remand would not assist in meaningful judicial review of this appeal. Therefore, the court denies the Association's appeal on this issue.

2. *Need for a Stability Analysis.*

The Developer's civil engineer, whose firm also worked on the retaining wall, testified that the retaining wall was appropriately designed and constructed to bear the impact of this

[3] The condominium owners share the position of many abuttors during planning board reviews of complex projects. As they must, developers come prepared with engineered plans and engineers prepared to support their project. Many abuttors lack the know how and/or the funds to engage counsel and consulting engineers while a planning board is proceeding. They do not engage experts to adequately provide the type of evidence that might persuade the Board when considering engineering issues. The planning board must decide based on the evidentiary record presented at the hearing. As expected, a planning board typically weighs knowledgeable opinions from an expert over anecdotal lay opinions.

construction. The Association offered no qualified testimony to contrary. Therefore, there is substantial evidence in the record supporting the Board's approval of the project and implied finding that the wall is adequately designed.

The court's review of the record does not show any evidence, other than lay opinions, that would overcome the engineer's testimony that the wall was properly sized and constructed to protect the condominium. Therefore, the court sees no benefit to a remand for additional findings with respect to this issue.

It is ORDERED that this matter is REMANDED to the Portland Planning Board to determine whether the project is an "eligible project" allowing a reduction of parking spaces and to provide findings of fact explaining that decision. In all other aspects, the Planning Board's decision is AFFIRMED.

This Order is incorporated on the docket by reference pursuant to M.R.Civ.P. 79(a).

DATE: 7/8/21

Thomas R. McKeon
Justice, Maine Superior Court

ACORN ENGINEERING, INC.

Planning Division
Attn: Shukria Wiar
City of Portland, Maine
389 Congress Street, 4th Floor
Portland, ME 04101

August 2, 2019
Rev. October 29, 2019

Subject: Level III Final Site Plan/Subdivision Application – 126/128 North Street

Dear Shukria Wiar:

On behalf of Upright Properties, LLC, we are pleased to submit the accompanying package of submission materials related to the proposed redevelopment at 126 and 128R North Street. Based upon the discussions at the September 27th, 2019 meeting with you, Chief Thompson, the Applicant and design team the project was updated to include the future plans for 126 North St. As such the proposal has been updated as a phased project where Phase 1 would include the redevelopment of 128R into a four-story building with six condominiums and covered parking on the ground level. Phase 2 would include the redevelopment of 126 into a three-story building with five rental units. Overall, the phased project will result in a net increase of six dwelling units. The project site is located within the City's R-6 Zoning District as well as the Munjoy Hill Conservation Overlay District. This application package is intended to meet the City's Submission Requirements as outlined in the Level III Site Plan/Subdivision Application procedures.

The 128R site currently shares a driveway with the abutting 128F North Street property, achieving a public policy goal of the City's. Additionally, 126 would grant 128R an access easement to provide a 16'-wide access way, providing greater emergency access for three properties. We are pleased to submit this application which will increase the available housing stock by six units including one workforce unit on site and will also improve the area's stormwater management by implementing a high-flow rain garden and storm infrastructure resulting in a reduction in runoff.

The 128R infill lot is largely hidden from the public right-of-way; however, the building design has incorporated strategies to help the structure blend in with the surrounding character of the neighborhood. Prior to this formal application, the project architect has held extensive conversations with the City's Urban Planner to strategize on ways the building can fit into the neighborhood and provide an active front façade. Furthermore, the proposed 126 building features a three-story gable roof structure which compliments the neighboring 128F multi-family building.

If you have any questions regarding these materials or the completeness of the application materials, please contact us within the next five (5) days.

Sincerely,

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

The following documents and drawings will be uploaded onto the City's electronic submission site per the procedure outlined in the application:

Documents:

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

Drawings:

- Civil Site Plan Set, Dated 10/29/19
- Architectural Plan Set, Dated 10/29/19

ACORN ENGINEERING, INC.

Shukria Wiar – City Planner
Planning Division, City of Portland
389 Congress Street
Portland, ME 04101

August 27, 2020

Subject: Final Submission and Lot Merge
126/128R North Street Redevelopment – Portland, Maine

Shukria:

In response to public comments, the Applicant has proposed to merge the two lots at 126 and 128R North St. Overall, the project design and proposed phasing has remained largely the same, simply with removal of the devising lot line between 126 and 128R and a 2 ft extension to the rear of the 126 building. We have provided an updated zoning analysis to demonstrate each structure's conformance with the R-6 Zoning District as well as the Munjoy Hill Conservation Overlay District. Each building and previous lot is able to stand on its own as a legal lot with six units proposed in each structure; however, if approved, the lot merge would eliminate the existing legal and buildable non-conforming lot. To this point, we have also analyzed the entire site as one for conformance with the Space & Bulk standards, which can be found on the Updated Site Plan and Subdivision Plan.

Additionally, the design maintains the eight proposed parking spaces. With 12 proposed units, nine parking spaces would normally be required given the R-6 exception of the first three spaces and a 1:1 parking ratio thereafter. However, we are requesting that the Planning Board exercises its authority under Portland's Land Use Code Sec. 14-332.2 (b) to set the 126 North St. on-site workforce housing unit's parking requirement to zero. With the Planning Board's agreement on this item, the site meets the total requirement of eight parking spaces.

We are pleased to advance this project which will provide two deed-restricted workforce units and ten market rate residential units, further providing a mix of housing opportunities in proximity to the Downtown core. Please let me know if you have any additional questions or comments.

Sincerely,

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

Dear Neighbor: January 3, 2020

On behalf Upright Properties LLC and the families who will live in the residences, we are pleased to invite you to a second neighborhood meeting to discuss our revised plans for the proposed project at 128R and 126 North Street, which are located within the R-6 zoning (Munjoy Hill Overlay) district. The project includes a phased approach with first phase the redevelopment of the 128R lot into a 6 unit, 4-story residential building and the second phase the reconstruction of the 126 lot into a 3-story, 5 unit rental property. Ground-level parking at both locations will allow us to reduce the amount of parking spaces used on the street and storage space for bicycle parking will be provided as well. Both buildings will include modern fire/life safety systems and will exceed the state's energy efficiency requirements. Both buildings are designed to fair housing accessibility standards, providing 7 fully adaptable housing units. In addition to providing improved housing, the sidewalk will be rebuilt to City technical standards.

Meeting Location:	The Root Cellar – 94 Washington Ave., Portland, ME 04101
Meeting Date:	Thursday, January 16, 2020
Meeting Time:	5:30 p.m.

This notification supersedes the postcard dated December 27, 2019. There is no longer a meeting on January 9, 2020.This notification is being sent to all residents within 500 feet of the proposed development as well as those residents on the "interested parties list." A sign-in sheet will be circulated and minutes of the meeting will be taken. Both the sign-in sheet and minutes will be submitted to the Planning Board. If you have any questions regarding the neighborhood meeting, please don't hesitate to call me at 207-749-9656.

Sincerely,

Joshua Wojcik
Project Builder and Future Resident of 128R North St.

Portland, Maine — Yes. Life's good here.

Planning & Urban Development Department

LEVEL II and LEVEL III APPLICATION SUBMISSION CHECKLIST

Please submit each document as a separate PDF file.

Please confirm by electronically checking the boxes to the left

General Application Documents

Checklist	Items to be Provided
Yes NA Plan ✔	PROJECT DESCRIPTION • Cover Letter with detailed project description
Yes NA Plan ✔	COMPLETED CHECKLIST – LEVEL III APPLICATION
Yes NA Plan ✔	RIGHT, TITLE AND INTEREST • Deeds, leases, or purchase and sales agreements
Yes NA Plan ✔	EVIDENCE OF STATE OR FEDERAL APPROVALS, if applicable • Permits or letters of non-jurisdiction, if applicable
Yes NA Plan ✔	ZONING ASSESSMENT • Table listing required and proposed uses and dimensional standards Zoning Assessment Table
Yes NA Plan ✔	EXISTING &/OR PROPOSED EASEMENTS OR COVENANTS, if applicable • Evidence of existing easements and any proposed easements
Yes NA Plan ✔	WAIVER REQUESTS • Written request for waiver describing request and reason. Waiver Table
Yes NA Plan ✔	FINANCIAL CAPABILITY • Letter or evidence from a financial institution or third party verifying financial capacity to undertake project
Yes NA Plan ✔	TECHNICAL CAPABILITY • Evidence of technical capability of applicant and consultants – resumes and/or examples of past projects

LEVEL II AND LEVEL III SITE PLAN STANDARDS AND SUBMISSION CHECKLIST

Provide assessment of compliance with standards and include supplemental documentation, as applicable.

Please submit each document as a separate PDF file.

TRANSPORTATION

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

ENVIRONMENTAL AND LANDSCAPE FEATURES	
Check list	Assess/Provide/Document:
Yes NA Plan ☐ ✔ ☐	Preservation of Significant Natural Features (14-526 (b) 1), if applicable • Trees, plants, habitats listed on State or Federal list of endangered or threatened • High and moderate value waterfowl and wading habitat • Aquifers on Casco Bay Islands • Waterbodies (including wetlands, watercourses, significant vernal pools and floodplains) • Proposed preservation areas and protection measures • Documentation from environmental consultants, determinations from applicable state agencies
Yes NA Plan ✔ ☐ ☐	Landscaping and Landscape Preservation (14-526 (b) 2 a) • Preservation of trees and preservation within required zoning setbacks (Technical Manual, Section 4) • Protection measures of existing vegetation during construction • Protection measures within Shoreland Zone, if applicable
Yes NA Plan ✔ ☐ ☐	Site Landscaping (14-526 (b) 2 b) • Screening and buffering of service areas and between non-residential and residential uses • Planting plans with plant schedule and sizes (Technical Manual, Section 4)
Yes NA Plan ☐ ✔ ☐	Parking Lot Landscaping (14-526 (b) 2 b ii), if applicable • Landscaped islands within parking areas (Technical Manual, Section 4)
Yes NA Plan ✔ ☐ ☐	Street Trees (14-526 (b) 2 b iii) • Existing Heritage or Feature Trees on site and measures to preserve • Identify street trees on the plan meeting the site plan and Technical Manual standards (Section 4) or identify alternative measures, if applicable

ENVIRONMENTAL AND STORMWATER	
Check list	Assess/Provide/Document:
Yes NA Plan ✔ ☐ ☐	Water Quality, Stormwater Management and Erosion Control (14-526 (b) 3 a) • Stormwater report in compliance with Section 5 of Technical Manual and DEP Chapter 500 stormwater for basic, general and flooding standards, as applicable • Erosion control plan and measures • Evidence of compliance with Urban Impaired Stream Standards pursuant to DEP Chapter 500 stormwater, as applicable • Subsurface sanitary sewage disposal and groundwater protection

PUBLIC INFRASTRUCTURE AND SAFETY	
Check list	Assess/Provide/Document:
Yes NA Plan ✔	Consistency with City Master Plans (14-526 (c) 1) • Identify consistency with master plans • Proposed easements, rights and improvements to connect or continue off-premises public infrastructure, as applicable
Yes NA Plan ✔	Public Safety and Fire Prevention (14-526 (c)) • Address Crime Prevention through Environmental Design (CPTED) (Technical Manual, Section 3) • Emergency vehicle access • Address consistency with public safety standards (Technical Manual, Section 3) • Submit a code summary referring NFPA 1 and all Fire Department standards (Technical Manual, Section 3) – Fire Checklist
Yes NA Plan ✔	Availability and Adequacy of Public Utilities (14-526 (c) 3) (Technical Manual, Sections 2 & 9) • Electrical services, including providing underground services • Identify existing and proposed connections for public utilities and required public utility upgrades • Sewer line connections are required, if there is a main within 200 feet • Proposed solid waste management facilities on-site and management for the site • Written evidence of the ability to serve from utility companies, as applicable

SITE DESIGN	
Check list	Assess/Provide/Document:
Yes NA Plan ✔	Massing, Ventilations and Wind Impact (14-526 (d) 1) • Wind and ventilation impacts on adjoining structures and/or adjacent public spaces. Wind study, if applicable • Bulk, location or height impacts on adjoining structures • Identify and locate HVAC equipment and venting away from public spaces and residential properties • Identify screening and manufacturing specifications for noise, if applicable
Yes NA Plan ✔	Shadows (14-526 (d) 2), if applicable • Shadow analysis of impacts on publicly accessible open space (Technical Manual, Section 11)
Yes NA Plan ✔	Snow and Ice Loading (14-526 (d) 3) • Building design to prevent snow and ice from loading or falling onto adjacent properties or public ways
Yes NA Plan ✔	View Corridors (14-526 (d) 4), if applicable • Protection of designated view corridors (Portland Design Manual, Appendix 1)

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

Level II and Level III Site Plan Checklist

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

☒ RECENT BOUNDARY SURVEY (stamped by Maine Licensed Surveyor)

Must be in compliance with Technical Manual, Section 13

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

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

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

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

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

☒ UTILITY PLAN including:

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

☒ GRADING and DRAINAGE PLAN including:
• Existing grades and drainage • Proposed grades • Proposed stormwater management meeting Technical Manual (Section 5) standards • Location and proposed alteration of a water course • Preservation or alteration of wetlands
☒ EROSION CONTROL
• Must be in compliance with Technical Manual, Section 5
☒ LANDSCAPE PLAN including:
• Existing vegetation to be preserved and preservation measures • Proposed landscaping and buffers • Planting schedule
Δ RECORDING PLAT, if applicable
• IF SUBDIVISION: Must be in compliance with requirements of Section 14-496 (b)
☒ ARCHITECTURAL PLANS & RENDERINGS including:
• Exterior building elevations, color renderings, illustrations of all sides • Location and dimensions of all existing & proposed HVAC & mechanical equipment, all proposed screening • Provide context drawings, if applicable (Design Manual, page 1) • Floor plans

ACORN ENGINEERING, INC.

Planning Division
City of Portland, Maine
389 Congress Street, 4th Floor
Portland, ME 04101

January 16, 2020

Subject: 126/128R North Street Neighborhood Meeting #2

I, Will Savage, hereby certify that a neighborhood meeting was held on January 16, 2020 at the Root Cellar at 5:30 pm.

I also certify that on January 6, 2020, invitations were mailed to the following:

1. All addresses on the mailing list provided by the Planning Division which includes property owners within 500 feet of the proposed development.

2. Residents on the "interested parties" list.

Sincerely,

Date: 1/16/20

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

Included with this certification are:

1. Copy of the invitation sent
2. Sign-in sheet
3. Meeting minutes

Section C

Right, Title, Interest

MAINE REAL ESTATE TAX PAID

QUITCLAIM DEED WITH COVENANT

MARY ROY, of Portland, County of Cumberland and State of Maine, for consideration paid, grants to UPRIGHT PROPERTIES, LLC, a Maine limited liability company with its principal place of business in Portland, County of Cumberland and State of Maine and having a mailing address of P.O. Box 833, Wilton, Maine 04294, WITH QUITCLAIM COVENANT, a certain lot or parcel of land situated southwesterly of, but not adjacent to, the southwesterly sideline of North Street, in the City of Portland, County of Cumberland, and State of Maine, being more particularly bounded and described as follows:

Beginning at the northerly corner of the herein described parcel on the southwesterly line of land described in a deed from Gregory D. Kesich and Gail D. Kesich to Raymond T. Wojcik, Zetta A. Wojcik, and Joshua T. Wojcik, dated August 24, 2007 and recorded at the Cumberland County Registry of Deeds (CCRD) in Book 25418, Page 226, being S35°14'21"E along said land of Wojcik, a distance of twenty-four and fifty-six hundredths (24.56') feet from the westerly corner of said land of Wojcik;

Thence S52°38'46"W along land described in a deed from Redfern Munjoy, LLC to Upright Properties, LLC, dated January 31, 2014, recorded in CCRD Book 31318, Page 270, a distance of thirty-seven and eighty hundredths (37.80') feet to the westerly corner of the herein described parcel at land described in a deed from Raymond C. Maxwell to Redfern Munjoy, LLC, dated January 31, 2014, recorded in CCRD Book 31317, Page 116;

Thence S53°48'37"E along said land of Redfern Munjoy, LLC, a distance of fourteen (14') feet, more or less, to the southwesterly extension of the southeasterly sideline of said land of Wojcik;

Thence N52°38'46"E along remaining land of the herein grantor on the southwesterly extension of the southeasterly sideline of said land of Wojcik, a distance of thirty-three (33') feet, more or less, to the southerly corner of said land of Wojcik, and the westerly corner of land described in a deed from Hazel Brenerman to Peter J. DeTroy, III and Mary Roy (the herein grantor), dated November 21, 2003 and recorded in CCRD Book 20592, Page 111;

Thence N35°14'21"W along said land of Wojcik, a distance of thirteen and a half (13 1/2') feet, more or less, to the point of beginning.

Total area of the herein described parcel equals 480 square feet, more or less. The bearings in this description are based on Grid North, MSPC NAD83, 1802 (West Zone).

The herein described property is depicted on "*Exhibit Sketch For Proposed Conveyance*", prepared by Nadeau Land Surveys, Job #2181902, dated May 29, 2018, attached to and made part of this deed. Meaning and intending to convey a portion of land described in a deed from Redfern Munjoy, LLC to Peter J. DeTroy, III and Mary Roy, dated January 31, 2014, recorded at the Cumberland County Registry of Deeds in Book 31318, Page 267.

Mary Roy derived her sole title to this property by being the surviving joint tenant of her late spouse, Peter J. DeTroy, III. Peter J. DeTroy, III died on May 28, 2016, a resident of Portland, Cumberland County, Maine. Reference is made to a Certificate and Abstract N-121, dated June 16, 2016 and recorded at the Cumberland County Registry of Deeds in Book 33213, Page 100.

Witness my hand and seal this 5 day of June, 2018.

Witness

Darya I. Zappia

Mary Roy

STATE OF MAINE
Cumberland, ss.

June 5, 2018

Personally appeared the above-named MARY ROY and acknowledged the foregoing instrument to be her free act and deed. Before me,

~~Notary Public~~/Attorney-at-law
Printed Name: DARYA I ZAPPIA
~~My Commission Exp.:~~ Bar No 4717

Doc#: 25448 Bk:34890 Pg: 306

Nadeau Land Surveys

Professional Land Surveyors
Certified Floodplain Managers

Exhibit Sketch For Proposed Conveyance

Mary Roy to Upright Properties, LLC
Between Sheridan Street & North Street, Portland, Maine
1" = 20' May 29, 2018 Job #2181902

Boundary lines based on "Exhibit Sketch For Proposed Conveyance", dated November 27, 2013, recorded in CCRD Book 31318, Page 267, and "Condominium Plat, Munjoy Heights, A Condominium, Sheridan Street, East Cove Street, And Walnut Street, Portland, Maine", dated April 21, 2015 by Nadeau Land Surveys, Portland, Maine, recorded in CCRD Plan Book 215, Page 143.

STATE OF MAINE
JAMES D. NADEAU
2124
PROFESSIONAL LAND SURVEYOR

5-29-18

Received
Recorded Register of Deeds
Jun 05,2018 03:05:59P
Cumberland County
Nancy A. Lane

918 Brighton Avenue
Portland, Maine 04102

www.nadeaulandsurveys.com

Phone (207) 878-7870
Fax (207) 878-7871

307

Know all Men by these Presents, That

I, Elmore W. Ramsdell of Portland in the County of Cumberland and State of Maine,

in consideration of one dollar and other valuable considerations, paid by
Claire Bowden of said Portland,

the receipt whereof I do hereby acknowledge, do hereby give, grant, bargain, sell and convey unto the said Claire Bowden, her heirs and assigns forever, a certain lot or parcel of land on the easterly side of Sheridan Street, beginning at a point on said easterly side of Sheridan Street which point marks the southwesterly corner of land conveyed by A. J. Bernstein to Elmore W. Ramsdell by deed dated May 28, 1923, and recorded in Cuberland County Registry of Deeds in Book 1133, Page 466; thence running northerly by said easterly side line of Sheridan Street sixty-three and five tenths (63.5) feet, more or less, to the northwesterly corner of said land conveyed to Ramsdell as aforesaid; thence running easterly along the northerly line of said land one hundred and four and sixty-two one hundredths (104.62) feet to the northwest corner of land conveyed by said A. J. Bernstein to Joseph R. Murphy by deed dated May 28, 1923, recorded in Cumberland County Registry of Deeds, Book 1133, Page 465; thence running southerly by the westerly line of said Murphy land twenty and thirty-one one hundredths (20.31) feet to the southwesterly corner of said Murphy land; thence running easterly along the southerly line of said Murphy land fifteen (15) feet to a point; thence southerly in a line parallel with and fifteen (15) feet distant easterly from said westerly side line of said Murphy land extended southerly, about forty-three (43) feet to the southerly line of land first above mentioned as conveyed by Bernstein to Ramsdell, at a point ninety-one and ninety-three one hundredths (91.93) feet westerly from the westerly side line of North Street; thence running westerly by said southerly side line of said Ramsdell land about one hundred twenty-one and ninety-five one hundredths (121.95) feet to Sheridan Street and the point of beginning.

Being a part of land conveyed by Abraham J. Bernstein to me by deed dated May 28, 1923, recorded in Cumberland County Registry of Deeds, Book 1133, Page 466.

Together with a right of way across my land from the lot hereby conveyed to North Street.

Twelve words blotted out before signing. D.W.P.

U.S.I.R. $2.00
E.W.R. 7/25/23

To Have and to Hold the aforegranted and bargained premises, with all the privileges and appurtenances thereof to the said Claire Bowden, her heirs and assigns, to her and their use and behoof forever. And I do covenant with the said Grantee, her heirs and assigns, that I am lawfully seized in fee of the premises; that they are free of all incumbrances; except as aforesaid;

that I have good right to sell and convey the same to the said Grantee to hold as aforesaid; and that I and my heirs, shall and will warrant and defend the same to the said Grantee, her heirs and assigns forever, against the lawful claims and demands of all persons. except as aforesaid.

In Witness Whereof, I, the said Elmore W. Ramsdell, and I, Amy S. Ramsdell, wife of the said Elmore W. Ramsdell, joining in this deed as Grantor, and relinquishing and conveying my right by descent and all other rights in the above described premises

have hereunto set my hand- and seal -this 25th, day of July in the year of our Lord one thousand nine hundred and twenty-three.

Signed, Sealed and Delivered in presence of

D. W. Philbrick — Elmore W. Ramsdell — Seal

Everett W. Fowler — Amy S. Ramsdell — Seal

State of Maine, CUMBERLAND, ss. July 25, 192 3. Personally appeared the above named Elmore W. Ramsdell and acknowledged the above instrument to be his free act and deed.

Before me, Donald W. Philbrick *Justice of the Peace.*

Received July 27, 192 3, at 9 o'clock 40 m. A. M., and recorded according to the original.

EXHIBIT A

RELEASE AND EASEMENT AGREEMENT

This Release and Easement Agreement (the "Agreement") is by and between **REDFERN MUNJOY, LLC**, a Maine limited liability company ("Redfern"), with a place of business in Portland, Maine and a mailing address of PO Box 8816, Portland, Maine 04104, owner of premises (the "Redfern Land") described in deeds recorded in the Cumberland County Registry of Deeds set forth on Exhibit A attached hereto and made a part hereof, and **UPRIGHT PROPERTIES, LLC** ("Upright"), a Maine limited liability company with a mailing address of PO Box 833, Wilton, Maine 04294, owner of premises (the "Upright Parcel") conveyed by corrective deed from Redfern dated January 31, 2014 and recorded in said Registry in Book 31318, Page 270 (the "Upright Deed").

Whereas, in the Upright Deed, Redfern reserved Easement Rights in the Easement Area, all as defined and more fully described therein, which Easement Rights are for the benefit of portions of the Redfern Land that Redfern is developing as residential condominium/subdivision ("Munjoy Heights").

Whereas, the conditions of the Easement Area requires modifications that were not anticipated at the time the Upright Deed was delivered.

Whereas, Upright and Redfern desire to amend the Easement Rights and reduce the square footage of the Easement Area and to clarify their respective ownership rights and easement rights.

Now Therefore, Redfern and Upright, for one dollar and other sufficient consideration paid and received including the grants and covenants hereinafter set forth, do hereby make the following grants of real property interests and agreements, which agreements are intended to run with the land that is Munjoy Heights and the Upright Parcel:

1. Redfern releases to Upright all interest in the easterly portion of the Easement Area, being a strip of land ten (10) feet wide more particularly bounded and described as follows:

   Commencing at a #5 steel rebar with survey cap #2124 to be set at the southerly corner of the Upright Parcel;

   Thence N 52° 38' 46" E along the Redfern Land, a distance of ten and one one-hundredth (10.01) feet to the southerly corner of the land to be released from the Easement Area and the Point of Beginning;

   Thence from said Point of Beginning N 52° 38' 46" E along the Redfern Land and land conveyed to Peter J. DeTroy, III and Mary Roy by corrective deed dated January 31, 2014 and recorded in the Cumberland County Registry of Deeds in Book 31318, Page 267, a distance of ten and one hundredth (10.01) feet;

   Thence N 35° 18' 27" W through the Upright Parcel, a distance of forty-nine and sixty-nine hundredths (49.69) feet;

   Thence N 17° 29' 52" W continuing through the Upright Parcel, a distance of forty and sixty-one hundredths (40.61) feet to the northwesterly line of the Upright Parcel at the Redfern Land;

   Thence S 52° 38' 46" W along the Redfern Land a distance of ten and sixty-three hundredths (10.63) feet;

   Thence S 17° 29' 52" E a distance of thirty-eight and fifty-seven hundredths (38.57) feet;

   Thence S 35° 18' 27" E a distance of fifty-one and sixty-two hundredths (51.62) feet to the Point of Beginning.

   Total area of the herein described parcel equals 902 square feet (0.02 acre). The bearings in this description are based on Grid North, MSPC NAD83, 1802 (West Zone).

2. The Revised Easement Area is a strip of land ten (10) feet wide, being more particularly bounded and described over the following portion of the property:

   Beginning at a #5 steel rebar with survey cap #2124 to be set at the southerly corner of the Upright Parcel;

   Thence N 52° 38' 46" E along the Redfern Land a distance of ten and one hundredth (10.01) feet to the southerly corner of the land to be released from the Easement Area;

   Thence N 35° 18' 27" W along a line ten (10) feet easterly of the Redfern Land, a distance of fifty-one and sixty-two hundredths (51.62) feet;

Thence N 17° 29' 52" W along a line ten (10) feet easterly of the Redfern Land, a distance of thirty-eight and fifty-seven hundredths (38.57) feet to the northwesterly line of the Upright Parcel at the Redfern Land;

Thence S 52° 38' 46" W along the Redfern Land, a distance of ten and sixty-three hundredths (10.63) feet to a #5 steel rebar with survey cap #2124 to be set at the westerly corner of the Upright Parcel;

Thence S 17° 29' 52" E continuing along the Redfern Land, a distance of thirty-six and fifty-three hundredths (36.53) feet to a #5 steel rebar with survey cap #2124 to be set;

Thence S 35° 18' 27" E continuing along the Redfern Land, a distance of fifty-three and fifty-four hundredths (53.54') feet to the point of beginning.

Total area of the herein described parcel equals 901 square feet (0.02 acre). The bearings in this description are based on Grid North, MSPC NAD83, 1802 (West Zone).

3. The Easement Rights are hereby amended as follows and the description of the rights and obligations herein supersede and replace the Easement Rights reserved in the Upright Deed:

   Upright grants to Redfern, its successors and assigns, the right and easement to enter upon the Revised Easement Area with at least 120 days of advance notice (except in the case of emergency) to the Grantee, its successors and assigns, with men and equipment, including heavy equipment, to maintain, repair, shore-up and replace a retaining wall between the adjacent properties of the Grantor and the Grantee (the "Revised Easement Rights"), provided that in the exercise of the Revised Easement Rights Grantor, its successor and assigns, shall (a) ensure all work is done properly and promptly; (b) ensure that no vehicles or construction equipment whatsoever are left overnight or otherwise stored within the Easement Area except when easement work is underway; (c) exercise best efforts to limit any inconvenience to the Grantee, its successors and assigns, or to any other lawful occupier of the Upright Parcel; (d) promptly and reasonably restore the Revised Easement Area to its former condition before the exercise of the Revised Easement Rights; and (e) defend and indemnify the Grantee, its successors and assign, of and from all losses, damages and expenses arising from the exercise of the Revised Easement Rights, including all losses, damages and expenses (including death) arising from the exercise of the Revised Easement Rights for which any third parties seek to hold the Grantee, its successors and assigns, liable.

4. The terms of this Agreement, including all obligations and rights of the parties hereto, are intended to run with ownership of the Upright Parcel and the Redfern Land (the "Affected Lands"). The acceptance of a deed or mortgage to any portion of the Affected Lands, or the entering into a lease or other occupancy of any such portion shall constitute an agreement that the covenants and restrictions set forth in this Agreement are accepted and ratified by such grantee, mortgagee, tenant, or occupant. All of such provisions shall be covenants running with the land and shall bind any persons having at any time any

interest or estate in the Affected Lands or any portion thereof as though such provisions were recited and stipulated at length in each and every deed, conveyance, mortgage or lease thereof.

5. Each owner of all or any portion of the Affected Lands and its heirs, successors and assigns shall be liable for the performance of all covenants, obligations and undertakings set forth in this Agreement, but only to the extent such covenants, obligations or undertakings accrue during the period in which such party owns the affected lands or any portion thereof.

6. Invalidation of any of the provisions contained in this Agreement, or of the application thereof to any person by judgment or court order shall in no way affect any of the other provisions hereof or the application thereof to any other person and the same shall remain in full force and effect.

(Signature Pages follow this page)

IN WITNESS WHEREOF, the said Redfern Munjoy, LLC has caused this instrument to be executed by Jonathan Culley, its Manager, hereunto duly authorized, as of the 30th day of April, 2015.

Redfern Munjoy, LLC, a Maine limited liability company

Witness: Mary Lea Clifford

By: _____

Jonathan Culley
Its Manager

STATE OF MAINE
COUNTY OF CUMBERLAND

4/30, 2015

Then personally appeared Jonathan Culley, Manager of Redfern Munjoy, LLC, and acknowledged the foregoing instrument to be his free act in his said capacity and the free act and deed of the limited liability company.

Before me,

Mary Lea Clifford
Notary Public/~~Attorney at Law~~

SEAL

MARY LEA CLIFFORD
Notary Public, Maine
My Commission Expires February 5, 2016

IN WITNESS WHEREOF, the said Upright Properties, LLC has caused this instrument to be executed by Joshua Wojcik, its Manager, hereunto duly authorized, as of the 30 day of April, 2015.

Upright Properties, LLC, a Maine limited liability company

Witness: _____
Cliff Ruprecht

By: _____
Joshua Wojcik
Its Manager

STATE OF MAINE
COUNTY OF CUMBERLAND April 30, 2015

Then personally appeared Joshua Wojcik, Manager of Upright Properties, LLC, and acknowledged the foregoing instrument to be his free act in his said capacity and the free act and deed of the limited liability company.

Before me,

_____
Notary Public/~~Attorney at Law~~

SEAL

BRITTANY HANDCOCK
NOTARY PUBLIC
CUMBERLAND COUNTY
MAINE
MY COMMISSION EXPIRES FEBRUARY 21, 2021

Exhibit A
Source Deeds for Redfern Munjoy LLC
The Redfern Land

1. Deed from Four Sills LLC to Redfern Munjoy, LLC dated December 4, 2013 and recorded in the Cumberland County Registry of Deeds in Book 31207, Page 48.

2. Deed from Francis O'Connor and Nelson Nadeau to Redfern Munjoy, LLC dated December 4, 2013 and recorded in the Cumberland County Registry of Deeds in Book 31207, Page 50.

3. Deed from Craig G. Coffin, Trustee of the North Street Realty Trust to Redfern Munjoy, LLC dated December 11, 2013 and recorded in the Cumberland County Registry of Deeds in Book 31222, Page 224.

4. Deed from Katherine P. Richman and Nikki Lee Green to Redfern Munjoy, LLC dated December 30, 2013 and recorded in the Cumberland County Registry of Deeds in Book 31262, Page 266.

5. Deed from Dennis E. Lovejoy and Gladys A. Lovejoy to Redfern Munjoy, LLC dated January 10, 2014 and recorded in the Cumberland County Registry of Deeds in Book 31281, Page 281.

6. Deed from Raymond C. Maxwell to Redfern Munjoy, LLC dated January 31, 2014 and recorded in the Cumberland County Registry of Deeds in Book 31317, Page 116.

7. Deed from Raymond H. Waterhouse and Alina Waterhouse to Redfern Munjoy, LLC dated January 23, 2014 and recorded in the Cumberland County Registry of Deeds in Book 31302, Page 177.

Received
Recorded Register of Deeds
Apr 30,2015 01:41:03P
Cumberland County
Nancy A. Lane

MEMORANDUM

OF

UNDERSTANDING

Redevelopment of 126 & 128R North Street

This Memorandum of Understanding ("MOU") is entered into as of October 21, 2019 by Joshua T. Wojcik, an individual residing in Portland, Maine ("Wojcik"), and Upright Properties, LLC, a Maine limited liability Company ("Upright").

WHEREAS, Wojcik is the owner of record of 126 North Street, Portland, Maine ("126 North"); and

WHEREAS, Upright is the owner of record of 128R North Street, Portland, Maine ("128R North"); and

WHEREAS, Upright and Wojcik are submitting a joint application to the Planning and Urban Development Department of the City of Portland proposing the redevelopment of 126 North and 128R North.

IT IS THEREFORE UNDERSTOOD AND AGREED that:

A. Wojcik shall, upon the request of Upright, and provided all appropriate permits have been issued by all relevant State and City authorities, reconstruct the existing building located at 126 North prior to the substantial completion of the building to be built at 128R North.

B. Wojcik shall situate any structure at 126 North such that a sixteen foot (16') access corridor is available to accommodate pedestrian and vehicular traffic between 128R North and the nearest public way (North Street).

C. Wojcik shall execute and deliver to Upright, prior to the commencement of any reconstruction at 126 North or earlier upon the request of Upright, a deed implementing the terms of this MOU as an easement appurtenant and delineating the pedestrian and vehicular access rights to be provided in perpetuity to 128R North as the dominant estate.

IN WITNESS WHEREOF, Joshua T. Wojcik and Upright Properties, LLC, have executed this MOU and thereby bind themselves to the conditions set forth within this MOU on the day and year first above written.

UPRIGHT PROPERTIES, LLC

Joshua T. Wojcik
126 North Street
Portland, Maine

By: _____
Joshua T. Wojcik
Its Manager
128R North Street
Portland, Maine

REAL ESTATE PURCHASE AND SALE AGREEMENT

THIS AGREEMENT, dated this 1st day of September, 2020 (the "Contract Date"), is by and between **Joshua T. Wojcik**, an individual with an address in 47 Lafayette Street #1, Portland, Maine ("Seller") and **Upright Properties, LLC**, a Maine limited liability company with a place of business in Portland, Maine ("Purchaser").

1. Purchase and Sale of Property.

Subject to the terms and conditions set forth herein, Seller hereby agrees to sell and convey to Purchaser and Purchaser hereby agrees to purchase from Seller and pay for all of the Seller's right, title and interest the following described property owned by Seller (collectively, the "Premises"):

> That certain lot or parcel of real property known as 126 North Street, Portland, Maine, and more particularly described in that certain deed recorded in the Cumberland County Registry of Deeds in Book 53783, Page 210, together with all fixtures and improvements situated thereon owned by Seller.

2. Purchase Price.

The purchase price for the Premises shall be $285,000 and shall, subject to usual and customary adjustments for taxes, fees, and transaction expenses, and shall be paid by cash, bank check, or wire.

3. Prorations, Adjustments and Costs.

Seller and Purchaser shall prorate as of the date of Closing (the "Closing Date"):

(a) real estate taxes and assessments assessed against the Premises for the tax year in which the Closing occurs. Seller is responsible for any unpaid real estate taxes for prior years;

(b) charges for heat, oil, sewer, water or any other utility services provided to the Premises for which tenants are not separately liable for payment; and

4. Conveyance: Title.

(a) Seller shall convey the Premises to Purchaser by good and sufficient Quitclaim Deed with Covenant (the "Deed"). Title to the Premises shall be good and

marketable and shall be free and clear of all liens and encumbrances except (i) zoning restrictions and land use matters; (ii) current taxes and assessments; (iii) the Leases; and (iv) any "Defects of Title" as (defined below) accepted or waived by Purchaser pursuant to Section 4(b).

(b) On or before the Closing Date, Purchaser shall notify Seller of any defects in title that would make Seller unable to give title to the Premises as herein stipulated (any of which is called herein a "Defect of Title"). Seller shall have a period of not more than 30 days after receipt of notice of such defect within which to remedy or cure any such Defect of Title, and the Closing shall be extended to the date that is five (5) business days after the expiration of such 30-day period. If such Defects of Title are not corrected or remedied within such 30-day period, then Purchaser shall elect, by written notice to Seller on or before the Closing Date, as the same may be extended, either (i) to accept title to the Premises subject to the uncured Defects of Title without reduction of the Purchase Price and without any right to damages and without any other liability on the part of Seller, or (ii) to terminate this Agreement, whereupon the Deposit shall be returned to Purchaser and all obligations of the parties hereunder shall cease and neither party shall have any claim against the other by reason of this Agreement, except with respect to any provision hereof that expressly survives the termination of this Agreement.

5. Due Diligence Waived.

The Property is purchased AS IS, and any due diligence period is hereby waived.

6. Financing Contingency.

This Agreement is not subject to a financing contingency.

7. Closing.

(a) The Closing shall take place on a date that is not more than ninety (90) days after the Contract Date, at 10 a.m. at 47 Lafayette Street, Portland Maine, or at such other place as shall be mutually agreed to by both Purchaser and Seller, unless extended as provided herein. TIME IS OF THE ESSENCE.

(b) The following shall occur at the Closing, each being a condition precedent to the others and all being considered as occurring simultaneously:

(1) Seller shall execute, have acknowledged and deliver to Purchaser the Deed describing the Premises, such Deed to be subject only to

those matters set forth in Section 4(a) and to any Defects of Title accepted or waived by Purchaser pursuant to Section 4(b); and

(2) Purchaser shall deliver to Seller the payment required by Section 2, evidenced by an amended LLC agreement with adjusted Schedule A reflecting the new allocation of LLC membership interest; and

(3) Each party shall deliver to the other such other documents, certificates and the like as may be required herein or as may be necessary to carry out their obligations under this Agreement or as may be required by law; and

(4) Seller shall deliver full possession of the Premises to the Purchaser, subject to all leases currently in effect, copies of said leases shall also be delivered to Purchaser at Closing.

8. Risk of Loss.

The risk of loss to the Premises prior to the Closing Date shall be on Seller.

9. No Brokers.

The parties affirm that no brokers have been utilized for this transaction and no brokerage fees are due.

10. Default.

In the event of default by either party the non-defaulting party shall retain all remedies at law and equity.

11. Notices.

All notices, demands or other communications made pursuant to this Agreement shall be in writing and shall be either hand delivered or sent by certified or registered mail, return receipt requested. Such notice shall be deemed effective upon the earlier of (a) actual receipt or (b) two days following its deposit in the United States mail, postage prepaid, and addressed as follows:

If intended to Seller, to:

Joshua Wojcik
47 Lafayette Street #1
Portland Maine, 04101

If intended to Purchaser, to:

Upright Properties LLC
c/o Joshua Wojcik
47 Lafayette Street #1
Portland Maine, 04101

With a copy to:

Sage M. Friedman, Esq.
Murray, Plumb & Murray
P.O. Box 9785
Portland, ME 04104-5085

12. Miscellaneous.

(a) Seller and Purchaser shall each pay their portion of the Maine State Transfer Tax.

(b) Seller hereby certifies that Seller is a resident of the State of Maine. Seller hereby acknowledges Purchaser's requirement to withhold 2½% of the purchase price pursuant to 36 M.R.S.A. §5250-A if Seller is not a resident of the State of Maine, unless Seller presents to Purchaser at closing a Certificate of Exemption or Certificate of Reduction from the State of Maine Bureau of Taxation.

(c) By signing this Contract, Purchaser acknowledges that Purchaser has been notified of the State of Maine's withholding tax requirement pursuant to 36 M.R.S.A. §5250-A.

(d) Seller hereby certifies that Seller is a resident of the United States of America and is not subject to the 10% withholding tax imposed upon "foreign persons" by Section 1445(a) of the Internal Revenue Code of 1954.

(e) This Agreement shall inure to the benefit of and be binding upon the parties hereto and their respective heirs, personal representatives, successors in interest and permitted assigns.

(f) It is understood and agreed that all understandings, agreements, warranties or representations, either oral or in writing, including without limitation any letters of intent or prior agreements, heretofore between the parties hereto are merged in and superseded by this Agreement, which document alone fully and completely expresses the parties' agreement with respect to the transactions covered hereby. This Agreement may not be modified in any manner except by a subsequent instrument in writing signed by Seller and Purchaser.

(g) This Agreement may be simultaneously executed in any number of counterparts, each of which when so executed and delivered shall be an original; but such counterparts shall constitute but one and the same instrument.

(h) If the date for performance of any obligation hereunder, or the giving of any notice hereunder, falls on a Saturday, Sunday or a legal holiday in the State of Maine, the period for such performance, or the giving of any notice hereunder, shall be extended to the next business day.

(i) This Agreement shall be construed and enforced in accordance with and governed by the laws of the State of Maine.

{signatures follow}

IN WITNESS WHEREOF, the parties have executed this Agreement as a sealed instrument as of the date set forth below their respective signatures, to be effective as of the Contract Date.

SELLER:

Dated:_____ _____
Joshua T. Wojcik

PURCHASER:
UPRIGHT PROPERTIES, LLC

Dated:_____ _____
By: Joshua T. Wojcik
Its: Manager

128R & 126 North St Neighborhood Meeting Notes (Second Meeting) 1/16/2020 5:30pm at the Root Cellar on Washington Ave, Portland, ME.

Applicant Joshua Wojcik thanked everyone for attending, introduced the two development projects and the design team including civil engineer Will Savage from Acorn Engineering and architect Tracie Reed from Dextrous Creative.

Will Savage's Presentation covered the following:

- Notification that the planning board workshop for the two projects had been tentatively set for January 28th, 2020. All attendees were encouraged to go to the workshop;
- The purpose of the second meeting was to cover the various changes to the plan;
- The reason two development projects were being submitted under one application was to provide transparency to all parties and to avoid confusion;
- The zoning context of the project is R-6, Munjoy Hill Overlay;
- Site plan for both properties was presented;
- Site is fairly flat, with 126 sloping slightly towards the street and 128R sloping towards Munjoy Heights;
- Parking plan: 6 covered spaces at 128R; 2 covered parking spaces at 126. Each includes an ADA space and access lane;
- The plan for plantings;
- The plan for underground utilities;
- The storm water plan, including collection and storage systems and highlighted the point that less storm water will runoff towards Munjoy Heights as a result of this project;
- Clarified that the same engineering team (civil, geotechnical and structural) was being used for these projects as was used for the Munjoy Heights development project in order to ensure continuity of analysis and approach to make sure the retaining wall was fully understood and protected during all phases of the project.

Tracie Reed's Presentation covered the following:

- A description of the neighborhood;
- A discussion of the changes that were made to the rear building;
- A discussion of the changes that are being proposed for the 126 property;
- Presentation of revised renderings showing 128R as well as new renderings showing 126;
- Discussion of locations of compressors for heating/cooling systems;
- Described size and width and heights of both buildings;

Questions and Comments from the Public Attendees:

Questions about the timelines for both projects were raised. It was explained that each project will take approximately 12+ months to substantial completion and that 128R will be first. It was noted that 126 will be demolished after 128R is substantially completed, but before the CO for 128R is issued. It was explained that the order of the project was for several reasons, including that two of the prospective owners at 128R are currently residents of 126 North but also from a construction management perspective that it makes the most sense to "build your way out of a job site."

Questions were raised several times about how it was possible the storm water runoff towards Munjoy Heights would be reduced. The storm water plan was explained in greater detail, including how both the proposed development and Munjoy Heights stormwater system had been designed for a 100 year storm event. The snow removal and storage plan for both properties was also described.

Questions were raised about whether the garage could be enclosed to protect the residents of Munjoy Heights from having to look at parked cars and to shield them from the fumes that may result from the parking garage. It was explained that the zoning ordinance requires parking to be located in the rear of all properties to provide for an activated frontage. Difference in the zoning setbacks for buildings vs parking areas vs. decks meant that fully enclosing the garage was not possible. Examples of extruded metal screen that will be used at the rear of the garage to support vine growth was requested and the design team agreed to bring images to the planning board workshop. It was also questioned whether additional plantings could be installed between the garage and Munjoy Heights. The team noted that the root structure of plantings in the 10' strip between the garage and the property line could jeopardize the integrity of the retaining wall. It was questioned whether anything else could be done to reduce the potential for idling of vehicles within the garage that residents of Munjoy Heights believe would impact them. The design team agreed to explore ideas.

The idea of an underground parking garage was proposed by an attendee. It was explained that this would conflict with fair housing accessibility requirements and that it would present numerous engineering problems both to the retaining wall and to surrounding buildings.

A rendering from Sheridan Street taken at a small opening of the Munjoy Heights buildings looking up towards the retaining wall was requested. The team noted that renderings take significant time and resources to complete and a view from this area would not be possible before the workshop.

A question was raised about what would happen if the owner of 126 decided to not re-develop his property once the building was demo'd. It was explained that he would have to pay a significant fine to cover the elimination of housing units. It was emphasized that the owners of

both properties are very much interested in helping the City address its housing crisis by adding units. It was questioned what the rental prices will be for the units at 126 North St. It was explained that these units would be relatively affordable (rental prices from $1850 - $2,000) compared to other two bedroom units in the market, since the units were modest in size. Attendees didn't feel like those were affordable prices. It was explained that the current price of a two bedroom Work Force unit was about $1,860. An attendee commented that she thought that number was unaffordable.

Concerns was raised that emergency vehicles wouldn't be able to reach the rear property. The team noted that the building would have a 16' wide fire lane for emergency vehicles in addition to the sprinkler and fire alarm system.

Questions were raised about the front, side and rear setbacks. Several attendees commented that they felt like the zoning setbacks were too small. The neighbors who live next to the proposed projects feel like the side setback is too small. The neighbors who live in Munjoy Heights feel like the rear setbacks are too small.

It was asked whether a shadow / shading analysis was done by a Munjoy Heights resident. The team confirmed this is not required for the application but noted that Munjoy Heights is to the south and west of the property, which means the building will have a minimal impact on the amount of sun shining on Munjoy Heights.

It was asked whether this would be the tallest building visible from I-295. It was explained that Promenade East Condominiums will remain visibly taller.

It was clarified that 126 North St does not have a 4th floor. The window above the third floor is an attic window. It was further explained that the stairwell inside will not reach the attic.

A few attendees commented that the building is too large.

One attendee commented that he believed the project would reduce property values.

With no further questions raised or comments offered, the team thanked attendees for their time and thoughtful comments and the meeting was closed at 7pm.

Meeting minutes by Joshua Wojcik & Reviewed by Will Savage and Tracie Reed.

Att. D

Section D

Zoning Assessment

ZONING ANALYSIS Relevant Zone: R-6

All Projects:

	Required	Proposed – 128R
Lot Size	2,000 sf	6,142 sf
Area Per Dwelling Unit	725 sf	1,024 sf
Minimum Street Frontage	20'	N/A
Front Yard Minimum	5'	5.25'
Front Yard Maximum	N/A	N/A
Rear Yard	15'	15.11'
Yard Right	5'	11.90'
Yard Left	5'	8.56'
Side Street Setback	N/A	N/A
Step Back	10' @ 35'	> 10'
Maximum Lot Coverage	60%	57%
Minimum Lot Coverage	N/A	N/A
Maximum Height	45'	44.6'
Open Space	20%	40%
Maximum Impervious Area	80%	60%
Pavement Setback	N/A	N/A
Floor Area Ratio	N/A	N/A
Off Street Parking Spaces	3	6
Loading Bays		
Other 1		
Other 2		
Other 3		

	Required	Proposed – 126
Lot Size	2,000 sf	3,645 sf
Area Per Dwelling Unit	725 sf*	607 sf*
Minimum Street Frontage	20'	38’
Front Yard Minimum	3.7’	4’
Front Yard Maximum	N/A	N/A
Rear Yard	15'	16.49’
Yard Right	5'	5 '
Yard Left	5'	9.76’
Side Street Setback	N/A	N/A
Step Back	10' @ 35'	> 10'
Maximum Lot Coverage	60%	47%
Minimum Lot Coverage	N/A	N/A
Maximum Height	45'	33.3’
Open Space	20%	20%
Maximum Impervious Area	80%	80%
Pavement Setback	N/A	N/A
Floor Area Ratio	N/A	N/A
Off Street Parking Spaces	2	2
Loading Bays		
Other 1		
*25% density bonus allowed per Section 14-488		

126 & 128R North Street

Neighborhood Meeting
January 16, 2020

Name	Organization	Address	Phone	Email
Bud Pollak		225 Sheraton St	203-984-1833	BPOLLAK64@Yahoo.com
Susan & Lindsay Mann		122 North St	610-613-8322	lindsaymann@gmail.com
Betts + Elton Mayer		211 Sheridan ST	207-253-1838	bettsgmayer@gmail.com
A. NAQVI		203 Sheridan St	207-838-8740	Ali.Naqvi@Yahoo.com
James Trainor		204 Sheridan St	646 346-4938	jamesmtrainor@gmail.
YAEL REINITZ		204 Sheridan ST	6463274158	yael.reinhart.com
Tom Federle		254 Commercial Street	899-0155	tom@federlelawmaine.com

126 & 128R North Street

Neighborhood Meeting

January 16, 2020

Name	Organization	Address	Phone	Email
Liz Hays		107 North St.		lizchays@gmail.com
ANN CASADY		205 Sheridan		anncasadya yahoo.com
Peter Pitegoff		205 Sheridan		ppitegoff@gmail.com
Betty Lorber		225 Sheridan St		betty.lorber@gmail
Pam Kaufman		137 North St.		
Andrew Kaufman		137 NORTH ST		kaufmanandrew1@gmail.com
Leslie Hart		215 Sheridan		blesliehart@gmail.e
Kevin Schochat		215 Sheridan		kevin@kevinschochat.com
Sue Robins		206 Sheridan		suerobins@twc.com
Richard MARINO		226 SHERIDAN		RMARINO4102@Yahoo
Tracey J Reed	Dept. Comm.	77 Nursery		
Joshua Wojcik	Upright Properties	PO Box 833 Wilton, ME		JWojcik@UprightFrameworks.com
Will Savage	Acorn Engineering	65 Hanover St. Portland, ME		WSAVAGE@Acorn-engineering.com

E. Summary of Written Easements

Existing

There are two easements as identified by the Surveyor:

- Permanent right-of-way with 128F North Street (includes the rights to use the corridor for utilities). Reference CCRD Bk 1143, Pg 307.
- Permanent retaining wall maintenance easement with Munjoy Heights. Reference CCRD Bk 32237, Page 104.

Proposed

There is currently one proposed easement.

- Access/Utility easement from 126 to 128R (includes rights to use the 4.58' brick walkway for access/utilities and the turnaround)

M E M O R A N D U M

TO: Planning Board, City of Portland, Maine

FROM: Sage M. Friedman, Esq.

DATE: August 27, 2020

RE: Easement Rights Erroneously Asserted by the Board of the Munjoy Heights Condominium Association

At the request of our client, Upright Properties, LLC ("Upright"), and the staff of the Planning & Urban Development Department of Portland I have reviewed the assertions made by the Board of the Munjoy Heights Condominium Association ("Munjoy Heights") in a letter dated August 12, 2020, regarding easements over the property located at 128R North Street, Portland, Maine (the "Subject Property"), as well as the deeds referenced therein. In the letter, Munjoy Heights asserts that it has somehow acquired an access easement from North Street, across 128F North Street (the "Neighbor's Property"), across the Subject Property in order to access a maintenance easement reserved in the corrective deed from Munjoy Heights' developer, Redfern Munjoy LLC, conveying the Subject Property to Upright (the "Deed").[1]

Munjoy Heights' assertion is factually and legally incorrect. Munjoy Heights holds no right to traverse, access or otherwise use the Subject Property except for those rights explicitly contained within the plain language of the easement reserved in the Deed. Moreover, Munjoy Heights's rights to the maintenance easement will not be infringed by the project proposed by Upright.

The Deed Does Not Reserve Any Rights Beyond the Maintenance Easement Area

The language in the Deed reserves a specific easement area along the western edge of the Subject Property to "maintain, repair, shore-up and replace a retaining wall" subject to a variety of notice and use limitation and requirements. The easement language allows for access to the easement area for these purposes but does not provide any rights to any part of the Subject Property not contained within the clearly defined easement area.

The Deed and easement rights contained therein were the subject of negotiation between Redfern Munjoy and Upright prior to the conveyance. The language used, drafted by Redfern Munjoy, reflects the full scope of their agreement regarding the reserved easement area and access rights. Had Redfern Munjoy intended to seek access rights from North Street across other parts of the Subject Property such language would most assuredly be contained in the Deed. Munjoy Heights did not seek such access rights because they are not necessary, as discussed below.

[1] A copy of the Deed is attached hereto as Exhibit A, but was also was recorded in the Cumberland County Registry of Deeds on February 3, 2014 in Book 31318 at Page 270.

The Easement Rights In The 1923 Deed Encumber Only The Neighbor's Property

In making its assertion of rights over the Subject Property, Munjoy Heights has confabulated easement rights that it may still hold across the Neighbor's Property (a separate lot, held by Kremer) with access rights across the Subject Property, which it does not hold. Although its argument is confused, Munjoy Heights appears to assert that its retained easements rights across the Neighbor's Property to the eastern edge of the Subject Property and the maintenance easement in the Deed interact to somehow grant it rights to cross the Subject Property from the right of way across the Neighbor's Property in order to access the defined maintenance easement area.

Respectfully, this argument is simply nonsensical. Munjoy Heights holds only those rights over the Subject Property which are enumerated in the Deed. The 1923 deed[2] referenced in Munjoy Heights' letter contains only the following granting language "[t]ogether with a right of way across my land [(now the Neighbor's Property)] from the lot hereby conveyed to North Street." It is simply not within the principles of easement and property law that this language provides a right of way across the Subject Property.

Munjoy Heights Has Access To The Maintenance Easement From Its Own Land

While Munjoy Heights does not explicitly assert an easement by necessity, it seems to be implying one by claiming, erroneously, that there are no other ways for it to access the reserved maintenance easement area.

This claim is factually incorrect.

Even a casual examination of the land itself, or a cursory review of relevant plans and current satellite maps, amply demonstrate that Munjoy Heights has unobstructed access to the maintenance easement directly from its own land. This access will allow for any retaining wall maintenance or replacement projects that may be necessary.

Summary

In summary, Munjoy Heights' claim of interference with its rights is erroneous. Munjoy Heights holds only the rights to the Subject Property that are enumerated in the plain language of the Deed. The 1923 deed encumbers only the Neighbor's Property, and does not, and could not, grant any rights over the Subject Property. The proposed project on the Subject Property will not interfere with any rights actually held by Munjoy Heights, which has ample access to the maintenance easement from its own land.

[2] Recorded on July 27, 1923 in the Cumberland County Registry of Deeds in Book 1143 at Page 307.

EXHIBIT A

Corrective

QUITCLAIM DEED WITH COVENANT

KNOW ALL PERSONS BY THESE PRESENTS THAT, **REDFERN MUNJOY, LLC,** a Maine Limited Liability Company of Portland, Maine, for consideration paid, grants to **UPRIGHT PROPERTIES, LLC,** a Maine Limited Liability Company of Portland, Maine, whose mailing address is: PO Box 833 Wilton, ME 04294, with **QUITCLAIM COVENANT,** the premises situated on or about 128R North Street in the City of Portland, County of Cumberland and State of Maine, more particularly bounded and described as follows:

A certain lot or parcel of land, with the buildings thereon, situated southwesterly of, but not adjacent to, the southwesterly sideline of North Street, in the City of Portland, County of Cumberland, and State of Maine, being more particularly bounded and described as follows:

Beginning at a #5 steel rebar with survey cap #2124 to be set at the easterly corner of the herein described parcel, also being the southerly corner of land described in a deed from Ann S. Kremer (f/k/a Ann S. Lambert) to Ann S. Kremer and Steven E. Kremer, dated February 21, 2003, and recorded at the Cumberland County Registry of Deeds (CCRD) in Book 18907, Page 180, and on the northwesterly line of land described in a deed from Gregory D. Kesich and Gail D. Kesich to Raymond T. Wojcik, Zetta A. Wojcik, and Joshua T. Wojcik, dated August 24, 2007 and recorded in CCRD Book 25418, Page 226;

Thence N35°14'21"W along the southwesterly line of said land of Kremer, a distance of forty-three and five hundredths (43.05') feet to a #5 steel rebar with survey cap #2124 to be set at the westerly corner of said land of Kremer, and on the southeasterly line of land described in a deed from JHA Services, Inc. to Portland VOA Elderly Housing, Inc., dated August 30, 1995, and recorded in CCRD Book 12088, Page 261;

Thence S52°38'46"W along said land of Portland VOA Elderly Housing, Inc., a distance of fifteen and no hundredths (15.00') feet to a found #6 steel rebar;

Thence N35°14'21"W continuing along said land of Portland VOA Elderly Housing, Inc. , a distance of twenty and thirty-one hundredths (20.31') feet to a #5 steel rebar with survey cap #2124 to be set at the northerly corner of the herein described parcel;

Thence S52°38'46"W continuing along said land of Portland VOA Elderly Housing, Inc., and along remaining land of the herein grantor, a distance of forty-two and ninety-two hundredths (42.92') feet to a #5 steel rebar with survey cap #2124 to be set at the westerly corner of the herein described parcel;

Thence S17°29'52"E continuing along remaining land of the herein grantor, a distance of thirty-six and fifty-three hundredths (36.53') feet to a #5 steel rebar with survey cap #2124 to be set;

Thence S35°18'27"E continuing along remaining land of the herein grantor, a distance of fifty-three and fifty-four hundredths (53.54') feet to a #5 steel rebar with survey cap #2124 to be set at the southerly corner of the herein described parcel;

Thence N52°38'46"E continuing along remaining land of the herein grantor, and land conveyed or to be conveyed to Peter J. DeTroy, III and Mary Roy, a distance of fifty-three and ninety-nine hundredths (53.99') feet to a #5 steel rebar with survey cap #2124 to be set on the southwesterly line of said land of Wojcik;

Thence N35°14'21"W along said land of Wojcik, a distance of twenty-four and fifty-six hundredths (24.56') feet to a #5 steel rebar with survey cap #2124 to be set at the westerly corner of said land of Wojcik;

Thence N52°38'46"E continuing along said land of Wojcik, a distance of fifteen and no hundredths (15.00') feet the point of beginning.

Total area of the herein described parcel equals 5,202 square feet (0.12 acre). The bearings in this description are based on Grid North, MSPC NAD83, 1802 (West Zone).

The above described parcel is subject to a reserved retaining wall maintenance easement for the purposes set forth below and for the benefit of Grantor's adjacent land, said easement being twenty (20') feet wide, being more particularly bounded and described over the following portion of the above-described property (the "Easement Area"):

Beginning at a #5 steel rebar with survey cap #2124 to be set at the southerly corner of the herein described parcel, also being the southerly corner of the above described parcel;

Thence N52°38'46"E along remaining land of the herein grantor, and land conveyed or to be conveyed to Peter J. DeTroy, III and Mary Roy, a distance of twenty and one hundredth (20.01') feet to the easterly corner of the herein described parcel;

Thence N35°18'27"W through the above described parcel, a distance of forty-nine and sixty-nine hundredths (49.69') feet;

Thence N17°29'52"W continuing through the above described parcel, a distance of forty and sixty-one hundredths (40.61') feet to the northwesterly line of the above described parcel;

Thence S52°38'46"W along remaining land of the herein grantor, a distance of twenty-one and twenty-six hundredths (21.26') feet to a #5 steel rebar with survey cap #2124 to be set at the westerly corner of the herein described parcel;

Thence S17°29'52"E continuing along remaining land of the herein grantor, a distance of thirty-six and fifty-three hundredths (36.53') feet to a #5 steel rebar with survey cap #2124 to be set;

Thence S35°18'27"E continuing along remaining land of the herein grantor, a distance of fifty-three and fifty-four hundredths (53.54') feet to the point of beginning.

Total area of the herein described parcel equals 1,803 square feet (0.04 acre). The bearings in this description are based on Grid North, MSPC NAD83, 1802 (West Zone).

Grantor hereby reserves the right and easement to enter upon the Easement Area with at least 120 days of advance notice (except in the case of emergency) to the Grantee, its successors and assigns, with men and equipment, including heavy equipment, to maintain, repair, shore-up and replace a retaining wall between the adjacent properties of the Grantor and the Grantee (the "Easement Rights"), provided that in the exercise of the Easement Rights Grantor, its successors and assigns, shall (a)

ensure all work is done properly and promptly; (b) ensure that no vehicles or construction equipment whatsoever are left overnight or otherwise stored within the Easement Area except when easement work is underway; (c) exercise best efforts to limit any inconvenience to the Grantee, its successors and assigns, or to any other lawful occupier of the property; (d) promptly and reasonably restore the Easement Area to its former condition before the exercise of the Easement Rights; and (e) defend and indemnify the Grantee, its successors and assigns, of and from all losses, damages and expenses associated with the exercise of the Easement Rights, including all losses, damages and expenses (including death) incurred by third parties seeking to hold the grantee, its successors and assign, liable therefor.

Meaning and intending to describe a portion of land described in a deed from Raymond C. Maxwell to Redfern Munjoy, LLC, dated January 31, 2014, recorded herewith at the Cumberland County Registry of Deeds , and a portion of land described in a deed from Four Sills, LLC to Redfern Munjoy, LLC, dated December 4, 2013, recorded at the Cumberland County Registry of Deeds in Book 31207, Page 48, and being depicted as Unit 30 – "To Be Conveyed To Upright Properties, LLC", including "Easement #5", on a plan entitled "*Plan Depicting A Proposed Subdivision Made For Redfern Munjoy LLC, P.O. Box 8816, Portland, ME 04104, Munjoy Heights, Sheridan Street, East Cove Street, And Walnut Street, Portland, Maine*", dated December 6, 2013, to be revised by Nadeau Land Surveys, Portland, Maine.

IN WITNESS WHEREOF, the said **REDFERN MUNJOY, LLC,** has caused this instrument to be signed by Jonathan R. Culley, Its Manager, hereunto duly authorized, this 31st day of January, 2014.

REDFERN MUNJOY, LLC

Witness

By: _____
Jonathan R. Culley, Its Manager

STATE OF MAINE
COUNTY OF CUMBERLAND

January 31, 2014

Then personally appeared the above-named Jonathan R. Culley, Manager of Redfern Munjoy, LLC, who acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of Redfern Munjoy, LLC.

Before me,

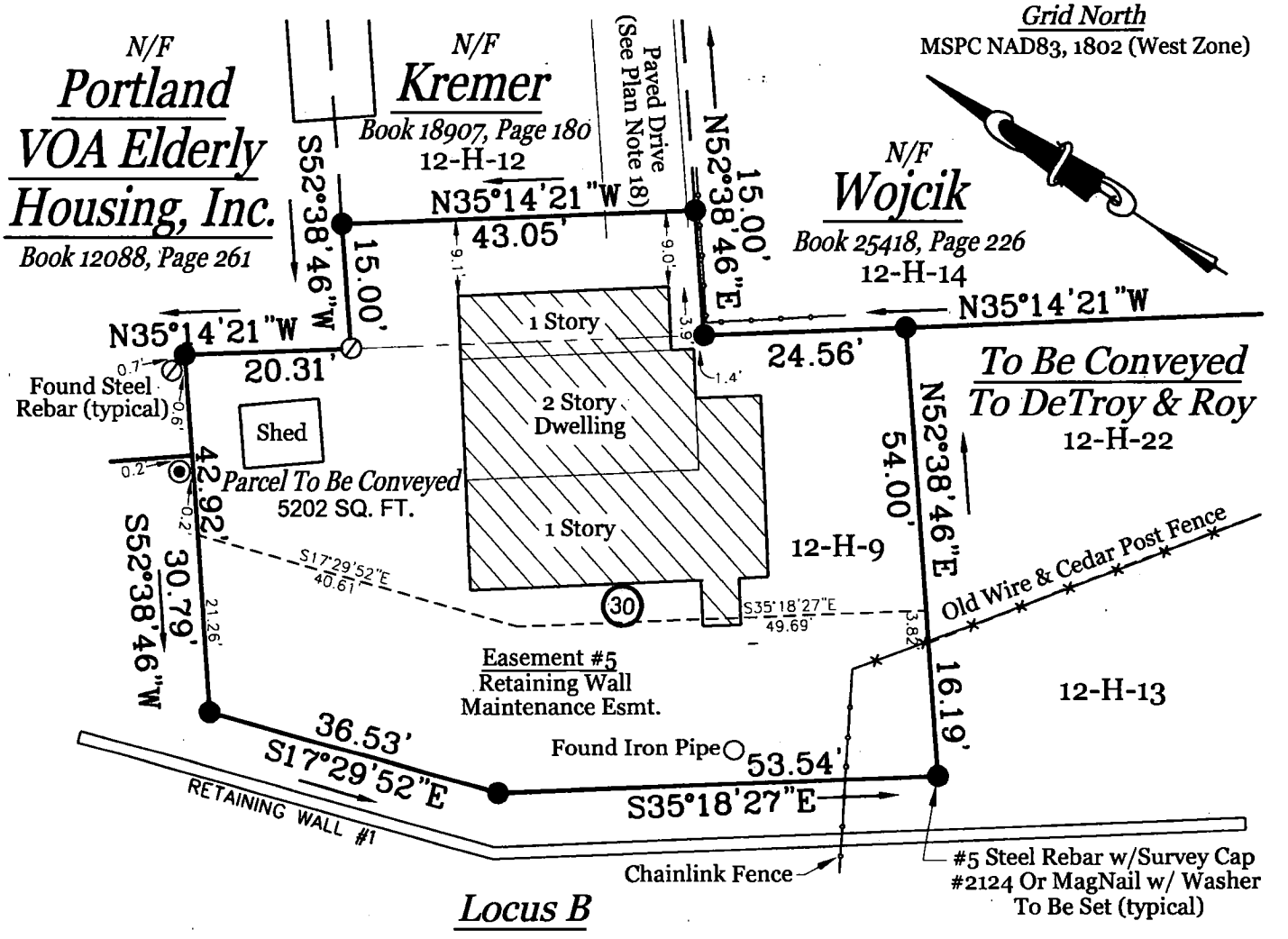
_____
Notary Public/Attorney-at-Law

Thomas Jewell
Typed or printed name of person
taking acknowledgment

Exhibit Sketch For Proposed Conveyance & Easement #5

Redfern Munjoy, LLC to Upright Properties, LLC
Between Sheridan Street & North Street, Portland, Maine
1" = 20' November 27, 2013 Job #2131381

Boundary lines based on a plan entitled "Plan Depicting The Results Of A Boundary Survey & Existing Conditions Survey Made For Redfern Munjoy LLC, Sheridan Street, East Cove Street, And Walnut Street, Portland, Maine". dated November 11, 2013, revised November 25, 2013 by Nadeau Land Surveys, Portland, Maine.



Received
Recorded Register of Deeds
Feb 03,2014 02:12:11P
Cumberland County
Pamela E. Lovley

ACORN ENGINEERING, INC.

Shukria Wiar – City Planner
Planning Division, City of Portland
389 Congress Street
Portland, ME 04101

February 24, 2020

Subject: Comment Response Letter 2
126/128R North Street Redevelopment – Portland, Maine

Shukria:

In response to the Planning Board workshop held on January 28th, a meeting between the development team and Planning Department held on February 4th, and the City Staff comments within the planning memo, we have developed this response letter which also outlines the notable changes within the application, which include:

- Removal of the 126 North Street covered parking area and addition of a 6th unit to the building as allowed within Section 14-488 (g) of the City's ordinance for a density bonus based upon on-site workforce housing.
- Addition of project renderings including new perspectives, clarification of the screening at the back of the site, and a section view between Washington Avenue and North Street to illustrate the topography and spatial relationships between neighboring properties.
- Addition of documents such as the draft condo docs and an approximate overall project schedule.

Please see below for responses to the second round of comments. Also included within this submission is the architectural response letter from Dextrous Creative.

Mike Tremblay, DPW

Comment – *The Applicant did not implement the suggested shared driveway treatment between the two properties. One of the stated reasons is that no easement currently exists for 126 North Street to access and use the driveway. It should be noted that such an easement could be created if desired, as the two properties are currently under common ownership.*

Response – The two properties are not under common ownership. The owner of 128F North St., who is unaffiliated with this project, owns the existing driveway and is not willing to grant an access easement to 126 North St. 128R has an existing access and utility easement over the driveway, making it the only parcel that has rights to use the driveway (besides 128F).

Comment – *The Applicant does not have a standard width driveway accessing the parking spaces at 126 North Street. They have alleviated this by providing a wider-than-required parking space so*

that vehicles can more easily maneuver into the parking space. However, AutoTURN runs provided show that it is still very difficult for a vehicle to exit this space, coming very close to the wall of the building, the wall along the edge of the driveway, and the adjacent handicap parking space. This configuration likely requires that vehicles back into the driveway; it does not look possible for a vehicle to pull into the driveway and eventually exit head-out. While this configuration may be suitable assuming the occupants of 126 North Street do not have overly large vehicles, always back into the driveway, and have the skill and acuity to maneuver a vehicle into and out of the parking spaces. This may not always be the case however. This configuration requires a waiver for parking area drive aisle.

Response – The 126 North covered parking area has been eliminated and the driveway revised to accommodate tandem parking for two vehicles (including one for an ADA van space) as encouraged within the Munjoy Hill Overlay District.

Comment – *The handicap space in 126 North Street does not need to be marked as such, as it is located in a parking area with 4 spaces or less. The space must be accessible (as designed), but anyone can park there. The applicant may choose to keep it marked as a handicap space if they choose.*

Response – Signage is not proposed in the new scheme, but the ADA compliance has remained part of the plan.

Comment – *Space 4 in 128 North Street does not appear to meet the dimensional requirements for a compact space (8x15), and therefore should not be counted as a parking space for the purposes of meeting zoning requirements. Since only 3 spaces are required per zoning, this is acceptable; however, this space should not be shown as a parking space in the site plan.*

Response – Based upon our AutoTurn analysis and associated dimensional limitations set forth in the Site Plan and condominium docs, Space #4 is functional for the defined vehicle. Given that this space will be deeded to a homeowner within the condo association, the familiarity with the parking space paired with the vehicle size restrictions will result in a usable parking space, despite the fact that the length is less than 15' for a portion of the space. We would also note the drive aisle is 24 ft wide adjacent to all spaces including Space #4.

Comment – *Space 2, Space 5, and Space 6 in 128 North Street are compact spaces. The Applicant requires a waiver for the proportion of parking spaces (67%, assuming Space 4 is retained as an allowable compact space, vs 20% allowed).*

Response – As is customary in small residential infill projects such as this, we are requesting a waiver to provide over 20% compact spaces. Vehicle limitations have been set for maximum wheelbase, turning radius, etc. and homeowners will be accustomed to the maneuvering in and out of the parking area. We have updated the waiver table within this submission to reflect this request. We would also note the drive aisle is 24 ft wide adjacent to all the spaces within 128R.

Lauren Swett, 3rd Party Civil Engineering Review

Comment – *The Applicant has provided erosion and sedimentation control locations, details, and a written plan in accordance with the Basic Standards. The erosion and sedimentation control*

measures have been shown on the Construction Management Plan. It is suggested that perimeter erosion controls also be shown on the grading and drainage plan, for clarity during construction on this very tight site.

Response – We have added the erosion control barrier to the Grading & Drainage Plan.

Comment – *The Applicant is proposing a Focal Point rain garden system to provide treatment in accordance with the General Standards. Focal Point details have been provided. The actual Focal Point system components should be drawn on the grading plan, including the R-tanks. It is not clear on the plan as shown what the extent of the subsurface system will be. The system is in close proximity to the property line as well as the proposed building, so clear extents should be provided to ensure that the system can be constructed properly.*

Response – Please refer to the grading and drainage plan, sheet C-30. Within the inset, the extents of the stone perimeter are shown. We have since added an offset to represent the chambers within the stone for clarity.

Comment – *The Applicant has noted that flows will not be increasing, in accordance with the Flooding Standard. It is noted, however, that the project will be redirecting flows, and stormwater flow to the rear of the site will be reduced, but stormwater flow to the combined sewer in North Street will be increasing in the 10-year and 25-year storm events. The acceptability of this increase to the combined sewer will need to be verified by the Department of Public Works.*

Response – A 3.25" orifice has been added to the plans and hydrocad model such that the peak 10 and 25 year flowrates to North Street will remain the same down to the hundredth of a cubic foot per second. The overall runoff leaving the site will be notably lower than the existing conditions.

Comment – *Additional information should be provided on snow storage. The snow storage area currently shown overlaps with a landscaped area. Snow storage should be considered for both driveways.*

Response – The existing driveway currently functions in a similar manner as the proposed condition. Landscaped areas are generally acceptable locations for snow storage as long a stormwater system does not existing within this space. During large or prolonged storms without any thaw, snow may need to be removed from the site as is customary on tight urban projects such as this.

Comment – *Consideration should be made for landscaping conflicts with utilities. In particular, consider the oak and blue point juniper proposed to the southeast of the southern building. These trees are located over a bank of proposed subsurface utility lines.*

Response – We have removed the proposed woody vegetation from the utility areas and relocated less root-intensive shrubs on the property line to maintain a buffer.

Jeff Tarling, City Arborist

Comment – *The North Street project should include some type of landscape treatment, after looking at the site they may want to consider smaller scale trees / shrubs like Amelanchier, which*

can be a small tree or shrub depending on the cultivar selected. Lilacs or viburnums could also work. Plantings can be in groves or along the property line.

Response – We have added an Amelanchier to the proposed Landscape Plan. In general, the project has aimed to provide as much landscaping as possible. Certain site conditions such as utility lines and the existing retaining wall maintenance area have restricted areas from otherwise being fully landscaped.

Bill Scott, Chief Surveyor

Comment – *Various comments on the subdivision plat, utility plan, and grading & drainage plan per 2/12/2020 list of comments.*

Response – All comments have been resolved/revised within the plan set. Please note that two subdivision plats were created because of the phased approach. The properties are under distinct ownership (128R will result in a Homeowner's Association and 126 will result in multifamily rentals); however, the project is being reviewed/designed as one to create a cohesive and well-planned project.

Please let us know if you have any additional questions or comments.

Sincerely,

Samuel J. Lebel, E.I.
Project Engineer
Acorn Engineering, Inc.

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

February 20, 2019

Caitlin Cameron, AICP, Associate AIA, LEED AP
Urban Designer
Planning & Urban Development Department
389 Congress Street
Portland, ME 04101

Re: 128R and 126 North Street

Caitlin, Attached, please find revised submission materials as a result of feedback from neighbors, board members and staff at the planning workshop last month.

The following is a summary of changes made to our designs and their intent:

- As the result of feedback from neighbors, the board and staff concerning the location of 126's primary entrance we revised our floorplan to create an entrance directly off North Street. We have maintained the existing drive, providing two tandem off-street parking spots for the building, including an accessible space with recessed access aisle integrated under our structure.

- The new recessed access aisle, level with the driveway also functions as a covered entry for the building's central stair. We have confirmed with technical experts at the International Code Council and Access Design that this solution is an acceptable means of providing a parking aisle for the building.

- On sheet A-1.6 you will note that we have added another housing unit, bringing the total for 126 North to six units. The new two-bedroom rear unit allows us to help alleviate Portland's housing crisis and better-meet section 14-487. As a result of the new front hall and access aisle the front unit on the building's first floor will become a one-bedroom unit.

- 126 North been brought closer to North Street to better meet A-3 'Relationship to the Street'. The building's roof pitch (B-4) does meet zoning requirements.

- In reworking the first floor plan of 126 North we have sought to improve upon the design as it relates to elements in 'Section C, orientation to the street.' Our building now has its principal entrance along North Street (C-1), with a small canopy. The building's windows have been switched to double-hung windows. This allows us to meet (C-2), the visual privacy design guidelines on the first floor by frosting the lower sash while maintaining the building's accessibility.

- Changing the building's entrance also helps the building better meet Section F 'Articulation'. Note that our trim detail is greater than 4" (F-7) and we have sought to

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provide a transition space at the front of the building utilizing vegetation and brick pavers while maintaining the accessibility of the entrance as required by ICC Chapter 11 and Fair Housing.

- The floor plan of 128R North remains unchanged. However, the lattice previously mentioned in the planning board workshop is now included in the model as is the wheel stop in the first-floor parking area. This wall has been raised to provide screening of car headlights. Screening is also provided via the extruded metal lattice. On the building sides a similar lattice would be utilized taking the form of fencing to continue the pattern and provide screening along the sides of the parking area.

- The parking area at 128R North is required per ASHRAE standards to be mechanically ventilated. Exhaust from the garage would be directed mechanically up through the roof of the building in accordance with best engineering practices. The mechanical components of the system is equivalent in size to a heat pump compressor, likely to be roof-mounted.

- Also included in our packet is a new sheet, A-3.2 Site Section. As requested by the board, this section spans approximately 610'-0" in length from North Street to Washington Avenue. The site section was developed with spot elevations along Washington Avenue taken from ongoing construction projects, our site survey, Portland's GIS system, the Assessor's database (which provides rough widths of building's), and Google Street view. The section is cut facing the back of buildings at East Cove Street. Our project features many of the same design professionals as the Munjoy Heights project along Sheridan Street, who provided a site section of their project. Based on the spot elevations along Washington Avenue and the elevation of our site, taken from our survey, the building is minimally visible when viewed at the far sidewalk of Washington Avenue.

  This vantage is 435'-0" to our site and in areas without vegetation may render the top 9'-4" of our building visible. This said, based on my photos of the site there are treetops along East Cove Street which may obscure the building. The same is true further down Washington Avenue near Northern Burner Supply where trees planted between Washington and Munjoy Heights extend above their project's roofline. The Northern Burner Supply photo is included on page 26 of my neighborhood survey submitted in August 2019 and a view from Cove Street was included in my slides at the planning board workshop in January.

- While the distance between the back of 128R and Munjoy Heights varies the narrowest gap between the structures is 25'-0" to 32'-0" from the face of their building to the outermost part of the back deck. As noted on the drawing the distance between the buildings at the location of the section from face-to-face is 28'-0".

- On sheet A-5.2 you will note a new perspective line drawing. This drawing illustrates the view of an individual inside a private unit within the Munjoy Heights complex looking

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towards 128R North. Clearly, providing renderings from within private dwelling units is not required and the voluntary inclusion of one does give me pause especially considering the value of those units. Do we let those with significant resources make demands otherwise not required of applicants? None-the-less we have included the perspective to clarify concerns and comments, understanding the unease of having construction nearby. Note that we chose to provide a rendering from the building's fourth floor window because the complex's third floor window views our project through a chain-link fence owned by their association and the second-floor windows look out directly onto their retaining wall.

Thank you, Shukria and Deb for your thoughtful and thorough design review. We look forward to presenting our revised plans to you and the board at another workshop soon.

Regards,

Tracie J. Reed, Maine Licensed Architect, LEED AP, NCARB
Principal

CC: William Savage, P.E, and Sam Lebel, Acorn Engineering
Josh Wojcik, Upright Properties

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Section F

Request For Waivers

Standard to be Waived: Cite Ordinance or Technical Manual Standard	**Cite Standard Language:** Cite specific language of applicable Ordinance or Technical Manual Standard	**Waiver Being Sought:** Describe waiver being sought. Ex. – We are requesting a two-way parking lot drive aisle width of 20' feet.	**Justification for Waiver:** Address specific waiver criteria, if applicable, and document reasons for the waiver request.
Technical Manual 1.14	20% Compact Space allowance	We are requesting that 50% of the proposed 8 parking space be compact.	Due to the constrained space on site and the nature of residential ownership, the parking spaces have been tailored to site with set dimensional vehicle limitations. All spaces are functional and will be familiar low turnover spaces.
Technical Manual I-27	Standard parking = 18' in length	To reduce the 18' dimension to 16.5'	Given the site constraints, the waiver is necessary to facilitate parking.

DECLARATION OF CONDOMINIUM

of

RIFUGIO, A CONDOMINIUM
Portland, Maine

Upright Properties, LLC
Portland, Maine
Declarant

DRAFT

Recorded: Cumberland County Registry of Deeds

Book _____, Page ____ - Date: _____, 2020

DECLARATION
RIFUGIO, A CONDOMINIUM

THIS DECLARATION (the "Declaration") is executed by Upright Properties, LLC (the "Declarant"), pursuant to the Maine Condominium Act, Chapter 31 of Title 33 of the Maine Revised Statutes, as amended (the "Act").

ARTICLE I
CREATION OF CONDOMINIUM; DEFINED TERMS

1.1. Declaration of Property. The Declarant, owner of that certain lot or parcel of land situated at 126 and 128R North Street, Portland, Cumberland County, Maine, more particularly described in Schedule A, and of all buildings and improvements constructed thereon and all easements, rights, privileges and appurtenances related thereto (collectively the "Property") hereby submits the Property to the provisions of the Act and creates with respect to the Property a condominium under the Act (the "Condominium"). The name of the Condominium is Rifugio, a Condominium, and its address is 128R North Street, Portland, Maine 04101. The name of the Association is Rifugio Condominium Owners Association and its address is 128R North Street, Portland, Maine 04101.

The Property is depicted on a plat of said land entitled "Condominium Plat, Rifugio, a Condominium," dated _____, by _____, and on floor plans of such buildings and improvements constructed thereon, entitled "Horizontal & Vertical Boundaries, Rifugio, a Condominium," dated _____, by _____, (collectively, the "Plans" or "Plats and Plans"), which Plans are recorded in the Cumberland County Registry of Deeds, Plan Book ___, Pages ____ through ____.

Initially, the Condominium consists of the land located at 126 and 128R North Street, as described in Exhibit A. As shown on the plats and plans this shall include one (1) building containing six (6) units numbered 1 through 6, accessible from North Street, and unit number 7, an additional building to be constructed, containing six (6) rental apartments, also accessible from North Street.

1.2. Defined Terms. As provided in Section 1601-103 of the Act, capitalized terms not otherwise defined in this Declaration, as it may be amended from time to time, or on the Plat and Plans, shall have the same meanings as specified in the Act. The following terms which are not otherwise defined in this Declaration shall have the following specific meanings in this Declaration.

1.2.1. "Allocated Interests" mean (a) the Common Element Interest, and (b) the Common Expense Liability, allocated to each Unit pursuant to this Declaration.

1.2.2. "Association" means the association of the Unit Owners of the Condominium organized pursuant to Section 1603-101 of the Act as a nonprofit corporation under the Maine Non Profit Corporation Act. The name of the Association is Rifugio Condominium Owners Association.

1.2.3. "Building" means the building erected on the Property shown on the Plat and Plans containing four (4) levels (including the parking level) and six (6) units. Unit 1 occupies the first floor of the Building, except for parking area, common entrances, halls, elevator and stairs as shown on the Plans. Unit 2 and Unit 3 occupy the second floor of the Building, except for the common halls, elevator and stairs as shown on the Plans. Unit 4 and Unit 5 occupy the third floor of the Building, except for the common halls, elevator and stairs as shown on the Plans. Unit 6 occupies the fourth floor of the Building, except for the common halls, elevator and stairs as shown on the Plans. The travel lanes of the parking area and bike storage on the first floor, as shown on the Plans, is a Common Element. The decks located off of Units 2, 3, 4, 5, and 6 are allocated to such units as Limited Common Elements.

1.2.4. "By-Laws" means such governing regulations for the Association as are adopted pursuant to the Act and this Declaration for the regulation and management of the Condominium, including such amendments thereof as may be adopted from time to time.

1.2.5. "Common Elements" mean all portions of the Condominium other than the Units and shall further include, without limitation, the outside walls and roof of the Building, the land, walkways, chimneys, elevator, other common facilities or equipment, common porches, stairways or hallways, landscaping, pipes, wires, conduits, foundation, columns, girders, beams, concrete joists, supports, exterior walls, and any central installations and equipment for power, light, air conditioning, heating, ventilation, elevator, door bells and electronic door opener/intercom system (if any), and other service and utility lines which are not defined as a part of the Units. The Common Elements are sometimes referred to as the "Common Areas".

1.2.6. "Common Element Interest" means the percentage of undivided interest in the Common Elements appurtenant to each Unit.

1.2.7. "Common Expenses" mean and include, but are not limited to, (a) the cost of maintenance, management, operation, repair, renovation, restoration and replacement of the Common Elements and such Limited Common Elements and such parts of the Units as to which pursuant to this Declaration it is the responsibility of the Association to maintain, repair and replace; (b) the cost of all insurance premiums on all policies of insurance required to be or which have been obtained by the Executive Board

pursuant to the provisions of this Declaration; (c) such amounts as the Executive Board may deem necessary to provide for general operating reserve funds, reserve funds for replacements and contingencies, reserve funds in the amount of the applicable deductibles on property insurance policies carried by the Association, and such other reserve funds as may be required by the By-Laws or as the Executive Board may periodically establish; (d) sums that the Executive Board may deem necessary to compensate for any deficits in receipts over expenses for the previous fiscal year; (e) the charges and fees for energy, electricity, heat, water, gas and sewer services, and all other utilities furnished to the Condominium to the extent not separately metered to individual Units and charged to individual Unit Owners; (f) costs and fees for legal and accounting services for the Condominium procured by the Association; and (g) such other costs and expenses that may be declared by the Act, this Declaration, the By-Laws, or resolution or agreement by the Executive Board, to be Common Expenses of the administration, operation, maintenance and repair of the Condominium and Property and the rendering to Unit Owners of all related services.

1.2.8. "Common Expense Liability" means the allocation to each Unit of the respective liability for Common Expenses. The Common Expense Liability allocated to the Unit is a percentage equal to the Common Element Interest appurtenant to the respective Unit.

1.2.9. "Condominium Documents" mean this Declaration, the Plans, the By-Laws and any Rules and Regulations adopted pursuant thereto by the Executive Board, and all amendments to each of the same.

1.2.10. "Eligible Mortgage Holder" means the holder of record of a recorded first Mortgage encumbering a Unit in the Condominium which has delivered written notice to the Association by prepaid United States Mail, return receipt requested, or by delivery in hand securing a receipt therefor, stating the name and address of the said holder of the Mortgage, the name and address of the Owner of the Unit encumbered by such Mortgage, the identifying number of such Unit, and containing a statement that such Mortgage is a recorded first Mortgage.

1.2.11. "Limited Common Elements" mean those portions of the Common Elements the exclusive use of which is reserved as an appurtenance to one or more, but fewer than all, of the Units as indicated and allocated pursuant to this Declaration.

1.2.12. "Limited Common Expenses" include (a) the Common Expenses associated with the maintenance, repair or replacement of a Limited Common Element which shall be assessed exclusively against the Units to which that Limited common Element is assigned in proportion to the relative Common Expense Liabilities of such Units as between themselves, as the Executive Board may periodically determine, and (b)

the Common Expenses for services benefiting fewer than all the Units, which are assessed exclusively against the Units benefited in accordance with the use of such services as permitted by Section 1603-115(c) of the Act.

1.2.13. "Mortgage" means a recorded mortgage or deed of trust encumbering a Unit in the Condominium held by a Mortgagee or an Eligible Mortgage Holder.

1.2.14. "Mortgagee" means the holder of a Mortgage.

1.2.15. "Recorded" means that an instrument has been duly entered of record in the Registry of Deeds in and for Cumberland County, Maine.

1.2.16. "Rules and Regulations" mean such Rules and Regulations as may be adopted by the Executive Board pursuant to Article 9.1 of the By-Laws.

1.2.17. "Unit" means a part of the Property designated for any type of separate ownership or occupancy, which has a direct exit to a public street or way, or to a Common Element or Common Elements leading to a public street or way, the boundaries of which Unit are established in Article III.

1.2.18. "Votes" mean the Votes in the Association allocated to the Units set forth in Schedule B.

1.2.19. "Unit 7" means the to be constructed building designated on the Plats and Plans as Unit 7, which shall contain six (6) rental apartments, designated 7-A (1 bedroom), 7-B (income restricted rental, 2 bedroom), 7-C (2 bedroom), 7-D (2 bedroom), 7-E (2 bedroom), 7-F (2 bedroom).

1.3. Interpretation. In the event of any conflict or discrepancy between this Declaration, the By-Laws, and the Plans, the provisions of this Declaration shall govern the By-Laws and the Plans.

ARTICLE II
DESCRIPTION OF PROPERTY & UNITS; CONSTRUCTION OF UNIT 7

2.1. Description of the property. A legally sufficient description of the Property included in the Condominium is set forth in Schedule A and the location and dimensions of the Property included in the Condominium are depicted on the Plans referred to in Paragraph 1.1. All easements, licenses, rights or encumbrances, if any, to which the Condominium shall be subject to are described in Exhibit A.

2.2. Location and Dimensions of Building and Unit 7. The location and dimensions of the Building and Unit 7 (to be constructed) and improvements erected on the Property, and of the Common Elements, are depicted on the Plans.

2.3 Driveways. The Building is served by a driveway from North Street approaching from the northeasterly side of the Building, which serves the parking area. The Building's driveway is a Common Element, and the Unit Owner's share of the cost of maintenance (including snow removal), repair and replacement of the driveway is a Common Expense. Unit 7 is served by a separate driveway, also from North Street. Unit 7's driveway and the parking space to be constructed thereupon are limited common elements serving only Unit 7.

2.4 Stormwater Maintenance System. The Stormwater Maintenance System shall include the culverts, drains, pipes, focal point gardens, and other systems necessary to meet the drainage and stormwater management needs of the Condominium as documented in the Stormwater Maintenance Agreement, dated _____, 2020, and attached hereto as Exhibit B.

2.5 Development of Unit 7. In accordance with and subject to the Act, the Declarant reserves, on behalf of the Owner of Unit 7, the right, but not the obligation, until seven (7) years from the date of the recording of this Declaration:

A. To construct Unit 7 in accordance with the Plats and Plans and all municipal approvals and permits received as of _____ _____, 20__, as revised or amended, including the site plan and subdivision plat approval dated _____ , 2020.

B. If necessary to exercise any rights reserved under this Section 2.5, the Owner of Unit 7 shall prepare, execute and record an amendment to the Declaration pursuant to the Act, which amendment shall include a plat and plans as required by the Act to the extent not previously recorded, and a revised allocation of Common Expense Liability and Common Element Interest that accurately reflects the expected usage of Common Elements and association expenses attributable to residents of Unit 7, as constructed. Said amendment shall become effective without the consent of any other person. Until completion of Unit 7 and the recording of the above discussed amendment, Unit 7 shall be allocated Common Expense Liability and Common Element Interest as described below in Schedule B.

C. Notwithstanding any other provisions of this Declaration, the provisions of this Section 2.5 may not be amended without the written consent of the Owner of Unit 7.

ARTICLE III
DESCRIPTION OF UNITS, ETC.

3.1. Number of Units. The Declarant has created pursuant to this Declaration the seven (7) Units identified in Schedule B.

3.2. Creation of Units. Reference is made to Schedule B for the identifying number of each Unit created by this Declaration and to the Plans for a description of each Unit created by this Declaration including each Unit's identifying number, the locations and dimensions of the vertical boundaries and horizontal boundaries of each Unit, the Common Elements to which the Unit has direct access, the Limited Common Elements which serve each Unit, and any other information necessary to identify the Unit.

3.2.1 Condominium Unit Subject to Eligibility Restrictions. In accordance with Division 30 of Chapter 14 of the City of Portland's Code of Ordinances, Unit 1 (the "Workforce Unit") shall be designated as Workforce Housing Unit for Sale, as that term is defined at Section 14-485. Therefore, the Workforce Unit shall be (i) sold at a purchase price which is affordable to a household earning 120% or less of average median income ("AMI") for greater Portland; (ii) sold only to a household earning 120% or less of AMI; and (iii) these restrictions shall be recorded in the deed from Declarant conveying the Workforce Unit and/or in other legally binding agreements, as may be required by the City of Portland, including the Affordable Housing Agreement, dated _____, 2020. Declarant and the Association shall cooperate with the City of Portland's verification processes, and shall, together with any prospective buyer, provide the City with sufficient information to determine any prospective buyer's eligibility, as well as meet any additional requirements as put forth in the Affordable Housing Agreement.

3.2.2 Rental Unit Subject to Eligibility Restrictions. In accordance with Division 30 of Chapter 14 of the City of Portland's Code of Ordinances, the rental apartment designated as 7-B (the "Income Restricted Rental"), contained with Unit 7, shall be designated as Workforce Housing Unit for Rent, as that term is defined at Section 14-485. Therefore, the Income Restricted Rental shall be (i) rented at a rate which is affordable to a household earning 100% or less of AMI for greater Portland; (ii) rented only to a household earning 100% or less of AMI; and (iii) these restrictions shall be recorded in the deed from Declarant conveying the Unit 7 and/or in other legally binding agreements, as may be required by the City of Portland, including the Affordable Housing Agreement, dated _____, 2020. Declarant and the Association shall cooperate with the City of Portland's verification processes, and shall, together with any prospective renter, provide the City with sufficient information to determine any prospective renter's eligibility, as well as meet any additional requirements as put forth in the Affordable Housing Agreement.

In accordance with the Affordable Housing Agreement, if Unit 7 is ever subdivided under Section 3.5 below, then the Owner of Unit 7 shall have the option to convert the Income Restricted Rental to a Workforce Housing Unit for Sale, as that term is defined at Section 14-485 of the City of Portland's Code of Ordinances

3.3. Unit Boundaries. The boundaries of each Unit created pursuant to this Declaration are situated as shown on the Plans and shall consist of:

3.3.1. Upper and Lower (horizontal) Boundaries: The upper and lower boundaries of each Unit shall be the following boundaries extended to an intersection with the vertical (perimetric) boundaries:

3.3.1.1. Upper Boundary: The planes formed by the bottom side of the ceiling rafter stud line.

3.3.1.2. Lower Boundary: The horizontal plane of the top surface of the structural flooring of the Unit.

3.3.2. Vertical (perimetric) Boundaries: The vertical boundaries of each Unit are the vertical planes, extended to intersections with each other and with the Unit's upper and lower boundaries, of the inner or Unit side surface of the studs which support the dry wall, plaster, wallboard or other materials forming the perimeter walls bounding the Unit. Boundary lines shall also be the exterior surfaces of doors, windows and glass walls, and their frames, sills and thresholds, where applicable.

3.3.3. The Unit shall include the following items exclusively serving the Unit, whether or not located within the boundaries of the Unit: heating, hot water, solar panels, gas lines, telecommunications wiring and components, electrical and air conditioning components and apparatus, and all partitions which are wholly contained within the Unit including interior doors, door frames, hardware, electrical outlets and wiring, and devices in such partitions serving only the Unit.

3.3.4. The Unit shall include all lath, furring, wallboard, wall materials, plasterboard, plaster, paneling, tiles, wallpaper, paint, finished flooring and any other materials constituting any part of the finished surfaces thereon located within the boundaries of the Unit.

3.3.5. Subject to the provisions of subparagraphs 3.3.3 and 3.3.4 above, if any chute, flue, duct, wire, conduit, bearing wall, bearing column, stairway, or any other fixture lies partially within and partially outside the designated boundaries of a Unit, any portion thereof serving only that Unit is a Limited Common Element allocated solely to

that Unit, and any portion thereof serving more than one Unit or any portion of the Common Elements is a part of the Common Elements.

3.3.6. Subject to the provisions of subparagraphs 3.3.3, 3.3.4 and 3.3.5 above, all spaces, interior partitions and other fixtures and improvements within the boundaries of a Unit are a part of the Unit.

3.4. Allocated Interests. The Allocated Interests allocated to each Unit are listed and allocated to the Units in Schedule B.

3.5. Relocation of Unit Boundaries. Subject to applicable provisions of this Declaration and the By-Laws, and deed restrictions affecting the Property, and of law and environmental and land-use ordinances and regulations, the subdivision of Units horizontally or vertically and the relocation of horizontal and vertical boundaries between Units will be permitted at the expense of the Unit Owners of the Unit or Units to be so subdivided and the boundaries of which are to be so relocated, subject to compliance with the provisions therefor stated in Section 1602-112 and Section 1602-113 of the Act.

3.6. Alteration of Partitions. Subject to applicable provisions of this Declaration and the By-Laws, and any deed restrictions affecting the Property, and of law, ordinances and land-use regulations, a Unit Owner may, after acquiring a vertically or horizontally adjoining Unit or adjoining part of a vertically or horizontally adjoining Unit, remove or alter any intervening partition or create apertures therein, even if the partition in whole or in part is a Common Element, if such acts do not impair the structural integrity or mechanical systems of the Building or lessen the support of any portion of the Property. Removal of partitions or creation of apertures under this subparagraph is not alteration of boundaries.

3.7. Alterations by Unit Owner. Subject to any applicable provisions of this Declaration, the By-Laws or Rules and Regulations of the Association, a Unit owner may make nonstructural improvements and alterations to the interior of such owner's Unit but no Unit Owner may make any improvements or alterations or do any work whatsoever which would impair the structural integrity or mechanical systems of the Building or of a Unit owned by another Unit Owner, lessen the support of any portion of the Condominium, jeopardize the soundness or safety of the Property, or reduce the fire rating of any walls or violate any building or fire codes. Except as provided in this Declaration, no Unit Owner shall alter any of the Common Elements or paint or otherwise change the appearance of the Common Elements (including Limited Common Elements) or paint or otherwise change the exterior appearance of such owner's Unit (including, but not limited to, the exterior surface of doors) or any other portion of the Condominium without the prior written approval of the Executive Board.

3.8 Utilities. The utilities serving the Units and Common Areas of the Condominium are as follows:

3.8.1 Each Unit is separately metered for electricity.

3.8.2 Each Unit is served by its own separately metered natural gas line, and each unit owner is responsible for any cost related to the use thereof.

3.8.3 Each Unit shall be served by one or more heating or heating and cooling systems. Each unit owner is responsible for their own heating costs, including operating costs, repair, maintenance and replacement costs, if necessary, of heating and cooling systems serving such unit owner's Unit.

3.8.4 Each Unit shall be served by a heat-recovery ventilation system. Each unit owner is responsible for their own use of the heat-recovery ventilation system including operating costs, repair, maintenance and replacement costs, if necessary.

3.8.5 There is a separate electric meter for all Common Area lighting and other common area electric usage, including any central heating or ventilation systems.

3.8.6 There is a single shared water meter for the condominium. Water and sewer charges shall be shared by the Units based on the allocations of shared expenses defined in Schedule B.

ARTICLE IV
COMMON ELEMENTS, LIMITED COMMON ELEMENTS AND APPLICABLE PROVISIONS

4.1. Common Elements. The Common Elements are shown on the Plans.

4.2. Allocation of Limited Common Elements. The location and dimensions of the Limited Common Elements, except for the portions of the Property described as Limited Common Elements pursuant to Sections 1602-102(2) and (4) of the Act, and the identification of the Unit or Units to which the Limited Common Elements are hereby allocated, are described in this Paragraph 4.2, and on the Plat and Plans. The allocation of Limited Common Elements to the Units cannot be altered except in compliance with Section 1602-108(b) of the Act at the expense of the Owners of the Units involved and with the written consent of the Owners and Eligible Mortgage Holders of record of the Units affected by the reallocation of Limited Common Elements. The following portions of the Common Elements serving fewer than all the Units, but located outside those Units' boundaries, are each allocated as a Limited Common Element to the Unit or Units which it serves:

4.2.1. The storage area depicted on the Plans as Limited Common Elements to the respective Unit served.

4.2.2. Any hallways, stairways, landings and doorways, waiting areas or reception areas, storage spaces, porches and decks depicted on the Plat and Plans as Limited Common Elements to the respective Unit served.

4.2.3. Doors leading from the Unit to the Common Elements or Limited Common Elements and any associated door paneling, frames, glassware, buck, trim, sills and hardware including lock, hinges and closure but not including the interior surface of the doors, which are part of the Unit.

4.2.4. Windows and any shutters, awnings, decorative grating and window boxes designed to serve the Unit.

4.3. Common Elements to Remain Undivided. The Common Element Interest of a Unit shall be inseparable from each Unit, and any conveyance, lease, devise or other disposition or mortgage or other encumbrance of any Unit shall extend to and include the Common Element Interest, whether or not expressly referred to in the instrument effecting such transfer. The Common Elements shall remain undivided and no action for partition or division of any part thereof shall be permitted, unless otherwise provided by law and permitted by this Declaration.

4.4. Use of Common Elements. Except as their use may otherwise be limited by this Declaration or the By-Laws or otherwise by the Executive Board pursuant to its powers, each Unit Owner, tenant and occupant of a Unit, and the guests, customers, clients, agents and employees of such Unit Owner, tenant and occupant, may use the Common Elements in common with all other Unit Owners and tenants or occupants of other Units, and their respective guests, customers, clients, agents and employees, in accordance with the purposes for which they are intended, without hindering or encroaching upon the lawful rights of the other Unit Owners, upon the following terms:

4.4.1. No signs of any character shall be erected, posted or displayed upon, in, from or about any Unit or Common Element without the prior written approval of the Executive Board.

4.4.2. No Unit Owner shall obstruct any of the Common Elements nor shall any Unit Owner place or cause anything to be placed on or in any of the Common Elements (except those areas designated for such storage by the Condominium Documents or the Executive Board) without the approval of the Executive Board.

4.4.3. The Executive Board, the Association and any Unit Owner shall not be considered a bailee of any personal property stored on the Common Elements, whether or not exclusive possession of the particular area is given to a Unit Owner, and shall not be responsible for the security of such personal property or for any loss or damage thereto, whether or not due to negligence, except to the extent covered by insurance in excess of any applicable deductible.

4.5 Stormwater Maintenance System. Notwithstanding anything else in this Declaration the individual components of the Stormwater Maintenance System are a Common Element.

ARTICLE V
EASEMENTS; RIGHTS OF WAY AND LICENSES; PARKING; STORMWATER MAINTENANCE

5.1. Recorded Easements and Licenses. The Condominium benefits from the following recorded easements and licenses:

5.1.1 A right of way and utility easement across 128 North Street granted by Elmore W. Ramsdell to Claire Bowden, dated July 25, 1923, and recorded in the Cumberland County Registry of Deeds at Book 1143, Page 307.

5.2 Parking; ADA Compliant Parking. The Condominium shall initially include six (6) parking spaces for Unit Owners with one space assigned to Units 2-5, and two spaces assigned to Unit 6 as a Limited Common Element. "On-street" parking may also be available on the public streets nearby in accordance with the City of Portland ordinances, rules and regulations. Additional parking shall be added as part of Phase 2, and the allocation of such parking as limited elements shall be included in the amendment contemplated in Section 2.5(B).

A limited common element parking space, including the parking spaces which are designed to meet accessibility needs under the American's with Disabilities Act, may be reassigned by an amendment to this Declaration in accordance with section 1602-108(b) of the Act. Any owner wishing to reassign a limited common element parking space shall submit to the Association the language of a proposed amendment and such additional details as the Association may reasonably require. The proposed amendment must be approved by vote or agreement of the owner of each unit particularly affected, and the owners of the units to which 70% of the votes of the association are allocated. If approved by unit owners, the amendment shall be recorded in the registry of deeds. The Association shall determine which unit or units are "particularly affected". Unit owners

seeking approval under this paragraph shall pay a fee of $500 and all costs incurred by the Association in connection with the application, including preparation of the amendment, recording costs and attorney's fees. The Association shall approve any amendment submitted to reassign a van accessible, ADA compliant, parking space from a person without a physical disability to a person with a condition or impairment that substantially limits his or her mobility who requires such an ADA compliant space. No fee shall be charged under such circumstances, but legal fees and other expenses shall be the responsibility of the applicant.

5.2.1 Parking Space Assignment; Vehicle Restrictions. The parking spaces are subject to the following restrictions and assigned to the following Units as limited common elements:

	Maximum Vehicle Characteristics				
#	Wheel Base	Length	Width	Unit	Notes
1	9.3'	16.5'	6.5'	6	ADA Compliant
2	8.6'	15.8'	6'	2	Mid-Size
3	8.5'	15.8'	6'	4	Mid-Size
4	8.5'	14.5	5.8'	6	Compact
5	9.3'	16.5'	6.5'	3	Full-Size/SUV
6	9.3'	16.5'	6.5'	5	Full-Size/SUV

5.3 Stormwater Maintenance Agreement. The Association shall maintain the Stormwater Maintenance System and shall undertake as common expenses all costs necessary to meet the obligations of the Stormwater Maintenance Agreement, dated _____, 2020, and attached hereto as Exhibit B.

ARTICLE VI
NOTICES TO UNIT OWNERS BY ASSOCIATION, ETC.

6.1. To Unit Owners. All notices, demands, bills, statements or other communications affecting the Condominium given to Unit Owners by the Association shall be in writing and shall be deemed to have been duly given if delivered personally securing a receipt therefor or sent by United States mail, postage prepaid, or if such notification is of a default or lien, sent by registered or certified United States mail, return receipt requested, postage prepaid, addressed to the Unit Owner at the address which the Unit Owner shall designate in writing and file with the Secretary of the Association or managing agent, or if no such address is so designated, the address of the Unit of such Unit Owner who is the record owner thereof.

6.2. To the Association. All notices, demands, statements or other communications affecting the Condominium given by the Unit Owners to the Association shall be in writing and shall be deemed to have been duly given to the Association if delivered personally securing a receipt therefor, or sent by United States mail, postage prepaid, return receipt requested, addressed to the Association at the principal office of the managing agent, or if there shall be no managing agent, then to the Secretary of the Association at the address of the Unit of which the Secretary is the record Unit Owner.

6.3. To Eligible Mortgage Holder. All notices, demands, statements or other communications affecting the Condominium given by the Association to any Eligible Mortgage Holder shall be in writing and shall be deemed to have been duly given by the Association if delivered personally securing a receipt therefor, or sent by United States mail, postage prepaid, addressed to the Eligible Mortgage Holder at the address identified pursuant to subparagraph 1.2.10 by virtue of which it became an Eligible Mortgage Holder.

ARTICLE VII
EASEMENTS

The following easements and rights are hereby granted or reserved:

7.1. Utilities, Pipes and Conduits. Each Unit Owner shall have an easement in common with all other Unit Owners to use all pipes, wires, ducts, cables, conduits, public utility lines and other Common Elements serving such owner's Unit and located in any of the other Units. Each Unit shall be subject to an easement in favor of all other Unit Owners to use the pipes, ducts, cables, wires, conduits, public utility lines and other Common Elements serving such other Units and located in such Unit. The Association acting through its Executive Board shall have the right to grant to third parties additional permits, licenses and easements over and through the Common Elements for utilities, and other purposes reasonably necessary or useful for the proper maintenance and operation of the Condominium.

7.2. Ingress and Egress. Each Unit Owner, and the partners, guests, employees, tenants, sub-tenants, invitees, agents, contractors and licensees of the Unit Owner, shall have an easement, subject to the provisions of the Declaration and any Rules and Regulations established by the Executive Board, in common with all other Unit Owners, to use the entrances, exits, Common Element corridors, elevator, and hallways, Common Element stairways and other Common Elements as a means of ingress and egress to and from the Property and the adjoining public streets.

7.3. Condominium Association and Executive Board Access. The Association and its Executive Board, officers, agents and employees, and the managing agent and

every other person authorized by the Executive Board shall have the irrevocable right and easement to have access to each Unit as provided in Section 1603-107(a) of the Act as may be necessary for the inspection, maintenance, repair or replacement of any of the Common Elements and Limited Common Elements therein or accessible therefrom for the making of any additions or improvements thereto, or to make repairs to any Unit, Common Elements or the Limited Common Elements if such repairs are reasonably necessary for public safety or to prevent damage to any other Unit or Units, the Common Elements or Limited Common Elements, or to abate any violation of law, orders, rules or regulations of the Association or of any governmental authorities having jurisdiction thereof. In case of an emergency, such right of entry shall be immediate whether or not the Unit Owner is present at that time.

7.4. Encroachments. Each Unit shall have an easement to the extent necessary for structural and subjacent support over every other Unit and over the Common Elements, and each Unit and the Common Elements shall be subject to an easement for structural and lateral support in favor of every other Unit. If any portion of the Common Elements or Limited Common Elements hereafter encroaches upon any Unit, or if any Unit hereafter encroaches upon any other Unit or upon any portion of the Common Elements or Limited Common Elements, as a result of settling or shifting of the Building or otherwise than as a result of the purposeful or negligent act or omission of the Owner of the encroaching Unit, or of the Association in the case of encroachments by the common Elements or Limited Common Elements, a valid easement appurtenant to the encroaching Units, Common Elements or Limited Common Elements for the encroachment and for the maintenance of the same shall exist for so long as the encroachment shall exist. In the event that the Building shall be partially destroyed as a result of fire or other casualty or as a result of a taking by the power of, or in the nature of, eminent domain or by an action or deed in lieu of condemnation, and then is rebuilt, encroachments of a portion or portions of the Common Elements or Limited Common Elements upon any Unit or of any Unit upon any other Unit or upon any portion of the Common Elements or Limited Common Elements, due to such rebuilding, shall be permitted, and valid easements appurtenant to the encroaching Units, Common Elements or Limited Common Elements for such encroachments and the maintenance thereof shall exist so long as the Building as so rebuilt shall stand.

7.5. Common Elements Easement in Favor of Unit Owners.

The Common Elements (including, but not limited to, the Limited Common Elements) shall be and are hereby made subject to the following easements in favor of the Units benefited:

7.5.1. For the installation, repair, maintenance, use, removal and/or replacement of pipes, ducts, heating and air conditioning systems, electrical, telephone

and other wiring and cables for communication, intelligence, information storage, retrieval or processing, computer operations, and word processing and all other utility lines and conduits which are a part of or serve any Unit and which pass across or through a portion of the Common Elements.

7.5.2. For the installation, repair, maintenance, use, removal and/or replacement of lighting fixtures, electrical receptacles, panel boards and other electrical installations which are a part of or serve any Unit but which encroach into a part of the Common Elements adjacent to such Unit; provided that the installation, repair maintenance, use, removal or replacement of any such item does not unreasonably interfere with the common use of any part of the Common Elements, adversely affect either the thermal or acoustical character of the Building or impair or structurally weaken the Building.

7.5.3. For driving and removing nails, screws, bolts and other attachment devices into the Unit side surface of the studs which support the dry wall or other perimeter walls bounding the Unit, the bottom surface of floor joists above the Unit and the top surface of the floor joists below the Unit to the extent such nails, screws, bolts and other attachment devices may encroach into a part of the Common Elements adjacent to such Unit; provided that any such action will not unreasonably interfere with the common use of any part of the Common Elements, adversely affect either the thermal, aesthetic or acoustical character of the Building or impair or structurally weaken the Building.

ARTICLE VIII
ASSESSMENTS FOR COMMON EXPENSES AND MAINTENANCE OF PROPERTY

8.1. Allocation and payment of Assessments of Common Expenses. The total amount of Common Expenses shall be assessed against the Units in the following proportions:

8.1.1. The Common Expenses that are not assessed as Limited Common Expenses shall be assessed against all the Units in proportion to the relative Common Expense Liabilities of all the Units.

8.1.2. (a) If a Limited Common Expense benefits more than a single Unit, that Limited Common Expense shall be assessed solely against all the Units benefited in proportion to the relative Common Expense Liabilities of such Units as between themselves, as the Executive Board shall periodically determine, (b) if a Limited Common Expense only benefits a single Unit, that Limited Common Expense shall be assessed solely against the Unit benefited, as the Executive Board shall periodically

determine, (c) to the extent that utilities are not separately metered to the Units and notwithstanding anything to the contrary contained herein or in the By-Laws, the costs of utilities may be assessed against the Units in proportion to usage as the Executive Board may periodically determine, and (d) any additional costs of insurance shall be assessed against Units as a Limited Common Expense on the basis of any additional premiums charged due to the contents, characteristics or features of a particular Unit as more particularly provided in Paragraph 14.2., which additional costs the Executive Board shall periodically determine on the basis of the advice of the insurance company described in Paragraph 14.2., provided, however, (e) if a Limited Common Expense is associated with the maintenance, repair or replacement of a Limited Common Element, that Limited Common Expense shall be assessed solely against all the Units to which that Limited Common Element is allocated in proportion to the relative Common Expense Liabilities of such Units as between themselves, as the Executive Board shall determine.

8.1.3. The cost of utilities serving the Condominium not individually metered to a Unit shall be Common Expenses or Limited Common Expenses assessed pursuant to subparagraphs 8.1.1. and 8.1.2.

8.2. Payment of and Lien for Assessments.

8.2.1. Commencing no later than sixty (60) days after the first unit is conveyed, each unit owner, including the Declarant, shall pay to the Association or its authorized representative (1) on the first day of each month, or on such other date that the Association may determine in writing, one-twelfth (l/12th) of the Common Expenses including Limited Common Expenses, and revised Common Expenses including revised Limited Common Expenses, assessed on an annual basis against such owner's Unit in the proportions required in Paragraph 8.1. and (2) all special assessments, any other sum duly levied against the Unit pursuant to this Declaration, the By-Laws or the Act, including Limited Common Expenses assessed against Unit Owners for maintenance, repair or replacement of a Limited Common Element pursuant to Paragraph 8.4., all interest thereon and charges for late payment thereof and legal fees and other costs of collection thereof, and fines, penalties and fees as provided by this Declaration, the By-Laws or the Act, on the first day of the next month which begins more than ten (10) days after delivery to the Unit Owner of notice of such special assessment or levy or on such other date that the Association may determine in writing. If for any reason the Association shall revise the annual budget of the Association whereby the Common Expenses or any component thereof may be increased, then commencing on the first day of the first month subsequent to the adoption of such revised budget each Unit Owner shall pay to the Association or its authorized representative such revised annual Common Expenses including Limited Common Expenses assessed against his Unit in the proportions required in Paragraph 8.1.

8.2.2. The total annual assessment levied against each Unit for Common Expenses including Limited Common Expenses, revised Common Expenses including revised Limited Common Expenses, or any special assessment, and any other sums duly levied against the Unit pursuant to this Declaration, the By-Laws, or the Act, including Limited Common Expenses assessed against Units for maintenance, repair or replacement of a Limited Common Element pursuant to Paragraph 8.4., all interest thereon and charges for late payment thereof, legal fees and other costs of collection thereof, and fines, penalties and fees as provided in this Declaration or the By-Laws shall constitute the personal liability of the Owner of the Unit so assessed and also shall, until fully paid, constitute a lien against the Unit in favor of the Association as provided in Section 1603-116 of the Act. Such lien shall, with respect to annual assessments and revised annual assessments, be effective on the first day of each fiscal year of the Association as to the full amount of the annual assessment or revised annual assessment, and, as to special assessments and other sums duly levied including Limited Common Expenses assessed against a Unit Owner for maintenance, repair or replacement of a Limited Common Element pursuant to Paragraph 8.4., interest, charges for late payment, legal fees, costs of collection, fines, penalties and fees as described in subparagraph 8.2.1., on the first day of the next month which begins more than ten (10) days after delivery to the Unit Owner of notice of such special assessment or levy. In any case where an assessment against a Unit Owner is payable in installments, upon a default by such Unit Owner in the timely payment of any two consecutive installments, the maturity of the remaining total of the unpaid installments of such assessments may be accelerated at the option of the Executive Board, and the entire balance of the assessment may be declared due and payable in full by the service of notice to such effect upon the defaulting Unit Owner by the Executive Board or its representative. Such lien is prior to all other liens and encumbrances on a Unit except (a) liens and encumbrances recorded before the recordation of this Declaration, (b) a first Mortgage recorded before or after the date which the assessment sought to be enforced becomes delinquent, and (c) liens for real estate taxes and other governmental assessments or charges against the Units; provided, however, that such lien is not subject to the provisions of 14 M.R.S.A. Section 4651 or 4651-A and 18-A M.R.S.A. Section 2-201, et seq., as they or their equivalents may be amended or modified from time to time.

8.2.3. The lien for assessments described in subparagraph 8.2.2. may be enforced and foreclosed by the Association in like manner as a mortgage on real estate as provided in Section 1603-116(a) of the Act or by any other means presently or hereafter provided by law or in equity. A suit to recover a money judgment for unpaid assessments, interest, penalties, and costs of collection may be maintained against the Unit Owner personally without foreclosing or waiving the lien securing such assessments and a foreclosure may be maintained notwithstanding the pendency of any suit to recover a money judgment. During the pendency of any such suit, the Unit Owner shall be required

to pay a reasonable rental for the Unit for any period prior to sale pursuant to any judgment or order of any court having jurisdiction over such sale.

8.2.4 In addition to the regular monthly payments of Common Expenses as set forth herein, each purchaser of a Unit from the Declarant shall pay to the Association a special assessment at the time of closing equal to two (2) times the estimated monthly assessment to provide a working capital reserve fund for the Association.

8.3. Reduction of Expenses and Surplus Funds. All receipts from payments, fees or charges for the use, rental or operation of any and all Common Elements shall be applied first to reduce the Common Expense relating to the use of that Common Element giving rise to such Common Expense and any excess thereof shall be applied to Common Expenses generally; and all receipts from any assessments for Limited Common Expenses shall be applied first to reduce the Limited Common Expense relating to the service afforded to the Unit benefited and any excess shall then be applied to reduce until exhausted the subsequent monthly installments of Common Expenses assessed against the Unit benefited. Any amounts accumulated from assessments for Common Expenses, income from interest on reserves, and income from the operation of the Common Elements to which such Common Expenses pertain in excess of the amount required for actual Common Expenses and provision for Common Expenses and any payment of reserves shall be credited to each Unit Owner in proportion to their respective Common Expense Liabilities to reduce until exhausted the next monthly installments due from Unit Owners.

8.4. Limited Common Elements, Maintenance. Each Unit Owner shall be solely responsible for the maintenance and repair of the portion of the Building allocated to such Unit Owner's Unit as a Limited Common Element, including without limitation the respective portions of the basement, storage areas and garage. Notwithstanding the foregoing, the Association may maintain, repair and replace any Limited Common Elements if the Association determines such repair and replacement is necessary to maintain the safety, integrity and value of the Building and the Units. In such event, the Association shall assess as a Limited Common Expense expenses associated with the maintenance, repair or replacement of such Limited Common Element against the Units to which the Limited Common Element is assigned or appurtenant in proportion to the relative Common Expense Liabilities of such Units as between themselves, provided that the Association shall also have the right to assess an individual Unit for Limited Common Expenses associated with said purposes applicable to such Unit if the Limited Common Expense shall be incurred due to the negligence, neglect or misconduct of the Owner of such Unit or if the item giving rise to the expense shall be for the benefit of that Unit only.

8.5. Maintenance of Common Elements. The Association shall be responsible for the maintenance, repair and replacement (unless, if in the opinion of the Executive Board such expense was necessitated by the negligence, misuse or neglect of a Unit Owner) of all of the Common Elements (subject to Paragraph 8.4. regarding the Limited Common Elements) whether located inside or outside of the Units, the cost of which shall be charged to the Unit Owners as a Common Expense except as otherwise provided in Paragraph 8.4. with regards to Limited Common Elements. The maintenance, repair and replacement of Common Elements located within a Unit, or for which the Unit Owner is otherwise responsible, to the extent required for the functioning of or for connecting utilities to the Property and Units shall be furnished by the Association as part of the Common Expenses or, if fewer than all of the Units are benefited, the Limited Common Expenses. Any Unit Owner permitted by the Executive Board to use a specific portion of the Common Elements for storage is responsible for the maintenance and care of such portion and shall use the same in a safe and sanitary manner.

8.6. Maintenance of Unit. Each Unit Owner shall keep and maintain such unit owner's Unit and the Limited Common Elements allocated to each Unit Owner's Unit, if any, and its equipment, appliances and appurtenances in good order, condition and repair and in a clean and sanitary condition, whether such maintenance and repair shall be structural or nonstructural, ordinary or extraordinary, and shall do all redecorating, painting and varnishing which may at any time be necessary to maintain the good appearance and condition of the Unit or such Limited Common Element, provided, however, no Unit Owner shall change the appearance of the exterior of the Building without the prior written consent of the Executive Board. The Unit Owner shall maintain the interior surfaces of windows in the Units including periodic washing. No Unit Owner shall sweep or throw, or permit to be swept or thrown, from the Unit any dirt, debris or other substance. In addition, each Unit Owner shall be responsible for all damage to any other Units or to the Common Elements resulting from such owner's failure or negligence to make any of the repairs required by this Article. Each Unit Owner shall perform such owner's responsibility in such manner as shall not unreasonably disturb or interfere with the other Unit Owners. Each Unit Owner shall promptly report to the Executive Board or the managing agent any defect or need for repairs for which the Association is responsible.

8.7. Liability of Owner. Each Unit Owner shall be liable, and the Association shall have a lien against such Owner's Unit for, the expense of maintenance, repair or replacement of any damage to the Common Elements including Limited Common Elements or of another Unit caused by such Unit Owner's act, neglect or carelessness or by that of such Unit Owner's guests, employees, agents, or lessees which the Association shall have the right to cure, correct, maintain, repair or replace. Such liability shall include any increase in fire insurance rates occasioned by use, misuse, occupancy, or abandonment of any Unit or its appurtenances. Nothing herein contained, however, shall

be construed so as to modify any waiver by insurance companies of rights of subrogation against such Unit Owner.

8.8. Maintenance Responsibilities. Notwithstanding the ownership of the various portions of the Common Elements and the Units by virtue of the descriptions of the boundaries of Units provided in this Declaration, the Units and Common Elements shall be maintained and repaired by each Unit Owner and the Association in accordance with the provisions of Section 1603-107(a) of the Act, except as expressly set forth to the contrary in this Declaration.

ARTICLE IX
ASSOCIATION OF UNIT OWNERS; VOTING

9.1. The Association, Powers. The membership of the Association at all times shall consist exclusively of all Unit Owners, or, following any termination of the Condominium as provided in Section 1602-118 of the Act, of all former Unit Owners entitled to distributions of proceeds under said Section 1602-118, or their heirs, successors or assigns, but shall not include persons having an interest in a Unit solely as security for an obligation. Each Unit Owner shall automatically become and be a member of the Association as long as such owner continues as a Unit Owner and upon the termination of the interest of the Unit Owner in the Condominium such owner's membership and any interest in the common funds of the Association shall thereupon automatically terminate and transfer and inure to the next Unit Owner or Owners succeeding in interest. Except as otherwise provided in Section 1603-103(b) of the Act, the Association shall have all the powers granted pursuant to Section 1603-102 of the Act.

9.2. Executive Board. The affairs of the Association shall be governed by an Executive Board composed of three (3) natural persons, all of whom shall be Unit owners or spouses of Unit Owners or in the case of a Unit Owner which is a corporation, partnership, limited liability company, trust or estate, a designated agent thereof. Notwithstanding the above requirements, the initial Executive Board shall be elected by the incorporator of the Association and shall serve until the earlier of (i) at least two (2) units have been sold, or (ii) the third annual meeting.

9.3. Votes. The Votes in the Association allocated to each Unit are stated in Schedule B. Unless by express provisions of the Act, the By-Laws or this Declaration a different vote is required, each question presented at a meeting of the Association shall be determined by the affirmative vote of Owners of Units to which are allocated no less than sixty-six percent (66%) of the Votes in the Association. Provided, however, that notwithstanding any provision to the contrary contained in the By-Laws or this

Declaration, the affirmative vote of one hundred percent (100%) of all of the Unit Owners shall be required for the Association to act on any of the following matters: termination of the Condominium pursuant to Section 1602-118 of the Act; merger or consolidation of the Condominium with another condominium; conveyance or subjection to a security interest of any portion of the Common Elements; use of any proceeds of insurance required to be maintained by the Association pursuant this Declaration or any eminent domain awards or proceeds for purposes other than repair and restoration of the damaged Property in accordance with the Condominium Documents, the original elevation thereof and the original building plans and specifications therefor; and amendments to the Condominium Documents which govern or regulate (a) voting, (b) assessments, assessment liens or subordination of such liens, (c) reserves for replacement, repair and replacement of the Common Elements or Units, if applicable, (d) insurance or fidelity bonds, (e) responsibility for maintenance and repair of the Common Elements and the Units, (f) leasing of Units, or (g) imposition of any right of first refusal or similar restriction on the right of a Unit Owner to sell, transfer, or otherwise convey or lease an owner's Unit.

9.4. Voting. The Votes in the Association allocated to a Unit can only be cast as a unit and cannot be split. If a Unit is owned of record by one person, that Unit owner's right to cast all the Votes allocated to that Unit shall be established by the record title to the Unit, provided, however, that such person's spouse or designated agent may cast the Votes allocated to such Unit if authorized to do so in a certificate executed by the Unit Owner and filed with the Secretary of the Association, which certificate shall be valid until revoked by a subsequent certificate similarly executed and filed with the Secretary of the Association. If ownership of a Unit is in more than one person, the person who shall be entitled to cast all the Votes allocated to that Unit shall be the person named in a certificate executed by all of the Owners of such Unit and filed with the Secretary of the Association. If ownership of a Unit is in a corporation, partnership, limited liability company, limited liability partnership, trust or estate, the officer or employee of that corporation, general partner of that partnership, member of that limited liability company, or partner of that limited liability partnership, trustee of that trust, or agent of that estate, entitled to cast for the corporation, partnership, limited liability company, limited liability partnership, trust or estate the Votes allocated to such Unit shall be designated in a certificate for that purpose executed by the president or a vice president of that corporation, and attested to by the secretary, assistant secretary or clerk of that corporation, executed by all the general partners of that partnership, executed by all the managing members or members with sufficient authority of that limited liability company, executed by the managing partner or partners with sufficient authority of that limited liability partnership, executed by all the trustees of that trust, or executed by either all the devises of that estate or by order of the probate court and filed with the Secretary of the Association. Such certificates of multiple owners, corporations, partnerships, limited liability companies, limited liability partnerships, trusts or estates shall be valid until

revoked by a subsequent certificate similarly executed and filed with the Secretary of the Association. Wherever the vote, approval or disapproval of a Unit Owner is required by this Declaration or the Act, such vote, approval or disapproval shall be made only by the person who would be entitled pursuant to such certificate to cast at any meeting of the Association the Votes allocated to such Unit. If the person named or designated in said certificate for a particular Unit shall be absent from a meeting of the Association, no person may cast the Votes allocated to that Unit at the meeting although the presence at the meeting of a non-named or non-designated co-Owner or member, officer, employee, agent or designee of such Owner shall be counted in determining whether a quorum is present. If a multiple Owner of a Unit that is not a corporation, partnership, limited liability company, limited liability partnership, trust or estate has failed to file said certificate with the Secretary of the Association and only one of the multiple Owners is present at a meeting of the Association, he shall be entitled to cast at the meeting all the Votes allocated to that Unit without establishing the concurrence of the absent Owners just as though that person were the sole Owner of the Unit. If a multiple Owner of a Unit that is not a corporation, partnership, limited liability company, limited liability partnership, trust or estate has failed to file said certificate with the Secretary and if more than one Owner of that Unit is present at the meeting, the Votes allocated to that Unit may be cast only in accordance with the agreement of a majority of the multiple Owners present at the meeting. Such majority agreement shall be conclusively presumed if any one of those multiple Owners shall cast the Votes allocated to the Unit without protest being promptly made to the person presiding over the meeting by any other Owners of that Unit. No Votes allocated to a Unit owned by the Association may be cast.

ARTICLE X
RESTRICTIONS ON USE, OCCUPANCY AND ALIENATION OF UNITS

10.1. Use and Occupancy Restrictions on Units. Each Unit shall be occupied and used subject to the following restrictions:

10.1.1. All Units are restricted to residential use, which shall not preclude leasing or rental, subject, however, to the requirement that rentals or leases of any nature (including, without limitation, any rentals facilitated through any third-party/online services such as Airbnb, Homeaway.com or VRBO) shall comply with the restrictions contained in this Declaration, the By-Laws of the Association, and any Rules & Regulations promulgated by the Association in accordance with its By-Laws.

10.1.2. Nothing shall be done or kept in any Unit or in the Common Elements which will increase the rate of insurance for the Property or any part thereof without the prior written consent of the Executive Board. No Unit Owner shall permit anything to be done or kept in such Owner's Unit or in the Common Elements which will result in the cancellation of insurance on the Property or any part thereof or which would

be in violation of any law, regulation or administrative ruling. No waste will be committed on the Common Elements.

10.1.3. No Unit shall be used so as to create a nuisance or an unreasonable interference with the peaceful possession and occupation or proper use of any other Unit or the Common Elements.

10.1.4. No Owner or occupant of any Unit shall carry on, or permit to be carried on, any practice which unreasonably interferes with the quiet enjoyment and proper use of another Unit or the Common Elements by the Owner or occupant of any other Unit, or which creates or results in a hazard or nuisance on the Property.

10.1.5. The Association shall have the power to regulate the keeping of pets and animals in such manner as may be prescribed from time to time in any Rules and Regulations established by the Executive Board.

10.1.6. No Unit Owner shall remove any of the acoustical, sound-deadening, or fire-resistant material from the walls, floors or ceilings of such owner's Unit without replacing the same with acoustical, sound-deadening, or fire resistant materials of equal or greater sound-deadening or fire-resistant ratings or qualities. No Unit Owner shall remove any of the acoustical, sound-deadening, or fire-resistant materials from the Common Elements surrounding such owner's Unit without the prior written consent of the Executive Board.

10.1.7. Trash, garbage and other waste shall be kept only in sanitary containers and shall be disposed of in such manner as may be prescribed from time to time in any Rules and Regulations established by the Executive Board.

10.1.8. No Unit Owner shall overload the electrical wiring in the Building or operate any machinery, appliances, accessories or equipment in such a manner as to cause, in the reasonable judgment of the Executive Board, any unreasonable disturbance or make any alterations, repairs or modifications to or connections with the electrical or plumbing systems without the prior written consent of the Executive Board.

10.1.9. Each Unit Owner shall maintain sufficient heat inside his Unit to prevent the pipes running through the Unit from freezing or cracking from the effects of cold weather. The Unit Owner shall be liable to the Association for the costs and expenses of repairing all damage inflicted on another Unit or the Common Elements due to freezing, breaking, or cracking of pipes caused by the Unit Owner's failure to comply with the requirements of this subparagraph.

10.2. Leasing Restrictions. No Unit Owner shall lease a Unit other than on written form of lease requiring the lessee to comply with the Condominium Documents. The Owner of a Unit shall, promptly following the execution of any lease of that Unit, notify the Association in writing of the name of the tenant and the term of the lease and any options in the lease to renew extend or purchase.

10.3. Voluntary Resale of Units. The following provisions apply to the sales of Units:

10.3.1. No Unit Owner shall be liable for the payment of any part of the Common Expenses assessed against such owner's Unit subsequent to the date of recordation of a conveyance in fee of such Unit by the Owner. In a voluntary transfer of a Unit, the grantee of the Unit shall be jointly and severally liable with the grantor for all unpaid assessments and special assessments for Common Expenses made by the Executive Board against the latter up to the time of the recordation of grantor's transfer, without prejudice to the grantee's right to recover from the grantor the amounts paid by the grantee therefor. However, any person who shall have entered into an agreement to purchase a Unit from a Unit Owner shall be entitled to a certificate from the Executive Board as provided by Section 1604-108(b) of the Act prepared at the expense of the person so requesting the same, and the grantee shall not be liable for, nor shall the Unit conveyed be subject to a lien for, any assessments or unpaid special assessments made by the Executive Board against the grantor for Common Expenses in excess of those disclosed on such certificate. A voluntary transfer for the purpose of this subparagraph 10.3.1. shall be considered any sale, lease, gift, testate or intestate distribution, or the transfer of ownership of a corporation owning a Unit.

10.3.1. In contemplating and executing any voluntary resale or transfer of the Workforce Unit (Unit 1), the owner of the Workforce Unit and the Association will cooperate with the City of Portland to ensure compliance with the eligibility restrictions imposed on the Workforce Unit, as well as to comply with the City's implementing regulation for income verification and any additional terms contained in the Affordable Housing Agreement between the City and the Declarant dated _____, 2020.

ARTICLE XI
MORTGAGES OF UNITS; RIGHTS OF MORTGAGEES

11.1. Right to Mortgage. Each Unit Owner shall have the right to mortgage or encumber such owner's Unit together with its appurtenant Allocated Interests. Except as otherwise permitted by Section 1603-112 of the Act and subject to this Declaration, no Unit Owner shall have the right or authority to mortgage or otherwise encumber in any manner whatsoever the Common Elements or any part thereof.

11.2. Identification of Mortgagee. A Unit Owner who mortgages his Unit shall notify the Executive Board in writing of the name and address of such owner's Mortgagee(s). Failure to provide such notice, however, shall not affect in any way any Mortgage or the validity or enforceability thereof.

11.3. Mortgage Foreclosure. Any Mortgagee holding a recorded first Mortgage on a Unit that obtains title to the Unit pursuant to the remedies provided in the Mortgage, or through a completed foreclosure of the Mortgage, or through deed (or assignment) in lieu of foreclosure, shall take the Unit with the Allocated Interests appurtenant thereto free of any claims or liens for unpaid assessments for Common Expenses, interest and costs levied against such Unit which accrue prior to the acquisition of title to such Unit by the Mortgagee, other than the proportionate share of the Common Expenses which become due and payable from and after the date on which the Mortgagee shall acquire title to the Unit through a completed foreclosure or deed (or assignment) in lieu of foreclosure.

11.4. Notices to Eligible Mortgage Holder. The Association shall send reasonable prior written notice by prepaid United States mail to each Eligible Mortgage Holder of the following proposed actions or events either within a reasonable period prior to the taking of any of such proposed actions or at the time that notice thereof is given to the Unit Owner or Owners:

11.4.1. The termination of the Condominium pursuant to Section 1602-118 of the Act.

11.4.2. A change in the Allocated Interests of a Unit, or a change in the boundaries of a Unit or a subdivision of a Unit;

11.4.3. The merger or consolidation of the Condominium with another condominium;

11.4.4. The conveyance or subjection to a security interest of any portion of the Common Elements;

11.4.5. The proposed use of any proceeds of hazard insurance required to be maintained by the Association pursuant to the Declaration or the By-Laws for purposes other than the repair or restoration of the damaged property;

11.4.6. Any default in the performance or payment by a Unit Owner of any obligations under the Declaration or By-Laws, including, without limitation, default in the

payment of Common Expense Liability, which default continues for a period exceeding sixty (60) days;

11.4.7. Any condemnation or casualty loss that affects either a material portion of the Condominium or the Unit securing the Mortgage;

11.4.8. A lapse, cancellation or material modification of any insurance policy or fidelity bond maintained by the Association, and

11.4.9. Any proposed action that requires the consent of a specified percentage of the Eligible Mortgage Holders as specified in Paragraph 11.5.

In the event of any proposed actions described in subparagraphs 1, 2, 3, 4, or 5 above, an Eligible Mortgage Holder shall have the right, but not the obligation, in place of the Unit Owner, to cast the Votes allocated to that Unit or give or withhold any consent required of the Unit Owner for such action by delivering written notice to the Association with a copy to the Unit Owner prior to or at the time of the taking of the proposed action, which notice shall be sent by prepaid United States mail, return receipt requested, or by delivery in hand. Failure of the Eligible Mortgage Holder to so exercise such rights shall constitute a waiver thereof and shall not preclude the Unit Owner from exercising such right. In the event of any default described in subparagraph 6 above, the Eligible Mortgage Holder shall have the right, but not the obligation, to cure such default.

In addition, an Eligible Mortgage Holder or its representative shall have the right to attend Association and Executive Board meetings for the purposes of discussing the matters described in subparagraphs 1 through 5 above.

11.5. Mortgagee Approva1 Rights. Except as may be otherwise set forth in this Declaration or in the By-Laws, where approval by a specified percentage of Eligible Mortgage Holders is required, such approval shall be based upon one (1) vote for each Unit on which a Mortgage is held.

11.5.1. The prior written approval of sixty (60%) percent of the Eligible Mortgage Holders shall be required to: (a) terminate or abandon the Condominium for reasons other than substantial destruction or condemnation of the Condominium and (b) abandon, partition, subdivide, encumber, sell or transfer any of the Common Elements (except for granting easements for utilities or other public purposes consistent with the intended use of the Common Elements) by act or omission.

11.5.2. The prior written approval of at least sixty (60%) percent of the Eligible Mortgage Holders shall be required for the termination or abandonment of the

Condominium as a result of condemnation or substantial loss to the Units, Common Elements, or both.

11.5.3. The prior written approval of at least sixty (60%) percent of the Eligible Mortgage Holders shall be required to use property insurance and eminent domain proceeds for losses to any Condominium Property (whether to Units or to Common Elements) for other than the repair, replacement restoration of the Property substantially in accordance with this Declaration, the By-Laws, the Plat and Plans, and the original elevation thereof and the original building plans and specifications.

11.5.4. The prior written approval of at least sixty percent (60%) of the Eligible Mortgage Holders shall be required to add or amend any material provisions of the Declaration or the By-Laws which establish, provide for, govern or regulate any of the following:

(a) Voting rights;

(b) Assessments, assessment liens or the priority of assessment liens;

(c) Reserves for maintenance, repair and replacement of Common Elements;

(d) Responsibility for maintenance and repairs;

(e) Reallocation of interests in the Common Elements or Limited Common Elements, or rights to their use;

(f) Redefinition of any Unit boundaries;

(g) Convertibility of Units into Common Elements or common Elements into Units;

(h) Expansion or contraction of the Condominium, or the addition, annexation or withdrawal of property to or from the Condominium;

(i) Insurance or fidelity bonds;

(j) Leasing of Units;

(k) Imposition of any restrictions on a Unit Owner's right to sell or transfer his Unit;

(l) A decision by the Association to establish self-management when professional management had been required previously by the Declaration or the By-laws;

(m) Restoration or repair of the Condominium (after a hazard damage or partial condemnation) in a manner other than as specified in the Declaration or the By-laws;

(n) Any action to terminate the legal status of the Condominium after substantial destruction or condemnation occurs; or

(o) Any provisions that expressly benefit Eligible Mortgage Holders.

An addition or amendment to the Declaration or the by-laws shall not be considered material if it is for the purpose of correcting technical errors.

An Eligible Mortgage Holder who receives a written request to approve additions or amendments to the Declaration or the By-Laws who does not deliver to the requesting party a negative response within thirty (30) days after the giving of notice shall be deemed to have approved such request in writing provided written notice of this provision is included in any such request.

11.6. Rights of First Refusal. Notwithstanding anything to the contrary elsewhere contained in this Declaration, the By-Laws or any Rules and Regulations of the Association, in the event that this Declaration or the By-Laws contain, or the Unit owners in the future amend the Condominium Documents to adopt any right of first refusal in the case of the sale of any Unit, such right of first refusal shall not impair the right of any Mortgagee to: (a) foreclose or take title to the Unit pursuant to the remedies provided in the Mortgage; (b) accept a deed (or assignment) in lieu of foreclosure in the event of a default by a mortgagor; or (c) sell or lease a Unit acquired by the procedures hereinabove set forth.

11.7. Mortgagee Priority. No provision of the Condominium Documents shall be deemed or construed to give a Unit owner, or any other person, priority over the rights of any Eligible Mortgage Holder pursuant to its Mortgage in the case of a distribution to Unit Owners of insurance proceeds or condemnation awards for losses to or a taking of Units, Common Elements, or both.

11.8. Books and Records. The Association shall maintain current copies of the Condominium Documents as well as its books, records and financial statements available during normal business hours for inspection and copying by Eligible Mortgage Holders upon reasonable prior written request and payment by such Eligible Mortgage Holder of

any costs associated therewith. The Association, upon reasonable prior written request of any Eligible Mortgage Holder, shall furnish such Eligible Mortgage Holder with a financial statement of the Association for the preceding fiscal year, provided that any costs associated with the preparation and furnishing of such statement shall be paid by such Eligible Mortgage Holder.

ARTICLE XII
AMENDMENTS

Except in cases of amendments to this Declaration that may be unilaterally executed and recorded by the Association as described in Sections 1601-107, Eminent Domain, 1602-108(c), Allocation of Limited Common Elements, Section 1602-112(a), Relocation of Boundaries Between Adjoining Units, Section 1602-113, Subdivision of Units, and 1602-117(a), Amendment of Declaration, of the Act and cases of amendments to this Declaration by certain Unit Owners, as described in Sections 1602-108(b), Reallocation of Limited Common Elements, Section 1602-112(a), Relocation of Boundaries Between Adjoining Units, Section 1602-113, Subdivision of Units, or 1602-118(b), Termination of Condominium, and subject to the other provisions of this Declaration including, but not limited to, Paragraph 9.3, and of the Act, this Declaration and the Plat and Plans may be amended as follows:

12.1. Before Any Conveyance. Prior to the conveyance of any Unit by the Declarant to a Unit Owner other than as security for an obligation, the Declarant shall have the right to amend and reamend this Declaration in any manner that the Declarant may deem appropriate.

12.2. After First Conveyance. After the first conveyance of a Unit by a Declarant as contemplated in the preceding Paragraph, the terms of the following subparagraphs shall apply to the amendment of this Declaration:

12.2.1. Notice. Notice of the subject matter of a proposed amendment shall be included in the notice of any meeting of the Executive Board or Association in which a proposed amendment is considered, and shall be served upon all Unit Owners and upon all Eligible Mortgage Holders.

12.2.2. Resolution. An amendment may be proposed by either the Executive Board or by Unit Owners holding in the aggregate no less than thirty percent (30%) of the Votes in the Association. No resolution of the Executive Board adopting a proposed amendment or the proposed amendment itself shall be effective unless it has been adopted at a meeting of the Association duly called and held in accordance with the By-Laws by

the affirmative vote of at least sixty-six percent (66%) in voting interest of all of the Unit Owners and then executed and recorded as provided in subparagraph 12.2.5.

12.2.3. Agreement. In the alternative, an amendment may be made by an agreement signed by the record Owners of Units to which are allocated one hundred percent (100%) of the Votes in the Association in the manner required for the execution of a deed and acknowledged by at least one of them, and such amendment shall be effective when certified and recorded as provided in subparagraph 12.2.5.

12.2.4. Proviso. Provided, however, that except as otherwise permitted by the Act and provided in this Declaration, no amendment may increase the number of Units or change the boundaries of any Unit, the Allocated Interests allocated to a Unit, or the uses to which any Unit is restricted without the unanimous consent of the Unit Owners and the consent of at least sixty percent (60%) of the Eligible Mortgage Holders.

12.2.5. Execution and Recording. A copy of each amendment shall be attached to or included with a certificate, certifying that the amendment was duly adopted, which certificate shall be executed and acknowledged by such officer or officers of the Association and/or member or members of the Executive Board designated for that purpose by the By-Laws. The amendment shall be effective when such certificate and copy of the amendment are recorded.

12.2.6. Notice and Challenge. No action to challenge the validity of an amendment to this Declaration adopted by the Association pursuant to this Article may be brought more than one year after such amendment is recorded. After each amendment to this Declaration adopted pursuant to this Article has been recorded, notice thereof shall be sent to all Unit Owners and to all Eligible Mortgage Holders at the address last furnished to the Executive Board, but failure to send such notices shall not affect the validity of such amendment.

ARTICLE XIII
TERMINATION OF CONDOMINIUM

13.1. Termination. The Condominium shall not be terminated except as provided in, and subject to, Section 1602-118 of the Act, by agreement of Unit Owners of Units to which one hundred percent (100%) of the Votes in the Association are allocated and of the percentage of Eligible Mortgage Holders provided in Paragraph 11.5. Termination provided for in Section 1602-118 of the Act shall not bar the subsequent re-creation of the Condominium or another condominium with respect to the Property.

ARTICLE XIV
INSURANCE

14.1. Policies. Commencing no later than the time of the first conveyance of a Unit other than as security for an obligation to a person other than the Declarant, the Executive Board on behalf of the Association shall obtain, or cause to be obtained, and shall maintain as a Common Expense, the policies of insurance described in Paragraphs 14.2., 14.4. and 14.5. to the extent such policies shall be reasonably available from reputable insurance companies. To the extent that said insurance described in Paragraphs 14.2., 14.4. and 14.5. is not reasonably available as described in the preceding sentence, the Executive Board on behalf of the Association shall give written notice of that fact to the Unit Owners and the Eligible Mortgage Holders of Mortgages of their Units by hand delivery securing a receipt therefor, or by prepaid United States mail, return receipt requested. To the extent that any of the insurance described in Paragraphs 14.2., 14.4. and 14.5. shall become in the future no longer available, the Association shall obtain in substitution therefor such comparable insurance as shall then be available. The Executive Board is hereby irrevocably appointed as attorney-in-fact for each Unit Owner and for each Mortgagee and Eligible Mortgage Holder and for each owner of any other interest in the Property for the purpose of purchasing and maintaining the insurance described in Paragraphs 14.2., 14.4. and 14.5., the collection and appropriate disposition of the proceeds thereof as trustee for all Unit Owners and their Mortgagees as their respective interests may appear to hold any insurance proceeds in trust for disbursement as provided in Paragraph 14.3. and subparagraphs 14.2.4., the By-Laws and Section 1603-113(e) of the Act, the negotiation of losses and execution of releases of liability, and the execution of all documents, and the performance of all other acts necessary to accomplish such purposes.

14.2. Property Insurance. The Executive Board shall obtain and maintain as a Common Expense a blanket-type or master standard form of "all-risk" fire insurance policy with extended coverage, vandalism, malicious mischief, windstorm, sprinkler leakage (if applicable), debris removal, cost of demolition endorsements in a reasonable amount and a water damage endorsement issued by an insurance company authorized to do business in the State of Maine insuring as a single entity the entire Property (exclusive of land, foundations, excavations, and other similar items customarily excluded from property insurance policies), including the Units (including the unfinished floor slab or basement floor, as the case may be, roof and roof rafters, wall studs, joists, columns, studs or beams, and all exterior windows and doors; but not including the sheetrock forming the perimeter walls of the Units, any floorcovering (such as tile; wood flooring and carpeting) and any wallcovering (such as paint, wallpaper, paneling or tiles), furniture, fixtures (such as cabinets, built-in closets or bookshelves, vanities, lamps and chandeliers) furnishings, appliances or other personal property owned by Unit Owners), Limited Common Elements and other Common Elements together with all service equipment and machinery contained in the Property and the fixtures, supplies and common personal property belonging to the Association and covering the interests of and naming as named insured,

the Association, the Executive Board and all Unit Owners and their Mortgagees and their Mortgagees' successors and assigns, as their insurable interests may appear. Such blanket or master policy shall be in an amount equal to one hundred percent (100%) of the then current full replacement cost of the Property (exclusive of the land, excavations, foundations and other similar items customarily excluded from such coverage), without deduction for depreciation (such amount to be predetermined annually by the Executive Board with the assistance of the insurance company affording such coverage) and shall contain a standard Maine Mortgage Clause in favor of each Mortgagee of a Unit whether or not named therein with provisions that the proceeds of loss, if any, shall first be payable to each Mortgagee, its successors and assigns, as its insurable interest may appear, subject, however, to the loss payment and adjustment provisions in favor of the Association contained in Paragraph 14.3., subparagraph 14.2.3, the By-Laws and Section 1603-113(e) of the Act. Since subparagraph 8.1.2., clause (d), requires that additional costs of insurance shall be assessed against each Unit as a Limited Common Expense in an amount equivalent to the additional premiums charged due to the particular contents, characteristics or features of that Unit which are insured pursuant to this Paragraph, the Executive Board shall obtain annually from the insurance company affording such coverage its opinion as to the monetary amounts by which the costs of insuring that Unit pursuant to this Paragraph are higher than the costs of insuring a Unit of comparable "size" which does not contain or have those particular contents, characteristics or features and the identification of those contents; characteristics or features and the identification of those contents, characteristics and features. The Executive Board shall use this opinion as the basis for its computation of Limited Common Expense assessments against the Unit for additional costs of insurance. This blanket or master hazard insurance policy may, at the option of the Executive Board, contain such "deductible" as the Executive Board shall reasonably deem appropriate, but not exceeding the lesser of Ten Thousand Dollars ($10,000.00) or one percent (1%) of the face amount of the policy, and shall also contain the following provisions:

14.2.1. The following endorsements (or their equivalent): (a) "no control" (to the effect that coverage shall not be prejudiced by any act or neglect of any occupant or Unit Owner or their agents when such act or neglect is not within the control of the insured, or the Unit Owners collectively; nor by any failure of the insured, or the Unit Owners collectively, to comply with any warranty or condition with regard to any portion of the Condominium over which the insured, or the Unit Owners collectively, have no control); (b) "Construction Code Endorsement", "increased cost of construction", (c) "agreed amount" or "limitation of co-insurance clause"; and

14.2.2. That any "no other insurance" clause expressly exclude individual Unit Owners' policies from its operation so that the physical damage policy purchased by the Executive Board shall be deemed primary coverage and any individual Unit Owners' policies shall be deemed excess coverage, and in no event shall the insurance coverage

obtained and maintained by the Executive Board hereunder provide for or be brought into contribution with insurance purchased by individual Unit Owners or their Mortgagees.

14.3. Losses; Adjustment and Payment. Any loss covered by the insurance policy described in Paragraph 14.2. shall be adjusted with the Association by its Executive Board, and the insurance proceeds for said loss shall be payable to the Association, and not to any Mortgagee. The Association shall hold any insurance proceeds in trust for Unit Owners, Mortgagees and other lien holders as their interests may appear. Subject to the Provisions of this Paragraph, the By-Laws and Section 1603 113(e) of the Act, the proceeds shall be disbursed first for the repair or restoration of the damage to the Property, and Unit Owners, Mortgagees and other lien holders are not entitled to receive payment of any portion of the proceeds unless there is a surplus of proceeds after the damaged Common Elements and Units have been repaired or restored, the decision has been made not to repair or restore the damage as provided in Section 1603-113(h) of the Act, or the Condominium is terminated.

14.4. Liability Insurance. The Executive Board shall obtain and maintain as a Common Expense comprehensive general public liability insurance (including medical payments insurance) and property damage insurance in such limits as the Board may from time to time determine, insuring each Executive Board member, the managing agent, and each Unit Owner against any liability to the public or to the Unit Owners (and their invitees, agents and employees) covering all occurrences commonly insured against for death, bodily injury or property damage arising out of, or incident to, the maintenance, ownership or use of the Common Elements and/or relating to any legal liability resulting from suits or actions related to employment contracts to which the Association is a party. Such insurance shall be issued on a comprehensive liability basis and shall contain: (a) a cross liability endorsement under which the rights of a named insured under the policy shall not be prejudiced with respect to his action against another named insured; (b) a "Severability of interest" endorsement which shall preclude the insurer from denying liability to a Unit Owner because of negligent acts of the Association or of another Unit Owner. The Executive Board shall review such limits once each year, but in no event shall such insurance be less than one million dollars ($1,000,000.00) covering all claims for bodily injury or property damage arising out of one occurrence.

14.5. Other Insurance. The Executive Board shall obtain and maintain as a Common Expense:

14.5.1. Workmen's compensation insurance if and to the extent necessary to meet the requirements of law;

14.5.2. Adequate fidelity coverage to protect against dishonest acts on the part of officers, members of the Executive Board, trustees and employees of the

Association, and all others who handle, or are responsible for handling, funds of the Association, including the managing agent. Such fidelity bonds shall: (a) name the Association as an obligee; (b) be written in an amount not less than the greater of (i) one-quarter of the total annual assessments for Common Expenses plus the Association's reserve funds for the fiscal year or (ii) the maximum funds in the custody of such persons handling the funds of the Association; and (c) contain waivers of any defense based upon the exclusion of persons who serve without compensation from the definition of "employee" or similar expression; and

14.5.3. Such other insurance as the Executive Board may determine or as may be requested from time to time by a Unit Owners holding in the aggregate no less than sixty-six percent (66%) voting interest in the Association including, to the extent available, directors' and officers' liability insurance to satisfy indemnification obligations of the Association provided in Paragraph 17.2.

14.6. Memoranda; Cancellation; Additional Required Provisions. All insurers that shall issue an insurance policy or policies under this Article shall issue certificates or memoranda of insurance to the Association, and, upon request, to any Unit owner or Mortgagee. All such insurers issuing the policy may not cancel (including cancellation for non-payment of premium), substantially modify or refuse to renew such policy or policies until twenty (20) days after notice of the proposed cancellation or non-renewal has been mailed to the Association, the managing agent, each Unit Owner and each Mortgagee to whom a certificate or memorandum of insurance has been issued at their respective last known addresses. All policies under Paragraph 14.2 and 14.4 shall in addition contain the following Provisions or features:

14.6.1. The insurer waives any right to claim by way of subrogation against the Declarant, the Association, the Executive Board, the managing agent or the Unit Owners, and their respective agents, employees, guests and, in the case of the Unit Owners, the members of their households;

14.6.2. Each Unit Owner is an insured person under the policy with respect to liability arising out of his ownership of an undivided interest in the Common Elements or membership in the Association;

14.6.3. The insurer waives its right to subrogation under the policy against any Unit Owner of the Condominium;

14.6.4. No act or omission by any Unit owner, unless acting within the scope of his authority on behalf of the Association, will void the policy or be a condition to recovery under the policy; and

14.6.5. If, at the time of a loss under the policy, there is other insurance in the name of a Unit Owner covering the same risk covered by the policy, the Association's policy Provides primary insurance.

14.7. Separate Insurance. Each Unit Owner shall have the right, at the owner's own expense, to obtain insurance for the owner's Unit and for the owner's own benefit and to obtain insurance coverage upon the owner's personal property and for the owner's personal liability as well as upon any improvements made by the owner's to the owner's Unit under coverage normally called "improvements and betterment's coverage" and for such other risks as are normally insured against, provided, however, that no Unit Owner shall be entitled to exercise its right to acquire or maintain such insurance coverage so as to decrease the amount which the Executive Board, on behalf of all Unit Owners, may realize under any insurance policy maintained by the Board or to cause any insurance coverage maintained by the Board to be brought into contribution with insurance coverage obtained by a Unit Owner. All such policies shall contain waivers of subrogation. Any Unit Owner which obtains an individual insurance policy covering any portion of the Condominium, other than improvements and betterment's made by such Owner at its expense and personal property belonging to such Owner, shall file a copy of such individual policy or policies with the Executive Board within thirty (30) days after the purchase of such insurance. Such Unit Owner shall also promptly notify the Executive Board in writing in the event such policy is canceled. Each Unit owner shall notify the Executive Board in writing of all structural improvements made by the Unit Owner to the owner's Unit; provided, however, that this sentence shall not be construed as an authorization to Unit Owners to make structural improvements to Units otherwise than in accordance with this Declaration, the By-Laws and Rules and Regulations promulgated by the Executive Board. Any premium increase caused by such improvements may be assessed to the Owner of the improved Unit.

ARTICLE XV
APPLICABILITY: COMPLIANCE AND DEFAULT; ARBITRATION; EMINENT DOMAIN; SELF HELP

15.1. Applicability. This Declaration shall be applicable to the Condominium. All present and future Owners and tenants, their guests, licensees, servants, agents, employees and any other person or persons that shall be permitted to use the Common Elements shall be subject to this Declaration, the By-Laws and to such Rules and Regulations as may be issued by the Executive Board from time to time to govern the conduct of its members and the use and occupancy of the Property. Ownership, rental or occupancy of any of the Units in the Condominium shall be conclusively deemed to mean that said Owner, tenant or occupant has accepted and ratified this Declaration, the By-Laws and the rules and regulations of the Association and will comply with them. The acceptance of a deed or conveyance (other than as security) or the entering into of a lease

or the entering into of occupancy of any Unit (other than possession by a Mortgagee prior to either of the completion of foreclosure or the acceptance of a deed to the Unit subject to the Mortgage held by such Mortgagee) shall signify that the provisions of this Declaration and the by-laws, the Rules and Regulations of the Association and the decisions of the Executive Board are accepted and ratified by such Owner, tenant or occupant, and all of such provisions shall be deemed and taken to be covenants running with the land and shall bind any person having at any time any interest or estate in such Unit, as though such provisions were recited and stipulated at length in each and every deed or conveyance or lease thereof.

15.2. Compliance and Governance:

15.2.1. Each Unit Owner shall be governed by and shall comply strictly with the terms, covenants, conditions and restrictions of this Declaration, the By-Laws and the Rules and Regulations adopted pursuant thereto, and the same as they may be amended from time to time.

15.2.2. The Executive Board shall have the power to adopt, amend and enforce compliance with, such reasonable Rules and Regulations relative to the operation, use and occupancy of the Units and the Common Elements consistent with the provisions of this Declaration and the Act, including, but not limited to the appointment of such committees and the enactment and enforcement of such enforcement procedures and penalties for violations as the Executive Board shall deem appropriate. Any such Rules and Regulations shall be adopted or amended, from time to time, by means of appropriate resolutions duly approved by the Executive Board in accordance with this Declaration and the By-Laws. A copy of such Rules and Regulations and copies of any amendments thereto shall be delivered or mailed to each Owner or occupant of a Unit promptly after the adoption thereof and shall become binding upon all Owners, their successors in title and assigns, and occupants.

15.2.3. The failure of the Declarant, or the Executive Board, or any Unit Owner to enforce any covenant, restriction or other provision of the Act, the Condominium Documents or the Rules and Regulations adopted pursuant thereto, shall not constitute a waiver of the right to do so thereafter.

15.3. Arbitration:

15.3.1. All claims, disputes, controversies and other matters in question between the Association or any Unit Owners, on one hand, and a Unit Owner, on the other hand, arising out of or relating to the Condominium, the Condominium Documents or the deed to any Unit, shall be decided and settled by private arbitration in Portland, Maine, in accordance with the Construction Industry Arbitration Rules of the American

Arbitration Association then obtaining unless the parties mutually agree otherwise. This agreement to arbitrate shall be specifically enforceable under the prevailing arbitration law.

15.3.2. A party requesting arbitration shall do so by written notice to the other party. The arbitration shall be conducted by a private three person arbitration panel chosen as follows: each party shall designate an arbitrator and the two designated arbitrators shall select a third arbitrator. The decision shall then be rendered by a majority vote of the panel. Any dispute brought to arbitration must be decided by the arbitrators within ninety (90) days from the date of notice from one party to the other party requesting the arbitration and the decision of the panel shall be final and binding and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

15.3.3. Each party shall be responsible for the cost of its own arbitrator and for one-half (1/2) of the cost of the jointly selected arbitrator, unless the arbitration panel rules to the contrary.

15.3.4. Notwithstanding anything in Sections 15.3.1., 15.3.2. and 15.3.3. to the contrary, in the event that the Unit owners and/or Association either (i) are unable to agree upon the expenses, budget or the performance of the maintenance, repair and replacement of the common elements in accordance with the standards specified herein, which deadlock continues for 30 days after a Unit Owner and/or Director of the Association sends written notice to the other parties in interest indicating the decisions and dispute, or (ii) are so divided with respect to maintenance and upkeep of the Property that the Property is suffering or will suffer irreparable injury, in either such event, the Association shall elect in accordance with the provisions of the Bylaws an independent professional property manager to handle such duties in dispute. If the Association is unable to agree on the selection of such a property manager, the issue on selection of a professional manager shall be referred to, decided and settled by private arbitration as set forth in Paragraphs 15.3.1, 15.3.2. and 15.3.3. above.

15.4. Eminent Domain. If all or part of the Common Elements shall be taken or condemned by any authority having the power of eminent domain, the Association shall notify the Owners and Eligible Mortgage Holders of the Units affected and shall represent the Unit Owners in any condemnation proceedings or in negotiations, settlements and agreements with the condemning authority, and the award shall be paid to the Association for the use and benefit of the Unit Owners and their Mortgagees as their interests may appear. The Association shall divide any portion of the award not used for any restoration or repair among the Unit Owners and their Mortgagees, as their interests may appear, in proportion to their Allocated Interests in the Common Elements prior to such taking or condemnation, but the portion of the award attributable to the acquisition of any Limited

Common Element shall be equally divided among the Owners of the Units to which such Limited Common Element was allocated at the time of such taking or condemnation and their Mortgagees, as their interests may appear. Each Unit Owner appoints the Association as attorney-in-fact for the purposes described in this paragraph. Notwithstanding anything to the contrary in this Paragraph 15.4., lien holders on any Unit, Common Element or Limited Common Element, shall have a lien on any such awards in order of priority of their respective liens.

15.5. Self Help. If the Association shall default in its obligations to maintain, repair, and replace the portions of the Limited Common Elements or Common Elements appurtenant to or serving any Unit, or the portions of any Unit as to which pursuant to this Declaration it is the responsibility of the Association to maintain, repair and replace, and such failure or default is not cured within thirty (30) days after notice from the Owner of that Unit to the Association specifying the default, or the Association shall not within said period commence to cure the default and thereafter prosecute the curing of such default to completion with due diligence, the owner of said Unit may, at the owner's option, without waiving any claims for breach, at any time thereafter cure such default for the account of the Association and shall be entitled to set off against subsequent assessments for Common Expenses the amounts paid and expenses or contractual liabilities incurred in an amount that shall not exceed two (2) months' installments of assessments against that Unit for Common Expenses; provided, however, that such Unit Owner may cure any such defaults as aforesaid prior to the expiration of said waiting period after notice to the Association if it is necessary to protect his Unit or its appurtenant Limited Common Elements or other interests, or to prevent injury or damage to persons or property. The Unit Owner that cures such default shall have the benefit of the rights and easements reserved to the Association pursuant to Paragraph 7.3. to enable it to cure the defaults. The rights provided Unit Owners in this Paragraph 11.5. shall extend to Eligible Mortgage Holders.

ARTICLE XVI
LIMITATION OF LIABILITY

16.1. Limited Liability of the Executive Board. The Executive Board, and its members in their capacity as members, officers and employees:

16.1.1. Shall not be liable for the failure of any service to be obtained by the Executive Board and paid for by the Association, or for injury or damage to persons or property caused by the elements or by another Unit Owner or person on the Property, or resulting from electricity, gas, water, rain, dust or sand which may leak or flow from the outside or from any part of the Buildings, or from any of its pipes, drains, conduits, appliances, or equipment, or from any other place unless in each such instance such injury

or damage has been caused by the willful misconduct or gross negligence of the Association or the Executive Board;

16.1.2. Shall not be liable to the Unit Owners as a result of the performance of the Executive Board members' duties for any mistake of judgment, negligence or otherwise, except for the Executive Board members' own willful misconduct or gross negligence;

16.1.3. Shall have no personal liability in contract to a Unit Owner or any other person or entity under any agreement, check, contract, deed, lease, mortgage, instrument or transaction entered into by them on behalf of the Executive Board or the Association in the performance of the Executive Board members' duties;

16.1.4. Shall not be liable to a Unit Owner, or such Unit Owner's tenants, employees, agents, customers or guests, for loss or damage caused by theft of or damage to personal property left by such Unit Owner or his tenants, employees, agents, customers or guests in a Unit, or in or on the Common Elements or Limited Common Elements, except for the Executive Board members' own willful misconduct or gross negligence;

16.1.5. Shall have no personal liability in tort to a Unit Owner or any other person or entity, direct or imputed, by virtue of acts performed by or for them, except for the Executive Board members' own willful misconduct or gross negligence in the performance of their duties; and

16.1.6. Shall have no personal liability arising out of the use, misuse or condition of the Building, or which might in any other way be assessed against or imputed to the Executive Board members as a result of or by virtue of their performance of their duties, except for the Executive Board members' own willful misconduct or gross negligence.

16.2. Indemnification. Each member of the Executive Board, in his or her capacity as an Executive Board member, officer or both, shall be indemnified by the Association against all expenses and liabilities, including attorney's fees, reasonably incurred by or imposed upon him or her in connection with any proceeding in which he or she may become involved by reason of being or having been a member and/or officer of the Executive Board, or any settlement of any such proceeding, whether or not he or she is an Executive Board member, officer or both at the time such expenses are incurred, except in such cases wherein such Executive Board member and/or officer is adjudged guilty of willful misconduct or gross negligence in the performance of duties; provided that indemnification hereunder with respect to any criminal action or proceeding is permitted only if such Executive Board member and/or officer had no reasonable cause to believe his or her conduct was unlawful. The indemnification by the Unit Owners set

forth in this Paragraph shall be paid by the Association on behalf of the Unit Owners and shall constitute a Common Expense and shall be assessed and collectible as such. Such right of indemnification shall not be deemed exclusive of any other rights to which such Executive Board member and/or officer may be entitled as a matter of law or agreement or by vote of the Unit Owners or otherwise.

16.3. Defense of Claims. Complaints brought against the Association, the Executive Board or the officers, employees or agents thereof in their respective capacities as such, or the Condominium as a whole, shall be directed to the Executive Board of the Association, which shall promptly give written notice thereof to the Unit Owners and the Eligible Mortgage Holders, and such complaints shall be defended by the Association. The Unit Owners shall have no right to participate in such defense other than through the Association.

ARTICLE XVII
GENERAL PROVISIONS

17.1. Captions. The headings in this Declaration are for purposes of reference only and shall not limit or otherwise affect the meaning hereof. Any tables of contents or indices attached to this Declaration are for purposes of reference and convenience only and shall neither limit nor otherwise affect the meaning hereof nor be deemed as part of this Declaration. References in this Declaration to Articles, Paragraphs, subparagraphs and Schedules without references to the document in which they are contained are references to this Declaration. Schedules are attached to and incorporated by reference into this Declaration and are an integral part of this Declaration.

17.2. Gender Number. Etc. The use of the singular number in this Declaration shall be deemed to include the plural, the plural the singular, and the use of any one gender shall be deemed applicable to all gender.

17.3. Severability. The invalidity of any provisions of this Declaration shall not be deemed to impair or affect in any manner the validity, enforceability or effect of the remainder of this Declaration, and in such event, all of the other provisions of this Declaration shall continue in full force and effect as if such invalid Provision had never been included herein.

{Remainder of page intentionally left blank. Signatures follow.}

IN WITNESS WHEREOF, Declarant has caused this Declaration to be executed this ____ day of _____, 2020.

UPRIGHT PROPERTIES, LLC

By:_____
Joshua Wojcik, Manager

STATE OF MAINE
CUMBERLAND, SS. _____ ____, 2020

Personally appeared the above-named, Joshua Wojcik, who acknowledged the foregoing instrument to be his free act and deed.

Before me,

_____
Notary Public/Attorney at Law

_____
Print Name

DRAFT

SCHEDULE A
TO
DECLARATION OF CONDOMINIUM
OF
RIFUGIO, A CONDOMINIUM

PROPERTY DESCRIPTION

[METES AND BOUNDS DESCRIPTION TO BE INSERTED FROM DEEDS – 128R and 126]

DRAFT

SCHEDULE B
TO
DECLARATION OF CONDOMINIUM
FOR
RIFUGIO, A CONDOMINIUM

Unit Number	Share of Common Expense Interest and Common Expense Liability	Votes in Association
Unit 1 (Workforce, 1 bedroom)	7.00%	1
Unit 2 (1 bedroom)	11.00%	1
Unit 3 (2 bedroom)	16.00%	2
Unit 4 (1 bedroom)	13.00%	1
Unit 5 (2 bedroom)	18.00%	2
Unit 6 (3 bedroom)	25.00%	3
Unit 7* (to be constructed: 6 rental unit building)	10.00%	3
	1 (100%)	13

* Unit 7's allocation of Common Interest and Expense Liability shall be adjusted, per Section 2.5 above, upon completion of Unit 7, and this schedule, and this Declaration, shall be amended accordingly at the sole cost and expense of the Owner of Unit 7. The expected allocation, post construction, is 26%.

EXHIBIT A
TO
DECLARATION OF CONDOMINIUM
FOR
RIFUGIO, A CONDOMINIUM

EASEMENTS

[EASEMENT INFORMATION TO BE INSERTED FROM DEEDS]

DRAFT

EXHIBIT B
TO
DECLARATION OF CONDOMINIUM
FOR
RIFUGIO, A CONDOMINIUM

STORMWATER MAINTENANCE AGREEMENT

[ATTACH STORMWATER MAINTENANCE AGREEMENT]

DRAFT

RIFUGIO, A CONDOMINIUM
RULES AND REGULATIONS

General

It should be understood by all unit owners that the exteriors of the buildings and all the land area and facilities outside the individual units are common property. Certain parts of the common property, including decks and parking areas, are "limited common areas" reserved for the exclusive use of the associated unit owners. The maintenance, alteration, improvement, general appearance and use of the common property, including the limited common areas, are under the control of the Association through its Executive Board. Attention is called to the Declaration of Rifugio, a Condominium (the "Declaration") and to the By-Laws of the Rifguio Condominium Owners Association (the "By-Laws") for specific definition of the common property and for the general responsibilities of unit owners with respect to the common property and to their units.

As provided in the Declaration and the By-Laws, in order to assure the peaceful and orderly use and enjoyment of the buildings and common area and facilities, the following Rules and Regulations have been adopted.

Use and Occupancy

A) COMMON AREAS

Use, maintenance and operation of common areas shall not be obstructed, damaged or subject to interference by any unit owner.

B) UNIT USE AND MAINTENANCE

1. Each owner shall maintain his or her unit in good condition, good order and repair at their own expense as specified in the Declaration.

2. No noxious or offensive activity shall be carried on in any Unit or on the Common Elements, nor shall anything be done therein which may be or become an annoyance or nuisance to the other Unit owners and occupants. No Unit owner shall make or permit any disturbing noises in the building or do or permit anything which will interfere with the rights, comforts or convenience of other Unit owners. All Unit owners shall keep the volume of any radio, television or musical instrument in their Units sufficiently limited at all times so as not to disturb other Unit owners.

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3. Commercial Activity - No commercial activity of any nature shall be permitted in or about any unit. Notwithstanding the foregoing, a home office is allowed provided such home office use does not create a nuisance or an unreasonable interference with the peaceful possession and occupation or proper use of any other Unit or the Common Elements. To the extent that Unit 7 is operated as a residential rental property, such activity shall be allowed.

4. Parking; Snow Removal - The parking areas consist of six covered spaces which are Limited Common Elements to be used only by the assigned Unit Owners. The parking areas are for licensed and fully operable vehicles only. Motor homes, boats and trailers shall not be left in the parking area. Members, their family, lessees and guests shall cooperate, as directed by the Association or its chosen snow removal contractor/vendor, to move their cars from the parking spaces to facilitate timely snow removal. Vehicles in violation of these provisions are subject to towing at the owner's expense.

5. Decks; Snow Removal – Unit owners shall maintain their decks in good condition and shall avoid using their decks for unsightly storage. If owners remove snow from their decks they shall do so in a manner that avoids pushing the snow onto any other owner's decks, and any snow removed shall be shoveled delicately towards the sides of Rifugio's property, not towards Munjoy Heights or its retaining wall.

6. Garbage, Trash and Recycling - Trash, garbage and other waste shall be kept only in sanitary covered containers as provided by the Association or the City of Portland. All trash left for pick up on the appropriate day must be properly divided between the container provided for recyclable materials and all other trash must be placed in mandated City of Portland Trash Bags.

7. Personal Property - Articles of personal property belonging to any unit owner or his/her guest may be stored in the unit's designated storage area. All personal property placed in any portion of the building or any place appurtenant thereto, including, but without limitation, the storage areas, shall be at the sole risk of the unit owners, and the Association shall in no event be liable for the loss, destruction, theft or damage to such property.

8. Hazardous Materials - No gasoline or other flammable substances, explosives, or toxic material may be kept in any unit or any storage area designated to any unit.

9. No Smoking in Common Areas - Smoking of tobacco, cannabis, or any other consumable flammable material is not permitted within the common interior areas of the Condominium.

C) ALTERATIONS OR IMPROVEMENTS

1. General - Alterations or modifications in the limited common areas, which involve structural change, additions or painting shall not be undertaken by the unit owner, and such alterations or modifications shall be done by the Association, unless otherwise approved in writing. This includes walls, driveways, porches, etc. Permanently installed play equipment is not permitted without the written consent of all the owners.

2. Screen and Storm Windows - Only those types approved by the Board are allowed. Approval for each installation shall be requested in writing and must receive prior written Board approval.

3. Unit Integrity - No unit owner shall do or have done any work which may jeopardize the soundness or safety of the property, reduce the value thereof or impair any easement, rights, appurtenances or other hereditament consisting of common elements without the unanimous written consent of all other unit owners.

4. Propane Storage Tanks - No propane tanks shall be allowed at the property, except small propane tanks for exterior gas grills which must be used and stored in accordance to the applicable section of the City of Portland, Maine, Code of Ordinances.

D) LANDSCAPING

1. Approval and Responsibility - Any change or addition to plantings (shrubs and bushes) must receive written Board approval, and shall be subject to City of Portland approval, if applicable. Care and maintenance thereafter is the responsibility of the Association.

2. Special Restrictions - Landscaping must not impede mowing or the placement of snow removed from driveways and walks.

E) PETS

1. Pets are either dogs or cats. Any other species must receive written approval of the Board. Pets over forty-five (45) pounds in weight must receive written approval of the Board.

2. Total Number of Indoor/Outdoor Pets - Not more than two pets per unit.

3. Small Indoor Pets such as caged birds, hamsters, turtles, fish, etc., will not count as part of the pet quota.

4. Dogs are not allowed outside of their unit except on a leash or under control of a responsible person. Pet owners are responsible for any property damage, injury or disturbance their pets may cause or inflict. No animal shall be permitted to bark, howl, or make other loud noises for such time as disturbs neighbors' rest or peaceful enjoyment of their unit and adjacent common areas. No breeding of animals is allowed. Pet owners are responsible for the removal and proper disposal of animal wastes in all areas – both limited and common.

F) MISCELLANEOUS

1. Garage Sales - No unit owner shall hold a garage sale or any other type of outside sale without the prior written consent of the Board.

2. Clotheslines – Clotheslines are allowed in designated areas, as provided by the Board.

3. Exterior Lights - No additional spotlights or floodlights are permitted on the exterior of any unit.

4. Leasing - Members who lease must obtain a signed, written lease agreement from their tenant including provisions requiring the tenant to abide by all restrictions and obligations contained in the Condominium's Declaration, the Association's By-Laws, and all Rules & Regulations adopted by the Board. Such agreement must provide for termination of the lease on fourteen (14) days notice from the Board for failure to comply. A copy of the lease also must be filed with the Board within seven (7) days of its execution. A lease or other rental, including, without limitation, any rentals facilitated through any third-party/online services such as Airbnb, Homeaway.com or VRBO, shall be for a minimum of three (3) months.

5. Occupancy - A unit may be occupied by any number of individuals related by blood, marriage, adoption or domestic partnership. Unless the occupancy is governed by a written lease, a unit may be occupied by no more than two non-family members as roommates of the unit owner, provided that the unit owner is one of the other adult occupants. All occupants of the units shall be subject to the restrictions and obligations contained in the Condominium's Declaration, the Association's By-Laws, and all Rules & Regulations adopted by the Board, and shall execute a written agreement to such effect to be filed with the Board.

7. Periods of Absence – Members shall be responsible for ensuring that their units, and all equipment serving their unit, function properly during any extended period of absence, especially during winter months, to reduce the possibility of damage to any other units or common areas of the building. Members shall arrange for their

units to be checked regularly during their absence, and shall provide emergency contact information to the Board.

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Rifugio, a Condominium, Fines Schedule & Policy

Goal of Rules and Fines -The goal of rules and fines is to promote the quality of life in the Condominium. Rules and fines should help to encourage harmony among Unit Owners and Board Members.

Unit Owners' Rights Regarding Fines -With the exception of monthly assessments, unit owners will be given oral notice of a violation. The owner has ten (10) days in which to request a hearing. If the infraction persists, written notice will be sent. The unit owner will be provided an opportunity to be heard at a specific time and place if he/she requests it. The owner's defense and any mitigating circumstances will be given a fair hearing by the Board.

Unit Owners' Grace Period - A fine will not be imposed until after a minimum of ten (10) days from the time of a hearing if one is scheduled. If no hearing is requested, the fine shall be imposed only after ten (10) days from postmark date of written notice.

Legal Status of Fines - Under the Maine Condominium Act, any fines imposed by the Board of Directors represent a lien on the unit owner's property. By law, the Board shall establish the fine schedule and impose fines for any new rules.

Schedule of Fines

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RULES AND REGULATIONS

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Other Types of Penalties - When necessary and appropriate, the Board of Directors may choose another type of penalty (such as removal of an obstacle), as provided in the Declaration.

DRAFT

Bangor Savings Bank

You matter more.

September 4, 2020

City of Portland, Planning Division
389 Congress Street, 4th Floor
Portland, ME 04101

RE: 126 North St.

To Whom It May Concern:

Josh Wojcik, Upright Properties and its affiliates are well known to Bangor Savings Bank. We have worked with Josh for over 10 years and have been directly involved in the financing of numerous successful projects. All accounts have been handled as agreed.

Bangor Savings Bank is providing financing for 128 R North St. The Bank is interested in entertaining financing for merged lots on North St. Josh has the financial capacity to successfully complete the proposed project. We are looking forward to more substantive conversations as this project materializes.

Please feel free to contact me should you need any additional information. I can be reached at (207) 974-4154; rick.fournier@bangor.com.

Sincerely,

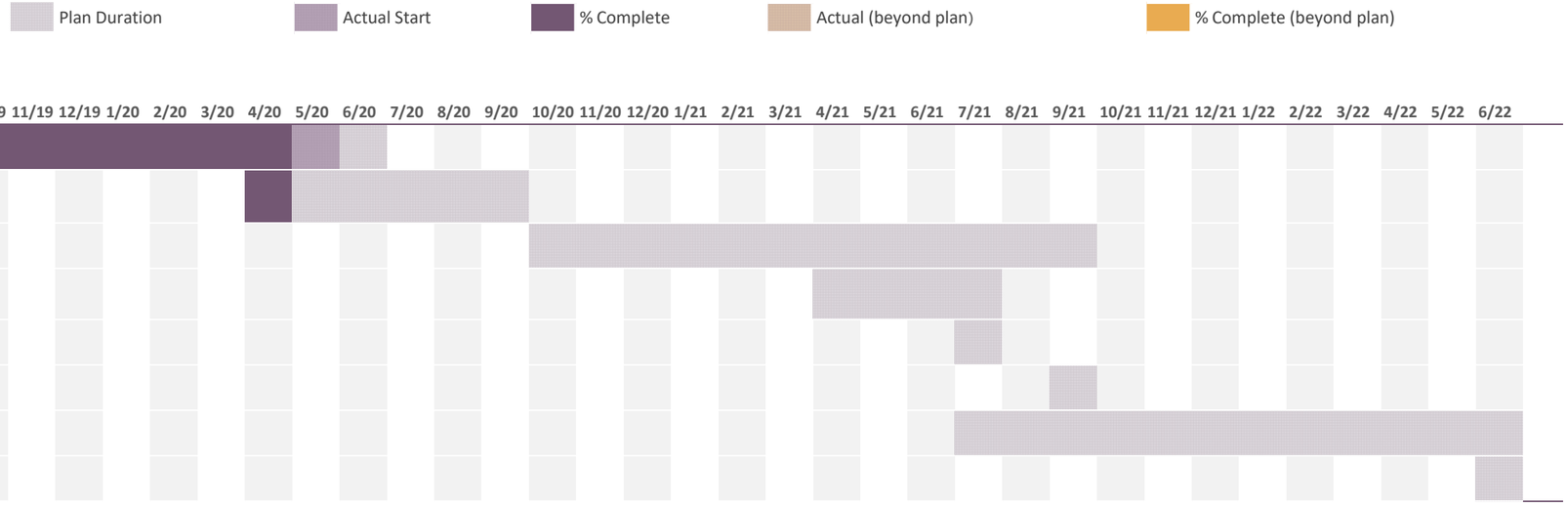
Richard L. Fournier, II
Vice President

128R & 126 North St

Att. GG

Schedule of Major Phases of Project Approval Processes (updated 5/5/20)

ACTIVITY	PLAN START	PLAN DURATION	ACTUAL START	ACTUAL DURATION	PERCENT COMPLETE
Site Plan Approval	1	10	1	9	90%
Building Permit Approval - 128R	8	6	8	1	15%
Construct 128R	14	12	0	0	0%
Building Permit Approval - 126	20	4	0	0	0%
Demolish 126	23	1	0	0	0%
CO 128R	25	1	0	0	0%
Construct 126	23	12	0	0	0%
CO 126	34	1	0	0	0%



NOTE: This schedule is for planning purposes only. This schedules carries with it the same inherent uncertainties involved in any project schedule relying on multiple parties and spanning 34 months. Factors including (but not limited to) the following may impact the actual timeline: Timings of City approvals and inspections; Availabilities of sub-contractors and materials; Labor shortages; Weather - specifically the severity of winter, which varies widely in Portland from year to year.

Section H

Technical Capacity

H. Technical Capacity

Acorn Engineering, Inc. has successfully permitted and engineered over 15 level II/III projects in Portland in the past 5 years, many of which have been constructed. Some examples include:

- Eldredge Lumber Expansion
- 127 York Street – Harborview Townhomes
- Munjoy Heights
- 89 Anderson St. – East Bayside Lofts
- 667 Congress St – The Hiawatha
- 121 Washington Ave Redevelopment
- 31 Fore Street Condominiums

Additionally, the rest of the design team is outlined below.

- Dextrous Creative (Architect – Tracie Reed) – Tracie Reed is a Maine Licensed, LEED AP and NCARB certified architect based in Portland. Her work encompasses a wide variety of commercial, residential and construction builds. In addition, she performs field work for High Performance Building Model Assessments in accordance with ASHRAE Level 2 Energy Audits guidelines, with the aim of reducing energy and water consumption. Tracie has received awards from the American Institute of Architects and has appeared in publications for the Journal of Green Building and Young Architect Forum Connection.

March 10, 2020

Caitlin Cameron, AICP, Associate AIA, LEED AP
Urban Designer
Planning & Urban Development Department
389 Congress Street
Portland, ME 04101

Re: 128R North Street Deck

Caitlin, Yesterday Civil Engineer Will Savage, our client Joshua Wojcik and I met with Shukria Wiar and Ann Machado. At the meeting we discussed Ann's zoning analysis of the site plan with a new color-coded site plan that makes the dimensioned setbacks easier to read.

To summarize our discussion:

- Based on our December 2018 pre-application meeting with city staff, our team was told that our project is required to meet all of the same conditions as front lots because the current overlay language does not distinguish between front and rear lots. It is for this reason that we revised our plans to comply with the 50% active street front provisions at that time. This is also why we have proposed offset side setbacks, which are largely prevalent in the neighborhood. It is this built-pattern flexibility that we seek to keep the back-deck side setback in this 4'-7'' area at 8'-6''. This still maintains the cumulative 20'-0'' setback required in zoning. It also allows us to align the decks with the edge of our building, maintaining more traditional massing than offsetting the deck from the edge of the building by 2'-0''. The area in question is bubbled on sheet A/A-1.1 to clarify.
- While our client's attorney notes that the maintenance easement does not address air rights we agreed to align upper decks with the 10'-0" maintenance easement with Munjoy Heights.
- In keeping with the built pattern at the street we pushed the circulation tower (stair/elevator) at the front of 128R North so it aligns with 126 North. The building was pushed 1.64' East which now makes the side setback in that area 10.2'
- Ann agreed that the 2'-0" eave at the second level is allowable under zoning to extend into the side setback. During the meeting she noted our team had been measuring the side setback along the diagonal to the face of our building incorrectly. She noted that we should have taken the measurement to the side of our building in a perpendicular line which means the face of our building as drawn is more than 10'-0" from the property line. The only area that is under 10'-0" (drawn at a 8.5' setback) is at the rear deck where the site narrows. This condition exists for approximately 4'-7".
- Note that elevations have been renamed in the attached set.
- We also shared the site section that was submitted as part of our revised packet.

Dextrous Creative
dextrouscreative.com
tracieereed@dextrouscreative.com
Portland, ME 04101

We look forward to discussing the deck side setback with you and sharing our design revisions with the Planning Board on April 14th.

Regards,

Tracie J. Reed, Maine Licensed Architect, LEED AP, NCARB
Principal

CC: William Savage, P.E, and Sam Lebel, Acorn Engineering
Josh Wojcik, Upright Properties
Ann Machado, Zoning Administrator
Shukria Wair, Planner

Dextrous Creative
dextrouscreative.com
traciereed@dextrouscreative.com
Portland, ME 04101

I. Conformity with Land Use Ordinance

The following outline is made in accordance with the City of Portland Code of Ordinances, Chapter 14 Land Use, Article V Section 14-526.

OVERVIEW

The proposed project includes a two-phase approach where Phase 1 would include the redevelopment of 128R into a four-story building with six condominiums and covered parking on the ground level. Phase 2 would include the redevelopment of 126 into a three-story building with six rental units. The demolition of 126 would occur prior to occupancy of 128R to allow for 16' wide of vehicular access to 128R as requested by the Fire Department.

(a) Transportation Standards

1. Impact on Surrounding Street Systems:

   The site is located at 126 and 128R North Street. North Street is classified as a local street and currently supports a low traffic volume. A negligible traffic increase along North Street is expected for this project due to the low turnover of the proposed land use.

2. Access and Circulation:

   a. Site Access and Circulation:

      (i) The development will provide safe access and internal circulation for both pedestrians and vehicles as seen on the Site Plan.

      (ii) The proposed driveways will be in the same location as the existing driveways. Turning movements and traffic flows will not be conflicted.

      (iii) The site does not feature drive up services as mentioned in this requirement.

   b. Loading and Servicing:

      (i) There are no anticipated loading and servicing needs.

   c. Sidewalks:

      (i) An existing bituminous sidewalk exists on the westerly side of North Street.

      (ii) The small portion of sidewalk along the driveway will be rebuilt per the City's latest detail and specifications on driveway aprons and sidewalks.

      (iii) An internal sidewalk from the public ROW to the proposed site of 128R North Street will be constructed as seen on the Site Plan. The sidewalk would be subject o an access easement, providing pedestrian access for both sites.

3. Public Transit Access:

   a. Not applicable.

b. Not applicable.

c. Not applicable.

4. Parking:

a. Location and Required Number of Vehicle Parking Spaces:

(i) The proposed project on 126 & 128R North Street will provide 2 & 6 parking spaces respectively, which meets the requirement.

(ii) A parking study is not required.

(iii) The amount of parking exceeds the minimum requirement by more than 10% on 128R North Street. The proposed 6 spaces exceed the requirement by 3 spaces. This is to provide one space per unit which is the industry standard for condominiums. Given the recent development boom and an overall higher demand for on-street parking, decreasing the demand for on-street parking will benefit the end users as well as the entire neighborhood. For more information, please refer to section S. Parking Analysis.

(iv) A waiver has been requested to reduce the required stall length of 18' to 16.5' on 128R North Street.

(v) The driveways and parking areas will be constructed with bituminous pavement which will drain water without eroding.

b. Location and Required Number of Bicycle Parking Spaces:

(i) The site plan includes interior bicycle storage room. This will allow for the minimum storage of 2 bicycles on each site to be parked in a secure location, with the potential for additional storage within each owner's individual unit.

c. Motorcycles and Scooter Parking:

(i) There are no areas designated for motorcycles or scooters at this time; however, adequate room exists for the storage of these motor vehicles should an owner decided to use his/her deeded space for motorcycles or scooters.

d. Snow Storage:

(i) Given the parking areas will be covered in their entirety, snow removal is not required. In general, snow will be stored in green space. Snow storage for 126 North Street will be located on the southeast edge of the lot. See site plan C-10.

(ii) The snow storage has not been located where it will adversely impact the functionality of any part of the site.

5. Transportation Demand Management (TDM):

a. A TDM plan is not required for this project.
b. A TDM plan is not required for this project.
c. A TDM plan is not required for this project.

(b) Environmental Quality Standards

1. Preservation of Significant Natural Features:

   a. Not applicable.

   b. Not applicable.

2. Landscaping and Landscaping Preservation:

   a. Landscape Preservation.

      (i) The disturbance of trees and vegetation that are not proposed to be removed as part of the project will be limited as much as possible – namely along the side and rear property lines.

      (ii) There are no trees 10 inches DBH or greater identified by the Surveyor within the setbacks.

      (iii) It is not anticipated that the project will necessitate any tree protection.

      (iv) A waiver is not requested.

      (v) Not applicable.

   b. Site Landscaping.

      (i) Landscaped Buffers:

         a. Solid waste will be handled internally and out of site from the public ROW.

         b. The project at 128R has 0 linear feet of frontage along North Street; however, a multitude of plantings will be provided on site as outlined on the Landscape Plan. The 126 site also meets the landscaping requirement based on its minimal street frontage.

         c. Not applicable.

         d. Screening has been provided as outlined in the Landscape Plan.

      (ii) Parking Lot Landscaping:

         a. Not applicable – all parking is covered.

         b. There is no proposed area with greater than 40 parking spaces without interrupted pavement.

         c. Not applicable.

         d. Not applicable.

         e. Not applicable.

         f. Not applicable.

(iii) Street Trees:

a. The two existing street trees are proposed to remain. Given the minimal street frontage and existing trees, the Applicant will pay into the tree fund for the net deficit of nine street trees.

b. Not applicable.

3. Water Quality, Stormwater Management and Erosion Control:

a. Stormwater:

(i) The site drainage will not be directed to flow or pond onto adjacent lots. The drainage patterns will be altered to intercept the roof runoff as well as the driveway runoff, with the addition of stormwater best management practices to attenuate the flows.

(ii) Any stormwater that flows onto adjacent lots will not exceed the pre-development flows.

(iii) The runoff from the site into the City property will not increase from the pre-development condition.

(iv) Not applicable.

b. A site-specific Stormwater Management Plan has been developed for the project to show compliance with Section 5 of the Technical Manual, including the basic standards of MEDEP Chapter 500. Please refer to sections J and K, the Stormwater Management and Erosion & Sedimentation Control Plans, respectively, for more information.

c. The project is not located in a watershed of an urban impaired stream as listed by the MEDEP.

d. Not applicable.

e. The development is not anticipated to pose a contamination risk to groundwater during or after construction. The project will be serviced by a public wastewater system.

f. The development will provide for adequate and sanitary disposal of sewage in accordance with Section 2 of the Technical Manual.

(c) Public Infrastructure and Community Safety Standards

1. Consistency with City Master Plans:

a. The project has been designed to be consistent with the City's Zoning Ordinance and off-site infrastructure.

b. Not applicable.

2. Public Safety and Fire Prevention:

a. The site has been designed to promote safe and inviting public access.

b. Access is available to both buildings via the proposed 16' entrance to 128R North Street which will be constructed in Phase 1. The building will be sprinkled with a full NFPA 13 system.

c. A fire hydrant is located about 215' away located on 146 North street in front of the Island View Apartments. Another fire hydrant is located approximately 175' away on the corner of Walnut Street and North Street.

3. Availability and Adequate Capacity of Public Utilities:

a. Public utilities in the vicinity of the site have capacity to serve the project. Ability to Serve letters have been sent to the respective companies. Responses have been included in the submission and any remaining responses will be submitted upon receipt.

b. The electrical service will be wired underground.

c. The new sewer and stormwater infrastructure will meet the provisions of the Technical Manual.

d. The projects will be served by connection to the public sewer system within North Street.

e. The sanitary sewer collection system meets all applicable sections of the Technical Manual. The stormwater management system is designed to meet the standards of Chapter 500.

f. Although not required, the project anticipates providing internal solid waste storage with private hauling of the waste.

(d) Site Design Standards

1. Massing, Ventilation and Wind Impact:

a. Not applicable.

b. Not applicable.

c. Not applicable.

2. Shadows:

a. The shadows created by the building will not influence public open spaces.

3. Snow and Ice Loading:

a. The structures will not distribute snow and ice onto adjacent properties.

4. View Corridors:

a. The project site is located outside the Downtown Vision View Corridor Protection Plan.

5. Historic Resources:

a. The development is not located in a historic district, historic landscape district or City designated landmark.

b. The development is not located adjacent to designated landmarks, historic district, or historic

landscape district. The pending Munjoy Hill historic district may abut the project in the future.

c. There are no known archaeological resources on the site.

6. Exterior Lighting:

a. Site Lighting.

(i) Exterior lighting will be designed to meet the requirements of Section 12 of the Technical Manual. A photometric plan has been included with this submission.

(ii) Any lighting that may adversely impact the abutting residential properties will feature house-side shielding.

b. Architectural and Specialty Lighting.

(i) No architectural or specialty lighting is proposed.

(ii) No up-lighting is proposed.

c. Street Lighting.

(i) No new street lights are proposed.

7. Noise and Vibration:

a. The HVAC system will meet the applicable state and federal emissions requirements and will also be screened and directed away from abutters.

8. Signage and Wayfinding:

a. All street and wayfinding signage shall meet the requirements of the Manual on Uniform Traffic Devices (MUTCD) and Division 22 of the City Code.

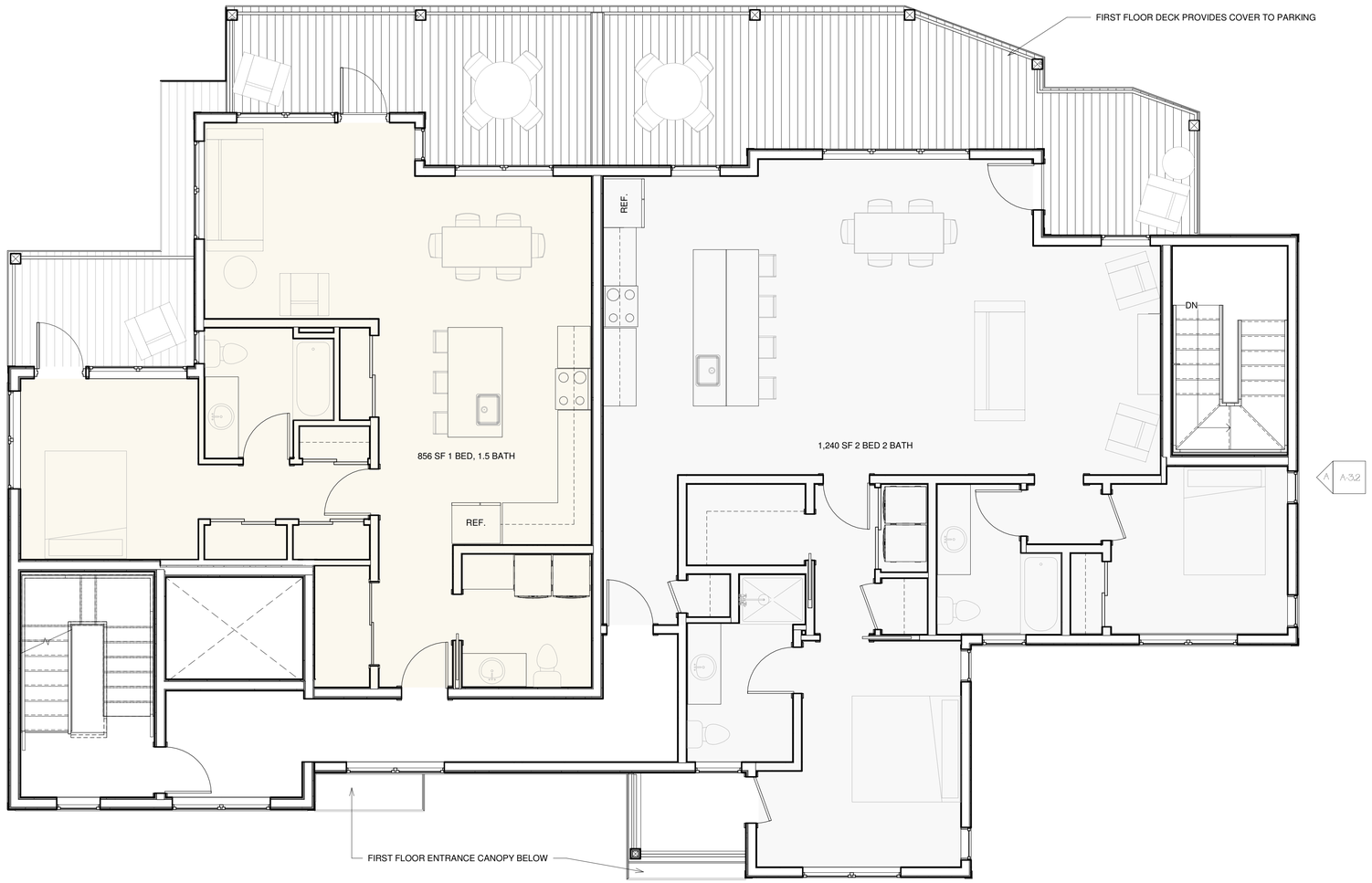
(i) The project is not located in a historic district or subject to Article IX.

(ii) Not applicable.

(iii) All street and wayfinding signage shall meet the requirements of the Manual on Uniform Traffic Devices (MUTCD) and Division 22 of the City Code.

9. Zoning Related Design Standards:

a. The project has been designed to meet the standards set forth in the R-6 zone. Please refer to the Site Plan for more information on the Space & Bulk Standards.



A Second Floor
1/4" = 1'-0"

[DESIGN DEVELOPMENT NOT FOR CONSTRUCTION]

0' 2' 4' 8' 16'

126 & 128R North Street

NEW CONSTRUCTION

OWNER
JOSHUA WOJCIK
UPRIGHT FRAMEWORKS LLC
PO BOX 833
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jwojcik@uprightframeworks.com

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PROJECT TEAM

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STRUCTURAL ENGINEER
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No.	Description	Date

SECOND & THIRD FLOOR PLAN

Project number	18-16_126R North
Date	04.16.20
Drawn by	TJR
Checked by	TJR

A-1.2

Scale 1/4" = 1'-0"

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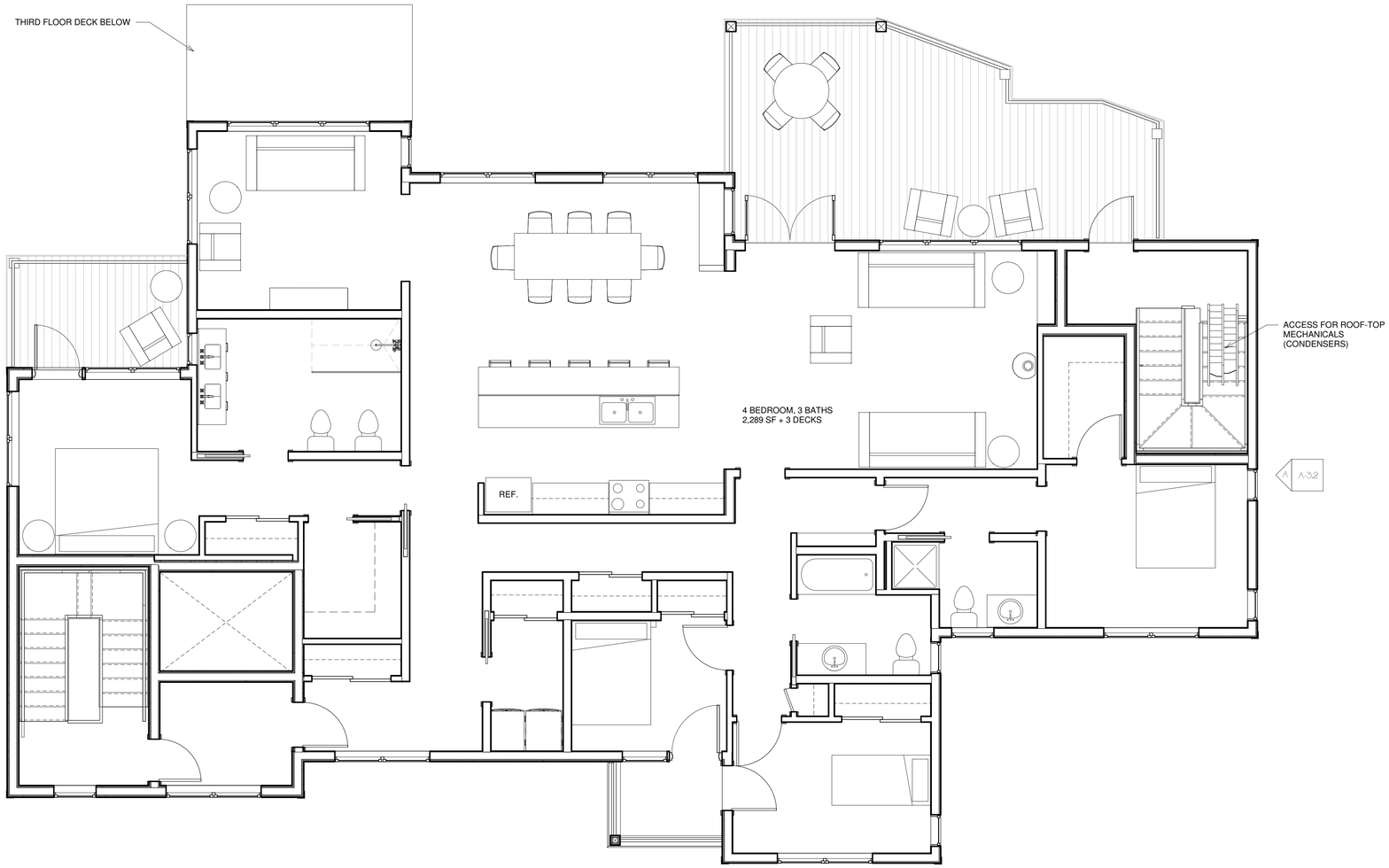

A Fourth Floor
1/4" = 1'-0"

[DESIGN DEVELOPMENT NOT FOR CONSTRUCTION]

0' 2' 4' 8' 16'

126 & 128R North Street

NEW CONSTRUCTION

OWNER
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No.	Description	Date

FOURTH FLOOR

Project number	18-16_128R North
Date	04.16.20
Drawn by	TJR
Checked by	TJR

A-1.4

Scale 1/4" = 1'-0"

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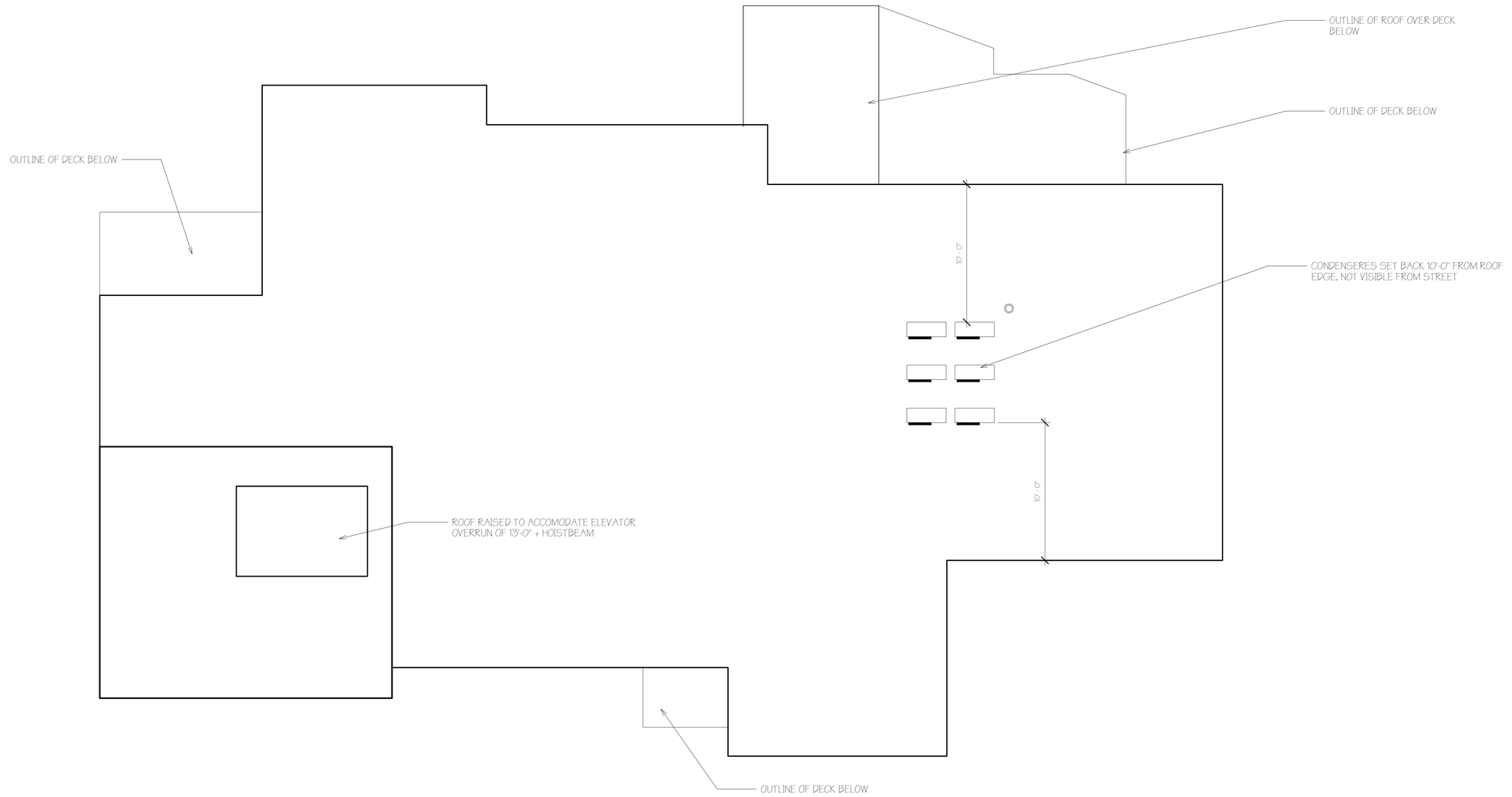

A Roof
1/4" = 1'-0"

[DESIGN DEVELOPMENT NOT FOR CONSTRUCTION]

0' 2' 4' 8' 16'

126 & 128R North Street

NEW CONSTRUCTION

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No.	Description	Date

ROOF PLAN

Project number	18-16_128R North
Date	04.16.20
Drawn by	Author
Checked by	Checker
	A-1.5
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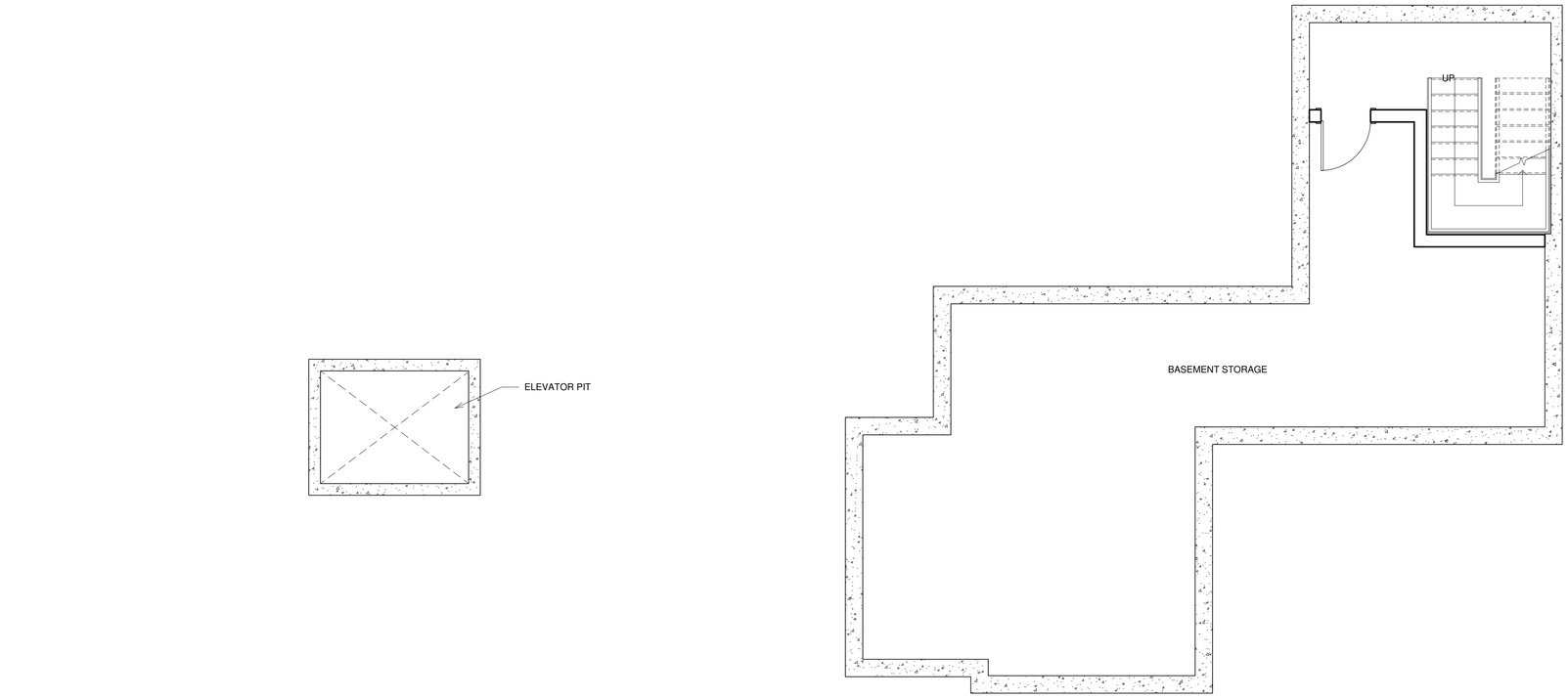

A Basement Plan
1/4" = 1'-0"

128R North Street

NEW CONSTRUCTION

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No.	Description	Date

BASEMENT PLAN

Project number	18-16_128R North
Date	11.19.18
Drawn by	Author
Checked by	Checker

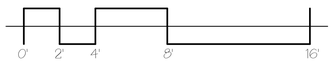
A-1.6

Scale 1/4" = 1'-0"

8/2/2019 12:06:57 PM

A North Elevation
3/16" = 1'-0"

B South Elevation
3/16" = 1'-0"



126 & 128R North Street

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No.	Description	Date

SOUTH & NORTH ELEVATIONS

Project number	18-16_128R North
Date	04.16.20
Drawn by	Author
Checked by	Checker

A-2.1

Scale 3/16" = 1'-0"

4/16/2020 10:17:02 AM

A South Elevation
3/16" = 1'-0"

B North Elevation
1/4" = 1'-0"

128R North Street

NEW CONSTRUCTION

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No.	Description	Date

SOUTH & NORTH ELEVATIONS

Project number	18-16_128R North
Date	11.19.18
Drawn by	Author
Checked by	Checker
	A-2.1
Scale	As indicated

8/22/2019 12:23:55 AM

A East Elevation
3/16" = 1'-0"

B West Elevation
3/16" = 1'-0"

126 & 128R North Street

NEW CONSTRUCTION

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Structural Integrity Consulting Engineers, Inc.
46 Forest Ave
Portland, ME 04101
(207) 774-4614

No.	Description	Date

EAST & WEST ELEVATIONS

Project number	18-16_128R North
Date	04.16.20
Drawn by	Author
Checked by	Checker

A-2.2

Scale 3/16" = 1'-0"

4/16/2020 10:25:47 AM

A East Elevation
3/16" = 1'-0"

B West Elevation
3/16" = 1'-0"

128R North Street

NEW CONSTRUCTION

OWNER
JOSHUA WOJCIK
UPRIGHT FRAMEWORKS LLC
PO BOX 833
WILTON ME 04294
jwojcik@uprightframeworks.com

DEXTROUS CREATIVE
PORTLAND, ME 04102
TRACIE REED, ARCHITECT
NCARB, AIA, LEED AP BD+C
traciereed@dextrouscreative.com
2074093459 (cell)

PROJECT TEAM

SURVEYOR
James P. Nadeau, PLS
Nadeau Land Surveyors
918 Brighton Ave
Portland, ME 04102
(207) 878-7870

GEOTECHNICAL ENGINEER
Mat Hardison, P.E.
Senior Geotechnical Engineer
Summit Geoengineering Services, Inc.
P.O. Box 7216
Lewiston, Maine 04243
(207) 576-6762

CIVIL ENGINEER
Will Savage, PE
Acorn Engineering, Inc
PO Box 3372
Portland, Maine 04104
(207) 775-2655

STRUCTURAL ENGINEER
Aaron C. Jones, P.E.
Structural Integrity Consulting Engineers, Inc.
46 Forest Ave
Portland, ME 04101
(207) 774-4614

No.	Description	Date

EAST & WEST ELEVATIONS

Project number	18-16_128R North
Date	11.19.18
Drawn by	Author
Checked by	Checker

A-2.2

Scale 3/16" = 1'-0"

6/27/2019 11:39:16 AM

F Northeast Perspective

B Bird's Eye View of North Street Facade

1 Main Entrance 128R

D View from Driveway

E Entrance View

126 & 128R North Street

NEW CONSTRUCTION

OWNER
JOSHUA WOJCIK
UPRIGHT FRAMEWORKS LLC
PO BOX 833
WILTON ME 04294
jwojcik@uprightframeworks.com

DEXTROUS CREATIVE
PORTLAND, ME 04102
TRACIE REED, ARCHITECT
NCARB, AIA, LEED AP BD+C
tracie.reed@dextrouscreative.com
207.409.0459 (cell)

PROJECT TEAM

SURVEYOR
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Nadeau Land Surveyors
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(207) 878-7870

GEOTECHNICAL ENGINEER
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Senior Geotechnical Engineer
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(207) 775-2655

STRUCTURAL ENGINEER
Aaron C. Jones, P.E.
Structural Integrity Consulting Engineers, Inc.
46 Forest Ave
Portland, ME 04101
(207) 774-4614

No.	Description	Date

PERSPECTIVES 128R

Project number	18-16_128R North
Date	04.16.20
Drawn by	Author
Checked by	Checker

A-5.1

Scale

4/16/2020 10:24:54 AM

A Northwest Perspective

B 4th floor Munjoy Heights View

THIS PERSPECTIVE IS TAKEN FROM THE FOURTH FLOOR AT MUNJOY HEIGHTS FROM JUST WITHIN THE UNIT. ELEVATION OF THE CAMERA (EYES) IS TAKEN AT 5'-0" ABOVE THE FLOOR AS SHOWN ON THE SITE SECTION A/A-3.2. THE DISTANCE OF THIS PERSON IS STANDING (INSIDE THEIR UNIT) IS 31'-0" FROM THE FACE O FTHE SECOND FLOOR DECK. THE MUNJOY HEIGHTS BUILDINGS VARY IN DISTANCE FROM 128R NORTH BASED ON THEIR PROJECT'S SPLINE. THAT SAID, THE DISTANCE FROM THE EXTERIOR FACE OF THEIR BUILDINGS TO THE EXTERIOR FACE OF THE SECND FLOOR DECKS RANGES FROM 25'-0" AT THE CLOSEST SECTION TO 32'-0". IN THE SITE SECTION SHOWN ON PAGE A-3.2 THE BUIDINGS ARE SHOWN AT 28'-0" APART.

126 & 128R North Street

NEW CONSTRUCTION

OWNER
JOSHUA WOJCIK
UPRIGHT FRAMEWORKS LLC
PO BOX 833
WILTON ME 04294
jwojcik@uprightframeworks.com

DEXTROUS CREATIVE
PORTLAND, ME 04102
TRACIE REED, ARCHITECT
NCARB, AIA, LEED AP BD+C
traciereed@dextrouscreative.com
2074039459 (cell)

PROJECT TEAM

SURVEYOR
James P. Nadeau, PLS
Nadeau Land Surveyors
918 Brighton Ave
Portland, ME 04102
(207) 878-7870

GEOTECHNICAL ENGINEER
Mat Hardison, P.E.
Senior Geotechnical Engineer
Summit Geoengineering Services, Inc.
P.O. Box 7216
Lewiston, Maine 04243
(207) 576-6762

CIVIL ENGINEER
Will Savage, PE
Acorn Engineering, Inc
PO Box 3372
Portland, Maine 04104
(207) 775-2655

STRUCTURAL ENGINEER
Aaron C. Jones, P.E.
Structural Integrity Consulting Engineers, Inc.
46 Forest Ave
Portland, ME 04101
(207) 774-4614

No.	Description	Date

PERSPECTIVES 128R

Project number	18-16_128R North
Date	04.16.20
Drawn by	Author
Checked by	Checker

A-5.2

Scale

4/16/2020 12:25:59 AM

VICINITY MAP
NOT TO SCALE

PHASE I		
STRUCTURE SETBACKS & HEIGHT – 128R NORTH		
ZONE: R6 – MHNCDO	REQUIRED	PROPOSED
MINIMUM FRONT YARD SETBACK	5'	5'*
MINIMUM SIDE YARD SETBACK (LEFT)	10'	10.20'
MINIMUM SIDE YARD SETBACK (RIGHT)	10'	12.14'
MINIMUM DECK SETBACK	7.5'	10.10'
MINIMUM REAR YARD SETBACK	15'	15.08'
MAXIMUM BUILDING HEIGHT	45'	44.45'
* MEASUREMENT SHOWN TO DEMONSTRATE COMPLIANCE FOR THE 128R FRONT YARD SETBACK AND THE 126 REAR YARD SETBACK, YIELDING A MINIMUM CUMULATIVE STRUCTURE SEPARATION OF 15'.		

OVERALL SITE		
SPACE AND BULK STANDARDS		
ZONE: R6 – MHNCDO	REQUIRED	PROPOSED
MINIMUM LOT SIZE	2,000 SF	9,787 SF
MINIMUM STREET FRONTAGE	20'	38'
MINIMUM LANDSCAPED OPEN AREA	20%	32%
MAXIMUM NUMBER OF DWELLING UNITS*	725 SF/UNIT = 16	12
RESIDENTIAL PARKING	1 SPACE PER UNIT AFTER 3 UNITS = 8 SPACES**	8
MINIMUM INTERNAL RESIDENT BICYCLE STORAGE SPACES	2 SPACES/5 D.U. = 4	4
MAXIMUM LOT COVERAGE	60%	51%
* REFER TO PORTLAND LAND USE ORDINANCE SECTION 14–488 (g)		
** REFER TO PORTLAND LAND USE ORDINANCE SECTION 14–332.2 (b)		
THE ABOVE VALUES REPRESENT THE ENTIRE SITE IMPROVED UPON ACCOUNTING FOR THE PROPOSED CONDITIONS WITHIN THE 126 NORTH STREET SUBDIVISION PLAT (PHASE II)		

OWNER:

UPRIGHT PROPERTIES, LLC
PORTLAND, MAINE
CONTACT: JOSH WOJCIK
PO BOX 833 WILTON, ME 04294

CIVIL/SITE ENGINEER:

ACORN ENGINEERING, INC.
PORTLAND, MAINE
CONTACT: WILL SAVAGE, P.E.
65 HANOVER STREET, PORTLAND, ME 04101

SURVEYOR

NADEAU LAND SURVEYS
PORTLAND, MAINE
CONTACT: JAMES D. NADEAU, P.L.S.
918 BRIGHTON AVE, PORTLAND, ME 04102

RECORDING INFORMATION
STATE OF MAINE, CUMBERLAND
COUNTY REGISTRY OF DEEDS

RECEIVED: _____

RECORDED IN _____

ATTEST: _____

REGISTRAR

JAMES D. NADEAU, MAINE P.L.S. #2124

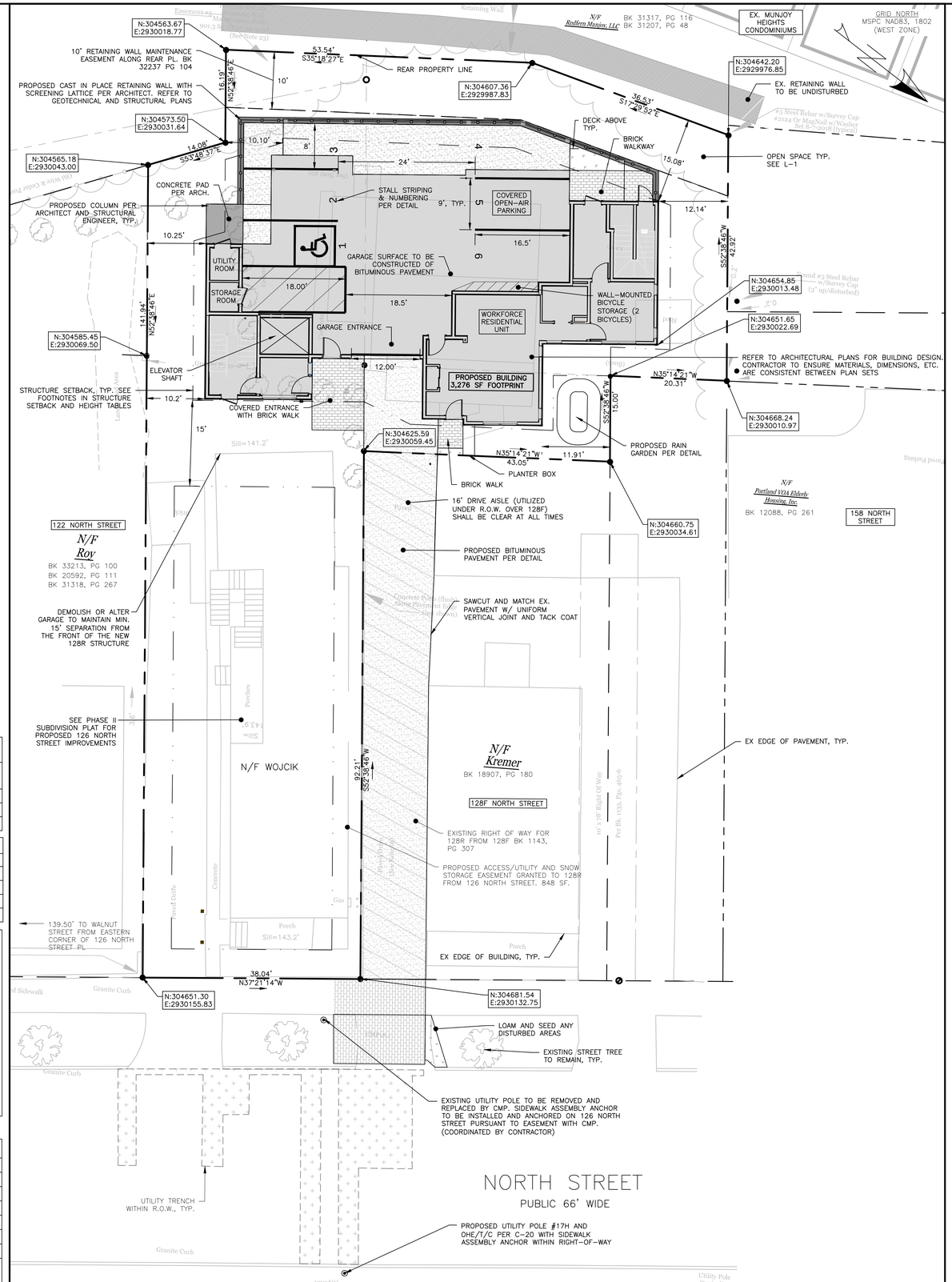
NADEAU LAND SURVEYS DATE:

PERMISSIBLE VEHICLE SUMMARY – 128R			
SPACES	MAX WHEEL BASE	MAX LENGTH	MAX WIDTH
1,5,6	9.3'	16.5'	6.5'
2	8.6'	15.8'	6'
3,4	8.5'	14.5'	5.8'

PARKING SUMMARY – 128R	
DIMENSIONS	# PARKING SPACES
9'x16.5'	4
8'X16.5'	1
8'X18'	1
TOTAL PROPOSED SPACES	6

LANDSCAPED AREAS
PAVED
CURB
PROPOSED BUILDING
PROPERTY LINE
STRIPING
RETAINING WALL
EX. PROPERTY MARKER
SETBACK LINE

UNIT TABULATION – 128R	
UNIT NUMBER	SIZE (SF)*
1A	672
2A	1,240
2B	870
3A	1,240
3B	870
4A	2,289
*UNIT AREA MEASURED FROM OUTSIDE OF EXTERIOR WALLS TO THE CENTER OF SHARED WALLS	



GENERAL NOTES:

1. FOR INFORMATION REGARDING THE PROPOSED SITE, REFER TO THE SITE PLAN, C–10, MOST RECENT VERSION.
2. FOR INFORMATION REGARDING PROPOSED UTILITIES, REFER TO THE UTILITY PLAN, SHEET C–20, MOST RECENT VERSION.
3. FOR INFORMATION REGARDING PROPOSED GRADING AND STORMWATER, REFER TO THE GRADING & DRAINAGE PLAN, SHEET C–30, MOST RECENT VERSION.
4. UNIT TABULATION PROVIDED BY DEXTROUS CREATIVE; REFER TO ARCHITECTURAL PLANS FOR FLOOR PLANS AND BUILDING HEIGHTS.
5. TOTAL SITE AREA INCLUDES 0.14 ACRES (6,142 S.F.). R.O.W. WIDTH FOR NORTH STREET IS 50 FEET PER BOUNDARY SURVEY & TOPOGRAPHICAL MAP WITH EXISTING CONDITIONS COMPLETED BY NADEAU LAND SURVEYS DATED 8/22/2018 (JOB #2181902BTR1).
6. SITE BOUNDARIES PER BOUNDARY SURVEY & TOPOGRAPHICAL MAP WITH EXISTING CONDITIONS COMPLETED BY NADEAU LAND SURVEYS ASSOCIATED DATED 8/22/2018 (JOB #2181902BTR1)
7. PROPERTY PINS TO BE SET BY PROFESSIONAL LAND SURVEYOR
8. AS OF 8/26/2020, THE SITE IS BOUNDED BY THE R–6 ZONE ON EAST, WEST, SOUTH, AND NORTH SIDES OF THE CITY OF PORTLAND GIS WEBSITE.
9. LOCUS PARCEL IS SHOWN ON THE CITY OF PORTLAND ASSESSOR'S MAP 12, BLOCK H, LOT 9
10. LOCUS PARCEL DOES NOT FALL IN A SPECIAL FLOOD HAZARD AREA PER FEMA FLOOD INSURANCE RATE MAP COMMUNITY–PANEL NUMBER 2300510014B, INDEX DATED 7/17/1986.
11. ALL BUILDING CORNER OFFSETS TO BOUNDARY LINES ARE FROM THE BUILDING FOUNDATION, UNLESS OTHERWISE NOTED.
12. THIS SHEET IS THE SUBDIVISION PLAT FOR THE CREATION OF UP TO SIX (6) DWELLING UNITS ON THE EXISTING SUBJECT PROPERTY.
13. THE CONDOMINIUM DOCUMENTS ARE TO OUTLINE THE MAINTENANCE AND MANAGEMENT OF DRIVEWAYS, SIDEWALKS, RETAINING WALLS, STORMWATER DEVICES, SITE LIGHTING, TRASH REMOVAL, AND SNOW REMOVAL AS THE RESPONSIBILITY OF THE OWNER.
14. THE HOMEOWNER'S ASSOCIATION SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND MANAGEMENT OF DRIVEWAYS, SIDEWALKS, STORMWATER DEVICES, SITE LIGHTING, TRASH REMOVAL, RETAINING WALLS, AND SNOW REMOVAL.
15. THE HOMEOWNER'S ASSOCIATION SHALL BE RESPONSIBLE FOR COMPLYING WITH THE CONDITIONS OF CHAPTER 32 STORMWATER INCLUDING ARTICLE III, POST–CONSTRUCTION STORMWATER MANAGEMENT AGREEMENT, WHICH SPECIFIES ANNUAL INSPECTIONS AND REPORTING REQUIREMENTS AT A MINIMUM. IN ADDITION, THE OWNER SHALL BE RESPONSIBLE FOR COMPLYING WITH THE CONDITIONS OF THE SUBMITTED STORMWATER MANAGEMENT PLAN AND THE APPROVED PLANS, AND MEET CITY STANDARDS AND STATE GUIDELINES.

SURVEY NOTES:

1. THIS PLAN IS NOT INTENDED TO DEPICT LIMITS OR EXTENT OF FEE TITLE OWNERSHIP. AN OPINION OF TITLE SHOULD BE RENDERED BY A TITLE ATTORNEY.
2. THE OFFICE RESERVES THE RIGHT TO BE HELD HARMLESS BY ALL 3RD PARTY CLAIMS.
3. THIS SURVEY DOES NOT PURPORT TO REFLECT ANY OF THE FOLLOWING:
   3.1. EASEMENTS OTHER THAN THOSE THAT ARE VISIBLE OR SPECIFICALLY STATED IN THE REFERENCED DOCUMENTS.
   3.2. BUILDING SETBACK COMPLIANCE OR RESTRICTIVE COVENANTS.
   3.3. ZONING OR OTHER LAND USE REGULATIONS
   3.4. THE LOCATION OF ANY UNDERGROUND UTILITIES OR STRUCTURES.
4. THIS OFFICE RESERVES THE RIGHT TO BE HELD HARMLESS FOR UNKNOWN OR UNOBTAINABLE PRIVATE RECORDS WHICH COULD AFFECT THE RESULTS OF THIS SURVEY
5. REFERENCE IS MADE TO "LETTER OF AGREEMENT" DATED MAY 23, 2018 BETWEEN NADEAU LAND SURVEYS AND THE BELOW LISTED CLIENT(S), WHICH SHALL BE CONSIDERED AN INTEGRAL PART OF THIS SURVEY.
6. N/F IS AN ABBREVIATION FOR NOW OR FORMERLY.
7. ALL DEEDS REFERENCED ON THIS PLAN ARE RECORDED AT THE CUMBERLAND COUNTRY REGISTRY OF DEEDS (CCRD).
8. LOCUS PARCELS ARE LOCATED IN THE R–6 RESIDENTIAL ZONE: (AS OF 8/22/18)
   8.1. MIMIMUM LOT SIZE = 200 S.F.
   8.2. MINIMUM LOT AREA / DWELLING UNIT = 725 S.F.
   8.3. MINIMUM STREET FRONTAGE = 20 FEET
   8.4. MINIMUM LOT WIDTH = 20 FEET
   8.5. MAXIMUM LOT COVERAGE = 60%
   8.6. MINIMUM FRONT YARD SETBACK = 5 FEET, OR AVERAGE DEPTH OF ADJACENT FRONT YARDS
   8.7. MINIMUM SIDE YARD SETBACK = 10 FEET
   8.8. MINIMUM REAR YARD SETBACK = 15 FEET
9. LOCUS PARCEL A IS SHOWN ON THE CITY OF PORTLAND ASSESSOR'S MAP 12, BLOCK H, AS LOT 14, AND IS LISTED AS 126 NORTH STREET. LOCUS PARCEL B IS SHOWN ON THE CITY OF PORTLAND ASSESSOR'S MAP 12. BLOCK H, AS PARTS OF LOTS 9 & 22, AND LISTED AS 128R NORTH STREET.
10. AREA OF LOCUS PARCEL A IS 4,105.0 SQUARE FEET (0.09 ACRE). AREA OF LOCUS PARCEL B IS 5,682.0 SQUARE FEET (0.13 ACRES)
11. THE APPARENT RIGHT OF WAY LINES DEPICTED ON THIS PLAN ARE BASED ON THE PLAN REFERENCES LISTEN HEREON MONUMENTATION FOUND IN THE FIELD, AND CITY OF PORTLAND ENGINEERING STREET NOTES.
12. THE LOCUS PARCELS DO NOT SCALE IN A SPECIAL FLOOD HAZARD AREA PER FEMA FLOOD INSURANCE RATE MAP COMMUNITY–PANEL NUMBER 230051 0014B, INDEX DATED DECEMBER 8, 1998. THE PARCELS SCALE IN ZONE C.
13. ALL BUILDING CORNER OFFSETS TO BOUNDARY LINES ARE FROM CORNER BOARDS AND NOT BUILDING FOUNDATION, UNLESS NOTED.
14. CALL 1–888–DIGSAFE AT LEAST THREE BUSINESS DAYS BEFORE PERFORMING ANY EXCAVATION.
15. VERTICAL DATUM IS NGVD29. BENCHMARK IS CITY MONUMENT T112–18–107, ELEVATION = 145.08'
16. SEE CCRD BOOK 1143, PAGE 307, DATED JULY 25, 1923, FROM ELMORE W. RAMSDELL TO CLAIRE BOWDEN, FOR RIGHT OF WAY TO NORTH STREET.
17. PER CITY OF PORTLAND RECORDS. VOL. 1, PAGE 184, NORTH STREET WAS ACCEPTED MARCH 20, 1795 AS 4 RODS (66 FEET) WIDE.
18. SEE CCRD BOOK 14149, PAGE 281, DATED SEPTEMBER 10, 1998, FOR CITY OF PORTLAND'S LICENSE TO ERECT A FENCE ACROSS POPLAR STREET PARTIALLY INTRUDING ON LAND N/F MAXWELL.
19. SEE CCRD BOOK 31326, PAGE 331, DATED FEBRUARY 3, 2014, FROM THE CITY OF PORTLAND TO RAYMOND C. MAXWELL, FOR TERMINATION OF LICENSE RECORDED IN BOOK 14149, PAGE 281.
20. EXISTING BULKHEAD IS ALLOWED TO ENCROACH SETBACK WINDOW PER CITY OF PORTLAND ZONING ORDINANCE SECTION 14–425.
21. SEE NOTICE FOR VACATED PORTIONS OF SHERIDAN STREET AND EAST COVE STREET, DATED MARCH 5, 2015 AND RECORDED IN CCRD BOOK 32118, PAGE 145.
22. THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THIS OFFICE MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN–SERVICE OR ABANDONED. THE UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE LOCATION AND ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THIS OFFICE HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.
23. SEE CCRD BOOK 32237, PAGE 104, DATED APRIL 30, 2015, FOR RELEASE AND EASEMENT AGREEMENT BETWEEN REDFERN MUNJOY, LLC AND UPRIGHT PROPERTIES, LLC.
24. THE COORDINATES DEPICTED ON OUR PLAN ARE FOR MUNICIPAL REQUIREMENTS ONLY AND SHOULD NOT BE USED FOR CONSTRUCTION LAYOUT. THIS OFFICE ASSUMES NO LIABILITY AND/OR RESPONSIBILITY IF USED FOR CONSTRUCTION PURPOSED.
25. SPOT GRADES, SILL AND RIM ELEVATIONS ARE FOR ENGINEERING PURPOSED ONLY. AND SHALL NOT BE USED AS PROJECT BENCHMARKS. THIS OFFICE ASSUMES NO LIABILITY AND/OR RESPONSIBILITY IS USED FOR CONSTRUCTION PURPOSES.
26. NO RECORDS RESEARCH OR SITE EVALUATION HAS BEEN PERFORMED SINCE THE ORIGINAL DATE OF THIS SURVEY. THIS SURVEY PLAN WAS REVISED SOLEY TO DEPICT ADDITIONAL UTILITY INFORMANTION

EASEMENTS:

THERE ARE TWO EXISTING EASEMENTS AS IDENTIFIED BY THE SURVEYOR:
1. PERMANENT RIGHT–OF–WAY WITH 128F NORTH STREET. REFERENCE CCRD BK 1143, PG 307.
2. PERMANENT RETAINING WALL MAINTENANCE EASEMENT WITH MUNJOY HEIGHTS. REFERENCE CCRD BK 32237, PG 104

THERE ARE NO PROPOSED EASEMENTS.

WAIVERS & CONDITIONS OF APPROVAL:

TBD

APPROVED: PORTLAND PLANNING BOARD

CHAIRPERSON: DATE:

10 0 10 20
SCALE: 1"=10'

PERMIT LEVEL
NOT ISSUED FOR
CONSTRUCTION

ISSUED FOR	BY DATE
LEVEL III SITE PLAN	WHS 8/7/19
PHASE II UPDATE	WHS 10/29/19
COMMENT RESPONSE 2	WHS 7/24/2020
FINAL APPLICATION	WHS 8/2/2020
LOT MERGE	WHS 8/26/2020

DRAWING NAME: SUBDIVISION PLAT – 126/128R NORTH STREET, PORTLAND, ME 04101
PROJECT NAME: 126/128R NORTH STREET REDEVELOPMENT
CLIENT: UPRIGHT PROPERTIES, LLC
PO BOX 833 WILTON, ME 04294

ACORN ENGINEERING, INC.
65 HANOVER ST, PORTLAND, MAINE 04101
(207) 775–2655

THESE PLANS, AND/OR FILES, ARE NOT TO BE USED IN WHOLE OR IN PART FOR ANY OTHER PROJECT, AND ARE NOT TO BE ALTERED WITHOUT THE WRITTEN PERMISSION OF ACORN ENGINEERING, INC. ANY REUSE WITHOUT SUCH PERMISSION SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

FILE: 1116_CIVIL
JN: 1116
SCALE: 1"=10'
DESIGNED BY: SJL
DRAWN BY: ZMS
CHECKED BY: WHS

STATE OF MAINE
WILLIAM H. SAVAGE
No. 14446
8-28-20
REGISTERED PROFESSIONAL ENGINEER

DRAWING NO.
PLAT

VICINITY MAP
NOT TO SCALE

PHASE II		
STRUCTURE SETBACKS & HEIGHT – 126 NORTH		
ZONE: R6 – MHNCDO	REQUIRED	PROPOSED
MINIMUM FRONT YARD SETBACK	3.7' (AVG. ABUTTER)	4'
MINIMUM SIDE YARD SETBACK (LEFT)	5'	10.02'
MINIMUM SIDE YARD SETBACK (RIGHT)	5'	5'
MINIMUM REAR YARD SETBACK*	10'	16'*
MAXIMUM BUILDING HEIGHT	35'	33.32'

* MEASURED 5' OFF THE FRONT OF THE 128R STRUCTURE ASSUMING A MINIMUM 5' FRONT YARD SETBACK FOR 128R CONFORMANCE. MEASUREMENTS SHOWN TO DEMONSTRATE COMPLIANCE FOR THE 128R FRONT YARD SETBACK AND THE 126 REAR YARD SETBACK, YIELDING A MINIMUM CUMULATIVE STRUCTURE SEPARATION OF 15'.

OVERALL SITE		
SPACE AND BULK STANDARDS		
ZONE: R6 – MHNCDO	REQUIRED	PROPOSED
MINIMUM LOT SIZE	2,000 SF	9,787 SF
MINIMUM STREET FRONTAGE	20'	38'
MINIMUM LANDSCAPED OPEN AREA	20%	32%
MAXIMUM NUMBER OF DWELLING UNITS*	725 SF/UNIT = 16	12
RESIDENTIAL PARKING	1 SPACE PER UNIT AFTER 3 UNITS = 8 SPACES**	8
MINIMUM INTERNAL RESIDENT BICYCLE STORAGE SPACES	2 SPACES/5 D.U. = 4	4
MAXIMUM LOT COVERAGE	60%	51%
* REFER TO PORTLAND LAND USE ORDINANCE SECTION 14-488 (g)		
** REFER TO PORTLAND LAND USE ORDINANCE SECTION 14-332.2 (b)		

OWNER:

JOSH WOJCIK
PO BOX 833 WILTON, ME 04294

CIVIL/SITE ENGINEER:

ACORN ENGINEERING, INC.
PORTLAND, MAINE
CONTACT: WILL SAVAGE, P.E.
65 HANOVER STREET, PORTLAND, ME 04101

SURVEYOR

NADEAU LAND SURVEYS
PORTLAND, MAINE
CONTACT: JAMES D. NADEAU, P.L.S.
918 BRIGHTON AVE, PORTLAND, ME 04102

LANDSCAPED AREAS
PAVED
CURB
PROPOSED BUILDING
PROPERTY LINE
STRIPING
RETAINING WALL
EX. PROPERTY MARKER
SETBACK LINE

PARKING SUMMARY – 126	
DIMENSIONS	# PARKING SPACES
10'x18'	1
8'X18' (ADA)	1
TOTAL PROPOSED SPACES	2

UNIT TABULATION – 126	
UNIT NUMBER	SIZE (SF)*
1A	680
2A	687
2B	716
3A	687
3B	716

*UNIT AREA MEASURED FROM OUTSIDE OF EXTERIOR WALLS TO THE CENTER OF SHARED WALLS

RECORDING INFORMATION
STATE OF MAINE, CUMBERLAND
COUNTY REGISTRY OF DEEDS

RECEIVED: _____

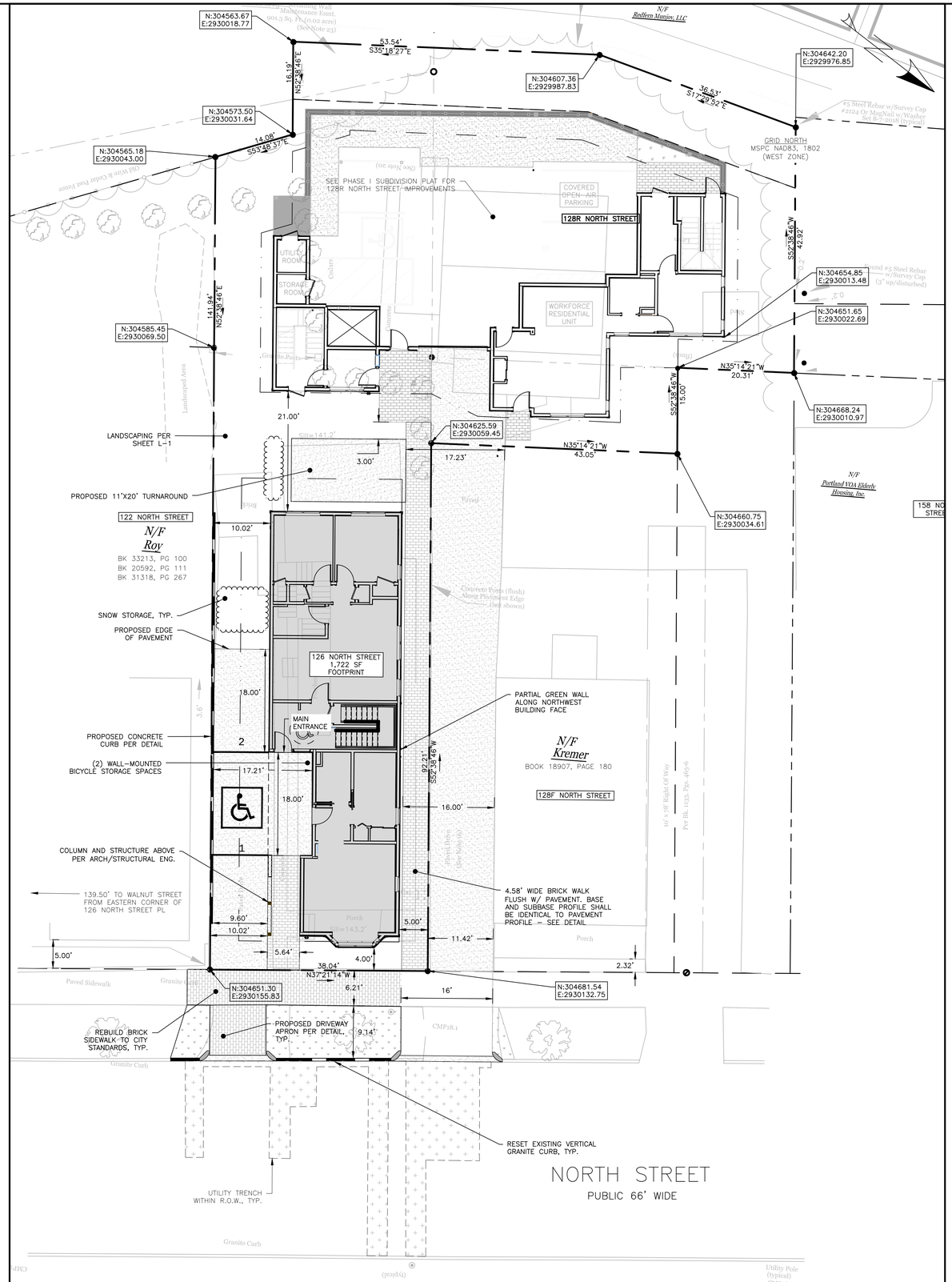
RECORDED IN _____

ATTEST: _____
REGISTRAR

JAMES D. NADEAU, MAINE P.L.S. #2124

NADEAU LAND SURVEYS DATE:

_____ _____



GENERAL NOTES:

1. FOR INFORMATION REGARDING THE PROPOSED SITE, REFER TO THE SITE PLAN, C-10, MOST RECENT VERSION.
2. FOR INFORMATION REGARDING PROPOSED UTILITIES, REFER TO THE UTILITY PLAN, SHEET C-20, MOST RECENT VERSION.
3. FOR INFORMATION REGARDING PROPOSED GRADING AND STORMWATER, REFER TO THE GRADING & DRAINAGE PLAN, SHEET C-30, MOST RECENT VERSION.
4. UNIT TABULATION PROVIDED BY DEXTROUS CREATIVE; REFER TO ARCHITECTURAL PLANS FOR FLOOR PLANS AND BUILDING HEIGHTS.
5. TOTAL SITE AREA INCLUDES 0.084 ACRES (3,645 S.F.). R.O.W. WIDTH FOR NORTH STREET IS 50 FEET PER BOUNDARY SURVEY & TOPOGRAPHICAL MAP WITH EXISTING CONDITIONS COMPLETED BY NADEAU LAND SURVEYS DATED 8/22/2018 (JOB #2181902BTR1).
6. SITE BOUNDARIES PER BOUNDARY SURVEY & TOPOGRAPHICAL MAP WITH EXISTING CONDITIONS COMPLETED BY NADEAU LAND SURVEYS ASSOCIATED DATED 8/22/2018 (JOB #2181902BTR1)
7. PROPERTY PINS TO BE SET BY PROFESSIONAL LAND SURVEYOR.
8. AS OF 8/26/2020, THE SITE IS BOUNDED BY THE R-6 ZONE ON EAST, WEST, SOUTH, AND NORTH SIDES OF THE CITY OF PORTLAND GIS WEBSITE.
9. LOCUS PARCEL IS SHOWN ON THE CITY OF PORTLAND ASSESSOR'S MAP 12, BLOCK H, LOT 14
10. LOCUS PARCEL DOES NOT FALL IN A SPECIAL FLOOD HAZARD AREA PER FEMA FLOOD INSURANCE RATE MAP COMMUNITY-PANEL NUMBER 2300510014B, INDEX DATED 7/17/1986.
11. ALL BUILDING CORNER OFFSETS TO BOUNDARY LINES ARE FROM THE BUILDING FOUNDATION, UNLESS OTHERWISE NOTED.
12. THIS SHEET IS THE SUBDIVISION PLAT FOR THE CREATION OF UP TO SIX (6) DWELLING UNITS ON THE EXISTING SUBJECT PROPERTY.
13. THE OWNER SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND MANAGEMENT OF DRIVEWAYS, SIDEWALKS, STORMWATER DEVICES, SITE LIGHTING, TRASH REMOVAL, RETAINING WALLS, AND SNOW REMOVAL.
14. THE OWNER SHALL BE RESPONSIBLE FOR COMPLYING WITH THE CONDITIONS OF CHAPTER 32 STORMWATER INCLUDING ARTICLE III, POST-CONSTRUCTION STORMWATER MANAGEMENT AGREEMENT, WHICH SPECIFIES ANNUAL INSPECTIONS AND REPORTING REQUIREMENTS AT A MINIMUM. IN ADDITION, THE OWNER SHALL BE RESPONSIBLE FOR COMPLYING WITH THE CONDITIONS OF THE SUBMITTED STORMWATER MANAGEMENT PLAN AND THE APPROVED PLANS, AND MEET CITY STANDARDS AND STATE GUIDELINES.

SURVEY NOTES:

1. THIS PLAN IS NOT INTENDED TO DEPICT LIMITS OR EXTENT OF FEE TITLE OWNERSHIP. AN OPINION OF TITLE SHOULD BE RENDERED BY A TITLE ATTORNEY.
2. THE OFFICE RESERVES THE RIGHT TO BE HELD HARMLESS BY ALL 3RD PARTY CLAIMS.
3. THIS SURVEY DOES NOT PURPORT TO REFLECT ANY OF THE FOLLOWING:
   - 3.1. EASEMENTS OTHER THAN THOSE THAT ARE VISIBLE OR SPECIFICALLY STATED IN THE REFERENCED DOCUMENTS.
   - 3.2. BUILDING SETBACK COMPLIANCE OR RESTRICTIVE COVENANTS.
   - 3.3. ZONING OR OTHER LAND USE REGULATIONS
   - 3.4. THE LOCATION OF ANY UNDERGROUND UTILITIES OR STRUCTURES.
4. THIS OFFICE RESERVES THE RIGHT TO BE HELD HARMLESS FOR UNKNOWN OR UNOBTAINABLE PRIVATE RECORDS WHICH COULD AFFECT THE RESULTS OF THIS SURVEY
5. REFERENCE IS MADE TO "LETTER OF AGREEMENT" DATED MAY 23, 2018 BETWEEN NADEAU LAND SURVEYS AND THE BELOW LISTED CLIENT(S), WHICH SHALL BE CONSIDERED AN INTEGRAL PART OF THIS SURVEY.
6. N/F IS AN ABBREVIATION FOR NOW OR FORMERLY.
7. ALL DEEDS REFERENCED ON THIS PLAN ARE RECORDED AT THE CUMBERLAND COUNTRY REGISTRY OF DEEDS (CCRD).
8. LOCUS PARCELS ARE LOCATED IN THE R-6 RESIDENTIAL ZONE: (AS OF 8/22/18)
   - 8.1. MIMIMUM LOT SIZE = 200 S.F.
   - 8.2. MINIMUM LOT AREA / DWELLING UNIT = 725 S.F.
   - 8.3. MINIMUM STREET FRONTAGE = 20 FEET
   - 8.4. MINIMUM LOT WIDTH = 20 FEET
   - 8.5. MAXIMUM LOT COVERAGE = 60%
   - 8.6. MINIMUM FRONT YARD SETBACK = 5 FEET, OR AVERAGE DEPTH OF ADJACENT FRONT YARDS
   - 8.7. MINIMUM SIDE YARD SETBACK = 5 FEET
   - 8.8. MINIMUM REAR YARD SETBACK = 10 FEET
9. LOCUS PARCEL A IS SHOWN ON THE CITY OF PORTLAND ASSESSOR'S MAP 12, BLOCK H, AS LOT 14, AND IS LISTED AS 126 NORTH STREET. LOCUS PARCEL B IS SHOWN ON THE CITY OF PORTLAND ASSESSOR'S MAP 12. BLOCK H, AS PARTS OF LOTS 9 & 22, AND LISTED AS 128R NORTH STREET.
10. AREA OF LOCUS PARCEL A IS 4,105.0 SQUARE FEET (0.09 ACRE). AREA OF LOCUS PARCEL B IS 5,682.0 SQUARE FEET (0.13 ACRES)
11. THE APPARENT RIGHT OF WAY LINES DEPICTED ON THIS PLAN ARE BASED ON THE PLAN REFERENCES LISTEN HEREON MONUMENTATION FOUND IN THE FIELD, AND CITY OF PORTLAND ENGINEERING STREET NOTES.
12. THE LOCUS PARCELS DO NOT SCALE IN A SPECIAL FLOOD HAZARD AREA PER FEMA FLOOD INSURANCE RATE MAP COMMUNITY-PANEL NUMBER 230051 0014B, INDEX DATED DECEMBER 8, 1998. THE PARCELS SCALE IN ZONE C.
13. ALL BUILDING CORNER OFFSETS TO BOUNDARY LINES ARE FROM CORNER BOARDS AND NOT BUILDING FOUNDATION, UNLESS NOTED.
14. CALL 1-888-DIGSAFE AT LEAST THREE BUSINESS DAYS BEFORE PERFORMING ANY EXCAVATION.
15. VERTICAL DATUM IS NGVD29. BENCHMARK IS CITY MONUMENT T112-18-107, ELEVATION = 145.08'
16. SEE CCRD BOOK 1143, PAGE 307, DATED JULY 25, 1923, FROM ELMORE W. RAMSDELL TO CLAIRE BOWDEN, FOR RIGHT OF WAY TO NORTH STREET.
17. PER CITY OF PORTLAND RECORDS. VOL. 1, PAGE 184, NORTH STREET WAS ACCEPTED MARCH 20, 1795 AS 4 RODS (66 FEET) WIDE.
18. SEE CCRD BOOK 14149, PAGE 281, DATED SEPTEMBER 10, 1998, FOR CITY OF PORTLAND'S LICENSE TO ERECT A FENCE ACROSS POPLAR STREET PARTIALLY INTRUDING ON LAND N/F MAXWELL.
19. SEE CCRD BOOK 31326, PAGE 331, DATED FEBRUARY 3. 2014, FROM THE CITY OF PORTLAND TO RAYMOND C. MAXWELL, FOR TERMINATION OF LICENSE RECORDED IN BOOK 14149, PAGE 281.
20. EXISTING BULKHEAD IS ALLOWED TO ENCROACH SETBACK WINDOW PER CITY OF PORTLAND ZONING ORDINANCE SECTION 14-425.
21. SEE NOTICE FOR VACATED PORTIONS OF SHERIDAN STREET AND EAST COVE STREET, DATED MARCH 5, 2015 AND RECORDED IN CCRD BOOK 32118, PAGE 145.
22. THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THIS OFFICE MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. THE UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE LOCATION AND ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THIS OFFICE HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.
23. SEE CCRD BOOK 32237, PAGE 104, DATED APRIL 30, 2015, FOR RELEASE AND EASEMENT AGREEMENT BETWEEN REDFERN MUNJOY, LLC AND UPRIGHT PROPERTIES, LLC.
24. THE COORDINATES DEPICTED ON OUR PLAN ARE FOR MUNICIPAL REQUIREMENTS ONLY AND SHOULD NOT BE USED FOR CONSTRUCTION LAYOUT. THIS OFFICE ASSUMES NO LIABILITY AND/OR RESPONSIBILITY IF USED FOR CONSTRUCTION PURPOSED.
25. SPOT GRADES, SILL AND RIM ELEVATIONS ARE FOR ENGINEERING PURPOSED ONLY. AND SHALL NOT BE USED AS PROJECT BENCHMARKS. THIS OFFICE ASSUMES NO LIABILITY AND/OR RESPONSIBILITY IS USED FOR CONSTRUCTION PURPOSES.
26. NO RECORDS RESEARCH OR SITE EVALUATION HAS BEEN PERFORMED SINCE THE ORIGINAL DATE OF THIS SURVEY. THIS SURVEY PLAN WAS REVISED SOLEY TO DEPICT ADDITIONAL UTILITY INFORMANTION

EASEMENTS:

1. THERE ARE NO EXISTING EASEMENTS IDENTIFIED BY THE SURVEYOR PERTAINING TO 126 NORTH STREET.
2. NO RECORD OF AN EASEMENT WAS FOUND FOR THE APPARENT ENCROACHMENT OF THE AERIAL UTILITY LINES ACROSS THIS PROPERTY.

THERE ARE NO PROPOSED EASEMENTS.

WAIVERS & CONDITIONS OF APPROVAL:

N/A

APPROVED: PORTLAND PLANNING BOARD

CHAIRPERSON: DATE:

_____

_____

_____

_____

_____

_____

_____

_____

10 0 10 20

SCALE: 1"=10'

PERMIT LEVEL
NOT ISSUED FOR
CONSTRUCTION

ISSUED FOR	BY	DATE
PHASE II UPDATE	WHS	10/29/19
COMMENT RESPONSE	WHS	12/18/19
COMMENT RESPONSE 2	WHS	2/24/2020
FINAL APPLICATION	WHS	6/2/2020
LOT MERGE	WHS	8/28/2020

DRAWING NAME: SUBDIVISION PLAT – PHASE II (126 NORTH ST., PORTLAND, MAINE 04101)

PROJECT NAME: 126/128R NORTH STREET REDEVELOPMENT

CLIENT: JOSHUA WOJCIK
PO BOX 833 WILTON, ME 04294

ACORN ENGINEERING, INC.

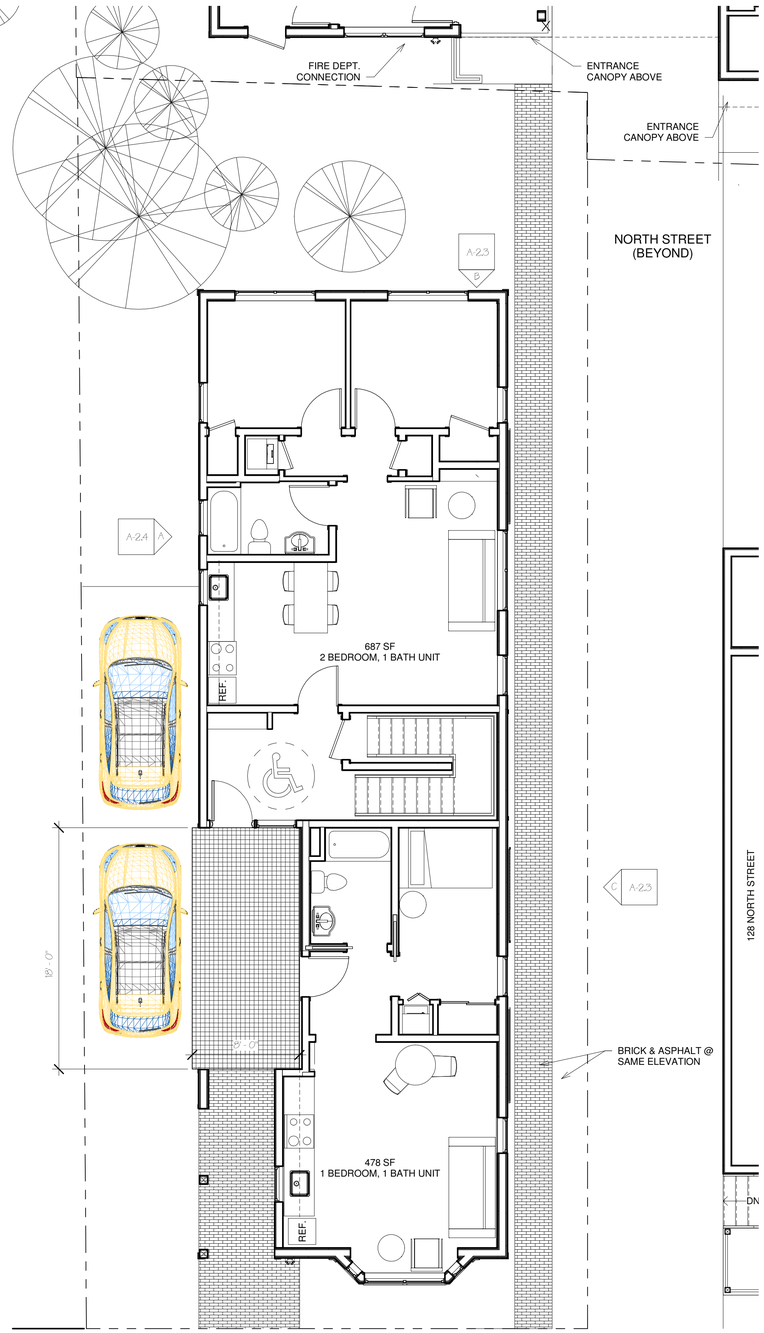
THESE PLANS SHALL NOT BE MODIFIED WITHOUT THE WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY MODIFICATIONS MADE TO THESE PLANS WITHOUT SUCH PERMISSION SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
65 HANOVER ST. PORTLAND, MAINE 04101
(207) 775-2655

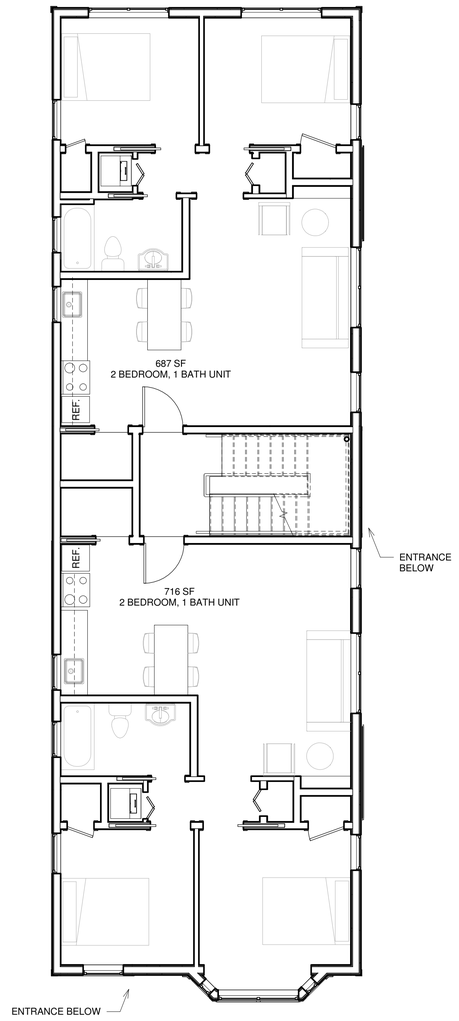
FILE:	1116_CIVIL
JN:	1116
SCALE:	1"=10'
DESIGNED BY:	SJL
DRAWN BY:	ZMS
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM S. SAVAGE
No. 10466
8-28-20
REGISTERED PROFESSIONAL ENGINEER

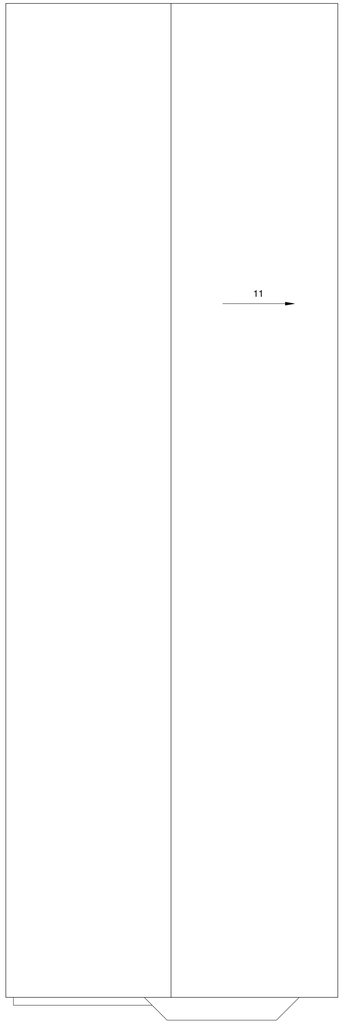
DRAWING NO.
PLAT



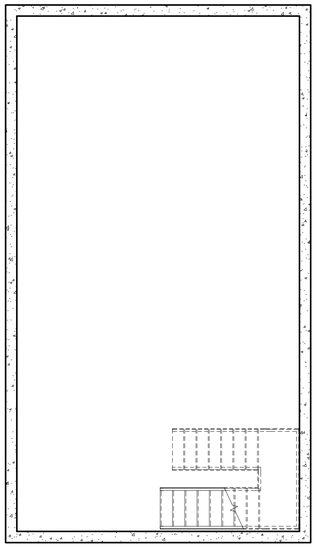
A First Floor 126
3/16" = 1'-0"



B Second & Third Floors 126
3/16" = 1'-0"



C Roof 126
3/16" = 1'-0"



D Basement
3/16" = 1'-0"

126 & 128R North Street

NEW CONSTRUCTION

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UPRIGHT FRAMEWORKS LLC
PO BOX 833
WILTON ME 04294
jwojcik@uprightframeworks.com

DEXTROUS CREATIVE
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TRACIE REED, ARCHITECT
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2074030459 (cell)

PROJECT TEAM

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Nadeau Land Surveyors
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Senior Geotechnical Engineer
Summit Geoengineering Services, Inc.
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(207) 576-6762

CIVIL ENGINEER
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Acorn Engineering, Inc
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STRUCTURAL ENGINEER
Aaron C. Jones, P.E.
Structural Integrity Consulting Engineers, Inc.
46 Forest Ave
Portland, ME 04101
(207) 774-4614

No.	Description	Date

PHASE 2 PLANS

Project number	18-16_128R North
Date	04.16.20
Drawn by	Author
Checked by	Checker

A-1.6 126

Scale 3/16" = 1'-0"

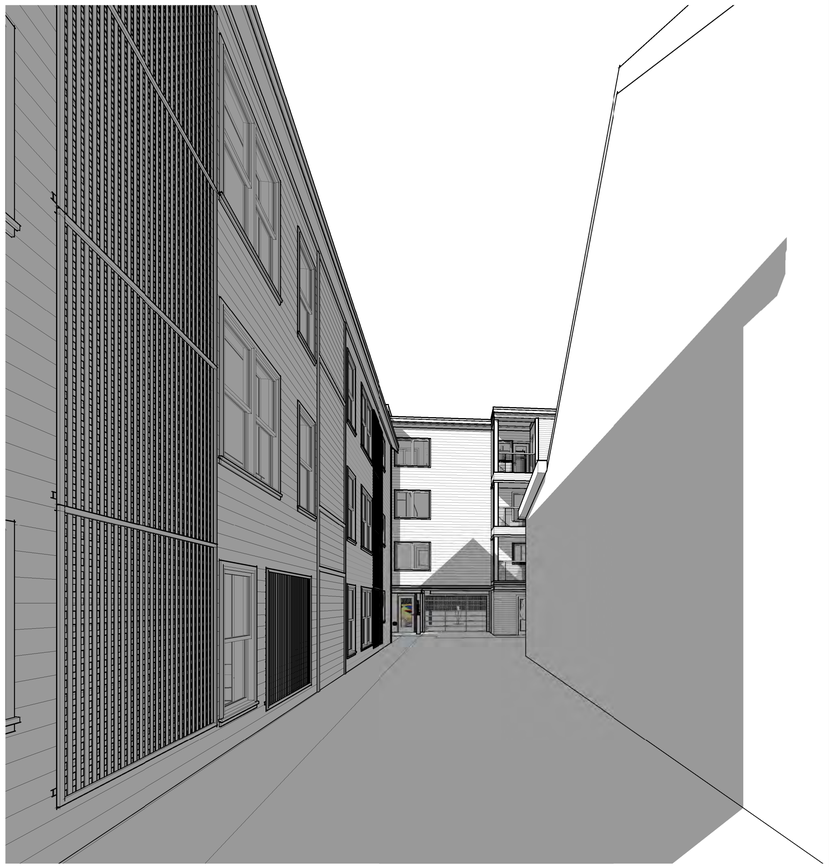
4/16/2020 11:55:17 AM

A View for Walnut Street Rendering

D View from Senior Housing for Rendering Copy 1

B View 126 + 128R North (elevation 176"

C Street View 126 + 128R North (Eye at 5'-0")



E View from North Street Sidewalk 126 & 128R

126 & 128R North Street

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No.	Description	Date

PERSPECTIVES 126

Project number	18-16_128R North
Date	04.16.20
Drawn by	Author
Checked by	Checker

A-5.3

Scale

4/16/2020 10:25:51 AM

A North Street View Showing Entrances

B Main Entrance 126

126 & 128R North Street

NEW CONSTRUCTION

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No.	Description	Date

PERSPECTIVES 126

Project number	18-16_128R North
Date	04.16.20
Drawn by	Author
Checked by	Checker

A-5.4

Scale

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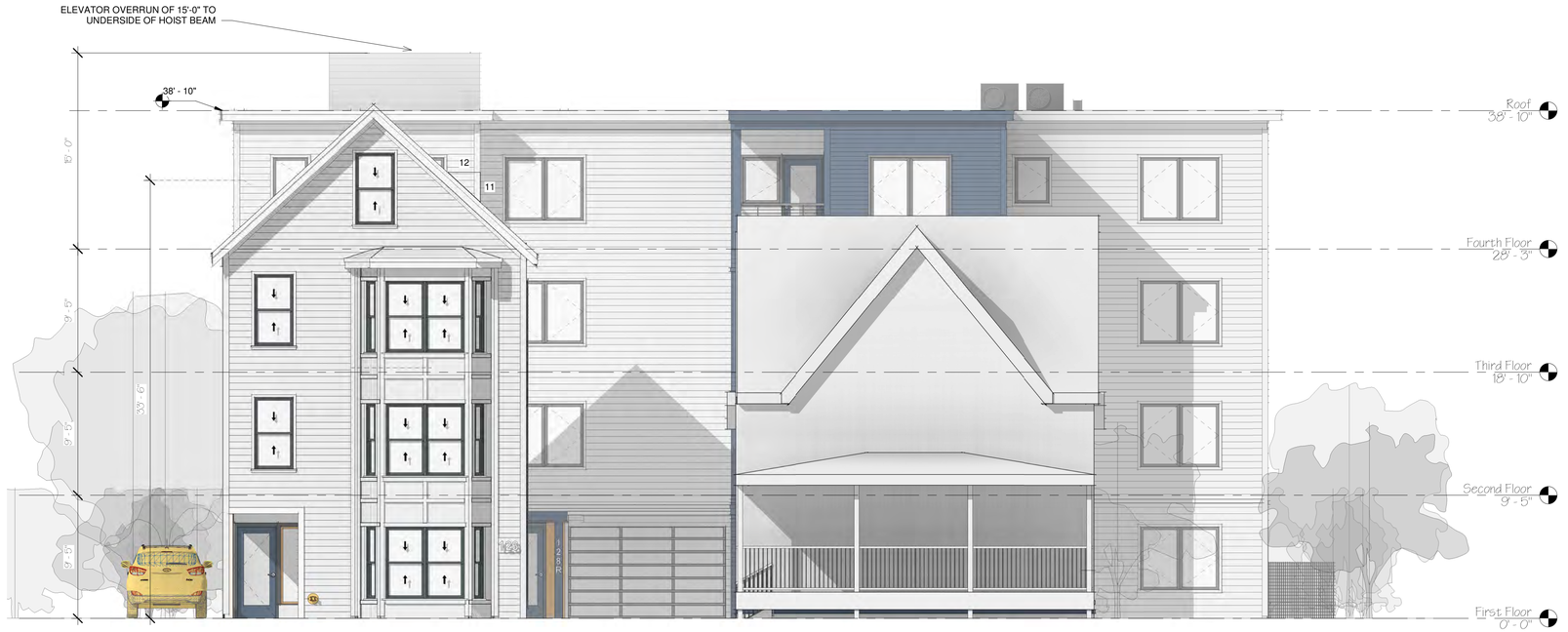

A South Elevation 126 & 128
3/16" = 1'-0"

B North Elevation 126 North
3/16" = 1'-0"

C East Elevation 126 North
3/16" = 1'-0"

126 & 128R North Street

NEW CONSTRUCTION

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No.	Description	Date

SOUTH, NORTH & EAST 126

Project number	18-16_128R North
Date	04.16.20
Drawn by	Author
Checked by	Checker

A-2.3

Scale 3/16" = 1'-0"

4/16/2020 10:02:22 AM

A West Elevation 126 North
3/16" = 1'-0"

126 & 128R North Street

NEW CONSTRUCTION

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No.	Description	Date

WEST ELEVATION 126

Project number	18-16_128R North
Date	04.16.20
Drawn by	Author
Checked by	Checker

A-2.4

Scale 3/16" = 1'-0"

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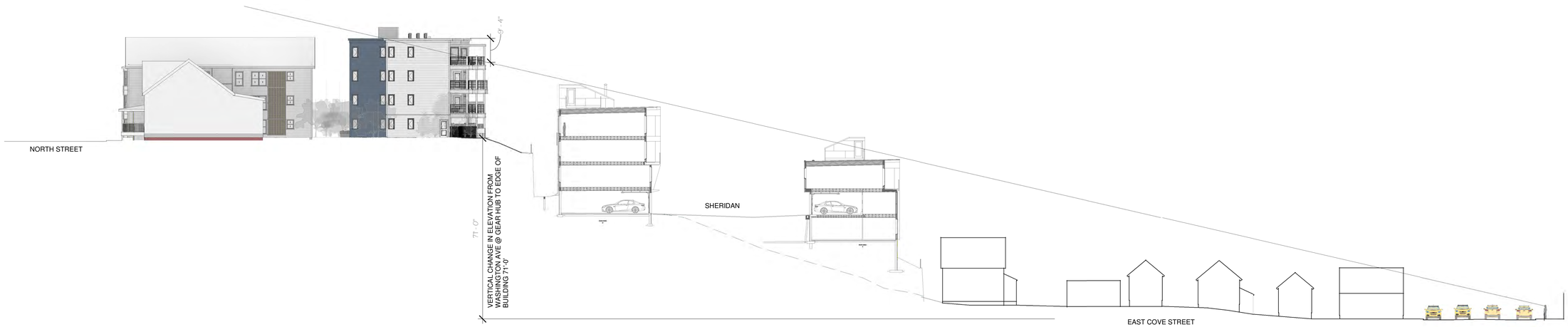

EDGE OF BUILDING TO SIDEWALK ON FAR SIDE OF WASHINGTON AVE - 416'-0" HORIZONTALLY

A SITE SECTION NORTH STREET TO WASHINGTON AVENUE
1" = 20'-0"

ENTOURAGE 'FLORENCE' IS 5'-6" TALL. IF FLORENCE WERE TO STAND ON THE FAR SIDEWALK OF WASHINGTON AVENUE AND LOOK UP TOWARDS NORTH STREET THEY WOULD BE ABLE TO SEE THE TOP OF THE DECK RAIL AT 128R NORTH AND THE ELEVATION BEYOND AT A DISTANCE OF 435'-0" (HYPOTENUSE). THE REAR FACE OF THE BUILDING WOULD BE 418'-0" FROM HER HORIZONTALLY AND 71'-0" VERTICALLY*. THE MAJORITY OF THEIR SITE LINE WOULD BE CONSUMED BY THE MUNJOY HEIGHTS PROJECT (ALONG SHERIDAN STREET). THE DASHED LINE SHOWS THE CHANGE IN TOPOGRAPHY CREATED BY THE MUNJOY HEIGHTS PROJECT. THE ENTOURAGE IS ALSO SHOWN WITHIN THE FOURTH FLOOR OF THE MUNJOY HEIGHTS PROJECT LOOKING AT THE BACK OF 128R. THIS INDIVIDUAL IS 31'-0" AWAY FROM THE FACE OF DECK AND THEIR EYES WOULD BE 5'-0" ABOVE THE GRADE OF PARKING. THE PERSPECTIVE SEEN BY THIS PERSON IS SHOWN ON B/A-5.2. NOTE THAT THE MUNJOY HEIGHTS PROJECT. NOTE THAT THE BUILDINGS IN THE MUNJOY HEIGHTS PROJECT ARE SITUATED ALONG A SPLINE AND VARY IN DISTANCE FROM THE REAR FACE OF 128R BUILDING. AT THE CLOSEST POINT THE EXTERIOR FACE OF THE MUNJOY HEIGHTS BUILDING TO THE FACE OF DECK IS 25'-0" AND AT THE WIDEST POINT IT IS 32'-0". AT THE POINT OF THIS SECTION THE BUILDING IS MODELED AT 28'-0" SEPARATION.

*BASED ON ACORN ENGINEERING SITE ELEVATIONS POINTS AT THE EDGE OF BUILDING ON 128R NORTH STREET AND PROJECTS CURRENTLY UNDER CONSTRUCTION ALONG WASHINGTON AVENUE. SITE SECTION THROUGH MUNJOY HEIGHTS OBTAINED FROM ENGINEER. EAST COVE STREET HOUSES WERE SITED USING A COMBIATION OF PORTLAND GIS DATA, ASSESSING DEPARTMENT MEASUREMENTS AND GOOGLE STREET VIEW IMAGES

126 & 128R North Street

NEW CONSTRUCTION

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No.	Description	Date

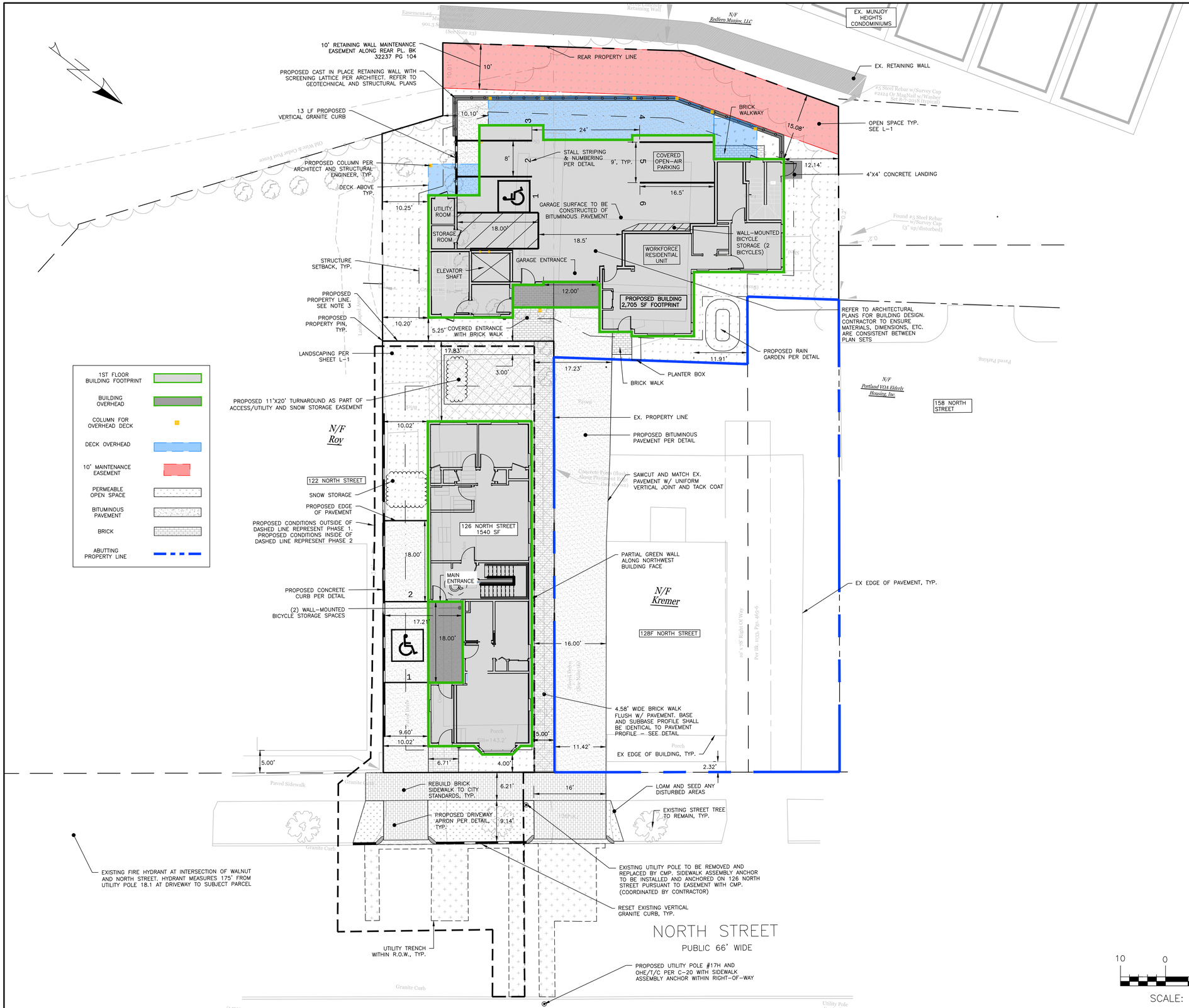
SITE SECTION

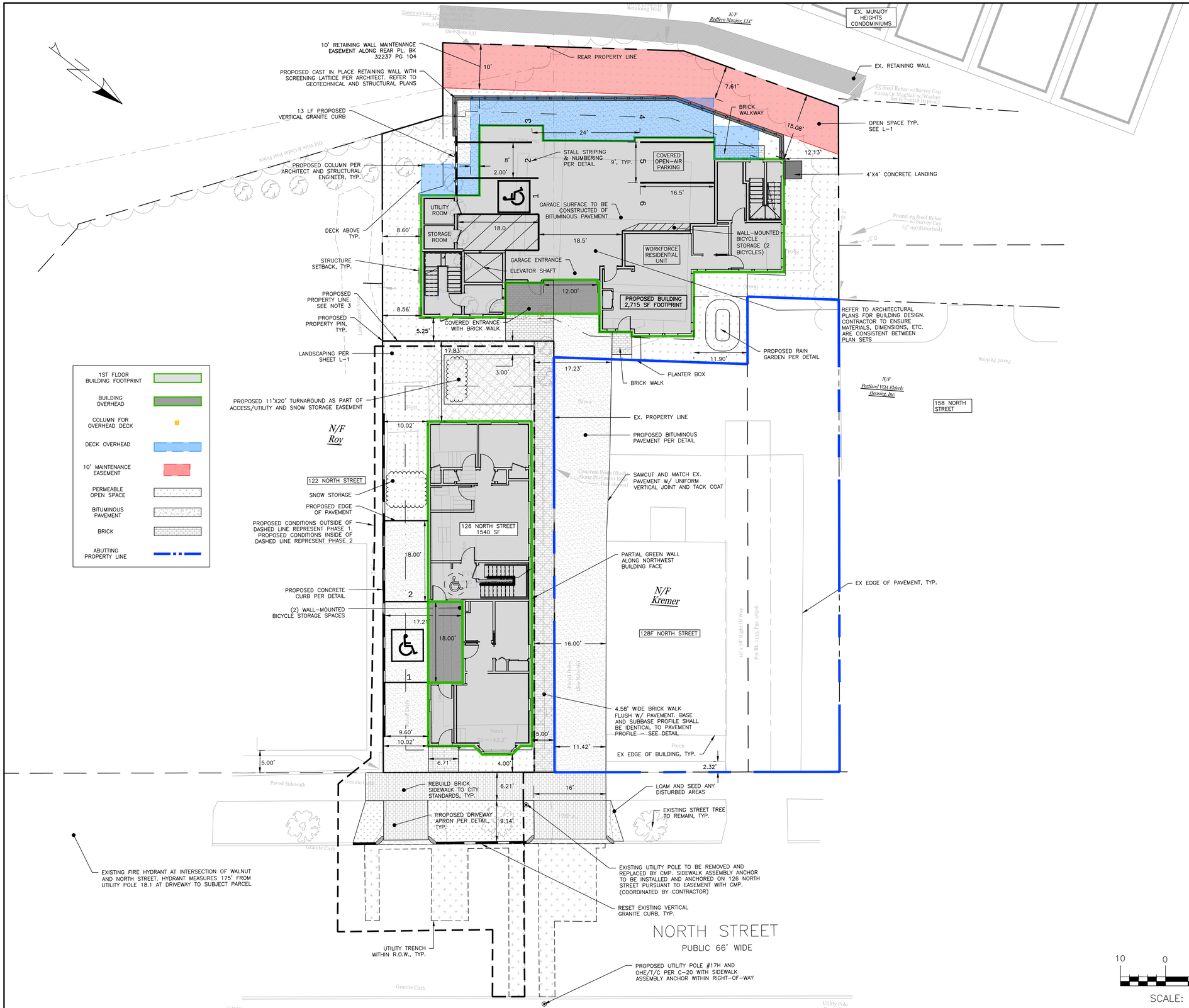
Project number	18-16_128R North
Date	04.16.20
Drawn by	Author
Checked by	Checker

A-3.2

Scale 1" = 20'-0"

4/16/2020 11:22:55 AM


10' RETAINING WALL MAINTENANCE EASEMENT ALONG REAR PL. BK 32237 PG 104
PROPOSED CAST IN PLACE RETAINING WALL WITH SCREENING LATTICE PER ARCHITECT. REFER TO GEOTECHNICAL AND STRUCTURAL PLANS
13 LF PROPOSED VERTICAL GRANITE CURB
PROPOSED COLUMN PER ARCHITECT AND STRUCTURAL ENGINEER, TYP.
DECK ABOVE TYP.
STRUCTURE SETBACK, TYP.
PROPOSED PROPERTY LINE, SEE NOTE 3
PROPOSED PROPERTY PIN, TYP.
LANDSCAPING PER SHEET L-1
PROPOSED 11'X20' TURNAROUND AS PART OF ACCESS/UTILITY AND SNOW STORAGE EASEMENT
N/F Roy
122 NORTH STREET
SNOW STORAGE
PROPOSED EDGE OF PAVEMENT
PROPOSED CONDITIONS OUTSIDE OF DASHED LINE REPRESENT PHASE 1. PROPOSED CONDITIONS INSIDE OF DASHED LINE REPRESENT PHASE 2
PROPOSED CONCRETE CURB PER DETAIL
(2) WALL-MOUNTED BICYCLE STORAGE SPACES
EXISTING FIRE HYDRANT AT INTERSECTION OF WALNUT AND NORTH STREET. HYDRANT MEASURES 175' FROM UTILITY POLE 18.1 AT DRIVEWAY TO SUBJECT PARCEL
1ST FLOOR BUILDING FOOTPRINT
BUILDING OVERHEAD
COLUMN FOR OVERHEAD DECK
DECK OVERHEAD
10' MAINTENANCE EASEMENT
PERMEABLE OPEN SPACE
BITUMINOUS PAVEMENT
BRICK
ABUTTING PROPERTY LINE
REAR PROPERTY LINE
N/F Redfern Munjoy, LLC
EX. MUNJOY HEIGHTS CONDOMINIUMS
EX. RETAINING WALL
BRICK WALKWAY
OPEN SPACE TYP. SEE L-1
#5 Steel Rebar w/Survey Cap #2124 Or MagNail w/Washer (Set 8-7-2018 Updated)
4'X4' CONCRETE LANDING
STALL STRIPING & NUMBERING PER DETAIL
9', TYP.
COVERED OPEN-AIR PARKING
GARAGE SURFACE TO BE CONSTRUCTED OF BITUMINOUS PAVEMENT
UTILITY ROOM
STORAGE ROOM
ELEVATOR SHAFT
GARAGE ENTRANCE
WORKFORCE RESIDENTIAL UNIT
WALL-MOUNTED BICYCLE STORAGE (2 BICYCLES)
PROPOSED BUILDING 2,705 SF FOOTPRINT
5.25' COVERED ENTRANCE WITH BRICK WALK
REFER TO ARCHITECTURAL PLANS FOR BUILDING DESIGN. CONTRACTOR TO ENSURE MATERIALS, DIMENSIONS, ETC. ARE CONSISTENT BETWEEN PLAN SETS
PROPOSED RAIN GARDEN PER DETAIL
PLANTER BOX
BRICK WALK
EX. PROPERTY LINE
PROPOSED BITUMINOUS PAVEMENT PER DETAIL
SAWCUT AND MATCH EX. PAVEMENT W/ UNIFORM VERTICAL JOINT AND TACK COAT
126 NORTH STREET 1540 SF
MAIN ENTRANCE
PARTIAL GREEN WALL ALONG NORTHWEST BUILDING FACE
N/F Kremer
128F NORTH STREET
EX EDGE OF PAVEMENT, TYP.
4.58' WIDE BRICK WALK FLUSH W/ PAVEMENT. BASE AND SUBBASE PROFILE SHALL BE IDENTICAL TO PAVEMENT PROFILE - SEE DETAIL
EX EDGE OF BUILDING, TYP.
N/F Portland VOA Elderly Housing, Inc
158 NORTH STREET
REBUILD BRICK SIDEWALK TO CITY STANDARDS, TYP.
PROPOSED DRIVEWAY APRON PER DETAIL, TYP.
LOAM AND SEED ANY DISTURBED AREAS
EXISTING STREET TREE TO REMAIN, TYP.
EXISTING UTILITY POLE TO BE REMOVED AND REPLACED BY CMP. SIDEWALK ASSEMBLY ANCHOR TO BE INSTALLED AND ANCHORED ON 126 NORTH STREET PURSUANT TO EASEMENT WITH CMP. (COORDINATED BY CONTRACTOR)
RESET EXISTING VERTICAL GRANITE CURB, TYP.
UTILITY TRENCH WITHIN R.O.W., TYP.
NORTH STREET
PUBLIC 66' WIDE
PROPOSED UTILITY POLE #17H AND OHE/T/C PER C-20 WITH SIDEWALK ASSEMBLY ANCHOR WITHIN RIGHT-OF-WAY
Found #5 Steel Rebar w/Survey Cap (3' up/disturbed)
Found #5 Steel Rebar w/Survey Cap (Flush)
Found #5 Steel Rebar w/Survey Cap (Bent)
Found #5 Steel Rebar w/Survey Cap (Flush)
Found #5 Steel Rebar w/Survey Cap (Flush)
Found #5 Steel Rebar w/Survey Cap (Flush


10' RETAINING WALL MAINTENANCE EASEMENT ALONG REAR PL. BK 32237 PG 104
PROPOSED CAST IN PLACE RETAINING WALL WITH SCREENING LATTICE PER ARCHITECT. REFER TO GEOTECHNICAL AND STRUCTURAL PLANS
13 LF PROPOSED VERTICAL GRANITE CURB
PROPOSED COLUMN PER ARCHITECT AND STRUCTURAL ENGINEER, TYP.
DECK ABOVE TYP.
STRUCTURE SETBACK, TYP.
PROPOSED PROPERTY LINE, SEE NOTE 3
PROPOSED PROPERTY PIN, TYP.
LANDSCAPING PER SHEET L-1
PROPOSED 11'X20' TURNAROUND AS PART OF ACCESS/UTILITY AND SNOW STORAGE EASEMENT
N/F Roy
122 NORTH STREET
SNOW STORAGE
PROPOSED EDGE OF PAVEMENT
PROPOSED CONDITIONS OUTSIDE OF DASHED LINE REPRESENT PHASE 1. PROPOSED CONDITIONS INSIDE OF DASHED LINE REPRESENT PHASE 2
PROPOSED CONCRETE CURB PER DETAIL
(2) WALL-MOUNTED BICYCLE STORAGE SPACES
EXISTING FIRE HYDRANT AT INTERSECTION OF WALNUT AND NORTH STREET. HYDRANT MEASURES 175' FROM UTILITY POLE 18.1 AT DRIVEWAY TO SUBJECT PARCEL
1ST FLOOR BUILDING FOOTPRINT
BUILDING OVERHEAD
COLUMN FOR OVERHEAD DECK
DECK OVERHEAD
10' MAINTENANCE EASEMENT
PERMEABLE OPEN SPACE
BITUMINOUS PAVEMENT
BRICK
ABUTTING PROPERTY LINE
N/F Redfern Munjoy, LLC
EX. MUNJOY HEIGHTS CONDOMINIUMS
REAR PROPERTY LINE
EX. RETAINING WALL
BRICK WALKWAY
OPEN SPACE TYP. SEE L-1
4'X4' CONCRETE LANDING
STALL STRIPING & NUMBERING PER DETAIL
COVERED OPEN-AIR PARKING
GARAGE SURFACE TO BE CONSTRUCTED OF BITUMINOUS PAVEMENT
UTILITY ROOM
STORAGE ROOM
WALL-MOUNTED BICYCLE STORAGE (2 BICYCLES)
WORKFORCE RESIDENTIAL UNIT
GARAGE ENTRANCE
ELEVATOR SHAFT
PROPOSED BUILDING 2,715 SF FOOTPRINT
COVERED ENTRANCE WITH BRICK WALK
REFER TO ARCHITECTURAL PLANS FOR BUILDING DESIGN. CONTRACTOR TO ENSURE MATERIALS, DIMENSIONS, ETC. ARE CONSISTENT BETWEEN PLAN SETS
PROPOSED RAIN GARDEN PER DETAIL
PLANTER BOX
BRICK WALK
N/F Portland VOA Elderly Housing Inc
158 NORTH STREET
EX. PROPERTY LINE
PROPOSED BITUMINOUS PAVEMENT PER DETAIL
SAWCUT AND MATCH EX. PAVEMENT W/ UNIFORM VERTICAL JOINT AND TACK COAT
126 NORTH STREET 1540 SF
PARTIAL GREEN WALL ALONG NORTHWEST BUILDING FACE
N/F Kremer
128F NORTH STREET
EX EDGE OF PAVEMENT, TYP.
4.58' WIDE BRICK WALK FLUSH W/ PAVEMENT, BASE AND SUBBASE PROFILE SHALL BE IDENTICAL TO PAVEMENT PROFILE - SEE DETAIL
EX EDGE OF BUILDING, TYP.
REBUILD BRICK SIDEWALK TO CITY STANDARDS, TYP.
PROPOSED DRIVEWAY APRON PER DETAIL, TYP.
LOAM AND SEED ANY DISTURBED AREAS
EXISTING STREET TREE TO REMAIN, TYP.
EXISTING UTILITY POLE TO BE REMOVED AND REPLACED BY CMP. SIDEWALK ASSEMBLY ANCHOR TO BE INSTALLED AND ANCHORED ON 126 NORTH STREET PURSUANT TO EASEMENT WITH CMP. (COORDINATED BY CONTRACTOR)
RESET EXISTING VERTICAL GRANITE CURB, TYP.
UTILITY TRENCH WITHIN R.O.W., TYP.
NORTH STREET
PUBLIC 66' WIDE
PROPOSED UTILITY POLE #17H AND OHE/T/C PER C-20 WITH SIDEWALK ASSEMBLY ANCHOR WITHIN RIGHT-OF-WAY
Found #5 Steel Rebar w/Survey Cap (3" up/disturbed)
#5 Steel Rebar w/Survey Cap #2124 Or MagNail w/Washer (Set Between Units)
Found #5 Steel Rebar w/Survey Cap #2124 Or MagNail w/Washer (Set Between Units)
Found #5 Steel Rebar w/Survey Cap (3" up/disturbed

MURRAY PLUMB & MURRAY
ATTORNEYS AT LAW

M E M O R A N D U M

TO: **City of Portland Planning Board**

FROM: **John C. Bannon, Esq. on behalf of Upright Properties, LLC**

DATE: **September 27, 2021**

RE: **126/128R North Street/Level III Site Plan and Subdivision/PL-000791-2019/Upright Properties, LLC, Applicant**

Legal Interpretation of Paragraph (d) of the Definition of "Eligible Housing" in Section 14-485 of the Land Use Code

A. Legal Analysis

Paragraph (d) of the Definition of "Eligible Housing" in Section 14-485 of Land Use Code provides that "Projects shall not be considered 'eligible projects' *solely* because they are *subject to* Section 14-487 (Ensuring Workforce Housing)." (emphasis added) It does not use the phrase "*if* they are subject to Section 14-487." Accordingly, paragraph (d) cannot be interpreted as declaring that *all* projects that are "subject to" Section 14-487 are, for that reason alone, excluded from the definition of "eligible project."

The question then becomes, what did the drafters mean when they stipulated that a project that would otherwise constitute an "eligible project" is excluded from that term if it would qualify "*solely*" because it is subject to Section 14-487?

The analysis begins with identifying what an "eligible project" is eligible *for*. The answer is, that such projects are eligible for the bonuses and reductions in development standards (hereafter the "Benefits") set forth in Section 14-488 and other provisions of the Land Use Code (such as the off-street parking requirement in Section 14-332.2(b)).

The next step is to identify the purpose of the Benefits. That purpose is to incentivize developers to include affordable and workforce housing *within* the main project; in other words, to provide "on-site" workforce housing units. That policy preference is most clearly expressed in the Statement of Purpose for Division 30 set forth in Section 14-484:

> The purpose of this division therefore is to offer incentives to developers to include units of affordable housing *within* development projects, thereby mitigating the impact of *market rate* housing construction on *the limited supply of available land* for

> suitable housing, and helping to meet the housing needs of all economic groups within the city.

(emphasis added) That purpose is also reflected in Section 14-487(e)(2):

> Workforce units are encouraged to be *integrated with the rest of the development*, should use a *common entrance* and should provide no indications from *common areas* that these units are workforce housing units.

(emphasis added).

The most reasonable explanation for why paragraph (d) was added to the definition of "eligible project" in Section 14-485 is that some projects that are merely "subject to" Section 14-487 do *not* promote the goal of increasing the amount of *on-site* workforce housing and therefore do not merit being rewarded by the Benefits.

A project is "subject to" Section 14-487 so long as it will "create ten or more dwelling units for rent or for sale…." Section 14-487(b). If it does, then it must comply with the requirements of Section 14-487(d).

There are three means by which a project may "comply" with Section 14-487(d). The first alternative is that "[a]t least ten percent (10%) of the units *in the project* shall meet the definition of workforce housing unit for sale or rent." (emphasis added).

However, the second alternative is for the project to pay a "fee-in-lieu as per (e)(4) below for any fractional value or providing an additional unit *on site."* (emphasis added). Section 14-487(e)(4) provides as follows:

> As an alternative to providing workforce housing units, projects may pay a fee in lieu of some or *all* of the units. In-lieu fees shall be paid into the Housing Trust fund as defined in Sec. 14-489. The fee for affordable units not provided shall be $ 100,000 per unit, adjusted annually in the same way as the fee under Division 29 for Housing Replacement.

(emphasis added) Accordingly, if a developer prefers to pay the in-lieu fee, the project will provide *no* workforce housing units *on site*. Because such a project would not promote the goal of including workforce housing on site, it is rational to exclude such a project from being eligible for the Benefits that are intended to reward the provision of on-site workforce housing units.

Third, a developer may comply with Section 14-487 by creating workforce housing units *off-site*. Although no provision of the Code expressly provides that off-site workforce housing units may satisfy Section 14-487, Section 14-487(e)(3) in fact refers to workforce units that are "off-site." Moreover Section 14-487(f)(3) mandates that the City develop "[r]egulations to further specify the details of this section" with regard to "[g]uidelines for meeting the requirement that *off-site* units be 'in the same neighborhood'". (emphasis added). The City in fact adopted, among other regulations, the *Inclusionary Zoning Implementation Guidelines for Developers of Homeownership Housing.*[1] Those Guidelines expressly provide that "A Developer may choose to satisfy the Workforce Unit requirements by providing these units off-site through the construction of new units, the restriction of existing market rate units, or the conversion of non-residential uses." Such off-site units must be "located within the same Census Block Group as the parcel from which the Project triggering the creation of Workforce Units is located or within 1,500 feet of the Project;…" *Id.* However, because such off-site units likewise do not promote the goal of including workforce housing *on site*, provision of *off-site* workforce units should not render the project "eligible" for the Benefits.

That paragraph (d) of the definition of "eligible project" Section 14-485 is intended to include, within the definition of "eligible projects," projects that are "subject to" Section 14-487 but which include workforce units *on-site,* is expressly confirmed by Section 14-488(g). That regulation provides that: "Projects that *are* subject to 14-487 that *choose* to provide the required workforce housing *on site* are eligible for a 25% increase in total permitted units."… (emphasis added)

An additional contextual clue is offered by paragraph (c) of Section 14-485's definition of "eligible project." Paragraph (c) states that "[a]ffordable housing units for sale or rent may not differ in *exterior* design from other units *within* an eligible project." Uniformity of *exterior* design would be irrelevant unless paragraph (c) is intended to refer to *on-site* affordable housing units. Significantly, the *Inclusionary Zoning Implementation Guidelines for Developers of Homeownership Housing* do not require off-site workforce units to have the same external appearance as units within the main project.

Because projects with on-site workforce units fulfil the goal of integrating workforce housing *within* new residential projects, it is rational for the Land Use Code to grant such projects the density bonus described in Section 14-488(g) and any other Benefits granted to "eligible projects" by other sections of the Code.

[1] The City also developed parallel regulations for rental housing in the *Inclusionary Zoning Implementation Guidelines for Developers of Rental Housing.*

One such section is Section 14-332.2(b), governing off-street parking spaces. That section reads as follows:

> *Incentives for affordable-housing*-parking reductions: for each low-income or workforce housing unit for rent or sale *within* an eligible project under the Affordable Housing Ordinance established in Division 30 of this article, no more than one (1) parking space shall be required. The planning board may establish a parking requirement for affordable housing units that is less than one (1) parking space per affordable housing unit, regardless of the size of the structure.

(emphasis added). On its face, Section 14-332.2(b) is intended to provide "incentives" for a developer to include affordable housing "*within*" a residential project. Indeed, the only circumstance in which it would be rational to reduce off-street parking requirements for a project "subject to Section 14-487*"* is if the affordable dwelling units are located *on-site*. If the developer elected to pay a fee-in-lieu of providing workforce housing, there would be no such units that would require parking spaces. Likewise, if the workforce housing is located off-site, there would be no rational reason to reduce the amount of parking spaces required for the *principal* project site.

B. Application of the Above Legal Analysis to the Upright Project

Because the Upright project proposes a total of 12 dwelling units, then under Section 14-487(d), the project is required to provide the equivalent of 1.2 workforce housing units either (a) on-site, (b) through an in-lieu payment of $ 100,000 per unit or fraction thereof, or (c) off-site.

Upright has chosen to comply with Section 14-487(d) by including two workforce housing units within the project itself: one in the building at 126 North Street, and another in the building at 128R North Street. Upright has thereby exceeded the minimum requirements of Section 14-487(d) in two ways: (a) the two workforce housing units exceed the minimum numerical requirement of 1.2 units of workforce housing, and (b) the two workforce housing units are provided on-site rather than through an in-lieu payment or the creation of workforce housing units off-site.

Upright's project satisfies the definition of "eligible project" set forth in Section 14-485 because:

a. multi-family dwellings are a permissible use in the R-6 Zone (Section 14-136(a)(2)) and Munjoy Hill Neighborhood Conservation Overlay District (Section 14-140.5).

b. it consists of multi-family dwellings and will not be located in an R-1 or R-2 Zone;

c. it creates new dwelling units, among which is at least one (in fact, two) workforce housing units for rent or sale, through new construction, which units do not differ in exterior design from other market-rate units within the project; and

d. is not merely "subject to" Section 14-487 but *exceeds* Upright's minimum obligations under Section 14-487(d) by providing two, on-site workforce dwelling units.

Under Sections 14-332.1(k)(1) and (4), although the minimum off-street parking requirement in the R-6 Zone is one space per unit, "no parking shall be required for the first three units…." Under those sections, the Upright Project would need to supply a maximum of 9 off-street parking spaces.

However, under Section 14-332.2(b), because the Upright project meets the definition of an "eligible project" contained in Section 14-485, the Planning Board had discretion to "establish a parking requirement for affordable housing units for rent or sale…that is less than one (1) parking space per affordable housing unit, regardless of the size of the structure." Section 14-332.2(b) therefore authorized the Planning Board to reduce the number of required parking spaces from 9 to 8.

PL-000791-2019, Sept. 28 Planning Board Meeting PC2

Ann Casady
Sep 27, 2021, 9:57:22 AM

to planni...@portlandmaine.gov, Peter Pitegoff
To the City of Portland Planning Board:

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

Thank you for your service and your serious consideration from concerned neighbors.

With regards to the hearing about the development at 126 and 128R North Street (PL-000791-2019) and the 80B appeal judgement where the Maine Superior Court concluded that the Planning Board failed to demonstrate that the proposed development of Upright Properties was an “eligible project“ under Portland's affordable housing ordinance, Section 14-487 of the City Land Use Code, which would be required to permit a reduction in the number of off-street parking spaces.

As residents of Munjoy Hill, it concerns us that the planning board and staff only look at whether a proposed building meets the code requirements. I hope that the existence of a planning staff and a planning board mean that there are long-term urban plans and goals for a rapidly growing city like Portland. If the goal is to add more housing units, other considerations need to be taken into account as well. More housing units mean more cars, more street congestion for an infrastructure that was created for a neighborhood with single-family homes and some triple-family housing with yards and driveways. As we watch large multi-unit buildings enter into these neighborhoods, consideration of unit-owners' cars and their guests’ cars can not be ignored.

128R and 126 North Street are within the same block of the East End Elementary School. Each day 2 to 3 times a day multiple School buses, children, parents in cars dropping children off at the school travel along that very section of North Street. Cars are parked on both sides of that street already with very few available spaces. When a school bus travels down that block it stops two-way traffic. With 12 more housing units being added to that block, it unfairly burdens the street with more cars and traffic. Isn’t planning about understanding the environment and the context? Have traffic studies been done to understand the impact of more units on that block?

With the planning board's approval of these 12 units to this particular block within this neighborhood, I urge you to require this developer to at least provide the required number of off-street parking spaces of 9.

Thank you for your consideration,

Ann Casady & Peter Pitegoff
205 Sheridan Street
Portland, Maine 04101

PC3

Comment letter regarding 128R North St - please add to comments for 9/28/21 Planning Board Workshop

Sue Robins

9:53 AM
to planni...@portlandmaine.gov

Hello,

Please add the attached letter to public comments regarding item 5(i) of the agenda for the Portland Planning Board Hearing to be held at 7 pm on September 28, 2021.

Susanne Robins M.S. Ed.
President
Munjoy Heights Condominium Association
310-529-7673 (m)
suerobins@twc.com
she/hers

TO: The Portland, Maine City Planning Board

FROM: The Munjoy Heights Condominium Association Board of Directors

SUBJECT: 09/28/2021 Workshop regarding: Level III Site Plan and Subdivision; 126 and 128 North Street; Upright Properties, LLC., and Josh Wojcik, Co-Applicants.

DATE: Sep 28, 2021

In the 80B appeal of this matter, the Maine Superior Court concluded that the Planning Board failed to demonstrate that the proposed development of Upright Properties at 126 and 128R North Street was an “eligible project” under Portland's affordable housing ordinance, Section 14-487 of the City Land Use Code, which would be required to permit a reduction in the number of off-street parking spaces. Notwithstanding this requirement, the Planning Board allowed a reduction in off-street parking spaces from 9 to 8. Because the Planning Board had not established the necessary finding that the proposed development met the definition of “eligible project” pursuant to Section 14-485 of the Code, the court remanded the matter for explanation of the rationale for reducing the number of parking spaces.

In its report dated September 24, 2021, the Planning Department staff is now offering a post hoc rationalization for reducing the required number of parking spaces, arguing that the project meets subdivision (d) of the definition of “eligible,” which merely states that "Projects shall not be considered “eligible projects” solely because they are subject to Section 14-487 (“Ensuring Workforce Housing”)." But in this case, staff cites only the developer’s compliance with Section 14-487 as the rationale for claiming the development is an “eligible project." Section 14-487 mandatorily applies to all developments of 10 units or more, regardless of whether any such project is “eligible” for additional benefits or incentives. Staff bases its conclusion solely on applicant's compliance with Section 14-487 to construct the required “onsite affordable units.” See Planning Board Report dated 9/24/2021, page 5 (Staff comment under heading (d)). Staff attempts to cast Upright’s development as something broader than mere compliance with 14-487 by describing the developer’s compliance with the ordinance — the provision of the required affordable units — as somehow preferable to simply paying a fee in lieu, another option under the ordinance. But this is a distinction without meaning: In either case, in violation of Section 14-485(d), Upright’s project would be considered an "eligible project” solely because it is subject to Section 14-487.Under the Planning Department's rationale, this means that anytime a single affordable unit is constructed rather than pay an "in lieu of” fee as is allowed by the ordinance, the project would be considered eligible and would have the right to a reduction in off-street parking requirements. By asserting this rationale, the Planning Department nullifies Section 14-485(d), which requires that for an eligible project to receive additional incentives under the affordable housing ordinance there must be something greater than simply meeting the Section 14-487 minimum standards required of all projects of 10 or more units in the City.

Because the post hoc rationalization offered by the Planning staff is contrary to the purposes of Portland's affordable housing ordinance (Section 14-487 of the City Land Use Code), this rationalization should be rejected. The reduction in the required number of parking spaces for this project does nothing to incentivize or increase affordable units — it is simply an additional giveaway to this particular developer. All of the benefits and bonuses provided in this matter have done nothing but permit the shoehorning of an oversized development into a small backyard lot lacking street frontage and access from a public street, including waivers and bonuses resulting in reduced parking space dimensional requirements, increased building height, and decreased driveway width. To now allow for an additional reduction in the required number of parking spaces does nothing to further City policies or provide an incentive to increase affordable housing.

Respectfully submitted,

Munjoy Heights Condominium Association Board of Directors

PC4

Deny the Reduction in Parking Requirement at 126 North Street

Lindsay Steven Mann

10:43 AM
to planni...@portlandmaine.gov

Members of the Planning Board -

The project you approved (PL-000791-2019) at your September 8, 2020 meeting has changed many times in scope, and it has changed once again since that meeting.

Josh Wojcik and Upright Properties relied on Portland's Affordable Housing Ordinance as justification for the Planning Board's elimination of a required parking space. Wojcik is **not** creating an affordable housing project that benefits from relaxation of parking standards. He proposes to build **market rate** units at 126 that contain a "workforce housing unit" as required by the city. His inclusion of the workforce unit at 128 is merely a ploy to grant himself a height increase to 45' and an additional 2 luxury units. If you believe that these units (other than the workforce unit) will remain affordable then you are absolutely kidding yourselves. This is an example of someone cheating the system (under the guise of creating affordable housing) for profit. It is egregious and unethical, and you approved it.

The Planning Board made costly and consequential errors approving this project in the first place. More specifically, it had no basis to reduce the parking standard required by its own ordinance.

When a fence is erected along the Kremer Right of Way in October, Wojcik will no longer have the 16 foot access to 128 as required by the fire department. He wants to eliminate parking at 126 so he can wrap cars around 126 and into 128 as constructed. Not only is this an overburdening of one driveway that is inconsistent with Munjoy Hill housing design - **in a school zone** - but it is a gratuitous and unlawful application of the Affordable Housing Ordinance.

You now have the opportunity to do the right thing:

1. Deny this reduction in parking requirement
2. Demand the applicant complete a full traffic study of the school zone on North Street
3. Require resubmission of both 128 and 126 applications to include the loss of 16' vehicular access

Lindsay Mann
122 North St.

PC5

Testimony for 126/128R North Street (PL-000791-2019

Beverly Bookin

11:44 AM (1 hour ago)
to planni...@portlandmaine.gov

Please accept the attached letter of testimony regarding this case to the public record for this evening's hearing. Thank you.

September 28, 2021

TO: City of Portland Planning Board

FROM: Beverly Bookin, 203 Sheridan Street, Portland ME 04101

Dear Chair Mazer and Fellow Board Members:

My husband and I only recently purchased a townhouse in Munjoy Heights immediately west of the proposed Uplift North Street Project (UNSP) on property at 126/128R North Street. As a result, we were not residents at the time that approval of the project was granted, but if we had been, we would have had significant reservations.

However, as a retired urban planner from Portland, Oregon, my analysis of the local Land Use Code and public record for this project suggest that the problem predates the UNSP project approval with the City's adoption of the Munjoy Hill Neighborhood Conservation Overlay (MHNCO) Zone that adopts R6 residential zoning for the entire neighborhood. The R6 zone allows one dwelling unit (du)/725 square feet (sf) of site area, or 60 du/acre (43,560 sf/725). This density far exceeds that of the existing neighborhood, which I estimate to be between 12-15 du/acre. With 29 units on 1.5 acres, Munjoy Heights has a residential density of 20 du/acre, which is on the high end of the neighborhood, so the R6 zoning is three times denser.

Because Munjoy Hill has stable, even escalating, property values, redevelopment at the R6 density will only occur on scattered, generally small vacant or under-developed lots. The UNSP is a perfect example where 12 du are allowed by right on a project site of less than 10,000 sf.

The wisdom of the re-zoning project to encourage infill housing notwithstanding, existing property owners have the right to demand that infill residential projects meet reasonable development standards for setbacks, height, lot coverage and minimum parking that minimize to the degree possible the adverse impacts associated with scale and function, the latter including reduced solar access, increased stormwater run-off and parking spill-over onto neighboring public streets. In granting several waivers to UNSP for the project, the City has failed to address the legitimate concerns of existing property owners about UNSP's deleterious impacts.

In my professional opinion, the Superior Court was correct in rejecting the City's legal findings of fact as inadequate to justify a parking reduction. Given the impact of the project on neighboring properties, I do not believe that there is sufficient justification for revised findings of fact to satisfy the Court.

So what remediation is possible in this case? The six-unit condominium on 128R North Street is under construction and its floor plate and, thus, on-site parking supply, fixed. As the second phase of development on 126 North Street is not yet underway, we ask that the Planning Commission consider revision of the approval for that phase either to reduce the approved number of units or increase the on-site parking.

Having been a fellow planning commissioner in another community, I realize that Planning Commissioners often find it challenging to resolve genuine disputes between applicants and surrounding neighbors, but that's our job. Neighbors of UNSP have raised legitimate concerns about the reduction of on-site parking that deserve to be addressed, as the Superior Court has demanded in its remand. Thank you for the opportunity to present this testimony.

Sincerely,

Beverly Bookin

128R and 126 North St. hearing 9/28/21 PC6

Leslie Hart

12:39 PM (28 minutes ago)

to planni...@portlandmaine.gov

To the members of the Portland Planning Board

This is to encourage the board to adhere to the established required number of nine off-street parking places for (PL-000791-2019). There are good reasons for this requirement, namely to avoid increased congestion on our roads. This is especially important on North Street, given the proximity of the development to the East End School where morning and afternoon traffic is already heavy.

There is no reason to grant the developer an exception to this already-established requirement. Blind adherence to the mantra of “more housing” only results in negatively impacting the quality of life in Portland.

Thank you,

Leslie Hart & Kevin Schochat
215 Sheridan St.
Portland ME 04101
917.364.3682

126/128R NORTH STREET REDEVELOPMENT

UPRIGHT PROPERTIES, LLC
PORTLAND, MAINE

LEGEND

EXISTING		PROPOSED
REFER TO THE EXISTING CONDITIONS PLAN FOR ADD'L INFO	UNDERDRAIN	
	UTILITY PAVEMENT CUTS	
	RETAINING WALL	
	SEDIMENTATION BARRIER	
	EDGE OF PAVEMENT	
	CURB	
	SIGN	
	LAMP OR LIGHT POLE	
	UTILITY POLE	
	GUY WIRE	
	WATER VALVE	
	FIRE HYDRANT	
	SEWER MANHOLE	
	CATCH BASIN/FIELD INLET	
UE UE	UNDERGROUND ELECTRIC LINE	UGE
W W	UNDERGROUND WATER LINE	UW UW
64	MINOR CONTOURS (1 FT)	64
65	MAJOR CONTOURS (5 FT)	65
GAS	GAS LINE	GAS
	UNDERDRAIN	
	STORM DRAIN LINE	
S S	SEWER LINE	S S
	EXISTING/PROPOSED BUILDING	
OHE/T/C	OVERHEAD ELECTRICAL/TELEPHONE/CABLE	OHE/T/C
	PROPERTY LINE	
	SETBACKS	

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CALL BEFORE YOU DIG
1-888-DIG-SAFE
1-888-344-7233

PERMIT LEVEL
NOT ISSUED FOR
CONSTRUCTION

UTILITIES

SEWER:

DEPARTMENT OF PUBLIC WORKS (DPW)
250 CANCO ROAD
PORTLAND, MAINE 04103
CONTACT: KEITH GRAY, P.E.
(207) 874-8834

WATER:

PORTLAND WATER DISTRICT
225 DOUGLASS STREET
PO BOX 3553
PORTLAND, MAINE 04104
ATTN: MEANS DIVISION
(207) 774-5961

ELECTRIC:

CENTRAL MAINE POWER COMPANY (CMP)
162 CANCO ROAD
PORTLAND, MAINE 04103
CONTACT: PAUL DUPERRE
(207) 828-2882

TELEPHONE:

CONSOLIDATED COMMUNICATIONS
5 DAVIS FARM ROAD
PORTLAND, MAINE 04103
CONTACT: PAT MORRISON
(207) 745-9363

CABLE:

SPECTRUM CABLE
22 INDUSTRIAL PARK ROAD
SACO MAINE, 04072
CONTACT: MARK PELLETIER
(877) 546-0962

NATURAL GAS:

UNITIL SERVICE CORP
1075 FOREST AVENUE
PORTLAND, ME 04103
CONTACT: BRIDGET HARMON
(207) 541-2536

PROJECT TEAM

DEVELOPER:

UPRIGHT FRAMEWORKS, LLC
PORTLAND MAINE
CONTACT: JOSH WOJCIK
(207) 749-9656

ARCHITECT:

DEXTROUS CREATIVE
PORTLAND, MAINE
CONTACT: TRACIE REED, R.A.
(207) 409-0459

SURVEYOR:

NADEAU LAND SURVEYS
PORTLAND, MAINE
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(207) 878-7870

STRUCTURAL ENGINEER:

STRUCTURAL INTEGRITY CONSULTING ENGINEERS, INC.
PORTLAND, MAINE
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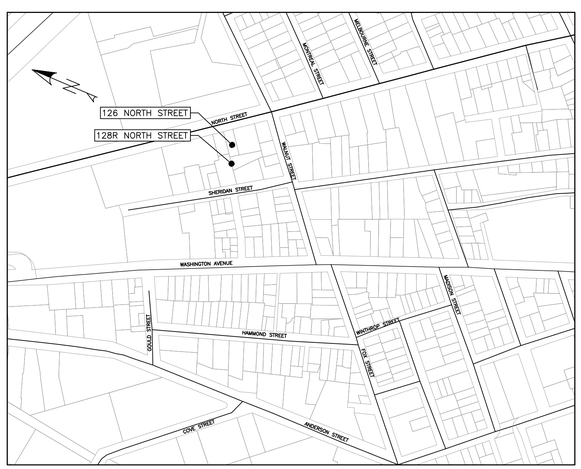
GEOTECHNICAL ENGINEER:

SUMMIT GEOENGINEERING SERVICES
LEWISTON, MAINE
CONTACT: BILL PETERLEIN, P.E.
(207) 318-7761



VICINITY MAP
NOT TO SCALE

ABBREVIATIONS

PARTIAL LIST OF ABBREVIATIONS AND THEIR CORRESPONDING MEANING. PLEASE CONTACT THE ENGINEER FOR ANY CLARIFICATION

APPROX.	APPROXIMATE
BC	BOTTOM OF CURB
BMP	BEST MANAGEMENT PRACTICE
BOT.	BOTTOM
CAD	COMPUTER AIDED DESIGN
CB	CATCH BASIN
CF	CUBIC FOOT
CIP	CAST IN PLACE
CM	CONSTRUCTION MANAGER
CMP	CENTRAL MAINE POWER
CONC.	CONCRETE
CY	CUBIC YARD
DIP	DUCTILE IRON PIPE
DIA.	DIAMETER
DIM.	DIMENSION
EA.	EACH
ELEC.	ELECTRICAL
ELEV.	ELEVATION
EQUIV.	EQUIVALENT
EST.	ESTIMATE
EX.	EXISTING
FFE	FINISH FLOOR ELEVATION
FT.	FEET
GAL.	GALVANIZED
I.B.C.	INTERNATIONAL BUILDING CODE
ID	INNER DIAMETER
IN.	INCH
INV.	INVERT
IZ	INCLUSIONARY ZONING
L	LENGTH
MAX.	MAXIMUM
M.E.P.	MECHANICAL, ELECTRICAL, PLUMBING DESIGNER
MDOT	MAINE DEPARTMENT OF TRANSPORTATION
MFG.	MANUFACTURED
MH	MANHOLE
MIN.	MINIMUM
O.C.	ON CENTER
OD	OUTSIDE DIAMETER
OHE/T/C	OVERHEAD ELECTRIC/TELEPHONE/CABLE
PC	PRECAST
PE	PROFESSIONAL ENGINEER
PL	PROPERTY LINE
PLS	PROFESSIONAL LAND SURVEYOR
PROP.	PROPOSED
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
PWD	PORTLAND WATER DISTRICT
R	RADIUS
RD	ROOF DRAIN
RET.	RETAINING
ROW	RIGHT OF WAY
S	SLOPE
SD	STORM DRAIN
SDR	STANDARD DIMENSION RATIO
SF	SQUARE FEET
SMH	SEWER MANHOLE
SPEC.	SPECIFICATION
TC	TOP OF CURB
TW	TOP OF WALL
TYP.	TYPICAL
UD	UNDERDRAIN
UGE	UNDERGROUND ELECTRIC
DCVA	DOUBLE-CHECK VALVE ASSEMBLY

ISSUED FOR	BY DATE
LEVEL III SITE PLAN	WHS 8/7/19
PHASE II UPDATE	WHS 10/29/19
COMMENT RESPONSE	WHS 12/18/19
COMMENT RESPONSE 2	WHS 2/24/2020

DRAWING NAME: COVER SHEET & LEGEND
PROJECT NAME: 128R NORTH STREET REDEVELOPMENT
CLIENT: UPRIGHT PROPERTIES, LLC
PO BOX 833 WILTON, ME 04294

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ACORN ENGINEERING, INC.
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FILE: 1116_CIVIL
JN: 1116
SCALE: NTS
DESIGNED BY: SJL
DRAWN BY: ZMS
CHECKED BY: WHS

STATE OF MAINE
WILLIAM H. SAVAGE
No. 11140
REGISTERED PROFESSIONAL ENGINEER
2-13-2020

DRAWING NO.
C-01

GENERAL NOTES:

1. THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANIES AND DIG SAFE AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION FOR UTILITIES. OTHERWISE IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF UNDERGROUND UTILITIES AND LOCATE ANY POTENTIAL CONFLICTS WITH THE APPROVED PLANS PRIOR TO CONSTRUCTION.
2. THE CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF ALL EROSION CONTROL MEASURES SHOWN ON THE PLAN. IF DEEMED NECESSARY BY THE OWNER OR OWNER'S REPRESENTATIVE, ADDITIONAL EROSION CONTROL MEASURES SHALL BE INSTALLED AT NO ADDITIONAL COST TO THE OWNER.
3. THE CONTRACTOR SHALL PREPARE THEIR OWN MATERIAL SCHEDULE BASED ON THE PLANS AND FIELD VERIFICATION BY THE CONTRACTOR. ALL MATERIAL SCHEDULES SHOWN WITHIN THE PLAN SET ARE FOR GENERAL INFORMATION ONLY.
4. ALL CONSTRUCTION METHODS, TESTING AND MATERIALS SHALL CONFORM TO THE MAINE DEPARTMENT OF TRANSPORTATION SPECIFICATIONS, THE CITY OF PORTLAND AND SERVICING UTILITY REQUIREMENTS, IF ANY. IN CASES WHERE THESE CONFLICT THE MOST STRINGENT SPECIFICATION SHALL APPLY AT NO ADDITIONAL COST TO THE OWNER.
5. THE SITE CONTRACTOR SHALL MAINTAIN A SET OF PAPER AND CAD DRAWINGS WHICH SHALL RECORD THE ACTUAL LOCATION, DIMENSIONS, ELEVATIONS, MATERIALS OF THEIR WORK, INDICATING THEREON ALL VARIATIONS FROM THE CONTRACT DRAWINGS. THE CONTRACTOR SHALL PROVIDE THE OWNER WITH ONE COMPLETE SET OF REPRODUCIBLE RECORD DRAWINGS, IN .DWG FORMAT AND PAPER, STAMPED ''AS-BUILT''. IF AUTOCAD NOT AVAILABLE EXCLUDE FROM BID IN WRITING.
6. THE CONTRACTOR WILL REMAIN SOLELY AND COMPLETELY RESPONSIBLE FOR ENFORCEMENT OF AND COMPLIANCE WITH 1) ALL CONTRACT PLANS AND SPECIFICATIONS, 2) APPLICABLE INTERNATIONAL BUILDING CODE REQUIREMENTS, AND 3) ALL SITE WORKING CONDITIONS AND SAFETY REQUIREMENTS, DAY AND NIGHT, FOR BOTH PERSONS AND PROPERTY, IN EACH CASE BOTH BY THE CONTRACTOR AND ITS SUBCONTRACTORS. THESE INCLUDE ALL OSHA, NIOSH, U.S. EPA AND ANY OTHER APPLICABLE GOVERNMENTAL REGULATIONS.
7. EXISTING CONDITIONS, BOUNDARY SURVEY, AND TOPOGRAPHY FROM THE PLAN TITLED ''PLAN DEPICTING THE RESULTS OF A BOUNDARY SURVEY & EXISTING CONDITIONS SURVEY'' (JOB NO. 2181902BTR1) BY NADEAU LAND SURVEYS DATED 8/22/2018 AND REVISED 5/1/2019.
8. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ACCESS TO THE SITE AT ALL TIMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY MARKINGS, SIGNAGE AND INCIDENTALS TO MAINTAIN A SAFE VEHICLE AND PEDESTRIAN ACCESS THOUGH THE LIFE OF THE PROJECT. THE CONTRACTOR SHALL NOTIFY THE PORTLAND PUBLIC SAFETY DIVISION ROUTINELY REGARDING TEMPORARY IMPACTS OR CHANGES TO SITE ACCESS CONDITIONS.
9. CONSTRUCTION MANAGEMENT PLAN BY ACORN ENGINEERING SHALL BE REFERRED TO FOR ANTICIPATED PROJECT SCHEDULE AND CLOSURES. TRAFFIC CONTROL SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
10. CONTRACTOR TO DETERMINE SOIL CLASSIFICATION INDEPENDENTLY FOR TRENCH, SHORING, AND OTHER SIMILAR CONSTRUCTION MEANS AND METHODS APPLICATIONS.
11. NO HOLES, TRENCHES, OR STRUCTURES SHALL BE LEFT OPEN OR UNATTENDED OVERNIGHT IN ANY AREA ACCESSIBLE TO THE PUBLIC OR WITHIN THE PUBLIC RIGHT-OF-WAY.
12. THE CONTRACTOR SHALL CONDUCT A PRE-CONSTRUCTION SURVEY OF INTERIOR SUBGRADE AND ABOVE GRADE ACCESSIBLE WALLS, CEILINGS, FLOORS, ROOF AND VISIBLE EXTERIOR AS VIEWED FROM THE GRADE LEVEL. THIS SHALL BE COMPLETED AT A MINIMUM FOR ADJACENT STRUCTURES. A COPY OF THE SURVEY SHOULD BE PROVIDED TO THE OWNER. DOCUMENT WITH PICTURES AT A MINIMUM.
13. THE CONTRACTOR SHALL SURVEY ROCK SURFACE PRIOR TO EXCAVATION AND DEVELOP VOLUME CALCULATIONS TO SHARE WITH ACORN ENGINEERING, IF ANY.

CIVIL SITE NOTES:

1. THE CONTRACTOR SHALL SUBMIT IN WRITING ANY REQUESTS TO MODIFY THE CONTRACT DOCUMENTS.
2. ALL SHOP AND ERECTION DRAWINGS SHALL BE CHECKED AND STAMPED BY THE CONTRACTOR PRIOR TO SUBMISSION FOR ENGINEER'S REVIEW. ANY UNCHECKED OR NON-STAMPED SUBMITTALS WILL BE RETURNED WITHOUT REVIEW.
3. CONTRACTOR SHALL THOROUGHLY INSPECT AND SURVEY EXISTING STRUCTURES AND SITE TO VERIFY CONDITIONS THAT AFFECT THE WORK SHOWN ON THE DRAWINGS. CONTRACTOR TO NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO PROCEEDING.
4. DETAILS SHOWN APPLY TO ALL SIMILAR CONDITIONS UNLESS OTHERWISE INDICATED.
5. ALTHOUGH ALL DUE DILIGENCE HAS BEEN APPLIED TO MAKE THE DRAWINGS AS COMPLETE AS POSSIBLE, NOT ALL DETAILS ARE ILLUSTRATED, NOR IS EVERY EXCEPTIONAL CONDITION ADDRESSED WITHIN THE CONTRACT DOCUMENTS.
6. ALL PROPRIETARY CONNECTIONS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
7. THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF ALL WORK, INCLUDING DIMENSION AND LAYOUT VERIFICATION, MATERIALS COORDINATION, SHOP DRAWING REVIEW, AND THE WORK OF ANY SUBCONTRACTORS.
8. UNLESS OTHERWISE SPECIFICALLY INDICATED, THE DRAWINGS DO NOT DESCRIBE OR DIRECT MEANS OR METHODS OF CONSTRUCTION.
9. THE CONTRACTOR, IN THE PROPER SEQUENCE, SHALL PERFORM OR SUPERVISE ALL WORK NECESSARY TO ACHIEVE THE FINAL COMPLETED STRUCTURE, AND TO PROTECT THE STRUCTURE, WORKMEN, AND OTHERS DURING THE CONSTRUCTION. SUCH WORK SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING FOR CONSTRUCTION EQUIPMENT, SHORING FOR EXCAVATION, FORMWORK, SCAFFOLDING, SAFETY DEVICES AND PROGRAMS OF ALL KINDS, SUPPORT AND BRACING FOR CRANES AND OTHER ERECTION EQUIPMENT.
10. DO NOT BACKFILL AGAINST RETAINING WALLS UNTIL SUPPORTING SLABS AND FLOOR FRAMING ARE IN PLACE AND SECURELY ANCHORED, UNLESS ADEQUATE BRACING IS PROVIDED. CONCRETE SHALL ALSO BE CURED FOR 28 DAYS PRIOR TO BACKFILLING.
11. TEMPORARY BRACING SHALL REMAIN IN PLACE UNTIL ALL FLOORS, WALLS, ROOFS AND OTHER SUPPORTING ELEMENTS ARE IN PLACE.
12. ALL PAVEMENT JOINTS SHALL BE SAWCUT AND APPLIED WITH TACK COAT PRIOR TO PAVING TO PROVIDE A DURABLE AND UNIFORM JOINT.
13. THE ENGINEER BEARS NO RESPONSIBILITY FOR THE ABOVE ITEMS, AND OBSERVATION VISITS TO THE SITE DO NOT IN ANY WAY INCLUDE INSPECTION OF THEM.

SPECIAL INSPECTION NOTES:

1. ALL SITE SOILS-RELATED WORK AND FOOTING EXCAVATIONS PRIOR TO PLACING FORMS SHALL BE REVIEWED BY THE GEOTECHNICAL ENGINEER.
2. SITE DRAINAGE SHALL BE REVIEWED BY THE PROJECT ENGINEER.
3. NORMAL REVIEWS WILL BE CONDUCTED BY LOCAL BUILDING DEPARTMENT.
4. NOTIFY 48 HOURS PRIOR TO REQUIRED REVIEW.
5. REQUIRED SPECIAL INSPECTIONS PER I.B.C. SECTION 1705.6 BY AN APPROVED SPECIAL INSPECTOR RETAINED BY OWNER. CONTRACTOR TO COORDINATE SPECIAL INSPECTIONS.
6. SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION.
7. DUTIES AND RESPONSIBILITIES OF THE SPECIAL INSPECTOR SHALL BE TO OBSERVE AND/OR TEST THE WORK ASSIGNED AND OUTLINED ABOVE FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS, ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION.
8. THE SPECIAL INSPECTOR SHALL FURNISH REGULAR REPORTS TO THE BUILDING OFFICIAL, THE ARCHITECT AND ENGINEER OF RECORD, AND OTHER DESIGNATED PERSONS. PROGRESS REPORTS FOR CONTINUOUS INSPECTION SHALL BE FURNISHED WEEKLY. INDIVIDUAL REPORTS OF PERIODIC INSPECTIONS SHALL BE FURNISHED WITHIN ONE WEEK OF INSPECTION DATES. THE REPORTS SHALL NOTE UNCORRECTED DEFICIENCIES, AND CHANGES TO THE APPROVED CONSTRUCTION DOCUMENTS AUTHORIZED BY THE ENGINEER OF RECORD.
9. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT WITHIN TEN DAYS OF THE FINAL INSPECTION STATING WHETHER THE WORK REQUIRING A SPECIAL INSPECTION WAS, TO THE BEST OF THE INSPECTOR'S KNOWLEDGE AND BELIEF, IN CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE I.B.C. WORK NOT IN COMPLIANCE SHALL BE NOTED IN THE REPORT.
10. SPECIAL INSPECTION FIRM SHALL BE EMPLOYED BY OWNER AND COORDINATED BY THE CONTRACTOR.

LAYOUT NOTES:

1. MONUMENTS DELINEATING PROPERTY LINES OR RIGHT OF WAYS SHALL NOT BE DISTURBED DURING CONSTRUCTION OPERATIONS. IN THE CASE A MONUMENT IS DISTURBED, AT THE CONTRACTOR'S EXPENSE, THE MONUMENT SHALL BE RESET TO ITS ORIGINAL LOCATION AND ELEVATION BY A REGISTERED LAND SURVEYOR.
2. ALL DIMENSIONS ON THE FOLLOWING SHEETS TAKE PRECEDENT OVER SCALED DIMENSIONS. EACH DRAWING WITH A BAR SCALE MEANS THAT THE DRAWING/DETAIL HAS BEEN SCALED AS ACCURATELY AS POSSIBLE, AND THE BAR SCALE IS FOR GENERAL REFERENCE ONLY. IF NO BAR SCALE IS PRESENT, THEN THERE IS NO SCALE TO THAT DRAWING/DETAIL. AT NO TIME SHOULD DRAWINGS BE SCALED FROM. ANY DISCREPANCIES BETWEEN DRAWINGS, DETAILS, SPECIFICATIONS AND THE FIELD CONDITION SHALL BE IMMEDIATELY REPORTED TO THE CIVIL ENGINEER FOR FURTHER DIRECTIONS BEFORE ANY ADDITIONAL WORK PROCEEDS.
3. SIGNAGE, STRIPING, AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
4. ALL TRAFFIC CONTROL SIGNS INDICATED ON THE SITE LAYOUT PLAN ARE TO MEET ALL REQUIREMENTS & CONDITIONS OF THE CITY OF PORTLAND, MAINE DEPARTMENT OF TRANSPORTATION AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
5. THE CONTRACTOR SHALL OBTAIN THE SERVICES OF A LICENSED PROFESSIONAL LAND SURVEYOR TO PROVIDE A MINIMUM OF TWO TEMPORARY BENCHMARKS WITHIN THE SITE AND TO LOCATE PROPOSED STRUCTURE CORNERS.
6. CONTRACTOR SHALL ENSURE THAT ACCESS, INCLUDING BUT NOT LIMITED TO WALKWAYS, DRIVEWAYS, AND MAILBOXES ADJACENT TO THE PROJECT REMAIN FUNCTIONAL AND AVAILABLE FOR USE AT ALL TIMES.

PERMITTING NOTES

1. THIS PROJECT IS SUBJECT TO THE TERMS AND CONDITIONS OF SITE PLAN – LEVEL III AND SUBDIVISION PERMIT FROM THE CITY OF PORTLAND.
2. THE CONTRACTOR SHALL REVIEW THE ABOVE REFERENCED PERMITS PRIOR TO SUBMITTING A BID FOR THIS PROJECT, AND INCLUDE COSTS AS NECESSARY TO COMPLY WITH THE CONDITIONS OF THESE PERMITS.
3. ALL WORK WITHIN THE PUBLIC RIGHT-OF-WAY REQUIRES A STREET OPENING PERMIT FROM THE CITY OF PORTLAND. ADDITIONALLY, COORDINATE WITH THE DEPARTMENT OF PUBLIC WORKS.

GRADING AND DRAINAGE NOTES:

1. TOPSOIL STRIPPED FROM THE SITE THAT IS SUITABLE FOR REUSE AS LOAM (MEETS THE REQUIREMENTS WITHIN SECTION 615 OF THE MDOT STANDARD SPECIFICATIONS, MOST RECENT VERSION AND IS FREE OF TRACEABLE AMOUNTS OF CONTAMINANTS) SHALL BE STOCKPILED WITHIN THE PROPOSED LIMIT OF WORK AREA. THE CONTRACTOR SHALL NOT ASSUME THAT ANY STRIPPED TOPSOIL WILL BE ACCEPTABLE FOR REUSE WITH THEIR ESTIMATE.
2. THE CONTRACTOR SHALL ANTICIPATE THAT GROUNDWATER WILL BE ENCOUNTERED DURING CONSTRUCTION AND SHALL INCLUDE SUFFICIENT COSTS WITHIN THEIR BID TO PROVIDE DEWATERING AS NECESSARY; NO SEPARATE PAYMENT SHALL BE MADE TO THE CONTRACTOR FOR DEWATERING. DEWATERING SHALL INCLUDE TREATMENT OF SILT THROUGH THE USE OF A DIRTBAG BY ACF ENVIRONMENTAL OR APPROVED EQUIVALENT.
3. THE OWNER SHALL BE RESPONSIBLE FOR OBTAINING ANY EASEMENT OR TEMPORARY CONSTRUCTION RIGHTS AS NECESSARY BY PRIVATE ADJACENT LAND OWNERS. THE CONTRACTOR SHALL NOT DISTURB ANY SOIL BEYOND THE PROPERTY LINE WITHOUT NOTIFYING AND OBTAINING SUCH EASEMENT OR TEMPORARY CONSTRUCTION RIGHT FROM THE OWNER. PRIOR TO THE CONTRACTOR PRICING THE WORK THE CONTRACTOR SHALL REQUEST PROOF OF SUCH EASEMENT OR TEMPORARY RIGHTS. SHOULD EASEMENTS OR TEMPORARY RIGHTS NOT BE AVAILABLE THE CONTRACTOR SHALL INCLUDE COST FOR BRACING AND SHORING AS NECESSARY.
4. THE CONTRACTOR SHALL PROVIDE A FINISH PAVEMENT SURFACE FREE OF LOW SPOTS AND PONDING AREAS. THE MINIMUM SLOPE SHALL MEET OR EXCEED 0.5% IN ALL CASES. ALL SLOPES SHALL BE AWAY FROM BUILDINGS AND TOP OF PAVEMENT SHALL BE AT OR BELOW EXISTING FINISH FLOOR ELEVATIONS.
5. NO ADDITIONAL PAYMENT FOR UNSUITABLE MATERIALS SHALL BE MADE.
6. ALL STORM DRAIN PIPE SHALL BE SMOOTH BORE INTERIOR PROVIDING A MANNINGS ROUGHNESS COEFFICIENT OF N=0.012 OR LESS.
7. ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE.
8. NATIVE SOILS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LIMIT THE DISTURBANCE TO SUBGRADE SOILS. SHOULD THE SUBGRADE BECOME YIELDING OR DIFFICULT TO WORK, DISTURBED AREAS SHALL BE EXCAVATED AND BACKFILLED WITH COMPACTED SELECT FILL OR CRUSHED STONE AT NO ADDITIONAL EXPENSE TO THE OWNER.
9. ALL SUBGRADE PREPARATION IS SUBJECT TO THE RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL ENGINEER.

EROSION CONTROL NOTES:

1. ALL ROUTINE MAINTENANCE ACTIVITIES SHALL BE CONDUCTED IN SUCH A WAY TO LIMIT THE AMOUNT OF DISTURBED AREA AT ONE TIME TO THE EXTENT PRACTICABLE.
2. PRIOR TO THE START OF ANY CLEARING/LAND DISTURBING ACTIVITIES, THE CONTRACTOR SHALL INSTALL APPLICABLE EROSION CONTROL DEVICES SUCH AS PERIMETER SILT FENCE, AND OTHER APPLICABLE MEASURES. IN THE EVENT THE CONTRACTOR IS NOT SURE A EROSION CONTROL MEASURE SHOULD BE IMPLEMENTED, THE CONTRACTOR SHALL CONTACT THE ENGINEER OF RECORD TO CONFIRM IMPLEMENTATION OF ANY EROSION CONTROL DEVICES.
3. ALL GROUND AREAS GRADED FOR CONSTRUCTION SHALL BE GRADED, LOAMED, SEEDED AND MULCH SHALL BE APPLIED AS SOON AS POSSIBLE WITHIN 7 DAYS FOLLOWING THE COMPLETION OF ANY SOIL DISTURBANCE, AND PRIOR TO ANY STORM EVENT.
4. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL SHALL BE INSTALLED TO THE SATISFACTION OF THE CITY. THE CONTRACTOR SHALL REFERENCE THE APPROVED EROSION AND SEDIMENTATION CONTROL REPORT FOR TEMPORARY AND PERMANENT EROSION AND SEDIMENTATION CONTROL DEVICES IN ADDITION TO THE PLAN SET. THE CONTRACTOR SHALL ALSO REFER TO THE MAINE D.E.P.'S PERMIT CONDITIONS, FINDINGS OF FACT AND ORDER (IF ANY), AND THE CURRENT MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR ADDITIONAL INFORMATION.
5. PRIOR TO PAVING, THE CONTRACTOR SHALL REMOVE ALL SEDIMENT FROM STORM DRAINS, CATCH BASINS, AND APPURTENANCES.
6. REFER TO THE EROSION CONTROL DETAILS & NOTES FOR ADDITIONAL INFORMATION.

UTILITY NOTES:

1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND ELEVATION OF THE EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED UPON RECORDS OF VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO TEST PIT TO DETERMINE THE EXACT LOCATION AND ELEVATION OF UTILITIES TO COORDINATE WITH THE PROPOSED CONNECTIONS OR CROSSING. ANY DISCREPANCIES SHALL BE IMMEDIATELY REPORTED TO THE CIVIL ENGINEER FOR FURTHER DIRECTIONS BEFORE ANY ADDITIONAL WORK PROCEEDS.
2. CONTRACTOR SHALL, AT NO ADDITIONAL COST TO THE OWNER, CONDUCT EXPLORATORY EXCAVATIONS AT LOCATIONS WHERE PROPOSED EXCAVATION WILL INTERSECT WITH EXISTING UTILITIES, PRIOR TO THE ORDERING OF STRUCTURES.
3. ALL NEW SANITARY MANHOLES SHALL BE VACUUM TESTED BEFORE BACKFILLING. TESTING SHALL BE COMPLETED IN ACCORDANCE WITH TECHNICAL REPORT #16 (TR-16): GUIDES FOR THE DESIGN OF WASTEWATER TREATMENT WORKS, PREPARED BY THE NEW ENGLAND INTERSTATE WATER POLLUTION CONTROL COMMISSION.
4. SEWER MANHOLES SHALL BE 4' ID UNLESS OTHERWISE STATED ON THE PLANS.
5. CONTRACTOR TO PROVIDE 5' OF COVER FROM TOP OF PIPE TO FINISH GRADE FOR WATER MAINS.
6. THRUST BLOCKS SHALL BE USED FOR THRUST RESTRAIN ON WATER MAINS. DETAIL AND LIMITS FOR THRUST BLOCKS ARE SHOWN ON SHEET C-44.
7. WATER INFRASTRUCTURE SHALL BE TESTED IN ACCORDANCE WITH THE PORTLAND WATER DISTRICT DOCUMENT ''WATER AND SEWER CONSTRUCTION SPECIFICATIONS AND PROCEDURE'', MOST RECENT REVISION.
8. ALL REQUIRED FITTINGS FOR THE WATER MAIN ARE NOT SHOWN ON DRAWINGS. CONTRACTOR SHALL FURNISH AND INSTALL ALL NECESSARY FITTINGS REQUIRED TO CONSTRUCT THE WATER MAIN IN ACCORDANCE WITH CITY OF PORTLAND, STATE OF MAINE, AND AMERICAN WATER WORKS ASSOCIATION STANDARDS AND REGULATIONS.
9. CONTRACTOR SHALL COORDINATE WORK REGARDING ANY WATER MAIN CONNECTION AND WATER MAIN SHUTDOWN WITH THE PORTLAND WATER DISTRICT AT LEAST SEVEN (7) DAYS PRIOR TO CONSTRUCTION.
10. ALL WATER PIPE INSTALLATION SHALL CONFORM WITH THE PORTLAND WATER DISTRICT SPECIFICATIONS AND PROCEDURES, MOST RECENT EDITION.
11. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
12. SEWER, GAS, TELEPHONE, ELECTRICITY, CABLE, WATER AND ANY OTHER UTILITY CONNECTIONS SHALL BE REVIEWED BY PLUMBING, ELECTRICAL, AND MECHANICAL DESIGNER FOR CONSISTENCY WITH THEIR PLANS PRIOR TO CONSTRUCTION.
13. COORDINATE EXIT POINT FOR SECONDARY SERVICE WITH THE ARCHITECT/ELECTRICAL ENGINEER. SECONDARY LINE LOCATIONS NOT PROVIDED BY ACORN ENGINEERING WITHIN THE UTILITY PLAN.
14. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL THE NECESSARY PERMITS FOR THE INSTALLATION OF THE UTILITIES AND STORMDRAINS WITHIN THE PUBLIC RIGHT OF WAY. THE CONTRACTOR SHALL SUBMIT A MAINTENANCE OF TRAFFIC PLAN TO THE CITY IN ACCORDANCE WITH THE CITY OF PORTLAND TECHNICAL MANUAL PRIOR TO ANY WORK.
15. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL BOXES, FITTINGS, CONNECTORS, COVER PLATES AND OTHER MISCELLANEOUS ITEMS NOT NECESSARILY DETAILED ON THE DRAWINGS TO RENDER INSTALLATION OF UTILITIES COMPLETE AND OPERATIONAL AT NO EXTRA EXPENSE TO THE OWNER.

DEMOLITION NOTES:

1. THE FOLLOWING ITEMS ARE TYPICAL OF MATERIAL WHICH MAY EXIST ON SITE. THE CONTRACTOR IS ADVISED TO VISIT THE SITE TO CONFIRM DEMOLITION ITEMS SINCE THE LIST IS NOT INCLUSIVE OF THE SITE CONDITIONS WHICH MAY BE ENCOUNTERED:

   ROCK AND CONCRETE FOUNDATIONS

   CONCRETE SLABS

   BITUMINOUS ASPHALT PAVEMENT

   CONCRETE PADS AND BLOCKS

   FENCE POST AND FENCING

   UNDERGROUND UTILITY LINES

   ABOVE AND OR BELOW FUEL OIL AND PROPANE GAS TANKS

   STORM DRAIN PIPES AND APPURTENANCE STRUCTURES

   OTHER TRASH & MISCELLANEOUS SOLID WASTES

2. ALL DISPOSAL OF DEMOLITION DEBRIS OR WASTE SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE, & FEDERAL REGULATIONS. CONTRACTORS SHALL PROVIDE OWNER WITH APPROPRIATE "BILLS OF LADING" DEMONSTRATING PROPER DISPOSAL OF ALL MATERIALS.
3. THE CLIENT HAS NOT REQUESTED NOR HAS ACORN ENGINEERING COMPLETED A PHASE I – ENVIRONMENTAL SITE ASSESSMENT FOR THE PROPERTY.

PERMIT LEVEL
NOT ISSUED FOR
CONSTRUCTION

ISSUED FOR	BY DATE
LEVEL III SITE PLAN	WHS 8/7/19
PHASE II UPDATE	WHS 10/29/19
COMMENT RESPONSE	WHS 12/18/19
COMMENT RESPONSE 2	WHS 2/24/2020

DRAWING NAME: GENERAL NOTES
PROJECT NAME: 128R NORTH STREET REDEVELOPMENT
CLIENT: UPRIGHT PROPERTIES, LLC
PO BOX 833 WILTON, ME 04294

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FILE:	1116_CIVIL
JN:	1116
SCALE:	NTS
DESIGNED BY:	SJL
DRAWN BY:	ZMS
CHECKED BY:	WHS

STATE OF MAINE — WILLIAM H. SAVAGE — No. 12119 — REGISTERED PROFESSIONAL ENGINEER — 2-13-2020

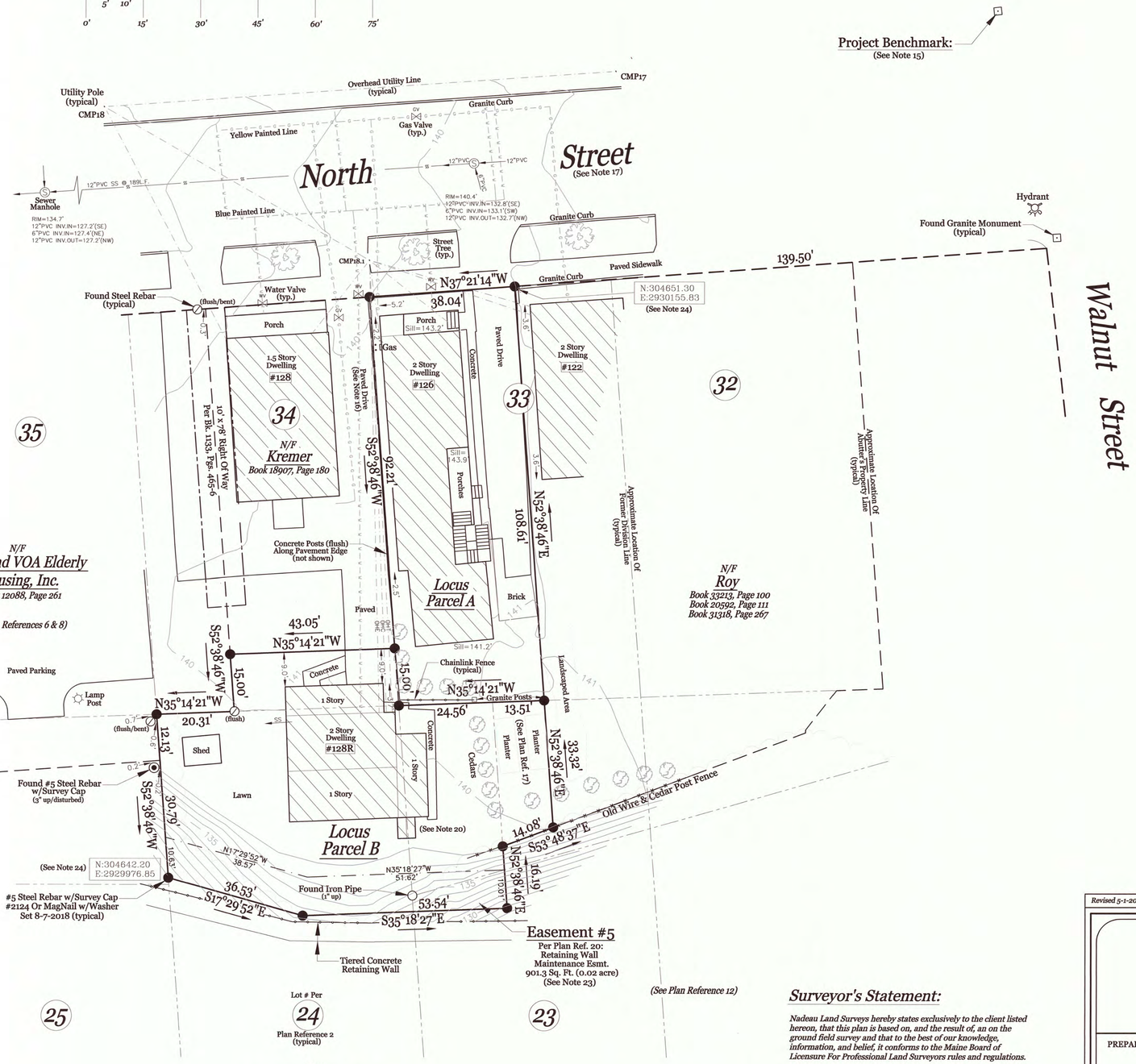
DRAWING NO.
C-02

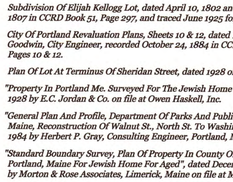
Plan References:

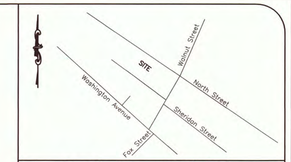
1. *Subdivision Of Lot #1 On Mountjoy's Neck For Little, Weeks, And Moody, dated February 17, 1802 and recorded March 24, 1802 in CCRD Book 36, Page 247.*
2. *Re-Survey Of Plan Reference 1, dated June 1876 by E.C. Jordan, C.E., City Plan 370/6 and 386/28.*
3. *Subdivision Of Elijah Kellogg Lot, dated April 10, 1802 and recorded February 18, 1807 in CCRD Book 51, Page 297, and traced June 1925 for City Plan 406/78.*
4. *City Of Portland Revaluation Plans, Sheets 10 & 12, dated 1882 by William A. Goodwin, City Engineer, recorded October 24, 1884 in CCRD Plan Book 5, Pages 10 & 12.*
5. *Plan Of Lot At Terminus Of Sheridan Street, dated 1928 on file at Owen Haskell, Inc.*
6. *"Property In Portland Me. Surveyed For The Jewish Home For Aged", dated August 1928 by E.C. Jordan & Co. on file at Owen Haskell, Inc.*
7. *"General Plan And Profile, Department Of Parks And Public Works, City Of Portland, Maine, Reconstruction Of Walnut St., North St. To Washington Ave.", dated May 17, 1984 by Herbert P. Gray, Consulting Engineer, Portland, Maine, City Plan 502/7.*
8. *"Standard Boundary Survey, Plan Of Property In County Of Cumberland, City Of Portland, Maine For Jewish Home For Aged", dated December 20, 1985 (Working Plan) by Morton & Rose Associates, Limerick, Maine on file at Maine Boundary Consultants.*
9. *"City Of Portland, Maine Parks And Public Works Department Engineering Division, North Street Plan And Profile Sta. 11+00 To 16+50", Sheet 8 of 14, dated August 1985 by Woodard & Curran Inc. Consulting Engineers, Gorham, Maine, City Plan 925/1.*
10. *"City Of Portland, Maine Parks And Public Works Department Engineering Division, Sheridan Street Plan And Profile Sta. 9+00N To 13+50N", Sheet 5 of 25, dated June 1987 by Woodard & Curran Inc. Consulting Engineers, Portland, Maine, City Plan 913/10.*
11. *"Plan Of Property In Portland, Maine Made For Nicole D'Entremont (Standard Boundary Survey)", dated July 15, 1991 by Robert J. Cyr, RLS 955, South Portland, Maine, recorded July 16, 1991 in CCRD Plan Book 191, Page 43.*
12. *"Division Of Land For Nicki Lee Green & Katherine P. Richmond, 79 Walnut Street, Portland, Maine", dated April 2006 by Andrew E. Bradford Land Surveying, Inc., Kennebunk, Maine.*
13. *"Plan Of Property Of W.H. Baxter, Esq.", dated July 1866 by Anderson Bonnell & Co., recorded July 1, 1866 in CCRD Plan Book 2, Page 54.*
14. *Richards Standard Atlas Of The City Of Portland, Plate 2, dated 1914.*
15. *Insurance Maps Of Portland, Maine, Volume One, Published By The Sanborn Map Company, Plate 1, dated 1909, last corrected April 1952.*
16. *City Of Portland Atlas, Plate 48A, dated 1873.*
17. *"Exhibit Sketch For Proposed Conveyance, Mary Roy To Upright Properties, LLC Between Sheridan Street & North Street, Portland, Maine", dated May 29, 2018 by Nadeau Land Surveys, Portland, Maine, recorded June 5, 2018 at the Cumberland County Registry of Deeds in Book 34890, Page 304.*
18. *"Plan Depicting The Results Of A Boundary Survey & Existing Conditions Survey Made For Redfern Properties LLC, Sheridan Street And East Cove Street, Portland, Maine", dated November 11, 2013, revised November 25, 2013 by Nadeau Land Surveys, Portland, Maine.*
19. *"Plan Depicting A Proposed Subdivision Made For Redfern Munjoy LLC, P.O. Box 8816, Portland, ME 04104, Munjoy Heights, Sheridan Street, East Cove Street, And Walnut Street, Portland, Maine", dated December 6, 2013, last revised February 10, 2014 by Nadeau Land Surveys, Portland, Maine, recorded February 21, 2014 at the Cumberland County Registry of Deeds in Plan Book 214, Page 48.*
20. *"Condominium Plat, Munjoy Heights, A Condominium, Sheridan Street, East Cove Street, And Walnut Street, Portland, Maine", dated April 21, 2015 by Nadeau Land Surveys, Portland, Maine, recorded April 30, 2015 at the Cumberland County Registry of Deeds in Plan Book 215, Page 143.*
21. *"City Of Portland, Maine Parks And Public Works Department Engineering Division, North Street, Plan And Profile Sta. 11+00 To 16+50", Sheet 8 of 14, dated August 15, 1985, City Plan 925/1.*
22. *"Portland Water District, Portland Sewer System Infiltration-Inflow Analysis, System Base Mapping, Study Area IV", Sheet IV-11, dated 1981, last revised March 22, 1999 by Hunter-Ballew Associates, Falmouth, Maine, City Plan 905/1.*

Graphic Scale:

0' 5' 10' 15' 30' 45' 60' 75'







Location Map: Not To Scale

General Notes:

1. *This plan is not intended to depict limits or extent of fee title ownership. An opinion of title should be rendered by a title attorney.*
2. *This office reserves the right to be held harmless by all 3rd party claims.*
3. *This survey does not purport to reflect any of the following:*
   a. *easements other than those that are visible or specifically stated in the referenced documents.*
   b. *building setback compliance or restrictive covenants.*
   c. *zoning or other land use regulations.*
   d. *the location of any underground utilities or structures.*
4. *This office reserves the right to be held harmless for unknown or unobtainable private records which could affect the results of this survey.*
5. *Reference is made to "Letter Of Agreement" dated May 23, 2018 between Nadeau Land Surveys and the below listed client(s), which shall be considered an integral part of this survey.*
6. *N/F is an abbreviation for Now or Formerly.*
7. *All deeds referenced on this plan are recorded at the Cumberland County Registry of Deeds (CCRD).*
8. *Locus Parcels are located in the R-6 Residential Zone:*
   Minimum Lot Size = 2,000 S.F.
   Minimum Lot Area / Dwelling Unit = 725 S.F.
   Minimum Street Frontage = 20 feet
   Minimum Lot Width = 20 feet
   Maximum Lot Coverage = 60%
   Minimum Front Yard Setback = 5 feet, or average depth of adjacent front yards
   Minimum Side Yard Setback = 5 feet
   Minimum Rear Yard Setback = 10 feet
   A City of Portland Code Enforcement Officer should be consulted for confirmation of all applicable space & bulk requirements for Locus Parcels.
9. *Locus Parcel A is shown on the City of Portland Assessor's Map 12, Block H, as Lot 14, and is listed as 126 North Street. Locus Parcel B is shown on the City of Portland Assessor's Map 12, Block H, as parts of Lots 9 & 22, and is listed as 128R North Street.*
10. *Area of Locus Parcel A is 4,105.0 square feet (0.09 acre). Area of Locus Parcel B is 5,682.0 square feet (0.13 acre).*
11. *The apparent right of way lines depicted on this plan are based on the Plan References listed hereon and monumentation found in the field, and City of Portland Engineering Street Notes.*
12. *The Locus Parcels do not scale in a Special Flood Hazard Area per FEMA Flood Insurance Rate Map Community-Panel Number 230051 0014B, index dated December 8, 1998. The parcels scale in Zone C.*
13. *All building corner offsets to boundary lines are from cornerboards and not building foundation, unless noted.*
14. *Call 1-888-DIGSAFE at least three business days before performing ANY excavation.*
15. *Vertical Datum is NGVD29. Benchmark is City Monument T112-18-107, elevation = 145.08'.*
16. *See CCRD Book 1143, Page 307, dated July 25, 1923, from Elmore W. Ramsdell to Claire Bowden, for right of way to North Street.*
17. *Per City of Portland Records Vol. 1, Page 184, North Street was accepted March 20, 1795 as 4 rods (66 feet) wide.*
18. *See CCRD Book 14149, Page 281, dated September 10, 1998, for City of Portland's License to erect a fence across Poplar Street partially intruding on land N/F Maxwell.*
19. *See CCRD Book 31326, Page 331, dated February 3, 2014, from the City of Portland to Raymond C. Maxwell, for Termination of License recorded in Book 14149, Page 281.*
20. *Existing bulkhead is allowed to encroach setback window per City of Portland Zoning Ordinance Section 14-425.*
21. *See Notice for vacated portions of Sheridan Street and East Cove Street, dated March 5, 2015 and recorded in CCRD Book 32118, Page 145.*
22. *The underground utilities shown have been located from field survey information and existing drawings. This office make no guarantees that the underground utilities shown comprise all such utilities in the area, either in-service or abandoned. The underground utilities shown are approximate location and are located as accurately as possible from information available. This office has not physically located the underground utilities.*
23. *See CCRD Book 32237, Page 104, dated April 30, 2015, for Release And Easement Agreement between Redfern Munjoy, LLC and Upright Properties, LLC.*
24. *The coordinates depicted on our plan are for municipal requirements only and should not be used for construction layout. This office assumes no liability and/or responsibility if used for construction purposes.*
25. *Spot grades, sill and rim elevations are for engineering purposes only, and shall not be used as project benchmarks. This office assumes no liability and/or responsibility if used for construction purposes.*
26. *No records research or site evaluation has been performed since the original date of this survey. The survey plan was revised solely to depict additional utility information.*

Locus Deed References:

Locus Parcel A

Gregory D. Kesich and Gail D. Kesich
To
Raymond T. Wojcik, Zetta A. Wojcik and Joshua T. Wojcik
dated August 24, 2007 and recorded August 27, 2007 at the Cumberland County Registry of Deeds in Book 25418, Page 226.

Locus Parcel B

Redfern Munjoy, LLC
To
Upright Properties, LLC
dated January 31, 2014 and recorded February 3, 2014 at the Cumberland County Registry of Deeds in Book 31317, Page 118, corrected on same date in Book 31318, Page 270.

Mary Roy
To
Upright Properties, LLC
dated and recorded June 5, 2018 at the Cumberland County Registry of Deeds in Book 34890, Page 304.

Revised 5-1-2019: *Added Sewer and Water information, Plan References 21 & 22, Note 26, and FB 409.*

Surveyor's Statement:

Nadeau Land Surveys hereby states exclusively to the client listed hereon, that this plan is based on, and the result of, an on the ground field survey and that to the best of our knowledge, information, and belief, it conforms to the Maine Board of Licensure For Professional Land Surveyors rules and regulations.

This plan is not valid without the signature and stamp of the below listed Professional Land Surveyor who prepared this plan as it may contain unauthorized alterations unknown to this office.

Nadeau Land Surveys

James D. Nadeau, P.L.S. #2124 (agent) *Date:* 5-1-2019

STATE OF MAINE · JAMES D. NADEAU · 2124 · PROFESSIONAL LAND SURVEYOR

Plan Depicting The Results Of A Boundary Survey & Existing Conditions Survey Made For

Joshua T. Wojcik

Southwesterly Sideline Of North Street

Portland, Maine

PREPARED BY:

Nadeau Land Surveys

918 BRIGHTON AVENUE
PORTLAND, ME 04102

Professional Land Surveyors
Certified Floodplain Managers

PH. (207) 878-7870
FAX (207) 878-7871

RECORD OWNER: Joshua T. Wojcik, et al. Upright Properties, LLC 47 Lafayette St. #1 Portland, ME 04101	DRAWN BY: TPB	PLAN DATE:	8/22/2018
	CHECKED BY: JDN/MLC	SURVEY DATE:	June 2018
	INSTR. Topcon DS-205AC	SCALE:	1" = 15'
FIELD BOOK: FB 407 & 409 & Topcon Tesla	JOB No: 2181902BTR1	SHEET No:	1 of 1

GENERAL NOTES: PHASE II DEMOLITION TO OCCUR PRIOR TO PHASE 1 CERTIFICATE OF OCCUPANCY

1. EXISTING ASPHALT PAVEMENT TO BE REMOVED SHALL BE STRIPPED AND PROPERLY DISPOSED OF OFFSITE.
2. ALL DISPOSAL OF DEMOLITION DEBRIS OR WASTE SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE, & FEDERAL REGULATIONS. CONTRACTOR SHALL PROVIDE OWNER WITH APPROPRIATE "BILLS OF LADING" TO DEMONSTRATE PROPER DISPOSAL OF ALL MATERIALS.
3. SITE DEMOLITION SHALL NOT OCCUR UNTIL PROPER ABATEMENT PROCEDURES HAVE OCCURRED. ABATEMENT, IF NECESSARY, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
4. THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANIES AND DIG SAFE AT LEAST 72 HOURS PRIOR TO EXCAVATION TO REQUEST EXACT FIELD LOCATION FOR UTILITIES. OTHERWISE IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF UNDERGROUND UTILITIES AND LOCATE POTENTIAL CONFLICT WITH THE APPROVED PLANS PRIOR TO CONSTRUCTION.
5. ALL CONSTRUCTION SIGNAGE IS TEMPORARY AND SHALL BE REMOVED AT PROJECT COMPLETION.
6. SEDIMENT BARRIERS TO BE PLACED DIRECTLY ON THE FRONT AND SIDE PROPERTY LINES, DOWN GRADIENT OF THE PROPOSED PROJECT WORK PER DETAIL; FENCES ARE OFFSET OF THE PROPERTY LINES AS SHOWN ON THE PLAN FOR CLARITY PURPOSES AND DO NOT NECESSARILY DEPICT THE PHYSICAL LOCATION.
7. CONTRACTOR SHALL PLACE CATCH BASIN INLET PROTECTION ON CATCH BASINS AND FIELD INLETS DOWN-GRADIENT OF ALL NON-STABILIZED SURFACES, PER DETAIL.
8. DEMOLITION PLAN IS NOT INCLUSIVE OF ALL EXISTING ITEMS TO BE REMOVED AS PART OF SITE CONSTRUCTION INCLUDING BUT NOT LIMITED TO LANDSCAPING, UTILITIES, WORK WITHIN THE ROW, ETC. ALL DEMOLITION WORK SHALL BE IN ACCORDANCE WITH THE CITY OF PORTLAND REGULATIONS.
9. CONTRACTOR TO BE RESPONSIBLE FOR PROVIDING OFF-SITE PARKING TO EMPLOYEES; ON-SITE PARKING WILL NOT BE PROVIDED OR GUARANTEED. CONTRACTOR TO BE RESPONSIBLE FOR OBTAINING THE APPROPRIATE PERMITS FROM THE CITY FOR CLOSING ANY ON-STREET PARKING SPACES DURING THE CONSTRUCTION PERIOD.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR SNOW REMOVAL ALONG CONSTRUCTION FENCE AND GATE.
11. NO WORK ON PHASE II SHALL OCCUR DURING PHASE I WORK UNLESS AUTHORIZED BY THE OWNER.

EX. MUNJOY HEIGHTS CONDOMINIUMS

EX. RETAINING WALL

EX. 10' RET. WALL EASEMENT

EROSION CONTROL MIX BERM

EX. STRUCTURE DEMOLISHED ON 11/19/19. DEBRIS, UTILITIES, ECT. MAY REMAIN. CONTRACTOR TO COORDINATE EXTENT OF DEMO W/ CLIENT

DEMOLISH SHED

RETIRE EXISTING SEWER LATERAL. REMOVE PIPE MIN. 5' BEYOND PROPOSED BUILDING FOOTING AND PLUG PER DETAIL. IF PIPE IS FOUND TO RUN TO NORTH STREET, RETIRE PER DPW, COORDINATE WITH OWNER ON LOCATION

REMOVE CONC. SLABS, TYP.

TEMP. CONSTRUCTION FENCE

REMOVE OVERHEAD UTILITIES.

DEMOLISH EXISTING BUILDING PRIOR TO OCCUPANCY OF 128R NORTH

UTILITY + DRIVEWAY CONSTRUCTION TO BE COORDINATED WITH OWNER OF 128F NORTH STREET. LIMIT DURATION TO THE GREATEST EXTENT PRACTICABLE. SUBBASE AND BASE GRAVELS AS WELL AS BASE PAVEMENT SHALL BE CONSTRUCTED IMMEDIATELY AFTER COMPLETION OF UTILITIES.

RELOCATE 10 CEDAR TREES ON SITE. SEE SHEET L-1

EXISTING PROPERTY LINE

PROPOSED PROPERTY LINE PER SUBDIVISION PLAT AND LAND CONVEYANCE

128R NORTH STREET

126 NORTH STREET

128F NORTH STREET

N/F Redfern Munjoy, LLC

N/F Portland VOA Elderly Housing Inc

N/F Roy

N/F Kremer

REMOVE EXISTING PAVEMENT

PHASE 1 INCLUDES CONDITIONS OUTSIDE OF DASHED LINE. PHASE 2 INCLUDES CONDITIONS INSIDE OF LINE

REROUTE EXISTING GAS LINE IN COORDINATION WITH UNITIL TO FACILITATE 128R CONSTRUCTION. RETIRE LINE PRIOR TO DEMOLITION OF 126

REMOVE OVERHEAD UTILITIES

LOCATE EXISTING DOMESTIC WATER SERVICE LINE, SHUT CORPORATION, REMOVE SERVICE BOX AND ROAD, AND CUT DOMESTIC SERVICE AT MAIN

REMOVE EXISTING PAVEMENT FOR UTILITY CONSTRUCTION

CONTRACTOR AND OWNER TO COORDINATE TEMP. DISCONNECTION OF GAS SERVICE TO 128F NORTH STREET. SEE SHEET C-20

REMOVE EXISTING UTILITY POLE. SEE SHEET C-20 FOR NEW POLE AND CONNECTIONS TO EXISTING BUILDINGS

LOCATE EXISTING DOMESTIC WATER SERVICE LINE, SHUT CORPORATION, REMOVE SERVICE BOX AND ROAD, AND CUT DOMESTIC SERVICE AT MAIN

MODIFY DRIVEWAY AND CURB CUT PER SHEET C-10

LOCATE EXISTING SEWER LATERAL. LATERAL SHALL BE RETIRED AND PLUGGED PER DETAIL.

EXISTING WATER MAIN

UTILITY TRENCH WITHIN R.O.W., TYP.

RETIRE EXISTING GAS LINE IN COORDINATION WITH UNITIL

EXISTING GAS MAIN

EXISTING SEWER MAIN

RIM=140.4'
12"PVC INV.IN=132.9'(SE)
INV.IN=133.1'(SW)
INV.OUT=132.7'(NW)

RIM=134.7'
12"PVC INV.IN=127.2'(SE)
6"PVC INV.IN=127.4'(NE)
12"PVC INV.OUT=127.2'(NW)

12"PVC SS @ 189L.F.

10 0 10 20

SCALE: 1"=10'

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
LEVEL III SITE PLAN	WHS 8/7/19
PHASE II UPDATE	WHS 10/29/19
COMMENT RESPONSE	WHS 12/18/19
COMMENT RESPONSE 2	WHS 2/24/2020

DRAWING NAME: DEMOLITION & CONSTRUCTION MANAGEMENT PLAN

PROJECT NAME: 126/128R NORTH STREET REDEVELOPMENT

CLIENT: UPRIGHT PROPERTIES, LLC
PO BOX 833 WILTON, ME 04294

ACORN ENGINEERING, INC.

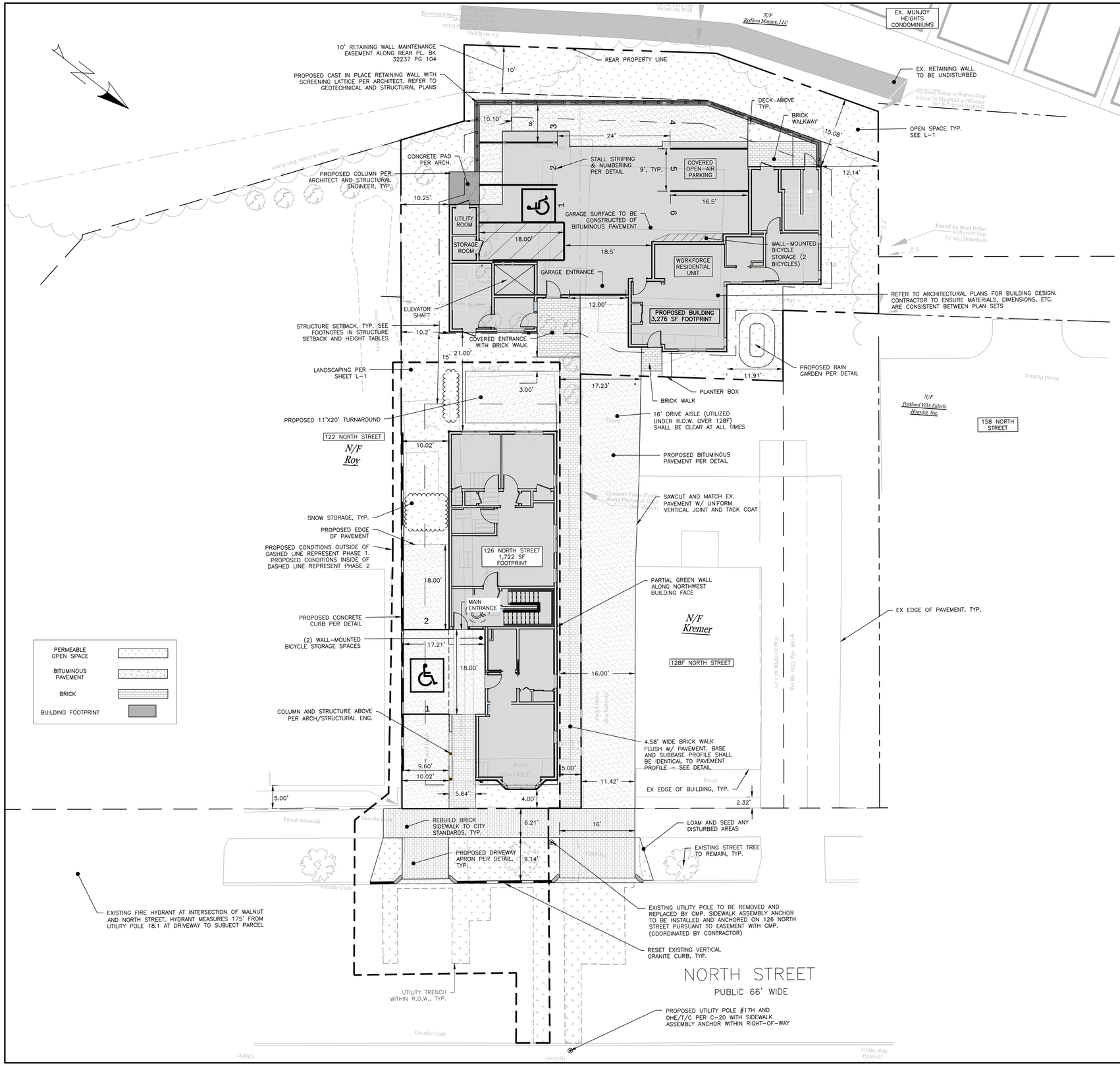
THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY MODIFICATIONS MADE TO THIS PLAN WITHOUT THE WRITTEN PERMISSION OF ACORN ENGINEERING, INC. SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
65 HANCOCK ST. SUITE 1, WILTON, MAINE 04101
(207) 775-2655

FILE:	1116_CIVIL
JN:	1116
SCALE:	1"=10'
DESIGNED BY:	SJL
DRAWN BY:	ZMS
CHECKED BY:	WHS

STATE OF MAINE WILLIAM H. SAVAGE 10419 REGISTERED PROFESSIONAL ENGINEER 2-13-2020

DRAWING NO. C-03



GENERAL NOTES:

1. STRIPING AS INDICATED ON SITE PLAN SHALL BE WHITE AND 4" WIDE.
2. EXISTING CONDITIONS PROVIDED BY NADEAU LAND SURVEYS ON A PLAN ENTITLED BOUNDARY & EXISTING CONDITIONS SURVEY AT NORTH STREET MADE FOR JOSH T. WOJCIK (JOB NO. 2181902BTR1). PLAN IS DATED AUG. 22, 2018 WITH A MOST RECENT REVISION DATE OF MAY 1, 2019.
3. SOLID GREY HATCH DEPICTS ENCLOSED LIVING SPACE AT THE GROUND LEVEL OR ABOVE.
4. NO WORK ON PHASE II SHALL OCCUR DURING PHASE I WORK UNLESS AUTHORIZED BY THE OWNER.

PHASE I STRUCTURE SETBACKS & HEIGHT – 128R NORTH		
ZONE: R6 – MHNCDO	REQUIRED	PROPOSED
MINIMUM FRONT YARD SETBACK	5'	5'*
MINIMUM SIDE YARD SETBACK (LEFT)	10'	10.20'
MINIMUM SIDE YARD SETBACK (RIGHT)	10'	12.14'
MINIMUM DECK SETBACK	7.5'	10.10'
MINIMUM REAR YARD SETBACK	15'	15.08'
MAXIMUM BUILDING HEIGHT	45'	44.45'
* MEASUREMENT SHOWN TO DEMONSTRATE COMPLIANCE FOR THE 128R FRONT YARD SETBACK AND THE 126 REAR YARD SETBACK, YIELDING A MINIMUM CUMULATIVE STRUCTURE SEPARATION OF 15'.		

PHASE II STRUCTURE SETBACKS & HEIGHT – 126 NORTH		
ZONE: R6 – MHNCDO	REQUIRED	PROPOSED
MINIMUM FRONT YARD SETBACK	3.7' (AVG. ABUTTER)	4'
MINIMUM SIDE YARD SETBACK (LEFT)	5'	10.02'
MINIMUM SIDE YARD SETBACK (RIGHT)	5'	5'
MINIMUM REAR YARD SETBACK*	10'	16'*
MAXIMUM BUILDING HEIGHT	35'	33.32'
* MEASURED 5' OFF THE FRONT OF THE 128R STRUCTURE ASSUMING A MINIMUM 5' FRONT YARD SETBACK FOR 128R CONFORMANCE. MEASUREMENTS SHOWN TO DEMONSTRATE COMPLIANCE FOR THE 128R FRONT YARD SETBACK AND THE 126 REAR YARD SETBACK, YIELDING A MINIMUM CUMULATIVE STRUCTURE SEPARATION OF 15'.		

OVERALL SITE SPACE AND BULK STANDARDS		
ZONE: R6 – MHNCDO	REQUIRED	PROPOSED
MINIMUM LOT SIZE	2,000 SF	9,787 SF
MINIMUM STREET FRONTAGE	20'	38'
MINIMUM LANDSCAPED OPEN AREA	20%	32%
MAXIMUM NUMBER OF DWELLING UNITS*	725 SF/UNIT = 16	12
RESIDENTIAL PARKING	1 SPACE PER UNIT AFTER 3 UNITS = 8 SPACES**	8
MINIMUM INTERNAL RESIDENT BICYCLE STORAGE SPACES	2 SPACES/5 D.U. = 4	4
MAXIMUM LOT COVERAGE	60%	51%
* REFER TO PORTLAND LAND USE ORDINANCE SECTION 14-488 (g)		
** REFER TO PORTLAND LAND USE ORDINANCE SECTION 14-332.2 (b)		

PERMISSIBLE VEHICLE SUMMARY – 128R			
SPACES	MAX WHEEL BASE	MAX LENGTH	MAX WIDTH
1,5,6	9.3'	16.5'	6.5'
2	8.6'	15.8'	6'
3,4	8.5'	14.5'	5.8'

PARKING SUMMARY – 128R	
DIMENSIONS	# PARKING SPACES
9'x16.5'	4
8'X16.5'	1
8'X18'	1
TOTAL PROPOSED SPACES	6

PARKING SUMMARY – 126	
DIMENSIONS	# PARKING SPACES
9'x18'	1
8'X18' (ADA)	1
TOTAL PROPOSED SPACES	2

10 0 10 20

SCALE: 1"=10'

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
LEVEL III SITE PLAN	WHS 8/7/19
PHASE II UPDATE	WHS 10/29/19
COMMENT RESPONSE	WHS 12/18/19
COMMENT RESPONSE 2	WHS 2/24/2020
FINAL APPLICATION	WHS 5/7/2020
BID SET	WHS 6/9/2020
LOT MERGE	WHS 9/28/2020

DRAWING NAME: MASTER SITE PLAN

PROJECT NAME: 126/128R NORTH STREET REDEVELOPMENT

CLIENT: UPRIGHT PROPERTIES, LLC
PO BOX 833 WILTON, ME 04294

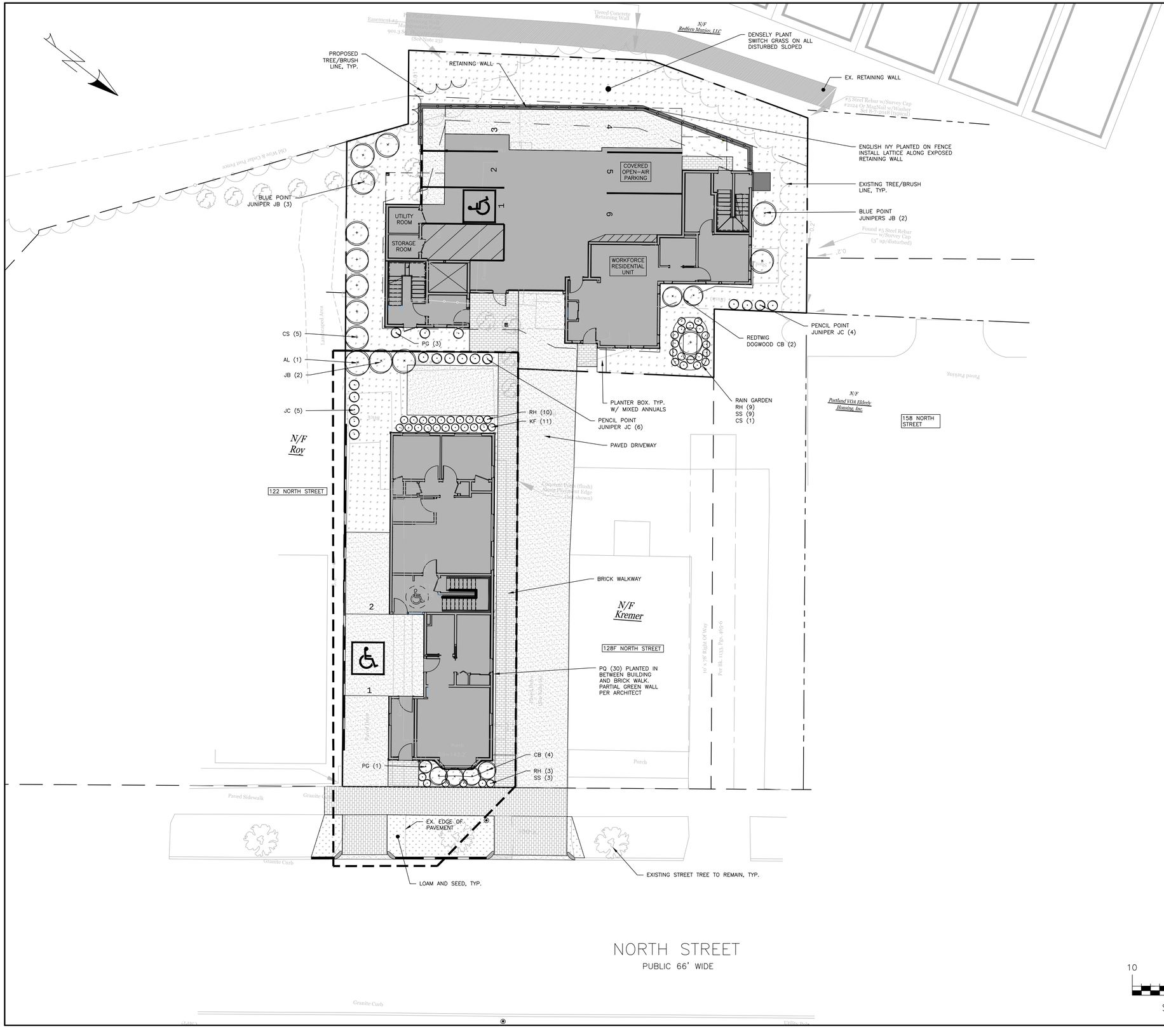
ACORN ENGINEERING, INC.
65 HANNAFORD DRIVE, BLAKE 04101
(207) 775-2655

THIS PLAN SHALL NOT BE MODIFIED IN ANY WAY WITHOUT THE PRIOR WRITTEN AUTHORIZATION FROM ACORN ENGINEERING, INC. AND SHALL NOT BE USED BY ANY PERSON OR OTHERWISE, FOR ANY PURPOSE OTHER THAN THE SPECIFIC PROJECT FOR WHICH IT WAS PREPARED AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC. ANY SUCH UNAUTHORIZED USE SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

FILE: 1116_CIVIL
JN: 1116
SCALE: 1"=10'
DESIGNED BY: SJL
DRAWN BY: ZMS
CHECKED BY: WHS

STATE OF MAINE
WILLIAM H. SAVAGE
No. 11416
8-28-20
LICENSED PROFESSIONAL ENGINEER

DRAWING NO.
C-10



GENERAL NOTES:

1. CONTRACTOR TO BE HELD RESPONSIBLE FOR THE WATERING AND MAINTENANCE OF ALL PLANT MATERIAL AND LANDSCAPING IMPROVEMENTS AS NECESSARY.
2. CONTRACTOR TO MAINTAIN A ONE YEAR WARRANTY ON ALL PLANTINGS FOLLOWING INSTALLATION.
3. NO PLANTING WILL BE INSTALLED UNTIL ALL GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA.
4. CONTRACTOR TO VERIFY ALL UTILITIES ON PROPERTY AND TO PROTECT ALL UTILITIES DURING EXCAVATION FOR PLANTS.
5. ALL CONTAINER MATERIAL TO BE GROWN IN CONTAINER MINIMUM OF 6 MONTHS.
6. ALL MATERIAL SHALL COMPLY WITH THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK, AMERICAN ASSOCIATION OF NURSERYMAN.
7. CONTRACTOR SHALL REPAIR ALL DAMAGE TO PROPERTY FROM PLANTING OPERATIONS AT NO COST TO OWNER.
8. THE ENGINEER MAY TAG ALL PLANTS AT THE NURSERY AND INSPECT THEM AFTER DELIVERY TO THE SITE; ALL PLANT MATERIALS SHALL BE INSPECTED BY THE ENGINEER ON SITE PRIOR TO INSTALLATION.
9. SEE PERMANENT SEEDING TABLE ON SHEET C-47 FOR LAWN AREAS.
10. BLUE POINT JUNIPERS MAY BE SUBSTITUTED W/ EXISTING RELOCATED CEDARS IF IN GOOD HEALTH

PLANT SCHEDULE

ID	BOTANICAL NAME	COMMON NAME	QTY	SIZE
	TREES			
JB	JUNIPERUS CHINENSIS 'BLUE POINT'	BLUE POINT JUNIPER	8	5'
JC	JUNIPERUS COMMONS 'PENCIL POINT'	PENCIL POINT JUNIPER	15	5'
AL	AMELANCHIER LAEVIS	ALLEGHENY SERVICEBERRY	1	5'
	SHRUBS			
CB	CORNUS BAILEY'I SERICEA 'YARROW'	ARCTIC FIRE REDTWG DOGWOOD	6	3 GAL.
PG	PICEA GLAUCA 'CONICA'	DWARF ALBERTA SPRUCE	4	3'-4'
CS	CORNUS SERICEA	RED TWG DODWOOD	6	3 GAL.
	PERENNIALS			
RH	RUDBECKIA HIRTA	BLACK EYED SUSAN	22	1 GAL.
SS	SALVIA SYLVESTRIS	SAGE 'MAY NIGHT'	12	1 GAL.
HH	HEDERA HELIX	COMMON IVY	44	1 GAL.
PQ	PARTHENOCISSUS QUINQUEFOLIA	VIRGINIA CREEPER	30	1 GAL.
KF	CALAMSGROSTIS ACUTIFLORA	KARL FORESTOR	11	1 GAL.

10 0 10 20

SCALE: 1"=10'

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
LEVEL III SITE PLAN	WHS 8/7/19
PHASE II UPDATE	WHS 10/29/19
COMMENT RESPONSE	WHS 12/18/19
COMMENT RESPONSE 2	WHS 2/24/2020

DRAWING NAME: LANDSCAPE PLAN

PROJECT NAME: 126/128R NORTH STREET REDEVELOPMENT

CLIENT: UPRIGHT PROPERTIES, LLC
PO BOX 833 WILTON, ME 04294

ACORN ENGINEERING, INC.

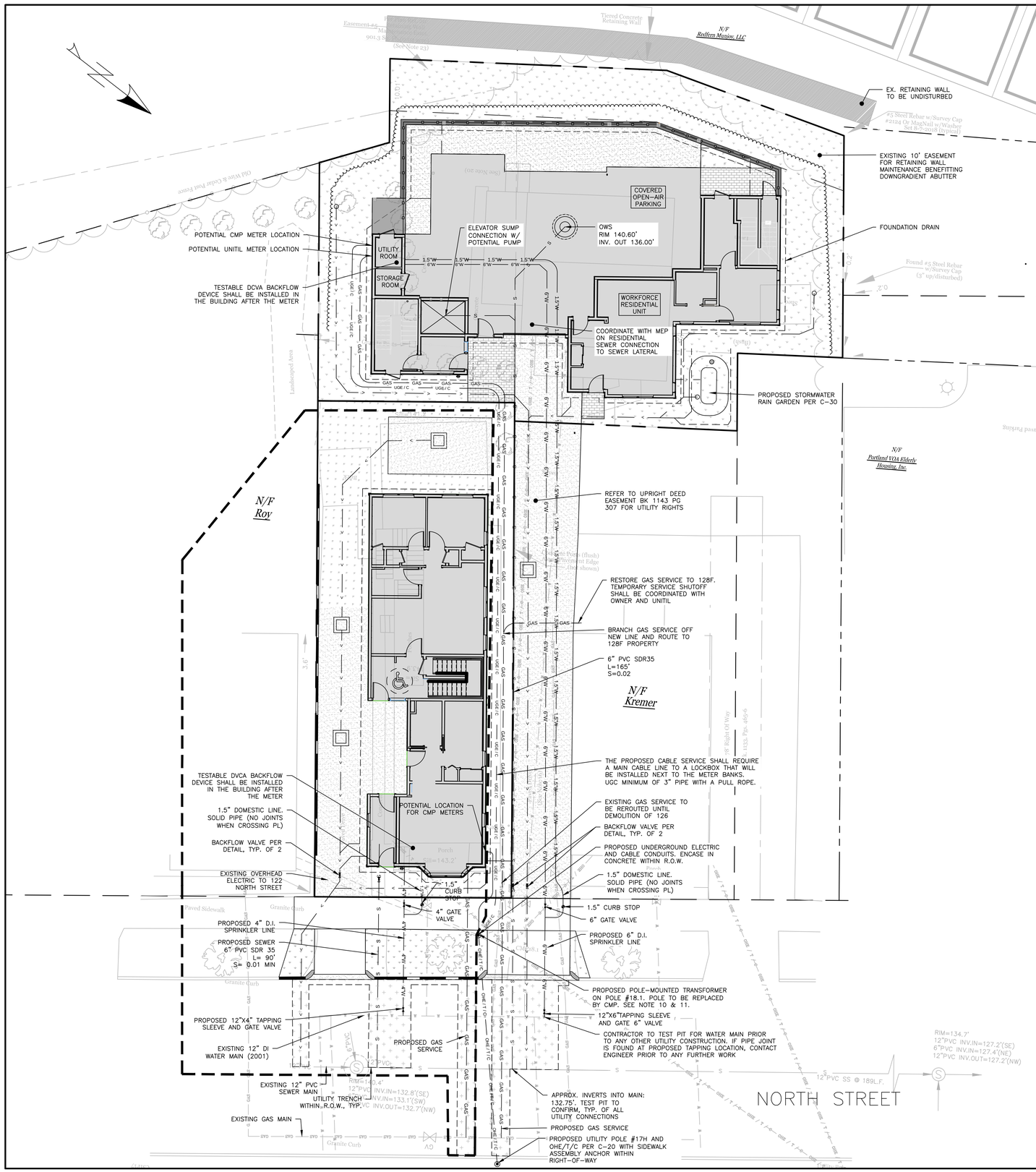
THESE PLANS SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. AND ANY UNAUTHORIZED USE OF THESE PLANS SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
65 HANOVER ST. PORTLAND, MAINE 04101
(207) 775-2655

FILE:	1116_CIVIL
JN:	1116
SCALE:	1"=10'
DESIGNED BY:	SJL
DRAWN BY:	ZMS
CHECKED BY:	WHS

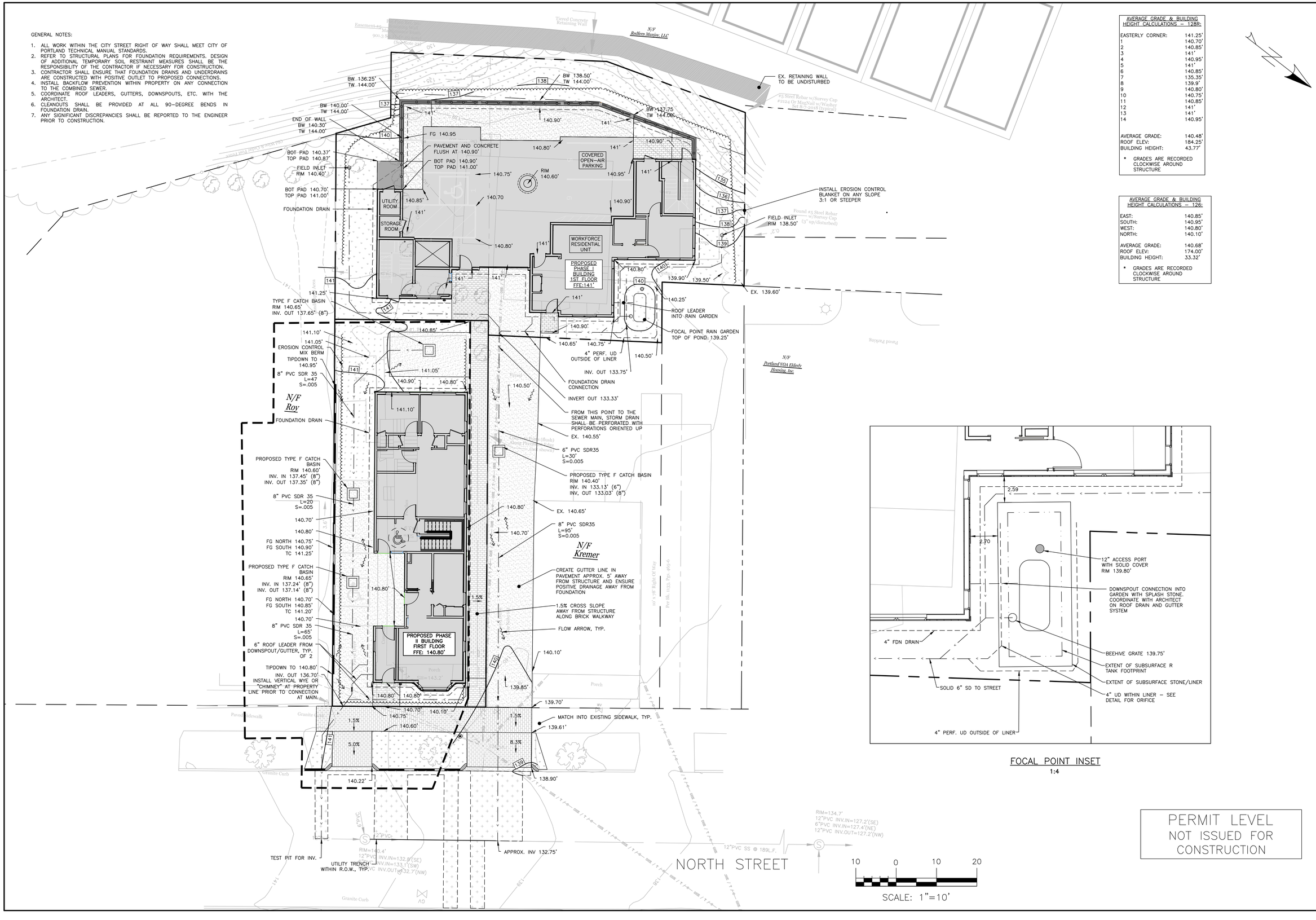
STATE OF MAINE WILLIAM H. SAVAGE No. 11419 REGISTERED PROFESSIONAL ENGINEER 2-13-2020

DRAWING NO.
L-1


N/F
Redfern Munjoy, LLC
Tiered Concrete Retaining Wall
EX. RETAINING WALL TO BE UNDISTURBED
EXISTING 10' EASEMENT FOR RETAINING WALL MAINTENANCE BENEFITTING DOWNGRADIENT ABUTTER
FOUNDATION DRAIN
#5 Steel Rebar w/Survey Cap #2124 Or MagNail w/Washer Set (5' up/disturbed) (typical)
Found #5 Steel Rebar w/Survey Cap (3' up/disturbed)
COVERED OPEN-AIR PARKING
ELEVATOR SUMP CONNECTION W/ POTENTIAL PUMP
OWS RIM 140.60' INV. OUT 136.00'
WORKFORCE RESIDENTIAL UNIT
POTENTIAL CMP METER LOCATION
POTENTIAL UNITIL METER LOCATION
UTILITY ROOM
STORAGE ROOM
TESTABLE DCVA BACKFLOW DEVICE SHALL BE INSTALLED IN THE BUILDING AFTER THE METER
COORDINATE WITH MEP ON RESIDENTIAL SEWER CONNECTION TO SEWER LATERAL
PROPOSED STORMWATER RAIN GARDEN PER C-30
N/F
Portland VOA Elderly Housing, Inc.
Paved Parking
Landscaped Area
N/F
Roy
REFER TO UPRIGHT DEED EASEMENT BK 1143 PG 307 FOR UTILITY RIGHTS
RESTORE GAS SERVICE TO 128F. TEMPORARY SERVICE SHUTOFF SHALL BE COORDINATED WITH OWNER AND UNITIL
BRANCH GAS SERVICE OFF NEW LINE AND ROUTE TO 128F PROPERTY
6" PVC SDR35 L=165' S=0.02
N/F
Kremer
THE PROPOSED CABLE SERVICE SHALL REQUIRE A MAIN CABLE LINE TO A LOCKBOX THAT WILL BE INSTALLED NEXT TO THE METER BANKS. UGC MINIMUM OF 3" PIPE WITH A PULL ROPE.
EXISTING GAS SERVICE TO BE REROUTED UNTIL DEMOLITION OF 126
BACKFLOW VALVE PER DETAIL, TYP. OF 2
PROPOSED UNDERGROUND ELECTRIC AND CABLE CONDUITS. ENCASE IN CONCRETE WITHIN R.O.W.
1.5" DOMESTIC LINE. SOLID PIPE (NO JOINTS WHEN CROSSING PL)
TESTABLE DVCA BACKFLOW DEVICE SHALL BE INSTALLED IN THE BUILDING AFTER THE METER
1.5" DOMESTIC LINE. SOLID PIPE (NO JOINTS WHEN CROSSING PL)
POTENTIAL LOCATION FOR CMP METERS
EXISTING OVERHEAD ELECTRIC TO 122 NORTH STREET
7' 1.5" CURB STOP
4" GATE VALVE
1.5" CURB STOP
6" GATE VALVE
PROPOSED 4" D.I. SPRINKLER LINE
PROPOSED SEWER 6" PVC SDR 35 L= 90' S= 0.01 MIN
PROPOSED 6" D.I. SPRINKLER LINE
PROPOSED POLE-MOUNTED TRANSFORMER ON POLE #18.1. POLE TO BE REPLACED BY CMP. SEE NOTE 10 & 11.
PROPOSED 12"X4" TAPPING SLEEVE AND GATE VALVE
12"X6"TAPPING SLEEVE AND GATE 6" VALVE
CONTRACTOR TO TEST PIT FOR WATER MAIN PRIOR TO ANY OTHER UTILITY CONSTRUCTION. IF PIPE JOINT IS FOUND AT PROPOSED TAPPING LOCATION, CONTACT ENGINEER PRIOR TO ANY FURTHER WORK
EXISTING 12" DI WATER MAIN (2001)
PROPOSED GAS SERVICE
EXISTING 12" PVC SEWER MAIN
UTILITY TRENCH WITHIN R.O.W., TYP.
EXISTING GAS MAIN
APPROX. INVERTS INTO MAIN: 132.75'. TEST PIT TO CONFIRM, TYP. OF ALL UTILITY CONNECTIONS
PROPOSED GAS SERVICE
PROPOSED UTILITY POLE #17H AND OHE/T/C PER C-20 WITH SIDEWALK ASSEMBLY ANCHOR WITHIN RIGHT-OF-WAY
NORTH STREET
RIM=134.7'
12"PVC INV.IN=127.2'(SE)
6"PVC INV.IN=127.4'(NE)
12"PVC INV.OUT=127.2'(NW)
12"PVC SS @ 189LF.
RIM=140.4'
12"PVC INV.IN=132.8'(SW)
INV.IN=133.1'(SW)
12"PVC INV.OUT=132.7'(NW)
Granite Curb
Paved Sidewalk
Old Wire & Chain Post Fence
Edge of Pavement
Cable Box
Porch
Sill=143.2'
Bldg
Set Nails (flush) Pavement Edge (not shown)
Found Rebar (flush)
Found Rebar
Found Rebar w/Survey Cap
Found Rebar w/Survey Cap (flush)
Found Rebar w/Survey Cap (3' up/disturbed)
Found Rebar w/Survey Cap (5' up/disturbed)
Found Rebar w/Survey Cap (Not shown)
Found Rebar (Not shown)
Found Rebar (Not shown)
Found Rebar

GENERAL NOTES:

1. ALL WORK WITHIN THE CITY STREET RIGHT OF WAY SHALL MEET CITY OF PORTLAND TECHNICAL MANUAL STANDARDS.
2. REFER TO STRUCTURAL PLANS FOR FOUNDATION REQUIREMENTS. DESIGN OF ADDITIONAL TEMPORARY SOIL RESTRAINT MEASURES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR IF NECESSARY FOR CONSTRUCTION.
3. CONTRACTOR SHALL ENSURE THAT FOUNDATION DRAINS AND UNDERDRAINS ARE CONSTRUCTED WITH POSITIVE OUTLET TO PROPOSED CONNECTIONS.
4. INSTALL BACKFLOW PREVENTION WITHIN PROPERTY ON ANY CONNECTION TO THE COMBINED SEWER.
5. COORDINATE ROOF LEADERS, GUTTERS, DOWNSPOUTS, ETC. WITH THE ARCHITECT.
6. CLEANOUTS SHALL BE PROVIDED AT ALL 90-DEGREE BENDS IN FOUNDATION DRAIN.
7. ANY SIGNIFICANT DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER PRIOR TO CONSTRUCTION.



AVERAGE GRADE & BUILDING HEIGHT CALCULATIONS – 128R:

EASTERLY CORNER:	141.25'
1	140.70'
2	140.85'
3	141'
4	140.95'
5	141'
6	140.85'
7	135.35'
8	139.9'
9	140.80'
10	140.75'
11	140.85'
12	141'
13	141'
14	140.95'
AVERAGE GRADE:	140.48'
ROOF ELEV:	184.25'
BUILDING HEIGHT:	43.77'

* GRADES ARE RECORDED CLOCKWISE AROUND STRUCTURE

AVERAGE GRADE & BUILDING HEIGHT CALCULATIONS – 126:

EAST:	140.85'
SOUTH:	140.95'
WEST:	140.80'
NORTH:	140.10'
AVERAGE GRADE:	140.68'
ROOF ELEV:	174.00'
BUILDING HEIGHT:	33.32'

* GRADES ARE RECORDED CLOCKWISE AROUND STRUCTURE

FOCAL POINT INSET
1:4

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
ATS	WHS 8/26/19
LEVEL III SITE PLAN	WHS 9/7/19
PHASE II UPDATE	WHS 10/29/19
COMMENT RESPONSE	WHS 12/18/19
COMMENT RESPONSE 2	WHS 2/24/2020
FINAL APPLICATION	WHS 6/2/2020

DRAWING NAME: GRADING & DRAINAGE PLAN
PROJECT NAME: 126/128R NORTH STREET REDEVELOPMENT
CLIENT: UPRIGHT PROPERTIES, LLC
PO BOX 833 WILTON, ME 04294

THESE PLANS SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. AND SHALL BE RETURNED UPON REQUEST OR, OTHERWISE, SHALL BE THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
65 HANOVER ROAD, SUITE 310 FLORENCE, MAINE 04101
(207) 775-2655

FILE:	1116_CIVIL
JN:	1116
SCALE:	1"=10'
DESIGNED BY:	SJL
DRAWN BY:	ZMS
CHECKED BY:	WHS

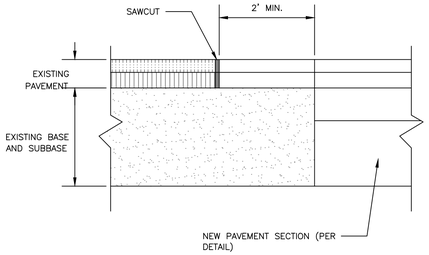
STATE OF MAINE
WILLIAM H. SAVAGE
No. 11410
5-13-2020
REGISTERED PROFESSIONAL ENGINEER

DRAWING NO.
C-30

NOTES:

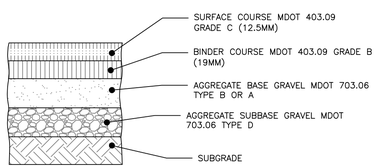
1. SAWCUT EXISTING PAVEMENT AND REMOVE 2' STRIP OF EXISTING PAVEMENT. APPLY BITUMINOUS TACK COAT PRIOR TO PLACEMENT OF NEW BITUMINOUS PAVEMENT.

2. THE NEW PAVEMENT SECTION SHALL MEET THE CITY OF PORTLAND ARTERIAL BITUMINOUS PAVEMENT SECTION DETAIL AT A MINIMUM OR THE THE EXISTING PAVEMENT AND AGGREGATE BASE AND SUBBASE DEPTH WHICHEVER IS GREATER.



PAVEMENT SAWCUT DETAIL

NOT TO SCALE

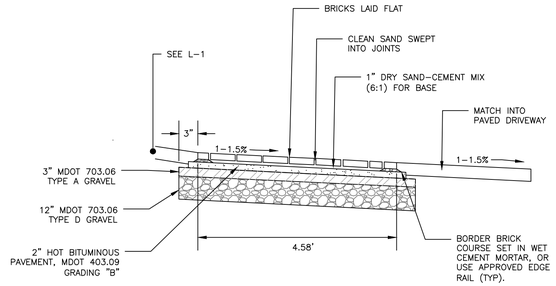


NOTE:
COMPACT SUBGRADE TO 95% MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D-1557

THICKNESS OF LAYERS	
STANDARD	LAYERS
1-1/2"	SURFACE COURSE MDOT 403.09 GRADE C (12.5mm)
2"	BINDER COURSE MDOT 403.09 GRADE B (19mm)
3"	AGGREGATE BASE GRAVEL MDOT 703.06 TYPE B OR A
15"	AGGREGATE SUBBASE GRAVEL MDOT 703.06 TYPE D

BITUMINOUS PAVEMENT PROFILE

NOT TO SCALE



INTERNAL BRICK PEDESTRIAN SIDEWALK ON VEHICULAR WAY

NOT TO SCALE

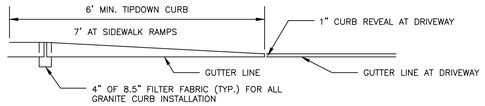
NOTES:

1. BRICKS TO BE USED:

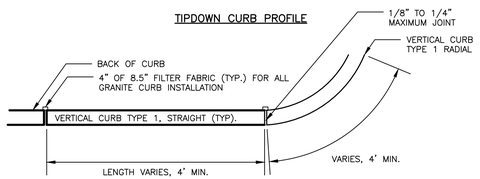
   NEW CONSTRUCTION:
   4"X8" PINE HALL PATHWAY PAVER BRICK; MFG. BY PINE HALL BRICK CO., MADISON, NORTH CAROLINA. LACHANCE ITEM #193623;. PINE HALL PATHWAY PAVER BRICK.

   REPAIR/MAINTENANCE TO EXISTING BRICK SIDEWALKS:
   VERMONT BACKER SUPPLIED BY GAGNE AND SONS SPECIFICATION NUMBER: "VERMONT PAVER BRICK", ITEM NUMBER #VBBB

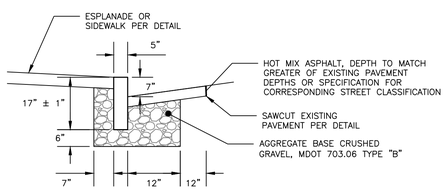
2. INSTALL BRICK FLUSH UP TO BUILDING, PAVEMENT, STAIRS, CONCRETE SURFACES, CURB OR LANDSCAPED AREAS.



TIPDOWN CURB PROFILE



VERTICAL GRANITE CURB PLAN VIEW



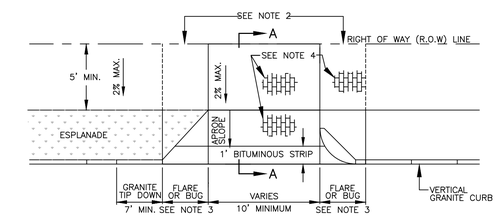
VERTICAL GRANITE CURB CROSS SECTION

NOTES:

1. CURB SHALL BE RESET IN ACCORDANCE WITH MDOT 609.08 WITH THE EXCEPTION OF CURB SPACING TO BE INSTALLED PER DETAIL.

VERTICAL GRANITE CURB AND TIPDOWN INSTALLATION IN EXISTING STREETS DETAIL

NOT TO SCALE



APRON SLOPE TABLE

LAND USE	MAXIMUM RECOMMENDED GRADE CHANGE AT STREET(G)
RESIDENTIAL WITH <9 PARKING SPACES	14%
ALL OTHER DRIVEWAYS	10%

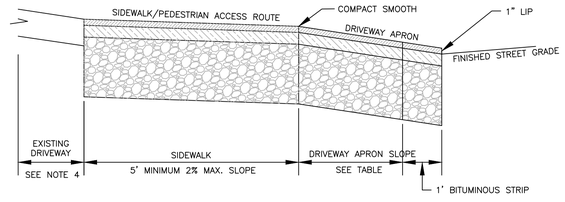
NOTES:

1. MATCH EXISTING GRADE AT R.O.W LINE, WHERE REQUIRED TO MEET A.D.A. AND DRIVEWAY APRON SLOPE REQUIREMENTS, A CONSTRUCTION EASEMENT MAY BE REQUIRED.

2. IF MATCHING THE EXISTING GRADE AT ROW CAUSES APRON SLOPE TO EXCEED RECOMMENDED %, SIDEWALK TRANSITION AREAS MAY BE ADDED, BUT SHALL NOT EXCEED 8.33%.

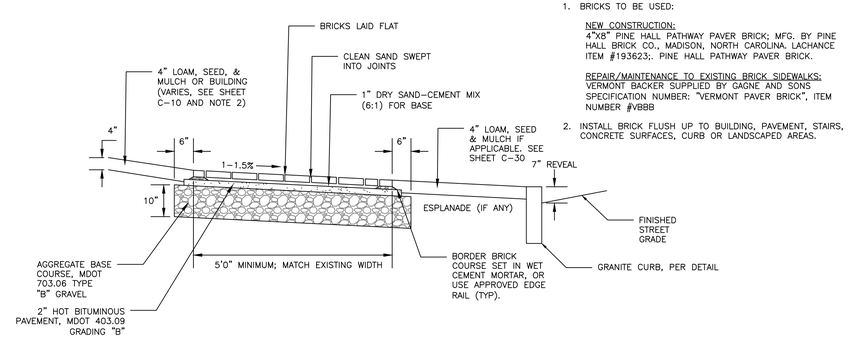
3. TWO-FOOT RADIUS CORNER GRANITE PIECES ("BUGS") ARE REQUIRED AT LOW-VOLUME DRIVEWAYS UNLESS OTHERWISE DIRECTED BY DPW. AT OTHER DRIVEWAYS, STANDARD FLARE/TIPDOWN TREATMENTS SHALL BE USED.

4. ALL MATERIALS TO COMPLY WITH CITY'S SIDEWALK & DRIVEWAY MATERIAL POLICY. BRICK IN DRIVEWAY APRONS, WHERE APPLICABLE, SHALL BE ORIENTED IN THE SAME WAY AS THE ADJACENT BRICK SIDEWALK.



DRIVEWAY APRON

NOT TO SCALE



BRICK SIDEWALK WITH BITUMINOUS BASE DETAIL – RIGHT OF WAY AND INTERNAL NON-VEHICULAR WALKS

NOT TO SCALE

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
LEVEL III SITE PLAN	WHS 8/7/19
PHASE II UPDATE	WHS 10/29/19
COMMENT RESPONSE 2	WHS 7/24/2020

DRAWING NAME: SITE DETAILS – 1

PROJECT NAME: 128R NORTH STREET REDEVELOPMENT

CLIENT: UPRIGHT PROPERTIES, LLC
PO BOX 833 WILTON, ME 04294

ACORN ENGINEERING, INC.
ENGINEERING — SURVEYING — PLANNING
65 HANCOCK STREET PORTLAND, MAINE 04101
(207) 775-2655

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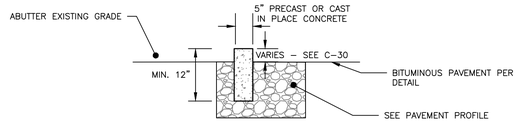
FILE:	1116_CIVIL
JN:	1116
SCALE:	NTS
DESIGNED BY:	SJL
DRAWN BY:	ZMS
CHECKED BY:	WHS

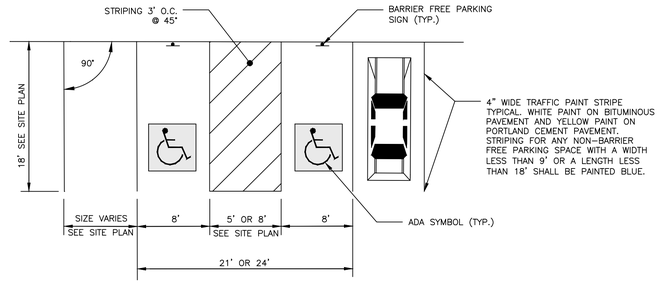
DRAWING NO.
C-40

NOTES:

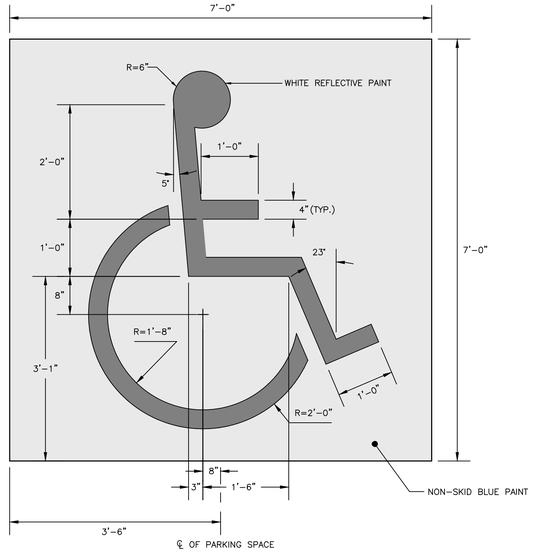
1. CONCRETE 5,000 PSI AT 28 DAYS
2. REINFORCE WITH (2) #4 REBARS
3. ALL CURBING SHOULD BE COATED WITH A CLEAR SEALER EACH FALL TO PROTECT FROM ROAD SALT DAMAGE. CHECK WITH MANUFACTURER FOR APPROPRIATE TYPE.
4. JOINTS SHALL BE BACKED WITH GEOTEXTILE FABRIC WHEN ADJACENT TO TOPSOIL



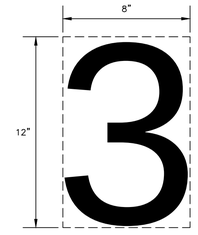
VERTICAL CONCRETE CURB DETAIL
NOT TO SCALE



PARKING SPACE DIMENSIONS
NOT TO SCALE



INTERNATIONAL BARRIER FREE SYMBOL
NOT TO SCALE



NOTES:

1. NUMBERS TO BE PAINTED AS THE SAME COLOR AS THE CORRESPONDING PARKING SPACE.
2. BOTTOM OF NUMBER TO BE FLUSH WITH THE FRONT OF THE PARKING SPACE.

PARKING STALL NUMBER DETAIL
NOT TO SCALE

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
LEVEL III SITE PLAN	WHS 8/7/19
PHASE II UPDATE	WHS 10/29/19
COMMENT RESPONSE 2	WHS 7/24/2020

DRAWING NAME: SITE DETAILS – 2

PROJECT NAME: 128R NORTH STREET REDEVELOPMENT

CLIENT: UPRIGHT PROPERTIES, LLC
PO BOX 833 WILTON, ME 04294

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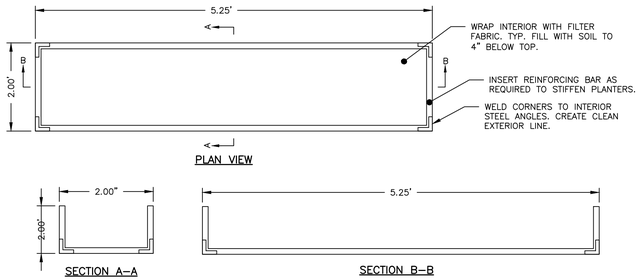
ACORN ENGINEERING, INC.
65 HANOVER ST. PORTLAND, MAINE 04101
(207) 775-2655

FILE:	1116_CIVIL
JN:	1116
SCALE:	NTS
DESIGNED BY:	SJL
DRAWN BY:	ZMS
CHECKED BY:	WHS

STATE OF MAINE WILLIAM H. SAYSLOE No. 11419 REGISTERED PROFESSIONAL ENGINEER
1-13-2020

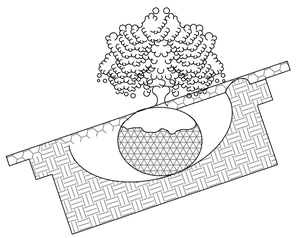
DRAWING NO.
C-41



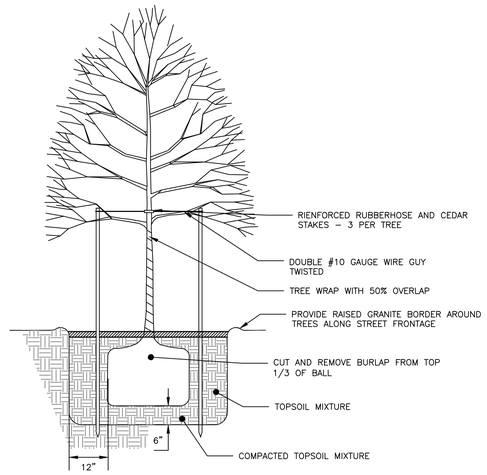
WEATHERING STEEL PLANTER BOX
NOT TO SCALE

NOTES:

1. DIG HOLE AT LEAST 2 TIMES THE DIAMETER OF THE ROOT BALL AND AS DEEP AS THE ROOT BALL (NO DEEPER). SET ROOT BALL CENTERED, WITH THE TOP AT DOWNHILL EDGE OF THE HOLE.
2. TOPSOIL BACKFILL SHALL BE NATURAL FRIABLE, FERTILE, FINE LOAMY SOIL POSSESSING THE CHARACTERISTICS OF TOPSOIL IN THE VICINITY WHICH PRODUCE A HEAVY GROWTH. TOPSOIL SHALL CONTAIN NOT LESS THAN 6% NOR MORE THAN 20% ORGANIC MATTER. TOP SOIL SHALL HAVE A pH VALUE OF NOT LESS THAN 5.5 NOR MORE THAN 7.0.
3. CONTAINER GROWN STOCK – REMOVE CONTAINER PROTECTING THE ROOT BALL. GENTLY COMB OUT THE ROOTS. PRUNE DAMAGED ROOTS.
4. BACKFILL THE HOLE WITH TOPSOIL TO A DEPTH NOT TO EXCEED 8" THEN WATER SUFFICIENTLY TO SETTLE TOPSOIL. REPEAT SOIL BACKFILL, WATER, DRAIN. TOPSOIL SHALL BE TAMPED UNDER EDGES OF THE BALLED PLANTS. BACKFILL TO FINISH GRADE AND CREATE AN EARTHEN SAUCER. SOAK PLANTS TWICE WITHIN THE FIRST TWENTY–FOUR HOURS OF PLANTING.

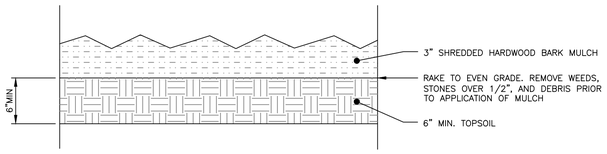


TYPICAL PLANTING
NOT TO SCALE

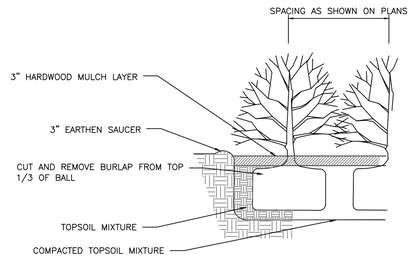


TREE PLANTING DETAIL
NOT TO SCALE

PERENNIAL PLANTING DETAIL
NOT TO SCALE



BARK MULCH DETAIL
NOT TO SCALE



SHRUB PLANTING DETAIL
NOT TO SCALE

PLANTING NOTES:

1. ALL PLANT SELECTION AND INSTALLATION WILL BE IN COMPLIANCE WILL THE CITY OF PORTLAND TECHNICAL MANUAL (SECTION 4).
2. CONTRACTOR TO VERIFY ALL UTILITIES ON PROPERTY AND TO PROTECT ALL UTILITIES DURING EXCAVATION FOR PLANTS.
3. IF THERE IS A DISCREPANCY BETWEEN THE NUMBER OF PLANTS SHOWN ON THE PLAN AND THE NUMBER OF PLANTS SHOWN IN PLANT LIST (IF ANY), THE NUMBER OF PLANTS SHOWN ON PLAN WILL TAKE PRECEDENCE.
4. ALL MATERIAL SHALL COMPLY WITH THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK, AMERICAN ASSOCIATION OF NURSERYMAN.
5. ALL DISTURBED AREAS NOT TO BE PAVED OR PLANTED SHALL BE LOAMED AND SEEDED AS SHOWN. THE SEED MIX SPECIFICATIONS ARE AS FOLLOWS: LESCO FINE FESCUE LINKS BLEND OF 35% HARD FESCUE, 35% CREEPING RED FESCUE, 20% CHEWINGS FESCUE AND 10% SHEEP FESCUE. ADD 5% LITTLE BLUESTEM AND 5% NORTHEAST WILDFLOWER SEED MIXTURE BY WEIGHT TO THE LINKS BLEND.
6. FOR PRICING PURPOSES, PROVIDE A PER TREE UNIT COST FOR STAKING AND GUYING. IF STAKING AND GUYING IS REQUIRED, REMOVE TREE WRAP, STAKES, AND GUY WIRES AT END OF FIRST GROWING SEASON.
7. FOR TREE PLANTING IN LAWN AREAS, ANY DISTURBED LAWN SHALL BE LOAMED AND SEEDED AS NECESSARY.
8. NEW TREES TO BE INSTALLED WITH A SLOW RELEASE WATERING BAG.
9. CONTRACTOR TO BE HELD RESPONSIBLE FOR THE WATERING AND MAINTENANCE OF ALL PLANT MATERIAL AND LANDSCAPING IMPROVEMENTS FOR AT LEAST 30 DAYS FOLLOWING INSTALLATION. FOLLOWING THIS PERIOD, THE LANDOWNER OR PROPERTY MANAGEMENT SHALL BE RESPONSIBLE FOR CONTINUED WATERING AND MAINTENANCE. CONTRACTOR TO MAINTAIN A ONE YEAR WARRANTY ON ALL PLANTINGS FOLLOWING FINAL INSTALLATION.
10. ALL PROPOSED PLANTS SHALL BE LOCATED AS SHOWN ON THE PLANS. CONTRACTOR TO NOTIFY ENGINEER WHEN PLANTINGS HAVE BEEN MOBILIZED ON SITE. ENGINEER TO INSPECT AND ACCEPT OR REJECT ANY SPECIMENS ON THE BASIS OF APPARENT HEALTH, HARDINESS, AND CONFORMANCE WITH THE PLANTING SCHEDULE. REJECTED SPECIMENS ARE TO BE REPLACED BY THE CONTRACTOR AT NO ADDED COST TO THE OWNER. ACCEPTANCE DOES NOT WAIVE THE REQUIRED ONE YEAR PLANTING WARRANTY.

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
LEVEL III SITE PLAN	WHS 8/7/19
PHASE II UPDATE	WHS 10/29/19
COMMENT RESPONSE 2	WHS 7/24/2020

DRAWING NAME: LANDSCAPING DETAILS
PROJECT NAME: 128R NORTH STREET REDEVELOPMENT
CLIENT: UPRIGHT PROPERTIES, LLC
PO BOX 833 WILTON, ME 04294

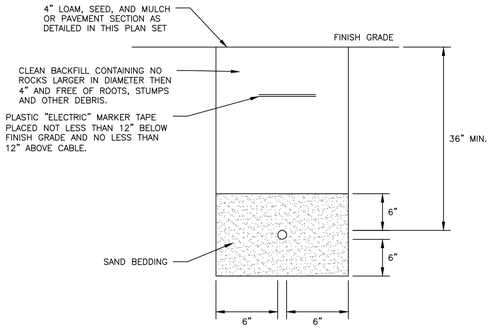
ACORN ENGINEERING, INC.
ENGINEERING, INC.
65 HANCOCK STREET PORTLAND, MAINE 04101
(207) 775-2655

ALL PLANS SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. AND ANY UNAUTHORIZED MODIFICATIONS OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

FILE:	1116_CIVIL
JN:	1116
SCALE:	NTS
DESIGNED BY:	SJL
DRAWN BY:	ZMS
CHECKED BY:	WHS

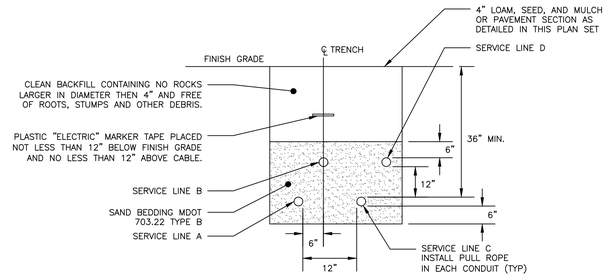
STATE OF MAINE — WILLIAM H. SAVAGE — 10119 — REGISTERED PROFESSIONAL ENGINEER — 2-13-2020

DRAWING NO.
C-42



SECONDARY ELECTRICAL TRENCH

NOT TO SCALE



CONDUIT TYPE				
SERVICE	CONDUIT SIZE	GRASS AND PAVED AREAS	UTILITY	REMARKS
A	2–5"	SCHEDULE 40 PVC ELECTRICAL GRADE	PRIMARY POWER	SEE NOTE 1
B	2–4"	SCHEDULE 40 PVC	COMMUNICATION	–
C	2–4"	SCHEDULE 40 PVC ELECTRICAL GRADE	SPARE	IF REQUIRED
D	2–4"	SCHEDULE 40 PVC	CABLE	–

NOTES:

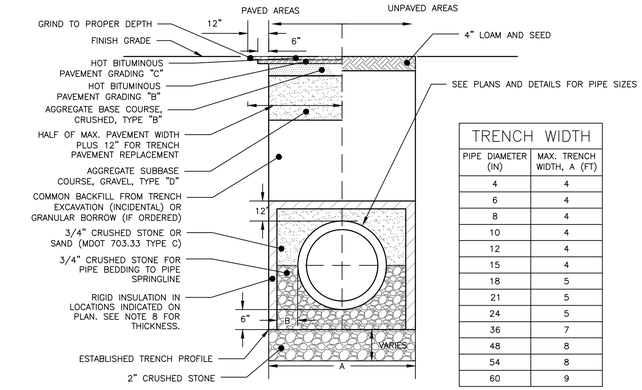
1. ONE CONDUIT CAPPED FOR SPARE, PROVIDE GALVANIZED STEEL LONG SWEEP AT RISER POLE AND EXTEND GALVANIZED CONDUIT TO 10" ABOVE GRADE AT POLE WITH STAND–OFF BRACKETS.
2. MINIMUM SEPARATION OF 24 INCHES BETWEEN PRIMARY CABLE/CONDUIT AND GAS LINES SHALL BE MAINTAINED.
3. CONDUITS WITHIN THE CITY RIGHT–OF–WAY SHALL BE ENCASED IN CONCRETE.

UTILITY TRENCH – PRIMARY AND SECONDARY POWER, TELEPHONE, AND CABLE

NOT TO SCALE

DESIGN NOTES:

1. ANY ALTERNATE TRENCHING METHODS SHALL BE APPROVED IN ADVANCE BY THE CITY.
2. ALL CONSTRUCTION METHODS SHALL CONFORM TO THE CITY OF PORTLAND TECHNICAL STANDARDS FIGURE II–2.
3. BRACING & SHEETING OR OTHER TRENCH PROTECTION TO BE PROVIDED TO MEET APPLICABLE STATE AND O.S.H.A SAFETY STANDARDS. ALL SUCH TRENCH PROTECTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
4. WHERE APPLICABLE, PERFORATIONS IN STORM DRAIN (PERF. SD) SHALL BE ORIENTED UP.
5. ALL STORM DRAINS SHALL BE PVC SDR 35 MIN PS–46 RATING OR OR IN ACCORDANCE WITH CITY OF PORTLAND TECHNICAL MANUAL , SECTION 2 – SANITARY SEWER AND STORM DRAIN – PART 2.5.2
6. IN PAVED AREAS, DEPTHS OF GRAVEL AND HOT MIX ASPHALT PAVEMENT SHALL MATCH THE GREATER OF EXISTING CONDITIONS OR THE REQUIREMENTS FOR THE CORRESPONDING STREET CLASSIFICATION.
7. THIS DETAIL SHALL BE APPLIED ONLY TO PIPE TRENCHES WITHIN OF THE CITY OF PORTLAND R.O.W.
8. STORM DRAIN COVER BETWEEN 2' AND 3' SHALL INCLUDE 4" OF RIGID INSULATION. COVER BETWEEN 3' AND 4' SHALL INCLUDE 2" RIGID INSULATION. OTHER UTILITIES: ADD 2" OF RIGID INSULATION FOR EACH FOOT ABOVE MINIMUM DEPTH.
9. DEPTH OF BITUMINOUS PAVEMENT AND AGGREGATE COURSES SHALL BE DETERMINED BY STREET CLASSIFICATION.
10. DIMENSION B SHALL BE SUFFICIENT TO ALLOW CRUSHED STONE BEDDING TO BE PLACED AND COMPACTED UNDER THE HAUNCHES OF THE PIPE; BUT IN ALL CASES DIMENSION B SHALL BE AT LEAST 9".
11. DIMENSION A IS THE MAXIMUM WIDTH ALLOWED FOR CALCULATING PAY QUANTITIES UNDER GRANULAR BORROW, CRUSHED STONE, STRUCTURAL EARTH EXCAVATION, AND STRUCTURAL ROCK EXCAVATION. DIMENSION A SHALL BE BASED ON PIPE DIAMETER D, AS SET FORTH IN THE TABLE BELOW.



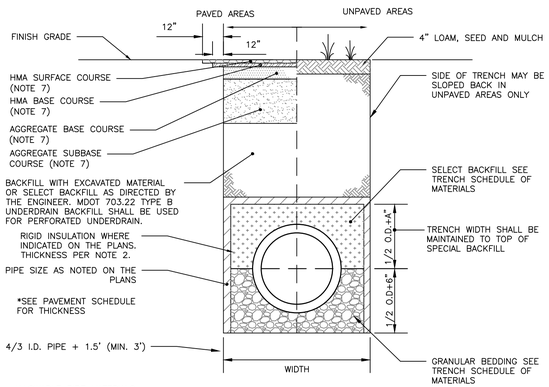
TRENCH WIDTH	
PIPE DIAMETER (IN)	MAX. TRENCH WIDTH, A (FT)
4	4
6	4
8	4
10	4
12	4
15	4
18	5
21	5
24	5
36	7
48	8
54	8
60	9

ALLOWABLE PIPE MATERIALS:

- REINFORCED CONCRETE PIPE (RCP) MIN. STRENGTH OF CLASS III
- PVC RING TYPE SEWER (SDR 35) OR EQUIVALENT, MIN PS–46 RATING
- PVC RING TYPE SEWER PIPE MEETING ASTM F 789
- DUCTILE IRON PIPE (DIP)
- ADS N–12 HP TRIPLE–WALL MIN PS–46 RATING
- ADS SANITITE HP MIN. PS–46

CITY OF PORTLAND TYPICAL PIPE TRENCH DETAIL

NOT TO SCALE



SCHEDULE OF MATERIALS		
TYPE OF PIPE	GRANULAR BEDDING	SELECT BACKFILL
CMP DUCTILE IRON RCP	MDOT 703.22 TYPE B UD BACKFILL	MDOT 703.22 TYPE B UD BACKFILL
PVC/HDPE	MDOT 703.22 TYPE C 3/4" CRUSHED STONE	MDOT 703.22 TYPE B UD BACKFILL
CMP	MDOT 703.22 TYPE C 3/4" CRUSHED STONE	MDOT 703.22 TYPE C 3/4" CRUSHED STONE

NOTES:

1. BRACING AND SHEETING OR OTHER TRENCH PROTECTION TO BE PROVIDED TO MEET APPLICABLE STATE AND O.S.H.A. SAFETY STANDARDS. ALL SUCH TRENCH PROTECTION TO BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. STORM DRAIN COVER BETWEEN 2' AND 3' SHALL INCLUDE 4" OF RIGID INSULATION. COVER BETWEEN 3' AND 4' SHALL INCLUDE 2' RIGID INSULATION. OTHER UTILITIES: ADD 2" OF RIGID INSULATION FOR EACH FOOT ABOVE MINIMUM DEPTH.
3. INSTALL WARNING TAPE DIRECTLY ABOVE UTILITIES AT THE TOP OF SUBGRADE.
4. MINIMUM COVER
   4.1. 2'–0" – STORM DRAIN
   4.2. 5'–0" – SEWER
5. NO TREES SHALL BE PLANTED WITHIN 5' OF A SEWER PIPE OR SERVICE
6. THIS DETAIL SHALL BE APPLIED ONLY TO DRAINAGE PIPE TRENCHES OUTSIDE OF THE CITY OF PORTLAND ROW.
7. THICKNESS AS NOTED BY SURFACE DETAILS

ALLOWABLE PIPE MATERIALS:

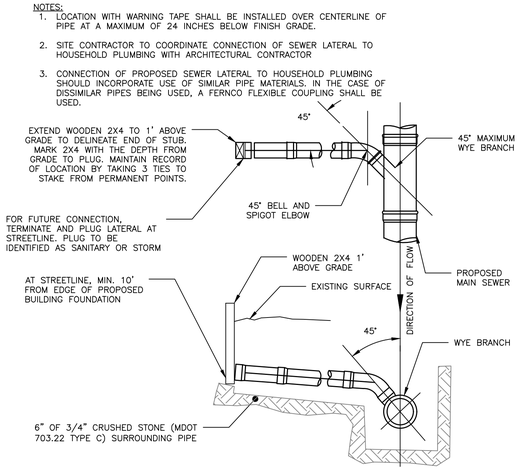
- REINFORCED CONCRETE PIPE (RCP) MIN. STRENGTH OF CLASS III
- PVC RING TYPE SEWER (SDR 35) OR EQUIVALENT, MIN PS–46 RATING
- PVC RING TYPE SEWER PIPE MEETING ASTM F 789
- DUCTILE IRON PIPE (DIP)
- ADS N–12 HP TRIPLE–WALL MIN PS–46 RATING
- ADS SANITITE HP MIN. PS–46

INTERNAL STORM DRAIN AND SEWER TYPICAL TRENCH SECTION

NOT TO SCALE

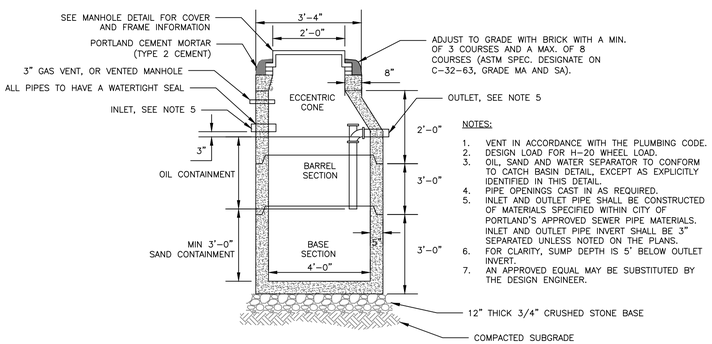
NOTES:

1. LOCATION WITH WARNING TAPE SHALL BE INSTALLED OVER CENTERLINE OF PIPE AT A MAXIMUM OF 24 INCHES BELOW FINISH GRADE.
2. SITE CONTRACTOR TO COORDINATE CONNECTION OF SEWER LATERAL TO HOUSEHOLD PLUMBING WITH ARCHITECTURAL CONTRACTOR
3. CONNECTION OF PROPOSED SEWER LATERAL TO HOUSEHOLD PLUMBING SHOULD INCORPORATE USE OF SIMILAR PIPE MATERIALS. IN THE CASE OF DISSIMILAR PIPES BEING USED, A FERNCO FLEXIBLE COUPLING SHALL BE USED.



SEWER TEE/WYE CONNECTION DETAIL

NOT TO SCALE



NOTES:

1. VENT IN ACCORDANCE WITH THE PLUMBING CODE.
2. DESIGN LOAD FOR H–20 WHEEL LOAD.
3. OIL, SAND AND WATER SEPARATOR TO CONFORM TO CATCH BASIN DETAIL, EXCEPT AS EXPLICITLY IDENTIFIED IN THIS DETAIL.
4. PIPE OPENINGS CAST IN AS REQUIRED.
5. INLET AND OUTLET PIPE SHALL BE CONSTRUCTED OF MATERIALS SPECIFIED WITHIN CITY OF PORTLAND'S APPROVED SEWER PIPE MATERIALS. INLET AND OUTLET PIPE INVERT SHALL BE 3" SEPARATED UNLESS NOTED ON THE PLANS.
6. FOR CLARITY, SUMP DEPTH IS 5' BELOW OUTLET INVERT.
7. AN APPROVED EQUAL MAY BE SUBSTITUTED BY THE DESIGN ENGINEER.

4'–0" DIAMETER PRECAST OIL AND WATER SEPARATOR

NOT TO SCALE

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
LEVEL III SITE PLAN	WHS 8/7/19
PHASE II UPDATE	WHS 10/29/19
COMMENT RESPONSE 2	WHS 7/24/2020

DRAWING NAME: UTILITY DETAILS – 1

PROJECT NAME: 128R NORTH STREET REDEVELOPMENT

CLIENT: UPRIGHT PROPERTIES, LLC
PO BOX 833 WILTON, ME 04294

ACORN ENGINEERING, INC.
ENGINEERING, INC.

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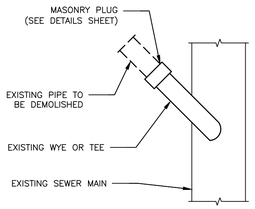
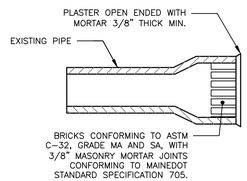
ACORN ENGINEERING, INC.
65 HANOVER STREET, PORTLAND, MAINE 04101
(207) 775–2655

FILE:	1116_CIVIL
JN:	1116
SCALE:	NTS
DESIGNED BY:	SJL
DRAWN BY:	ZMS
CHECKED BY:	WHS

STATE OF MAINE — WILLIAM H. RAYMOND — 2-13-2020 — REGISTERED PROFESSIONAL ENGINEER

DRAWING NO.
C-43

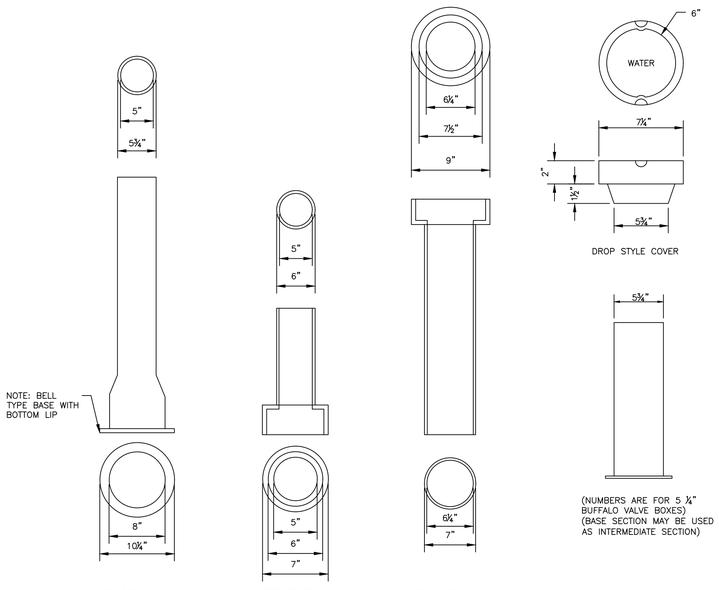




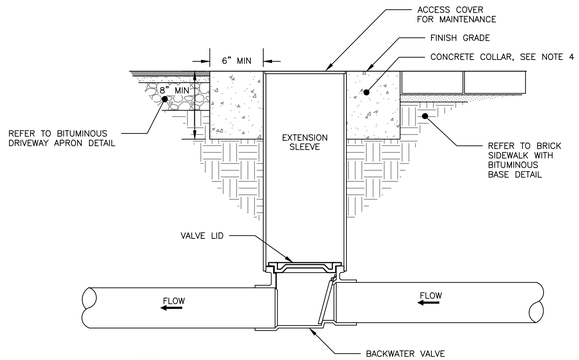
DESIGN NOTES:

1. IT IS ASSUMED THAT THE EXISTING PIPE IS OF VITRIFIED CLAY CONSTRUCTION. USE CAP OR PLUG FOR PVC PIPE

MASONRY PLUG DETAIL
NOT TO SCALE



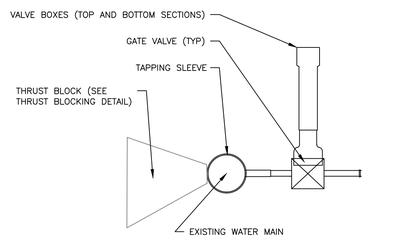
VALVE BOX & COVER
NOT TO SCALE



NOTES:

1. BACKFLOW VALVE TO BE PROVIDED BY AGRI DRAIN CORPORATION OR AN APPROVED EQUAL.
2. VALVE TO BE INSTALLED TO MANUFACTURER'S SPECIFICATIONS AND COMPLY WITH RULES AND REGULATIONS AS OUTLINED IN SECTION 2 OF THE CITY OF PORTLAND TECHNICAL MANUAL.
3. VALVE SHALL BE INSTALLED WITH A VALVE BOX AND COVER TO PROVIDE EASY ACCESS AND MAINTENANCE; VALVE COVER SHALL STATE 'SEWER' ON LID FLUSH TO SURFACE. REFER TO VALVE & BOX COVER DETAIL FOR ADDITIONAL INFORMATION.
4. CONCRETE COLLAR AT A MINIMUM 24-HOUR COMPRESSIVE STRENGTH OF 3,000 PSI.

BACKFLOW VALVE ASSEMBLY
NOT TO SCALE

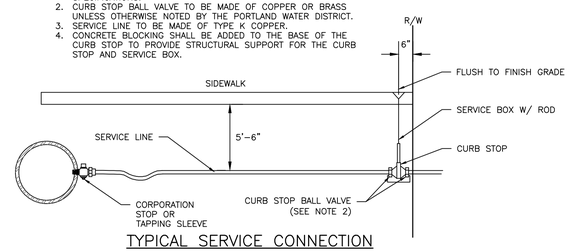


SIDE VIEW

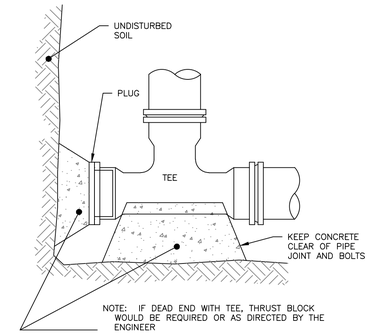
TAPPING SLEEVE AND VALVE
NOT TO SCALE

NOTES:

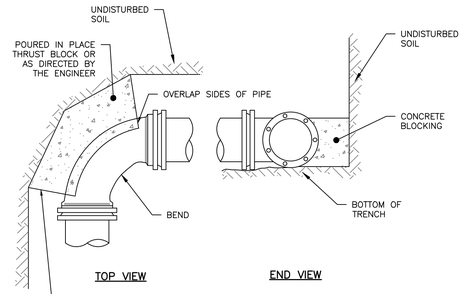
1. ALL MATERIALS AND INSTALLATION PROCEDURES MUST COMPLY WITH THE CITY OF PORTLAND WATER DISTRICT (PWD) SPECIFICATIONS.
2. CURB STOP BALL VALVE TO BE MADE OF COPPER OR BRASS UNLESS OTHERWISE NOTED BY THE PORTLAND WATER DISTRICT.
3. SERVICE LINE TO BE MADE OF TYPE K COPPER.
4. CONCRETE BLOCKING SHALL BE ADDED TO THE BASE OF THE CURB STOP TO PROVIDE STRUCTURAL SUPPORT FOR THE CURB STOP AND SERVICE BOX.



TYPICAL SERVICE CONNECTION
NOT TO SCALE



END SECTION



TOP VIEW

END VIEW

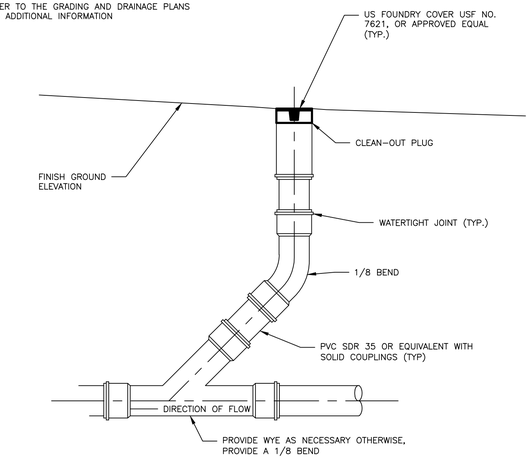
NOTE: SEE THRUST/RETAINER GLAND SCHEDULE FOR TYPE OF BLOCKING TO BE USED ON BENDS

REGULAR BEND

THRUST BLOCKING
NOT TO SCALE

NOTES:

1. REFER TO THE GRADING AND DRAINAGE PLANS FOR ADDITIONAL INFORMATION



CLEANOUT DETAIL
NOT TO SCALE

PERMIT LEVEL
NOT ISSUED FOR
CONSTRUCTION

ISSUED FOR	BY DATE
LEVEL III SITE PLAN	WHS 8/7/19
PHASE II UPDATE	WHS 10/29/19
COMMENT RESPONSE 2	WHS 7/24/2020

DRAWING NAME: UTILITY DETAILS - 2

PROJECT NAME: 128R NORTH STREET REDEVELOPMENT

CLIENT: UPRIGHT PROPERTIES, LLC
PO BOX 833 WILTON, ME 04294

ACORN ENGINEERING, INC.
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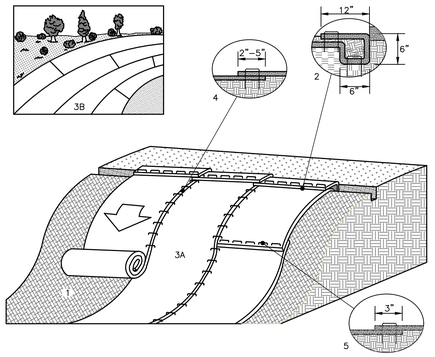
ACORN ENGINEERING, INC.
65 HANOVER STREET PORTLAND, MAINE 04101
(207) 775-2655

FILE:	1116_CIVIL
JN:	1116
SCALE:	NTS
DESIGNED BY:	SJL
DRAWN BY:	ZMS
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM H. SAVAGE
No. 9408
2-13-2020
REGISTERED PROFESSIONAL ENGINEER

DRAWING NO.
C-44



SLOPE
INSTALLATION DETAIL

1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL BLANKET (ECB), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE ECB IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF ECB EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE ECB WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO THE COMPACTED SOIL AND FOLD THE REMAINING 12" PORTION OF ECB BACK OVER THE SEED AND COMPACTED SOIL. SECURE ECB OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE ECB.
3. ROLL THE ECB (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. ECB WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL ECB MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE.
4. THE EDGES OF PARALLEL ECB MUST BE STAPLED WITH APPROXIMATELY 2" – 5" OVERLAP DEPENDING ON THE ECB TYPE.
5. CONSECUTIVE ECB SPLICED DOWN THE SLOPE MUST BE END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE ECB WIDTH.

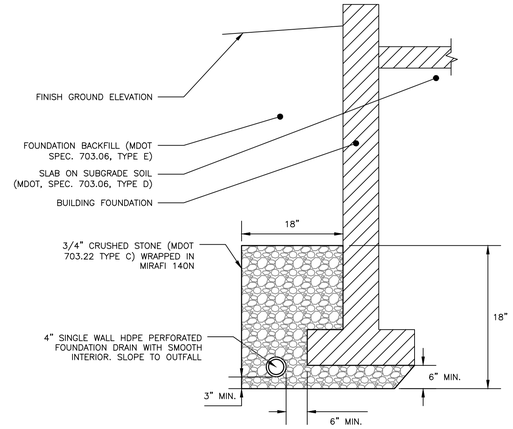
*NOTE:
IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE ECB.

EROSION CONTROL BLANKET SLOPE INSTALLATION

NOT TO SCALE

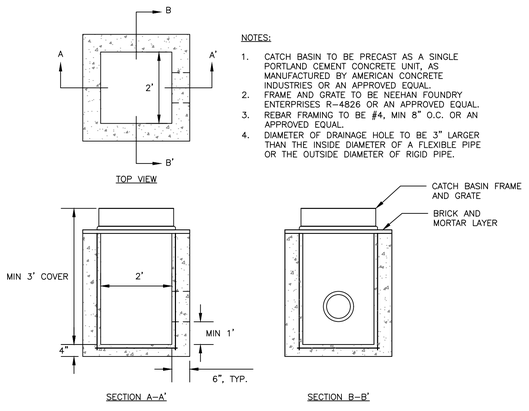
NOTES:

1. REFER TO THE BUILDING ARCHITECTS PLANS FOR THE BUILDING FOUNDATION, BACKFILL, ROOF DRAIN, SIDEWALK AND OTHER DETAILS.
2. PERFORATIONS IN UNDERDRAIN PIPE SHALL BE ORIENTED DOWN.
3. FOUNDATION WALL FOOTINGS SHALL BE CONSTRUCTED TO A MIN. DEPTH OF 4 FT BELOW ADJACENT FINISH GRADE. REFER TO STRUCTURAL ENGINEERS PLANS FOR ADDITIONAL INFORMATION AND MIN. REQUIREMENTS.



FOUNDATION DRAIN DETAIL

NOT TO SCALE

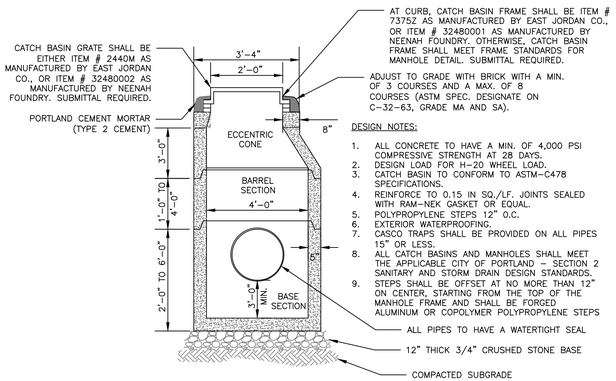


NOTES:

1. CATCH BASIN TO BE PRECAST AS A SINGLE PORTLAND CEMENT CONCRETE UNIT, AS MANUFACTURED BY AMERICAN CONCRETE INDUSTRIES OR AN APPROVED EQUAL.
2. FRAME AND GRATE TO BE NEEHAN FOUNDRY ENTERPRISES R-4826 OR AN APPROVED EQUAL.
3. REBAR FRAMING TO BE #4, MIN 8" O.C. OR AN APPROVED EQUAL.
4. DIAMETER OF DRAINAGE HOLE TO BE 3" LARGER THAN THE INSIDE DIAMETER OF A FLEXIBLE PIPE OR THE OUTSIDE DIAMETER OF RIGID PIPE.

'TYPE F' PRECAST CATCH BASIN

NOT TO SCALE



DESIGN NOTES:

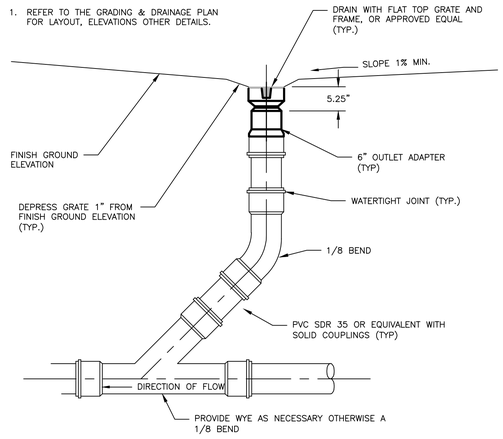
1. ALL CONCRETE TO HAVE A MIN. OF 4,000 PSI COMPRESSIVE STRENGTH AT 28 DAYS.
2. DESIGN LOAD FOR H-20 WHEEL LOAD.
3. CATCH BASIN TO CONFORM TO ASTM-C478 SPECIFICATIONS.
4. REINFORCE TO 0.15 IN SQ./LF. JOINTS SEALED WITH RAM-NEK GASKET OR EQUAL.
5. POLYPROPYLENE STEPS 12" O.C.
6. EXTERIOR WATERPROOFING.
7. CASCO TRAPS SHALL BE PROVIDED ON ALL PIPES 15" OR LESS.
8. ALL CATCH BASINS AND MANHOLES SHALL MEET THE APPLICABLE CITY OF PORTLAND – SECTION 2 SANITARY AND STORM DRAIN DESIGN STANDARDS.
9. STEPS SHALL BE OFFSET AT NO MORE THAN 12" ON CENTER, STARTING FROM THE TOP OF THE MANHOLE FRAME AND SHALL BE FORGED ALUMINUM OR COPOLYMER POLYPROPYLENE STEPS

4'–0" DIAMETER PRECAST CATCH BASIN/MANHOLE

NOT TO SCALE

NOTES:

1. REFER TO THE GRADING & DRAINAGE PLAN FOR LAYOUT, ELEVATIONS OTHER DETAILS.



INLINE DRAIN DETAIL WITH FLAT GRATE

NOT TO SCALE

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
LEVEL III SITE PLAN	WHS 8/7/19
PHASE II UPDATE	WHS 10/29/19
COMMENT RESPONSE	WHS 12/18/19
COMMENT RESPONSE 2	WHS 2/24/2020

DRAWING NAME: DRAINAGE DETAILS

PROJECT NAME: 128R NORTH STREET REDEVELOPMENT

CLIENT: UPRIGHT PROPERTIES, LLC
PO BOX 833 WILTON, ME 04294

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ACORN ENGINEERING, INC.
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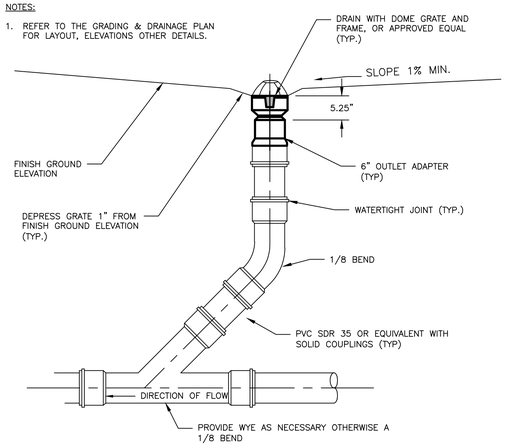
JN:	1116
SCALE:	NTS
DESIGNED BY:	SJL
DRAWN BY:	ZMS
CHECKED BY:	WHS

DRAWING NO.
C-45

NOTES:

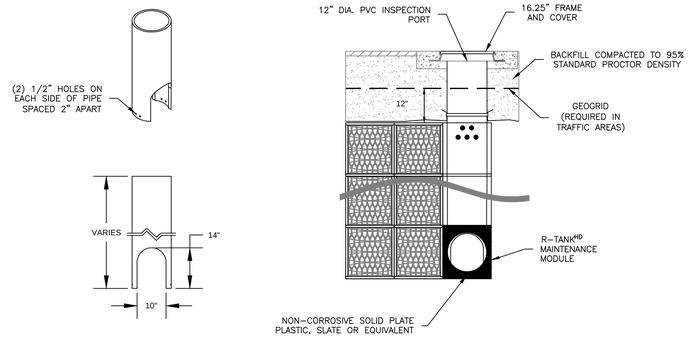
1. REFER TO THE GRADING & DRAINAGE PLAN FOR LAYOUT, ELEVATIONS OTHER DETAILS.



OVERFLOW BEEHIVE DRAIN

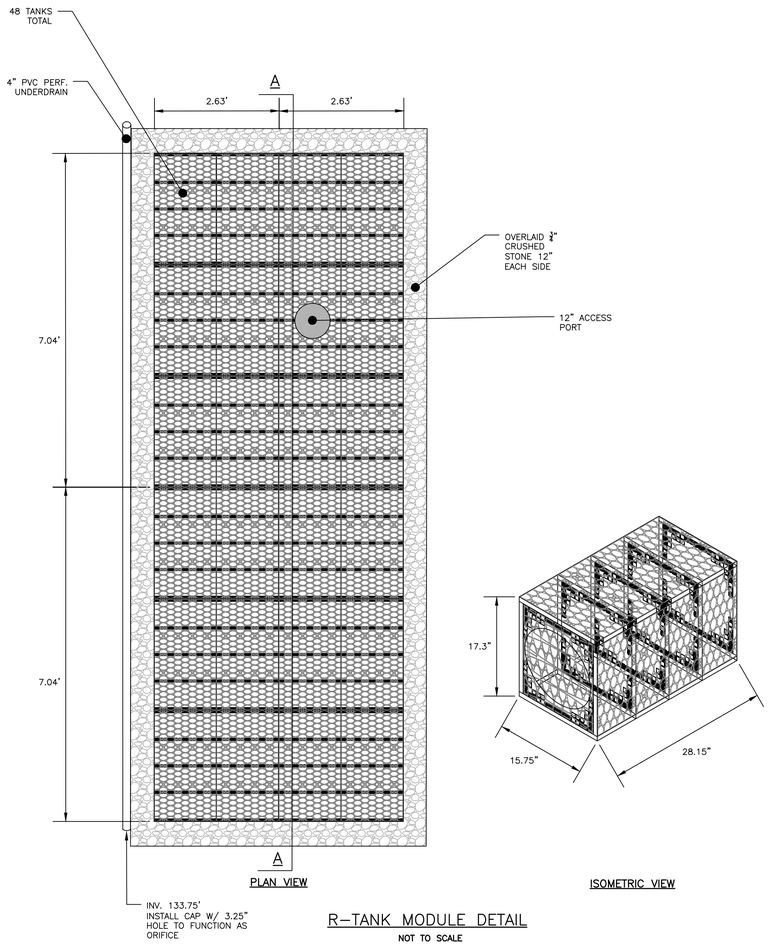
NOTES

1. THE INSPECTION PORT IS USED IN THE MAINTENANCE MODULE TO INSPECT THE LEVEL OF SEDIMENT ACCUMULATION.
2. MINIMUM REQUIRED MAINTENANCE INCLUDES A QUARTERLY INSPECTION DURING THE FIRST YEAR OF OPERATION AND A YEARLY INSPECTION THEREAFTER. FLUSH MAINTENANCE ROW VIA THE ACCESS STRUCTURE FROM EITHER END AS NEEDED.
3. SEE TRAFFIC LOADING DETAIL FOR MINIMUM & MAXIMUM COVER REQUIREMENTS.



ACCESS PORT WITH SOLID COVER

NOT TO SCALE

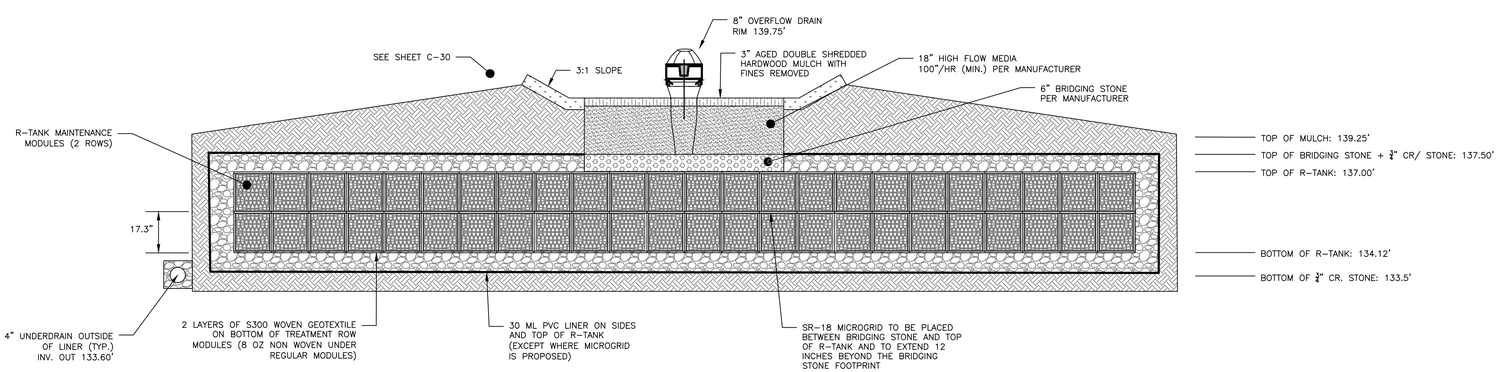


PLAN VIEW

ISOMETRIC VIEW

R-TANK MODULE DETAIL

NOT TO SCALE



SECTION A-A

FOCAL POINT RAIN GARDEN WITH R-TANK TREATMENT ROW

NOT TO SCALE

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
LEVEL III SITE PLAN	WHS 8/7/19
PHASE II UPDATE	WHS 10/29/19
COMMENT RESPONSE	WHS 12/18/19
COMMENT RESPONSE 2	WHS 2/24/2020

DRAWING NAME: FOCAL POINT RAIN GARDEN DETAILS

PROJECT NAME: 128R NORTH STREET REDEVELOPMENT

CLIENT: UPRIGHT PROPERTIES, LLC
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CHECKED BY:	WHS

DRAWING NO.
C-46

1.0 EROSION CONTROL MEASURES AND SITE STABILIZATION

AS PART OF THE SITE DEVELOPMENT, THE FOLLOWING TEMPORARY AND PERMANENT EROSION AND SEDIMENTATION CONTROL DEVICES SHALL BE IMPLEMENTED. DEVICES SHALL BE INSTALLED AS DESCRIBED IN THIS REPORT OR WITHIN THE PLAN SET. SEE THE MAINE EROSION AND SEDIMENT CONTROL HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES FOR FURTHER REFERENCE.

1.1 TEMPORARY EROSION CONTROL MEASURES

THE FOLLOWING TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES ARE PLANNED FOR THE PROJECT'S CONSTRUCTION PERIOD:

1.1.1 CRUSHED STONE STABILIZED CONSTRUCTION ENTRANCES SHALL BE PLACED AT ALL ACCESS POINTS TO THE PROJECT SITE WHERE THERE ARE DISTURBED AREAS. THE FOLLOWING SPECIFICATIONS SHALL BE FOLLOWED AT A MINIMUM:
- STONE SIZE SHALL BE 2–3 INCHES, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
- THE THICKNESS OF THE ENTRANCE STONE LAYER SHALL BE NO LESS THAN 6 INCHES.
- THE ENTRANCE SHALL NOT BE LESS THAN 20 FEET WIDE, HOWEVER NOT LESS THAN THE FULL WIDTH OF POINTS WHERE INGRESS OR EGRESS OCCURS. THE LENGTH SHALL NOT BE LESS THAN 50 FEET IN LENGTH.
- GEOTEXTILE FABRIC (WOVEN OR NON–WOVEN) SHALL BE PLACED OVER THE ENTIRE ENTRANCE AREA.
- THE ENTRANCE/EXIT SHALL BE MAINTAINED TO THE EXTENT THAT IT WILL PREVENT THE TRACKING OF SEDIMENT ONTO PUBLIC ROAD WAYS.

1.1.2 SILTATION FENCE OR EROSION CONTROL BERM SHALL BE INSTALLED DOWN GRADIENT OF ANY DISTURBED AREAS TO TRAP RUNOFF BORNE SEDIMENTS UNTIL PERMANENT STABILIZATION IS ACHIEVED. THE SILT FENCE OR EROSION CONTROL BERM SHALL BE INSTALLED PER THE DETAILS PROVIDED IN THE PLAN SET AND INSPECTED BEFORE AND IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. REPAIRS SHALL BE MADE IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THE FENCE LINE OR BERM. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR THE EDGES, OR IMPOUNDING OF LARGE VOLUMES OF WATER BEHIND THE FENCE OR BERM, THE BARRIER SHALL BE REPLACED WITH A STONE CHECK DAM.

1.1.3 HAY MULCH INCLUDING HYDRO SEEDING IS INTENDED TO PROVIDE COVER FOR DENUDED OR SEEDED AREAS UNTIL REVEGETATION IS ESTABLISHED. MULCH PLACED BETWEEN APRIL 15TH AND NOVEMBER 1ST ON SLOPES OF LESS THAN 15 PERCENT SHALL BE COVERED BY FABRIC NETTING AND ANCHORED WITH STAPLES IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION. MULCH PLACED BETWEEN NOVEMBER 1ST AND APRIL 15TH ON SLOPES EQUAL TO OR STEEPER THAN 8 PERCENT AND EQUAL TO OR FLATTER THAN 2:1 SHALL USE MATS OR FABRIC NETTING AND ANCHORED WITH STAPLES IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION.

1.1.4 AT ANY TIME OF THE YEAR, ALL SLOPES STEEPER THAN 3:1 SHALL BE STABILIZED WITH DOUBLE NET EROSION CONTROL BLANKET BIONET SC150BN BY NORTH AMERICAN GREEN OR APPROVED EQUAL, OR EROSION CONTROL MIX SLOPE PROTECTION AS DETAILED WITHIN THE PLANS.

1.1.5 NORTH STREET SHALL BE SWEPT TO CONTROL MUD AND DUST FROM THE CONSTRUCTION SITE AS NECESSARY. ADD ADDITIONAL STONE TO THE STABILIZED CONSTRUCTION ENTRANCE TO MINIMIZE THE TRACKING OF MATERIAL OFF THE SITE AND ONTO THE SURROUNDING ROADWAYS.

1.1.6 DURING DEMOLITION, CLEARING AND GRUBBING OPERATIONS, STONE CHECK DAMS SHALL BE INSTALLED AT ANY AREAS OF CONCENTRATED FLOW. THE MAXIMUM HEIGHT OF THE CHECK DAM SHALL NOT EXCEED 2 FEET. THE CENTER OF THE CHECK DAM SHALL BE 6 INCHES BELOW THE OUTER EDGES OF THE DAM. THE CONTRACTOR SHALL MULCH THE SIDE SLOPES AND INSTALL STONE CHECK DAMS FOR ALL NEWLY EXCAVATED DITCH LINES WITHIN 24 HOURS OF THEIR CREATION.

1.1.7 SILT FENCE STAKE SPACING SHALL NOT EXCEED 6 FEET UNLESS THE FENCE IS SUPPORTED WITH 14 GAUGE WIRE IN WHICH CASE THE MAXIMUM SPACING SHALL NOT EXCEED 10 FEET. THE SILT FENCE SHALL BE "TOED" INTO THE GROUND.

1.1.8 STORMDRAIN INLET PROTECTION SHALL BE PROVIDED TO STORMDRAINS THROUGH THE USE OF ANY OF THE FOLLOWING: HAY BALE DROP INLET STRUCTURES, SILT FENCE DROP INLET SEDIMENT FILTER, GRAVEL AND WIRE MESH DROP INLET SEDIMENT FILTER, OR CURB INLET SEDIMENT FILTER. BARRIERS SHALL BE INSPECTED AFTER EVERY RAINFALL EVENT AND REPAIRED AS NECESSARY. SEDIMENTS SHALL BE REMOVED WHEN ACCUMULATION HAS REACHED ½ THE DESIGN HEIGHT.

1.1.9 DUST CONTROL SHALL BE ACCOMPLISHED BY THE USE OF ANY OF THE FOLLOWING: WATER, CALCIUM CHLORIDE, STONE, OR AN APPROVED MDEP PRODUCT. DUST CONTROL SHALL BE APPLIED AS NEEDED TO ACCOMPLISH DUST CONTROL.

1.1.10 TEMPORARY LOAM, SEED, AND MULCHING SHALL BE USED IN AREAS WHERE NO OTHER EROSION CONTROL MEASURE IS USED. APPLICATION RATES FOR SEEDING ARE PROVIDED AT THE END OF THIS REPORT.

1.1.11 STOCKPILES SHALL BE STABILIZED WITHIN 7 DAYS OF FORMATION UNLESS A SCHEDULED RAIN EVENT OCCURS PRIOR TO THE 7 DAY WINDOW, IN WHICH CASE THE STOCKPILE SHALL BE STABILIZED PRIOR TO THE RAIN EVENT. METHODS OF STABILIZATION SHALL BE MULCH, EROSION CONTROL MIX, OR EROSION CONTROL BLANKETS/MATS. SILT FENCE OR A WOOD WASTE COMPOST FILTER BERM SHALL BE PLACED DOWNHILL OF ANY SOIL STOCKPILE LOCATION.

1.1.12 FOR DISTURBANCE BETWEEN NOVEMBER 1 AND APRIL 15, PLEASE REFER TO WINTER STABILIZATION PLAN IN THIS REPORT AND THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR FURTHER INFORMATION.

1.1.13 IT IS OF THE UTMOST IMPORTANCE THAT STORMWATER RUNOFF AND POTENTIAL SEDIMENT FROM THE CONSTRUCTION SITE BE DIVERTED AROUND THE PROPOSED UNDERDRAINS UNTIL THE TRENCH IS BACKFILLED.

1.2 PERMANENT EROSION CONTROL MEASURES

THE FOLLOWING PERMANENT EROSION CONTROL MEASURES ARE INTENDED FOR POST DISTURBANCE AREAS OF THE PROJECT.

1.2.1 ALL DISTURBED AREAS DURING CONSTRUCTION, NOT SUBJECT TO OTHER PROPOSED CONDITIONS, SHALL RECEIVE A MINIMUM 4" OF LOAM, LIMED, AND MULCHED. EROSION CONTROL BLANKETS OR MATS SHALL BE PLACED OVER THE MULCH IN AREAS NOTED IN PARAGRAPH 4.2 OF THIS REPORT.

1.2.2 ALL STORMWATER DEVICES SHALL BE INSTALLED AND TRIBUTARY AREAS STABILIZED PRIOR RECEIVING STORMWATER.

1.2.3 REFER TO THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR ADDITIONAL INFORMATION.

2.0 EROSION AND SEDIMENTATION CONTROL PLAN

2.1 THE EROSION AND SEDIMENTATION CONTROL PLAN IS INCLUDED WITHIN THE PLAN SET.

3.0 DETAILS AND SPECIFICATIONS

3.1 EROSION CONTROL DETAILS AND SPECIFICATIONS ARE INCLUDED IN THE PLAN SET.

4.0 STABILIZATION PLAN FOR WINTER CONSTRUCTION

WINTER CONSTRUCTION CONSISTS OF EARTHWORK DISTURBANCE BETWEEN THE DATES OF NOVEMBER 1 AND APRIL 15. IF A CONSTRUCTION SITE IS NOT STABILIZED WITH PAVEMENT, A ROAD GRAVEL BASE, 75% MATURE VEGETATION COVER OR RIPRAP BY NOVEMBER 15, THEN THE SITE SHALL BE PROTECTED WITH OVER–WINTER STABILIZATION. ANY AREA NOT STABILIZED WITH PAVEMENT, VEGETATION, MULCHING, EROSION CONTROL MIX, EROSION CONTROL MATS, RIPRAP, OR GRAVEL BASE ON A ROAD SHALL BE CONSIDERED OPEN.

THE CONTRACTOR SHALL LIMIT THE WORK AREA TO AREAS THAT WORK WILL OCCUR IN DURING THE SUBSEQUENT 15 DAYS AND SO THAT IT CAN BE MULCHED ONE DAY PRIOR TO A SNOW EVENT. THE CONTRACTOR SHALL STABILIZE WORK AREAS PRIOR TO OPENING ADDITIONAL WORK AREAS TO MINIMIZE AREAS WITHOUT EROSION CONTROL MEASURES.

THE FOLLOWING MEASURES SHALL BE IMPLEMENTED DURING WINTER CONSTRUCTION PERIODS:

4.1 SEDIMENT BARRIERS

DURING FROZEN CONDITIONS, SEDIMENT BARRIERS MAY CONSIST OF EROSION CONTROL MIX BERMS OR ANY OTHER RECOGNIZED SEDIMENT BARRIERS AS FROZEN SOIL PREVENTS THE PROPER INSTALLATION OF HAY BALES OR SILT FENCES.

4.2 MULCHING

ALL AREAS SHALL BE CONSIDERED TO BE DENUDED UNTIL SEEDED AND MULCHED. HAY AND STRAW MULCH SHALL BE APPLIED AT A RATE OF 150 LB. PER 1,000 SQUARE FEET OR 3 TONS/ACRE (TWICE THE NORMAL ACCEPTED RATE OF 75–LBS./1,000 S.F. OR 1.5 TONS/ACRE) AND SHALL BE PROPERLY ANCHORED. EROSION CONTROL MIX MUST BE APPLIED WITH A MINIMUM 4 INCH THICKNESS. MULCH SHALL NOT BE SPREAD ON TOP OF SNOW. THE SNOW SHALL BE REMOVED DOWN TO A ONE–INCH DEPTH OR LESS PRIOR TO APPLICATION. AFTER EACH DAY OF FINAL GRADING, THE AREA SHALL BE PROPERLY STABILIZED WITH ANCHORED HAY OR STRAW OR EROSION CONTROL MATTING. AN AREA SHALL BE CONSIDERED TO HAVE BEEN STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED OR ADEQUATELY ANCHORED SO THAT GROUND SURFACE IS NOT VISIBLE THROUGH THE MULCH. BETWEEN THE DATES OF NOVEMBER 1 AND APRIL 15, ALL MULCH SHALL BE ANCHORED BY EITHER MULCH NETTING, TRACKING OR WOOD CELLULOSE FIBER. THE COVER WILL BE CONSIDERED SUFFICIENT WHEN THE GROUND SURFACE IS NOT VISIBLE THROUGH THE MULCH. AFTER NOVEMBER 1ST, MULCH AND ANCHORING OF ALL EXPOSED SOIL SHALL OCCUR AT THE END OF EACH FINAL GRADING WORKDAY.

4.3 SOIL STOCKPILING

STOCKPILES OF SOIL OR SUBSOIL SHALL BE MULCHED FOR OVER WINTER PROTECTION WITH HAY OR STRAW AT TWICE THE NORMAL RATE OR WITH A FOUR–INCH LAYER OF EROSION CONTROL MIX. THIS SHALL BE DONE WITHIN 24 HOURS OF STOCKING AND RE–ESTABLISHED PRIOR TO ANY RAINFALL OR SNOWFALL.

4.4 SEEDING

BETWEEN THE DATES OF OCTOBER 15TH AND APRIL 1ST, LOAM OR SEED SHALL NOT BE REQUIRED. DURING PERIODS OF ABOVE FREEZING TEMPERATURES FINISHED AREAS SHALL BE FINE GRADED AND EITHER PROTECTED WITH MULCH OR TEMPORARILY SEEDED AND MULCHED UNTIL SUCH TIME AS THE FINAL TREATMENT CAN BE APPLIED. IF THE DATE IS AFTER NOVEMBER 1ST AND IF THE EXPOSED AREA HAS NOT BEEN LOAMED, FINAL GRADING WITH A UNIFORM SURFACE, THEN THE AREA MAY BE DORMANT SEEDED AT A RATE OF 3 TIMES HIGHER THAN SPECIFIED FOR PERMANENT SEED AND THEN MULCHED.

DORMANT SEEDING MAY BE PLACED PRIOR TO THE PLACEMENT OF MULCH OR EROSION CONTROL BLANKETS. IF DORMANT SEEDING IS USED FOR THE SITE, ALL DISTURBED AREAS SHALL RECEIVE 4" OF LOAM AND SEED AT AN APPLICATION RATE OF 5 LBS/1,000 S.F. ALL AREAS SEEDED DURING THE WINTER SHALL BE INSPECTED IN THE SPRING FOR ADEQUATE CATCH. ALL AREAS INSUFFICIENTLY VEGETATED (LESS THAN 75% CATCH) SHALL BE REVEGETATED BY REPLACING LOAM, SEED AND MULCH. IF DORMANT SEEDING IS NOT USED FOR THE SITE, ALL DISTURBED AREAS SHALL BE REVEGETATED IN THE SPRING.

4.5 OVER WINTER STABILIZATION OF DISTURBED SOILS

BY SEPTEMBER 15TH, ALL DISTURBED SOILS ON AREAS HAVING A SLOPE LESS THAN 15% SHALL BE SEEDED AND MULCHED. IF THE DISTURBED AREAS ARE NOT STABILIZED BY THIS DATE, THEN ONE OF THE FOLLOWING ACTIONS SHALL BE TAKEN TO STABILIZE THE SOIL FOR LATE FALL AND WINTER:

- STABILIZE THE SOIL WITH TEMPORARY VEGETATION – BY OCTOBER 1ST, SEED THE DISTURBED SOIL WITH WINTER RYE AT A SEEDING RATE OF 3LBS PER 1,000 S.F., LIGHTLY MULCH THE SEEDED SOIL WITH HAY OR STRAW AT 75 LBS PER 1,000 S.F., AND ANCHOR THE MULCH WITH PLASTIC NETTING. MONITOR GROWTH OF THE RYE OVER THE NEXT 30 DAYS. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR FAILS TO COVER AT LEAST 75% OF THE DISTURBED SOIL BEFORE NOVEMBER 1ST, THEN MULCH THE AREA FOR OVER–WINTER PROTECTION.
- STABILIZE THE SOIL WITH SOD – STABILIZE THE DISTURBED SOIL WITH PROPERLY INSTALLED SOD BY OCTOBER 1ST. PROPER INSTALLATION INCLUDES PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL.
- STABILIZE THE SOIL WITH MULCH – BY NOVEMBER 15TH, MULCH THE DISTURBED SOIL BY SPREADING HAY OR STRAW AT A RATE OF AT LEAST 150 LBS PER 1,000 S.F. ON THE AREA SO THAT NO SOIL IS VISIBLE THROUGH THE MULCH. IMMEDIATELY AFTER APPLYING THE MULCH, ANCHOR THE MULCH WITH PLASTIC NETTING TO PREVENT WIND FROM MOVING THE MULCH OFF THE DISTURBED SOIL.

4.6 OVER WINTER STABILIZATION OF DISTURBED SLOPES

ALL STONE–COVERED SLOPES SHALL BE CONSTRUCTED AND STABILIZED BY NOVEMBER 15TH. ALL SLOPES TO BE VEGETATED SHALL BE SEEDED AND MULCHED BY SEPTEMBER 1ST. A SLOPE IS CONSIDERED A GRADE GREATER THAN 15%. IF A SLOPE TO BE VEGETATED IS NOT STABILIZED BY SEPTEMBER 1ST, THEN ONE OF THE FOLLOWING ACTION SHALL BE TAKEN TO STABILIZE THE SLOPE FOR LATE FALL AND WINTER:

- STABILIZE THE SOIL WITH TEMPORARY VEGETATION AND EROSION CONTROL MATS – BY OCTOBER 1ST THE DISTURBED SLOPE SHALL BE SEEDED WITH WINTER RYE AT A SEEDING RATE OF 3 LBS PER 1,000 S.F. AND THEN INSTALL EROSION CONTROL MATS OR ANCHORED MULCH OVER THE SEEDING. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR FAILS TO COVER AT LEAST 75% F THE SLOPE BY NOVEMBER 1ST, THEN THE CONTRACTOR SHALL COVER THE SLOPE WITH A LAYER OF EROSION CONTROL MIX OR WITH STONE RIPRAP.
- STABILIZE THE SOIL WITH SOD – THE DISTURBED SLOPE SHALL BE STABILIZED WITH PROPERLY INSTALLED SOD BY OCTOBER 1ST. PROPER INSTALLATION INCLUDES THE CONTRACTOR PINNING THE SOD ONTO THE SLOPE WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL. THE CONTRACTOR SHALL NOT USE LATE–SEASON SOD INSTALLATION TO STABILIZE SLOPES HAVING A GRADE GREATER THAN 3H:1V OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE.
- STABILIZE THE SOIL WITH EROSION CONTROL MIX – EROSION CONTROL MIX SHALL BE PROPERLY INSTALLED BY NOVEMBER 15TH. THE CONTRACTOR SHALL NOT USE EROSION CONTROL MIX TO STABILIZE SLOPES HAVING GRADES GREATER THAN 2H:1V OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE.
- STABILIZE THE SOIL WITH STONE RIPRAP – PLACE A LAYER OF STONE RIPRAP ON THE SLOPE BY NOVEMBER 15TH. A REGISTERED PROFESSIONAL ENGINEER SHALL BE HIRED TO DETERMINE THE STONE SIZE NEEDED FOR STABILITY ON THE SLOPE AND TO DESIGN A FILTER LAYER FOR UNDERNEATH THE RIPRAP.

5.0 INSPECTION AND MAINTENANCE

A PERSON WITH KNOWLEDGE OF EROSION AND STORMWATER CONTROL, INCLUDING THE STANDARDS AND CONDITIONS IN THE PERMIT, SHALL CONDUCT PERIODIC VISUAL INSPECTIONS OF INSTALLED EROSION CONTROL MEASURES. THE FREQUENCY OF INSPECTION SHALL OCCUR AT LEAST ONCE EVERY TWO WEEKS, AS WELL AS AFTER A "STORM EVENT". A "STORM EVENT" SHALL CONSIST 0.5 INCHES OF RAIN WITHIN A 24 HOUR PERIOD. THE FOLLOWING EROSION AND SEDIMENT CONTROL – BEST MANAGEMENT PRACTICES (BMP'S) SHALL INSPECTED IN THE MANNER AS DESCRIBED.

5.1 SEDIMENT BARRIERS

HAY BALE BARRIERS, SILT FENCES AND FILTER BERMS SHALL BE INSPECTED AND REPAIRED FOR THE FOLLOWING IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THEM. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR THE EDGES OF THE BARRIER, OR IMPOUNDING OF LARGE VOLUMES OF WATER BEHIND THEM, SEDIMENT BARRIERS SHALL BE REPLACED WITH A TEMPORARY CHECK DAM. SHOULD THE FABRIC ON A SILT FENCE OR FILTER BARRIER DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER IS STILL NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY. SEDIMENT DEPOSITS SHOULD BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE–HALF THE HEIGHT OF THE BARRIER. FILTER BERMS SHOULD BE RESHAPED AS NEEDED. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHOULD BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.

5.2 STABILIZED STONE CONSTRUCTION ENTRANCES

THE EXIT SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OF SEDIMENT ONTO PUBLIC RIGHTS–OF–WAY. WHEN THE CONTROL PAD BECOMES INEFFECTIVE, THE STONE SHALL BE REMOVED ALONG WITH THE COLLECTED SOIL MATERIAL AND REDISTRIBUTED ON SITE IN A STABLE MANNER. THE ENTRANCE SHOULD THEN BE RECONSTRUCTED. THE CONTRACTOR SHALL SWEEP OR WASH PAVEMENT AT EXITS, WHICH HAVE EXPERIENCED MUD–TRACKING ON TO THE PAVEMENT OR TRAVELED WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH AGGREGATE, WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING STORM DRAINS, DITCHES, OR WATERWAYS.

5.3 MULCHED AREAS

ALL MULCHES MUST BE INSPECTED PERIODICALLY, IN PARTICULAR AFTER RAINSTORMS, TO CHECK FOR RILL EROSION. IF LESS THAN 90% OF THE SOIL SURFACE IS COVERED BY MULCH, ADDITIONAL MULCH SHALL BE IMMEDIATELY APPLIED. NETS MUST BE INSPECTED AFTER RAIN EVENTS FOR DISLOCATION OR FAILURE. IF WASHOUTS OR BREAKAGE OCCUR, RE–INSTALL THE NETS AS NECESSARY AFTER REPAIRING DAMAGE TO THE SLOPE. WHERE MULCH IS USED IN CONJUNCTION WITH ORNAMENTAL PLANTINGS, INSPECT PERIODICALLY THROUGHOUT THE YEAR TO DETERMINE IF MULCH IS MAINTAINING COVERAGE OF THE SOIL SURFACE. REPAIR AS NEEDED.

5.4 DUST CONTROL

WHEN TEMPORARY DUST CONTROL MEASURES ARE USED, REPETITIVE TREATMENT SHALL BE APPLIED AS NEEDED TO ACCOMPLISH CONTROL.

5.5 STORMWATER APPURTENANCES

ALL UNDERDRAINS, STORM DRAINS, AND CATCH BASINS NEED TO BE OPERATING EFFECTIVELY AND FREE OF DEBRIS.

5.6 EROSION AND SEDIMENTATION CONTROL INSPECTIONS:

ACORN ENGINEERING HAS PERSONNEL QUALIFIED TO CONDUCT EROSION AND SEDIMENTATION CONTROL INSPECTIONS. FOR FURTHER INFORMATION CONTACT:

CONTACT: WILL SAVAGE, PE
TELEPHONE: (207) 775–2655

QUALIFICATIONS:

Ø MAINE PROFESSIONAL ENGINEERING LICENSE #11419
Ø MAINE DEP – CERTIFIED IN MAINTENANCE & INSPECTION OF STORMWATER BMP'S CERT #14
Ø CERTIFIED EROSION, SEDIMENT AND STORM WATER INSPECTOR (CESSWI) CERT #0293
Ø CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC) CERT. #4620

THE CONTRACTOR HAS SOLE RESPONSIBILITY FOR COMPLYING WITH THE EROSION AND SEDIMENTATION REPORT/PLAN, INCLUDING CONTROL OF FUGITIVE DUST. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY MONETARY PENALTIES RESULTING FROM FAILURE TO COMPLY WITH THESE STANDARDS.

6.0 IMPLEMENTATION SCHEDULE

THE FOLLOWING IMPLEMENTATION SEQUENCE IS INTENDED TO MAXIMIZE THE EFFECTIVENESS OF THE ABOVE DESCRIBED EROSION CONTROL MEASURES. CONTRACTORS SHOULD AVOID OVEREXPOSING DISTURBED AREAS AND LIMIT THE AMOUNT OF STABILIZATION AREA.

1. INSTALL A STABILIZED CONSTRUCTION ENTRANCE IN ALL LOCATIONS WHERE CONSTRUCTION TRAFFIC WILL ENTER AND EXIT THE SITE.
2. INSTALL PERIMETER SILT FENCE OR EROSION CONTROL BERM.
3. INSTALL ALL OTHER EROSION CONTROL DEVICES AS NECESSARY THROUGHOUT THE REMAINDER OF THIS SCHEDULE.
4. COMMENCE INSTALLATION OF DRAINAGE INFRASTRUCTURE.
5. PRIORITIZE THE DOWNHILL RETAINING AND FOUNDATION WALLS TO CONTAIN RUNOFF WITHIN THE SITE WHILE PROVIDING AN ENGINEERED OUTLET WITH SILTATION BARRIER TO THE MUNICIPAL STORMWATER SYSTEM WITHIN NORTH STREET.
6. COMMENCE EARTHWORK OPERATIONS, WALL AND FOUNDATION INSTALLATION.
7. COMMENCE INSTALLATION OF UTILITIES.
8. CONTINUE EARTHWORK AND GRADING TO SUBGRADE AS NECESSARY FOR CONSTRUCTION.
9. COMPLETE INSTALLATION OF DRAINAGE INFRASTRUCTURE, AS WELL AS OTHER UTILITY WORK.
10. COMPLETE REMAINING EARTHWORK OPERATIONS.
11. INSTALL SUB–BASE AND BASE GRAVELS IN PAVED AREAS.
12. INSTALL PAVING, CURBING AND BRICKWORK.
13. LOAM, LIME, FERTILIZE, SEED AND MULCH DISTURBED AREAS AND COMPLETE ALL LANDSCAPING.
14. ONCE THE SITE IS STABILIZED, 90% CATCH OF GRASS HAS BEEN OBTAINED, OR MULCHING OF LANDSCAPE AREAS IS COMPLETE REMOVE ALL TEMPORARY EROSION CONTROL MEASURES.
15. TOUCH UP AREAS WITHOUT A VIGOROUS CATCH OF GRASS WITH LOAM AND SEED.
16. COMPLETE SITE SIGNAGE AND STRIPING.
17. EXECUTE PROPER MAINTENANCE OF ALL TEMPORARY AND PERMANENT EROSION CONTROL MEASURES THROUGHOUT THE PROJECT.

THE ABOVE IMPLEMENTATION SEQUENCE SHOULD BE GENERALLY FOLLOWED BY THE SITE CONTRACTOR. HOWEVER, THE CONTRACTOR MAY CONSTRUCT SEVERAL ITEMS SIMULTANEOUSLY. THE CONTRACTOR SHALL SUBMIT TO THE OWNER A SCHEDULE OF THE COMPLETION OF THE WORK. IF THE CONTRACTOR IS TO COMMENCE THE CONSTRUCTION OF MORE THAN ONE ITEM ABOVE, THEY SHALL LIMIT THE AMOUNT OF EXPOSED AREAS TO THOSE AREAS IN WHICH WORK IS EXPECTED TO BE UNDERTAKEN DURING THE FOLLOWING 30 DAYS.

THE CONTRACTOR SHALL RE–VEGETATE DISTURBED AREAS AS RAPIDLY AS POSSIBLE. ALL AREAS SHALL BE PERMANENTLY STABILIZED WITHIN 7 DAYS OF FINAL GRADING OR BEFORE A STORM EVENT. THE CONTRACTOR SHALL INCORPORATE PLANNED INLETS AND DRAINAGE SYSTEMS AS EARLY AS POSSIBLE INTO THE CONSTRUCTION PHASE.

7.0 CONCLUSION

THE ABOVE EROSION CONTROL NARRATIVE IS INTENDED TO MINIMIZE THE DEVELOPMENT IMPACT BY IMPLEMENTING TEMPORARY AND PERMANENT EROSION CONTROL MEASURES. THE CONTRACTOR SHALL ALSO REFER TO THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR ADDITIONAL INFORMATION.

8.0 SEEDING PLAN

8.1 SITE PREPARATION

THE SEEDED AREAS SHALL BE FEASIBLY GRADED OUT TO PROVIDE THE USE OF EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING. IF NECESSARY, THE SITE MAY REQUIRE ADDITIONAL TEMPORARY EROSION CONTROL MEASURES OUTLINED IN THE EROSION CONTROL REPORT.

8.2 SEEDBED PREPARATION

FERTILIZER SHALL BE APPLIED TO THE SITE AT A RATE OF 13.8 POUNDS PER 1,000 SQUARE FEET. THE COMPOSITION OF THE FERTILIZER SHALL BE 10–10–10 (N–P205–K20) OR EQUIVALENT.

LIMESTONE SHALL BE APPLIED TO THE SITE AT A RATE OF 138 POUNDS PER 1,000 SQUARE FEET.

8.3 SEEDING

THE COMPOSITION AND AMOUNT OF TEMPORARY SEED APPLIED TO A SITE SHALL BE DETERMINED BY THE FOLLOWING TABLE:

TEMPORARY SEED APPLICATION RATES

SEED	LBS / ACRE	RECOMMENDED SEEDING DATES
WINTER RYE	2.57	8/15 TO 10/1
OATS	1.84	4/1 TO 7/1 8/15 TO 9/15
ANNUAL RYGRASS	0.92	4/1 TO 7/1
SUDANGRASS	0.92	5/15 TO 8/15
PERENNIAL	0.92	8/15 TO 9/15
TOTAL	7.17 LBS/ACRE	

PERMANENT SEED APPLICATION RATES

SEED	LBS / ACRE
KENTUCKY BLUEGRASS	20.00
CREEPING RED FESCUE	20.00
PERENNIAL RYEGRASS	4.80
TOTAL	44.8 LBS/ACRE

8.4 MULCHING

MULCH SHALL BE HARDWOOD AND APPLIED AT A RATE OF 70 LBS – 90 LBS PER 1,000 SQUARE FEET. THE MULCH SHALL BE INSTALLED AT A MINIMUM DEPTH OF 4 INCHES. THE SEEDED AREA SHALL BE MULCHED IMMEDIATELY AFTER SEED IS APPLIED. MULCHING DURING THE WINTER SEASON SHALL BE DOUBLE THE NORMAL AMOUNT. REFER TO DETAIL FOR MORE INFORMATION.

8.5 CONCLUSION

PLEASE REFER TO THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR ADDITIONAL INFORMATION PERTAINING TO TEMPORARY SEEDING AND MULCHING.

PERMIT LEVEL
NOT ISSUED FOR
CONSTRUCTION

NOTES:

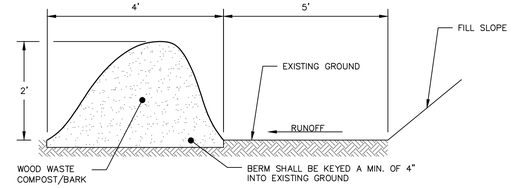
1. THE EROSION CONTROL MIX SHALL CONFORM TO THE FOLLOWING STANDARDS AND IN ACCORDANCE WITH THE MAINE DOT CHAPTER 700, SECTION 717.04(D):

1.1. pH BETWEEN 5.0 – 8.0
1.2. PARTICLE SIZE (BY WEIGHT):
1.2.1. 100% PASSING A 150 MM (6 IN) SCREEN
1.2.2. 75 TO 85% PASSING A 19 MM (0.75 IN) SCREEN
1.3. SOLUBLE SALTS CONTENT < 4.0 MMHOS/CM
1.4. ORGANIC MATTER 20 TO 100% , DRY WEIGHT BASIS

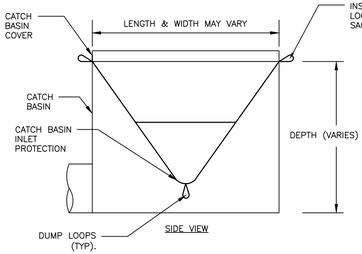
2. THE BERM SHOULD BE PLACED, UNCOMPACTED, ALONG A RELATIVELY LEVEL CONTOUR, WHEN NECESSARY THE BERM MAY BE PLACED PERPENDICULAR TO THE SLOPE ALONG THE PROPERTY LINE TO CONTAIN THE SEDIMENT PROVIDED A BERM IS LOCATED AT THE BASE OF THE SLOPE.

3. THE BERM MAY BE USED IN LIEU OF SILTATION FENCE, AT THE TOE OF SHALLOW SLOPES, ON FROZEN GROUND, LEDGE OUT CROPS, VERY ROOTED FORESTED AREA OR AT THE EDGE OF GRAVEL PARKING AREAS.

4. BERMS SHALL REMAIN IN PLACE UNTIL UPSTREAM AREA IS STABILIZED OR 90% CATCH OF VEGETATION IS ATTAINED. BERMS SHALL BE REMOVED OFFSITE OR BY SPREADING SUCH THAT NATIVE EARTH CAN BE SEEN BELOW.



EROSION CONTROL MIX BERM DETAIL
NOT TO SCALE



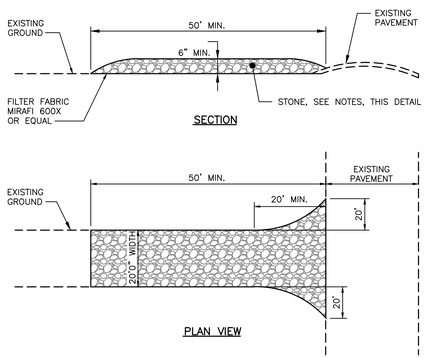
NOTES:

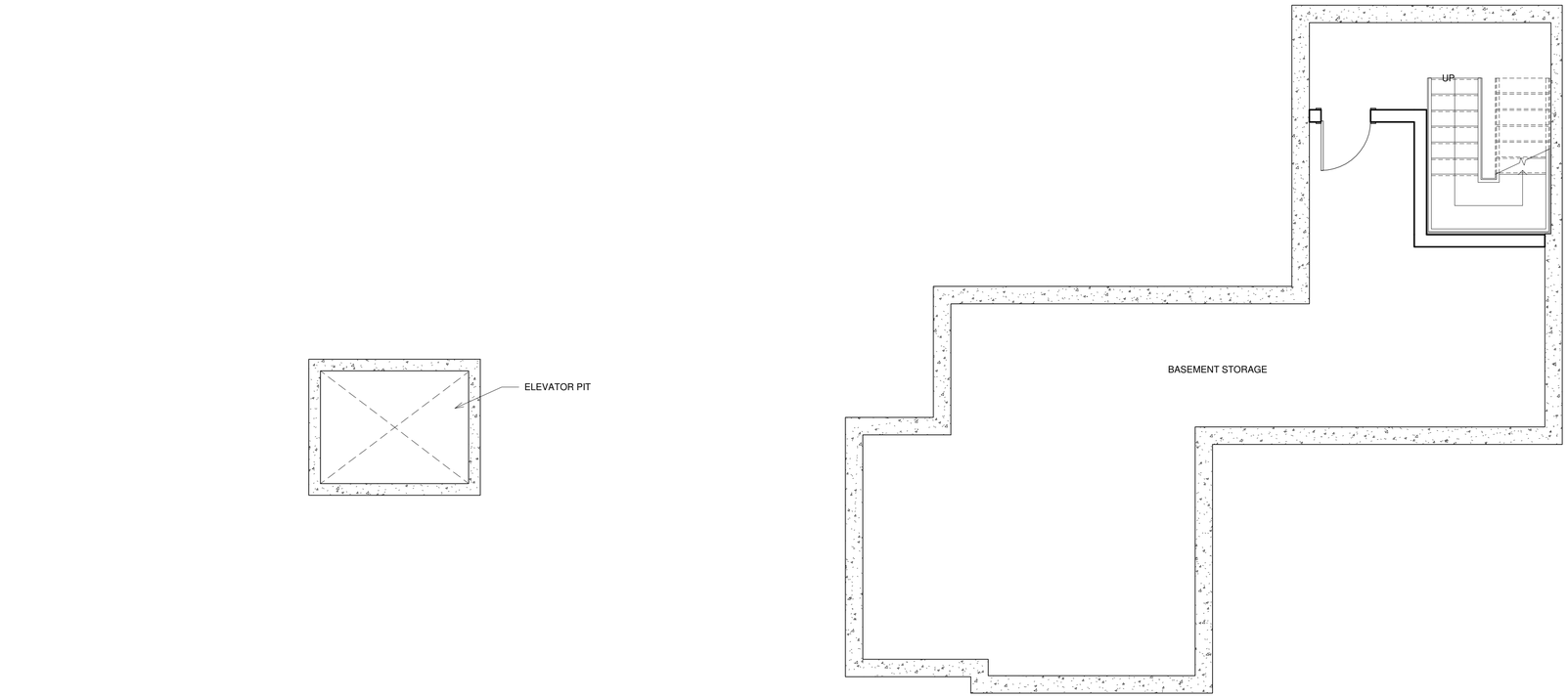
1. CATCH BASIN INLET PROTECTION SHALL BE INSTALLED DOWNGRADIENT OF PROPOSED PROJECT AND ROUTINELY MAINTAINED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS
2. CATCH BASIN SIZE VARIES. CONTRACTOR TO ENSURE CATCH BASIN INLET PROTECTION MATCHES CATCH BASIN DIMENSIONS.
3. SILT SACK SHALL BE ACF ENVIRONMENTAL SILT SACK, TYPE A, OR APPROVED EQUAL.

CATCH BASIN INLET PROTECTION
NOT TO SCALE

NOTES:

1. CONTRACTOR SHALL ADD STONE TO ENTRANCE AS MUD/SILT MATERIAL ACCUMULATES
2. STONE SHALL BE 2"–3" COARSE AGGREGATE
3. CONSTRUCTION ENTRANCE SHALL BE GRADED TO NOT ALLOW ANY STORMWATER TO BE CONVEYED OFF SITE. IN SITUATIONS WHERE THIS IS NOT POSSIBLE, ANY STORMWATER CONVEYED OFFSITE SHALL BE TREATED OR RETAINED IN A MANNER APPROVED BY ENGINEER.
4. WHEN NECESSARY, ON–SITE VEHICLES SHALL HAVE THEIR WHEELS CLEANED PRIOR TO LEAVING SITE.
5. CONSTRUCTION ENTRANCE SHALL BE GRADED IN A MANNER THAT PREVENTS TRACKING OF SEDIMENTS ONTO PUBLIC RIGHT–OF–WAY


EXISTING GROUND
50' MIN.
EXISTING PAVEMENT
6" MIN.
FILTER FABRIC MIRAFI 600X OR EQU



A Basement Plan
1/4" = 1'-0"

128R North Street

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No.	Description	Date

BASEMENT PLAN

Project number	18-16_128R North
Date	11.19.18
Drawn by	Author
Checked by	Checker

A-1.6

Scale 1/4" = 1'-0"

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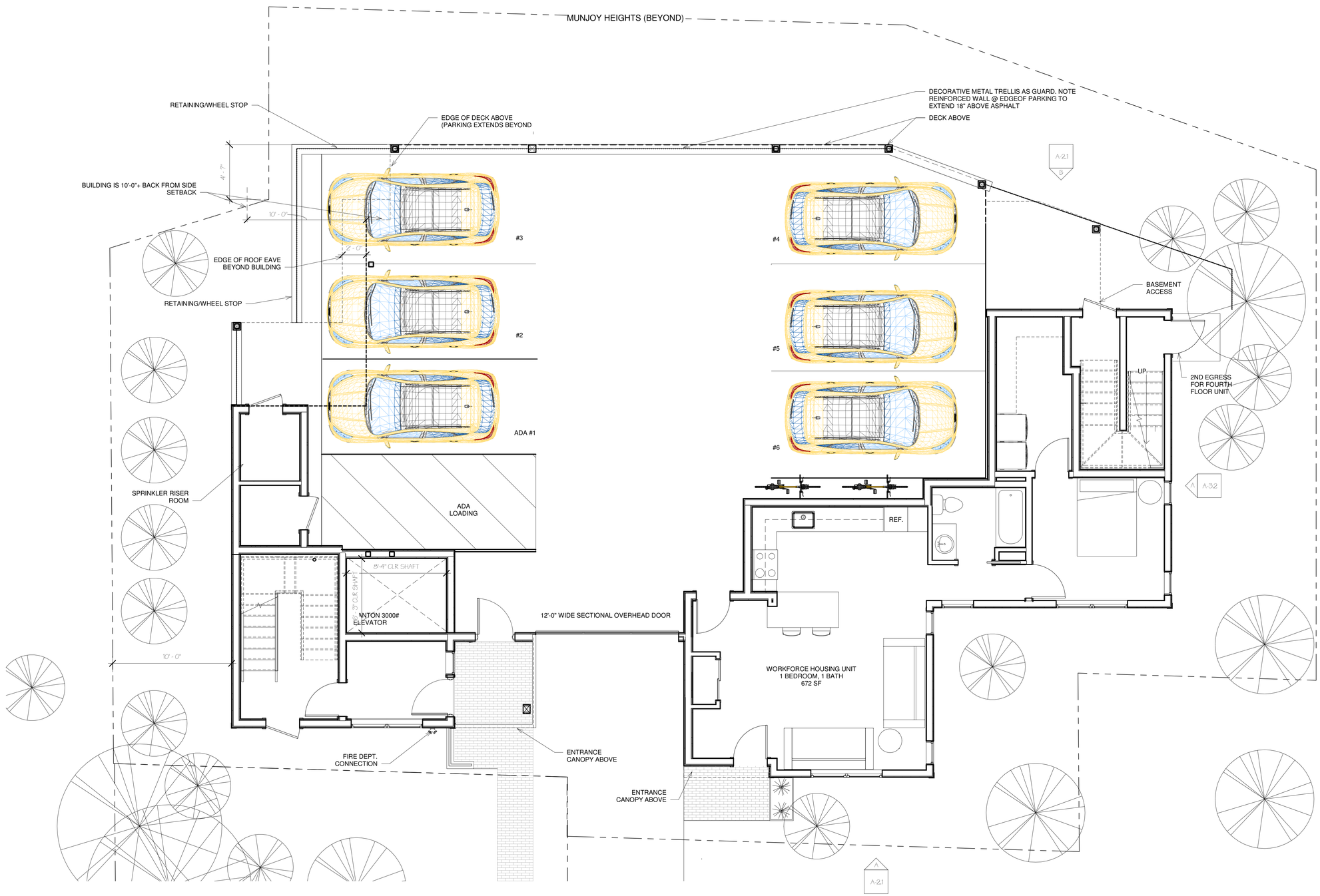

A First Floor
1/4" = 1'-0"

[DESIGN DEVELOPMENT NOT FOR CONSTRUCTION]

0' 2' 4' 8' 16'

126 & 128R North Street

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No.	Description	Date

FIRST FLOOR PLAN

Project number	18-16_128R North
Date	04.16.20
Drawn by	TJR
Checked by	TJR
	A-1.1
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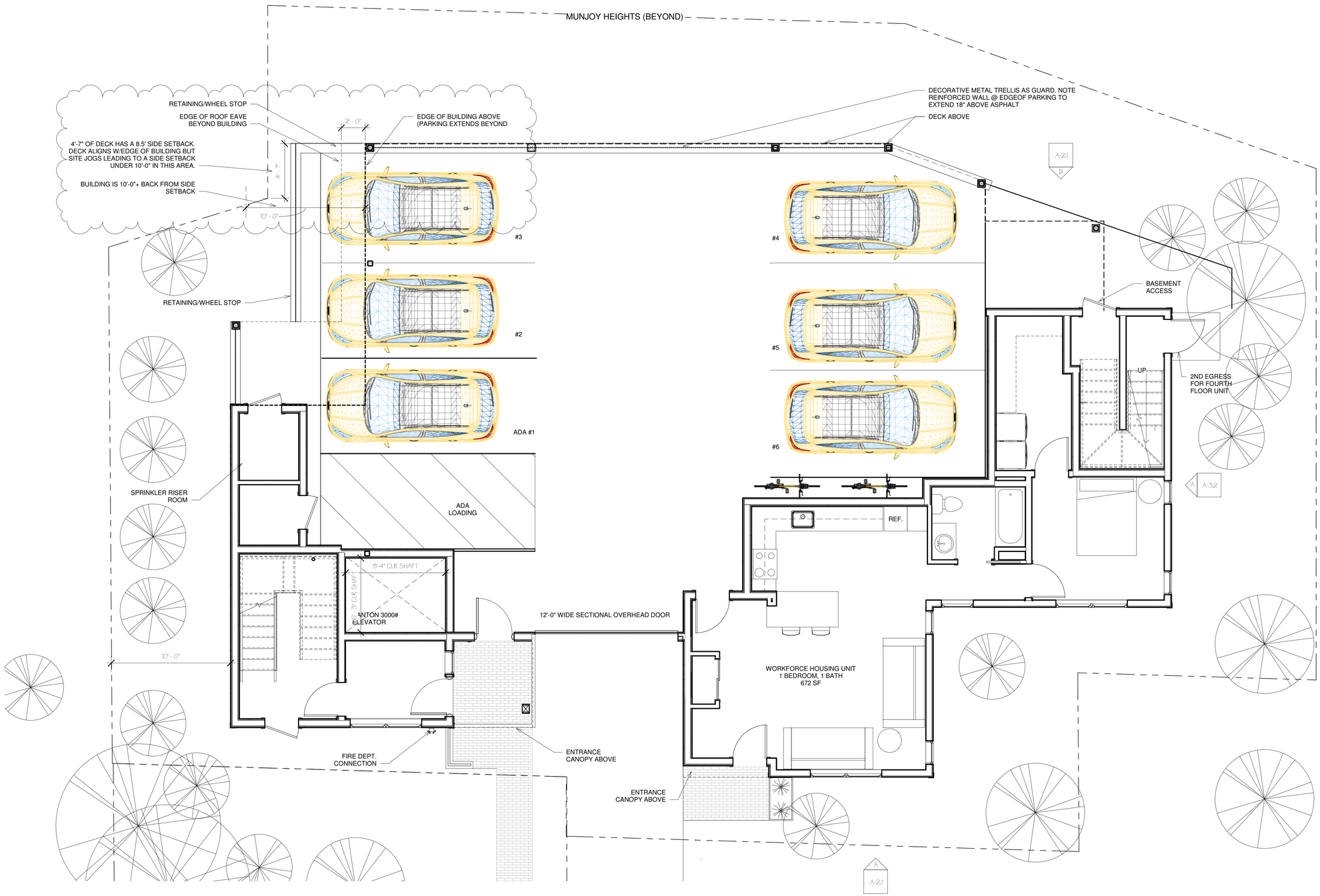

A First Floor
1/4" = 1'-0"

[DESIGN DEVELOPMENT NOT FOR CONSTRUCTION]

0' 2' 4' 8' 16'

126 & 128R North Street

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No.	Description	Date
1	Revision 1	Date 1

FIRST FLOOR PLAN

Project number	18-16_128R North
Date	11.19.18
Drawn by	TJR
Checked by	TJR
	A-1.1
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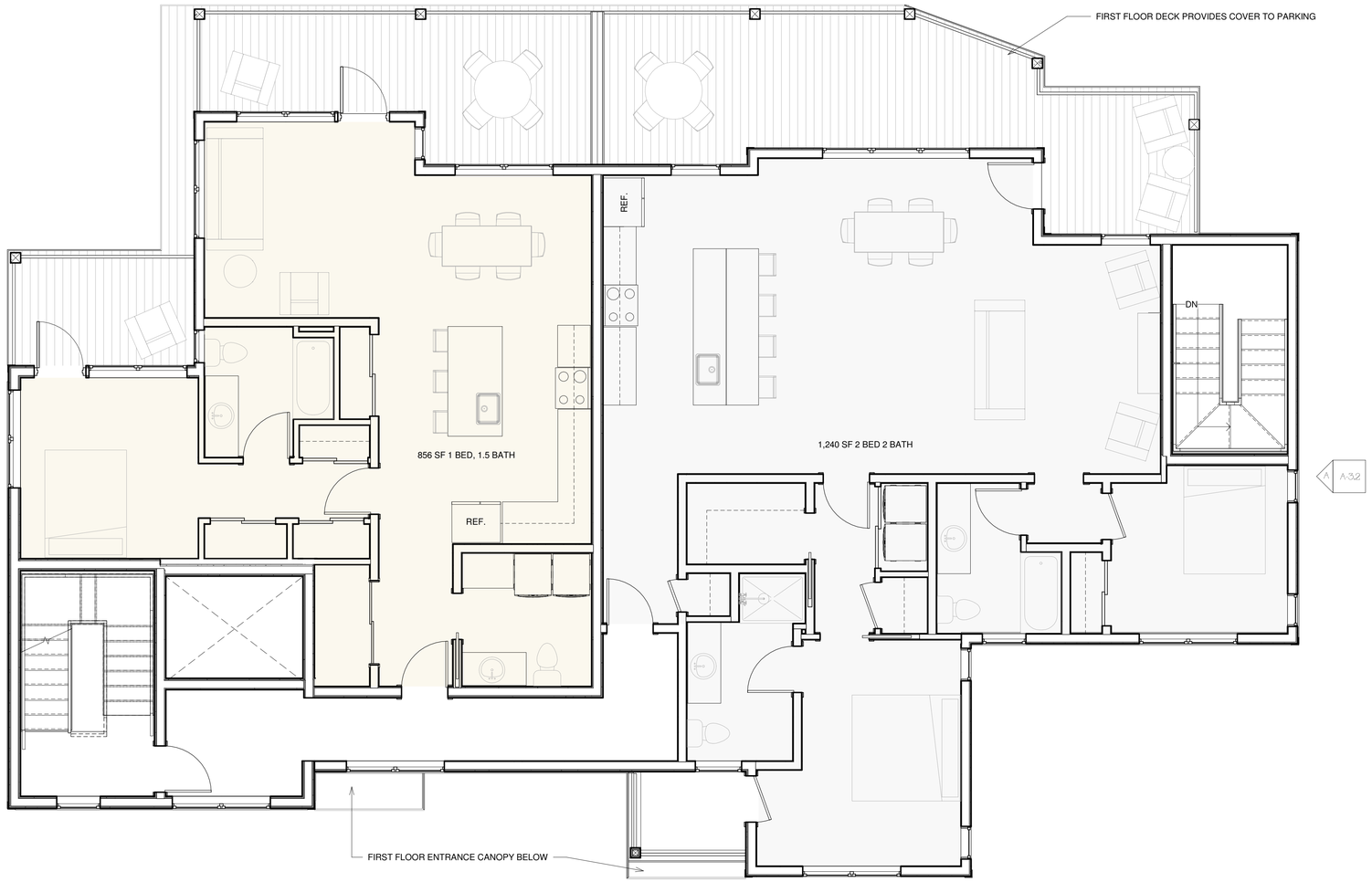

A Second Floor
1/4" = 1'-0"

[DESIGN DEVELOPMENT NOT FOR CONSTRUCTION]

0' 2' 4' 8' 16'

126 & 128R North Street

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No.	Description	Date

SECOND & THIRD FLOOR PLAN

Project number	18-16_128R North
Date	11.19.18
Drawn by	TJR
Checked by	TJR
	A-1.2
Scale	1/4" = 1'-0"

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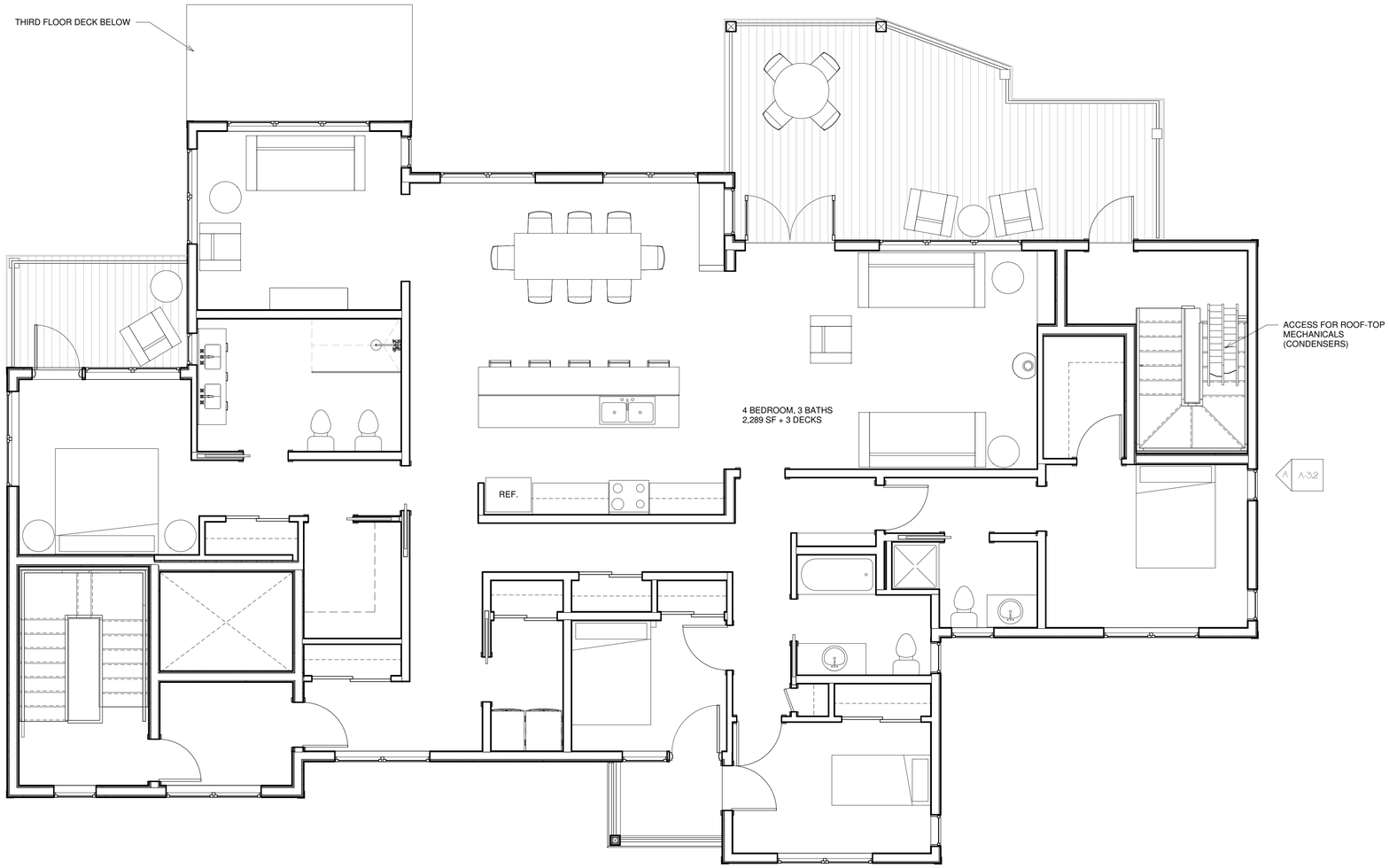

A Fourth Floor
1/4" = 1'-0"

[DESIGN DEVELOPMENT NOT FOR CONSTRUCTION]

0' 2' 4' 8' 16'

126 & 128R North Street

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No.	Description	Date

FOURTH FLOOR

Project number	18-16_128R North
Date	11.19.18
Drawn by	TJR
Checked by	TJR

A-1.4

Scale 1/4" = 1'-0"

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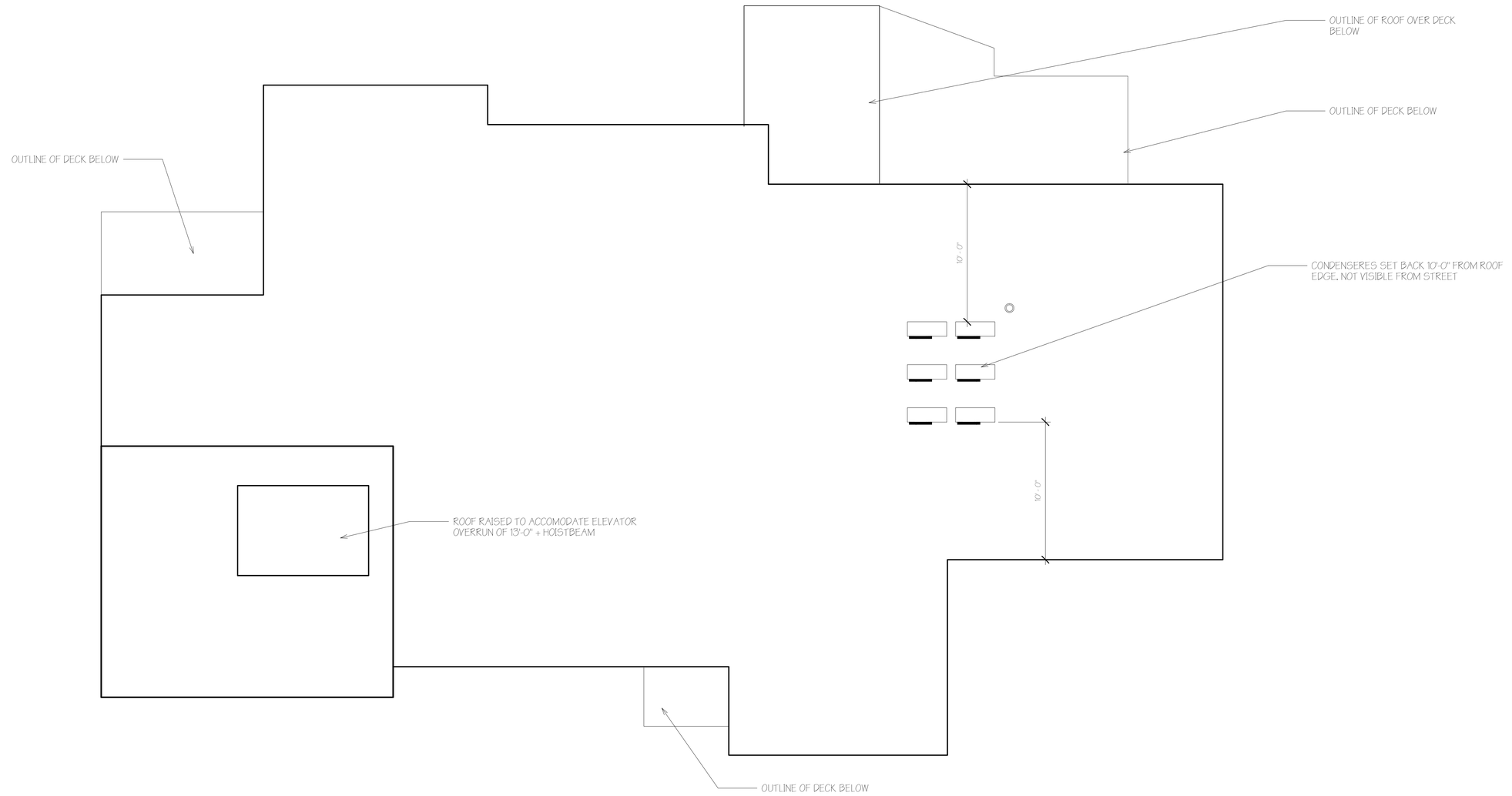

A Roof
1/4" = 1'-0"

[DESIGN DEVELOPMENT NOT FOR CONSTRUCTION]

0' 2' 4' 8' 16'

126 & 128R North Street

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No.	Description	Date

ROOF PLAN

Project number	18-16_128R North
Date	11.19.18
Drawn by	Author
Checked by	Checker
	A-1.5
Scale	1/4" = 1'-0"

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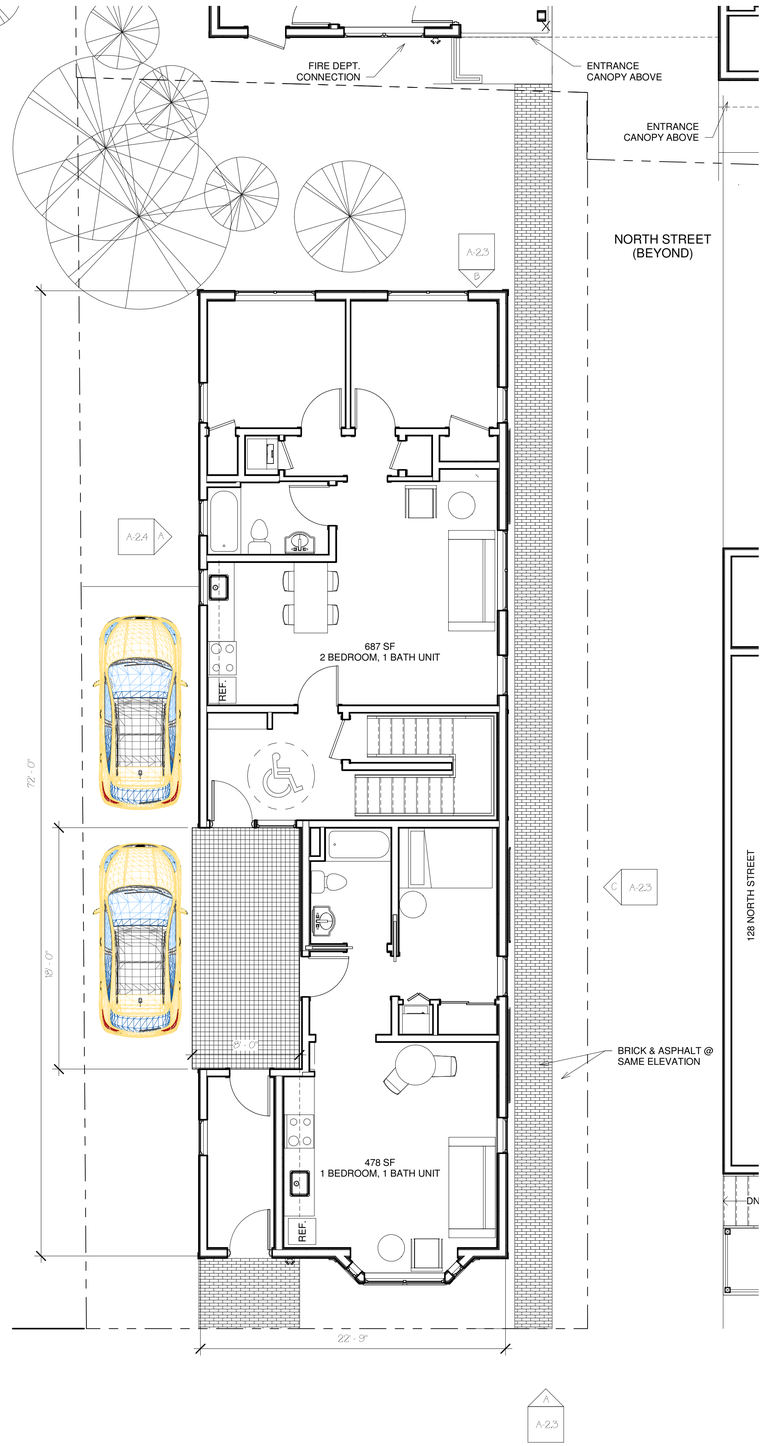

A First Floor 126
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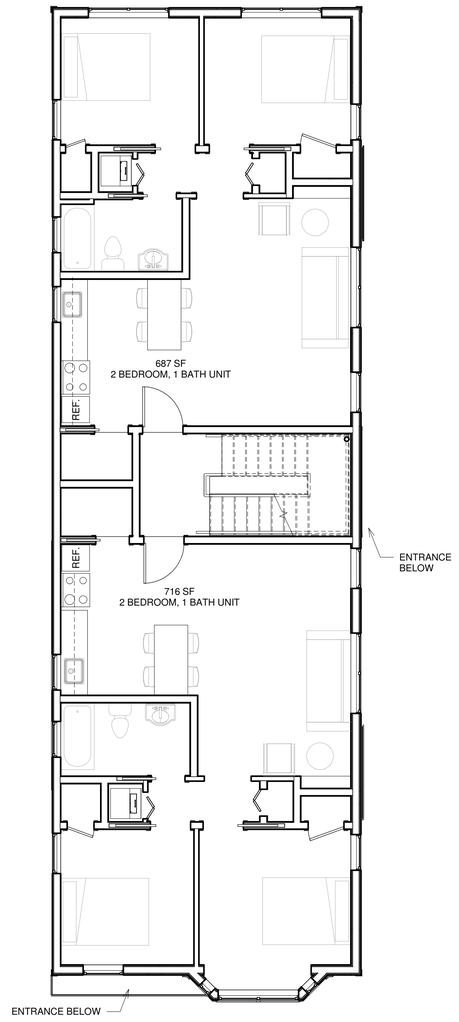

B Second & Third Floors 126
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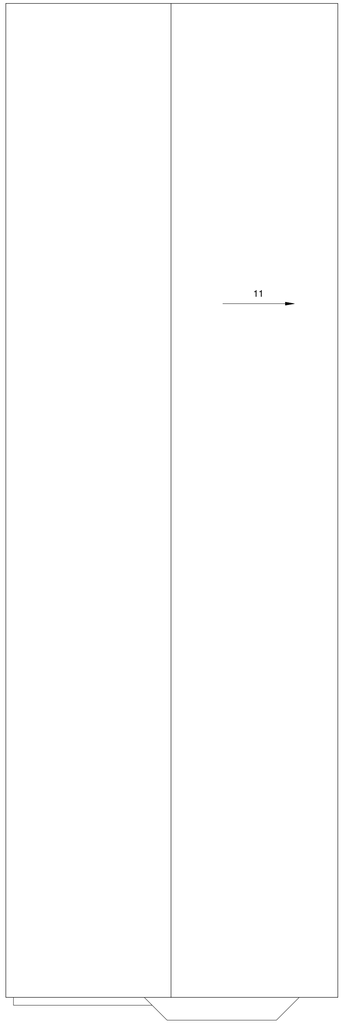

C Roof 126
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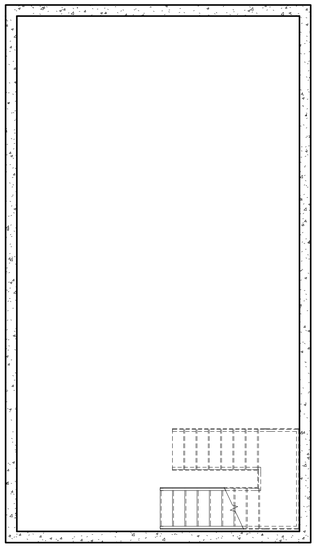

D Basement
3/16" = 1'-0"

126 & 128R North Street

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No.	Description	Date

PHASE 2 PLANS

Project number	18-16_128R North
Date	11.19.18
Drawn by	Author
Checked by	Checker

A-1.6 126

Scale 3/16" = 1'-0"

3/10/2020 8:35:39 AM

A North Elevation
3/16" = 1'-0"

B South Elevation
3/16" = 1'-0"

0' 2' 4' 8' 16'

126 & 128R North Street

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No.	Description	Date

SOUTH & NORTH ELEVATIONS

Project number	18-16_128R North
Date	11.19.18
Drawn by	Author
Checked by	Checker

A-2.1

Scale 3/16" = 1'-0"

3/10/2020 8:57:16 AM

A East Elevation
3/16" = 1'-0"

B West Elevation
3/16" = 1'-0"

126 & 128R North Street

NEW CONSTRUCTION

OWNER
JOSHUA WOJCIK
UPRIGHT FRAMEWORKS LLC
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No.	Description	Date

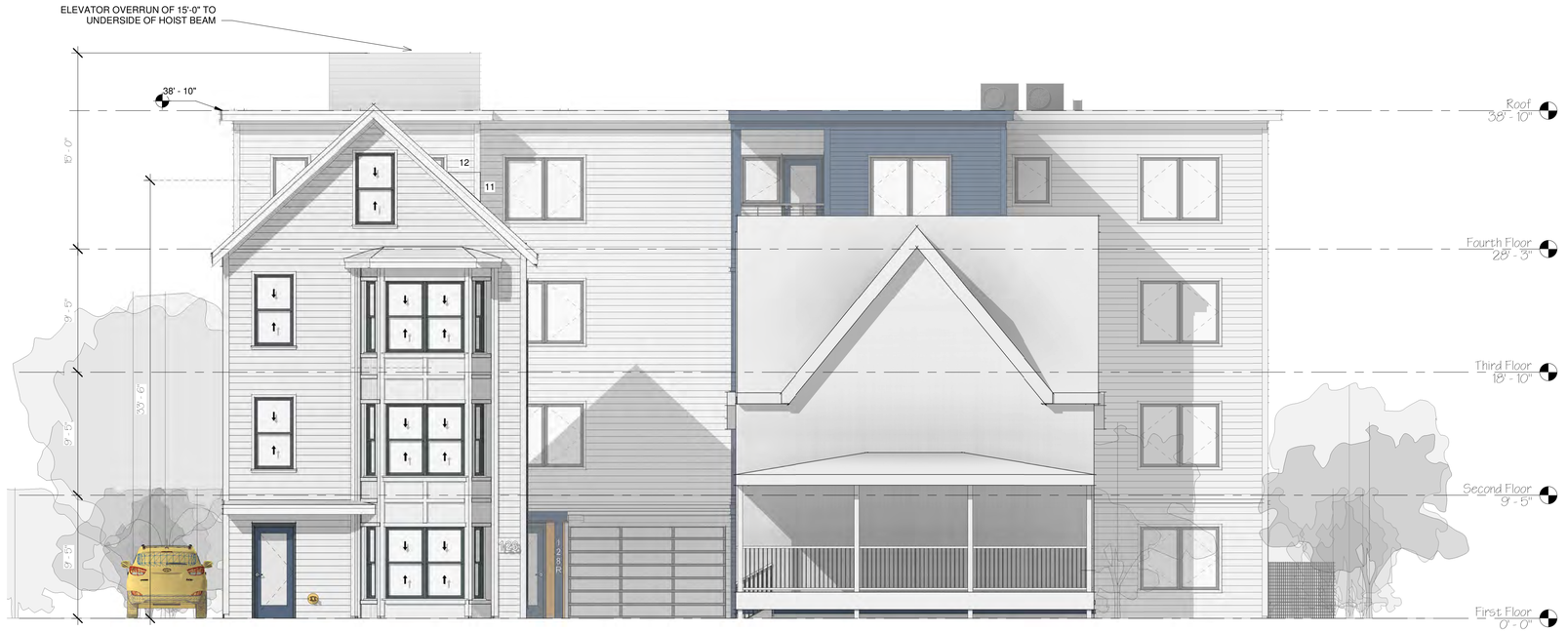
EAST & WEST ELEVATIONS

Project number	18-16_128R North
Date	11.19.18
Drawn by	Author
Checked by	Checker

A-2.2

Scale 3/16" = 1'-0"

5/10/2020 8:39:03 AM



A South Elevation 126 & 128
3/16" = 1'-0"

B North Elevation 126 North
3/16" = 1'-0"

C East Elevation 126 North
3/16" = 1'-0"

126 & 128R North Street

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No.	Description	Date

SOUTH, NORTH & EAST 126

Project number	18-16_128R North
Date	11.19.18
Drawn by	Author
Checked by	Checker

A-2.3

Scale 3/16" = 1'-0"

3/10/2020 8:40:38 AM

A West Elevation 126 North
3/16" = 1'-0"

126 & 128R North Street

NEW CONSTRUCTION

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No.	Description	Date

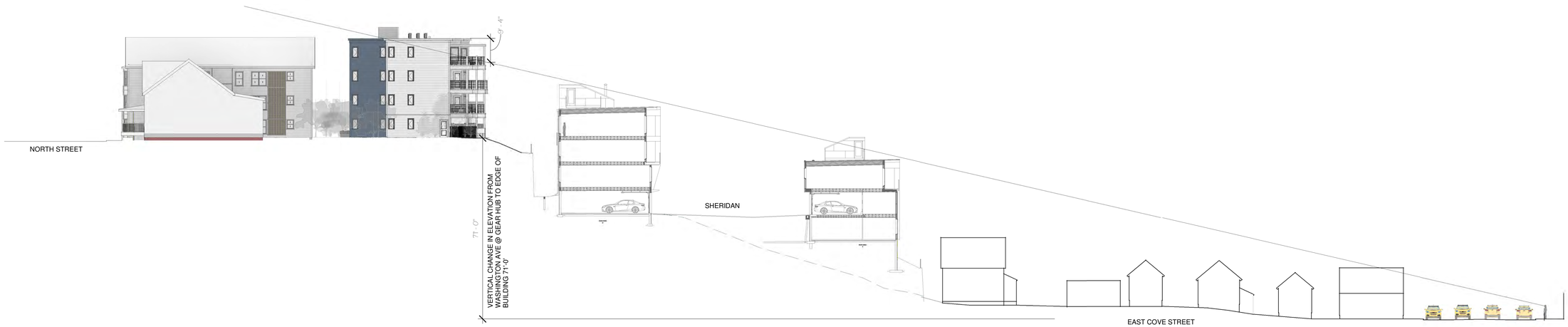
WEST ELEVATION 126

Project number	18-16_128R North
Date	11.19.18
Drawn by	Author
Checked by	Checker

A-2.4

Scale 3/16" = 1'-0"

5/10/2020 8:40:25 AM



EDGE OF BUILDING TO SIDEWALK ON FAR SIDE OF WASHINGTON AVE - 416'-0" HORIZONTALLY

A SITE SECTION NORTH STREET TO WASHINGTON AVENUE
1" = 20'-0"

ENTOURAGE 'FLORENCE' IS 5'-6" TALL. IF FLORENCE WERE TO STAND ON THE FAR SIDEWALK OF WASHINGTON AVENUE AND LOOK UP TOWARDS NORTH STREET THEY WOULD BE ABLE TO SEE THE TOP OF THE DECK RAIL AT 128R NORTH AND THE ELEVATION BEYOND AT A DISTANCE OF 435'-0" (HYPOTENUSE). THE REAR FACE OF THE BUILDING WOULD BE 418'-0" FROM HER HORIZONTALLY AND 71'-0" VERTICALLY*. THE MAJORITY OF THEIR SITE LINE WOULD BE CONSUMED BY THE MUNJOY HEIGHTS PROJECT (ALONG SHERIDAN STREET). THE DASHED LINE SHOWS THE CHANGE IN TOPOGRAPHY CREATED BY THE MUNJOY HEIGHTS PROJECT. THE ENTOURAGE IS ALSO SHOWN WITHIN THE FOURTH FLOOR OF THE MUNJOY HEIGHTS PROJECT LOOKING AT THE BACK OF 128R. THIS INDIVIDUAL IS 31'-0" AWAY FROM THE FACE OF DECK AND THEIR EYES WOULD BE 5'-0" ABOVE THE GRADE OF PARKING. THE PERSPECTIVE SEEN BY THIS PERSON IS SHOWN ON B/A-5.2. NOTE THAT THE MUNJOY HEIGHTS PROJECT. NOTE THAT THE BUILDINGS IN THE MUNJOY HEIGHTS PROJECT ARE SITUATED ALONG A SPLINE AND VARY IN DISTANCE FROM THE REAR FACE OF 128R BUILDING. AT THE CLOSEST POINT THE EXTERIOR FACE OF THE MUNJOY HEIGHTS BUILDING TO THE FACE OF DECK IS 25'-0" AND AT THE WIDEST POINT IT IS 32'-0". AT THE POINT OF THIS SECTION THE BUILDING IS MODELED AT 28'-0" SEPARATION.

*BASED ON ACORN ENGINEERING SITE ELEVATIONS POINTS AT THE EDGE OF BUILDING ON 128R NORTH STREET AND PROJECTS CURRENTLY UNDER CONSTRUCTION ALONG WASHINGTON AVENUE. SITE SECTION THROUGH MUNJOY HEIGHTS OBTAINED FROM ENGINEER. EAST COVE STREET HOUSES WERE SITED USING A COMBIATION OF PORTLAND GIS DATA, ASSESSING DEPARTMENT MEASUREMENTS AND GOOGLE STREET VIEW IMAGES

126 & 128R North Street

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No.	Description	Date

SITE SECTION

Project number	18-16_128R North
Date	11.19.18
Drawn by	Author
Checked by	Checker

A-3.2

Scale 1" = 20'-0"

3/10/2020 8:46:29 AM

F Northeast Perspective

B Bird's Eye View of North Street Facade

1 Main Entrance 128R

D View from Driveway

E Entrance View

126 & 128R North Street

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No.	Description	Date

PERSPECTIVES 128R

Project number	18-16_128R North
Date	11.19.18
Drawn by	Author
Checked by	Checker

A-5.1

Scale

5/10/2020 8:44:43 AM

A Northwest Perspective

B 4th floor Munjoy Heights View

THIS PERSPECTIVE IS TAKEN FROM THE FOURTH FLOOR AT MUNJOY HEIGHTS FROM JUST WITHIN THE UNIT. ELEVATION OF THE CAMERA (EYES) IS TAKEN AT 5'-0" ABOVE THE FLOOR AS SHOWN ON THE SITE SECTION A/A-3.2. THE DISTANCE OF THIS PERSON IS STANDING (INSIDE THEIR UNIT) IS 31'-0" FROM THE FACE O FTHE SECOND FLOOR DECK. THE MUNJOY HEIGHTS BUILDINGS VARY IN DISTANCE FROM 128R NORTH BASED ON THEIR PROJECT'S SPLINE. THAT SAID, THE DISTANCE FROM THE EXTERIOR FACE OF THEIR BUILDINGS TO THE EXTERIOR FACE OF THE SECND FLOOR DECKS RANGES FROM 25'-0" AT THE CLOSEST SECTION TO 32'-0". IN THE SITE SECTION SHOWN ON PAGE A-3.2 THE BUIDINGS ARE SHOWN AT 28'-0" APART.

126 & 128R North Street

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No.	Description	Date

PERSPECTIVES 128R

Project number	18-16_128R North
Date	11.19.18
Drawn by	Author
Checked by	Checker

A-5.2

Scale

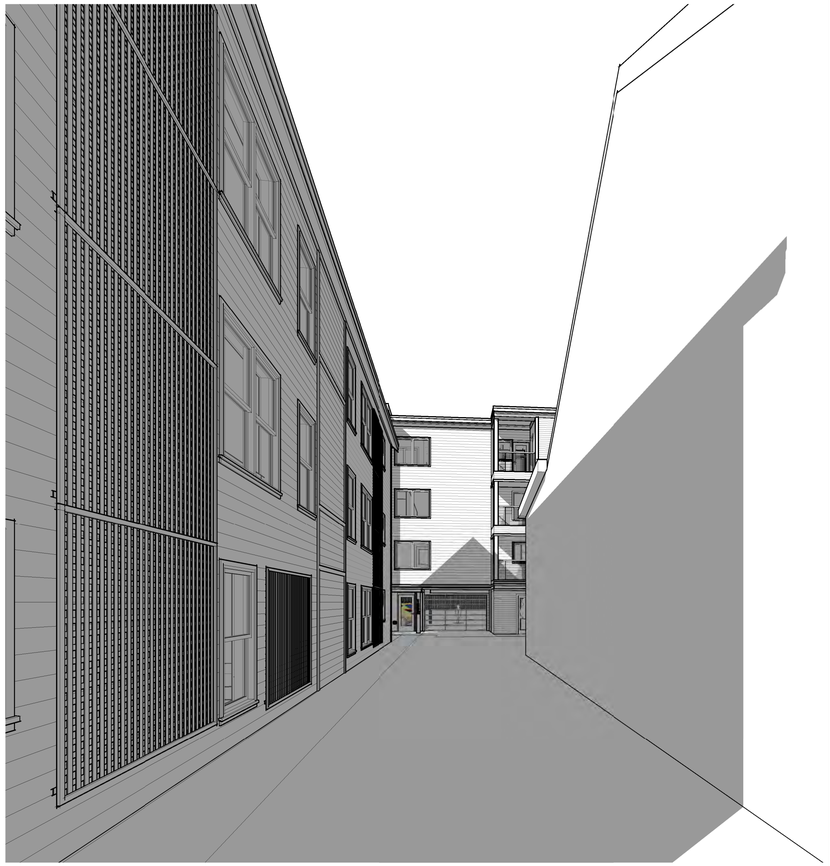
3/19/2020 9:45:25 AM

A View for Walnut Street Rendering

D View from Senior Housing for Rendering Copy 1

B View 126 + 128R North (elevation 1/16"

C Street View 126 + 128R North (Eye at 5'-0")



E View from North Street Sidewalk 126 & 128R

126 & 128R North Street

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No.	Description	Date

PERSPECTIVES

126

Project number 18-16_128R North
Date 11.19.18
Drawn by Author
Checked by Checker

A-5.3

Scale

5/10/2020 8:47:50 AM

A North Street View Showing Entrances

B Main Entrance 126

126 & 128R North Street

NEW CONSTRUCTION

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No.	Description	Date

PERSPECTIVES 126

Project number 18-16_128R North
Date 11.19.18
Drawn by Author
Checked by Checker

A-5.4

Scale

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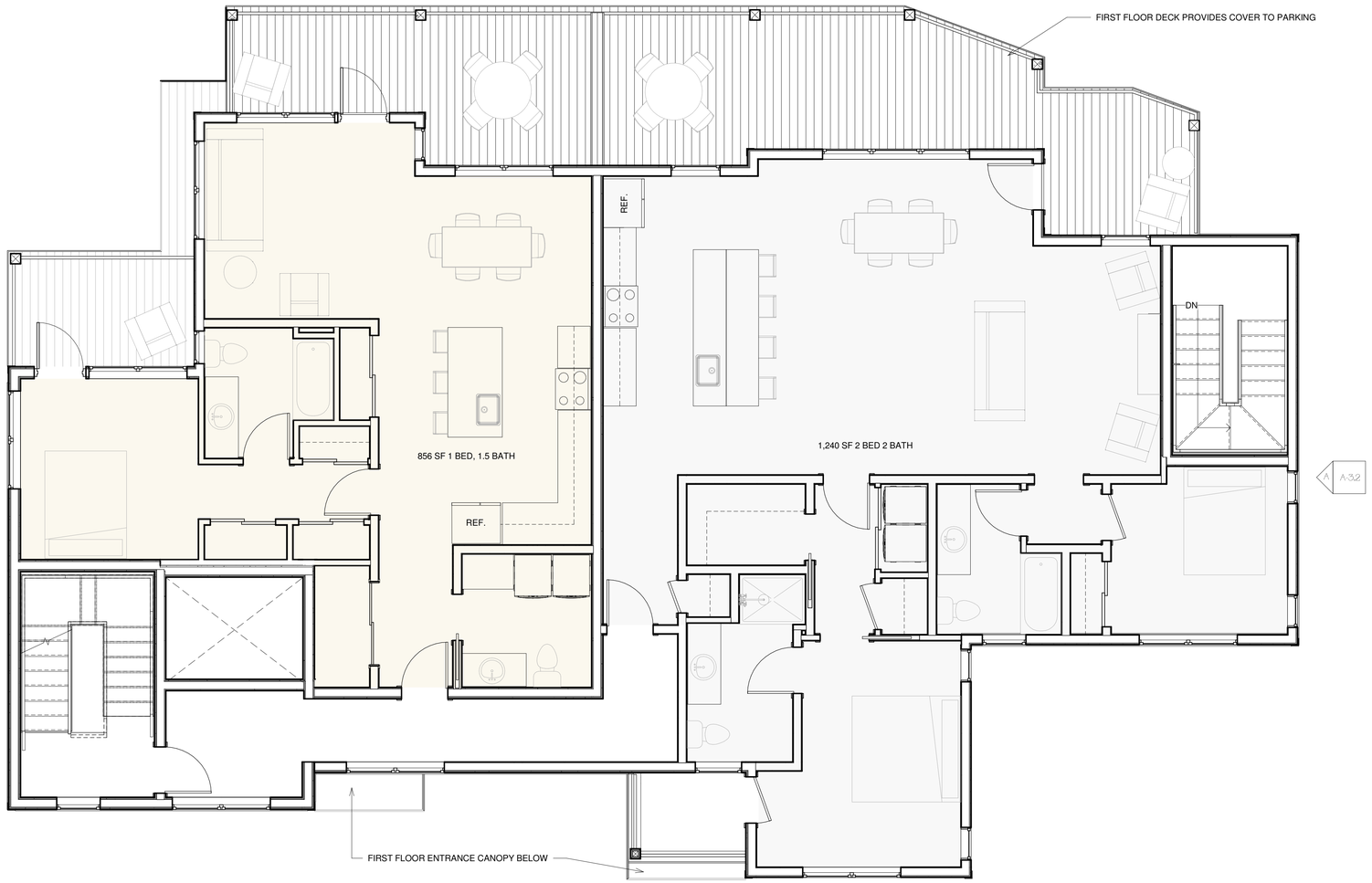

A Second Floor
1/4" = 1'-0"

[DESIGN DEVELOPMENT NOT FOR CONSTRUCTION]

0' 2' 4' 8' 16'

126 & 128R North Street

NEW CONSTRUCTION

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No.	Description	Date

SECOND & THIRD FLOOR PLAN

Project number	18-16_128R North
Date	04.16.20
Drawn by	TJR
Checked by	TJR

A-1.2

Scale 1/4" = 1'-0"

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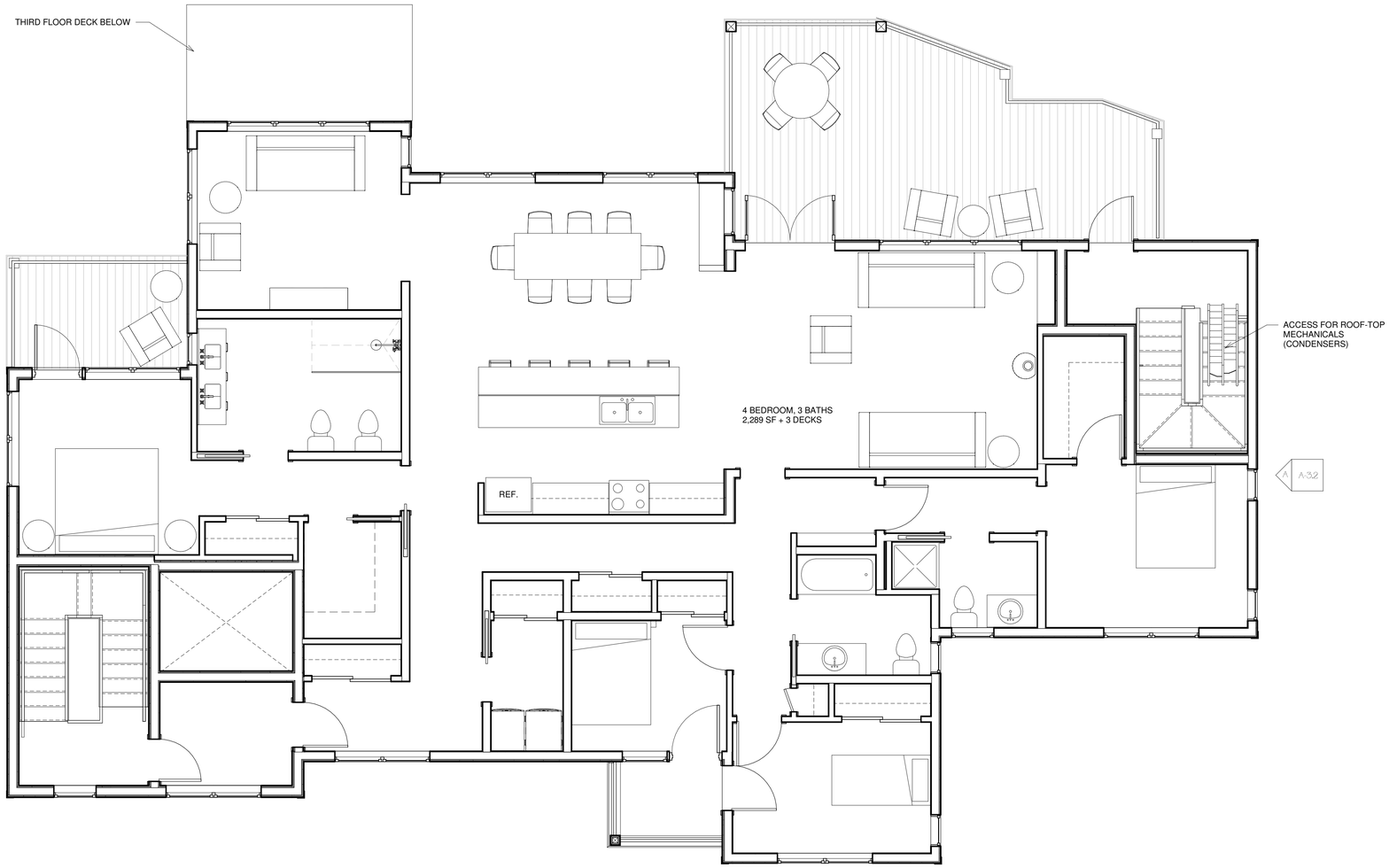

A Fourth Floor
1/4" = 1'-0"

[DESIGN DEVELOPMENT NOT FOR CONSTRUCTION]

0' 2' 4' 8' 16'

126 & 128R North Street

NEW CONSTRUCTION

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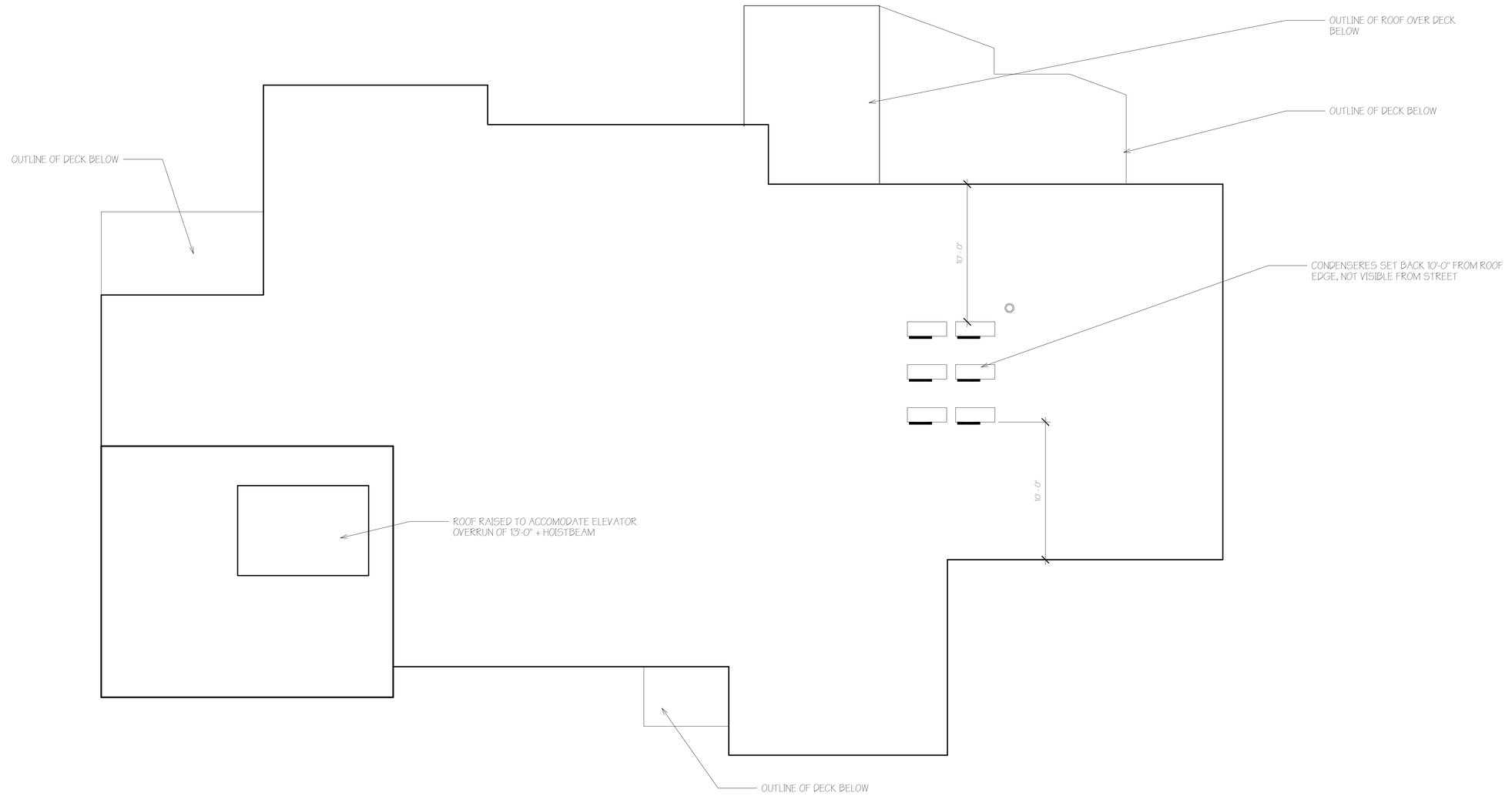
No.	Description	Date

FOURTH FLOOR

Project number	18-16_128R North
Date	04.16.20
Drawn by	TJR
Checked by	TJR
	A-1.4
Scale	1/4" = 1'-0"

4/16/2020 11:58:14 AM



A Roof
1/4" = 1'-0"

[DESIGN DEVELOPMENT NOT FOR CONSTRUCTION]

0' 2' 4' 8' 16'

126 & 128R North Street

NEW CONSTRUCTION

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No.	Description	Date

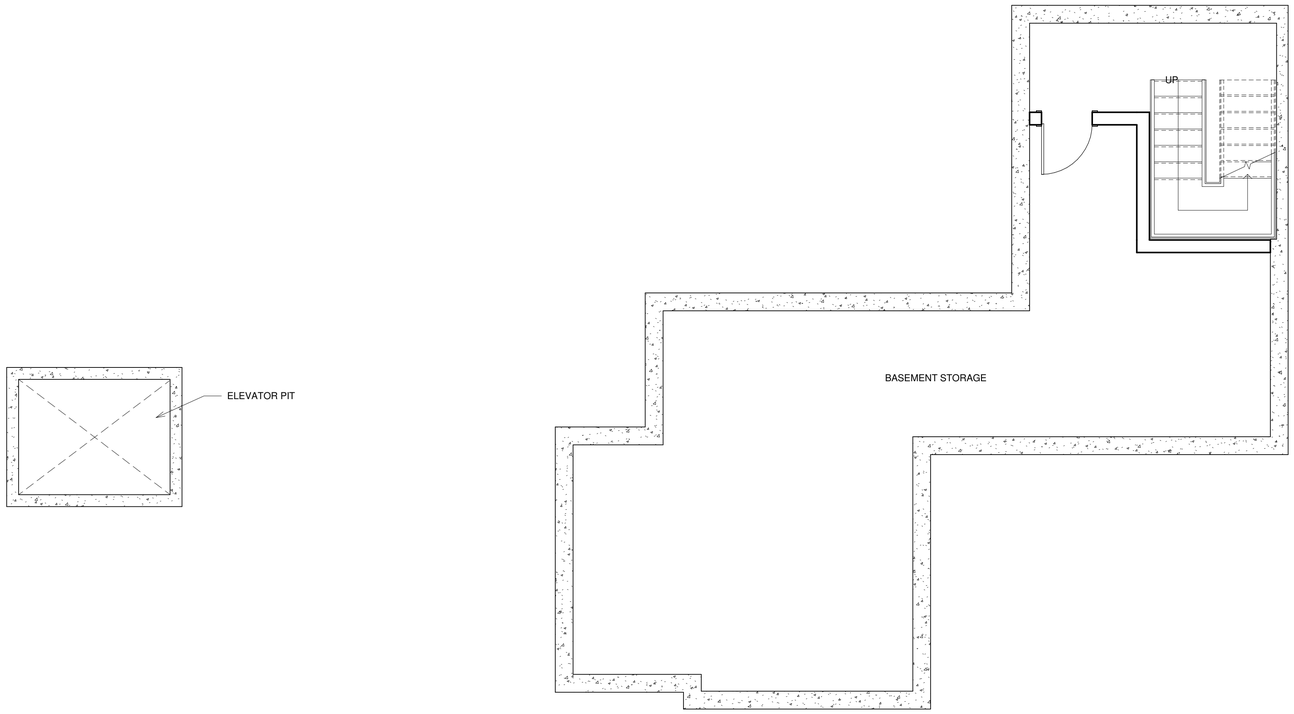
ROOF PLAN

Project number 18-16_128R North
Date 04.16.20
Drawn by Author
Checked by Checker

A-1.5

Scale 1/4" = 1'-0"

4/16/2020 11:59:14 AM



A Basement Plan
1/4" = 1'-0"

128R North Street

NEW CONSTRUCTION

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No.	Description	Date

BASEMENT PLAN

Project number	18-16_128R North
Date	11.19.18
Drawn by	Author
Checked by	Checker

A-1.6

Scale 1/4" = 1'-0"

8/2/2019 12:06:57 PM

A North Elevation
3/16" = 1'-0"

B South Elevation
3/16" = 1'-0"

0' 2' 4' 8' 16'

126 & 128R North Street

NEW CONSTRUCTION

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No.	Description	Date

SOUTH & NORTH ELEVATIONS

Project number	18-16_128R North
Date	04.16.20
Drawn by	Author
Checked by	Checker

A-2.1

Scale 3/16" = 1'-0"

4/16/2020 10:17:02 AM

A South Elevation
3/16" = 1'-0"

B North Elevation
1/4" = 1'-0"

0' 2' 4' 8' 16'

128R North Street

NEW CONSTRUCTION

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TRACIE REED, ARCHITECT
NCARB, AIA, LEED AP BD+C
tracienreed@dextrouscreative.com
207.409.0459 (cell)

PROJECT TEAM

SURVEYOR
James P. Nadeau, PLS
Nadeau Land Surveyors
918 Brighton Ave
Portland, ME 04102
(207) 878-7870

GEOTECHNICAL ENGINEER
Mat Hardison, P.E.
Senior Geotechnical Engineer
Summit Geoengineering Services, Inc.
P.O. Box 7216
Lewiston, Maine 04243
(207) 576-6762

CIVIL ENGINEER
Will Savage, PE
Acorn Engineering, Inc
PO Box 3372
Portland, Maine 04104
(207) 775-2655

STRUCTURAL ENGINEER
Aaron C. Jones, P.E.
Structural Integrity Consulting Engineers, Inc.
46 Forest Ave
Portland, ME 04101
(207) 774-4614

No.	Description	Date

SOUTH & NORTH ELEVATIONS

Project number	18-16_128R North
Date	11.19.18
Drawn by	Author
Checked by	Checker
	A-2.1
Scale	As indicated

8/22/2019 12:23:35 AM

A East Elevation
3/16" = 1'-0"

B West Elevation
3/16" = 1'-0"

126 & 128R North Street

NEW CONSTRUCTION

OWNER
JOSHUA WOJCIK
UPRIGHT FRAMEWORKS LLC
PO BOX 833
WILTON ME 04294
jwojcik@uprightframeworks.com

DEXTROUS CREATIVE
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No.	Description	Date

EAST & WEST ELEVATIONS

Project number	18-16_128R North
Date	04.16.20
Drawn by	Author
Checked by	Checker

A-2.2

Scale 3/16" = 1'-0"

4/16/2020 10:05:47 AM

A East Elevation
3/16" = 1'-0"

B West Elevation
3/16" = 1'-0"

128R North Street

NEW CONSTRUCTION

OWNER
JOSHUA WOJCIK
UPRIGHT FRAMEWORKS LLC
PO BOX 833
WILTON ME 04294
jwojcik@uprightframeworks.com

DEXTROUS CREATIVE
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PROJECT TEAM

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Portland, ME 04101
(207) 774-4614

No.	Description	Date

EAST & WEST ELEVATIONS

Project number	18-16_128R North
Date	11.19.18
Drawn by	Author
Checked by	Checker

A-2.2

Scale 3/16" = 1'-0"

5/2/2019 11:39:56 AM

F Northeast Perspective

B Bird's Eye View of North Street Facade

1 Main Entrance 128R

D View from Driveway

E Entrance View

126 & 128R North Street

NEW CONSTRUCTION

OWNER
JOSHUA WOJCIK
UPRIGHT FRAMEWORKS LLC
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jwojcik@uprightframeworks.com

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PROJECT TEAM

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STRUCTURAL ENGINEER
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46 Forest Ave
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(207) 774-4614

No.	Description	Date

PERSPECTIVES 128R

Project number	18-16_128R North
Date	04.16.20
Drawn by	Author
Checked by	Checker

A-5.1

Scale

4/16/2020 10:24:54 AM

A Northwest Perspective

B 4th floor Munjoy Heights View

THIS PERSPECTIVE IS TAKEN FROM THE FOURTH FLOOR AT MUNJOY HEIGHTS FROM JUST WITHIN THE UNIT. ELEVATION OF THE CAMERA (EYES) IS TAKEN AT 5'-0" ABOVE THE FLOOR AS SHOWN ON THE SITE SECTION A/A-3.2. THE DISTANCE OF THIS PERSON IS STANDING (INSIDE THEIR UNIT) IS 31'-0" FROM THE FACE O FTHE SECOND FLOOR DECK. THE MUNJOY HEIGHTS BUILDINGS VARY IN DISTANCE FROM 128R NORTH BASED ON THEIR PROJECT'S SPLINE. THAT SAID, THE DISTANCE FROM THE EXTERIOR FACE OF THEIR BUILDINGS TO THE EXTERIOR FACE OF THE SECND FLOOR DECKS RANGES FROM 25'-0" AT THE CLOSEST SECTION TO 32'-0". IN THE SITE SECTION SHOWN ON PAGE A-3.2 THE BUIDINGS ARE SHOWN AT 28'-0" APART.

126 & 128R North Street

NEW CONSTRUCTION

OWNER
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UPRIGHT FRAMEWORKS LLC
PO BOX 833
WILTON ME 04294
jwojcik@uprightframeworks.com

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2074039459 (cell)

PROJECT TEAM

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(207) 878-7870

GEOTECHNICAL ENGINEER
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STRUCTURAL ENGINEER
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Structural Integrity Consulting Engineers, Inc.
46 Forest Ave
Portland, ME 04101
(207) 774-4614

No.	Description	Date

PERSPECTIVES 128R

Project number	18-16_128R North
Date	04.16.20
Drawn by	Author
Checked by	Checker

A-5.2

Scale

4/16/2020 1:22:59 AM

VICINITY MAP
NOT TO SCALE

PHASE I		
STRUCTURE SETBACKS & HEIGHT – 128R NORTH		
ZONE: R6 – MHNCDO	REQUIRED	PROPOSED
MINIMUM FRONT YARD SETBACK	5'	5'*
MINIMUM SIDE YARD SETBACK (LEFT)	10'	10.20'
MINIMUM SIDE YARD SETBACK (RIGHT)	10'	12.14'
MINIMUM DECK SETBACK	7.5'	10.10'
MINIMUM REAR YARD SETBACK	15'	15.08'
MAXIMUM BUILDING HEIGHT	45'	44.45'
* MEASUREMENT SHOWN TO DEMONSTRATE COMPLIANCE FOR THE 128R FRONT YARD SETBACK AND THE 126 REAR YARD SETBACK, YIELDING A MINIMUM CUMULATIVE STRUCTURE SEPARATION OF 15'.		

OVERALL SITE		
SPACE AND BULK STANDARDS		
ZONE: R6 – MHNCDO	REQUIRED	PROPOSED
MINIMUM LOT SIZE	2,000 SF	9,787 SF
MINIMUM STREET FRONTAGE	20'	38'
MINIMUM LANDSCAPED OPEN AREA	20%	32%
MAXIMUM NUMBER OF DWELLING UNITS*	725 SF/UNIT = 16	12
RESIDENTIAL PARKING	1 SPACE PER UNIT AFTER 3 UNITS = 8 SPACES**	8
MINIMUM INTERNAL RESIDENT BICYCLE STORAGE SPACES	2 SPACES/5 D.U. = 4	4
MAXIMUM LOT COVERAGE	60%	51%
* REFER TO PORTLAND LAND USE ORDINANCE SECTION 14–488 (g)		
** REFER TO PORTLAND LAND USE ORDINANCE SECTION 14–332.2 (b)		
THE ABOVE VALUES REPRESENT THE ENTIRE SITE IMPROVED UPON ACCOUNTING FOR THE PROPOSED CONDITIONS WTHIN THE 126 NORTH STREET SUBDIVISION PLAT (PHASE II)		

OWNER:

UPRIGHT PROPERTIES, LLC
PORTLAND, MAINE
CONTACT: JOSH WOJCIK
PO BOX 833 WILTON, ME 04294

CIVIL/SITE ENGINEER:

ACORN ENGINEERING, INC.
PORTLAND, MAINE
CONTACT: WILL SAVAGE, P.E.
65 HANOVER STREET, PORTLAND, ME 04101

SURVEYOR

NADEAU LAND SURVEYS
PORTLAND, MAINE
CONTACT: JAMES D. NADEAU, P.L.S.
918 BRIGHTON AVE, PORTLAND, ME 04102

RECORDING INFORMATION
STATE OF MAINE, CUMBERLAND
COUNTY REGISTRY OF DEEDS

RECEIVED: _____

RECORDED IN _____

ATTEST: _____

REGISTRAR

PERMISSIBLE VEHICLE SUMMARY – 128R			
SPACES	MAX WHEEL BASE	MAX LENGTH	MAX WIDTH
1,5,6	9.3'	16.5'	6.5'
2	8.6'	15.8'	6'
3,4	8.5'	14.5'	5.8'

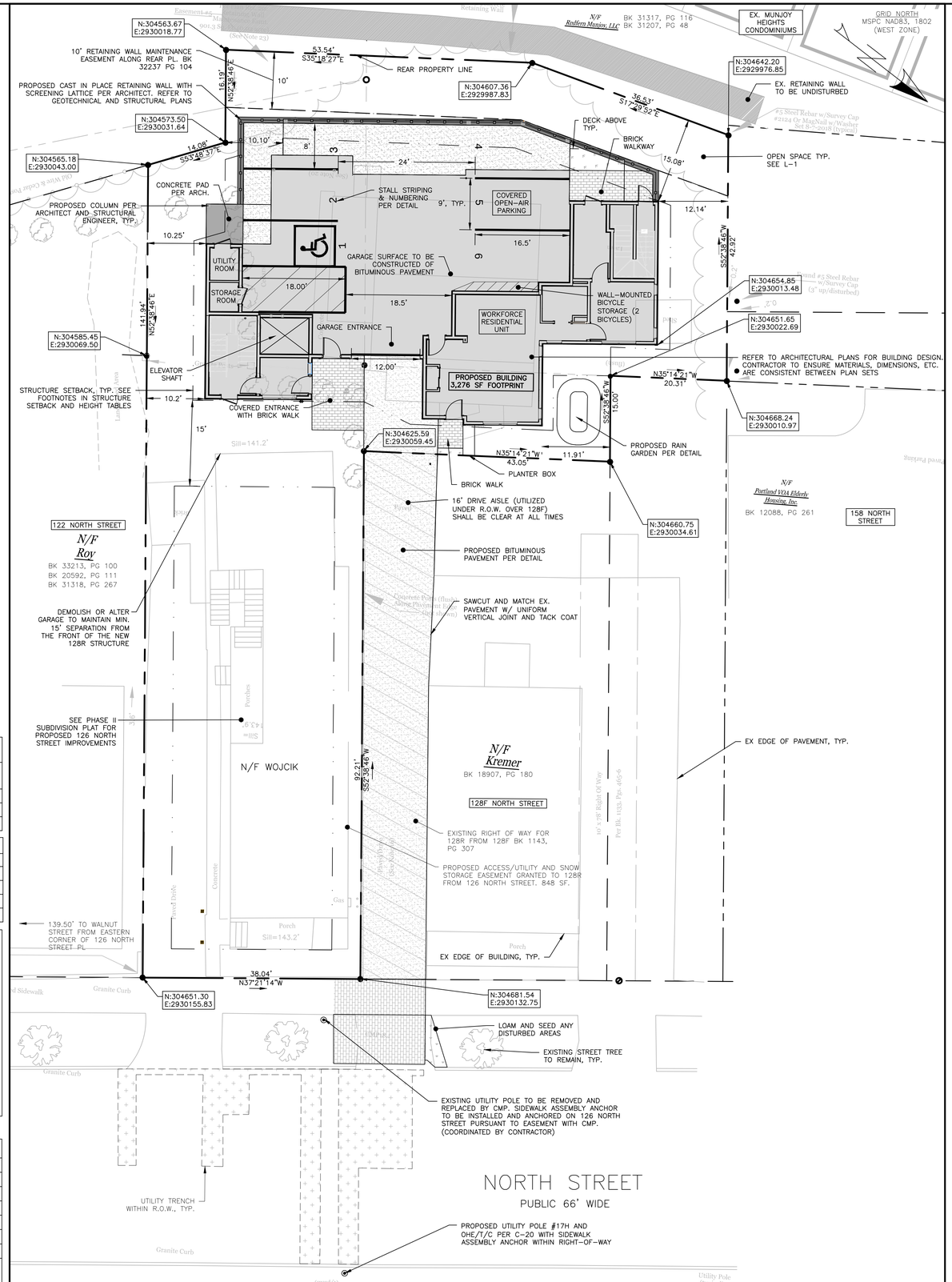
PARKING SUMMARY – 128R	
DIMENSIONS	# PARKING SPACES
9'x16.5'	4
8'X16.5'	1
8'X18'	1
TOTAL PROPOSED SPACES	6

LANDSCAPED AREAS
PAVED
CURB
PROPOSED BUILDING
PROPERTY LINE
STRIPING
RETAINING WALL
EX. PROPERTY MARKER
SETBACK LINE

UNIT TABULATION – 128R	
UNIT NUMBER	SIZE (SF)*
1A	672
2A	1,240
2B	870
3A	1,240
3B	870
4A	2,289
*UNIT AREA MEASURED FROM OUTSIDE OF EXTERIOR WALLS TO THE CENTER OF SHARED WALLS	

JAMES D. NADEAU, MAINE P.L.S. #2124

NADEAU LAND SURVEYS DATE:



10 0 10 20
SCALE: 1"=10'

PERMIT LEVEL
NOT ISSUED FOR
CONSTRUCTION

GENERAL NOTES:

1. FOR INFORMATION REGARDING THE PROPOSED SITE, REFER TO THE SITE PLAN, C-10, MOST RECENT VERSION.
2. FOR INFORMATION REGARDING PROPOSED UTILITIES, REFER TO THE UTILITY PLAN, SHEET C-20, MOST RECENT VERSION.
3. FOR INFORMATION REGARDING PROPOSED GRADING AND STORMWATER, REFER TO THE GRADING & DRAINAGE PLAN, SHEET C-30, MOST RECENT VERSION.
4. UNIT TABULATION PROVIDED BY DEXTROUS CREATIVE; REFER TO ARCHITECTURAL PLANS FOR FLOOR PLANS AND BUILDING HEIGHTS.
5. TOTAL SITE AREA INCLUDES 0.14 ACRES (6,142 S.F.). R.O.W. WIDTH FOR NORTH STREET IS 50 FEET PER BOUNDARY SURVEY & TOPOGRAPHICAL MAP WITH EXISTING CONDITIONS COMPLETED BY NADEAU LAND SURVEYS DATED 8/22/2018 (JOB #2181902BTR1).
6. SITE BOUNDARIES PER BOUNDARY SURVEY & TOPOGRAPHICAL MAP WITH EXISTING CONDITIONS COMPLETED BY NADEAU LAND SURVEYS ASSOCIATED DATED 8/22/2018 (JOB #2181902BTR1)
7. PROPERTY PINS TO BE SET BY PROFESSIONAL LAND SURVEYOR
8. AS OF 8/26/2020, THE SITE IS BOUNDED BY THE R-6 ZONE ON EAST, WEST, SOUTH, AND NORTH SIDES OF THE CITY OF PORTLAND GIS WEBSITE.
9. LOCUS PARCEL IS SHOWN ON THE CITY OF PORTLAND ASSESSOR'S MAP 12, BLOCK H, LOT 9
10. LOCUS PARCEL DOES NOT FALL IN A SPECIAL FLOOD HAZARD AREA PER FEMA FLOOD INSURANCE RATE MAP COMMUNITY–PANEL NUMBER 2300510014B, INDEX DATED 7/17/1986.
11. ALL BUILDING CORNER OFFSETS TO BOUNDARY LINES ARE FROM THE BUILDING FOUNDATION, UNLESS OTHERWISE NOTED.
12. THIS SHEET IS THE SUBDIVISION PLAT FOR THE CREATION OF UP TO SIX (6) DWELLING UNITS ON THE EXISTING SUBJECT PROPERTY.
13. THE CONDOMINIUM DOCUMENTS ARE TO OUTLINE THE MAINTENANCE AND MANAGEMENT OF DRIVEWAYS, SIDEWALKS, RETAINING WALLS, STORMWATER DEVICES, SITE LIGHTING, TRASH REMOVAL, AND SNOW REMOVAL AS THE RESPONSIBILITY OF THE OWNER.
14. THE HOMEOWNER'S ASSOCIATION SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND MANAGEMENT OF DRIVEWAYS, SIDEWALKS, STORMWATER DEVICES, SITE LIGHTING, TRASH REMOVAL, RETAINING WALLS, AND SNOW REMOVAL.
15. THE HOMEOWNER'S ASSOCIATION SHALL BE RESPONSIBLE FOR COMPLYING WITH THE CONDITIONS OF CHAPTER 32 STORMWATER INCLUDING ARTICLE III, POST-CONSTRUCTION STORMWATER MANAGEMENT AGREEMENT, WHICH SPECIFIES ANNUAL INSPECTIONS AND REPORTING REQUIREMENTS AT A MINIMUM. IN ADDITION, THE OWNER SHALL BE RESPONSIBLE FOR COMPLYING WITH THE CONDITIONS OF THE SUBMITTED STORMWATER MANAGEMENT PLAN AND THE APPROVED PLANS, AND MEET CITY STANDARDS AND STATE GUIDELINES.

SURVEY NOTES:

1. THIS PLAN IS NOT INTENDED TO DEPICT LIMITS OR EXTENT OF FEE TITLE OWNERSHIP. AN OPINION OF TITLE SHOULD BE RENDERED BY A TITLE ATTORNEY.
2. THE OFFICE RESERVES THE RIGHT TO BE HELD HARMLESS BY ALL 3RD PARTY CLAIMS.
3. THIS SURVEY DOES NOT PURPORT TO REFLECT ANY OF THE FOLLOWING:
   - 3.1. EASEMENTS OTHER THAN THOSE THAT ARE VISIBLE OR SPECIFICALLY STATED IN THE REFERENCED DOCUMENTS.
   - 3.2. BUILDING SETBACK COMPLIANCE OR RESTRICTIVE COVENANTS.
   - 3.3. ZONING OR OTHER LAND USE REGULATIONS
   - 3.4. THE LOCATION OF ANY UNDERGROUND UTILITIES OR STRUCTURES.
4. THIS OFFICE RESERVES THE RIGHT TO BE HELD HARMLESS FOR UNKNOWN OR UNOBTAINABLE PRIVATE RECORDS WHICH COULD AFFECT THE RESULTS OF THIS SURVEY
5. REFERENCE IS MADE TO "LETTER OF AGREEMENT" DATED MAY 23, 2018 BETWEEN NADEAU LAND SURVEYS AND THE BELOW LISTED CLIENT(S), WHICH SHALL BE CONSIDERED AN INTEGRAL PART OF THIS SURVEY.
6. N/F IS AN ABBREVIATION FOR NOW OR FORMERLY.
7. ALL DEEDS REFERENCED ON THIS PLAN ARE RECORDED AT THE CUMBERLAND COUNTRY REGISTRY OF DEEDS (CCRD).
8. LOCUS PARCELS ARE LOCATED IN THE R-6 RESIDENTIAL ZONE: (AS OF 8/22/18)
   - 8.1. MIMIMUM LOT SIZE = 200 S.F.
   - 8.2. MINIMUM LOT AREA / DWELLING UNIT = 725 S.F.
   - 8.3. MINIMUM STREET FRONTAGE = 20 FEET
   - 8.4. MINIMUM LOT WIDTH = 20 FEET
   - 8.5. MAXIMUM LOT COVERAGE = 60%
   - 8.6. MINIMUM FRONT YARD SETBACK = 5 FEET, OR AVERAGE DEPTH OF ADJACENT FRONT YARDS
   - 8.7. MINIMUM SIDE YARD SETBACK = 10 FEET
   - 8.8. MINIMUM REAR YARD SETBACK = 15 FEET
9. LOCUS PARCEL A IS SHOWN ON THE CITY OF PORTLAND ASSESSOR'S MAP 12, BLOCK H, AS LOT 14, AND IS LISTED AS 126 NORTH STREET. LOCUS PARCEL B IS SHOWN ON THE CITY OF PORTLAND ASSESSOR'S MAP 12. BLOCK H, AS PARTS OF LOTS 9 & 22, AND LISTED AS 128R NORTH STREET.
10. AREA OF LOCUS PARCEL A IS 4,105.0 SQUARE FEET (0.09 ACRE). AREA OF LOCUS PARCEL B IS 5,682.0 SQUARE FEET (0.13 ACRES)
11. THE APPARENT RIGHT OF WAY LINES DEPICTED ON THIS PLAN ARE BASED ON THE PLAN REFERENCES LISTEN HEREON MONUMENTATION FOUND IN THE FIELD, AND CITY OF PORTLAND ENGINEERING STREET NOTES.
12. THE LOCUS PARCELS DO NOT SCALE IN A SPECIAL FLOOD HAZARD AREA PER FEMA FLOOD INSURANCE RATE MAP COMMUNITY–PANEL NUMBER 230051 0014B, INDEX DATED DECEMBER 8, 1998. THE PARCELS SCALE IN ZONE C.
13. ALL BUILDING CORNER OFFSETS TO BOUNDARY LINES ARE FROM CORNER BOARDS AND NOT BUILDING FOUNDATION, UNLESS NOTED.
14. CALL 1–888–DIGSAFE AT LEAST THREE BUSINESS DAYS BEFORE PERFORMING ANY EXCAVATION.
15. VERTICAL DATUM IS NGVD29. BENCHMARK IS CITY MONUMENT T112–18–107, ELEVATION = 145.08'
16. SEE CCRD BOOK 1143, PAGE 307, DATED JULY 25, 1923, FROM ELMORE W. RAMSDELL TO CLAIRE BOWDEN, FOR RIGHT OF WAY TO NORTH STREET.
17. PER CITY OF PORTLAND RECORDS. VOL. 1, PAGE 184, NORTH STREET WAS ACCEPTED MARCH 20, 1795 AS 4 RODS (66 FEET) WIDE.
18. SEE CCRD BOOK 14149, PAGE 281, DATED SEPTEMBER 10, 1998, FOR CITY OF PORTLAND'S LICENSE TO ERECT A FENCE ACROSS POPLAR STREET PARTIALLY INTRUDING ON LAND N/F MAXWELL.
19. SEE CCRD BOOK 31326, PAGE 331, DATED FEBRUARY 3, 2014, FROM THE CITY OF PORTLAND TO RAYMOND C. MAXWELL, FOR TERMINATION OF LICENSE RECORDED IN BOOK 14149, PAGE 281.
20. EXISTING BULKHEAD IS ALLOWED TO ENCROACH SETBACK WINDOW PER CITY OF PORTLAND ZONING ORDINANCE SECTION 14–425.
21. SEE NOTICE FOR VACATED PORTIONS OF SHERIDAN STREET AND EAST COVE STREET, DATED MARCH 5, 2015 AND RECORDED IN CCRD BOOK 32118, PAGE 145.
22. THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THIS OFFICE MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN–SERVICE OR ABANDONED. THE UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE LOCATION AND ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THIS OFFICE HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.
23. SEE CCRD BOOK 32237, PAGE 104, DATED APRIL 30, 2015, FOR RELEASE AND EASEMENT AGREEMENT BETWEEN REDFERN MUNJOY, LLC AND UPRIGHT PROPERTIES, LLC.
24. THE COORDINATES DEPICTED ON OUR PLAN ARE FOR MUNICIPAL REQUIREMENTS ONLY AND SHOULD NOT BE USED FOR CONSTRUCTION LAYOUT. THIS OFFICE ASSUMES NO LIABILITY AND/OR RESPONSIBILITY IF USED FOR CONSTRUCTION PURPOSED.
25. SPOT GRADES, SILL AND RIM ELEVATIONS ARE FOR ENGINEERING PURPOSED ONLY. AND SHALL NOT BE USED AS PROJECT BENCHMARKS. THIS OFFICE ASSUMES NO LIABILITY AND/OR RESPONSIBILITY IS USED FOR CONSTRUCTION PURPOSES.
26. NO RECORDS RESEARCH OR SITE EVALUATION HAS BEEN PERFORMED SINCE THE ORIGINAL DATE OF THIS SURVEY. THIS SURVEY PLAN WAS REVISED SOLEY TO DEPICT ADDITIONAL UTILITY INFORMANTION

EASEMENTS:

THERE ARE TWO EXISTING EASEMENTS AS IDENTIFIED BY THE SURVEYOR:
1. PERMANENT RIGHT–OF–WAY WITH 128F NORTH STREET. REFERENCE CCRD BK 1143, PG 307.
2. PERMANENT RETAINING WALL MAINTENANCE EASEMENT WITH MUNJOY HEIGHTS. REFERENCE CCRD BK 32237, PG 104

THERE ARE NO PROPOSED EASEMENTS.

WAIVERS & CONDITIONS OF APPROVAL:

TBD

APPROVED: PORTLAND PLANNING BOARD

CHAIRPERSON: DATE:

ISSUED FOR	BY DATE
LEVEL III SITE PLAN	WHS 8/7/19
PHASE II UPDATE	WHS 10/29/19
COMMENT RESPONSE 2	WHS 7/24/2020
FINAL APPLICATION	WHS 8/2/2020
LOT MERGE	WHS 8/26/2020

DRAWING NAME: SUBDIVISION PLAT – 126/128R NORTH STREET, PORTLAND, ME 04101
PROJECT NAME: 126/128R NORTH STREET REDEVELOPMENT
CLIENT: UPRIGHT PROPERTIES, LLC
PO BOX 833 WILTON, ME 04294

THESE PLANS, IN PART OR WHOLE, ARE NOT TO BE USED OR MODIFIED WITHOUT THE EXPRESSED WRITTEN PERMISSION AND AUTHORIZATION OF ACORN ENGINEERING, INC. ANY UNAUTHORIZED USE OF THESE PLANS WILL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
65 HANOVER ST, PORTLAND, MAINE 04101
(207) 775-2655

FILE: 1116_CIVIL
JN: 1116
SCALE: 1"=10'
DESIGNED BY: SJL
DRAWN BY: ZMS
CHECKED BY: WHS

STATE OF MAINE WILLIAM H. SAVAGE No. 14446 REGISTERED PROFESSIONAL ENGINEER 8-28-20

DRAWING NO.
PLAT

VICINITY MAP
NOT TO SCALE

PHASE II		
STRUCTURE SETBACKS & HEIGHT – 126 NORTH		
ZONE: R6 – MHNCDO	REQUIRED	PROPOSED
MINIMUM FRONT YARD SETBACK	3.7' (AVG. ABUTTER)	4'
MINIMUM SIDE YARD SETBACK (LEFT)	5'	10.02'
MINIMUM SIDE YARD SETBACK (RIGHT)	5'	5'
MINIMUM REAR YARD SETBACK*	10'	16'*
MAXIMUM BUILDING HEIGHT	35'	33.32'

* MEASURED 5' OFF THE FRONT OF THE 128R STRUCTURE ASSUMING A MINIMUM 5' FRONT YARD SETBACK FOR 128R CONFORMANCE. MEASUREMENTS SHOWN TO DEMONSTRATE COMPLIANCE FOR THE 128R FRONT YARD SETBACK AND THE 126 REAR YARD SETBACK, YIELDING A MINIMUM CUMULATIVE STRUCTURE SEPARATION OF 15'.

OVERALL SITE		
SPACE AND BULK STANDARDS		
ZONE: R6 – MHNCDO	REQUIRED	PROPOSED
MINIMUM LOT SIZE	2,000 SF	9,787 SF
MINIMUM STREET FRONTAGE	20'	38'
MINIMUM LANDSCAPED OPEN AREA	20%	32%
MAXIMUM NUMBER OF DWELLING UNITS*	725 SF/UNIT = 16	12
RESIDENTIAL PARKING	1 SPACE PER UNIT AFTER 3 UNITS = 8 SPACES**	8
MINIMUM INTERNAL RESIDENT BICYCLE STORAGE SPACES	2 SPACES/5 D.U. = 4	4
MAXIMUM LOT COVERAGE	60%	51%
* REFER TO PORTLAND LAND USE ORDINANCE SECTION 14-488 (g)		
** REFER TO PORTLAND LAND USE ORDINANCE SECTION 14-332.2 (b)		

OWNER:

JOSH WOJCIK
PO BOX 833 WILTON, ME 04294

CIVIL/SITE ENGINEER:

ACORN ENGINEERING, INC.
PORTLAND, MAINE
CONTACT: WILL SAVAGE, P.E.
65 HANOVER STREET, PORTLAND, ME 04101

SURVEYOR

NADEAU LAND SURVEYS
PORTLAND, MAINE
CONTACT: JAMES D. NADEAU, P.L.S.
918 BRIGHTON AVE, PORTLAND, ME 04102

LANDSCAPED AREAS
PAVED
CURB
PROPOSED BUILDING
PROPERTY LINE
STRIPING
RETAINING WALL
EX. PROPERTY MARKER
SETBACK LINE

PARKING SUMMARY – 126	
DIMENSIONS	# PARKING SPACES
10'x18'	1
8'X18' (ADA)	1
TOTAL PROPOSED SPACES	2

UNIT TABULATION – 126	
UNIT NUMBER	SIZE (SF)*
1A	680
2A	687
2B	716
3A	687
3B	716

*UNIT AREA MEASURED FROM OUTSIDE OF EXTERIOR WALLS TO THE CENTER OF SHARED WALLS

RECORDING INFORMATION
STATE OF MAINE, CUMBERLAND
COUNTY REGISTRY OF DEEDS

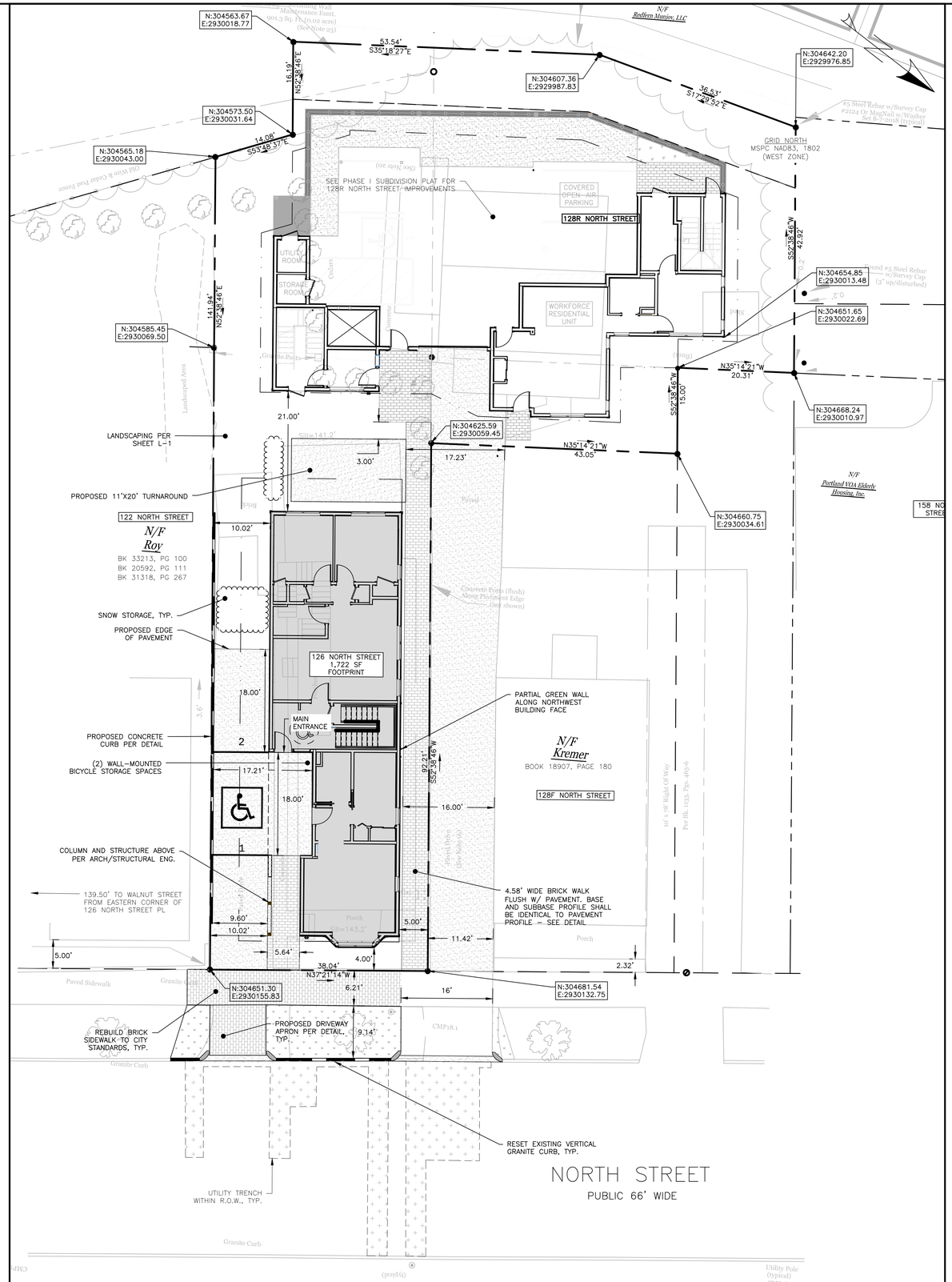
RECEIVED: _____

RECORDED IN _____

ATTEST: _____
REGISTRAR

JAMES D. NADEAU, MAINE P.L.S. #2124

NADEAU LAND SURVEYS DATE:



GENERAL NOTES:

1. FOR INFORMATION REGARDING THE PROPOSED SITE, REFER TO THE SITE PLAN, C-10, MOST RECENT VERSION.
2. FOR INFORMATION REGARDING PROPOSED UTILITIES, REFER TO THE UTILITY PLAN, SHEET C-20, MOST RECENT VERSION.
3. FOR INFORMATION REGARDING PROPOSED GRADING AND STORMWATER, REFER TO THE GRADING & DRAINAGE PLAN, SHEET C-30, MOST RECENT VERSION.
4. UNIT TABULATION PROVIDED BY DEXTROUS CREATIVE; REFER TO ARCHITECTURAL PLANS FOR FLOOR PLANS AND BUILDING HEIGHTS.
5. TOTAL SITE AREA INCLUDES 0.084 ACRES (3,645 S.F.). R.O.W. WIDTH FOR NORTH STREET IS 50 FEET PER BOUNDARY SURVEY & TOPOGRAPHICAL MAP WITH EXISTING CONDITIONS COMPLETED BY NADEAU LAND SURVEYS DATED 8/22/2018 (JOB #2181902BTR1).
6. SITE BOUNDARIES PER BOUNDARY SURVEY & TOPOGRAPHICAL MAP WITH EXISTING CONDITIONS COMPLETED BY NADEAU LAND SURVEYS ASSOCIATED DATED 8/22/2018 (JOB #2181902BTR1)
7. PROPERTY PINS TO BE SET BY PROFESSIONAL LAND SURVEYOR.
8. AS OF 8/26/2020, THE SITE IS BOUNDED BY THE R-6 ZONE ON EAST, WEST, SOUTH, AND NORTH SIDES OF THE CITY OF PORTLAND GIS WEBSITE.
9. LOCUS PARCEL IS SHOWN ON THE CITY OF PORTLAND ASSESSOR'S MAP 12, BLOCK H, LOT 14
10. LOCUS PARCEL DOES NOT FALL IN A SPECIAL FLOOD HAZARD AREA PER FEMA FLOOD INSURANCE RATE MAP COMMUNITY-PANEL NUMBER 2300510014B, INDEX DATED 7/17/1986.
11. ALL BUILDING CORNER OFFSETS TO BOUNDARY LINES ARE FROM THE BUILDING FOUNDATION, UNLESS OTHERWISE NOTED.
12. THIS SHEET IS THE SUBDIVISION PLAT FOR THE CREATION OF UP TO SIX (6) DWELLING UNITS ON THE EXISTING SUBJECT PROPERTY.
13. THE OWNER SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND MANAGEMENT OF DRIVEWAYS, SIDEWALKS, STORMWATER DEVICES, SITE LIGHTING, TRASH REMOVAL, RETAINING WALLS, AND SNOW REMOVAL.
14. THE OWNER SHALL BE RESPONSIBLE FOR COMPLYING WITH THE CONDITIONS OF CHAPTER 32 STORMWATER INCLUDING ARTICLE III, POST-CONSTRUCTION STORMWATER MANAGEMENT AGREEMENT, WHICH SPECIFIES ANNUAL INSPECTIONS AND REPORTING REQUIREMENTS AT A MINIMUM. IN ADDITION, THE OWNER SHALL BE RESPONSIBLE FOR COMPLYING WITH THE CONDITIONS OF THE SUBMITTED STORMWATER MANAGEMENT PLAN AND THE APPROVED PLANS, AND MEET CITY STANDARDS AND STATE GUIDELINES.

SURVEY NOTES:

1. THIS PLAN IS NOT INTENDED TO DEPICT LIMITS OR EXTENT OF FEE TITLE OWNERSHIP. AN OPINION OF TITLE SHOULD BE RENDERED BY A TITLE ATTORNEY.
2. THE OFFICE RESERVES THE RIGHT TO BE HELD HARMLESS BY ALL 3RD PARTY CLAIMS.
3. THIS SURVEY DOES NOT PURPORT TO REFLECT ANY OF THE FOLLOWING:
   - 3.1. EASEMENTS OTHER THAN THOSE THAT ARE VISIBLE OR SPECIFICALLY STATED IN THE REFERENCED DOCUMENTS.
   - 3.2. BUILDING SETBACK COMPLIANCE OR RESTRICTIVE COVENANTS.
   - 3.3. ZONING OR OTHER LAND USE REGULATIONS
   - 3.4. THE LOCATION OF ANY UNDERGROUND UTILITIES OR STRUCTURES.
4. THIS OFFICE RESERVES THE RIGHT TO BE HELD HARMLESS FOR UNKNOWN OR UNOBTAINABLE PRIVATE RECORDS WHICH COULD AFFECT THE RESULTS OF THIS SURVEY
5. REFERENCE IS MADE TO "LETTER OF AGREEMENT" DATED MAY 23, 2018 BETWEEN NADEAU LAND SURVEYS AND THE BELOW LISTED CLIENT(S), WHICH SHALL BE CONSIDERED AN INTEGRAL PART OF THIS SURVEY.
6. N/F IS AN ABBREVIATION FOR NOW OR FORMERLY.
7. ALL DEEDS REFERENCED ON THIS PLAN ARE RECORDED AT THE CUMBERLAND COUNTRY REGISTRY OF DEEDS (CCRD).
8. LOCUS PARCELS ARE LOCATED IN THE R-6 RESIDENTIAL ZONE: (AS OF 8/22/18)
   - 8.1. MIMIMUM LOT SIZE = 200 S.F.
   - 8.2. MINIMUM LOT AREA / DWELLING UNIT = 725 S.F.
   - 8.3. MINIMUM STREET FRONTAGE = 20 FEET
   - 8.4. MINIMUM LOT WIDTH = 20 FEET
   - 8.5. MAXIMUM LOT COVERAGE = 60%
   - 8.6. MINIMUM FRONT YARD SETBACK = 5 FEET, OR AVERAGE DEPTH OF ADJACENT FRONT YARDS
   - 8.7. MINIMUM SIDE YARD SETBACK = 5 FEET
   - 8.8. MINIMUM REAR YARD SETBACK = 10 FEET
9. LOCUS PARCEL A IS SHOWN ON THE CITY OF PORTLAND ASSESSOR'S MAP 12, BLOCK H, AS LOT 14, AND IS LISTED AS 126 NORTH STREET. LOCUS PARCEL B IS SHOWN ON THE CITY OF PORTLAND ASSESSOR'S MAP 12. BLOCK H, AS PARTS OF LOTS 9 & 22, AND LISTED AS 128R NORTH STREET.
10. AREA OF LOCUS PARCEL A IS 4,105.0 SQUARE FEET (0.09 ACRE). AREA OF LOCUS PARCEL B IS 5,682.0 SQUARE FEET (0.13 ACRES)
11. THE APPARENT RIGHT OF WAY LINES DEPICTED ON THIS PLAN ARE BASED ON THE PLAN REFERENCES LISTEN HEREON MONUMENTATION FOUND IN THE FIELD, AND CITY OF PORTLAND ENGINEERING STREET NOTES.
12. THE LOCUS PARCELS DO NOT SCALE IN A SPECIAL FLOOD HAZARD AREA PER FEMA FLOOD INSURANCE RATE MAP COMMUNITY-PANEL NUMBER 230051 0014B, INDEX DATED DECEMBER 8, 1998. THE PARCELS SCALE IN ZONE C.
13. ALL BUILDING CORNER OFFSETS TO BOUNDARY LINES ARE FROM CORNER BOARDS AND NOT BUILDING FOUNDATION, UNLESS NOTED.
14. CALL 1-888-DIGSAFE AT LEAST THREE BUSINESS DAYS BEFORE PERFORMING ANY EXCAVATION.
15. VERTICAL DATUM IS NGVD29. BENCHMARK IS CITY MONUMENT T112-18-107, ELEVATION = 145.08'
16. SEE CCRD BOOK 1143, PAGE 307, DATED JULY 25, 1923, FROM ELMORE W. RAMSDELL TO CLAIRE BOWDEN, FOR RIGHT OF WAY TO NORTH STREET.
17. PER CITY OF PORTLAND RECORDS. VOL. 1, PAGE 184, NORTH STREET WAS ACCEPTED MARCH 20, 1795 AS 4 RODS (66 FEET) WIDE.
18. SEE CCRD BOOK 14149, PAGE 281, DATED SEPTEMBER 10, 1998, FOR CITY OF PORTLAND'S LICENSE TO ERECT A FENCE ACROSS POPLAR STREET PARTIALLY INTRUDING ON LAND N/F MAXWELL.
19. SEE CCRD BOOK 31326, PAGE 331, DATED FEBRUARY 3. 2014, FROM THE CITY OF PORTLAND TO RAYMOND C. MAXWELL, FOR TERMINATION OF LICENSE RECORDED IN BOOK 14149, PAGE 281.
20. EXISTING BULKHEAD IS ALLOWED TO ENCROACH SETBACK WINDOW PER CITY OF PORTLAND ZONING ORDINANCE SECTION 14-425.
21. SEE NOTICE FOR VACATED PORTIONS OF SHERIDAN STREET AND EAST COVE STREET, DATED MARCH 5, 2015 AND RECORDED IN CCRD BOOK 32118, PAGE 145.
22. THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THIS OFFICE MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. THE UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE LOCATION AND ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THIS OFFICE HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.
23. SEE CCRD BOOK 32237, PAGE 104, DATED APRIL 30, 2015, FOR RELEASE AND EASEMENT AGREEMENT BETWEEN REDFERN MUNJOY, LLC AND UPRIGHT PROPERTIES, LLC.
24. THE COORDINATES DEPICTED ON OUR PLAN ARE FOR MUNICIPAL REQUIREMENTS ONLY AND SHOULD NOT BE USED FOR CONSTRUCTION LAYOUT. THIS OFFICE ASSUMES NO LIABILITY AND/OR RESPONSIBILITY IF USED FOR CONSTRUCTION PURPOSED.
25. SPOT GRADES, SILL AND RIM ELEVATIONS ARE FOR ENGINEERING PURPOSED ONLY. AND SHALL NOT BE USED AS PROJECT BENCHMARKS. THIS OFFICE ASSUMES NO LIABILITY AND/OR RESPONSIBILITY IS USED FOR CONSTRUCTION PURPOSES.
26. NO RECORDS RESEARCH OR SITE EVALUATION HAS BEEN PERFORMED SINCE THE ORIGINAL DATE OF THIS SURVEY. THIS SURVEY PLAN WAS REVISED SOLEY TO DEPICT ADDITIONAL UTILITY INFORMANTION

EASEMENTS:

1. THERE ARE NO EXISTING EASEMENTS IDENTIFIED BY THE SURVEYOR PERTAINING TO 126 NORTH STREET.
2. NO RECORD OF AN EASEMENT WAS FOUND FOR THE APPARENT ENCROACHMENT OF THE AERIAL UTILITY LINES ACROSS THIS PROPERTY.

THERE ARE NO PROPOSED EASEMENTS.

WAIVERS & CONDITIONS OF APPROVAL:

N/A

APPROVED: PORTLAND PLANNING BOARD

CHAIRPERSON: DATE:

10 0 10 20
SCALE: 1"=10'

PERMIT LEVEL
NOT ISSUED FOR
CONSTRUCTION

ISSUED FOR	BY	DATE
PHASE II UPDATE	WHS	10/29/19
COMMENT RESPONSE	WHS	12/18/19
COMMENT RESPONSE 2	WHS	2/24/2020
FINAL APPLICATION	WHS	6/2/2020
LOT MERGE	WHS	8/28/2020

DRAWING NAME: SUBDIVISION PLAT – PHASE II (126 NORTH ST., PORTLAND, MAINE 04101)
PROJECT NAME: 126/128R NORTH STREET REDEVELOPMENT
CLIENT: JOSHUA WOJCIK
PO BOX 833 WILTON, ME 04294

ACORN ENGINEERING, INC.

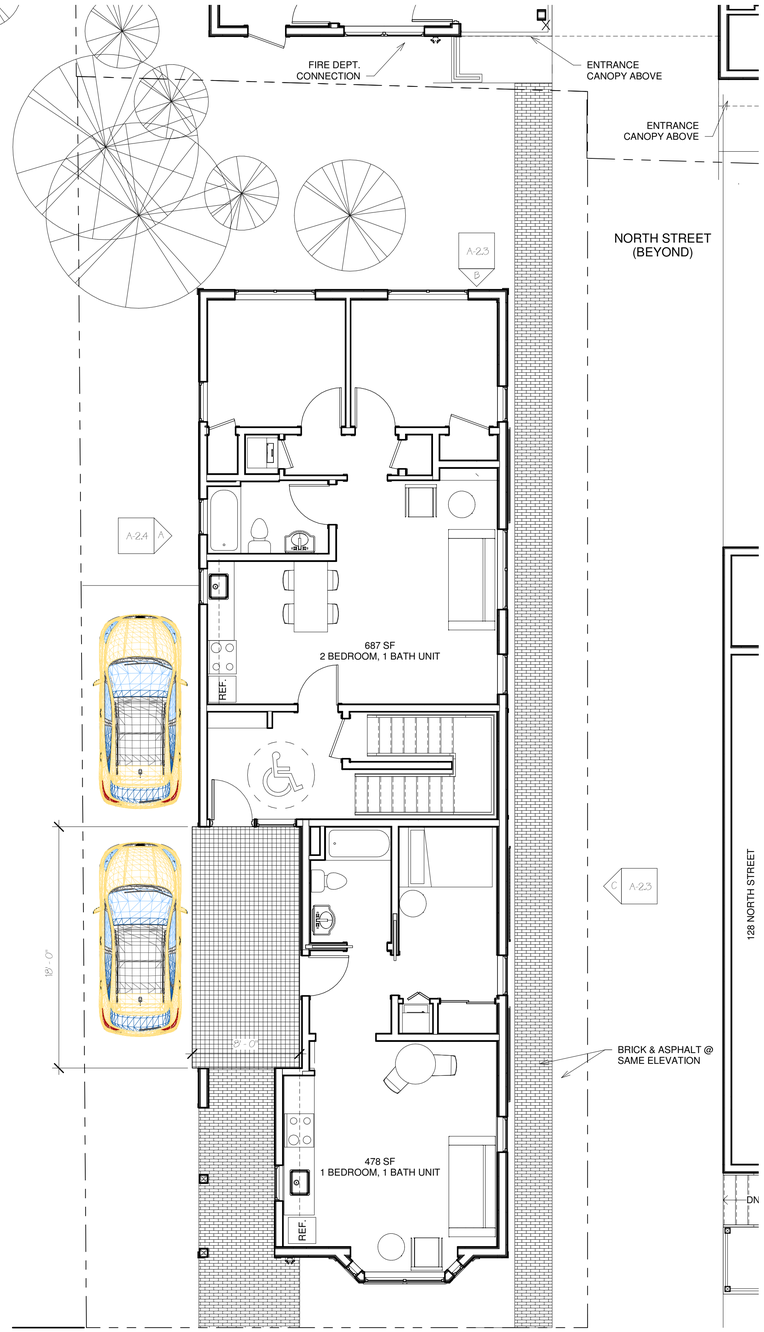
THESE PLANS SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. AND SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
65 HANOVER STREET, PORTLAND, MAINE 04101
(207) 775-2655

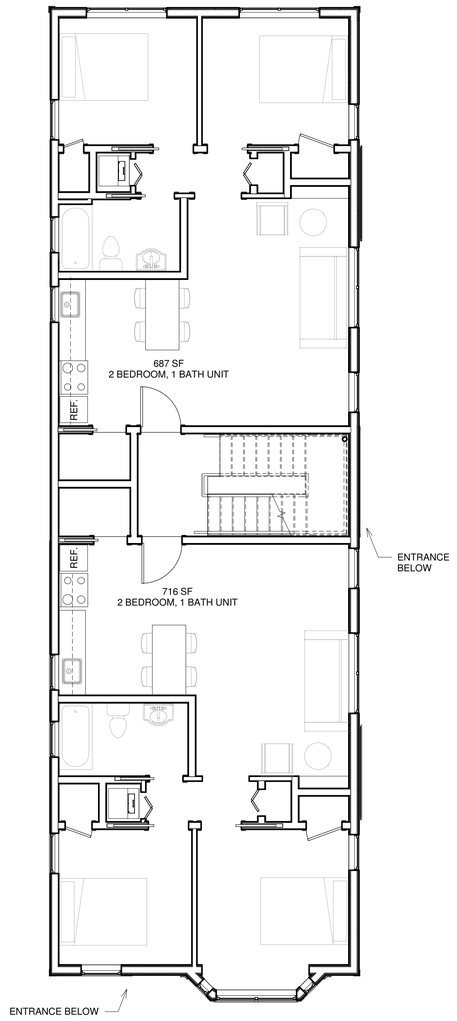
FILE: 1116_CIVIL
JN: 1116
SCALE: 1"=10'
DESIGNED BY: SJL
DRAWN BY: ZMS
CHECKED BY: WHS

STATE OF MAINE
WILLIAM J. SAVAGE
No. 10466
8-28-20
REGISTERED PROFESSIONAL ENGINEER

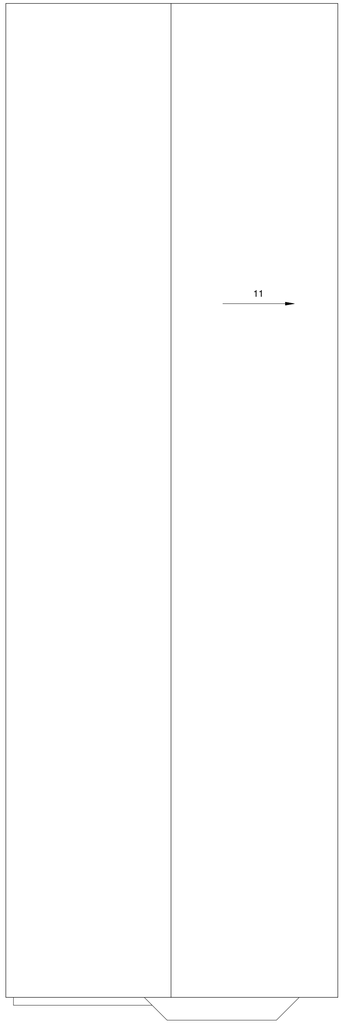
DRAWING NO.
PLAT



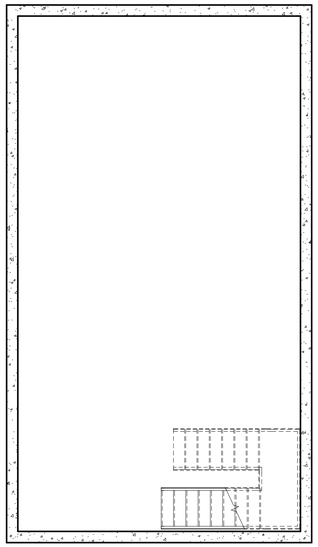
A First Floor 126
3/16" = 1'-0"



B Second & Third Floors 126
3/16" = 1'-0"



C Roof 126
3/16" = 1'-0"



D Basement
3/16" = 1'-0"

126 & 128R North Street

NEW CONSTRUCTION

OWNER
JOSHUA WOJCIK
UPRIGHT FRAMEWORKS LLC
PO BOX 833
WILTON ME 04294
jwojcik@uprightframeworks.com

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2074030459 (cell)

PROJECT TEAM

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Senior Geotechnical Engineer
Summit Geoengineering Services, Inc.
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CIVIL ENGINEER
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Acorn Engineering, Inc
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(207) 775-2655

STRUCTURAL ENGINEER
Aaron C. Jones, P.E.
Structural Integrity Consulting Engineers, Inc.
46 Forest Ave
Portland, ME 04101
(207) 774-4614

No.	Description	Date

PHASE 2 PLANS

Project number	18-16_128R North
Date	04.16.20
Drawn by	Author
Checked by	Checker

A-1.6 126

Scale 3/16" = 1'-0"

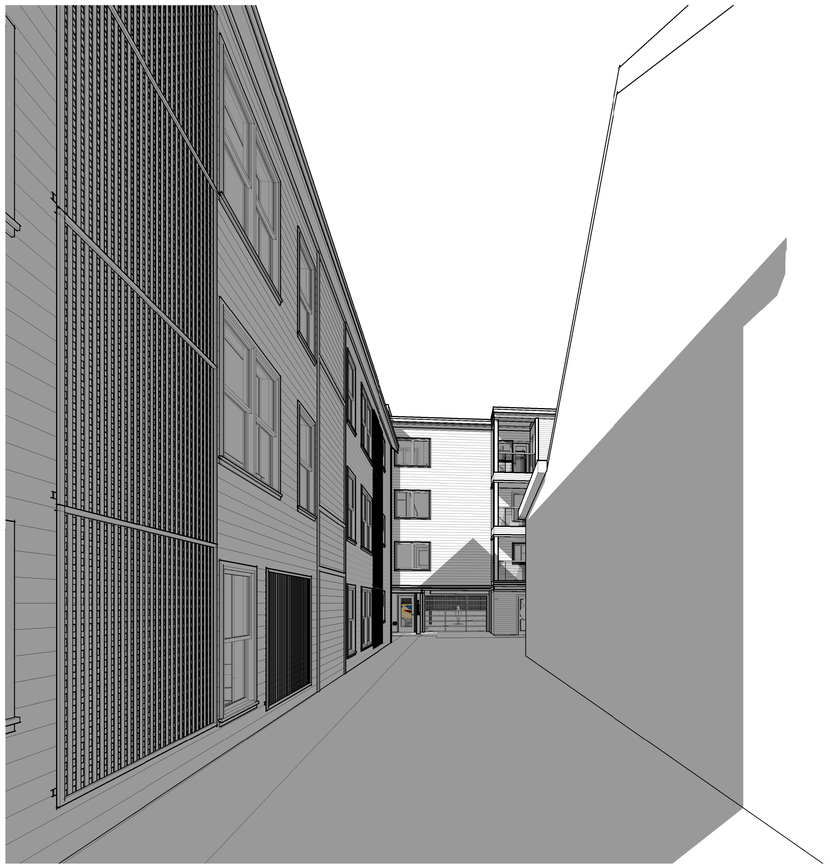
4/16/2020 11:55:17 AM

A View for Walnut Street Rendering

D View from Senior Housing for Rendering Copy 1

B View 126 + 128R North (elevation 176"

C Street View 126 + 128R North (Eye at 5'-0")



E View from North Street Sidewalk 126 & 128R

126 & 128R North Street

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No.	Description	Date

PERSPECTIVES 126

Project number	18-16_128R North
Date	04.16.20
Drawn by	Author
Checked by	Checker

A-5.3

Scale

4/16/2020 10:25:51 AM

A North Street View Showing Entrances

B Main Entrance 126

126 & 128R North Street

NEW CONSTRUCTION

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No.	Description	Date

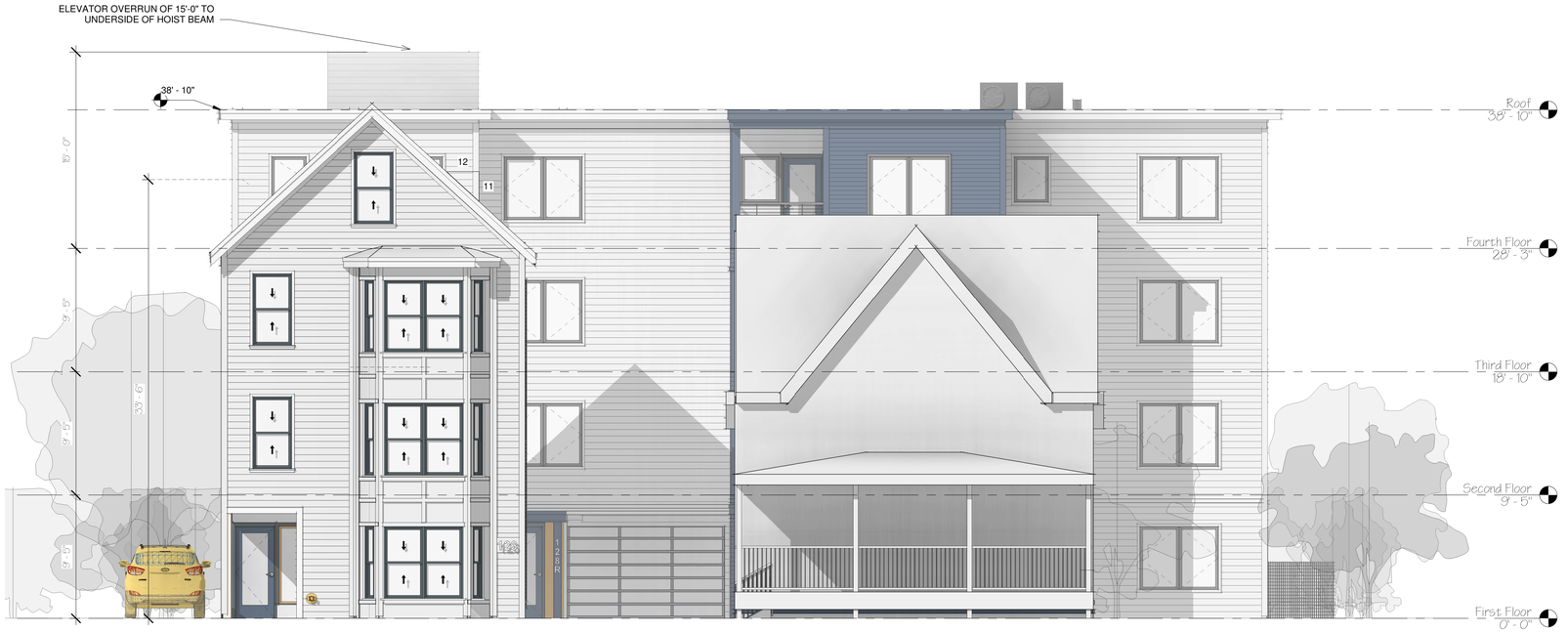
PERSPECTIVES 126

Project number 18-16_128R North
Date 04.16.20
Drawn by Author
Checked by Checker

A-5.4

Scale

4/16/2020 10:26:00 AM



A South Elevation 126 & 128
3/16" = 1'-0"

B North Elevation 126 North
3/16" = 1'-0"

C East Elevation 126 North
3/16" = 1'-0"

126 & 128R North Street

NEW CONSTRUCTION

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No.	Description	Date

SOUTH, NORTH & EAST 126

Project number	18-16_128R North
Date	04.16.20
Drawn by	Author
Checked by	Checker

A-2.3

Scale 3/16" = 1'-0"

4/16/2020 10:02:22 AM

A West Elevation 126 North
3/16" = 1'-0"

126 & 128R North Street

NEW CONSTRUCTION

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No.	Description	Date

WEST ELEVATION 126

Project number	18-16_128R North
Date	04.16.20
Drawn by	Author
Checked by	Checker

A-2.4

Scale 3/16" = 1'-0"

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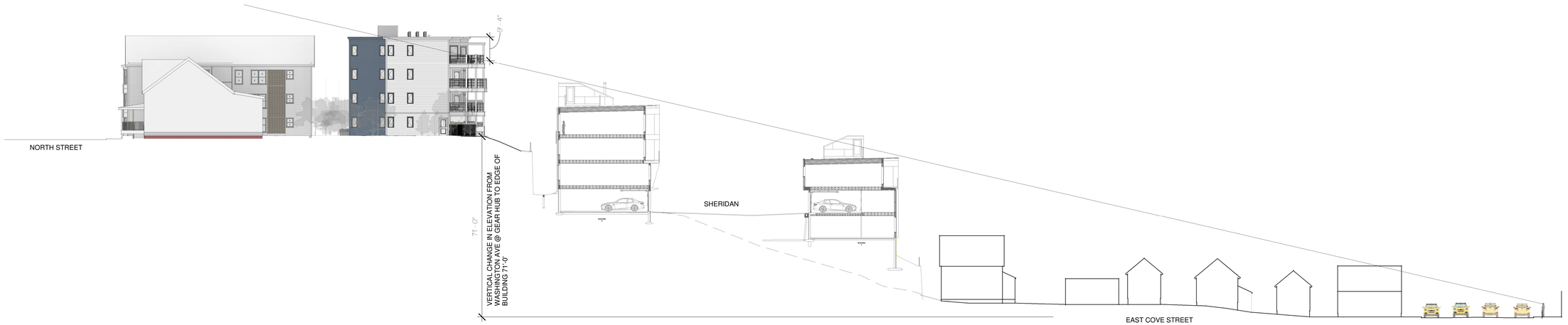

EDGE OF BUILDING TO SIDEWALK ON FAR SIDE OF WASHINGTON AVE - 416'-0" HORIZONTALLY

A SITE SECTION NORTH STREET TO WASHINGTON AVENUE
1" = 20'-0"

ENTOURAGE 'FLORENCE' IS 5'-6" TALL. IF FLORENCE WERE TO STAND ON THE FAR SIDEWALK OF WASHINGTON AVENUE AND LOOK UP TOWARDS NORTH STREET THEY WOULD BE ABLE TO SEE THE TOP OF THE DECK RAIL AT 128R NORTH AND THE ELEVATION BEYOND AT A DISTANCE OF 435'-0" (HYPOTENUSE). THE REAR FACE OF THE BUILDING WOULD BE 418'-0" FROM HER HORIZONTALLY AND 71'-0" VERTICALLY*. THE MAJORITY OF THEIR SITE LINE WOULD BE CONSUMED BY THE MUNJOY HEIGHTS PROJECT (ALONG SHERIDAN STREET). THE DASHED LINE SHOWS THE CHANGE IN TOPOGRAPHY CREATED BY THE MUNJOY HEIGHTS PROJECT. THE ENTOURAGE IS ALSO SHOWN WITHIN THE FOURTH FLOOR OF THE MUNJOY HEIGHTS PROJECT LOOKING AT THE BACK OF 128R. THIS INDIVIDUAL IS 31'-0" AWAY FROM THE FACE OF DECK AND THEIR EYES WOULD BE 5'-0" ABOVE THE GRADE OF PARKING. THE PERSPECTIVE SEEN BY THIS PERSON IS SHOWN ON B/A-5.2. NOTE THAT THE MUNJOY HEIGHTS PROJECT. NOTE THAT THE BUILDINGS IN THE MUNJOY HEIGHTS PROJECT ARE SITUATED ALONG A SPLINE AND VARY IN DISTANCE FROM THE REAR FACE OF 128R BUILDING. AT THE CLOSEST POINT THE EXTERIOR FACE OF THE MUNJOY HEIGHTS BUILDING TO THE FACE OF DECK IS 25'-0" AND AT THE WIDEST POINT IT IS 32'-0". AT THE POINT OF THIS SECTION THE BUILDING IS MODELED AT 28'-0" SEPARATION.

*BASED ON ACORN ENGINEERING SITE ELEVATIONS POINTS AT THE EDGE OF BUILDING ON 128R NORTH STREET AND PROJECTS CURRENTLY UNDER CONSTRUCTION ALONG WASHINGTON AVENUE. SITE SECTION THROUGH MUNJOY HEIGHTS OBTAINED FROM ENGINEER. EAST COVE STREET HOUSES WERE SITED USING A COMBIATION OF PORTLAND GIS DATA, ASSESSING DEPARTMENT MEASUREMENTS AND GOOGLE STREET VIEW IMAGES

126 & 128R North Street

NEW CONSTRUCTION

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jwojcik@uprightframeworks.com

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No.	Description	Date

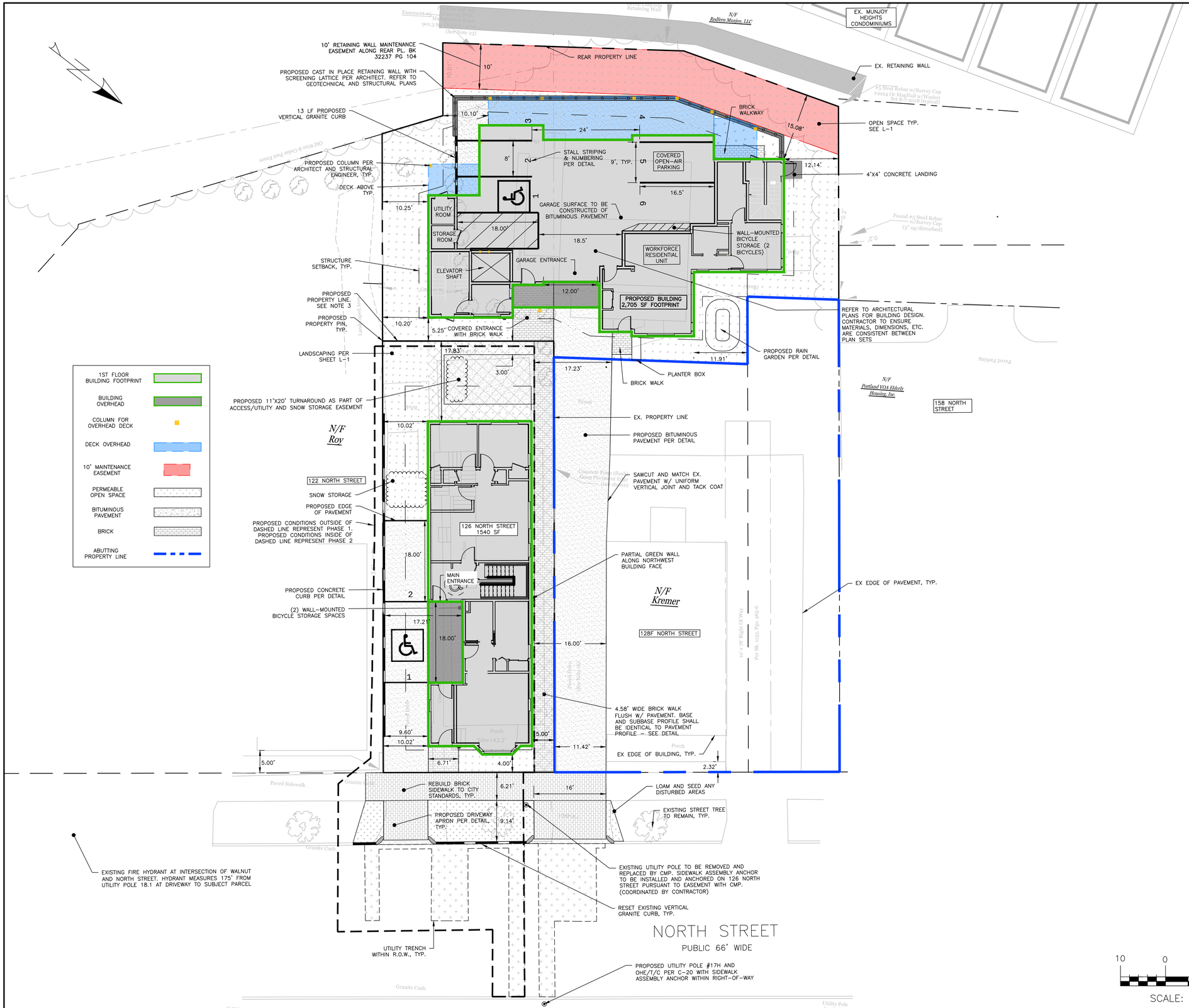
SITE SECTION

Project number	18-16_128R North
Date	04.16.20
Drawn by	Author
Checked by	Checker

A-3.2

Scale 1" = 20'-0"

4/16/2020 11:22:55 AM



GENERAL NOTES:

1. STRIPING AS INDICATED ON SITE PLAN SHALL BE WHITE AND 4" WIDE.
2. EXISTING CONDITIONS PROVIDED BY NADEAU LAND SURVEYS ON A PLAN ENTITLED BOUNDARY & EXISTING CONDITIONS SURVEY AT NORTH STREET MADE FOR JOSH T. WOJCIK (JOB NO. 2181902BTR1). PLAN IS DATED AUG. 22, 2018 WITH A MOST RECENT REVISION DATE OF MAY 1, 2019.
3. REFER TO LEGAL DESCRIPTION AND ACCOMPANYING EXHIBIT IN BK _____ PG _____ FOR CONVEYANCE OF LAND FROM 126 NORTH STREET TO 128R NORTH STREET.
4. SOLID GREY HATCH DEPICTS ENCLOSED LIVING SPACE AT THE GROUND LEVEL OR ABOVE.
5. NO WORK ON PHASE II SHALL OCCUR DURING PHASE I WORK UNLESS AUTHORIZED BY THE OWNER.

PHASE I		
SPACE AND BULK STANDARDS – 128R NORTH		
ZONE: R6 – MHNCDO	REQUIRED	PROPOSED
MINIMUM LOT SIZE	2,000 SF	6,142 SF
MINIMUM STREET FRONTAGE	20'	N/A
MINIMUM FRONT YARD SETBACK	5'	5.25'
MINIMUM SIDE YARD SETBACK (LEFT)	10'	10'
MINIMUM SIDE YARD SETBACK (RIGHT)	10'	11.91'
MINIMUM DECK SETBACK	10'	10.10'
MINIMUM REAR YARD SETBACK	15'	15.08'
MAXIMUM LOT COVERAGE	60%	57%
MINIMUM LOT WIDTH	20'	101'
MAXIMUM BUILDING HEIGHT	45'	44.61'
MINIMUM LANDSCAPED OPEN AREA	20%	40%
MAXIMUM NUMBER OF DWELLING UNITS	725 SF/UNIT = 8	6
RESIDENTIAL PARKING	1 SPACE PER UNIT AFTER 3 UNITS = 3 SPACES	6
MINIMUM INTERNAL RESIDENT BICYCLE STORAGE SPACES	2 SPACES/5 D.U. = 2	2

PERMISSIBLE VEHICLE SUMMARY – 128R			
SPACES	MAX WHEEL BASE	MAX LENGTH	MAX WIDTH
1,5,6	9.3'	16.5'	6.5'
2,3	8.6'	15.8'	6'
4	8.5'	14.5'	5.8'

PARKING SUMMARY – 128R	
DIMENSIONS	# PARKING SPACES
9'x16.5'	4
8'X16.5'	1
8'X18'	1
TOTAL PROPOSED SPACES	6

PHASE II		
SPACE AND BULK STANDARDS – 126 NORTH		
ZONE: R6 – MHNCDO	REQUIRED	PROPOSED
MINIMUM LOT SIZE	2,000 SF	3,645 SF
MINIMUM STREET FRONTAGE	20'	38'
MINIMUM FRONT YARD SETBACK	3.7' AVG	4'
MINIMUM SIDE YARD SETBACK (LEFT)	5'	10.02'
MINIMUM SIDE YARD SETBACK (RIGHT)	5'	5'
MINIMUM DECK SETBACK	10'	N/A
MINIMUM REAR YARD SETBACK	10'	17.83'
MAXIMUM LOT COVERAGE	60%	47%
MINIMUM LOT WIDTH	20'	38'
MAXIMUM BUILDING HEIGHT	35'	33.32'
MINIMUM LANDSCAPED OPEN AREA	20%	20%
MAXIMUM NUMBER OF DWELLING UNITS	725 SF/UNIT = 5*	6
RESIDENTIAL PARKING	1 SPACE PER UNIT AFTER 3 UNITS = 2 SPACES	2
MINIMUM INTERNAL RESIDENT BICYCLE STORAGE SPACES	2 SPACES/5 D.U. = 2	2

*SECTION 14-488 STATES "THAT PROVIDING BOTH WORKFORCE AND AFFORDABLE HOUSING UNITS, THE APPLICANT SHALL HAVE THE OPTION OF UTILIZING APPLICABLE INCENTIVES". IN THIS CASE THE INCENTIVE RESULTS IN 6 UNITS.

PARKING SUMMARY – 126	
DIMENSIONS	# PARKING SPACES
9'x18'	1
8'X18' (ADA)	1
TOTAL PROPOSED SPACES	2

10 0 10 20

SCALE: 1"=10'

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
LEVEL III SITE PLAN	WHS 8/7/19
PHASE II UPDATE	WHS 10/29/19
COMMENT RESPONSE	WHS 12/18/19
COMMENT RESPONSE 2	WHS 2/24/2020
COMMENT RESPONSE 3	WHS 3/17/2020

DRAWING NAME: COLOR CODED SITE PLAN
PROJECT NAME: 126/128R NORTH STREET REDEVELOPMENT
CLIENT: UPRIGHT PROPERTIES, LLC
PO BOX 833 WILTON, ME 04294

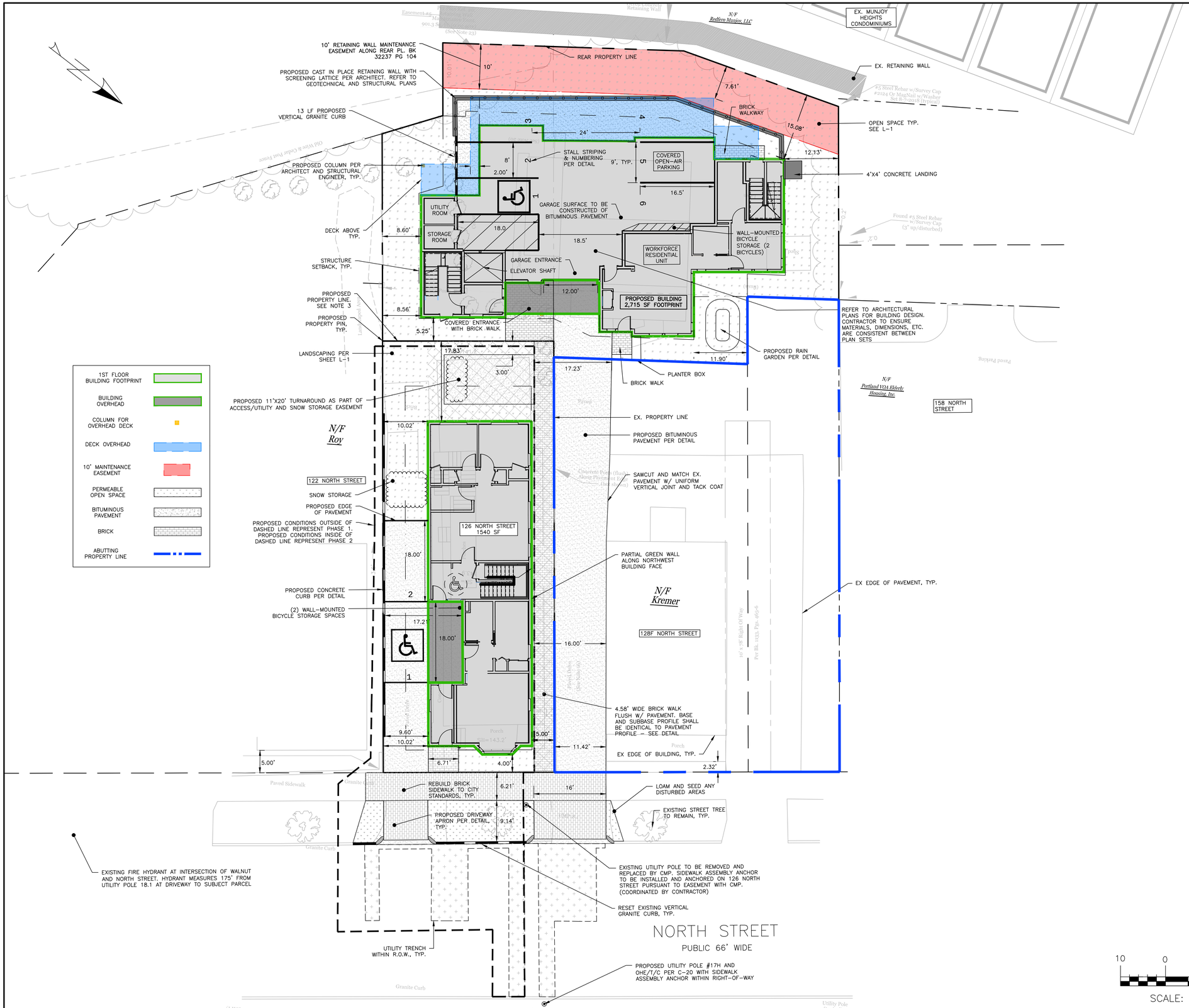
USE OF THESE PLANS, IN WHOLE OR IN PART, IS NEITHER TO BE USED NOR MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. AND SHALL BE RETURNED UPON REQUEST OR UPON COMPLETION OF THE PROJECT. ANY UNAUTHORIZED USE, MODIFICATION OR REUSE OF THESE PLANS BY ANY PARTY OTHER THAN THE PERSON FOR WHOM THE WORK WAS PREPARED FOR AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
65 HANOVER ST. PORTLAND, MAINE 04101
(207) 775-2655

FILE:	1116_CIVIL
JN:	1116
SCALE:	1"=10'
DESIGNED BY:	SJL
DRAWN BY:	ZMS
CHECKED BY:	WHS

3-4-2020

DRAWING NO.
C-10


1ST FLOOR BUILDING FOOTPRINT
BUILDING OVERHEAD
COLUMN FOR OVERHEAD DECK
DECK OVERHEAD
10' MAINTENANCE EASEMENT
PERMEABLE OPEN SPACE
BITUMINOUS PAVEMENT
BRICK
ABUTTING PROPERTY LINE
10' RETAINING WALL MAINTENANCE EASEMENT ALONG REAR PL. BK 32237 PG 104
PROPOSED CAST IN PLACE RETAINING WALL WITH SCREENING LATTICE PER ARCHITECT. REFER TO GEOTECHNICAL AND STRUCTURAL PLANS
13 LF PROPOSED VERTICAL GRANITE CURB
PROPOSED COLUMN PER ARCHITECT AND STRUCTURAL ENGINEER, TYP.
DECK ABOVE TYP.
STRUCTURE SETBACK, TYP.
PROPOSED PROPERTY LINE, SEE NOTE 3
PROPOSED PROPERTY PIN, TYP.
LANDSCAPING PER SHEET L-1
PROPOSED 11'X20' TURNAROUND AS PART OF ACCESS/UTILITY AND SNOW STORAGE EASEMENT
N/F Roy
122 NORTH STREET
SNOW STORAGE
PROPOSED EDGE OF PAVEMENT
PROPOSED CONDITIONS OUTSIDE OF DASHED LINE REPRESENT PHASE 1. PROPOSED CONDITIONS INSIDE OF DASHED LINE REPRESENT PHASE 2
PROPOSED CONCRETE CURB PER DETAIL
(2) WALL-MOUNTED BICYCLE STORAGE SPACES
EXISTING FIRE HYDRANT AT INTERSECTION OF WALNUT AND NORTH STREET. HYDRANT MEASURES 175' FROM UTILITY POLE 18.1 AT DRIVEWAY TO SUBJECT PARCEL
N/F Redfern Munjoy, LLC
EX. MUNJOY HEIGHTS CONDOMINIUMS
REAR PROPERTY LINE
EX. RETAINING WALL
BRICK WALKWAY
OPEN SPACE TYP. SEE L-1
4'X4' CONCRETE LANDING
STALL STRIPING & NUMBERING PER DETAIL
COVERED OPEN-AIR PARKING
GARAGE SURFACE TO BE CONSTRUCTED OF BITUMINOUS PAVEMENT
UTILITY ROOM
STORAGE ROOM
WALL-MOUNTED BICYCLE STORAGE (2 BICYCLES)
WORKFORCE RESIDENTIAL UNIT
GARAGE ENTRANCE
ELEVATOR SHAFT
PROPOSED BUILDING 2,715 SF FOOTPRINT
COVERED ENTRANCE WITH BRICK WALK
REFER TO ARCHITECTURAL PLANS FOR BUILDING DESIGN. CONTRACTOR TO ENSURE MATERIALS, DIMENSIONS, ETC. ARE CONSISTENT BETWEEN PLAN SETS
PROPOSED RAIN GARDEN PER DETAIL
PLANTER BOX
BRICK WALK
N/F Portland VOA Elderly Housing Inc
158 NORTH STREET
EX. PROPERTY LINE
PROPOSED BITUMINOUS PAVEMENT PER DETAIL
SAWCUT AND MATCH EX. PAVEMENT W/ UNIFORM VERTICAL JOINT AND TACK COAT
126 NORTH STREET 1540 SF
PARTIAL GREEN WALL ALONG NORTHWEST BUILDING FACE
N/F Kremer
128F NORTH STREET
EX EDGE OF PAVEMENT, TYP.
4.58' WIDE BRICK WALK FLUSH W/ PAVEMENT. BASE AND SUBBASE PROFILE SHALL BE IDENTICAL TO PAVEMENT PROFILE - SEE DETAIL
EX EDGE OF BUILDING, TYP.
REBUILD BRICK SIDEWALK TO CITY STANDARDS, TYP.
PROPOSED DRIVEWAY APRON PER DETAIL, TYP.
LOAM AND SEED ANY DISTURBED AREAS
EXISTING STREET TREE TO REMAIN, TYP.
EXISTING UTILITY POLE TO BE REMOVED AND REPLACED BY CMP. SIDEWALK ASSEMBLY ANCHOR TO BE INSTALLED AND ANCHORED ON 126 NORTH STREET PURSUANT TO EASEMENT WITH CMP. (COORDINATED BY CONTRACTOR)
RESET EXISTING VERTICAL GRANITE CURB, TYP.
UTILITY TRENCH WITHIN R.O.W., TYP.
NORTH STREET
PUBLIC 66' WIDE
PROPOSED UTILITY POLE #17H AND OHE/T/C PER C-20 WITH SIDEWALK ASSEMBLY ANCHOR WITHIN RIGHT-OF-WAY
Found #5 Steel Rebar w/Survey Cap (3" up/disturbed)
#5 Steel Rebar w/Survey Cap #2124 Or MagNail w/Washer (Set 5/30/2018 (typical))
Found #5 Steel Rebar w/Survey Cap #2124 (Flush)
Found #5 Steel Rebar w/Survey Cap (Flush)
Found #5 Steel Rebar w/Survey Cap (Flush)
Found #5 Steel Rebar w/Survey Cap